



CoronaCrash Roadmap V: It's All Over but the Shoutin'

There are two clear camps of thinking on how the Coronavirus plays out for markets (somewhat distressingly, these camps tend to cleave along political lines).

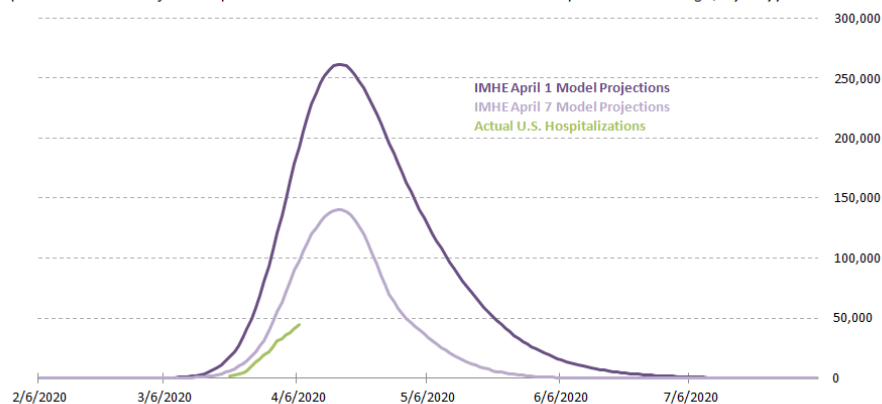
- The bull camp thinks the worst-case scenarios have been badly overblow, that the “cure is threatening to become worse than the disease,” and that things can soon transition towards a more balanced approach to virus control vs. economic survival.
- The bear camp foresees rolling “hot spots” throughout the U.S. and a rapid resurgence of viral transmission if there is any loosening of “social distancing” requirements, risking an overwhelmed health system and mass casualties.

Equity market price action is suggesting that the bull camp has the better of the argument right now. Let's have a look at why that is, and why I expect the trend to continue.

First of all, as is now clear, the “expert prediction models” wildly overshot the mark. More downward revisions are in store:

IMHE Coronavirus Model Wildly Overestimates Hospitalizations

(IMHE estimates of all hospital beds needed in the U.S. vs. actual hospitalization usage, by day)



Sources: IMHE Covid Model 2020_04_01.2, IMHE Covid Model 2020_04_05.08, The COVID Tracking Project (downloaded 4/7/2020)

The most significant error in these models has been an underestimation of the mitigatory effects of social distancing. Perhaps social distancing can achieve high efficacy without being pursued to the point of welding doors shut to keep people in their homes.

The objective should be to find the degree of social distancing that reduces the rate of case generation to levels at which the healthcare system can efficiently apply therapeutics, about which more will be learned day by day.



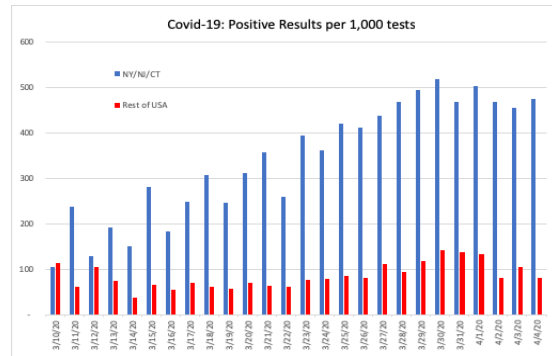
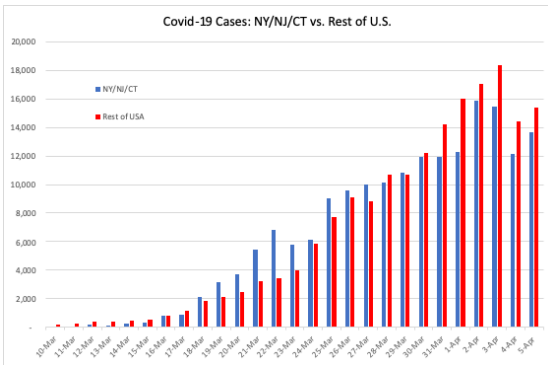
Another error the models have made is in using sketchy data from Wuhan and Northern Italy as for parameter inputs. As the IMHE model becomes less reliant on specious inputs from overseas and more so on the observed reality here in the U.S., its accuracy should increase.

