

## Sustainability: here comes the hard part

Sustainability is the main focus of ING research this week. Current volatile power prices are a political and economic challenge with few immediate green solutions. Sustainable borrowing is on a tear, but banks got a climate warning from the ECB. Just as well the electric bus revolution is speeding up; we've got that covered too in our weekly roundup

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By Carsten Brzeski

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By Suvi Platerink Kosonen and Maureen Schuller

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# UK power price spike exposes the challenges of net zero electricity

UK power price volatility is unlikely to go away as the country transitions towards more wind and solar reliance. Hydrogen, grid investment and power...



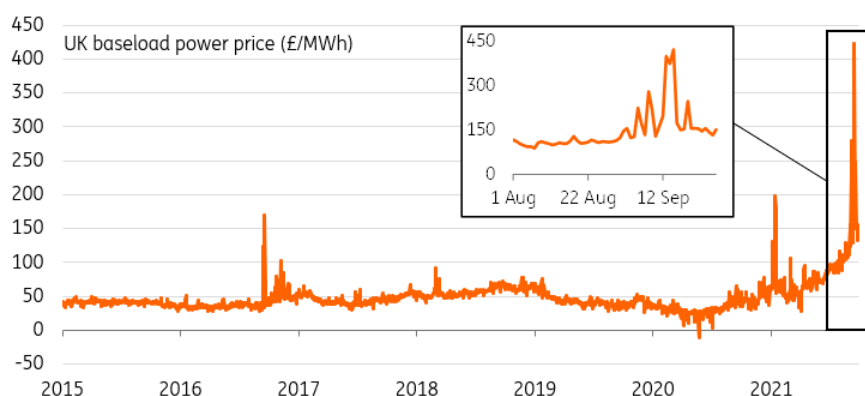
Sustainable electricity generation demonstrated at an exhibition in London

The recent surge in UK power prices could hardly have come at more awkward time for the British government, with a little more than a month to go until the county hosts the COP26 global climate summit in Glasgow.

True, the UK is not alone, and to varying extents the whole of Europe is grappling with higher energy costs. But the situation in Britain has become particularly acute. The one-month baseload forward, a gauge of wholesale electricity pricing, currently sits at more than double the level it has been at any point in the past decade.

In this piece we'll look at why this is happening, the economic impact, but also some potential solutions. But the simple conclusion is that we should expect some ongoing volatility in power prices as the country begins its necessary journey towards green electricity and heating – albeit hopefully not quite to the same extent as recent weeks.

## UK power prices have surged through September



Source: Refinitiv

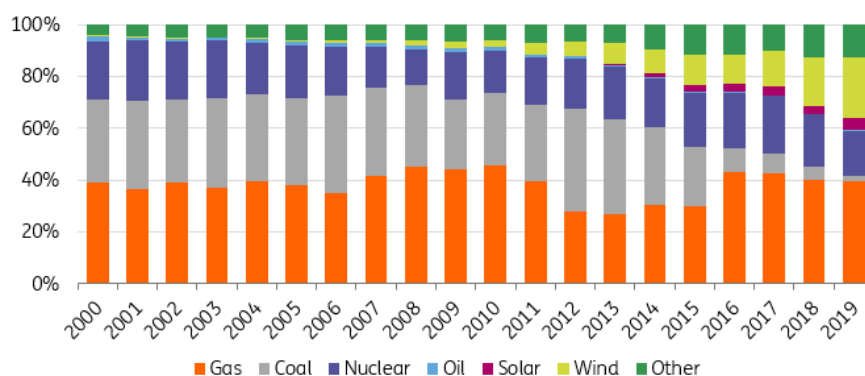
## The power price spike has revealed two key vulnerabilities in the UK's energy system

The sharp spike in UK electricity prices through September owes a fair amount to bad luck. That was epitomised by a [recent fire](#) at the point where a key power cable enters England from France. The UK's exit from the EU, and with it the internal energy market, has possibly also contributed at the margin.

But the UK is also a victim of its own progress on lowering emissions, and it's revealed two key vulnerabilities as the country transitions to net zero.

The first is that the UK has become particularly reliant on natural gas. This has coincided with one of the starkest falls in coal generation in Europe over recent years. Indeed, this is a key reason why the UK scores comparatively well on recent reductions in CO<sub>2</sub> output. Emissions have already fallen by around half of what is needed by 2050 under the government's target, according to data from the Climate Change Committee. The percentage reduction in total carbon emissions has been the largest in the G7, and electricity accounts for almost half the decline since 1990.

## UK power generation by source (% total)



Source: Bloomberg NEF, ING

The second vulnerability relates to the UK's increasing reliance on 'variable renewables' – that's

solar and to a greater extent, wind. The latter, in particular, is a key focus of the UK's efforts to decarbonise electricity. It already accounted for 7.5% of energy consumption in 2019, and became significantly more prevalent during the pandemic when power demand fell, taking fossil fuel generation down with it. The government is planning for 40GW of offshore capacity by the end of the decade.

This is clearly a key part of the UK's net-zero journey, but the transition also brings with it some major challenges.

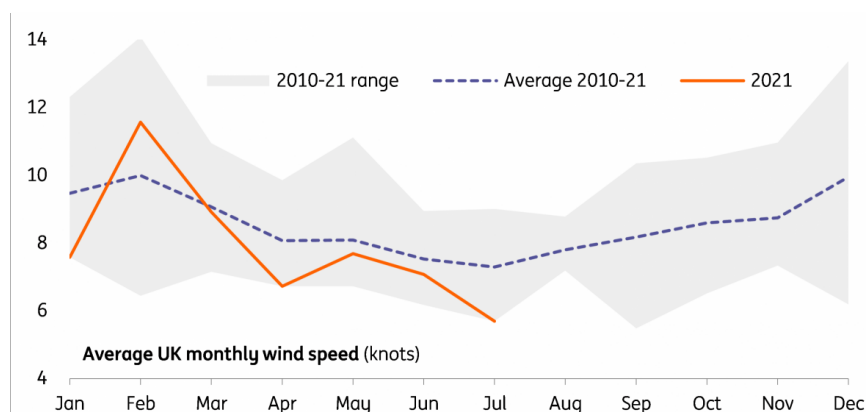
*July comfortably saw the lowest wind speed for that month this century*

Admittedly, money isn't one of them, given the price of offshore wind has effectively [fallen by two-thirds](#) since 2015. Private-sector involvement is incentivised by the government's contract-for-difference auctions, which guarantee a minimum price for the supplier. From a public financing perspective, the costs are more minimal than for other areas of the net-zero transition. It's likely to be energy efficiency in buildings that will require the largest near-term investment from the government.

Part of the challenge instead lies in getting renewables projects through various approval stages. The government is under pressure to streamline the planning process to help increase the flow of new projects.

But the more immediate hurdle is the volatility in how much renewable electricity is generated. Recent shortages in natural gas – which our commodities team link to a colder April/May, a redirection of LNG supplies to Asia, and less supply from Norway & Russia - have coincided with a particularly poor few months for UK wind. The latest data covering July shows comfortably the lowest wind speed for that month this century.

## 2021 has not been good for strong winds



Source: Department for Business, Energy & Industrial Strategy (BEIS)

## No easy short-term solution to the UK's power price challenge

In the short-term, escalating power prices are somewhat beyond the government's control. As our



commodities team notes, a fall in gas prices will rely heavily on winter temperatures.

Further power price pressure may well require the UK government to repeatedly step in to support heavy industry, as it has done recently with CO2 production. And as the likes of France, Spain and Italy are already starting to do, the UK will be under pressure to directly support consumers. The cap on household energy costs is already set to rise by 12% in October, and a further double-digit rise next April seems increasingly likely, too.

We expect this to contribute over one percentage point to inflation by the second quarter of next year. This coincides with a tightening of fiscal policy via reduced welfare benefits and a forthcoming rise in taxes. The hit to the cost of living is one of the factors why we think the Bank of England will leave it until later in 2022 before hiking interest rates. Consumer confidence has already fallen fairly sharply in September.

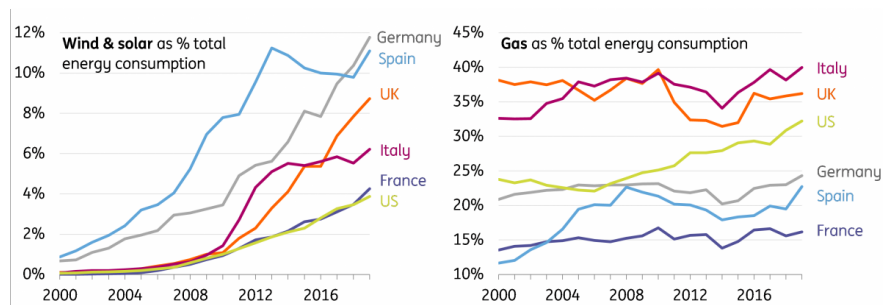
## Hydrogen offers one long-term option to minimising price volatility

It's these short-term issues that will inevitably frame the debate heading into COP26, but there are some interesting longer term lessons too. Indeed the events of recent weeks are a reminder that price volatility is going to remain a common feature as the UK transitions to zero-carbon electricity, particularly from wind and solar.

The good news, for now, is that the arrival of autumnal weather appears to be heralding the return of stronger winds. But a key lesson of the past few weeks is that the UK's progress on decommissioning coal power, while clearly a long-term success, has also left the UK with fewer ways to substitute for poor wind and solar generation.

