

# Research Briefing | Eurozone

## Slow vaccination pushes return to normal to late 2021

### Economist

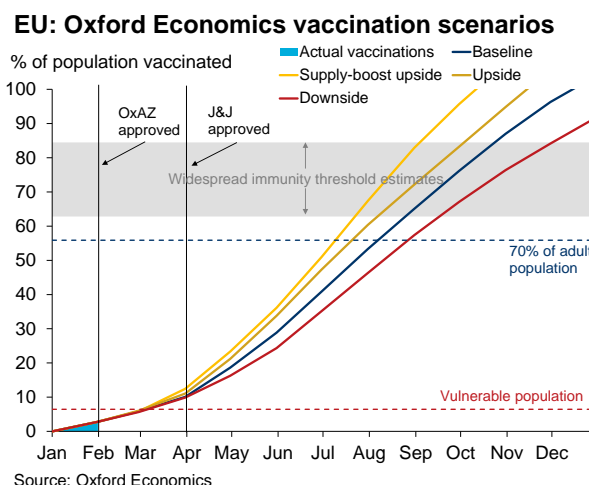
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- We expect eurozone GDP to contract in Q1. European countries have so far faltered in implementing their vaccination programmes, slowing their effort to control the pandemic and allow any meaningful economic recovery to take off. We estimate that inoculations will remain limited over Q1, forcing governments to maintain strict containment measures as infection rates stay high.
- Vaccinations should accelerate from the spring, paving the way for relaxation of most restrictions and ushering in a growth rebound, peaking in Q3. We expect the EU to hit its summer target of vaccinating 70% of the adult population in early August. However, it's likely to still lag others, such as the UK or the US, given its target is relatively unambitious.
- Several risks surround our baseline. On the downside, more supply reductions, logistical issues, and a slower uptake due prevailing antivax sentiment in some countries could prolong vaccination progress. On the upside, increases in production capacity, improvements in manufacturing processes, and more efficient inoculation programmes could accelerate the pace. Overall, we see risks as broadly balanced around our baseline.
- We see additional uncertainties regarding the exit from the current restrictions. A premature relaxation of containment measures could see a resurgence in infections. And a singular focus on only vaccines as determining the economic outlook is misleading because cautious consumers waiting to be vaccinated before resuming their normal spending patterns could delay the recovery.

Vaccinating much of the population is a necessary step in bringing the Covid-19 pandemic under control, which is in turn crucial for any meaningful and sustained economic recovery. Our latest estimates of the EU's vaccination path in 2021 are now reflected in our eurozone economic outlook.

**Figure 1: Possible 2021 vaccination trends**



Our baseline forecast of the EU's vaccination programme sees the target of vaccinating 70% of the adult population met by early August, with widespread immunity reached in Q4.

Vulnerable groups should be vaccinated by end-March, paving the way to relax some restrictions.

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## Rollout of vaccines has been slow

The eurozone countries have been tardy at every stage of vaccination deployment so far. The desire for political safeguarding meant the European Commission was slower to strike advance deals for doses with pharmaceutical companies, while a more cautious approval process resulted in the Pfizer and Moderna vaccines gaining conditional marketing authorisation by the European Medicines Agency (EMA) later than in the UK or the US. Moreover, poor planning, logistics, and infrastructure issues in some member states caused the vaccination rollout to lag other developed economies. The UK has managed to inoculate over 13% of its population with at least one dose, and Israel surpassed 35%. But Denmark, the EU's best performing larger country so far, currently sits at 3.3% (**Figures 2 and 3**), while the EU average is 2.5%.

