

September 21, 2020

# COVID-19: Can a lasting recovery happen without a vaccine?

**AUTHORS**

Aviva Investors | [Ian Pizer](#), [Mark Robertson](#), and [Sunil Krishnan](#)

With the notable exception of China, countries around the world have struggled to get their economies firing on all cylinders without COVID-19 infections flaring up again. Until a way to contain the virus is found, recoveries are likely to remain stop-start and fragile.

**In brief:**

- As data lays bare the huge economic damage being wreaked by COVID-19, in turn roiling financial markets, investors are understandably eager to figure out the likelihood of getting the pandemic under control. Unfortunately, amid the deluge of information to process, those looking for answers are faced with conflicting signals.
- Take the case of the global hunt for a knock-out vaccine. According to the World Health Organization, there are currently 165 candidates, at different stages of development, around the world. Making sense of the news flow is not straightforward.
- In the following Q&A, Ian Pizer (IP), senior multi-asset and macro strategist at Aviva Investors, recently discussed the latest developments in the global effort to bring the pandemic under control, while Mark Robertson (MR), head of multi-strategy funds, and Sunil Krishnan (SK), head of multi-asset funds, offered their assessment of what this means for the economic outlook and financial markets.

**WHERE COVID-19 HAS HIT HARDEST**

Country	Total Cases	Cases/Million Population	Total Deaths	Deaths/Million Population
United States	6,564,302	19,999	195,315	595
India	5,020,359	3,638	82,066	59
Brazil	4,382,263	20,617	133,119	626
Russia	1,069,873	7,331	18,723	128
Peru	733,860	22,257	30,812	934
Colombia	728,590	14,319	23,288	458
Mexico	676,487	5,247	71,678	556
South Africa	651,521	10,985	15,641	264
Spain	603,167	12,901	30,004	642
Argentina	577,338	12,774	11,852	262

Source: Johns Hopkins University Coronavirus Resource Center, with data last updated 9/15/2020, including the number of confirmed cases and deaths from novel coronavirus by country, the trend in confirmed cases and death counts by country.

## What is your current thinking on the search for a vaccine?

**IP:** The results so far are broadly in line with what we would have hoped to see. Multiple candidates produce a robust measurable immune response. However, we don't as yet have sufficient knowledge to evaluate whether these immune responses are sufficient to protect against infection or disease. This is the purpose of the phase III trials that are starting for several of these candidates.

It is reassuring that we can see these candidates can generate a response in line with, or even exceeding, that of recovered patients who have cleared the virus. This isn't just antibody responses either. One of Pfizer/BioNTech's vaccine candidates has demonstrated a robust T-cell response on both the helper T-cell (CD4) and killer T-cell (CD8). The Oxford vaccine candidate has shown a T-cell response, but hasn't demonstrated the type, and the Moderna candidate has shown a CD4 response.

There has been concern that the level of antibodies in recovered patients waned unusually rapidly. However, if you concentrate on what immunologists are saying, the falls in several of the key antibody responses are in line with what would be expected post infection. On infection, you produce high levels of antibodies to clear it, but the response is designed to fall off before being maintained at a low baseline level. It would be incredibly unhealthy to maintain these levels for every infection you ever had.

More recent larger studies have provided reassurance that naturalizing antibodies to the spike protein seem to be behaving in line with what would be expected, and that on re-exposure to the virus their level would be expected to rapidly increase.

Having said all that, it is not unheard of for a vaccine to generate a strong immune response, for animal models to show protection, and yet it fails to demonstrate protection in phase III trials. So there are grounds for optimism, but the evidence is not yet conclusive.

### NOTABLE VACCINE CANDIDATES

Candidate	Mechanism	Sponsor	Trial Phase	Institution
Ad5-nCoV	Recombinant vaccine (adenovirus type 5 vector)	CanSino Biologics	Phase 3	Tongji Hospital, Wuhan, China
AZD1222	Replication-deficient viral vector vaccine (adenovirus) from chimpanzees	The University of Oxford; Astra Zeneca; IQVIA; Serum Institute of India	Phase 3	The University of Oxford, the Jenner Institute
CoronaVac	Inactivated vaccine (formalin with alum adjuvant)	Sinovac	Phase 3	Sinovac Research and Development Co., Ltd
mRNA-1273	mRNA-based vaccine	Moderna	Phase 3	Kaiser Permanente Washington Health Research Institute
Bacillus Calmette-Guerin (BCG) vaccine	Life-attenuated vaccine	University of Melbourne and Murdoch Children's Research Institute; Radboud University Medical Center; Faustman Lab at Massachusetts General Hospital	Phase 2/3	University of Melbourne and Murdoch Children's Research Institute; Radboud University Medical Center; Faustman Lab at Massachusetts General Hospital
BNT162	mRNA-based vaccine	Pfizer, BioNTech	Phase 2/3	Multiple study sites in Europe and North America
NVX-CoV2373	Nanoparticle vaccine	Novavax	Phase 2B	Novavax

Source: "COVID-19 Vaccine Tracker," *Regulatory Affairs Professionals Society (RAPS)*, September 17, 2020. Excludes Sputnik V, which was approved by the Ministry of Health of the Russian Federation on August 11. Experts have raised considerable concern about the vaccine's safety and efficacy given it has not yet entered Phase 3 clinical trials.

