

## It's now or never

Asia seems to be catching up in the sustainability race; Rob Carnell's been sifting through the data. We've certainly got inflation now and that's causing market jitters. We've now got another German green bond. And if not now, then when? We look at the slow takeup of Europe's recovery fund. And we examine why AI is still not mainstream in retail

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## Carnell: How Asia is catching up in the global sustainability race

Just how effective are Asia's efforts to build a more sustainable society? ING's Regional Head of Research in Singapore, Rob Carnell, says although there remain differences between where we are in Europe, the region is quickly catching up



### How Asia is catching up in the global sustainability race

Asia appears to be a region in transition as far as sustainability is concerned. While it may not have all the frameworks in place yet, the region seems to be making faster progress and greater efforts to improve. Rob Carnell assesses where Asia sits on the 'green scale', drawing on insights from a recent ING/Longitude survey

[Watch video](#)

# Now or never: Asia's sustainability challenge

Covid-19 has prompted firms and investors globally to accelerate their sustainability efforts as we've discovered in the recent Longitude/ING survey, 'Now or never, a new bar for sustainability'. And it seems the Asia-Pacific region is quickly catching up with the rest of the world as far as environmental and social issues are concerned



The urban 'green lungs' of Victoria Park meet the soaring residential and commercial buildings of Hong Kong, China

## Reasons to be hopeful, but it's not clear-cut

Ask most people what they would expect in terms of regional differences from a global survey on corporate and investor attitudes to environmental issues and I expect they would suggest that Europe would be the clear leader, setting their own challenging standards and in turn, setting the standards for the rest of the world to follow.

They would probably suggest that Asia has been moving progressively in this direction and in recent years has shown that it too can take Environmental, Social & Governance (ESG) issues seriously.

They would probably argue that the US is only just beginning to set off on this journey, though is doing so with considerable energy right now.

So perhaps the thing that jumps out most from the data from which the Longitude/ING "Now or Never" study is collated, is that for the most part, Europe, North America, and Asia-Pacific are fairly close in terms of the majority of these survey results.

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*Surveys tend to capture aspiration more easily than they do objective positions*

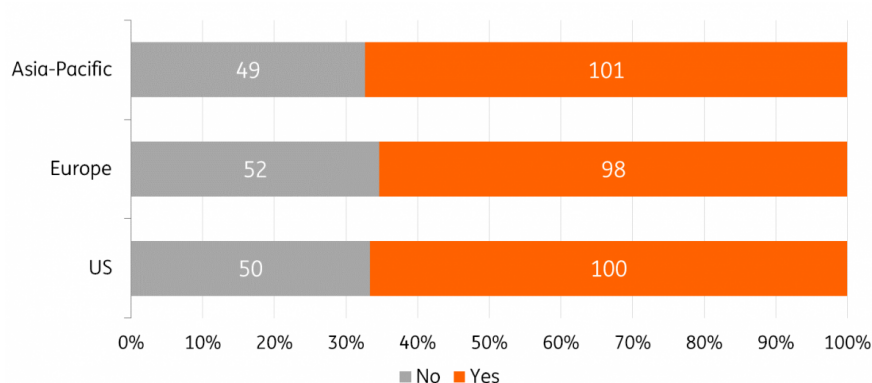
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One reason why there is not a greater dispersion in the survey results in line with our prior expectations may be that such surveys tend to capture aspiration more easily than they do objective positions. For example, ask a question like, "In the light of the pandemic, will your company make executive pay more closely linked to attaining ESG targets?", and for a European company already well advanced in such fields, the answer may well be "no" because it already does this to a high degree.

Ask the same question of a US company that until now may have paid no heed to such metrics, and even if it may only be beginning to take such goals seriously and in a totally non-material way, you might get a very different answer.

So in short, interpretation of the data needs to be careful and take the wider global context into account. This will become a far more valuable set of data as it is repeated over time and we can see "direction" and "aspiration" supplemented by some more objective measures of progress.

## Had your company set itself any formal sustainability targets for the environment before the Covid-19 pandemic?



e.g. carbon footprint, energy efficiency, waste reduction

Source: Longitude and ING study "Now or Never, a new bar for sustainability"

## Asia-Pacific, transitioning towards an ESG world

Results from the survey indicate that at least on the surface, firms across the world are taking ESG more seriously with two-thirds of survey respondents, regardless of region, setting formal environmental targets even prior to the events of 2020. The survey also shows that the majority of firms across Asia, Europe and the US are likely to increase and expand environmental targets in response to the coronavirus developments, led by 113 firms from Europe, 110 from Asia and 103 from the US. This ranking is in line with the prior beliefs we outlined in the introduction.

And although these results suggest that our initial expectation that ESG and sustainable financing is an area where companies from Europe outpace Asia and that in turn, Asia outpaces the US, there are perhaps more important messages we can infer from the data.

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### *Asia is currently in transition with regard to ESG efforts*

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One of these is that Asia is currently in transition with regard to ESG efforts. Asked whether their companies had a sustainable framework in place, only four firms in Asia replied that they had not and had no plans for doing so. That compares with 10 in Europe and seven in the US. Although Asia trailed both Europe and American in terms of having a working sustainable framework in place as of today, the survey showed that 66 firms from Asia were currently in the process of setting up such a framework - noticeably more than firms in either Europe or the US.

Even if Asia lags its peers in Europe and the US in terms of having a working sustainability framework, the survey shows that actual progress is being made on this in the region as it transitions towards a greater emphasis on ESG.

### Asia-Pacific according to the survey

For the purposes of this survey, 'Asia-Pacific' is also a very particular definition. Out of 450 firms surveyed, 150 of these were classified as Asia-Pacific, with roughly equal numbers of respondents from firms in Australia, China, Hong Kong and Singapore. In contrast, although no more firms in total, for Europe, these came from 10 different countries, including Western and Eastern/Central Europe.

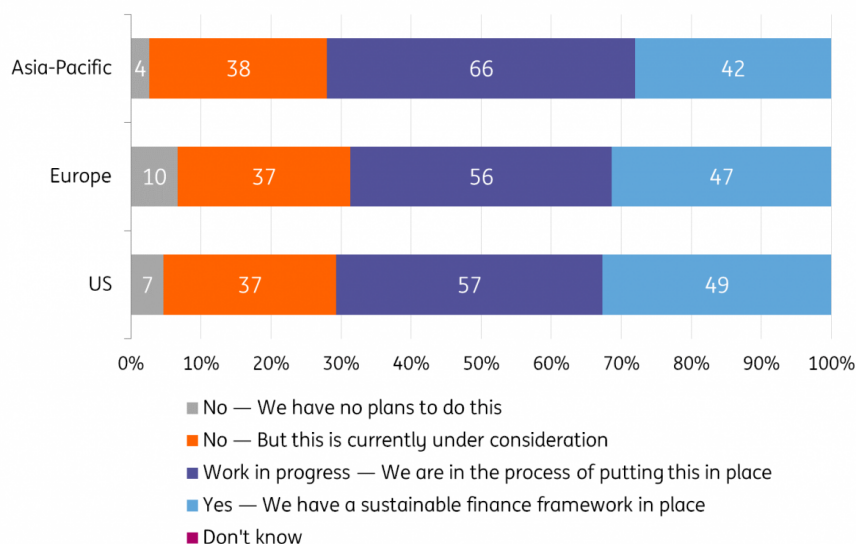
And what about China? It can be argued that the sample doesn't give sufficient weight to the country within the region, although the addition of Hong Kong firms may lessen this criticism to some extent. Moreover, given China's economic dominance of the region, this is always going to be a potential issue and it's one that we need to be fully aware of.

Singapore in contrast is a very small economy, at the extreme end of the wealth and income curve, and also may not be particularly representative of the region. Australia is uniquely placed given the importance of extraction industries for its economy and may also not be particularly representative. Both countries are currently heavy per capita emitters of greenhouse gases, though they take very different public stances on the environment.

In short, a broader sub-set of Asia-Pacific would have helped to smooth out any impact of

outlier and dominant countries in the survey. And though that does not mean we cannot draw any conclusions, we feel it is important to highlight the potential for misinterpretation before we start tentatively drawing out the distinctive Asia-Pacific angles that show up.

## Has your company got a sustainable finance framework in place today?



Source: Longitude and ING study "Now or Never, a new bar for sustainability"

## Main Asia finding: Government support will be crucial

One area that we feel will be crucial in terms of developing and sustaining the push towards environmental, social & corporate governance (ESG) is practical government support for such initiatives. This is important because although firms can go a long way towards improving their environmental and social impact, it is probable that the commercial imperatives that drive such actions will eventually run out of momentum without a framework of regulations and clear support from governments.

*Corporate momentum may stall without a regulatory framework or governmental support*

Well informed firms may undertake a number of actions linked to environmental and social issues driven by their own commercial self-interest - recognising that a "green" product may command sales and possibly even a price-premium in excess of any cost consideration. But without carbon taxes, emissions caps, safety standards and the like, this isn't likely to get countries all the way to net-zero carbon emissions. We feel that governments set out the playing field and the rules, and companies then use their entrepreneurial skills to come up with the smartest solutions to these (technical or social innovations). The better they do that, the more growth we

can enjoy in a sustainable manner.

For the moment, Asian companies have indicated a broad push towards ESG goals and setting up sustainability frameworks. But support from governments via incentive schemes or standardised metrics will help to ensure that these initial objectives do not fizzle out.

Survey results shown in the chart below suggest that support from Asian governments for environmental issues such as renewable energy programmes, electrification of transport, sustainable materials' use and carbon taxes was only modestly higher compared to that of European and US governments. However, Asian governments gave relatively less emphasis or support to other social issues such as social housing, access to healthcare and social inequality. At first glance, it looks like governments across Asia-Pacific favour more support for environmental issues compared to social issues.

We'd suggest further research before accepting this conclusion. What we do think is clear is that government support for the push to ESG will be crucial in expanding corporate efforts.