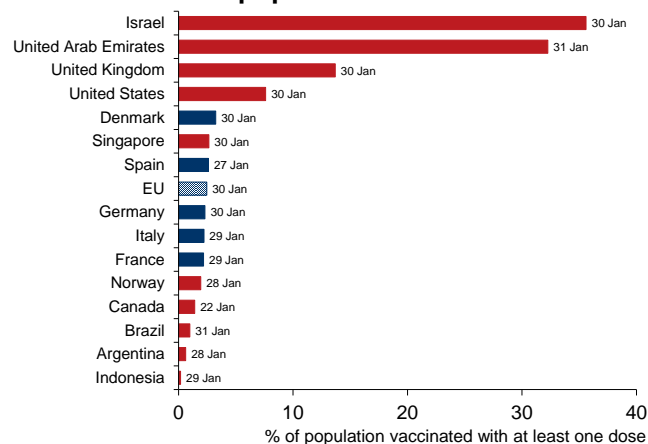
**Emerging supply constraints among vaccine manufacturers pose an additional challenge to the lagging European programmes.** In fact, after Pfizer announced a reduction in its production targets for 2020 - early 2021, AstraZeneca suffered a 50% (from 80m to 40m) fall in supply to the EU in Q1 due to manufacturing issues. Shortages have already hampered the vaccination pace in some countries, with daily doses administered having fallen from the highs reached over the course of January (**Figure 4**). Additionally, while orders negotiated by the EU are allocated to member states according to total population, some countries opted not to purchase their allocation in full from the pharmaceutical companies, further slowing the pace of vaccinations (**Figure 11**).

## Vaccinations will be key in shaping the outlook

Mass vaccinations will be essential to lifting restrictions without risking a new surge in infections or overwhelming health care systems, thus allowing economic conditions to normalize sustainably. To forecast when the key thresholds might be reached, we've built a likely vaccination path based on available information about the EU's orders and pre-orders, the likely delivery schedules, and a range of compounding factors (blue line in **Figure 1**). Our baseline assumes that most logistical issues encountered by member states are resolved over the course of Q1, while no further supply shortages will happen from late-Q1, and we account for the recent compensating boosts from [AstraZeneca](#) in Q1 and [Pfizer](#) from Q2. Moreover, we assume that the population take-up won't pose a problem in the first stages of vaccination programmes because the most at-risk people (65+ and health care staff) are less

**Figure 2: Eurozone countries have seen a slow initial rollout of vaccination programmes**

### Global: Share of population vaccinated

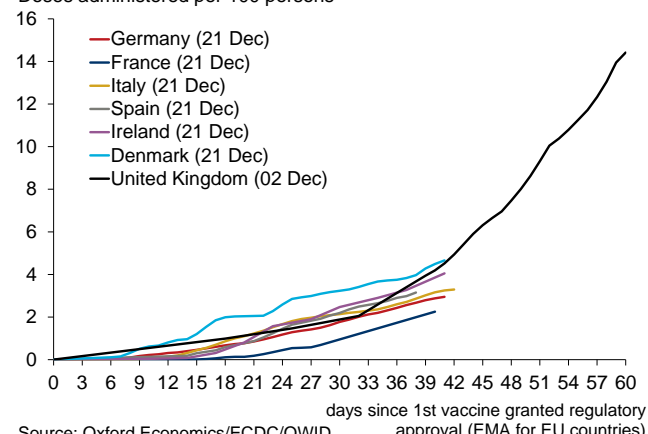


Source: Oxford Economics/ECDC/Our World in Data

**Figure 3: European countries have failed to match the acceleration in pace seen in the UK**

### Vaccination programmes progress

Doses administered per 100 persons

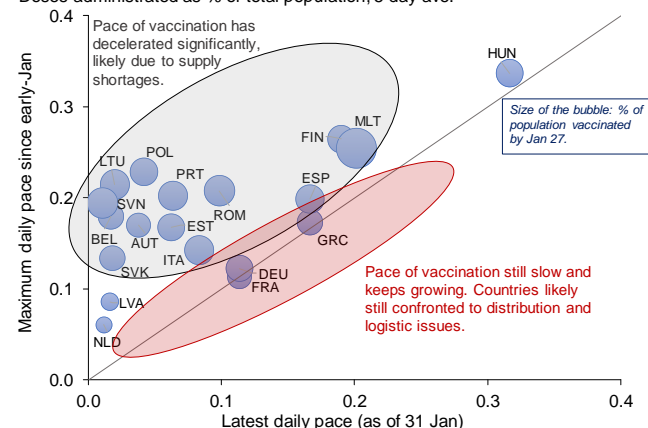


Source: Oxford Economics/ECDC/OWID

**Figure 4: European vaccination programmes face both logistical and supply challenges**

### Eurozone: Covid-19 vaccination pace

Doses administered as % of total population, 5 day ave.



