TOP 10 MOST FREQUENTLY ASKED INVESTOR QUESTIONS

In this issue of Strategy Insights *we provide our perspective on common questions we've been getting from investors as they grapple with the market volatility resulting from the COVID-19 pandemic and unprecedented monetary and fiscal policy responses.*

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As our longtime readers know, we often gravitate toward using a musical or pop culture reference to help characterize our view of the investment landscape. While the last six months have been nothing short of tumultuous, we're sticking with our previous choice for 2020: The Grateful Dead's 1970 cult classic "Truckin'." Originally chosen to depict the economy that just kept moving along, the song's lyric "...what a long, strange trip it's been..." is perhaps even more fitting now.

We entered 2020 from a position of relative strength following a turbulent 2019, as green shoots in the global economy were finally beginning to form and trade tensions with China were fading into the background. Little did we know that the seemingly relentless climb of the economy and markets would come to a screeching halt in late February, driven by a novel coronavirus (COVID-19) and a subsequent global economic shutdown. The ensuing market volatility was record-setting just about any way you measured it.

Yet, as of June 30, 2020, the S&P 500 has posted an unbelievable comeback, with the index within about 8% of its all-time high. Although "Truckin'" might seem inappropriate given the wild ride we've been on so far this year, clearly the market found a way to "keep on truckin'," albeit with the help of the metaphorical "monster truck" of the Federal Reserve (Fed), which took swift, bold steps to inject much-needed liquidity into the system. We attribute the strength and momentum of this year's rebound to the fundamental support beams of the Fed's #unprecedented monetary policy intervention and to Congress's extensive fiscal policy actions.

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We are surprised how far we have come in just several months, and investor sentiment feels like it has turned from outright fear of the unknown to a serious case of FOMO (fear of missing out). Our primary concern now is whether the market is able to continue to fuel this rally amid a lack of meaningful positive catalysts. Without a significant improvement in the economic and earnings growth backdrops, we may be facing a futile bounce off near-zero activity levels, but what we need is a sustainable reacceleration after the economy reopens.

We continue to monitor a laundry list of possible risks to a sustained rebound:

- a potential second wave of COVID-19 (either seasonally or as a function of multiple virus curves);
- slower news on vaccine trials and breakthroughs;
- tariff and trade issues resurfacing with China;
- weakened consumption data following a roll-off in fiscal stimulus programs later this summer;
- the November 2020 presidential election; and
- a capital expenditure (capex) rebound pushed out well beyond the election.

In this edition of *Strategy Insights*, we address 10 key questions that investors may have on their minds right now. It is a wide-ranging list of topics, which speaks volumes about the complexity of issues the market and investors are tackling this year.

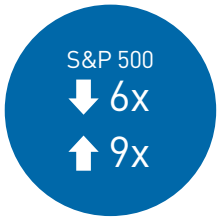
New Market Records So Far This Year...

Record high on March 16, 2020

Highest-ever stock correlation on March 16, 2020

Fastest bear market, February 19-March 23, 2020

Fastest bull market, March 23-April 8, 2020



Fastest drop/expansion in forward P/E February 19-March 23, 2020, March 23-June 19, 2020

First negative overnight repo rate in history on March 20, 2020; negative as recently as May 21, 2020

Investment Grade and High Yield

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Q *Why has there been such a significant divergence between the economy and markets throughout the COVID-19 crisis?*

A By far, this has been the number one question investors have asked us in recent weeks: Has the market decoupled from the economy, or is the rally from the March 23 low reflective of investors' expectations for a near-exponential rebound after switching the economy's lights back on? After falling more than 30% in less than a month (February 19-March 23), as of June 19, the S&P 500 is down just 3% year to date, while the US unemployment rate — a staggering 13% — sits at the highest level since the Great Depression. We believe there are two key catalysts behind the seemingly divergent paths of financial markets and economic data.

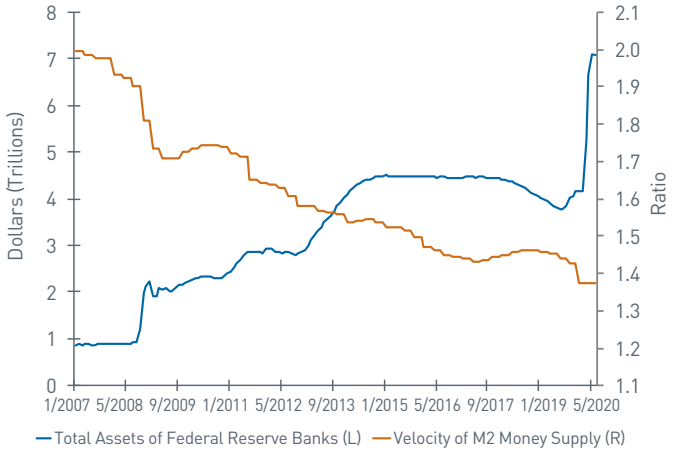
For context, our current economic recession wasn't brought on by excessive growth in credit markets, or by exuberance for internet-based companies that did not live up to their initial hype. Instead it was self-induced, triggered by government-mandated economic closures around the world that were implemented in an effort to control the spread of the COVID-19 pandemic. A controlled economic shutdown of this magnitude is an event no investor has ever experienced, while the pace and scale of the global pandemic appear to be something the world was largely unprepared for. Therefore, we are in uncharted waters with only past economic cycles as a guide for the path forward; this is a truly unprecedented period.

