20th May 2020

*** We have decided to pause the Corona Crisis Daily at the end of this week as new case growth and fatalities have been suppressed for now. I really hope it is a permanent halt but we stand ready to bring it back if the virus has a second wave. Thanks for all your interactions and feedback on the report. ***

How cases have developed globally

- Global cases rose by 2.0 per cent to just under 4.9m, while reported covid-19 fatalities rose by 1.5 per cent to over 323,000.

- We again highlight the latest weekly ONS statistics for England and Wales, which give some of the most granular age-related data on deaths caused by covid-19 yet. So far, one in every 72 people in over 90 years old (population around 547,000) has died of covid-19. A relatively sizeable number considering it has only been transmitting for a few months. For those over 70 years old the ratio is currently one in every 261.

- At the other end of the spectrum, zero 5-9 years old (population around 3.7m) have died so far. In fact of those 19yrs old and under, ‘only’ one in every 1.3m have died to date. There are 14m in this population. In the charts in the pdf we show this ratio for each five-year age bucket in England and Wales.

- These low numbers are partly due to the relatively short time the virus has spread through the community. To further the analysis we have made some assumptions as to how many in each age group the virus would kill if everyone in the world became exposed. To do this we have assumed a global case mortality rate of 0.75 per cent which many scientists believe would be in the right ballpark if the virus was left to spread in an unmitigated manner. We have then worked out a total number based on the England and Wales population and proportioned fatalities into each age buckets given the ratios seen so far in this crisis.

- This analysis includes some huge assumptions, but we estimate that 16.6 per cent of the over 90 year old population would die (1 in every 6) if all exposed. For those over 70, we think the fatality rate would be 4.6 per cent (1 in every 22). For those 14 years and under, the fatality rate could ‘only’ be around one in every 298,000 based on proportionally allocating deaths. With such low numbers of fatalities in this age group at the moment you would have to be very cautious about over interpreting this projected number though.

- For those 20-64 years old (a proxy for the working age cohort) we estimate that the fatality rate would be 0.1 per cent on this basis which equates to one in every 672 people.
Again we would stress that many assumptions have been used for this analysis and a small change somewhere along the way may make a big difference to the results. Hopefully it is food for thought.

Looking at how cases are developing across the world, the UK as a whole saw cases rise by 1.0 per cent, a drop from the last three days and against the normal Tuesday rise after lower weekend numbers. However fatalities rose by 1.6 per cent, the highest rate in seven days and above the five-day average of 1.1 per cent. That is a sizeable Tuesday effect after low weekend numbers. The trend is still generally down, though.

US cases rose by 1.3 per cent, under the 1.5 per cent five-day average. Fatalities in the country rose 1.8 per cent, a jump from the five-day average of 1.1 per cent. That is something to watch as various states reopen their economies.

Germany had an increase in daily case growth to 0.7 per cent, but the five-day average still sits at the nearly one-month average of 0.4 per cent. Fatalities in the country rose 1.0 per cent, slightly up from recent days.

Russia now has nearly 300,000 cases, with total infections rising by 3.2 per cent over the past 24 hours for the second day in a row. The country continues to see growth slow, but at over three per cent it is the second-fastest growing country in the top ten. Fatalities rose by 4.2 per cent, in line with the 5 five-day average.

Brazil has now risen to the third most affected country in the world, passing the UK in the last day. Brazilian cases rose by 6.5 per cent, above the five-day average of 6.0 per cent. Fatalities rose by 6.7 per cent, above the five-day average of 5.1 per cent.

Spain is likely to vote today on extending the country’s state of emergency, even as some restrictions are lifted. With this backdrop, 69 people died from covid-19 over the past 24 hours (0.2 per cent growth). Cases grew by 0.2 per cent, continuing the trend of sub-one per cent growth.

Iran continues to see a steadily growing case count, after relaxing some restrictions back in late April, with 1.7 per cent growth in infections over the last day. Worryingly fatalities grew at 0.9 per cent, in line with two weeks back and slightly over the recent five-day average.
### Figure 1: Change in coronavirus cases over the last five days across major affected areas of the world

