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IMPACT ASSESSMENT REPORT

Accompanying the document

Proposal for a
REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on European green bonds

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Glossary

Term or acronym	*Meaning or definition*
AUM	Assets Under Management
CBI	Climate Bonds Initiative
CSR	Corporate Social Responsibility
DG FISMA	Directorate-General for Financial Stability, Financial Services and Capital Markets Union
DNSH	Do No Significant Harm
EIB	European Investment Bank
ESAs	European Supervisory Authorities
ESG	Environmental, Social and Governance
ESMA	European Securities and Markets Authority
EU GBS	EU Green Bond Standard
ETS	Emissions Trading System
FTE	Full-Time Equivalent
GBP	Green Bond Principles
GHG	Greenhouse Gas
HLEG	High Level Expert Group [on Sustainable Finance]
ICMA	International Capital Markets Association
KID	Key Information Document
KPIs	Key Performance Indicators
MS	Member States
NACE	Statistical Classification of Economic Activities in the European Community
NECPs	National Energy and Climate Plans
NFRD	Non-Financial Reporting Directive
NGOs	Non-Governmental Organisations
OECD	Organisation for Economic Co-operation and Development
PEPP	Pan-European Personal Pension Product
PRI	Principles for Responsible Investment
RSFS	Renewed Sustainable Finance Strategy
RTS	Regulatory Technical Standards
SDG	Sustainable Development Goal
SFDR	Sustainable Finance Disclosure Regulation
SPO	Second Party Opinion
TEEC	Transition Énergétique et Écologique pour le Climat (French Label for the Energy and Ecological Transition)
TEG	Technical Expert Group on Sustainable Finance
TFEU	Treaty on the Functioning of the European Union
TSC	Technical Screening Criteria
UCITS	Undertakings for the Collective Investment of Transferable Securities

1. INTRODUCTION: POLITICAL, ECONOMIC AND LEGAL CONTEXT

This impact assessment concerns a proposed initiative to establish an official EU standard for green bonds based on the EU Taxonomy for sustainable finance, and to establish a regime for registering and supervising companies acting as external reviewers for green bonds aligned with this standard.

1.1. Political context

This initiative is part of the European Commission's 2021 Work Programme and is one of the actions proposed by the European Commission to implement the European Green Deal.[1] In their December 2020 Conclusions, the European Council mentioned that "*the EU should promote the development of common, global standards for green finance*", and invited the Commission to "*put forward a legislative proposal for an EU green bond standard by June 2021 at the latest."*

To transition to a climate neutral economy and reach the EU's environmental sustainability objectives, significant investment is required across all sectors of the economy. The achievement of the EU's current 2030 climate and energy targets would require in the period 2021-30 energy system investments (excluding transport) of EUR 336 billion per annum (in constant prices of 2015), equivalent to 2.3% of GDP.[2]

The bond market can facilitate green transition investments and thereby help reach the EU's environmental targets. Bonds are already one of the main instruments used for financing fixed assets in sectors related to energy and resource efficiency. In addition, several industry-led initiatives and guidance documents exist for the purpose of issuing so called 'green bonds'.

This green bond market has seen vigorous growth in the number and volume of green bonds issued, both in the EU and globally. Despite this trend, green bonds remain a fraction of the overall bond market, representing about 3 to 3.5 % of overall bond issuance in 2019[3]. Further growth in the market for high quality green bonds could be a source of significant green investment, thereby helping to meet the investment gap of the European Green Deal.

The EU is a global leader in green bonds, with 48% of the around EUR 253 billion of global green bond issuances in 2020 denominated in euro[4]. Providing a trusted regulated environment that supports the issuance and creation of green bonds would also promote the international role of the euro, and help to achieve the goal of developing EU financial markets into a new 'green finance' hub.

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[1] The European Green Deal (EGD) is the EU' response to the climate and environment-related challenges that are this generation's defining task. It is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050, where the environment and health of citizens are protected, and where economic growth is decoupled from resource use. The EGD Investment Plan of 14 January 2020 announced the establishment of an EU Green Bond Standard.

[2] Impact Assessment Accompanying the Communication "Stepping up Europe's 2030 climate ambition Investing in a climate-neutral future for the benefit of our people" SWD/2020/176 final

[3] Moody's:"*Green, social and sustainability bonds accounted for 4.5% of total global bond issuance in 2019"*(link), 77% of which was green bonds.

[4] For more information, see Annex 5 – Market developments

The Commission committed to developing an EU Green Bond Standard (EU GBS) in its Action Plan Financing Sustainable Growth adopted in March 2018. As a first step, the Commission asked the Technical Expert Group on Sustainable Finance (TEG) to produce a report on an EU GBS. The TEG published its interim report in March 2019, followed by a call for feedback period. The final report with a draft EU Green Bond Standard was published in June 2019, and the TEG also published a usability guide for the draft standard in March 2020.

1.2. Market context[5]

Green bonds are a relatively new form of debt instrument that provide investors with additional commitments and transparency on the green use of proceeds. In the typical "use of proceeds" model, issuers commit to spend the money raised or an equivalent amount on environmentally sustainable investments. This information is usually contained in separate stand-alone documents, not within the bond's prospectus or other legal documentation (bond covenants etc). Under existing market practices and regulations, green bonds are legally no different from conventional bonds[6].

The use of proceeds model enables a wide-range of approaches, including securitisation bonds, revenue bonds, project bonds, covered bonds, and other debt instruments.

The success of green bonds can be traced back to growing demand for green financial assets from investors, especially institutional investors such as insurance companies, pension funds, and investment funds. These assets allow them to meet their self-set targets for the green proportion of their investment portfolios.

As evidenced by the recent growth of the green bond market, some issuers have been willing to absorb the additional administrative costs associated with the greater transparency and credibility requirements for investors. For issuers, issuing a green bond offers a strategic marketing opportunity to showcase their green commitment and ambition to existing or new investors, possibly as part of the broader corporate or institutional green transition[7]. This allows issuers to enlarge and diversify their investor base, as new dedicated green and socially responsible investors enter the market and drive demand for these types of bonds.

Alongside the signalling effect, green bond issuance also provides issuers with an opportunity to improve their procedures for handling and acting on sustainability-related information, such as climate-related risks. In this way, issuers may use green bonds as an organisational opportunity to boost their adaptability to the changing environmental and regulatory context, thereby improving their future competitiveness and profitability through a first-mover advantage, or allowing public organisations to better respond to the demands of their stakeholders.

Analysis of the current market for green bonds in the EU and world-wide indicates that the market is growing rapidly. In the EU27, the number of green bonds issued has been growing by about 47.2%, while the volume has been growing by about 50.9% per year between 2015 and 2020. This growth is driven by inter alia the following factors:

[5] For more information on the market context, see Annex 4 – Market Context and controversies
[6] A "conventional bond" is here referring to a bond that is neither green, nor explicitly sustainable.
[7] Evidence from a JRC study based on a sample of non-financial companies suggests that green bonds act as a credible signal of the issuers' climate-related engagement. Fatica, S., and Panzica, R. (2021), "Green Bonds as a tool against climate change?", Business Strategy and the Environment, https://doi.org/10.1002/bse.2771

- Increasing need to finance investments that help to mitigate the risk of climate change
- Increasing demand from institutional investors and their clients to hold green financial assets, for example to hedge against the risk of stranded assets and make a positive impact against climate change.
- Intensifying competition among financial market participants to offer such green financial products (such as green investment funds) to investors.
- An overall legislative and political environment favouring transparency on the sustainability of investments (including requirements for financial market participants to disclose the alignment of their investments with the EU Taxonomy Regulation[8]).

These factors are all linked to the growing awareness about the need to tackle the risk of climate change, and are therefore likely to remain relevant factors in the long run. For this reason, it is reasonable to assume that the green bond market is likely to continue growing, potentially at or close to its current course. Based on projections in annex 5, this would mean that yearly EU green bond issuance in 2023[9] could reach EUR 430 billion, spread out over roughly 1350 green bond issuances.

The development of standards[10]

Along with the growth of the green bond market, market players have cooperated to standardise practices and develop guidelines for green bond issuance. Such so-called standards benefit both issuers and investors:

1. **For issuers,** a widely accepted standard conveys investors' expectations and thus reduces the need for specialised advisory services to issue a green bond that would be accepted as green by investors. It increases the credibility of the issuer's sustainability commitments and mitigates the potential reputational risk of accusations of 'greenwashing'.
2. **For investors**, it provides increased certainty that their investments are being used to deliver real environmental objectives without having to conduct their own extensive due diligence.

Currently, the most commonly-used market standard is the Green Bond Principles (GBPs), which are process-based guidelines maintained by the International Capital Market Association, or ICMA. To align with this standard, a green bond's proceeds should finance assets and projects with positive environmental impacts. The standard sets out a clear process for the selection of projects and the allocation and tracking of funds, although it lacks a clear definition of green economic activities. Bond issuers should also report on the use of proceeds including, if possible, information on the environmental impact of the projects. In addition, the GBPs recommend obtaining a third party external review.

Other standards are also widely used, including the more prescriptive Climate Bond Standard, developed by the Climate Bonds Initiative (CBI). The CBI standard sets the same basic requirements as the ICMA standard, which means that any bond compatible with the former should normally also be compatible with the latter. However, unlike the GBPs, the CBI includes a taxonomy with screening criteria to define green economic activities, and the requirement for green bonds to be certified by approved external reviewers. About a quarter of green bonds issued in 2020 were certified according to the CBI standard. Table 1 below

[8] See Annex 11 – ESG Disclosure obligations
[9] 2023 is the likely first full calendar year where a potential legislative initiative for an EU GBS might be in application.
[10] More details on green bond standards in Annex 7 – Standards and Definitions of green

compares ICMA's Green Bond Principles and CBI's Climate Bonds Standard. More details are available in annex 7.

	Green Bond Principles	Climate Bonds Standard
Owner	International Capital Markets Association	Climate Bonds Initiative
Reach	The dominant international standard (used by most of the international green bond market)	24% of all green bonds issued in 2020
Environmental objectives	Climate mitigation and adaptation, natural resources, biodiversity, and pollution prevention and control.	Low-carbon and climate resilience
Main requirement on use of proceeds	100% green	100% aligned with climate bonds Taxonomy and certified by external reviewer.
Definition of green	High level categories for eligible projects	Climate Bonds Taxonomy covering eight sectors.
Screening criteria	N/A	Screening criteria available for some sectors, including power generation, transport, buildings, and other sectors.
External review requirements	Recommended	Dedicated certification scheme – certification is required both pre-issuance and post-issuance (2 years after)
Requirements for external reviewers	High level guidelines for external review	External reviewers must be pre-approved by CBI. High-level requirements.
Allocation reporting	Not required	Required
Impact reporting	Recommended	Recommended

Table 1 - ICMA GBP and CBI standard

External review[11]

The development of these new standards has been accompanied by the growing use of external review to provide assurance to investors. It is common market practice for green bonds issuers to contract a third party to review the green bond documentation, either prior to bond issuance (to check alignment of the bond framework against the respective standard) or post-issuance (to check alignment of the projects funded by the bond against eligibility criteria). This is recommended under the ICMA GBPs and required under the CBI standard. External review is sometimes referred to as "verification", for example in the TEG's draft EU GBS.

According to the TEG report, external reviews have become common market practice in the EU green bond market. Research conducted by the Luxembourg Stock Exchange indicated that more than 85% of issuers use some form of pre-issuance review and of this grouping, 98% were in the form of an external review.

1.3. Legal context[12]

This section sets out the main relevant legislation.

Rather than being a self-standing initiative, the EU Green Bond Standard is part of a bigger puzzle, namely the EU's actions on sustainable finance as set out by the 2018 Sustainable

[11] More details in Annex 9 – External review

[12] For more information on disclosure requirements under the Taxonomy Regulation, the NFRD, and the SFDR, see annex 11 on ESG disclosure rules

Finance Action Plan. As that plan is increasingly coming into fruition, with the adoption of several initiatives and the development of related Level 2 Delegated Acts advancing rapidly, the EU Green Bond Standard would emerge into an environment that is already – to a certain extent - prepared for it. At the same time, the Commission has been working on the development of the Renewed Sustainable Finance Strategy.

The main legislative initiative that would impact on an EU GBS initiative is **the Taxonomy Regulation**[13], which was adopted by co-legislators in 2020. It sets out a classification of economic activities as environmentally sustainable, while complying with minimum social safeguards[14]. This framework can be used as a benchmark to classify whether an economic activity and, by extension, assets or projects are green. In turn, it is intended to facilitate the assessment of the greenness of related equity and debt. The Taxonomy Regulation mainly influences the future EU Green Bond Standard initiative in two ways:

First, under the Taxonomy Regulation article 4, the EU must apply the criteria of the Taxonomy when setting out any standards for green corporate bonds.[15] For this legal reason, any future EU Green Bond Standard must use the same definition of environmental sustainability as set by the Taxonomy Regulation as far as corporate issuers are concerned. For sovereign issuers, this requirement does not apply the same way.[16]

Second, as part of the Taxonomy Regulation's Article 8, financial and non-financial undertakings falling under the scope of the **Non-Financial Reporting Directive (NFRD**) [17] will be required to disclose, as of 31 December 2021, the extent to which their activities substantially contribute to the EU environmental objectives as defined by the Taxonomy Regulation (henceforth: Taxonomy-aligned). Concretely, they will have to calculate and disclose the extent to which their activities are Taxonomy-aligned, including the percentage of their capital expenditure (CapEx), operating expenditure (OpEx), and revenue associated with such activities. Consequently, such companies will have adjusted their internal processes to be able to track and account for the respective Taxonomy-aligned financial flows.

Furthermore, on 21 April 2021 the Commission adopted a proposal to review the NFRD, which currently imposes reporting requirements on large public interest entities with more than 500 employees. It is expected that this review will expand the scope of companies falling under the NFRD from 11 700 to close to 50 000 companies. The Commission also proposed that companies subject to the NFRD should be required to obtain limited assurance on their non-financial reporting. This would substantially increase the availability of information on the share of Taxonomy-aligned assets of EU companies, and should help facilitate and reduce the costs of issuing Taxonomy-aligned green bonds.

[13] Regulation on the establishment of a framework to facilitate sustainable investment (Regulation (EU) 2020/852 (Taxonomy)). More information on the Taxonomy Regulation is available in Annex 8.

[14] Those minimum safeguards defined in the Taxonomy Regulation are without prejudice to the application of more stringent requirements related to the environment, health, safety and social sustainability set out in Union law, where applicable.

[15] Article 4 of the EU Taxonomy Regulation: "*Member States and the Union shall apply the same criteria set out in Article 3 to determine whether an economic activity qualifies as environmentally sustainable for the purposes of any measure setting out requirements for financial market participants or issuers in respect of financial products or corporate bonds that are made available as environmentally sustainable.*"

[16] See Annex 10 on sovereign bonds.

[17] Non Financial Reporting Directive (Directive 2014/95/EU)

Another relevant development is the entry into application, as of March 2021, **of the Sustainable Finance Disclosure Regulation (SFDR)**[18], which governs how financial market participants (including asset managers and financial advisers) should disclose sustainability information towards end investors and asset owners. Under this Regulation, financial market participants will also be required to report on the share of Taxonomy-alignment of the assets in which they invest, including potentially, green bonds.

The European Commission is also currently working on establishing criteria for a new **EU Ecolabel for Financial Products**[19]**.** It will apply to retail financial products, such as equity funds and bond funds, and it will be legislated using an extension of the EU-ecolabel Regulation. This means the EU Ecolabel for financial products would rely on an existing "brand", which already benefits from a certain consumer recognition. While financial instruments such as bonds and equity will not be directly eligible for the EU Ecolabel, as they are financial instruments and not retail financial products, they will qualify indirectly, as part of bond or equity fund portfolios.

The Commission aims to create a coherent approach to sustainable financial products based on increased transparency and the use of the EU Taxonomy. It is expected that the definition of green in the criteria for the new EU Ecolabel for financial products will be based on the EU Taxonomy, and that EU GBS bonds would be eligible for EU Ecolabel bond fund portfolios. This could incentivise investment in bonds aligned with the future EU GBS.

In conclusion, the EU Green Bond Standard is one of several interlinked initiatives that aim to incentivise (in the case of the EU GBS) or require (in the case of the Taxonomy, reviewed NFRD, and SFDR) the disclosure of Taxonomy aligned green assets by corporations in the EU. For this reason, the impact of the EU GBS initiative should be considered in the context of the aforementioned initiatives.

The Delegated Act~~s~~ setting out the technical screening criteria for the "Substantial Contribution" and "Do No Significant Harm" conditions for the two environmental objectives of climate mitigation and climate adaptation was adopted in June 2021 and will enter into force by the end of 2021 subject to a 6-month scrutiny period by co-legislators. The entry into force of the delegated act~~s~~ covering the other four environmental objectives of the Taxonomy should follow 12 months later. For this reason, it is expected that at least the climate-related part of the Taxonomy would be in place before the EU GBS enters into force, and potentially all six environmental objectives of the Taxonomy.

1.4. Analytical context

This impact assessment aims at providing an unbiased, comprehensive and evidence-based assessment of the trade-offs implied by the potential policy options. Significant efforts have been undertaken to support the analysis. In addition to the evaluation of the stakeholder consultations and the work of the TEG, market data was collected from external databases to map the green bonds market with a view to informing the regulatory response. Further cost data and cost estimates were collected from stakeholders and supervisors directly.

[18] Sustainable Finance Disclosure Regulation (Regulation (EU) 2019/2088)
[19] Under the EU Ecolabel Regulation (Regulation (EC) No 66/2010)

A key limitation of the analysis pertains to the extent to which the current green bond market aligns with the technical criteria under the Taxonomy Regulation. Given the current supervisory reporting and public disclosure frameworks, the availability of relevant data and information is sporadic and lacks necessary depth to carry out a data-driven analysis. Information was however collected in the form of stakeholder feedback.

It should be noted that an assessment of the taxonomy criteria is not material to the available policy choices under this initiative. Co-legislators have already taken such choice in the form of adopted primary legislation. As mentioned above, the legal drafting of the Taxonomy Regulation rules out a Commission initiative on green bonds which stands disassociated from the taxonomy-based criteria[20]. Only the taxonomy criteria may be used to define an 'environmentally sustainable economic activity'. The choice to deviate from this definition is excluded given the objective to define and standardise bonds which finance environmentally sustainable activities. As such, there is no policy option that would require a further assessment of the usability of the taxonomy criteria (excluding for sovereign bonds[21]). A broader market assessment based on the available data is provided in the impact assessment supporting the Delegated Regulation on the Taxonomy.

In view of these constraints on the initiative, the collective evidence stemming from the different methodological approaches overall can be considered to be sufficiently sound as a basis for the impact assessment.

Two factors limit the amount of quantitative analysis included in the present report, namely (1) the difficulties with using existing data to estimate the effect of a currently inexistent framework, and (2) the intangible nature of certain benefits of green bond issuance, such as the green bond premium, or a reputational boost.

Despite these hindrances, this analysis takes a quantitative approach to cost benefit assessment where possible. Annex 3 sets out a quantitative estimate of the costs of registration and supervision by ESMA for external reviewers, as well as a related estimate of the cost for issuers of making use of external review services under the proposed EU GBS. Annex 6 includes estimated ranges for the green bond premium, although the data on the size of this premium is inconclusive. At the same time, other reported benefits of green bond issuance, such as a reputational boost for the issuer, could not be quantified, and little relevant literature was found no this topic. For these reasons, the cost-benefit assessment in section 6, which brings together all these elements, is mostly qualitative.

2. PROBLEM DEFINITION

2.1. What are the problems?

The current impact assessment considers the functioning and interplay of two closely interlinked markets: the market for green bonds (in particular high quality green bonds) and the market for external review services, used to give investors assurance about the alignment of their green bond to existing market standards. This section will identify the main problems affecting the two markets in scope, and their consequences. It will then consider the underlying problem drivers.

[20] c.f. Article 4 Taxonomy Regulation
[21] See Section 5 – Policy Options and Annex 10 – Sovereign Bonds

2.1.1. *For investors: Costly/difficult to identify high quality green bonds*

The green bond market suffers from a moral hazard problem that reduces trust in the market and drives up costs for investors (and issuers). The problem can be summarised as follows: once an investor has bought a "use of proceed" green bond, it relies on the issuer to follow up on the green commitments made, usually in terms of investing bond proceeds in certain activities. From the issuer side, green bond issuance can be profitable, for instance due to reputational gains or potential price benefits from issuing green debt[22]. But the real costs associated with following up on green commitments create an incentive for the issuer to shirk on the commitments made to investors once the bond has been issued. If so, investors will be the main losers, as the bonds they hold will no longer be green. For these reasons, investors may worry about the greenness of the bond and want to verify the bond's greenness ex ante.

However, investors currently face significant constraints to (i) determine the positive environmental impact of a bond, and (ii) compare different green bonds. Despite the existence of several commonly used market standards, which to a certain degree overlap and can be used conjunctively, the green bond market does not sufficiently enable investors to identify high quality green bonds.

In particular, definitions of green projects vary or are inexistent. For example, the dominant market standard (ICMA's Green Bond Principles) relies on high-level principles for eligible green projects, not detailed criteria. As for the more prescriptive CBI standard, its privately maintained definitions omit many potential sectors of green economic activities.

Also, the quality and role of external review varies widely. ICMA GBPs has no clear and formalised mechanism to guarantee the quality and integrity of the external review process, for example through registration and supervision of external reviewers of green bonds. As for the CBI standard, it includes certification but lacks a rigorous mechanism for supervising the conduct of those external reviewers.

Because of this lack of standardised definitions of green projects, lack of standardised transparency requirements, and the varying quality of external review, investors may need to expend time and resources on assessing and double-checking information published by existing green bonds issuers.

While this situation is already problematic today, two trends further aggravate the moral hazard problem, which could accentuate the issue in the future:

1) As explained in Annex 6, demand for green bonds is increasing, which may have the effect of driving up green bond premia, and thereby increase the incentive for issuers to issue green bonds.
2) As explained in Annex 8, the green bond market is increasingly expanding into sectors where it is more difficult agree on what is sustainable, such as manufacturing.

While sovereigns also are confronted with controversies around green bonds, and in particular the need to better define green proceeds, the risk to investors is less acute, as sovereigns generally have a transparent approach to use of proceeds, and benefit from high levels of trust in the green bond market, as evidenced by green bond premia for sovereigns, which are relatively high[23].

[22] See Annex 6 – Costs and Benefits of issuing green bonds
[23] See Annex 6

2.1.2. *For issuers: Additional costs for issuing a green bond (due to market fragmentation)*

Issuing a green bond already requires additional cost for issuers, for example in terms of reporting, external review, and internal reorganisation and training. However, the moral hazard problem referred to in 2.1.1 means that issuers are under increasing pressure to demonstrate the greenness of their bonds. The diversity of market practices in the green bond market (both with regards to definitions of green, and the market for external review) means that issuers may need to incur additional costs in order to enhance the credibility of their green issuance:

- In the case of corporate green bond issuers, investors frequently require issuers to obtain an ESG rating for their company. This is in principle an unnecessary cost, since the green bond itself and the underlying projects are usually already reviewed by an external reviewer.
- Issuers, and in particular first-time issuers, may need to spend significant resources deciding which standard to make use of, due to the diversity of market practices.
- The lack of a common definition of green and of a green bond means that issuers may need to spend additional resources, e.g. on additional advisory services, to demonstrate the green credentials of their bond, even after the requirements of the chosen standard has been met.

2.1.3. *For issuers: Uncertainty around green assets, potential reputational risks*

There is overall uncertainty on the type of economic activities that can be considered green, due to a lack of international agreement on such definitions. This has helped to cause some issuers to experience reputational damage as stakeholders questioned the greenness of their bond[24].

Collected feedback shows that the fear of adverse publicity because a deal is deemed "insufficiently green" has prevented some issuers from tapping the market[25]. This is particularly the case in economic sectors that are very important for the transition to a low carbon economy, but where the identification of green assets and projects is not straightforward due to a lack of carbon neutral and/or otherwise fully sustainable alternative production process and technology, such as steel or cement industries.

So far, these sectors have seen relatively limited green bond issuance[26].

[24] See Annex 4 on market context and controversies, and also the following articles: "Bond market asking what is green curbs climate friendly debt" and "How green are green bonds?" (In addition, the issuer of a green bond could come under criticism should the proceeds of the bond finance an activity with questionable social practices that do not meet minimum social safeguards.).

[25] A fear often cited by stakeholders is that investors would challenge the greenness of bonds issued by such corporates based on their overall corporate activities rather than focusing on the asset or project financed as per the use-of-proceeds approach.

[26] According to the June report of the TEG

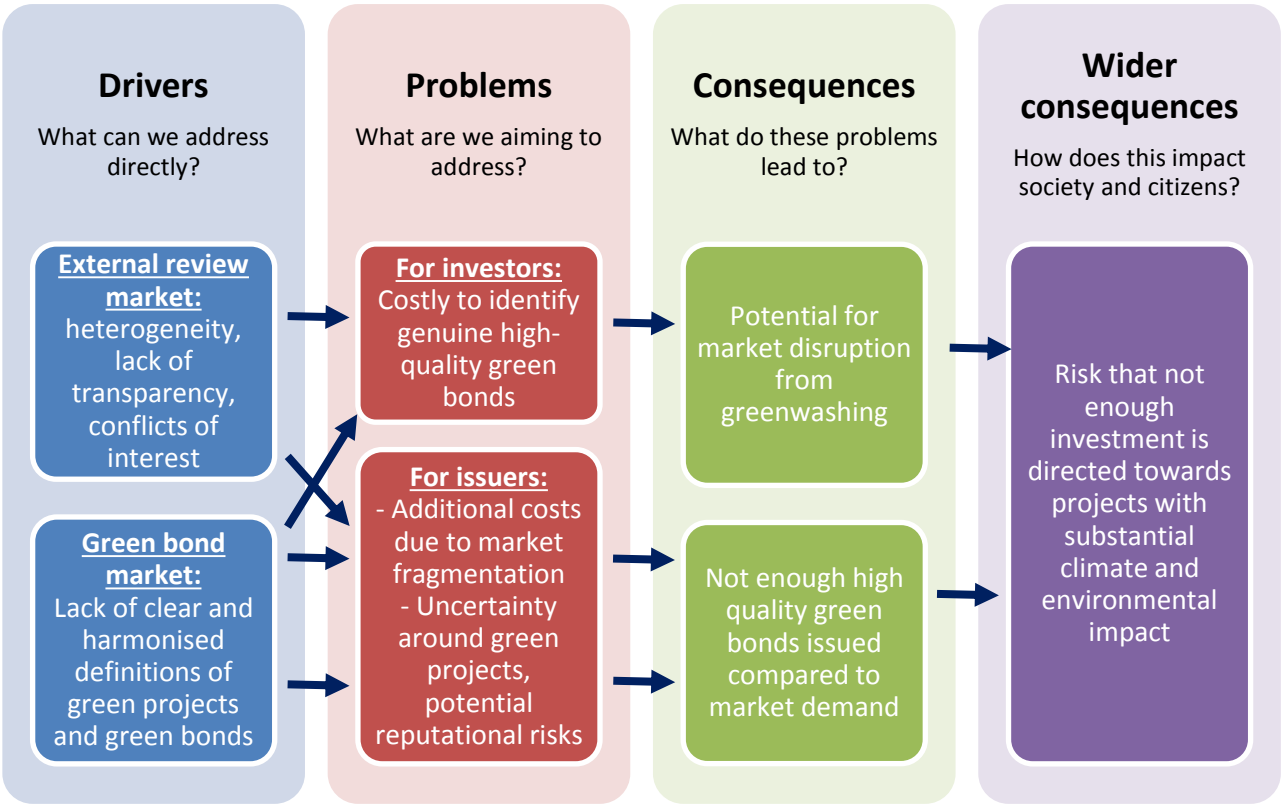

Figure 1: Problem tree

2.2. Consequences

2.2.1. Potential future market disruption from greenwashing

As the current market for green bonds is based on voluntary market standards with minimal government intervention, it mainly relies on trust among investors and issuers. While controversies relating to alleged greenwashing of the bond itself or the underlying projects are relatively rare, a more frequent criticism relates to the sustainability credentials of the green bond itself. However, with continued fast market growth and in the absence of regulatory intervention, the risk of major controversies regarding greenwashing, insufficient environmental impact of a bond, or issues linked to a bond not complying with minimum social standards, for example, will only increase.[27] But as the market grows, and as the problems identified in section 2.1 become more acute, the risk of such incidents and their potential impact on the functioning of the whole of the green bond market increase.

In addition, while issuers might communicate their green promises for the use of proceeds in their marketing and standard related documents, such information is not systematically included in the contractual and regulatory documents for the bond transaction, which can make it difficult for investors to hold issuers to account for honouring their green commitments.

The combination of these factors may lead to situations where investors are given a false sense of the sustainability impact of the funded project or asset. In effect, the sustainability impact may fall short of investor's initial expectations. If this should occur, investors could

[27] See Annex 4 for more information on greenwashing controversies.

risk financial losses, as they may have to sell their bonds because they no longer comply with investment guidance or criteria, particularly in the case of institutional investors.

Any such incident could disrupt the current green bond market by creating reputational problems for the whole sustainable investment market, reducing the trust of investors on which this market relies, and further increasing costs for issuers.

2.2.2. Not enough high quality green bonds issued compared to market demand

In their June 2019 report, the TEG found that there was a fundamental problem of lack of supply in the market for green bonds, as evidenced by the frequent oversubscription of green bond auctions or sales. In 2019, demand for green bonds outstripped supply by more than 5 to 1, compared to a ratio of 3 to 1 for conventional bonds.[28] This means that the green bond market is not exploiting its full potential for growth.

Green bond issuance is conditional on the existence (or creation) of a corresponding amount of green investments on the issuer's balance sheet. For this reason, the lack of eligible investment is the main limiting factor for green bond issuance. This factor is out of the scope of this impact assessment.

However, the problems for issuers identified in 2.1 also play a part in limiting supply. The problem of uncertainty around green assets and potential reputational risks serves to dissuade potential green bond issuers. At the same time, the additional costs for issuing a green bond due to market fragmentation contribute to reducing the net benefits of green bonds, and therefore indirectly reducing issuance.

2.3. Wider consequences

2.3.1. Risk that not enough investment is channeled towards projects with substantial climate and environmental impact

The market for high quality green bonds is important for channelling funding into the type of fixed investments needed to reach the EU's climate targets. However, despite the overall situation of growth, the problems and consequences identified in 2.1 and 2.2 constitute market barriers that could trap the market in an inefficient equilibrium[29] and hinder future market development.[30]

If not enough high quality green bonds are issued to respond to market demand, there is a risk that substantial funding is instead diverted to activities and projects that – while they may have environmental benefits – are not substantially contributing to the EU climate and environmental objectives.

In order to fund climate mitigation, climate adaptation, and wider environmentally sustainable purposes, the market for high quality green bonds therefore needs to be supported to reach its maximum potential.

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[28] CBI: "Green bond pricing in the primary market: January – June 2020"

[29] Pauline Deschryver & Frederic de Mariz: "What Future for the Green Bond Market?", 2020

[30] As noted by Bowman (2019), due to a lack of credibility, credentials, and supply —there is a risk that the infancy of the market does not offer enough data to investors to make an educated investment decision and as a result, investors are reluctant to move forward creating a "chicken and egg" problem". (Source: Louise Bowman: "ESG: green bonds have a chicken and egg problem", 2019)

2.4. What are the problem drivers?

The problem drivers can be divided into those affecting the market for external reviewers, and those affecting the market for green bond issuance.

2.4.1. External review market: Heterogeneity, lack of transparency, and potential issues relating to conflicts of interest in the external review market

The external review (see Annex 9) is usually carried out by third parties, according to procedures which are specific to each reviewer, and which have emerged organically alongside the development of various market standards. For this reason, there is also a considerable amount of diversity in market practices and in the quality of services provided. In turn, this diversity obstructs market transparency and hinders the market from functioning effectively and from delivering high quality external review services that serve the interests of issuers and investors alike.

To give only a few examples of market diversity:

- External reviews may include a consideration of the ESG rating of the issuer, or not.
- They may rely on the project categories of ICMA's Green Bond Principles, or more prescriptive definitions of green projects.
- They may be valid for several transactions or concern specifically the pre-issuance or post-issuance stage of the bond.
- There is also a wide variety of actors: non-financial rating agencies specialising in second party opinions, big-four audit firms providing mostly post-issuance verification, credit rating agencies, and global technical inspection and certification bodies are all active in the external review market.

In its report, the TEG also highlighted a number of challenges in this sector, including variable quality of assessments, potential lack of independence or management of potential and actual conflicts of interest and the handling of potentially price sensitive information.

This situation can lead to information asymmetries and a reduction in overall trust in the green bond market and the integrity of the credentials of specific bonds. The range of differing approaches by entities with varying levels of expertise in environmental matters can create uncertainty for issuers and investors on the actual value, quality and impact of external reviews. It can also lead to duplication and increased costs. In Deschryver and de Mariz (2020)[31], investors note the lack of a consistent certification system, in comparison with credit ratings in the conventional bond market.

In addition, given the lack of a common classification system and criteria, some issuers in fact engage with multiple reviewers in order to attain a higher degree of certainty and investor confidence. Another common practice is for issuers to obtain ESG ratings in addition to the external review, as many investors associate the greenness of the bond with the greenness of the company itself. This gives rise to additional costs that would potentially not arise if these issuers could instead more fully rely on the opinion of the external reviewer.

[31] Deschryver and de Mariz (2020): What Future for the Green Bond Market? How Can Policymakers, Companies, and Investors Unlock the Potential of the Green Bond Market?

In January 2021 the Commission published an extensive study on the market for Sustainability-Related Ratings, Data and Research[32], which overlaps to some extent with the market for external review services. The study noted that while efforts to develop common voluntary standards for sustainability-related product and service providers have been undertaken, none have been firmly established across the market. The study also highlighted the increasing array of sustainability-related product and service providers operating in this growing market, which emphasises the need for greater transparency across the industry in terms of methodologies, disclosures and how research providers assess the performance of green assets and investments.

Amid increasing demand, more financial data and research providers and credit ratings providers are entering the sustainability-related products and services market, which is leading to increased merger and acquisition activity as those traditional players to expand their service offerings by buying up specialised sustainability-related providers.

The high level of industry consolidation identified in the study also highlights the potential for conflicts of interest to emerge, particularly associated with providers both evaluating companies and offering paid advisory services. Concerns have been raised about potential conflicts of interest and quality control issues: at present, there is no legal framework in place for minimum operational requirements and safeguards, nor for registration or authorisation and supervision of external reviewers, as the industry has developed organically without regulatory support.

A report by Bloomberg Law[33] indicates that most external reviewers are not subject to any stand-alone independence requirements and in some cases, reviewers and their affiliates also provide advisory services to potential green bond issuers, which may raise independence issues. The report highlighted that the conclusion or opinion provided by external reviewers can vary depending on the provider in particular, and on differing definitions of what constitutes a 'green' investment, particularly the difference between 'dark' and 'light' green.

External reviewers fulfil an important role in bridging the gap between analysing potentially complex green projects and assessing them against the requirements of the EU Taxonomy and assisting investors with making suitably informed investment decisions. It is therefore important that potential conflicts of interest are managed and averted, ensuring an appropriate level of market transparency. The absence of a supervisory framework for external reviewers with minimum standards to ensure the quality and objectivity of their reviews combined with a lack of transparency regarding their activities could lead to the misallocation of investments or even greenwashing, which would damage investor confidence in the EU GBS market and undermine the future development of the EU GBS market.

The situation is less urgent in the case of sovereign issuers, who frequently make use of state auditors instead of external reviewers. These state auditors typically have legally guaranteed independence, and there does not appear to have been any controversies regarding their performance of the external review tasks.

More information available in Annex 9 on external review.

[32] Link to study
[33] Green Bond Second Party Opinions: Legal and Practice Considerations'

2.4.2. Green bond market: Imperfect information due to a lack of clear and harmonised definitions of green projects and green bonds.

The market for green bonds is hampered by the lack of clear and comprehensive definitions of a green economic activities to guide green bond issuance, and of a common yet prescriptive standard for green bond issuance.

The most commonly used standard, ICMA's Green Bond Principles, is market-developed, mostly principles-based and does not refer to a specific taxonomy of eligible green projects. The more ambitious CBI standard includes a market-based Taxonomy, but it only covers climate-related matters, leaving out important sectors for further emission reductions, or areas where it is more difficult to agree on the definition of green, such as high emission manufacturing[34].

The creation of the EU Taxonomy is an attempt to address this situation, by providing comprehensive and granular definitions of how various economic activities can qualify as environmentally sustainable (more information in Annex 8 – the Taxonomy). The EU Taxonomy will be freely available for existing standards to make use of, if they wish.

However, in order to make use of the detailed definitions of the Taxonomy in the "use of proceeds" space, and ensure that investors can have proper trust that the strict criteria are complied with, it is necessary to have a standardised system of verification with qualified and experienced entities checking that the relevant Taxonomy-criteria have been met.

As explained in 2.4.1, the current practices around external review do not currently meet this requirement, and so far there are no indications that existing market-based standards intend to impose a more stringent oversight over external reviewers. It is also not clear whether it would be feasible for market based standards to operate a rigorous system of monitoring of external reviewers. For this reason, it is unlikely that market-based standards will be able to credibly enforce Taxonomy-alignment of standards within an acceptable timeframe.

This situation of imperfect information poses problems for both issuers and investors, in particular those with high sustainability-related ambitions. Without a clear definition of green, environmentally ambitious issuers are lacking a clear and reliable way to signal this to investors. As for investors, who are increasingly on the lookout for green debt instruments to add to their portfolios[35], their search is complicated by the fact that there is no commonly accepted definition of a green bond, in particular on the more environmentally ambitious segment of the market.

2.5. How will the problem evolve?

Without EU action regarding green bonds, the most likely outcome would be the continued development of differing market-based standards for green bonds or new legislative initiatives at national level. For more information, see section 5.1 – what is the baseline?

The TEG has pointed to the large range of approaches in the field of external review as a potential source of problems, creating uncertainties for issuers and investors on the actual value, quality and impact of the external reviews. Concerns have been also raised about

[34] The CBI Taxonomy is mostly used in the market for green bonds (although other sectors have also made use of it to some extent), and it only covers about a quarter of the green bond market (26% of green bonds obtained CBI certification in 2020). The CBI Taxonomy does not contain screening criteria for transitional sectors such as energy intensive and hard-to-abate industry.

[35] CBI: "Green Bond European Investor Survey", 2019 (Link)

potential conflicts and quality control issues in this market. Without a legal framework in place, the market cannot provide for the registration and supervision of external review on its own, and thus most of these issues would likely remain unaddressed.

Because of the expected strong growth of the green bond market, the vulnerabilities that exist within the current market-based system are likely to grow, which may amplify the risk of a potential high impact or high visibility occurrence of greenwashing. Such an incident could potentially create reputational problems for the whole green bond market, thereby reducing the trust of investors on which this market relies, and increasing costs for issuers.

3. WHY SHOULD THE EU ACT?

3.1. Legal basis

The legal basis for this initiative is Article 114 of the Treaty on the Functioning of the European Union (TFEU), which confers to the European institutions the competence to lay down appropriate provisions that have as their objective the establishment and functioning of the internal market.

Taking into account the criteria set out in the Vodafone case (C-58/08) Article 114 TFEU allows the EU to take measures not only to eliminate existing obstacles to the exercise of the fundamental freedoms, but also to prevent the likely emergence of such obstacles in the future. This also includes those obstacles that make it difficult for market participants, such as issuers of green bonds or investors, to take full advantage of the benefits of the internal market.

Although other national legislation exists stipulating a framework for green bond issuance (e.g. in China), no EU Member State has yet legislated to establish an official green bond standard at national level. The current EU market for green bonds is therefore entirely based around market-defined standards and practices, with assurance to investors provided by companies acting as external reviewers. These market-based standards set out high-level process-based guidelines or recommendations, but as outlined in Section 2, the underlying definitions of green projects are insufficiently standardised, rigorous, and comprehensive. For this reason, various practices co-exist, which make it costly for investors to identify genuine green bonds.

In light of the continued growth of the green bond market and its role in funding the type of fixed investments needed to reach the goals of the Paris agreement, it is likely that some Member States would consider creating a standard at national level, or establishing national guidelines.

Such national standards would likely seek to address the same problems that the proposed EU GBS initiative aims to address, but the results may be divergence across EU Member States. There are already examples of Member States operating with diverging frameworks in their issuance of sovereign green bonds, or in the area of labels for environmentally sustainable financial products. For this reason, it is likely that disparities between national laws would emerge that obstruct the fundamental freedoms and undermine a European level playing field. Therefore there is an identifiable need for a harmonized green bond standard to be applied across the EU.

3.2. Subsidiarity: Necessity of EU action[36]

For now, Member States seem to refrain from establishing national legislation, which is likely linked to the widespread expectation that the Commission will act in this area, as announced in the 2018 Sustainable Finance Action Plan. In consultation feedback, many EU Member States have been calling for a harmonized green bond standard at EU level. However, in the absence of such a harmonised standard, it is predictable that Member States would bring forward their own legislation in the area of green bonds.

Without EU action regarding green bonds, the most likely outcome would be the continued development of market-based standards for green bonds or new legislative initiatives at national level. Such uncoordinated actions at national level may lead to a proliferation of diverging green bond standards, which would fragment the green bond market in the EU and potentially hamper cross-border investment flows. The EU GBS would ensure a level playing field and reduce the potential scope for disparities across the EU while supporting the attainment of the EU's sustainable finance policy objectives. It also has the potential to become a leading global standard for green bonds. An intervention at the EU level is more likely to successfully define consistent requirements for the internal market and thereby prevent market distortions. Therefore, a legislative measure (based on Article 114 TFEU) would further improve the functioning of the Single Market.

3.3. Subsidiarity: Added value of EU action

In a similar way to the bond market, the green bond is an inherently international market made up of issuers, typically larger companies, seeking out a broad and diverse population of investors, and investors seeking out the highest possible liquidity and frequently trading debt on cross-border secondary markets. For this reason, national legislation to tackle the failures identified in the green bond market would have the potential effect of fragmenting a market which is inherently international.

The market for external reviewers of green bonds is also a cross-border market. In order to preserve a level playing field for the companies providing external review services, any legislation setting up a regime for the registration and supervision of these entities should also be at EU level. Finally, given the many interactions between a potential initiative for an EU Green Bond Standard, and other relevant EU-level legislation, such as the Taxonomy Regulation, an EU instrument appears to be more suitable. A possible intervention at EU level therefore complies with the principle of subsidiarity as set out in Article 5 of the TFEU.

For a detailed analysis of the legal basis, see Annex 12.

4. OBJECTIVES: WHAT IS TO BE ACHIEVED?

This initiative is a direct response to vocal requests from green bond investors and issuers alike for a credible and high-quality standard for Taxonomy-aligned green bonds, as expressed for example in the targeted consultation on the EU GBS. According to this

[36] According to the principle of subsidiarity, the EU should act where it can provide better results than intervention at Member State level. In addition, EU action should be limited to what is necessary in order to attain the objectives, and comply with the principle of proportionality.

feedback, such an initiative should standardise and develop the market for green bonds and set the global standard for the application of the EU Taxonomy in green bond markets, so that green bonds become a genuine tool for the EU to transition towards climate neutrality. Building on this feedback, this section sets out the main objectives for this initiative.

4.1. General objectives

The general objective is to better exploit the potential of the single market to contribute to meeting the EU's climate and environmental objectives, in accordance with Article 2(1)c of the Paris Agreement, by

- facilitating further development of the market for high quality green bonds, while
- minimising disruption to existing green bond markets, and
- attracting sovereign issuers to the framework while catering to their specificities

This would be achieved by establishing a standard (or similar) for high quality green bond issuance that would:

- Improve the ability of investors to identify and trust high quality green bonds
- Facilitate the issuance of high quality green bonds, by:
    - reducing costs from market fragmentation
    - clarifying green definitions and reducing the reputational risk for issuers from sectors that are not sufficiently covered by existing market-based taxonomies
- include some flexibility for sovereigns issuers.

4.2. Specific objectives

There are two specific objectives, which relate to the two problem drivers identified in section 2.4.

4.2.1. The EU GBS should clarify and harmonise definitions of green projects and green bonds

By aligning green bonds with the EU Taxonomy, this initiative should contribute to clarifying green definitions on the bond market. This should help investors in the process of identifying high quality green bonds, comparing them against each other, and mitigating against the risk of greenwashing. It should also help issuers in the process of issuing green bonds and identifying green economic activities on their balance sheets.

4.2.2. The EU GBS should harmonise outcomes, improve transparency, and address potential conflicts of interest for external reviewers

External review is a well-established market practice and a core part of almost any green bond issuance, irrespective of the type of issuer or the standard followed. However, as detailed in 2.2, a wide-range of market practices and actors co-exist in a limited space. This initiative will aim to strengthen external review for the high quality EU green bonds, and improve its quality, usefulness, and trustworthiness for investors, by harmonising outcomes, addressing conflicts of interest, and improving transparency and oversight over the overall process.

For the EU GBS itself, the requirements for external reviewers are intended to provide an additional level of assurance to issuers and investors that those external reviewers that are

registered have implemented effective policies and procedures to ensure the quality, independence and overall integrity of their assessments. This will make the EU GBS distinct from other green bond standards in the market and support the intention to establish the EU GBS as the gold standard for green bonds.

Problems	Objectives
For investors: Costly/difficult to identify high quality green bonds **For issuers:** - Additional costs for issuing a green bond due to market fragmentation - Uncertainty around green assets, potential reputational risks	Improve the ability of investors to identify and trust high quality green bonds Facilitating issuance of high quality green bonds by: - Reducing costs from market fragmentation. - Clarifying green definitions and reducing the reputational risk for issuers.
Problem drivers in the external review market	**Specific objectives in the external review market**
Heterogeneity, lack of transparency, issues related to conflicts of interest	Harmonising outcomes, improving transparency, and addressing conflicts of interest.
Problem drivers in the green bond market	**Specific objectives in the green bond market**
Lack of clear and harmonised definitions of green projects and green bonds.	Clarifying and harmonising definitions of green projects and procedures for issuing green bonds.

Table 2: Problems and objectives

5. WHAT ARE THE AVAILABLE POLICY OPTIONS AND HOW DO THEY COMPARE?

5.1. What is the baseline from which options are assessed?

Under the baseline, there would be no Commission action in the green bond market, whether in the form of legislation or guidance. This would maintain the status quo in the market, with most green bond issuers relying on existing market-based principles and guidance[37]. The principle characteristics of the baseline scenario are:

- **Continued market growth along or slightly below current trajectories.** 2015-2020 saw an impressive average annual growth of 46% in terms of green bonds issued, and also 46% in terms of volume[38]. It is expected that the green bond market will continue to grow along or slightly below these trajectories. The main factors driving this trend are an enhanced awareness for sustainability factors of downstream consumers, increasing market demand for green bonds, and a reinforced sustainability focus in many Member State and EU policies.
- **Growth of external review market, but no legal framework in place for the registration and supervision of external reviewers.** The assessment of green bonds by an external reviewer will likely remain the market norm, and hence this market will grow in line with market needs. However, the differing approaches of the range of entities in this field will continue to be a potential source of problems, creating uncertainties for issuers and investors

[37] e.g. ICMAs Green Bond Principles, Climate Bonds Initiative
[38] Source: CBI data (see Annex 5 – Market Developments for more info)

on the added value, quality and impact of the external reviews. Issues relating to potential conflicts of interest and quality control would not be addressed and the EU GBS would therefore have to rely on existing market processes and external reviewers.

- **No dominant classification system to determine the greenness of projects and assets, and continued use of partial and high-level taxonomies.** While the Taxonomy Regulation for climate mitigation and climate adaptation will enter into force in 2021, the Commission would not take any action to promote it as part of an official green bond standard. While existing market-based guidance provides broad 'green criteria', they generally lack specificity and granularity for more detailed assessments. Some issuers also prefer to refer to their own taxonomies, rather than using the CBI Taxonomy. This indicates that the market is unable to converge around a single standard classification system that is at the same time comprehensive and granular.
- **Continued uncertainty for investors and issuers on the definition of green.** This in turn generates inefficiencies in terms of search costs, increased risk exposure for investors and, depending on the applied market practice, higher issuing costs. On the one hand, issuers will continue to face reputational risks in cases where there is doubt over the greenness of assets or projects. This is particularly a concern for non-traditional green issuers which generate revenue mainly from carbon intensive activities. In effect, their green bond issuance levels are likely to remain very low with potential negative impacts on their ability to transition.

  On the other hand, investors would lack clarity and transparency on the greenness of investments. Since there is no common classification system in place, each bond and its corresponding activities need to be assessed individually to determine whether it meets the individual investor's understanding and expectations of 'green', thus driving search costs.

  It can be expected that there will be some uptake of 'taxonomy aligned' bonds (i.e. making use of the EU taxonomy) even without EU intervention. It is expected that market standards would allow the use of the EU Taxonomy as one of several definitions of green. However, the issues set out in terms of consistency, comparability and certainty would still largely persist. The market would also remain heavily fragmented due to possible different understandings of the taxonomy criteria. As there would not be any means of enforcement, issuers could claim taxonomy-alignment without facing supervisory repercussions. This may in fact lower transparency and confidence in the market and negatively affect the wider uptake of the taxonomy criteria as a benchmark. It is unclear whether the CBI Taxonomy would converge or diverge from the EU Taxonomy.
- **Amplified risk of high visibility or high impact market controversy**. Seen against the expected growth of the green bond market, the vulnerabilities that exist within the current market-based system may amplify the risk of a potential high impact or high visibility occurrence of greenwashing. Such an incident could potentially create reputational problems for the whole green bond market, thereby reducing the trust of investors on which this market relies, and increasing costs for issuers.
- **Potential national action:** There is also the potential that Member States may develop their own legal regimes for green bonds, potentially based on discrepant Taxonomies. We have seen a similar development in the case of labels for green investment funds (see section 3 – legal basis). The fact that Member States are not actively pursuing such plans at this moment is likely due to the Commission's ongoing work on the EU GBS. Should the Commission abandon these efforts, it is likely that Member States would seek to compensate with national initiatives, given the growing importance of sustainable finance for the financial industry and for low-carbon investments.

5.2. Description of the policy options

This impact assessment focuses in particular on the three key policy dimensions set out below. The three dimensions are related, but the policy choices do not depend on each other across policy dimensions.

1) Scope of application for green bond issuers (and core requirements of EU GBS)

- Option 1: EU GBS alignment voluntary for all green bond issuers
- Option 2: EU GBS alignment mandatory for non-sovereign EU green bond issuers, following transition-period

2) Regulatory treatment of external reviewers of EU GBS-aligned bonds

- Option 1: Registration and limited supervisory oversight
- Option 2: Authorisation and supervision with more stringent requirements

3) The extent of flexibility for sovereign users of the EU GBS

- Option 1: No flexibility compared to corporate issuers
- Option 2: Flexibility regarding non-Taxonomy-related requirements.
- Option 3: Flexibility regarding non-Taxonomy- and Taxonomy-related requirements

Each policy option is described and also assessed below. The potential willingness of green bond issuers to make use of the proposed standard, based on the preferred policy choices across all policy dimensions, is assessed in section 6: Preferred option.

5.3. Policy Dimension 1: Scope of application for green bond issuers (and core requirements of the EU GBS)

The current section will assess the extent to which the EU GBS should apply to current and future green bond issuers, and the core requirements of the standard.

In the 2018 Sustainable Finance Action Plan, the Commission tasked the Technical Expert Group on Sustainable Finance (TEG) with drawing up a report on an EU Green Bond Standard, based on current market best practices. In line with this mission, the TEG proposed the standard that is summarised in table 2 below (full standard is available in Annex 14).

TEG'S PROPOSAL FOR THE EU GREEN BOND STANDARD

ELIGIBLE GREEN PROJECTS:

- Physical or financial assets.
- CapEx or selected Opex (with 3-year look-back period)
- Public investments or public subsidies

Must be aligned with Taxonomy Regulation:

1. Contribute substantially to at least 1 environmental objective.
2. Not significantly harm any other objective
3. Comply with the minimum social safeguards
4. Align with Technical Screening Criteria (TSCs) where available.

Flexibility: If no TSCs are available or applicable, an external reviewer shall confirm that projects nonetheless meet the 3 other requirements.

Grandfathering: Subsequent changes to TSCs should not apply to

REQUIRED REPORTING:

Green Bond Framework: setting out environmental objectives, process to determine Taxonomy alignment and track proceeds, projects to be financed by the bond, and what impact metrics will be used.

