GLOBAL MACRO, ECONOMICS & RATES STRATEGY RESEARCH

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US Economics Focus

Pandemic permutations

Given the fact that this is not a classic recession, we find the usual VAR modeling of the economy wanting. We addressed this massive shortcoming in a DD earlier this week. Instead of focusing on classical impulse/response models, we think the best way to go about modeling economic growth over the next few quarters is to create a set of plausible scenarios and adjust the probability of each scenario according to incoming data on the evolution of COVID-19.

Indeed, even medical experts are operating under a significant cloud of uncertainty. Notice just in recent days how the projections of potential COVID-19 deaths in the United States has evolved. The IHME “Murray Model” went from projecting total US deaths of north of 90k on April 2 to about 60k on April 7. And the most apocalyptic projections have been scaled way back. Recall Imperial College London projected 2.2 million US deaths back in mid-March.

IHME models suggest that with social distancing maintained, the end of the current epidemic wave in the United States could come in early June. There is some important regional divergence here. Indeed, NY State is expected to hit zero daily new deaths by May 5, while Texas is not expected to be at zero daily deaths until early June (though with a projected total death count of about 2,000 versus about 13,000 in NY). The point is, we could conceivably see a “rolling open” of regional pockets of economic activity starting in early May based on what the models look like right now. Monitoring developments in NY state will be crucial.

The next few weeks will shed light on this evolution. There are three potential outcomes here. 1) The model is right and we are on track to flatten the nationwide “death curve” by early June. 2) The models remain too pessimistic and daily deaths decline faster than projected, potentially leading to an earlier “rolling re-opening” of the economy. 3) The death curves do not roll over as fast as expected and the day of zero deaths is pushed out. With the nationwide death rate peak expected this weekend (April 12), we will know over the next couple of weeks whether we are on track or not.

But again, the uncertainty is when and to what degree the US economy begins to open up. Incoming data on the evolution of the virus will shift the bounds of this uncertainty almost on a daily basis. Thus we need a sort of playbook of possible trajectories for the US economy depending on the direction provided by 1) virus models and 2) how the incoming data behave relative to those models. Thus we have created a set of five plausible outcomes (there can obviously be many, many more and we will adjust these as necessary over the coming weeks) as to how the economy could evolve depending on various virus trajectories. We also applied preliminary probabilities to each outcome, which are based on both our views and conversations with our internal experts in the medical field. Again, the probability of each “bucket” will evolve based on the incoming virus data and we plan to continue making adjustments as needed. In many ways this will be a living document. Note that given the significant level of uncertainty with any economic forecast in the current environment, projections will continue to be largely “stylized.”

The “baseline” chart below is actually the weighted average of each of the potential outcomes we envision. We currently give the largest (and, for now, equal) weights to the V-shape and Double-Dip scenarios. Thus our base case sees a sharp decline in 2Q, followed by a large advance in 3Q and a very modest increase in 4Q. Again, we stress, we will be updating these as regularly as necessary to capture incoming data related to the evolution of the virus.

