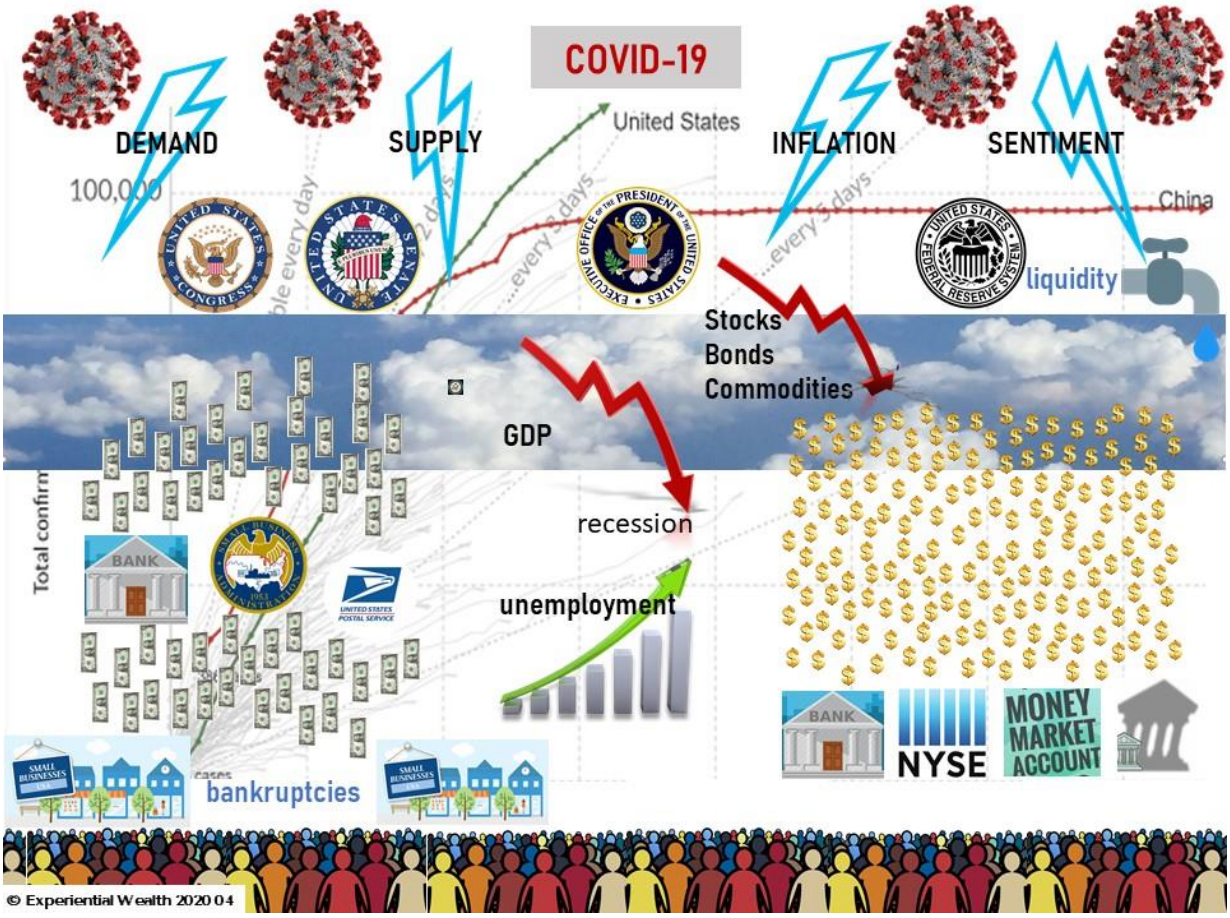
EXPERIENTIAL WEALTH
FIDUCIA PERPETUA

April 5, 2020

The cacophony of impact, fallout, responses, and scale of the COVID-19 coronavirus on a human level and on the economy is shocking. The speed of change, on a sometimes hourly basis, is impossible to capture. As such, for this quarterly commentary, we have prepared the following graphics as a summary in an effort to show what has transpired economically in the last 45 days.



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PREAMBLE

The COVID-19 pandemic that originated in Hubei, China (first uncovered in October 2019) is now a global phenomenon. Analysis of the fallout can be divided into three related strands: Public Health, Economy, and Financial Markets. It is natural for investment analysts to reach back to prior financial shocks or austerity as reference points to gauge the impact of the current exogenous shock and project recovery. I suggest these siloed perspectives are inadequate or, at times, even erroneous in reaching base case outcomes with any reasonable degree of confidence. It is not that "this time is different"; it is that most living persons have not experienced this type of event in their lifetimes. Sadly, many search their limited and quarantined professional experience to anchor baselines in anticipating what to come.

This global pandemic is not a Black Swan event - an unpredictable event that is beyond what is normally expected of a situation with potentially significant rewards or consequences. COVID-19, like SARS, MERS, Ebola and other viruses before, is quite a predictable event, and one day, another novel virus will attack us. We know about the existence of the virus, and we also know the effective way to minimize transmission as well as the limitation of medicine.

First (and foremost), this is a Public Health Crisis that is rolling across an unprepared globe. The duration and severity will be based on: (1) medical solutions (testing, treatment and vaccination), (2) robustness and capacity of healthcare infrastructure and personnel in each region, (3) good human behavior (social distancing, shelter in place, good hygiene and self-control), (4) political and social structure (ability and faithful adherence by the populace to lock down a city, state, region, and country and to make policy decisions promptly and implement them successfully and speedily), and (5) take bold and disproportional steps early.

The most important question is the duration of the COVID-19 crisis. Answering this question requires: (1) understanding how many are infected (through universal testing) and (2) showing evidence of "bending the curve". The first step is to collect data regarding the spread of the virus. After a baseline population has been tested, data would be available to map and trace the progress of the infection, hospitalization, death and recovery rates.

In the U.S., testing remains largely unavailable for the masses across the country even though testing kits and methodologies are now catching up. This remains the biggest challenge. The upside surprise would be the FDA approval of medical treatment for the virus. However, as of today, there is no assurance or certainty that any treatment is available, let alone effective. Further, vaccines are 12-months away at best and they would be to prevent attacks in 2021 and beyond. Strict social distancing, sheltering in place and self-quarantining remain the only ways to minimize or stop transmission.

Second, this is an Economic Crisis which continues to unfold as a derivative of the Public Health Crisis. The policies for a sudden stop to daily economic activities and closing borders locally and globally have monumental consequences. The supply and demand destructions and the domino effects from cessation of daily commerce have immediate and devastating impacts on the U.S. and global economies. The expected explosion in unemployment due to a sudden economic shutdown will certainly bring the U.S. into a recession. Bankruptcies are

inevitable as vanished consumer demand and business closures grind the economy to a crawl. Global trade and supply/value chains are obvious victims starting in China (the factory floor for the world) which fed into a downward spiral and vicious cycle of diminishing demand and supply as the virus bled into the rest of the world. One example is the oil price. The COVID-19-led demand destruction for oil and oil products (less fuel demand due to less travel, commerce and production) has plummeted the price of oil globally. China's refineries, for example, cut their imports of foreign oil by about 20% due to a lack of demand in February. This led to the competition for revenue and dominance which fractured the uneasy relationship between Russia and Saudi-led OPEC. The existing coordination for production levels fell apart, and Saudi decided to cut oil prices by $11 to $35 per barrel. Since then, the free-falling market price has punched through $20. This COVID-19 initiated dispute is now impacting the American shale-oil producers. Debt reorganization, layoffs, and bankruptcies are here. In fact, some producers have begun paying customers to store the overflowing oil.

The Federal Reserve, sensing a significant economic fallout with severe financial stress, took unprecedented actions (monetary bazooka) to do whatever it takes as the lender and buyer of last resort. This intends to bring order, trust, stability and liquidity back to the market. We are not only in the zero-interest rate policy (ZIRP) environment, we are also in quantitative easing forever (QE Infinity) reality.

