Investment Observations & Briefing

Kyle P. Webber, Managing Partner | *April 7, 2020*

// CHEAT SHEET FORECASTS & ANALYSIS //

- ***US COVID-19 Infections*** *(First Wave)*
  Global: 1.36 million
  US: 368,449
  New Case Apex: 4/15/20
  New Case Trough: 5/20/20 *(potential full reopen)*

- ***Economy***
  Steepest recession since the Great Depression.
  GDP: 1st quarter -5% 2nd quarter -25%
  Unemployment: > 12% with > 25% jobs lost.

- ***US Cares Act***
  Individuals: $603.7 billion
  Small Business: $377 billion
  Corporations: $500 billion
  Local Government & Public Service: $519.3 billion
  Retirement Accounts: Withdraw up to $100k

- ***S&P 500 Bear Market Bottom***
  Highly dependent on length of COVID-19 impact.
  2,300 = COVID-19 issues are largely mitigated in April
  1,800 = Corporate earnings decline by 30% and COVID-19 issues persist past April.

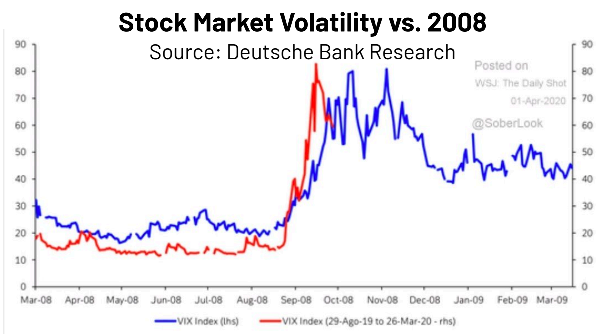
- ***Stock Opportunities***
  Tech, materials, Industrials, small value, emerging markets

- ***Bond Opportunities***
  High yield bonds and investment grade corporate bonds once spreads peak and being to fall.

- ***Commodity Opportunities***
  Broad based commodities with overweighting to oil, industrial metals and agriculture. Infrastructure legislation should amplify appreciation.

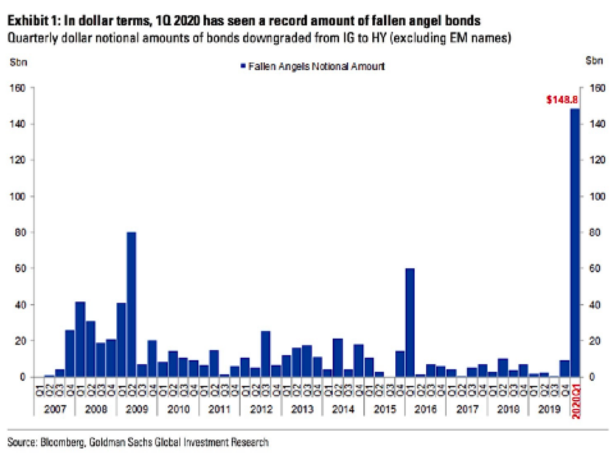
Introduction
Let's get this out of the way, this is not a drill. No one has seen a pandemic of this scale in their lifetime. First and foremost, this is a healthcare tragedy. My goal here is to contextualize what has occurred in financial markets as a result of COVID-19, where I see things headed, and an investment opportunity framework. Our healthcare system and economy are facing extraordinary challenges as we navigate the COVID-19 pandemic. One that has disrupted all of our lives and will have a lasting impact for the foreseeable future. Governors are locking down states, manufacturers are retooling assembly lines to produce ventilators, healthcare workers are saving lives on the front lines, financial markets have been in turmoil and don't forget about the toilet paper-armageddon. Government reacted quickly, enacting unprecedented monetary and fiscal stimulus in an effort to lessen any catastrophic economic effects.

