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Regulatory and Market Trends for ESG Bonds and Funds, and Some of the Associated Risks of Sovereigns*

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Promoting the financing of the transition to a sustainable economy is one of today's key issues. However, access to scarce resources is further complicated by a striking new phenomenon: both regulators and investors are becoming increasingly "choosy", as they make their decisions on whom to give money to dependent on circumstances that go beyond green and scientific aspects. It is therefore no coincidence that an increasing number of investment funds are obtaining ESG[1] ratings that formulate exclusion rules for sovereign bonds based on NGO indicators (e.g. civil liberties, level of corruption). If such criteria become an international standard, a sovereign that fails to meet them could be threatened with total exclusion from the green/ESG market. The aim of this essay is to review the regulatory environment and the market situation through this lens. It is important to note, however, that both legislation and market preferences are in a quickly evolving, amorphous state, and thus continuous monitoring of the conditions is essential.

Journal of Economic Literature (JEL) codes: G12, G18, G20, G28, G38, K22, K32, Q01, Q50

Keywords: green investment, ESG, regulation, bond, market, sovereign, risk

1. Introduction

The answers to global warming as a scientific question have long been sought by experts and policymakers in the same terrain. However, a significant redefinition of this focus is currently underway in the Western world. Looking at legislation and

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[1] ESG stands for Environmental, Social and Governance. The aim of these frameworks is to give investors a better understanding of the risks inherent in the environmental and social sustainability and governance of business organisations.

market developments, it is clear that “social” and “sustainable” are increasingly coming to the fore as keywords – i.e. a context that belongs wholly or partly to social sciences – rather than “green”. In any case, finding a new, unified focus is substantially hindered by the fact that the final, long-term shape of the now gigantic regulatory edifice, which is unstable due to the centrifugal force of counter-interests or even external shocks, is rather blurred.

The essay aims to provide a context for regulatory and market trends related to the financing of the green transition and draws attention to some little-known sovereign risks that are quietly building up.

2. Green/ESG bond standards

One of the necessary preconditions for the green transition as a global process is the creation of a common language in many dimensions of our lives, including finance. At the global level, with regard to bonds, the voluntary standards of two organisations, the International Capital Market Association (ICMA) and the Climate Bond Initiative (CBI), have become widespread: the Green Bond Principles (GBP) (*ICMA 2021b*) and the Climate Bond Standard (CBS) (*CBI 2019*), respectively. The market is super-dominated by the GBP, which has been in existence and evolving since 2014 and is now considered the global standard.[2] Although the GBP provides detailed guidance on the selection of projects, it does not provide a precise definition of what constitutes a green activity (i.e. there is no taxonomy). In deciding the latter, it proposes only a third-party review. The CBS is more constrained than the GBP, as the CBI has also published a relevant taxonomy (*CBI 2021b*), while expecting the same external validation. This makes it a less attractive alternative for many, which may also explain its lower take-up.

The EU Green Bond Standard (EU GBS) has been in development since 2018.[3] As proposed by the relevant working group, the so-called Technical Expert Group on Sustainable Finance (*EU TEG 2020*), the EU GBS would expect consistency with the EU Taxonomy, transparency, external evaluation and even supervision of external evaluators by the European Securities and Markets Authority (ESMA). Although it is still only a proposal, some bond issuers are already adapting to it in practice.

In 2020, the Hungarian Government Debt Management Agency set up a green bond framework in line with the GBP (*Government Debt Management Agency 2020*). Green government bonds, which have since been issued in euro, yen, forint and yuan, are designed to channel some of the funds needed to meet international commitments to fight climate change (other sources of financing include EU funding

[2] According to *ICMA* (*2022*), their “share” averaged at 98 per cent in 2021.
[3] Legislative text proposed by the European Commission: *EC* (*2021*); as corrected by the European Parliament: *EP* (*2022*).

from various sources, European Investment Bank loans and proceeds from the sale of EU ETS quotas[4]). In order to facilitate the issuance of green bonds by market participants, the Central Bank of Hungary (Magyar Nemzeti Bank, MNB) has also published its guidelines in 2022 (*MNB 2022*).

It is worth noting that non-resident issuances outside of Europe and North America have also been more or less consistent with these principles for some time. Two markets of particular importance are worth mentioning: the panda (yuan) and the samurai (yen). The Chinese central bank issued its own green bond guidelines in 2015 (*PBC 2015*) and the Green Finance Committee established the relevant taxonomy (*GFC 2015*), which was updated in 2021 (*PBC 2021*). In summer 2022, the first framework combining Chinese practice and the GBP was born (*GFC 2022*). The Japanese Ministry of the Environment issued GBP-consistent green bond guidelines in 2015 (*JME 2017*), which were updated in 2020 to include guidelines for green and sustainability-linked loans (*JME 2020*). Additionally, Asia's most important stock exchange – the world's third largest – the Japan Exchange Group, unveiled its green bond framework in spring 2022 (*JPX 2022*).

In contrast to the green standards, the range of social and sustainability guidelines is still much more limited. The ICMA is currently leading the way, having already issued recommendations on social, sustainability and sustainability-linked bonds[5] (*ICMA 2021c, 2021d, 2020/2021a*, respectively). The EU has also followed the ICMA social bond principles in the design of the framework for the EU's employment retention programme (*EU SURE 2020*), launched in the wake of the coronavirus pandemic.

Due to the continuing lack of a common narrative in the EU, several Member States have developed their own labels – initially green, later ESG – with a specific standard and mostly with a taxonomy, which can be awarded to the funds with the majority of their underlying products meeting these criteria. However, these labelling systems reflect and are optimised for national priorities.

3. EU regulatory environment

In 2018, the European Commission adopted the Action Plan for financing sustainable growth (*EU 2018*) with the intention of shifting resources towards sustainable investments. The subsequent series of measures is made up of a number of organically interlinked elements.

[4] The EU Emissions Trading System is the world's first and largest carbon market.
[5] Unlike GSS (Green, Social, Sustainability) bonds, funds raised through Sustainability-Linked Bond (SLB) issuance can be used for anything, i.e. the funds raised are not earmarked (there is no Use of Proceeds, UoP). The product is linked to sustainability by making explicit commitments (Sustainability Performance Target, SPT) in respect of one or more Key Performance Indicators (KPIs), such as greenhouse gas (GHG) emissions. If the commitment fails, the bond pays a higher interest rate ("step up"), and if it over-performs, it may pay a lower rate ("step down"). Chile was the first sovereign to issue an SLB in March 2022. In October, Uruguay followed suit with the debut of step down (for frameworks, see *CMF 2022; UMEF 2022*).

The EU Taxonomy (*EU 2020*) is an EU-wide classification system for determining whether an economic activity is environmentally sustainable. It requires companies subject to the Non-Financial Reporting Directive (NFRD) (*EU 2014*) to report on the extent to which their operations are in line with the regulation, i.e. how "green" they are. Under the NFRD, large companies (with more than 500 employees and a balance sheet total exceeding EUR 20 million and/or turnover exceeding EUR 40 million) are required to report non-financial information such as environmental protection, social responsibility, treatment of employees, human rights, anti-corruption or even gender and age diversity in the management. However, the Commission would widen this further (to those meeting at least two of the three criteria: more than 250 employees, a balance sheet total exceeding EUR 20 million, turnover exceeding EUR 40 million) in the context of the Corporate Sustainability Reporting Directive (CSRD) (*EU 2021a*), which among other things proposes to amend the NFRD from a sustainability perspective and would extend and tighten the requirements for the content and format of the reports (see also EU Sustainability Reporting Standards, ESRS).