Source: Oxford Economics/Haver Analytics

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reluctant to get vaccinated than the younger. In our baseline, we assume member states buy the entire number of doses allocated under the EU scheme and that they vaccinate accordingly (see [Table 1 and Appendix](#) for full description of our baseline and scenario assumptions).

**We expect GDP to contract again in Q1 as vaccination progress remains limited.** This is forcing governments to maintain strict containment measures ([Figure 5](#)) as infection rates remain high and dangerously close to slipping out of control ([Figure 6](#)) due to the new, more transmissible Covid-19 variants. Economic activity currently remains subdued ([Figure 14](#)), and we expect GDP to fall in Q1 after a smaller-than-expected contraction in Q4 2020.

**Vaccinations should accelerate markedly from the spring, paving the way to economic recovery.** After activity remains relatively restrained at the beginning of Q2, we see it accelerating markedly from May (see [Appendix Table](#)) as vaccination among the 60+ population gains traction and restrictions see a relatively rapid relaxation (notably in personal mobility and retail). In addition, warmer temperatures and a shift to activity outdoors should further limit new infections similarly to last summer, although the effect will likely be somewhat smaller given the higher transmissibility of the new variants. With 50% of the population, including all vulnerable groups, vaccinated by June-July, most containment measures should start easing, with a broader reopening of restaurants and other contact-intensive services across the bloc.

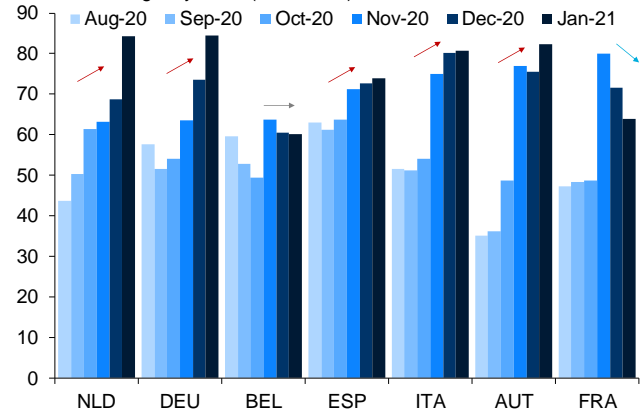
In this context, we expect a stronger summer season than last year (though still well below 2019 levels), and we see **GDP growth peaking in Q3 before starting to normalize from Q4 onwards.** However, international travel restrictions are likely to be among the last lifted, so we think tourism will remain mainly local, as last year. This means, despite similar levels of inoculation and restriction relaxation, recovery in countries that rely strongly on international tourism; such as Spain, Portugal, or Greece, might lag their peers.

**Overall, our estimates suggest vaccination levels won't be sufficient to reach the estimated lower threshold of herd immunity before the end of Q3, at least.** This is broadly consistent with the targets set by the EU of vaccinating 80% of the 80+ population and health care staff by March, and 70% of adults "by the summer." However, the EU is likely to still lag other advanced economies such as the UK or the US, given its target is relatively unambitious, resulting in a slower lifting of the restrictions.

**Figure 5: Most eurozone governments have recently tightened restrictions in place**

## Eurozone: Lockdown stringency

Lockdown stringency index (max = 100)

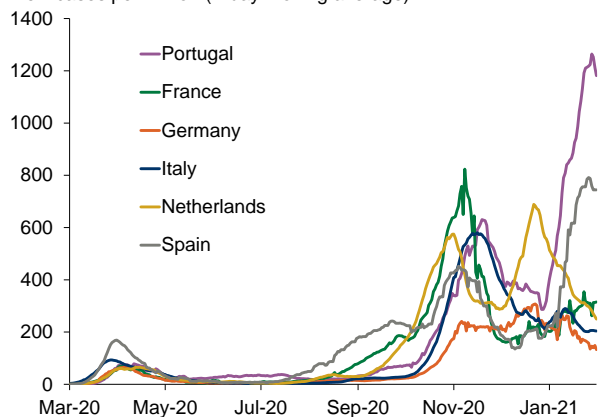


Source: Oxford Economics/Blavatnik School of Government

**Figure 6: Infection rates are still very high in Europe as the new covid variants spread**

## EU: New COVID-19 cases per capita

New cases per million (7-day moving average)