How Did We Get Here
COVID-19 started in China's Hubei province several months ago and has rapidly spread throughout the world infecting more than 1.36 million people globally and an estimated mortality rate greater than 3%. This pandemic is a black swan event that has brought more than 25% of the U.S. economy to a screeching halt and has destroyed asset prices at break neck speed, making it the worst quarter for stocks since 1987. Any notion that U.S. GDP and unemployment this year or next get back to where we were prior to the pandemic is fool's gold. It only took 22 days for the S&P 500 to fall 30%, the fastest ever. The explosion of volatility in the stock market exceeded both 1929 and 2008 with the average daily move on the S&P 500 over 4.50%. In early March, Quartz Partners made the defensive decision to preserve capital and move 100% to 1-3 month Treasury Bills and cash. Companies have been hit by both supply and demand shocks which has been reflected in falling stock prices.

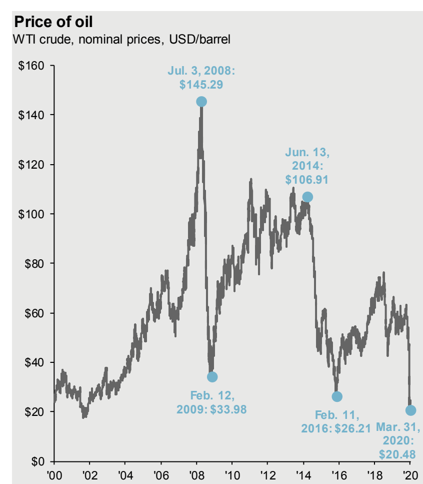


Groups (11)	Return Positive Price Return
S&P 500 ECO SECTORS IDX	-26.51%
All Groups	
S&P 500 CONS STAPLES IDX	-14.05%
S&P 500 HEALTH CARE IDX	-16.49%
S&P 500 INFO TECH INDEX	-24.76%
S&P 500 COMM SVC	-25.46%
S&P 500 UTILITIES INDEX	-25.97%
S&P 500 CONS DISCRET IDX	-28.16%
S&P 500 REAL ESTATE IDX	-28.88%
S&P 500 MATERIALS INDEX	-29.50%
S&P 500 INDUSTRIALS IDX	-32.85%
S&P 500 FINANCIALS INDEX	-36.75%
S&P 500 ENERGY INDEX	-44.33%

Corporate earnings deceleration has compounded the impact of Covid-19. Since the 3rd quarter of 2018, US corporations were in the midst of an earnings recession but have used in some instances up to 100% of free cash flow for stock buybacks as a means of increasing their stock price. Some corporations even took advantage of low rates to take on debt to execute stock buybacks. Stock buyback activity was one of the largest buyers of stocks over the past 10 years. But in recent weeks that has dried up. S&P 500 companies have suspended over 25% in stock buybacks, and Goldman Sachs sees buybacks falling over $560 billion this year, providing additional headwinds for stocks. U.S. Small cap stocks have been hit especially hard, understandably so given their poor balance sheets are bloated with 56% more debt vs. their large cap counterparts. Technology and healthcare stocks fell but were the most resilient during this sell off due to strong balance sheets.



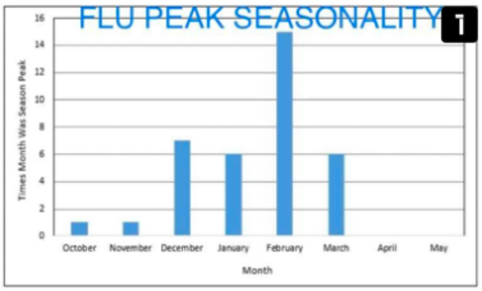
Bond markets were not immune. The high yield market has once again played its part as a "canary in a coal mine" with high yield credit spreads spiking to levels not seen since the Global Financial Crisis. Ford and Delta have already been downgraded to junk bond rating. With $10 trillion of corporate debt, close to 50% of U.S. GDP, there is been fear that corporations will find it exceedingly difficult to refinance debt in the coming months and quarters with falling revenue. Last week, Yum Brands sold bonds maturing in 2025 at a 7.75% yield. By comparison, Yum raised $800 million in September through 10-year debt with a yield of 4.75%. This type of example should continue to provide a headwind for companies with more than 80% of the $805 billion investment grade bond market at risk of being downgraded to junk rating.