## Could you estimate the probability of a vaccine, that at least works partially, being developed by the middle of next year?

**IP:** Given the phase III trials that have been announced for several candidates, we can be confident that if one of these induces sterilizing immunity (immunity from actual infection rather than immunity from severe disease resulting from infection) we should know before the end of this year. Once we have a successful vaccine, we will have a baseline to better evaluate other candidates against and so may be better able to prioritize which candidates to concentrate efforts on.

You could try to put a probability on it, but even experts seem to be saying there's too much uncertainty to make it worthwhile. What we can say is there seems to be no evidence a vaccine won't work. It is positive that nobody has said we've got to go back to square one.

All the same, it's important to recognize there is no silver bullet and it is likely to be a long slog out of this. Even if a vaccine is 100 per cent effective, you've still got to get everyone vaccinated globally and that's going to take a long time. Even in the developed world, it's not going to happen quickly as you're going to have problems with vaccine uptake.

## If a vaccine can't be found, what's the outlook for treating the disease?

**IP:** I'm skeptical of the chances of a cure, but we should expect continued progress in treatment. There is already evidence of this. Recent U.S. fatalities have been lower than might have been expected given rates of infection over the past six weeks, even allowing for the lag between the two. This suggests treatment has already improved materially since the spring. This isn't from a silver bullet but rather a series of lessons, many of which are actually low tech.

For example, in the early stages it was felt getting severe cases onto ventilators early might improve outcomes, but in fact attempting to keep marginal cases off a ventilator has proven more effective. Something as simple as proning (rolling patients onto their stomachs) has also helped.

There is also a much better understanding of the phases of the disease, with the first week being dominated by viral spread, but the deterioration in the second week being the result of an overactive immune response more than viral activity. So steroids, which were initially avoided due to concern they might inhibit the immune response, were tested in this second phase. Dexamethasone, a cheap, widely available drug, has been proven to reduce mortality significantly in more severe cases.

In the coming weeks, we should learn the results of trials on the benefits of convalescent sera and monoclonal antibodies. There is reason to believe improvements will continue to be made. Unfortunately, while these are clearly positive developments, they don't materially lower the burden on hospitals from high levels of infection.

To do that we need an early intervention able to reduce the probability of an infection becoming severe enough to result in hospitalization. One study suggests interferon beta could play a role, although it was small and, as yet, the work has not been peer reviewed.

Away from treatment, the other area where there is potential for a leap forward is testing. The most positive idea I have heard is being promoted by Michael Mina (assistant professor of epidemiology at Harvard T. H. Chan School of Public Health and a core member of the Center for Communicable Disease Dynamics). The idea is to utilize less sensitive but low-cost paper-strip tests that offer rapid diagnosis. By regularly testing large numbers, the objective would be to catch people early and force them to self-isolate before they become infectious.

The aim would not be to replace the polymerase chain reaction (PCR) nasal swab in a clinical setting. PCR is very sensitive so it can pick-up evidence of infections over a long period of time. While this is important for clinicians trying to evaluate which treatment to give, a regular, low-cost rapid test is superior for the purposes of reducing transmission.

However, although the technology is already there, it will require a change of mentality. Currently, these tests are criticized for being inaccurate in comparison to the PCR test. This misses the point. They are not trying to replicate the PCR test; rather, they are trying to identify infectious people, and they are very accurate at identifying those with higher viral loads.

In the event vaccines and treatments take longer to come we can still control the spread of infection

In fact, if the purpose is identifying infectious people, the PCR test is less accurate as people who are no longer infectious give false positive readings. This technology offers reasons for optimism; that in the event vaccines and treatments take longer to come we can control the spread of infection with far lower restrictions and economic pain than we've seen so far in the pandemic.

## China seems to have done a remarkable job of keeping a lid on infections at the same time as reviving its economy. What does its experience teach us?

**IP:** I think China taught us early on the virus is way more containable than most western experts had believed. They thought we might be able to flatten the curve but we would be just delaying a wave that could not be held back indefinitely. The view now is that it can be contained, depending on how determined you are. The less you have to worry about individual privacy, the easier that is. That's why China is in a camp of its own.

Everyone is excited about the idea technology will save us. But the reality is that no other country has the sort of take-up of apps that would be needed to achieve this. In China, take up wasn't optional: you had to have their app. If you couldn't show your green, amber or red status, you couldn't get public transport or wouldn't be allowed into shops.

South Korea has been quite effective for a number of reasons, not least because it has had full access to the geo-location data from phones. When someone has tested positive, authorities have notified others who are likely to have come into close contact with them. It is clear a state's ability to suppress the disease is assisted by an ability to override privacy concerns.

The U.S. experience is at the other end of the spectrum. What is the way forward there?

**IP:** The political situation in the United States is the biggest impediment. If there had been a concerted push for patriotic mask wearing along with social distancing four months ago the country might have been in a better place.