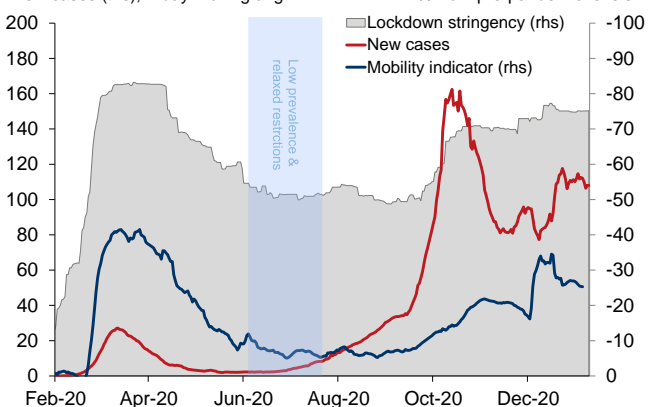


Source: Oxford Economics/ECDC/OWID

**Figure 7: Even in the summer when cases were low, voluntary social distancing limited mobility**

## Eurozone: Covid-19 and mobility

New cases (ths), 7-day moving avg.



Source: Oxford Economics/ECDC/Our World in Data/Google Mobility Report

\*Mobility & lockdown stringency are GDP-weighted averages

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## Exit plans are rife with risks

As vaccination progresses and picks up pace, attention will inevitably shift towards relaxing restrictions. While freeing up economies is one of the purposes of vaccine deployment, reaching a certain threshold of inoculated population isn't a panacea - infection rates and health care system capacity also play an important role. We therefore caution against premature or hurried relaxation of restrictions and highlight some key risks.

First, political pressure might force governments to ease restrictions too early and too quickly, resulting in a further resurgence of infections. Once the vulnerable population is vaccinated – which our baseline assumes from end-March – we expect strong pressure for lifting restrictions. While inoculating vulnerable groups will significantly reduce mortality, given the risk of dying from Covid-19 steeply increases for the elderly (Figure 8), an all-at-once lifting of restrictions could spark a large outbreak among the unvaccinated. Although the mortality risk among the younger and less vulnerable would be much lower, an unchecked spread could still overwhelm the health care system. A more gradual, sequenced approach to relaxing restrictions, potentially conditional on vaccination gains, is a better option.

The second risk stems from further supply and logistical issues. While our baseline assumes most of these are resolved by Q2, there's a chance that manufacturers' production capacity continues to be limited beyond the end of the winter, allowing only partial deliveries to the EU. Similarly, logistical and infrastructure issues could remain problematic for some member states, especially those with less developed health systems. We explicitly consider such possibilities in our downside scenario.

But vaccines aren't the only factor determining the outlook. We also see risks pertaining to [consumer patterns](#) because it's difficult to gauge the responses of less vulnerable people to loosened restrictions. Some households might opt for voluntary social distancing until they receive their vaccine, not fully responding to the relaxations, a similar pattern to last summer (Figure 7). We find that the voluntary social distancing motive is quite strong (Figure 9). Such behaviour is much more likely when the prevalence of virus is high and consumers continue to display elevated levels of fear of getting infected (Figure 10). It's therefore crucial that existing lockdowns remain in place alongside the vaccination programmes until infection rates are brought sufficiently down. That trend will be

Figure 8: Fatality rate of Covid-19 increases steeply for the elderly

### Covid-19 infection fatality rate in high-income countries

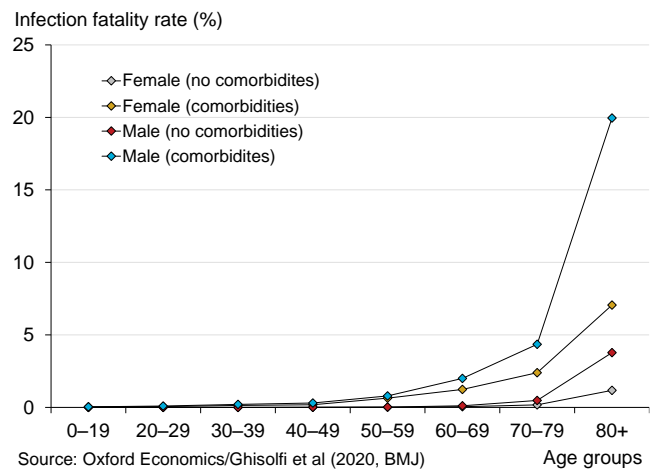


Figure 9: Voluntary social distancing plays an important part in consumer behaviour