Despite recent economic turmoil, since March 23 we have witnessed one of the strongest rebounds on record, with the S&P 500 delivering nearly 40% in total return through June 19. What happened on March 23 to catalyze this rebound? The Fed unleashed a torrent of stimulus measures, including "unlimited" quantitative easing (QE), as well as numerous other facilities, with the Fed effectively becoming the buyer of last resort for certain asset classes, such as corporate and municipal bonds and even high-yield exchange-traded funds (ETFs).

While most of the Fed's new programs took weeks or even months to get up and running, the implementation of unlimited QE was an easy first step, as the Fed has engaged in balance sheet expansion activities at various points since November 2008. Case in point: As of March 18, the Fed's balance sheet totaled $4.7 trillion, but by June 7 it had ballooned to $7.1 trillion! In our view, flooding the market with liquidity had an immediate and positive impact for investors at a moment of peak uncertainty. We believe the primary challenge for the Fed will be turning off the QE "spigot." Unique to most other central banks, the Fed has a dual mandate of maximum employment and price stability. Therefore, while the Fed expanded its balance sheet by $3 trillion within three months, its own forecasts are calling for unemployment to remain at 9% through the end of the year. Thus, we do not expect it will be easy for the Fed to stop the flow of QE liquidity. As such, investors should expect the Fed's balance sheet to remain at $7 trillion or higher for the foreseeable future (Chart 1).

The second catalyst driving the disconnect between economic data and the strong rally in equity markets, in our view, is Congress's widespread fiscal stimulus. While the Fed can quickly turn on the liquidity spigot with a simple Federal Open Market Committee (FOMC) vote, fiscal stimulus requires bipartisan negotiation and support (and thus time) to ultimately work its way through the system. However, since the start of the pandemic, Congress has already enacted four fiscal stimulus programs to deal with the impact from COVID-19, the latest being the Coronavirus Aid, Relief and Economic Security (CARES) Act. In fact, the CARES Act was the largest economic stimulus package in US history at approximately $2.2 trillion, which is equivalent to about 10% of US GDP.

Chart 1
Fed Balance Sheet and Velocity of Money
1/31/2007 - 6/30/2020



Source: Bloomberg L.P., PNC

The numerous provisions of the CARES Act, including the Paycheck Protection Program (PPP), one-time tax rebates for individuals and households, and a significant expansion in unemployment benefits (e.g., an additional $600 *per week* for recipients), create complexity in using traditional economic data to gauge the success of the stimulus measures. In our view, these unprecedented policy actions may be masking underlying weakness in the economy that may take much longer to recover than equity markets seem to anticipate. For example, the PPP may be *understating* the true unemployment rate, and the expanded unemployment insurance benefits may be *overstating* the strength in retail sales. At the end of the day, we expect it may have been easier to turn the lights off on the economy than it will be to flip the economic light switch back on considering this has never been done before. While markets and the economy don't always move in lock-step, they do tend to at least rhyme, which means we expect they will inevitably converge, at least partially. So, determining which one — the strong stock market or the weaker economic data — is "right" remains to be seen, but at some point we believe fundamentals have to come back into focus.

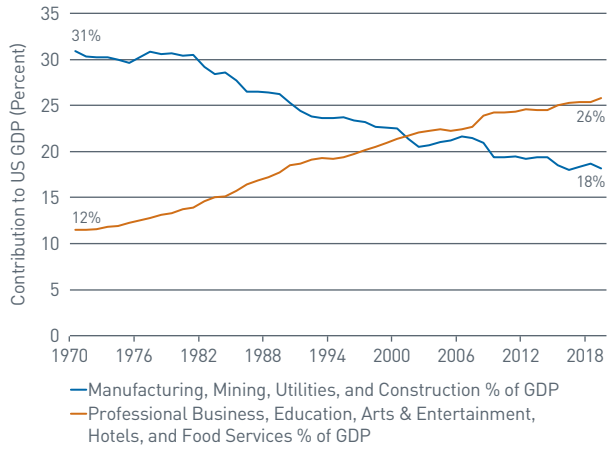
Additionally, although the fiscal stimulus measures were intended to be temporary, investors might be shrugging off negative economic data on the expectation (hope?) that these various stimulus measures will be extended or, in the case of expanded unemployment benefits, even become more permanent in nature. This in part may explain the high forward price-to-earnings (P/E) multiples in mid- and small-cap US equities. In fact, small cap (Russell 2000®) growth, core, and value indices are all at or near their all-time highs. While market prices have reacted very positively to Fed and fiscal stimulus measures, underlying earnings estimates have been slow to react. This is why we continue to view the market recovery not as a "V", "U", or "W-shaped" one, but rather as square root-shaped (√), marked by a record-breaking correction and recovery, but range-bound from here, as the market continues to wrestle with numerous cross-currents.

