The economic scarring of the COVID-19 pandemic

The health-related policy responses to contain the coronavirus pandemic have had a large impact on the health of the global economy. An important question from the Great Lockdown is how much of these economic impacts are temporary and will be "caught up" in a relatively short period of time and how much is of a more permanent nature, which we call "economic scarring". This analysis aims at using consensus forecasts to quantitatively assess the scarring effect of the pandemic on output and relating it to that of the 2008 financial crisis.

To estimate the *expected* scarring effect of the coronavirus pandemic on global output, we calculate what the forecast revisions to consensus GDP growth imply for the level of real GDP three years ahead. We use the same methodology to calculate the actual 3-year scarring effect of the 2008 financial crisis. We implement this analysis for the US, UK, Euro Area, Japan, China and appropriate aggregates.

Methodology

To estimate the scarring effect of Covid-19, we take the level of annual real GDP from country national accounts up to 2019 and append those implied by the pre-covid vintage of consensus annual growth forecasts from 2020 to 2022. We then calculate the same object using the most recent vintage. The 3-year scarring effect of the pandemic is defined as the percentage difference in the expected level of 2022 real GDP between the two vintages.

We determine the pre-covid vintage as January 2020 for Western countries and November 2019 for the Asian countries, given the important difference in timings of the outbreaks in both regions. The most recent vintage date is August 2020.

We also implement the same exercise with the 2008 Great Financial Crisis (GFC), by taking the level of annual real GDP up until 2007 and appending those implied by the pre-crisis vintage of consensus annual growth forecasts from 2008 to 2010. We determine January 2008 as the pre-crisis vintage date. The relevant measure for 3-year scarring is the percentage difference between the expected level of 2010 real GDP as of the pre-crisis vintage date and the data out-turn.

Data adjustments

Our main data source for the GDP growth forecasts is Consensus Economics. However, consensus forecasts only exist with respect to 2, and in some cases 1, year(s) ahead. For example, the August 2020 vintage contains forecasts for only 2020 and 2021. We therefore source the 2022 forecasts externally, from Goldman Sachs economists' most recent publications.

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For the January 2020 vintage (pre-covid vintage for Western countries), a similar problem exists, so we set 2022 expected growth equal to the mean of 2020 and 2021 consensus growth forecasts. We argue that this is a mild assumption, given that these forecasts were made before the pandemic took a firm hold in the West and so it is likely that the economy was relatively close to the steady state growth path. For the November 2019 vintage (pre-covid vintage for Asian countries), only 2019 and 2020 forecasts exist. We therefore set 2021 and 2022 growth forecasts equal to the mean of 2019 and 2020 consensus growth forecasts, with a similar reasoning in mind.

As for the 2008 Financial Crisis, the January 2008 pre-crisis vintage only contains forecasts for 2008 and 2009. We therefore set forecasts for 2010 equal to the average of the consensus growth forecasts for 2008 and 2009.

Results

Table 1 below shows the 3-year scarring inferred from consensus forecasts for both the Covid-19 pandemic and the 2008 Financial crisis. The effect of the pandemic varies between 3.9% for the US and 2.0% for China, with the other countries in between. In all advanced economy countries, we find that the pandemic is expected to have a much less significant impact on the level of GDP over a 3-year period than was the case for the financial crisis. Figures 1 and 2 portray the same results in a time-series format. Figure 1 shows the level of annual GDP up to 2010 (indexed at 2007 = 100) that was expected as of January 2008 versus the actual data. Figure 2 shows the time series of the level of annual GDP up to 2022 (indexed at 2019=100) that was expected as of January 2020 versus the level expected as of the most recent vintage.

It is important to note that our framework for estimating the 3-year expected scarring effect of the Covid-19 pandemic rests on the assumption that the revisions to consensus forecasts between the two vintages are solely due to the coronavirus pandemic. A violation of this assumption implies an overestimate of the true expected scarring due to the pandemic.

Table 1. 3-year scarring on real GDP due to financial crises (%)

	US	UK	Euro Area	Japan	China	All	Adv. Econ
Covid-19 pandemic	-3.9	-2.6	-2.6	-3.1	-2.0	-3.0	-3.3
Great Financial crisis	-7.2	-8.2	-7.4	-7.2	-0.5	-6.3	-7.3

Note: Covid-19 pandemic shows the percentage difference in the 2022-level of expected real GDP between the pre-covid and latest vintages. Great Financial Crisis shows the percentage difference in the 2010 levels of real GDP between the pre-crisis vintage and the actual data out-turn.