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*China's pledge together with the other net-zero targets sets the bar for other countries in the region*

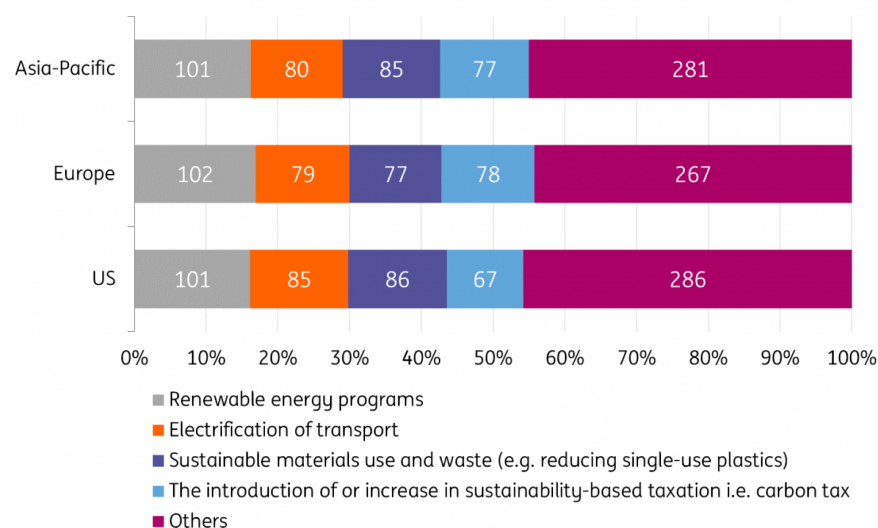
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There was not much of a push towards [sustainability in Asia in governments' fiscal response to the Covid-19 pandemic](#). But since then, a number of governments in the region have made more solid policy announcements.

China, for example, followed up on its 2060 net-zero carbon pledge late last year with further policy announcements at the latest Two Sessions meetings. [China's 2060 net-zero pledge is credible](#), though ambitious, and builds on similar pledges from two of the other big economies and polluters in the region, Japan and South Korea. China's pledge together with the other net-zero targets sets the bar for other countries in the region. In other words, if China can achieve this, then really, everyone can.

## To what extent do you expect to see government action on the issues below in the country where you're personally located?

Outlook for new government policies (ESG and others) and investment over the next one to two years



Source: Longitude and ING study "Now or Never, a new bar for sustainability"

## Investors have yet to wake up to 'Green'

One other outcome from the survey (which is more straightforward to accept) is that Asia-Pacific investors, on the whole, are not yet demanding portfolios free of the most polluting firms as they are increasingly doing in Europe. At the moment, maximising returns is possibly still the key objective for investors, regardless of the underlying activity of the firms in question.

*Asia-Pacific investors are not yet, on the whole, demanding portfolios free of the most polluting firms*

The Longitude/ING survey shows some interesting trends describing why firms are undertaking their sustainability efforts. Companies across the globe appear to have a similar emphasis on the cost motivation for sustainability, with companies citing “Achieve savings/cut costs” and “Improve resource efficiency” as two key motivations for their efforts.

However, we notice some differences as well with US-based firms highlighting “Living up to corporate social responsibility”, “Respond to changing investor demands (for ESG)” and “Create new commercial opportunities” as their top three motivating factors for the push to sustainability.

For European firms, the motivation that stood out was to “avoid reputational risk/improve brand reputation” given that chasing sustainability efforts is widely accepted and possibly even expected

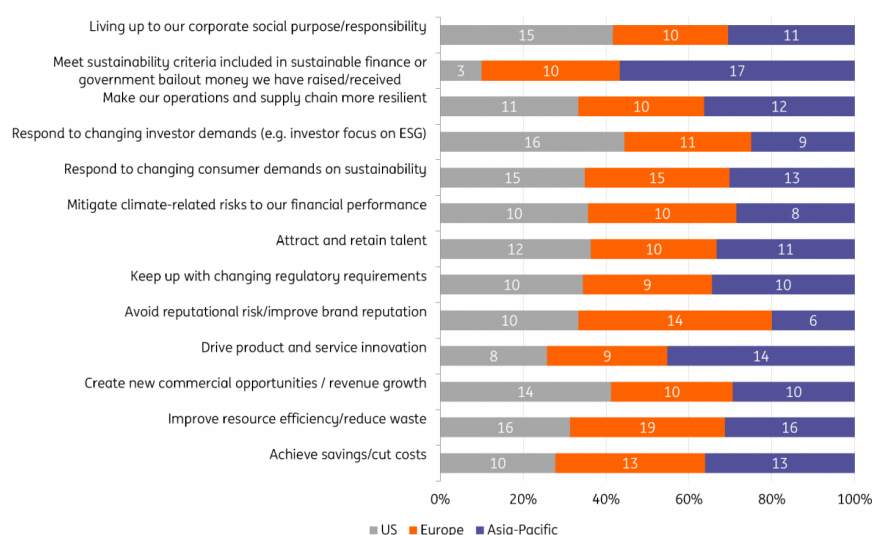
of firms based in Europe.

Firms in Asia cite “Meet sustainability criteria” and “Drive product innovation” as their main motivations, and more often than their counterparts in Europe and the US.

This doesn't deny the existence of a concerted push by firms in Asia to adhere to their sustainability frameworks but suggests that such frameworks may be less driven by outside investor perceptions and requirements than their peers in Europe or the US. That said, the differences between regions are not big, and we would not want to inflate their statistical significance.

## What are the most important motivations or drivers for your company's sustainability efforts over the next one to two years?

Motivations that drive the push towards sustainability efforts



Source: Longitude and ING study "Now or Never, a new bar for sustainability"

## Asia lags EU and US in green financing but expect some catch-up

Other survey data also supports our hypothesis that Asia is still in transition towards integrating ESG into its operations as firms in the region work to set up sustainability frameworks aided by government support for select initiatives. One area that Asia appears to still lag is in utilising sustainable finance as a means to raise capital. Substantially fewer companies in Asia claimed to be doing this compared to companies in both Europe and the US.

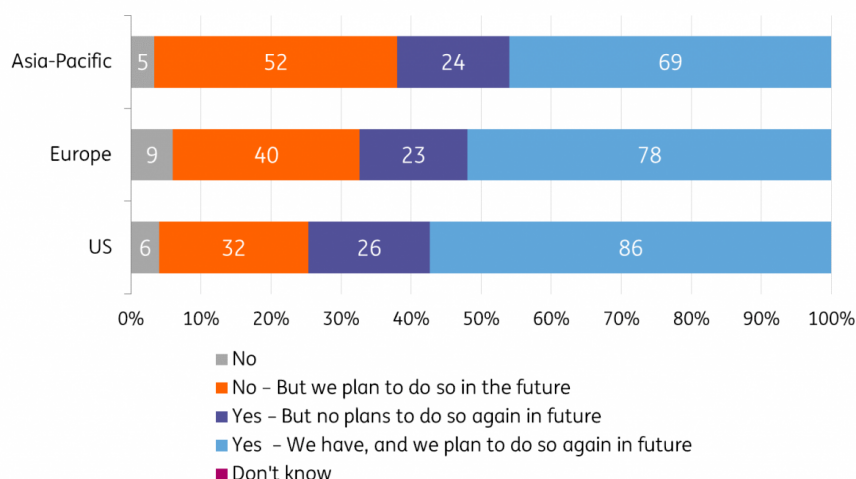
*One area that Asia appears to still lag is in utilising sustainable finance as a means to raise capital*

In the coming years, we can expect more focus on sustainable finance from companies in Asia with

the survey highlighting a substantial number of Asian companies (52) planning to do this in the future. We can only expect an increased number of capital raising exercises to be geared towards ESG as more companies in Asia successfully set up their sustainability framework and government support for these initiatives continues.

## Has your company ever raised capital by using a sustainable finance instrument?

For instance, a green bond, social bond, sustainability bond or green loan.



Source: Longitude and ING study "Now or Never, a new bar for sustainability"

### Asia is a region in transition in need of bold support

It does look as if the Covid-19 crisis, for all the damage it has done, had led governments, corporations, households and investors to wake up to the damage that unfettered economic activity had been unleashing on the earth for decades. It is no longer too controversial to claim that a corner has definitely been turned in terms of attitudes to such activity. And with increasing numbers of countries making future net-zero carbon pledges, the coming decades will see many changes in the way firms operate.

Perhaps the most glaring regional nuance thrown up by this survey, which otherwise fits many of our prior beliefs, is to describe Asia as a region in transition, a region in need of bold and clear legislation and support from governments to complement the positive steps already being taken by many companies. It is also descriptive of a region where the investor has yet to start demanding a greener portfolio, without thinking that this is somehow a trade-off from higher returns and a region that has yet to fully take advantage of the opportunities available from green finance. This is changing.

## Author

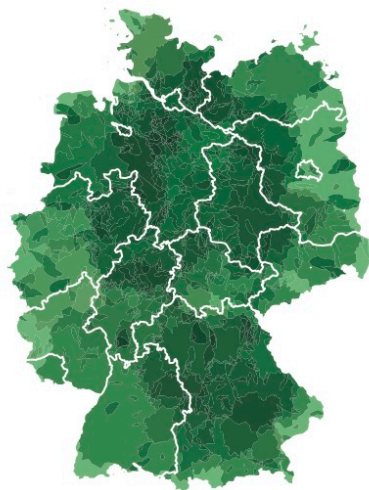
**Nicholas Mapa**

Senior Economist, Philippines

[nicholas.antonio.mapa@asia.ing.com](mailto:nicholas.antonio.mapa@asia.ing.com)

## Germany adds to green bond curve

Germany has just launched its third green bond, with a 30Y maturity. We can now calculate the green premium - dare we say greenium - at this maturity. The deal should help build non-sovereign green bond volumes at the long end of the curve



### Greener for longer

The launch of the green Bund Aug50 green line complements the existing 5Y 10/25 and 10Y 08/30 issues. In fact, it is the longest green Euro government bond issue to date. Note, though, that fellow eurozone sovereigns have also exhibited a preference for long-dated green issues, albeit slightly shorter.

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*Germany's approach to green issuance differs from that of other sovereigns*

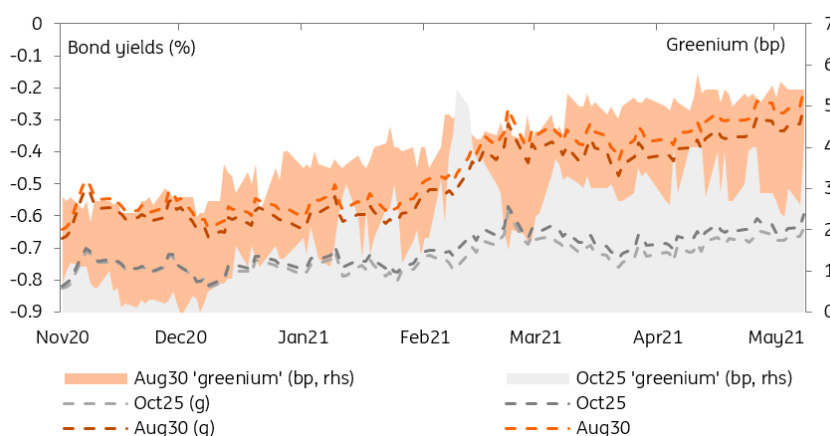
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Germany's approach to green issuance differs from that of other sovereigns in that it consists of 'twin' lines that are fungible into matched coupon and maturity issues. For each of the three existing green German sovereigns bonds (5Y, 10Y, and 30Y) there is thus an identical 'non-green' bond.