In the meantime, there is a set of data out of New York State that is already establishing robust relationships that can be exploited to paint a clear picture of how this could play out.

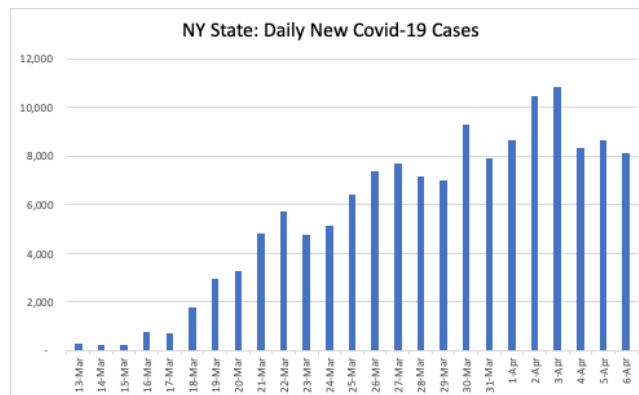
To say that New York is the epicenter of the crisis in the U.S. is an understatement. It is **orders of magnitude worse** than anywhere else.

The Tri-State Area (NY, NJ, CT) comprises 7% of the nation's population but has recorded nearly **half of all infections**. The infection rate in NY/NJ/CT, at 0.78% per capita, is **13 times** that of the rest of the U.S.

And this is not primarily the result of a discrepancy in testing. While NY,NJ/CT do have a per capita testing rate (1.9%) that is 3x higher than the rest of the country, this is primarily a function of having more sick people. **The positive test rate in NY/NJ/CT is over 4x higher** than the rest of the country.



Fortunately, the case rate in NY State has plateaued. (All charts run through 4/6, NY data sourced to NY Gov. Cuomo's daily press conferences.)



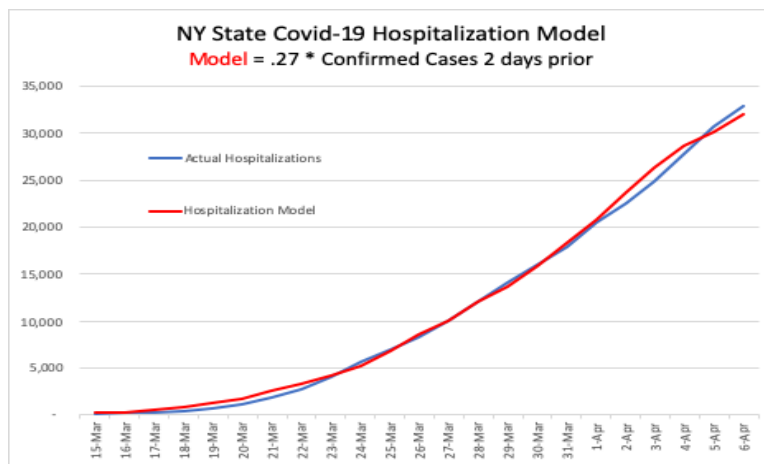


The time from infection to a positive test is around 14 days. New York City residents started to undertake changes in social behaviors in mid-March (a friend and I cancelled plans to attend a group event on March 12th, for example). The rate of “community spread” would have begun to decrease then. A subsequent round of at-home and in-hospital infections is likely working its way through the data now, resulting in the current plateau of recorded cases.

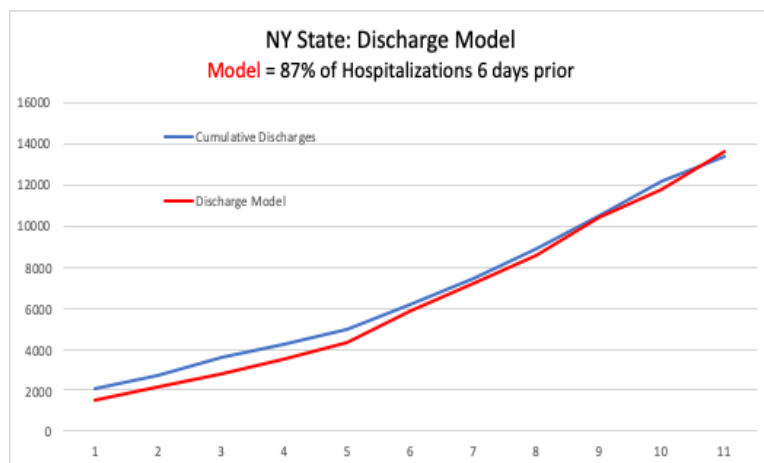
I anticipate that NY will be recording a marked deceleration in reported cases in the coming week.