The KPIs mentioned in Article 8(2) of the Taxonomy are only for non-financial companies: these are green ratios for turnover as well as investment (CapEx) and operating (OpEx) costs. The Green Asset Ratio (GAR), an indicator that can also be used for financial companies, is addressed in a delegated act complementing the Taxonomy (Delegated Act – DA, *EU 2021c*).

The regulatory environment is further complicated by the need to distinguish between the concepts of eligibility and alignment in the context of compliance with the Taxonomy. Eligible simply means that an activity is relevant to the six environmental objectives listed in the Taxonomy (see DA 1(5)), while the aligned status requires more criteria to be met than this. An activity is aligned if:

- It is in line with the technical screening criteria (TSC) set out in the DA, i.e. the activity contributes positively and substantially to the achievement of the environmental objective(s) concerned. Currently, accepted TSCs exist for two of the six environmental targets – climate change mitigation and climate change adaptation.
- It does not significantly hinder the achievement of other environmental objectives ("do not significant harm", e.g. recyclability), including the four other environmental objectives, i.e. the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and control, and the protection and restoration of biodiversity and ecosystems.
- Basic human and employee rights ("minimum [social] safeguards") are guaranteed.

Regarding the missing TSCs, an expert group[6] mandated by the Commission published its report in March 2022 (*PSF 2022a, 2022b*), but this material currently has no legal consequences.

For the financial year starting from 1 January 2022, the reporting obligation came into force for all companies concerned, but temporarily only at the level of eligibility. For non-financial companies, the reporting obligation at the alignment level will be effective from 2023, while financial companies have been given an additional year's grace, starting in 2024.

It is important to point out that, according to Article 7(1) of the DA, the securities of government, central bank and supranational issuers should not be included in the calculation of the KPI (neither in the numerator nor in the denominator) for the time being, due to the lack of a methodology, but financial corporations may voluntarily disclose their figures including sovereigns. This is scheduled to change from 30 June 2024, when the DA methodology will be updated.

The coming into force of the Taxonomy in 2022 was preceded by the entry into force (10 March 2021) of the Sustainable Financial Disclosure Regulation (SFDR) (*EU 2019a*). The aim of this regulation is to increase transparency, thus channelling financial resources towards activities that serve sustainable development. The obligated subjects are large financial market participants with more than 500 employees, i.e. investment funds, pension funds, asset managers, insurance companies, banks, venture capital funds, financial advisors and portfolio managers. Smaller companies, although not required to report, are obliged to explain the reason for non-compliance ("comply or explain principle"). The regulation makes transparent (i) the extent to which actors are exposed to and their methods of managing sustainability risks, and (ii) the impact of their activities on sustainability itself (this two-way street is called "double materiality"). Point (ii) is the so-called Principal Adverse Impact (PAI), an indicator of which can be for example, the magnitude of GHG emissions or the human rights situation. By standardising the information to be disclosed, the regulation also combats greenwashing[7].

The SFDR's classification system essentially separates funds into three categories:

- Article 6: Funds without explicit sustainability scope.
- Article 8: Funds that promote environmental or social characteristics that are not specifically sustainability-oriented (light green).
- Article 9: Funds that have sustainable investment as their objective (dark green).

[6] Platform on Sustainable Finance (PSF)
[7] The term refers to the deceptive practice of an organization falsely presenting itself as environmentally sustainable.

Article 6 obliges all funds to disclose their sustainability risks, so this minimum level of disclosure applies to all funds, including non-green/ESG funds. Funds advertised as green/ESG are classified under Article 8 or 9, depending on their characteristics. Funds classified under Article 8 offer financial products that promote environmental and/or social objectives, provided that the underlying companies in which the investments are made follow good governance principles. The funds under Article 9 are more forward-looking in that they are backed by investments with a specific sustainability objective and a concrete, measurable positive impact (e.g. solar investment with measurable GHG emission reductions).[8]

The SFDR, like the other rules, suffers from a number of shortcomings. Based on the experience since its introduction, the clarity and interpretability of the definitions is often compromised, according to the assessment of market players (see *So 2022*). A further problem is the lack of data, which is not expected to change until the first CSRD reports (the Commission proposal is for the reporting period to start from 1 January 2023, with publication from 2024).

Additional recommendations and legislation also help to promote transparency. For example, the ESMA's guidance issued for credit rating agencies: If they include ESG considerations in their ratings, it is of utmost importance to provide a detailed justification (*ESMA 2019a*, *2019b*). Another important piece of legislation is the Low Carbon Benchmark Regulation (*EU 2019b*), which is a sustainability amendment to the Benchmark Regulation (*EU 2016*), created after the LIBOR and EURIBOR manipulation scandals. This provides a single, transparent methodological standard for ESG benchmark administrators.

The continued reflection on the overall EU strategy has not stopped, of course. In summer 2021, the working document of the new strategy for financing the transition to a sustainable economy was completed, based on the 2018 Action Plan (*EU 2021b*).

Overall, the regulatory environment is constantly evolving, both in terms of the above rules and their interconnections. However, the regulation is company-centric for the time being, lacking in many respects the considerations arising from the specific situation of sovereigns as bond issuers. The rating/labelling schemes that are emerging in parallel with the regulatory environment (and in many cases before it) partly fill the gap left by the delay in detailed regulation, but sometimes go beyond the current requirements and impose stricter requirements on sovereigns. The question is the extent to which these specific responses will coincide with the EU's future position. There are signs of this, but the debate is far from over. It is also unclear to what extent the EU market would accept a potentially compromise

[8] Being under Article 9 is not in itself an alignment with Taxonomy.

rating system with light standards or even a rating system that is too strict. In other words, could it be the case that, despite the introduction of the EU Ecolabel for financial products (*EU Ecolabel 2018*), which is still being developed, the established national labels for qualifying funds will continue to be the most authoritative? This is not just a mind game, as the EU GBS, even in the (more stringent)[9] form proposed by the *EP* (*2021*), potentially allows for it:

- The draft regulation lays down rules primarily for, but not limited to, bonds to be issued with the "EuGB" label (Article 1). It would therefore not exclude for the time being the issuance of bonds that are advertised as sustainable, but not labelled as EuGB, but would only make it conditional on the disclosure of certain information (such as allocation structure, degree of compliance with EU Taxonomy, etc., see Article 7c(3)).
- Two years after the entry into force of the draft, and every three years thereafter, the Commission will prepare a comprehensive impact report for the Parliament and the Council proposing whether or not the EU GBS should become mandatory (Article 63a(2)).

Accordingly, for the time being, the EU GBS barrier does not seem to be hard: adoption of the regulation may be delayed and it is not even certain that a decision on making it mandatory will be taken after two years. In the event of such a postponement, for example, green bonds could continue to be issued under a national framework for five (2+3) years after adoption. However, it is important to note that the mandatory or voluntary nature of the standard is far from decided.

4. Member State qualification of green/ESG portfolios

In recent years, the need for a standard rather than an untransparent system of self-certification has become more pronounced. Novethic's (*2019, 2020a, 2020b*) market overviews show that by the end of the decade, there were nine fund labels on the market in Europe.

Two types of labels can be distinguished: ESG and green focus. The former guarantees that the financial products are backed by an integrated ESG strategy, while the latter is available for thematic green funds. The origins and underlying organisational background of the labels vary widely (*Table 1*).

[9] While the European Commission's initial proposal (*EC 2021*) is for a voluntary framework, the European Parliament, in line with the European Central Bank's recommendation (*ECB 2021*), advocates making it mandatory.

