# SustainaWeekly

## Why climate solidarity matters

- **Economist: Climate solidarity is one of the big topics on the agenda at COP27. New estimates suggest developing countries will need a trillion dollars annually by 2030. This amount dwarfs the 100bn target, which is not even currently being met. Progress at the summit is very limited so far and the US plan of finance via carbon credits still lacks detail.**

- **Strategist: Green bond assets from IG real estate issuers have superior energy intensity and carbon footprint when compared to overall company levels. Hence, while one would expect green bond holders to be willing to pay up for these instruments, we show that the greenium is no longer visible in the real estate space. This could be due to the poor state of the real estate credit market, making investors push ESG considerations to the backburner.**

- **Sectors: The share of environmental investments in industry and the energy sector has been rising. With pressure from society due to the climate crisis and pressure on profits emanating from the current energy crisis, environmental investments are becoming more interesting. The climate investment share should rise further in coming years.**

- **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 week's SustainaWeekly, we start by looking at the topic at the top of the agenda at COP27: climate solidarity, and why it matters. The calls for climate solidarity reflect the major financing needs of developing and emerging economies outside of China, which exceed those of the advanced economies. External finance will need to total one trillion dollars annually by 2030, which dwarfs the current USD 100bn target, which is not being met. Carbon emissions of these countries amount to around a third of total global emissions. So the decarbonisation of these economies is crucial if we are to see global warming limited to 1.5 degrees. Progress at the summit so far has been disappointing. We go on to look at developments of climate investments in the industrial sector and whether the higher impact of green bonds by real estate issuers is priced in.

Enjoy the read and, as always, let us know if you have any feedback!

Nick Kounis, Head Financial Markets and Sustainability Research | nick.kounis@nl.abnamro.com

# Climate solidarity the focus at COP27

Nick Kounis – Head Financial Markets & Sustainability Research | nick.kounis@nl.abnamro.com

- **Climate solidarity is one of the big topics on the agenda at COP27**
- **New estimates suggest developing countries will need a trillion dollars annually by 2030**
- **This amount dwarfs the 100bn target, which is not even currently being met**
- **Progress so far is very limited and the US plan of finance via carbon credits still lacks detail**

Climate solidarity is one of the big topics on the agenda at COP27. The Secretary General of the UN has called for 'a historic Pact between developed and emerging economies – a Climate Solidarity Pact', in which 'wealthier countries and International Financial Institutions provide financial and technical assistance to help emerging economies speed their own renewable energy transition'. He said that the US and China 'have a particular responsibility to join efforts to make this Pact a reality' and the choice for humanity was to 'cooperate or perish'.

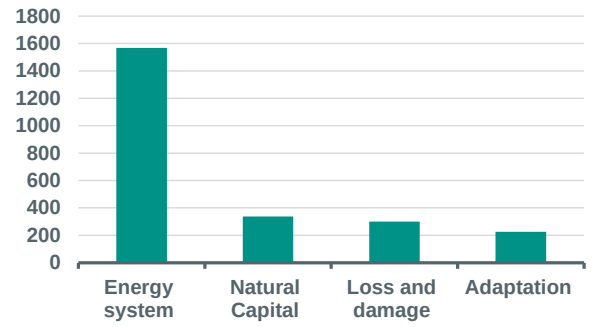
**Investment and spending needs total USD 2.4 trillion per annum by 2030**

The calls for climate solidarity reflect the major financing needs of developing and emerging economies outside of China, which exceed those of the advanced economies. Indeed, this is a point we highlighted in this publication last week. However, a new report, underlines this point. The Report of the Independent High-Level Expert Group on Climate Finance (see here) – commissioned by the UN and the COP26 and COP27 Presidencies - sets out the broad financing needs of these economies related to transition and climate change to be consistent with a 1.5 degree scenario.

It estimates the total annual investment and spending needs for climate action per year by 2030 for emerging markets and developing countries (EMDC) other than China at around USD 2.4 trillion (see charts below). This covers what is needed to transform the energy system, coping with the loss and damage from climate change, investing in adaptation and resilience and investing in natural capital. As such, it constitutes a comprehensive estimate of the financial need.

**Investment and spending needs for climate action**

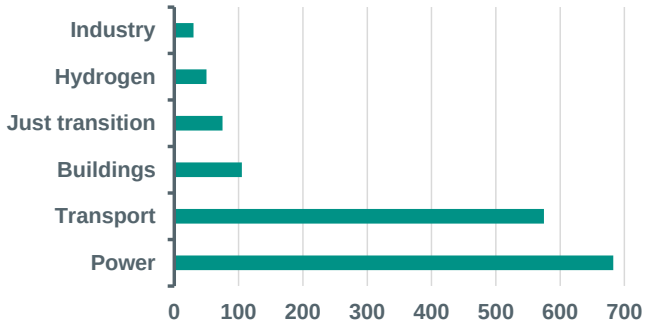
USD bn per annum by 2030 for EMDC other than China




