

March 29, 2020

Figures are rounded to save time.

A quick shout out to my wife Cherry. She's a registered nurse and is volunteering to work in the covid clinic in her hospital. People who put themselves at risk to save lives are saints.

This letter is different from past ones. Normally I focus on individual investment ideas. However, now there's a binary question, "Will we enter a great depression that lasts for years because of the pandemic?" I think not and explain my reasoning here. Some folks aren't interested in the virus. If that's you, skip the first section of this letter. For you guys, I wrote an article covering companies that will perform spectacularly if the economy gets back on track in a year or two. Here's [a link](#). Keep in mind that if we do enter a severe depression most of those stocks will do badly.

1. How I learned to Stop Worrying and Love the Virus

My investment in Hawaiian Air (HA) suddenly dropped 15% late January. The news was that 200 people were infected with a new virus in China. Previous scares like SARS or MERS came to mind which turned out to be media sensationalism. I bought more stock while rolling my eyes¹. This decision took all of four minutes.

Ten days later I saw a [video](#) of a western reporter walking through a major street in Beijing. Only... there were no cars. It looked like something out of a movie. This gave me pause and I read more about the virus. It was growing and many people were dying. But still I thought, "Why is China reacting like that? Doesn't the *flu* kill way more people every year?" I used this crappy reasoning to justify my initial reaction in the face of new strong evidence. While yes, the flu kills more people (so far), China's response was extreme and not remotely normal. Memes poked fun at people like me:

¹ A good tax strategy is buying unjustified stock drops, wait 30 days for wash sale rules, and sell your original shares for a short term capital loss. This is routine.



Pandemic 2 is a game / pandemic simulator. You play a virus and your mission is to kill all humans on earth. In the game, you balance being undetected, spreading rapidly and not killing the infected too fast. If your virus seems too threatening early on, the humans react well; they rapidly contain it, close borders and work on a cure. For comparison, a good strategy is having a long incubation period with high contagiousness. This allows people to spread it widely. Covid19 has these traits. Borders had been open and I realized this was already everywhere in the world by mid February. I saw [another video](#) of suspension bridges with no cars and [a picture](#) of a major shopping center with no customers. Remember those Hawaiian Air shares I added? I quit those after thinking this through.

I follow some biotech investors. Some of them joked, “Financial people are all talking about the virus, while biology people are all talking about finance.” Most doctors’ opinions were the same: this is not a serious threat. I gave this “expert” consensus credit for a while. I won’t make this mistake again. Doing your own thinking is key.

I’ve been casually studying oil for years. China consumes about 15% of the world’s oil, meanwhile major cities were shut down and borders closed. Somehow oil was still trading within its normal range above \$50? That didn’t make sense and I shorted oil mid-February.

Late February my mentor said he thought the pandemic was serious. He was going to make a macro bet even though he never does that. He specifically avoids them, just like me. We hadn’t talked about this issue too much and reached the same conclusion independently. And then Bill Gates suddenly [said the same thing](#). I think Bill is credible and he’s been studying epidemics for his charity since leaving Microsoft.

I had too many long positions to figure out which to quit. Instead, I kept my positions but shorted Russell 2000 futures which changed my exposure to average ~40% net long on the way down. I kept this exposure until the sp500 hit 2,400. Why the Russell 2000? I’ve looked at every company in the major

indices. This is by far the worst one. This bet worked out well: the Russell 2000 dropped 33% from its peak while the SP500 only dropped 25%. There's also a tax advantage when shorting futures specifically². I believe the Russell 2000 is still incredibly overvalued today.

Catching this event in time was very lucky. I don't plan on making macro bets in the future unless it seems incredibly obvious and big. Most won't be. Going forward, don't count on me dodging the next bear market.

So where do I think we're at now? This is just my opinion and everyone should do their own thinking:

1. The pandemic is very beatable.
2. R_0 is the key variable. R_0 is the average number of people that an infected person spreads the virus to. An R_0 of 2 means the virus doubles every few days. With $R_0 > 2$, hospitals get overloaded fast. This is a threat but also a blessing. If we get R_0 to .5, the virus halves every few days instead. We win once we get it below 1. **This is the main reason why I think we won't enter a great depression.**
3. Masks lower R_0 . The US Surgeon General and World Health Organization claim they don't work. They're just wrong. Masks help prevent an infected person from infecting others. There's actually no dispute from most organizations. ~80%+ of people with covid never have symptoms. They get sick and spread the virus to others, but don't even know it. This is why it spreads so much and why the virus is so deadly. However, if we require everyone to wear a mask, similar to helmet laws, the long incubation period stops being advantageous to the virus. I think there's a good chance lots of places enact mask laws.
4. R_0 isn't the same everywhere. My French friend accurately predicted early on that Italy and Spain would be epicenters. Why? Their culture is different; they're more open and physical; hygiene standards are lower. Japan is the other extreme. R_0 in large cities is higher than rural places. Cities with subways spread it faster than when everyone drives a car. And so on. Meanwhile, people are using the worst-case-scenarios and think that will happen everywhere. They're looking at the worst 50 cities and ignoring the other 3,000 where things aren't as bad; where R_0 is much lower. That's a strong tell that this is a panic.
5. R_0 isn't the same over time. The governor of NY encouraged people to go to the movies and said the virus was not a threat in February. I'm not singling him out. Basically every leader said this. This was just my initial reaction, too. However, obviously New Yorkers will change their behavior going forward and R_0 will drop.