Allocation Reporting (annually): Shall include a breakdown of allocated amounts to Green Projects at least on sector level.

Impact Reporting: At least once during bond lifetime after full allocation of the

outstanding EU Green Bonds (grandfathering).	bond proceeds.
VERIFICATION REQUIREMENTS (a.k.a. EXTERNAL REVIEW): - The issuer shall appoint an external reviewer to confirm alignment of the Green Bond Framework with the EU GBS. - Verification of the Final Allocation Report is required. **Verification providers will be subject to accreditation including explicit requirements related to:** **1.** professional codes of conduct related to business ethics, conflicts of interest and independence; **2.** professional minimum qualifications and quality assurance and control; **3.** standardised procedures for Verification.	

Table 3 – TEG's proposal for an EU GBS[39]

Alignment with market best practices

The final set of requirements of the EU GBS itself that are being examined in this impact assessment are based on the draft standard proposed by the TEG, which in turn is based on (or similar to) market best practices, including best practice within the existing standards such as the ICMA GBPs and the CBI standard[40] (for example where an existing standard does not require but recommends certain practices):

- with regards to reporting, these include the publication of a green bond framework, of allocation reports, and impact reports[41].
- With regards to external review, these include external review of the green bond framework and the final allocation report.
- With regards to eligible green projects, these include the "use of proceeds" approach. This model enables a wide-range of approaches, including securitisation bonds, revenue bonds, project bonds, covered bonds, and other debt instruments.

Allocation and impact reports

Building on a practice established in the CBI standard, the EU GBS would require issuers to publish yearly allocation reports detailing the use of green bond proceeds, and providing evidence on the Taxonomy-alignment of the projects funded by their bonds. These allocation reports are what enable external reviewers and investors to check the issuer's progress and hold the issuer to account for fulfilling its sustainability commitment. In line with market best practice, the EU GBS will require issuers to have their allocation report reviewed by an external reviewer after a certain amount of time.

As is also common market practice, the impact report is the issuer's review of the environmental impact of the bond once all the proceeds have been allocated. This allows investors to quantify and compare the environmental impact of their investment, and mitigates against the risk of "greenwashing". For transparency reasons, both reports would be publicly made available to ensure full transparency.

Feedback from stakeholders

[39] See Annex 14 for more information on the TEG's proposed standard
[40] See section 1 for a description and comparison of these two standards.
[41] 79% of green bonds issued prior to November 2017 already had impact reporting in place. (Source: CBI: "Post-issuance reporting in the green bond market")

By following established market practice, the EU GBS would avoid needlessly changing well-established practices regarding the format, frequency, and type of reporting. It would also avoid needlessly disrupting the market for external review. The alignment with market best practices is also justified based on the desire to position the EU GBS as the foremost standard in terms of transparency and environmental credibility. Finally, the alignment with existing market best practice was preferred by a large majority of respondents to the targeted consultation on the EU GBS, who also agreed with all the main requirements of the EU GBS as proposed by the TEG.

In particular, investors argued that the core requirements of the EU GBS would respond to their needs for clarity, consistency, comparability, transparency and assurance that the financed projects are aligned with the EU Taxonomy. A majority of issuers and financial service-providers also agreed with the proposed requirements, arguing that the EU GBS could help to standardise, clarify, and create a genuine market for high quality green bonds. However, some respondents worried that the requirements would be difficult to meet for SMEs wishing to issue green bonds, especially with regards to reporting and external review. Table 3 below provides a summary of the consultation feedback on this issue.

Requirements proposed by the TEG	**Answers to the question**	**Strongly agreed + rather agreed**	**Strongly disagreed + rather disagreed**
Aligning eligible green projects with the EU Taxonomy:	160	136 (87%)	8 (5%)
Publishing a Green Bond Framework before issuance	160	145 (90.5%)	2 (1.5%)
Publishing an annual allocation report	161	145 (90%)	6 (4%)
Publishing an environmental impact report at least once before final allocation	159	126 (79%)	15 (9.5%)
Having the (final) allocation report and the Green Bond Framework verified	157	139 (81.5%)	12 (8%)

Table 4 – Feedback from targeted consultation on the EU GBS

For the reasons set out above, it is recommended that the core elements of the EU GBS should be aligned with market best practice.

Alignment with the EU Taxonomy

While being modelled on market best practice, the potential EU GBS would also go beyond existing standards by including a requirement to align bond proceeds with the Taxonomy.[42] As noted in section 1, this is a legal requirement for the EU GBS. In practical terms, this means that only those issuers with existing Taxonomy-aligned assets on their balance sheets, or plans to invest in new assets aligned with the EU Taxonomy, would be able to issue using the EU GBS.

Given that the Taxonomy sets out comprehensive and detailed criteria for the definition of projects that are green, some potential green bond issuers may struggle to meet this requirement. This means the standard would likely be more costly for the average green bond issuer to align with, compared to current market standards.

[42] In addition, it may include a requirement to only use authorised and supervised external reviewers, depending on the outcome of this impact assessment (see section 5.4).

At the same time, the EU GBS would likely allow certain issuers to increase the benefits typically associated with green bond issuance, such as a reputational boost for the issuer, a diversification of the investor base, and a potential green bond premium, since these benefits typically increase with the level of ambition and green assurance of the bond.

For the reasons set out above, the issuers most likely to benefit from (and therefore employ) the EU GBS are those wishing to demonstrate a strong green commitment. The overall positive feedback from issuers to the targeted consultation indicates that there are many such issuers. A more detailed assessment of the impact of the link with the Taxonomy is carried out in section 6 – Preferred option.

Transitional sectors in the Taxonomy

Because the EU Taxonomy includes transitional sectors, such as manufacturing, proceeds from EU GBS could also be used to fund activities that are not low carbon. These sectors are included because there is a need to stimulate emission reductions even in those sectors where zero carbon is challenging or impossible to achieve today. At the same time, many of these sectors have significant potential for CO2 reduction.

However, this inclusion creates a theoretical risk of undermining the green credibility of the standard, in particular given the fact that the leading ambitious green bond standard on the market, CBI, does not include such activities in its Taxonomy. At the same time, this risk is mitigated by the strict conditions impose by the Taxonomy Regulation, as also explained in annex 8.5, on those activities that may be considered transitional.

In particular, in order to be considered transitional, activities must have greenhouse gas emissions that are substantially lower than the sector or industry average and they must not hamper the development and deployment of low-carbon alternatives or lead to a lock-in of assets incompatible with the objective of climate-neutrality.

For green bond market participants, the advantages of including such activities are clear: issuers in transitional sectors, which has been an underperforming sector for green bonds, will have clear EU-sanctioned definitions of green to underpin their green bond issuance, substantially reducing the reputational risk of issuing. This could allow issuers that are currently wary of issuing green bonds to join the market. For investors, the EU Taxonomy will provide clarity on what is considered best in class[43], allowing those investors that wish to fund transitional activities to do so with more confidence in the greenness of their bond.

Grandfathering

The EU GBS proposal would envisage to allow issuers of existing green bonds to opt-in and designate their bond as an EU green bond, provided that all criteria for a new EU GBS bond are met. Green bonds that financed assets which do not meet the taxonomy criteria will not be able to carry the EU GBS designation. Deviating from this strict approach would undermine the increased transparency and consistency (in particular as concerns the green definition) that the standard aims to achieve.

[43] For example, for manufacturing sectors covered by the EU Emission Trading Scheme, TEG recommends using the ETS benchmark for free allocation for a sector (i.e. best 10% of carbon intensity) in order to specify the best performance in that sector.

As concerns grandfathering in the case of subsequent changes to the taxonomy, the proposal could stipulate that an EU green bond would retain this designation until it matures (= full grandfathering), even if a later amended version of the taxonomy would no longer classify the underlying asset or project as green. Options that would deviate from this approach have been excluded at an early stage (for more information, see Annex 13).

5.3.1. Policy options

For non-sovereign green bond issuers, such as Corporates, there are two alternatives:

1) **Option 1: EU GBS alignment voluntary for green bond issuers in the EU**
Under this option, issuers of green bonds would retain the freedom to decide whether to issue green bonds using the EU GBS or not. Should they choose to align with the EU GBS, they would have to meet all the requirements under the standard. Other market standards would still be available, and could potentially be used in combination with the EU GBS. For sovereign green bond issuers, this is the only alternative, since for legal reasons the standard cannot be made mandatory for these issuers.

2) **Option 2: EU GBS alignment mandatory for non-sovereign green bond issuers in the EU, with transitional phase in:**

The second option would be a mandatory standard for non-sovereign issuers, where all green bonds issued by such an issuer in the EU would need to make use of the EU GBS in order to be able to be called a green bond. The option of a mandatory standard also covering sovereign issuers was not assessed (see Annex 13). For corporate issuers, the mandatory alignment with the EU GBS would be phased in over a defined transitional period, with grandfathering of existing bonds to ensure that investors who have purchased green bonds in good faith are not penalised. After the transitional period, any green bonds that are issued without being aligned with the EU GBS would lose the right to label themselves as green bonds in the EU.

In addition, the policy option of "**Flexibility for corporate issuers with regards to Taxonomy-alignment"** was discarded at an early stage. Annex 13 describes the policy option in detail, as well as the reasons for discarding it at an early stage.

5.3.2. How do the policy options compare?

1) **Option 1: EU GBS alignment voluntary for green bond issuers in the EU**

PROs: This approach minimises the risk of holding back the market. It provides issuers of high quality green bonds with a dedicated standard to signal to investors their sustainability ambitions or achievements, without imposing it on those green bond issuers who are less ambitious. It would allow use of the standard to grow over time in line with market experience with the use of the taxonomy, and as legal requirements for Taxonomy-aligned disclosure gradually enter into force. Several respondents to the targeted consultation made the comment that it was important to keep the standard voluntary, and were worried that otherwise existing green bonds could lose their status as green. Depending on the

development of the green bond market and the success and take-up of the EU GBS, its voluntary nature could be reviewed (and potentially changed to binding) after a certain amount of time.

CONs: Take-up of EU GBS may be limited at first, or permanently. The risk of green-washing and potential market disruption from a controversy could persist. The lack of transparency and confusion about the green credentials of those green bonds not making use of the EU GBS would continue. Financial flows labelled 'green' would only partially contribute to achieving the EU climate objectives.

Impact on issuers	• Issuers would be given an extra standard which they can make use of. This would in particular benefit issuers of high quality green bonds, as the EU GBS is better tailored to such issuers. This would allow those investors the opportunity to better differentiate themselves from the market competition, which could contribute to increasing the benefits of green bond issuance for those issuers (i.e. reputational boost, green bond premium). • The additional cost of using the EU GBS would be lower for (1) issuers with a higher existing share of Taxonomy-aligned assets on their balanced sheet, and (2) issuers falling under the scope of the current NFRD, the future revised NFRD, or the SFDR (for financial institutions), who would all be required to disclose their share of Taxonomy-aligned assets and expenditure. For those issuers, some of the costs of identifying and reporting on the Taxonomy-aligned assets would already have been incurred. • For issuers active in sectors underserved by existing market-based taxonomies (e.g. steel, cement, aluminium or chemicals) the link to the EU Taxonomy in the EU GBS may persuade some of them to issue new green bonds to fund mitigating measures in their manufacturing process[44].
Impact on smaller issuers	• In the targeted consultation, some respondents worried that the requirements would be difficult to meet for SMEs wishing to issue green bonds, especially with regards to reporting and external review.
Impact on investors	• Investors would on the one hand be faced with yet another standard, which may increase confusion and fragmentation of the market. • On the other hand, they would benefit from the existence of a green bond standard with high quality assurance, allowing them more easily identify high quality green bonds, and to be less exposed to the risk of greenwashing. • Institutional investors wishing to bolster the green credentials of their portfolios would have at their disposal a new tool for identifying Taxonomy-aligned bonds, and this should help for example with increasing the share of taxonomy-alignment for the purposes of disclosures to clients under the SFDR. • Ultimately, this could also help retail investors access more high-quality green investment opportunities, for example through bond funds whose assets include EU GBS aligned bonds.
Impact on external reviewers	• External reviewers would be given a new business opportunity as registered reviewers of the EU GBS. • Even if a supervisory regime is set up, they would not be under any obligation to seek registration, as they would be free to continue serving other parts of the green bond market.

Table 5: Impact of voluntary standard

[44] See annex 7

2) Option 2: EU GBS alignment mandatory for green bond issuers in the EU, with transitional phase in:

PROs: The average quality of green bonds traded on EU markets would be higher. The clarity regarding green projects for all green bonds on the market would be higher. Investors would benefit from reduced cost of due-diligence. Financial flows labelled 'green' would strongly contribute to achieving the EU climate objectives as per the criteria in the Taxonomy Regulation.

CONs: There is a risk of constraining the market as the mandatory requirement is phased in. The Taxonomy remains untested in practice so it is difficult to assess the feasibility of using the EU GBS for current green bond issuers. There is a strong risk of issuance and trading moving to markets in third countries, especially as many issuers currently cannot comply with the Taxonomy at this stage. Only a very small group of respondents to the targeted consultation (3 out of 167) called for a mandatory standard.

Impact on issuers	• Since the term "green bond" would be reserved for green bonds aligned with the EU GBS, this option would narrow the available options for existing and prospective green bonds issuers. They would have the choice between issuing a green bond according to the EU GBS, or opting for another type of bond or debt instrument altogether. There would be no other forms of green bonds available. • For those issuers who are not able to identify Taxonomy-aligned assets on their balance sheets, or willing to invest in Taxonomy-aligned assets, issuing a green bond in the EU would no longer be possible. For this reason, they may choose to issue under third country jurisdictions.
Impact on investors	• The clarity regarding green projects for all green bonds on the market would be higher, which would reduce the risk of greenwashing. • However, the flow of green bonds would likely be reduced, at least in the short run, which is a bad outcome for investors, given the current high demand and oversubscription for green bonds.
Impact on external reviewers	• In the short run, the flow of green bonds would likely be reduced, so business opportunities would be reduced for external reviewers. However, in the long run, it is possible that business opportunities would increase, if the EU GBS leads to increased use of external review, especially for post-issuance review of the Taxonomy-alignment of proceeds. • If a supervisory regime is set up, all external reviewers of green bonds that wish to continue offering this service would need to seek registration under this regime. The costs of this for the reviewer will be assessed in section 5.4

Table 6: Impact of mandatory standard with phase-in

Comparison table:

The following table summarises the assessment of the options against those objectives which are relevant for the green bond market:

	Option 1: Voluntary standard	Option 2: Mandatory standard
Clarifying and harmonising definitions of green projects and	+ Depends on take-up. If EU GBS is used, it will help to disseminate	++ EU Taxonomy and market best practices on reporting and external review would become the

procedures for issuance	Taxonomy and harmonise definitions. Further fragmentation will be limited by alignment of EU GBS with market best practice.	norm. Full harmonisation.
Reduce costs for issuers	0 No net costs, as only those issuers who estimate a benefit from using standard would do so.	- While there may be a net benefit for some issuers, others may forego green bond issuance altogether.
Efficiency (cost-effectiveness)	+ Achieves objectives (partially) without imposing net costs on any issuers.	- Achieves objectives but imposes net costs on some issuers, and may end up disrupting market.
Impact on SMEs	0 SMEs will be free to disregard the standard, but in some cases they may also be disadvantaged by not being able to afford to use the standard.	- Some issuers may struggle to use standard due to market best practice requirements.
Other economic, environmental, social and fundamental rights impacts	+ Positive environmental impact and positive economic impact. Social safeguards are included in Taxonomy.	+ Positive environmental impact but less positive economic impact, as there may be less green bond issuance. Social safeguards are included in Taxonomy.
Coherence with EU policy objectives	++ Aligned with overall EU sustainable finance strategy and transition to carbon neutrality	+ Aligned with overall EU sustainable finance strategy and transition to carbon neutrality, but market disruption may harm Capital Markets Union. (Issuers could choose to stop issuing green bonds altogether)

5.4. Policy dimension 2: Regulatory treatment of external reviewers of EU GBS-aligned green bonds

This policy dimension assesses two potential options for the regulatory treatment of third parties providing external review services to issuers of EU GBS-aligned green bonds, in light of the issues identified as part of problem driver 2.4.1[45]

Stakeholder feedback to both the RSFS public consultation and the EU GBS targeted consultation indicated broad market support for an external reviewer regime[46]. In the RSFS public consultation, a significant majority (78.8% of 141 responses) supported the introduction of a certification and supervision regime for external reviewers administered at the EU level. At the same time, respondents highlighted the importance of proportionality in any new regime to ensure that smaller entities can continue to provide these services.

The introduction of a formalised regime for external reviewers would be a forward-looking and pre-emptive action.[47]. So far, there are no significant issues identified in the market for external review of green bonds, which in any case is still quite small, with annual revenue estimated between EUR 5 million and EUR 10 million. But the market for EU GBS bonds

[45] Heterogeneity, lack of transparency, and potential issues relating to conflicts of interest in the external review market

[46] See Annex 2 for more info on stakeholder feedback.

[47] Preliminary ESMA market estimations, based on an average fee of EUR 40,000 per issuer and overall green bond issuance of EUR 490 billion

does not yet exist, so it is impossible to say for certain what issues may be encountered in the external review market for such EU GBS bonds.

In particular, the potential regime for external reviewers would aim to raise overall trust levels in the external review process and the protection of the integrity of the EU GBS. By raising the level of trust in the market, investors will be able to more easily identify green high quality green bonds, which will support the further development and growth of the market. Integrity is particularly important for the EU GBS, since it will cater to the higher quality segment of green bonds, thanks to its alignment with the EU Taxonomy and market best practice.

Imposing a framework on all external reviewers would undermine the voluntary approach being taken for the EU GBS which is intended to only be used by those market players that fully support its objectives and are willing to bear the additional cost or administrative burden to deliver meaningful and trustworthy green investments to the market.

In the same vein, the TEG recommended[48] the establishment of a regime to promote the development of the European green bond market by improving the quality and standardisation of the review process for the EU GBS, while ensuring a level playing field across the Union and meet the high demand from investors seeking quality green financial assets.

The framework should build upon the existing pool of service providers while ensuring a level-playing field for companies that have the relevant skills to provide external review services. The calibration of the framework's requirements are key to ensuring that it does not act as a disincentive for firms to register or force smaller firms out of the market. It is also important to consider the resource requirements at supervisor level to minimise costs and resource demands to administer the new scheme.

In order to support the entry of smaller participants into the market, the framework must be proportionate in its requirements in order to reflect the nature and scale of activity. By including proportionality measures and limiting the framework's requirements that would necessitate organizational changes and require additional financial resources, risks associated with insufficient competition can be avoided. Such risks include higher prices or other barriers to entry, and inadequate choice for smaller issuers.

As the market grows in size and importance or if specific issues arise regarding the conduct of external reviewers more generally, the framework could be reviewed and extended to encompass all external reviewers or could be incorporated into other potential Commission initiatives to improve supervision of entities in the green market more generally.
While the majority of existing external reviewers are based in the EU, provision could be made in the proposed framework to facilitate third country reviewers that wish to assess compliance with the EU GBS. Existing frameworks contain equivalence provisions or allow for certification or endorsement of third country entities[49].

[48] June 2019 TEG report on an EU GBS
[49] Additional information is contained in the External Review Annex.

5.4.1. Policy options

With regard to a potential regulatory regime for external reviewers, the two main policy options are:

1) **Registration and limited supervisory oversight and requirements:** This option consists of tasking ESMA with registering external reviewers of the EU GBS, which would require a legislative instrument. Under this approach, external reviewers would be required to only register with ESMA with limited ongoing supervisory requirements.

2) **Authorisation and supervision with more stringent requirements:** This option consists of tasking ESMA with authorising and supervising external reviewers of the EU GBS, which would require a legislative instrument. This approach entails a more stringent framework for the authorisation and supervision of external reviewers.

In addition, the policy option of "**tasking national competent authorities (NCAs) with managing a regime for external reviewers"** was discarded at an early stage. Annex 13 describes the policy option in detail, as well as the reasons for discarding it at an early stage.

5.4.2. How do the policy options compare?

1) **Option 1: ESMA registration with limited ongoing supervision**

The framework for external reviewers of the EU GBS could set out requirements on their minimum professional conduct, transparency and registration and supervision. For example, external reviewers could be subject to requirements on professional ethics, good repute, objectivity, independence and conflicts of interest, and be required to demonstrate and maintain professional minimum qualifications, quality assurance and control and be required to follow specific procedures when carrying out verification activities, in particular whether bond proceeds have been used to finance Taxonomy aligned expenditures. In order to be registered, the external reviewer would need to demonstrate that it only charges non-discriminatory and cost-based fees to issuers and that its fees are not dependent on the results of its assessment activities.

The external reviewer would be required to ensure that the members of its management body have appropriate levels of qualification and expertise to fulfil its tasks and that they conduct their activities with integrity and good repute. The external reviewer should have proper operational safeguards and internal processes that enable it to assess the compliance of a green bond with the EU GBS requirements.

With regards to conflicts of interest, there could be specific requirements to ensure that the external reviewer and its employees are independent from the issuer and the verification is carried out objectively, independently and is not affected by any existing or potential conflicts of interest or business relationship. Potential or existing conflicts of interest that have been identified should be eliminated or mitigated and disclosed without delay. The reviewer would also be required to document its relevant policies and procedures in order to evaluate their effectiveness. The designated competent authority would be empowered to investigate and take enforcement action if necessary to ensure the integrity of the market and the EU GBS.

The approach for registration and supervision of external reviewers could be similar to that for third party verifying STS compliance[50]. This would allow for the registration of an external reviewer with a designated competent authority, in order to register them to assess the compliance of a green bond with the EU GBS and to carry out post-issuance verification of the use of proceeds. A current list of registered external reviewers and green bonds that have been issued with an SPO (Second Party Opinion) on their compliance with the EU GBS requirements could be provided on an official website maintained by ESMA.

PROs: This approach would have the benefit of a single registration process for external reviewers with a limited ongoing supervisory burden. The framework would be based on a set of proportionate requirements covering professional conduct and transparency of the external reviewer's policies and procedures that the designated competent authority would assess an application against. These requirements would be proportionate to the current size of the external reviewers, the general market and the non-systemic nature of their activity. This approach would minimise the cost and resource implications for both external reviewers and the designated competent authority whilst increasing accountability and market transparency.

CONs: Under this option, external reviewers would not be subject to more stringent requirements covering their organisational structure and financial resources. This might create the risk that the external reviewer's activity is of lower quality, which could lead to increased reputational risk for issuers and negatively impact the reputation of EU GBS bonds. Less intensive ongoing supervision would limit the ability of the designated competent authority to actively detect and intervene in the event of a failure to comply with the requirements of the framework by an external reviewer.

Impact on reviewers	• This option could impose initial compliance costs for reviewers, because they will have to fulfil a number of on-boarding requirements, including paying an initial application fee, set under the registration process which they may not necessarily do at the moment. • They have to pay a fee for registration. • There will only be limited costs for ongoing supervision. For example, 1 FTE may be required for compliance purposes. • Registration is mandatory only for reviewers of EU GBS bonds. • While existing industry-based green bond standards might evolve and incorporate the Taxonomy, only issuers of EU GBS bonds will be able to show that their external reviewers are registered and supervised. Registering will allow external reviewers to access the additional business segment of verifying bonds issued according to the EU GBS. It will also give a proof of quality comparative advantage over those reviewers that chose not to register when competing for verification business in the segment of industry-based green bond standards. • 1 – 1.5 FTE for compliance activity. • Initial application fee between EUR 1,500 and EUR 5,000. • Ongoing supervision EUR 500 to EUR 2,000 per year.
Impact on issuers	• Issuers may have to pay more, because reviewers might pass on their compliance costs to them. • If issuers do not want to pay for external review, they can choose to follow other practices or market standards as the EU-GBS is a voluntary standard. • The TEG expects that, even if only voluntary, the EU-GBS would rapidly gain

[50] Article 28 of Securitisation Regulation (EU) 2017/2402

	significant market recognition. Investors may expect issuers to use the EU GBS and this may lead to a market preference or pricing advantage over other standards. • Non-compliance with the verification standards entails a reputational cost for the company. It is reasonable to assume that external verification provides a stronger signal to investors of the environmental commitment of the green issuers than a self-attributed green label.
Impact on investors	• The benefits for investors are dependent on the types of requirements that will be imposed on external reviewers. For instance, investors will benefit from more credible external reviews where the independence, objectivity and quality assurance of the service is guaranteed by the framework. Greater standardisation of reporting templates would improve transparency and comparability. Investor confidence in the integrity and independence of the process would be enhanced.
Impact on EU budget	• ESMA would require additional resources to carry out supervisory tasks with a one-off cost to cover the development of the IT platform. • According to the TEG, even under a scenario that assumes strong and continued growth in the green bond market the number of external reviewers to be registered is expected to remain relatively small[51] implying that the additional supervisory resources required would also be limited. • <0.3 FTE per regulated entity. 1-2 FTE for database and ICT development and maintenance.

Table 8 - Impact of centralised registration by ESMA

2) Option 2: ESMA Authorisation with more stringent ongoing supervisory oversight and requirements:

Under this approach, external reviewers of the EU GBS would be required to submit significant information on their business plans, organisational and resourcing arrangements, governance structures, policies and procedures for ensuring compliance with the Regulation and their assessment methodologies. Once an application is deemed complete, the supervising body would then have to carry out a detailed analysis to ensure it meets the Regulation's requirements before submitting a decision on authorisation to ESMA's Board of Supervisors or the NCAs' Board. A fee would be payable to submit the application and reviewers would be subject to ongoing supervisory fees depending on their size and turnover.

This approach would be similar to that taken in the Credit Rating Agency Regulation (EU) 462/2013 with stringent requirements imposed on external reviewers that wish to provide services to issuers of the EU GBS.

In this regard, it is important to note the key differences between CRAs and external reviewers – CRAs are systemically important entities relied upon by the market to issue independent ratings on the creditworthiness of a financial instrument. The determination of a rating is a complex and detailed process requiring forecasting and modelling of potential impacts of changes in market conditions or in the underlying assets. Credit ratings have significant implications for the pricing of an instrument.

In the case of credit ratings, there are requirements in the EU legislations (CRR, Solvency II) related to the use of credit ratings in the process of determination of the amount of regulatory capital. Credit ratings therefore have an impact on the type and amount of financial

[51] Currently only six external review providers account for more than ¾ of the market. CICERO: "Milestones 2018. A practitioner's perspective on the Green Bond Market", 2018 (Link)

instruments that credit institutions and insurance undertakings need to hold for the regulatory purposes.

In contrast, external reviewers operate in a niche market for green bonds, and while their opinions are an important source of assurance for investors and issuers regarding the sustainability of their investments, the activity is non-systemic and has limited pricing impact on the final price of the bond.

PROs: This approach would have the benefit of a single authorisation process for external reviewers and harmonised supervision across the union. It could improve standardisation and quality of the external review process and transparency for issuers and investors about the activities of external reviewers.

CONs: ESMA or the designated national bodies will require additional resources to establish and administer this new process, and it will take time to complete the legislative process to grant the necessary powers to ESMA or the designated national bodies. A comprehensive framework would create significant additional costs for external reviewers and ESMA or the designated national bodies. A more stringent framework, similar to the Credit Rating Agency Regulation, is not proportionate given the size of the market and the non-systemic nature of their activities.

Impact on reviewers	• This option would impose higher compliance costs for reviewers, because they will have to fulfil the requirements set under the supervision framework, which they may not necessarily do at the moment. • They will have to pay a fee for registration • They will have to bear costs for ongoing supervision. • They would have to incur organisational and resource costs to comply with the framework. For example, a minimum headcount of 5 FTEs is required for a small entity to be able to comply with the full CRA framework. Based on average salary of EUR 50,000 to EUR 90,000 this would be approximately EUR 250,000 to EUR 350,000. • Authorisation would be mandatory only for reviewers of the EU GBS bonds. • Given the small size of the market for external review in terms of annual total revenue, external reviewers may not see the benefits of seeking authorisation compared to the costs they have to bear for it. • This approach could favour larger entities in particular CRAs that are active in the space and can more easily comply with the requirements. The overall burden of the new regime could be too much for smaller entities. • ESMA application fees under the CRA Regulation range from EUR 30,000 to over EUR 100,000 for larger entities. Ongoing supervision costs of up to EUR 20,000 per year.

Impact on issuers (larger entities)	• Issuers may have to pay more, because reviewers might pass on their compliance costs to them • If issuers do not want to pay for external review, they can choose to follow other practices, because the EU-GBS is a voluntary standard. However, the TEG believes that, even if only voluntary, the EU-GBS could rapidly gain market recognition and become the new standard for green bonds. Investors may have a preference for EU GBS aligned green bonds. • Non-compliance with the verification standards entails a reputational cost for the company. Hence, it is plausible to assume that external verification provides a stronger signal of the environmental commitment of the green issuers than a self-attributed green label. • At least 1 authorised external reviewer would be required to provide the necessary SPO and/or post-issuance reporting. If the compliance costs are too high there is a risk that no external reviewers seek authorisation which would have a significant impact on the ability of issuers to issue bonds under the EU GBS.
Impact on issuers (smaller entities)	• If smaller entities are forced out of the market by larger entities, this leads to market concentration of external reviewers, which could lead to higher costs for issuers • The EU-GBS is a voluntary standard, so smaller entities can also choose to follow other practices in order to avoid any additional costs of the EU GBS framework. • The TEG expects that, even if only voluntary, the EU-GBS would rapidly gain significant market recognition. Investors may expect issuers to use the EU GBS and this may lead to a market preference or pricing advantage over other standards. • Non-compliance with the verification standards entails a reputational cost for the company. Hence, it is plausible to assume that external verification provides a stronger signal of the environmental commitment of the green issuers than a self-attributed green label.
Impact on investors	• Investors will benefit from more credible and comparable external reviews
Impact on EU budget	• ESMA will require additional resources to carry out supervisory tasks. Initial estimates based on the approach taken with CRAs indicates a requirement of 0.3 FTE per authorised entity. The associated development and maintenance of IT systems and databases could require up to 2 FTE. Based on an assumption of 10 regulated entities the annual cost of supervision would range from EUR 1.1 million in year 1 to EUR 850,000 from year 2 onwards. The additional cost in year 1 is to cover the cost of associated ICT development • The implied cost of the decentralised regime would be a multiple of the resource requirements indicated for ESMA as each competent authority would need to recruit additional staff and build the necessary IT systems. • ESMA envisages environmental issues as becoming part of its mandate going forward. For example, ESMA has been asked to build capacity on sustainability for other purposes (MiFID II; fiduciary duty). Additional green expertise and capacity within ESMA will be required, but can be used for multiple supervisory purposes. ESMA also participated in the work of the TEG and supports taking on this new role. • Differing approaches at national level could lead to divergence between Member States. Some Member States may also lack the necessary expertise and knowledge to effectively carry out these functions at the national level or may not have a suitable existing body to designate.

Table 9- Impact of centralised authorisation and supervision by ESMA

Comparison table

The following table summarises the assessment of the options against the objectives set out in section:

	Option 1	**Option 2**
Harmonising outcomes, improving transparency and addressing conflicts of interest in the external review market	++ Improved transparency and accountability Better informed investment decisions Cost savings from having to gather, assess and compare information	+++ Improved transparency and accountability Better informed investment decisions Cost savings from having to gather, assess and compare information
Reduce costs for external reviewers	- Increased supervisory and organisation costs due to additional compliance activities	-- Increased supervisory and organisation costs due to more stringent compliance requirements
Efficiency (cost-effectiveness)	+ Improved reliability, usability and comparability of reports and data reducing costs for issuers and investors Documented policies and procedures for addressing conflicts of interest reducing level of investor research required Mitigates against potential reputational damage for issuers and reviewers or need to seek multiple external reviews	-- Limited size of current market and non-systemic nature of the activity reduce the efficiency benefit of more stringent measures as the imposed costs would be outsized in comparison to the perceived risks The significant additional costs in terms of the minimum FTE requirement for compliance may discourage firms from seeking authorisation
Impact on SMEs	- Increased costs may be passed on to issuers which proportionally would have a greater impact on smaller issuers such as SMEs. Smaller reviewers would also be impacted to a greater extent by increased supervisor and compliance costs.	-- Additional supervisory costs may be passed on to issuers Smaller reviewers would also be impacted to a greater extent by increased supervisor and compliance costs.
Other economic, environmental, social and fundamental rights impacts	++ Behavioural changes of companies to be more sustainable Increased investment flows to sustainable projects and companies	++ Behavioural changes of companies to be more sustainable Increased investment flows to sustainable projects and companies
Coherence with EU policy objectives	++ Aligned with overall EU sustainable finance strategy and transition to carbon neutrality	++ Aligned with overall EU sustainable finance strategy and transition to carbon neutrality

Costs under option 3 are based on the application of a regime based on the CRA Regulation. Option 2 is costed relative to this.

5.5. Policy dimension 3: Flexibility for sovereign issuers[52]

Sovereigns are important issuers of green bonds: public sector green bond issuances represented more than one third of global issuances of green bonds in 2018[53]. In order to cover the market for green bonds, the EU GBS should also cater to sovereigns. This section

[52] (see annex 10 on sovereign bonds for more details).
[53] Moody's Investor Services: *"2019 Global Green Bond Outlook", 2019* (Link)

explores the extent to which specific flexibility in meeting the requirements of the EU GBS is justified to allow sovereigns to make use of the standard on a voluntary basis.

The TEG proposed that the EU GBS should apply equally to private and public (including sovereign) issuers. In their report, they specified that green expenditures for sovereigns and sub-sovereigns could include relevant public investments, subsidies and expenditures. This section will focus exclusively on the case of a voluntary EU GBS for sovereign issuers – there is no policy option for a mandatory standard for sovereign green bonds, as the chosen legal basis – Article 114 TFEU – does not warrant such type of legislative action (see Annex 13 – discarded options).

Specificities of sovereign issuers

The process of issuing a Sovereign green bond is similar to that of issuing a corporate green bond, with some specificities. Stakeholders have mentioned the following particularities of Sovereign green bond issuers, and how it might affect their use of the EU GBS:

- **Types of expenditure funded:** Although Sovereign green bonds may directly finance tangible assets such as infrastructure, they also target more indirect and decentralised expenditures, such as subsidies and operational expenditures. Intangible assets, such as research and innovation, also appear more frequently in sovereign bonds than corporates.
- **Lack of project level overview of impacts:** It may be difficult for a sovereign to state with certainty that all items funded are aligned with the Taxonomy, in particular the Do No Significant Harm (DNSH) criterion. Sovereigns typically fund grant schemes, and are not always in the supply chain for individual projects. Energy efficiency grants which are distributed to firms in many different industries were mentioned as a potential example.
- **A preference for state auditors:** public issuers may prefer to use existing state agencies specialised in government accounts rather than external third parties for the review of the allocation of bond proceeds.
- **Legal restrictions on committing unspent proceeds:** In some cases, a forward-looking approach to the allocation of green funds is not possible. This could be for example if the Green Bond Framework of a sovereign issuer cannot commit a Parliament or pre-empt the final decision on the allocation of state funds.

This means that two types of flexibility may be relevant for Member States wishing to apply the EU GBS: flexibility linked to the EU Taxonomy Regulation (i.e. on use of proceeds) and flexibility linked to other requirements. These two will now be discussed in order.

1) Flexibility linked to the EU Taxonomy Regulation

In its draft report on the EU GBS, the TEG advocated for the inclusion of a limited degree of flexibility related to the specific technical screening criteria set out in the Taxonomy Delegated Acts, by relying on the fundamental principles of the Taxonomy Regulation to verify that investments align with the Taxonomy (the "TEG approach"). This was justified by the need to handle gaps in the gradual development of the Taxonomy, and areas where the criteria would not directly applicable, such as outside the EU's borders or for particularly innovative projects.

While Member States that responded to the targeted consultation on the EU Green Bond Standard were in general supportive of the core components of the EU GBS as proposed by

the TEG, and especially of the alignment with the Taxonomy, a number of Member States also agreed with the TEG's proposal for flexibility.

However, there is an important legal dimension to the question of flexibility from the requirements of the EU Taxonomy Regulation. Article 4 of The EU Taxonomy Regulation specifies that: "*Member States and the Union shall apply the same criteria set out in Article 3 to determine whether an economic activity qualifies as environmentally sustainable for the purposes of any measure setting out requirements for financial market participants or issuers in respect of financial products or corporate bonds that are made available as environmentally sustainable.* "

Given that the EU GBS initiative will pursue, as its core objective, the aim of delineating the boundaries of what shall constitute an 'environmentally sustainable' bond, the EU Taxonomy will need to be applied fully to determine the eligibility of the proceeds of the bond issuance, for corporate issuers. This excludes the type of flexibility suggested by the TEG for corporate bonds.

However, although the EU is not legally allowed to deviate from the Taxonomy Regulation when setting out standards for green bonds issued by corporates[54], this restriction does not apply in the case of Sovereign issuers. Accordingly, there is legal scope for affording flexibility around the definition of eligible green proceeds for potential sovereign issuers of EU GBS green bonds. Two such potential flexibility approaches are explained below.

1) "Flexibility pocket" approach

One potential approach is to allow Sovereign issuers to include as proceeds in their EU GBS-aligned bond expenditure that has a positive environmental impact, but is not Taxonomy aligned. Under such a "flexibility pocket" approach, the proceeds of the sovereign EU GBS bond would be clearly divided into two parts: one part that would be 100% aligned with the criteria of Article 3 of the Taxonomy Regulation, and a second part (the "pocket") where there would be flexibility to diverge from the Taxonomy.

The size of this pocket would be capped, and subject to some minimum criteria: for example, only economic activities not covered by existing Technical Screening Criteria under the EU Taxonomy, because those criteria are not yet developed for a specific sector or a specific environmental objective, would be eligible for the flexibility pocket. Furthermore, economic activities would still need to (i) substantially contribute to one of the six environmental objectives as set out in the Taxonomy Regulation, (ii) do no significant harm to any of these objectives, and (iii) meet the minimum safeguards of the Taxonomy Regulation. The projects in the flexibility-pocket would not be considered Taxonomy-aligned.

The separation into two parts would facilitate the task for financial institutions holding these bonds of disclosing Taxonomy-alignment under the Sustainable Finance Disclosures Regulation.[55] Any use of flexibility would be accompanied by appropriate disclosures, to ensure that investors are fully aware of its extent, and can discount the Taxonomy-alignment of the bond accordingly.

[54] Cf. Article 4 of the Taxonomy Regulation, see discarded options

[55] 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 (Link)

Member States were consulted on the "flexibility pocket" approach using a targeted questionnaire (see Annex 9 for full results).

2) Applying the "TEG approach" only to sovereign issuers: applying the Taxonomy by relying on its fundamental principles

Another potential approach would have been to follow the TEG approach outlined on the previous page, but only for sovereign issuers.

In practice this approach could lead to certain paradoxical outcomes: given that sovereigns and corporates often ultimately fund the same economic activities, flexibility in the application of the Taxonomy could lead to inconsistencies. In particular, such flexibility could lead to the exact same economic activity being judged differently based on the source of its funding.

For example, a project outside the EU could potentially be deemed Taxonomy-aligned while an identical one inside the EU would not be. Or a project in a sector not yet covered by the Taxonomy could be deemed Taxonomy-aligned if it's funded by a sovereign, but not if it's funded by a corporate. This could lead to unwanted outcomes, such as allowing public actors to crowd out private actors by being able to offer "Taxonomy-aligned" funding where the private sector is not. In order to avoid this inconsistency, it is not recommended to give sovereigns the flexibility to interpret or apply the Taxonomy differently to corporates. For these reasons, Member States were not actively consulted on the "TEG approach" to flexibility.

2) Flexibility linked to other requirements

Taking into account the issues mentioned by sovereign respondents to the consultation, potential flexibility for sovereign green bond issuers could also be possible with regards to other aspects, such as the reporting and review requirements of the EU GBS. In particular, the following types of flexibility could be considered for sovereign issuers of EU GBS-aligned green bonds:

- Allowing, if necessary, sovereign issuers and the reviewers of their EU GBS-aligned green bonds to assess the alignment with the criteria of the Taxonomy Regulation based on the terms and conditions of funding programmes, rather than at project level. This could greatly facilitate the process of assessing Taxonomy-alignment for sovereigns, especially in case of government programs funding multiple projects according to Taxonomy-aligned terms and conditions.
- Allowing sovereign issuers to rely on internal state auditors instead of external third parties for the review of the allocation of proceeds.

5.5.1. Policy options

Based on this feedback, the following three options are proposed to grant flexibility to sovereign issuers wishing to make use of the EU GBS when compared to the requirements for private issuers:

- **Option 1: No flexibility compared to corporate issuers**

- **Option 2: Flexibility regarding other requirements, <u>but not</u> the EU Taxonomy Regulation)**
- **Option 3: Flexibility regarding other requirements <u>and</u> the EU Taxonomy Regulation**

These options are cumulative in the level of flexibility, i.e. option 3 includes the flexibility of option 2 but goes further by adding flexibility on taxonomy requirements. Keeping this in mind, the following assessment will focus on the impact of the additional flexibility introduced for each option.

5.5.2. <u>How do the policy options compare?</u>

1) Option 1: No flexibility compared to corporate issuers

<u>PROs:</u> Full consistency. No preferential treatment of the public sector. The credibility of the standard will be boosted.

<u>CONs:</u> Additional difficulties for sovereign issuers to make use of the EU GBS.

Impact on sovereigns	<u>Impact of no EU Taxonomy Regulation-related flexibility:</u> Sovereigns wishing to use the EU GBS would need to comply fully with the Taxonomy. Depending on when the EU GBS is adopted, sovereigns may struggle at first to identify enough Taxonomy-aligned expenditure to justify issuing an EU GBS bond. But the time it will take co-legislators to negotiate and adopt the EU GBS (estimated Q2 2022) may give some MS the time to make the necessary preparations. Sometimes it may be the case that MS have expenditure which is green and of equal ambition to something which would be Taxonomy-aligned, but still not Taxonomy aligned due to differences with the Taxonomy TSCs. In such cases, MS would need to adapt their sustainable expenditure (e.g. relevant funding programs) to ensure Taxonomy alignment. In the medium to long run this could lead to more Taxonomy-alignment in general, as it would also incite the private sector to follow suit. In the meantime, sovereigns could also chose to follow other standards, as in any case the EU GBS would be voluntary for sovereigns. <u>Impact of no flexibility on other aspects:</u> Sovereigns wishing to use the EU GBS would also need to comply fully with the EU GBS-related requirements for corporate issuers, including on external review, project-by-project reporting, and refinancing. - On project-by-project reporting, it is likely that the lack of this flexibility would cause significant hindrances for MS issuers, as they are not used to proving alignment by assessing every single project, and they gave quite strong support for this flexibility in their stakeholder feedback. - On external review, only a couple of sovereign issuers have made not made use of external third parties, so the loss of this flexibility would mean that only a small minority of MS would need to adapt their practices.
Impact on corporates	Corporates issuing the EU GBS would benefit from a level playing field with sovereigns in terms of use of proceeds. In particular, this means that they would not be disadvantaged when seeking to finance green expenditure using the EU GBS.
Impact on investors	Investors would benefit from full clarity as there would be no exceptions for sovereigns. They would be able to treat sovereign EU GBS bonds as fully Taxonomy aligned, even at the individual project level.

	However it is also likely that sovereign issuance of EU GBS would be lower under this option, meaning that there would be fewer bonds to meet the demand for high quality green bonds.

Table 10- Impact of no flexibility option

2) Option 2: Flexibility regarding other requirements, but not the EU Taxonomy Regulation

PROs: Consistency with regards to the Taxonomy. Coherent definitions of what is green. Flexibility on EU GBS requirements overcomes the main obstacles sovereigns would face in using the EU GBS. Feedback from MS shows that they are mostly in favour of flexibility related to other (i.e. non Taxonomy-related) requirements.

CONs: Sovereigns may struggle to apply the Taxonomy 100%, which would be challenging for them and may limit their use of the EU GBS.

Impact on sovereigns	Impact of no Taxonomy-related flexibility: Similar to option 1. Impact of flexibility with regards to other requirements: Sovereigns wishing to use the EU GBS would be given flexibility with regards to other requirements, including on external review, project-by-project reporting, and refinancing. - On project-by-project reporting, the additional flexibility will help MS that wish to issue green bonds to fund decentralised spending programmes, such as subsidies for renewable energy installation or energy efficiency measures. The flexibility to assess government spending programmes based on their terms and conditions, instead of assessing each of the individual projects funded, would greatly facilitate the process of assessing Taxonomy-alignment for sovereign issuers, and could support increased sovereign use of the EU Taxonomy. - On external review, those MS who wish to do so will be able to make use of their state auditors to review allocation reports.
Impact on corporates	Despite some flexibility given to sovereigns, corporates issuing the EU GBS would still benefit from a level playing field with sovereigns in terms of use of proceeds. In particular, this means that they would not be disadvantaged when seeking to finance green expenditure using the EU GBS.
Impact on investors	Investors would benefit from full clarity on use of proceeds and Taxonomy-alignment, as there would be no exceptions in this respect for sovereigns. They would be able to treat sovereign EU GBS bonds as fully Taxonomy aligned, although they may occasionally ask for additional clarifications at project level. However it is also likely that sovereign issuance of EU GBS would be slightly lower under this option (although still higher than under option 1), meaning that there would be fewer bonds to meet the demand for high quality green bonds.

Table 11 - Impact of some flexibility option

3) Option 3: Flexibility regarding other requirements and the EU Taxonomy Regulation

PROs: Sovereigns would be fully facilitated in their use of the EU GBS, and their ability to identify EU GBS-eligible expenditure on their balance sheets may be higher, potentially allowing them to more easily issue EU GBS-aligned green bonds if they choose to.

CONs: Feedback from MS shows that they are divided on the question of flexibility on Taxonomy-related requirements, with some expressing significant reservations. So far, the green bond market has not operated with separate requirements for sovereigns and sovereigns, so this would be an untested approach. Inconsistencies within the EU GBS could lead to paradoxical situations, and it could weaken the usefulness of the EU GBS as a gold standard for high quality green bonds, as it would give less certainty on the positive environmental impact of use of proceeds.

Impact on sovereigns	Impact of Taxonomy-related flexibility: Sovereigns would be fully facilitated in their use of the EU GBS. By using the flexibility pocket, their ability to identify EU GBS-eligible expenditure would rise. This could facilitate the issuance of EU GBS-aligned green bonds, in particular for smaller MS. At the same time, as pointed out by a majority of MS in feedback, such inconsistencies between sovereigns and corporates could lead to a situation where sovereign EU GBS bonds are considered less green than corporate EU GBS bonds. Investors would need to account for the potentially lower share of Taxonomy-alignment of sovereign EU GBS bonds. There is a risk that this would cause them to treat sovereign EU GBS bonds as less desirable than corporate bonds, which means that funding costs for sovereigns using green bonds could rise (i.e. their green bond premium would be lower). For this reason, it is not clear to what extent sovereigns would choose to make use of the flexibility pocket. Overall, feedback from MS shows that they are divided on the question of flexibility on Taxonomy-related requirements, with some expressing significant reservations. Impact of flexibility with regards to other requirements: Similar to option 1.
Impact on corporates	Corporates would in effect have stricter conditions for using the EU GBS compared to sovereigns. Depending on the extent to which sovereigns make use of the flexibility pocket, they may find themselves at a disadvantage in certain situations. For example, a sovereign would be able to issue an EU GBS-aligned bond for funding certain projects, where corporates would not be able to do the same.
Impact on investors	Because of the flexibility pocket following different requirements from the rest of the bond, investors would need to devote resources to checking the greenness of the expenditure in the flexibility pocket. There is a risk that this would cause them to treat sovereign EU GBS bonds as less desirable than corporate bonds.

Table 12 - Impact of full flexibility option

Comparison table:

The following table summarises the assessment of the options against those objectives which are relevant for the green bond market. The options are assess compared to each other (not compared to the baseline).

	Option 1	**Option 2**	**Option 3:**
Clarifying and harmonising definitions of green projects and procedures for issuance	++ This option would preserve full harmonisation between sovereign and corporates	+ This option would mostly preserve harmonisation between sovereign and corporates.	- This option would create divergence in the definition of "green", and could lead investors to discriminate against sovereign bonds.
Reduce costs for issuers	0 This option would not reduce costs for sovereigns	+ This option would reduce costs for issuers, including potentially quite significant costs associated with assessing Taxonomy-alignment of individual projects.	+ This option would allow sovereigns to include elements in use of proceeds without assessing Taxonomy-alignment. But the market price of their bonds may go down due to being perceived as less green.
Efficiency (cost-effectiveness)	0 This option does not reduce costs for sovereigns.	+ This option reduces costs while achieving most objectives.	- This option reduces costs, but does not achieve the objective.
Impact on SMEs	0 N/A	0 N/A	0 N/A
Other economic, environmental, social and fundamental rights impacts	0 Positive environmental impact, negative economic impact as sovereign issuance is not facilitated.	+ Positive environmental impact and positive economic impact, as sovereign issuance is facilitated.	0 Potential negative environmental impact, as coherence of Taxonomy definitions challenged. Positive economic impact, as sovereign issuance is facilitated.
Coherence with EU policy objectives	0 Aligned with overall EU sustainable finance strategy and transition to carbon neutrality, but sovereigns will not be encouraged to issue EU GBS, which may harm Capital Markets Union	+ Aligned with overall EU sustainable finance strategy and transition to carbon neutrality	- Not aligned with overall EU sustainable finance strategy due to deviations from harmonisation under Taxonomy definitions.

5.6. Options discarded at an early stage

The following options were considered but discarded at an early stage:

(1) Non-legislative measure: Commission Communication on an EU GBS
(2) Developing other standards and labels as part of a framework
(3) Tasking national competent authorities (NCAs) with managing a regime for external reviewers
(4) Flexibility for corporate issuers with regards to Taxonomy-alignment
(5) A mandatory standard for sovereign issuers
(6) Banning the refinancing of existing green assets and expenditure by the EU GBS
(7) Options which may imply the loss of green status before the bond matures.

Annex 13 describes each of these options in detail and the reasons for discarding them at an early stage.

6. PREFERRED OPTION

The chosen option builds on market best practices in the field of reporting and external review, and on the alignment with the EU Taxonomy. The alignment with market best practices is justified based on the desire to position the EU GBS as the foremost standard in terms of transparency, legal certainty, and environmental credibility. It will also help avoid fragmentation and reduce confusion for issuers and investors. The link with the criteria in the Taxonomy is legally mandated. In feedback from the targeted consultation on the EU GBS, the vast majority of respondents agree with these choices.

6.1. Policy dimension 1: scope of application

The current data and stakeholder evidence indicates that under the mandatory option, there is a risk of strong disruption to the green bond market. In contrast, the voluntary standard achieves many of the same objectives, while minimising market disruption. Whereas a mandatory standard forces net costs on some, a voluntary standard will likely only be used by those who see a net benefit in doing so. For this reason, the voluntary option avoids discouraging issuers from issuing green bonds, and impairing the development of green bond markets.

A voluntary standard would in particular appeal to issuers of high quality green bonds, allowing them to highlight more clearly to investors and others their environmental credentials. For these issuers, the potential additional costs of complying with the EU GBS (in particular related to the assessment of taxonomy-alignment and external review) would more likely be cancelled out by higher benefits, such as investor demand and a potential green bond premium, would also likely be higher. This possibility is supported by the strong interest shown from stakeholders in the EU GBS.

In the targeted consultation, several respondents made the comment that it was important to keep the standard voluntary, and expressed worries that existing green bonds could otherwise lose their status as green. Only a very small group (3 respondents out of over 160) called for a mandatory standard.

The conclusion of this assessment is therefore that option 1 (EU GBS alignment voluntary for green bond issuers) is the best policy option. This means that green bond issuers in the EU and elsewhere will be free to align their green bonds with the standard if they wish to, based on their own cost-benefit assessments. The voluntary nature of the EU GBS will apply to all potential issuers, whether private or public. Issuers will also have the option of using the EU GBS alongside other standards, for example. This facilitates the creation of a competitive market environment that allows investor demand to drive future issuances rather than regulatory requirements.

6.2. Regulatory treatment of external reviewers of EU GBS-aligned green bonds

The second policy dimension concerns the nature of a registration and supervision regime for external reviewers.

Based on the analysis of the available policy options and taking into account stakeholder feedback, the EU GBS should proceed with option 1. This option would require external reviewers to seek registration from ESMA with limited ongoing supervisory requirements,

which are proportionate to the size of the market and the non-systemic nature of their activities. This approach would also limit the additional supervisory and organizational costs for external reviewers and supervisors.

