

Market Volatility Update: Challenges and Opportunities

March 2020

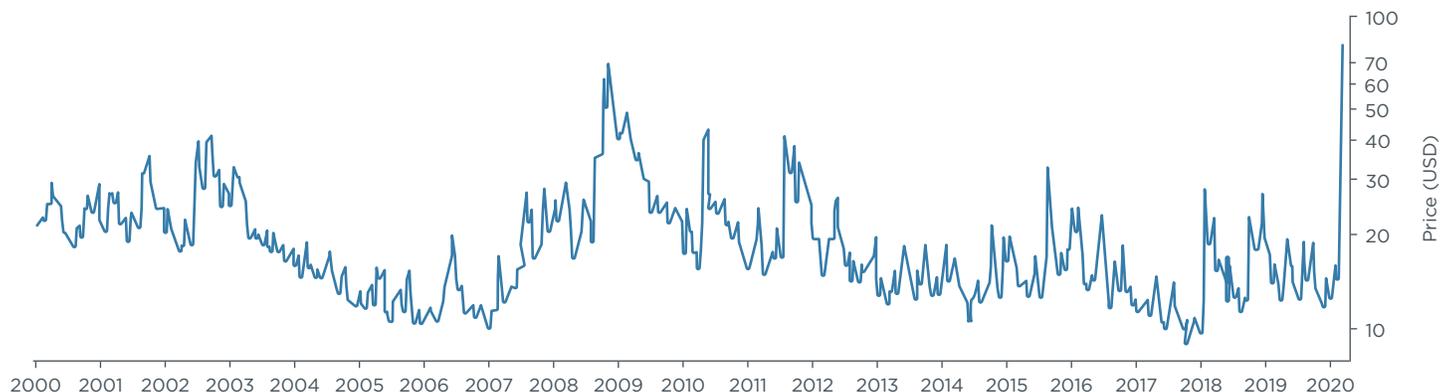
Both stock and bond markets continue to struggle with the COVID-19 global pandemic, clearly an unanticipated major global event. The reset in valuations has been swift and painful—a 30-35% decline in three weeks from market peaks on February 12 (Dow Jones Industrial Average) and February 19 (S&P 500 and Nasdaq). After nearly a decade of muted volatility, the Chicago Board Options Exchange Market Volatility Index (VIX) has reached record highs in recent days (see Chart A) fanning the fears already in place over the unpredictable nature of the coronavirus. A flurry of other factors has exacerbated the situation: ubiquitous social media commentary and news flow (which was not present to the same degree in past meltdowns), a surprise move by Saudi Arabia to depress the price of oil, and then demand-depressed global markets when Russia wouldn't accede to production cuts. This has led to unprecedented action around the globe to lock down citizens and economies.

Given the unique set of circumstances, it is more important than ever to retain perspective and try to remain calm. We highlight a number of issues below that leave markets and economies on a more solid footing than during prior systemic shocks. That said, we also know there's no way to accurately predict the life cycle of the disease, the economic steps that will end up being necessary to mitigate its spread/morbidity, or the speed with which activity can be jump started following the current crisis. These signs—and others—point to ongoing volatility and unease at heightened levels.

Through all market cycles, we recommend having a long-term strategy with asset allocation targets and regular rebalancing when sectors become overweighted in your portfolio. With that as our baseline, in this volatility update, we lay out in greater detail where we are today and the considerations, perspectives, and practical advice to keep in mind as the situation continues to evolve.

Chart A: Price History: CBOE Market Volatility Index (VIX) (Logarithmic scale) *Date range: March 17, 2000 to March 18, 2020*

Lowest: Nov. 24, 2017 - 8.56. Highest: Oct. 24, 2008 - 89.53



Note: All data sourced from either Bloomberg, LLC or FactSet unless otherwise specified.

Our Perspective: What's the Same or Different Relative to Prior Economic Shocks?

The U.S. entered this shock on relatively solid economic footing, with no major excesses apparent in the system as there were in the 2001-02 (tech bubble) and 2008-09 (housing bubble) shocks.

