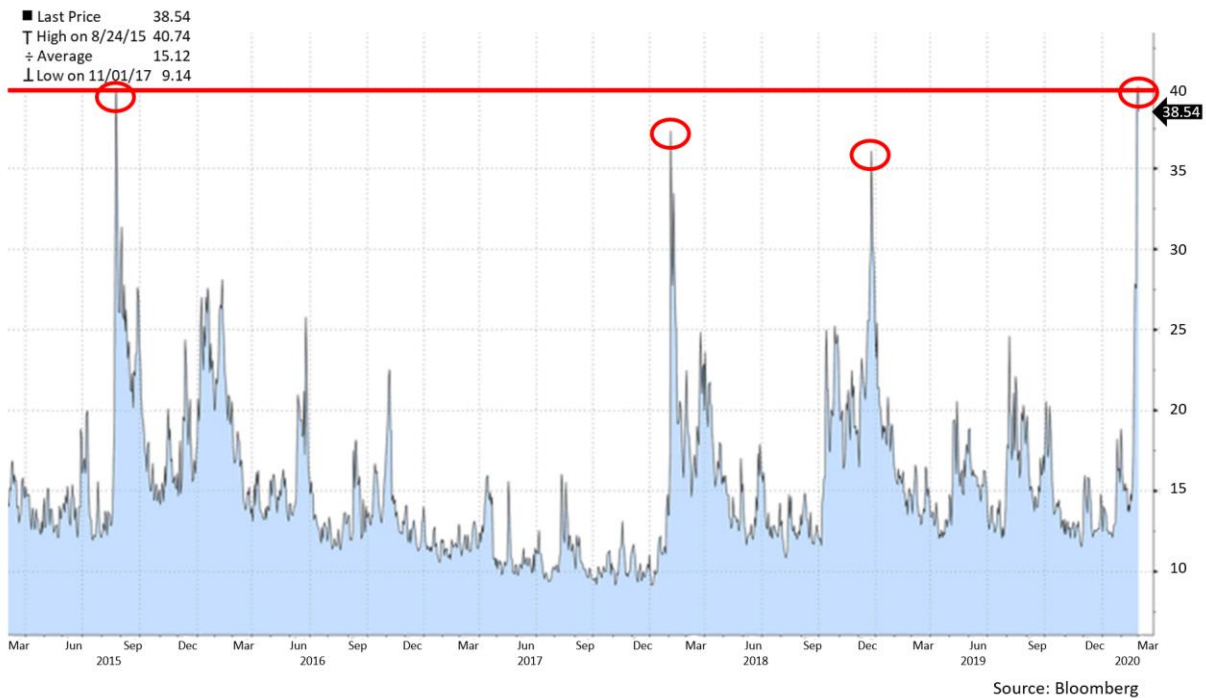


Coronavirus Correction, What is Discounted Now?

Markets have violently corrected as fears of an economic shock brought on by the coronavirus are factored into investors thinking. A few weeks ago, equity investors were willing to assume the virus was likely to be limited in scope to China. Those assumptions changed as hot-spots for contagion cropped up throughout the rest of Asia, the Middle East and Europe. While the impact in the US has been fairly contained, during the past week investors have gradually assumed that the US would also have a negative impact from the virus, as evidenced by US Government bond yields plunging to their lowest level on record. We chalk this up to a safety trade for both International and US investors that are concerned a Chinese style quarantine might be required to halt the progress of this disease and drive the worldwide economy into a recession.

One characteristic of this violent move is a rise in volatility. Over the past five years, the US VIX index (implied options volatility) has spiked past 30% implied volatility four times. The most recent was last week when it crested 40% implied volatility. That is a fairly scary reading and comparable to the other three peaks. In 2015, China devalued their currency, leading the index to spike to over 40% implied volatility. In early 2018, Trade War fears and a Fed commitment to tightening drove the implied volatility over 35%. In late 2018, the Fed recommitted to overtightening, driving implied volatility over 35%.

CBOE Volatility Index 2015-2020



What do these episodes have in common with the Coronavirus? Each represented a headwind for economic growth that could be substantial and long lasting, and markets pitched a fit. So the natural question was, what has the market discounted now?

From our reading of the past five years, a surge in volatility has generally indicated a short term bottom in markets and S&P 500 returns over the next 1, 3, 6 and 12 month periods have been positive in the three prior surges, as seen in the table below.

S&P Returns Post Volatility Peak

VIX Surge	1 Month	3 Month	6 Month	12 Month
8/24/2015	2.2	10.9	3.1	17.4
2/5/2018	2.9	1.0	8.3	1.1
12/24/2018	12.5	19.7	26.7	39.5

Source: Bloomberg

Markets anticipated economic growth might be poised for a resurgence up until very recently, as the manufacturing weakness from last year was finally easing and some indicators from Europe and Asia were showing a firming in activity. That has abruptly changed. We saw extremely weak economic readings over this past weekend from China. Their manufacturing and services Purchasing Managers Indexes both dropped into record low territory, posting a contraction in activity that was even weaker than during the Great Financial Crisis. As we listen to some of our favorite economists, they seem to believe that there is likely to be a dramatic recovery from this weakness as China reopens factories and halts the spread of the virus. There are some observers that worry the infection rate could re accelerate in China as activity resumes, and the situation will bear watching. At the current time though, it seems like the Chinese authorities have taken effective measures to halt the spread of the virus. Interestingly, Chinese markets at this writing are actually up over the past month, where most developed markets are down 10% or so.

