

# SustainaWeekly

## Will labour shortages hamper the transition?

- ▶ **Economics Theme:** We have looked at labour shortages in the Netherlands for professions that are important for the construction of a new energy infrastructure, the insulation of houses and the installation of solar panels. While the labour market is very tight across the board, this is even more true for climate professions, with a much higher proportion of unfilled vacancies. These shortages threaten to hamper the transition without more decisive action to train and retrain at scale.
- ▶ **Strategy Theme:** Renewable energy companies keep trading at high P/E multiples. This breaks from the trends in other growth equities, which have been hurt by higher interest rates. This partly reflects that stepped up EU renewable ambitions have boosted the earnings prospects of equipment manufacturers. However, renewable power producers have less to gain from REPowerEU, while they also continue to trade at high multiples.
- ▶ **ESG Bonds:** We conducted a review of ESG bond issuance in Q1. The remarkable growth trend of 2021 was not matched in the first quarter of 2022, partly reflecting broader market volatility. The issuance volumes of green bonds led the decline, followed by social bonds. In contrast, sustainability bonds and SLBs experienced a promising growth in issuance volumes in Q1. Issuance volumes of financials remained nearly unchanged, but corporates exhibited robust growth.
- ▶ **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 edition of the SustainaWeekly, we start off by assessing whether labour shortages in the Netherlands can hamper the government's ambitious plans to reduce emissions by 60% by 2030. Unfortunately, our analysis suggests that this is a very real risk. While the labour market is very tight across the board (about 20% of vacancies are currently unfilled), this is even more true for climate professions. Between the end of 2021 and March 2022, the percentage of unfilled vacancies rose from 24% to 36%. We go on to look at why renewable energy equities have escaped the downward pull of higher interest rates, in contrast to other growth stocks. Finally, we present a review of ESG bond issuance in Q1, when we saw a break in the upward march of the market. Enjoy the read and, as always, let us know if you have any feedback!

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# Labour shortages among climate professions increasingly hampering energy transition

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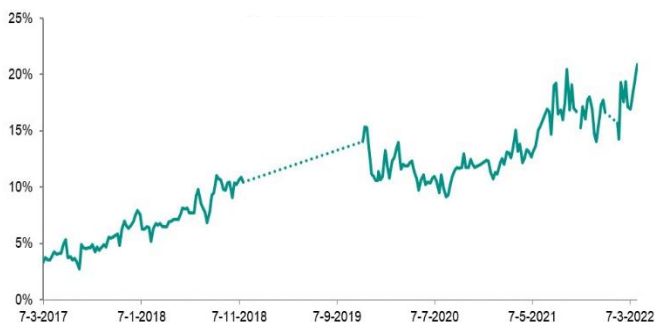
- ▶ The 35 billion euros from the climate fund with which the Dutch Cabinet has the ambition to achieve a 60% reduction in emissions by 2030 is threatening to flounder because staff shortages
- ▶ We have looked at labour shortages in the Netherlands for a selection of 52 professions that are important for the construction of a new energy infrastructure, the insulation of houses and the installation of solar panels – the so-called climate professions
- ▶ While the labour market is very tight across the board (about 20% of vacancies are currently unfilled), this is even more true for climate professions. Between the end of 2021 and March 2022, the percentage of unfilled vacancies rose from 24% to 36%
- ▶ There are good initiatives for retraining and further training, but these will need to be rolled out on a much larger scale to prevent the energy transition being hampered by labour shortages

## Percentage of unfilled vacancies

We measure the scarcity in the Dutch labour market on the basis of open data from the UWV benefits agency. At [werk.nl](http://werk.nl), vacancies that are currently open are displayed by profession and by municipality. The search activity of jobseekers at the UWV is also registered. We match all jobseekers who show an interest in a particular profession and are willing to travel from their home address to the location of the vacancy with the vacancies available at that time. In this way, we measure for each profession the percentage of vacancies for which there is no interest among job-seekers. The figure below shows that the labour market is currently historically tight. More than 20 percent of the vacancies are unfilled. For more information about our measurement method, click [here](#) (Dutch only).

### All-time high scarcity in the Dutch labour market

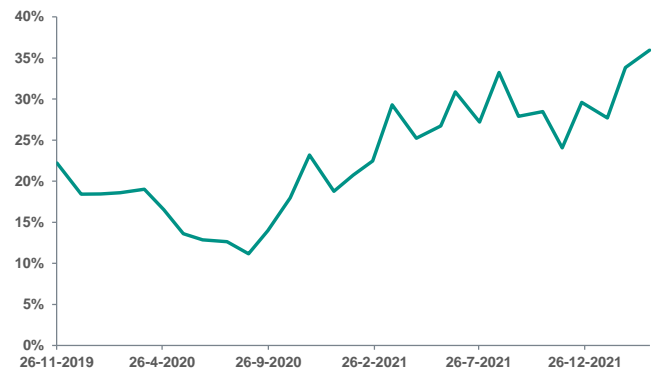
% of unfilled vacancies



Source: UWV, ABN AMRO Group Economics

### Tightness among climate professions even greater

% of unfilled vacancies for professions relevant to the energy transition



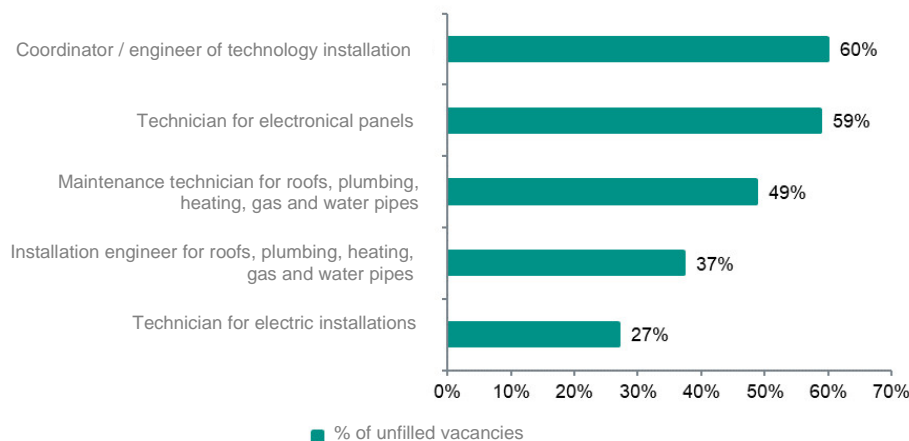
Source: UWV, ABN AMRO Group Economics

For a selection of 52 professions (see appendix for the chosen professions) that are relevant to the energy transition, the shortage is even more severe. At present, 36% of the vacancies cannot be filled.

