

# Sustainaweekly

## Everything you need to know about carbon pricing

- ▶ **Economics Theme:** We answer five key questions related to the theme “Carbon prices”: Why have prices surged this year? Is a national carbon tax for industry useful? Can carbon taxes play an effective role in other sectors? What is the impact of high carbon prices on the transition? What could be the trend in carbon prices in the coming years?
- ▶ **Strategy Theme:** Our analysis shows that Sustainalytics ESG risk rating scores have a statistically significant effect on corporate bond pricing, i.e. better ESG credentials result in lower credit spreads.
- ▶ **ESG Bonds:** Vestas announced a new SLB Framework, followed by the Chilean government, who is set to become the first sovereign to issue a SLB. Earlier last week, the government of Singapore also announced it will issue USD 26bn of green bonds until 2030.
- ▶ **Policy and Regulation:** ECON has this week received the opinion of ENVI on the proposal for EU Green Bond Standards. Where do we currently stand in the legislature process? And what are the remaining discussion points? We explore these questions in this section.
- ▶ **Company and Sector news:** KfW, the German development bank, unexpectedly announced an immediate halt in its subsidies towards energy-efficient houses and refurbishment. We examine what the impact could be for Real Estate companies in the country.
- ▶ **ESG in figures:** In a regular section of our weekly, we present a chart book on some of the key indicators for ESG financing and the energy transition.

In this third edition of the Sustainaweekly, we start by discussing carbon prices and carbon taxes, as carbon prices have soared recently. We answer several questions around this theme. We then follow up with investigating whether there is a relationship between ESG risk ratings and corporate bond prices. And, indeed, our results show that there is! In this publication, we also analyse some of the newly announced SLB Frameworks by corporates, but also from governments. And where do we stand towards the final version of the EU GBS? We have built an overview of the approval process and how the EU plans to have a final version by the end of the summer. Finally, we also explore the impact of a halt in KfW subsidies to German real estate companies. Enjoy the read and, as always, let us know if you have any feedback!

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## Carbon prices: five key questions

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- ▶ **Over the last year there have been big developments in carbon prices**
- ▶ **Against this background we attempt to answer five key questions**
- ▶ **Why have carbon prices surged this year?**
- ▶ **Is a national carbon tax for industry useful?**
- ▶ **Can carbon taxes play an effective role in other sectors?**
- ▶ **What is the impact of high carbon prices on the transition?**
- ▶ **What could be the trend in carbon prices in the coming years?**

With the new climate targets set, and the European Commission's proposals on how to implement these targets now under review, the EU as a whole is targeting a 55% carbon reduction in 2030. The European Commission has been using the European Union Emissions Trading System (EU ETS) as a tool to curb carbon emissions and allow the market to discover the 'right' carbon price within certain sectors since 2005. In its 'Fit for 55' plan, the Commission proposes a major revision of the EU ETS in order to meet the new targets. The ETS is to be made stricter and will be expanded, or mimicked more broadly across the economy. Meanwhile, a carbon tax was introduced by the Dutch government ahead of the Fit for 55 plans presented by the European Commission, with the aim of ensuring a floor for the cost of carbon in the industrial sector. Other countries have also introduced or are considering carbon taxes. Finally, carbon prices have surged this year. Against this background, we attempt to answer five key questions that arise.

### **Why have carbon prices surged this year ?**

Carbon prices have surged because of stricter policy as well as the problems in gas markets. Let's first take a closer look at policy. The European Commission has been using the European Union Emissions Trading System (EU ETS) as the pricing tool for carbon emissions since 2005. With its Fit for 55 plan, the Commission has proposed a major revision of the EU ETS (see also our note [here](#) for more details). Not only will the number of sectors falling under this trading scheme be expanded, but also the number of available emissions rights will be reduced at a faster pace. Currently, the EU ETS limits carbon emissions in the industrial, electricity and aviation sectors (within the EU). This will be expanded to include the European maritime sector. On top of that, a separate ETS will be created for the buildings and road transport sectors. Furthermore, no more emission rights will be available under the EU ETS cap-and-trade system in 2050. As a result, all companies that fall within the EU ETS will by then need to have cut their emissions in such a manner that the overall EU result will be net zero. The current method of lowering the number of available emissions rights every year has proved successful over the past years. Indeed, the sectors in scope have lowered their emissions by 25% since the start of the trading system. Assuming the Fit for 55 proposal is approved in its current form, the cap on the number of available emissions rights will be lowered not by 2.2% each year but by 4.2% during the fourth phase (2021-2030). This will lead to a 61% carbon reduction for these sectors by 2030, independently of what happens to EU ETS prices.

In the first half of 2021, EU ETS prices already rallied significantly as they priced in the Fit for 55 proposal ahead of time. Recently, prices have been pushed to new record highs above EUR 95/tonne, triggered by soaring gas prices and low gas supply. This has led to coal-fired power plants stepping in to compensate, which resulted in demand for emissions rights picking up. The current price level is also well above the EUR 60/tonne what the Dutch authorities had in mind for the level of the Dutch carbon tax in 2024.

## EU ETS prices reaches record after record



Source: Bloomberg

Meanwhile, investment activity is starting to play a bigger role in EU ETS pricing too. The cap-and-trade system was initially meant to offer trading opportunities among companies. Currently, we are seeing increasing numbers of investors and speculators becoming interested in this instrument as a way to generate returns. Market speculation is only allowed for professional parties though. Still, the interest in speculation on market price development has increased every quarter. At the same time, the underlying number of available carbon permits will continue to decline every year, which will only serve to increase the risk of higher price volatility over time. Poland, the Czech Republic and Denmark have already communicated their worries regarding price volatility to the European Commission. They would like to ban market speculation and have requested that EU ETS trading be left to the companies in the sectors concerned. On the other hand, investors can provide liquidity, allowing companies more opportunities to trade. At the time of writing, the European Commission has not changed its policy so far.

### Is a national carbon tax for industry useful?

The idea of a national carbon tax is that it would stimulate a faster transition towards a carbon-neutral economy. Such a tax could indeed speed up the local energy transition but, at the same time, it could frustrate the working of the EU ETS. In the Netherlands, a carbon price was imposed with a starting level of EUR 30/tonne in 2021; this will be raised to EUR 125/tonne in 2030. Companies only have to pay the national tax if the ETS is trading below the price of the tax for that year. So in the current situation, this is not the case, as the national tax serves as a minimum price if the ETS price is trading lower. The aim of the EU ETS is to achieve carbon reduction at the lowest cost. This system allows easy and cheaper measures to be taken first. It therefore creates time for companies to find ways to reduce the more difficult and more expensive tonnes of carbon emissions at a later stage. The most significant results in the past few years have been seen in the utility sector, where replacing coal-fired power plants by wind farms is relatively easy to achieve at a cost. However, it is more difficult for heavy industry to find alternatives to lower carbon emissions, while trying to compete with companies in other countries who do not have to – or are unwilling to – take these kinds of measures (yet). If a national tax is imposed, companies may be forced to speed up their transition at a higher cost, thereby losing competitiveness. But a national tax could also have a distorting effect on the energy transition and broader climate policy: for instance, if a gas-fired power plant in country A was replaced by a less efficient coal-fired power plant in country B. After all, more emissions rights would then become available for industries outside the scope of the national tax, which would therefore delay the transition at the other locations. Essentially it is important to have a level playing field.

