



## COVID-19 (Coronavirus): Current and Future Implications

April 2020 – Q1 Explorations

First, we hope all are well and safe.

“Because India is shut down, we have a new operator...”, the greeting pronounced on an institutional level conference call we recently participated in sums it up pretty well. The obvious implication is that India is now on lock down due to the spread of COVID-19 (a.k.a. Coronavirus), a virus that is highly contagious, has an unknown but significant death rate, and is rampaging globally.

The next level implication speaks to how global the world really is (beyond the quick travel of the virus) when we are looping calls from the US to India and back simply to have a cheaper operator and how this virus may speed up a trend towards more regional and even local commerce. In our [most recent Explorations](#), we had discussed increasing automation which will negatively affect globalization and the decline in global trade in the [Explorations prior to that](#). The third implication is that this virus will most likely have a longer-term effect on the way we generally conduct business as the disruption creates new business processes that people hold on to well after the disruption ends.

New diseases ravaging humanity has unfortunately been with us for millennia. In fact, disease jumping from animals to humans (“Chicken” Pox, Smallpox, Measles, AIDS, etc.) has had devastating effects, especially on those populations who had not had time to build up immunity (e.g., Native Americans). Europeans lived a lot closer to their domesticated animals than Native Indians due to density and perhaps simply hygiene practices. As a result, there were more animal-borne diseases effecting Europeans to the detriment of the Native Americans, that they eventually came in contact with - I learnt this interesting fact from a book I read as this virus was unfolding in China: “The Lost City of the Monkey God”, where the author, Douglas Preston, was infected by Leishmaniasis - look it up and be prepared to be scared. The book is a pretty good read.

### HISTORY OF PANDEMICS



Chart via Visual Capitalists: <https://www.visualcapitalist.com/history-of-pandemics-deadliest/>





Historically, the only real response for humanity was to quarantine, a word that comes from Italian coastal cities where they made ships drop anchor for forty days prior to coming onshore to make certain travelers did not have the Bubonic Plaque. Evidently, they began with 30 days (Trentatine?) but that did not work too well.... Thankfully, over the last century we have made remarkable progress in the medical field allowing for high levels of confidence that we will have reasonably effective therapeutics toward the end of this year (hopefully sooner) and a vaccine sometime next year. Before getting too far ahead and discussing some of the longer-term themes we see playing out, it may be helpful to review where we are now, how we see the arch of the virus and how that may affect the economy and markets.

Besides actively participating in calls with the managers we follow along with other institutional managers to get insights into the markets and associated strategies, we have been listening to a number of calls focused on COVID and actively following a number of websites dedicated to data on the virus. Social distancing and quarantine have been effective historically and is really the first step in what will be a relatively long recovery for society getting comfortable enough to resume life in some sort of similar fashion to how we were living merely 2 months prior. Below is a chart courtesy of [www.worldometers.info](http://www.worldometers.info) of new cases in Italy (for a list of sites we actively follow check out the endnote).<sup>1</sup> We have highlighted where a nationwide quarantine began. Note how approximately 12 days after the quarantine the numbers apex and then begin to decline.<sup>2</sup>

Now thankfully, as a society, we have a lot more tools at our disposal. The next important element is testing. We are currently only testing for the presence of the disease but will eventually (hopefully this summer) have the capability to test for the antibody which is important to understand levels of immunity within society.<sup>3</sup>

America was tragically late in getting disease tests going. In early March we were testing less than 1,000 people daily... in a country of 350 million people. We were flying blind. Thankfully, via

several steps we have mostly fixed that issue and are now testing in excess of 100,000 people daily (see chart on next page). Dr. Scott Gottlieb, former FDA Commissioner, whom we have been following regularly, believes that we need to test 750,000 people weekly for the foreseeable future to best understand and track the virus (My gut is we need even more and will achieve that level soon).