Q *With such a large percentage of the services economy in the virus's crosshairs, how will that impact the consumer, which has been the workhorse of the cycle?*

A The composition of US GDP has been shifting for decades, as the contribution from manufacturing has declined over time. Since 1970, the US manufacturing economy's contribution to US GDP has contracted from 22% to 11% in 2019, according to the Bureau of Economic Analysis. Today, the United States is a services-based economy (approximately 70% of GDP), ranging from professional and healthcare services to hospitality and leisure services. In our view, a better characterization of just how much the composition of GDP has changed over the last five decades becomes even more apparent if we expand the scope of each category (Chart 2). This is a critically important topic to understand, since the consumer has been the workhorse of the business cycle. Therefore, any potential impairment to the health and behavior of the US consumer is likely to have a significant impact on the trajectory of economic growth.

After a mandated global economic shutdown, any growth rate above zero could be considered a "bounce." Activities once taken for granted, such as air travel, automobile purchases, and cruise line reservations, are expected to see such a bounce, but the reality is COVID-19 will likely impact millennials and "Gen-Z" like the Great Depression did for the Greatest Generation. Will the psyche of these younger generations be fundamentally altered and eschew these types

Chart 2
Evolving Makeup of US GDP, 1970-2019
As of 12/31/2019



Source: Bloomberg L.P., PNC

of products and experiences? This is the second recession in 10 years, and its impact touched just about everybody — not only here in the United States but globally as well. In our view, what we're living through now has the potential to have a lasting impact by changing perceptions about how to live, work, interact, and evolve social norms of one's family, social unit, and the community at-large. This is occurring at a peculiar time, with social gatherings already splintering. With social media, texting, and gaming, society was already shifting away from a focus on face-to-face community engagement and toward a more isolated, digital social construct.

We believe COVID-19 may have altered the psyche of the world by challenging the very foundation of our social norms. As states reopen, "normal" activities will be anything but normal for some time, and we expect it won't be confined just to experiences that used to be taken for granted, like going to restaurants or clothes shopping. While economic activity may not immediately return to 100% of the way it was pre-COVID, could it reach 85-90%? We believe that is a reasonable expectation. In our view, that last 10% is largely a function of the resumption of public transportation and air travel, which may never fully recover to its prior form. The good news is that while spending patterns may not fully revert, it might not automatically translate into meaningfully higher savings rates either. Pre-COVID, the US personal savings rate was averaging a healthy approximate 8%, but as of May it had increased to 23%. We expect that number to come back down because it was largely a function of the lockdown as well as the fiscal stimulus benefits, but ultimately in a period of economic uncertainty we would still expect savings rates to remain above average. It is possible consumer spending behaviors will eventually evolve away from experiences and services and into other to-be-determined discretionary items the longer social distancing guidelines remain in place.

In our view, the single most important economic variable for a strong consumer-oriented economy is jobs. Through the end of May, the overall US unemployment rate was 13.3%, just off its COVID-19 crisis peak of 14.7%. Even more alarming is that continuing jobless claims through June 12 were 19.5 million. For perspective, the peak of the financial crisis never got above 7 million continuing jobless claims. However, we believe the sustainability of the recovery will ultimately be dictated by a return of jobs and demand to the service economy, which in turn will be tied equally to a bounce-back in consumer sentiment and health officials' guidance on the safety of resuming normal activities.

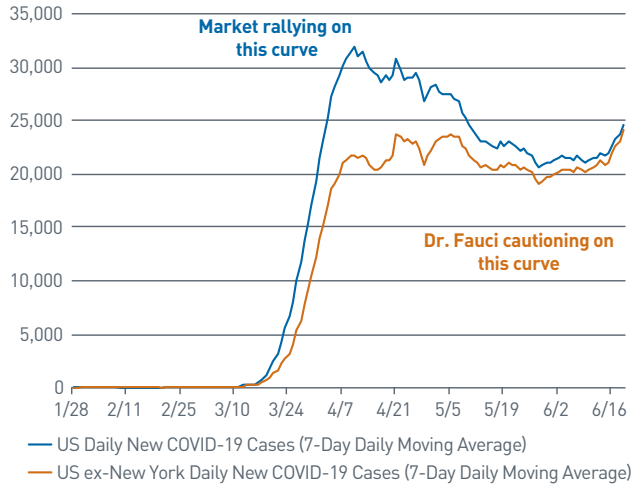
Q *What is the US market's biggest vulnerability today?*

A There has been no shortage of risks for investors to digest in 2020, including renewed geopolitical tensions from Iran, an OPEC+ price war, and the like; presidential election uncertainty; natural disasters, including dust clouds and "murder hornets" for starters; the unintended consequences of unprecedented monetary and fiscal policy actions; and, oh-by-the-way, a global pandemic. It is not surprising that stock market volatility has surged in response to these vulnerabilities. Although the VIX has trended downward since its March 16 high, a spike as recently as June 11 suggests we are not out of the woods yet. So what do we view as the biggest risk to the market today? We continue to believe the path of the virus, the shape of the virus case curves, and the success or failure of reopening plans will have the greatest impact on the trajectory of the markets from here.