### Can carbon taxes play an effective role in other sectors?

We think they can. National authorities could add a form of carbon pricing for all sectors which are out of scope of the EU ETS or of the ETS for buildings and road transport that is now being created. The aim would be to trigger an acceleration of their carbon emissions reduction. These remaining sectors are all part of the Effort Sharing Regulation (ESR). Many of these ESR sectors (such as agriculture and waste management) are either less international in character or cannot be moved to other regions. As a result, national policies will be less affected by trends in other regions and will therefore achieve better results. Nevertheless, also within the ESR, it could be wise for governments and sectors to cooperate with other countries to

align policies. Similar targets over a wider region may stimulate closer cooperation among companies within same sectors. This could speed up technological development and innovation.

### What is the impact of high carbon prices on the transition?

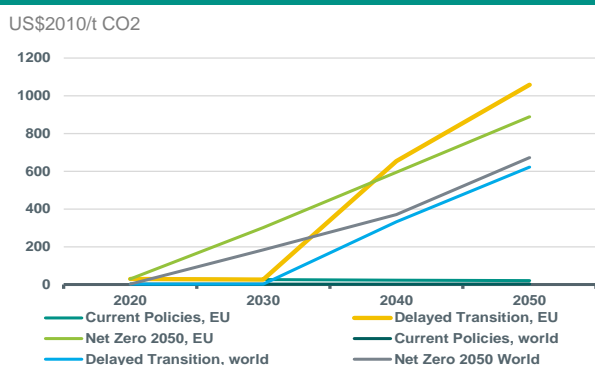
The idea of putting a price on carbon emissions is simple. It should act as an incentive to boost efforts to lower carbon emissions and to accelerate the energy transition. It should make investments in alternatives that are available but not yet economical more attractive, or at least strengthen the economic case to invest. For an example on how the economics of new technologies interact with the level of the carbon price, please see our note [here](#) for the case of hydrogen. Nevertheless, there is a fragile balance between stimulating carbon reduction and frustrating this process. After all, putting a price on carbon emissions makes current processes more expensive. At the same time, investment in capital goods as well as research and development to boost innovation could therefore be helpful. These two aspects are interconnected since companies in competition within a sector may struggle to absorb the initial losses of carbon emissions pricing while also investing in the transition towards a new future. In the meantime, it will be difficult to switch from older – more carbon-intensive – techniques to carbon-neutral solutions if these solutions are not yet available. If demand for the older techniques does not drop and is not replaced by alternatives, these carbon prices have simply made the old production method more expensive.

Meanwhile, the matter of infrastructure should also be considered. It will be a costly process to build a whole new infrastructure for techniques like green hydrogen or heat grids, as well as the expansion of the current electricity grid to meet future demand. To get the right infrastructure in place will take a long time, due not only to the technical burdens, but also to the legislative aspects and permits that must be arranged first. Examples are the construction of offshore wind farms or building/expanding a high-voltage electricity grid. One key issue that arises here is how the authorities use the proceeds of carbon prices. For instance, if the proceeds are used to build green infrastructure or to support private investment and innovation, then carbon prices could encourage the transition by both making carbon-intensive production less attractive as well as encouraging the alternatives.

### What could be the trend in carbon prices in the coming years?

To answer this question, it is useful to think in terms of scenarios given the uncertainties. In transition and climate scenarios, the carbon price is typically used to reflect the strictness of measures to reduce emissions. A high carbon price in a scenario is thus an incentive in a general way: either through actual pricing or through policy measures making emitting carbon more difficult or unattractive. It is not a market price, the result of supply and demand as in a “cap and trade” system such as the EU’s ETS trading system. Part of the carbon price stands for an actual amount that needs to be paid, and part stands for other non-monetary measures restricting carbon emissions. The carbon price can be thought of as a summary of mitigation policies or a shadow price. Shadow prices account for trading schemes and regulatory measures too, from which revenues are not necessarily levied.

#### Carbon prices in NGFS scenarios



Source: NGFS, REMIND-MAGPIE 2.1-4.2

The chart above shows the development of carbon prices in climate scenarios of the Network for Greening of Financial Services (NGFS). As can be seen in the chart, all transition scenarios work with a sharply increasing carbon price. The carbon price is typically higher in net zero scenarios than in less ambitious scenarios, as it acts as incentive to reduce emissions sufficiently. In addition, the carbon price eventually ends up higher in a delayed transition scenario. If the transition is delayed, the same reduction progress needs to take place in a shorter time frame, which explains why carbon prices reach a higher level during the transition period. Furthermore, the carbon price is typically higher for EU/advanced economies than for the (rest of the) world. Differences in carbon prices across regions -given the same transition scenario- typically have to do with differences in opportunities to reduce emissions given the geography, such as the amount of land and resources available for carbon-dioxide removal technologies. Another main reason is differences in sectoral composition, with some sectors being more carbon intensive than others.

### **The impact of carbon pricing – a financial sector perspective**

A version of parts of the text above was published earlier as a part of a broader publication. This report is a reflection of the deliberations of the Working Group on Carbon Pricing set up under the auspices of the Sustainable Finance Platform. The Sustainable Finance Platform is a cooperative venture of De Nederlandsche Bank (chair), the Dutch Banking Association, the Dutch Association of Insurers, the Federation of the Dutch Pension Funds, the Dutch Fund and Asset Management Association, Invest-NL, the Netherlands Authority for the Financial Markets, the Ministry of Finance, the Ministry of Economic Affairs and Climate, and the Sustainable Finance Lab.

The full publication can be downloaded [here](#).

## Issuer ESG scores drive corporate bond pricing

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- ▶ **We try to establish a relationship between an issuer's ESG credentials and how its bonds are priced**
- ▶ **The obvious assumption being that better ESG credentials result in tighter credit spreads**
- ▶ **We regressed bond spreads against the Sustainalytics ESG risks rating scores (and other variables)**
- ▶ **The results show that the Sustainalytics ESG risk rating score has indeed statistical significance**

Investors have for a long time accepted the notion that there is a link between an issuer's credit rating (as set, for example, by S&P, Mood's or Fitch) and how much spread the issuer pays on a bond. Obviously, an issuer's business and financial credentials are key drivers in repayment capacity, hence this relationship. However, with the rise of independent ratings specifically focussing on an issuer's ESG standing, we were curious to find out whether ESG credentials also have an impact on what kind of spread an issuer has to pay.

Nearly a year ago, we released a note where we initiated the use of Sustainalytics ESG data in our research offerings (see [here](#)). In this note, we conducted a multiple variable regression analysis on EUR IG corporate credit spreads. We included the Sustainalytics ESG risk rating score, but also other important drivers of credit spreads as independent variables. This was a single period cross-sectional exercise, with a range of continuous and dummy variables. At the time, the regression results confirmed our assumption about the significance of ESG risks rating scores in the corporate bond space.

We have carried on running the regression and our latest run, based on recent data, continues to show that the statistical significance of ESG risk rating scores remains in place. The model output table (shown on the next page) shows that the ESG risk remains significant at a 95% confidence interval. Furthermore, the ESG risk rating score has a coefficient of 0.88, meaning that with each unit of higher ESG risk rating score spreads should statistically rise by 0.9bp. For clarification, under the Sustainalytics ESG risk rating approach a lower score implies lower ESG risk, or better ESG credentials. The regression also shows that other obvious relationships still stand when assessed through a statistical microscope, such as higher spread when a bond has a higher duration or suffers from lower liquidity (as reflected in the bid-ask spread). The overall model has a high explanatory power, as reflected in a R-square of 0.69.

Hence, a clear relation between a forward looking view on an issuer's ESG credentials could potentially become a source of outperformance for debt investors.

