Sustainaweekly

Implications of changes to EU taxonomy

- **Strategy Theme: The EC labelled natural gas and nuclear as transition fuels in the taxonomy. This will hardly lead to any support for financing of existing gas plants, but it does improve chances for nuclear. Implications for the ESG bond market are limited.**
- **Economics Theme: We assess whether flood risk is already impacting house prices, in the case of the Netherlands. Our research findings are inconclusive but point towards current flood risks being not (fully) priced in to house valuations.**
- **ESG Bonds: Corporate ESG issuance is booming, accounting for roughly 40% of all issues in the EUR IG space so far this year. The share of Bank ESG bonds has been stable this year, but that following a doubling last year.**
- **Policy and Regulation: The EBA published technical standards for ESG disclosures of banks. We take a closer look at the standards, including two key metrics that need to be disclosed: The Green Asset Ratio and the Banking Book Taxonomy Alignment Ratio.**
- **Company and Sector news: We review a recent report on the challenge of the EC's policies on greening the built environment for existing buildings, especially in the residential sector.**
- **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.**

We are pleased to launch the first edition of our new weekly publication. This publication aims to give a broad overview of developments in the ESG universe, from economic and strategy themes, ESG bonds and policy and regulation, to company and sector news. This publication will replace our long running ESG Bond Monthly and we hope to provide the coverage that was included in that publication, but also a lot more and on a more frequent basis. We will continue to publish longer thematic notes in our ESG Economist and ESG Strategist series as well as in our Flagship notes. We hope this publication will provide useful information and analysis, which will support you in your activities. If you have any feedback on this publication, please let us know.

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Natural gas and nuclear: taxoNOmy or taxoYESmy?

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- **The European Commission has labelled natural gas and nuclear as transition fuels in the taxonomy**
- **…but only under very strict conditions**
- **This will hardly lead to extra support for the financing of existing gas fired power plants, but better chances for nuclear**
- **No imminent impact expected in the ESG bond market**

On 2 February, the European Commission (EC) presented its final version of the Complementary Climate Delegated Act of the EU Taxonomy Regulation, which officially includes nuclear and gas energy in the list of economic activities covered by the EU taxonomy. This version follows after a consultation period on a draft proposal, published by the Commission on 31 December 2021, and which was open until 21st of January for feedback. In the final version, the outcome of the consultations with the Member States Expert Group on Sustainable Finance and the Sustainable Finance Platform as well as the feedback from the European Parliament were taken into account. It led to some (minor) adjustments, mainly regarding natural gas.

The suggested criteria for the inclusion of natural gas was based on recommendations of the Technical Expert Group on Sustainable Finance (TEG), an expert group set up by the EC in 2018. Their recommendations were shared in two interim versions published in December 2018 and June 2019. Natural gas was also further included in the first draft of the EU Taxonomy published by the EC in November 2020, which was later-on open for a 4-week feedback period. As for nuclear energy, although excluded from the TEG recommendation reports, the proposed criterion relies on a technical assessment prepared by the Joint Research Centre (JRC), which assesses the possibility for nuclear energy to make a substantial contribution to climate change mitigation, while not harming other EU environmental objectives.

Not a unanimous decision… at all

After the criticism on the initially proposed text, the Commission added a separate paragraph stating that companies must make it very clear that these energy fuels should support the energy transition and should be considered a temporary option (i.e. should eventually switch fully to renewable or low-carbon gases). They are subject to clear limits and phase-out periods. It was additionally highlighted that both natural gas and nuclear are flagged as transition activities, as per definition in the Taxonomy Regulation, and should therefore not be seen as explicitly ‘green’. Some indicated that they are unofficially called amber or orange to express the differences.

New disclosure requirements were also added to the final version, setting out that companies must disclose the proportion of their activities linked to natural gas and nuclear energy. This will allow investors to be able to clearly recognize whether an investment includes nuclear or natural gas and to what extent. According to the EC, “the inclusion of nuclear and natural gas in the taxonomy does come with conditions associated with their use and with safeguards against significant environmental harm”. According to the EC, a balance has been found between fundamentally different opinions in supporting the road to decarbonisation. Or, as Mairead McGuinness, EC Commissioner for Financial Services, Financial Stability and Capital Markets Union, said "The EU taxonomy is a tool to increase transparency in financial markets, so it is a tool for the financial sector, not energy policy," and "Member States remain fully responsible for deciding their own energy mix."

The proposal is set for a turbulent journey to adoption, and still requires approval by Member States and the European Parliament. First, the final draft published on the 2nd of February needs to be translated into all official EU languages. After that, the Complementary Delegated Act of the EU Taxonomy Regulation will be formally transmitted to the co-legislators for their scrutiny. As for the other Delegated Acts under the Taxonomy Regulation, the European Parliament and the Council (who have delegated the power to the Commission to adopt Delegated Acts under the Taxonomy Regulation) will have four months to scrutinise the document, and, should they find it necessary, to object to it. Both institutions may request an

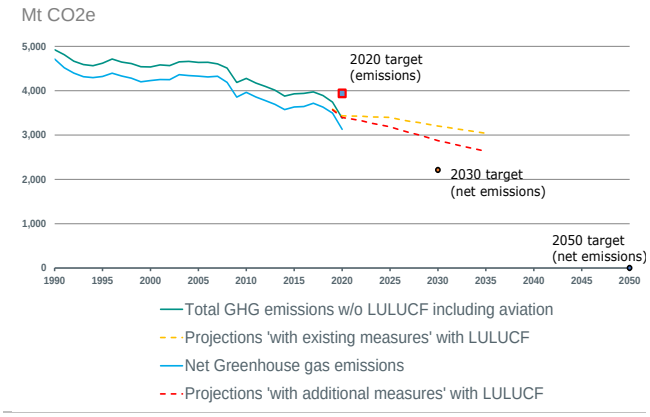
additional two months of scrutiny time. In the Council, a qualified majority of at least 72% of member states (i.e., at least 20 states) representing at least 65% of the EU population are needed to object to the Delegated Act. The Parliament, on the other hand, requires a simple majority. Nevertheless, it seems unlikely that these blocking thresholds will be met. Once the scrutiny period is over and if neither of the co-legislators objects, the Complementary Delegated Act will enter into force and apply as of 1 January 2023.

Why do most countries want to include nuclear and natural gas in the EU Taxonomy?

To reach the actual goal of limiting global temperature increase, many steps are needed. Investing in carbon neutral solutions and reducing emissions from fossil fuels is crucial. At the same time, keeping the energy system reliable and energy bills as affordable as possible are factors which must also be taken into account. We know that the expansion of solar and wind power across Europe is a crucial part of the strategy. However, we see that in some places the infrastructure will have to be greatly expanded to accommodate this more flexible way of generating energy. Finally, it is a fact that solar and wind energy are not always sufficiently available to meet the (still increasing) demand for electricity. Other alternatives play a role here. Think of demand-side management, energy storage and back-up energy sources.