### Eurozone: Voluntary social distancing pre-lockdown

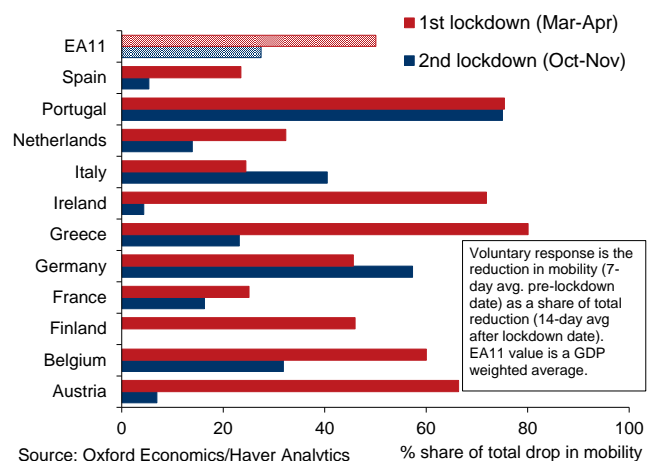
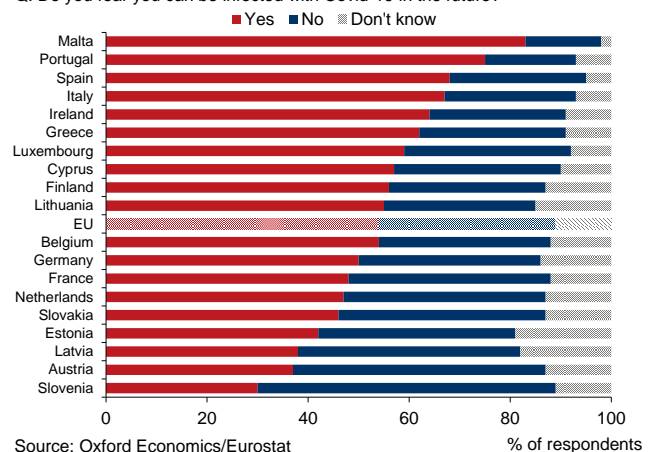


Figure 10: Although fear of infection differs across countries, it remains high overall

### EU: Fear of infection (December 2020)

Q: Do you fear you can be infected with Covid-19 in the future?





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aided by the growing share of vaccinated population, especially because [preliminary evidence](#) from Israel suggests that vaccines also help reduce transmission.

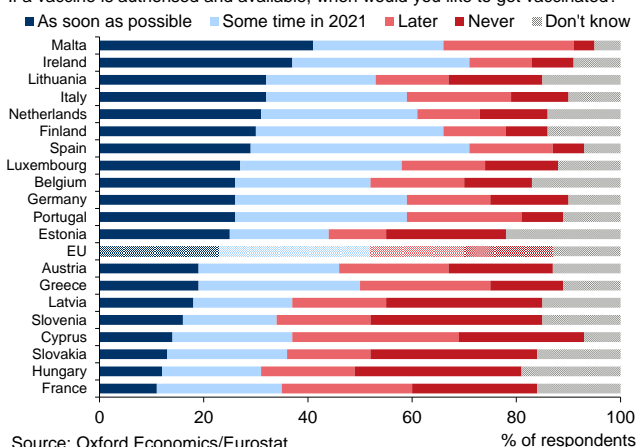
Finally, we're seeing the adverse risk of relatively strong antivax sentiment in the eurozone, particularly in France (Figure 11). Low uptake of vaccines, especially among younger people who might feel less at risk, would threaten the formation of herd immunity, the threshold for which is estimated to be around 70%-85% of population. Nonetheless, surveys show that at least part of the vaccine reluctance should dissipate over time (Figure 16 and 17).