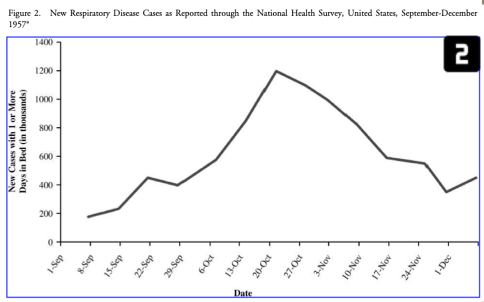


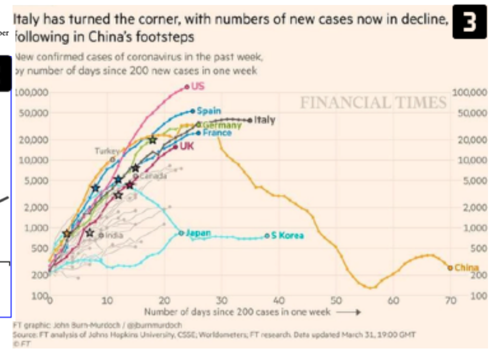
The turmoil in the oil market has remained relatively under the radar with Saudi Arabia and Russia choosing a less than an ideal time to engage in a price war. From top to bottom oil prices fell 66%. The oil industry is facing a higher surplus of oil than in 2015-2016 when oil plummeted 75%. Oil prices recovered some losses late last week on rumors that OPEC will cut up to 10 million barrels per day in production, equivalent to almost 50% of the combined production between Russia and Saudi Arabia. A 10 million barrel per day production cut, would require all oil producers to make cuts. Possibly, forcing U.S. oil producers to make cuts, which will be a tough pill to swallow given that their break even is around $40 per barrel. With a collapse in demand, a 10 million barrel cut may not be sufficient to buoy oil prices, an additional cut of 5 million barrels may be warranted.

Where Are We Headed

Successful investing requires wearing two hats; financial analyst and historian. Financial analysis allows us at a micro level to identify dislocation of future value vs. present value. While history allows us at a macro level to understand the opportunistic entry and exit points in a larger time frame. To say we have never seen anything like this is an understatement. In the early onset of the COVID-19 pandemic people often pointed to the muted effect of the 2009 H1N1 pandemic but it was clear from the early data out of China that COVID-19 is very different. In 2009-2010 estimated cases in the US exceeded 60 million, but nearly 30% of those over 60 years old had antibodies against H1N1 and the estimated mortality rate was just 0.03%; 100 times less than the current estimated COVID-19 mortality rate. The 1918 Spanish Flu Pandemic albeit having a higher 2.5% mortality rate is also a poor comparison in that virology and containment protocol were in their infancy. We find ourselves in uncharted waters as far as modeling total infections and deaths. However, there are glimmers of hope with promising antiviral and antibiotic cocktails to hold us over until we can get one of the many prototype vaccines in our doctors hands hopefully in 2021. When will we begin to open back up? I'm looking at three sets of data 1) Flu *(seasonality)*, 2) 1957 H2N2 Pandemic *(apex to trough)* and 3) Italy *(modern containment protocol)*.







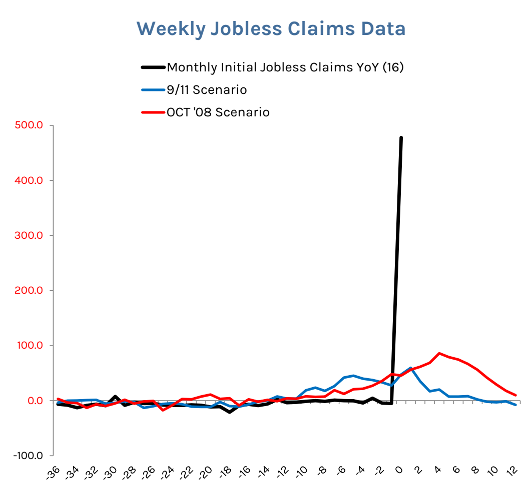
1) Some experts believe COVID-19 shares similar seasonality characteristics with the Flu, which would lead us to believe that the contagious nature of COVID-19 would fall in April and May as warmer weather and humidity increases in the northern hemisphere. 2) We can gather from the 1957-1958 H2N2 Pandemic additional timing characteristics which shows an apex at 42 days and a statistical trough at 83 days. 3) My best estimate is that the US lags Italy by roughly 2 weeks. When I model this data, it seems that around April 15 *(give or take a week)* would be a reasonable apex in the U.S. and Memorial Day is a reasonable target date for an infection trough.

