

THE VIRAL ECONOMY™

PERSONAL AND FINANCIAL HEALTH DURING COVID-19

A STRATEGIC NEWS SERVICE®

EXCLUSIVE PUBLICATION





The Viral Economy

Week of April 27, 2020
Part 10

SECTIONS

1. Overview: Where Are the Tests?
2. Severity
3. Market Effects
4. Appendix: Major Economy Tracker

OVERVIEW: WHERE ARE THE TESTS?

By Evan Anderson

Since the very beginning of the pandemic, it's been clear that there are only a few scenarios that lead to a successful return to productivity and some semblance of normalcy. Countries have followed different policies in an attempt to reach one of these optimal scenarios. The

likelihood of each is critical to the potential success, and therefore wisdom, of adapting policy to further one of the following goals:

1. A vaccine is rapidly developed and safely deployed, allowing for a near-full return.
2. The spread of the virus is so broad that herd immunity is rapidly reached - a factor we discussed in Part 9 - highlighting some potential optimism, with the caveat that only large-scale virus testing and antibody testing can inform the discussion.

3. The disease continues to spread back and forth around the globe, while social distancing flattens curves and lowers total deaths while also preventing hospital system overload.

We will explore each of these scenarios, assessing their likelihood and, therefore, the wisdom of counting on them as policy drivers.

Scenario 1: Vaccines

"It is far from guaranteed that the vaccine will be safe and effective.... [B]efore entering clinical trials, the average experimental vaccine has a 6 per cent chance of ultimately reaching the market. Of those that make it into trials, a 2019 analysis suggests the probability of success is 33.4 per cent."

– New Scientist, 4/29/20

Rapid development of vaccines has been touted as a critical effort, with [huge numbers of teams](#) devoted to their development. While Oxford University has stated that its vaccine [may be available by fall](#), it is worth noting that "between 1998 and 2009, [the average time taken to develop a vaccine was 10.7 years.](#)"

Scenario 2: Herd Immunity

Much has also been made of the possibility that we'll reach herd immunity first (a situation in which so many have been exposed to the virus that it's difficult for it to spread through the population). However, the WHO has noted that there is of yet [no evidence that recovered patients get immunity](#), while estimates from New York City are in the [20 percent range](#).

With 12,509 deaths and the common necessity of reaching very high percentages of infection in order for herd immunity to kick in, clearly the cost of achieving herd immunity is a death rate most would find unacceptable. The ongoing case of Sweden, which has a robust medical system but has put few social distancing requirements in place, continues to be instructive. The Nordic country now has one of the highest death rates in the world, [climbing quickly toward the top 10, while testing still lags behind that of most nations experiencing a large outbreak.](#)

Scenario 3: Ongoing Infection

This, unfortunately, is the most likely. With a high R_0 in most scenarios, COVID-19 will clearly be spreading around various parts of the world (particularly in the most intractable public-health environments) for some time to come. Thus, any country that isn't completely closed off will likely see ongoing new infections from other regions (or its own worst-off states or provinces). This is the idea behind Dr. Anthony Fauci's recent statement regarding the need to prepare testing, contact tracing, and quarantine capacity for a possible second wave this fall. As reported by CNN, [Fauci said](#):

If by that time we have put into place all of the countermeasures that you need to address this, we should do reasonably well.... If we don't do that successfully, we could be in for a bad fall and a bad winter.

Given the likelihood that active spread of infections will continue for the foreseeable future, we can reasonably conclude that the imposition of high-magnitude testing, contact tracing, and quarantine (in line with the South Korean model) will be critical in the coming months. Unfortunately, the entire globe remains far below the required level of testing per million, including the United States government, which, despite frequent promises, [continues to lag behind on testing](#) - a situation that will have to be remedied.

Those areas and countries that are combining a lack of testing with the beginnings of a reopening are placing themselves at huge risk of a resurgence, which will predictably result in a second lockdown and further inefficiencies and economic consequences.

Severity

Severity will be measured using four key indicators. Since there is drastically insufficient testing, particularly in the United States, we will not be estimating cases until mass testing is ramped up and a realistic sense of spread can be regained.

1. Apparent R_0 , or “R-Naught”

The number of new individuals each case will infect, based on Los Alamos’ most recent study. An R_0 below 1 means the disease is being contained.

2. Case Fatality Rate, or CFR

The number of deaths as a percentage of total resolved cases (percentage of deaths vs. individuals cured).

