MORNING BRIEFING
March 17, 2020

Declaration of War

Check out the accompanying podcast.

(1) The panic question. (2) Fear is the cure. (3) Lowering GDP and earnings estimates again. (4) Ranges make more sense than point estimates. (5) Fed is running out of ammo and shock-and-awe. (6) The Fed's Zombie problem. (7) Mobilizing the troops during wartime. (8) The zero-immunity problem. (9) The R0 Factor. (10) Listen to Dr Fauci. (11) Six feet apart beats six feet under. (12) Flattening the curve. (13) Case studies. (14) Stay healthy, please!

Strategy: Too Late To Panic? I would like to say that it is too late to panic rather than to ask the question whether it is too late to panic. I do think it is too late to panic, but I'm not sure. That's because predicting the pandemic of fear is harder than predicting the pandemic of the virus fueling the fear, as the former is spreading much faster than the latter. Perversely, the more fear the better, because the best cure for a viral pandemic is a viral panic, as I argued yesterday.

Nevertheless, logic isn't particularly useful during times like these. So here I am again lowering our outlook for GDP and S&P 500 earnings. Why am I doing so right after the Federal Open Market Committee (FOMC) cut the federal funds rate to zero and launched QE4? They did so in an emergency session on Sunday (March 15), even though they had a meeting scheduled this week on March 17 and 18. That urgency suggests that they've been getting lots of feedback about rapidly deteriorating economic conditions.

So we are joining the pessimists on the near-term economic outlook. Real GDP is likely to drop by 4% to 6%, at an annual rate, during Q2. There's not much point in making a point estimate. That could be followed by a drop of 2% to 4% during Q3. That would be a severe recession. The question is whether it will be a short one. Needless to say, that depends on the virus. I'm of the opinion that the worst will be over by mid-year. If so, then a significant snapback in real GDP of 5% to 10% is possible during Q4.

S&P 500 earnings are likely to be down sharply, especially during Q2 and Q3. Again, a sharp rebound is likely during Q4 in the severe-but-short-recession scenario. For the year, profits could be down 10% to 15%. Next year, they should rebound at least as much.

The Fed: Running Low on Ammo. Stock markets fell sharply around the world despite a series of easing actions by the Fed, which were announced Sunday afternoon following the second emergency meeting of the FOMC so far this year. During the first emergency meeting, on March 3, the FOMC cut the federal funds rate from a range of 1.50%-1.75% to 1.00%-1.25%.

At Sunday's emergency session, the rate was cut by 100 basis points to 0.00%-0.25%. The discount rate was cut by the same amount to 0.25%, and bank reserve requirements were dropped to zero. Additionally, QE4 was announced, with the Fed ready to purchase $500 billion in Treasuries and $200 billion in mortgage-backed securities. Unlike previous QE programs, no monthly schedule of purchases was set. Presumably, the Fed will purchase securities as deemed necessary to provide liquidity to the financial markets, which have become extremely illiquid as a result of the pandemic of fear unleashed by the COVID-19 pandemic.

However, these unconventional policies have become all too conventional and have lost their effectiveness. The markets' adverse reaction to the Fed's moves shows that the Fed no longer has the fire power to shock and awe. Melissa and I won't be surprised if the Fed asks Congress for authorization to purchase corporate bonds. They might do so hoping to avert the Zombie Apocalypse as lots of BBB-rated corporations fall over the cliff into junk status. The Fed is also likely to revive some of the liquidity programs that worked quite well in 2008 and 2009, especially the commercial paper facility that injected liquidity into that distressed market.

Virology I: Declaration of War. The reality is that monetary policy can't solve all our problems, and it certainly can't do anything about the actual viral pandemic. On the other hand, governments around the world have declared war on the virus, and their efforts might just work to end the pandemic sooner rather than later. As we discussed yesterday, China seems to be winning the war, while Italy seems to be losing it. Within the next few weeks, we will learn whether the US is following the lead of China or Italy in fighting this war.

Here is what we would do for the war effort that hasn't been done yet:

(1) Why not have governments recruit and pay the hotel industry to use their facilities to test, house, and treat patients who have the virus through the end of the year?

(2) Why not have the government employ (with suitable protection and training) hotel staff to support medical professionals assigned to each hotel?

(3) Why not immediately launch a global Manhattan Project to manufacture hundreds of thousands of ventilators?

These measures, employed together with the social-distancing recommendations of Dr Anthony Fauci, director of the National Institutes of Health's institute for Allergy and Infectious Diseases, will work. (Hat tip to John Pridjian, a longtime personal friend of mine and CFO of an investment management firm with Asian investments.)