## Installers

For the professions most directly related to the energy transition - electrical engineers or solar panel installers, for example - the percentage of unfilled vacancies is even higher. Their specific knowledge and skills are crucial when installing heat pumps or solar panels, for example.

### Examples of tight professions in relation to the energy transition



Source: UWV, ABN AMRO Group Economics

### Policy options to increase labour supply

In Groningen, people entitled to benefits are trained via the UWV to install solar panels within three months. The benefits institute has identified climate jobs and skills for the built environment.

“Techniek Nederland” is another initiative to help increase supply (see [here](#)). The trade association of installers has published an overview of all kinds of local government plans and educational opportunities on the website Techniek Nederland. Such initiatives need to be replicated and scaled up if the government is to meet its ambition of reducing emissions by 60 per cent by 2030.

### Appendix: Selection of relevant professions for the construction of energy infrastructure

|   |  |
|---|--|
| All-round fitter for house connections                                | Insulator for construction   |
| Assembler low- and medium-voltage networks (cable worker)             | Main electricity network technician                                  |
| Cad draftsman installation technology                                 | Maintenance mechanic roofing, plumbing, heating, gas and water pipes |
| Cad draughtsman - work preparer installation technology               | Manager/entrepreneur of civil engineering company                    |
| Calculator civil engineering  | Manager/entrepreneur, installation company                           |
| Chief middle and high voltage installations engineer                  | Meter reader gas, water, electricity                                 |
| Consultant geotechnical engineering                                   | Network manager (senior)   |
| Contract manager civil engineering                                    | Pipe insulator   |
| Department manager energy production company                          | Pipe systems draftsman   |
| Design engineer installation technology                               | Pipe systems draftsman/preparator                                    |
| Distribution mechanic gas / water (transport pipelines)               | Pipeline systems designer  |
| Domestic central heating fitter                                       | Pipeline systems designer  |
| Draftsman-constructor installation technology                         | Pipeline systems engineer  |
| Electric installation technician                                      | Planner of civil engineering projects                                |
| Electric panel mechanic   | Planner/preparator for installation technology                       |
| Electrical installations inspector                                    | Plastic door, window and frame maker                                 |
| Electrical welder (levels 3 & 4)                                      | Project leader cable and pipeline infrastructure                     |
| Electricity network technician  | Project leader ground, road and hydraulic engineering                |
| Energy Performance Assessment (EPA) employee                          | Project leader installation engineering                              |
| Environmental technology expert                                       | Recycling employee   |
| Fitter of medium and high voltage installations                       | Superintendent ground, road and hydraulic engineering                |
| Installation company manager  | Superintendent installation (electrical)                             |
| Installation mechanic roofing, plumbing, heating, gas and water pipes | Utility heating fitter   |
| Installations systems designer  | Work planner/calculator ground, road and hydraulic engineering       |
| Installations technician  | Work planner/calculator installation technology                      |
| Installations technology draftsman                                    | Work planner/project leader for civil engineering                    |

Source: UWV, ABN AMRO Group Economics

## Not all renewable energy companies may escape the impact of higher interest rates

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- ▶ **Renewable energy companies keep trading at high P/E multiples**
- ▶ **This breaks from the trends of other growth equities, which have been hurt by higher interest rates**
- ▶ **This partly reflects that stepped up EU renewable ambitions have boosted the earnings prospects of equipment manufacturers**
- ▶ **However, renewable power producers have less to gain from REPowerEU, while they also continue to trade at high multiples**

The equity prices of companies whose growth prospects are strong over the long term are sensitive to movements in interest rates. Growth equities have endured a terrible year so far. Looking for example at the Stoxx 600 technology index, which includes a mix of semiconductor, software and e-commerce companies, the composite is down by nearly 21%, while the broad Stoxx 600 index is down by only 6%. The near term earnings outlook on growth stocks remains healthy, yet these growth equities are suffering from a higher interest rate used to discount distant future cashflows. As growth equities typically trade at high earnings multiples, and this high multiple was of course also boosted by the earlier decline in global interest rates since the pandemic broke out, the reverse trend of higher interest rates has a more profound impact in comparison to low multiple value equities.

### Renewable energy companies continue to trade high

European renewable energy companies also share the growth characteristics of technology companies. They also trade at high earnings multiples, yet they have so far strangely managed to resist this trend of multiple compression we experience in the technology space. Indeed, the table below shows that the stock price on a swath of names in the renewable energy space is mainly up YTD, while the reference indices listed in the bottom of the table are down. Actually, the stock performance in the renewable energy space was pretty much aligned to the dismal performance of the Stoxx technology index until early March judging by the troughs shown in the 6th column. The outlook for the renewable energy companies turned when the European commission laid out plans to become even more ambitious on the renewable energy front under REPowerEU (see [here](#)). This has been subsequently been followed up by a stepping of the national renewable energy ambitions of a number of European countries (see [here](#) and [here](#)). The biggest exceptions to the improving equity price trend for renewable energy companies are Siemens Gamesa and Aker Carbon Capture, where the share price remains down; in the case of Siemens Gamesa, this is driven by historical challenges to manage projects, which is therefore deemed idiosyncratic.