February 2022 Regression Statistics on ICE BofA ML EUR corporate IG index (ticker ENS0)

Independent variables	Coefficient	t-stat	2-Tailed P-value
Intercept	-76.16	-6.21	0.00000
CSPP dummy	-6.82	-5.35	0.00000
Sustainalytics ESG Risk Rating	0.88	8.65	0.00000
Issuer Size	187.56	1.14	0.25357
EM Dummy	50.78	12.41	0.00000
AA1	7.51	0.48	0.63069
AA2	-5.91	-0.45	0.65192
AA3	9.53	0.78	0.43791
A1	16.43	1.35	0.17692
A2	27.58	2.29	0.02222
A3	30.26	2.52	0.01180
BBB1	48.27	4.02	0.00006
BBB2	65.68	5.48	0.00000
BBB3	88.71	7.39	0.00000
Automotive	14.68	4.94	0.00000
Basic Industry	4.81	1.70	0.08968
Capital Goods	13.62	4.74	0.00000
Consumer Goods	11.09	4.28	0.00002
Energy	22.05	7.47	0.00000
Leisure	7.75	0.76	0.44810
Media	19.48	4.56	0.00001
Real Estate	59.29	21.97	0.00000
Retail	10.09	2.74	0.00615
Services	8.87	2.25	0.02480
Technology & Electronics	17.01	4.52	0.00001
Telecommunications	-0.59	-0.21	0.83709
Transportation	19.82	6.36	0.00000
Utility	0.51	0.20	0.83929
Effective Duration	7.19	47.32	0.00000
Bid/Ask spread	2.54	13.20	0.00000

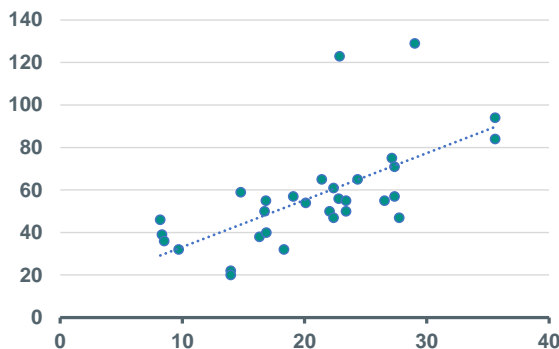
No. of obs.	2408
R squared	0.69
Dependent variable	Asset Swap Spread (bp)

Source: Sustainalytics, ICE BofAML, ABN AMRO Group Economics

To further visualise the relationship, we have plotted the spread of a sample of corporate bonds with roughly the same credit quality and also in a constrained duration bucket between 8 and 9 years against an issuers ESG risk rating score. The trend-lines in the charts shown below clearly illustrate an increasing level of credit spread (Y-axis) as the ESG risk rating deteriorates (X-axis). This further underlines that better ESG credentials result in lower credit spreads, making ESG metrics one of the main drivers of credit spreads. This, in turn, likely reflects **that investors are putting more weigh to a company's ESG risk in their investment decisions.**

Spreads plotted against ESG risk score (A2/A3's)

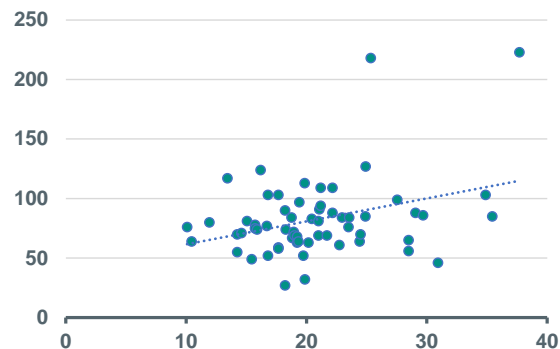
X-axis: ESG risk rating (lower=better), Y-axis: asset swap spread (bp)



Source: Sustainalytics, ICE BofAML, Bloomberg, ABN AMRO Group Economics, exercise was limited to bonds which have duration between 8 and 9 years

Spreads plotted against ESG risk score (BBB1's/BBB2's)

X-axis: ESG risk rating (lower=better), Y-axis: asset swap spread (bp)



Source: Sustainalytics, ICE BofAML, Bloomberg, ABN AMRO Group Economics, exercise was limited to bonds which have duration between 8 and 9 years



## ESG bonds: Chile set to become the first sovereign to issue a SLB

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- ▶ **Vestas Wind System has announced a new Sustainability-Linked Bond Framework, although the company would have enough “green” assets for a potential green bond issuance**
- ▶ **Nevertheless, KPIs set by the company seem to be very ambitious**
- ▶ **Following Vestas, the government of Chile has also published its new Sustainability-Linked Bond Framework**
- ▶ **Chile is therefore set to become the first sovereign to issue an SLB. Could this open the path for others sovereigns to follow?**
- ▶ **Singapore has also announced it will issue USD 26bn in green bonds until 2030**

### Companies in high-impact “green” sectors can also issue SLBs

Wind turbine maker **Vestas Wind System** published last Monday a new Sustainability-Linked Bond (SLB) Framework ([here](#)). The company designs, manufactures, installs, and services wind turbines across the globe, and has so far installed more than 151 GW of wind turbines in 86 countries. DNV has provided the Second Party Opinion (SPO), see [here](#). A two-part SLB issuance of EUR1bn will follow subject to market conditions, which will likely not happen until tensions in Ukraine have eased.

Vestas is a sustainability-leader in its field. It holds a B+ rating from ISS ESG, an AAA score from MSCI, and a low-risk rating of 14.7 from Sustainalytics. In 2020, it also became the very first renewable energy manufacturer to successfully have a validated target by the Science Based Targets initiative (SBTi) in line with the 1.5 degrees scenario. These targets apply to Vestas' scope 1 and 2 emissions (i.e. from direct operations, such as manufacturing/transport), as well as scope 3 emissions (indirect emissions, i.e. from its supply chain).

Vestas already issued a green bond in 2015, which was redeemed at the end of last year. Surprisingly, the company has decided this time to not go down the “use of proceeds” road with a green bond issuance, but to issue a SLB instead. This instrument, which first emerged in 2019 through an issuance of the Italian utilities company Enel, has usually been preferred either by companies which lack enough eligible green assets and/or investments, or by companies which have a strong decarbonization trajectory and would like to link their financing strategy with their ESG goals. The latter is usually the case for companies in the so-called “transition” sectors.

Vestas could have still chosen for a use of proceeds type of issuance. In terms of green assets and/or investments, the company has disclosed in 2021 that 100% of its turnover aligns with the EU Taxonomy, whereas the shares of operating expenses (OPEX) and capital expenditure (CAPEX) is 97% and 91%, respectively, given the presence of administrative costs and special items in these metrics.

Looking at the chosen KPIs in the SLB framework, Vestas has linked the SLB transaction to 3 targets: (1) reduce scope 1 and 2 GHG emissions by 100% by 2030 (vs a 2019 baseline) – this needs to be achieved without the use of carbon offsets; (2) reduce scope 3 GHG emissions per MW by 45% by 2030 (vs a 2019 baseline), and (3) reduce material efficiency ratio per MW by 90% by 2030 (vs 2021 baseline). Regarding the latter, the target is calculated as following: the numerator relates to total tonnes of non-recycled waste (e.g. incinerated or landfilled) from Vestas own manufacturing, which is divided by MW of capacity produced and shipped during the reporting period.

To evaluate the ambitiousness of these KPIs, Vestas has mostly relied on its SBTi certification, which assures that the company is aligned with meeting the targets set under the Paris Agreement. Nevertheless, we have also quickly compared Vestas' ambitions to its closest peer – Siemens Gamesa. While they don't have a SLB in place, Siemens Gamesa has also committed to SBTi with the ambition to reach a 70% reduction in scope 1 and 2 emissions per MW installed by 2025 (vs 2017 baseline). While both targets are hard to compare given that one is a relative metric per MW of installed renewable energy, we have tried to make them more comparable.