Given the non-systemic nature of external reviewer activity and the relatively small size of the market, a more stringent regime which would incur greater organisation and supervisory costs is not required at the present time. However, developments in the market should be monitored to ensure the framework is functioning as intended and the number of external reviewers that have sought registration would be a key performance metric.

Registration and limited supervision by ESMA would support a harmonized application of rules as well as uniform supervision and ESMA staff would also be able to leverage their experience from the supervision of credit ratings agencies and trade repositories. While this option would impose compliance costs on external reviewers, all investors and users of opinions from external verifiers would benefit from the same level of investor protection, transparency and integrity across the market. In contrast, if a national competent body were to fulfil the same function, this could lead to divergent approaches and fee levels across the Union and additional national rules could restrict the ability of reviewers to provide their services on a cross-border basis.

6.3. The extent of flexibility for sovereign users of the EU GBS

The third policy dimension concerns the extent of flexibility which should be given to sovereign issuers of the EU GBS.

According to the responses to a dedicated stakeholder questionnaire on the matter, Member States are evenly divided on the idea of a flexibility pocket for non-Taxonomy aligned expenditure, but the strongest arguments weigh against such flexibility. In particular, having two grades of green expenditure within the use of proceeds could lead to a singling out of sovereign users of the EU GBS as less green, or it could harm the credibility of the standard, or undermine its legal certainty and transparency. Some MS also argued that as sovereigns, they should set the bar, and they feared that the flexibility pocket would introduce additional complexity.

However, Member States are broadly very positive to the suggestions for flexibility with regards to other requirements, such as on project-by-project reporting, such as on external review, and refinancing.

Hence, the chosen approach is option 2 (flexibility with regards to other requirements, but not the requirements of the Taxonomy Regulation). By pursuing this option, MS should be able to make use of the EU GBS (on a voluntary basis) on a level playing field with corporates, while still benefiting from some flexibility that takes into account their institutional specificities. In particular, the flexibility to assess government spending programmes based on their terms and conditions, instead of assessing each of the individual projects funded, would greatly facilitate the process of assessing Taxonomy-alignment for sovereign issuers, and could support increased sovereign use of the EU Taxonomy.

It is important context that any Commission proposal on the EU GBS would need adoption by co-legislators before it can enter into force. This means that the Taxonomy-alignment of sovereigns today is less relevant than the expected and actual Taxonomy-alignment in 2022, when the EU GBS may actually be available to use. Meanwhile, given the dynamic nature of

the taxonomy, regular monitoring and evaluation is also foreseen to update technical screening criteria in line with market developments.

In addition, the Commission is currently assessing how to give more space within the taxonomy level 2 rules for transition or other activities in line with the taxonomy's objectives. Creating more flexibility or widening the scope also for Sovereign issuers in this way seems to offer a more coherent, reliable approach than doing this for sovereign EU GBS issuance alone.

6.4. Alignment with objectives

As shown in the table below, the preferred option package is aligned with the objectives detailed in section 4.

Objectives	Alignment of preferred policy options
Facilitate further development of the market for high quality green bonds…	- The alignment with market best practices meets this objective, as it caters to higher quality green bonds.
…while minimising disruption to existing green bond markets.	- The choice of a voluntary rather than mandatory standard meets this objective. - The choice of a light rather than stringent regulatory regime for external reviewers meets this objective.
… and attracting sovereign issuers to the framework while catering to their specificities	- The choice of the some amount of flexibility for sovereign issuers, without risking discrimination against sovereign issuers for insufficient Taxonomy alignment of green bonds, meets this objective.
Improve the ability of investors to identify and trust high quality green bonds	- The choice of a regulatory regime for external reviewers (rather than relying on existing market processes) meets this objective.
Facilitate the issuance of high quality green bonds, by reducing costs from market fragmentation	- The lack of flexibility w.r.t. the Taxonomy Regulation meets this objective by avoiding fragmentation between corporate and sovereign green bonds. - The alignment with market best practices meets this objective by avoiding market fragmentation. - The choice of a voluntary rather than mandatory standard is not well aligned with this objective – a mandatory standard would have reduced fragmentation more, by unifying the market around one standard.
Facilitate the issuance of high quality green bonds, by clarifying green definitions and reducing the reputational risk for issuers from sectors not sufficiently covered by existing market-based taxonomies	- The alignment with the EU Taxonomy meets this objective, as it clarifies green definitions.

Table 13 - Alignment with objectives

6.5. Analysis of the expected take-up of standard

The following section will assess the expected take up and use of the EU GBS, provided that a legislative initiative as proposed in line with the preferred option identified in this impact assessment. The analysis begins by assessing the extent to which current green bond issuers be able to meet the requirement for 100% taxonomy-aligned use of proceeds. It then conducts

a partial and high-level cost-benefit analysis of using the EU GBS compared to other green bond standards.

6.5.1. Taxonomy-alignment – general results

The first condition for an issuer to use the EU GBS is that they can locate enough Taxonomy-aligned assets, operating expenditure, or capital expenditure on their balance sheet to match the amount of the prospective EU GBS bond.

Annex 8.3 contains a summary of the most relevant studies that have been carried out to gauge the level of Taxonomy alignment, usually by estimating the share of Taxonomy-aligned revenue for a set of European or global equities. This exercise is rendered more difficult by a range of constraints, notably the fact that no part of Taxonomy is yet finalised, and that requirements for Taxonomy- aligned disclosures are not yet in force, so there is a lack of available data. These studied indicate that for companies in the EU today, the percentage of taxonomy-aligned activities would likely be in lower single digit number (likely below 5%)[56].

However, it is important to note that the Taxonomy is a tool for encouraging transition towards Paris-alignment. In that sense, a lower percentages today indicates a greater need for more effort. Crucially, while the study results mentioned above give us a rough indication of the current state of play, what matters for EU GBS issuance is the ability of companies to invest and create Taxonomy-aligned assets going forward. If so, the share of Taxonomy-alignment will increase over time.

In this respect, a study by EY where a group of consultants identified over €200 billion of shovel- ready green investment projects across the EU is a useful reference. EY identified at least € 20.6 billion worth of Taxonomy-aligned projects spread over several sectors. While the study does not give a comprehensive overview of the potential for Taxonomy-aligned investments in Europe, it gives an indication of the sheer scale of green and Taxonomy-aligned projects potentially in the pipeline, and which could be funded using EU GBS bonds.

6.5.2. Taxonomy-alignment – the case of high-emission manufacturing specifically

As explained further in annex 8.4, the link of the EU GBS with the Taxonomy may facilitate green bond issuance by certain sectors currently lagging behind in issuance. The Taxonomy sets out criteria for investments in certain transitional activities to be considered as green even if they are not low-carbon activities per se. One example is the sector of energy-intensive industry, which has been insufficiently covered by market-based taxonomies, and where green bond issuance is relatively low. According to the TEG, the fear of adverse publicity because a deal is deemed "insufficiently green" has prevented some issuers in such sectors from tapping the green bond market.

Potential green bond issuers in this sector are likely to benefit from being covered by the clear criteria of the EU Taxonomy. Annex 8.4 explains how sectors such as steel, aluminium, cement, or chemicals, which are among the largest emitters in the EU, may be able to use the EU Taxonomy to grow their green bond issuance, with significantly less fear of accusations of green-washing from sceptical investors or civil society. For this reason, the EU Green

[56] Purely as a reference for sake of comparison, it can be noted that this share is higher than the share of the green bond market compared to the overall bond market, which is 3.5%.

Bond Standard can, thanks to its link with the EU Taxonomy, help companies in this sector enter the green bond market.

6.5.3. Cost-benefit analysis of issuing a green bond using the EU GBS, versus another green bond standard

An issuer would likely only choose to make use of the EU GBS if the net benefits of doing so exceeds the net benefits of all other options for raising financing, including issuing a green bond using one of the other available green bond standards, issuing a conventional bond, or raising financing using other means.

In line with the mandate given to it by the Commission, the TEG has proposed an EU GBS draft standard based on market best practice. Given the additional requirements for use of proceeds to be Taxonomy-aligned, and to contract only registered external reviewers, the standard would likely be more costly - on average - for issuers to align with, compared with current market standards. However, for issuers already following market best practice, alignment with the potential EU GBS would be less costly.

At the same time, the EU GBS would likely also bring in more of the benefits typically associated with green bond issuance, such as a reputational boost for the issuer, a diversification of the investor base, and a potential green bond premium. These benefits would increase with the greenness of the bond. For these two reasons, issuers of high quality green bonds are the ones who are the most likely to make use of the potential EU GBS, in order to reap higher benefits from their existing green credentials. The positive feedback from many green bond issuers to the targeted consultation indicates that there are many such issuers who are eager to make use of the EU GBS.

6.5.4. Costs of issuing using EU GBS (compared to current green bond standards)

Issuing a green bond usually implies extra costs compared to a conventional bond, such as for administrative efforts, staffing and training needs related to the creation of a green bond program, the management and monitoring of the use of green bond proceeds, and carrying out of reporting requirements after issuance. In addition, there are costs for external review (ranging from EUR 20.000 to 40.000 per issuance, based on stakeholder input).

Although views vary, the average expectation from stakeholders is for slightly higher costs for reporting and external review for those using the EU GBS (in particular those who not otherwise follow market best practice, such as aligning with the more ambitious CBI standard).

The following section goes through the various costs in details to see how the EU GBS would differ from existing market standards.

1) Costs of reporting obligations

If the EU GBS follows market best practice, it would require the publication of a Green Bond Framework, of yearly allocation reports, and an impact report following full allocation of proceeds. The related costs are unlikely to vary significantly from current green bond standards.

2) Costs of external review[57]

If the EU GBS follows market best practice, it would require issuers to obtain external review of the green bond framework and of their final allocation report. This indicates that the costs of external review obligations under the EU GBS will not vary materially from the cost of current green bond standards, in particular the CBI standard, which requires both forms of external review.[58]

The real change in costs might therefore come from the effect of the potential registration and supervision regime for external reviewers, under which external reviewers who wish to cater to EU GBS issuers may need to pay a fee to ESMA. Many respondents to the targeted consultation indicated that the additional costs would depend on the design of the future regime for external reviewers. Annex 3 quantifies the average additional cost per issuer of using the services of an external reviewer registered and supervised under a regime set up by the EU GBS. The result of the analysis is that additional costs per client are likely to be in the range of EUR 1,334 to EUR 3,281. For larger entities with significant organisational capacity, the costs may be lower.

At the same time, the TEG found that the range of approaches and services provided by external reviewers can create uncertainty for issuers and investors on the actual value, quality and impact of the external reviews, and can also lead to increased costs, for example, where an issuer must obtain more than one external reviewer second opinion, or an ESG rating. For this reason, it is possible that the intended standardisation brought to the market for external review by the EU GBS could help to bring prices down, provided that enough external reviewers apply for registration to review EU GBS bonds to encourage meaningful competition.

In the targeted consultation, several respondents from the financial sector were of the view that the EU GBS would reduce costs for issuers in the long-run, due to standardisation, consolidation, and more competition among external reviewers (by reducing the ability of external reviewers to differentiate their offers based on content).

3) Cost of identifying and tracking assets aligned with the EU Taxonomy

Issuers using the EU GBS would need to integrate the taxonomy criteria into their internal assessment of what is considered sustainable, and use it to identify green assets for the bond. In the targeted consultation, many pointed to the additional cost from screening proceeds against the EU Taxonomy as the main factor of increased costs. Some mentioned in particular the need to carry out due diligence according to the DNSH criteria as a major cost factor.

However, as mentioned in section 1 parallel disclosure requirements under the SFDR[59] and the Taxonomy Regulation mean that such costs would likely need to be absorbed regardless. In particular, companies under the scope of the NFRD[60] will have to report as of January 2022 their share of Taxonomy-aligned expenditure and revenues. This would incur a cost linked to collecting relevant environmental data, matching them with financial data at activity level, and disclosing on the resulting alignment. The disclosure requirements enter into force in a phased way over the first few years, alleviating these effects. As the Commission

[57] For more information, see Annex 3.
[58] External review also brings benefits, see next section.
[59] Sustainable Finance Disclosures Regulation
[60] Non-Financial Reporting Directive

published a proposal to extend the scope of the NFRD, it is increasingly likely that any Corporates considering issuing according to the EU GBS would already fall under the requirement to publish these Taxonomy-alignment metrics.

Due to these legislative developments, a large part of the internal costs related to the assessment of Taxonomy-alignment may already be incurred by issuers, irrespective of the EU GBS.

6.5.5. Benefits of issuing using EU GBS (compared to current green bond standards)

For reasons discussed previously, the alignment of EU GBS with market best practice and in particular with the EU Taxonomy Regulation may allow issuers to more clearly and easily demonstrate their green commitment. The additional benefits of the external review process for the EU GBS may also be valued by both investors and issuers in terms of the additional assurance and transparency it provides regarding the greenness of their investment.

This should increase the signalling effect of the green bond, allowing the EU GBS to amplify some of the benefits for green bond issuers:

1) Increased reputational boost

For example, issuers of green bonds typically obtain a reputational boost, as the label of being a green bond issuer can be a strong signal about the environmental credentials of a corporation. Such a signalling effect is likely to be at least as strong, if not a stronger, in the case of the EU Green Bond Standard. The EU is also known worldwide to have some of the highest environmental standards, so EU GSB alignment could help a company establish itself as a green front-runner internationally.

2) Increased demand from investors

According to Agliardi and Agliardi (2019)[61], the rising environmental awareness among investors contributes to increased demand for green bonds and to oversubscriptions. According to Climate Bond Initiative, 62% of green bonds in 2018 achieved a higher oversubscription and spread compression than their vanilla equivalents after 28 days. A separate effect on demand may come from the SFDR, which may facilitate the process for holders of EU GBS-aligned bonds to report their share of Taxonomy-aligned assets.

3) Increased green bond premium

There is growing evidence that issuers of green bonds benefit from a so-called green bond premium, a small but consistent pricing advantage due to investors accepting a lower yield on green bonds, which allows issuers of green bonds to borrow more cheaply. Although there is no definitive proof on the extent and pervasiveness of such a green bond premium, academic research indicates that it ranges between 1 and 20 basis points, and in some cases even higher. Stakeholders, including a prominent investment bank, have suggested estimates ranging from 2 to 30 basis points, although these depend on the sector and issuer type. For more information on the estimated size of the green bond premium, please see Annex 6.

The size of the green bond premium also seems to correlate rather strongly with the level of green commitment from the issuer, such as the extent to which the issuer has made use of external review, as well as their history of green bond issuance. This would suggest that there is positive relation between the ability to trust the greenness of a bond and the size of the potential green bond premium for the issuer. If so, issuers making use of the EU GBS may

[61] Agliardi, E., Agliardi, R: "Financing environmentally-sustainable projects with green bonds", 2019 (Link)

benefit from an – on average – higher green bond premium than those using market standards, given the rigorous requirements and high green quality of the EU GBS.

6.5.6. Cost and benefits: Summary table

The following table sums up the potential costs and benefits for green bond issuers of using the EU GBS, versus using another green bond standard.

Potential Benefits of EU GBS VS other green bond standards	**Potential Costs of EU GBS VS other green bond standards**
Higher investor demand due to alignment with EU Taxonomy, and synergies with other EU legislation (companies can use EU GBS when reporting Taxonomy-aligned assets. Potential synergies with EU-ecolabel). **Increased reputational boost** for the issuer due to use of clear, recognisable market standard with EU-brand. **Potential green bond premium,** ranging from 1 to over 20 bps, due to additional green commitment inherent in EU GBS requirements (study finds link between post-issuance verification and size of green bond premium). **Other potential benefits,** such as the learning process for the issuer, opportunities to attract a more diverse set of investors, etc.	**Administrative costs of identifying Taxonomy-aligned assets** (unless the cost is already incurred, due to legal requirements for companies under NFRD scope to report Taxonomy-alignment. **Potentially higher costs of external review**, if external reviewers pass on costs of complying with registration requirements to issuers (which is likely). These costs are quantified as being between EUR 1,334 to EUR 3,281 per issuer, although in the long-run the additional cost could fall due to increased standardisation and competition. **Roughly similar cost for reporting** and other EU GBS requirements, since standard is aligned with market standard / best practice. **OUT OF SCOPE: Costs of investing in Taxonomy-aligned assets** (this is only relevant for companies that do not already have sufficient Taxonomy-aligned assets or expenditure. It is out of scope, as there are many factors that determine the Taxonomy-alignment of an issuer's assets, beyond their issuance of green bonds)

Table 14 - Costs and benefits for issuers of using the EU GBS

7. HOW WILL ACTUAL IMPACTS BE MONITORED AND EVALUATED?

A robust monitoring and evaluation mechanism is crucial to assess the extent to which the envisaged standard meets its policy objectives. This will allow the Commission to review the legislation effectively at a future stage. It will also facilitate the early detection of potential unintended consequences and enable the Commission to address any such issues in a timely manner.

The intrinsic link to the Taxonomy Regulation[62] implies that the information gathered will provide key insights not only on the functioning of the EU GBS but also on the practical applicability of the Taxonomy. Given the taxonomy-based constraints for defining 'economically sustainable economic activities', the uptake of the standard will critically

[62] c.f. Art. 4 Taxonomy Regulation

depend on the availability and/or economic feasibility of taxonomy eligible assets and projects. The taxonomy thereby sets the limits within which issuers can adopt the EU GBS (i.e. full market penetration is only possible if the whole market converges on a taxonomy-based system). There are likely to be links also to other related sustainable finance initiatives, such as the Ecolabel where the monitoring of the EU GBS will add useful information.

For the monitoring and preparation of a future evaluation of the impact of the legislative initiative, the following non-exhaustive list of sources could provide for a basis for information gathering:

a. ESMA database on registration of external reviewers,
b. ESMA database regarding regulatory fees and charges,
c. ESMA/NCA database on notifications and complaints,
d. External databases on bond market

The data and indicators for monitoring and evaluation linked to these sources would include the following output:

Data / Indicator	**Objective / reasoning**
i. Total amount of EU GBS issued per annum and outstanding	Aim for long-term growth of the EU GBS market following initial launch; will not achieve high market penetration, at least initially, due to stringent taxonomy requirements
ii. Total amount of bonds earmarked as 'green'(but not EU GBS) issued per annum and outstanding [EU and globally]	Acts as a benchmark for success of the EU GBS and the Taxonomy; provides insights on greenwashing / possible need for further regulation
iii. Data on the relative pricing of EU GBS, bonds earmarked as 'green' (but not EU GBS) and other bonds outstanding (as a benchmark i.e. from the same/similar issuers)	Data provides information on investor preference and success of the EU GBS and Taxonomy; pricing difference would also show impact of potential future incentives provided at EU or national level
iv. Data on liquidity in the markets for EU GBS, bonds earmarked as 'green' and other bonds outstanding (as a benchmark i.e. from the same/similar issuers)	Additional insights on functioning of the market versus others; liquidity data may also show impact of potential future incentives provided at EU or national level
v. Number of external reviewers registered under the EU GBS legislation	Measure of the market attractiveness of the regime; indirect measure of the level of competition in the market
vi. Data on the regulatory fees paid by external reviewers	Provides insights on the effectiveness of setting up a lighter and proportionate supervisory framework
vii. Complaint and/or supervisory reports concerning compliance with the standard	Information on the effectiveness of ensuring high market integrity
viii. Complaint and/or supervisory reports concerning the applicability of the taxonomy	Provides insights on the effectiveness, efficiency and coherence of taxonomy related aspects

Table 15 - Data and indicators

The timing of the monitoring needs to consider the application date of the legislation. No sooner than five years following this date, the Commission shall carry out an evaluation of this initiative, unless underlying legislation provides for an earlier evaluation deadline. The

Commission will take the sources and indicators mentioned above into account and rely on a public consultation and discussions with ESMA and competent authorities.

In particular, the evaluation could assess the extent to which:

- The yearly issuance of EU GBS-aligned green bonds grows faster or at the same pace as the yearly issuance of all green bonds
- A large share of green bonds backed by Taxonomy-aligned projects are issued using the EU GS.
- EU GBS-aligned bonds are associated with larger green bond premia than other green bonds on average.
- The yearly issuance of EU GBS-aligned bonds is sufficient to sustain the activities of at least 3 registered external reviewers.
- The EU GBS reduces the search costs of investors seeking high quality green bonds, and the number of complaints receive by supervisory authorities stays relatively low.

The evaluation shall be conducted according to the Commission's better regulation Guidelines.

Annex 1: Procedural information

1. LEAD DG, DECIDE PLANNING/CWP REFERENCES

This Impact Assessment Report was prepared by Directorate C (in conjunction with Directorates B and E) "Financial Markets" of the Directorate General "Directorate-General for Financial Stability, Financial Services and Capital Markets Union" (DG FISMA).

The Decide Planning reference of the initiative "Proposal for a Regulation of the European Parliament and of the Council on the Establishment of an EU Green Bond Standard" is PLAN/2020/7030.

This initiative is part of the Commission Work Programme 2021 (COM2020 690 final – 19.10.2020) and is one of the actions proposed (number 16) by the European Commission in the context of "an Economy that Works for People".

2. ORGANISATION AND TIMING

Several services of the Commission with an interest in the initiative have been involved in the development of this analysis.

Four Inter-Service Steering Group (ISSG) meetings, consisting of representatives from various Directorates-General of the Commission, were held in 2020.

The first meeting took place on 19 February 2020, attended by DG ENV, CLIMA, ECFIN, EMPL, DEVCO, TRADE, ENER, BUDG, TAXUD, MOVE, RTD, MARE, NEAR, GROW, CNECT, EEAS, JRC, SJ and the Secretariat General (SG).

The second meeting was held on 28 May 2020. Representatives from DG ENV, CLIMA, ECFIN, EMPL, DEVCO, TRADE, ENER, BUDG, TAXUD, MOVE, RTD, MARE, NEAR, CNECT, JRC, SJ and the SG were present.

The third meeting was held on 20 November 2020 and was attended by DG ENER, TRADE, RTD, NEAR, ECFIN, DEVCO, EMPL, MOVE, ENV, MARE, CLIMA, GROW, BUDG, EEAS, JRC, SJ and the SG.

The fourth meeting took place on 10 December 2020, attended by DG CLIMA, ECFIN, EMPL, TRADE, ENER, BUDG, MOVE, RTD, MARE, CNECT, JRC, DEVCO, EEAS, SJ and the SG. This was the last meeting of the ISSG before the submission to the Regulatory Scrutiny Board on 20 January 2021.

The meetings were chaired by SG.

DG FISMA has considered the comments made by DGs in the final version of the IA. In particular, it has simplified the structure of the policy options, reduced the length of the report and clarified the links with other EU legislation and initiatives. The analysis of impacts and the preferred option takes account of the views and input of different DGs.

3. CONSULTATION OF THE RSB

The Impact Assessment report was examined by the Regulatory Scrutiny Board on 17 February, 2021. The Board gave a positive opinion with reservations. Taking into account the feedback received from the Board, the Impact Assessment was especially revised on the following aspects:

- Further specification of the problem definition/ problem analysis: e.g. concerning deficiencies of current green bond market standards, shortcomings on use of EU Taxonomy, description of moral hazard problem of the green bond market linked to lack of clarity on green investments, justification for regulating an area before significant problems arise, risks of not regulating the area of external reviews, different treatment of sovereign green bond issuers due to specificities of sovereigns.
- Better assessment on how market standards would evolve in the absence of a new EU initiative.
- Adjustment/ deletion of option that corresponds to the baseline on external reviews.
- Additional clarification for the need for further supervision on external reviews, also in context of problem description and definition of options. In addition, better reasoning for choosing a more proportionate approach to regulating evolving segment and not considering an option to regulate the external review of existing market standards, in addition to the EU GBS.
- Clarification of explanations on legal reasons for discarding the option of a mandatory standard for sovereign issuers.
- Explanation in further depths of the purpose and consequences of allocation and impact reporting.
- Providing additional details on the degree of grandfathering which is foreseen for the EU GBS.
- Addressing possible challenges of aligning the EU GBS with the EU Taxonomy, for example related to the inclusion of the greening of brown sectors.
- Description of reasons for the mainly qualitative assessment and the limitations regarding quantitative data, and the efforts made in that respect.
- Explanations on how success of the EU GBs initiative will be measured (taking into account the estimated costs and benefits of the preferred options of this initiative).

4. EVIDENCE, SOURCES AND QUALITY

The impact assessment draws on an extensive amount of desk research, expert group meetings, in-depths interviews with selected stakeholders, call for feedback, open public consultation, targeted consultation, opinions and advice by the potential supervising authorities, targeted questionnaire, academic research papers and other.

The material used has been gathered since the Commission Services started the EU GBS initiative as set out in the Commission's Action Plan on Financing Sustainable Growth as of March 2018 (see "*Action 2: Creating standards and labels for green financial products*"). This material includes but is not limited to the following:

- As set out in Action 2 of the Action Plan on Financing Sustainable Growth and at the request of the Commission, the Technical Expert Group (TEG) on Sustainable Finance started its work in June 2018. As a result of many meetings (13 physical TEG meetings) and intense

discussion, the TEG prepared a comprehensive report with recommendations for an EU GBS that was published in June 2019. The TEG suggested the establishment of an official and voluntary EU GBS based on the EU Taxonomy, building on existing market standards. Next to that, it provided a usability guide in March 2020, including an updated proposal for an EU GBS. The mandate of the TEG ended in September 2020.

- Regarding the draft TEG report, the TEG conducted a call for feedback that ran from 6 March 2019 until 7 April 2019. It received 104 replies from a balanced group of stakeholders (issuers, investors, banks, verifiers, NGOs, main associations and NCAs) with a strong majority of respondents supporting the creation of a voluntary EU GBS standard as well as a strong link to the EU Taxonomy. The results from this call for feedback were considered in the final June 2019 TEG report.
- The Commission launched an open public consultation on the Renewed Sustainable Finance Strategy on 8 April 2020 that was open for 16 weeks (due to the corona virus pandemic the deadline for responses was extended by one month and closed on 15 July 2020). This consultation provided for over 100 questions, including several questions on standards and labels for financial products as well as on the EU GBS. The Commission received over 600 replies to this consultation from a large range of stakeholders. A Feedback Statement providing an overview of the contributions to this public consultation will be published on the Commission's website.
- DG FISMA carried out a set of in-depth interviews on the EU GBS with 11 selected stakeholders different sectors and various Member States in the months of May and June 2020.
- As part of the process, DG FISMA also launched a targeted consultation on 12 June 2020 to seek further input from stakeholders on the EU GBS. This consultation was open for 16 weeks (due to the corona virus pandemic the deadline for responses was extended by one month) and closed on 2 October 2020 after receiving 167 responses. The replies have been published on DG FISMA webpage. The consultation document consisted of 19 questions in total and focused on two main topics, namely on the EU GBS as well as on Social Bonds and COVID-19. Contributions were received from a large range of stakeholders, including company/business organisations, business association, consumer organisations, NGOs and public authorities. Geographically, replies were received from 20 EU Member States, 2 other European countries and 2 non-European countries. DG FISMA has analysed the feedback to this targeted consultation and prepared a Feedback Statement, which will be published on DG FISMA website.
- A targeted "Questionnaire on Sovereign green bond issuance using the EU Green Bond Standard" was shared with EU Member States on 2 December 2020 (DMOs) and 9 December 2020 (Finance and Environment Ministries) for feedback by 15 December 2020. The questionnaire focused on the usage of the EU GBS by sovereign issuers and provided 10 questions. A large number of Member States (17 responses) provided concrete feedback to this questionnaire.
- DG FISMA had calls with European Securities and Markets Authority (ESMA) for its opinion and advice (e.g. on 19 November and 8 December 2020) regarding a potential registration/supervision regime of external reviewers at EU Level (giving a new role/ task to ESMA).
- The JRC prepared several academic / working papers / reports regarding green bonds: (1) "Green bonds and companies' environmental performance: a feasibility study"; (2) "Green bonds and use of proceeds reporting: what do we know from market data providers?"; (3)

"The pricing of green bonds. Are financial institutions special?"; (4) "Green Bonds as a tool against climate change".

- The EU GBS has been on the agenda of the Member State Expert Group on Sustainable Finance since 2019: Member States have been updated on the ongoing EU GBS initiative a regular basis and specific issues, as e.g. the link to the EU Taxonomy or the format and the nature of a potential EU GBS have been discussed.

  The material used to inform this impact assessment comes from reputable and well-recognised sources that act as benchmarks and reference points for the topic. Findings were cross-checked with results in different publications in order to avoid biases caused by outliers in the data or vested interests by authors.

Annex 2: Stakeholder consultations and selected interviews

This section presents the full or partial results of two stakeholder consultations:

1. Targeted Consultation on the EU Green Bond Standard (12/06/2020 to 09/10/2020)
2. Online consultation on the Renewed Sustainable Finance Strategy (2019)

1. TARGETED CONSULTATION ON THE EU GREEN BOND STANDARD

On 12/06/2020 DG FISMA launched a targeted consultation on the Establishment of an EU Green Bond Standard (EU GBS).

The initiative forms part of the Commission's overall effort to encourage greater investment in green and sustainable investments. It is a follow-up to the Commission Action Plan on Financing Sustainable Growth of March 2018, which tasked the Commission Technical Expert Group (TEG) on Sustainable Finance to prepare "*a report on an EU green bond Standard, building on best practices*" (Action 2: Creating standards and labels for green financial products). In its final report of June 2019, the TEG put forward concrete recommendations for an EU GBS. It included alignment of the use of bond proceeds with the EU Taxonomy, the publication of a Green Bond Framework, mandatory reporting on the use of proceeds (allocation reports) and on environmental impact (impact report), and independent verification of the compliance with the Green Bond framework and final allocation report by an external verifier. This work was supplemented by the TEG's usability guide (with updated proposed Standard and Green Bond Framework) from March 2020.

Building on this work, the purpose of this targeted consultation was to collect further views and opinions of interested parties on the content for the establishment of an EU GBS. Respondents were invited to provide concise and operational suggestions on measures that can be put in place to deliver the policy goals.

The consultation document consisted of 19 questions in total and focused on two main topics, namely on the EU Green Bond Standard as well as on Social Bonds and COVID-19. The questions focussed on several issues such as *inter alia* the rationale for establishing an EU GBS, possible core components of a new standard, and other issues such as use of the EU GBS by public sector issuers as well as establishment of additional standards and labels.

DG FISMA received 166 responses by the end of the consultation period on 09/10/2020. Contributions were received from a large range of stakeholders (see Table 16).

Type of stakeholder	**Number of respondents**	**% of respondents**
Company/business org.	75	45.2
Business Association	37	22.3
Public authority	15	9
Other	12	7.2
NGO	10	6
EU Citizen	6	3.6
Academic/research institution	4	2.4

Field of activity	**% of respondents**
Other	42.2
Banking	30.7
Investment management	17.5
Not applicable	9.6
insurance	8.4
Market infrastructure	6
Pension provision	5.4
Accounting	3
Auditing	2.4

Trade union	3	1.8
Non-EU citizen	2	1.2
Consumer org.	1	0.6
Environmental org.	1	0.6

Credit Rating Agencies	2.4
Social entrepreneurship	1.8

Table 16 - Replies by type of stakeholder and field of activity

Geographically, replies were received from 20 EU Member States, 2 other European countries and 2 non-European countries (see Table 17 for a detailed breakdown).

Country of origin	**Number of respondents**
Germany	29
Belgium	23
France	22
Netherlands	15
Italy	14
UK	12
Greece	8
Finland, Spain, Sweden	5 each
Denmark, Norway, United States	4 each
Austria	3
Czechia, Luxembourg, Poland	2
Argentina, Ireland, Latvia, Lithuania, Malta, Romania, Switzerland	1 each

Table 17 - Replies by country

This feedback statement summarizes the responses received to each question. It is not intended as a detailed analysis of the responses, but seeks to give a general assessment of the contributions received and highlight any common themes or issues related to the EU GBS as well as to Social Bonds and COVID-19. The summary of the responses provides particular insight into new areas for action proposed by the respondents. This feedback statement does not give any indication of potential initiatives, which the European Commission may or may not undertake in the future in this area.

Summary of individual responses

Q1) In your view, which of the problems mentioned below is negatively affecting the EU green bond market today?

Based on the average scores among respondents for each of the questions, it is possible to identify clusters of problems which issuers identify as having a similar degree of negative impact on the green bond market today, ranked from most to least impactful:

Close to a rather high impact	Uncertainty regarding green definitions.
Somewhere between a certain impact and rather high impact	Doubt about the green quality of green bonds and risk of greenwashing, Costly and burdensome reporting process, and Uncertainty with regards to the eligibility of certain assets.
Slightly more than a certain impact	Absence of economic benefits associated with the issuance of green bonds, Lack of available green projects and assets, and

	Lack of transparency and comparability in the market for green bonds.
Less than a certain impact	The complexity of external review procedures, Costly and burdensome reporting process, and The lack of clarity concerning the practice for the tracking of proceeds.

<u>Q2)</u> To what extent do you agree that an EU GBS as proposed by the TEG would address the problems and barriers mentioned above in question 1?

Based on the average scores among respondents for each of the questions, it is possible to identify clusters of barriers and problems mentioned above in question 1 that issuers identify as being addressed to a similar degree by an EU GBS as proposed by the TEG. In the following, they are ranked from most to least impactful:

Somewhere between rather high and very high impact:	Uncertainty regarding green definitions, Lack of transparency and comparability in the market for green bonds, Uncertainty with regards to the eligibility of certain types of assets, and Doubt about the green quality of green bonds and risk of greenwashing.
Slightly less than rather high impact:	Lack of clarity concerning the practice for the tracking of proceeds.
Slightly more than a certain impact:	Absence of economic benefits associated with the issuance of green bonds, Lack of available green projects and assets, and ”Complexity of external review procedures.
Less than a certain impact:	Cost of the external review procedure and Costly and burdensome reporting processes.

<u>Q3)</u> To what extent do you agree with the proposed core components of the EU GBS as recommended by the TEG?

160 respondents answered this question, and the vast majority of them strongly agreed or rather agreed with all the main requirements of the EU GBS as proposed by the TEG. Investors argued that the core requirements of the EU GBS would respond to their needs for clarity, consistency, comparability, transparency and assurance that the financed projects are aligned with the EU Taxonomy.

Several respondents also pointed out that the EU GBS is largely aligned with current voluntary market practices, not least with regards to the requirements for publishing a green bond framework, reporting, and verification. Some respondents however worried that the requirements would be difficult to meet for SMEs wishing to issue green bonds, especially with regards to reporting and external review.

Several respondents made the comment that it was important to keep the standard voluntary, and were worried that otherwise existing green bonds could lose their status as green. Only a very small group (3 respondents) called for a mandatory standard.

Specific comments made on each of the sub-questions:

<u>Requirement to align eligible green projects with the EU Taxonomy:</u>

An overwhelming majority of respondents (136/160, or 87%) strongly agreed or rather agreed with this requirement (while only 8 strongly disagreed or rather disagreed). A large

number of comments concerned suggestions for flexibility with regards to the Taxonomy, for example with regards to the TSCs, Transition activities, or DNSH, in particular with regards to the progressive finalisation of the Taxonomy. Some respondents suggested that the EU GBS should allow for general corporate purpose issuance, or target-linked approaches.

Requirement to publish a Green Bond Framework before issuance

An overwhelming majority of respondents (145/160, or 90.5%) strongly agreed or rather agreed with this requirement. Some respondents asked that the standard should be defined within the legal documentation (as an addition, or instead of the green bond framework)

Requirement to publish an annual allocation report

An overwhelming majority of respondents (145/161, or 90%) strongly agreed or rather agreed with this requirement (while only 6 strongly disagreed or rather disagreed). Some issuers pointed out potential synergies, such as including the allocation reporting in the issuer's non-financial statement under the NFRD, or potential flexibility, such as giving issuers the choice between a final report and yearly allocation reports. A small number of issuers pointed out that the ongoing reporting obligations (i.e. the Allocation Report and the Impact Report) would prove particularly burdensome for SMEs.

Requirement to publish an environmental impact report at least once before final allocation

A very large majority of respondents (126/159, or about 79%) strongly agreed or rather agreed with this requirement (while only 15 strongly disagreed or rather disagreed). However, a number of comments mentioned that the requirement to publish an impact report before full allocation of proceeds, as mentioned in the question, was impractical. The consultation question was not clearly worded, as it should have said: "after full allocation and before the end of the bond's lifetime" (as in the TEG's usability guide).

Stakeholders in favour pointed out that such reporting was already established market practice, and that reporting on environmental impact based on standardised metrics is key to facilitate investments in line with dedicated impact strategies. More sceptical respondents mentioned that the monitoring of impact could be a considerable cost for issuers, and advised against requiring issuers to disclose methodologies and assumptions for the calculation of KPIs ex-ante. One respondent pointed out that the Taxonomy already has built-in impact reporting, as the criteria are set according to impact, hence separate impact reports were not necessary.

Requirement to have the (final) allocation report and the Green Bond Framework verified

An overwhelming majority of respondents (139/157, or 81.5%) strongly agreed or rather agreed with this requirement (while only 12 strongly disagreed or rather disagreed).

Respondents argued that including these requirements would strengthen the credibility, trust, and integrity of the EU Green Bond Standard, thereby adding to its value, while ensuring full transparency, a simplified due diligence process, and increased accountability towards potential and current investors. Some also asked that the requirement for external review should be extended to the impact reporting. A few respondents argued that deals with external verification benefit from higher market liquidity.

While few - if any - respondents objected to the requirement for external review of the green bond framework, some respondents criticised the requirement for external review of the final

allocation report. One line of argumentation was that this requirement had limited value added, as the allocation of proceeds is quite straightforward, allowing market participants to spot any misuse without help. A few respondents also pointed out that issuers would in any case not dare to misallocate proceeds due to the potential reputational risk. Another criticism related to the effort required by issuers, with some pointing out that issuers with several small projects would suffer disproportionately. For this reason, verification of the methodology for choosing eligible projects should suffice.

Finally, a small minority of respondents were concerned that the external review requirement for the final allocation report was not appropriate for issuers employing the so-called portfolio approach, where the portfolio of underlying assets is dynamic and therefore bonds are never fully allocated (this is due to the fact that the project portfolio changes over time and green bonds are not linked to individual projects).

Q4) Do you agree with the proposed content of the (a) Green Bond Framework, (b) Green Bond allocation report, and (c) Green Bond impact report as recommended by the TEG?

The vast majority of respondents agreed with the content of the TEG's proposed Green Bond Framework, Green Bond allocation report, and Green Bond impact report, though with some minor suggestions for improvements for each of the three documents. Some respondents also clarified that while they agreed with the spirit or the intention of the documents, they had different views on how to design each document, and often reserved to answers given to other questions in the consultation.

Q5) Do you expect that the requirement to have the Green Bond Framework and the Final Allocation report verified (instead of alternatives such as a second-party opinion) will create a disproportionate market barrier for third party opinion providers that currently assess the alignment of EU green bonds with current market standards or other evaluation criteria?

The majority of respondents responded positively that the requirement for verification could create a disproportionate market barrier for third party opinion providers while a minority responded negatively that it would not. However, there were no detailed responses provided by negative respondents.

In the detailed responses, concerns were raised about potential additional costs of the proposed verification requirement, particularly for smaller entities, given the need for additional experience and expertise to carry out the assessment of an issuers overall sustainability strategy, the alignment of the EU GBS use of proceeds and DNSH.

Other responses raised concerns about potential professional indemnity and liability issues for verifiers as they may face increased risks given the need to also provide an explicit opinion on the issuance's alignment with the taxonomy and an assessment of DNSH. One response suggested that post-issuance verification could be conducted by auditors as part of the issuers annual report which would reduce the burden on other verifiers that could instead focus on providing second opinions.

Another issue relates to the "portfolio approach", where multiple green bonds finance a portfolio of green loans. Given that the EU GBS is a bond-by-bond approach with specific project allocation of proceeds there could be difficulties maintaining the link between bond and project as the bonds mature and are replaced with new issuance.

A number of respondents expressed concern about the use of the term 'verifier' in the EU GBS as it may inadvertently exclude other types of entity from engaging in this activity and limit the number of firms that can provide these services for the EU GBS. It was recommended that the EU GBS use more established terms such as external reviewer or second opinion provider and build upon existing market practices.

Q6) Do you agree that 100% of the use of proceeds of green bonds should be used to finance or refinance physical or financial assets or green expenditures that are green as defined by the Taxonomy?

Almost all respondents agreed that 100% of use of proceeds being of green bonds should be to finance or refinance assets or expenditures that are defined as green by the Taxonomy. However, a large majority of them are inclined for some degree of flexibility on its alignment with the EU Taxonomy.

Majority of respondents have not proposed any threshold for percentage of alignment with the Taxonomy. Those who did, their proposals varied for alignment varied mostly between 70% and 99%. Most respondents acknowledge that a lower threshold will damage the credibility of the EU GBS and would risk greenwashing practices.

The main reason for this need of flexibility in the majority of responses is that the EU Taxonomy is not yet completed, so this threshold would apply to activities not covered by existing TSC; they usually believe that this flexibility should disappear as future criteria is progressively added to the Taxonomy, but additional transparency should be ensured during this period.

In the detailed responses, some respondents expressed concerns that certain existing green bond market issuers might not be able to adapt to a 100% of alignment requirement, in particular small projects or large and granular portfolios. In addition, the possibility of constraining the innovation and a future alignment with international standards have been put forward as reasons to implement some flexibility.

Some of the responses also reflect a concern related to the differences between the Taxonomy criteria and current market practices, specifically for the renovation of buildings and green mortgages.

Other responses highlight the possible negative effect that a 100% alignment requirement without flexibility would have on transitioning activities.

Q7) Do you agree with the TEG's approach[63] to flexibility with regards to applying the Technical Screening Criteria of the EU Taxonomy? Do you see any other reasons to deviate from the technical screening criteria when devising the conditions that Green Bond eligible projects or assets need to meet?

[63] The TEG proposes that in cases where (1) the technical screening criteria have not yet been developed for a specific sector or a specific environmental objective or (2) where the developed technical screening criteria are considered not directly applicable due to the innovative nature, complexity, and/or the location of the green projects, the issuer should be allowed to rely on the fundamentals of the Taxonomy to verify the alignment of their green projects with the Taxonomy. This would mean that the verifier confirms that the green projects would nevertheless (i) substantially contribute to one of the six environmental objectives as set out in the Taxonomy Regulation, (ii) do not do significant harm to any of these objectives, and (iii) meet the minimum safeguards of the Taxonomy Regulation.

A large majority of responses support allowing the issuer to rely on fundamentals of the Taxonomy when it comes to verify the alignment of their green projects. The main reasons put forward are avoiding that innovation is stifled, and ensuring non-EU companies have a chance to comply with the standard.

The main concerns centre on the role of the verifier and the increased costs this will imply. Respondents ask for flexibility on Taxonomy interpretation, deep knowledge of both the Taxonomy and the national specifics, and clear guidelines while maintaining a solid bond with the Platform on Sustainable Finance (which, in turn, should be inclusive, transparent and follow up on innovation and ESG changes).

There are also some suggestions to limit the involvement of the verifiers to the verification of the issuer´s eligibility criteria for green projects or assets, instead of the assets themselves.

Most of the responses emphasize the need for reinforced transparency and reporting obligations for issuers making use of this type of flexibility and suggest that issuers explain why they are not complying with Taxonomy's technical screening criteria (TSC) through additional disclosures, such as disclosing at project level, or providing the details in GB framework and in allocation reports.

A minority of the responses raise concerns about the treatment of cases enjoying this flexibility when detailed TSC covering them are developed in the future. For all of those respondents, reassessment could be a problem and therefore they suggest a grandfathering system as an alternative.

Some responses ask for further clarification of the do no significant harm criteria.

As regards the last sub-question, the majority do not see other reasons to deviate from the technical screening criteria when devising the conditions that Green Bond eligible projects or assets need to meet. For the minority, who take the opposite view, there is some correspondence with the concerns expressed in question 6 with respect to renovation and green buildings. Those respondents suggest that activities that currently qualify for a green bond according to market standards should be able to be qualified as green under the EU GBS.

<u>Q8)</u> As part of the alignment with the EU Taxonomy, issuers of EU Green Bonds will need to demonstrate that the investments funded by the bond meet the requirements on do-no-significant-harm (DNSH) and minimum safeguards. The TEG has provided guidance in both its Taxonomy Final Report and the EU GBS user guide on how issuers could show this alignment. Do you foresee any problems in the practical application of the DNSH and minimum safeguards for the purpose of issuing EU green bonds?

A large majority of respondents thinks that there will be problems in the practical application of the DNSH and minimum safeguards for the purpose of issuing EU green bonds.

The main problem identified in the detailed responses is the complexity of demonstrating compliance with the DNSH and minimum safeguards criteria. Respondents consider this a difficult procedure. They suggest that the Platform on Sustainable Finance and the EC should offer more guidance on how the compliance should be demonstrated, further clarifying the criteria or providing additional examples.

In the same way, many respondents see qualitative aspects of the DNSH and minimum safeguards as a source of subjectivity and ambiguity, with a room for interpretation.

Respondents offer various suggestions to overcome the abovementioned difficulties: allowing some flexibility in terms of compliance with DNSH and minimum safeguards criteria, using national and EU legislation as a basis, and developing equivalence between those criteria and existing international standards.

Respondents generally also voice concerns related to lack of data. Not all issuers seem to have access to the information needed to prove compliance at present. Although the problem of lack of data could be solved over time, respondents express their concern about the costs of collecting the information needed, especially for third country issuers and SMEs.

The banking sector is particularly worried by this lack of data. Banks are not able to easily check DNSH at a project/loan level mainly because projects are owned by their customers and is difficult for financial companies to gain access to that level of detail.

Lastly, a minority of the respondents refers to difficulties in complying with DNSH and MS criteria for issuers from non-EU countries because DNSH principles are mainly based on EU regulations and because not every country complies with ILO Declaration on Fundamental Principles and Rights at Work.

<u>Q9)</u> Research and Development (R&D) plays a crucial role in the transition to a more sustainable economy, and the proposed EU GBS by the TEG explicitly includes such expenditure as eligible use of proceeds. Do you think the EU GBS should provide further guidance on these types of activities, to either solve specific issues with green R&D or further boost investment in green R&D?

Responses to this question are fairly divided. Among those who answered and considered the issue relevant, opposite views regarding the question whether R&D area should be further clarified or is sufficiently clear are similarly represented. Comparatively smaller share of respondents are of the view that the proposed EU GBS by the TEG should be changed to boost R&D.

Responses mostly offer considerations of the specific features of R&D activities (outcome uncertainty, long term profile), and few substantive changes are proposed even in the (b) responses group.

All of the respondents are aware of the relevance of R&D for contributing to the environmental objectives and highlight the necessity of further clarification/classification to benefit market participants. Some of the suggestions ask for a new R&D category with own criteria under the Taxonomy, while others prefer to treat R&D activities within the respective green activities as an eligible expenditure, and provide additional information to investors, preventing greenwashing at the same time.

Other responses propose the creation of robust impact and allocation reporting and verification for R&D activities (there is no prevailing view whether this should be mandatory or voluntary).

Only a few of the responses address more tangible and direct measures, like providing tax relief to investors and issuers regarding R&D activities, or requiring a minimum percentage of proceeds to be allocated to R&D activities or allowing the entirety of proceeds to be allocated in R&D activities.

Overall, there is such disparity in the suggestions offered that none of them are widely shared.

<u>Q10)</u> Should specific changes be made to the TEG's proposed standard to ensure that green bonds lead to more new green investments?

A large number of respondents across all categories agreed with the content of the standard as proposed by the TEG and stated that no specific changes are necessary at least for the time being. The proposed standard promotes comparability and high quality of disclosures for investors. They are overall satisfied with the standard as it stands, which will be sufficient to drive the standardization, transparency and simplification of the green bond market in EU and steer capital flows towards green investments.

Next to that, some respondents underlined that possible future changes to the standard could only be made after the standard has been used in practice for a certain period of time. In addition, there is also enough flexibility to incorporate dynamic developments. Any possible revision of the standard in the future should take into account the practical experience gained by market participants as well as the developments of relevant legislation, as e.g. the EU Taxonomy Regulation.

However, a majority of respondents was also of the opinion that specific changes should be made to the TEG's proposed standard. It was stressed that the EU GBS should not be a static document, but should be flexible enough to adapt to any new market developments. The areas for suggested changes are as follows:

- Some respondents underlined the need for more flexibility than the current taxonomy allows, e.g. in the case of financing renovations of buildings.
- There was a clear call for putting in place comprehensive grandfathering rules for eligible green projects/assets (project level or/and portfolio level).
- Regarding the scope of this initiative, some participants favoured a broader approach and see the need for a broader approach that would also address transition bonds or sustainability-linked bonds. The aspect of refinancing and green loans should also be taken into account.
- Some respondents called for additional requirements for the impact reporting. Some further guidance/ details on how to measure the impacts would be needed.
- Many respondents highlighted the need for a defined limited look-back or re-financing period in the green bond framework to push new green investments (additionality). There was the request that both capex and opex should have a limited look-back period. There were several calls for a maximum look-back period of one year. E.g. projects that are more than 10 years old should not qualify under the framework, because these bonds would not contribute anything new/additional to the green transition.

<u>Q11)</u> The EU Taxonomy technical screening criteria will be periodically reviewed. This may cause a change in the status of issued green bonds if the projects or assets that they finance are no longer eligible under the recalibrated taxonomy. In your opinion, should an EU Green Bond maintain its status for the entire term to maturity regardless of the newly adapted taxonomy criteria?

The overwhelming majority of respondents across all categories, issuers and investors, agreed that an EU Green Bond should maintain its status for the entire term to maturity regardless of newly adapted EU taxonomy criteria. This means that green at issuance should be green for the entire term to maturity of the bond. According to these respondents, a strong

grandfathering regime is needed, as this would provide legal certainty and avoid confusion in the market once a bond is issued. Clarity, certainty and predictability are crucial for issuers and investors when making investments. Any changes to the status of the green bond before maturity would have consequences in terms of investors' appetite for these products and prices. Furthermore, additional reviewing would increase the costs and make the whole process more burdensome. It could also cause strong volatility in the price. Some respondents even stated that it would generally not be possible to adapt already launched projects to the newly recalibrated criteria of the EU taxonomy.

On the contrary, only a very few respondents were of the opinion that there should not be any grandfathering at all, if the updated EU Taxonomy technical screening criteria are no longer met. In this case, the EU Green Bond should lose its status. It was also suggested that a non-compliant green bond could then also be labelled differently.

However, a minority of respondents was also of the opinion that in the case of adapted EU taxonomy criteria an EU Green Bond should not maintain its status, but some kind of grandfathering would be necessary. A grandfathering period would provide the possibility for issuers to adapt the activities to the revised EU taxonomy. Some respondents underlined that a limited grandfathering period would also avoid greenwashing. In this context, most respondents favored a maximum amount of 5 years for grandfathering. Few respondents suggested a maximum amount of 3 years as well as 10 years. Only one respondent was in favor of a maximum of 20 years. However, few respondents also chose a "different approach all together". Among those, some explained that is depends on the financed asset or protect. Grandfathering criteria should not be quantified in years, but rather on a combination of the duration of the project and the extent of projected environmental improvements. An alternative could also be a grace period allowing for realignment with new taxonomy standards.

Q12) Stakeholders have noted that the issuance process for a green bond is often more costly than for a corresponding plain vanilla bond. Which elements of issuing green bonds do you believe lead to extra costs, if any?

The respondents find that verification, reporting, and additional planning and preparation are all factors of the EU GBS that will lead to extra costs.

Most respondents indicate that the extra costs are somewhere between moderate and high for all three factors, although additional planning and preparation (including the identification of green assets) is considered as the costliest of the three, while verification and reporting are roughly tied as the two least costly. Some respondents also mentioned other costs, such as IT costs or communication costs.

Many respondents also mention that smaller issuers will have more difficulties absorbing these costs, as they will represent a larger fraction of their bond (thereby affecting the cost benefit calculation of green bonds for smaller issuers). The costs are also typically higher for first time issuers. There are also differences in ongoing costs, as conventional bonds require almost no surveillance after issuance and allocation, whereas green bond needs roughly 20% more of human capital at issuance.

Concerning the overall additional cost impact, the estimates vary. Some think the additional costs will not be significant, while others do. For example, one investment bank does not see the additional costs as a concern, while some stock exchanges do.