3. Total Confirmed Cases

The official number of reported confirmed cases, as of press time (per Johns Hopkins)

4. Total Estimated Cases

Based on the latest guidance from Imperial College London’s COVID-19 Response Team

April 29, 2020

Apparent $R_0 = 6$

CFR = ?

Total Confirmed Cases: **3,139,415**

Total Estimated Cases:
Estimates of CFR and Cases are not useful without sufficient testing.

Official Death Count:
218,456

Most-Affected Regions

Countries experiencing the highest deaths per million

San Marino (1,208)	Netherlands (275)	Switzerland (148)
Belgium (647)	Isle of Man (247)	Luxembourg (142)
Andorra (531)	Sweden (244)	Monaco (102)
Spain (519)	Ireland (235)	Bermuda (96)
Italy (453)	Channel Islands (207)	Portugal (95)
France (362)	Montserrat (200)	Saint Martin (78)
UK (319)	Switzerland (196)	Canada (76)
Sint Maarten (303)	USA (179)	Denmark (76)

Market Effects

Percentage Change Since Outbreak, Select Viral Economy Metrics

Financial Markets

Shanghai Composite **-9.09**
Shenzhen Composite **-2.32**
Hang Seng **-12.99**
Nikkei **-16.14**
DJI **-14.42**
S&P 500 **-9.87**
FTSE 100 **-19.60**
Bovespa **-29.57**
Nasdaq **-2.75**

Commodities with High China Demand

WTI Crude **-75.98**
Brent Crude **-67.12**
Copper **-15.73**
Steel Rebar **-8.8**
Nickel **-12.33**
Iron Ore **-11.70**
Aluminum **-16.56**
Cotton **-15.51**



US Case Map as of April 29, 2020
(Courtesy Johns Hopkins)

Economies and Companies with Significant Exposure Selected by The Viral Economy in February

National ETFs

iShares MSCI China **-5.83**
iShares MSCI India **-21.25**
iShares MSCI Australia **-24.20**
iShares MSCI Japan **-9.96**
iShares MSCI South Korea **-13.77**
iShares MSCI Russia **-26.42**
iShares MSCI Philippines **-27.26**
iShares MSCI New Zealand **-12.71**
iShares MSCI Malaysia **-17.43**
iShares MSCI Singapore **-23.89**
iShares MSCI Thailand **-23.92**
VanEck Vectors Vietnam **-21.60**

US Equities

Skyworks Solutions **-11.36**
Wynn Resorts Ltd. **-37.44**
Qorvo **-14.68**
Qualcomm **-9.65**
Micron **-11.67**
Broadcom **-12.34**
NVIDIA **+25.37**
Texas Instruments **-8.18**
IPG Photonics **-7.10**
KLA-Tencor **-2.48**

The spread of the virus has begun to slow in many countries with strong social distancing requirements in place. However, opening too early or without sufficient testing, tracing, and quarantine capabilities will simply return many countries, states, and provinces to the place they started earlier this year. Without these key resources, and antibody testing to ascertain burden of disease, the global population and economy cannot effectively move forward.

While mass injections of liquidity have helped to boost and hold up markets, they equally provide false hope in a situation in which the economic effects of the pandemic are far from over, and fundamentals remain weak beyond precedent.

Expect the market to continue to generally decline as the situation drags on. True economic stability can only come with a comprehensive effort to move from reactive to proactive measures. Large-scale testing - the first step - remains elusive worldwide.

RECOMMENDATIONS:

1. Do not visit hospitals unless absolutely necessary.
2. Expect the current market bump to lose momentum as earnings are reported.
3. Wash your hands frequently.
4. Practice social distancing, avoid crowds, and stay 10 feet away from others.
5. The virus appears to be more airborne than previously known. Wear a mask if possible when in shared spaces.
6. Watch for signs that immunity is not occurring in recovered patients.



EVAN ANDERSON is the CEO of INVNT/IP and a senior staff writer at SNS. Infectious-disease epidemiology has been a strong interest since his work with tuberculosis in Haiti.

Appendix: SNS Virus Tracker for Major Economies

The SNS Virus Severity Tracker© for major economies measures the trajectory of SARS-CoV-2 and its effect on the economy of each of the largest countries (by nominal GDP) whose data can be trusted. Notable exceptions in the top global economies are China, India, and Brazil, whose virus data cannot be trusted for varied reasons, running from lack of press freedom (China, Brazil) to evidence of tampering (China) to a simple lack of testing capabilities and robust medical infrastructure (India).