Source: Independent High-Level Expert Group on Climate Finance

**Breakdown for energy system**

USD bn per annum by 2030 for EMDC other than China




Source: Independent High-Level Expert Group on Climate Finance

**External financing need around USD 1 trillion**

So how much extra money do EMDCs need and where might it come from? The report notes that there is not a large amount of additionality in the investments required to align energy systems in EMDCs (other than China) with climate objectives. The authors estimate that only around USD 550bn of the roughly USD 1.5 trillion total annual financing need for the energy transformation by 2030 will be additional investment. This is because the growth and structural change agendas in EMDCs already entail substantial investment requirements in the energy sector. However, investment requirements in natural capital, adaptation and resilience, and spending on loss and damage will be additional. This leaves the additional needs at just under USD 2 trillion. The report concludes that around half of the required financing can be reasonably expected to come from local sources, leaving an external financing need of around USD 1 trillion. This is ten times the USD

100bn financing target to be provided and mobilised by developed countries for climate action in developing countries by 2020 (which still has not been met). The authors clarify that 'USD1 trillion is not the new USD 100 billion' as the latter was negotiated, not deduced from analyses of what is necessary for a purpose.

**Potential financing mix**

The report sets out a four pronged strategy that could secure the size of financing flows set above. First, each country should set out its own strategy for investment aligned with the Paris agreement. Second, the scaling up of finance from multilateral development banks (MDBs) and other development finance institutions (DFIs). It estimates that flows from these institutions should triple by 2025 (from USD60bn to USD 180bn) and that decisions to this end need to be taken very quickly, with the annual meetings of the MDBs in 2023, COP28, and G20/G7 crucial. Third, private sector investment and finance at scale, achieved via partnerships with countries and international financial institutions. It notes that the setting up of the Glasgow Financial Alliance for Net Zero (GFANZ) initiative - a global coalition of leading financial institutions committed to accelerating the decarbonization of the economy – was a big step forward, but it was important now to translate the commitment into action. Fourth, bilateral official development assistance for climate should be doubled by 2025 (USD 30bn to USD 60bn). To this end, donor countries need to take decisions now to incorporate this into their budgets. This could be supplemented by an international financing facility, which could expand the availability of low-cost finance through use of guarantees.

**Progress at COP27 very limited so far**

Given the scale of the challenge set out above, progress at the COP27 summit has been very limited so far. The UK said it would allow some debt payment deferrals from developing countries, while Austria and New Zealand put forward funding for loss and damage. Meanwhile, the US proposed a new carbon trading scheme to boost investment in developing countries. The initiative – named the Energy Transition Accelerator (ETA) – is intended to attract finance for developing countries to support their clean energy transitions. The ETA would produce verified greenhouse gas emission reductions, which participating jurisdictions (at the national or subnational level) can issue as marketable carbon credits. The scheme is at a very early stage in terms of design, so that perhaps explains the very modest expressions of interest at this stage (two developing countries, two banks and two multinationals).

**US carbon trading proposal difficult to evaluate at this stage**

The lack of detail also makes an evaluation of the potential of the scheme difficult. Although it could help to attract private sector financing for the transition in EMDCs, therefore reduce emissions in these economies, the risk is that it comes at the expense of real carbon emission reduction by the multinationals. Therefore, for such a scheme to be effective, the emission cuts financed by projects in the EMDCs would need to be deeper/quicker that implied by 1.5 degree scenario to be an effective carbon offset.

**EMDC transition crucial**

Carbon emissions of the EMDCs amount to around a third of total global emissions. So the decarbonisation of these economies is crucial if we are to see global warming limited to 1.5 degrees. The lack of impetus so far to help these countries finance the energy transition looks to be a major obstacle for the global economy achieving a Net Zero scenario.

# Green bond impact not resonating in real estate credit

Shanawaz Bhimji, CFA – Head of Corporate Debt Research | shanawaz.bhimji@nl.abnamro.com

- **EUR IG residential real estate bond issuers have all started publishing their green bond impact reports, which showcase the energy demand and carbon emission in the properties allocated to green financing**
- **This allows for a comparison against the climate credentials of the overall issuer real estate portfolio, but also benchmarking amongst the issuers**
- **German bellwether Vonovia/Deutsche Wohnen achieves the largest reduction from the regular portfolio**
- **Finnish residential real estate issuers Kojamo and Sato have better starting points in terms of energy use and emission against German and Dutch names, which is remarkable given the harsher weather conditions in their operating region**
- **However, the bond market (or green bond investors specifically) seem to assign zero weight to the superior profile of the green assets, as none of the underlying green bonds trades at tighter credit spreads**

Green bond investors are looking for climate impact in terms of the assets they specifically finance. The real estate sector, which has strong decarbonization objectives, should therefore find strong appetite at green bond investors looking for impact. Previously, we have indeed shown that in secondary market many real estate bonds trade at a lower spread than their non-green equivalents. Although the market for real estate credit has incurred significant spread widening, we would have expected that green bond investors would stick to their principles for a stronger bid, especially now that issuers can clearly demonstrate the climate superiority of the assets they have put-up for finance under the green bond. By looking specifically at the residential real estate part of the market, since all the issuers in this segment that have printed EUR green bonds have published allocation reports, we try to figure out whether this higher bid still holds.