On the flip side, we see upside risks as well, notably in the shape of improving the manufacturing processes for vaccines. Production yields typically go up over time in individual plants as the processes for growing cell cultures, filtering, etc. get optimised, leading to increased supply. Another way of boosting capacity is getting new production lines up to speed quicker or licensing manufacturing to other pharmaceutical companies. For example, Sanofi (whose vaccine project with GlaxoSmithKline suffered a setback in trials and has been pushed into 2022) announced it will manufacture an additional 125m doses of the Pfizer-BioNTech vaccine at its production facility in Frankfurt for the EU. Given the existing supply constraints, higher production capacity represents an upside risk to our outlook.

**Figure 11: Anti-vax sentiment is relatively high in European countries, posing risk to the uptake**

## EU: Vaccination attitudes (December 2020)

If a vaccine is authorised and available, when would you like to get vaccinated?



**Table 1: Baseline assumptions**

## Eurozone 2021 outlook: Main assumptions

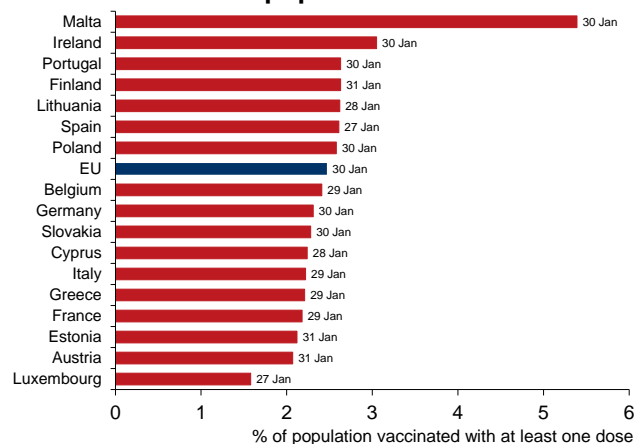
	Q1	Q2	Q3	Q4
<b>Vaccination pace</b>				
Logistics	Logistical issues limit the pace of the vaccination programmes	Most issues are resolved; programmes operate at full capacity by end Q2	No logistical issues	No logistical issues
Supply	Supply issues limit the vaccination pace	Some supply issues remain	No supply issues	No supply issues
<b>Vaccination uptake</b>	High uptake: Priority and at-risk population is overall less reluctant to get vaccinated	High uptake: Priority and at-risk population is overall less reluctant to get vaccinated	Moderate uptake: Vaccination pace slows in some countries due to the (mainly young) population's reluctance to get vaccinated.	All population willing to get vaccinated has received a dose.
<b>Targets</b>	<b>EU target 1:</b> 80% of the 80+ & health and social care professionals should be vaccinated by March. - Reached -	Vaccination accelerates among the 60+ adults, and then for younger adults.	<b>EU target 2:</b> 70% of adults should be vaccinated by the summer. - Reached -	Vaccination completed. Herd immunity is achieved.
<b>Restrictions</b>	Stringent restrictions in place due to high infection rates, in part caused by the new virus variants.	Restrictions are eased significantly.	Minimum restrictions remain.	All restrictions with a significant economic impact are lifted.
<b>Consumer behaviour</b>	Consumption restricted by containment measures.	Consumption gains moderate traction. Some consumers wait to get vaccinated before resuming normal consumption patterns.	Boom in consumption over the summer season/holidays. Tourism remains mainly local with some travel restrictions lingering.	Continued normalisation of saving/consumption pattern
<b>Economic developments</b>	Economy subdued	Growth starts to accelerate	Strong summer season, although still below 2019 levels. Peak in quarterly growth.	Growth remains strong, but starts its gradual return to "normal" rates.