Incidentally, this is a problem that many countries are likely to encounter over coming years. One of the conclusions of our team's [global energy transition scenarios](#) published last year, was that gas demand globally is unlikely to peak until the next decade as countries seek a 'backup' for variable renewables. In terms of impact, [our team has looked at the challenge of price volatility in detail](#) and estimates that a 50% short-term increase in UK wind generation (eg as wind speeds change) lowers British electricity prices by 6.6%, and similar vice-versa.

## UK reliant on variable renewables and natural gas



Source: Our World in Data, ING

This means that finding effective ways of storing renewable energy is going to be particularly important for Britain – not least because capacity for storing natural gas has shrunk considerably

in the past couple of years, following the [closure of a site](#) that housed 70% of the UK's gas stocks up until that point.

Hydrogen is clearly one option, though as our US team noted in their write-up of [New York Climate Week](#), technology remains an obvious barrier and for now it's an expensive option. The UK released its [strategy](#) on this during August, with a goal of enabling 5GW of production by 2030.

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*Hydrogen may actually increase the UK's dependency of gas in the short-term*

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Industry is now awaiting details on how contract-for-difference auctions, like those used for wind power to guarantee producers a minimum price for generation, could be structured to help unlock the £4bn private investment the government is looking for. The UK hopes to use this both for industrial power, but also potentially to replace gas in the country's existing heating systems.

But as in many other countries, the compromise of quick hydrogen deployment may well be that not all of it is generated with green renewables. The alternative - so-called 'blue hydrogen' - is produced from gas, with the resulting emissions captured and stored.

In other words, hydrogen may actually increase the UK's dependency on gas in the short-term, even if in the longer-term it offers a way of smoothing the UK's volatility in renewables production and thus acts as a key component in the net zero journey.

The blue hydrogen approach also relies on further technological advances in storing emissions, though the UK is arguably at a more advanced stage than most in preparations for the first carbon capture and storage (CCS) clusters. This infrastructure enables emissions from various industries in close proximity to be captured and piped offshore.

## Local power pricing and changes to grid design will help mitigate volatility wind

The final piece of the jigsaw is the electricity network itself. While the cost of wind and solar has fallen dramatically, it's been replaced by other costs to account for the increased volatility that both renewables bring. 35% of the UK's wind power is generated in Scotland, and there's only so much grid capacity to move that electricity around the wider United Kingdom when supply exceeds Scotland's local demand.

Suppliers are frequently paid so-called constraint payments to turn-off the turbines on windier days to stop the system overloading. The tilt towards offshore over onshore wind over coming years will probably only amplify the constraints of the existing electricity grid.

The obvious solution to these challenges – adding more interconnectors to enable more power to flow around the country – is clearly expensive. Ensuring that new sources of wind and solar are spread evenly around the country, unsurprisingly, also offers part of the solution, in so far as regional weather allows.

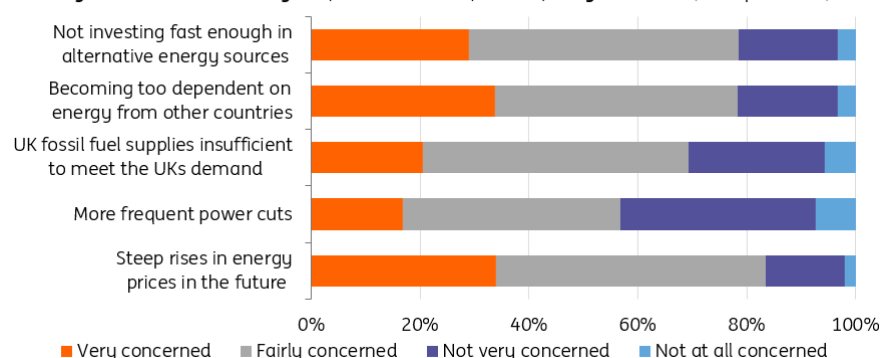
But as a [Policy Exchange](#) paper proposed earlier in the year, local power pricing could also

ultimately play a role. After all, rapidly rising sales of electric cars effectively provides the grid with a network of batteries across the country, and an opportunity to balance local grids. The UK's current national electricity pricing offers few incentives for consumers to charge at times of lower local demand/higher supply – though dynamic (national) tariffs with cheaper overnight costs are becoming more prevalent.

Finding an effective, perhaps technology-based, method of incentivising consumers to charge their cars when it's windy or sunny locally may offer a helpful way of balancing the electricity network.

## UK consumers more concerned about price spikes than renewables investment

Thinking about the next 10-20 years, how concerned, if at all, are you about... (% respondents)



Source: BEIS Public Attitudes Tracker

### The challenge of price volatility isn't going away

The common theme running through all of this is that it's going to take time. And much of it – not least hydrogen power – will rely on technological gains as much as capital investment. While the UK's plans for net zero energy are clearly essential both for climate and long-term economic health, the transition process means the UK – [like other parts of Europe](#) – will have to adapt to more volatility in power prices over the next few years.

This is unlikely to be the last time that power prices spike on unseasonal weather or indeed volatility in gas supply – and indeed both hold the key to how serious the situation becomes this winter. Cost of living spikes will be a recurring risk – though it goes without saying that the longer-term impact of not taking action would be much greater than the near-term costs of the energy transition.

But there's also a growing risk that the public becomes more disenfranchised with net zero, as some near-term costs become more visible. The good news is that around 80% of the public support the use of renewable energy. Keeping it at that level will be a key challenge for the government over the next few years.



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# The ECB's clear warning to banks on climate risk

The warning from the European Central Bank couldn't be clearer: climate change will be a major source of systemic risk to banks if no action is taken....



Climate change will increasingly impact banks' balance sheets if nothing is done.  
Pictured: flooding in Germany back in July

## Climate stress testing will support a greening of bank balance sheets

Based upon its economy-wide climate stress test results, the ECB concluded this week that climate change will be a major source of systemic risk to banks if no action is taken, particularly for those highly exposed to economic sectors and/or geographical areas most at risk. But this presents opportunities for banks too. Those which help companies finance their transition towards more sustainable business models will enable them to increase the taxonomy compliance of their lending books. And that will, in turn, support the issuance of green bonds by banks, including those under the upcoming European green bond standard.

## *The ECB's climate stress testing framework will provide additional incentives for banks to green their balance sheets*

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The ECB's results of its climate stress tests provide valuable insight into the vulnerabilities banks face as far as climate risks and their exposure to non-financial companies are concerned. It's the first step in the central bank's roadmap towards a climate stress-testing framework. It will be followed by a separate supervisory climate stress test of individual banks in 2022, which should result in the introduction of a more regular climate stress-testing of banks in the following couple of years. The climate stress test of the euro-system balance sheet is scheduled for the first quarter of next year.

We believe the ECB's climate stress testing framework will form an increasingly important additional incentive for banks to green their balance sheets in the years to come. Furthermore, banks that are more exposed to climate risks are likely to face increasing pressure to prepare for those risks which will potentially involve them building up climate capital buffers.

### **'Act early' is the clear message**

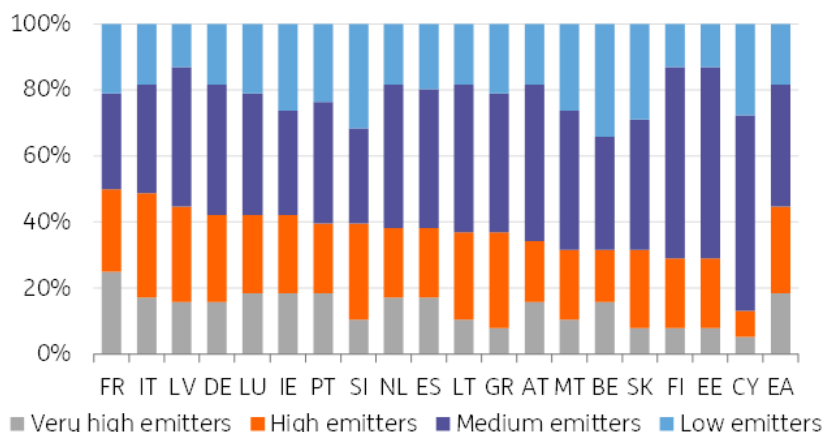
There is a clear advantage to acting early as the longer to medium-term costs of doing nothing to combat climate change far outweigh the short-term costs of transition; that's clearly the most important conclusion the ECB draws from the stress test results. If not mitigated, the effects of climate change will mostly be concentrated in certain geographical areas and sectors. While the physical risks stemming from climate change will primarily be concentrated in certain countries, the transition risks will have a stronger impact on certain sectors. In fact, the ECB sees climate change as a major source of systemic risk, particularly for banks that are highly exposed to these economic sectors and/or geographical areas.

## *The ECB sees climate change as a major source of systemic risk to banks*

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The ECB's data analysis implies that where it comes to transition risks, sectors such as mining, electricity & gas, agriculture, manufacturing, water supply & waste are probably the most emission-intensive, whereas the biggest contributors to overall absolute emissions are manufacturing, electricity & gas, transport, and wholesale & retail activities. The latter sectors represent 40% of bank loan exposures. On a country-by-country basis, the ECB statistics show that bank loans in France and Italy, in particular, are more exposed to very high emitters or high emitters (around 50%), with German bank loans also above 40%, as you can see in the chart below. Cypriot banks have a relatively modest bank loan exposure to transition risk.