In FOMC's press release and press conferences as well as announcements from the Administration, they often lead with the statements that the U.S. economy is strong and robust with the lowest unemployment rate in 50 years and consumers are in good shape. These types of backward-looking statements are totally irrelevant. We suggest that all backward-looking data regarding the 11-year economic expansion will not contribute to our understanding of the domestic economy beginning in March forward. Without knowing the scale, scope and duration of the virus impact, it is anyone's guess as to the depth and width of our economic destruction and impact. Recession is assured; the questions are when the starting point of a recovery will be and will it be a rolling recovery over a longer period of time (U or L shaped) or a "V"-shaped recovery to the past.

Assuming 80% of the U.S. population has strictly adhered to the guidelines of social distancing and 20% has not, this would bend the curve. But this stable disequilibrium will still see infections popping up even though they are not exponentially multiplying. As the restriction is finally lifted and workers are encouraged to go back to work and participate in social and civic life again, would lingering uncertainty and fear prevent a full recovery back to normal quickly? Even though there would be a fair number who have either recovered or are asymptomatic, thus possessing the antibody against COVID-19, there would still be a large number who have no immunity. Would this larger population feel comfortable to take a cruise, attend sports events, frequent restaurants, and take the usual number of business flights? Probably not, since the virus remains a pervasive threat, especially after witnessing hundreds of thousands perish from it. This would likely contribute to a longer U shaped recovery. Then, there is also the possibility of a second wave of virus outbreak, even barring mutation.

Third, this is a Financial Market Crisis which is a derivative of the Economic crisis which in turn is a derivative of the Public Health Crisis. Bonds were quickly repriced based on the reaction to raise cash, deleverage and sell the most liquid securities in light of the economic shock. These extreme conditions exaggerated the illiquidity in the market. Equities, at the same time, moved from a position of an all-time-high on February 19th to a bear market in 3-weeks. With over a 31% loss in value (for the S&P 500 Index), many believe this is close to the bottom. Many investors maintain a buy-on-the-dip mentality and have been disappointed. The unknowable scale, scope and duration of, and thus the impact from COVID-19, will continue to put pressure on the stock market as investors continue to reprice the market for cascading bad economic news to come. If the stock market is a thermometer for the future of the economy, it is likely that the market has more downside from here, at least retest the recent lows. Although the market had welcomed the monetary bazooka and the subsequent, and unprecedented, $2 trillion fiscal bazooka, these would be insufficient if a prolonged period is needed to bend the curve and get the economy started again, not to mention the psychological and behavioral reluctance to immediately return to normal.

To gain a better perspective about the future of the financial market, we need to go beyond applying the standard, backward-looking factors and develop a better understanding about COVID-19 and its trajectory as well as its full impact on our economy assuming everyone is faithful to social distancing and personal hygiene to a varying degree of compliance.

A Foreign Invader

The World Health Organization ("WHO") was first notified of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), commonly referred to as COVID-19 or novel (i.e. new) Coronavirus, by Chinese authorities in Wuhan, Hubei. COVID-19 is a zoonotic virus. From analyses undertaken with available full genome sequences, bats appear to be the reservoir of the COVID-19 virus, but the intermediate host(s) has not yet been identified according to the WHO-China Joint Mission Joint Mission Report[1].

COVID-19 is transmitted via droplets and fomites during close unprotected contact between a carrier and the infected. Airborne spread has not been reported for COVID-19, and it is not believed to be a major driver of transmission based on available evidence. With proper distancing, the risk of catching COVID-19 from someone with no symptoms at all is low.

According to British Medical Journal[2] (BMJ), older age, cardiovascular disease, diabetes, chronic respiratory disease, hypertension, and cancer were all associated with an increased risk of death. Studies also suggest that obesity and smoking were associated with increased risks. In Italy, higher risks have also been reported in men than in women, which could be partly due to their higher smoking rates and subsequent comorbidities.

According to a study using the Gallup National Health and Well-Being Index data to examine rates of chronic conditions believed to be key risk factors in addition to smoking

[1] https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf
[2] https://www.bmj.com/content/bmj/368/bmj.m1198.full.pdf

rates and population age distribution, over 11 million U.S. adults are at severe risk of critical illness or death if infected with COVID-19.

The table projects the total number of adults who would have a very high chance of becoming critically ill or dying if 100% of the U.S. population were to become infected with COVID-19.

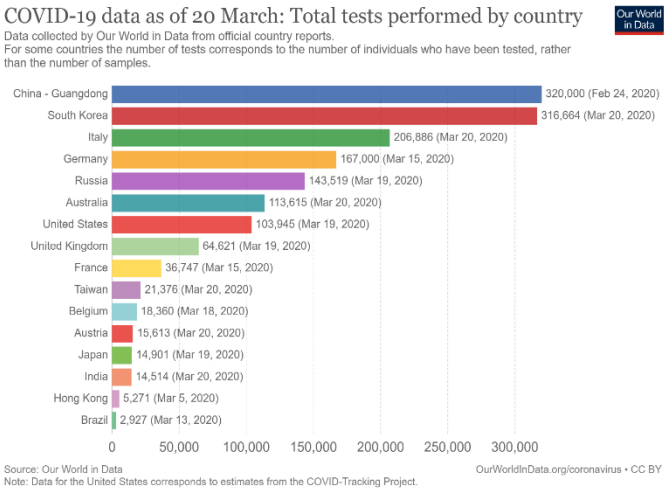
Estimated Number of U.S. Adults at Risk of Death If 100% Were Infected With COVID-19

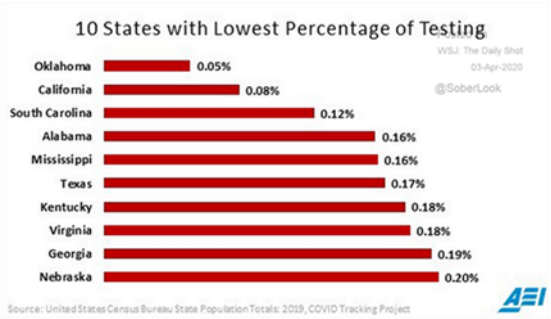
	Total people	Percentage with at least one condition	Percentage at severe risk	Total people at severe risk
	#	%	%	#
Age group				
18-29	53,657,553	6.63	0.55	296,656
30-39	42,518,642	13.60	1.14	483,969
40-49	40,909,501	27.44	2.55	1,041,192
50-59	43,310,372	45.05	4.80	2,080,565
60-69	36,150,682	61.15	7.34	2,654,195
70-79	20,706,539	75.14	12.36	2,559,528
80+	12,122,561	78.98	16.72	2,026,659
U.S. adults	249,375,850			11,142,765

Note: Figures for "Total people at severe risk" may not calculate perfectly because percentages in the table are rounded to two decimal places.