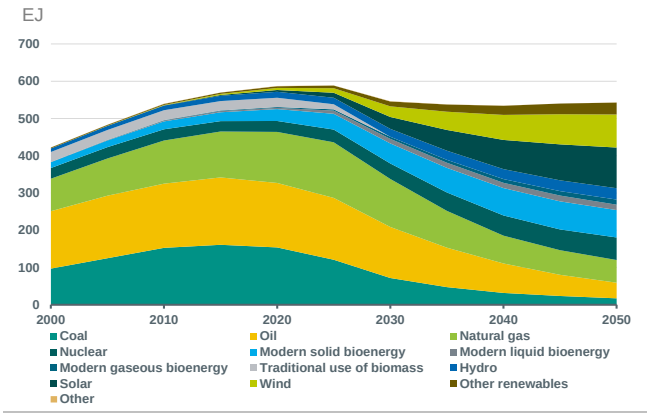
The current energy mix in Europe differs greatly from country to country. In Poland, for example, the economy runs mainly on coal, in France on nuclear energy, in Germany on a mix of coal and renewable energy and in the Netherlands mainly on natural gas. The fact that the energy mix differs so much from country to country makes it difficult to coordinate an unambiguous EU policy. In 2021, the EC agreed to sharpen the ambition with regards to CO2 emissions. With its 'Fit-for-55' plan, the CO2 reduction to be achieved by 2030 (compared to 1990) has been increased to 55%. To achieve this, greenhouse gas emissions must be reduced quickly and drastically (the EU currently stands at a reduction of 31%, as of 2020). But even after that, there will still be a challenge – perhaps even a bigger one.

Historical trend of European carbon emissions



Source: European Environment Agency

Total energy supply in Net Zero Emission scenario



Source: IEA, World Energy Outlook

In order to move from the current - mostly fossil-based - energy mix to a carbon-neutral mix, natural gas and nuclear energy play important roles in the transition, in addition to well-known sustainable energy sources such as solar and wind energy. Nuclear energy is known to be virtually CO2-free. With natural gas, we know that emissions from current gas plants are on average half of that from coal fired power plants. According to both the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA), both energy sources will grow in percentage terms. Natural gas will play the role of a transition fuel mainly in the next decade. Nuclear power will grow especially after 2035.

The EU taxonomy aims to direct and mobilise private investment in activities needed to achieve climate neutrality in the next 30 years. Only in the EU, there is an estimated EUR 520bn of annual additional investments required for the green transition, with more than 65% needed to be filled via private investments. Because both energy sources are so important to accelerate the reduction of greenhouse gas emissions, the EC has proposed to give both a label confirming their role in the energy transition. With this affirmation, the EC hopes to facilitate the financing of certain gas and nuclear activities.

Only ‘green’ under very strict conditions

Strict conditions apply to meet the requirements of the EU taxonomy. For nuclear power, the construction permit must be obtained before 2045. In addition, a nuclear power plant must meet the best-available technology, there must be a detailed plan for disposal by 2050, and there must be a good and safe plan for dealing with the nuclear waste. The criterion also includes the application of accident-tolerant fuel from 2025 onwards, which are currently still in a testing phase.

A gas-fired power station should have life-cycle emissions (direct and indirect) below 100gCO2e/kWh to be eligible. Alternatively, for facilities built before 2031, an exceptional maximum threshold of direct emissions of 270g CO2e/kWh can also be applied, or equivalently, a maximum annual average of 550 kg CO2e/kW over 20 years. However, in this case, the plant is also required to have replaced a fossil fuel (i.e. Coal-fired) power stations and should be fully suitable for the combustion of 'low carbon' gas, such as hydrogen for example. Furthermore, by 2035, the facility also needs to switch to full use of renewable or low-carbon gaseous fuels and this switch needs to also result in a reduction in emissions of 55% over the lifetime of the newly installed capacity. According to a study by the European Economic Commission of the United Nations (UNECE), the average direct emissions of a gas plant currently lies between 403 and 513 grams of CO2e/kWh. If the CO2 emissions can be (partially) captured and stored (Carbon Capture and Storage = CCS), then the emissions drop to a range of 92-221 grams CO2e/kWh. This shows that natural gas can potentially be included in the EU Taxonomy if CO2 emissions are captured and stored.

Would it also support the financing of existing gas fired power plants?

Looking at natural gas, according to the World Resources Institute there are 439 operational natural gas power plants in the EU-27 with >1MW of capacity (as of June 2021). This leads to an average installed capacity of 323 MW. Taking into account the average EU capacity factor (i.e. that natural gas power plants operate at an average 28% capacity), we can estimate an average annual electricity generation of 2,840 GWh per power plant. Considering the emission factor for electricity generated from natural gas as per IPCC (i.e. 56,100 kg CO2/TJ), this results in an equivalent of 202g CO2/kWh - well below the EU Taxonomy proposed threshold for direct emissions.

However, the aforementioned low emission factor disregards the methane leakages at the extraction and transportation, which may account for a significant part of the emissions. Natural gas leakage is estimated to be between 0.8% and 5.5% of all volume combusted (IEA estimates this to be even higher, around 8%), resulting in emissions between 90 and 370gCO2eq/kWh. Consequently, IPCC estimates that natural gas combined-cycle plants globally have emissions in the range of 410–650 gCO2eq/kWh. This would imply that currently there is no natural gas power plant in Europe that would comply with the proposed EU Taxonomy thresholds, even when looking at the “exceptional” 270g CO2/kWh until 2030.

Carbon capture and storage (CCS) may therefore come as a solution to allow gas plants to be compliant with the threshold. The IPCC estimates that the use of CCS is expected to reduce life-cycle GHG emissions to 70 – 290 gCO2e/kWh (assuming ca. 90% of the gas leaked is captured and remaining emissions are mainly connected to the fuel chain). Looking at the 439 operational natural gas power plants in EU, none is assessed to have an integrated CCS. The Clean Air Task Force estimates that in December 2021 there were 56 carbon capture projects across 18 different European countries, with the Netherlands and Norway taking the lead. While all would have capacity to store the natural gas leakages (assuming 5% of all CO2 emitted), there were however only 37 (or 66%) that would be able to store the entire life-cycle emissions .
Hence, while the inclusion of gas into the EU Taxonomy might be seen as controversial, it is important to note that additional investments to reduce emissions are still required for gas producing companies to be able to label those as EU Taxonomy aligned investments.

Better chances for nuclear

Zooming into nuclear, there were in June 2021, 48 power plants in the EU-27, with over half of them being located in either France or Germany. All plants in France are either owned or operated by EDF. We have investigated therefore whether those plants might meet the proposed EU Taxonomy requirements. EDF notes that 10% of the total waste generated refers to highly radioactive waste. This waste is conditioned in stainless steel containers and placed in intermediate storage at Orano’s La Hague plant. Those are then required to be transferred to the Industrial Centre for Geological Disposal (Cigéo)

after 2035 (when it begins operations), where it will be stored in drifts hollowed out 500 metres below ground, in a stable geological environment, embedded in impermeable claystone. EDF discloses that it has set up “reserved” funds, which have been set aside to secure financing of nuclear plant decommissioning expenses and long-term storage expenses for radioactive waste. In 2020, EDF also had ca. EUR 60bn in provisions for waste removal, conditioning and long-term radioactive waste management, decommission of nuclear plants and last cores (EUR 45bn only in France). The company also has provisions and final disposal facilities for all very low-, low- and intermediate level radioactive waste. Hence, by using EDF as proxy for the entire EU-27 nuclear plants universe, we could assume that nuclear plants seem to comply more easily with the EU Taxonomy requirements. However, even in this case, nuclear companies would still be required to face investor pushback, with several ESG funds (e.g. NN IP and Robeco) not allowed to invest in nuclear energy.