- Significant regulation, including tighter capital requirements and stricter rules regarding proprietary trading activities, has left the banking system in sounder shape, generally speaking.
- U.S. consumer balance sheets and income statements were in a much better place entering this period, with overall net worth at record highs, the housing market strong, and unemployment at record lows.¹ The confluence of these could tee up a sounder jumping off point, particularly if the course of the disease ends up being relatively short and activity can be restarted sooner rather than later. The initially hit portions of China are potentially peaking in the number of infections, prompting Chinese officials to release some travel restrictions and to reopen factories.
- Central banks around the world wasted little time in taking quick and aggressive action. The U.S. Federal Reserve has already cut policy rates to near zero—outside of regularly scheduled meetings—as well as deploying a variety of programs to support overnight cash markets, provide additional interest free liquidity to banks, and resume quantitative easing (see additional comments on the Fed moves below). Central banks from the EU, UK, Australia, China, and Japan have taken action as well.
- Governments around the world are also stepping up with much more aggressive fiscal interventions than were present early in the 2008-09 crisis. To promote economic stability in the U.S., many

actions are on the table including: delaying income tax payment deadlines, providing aid for specific industries, offering zero cost loans and other assistance to small businesses, increasing wages for lower-income workers, and sending checks to citizens.

- The ubiquity of social media and the preponderance of assets in passively managed funds can exacerbate volatility as markets “discount” news and events with split-second efficiency. We believe it’s important to separate out the noise from what may be long-term trends.
- Investors tend to avoid information vacuums and the unknowable nature of the course of the coronavirus creates just such a vacuum. Adding to the lack of solid information, many companies have simply withdrawn guidance on revenues and earnings forecasts as they themselves have no way to determine the effects of a situation changing on a daily (perhaps even hourly) basis.
- Nonetheless, earnings season will start in a few weeks and though the numbers themselves may not turn out to be important, the commentary that companies make in their investor calls will be closely scrutinized.
- Companies have been able to draw on short term credit lines and banks have been able to respond leaving a possibly better capital cushion. Politicians and officials continue to search for additional ways to backstop businesses and consumers alike to keep economies as intact as possible until more normal economic activity can be rebooted.
- The U.S. Treasury yield curve has returned to a positive slope. This would seem to hint that traders think growth can continue on the other side of this. It could potentially invert if the outlook indicated that economic growth was going to fall off a cliff.

Reviewing the History of Recessions and Stock Market Performance

Recession Period	GDP Decline Peak to Trough	S&P 500 P/E Multiple	S&P Decline Peak to Trough	Recapture Loss* From Trough (Months)	"Flat" Return Period** (Months)	% Return 1-Year Past Trough	% Return 2-Year Past Trough
7/1953-5/1954	-2.6%	9-11x	-14.8%	6	14	37.8%	98.1%
8/1957-4/1958	-3.7%	12-13x	-20.7%	11	14	31.0%	43.7%
4/1960-2/1961	-1.6%	18-19x	-13.4%	3	18	30.7%	4.6%
12/1969-11/1970	-0.6%	16-17x	-34.7%	22	39	43.7%	59.7%
11/1973-3/1975	-3.2%	11-12x	-48.2%	69	91	37.9%	67.1%
1/1980-7/1980	-2.2%	9x	-16.7%	19	20	44.4%	26.6%
7/1981-11/1982	-2.7%	9x	-20.0%	2	21	66.1%	77.4%
7/1990-3/1991	-1.4%	14-15x	-19.2%	4	7	33.5%	45.2%
3/2001-11/2001	-0.3%	27-28x	-47.4%	57	76	36.1%	49.6%
12/2007-6/2009	-5.1%	17.3x	-55.2%	49	54	72.3%	103.4%
Average	-2.3%		-29.0%	24.2	35.4	43.4%	57.5%

* Every bear market or correction coinciding with a recession is based on a market peak to trough. Recapture loss means from trough to former peak.

** "Flat" return period refers to the time from the S&P 500 peak to the date when losses from the market plunges associated with recession were fully recovered based on price only.

Several key factors stand out when observing the history of U.S. recessions and corresponding stock market performance as measured by the S&P 500 Index.² First, the magnitude of output decline (measured by GDP)³ and the related duration for each episode has a significant impact on the severity of each stock market decline. Not surprisingly, above average GDP contraction during recessionary periods since WWII are associated with more extreme bear market episodes for U.S. equities. For example, the 1973-75 and 2007-09 recessions lasted 16 and 18 months and registered relatively high peak-to-trough output contractions of -3.2% and -5.1%—with associated stock market plunges of -48.2% and -55.2% respectively. The one exception was the 1957-58 recession, when the economic deceleration was above average (-3.7% peak to trough), but the equity market drawdown was relatively minor at -20.7%.