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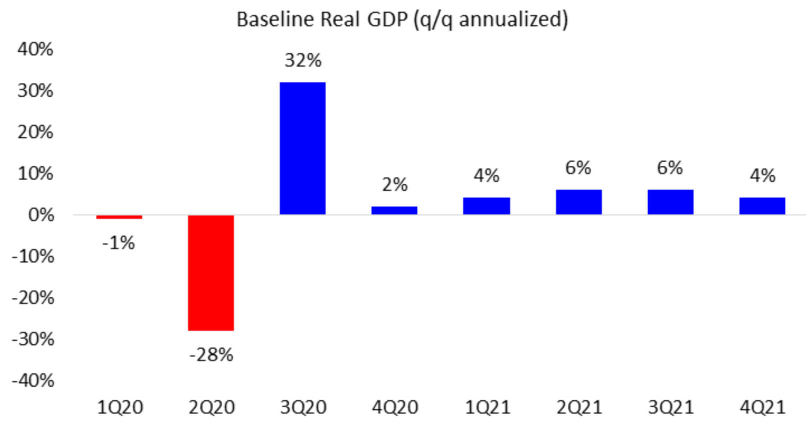
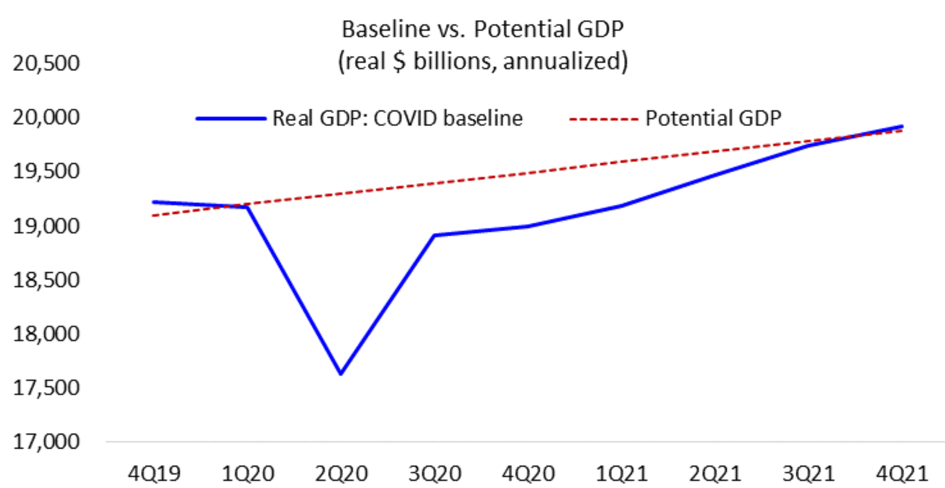


Source: Haver, RBC Capital Markets US Economics

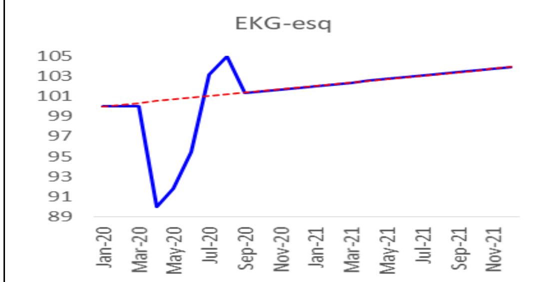
But in our view far more critical than the quarterly profile is the recovery back to trend. Again, recall that what made the 2008/09 recession truly painful from an economic perspective was not the -4% peak-to-trough decline but the $4.5 trillion in lost output (relative to potential growth) over the subsequent 10 years. Real GDP did not get back to potential until 2017 following the 2008 crisis. Our base case thus far calls for a total loss in output relative to potential of about -$800 billion through the end of 2021 (at that point we expect real output to be aligned once again with potential. As we have written, this duration of the shortfall matters more than immediate magnitude for asset values in the here and now. In other words, it is not the one-off shock to cash flow that impairs the net present value of an asset/investment, but rather the prolonged shortfall relative to the original projections.



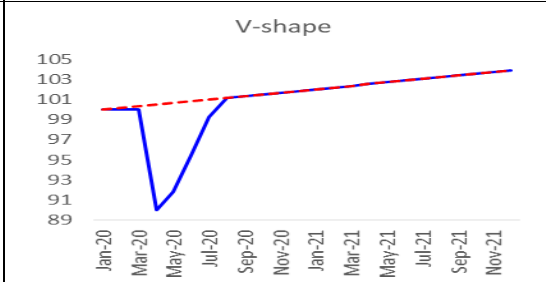
Source: Haver, RBC Capital Markets US Economics

Below is a summary of five most likely outcomes we see at this juncture (along with the weight) and next to the summary is a stylized chart which shows how long it would take to get back to potential growth.