No imminent impact expected in the ESG bond market

In parallel to the discussions on whether transitional activities should be included in the EU Taxonomy, the European Parliament published last December a proposal to exclude the financing of gas and nuclear power generation from the EU Green Bond Standard (EU GBS). The EU GBS is the official link between the EU Taxonomy and the bond market, and aims to provide guidance to market participants on how to raise financing for “green” activities, as specified in the EU Taxonomy. The EC has published a proposal for the EU GBS in July 2021, which was later open for a 2-month consultation period.

The draft report outlined by Paul Tang, a Dutch Member of European Parliament and rapporteur for the Parliamentary Committee on Economic and Monetary Affairs, proposes that “European green bonds should not fund activities concerning electricity generation using nuclear energy generation or electricity generation from natural gas”. Hence, while the latest draft of the EU GBS published by the Commission in July 2021 stipulates that funds raised by European green bonds should be allocated fully to projects aligned with the EU Taxonomy, the Parliament proposes to exclude from the list the activities outlined in the new Complementary Climate Delegated Act. While the final version of the EU GBS is not expected to be published before summer, exclusion of gas and nuclear from European green bonds would certainly bring the standard closer to already current market practices. Furthermore, the existing bond market already distinguishes between “green” and “transitional” instruments. Hence, an exclusion from these transitional activities would also avoid any disruption to the existing ESG bond market. The EU has also indicated that it is working on a transition bond standard.

Given the above, we do not expect the publication of the Complementary Climate Delegated Act on the EU Taxonomy to have any imminent impact in the ESG bond market. However, developments in the EU GBS might provide some more clarity in the near future. Besides, dedicated investors with strong ESG integration have already flagged that they will not invest in green bonds that finance nuclear and/or gas activities. The strong demand of these investors are key drivers in the ESG bond market and have therefore been fundamental into shaping its (pricing) dynamics. On the supply side, as highlighted above, we also do not expect companies to be able to claim themselves fully aligned with the detailed criteria for transitional activities, especially when looking at natural gas power plant owners. Hence, even with the potential inclusion of nuclear and gas in the EU GBS and assuming the unlikely investor support, we should not expect to see a lot of issuers issuing green bonds with proceeds aligned with the new Complementary Climate Delegated Act.

Is flood risk already affecting house prices?

Lessons learned from an impact assessment study in the Netherlands

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- **Global warming increases the probability of flooding. If this risk is not reflected in house prices this raises concerns about a sudden risk re-pricing that may prove financially destabilizing**
- **Our research findings are inconclusive but point towards current flood risks being not (fully) priced in to house valuations**
- **The key methodological challenge in providing a robust estimate of flooding risk on house prices is finding comparable houses for the exercise, while still keeping the sample size sufficiently large**

Global warming increases the probability of flooding from either breaking or flooding barriers as the sea level rises or from more frequent and harder rainfall causing damage directly or via flooding rivers. The real estate sector in particular is vulnerable to this type of physical climate risk. Home owners, who commit themselves financially via a mortgage to the long term value of their home, should in theory be fully aware of the value reducing potential of current and future flooding probabilities. The question is: are they?

If they are, we would expect that the transaction prices of houses that are located in areas that are already today more likely to flood are lower than houses that are situated on land that is less likely to flood, all other things being equal. If they are not, this means that current and future potential damage is not (completely) taken into account. This is of great interest to banks as they typically have significant exposure to mortgages, investors in securities linked to banks, mortgages or the real estate sector as well as home owners. Knowing how physical risks of climate change such as flooding probabilities can affect the financial stability of banks and thereby the financial system will be part of a regulatory requirements from the ECB going forward.

Our research findings are intended to share the lessons learned in how to approach a question like this. We believe that an open exchange of trials and errors in research aimed at estimating the economic impact of climate change contributes to financial resilience of our clients, our bank and our economy. In this article we share our findings and the different empirical approaches we considered, we explain the limitations and recommendations for further research on this topic. For the complete publication see here.

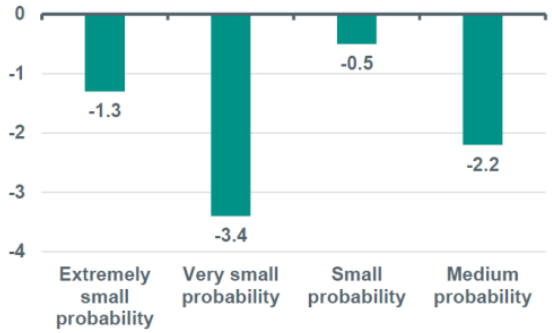
Empirical Approach. In this observational study we focused on the causal impact of flood risk on house prices in the Netherlands. The main challenge when identifying causation is finding the right comparison. In our research setting, we only observe the sale price of a house with a given flood probability. We don't know what the price of that house in that moment would have been had the flood probability been different. In other words, we don't have a counterfactual, while the comparison of the observed house with it's counterfactual would be the causal effect we are looking for.

To get around this problem, we compare house prices with different flooding probabilities (yearly probabilities of a flood >50cm) to each other, controlling for a suite of location- and property-specific characteristics. This cross-sectional method is widely used in historical literature on flood risk. We observe five different flood risk categories: no significant risk, extremely small risk (<1/30.000), very small risk (1/3000 to 1/30.000), small risk (1/300 to 1/3000) and medium risk (> 1/300).

The figure below shows that properties with a medium >50cm flood probability have about 2.2% house price discount compared to similar properties without a significant flood probability. If people take flood risk into account when buying a house, you'd expect properties with a higher flood risk to have a bigger price discount. However, this is not what our results show. The biggest discount is found for the very small >50cm flood probability (1/3000 to 1/30.000) properties. This result seems unlikely. Although we have a large sample and we control for property and neighbourhood characteristics and make use of location and time fixed effects, it's likely that these results suffer from omitted variable bias.

Percentage change in house price associated with >50cm flood

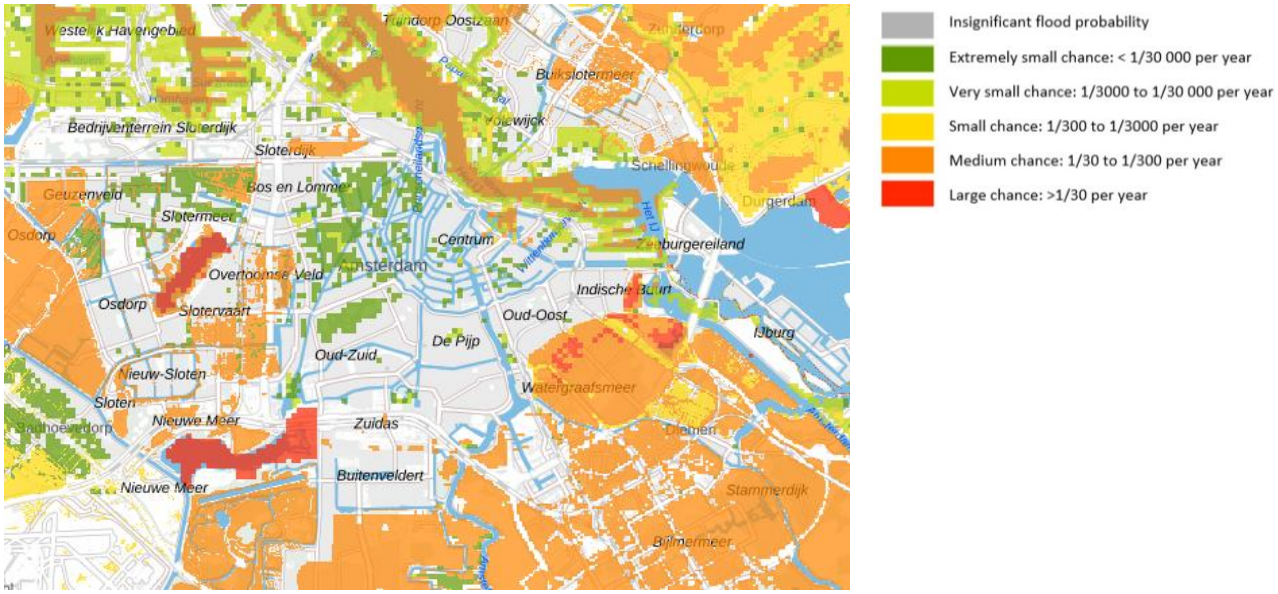
Percentage change in house price compared to no significant flood probability