GALLUP NATIONAL HEALTH AND WELL-BEING INDEX

Testing is the single most important activity every country should initiate and embrace. The ability for any country, municipality or agency to assess the scope, severity, containment and control of the virus is based on the collection of a robust set of data. Conducting tests on the population early allows policy makers and governments to make timely decisions and thereafter assess the effectiveness of policies and actions. Ideally, if everyone gets tested, the baseline of infected (asymptomatic included) vis-à-vis the uninfected would be clear and

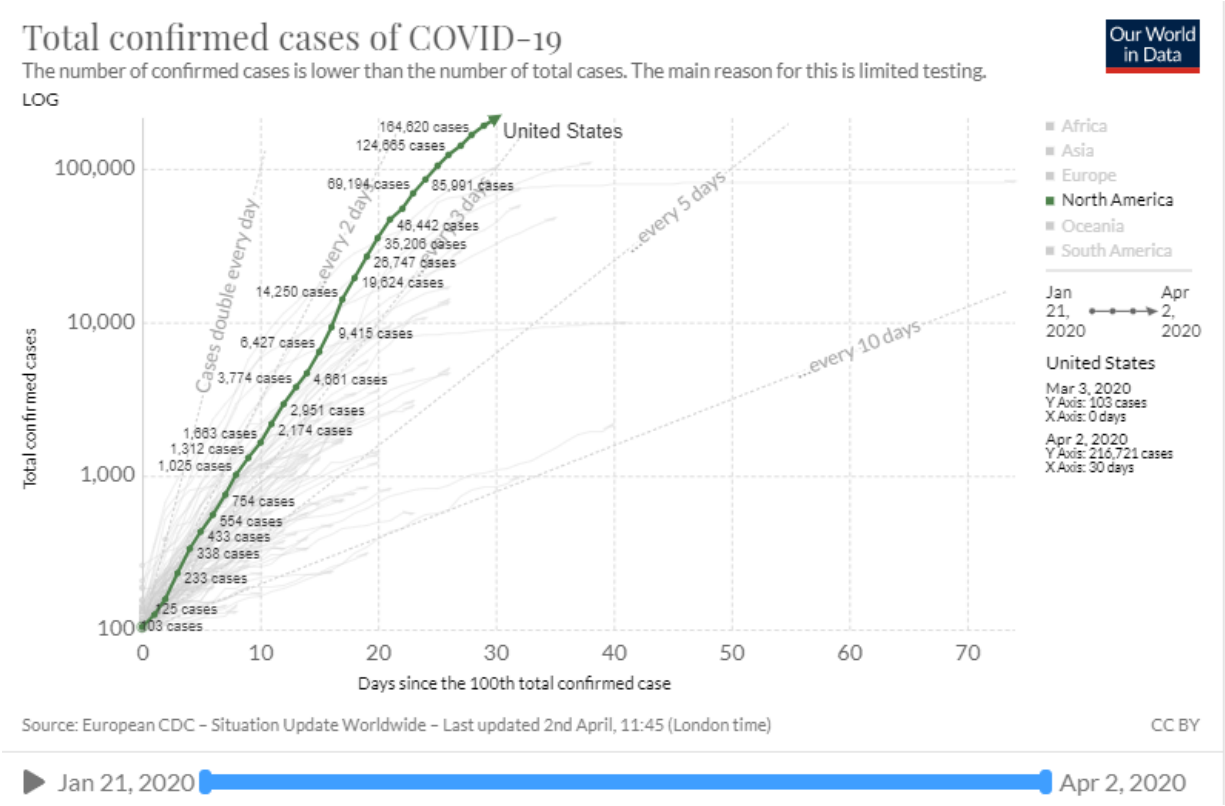




actions can be taken to contain and control the spread of the contagion. Once the baseline has been established, perhaps only those with symptoms would be retested. Also, this would provide an accurate mortality rate. But, without data, we are literally flying blind. Furthermore, the uninfected should also be retested periodically as there is no guarantee that a negative result assures no infection in the future and not becoming a carrier to infect others.

A helpful metric to measure the rate of change is the doubling time. This is the time it took for the number of cases to double. For example, if the number of cases is doubling and remains constant, then the outbreak is spreading exponentially. After 11 doublings, an initial 500 cases would grow to more than 1 million cases, and after 10 more doublings, it would be 1 billion cases. By having robust and comprehensive testing data to build on, the number of people infected vs. non-infected and the rate of mortality become certain for a country or a region.

The following graph[3] shows the total confirmed cases for different countries as provided by WHO data and illustrated by "Our World in Data".



The graph shows the trajectory for each country as compared to the rate of doubling of the confirmed infected population in 2-, 3-, 5- and 10-days. As of the end of March, the U.S. is firmly on the path of doubling every 3-days. That means the U.S. is headed to over 500,000 cases by April 6.

China and South Korea have both "flattened the curve" and are with little to no new cases. Although China's data has always been suspect, Korea's data is deemed to be credible. Asian countries have had prior experiences with viral pandemics such as SARS and MERS and are more prepared with dealing with such attacks. Not being a western liberal democracy, they have a command and control top-down society and an economy which lends to better compliance to government policies with fewer deviations. Korea was aggressive early in its

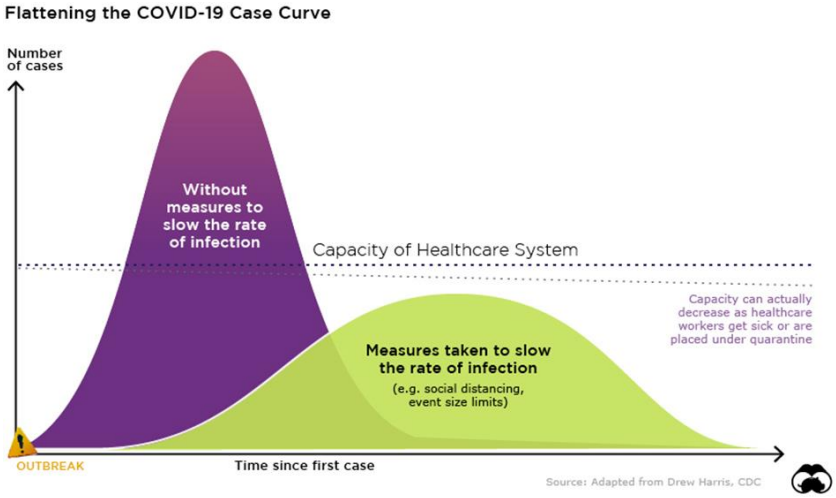
[3] https://ourworldindata.org/coronavirus#the-growth-rate-of-covid-19-deaths

efforts to contain the spread of the virus by conducting tests early to large populations, invoking social distancing, promoting personal hygiene, conducting contact tracing of infected citizens, and aggressively reaching out to those who came in contact with known infected individuals and asking them to stay isolated[4].

HOW MANY WAYS TO STOP THE VIRUS?

There are three approaches to handle a virus outbreak. First would be the application of a vaccine on the population. This is not available since COVID-19 is a novel virus. Second would be Herd Immunity which is the natural way to allow as many people to get infected so that the virus will go through the entire population, and those who survive develop antibodies or immune systems to fend against the virus. Third is through self or community restraint (using protective gear, social distancing, working from home, sheltering-in-place, closing schools and other institutions, and placing limits on the size of gatherings, etc.), practicing good personal hygiene, and using protective gear where applicable. The focus here is to "bend the curve".

Herd Immunity may be a brutal but right approach to let the virus run its course. This will likely have the least impact on the economy since life as we know it continues with no restraints. Allowing the buildup of immunity naturally would also mean substantial burdens on the public health system since many would get sick and some would die. When the virus is allowed to spread, eventually the majority of the people will have been infected and (if they survive) become immune so that the outbreak will fizzle out on its own as the virus finds it harder to locate a susceptible host.



Earlier this month, the United Kingdom was toying with the idea of asking people over age 70 to self-isolate and to promote immunity by allowing up to 60% of its population to become infected. With 66 million people living in the UK, the Herd Immunity strategy could lead to as many as 40 million people infected. Depending on the mortality rate, the death rate en route to improved immunity could range from 300,000 to more than a million. This quickly received significant pushback and became a non-starter. Poor countries such as Brazil and India with poor public health infrastructures are likely to default to Herd Immunity – accepting that a portion of the population will be infected, get sick and die.