² Profits from shorting futures are considered 60% long term capital gains, whereas shorting an ETF is 100% short term capital gains.

6. Approval is pending on a \$50 test that takes 10 minutes. If true, this stops the virus in its tracks once production ramps up. Constantly test random people in large numbers and R_0 will definitely drop below 1. Infected people can self quarantine and have much less time to spread it to others. If a test costs \$50 and we do 25 million a day, that costs just \$1.25 billion per day. Fewer tests are required over time. This is a viable option.
7. A vaccine will take 18 months according to Bill Gates and his charity is already working on it. Once this is developed, covid19 will be behind us like past horrible diseases.
8. Trump was right to say, "The cure cannot be worse than the disease." His disapproval broke below 50 for the first time since the election after saying this. It seems clear which way the wind is blowing. Everyone who is calling for an economic shutdown is still collecting their paycheck, it seems. So the worst case scenario is that the economy resumes with a lower R_0 for the above mentioned reasons. Older people can isolate until a better solution is found. As tragic as that is, far fewer people will die from the virus than a great depression. Hopefully it doesn't come to this. Right now my bigger worry is for our European friends; that their governments might permanently damage their economies.

2. Idea refuting the efficient market hypothesis

A finance professor will tell you that markets constantly price in all new information and that I cannot prove that a price was wildly off. This time, I can. Here the value of the fund is clearly stated as \$2.31 per share but traded for \$3.74. Thanks to [Nat Stewart](#) for this top notch idea. Shorting this made us 3.5% this quarter. I found a couple more like this, but none were nearly this juicy.



3. Results for January 1st - March 27th, 2020

SP500: -21%. Max drawdown 34%.

Fund: +5.6%. Max drawdown 37%.

Currently we're 160% long and 100% short, so net 60% long. I will go back to 100% long soon. Gross leverage dropped a lot throughout the quarter as volatility picked up - there's no real choice here, you have to reduce leverage when volatility is so high. I did this by quitting shorts that dropped 70%+ and a few longs that held up well. Right now I have too much gross exposure because last week my longs did incredibly well. I've been opportunistically selling to reduce leverage and will continue to do so until the market settles.

Longs:

The biggest winner was Performance Food Group Company (PFGC). They supply food to restaurants. The fear is that restaurants will all go bankrupt since they're forced to shut down. That seems quite pessimistic to me and I'll believe it when I see it. The company sold off 87% from its peak; [Grant](#) spotted it near the bottom so thanks to him. I sold it again after shares tripled to find more opportunities like this. We won 4%.

The biggest loser was AerCap (AER). They own and lease out airplanes. Right now AER is like buying airplanes for 30 cents on the dollar and management is great. I knew this would be a pain trade but I really don't believe they'll go bankrupt. And calling bottom is impossible. We lost 7.5% and it's our largest long position. Other airplane lessors had a stronger recovery; AerCap is lagging. There's evidence that forced selling is going on creating this opportunity. Until that ends, prices will continue to be disconnected and there will be more pain.

Shorts:

The biggest winner was the Russell 2000 index short, we won 42%.

Besides that, the next biggest winner was my highest confidence short: Bed Bath and Beyond (BBBY). We had a large position via out of the money long dated put options. They tripled in value. We won 14% and are still short.

The biggest loser was BOC Aviation (2588.HK). They're similar to AerCap and we're doing a long/short bet. I entered this trade late, but the airplanes are trading much closer to book value. So while AerCap can triple from here, BOC aviation should only go up 50%. We lost 4.5% so far. Going forward, I expect this and AerCap to trade more closely since the valuation gap is so wide now.

4. Detailed broker reports

Q: What caused the large down spike at the end of the quarter?

