Understanding the Market
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UNDERSTANDING THE VIRUS DATA

As we recently noted, the virus is making its way around the world. We are not students of medicine, so we cannot say exactly what the prospects are for the spread of the virus over coming months, especially as the weather warms (there has been a suggestion that the virus does not spread as much when temperature is above 75F/25C). But we have spent decades studying and thinking about statistical data and there is a lot of confusion on that front. Before talking about the data, we acknowledge the seriousness of the virus, we hope all our readers are well (and washing hands regularly) and we are sorry for all who suffer as a result of the virus. Our single goal in this message is to understand the data better.

Everyday newspapers report the number of cases and deaths, and reporters make bold statements about how there are more cases in country X or deaths in country Y. Oddly, no reporter uses terms like "margin of error", indicating the imprecision of the data. The data are never revised (e.g., when deaths on the 22nd of the month are reported on the 23rd, the jump in the number is not explained). Here is a brief attempt to clear some things up.

First, no one knows how many people have coronavirus. All we know is how many people tested positive. Some fraction of those infected with coronavirus are asymptomatic and thus are unlikely to be tested. Without getting into the issues of how accurately the data are reported, the US has performed around 600,000 tests and 100,000 or so tested positive for the virus. We do not know how many of these tests were for the same person, and we do not know the rate of "false positive" results (how often a healthy person gives a positive test result). We also do not know the amount of "false negative" tests (people infected with the virus whose test reports that they are not infected).

Getting a test in the US (if you are not a celebrity or professional athlete) is not easy (yet); if you have mild symptoms but have not been to China or Italy or live with someone who has been infected, you are unlikely to be tested. It is an interesting fact that roughly 5 out of 6 tests yields a negative result.

We have read that there are efforts to develop a test for the antibodies to the virus (presuming that you can only get it once, which is apparently not a certainty). A widely available test that could state that someone had had the virus (whether asymptomatic or not) would allow that person to participate more freely in public (though they would still have to make an effort not to spread the disease from contact with infected people).

Similarly, the death data are hard to interpret in the current environment. In Italy there has been a debate about whether people die from the virus or with the virus; a large number of the early victims had multiple health issues that complicated their treatment. As the data improve, epidemiologists will be able to calculate an "excess death rate", which attempts to measure how many people died relative to an average year. The idea is that we all have a probability of dying in a given year, and if you take 100 people who are 85 years old who suffer from diabetes, you expect a certain number of them to die each year. If you want more precision, you can calculate how many years of life were lost, but there is nothing even close being calculated in the current environment.

As we have noted earlier, in a typical US flu season it is estimated that around 50,000 people die of the flu (the central estimate for the 2017-2018 season was 61,000 and the range was from around 45,000 to 95,000). Assuming that the flu season is around 6 months, that's around 10,000 dead per month or 2,500 per week. There have been around 2,000 deaths from coronavirus since the start of the year. If we are lucky (and keep social distance and washing our hands), coronavirus deaths will not keep doubling for much longer, but even so it would be useful to measure the number of deaths relative to a relevant indicator.

One quick economic data note (probably not necessary for our European readers whose data are presented differently) that some major newspapers seem to misunderstand. Some economists (notably Goldman Sachs) believe that second quarter GDP will decline at a 24% seasonally adjusted annual rate (SAAR). In European terms, this would be a roughly 6.5% quarterly decline; that is, GDP in June would be lower by 6.5% than it was in March. If the GDP declined by this percentage for four consecutive quarters, in one year the economy would be 24% smaller than it is today. But that same forecast indicated growth in the third quarter around 13% (again SAAR) so about half the second quarter's drop will return in Q3.

During a global pandemic there is a lot of shouting by various people who often advocate for the same proposals they thought were important before the pandemic; on the left, politicians have argued that the pandemic is the perfect time for increased worker rights and on the right there are undoubtedly some who think it is time for another tax cut. We are not immune to this phenomenon; we have always supported better data to better understand the state of the economy. We hope our call for better data in this instance will lead to more rational decisions by policymakers.

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