Table 1
European green and ESG fund labels

Name	Created in	Type	Country	Characteristics
Umweltzeichen	2004	ESG	AT	Under the direction of the Ministry of Environment
LuxFLAG Environment	2011	green	LU	Set up by Luxembourg financial institutions. Cross-border certification.
LuxFLAG ESG	2014	ESG	LU	See above.
LuxFLAG Climate Finance	2016	green	LU	See above.
SRI Label	2015	ESG	FR	An independent committee with the support of the Ministry of Finance.
Greenfin Label	2016	green	FR	Independent committee chaired by the Ministry of Ecology.
FNG-Siegel	2015	ESG	DE, AT, SUI	Expert committee overseen by the German-speaking region's sustainable investment forum (Forum Nachhaltige Geldanlagen, FNG).
Nordic Swan Ecolabel	2017	ESG/green	DK, SE, NO, FI, IS	Committee set up by the governments of the Nordic countries. The Nordic Ecolabel has been in existence since 1989 in 60 retail product categories, with the financial products category launched in 2017.
Towards Sustainability	2019	ESG	BE	Launched by the Belgian financial sector association (Febelfin); this was the original name of the label. The classification is issued by a non-profit organisation (Central Labelling Agency, CLA). Aims to become a market standard, at least within Belgium.

Source: Novethic (2019), FNG-Siegel (2020), Greenfin Label (2019), Nordic Swan Ecolabel (2022), SRI Label (2020), Towards Sustainability (2021)

Four out of six ESG-focused labels exclude certain companies and sovereigns. The starting point is the ten principles of the UN Global Compact, such as human rights, employee rights, environmental protection and anti-corruption (*UN 2000*). Companies may be excluded on the basis of standards for the manufacture or resale of weapons and certain components thereof, tobacco products, or even for genetic engineering. For sovereigns, disqualifying factors may include limited human freedoms, high levels of corruption, death penalty, nuclear energy, international sanctions, lack of ratification of the Paris Agreement (*UN 2015*) and Rio Conventions (*UN 1992*). Several labelling agencies rely on indicators from non-governmental organisations (NGOs), such as the country rating of the Freedom House[10] or the

[10] https://freedomhouse.org/explore-the-map?type=fiw&year=2022

Transparency International[11] Corruption Perceptions Index (CPI).[12] In the cases of the *FNG-Siegel* (*2020*) and *Towards Sustainability* (*2021*), the "not free" country rating and a corruption index lower than 40 (the lower the worse) are clear disqualifiers, but the latter criterion is also explicitly mentioned for example in the *Nordic Swan Ecolabel* (*2022*). This orientation in ESG ratings is not just a European phenomenon. In the *Morgan Stanley* (*2020*) framework, the criteria "Voice & Accountability", "Rule of Law", or "Corruption" appear in the Governance dimension.

In terms of hydrocarbon exposure, not only the thematic green labels, but also the majority of ESG labels set strict criteria, typically a threshold of 5 per cent based on revenue, not only for extraction but also for energy production. But even more striking is the fact that nuclear energy (and in many cases elements of the associated value chain) is more rejected than fossil fuels and even coal. Some labels have no limit, or even have a limit of 25–30 per cent for fossil fuels and coal, compared to 5 per cent for nuclear.[13]

The minimum requirement for green activities in green label funds expressed as a percentage of turnover varies from 10 to 37.5 per cent (*Novethic 2019*). These figures are usually the result of a combination of two thresholds: on the one hand, there is a minimum requirement in the percentage of revenue for companies to qualify as green, and on the other hand, there is an expectation for the total portfolio, i.e. what percentage of companies should be green. It is expected that the financial EU Ecolabel will follow a similar two-step system.

There are also significant differences between labelling agencies in the exclusion or acceptance of certain green bonds. For some, a gas company's green bond is a green investment, while for others it is not. For some, it is not a problem if the sovereign invests in nuclear energy (France), while for others it is a reason for disqualification if it involves an expansionary development (Austria). The French Greenfin, for example, is partly based on the CBS (*Greenfin Label 2019*), which is why it can be receptive to nuclear energy (when it comes to sovereigns, but not in the case of companies). Of course, the causality may be the other way round: the national label was based on this standard in the first place because it is not dismissive of nuclear energy.

[11] https://www.transparency.org/en/cpi/2021

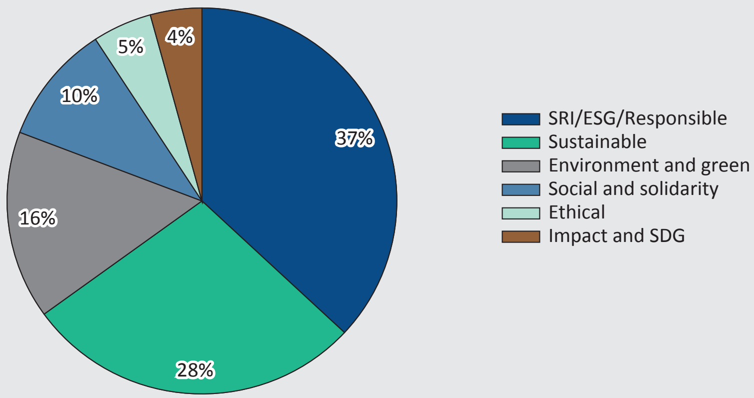
[12] The World Bank also prepares a set of indicators on the same theme (see Worldwide Governance Indicators, http://info.worldbank.org/governance/wgi). It is worth noting, however, that while on some issues the World Bank and NGO indicators arrive at qualitatively the same assessment of the situation, on others they present a markedly different picture.

[13] The European Commission's and the European Parliament's recently more liberal standpoint – which is diametrically opposed to their earlier position – on nuclear energy and fossil gas (see *EU 2021d* versus *EU 2022*) is just another fault line in the relationship between some market players (plus some Member States) and the EU institutions.

4.1. Conceptual proliferation

The lack of a common language has inevitably led to babelism in terms of names. This is illustrated by *Novethic*'s (*2020a*) collection at the end of 2019 including 806 labelled European fund names (*Figure 1*). The most frequently used key words were "socially responsible investment" (SRI), "ESG" and "responsible" (225). However, "sustainable" in different languages was on the rise (171). Also significant were "environment and green" (96) and "social and solidarity" (61). There were also the terms "ethical" (30) and "impact and sustainable development goal" (SDG) (26). A fund could fall into several categories (68). It is interesting to note, however, that the remainder of the labelled funds, more than a quarter of them, did not even mention sustainability in their marketing materials.