[4] https://www.nature.com/articles/d41586-020-00740-y

For the U.S., Herd Immunity was floated by the Administration very briefly, and after some delay, the "bend the curve" is now the approach to take. However, it takes time to bend the curve and it comes with significant economic and social consequences. This is how social distancing works[5] (according to www.visualcapitalizt.com):

Scenario	5 Day Period	30 Day Period
No social distancing practiced	1 person infects 2.5* others	**406** people infected as a result
50% reduction in social exposure	1 person infects 1.25* others	**15** people infected as a result
75% reduction in social exposure	1 person infects 0.625* others	**2.5** people infected as a result

**For estimations only. It is not possible to infect only a fraction of another person.*

Testing allows infected people to know that they are infected. This would help them receive the care they need, and it can help them take measures to reduce the probability of infecting others. People who don't know they are infected might not stay at home and thereby risk infecting others. Testing is also crucial as the appropriate response to the pandemic. It allows us to understand the spread of the disease and to take evidence-based measures to slow down the spread of the disease.

The bottom line is that **IF** the U.S. population will FAITHFULLY practice and MAINTAIN the necessary behavior modifications (physical distancing) and have the PATIENCE to wait this out so that less people will likely come in contact with infected individuals (symptomatic or not), then COVID-19 will burn out naturally. With ongoing testing and vigilance about hygiene and prevention tactics, a second wave would be prevented. This will buy the time necessary to develop drugs and vaccines to fight against COVID-19 when it returns.

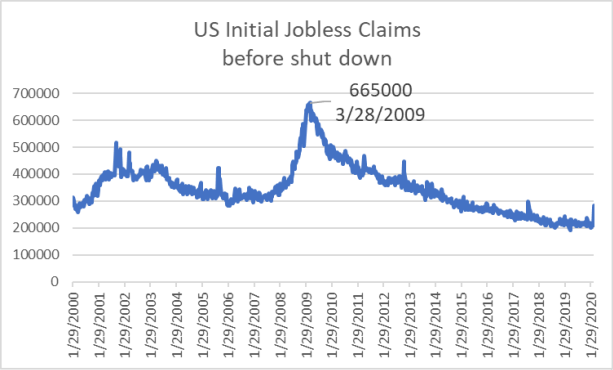
AN EXOGENOUS SHOCK!

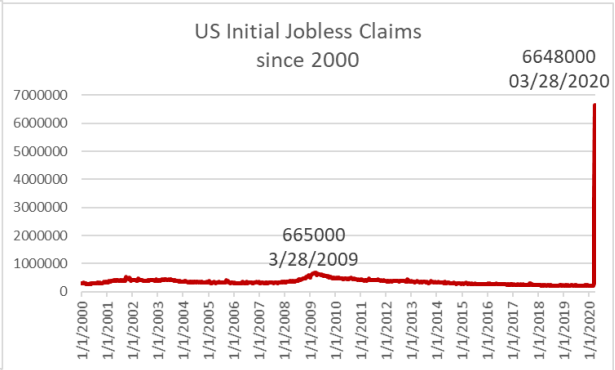
As this quarterly commentary is written, facts on the ground are changing; policies are being decided upon and executed; new uncertainties are surfacing; and the scale, scope, duration and required responses to a global health/economic/financial shock continue to morph. To put it simply, any projections about the future are nothing more than opinions, and everyone has one.

According to the Department of Labor[6], in the week ending March 28, the advance figure for seasonally adjusted initial weekly unemployment claims was 6,648,000, an increase of 3,341,000 from the previous week's revised level. This marks the highest level of seasonally adjusted initial claims in the history of the seasonally adjusted series. The previous week's level was 3,307,000. The 4-week moving average is now 2,612,000 with the previous week's average at 1,004,250. The U.S. is now at 10 million claimants for unemployment

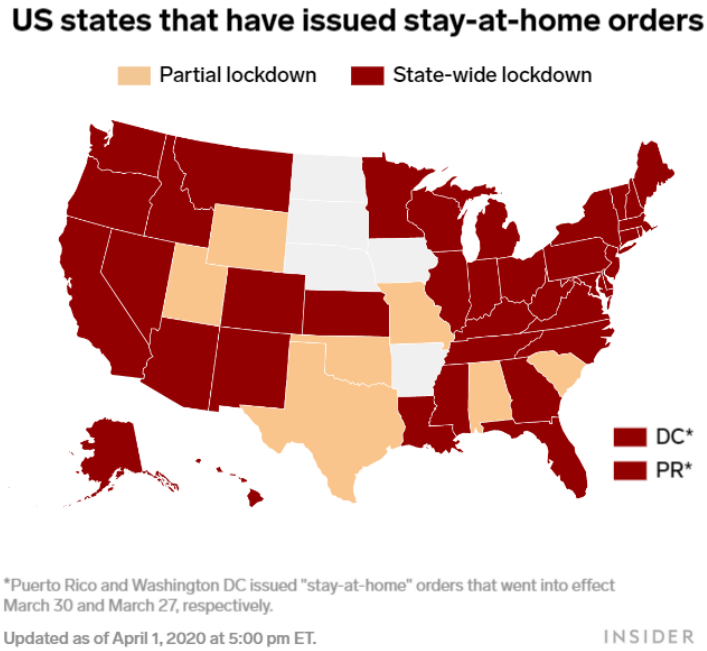
[5] https://www.visualcapitalist.com/the-math-behind-social-distancing/
[6] https://www.dol.gov/sites/dolgov/files/OPA/newsreleases/ui-claims/20200551.pdf

compensation.





It is common knowledge that 70% of the $21.44 trillion U.S. economy is derived from the service sector. According to the Bureau of Labor Statistics, over 129 million of the 161 million jobs are in the service industry. Further, 15.8 million of which are in the retail trade, and 16.4 million are in the leisure and hospitality sector. This totals over 32 million jobs. Assuming conservatively 1 out of 2 of these workers are terminated or furloughed, that means 16 million service workers would be unemployed or at least without a paycheck as the states institute two-week and longer lockdowns. Over the next weeks, we expect the total of those applying for unemployment claims to continue to rocket upwards as these (predominantly) service workers have no alternative job prospects. We can see moving up from here to at least 16 million. Since the U.S. does not have a federal mandatory lockdown policy, the rolling lockdown decisions (which have various levels of constraints[7]) among the 50 states will drag the process out, ending with a high unemployment rate stretched out over a longer period of time. If we couple this with a massive wave of small service business bankruptcies, these unemployed will not find jobs when the pandemic is over.

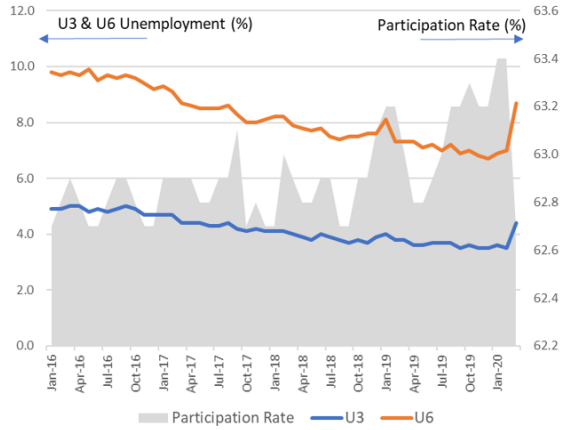


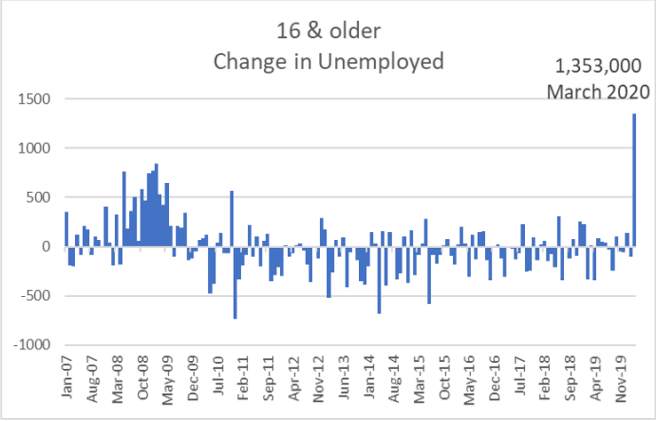
The following charts show the employment situation for March, which does not capture the full scope of the lockdown and serves as a teaser of what we should expect for April's unemployment when released in May. The sharp jump (much greater than the consensus)