Source: Oxford Economics

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**Figure 12: Some cross-country differences are already visible in the eurozone**

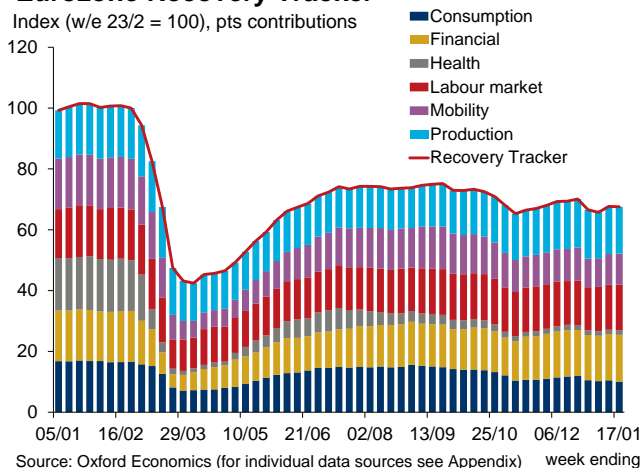
## Eurozone: Share of population vaccinated



Source: Oxford Economics/ECDC/Our World in Data

**Figure 14: Our Recovery Tracker shows activity in the eurozone remains subdued**

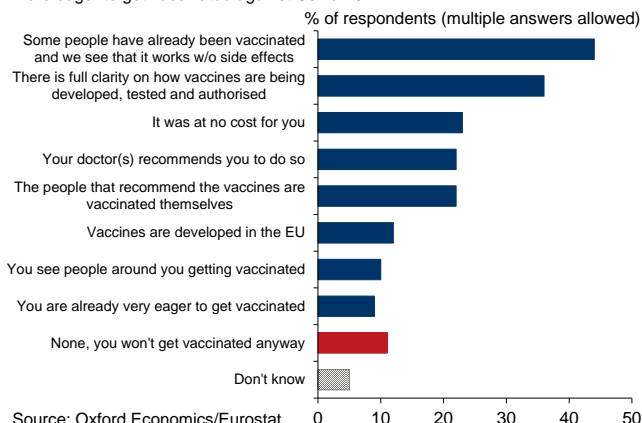
## Eurozone Recovery Tracker



**Figure 16: Survey answers show vaccine reluctance can be overcome over time...**

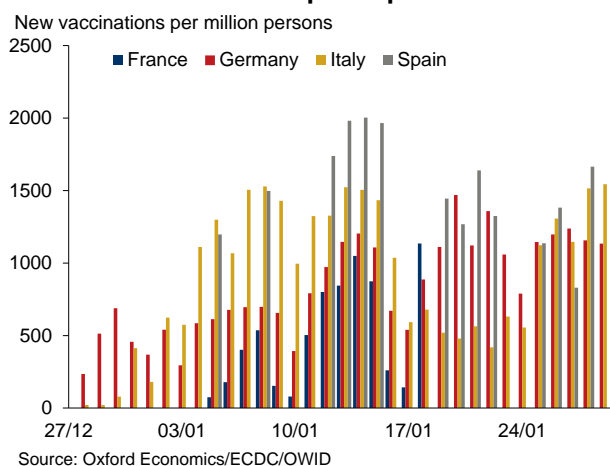
## EU: Covid-19 vaccination sentiments

Q: Which of the following statements correspond to what you think? You would be more eager to get vaccinated against Covid-19 if:



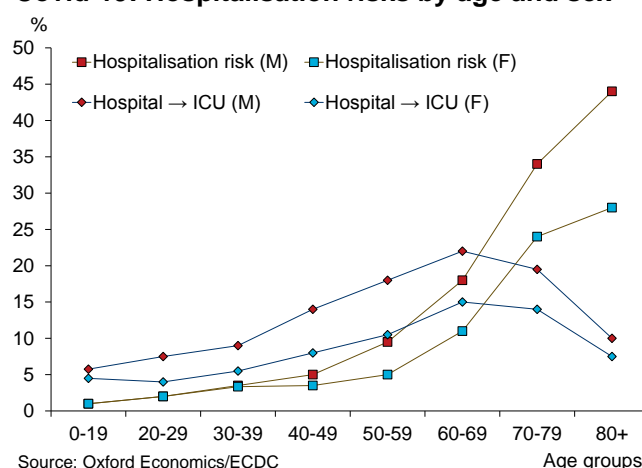
**Figure 13: Daily vaccinations are picking up, but the acceleration is still limited**