## Daily New Cases in Italy

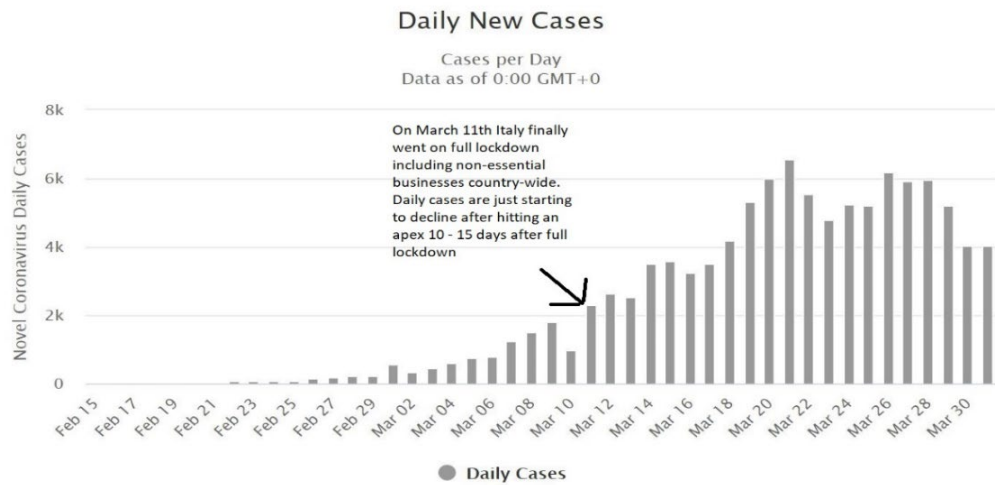


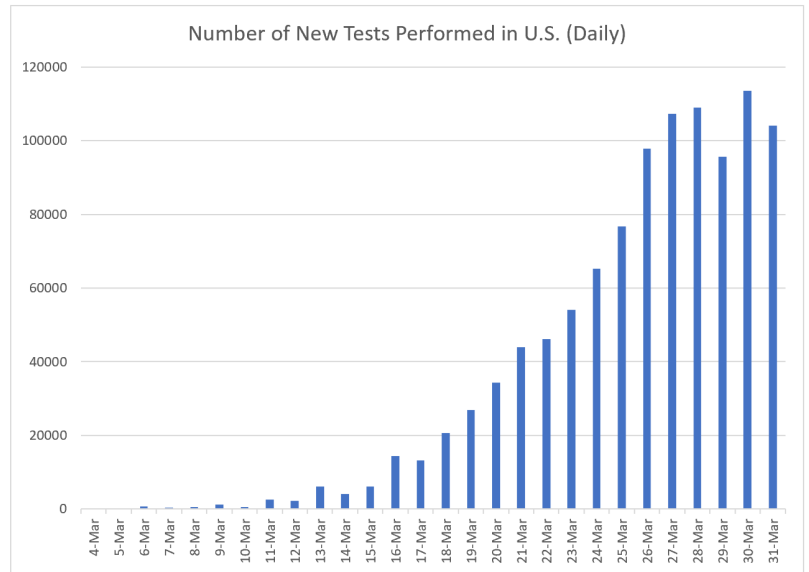
Chart via WorldOMeter: <https://www.worldometers.info/coronavirus/country/italy/>





Unfortunately for America, we were not able to contain the virus at all, so the next element encompassing tracking down contacts and tamping down hotspots, could not feasibly be done at this point. This is where some autocratic countries perhaps have an advantage in the ability to infringe on people's rights and track them. A group in the UK is working on an App that will allow some level of voluntary buy-in from citizens. It sounds like a good idea as I know I would want to inform others and be informed if there was a possibility that I infected or was infected - doing my part.

So how do we go back to life as it was, or at least close to it?



Data Sourced from <https://covidtracking.com/us-daily/>

The best road map we have seen is via Dr. Gottlieb.<sup>4</sup> According to his group, once we can have effective testing and the ability to monitor cases, we can reopen for most people though with caveats. The old and infirm must remain in quarantine, as a society we need to take enhanced cleaning and hygiene measures, and we will still need to limit large groups of people (e.g., no major sports, no parties). I personally do not see myself participating in Phase II based on his definition, as I am lucky enough to be able to work from home and can contain myself from having in-person social interaction (our firm has been having pretty solid social hours via Zoom). So, it would be surprising if Phase II resulted in a material part of the economy fully coming back due to the white-collar worker simply staying home. There is evidence of that in China, where supposedly the workforce is back but the consumer is not. In any event, Phase II can hopefully occur sometime in May.

Phase III occurs once there is either effective therapeutic options or a vaccine. That is when we will truly be back to normal. It feels like there is a chance Phase III can occur by the fall via the therapeutic option. Vaccines seem like a 2021 event at best. It also seems like we may be in luck for the summer as most experts believe that COVID, like the common cold, will primarily be suppressed in the warmer months.<sup>5</sup>

Based on the above prognosis, we will probably need more than 8 weeks of assistance from the government for a vast swath of America. Which means more government bailouts. While this recession may be brief, assuming a full stop through April and potentially all of May and then a slow recovery through the summer, it will be harsh. It is worth noting that most pundits believe it will be brief but there is a lot still to digest regarding the virus and its effects on society and the economy. We had mentioned in a recent piece that most of a company's valuation is based on future value, terminal value (see graphic on next page). It will be interesting to see how the market struggles to price business value over the next couple of months. We know it will be volatile.