## How does one say greenium in German?

This allows for a simple 'one-to-one' comparison between green and non-green bonds. Readers familiar with green bonds will immediately see the advantage of this approach. Namely, the yield difference between these twins bonds represents accurate measures of the 'greenium', the additional price (measured in yield) investors are willing to pay to invest in green bonds rather than non-green equivalents.

## Other green Bunds offer a lower yields than non-green twins



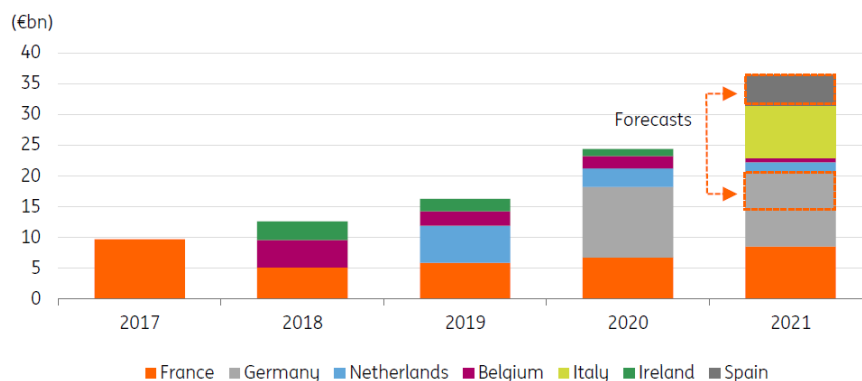
Source: Refinitiv, ING

From the point of view of borrowers, in this instance the German federal state, this represents a saving on the interest rates carried by the (lower-yielding) green bond. At this point, one might object that green bonds do not necessarily trade with lower yields than non-green bonds. Except, in the current case, they do. The new 08/50 green Bund was issued at a yield 2bp lower than its non-green peer. As per today's secondary market data indicate that the 5Y and 10Y equivalent 'greenium' is around 3bp and 5bp respectively.

## It's all a matter of incentives

As long as this 'greenium' remains positive, it carries an incentive for borrowers to issue green bonds rather than non-green equivalents. As the funds raised in this way are ring-fenced for 'green' uses, the cost of financing green projects is lower. In the case of a sovereign, this could either take the form of additional 'green' expenses or simply lower the breakeven rate of return on already planned projects.

## Germany is a relatively latecomer to the green bond party



Source: Refinitiv, ING

But green sovereign issuance brings another benefit: it creates benchmark green issues off which other issuers, whether financials and corporates, can price off. Germany is a relative latecomer among eurozone sovereigns, but it is taking it seriously. Its approach is fast building a standard for the pricing of green bonds across maturities, including in shorter tenors where other sovereign green bond issuance is more scarce.

### Author

#### Antoine Bouvet

Head of European Rates Strategy

[antoine.bouvet@ing.com](mailto:antoine.bouvet@ing.com)

#### Benjamin Schroeder

Senior Rates Strategist

[benjamin.schroeder@ing.com](mailto:benjamin.schroeder@ing.com)

# Artificial intelligence is driving online sales to a new reality

Online retailers have been given a phenomenal sales boost during the pandemic with so many physical stores closed. And those which use artificial intelligence to help with the three major challenges of automation, big data analysis and process optimisation are set to have a major competitive advantage over their rivals



AI allows customers to 'just walk out' of this new Amazon store in London without having to queue at any tills

## Retailers use AI for three main things

How we shop is changing and Artificial Intelligence, AI, is revolutionising retail. Those companies which can afford or who are nimble enough to adopt the latest technology will clearly have an advantage over their competitors.

AI is a collective term for systems that imitate areas of human intelligence. So we have image recognition software that identifies counterfeit products. There's data analysis software which can spot a potential loss of customers at an early stage, prompting action on the retailers' part to get them back. In fact, we identify three main purposes of AI in retail:

- The automation of all kinds of digital and physical processes.
- The gaining of useful insights from collected and analysed data and third parties to improve retailers' online experience with their customers.
- The optimisation of processes which focus on generating sales and keeping costs down.

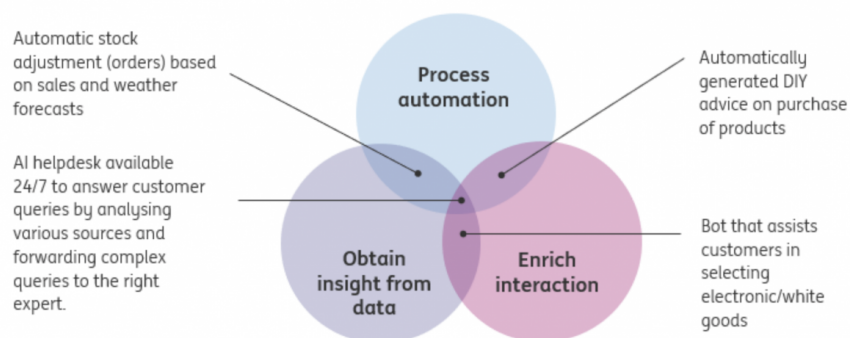
## High growth for online retail sales

The Covid-19 lockdowns have given a significant boost to online retailers. We've seen year-on-year sales rise between thirty and fifty percent in several European countries. In the UK, the share of online in total retail sales jumped from 16% in 2019 to 23% last year. Dutch online retail sales were 45% higher in 2020 compared to the previous year and that momentum is sure to keep going; we expect another 15% increase in online sales in the Netherlands in 2021.

Obviously, sales in physical stores have massively declined. The acceleration of 'online' poses numerous challenges for omnichannel retailers

## Artificial intelligence's three main purposes

Three main purposes of AI with examples of AI applications where those purposes overlap



Source: ING Economics department based on HBR (2018)

## Acceleration of online growth demands process adaptation

The three main purposes of AI ultimately contribute to improving the management of retail companies. The potential improvements and adaptations are especially relevant for those omnichannel retailers now that the balance between the sales channels has changed significantly.

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*The switch to online demands changes in how logistics, marketing and after-sales are organised*

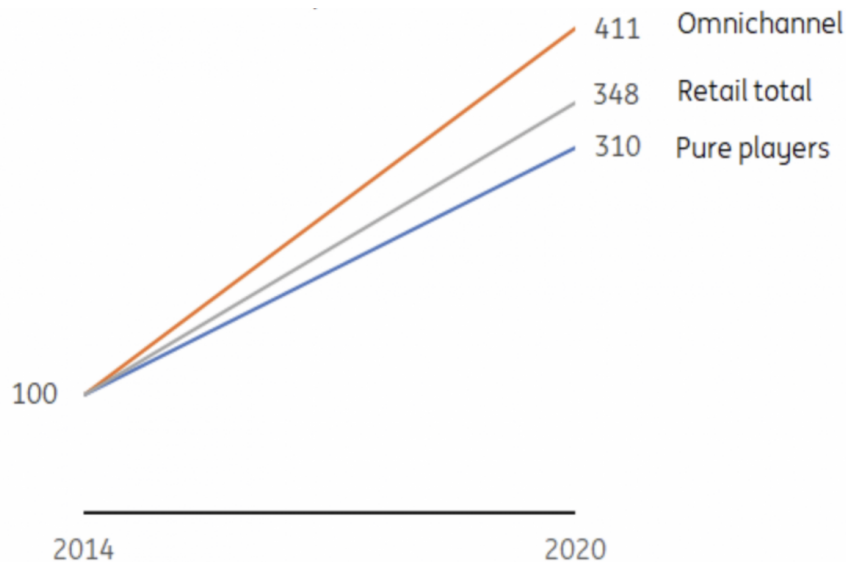
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The shift from physical sales in stores to online sales via websites and apps has been ongoing for many years and the Covid-19 crisis accelerated it still further. In 2020, online retail sales rose 32% in the United States, 44% in the Netherlands and 47% in the United Kingdom compared to 2019. A

situation in which physical stores are generally closed and a complete dependence on online channels is extreme, but online sales are expected to continue to form a larger proportion of sales. This demands changes in how logistics, marketing and after-sales are organised.

## Sales for online omnichannel retailers show fastest increase in the Netherlands

Index revenue online sales, 2014 = 100



Source: CBS

## Challenges in various areas

Three common challenges facing omnichannel retailers relating to online sales channel growth are:

1. Insight into stock management, with a complicating factor being that sales take place via both physical and online channels.
2. Optimising the online sales process, for example when searching for and finding the right products, so that this is not an inferior experience to either physical shopping or the experience at competitor online stores.
3. Improvements in the returns process.

These three challenges each have an effect on specific areas of the value chain in retail, notably for sales, distribution and logistics, and customer services and marketing.

## The impact of AI across the value chain

The three biggest challenges for omnichannel retailers impact various parts of the value chain



### Challenge 1: Use AI to improve alignment between channels

AI improves the alignment between channels by making better predictions and by making automation processes smarter. Aggregated data forms the basis for predictions to enable process improvement.

And you can see where this could make big improvements for companies. About a third of Dutch retailers, for instance, analyse big data but only 14% actually use AI technology to do it. Getting more accurate sales predictions by analysing historic transactions and other variables, such as behaviour, the weather, the time of day and so on would help make logistics' streams far more efficient.

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*Intelligent automation has a lot to offer*

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The online and physical channels and the interaction between these can be specifically examined for this. Moreover, this reduces the waiting time or the risk that customers miss out, which improves customer satisfaction. Intelligent automation has a lot to offer, particularly for core processes such as stock management. Stock adjustment then takes place automatically for many products and categories.

**29%** Number of Dutch retailers using big data analysis

## Optimise sales with automatic price adjustments

Store prices generally move most during sales periods; discounts increase incrementally as the sales' period progresses. AI offers online and physical retailers the opportunity to significantly refine price adjustments. Such dynamic pricing has been used in aviation and the hotel industry for decades. Prices are adjusted upwards and downwards based on numerous factors including availability, competitor prices and click behaviour.

Increasing numbers of retailers are now taking this approach, although products are often less standardised than hotel rooms or flight seats. Amazon has been using advanced algorithms for many years to analyse data, discover patterns and adjust prices in real time. Economic principles such as price discrimination - the right price for individual customers - and price elasticity - how demand changes when prices change - play an important role in this. A lot of historical and other data are needed here, such as prices and sales, but retailers can also use an abundance of 'pricing' software to get their dynamic pricing strategy started.

**14%** Number of Dutch retailers using one or more AI technologies

## Challenge 2: insight into customer behaviour for an improved experience

Artificial intelligence is about data. Online stores can collect, process, and analyse a wealth of information to gain insights about customers that help simplify the sales process. This includes how long you stay on a page, what you click on and what you buy and why. The insights offered by these patterns and data connections can improve the customer experience during the purchasing process, for instance by offering personalised purchase suggestions.