## Share of bank loans exposed to transition risk



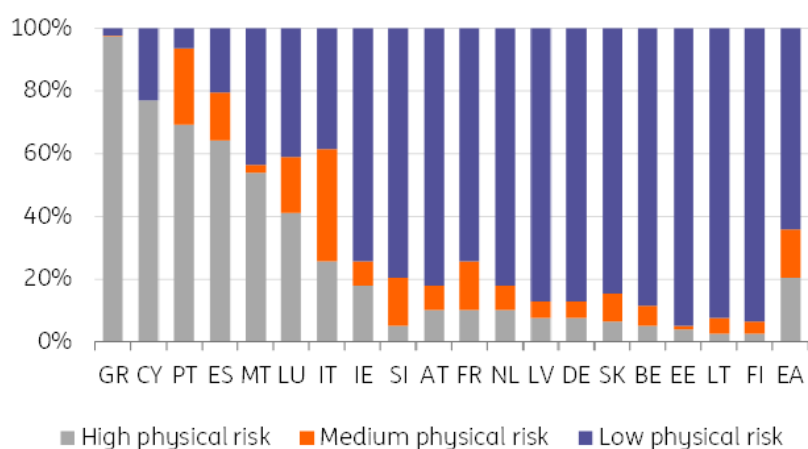
Source: ECB Occasional Paper Series No 281 (September 2021), ING

## Wildfires and flooding are two major physical risks

It's important to note, however, that the ECB sees physical risks as the most important risk to banks if no action is taken. If those climate risks are not addressed, bank losses could continue to increase non-linearly over time due to the permanent nature of climate change. Banks with high physical risk could exhibit a very significant impact. The ECB identifies 22% of the euro area bank exposures as being affected by high physical risk, of which wildfire is the most important (~70%), followed by flooding (~27%).

The ECB anticipates southern European countries will suffer more from wildfires as a consequence of climate change, whereas countries in eastern and central Europe are more likely to suffer more from flooding. Greek, Cypriot, Portuguese and Spanish banks have, according to ECB calculations, a particularly high share of bank loan exposure to high physical risk if climate change is not mitigated, Finnish banks have the least.

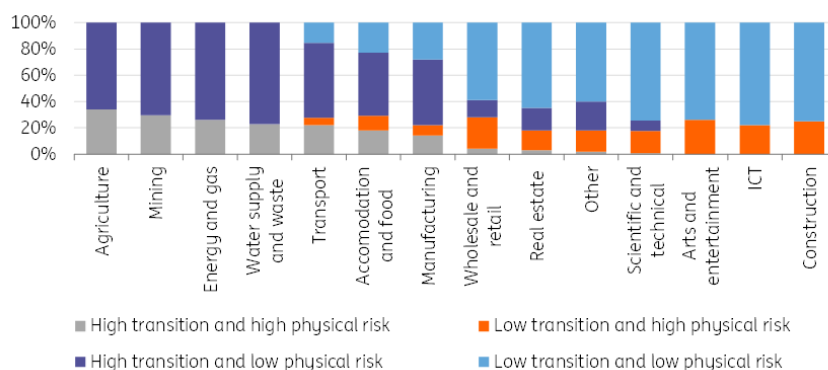
## Share of bank loans exposed to physical risk



Source: ECB Occasional Paper Series No 281 (September 2021), ING

On a more generic basis, the ECB identifies firms in resource-intensive sectors, such as agriculture, mining, electricity & gas, and water supply & waste sectors, to have particularly high transition risk. Instead, high physical risks are spread more evenly across the different sectors. So we only see modest transitional and physical risks in sectors such as information & communications technology (ICT), arts & entertainment and in scientific and technical areas.

## Share of firms subject to climate risk by sector



Source: ECB Occasional Paper on the economy wide climate stress test (September 2021), ING

The ECB categorises firms as vulnerable to high transition risk if their relative emissions fall into the 70th percentile of Scope 1, 2 and 3 relative emissions for the entire sample. Firms are vulnerable to high physical risk if their probability of suffering from a wildfire or a river or coastal flood in a given year is over 1%. The ECB calculations based on Four Twenty Seven and Urgentem data (2018).

## Some sectors are more vulnerable than others

This supports the conclusion that banks with stronger exposure to the agriculture, mining, energy & gas, and water supply & waste sectors are more vulnerable to the transition and physical risks run by their corporate clients. But this doesn't mean that future bank responses will see them all move away from sectors with the most climate risks. That's because banks can play an important role in financing companies' transition to more sustainable business models.

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*Banks can play an important role in financing the transition towards more sustainable business models*

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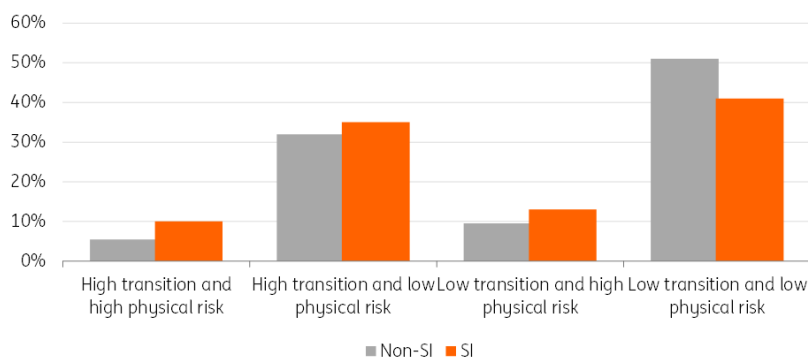
Exposure to climate risks give banks good opportunities to support companies, especially when you consider the adjustment process will be costly and, of course, it'll need funding. Banks could well be able to grow the size of their 'environmentally sustainable' lending book under taxonomy regulation. This, in turn, could be supportive of the issuance of green bonds by banks, including those meeting the requirements from the forthcoming European green bond regulations.

The ECB also concludes that large and significant institutions (SIs) are slightly more exposed to climate risk than less significant institutions (LSIs). The central bank estimates, for instance, that LSIs are roughly 50% exposed to low transition and low physical risk firms, whereas SIs have only around 40% exposure to these low climate risk firms. Vice versa, SIs have higher exposures to firms

that have high transition and/or high physical risks.

So, addressing climate risk appears even more important to significant institutions. Typically, the banking segment is well-positioned to withstand climate-related risks, but you can't rule out banks having to face increased pressure to increase their capital buffers further to mitigate against a worsening environment. And that could lead to them being even more vocal on the topic in years to come.

## Share of bank loans exposed to climate risk per bank type



Source: ECB Occasional Paper on the economy wide climate stress test (September 2021), ING

\*The ECB has categorised exposures as high transition risk if a firm's absolute emissions fall into the 70th percentile of Scope 1, 2 and 3 absolute emissions for the entire sample. Exposures are categorised as high physical risk if a firm's probability of suffering from a wildfire or a river or coastal flood in a given year is over 1%. Banks are classified as significant institutions (SIs) based on the definition set out in the SSM Regulation and SSM Framework Regulation. The ECB calculations based on Four Twenty Seven and Urgentem data (2018).

## The ECB's assessment of bank credit risk

The ECB's climate stress test exercise assessed the risk of climate change on 4 million corporates and 1,600 consolidated banking groups across the Euro area. For banks, the impact from transition and physical risks is analysed both through the credit and market risk channels, although the former is clearly the more important. The ECB compares the impact on eurozone banks from the scenarios' hothouse world and delayed transition to an orderly transition scenario that is used as the baseline.

For assessing bank credit risk, the ECB uses projections on the probability of defaults (PDs) and loss given defaults (LGDs) on banks' corporate books over the next 30 years or so. This exercise does not include bank exposures to households.

The results suggest that banks would benefit until 2030 if the economy does not transition or transitions with a delay, as the average PD would be around 1.5% lower than under the orderly transition scenario. This effect is however more than offset in the medium to long term. By 2050 the median loan portfolio PD would have increased by 7% in a hothouse world as compared with the baseline.

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*Major banks would stand to suffer more than smaller ones under*



## *a hothouse world scenario*

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Furthermore, this trend would continue beyond 2050 at least at the same pace if the irreversible nature of the physical risk is not mitigated. Instead, in the delayed-transition scenario, the relative higher PDs would peak at around 2% in 2035 as corporates finance their transition with debt, stabilising around 3% thereafter. The higher corporate leverage would reflect negatively on the quality of bank loan portfolios. Therefore, the impact on banks from any disorderly transition is more limited than the one from the hothouse world scenario in the longer term.

The results further suggest that major banks would stand to suffer more than smaller ones under a hothouse world scenario. This is due to their clients being more exposed to negative impacts from physical risks such as extreme weather events.

## **The benefits of an orderly transition**

Almost all banks would benefit from an orderly transition. The majority of the banks would exhibit a lower PD by 2050 in the orderly transition scenario than in the hothouse world scenario. The ECB calculates that the average bank-level PD in the hothouse scenario would be 2.3% by 2050, as compared with the 2.1% envisaged for the orderly transition scenario. The effects are not similar in all countries, especially in the hothouse scenario, as the nature of physical risk in the medium to long term is non-linear and location-specific.

## *The probability of default could even rise by 30% for some banks*

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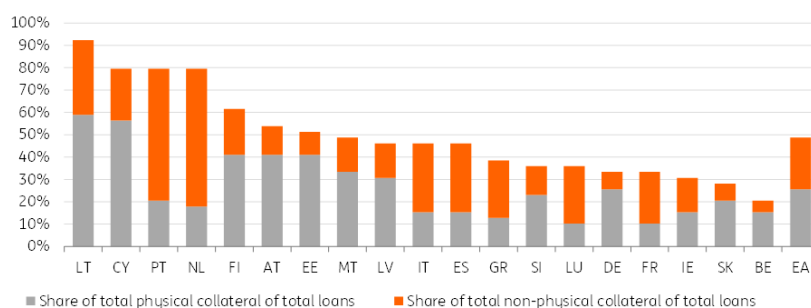
The impact hits certain banks considerably harder than others and the impact may be significant. Looking at the top 10% of banks by PD dispersion, the study finds that their average PDs would rise 30% by 2050, which is five times higher than for the whole sample in the case of the hothouse world scenario. These top exposed banks would also exhibit a long term increase in their PDs in the disorderly transition and orderly transition scenarios. These banks are larger and account for almost 20% of the total exposures. Instead, for the whole sample, the average PD will actually decline by 2050 in the event of an orderly transition, i.e. early and effective climate policies.