In our view, recent virus data have deteriorated at a much faster pace than the market anticipated. In fact, after two months of gradual decline, new cases in the United States plateaued and then accelerated sharply beginning in the middle of June (Chart 3, page 7). This is due in large part to an increasing number of cases in states that were among the last to implement shutdown measures and the first to unwind them. Initially, COVID-19 was so prevalent in New York that it, in effect, was the COVID-19 curve for the United States. It was not until mid-May that the "US" and "US ex-New York" curves began to converge, as cases in New York started to trend down while other parts of the country started trending up. As case counts continue to move higher in recent days and weeks, the ripple effect of this trend is an indication the coming months could be fairly choppy for investors. An increase in new cases counters the expectation for a swift economic reopening; that is, the market may have gotten a little ahead of itself in the record-breaking rally off the March lows.

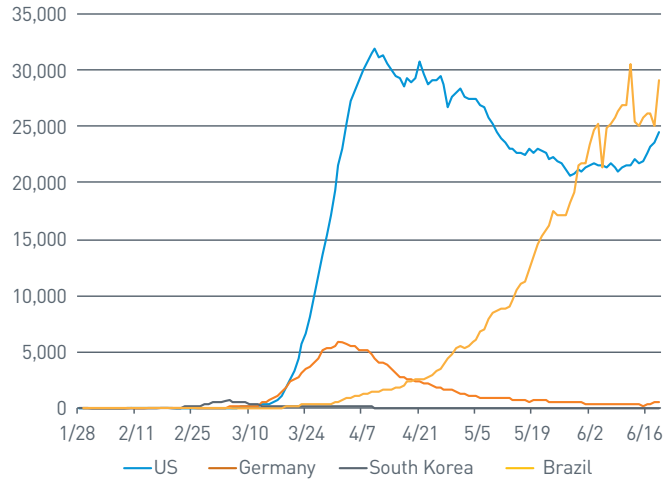
Considering COVID-19 is a novel (i.e., previously unidentified) virus, forecasting the path of the virus has been enough of a challenge for health policy experts, let alone for investors.

Chart 3
Daily New COVID-19 Cases, United States
1/28/2020 - 6/19/2020



Source: Bloomberg L.P., PNC

Chart 4
Daily New COVID-19 Cases, Select International
1/28/2020 - 6/19/2020



Source: Bloomberg L.P., PNC

Compounding the issue is not only tracking the path of the virus across the globe to different countries, but also within countries (Chart 4). For example, many countries in Europe (e.g., Germany) and Asia (e.g., South Korea) have already seen the "first wave" of cases flatten to the point where those countries — both developed and emerging — are in recovery mode. The United States, believe it or not, is in a similar position as countries in Latin America (e.g., Brazil) and Africa (e.g., South Africa) in that cases are rising quite rapidly. This is especially frustrating given the United States is the largest economy in the world with theoretically unlimited resources at its disposal, and allegedly has the most advanced healthcare system in the world. The polarizing debate over social distancing practices has stymied efforts to flatten the curve. Here we are at the end of June, three-plus months into this experiment, and we're still reaching new highs in daily cases.

Let's be clear, we believe the United States has not entered a "second wave," but rather this is a continuation of the first wave that simply plateaued for a few weeks and is now reaccelerating. As shown in Chart 3, the 7-day daily moving average for new cases in the United States bottomed on May 28 and has quickly moved higher since. Therefore, it should not be surprising that the S&P 500 is lagging the MSCI World ex-USA Index by over 100 basis points (bps) and the MSCI Emerging Markets (EM) Index by more than 600 bps since then.

In recent weeks, there has been a lot of pushback on the rise of new cases as a function of more/greater testing capabilities. Intuitively, that might make sense, because testing capabilities are reaching an all-time high and positive cases are also at an all-time high. Unfortunately, according to data compiled by Johns Hopkins University, the ratio of cases-to-tests is rising, meaning the percentage of positive cases is increasing much faster than the percentage of tests being conducted. At this point, it is also concerning that cases are rising in different pockets of the country, whereas initially cases were heavily concentrated in contiguous states in the northeast. The longer the United States struggles with flattening the curve, the more impaired the fundamental backdrop is likely to become — this is literally a race against time.

Q *Given the unprecedented effects of COVID-19, what is the outlook for equity earnings globally?*

A The abrupt shutdown of business activity in the first quarter had a devastating impact on earnings results for companies around the world. S&P 500 companies delivered a year-over-year blended earnings growth rate (actual growth combined with consensus estimates) in the first quarter of -14.7%, well below the expectation for -6% growth. The hits to earnings growth for the mid cap S&P 400® and the small cap Russell 2000 were even more profound at -35% and -125%, respectively.