Aligned with its decarbonization trajectory, Vestas also has an SBTi-validated target for 2025 which is a 55% reduction in scope 1 and 2 vs a 2019 baseline. Siemens Gamesa's target is set relative to a 2017 baseline, but compared to a 2019 baseline it would result in a 72% emission reduction by 2025 (emissions were relatively higher in 2019 vs 2017). Hence, assuming for 2025 the same installed capacity as the producers achieved in of 2021, targeted scope 1 and 2 per MW for Vestas would stand at -65% compared to 2019, which is slightly lower than the -72% aimed by Siemens Gamesa. On the other hand, it is important to note that Siemens Gamesa's target, by being relative to its newly installed capacity, might also 'hide' the fact that scope 1 and 2 emissions can go up, with the relative emission per MW going down. This could indeed be the case, given a huge ramp-up of investments in wind farms in the foreseeable future. The absolute reduction target as promised by Vestas should then be preferred.

Looking at the financial impact of the SLB when a KPI is not met, Vestas has committed itself towards a coupon step-up. Each KPI has a pre-set weight (KPI 1 is 20%, KPI 2 and 3 are both weighted 40%). The coupon step up in case one or more of these KPIs is missed will be shared once the expected two-part EUR1bn SLB has been launched in the market.

### What about sovereigns – should these issuers also issue SLBs?

The **government of Chile** will become the first sovereign to launch a Sustainability-Linked Bond (SLB), likely already in the near future as it started investor meetings on 23 February. It was also announced that the country will likely issue a 15y euro-denominated SLB bond and a 20y USD deal. Chile was also the first country to issue green bonds in the Americas back in 2019. Chile's new Sustainability-Linked Bond Framework ([here](#)) broadens the scope of eligible instruments next to the existing Sustainable Bond Framework ([here](#)). Indeed, the new SLB framework will lay the ground for the country to also issue SLBs on top of Social, Green and Sustainable Bonds. The newly published Framework complies with the International Capital Markets Association (ICMA) SLB Principles (2020) and includes two KPIs. The first, refers mainly to reductions in the country's greenhouse gases (GHG) emissions and the second to electric generation deriving from non-conventional renewable energy (NCRE) sources. Regarding the first KPI, Chile has committed itself to both, achieve a GHG emissions of 95 MtCO<sub>2</sub>e by 2030 (a -15% reduction vs 2018) and not surpass a maximum cumulative GHG emissions between 2030 and 2030 of 1,100 MtCO<sub>2</sub>e. Under the second KPI, the sovereign has set the target to achieve 50% and 60% electric generation derived from NCRE sources by 2028 and 2032, respectively (in 2018, this was 17%).

Looking at the first KPI, under these GHG emissions targets Chile would be in a scenario that is slightly below a two degree C warming target (as agreed in the Paris Agreement), according to the o Climate Action Tracker (CAT). Nevertheless, the 2030 target places the country as the 7<sup>th</sup> best performing under the Climate Change Performance Index 2022 – an index which evaluates and compares the climate protection performance of 63 countries, which are together responsible for more than 90% of global greenhouse gas (GHG) emissions. Chile ranks below countries such as Denmark, Sweden, Norway, UK, Morocco and India. However, it is good to note that the Index currently assesses that no country yet fulfils the requirements to limit global warming to "well below" two degrees.

With regards to the second KPI, under a scenario of limiting global temperature rises to below 1.5 degrees (as agreed in the Paris Agreement), IEA's stipulates under its Roadmap to Net Zero 2050 that a target of 61% of global electricity sourced from renewable power would need to be achieved by 2030. Broken down by project energy source, this would translate to a 45% coming from non-hydroelectric renewable energy - which can be used as a proxy towards Chile's NCRE. Based on this, Chile's targets would be assessed as above the IEA's Roadmap and therefore contributing to limiting temperature increases below 1.5 degrees.

KPI one and two were evaluated as "Ambitious" and "Highly Ambitious", respectively, by the Second Party Opinion Provider (Sustainalytics, [here](#)).

Chile – as being the first country to potentially issue an SLB – can lay the ground for other countries to follow the same path. The issuance of SLBs by sovereigns implies that there will also be financial costs involved in case a country does not meet its pre-determined (environmental) targets. This can translate into an extra incentive for countries to act more strongly towards achieving decarbonization strategies. While Chile has not yet determined what would be the financial impact of not

meeting its KPIs (those are usually set in the relevant legal documentation for each specific SLB issuance), this can be estimated. Under a rough calculation (which ignores the time-value of money), we assume that the sovereign issues indeed a 15-year EUR SLB (i.e. with maturity in 2037), and that each target carries a 12.5bps coupon-step up (i.e. total of 50bps). This would imply an additional EUR 40mln (over the lifetime of the bond) that would need to be paid to bondholders if all targets are missed. This sounds like a good incentive to meet pre-defined sustainability targets

However, sovereigns are mostly financed via tax money. Hence, under a scenario where Chile would have to “pay up” due to missing its own targets, this could imply that ultimately Chilean taxpayers will be “paying the bill”. This might therefore come also as a disincentive for sovereigns to issue SLBs in the future.

### **Still in the sovereign market: debut for Singapore to enter the green bond market**

**Singapore** is set to join the green bond market and is expected to publish a Green Bond Framework later this year. The launch of the first green bond will be part of a bigger plan. In total, Singapore aims to issue about USD 26bn up to 2030, as announced in the country’s budget released earlier last week. The Singapore Green Bond Framework will be aligned with the Green Bond Principles formulated by ICMA.

While the Green Bond Framework by the Ministry of Finance (MOF) has not been released yet, the National Environment Agency (NEA) – which acts as a statutory board under the Ministry of Sustainability and the Environment of the Government of Singapore - has already earlier last year published its own green bond framework. The proceeds of green bonds issued by NEA are used to finance or refinance public sector sustainable waste management projects (a two-year lookback period is applicable for refinancing projects). This includes, for example, waste processing and recycling, waste-to-energy, sludge incineration (with 70% thermal efficiency), etc. NEA’s Framework excludes fossil fuel-based electric power generation or improvement in the efficiency of fossil fuel-based electric power generation to avoid doubt. MOF has announced that it will convene and connect with NEA in order to assure alignment between both green bond programmes.

## EU GBS: one step closer to a final version

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- ▶ **The EU GBS is set to become the “golden standard” for issuers of green bonds in the EU**
- ▶ **However, the legislative proposal still needs to undergo several approval processes before it can come into force**
- ▶ **Earlier this week, ENVI has sent its opinion on the proposal to ECON, and all amendments received so far will be voted in the next ECON meeting, taking place in March**
- ▶ **After this, ECON’s suggestions will be submitted to both the Parliament and the Council**
- ▶ **A final version agreed between Parliament and the Council is therefore expected by the end of the summer**

The EU Green Bond Standard (EU GBS) is a standard established by the European Union to help scale up and also raise the environmental ambitions of the green bond market. Once adopted, this proposed Regulation will set a gold standard for how companies and public authorities can use green bonds to raise funds on capital markets to finance “green” activities, as set out in the EU Taxonomy.

The EU Commission submitted a proposal on the EU GBS in July 2021, which was open for feedback of the general public until September. The proposal was also subsequently submitted for review by co-legislators, the European Parliament and the Council.