<table>
<thead>
<tr>
<th>Country/Territory</th>
<th>Confirmed Cases</th>
<th>Cases/1M Population</th>
<th>Last 5 Days Daily Rate of Change</th>
<th>Rate of Change 14 days ago</th>
<th>Total Testing</th>
<th>Tests/1M Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>T-1</td>
<td>T-2</td>
<td>T-3</td>
<td>T-4</td>
</tr>
<tr>
<td>United States</td>
<td>1,528,568</td>
<td>4,618</td>
<td>1.3%</td>
<td>1.4%</td>
<td>1.3%</td>
<td>1.7%</td>
</tr>
<tr>
<td>New York</td>
<td>362,630</td>
<td>18,653</td>
<td>0.4%</td>
<td>0.4%</td>
<td>0.5%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Russia</td>
<td>299,941</td>
<td>2,055</td>
<td>3.2%</td>
<td>3.2%</td>
<td>3.6%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Brazil</td>
<td>271,885</td>
<td>1,281</td>
<td>6.5%</td>
<td>5.9%</td>
<td>3.2%</td>
<td>6.0%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>250,138</td>
<td>3,686</td>
<td>1.0%</td>
<td>1.1%</td>
<td>1.5%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Spain</td>
<td>232,037</td>
<td>4,963</td>
<td>0.2%</td>
<td>0.4%</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Italy</td>
<td>226,699</td>
<td>3,749</td>
<td>0.4%</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.4%</td>
</tr>
<tr>
<td>France</td>
<td>180,933</td>
<td>2,772</td>
<td>0.5%</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Germany</td>
<td>177,778</td>
<td>2,122</td>
<td>0.7%</td>
<td>0.1%</td>
<td>0.4%</td>
<td>0.3%</td>
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<tr>
<td>Turkey</td>
<td>151,615</td>
<td>1,803</td>
<td>0.7%</td>
<td>0.8%</td>
<td>0.9%</td>
<td>1.1%</td>
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<tr>
<td>Iran</td>
<td>124,603</td>
<td>1,483</td>
<td>1.7%</td>
<td>1.9%</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>India</td>
<td>108,475</td>
<td>77</td>
<td>6.1%</td>
<td>4.8%</td>
<td>5.6%</td>
<td>5.7%</td>
</tr>
<tr>
<td>China</td>
<td>82,965</td>
<td>58</td>
<td>0.0%</td>
<td>0.0%</td>
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<td>0.0%</td>
</tr>
<tr>
<td>Belgium</td>
<td>55,791</td>
<td>4,819</td>
<td>0.4%</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.6%</td>
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<tr>
<td>Mexico</td>
<td>54,346</td>
<td>422</td>
<td>5.3%</td>
<td>4.9%</td>
<td>4.4%</td>
<td>4.7%</td>
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<tr>
<td>Netherlands</td>
<td>44,449</td>
<td>2,587</td>
<td>0.2%</td>
<td>0.8%</td>
<td>0.3%</td>
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<td>Sweden</td>
<td>30,799</td>
<td>3,050</td>
<td>1.4%</td>
<td>0.8%</td>
<td>1.6%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>30,618</td>
<td>3,538</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Singapore</td>
<td>28,794</td>
<td>5,106</td>
<td>1.6%</td>
<td>1.1%</td>
<td>2.5%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Japan</td>
<td>16,367</td>
<td>129</td>
<td>0.4%</td>
<td>0.1%</td>
<td>0.3%</td>
<td>0.2%</td>
</tr>
<tr>
<td>South Korea</td>
<td>11,110</td>
<td>217</td>
<td>0.3%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Africa</td>
<td>87,166</td>
<td>72</td>
<td>2.8%</td>
<td>4.2%</td>
<td>3.8%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Worldwide</td>
<td>4,897,492</td>
<td>630</td>
<td>2.0%</td>
<td>1.9%</td>
<td>0.9%</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

Source: Deutsche Bank, WHO, CDC, ECDC, JHU

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### Exit Strategy

- **Singapore**: It was announced that more businesses can reopen from 2 June, while schools will also begin to reopen.

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Greece will lift the ban on travel to its islands for non-residents starting May 25. Travel to the large islands of Crete and Evvia was allowed from this past Monday. The country will also extend the requirement for a two-week quarantine for all visitors arriving in Greece to May 31.

Medical Updates

- Scientists at the Korean Centers for Disease Control and Prevention found that those who tested positive after recovering were not infectious.
- The UK’s Office for National Statistics said that the share of deaths registered in England and Wales in the week ending 8 May which mentioned covid-19 was 31.1 per cent. This was down from 33.6 per cent the previous week.

Major virus updates over the past day

- Countries taking part in the WHO’s annual assembly adopted a resolution by consensus urging a joint response to the crisis. The resolution, tabled by the European Union, called for an “impartial, independent and comprehensive evaluation” of the international response to the pandemic. The investigation should include a probe of “the actions of WHO and their time-lines pertaining to the Covid-19 pandemic”.
- EU: A spokesman said that the EU “backs the WHO in its efforts to contain and mitigate the Covid-19 outbreak and has already provided additional funding to support these efforts.”
- Spain: Today, the government will seek a fifth, two-week extension of the state of emergency that has been in force since 14 March. The wearing of face masks in all public places where social distancing cannot be observed is also to become compulsory.
- The US-Canadian border will remain closed to non-essential travel until 21 June.
- French Foreign Minister Jean-Yves Le Drian said “As of Wednesday, we will ask all French people … returning to France and people who reside in France to put themselves in a voluntary two-week quarantine,” for those who return from countries outside the EU.
- World Bank President Malpass warned that up to 60m people will be pushed into extreme poverty and current recovery efforts are not enough.
- Australia has threatened to appeal to the WTO following Beijing’s announcement that it will impose tariffs on barley trade.