Voice search or visual search, where a photo can be used to search for comparable items, also makes life easier for customers. The combination of AI with other technologies also appears to be promising in bringing the online experience closer to the physical shopping experience. For instance, customers can use augmented reality to try on virtual clothing and see what that new sofa will look like in their living room.

## Omoda mainly uses AI for sales processes and marketing

Omoda is a retailer that sells shoes online and via stores and has many years of experience with both analysing big data and with AI. Omoda mainly uses AI to improve the online sales process. The fashion sector is seasonal, with collections that disappear after one season and involve a considerable human component in terms of procurement. This means that the contribution AI can make towards more intelligent stock management is generally smaller.

A wealth of data is available to develop models, particularly in the sales process and marketing. Models play a significant role in determining which customer segment sees which specific online offer. The company also uses a predictive model to identify site visitors, which improves the likelihood that these people will switch to making a purchase. Retargeting marketing campaigns, for instance via Facebook, then only focuses on this group. The models demand continuous adjustment. New patterns have arisen during the Covid-19 crisis as customer groups that used to visit stores have now started purchasing items online, resulting in models needing to be adjusted and retrained.

## Challenge 3: Reduce the cost of returns by reducing returns and improving logistics

AI can make a twofold contribution to improving processes in relation to returns. The first objective is to reduce the number of times someone sends back. For some product categories, such as clothing, returns can reach 40% or 50%. Suggestions, virtual assistants, and virtual changing rooms are important AI applications that will lead customers to the right products.

Ensuring an improved match between supply and demand reduces the number of returns and improves customer satisfaction. As well as reducing returns, AI offers the opportunity to reduce the costs of reverse logistics. This mainly takes place by deciding what needs to happen with a returned item and automating this. For instance, sales trends, shipment, and repair costs can be used to determine whether the item returned to the store can stay there or whether it needs to go to a central warehouse, be repaired or can no longer be sold.

## How AI helps resolve multiple challenges

What is AI used for?	What does this offer retail?
Process automation	<b>Improved processes</b> <ol style="list-style-type: none"> <li>1 More intelligent automated stock management</li> <li>2 Automated customer support during sales (chatbot)</li> <li>3 More efficient returns process</li> </ol>
Giving insight	<b>More insight into customers</b> <ol style="list-style-type: none"> <li>1 More accurate sales predictions</li> <li>2 Personalised online offer for customers</li> <li>3 Reduce returns</li> </ol>
Enrich experience	<b>Improved match between supply and demand</b> <ol style="list-style-type: none"> <li>1 Reduce waiting times / never out-of-stock</li> <li>2 Bring sales process closer to physical shopping experience</li> <li>3 Assessing virtual articles (e.g. trying on) prevents returns</li> </ol>

## Using AI is not an easy or quick solution

Although AI helps resolve omnichannel retailers' three challenges, it is often not a quick solution. Those new to artificial intelligence need experience with data, data analysis and actually applying AI. Using it in different processes is not something you can manage within a short time. Even if off-the-shelf software is available, many solutions demand data that is specific to the retailer and adjustments to models.

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## *Investing extra time and money is extremely difficult for some retailers*

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To be of value, a chatbot, for example, must be trained in the queries that are relevant to customers. And these queries differ for an electronics chain or a fashion retailer. Moreover, existing models are not trained for circumstances in which only the online channel is open. Investing extra time and money is extremely difficult for some retailers in the current economic situation. According to CBS (Statistics Netherlands) data, one in five retailers is expecting to invest less this year compared with one in ten in the two previous years.

## After online acceleration, AI helps steer growth in the right direction

Despite the drawbacks, there is a great opportunity to use AI to address omnichannel retailers' most important online challenges. Improved matching of supply and demand with AI will both reduce returns and drive sales and customer satisfaction. Improved sales predictions feed efficient logistics streams and improve stock management. AI helps steer growth in the right direction. Larger, fully online stores often already work with AI, which means they are more efficient and are better able to match supply with demand. We expect this will also become the standard for omnichannel retailers.

## So we finally have some US inflation. Or do we?

It's not easy to grasp the rhythm coming from the US right now. Like any good hip hop mix, the rap is upbeat but the rhyme has a complexity to it. Inflationary tendencies are setting a hot beat, but there is a murky undercurrent coming from deep negative US real rates. The official sector is all in; it may need to hang in there a bit longer before the job is fully done



The Federal Reserve has seen it all before, and is at it again – generating demand to help stoke inflation

The last time US inflation exceeded 4% was around the time of the great financial crisis. Since then, a low rate and tame inflation environment has dominated. In fact, US growth or inflation has never really motored since then. It has been more impressive than seen in Europe, but not as energetic as would be typical from the US economy.

It took quite some years before the Federal Reserve felt comfortable enough to tempt its funds rate higher, which it finally did, culminating in a peak at 2.5% in 2019. The Fed had its critics, as it came against a backdrop where headline inflation had averaged an unimpressive 1.7% since 2008. In fact, the US economy was bracing itself for a recession by mid-2019, long before we ever heard

of Covid, which ultimately pushed us into one, a big one.

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*The Fed has had some practice at resuscitation. But the speed of reaction here has been particularly impressive.*

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The policy response to Covid was remarkable on a number of fronts. First, the Fed had a bag of tricks that it had employed during the great financial crisis that it could unleash in a super quick fashion. And the Fed added to these, through various bespoke pandemic relief measures. The Fed also chopped rates to zero in a flash and engaged in a very aggressive bond buying programme, hoovering up bonds and adding liquidity at a speed that was supersonic compared with the great financial crisis response, which was reasonably swift in itself.

Fast forward to today, and the 4.2% headline inflation reading is an outcome of this response. But it's not just the Fed that has driven this.

## The US Treasury has been a key additional stimulator – printing bills to pay its citizens

The second big difference seen in the pandemic response is the reaction of the US Treasury. Not only did the US run up a fiscal deficit of some 20% of GDP to help shield the economy from the pandemic, but the US has also activated a version of helicopter money – handing out cash to citizens. Not from the central banks (pure helicopter) but from the government (same effect for the recipient).

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*The official sector has effectively been printing bills as a form of helicopter money.*

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The US Treasury financed this, and other pandemic-related spending, by issuing short-term bills (mostly). Issuing bills in this fashion is akin to printing money, with the one key difference being that bills issuance gets added to the level of government debt. Although in terms of application it's the same thing; it's the official sector (government and central bank) printing something, anything, to help facilitate payments to its citizens. This has been a monumental move by the official sector as a whole to help secure a US safety net, and subsequent macroeconomic recovery.

This, too, is a factor that has driven demand and has helped to generate some inflation.

## And that in part explains why the Fed will be reluctant to upend the stimulus too soon – why when things can still turn sour?

It also in a way explains why the Federal Reserve will not rush to hike rates. Why? Once the Fed hit zero on rates and was full-on engaged in aggressive bond buying, there was little more it could do.

The Fed needed the US Treasury to chip in big. The argument for doing so was not just a reflection of the current moment, but also about the future. The US was undergoing some traumatic naval gazing centred on social inequality and the need for better inclusion. The Fed, on more than one occasion, has highlighted changes within its own thinking, and has noted that it will maintain its easy policy stimulus until the most vulnerable parts of the economy are put back to work. That suggests a much more patient Fed than would be typical.

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*This is a Fed that sets policy towards social equality, with a tip of the slipper to the US Treasury for helping out.*

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There is another important dimension to this. The fact that the US Treasury has forked out in support of the economy through big spending including stimulus checks, is also a rationale for the Fed to be patient. Why? Because the Fed has changed. In different times gone by, central banks would balance a big fiscal deficit by tightening monetary policy. Here it's different. Here the Fed has effectively asked the US Treasury to help out to secure recovery. The US Treasury has done so. Given that, it would be a bit disingenious for the Fed to go ahead and hike rates at the first sniff of an upturn. The Fed's plan is to get the biggest bang that it possibly can from its buck, in what is effectively a team effort to resuscitate the US economy.

## But there are dark demons at play too. Deep negative real rates pose questions about inflation sustainability

This brings us full circle to the reopening. It's impressive, and will continue to be in the coming couple of quarters. Growth numbers are eye-wateringly high (7%) and inflation is popping (4%). But, where will we be say in 2Q22? Likely still running at or above trend, according to ING's chief international economist James Knightley, who has made some super calls along the way. That risks the Fed being behind the curve, perhaps having to hike by more later.

But then what? Remember, in 2019 the Fed finally managed to get the funds rate up to 2.5%; and the economy shuddered.

We are constructive on medium-term prospects, and in that sense we anticipate Fed hikes. At the same time, we are frankly a tad perplexed by what we see in the real rates space. The 10yr market rate minus inflation expectations gives us the real rate, and it is running at -90bp. That paints quite a poor picture for the medium-term outlook, as theoretically there is a link to medium-term growth aspirations. As it is, deep negative real rates are not discounting growth at all. In fact, they are predicting stagnation, or worse. That's a warning sign we can't ignore.

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*Deep negative real rates are not discounting growth at all. That's a warning sign that we can't ignore.*

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The bond market is usually quite a shrewd predictor of the future. Right now the bond market is

telling us that the Fed is not going to rush into hiking rates. We can glean this from the 2yr yield stuck in the 15bp area (comfortably within the Fed's zero to 25bp range for the funds rate). The bond market is also telling us that there is no mad panic on this. We can infer this from the 10yr yield at just 1.7%. It is up 10bp since the jump in April inflation, but should be much higher to really cushion the effect of higher inflation on real returns. At the same time, perversely, the bond market contains a decent inflation discount e.g. 2.8% of inflation is discounted every year for the next four years, at least.

But, and it's a big but – to achieve that, real rates have been pushed deep into negative territory.

We now have confirmation that inflation is running at over 4%. Good! We need that to help reduce debt levels in real terms. We should also welcome the implied demand excess that might underpin the rise in inflation. We expect that to continue in the coming quarters.

But after that, things get a bit murkier. We remain upbeat, but we also can't ignore deep negative real yields. We target for them to become less negative as the recovery matures. But if they don't, we'd be concerned.

Not our central view, but if real rates were to remain exceptionally deeply negative, it could mean that the US official sector needs to remain heavily invested, on an ongoing basis.

We've seen versions of this before – demographic drags come from Europe and Japan (aging populations) underpin stern structural obstacles. The challenge in the US is to break away from this, and real yields are as good a measure as any to assess where we are in this fight. And right now, there is still some work to be done.