Source: ABN AMRO Group Economics

Omitted variable bias. To understand the omitted variable bias better, it's useful to have a closer look at the flood probability map. The below figure shows the flood probabilities for Amsterdam. Within Amsterdam there are differences in house prices depending on the area, with Amsterdam city center being more expensive than the outer part. So, for this area we are capturing something else besides flood risk in our regressions, namely houses in the outer area have a discount compared to the city center.

Flood probabilities >50cm Amsterdam



Source: Landelijk Informatiesysteem Water en Overstromingen (LIWO)

Improving the comparison. Apparently, we are not comparing similar houses.Therefore, we zoom in more locally to neighbourhood level (in dutch: "buurt"). We only select those neighbourhoods with at least 5 properties with a medium flood probability and at least 5 properties with no significant flood probability. This reduces the sample to only 294 properties in 11 different neighbourhoods. Here we find in only 3 of the 11 neighbourhoods a statistically significant differences in house prices, two times a lower average sales price for houses with a flood risk and one time an average higher price for the houses with a flood risk.

Average sales price per neighbourhood and flood probability

Neighbourhood	Number of housholds	Flood probability	Number of observations	Mean salesprice per m2 (time index corrected)	Welch's t-test Statistic	P-value	Mean significantly different
Neighbourhood 1	850	No significant probability	6	€ 1.688	-1,91	0,069	No
		Medium probability (>1/300)	18	€ 1.780			
Neighbourhood 2	1520	No significant probability	5	€ 1.603	-2,45	0,03	Yes
		Medium probability (>1/300)	22	€ 1.816			
Neighbourhood 3	1250	No significant probability	5	€ 2.059	2,29	0,042	Yes
		Medium probability (>1/300)	11	€ 1.828			
Neighbourhood 4	3410	No significant probability	8	€ 3.431	1,71	0,114	No
		Medium probability (>1/300)	12	€ 2.953			
Neighbourhood 5	2895	No significant probability	7	€ 1.983	0,68	0,51	No
		Medium probability (>1/300)	12	€ 1.924			
Neighbourhood 6	2395	No significant probability	15	€ 2.362	2,45	0,024	Yes
		Medium probability (>1/300)	12	€ 2.095			
Neighbourhood 7	3460	No significant probability	13	€ 2.468	1,73	0,10	No
		Medium probability (>1/300)	21	€ 2.252			
Neighbourhood 8	2910	No significant probability	14	€ 1.801	1,54	0,149	No
		Medium probability (>1/300)	7	€ 1.648			
Neighbourhood 9	1105	No significant probability	8	€ 2.406	-0,12	0,91	No
		Medium probability (>1/300)	5	€ 2.457			
Neighbourhood 10	3135	No significant probability	42	€ 1.931	-1,23	0,254	No
		Medium probability (>1/300)	5	€ 2.033			
Neighbourhood 11	5150	No significant probability	8	€ 2.034	1,12	0,19	No
		Medium probability (>1/300)	38	€ 1.920			

Source: ABN AMRO Group Economics

Lessons learned: the challenge of finding the right comparison while keeping sufficient observations. Main challenge in impact evaluation is constructing the “right” counterfactual. We used a cross-sectional method to analyse the impact of flood risk on house prices. In order to construct a convincing counterfactual using a cross-sectional method all confounding factors need to be included in the regression model. Unobserved characteristics that are correlated with both the flooding probabilities and sales price cause an omitted variable bias. And indeed, our analysis confirms that our initial model suffered from omitted variable bias.

In order to overcome this issue we improved our comparison by exploring flood risk variation on a more local level. When only looking at houses with different flood risk probabilities within the same neighbourhood we do not find that flood risk is priced into the residential real estate market. This could be concerning because it would tell us that home owners who do not consider current potential losses from flooding are bound to not take future losses from flooding into account at all. For locations where future losses are estimated to increase through increasing flood risk, there is the risk of a sudden price correction. Whether and how this affects client’s, the bank’s and the economy’s financial resilience is not known today.

These research findings are not allowing for any firm conclusions. More research is need, given the importance of the topic. The key challenge to overcome is finding the right comparison of houses without losing too many observations. As location is extremely important for valuation, the right comparison comes down to comparing properties that are as close to each other as possible. One way would be to follow a property’s sales price over time while the flood probability changes. This would require a repeated sales data set with varying flood probabilities over time. We do not have these data. Another option is a comparison of properties using a border discontinuity design. With sufficient observations on a high proximity to each other, this is feasible. In general, including more property and location specific characteristics would improve the comparison.

ESG bonds: issuance makes a strong start in 2022

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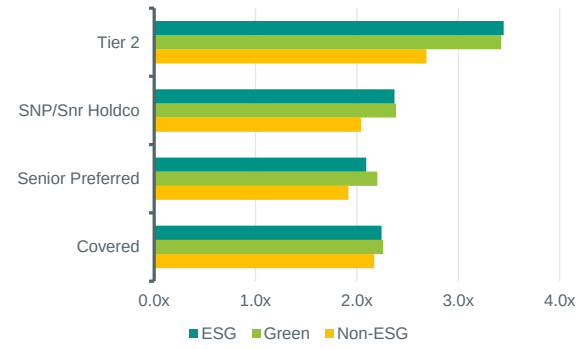
- **The market for euro bank senior and subordinated ESG (green, social, sustainability and sustainability-linked) saw their share in the primary market almost doubling in 2021; this share has been maintained so far this year**
- **ESG bank bonds attracted on average more demand than non-ESG bonds, while the difference being largest for the riskier ranks of bank debt but greeniums were still largest for senior preferred paper**
- **Corporate ESG issuance in the EUR IG bond space have represented roughly 40% of all issuance activity so far this year, up from 28% last year**
- **Corporate ESG bonds have had to offer more new issue concessions in comparison to their non-ESG equivalents**

The market for ESG bonds (green, social, sustainability and sustainability-linked) euro benchmark senior and subordinated bank debt has started 2022 on a solid note, with almost 15% of new benchmark deals having a ESG format. Before assessing this year's ESG deals, we look briefly back at last year when issuance of ESG senior and subordinated euro bank bonds already almost doubled compared to issuance in 2020. Consequently, the share of ESG issuance in total euro bank debt supply (excluding covered bonds) rose to around 16% in 2021, up from 8% in 2020. This also provides more observations to see whether ESG bonds benefit from stronger demand and lower new issue premiums (or so-called greeniums).