Virology II: Overcoming the Zero Immunity Problem. We and others have compared and contrasted COVID-19 to the seasonal flu and H1N1. The similarities suggest that the reaction to the novel virus is entirely overblown. But if we did nothing to stop the spread of COVID-19, what would be the outcome? The answer is not good. That's because the human population has next to zero immunity against this virus, and it is much more contagious than other coronaviruses. The good news is that doing what we are doing—i.e., stopping in our tracks—seems to be the best way to slow the spread and to eventually overcome the COVID-19 global pandemic.

Consider the following:

(1) *High-level numbers*. The Centers for Disease Control and Prevention (CDC) estimates that from October 1, 2019 to March 7, 2020 in the US there have been 36 million to 51 million flu illnesses, 370,000 to 670,000 flu hospitalizations, and 22,000 to 55,000 flu-related deaths. The CDC also estimates that between April 2009 and April 2010 there were about 60.8 million cases of H1N1 in the US, a novel strain of influenza at the time. It caused approximately 274,304 hospitalizations and 12,469 deaths.

As of this writing on Monday afternoon, the virus that causes COVID-19 has infected 4,287 people in the US and killed 74, according to a Johns Hopkins University & Medicine global map dedicated to tracking the disease. It's still early days for the virus here in the US. In China,

where the spread of the disease started and seems to have peaked, 81,032 COVID-19 infections and 3,217 related deaths have been reported.

(2) *Worst- and best-case projections*. According to a March 13 *NYT* article, the CDC has estimated COVID-19 outcomes in the US in four scenarios based on the characteristics of the disease. The estimates range from 160 million to 214 million people infected and 200,000 to 1.7 million people dying, with the pandemic lasting from a few months up to more than a year.

The assumptions for these scenarios were reviewed by the *NYT* and shared with 50 expert teams to help model potential outcomes. When people change their behavior, however, the parameters for those models are no longer applicable, according to an expert epidemic modeler quoted in the article. The CDC is working on how public interventions might decrease the worst-case numbers, but those projections have not been made public.

(3) *Transmissibility*. R-naught (R0) represents how many people an average person with the virus infects. A lower R0 means an outbreak is slowing, while a higher one means it's spreading at a higher rate. A value of less than 1 means a disease could die out. A value of more than 1 means the disease is spreading exponentially. R0 may change as more people develop immunities to a disease by way of infection and as vaccines are developed and injected.

The CDC estimates that each infected person would infect two or three others, according to the *NYT*. That's roughly right on with actual data for COVID-19 that shows it has an R0 of about 2.0 to 2.5, or about 2.2 on average. The R0 of seasonal influenza is about 1.3. The R0 of H1N1 is about 1.2 to 1.6. That's all pulled from a 3/14 *Business Insider* article, which compiled the data from various sources.

(4) *Hospitalization rate*. The CDC's projections assume up to a 12.0% hospitalization rate, or ratio of hospitalizations to infections, according to the *NYT*. Actual data from China suggests that about 14% of cases were severe and 5% were critical, according to the largest Chinese CDC study on the disease to date. Based on the CDC data cited above, H1N1's hospitalization rate was around 0.5% and the seasonal flu's about 1.0% to 1.3%.

Could the US handle an influx of COVID-19 patients on top of the seasonal flu? It's questionable whether the US's intensive-care units—which number 46,500 according to an analysis by the Johns Hopkins University Center for Health Security—would be sufficient. But it

is clear that the exponential daily spread of this disease certainly could stretch US hospital capacity, which is why it's critically important to stay home and slow the spread!

(5) *Morbidity*. The rate of deaths to infections could change depending on the medical care that critically ill patients receive. Researchers for the China study reported a rate of death to infections of 2.30%, which skews much higher for older individuals. Infections and deaths aboard the Diamond Princess cruise ship, which was quarantined at sea off of Japan after a passenger tested positive, suggest a lower morbidity rate of 0.50%. CDC estimates suggest somewhere between 0.25% and 1.00%, according to the *NYT*. Based on the data cited above, the morbidity rate for H1N1 was 0.02%, which is below seasonal influenzas' 0.10% rate.

Notably, the reported number of infections here in the US may understate the real number because many cases are asymptomatic and testing here has been limited. That would imply a lower morbidity rate. But given the scale of the infections and how contagious the disease is, the absolute number of deaths could still be significant and far worse than for the flu viruses.

Virology III: Six Feet Apart. This chart has gone viral. It shows that if we all practice washing our hands—not touching our face and staying home when we are sick—we can flatten the curve! Also helpful are more aggressive measures like social distancing (avoiding large crowds and maintaining at least a six-foot distance from others) as well as social isolation and quarantine (the former used to separate the sick from the healthy and the latter to separate out the exposed to determine their health status and limit disease spread, per this CDC webpage).