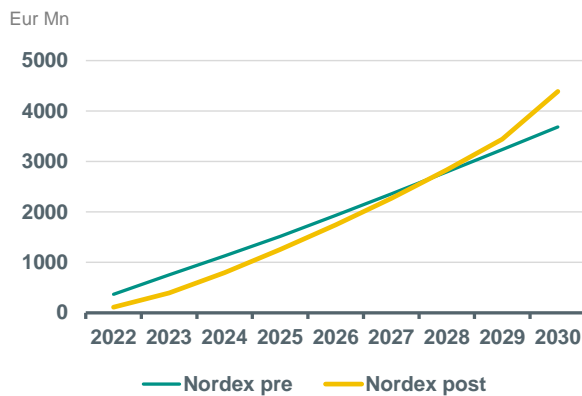
| Name                         | Renewable energy company type            | P/E 2022    | P/E 2023    | YTD change    | YTD trough    |
|------------------------------|--|-------------|-------------|---------------|---------------|
| VESTAS WIND SYSTEMS A/S      | Equipment - wind turbines                | 137.4       | 40.3        | 2.0%          | -18.8%        |
| ORSTED                       | Renewable power generator                | 28.4        | 38.3        | -2.6%         | -23.2%        |
| CORP ACCIONA ENERGIAS RENOVA | Renewable power generator                | 22.8        | 23.8        | 7.2%          | -17.8%        |
| NEOEN                        | Renewable power generator                | 74.6        | 55.9        | 0.8%          | -28.5%        |
| ERG                          | Renewable power generator                | 38.4        | 37.0        | 11.8%         | -17.2%        |
| EDP RENOVAVEIS               | Renewable power generator                | 36.8        | 35.6        | 4.1%          | -22.4%        |
| SIEMENS GAMESA RENEWABLE ENE | Equipment - wind turbines                | NA          | 73.0        | -26.5%        | -29.1%        |
| VERBIO VEREINIGTE BIOENERGI  | Biofuel producer                         | 25.0        | 38.6        | 30.5%         | -26.9%        |
| NORDEX SE                    | Equipment - wind turbines                | NA          | 51.4        | 13.9%         | -15.9%        |
| ITM POWER PLC                | Equipment -hydrogen production           | NA          | NA          | -9.9%         | -42.1%        |
| NEL ASA                      | Equipment -hydrogen production           | NA          | NA          | -6.5%         | -33.5%        |
| AKER CARBON CAPTURE ASA      | Equipment - carbon capture               | NA          | NA          | -24.3%        | -53.1%        |
| OX2 AB                       | Equipment - wind turbines & solar panels | 70.8        | 34.6        | 47.7%         | -28.4%        |
| POWERCELL SWEDEN AB          | Equipment - fuel cells                   | NA          | NA          | 7.5%          | -29.9%        |
| ATLANTICA SUSTAINABLE INFRAS | Renewable power generator                | 71.8        | 41.3        | -7.7%         | -13.6%        |
| <b>Stoxx 600</b>             |  | <b>13.7</b> | <b>12.9</b> | <b>-6.3%</b>  | <b>-14.9%</b> |
| <b>Stoxx 600 technology</b>  |  | <b>23</b>   | <b>19.5</b> | <b>-22.5%</b> | <b>-26.4%</b> |
| <b>Stoxx 600 utility</b>     |  | <b>15.4</b> | <b>14.2</b> | <b>-2.8%</b>  | <b>-7.8%</b>  |
| <b>Stoxx 200 smallcap</b>    |  | <b>15.5</b> | <b>13.9</b> | <b>-11.4%</b> | <b>-19.9%</b> |

Source: Bloomberg, ABN AMRO Group Economics, data as per April 19th 2022

Indeed, earnings forecasts for the above renewable energy equipment manufacturers have received a boost from the REPowerEU initiative. This earnings boost makes sense given that Germany has raised its target for renewable energy in the power mix from 65% pre-Ukraine conflict to 80%, to be achieved by 2030. In the Netherlands, the addition of 3 new areas for off-shore windfarm exploration is set to raise off-shore wind capacity from 11.5GW to 21GW. However, in the case of the high multiple renewable power generators (i.e. the ones which operate the assets and sell the power) the forecasts have actually remained stable or even come down slightly. Still, their share price has also risen this year and their high valuation multiple is also uncompromised.

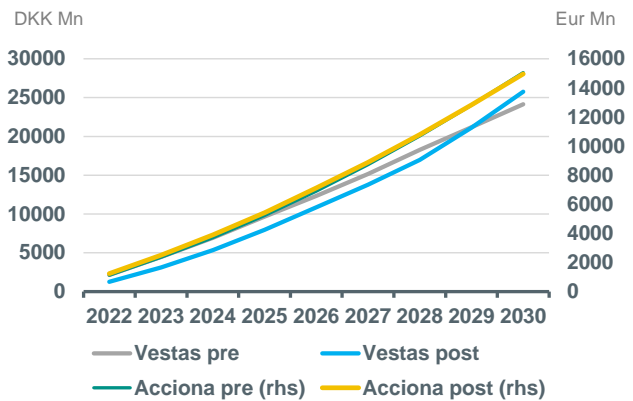
Given the above developments, we have assessed whether these earnings upgrades have been strong enough to justify the recent strong equity performance in a couple of names. From the table on the previous page we take Nordex (windpower equipment – shares up 14% YTD), Vestas (windpower equipment – shares up 2% YTD) and Acciona Energias Renovables (aka Acciona, renewable energy operator – shares up 7% YTD) as examples. The charts below show the cumulative expected EBITDA profile through 2030 before and after the March 2022 upgrades. Clearly the profile for Acciona has hardly changed, while the higher profile for both Nordex and Vestas seems to be driven by back-ended earnings.