From an economic perspective, it's naive to expect a V-Shaped recovery where it is business as usual in the second, third, or even fourth quarter of this year. We are, in fact in a recession, right now. Economic cycles exist and recessions are inevitable regardless of Fed intervention and fiscal policy. While COVID-19 was clearly the catalyst for this recession, make no mistake the U.S. was well on its way towards a recession as growth and inflation had both peaked and were decelerating. This is why Quartz Partners had actively reduced portfolio risk for significant periods in the 4th quarter of 2018 and through a significant portion of 2019. The U.S. had experienced its longest economic expansion in modern times and from a macro level, (3) events occurred that have an extremely high correlation to ensuing recessions:

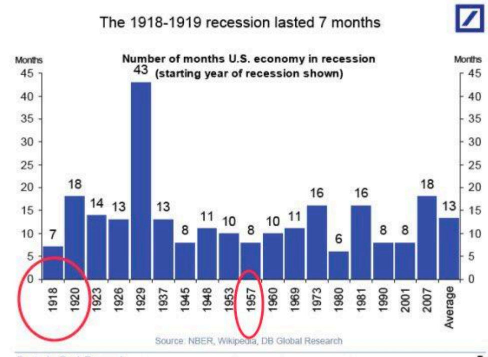
1) **Corporate earnings** per share peaked in the 3rd quarter of 2018. The average peak to trough of corporate earnings per share is 6 quarters which historically would put the earnings trough in mid 2020.

2) **The U.S. treasury yield curve inverted** in August of 2019. Yield curve inversions occur when longer dated bonds have lower yields than their shorter dated counterparts *(e.g. 10-year US treasuries have a lower yield than 2-year treasuries).* U.S. Treasury Yield Curve inversions have a 100% track record in predicting recessions with the average lag between an inversion and a recession is about 11 months. This again would put the start date of a recession in mid 2020.

3) **The Federal Reserve cut rates 4 consecutive times** without a single rate hike. On March 3rd the Fed cut rates for the 4th consecutive time which is highly indicative of an ensuing recession in the coming months.

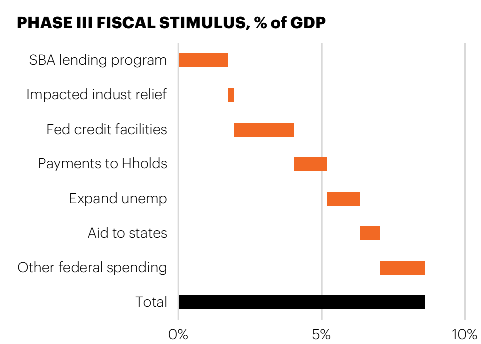


Despite the phase 1 trade deal with China, the U.S. remained on target for a recession when COVID-19 violently changed the trajectory, through an unprecedented velocity of economic destruction by first sending a supply shock by way of China shutdown then followed by a demand shock by way of global quarantine. This has brought the global economy to a screeching halt, and my expectation is that this will be the deepest peace time recession since the Great Depression. With 40% of the labor market materially impacted by COVID-19, I expect the unemployment rate to quickly surpass the previous record of 10.8% set in 1982. To put things in context in the last two weeks, unemployment claims are higher than any other period and have surged to just under 10 million with an expectation that they may peak at 25 million. That job loss would be more than double the 8.7 million positions cut from payrolls during the 2007-09 Global Financial Crisis and its aftermath. For every million in incremental jobless claims, credit card charge-off rates *(defaults)* typically rise by 1.50%. For reference, at the peak of the global financial crisis charge-off rates reached 10.50%. This could translate to charge-off rates rising from 3.7% to 37% *(25 x1.50%)*.