First-quarter earnings results in international markets were also significantly hampered by business dislocations, with the MSCI World ex USA Index registering negative year-over-year growth of -60% and the MSCI EM Index with growth of -32%. While the earnings hit to global companies was dramatic, the fact that most of the shutdowns did not start until midway through the first quarter and continue to some degree across many parts of the world means the outlook for second-quarter earnings growth across market caps and geographies could be even more dire.

However, we believe the earnings outlook for the second half of the year is more optimistic, as businesses begin to return to some semblance of a normal operating environment. Of course, what this environment will look like and how normalized business operations will be across the globe likely depends on whether there is potential for a second wave of COVID-19 cases in the fall. The hopes for successful progress toward effective therapeutic treatments or a vaccine could go a long way in establishing some certainty.

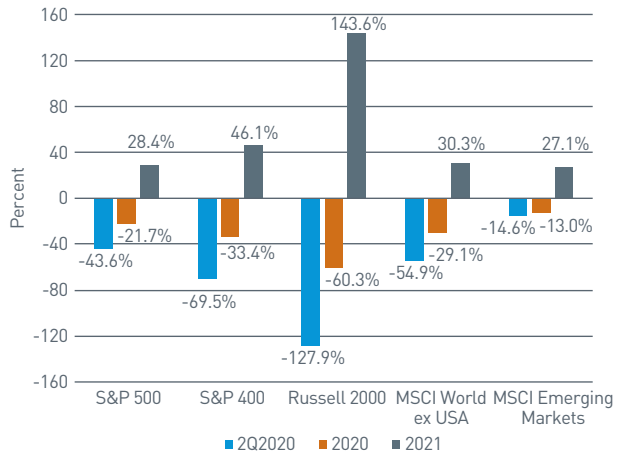
Currently, the combination of severely negative growth in the first half of the year and a presumptive second-half earnings snapback for companies globally produces a 2020 consensus earnings growth outlook for the S&P 500 of -21.7%. For mid and small cap, the 2020 consensus estimates are -33.4% and -60.3%, respectively. Consensus earnings growth for developed international companies in the MSCI World ex USA Index is expected to be worse than domestic equities, at -29.1%. However, EM companies are expected to deliver the strongest earnings growth for the year of any equity class globally, with consensus anticipating a decline of just 13.0%. EM earnings growth is heavily influenced by China's nearly 40% weight in the EM benchmark. These companies have benefited from an improving economic backdrop, along with faster secular growth characteristics from some of the largest names in the benchmark.

We caution that these estimates are fluid and could change based on the outcome of quarterly earnings results for the balance of the year. As such, we expect if second-quarter earnings results are indeed as draconian as expected, the consensus numbers for 2020 will get revised even lower. Alternatively, more favorable earnings results will likely drive higher revisions for the year.

But what really matters for the trajectory of equity markets at the halfway point in the year are growth expectations for forward earnings. Importantly, we view the outlook here as much more favorable. For the S&P 500, 2021 growth is expected to return to more than 28% (Chart 5), the result of the easy comparison to the earnings decline in 2020. If the earnings number for 2021 comes to fruition, it would be basically in line with the earnings per share (EPS) number for the index in 2019, representing essentially no earnings growth over the two-year time period.

Mid-cap earnings growth for 2021 is expected to be 46.1% and a significant 143.6% for small caps. While these growth rates may be impressive, they are largely a function of the dampened growth in 2020. If you break down small cap further and just look at small cap value as an example, its

Chart 5
Consensus Earnings Growth Estimates
As of 6/19/2020



Source: FactSet® Research Systems Inc., PNC

EPS growth rate for 2021 is a staggering 100%. In our view, that expectation is largely based on reversion to the mean. For example, the small cap value Consumer Discretionary sector is expected to see earnings growth decline 100% in 2020 and then rebound 2,000% in 2021. Similarly, the Energy sector is expected to see earnings decline 800% in 2020 and then rebound with a slightly lower net income loss for 2021. While these are the estimates today, we are skeptical of whether this is achievable without a strong "V-shaped" recovery in the global economy. Even if these optimistic expectations play out for both mid- and small-cap companies, hitting the current consensus EPS number in 2021 would still leave earnings for these benchmarks 2.6% and 3.4% below 2019 levels.

In international markets, the MSCI World ex USA Index is expected to realize more than 30% growth in 2021, while EM is expected to deliver more than 27% growth. Hitting current 2021 EPS estimates for the MSCI World ex USA Index would mean a 7.6% decline relative to 2019 EPS, while the EM index would realize growth of almost 11%. These earnings growth estimates could change, perhaps significantly, depending on the pace of growth over the next several quarters, likely influenced by the path of the pandemic. Regardless of the outcome over the next several quarters, we believe large-cap and EM companies are in a better position to weather the earnings storm due to their solid relative growth capabilities.