**Cumulative EBITDA profile Nordex**



Source: Bloomberg, ABN AMRO Group Economics

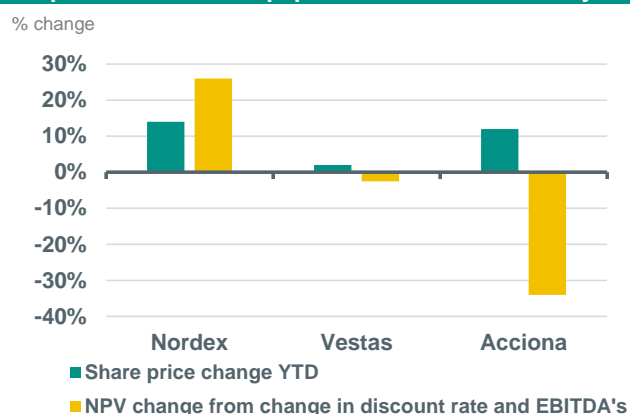
**Cumulative EBITDA profile Vestas & Acciona**



Source: Bloomberg, ABN AMRO Group Economics

The idea is to combine this change in earnings (i.e. EBITDA) profile and the higher interest rate environment to see whether the recent share price outperformance by the renewable players is somehow justified. To do this, we are looking for the difference in a theoretical discounted cashflow valuation under the pre-REPowerEU EBITDA forecast and under the post-REPowerEU EBITDA forecast. We specifically state a theoretical valuation as we are working with arbitrary discount rates but also EBITDA instead of a cashflow being available for shareholders. This arbitrary approach is not a major issue in terms of deriving conclusions, since the goal is not to confirm whether the equity valuations are correct, but instead to see as to roughly how much and in which direction they would change under different EBITDA and interest rates expectations. We assume a 5% discount rate for the pre-REPowerEU EBITDA trajectory and a 5.1% discount rate for the post-RepowerEU EBITDA trajectory reflecting our changes in forecast for the 10y bund yield since the start of this year. The final cashflow (using EBITDA) is perpetuated at a terminal growth rate of 2.5%.

### Compatible moves at equipment manufacturers only



Source: Bloomberg, ABN AMRO Group Economics

Clearly the direction and to a certain extent the magnitude of change in share price and our theoretical NPV seems compatible in the case of the renewable energy equipment manufacturers Nordex and Vestas. We note that the REPowerEU (and the individual country initiatives) should indeed benefit the manufacturer, given that governments are stimulating the purchase and installation of these energy sources. In the case of Acciona however, there seems to be a discrepancy between the direction of the NPV and the share price movement. The outcome for renewable power generators from REPowerEU is less clear. Indeed the impediments to expansion currently in place, such as planning permissions, will become less cumbersome under the EU plans. But on the other hand competition for renewable power assets will be fierce as well, which can curb growth. Indeed, Acciona's but also ERG's and EDPR's EBITDA profile (according to analyst estimates) should have risen in case there would have been a net positive impact. Unfortunately it did not.

To summarise, the ability of renewable power equipment manufacturers to defy the higher rates environment and continue to trade at high earnings multiples looks plausible, yet the recent outperformance of the equity price of renewable power generations, such as Acciona, but also ERG and EDPR seems surprising.

## ESG bond issuance boom takes a step back in Q1

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- ▶ **ESG Bond Growth:** The remarkable growth trend of 2021 was not matched in the first quarter of 2022. The issuance volumes of green bonds led the decline, followed by social bonds. In contrast, sustainability bonds and SLBs experienced a promising growth in issuance volumes in Q1
- ▶ **Sector Breakdown:** Governments and SSAs were largely responsible for the slowdown in ESG bond growth last quarter. The EU issued much less social 'SURE' bonds this year than it did in Q1 last year, while sovereigns, such as the French and Italian government, which issued significant volumes in Q1 2021, have only supplied a small fraction so far. Issuance volumes of financials remained nearly unchanged while corporates exhibited a robust growth.
- ▶ **Country Breakdown:** France is leading the moderation in issuance volumes in the first quarter while the Benelux and Germany are showing remarkable growth by doubling issuance volumes this quarter relative to the first quarter of 2021

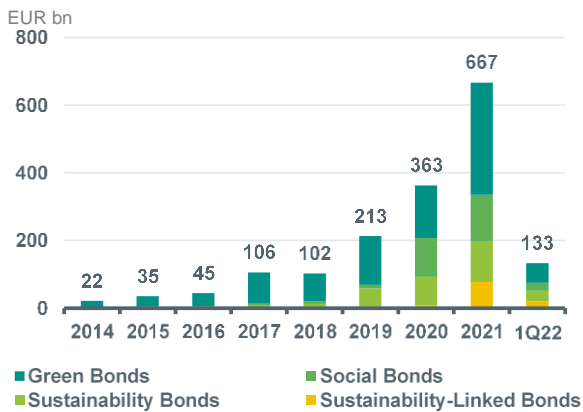
The primary market for ESG bonds was not immune to the strong increase in market volatility in Q1 of this year, as the new supply of ESG bonds did not continue the trend of remarkable growth that it experienced last year. New issuance of ESG bonds in EUR, GBP or USD (and with a minimum size of 250mn) amounted to EUR 133bn in the first quarter of 2022. This is down 26% compared to the EUR 180bn of new issuance of ESG bonds in the same period a year ago. Also when looking at the overall market, ESG bond issuance was at EUR 223bn slightly down in Q1 2022 compared to the EUR 263bn issued in Q1 2021. As such, it remains to be seen if this year's issuance of ESG bonds will top last year's total record issuance of over EUR 1bn (or EUR 667bn, when considering only bonds in EUR, GBP or USD). However, the slowdown in new supply was probably related to the more adverse market conditions at the start of this year. Still, this year's ESG issuance remains well above that seen in any other first quarters in recent years (average EUR, USD and GBP issuance in 2017-2020 was, for instance, EUR 40bn).