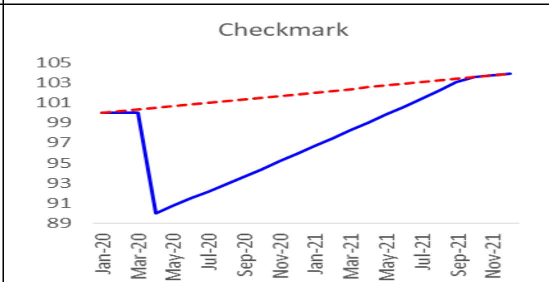
EKG-esq (5% probability) The best-case but lowest probability scenario. The virus basically disappears by late June and case fatality ratios (CFR) come in much lower than previously thought – towards something approaching the flu death rate of about 0.1%. The largest source of uncertainty with regards to the COVID-19 risk assessment is that we have no idea what the "denominator" looks like – in other words, we do not know the infection rate. Using estimated CFR numbers from a recent Lancet study[1], pegs the CFR for the United States (given the population age distribution) at 1.9% on the high side and 0.5% on the low side. But cumulative death projections for the United States (currently at about 60,000 projected by IHME) are coming in well below even the best-case CFR estimates, assuming a 5% rate of population infection (~17 million Americans). If we do indeed approach a CFR closer to a flu-like 0.1%, the psychological implications could be significant in terms of the population's risk tolerance. In this case, the direct stimulus injected into the economy in 2Q means 3Q economic activity would come roaring back.



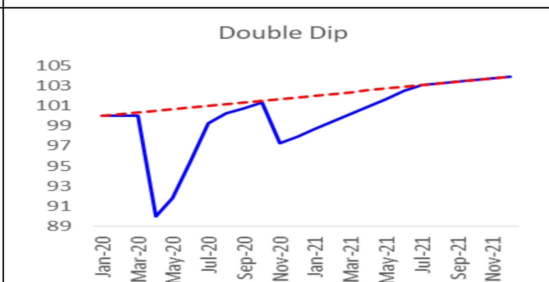
V-shape (35%) Virus remains but death rate much lower than thought (though not as positive as the EKG scenario) and therapeutics working to stave off significant death numbers. This is the "containment" scenario. Moreover, there is not a second wave of substance in the fall. The economy recovers back to potential by the tail end of 3Q but does not overshoot, given the virus is still out there and people tend to save the bulk of their 2Q windfall.



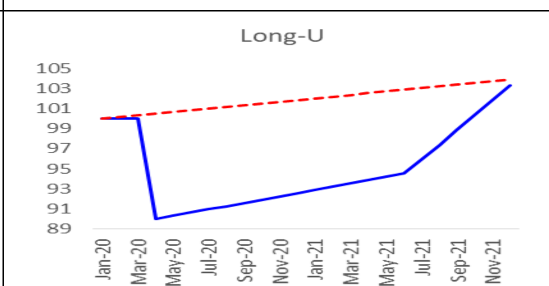
Checkmark (20%) The adaptive shallow recovery. The infection and death curves remain elevated and thus social distancing declines very gradually as virus remains a substantial health risk. With antibody tests expected to increase markedly within the next month, the economy can perhaps begin to open up very gradually with those folks that are immune/extremely low risk. But this still means no significant ramp-up in economic activity through the middle of the year. As this progresses, still-elevated social distancing (especially in high-risk groups) makes the odds of a second wave low.



Double Dip (35%) False start and relapse as virus comes back in the fall. The decline in 4Q economic activity is likely to be significantly less dramatic than 2Q as the economy will be better prepared to enact social distancing quickly and the health care space will be better equipped.



Long-U (5%) No letup in the virus risk and death rate remains high. Growth hit prolonged as social distancing remains significant. Antibody tests prove to be non-starters. Therapeutics work only modestly. Vaccine timeline remains highly uncertain. Similar path to post-2008 shock. However, with enough time, herd immunity then becomes a real possibility. This is the "classical recession" scenario with some caveats. But what still makes it different is 1) the massive amount of fiscal and monetary policy, which will continue to get scaled up if the virus headwind is protracted and 2) the potential that either a vaccine or herd immunity threshold provides an end-point.



[1] https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30243-7/fulltext

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