Other geographies still have the containment of the virus ahead of them, and we are unsure of the extent of measures that will be needed to deal with it. Developed markets rioted last week, as it is impossible to estimate the extent of the economic impact these measures will have. Europe and Japan are each in especially vulnerable positions, since growth has not been robust there to begin with and much of their economies are geared towards exports to China. The US may be less vulnerable, as we are more reliant on Imports from China than exporting to them. The disruptions in supply chains will likely result in pressure on our economic numbers, but as China returns to work we would expect that any parts shortages should ease in the foreseeable future.

So what should we expect as we move forward with the global response to this epidemic? We anticipate several items are likely, including:

1. Central banks will indicate they are ready and willing to act if they detect weakness in their respective economies. Indeed, The Bank of England and Bank of Japan each already pledged to act to stabilize financial markets. The Federal Reserve has opened the door to a US interest rate cut. The Bank of China has been aggressively easing to provide their economy a cushion for the downdraft in growth. We believe other central banks will likely join in and coordinated action to respond to the crisis may be forthcoming as the group of seven (the heads of the seven largest central banks) convene for a teleconference this week.
2. Inflation and Commodities will probably remain pressured. Demand is being reduced for commodities as quarantines and travel bans impact economies. Russia has pledged to work with OPEC + to stabilize energy markets, so production curtailment is likely. We will likely need to see a resurgence in growth later this year to see sustainable strength in these measures. Fortunately, most economists expect that resurgence to occur.
3. We expect strong actions to be taken by health authorities worldwide, and those actions will likely reduce economic growth over the short term. The Chinese experience already suggests this, so we are watching their developments to get a glimpse into how long it takes to recover from an event like this. Fortunately, the Chinese experience has also heightened awareness and can also provide some guidelines for appropriate containment measures. Additionally, Cold and Flu season is winding down for most developed markets with the coming of warmer weather. With any luck conditions for continued spread of the illness may limit its headway as summer months approach, providing a needed respite for treatments and countermeasures to be developed.
4. Globally stimulative economic policies are likely to be undertaken. China has already had their "Whatever it takes" moment like Mario Draghi had in Europe in 2012. They have introduced measures to bolster growth, including lower rates, auto incentives, reduced value added taxes and the like. We anticipate more on that front. There may be further announcement from the US if the economy weakens. Low rates are likely to spur better housing and durables purchases in the US, acting as a counterbalance to other weaker sectors. Europe has been a significant underachiever when it comes to providing incentives for economic growth. This crisis may give them the impetus to provide some form of coordinated fiscal push, but most observers remain skeptical. "We will believe it when we see it" seems to be a common sentiment.
5. Politically, weaker growth plays for opposition parties worldwide. We hate having to inject politics into a conversation like this, but it remains an unpleasant reality. As economic uncertainty grows, anti-incumbent sentiment grows. Market reactions to this will vary from market to market, but it also provides an incentive for current officeholders to provide visible support for their economies either through fiscal stimulus, deregulation or tax incentives. Couple the economic impact from the current health scare with the prospects of a Hard Brexit, and we can envision a situation where Europe (both England and the Continent) changes their stripes and becomes more pro-growth.



While we could sit here and spout opinions for a long time, the real question most stockholder have is “what do I do now?” We see extreme sentiment measures as evidenced by high volatility readings (the VIX) and high put to call readings. Typically, those readings coincide with peak fear, and markets have tended to stabilize after them. In the US, we had three days of 3% or larger declines in a row over the past week. Normally, after just ONE 3% decline the market goes on to low double digit percentage gains over the following year. Unfortunately, this is a new type of problem for the markets. While there have been other high profile outbreaks of infectious diseases, none have captured the attention of the market like this. Most economists have already anticipated economic weakness and marked their forecasts down accordingly, but we have not seen the indicators yet and that is all still to play out ahead of us.

Over the next few months, our base case is that the world economy is going to suffer a Chinese demand shock that will likely wear off fairly quickly. The volatility we have seen over the past week is likely to subside at some point, but we are dealing with an unpredictable force of nature. What investors want to do is maintain their exposure to higher quality holdings that allow them to participate in the long term growth of economies worldwide with an eye towards the super-trends of the future. Those trends include Emerging Market middle class consumption, technological advancements transforming existing businesses and new communications technologies to name a few. A short term downturn in markets is providing the opportunity for investors to gain good exposure at much better prices than just a week ago.

As always, if you need any additional information, please feel free to contact any of us.

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03/2/20
S&P 500 – 2,954
Russell 1000 Value – 1,185
MSCI ACWI ex-US- 270

Refer to the following page for more information on the commentary presented. This is pertinent to this letter and should not be reproduced or duplicated without this disclosure.



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