Zooming again into only benchmark ESG bonds in EUR, GBP or USD currencies, issuance of green and social bonds both experienced a drop in issuance volumes in Q1 2022 relative to the same quarter last year, with green volumes dropping by 30% to EUR 58bn and social bond issuance declining by 63% to EUR 24bn. The decline in social bond issuance was mainly due to the unusually large amount of social bonds in 2021, driven by the EU SURE bonds, which amounted to EUR 32bn only in the first quarter of last year. Correcting for EU SURE bonds, social bond issuance was down "only" by 27% on a year-on-year basis. On the other hand, sustainability bonds and sustainability-lined bonds (SLBs) both saw larger issuance volumes compared to Q1 2021. Sustainability bond issuance volume increased by 24%, bringing the total issued amount to EUR 32bn. Issuance of SLBs looked particularly promising in the first three months of 2022, with an issuance amount of EUR 20bn, up 174% relative to the first quarter of last year. This highlights the continuous trend of sky-rocketing growth in the SLB market, with such bonds growing on average by 48% per month since they first emerged in 2019.

Within the overall market, green and social bond issuance were also down, by 17% and 57%, respectively. Meanwhile, both sustainability bonds and SLBs were 37% and 80% higher.

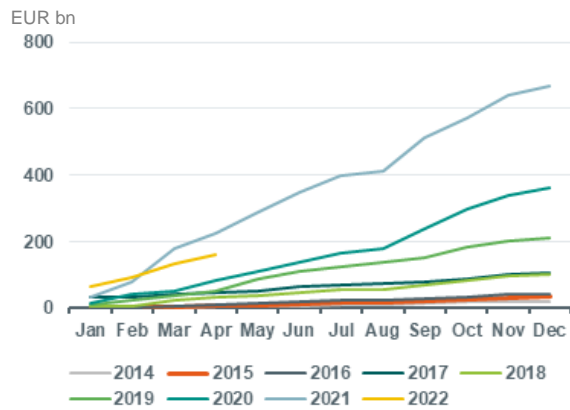


## 1Q22 ESG bond issuance lagging behind 2022 ...



Source: ABN AMRO Group Economics, Bloomberg. Note: considers only issuances in EUR, GBP and USD, with issuance size larger than EUR 250m.

## ... but still higher than in previous years



Source: ABN AMRO Group Economics, Bloomberg. Note: considers only issuances in EUR, GBP and USD, with issuance size larger than EUR 250m.

A breakdown of ESG bond issuance by sector shows new issuance by governments and SSAs experienced a large moderation this quarter relative to Q1 2021. Total issuance declined by 58% to EUR 42bn. This large drop in issuance from the government/SSA sector can be partially attributed to a decline of ESG bond issuance by the European Union (EU). As previously mentioned, the EU issued under its SURE programme a total of EUR 32bn in social bonds in Q1 last year. However, during the first quarter of this year, only a total of EUR 8.2bn was issued. The lack of green/social issuance of the EU was probably also related to the rise in base rates and uncertainties created by the Ukraine-Russia war. Looking ahead, the EU announced in its most recent issuance plans ([link](#)) that it would raise EUR 50bn in long-term bonds by June 2022 to cover its funding needs for the NGEU. The EU will raise up to 30% of this through green bonds as a funding method, which will help to increase ESG bond issuance by government/SSA in the second quarter of this year – although likely not enough to top last year's record. Furthermore, under the EU SURE programme, the EU has already raised EUR 91.8bn from its EUR 100bn envelope. Hence, EU issuance this year will likely mainly be in green format.

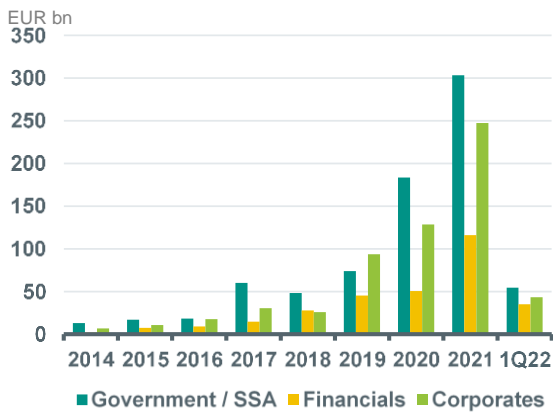
The decline in government/SSA issuance this quarter was also driven by a sharp reduction in ESG bonds coming from sovereigns. Looking at only EUR, GBP and USD benchmark issuance, sovereigns issued a total of EUR 34.7bn in the first quarter of last year, which is almost EUR 28bn (!) more than the total amount issued in Q1 of this year. Last year's significantly higher volumes were mainly driven by issuance by the French and Italian governments, which combined totalled EUR 27.7bn. So far this year, likely due to adverse market conditions, we have only seen Chile and the Philippines tapping the dollar market.

Meanwhile, the volume of ESG bond issuance of financial issuers remained nearly unchanged in the first quarter, with a total of EUR 28bn. This was down by 2% compared to Q1 2021. Nevertheless, financials have become a bigger relative player in the ESG bond market in the first quarter of this year. While in 2021 this segment only accounted for 17% of the total market (again, considering only bonds in EUR, USD and GBP currencies), financials now represent 21% of the total market.

New ESG bond supply from corporates, on the other hand, exhibited elevated levels last quarter, bringing issuance volumes to EUR 63bn, 22% higher than the same period in the prior year. Corporate issuance has been mainly in SLB format (EUR 10bn higher than in Q1 last year), but also in green and social format, corporates have issued EUR 2bn more so far than in Q1 2021.

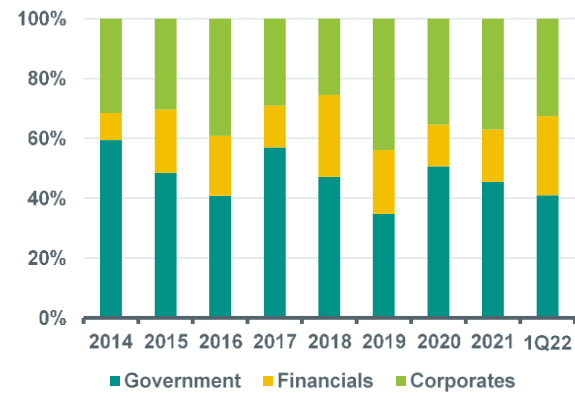


## Government/SSA issuance are lagging behind...



Source: ABN AMRO Group Economics, Bloomberg. Note: considers only issuances in EUR, GBP and USD, with issuance size larger than EUR 250m.