The EUR green bond residential real estate universe is small, only comprising four issuers being **Vonovia** (largely Germany - Vonovia recently acquired **Deutsche Wohnen**), **Vesteda** (Netherlands), **Kojamo** (Finland) and **Sato** (Finland). Still, we do note that some form of consistency is being applied across residential real estate issuers in the sense that the measurement of energy usage and emissions also spans tenant scope. There might be some differences in approach, such as the fact that tenant electricity usage is not included in the energy and emission numbers published by Vonovia. While the Finish operators have managed to proceed to live tracking of energy usage at their tenants, Vonovia and Vesteda calculate energy and emission impact on the back of energy labels. The table below shows a summary from the latest published green bond allocation reports and issuer 2021 sustainability reports.

| | Kojamo (BBB2) | | Vonovia (BBB1) | | Deutsche Wohnen (BBB1) | | Sato (BBB2) | | Vesteda (A3) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 | 2021 | 2020 | 2021 | 2020 | 2021 | 2020 |
| Energy intensity green bond real estate portfolio (KWh per sqm per annum) | 78.5 | Unk | 64 | Unk | 66 | Unk | 77.9 | Unk | 107.9 | 107.6 |
| Energy intensity entire real estate portfolio (KWh per sqm per annum) | 98 | 89.7 | 162.2 | 165.1 | 159 | 160 | 110 | 109.2 | 126.9 | 125.5 |
| Emission intensity green bond real estate portfolio (CO2 kg per sqm per annum) | 10.6 | Unk | 13.7 | Unk | 14 | Unk | 16.9 | Unk | 20.3 | 20.2 |
| Emission intensity entire real estate portfolio (CO2 kg per sqm per annum) | 11.2 | 14.3 | 36.1 | 37.1 | 38.7 | 39 | 26 | 22.3 | 25.2 | 23.1 |
| Energy usage green bond portfolio vs total portfolio | -20% | Unk | -61% | Unk | -58% | Unk | -29% | Unk | -15% | -14% |
| Emission reduction green bond portfolio vs total portfolio | -5% | Unk | -62% | Unk | -64% | Unk | -35% | Unk | -19% | -13% |

Source: Sato, Vonovia, Kojamo, Vesteda, ABN AMRO Group Economics. Note: Unk = Unknown

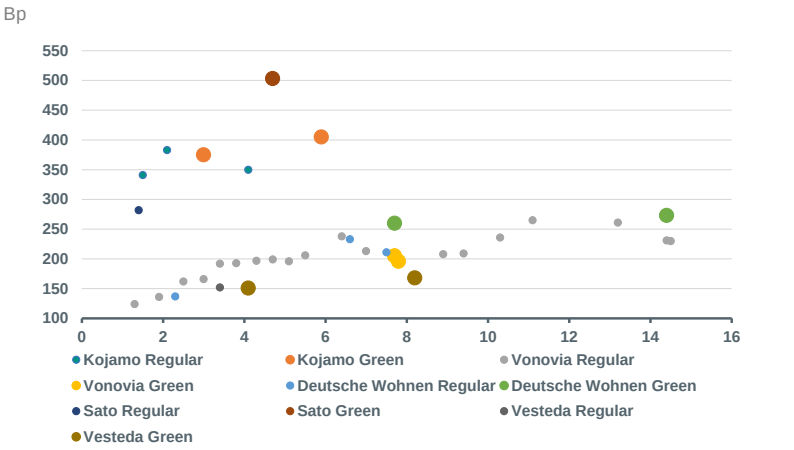
Clearly the Vonovia green bond holder achieves the largest impact in comparison to the regular Vonovia bond holder. Energy intensity and emissions sit roughly 60% lower than at overall company level, and in the case of its recent Deutsche Wohnen acquisition, the green bond properties emit nearly 65% less CO2 per square metre (sqm). When we extrapolate the 24.6 KWh per sqm tenant electricity usage as reported by Dutch peer Vesteda (since Vonovia does not report on electricity),

the energy usage on green bond assets rises from 64 KWh per sqm to 85 KWh per sqm. This would still imply a 54% lower intensity than at regular bond level, which again reflects much more impact than at the other issuers.

**Despite data showing lower emissions, greeniums are difficult to come by**

We highlighted the superior energy intensity and carbon footprint at Vonovia, but this feature is also available across all issuers, as one would expect. Hence, if the green bond is funding assets with better climate impact, even if the difference only amounts to 5% as reflected in the case of Kojamo, the green bond holder should be willing to pay up. The chart below shows that this is clearly not the case and in some cases we are even seeing green bonds trading at wider credit spreads today. The best example is the Deutsche Wohnen 0.5% 2031 green bond which trades at 20bp pick-up to the Deutsche Wohnen 2031 1.625% regular bond. Valuations should speak in favour of the green bond, given the huge difference in energy usage and emissions to company level.

**Greeniums difficult to come by in residential real estate green bonds**




Source: Bloomberg, ABN AMRO Group Economics

Green bond valuations in the Finnish names are also off-course. The Kojamo 2% 2026 green bond trades at 25bp of pick-up to the Kojamo 1.875% 2027 regular bond, despite featuring a 1y less in duration. In the case of Sato, the 1.35% 2028 trades at the highest (222bp) spread steepness in this universe to its shorter dated equivalent non-green bond, being it the 1.375% 2024. Such steepness is not visible at similarly BBB2 rated Kojamo, while Sato on a stand-alone basis reports lower ND/EBITDA (12.6x) than Kojamo (14.3x), according to the latest rating agency adjusted financial metrics. Presumably the Sato bonds are still reeling from the negative credit outlook issued at parent company level, although this has been recently revised back to stable. Clearly, investors have pushed ESG features on this bond to the backburner.