Loss given default (LGD) in the hothouse world scenario would be particularly impacted by physical damage for collateral. The stress tests assess the impact on loss given default and collateral values by taking into account a reduction in the value of the physical collateral due to damage caused by physical risk as well as the more macro level impact from the transition and physical risks. Banks would exhibit the largest increase in their LGD in the hothouse world scenario that would also see some bank portfolios disproportionately more affected than others.

For the ECB sample, around 50% of the loans are protected by (mainly physical) collateral, as we show in the chart below. The total collateral value is the highest in larger countries such as Germany, Italy, Spain, France and the Netherlands. Of these, the share of collateralised lending of the total is the highest in the Netherlands (80%), followed by Italy and Spain (around 45%), with Germany and France clearly lower at around 35%. As non-physical collateral plays a big role

especially in the Netherlands, looking at only physical collateral, the share is the highest for the larger countries in Germany, followed by the Netherlands.

## Share of physical and non-physical collateral of loans by country



Source: ECB Occasional Paper Series No 281 (September 2021), ING

## Calculating banks' potential losses

The highest expected losses are expected to be exhibited by banks located in countries with either low levels of collateralisation or high exposure to physical risk. The stress tests use the climate-stressed PDs and LGDs for the corporate loan portfolios to arrive at the expected loss estimates for individual banks. The expected losses are estimated to be minimal in the orderly transition scenario. In the hothouse world scenario, the estimated losses are indicated to increase 8% above those in the orderly one by 2050. In the disorderly transition scenario, the expected losses would be around 3-4% higher. Certain countries seem to be more prone to physical hazards showing both higher PDs and higher LGDs. These countries show higher expected losses.

*The highest losses are expected for banks with low levels of collateralisation or high physical risk exposures*

The ECB has also developed an internal model to assess climate impact on €80bn of corporate bonds held by banks to account for shocks on credit spreads from transition and physical risks under the three climate scenarios. The fair value losses from the bond portfolios are almost always higher in the hothouse world scenario than in the orderly transition scenario. The market impact however is rather limited to banks as the total corporate bond possessions remain relatively small as compared to the total balance sheet size of the banks (€30tr).

## Conclusion

Based on the stress test results, the ECB concludes that there is a clear advantage to acting early, as the short-term costs of transition are by far not as significant as the medium to long term costs of not combatting climate change. If not mitigated, the effects of climate change will mostly be concentrated in certain geographical areas and sectors. The ECB sees climate change as a major source of systemic risk, particularly for banks that are highly exposed to these economic sectors and/or geographical areas.

We believe that banks that are more exposed to climate risks are likely to face increasing pressure to prepare for those risks, which may well lead them to build up climate capital buffers. That said, helping companies finance their transition towards more sustainable business models will give banks opportunities to align their lending books with regulatory requirements and their own climate goals.

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## Sustainable borrowing goes truly global

Borrowing with a sustainability ilk is on a tear for 2021 so far. We note three key nuances. First, USD borrowing is now ahead of EUR borrowing for...



### **Sustainable borrowing is running at 30% up from 2020, and we still have a full quarter to run**

Sustainable borrowing (including green and social) has leapt and bounded through 2021, already running at up 30% on 2020, and there is still a quarter to run. Strikingly, the proportion written in USD is well up. It accounts for 36% of total issuance, eating into the typically dominant proportion done in EUR, which is running at a still impressive 44% of total issuance. As is typical, a decent rump of this USD issuance is done by non-US players, but US domiciled players have also shown an increased representation, with the proportion done by such players running at 19% of the global total, which is up on last year.

### **The corporate space is where the dynamics are interesting, especially on US sustainable-linked borrowing**

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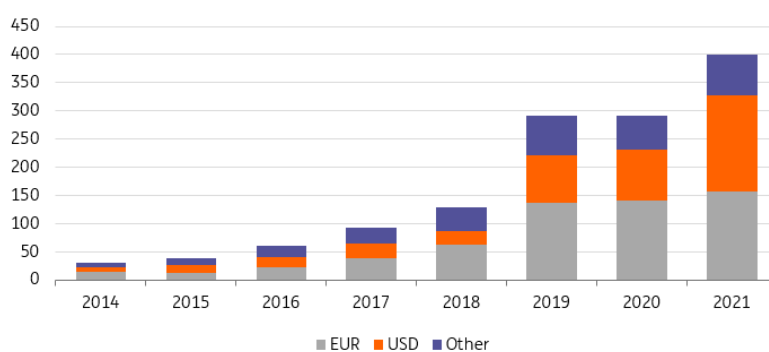
*USD-denominated borrowing accounted for 43% of overall borrowing, knocking EUR-denominated borrowing into second*

place

The standout numbers come from corporates though, on a number of fronts. First overall sustainable borrowing by corporates on a global scale is already running at up 37% on the full 2020 numbers. Second, and perhaps even more remarkable, is that USD-denominated borrowing accounted for 43% of overall borrowing, knocking EUR-denominated borrowing into second place. For corporates, the USD has been the currency of choice for their sustainable issuance for the first time since 2015 (when overall sustainable issuance numbers were a fraction of what they are today).

It's not usual for USD-denominated issuance to dominate in the wider world of bonds, but to have it overtaking EUR-denominated sustainable issuance is relatively novel. Tighter spread into US yields may be one factor, but we feel it is more reflective of an upping in the representation of US corporates and other non-eurozone corporates generally.

## Corporate sustainable borrowing (USDbn)



Source: BNEF, ING estimates

Indeed, US corporate sustainable borrowing has jumped this year, running at 26% of global issuance, compared with 16% of total 2020 issuance. Clearly there has been a step up in interest in sustainable financing from US corporates, in tune with an increased volume of sustainable-related conversations.

*The bulk of the incremental US sustainable borrowing has been in loans (as opposed to bonds), and the bulk of this has been sustainability-linked loans*

When we look at the breakout of borrowing between loans and bonds there is an additional important nuance. The bulk of the incremental US sustainable borrowing has been in loans (as opposed to bonds), and the bulk of this has been in sustainability-linked loans. In fact these have mushroomed from practically nothing in 2020 to in excess of USD50bn in 2021 so far. From accounting for 3% of sustainability-linked borrowing in 2020, US corporates have accounted for

28% of sustainability-linked borrowing so far in 2021. The Euro market continues to dominate here overall, with USD88bn of borrowing done EUR-denominated, or 48% of overall issuance. But it is clear that this segment has caught the ear of US corporates.

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*Sustainable-linked loans have become a nice entry point into the sustainable borrowing space for many US corporates*

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Indeed, sustainable-linked loans have become a nice entry point into the sustainable borrowing space for many US corporates that have an interest in growing in this space. Most corporates have revolver facilities, and adding a sustainability-linked portion to the loan portfolio presents a soft step in the direction of doing more business in this area in the future. It can in fact be a lead into future sustainable issuance through bonds, as a next logical step, and especially should the sustainability linked loans prove a welcome addition.

It is possible that this ballooning in sustainability-linked borrowing has cannibalized other sustainable routes for US corporates. But we think this is a minor effect, or at the very least a short term one. On most other measures US corporates have kept the pace with the overall uptrend in sustainable borrowing. For example, overall US sustainable bond issuance (so, excluding loans) is running at USD34bn year-to-date, which is up 30% on full year 2020. This magnitude of increase is in line with the overall increase in sustainable issuance between this year so far versus last year as a whole. Indeed, we find that Euro corporates are seeing a similar proportional expansion in sustainable bond issuance through 2021 so far, running at up a tad over 30% versus full year 2020.

## **There is also a truly global dimension on ESG bond issuance, with Chinese corporates featuring**

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*Notable jumps in sustainable bond issuance from China-domiciled corporates*

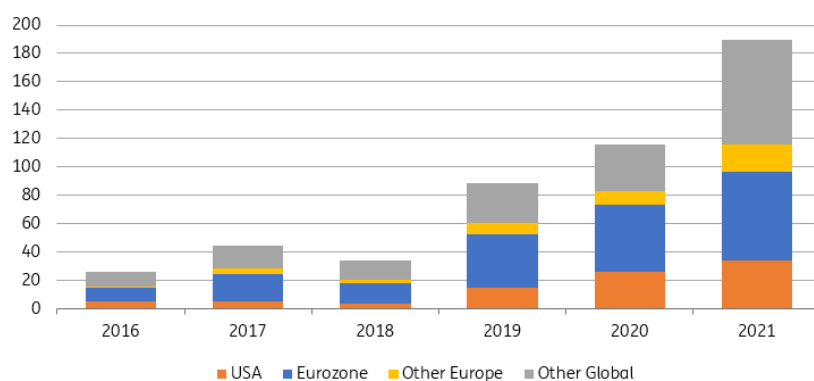
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The big expansion in the global corporate bond issuance has in fact been from non-US and non-Eurozone corporates. Notable jumps in sustainable bond issuance from China-domiciled corporates drove this (actually through green bonds), along with leaps in sustainable bond issuance from South Korea and UK-domiciled corporates.

Corporates outside of the US and the eurozone saw more than a doubling of sustainable bond issuance in 2021 year-to-date versus 2020 as a whole. In fact, this bucket is not only running at double the size of US corporate sustainable issuance, but is also running at above the size of eurozone sustainable corporate bond issuance. The likes of Mexican, Japanese and Swedish corporates are some of the other key players in this non-US / non-eurozone bucket.