The graphs below show that euro-denominated bank debt (including covered bonds) indeed attract stronger demand, measures by the average bid-to-cover ratio of new deals. The difference in demand between ESG and non-ESG (i.e. regular) bonds seems to go hand in hand with their riskiness, with the difference the largest for Tier 2 paper. Interesting to note, is that this 'additional' demand does not seem to result in lower new issue premiums (NIP), given that the difference in NIP for ESG and non-ESG euro bank debt was actually the smallest for Tier 2 paper. In fact, it was largest for senior preferred debt, which is one of the safest bank debt ranks. Even in the covered bond space, a greenium was visible, despite the average NIP being only 1bp last year. What is more, in the senior preferred space, green bonds priced at a more than 2bp lower NIP than other ESG bonds, which seems a bit puzzling as this is not the case for other ranks of bank debt. In any case, it seems fair to conclude that in 2021, euro bank debt with a green, social or sustainable character attracted more demand, while a greenium was also clearly visible.

Demand for ESG and non-ESG euro bank debt

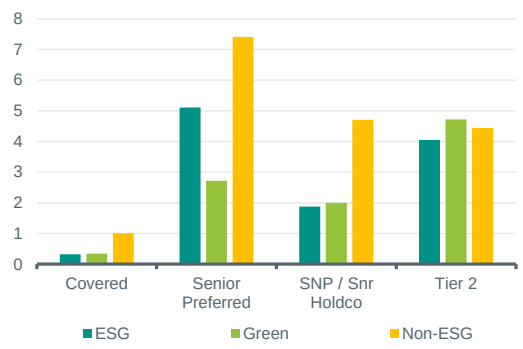
Average bid-to-cover ratio for (non) ESG bank debt, split by debt rank



Source: Bloomberg, ABN AMRO

New issue premiums of ESG bonds versus non-ESG

Average NIP for (non) ESG bank debt, split by debt rank (bp)



Source: Bloomberg, ABN AMRO

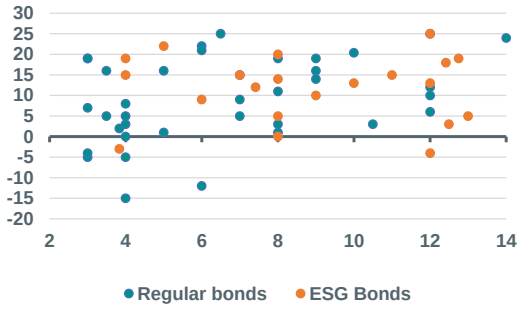
This year, roughly 15% of new supply of ESG euro bank debt (including covered bonds) had a ESG character, so roughly in line with 2021's figure for the year as a whole. In volume terms, senior preferred paper has seen EUR 5.2bn of ESG issuance year-to-date (total: EUR 15.7bn), while this is EUR 3.9bn for senior non-preferred debt (total: EUR 17.9bn), and

EUR 0.5bn for covered bonds (total: EUR 30bn). The subordinated debt market is still waiting for the first ESG bond. Demand for ESG bonds has again be slightly stronger than that for non-ESG bonds, although the greenium has been less visible so far in 2022. This could be due to the increase in market volatility, and risk-off mode in financial market more generally, which has probably made investors more price sensitive, irrespective of the character of the bond. However, it is still early days to draw any firm conclusion yet.

Corporate ESG issuance in the EUR IG bond space has got off to a great start this year, as it represented roughly 40% of all issuance activity. Over 2021 as a whole, this was 28% and during the same period in 2021 this was 25%. Green bonds take top spot as the structure of choice making up 2/3rd of ESG issuance followed by sustainability-linked bond (SLB) instruments, which make up most of the remainder. In terms of new issue premiums, the chart below shows that generally the ESG bonds had to offer more concessions in comparison to their non-ESG equivalents.

Concessions higher in new ESG bonds

New issue premium paid on issuance since start 2022 (bp)



Source: Bloomberg, ABN AMRO Group Economics

There was no noticeable difference in credit quality between what has been issued in the ESG space and the non-ESG space. Perhaps the very high representation of the real estate and utility sector in ESG bond issuance could have caused investor fatigue, yet we have shown in the past that in the secondary market the bonds issued by real estate and utility companies eventually achieve high greeniums. However, this has yet to transpire in this year's ESG bonds as roughly 65% of the NIP on high concessions issues remains intact (this is 50% for non-ESG bonds).

EBA published technical standards for ESG risk disclosures

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- **The EBA published draft technical standards for bank disclosures for ESG risks more generally, as well as climate change transition and climate change physical risk specifically**
- **The Green Asset Ratio (GAR) and the Banking Book Taxonomy Alignment Ratio (BTAR) are both metrics that need to be disclosed**
- **Although full reporting will not be until 2024, the exercise will eventually lead to comprehensive and comparable information about the ESG related risks of financial institutions**

The **European Banking Authority (EBA)** published the final draft implementing technical standards (ITS) on prudential disclosures on ESG risks on 24 January (see here). The ITS include tables and templates for qualitative and quantitative disclosures on ESG risks more generally, as well as climate change transition and climate change physical risk specifically. They will also include quantitative information on key performance indicators on climate change mitigating measures, such as the Green Asset Ratio (GAR) and the Banking Book Taxonomy Alignment Ratio (BTAR). The information will in the end be provided on a biannual basis, using 30 June and 31 December as reference dates. Although the first reports will only be published next year (see table below), and most information only in 2024, this will eventually provide comprehensive and comparable information about the ESG related risks of financial institutions as well as information about how they mitigate these risks.

What to report?	Reference date	First reporting deadline
ESG Risk	31/12/2022	Q1 2023
GAR	31/12/2023	2024
BTAR	30/06/2024	June 2024
Scope 3 emissions	30/06/2024	June 2024*

*There is a phase-in period already applicable, which requires financial institutions to either already disclose scope 3 emissions, or disclose information on their plans to implement methodologies to estimate and disclose this information. All financial institutions must however be able to disclose scope 3 emissions by June 2024.

The EBA also noted that it takes a sequential approach in developing the ITS, with a focus on risks stemming from climate change. At a later stage, the ITS will be extended to capture disclosures on a broader range of ESG risks. Overall, the ITS fits the broader picture of financial regulators increasingly shifting focus to ESG risks, while also fulfilling the need from investors to get more detailed information about those risks. Below we will highlight the most important details of the different reports that financial institutions need to deliver.

What is GAR and BTAR and how are they calculated?

The Green Asset Ratio (GAR) and the Banking Book Taxonomy Alignment Ratio (BTAR) are both metrics that need to be disclosed by financial institutions under the upcoming requirements as set out by EBA for pillar 3 disclosures on ESG risks. The GAR is also a metric that needs to be disclosed as per Article 8 of the Taxonomy Regulation set out by the EU.

The GAR and the BTAR have similar calculations. However, while the GAR takes into account exposures towards counterparties subject to the Non-Financial Reporting Directive (NFRD), i.e. large public companies (>500 employees), the BTAR also focuses on companies that fall out of scope of the NFRD. Both assess the share of a financial institution's exposure towards EU Taxonomy aligned activities (as per the EU Taxonomy Climate Delegated Act).

The numerator of the GAR is the loans and advances, debt securities, equities, and repossessed collaterals that are targeted at financing taxonomy-aligned economic activities. As such, it captures total exposures aligned with the EU Taxonomy on climate change mitigation & adaptation. The assessment of whether exposures are aligned with the EU Taxonomy shall be done as follows:

- For project financing, the screening for alignment is done on a project-by-project basis

- For general corporate lending, financial institutions shall rely on the information provided by corporates covered by the NFDR
- For loans collateralized with residential immovable and/or housing funding, assessment is done based on EPC label information of the property financed
- For motor vehicle loans to retail, the screening needs to take into account the energy efficiency of the vehicle

The denominator of GAR covers the total on-balance sheet covered assets (i.e. all on-balance sheet exposures except for sovereign exposures and the trading portfolio). The GAR also needs to be broken down into funding towards specialized lending, transitional and enabling activities.