However, continued deceleration is not necessary to put the situation into a manageable equilibrium. If the case rate plateaus, healthcare system utilization will enter a steady state.

- 27% of confirmed cases (with a 2-day lag) are checking into hospitals:

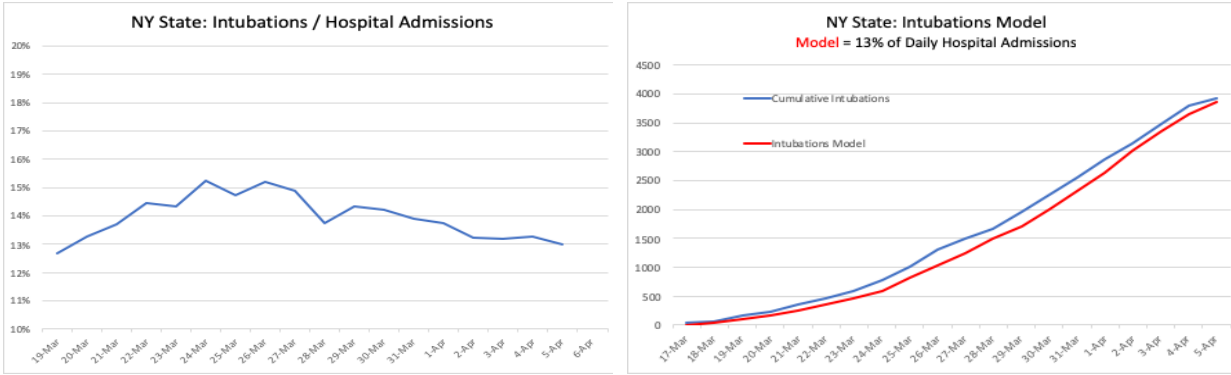


- 87% of those patients leave the hospital on average 6 days later:



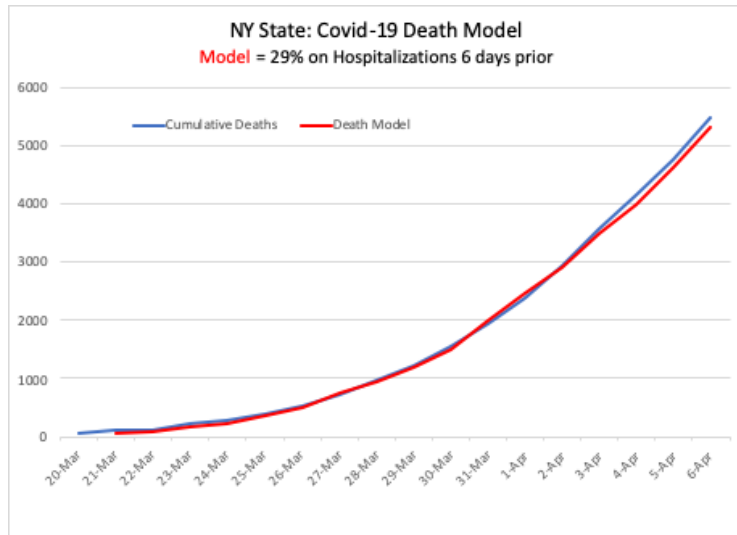


- 13% of hospitalized patients have ended up on a ventilator:



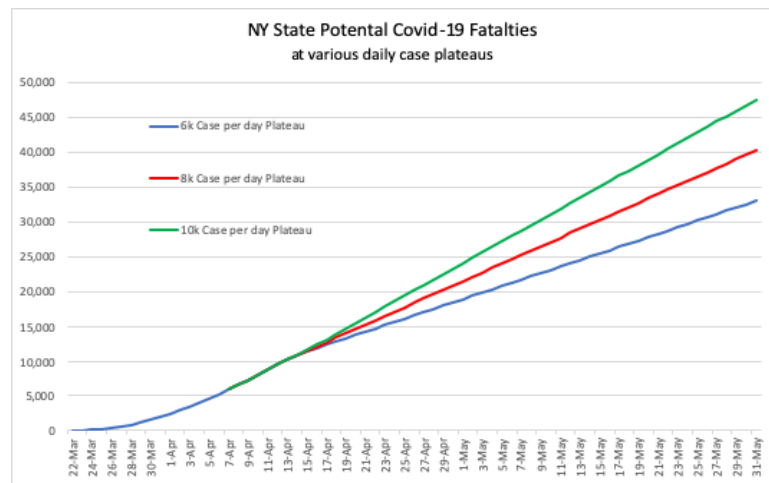
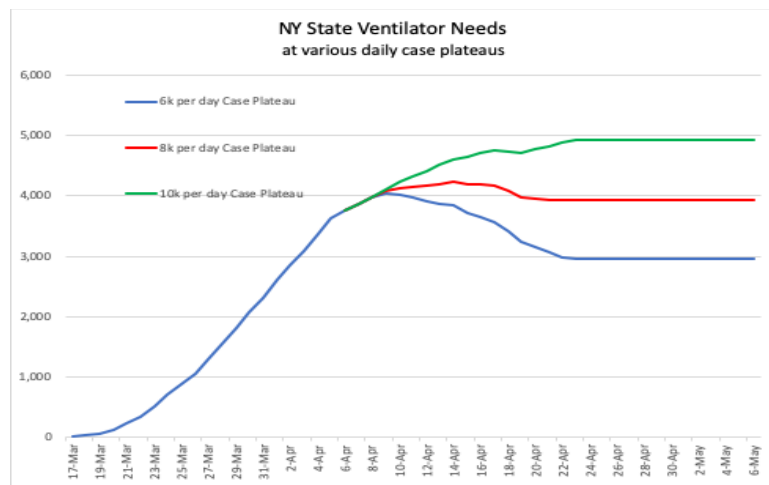
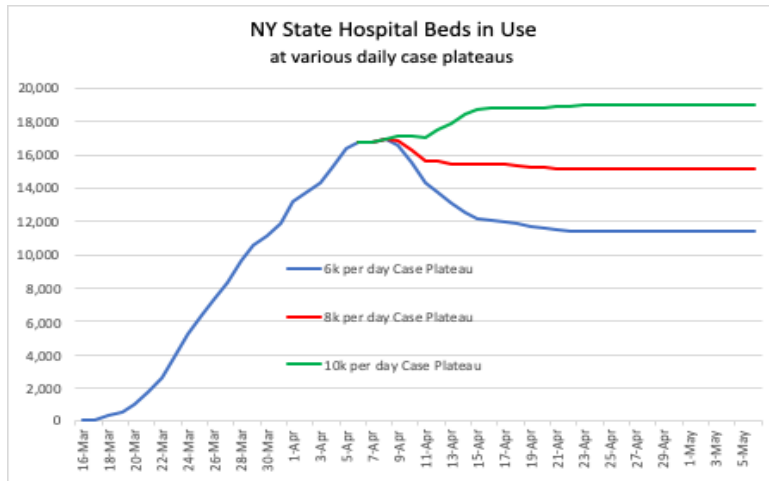
One anomaly in the NY, relative to what we saw in China, is that people seem to be dying much more quickly. i.e., many patients seem not to even make it to a ventilator (some may not even be making it to the hospital). I suspect the experience in Wuhan was in fact similar, albeit with far more deaths going unreported.

The NY death rate is currently a function of hospital admissions 6 days earlier (roughly 18 days from infection onset):



A 27% hospitalization rate with a 29% death rate of those hospitalized produces **a catastrophic case fatality rate of over 7.5%** on a terminal basis.

Here are the scenarios for healthcare capacity utilization and mortality should statewide case rate stabilize at 6,000, 8,000 or 10,000 new cases per day:





What becomes clear is that worst-case scenarios of an over-run healthcare system have assumed a continued acceleration in the rate of new case formation. Furthermore, while the NY City system is seemingly stretched to the limit, there remains ample capacity outside NY City and capacity at temporary Federal installations (the Javits Center and the US Navy ship Comfort) remains largely untapped.