## Corporate sustainable bond issuance by region (USDbn)



Source: BNEF, ING estimates

A related outcome here is that the currency of choice for global corporates issuing bonds in the sustainable space has been the USD in 2021 so far, accounting for 38% of corporate issuance. That's up from 35% in 2020, while EUR-denominated issuance fell from 41% in 2020 to run at 33% in 2021 so far. And issuance in other currencies has also risen, dominated by a jump in CNY-denominated issuance (from a USD equivalent of 5bn in 2020 to USD25bn in 2021 year to date).

### Lots of moving parts, with US and Chinese corporates stepping up the pace

The dominant outcomes here centre on an ongoing acceleration in sustainable borrowing generally. Within the corporates sphere, there has been a significant build in use of sustainability-linked loans among US corporates, from near zero to quite significant. And the emergence of Chinese corporates as sustainable bond issuers is significant (see more on this space [here](#)). In addition, the wider sustainable market currency of choice for corporates as a whole has morphed to USD (from EUR, which is still a close second best). It may prove temporary, but it also signals, in a way, a more normal outcome, where [USD-issuance tends to dominate](#) on a wider scale beyond sustainability. And there is more on the pivotal Euro backdrop [here](#) and on supply [here](#).

From a US perspective, pace is being kept with the growth elsewhere, with a significant positive impulse coming from sustainability-linked borrowing, while US corporate ESG bond issuance is broadly keeping pace with the growth in aggregate sustainable bond issuance.

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# All aboard Europe's electric bus revolution

With increased pressure to decarbonise and just four years to meet the minimum requirements, European public transport authorities are speeding up the...



Source: Shutterstock

Electric bus charging station in Milan, July 2021

## Battery electric buses at the forefront of the energy transition

Public buses are considered a natural starting point in the green transition. Electric buses are available, and the ranges match most of the daily distances. Importantly, authorities can also drive the transition forward via tendering processes and public contracts.

This will be the decade of change. Battery electric buses are perceived to be the most viable option to decarbonise most of the public buses that predominantly run in urban areas. Fast charging and with longer lifecycles, battery electric buses are also close to being competitive in terms of the total cost of ownership. Some 98% of the [newly-registered zero emission buses](#) across Europe in the last two years were battery electric vehicles (BEV). The other zero-emission option – Fuel cell electric buses (FCEV) – are less energy-efficient and expected to play a moderate role.

## The pandemic heavily impacted public transport...

The pandemic has been tough for public transport. Due to the downturn in passenger volumes, as

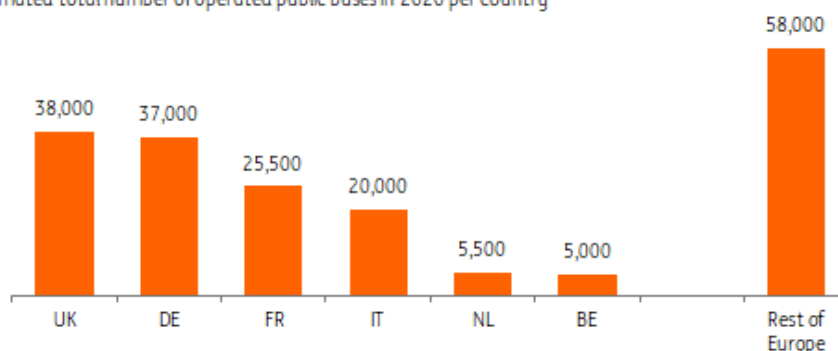
well as an uncertain outlook, the total number of new registered buses and coaches in Europe dropped by over a fifth in 2020 and has not yet recovered. Investment in new coaches has been hit the hardest. But [new inflows of green buses slowed as well](#), as public contracts were extended, rather than allowed to expire, amid uncertainty over the return of passenger volumes. In effect, this meant that some of the buses due to be replaced were not.

## ... but passenger traffic has shown resilience; bus fleets won't shrink

With rising vaccination rates and countries lifting restrictions, [public transport volumes are showing signs of a sustained recovery](#) this autumn. Although the return of passengers is uneven across countries and a full recovery will take more time, as some structural impact could persist, we do not foresee a long-term contraction in the European public bus fleet.

## Large European public bus fleets in UK, Germany and France

Estimated total number of operated public buses in 2020 per country



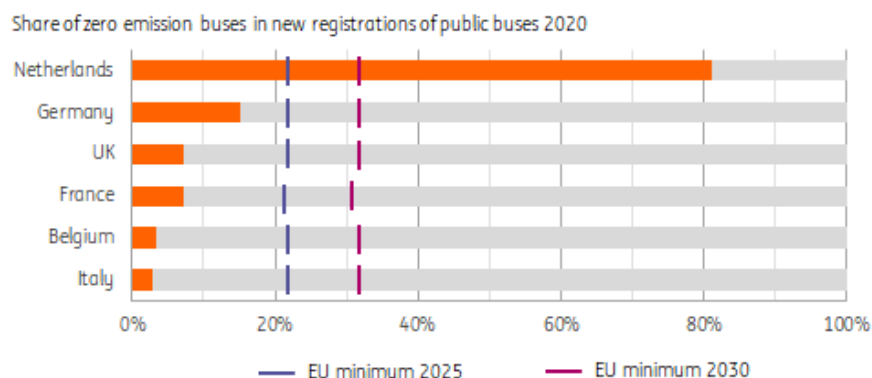
Source: BNEF, ING Research

## Electrification propelled by EU targets, ambitious national plans

In most European countries, electrification of the fleet has just started. Most electric buses are currently purchased by Western European countries and the Nordics. The EU [clean vehicle directive\\*](#) sets minimum requirements for purchasing new zero emission public buses (electric + fuel cell electric) in member states, which differ across the continent. In most Western European countries, a minimum share of 22.5% should be zero emission by 2025, rising to 32.5% by 2030, for most countries. For some Eastern European countries, like Romania, requirements are lower. However, this sets only a bare minimum and several countries and cities have more ambitious targets (see at the bottom), with still a long way to go. This means electric buses will continue to be promoted and we expect to see an acceleration of the uptake in the years to come.

\*Under the EU 'Fit for 55' plans, revisions to the clean vehicle directive are not on the table. But if the transition is not progressing fast enough, this could change, with minimum levels raised to help speed up the process. [A separate European emission trading system](#) for road transport could impact public bus transport as well, but this will only take effect from 2026.

## Netherlands ahead with inflow of zero emission public buses

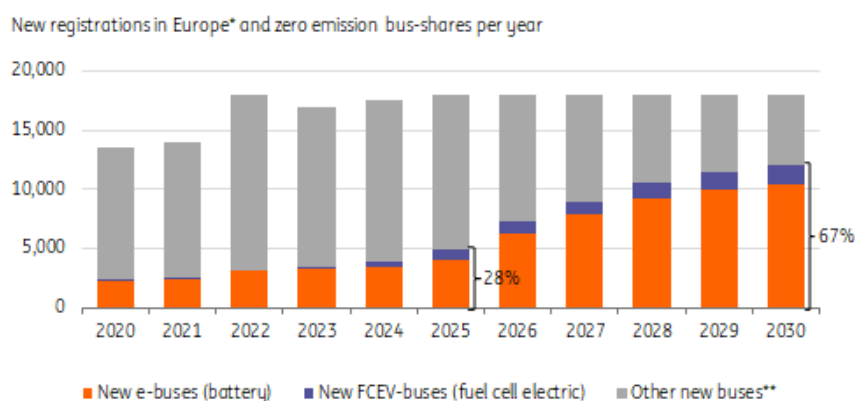


Source: EU, BNEF, ING Research

## Annual electric bus sales to surge from 2023, quadruple by 2030

As European countries emerge from the pandemic and start looking forward again, we expect sales of electric buses to significantly increase from 2023 onwards. In 2025, we expect over 4,000 new e-buses to come online across Europe (vs an expected 2,450 in 2021). Beyond 2025, we expect new inflows to accelerate to over 10,000 buses as transition programmes come on stream and targets become more pressing. This is equal to almost 60% of new sales. While fuel cell electric buses are expected to take a larger share in the long-distance transport segment in the run up to 2030, battery electric buses will continue to dominate. Together, two-thirds of new buses are expected to be zero emission by then.

## Annual European e-bus sales to exceed 10,000 by 2029

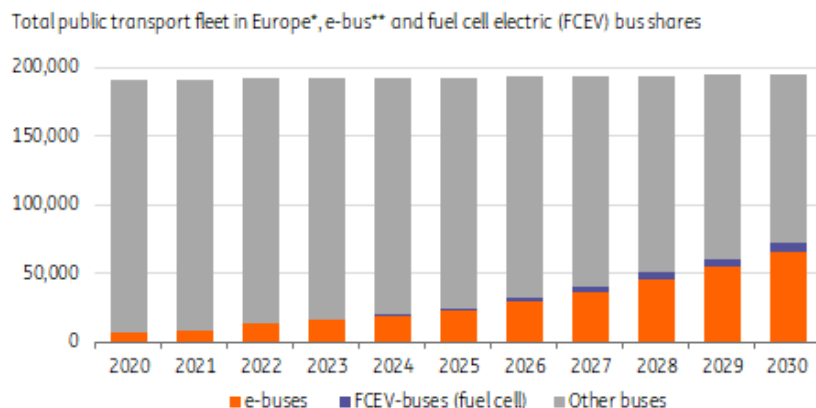


Source: ACEA, EAFO, BNEF, ING Research \*EU + UK + EFTA \*\*diesel, gas, plug-in hybrid

## Most of the EU's bus fleet will still need to be replaced by 2030

With new sales of e-buses increasing, Europe's bus fleet will continue to see further substitution. In nine years' time, the electric bus fleet – including existing trolley buses, which play a significant role in some cities in Central and Eastern Europe – is expected to reach 65,000 units. Germany and the UK will run the largest e-fleets. This implies the fleet share will surge from barely 4% in 2020 to an expected 33% in 2030. Additionally, the rolling stock will contain a small share of fuel cell electric vehicles. This reflects a significant shift, but at the same time it means the largest portion will still need to be replaced after 2030.