## Author

### **Padhraic Garvey, CFA**

Regional Head of Research, Americas

[padhraic.garvey@ing.com](mailto:padhraic.garvey@ing.com)

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Article | 10 May 2021

## The lacklustre take-up, so far, of Europe's multi-billion rescue fund

The EU's Recovery and Resilience facility is meant to help European economies recover from the Covid-19 crisis. The fund will serve more as a medium-term boost to growth than a crisis-fighting tool. That said, digitalisation and the greening of mobility, energy and real estate stand to gain significant investment so boosting overall GDP growth



European Commission President, Ursula von der Leyen

### Not all countries too eager to pick up a free lunch

It's the facility that's meant to help European countries recover from the Covid-19 crisis. €672.5bn of grants and loans are available and countries have been submitting their plans. But that take-up, at least so far is modest at best. Only 14 out of a possible 27 proposals have come in. Like you would do when hosting an unsuccessful party, you extend the deadline for applications a bit to make sure you fill the room. That's what the Commission has done as it has made the deadline flexible.

Some countries have already announced they will not participate for now, while others struggle to make proposals up to the Commission's standards. For now, let's take a look at what has already

come in. And we're limiting ourselves to the investments and will leave the reform proposals for another time.

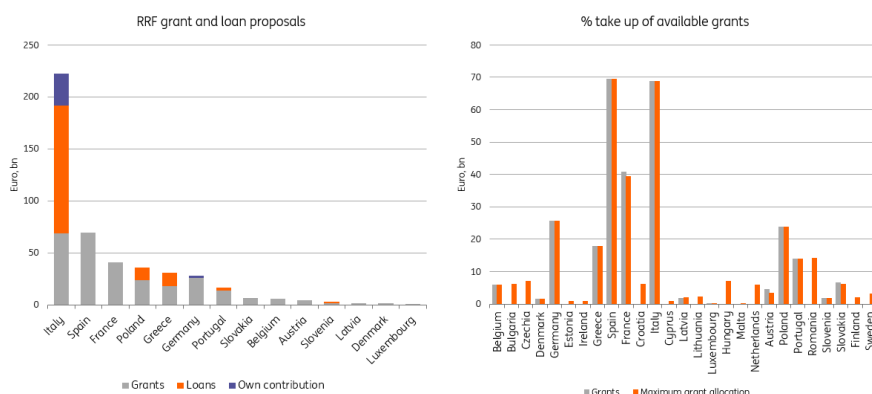
*It's obvious that Italy has gone big and bold with its proposal*

It's important to say that the countries which haven't put proposals in so far have smaller maximum grants to receive from the fund. About 84% of the available grants have been applied for because the countries that stand to gain the most from the fund have already applied. The only country that is set to receive more than €10bn that hasn't submitted a proposal so far is Romania. For the eurozone economy, the biggest one not tapping funds for the moment is the Netherlands at €6bn. Still, with very few countries opting for loans, the total amount of proposals comes in at 'just' €433bn, well shy of the total of €672.5bn in the facility.

As you can see from the chart below, it's obvious that Italy has gone big and bold with its proposal. Not only have they applied for the maximum amount of grants available to them, but they have also gone for an even larger amount in loans and add their own contribution to the plans on top (mind you, the proposal also includes a small amount coming from the recovery funds smaller cousin REACT-EU). That makes the amount for Italy - if approved - about 44% of the total money demanded so far.

But don't count out Spain's fiscal efforts either. While Italy's plans spread out over the total period of 2021-2026, Spain's plans are set to take effect in the first three years only, making the impact on GDP in the first recovery phase large.

Italy has applied for the largest sum from the facility; most grants have now been applied for



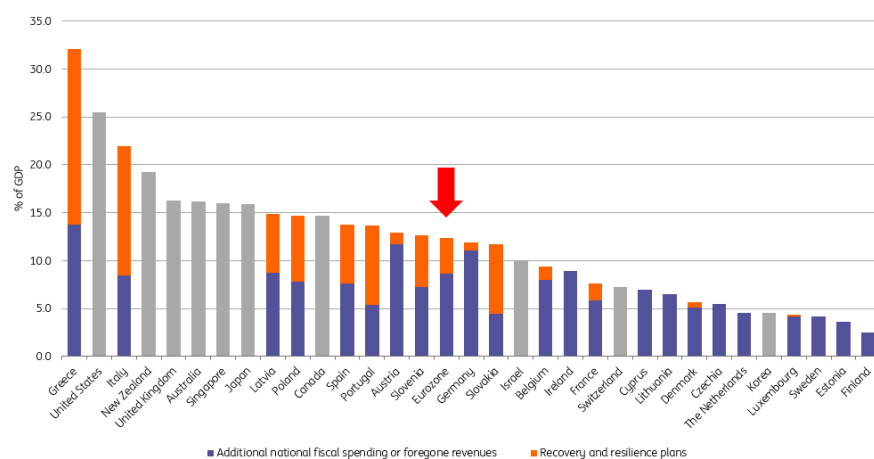
Source: European Commission, National Recovery and Resilience Proposals, ING Research Note: some country data - like Italy - also includes the funds requested from the REACT-EU part of the NextGeneration EU

## The plan still leaves eurozone Covid-19 fiscal efforts at less than half of the US

The impact of the plan is definitely sizeable, although the amount applied for is well shy of the total available in the facility. At €433bn, it has to be said that the impact will spread out over the full period 2021-2026 for almost all countries. That makes the fiscal impact of the programme for the initial recovery phase somewhat underwhelming.

Looking at the additional fiscal spending that countries have done or promised to do in response to Covid-19, the US stands out with a whopping 25.5% of GDP. This includes the approved proposal for the American Rescue Plan, but not the new proposals put forward by President Biden which have yet to find approval in Congress. The eurozone comes in at just 12.4% of GDP when adding the Recovery and Resilience Proposal to national fiscal spending to fight the pandemic. This might even overstate the total amount as there may be some double-counting in projects originally planned to be nationally financed that are now included in the national RRP.

## Additional fiscal spending in response to the Covid-19 crisis gets a sizeable boost from the RRF in some countries



Source: IMF database of fiscal policy responses to Covid-19, National Recovery and Resilience Proposals, ING Research

Note: possible double counting due to projects initially nationally funded now included in RRP. France has been corrected for double counting as total spending funded from RRF is part of previous proposals.

Of course, it is more relevant to look at the fiscal impulse for individual countries as the facility was designed to help the states most in need. Given the sizeable loans that countries like Greece and Italy have taken out, these countries do move to the global frontrunners in terms of fiscal spending in response to Covid-19. Greece even surpasses the US at 32.1% of GDP, but the impact could be significantly smaller as the lending part of the Greek proposal is reserved for the partial funding of private investment so the takeup is non guaranteed.

Italy stands at 21.9% of GDP, also very high on the list. Overall it is important to keep the possible double counting caveat in mind (RRF funding for originally nationally-funded proposals) for the

exact number though, view this as an upper estimate. It is also important to keep in mind the time span, as US support agreed on so far has a far larger immediate impact than the Italian and Greek Recovery and Resilience Proposals. Spain and Portugal also rank high thanks to the recovery fund proposals but do remain well below countries such as the UK, Australia and Japan.

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### *The big wins are for the medium term*

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As Spain and Portugal have weak automatic stabilisers, this is of concern from a crisis response perspective. That shows that while the project helps significantly in terms of fiscal support, it is still unlikely to cause the harder hit eurozone economies to recover quicker than their northern eurozone partners as we have extensively written about [here](#). The big wins are for the medium term as investment and reforms have the potential to improve trend growth, which has been a clear eurozone problem since the global financial crisis.

## How to spend it, the eurozone version

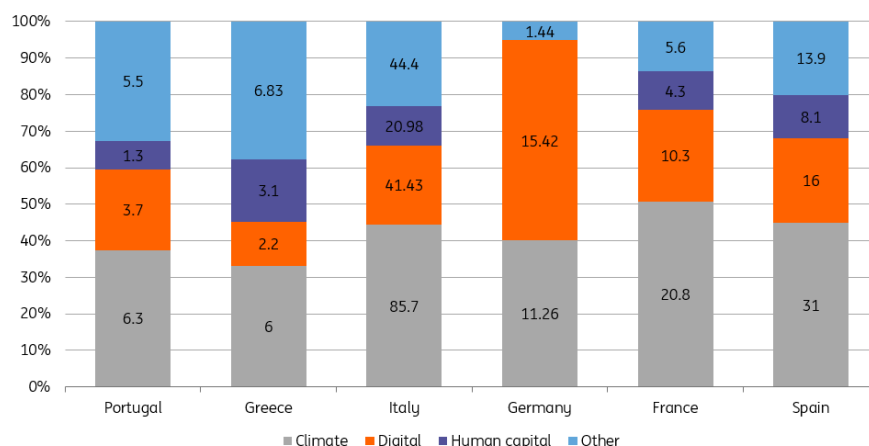
The Commission has put a strong directive on how to invest the funds in the rules around the Recovery and Resilience Facility:

- At least 37% has to be directed to climate investments and reforms and 20% to foster the digital transition.
- All large economies meet these targets set with most going well above it - according to their own assessment, whether the Commission agrees is another matter.
- The German plan even indicates that more than 50% of the plans count towards digital transition.

Most countries have indicated spending more than 40% of their funds on climate investments and reforms with Belgium and France spending over half.

To get a sense of the focus of the larger countries we look at the six largest eurozone RRP, which come from Italy, Spain, France, Greece, Germany and Portugal. Those are the only ones over 15bn euro and represent 95% of the total eurozone proposals. Comparisons are tough given different classifications and reporting of projects between countries, but we have drafted some rough categories to see where most spending will be done.

## The main focus of RRF spending differs between the big spenders



Source: National Recovery and Resilience Proposals, ING Research

As we've just mentioned, climate spending takes the crown in the project with €16bn earmarked for investment under green transition-related projects. Even though Italy has a rather balanced proposal, its total size still makes it contribute to more than half of the specific climate-related proposals. Digital is most important in Germany, with a majority of investments going to digitalisation.

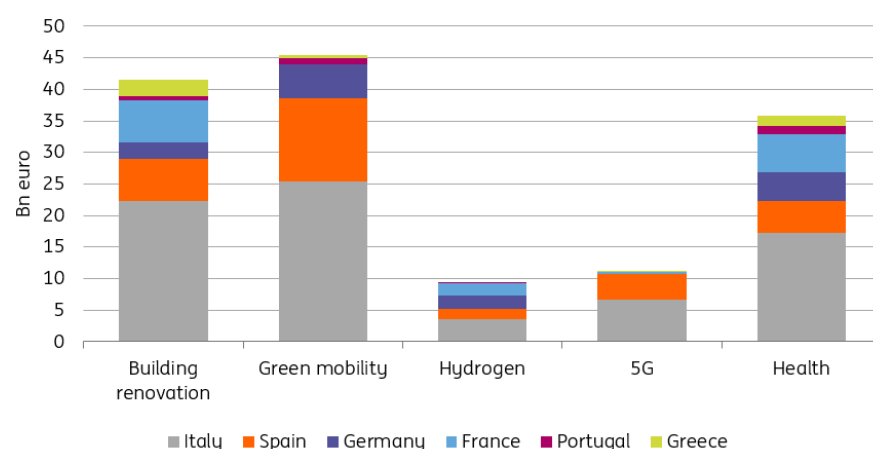
Greece and Portugal have very balanced programmes with a lot of spending on other types of projects. Greece also heavily banks on human capital related investment, about 17% of the total as skills and employment have been key factors in which Greece has lagged since the Global Financial Crisis.