This tracker uses proprietary Viral and Economic indexes to serve as a guide for the global viral and economic outlook of these countries individually and in combination. The countries tracked represent over 890 million people generating over \$44 trillion in annual GDP. Individual country profiles will be added each week as more data becomes available.

Overall SNS Severity Index© Scores

(0=Unaffected, 1=Extremely Severe)

South Korea (0.05)

Australia (0.08)

Japan (0.08)

Germany (0.10)

Canada (0.21)

France (0.23)

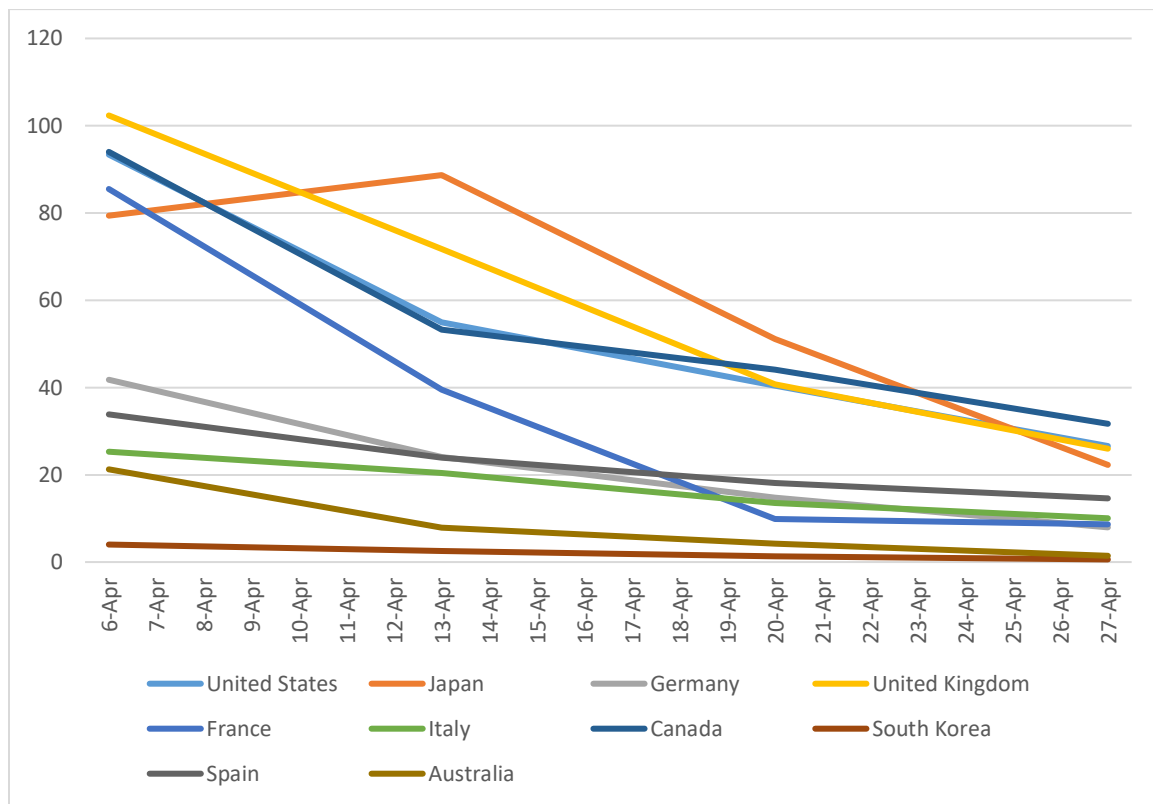
Italy (0.25)

United States (0.24)

United Kingdom (0.31)

Spain (0.35)