<u>Q13)</u> In your view, how would the costs of an official standard as proposed by the TEG compare to existing market standards?

Although opinions vary, the average view seems to be that there may be a small cost increase for EU GBS users compared to other green bond standards (in particular those who use GBP without CBI or without following market best practice otherwise), but this cost increase should normally not be large or particularly dissuasive (although for smaller issuers, this might be a concern). It should be noted that several respondents from the financial sector were of the view that the EU GBS would reduce costs for issuers, thanks to standardisation, consolidation, and more competition among external reviewers. One respondent welcomed that the proposed GBS allows for incorporation of multiple projects into a green bond framework as well as for allocation and impact reporting to be done at portfolio level for multiple projects. However, others indicated that costs of the EU GBS would be significantly higher than for ICMA GBPs. Many respondents also indicated that a lot would depend on the future regime for verifiers (e.g. under ESMA).

Many pointed to the additional cost from screening proceeds against the EU Taxonomy as the main factor of increased costs. Some mentioned in particular the need to carry out due diligence according to the DNSH criteria as a major cost factor, not least due to the need to change internal processes. There was broad agreement that use of the Taxonomy would raise costs. However, some respondents pointed out that parallel disclosure requirements under the Sustainable Finance Disclosure Regulation and the Taxonomy Regulation itself means that these higher costs would have to be absorbed anyway, independently of the EU GBS, and this widespread adoption of the Taxonomy would also facilitate the screening process according to its criteria.

The second most widely mentioned source of additional costs for the EU GBS was the need for a verification of the green bond framework and post-issuance verification of the allocation, compared to just a second party opinion being required for the ICMA GBPs. One issuer mentioned that they had received a first proposal for an external verification that was more than double the cost of a normal verification (i.e. a second party opinion). However, not all respondents agreed that the review requirements for the EU GBS would raise costs compared to current standards, given that many existing green bonds already make use of post-issuance verification. Several respondents noted that, in terms of structure, the external review requirements of the EU GBS as proposed by the TEG are pretty much in line with best market practice of GBP and therefore no material additional costs are expected. Others noted that the standardisation of verification requirements would improve clarity and reduce the ability of verifiers to differentiate their offers based on content, which could have a stabilising effect on prices, in particular for those seeking high quality verification. On the verifier side, one company active in this sphere noted that the need to verify against the requirements of the Taxonomy would require more data.

<u>Q14)</u> Do you believe that specific financial or alternative incentives are necessary to support the uptake of EU green bonds (green bonds following the EU GBS), and at which level should such incentives be applied (issuer and/or investor)?

For each of the four types of incentives asked about in this question, the average respondent answered that that this incentive would have somewhere between "a certain impact" and "rather high impact", with regards to supporting the uptake of the EU green bond standard.

Ranking of the options from most to least popular:

1. Other incentives or alternative incentives for issuers.
2. Other financial incentives or alternative incentives for investors.
3. Public guarantee schemes provided at EU level, as e.g. Invest EU"
4. Alleviations from prudential requirements received the least positive response.

Considerations in favour of incentives	**Considerations against incentives**
• Increase the internal rate of return for projects that are eligible for refinancing by a green bond. • Offset additional costs compared to vanilla bonds, but have additional costs. • Bolstering uptake of standard by SMEs • Compensating issuers, who are required to take on the entire (financial) workload of issuing green bonds. • Singapore already offers targeted and time-limited (until 2023) compensation for issuers to alleviate the heightened GBS documentation requirements, as it is. • Help create some momentum behind the GBS, and create gravity towards entire asset class.	• Promoting the use of the green bond standard should not be confused with the aim of promoting green investment and growth. Green projects can be financed by many different means, and care needs to be taken before promoting the use of a specific financial instrument such as green bonds. Incentives should be at the level of climate policy, not directly related to a financial instrument. • The GB market has been a very dynamic market without any incentives. • Subsidies could lead to market distortions. • Alleviations from prudential requirements could have the potential to disrupt the risk-based approach of prudential framework and thereby undermine the credibility of these bonds. • The net benefit of the EU GBS will be positive, so no incentives are needed.

Q15) Do you foresee any issues for public sector issuers in following the Standard as proposed by the TEG?

The majority of respondents, mostly coming from the private sector, did not foresee any issues for public sector issuers in following the Standard as put forward by the TEG. Many respondents highlighted that there should be a level playing field between private and public issuers of green bonds. It was also put forward that representatives coming from the public sector have been closely involved in the development of the EU taxonomy and the EU Green Bond Standard so far. Next to that it was mentioned that the purpose of the EU GBS is to be globally relevant and accessible to issuers located in the EU as well as to issuers located outside the EU.

However, at the same time, a significant minority with many respondents from the public sector/ authorities stressed that there are some issues for public sector issuers, including sovereign green bond issuers, following the TEG's standard. The respondents put forward the following issues:

Many respondents mentioned challenges with respect to the EU taxonomy. There are difficulties in assessing the EU taxonomy alignment of environmental policy related public expenditures or the requirements to make representations on DNSH. Moreover, the availability of data to demonstrate EU taxonomy compliance might be problematic. Furthermore, the one-size fits all approach adopted by EU taxonomy screening criteria may prove discouraging to countries of smaller size due to liquidity problems in issuance, lack of natural resources and other issues inherent to smaller, particularly very small public issuers.

Further work would be needed in order to take into account the special nature of public expenditures.

Next to that, some respondents underlined the issue of "additionality" that may be difficult for public issuers, such as sovereigns, and should not be required. A direct allocation of funds to green projects is not possible, as public issuers normally take a backward looking approach. Impact reporting could often not be done for 100 % of assets, because projects are not established directly for the bond and thus not designed in a way that guarantees to collect data. Thus, data for impact reporting would often not be available. More flexibility on the format of the impact report would therefore be needed.

Concerning the area of verification, it was suggested that in case of a sovereign bond the allocation report should not necessarily be verified by an external third party. It should possible that the allocation report could be provided by an internal auditor of/ an agent specializing in auditing the State's accounts.

Moreover, a potential governance issue was mentioned with respect to possible penalties. If a national body is in charge of supervising the green bond standard and applying penalties for any breaches by the issuing public entity, this may lead to difficulties.

Q16) Do you consider that green bonds considerably increase the overall funding available to or improve the cost of financing for green projects or assets?

A majority of respondents across all sectors confirmed that green bonds increase the overall funding available to or improve the cost of financing for green projects or assets.

Regarding the increase of the overall funding, many respondents were of the opinion that green bonds help issuers to identify, select and channelize funding to green projects and consequently assist in increasing the funding to green projects/assets. The green bond market has considerably increased the number of investment portfolios and the level of dedicated investment for the financing of green projects and assets. It was highlighted that green bonds are generally oversubscribed, which was explained with market driven dynamics. It was also mentioned that the issuance of green bonds could play a decisive role in the companies funding strategy that could considerably increase the overall funding available. Such a strategy change may come when the issuance of green debt redirects flows towards greener assets. However, at the same time it was also stressed that the availability of green funding is not always an issue, but a lack of eligible projects could be a limiting factor.

When looking at the EU GBS, it was stated that the EU GBS could have a great potential to channel funding, making it easier for issuers to finance them. It is vital that the EU GBS could give due consideration to market dynamics in its design in order to achieve its full potential. It would further enhance investor confidence in this asset class.

When looking at financing costs, it was stated that green bonds are an efficient way for investors to steer money to sustainable projects. An increasing demand may reduce funding costs for issuers and make issuance and investments into green more attractive. It was also mentioned that for "dark green" investments the financing costs have considerably improved. Currently, as there is a limited supply of green bonds, a "greenium" would be visible and the costs of issuing a green bond would be lower than issuing a normal bond. For the future, some respondents were of the opinion that the costs of financing green projects would definitely improve, as the market would grow and there would be more competition regarding investors' appetite.

On the contrary, a relevant minority took a negative approach. Some respondents were of the opinion that greens bonds would not considerably increase the overall funding or improve financing costs for green projects or assets. There is no real evidence that green bonds would lead to any additional green investment, especially since they are associated with an increase in certain costs in comparison to plain vanilla bonds. Given the lack of financial advantage, it would not be obvious. Furthermore, as current markets provide sufficient liquidity due to the general low interest rate environment, it would not be clear whether green bonds have an impact at all. Nevertheless, this may change in the long run, when small improvements may gradually lower the financing costs for issuers, essentially resulting in better costs of financing green projects. In this context, the issue of (financial) incentives was raised, which could encourage to access further financing via green bonds.

Finally, few respondents underlined that it would be too early and very difficult to confirm or assess at this state, whether green bonds would increase the overall funding available or improve the cost of financing for green projects or assets. A possible price difference may evolve only over time, as the interest in the green market seems to be growing.

Questions 17, 18, and 19 of the targeted consultation on the EU GBS asked about social bonds. The summary of the responses can be found in Annex 16.

2. ONLINE CONSULTATION ON THE RENEWED SUSTAINABLE FINANCE STRATEGY

On 11 December 2019, the European Commission adopted its Communication on a European Green Deal (EGD), which significantly increases the EU's climate action and environmental policy ambitions. The EGD announced a Renewed Sustainable Finance Strategy to help channel private capital towards sustainable investments. The aim of the public consultation was to collect views and opinions of interested parties in order to inform the development of the renewed strategy. The online consultation was open from 8 April until 15 July 2020 and consisted of 102 questions addressing subjects of interest in the area of sustainable finance.

A total of 648 organisations and persons provided a response to the questionnaire. The largest groups of respondents came from business associations (23%), financial companies/ business organisations (14%) and other companies/ business organisations (12%). Other groups with a significant number of responses include NGOs/ Civil Society (11%), EU citizens (22%) and public authorities (7%).

The following section will present the responses to some of the questions that are the most relevant for the initiative on the establishment of an EU Green Bond Standard.[64]

Overview of responses to selected questions

Q22 asked stakeholders if they agreed that verifiers of EU Green Bonds should be subject to some form of accreditation or authorisation and supervision, as recommended by the TEG.

[64] For questions 25, 26, 30, and 31, percentages of the coloured bars indicate the share of responding stakeholders for that question (see "n" number in Figure caption). The grey bar indicates the percentage of blank responses compared to total survey respondents (n=648).

74% of the responding stakeholders agreed that EU Green Bond (green bonds using the EU GBS) verifiers should be subject to accreditation or authorisation and supervision at a European level. A smaller proportion of stakeholders thought this should be achieved at a national level (7%). Overall, only 3% of stakeholders disagreed with the TEG recommendation. A slightly larger proportion of responding stakeholders indicated that they do not know or have no opinion (16%).

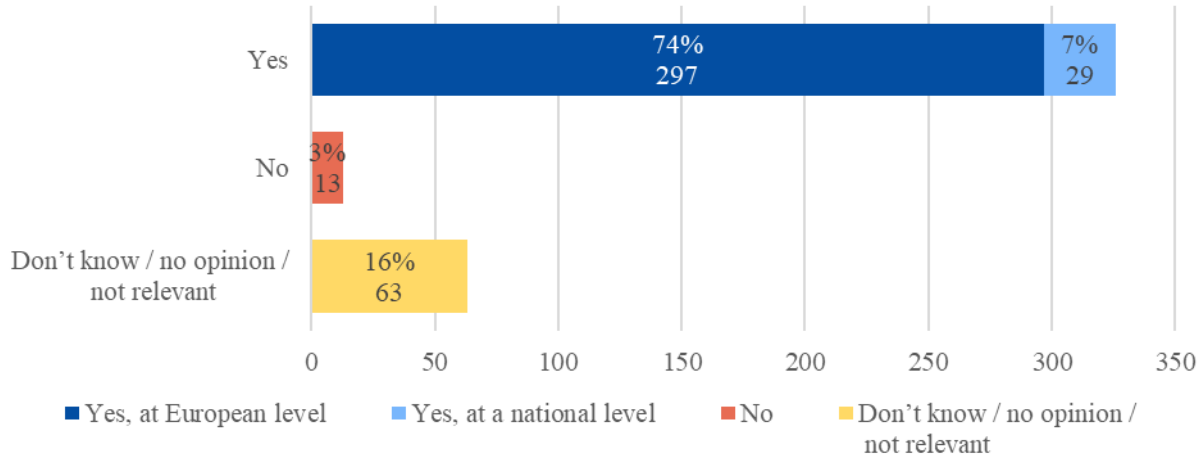


Figure 2 - Should verifiers of EU Green Bonds be subject to some form of accreditation or authorisation and supervision? (n=402)

Q23 asked stakeholders if any action the Commission takes on verifiers of EU Green Bonds should be linked to any potential future action to regulate the market for third-party service providers on sustainability data, ratings, and research.

Most stakeholders responded that any actions taken by the Commission on verifiers of EU Green Bonds should be linked to future potential actions on market regulation for third-party service providers on sustainability data, ratings, and research (46%). 35% of stakeholders indicated that they do not know, and smaller proportion disagreed (13%). 18% of business associations, 22% of financial companies/ business organisations and 17% of other companies/business organisations made up the majority of those that provided a "No" response. However, 47% of business associations, and 54% of NGOs/ Civil Society indicated that they either do not know or have no opinion.

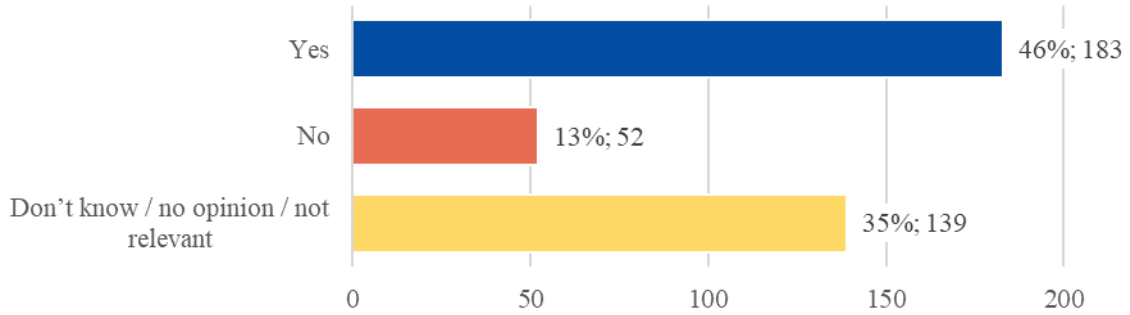


Figure 3 - Should any actions the Commission takes on verifiers of EU Green Bonds be linked to any potential future action to regulate the market? (n=374)

Q24 asked stakeholders if they envisage any issues for non-European issuers to follow the proposed standard by the Technical Expert Group (TEG).

The responses by stakeholders were largely mixed, however, single largest group indicated that they envisage issues for non-European issuers to follow the standards of the TEG (34%). 25% of responding stakeholders indicated that they do not envisage issues. Many of the stakeholder types were further split among the different options, with few cases where stakeholder types generally favoured one option. 59% of financial companies/ business organisations responded that they envisage issues.

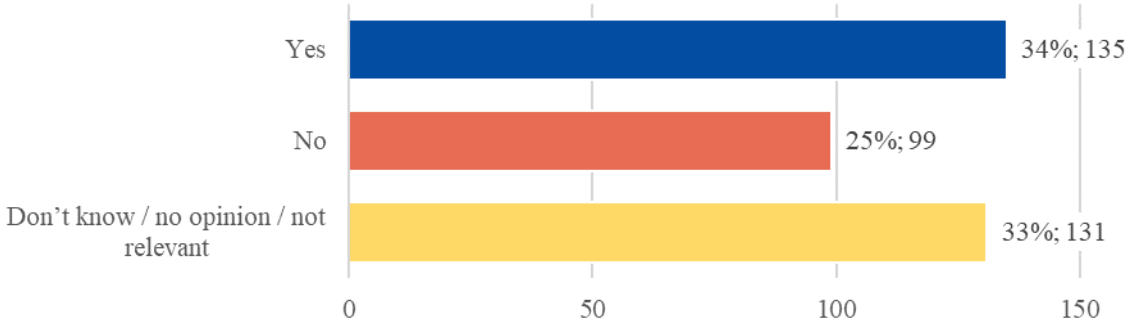


Figure 4 - Can stakeholders envisage any issues for non-European issuers to follow the proposed standard by the TEG (n=365)

Q25 asked stakeholders if they agree that requiring the disclosure of specific information on green bonds in the prospectus would improve the consistency and comparability of information for such instruments and help fight greenwashing.

Most stakeholders responded that they either agreed (27%) or strongly agreed (28%) that requiring the disclosure of specific information on green bonds in the prospectus would improve the consistency and comparability of information. 64% of academics, 71% of consumer organisations, 58% of NGOs/ civil society stakeholders and 80% of trade unions strongly agreed with this statement, while the largest proportion of public authorities responded that they agree with this statement (47%). Business associations and companies were largely split across the various options following the general data trends in the Figure below.

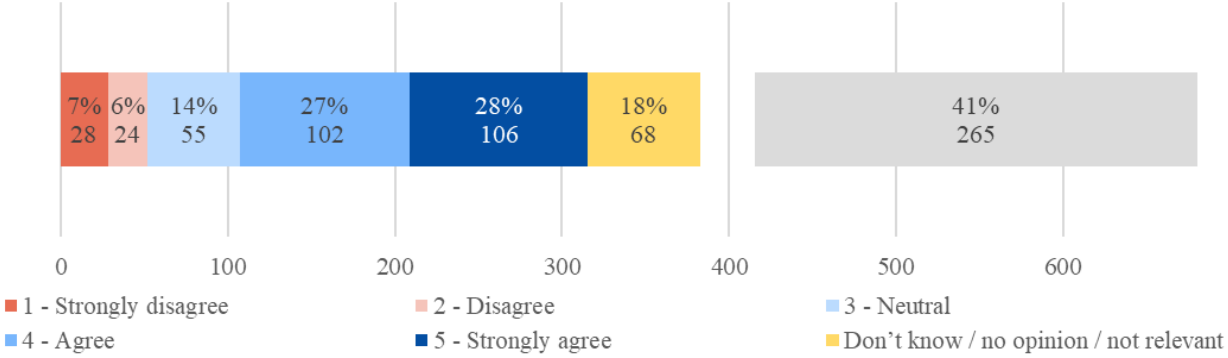


Figure 5 - Would requiring the disclosure of specific information on green bonds in the prospectus would improve the consistency and comparability of information for such instruments and help fight greenwashing? (n=383)

<u>Q30</u> asked stakeholders whether the EU should develop standards for different types of sustainability-linked bonds or loans.

A substantial minority of stakeholders either agreed (26%) or strongly agreed (20%) that the EU should develop standards for different types of sustainability-linked bonds or loans. In comparison, 12% of stakeholders disagreed and 6% strongly disagreed with this. NGO/ civil society stakeholders (44%) and trade unions (75%) were the stakeholders that had the largest shares of their group strongly agreeing. Public authorities' responses were spread across the options with most stakeholders indicating that they are neutral (39%) or agreeing (30%).

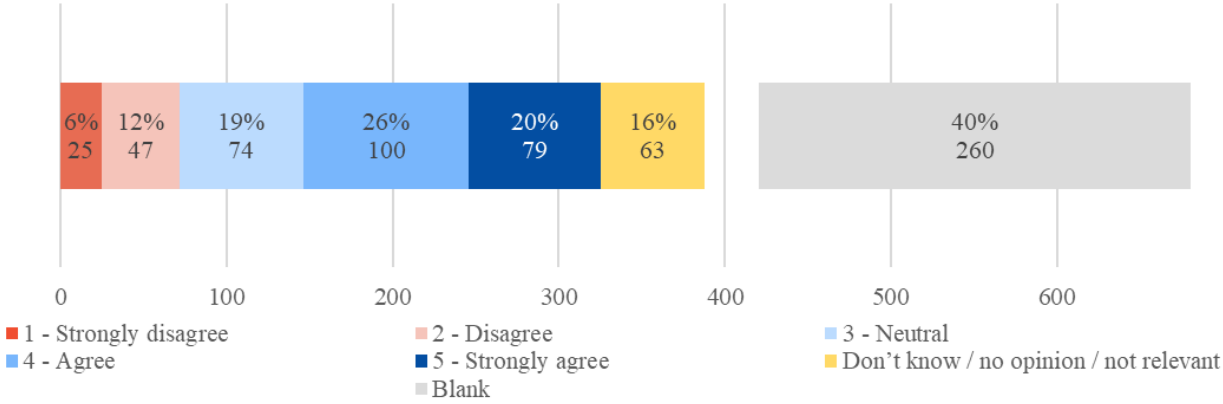


Figure 6 - Should the EU develop standards for different types of sustainability-linked bonds or loans? (n=388)

<u>Q70</u> asked stakeholders if the EU Taxonomy, as it is currently set out in the TEG report on Sustainable Finance, is suitable for use by the public sector, in order to classify and report on green expenditures.

Overall, most stakeholders agreed that the EU Taxonomy as it is currently set out is suitable for the public sector (56%). Of those that agreed, half indicated that while they agree that the Taxonomy is suitable as it is currently set out, it is only partially so (29% of all responses). 27% of stakeholders did not know or had no opinion. The smallest share of responses indicated that stakeholders do not agree that the Taxonomy as it is currently set out is suitable for the public sector (16%).

The stakeholders that had the highest proportion of stakeholders selecting "Yes" included academics (43%), consumer organisations (67%), NGOs/ Civil Society (45%), and "other" (43%). Public authorities (21%) and other companies/ business organisations (34%) had the highest relative shares of responses stating "No".

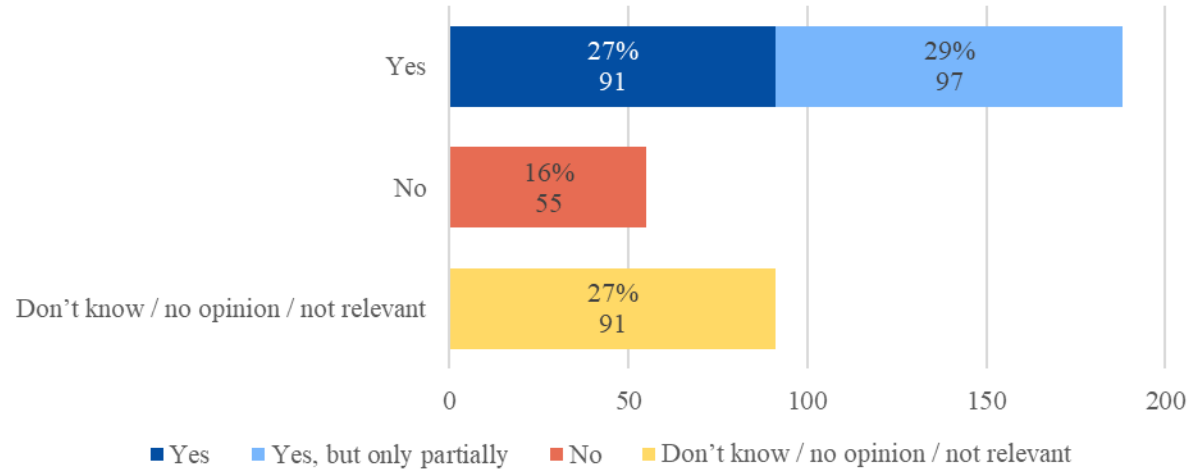


Figure 7 - Is the EU Taxonomy suitable for the public sector for classifying and reporting green expenditure? (n=334)

Q73 asked stakeholders if public issuers should be expected to make use of a future EU Green Bond Standard for their green bond issuances.

The majority of stakeholders responded that public issuers should be expected to use the EU GBS for green bond issuances (69%), with a minority share saying they should not (8%). 23% of stakeholders responded that they do not know/ have no opinion.

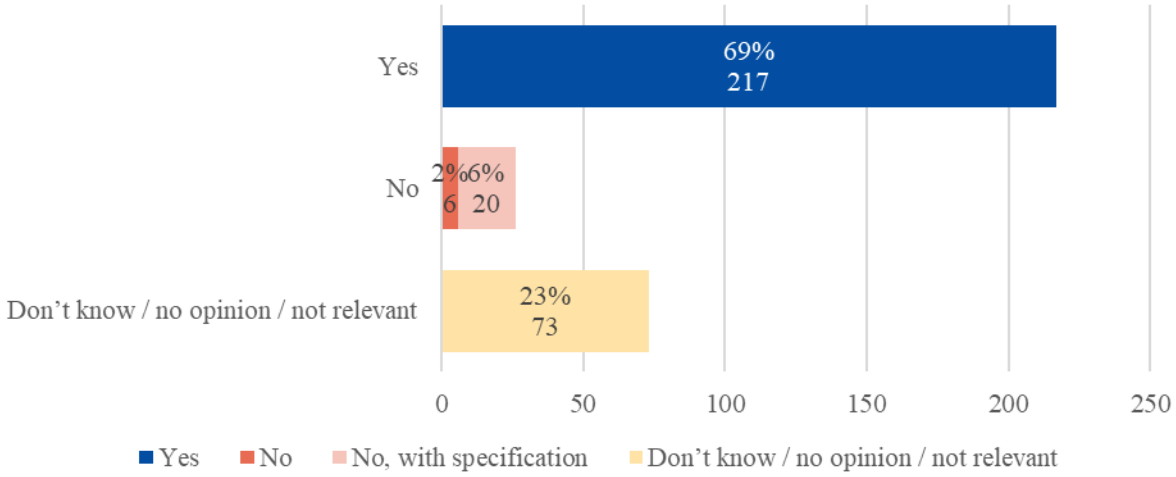


Figure 8 - Should public issuers be expected to make use of a future EU Green Bond Standard for their green bond issuances? (n=316)

Annex 3: Who is affected and how?

1. PRACTICAL IMPLICATIONS OF THE INITIATIVE

The proposed voluntary standard in conjunction with a light supervisory approach ensures that the objectives are reached in the most cost-effective manner. At the same time, it avoids disruptive impacts on existing green bond markets which can continue to operate freely. This facilitates the creation of a competitive market environment which allows investor demand to drive future issuances rather than regulatory requirements. The limited flexibility provided for sovereign green bond issuers under the standard, simplifies sovereign issuance while also safeguarding the integrity of the taxonomy classification system (harmonised definition of green) and increased transparency.

The initiative will require limited investments both by ESMA as well as external reviewers that decide to opt-in. On the side of ESMA, there will be one-off costs in the form of additional labour resources, training as well as IT setup costs. Newly hired staff would equally lead to increased on-going costs. Training and IT may also give rise to on-going costs but are expected to be minimal after initial setup.

External reviewers will equally face costs if they want to comply with the standard. Supervisory fees should be kept to a minimum for the time being given the market size and revenues. Reviewers will however face other direct compliance and legal advisory costs as well as organisational costs to meet all requirements. The extent of these costs will strongly depend on factors such as the type of service currently offered, ancillary activities and entity size. Some market actors are also already complying with other regulatory frameworks. This may decrease the one-off costs if certain organisational requirements are met already.

Issuers will still be able to issue green bonds under different market standards. Similarly to external reviewers, they can avoid costs if they do not opt-in. The costs of using the standard arise mainly due to cost that are passed on from external reviewers as well as costs relating to the application of the taxonomy. The application of the taxonomy will however also be required under other initiatives (e.g. NFRD) meaning that parts of these costs are incurred already. The standard will provide clear advantages in terms of trust which may translate into offsetting pricing advantages and thus provide incentives for issuers to use it. Likewise, issuers may want to demonstrate a stronger green commitment by issuing under the standard. The positive reputation effects are not directly measurable but may easily outpace any costs disadvantages over existing market approaches.

Investors will be provided with a green bond segment which ensures a high degree of market integrity, transparency and comparability. Likewise. It provides for a common definition of green thereby increasing comparability and trust. The initiative will provide increased choice to investors and will benefit especially the most committed green investors which value a stricter green definition. These investors can clearly set themselves apart from the rest of the market by focusing their bond investments on EU GBS. Depending on the success of the standard, investors may even start to fully converge on it driving issuance in the same direction. Although it is impossible to estimate this benefit quantitatively, the increased transparency under the standard will ultimately allow a more efficient allocation of capital in the green investment market.

2. SUMMARY OF COSTS AND BENEFITS

I. Overview of Benefits (total for all provisions) – Preferred Option		
Description	***Amount***	***Comments***
Direct benefits		
Avoidance of duplicative external review costs	Estimated total saving of 1.75 - 3.5 million Euro per year[65] Depends strongly on number of issuances, rate of duplication and individual review costs incurred	Some issuers currently engage with multiple external reviewers for additional assurance. This will not be necessary under the new framework as trust in external reviews is increased.
Reduction of search costs and additional research costs incurred by green investors	No estimate available	Green investors will be able to clearly distinguish EU GBS from other green bonds. The basis in the taxonomy ensures a clear definition of green. Investors will require less time to and effort to ensure that respective bonds are in line with their investment objectives.
Reduced exposure to risks of green washing	No estimate available	The standard demands an increased amount of information over other market practices (given the basis in the taxonomy) and ensures more standardised and higher quality external review procedures. This reduces the risk of greenwashing and related price deterioration (if revealed)
Reduced issuance costs given common taxonomy	No estimate available	Many issuers will already incur the cost to their assets against the taxonomy given, for example, requirements in the NFRD. This assessment will reduce the cost of issuance of EU GBS as part of the 'green assessment' has already been carried out.
Indirect benefits		
Increased pricing advantage over other market practice for issuers	In a low single basis point range for investment grade bonds. This effect depends strongly on investor behaviour and the acceptance and trust in the taxonomy as well as the standard itself.	Increased trust and assurances as to the greenness of the bond should help drive additional demand over other green bonds. This would imply pricing advantages and reduce the costs of financing for issuers
Increased high-quality green investments	No estimate available Depends on investor and issuer behaviour	Assuming that the benefits outstrip costs, at least in the longer run, the standard will help to increase investments in green projects and assets by lowering their financing costs. This will reduce the negative externalities of issuers with wider benefits for the

[65] This assumes a duplication rate of 10-20% and is based on an average external review costs of 40 000 Euro and 2020 issuance figures

		environment and society.

(1) Estimates are relative to the baseline for the preferred option as a whole (i.e. the impact of individual actions/obligations of the preferred option are aggregated together); (2) Please indicate which stakeholder group is the main recipient of the benefit in the comment section;(3) For reductions in regulatory costs, please describe details as to how the saving arises (e.g. reductions in compliance costs, administrative costs, regulatory charges, enforcement costs, etc.; see section 6 of the attached guidance).

II. Overview of costs – Preferred option							
		Citizens/Consumers		Businesses		Administrations	
		One-off	Recurrent	One-off	Recurrent	One-off	Recurrent
Establishing a framework for external reviewers	Direct costs	No cost impact	No cost impact	Initial Application Fee: EUR 1,500 to EUR 5,000 Organisational costs (additional staffing, ICT, record keeping, documenting processes and procedures): EUR 10,000 to EUR 150,000	Ongoing Supervision: EUR 500 to EUR 2,000 per year. Organisational costs (additional staffing, ICT, record keeping, documenting processes and procedures): 1 to 1.5 FTE for compliance activity. Dependent on salary(EUR 50,000 – EUR 90,000).	Supervisory ICT Development: EUR 50,000 to EUR 150,000	<0.3 FTE per entity. Dependent on salary scale (between EUR 75,000 and EUR 95,000 per FTE per year). Ongoing Supervisory ICT maintenance: 1-2 FTE approximately for full database development and ongoing maintenance. Dependent on salary scale (between EUR 75,000 and EUR 95,000 per FTE per year).
	Indirect costs	No cost impact	No cost impact	Cost of advertising new regulatory status	No cost impact	No cost impact	Cost of dealing with potential market complaints Costs associated with potential lawsuits

(1) Estimates to be provided with respect to the baseline; (2) costs are provided for each identifiable action/obligation of the preferred option otherwise for all retained options when no preferred option is specified; (3) If relevant and available, please present information on costs according to the standard typology of costs (compliance costs, regulatory charges, hassle costs, administrative costs, enforcement costs, indirect costs; see section 6 of the attached guidance).

Calculation of overall costs for external reviewers under EU GBS regime over a hypothetical 4-year period.

NB: These costs are calculated from the point of view of a small entity which does not already have any of the administrative capacity that would be required. For a larger entity, organisational costs may be lower than the lower estimate calculated below.

Cost	Type of cost	Lower estimate	Higher estimate
Initial application fee	One-off	1,500	5,000
Organisational costs	One-off	10,000	150,000
Ongoing supervision	Recurrent	500	2,500
Organisation costs	Recurrent	50,000	90,000

Assumptions:

- One-off costs are distributed over four years
- 4 external reviewers will register as EU GBS reviewers
- 160 EU GBS-aligned bonds are issued per year
- External reviewer split the market equally (i.e. each would have about 40 EU GBS-related clients per year).
- External reviewers pass on all the additional costs, but only to issuers of EU GBS-aligned green bonds.

Cost	Lower estimate	Higher estimate
Total one-off costs	11,500	155,000
Total recurrent costs	50,500	92,500
Average yearly costs per external reviewer[66]	53,375	131,250
Additional costs per client[67]	1,334	3,281

The result of the analysis is that additional costs per client are likely to be in the range of EUR 1,334 to EUR 3,281. For larger entities with significant organisational capacity, the costs may be lower.

Overview over current external review market

The current market participants belong to four categories (see more in Annex 7 on external reviewers):

a. **Credit Rating Agencies**: Moody's, S&P Global Ratings, Fitch, as well as more recently Beyond Ratings[68];
b. **Non-financial rating agencies and sustainability consultancies** specialised in second party opinions: Vigéo-Eiris (recently acquired by Moody's), Sustainalytics, ISS-oekom and the research organisation CICERO;
c. **Big-four audit firms** providing mostly post-issuance verification or "assurance" services: Deloitte, KPMG, PwC, EY;
d. **Global technical inspection and certification bodies**: e.g. DNV-GL, Bureau Veritas, TÜV, etc.

[66] = 1/4 Total one-off costs + total recurrent costs
[67] = Average yearly costs per external reviewer /40
[68] ESMA has registered Beyond Ratings SAS as Credit Rating Agency in March 2019. Beyond Ratings was acquired by London Stock Exchange Group in June 2019.

The majority of external reviewers are currently not under any form of financial regulation. However, the entities active in this market are not homogenous. It is the final category (d) for which the imposition of a regulatory and supervisory regime would most probably require new resources to comply with the regime.

The basis for this being that (a) already have a compliance structure in place to deal with global regulatory requirements of credit ratings (b) are large multi-national firms with significant internal support structures to meet wider compliance and fiduciary responsibilities (c) are already subject to national regulatory oversight for the provision of audit services and provide consultancy services to firms on regulatory compliance and should therefore be in a position to adapt to new regulatory requirements for EU GBS reporting.

For (d), a regulatory and supervisory regime would bring new costs and expertise requirements which may not be already in-house. From ESMA's experience of supervising smaller CRAs, which could be considered comparable in terms of revenues and scope of activities to the activity of Green Bond external review, and in particular the class of entity under (d), the following may be required in terms of compliance personnel.

Resources can typically involve 1 to 1.5 FTE for compliance, with up to an additional 1 FTE spread across internal audit, risk management, internal review and information security. However, it is also possible for the smallest entities to have 1 FTE for compliance, with and additional ~.5FTE spread across the other internal control functions. There may also be ICT development costs required to meet any record keeping and security requirements.

According to research conducted by CBI in 2018, the external review market was dominated by a group of mainly European service providers currently holding more than 90% of the market with six specific providers account for almost 75% of the market – CICERO, Sustainalytics, Vigeo Eiris, EY, ISS-oekom and DNV GL.[69] As the table below shows, these entities already have significant scale which will mitigate the impact of any additional compliance burden.

Predominant external reviewers	**Headcount**
CICERO	80
Sustainalytics	600
Vigeo Eiris	300
EY	250,000
ISS-oekom	2,000
DNV GL	12,000

[69] CICERO: "Milestones 2018. A practitioner's perspective on the Green Bond Market", 2018 (Link)

Annex 4: Market Context and controversies

Use of proceeds

In the use of proceeds model, which dominates green bond markets, the issuer commits to earmark the use of proceeds for (specific) green projects. This market has been characterized by a strong focus on climate change mitigation. According to research by the Joint Research Center[70], 585 of around 1000 analysed bonds supported mitigation. 318 pursued mixed environmental objectives, while only 83 pursued dedicated other environmental objectives, of which only eight pursued adaptation. The non-climate space sees a focus on circular economy, although the market has also seen innovation recently with the first 'blue bonds' issued by Seychelles and the World Bank in October 2018[71], and recently even a 'Rhino bond' aimed at protecting biodiversity.[72]

Since the agreement on and adoption of the Taxonomy Regulation, the market has begun to see an increasing amount of references to the Taxonomy in the use-of-proceeds documentation of green bonds (known as the "green bond framework"). For more information, see annex 7.

Controversies relating to use of proceeds green bonds

While the premise of use of proceeds is a good one, there have been certain criticisms and controversies. This section sets out the main types of controversies affecting use of proceed green bonds on the market today.

1) **Controversy regarding use of proceeds**:

The first is when the underlying project intended to be funded by the proceeds of the bond has fallen short of investor expectations, despite being in line with market standards, such as the ICMA Green Bond Principles. In this case, the controversy relates to the use of proceeds itself. Some examples include:

- **Repsol** - Repsol's green bond (2017, EUR 500m) was left out of the main green bond indexes and rejected by some investors on secondary markets, despite being compliant with ICMA's green bond principles, and having received a second party opinion from an external verifier[73]. The bond proceeds were used to fund energy-efficiency improvements in a petroleum refinery plant (Link)

- **Mexico City Airport trust** - Mexico City Airport Trust issued USD 6 billion of green bonds in 2016 and 2017 to finance a new energy-efficient airport, and the bond received green ratings by Moody's, S&P and Sustainalytics. In 2018, a political decision was made to discontinue the airport project, but some of the green bonds remain outstanding[74]. The

[70] Fatica, S., Panzica, R.: "Green bonds and use of proceeds reporting", JRC Technical Report, JRC117571.
[71] The World Bank: "Seychelles launches World's first sovereign blue bond", 2018
[72] Srivastava, S. (CNBC): "New 'rhino bonds' to allow investors to help with wildlife conservation", 2019
[73] https://www.wsj.com/articles/green-bonds-need-the-right-filter-11593509402
[74] Louise Bowman – ESG: green bonds have a chicken and egg problem (Euromoney, 19 June 2019)

cancellation of the project did not lead to default of the bond, but it has since been expelled from some ESG indices[75] .

- **Coal efficiency**- Green bonds have in certain instances been used to finance coal-efficiency projects, for example in China.

2) Controversy regarding the profile of the green bond issuer

The second common type of controversy is where the sustainability of the green bond issuer itself has been subject to criticism or controversy, and where this controversy has affected the willingness of issuers to buy green bonds despite the sustainability of the underlying projects to be funded by the green bond. Some examples include:

- **China Three Gorges Dam** - A USD 840 million green bond issue by the operator of China's Three Gorges Dam in 2018 caused controversy, with accusations of greenwashing, due to the Three Gorges Dam having been cited as a source of water pollution and damage for its surrounding ecosystems[76]. This was despite the proceeds being intended to be used for backing wind power projects in Europe. Despite the controversy, the bond proved popular with investors.

- **Saudi Electricity Company,** a state-owned Saudi company, raised EUR 1.3 billion from a green bond sale in 2020 to invest in the installation of smart meters across its grid, which caused controversy among investors[77].

- **The Australian state of Queensland** has issued green bonds which have been described as "a clear greenwash" Ulf Erlandsson of the Anthropocene Fixed Income Institute, an advocacy group. While the projects being funded by the bond are environmentally friendly, such as to preserve the Great Barrier Reef, Erlandsson believed they cannot be seen separately from the state's expansionary coal policy.

This type of controversy has a significant effect on the green bond market as a whole, as it limits the number of issuers that are able to operate in the green bond market, and forces those green bond issuers that are susceptible to be criticised for their overall sustainability to take additional steps when issuing green bonds, for example by an obtaining ESG rating for their entire company or institution.

This controversy stems from a view that green bonds exist not just to fund a particular type of project, but to fund a particular type of company. And this view is shared by many in the investor community. In a report by NN Investment Partners (NN IP), a Dutch asset manager, the company claims that "only around 85% of green bonds deserve the label"[78]. They base this conclusion on the logic that the greenness of the bond is linked to the greenness of the company.

NN IP finds that the remaining 15% of green bonds are issued by companies that may use the proceeds for environment-friendly projects, but which are involved in activities that incur

[75] Investors probe ESG credentials of bond sellers on 'greenwashing' fears (Financial Times, 28 October 2020)
[76] Environmental Bonds Stained By Greenwashing –Nikkei Asia, 3 March 2018
[77] https://www.ft.com/content/f794162c-3e45-4078-a7be-2e34fea5dd37
[78] https://www.nnip.com/en-INT/professional/insights/global-green-bond-market-set-to-hit-eur-2-trillion-in-three-years-says-nn-ip

negative impacts elsewhere. As an example, they mention a railway company that could finance low-carbon transportation through green bonds, while still being heavily involved in fossil fuel freight. NN IP conclude that investors need to closely scrutinise the credentials of green bonds and their issuers.

In a 2019 article by Louise Bowman[79], numerous banks and asset managers explain that they require issuers to have obtained an ESG rating with a good score, in order to invest in a green bond from this issuer. One theory that is put forward to explain the reticence of investors to fund green bonds by companies with existing controversies is that the existing definitions of green are not clear enough. In other words, because the definitions of green are not clear enough, issuers can not reliably commit to use the proceeds on sufficiently green assets, and investors use the profile of the company as a proxy for the greenness of the bond. Another theory that is put forward in the article is that there are no clear and accepted paths for how a green bond issuer can use the proceeds to improve its profile and become more sustainable.

Other types of sustainable bonds besides green

In addition to 'use of proceeds' green bonds, other types of sustainable bonds are also growing in popularity among issuers, in particular since the beginning of the COVID-19 crisis in 2020.

Sustainability-linked bonds (SLBs): There is a small but growing market segment for target-linked, or sustainability-linked bonds, where the return of the bond is dependent on the issuer achieving certain pre-determined quantitative sustainability targets, often in the form of reaching certain Key Performance Indicators. If the target is not met, the investor is typically compensated monetarily via a coupon step-up. SLBs are typically general purpose corporate bonds, with no dedicated use of proceeds, although it is possible to combine the two approaches into a "sustainability-linked green bond". Due to the fact that the two formats are not mutually exclusive, it is possible that we will see more such hybrids in the future, although at the moment they are scarce.

Some issuers and investors see this target-based approach as a positive development, as it can be a better fit for a number of issuers, notably in asset-light corporate sectors (such as wholesale). It also involves less effort on the part of the issuer in terms of reporting and transparency on use of proceeds, as well as less need for extensive external review. For investors, the format is attractive as they are compensated in case the issuer does not reach its targets. Others highlight the increased risk of greenwashing and criticize the fact that investors receive far less sustainability-related information. It may also be seen as a way to side-step questions on the definition of what is a green asset – i.e. the EU Taxonomy - which has been a fundamental development in the market in the past year. For the moment, the target-based approach is often seen as a complement to the use-of-proceeds approach.

As of December 2020, four corporates had issued SLBs: Enel, the Italian utilities company; Suzano, the Brazilian pulp & paper company; Novartis, the Swiss pharmaceuticals company, and Chanel, the French luxury goods company. The variety of sectors demonstrates the versatility of SLBs. The asset manager Amundi evaluates the size of the SLB market at USD

[79] Louise Bowman – ESG: green bonds have a chicken and egg problem (Euromoney, 19 June 2019)

10 billion, compared to USD 950 billion for use of proceeds green bonds[80]. In June 2020, the International Capital Markets Association published its first ever principles for sustainability-linked bonds.

Social bonds: these are 'use of proceeds' bonds, whose proceeds are dedicated to promoting positive social outcomes, such as the creation of affordable basic infrastructure, access to essential services, housing, employment, and the general socioeconomic empowerment. In 2017, the International Capital Markets Association published its first ever principles for social bonds.

Sustainability bonds: These bonds are a combination of green bonds and social bonds. In other words, they are 'use of proceeds' bonds where the issuer dedicates proceeds to a combination of green and social outcomes. In 2018, the International Capital Markets Association published its first ever guidelines for sustainability bonds.

Transition bonds: While there are diverging opinions as to what constitutes a transition bond, the idea for the moment is that these are bonds issued by companies that promise to become greener but where the outcome may not yet be sufficiently green under existing green bond market practices. By December 2019, however, only three such bonds had been issued globally (BNP Paribas, 2019).

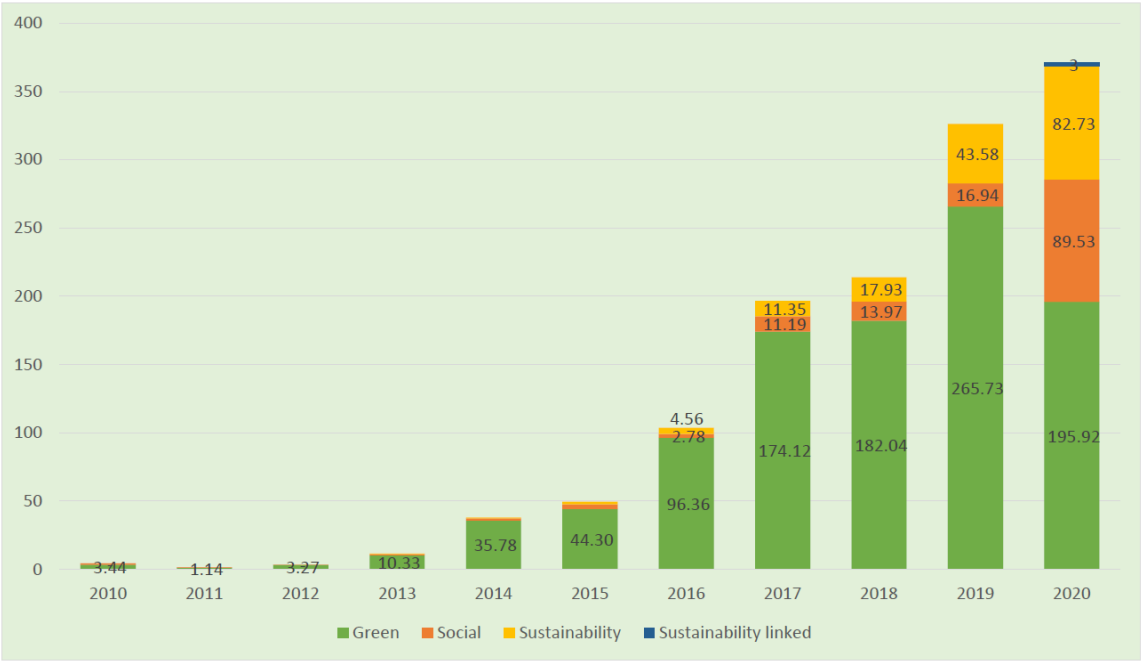


Figure 9 - Annual issuance of green, social, and sustainability bonds in USD billions (Source: Environmental Finance, 25 September 2020)

[80] De Fay et Crehalet (Amundi asset management insights blue paper) December 2020 - "Sustainability-linked bonds: nascent opportunities for ESG investing"

Annex 5: Market developments

This annex presents the latest figures on the development of the green bond market. Unless otherwise indicated, the figures in this annex are based on data from Climate Bonds Initiative (CBI), retrieved on 11 January 2021. In these figures, "EU" refers to green bonds issued in one of the EU's 27 Member States, plus those green bonds issued by the European Investment Bank, the Nordic Investment Bank, or the European Bank for Reconstruction and Development.

The CBI database operates with a more restrictive definition of a green bond compared to most comparable databases. To be considered for inclusion, bonds must have at least 95% use of proceeds financing or refinancing green/environmental projects, and proceeds should be broadly aligned with the Climate Bonds Taxonomy (so for example, bonds financing so-called "clean coal" are excluded).

Growth of the market

Since the first green bond was issued by the European Investment Bank in 2007, the green bond market has grown exponentially on the back of strong investor demand. While 2014 saw about EUR 28 bn in global issuance, 2019 reached around EUR 239 bn of annual issuance. Although the issuance of green bonds decreased in the first half of 2020 due to the COVID-19 pandemic, 2020 still beat 2019, with around EUR 520 bn in global issuance. The total amount of green bonds issued over the period 2007-2020 is approximately EUR 936 bn.

	EU		World (including EU)	
	Yearly volume of GBs issued (EUR millions)	Number of GBs issued	Yearly volume of GBs issued (EUR millions)	Number of GBs issued
2007	€ 600	1	€ 600	1
2008			€ 325	1
2009	€ 287	1	€ 636	3
2010	€ 720	10	€ 3,213	61
2011	€ 116	5	€ 945	36
2012	€ 1,072	9	€ 2,790	27
2013	€ 4,303	27	€ 8,453	49
2014	€ 17,205	87	€ 27,618	163
2015	€ 19,675	75	€ 40,482	245
2016	€ 26,601	98	€ 74,102	281
2017	€ 53,843	154	€ 139,042	420
2018	€ 55,394	159	€ 146,139	498
2019	€ 107,155	312	€ 238,967	855
2020	€ 129,189	464	€ 252,869	1129
Grand Total	**€ 416,160**	**1,402**	**€ 936,180**	**3,269**
Average annual growth (2015-2020)	50.9%	47.2%	49%	37.3%

Table 18 - Annual data on green bond issuance (EU and worldwide) (Source: CBI data)[81]

[81] Notes on methodology:
- Figures are from own calculations based on data from Climate Bonds Initiative.
- All green bond issues in CBI database (worldwide figures, including EU). Figures for number of green bond issuers exclude 3778 bonds issued by one issuer, Fannie Mae.
- Figures in EUR are obtained by multiplying USD figures by an average yearly exchange rate.
- Average annual growth rates are obtained by taking the average yearly growth rate from 2015 to 2020.

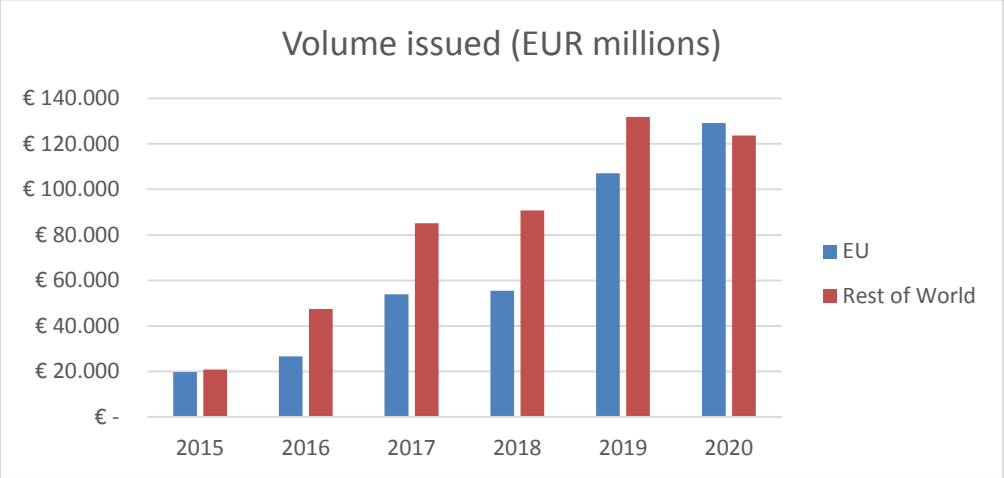


Figure 10 - Volume of green bonds issued in EUR (source: CBI data)

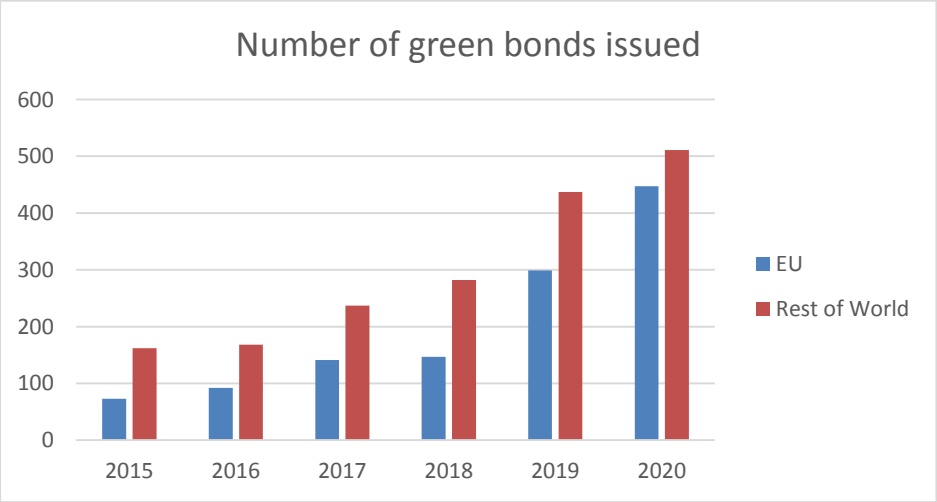


Figure 11 - Number of green bonds issued (source: CBI data)

Projected future market growth

This section attempts to give a very approximate estimate of the expected size of the green bond market in 2023.