## Green energy, real estate and mobility take the cake

When looking at specific factors, a few things stand out. The climate projects are mainly driven around the themes of green energy, real estate and mobility. The greening of real estate has been a focal point of the green transition for quite some time and this marks a large investment effort of no less than €41.5bn for the six countries examined. Greener transportation also ranks very high with about €45bn in investments planned.

Think of investments in cleaner public transportation but also in electric car charge points. Within the clean energy theme, investments in hydrogen as a clean energy source are interesting to note, with investments amounting to around €10bn set to be done.

## Selected investment themes and earmarked spending show potential for green investments



Source: National Recovery and Resilience Proposals, ING Research

Other projects that stand out are investments in digital modernisation, which leads to sizeable 5G rollout investments that add up to over €10bn. Spain and Italy, in particular, tend to invest significantly in 5G projects, which makes sense given the generally weaker digital infrastructure compared to some of the larger northern eurozone economies. Finally, health care is also important to mention and directly related to the Covid-19 crisis. All countries have devoted RRF investments to the sector, amounting to €36bn in total.

### Where does the project go from here?

A few key things are on the agenda at the moment. First of all, the Commission still eagerly awaits other countries to still join the party. When other proposals can be expected to come in remains unclear, but we do expect some to trickle in over the coming weeks. The EC will then review the proposals within two months of receipt. One month after the Commission agreement, the Council will have to approve the plans as well. When agreed, the countries will receive 13% as an early payout to get projects going, which should be the case in July. That means that money can start flowing in the third quarter of this year.

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*Without the approvals, the recovery fund is in jeopardy*

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Before that can happen though, countries will still need to ratify the Own Resources Decision. This establishes how the EU budget and RRF is funded, so without those approvals, the recovery fund is in jeopardy. This has not been done by all countries as of yet; mainly northern and eastern European countries still have to ratify. While this is a hotly contested decision in some countries like Germany and Finland, it does look like all countries are moving towards ratification before the end of June. That means that we don't expect major hiccups in the process for the RRF at this point and that the historical project can kick off later in the summer.

## Author

**Bert Colijn**

Chief Economist, Netherlands

[bert.colijn@ing.com](mailto:bert.colijn@ing.com)

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Article | 13 May 2021

## Listen: Tense times in world trade

US-China relations have worsened under the Biden administration, with both sides openly trading barbs and Trump-era trade tariffs remaining firmly in place. In this podcast, ING's Senior Economist Joanna Konings discusses the implications for global trade



In a statement partly aimed at China, US Secretary of State Antony Blinken told the UN last week that the US will push back "forcefully" when countries violate the rules and undermine the international order. The remarks followed a [heated exchange](#) between the two countries in March.

While the Biden administration offered the possibility of a reset in US-China relations, tensions have only escalated this year, while the tariffs implemented by former President Trump remain in place. [In this podcast](#), ING's Senior Editor Rebecca Byrne asks Senior Economist Joanna Konings what's likely to happen next and what it could mean for [world trade](#) this year.

### Author

#### Rebecca Byrne

Deputy Global Head of Editorial and Supervisory Analyst

[rebecca.byrne@ing.com](mailto:rebecca.byrne@ing.com)

## South Korea: Short term risks, long term payoffs

Korea was one of the most successful countries in Asia at combatting the Covid-19 pandemic in 2020, managing to avoid mass lockdowns. But it is now being tested as it lags behind the global vaccine rollout race. Strong current GDP growth is at risk if faster vaccination progress is not achieved



### □ GDP and inflation on the rise

Korea experienced a decline in real GDP of 1% in 2020. Compared to most countries in the region, or even globally, this was a very good result. And it owes a lot to the approach taken by Korea to deal with the Covid pandemic.

By concentrating heavily on test/trace/isolation, Korea kept its daily infection numbers low, and the disease never spiralled up to a point where this process broke down. As a result, mandatory national, lockdowns were avoided, though there were of course a number of social distancing measures and restrictions put in place to support the testing process.

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*Korean GDP emerged from Covid relatively unscathed*

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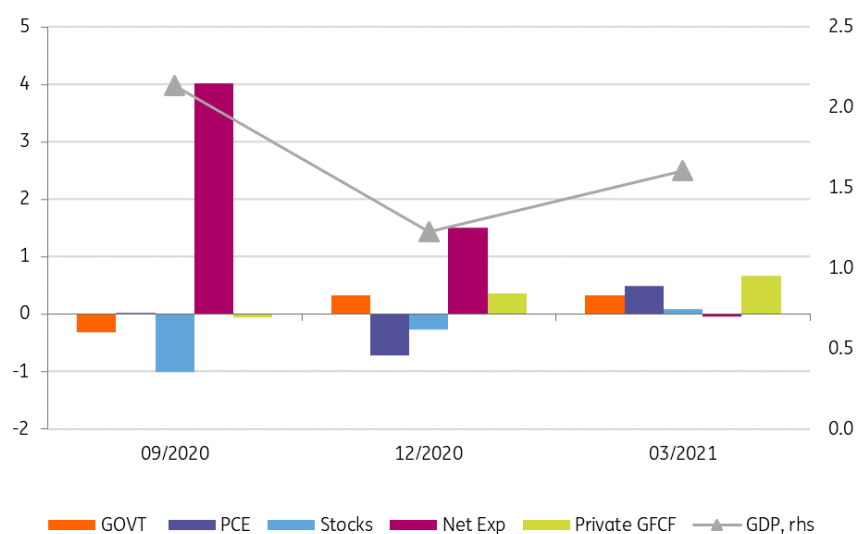
Lockdowns in particular, as well as other restrictions, have been doing most of the economic damage in this pandemic. Consequently, Korean GDP emerged from the main Covid wave in Asia relatively unscathed. Currently, restrictions only extend to bans on nightclubs, karaoke bars other nightly entertainment facilities.

GDP beat expectations in the first quarter of 2021, rising 1.6% from the previous quarter, faster actually than the previous quarterly growth rate of 1.2%. That took GDP in Korea to pre-pandemic levels and suggests that by the end of the year, Korea may have made up all of the ground it lost in 2020.

The strength of GDP in 1Q21 owes more to a broad-based contribution than to any particular subcomponent. During the depths of the pandemic in 2020, depressed domestic demand meant that net exports provided an outside lift to GDP. In 1Q21, net exports contributed nothing to growth, as rising imports offset all the export boost. But there were moderate gains in all domestic demand sectors, from private consumption, investment, some re-stocking and boosted by continued government support.

This is encouraging as it leaves the economy less exposed than if one single sector was bearing all the burden for economic growth, and gives us more confidence to upgrade our forecast numbers.

### Contributions to YoY GDP growth (pp)



Source: CEIC, ING

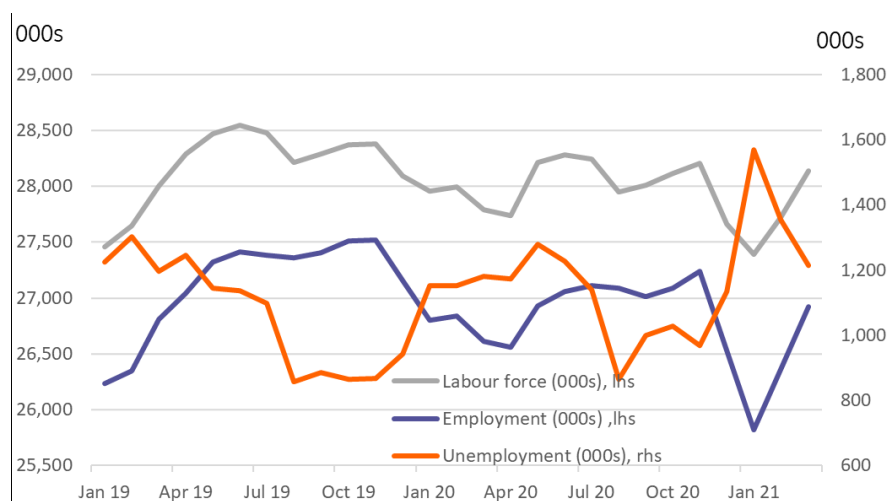
### GDP strong, but so is inflation

We have already lifted our 2021 full-year forecast to 3.6%, and we are looking to raise it further, with a realistic chance that 2021 GDP growth exceeds 4% this year.

It is not just GDP that is making a strong recovery. After 28 months below 2%, headline inflation surged higher from 1.5% to 2.3%YoY in April. This wasn't due to any particular surge in the April price level, which only rose 0.2%MoM, within the normal range of monthly volatility. But compared to a 0.6%MoM decline in prices in April 2020, it looks very strong.

Just like the US, the jury in Korea is out on just how much of this inflation increase is transitory and how much will stick. One way of answering this question is to see what is going on in the labour market and see if there is any embedding of higher prices in tighter labour markets and higher wages.

## Unemployment, employment and the labour force



Source: CEIC, ING

## Labour data requires some verification

The evidence from the labour market in Korea, like so much else currently, has to be taken with a pinch of salt. Certainly, there is a coincidence in the recent pick up in inflation which matches a sharp decline in the rate of unemployment. And the unemployment rate has fallen in line with the rise in employment and a rising labour force, which looks encouraging. Scratch the surface a bit deeper, though and you find there is more to this than it first appears.

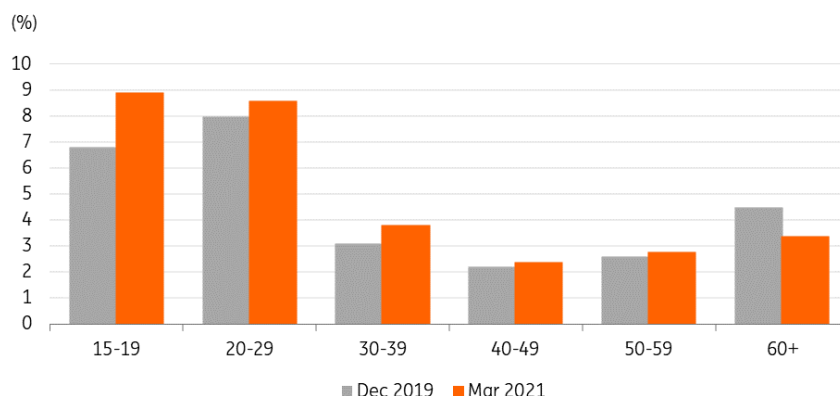
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*It looks like the younger generation is struggling to gain access to quality employment*

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Splitting the unemployment rate by different age groups, you see that there is still very high unemployment for the younger age groups, while the drop in unemployed at the 60+ age group suggests these individuals were pushed out of the labour market into retirement during the pandemic. It is better news for those of prime working age, which is probably better for future private consumption. But it looks like the younger generation is struggling to gain access to quality employment, which is worrying and argues for some structural labour reforms.