At the Parliament, the Committee on Economic and Monetary Affairs (ECON) has been referred as the responsible committee to review the EU GBS, where MEP Paul Tang (S&D, NL) was appointed as rapporteur. The European Central Bank (ECB) has also been asked by the Parliament to produce an opinion, which was shared in November 2021. The European Parliament's Committee on Budgets (BUDG) and the Environment, Public Health and Food Safety Committee (ENVI) Committees have been asked by ECON to give opinions on the legislative proposal, and ENVI has appointed Bas Eickhout (Greens/EFA, The Netherlands) as rapporteur for an opinion.

The ECON committee held a first exchange of views on 26 October 2021, and on 30 November 2021, after which the rapporteur Paul Tang published his draft report on the Commission proposal. This draft was subsequently presented in an ECON Committee in January this year. The main points raised by Paul Tang were the following:

- The rapporteur proposes an obligation for European Green Bonds (EuGB) issuers to develop transition plans to reach net zero by 2050
- They should comply with the Do No Significant Harm (DNSH) principle and the minimum safeguards set out in Article 18 of the EU taxonomy regulation
- EuGBs should not fund fossil gas- or nuclear-powered energy plants, in line with current market practices on green bonds (despite those activities being already included in the EU Taxonomy)
- The rapporteur proposes provisions to make it easier to compare the EU GBS with other sustainable bond issuances: he seeks the introduction of a standardised disclosure format for each issuance of a sustainable bond, whether they are EuGBs or other types of sustainable bond, which would also be verified by an external reviewer
- He suggests additional requirements to strengthen the independence of external reviewers and avoid possible conflicts of interest; these include reducing the ability of external reviewers to outsource vital aspects of the reviewing process, and giving ESMA a mandate to strengthen measures against conflicts of interest

Following the draft report, BUDG has submitted an opinion, followed by ENVI earlier this week. ENVI's proposal was very much aligned with the amendments submitted by Paul Tang, while it also included further considerations, such as a full grandfathering clause. This was also previously proposed by the European Mortgage Federation-European Covered Bond Council (EMF-ECBC) and the ECB. The latter would mean that, if there is an amendment in existing EU Taxonomy Delegated Acts, these would not affect fully-allocated EuGBs.

Meanwhile, the ENVI did not take a view on the potential exclusion of nuclear and gas from the EU GBS, as proposed by Paul Tang. Bas Eickhout, rapporteur for ENVI, had further proposed to make the EU GBS mandatory as of “three years after the date of entry into force of this Regulation” to all issuers of bonds marketed as environmentally sustainable. Eickhout's

proposal for a mandatory standard was earlier suggested by the ECB in its opinion of November 2021. The ECB, however, had in this case acknowledged the difficulties of setting a concrete time period for the standard to become mandatory.

The European Parliament’s ECON Committee will convene next Monday, 28 February, to discuss the file and the full list of amendments (49 in total). The file will then be voted upon in the next ECON committee in March, after which it will be submitted to both the Parliament and the Council. The Parliament can then negotiate with the Council, with a view to an agreement on the (final) file by (hopefully) the end of this summer. Only after all these steps have taken place, the EU GBS will be in a final format and can legally come into force (please refer to the timeline below).

In parallel to the ECON discussions as highlighted above, the Slovenian Presidency (SI PCY) took the lead in the Council on the discussions regarding the EU GBS proposal, and has submitted a progress report on 16 December 2021. Member States had also afterwards the opportunity to provide their comments. The main points raised by the Slovenian Presidency, as well as the reaction of Member States, is summarized below:

- SI PCY proposes a 20% flexibility pocket for the allocation of a bond with regard to the Technical Screening Criteria (TSC) of the EU Taxonomy. This would be the case for activities that do not yet have a TSC or for which full alignment is not possible yet (due to the innovative, complex nature or location of the economic activity and/or due the nature of non-economic activities). This would have to be reported and evidenced under the supervision of an independent verifier
  - Member States in favour: Portugal, Estonia, Bulgaria
  - Member States who suggested 10% flexibility instead of 20%: Belgium and Luxembourg
  - Member States who suggested that a flexibility pocket should be temporary: Austria, the Netherlands and Denmark
- SI PCY calls for a “binary choice” between the European Securities and Markets Authority (ESMA) or National Competent Authorities (NCA) as supervisors of external reviewers, where ESMA would be the supervisory authority except for external reviewers that are already subject to its supervision and/or for “not for profit” organizations and micro, small, or medium-sized enterprises
  - In favour of ESMA supervision: Germany, Portugal, Bulgaria and the Netherlands
  - In favour of NCA supervision: Belgium and Luxembourg
- On the other hand, SPI PCY proposes NCA to be the supervisory authority for all EuGB issuers, with the exception of sovereigns
  - Only Bulgaria seems to have arguments to be in favour of NCA supervision applying solely to issuers which are required to publish a prospectus. All other Member States were in favour

Member States seem to have also jointly agreed that the use of the ‘EuGB’ designation should be voluntary (contrary to ENVI’s and ECB proposals), anchored in the EU taxonomy, and based on best market practices. The report also mentions that the EU GBS should take into account the specificities of sovereigns, where it is justified. This includes for example, the fact that public subsidy programmes and tax relief programmes would be exempt from project-by-project assessments, and that external reviewer would need in this case to only assess the alignment of a programme’s terms and conditions with the EU Taxonomy. Sovereign issuers would also be able to use state auditors as external reviewers, and state auditors would be exempted from the registration system.

**EU GBS approval timeline: final version expected to be in place by end of Summer 2022**



Source: ABN AMRO Group Economics

## KfW announced a halt in its subsidies towards the real estate sector

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- ▶ **The German development bank KfW has announced a full stop of its subsidies towards energy-efficient buildings and refurbishment**
- ▶ **The reason behind it is a current funding gap, with applications already exceeding the amount available under the programme**
- ▶ **This will likely have an impact on Real Estate companies, which rely on these subsidies to decarbonize their portfolios**
- ▶ **Nevertheless, it does not seem that the halt in subsidies will stop renovation rates, as companies such as Vonovia remain committed to increase their share of energy efficient buildings**

At the end of January, the German Ministry of Economics unexpectedly announced the immediate stop of the state funding for energy efficiency buildings under “**Kreditanstalt für Wiederaufbau**” (**KfW**). KfW is a leading German development bank and one of the world’s largest. It provides funding targeted to improve economic, social and environmental living, and only in 2021, it provided more than EUR 100bn in funds.

KfW has been a key player in supporting energy saving in the German residential buildings through its funding towards energy-efficient refurbishments and residential properties. In the past ten years, the bank has subsidized over 4 million housing units to be either built or refurbished in an energy-efficient way. This is equivalent to around 10% of the entire German building stock. KfW is estimated to be responsible to finance the renovation of around 275,000 housing units in the country per year. Since the start of the programme, it has triggered over EUR 260 billion in building measures and it has helped to reduce carbon emissions by almost 9 million tonnes every year.

The announcement in January that funding towards energy-efficient buildings would be halted involved two programmes: one for new construction, mainly Efficiency House (EH) 55 and 40, and another for the energy-efficient refurbishment programme. Funding for individual measures (such as heating system replacement), on the other hand, will continue in the meantime. The reason behind the abrupt stop is a current funding gap estimated to run into billions of euros: only from November 2021 until January 2022, applications submitted to KfW amounted to EUR 14bn, while the provisional budget for the “Federal Promotion of Efficient Buildings” earmarks only EUR 5bn for the entire KfW programmes. In total, EUR 34.5bn was provided in 2021 towards the financing of energy-efficient housing (up 29% vs 2020 and up 208% (!) on a two-year basis).