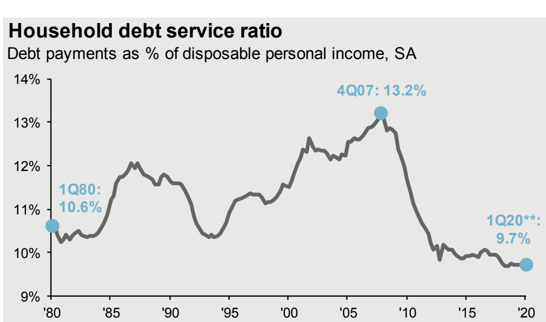
In the 1st quarter GDP is likely to fall -5% with another -25% in the 2nd quarter. It is my hope that 3rd quarter GDP recovers or at the very least stabilizes. Economic recovery will be highly dependent on the containment of a second wave of COVID-19. Recessions as deep as this will likely take years to get back to 2019 levels for GDP and unemployment. Outside of hyperinflation, it is unlikely that the Fed will raise rates until GDP and unemployment recovery fully. And from a historical perspective the pandemics of 1918 and 1957 resulted in recessions that lasted 7-8 months, with the average length lasting about 2.5 quarters. In comparison, this would put the end of the current recession somewhere in the fall of 2020.

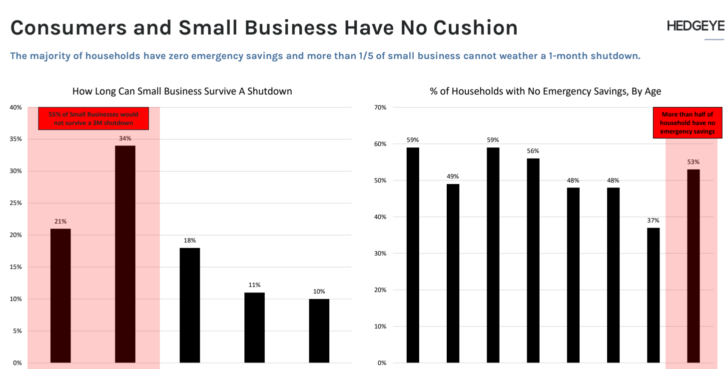
Both on the residential and commercial real estate fronts we should see continued downward pressure throughout 2020 and well into 2021. The spread between a 30-year fixed mortgage rate and a 10-year US Treasury bond typically hovers around 2.00%. The spread currently sits at 2.81% and is evidence that many lenders are quickly tightening standards which coupled with unemployment could reduce application volume by 75%.



Source: BEA, Federal Budget Office, FS Investments, as of March 27, 2020.

The Federal Reserve and the Government, despite their shortcomings, should be applauded for how quickly they jumped in to mitigate not a recession but a second Great Depression. In less than 60 days the Federal Reserve dropped rates to 0% and implemented all of former Fed chairman's Ben Bernanke's bag of tricks that were formulated on the fly during the 2008 Global Financial Crisis. The Federal Reserve is now buying assets at a rate of $1 million per second, ensuring the plumbing of the financial system continues to flow while the government is buying time by temporarily shoring up corporate and consumer balance sheets with $2.2 trillion in bailouts. House Speaker Nancy Pelosi and Senate Majority Leader Mitch McConnell have signaled that there is bipartisan support for a second stimulus bill of at least $1 trillion which would include a second round of direct payments to individuals along with support for the health care system. And there remains a possibility for a third stimulus bill that would focus on getting people back to work through an infrastructure spending bill. The immense monetary easing and stimulus instituted will eventually surpass the liquidity and $2.8 trillion of stimulus deployed in the Global Financial Crisis of 2008. In contrast to 2008, the quick action of the Fed and Government will likely compress the timeline on this recession by several months. For those wanting to debate the moral hazards of bailouts, let's table that for another day. There's no question that we will be paying for this for many years to come but I'd remind readers that the average business has less than 30 days of cash reserves and 55% of companies couldn't survive a 3 month shutdown. Consumers, who comprise up to 70% of GDP, are in far better shape at the onset of this than in 2008 with lower debt ratios. This silver lining comes with a very large caveat, consumers are only as good as their last paycheck as over 50% do not have emergency savings. This is why the U.S. Cares Act is so critical in buying time and bridging the income gap. It provides $1,200/adult + $500/child coming to most adults earning less than $100,000 and an additional $600 in weekly unemployment benefits for up to 4 months.