[7] https://www.wsj.com/articles/a-state-by-state-guide-to-coronavirus-lockdowns-11584749351

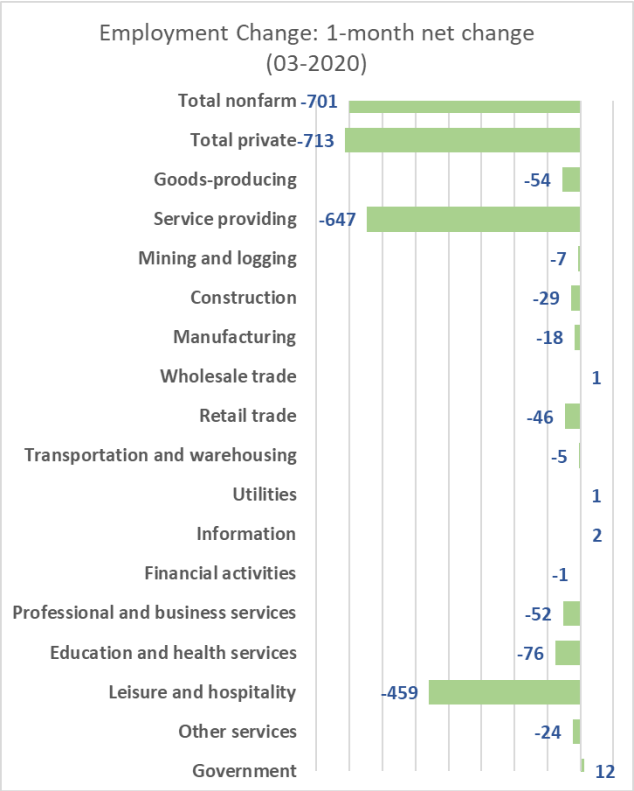
shows the suddenness due to instantaneous economic shutdown. This is likely to be the tip of the iceberg.

The graph below from BLS offers the 1-month change detail from the employment report. The two sectors that have shown the greatest losses of jobs are the "Service Providing" and





"Leisure & Hospitality" sectors of the economy. There is no surprise that these service sectors felt the brunt of the sudden stoppage of the economy. Total non-farm payroll employment rose by 273,000 in February, However, according to the left graph from BLS for March, beyond the expected two service sector job losses, "Construction", "Manufacturing", "Professional & Business Services", and "Education & Health Services" sectors also suffered job losses. This is a precarious first signal that the job losses may not be just limited to "retail" and other service sectors. During the lockdown period, medical doctors, dentists, and opticians are not allowed to see any non-emergency patients; voluntary surgery is also disallowed; part-time, substitute teachers and tutors are all out of a job or furloughed; losses to personal investments and retirement portfolios reverse decisions for home additions, expansions and/or remodeling which hurt builders, contractors and architects; and an overall demand destruction (except for essentials and medical supplies) will bleed into the "Manufacturing" and "Goods-Producing" sectors.



Sensing a severe economic and financial dislocation here and globally, the Federal Reserve responded first and quickly to calm and support the financial markets followed by a series of fiscal policy remedies from Congress.

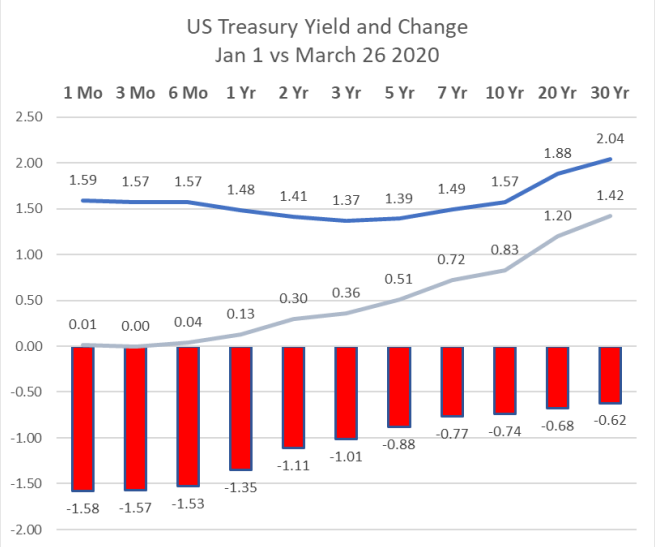
THE MONETARY BAZOOKA – WHATEVER IT TAKES

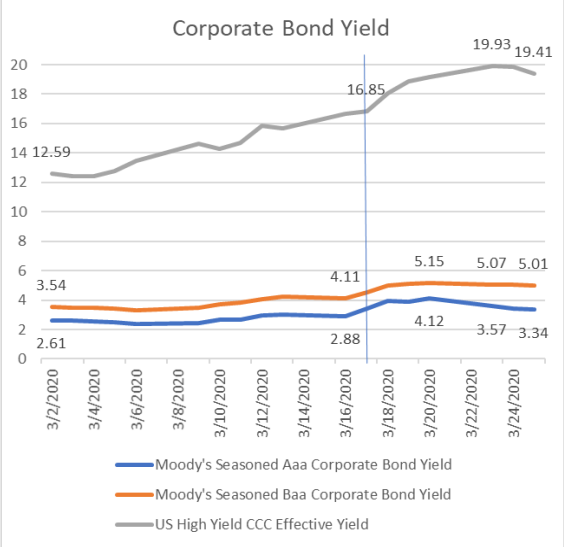
The Federal Reserve offered the first bazooka, without the burden of politics, and acted quickly and decisively on unprecedented monetary policies over the past two weeks in an effort to: (1) restore confidence in the financial system, (2) provide liquidity to bring order to the market and (3) serve as the buyer and lender of last resort. The following is a list of their actions since the beginning of March:

Date	Action
3/3	(ZIRP) lower federal funds target rate range to 1 to 1¼%
3/12	Repo – New York Fed offers $500 billion in a three-month repo operation that will settle on March 13, 2020. On 03-13, will further offer $500 billion in a three-month repo operation and $500 billion in a one-month repo operation for same day settlement. Three-month and one-month repo operations for $500 billion will be offered on a weekly basis for the remainder of the monthly schedule. The New York Fed will continue to offer at least $175 billion in daily overnight repo operations and at least $45 billion in two-week term repo operations twice per week over this period.
3/15 - 3/23	(ZIRP) lower federal funds target rate range to 0 to ¼% (QE) increase holdings of Treasury securities by at least $500 billion and agency mortgage-backed securities holdings by at least $200 billion[8] (ZIRP) conduct overnight reverse REPO operations at an offering rate of 0% (ZIRP) undertake open market operations as necessary to maintain the federal funds rate in a target range of 0 to ¼%
3-16	(ZIRP) decrease the discount rate (the primary credit rate) at the banks from 1¾% to ¼%
3-17	(QE) establish a Commercial Paper Funding Facility (CPFF)[9] to provide a liquidity backstop to U.S. commercial paper to smooth the functions of and supply credit and funding to auto loans and mortgages as well as liquidity to meet the operational needs of a range of companies
3/17 – 3/19[10]	(QE) establish a 6-month Primary Dealer Credit Facility (PDCF)[11] which would extend credit to primary dealers to buy a broad range of investment grade debt, including corporate, international agencies, commercial paper, municipals, mortgage-backed, and asset-backed securities, plus equity securities
3/18	(QE) establish a Money Market Mutual Fund Liquidity Facility (MMLF)[12] through the Federal Reserve Bank of Boston to extend non-recourse to eligible financial institutions to purchase certain types of high-quality assets from money market mutual funds (minimize a run on money markets and the likelihood of "breaking the buck")
3/20	coordinate with 5 other central banks to improve the swap lines' effectiveness in providing the U.S. dollar funding/liquidity to ease strains in global funding markets