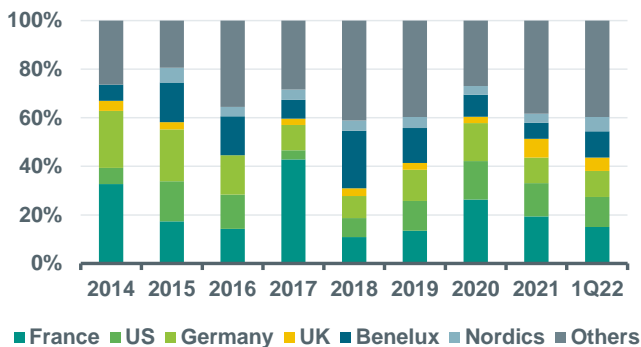
## ... but Corporates and FIG issuance remains robust



Source: ABN AMRO Group Economics, Bloomberg. Note: considers only issuances in EUR, GBP and USD, with issuance size larger than EUR 250m.

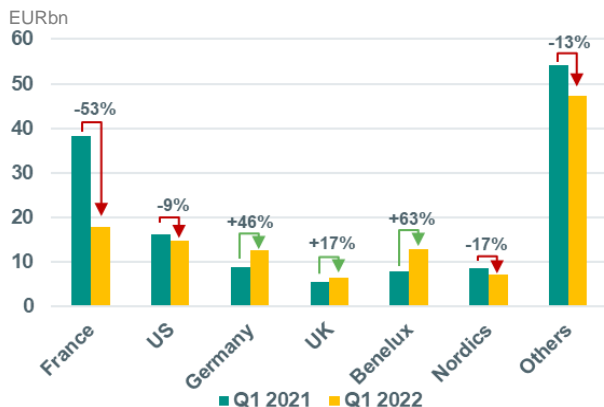
When looking at a country level, we observe that France experienced the largest drop in the issuance of ESG bonds. Whilst France still tops the leader board in terms of issuance volumes, their amount declined 53% from the EUR 38.2bn of issuance in the first quarter of 2021 (to EUR 17.9bn in the last quarter). As previously mentioned, this is partially driven by France's EUR 14.2bn green bond issued in Q1 2021. The Benelux and Germany both experienced an increase in new supply relative to the same period one year before. Benelux volumes posted the strongest increase (+63%), as issuance rose to EUR 12.8bn in Q1 2022, up from EUR 7.9bn in Q1 2021. German issuance grew from EUR 8.7bn in the first quarter of 2021 to EUR 12.7 in the previous quarter, a growth rate of 46%. Other countries generally showed a trend of slightly slowing issuance volumes in the past quarter relative to Q1 2021.

## France leads the decline in ESG bond issuance...



Source: ABN AMRO Group Economics, Bloomberg. Note: considers only issuances in EUR, GBP and USD, with issuance size larger than EUR 250m. Data excludes supranational.

## ... but Benelux and Germany show promising growth



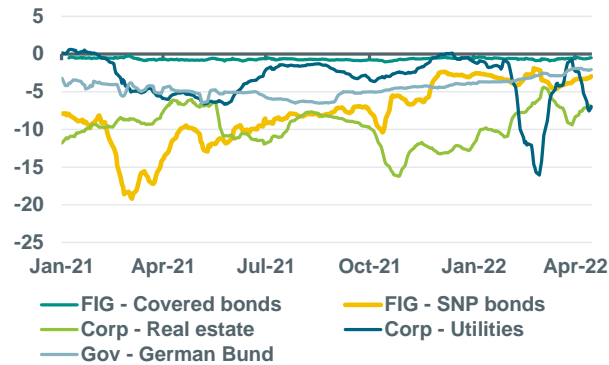
Source: ABN AMRO Group Economics, Bloomberg. Note: considers only issuances in EUR, GBP and USD, with issuance size larger than EUR 250m. Data excludes supranational.

On a different note, the Intergovernmental Panel on Climate Change (IPCC) published the findings of Working Group III of its sixth Assessment Report (AR6) on April 4. This third report in the IPCC trilogy ([link](#)) urged immediate and deep GHG emissions reductions to remain on track to keep global warming within the window of 1.5 degrees. The publication of this report further increased the urgency with regards to climate change, hence likely resulting in an increase in investments to speed up the transition. In addition, we have seen several EU governments announce more ambitious renewable energy targets over recent weeks, pushed by the need to reduce their dependence on Russian gas. Finally, further developments in ESG regulation such as the EU Taxonomy and the Sustainable Finance Disclosure Regulation (SFDR), will increase requirements on the disclosure side. Overall, this will make companies and financial markets participants more aware of the extent that their assets and investments can be labelled as ESG, which might also serve as additional push to increase capital flows towards ESG bonds. This will likely continue to support the ESG bond market, which is set to continue to grow robustly.