The curve reflects hospital capacity at the peak of the disease over time. If we all get sick at once, hospitals may become overburdened. If we slow the spread, the peak is lower. No one wants to see hospitals having to decide who gets treated. Here's how that scenario can be avoided, based on a few case studies:

(1) *China*. On February 10, China reported 2,478 new cases. Two weeks later, the number of daily new cases had dropped to 409. The epidemic in China appears to have peaked in late January, noted a February 27 *Science* article. The day before the article's writing, the number had dropped to 206. But that didn't happen on its own, it explained.

China implemented extreme tactics to contain and mitigate the spread of COVID-19. The most extreme was the lockdown of Wuhan and nearby cities in Hubei province, where at least 50 million people were put under a mandatory quarantine. In other regions of China, people

voluntarily quarantined and were monitored. Schools, restaurants, stores, and activities were shut down. Surveillance was launched. Mobile phone color codes designated a person's health status so that guards could prevent the movement of infected persons. The government aggressively conducted contact tracing. Chinese authorities also built several COVID-19-dedicated hospitals.

(2) *1918*. This chart shows a curve of the death rate for two cities when the US experienced its most lethal pandemic. The 1918 Spanish flu killed 675,000 Americans, according to CDC estimates reported by the *NYT*. St Louis and Philadelphia had dramatically different responses to the flu. St Louis officials heeded warnings, closing schools and limiting social gatherings, while Philadelphia officials did not. St Louis' curve was significantly flatter than Philadelphia's and peaked much later, though dwindled to zero at about the same time.

(3) *Seattle*. The *NYT* reported: "A preliminary study released on Wednesday by the Institute for Disease Modeling projected that in the Seattle area, enhancing social distancing—limiting contact with groups of people—by 75 percent could reduce deaths caused by infections acquired in the next month from 400 to 30 in the region."

(4) *Italy*. "What has happened in Italy shows that less-than-urgent appeals to the public by the government to slightly change habits regarding social interactions aren't enough when the terrible outcomes they are designed to prevent are not yet apparent; when they become evident, it's generally too late to act," according to a March 13 *Boston Globe* article.

Italy has been in lockdown since March 9, but it took weeks after the virus first appeared to realize that such measures were necessary. Hospitals have become overrun, and the morbidity rate is near 7.0%—though most affected areas in Italy have a high elderly population, which is more susceptible to becoming critically ill or dying from the disease.

"Italy is about 10 days ahead of Spain, Germany, and France in the epidemic progression, and 13 to 16 days ahead of the United Kingdom and the United States," the article stated. "That means those countries have the opportunity to take measures that today may look excessive and disproportionate, yet from the future, where I am now, are perfectly rational in order to avoid a health care system collapse."

CALENDARS

US: Tues: Retail Sales Total, Ex Autos, Ex Autos & Gas, and Control Group 0.2%/0.1%/0.4%/0.4%, Business Inventories -0.1%, Headline & Manufacturing Industrial Production 0.4%/0.3%, Capacity Utilization 77.1%, Job Openings 6.402m, NAHB Housing Market Index 74. **Wed:** Housing Starts & Building Permits 1.500mu/1.500mu, MBA Mortgage Applications, DOE Crude Oil Inventories. (DailyFX estimates)

Global: Tues: Germany ZEW Survey Current Situation & Expectations -30.0/-27.2, UK Employment Change (3m/3m) & Unemployment Rate (3m) 104k & 3.8%, Japan Trade Balance ¥916.7b. **Wed:** European Car Sales, Eurozone Headline & Core CPI 1.2%/1.2% y/y, Eurozone Trade Balance €19.2b, Japan CPI Headline, Core, and Core-Core 0.5%/0.6%/0.7% y/y, Australia Employment Change & Unemployment Rate 8.5k/5.3%. (DailyFX estimates)

STRATEGY INDICATORS

S&P 500/400/600 Forward Earnings (*link*): Forward earnings fell simultaneously for all three of these indexes last week for the first time since mid-November. LargeCap had its biggest w/w percentage decline in 14 months, dropping for a second straight week to its lowest level of the year. MidCap's and SmallCap's forward earnings were both down to their lowest levels since Christmas. These indexes had begun a forward-earnings uptrend during March 2019 but stumbled from July to November before rising until mid-February. While LargeCap's is just 1.0% below its record high at the end of January, MidCap's and SmallCap's are 3.8% and 7.3% below their October 2018 highs. Index changes for the SMidCaps at the end of 2019 helped MidCap's forward earnings improve from November's 18-month low, while SmallCap's is up from September's 17-month low. The yearly change in forward earnings soared to cyclical highs during 2018 due to the boost from the Tax Cuts and Jobs Act (TCJA) but began to tumble in October 2018 as y/y comparisons became more difficult. In the latest week, the rate of change in LargeCap's forward earnings dropped to a nine-week low of 3.0% y/y from 3.8%, which compares to an eight-month high of 4.4% at the end of January and a 38-month low of 1.0% in early December. That's down from 23.2% in September 2018, which was the highest since January 2011. MidCap's fell w/w to a seven-week low of -1.0% y/y from -0.5%. That compares to a five-month high of -0.2% in mid-February and -5.5% in November, which was the lowest since December 2009. That also compares to a TCJA-boosted 24.1% in September 2018 (the highest since April 2011). SmallCap's dropped w/w to 0.8% y/y from 1.1% and a nine-month high of 2.0% the week before that; that's still up from -9.6% in mid-September, which was the lowest since December 2009 and compares to the TCJA-boosted eight-year high of 35.3% in October 2018. Analysts had been expecting double-digit