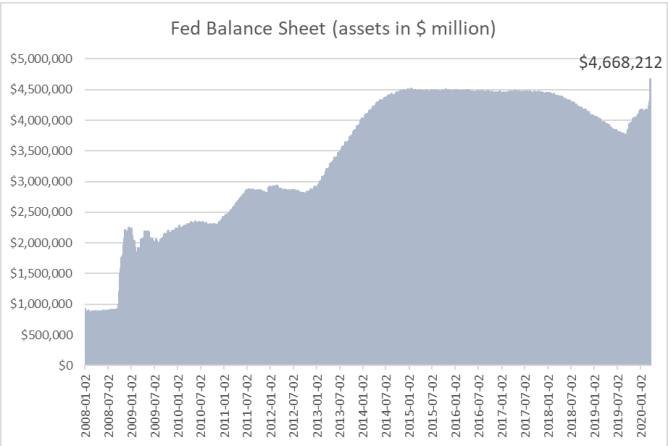
[8] https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a1.htm
[9] https://www.federalreserve.gov/newsevents/pressreleases/files/monetary20200317a1.pdf
[10] https://www.federalregister.gov/documents/2020/03/23/2020-06156/regulatory-capital-rule-money-market-mutual-fund-liquidity-facility
[11] https://www.federalreserve.gov/newsevents/pressreleases/files/monetary20200317b1.pdf
[12] https://www.federalreserve.gov/newsevents/pressreleases/files/monetary20200318a1.pdf

3/20	(QE) expand its program[13] of support for flow of credit by taking steps to enhance liquidity and functioning of crucial state and municipal money markets as a part of the MMLF
03/23	(QE Infinity) continue to purchase Treasury securities and agency mortgage-backed securities in the amounts needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions[14]





The upper left graph shows the significant and speedy drop in yields across the entire treasury yield curve from January to March 26. The precipitous drop in the front end of the yield curve due to Fed action has lowered the yield by over 150bp (red bars show the difference in yield along the curve). The right graph shows investment grade corporate bond yields gradually increased as a sign of an illiquid market with unmatched sellers and buyers of corporate bonds (massive selling of the most liquid instruments to raise cash). After the March 17th announcement of the creation of CPFF and PDCF, the investment grade bond yields tightened while corporate bonds', rated below investment grade (junk bonds), yields remain elevated since these bonds are not subject to these new facilities (at least not yet).



The Fed is taking unprecedented action to solve liquidity conditions in the bond market and money market instruments which will filter through as benefits for riskier assets. The left graph shows the beginning of a significant increase in the Fed's balance sheet which exceeds the prior expansion after the Global Financial Crisis (GFC). This expansion is likely not to be short-lived.

[13] https://www.federalreserve.gov/newsevents/pressreleases/files/monetary20200320b1.pdf
[14] https://www.federalreserve.gov/newsevents/pressreleases/monetary20200323b.htm

For now, the market is comforted by the Fed's decisive and speedy policy to "use its full range of tools to support the flow of credit to households and businesses" or unlimited large-scale asset purchase (or quantitative easing – QE). The Fed will soon be instituting a Main Street Business Lending Program that will support lending to eligible small and midsize businesses. We are now at the Japanification of America with ZIRP and QE Infinity and with little probability of a reversal even in the distant future. We are headed for negative interest rate policy "NIRP" and moving towards an $8 trillion Fed balance sheet.

THE 2ND BAZOOKA – THREE PARTS AND COUNTING

So far, this bazooka has three parts. Here is a short summary:

1. $8.3 billion Coronavirus Funding Bill[15] signed on March 6th

This bill is significantly more than the original amount of $2.5 billion requested and planned for.

   a. $3.1 billion to the Office of the Secretary of HHS dispersal and funding available until 2024
   b. $950 million to state and local public health response and distributed via the Centers for Disease Control and Prevention, with half the amount allocated within 30 days
   c. $300 million to buy vaccines and treatments
   d. $1.25 billion for international activities

2. $100 billion (estimated) First Coronavirus Response Act[16] signed on March 18th

   This bill provides for:

   a. Food assistance for children reliant on school meals that now face closures
   b. Unemployment insurance for laid-off workers
   c. Medicaid funds for state and local government workers
   d. Free Coronavirus testing for those who need it but cannot pay
   e. Reimbursements for businesses who give workers paid sick leave

3. The $2 trillion Coronavirus Aid, Relief and Economic Security Act[17] (CARES Act) has been approved by both houses of Congress, signed March 27th.[18]

   This unprecedented largess, both in speed and size, from the government is well intentioned and should help to support the economy from freefall. However, there are two issues. The first is the speed of the direct payment and unemployment compensation to individuals who have been displaced. As of today, much of cash, payments, grants or loans have not yet reached any individuals or businesses. The second is the sufficiency of the direct payment if the shutdown has to be extended for a longer period of time.