Figure 1
Distribution of names of labelled European funds at the end of 2019



Note: Some funds were associated with more than one name, i.e. there was overlap between categories.
Source: Based on Novethic (2020a)

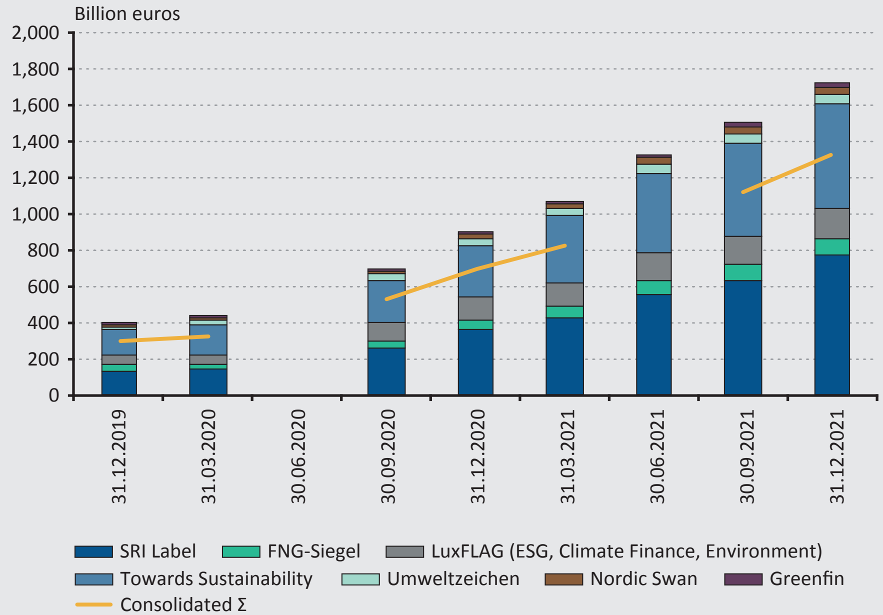
4.2. Competition between labelling agencies and NGO aspects

In 2019, a big race started, mainly between Belgian and French labellers as market leaders (*Figure 2*). At the same time, convergence towards EU regulation, ultimately towards the financial EU Ecolabel, started. However, this has by no means brought about a convergence between the systems to remove all significant differences. There continue to be striking differences, mainly in the exclusion of certain industries, but also possibly in transparency, documentation and reporting requirements.

In my view, what is actually missing for full harmonisation is an underlying interest. It may be that, although they all have a declared desire to expand abroad, maintaining a dominant position in their home country/region is the minimum objective. It follows that the specific interest of a country/region cannot be ignored. For example, a French rating agency will not exclude a sovereign developing the nuclear sector, while an Austrian one will. This creates the disadvantage that if a fund were to operate in more than one country/region, it would be worthwhile from a marketing point of view to have the label of more than one country/region, which in turn could imply compliance with a significantly different set of criteria. Of course, harmonisation is not helped by the fact that the pan-European objective itself is not yet settled, as the debate on the treatment of gas and nuclear energy, for example, is far from being decided.

It is worth pointing out that at the end of 2021 nearly half of the rated assets had a label that excluded sovereign bonds of countries with a corruption index below 40 (see FNG-Siegel, Towards Sustainability, Nordic Swan in *Figure 2*).

Figure 2
Assets managed in labelled funds



Note: A fund can have more than one label, so the consolidated value is lower. Mid-2020 data is not available.

Source: Based on Novethic (2020c, 2021a, 2021b, 2021c, 2021d, 2022)

4.3. Public awareness of labels

To what degree are retail investors interested in the label? In 2021, the French financial market authority launched a survey on responsible investment and awareness of labels among the general public. The results showed that 71 per cent of French people had never even heard of either of their two home labels (*AMF 2021*). Only 6–7 per cent knew in depth what the labels in question meant.

Given the fact that the French ESG label is also the European market leader and is hardly known at home, it would not seem realistic to assume, on the basis of pure competitive market logic, that retail funds would voluntarily exclude certain instruments from their portfolios. This would be of no benefit to them, as it would require a massive transformation of preferences. Such a shift can best be enforced by the regulator, for example through the financial EU Ecolabel, or indirectly through the rules for institutional investors.

4.4. The Climate Bond Certificate (CBC) as a scientific label

The CBI not only provides standards, taxonomy and information, but also acts as a labelling agency for green bonds. The CBC certifies that the asset/project meets the criteria set out in the CBS (currently a standard is in place that was prepared at the end of 2019).[14] As it is a green label, the standard does not include any points beyond climate/environmental issues (e.g. corruption), so in this respect it is analogous to the European green labels for investment funds discussed above. It should be stressed, however, that nuclear energy is listed as green in the CBI taxonomy, as its focus is on carbon intensity (only uranium mining, which is an indirect risk, is in the zone requiring more detailed assessment). Another important element is that it also places natural gas in the non-rejection zone, unlike coal, which is only given the green light in the specific case where carbon capture and storage is 100 per cent (so-called clean coal technology).

At the end of 2021, bonds with a value of more than USD 200 billion worldwide had CBI certification. Among these bonds there is also a Hungary-related security, namely the green mortgage bond issue of the Erste Jelzálogbank[15] Zrt. amounting to HUF 10.43 billion on 6 December 2021 (see *CBI Certified Bonds database*[16] and *Erste 2021*). Among European sovereigns, the Netherlands for example already applied for CBI certification for an issue of EUR 10.7 billion in September 2019.

[14] The new version (v4: *CBI 2022c*), published on 6 September 2022 for consultation, would add to the current standard (v3: *CBI 2019*) the necessary aspects for the rating of non-financial corporates, including the issue of SLBs by these corporates.

[15] mortgage bank

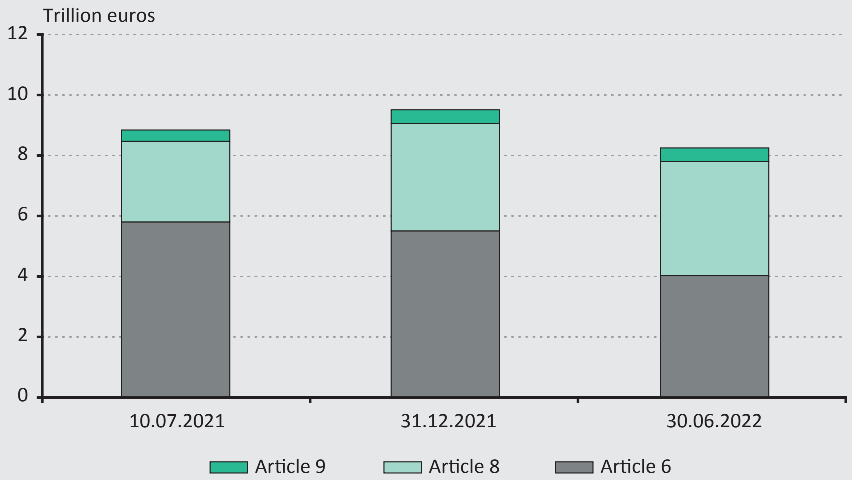
[16] https://www.climatebonds.net/certification/certified-bonds

5. Overview of SFDR Articles 6, 8 and 9

According to *Novethic* (*2022*), at the end of 2021, more than one fifth of the 1,799 funds (EUR 1,330 billion in assets under management) labelled as such were funds under Article 9. Green labels (Greenfin, LuxFLAG Environment, LuxFLAG Climate) are typically associated with funds under Article 9, but the share of such funds was also not negligible in the case of ESG labels (20–40 per cent).

The relevant sample from *Morningstar* (*2021, 2022a, 2022b*), a US financial services provider, covers 82–97 per cent of all funds traded in the EU, including unlabelled and non-green (Article 6) funds as well. Since the launch of the SFDR in March 2021, the data shows a significant uptake of funds under Articles 8 and 9. In fact, their asset ratio already exceeded 50 per cent in 2022, albeit in a general capital market contraction (*Figure 3*). It is also clear, however, that the funds under Article 8 are by far the most dominant.

Figure 3
Assets of funds under SFDR Articles 6, 8 and 9 (sample)



Note: The samples cover 82, 91 and 97 per cent of all European funds, respectively, in chronological order, and exclude money market funds, funds of funds and feeder funds (channeling funds into an umbrella fund).