## ESG in figures

### ABN AMRO Secondary Greenium Indicator

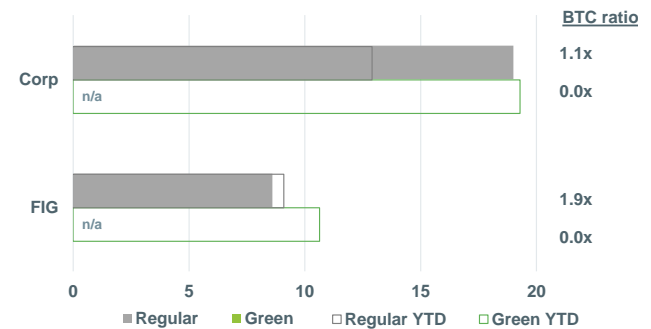
Delta (green I-spread – regular I-spread)



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

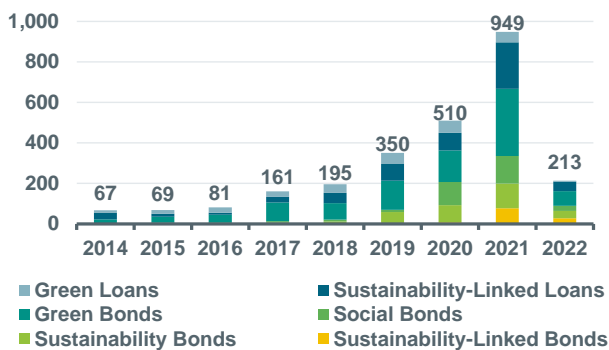
NIP in bps



Note: Data until 21-4-22. BTC = Bid-to-cover orderbook ratio. Source: Bloomberg, ABN AMRO Group Economics.