In general, the decision has however not been well-received by the public. Especially in view of the ambitious climate goals of Germany, stopping such a programme might have tremendous effects. In Germany, 40% of the energy consumption is attributable to the building sector - around 85% of it for heating and hot water, and 15% for electricity. Together, this results in about a third of all CO<sub>2</sub> emissions in the country being generated by buildings. On top of that, the building sector has also missed its climate targets by a wide margin, making it the only sector that not has reached the country’s GHG emission reduction targets for 2020. Germany’s goal is to cut emissions of the building sector by 68.1% by 2030 (vs 1990 levels).

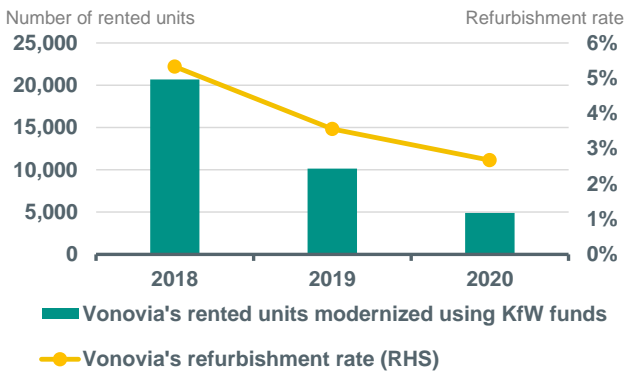
The January decision has a huge impact not only on families who have applied for a subsidy but also large real estate companies. Groups such as Vonovia and Deutsche Wohnen use subsidies from the KfW to finance mostly energy-related renovations. In 2020, Vonovia modernized 11,299 rented units and 1,382 buildings, where nearly 43% of those (down from 71% in 2019) were renovated using KfW funds. This translated to a refurbishment rate of 2.7% (down from 3.6% YoY) for 2020. Vonovia had already previously announced it expects a slightly lower rate of renovation in 2021 of around 2-2.5% due to a change-over to new KfW subsidy conditions, announced early last year. Hence, we estimate that a halt in the KfW programme can have a serious impact in the Group’s refurbishment plans.

Vonovia aims to achieve climate neutrality by 2050, which it plans to achieve via a 3% annual rate of refurbishment on the portfolio, focused on increased energy-efficiency measures as well as additional investments to replace inefficient heating

systems. Increased energy-efficiency measures are defined by the company as, among other, the achievement of KfW (EH) 100 or 70 standards (i.e. less than 45 kWh/m<sup>2</sup>). Currently, only 0.9% of Vonovia’s portfolio holds an energy efficiency below 50 kWh/m<sup>2</sup>. The average energy intensity of its rentable area is also well-above that, at 165.1 kWh/m<sup>2</sup>. Hence, refurbishments play an important role in Vonovia’s decarbonization plans.

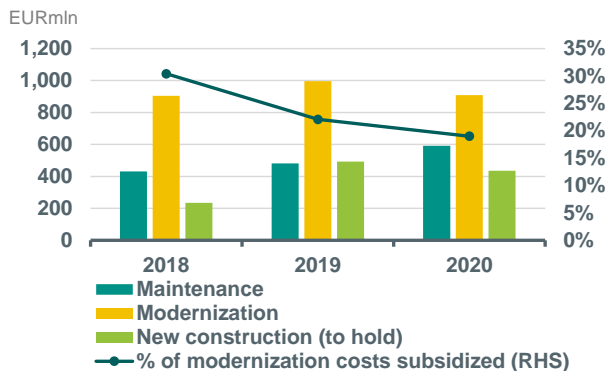
With the lack of subsidies (which are currently estimated to account for ca. 20% of Vonovia’s total modernization costs, assuming EUR 250 of subsidy per m<sup>2</sup>), the company will likely have to undergo higher own investments in order to achieve the targeted 3% renovation rate. This could have an indirect effect on rents, which will likely need to increase in order to compensate for the higher costs. However, high residential rents are already a very political contentious subject in Germany. Hence, the halt in KfW subsidies could either result in lower refurbishment rates, jeopardizing the decarbonization of the building industry, or result in higher investments required in order to meet those targets.

**Less KfW funds can result in lower refurbishments... rates...**



Source: Vonovia’s filings, ABN AMRO Group Economics

**...which means Vonovia either pays out of pocket or brings down energy driven renovations**



Source: Vonovia’s filings, ABN AMRO Group Economics

On that note, Vonovia has released a new Sustainable Finance Framework this week. The Framework allows the company (among others) to raise funding towards energy-efficient buildings and renovations. In terms of renovations, “energy-efficient” is defined by the company as a building which has achieved, within 3 years post-refurbishment, a 30% lower primary energy demand. The reduction in energy will be assessed by an independent energy expert.

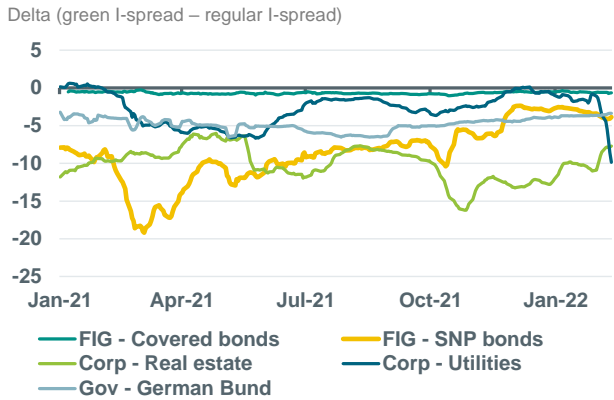
The newly published Sustainable Finance Framework by Vonovia is a signal that the company is still fully committed to its decarbonization strategy and will therefore continue to raise capital towards energy-efficient renovations. We therefore believe it is more likely that the cut of KfW funding will result in the company undertaking these higher costs (and then passing these investment through in rents – especially when they commensurately drive down energy usage for tenants) rather than jeopardizing its carbon-reduction plans.

Nevertheless, while part of the KfW programme will continue in the future (e.g. funding towards financing new buildings with the standard EH55), that does not seem to be the case for energy-efficient renovations. However, the German Ministry has announced that the funding for refurbishment was only temporarily stopped, and will therefore be resumed as soon as appropriate budgetary funds have been made available. There is no estimation however of exactly when this will be the case.



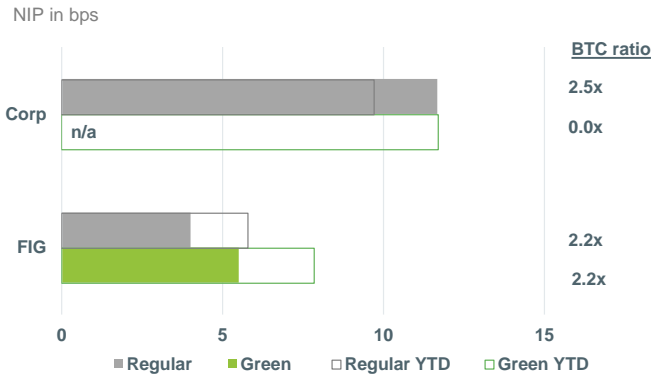
# ESG in figures

## ABN AMRO Secondary Greenium Indicator



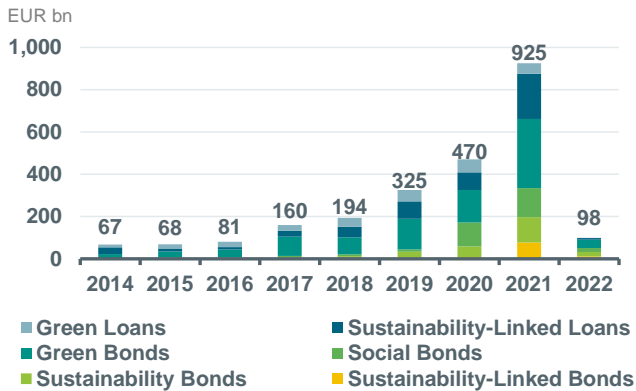
Note: Secondary Greenium indicator for Corp and FIG considers at least five pairs of bonds from the same issuer and same maturity year (except for Corp real estate, where only 3 pairs were identified). German Bund takes into account the 2030s and 2031s green and regular bonds. Delta refers to the 5-day moving average between green and regular I-spread. Source: Bloomberg, ABN AMRO Group Economics

