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The 2019-nCoV is officially called SARS-CoV-2, and the disease is named COVID-19. This is the third severe Coronavirus outbreak in less than 20 years, following SARS in 2002-2003 and MERS in 2012. I started reading about the latest virus about a month ago, and I emphasize that I am not a virologist.

There are no rational decisions in qualitative decision-making processes like stock trading. The current state of your mind always influences the decision. With this kind of emotional state, we cannot even make a decision. Before you can even think, your subconscious already does a preselection of what you think. So, what you finally analyze is already a filtered form of reality. This seems fundamental to many psychologists; however, I was astonished by how highly intellectual people behaved over the last month.

Overconfidence

By mid-February, you could already read about the virus. After several companies gave warnings about their business in China, I began doing more research about the illness and its potential impact. I read some articles and comments, and in some discussions, I noticed that many people started forming their opinions without basic knowledge or focusing on the wrong variables. Most people concentrate on the most spectacular effect that being the mortality rate and compared it to other SARS coronaviruses or even common influenzas.

Economically, the most important number is the R0 (reproduction number), especially during the incubation time. This number creates uncertainty and fear in our societies. Even if we live in a connected, uncertain world, our economies depend on the behavior of every individual, which works best under at least some kind of certainty.

A second underestimated fact, in the beginning, was the high necessity of intensive medical care, apparently much higher than for the "common flu." People, including President Trump, mistook the potential effects of the virus with the current results and, more importantly, that we can shape the future reality with our dynamic behavior. In other words, many people misunderstood the situation, mostly because busy they didn't have the time to do some research and were misinformed by public and private institutions.

We conclude that many people and even many financial analysts had the illusion of understanding a problem that they did not.

So, what exactly changed their minds?

Availability bias

Financial markets in the western world started to react after the first case in Italy. Why Italy? Why not after the Apple earnings warnings or after the first cases in South Korea? Yes, there is always the probability that a virus does not spread, as was the case for the 2003 COVID. However, that virus also had a very different R0, which was known at that time.



In my home country, Luxembourg, I noticed that even highly educated people did not start to consider the problematic at this stage. Handshakes were still common. It only happened after the first cases were reported locally. Of course, the probability was very high that, especially for an international hub like Luxembourg, the virus would have already spread. All these events were forecastable, but people only reacted once they become apparent when they were in the local news. They overrated local, easily accessible information.

After this second step of overrating current local news, opinions drastically changed in the other direction. Many people started to be anxious or even panic.

Base rate Neglect

People now focus first on the exponential growth and second on the extremely high mortality rate and catastrophic organization in Italy. Finally, they are negatively affected by the limitations imposed by most governments.

The overconfidence turned into catastrophic thinking, especially around the mortality rate. Logically, the more people you measure, the less deadly the virus will be. This is true given that not all people get the virus even if exposed to it, that there are many asymptomatic and many more persons with only mild or severe effects. South Korea has done over 250,000 tests and has a mortality rate of around 0.7%. This will vary from one country to another because it also depends on age, health system, outside temperature, humidity, and many more variables. Therefore, the samples are not large enough to make any decision on this.

The exponential growth is also a fear. First, the exponential growth curve will, at one moment, turn into a logistic curve given the limited number of available cases, even without any adaption of human behavior.

The SARS COV 2 virus is dynamic in its effect. It can mutate into something more dangerous, but a higher probably into something less risky. However, it is stable in its behavior, at least to my knowledge. I hope this is no illusion of experience. This means human behavior can more adapt to avoid a fast-spreading. If I understand well from what I have read over the last two months, the virus will also not be transmittable through the water in the future (unlike many others) or be able to be transmitted over a distance more than 2 meters outside. This is not only a theory but has been proven in practice in China, South Korea, Hong Kong, and Taiwan for some examples. This variable makes this virus already much more comfortable to cope with than other natural and human catastrophes like wars. Indeed, humans are dynamic in their behavior, and it is more difficult to forecast than the behavior of a virus. Financial Market participants understand this. Keynes probably described it best in his beauty contest example.

In extreme circumstances, if we stop all movement, the virus will be terminated like it was in China. However, the question is what variables were necessary or was there even one sufficient variable to reduce it effectively. No one really knows this. For how long is this possible? What are the social and economic costs? We need to understand that the measures taken by the government will work, but did they come too late?

I somehow understand the delayed reaction of our politicians. The risk of forecasting the worst epidemic crisis over the last 100 years is that the moment you declare it, the probability of it happening decreases. In the end, you might lose voters because you harmed a lot of businesses and



the economy overall. Remember, in 1918, people were weak, and returning soldiers spread the virus around the world with much less knowledge than today.

However, what I do not understand is the reaction from the European Union. As a supporter, I can even say that I am deceived. Even if the European Union does not have sufficient power in these domains, the non-coordination between countries was just a disaster. I believe every stock trader has a better disaster plan. Indeed, health care professionals knew about the virus since mid-December. They could have taken decisions that present a high return for low risks, like preparing medical supplies and equipment.

Viruses are not asteroid events or significant earthquakes. They happen all the time, and the last considerable pandemic was only 100 years ago. Many of us grew up reading the book "La Peste" by Camus. We are scanning for asteroids, which is good, but the last major one happened before humanity. Atom reactors against earthquakes were built here next to my home country and cost millions of euros, but we are overwhelmed if a well-known type of virus spreads.