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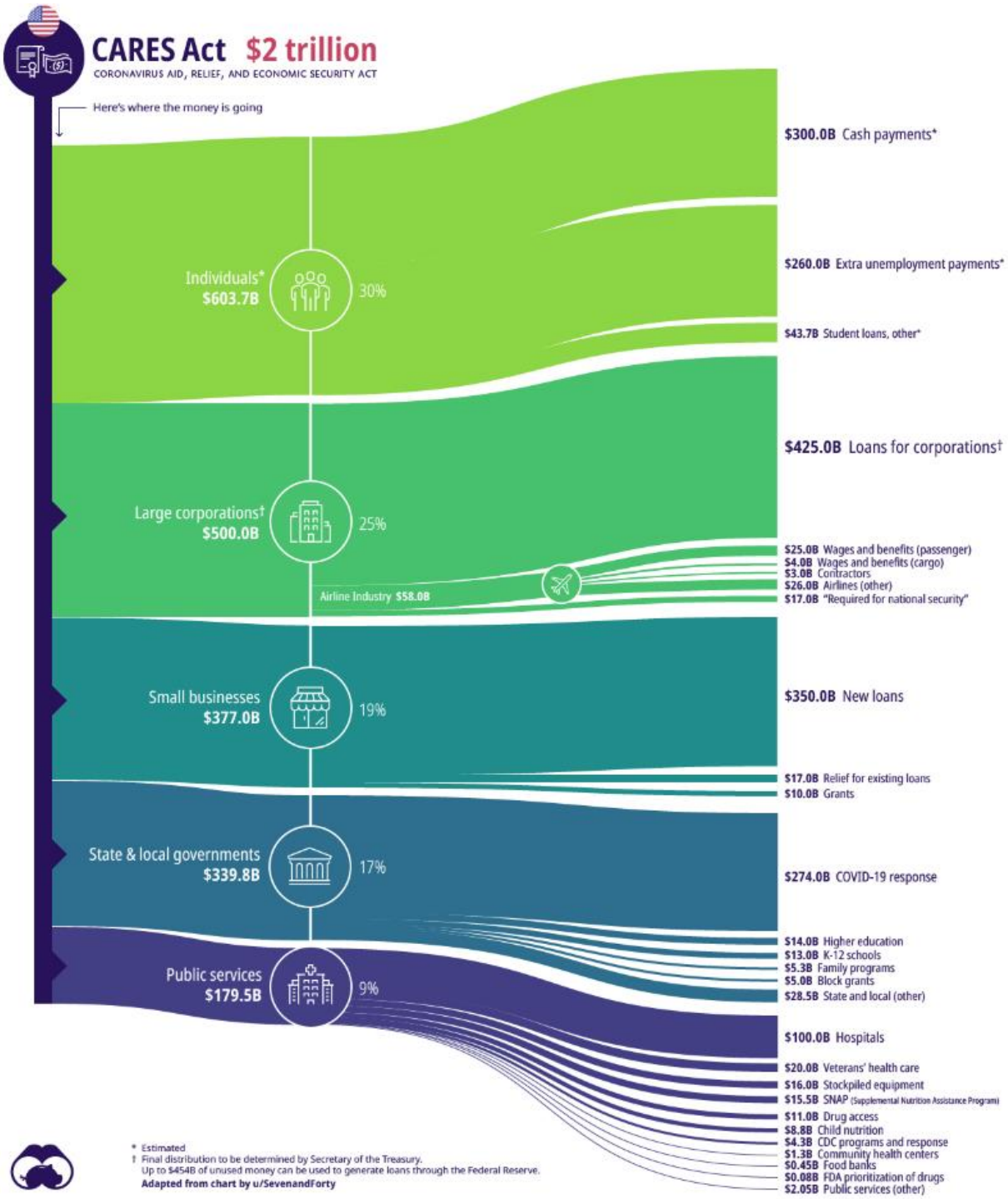
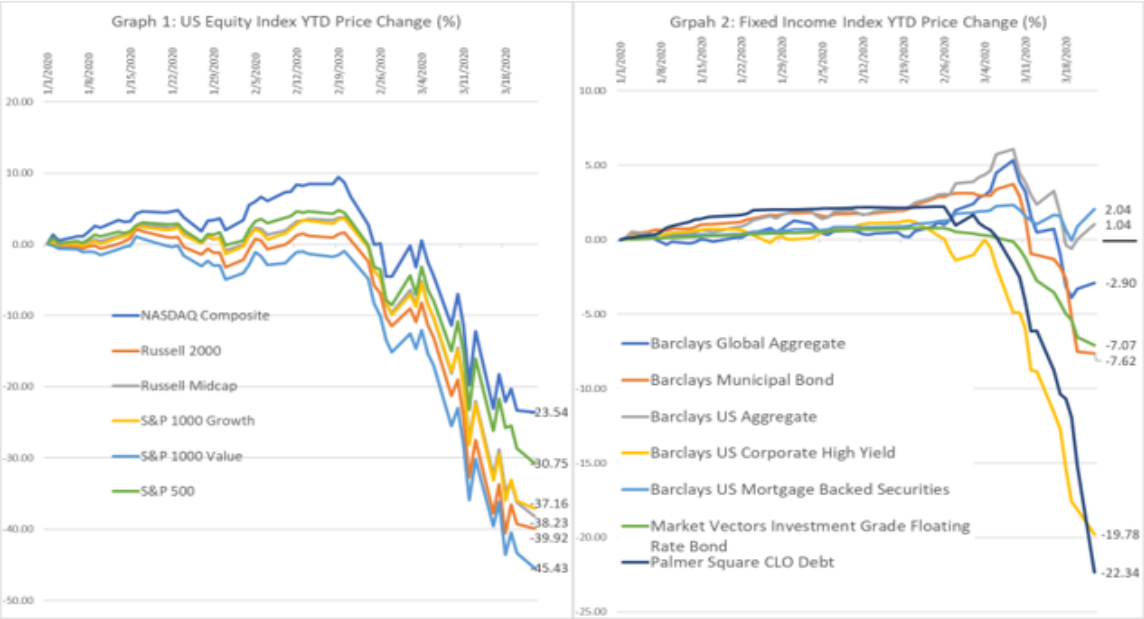
[15] https://www.congress.gov/bill/116th-congress/house-bill/6074/text
[16] https://www.congress.gov/bill/116th-congress/house-bill/6201?q=%7B%22search%22%3A%5B%22First+Coronavirus+Response+Act%22%5D%7D&s=1&r=1
[17] https://www.congress.gov/bill/116th-congress/house-bill/6407?q=%7B%22search%22%3A%5B%22Coronavirus+Aid%2C+Relief+and+Economic+Security+Act%22%5D%7D&s=2&r=1
[18] https://www.visualcapitalist.com/the-anatomy-of-the-2-trillion-covid-19-stimulus-bill/



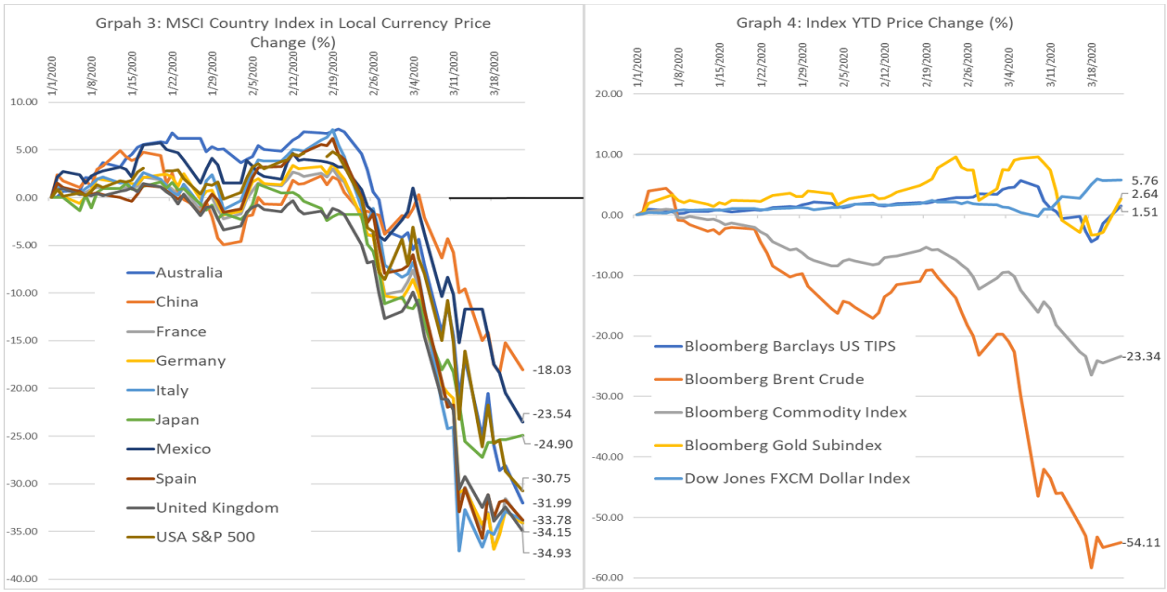
We expect a few more legislative actions would be needed before this is all over to continue supporting those unemployed and for state and local governments who see a shrinking tax revenue while mushrooming expenditures for public health.

DIVERSIFICATION DID NOT WORK

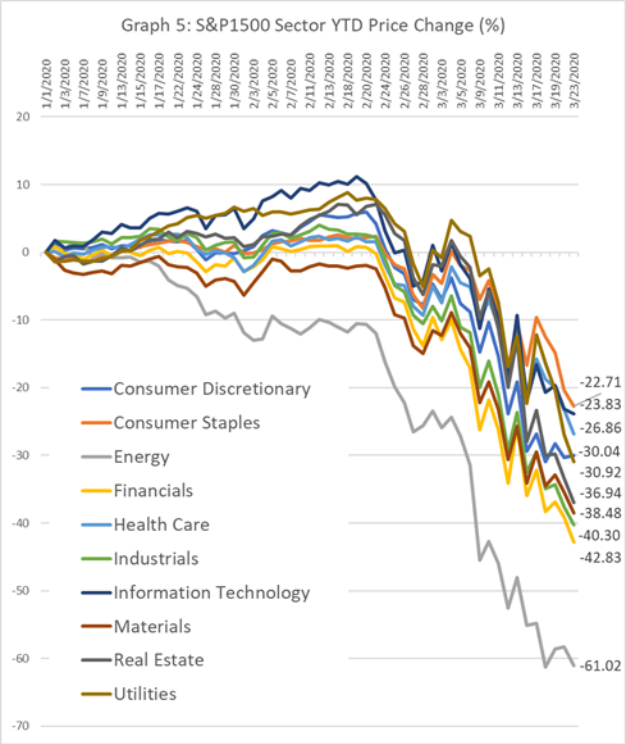
Here are four graphs that show the year-to-date (3-20-2020) price changes for a number of popular indices which paint a broad picture of the speed and depth of capital loss since mid-February. We went from a decade of recovery starting in 2010 to starting a new decade with dislocations and uncertainties that will likely exaggerate income and wealth disparity as well as impact globalization, immigration and trade in even more material ways. Further, the collective abandonment of guardrails for fiscal and monetary policies will have consequences.