Percent Change, Cases Per Million, Week-Over-Week



SNS Virus Severity Tracker: The United States

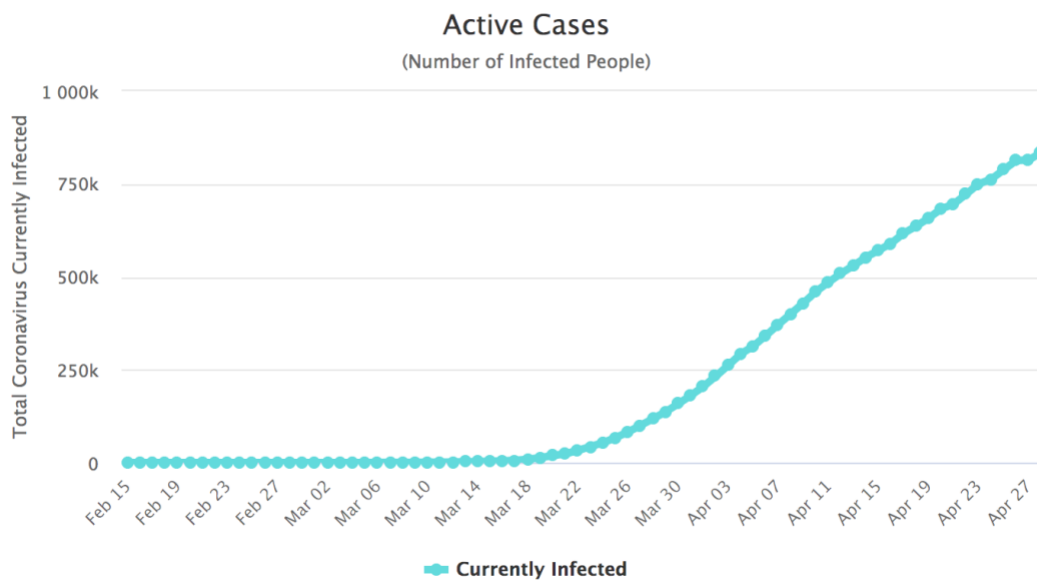
National outlook based on virus severity and economic indicators

Total Score: 0.24

SNS Virus Severity Index Score: 0.25

SNS Economic Severity Index Score: 0.24

Active Cases in the United States



All graphs by Worldometers

SNS Virus Severity Tracker: Japan

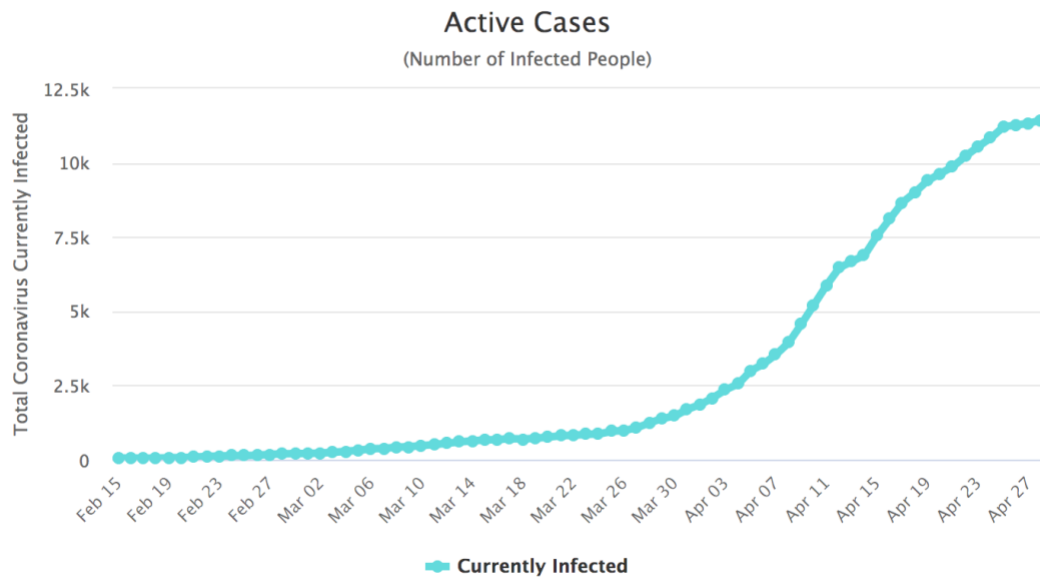
National outlook based on virus severity and economic indicators