The data out of China has always lacked transparency. But we can make observations to help provide a roadmap for containment and reopening. China's initial reopening data is mixed. While a bounce in the official purchasing managers' index from a record low in February was inevitable, the scale of the rebound to 52 from 35 exceeded most economists' expectations. However the consumer hasn't rebounded as quickly. A Morgan Stanley online survey of consumers in 19 provinces last week found that while 86% of respondents were leaving the house for work, 69% said they would go out for essentials only, down from 75% in early March. This level of caution may be hard to overcome as long as both citizens and the government remain worried about a second wave of outbreak. Last Friday, Beijing ordered all of the nation's movie theaters to close again and a small county in Henan province Tuesday found itself locked down again due to fears about a renewed outbreak. Void of a vaccine a second and third wave of infections are almost certainties before next spring and we do not know to what measure of lock-down in the U.S. will be instituted. Governor Newsom of California insinuated this week that there is high uncertainty football will be back come this fall. This at the very least tells us there will be a lingering effect of social distancing into at least the 4th quarter of this year.

When Will The Market Bottom

So when will the stock market bottom, or has it already? If the market has bottomed it would mark the fastest peak-to-trough bear market. No bear market has ever made that trip in less than 3 months, with the median at 17 months. With stock markets forward looking, bear markets typically bottom 4-6 months ahead of the economy bottoming.

Bear markets are often punctuated by sharp rebounds before continuing their downward trajectory, and at the very least retest the lows. In the last few days of March we witnessed a textbook example of a bear market rally which starting with a 9.4% gain on March 24th. Typical of a bear market rally, US Treasury yields remained compressed and each bounce in stocks has seen lower and lower trading volume. The start of this bounce lined up perfectly with a quarter end rebalancing narrative for pensions and target date retirement funds that need to buy stocks to get back to target allocations. Based on technical charts a bounce to 2,700 to 2,800 on the S&P 500 would be entirely reasonable. From a historical perspective the DOW has had a one day gain of more than 10% (8) previous times, all during bear markets and 75% of those times the DOW was lower 6 months later.

S&P 500 peak to trough around recessions

Recession Dates	Peak Date	Trough Date	Peak to Trough	Pullback (Days)
May 1937 - June 1938	3/10/1937	3/31/1938	-54%	386
Nov 1948 - Oct 1949	6/15/1948	6/13/1949	-21%	363
July 1953 - May 1954	1/5/1953	9/14/1953	-15%	252
Aug 1957 - April 1958	7/15/1957	10/22/1957	-21%	99
April 1960 - Feb 1961	8/3/1959	10/25/1960	-14%	449
Dec 1969 - Nov 1970	11/29/1968	5/26/1970	-36%	543
Nov 1973 - Mar 1975	1/11/1973	10/3/1974	-48%	630
Jan 1980 - July 1980	2/13/1980	3/27/1980	-17%	43
July 1981 - Nov 1982	11/28/1980	8/12/1982	-27%	622
July 1990 - Mar 1991	7/16/1990	10/11/1990	-20%	87
Mar 2001 - Nov 2001	3/24/2000	10/9/2002	-49%	929
Dec 2007 - June 2009	10/9/2007	3/9/2009	-57%	517

SOURCE: RBC US Equity Strategy, Haver, S&P. 1945 recession excluded.

The bulls will tell you that the market bottomed in March at 2,304, and their argument has some teeth to it. There have been five other occurrences when the S&P 500 fell consecutively to start the year in January, February and March. Four of those years came during a recession and one occurred in 1982 as the US exited a recession. In those 5-years, the market fell on average another 9.80% and didn't bottom for another 5 to 8 months. If we used this as a guide, the S&P 500 would bottom right in line with the March lows at around 2,330. To add more relevancy to the argument that the March lows of 2,304 may be an ideal bottom for the S&P 500, the average fall during a recession from the peak is 32%. This would put the S&P 500 bottom at 2,302.