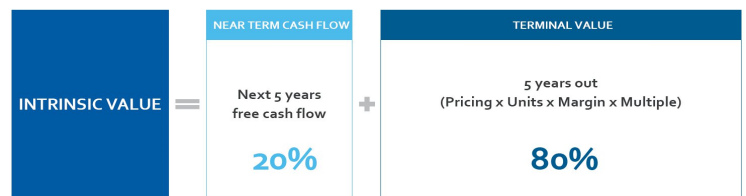
The other day, someone I was speaking with commented that his sister was finishing doctorate school via telemedicine - remotely. There has already been a push for telemedicine. Why come into a doctor's office if someone can adequately care for you remotely? Home tests and other medical innovations, supplemented perhaps by a local nurse, may be all that is needed to receive medical treatment anywhere, anytime. It would certainly be nice right now with COVID to simply have those who feel like they are infected to take a home test and then speak to a doctor via Zoom in regards the right protocol, with the medicine delivered via drone to their front door (after being ordered via Siri on their iPhone).

Another friend was lamenting that their wife's company (a national bank) refused to let her work from home one day a week prior to COVID, a strong desire she had given her long commute, responsibilities with family and, most importantly, the belief that she could be just as effective (if not more so) in a home office. They said it was impossible. Well guess what - it is possible! She has been working from home for the last month and her business line is thriving (she prices and distributes Structured Notes). My gut is that she will get at least one day a week at home once this passes. Matt Mullenweg, the Founder and CEO of Automattic, the company behind WordPress (which most websites use as their backbone) employs 1,172 employees around the world - all at home. Automattic never had or plan to have an office.<sup>6</sup>

COVID will speed up the trends we have been discussing. Regionalization and localization of businesses will most likely occur quicker to the detriment of emerging economies, as the risk of economies and countries being shut down or going offline becomes more apparent. A prime example is provided in a Wall Street Journal article from April 1st titled "Why the Richest Country on Earth Can't Get You a Face Mask", which points out that 85% of current global mask production capacity is in China and that parts for ventilators are sourced from all over the world - in fact recently, a temporary export restriction by Romania briefly prevented a significant part necessary for manufacturing to get to the states. AI and associated technologies will most likely speed up as well as people get used to working remotely - and may even prefer it. These trends were going to occur anyway and now there will simply be more demand for it resulting in them speeding up.

Like after 9/11, America's might will turn to tackling the issue of epidemics. As a country, we were actually ranked most capable of reacting to an epidemic. I think we took a few too many missteps, which occurs (note 9/11). Akin to airport & airplane security post 9/11, we will now step up our capabilities dramatically to tackle future epidemics. Also similar to 9/11 we will most likely have scares that simply pass - but as a nation this will spook us for a time to come. We will learn how many parasites and diseases actually live with us in this world. I am scared to know the number.

## Intrinsic value is largely driven by the terminal value



Note: Near Term Cash Flow equals to next 5 years free cash flow generation all discounted back to today plus net cash balance minus off balance sheet liabilities, adjusted for dilution & fundamental optionality. Terminal value is also discounted to present.

INTERNATIONAL OPPORTUNITY AND INTERNATIONAL ADVANTAGE

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Chart from Morgan Stanley Investment Management (MSIM)



Going back to one of the first Explorations we wrote, America remains by far the most powerful country in the world. It is not even close. We are blessed with the best geographical layout and location, the most resources, the most and best deep-water ports and with that we developed the largest economy, the largest navy, the most powerful army, the wealthiest country - by far. With all the bickering we may do internally and the issues we may have on a number of fronts, we are still situated better than pretty much everyone else in the world as a nation. This is fact now - fact that hopefully does not change. We are also lucky in the age we live in where we can use immense technology resources to isolate and understand the virus almost immediately and react relatively quickly.

On a slightly separate but related note, evidently we can also do a ton from home, something not feasible a mere two decades ago - I am fully connected, can entertain via endless TV and my kids are in school all day via technology, in their room - a whole new definition for "Home" schooling. Thankfully, quarantine is not our only resource. Couple those two together and we will beat it. We may have to be patient and it may hurt our economy in the short term but us social creatures will be back.