Company Updates

- Walmart announced that US comparable sales excluding fuel grew by 10.0 per cent in the 13-week period ending 1 May. Meanwhile, US eCommerce sale grew 74 per cent. However, the company withdrew their financial guidance for fiscal year 2021.
- Home Depot also suspended its previously communicated fiscal 2020 guidance.
- Southwest Airlines showed the first sign of good news in some time for the company, with bookings in May outpacing cancellations for the first time since March.
- Facebook will limit offices to 25 per cent occupancy and require masks at work. There will be regular temperature check as well when employees
return in multiple shifts starting in July.

**Economic Data Highlights**

- **UK:** Jobless claims in April rose by 856,500 to 2.1m, the highest level since July 1996.
- **EU:** The number of car registrations among the EU27 fell 76.3 per cent year-on-year in April.
- **Germany:** The expectation measure on the ZEW survey rose to 51.0 in May, the highest since April 2015. However, the current situation reading fell to -93.5, the lowest since July 2003.
- **US:** Housing starts in April fell to 891,000, a decline of 30.2 per cent on the previous month, and their lowest level since February 2015. Meanwhile building permits were down to 1.1m, the lowest level since January 2015.
- **Hong Kong:** The unemployment rate in April rose to 5.2 per cent, its highest rate since the financial crisis.
- **Europe’s auto market plunged further in April, with sales down by 76.3 per cent from the same month a year earlier, according to a sector federation. New car registrations had already fallen by an annualised 55.1 per cent in March.**

**Fiscal and Monetary Updates**

- **Euro Area:** In a speech yesterday, ECB Chief Economist Lane said “we are fully prepared to further adjust our instruments if warranted. This includes increasing the size of the PEPP and adjusting its composition, by as much as necessary and for as long as needed.”
- **UK:** The Treasury said that 8m jobs had been furloughed through the Coronavirus Job Retention Scheme, while a further 2m Self-Employment Income Support claims had been submitted. Meanwhile, the government extended the maximum loan size available through the Coronavirus Large Business Interruption Loan Scheme to £200m, up from £50m previously.
- **Indonesia:** The central bank left its seven-day reverse repo rate unchanged at 4.50 per cent, contrary to the consensus expectation for a 25bp cut.
Figure 3: Covid-19 Deaths per number of people in England and Wales by age group. E.g. 1 in 72 aged 90+ have died from Covid-19.

Figure 4: Covid-19 Deaths per number of people in England and Wales by age group on log scale.

Figure 5: Estimated deaths per number of people in each age bucket assuming everyone globally was exposed and the mortality rate was 0.75%.

Figure 6: Estimated % mortality rate in England & Wales in each age bucket assuming everyone globally was exposed and the mortality rate was 0.75%.
Figure 7: Much of Northern Europe’s experience has been very similar on a population adjusted measure

Covid-19 Cases per 1 million of the country’s population

Days since country announced 100th case

Source: Deutsche Bank, WHO, CDC, JHU

Figure 8: France is no longer tracking the same fatality path as Italy on a population adjusted basis, with the rate of new deaths slowing

Covid-19 Fatalities per 1 million of the country’s population

Days since country announced 10th death

Source: Deutsche Bank, WHO, CDC, JHU
Figure 9: There has been increasing case growth in regions like India, Brazil, Mexico and Russia just as Western Europe and the US flatten out.

Covid-19 case growth after 100 confirmed cases

![Graph showing Covid-19 case growth after 100 confirmed cases for various countries including India, Brazil, Mexico, Russia, Western Europe, and the US.

Source: Deutsche Bank, WHO, CDC, Worldometer]

Figure 10: New cases in the US have been flat for over two weeks and Europe seems to be slowing across the board on a 5 day average basis.

5 Day Average of Daily New Cases Since Country Observed 100th case

![Graph showing 5 day average of daily new cases since country observed 100th case for various countries including India, Brazil, Mexico, Russia, Western Europe, and the US.

Source: Deutsche Bank, WHO, CDC, Worldometer]
Figure 11: Fatalities across the world have slowed substantially compared to where we were 2 weeks ago with hospitals seeing less strain in different regions.

Covid-19 Total Fatalities by Country

Days since country announced 10th death

Confirmed Deaths

Source: Deutsche Bank, WHO, CDC, Worldometer

Figure 12: The growth in fatalities in the US and Europe have slowed on a 5 day average basis, yet we have seen the trend in fatalities lag the trend in new cases across the world.

5 day average of Daily Covid-19 Fatalities by Country

Days since country announced 10th death

Source: Deutsche Bank, WHO, CDC, Worldometer
Figure 13: The US and UK continue to increase the number of tests administered per day

![Daily tests per 1 million of the population](source)

Source: Deutsche Bank, OurWorldinData, Covid Tracking Project

Figure 14: New York State and England were the last two major regions we are watching that have seen their rate of new fatalities start to flatten

![Covid-19 Total Deaths by Region](source)

Source: Deutsche Bank, NHS, Covid Tracking Project, ECDC, Santepubliquefrance, Interaktiv.morgenpost
Appendix 1

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