## Unemployment rate by age cohort

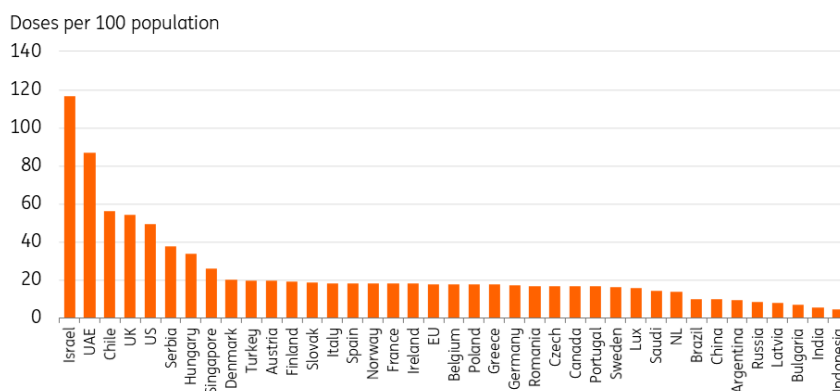


Source: CEIC

## □ Korea's slow vaccine rollout

Korea had a better pandemic than most, but it is having a really poor vaccine rollout. Like many countries in Asia, Korea has struggled to get access to physical vaccines, despite signing deals with some of the main producers in the west who have taken a “me first” approach to vaccine distribution. Vaccines are beginning to arrive now, but Korea lags behind even many developing nations in the region.

## Asia - Vaccinations per 100 population as at 6 May 2021



Source: Our World in data

## Korea's domestic vaccine industry slow off the blocks

Korea does have a vaccine industry, but it has been slow off the mark compared with some others, and domestic vaccine companies have not yet started late-stage trials of their own vaccines. It will be some time before Korea’s home-grown vaccines come on stream for the domestic population. SK Bioscience has got a license to begin producing the Novavax vaccine, which it will start to produce in June, aiming at delivering 20 million doses by the end of 3Q21.

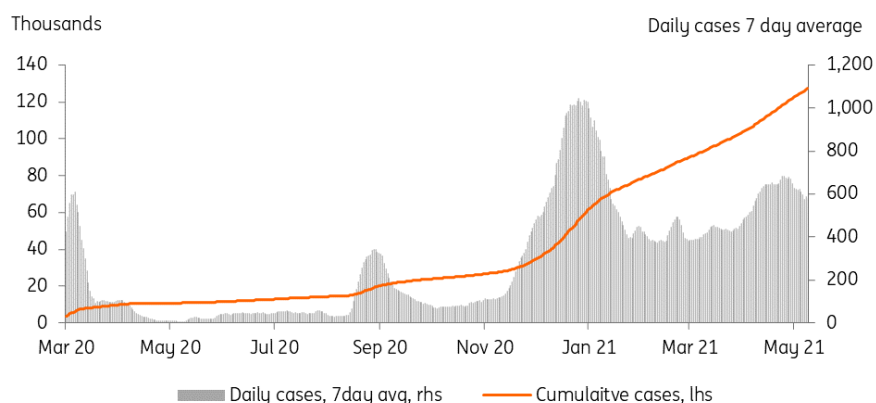
## *Korea's vaccine rollout has been slow off the mark*

South Korea “secured” enough vaccines for the whole country quite early, making contracts with Astra Zeneca, Pfizer, Johnson and Johnson, Moderna and also the WHO Covax scheme. However, like many other countries, Korea quickly learned that there is a difference between having a contract signed on a “best-efforts” basis and having actual vials of the physical vaccine in a fridge.

Obtaining the Astra Zeneca vaccine, Korea was slow to roll it out owing to confusion about its efficacy for older patients. This on/off approach to the Astra Zeneca vaccine has contributed to unease among the population about one of its most readily available vaccines – which hasn’t helped. The Pfizer vaccine only was only just beginning to be administered by late February.

## Coronavirus cases

7-day moving average and cumulative total cases



Source: CEIC, WHO

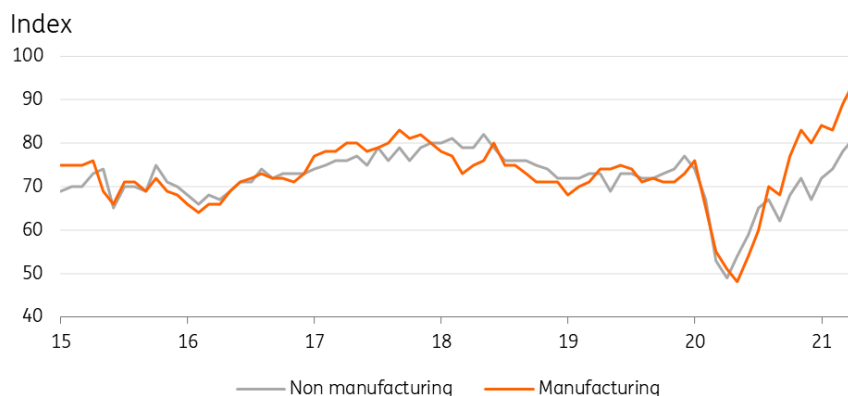
Daily case numbers are still low in Korea, averaging a little over 600 cases per day on a 7-day average basis. Though as we have learned from India, it takes only a month to go from a totally manageable situation to an apocalyptically bad one. And India has vaccinated a greater proportion of its population than Korea.

## □ Industry and exports

As the Korean GDP data shows, the economy continues to recover from the pandemic, and right now, is pushing ahead having recovered all lost ground to the pandemic. But it has not been an even recovery.

Korea’s manufacturing sector has done far better than the service sector. To some extent, this reflects the massive demand for consumer electronics that has sprung from lockdowns, and households need to upgrade both their working from home hardware as well as their entertainment systems.

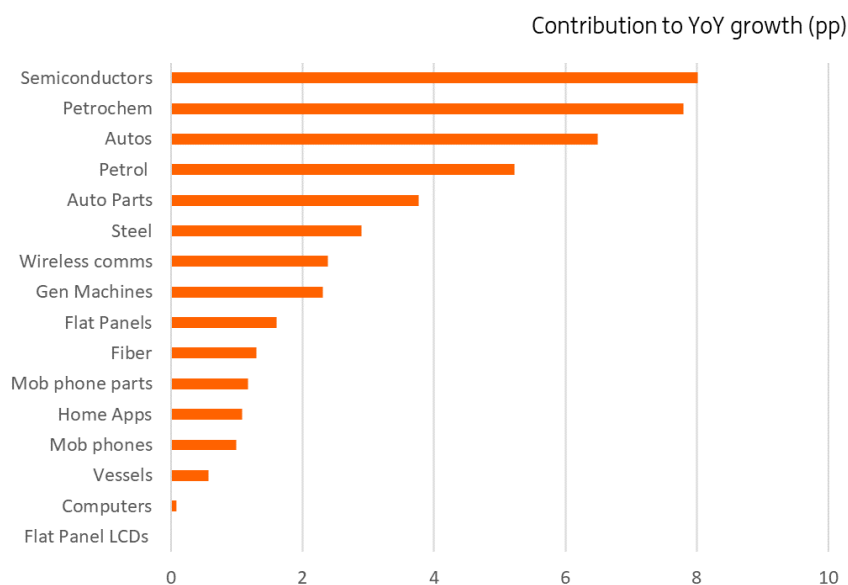
## Business sentiment by sector



Source: CEIC

Year-on-year figures are currently distorted by huge base effects as the comparison month last year was during the period of maximum economic shock. But the sector breakdown is instructive.

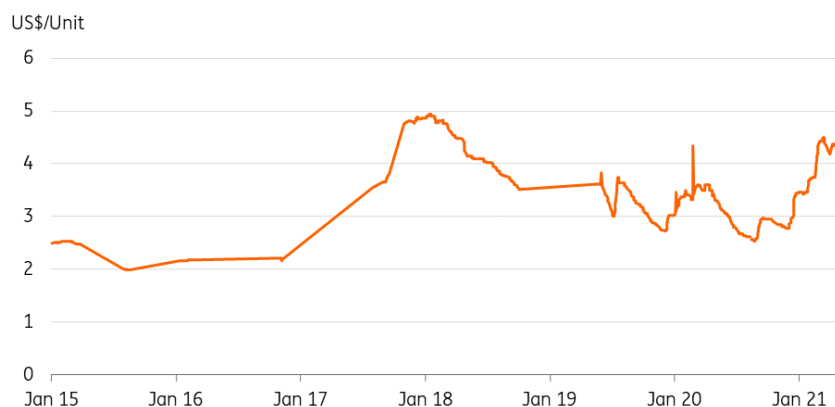
## Contribution to YoY export growth by type (pp)



Source: CEIC, ING

Semiconductor exports have done well, with both prices and volumes taking off (a great combination for corporate profits if you are a manufacturer of these products). But this has been a much less concentrated recovery than some in the recent past, and the initial electronics-focused gains have broadened out to other sectors such as autos, petrochemicals, and steel. Relatively speaking, mobile phones and computer exports have been quite soft.

## Semiconductor prices rising

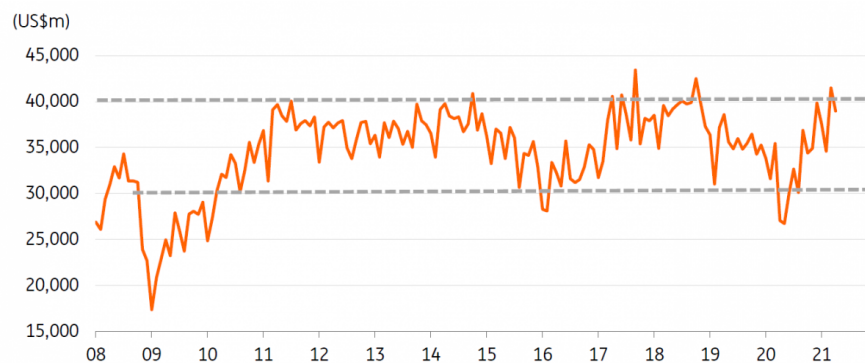


Source: CEIC

Total exports are back at the top of the range they have been stuck in since the global financial crisis but looked poised to break out on the upside before too long. Intra and extra-Asian exports have broadly risen in lockstep, but intra-regional exports account for almost two-thirds of Korea's exports, and mainland China alone about 20% of the total.