Given this belief, we do expect the next few months to be a good **longer-term** buying opportunity.

Be healthy. Be safe.

## Biases in favor of the US Remains and Short Duration in Review

Our general approach to investing on your behalf is to take a top-down approach in creating diversification of risks and returns in one's portfolio. Let's unpack that. A top-down approach means we start by viewing the high-level investing opportunities. Equities vs. Fixed Income exposure first. Then within equities, US, Developed Markets (e.g., Europe & Japan), and Emerging Markets (e.g., less- developed markets like China & India) and so forth. We continue on this path to actual strategy and manager selection. Diversification of risks and returns means we invest in multiple exposures on your behalf in order to increase the likelihood we'll have varied return streams as well as risk streams. Since we do not know with certainty (nor does anyone else to our knowledge) what investment will do best, we attempt to smooth out the experience. We do have biases though.

We have maintained a US bias for the last couple of years. Each of the Exploration pieces we have published this past year illustrated the positive attributes and strong positioning of the US relative to the rest of the world. This past quarter we had begun reviewing our exposure as strong and persistent US market performance, illustrated in the first chart below, has resulted in quite a premium. Given what is occurring now around the globe, we believe the US remains best positioned given a belief of sped up secular trends pointing to regionalization and our generally strong consumer base. We are



Chart date range: 4/2/2010 – 4/2/2020





currently not analyzing a potential shift in exposure but will resume once the world normalizes to some extent.

On top of structural difficulties within the fixed income space, spread levels, meaning the premium paid for more risky assets as compared to US treasury, have become much more expensive. Rather than focusing on duration we are actively searching for potential good longer-term risk/reward opportunities given disruption in fixed income. Our goal is to swap some of our lower risk allocations to slightly higher risk where we believe there is justification to do so given the risk/reward equation.

Finally, we had recently shifted primarily all of our international exposure from passive management to active management. Passive management is an efficient method in gaining exposure to a general asset or market. We had used passive ETFs that have low management costs to provide general exposure to international markets as correlation between company performance was generally high – meaning that most stocks were simply moving up in union. We believe that with the disruption due COVID there will be more opportunity for selective positioning. After an exhaustive search we have selected two managers that we believe will serve you well.

### **Concerns: *Black Swan Event!* – COVID**

COVID is a great example of a black swan event. It is an event which in retrospect looks a bit more obvious than as it played out. Furthermore, recent potential epidemics (e.g., SARS, Ebola, etc) minimally affected the US resulting in potential complacency among citizens and government. Asian countries generally did better with containment of COVID which may be due to experiences with SARS and other viruses that affected them more than us in the last couple of decades. Finally, it felt like China had control of it until they did not, allowing the virus to leak out and affect the rest of the world.

This does not preclude us from focusing on longer term concerns. In our last few Exploration we highlighted the addition of global strife between citizens and their governments as a growing concern. The AI Exploration as well as our Demographics Exploration point to the potential of global strife increasing as jobs go through further transformations, the world becomes older, and trade becomes more regional. COVID will make even more obvious the haves and have nots in society as blue collar and service workers will be hurt materially worse than white collar in this recession (though that is generally the case). In the US in particular, health-care coverage will be another source of strife.

In fact, all of our general concerns are escalating due to COVID. An isolationist view is in vogue currently as we treat all people entering our country as potential sources of virus. Furthermore, countries are or will begin hoarding medical supplies. This will continue what has seemed like an increasingly worrisome geopolitical climate.

Furthermore, The US is most likely just beginning to materially expand borrow with their \$2.2 trillion bail-out put in place towards the end of March. How will this affect the US ability to borrow in the future? How about the necessity to tax its citizens and corporations? Or provide social services and pensions (e.g., social security)?

We expected increased short-term volatility and risk but did not receive it due to our reasoning – rather due to a black swan event. We still view the election as a significant risk.





**Geopolitical climate:** COVID will most likely continue the negative geopolitical climate as countries scramble to close borders and hoard medical supplies in a bid to keep citizens safe and get economies back on track – to the detriment of global cooperation.

**Artificial market support by governments:** \$2.2 trillion and counting of added spend in 2020. Is it possible that the government is purchasing negative yielding bonds from the government? Yes, it is. We are not sure of the implications or how this potentially even ends (negatively or not) if it does but we are actively analyzing this risk.