## European e-bus fleet in public transport expected to exceed 60,000 by 2030



Source: EAFO, BNEF, ING Research \*EU + UK + EFTA \*\*including trolleys

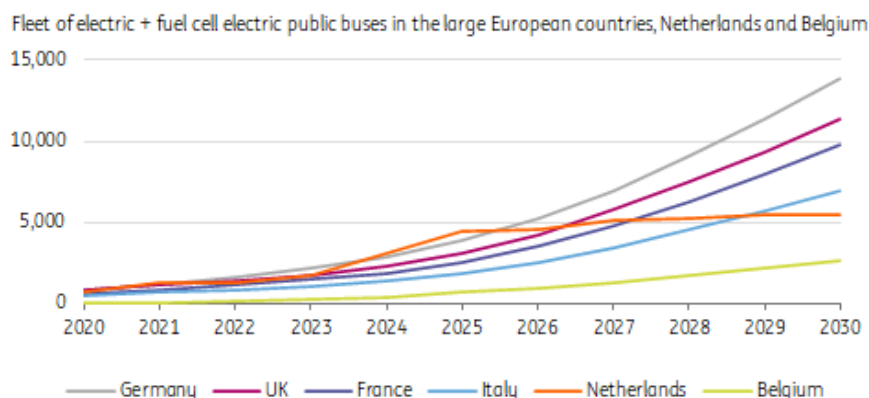
### The shift to e-buses won't be without challenges

Electrification of Europe's public fleets is not simply a matter of ambition and budget. Within countries, stakeholder interests will influence public contracts. Other challenges could also impact the pace of change along the way. The most important are:

- Infrastructure:** Enlarging the e-bus fleet requires upgraded charging infrastructure to efficiently deploy the vehicles in daily operation. This will mean added investment to expand and strengthen electricity networks. Alongside significantly increasing supply of (renewable) power to the grid, this is a general challenge for countries in the energy transition, but also a condition to electrify.
- Production capacity:** The manufacturing of e-buses will need to be expanded rapidly in the years to come. This will be a challenge. Manufacturers like Mercedes, Volvo and VDL, but also Ebusco, BYD and Switch are extending production, but shortages of capacity or components like batteries or semiconductors may be limiting factors. Meanwhile, manufacturing is just emerging from the pandemic-induced slowdown.
- Contracts and operations:** Aligning public contracts and authority-operator relations with longer life cycles and the deployment of electric buses is necessary. This may require legal and organisational adaptations, like upfront frameworks facilitating the takeover of vehicles by a successive operator, resulting in optimal commercial funding conditions for public transport fleets.



## Germany and UK to see the largest fleets of zero emission buses



Source: BNEF, ING Research

## National and city specific transition plans for electrification of public bus fleets in Western-European countries



The Netherlands

In 2016, the Netherlands adopted the [ambitious target to fully decarbonise its public bus fleet of 5,500 buses by 2030, with 100% zero-emission new inflow from 2025 onwards](#). In 2020, over 80% of newly registered buses were already zero emission, resulting in a fleet share close to 25% in early 2021. This still means that 4,000 buses will be replaced by zero emission vehicles over the rest of this decade.



Belgium

Within Belgium, Flanders [aims to carbonise the full public bus fleet \(2,300 buses\) of operator De Lijn by 2035, with the challenging objective to electrify inner city bus traffic by 2025](#). Although plug-in hybrids will play a significant role to meet this target, the current small fully electric fleet of buses will start to grow next year.



Germany

Germany aims to have electrified [half of its total public bus fleet in 2030 in its Klimaschutzprogramm](#). Large cities like Berlin, Hamburg and Cologne have announced plans to ramp up e-bus replacements this decade, leading to an inflow of thousands of new e-buses. A new federal government might also raise the ambition level.



France

In France, operators must ensure that 100% of the new buses are 'ecologically friendly' from 2025 (natural gas, hybrid electric or full electric). Additionally, regional authorities have their own targets: the capital region Ile de France aims to decarbonise its full fleet of 10,300 buses before 2030, with **30% (3,000) of this intended to be electric**. For the city of Paris (over 4,500 buses) the objective is to have a **full ecologically-friendly fleet by 2025**.



Italy adopted a sustainable bus plan over the period 2019-2033 which offers funding for the electrification of public buses to meet the EU's minimum requirements. This has just started. The city of Milan aims to fully electrify its fleet by 2030, **resulting in 1,200 e-buses**.



In the UK, the city of London announced plans to completely **decarbonise its fleet of over 9,000 buses by 2034**, which was earlier targeted for 2037. By the spring of 2021, only 487 were classified as zero emission, meaning that 8,500 buses will have to be replaced by zero emission ones in 13 years. The Confederation of Passenger Transport has set a target for all new buses to be ultralow or zero-emission by 2025. **The aim is that all sales of new buses are zero-emission by 2035**.

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## New York Climate Week emphasizes the need for action

Corporates and organisations gathered (virtually) in New York this week to show that they mean business when it comes to combating climate change. It was...



Solar panels and New York City skyline

New York Climate Week has concluded. It has not made many headlines in mainstream media, but it did contain a few days of interesting discussion on the merits of taking action now to secure a net zero future, and specifically to balance emissions versus production of greenhouse gases by 2050. It was very much a talking shop of the convinced, those that are of the firm opinion that climate change is happening, and that the behaviour of humanity is a central cause of it. And by extension, action taken now and in the coming years in an accelerated manner can help to stem the negative impact, bending the curve towards a more carbon neutral future. As is typical in such events, the case for the defense is typically not made, or at least a platform is not provided for it. But we'll leave that for another day. Here we focus on the key soundings and themes from the event.

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*It was very much a talking shop of the convinced*

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A whole series of corporates lined up to champion their efforts to lower their own carbon print. The range of names was impressive, spanning the sectors of energy, transport, food and agriculture, health, finance and more. And there was a global focus to the discussion, with a heavy European influence, especially in the healthcare and finance discussion, and in energy. There was also a solid nod to emerging markets, with the likes of India and Latin America singled out for coverage, and China was a strong discussion point too. The central theme was one of championing the work that has been done, while acknowledging that much more needs to be done. This was overlaid with loud calls for governments on a global scale to do much more; in a sense to catch up with segments of the private sector that deem themselves to be ahead of the pace.

## Climate: “Code red for humanity” reiterated

It has become clear that there is a real urgency to address climate change with all stakeholders involved. The UN Intergovernmental Panel on Climate Change (IPCC)'s assessment report published this August forecast that it is likely the global temperatures will have increased by 1.5 degrees Celsius compared to pre-industrial levels by 2040, much faster than previously projected.

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*There is also an important social dimension to big ambitions*

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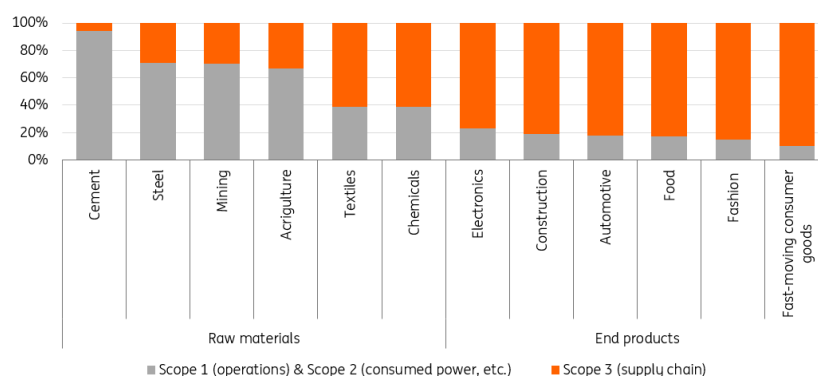
Moreover, despite the flurry of targets set by countries and companies to achieve net-zero emissions – a stage where greenhouse gas emissions are balanced with an equal amount of carbon removal from activities such as reforestation or carbon capture and storage – the pathway toward realizing this goal is very narrow.

At this year's New York Climate Week, governments, UN agencies, business, investors, and NGOs all stressed the imperativeness to tackle climate change and showed great enthusiasm to marry bolder plans with concrete actions. There is also an important social dimension to big ambitions, where vulnerable parts of society are not cast aside by new technologies. A just decarbonization process is what's required.

## Supply chain management at the heart of corporate sustainable practices

One hot topic among corporates at the Climate Week is the sustainable management of supply chains. Emissions from eight major supply chains including food, construction, automotive, and freight sectors together contribute to over 50% of all global greenhouse gas emissions. In the automotive sector, for instance, 14% of global steel production is for vehicles, and steel and iron production makes up 11% of global CO<sub>2</sub> emissions.

## Breakout of emissions and the supply chain effect



Source: CDP, BCG, ING estimates

Across sectors, a growing number of companies are developing strategies to decarbonize their supply chains. Common best practices agreed by participants at Climate Week include requiring suppliers to disclose sustainability-related information, investing time to listen to suppliers, assessing suppliers based on both the ambition and progress of their science-based sustainability targets, as well as helping suppliers improve their sustainable performance.