Finally, we see a flat credit term spread between the Vesteda 2% 2026 non-green and the Vesteda 1.5% 2027 green bond. But this does not seem to be driven by the green label of the 2027 bond, since we see similar flatness in term premia on Vonovia non-green bonds as well. Also, one might deem the 40bp tighter spread on the Vesteda 0.75% 2031 bond vs the Vonovia 0.75% 2032 bond as a sign that perhaps in this instrument the greenium has materialized. But one needs to take the one-notch credit rating differential between Vesteda (A3) and Vonovia (BBB1) into consideration, which for example, in the commercial real estate space contributes to 27bp of difference, judging by the difference in valuations in Gecina (A3) and Covivio (BBB1), for example. This then leaves only 13bp of greenium, which seems scant given that Vesteda's green bond portfolio generates nearly half the emissions as to what is reported at Vonovia company level.

Clearly, investors are not spending too much time on assessing impact report, because we would have ideally seen greeniums manifesting across all issuers. This is likely due to the poor state of the real estate credit market, where credit spreads have gone through the roof and liquidity has all but evaporated. However, given the occurrence of greeniums in the past, we would not be surprised that once the market normalizes, that the green bonds would outperform their regular equivalents. Especially since issuers are providing hard data these days on what kind of impact their green bonds are having.

# Environmental and climate investments slowly gaining ground

Casper Burgering – Economic Transition Economist | casper.burgering@nl.abnamro.com

- **The share of environmental investments in industry and energy sector has been rising**
- **With pressure from society due to the climate crisis and pressure on profits emanating from the current energy crisis, environmental investments are becoming more interesting**
- **Companies in sectors have numerous low-carbon technologies and options available at their fingertips to reduce greenhouse gas emissions**
- **However, a deterioration in producer confidence due to an unfavourable economic climate is going to negatively affect investment in industry in the coming quarters**

There is a greater focus in the private sector on sustainable investments and decarbonisation of products and processes. Companies are reacting faster to pressure from society due to the climate crisis and are seeing profits eroded by the current energy crisis. This is when investments in, for instance, renewable energy generation or other low-carbon technologies become increasingly interesting. CBS figures show that these investments have gained ground in recent years. Investments in low-carbon technologies and renewable energy will also need to increase significantly in the coming years to achieve the net-zero scenario by 2050, as described in our analysis from previous editions of this publication (see here and here).

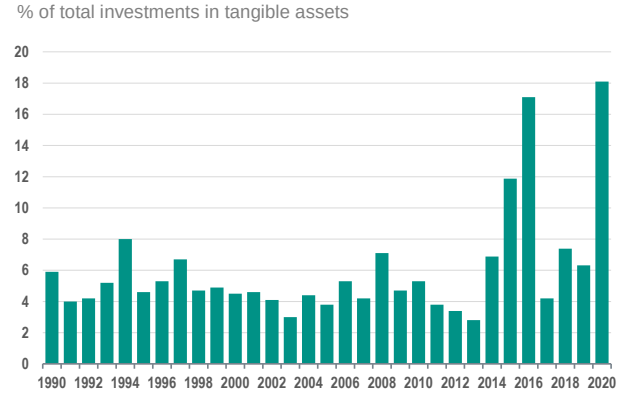
**Environmental investments**

A recent analysis on the economic impact of heatwaves - published in late October in the journal *Science Advances* - estimates that global warming caused between USD 5 billion and USD 29 billion in damages to the global economy between 1992 and 2013. In particular, it had a strong negative impact on the national income of many developing countries. The study thus underlined the relevance of climate policies that address environmental injustice on a global basis, but also the importance of significantly increasing environmental investments (including investments in climate measures) to limit further global warming, among other things.

According to Statistics Netherlands (CBS), environmental (or climate transition) investments[1)] relate to investments in tangible fixed assets whose main motive is to protect, restore or improve the environment. These investments do not necessarily pay for themselves within three years, which is sometimes the case with many other investments. The CBS also points out that environmental investments increased across the business sector in 2021. Of the total investments of companies, 14.2% was intended for environmental investments. Nine years earlier, this was only 3.7%.

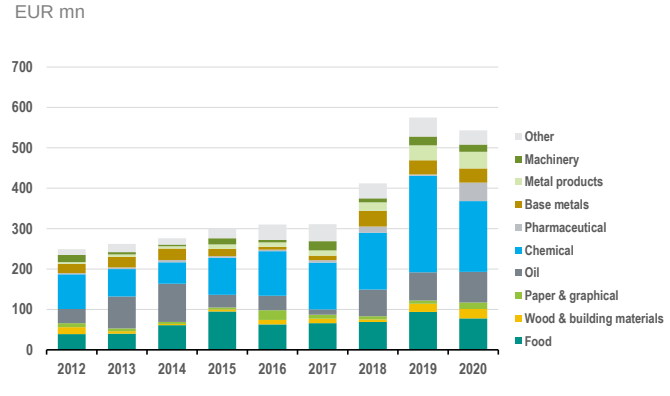
This is also reflected in the industry sector (these are the sectors of mineral extraction, manufacturing, energy supply and water extraction together). The share of environmental investments is also gaining ground here.