Meanwhile, the BTAR follows similar calculations, although it also includes exposures towards non-financial corporates not subject to NFRD disclosure obligations. Institutions must assess these exposures on a best effort basis and based on information collected bilaterally from their counterparties or calculated using estimates for those counterparties that do not have disclosure obligations.

Disclosure on scope 3 and ESG risks

Financial institutions are also asked to disclose information on their scope 3 emissions, i.e. financed GHG emissions of counterparties (scope 1, 2 and 3 emissions). Methodologies and sources used for these calculations also need to be disclosed. Furthermore, the scope 3 figure needs to be translated into relative terms as well. This depends on the sector of the counterparty, and will be based on alignment metrics defined by the International Energy Agency (IEA) for different sectors. This requires therefore the financial institution to calculate the distance from the current emission value of the alignment metric to the 2030 target in the IEA net zero by 2050 scenario.

Additional to that, institutions are also required to disclose the gross carrying amount of exposures towards selected sectors (such as agriculture, mining, manufacture, electricity, construction, real estate, etc). Specifically for exposures as loans collateralized by immovable properties, the institution shall also disclose the EPC label breakdown of the collateral (incl. properties without EPC labels), as well as the level of energy consumption (EP score in kWh/m2). Information on the energy consumption will be that indicated in the EPC label when available, or as estimated by the institution in the absence of an EPC label and if the institution is using internal models to produce these estimates.

Financial institutions shall also estimate their exposure towards the global top 20 carbon-intensive firms (based on evidence and public information), as well as exposures subject to physical risk (based on the location of the asset). For the latter, the institution shall rely on information provided in dedicated portals and databases that identifies geographies prone to specific climate-related hazard.

Another requirement of disclosure is regarding the assessment towards qualitative ESG risks. EBA has included three tables that specify the information that institutions must provide. This includes for example highlighting: (i) the objectives, targets and limits to assess and address environmental risk in short-, medium-, and long-term; (ii) the policies and procedures relating to engagement with counterparties on their strategies to mitigate and reduce environmental risks; (iii) the integration of measures to manage social factors and risks in internal governance arrangements; and (iv) the integration of governance factors in the risk management of their counterparties.

Doubts about EC's plans to make existing buildings greener

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- **The climate neutral targets for new buildings are easier to achieve compared to making existing buildings climate neutral**
- **Around 85% of all current buildings in Europe – private and public – will still have a function by 2050**
- **Residential buildings are the lions share of these, yet a significant proportion do not have an energy label, adding complexity to renovation targets**

Europe is not setting the bar high enough to reduce building energy consumption, according to a recent report (see **here**) published by the Building Performance Institute Europe (BPIE).

The European Commission (EC) set ambitious goals in late 2021 to achieve a low-carbon built environment by 2050. It was the starting point for new generation climate neutral buildings. From 2030, all new buildings – both private and public – in the EU must be emission-free. Governments will lead by example. The EC aims to ensure that all new public buildings to be built are emission-free from 2027 on.

The climate neutral targets for new buildings are easier to achieve compared to making existing buildings climate neutral. This is the biggest challenge. The EC has calculated that approximately 85% of all current buildings in Europe – private and public – will still have a function by 2050. To get started, the EC has proposed that at least 15% of the most energy-inefficient buildings should be upgraded from class G of the energy performance certificate to at least class F by 2027. This timeline applies to public buildings. For the homes, the upgrade must be completed by 2030.

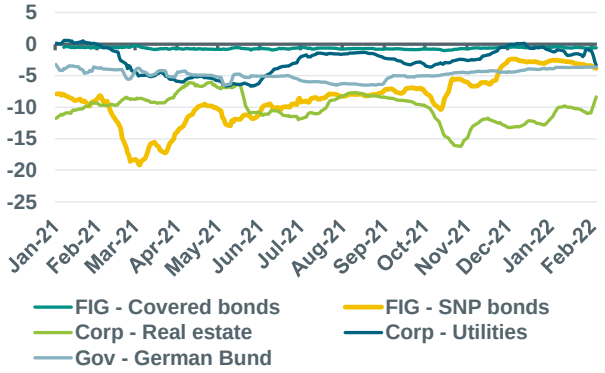
More than 87% of the built environment in the Netherlands consists of residential buildings. This means that only a small portion consists of public buildings. Therefore, the upgrade from class G to F in residential building sector will have the biggest effect on CO2 reduction goals. In 2020, there were more than 177,000 homes in the Netherlands in class G. This means that almost 27,000 homes will have to be renovated to class F in the next 8 years, based on the EC target. From this week, there would be almost 60 homes to renovate per week, until 2030. For Dutch standards, this is a relative simple task on paper, given the annual renovation efforts by housing corporations.

However, the figures are not complete. Of all existing homes in the Netherlands, about 42% still do not have a valid energy label. For the time being, an energy label is only required when selling a house. With the current tightness in the Dutch housing market, this share will not change quickly in the near future. Many other countries in Europe face the same problem. This makes it difficult to measure the ambitious target of the EC and adds additional complexity.

ESG in figures

ABN AMRO Secondary Greenium Indicator

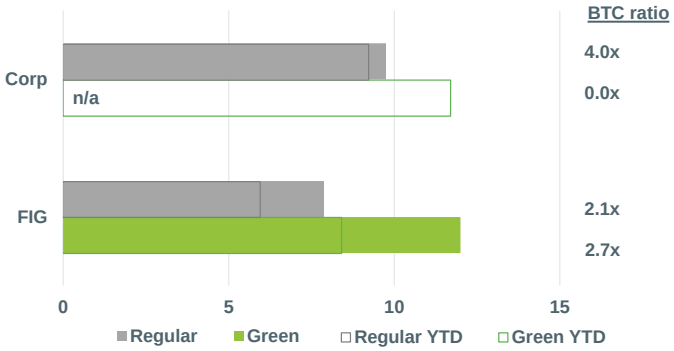
Delta (green I-spread – regular I-spread)



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. Source: Bloomberg, ABN AMRO Group Economics

ABN AMRO Weekly Primary Greenium Indicator

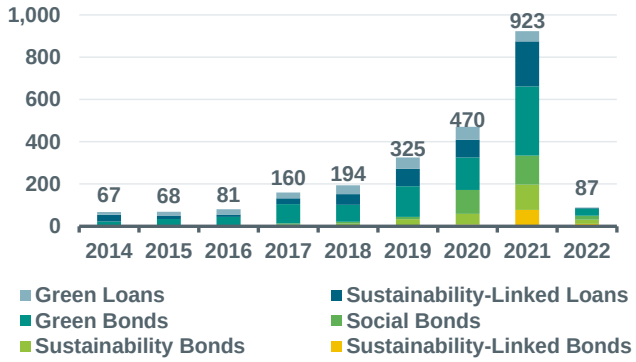
NIP in bps



Note: Data until 10-2-22. BTC = Bid-to-cover orderbook ratio. Source: Bloomberg, ABN AMRO Group Economics.