Furthermore, I believe that the European Union could have played a restrictive role so that national politicians were less afraid or at risk of losing voters after these drastic measures. Of course, the effect of this change in behavior takes time because we measure and see the past based on the incubation period. Reducing transmitting variables reduces the probability of transmitting. Given that most people are cured, the actual number of corona infected people will decrease soon. However, we might only "notice" it later again because we did not do any tests at the beginning.

I must admit that the fact that there are triage procedures taking place in northern Italy (middle of Europe) in 2020 makes me feel not only sad but angry. Europe has led the world since the middle ages and is the creator of all the rules to protect society, which is deeply engraved in our constitution. However, I think that we are only able to respond successfully to this kind of crisis by abolishing some of these rules, which happens in the case of a State of Emergency.

To cut a long story short, the measures taken will help flatten the curve and help many healthcare systems give all patients adequate treatment. The problem is now around the second step. How will we get out of this quarantine and when? Governments need to be perfectly organized in order to find the clusters fast and combat them effectively in a second step. South Korea is currently adapting that politics.

To conclude, my fear decreased a lot when I saw pictures of empty planes and people buying pasta and toilet paper for the next month. My concern was, and still a little is, that European governments do not have the same authority power as China, for example, and that panic only works for a certain amount of time.

Regarding financial markets

The virus was a necessary condition for this historic drop in equity markets. So were the historically high valued equity prices (PE), top indebted companies, non-profitable companies, and of course, the OPEC crises.

We could also observe that government interventions didn't have, at least until now, the desired effects on calming financial markets (the spike in the SPX after Mister Powell's 50 basis points rises before it drops is still a puzzle for me) and even cut to 0 as of today, March 16th.



I believe the calm comes back once the curves flatten in Western countries, maybe Italy being first. However, I do not think that markets will surge because there is a big question behind the second step. How do we release the quarantine measures? What will be the economic effects? How do we re-establish the trust between nations, especially if clusters are emerging from time to time? How do we quickly re-establish the free movement of people in the European Union to avoid strengthening anti-European sentiment?

There is always (and hopefully) the potential for positive news that there could be a vaccine, successful treatment, or quick minute disposal test (that takes the fear of this high R0 during incubation). Given that a few companies are highly represented in the SPX, I think it gives a false image of thinking in terms of the indexes. Many companies in Europe and even in the United States are at their multiyear low.

Bad news could be disorganization of governments managing the before mentioned step 2, or even others like the United States implementing a successful step 1. We might also see one or another fund that speculated on low volatility blow up or company going bankrupt. The highest risk lies in the high yield debt markets and other risky behaviors such as the buyback program for stocks, which was favored by a decade long chase for lower and lower yield. Some companies are not fit to survive other economic or interest environments.

Is the virus the external shock that might provoke major liquidity problems in the high yield sector? I don't believe so, even if spreads are currently increasing. However, I keep a close eye on the HYG. I think that just as innovation continues to improve the world, governments manage to improve their reaction in times of crisis. I don't think so in goldilocks, but I do believe that the real crisis will come in a devaluation of money in consumer goods. This will considerably limit the reactions of central banks. If companies change their supply chain, disruptions between nations will increase in the aftermath of this crisis. Therefore, I see a potential inflation risk for our western societies.

I am currently beta short; however, trying to take more and more advantage of the convexity of the option curve. I started this mid-last week, which was maybe too early. Indeed, the volatility smirk is very pronounced for specific stocks and even the general market. I also started buying strong underlying stocks last week and increasing certain short positions to keep my net long exposure under 20%.

I believe that companies like Carvana (CVNA) (read my last <u>article</u>), who depend on credit from the asset sale side (yes they sell the bundled credit of highly doubtful consumer loans) and on to finance not only their CAPEX but also their losses, are vulnerable in the case of a recession and or liquidity problems in the high yield.

Those kinds of companies have no real innovation and can only survive due to year or maybe even decade long trust of shareholders and debtholders. In the case of the crisis getting any worse, the default risk is very high. I also do not believe that those kinds of companies should get any governmental support (as airlines do, for example). The question is, what is the risk of protection?

These companies might surge in the case of market conditions. However, I believe that this surge is limited to an amount of time because many moment players got scared away, and it is possible to hedge a price increase by selling insurance for another stock or general market that might find its limit above 0. As previously written, I believe there will be some kind of uncertainty around the virus (except in case of any significant innovation).



I will also stay short in the car manufacturing sector, given that it is attacked from three sides, structurally (EV; sharing mobility; digitalization), cyclically and politically (China is the only growth market that wants to produce more end products). My favorite is 17-year loss-making company TESLA, a company that can only survive if monetary conditions stay suitable for a long time.

Two positive things to conclude with are that kids under ten years old seem, according to three studies from the Wuhan case, not only less likely to get the virus, but also have fewer symptoms. Secondly, just as we take advantage of mistakes from our past generation (NATO, European Union, Tsunami warning system), I hope that future generations benefit from a better organization in case of viruses spreading locally or globally.

Marc Daubenfeld