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*From a corporate management perspective, best practices also involve setting up a clear tone from top management on sustainability*

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From a corporate management perspective, best practices also involve setting up a clear tone from top management on sustainability, communicating effectively with consumers and suppliers, and building a radically transparent and traceable management system. Tangentially to this point it was interesting to see some of the companies emphasizing the importance of the circular economy with one large technology company aspiring to reuse or recycle a product for every new purchase.

One element that companies desire, but the market current lacks, is industry standards on sustainability and the circular economy so that players can be properly aligned, creating some consistency of treatment and a level playing field.

Many of the technology companies have come out to declare that they are currently at a point of net zero emissions, and they deem that to be the case from a full supply chain perspective. It gets tougher to achieve this as we move out the curve to corporates that survive off a more complex and heavier supply chain that could span players across different continents with different agendas.

One of the key declared ambitions for the corporates that spoke up on the issue was to take some ownership of the emissions profiles of their suppliers. This is quite a grandiose task to take on, especially for the producers of more complex product, and requires quite some due diligence

across a number of supply chain fronts. But it seems many corporates are up for the challenge.

## The energy sector – where the most urgent attention is required

At a very early stage of Climate Week it was agreed among participants that the system that needed our most urgent attention was in the energy system. Here we have the root of the carbon print, and that comes with a clear acknowledgement that changes are required. Wind, solar and hydro power were the key areas where more resources need to be directed towards.

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*Participants acknowledge that hydrogen has not yet achieved cost parity with other fuel alternatives*

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There was also an energetic discussion on hydrogen as a source of power, directed by one or other of the above, and a very interesting picture of New York energy being supplied in this fashion was featured. The usual requirements were trotted out here along the lines of cleaning up electricity generation generally, replacing fossil fuel plants, and aiming for clean electricity generation, and dramatic reductions in damaging emission. And not just in the coming decades, but as soon as this decade. Calls for governments to act here were loud.

Participants acknowledge that hydrogen has not yet achieved cost parity with other fuel alternatives in most cases. To support the development of the fuel, many G20 countries included in their Covid-19 recovery stimulus packages investment plans to support hydrogen production – especially “green” hydrogen produced through renewable energy. But more policy incentives are needed – not just in hydrogen, but in all parts of the energy sector.

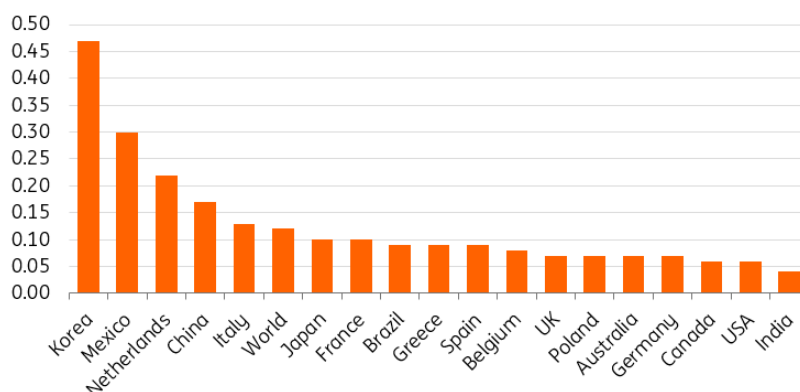
Developing green and sustainable energy is also important for energy security. As we can currently see across Asia and Europe, a reliance on fossil fuels, often from foreign countries, creates vulnerabilities to supply shocks that are economically and societally disruptive.

## Transport and lots of talk on electrification

The development of zero-emission vehicles (ZEVs) are crucial to help regional, country, and local jurisdictions achieve net-zero emissions targets. Yet, one main challenge to the uptick of EVs, especially in the US, is the lack of charging infrastructure. The density of charging stations in the US is lagging its European and Asian peers, which in part has led to low percentage of EVs in the automotive sales in the US. In 2020, EVs accounted for 74.8% of light vehicle sales in Norway, followed by Iceland (45%), Sweden (32.2%). In China the ratio was 6.2% and the US just 2.3%.

## Electric Vehicles Chargers - The US has some catching up to do

EV chargers per EV vehicle by country, 2020



Source: International Energy Agency

One of the reasons for the low level of EV deployment in the US is insufficient supporting policy at the federal level, which is only starting to build up this year. President Biden’s infrastructure plan is only setting aside \$7.5bn to expand electric vehicle charging – half a million EV chargers – with a priority to dedicate money to rural and low-middle income areas. There is another \$7.5bn for electric school buses and other public transportation.

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*The US looks set to continue lagging major European and Asian countries in EV adoption in coming years*

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President Biden had initially proposed upwards of \$100bn for incentives to buy an EV through credits or rebates on purchases, but this was cut from the final plan and will mean uptake will be much slower. Indeed, one of the key reasons that Norway has been so successful is that ordinarily the country charges hefty import duties and registration taxes. If you purchase an EV these fees and taxes are significantly reduced while there are also certain toll exemptions – a significant inducement.

With less financial support and a less developed charging network the US looks set to continue lagging major European and Asian countries in EV adoption in coming years and is in danger of being overtaken by much smaller European countries. This is not only important for climate change, but as many of the panelists pointed out, it is hugely detrimental for air pollution, which has knock-on implications for health.

## Mother Earth and Health are key sources of pollution that require action

The food and agriculture sector is traditionally seen as having contributed to worsening the environment, leading to biodiversity loss, deforestation, water quality degradation, and chemical pollution. At Climate Week, food companies talked about conducting business while respecting the



planetary boundaries. To do that, they are rethinking how to fit in to the food system, which can help them develop tailored climate strategies and be part of the climate solution. These include building up sensor systems for smart farming, advancing plant-based technologies to reduce emissions from food production, among others, to establish a regenerative and restorative food system. Such a system is a clear requirement to help bend the emissions curve, with a focus on greenhouse gas emission per calorie consumption as something to focus on when accessing the merits of alternative methods.

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*Food companies talked about conducting business while respecting the planetary boundaries*

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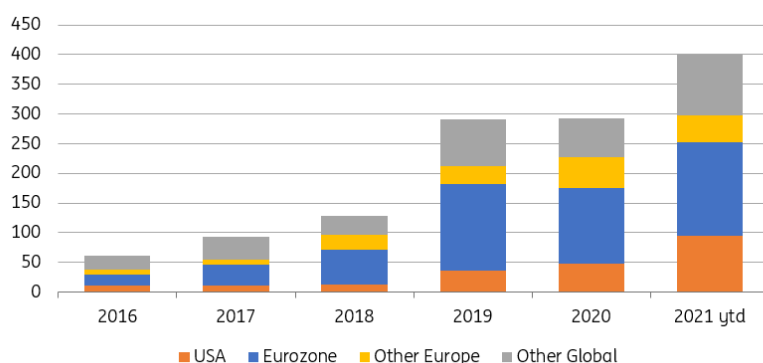
However, there was little discussion of personal responsibility on this key topic. According to the US Department of Agriculture food waste is estimated at 30-40% of the food supply. This is hugely detrimental to sustainability goals given the significant energy waste from machinery and logistics and fertilizer production plus the harm to biodiversity. While much of this is in supply chains there is also waste from people buying too much and throwing out food waste. There is also the diet that people choose that in the Western World and the US in particular tends to be protein heavy, which is also more energy intensive.

It was acknowledged that healthcare was an unusual polluter, responsible for some quite significant waste and gas emissions. Lessons from Europe featured here for the large US healthcare business, an area that no doubt will become a key target area in the coming years.

## Asset management and banking are seeing change, and more is coming

The notion of taking responsibility for what stakeholders get up to was a related topic of the week. In the area of finance there was a focus on the behaviour of asset managers. We know there has been a ballooning in environmentally friendly and sustainable funds at the asset management level, but the talk was to take this one step further and look at the entire holdings of assets managers when assessing how green and sustainable they really are, holistically.

## Corporate issuance of sustainable bonds – the US is on the up



Source: BNEF, ING estimates

Asset managers should also take on a more pivotal role in proxy voting, to help ensure more green objectives are achieved, including having an eye on board memberships, ensuring enough sustainability expertise is present. A similar theme obtains when it comes to banks, where their loan books should increasingly be pivoted towards a more sustainable friendly underpinning, and where brown players get funded that they have sustainability linked objectives tagged on to the takedown of borrowed funds.

## Steel – a heavy hitter and an example of where change is required

Companies are realizing that hard-to-abate sectors such as steel need to be part of the solution to realize net-zero emissions goals. There have been increasing discussions today about the decarbonization of these sectors, compared to even five years before when much of the focus was on cleaning up the power sector. That said, steel consuming companies like automakers are increasingly demanding greener steel, whose production is powered by renewable energies such as wind, solar, or hydrogen.

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*Steel consuming companies like automakers are increasingly demanding greener steel*

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Steel manufacturers and consumers with sustainability mandates have used Climate Week as a platform to express that the sector would need trillions of dollars to facilitate the greening process. Capital is required to de-risk investment, reduce the green premium, among others. Companies have also voiced their support for public procurement policies of steel, as well as a gradually increasing carbon price scheme.

## Winners and losers, and there are many of both

There are clearly significant opportunities for companies and employees as the world pivots towards action on climate and sustainability, but there was little discussion at the event surrounding what happens to the losers. Many companies will not be able to adapt to the new environment quickly enough to survive in their current form and this could have devastating impacts on the communities left behind.

As we have seen with the loss on coal mining, ship building and general manufacturing jobs across the US and Europe, a trail of economic hardship is left in its wake, that will need to be addressed. Inequality, in the sense of a loss of purpose, and a consequent rise in crime, can all quickly result in and create a polarizing political environment. Governments will need to come up with policies to mitigate this very quickly.