## ABN AMRO Weekly Primary Greenium Indicator



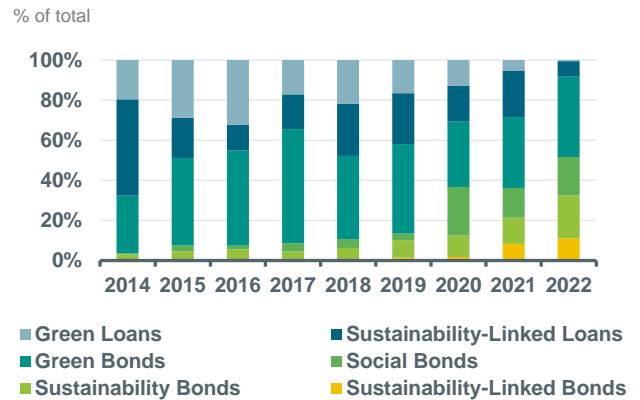
Note: Data until 17-2-22. BTC = Bid-to-cover orderbook ratio. Source: Bloomberg, ABN AMRO Group Economics.

## Sustainable debt market overview



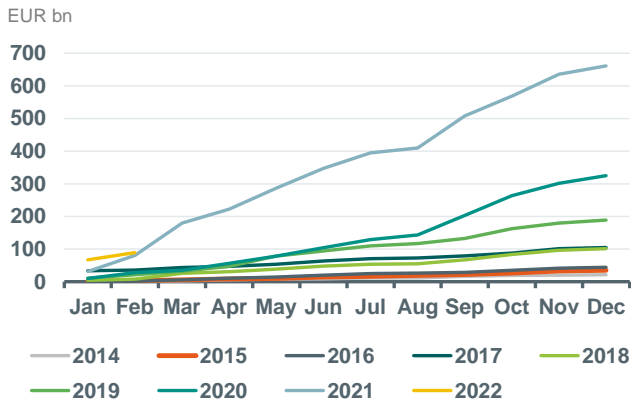
Source: Bloomberg, ABN AMRO Group Economics

## Breakdown of sustainable debt by type



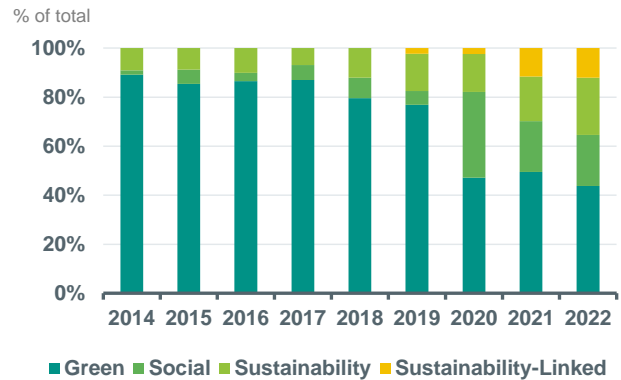
Source: Bloomberg, ABN AMRO Group Economics

## YTD ESG bond issuance



Source: Bloomberg, ABN AMRO Group Economics

## Breakdown of ESG bond issuance by type

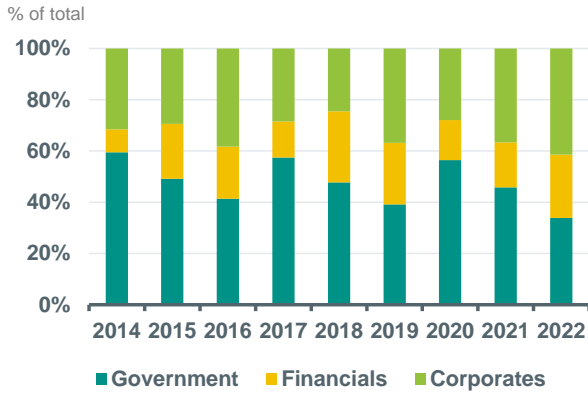


Source: Bloomberg, ABN AMRO Group Economics

Figures hereby presented take into account only issuances larger than EUR 250m and in the following currencies: EUR, USD and GBP.

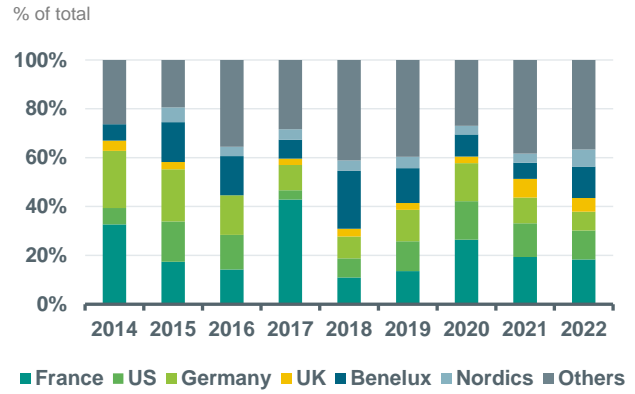


### Breakdown of ESG bond issuance by sector



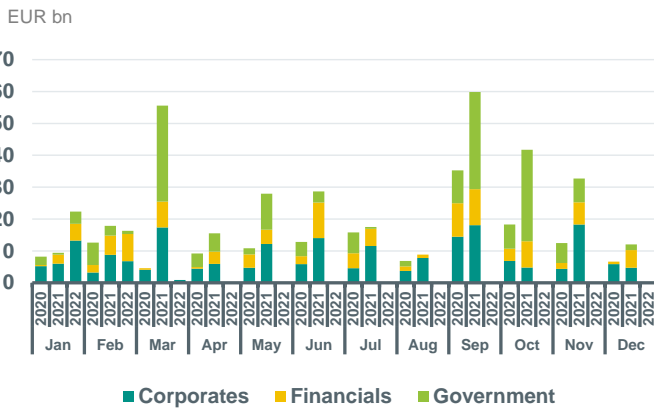
Source: Bloomberg, ABN AMRO Group Economics

### Breakdown of ESG bond issuance by country



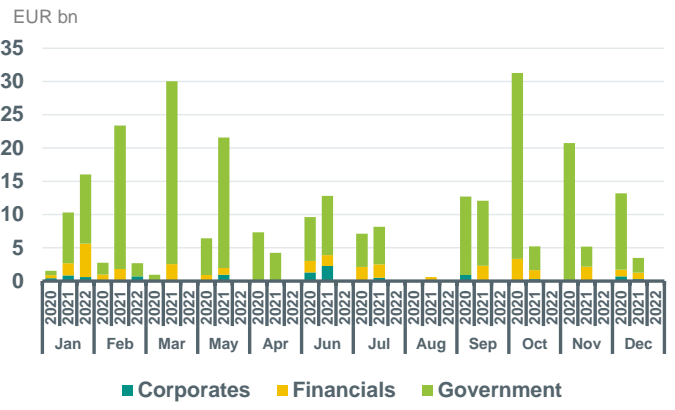
Source: Bloomberg, ABN AMRO Group Economics