**Environmental investments industry sector**




Source: CBS, ABN AMRO Group Economics

**Environmental investments manufacturing subsectors**




Source: CBS, ABN AMRO Group Economics

From 2014, the share of environmental investments in total investments increased sharply and reached its first historical peak level in 2016. In the years 2017-2019, the share fell back to its old level, before reaching a new peak level in 2020. In that year, environmental investments had a share of around 18% in total investments. Figures for 2021 are still unknown, but with increasing pressure from the climate and energy crises, it seems very likely that the 2020 level was matched in 2021 and will be beyond. On precondition, of course, that by then the economic climate and business confidence remain up to par. In 2020, environmental investments in manufacturing sector reached EUR 543 million. This refers to investments made by industrial companies with 10 or more employees. The level of climate investment in 2020 was slightly lower than the level in 2019, which is mainly due to a strong decrease in the chemical industry. The strong increase in the share in the left figure is thus entirely due to additional investments by companies in the energy supply sector. In this sector, environmental investments increased by an enourmous 288% in 2020, from a level of EUR 543 million in 2019 to EUR 2,314 million in 2020.

**Investments in low carbon technologies**

Companies in various sectors are increasingly faced with politics, consumers, end-users, NGOs and (regional) governments putting pressure on them to achieve greater reductions in greenhouse gas (GHG) emissions. Among other things, it also translates into stricter laws and regulations from the EU and the Netherlands. More and more companies are required to monitor their energy consumption and/or make investments in energy-saving solutions if they have a decent return within a set time frame. ABN AMRO recently released a publication on this subject (**see here**), which provides low-carbon solution options for companies across a large number of sectors to reduce GHGs. The publication shows that it is not always necessary to invest heavily in low-carbon technologies. There is plenty of low-hanging fruit.

Companies in sectors within the Dutch economy have several opportunities to reduce GHG emissions that yield good results in the short term. For instance, companies can reduce their emissions by introducing energy efficiency measures. This is relatively easy to achieve and, if properly implemented, also effective in reducing GHG. In addition, processes can be electrified, but heat pumps, hybrid boilers and exploiting waste heat also help. These techniques are widely available and face relatively few obstacles.

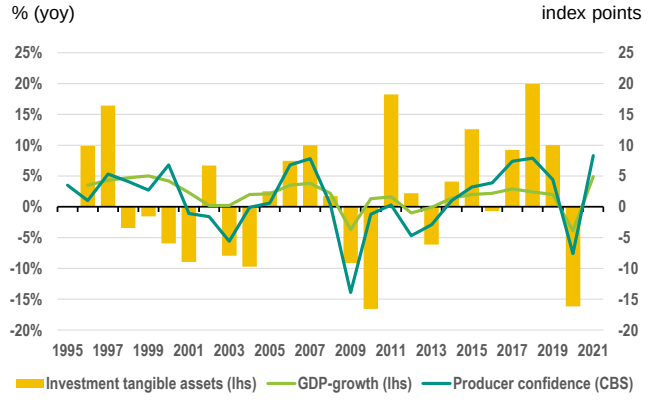
In the medium term, numerous other decarbonisation options for companies are under development or suitable for further scaling up. To reach the 2030 emissions of GHG target, it is necessary to implement current (demonstration) projects of technologies with known working principles. These include Carbon Capture & Storage (CCS) with high CO2 concentrations, recycling (plastics, scrap, biomass), green fuels and geothermal projects.

In the longer term, an acceleration of the transition is needed, especially for the period between 2030 and 2050. This involves innovative breakthrough techniques and further development of existing technologies, from, for example, process innovations and the deployment of (green) hydrogen.

**Confidence versus investments in industry**

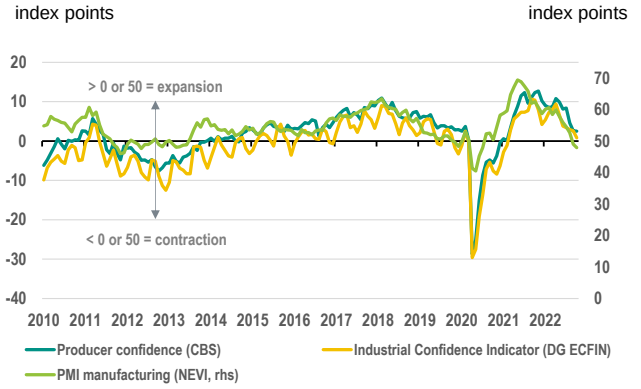
Firms' confidence about future industrial production has a strong correlation with the economic cycle. During an economic downturn, producer confidence drops. In this case, total investment also tends to weaken. When the economy rebounds, the opposite is true. This can be seen in the left-hand chart below. The links with investment do not always run one-to-one and some lag is visible. This is because investments are sometimes long-term projects and therefore react at a late stage.

## Investments industry vs. producer confidence




Source: CBS, ABN AMRO Group Economics

## Producer confidence industry




Source: CBS, ABN AMRO Group Economics

From the second quarter of 2022 onwards, producer confidence declined. We see this trend reflected in several confidence indicators. The purchasing managers' index (PMI) already reached contraction territory in October. This negative stance in confidence is most likely also going to have a negative impact on the investment of industrial companies.