**Shorter-term volatility and risks:** We expect volatility and headline risks to be heightened relative to the last couple of years.

To be clear, there are and always will be concerns in the market and in the world. We explore them to obviously give us the best chance to navigate them effectively. It is worth noting though that the reason we diversify both risks and returns is that the future is simply unknown.

### **General Market Review: *All Eyes on COVID***

After reaching all-time highs in February, equity markets set a record in how quickly it fell into a bear market as the realities of what the nation and the economy faced with the virus on our shores took hold.

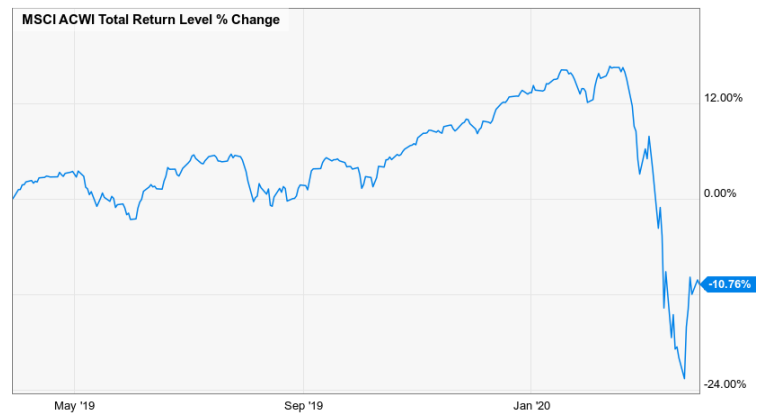
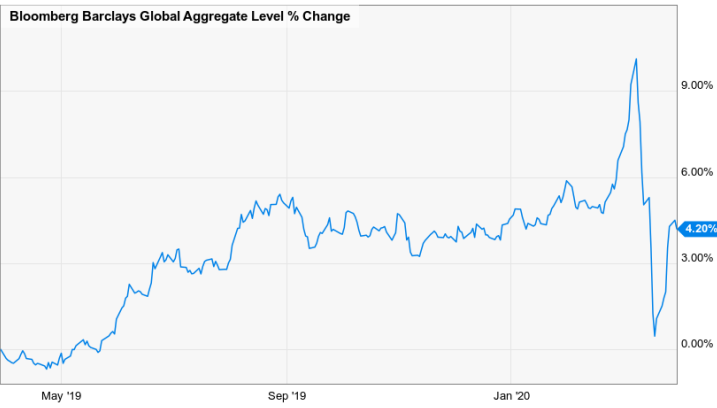
There were a number of structural realities and issues that created increased volatility and anxiety within the marketplace:

- While program trading and algorithms have always been a part of trade activity, computing power and lower friction costs have increased their presence materially. This results in more trading and increased volatility when markets become stressed. To get a small sense of how intricate some of the activities are I would recommend “Flash Boys” by Michael Lewis.
- Over the last twenty years increased regulation for banks and reduced requirements for market makers have generally reduced liquidity as well as buyers of last resort.
- Given the speed of the drop, highly margined accounts and collateralized debt defaulted resulting in forced selling further adding to drops on big days

These points conspired to create a real structural issue especially within the short-term credit markets which is a very large over the counter market. There simply were no buyers as the traditional dealers (major banks) were limited in their ability to profitably add balance sheet. The Fed finally stepped in with a number of programs to support the markets which is at least part of the shorter-term positive retracement within the Barclays Global Aggregate index (left chart on next page) which provides an indication of how fixed income performed.