Q *How do global equity valuations stack up given the swift market rebound?*

A In our view, the dramatic recovery in global equity markets since March 23 (the bottom for the S&P 500) has led to a spike in valuations that is not supported by the near-term fundamentals for most equity benchmarks. Since the recent market bottom, the S&P 500 rallied a remarkable 39% (through June 19) before the pandemic sent global markets into a free fall. Smaller-cap indices staged an even stronger recovery, while the rebound for international benchmarks in both developed and emerging markets was not quite as robust as it was for their domestic counterparts.

While the recovery in global benchmarks is certainly encouraging, we believe this aggressive price movement, in conjunction with negative earnings revisions, has helped drive valuations to somewhat unsustainable levels. The next-12-month (NTM) P/E multiple for the S&P 500 is now 22.0 times (x) — roughly 3x higher than the market's previous peak in February and a level last seen during the dot-com era of September 2000. As remarkable as this move in large-cap valuations has been, the moves in the S&P 400 and Russell 2000 indices have been even more substantial, especially since mid-May, when smaller-cap companies began to drastically outperform large caps.

The S&P 400 NTM P/E is 21.1x, close to an all-time high for the benchmark and a far cry from the roughly 17x at the February market peak and 10.5x at the March market bottom. This dramatic valuation dispersion in the mid-cap benchmark might be surprising until one looks at the movement in small caps. The NTM P/E for the Russell 2000 is now an astounding 47.7x, also close to an all-time high and well above the benchmark's previous high P/E of 26.8x reached in August 2009. In February, this P/E was roughly 23.5x and pulled back to 15x at the market low in March.

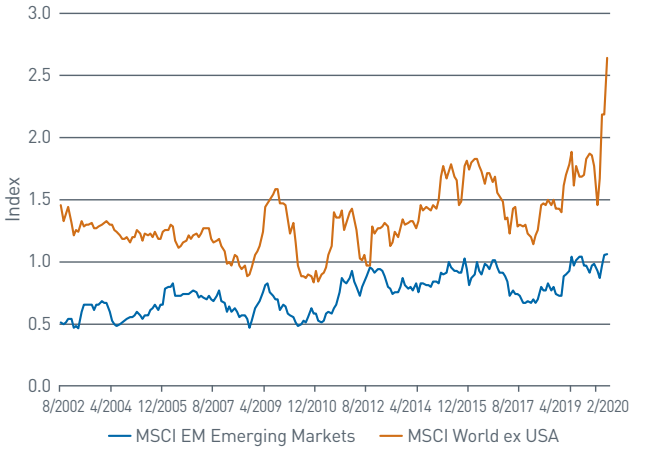
In the case of the Russell 2000 Growth index, its forward P/E is at an all-time high of 150x partly because second-quarter 2020 EPS is expected to be *negative* (i.e., the growth rate, as well as the absolute earnings number itself). We expect this multiple will come back down as earnings estimates start to rise off the bottom. Interestingly, the primary culprit that's tanking earnings for small-cap growth isn't biotechnology companies (approximately 20% of the index) like investors might be inclined to think, but rather the Consumer Discretionary sector, where leisure firms (e.g., casinos and gaming) were completely shut down for most of the second quarter. This is a perfect example of why we'd prefer to see multiple expansion driven by positive earnings revisions rather than price alone.

The valuation picture for the developed international companies in the MSCI World ex USA Index and for companies in the MSCI EM Index is much more reasonable than domestic benchmarks. The NTM P/E for the MSCI World Index is 16.0x, slightly above levels in February, but still below the benchmark's March 2004 all-time high of 17.1x. In EM, the NTM P/E is not even at its highest point for

Chart 6
Domestic PEG Ratios, NTM
8/31/2002 - 6/19/2020

Source: FactSet Research Systems Inc., PNC

Chart 7
International PEG Ratios, NTM
8/31/2002 - 6/19/2020



Source: FactSet Research Systems Inc., PNC

2020, sitting at 12.7x, just below its year-to-date high of 12.8x in January. The EM benchmark remains comfortably below its all-time valuation high of 15x in November 2007. The reasonable valuation metrics for international benchmarks generally reflect the more modest price recoveries for each benchmark off of the March 23 lows. In the case of EMs, the stronger relative earnings growth versus every other global asset class plays a meaningful role in its more attractive relative valuation.

A more intuitive method of comparing valuation metrics across asset classes might be to view each benchmark's NTM P/E level relative to its expected earnings growth over the same time period, or P/E to growth (PEG). Similar to absolute measures, the PEG for small caps has moved to extreme levels, especially during the recent rotation toward risker assets. While theoretically this rotation makes sense, given the renewed optimism around the economy reopening in conjunction with falling COVID-19 cases, the deterioration in the fundamental outlook for small caps has pushed valuations to potentially unsustainable levels. Growth-adjusted valuations for large- and mid-cap benchmarks, while elevated since the market bottom, seem more reasonable since the earnings growth outlook for these asset classes is not as dismal as it is for small caps (Chart 6).

With earnings growth and the pace of the rebound in prices more balanced, international PEG ratios continue to look more reasonable, especially in the case of the EM index (Chart 7). EM earnings growth, and thus its PEG, is heavily influenced by EM China. Given this attractive outlook, we continue to recommend maintaining asset allocation exposure to this asset class.