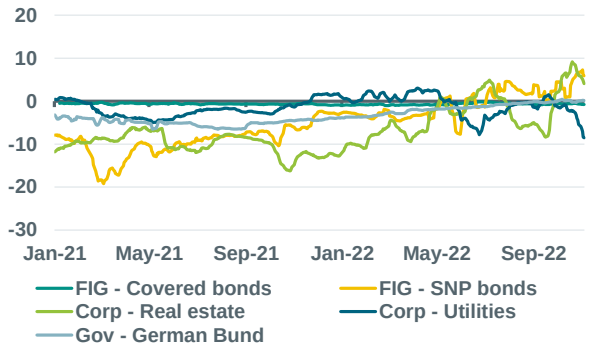
We expect (see here) the eurozone economy to contract by 0.9% in 2023. The Dutch economy is slightly more resilient. Broad government support through the energy price cap and the redistributive effects of this package will cause a smaller decline in consumption next year. As a result, the Dutch economy is capable of showing a slight growth of 0.7% in 2023. But the economic downturn in the eurozone and in particular the 1.8% economic contraction in Germany – the Netherland's main trading partner - will not do producer confidence - and thus indirectly investment in industry - any good.

[1]Environmental investments also include climate transition investments. Environmental investments are defined as investments to protect, restore or improve the environment. This may involve investments in the quality of water, air, soil, landscape, waste and also noise. So this can involve facilities that should lead to better air quality and a cleaner energy supply, such as investments in, for example, air filters, catalytic converters, wind turbines and solar parks.

# ESG in figures

## ABN AMRO Secondary Greenium Indicator

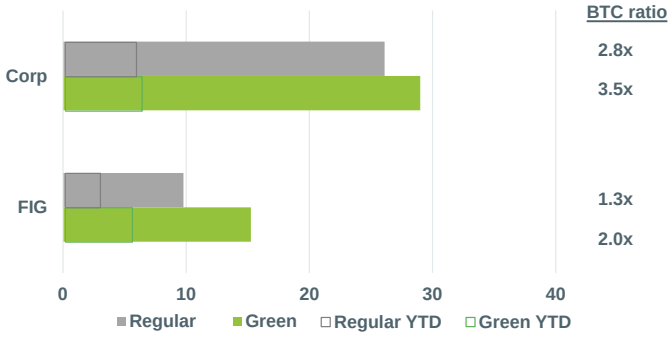
Delta (green I-spread – regular I-spread)




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. 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

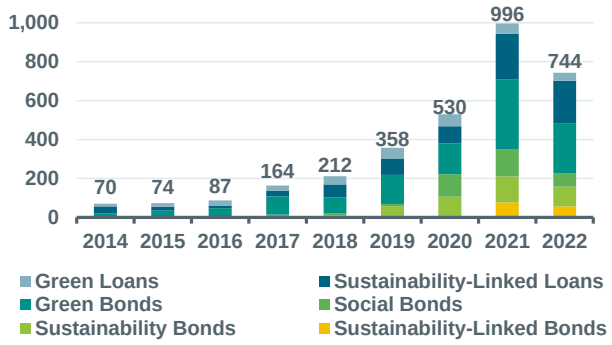
NIP in bps




Note: Data until 11-11-22. BTC = Bid-to-cover orderbook ratio. Source: Bloomberg, ABN AMRO Group Economics.

## Sustainable debt market overview

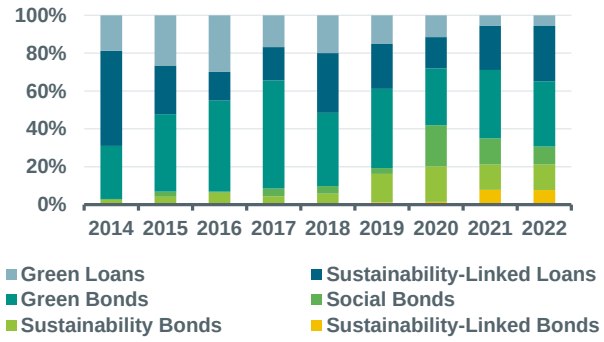
EUR bn




Source: Bloomberg, ABN AMRO Group Economics

## Breakdown of sustainable debt by type

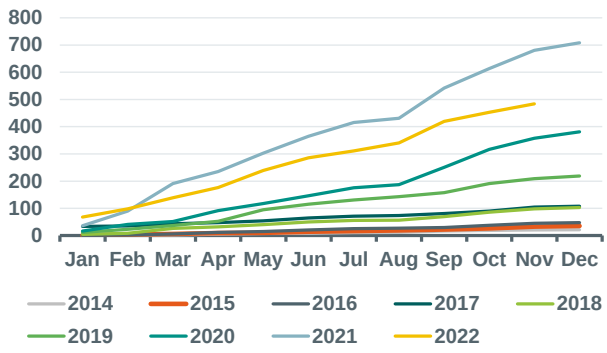
% of total




Source: Bloomberg, ABN AMRO Group Economics

## YTD ESG bond issuance

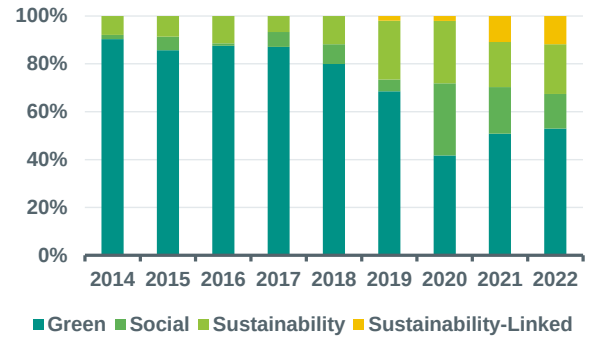
EUR bn (cumulative)