## Total Exports

\$m

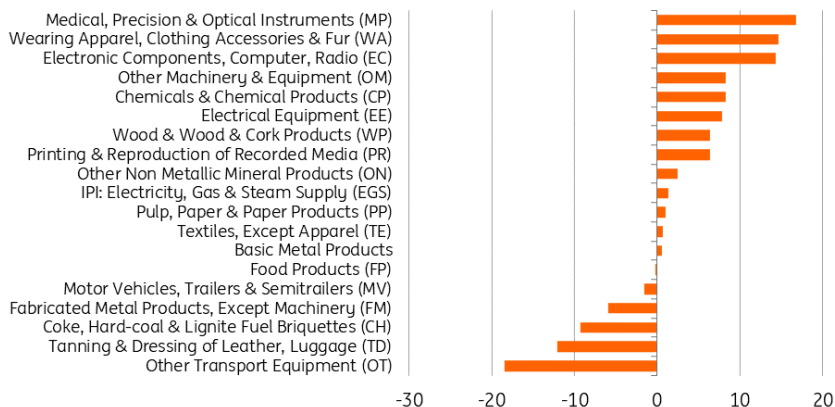


Source: CEIC

Production usually closely reflects export data, but at the moment it doesn't overlay very well. Strong auto exports are not matched by strong auto production, probably owing to ongoing chip shortages which are hindering a number of industries, but especially the auto sector. And clothing is making a surprise bid for the top position in terms of year-on-year growth, though like so much currently, strong base effects are heavily distorting such comparisons, and we think it is probably better to skip quickly on in case we start to draw conclusions that don't stand the test of time.

## Production by type of product

Contribution to YoY growth, pp



Source: CEIC, ING

The recovery in the service sector has been altogether less impressive, and that most likely reflects the fact that there are still social distancing restrictions in place. A stronger service sector recovery will likely go hand in hand with the vaccine rollout and further easing of restrictions. And given the pace of the current vaccine rollout, this is more likely to be a 3Q/4Q feature than a 2Q story.

### □ Central Bank and markets

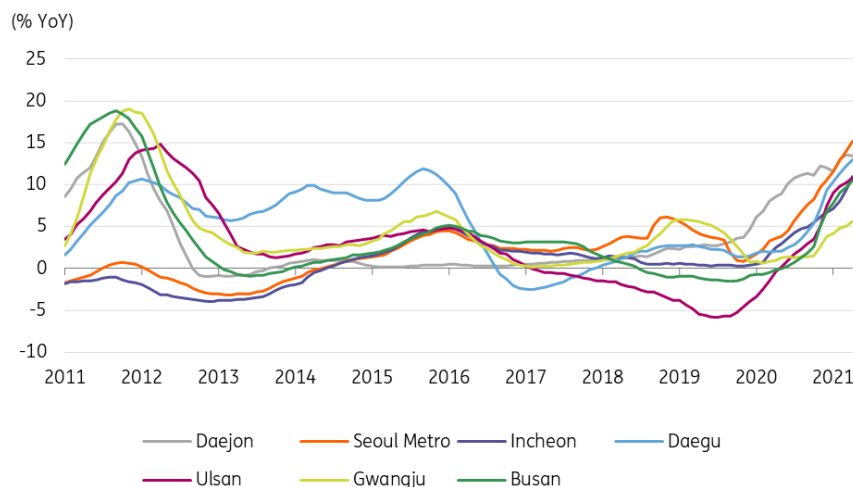
There hasn't been all that much for the Bank of Korea (BoK) to do recently. During the pandemic, the BoK introduced unlimited liquidity provision through repo markets, enhanced dollar funding, expanded financial institutions collateral capacity, launched a corporate bond backed lending facility and provided KRW5tr to SMEs.

Policy rates (the 7-day repo rate) were reduced from 1.25% to 0.75 in March 2020, and then again to 0.50% at the end of May 2020. Since then, the BoK has not had to do anything with monetary policy as the onus for economic support passed to the government and fiscal policy.

And we don't anticipate the BoK doing anything anytime soon either. There will, as we mentioned, be some near-term increase in inflation but no one is getting very excited about this base-driven event, and the consensus expectation does not anticipate policy rates rising before 3Q22, which is in line with our own thinking. It is worth noting that this will be considerably before rate increases are expected from the US Fed and this is one reason why are still anticipating some KRW appreciation on a longer-term horizon.

The other factor why rates may rise ahead of the Fed is the now widespread increase in house prices and growing concern over the high levels of household debt fueling this housing increase.

## Residential property prices (YoY%)



Source: CEIC

What this rising household debt means is that any eventual rate increase the BoK does will have a proportionally bigger impact on increasing debt service and reducing disposable incomes. So the outlook may be a slightly earlier tightening than the Fed, but we don't see it going very far before it starts to dampen the economy. We have rates at 1% in 2023, only 0.5pp higher than they are now. That might be enough.

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*KTB yields should hit 2.5% by the end of the year*

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The KTB market meanwhile has been tracking movements by US Treasury yields (UST) closely. We anticipate UST yields will keep rising, reaching 2.25% by the end of the year, so we have little problem seeing KTB yields hitting 2.5% by the same time, though this would imply a narrowing of the current spread and potentially turning negative through 2023.

## Korean Treasury bonds and US Treasuries



Source: CEIC

### □ Government and fiscal policy

Since the start of the pandemic, the Korean government has provided ongoing support through expansionary fiscal policies, which with the latest supplementary budget in March this year, takes the total of supplementary budgets to five.

*Korea has been quite cautious compared to some economies with its fiscal support*

But Korea has been quite cautious compared to some economies with its fiscal support. The original 2020 budget had an expenditure of KRW512.3tr. The latest supplementary budget for 2021 shows an expenditure of KRW572.9tr, only KRW60.6tr (approx. 3% of GDP) higher.

The consolidated fiscal balance has deteriorated from -KRW71.5tr to -KRW89.9tr and the debt stock has risen from KRW731.5tr to KRW965.9, taking the debt to GDP ratio up from 37.2 to 48.2. Our own house forecasts show some slippage from these budget forecasts. Revenues may undershoot projections and expenditures have a habit of growing more than intended, but they are not massively different from these government figures.

And neither our nor the government's projections are particularly alarming. The government is also now committing to keeping the debt-to-GDP ratio below 60% of GDP and from 2025, keeping the deficit no larger than 3% of GDP - a sort of Korean "Maastricht criterion".

The net result of this is twofold:

1. There is little if any likelihood of Korea seeing its long-term sovereign debt rating downgraded in the near term
2. There is still room for more fiscal stimulus over the coming years and unlike some other more spendthrift countries, Korea will not face a fiscal withdrawal shock.

## □ Sustainability

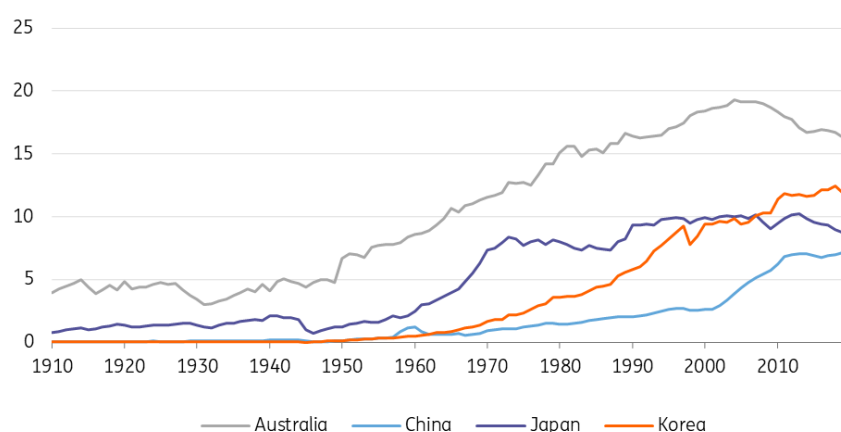
Back in 2020, Korea launched its Green New Deal, a programme we reviewed in “Asia’s Lamentable green response to Covid”, which you can read [here](#).

One of the things we felt was missing from that programme was a binding commitment to emissions reduction. Since then, Korea has pledged to achieve net-zero carbon emissions by 2050, matching the pledge by Japan, and exceeding the net-zero carbon 2060 pledge by China.

Asia still lags a long way behind regions like Europe when it comes to emissions reduction. And within Asia, Korea is one of the heavier producers of greenhouse gas emissions per capita, producing more than China and Japan, though not as much as Australia.

### Emissions per capita

Annual carbon dioxide - tonnes equivalent



Source: Our World in Data

The 2050 net-zero carbon pledge is an ambitious target given the starting point, but it is achievable. Government spending will have to start right away to ensure that this plan does not slip, though the upside is that the very substantial amount of spending we anticipate, could be supportive to overall economic growth over the coming decades. There will, of course, be substantial disruption along the way as heavy emitting industries face re-invention or closure.

## □ The future's bright

Korea has come through the pandemic in a reasonable shape, compared to many other countries. It also has a competitive edge in the product the world wants above all else right now, semiconductors. That sets a bright backdrop for Korea this year and next.

Monetary and fiscal policy will remain supportive, though we may see some tightening of rates by

late 2022. In the short run, we see the biggest risk to the economy being the slow vaccine rollout and the potential for Korea to see a new wave of infections. Longer-term, cleaning up the economy and transforming to a sustainable future will create a very challenging goal, but one whose pursuit could re-invigorate the economy.

## Forecast summary

	1Q21	2Q21	3Q21	4Q21	2020F	2021F	2022F	2023F
GDP (YoY%)	1.8	5.5	3.9	3.2	-1	3.6	2.6	3.2
CPI (YoY%)	1.1	2.6	2.5	2.8	0.4	2.3	1.8	1.7
Unemployment rate (eop)	3.9	4.3	4.3	4.1	4.5	3.5	3.3	3.1
Residential real estate YoY%	11.1	13.5	13.8	12.7	3.8	7.7	9.3	5.9
Fiscal Balance (consolidated ex soc sec)					-4.4	-5.3	-4.7	-4.2
Debt/ GDP (%)					43.9	48.7	49.4	49.9
Current a/c balance (% GDP)					3.5	2.9	2.7	2.5
7-day repo rate (eop)	0.75	0.5	0.5	0.5	0.5	0.5	0.75	1
10Y yields (eop)	2.08	2.25	2.5	2.5	1.67	2.5	2.75	2.8
USDKRW (eop)	1,131	1,120	1,100	1,080	1,086	1,080	1,040	1,000

Source: CEIC, ING

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