Of course, while healthcare capacity issues are manageable with a case plateau at current levels, the death toll will continue to rise. 35-45k deaths in NY State by end-May would likely push the national death count towards 100k. But this is not inevitable. With improved therapeutics, and continued social distancing by the elderly and medically vulnerable, the fatality rate should decline.

If the vulnerable can continue to protect themselves, so that infections are concentrated more heavily among the young and healthy, a higher infection rate would be sustainable from both the perspective of healthcare capacity and minimizing mortality.

Dissecting the Bear Case

My anecdotal observation is that a wide swath of the market remains pessimistic and underweight risk assets. Here are some tenets of the bear case:

- The U.S. sucks at social distancing

I can only attest to the environment here in the Connecticut suburbs of NYC that yeah, we're not hyper-vigilant about it. Most stores are open, and people are out and about at a rate I'd guesstimate is 35% of normal.

However, the data are bearing out an important point: social distancing need not be an all or nothing proposition. While the policy in the U.S. has not been rigorously adhered to, it's clear from the case rate plateau across the country that it's had a substantial effect on transmissions – in fact (as noted above) more so than the experts would have predicted.

As cases decelerate, social distancing can be progressively dialed back for the young and healthy to a degree that we find consistent with an acceptable steady-state case flow.

- As soon as people go back to work, infections will explode again

This is actually an argument for never lifting strictures on social interaction. By month's end I anticipate the political consensus will have fully shifted to an approach of "back to work with common sense social distancing" – no unnecessary business travel, telecommuting where



possible, restrictions on large gatherings – all of which will be facilitated by improvements in testing efficacy and capacity.

- There will be rolling hot spots like New York across the U.S.

I see no reason to expect this. Cases ex-NY/NJ/CT are plateauing and rolling over. Some localities may lag by a few days given the rolling start to stay-at-home measures. But it's **much easier to quash the virus from a low base** of infections, as was the case for nearly all of the U.S. ex-NY. Note that the original U.S. hotspot – Washington State – probably peaked out 4-5 days ago and still has a case total of less than 9,000 (and a positive test rate of less than 10%). The State has totaled 372 deaths.

- The economy is in depression

The situation is more akin to a deep freeze than a depression. The policy response has been surprisingly robust ([How I Learned to Stop Worrying and Love the Debt Bomb](#), 3/27/20), and given the likelihood of a timely exit from economic shutdown, the scope for a **v-like recovery remains intact**.

- There is no way we'll get back to normal any time soon

There is of course some truth to this. The Covid-vulnerable and Covid-concerned are unlikely to resume normal activities for quite some time. The V-recovery will look more like a left-handed checkmark.

But this problem can be overblown by static thinking. If the world a month from now looks like it does today, then yes, the return to normalcy will be halting. But **the world is very likely to look a lot less frightening** a month from now. Cases will have decelerated markedly in hotspots, and largely disappeared in many localities. If signs emerge that the virus is, in fact, seasonal – as seems likely – **the outlook a month from now could approximate normalcy** to a far greater degree than the consensus currently foresees.

- A vaccine is more than a year away

Likely true, but of limited market relevance. Assuming the virus is seasonal, we'll worry about next fall next fall. Healthcare capacity and preparedness will be greatly expanded by then, and a lot will have been learned about therapeutics.

- This event will generate permanent political and societal changes

There are clearly political forces intent on using recent events to secure an expansion of



government and centralization of power. I expect them to fail. In fact, such efforts could boomerang, if events significantly undershoot the worst-case scenarios.

It's All Over But the Shoutin'

Sadly, some degree of human tragedy still lies ahead. But from a markets perspective, I am firmly of the view that the worst is behind us. **The lows are in**, and I'm targeting a move to S&P 3000 area before we start fretting about the lackluster policy response in Europe and the fact that China is well and truly falling apart.



There is one huge risk to this view: I'm banking on seasonality of the virus. (What rationale other than climate could there be for the controlled situations in India and Africa?)

Given the rapidity of the rally, selling VIX may be attractive alternative to chasing risk assets. (Caution: not for the faint of heart). I'm short May VIX futures targeting levels near 30 (subject to change without notice).