percentage earnings growth for 2019 during late 2018, but those forecasts are down substantially since then. Here are the latest consensus earnings growth rates for 2019, 2020, and 2021: LargeCap (0.6%, 6.1%, 12.0%), MidCap (-5.1, 7.9, 11.7), and SmallCap (1.1, 5.6, 15.0).

S&P 500/400/600 Valuation (*link*): Valuations were sharply lower last week for these three indexes. Following the market's meltdown on Thursday, LargeCap's daily forward P/E of 14.0 was its lowest since 12/24/18. MidCap's 11.9 was the lowest since 10/3/11 and SmallCap's 11.8 was the worst since 3/11/09. All three price indexes roared back on Friday, but valuations remained at multi-year lows for the SMidCaps. Comparing their valuations on a w/w basis, LargeCap's forward P/E was down 1.4 points w/w to a 14-month low of 15.3 from 16.7. It had been at 18.9 during mid-February, which was the highest level since June 2002 and compares to a five-year low of 13.9 during December 2018. Of course, that's still well below the tech-bubble record high of 25.7 in July 1999. Last week's level compares to the post-Lehman-meltdown P/E of 9.3 in October 2008. MidCap's forward P/E dropped 2.0 points w/w to 12.9 from 14.9. That's the lowest reading since November 2011. MidCap's P/E is down from a 22-month high of 17.4 in mid-December and the record high of 20.6 in January 2002. However, MidCap's P/E has been at or below LargeCap's P/E for most of the time since August 2017—the first time that alignment has prevailed since 2009. SmallCap's P/E took the biggest hit last week, falling 2.4 points w/w to 12.7 from 15.1. That's down from mid-December's 16-month high of 18.1 and is the lowest since September 2011. It had been at a 15-year high of 20.5 in December 2016, when Energy's earnings were depressed. SmallCap's P/E finished the week below MidCap's for the first time since July 2008. SmallCap's P/E is also below LargeCap's. It had been below for four months through the end of August—the first time that has happened since 2003.

S&P 500 Sectors Quarterly Earnings Outlook (*link*): With analysts looking ahead to March quarterly earnings expectations, earnings revisions activity is picking up now and looks to be the worst in many years. The Q1 EPS forecast fell 31 cents w/w to $38.65. That represents a decline of 1.3% y/y on a frozen actual basis and an increase of 1.0% y/y on a pro forma basis. That compares to a 3.1% gain in Q4-2019, a 0.3% decline in Q3-2019, and y/y gains of 3.2% in Q2-2019, 1.6% in Q1-2019, 16.9% in Q4-2018, and 28.4% in Q3-2018 (which marked the peak of the current earnings cycle). Besides the small y/y decline in Q3-2019, the last time earnings fell markedly y/y was during the four quarters through Q2-2016. Seven of the 11 sectors are expected to record positive y/y earnings growth in Q1, with one rising at a double-digit percentage rate. That compares to eight positive during Q4, when two rose at a double-

digit percentage rate. Six sectors are expected to beat the S&P 500's pro-forma 1.0% gain in Q1, down from six in Q4 and seven in Q3 but up sharply from just three beating the S&P 500 during Q2-2019. Three sectors are expected to post improved (or less worse) growth on a q/q basis during Q1: Communication Services, Energy, and Materials. On an ex-Energy basis, the consensus expects earnings to rise 1.5% y/y in Q1. That compares to ex-Energy gains of 6.0% in Q4, 2.2% in Q3, 3.9% in Q2, and 3.0% in Q1 but is well below ex-Energy's 25.0% and 14.2% y/y gains in Q3-2018 and Q4-2018, respectively. Here are the latest Q1-2020 earnings growth rates versus their final Q4-2019 growth rates: Communication Services (12.8% in Q1-2020 versus 8.2% in Q4-2019), Information Technology (7.1, 9.2), Health Care (3.9, 9.9), Utilities (2.5, 17.8), Real Estate (2.5, 7.1), Financials (1.3, 10.3), Consumer Staples (0.6, 2.6), Energy (-12.5, -41.2), Consumer Discretionary (-8.5, 2.5), Materials (-8.7, -12.4), and Industrials (-13.6, -9.3).

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