Total Score: 0.08

SNS Virus Severity Index Score: 0.13

SNS Economic Severity Index Score: 0.02

Active Cases in Japan



SNS Virus Severity Tracker: Germany

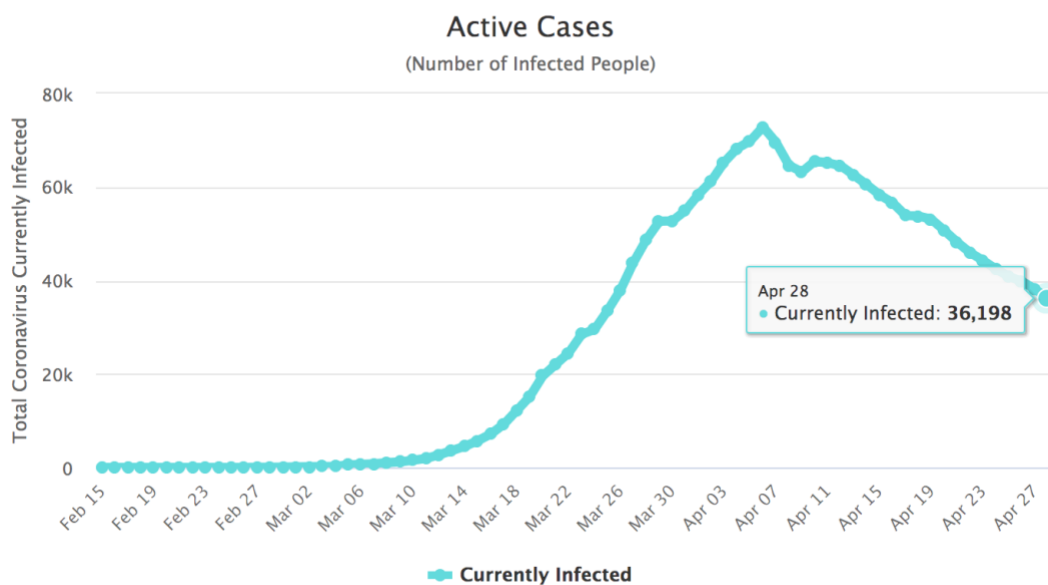
National outlook based on virus severity and economic indicators

Total Score: 0.10

SNS Virus Severity Index Score: 0.07

SNS Economic Severity Index Score: 0.13

Active Cases in Germany



SNS Virus Severity Tracker: United Kingdom

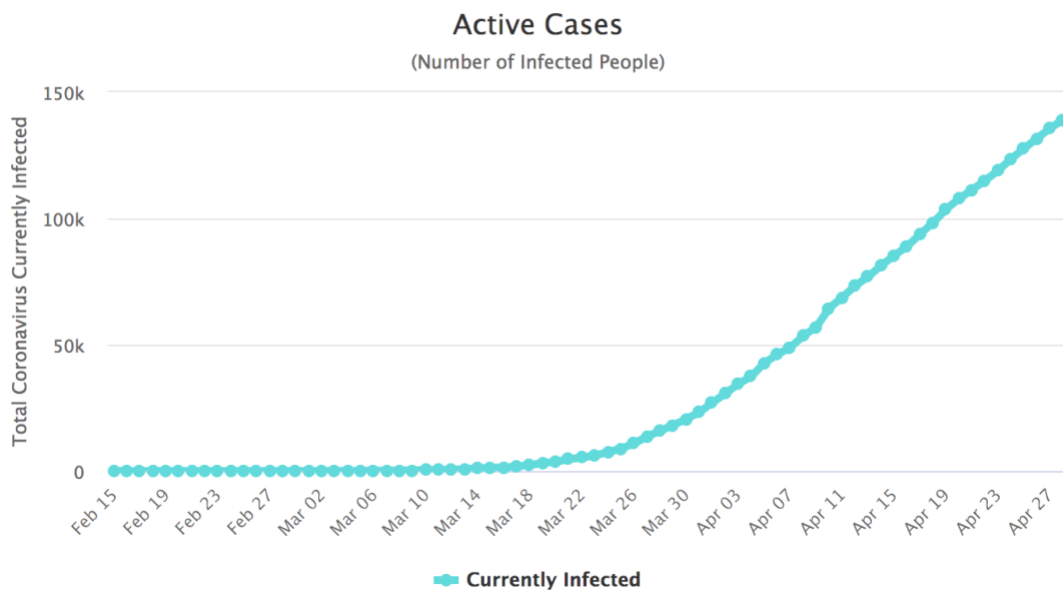
National outlook based on virus severity and economic indicators