Source: Bloomberg, ABN AMRO Group Economics

## Breakdown of ESG bond issuance by type

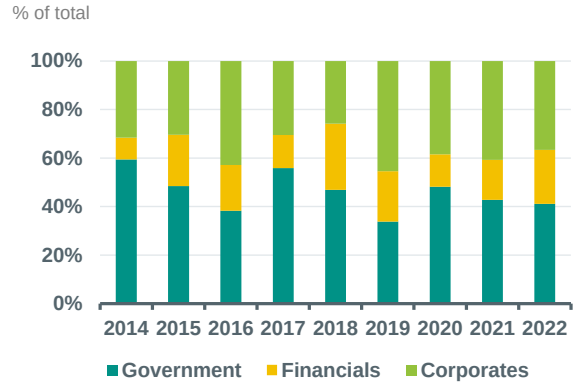
% of total




Source: Bloomberg, ABN AMRO Group Economics

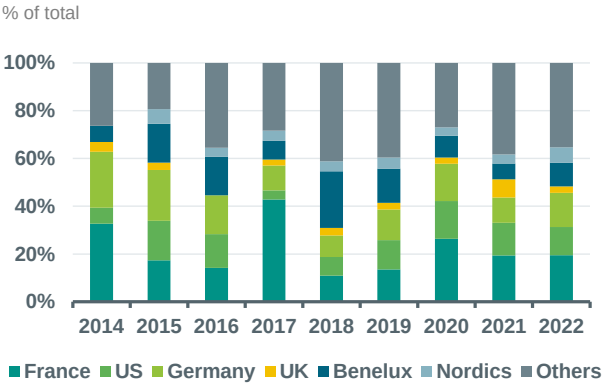
Figures hereby presented take into account only issuances larger than EUR 250m and in the following currencies: EUR, USD and GBP.