## EU: New vaccinations per capita



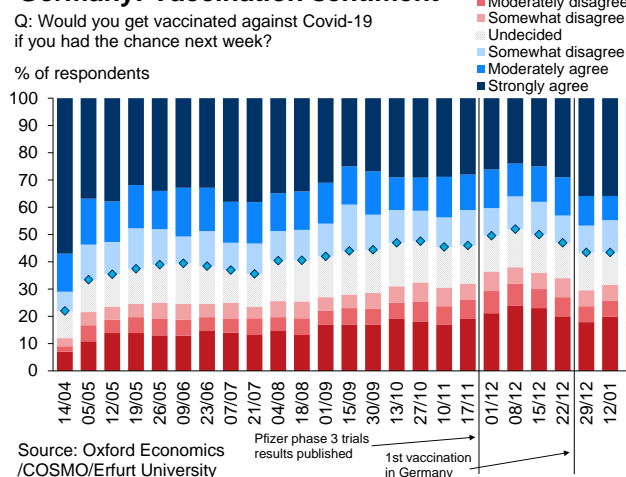
**Figure 15: Hospitalisation risk also increases with age, but it's significant even for the young**

## Covid-19: Hospitalisation risks by age and sex



**Figure 17: ...which is corroborated by the evolution in sentiment seen in Germany**

## Germany: Vaccination sentiment



## Technical Appendix – Scenario assumptions and descriptions

To reflect the substantial uncertainty about vaccination progress, we devise three different scenarios alongside our baseline forecast to account for the different plausible developments in coming months. We identify four key factors pertaining to the pace of vaccination programmes:

- 1) **Logistical capacity** – This represents the capacity of national vaccination programmes, such as infrastructure (e.g., vaccination centres), distribution of supplies and end-to-end deliveries, vaccination strategies, medical staffing, storage capacities, etc.
- 2) **Vaccine losses** – The mRNA vaccines (Pfizer-BioNTech and Moderna) require careful storage in deep sub-zero temperatures, and once thawed must be administered within a given time. This factor accounts for any losses due to faulty processes or planning.
- 3) **Slower take-up** – As the vaccination programmes progress to lower age groups, we expect some reluctance to get vaccinated for various reasons (lower perceived risk due to younger age and better health, lower sense of urgency as greater shares of the population are vaccinated, etc.). This scenario also includes antivax sentiments among the population.
- 4) **Supply disruptions** – In our baseline scenario, we account for the already-known supply disruptions and assume that the pharmaceutical companies make good on the contracts signed with the EC from then on. In our scenarios, we assume two kinds of supply shocks:
  - **Positive supply shock:** improvements in production processes (e.g., higher yields from cell cultures as production optimizes), increased supply due to opening of new production lines or other pharmaceutical companies being licensed to manufacture already-approved vaccines.
  - **Negative supply shock:** low yields from manufacturing processes developing the vaccine substance and filtration issues (such as those at AstraZeneca's Belgium plant recently), supply-chain issues such as insufficient vials for the vaccine doses, or any other production shortcomings.

Our three scenarios are devised as follows:

- 1) **Downside scenario** – We assume that newly approved vaccines take longer to get their deliveries up to speed, coupled with further negative supply shocks. In addition, the vaccine uptake slows more before the summer due to prevailing antivax sentiments, while national vaccination programmes struggle to hit full capacity before June.
- 2) **Upside scenario** – This scenario envisages marginal gains across the factors: improved production processes leading to higher yields; logistical issues being resolved quicker; vaccination infrastructure operating smoothly; and strong vaccine uptake on the back of effective government information campaigns.
- 3) **Supply boost upside scenario** – We assume that new production lines quickly hit high capacity utilization (e.g., BioNTech's new plant in Marburg) and other pharmaceutical companies start making already-approved vaccines (e.g., Sanofi producing 120m doses of the Pfizer-BioNTech vaccine by end-2021), along with the EU exercising its available purchasing options, more than offsetting the recent supply setback and boosting the supply of vaccine above current schedules. Due to higher supply, we expect some bottlenecks to slightly lower the efficiency of national vaccination programmes before they scale up. Equally, we also expect a slightly higher percentage of vaccine losses because the Pfizer mRNA vaccine is particularly susceptible to expiry or spoilage.