Current growth in the green bond market is driven by inter alia the following factors:

- Increased investment in climate change mitigating assets, such as low-carbon technology and infrastructure
- Increased demand from institutional investors and their clients for green investments, for example to hedge against the risk of stranded assets and make a positive impact against climate change.
- The overall legislative and political environment, which favours transparency on the sustainability of investments.

These factors are likely to remain relevant for decades or more, as they are all linked to the risk of climate change, which is an underlying driver that will be present for the foreseeable future. For this reason, it is reasonable to assume that the green bond market is likely to continue growing, potentially at or close to its current course.

Should the current average annual growth (from 2015 to 2020) continue in the next three years, yearly green bond issuance in 2023 would stand at approximately EUR 430 billion in the EU, and EUR 830 billion worldwide. Using a similar projection, the number of green bonds issued per year is estimated to be about 1470 in the EU and about 2900 worldwide.

It is impossible to project the market share of the future EU GBS. However, by making assumptions about this market share, one can arrive at different estimates of the number of EU GBS-aligned green bonds that may be issued in 2023. If for example the EU GBS should manage to capture 30% of the future EU green bond market, and none of the global market, this would represent about 440 EU GBS-aligned green bonds, or about EUR 130 billion in volume, based on the projections in this annex on overall green bond market size. These figures (for potential EU GBS issuance in 2023) are similar in size to the overall EU green bond issuance in 2019 or 2020, all standards included, which is illustrative of the current rapid growth of this market, and the potential situation should this growth continue.

Legal status of green bond

Green bonds are legally often general corporate purpose bonds, where issuers make a commitment to spend an equivalent amount as that raised on green assets. The proceeds technically go to the treasury however, and as such finance the entire balance sheet of the company. For this reason, the credit risk of the green bond is not related to the green projects, but to the credit risk of the entire issuer.

Other types of green bonds also exist, including project bonds, which are commonly used to finance sustainable infrastructure projects. In the case of project bonds, the risk is directly related with the asset being financed and how this asset is operated. Table 19 below provides more information on the types of green bonds.

Type	***Proceeds raised by bond sale are***	***Debt recourse***
"Use of Proceeds" Bond	Earmarked for green projects	Recourse to the issuer: same credit rating applies as issuer's other bonds
"Use of Proceeds" Revenue Bond or ABS	Earmarked for or refinances green projects	Revenue streams from the issuers though fees, taxes etc are collateral for the debt
Project Bond	Ring-fenced for the specific underlying green project(s)	Recourse is only to the project's assets and balance sheet
Securitisation (ABS) Bond	Refinance portfolios of green projects or proceeds are earmarked for green projects	Recourse is to a group of projects that have been grouped together (e.g. solar leases or green mortgages)
Covered Bond	Earmarked for eligible projects included in the covered pool	Recourse to the issuer and, if the issuer is unable to repay the bond, to the covered pool
Loan	Earmarked for eligible projects or secured on eligible assets	Full recourse to the borrower(s) in the case of unsecured loans. Recourse to the collateral in the case of secured loans, but may also feature limited recourse to the borrower(s).

Type	*Proceeds raised by bond sale are*	*Debt recourse*
Other debt instruments	Earmarked for eligible projects	

Table 19- Types of green bonds (source: CBI)

Currencies

In 2018, euro-denominated issuance represented 38% of the annual market by volume, overtaking the US dollar (46% in 2017). Euro-dominated issuance continued to increase its relative position, taking 42% of the total market in 2019, and 48% in 2020.

% of yearly global issuance	EUR	Other Currencies
2015	34%	66%
2016	25%	75%
2017	36%	64%
2018	38%	62%
2019	42%	58%
2020	48%	52%

Table 20 - Share of the euro in yearly global green bond issuance volume (source: CBI data)

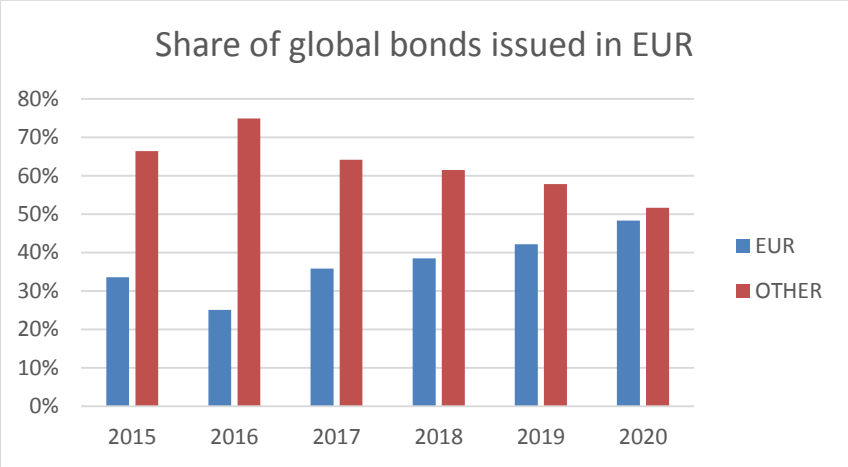


Figure 12 - Share of the euro in yearly global green bond issuance (source: CBI data)

Green bond issuers

Analysis of the current market for green bonds in the EU and world-wide indicates that the market is growing rapidly. In Europe, the number of issuers entering the green bond market for the first time every year grew by **30% yearly** on average between 2015 and 2020.

New issuers	EU	Rest of world
2015	22	54
2016	25	77
2017	39	118
2018	44	180
2019	64	239

2020	77	282

Table 21 - First time green bond issuers (source: CBI data)

Once an issuer has entered the market, published a green bond framework, and issued their first green bond, they may reissue up to several times a year using the same framework. According to Climate Bonds Initiative, 56% of bond volume for 2019 was made up of issuers who issued several times during 2019 alone, with a significant number of issuers (79) issuing twice a year, and 53 issuers issuing more frequently than that.

Frequency (# of deals in 2019)	Number of issuers	Share of total 2019 volume
2	79	15.8 %
3	18	8.4 %
4	14	4.1 %
5-9	16	15.4 %
10 or more	5	12.3 %
TOTAL	**132**	**56 %**

Table 22 - Frequency of green bond issue per issuer (source: CBI)

Regional breakdown:
Europe (52% in 2020) is the largest overall green bond market. In terms of individual countries, however, the US is the largest green bond market, not least due to large amounts of green mortgage-backed securities issued by Fannie Mae. China is the second largest green bond market. In 2020, the Asia-Pacific regions had the third largest volume after Europe.

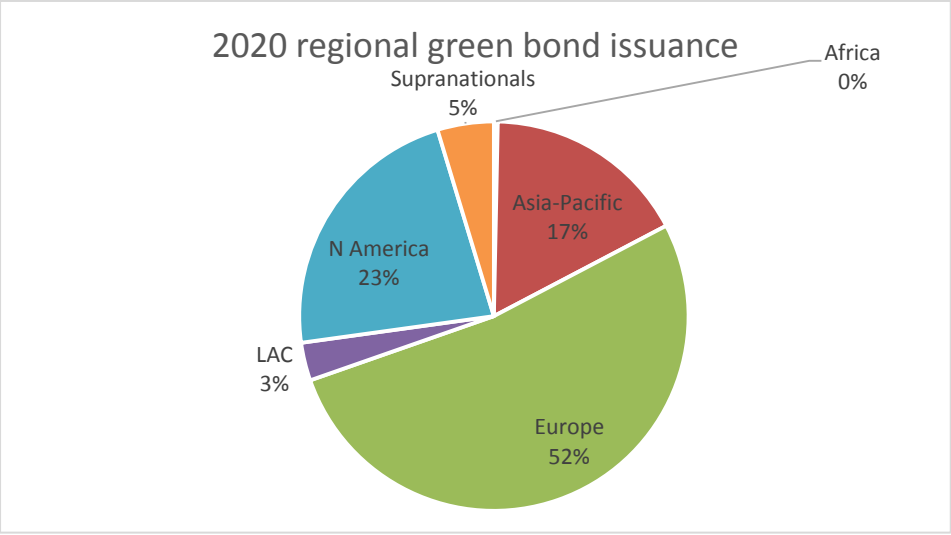


Figure 13 – 2020 Regional green bond issuance (Source: CBI data)

Types of issuers

While there are all kinds of issuers, the market has historically been led by public sector issuers and financial corporates. As Figure 17 shows, more than half of the market comes from public-related issuers, such as national and local governments, and development banks.

Financial corporates also play a strong role, as many banks issued green bonds. Recently, non-financial corporate issuance has been rising as well.

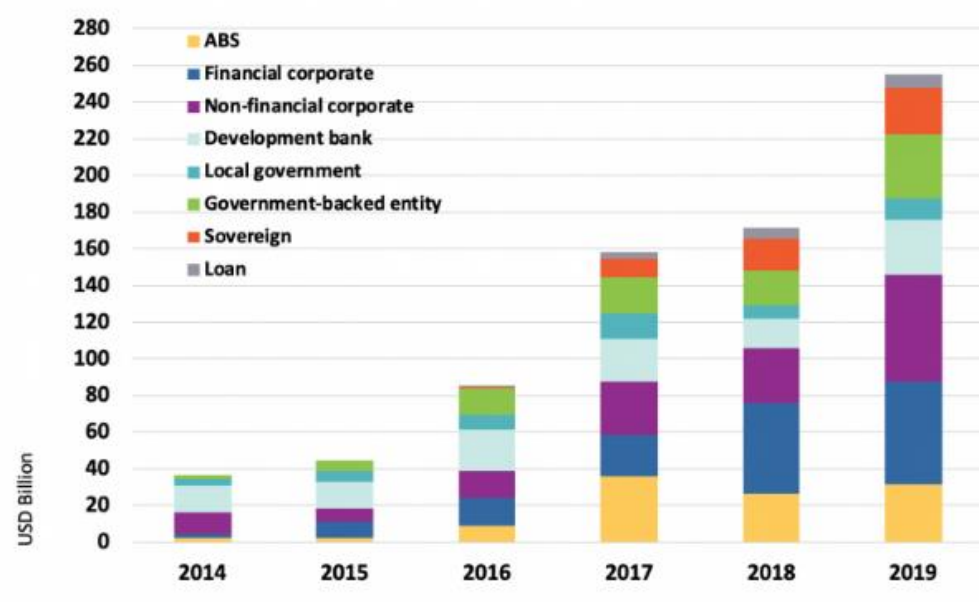


Figure 14 - Green bonds per type of issuer (CBI)

Sectors

Both financial and non-financial corporate issuances have mostly revolved around either housing or electricity production (60% of market in 2019). While these are important sectors in the transition to a more sustainable economy, it also means that many industrial sectors have so far not yet issued green bonds.

Annex 6: Costs and benefits of issuing green bonds

This annex analyses the potential costs and potential benefits faced by issuers of green bonds, to support the analysis in section 7 – preferred option. This annex does not specifically cover the costs and benefits of issuing under the EU GBS, but for green bond issuance in general.

Issuing a green bond requires additional work in terms of administrative effort and costs compared with a conventional bond. According to the TEG, such internal costs represent the main share of overall issuance costs. These costs relate to:

- staff and training needs related to the creation of a green bond program,
- the management and monitoring of the use of green bond proceeds,
- monitoring the environmental impact of the green projects,
- carrying out of reporting towards bond investors after issuance.

In addition, there are costs for external review/verifiers (roughly EUR 20.000 - 40.000 per issuance based on stakeholder input).

When a profit-maximising corporation issues a green bond, it can be assumed that:

- The net benefit (benefits-costs) of issuing a green bond for the issuer is positive.
- The net benefit for the issuer is higher than the net benefit of issuing a conventional (non-green) bond.

Unless these two conditions are true, it is likely that the issuer would rather issue a conventional bond or use other sources of finance.

1) Costs of issuing green bonds compared with conventional bonds:

During interviews with stakeholders, there was broad agreement that the issuance of green bonds is more costly than a regular bond, as it requires more work in terms of gathering and presenting the relevant information. However, in the CBI Treasurer survey[82], just under half of respondents (48%) agreed that the cost of funding green bonds was similar to that of vanilla equivalents, while 42% considered the costs to be lower.

One issuer responding to the targeted consultation indicated that the total additional costs of issuing a green bond (for verification, translation, communication etc, but not including internal costs) range from € 40,000 – €60,000 annually. According to the figures of one large investment bank responding to the targeted consultation, for green bonds issued according to the ICMA Green Bond Principles, additional costs for green bonds (over conventional bonds) linked to verification are around €20,000. For reporting, the costs vary between €5,000 and €10,000, while for planning and preparation, there are additional labour costs due to the need for a dedicated person that collects data (at least part time at certain times within the year). Other respondents gave more extreme numerical estimates on the overall cost of green bond issuance, corresponding to € 100,000 and € 200,000.

One stakeholder indicated that most issuers cover the internal costs from existing resources. Another stakeholder indicated that the additional costs are fairly limited when viewed in the context of the scale of the big investment projects, e.g. when issuing a € 500 million bond.

[82] CBI: "Green bond treasury survey", 2020 (Link)

Finally, a stakeholder mentioned that digitalization (e.g. digital impact reporting, databases shared between clients and investors) could be a solution for reducing the costs for sustainable finance products.

Many respondents to the targeted consultation also mention that smaller issuers may have more difficulty absorbing these costs, as they will represent a larger fixed cost fraction of their bond (thereby affecting the cost benefit calculation of green bonds for smaller issuers). The costs are also typically higher for first time issuers.

The costs of issuing a green bond can be categorised as follows:

1.2) Internal resources

This relates to the staff and IT systems required to put in place the procedures that allow for the issuance of a green bond (as part of a green bond programme), but also to the reporting requirements after issuance, which are sometimes seen as cumbersome.

This is especially needed for setting up the framework, implementing the selection process, tracking the proceeds/projects and an enhanced/changed investor relation work. The preparation of an impact report involves the monitoring and collection of data, which requires additional staff for data analysis and reporting requirements.

There are also differences in ongoing costs, as conventional bonds require almost no surveillance after issuance and allocation, whereas green bond needs roughly 20% more of human capital at issuance.

1.3) Uncertainty and delays

Setting-up a green bond requires more time, i. a. more internal coordination among different department but also external coordination. For many issuers, green bonds are a new instrument they need to familiarise themselves with.

1.4) External review:

The issuance of a green bond entails a second opinion/verification. Green bonds require recurrent impact reporting and potentially verification of the impact report and/or allocation of proceeds. **The TEG estimated that the costs for second-party opinions and/or external verification was roughly in the range of EUR 20,000 to 40,000.** Further estimates from stakeholder interviews and targeted consultations confirmed this. (see table below)

	Stakeholder interviews	**Targeted consultation**
Cost of Second Party Opinion/ external Verification **TEG:** Approximately in the range of EUR 20,000 to 40,000.	A typical second opinion/verifications costs around € 15.000 per issuance. Further stakeholders mentioned a range of roughly of € 20.000 to € 35.000. These costs do not correlate with the amount of the bond.	For SPO: In the range of 18.000 to 30.000 "A first proposal of an external verification was more than double the cost of a normal verification (SPO)" "Likely that external verification under EU GBS will be more costly than the current SPOs, as more work will be

		required to assess compliance with the Taxonomy Thresholds and the DNSH"
Cost of annual review of allocation report	The annual review costs are around € 5.000 to € 10.000.	
Cost of overall verification		- around 20 000 - 25.000 to 30.000 - 7.000 to 45.000

Table 23 - Costs of external review

2) Benefits of issuing green bonds compared with conventional bonds

During interviews with stakeholders, the following potential benefits for issuers of issuing green bonds were identified:

- Increased investor demand, more diversified set of investors, opportunities to attract overseas investors (for emerging markets) and opportunities to advance individual sustainability objectives/business models;
- An improved reputation on sustainability in the market: communication of commitment to national/regional/global targets and a capacity building exercise in dialogue with investors that increases the understanding for more ambitious longer-term sustainability strategies;
- In some cases a price "green premium" – small consistent price benefit for issuing green bonds;
- More consistency as green bond investors tend to be more stable;
- Very strong internal learning process for an entity and after first issuance of a green bond entities are in a better place to understand the green process and issuance as well as broader sustainability issues and manage future environmental risks;
- An enhanced coordination among different departments within the company may have a positive effect on the corporate culture.

Given the growing amount of green bonds that are issued, it can be assumed that in some cases these benefits outweigh the existing costs of issuing green bonds, making green bond issuance a net beneficial activity.

More information on the benefits of green bond issuance:

- **Communication and signalling.** Issuing a green bond is a way to signal to investors a strong focus on environmental issues. This, in turn, can lead to an overall lower funding curve as investors become convinced that the company is transition to a more sustainable business model.
- **A diversification of the issuer's investor base**. According to a study by the Harvard Business review (2018)[83], green issuers attract long-term investors with an increase of 21% (the share of long-term investors increases from 7.1% to 8.6%). This in turn, makes green bonds less volatile.
- **Higher demand for green bonds,** which provides benefits during the execution, and which may be evidenced by lower new issue premiums. For example, according to Climate Bond

[83] Flammer, C. (Harvard Business Review): "Green Bonds benefit companies, investors, and the planet", 2018 (Link)

Initiative, 62% of green bonds in 2018 achieved a higher oversubscription and spread compression than their vanilla equivalents after 28 days. According to Agliardi and Agliardi (2019)[84], the rising environmental awareness among investors contributes to increased demand for green bonds and to oversubscriptions.

Green bond premium (greenium)

While green bonds entail additional costs for issuers, there is growing evidence that issuers of green bonds are to some extent directly compensated for those costs through a pricing advantage on primary markets (i.e. issuers receive a higher market price when they sell the bond). This is referred to as a green bond premium (or even "greenium"). Such a green bond premium would imply that investors accept a lower yield on the bond due to its green characteristics.

Causes

Legally, green bonds are no different from regular bonds: although the issuer promises to spend the raised amount on the projects as outlined in the green bond framework, the use of proceeds are technically for general corporate purposes and therefore finance the entire balance sheet of a company. Green bonds rank pari-passu with bonds with the same rank and issuer. The green bond holder does not own any additional right on the underlying projects and is subject to the same market dynamics. This means that the credit risk and market risk of green bonds are similar to regular bonds. A green premium for the issuer is therefore somewhat of a market anomaly.

According to Ben Slimane et al (2020), demand for sustainable investments is increasing faster than supply, which is still relatively limited, creating a potential mismatch of supply and demand that can trigger scarcities and thus larger premia. According to Agliardi and Agliardi (2019), the rising environmental awareness among investors contributes to increased demand for green bonds and to oversubscriptions. In Zerbib (2019), the difference in pricing is attributed largely to investors' environmental preferences, rather than to risk. As those preferences manifest themselves in growing demand for green bonds, in particular from institutional investors who wish to have green bonds in their portfolios to attract clients and boost the green credentials of their funds or products, it is possible that the green bond premium will continue to grow.

Size of the green bond premium

It is not always straightforward to identify a green bond premium, as the price of the same bond without the green bond label is not known (i.e. it is a counter-factual). However, reports from stakeholders and studies seem to indicate that the green bond premium exists and is in fact growing in line with rising market demand for green bonds.

In May and June 2020, stakeholder outreach pointed to the existence of a small but consistent price benefit for issuing green bonds, consisting of a few basis points. According to one prominent investment bank interviewed in September 2020, outstanding green bonds at the time held a pricing advantage of 3-5 bps to plain vanilla bonds.

According to another stakeholder, representing a major European bank interviewed in January 2021, the average green bond premium has been increasing over time, to the point

[84] Agliardi, E., Agliardi, R: "Financing environmentally-sustainable projects with green bonds", 2019 (Link)

where it became a regular occurrence in the market. The growth in the green bond premium over time is also observed in the market for US municipal green bonds, Karpf and Mandel (2018).

The green bond premium is also present for sovereign issuers: in a study published by CBI in 2021[85] based on feedback from sovereign treasurers, France, the Netherlands and Germany reported that their green bond issuances had benefited from a green bond premium.

Studies

- The average premium ranges between two (Zerbib 2019) and eighteen basis points (Gianfrate and Peri 2019).
- Kapraun and Scheins (2019) examine both primary and secondary market effects and find that green bonds listed on the London and Luxembourg secondary markets with a dedicated green bond segment are traded on average 7 bps lower.
- Ben Slimane et al find (2020) use two methods to estimate green bond premia, and find significant premia of respectively 4.7 bps and 2.2 bps.
- In a meta-study by MacAskill et al (2020) that examined 15 separate studies on green bond premia on primary and secondary markets, only the analysis focused on secondary markets yielded conclusive results, with spreads there mostly focused between 1 and 9 basis points.

Determinants of the green bond premium

Green bond premia vary significantly around the average levels indicated in the previous section. Some of the key determinants for variation include:

- **Sector and geographic region:** According to stakeholders, the size of green bond premia correlates with the supply of green bonds for a given sector or geographic area (lower supply of green bonds leads to more important green bond premia). For example, one stakeholder estimates the average green bond premia in the energy and utilities sector at around 5-10 bps. In the automobile sector, however, premia are higher. Ben Slimane et al (2020) report that, according to Bloomberg, the €1 billion 10-year green bond issued by the automaker Daimler AG priced more than 13 basis points tighter than its conventional spread curve. Likewise, Volkswagen AG sold eight-year and 12-year green benchmarks with a volume of €2 billion, 15.4 and 13.6 basis points lower in yield versus the rest of its bonds. Green bond premia for bonds from central and eastern Europe, where green bonds are less frequent and hence could be more in demand, are currently at between 5-30 basis points.
- **Issuer heterogeneity:** the size or existence of the premium depends crucially on the type of issuer. (Fatica, Panzica and Rancan, 2021) finds a green bond premium for green bonds that are issued by supranational institutions and non-financial corporates, but no price difference for green bonds issued by financial institutions, all other factors equal. One possible reason behind such heterogeneity is that financial institutions are less clearly able to signal their environmental attitudes, as bond funding is arguably used to finance green loans. The same

[85] Climate Bonds Initiative: Sovereign green, social, and sustainability Bond Survey (2021)

study also finds that repeat issuers display an additional premium, potentially motivated by the build-up of a reputation on the green market and better ability on the part of investors to screen borrowers.

- **Importance of external review:** the literature also suggests that the price premium critically depends on external verification. Fatica et al. (2021) looked at the primary bond market worldwide and found that certified green bonds benefit from larger premia compared to self-labelled green bonds. This could be because external review acts as a signalling device for bonds with strong climate- or environmental benefits, which means they are able to sell at a premium even compared to other green bonds if those do not have external review. Similarly, Bachelet et al. (2019) find that green bonds of private issuers have a higher borrowing costs compared to non-green bonds unless they have third-party verification.
- **Alignment with strong standards:** MacAskill et al (2020) find that the systematic rules and standardisation that accompany strong GB governance reduce informational asymmetries, which helps to overcome investors' doubts on the 'greenness' of a particular green bond, both at issuance and reporting of ongoing performance. These findings confirm that investors are willing to pay a premium for investments that offer clear ESG-related reporting on fund proceeds, by up to 15 bps on secondary markets (Hyun et al., 2019; Baker et al., 2018).

Studies on the green bond premium:

- Serena Fatica, Roberto Panzica, and Michael Rancan. 2021. The Pricing of Green Bonds: Are Financial Institutions Special? Journal of Financial Stability, 54, doi.org/10.1016/j.jfs.2021.100873
- Hachenberg, Britta, and Dirk Schiereck. 2018. "Are Green Bonds Priced Differently from Conventional Bonds?" Journal of Asset Management 19 (6): 371–383. doi:10.1057/s41260-018-0088-5.
- Zerbib, Olivier David. 2019. "The Effect of Pro-Environmental Preferences on Bond Prices: Evidence from Green Bonds." Journal of Banking & Finance 98 (January): 39–60. doi:10.1016/j.jbankfin.2018.10.012.
- Gianfrate, Gianfranco, and Mattia Peri. 2019. "The Green Advantage: Exploring the Convenience of Issuing Green Bonds." Journal of Cleaner Production 219 (May): 127–135. doi:10.1016/j.jclepro.2019.02.022.
- Forsbacka, Kristina, and Gregor Vulturius. 2019. "A Legal Analysis of Terms and Conditions for Green Bonds." Europarättslig Tidsskrift 3: 379–442.
- Agliardi, Elettra and Agliardi, Rossella. 2019: "Financing environmentally-sustainable projects with green bonds"
- Mohamed Ben Slimane, Dany Da Fonseca, Vibek Mahtani, 2020. Amundi green bond premium – working paper 102-2020 – December 2020 – "Facts and fantasies about the Green Bond Premium"
- MacAskill et al, October 2020 Is there a greenium in the green bond market? Systematic literature review revealing premium determinants. (Journal of Cleaner Production)
- Karpf et Mandel (2018) The changing value of the 'green' label on the US municipal bond market
- Kapraun et Scheins (2019) Which bonds trade at a green bond premium?

Annex 7: Standards and definitions of green

The green bond market has considerably progressed the debate on what is green by facilitating the emergence of both market-based and regulatory definitions of green eligibility and their transparent comparison[86]. This section provides an overview over existing green bond standards and taxonomies for the definition of green, in order to enable a comparison of their span and enable further analysis. The main standards and taxonomies covered in this annex include:

1) ICMA's Green Bond Principles
2) Climate Bonds Initiative: Climate Bonds taxonomy and eligibility criteria
3) France: Climate and Energy Transition Label Taxonomy (recently renamed "Greenfin")
4) China Green Bond Endorsed Project Catalogue
5) Other standards and definitions of green
6) The Draft/Concept EU Green Bond Standard as proposed by the TEG

The EU Taxonomy for sustainable finance is covered in annex 7.

In Europe, the two most common standards are ICMA's green bond principles (GBP) and the Climate Bonds Standard (operated by the Climate Bonds Initiative, CBI), which also manages the Climate Bonds Taxonomy. The former, the GBPs, covers nearly the entire market, and focuses on process-related recommendations as well as high-level categories for eligible sectors.

The latter, CBI's standard and taxonomy, comes with stricter requirements for eligible projects (since it is also a Taxonomy) and is consequently used by fewer issuers. In their own assessment, CBI estimates that, out of USD 212 billion in value of green bonds issued in the first ten months of 2020, green bonds worth USD 163 billion were aligned with the Climate Bonds Taxonomy. Of these, green bonds worth USD 49.5 million requested and obtained the CBI certification.

Following the publication of the Commission's Action Plan on sustainable finance in March 2018, the Commission set up the Technical Expert Group on Sustainable Finance (TEG). One of its tasks was to draft a proposal for an EU Green Bond Standard. The TEG its report on the EU GBS in June 2019, followed by a usability guide in March 2020. On this basis, some issuers have already begun to make use of the standard, despite it not yet being officially adopted by the EU (see box 1).

Some Member States have developed labels of green financial products which also include taxonomies. One notable example is France, whose Greenfin label (old name: TEEC) is based on the CBI Taxonomy. Although the label itself is typically used for funds, the underlying criteria have strong indirect implications for green bonds. For example, France's sovereign green bond was aligned with the Greenfin standard. International actors have also developed their own taxonomies/bond standards, including the People's Bank of China Green Bond Catalogue.

[86] For a detailed analysis: China Green Finance Committee and EIB, "The need for a common language in Green Finance", 2017 (Link)

In feedback from a 2018 public consultation on institutional investor's and asset manager's duties regarding sustainability, stakeholders indicated that there are too many standards without a single, commonly-accepted framework.

Although these standards and taxonomies were primarily developed for use in the green bond market, they are also currently used as the basis for several existing national eco-labelling initiatives.

For example, the TEEC Label (France) and the FNG Siegel (Germany) are based on the CBI taxonomy. The Nordic Swan Ecolabel is based on ICMA's Green Bond Principle. And the Luxflag Climate Finance Label (Luxemburg) is based on the MDB/IDFC taxonomy (see Table 24 - Other definitions and standards relating to green bondsTable 24). On the other hand, the Austrian Ecolabel only specifies exclusion criteria but does not stipulate the use of a specific taxonomy.

In each case, the taxonomies have been adjusted to reflect national priorities, as well as having been narrowed down or made more granular for certain sectors. Using the French case as an example, the taxonomy used for the TEEC label is based on that of the CBI, with a few amendments to take account of the considerations of the stakeholders consulted and national public policy guidelines. Among others, certain activities that appear in the CBI taxonomy have been excluded from the TEEC label taxonomy, or, in some cases, descriptions of certain activities appearing in the CBI taxonomy have been specified in the French example.

Next to the market-based standards, some regions and countries have developed or are developing standards or guidelines for green bond issuances. Several jurisdictions, including China, India, Morocco, as well as the ASEAN countries, have green bonds regulations issued by financial services authorities. Several other jurisdictions, including Chile, Mexico, and South Africa, have listing requirements. In some cases, the requirements are part of a voluntary standard. The requirements usually revolve around disclosure and reporting issues, and they often build on the Green Bond Principles. Most of them contain use of proceeds requirements or guidance, although they are often high-level, building on the green project categories from the Green Bond Principles. Almost all of them have some form of mandatory external review.

The International Capital Markets Association's Green Bond Principles (GBP)

Developed in 2010 and annually reviewed by the Green Bonds Working Group through the coordination of the International Capital Markets Association, the GBP explicitly recognise broad categories of eligibility for green projects that contribute to several environmental objectives, including:

- climate change mitigation and adaptation,
- natural resource conservation,
- biodiversity conservation, and
- pollution prevention and control.

Use of proceeds	• Recommended to include proceeds in legal documentation • Financing or refinancing of eligible green expenditures. • **Disclosure of proportion of proceeds used for refinancing:** Recommended
Eligibility criteria	High level categories for eligible projects

	Social safeguards: Communicate clearly to investors the "*process applied to identify and manage potentially material environmental and social risks"*
Reporting	Impact monitoring and reporting recommended wherever possible
External Review requirements	Recommended. External review may be partial, covering only certain aspects of an issuer's green bond or associated Green Bond Framework or full, assessing alignment with all four core components of the GBP[87] Publication of external verification recommended
Accreditation of external reviewers/ verifiers	Not addressed in GBPs

Climate Bonds Initiative: Climate Bonds taxonomy and eligibility criteria

Dimension of green finance	The Climate Bonds taxonomy and sector-specific eligibility criteria are meant to support issuance of / investment in **green / climate-aligned bonds**.
Context	The **Climate Bonds Initiative** (CBI) supports the growth of worldwide green bond markets through the development and certification of standards, knowledge creation and networking. As part of its Climate Bonds Standard & Certification Scheme, it coordinates the development and constant refining of a taxonomy and sector-specific eligibility criteria for 'low carbon and climate resilient' investments. First released in 2013, the taxonomy is developed and continuously updated by the CBI team. The eligibility criteria are prepared by Technical Working Groups, made up of scientists, engineers and technical specialists, with support from expert advisory committees. Draft criteria are presented to Industry Working Groups before being released for public comment. Finally, criteria are presented to the Climate Bonds Standard Board for approval.
Conceptual definition	The Certification Scheme allows investors, governments and other stakeholders to prioritise 'low carbon and climate resilient' investments. Specifically, this includes projects or assets that directly contribute to: • Developing low carbon industries, technologies and practices that mitigate greenhouse gas (GHG) emissions consistent with avoiding dangerous climate change • Essential adaptation to the consequences of climate change
Taxonomy / sectoral focus	The **Climate Bonds Taxonomy** identifies 8 sectors that can be eligible for green and climate bonds: energy; buildings; industry; waste, pollution control and sequestration; transport; information technology and communication (ITC); agriculture & forestry; adaptation. For each sector, specific **inclusions**, **exclusions** and investment areas for which **more work** has to be done are defined. Further explanations and restrictions are added for most areas to support selection of eligible investments. (Figure 15)
(Inclusion / exclusion)	The investment areas that are specifically marked as "**excluded**" in the taxonomy are: nuclear power, fossil fuels (incl. fossil fuel efficiency and energy savings related to fossil fuel extraction, transport, power generation; rail transport of fossil fuels), landfill and waste incineration without gas/energy capture, timber harvesting, and agriculture on peat land.
Criteria	In order to become certified under the Climate Bonds Standards V2.1 green bonds have to comply with additional eligibility criteria. These are currently[88] available for - Energy (solar; wind; geothermal; bioenergy, marine renewables) - Low carbon transport (private, public, rail freight, cross-cutting) - Water infrastructure

[87] The four components of the Green Bond Principles are: (1) Use of proceeds; (2) Process for project evaluation and selection; (3) Management of proceeds; and (4) Reporting.
[88] Latest available version is from January 2020.

	- Low carbon buildings - Land use and marine resources (forestry, ecosystem protection and restoration) - Waste management and pollution control Criteria are under development in the sectors of - Water-borne transport - hydro-power - energy storage, transmission, distribution, - agriculture. Eligibility criteria are yet to be developed in inter alia the following sectors: - Carbon capture and storage - fisheries and aquaculture, supply chain asset management for land use - Industry, including energy-intensive manufacturing - IT and communication technology
Product / process standards	The Climate Bonds taxonomy is part of the Climate Bonds Standard & Certification Scheme. In order to become certified, issuers have to comply with a range of pre- and post-issuance requirements, which are largely aligned with the Green Bond Principles. • Pre-Issuance Certification: Assessment and certification of the bond issuer's internal processes, including its selection process for projects & assets, internal tracking of proceeds, and the allocation system for funds. • Post-Issuance Certification: Assessment and certification of the bond, which must be undertaken after the allocation of bond proceeds is underway, and includes assurance from the Verifier that the issuer and the bond conform with all of the Post-Issuance Requirements of the Climate Bonds Standard. An issuer may also choose to voluntarily repeat the post-issuance certification process on a periodic basis.
Investor implications	Globally, 57 Climate Bonds were certified by September 2017. The Climate Bonds taxonomy is rather detailed and allows fast identification of (in)eligible investment areas. The different sector-specific eligibility criteria, in turn, require more in-depth scrutiny. The criteria are structured differently for each sector which can be particularly challenging for issuers whose bond projects fall into different green categories. Benefits for issuers, according to CBI: • More diverse investor base: certification signals the low-carbon integrity of the bond and is important for investors looking for climate related investments. Most issuers of Certified Climate Bonds find that the range of investors interested in their bond is much broader. • Easier-to-find: certification allows potential investors to quickly find a credible green / climate bond on Bloomberg and via other providers of market information. • Enhanced reputation: certification allows an issuer to associate its organisation with efforts to scale up financial flows for delivering the low-carbon economy and securing prosperity for future generations. • Lower cost: issuers pay less for certification than for a second opinion, and investors avoid the cost of environmental due diligence.
Policy implications / EU relevance	The taxonomy and eligibility criteria have been/are being developed with stakeholders from the EU and beyond. They should thus support bond issuers across different countries.

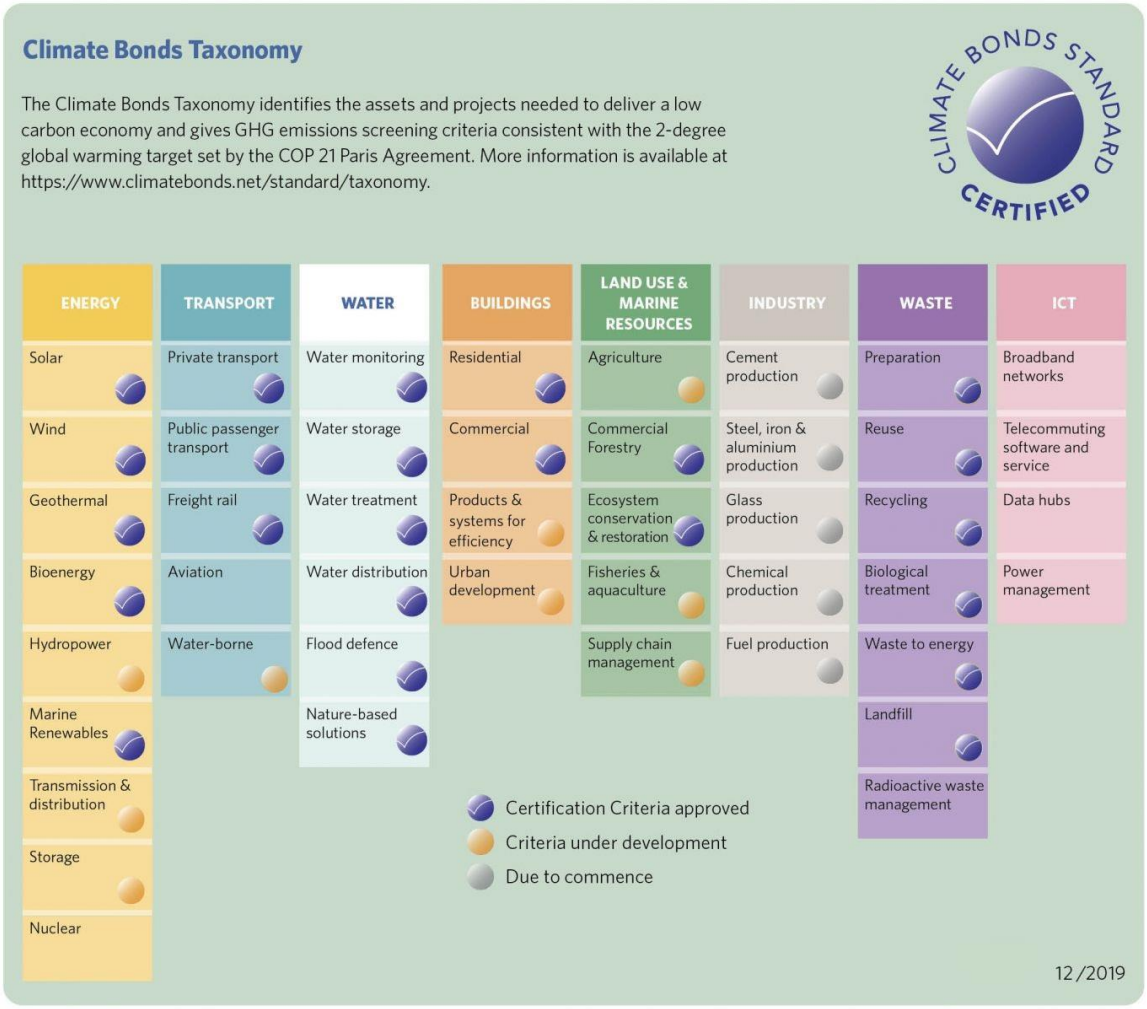


Figure 15 - Sector breakdown of Climate Bonds Taxonomy

France: Energy and Ecological Transition for the Climate (TEEC) Label

Dimension of green finance	The label aims to specifically identify **investment funds** (equity funds, green bond funds, infrastructure funds and private equity) that contribute to the energy and ecological transition.
Context	In 2014, the French government announced its intention to create an **Energy and Ecological Transition for Climate (TEEC) label** and an SRI label. These labels aim to help investors comply with legal requirements to demonstrate the alignment of their portfolio to national and international targets (as specified in the Law N° 2015-992 on Energy Transition for Green Growth, adopted in 2015). The TEEC label was developed by a working group with representatives of important stakeholder groups, on behalf of the then French Ministry of the Environment, Energy and Marine Affairs. The first version of the "Criteria Guidelines" was published in 2015. The criteria guidelines specify the following: • Eligibility criteria for candidate funds (eligible funds, funds' assets, special cases) • Label criteria "Pillar I - Fund's objectives and methodology for the selection of assets […]" • Label criteria "Pillar II – Consideration of ESG Criteria in the construction and life of the portfolio" • Label criteria "Pillar III – Highlighting positive impacts on energy and ecological transition" • Appendix 1 - Definition of activities falling within the scope of the energy and ecological transition • Appendix 2 - Strict and partial exclusions • Appendix 3 - Portfolio allocation thresholds between the various allocation categories • Appendix 4 - Information to be submitted regarding environmental impact measurements • Appendix 5 - Requirements for the use of derivative instruments within an TEEC-certified fund • Appendix 6 – List of documents to submit
Taxonomy / sectoral focus	The taxonomy (provided in Appendix I of the Criteria Guidelines) lists 8 eligible sectors (energy, building, industry, waste management/pollution control, transport, ICT, agriculture & forestry, adaptation). For each sector, further "areas" (e.g. solar energy), "specific categories and activities" (e.g. "PV solar electricity") and descriptions are provided. The taxonomy is the same as that of the CBI with some changes and further specifications: • Certain activities listed in the CBI taxonomy have been excluded (fuel efficient vehicles, broadband); • The descriptions of certain activities appearing in the CBI taxonomy have been specified; • Certain activities considered by the CBI taxonomy as requiring additional work, which are therefore not currently eligible, have been deemed eligible by the EETC taxonomy; • A "Services" category has been added to the "Energy", "Buildings" and "Industry" sectors.
(Inclusion / exclusion) Criteria	The exclusion criteria (provided in Appendix II of the Criteria Guidelines) are as follows: Strict exclusion: Companies having activities pertaining to: • The exploration-production and exploitation of fossil fuels; • The entire nuclear sector, namely the following activities: uranium extraction, uranium concentration, refining, conversion and enrichment, the production of nuclear fuel structures, construction and use of nuclear reactors, treatment of spent nuclear fuel, nuclear decommissioning and radioactive waste management. Partial exclusion: • Service companies and companies involved in the distribution / transportation and the production of equipment and services are excluded, in so far as 33% [inclusive] or more of their turnover comes from clients from the strictly excluded sectors (as defined above). • Companies making 33% [inclusive] or more of their turnover from one of the following activities are excluded: Storage and landfill centres without GHG capture; Incineration without energy recovery; Energy efficiency for non-renewable energy sources and energy savings linked to optimising the extraction, transportation and production of electricity from fossil fuels; Logging, unless managed in a sustainable fashion as defined in appendix 1, and peatland agriculture.

China Green Finance Committee: China Green Bond Endorsed Project Catalogue[89]

Dimension of green finance	The China Green Bond Endorsed Project Catalogue ("Catalogue") identifies projects that are eligible for (re)financing through **green bonds** falling under the regulation of the People's Bank of China.
Context	The Central Committee of the CPC and the State Council in September 2015 issued the Integrated Reform Plan for Promoting Ecological Progress which, for the first time, clearly stated to initiate the top-level design for the national green financial system, including through the green bond market. Against this background, the **Green Finance Committee** of China Society of Finance and Banking put forward the Green Bond Endorsed Project Catalogue (2015 Edition). The catalogue aims to provide an explicit guideline for green investment projects. The Committee commissioned CECEP Consulting Co., Ltd. and the Research Centre of Climate and Energy Finance of Central University of Finance and Economics to prepare the Catalogue and undertake relevant research work.
Conceptual definition	In addition to challenges from climate change, China is facing other issues such as severe environmental pollution, aggravated resource constraints and deteriorated ecological degradation. Environmental benefits are thus framed to comprise GHG emission reduction, pollution reduction, resource conservation, ecological protection, etc.
Taxonomy / sectoral focus	The Catalogue lists **six Level-1 categories** of projects with marked environmental benefits (Energy Saving; Pollution Prevention and Control; Resource Conservation and Recycling; Clean Transportation; Clean Energy; Ecological Protection and Climate Change Adaption), **31 Level-2 categories** as well as a large number of **Level-III categories**, with detailed explanations and defining criteria as well as links to the national industries classification codes.
(Inclusion / exclusion) Criteria	For some categories it is specified which existing sectoral benchmarks and guidelines the technology or activity has to comply with (e.g. as defined in national standard of energy consumption allowance for unit product, Evaluation Standard for Green Building, standard of Chinese organic products, etc.). For Solar Photovoltaic (PV) Power Generation, specific thresholds are defined regarding conversion efficiency and decay rate.
Investor implications	In 2016 China's green bonds volume aligned with China's green definitions (but not necessarily with international green definitions, e.g. as determined by the Green Bond Principles) made up USD 36bn or 39% of the global volume.

Other definitions and standards relating to green bonds

Labels, certification schemes	LuxFLAG Green Bond Label	Taxonomy (referring to GBP)	Relatively unspecific, taxonomy referring to GBP
Guideline / policy	ASEAN Green Bond Standards	Taxonomy, process standard	Based on the international Green Bond Principles and in line with the Climate Bonds Taxonomy. Eligible projects are defined by the GBP's broad categories with the addition of specifically excluding fossil fuel power generation projects.
Guideline / policy	Sustainable Development Investments (Developed by Dutch asset manager PGGM and APG)	Taxonomy Process standard	Identifies investments aligned with the Sustainable Development Goals (SDGs). The SDI consist of a broad list of activities consistent with the SDG goals and sub-goals and a decision tree to assess in a simple way whether an investment is aligned or not.
Guideline /	The Multilateral	Taxonomy	A common approach to track finance towards climate

[89] CBI: "Green Bond Endorsed Project Catalogue (Draft for consultation)", 2020 (Link)
CBI: "Roadmap for China: Green bond guidelines for the next stage of market growth", 2016 (link)
CBI: "China Green Bond Market 2016", 2017 (link)

policy	Development Banks (MDBs) and the International Development Finance Club (IDFC): Common Principles for Climate Mitigation Finance Tacking		change mitigation and adaptation which can offer some guidance, especially to lending institutions, around which loans can be considered green. Eligible activities include: 1. Renewable energy 2. Lower-carbon and efficient energy generation 3. Energy efficiency 4. Agriculture, forestry and land-use 5. Non-energy GHG reductions 6. Waste and wastewater 7. Transport 8. Low-carbon technologies 9. Cross-cutting issues (e.g. policy support and financing instruments)
Guideline / policy	Morocco Green Bond guidelines	Taxonomy	Very broad taxonomy with exemplary character
Guideline / policy	US Energy Conservation / Renewable Energy Bonds	Taxonomy	Very narrow focus on energy
Guideline / policy	EIB Climate Action Bonds	Taxonomy	Based on MDB-IDFC, so no need for extra assessment
Guideline / policy	Nordic Investment Bank	Taxonomy	Early taxonomy, with focus on emission reductions (beyond CO2)
Guideline / policy	Working group of eleven International Financial Institutions	Impact metrics	Four impact indicators defined for RE and EE
Guideline / policy	GBP Impact Reporting Working Group	Impact metrics	Three core indicators for sustainable water and wastewater management, other sustainability indicators
Index	Bloomberg Barclays MSCI Global Green Bond Index	Taxonomy	Very open and short list of eligible environmental categories
Rating	Cicero Shades of Green	Assessment methodology	Assesses the expected environmental effectiveness / impact of the bond issue (How forward looking is it?)
Rating	S&P Green Evaluation	Assessment methodology	Assesses the expected environmental effectiveness / impact of the bond issue (What are key environmental impacts?)
Rating	Moody's Green Bond Assessment	Assessment methodology	Assesses the expected environmental effectiveness / impact of the bond issue (How well does the issuer follow the GBP?)

Table 24 - Other definitions and standards relating to green bonds[90]

The TEG's concept for an EU Green Bond Standard

Use of proceeds	Required to include proceeds in legal documentation. Financing or refinancing of eligible green expenditures. Specific requirements, related to capital/operating expenditures and look-back periods. **Disclosure of proportion of proceeds used for refinancing:** Required
Eligibility criteria (1):	Economic activities shall be aligned with **EU Taxonomy:** 1. Substantial contribution to one out of six environmental objectives 2. Ensure that economic activities do-no-significant harm to any of the EU Taxonomy's six Environmental Objectives 3. Comply with sector-specific technical screening criteria, including principles, metrics and related thresholds on sectors that are deemed environmentally

[90] Some parts of this table are based on EU study: "Defining "green" in the context of green finance", 2017 (Link)

	sustainable. 4. Ensure compliance with minimum **social safeguards** represented by the principles and rights set out in the eight fundamental conventions identified in the ILO's declaration on Fundamental Rights and Principles at Work. Green Bond Framework (GBF) is required.
Reporting	Impact monitoring and reporting required
External Review requirements	Required. Verification of the Green Bond Framework and the Final Allocation Report by an accredited verifier to confirm conformity with the EU-GBS. **Publication of external verification** required
Accreditation of external reviewers/ verifiers	A centralised scheme of accredited verifiers, to be operated by ESMA. To be preceded by a voluntary interim registration scheme for an estimated transition period of up to 3 years.

Box 1: Examples of issuers making use of the TEG's concept for the EU GBS (extracts from Green Bond Frameworks)

Public sector:

- **Grand Duché du Luxembourg:** "The eligibility criteria of green categories comply, when applicable, with the recommendation of the Technical Expert Group (TEG) final report on the EU Taxonomy (the "EU Taxonomy") published in March 202011 or any updated version, on a best effort basis."
- **CAFFIL:** "SFIL Group strives to align this Green Bond Framework with future updates to the Green Bond Principles and both the EU classification system (the so-called "taxonomy") and the EU Green Bond standard3 currently under discussion at the European Commission, on best effort basis, since both those documents are still subject to ongoing discussions and evolutions."
- **Landwirtschaftliche Rentenbank:** " Rentenbank acknowledges that the EU Taxonomy and the EU Green Bond Standard are yet to be finalised, but has already elected – on a best efforts basis – to align its Green Bond framework with the objective of climate change mitigation."

Non-financial corporates

- **Volvo:** "The Company has also taken into account, on a best effort basis, the recommendations of the Technical Expert Group (TEG) final report on the EU Taxonomy (the "EU Taxonomy") published in March 2020 in establishing the definition of the Eligibility Criteria."
- **Daimler:** "It is Daimler's intention to follow the best practices, in relation to Green Bonds and Loans, as the market standards develop and as the EU classification of environmentally sustainable economic activities (the Taxonomy) and the EU Green Bond Standard enter into force.
- **VW:** "On a best efforts basis, VW will review and update the content of the Green Finance Framework and managing any future updates of this document to reflect relevant changes in the Group's corporate strategy, technology and market developments (e.g. the introduction of the EU GBS)."

Financial corporates:

- **Deutsche Bank:** "In formulating the Framework care was also taken to reflect the latest reports on the European Union Green Bond Standard (EU GBS) and the European taxonomy for sustainable activities (EU Taxonomy), prepared by the Technical Expert Group on Sustainable Finance established by the European Commission."
- **Unipol**: "Unipol is fully committed to meet stakeholders' expectations on investors' role to support sustainable development, as defined in EU "Action Plan: Financing Sustainable Growth". Therefore, criteria established by Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment ("Taxonomy Regulation") have been considered in the definition of Eligibility Criteria."
- **Sparebank:** "The Eligibility Criteria used to earmark Eligible Green Assets for SR-Bank's green bond are set out below. Such Eligibility Criteria comply with the recommendation of the Technical Expert Group (TEG) report on the EU Taxonomy published at the end of June 2019, which establishes a system to classify environmentally sustainable activities by setting out metrics and thresholds."
- **Rabobank:** "The eligible projects are aligned with EU Environmental Objective"

Annex 8: EU Taxonomy – coverage and related disclosure obligations

1. WHAT IS THE TAXONOMY?

Regulation (EU) 2020/852, or the Taxonomy Regulation, establishes criteria for determining whether an economic activity qualifies as environmentally sustainable in the EU. This can then be used to classify or 'rate' the greenness of companies, and in turn of assess the greenness of their equity and bonds.

The Taxonomy Regulation is centred on six environmental objectives:

1. climate change mitigation
2. climate change adaptation
3. sustainable use and protection of water and marine resources
4. transition to a circular economy
5. pollution prevention and control
6. protection and restoration of biodiversity and ecosystems

The Taxonomy Regulation establishes the framework for the EU taxonomy by setting out four overarching conditions that an economic activity has to meet in order to qualify as environmentally sustainable:

(i) it contributes substantially to one or more of the six environmental objectives set out in the Taxonomy Regulation;
(ii) it does not significantly harm any of the other environmental objectives;
(iii) it is carried out in compliance with minimum (social) safeguards set out in the Taxonomy Regulation[91]; and
(iv) it complies with technical screening criteria that are established through delegated acts. The technical screening criteria specify the conditions under which an economic activity meets criteria (i) and (ii).