Given we've experienced the fastest market decline in history followed by one of its sharpest recoveries, it is not surprising that various benchmark metrics have reached a series of new highs. However, we believe current valuations for most equity benchmarks are far ahead of the fundamental outlook for companies in those benchmarks. Second-quarter earnings results are likely to provide the next catalyst for the direction of global markets. As such, we could see equity prices tread water, or even pull back modestly, until the near-term earnings situation becomes clearer. We are not casting a bearish outlook on global equity prices; rather, we are pointing out that the valuation leg of our investment process "stool" makes it difficult to justify a significant move higher in asset prices. We maintain our current asset allocation recommendations, but caution against rebalancing portfolios into these expensive valuation levels.

Q *How have fixed income markets responded to the Fed's large-scale monetary policy actions, and does the Fed have any tools left in its toolbox?*

A As it became clear the world was headed for significant turbulence due to the rapidly spreading COVID-19 pandemic, the Fed unleashed a battery of measures to support the economy and stabilize liquidity in fixed income markets. Remarkably, what the Fed did in one month was equivalent to what the Ben Bernanke-led Fed did over a span of more than six months during the 2008-09 financial crisis. In our view, the Fed clearly changed the rules with its unprecedented liquidity injection into the system, which has had an extraordinary calming effect on fixed income markets. The MOVE Index (the bond market's equivalent of the VIX) is currently sitting below its 10-year average level, while the VIX remains elevated (greater than 30). Spreads have narrowed meaningfully from mid-March levels, and unusually steep discounts to net asset values for many highly liquid fixed income ETFs have been erased (Chart 8).

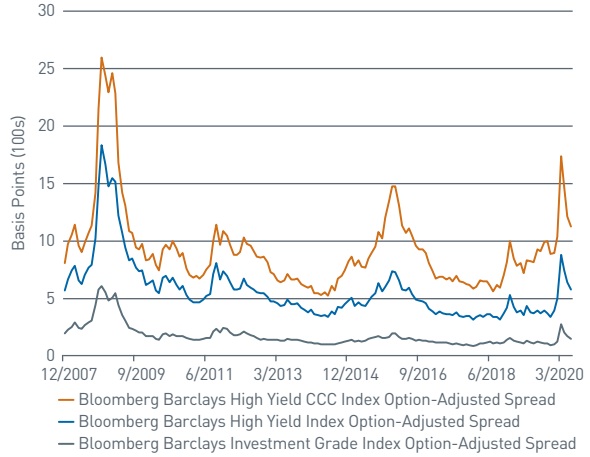
Although the Fed has not yet fully implemented all of its announced programs, at the time of this writing, just the signaling effect alone appears to have been a game changer for fixed income markets. But what if we have another setback in the COVID-19 recovery process, or some yet unknown headwind to global markets appears? Does the Fed have any tools left? Fed Chair Jerome Powell's consistent answer to this question is yes. As the buyer of last resort with nearly unlimited pockets, the Fed should be able to step in, if necessary, to continue to support the proper functioning and liquidity of the system (Chart 9). Some of these actions include, but are not limited to:

- increasing or decreasing various activities in the repurchase agreement (repo) market;
- initiating global central bank US dollar swap lines; and continuing bond purchases under the "unlimited" QE program.

The challenge, in our view, is that the current environment requires a multifaceted solution. The Fed can provide as much liquidity as markets may need, but it cannot provide or affect solvency issues — the key concern for a business's ability to continue operating. A successful path forward will require multiple policy solutions from fiscal, monetary, and public health angles.

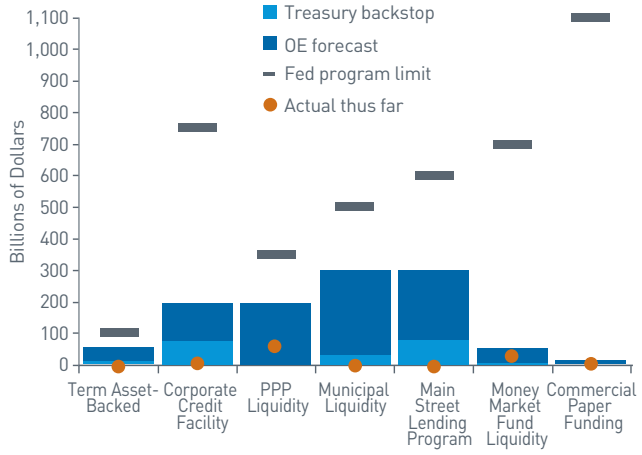
The FOMC met in early June for a regularly scheduled meeting (following a series of emergency meetings in the early phase of COVID-19) and, as expected, made no changes to its current monetary policy stance. The expectation is that the federal funds rate will be kept in its current range of 0.00-0.25% "until it is confident that the economy has weathered recent events and is on track to achieve its