Figure 1. 2008 Financial Crisis 3-year scarring: Expected index level of real GDP as of the pre-crisis vintage versus data out-turn

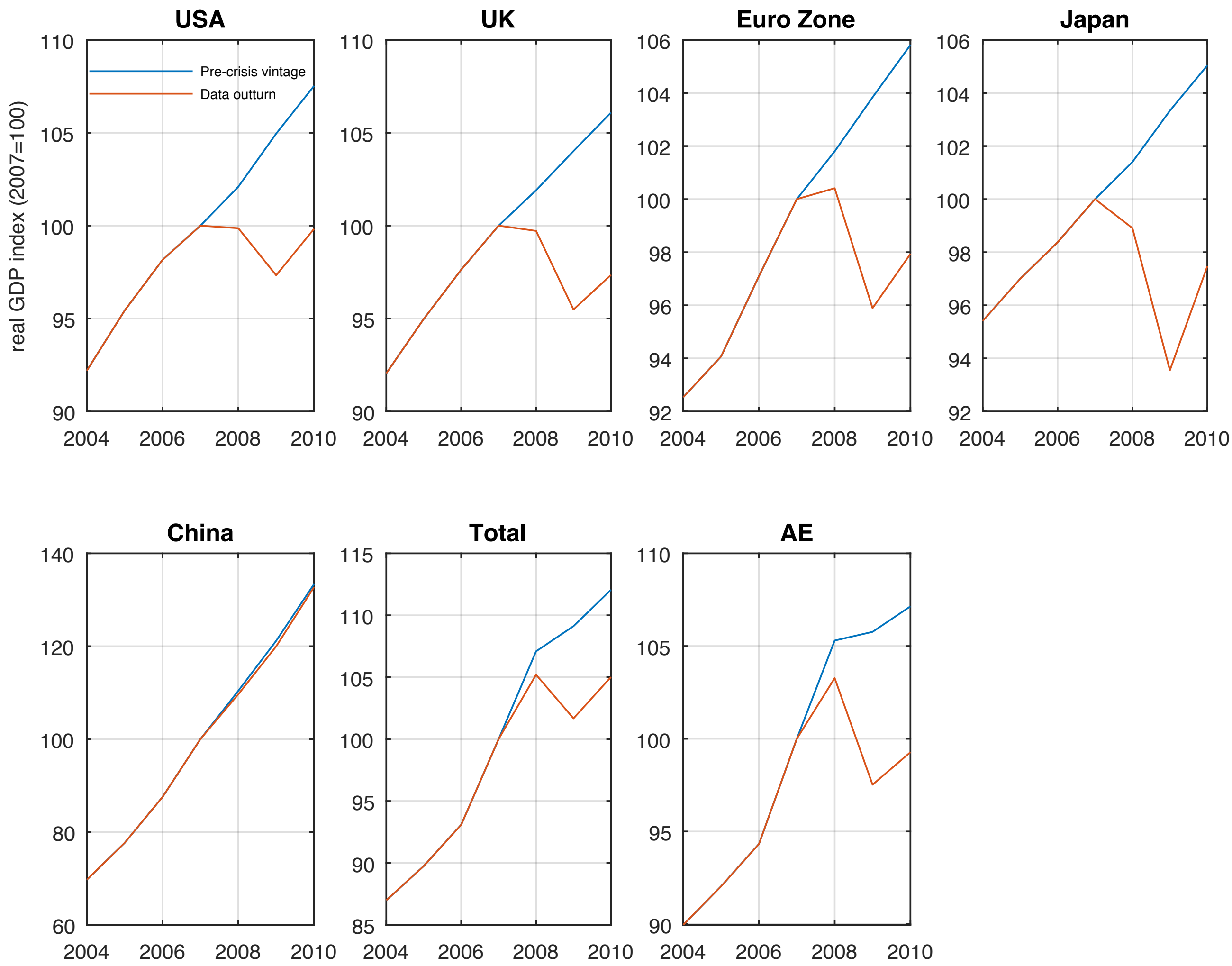

Figure 2. Covid-19 3-year scarring: Expected index level of real GDP as of pre-covid vintage versus the most recent vintage