For the climate mitigation objective, the taxonomy Regulation recognises three layers of green activities that can contribute to this objective:

1) **Low-carbon activities:** The first layer is activities that are already low carbon, such as renewable energy.
2) **Enabling activities:** The second layer is activities that enable emission reduction in other activities, and that in themselves are environmentally sustainable. For example: manufacturing of components essential for renewable energy production
3) **Transitional activities:** The third layer includes activities that are consistent with EU and international environmental goals but for which there are no technologically and economically feasible low-carbon alternatives

[91] Article 18 of the Taxonomy Regulation specifies: the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights, including the declaration on Fundamental Principles and Rights at Work of the International Labour Organisation (ILO), the eight fundamental conventions of the ILO and the International Bill of Human Rights.

3. WHAT DOES THE EU TAXONOMY COVER?

The Taxonomy uses the Statistical Classification of Economic Activities in the European Community, commonly referred to as NACE, and its codes, as the basis for the activity-specific technical screening criteria. In order to decide for which activities to develop screening criteria, all economic activities were considered on the basis of their own profile as for polluting emissions or ability to reduce emissions stemming from other economic sectors.

If an economic activity is included ("taxonomy-eligible") at a given point in time, it means that this activity has been assessed by technical experts and it was found that the activity can make a substantial contribution to one or more environmental objectives under the Taxonomy Regulation. Consequently, it appears in the delegated act and receives technical screening criteria. In order to be considered environmentally sustainable or "taxonomy-aligned", however, these criteria need to be met by an economic operator. It is important to note that if an activity is not included, it does not mean it is unsustainable. The activity could be only marginally contributing, or simply not been assessed yet. The ultimate goal of the taxonomy is to assess the whole spectrum of economic activities.

It is important to note that the EU taxonomy only classifies economic activities; it does not include, classify or rate companies. Companies may have some activities that comply with the taxonomy and others that do not. While the taxonomy is a binary tool for activities, (either an activity is in, or it is out), it is not binary for companies. Companies can take steps to increase their share of taxonomy-aligned activities and thus use the taxonomy as a tool for the transition.

The following table indicates the sectors covered by the TEG's Taxonomy Report, and their respective emissions[92]:

NACE macro-sector code	**(Scope 1) Tonnes CO2e (2018)**	**Covered by TEG Taxonomy report?**
D - Electricity, gas, steam and air conditioning supply	1,021,327,916.14	Fully
C – Manufacturing	836,131,368.27	Partially
H - Transportation and storage	543,990,599.69	Partially
A - Agriculture, forestry and fishing	526,387,217.14	Fully
E - Water supply; sewerage, waste management and remediation activities	161,962,114.37	Fully
B - Mining and quarrying	81,201,552.02	Partially
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	79,399,182.95	No
F – Construction	64,791,686.40	Partially
Q - Human health and social work activities	32,512,530.55	No
O - Public administration and defence; compulsory social security	29,297,099.74	No
N - Administrative and support service activities	21,424,859.33	No
I - Accommodation and food service activities	17,333,105.86	No
P – Education	17,273,274.20	No
M - Professional, scientific and technical activities	17,056,511.88	Partially

[92] EU Taxonomy report, Technical Annex, p. 13

K - Financial and insurance activities	10,837,435.09	No
S - Other service activities	9,816,300.62	No
J - Information and communication	8,780,514.69	Fully
R - Arts, entertainment and recreation	8,298,587.66	No
L - Real estate activities	5,726,208.34	Partially
T - Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	234,573.70	No
U - Activities of extraterritorial organisations and bodies	26.68	No

Table 25 - Sectoral coverage of TEG's Taxonomy report

4. STUDIES ON TAXONOMY ALIGNMENT AND COVERAGE

As Taxonomy-related disclosures are not yet in place, and the Delegated Acts of the Taxonomy Regulation are not yet adopted, the precise coverage of taxonomy-aligned activities in today's financial markets cannot be determined at this stage with sufficient reliability. Nevertheless, this sub-section aims to illustrate potential coverage and alignment with the EU taxonomy based on the limited number of existing studies that try to approximate it. The few studies that exist are mostly only available on a commercial basis, e.g. with a certain data subscription, also these were made available to Commission services.

The studies covered differ in many ways, including methodology, scope, assumptions made, and types of funds or markets analysed. An important distinction between these studies is the level of assessment with regards to EU taxonomy - some studies assess potential EU taxonomy-alignment (i.e. what share of activities would likely meet the technical screening criteria), while other limit the assessment to taxonomy eligibility (i.e. mapping what companies operate in some of the NACE activities from the TEG report[7]).

The following studies of Taxonomy-alignment are covered in this section:

1. Adelphi and ISS ESG, European Sustainable Finance Survey, (2020)
2. *Ecolabel study "Testing draft EU Ecolabel Criteria on Existing UCITS Equity Fund" (2020)*
3. Study by Nordea (2020)
4. Study by MSCI (2020)
5. Study by Goldman Sachs "Mapping stocks to the Taxonomy" (2020)
6. EY: A Green Covid-19 Recovery and Resilience Plan for Europe (Sep 2020)

A few important caveats apply to these six studies and their results:

- The studies covered in this section focus on revenue, whereas the EU GBS will require Taxonomy-alignment of assets and expenditure, in particular capital expenditure. For this reason the studies do not give an answer to the question of potential Taxonomy-alignment of use of proceeds for bond issuers. However, to the extent that the greenness of the

[7] This can be done either based on their primary NACE code, which is less precise, or on NACE codes associated with their different business segments for which financial data exist.

revenue of a company reflects the greenness of its assets, the studies provide an indication of the potential for EU GBS issuance.[93]

- Studies are from 2020 or earlier. However the EU GBS is only expected to be adopted in 2022. Consequently it seems reasonable to assume that in the years leading up to the adoption of the EU GBS the share of Taxonomy-aligned assets of many EU companies would increase, due to technological trends, market trends, and legislative requirements.
- One caveat, often noted in the studies, concerns the lack of consistent data on potential Taxonomy-alignment from companies and financial product providers, and the consequent need to make several assumptions, something that the Taxonomy Regulation aims to address by ensuring more consistent data along the investment chain.
- While these studies typically estimate the share of Taxonomy-alignmed revenue to total revenue, they offer few insights into whether the resulting figures are due to the criteria of the Taxonomy itself, or the simple lack of green revenue in the economy overall. For this reason, the more interesting metric for our purposes would may be have been the share of Taxonomy-aligned revenue as a share of green revenue, not total revenue.

The studies:

1. **Adelphi and ISS ESG (2020)**

In a taxonomy mapping carried out by Adelphi and ISS ESG[94] and commissioned by the German ministry of the environment, the consultants analysed public data on 75 European companies companies listed on three main European indices (EURO STOXX 50, DAX 30 and CAC 40). The study found that approximately 22% of their total revenue concerns activities listed in the Taxonomy, as proposed by the TEG.

The study stands out in looking at compliance also with DNSH-criteria. While almost 20% of Taxonomy-eligible revenues across the indices were identified and 3-5% of total revenues meet substantial contribution criteria (approximately one fifth of the eligible revenues), less than half of this was found to comply with DNSH-criteria. Overall, the study estimates between 1.2% and 2.1% of total revenue across the indices to be fully Taxonomy-aligned (or between 4.6% and 10.6% of Taxonomy-relevant revenue).

The study only considered the two climate-related objectives of the Taxonomy, and did not include certain companies such as banks. Other than that, the authors explained that the low results were primarily due to a high-carbon economy and a lack of data and reporting from companies.

2. **Ecolabel study**

A recently published study[95] commissioned by the European Commission '*Testing draft EU Ecolabel Criteria on Existing UCITS Equity Funds'* tested potential EU taxonomy-related thresholds for equity funds to inform the design of an EU Ecolabel for financial products. The

[93] Due to the more forward-looking nature of capital expenditure (as it usually reflects the future economic activities of the company, for example in the case of an investment in production capacity), one could argue that the share of Taxonomy-aligned economic activities reflected by capital expenditure is likely to be overall higher for many bond issuers than the respective share as reflected by revenue.
[94] Adelphi and ISS ESG: "European Sustainable Finance Survey", 2020 (Link)
[95] Available at: https://ec.europa.eu/info/publications/200626-study-eu-ecolabel-criteria-ucits_en

study worked with a sample of 101 'green' UCITS equity funds domiciled in the EU 27 Member States. Half of these were labelled under one of the existing national labels and the other half was not labelled.

The study clustered the share of green revenue of the 1831 unique companies the funds were invested in, into the following five categories:

- activity is not covered by Taxonomy,
- activity is per se and unconditionally taxonomy compliant,
- activity is evaluated against a GHG intensity,
- activity is evaluated against another numeric threshold, and
- activity is evaluated against qualitative criteria.

The findings at company level showed that 52.7% of the activities in the primary and secondary segments of the companies were not covered under substantial contribution to climate change mitigation in the final TEG report on EU taxonomy, followed by 21.3% of activities covered by EU taxonomy (either as green without a need to meet any threshold, or with quantitative or qualitative criteria) and 13.7% being left in ambiguous mapping due to data restrictions[96].

Limitations:

- Only climate change mitigation was considered in this study.
- DNSH criteria and social safeguards were not addressed (only substantial contribution)
- Only UCITS equity funds were investigated, although the EU Ecolabel targets a wider scope of retail financial products;

Entire Sample (101 funds)		
Category	***Revenue-weighted % of activities***	
0: Ambiguous Mapping		13.7
1: No Taxonomy exposure		52.7
2: Per se Green		7.4
3: GHG intensities		1.9
4: Numeric		2.9
5: Qualitative		15.0
Energy Production[97]		5.4
Data restrictions	*No firm data obtained*	0.1
	Cash / Currencies	1.0
Total		**100**

Table 26 - Clustering of Revenue segments (source: Climate & Company)

[96] Typically as some activities captured in other industrial classification systems (notably Standard Industrial Classification) could not be clearly associated with a single NACE activity or due to lack of adequate revenue data.

[97] Energy production is listed separately since several activities fall under NACE code 35.11 (i.e. "ambiguous mapping"). Nonetheless, an evaluation of energy production activities with the proposed methodology described in section 4.3 is possible.

3. Nordea

Nordea also made its own assessment in March 2020 of potential EU Taxonomy-alignment in Nordic equity markets based on the interim TEG report. The assessment was done on a sample of 257 listed Nordic companies (in Sweden, Finland, Denmark, and Norway) and focused on checking both taxonomy eligibility (associating companies with relevant NACE codes) as well as testing substantial contribution to climate change mitigation[98]. Unlike most other studies, DNSH criteria were checked, although mostly on a qualitative basis due to data unavailability and nature of the criteria. The assessment was largely based on public information[99] (e.g. annual and sustainability reports, companies' websites, product listings, technical specification of products) with limited verification with the companies.

Overall, this study estimated that:

- around 60% of companies in the sample are in scope of the EU Taxonomy,
- around 30% of companies in the sample have some potentially taxonomy-aligned revenues
- 6.5% of revenues of the companies in the sample are potentially Taxonomy-aligned.

Renewable energy and real estate and construction companies have the highest share of potentially Taxonomy-aligned revenues according to the study.

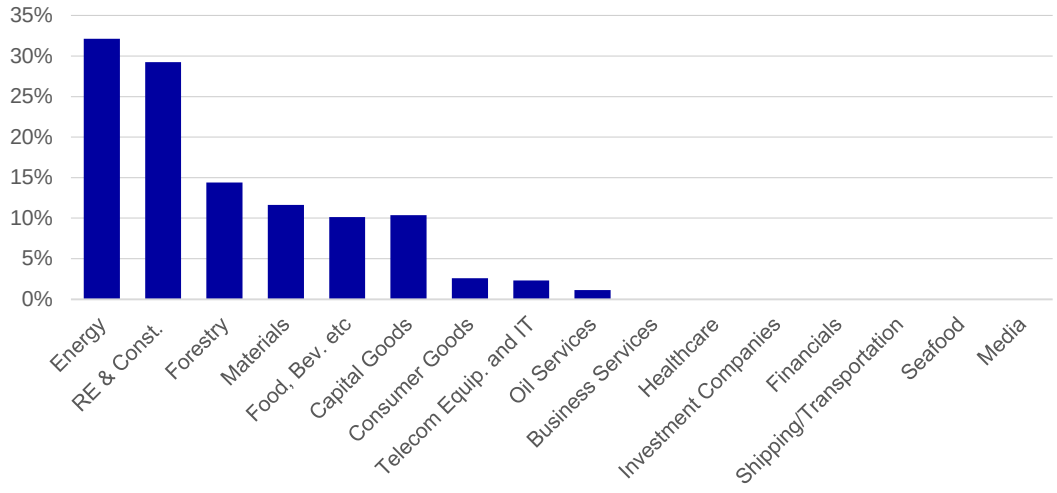


Figure 16 - Estimated share of potentially aligned activities in different sectors based on Nordea report. Source: Nordea, 2020

4. MSCI assessment

MSCI's assessment combined an assessment of Taxonomy eligibility with an approximation for meeting DNSH criteria and minimum social standards. The study nevertheless did not test whether substantial contribution criteria are met, hence the results are hard to compare with the other studies at our disposal. MSCI used revenue estimation from MSCI Sustainable Impact Metrics and used their data on controversial events and business involvement data

[98] The assessment of substantial contribution to climate change adaptation was limited to several activities such as insurance products, infrastructure, IT companies.
[99] Information considered in the assessment mostly came from 2018 accounts.

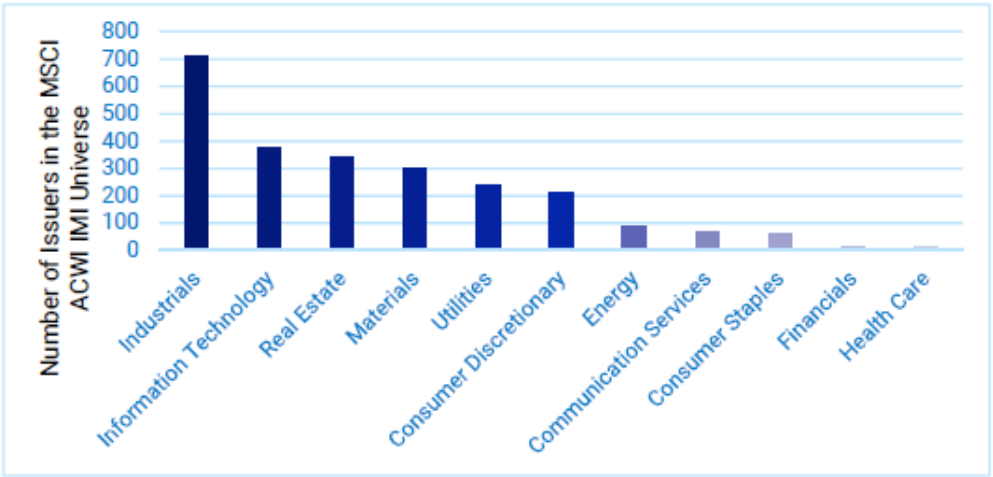
from MSCI ESG Controversies and MSCI Business Involvement Screening Research as a proxy for meeting DNSH criteria.

Using this approach, MSCI estimated that 27% of the constituents of the MSCI ACWI Investable Market Index (with approximately 9000 companies) had some degree of involvement in activities listed in the TEG report while avoiding major controversies. Of this group, 15% generated at least 5% of their revenue from activities likely to address one or more of the six environmental objectives of the EU Taxonomy and were not involved in controversial practices that could indicate breach of the Taxonomy's minimum social safeguards and DNSH criteria.

The chart below shows the results across of 2,425 issuers with potentially EU Taxonomy eligible revenues. As figure 34 shows, the number of companies per sector with such activities is relatively high for at least five sectors – ranging from industrials to information technology and real estate. While the final conclusion would depend on company size, this is likely to allow construction of well-diversified portfolios focused on EU taxonomy alignment.

	Number of Issuers	Percentage of MSCI ACWI IMI
Any involvement (>0%)	2425	*27%*
Some Involvement (>5%)	1297	*15%*
Participant (>20%)	532	*6%*
Mostly green (>50%)	221	*2%*
Pure play (100%)	28	*0.32%*

Figure 17 - Issuers by potentially aligned revenue share (MSCI, 2020)



Source: MSCI ESG Research, Data as of June 2, 2020

Figure 18 - Number of relevant companies per sector within MSCI ACWI IMI Index (MSCI, 2020)

5. Goldman Sachs study Mapping stocks to the Taxonomy (2020)

A June 2020 study by Goldman Sachs screened large and mid-cap global companies in the MSCI ACWI index and found that around 1200, or 41%, have at least some revenue (more than 5%) that is potentially eligible under the Taxonomy. 957 companies were found to have more than 50% potentially eligible revenue, while 602 companies were found to have 100% potentially eligible revenue.

High rates of potential eligibility are notably seen in Japan and the rest of Asia, due to the broad potential application of the Taxonomy to industrial companies, and notably the manufacture of low carbon technologies (see exhibit-tables from the study below). The study highlights however that actual rates of Taxonomy-alignment will be far lower, once compliance with the technical screening criteria and social safeguards are checked.

	Ecolabel study (Climate & company et al., 2020)	**Nordea** (March 2020, not publically available)	**MSCI** (2019, not publically available)	**Goldman Sachs** (June 2020, not publically available)	Adelphi and ISS ESG European Sustainable Finance Survey (2020).
Scope	Sample of "green" UCITS equity funds domiciled in the EU (101 funds, of which 51 are currently labelled, with 1831 investee companies)	Nordic equities (sample of 257 companies)	Global equities and green bonds (Assessment was made based on MSCI ACWI IMI index (around 9000 constituents).	Medium and large-cap equities from MSCI ACWI index (~2900 companies)	75 companies on three main EU equity indices
Level of Taxonomy-relevant assessment	NACE codes + SC criteria of the underlying companies (climate mitigation only)	NACE codes + SC criteria + limited DNSH assessment	Equity: NACE codes + DNSH and minimum social criteria based on proxies (not actual criteria)	checking NACE codes only (eligibility)	NACE + SC + DNSH criteria (climate mitigation and adaptation)
Main results on Taxonomy eligibility		• ~30% of companies had some eligible revenues • ~60% of companies in the sample were in scope of the EU Taxonomy		41%, of global companies in MSCI ACWI index (26% of market cap), have revenue exposure (>5%) that is potentially Taxonomy-eligible.	
Main results on Taxonomy alignment	~11% of total net assets invested in companies with least 50% from "green" economic activities based on SC criteria;	• ~6.5% of potentially taxonomy-aligned revenues;	**Equity:** ~ 9% of MSCI ACWI IMI constituents likely involved in eligible activities and meet DNSH; **Green bonds:** ~17% of Bloomberg Barclays MSCI Green Bond Index (by market value)		Between 1.2% and 2.1% of total revenue across the indices estimated to be fully Taxonomy-aligned (or between 4.6% and 10.6% of Taxonomy-relevant revenue).
Other important findings and caveats	Many holdings could not be clearly categorised in the draft Ecolabel pockets due to significant data issues and ambiguous mapping between classification systems	Substantial contribution assessed based on Nordea's estimation using available information; limited verification of the results with companies	NACE activity mapping + proxy for DNSH and minimum social criteria compliance	Companies with Taxonomy-eligible share >5% tend to be smaller on average	While revenue shares signal a low level of potential alignment today, the study found that 94.7% of the companies analysed invest in climate change mitigation, but that data for checking for Taxonomy-compliance based on capital expenditure (CapEx) and/or operational expenditure (OpEx) was not possible.

Table 27 - High-level comparison of studies on Taxonomy alignment and eligibility

6. EY study: A Green Covid-19 Recovery and Resilience Plan for Europe

In a report released in September 2020, the consultancy EY analysed five sectors (energy, transport, buildings, industry, and land use) to identify shovel-ready projects with the potential to create social, environmental, and economic value over the next two years. The analysis was carried out identifying suitable investments in the context of the EU's Next Generation EU recovery effort, but it also shows the vast potential for Taxonomy-aligned green investments.

In their summary report, EY identify over 1000 such projects across the EU27, which are developed and only need a last push (which could be additional financing, or overcoming other barriers) to be realised. Together, these projects represent an aggregate investment of €200 billion, distributed evenly in all EU27 countries. However, EY estimates that this list of 1000 projects only captures about 10% of green projects currently under development, meaning that the potential is much larger. According to EY, the entire EU pipeline of green projects could be as high as €1 trillion.

EY used the TEG's final report and technical annex on the Taxonomy from March 2020 to evaluate the climate benefits of the projects. Accordingly, EY applied a "rigorous use" of the taxonomy to differentiate projects into two groups, with one group being those aligned with EU taxonomy and having a clear climate benefit, while the other group being those projects with clear environmental benefits but for which EY could not check compliance with EU taxonomy using available information.

As can be seen from the examples below, EY identified over € 20.6 billion worth of projects falling into the first category (Taxonomy aligned), spread over several sectors. This figure should be interpreted as a lower bound, as the total share or number of projects clearly identified by EY to be Taxonomy-aligned as part of their study is not known.

Energy sector			
MS	**Project Developer**	**Investment**	**Project Description**
Cy-EL	EuroAsiainterconnector Limited	€ 2,5 Bn	Euro asia Interconnector, Israel -Greece –Cyprus -Stage I
EE	Tuuletraal	€ 553 Mn	Tuuletraal Offshore Wind Power Project (380MW)
FI	Valorem	€ 300 Mn	Viiatti onshore wind power project (250-300MW)
DE	EcofinConceptGmbH	€ 98 Mn	70 MWp floating solar system on an open-cast lake (formerly used for brown coal mining)
EL	Power Transmission Operator (IPTO or ADMIE)	€ 1 Bn	Interconnection Athens –Crete
EI	CodlingWind Park Ltd	€ 1,962 Bn	The 1,100MW Codling Wind Park is an offshore wind farm located 16.7km off the coast of Ireland
SK	Energy Development GmbH	€ 12 Mn	Development of PV power plants in Slovakia, revitalization of brown fields and former mining areas
ES	Iberdrola	€ 300 Mn	590 MWpsolar PV project located in Cáceres
SE	Skanska Sweden & Gothenburg Energy	€ 60 Mn	Skanska TES is a thermal seasonal energy storage solution that can balance energy systems in a city or district

Transportation sector			
MS	**Project Developer**	**Investment**	**Project Description**
BU	Sofia municipality	€ 50 Mn	Acquisition of e-buses
HR	iCat d.o.o.	€ 5 Mn	SolarCat-self-sustaining solar passenger ship
CZ	City of Hradec Kralove	€ 26 Mn	Replacement of fleet of buses by electro buses

FR	FM Logistics	€	20 Mn	H2HUB project is aimed at the production of green hydrogen from on-site solar PV panels in order to fuel trucks and heavy-duty vehicles
DE	Munich City	€	700 Mn	Munich U-Bahn Line 5 Extension Project, Laimer Platz - Pasing, Bayern
HU	NKM MobilitásKft.	€	70 Mn	Development of an alternative charging station network
IT	Comunedi Milano	€	1,5 Bn	Acquisition of new electric buses to replace diesel fleet
PL	Cracow Municipality / ZIKIT	€	110 Mn	4.5 km fast tramline between Czyżyny and Mistrzejowice, in the city of CraCow
SK	Region BanskaBystrica	€	40 Mn	Modernization of public transportation, 100 electric buses
ES	Iberdrola	€	150 Mn	Deployment infrastructure for electric vehicle recharging
SE	KatlaAero	€	9 Mn	Developing drone network for electrical air distribution.

Buildings sector

MS	Project Developer	Investment	Project Description
CZ	City of Prague	€ 111 Mn	Accelerated reduction of energy intensity of Prague buildings
FR	Eiffage	€ 50 Mn	New process developed by research facilities at EiffageRoute, represents a low carbon innovation on two level.
DE	KMLS GmbH	€ 100 Mn	Replacement of gas consumption from heating and processes in Siemens facilities Germany to electricity from renewable sources
HU	The Municipality of the City of Budapest	€ 350 Mn	Boosting energy performance of residential buildings in Budapest
IT	Comune di Milano	€ 1 Mn	EnergieSprongis a project for public buildings in Milan which will use "disruptive" and "market ready" industrialized building deep renovatonpackages
NL	City of Amsterdam	€ 5 Mn	Resilioproject -Resilience nEtworkof Smart Innovative cLImate-adapativerOoftops
PL	Lubelskie przedsiebiorstwo eneretyk icieplnej SA	€ 25 Mn	Retrofit and extension of the district heating (DH) network in the city of Lublin
SK	Čiernohronská železnica, n.o.	€ 45 Mn	Construction of the electrified narrow gauge line to the tourist center Chopok-south.
ES	Inditex	€ 100 Mn	Construction of a new building in Inditex headquarters, with the highest standards in terms of energy efficiency and performance
SE	Skanska Sweden AB	€ 3 Mn	Build a climate neutral office building producing energy

Sector: Industry

MS	Project Developer	Investment	Project Description
AT	Verbund	€ 6 Mn	Demonstration of a 6MW electrolysis power plant to produce steel
BE	Calix limited	€ 20 Mn	LEILAC (Low Emissions Intensity Lime And Cement) will pilot a breakthrough technology that has the potential to enable both Europe's cement and lime industries to reduce their emissions
FR	H2V Product	€ 98 Mn	Green hydrogen production plant on land in the industrial zone of Port-Jérôme
DE	Meyer Burger	€ 170 Mn	Build-up of a GW scale European solar PV cell and module manufacturing plant in Germany
IT	Hydro2Power SRL	€ 1 Mn	Creating a new generation of effective hydrogen storage devices at low pressure, safe and very efficient and easy absorption and desorption profiles
IT	Enel Green Power and partners	€ 403 Mn	Italian Photovoltaic Giga Factory
NL	Port of Rotterdam, Energie Beheer Nederland B.V. (EBN) andN.V. Nederlandse Gasunie	€ 50 Mn	Rotterdam CCUS project Porthos
PL	LG Chem Wroclaw Energy SP ZOO	€ 1 Bn	EV battery Gigafactory
PO	Iberdrola	€4,8 Bn	Sines Green Hydrogen Plant (1GW electrolysis)
SE	LKAB, SSAB, Vattenfall	€ 1,7 Bn	Develop and commercialise a fossil free value chain for steel production.

Land use sector			
MS	**Project Developer**	**Investment**	**Project Description**
HR	Agrivid.o.o.	€ 300,000	Agrivi Agriculture sustainable practices based on the deployment of Farm Management Software (FMS), which factors in a carbon emission calculator
DE	City of Munich	Confd	A pioneering facade design with vertical greenery improving microclimate
IT	Comune di Milano	€ 2 Bn	Innovative afforestation project in urban context, with the final aim of planting 3 million trees within the Metropolitan City of Milan by 2030
NL	Stichting Voedselbosbouw Nederland	€ 65 Mn	Cooperative development and management of at least 200 hectares new natural areas consisting of food forests in the province of North-Braban
PL	Regionalny Zarząd Gospodarki Wodnej w Krakowie	€ 10 Mn	Restoration of ecological continuity of flowing surface waters
ES	Madrid City Council, Ferrovial, Universidad Politécnica de Madrid	€ 15 Mn	Green infrastructure and health co-benefits of urban greening in the city of Madrid.

Overall results

Results diverge, but generally suggest relatively low levels of alignment today across the chosen samples. Considering the Nordea and adelphi studies as the most comparable in their scope to EU capital markets, it is realistic to expect that the percentage of taxonomy-aligned activities would likely be in lower single digit number (probably below 5%) for companies in the EU today. There is a however a notable degree of uncertainty around these results, as availability of data for assessing EU taxonomy alignment is still limited at this stage.

Notably, the study by adelphi, which looked at potential Taxonomy-alignment in the revenues of 75 European companies listed on three main European indices (EURO STOXX 50, DAX 30 and CAC 40), found levels of alignment between 1.2% and 2.1% of total revenue across the indices. Meanwhile, the study by Nordea, which looked at Nordic equity markets, found ~6.5% of potentially taxonomy-aligned revenues in their sample, using a more limited estimation of DNSH criteria. It is worth noting that the potential alignment seems to be heavily influenced by the application of DNSH criteria.

As noted previously, it is important to keep in mind that the studies listed here focus on revenue, whereas the EU GBS will require use of proceeds to be dedicated to Taxonomy-aligned assets and expenditure, and in particular capital expenditure. This means that use of the EU GBS will depend not just on the Taxonomy-alignment of existing assets, but also on the potential for future Taxonomy-aligned capital expenditure. In this respect, the study by EY, where a group of consultants identified over €200 of shovel- ready green investment projects across the EU, is an interesting indication. While the study does not give a comprehensive overview of the potential for Taxonomy-aligned investments in Europe, it does give an indication of the sheer scale of green and Taxonomy-aligned potentially in the pipeline, and which could be funded using EU GBS bonds.

5. CASE STUDY: ENERGY INTENSIVE INDUSTRY AND HARD-TO-ABATE MANUFACTURING SECTORS

The following section will focus on the Taxonomy's coverage of certain industries where the potential for reducing emissions is very high, but which are not covered by any of the existing market-based Taxonomies. It will further argue that the EU Green Bond Standard, thanks to its link with the EU Taxonomy, can help companies in this sector enter the green bond market, thereby helping them raise the necessary funds for emission reducing investment.

As indicated in Table 25, the manufacturing sector overall is the second largest contributor to Europe's CO2e emissions, and this is in large part due to the sectors of cement, aluminium, steel and iron, chemicals, fertiliser, and plastics. Although in most cases, carrying out these activities in a climate-neutral way is technologically difficult or costly, the fact remains that in most cases there is no carbon-neutral alternative to replace these activities. For this reason, setting these industries on a pathway to climate neutrality remains an important part of reaching the Paris agreement targets.

Under the Taxonomy Regulation, such activities may qualify as "transitional", under the following criteria:

1. The activity must have no technologically and economically feasible low-carbon alternative.
2. The activity must 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.
3. The activity must have greenhouse gas emission levels that correspond to the best performance in the sector or industry, while not hampering the development and deployment of low-carbon alternatives; and not leading to a lock-in of carbon-intensive assets, considering the economic lifetime of those assets.

The Taxonomy Delegated Acts will set out the screening criteria for each of the relevant technologies to be considered such a transitional activity.

The existence of such activities in the Taxonomy is relevant for the EU GBS, because energy-intensive industry is one of the sectors which have seen the least issuance of green bonds. As can be seen from Figure 19 below, only a few percent at most of green bonds have come from the industry sector. According to Climate Bonds Initiative[100], the reason that green finance for high-emitting activities has so far been limited is arguably due to a lack of provision of robust eligibility criteria - not because they are a priori incompatible with the green bond market or by extension a green label. In general, transition goals, pathways, metrics and indicators have been established for transitional activities relating to buildings (construction and retrofits) and to land-based transport (manufacture and operation of road vehicles, trains and associated infrastructure), but have been much less frequently addressed for aviation, shipping and heavy industry.

In particular, none of the existing taxonomies or standards set out criteria for how high-emitting industry (including cement, aluminium, iron and steel, and hydrogen) can transition

[100] CBI: "Financing Credible Transitions", 2020 (Link)

and thereby qualify for green bond issuance[101]. The most commonly used market-based Taxonomy, the Climate Bonds Taxonomy, provides guidance for the industry sector but does not set out any detailed criteria for the sector (see annex 6). As for ICMA's GBPs, they identify eligible use of proceeds categories, which could potentially include high-emitting industry, but the standard doe not set out any screening criteria or equivalent for these categories.

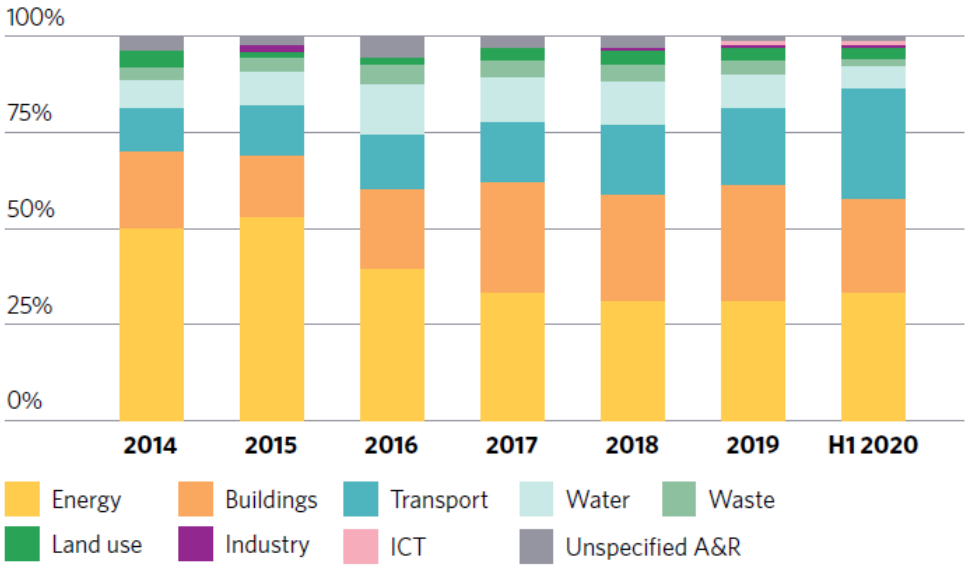


Figure 19 - Global green bond issuance broken down by sector (source: Climate Bonds Initiative)

In their 2019 report on the EU Green Bond Standard, the TEG finds that the risk of reputational risk may be holding back some companies from issuing green bonds, in particular in transitional sectors where the identification of green assets and projects is not straightforward. As the report explains, "issuers will only proceed with green bonds if they do not create additional risks or liabilities compared to the alternatives. In a limited number of cases, issuers have experienced reputational issues from negative market comments from media, NGOs, shareholders, etc. As a result, the fear of such adverse publicity for example because a deal is deemed "insufficiently green" has prevented some issuers from tapping the market."[102]

Energy intensive industry and hard-to-abate manufacturing sectors include:
- Cement
- Aluminium
- Iron and steel
- Chemicals
- Fertiliser
- plastics

A fear often cited by stakeholders is that investors would challenge the greenness of bonds issued by such corporates based on their overall corporate activities rather than focusing on the asset or project financed as per the use-of-proceeds approach. In addition, the issuer of a green bond could come under criticism should the proceeds of the bond finance an activity with questionable social practices that do not meet minimum social safeguards.

[101] According to the OECD, none of the existing taxonomies (the CBI Taxonomy, as well as definitions of green economic activities employed by China, Japan, France, or the Netherlands) include criteria for these manufacturing activities. Source: OECD: Developing Sustainable Finance Definitions and Taxonomies (2020)

[102] For example: https://www.bloomberg.com/news/articles/2016-03-07/bond-market-asking-what-is-green-curbs-climate-friendly-debt and https://www.climate2020.org.uk/wp-content/uploads/2016/09/BRIGHTWELL-CLIMATE2020.pdf .

The fact that the Taxonomy sets out clear criteria for the definition of green in traditionally hard-to-abate sectors may therefore be a game-changer for these sectors, in terms of their ability to issue green bonds. According to the TEG's draft Taxonomy, investments in the energy-intensive and hard-to-abate manufacturing sectors can be considered taxonomy-aligned if they are new investment in a production facility or process that meets the technical screening criteria, or if they consist of mitigation measures that are incorporated into a single investment plan within a determined time frame (5 or 10 years) that outlines how each of the measures in combination with others will in combination enable the activity to meet the threshold defined below actions. In other words, companies operating in these industries should be able to issue EU GBS-aligned green bonds for their investments to become greener, provided that they plan to fulfil the Taxonomy criteria within a certain time-frame.

How were the criteria specified?

In order to set most of the criteria for these manufacturing activities, the TEG made use of the 2021-2026 benchmarks of the Emissions Trading Scheme Directive. The criteria focus on reducing the GHG emissions caused by manufacturing activities up to the levels of performance achieved by best performers. For this reason, the limit for GHG emissions was set according to the average value of the top 10% performing installations, based on the data collected in the context of establishing the EU Emissions Trading System (EU ETS) industrial benchmark for the period of 2021-2026. For each company, the emissions should be calculated in accordance with the methodology for setting the benchmarks set out in the ETS Directive.[103]

Provided that the Taxonomy retains this relationship with the ETS Directive in the future, these specific limits would normally remain until 2026. The benchmarks are periodically updated approximately every 5 years, meaning that the thresholds that refer to them will not be static over time but automatically continue to represent the performance of the 10% best performing plants.

Calculating the criteria using the EU ETS methodology has several advantages:

- The five-year cycle should give companies predictability and a sufficient timespan to plan the necessary investments and issue the corresponding green bonds, should they wish to do so.
- The predictable pace of updates should allow companies some possibility to foresee future changes to the criteria and thereby plan ahead, also beyond the next five years.
- The methodology is robust and already established in Europe: EU ETS benchmarks are the most robust benchmarks available and the data calculated according to the boundaries set are readily available for all installations within the EU that are part of the EU ETS scheme.
- The limits are set based on actual rather than theoretical criteria and performances.

In addition, since the EU ETS benchmarks do not consider the full lifecycle of a process or product, the TEG has in some cases added criteria linked to recycling or improvement in upstream emissions.

Table 28 presents the relevant sectors, gives information on the size of their potential contribution to reducing overall GHG emissions, lists the criteria for substantial contribution

[103] EU: "Directive 2018/410", 2018 (Link)

to the climate mitigation objective in the draft Delegated Acts of the Taxonomy , and explains how such emission reductions may be obtained for each sector.

Manufacture	Contribution	Criteria for Taxonomy-alignment	How GHG emission reductions can be obtained
Cement and cement clinker	The manufacturing of cement is associated with significant CO2 emissions.	GHG limits reflect top 10% of current installations.	Minimising process emissions through energy efficiency improvements and switching to alternative fuels, reducing the clinker to cement ratio and using alternative clinkers and binder.
Aluminium	The manufacturing of aluminium is a highly energy intensive process.	Primary aluminium: GHG limits reflect top 10% of current installations based on combined direct and indirect emissions. Secondary aluminium: complies automatically.	Emissions from manufacturing aluminium are primarily related to the use of electricity, which contributes to over 50% of the production costs. Consequently, there is a strong incentive for the aluminium industry to improve energy efficiency. All aluminium recycling is eligible due to significantly lower emissions.
Iron and Steel		GHG limits reflect top 10% of current installations, or at least 90% of iron content in final product sourced from scrap steel.	The level of performance achieved by best performing plants is considered to make a substantial contribution to climate change mitigation. Furthermore, secondary production of steel (i.e. using scrap steel) is considered eligible due to significantly lower emissions than primary steel production.
Other inorganic basic chemicals	The manufacturing processes of carbon black and soda ash together account for approximately 4.9% of the GHG emissions from the chemical sector. The manufacturing process of chlorine is extremely energy-intensive, accounting for 17% of total electricity use of the European chemical and petrochemical industry.	Carbon black and soda ash: GHG limits reflect top 10% of current installations. Chlorine: Electricity consumption for electrolysis and chlorine treatment is equal or lower than 2.45 MWh per tonne of chlorine. Average life-cycle GHG emissions lower than 100g CO_2e/kWh.	Reducing the emissions from the manufacturing of carbon black and soda ash and improving energy efficiency and switching to low carbon electricity in the manufacturing of chlorine can positively contribute to the climate change mitigation objective.
Other organic basic chemicals	The manufacturing of high value chemicals, aromatics, ethylene chloride, vinyl chloride, ethylbenzene, styrene, ethylene oxide, mono ethylene glycol and methanol accounts for more than 35% of the emissions from the chemical sector.	GHG limits reflect top 10% of current installations. OR: when produced from renewable feedstock, life-cycle GHG emissions are lower than those of the equivalent fossil fuel-based chemical.	Minimizing process emissions and promoting the manufacturing of organic chemicals with renewable feedstock can contribute to the mitigation objective. Reducing the emissions from the manufacturing process of organic chemicals can therefore positively contribute to the mitigation objective.
Fertilizers and nitrogen compounds	The manufacturing of ammonia and nitric acid is highly carbon-intensive, accounting for approximately 23% of emissions coming from the chemical sector.	GHG limits set at top 10% of current installations (based on ETS data).	The ammonia sector is expected to substantially contribute to GHG emissions reduction, notably by using hydrogen produced from electrolysis. During the manufacturing of nitric acid, the main type of GHG generated is nitrous oxide and by applying the available technologies it is possible to reduce emissions by more than 80%.
Manufacture of plastics in primary form	Plastics production has been sharply growing over the last years and emissions from the plastics sector are expected to increase, not only because consumption - and therefore manufacturing - is expected to increase but also because plastics release CO2 when incinerated.	Fully manufactured by mechanical recycling, fully manufactured by chemical recycling, or derived from renewable feedstock. In the latter two cases, life-cycle GHG emissions must be lower than for fossil-fuel based equivalent.	Plastic manufacturing is only eligible when at least 90% of the final plastic is not used for single use consumer products and is recycled.

Table 28 - Technical Screening Criteria for selected manufacturing activities under the EU Taxonomy

Annex 9: External review

Transparency is an important element of any green investment to enable investors to make better informed decisions about the sustainability impact of their investment decisions. Providing accurate information on the environmental performance of their investments allows prospective investors to more efficiently compare different assets and mitigates against the risk of green washing.

In order to boost investor confidence in the environmental data provided, green bond issuers started to engage with third parties that provide independent third-party services and advice regarding their ESG impact. External review is a commonly used umbrella term that covers this wide range of third-party services such as environmental consultancy, provision of a second opinion on a green financial instrument's alignment with a particular standard or audits on the use of proceeds through post-issuance and impact reporting.

External reviews have become common market practice in the EU green bond market.[104] Independent third parties guarantee that the proceeds are used to finance green projects. Research conducted by the Luxembourg Stock Exchange (LuxSE)[105] for the TEG indicated that more than 85% of issuers use some form of pre-issuance review (also referred to as 'validation' in ISO standards to confirm that requirements for a specific intended use are fulfilled), out of which almost all take the form of external reviews (98%).

Recent research by the Climate Bond Initiative (CBI) has also found that post-issuance external reviews and reporting are positively correlated. An issuer's commitment to post-issuance external reviews seems to go hand-in-hand with post-issuance reporting[106] and post-issuance disclosure provides further transparency, ensures accountability and underpins the credibility of green bonds. This in its turn provides reassurance to investors and supports their involvement in the market.

Another analysis conducted by Natixis[107] of 97 global issuer and reporting profiles showed that 64% of issuers had provided some sort of third-party opinion and impact measurements were included in the scope of the external verification for 27%. Most of these post-issuance verification statements (85%) were deemed to meet (or exceed) related professional standards for the auditing profession (i.e., IFAC/ISAE 3000).

A report by Baker McKenzie[108] highlighted key issues impacting on the integrity of the market and undermining investor trust, including a lack of contractual protections for investors or 'greenwashing', the quality and transparency of reporting metrics and issuer confusion and fatigue. External reviewers can play an important role in mitigating these issues by providing reassurance to investors and guidance to issuers on the green characteristics of their investments.

The TEG highlighted a number of challenges in this sector in its report including variable quality of reporting, potential lack of independence or management of potential and actual conflicts of interest and the handling of potentially price sensitive information. The TEG

[104] Natixis Green Bonds 3:0, January 2017.
[105] Luxembourg Green Exchange: "Report on the analysis of green bond external reviews and reporting – European Issuers", draft paper prepared for EC TEG, 11 September 2018 (unpublished)
[106] CBI: "Post-issuance reporting in the green bond market", 2019 (Link)
[107] Natixis Green Bonds 4.0, January 2018
[108] Baker McKenzie, 'Critical challenges facing the green bond market'

recommended the establishment of an external reviewer framework to help address these challenges. The TEG also noted the important role of external reviewers in reducing informational asymmetries and mitigating the risk of greenwashing.

What do external reviewers do?

In its Guidelines for External Reviews[109], ICMA describes four main categories of external review services:

1) a **second party opinion** ('SPO') is an assessment of the issuer's Green, Social and Sustainability Bond issuance, framework or programme with the relevant Principles with alignment assessed against all of the core components of the selected framework. A second party opinion can also include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental and/or social sustainability and an evaluation of the environmental and/or social features of the types of Projects intended for the Use of Proceeds.

2) **verification** the provision of an independent assessment of an issuers' compliance against a designated set of criteria, typically related to business processes and/or ESG criteria. Verification can focus on alignment with internal or external standard or claims made by the issuer. Evaluation of the environmentally or socially sustainable features of underlying assets can also be termed verification. Assurance or attestation regrading an issuer's internal tracking method for use of proceeds, allocation of funds from ESG Bond proceeds, statement of environmental and or social impact or alignment with reporting requirements may also be defined as verification.

3) **certification** is when an issuer seeks to have its ESG Bond or associated framework or Use of Proceeds certified against a recognised external ESG standard or label. A standard or label defines specific criteria and alignment with these criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria. A common type of certification in the green bond market is the CBI certification, which checks alignment with the Climate Bonds Standard to ensure that it is consistent with the goals of the Paris Climate Agreement to limit warming to under 2 degrees.[110]

4) **ESG Bond Scoring/Rating** is when an issuer has its ESG bond or associated framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties such as specialised research providers or rating agencies according to an established scoring or rating methodology. The assessment may include a focus on environmental and/or social performance data, relative to a specified benchmark such as a 2-degree climate change scenario. Such a scoring or rating is distinct from credit ratings.

Another way of categorising the types of review is according to its timing with regards to the bond issuance event. According to this system, the two main types of external review are pre-issuance and post-issuance. **Pre-issuance review** covers SPOs (as explained above), third party assurance (similar to an SPO but performed by an accounting or audit firm), green bond rating (similar to an SPO but performed by a rating agency), or pre-issuance verification,

[109] ICMA: "Guidelines for green, social and sustainability bonds external reviews", 2018 (Link)
[110] CBI: "Certification under the Climate Bonds Standard", 2020 (Link)

which is necessary to be certified according to the Climate Bonds standard. **Post-issuance review** covers second- or third-party review of allocation reports, review of impact reports, and post-issuance verification, which is an assurance against the climate bonds standard.

Recent research by CBI shows a changing profile of external reviews in 2020, with Second Party Opinions (SPO) clearly gaining share. They accounted for 83% of issuance in H1 2020 versus 60% in 2019 – itself a relatively high share – as they become the norm in a market that increasingly 'demands' some form of external review.

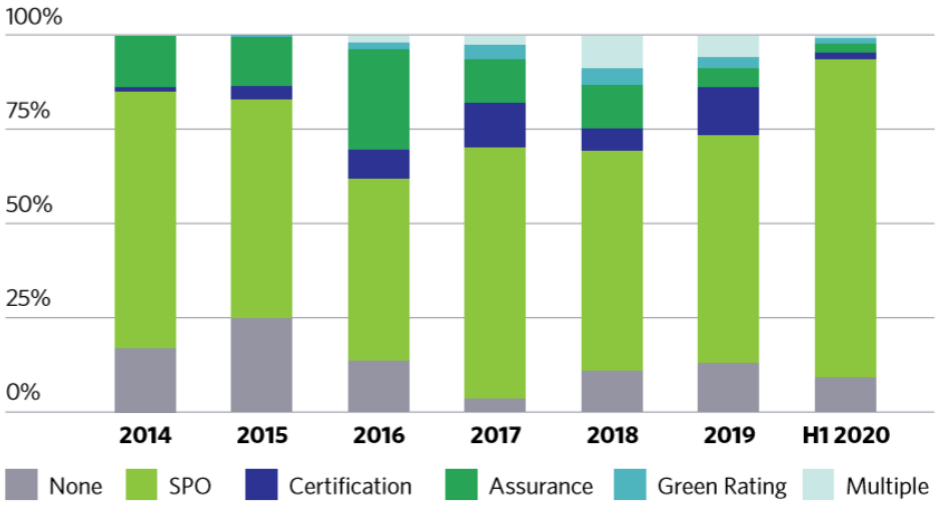


Figure 20 - SPO at highest share yet[111]

Type of review	What it covers	Service providers	Examples
Third party Assurance	Assurance reports state whether the green issuance is aligned with a reputable international framework, such as the Green Bond Principles (GBP) or Green Loan Principles (GLP)	Accounting / audit firms	KPMG Assurance Report commissioned by IDBI Bank Deloitte's Assurance Report commissioned by CGN
Second Party Opinion (SPO)	SPOs provide an assessment of the issuer's green bond framework, analysing the "greenness" of eligible projects/assets. Some also provide a sustainability "rating", giving a qualitative indication of aspects of the issuer's framework and planned allocation of proceeds	Environmental Social Governance (ESG) service providers (such as Oekom, Sustainalytics, Vigeo Eiris, DNV GL) and scientific experts (such as CICERO, CECEP Consulting). Other environmental consultants and assessment organisations.	DNV GL SPO commissioned by Arise AB Sustainalytics' SPO commissioned by the Development Bank of Japan Kestrel Verifier's SPO commissioned by the Sacramento Municipal Utility District ("SMUD")

[111] CBI: "Sustainable debt – global state of the market H1 2020", 2020 (Link)

Green Bond Rating	A number of rating agencies assess the bond's alignment with the Green Bond Principles and the integrity of its green credentials	Rating agencies such as Moody's, S&P Global Ratings, JCRA, R&I, RAM Holdings	Moody's Green Bond Rating assigned to Banco Nacional de Costa Rica's USD500m green bond S&P's Green Evaluation assigned to Province of La Rioja's USD200m green bond
Pre-issuance verification of the Climate Bonds Certification according to the Climate Bonds Standard	Confirms that the use of proceeds adhere to the Climate Bonds Standard and sector specific criteria (e.g. Low Carbon Transport)	Verifiers approved by the Climate Bonds Standard and Certification Scheme	Oekom (now known as ISS ESG) 's independent verification statement of ABN Amro's EUR500m green bond First Environment's independent verification statement of Los Angeles County MTA's USD471m green bond

Table 29: Examples of pre-issuance review (source: Climate Bonds Initiative)

Type of review	**What it covers**	**Service providers**	**Examples**
Second party or third party assurance report	Assurance of allocation of proceeds to eligible green projects.	Audit firms, ESG research service providers (Oekom, Sustainalytics) and scientific experts	DNV GL 2018 Assurance report for NAB's AUD300m 2014 green bond
Impact reporting	Reporting that seeks to quantify the climate or environmental impact of a project/asset numerically	Issuer, Audit firms, ESG research service providers (Oekom, Sustainalytics) and scientific experts	HSBC's green bond report Iberdola's Sustainability Report 2016 and PWC's independent Assurance report (pg. 266) Berlin Hyp Green Bonds Impact Report (June 2016)
Post-issuance verification of the Climate Bonds Certification according to the Climate Bonds Standard	Assurance against the Climate Bonds Standard, including the allocation of proceeds to eligible green projects and types of green projects	Verifiers approved by the Climate Bonds Standard and Certification Scheme	EY's post-issuance report for Westpac's AUD500m 2016 green bond KPMG's post-issuance report for Axis Bank's USD500m 2016 green bond

Table 30: Examples of post-issuance review (source: Climate Bonds Initiative)

Current Market Makeup:

Research suggests that external reviews can help reduce informational asymmetries for market participants. For issuers to have a green bond voluntarily verified by an external reviewer has become common practice with the relevant reports typically made available to investors before or at the time of issuance. Guidance on voluntary verification has been issued by ICMA (Guidelines for External Reviews) as well as CBI (Assurance Framework)

which both allow for the certification of green bonds with their respective standard. Yet, harmonisation of concepts and definitions of what is 'green' are also important prerequisites for mainstreaming green financing.

Currently the voluntary external review market is divided between four types of organisations:

1) **Non-financial rating agencies and sustainability consultancies** specialised in second party opinions: Vigéo-Eiris (recently acquired by Moody's), Sustainalytics, ISS-oekom and the research organisation CICERO;

2) **Big-four audit firms** providing mostly post-issuance verification or "assurance" services: Deloitte, KPMG, PwC, EY;

3) **Credit Rating Agencies**: Moody's, S&P Global Ratings, Fitch, as well as more recently Beyond Ratings[112]; and,

4) **Global technical inspection and certification bodies**: e.g. DNV-GL, Bureau Veritas, TÜV, etc.

According to research conducted by CBI in 2018, the external review market was dominated by a group of mainly European service providers currently holding more than 90% of the market and six specific providers account for almost 75% of the market – CICERO, Sustainalytics, Vigeo Eiris, EY, ISS-oekom and DNV GL.[113] (see Figure 21).