# FOUNTAINHEAD INSIGHTS



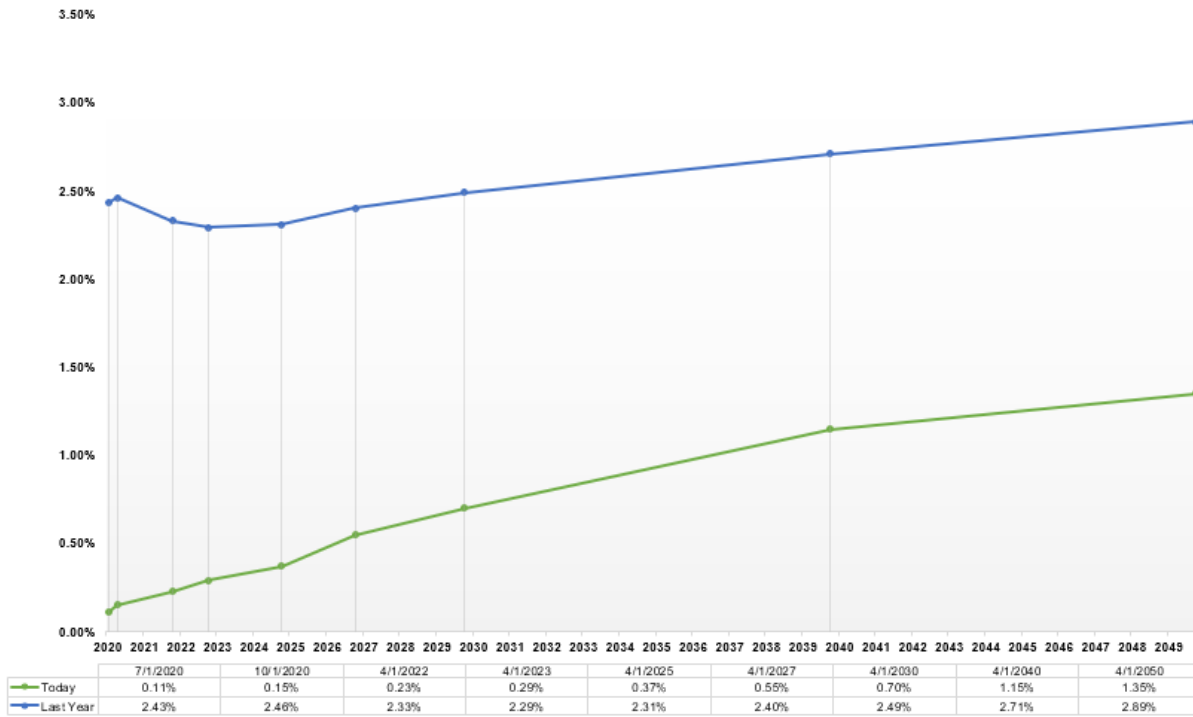
As can be seen from the above right chart, the MSCI ACWI Total Return index which represents exposure to global equities, dropped approximately 35% from highs reached in February and closed the quarter down roughly 23%, one of the worst quarters in history.

In addition to the government providing material support through their \$2.2 trillion stimulus program, the chart below shows Fed action in aggressively dropping Fed rates to 0%. The longer part of the curve dropped dramatically as market participants looked to risk-off trades.

Report Created on 04/01/2020

**YCHARTS**

Yield Curve



As always, we continue to monitor markets closely and look for opportunity on your behalf.





<sup>1</sup> Here is a list of websites that we have been actively looking at on a daily basis. We cannot stress enough how important it is to be looking at quality sources to stay informed. There is a ton of material out there right now and a lot of it is either opinion based or just flat out inaccurate.

- The COVID Tracking Project [https://covidtracking.com/data/?mod=article\\_inline#NJ](https://covidtracking.com/data/?mod=article_inline#NJ)
- John Hopkins Coronavirus Resource Center <https://coronavirus.jhu.edu/map.html>
- WorldOMeter Real Time Statistics Website <https://www.worldometers.info/coronavirus/>
- Deep Knowledge Group <https://www.dkv.global/covid>
- CDC Website <https://www.cdc.gov/coronavirus/2019-ncov/index.html>
- World Health Organization (WHO) Website [https://www.who.int/health-topics/coronavirus#tab=tab\\_1](https://www.who.int/health-topics/coronavirus#tab=tab_1)

<sup>2</sup> Unfortunately, everyone probably needs more testing, less false test results to get a real idea but current testing should at least give us an idea of the trend of cases at the least.

<sup>3</sup> I know for a fact that Mount Sinai, which is a couple of blocks away from my house, can test plasma for the antibody as they are requesting those who had COVID to come in and test for high antibody levels in order to get plasma from those patients and give to the real sick - plasma therapy.

<sup>4</sup> If you would like to read the piece from Dr. Gottlieb here is the link: <https://www.aei.org/research-products/report/national-coronavirus-response-a-road-map-to-reopening/>

<sup>5</sup> Here is an article detailing some of the potential treatments/vaccines that are being considered: <https://www.genengnews.com/virology/coronavirus/catching-up-to-coronavirus-top-60-treatments-in-development/>

<sup>6</sup> Here is a link to Sam Harris podcast with Matt Mullenweg, the Founding Developer of WordPress.com, discussing some tips on running a business from home: <https://samharris.org/podcasts/194-new-future-work/>

## **IMPORTANT DISCLOSURE**

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