### Be careful what you ask for

Time and time again, participants at Climate Week concluded with a call for more government support. This is timely, ahead of the UN COP26 set for Glasgow in November. There, the stage is set for a further overlay of potential governmental action. In fact a gathering of the UN General Assembly also took place in New York, coinciding with Climate

Week, from which the Biden administration announced a doubling of climate aid to USD11.4bn annually by 2024, and China pledged to halt the financing of new coal-fired power plants overseas (although there is more scrutiny on domestic emissions).

As a final aside, we wonder whether corporates fully understand that they are in a way asking for more regulation, and likely more taxes on activities that are responsible for the various externalities that manifest in climate erosion. Just like the lack of case for the defense, we will leave that whole debate for another day...

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## Carsten: What now after Germany's cliff-hanger elections?

ING's Carsten Brzeski in Berlin tells us that we're in for marathon talks between the Greens and the Liberals after a very close election result...



### German elections: Why Merkel could still be in charge by Christmas

Germany's centre-left party, the SPD, appears to have narrowly won the country's general election. But this is now just the start of protracted discussions between it, Chancellor Angela Merkel's party, the CDU, and the Greens. It was an unexpectedly tight race and until a new government can be formed, ING's Carsten Brzeski tells us that Mrs Merkel could still be in post until Christmas.

[Watch video](#)

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Snap | 1 October 2021

## 3.4% eurozone inflation puts more heat on the ECB

With yet another surge in headline inflation, the heat is on for the European Central Bank's December discussion on whether a pure recalibration of...



ECB President, Christine Lagarde, has more inflation dilemmas to worry about

Eurozone inflation just came in at 3.4% year-on-year in September, from 3.0% in August. A 13-year-high. Core inflation accelerated to 1.9%, from 1.6% in August.

The surge in headline inflation is still mainly driven by so-called one-off factors such as higher energy prices, the German VAT reversal or price mark-ups post-lockdown in the leisure and hospitality services. However, higher inflation has been spreading across the entire economy, with almost half of the major 100 components in the consumer price basket recording inflation rates of above 2%.

### Inflation prospects gradually moving from 'transitory' to 'more persistent'

Today's inflation surge will do very little to bridge the gap between the two inflation camps, the 'transitory' and the 'more persistent' camps. While the recent rise in energy prices and the prospect of supply chain frictions lasting far into 2022 are giving the 'transitory' camp a hard time,

slack in the labour market and some base effects disappearing next year still undermine the 'more persistent' view.

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### *We see two kinds of second-round effects materialising*

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In our view, some one-off factors should indeed fade away next year but inflation could turn out to be stickier than the 'transitory' camp currently assumes. In fact, we see two kinds of second-round effects materialising, keeping inflation higher than expected next year.

The first is the pass-through from higher producer prices to consumer prices. In the past, producers absorbed higher costs by squeezing profit margins. This time around, they seem to be willing to pass on higher costs to consumers as illustrated by the fact that selling price expectations in both the manufacturing and services sector are currently at or are close to record highs. The second pass-through channel will be wages. The mismatch in the labour market between the lack of skilled workers and still high unemployment rates as well as a re-regionalisation of production as a result of supply chain frictions could give rise to higher wages.

## **ECB still behind the curve with its inflation forecasts**

Admittedly, monetary policy can hardly bring down inflation driven mainly by one-off factors. However, constantly higher inflation rates and a high risk that the ECB has actually entered a period in which its longer-term inflation forecasts frequently turn out to be too low, compared with too high in the years prior to the pandemic, will put more pressure on how much monetary accommodation the eurozone economy really needs. With today's inflation data, the ECB's own forecasts have once again been too low. The September staff projections had headline inflation at 2.7%, it now comes in at 2.9%.

This week's speech by ECB president Christine Lagarde already signalled a changed stance on inflation compared with a few months ago; a shift from a very benign assessment to one of more alertness and awareness that inflationary pressure might be less short-lived than initially thought. This marks already some convergence between doves and hawks at the ECB but we still expect a heated debate at the December meeting. Recent and future inflation developments are still no reason at all to discuss policy rate hikes but definitely a reason to discuss a (more significant) reduction of the asset purchases and not just a recalibration.

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# Bank Pulse: Full Basel reforms to further increase European banks' capital requirements

European banks will have to face 13.7% higher minimum capital requirements by 2028. This follows a monitoring exercise by the European Banking Authority...



## Bank capital requirements would increase by 13.7% by 2028

The EBA has just published its monitoring exercise of the full implementation of the final Basel III reforms in the EU as compared with the full application of the current CRR/CRD IV. The report assesses the impact on 99 banks split into two groups (40 large and internationally active and 59 small banks) and one subgroup (G-SIIs) based on their size.

The report finds that the banking sector would see an average increase of 13.7% in the required minimum level of Tier 1 capital by 2028 as compared with the CRR/CRD IV. The aggregate capital requirement would increase to €866.1bn from €762bn. The impact has been reduced when compared with previous exercises. The effect would be bigger for the large and internationally active banks (+14.4%), where the G-SIIs would carry a heavier burden of +22.7%. Smaller Group 2 banks would be less impacted and see their minimum requirements increase by 8.1% in the case



of full implementation.

For G-SIIs the higher capital requirements would be notably driven by the introduction of the output floor. This would solely increase the minimum capital requirement by 7.4%. In addition, the minimum capital to be held for operational risk would increase by 6.1% by 2028. The impact of the output floor would be less for smaller banks at +2.2%. More important for them are the changes in the standardised (+6.8%) and the internal ratings-based (+3.6%) approaches for measuring credit risk.

**€3.1bn** The T1 capital shortfall

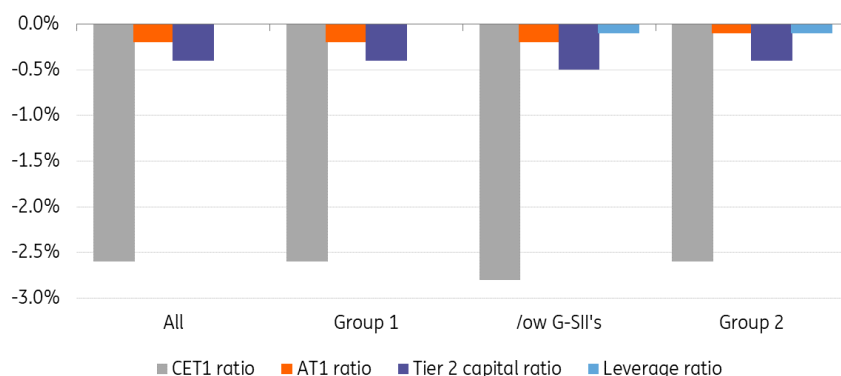
### Leverage based requirements would become less constraining

The higher risk-based capital requirements would contribute to making leverage-based requirements less constraining. According to the EBA, the number of banks constrained by the leverage ratio will halve from 32 under CRR/CRD IV to 15 under the full implementation of Basel III. Only for the G-SIIs group, the revised leverage ratio would increase the minimum T1 capital requirement (+0.7%) due to the G-SII surcharge.

The baseline impact presented above excludes the impact of three G-SIIs that have used, according to the EBA, “overly conservative data for market risk” in the new FRTB framework. Including the impact from these would result in the minimum capital requirement to increase by 23.3% for G-SII’s as compared with the 22.7% baseline. The difference is driven by a 2.9% higher market risk requirement as compared with just 0.1% higher in the baseline.

### The impact on capital ratios of fully loaded Basel III reforms

Compared with current fully loaded CRR/CRD IV by 2028



Source: ING, EBA

## Banks would need to raise more capital and extend their debt maturities

The full application of Basel III when compared with the fully loaded CRR/CRD IV rules would result in EU banks showing 260bp lower CET ratios, resulting in a CET1 capital gap of €0.7bn. The very small CET1 gap is only found in the group made up of smaller banks.

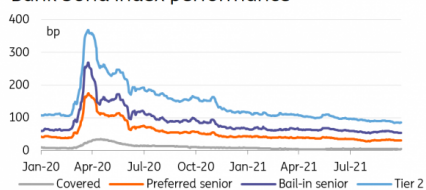
The Tier 1 shortfall for all banks would amount to €3.1bn. This would include €1.6bn for G-SIIs for the higher risk-based capital requirements. Smaller banks would instead need another €1.3bn due to the higher risk-based requirements and an additional €0.2bn due to the higher leverage-based requirements.

The shortfall of total capital for all banks would increase to €7.3bn, of which €5.3bn for G-SIIs. The relatively limited capital shortfalls reflect, in our view, banks being well prepared for the upcoming changes.

Finally, the report shows that to comply with the NSFR banks would need to raise another €8.1bn in longer-term funding, split between groups 1 (€5.6bn) and 2 (€2.4bn) with no shortfall found for the G-SIIs. We consider the funding shortfall as limited for the whole sector.

### Chart pack

Bank bond index performance

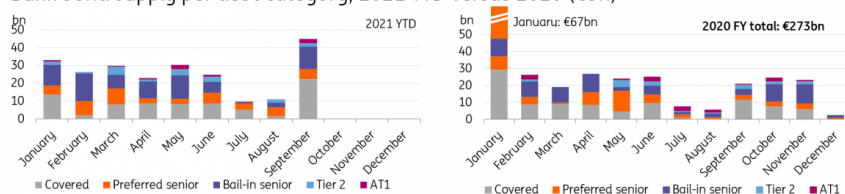


Relative performance of the indices



Source: Markit iBoxx, ING

Bank bond supply per debt category, 2021 YTD versus 2020 (€bn)\*



\*only includes public deals.Source: IGM, ING

\*only includes public deals.Source: IGM, ING

Source: ING, Markit, IGM

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