This leads to a second key factor, the importance of valuations. As shown in the table above, the valuation metric for this exercise is the price earnings multiple (P/E) of the S&P 500. To be sure, the absolute P/E level

can affect the depth of a stock market decline during recessionary periods. The aforementioned example of the 1957-58 recession that produced a severe GDP drop of -3.7% with just a -20.7% market decline was probably due to the absolute low P/E level at the time of just 12-13x. Similarly, but at opposite extremes, the early 2000s was barely a blip in terms of GDP contraction (-0.3%), yet the benchmark S&P 500 plummeted -47.4%, due in large part to P/E multiples contracting from extreme levels of 27-28x to average levels of 15x. A summary of the GDP contraction/valuation analysis and corresponding stock market performance is shown below. For periods with:

- Above average GDP decline/Above average P/E multiple: 1 period, -55.2% market drop.
- Above average GDP decline/Below average P/E multiple: 4 periods, -26% average market drop.
- Below average GDP decline/Above average P/E multiple: 3 periods, -31.8% average market drop.
- Below average GDP decline/Below average P/E multiple: 2 periods, -18% average market drop.

Admittedly, 10 recessions is a relatively small sample size. However, it still validates what we would expect: equity market returns during recessionary periods experience more severe drawdowns when the GDP contractions are above average, combined with higher P/E ratios—and vice versa.

Potential Investment Implications for 2020

As of this writing, the P/E multiple on the S&P 500 is 14.5x based on trailing earnings per share (EPS). This is near the average of the last 50 years, but well below the average of the last 20 years which excludes the sub-10x multiple valuations of the 1970s and early 1980s. Second, there does not appear to be a significant degree of “excess” in key sectors of the U.S. economy today: housing, equity valuations, bank lending, and consumer debt are currently not at extreme levels. Nevertheless, Wells Fargo Securities (WFS) projects the U.S. will enter a recession in Q2-Q3, with GDP declining -1.4% on a peak-to-trough basis. Keep in mind, though, depending on the source and timing of the estimate, you’ll find wide disparity among GDP forecasts.

Based on the history of recessions and stock market performance, current valuations and forecasts of a mild recession suggest equity markets could potentially rebound fairly quickly once investors begin to look beyond the anticipated downturns in Q2 and Q3. However, there is additional downside potential due to the uncertainties surrounding the coronavirus. We’re keeping a close eye on current events and market activities and will continue to provide updates as the situation unfolds.

Our Perspective on Recent Fed Actions

To be clear, the timing and delivery of the Fed’s last rate cut (Sunday, March 15) did not produce much confidence. It possibly gave the impression of “What terrible things do they know that we don’t?” But if you take a step back to examine the specifics, the Fed’s announcement should be positive for markets:

- The Fed’s actions were fully anticipated by investors, just not the timing and the delivery.
- The Fed lowered its target for the Fed funds rate by one percentage point (between zero and 25 basis points). While some investors seem to believe this may be insufficient to meaningfully affect economic activity and that monetary stimulus policies no longer work, recent history suggests otherwise. Case in point, once the stock market collapsed in

late 2018, the result was synchronized global easing that ended the economic slowdown by Q4 2019.

- The Fed announced it will increase its holdings of Treasury securities by at least \$500 billion and its holdings of agency mortgage backed securities (MBS) by at least \$200 billion. This is effectively another QE, which is a de-risking of the market. When the Fed buys long term Treasuries and MBS, it takes duration risk and prepayment risk out of the market.
- The Fed also announced the reduction of bank reserve ratios to zero to support lending during the crisis.
- Finally, the Fed announced coordinated foreign exchange (FX) swap lines with other major central banks of the world, to assure the availability of global dollar liquidity.

More Signs of the Bottom

- The Market Volatility Index (VIX) is currently near 80, its highest level ever and exceeding the point reached for the bottom of the 2008 stock market crash.
- Stock prices are oscillating by almost 10% per day, which is typically witnessed only near major market lows.