## Breakdown of ESG bond issuance by sector



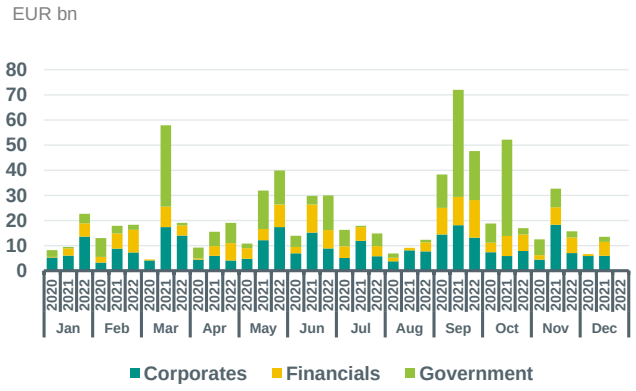

Source: Bloomberg, ABN AMRO Group Economics

## Breakdown of ESG bond issuance by country



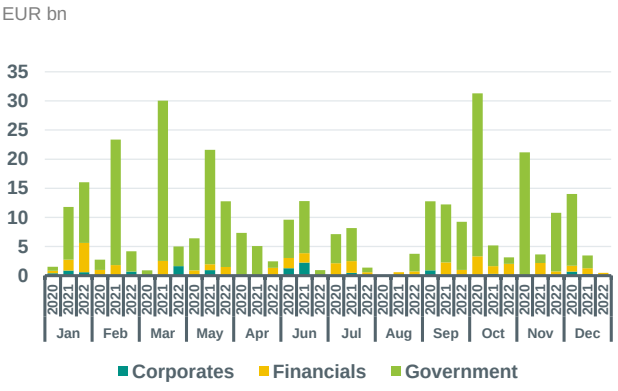

Source: Bloomberg, ABN AMRO Group Economics

## Monthly Green Bonds issuance by sector



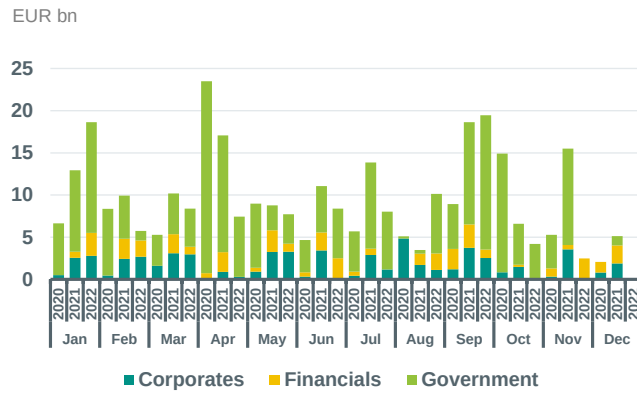

Source: Bloomberg, ABN AMRO Group Economics

## Monthly Social Bonds issuance by sector



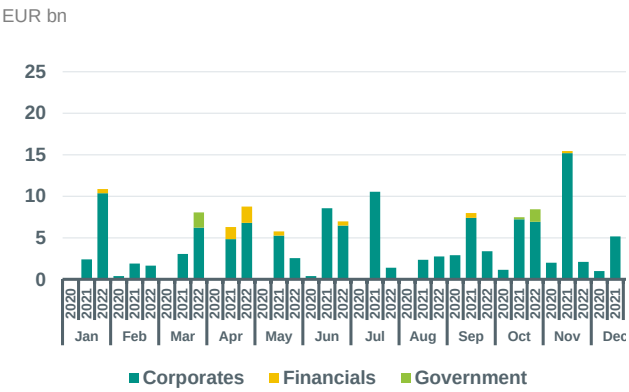

Source: Bloomberg, ABN AMRO Group Economics

## 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.

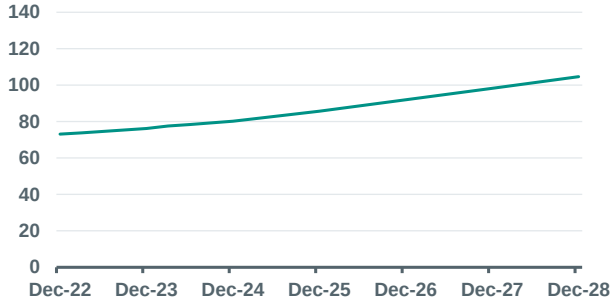
## Carbon contract current prices (EU Allowance)

EUR/MT


Source: Bloomberg, ABN AMRO Group Economics

## Carbon contract future prices (EU Allowance)

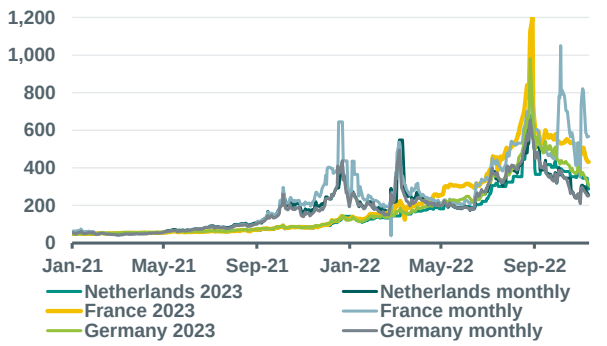
EUR/MT




Source: Bloomberg, ABN AMRO Group Economics

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

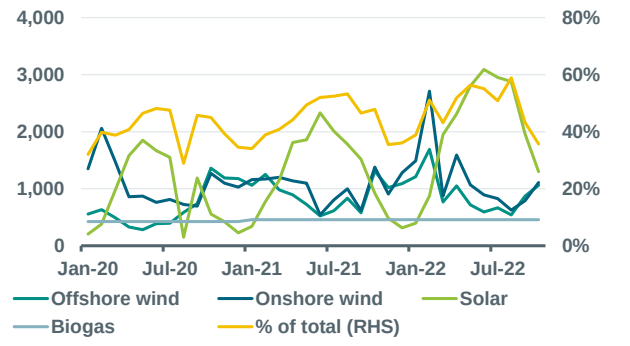
EUR/MWh




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

## Electricity generation from renewable sources (NL)

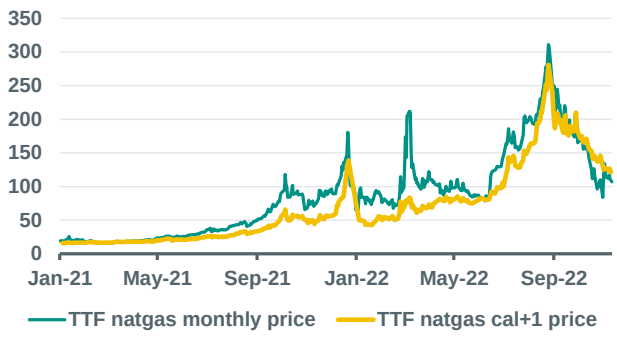
GW % of total




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

## TTF Natgas prices

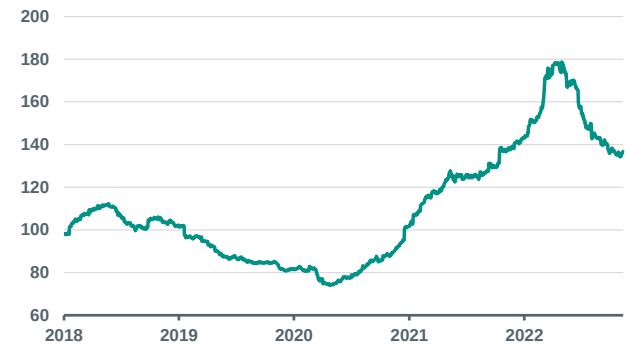
EUR/MWh




Source: Bloomberg, ABN AMRO Group Economics

## Transition Commodities Price Index

Index (Jan. 2018=100)




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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ABN AMRO Bank
Gustav Mahlerlaan 10 (visiting address)
P.O. Box 283
1000 EA Amsterdam
The Netherlands

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