Sustainable debt market overview

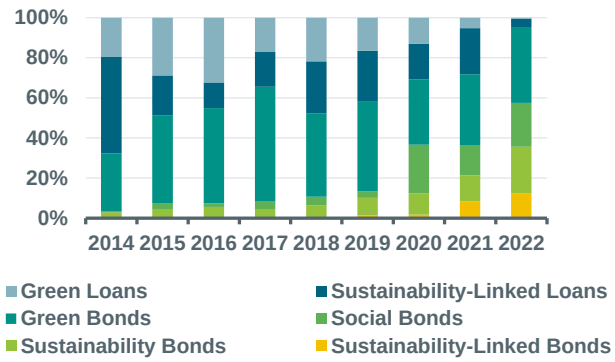
EUR bn



Source: Bloomberg, ABN AMRO Group Economics

Breakdown of sustainable debt by type

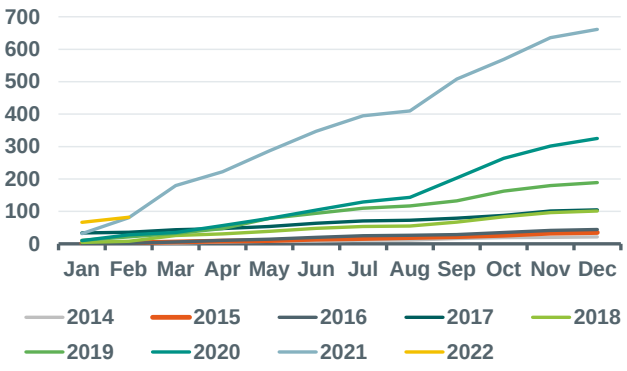
% of total



Source: Bloomberg, ABN AMRO Group Economics

YTD ESG bond issuance

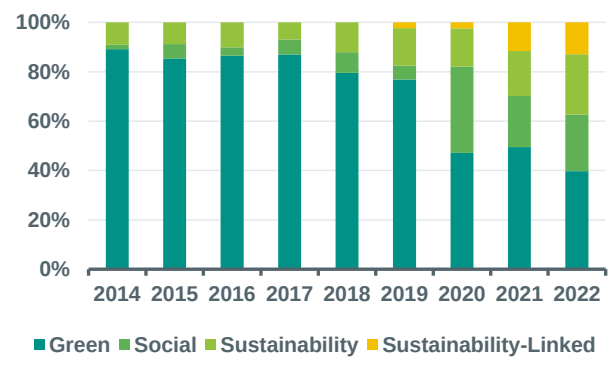
EUR bn



Source: Bloomberg, ABN AMRO Group Economics

Breakdown of ESG bond issuance by type

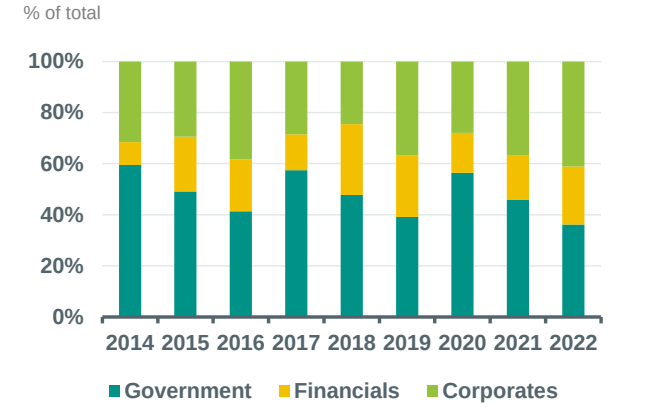
% of total



Source: Bloomberg, ABN AMRO Group Economics

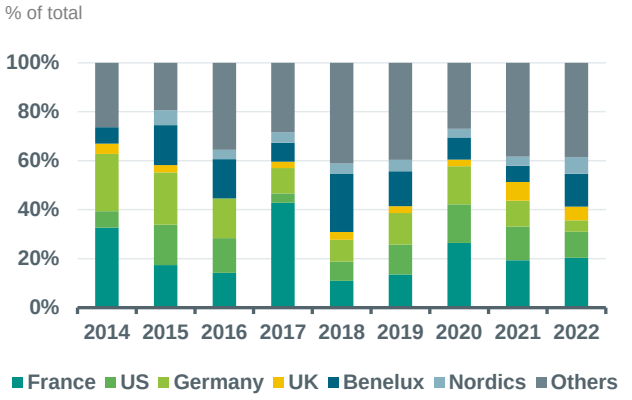
Figures hereby presented take into account only issuances larger than EUR 250m and in the following currencies: EUR, USD and GBP.

Breakdown of ESG bond issuance by sector



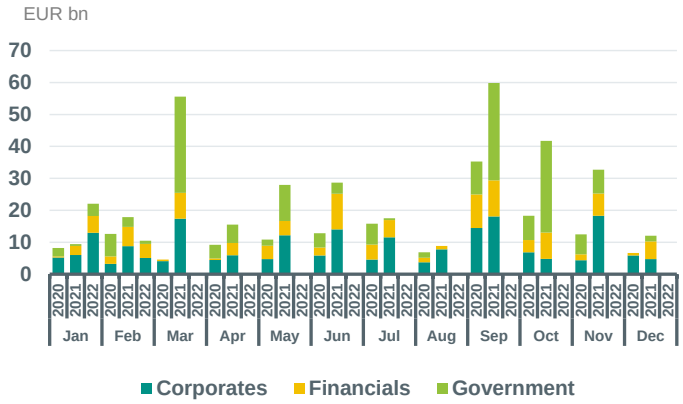
Source: Bloomberg, ABN AMRO Group Economics

Breakdown of ESG bond issuance by country



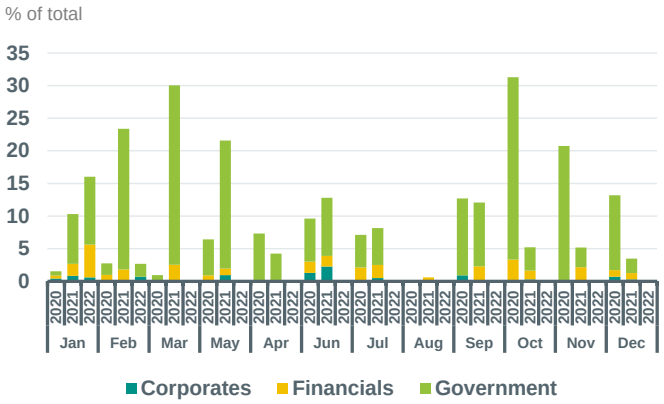
Source: Bloomberg, ABN AMRO Group Economics

Monthly Green Bonds issuance by sector



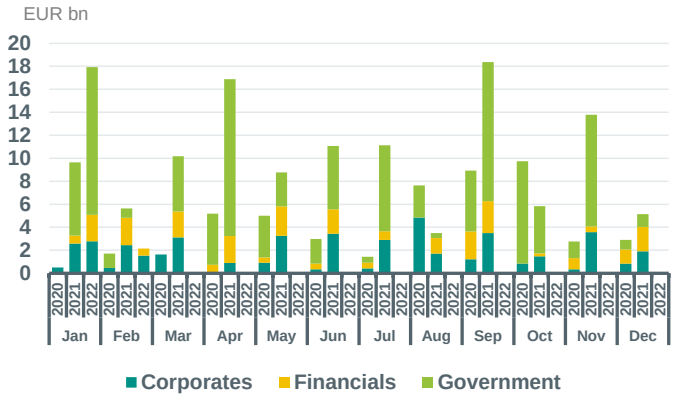
Source: Bloomberg, ABN AMRO Group Economics