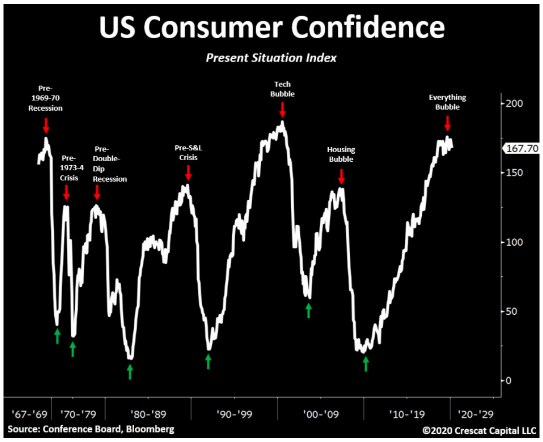
The bears will tell you that we are just warming up, and in many respects they have a superior argument. For starters, we have yet to see a successful test of the March 20th low and 2,302 implies the economy in large part will start back up by late April. The March lows did not account for extending the quarantine past Easter or 10 million jobless claims in the past 2 weeks. To add to this we will likely see the worst collapse in GDP and unemployment in the second quarter in almost a century which puts us in the Global Financial Crisis, Great Depression conversation. In the last two recessions, 2000 and 2008, the S&P 500 fell on average fell 53% which would put a floor on the S&P 500 around 1,600. Bottoming below 2,000 on the S&P 500 begins to make even more sense when you consider that Goldman Sachs expects corporate Earnings-Per-Share ("EPS") to decline 33% to $110 per share. Using a market multiple of 16 times EPS (16x$110=1,760) would put fair value on the S&P 500 right around 1,760.

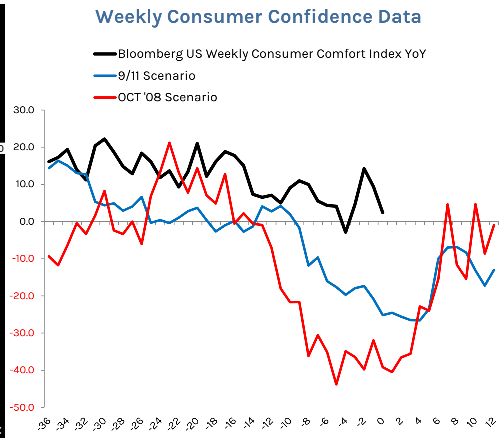
There are no easy answers. Valid arguments exist on both sides for 2,300 *(bulls)* and 1,600-1,760 *(bears)* as bottoms for the S&P 500. We are in a tug of war between the bulls and the bears with an uncertain economic impact of COVID-19 and the mitigation of said damage through epic stimulus. As with most things, the truth often lies somewhere in between. I'm not a fortune teller, but everyone looking for answers, reading this is looking for me to draw a line in the sand. Unfortunately I'd say we are halfway there with another 26% down from yesterday's stock market close. This would put the floor on the S&P 500 around 1,950. I say this tongue-and-cheek knowing that the government is pulling out all the stops to put a floor on the S&P 500 at 2,300.

Where Are The Opportunities.

For Quartz Partners, pinning hopes on an arbitrary S&P 500 price target is not a prudent way to manage client investments. For us we are sticking with our time-tested macro model and using S&P 500 price ranges as general guidelines as well as looking for market capitulation *(see phase 3 below)*. When we look at past bear markets we typically see (3) phases.

> **Phase 1:** Interest rates, energy and commodities fall off a cliff.
> **Phase 2:** Fast bear market rallies as investors "Buy the Dip"
> **Phase 3:** Capitulation; Bankruptcy and defaults spike, consumer sentiment bottoms, VIX *(measure of stock market volatility)* falls below 40, and several consecutive days of greater than 80% upside.





While we are waiting for confirmation of "Phase 3" of this bear market to buy stocks and high yield bonds, on Monday the 30th we started to "nibble" with a small position in commodities that have an overweight to oil. Once we see a confirmation of "Phase 3" our playbook is to continue to build out the remainders of our portfolios.