Source: Calculation based on Morningstar (2021, 2022a, 2022b)

At this point, it is worth recalling that sovereign ESG bonds with a corruption index below 40, according to the status at the end of 2021, would be excluded from about one half of the labelled funds (Towards Sustainability, FNG-Siegel, Nordic Swan). This roughly EUR 700 billion of assets (unconsolidated) certainly seems significant compared to the EUR 1.33 trillion of total assets labelled, but it is dwarfed by the total number of Article 8 and 9 (EUR 3.60+0.45=EUR 4.05 trillion) or even that of Article 6 (EUR 5.5 trillion) (the latter comparison is also relevant, as green bonds are far from being bought only by green investors). Thus, the funds that would certainly exclude sovereigns in the case of an unfavourable corruption figure represent only a fraction of the total European capital market of EUR 9.55 trillion, and since these stock data for Articles 6, 8 and 9 do not cover the entire population, the proportion is somewhat even smaller.

5.1. Greenwashing

The severe disproportion between Article 9 and Article 8 funds (1:8 ratio at the end of 2021 compared to 1:4 for labelled funds) shown in *Figure 3* indicates, in my view, the significant presence of greenwashing.[17] The phenomenon is probably closely related to the as yet unresolved dilemma of whether a company and its thematic project can be separated, i.e. whether a company's or government's bond is green/sustainable because of the name given to the product or because of the functioning and strategy of the whole underlying organisation. As long as a gas utility issuing a green/ESG bond is given the same return advantage (greenium) by the market as the solar park as an issuer, the triumph of these issues and the funds that build on them – whether new or existing but re-branded – can be predicted. Once the waves of regulatory uncertainty and green communication fervour subside, the market will be better able to price the underlying transition risks of a particular firm or sovereign. If a company's revenues come 99 per cent from brownfield, it is difficult to see why its ordinary and green bonds should be treated differently in terms of debt risk, i.e. why it should be entitled to greenium.

The recent semantic innovations ("green", "sustainable", "responsible", etc.) are presumably also partly due to this pricing defect, a kind of adaptive thinking. Practically, as soon as the arbitrage opportunity behind a fancy name starts to run out, it is worth coming up with a new, catchy product, for which the market is unlikely to be able to make an accurate value judgement at the outset, and which is likely to be overvalued at this stage due to strong green/ESG communication and partly regulatory pressure.

6. Greenium

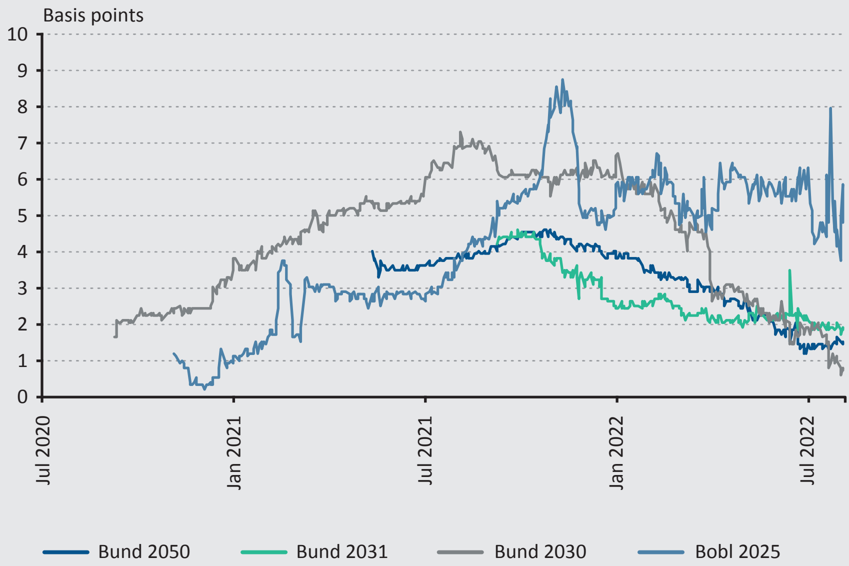
In a study by the CBI, the general experience of the sampled sovereigns issuing GSS bonds is that there is higher demand for their GSS bonds compared to conventional bonds (*CBI 2021a*). The Hungarian oversubscription rate was among the highest, but there were one or two odd cases, such as in Lithuania, where the opposite was observed.

[17] The only detailed and widely accepted system of guidelines and regulations that could provide some protection against greenwashing is specific to dedicated green (environmental) investments so far.

The excess demand can provide a yield advantage for the issuer. Looking at the data of 23 sovereign issues between 2017 and 2020, 9 showed greenium and 10 yields fell on the yield curve (*CBI 2021a*). Looking at non-sovereign issuance data for the second half of 2021, half of the 73 green bonds were greenium-affected or on the yield curve (*CBI 2022a*). As for EUR issuances, greens were oversubscribed by an average of 3.4 times, while the equivalent vanilla was oversubscribed by only 2.7 times (19.3 and 17 basis points spread compression, respectively). The same figures for USD issues showed 3 times and 2.7 times oversubscription (25.9 and 21.7 basis points).[18]

In Europe, the greenium can be examined particularly in the case of German government bonds due to the practice of twin issuance ("green twins", *Deutsche Finanzagentur 2022*). This means that the green paper issued has a normal counterpart with the same maturity and coupon. There are currently four such pairs, of which three are bonds (Bund with maturities in 2030, 2031 and 2050) and one is a treasury bill (Bobl 2025).

Figure 4
Yield advantage of green German government bonds at the individual maturities



Source: Calculation based on Bloomberg data (https://www.bloomberg.com)

[18] According to *Kotró* and *Márkus* (*2020*), investors in the US reward companies with a better ESG rating, i.e. not only financially-oriented companies, with a risk premium of up to 35 basis points lower on average. It is true, however, that they saw the exact opposite in Japan and a mixed picture in Europe.

Figure 4 clearly shows that there is a green premium for German papers, although all bonds had negative returns until the end of 2019, meaning that holding a green bond was more draining on the owner's wealth than holding a conventional one. It is worth noting that the investors' enthusiasm for long green paper, which was growing before, has reversed and the momentum is starting to fade.[19]

It is not at all common for sovereign GSS bonds to be bought by dedicated green investors alone; their percentage on average was only 44 per cent, with a wide dispersion (*CBI 2021a*). The 57-item non-sovereign sample for the second half of 2021 showed a higher average of 66 per cent (*CBI 2022a*).

As long as this kind of over-demand is felt, it does not seem reasonable to narrow the scope of green bond issuers beyond environmental criteria (except for excluding greenwashing). However, there is a risk that the line between the green and sustainability categories is becoming increasingly blurred (see the Nordic Swan's hybrid green/ESG label). Since the latter are not based solely on a set of scientific criteria and supply-demand rules, but on a different set of criteria that emphasises certain qualitative elements, this approach could even undermine the factual basis for the valuation of green bonds.