Total Score: 0.32

SNS Virus Severity Index Score: 0.45

SNS Economic Severity Index Score: 0.19

Active Cases in the United Kingdom



SNS Virus Severity Tracker: France

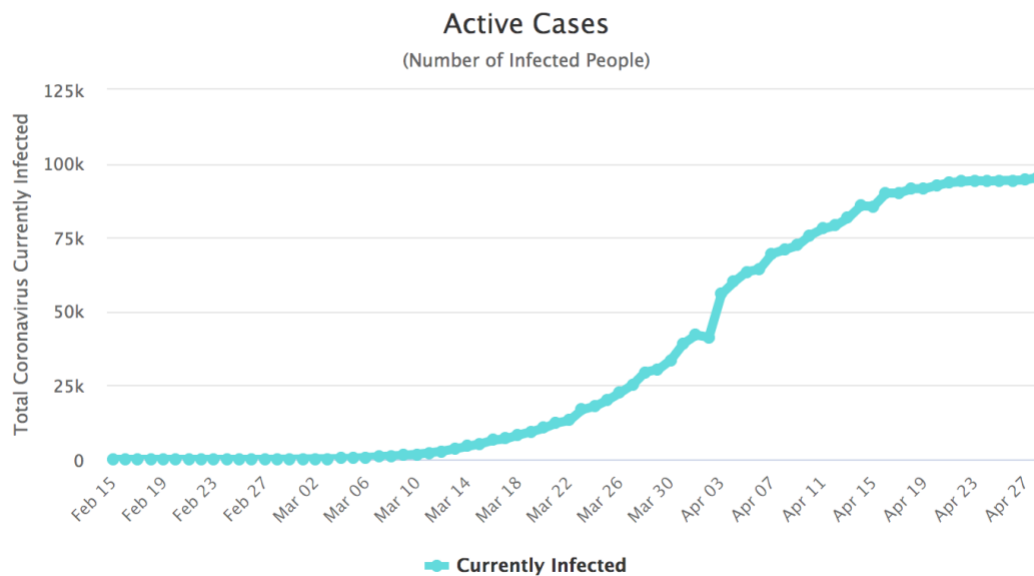
National outlook based on virus severity and economic indicators

Total Score: 0.23

SNS Virus Severity Index Score: 0.20

SNS Economic Severity Index Score: 0.26

Active Cases in France



SNS Virus Severity Tracker: Italy

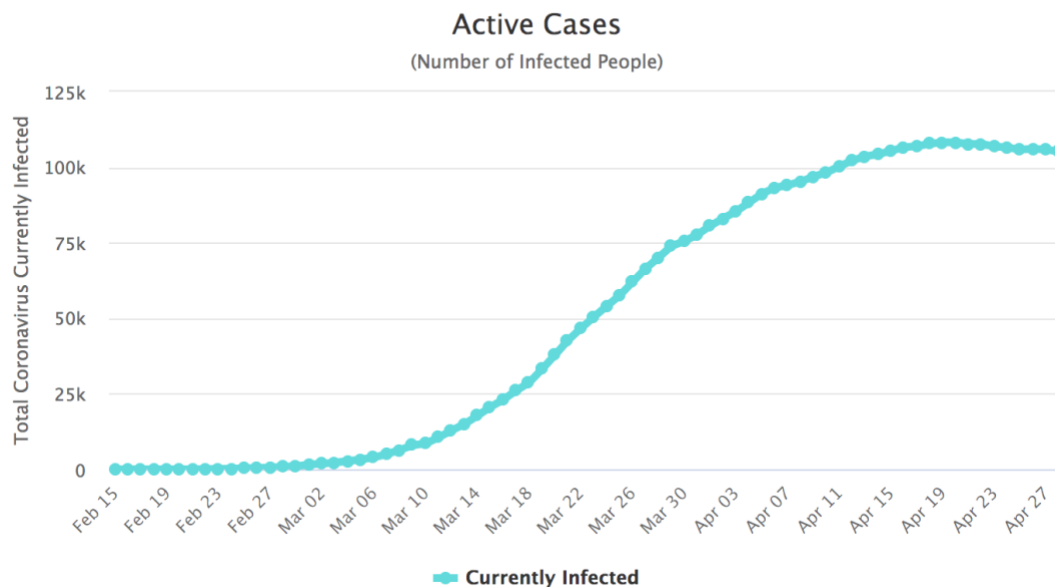
National outlook based on virus severity and economic indicators