A: The week of the 16th, the market behaved very irrationally. It should have been closed. Many funds were being forced to liquidate which I didn't realize at the time. The 18th especially was completely unhinged. I simply looked at valuations which got crazier and crazier by the minute. The clearest example was M/I Homes (MHO). Like all other home builders, it just kept selling off. Eventually it reached \$9.62/share while tangible book value is \$35/share. They have little debt and this was like buying homes for 25 cents on the dollar.

I kept thinking I was right. Were home values in the US really going to drop 60%+? It just seemed crazy. Most of my long positions were down 20%+ that same day. Every 15 minutes our account lost another 1% of its value. I wasn't even that levered at this point and my account briefly touched -23% in a single day, my worst by far. I started to really doubt myself. Perhaps I wasn't cut out to be an investor after all.

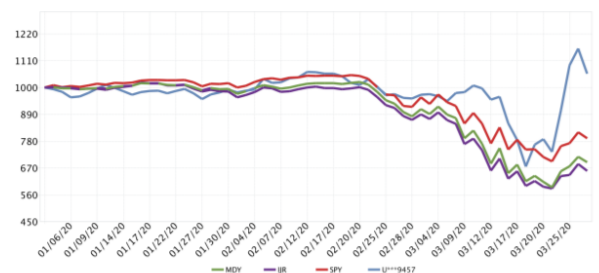
I reached out to some friends, most of whom are investing with me. They said encouraging words, that they trusted me, and told me to stick with my read. Thanks for that, friends.

I pulled myself together that day, reduced gross leverage further, sold stuff that held up relatively well, and actually bought more of these insanely cheap stocks. Turns out I wasn't crazy; we made an incredibly fast recovery and the stuff we're long still seems very cheap to me:

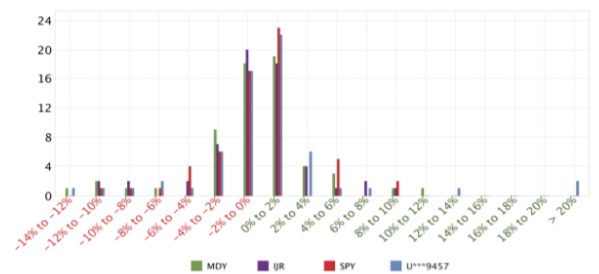
Risk Measures Benchmark Comparison

Risk Analysis	MDY	IJR	SPY	U***9457
Ending VAMI:	693.15	658.54	792.20	1,056.46
Max Drawdown:	42.21%	42.57%	33.70%	36.51%
Peak-To-Valley:	02/20/20 - 03/23/20	01/16/20 - 03/23/20	02/19/20 - 03/23/20	02/12/20 - 03/18/20
Recovery:	Ongoing	Ongoing	Ongoing	5 Days
Sharpe Ratio:	-2.10	-2.69	-1.53	0.66
Sortino Ratio:	-2.58	-3.18	-1.98	1.17
Standard Deviation:	3.96%	3.65%	3.40%	5.46%
Downside Deviation:	3.22%	3.09%	2.63%	3.11%
Correlation:	0.62	0.56	0.51	-
β :	0.85	0.84	0.82	-
α :	1.73	1.92	1.27	-
Mean Return:	-0.51%	-0.60%	-0.32%	0.23%
Positive Periods:	31 (50.00%)	29 (46.77%)	32 (51.61%)	33 (53.23%)
Negative Periods:	31 (50.00%)	33 (53.23%)	30 (48.39%)	29 (46.77%)

Value Added Monthly Index (VAMI)

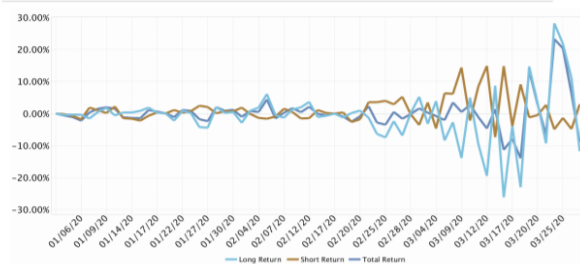


Distribution of Returns

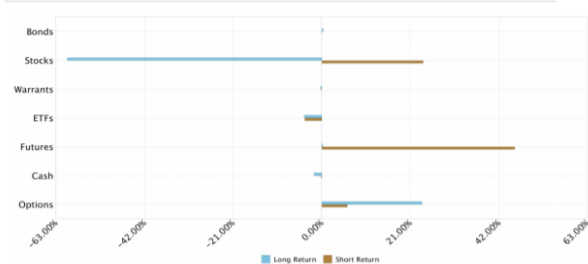


Performance by Long & Short

L & S Performance Comparison



L & S Performance By Financial Instrument Comparison



Note: Once again, most long option positions are actually shorts.