7. Global outlook

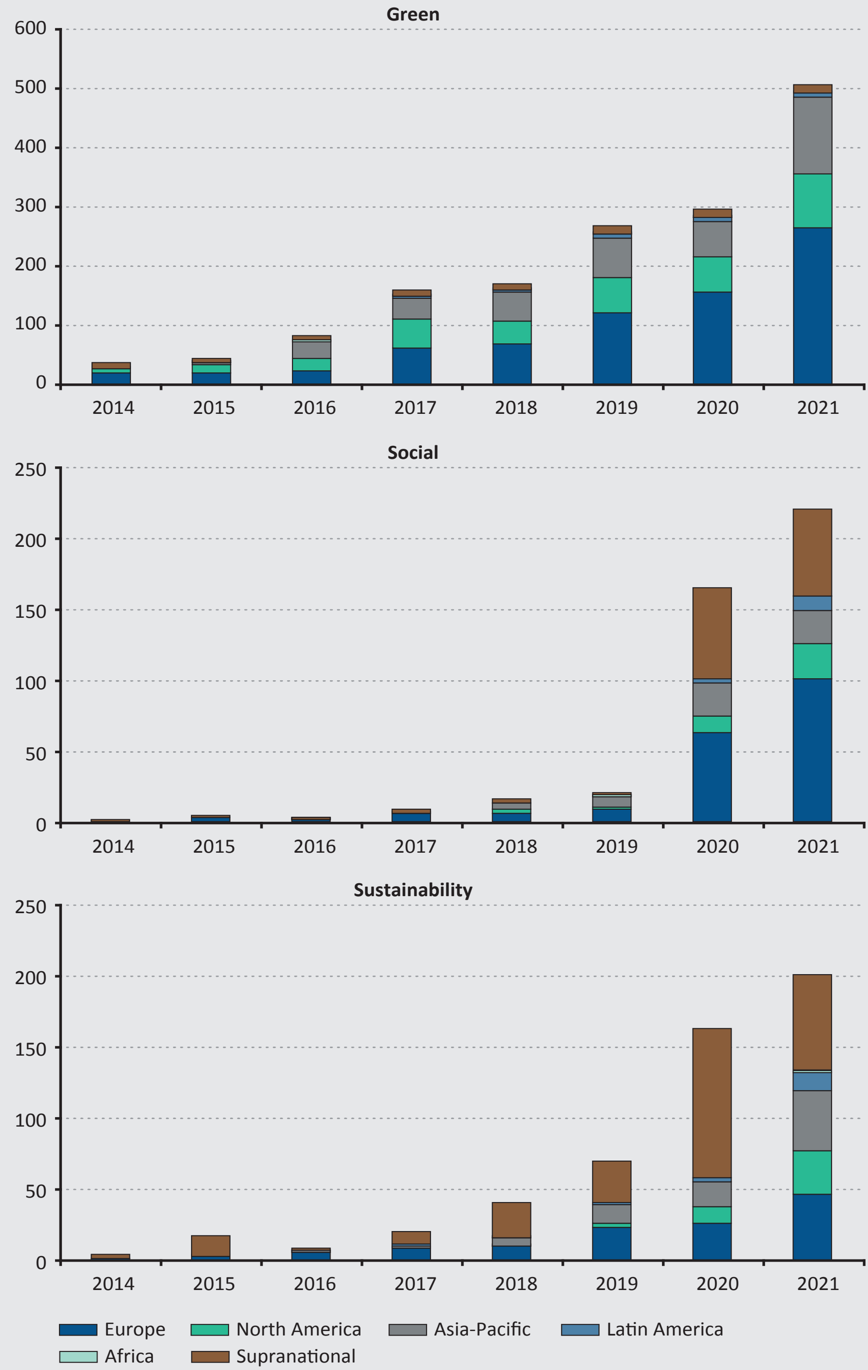
The CBI, as a non-profit international organisation with the declared aim of promoting a climate-friendly global economy, is the only organisation in the world to operate a free database[20] of annual issuance of green, social and sustainability products, at the global level and in different sections. The database includes debt products that the borrower itself describes as green, social or sustainability products (for more on the methodology, see *CBI 2020, 2022b*). According to the information provided by the data provider, the data are sufficiently representative, i.e. the distributions that can be drawn from them are adequate.

Figures 5–9 clearly show that green bond issuance continues to dominate, with more or less steady growth, while the combined issuance amounts of social and sustainability bonds has jumped to roughly similar levels, from virtually nothing, in two years.

[19] *Németh-Durkó* and *Hegedűs* (*2021*) also conclude in their analysis of green bond funds that greenium exists but is declining. The difference, they argue, could disappear as the regulatory environment for the funds settles down.

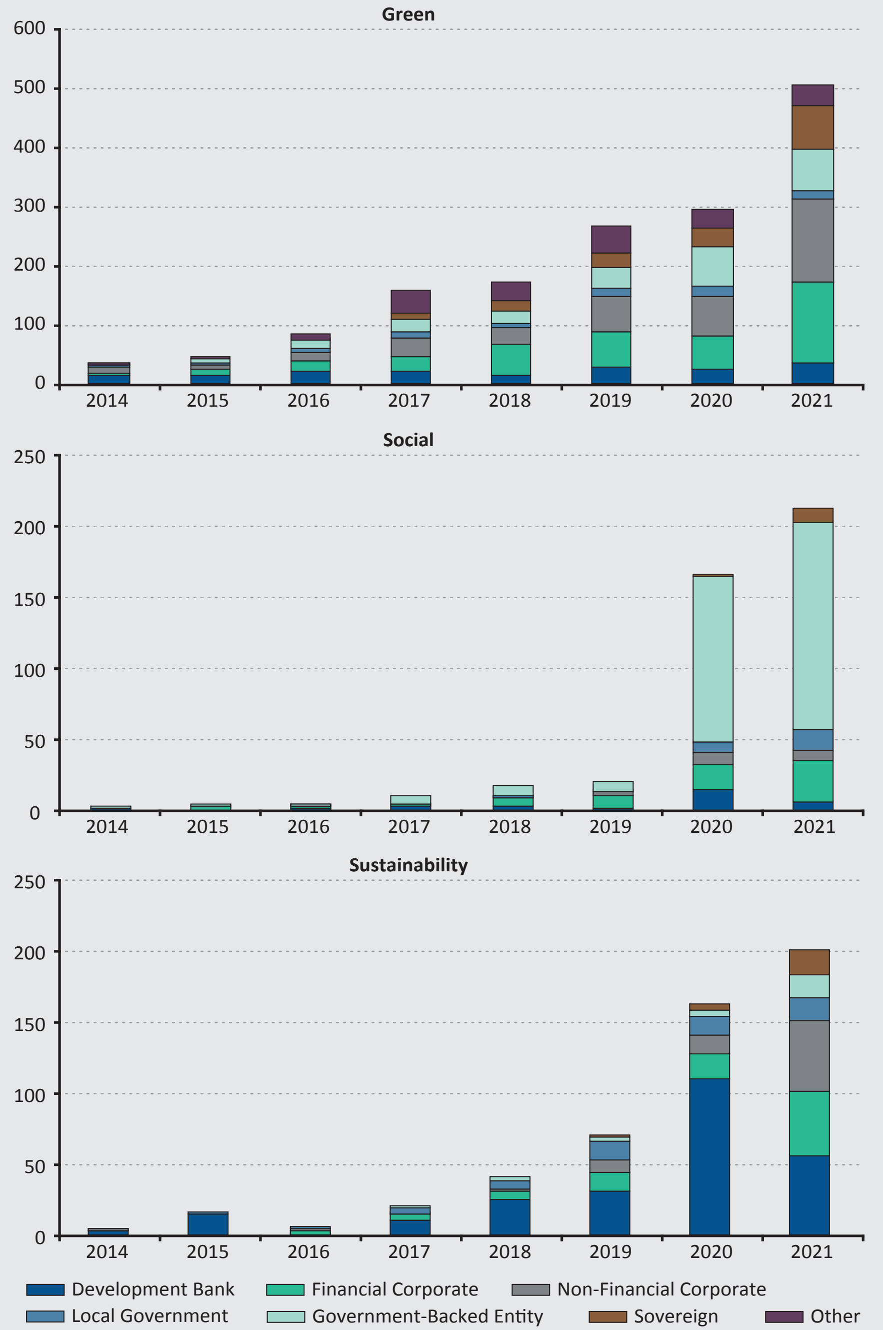
[20] Interactive Data Platform: https://www.climatebonds.net/market/data