While U.S. activity appears to have rebounded quite sharply, it is difficult to judge the relative economic prospects there. That is because it has adopted a rather chaotic approach, with lockdowns eased quite quickly in some places. The ones that acted fastest are in some cases having to re-restrict activity.

While there are a lot of dangers in using a currency as a way of measuring the health of an economy, it seems as though the United States has a more problematic or confused route out of lockdown. The fact the Federal Reserve is aware of this probably helps explain why the dollar has been so weak.

Will the central bank/government support we have seen be sufficient to avert another, potentially deeper and longer-lasting slump?

**MR:** Western governments stepped in to support household income on a massive scale, which was absolutely necessary to prevent an even sharper contraction in spending. At this point, we don't have any clarity of the impact as they try and step back over the next quarter or so. We will probably get further stimulus in the United States but, at some point, we will need to see the underlying strength of these economies coming through when this exceptional level of government sponsorship starts to be removed.

**SK:** Even if a vaccine were to pass its large-scale phase III trials tomorrow, we would still be faced with a lengthy rollout period during which current challenges to health and economic activity continue. Moreover, we have a number of emergency support measures, such as the UK's job retention scheme or U.S. Federal enhancement of unemployment benefits, which are due to expire or taper in the absence of additional legislation. That represents a potential shock to household incomes and confidence. This is why Federal Reserve Chairman Jerome Powell and others have made it clear further fiscal support is needed.

The need will be amplified if there are meaningful pullbacks in economic activity resulting from further virus outbreaks. The evidence suggests that activity declines in areas where caseloads increase, even if official restrictions are not introduced. It is positive many countries feel they will be able to manage future outbreaks through localized restrictions rather than nationwide lockdowns. But this still presents a threat to investor expectations of a relatively steady path back to 'normal' spending and production.

**MR:** What I would say is that the co-ordination between fiscal and monetary policy on display is unlike what we saw coming out of the global financial crisis, where austerity was deemed to be the appropriate response to increased fiscal deficits. It is questionable how effective quantitative easing was in delivering growth or inflation, even though it propped up financial assets. It will be interesting to see how long into the recovery fiscal expansion will be pursued for.

*Mark Robertson is Head of Multi-Strategy and Portfolio Manager, AIMS Target Return, Target Income and Fixed Income Funds. Mark is responsible for managing our suite of outcome-focused multi-strategy funds as well as leading our multi-strategy investment team.*

*Sunil Krishnan, Head of Multi-asset Funds at Aviva Investors, leads the team which manages long-only multi-asset funds and mandates. He is also a member of the Multi-Assets leadership group and a contributor to the AIMS investment process.*

*Ian Pizer, Senior Strategist, Multi-asset & Macro at Aviva Investors, works with the investment strategy team and the portfolio managers and plays a key role in the formulation of the "House View" and key risks. He also contributes to the idea generation process, and is a permanent member of the Strategic Investment Group.*

Except where stated as otherwise, the source of all information is Aviva Investors Global Services Limited (AIGSL), as of December 13, 2019. Unless stated otherwise any views and opinions are those of Aviva Investors. They should not be viewed as indicating any guarantee of return from an investment managed by Aviva Investors nor as advice of any nature. Information contained herein has been obtained from sources believed to be reliable, but has not been independently verified by Aviva Investors and is not guaranteed to be accurate. Past performance is not a guide to the future. The value of an investment and any income from it may go down as well as up and the investor may not get back the original amount invested. Nothing in this material, including any references to specific securities, assets classes and financial markets is intended to or should be construed as advice or recommendations of any nature. This material is not a recommendation to sell or purchase any investment.

---

## You May Also Like:

Will COVID-19 Lead to a Concentration of Corporate Power?

---

## Investment Partner



## Related Professionals

---

### Ian Pizer

Senior Strategist, Multi-asset & Macro

---

### Mark Robertson

Portfolio Manager

---

### Sunil Krishnan

Head of Multi-asset Funds

---

## Related Products

---

Virtus Aviva Multi-Strategy Target Return Fund

---

---

Aviva Investors Americas LLC (AIA) is the named subadviser to the Virtus Aviva Multi-Strategy Target Return Fund and utilizes the services of Aviva Investors Global Services Limited (AIGSL) and its other affiliates (collectively, Aviva Investors) to manage the Fund. Each affiliate entered into a Memorandum of Understanding (“MOU”) with AIA and these affiliates are Participating Affiliates as that term is used in relief granted by the SEC.]

### **Past performance is no guarantee of future results.**

All investments carry a certain degree of risk, including possible loss of principal.

**Please consider a Fund’s investment objectives, risks, charges, and expenses carefully before investing. For this and other information about any Virtus Fund, contact your financial professional, call 800-243-4361, or visit [virtus.com](https://www.virtus.com) for a prospectus or summary prospectus (<https://www.virtus.com/investor-center/mutual-fund-documents>). Read it carefully before investing.**

1830732

Mutual funds, ETFs, and Virtus Global Funds distributed by **VP Distributors, LLC**, member FINRA and subsidiary of Virtus Investment Partners, Inc.

© 2020 Virtus Investment Partners. As shown on Virtus.com.