### Sustainable debt market overview

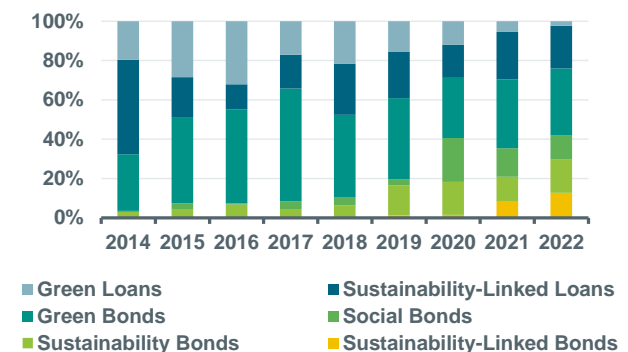
EUR bn



Source: Bloomberg, ABN AMRO Group Economics

### Breakdown of sustainable debt by type

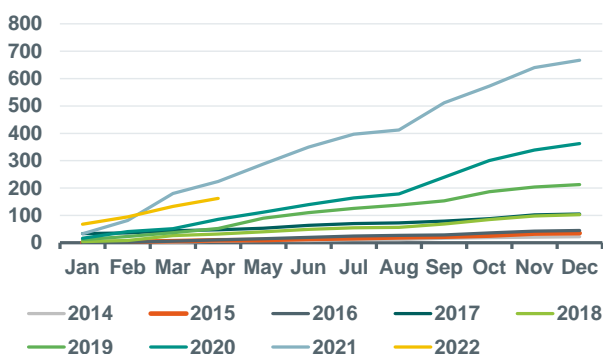
% of total



Source: Bloomberg, ABN AMRO Group Economics

### YTD ESG bond issuance

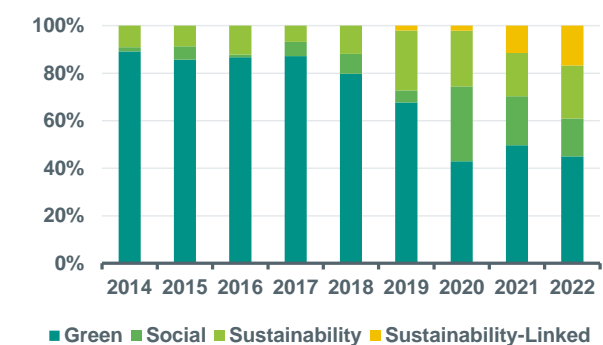
EUR bn



Source: Bloomberg, ABN AMRO Group Economics

### Breakdown of ESG bond issuance by type

% of total

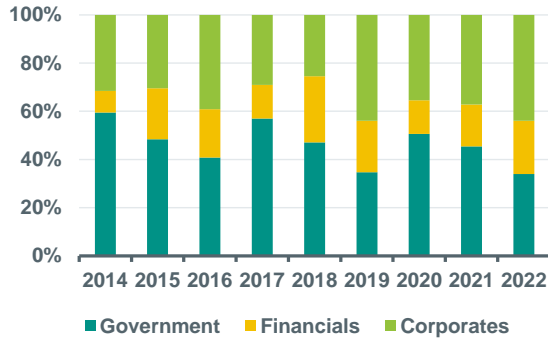


Source: Bloomberg, ABN AMRO Group Economics

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

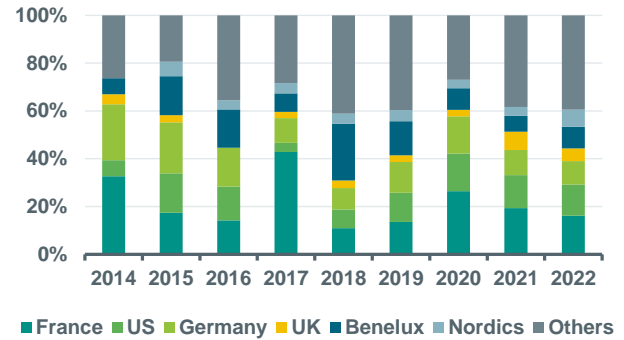
% of total



Source: Bloomberg, ABN AMRO Group Economics

### Breakdown of ESG bond issuance by country

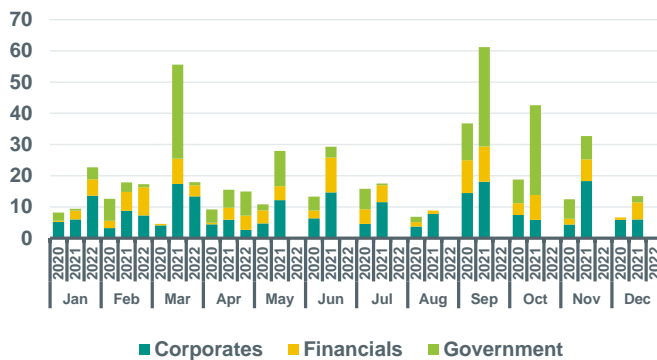
% of total



Source: Bloomberg, ABN AMRO Group Economics

### Monthly Green Bonds issuance by sector

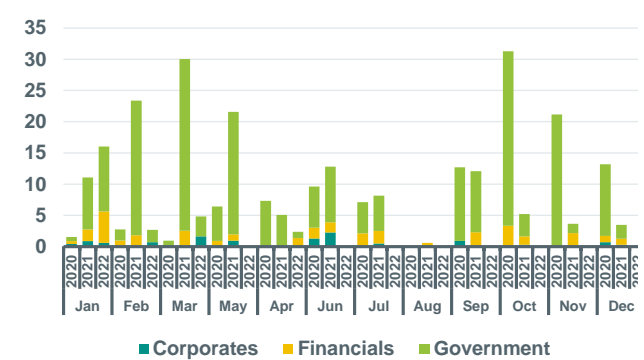
EUR bn



Source: Bloomberg, ABN AMRO Group Economics

### Monthly Social Bonds issuance by sector

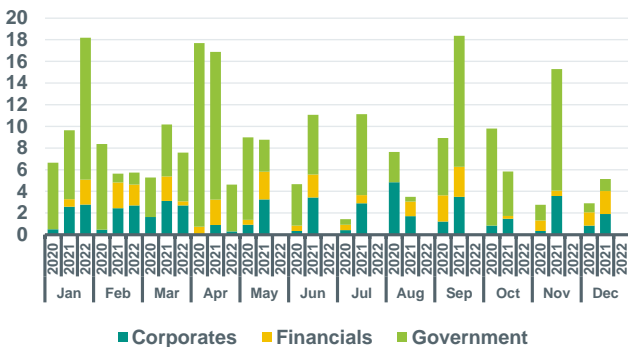
EUR bn



Source: Bloomberg, ABN AMRO Group Economics

### Monthly Sustainability Bonds issuance by sector

EUR bn



Source: Bloomberg, ABN AMRO Group Economics

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

EUR bn



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)**

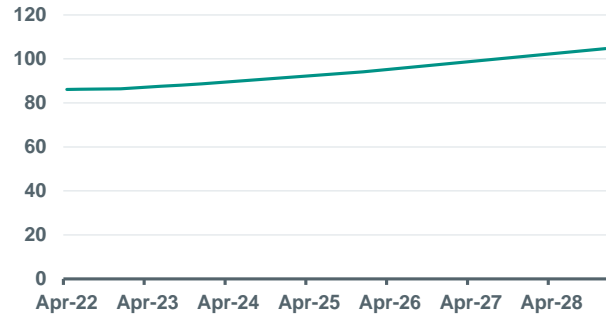
EUR/MT



Source: Bloomberg, ABN AMRO Group Economics

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

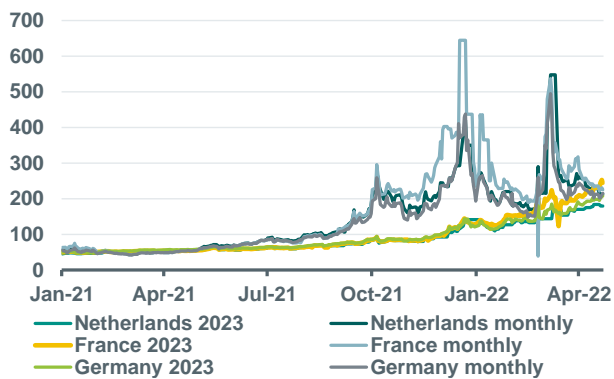
EUR/MT



Source: Bloomberg, ABN AMRO Group Economics

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

EUR/MWh

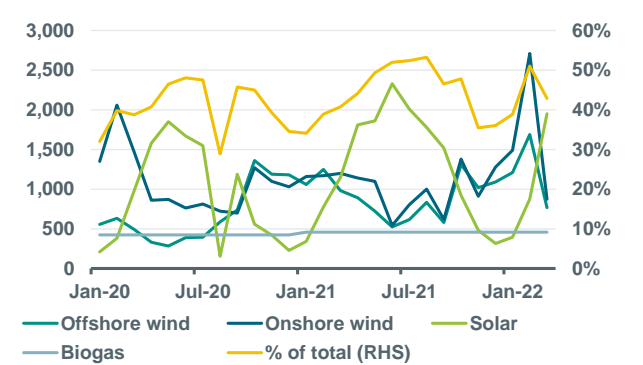


Source: Bloomberg, ABN AMRO Group Economics. Note: 2023 contracts refer to cal+1

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

GW

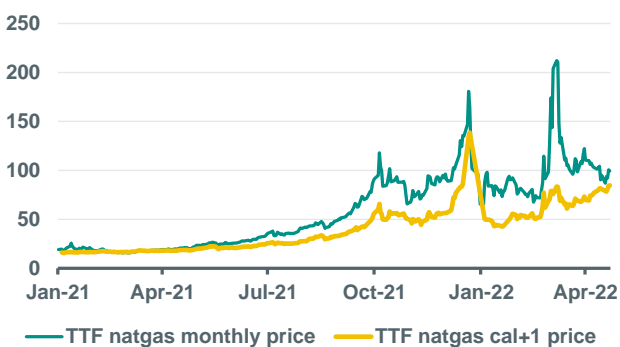
% of total



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

**TTF Natgas prices**

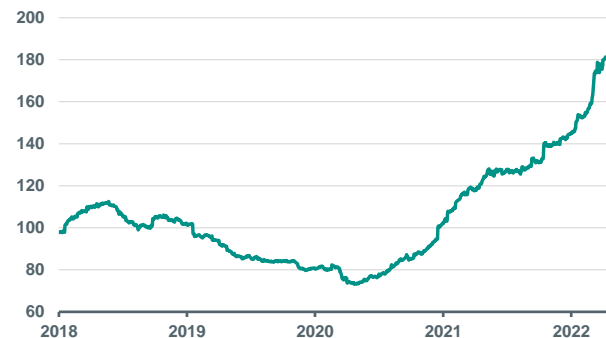
EUR/MWh



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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