Figure 5
Breakdown of GSS issuance by continent (USD billion)



Source: Based on CBI data

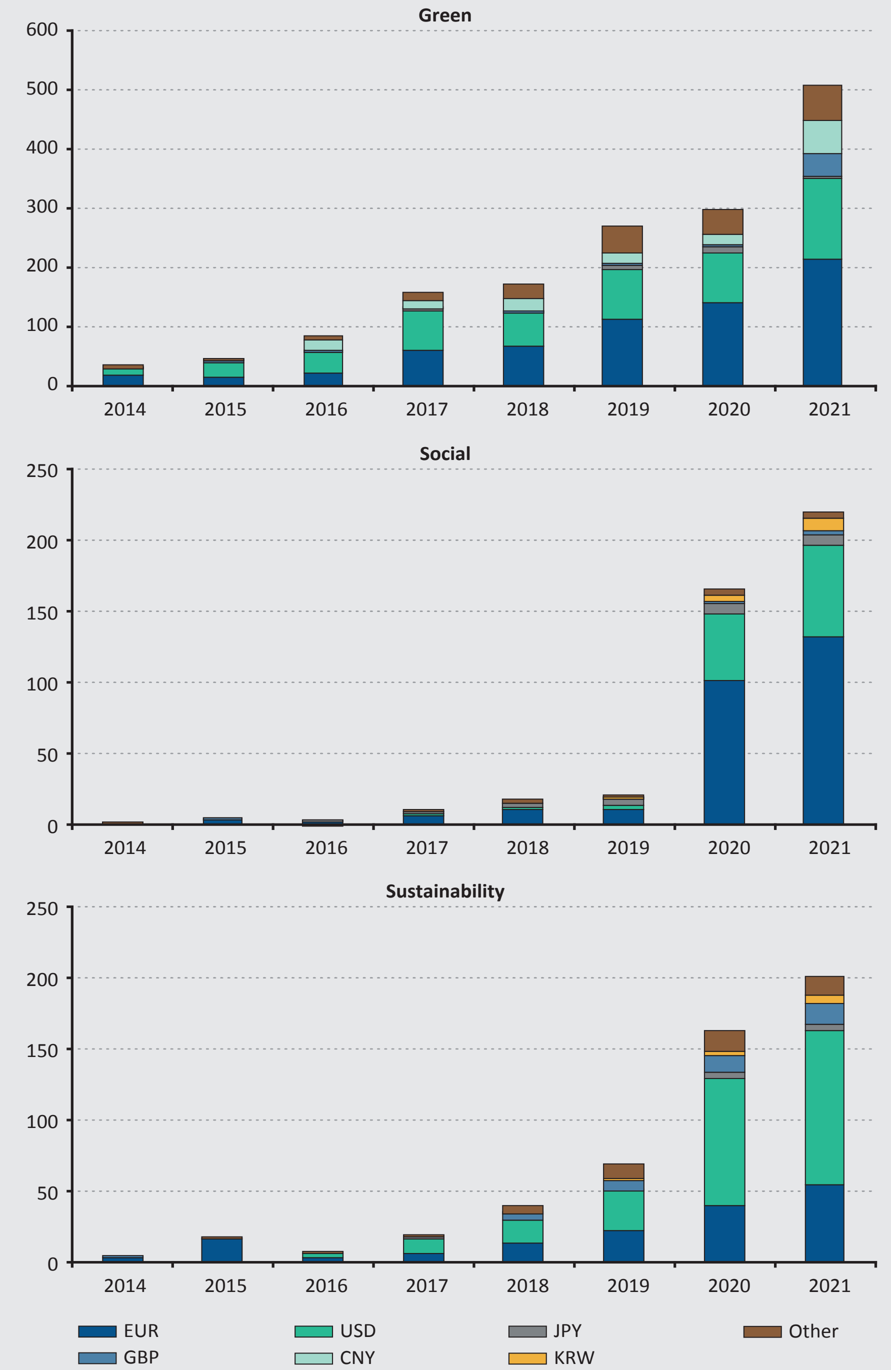
Figure 6
Breakdown of GSS issuance by issuer (USD billion)



Note: For this section, the sustainability bond data for 2021 is incomplete, so I have increased each element proportionally up to the total sum consistent with the other sections.

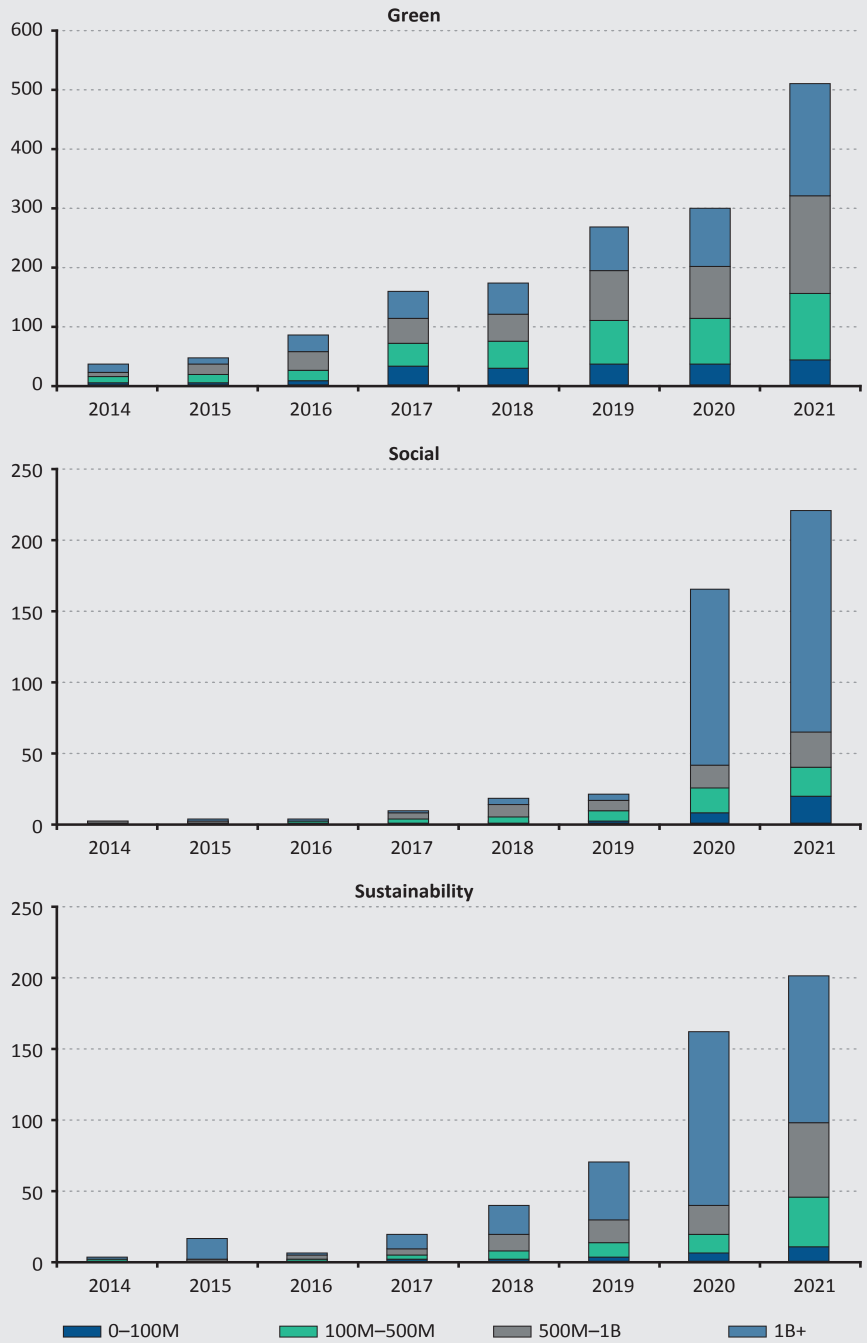
Source: Calculation based on CBI data

Figure 7
Breakdown of GSS issuance by currency (USD billion)



Source: Based on CBI data

Figure 8
Breakdown of GSS issuance by issue amount (billion USD)



Source: Based on CBI data

By location, Europe leads the way in green and social bonds (*Figure 5*). In the case of greens, the Asia–Pacific region is also active, while for social bonds, supranational organisations have played an active role in enhancing the dynamics of a market that effectively did not exist before 2020. Sustainability bonds were initially clearly dominated by supranational organisations, but by 2021, the picture was much more heterogeneous.