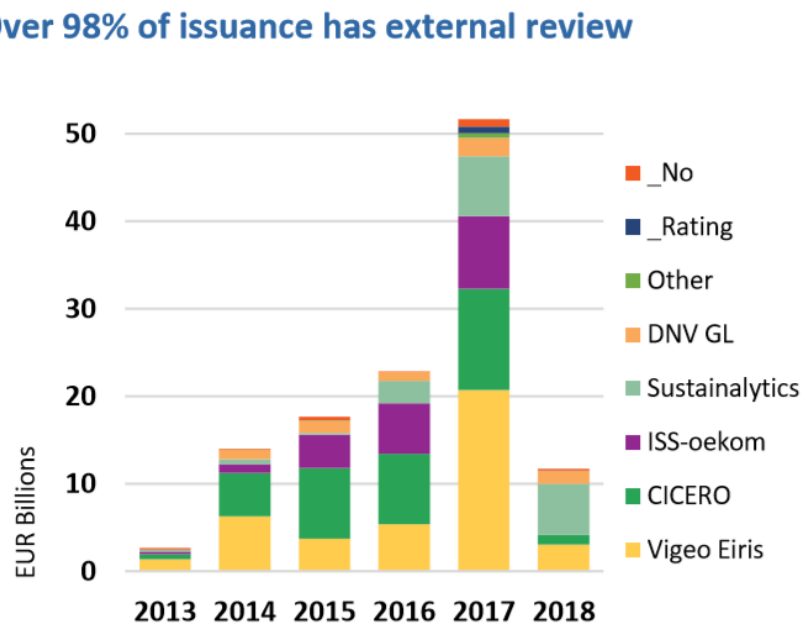


Figure 21 - Breakdown of green bond issuance in Europe according to external reviewer (EUR bn)

[112] ESMA has registered Beyond Ratings SAS as Credit Rating Agency in March 2019. Beyond Ratings was acquired by London Stock Exchange Group in June 2019.
[113] CICERO: "Milestones 2018. A practitioner's perspective on the Green Bond Market", 2018 (Link)

The tables below[114] list the current pool of external review service providers in Europe and maps their relationship with existing accreditation, approval and/or supervisory regimes in areas related to the green bond external review market that could be used as a model/template for the accreditation of verifiers. The top 5 players in the external review market in Europe in 2017 (according to CBI data) are highlighted in bold.

External review service provider name	Market share (2007-2017)[123]	Core business service[124]	ICMA/GBP voluntary disclosures	CBI approved for Europe	ESMA accreditation (i.e., CRA)	ISO/ and National SOs[125]	Financial audit[126]
Bureau Veritas		Technical certification	-	Worldwide	-	Yes	-
CICERO (top 5 - #2)	**29%**	**SPOs/research**	**Yes**	-	-	-	-
ISS-oekom (top 5 - #3)	**6%**	**SPO / non-financial rating**	**Yes**	**Worldwide**	-	-	-
IG Verifier		Technical certification	Yes	No	-	-	-
Escarus/TSKB		Consulting	Yes	-	-	-	-
Rating & Investment Info.		Credit Rating Agency	Yes	-	-	-	-
DNV-GL (top 5 - #5)	**4%**	**Technical certification**	-	**Worldwide**	-	**Yes**	-
SGS		Technical certification	-	No	-	Yes	-
EPIC Sustainability		Consulting	-	Worldwide	-	-	-
EthiFinance		Non-financial rating/consulting	-	Europe	-	-	-
Deloitte		Audit & consulting		Member firms		(in some countries?)	Yes
Beyond Ratings[127]		Non-financial rating agency	-	No	CRA application (decision pending)	-	-
EY	7%	Audit & consulting	-	Member firms		(in some countries?)	Yes
KPMG		Audit & consulting	-	Member firms		(in some countries?)	Yes
PwC		Audit & consulting	-	Member firms		(in some countries?)	Yes
Sustainalytics (top 5 - #4)	**15%**	**SPO / ESG rating/ consult.**	-	**Worldwide**		-	-
S&P Global		SPO / Credit	Yes	Europe	Authorised	-	-

[114] From June 2019 TEG report Annex 5, p. 72-73

Ratings/Trucost		Rating Agency		(via Trucost)	CRA (S&P Global Ratings)		
Moody's /		Credit Rating Agency	-	No	Authorised CRA	Via Vigeo-Eiris (see below)	-
Fitch		Credit Rating Agency	-	No	Authorised CRA	-	-
TüV Nord		Technical certification		Worldwide	-	Yes	-
Atelier Ten		Environmental design consultant	-	UK only	-		-
First Environment		Consulting/ GhG verification	-	Worldwide	-	Yes (GhG)	-
VigeoEiris (top 5 - #1)	**13%**	**SPO / Non-financial rating/ consulting**	-	**Worldwide**	-	**Yes**	-
Carbon Trust		Certification	-	Worldwide	-	Yes	-
EVI			-	Worldwide	-	Yes	-
NSF		Certification/ verification		Worldwide	-	Yes	-
Kestrel Verifiers		Verification		Worldwide	-	Yes	-
Multiconsult		Consulting		Worldwide	-	?	-
ERM CVS		Certification/ verification		Worldwide	-	Yes	
HKQAA		Certification/ verification		Worldwide		Yes	
Indufor Oy		Consulting		Worldwide		-	
Green Solver		Consulting		Worldwide		-	
DQS CFS		Certification/ verification		Worldwide		-	

Table 31 - External review service providers in Europe. Source: TEG report on an EU GBS (June 2019)

TEG Report:

According to the TEG, while post-issuance external reviews can be perceived as costly and of variable quality or added value to the issuer and/or investor, they can also strengthen the credibility of information published by the issuer, protect the integrity of the market and reduce the risk of green washing.

The TEG report also highlighted a number of other issues regarding existing market practices:

a) Relatively high(er) transaction costs for issuers (if not offset by a pricing advantage);
b) Potential lack of independence in perceived or actual conflicts of interest;
c) Limited disclosure of environmental performance criteria;
d) Time consuming and resource intensive process to develop robust sector-specific criteria for certification schemes;
e) Ambitious certification standards might make it difficult to promote adoption;
f) Post-issuance assurance statements do not systematically cover the environmental impacts of the projects funded by the bond;
g) Post-issuance verification might result in requalification of the green bonds and there is a risk for investors that their investments are no longer deemed green; and,
h) Post-issuance verification can give rise to confidential price sensitive information that must be managed with due consideration.

TEG Recommendation:

The TEG recommended the EU GBS incorporate an external review component to encourage standardisation of the process to determine alignment with the EU GBS and to accredit external reviewers under ESMA's supervision. This is intended to promote the development of the European green bond market by improving the quality and standardisation of the review process for the EU GBS while ensuring a level playing field across the Union.

Under this regime, external reviewers would be subject to registration/authorization including requirements covering (i) professional codes of conduct related to business ethics, conflicts of interest and independence; (ii) professional minimum qualifications and quality assurance and control; and (iii) standardised procedures for external reviews.

By requiring the issuing of a second opinion and post-issuance reporting by an independent third party, the EU Green Bond Standard (EU-GBS) aligns with best market practices and provides assurance to both issuers and investors that their investments are aligned with the EU Taxonomy, in particular assessing investments' compliance with the Do No Significant Harm (DNSH) criteria.

Third Country Reviewers:

Prudential concerns, in particular in terms of investor protection and market integrity, yield to consider certain conditions for third country reviewers seeking to offer external review services for any future EU GBS regime.

The EU GBS will establish a new standard of excellence for green bonds, with a requirement for pre- and post issuance review by an independent external reviewer. While section 5.4 addresses the regulatory treatment of such reviewers, it is nonetheless clear it would be important for both market integrity and investor protection to ensure that external reviewers are sufficiently qualified, objective and reliable when providing their services. For this reason, any registration requirement for such reviewers would form an integral part of securing the market's trust and facilitating the usability of such a standard. Both issuers and investors would rely on such an independent evaluation of the bond's alignment with the EU Taxonomy to price and invest in these bonds.

In the event an external reviewer engages in misconduct and the relevant bonds lose their EU GBS status, not only would investor trust in the EU GBS be undermined, investors could incur financial losses as they may be forced to sell the bonds because they are no longer considered green investments. This could also endanger overall market integrity if a number of bond issuances were impacted with potential implications for the broader green bond market. The diversion of capital from legitimate green investments would also reduce the effectiveness of the EU's policy interventions to support the achievement of its goals under the European Green Deal.

The considerations above hold true whether the reviewer is based in the EU or in a third country. For this reason, any regime for external reviewers from third countries would need to ensure that the supervisor of these entities (which in the EU will be ESMA) can effectively fulfil their supervisory role with respect to those third country entities, in particular to ensure

that the external reviewers conduct themselves in a way that does not damage market integrity and confidence in the EU GBS or negatively impacts on the interests of investors in EU GBS bonds. The importance of this requirement will increase proportionately with the size of the market, as the impact of a hit to market integrity will increase with the extent of usage of the EU GBS.

While the majority of existing external reviewers are based in the EU or the European Economic Area, provision should be made in the proposed framework to facilitate third country reviewers that wish to assess compliance with the EU GBS. Existing EU frameworks contain a number of third country mechanisms such as recognition or endorsement.

At the same time, it is important to ensure that ESMA can effectively fulfil its supervisory role with respect to third country entities, in particular to ensure that the external reviewers conduct themselves in a way that does not damage market integrity and confidence in the EU GBS or negatively impacts on the interests of investors in EU GBS bonds. The importance of this requirement will increase proportionately with the size of the market, as the impact of a hit to market integrity will increase with the extent of usage of the EU GBS.

Allowing a third country reviewer to designate a legal representative in the Union or allowing an EU based external reviewer to endorse the work of the third country reviewer are viable options that could be implemented in the proposed regulation while still maintaining the effectiveness of ESMA’s supervisory function and an adequate degree of investor protection.

Annex 10: Sovereign bonds

1. MARKET SITUATION

Sovereign green bond issuance in the EU started in December 2016 with the issuance by Poland of an inaugural green bond to the value of €750 million. This was followed by France's issue of a €7 billion green bond in January 2017, and since then many other countries have followed suit, in Europe and worldwide. To date, 10 EU Member States have issued sovereign green or sustainability bonds, including Belgium, Netherlands, Ireland, Germany, Sweden, Lithuania, Luxembourg, Hungary, as well as France and Poland.

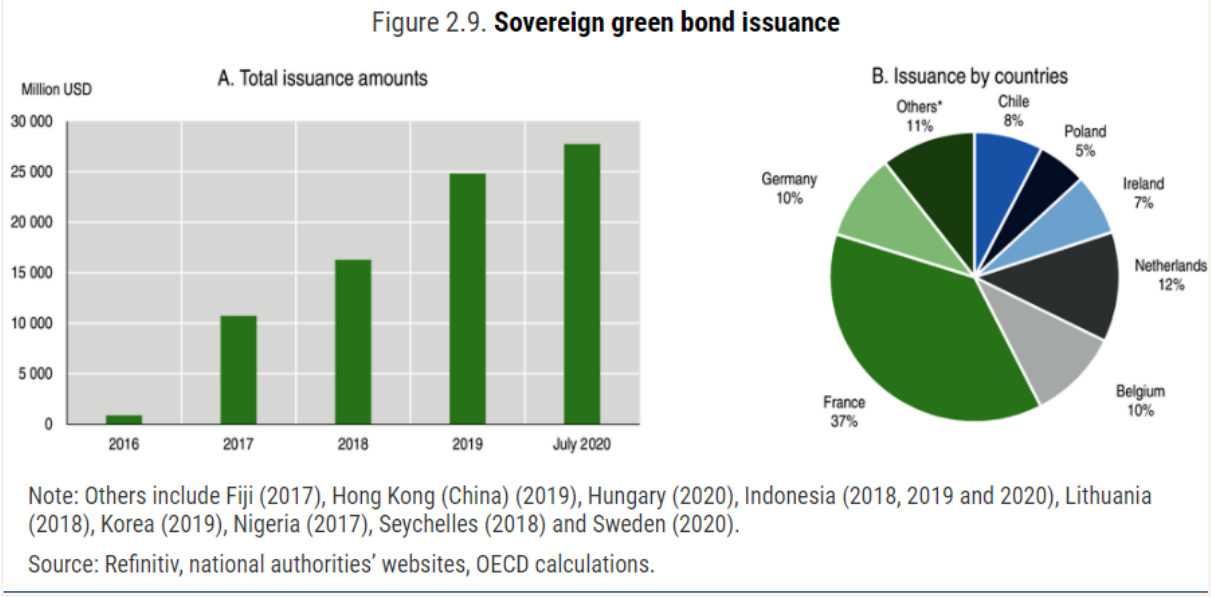


Figure 22- Sovereign green bond issuance (source: OECD)

Worldwide, according to the OECD, 16 sovereigns have now issued green bonds to finance green projects in governments' budgets, exceeding USD 80 billion. Euro area issuers account around 75% of the total issuance. Amid the COVID-19 pandemic, sovereign green-bond issuers have kept the issuance momentum in 2020 with several re-openings and a few inaugural issuances, including Germany and Sweden.

Despite its rapid growth, the size of the sovereign green bond market is quite small compared to traditional bonds. For example, in the OECD area, sovereign green bonds account for only 0.1% of all government debt securities[115]. However, the sovereign green bond market can be expected to keep growing over the longer horizon, as an increasing number of governments assess green bond issuance as a valuable tool.

Why do sovereigns issue green bonds?

A sovereign may decide to issue a green bond for a range of reasons:

[115] OECD: "Sovereign Borrowing Outlook for OECD Countries", 2020 (Link)

- Display leadership on climate change and sustainability.
- Signal commitment to sustainable, low-carbon growth strategies, which will have a positive impact on the private sector investment case for green sectors.
- Support the local sustainable finance ecosystem.
- Fund climate-related investments at a cheaper cost[116]
- Encourage collaboration between different departments in government (traditionally treasury and sustainability), and improve government tracking of climate-related and sustainable expenditure, to support a long-term low-carbon growth strategy.

The specificities of sovereign green bonds

The process of issuing a sovereign green bond is similar to that of issuing a conventional green bond. However, there are some additional steps, given the more complex organisational nature of governments, the type of expenditures they can entail, and their debt's benchmark role in domestic capital markets.

While the green bond market to date has largely focused on financing tangible green assets, such as wind farms, low-carbon buildings and railways through direct expenditures, sovereign green bonds have introduced indirect expenditures, such as subsidies and operational expenditures, into the mix. For example, Poland's green bond framework includes expenditures in the form of "budget allocation" (for example for excise tax exemption for renewable energy) and subsidies for all eligible sectors. The French green bond has for the large part gone to financing operational and subsidy and tax-related expenditures connected to the six eligible categories identified (see section 5 of this annex for more detail).

Intangible assets, such as research and innovation, also appear more frequently in sovereign bonds. These may be areas of investment that the private sector is less willing to undertake or they may include public goods, such as research and data collection.

In addition, the following specificities of Sovereign green bond issuers, which might affect their use of the EU GBS, have been mentioned by stakeholders:

- **Lack of project level overview of impacts:** It may be difficult for a sovereign to state with certainty that all items funded are aligned with the Taxonomy, in particular the Do No Significant Harm (DNSH) criterion. Sovereigns typically fund grant schemes, and are not always in the supply chain for individual projects. Energy efficiency grants which are distributed to firms in many different industries were mentioned as a potential example.
- **A preference for state auditors:** public issuers may prefer to use existing state agencies specialised in government accounts rather than external third parties for the review of the allocation of bond proceeds.
- **Legal restrictions on committing unspent proceeds:** In some cases, a forward-looking approach to the allocation of green funds is not possible. This could be for example if the

[116] For example, Belgium reported that they achieved a 2.5 basis point discount compared to regular sovereign bonds at similar maturities, resulting in annual savings of €1.125 million. According to media reports, the French green sovereign bond due in June 2039 priced at 13 basis points over the 1.25% May 2036 French sovereign bond. CBI: "Sovereign Green Bonds Briefing", 2018 (Link)

Green Bond Framework of a sovereign issuer cannot commit a Parliament or pre-empt the final decision on the allocation of state funds.

- **Problems for smaller countries:** issuing EU GBS-aligned green bonds separately from conventional bonds may result in reduced average issue size, and thereby reduced liquidity for sovereign bonds, which contributes to higher costs of funding for the sovereign.

This means that two types of flexibility may be relevant for Member States wishing to apply the EU GBS: flexibility linked to the EU Taxonomy (i.e. on use of proceeds) and flexibility linked to other requirements. These two will now be discussed in this order.

2. POTENTIAL FLEXIBILITY

The EU GBS as proposed by the TEG requires use of proceeds to be 100% aligned with the EU Taxonomy. Member States that responded to the targeted consultation on the EU Green Bond Standard, either through their finance ministries or DMOs, were in general supportive of the core components of the EU GBS as proposed by the TEG, and especially to alignment with the Taxonomy, which they see as the main strength of the standard. At the same time, a number of Member States agreed that a small amount of flexibility could be given to deviate from the criterion of Taxonomy alignment for 100% of use of proceeds.

Although the EU is not legally allowed to deviate from the Taxonomy Regulation when setting out standards for green bonds issued by corporates[117], this restriction does not apply in the case of Sovereign issuers. Accordingly, there is legal scope for affording a degree of flexibility around the definition of eligible green proceeds in the case of potential sovereign issuers of EU GBS green bonds. Several approaches are possible:

1) The TEG approach: applying the Taxonomy by relying on its fundamental principles

One potential approach would have been to follow the TEG, which proposed to rely on the fundamental principles of the Taxonomy Regulation to verify that investments align with the Taxonomy, instead of the Technical Screening Criteria, in certain cases. But in practice this approach would have had certain paradoxical outcomes. Given that sovereigns and corporates often ultimately fund the same economic activities, flexibility in the application of the Taxonomy could lead to inconsistencies.

In particular, such flexibility could lead to the exact same economic activity being judged differently based on the source of its funding. This could lead to unwanted outcomes, such as allowing public actors to crowd out private actors by being able to offer Taxonomy-aligned funding where the private sector is not. In order to avoid this inconsistency, it is not recommended to give sovereigns the flexibility to interpret or apply the Taxonomy differently to corporates.

2) "Flexibility pocket" approach

Another potential approach is to allow Sovereign issuers to include as proceeds in their EU GBS-aligned bond expenditure that has a positive environmental impact, but is not Taxonomy aligned. Under such a "flexibility pocket" approach, the proceeds of the

[117] Cf. Article 4 of the Taxonomy Regulation, see discarded options

sovereign EU GBS bond would be clearly divided into two parts: one part that would be 100% aligned with the criteria of Article 3 of the Taxonomy Regulation, and a second part (the "pocket") where there would be flexibility to diverge from the Taxonomy.

The size of this pocket would be capped, and subject to some minimum criteria: for example, only economic activities not covered by existing Technical Screening Criteria under the EU Taxonomy, for example because those criteria are not yet developed for a specific sector or a specific environmental objective, would be eligible for the flexibility pocket. Furthermore, economic activities would still need to (i) substantially contribute to one of the six environmental objectives as set out in the Taxonomy Regulation, (ii) do no significant harm to any of these objectives, and (iii) meet the minimum safeguards of the Taxonomy Regulation.

The separation into two parts would facilitate the task for financial institutions holding these bonds of disclosing Taxonomy-alignment under the Sustainable Finance Disclosures Regulation.[118] Any use of flexibility would be accompanied by appropriate disclosures, to ensure that investors are fully aware of its extent, and can discount the Taxonomy-alignment of the bond accordingly.

Member States were consulted on the flexibility pocket approach using a targeted questionnaire (see the next sub-section for full results).

	Taxonomy-aligned part of the bond	**Flexibility pocket**
Share of the total proceeds of the bond	100 *minus* X percent	X percent
Eligibility criteria	Taxonomy Article 3: - Substantial Contribution, as defined by TSCs. - DNSH, as defined by TSCs - Minimum safeguards	More flexible criteria (see proposals above)

(X = the size of the flexibility pocket)

Table 32 - Illustrative Model of use of proceeds of sovereign EU GBS-aligned green bond

Flexibility regarding reporting and review requirements

Taking into account the issues mentioned by sovereign respondents to the consultation, potential flexibility for sovereign green bond issuers could also be possible with regards to other aspects, such as the reporting and review requirements of the EU GBS. **In particular, the following types of flexibility could be considered for sovereign issuers of EU GBS-aligned green bonds:**

[118] 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 (Link)

- Allowing sovereign issuers to rely on internal state auditors instead of external third parties for the review of the allocation of proceeds.

- Allowing, if necessary, sovereign issuers and the reviewers of their EU GBS-aligned green bonds to assess the alignment with the criteria of the Taxonomy Regulation based on the terms and conditions of funding programmes, rather than at project level.

- Exempting Sovereigns from some of the potential restrictions on the use of refinancing (such as short look-back periods for eligible expenditure and potential bans or other restrictions on refinancing).

3. SUMMARY OF RESPONSES TO QUESTIONNAIRE ON SOVEREIGN GREEN BONDS

Between 2/12 and 23/12 DG FISMA carried out a short consultation of members of the Council's Economic and Financial Committee (EFC) subgroup on European Sovereign Debt Markets (ESDM) green bonds working group. The survey was also circulated to Members of the Member States Expert Group on Sustainable Finance (MSEG), and respondents were asked to coordinate their responses for each country.

The intention of the survey was to gauge the need and appetite for introducing flexibility within the EU Green Bond Standard targeted specifically at sovereign issuers who wish to make use of the Standard. Four types of flexibility were consulted about:

1. Flexibility around the use of proceeds: the questionnaire outline a proposal for a so-called flexibility pocket which would allow MS issuers of EU GBS bonds to also include Taxonomy non-aligned green expenditure in their use of proceeds, provided that certain conditions were fulfilled, and within a limited percentage of total proceeds.
2. Flexibility to use state auditors instead of third party reviewers for external review of allocation reports of the EU GBS proceeds.
3. Flexibility to assess (for the purposes of the EU GBS) the Taxonomy-alignment of government funding programmes based on terms and conditions of the programmes rather than the underlying projects.
4. Flexibility to operate with fewer restrictions on refinancing than in the corporate sector.

The consultation also asked Member States about their green bond issuance plans and their estimates around the Taxonomy-alignment their previous and future green bonds issuance.

These responses should be interpreted in light of the fact that at the time of the consultation, the delegated Acts for the Technical Screening Criteria of the Taxonomy for the climate objectives were not yet adopted (i.e. their final form was not yet known), and the respective delegated acts for the other four environmental objectives were not even available in draft form yet.

The results should also be interpreted in light of the fact that while respondents were answering questions about their actual or potential green bond issuance programmes in December 2020, the estimated adoption date for a potential EU Green Bond Standard initiative would be much later (potentially 2022, due to the need for co-legislators to reach an agreement). It seems that not all respondents took this fact fully into account when providing their responses.

Respondents: 17 Member States responded to the consultation[119], by providing feedback either through their Ministries of Finance or through debt or financial agencies. In 7 cases, Member States explicitly indicated that the Member State's representatives in the Member States Expert Group on Sustainable Finance had been consulted or were responsible for the response.

Summary of answers:

Question 1: Have you issued or do you plan to issue green bonds?

Overall, a large majority of Member States were planning to issue or considering issuing green bonds in the future:

- Out of the 7 which had previously issued green bonds (NL, DE, LU, BE, FR, LT, IE), 4 were certain that they would reissue, 2 would potentially reissue by tapping their existing framework, while 1 had no plans to reissue green bonds.
- Among the 10 remaining respondents which had not yet issued green bonds, 2 were actively preparing issuance, while 6 were considering issuing, and 2 stated they would not issue green bonds.

Question 2: Were your previous green bond issuances Taxonomy-aligned? Will your potential future green bonds be Taxonomy aligned?

A majority of green bonds issuers estimated that their bonds were potentially partially or fully Taxonomy-aligned. Out of the 7 previous green bond issuers, 2 estimated that their green bonds were potentially partially Taxonomy-aligned, 2 estimated that their green bonds were almost or fully Taxonomy-aligned, while 2 respondents could not yet give an answer. Those who could not yet answer cited the unfinalised status of the Taxonomy Delegated Acts and the lack of time needed to perform the estimation (MS were only given about two weeks to respond to the consultation, although additional time was given to those respondents who asked for it). 1 previous issuer did not answer the question.

Summary of relevant responses to the survey:

MS having previously issued green bonds	**7 (100%)**
green bonds were considered to be almost or fully Taxonomy-aligned	2 (28%)
green bonds were considered to be potentially partially Taxonomy-aligned	2 (28%)
could not yet give an answer	2 (28%)
who did not answer the question	1 (14%)

A majority of future green bond issuers were aiming for Taxonomy alignment or indicated that their bonds would be Taxonomy-aligned. Of the 9 respondents who gave an indication of the Taxonomy-alignment of their future green bonds, 3 were considering Taxonomy-alignment, 3 were aiming for Taxonomy-alignment, and 3 indicated that their green bonds would be fully Taxonomy-aligned.

[119] CY, NL, DE, DK, IT, ES, AT, LU, BE, FR, PT, LT, EE, IE, SI, RO, MT

Summary of relevant responses to the survey:

MS answering the question of Taxonomy-alignment of their future green bonds	**9 (100%)**
MS considering issuing Taxonomy-aligned green bonds	3 (33%)
MS aiming to issue Taxonomy-aligned green bonds	3 (33%)
MS indicating that their green bonds would be Taxonomy-aligned	3 (33%)

Question 3: Are there economic activities that you would wish to include in a green bond which are not currently covered by the Taxonomy?

Respondents listed a number of economic activities which they believed were not covered by the current draft Taxonomy Delegated Acts and should be included in these acts.

- The most commonly cited activity was **basic research on the environment and innovation**, with one MS specifying that they wanted subsidies to innovative companies to be included in the Taxonomy. (3 respondents). For this activity, it is possible that the three respondents were not aware that the most recent draft of the Taxonomy Delegated Acts from the Commission (published in November 2020) includes research, development, and innovation linked to the reduction of GHG emissions.
- The two second most commonly cited activity (by 2 respondents each) were **flood defences and climate finance.**
- The following activities were cited by 1 respondent each: **space technology for earth observation, subsidies for public transport, fisheries, agricultural land, urban greening, waste management facilities**. It is unclear to what extent these activities will be covered, or not, by the Taxonomy Delegated Acts.
- One respondents also mentioned that it is unclear to what extent **tax expenditures and grants** will be covered.
- 1 respondent complained that in general, **SMEs** are insufficiently covered by the Taxonomy Regulation. The respondent is interested in issuing small-sized green bonds to help SMEs issue debt instruments.

Questions 4-6: Need for flexibility for sovereign users of the EU GBS? What do you think of the idea of a flexibility pocket as explained in the consultation document? Would you prefer an alternative approach?

MS that answered the question regarding the flexibility pocket	16 (100%)
MS in favour of flexibility pocket	4 (25%)
MS potentially in favour of the flexibility pocket	3 (19%)
MS not in favour of the flexibility pocket, but in favour of general flexibility for public and private sector	3 (19%)
MS not in favour or sceptical to the flexibility pocket	6 (38%)

While questions 4 to 6 asked about the Flexibility pocket approach specifically, many respondents also provided their views on other forms of flexibility, including forms of flexibility that were not covered by the consultation questions for due to legal reasons (e.g. flexibility which would also apply to private issuers) or a lack of practical feasibility (e.g. allowing public and private actors to apply different technical Screening Criteria under the

EU GBS). The summary below focuses on the responses given with regards to the flexibility pocket itself.

The following arguments were given **in favour of the flexibility pocket:**

- The flexibility pocket could extend the Taxonomy by covering activities that enable those in the Taxonomy, or those not yet included in the taxonomy, such as those linked to new technologies.
- Flexibility could simplify issuance.
- Flexibility pockets are not desirable but seem necessary given that the Taxonomy criteria are not published for all Green expenditure or may not be appropriate for sovereigns.
- Some flexibility will be necessary if Taxonomy application to sovereigns is not clarified.
- Activities that are Taxonomy aligned in principle but without TSCs should still be covered, this is crucial with regards to principle of technological neutrality.
- MS may not be able to fully implement the Taxonomy for reasons beyond its control.

The following arguments were given **against the flexibility pocket:**

- The flexibility pocket implies a risk of being negatively perceived by investors. Investors may doubt whether the flexibility pocket is truly green, and may therefore delete the flexibility pocket from their own green reporting or refrain from buying the bond altogether. Alternatively, the 'pocket' approach could create a bifurcated market for sovereign green bonds, with some being considered green and others 'almost' green, which is not desirable.
- Sovereigns should set the bar for the use of the green bond standard for other issuers to follow. Favouritism towards Sovereigns could damage the credibility of the GBS.
- It would reduce clarity over use of proceeds, and introduce more complexity.
- It could undermine the legal certainty and transparency of the EU GBS. By damaging these attributes of the EU GBS, which are two of its main intended benefits and key to avoid greenwashing, the flexibility pocket would risk making the EU GBS an undesirable standard and thereby reduce its take-up by markets.
- The added value is small or non-existent, as issuers would likely seek to limit the size of their flexibility pocket for signalling purposes.
- Rather than have an extensive use of pockets it might be better for Sovereigns not to use the voluntary standards until they are better aligned with sovereign issuance.

Question 7: Whether sovereigns should be given flexibility to rely on State auditors or another state agency specialised in reviewing government accounts and public expenditure when preparing their allocation report, instead of an independent third party?

In favour: MS were broadly in favour of such flexibility, as they deemed it important to allow smaller sovereign issuers to cut costs and to use available national expertise, as State auditors have good knowledge of state accounts, and as this is current practice among some MS that have issued green bonds (e.g. NL). Among those in favour, a significant minority of MS expressed the view that such flexibility should only be afforded under certain conditions, such as making sure the state party has the required knowledge and skills, and that they would have to be guaranteed independent.

Against: A small minority of MS were against such flexibility, arguing that the use of an impartial third party expert is a healthy principal, and that there could be some bias in the analysis by state auditors.

Question 8: Whether sovereigns should be allowed to demonstrate Taxonomy alignment by assessing only the terms and conditions of a given programme or grant, rather than the individual projects funded under those terms?

In favour: Overall, there was a large majority in favour of allowing Member States to use the terms and conditions of a funding or spending programme to demonstrate Taxonomy-alignment for the purposes of eligible expenditure for the EU GBS, as opposed to project-by-project information.

Respondents explained that if the terms and conditions of a given program were adequately taxonomy aligned, then the grants or projects in the program would be as well, as States are responsible for having their policy measures properly implemented. They also argued that a certain degree of reliance on terms and conditions and existing audits and controls is unavoidable, as the nature of sovereign expenditure activity is broad and is generally viewed by the debt capital markets in that way. Among those who were in favour, about half argued that Taxonomy-alignment on project-level should still be followed as a goal, and flexibility should only be used when project-level info is not available and the terms and conditions are well-developed.

Against: Only a very small minority of MS were sceptical to such flexibility, citing a reluctance to differentiate public and private sectors within the EU GBS.

Question 9: Whether sovereigns should be exempt from potential restrictions on refinancing that would apply to corporate issuers? The question also asked for general views on refinancing and look-back periods.

Member States answered this question in various ways, and often by giving their views on the broader issue of how to deal with refinancing and look-back periods of assets or expenditure, rather than expressing a view on the subject of specific flexibility for sovereign issuers.

MS were divided, or unsure, on the issue of whether flexibility was needed. This may be because the question did not specify the type of rules that were foreseen for look-back periods and refinancing, so MS did not know against what rules the hypothetical flexibility would apply.

Overall, MS indicated that they were not in favour of a ban on refinancing, but believed there should be a cap on the look-back period for operating expenditure to be eligible, and this should be about 2-3 years.

4. ANALYSIS: COMPARISON OF KEY EU SOVEREIGN GREEN BONDS AND THE EU GREEN BOND STANDARD

Overview of selection of EU Sovereign bonds issued so far

Member State	Issuance date and amount	Standard used	Additional standard used
Poland	1st issue €750M (Dec 2016) maturity 2021 2nd issue €1 bn (2018) maturity 2026 3rd issue €2 bn (Mar 2019) (two tranches - maturity 2029 and 2049)	ICMA GBP	
France	1st issue €7 bn (Jan 2017). Regular taps since creation to ensure the same liquidity as for other OAT. In Feb 2020, the outstanding stands at €22,659 million.	ICMA GBP	TEEC/greenfin label, which is "inspired by" the CBI taxonomy
Belgium	1st issue €4.5 bn (Feb 2018) tenor: 15 years	ICMA GBP	
Netherlands	1st issue € 5,985 million (May 2019) 2nd issue (reopening) € 1,370 million (Jan 2020)	ICMA GBP	CBI Taxonomy (obtained external certification of bond's alignment with CBI).
Ireland	1st issue € 3 bn (Oct 2018) 2nd issue € 2 bn (Oct 2019)	ICMA GBP	
Germany		ICMA GBP	**"**designed to be in compliance with important elements of the EU GBS".
Luxembourg	1st issue €1.5 bn (Sep 2020)	ICMA GBP	- TEG draft Taxonomy ("fully aligned") - - EU Taxonomy (aligned on "best effort basis"). - Designed to comply with TEG's EU GBS.

The following table compares the key aspects of the sovereign green bonds issued so far with the requirements of the EU Green Bond Standard, and assesses the gap.

	MS green bonds	Analysis and comparison with draft EU GBS
Eligible expenditures and screening criteria (% of eligible green expenditures indicated when available)	**FR:** - Tax credits (33%), investment (7%), operating expenditures (33%), and intervention expenditures (27%). Assets include tangible assets (real estate, land, infrastructure) and intangible assets (systems and organisation, applied research and innovation, scientific knowledge). - Can be directed at state agencies, local authorities, companies, and households. - Inter-ministerial working group selects eligible green expenditures. - TEEC label[120] has been used as a reference **NL:** - Direct investment expenditures, subsidies, fiscal measures (tax credits), and selected opex.	Economic activities shall be aligned with **EU Taxonomy:** 5. **Substantial contribution to one out of six environmental objectives** Demonstrate that expenditure is aligned with sector-specific technical screening criteria for substantial contribution, as set out in the Taxonomy Delegated Regulation[121]. **6. Ensure that economic activities do-no-significant harm to five other environmental objectives** Demonstrate that expenditure does not breach sector-specific screening criteria for Do-No-Significant-harm,

[120] The French "Transition Energetique et Ecologique pour le climat" (TEEC) label from 2015 is inspired by ICMA's Green Bond Principles and the Climate Bond Taxonomy (Link)

[121] These criteria represent at least 93.5% of direct climate based emissions.

	- For each category, eligible central government budget articles are listed. - Expenditure outside these articles can be eligible, provided that CBI taxonomy is met. **LU:** Detailed "eligibility criteria" in Appendix 1 of framework, which are aligned with EU Taxonomy TSCs. **DE:** No screening criteria. An Inter-Ministerial Working Group (IMWG) will select eligible green expenditures. **PL:** - Budget allocations (including excise tax exemptions), subsidies and projects. **BE:** Investment expenditures (66%), operating expenditures (26%) and tax expenditures (8%).	as set out in the Taxonomy Delegated Regulation. 7. **Ensure compliance with minimum social safeguards** Ensure compliance with the principles and rights set out in the eight fundamental conventions identified in the ILO's declaration on Fundamental Rights and Principles at Work. EU Member States have ratified these conventions. The question of specific flexibility with respect to Taxonomy-alignment was asked to MS in the context of the questionnaire on sovereign bonds and the EU GBS. See section 4.4 of this annex.
Financing and refinancing	**FR:** - Expenditures from the previous year, current year and potentially future years are included; the percentage of allocation is disclosed. - More than 50% should be related to current or future budget. **NL:** Finance or refinance expenditures which contribute to climate mitigation and/or adaptation. At least 50% of proceeds for current or future budget years. **LU:** Financing of eligible expenditure, and refinancing of eligible expenditure with a 3-year look back period to avoid refinancing old assets. **DE:** 100% refinancing: An amount equal to yearly proceeds will be fully allocated to the previous years' eligible expenditures. In any given year, green bonds can only be issued once sufficient amount of eligible expenditure from the previous year is known. **PL:** Financing and re-financing of eligible projects is allowed. **BE:** Proceeds can be used for expenditures in the current budget, expenditures from the budget the year preceding the green bond issuance/tap date, and investments in green investment funds made maximum 2 years before the issuance/tap date.	Draft EU Green Bond Standard is designed to allow financing or refinancing of eligible green expenditures. There would be specific requirements related to capital/operating expenditures and look-back periods. Most Member state green bond frameworks impose stricter restrictions on refinancing than the draft EU Green Bond Standard. The question of specific flexibility with respect to refinancing was asked to MS in the context of the questionnaire on sovereign bonds and the EU GBS. See section 4.4 of this annex.
Alignment with Taxonomy and environmental objectives supported	**FR:** Bond framework predates the Taxonomy Four objectives: - climate adaptation - climate mitigation - protection of biodiversity - Reduction of air/water/soil pollution **NL:** Bond framework predates the Taxonomy	The question of specific flexibility with respect to Taxonomy-alignment was asked to MS in the context of the questionnaire on sovereign bonds and the EU GBS. See section 4.4 of this annex.

	Two objectives: - Climate adaptation - Climate mitigation **LU:** Complies "when applicable" with TEG's taxonomy, "or any updated version, on best effort basis". (see separate case study) Sustainalytics assessed the compliance of the LU sustainable bond framework with the EU Taxonomy: - 19/23 categories of spending listed in the eligibility criteria comply with applicable TSCs for "significant contribution" - 20 align or partially align with Do-No-Significant-Harm TSCs. **DE:** Categories of eligible green expenditures are mapped with the six environmental objectives of the Taxonomy. "Designed to be in compliance with important elements of draft EU GBS" **PL:** **IE:** **BE:** focusing on climate change mitigation and adaptation (96% of available eligible green expenditures), natural resource protection (3%) and biodiversity (1%).	
Categories of eligible expenditure & Technical screening criteria	**FR:** 1. buildings 2. Transport 3. Energy (incl. smart grid) 4. living resources (org. farming, biodiversity, env. protection) 5. Climate adaptation 6. Pollution & eco-efficiency (monitoring, research, circular econ.) 7. (Transversal) **NL:** 1. Renewable energy (all spending to be in line with CBI Taxonomy.) 2. Energy efficiency 3. Transport (rail) 4. Climate adaptation & Water management **LU:** 1. Transport 2. Energy transition 3. Green buildings 4. Climate finance and R&D 5. Protecting the environment 6. Waste & wastewater management **DE:** 1. Transport	The question of specific flexibility with respect to Taxonomy-alignment was asked to MS in the context of the questionnaire on sovereign bonds and the EU GBS. See section 4.4 of this annex.

	2. Energy and industry 3. International Cooperation 4. Research, innovation, and awareness-raising 5. Agriculture, forestry, biodiversity **PL:** 1. Renewable energy 2. Clean transportation 3. Sustainable agriculture operations 4. Afforestation 5. National parks 6. Reclamation of heaps **BE:** 1. Energy Efficiency 2. Clean Transportation 3. Renewable Energy (excluding hydro > 25MW) 4. Circular Economy 5. Living Resources and Land Use.	
Reporting	<u>Allocation reporting :</u> **FR, NL, LU, DE, PL, IE, BE :** publish yearly allocation reports IE's allocation reports include details on the total amount allocated to eligible green projects, the total amount allocated per eligible green category and the remaining unallocated total amount. NL's allocation report contains an overview of the allocation of the issued green bond to the main categories of eligible green expenditures, a breakdown of allocated proceeds per main category of eligible green expenditures, a breakdown of allocated proceeds per type of expenditure, the amount of unallocated proceeds. <u>Impact reporting:</u> **FR:** Output report and ex-post reporting on environmental impact, prepared by a Green Bond Evaluation Council. The evaluation council issued two reports: one is the evaluation of the credit tax for energy transition and another on the subsidies granted to the French waterway network. **NL:** Yearly impact report, starting in issuance year +1, based on existing publicly available reporting of the results and impact of eligible green expenditures, including where feasible on specific results (ex: number of projects) and environmental impact indicators (ex: avoided CO2 emission) related to the green eligible expenditures. Also provides information on climate change related impact indicators for the NL (ex: percentage of renewable energy production). **LU:** Impact report, with examples of metrics listed in framework **DE:** Sectorial impact reporting (published at least once	The EU Green Bond Standard would likely require the publication of yearly allocation reports, and at least one report on environmental impact during the lifetime of the bond. This is already common practice for all EU Member state green bonds. **Assessment: EU Member States would be able to align with this requirement.**

	in each bond lifetime). **PL:** Impact reporting is included in the allocation report where possible. **IE:** Intends to publish impact report in summer 2020 **BE:** Impact report published the year after issuance.	
External review	Second Party Opinion: **LU, PL, BE, and IE:** SPO by Sustainalytics **FR:** SPO and compliance review by Vigeo-Eiris (checking alignment with TEEC label) **DE:** SPO by ISS ESG **NL:** SPO by Sustainalytics and Formal certification by CBI Review of allocation report **IE** and **NL** rely on independent internal auditor of the State for the verification of the allocation of the use of the proceeds. **FR:** Allocation report reviewed by internal auditor and KPMG **NL:** Verification of conformity of allocation with CBI taxonomy by Sustainalytics. **LU:** Yearly external review of allocation report **DE:** Yearly external review of allocation report **PL:** Moody's to give an opinion of the allocation of proceeds, the reporting, the organisational approach and the environmental impact. **BE:** Independent audit firm to review annually the allocation report. Review of impact report **FR:** "Green bond evaluation council" will evaluate impact reports (with Paris agreement as reference)	The EU Green Bond Standard would likely require that: - The alignment of green bonds with EU GBS standard should be verified by an external company. - The final allocation report should be verified by external auditor. - External reviewers are registered. Under the EU GBS, external review of the impact report would not be required, but recommended. The system for registering external reviewers does not yet exist. See Annex 8 for an assessment of this. Most Member States already comply with the two first requirements listed above in their green bonds. However, there are some exceptions: NL and IE use their own internal auditor instead of an external third party to review the allocation report. **Assessment: EU Member States would be able to align with this requirement. However there may be a need for some flexibility with regards to the entities that can review the allocation report, by allowing Member States to use internal state auditors for this purpose.** The question of specific flexibility with respect to external review of the allocation report was asked to MS in the context of the questionnaire on sovereign bonds and the EU GBS. See section 4.4 of this annex.
Exclusions and safeguards	**FR:** Nuclear activities, armament, any expenditure mainly related to fossil fuel. **NL:** Fossil fuel production, power generation, nuclear, defence sector. **LU:** Nuclear power generation. Production, transportation, and power production from fossil fuels. Weapons, strong alcohol, tobacco, gambling, other illegal Safeguards: Pre-existing social and env. safeguards in national law	The question of specific flexibility with respect to Taxonomy-alignment was asked to MS in the context of the questionnaire on sovereign bonds and the EU GBS. See section 4.4 of this annex.

	DE: Armaments, defence, tobacco, alcohol, gambling. Fossil fuels (including coal). Nuclear (production, transport, storage, power generation, …) Already excluded from Federal budget: any expenditure violating EU Charter of Fundamental Rights **PL:** Fossil fuel for power generation and transportation, rail dedicated to transportation of fossil fuels, nuclear power generation, palm oil operations, weapons/alcohol/gambling/adult entertainment, large scale hydro projects (>20MW), transmission systems where >25% of electricity transmitted is fossil-fuel generated, use of biomass in cogeneration coal plants. **BE:** Nuclear, armament and any expenditure mainly related to fossil fuel.	

5. CASE STUDY: LUXEMBOURG'S SUSTAINABILITY BOND FRAMEWORK

On 2 September 2020, Luxembourg published its Sustainability Bond Framework, Europe's first for a sovereign. A few days later it sold its first Sustainability Bond for €1.5 billion. The issue of a Sustainability bond, rather than a green bond, allows Luxembourg to combine green and eligible socially beneficial expenditure as proceeds for the bond. The sovereign bond was aligned with ICMA's Sustainability bond principles.

Taxonomy alignment

Luxembourg also claims that its sustainability bond is fully in line with the recommendations of the final report of the Technical Expert Group (TEG) on the EU Taxonomy, and states that the framework has been designed to comply with the TEG's draft European Green Bonds Standard. As part of its alignment with the Taxonomy, Luxembourg's sustainability bond framework makes use of the Taxonomy's draft technical screening criteria developed by the TEG (which form the basis for the final criteria adopted by the Commission). The framework also states that the bonds would comply with the updated criteria, as they evolve from draft to final adoption, on a best effort basis.

In its annex 3, the bond framework lists the eligibility criteria for green expenditure, which cover the following sectors: Construction, Energy, Transport, Waste, Water management, Climate finance and R&D. Along the framework, Luxembourg published a report by external reviewer Sustainalytics that assesses the eligibility criteria in Luxembourg's framework against the draft Taxonomy.

The results of the Taxonomy assessment for the framework were as follows:

- **On Substantial contribution to climate mitigation/adaptation:** Of the eligibility criteria assessed for 23 different use of proceed categories, 19 were found to be in line with the EU Taxonomy TSCs, whereas four could not be assessed as no corresponding TSCs exist (yet). No categories were determined to be not aligned.

- **On Do No Significant Harm (DNSH) to the six environmental objectives**: Among 20 categories of spending where Sustainalytics was able to map directly to DNSH TSCs: 10 are aligned and 10 partially aligned with the applicable DNSH criteria.

- **Minimum safeguards:** Sustainalytics also stated its opinion that the activities and projects to be financed under the Framework will be carried out in alignment with the EU Taxonomy's Minimum Safeguards.

Categories that could not be assessed either cannot be mapped to NACE activities in the Taxonomy and/or are designed primarily to advance an environmental objective for which TSCs do not exist yet in the Taxonomy. For substantial contribution, these four were: (1) production and restoration of terrestrial and inland freshwater ecosystems, biodiversity, habitats, and soil, (2) development of water and wastewater management systems, (3) international climate finance, and (4) research, development and innovation focusing on climate mitigation and adaptation. For DNSH, the category of waste and wastewater management could be assessed, but not the three others.

For more information, see Table 33 below.

Table 1: Summary of Alignment of Framework Criteria with the EU Taxonomy

Framework Criterion	Alignment with Taxonomy Criteria		Alignment per EU Environmental Objective					
	TSC	DNSH	Mitigation	Adaptation	Water	Circular Economy	Pollution	Eco-systems
Construction of new buildings	■	□	■	■	■	□	■	□
Acquisition of buildings	■	■	■	■	–	–	■	■
Renovation of existing buildings	■	□	■	■	■	□	■	□
Construction and operation of electricity generation from Solar PV	■	□	■	■	–	■	–	□
Construction and operation of electricity generation from concentrated solar power	■	□	■	■	■	□	–	□
Construction and operation of electricity generation from wind power	■	■	■	■	■	■	–	■
Construction and operation of electricity generation from hydropower	■	■	■	■	■	–	■	■
Construction and operation of electricity generation from geo-thermal	■	□	■	■	■	–	□	■
Gas Combustion projects	■	□	■	■	■	–	■	□
Bio-energy projects	■	□	■	■	■	■	■	□
Installation of energy efficient appliance and lighting	■	■	■	■	–	–	■	–
Public Transport (Financing of zero emission land transport - light rail transit, metro, tram, trolleybus, bus and rail)	■	□	■	■	–	■	□	–
Public Transport (Passenger Rail Transport)	■	■	■	■	–	■	■	–
Infrastructure for low carbon transport	■	□	■	■	■	□	■	■
Collection and transport of non-hazardous waste	■	■	■	■	–	■	■	–
Composting of Bio-waste	■	□	■	■	–	–	□	–
Material recovery	■	■	■	■	–	–	–	–
Protection and restoration of terrestrial and inland freshwater ecosystems, biodiversity, habitats and soil								
Development of energy efficient water and wastewater management systems	■	■	■	■	■	–	–	■
Construction or extension of centralized wastewater treatment systems	■	■	■	■	–	–	■	■
Support the development of water and wastewater management systems	*	■	–	■	–	–	■	■
Mobilise and support investment in international climate finance								

Table 33 - Alignment of eligibility criteria with draft EU Taxonomy (extract from Sustainalytics report on Luxembourg's Sustainability bond framework)

Annex 11: ESG Disclosure obligations

This annex covers the existing and future disclosure and reporting requirements related to sustainable activities, and in particular alignment with the EU Taxonomy, and which are relevant for the EU GBS:

- The Non-Financial Reporting Directive
- The Ecolabel Regulation
- The Sustainable Finance Disclosures Regulation
- The EU Climate Benchmarks Regulation

Title	**The Non-Financial Reporting Directive**
Legislative or non-legislative?	**Legislative**
Brief description of policy or legislation	In 2014 the EU agreed the Non-Financial Reporting Directive (Directive 2014/95/EU), which amended the Accounting Directive (Directive 2013/34/EU). The Non-Financial Reporting Directive (NFRD) imposed new reporting requirements on certain large companies. Companies under the scope of the NFRD had to report according to its provisions for the first time in 2018, for information covering financial year 2017. As required by the NFRD, in 2017 the Commission published non-binding guidelines for companies under the scope of the Directive. In 2019, the Commission published additional guidelines, specifically on reporting climate-related information. If companies use reporting frameworks, then they have to specify which frameworks they have used. The NFRD does not, however, require the use of a reporting framework or standard. The NFRD applies to large public interest entities with more than 500 employees.10 In practice this means that it applies to large EU companies with securities listed in EU regulated markets, large banks (whether listed or not) and large insurance companies (whether listed or not) – all provided they have more than 500 employees. The NFRD exempts the subsidiaries of parent companies from the reporting obligation, if the parent company itself reports the necessary information on a consolidated basis. We estimate that approximately 11 700 companies are subject to the reporting requirements of the NFRD. The NFRD identifies four non-financial 'matters': environment, social and employee matters, human rights, and anti-corruption and anti-bribery. With regard to those four matters, it requires companies to disclose information about five business concepts: business model, policies (including due diligence processes implemented), the outcome of those policies, risks and risk management, and key performance indicators (KPIs) relevant to the business.12 Annex 8 provides illustrative examples of the kind of information that companies could be expected to disclose under the NFRD. Companies under the scope of the NFRD are required to disclose information "to the extent necessary for an understanding of [their] development, performance, position and impact of [their] activity." The reference to "impact" represented a significant innovation: it introduced a double materiality perspective, whereby companies have to report information not only on how non-financial issues affect the company ("outside-in" perspective), but also regarding the impact of the company itself on society and the environment ("inside-out" perspective).

	The NFRD requires the auditor to check that the company has provided a non-financial statement, but does not require the auditor to assure the content of the information. However, Member States may require assurance on the content of the information reported and three Member States (Italy, Spain and France) have used this option. Furthermore, on 21 April 2021 the Commission adopted a proposal to review the NFRD, which currently imposes reporting requirements on large public interest entities with more than 500 employees. It is expected that this review will expand the scope of companies falling under the NFRD from 11 700 to close to 50 000 companies. The Commission also proposed that companies subject to the NFRD should be required to obtain limited assurance on their non-financial reporting. This would substantially increase the availability of information on the share of Taxonomy-aligned assets of EU companies, and should help facilitate and reduce the costs of issuing Taxonomy-aligned green bonds.
Interaction with the EU Green Bond Standard	The future EU GBS will likely require full alignment of the use of proceeds of the bond with the EU Taxonomy. Article 8 of the EU Taxonomy Regulation requires financial and non-financial undertakings under the scope of the NFRD to include in their non-financial statements or consolidated non-financial statements information on how and to what extent their activities are associated with economic activities that qualify as environmentally sustainable. Therefore, entities subject to the NFRD will be required to disclose certain information on the way they operate and manage social and environmental challenges. Against this backdrop, issuers of future EU Green Bonds, which also fall under the NFRD scope, would have to fulfil this disclosure requirement. However, the TEG recommended in its usability guide that especially when entities are subject to NFRD and they wish to issue an EU Green Bond, they should include their overall EU Taxonomy alignment in the Green Bond Framework as well. Finally, the information disclosed according to the NFRD will provide additional information to investors, including green bond investors, allowing them to better assess the overall non-financial performance of companies.