### Monthly Green Bonds issuance by sector



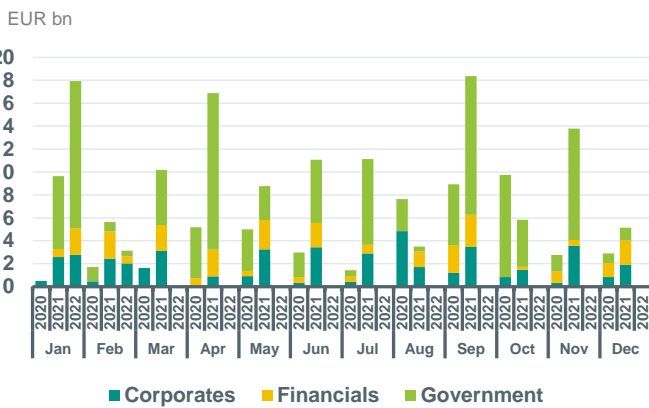
Source: Bloomberg, ABN AMRO Group Economics

### Monthly Social Bonds issuance by sector



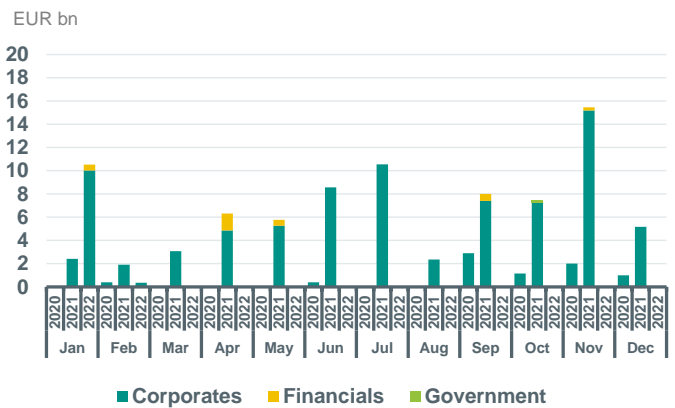
Source: Bloomberg, ABN AMRO Group Economics

### Monthly Sustainability Bonds issuance by sector



Source: Bloomberg, ABN AMRO Group Economics

### Monthly Sust.-Linked Bonds issuance by sector



Source: Bloomberg, ABN AMRO Group Economics

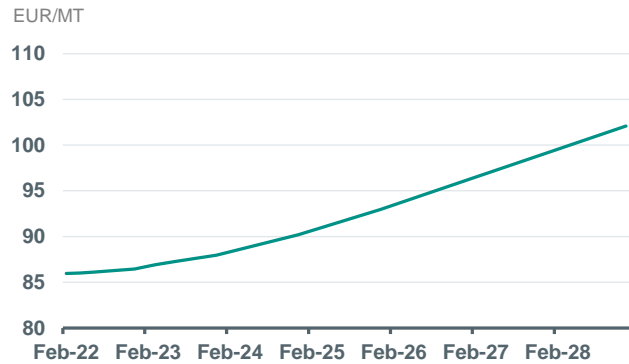
Figures hereby presented take into account only issuances larger than EUR 250m and in the following currencies: EUR, USD and GBP.

**Carbon contract current prices (EU Allowance)**



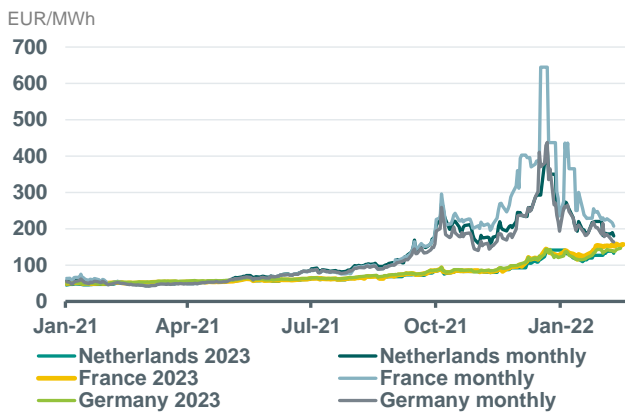
Source: Bloomberg, ABN AMRO Group Economics

**Carbon contract future prices (EU Allowance)**



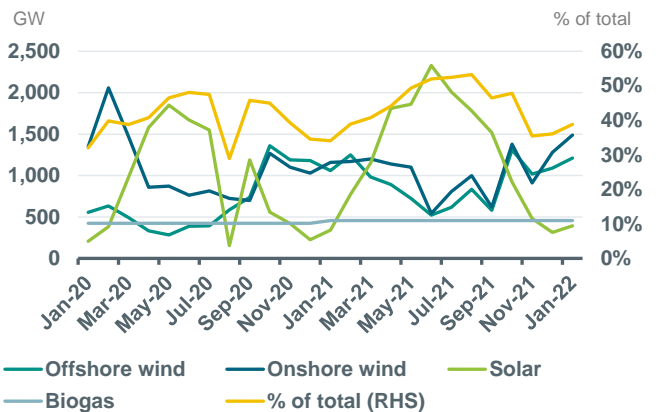
Source: Bloomberg, ABN AMRO Group Economics

**Electricity power prices (monthly & cal+1 contracts)**



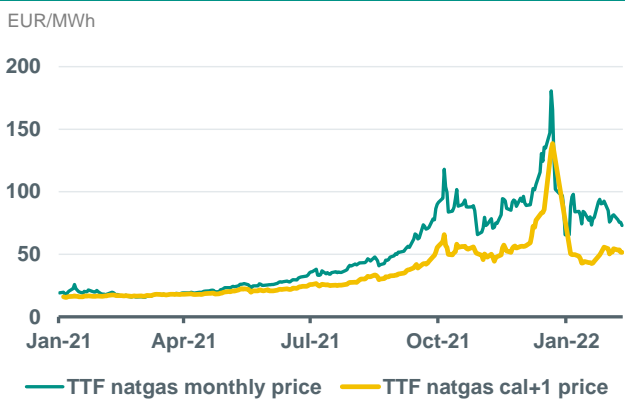
Source: Bloomberg, ABN AMRO Group Economics. Note: 2023 contracts refer to cal+1

**Electricity generation from renewable sources (NL)**



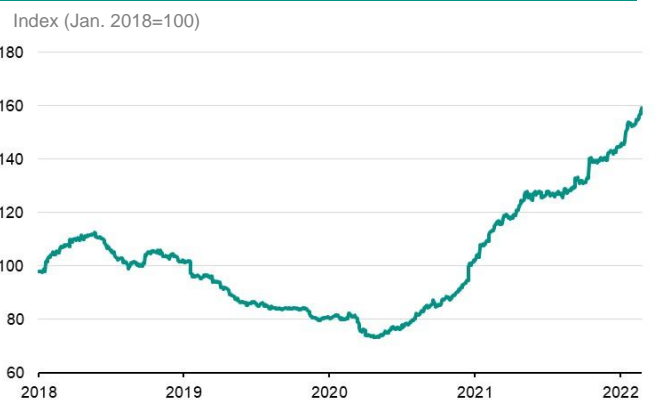
Source: Energieopwek (Klimaat-akkoord), ABN AMRO Group Economics

**TTF Natgas prices**



Source: Bloomberg, ABN AMRO Group Economics

**Transition Commodities Price Index**



Note: Average price trend of 'transition' commodities, such as: corn, sugar, aluminium, copper, nickel, zinc, cobalt, lead, lithium, manganese, gallium, indium, tellurium, steel, steel scrap, chromium, vanadium, molybdenum, silver and titanium. Source: Refinitiv, ABN AMRO Group Economics

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