Monthly Social Bonds issuance by sector



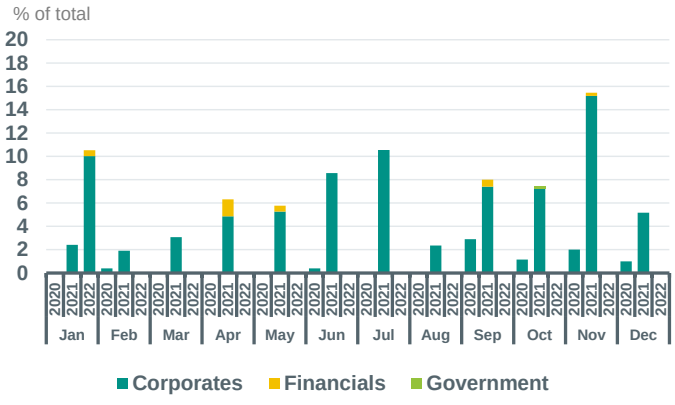
Source: Bloomberg, ABN AMRO Group Economics

Monthly Sustainability Bonds issuance by sector



Source: Bloomberg, ABN AMRO Group Economics

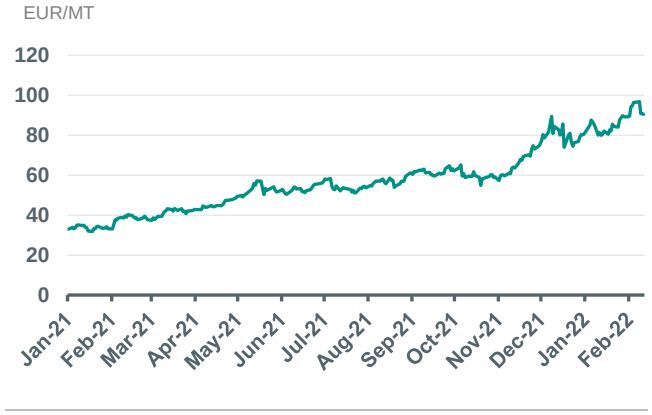
Monthly Sust.-Linked Bonds issuance by sector



Source: Bloomberg, ABN AMRO Group Economics

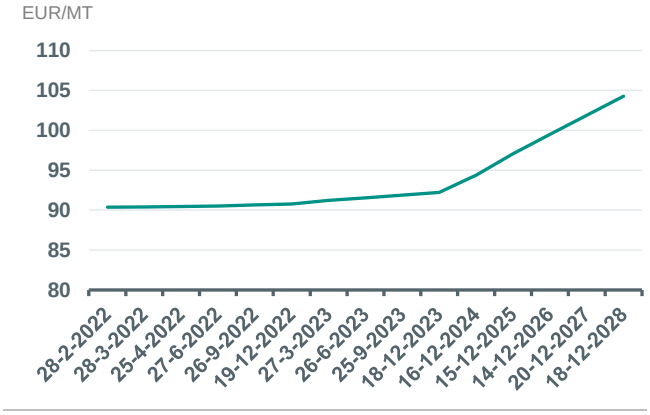
Figures hereby presented take into account only issuances larger than EUR 250m and in the following currencies: EUR, USD and GBP.

Carbon contract current prices (EU Allowance)



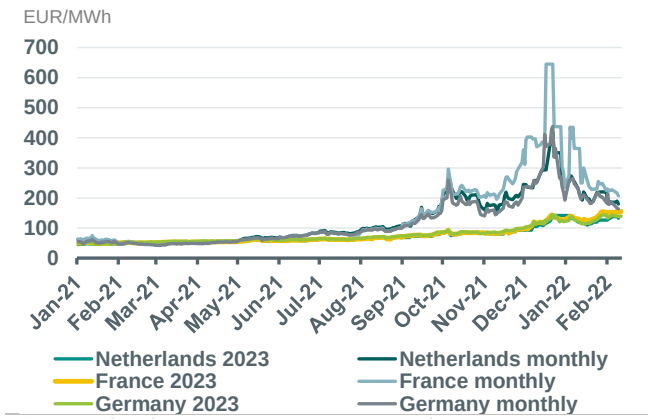
Source: Bloomberg, ABN AMRO Group Economics

Carbon contract future prices (EU Allowance)



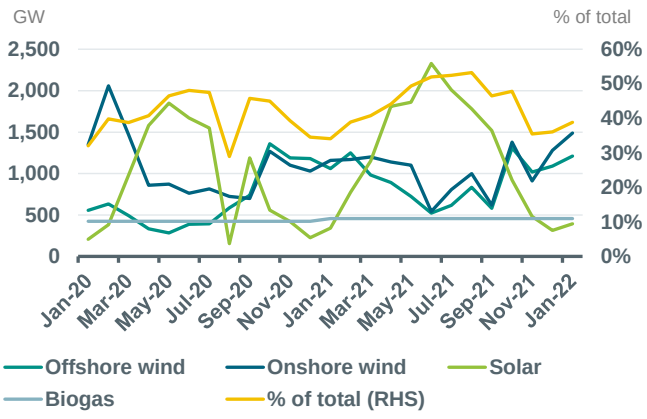
Source: Bloomberg, ABN AMRO Group Economics

Electricity power prices (monthly & cal+1 contracts)



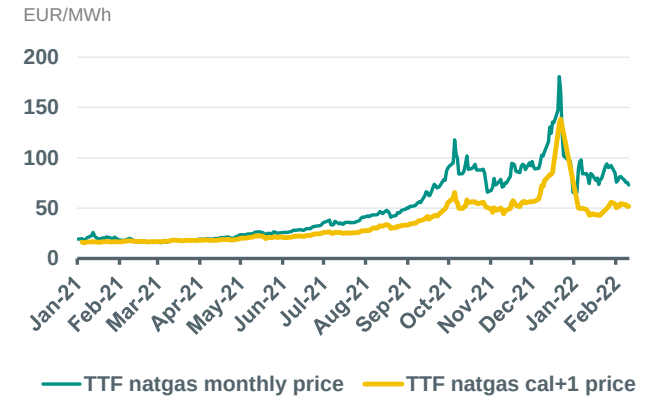
Source: Bloomberg, ABN AMRO Group Economics. Note: 2023 contracts refer to cal+1

Electricity generation from renewable sources (NL)



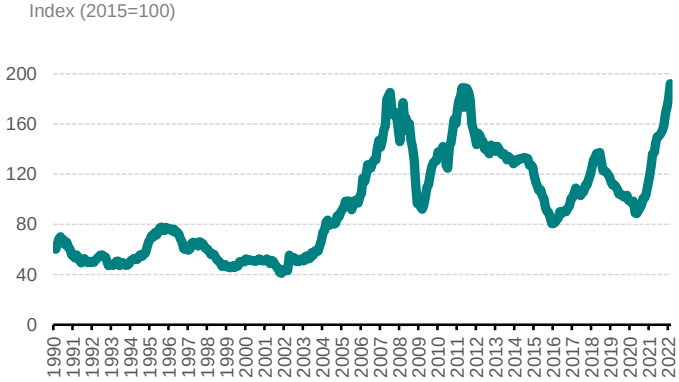
Source: Energieopwek (Klimaat-akkord), ABN AMRO Group Economics

TTF Natgas prices



Source: Bloomberg, ABN AMRO Group Economics

Price of commodities necessary for energy transition



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

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