Government Action

President Trump declared a national emergency on Friday, March 13. This news finally got the attention of the stock market resulting in a market rebound, even if it was short-lived. Here are some of the key announcements:

- The Federal Emergency Management Agency (FEMA) will be able to unleash \$50 billion in funding to help states and localities set up mobile hospitals and shelters while assisting with public safety. Laws will be waived that put limits on telehealth medicine, making it more accessible. (Telehealth is the use of digital information and communication technologies, such as computers and mobile devices, to access health care services remotely.)
- Drive-through coronavirus testing will be made available at Walmart, Target, Walgreens, and CVS. Google is working on a website to provide information related to identifying symptoms and obtaining coronavirus testing.

On March 17, the Trump Administration proposed a \$1 trillion aid deal with the following:

- An initial \$250 billion for direct payments for households—about \$1,000 for every American based on income brackets (scheduled for release at the end of April).
- \$500 billion to boost small businesses.
- \$50 billion for the airline industry.

In this period of unprecedented uncertainty, any news on actionable items is construed as a plus.

More Green Shoots from China

The number of new cases and deaths stemming from China has rolled over from a peak of over 6,000 per day to a near standstill since the beginning of March. Time will tell but investors are to some degree looking to China as a test case (with a five-week head start) for the future impact on Europe and the U.S. To put this in perspective, several experts on epidemiological curves were predicting as recently as early February that China would reach 30 million total cases by the end of February, but they ended February at around 100,000. (Source: Coho).

- As of Sunday, March 15, the World Health Organization (WHO) reported that China had 27 new confirmed COVID-19 cases while the rest of the world had 10,955.
- Apple, Inc. has reopened all stores in its Chinese market, but also said on March 13 that it would close Apple stores everywhere else for two weeks.
- The work resumption rate outside of Hubei province, the epicenter of the coronavirus outbreak, is about 60% for small and medium firms and over 95% for larger firms.
- Pollution levels according to the China Air Quality Index continue to rise.

Admittedly, China took draconian government measures that would be deemed unacceptable to the west: business shutdowns, home quarantines, mask-wearing requirements, and strenuous temperature checks. At the same time, Europe and the U.S. have prescribed some tough medicine as well:

- The Italian government has essentially locked down the entire country.
- Last week, President Trump announced a travel

ban on European nationals coming from the European Union.

- Sports entities in the U.S. have cancelled or suspended scheduled events (including the NBA, NCAA, NHL, MLB, and the Masters Golf Tournament).

Elsewhere in the U.S.:

- About 6.7 million people in the San Francisco Bay area have been ordered to stay at home for three weeks except for essential needs.
- New Jersey, New York, and Connecticut are recommending curfew.
- Numerous states and major cities in the U.S. have closed restaurants and bars.

Update on U.S Testing Capabilities

We believe the stock market's main fear is the unknown. Absent a cure or vaccine for COVID-19 (which is in the works), efficient testing is the best path to clearing up some of the unknowns. Indeed, testing is key to isolate infected people early to contain the problem. South Korea's testing efficiency stands out. Its total virus cases have leveled off at around 8,000. The aforementioned drive-through testing initiatives by the U.S. and the Google website are a good start, but the entire testing process needs to be improved and monitored as we go forward.

Challenges Lead to Opportunities

In our opinion, the Asian crisis in the late 1990s taught global investors an important lesson: the global economy is not a house of cards but rather a deck of cards. When the Southeast Asian region, arguably the main driver of global economic growth at the time, cratered in the late 1990s, the rest of the world was supposed to follow. Yet, in the U.S. year-over-year GDP growth *accelerated* from 4.3% from 1996 to 7.6% in mid-2000. So rather than a house of cards on the verge of collapsing, the global economy showed it was more like a deck of cards with capital moving toward regions offering the best growth opportunities (e.g., the U.S.).

To be clear, we're not saying the U.S. will escape recession, and a recession is all but guaranteed in Europe and Japan. But while an outflow of workers is expected from restaurants, live entertainment, and airlines, for example; other opportunities arise such as Amazon looking to hire an additional 100,000 workers.

Our Recommendations

As detailed in some of our previous communications, we are recommending specific guidance based on the recent market volatility:

- We have downgraded Master Limited Partnership exposure from Overweight to Neutral.
- We have moved from recommending Neutral allocation to a modest Overweight in equities, with additional allocations to U.S. large-cap stocks.
- Within fixed income, allocations to credit (Muni HY and Preferreds) were increased while still maintaining an Underweight to strategic targets.