Title	**Sustainable Finance Disclosure Regulation (Regulation EU 2019/2088 on Sustainability-related disclosure in the financial services sector) (SFDR)**
Legislative or non-legislative?	Legislative
Brief description of policy or legislation	The SFDR was adopted by co-legislators in spring 2019 and was published on 9 December in the Official Journal. It is already in force but will apply from 10 March 2021. The SFDR aims to increase transparency towards end-investors and thus their increased protection with respect to sustainability of investments undertaken on their behalf by manufacturers of investment products. The SFDR also includes rules for financial and insurance advisers. The SFDR lays down rules for sustainability-related disclosures toward end-investors, for both outside-in sustainability risks and inside-out adverse sustainability impacts. It does so in relation to: • the integration of sustainability risks by financial market participants and

	financial advisers in all investment processes, • financial products that pursue the objective of sustainable investment or have environmental or social characteristics, and • adverse impacts on sustainability matters at entity and financial products levels, i.e. whether financial market participants and financial advisers consider negative externalities on environment and social justice of the investment decisions/advice and, if so, how this is reflected at the product level. These obligations have considerable behavioural implications. In terms of legal technique, the SFDR is a directly applicable Regulation which introduces additional disclosure requirements to the existing elements of relevant sectoral legislations (AIFMD, UCITS, Solvency II, IORP II, national pension rules, IDD and MiFID II), via a self-standing text (lex specialis) providing full harmonization, cross-sectoral consistency and regulatory neutrality as well as convergence by ESMA, EIOPA and EBA. Instead of amending all these existing directives in identical way, the SFDR comes on "top" of existing rules in order to impose sustainability disclosure obligations. This way consistency and regulatory neutrality across all relevant institutional investors' sectors is ensured.
Interaction with the EU Green Bond Standard	Under this Regulation, financial market participants will be required to report on the share of Taxonomy-alignment of the assets in which they invest, including potentially, green bonds. Investors may find that holding EU GBS-aligned bonds, which would normally by definition be 100% Taxonomy-aligned, may simplify this process, and contribute to increase their disclosed share of Taxonomy-aligned assets.

Title	**Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel**
Legislative or non-legislative?	Legislative. According to the EU Ecolabel Regulation, the criteria developed for products to be awarded the Ecolabel are adopted by a Commission Decision and have a limited validity in time (revision clause in the Commission Decision).
Brief description of policy or legislation	Established in 1992, the EU Ecolabel is a symbol of environmental excellence awarded to products and services that meet environmental standards throughout their life cycle and provides guidance to companies on environmental best practices. Minimum social, ethical, governance safeguards are also considered. In the 2018 Action Plan on Sustainable Finance, the Commission saw the potential merit in the application of the EU Ecolabel Regulation to specific financial products offered to retail investors, including Packaged Retail Investment and Insurance Products (PRIIPs). The lack of labelled financial products may in fact prevent investors from directly channelling their funds into sustainable investments. The objective of introducing the EU Ecolabel for financial products is to allow retail investors concerned with the environmental impact of their investment to rely upon a trusted and verified label to make informed investment decisions while incentivising financial markets to develop more products with reduced or positive environmental impacts. Thanks to the use of an existing framework, the EU Ecolabel Regulation, it is possible to achieve a quick establishment of an EU label for financial products and improve the currently confusing situation on the different types of green products for end-investors, contributing in this way to avoid "greenwashing".

	The EU Ecolabel Regulation: • defines the general principles and rules, the procedures for developing/revising criteria, the labelling awarding mechanisms and promotional activities; • requires Members States to designate competent bodies in charge of the verification of the product's compliance with the EU Ecolabel criteria on a regular basis; • foresees a governance structure around the work on developing EU Ecolabel criteria for products and services. This includes setting up the EU Ecolabelling Board (EUEB) that has an advisory role; the involvement of stakeholders (NGOS, consumers organisations, ESAs, etc…) in criteria development process via two rounds of consultations and ad-hoc stakeholders meetings; the final vote on the criteria by the Regulatory Committee, composed by Members States, and their adoption via a Commission Decision. The ongoing work on the EU Ecolabel for retail financial products is co-lead by DG ENV and DG FISMA at political level. The Joint Research Centre (JRC) provides the environmental, economic analysis and scientific support to develop the criteria that financial products would have to fulfil in order to be awarded the EU Ecolabel. The JRC has analysed scientific/academic research in order to inform the philosophy and rationale for criteria structure and the comprehension of what environmental impact means for financial products.
Interaction with the EU Green Bond Standard	The strong link with the EU Taxonomy in the draft criterion 1 ensures that investments are, to an important extent, made in economic activities that are defined (by EU taxonomy) as being green. Along the same lines, a strong link with the Green Bond Standard is also foreseen, ensuring that investments go, to a large extent, into projects which are EU Green Bond Standards compliant.

Title	**EU Climate Benchmarks: Regulation (EU) 2016/1011 as amended by Regulation (EU) 2019/2089 and the respective Delegated Regulations**
Legislative or non-legislative?	**Legislative**
Brief description of policy or legislation	Regulation (EU) 2016/1011 as amended by Regulation (EU) 2019/2089 creates two new types of EU climate benchmarks (EU Climate Transition and EU Paris-aligned benchmarks) and requires benchmark administrators to disclose Environmental, Social and Governance (ESG) information for those benchmarks that pursue ESG objectives. The minimum standards for the construction of the EU Climate Benchmarks and the exact scope and content of the ESG disclosure requirements have been further specified in the three delegated acts that were published in the Official Journal on 3 December 2020. On the disclosure front, the delegated acts require benchmark administrators to explain, using a set template, which ESG factors they have taken into account

	when designing their benchmark methodology. They shall also explain how those factors are reflected in the key elements of that methodology, including for the selection of underlying assets, weighting factors, metrics and proxies. In addition, benchmark administrators shall explain in the benchmark statement, using a standard template, how ESG factors are reflected in each benchmark or family of benchmarks they provide and publish. Finally, benchmark administrators shall disclose information on the alignment with the objectives of the Paris Agreement.
Interaction with the EU Green Bond Standard	The Delegated Regulations lay down a list of ESG factors to be disclosed by benchmark administrators depending on the type of underlying assets concerned (e.g. equity, fixed income, sovereign). Information on the ESG factors should be made at an aggregated weighted value of the benchmark, not for each individual constituent (company). However, in order for benchmark administrators to be able to disclose such information, they will have to source the information directly from companies (e.g. via their annual reports) or to obtain this information from external data providers. In addition, in order to decide on the inclusion of companies in the two EU Climate Benchmarks, benchmark administrators would need to have some information on such as on their level of GHG emissions, or on whether a percentage of their revenues is derived from fossil fuel activities.

Annex 12: Legal basis

1. LEGAL BASIS

The legal basis for this initiative is Article 114 of the Treaty on the Functioning of the European Union (TFEU), which confers to the European institutions the competence to lay down appropriate provisions that have as their objective the establishment and functioning of the internal market.

The policy options presented in section 5 would justify the use of Article 114 TFEU, as the aim and content of the act would be to ensure the establishment and well-functioning of the internal market. In particular, the adoption of an EU GBS would aim to ensure harmonised requirements for an EU green bond that could be used across Member States by public and private green bonds issuers.

Given the criteria set out in the Vodafone case (C-58/08), Article 114 TFEU allows the EU to take measures not only to eliminate existing obstacles to the exercise of the fundamental freedoms, but also to prevent the likely emergence of such obstacles in the future. This also includes those obstacles that make it difficult for market participants, as issuers of green bonds or investors, to take full advantage of the benefits of the internal market. Issuers of green bonds within the EU may decide to align themselves with any number of market-organised standards to aid investors in the identification and assessment of the bonds greenness and other relevant attributes (see Annex 6).

These standards, being market-based, are based around high-level process-based guidelines or recommendations. The most common standard, ICMA's Green Bond Principles, does not operate with a common definition of green, and recommends but does not require the use of external review to confirm alignment with the standard or provide assurance to investors on the green credentials. For this reason, it allows various practices to co-exist and does not allow investors to sufficiently identify genuine green bonds. As set out in this impact assessment, it may also facilitate an incident of real or perceived "green washing".

Although other national legislation exists stipulating a framework for green bond issuance (e.g. in China), no EU Member State has yet established an official green bond standard at national level. The current EU market for green bonds is therefore entirely based around market-defined standards and practices, which are used on a voluntary basis. Assurance to investors is provided by companies acting as external reviewers, and issuers of green bonds within the EU may decide to align themselves with any number of market-based standards to aid investors in the identification and assessment of the bonds greenness and other relevant attributes.

This means that a number of roles typically performed by regulation and public authorities are carried out by private actors and through market-based standards. These market-based standards set out high-level process-based guidelines or recommendations, which are insufficiently standardised, insufficiently rigorous, and insufficiently complete to permit the market for green bonds to grow according to its potential. For this reason, various practices co-exist, which makes it costly for investors to identify genuine green bonds.

In light of the continued growth of the green bond market and its role in funding low-carbon infrastructure projects, and given the shortcomings of existing standards and the broad span that exists in market practices (even within a single standard such as the dominant ICMA Green Bond Principles), it is likely that one or several Member States would be interested in creating a standard at national level, or establish national guidelines.

Such a standard would likely seek to address the same problems that the proposed EU GBS initiative aims to address, but the results may be divergence across EU Member States. There are already examples of Member States operating with significantly diverging frameworks in their issuance of sovereign green bonds. For example, several Member States have already issued sovereign green bonds, and although most have followed the ICMA Green Bond Principles, some have also chosen to follow other secondary frameworks (e.g. CBI certification for Netherlands, TEEC Label for France).

There are also numerous examples of diverging frameworks in the area of labels for green/ environmentally sustainable financial products (See Table 34 below). Already today, there exist a number of voluntary labels for green/ environmentally sustainable funds at national level, but they are diverse and fragmented in their scope, coverage, strategies as well as mechanisms for assessing and mitigating environmental, social and governance factors. Due to this, the use of such labels is largely fragmented among national/regional lines in the EU. It is therefore not impossible that similar fragmentation may emerge with regards to green bonds.

For this reason, it is likely that disparities between national laws would emerge that obstruct the fundamental freedoms and undermine a European level playing field. Therefore there is an identifiable need for a harmonized green bond standard to be applied across the EU-27.

However, as the green bond market is growing and given the shortcomings of existing market-based standards, and the broad span that exists in practices even within a single standard, it is very likely that a Member State may see fit, at some point, to create such a standard at national level, or at the very least establish guidelines for green bond issuers.

Through feedback received in the targeted consultation on the EU GBS, many Member States have been calling for a harmonized standard at EU level. Overall, against this background, it is therefore likely that in the absence of a harmonized standard at EU level, Member States will come forward with own legislation in the area of green bonds. Disparities between national laws would then emerge that obstruct the fundamental freedoms and undermine a European level playing field.

In addition, the absence of a non-harmonized standard on green bonds will also hamper the proper functioning of the internal market in the context of sustainable investments. Article 3(3) of the Treaty on the European Union (TEU) stipulates*: 'The Union shall establish an internal market. It shall work for the sustainable development of Europe [...] and a high level of protection and improvement of the quality of the environment.*" Article 114 of the TFEU gives the EU the legal basis to address the current fragmentation and lack of clarity, adding that proposals that concern environmental protection and consumer protection have to take as a base a high level of protection. Green bonds issued according to diverse standards by private initiatives at national level do not offer a suitable and uniform basis to enhance the issuance of and investments into green bonds as to further grow sustainable investments.

2. SUBSIDIARITY: NECESSITY OF EU ACTION

According to the principle of subsidiarity, laid down in Article 5 of the TFEU, the EU should act where it can provide better results than intervention at Member State level. In addition, EU action should be limited to what is necessary in order to attain the objectives, and comply with the principle of proportionality.

The current dominating green bond issuance framework, the ICMA Green Bond Principles, was first published by a market-based initiative in 2014, and helped to standardise the process

of issuing a green bond, and thereby facilitating the rise of the green bond market. However, this standard does not refer to a set comprehensive and detailed definitions of green projects, nor does it set out any requirements for the companies acting as external reviewers on the green bond market.

As outlined in the problem definition (section 4 of this impact assessment), the EU market for green bonds suffers from a lack of clear and comparable information on green projects, due to a lack of common definitions of such projects. This makes it more difficult and therefore costly for investors to identify green bonds with a genuinely positive environmental impact. In order to address this issue, the present initiative will seek to establish a green bond standard based on the classification of environmentally contributing activities set out in the EU Taxonomy.

Given the international nature of the green bond market, coordinated action at EU level is needed. Issuers and investors of financial products require common metrics and definitions to determine which projects and activities are environmentally sustainable. These common requirements will enhance market efficiency, investor confidence and facilitate increased green bond issuance across the EU.

Without EU action regarding green bonds, the most likely outcome would be the continued development of market-based standards for green bonds or new legislative initiatives at national level, especially in a constantly growing green bond market. Such uncoordinated actions at national level may lead to a proliferation of diverging green bond standards, incentive schemes, and verification regimes, which would fragment the green bond market in the EU and potentially hamper cross-border investment flows. Moreover, it could hinder economies of scale, and making green bond issuance more costly and less lucrative. And it could lead to increased "green-washing", since market-based standards might be insufficiently rigorous and verifiable, which could potentially create reputational problems for the whole green bond market.

Next to that, the problems this initiative aims to tackle is directly related with other initiatives on sustainable finance at European level, such as the EU Regulation on a classification system of economic activities (so-called 'EU Taxonomy') and the EU Regulation on sustainability disclosures in the financial services sector. Furthermore, to address certain regulatory barriers, e.g. regarding possible financial incentives that could be linked to the EU GBS or the set-up of a centralised registration/supervision regime for verifiers at European level with tasking ESMA as competent authority, it might be necessary to amend already existing EU legislation.

The EU GBS will ensure a level playing field and reduce the potential scope for disparities across the EU while supporting the attainment of the EU's sustainable finance policy objectives and has the potential to become a leading global standard for green bonds. Given its focus on a robust framework for structuring and verifying investments, it will facilitate increased financial flows to green projects while building issuer, investor and asset manager confidence in the sector.

Responses to the call for feedback of the Technical Expert Group on Sustainable Finance as well as to the targeted consultation on the EU GBS largely support an intervention at EU level, when calling for setting up a harmonized green bond standard at EU level and a proper registration/supervision process of verifiers coordinated by ESMA. This feedback clearly indicates that legislative Action at EU level is appropriate to address the identified problems (see section 2).

Given the international nature of the green bond market, the objectives of this initiative can be better achieved at EU level. Member States acting alone are not able to put in place such a harmonized standard applicable across the EU. The comparability of EU Green Bonds, based on the same green bond requirements and a proper verification process enables potential investors to better compare EU Green Bonds across national borders and provides clarity to relevant entities. Divergences in green bond standards erect additional barriers to a Single Market in financial services and products and for the free movement of capital. It increases costs and uncertainties for issuers and investors, who normally operate across borders. These divergences represent an obstacle to the further cross-border development of the market and to the establishment and smooth functioning of the Single Market.

Only an intervention at EU level can define consistent standard requirements for the internal market and prevent market distortions. Therefore, if the impact assessment demonstrates that action at EU level would produce greater benefits over costs compared with action only at Member State level, the Commission will propose legislative measures (based on Article 114 TFEU) with the aim of further improving the functioning of the Single Market.

3. SUBSIDIARITY: ADDED VALUE OF EU ACTION

As part of the European Green Deal, the EU is committed to becoming climate neutral by 2050. Achieving this goal and the interim 2030 climate and energy targets requires significant additional public and private investment estimated at up to €260 billion per year. The European Green Deal Investment Plan (EGDIP) forms the investment pillar of the Green Deal. The EGDIP aims to mobilise capital funding for at least €1 trillion in sustainable investments over the next decade while creating enabling frameworks that will facilitate further sustainable investments including the establishment of an EU GBS.

Putting in place a harmonized standard for a green bond at EU level will contribute to the aim of Article 3 of the TEU that explicitly refers to the internal market as well as the work for the sustainable development of Europe. Further market integration is necessary to fully unlock public and private investments in green and sustainable projects and to facilitate cross-border sustainable investments. The EU GBS initiative will allow canalising capital flows to green and sustainable projects and has the potential to promote economies of scale, thereby helping the market to grow. Given the risk, that inaction will lead to market fragmentation and consumer confusion, the EU GBS will provide for legal clarity, transparency and comparability of EU Green Bonds across the EU. It would also significantly reduce the complexity and the administrative burden, which bring clear benefits to issuers and investors of green bonds.

Therefore, a common standard for green bonds that addresses the main barriers for green bonds across the EU can be most efficiently achieved at EU level. To address (parts of) certain problems it might be necessary to amend existing EU legislation. Action should therefore be coordinated at EU level, as EU instruments appear to be more suitable. A possible intervention at EU level therefore complies with the principle of subsidiarity as set out in Article 5 of the TFEU.

Table 34- Overview of labels for funds in Member States[122]

	GreenFin / TEEC label (Energy and Ecological Transition for Climate)[123]	**Luxflag Climate Finance Label**	**FNG Label** (sustainable mutual funds)[124]	**Nordic Swan Ecolabel**[125]	**Austrian Ecolabel** (sustainable financial products)	**Green Funds Scheme**
Member State	**France**	**Luxembourg**	**Germany**	**Nordic countries**	**Austria**	**Netherlands**
Date of launch	01/12/2015	01/09/2016	01/05/2015	15/06/2017	Established in 1990	It was implemented in 1995
Number of labelled funds or value	4 green bonds, 3 equity, 8 infrastructure App. EUR 2 Md	4 funds EUR 450 M	5 Environmental thematic funds (equity and green bonds) among. 40 applicants	13 (EUR 3 Md) [All in equity: 8 focus on Sweden, 3 Global, 1 Frontier, 1 Energy]	more than100 labelled financial products	Since the implementation of the program, more than 234,400 individuals have invested, more than EUR 6.8 billion in green funds, financing more than 5.000 projects.
Time to audit an application	4 to 6 weeks (depending on the type of fund)	1 month	4 months	About 30 hours over a 6-9 week period. (Can be much longer depending on the fund companies eagerness and adaptability)		N/A
Legal basis	Secondary & tertiary legislation	None	None	None	None	None
Eligibility criteria	UCITS/AIFM (at least 50% invested in Europe)	An investment fund authorised by a Member State or be subject to supervision equivalent to that in EU Member States	UCITS funds	UCITS funds	Sustainable Funds/Investment Certificates - Ethics-Ecology, Thematic Funds /Investment certificates	The Dutch "Green Fund" is not a label but a tax scheme. In green savings accounts, 70% of deposits are invested in green projects.
Decision on the evolution of the scheme	A multi-stakeholder committee chaired by the French Ministry of Environment	Luxflag in conjunction with a dedicated multi-stakeholder industry working group led by the Association of Luxembourg Fund Industry	An independent expert committee	The Nordic Ecolabelling Board, an independent external organisation.	Government sponsored: Federal Ministry of Agriculture and Forestry, Environment and Water Management	Government sponsored Ministries of the Environment, Finance and Agriculture.
Institution granting the label	Accredited (by the National Accreditation body COFRAC) auditors	LuxFlag Board upon the recommendations of the Eligibility Committee and LuxFlag secretariat	GNG, the operational labelling body of FNG, advised by an independent expert committee, who review the audit results	Nordic Swan Ecolabel	Federal Ministry of Agriculture and Forestry, Environment and Water Management	Ministries of the Environment, Finance and Agriculture.
Labelling costs	None	EUR 3,000 (once labelled)	EUR 3,000 (application)	To generalize, an application fee of 3,000 EUR and an annual license fee of 0.0015% of AUM in the fund. Please follow link for all details	The annual royalties depend on the specific turnover of the branch and/or product group of the applying enterprise.	N/A

[122] Table was drawn up by the Commission's Joint Research Center in the context of the EU Ecolabel for Financial Products initiative.
[123] French Ministry for Ecology and Inclusive Transition: "Greenfin Label. Criteria Guidelines", 2019 (Link)
[124] FNG: "Label for Sustainable Investment Funds. Rules of Procedure", 2020 (Link)
[125] Nordic Swan Ecolabel (Link)

	GreenFin / TEEC label (Energy and Ecological Transition for Climate)[123]	**Luxflag Climate Finance Label**	**FNG Label** (sustainable mutual funds)[124]	**Nordic Swan Ecolabel**[125]	**Austrian Ecolabel** (sustainable financial products)	**Green Funds Scheme**
Member State	**France**	**Luxembourg**	**Germany**	**Nordic countries**	**Austria**	**Netherlands**
Audit costs	Depending on auditor	0	Included into labelling costs	See labelling costs	See labelling costs	N/A
Labelling period	1 year (renewable)	1 year (renewable)	1 year (renewable)	Same as the criteria document. Current criteria are valid until 2020-06-30. The criteria are updated every 3-5 years.	1 year (renewable)	The Government checks whether the project meets all the conditions of the Green Funds Scheme and, if so, it issues a green certificated that remains valid for ten years.
Intermediate verification	Yes	Compliance verification after six months	None	Annual	None	None
Green taxonomy	CBI based, however slightly adjust to reflect national priorities	Common Principles for Climate Change Mitigation and Adaptation and Adaptation Finance Tracking (IDFC (International Development Finance Club)+MDBs)	CBI based	Based on ICMA's GBP.	The scheme does not stipulate the use of specific external taxonomy.	The scheme does not stipulate the use of a specific external taxonomy. It contains a definition of green projects providing a significant and immediate environmental benefit.
Transparency requirements	Some of the fund's financial management practises must be transparent. Investor's documents must present the environmental strategy of the fund	The applicant must publish full investment portfolio at least once a year. Additionally, it must describe its Climate Finance objectives (environmental and financial) and be transparent towards investors in its portfolio composition and documentation by providing categories and/or sub-categories of its Climate Finance investments	Signatory of the Eurosif Transparency Code required - FNG Matrix (a framework developed by FNG questioning the RI approach of the fund) required - Impact reporting assessed by the auditor (Points are granted depending on the quality of the KPIs reported)	Mandatory: Annual Fund sustainability report All holdings, updated quarterly Point Score: Detailed engagement information Voting records	Information on the sustainability or ecological/social concept of Ecolabelled products should be presented in line with the European Sustainable and Responsible Investment Forum's Sustainability Fund Transparency Guidelines.	There are no reporting obligations
Control & monitoring	Control and Monitoring plan Guidelines. 1.Process of certifying a candidate investment fund 2.The methods for monitoring a certified fund 3.The management of any observations made on the Control and Monitoring Plan	Compliance monitoring at six months	Included into the Label's rules of procedures and FAQs	An on-site visit is performed in connection with the application and once a year during the validity of the license. Sample checks are made on a regular basis.	The environmental and social evaluation of companies, public issuers and real estate is carried out by funds or external organisations.	Green projects are subject to the same economic examination by banks as non-green projects.

Annex 13: Options discarded at an early stage

The following describes each of these options in detail and the reasons for discarding them at an early stage:

(1) Non-legislative measure: Commission Communication on an EU GBS

(2) Developing other standards and labels as part of a framework

(3) Tasking national competent authorities (NCAs) with managing a regime for external reviewers

(4) Flexibility for corporate issuers with regards to Taxonomy-alignment

(5) Mandatory standard for sovereign green bond issuers in the EU

(6) Banning the refinancing of existing green assets and expenditure by EU GBS green bonds

(7) Options which may imply the loss of green status before the bond matures.

1. Non-legislative EU Green Bond Standard (e.g. Commission Communication or Recommendation)

The Commission could take forward the EU GBS via a non-legislative measure, such as a *"Commission Communication" or a "Commission recommendation",* based on the core elements for an EU GBS proposed by the TEG. After a two-year period, the Commission could then evaluate the market uptake of the EU GBS, and follow up with legislation if needed. Such a standard would automatically be a voluntary standard, and there would not be any registration and supervision regime for external reviewers, as this requires legislation.

A non-legislative approach allow the standard to be finalised more quickly, and it would allow the Commission more flexibility in amending the standard. It would also avoid the costs to the EU budget from drafting, negotiating, and implementing legislation, although there would still be costs involved in drafting, adopting, and updating the non-legislative standard.

As such a standard would not officially exist in legislation, it would not be enforceable, and would need to be more principles-based. Compared to a legislative approach, it would provide less legal certainty to investors, and it would not allow the attachment of potential monetary or regulatory incentives.

Therefore, it would not address all barriers in the market, and could increase rather than reduce fragmentation in the market. The added value compared to existing market standards would be lower, which means there may be a risk of limited uptake, as issuers may prefer to keep using market-based standards.

For these reasons this option is not recommended.

2. Developing other standards and labels as part of a framework

As part of the work regarding the Renewed Sustainable Finance Strategy, the Commission has consulted on the need for additional standards and labels, such as labels for Socially Responsible Investment (SRI) funds, a standard for green loans and mortgages, and a social impact bond standard.

Today, **target-linked sustainability bonds** are capturing a small but growing share of the green bond market. While some market actors contest the level of comparability to a use-of-proceeds green bond, they nonetheless present themselves as alternative vehicles for issuers. The reputational effects, often the key reason for issuers to consider a green bond issuance, are likely to be comparable. A dedicated EU standard for such bonds along the model of the EU GBS could help to ensure that issuers who wish to pursue ambitious environmental targets, for example by making use of the Taxonomy, would have a standard to rely on. It would also help to standardise the market.

However, this option was discarded at an early stage due to the lack of development of this segment of the market, and the difficulty of finding an exact method for linking the Taxonomy to such bonds, which typically ignore the use of proceeds.

In the future, it is possible that the market would be ready for the development of yet more EU standards, including for **social bonds** or **sustainability bonds**. This would depend on the development of an EU Taxonomy for social bonds, which will be considered as part of the work of the EU Platform for Sustainable Finance.

3. Tasking national competent authorities (NCAs) with managing the regime for external reviewers

Both the stringent and lighter regimes could be implemented at either the Union or national level. If implemented at the Union level, the competences would most naturally fit within the scope of ESMA's field of activities, given its current role authorising and supervising credit rating agencies. In comparison, if implemented at the national level, it would require each Member State to designate a National Competent Body to register and supervise external reviewers. This could lead to divergences in national approaches, and ESMA would still have to perform a coordination role to ensure harmonisation between the various national frameworks. This approach would also lead to duplication of costs and competition for qualified personnel, as each NCA would have to establish its own in-house registration and supervision process.

As a result, it is recommended that ESMA is designated as the registration and supervision body for external reviewers. This is the approach most likely to ensure a harmonised approach across the EU, with a single access point for external reviewers seekingregistration and a standardised application process and fee structure. Under this approach, only ESMA would be required to build the necessary expertise and allocate resources, thus avoiding any duplication of costs. Once registered by ESMA, it would also be easier for entities to passport their services across the Union, as there would not be any additional national level requirements to also comply with.

4. Flexibility for corporate issuers with regards to Taxonomy-alignment

In its draft report on the EU GBS, the TEG advocated for the inclusion of a limited degree of flexibility related to the specific technical screening criteria set out in the Taxonomy Delegated Acts.[126] This was justified by the need to handle gaps in the gradual development of the Taxonomy, with full application only foreseen by end 2021, and given the lack of market experience in interpreting the requirements of the Taxonomy.

However, this flexibility poses a legal problem. The EU Taxonomy Regulation specifies that the Union shall apply the EU Taxonomy when setting out the requirements for the marketing of corporate bonds that are categorised as environmentally sustainable[127]. Given that the EU GBS initiative will pursue, as its core objective, the aim of delineating the boundaries of what shall constitute an 'environmentally sustainable' (or in other words "green") bond, the EU Taxonomy will need to be applied fully to determine the eligibility of the proceeds of the bond issuance. This excludes the type of flexibility suggested by the TEG for corporate bonds.

Other ways of giving potential flexibility to issuers also come with significant drawbacks. For example, one alternative could have been to allow the proceeds of the bond to fund a combination of green activities and non-green activities, by setting a threshold for the share of non-green, However, this choice would have resulted in an EU GBS with a lower level of ambition than current market standards, which tend to require 100% use of proceeds for green activities. This would potentially put users of the EU GBS at a disadvantage.

5. Mandatory standard for sovereign green bond issuers in the EU

The option of making EU GBS alignment mandatory also for sovereign issuers of green bonds in the EU (in addition to non-sovereigns) was not assessed, as the chosen legal basis – Article 114 TFEU – does not warrant such type of legislative action.

This is also reflected in the fact that the Taxonomy Regulation's Article 4 only mentions *corporate* green bond issuers among those for whom an EU standard for green bonds should be based on the Taxonomy, not *sovereigns.*

6. Banning the re-financing by the EU GBS of existing green assets

One of the main criticisms in relation to green bonds has been their lack of 'additionality'. This refers to the question of whether green bonds lead to new (i.e. additional) green investments. In the current market, this need not be the case. Green bonds tend to finance assets and this can include (re-)financing of assets that already exist, within reasonable look-back periods (2-3 years maximum). For example, a bank could already be financing EUR 100m for the construction of a windmill, and only afterwards decide to issue a EUR 100m green bond for this. No new green investments will have been created.

[126] Specifically, the TEG proposed that in cases where either the technical screening criteria have not been developed for a specific sector or environmental objective, or where the developed screening criteria are not considered directly applicable due to the innovative nature, complexity and/or location of the green project, the issuer should instead be allowed to rely on the fundamental principles of the Taxonomy Regulation to verify that investments align with the Taxonomy, instead of the Technical Screening Criteria.

[127] Article 4 of the EU Taxonomy Regulation: "*Member States and the Union shall apply the same criteria set out in Article 3 to determine whether an economic activity qualifies as environmentally sustainable for the purposes of any measure setting out requirements for financial market participants or issuers in respect of financial products or corporate bonds that are made available as environmentally sustainable.* "

However, the fact that a particular green bond is issued after the assets it (re)finances does not necessarily imply that there is no causality, as the intention to issue a green bond in the future can also be a motivating factor for embarking on a green project today. For example, an issuer may decide to invest in a green project knowing that this investment may be refinanced by a green bond in the future. The possibility to re-finance a green asset using a green bond in the future, with the potential benefits that this brings to the issuer, may be an incentive to invest in that green asset today.

It should also be noted that many sovereign issuers exclusively make use of refinancing, as they cannot issue a green bond framework that pre-empts future spending.

For these reasons, the option of not allowing the refinancing of green proceeds using EU GBS bonds has been discarded. However, it is recommended to impose limits to prevent issuers from indefinitely refinancing the same expenditure, for example with time-limits to prevent expenditure that predate the issuance by more than a certain number of years to be used for new green bond issuance.

7. Options which may imply the loss of green status before the bond matures, in case the Taxonomy criteria change

The idea of the overall sustainable finance project is to facilitate sustainable investments with a broader view of achieving climate neutrality as soon as possible. In order to promote private investments further, the risk-payoff of green assets need to be improved, either by improving the expected payoff (incentives or disincentives for brown assets i.e. relative change) or by lowering risks.

Investors in bond markets are largely hold-to-maturity investors and most bond markets exhibit very slim liquidity on secondary markets. For green bonds, the investor base is largely constituted of green institutional investors, many of which face direct fiduciary duties to align their investments with their green objectives. This implies that such investors should also divest out of assets that are not or are no longer considered green.

In the context of the green bonds initiative, this is an important consideration as concerns potential future changes to the Taxonomy Regulation. If such changes would entail that a previously green asset financed by a green bond, is no longer considered green, a significant share of the investors in that bond may want to or may even be obliged to sell the bond at that point. While there would likely be conventional buyers to step in, it would nonetheless lead to a significant price impact given the sudden spike in selling interest. This would present a significant risk to investors in an EU GBS unless grandfathering of the taxonomy criteria until maturity of the bond is ensured.

Without grandfathering until maturity in the case of changes to the Taxonomy, investors would face higher risk and would be willing to pay less for an EU GBS i.e. coupon rates for issuers would be higher / a possible ‘greenium’ over conventional bonds would be lower. It would present an unnecessary hurdle to higher investments and thereby stands contrary to the general objective.

Not granting such grandfathering rights would furthermore risk that issuers postpone EU GBS issuance in anticipation of possible changes to the taxonomy. In effect, some green

investments would occur only at a later stage implying a loss of positive environmental impact during that time.

Given the current environmental trajectories, the ambition must be to facilitate green investments as strongly and quickly as possible. While an asset may no longer be green at some future point in time, according to the standards then, it will have still played a significant role in mitigating climate change or adapting to it, as per the taxonomy. Debt linked to the initial financing should therefore remain green until it matures. This limits risks to investors and thereby maximises a possible green spread to conventional bonds. In effect, investments are promoted more strongly and sooner in time.

Annex 14: EU Green Bond Standard as recommended by TEG

1. Scope of the EU-GBS

The European Green Bond Standard (EU-GBS) is a voluntary standard proposed to issuers that wish to align with leading best practices in the market. It is designed to be globally relevant and accessible to issuers located in the EU as well as to issuers located outside the EU. It builds on market best practices such as the Green Bond Principles (GBP).

2. Objective of the EU-GBS

The EU-GBS is intended to provide a framework of core components for EU Green Bonds, thereby enhancing transparency, integrity, consistency and comparability of EU Green Bonds. The ultimate objective is to increase the flow of finance to green and sustainable projects.

3. Definition of an EU Green Bond

An EU Green Bond is any type of listed or unlisted bond or capital market debt instrument issued by a European or international issuer that is aligned with the EU-GBS, and is therefore meeting the following requirements:

1. The issuer's Green Bond Framework shall confirm the alignment of the green bond with the EU-GBS;
2. The proceeds shall be exclusively used to finance or re-finance in part of in full new and/or existing 'Green Projects' as defined in section 4.1, as it shall be described in the bond documentation; and
3. The alignment of the bond with the EU-GBS shall have been verified by an accredited Verifier in accordance with section 4.4.

An issuer may only use the term 'EU Green Bond' if the above criteria are met. European and international issuers may decide to voluntarily requalify their existing green bonds as 'EU Green Bonds' in the same manner and, for the avoidance of doubt, after verification by an accredited Verifier.

It is important to note that EU Green Bonds are only fungible with green bonds issued as EU Green Bonds or requalified as EU Green Bonds.

4. Core components of the EU-GBS

4.1 Green Projects

Proceeds from EU Green Bonds, or an amount equal to such proceeds, shall be allocated only to finance or refinance Green Projects ('Green Projects') defined, subject to confirmation by an accredited Verifier (see section 4.4), as

(a) contributing substantially to at least one of the Environmental Objectives as defined in the EU Taxonomy Regulation[128] ('the Environmental Objectives'), namely (i) climate change mitigation, (ii) climate change adaptation, (iii) sustainable use and protection of water and marine resources, (iv) transition to a circular economy, waste prevention

[128] Proposal for a Regulation of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investment, COM(2018) 353 final 2018/0178 (COD), 24 May 2018 (link)

and recycling; (v) pollution prevention and control, and (vi) protection of healthy ecosystems, while

(b) not significantly harming any of the other objectives, and

(c) complying with the minimum social safeguards represented by the principles and rights set out in the eight fundamental conventions identified in the International Labour Organisation's declaration on Fundamental Rights and Principles at Work.

When the EU Taxonomy will be in force and where Technical Screening Criteria (i.e., principles, metrics, thresholds) have been developed in the EU Taxonomy for specific environmental objectives and sectors, Green Projects shall align with these criteria allowing however for specific cases where these may not be directly applicable as a result of factors such as the innovative nature, the complexity, and/or the location of the Green Project(s). An accredited Verifier shall either confirm alignment with the Technical Screening Criteria, or alternatively in cases where no technical screening criteria have been developed or in the above mentioned specific cases, that the projects nonetheless meet the requirements under the EU Taxonomy framework i.e. that they (a) contribute substantially to at least one of the Environmental Objectives (b) do not significantly harm any of the other objectives and (c) comply with the minimum social safeguards.

The issuer shall provide a description of such Green Projects in their Green Bond Framework (see section 4.2) and in the Green Bond legal documentation (for instance in the Prospectus or in the Final Terms). The information provided in the legal documentation may be summarised or may be limited to a reference to the Environmental Objectives and the GBF. In case that the Green Projects are not identified at the date of issuance, the issuer shall describe the type and sectors and/or environmental objectives of the potential Green Projects.

Green Projects can include:

- Physical assets and financial assets such as loans. Green assets can be tangible or intangible, and they can include the share of working capital that can reasonably be attributed to their operation.
- Any capital expenditure and selected operating expenditures such as maintenance costs related to green assets that either increase the lifetime or the value of the assets, and research and development costs. For the avoidance of doubt, operating costs such as purchasing costs and leasing costs would not normally be eligible except in specific and/or exceptional cases as may be identified in the EU Taxonomy and future related guidance.
- Relevant public investments and public subsidies for sovereigns and sub-sovereigns.

Green assets shall qualify without a specific look-back period provided that at the time of issuance they follow the eligibility criteria listed above. Eligible green operating expenditures shall qualify for refinancing with a maximum three [3] years look-back period before the issuance year of the bond.

For the avoidance of doubt, a specific green asset or expenditure can only qualify as a Green Project for direct financing by one or several dedicated green financing instruments (such as bonds or loans) up to the combined equivalent of its full value. It is understood that green financing instruments can be refinanced by other green financial products.

4.2 Green Bond Framework

The issuer shall produce a Green Bond Framework ('GBF') which confirms the voluntary alignment of the green bonds issued following this GBF with the EU-GBS and provides details on all the key aspects of the proposed use of proceeds and on its green bond strategy and processes. The draft standard foresees inclusion of the use of proceeds to be specified in the legal documentation.

The issuer shall indicate the following elements in their GBF:

1. The Environmental Objectives of the EU Green Bond or EU Green Bond programme and how the issuer's strategy aligns with such objectives, as well as their rationale for issuing;
2. The process by which the issuer determines how Green Projects align with the EU Taxonomy and, if applicable, qualitative or quantitative technical screening criteria with reference to section 4.1 and the support of an accredited Verifier. Issuers are also encouraged to disclose any green standards or certifications referenced in project selection;
3. A description of the Green Projects to be financed or refinanced by the EU Green Bond. In case where the Green Projects are not identified at the date of issuance, the issuer shall describe, where available, the type and sectors of the potential Green Projects. Where confidentiality agreements, competitive considerations, or a large number of underlying projects limit the amount of detail that can be made available, information can be presented in generic terms or on an aggregated portfolio basis;
4. The process for linking the issuer's lending or investment operations for Green Projects to the EU Green Bond issued. The issuer shall track the amount allocated to Green Projects in an appropriate manner until such amount equals the net proceeds and document the allocation through a formal internal process;
5. Information on the methodology and assumptions to be used for the calculation of key impact metrics: (i) as described in the EU Taxonomy, where feasible; and (ii) any other additional impact metrics that the issuer will define; and
6. A description of the Reporting (e.g. envisaged frequency, content, metrics).

For the avoidance of doubt, it is understood that subsequent changes to the Taxonomy will not apply to outstanding EU Green Bonds (grandfathering). Conversely, new issues shall be aligned with the most recent version of the Taxonomy and as relevant to their Green Projects. The GBF shall be published on the issuer's website or any other communication channel before or at the time of the issuance of an EU Green Bond and shall remain available until the respective maturity of the EU Green Bond.

5 Allocation and Impact Reporting

Two types of reporting are required under the EU-GBS: Allocation Reporting and Impact Reporting.

Allocation Reporting: Issuers shall report at least annually, until full allocation of the bond proceeds to Green Projects and thereafter, in case of any material change in this allocation.

Verification is only required for the Final Allocation Report.

The Allocation Report shall include:

- A statement of alignment with the EU-GBS;
- A breakdown of allocated amounts to Green Projects at least on sector level, however more detailed reporting is encouraged; and

- The geographical distribution of Green Projects (recommended on country level).

For the avoidance of doubt, the Final Allocation Report for an EU Green Bond to be published upon full allocation shall comprise information on all allocated amounts to Green Projects at least on sector level.
Impact Reporting: Issuers shall also report on impact of Green Projects at least once during bond lifetime after full allocation of the bond proceeds to Green Projects and thereafter, in case of material changes in this allocation.

The Impact Report shall include:

- A description of the Green Projects;
- The Environmental Objective pursued by the Green Projects;
- A breakdown of Green Projects by the nature of what is being financed (assets, capital expenditures, operating expenditures, etc.), the share of financing (i.e., the amount of Green Projects financed after the bond issuance) and refinancing (i.e., the amount of Green Projects financed before the bond issuance);
- Information and, when possible metrics, about the projects' environmental impacts, which needs to be in line with the commitment and methodology described in the Issuer's GBF; and
- If it hasn't been already detailed in the GBF, information on the methodology and assumptions used to evaluate the Green Projects impacts.

Verification of the Impact Reporting is not mandatory, however issuers are encouraged to have their Impact reporting reviewed by an independent third party.

Allocation Reporting and Impact Reporting can be either on a project-by-project level or on a portfolio level, where confidentiality agreements, competitive considerations, or a large number of underlying projects limit the amount of detail that can be made available.

For the avoidance of doubt, the Allocation Report as well as the Impact Report may cover several bond issuances under the same Green Bond Framework. The issuer may also decide to publish separate Impact Reports for separate project categories. Allocation and Impact Reporting can be presented in a combined report or in separate reports. In case full allocation and or impact is already determined upon issuance of a bond, issuers may choose to publish one report comprising information on allocation and impact at issuance, for the avoidance of doubt in case of material change of allocation, further reporting will be required.

Allocation Reporting and Impact Reporting shall be published on the issuer's website or any other communication channel. The Final Allocation Report and Impact Report published upon full allocation shall remain available until maturity of such EU Green Bonds unless replaced by further reports in case of material changes of allocation.

5.1 Verification

Issuers shall appoint an external reviewer to confirm:

- before or at the time of issuance, through an initial Verification, the alignment of their GBF with the EU-GBS, in accordance with section 4.1 (Green Projects) and 4.2 (Green Bond Framework); and
- after full allocation of proceeds, through a Verification, the allocation of the proceeds to green eligible projects in alignment with the Allocation Reporting as outlined in section 4.3 of the EU-GBS.

For the avoidance of doubt, an initial verification can be valid for several bonds issued under a programme with the same GBF.

It is also understood that for transactions that are fully allocated at issuance (e.g. as in the case of refinancing) the verification of the Allocation Reporting can be incorporated in the initial Verification.

Verification(s), and any subsequent ones, shall be made publicly available on the issuer's website and through any other accessible communication channel as appropriate. The verification of the GBF shall be made publicly available before or at the time of the issuance of its EU Green Bond(s). Verification of the Final Allocation Report should be made publicly available together with the publication of the Final Allocation Report, however at the latest one year after the publication.

Verification provider(s) will be subject to accreditation including explicit requirements related to (i) professional codes of conduct related to business ethics, conflicts of interest and independence; (ii) professional minimum qualifications and quality assurance and control; and (iii) standardised procedures for Verification.
Verification providers shall also disclose their relevant credentials and expertise and the scope of the review conducted in the Verification report.

Annex 15: Project green bonds to support the green transition and the EU Green Deal

Investment in sustainable infrastructure, buildings and renewable energy and related green bonds should be promoted as more common asset class in order to increase substantially the liquidity and the amount of financing available to build sustainable infrastructure, buildings and energy generation, and/or to make greener the existing ones. This will also boost the use of the Taxonomy itself and promote the EU Green Bond standard, for investments compliant with the provisions of the EU Taxonomy, while supporting the green transition and the objectives of the EU Green Deal.

Project green bonds often cover sustainable investments (e.g. in infrastructure, buildings, renewable energy) which are well within the scope of economic activities covered by the EU Taxonomy. Sustainable infrastructure assets are "investable" and can be supported by green bonds through a) corporate bonds that are used by companies to finance a range of sustainable activities and where the yield and risk of the bond is linked to the balance sheet of the underlying company. These bonds are likely to make up a large share of green bonds; b) project green bonds, which are dedicated to the financing of specific sustainable infrastructure assets, but are also suitable for supporting sustainable buildings and renewable energy have additional advantages as compared with general corporate bonds, since the proceeds are clearly related to the risk of the assets supported and the way it is operated. Further, the due diligence, which applies to project green bonds, ensures that the criteria and benchmarks set in the Taxonomy Delegated Act can be properly assessed and monitored.

The scale up of the project green bond market for sustainable infrastructure, buildings and renewable energy can be promoted using public guarantee, such as the InvestEU, in particular bonds credit enhancing and subordinated debt financing can enhance the use of green bonds for green field infrastructure.

Investment in infrastructure is considered as an "alternative investment" by institutional investors, but remains a small fraction of their overall investment strategy. According to Moody's[129], while the cumulative probability of default for other asset classes normally increases over time, infrastructure debt normally stabilizes following an initial period. Infrastructure debt performs like an investment grade security by year 10 in high-income countries.

Commercial and promotional banks can provide substantial support to the infrastructure sector. However, while the risk profile of infrastructure investment matches the requirements of long-term investors, due diligence for such projects is complex and regulatory risks are often high, which deters institutional investors to engage more with the sector. In some cases, private investors also lack the expertise to implement due diligence of infrastructure projects and prefer to invest in other financial assets, such as treasury bonds or shares, which are easy to assess and more liquid.

More broadly, lack of strategic planning and poor project preparation, poor business cases and barriers (state infrastructure ownership and lack of competition) also prevent investors from further engaging in infrastructure financing.

[129] Kelhoffer, K. (Moody's Analytics): "Examining Infrastructure as an Asset Class", 2020 (Link)

In the last decade, the debate about infrastructure as an asset has been intense at European and as well international level.

In particular the Regulation (EU) 2019/876[130] states that it is essential to lay down a regulatory environment that is able to promote high quality infrastructure projects and reduce risks for investors. The text does not include references to green infrastructure. However, it states that the European Commission should review the provision on high quality infrastructure projects in order to assess its impact on the volume of infrastructure investments by institutions and the quality of investments having regard to Union's objectives to move towards a low-carbon, climate-resilient and circular economy; and its adequacy from a prudential standpoint. The Commission should also consider whether the scope of those provisions should be extended to infrastructure investments by corporates.

The G20 Infrastructure Working Group (IWG) also recognised the benefits of promoting infrastructure as an asset class, seeking ways to improve the investment environment and mobilise higher levels of investment through capital markets[131]. Along this, EIB and OECD are promoting an Infrastructure Data Initiative (IDI), which promotes discussion and the coordination of initiatives led by multi-lateral development banks and international organisations, in cooperation with the private sector. The G20 Principles for Quality Infrastructure Investment also emphasise that access to adequate information and data is an enabling factor to support investment decision-making, project management and evaluation, particularly when considering the infrastructure life-cycle and cost-benefit analysis.

[130] Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012 (Link)

[131] G20/OECD: "Report on the collaboration with institutional investors and Asset Managers on infrastructure", 2020 (Link)

Annex 16: Summary of responses to stakeholder questions on Social bonds

Question 17)

To what extent do you agree with the following statements?

a. Social bonds are an important instrument for financial markets to achieve social objectives.

b. Social bonds targeting COVID19 are an important instrument for financial markets in particular to help fund public and private response to the socio-economic impacts of the pandemic.

c. Social bonds targeting COVID19 are mostly a marketing tool with limited impact on funding public and private responses to the socio-economic impact of the pandemic.

d. Social bonds in general are mostly a marketing tool with limited impact on social objectives.

e. Social bonds in general require greater transparency and market integrity if the market is to grow.

A large majority of respondents agreed or strongly agreed with the statement that social bonds are an important financial instrument to achieve social objectives. From the few stakeholders that disagreed some nevertheless noted that a social bond standard should be developed (see Q.18). This may suggest that the aspect of 'importance' has been understood differently across the respondents, for example in terms of social bonds' current market share.

While a majority of respondents equally agreed that social bonds are important in the context of financing Covid-response measures, there is a significantly higher fraction of replies which noted a neutral or disagreeing opinion compared to sub-question (a). However, there is no clear pattern as to the type of stakeholders' replies. Neutral or disagreeing replies came from both banks and asset managers but also development banks and other potential social bond issuers.

The replies to sub-questions (c) and (d) on the impact on funding and the contribution to social objectives respectively were quite similar. Both questions saw a majority of respondents disagreeing that social bonds are mostly a marketing tool and that they do have a positive impact on funding social expenditures. On sub-question (c), the percentage of stakeholders disagreeing was somewhat lower than for (d). Approximately a third of respondents held a 'neutral' opinion on this statement. This indicates that some stakeholders believe that social bonds may have been used (or were used more) as a marketing tool in the context of Covid. Overall, however, the perception is that these instruments carry a real benefit.

An overwhelming majority of respondents agreed with the statement in sub-question (e). More than three-quarters of stakeholders held the opinion that social bonds do require a greater transparency and market integrity for the market to grow. Interestingly, some regulators as well as market operators held a neutral stance on this statement. This suggests that, in their opinion, the current transparency and market integrity frameworks are sufficient already. The statement did not specify transparency and market integrity any further, so it may simply imply that these stakeholders believe that the existing regulatory frameworks already cater to high standards. In addition, there may be

concerns over further regulatory measures and concurrent administrative burdens that may arise (see Q 18).

<u>Question 18)</u> The Commission is keen on supporting financial markets in meeting social investment needs. Please select one option below and explain your choice:
a. The Commission should develop separate non-binding social bond guidance, drawing on the lessons from the ongoing COVID19, to ensure adequate transparency and integrity.
b. The Commission should develop an official EU Social Bond Standard, targeting social objectives.
c. The Commission should develop an official "Sustainability Bond Standard", covering both environmental and social objectives.
d. Other Commission action is needed.
e. No Commission action is needed in terms of social bonds and COVID19.

The replies to this question were strongly spread out across the options and without any patterns in terms of type of stakeholder replying. As noted by one respondent, the suggested actions under (a), (b) and (c) are not exclusive. This means that there may be some non-captured overlap in the statistics of the stakeholders' views. In terms of statistics, option (b) saw the largest support with approximately a third of respondents opting for it. The second favoured option was option (c). The other three options saw very similar support rates each.

Regardless of the sub-option chosen, a comment that frequently arose was there is currently no social taxonomy. Some respondents noted that it should be developed (and could then be applied under a standard) while others stated that capturing social aspects would be too complicated to fully regulate and should rather be addressed in the form of guidance. There were also comments on both sides as to whether or not there should be one overarching framework in form of a sustainability bond standard or keeping them separate. One the former, it was noted that equal procedures and transparency applies in both social and environmental areas. On the other hand, those in favour of separate standards noted that the methodologies for both areas are very different and that target investor bases for green bonds and social bonds differ significantly (return driven versus pure impact investors).

As for the respondents opting for (a), some noted that guidance could be a first step towards formulating a social taxonomy. Others stressed that it is too difficult to quantify social aspects, at least in any form similar to the environmental taxonomy. In result, no formal regulation should apply. In general, it was noted often that having official guidance would help to further foster the social bond market, generate increased transparency and create more awareness. At the same time, several stakeholders highlighted that guidance would avoid over-burdening issuers with additional bureaucracy.

As for comments under option (b), stakeholders often raised that social aspects are equally important to environmental and should be addressed. Often statements referred to the need for the Commission to develop a social taxonomy which could then form the basis for a standard. It was however also suggested that an SDG-like framework would actually make the UN the more logical actor to develop it. Positive aspects in terms of transparency, comparability and market integrity were frequently given as reasons for an official standard.

The respondents supporting option (c) often noted that social and environmental aspects should be addressed together. The taxonomy could achieve this but needs to be developed to cater to the social area. Some put market size and increased liquidity forward as reasons to combine both bond types. Others noted that a the use-of-proceeds approach as applied for GBs today should actually move to a full corporate approach with environmental and social objectives.

In terms of stakeholders replying option (d), there were no significant new ideas presented. Those stakeholders that provided additional comments often noted the need for increased flexibility in the market and the danger of overregulating small niche markets. This was equally a comment made frequently by those opting for (e). Others noted again the difficulty and extensive work required to define social objectives. It was also stressed that the green taxonomy should be finalized first before undertaking similar work on the social dimension. Another frequent statement, including by one regulator, was that market based guidance and transparency in the market to date is sufficient already.

<u>Question 19)</u> In your view, to what extent would financial incentives for issuing a social bond help increase the issuance of such bonds?

An overwhelming majority of stakeholders agreed that incentives will increase issuance. However, the views as to their effectiveness varied strongly with options 1, 2, and 3 being close to par. As pointed out by several stakeholders, incentives will of course promote issuance; however, the market impact depends strongly on their type and extent. Without these insights, no clear judgement can be made on their effectiveness.

In terms of additional comments, a majority of stakeholders argued for incentives with some stating explicitly that issuance costs are higher compared to plain vanilla bonds. In terms of possible incentives, taxation was the most frequently raised topic. Comments ranged from capital gains tax for investors to tax relief for institutional investors. Public awareness, issuance and public guarantees by supervisors concerning integrity of standards were also often raised. Some respondents furthermore suggested guarantees improving the risk profile of the issuer.

Several stakeholders equally cautioned against the use of incentives. This includes multiple stakeholders, which saw incentives to increase issuance. A statement made by some of these respondents was that demand is already high and no further incentive is actually needed. Others noted that any incentives should avoid skewing the relative risk of the underlying funding. Similarly, it was stated that prudential regulation should not be used to stimulate certain market behaviour. Lastly, some respondents stressed that it would be more efficient for the EU or Member States to target financial incentives directly at the real economy, rather than at a financial instrument.