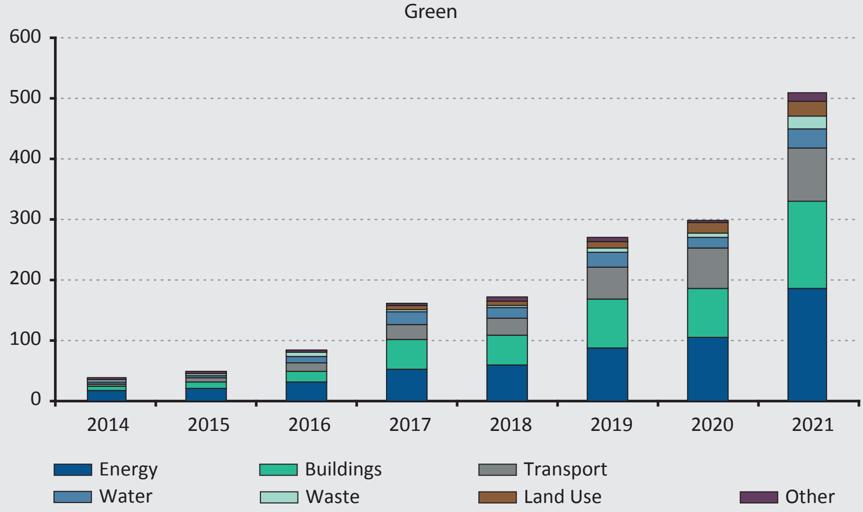
By type of issuer, we see the most pronounced sovereign presence in greens (*Figure 6*). Although government-backed entities accounted for the largest share of issuers of social bonds, it is worth noting that sovereign issuance – albeit starting from a low base – showed a strong increase in 2021. The sustainability category used to be dominated by development banks, but by 2021 the field became more diverse.

The currency of the majority of issues is basically euro and US dollar (*Figure 7*). In the green and social case, the euro is more dominant, while in the sustainability case, the dollar dominates. In the case of green, the yuan and, more recently, the British pound are also prominent, but together there is also significant issuance in Swedish krona and Canadian, Australian and Singapore dollars. In the social and sustainability cases, the noticeable increase in Korean won is an interesting development, but in the latter category it is also worth noting the significant share of British pounds (also in supranational issuances, see CBI database).

There are also significant differences between the types of issuance by volume (*Figure 8*). Although the importance of issues over USD 1 billion has increased for greens, the proportion of smaller transactions is still significant. However, regarding social and sustainability bonds, large issues are clearly dominating.

In terms of objectives, green bonds are mostly related to energy, buildings and transport (*Figure 9*). The large increase in 2021 is also mainly related to the first two allocation targets.

Figure 9
Breakdown of green issuance by allocation target (USD billion)



Source: Based on CBI data

8. Summary

Creating a common language is a necessary precondition for the global green transition. In the area of bonds, the voluntary standards of two organisations, ICMA and CBI, have been adopted worldwide: the GBP and CBS, respectively. The market is dominated by the GBP which has been in existence since 2014 and is currently the global standard. The EU GBS has been in development since 2018. According to the plans, this would require compliance with the EU Taxonomy, transparency, external evaluation and even supervision of external evaluators by ESMA. In contrast to the green standards, the range of social and sustainability guidelines is still much more limited. ICMA is currently leading the way (in this area as well), having already issued recommendations on social, sustainability and sustainability-related issues.

At the EU level, the recent entry into force of the SFDR has brought some progress in the area of fund self-certification. Its classification system essentially divides the funds into three categories. Article 6 obliges all funds to disclose their sustainability risks, even if they do not advertise themselves as green/ESG funds. Funds classified under Article 8 offer financial products that promote environmental and/or social objectives, provided that the underlying companies in which the investments are made follow good governance principles. The funds under Article 9 are more forward-looking in that they are backed by specific sustainability investments with concrete, measurable positive impacts. The SFDR, like the other rules, still suffers from several shortcomings (e.g. ambiguity of definitions, lack of data).

To go beyond the untransparent system of self-certifications, financial organisations lobbies or even governments have taken the initiative, thanks to the delay in EU regulation. By the end of the last decade, there were nine fund labels on the market in Europe. Two types of labels can be distinguished: ESG and green focus. The former guarantees that the financial products are backed by an integrated ESG strategy, while the latter is available for thematic green funds.

Labels with an ESG focus tend to exclude certain companies and sovereigns, for example because of their support for arms production or nuclear energy. However, despite their convergence with the EU regulatory environment, the labelling systems reflect and are optimised for national priorities and therefore still differ significantly.

It is important to point out that many of the ESG-labellers rely on NGO indicators, such as Freedom House's country rating or Transparency International's corruption index. For several of these labels, the "not free" country rating and/or a corruption index of less than 40 (the lower the worse) are disqualifying factors. An additional risk for the sovereigns concerned could be the possible blurring of the boundaries between green and sustainability categories, i.e. the addition of qualitative criteria to the purely scientific ones currently existing in the field of green. A further risk could be if these criteria are incorporated into general investor expectations and scorecards, as this could lead to a lower rating of normal (non-ESG) bonds. The analysis of risks can therefore by no means be limited to legislation alone, as investor preferences can be more stringent than this.

The general experience of sovereigns issuing green, social or sustainability bonds is that there is a higher demand for their GSS bonds compared to conventional ones. A demand surplus can give the issuer a yield advantage, i.e. a greenium. Marketing considerations and the uncertainty of the regulatory environment, including pricing difficulties, may also be behind the over-demand.

From a global perspective, green bond issuance continues to dominate, while the combined issuance of social and sustainability bonds has jumped to roughly similar levels over two years. By type of issuer, greens continue to have the strongest sovereign presence. The majority of issues are denominated in euros and US dollars. An interesting element in the social and sustainability cases is the visible increase in Korean won. There are also significant differences in terms of the volume of issues, with a still significant share of smaller issues for green bonds, while social and sustainability bonds are clearly dominated by large issues.

In summary, there are elements of risk associated with sovereign ESG issuance that are not very well known by the public, even though they may be potentially salient. Within the European Union itself, there are significant economic conflicts of interest, which can be seen by looking at the conditions of labels attached to each country. It remains to be seen how this will be reflected in the still-forming financial EU Ecolabel and EU GBS. Given the diversity of potential exposures, no sovereign can forego the constant monitoring of domestic, European and even global market developments and preferences. It follows organically from the latter that it is not enough to know the market for standards, taxonomies and certifiers only at the EU level.

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