Total Score: 0.25

SNS Virus Severity Index Score: 0.19

SNS Economic Severity Index Score: 0.31

Active Cases in Italy



SNS Virus Severity Tracker: Canada

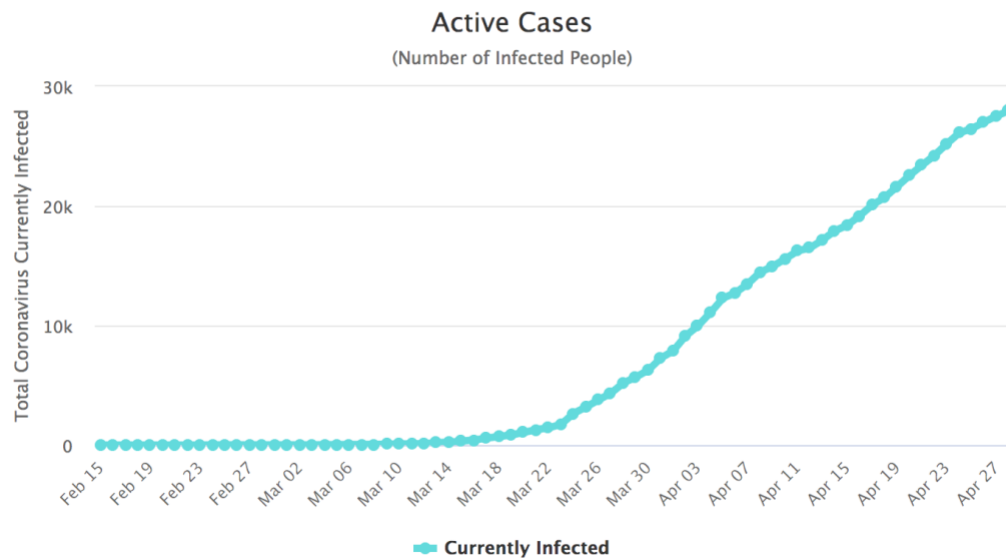
National outlook based on virus severity and economic indicators

Total Score: 0.21

SNS Virus Severity Index Score: 0.17

SNS Economic Severity Index Score: 0.26

Active Cases in Canada



SNS Virus Severity Tracker: South Korea

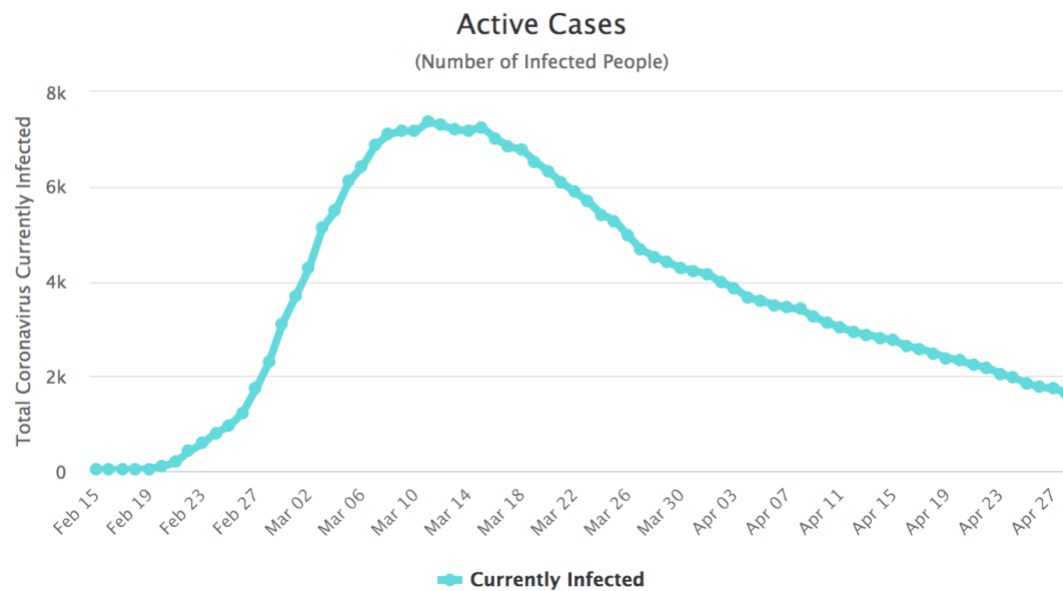
National outlook based on virus severity and economic indicators