At the same time, we realize there may be case-by-case situations in client accounts (and under these recent extreme conditions) that warrant discretion regarding

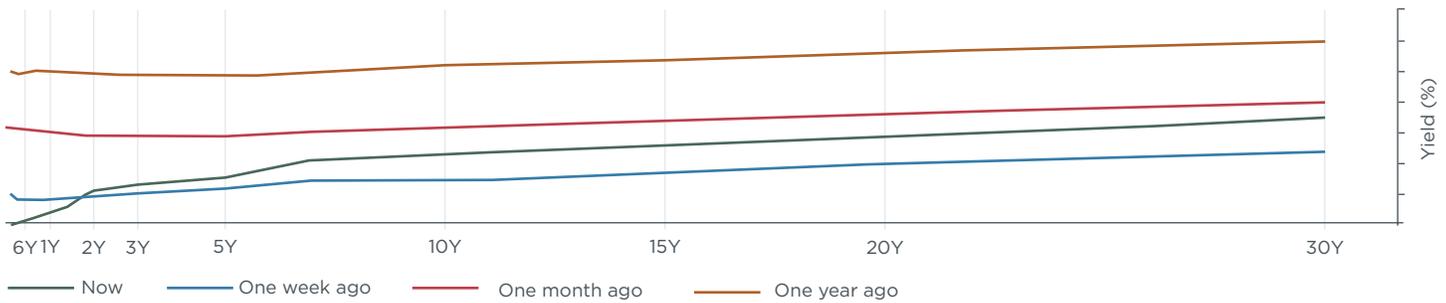
the timing of the selling: taxes, cash flows, rebalancing into equities, etc. However, we would not recommend allowing accounts to get too far below tactical targets.

Looking Past the Current Coronavirus Triggered Market Volatility

Twelve months from now we believe the U.S. will have the election cycle behind it, the UK will have negotiated a variety of trade deals with the EU and other trading partners, and hopefully Brexit will be a long-ago event. Supply chains will likely be more diversified and global activity should be solid enough to support increased Capital Expenditure (CapEx) and other forward looking investment. The potential for lower energy prices and interest rates should prove amenable to a stabilizing economic environment.

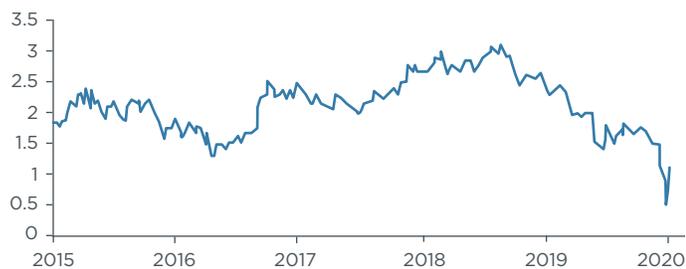
Additional Charts for Reference

Yield Curve (United States)



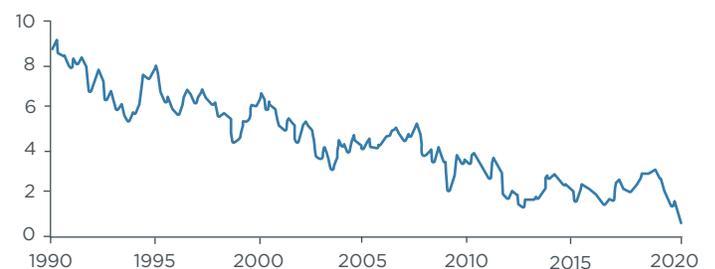
Source: *Tullet Prebon Information*.

U.S. 10 Year Note: Five Years of Yield History



Source: *FactSet*.

U.S. 10 Year Note: 30 Years of Yield History



Source: *FactSet*.

Endnotes

¹Wells Fargo Investment Institute, Market Charts Turning Data into Knowledge - First Quarter 2020, https://wim.sp.wellsfargo.net/wfii/Pages/Quarterly_Market_Update.aspx

²S&P 500 Index is a capitalization-weighted index calculated on a total return basis with dividends reinvested. The index includes 500 widely held U.S. market industrial, utility, transportation, and financial companies.

³Gross Domestic Product (GDP) is the monetary value of all finished goods and services made within a country during a specific period. GDP provides an economic snapshot of a country, used to estimate the size of an economy and growth rate. GDP can be calculated in three ways, using expenditures, production, or incomes.

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