US Stocks

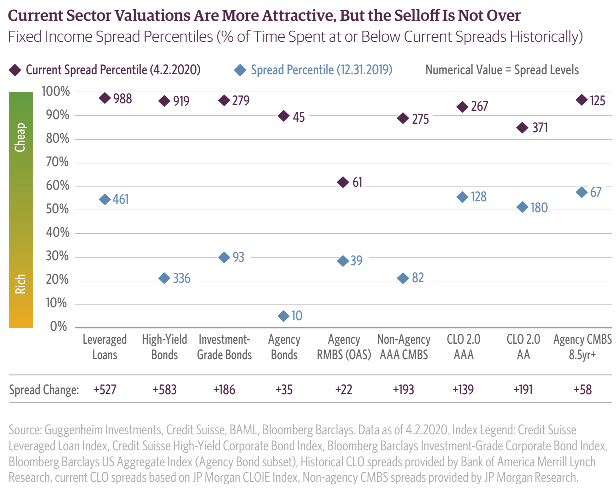
We have quite a shopping list for U.S. stocks building. The S&P 500 will benefit when stocks rebound, however cyclical sectors typically outperform coming out of bear markets, while utilities and consumer staples underperform. With this said we are looking tech, materials, and industrial stocks. To add to this small cap value stocks may be on our radar which have greatly underperformed for years. There are more small cap stocks in the Russell 2000 index priced below their book value than at the peak in the Global Financial Crisis. Following each of the eight bear market troughs in the past 40 years, small cap value stocks have outperformed. To a large extent the entry point on U.S. small cap stocks will be predicated on their ability to digest the debt on their balance sheets.

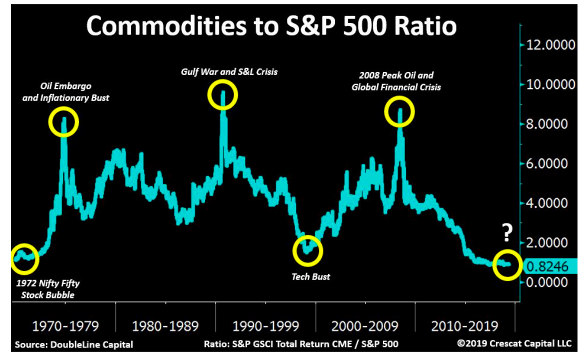
Foreign Stocks

Emerging markets could be the next domino to fall, as they have 60% more debt than they did during the Asian financial crisis of the late 90's. For the first time in decades China is on the brink of what could be the first credit downturn in decades. Household debt levels in China hit a high of $7.9 trillion in January following a painful trade war with the U.S. Emerging markets present an attractive opportunity that we have been watching for years. MSCI Emerging Market's index Price-to-Book is around 1. Only two other times it was this low, 2002 and 2008. Once the dust settles and emerging market currencies stabilize vs. the U.S. dollar, emerging markets should outperform.

Bonds

Within the fixed income universe, investment-grade corporate bonds, municipal bonds, as well as high yield bonds are beginning to look attractive. How cheap are corporate bonds? Looking at the historical interest rate spread relationships to U.S. Treasury bonds, nearly every bond class is at or near extremes. We have yet to see a cascade of downgrades or a spike in defaults, so spreads still have some room to rise. This is why we are still watchful. When the dust settles, the runway for bonds may be limited due to the massive shot of stimulus and high levels of debt. It is likely that we will enter a bear market for bonds when the economic cycle transitions from deflationary to inflationary, but that is years away.





Commodities
We've already discussed the deeply depressed values in oil, which in itself presents a great investing opportunity under $25 per barrel. In many respects commodities are a proxy for emerging market stocks and a relatively high correlation. Commodity valuations vs. stocks are at levels we haven't seen since the Asian financial crisis back in 1997.

This is all from me for now, remember great pain brings about great opportunity. Thank you for letting me use this to mind dump and please don't hesitate to reach out to me with any questions at kwebber@quartzpartners.com.

Stay safe,

Kyle P. Webber, Managing Partner
Quartz Partners Investment Management

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