Total Score: 0.05

SNS Virus Severity Index Score: 0.01

SNS Economic Severity Index Score: 0.08

Active Cases in South Korea



SNS Virus Severity Tracker: Spain

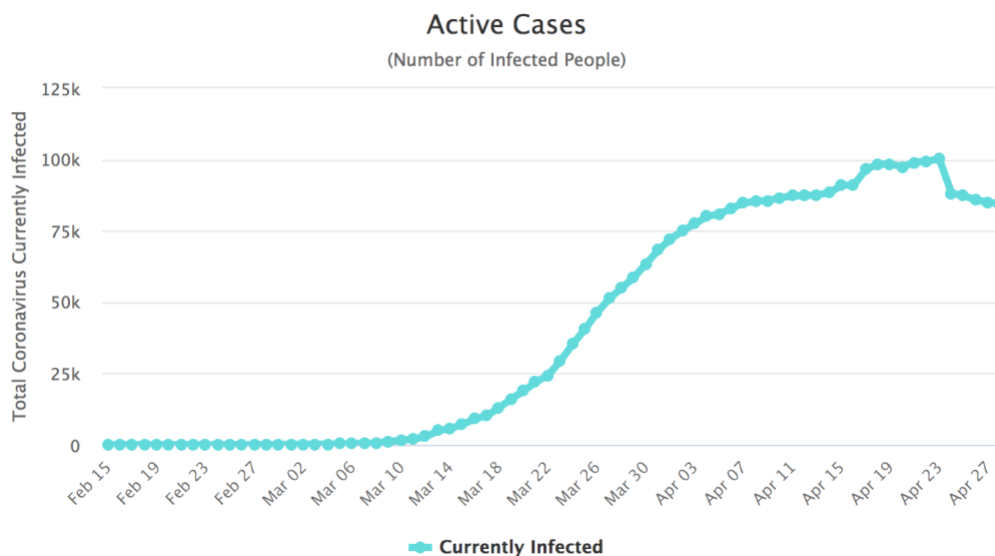
National outlook based on virus severity and economic indicators

Total Score: 0.35

SNS Virus Severity Index Score: 0.16

SNS Economic Severity Index Score: 0.54

Active Cases in Spain



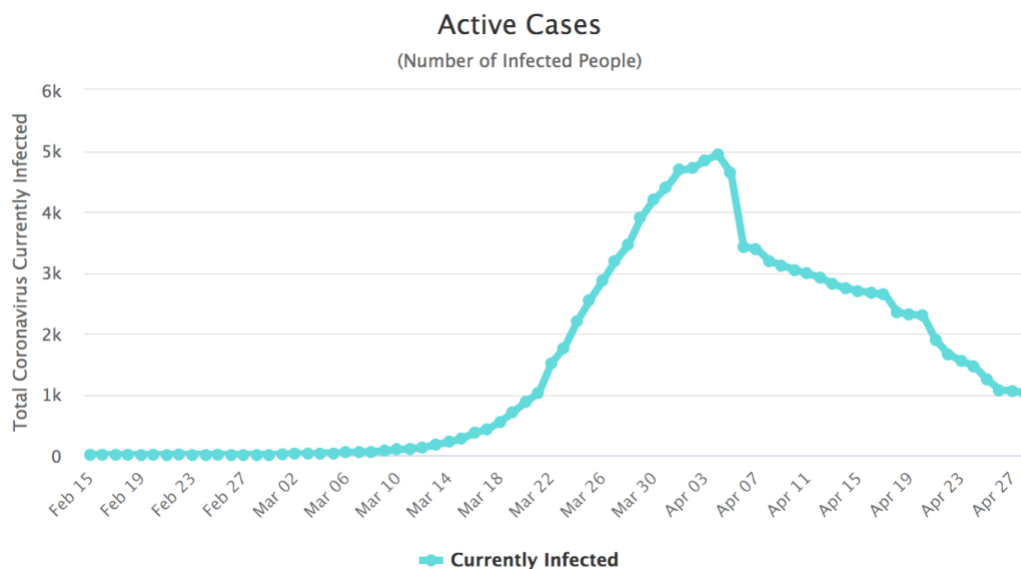
SNS Virus Severity Tracker: Australia

National outlook based on virus severity and economic indicators

Total Score: 0.08

SNS Virus Severity Index Score: 0.01

SNS Economic Severity Index Score: 0.14



OCTOBER 6-9 | LA JOLLA, CA

FUTURE IN REVIEW 2020

Three days of deep insight and intelligence about the future of technology and the global economy.

Form deep connections with the CEOs, business executives, and science-fiction authors who will become your business partners, investors, clients, and lifelong friends.

OUR PARTNERS

Global Platinum and FiReFilms Partner



2019 Global Silver Partners



Silver Academic Partner



Global Bronze Partner



Focus Channel Partners



Exhibitor



FiRe Academic Partner



FiRe Event Sponsor



And Honored FiReStarter 2019 Companies



Copyright © 2020 Strategic News Service LLC

"The Viral Economy," "Strategic News Service," "SNS," "Future in Review," "FiRe," "INVNT/IP," and "SNS Project Inkwell" are all registered service marks of Strategic News Service LLC.

ISSN 1093-8494