Graph 1 shows the sudden and precipitous drop in U.S. equities since the highs reached on February 19th. Graph 2 shows the performance of bonds has been poor overall as well. Even though investment grade bonds have lost value, including municipal bonds, lower grade or junk bonds suffered double digit losses. The reversal for the investment grade bonds came yesterday when the Federal Reserve, the lender of last resort, announced that it created facilities to buy bonds including corporates and munis (excluding junk bonds however).



Graph 3 on the prior page shows the performance of global stock markets since the start of this year. The major markets across the world have all sold off, with China (18.03%) experiencing the least losses and Italy the most (34.95%). Graph 4 illustrates the performance of commodities, U.S. dollar and Treasury Inflation Protection Securities (TIPS). It is clear that, during this period of market turmoil, the U.S. Dollar moved sharply higher while Gold and TIPS just returned to positive in the last two days. Brent Crude Oil, on the other hand, was decimated.



Finally, Graph 5 shows the 10-industry sectors of the S&P 1500. Every sector has lost significant value over March with the heaviest losses in the energy sector due to a freefall in oil prices.

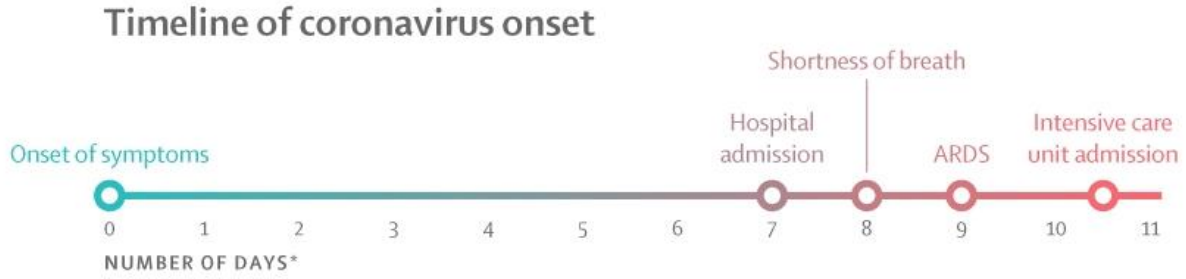
A well-diversified portfolio that was built based on historical relationships (correlations) between stocks, bonds, cash and other asset classes and investment strategies failed to function as expected. Since the Global Financial Crisis, global central banks have pushed interest rates so low that they promoted incremental risk taking. As investors moved into a higher yielding asset, crowding occurred and investors had to take incrementally more risk to meet their return or income objectives. After 11 years of moving further out of the risk spectrum, investors have collectively landed in a higher risk portfolio. Adding to that is the low cost of borrowing that promoted leveraging or borrowing. The combination of leverage and higher risk taking resulted in a speedier downfall in stocks and bonds this time around. Diversification does not work during an extreme environment where all assets (with the exception of safe haven assets and cash) move in the same direction – down.

The key to solving the financial crisis punctuated by the Covid-19 pandemic is preventing a financial asset liquidity crisis from becoming a solvency crisis for corporations and businesses, small and large, which ultimately will be a banking crisis. The Federal Reserve is designed to solve liquidity problems, but solvency needs to be addressed by the Federal Government. Therefore, it is essential for a sizable and properly targeted plan from lawmakers to be agreed upon and put into action until the entire episode is over.

ECONOMIC HEALTH vs PUBLIC HEALTH

Sudden stoppage of the economy is a direct result of social distancing, sheltering in place, and self-quarantining. As we enter the second quarter, we expect more downside volatility for stocks globally as the world continues its efforts to contain the spread of the virus.

Data, by definition, is a lagging indicator. With more testing, we will see a ballooning of infected. According to The Lancet[19], the following is a timeline of COVID-19 onset after first symptoms appear based on Wuhan patient data.



This means that when we hit the peak of infection and mortality rate, we are already one to two weeks into bending the curve, even as more will be hospitalized and die. The challenge with curve bending is the rolling start date for social distancing and geographical lockdown. To best understand the rate of progress or change is to observe infection, hospitalization and mortality rates on a state-by-state basis noting the date social distancing began for each state.

Until and unless we can contain the spread of the virus, our economy cannot and will not begin to recover. Our only course for defense is social (physical) distancing, good personal hygiene and to be isolated if one comes into contact with known infected individuals. Balancing the economic health and public health is challenging as they are now diametrically opposed. Once again, if everyone can adhere to the best practices of social distancing for 30 days and endure this hardship, we can come out of it with greater confidence. Otherwise, the health of the economy will deteriorate as the health of the nation continues to suffer.

Some of the signs are challenging the view of a short-lived crisis:

- On March 29, Hong Kong reported that imported cases continue to fuel infections, with 40 of Sunday's 59 new confirmed cases having a recent travel history. The total now stands at 641. Apparently, up to 100,000 people had returned to Hong Kong, mostly from Europe or the U.S., before the government's 14-day mandatory quarantine measure came into effect on March 19. As most of them were not tested for the virus, many transmission chains could have already appeared.
- As of April 1, Jia county, with the area's roughly 600,000 residents near the city of Pingdingshan, has been put into total lockdown in an effort to fend off a second coronavirus wave as the rest of China is attempting to "return to work".
- After an alarming increase in unlinked local cases, on April 4, Singapore announced a month-long partial lockdown, asking citizens to shelter-in-place with most workplaces ordered to close.

This may be a canary in the coal mine for the U.S. and a way to better estimate or project when the economy can recover.

[19] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30183-5/fulltext

Although it is too early to conduct a post-mortem of the COVID-19 pandemic, there are certain paths that seem obvious:

1. Globalization will continue to be challenged as consumer-based economies will likely rethink their dependence on foreign supply chains and focus on the need to source products and components from more diverse locations, to include domestic production.
2. Income and wealth disparity will be further exaggerated after this healthcare crisis is over. This is fuel for (left and right) populism and anti-immigration policies coupled with redistribution of wealth (at least taxation increases) and nationalism.
3. More fiscal spending in a zero-interest rate environment such as infrastructure projects and with some form of monetary financing such as universal income
4. Losing more individual liberties as the democracies act on the benefits of high-tech tracking and surveillance in the name of the "public good"
5. Employers will likely re-evaluate their headcounts and human resource efficiencies as well as the necessity to travel. Furthermore, companies will likely adjust to a more decentralized operational framework and continue to find ways to use technology to improve productivity and efficiency.
6. Even under a ZIRP environment, savings and safe haven assets will again be favored over investing as many will seek the return *of* their capital rather than return *on* their capital. This is also supportive of the continuing demographic shift to an aging population.

It is hard to support a return of inflation even as we climb out of the impending recession if these expectations are realized. As such, we expect the Federal Reserve to hold rates at the zero bound (hopefully never entering into negative yields) for an extended period. We will likely see another decade of financial repression where savers are supporting borrowers to again heal this economy back to health.

Finally, with ¾ of the country now staying at home, we are living altered daily lives and can gain insight into what we have taken for granted. We should give thanks to this opportunity to be with our loved ones, thank those who have always been the primary caregivers of our children and our elderly, appreciate the roles of teachers and school as we homeschool our children, and think of those restaurants, hairdressers, nail salons, and merchants and service providers that came in and out of our lives that made our lives richer and more convenient.

Sincerely yours,
EXPERIENTIAL WEALTH
Philip Chao
Principal & CIO