Chart 8
Changes in Fixed Income Option-Adjusted Spreads
12/31/2007 - 6/19/2020



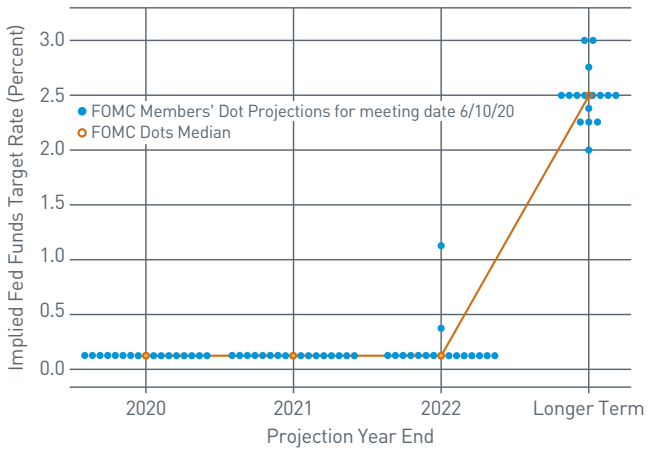
Source: FactSet Research Systems Inc., PNC

Chart 9
Fed's Credit Lending Facilities
As of 6/29/2020



Source: Oxford Economics, Federal Reserve, Haver Analytics

Chart 10
Implied Federal Funds Target Rate
As of 6/10/2020



Source: Federal Reserve, Bloomberg L.P.

maximum employment and price stability goals," according to Powell (Chart 10). In our view, this translates into a 2022 timeframe at the earliest. The FOMC also said it will continue to increase the central bank's balance sheet via additional purchases of Treasury securities and agency residential and commercial mortgage-backed securities (MBS). The PNC Economics team expects purchases to translate into roughly $80 billion per month of long-term Treasuries and about $40 billion per month of MBS.

The next regularly scheduled FOMC meeting in September should be a critical guidepost in assessing progress toward reopening the economy and any potential adjustments to monetary policy. However, with the November US presidential election looming large and the Fed's forecast for continued elevated unemployment levels, we would not expect to see grand or sweeping policy changes unless truly warranted. Historically, the Fed has tended to stay silent or out of the fray so as not to appear as if its policy actions are intended to influence the political process.

In addressing the concept of negative interest rate policy (NIRP) that has been deployed in Europe and Japan, the Fed has repeatedly said NIRP is not something it is considering, and we believe it is not a viable tool in the Fed's toolbox at this point. That said, the market has shown it does not have to wait for NIRP, as short-term fixed income securities, including overnight repos and T-bills, have traded at negative yields into late May, well after the initial March panic had passed.

The Fed's inflation target of 2% continues to be a lofty goal in our view. With the Consumer Price Index (CPI) moving toward 0% or lower in recent months, we continue to believe the Fed could be more challenged by rates moving too low than interest rates spiking. One approach that could encourage rates to move higher would be yield curve control (YCC), a policy measure used by the Bank of Japan since 2016 under its qualitative and quantitative easing policy. Under YCC, the central bank sets an implicit range on long-term interest rates, such as the 10-year Treasury. Should the yield move above that range, theoretically the Fed would increase its QE purchases to drive longer-term interest rates lower, and vice versa should rates decline too low. While YCC has worked in Japan, it is another policy with the ultimate goal of putting a ceiling on interest rates, which in effect translates to lower-for-longer interest rates.

Because of the unprecedented amount of liquidity thrown at fixed income markets, the worst of market performance and volatility could be behind us for now. However, with interest rates at or near their all-time lows, it is difficult to envision much of a positive outlook for fixed income markets. One of the many challenges facing fixed income investors is that companies continue to receive benefits from the various fiscal stimulus programs under the CARES Act; thus these programs may be masking underlying issues that could reappear once funding expires. At current valuation levels, we think most fixed income asset classes look rather expensive, with the exceptions of those areas not covered or included in Fed programs and/or those with outsized exposure to macroeconomic headwinds. Additionally, with policy rates firmly fixed at the zero bound, we do not see much room for a reasonable pick-up in yield, even across the longer duration parts of the yield curve. The one fixed income asset class that continues to look attractive, in our view, is EM debt.

Q *Could the recent, unprecedented fiscal and monetary stimulus lead to an inflation spike?*

A The US CPI has averaged 2.9% since 1920, and most central banks have developed an explicit inflation target of 2.0%. However, prior to the COVID-induced shutdowns, the business cycle average had been a paltry 1.7%. While US CPI is currently 0.1% on a year-over-year basis, the Fed's preferred measure of inflation is the core Personal Consumption Expenditures price index, which is at 1.0%, and only briefly crossed above 2.0% in 2018. Most other global central banks are nowhere near their 2% inflation targets, and in the case of NIRP regions like Japan and Europe, they are far below target. CPI in both the Eurozone and Japan is 0.1% (yes, both of these are year-over-year numbers), and in Japan's case inflation hasn't been above 2% in more than five years.

From both economic and asset allocation standpoints, there has been much discussion about whether this year's extraordinary fiscal and monetary stimulus will finally cause US inflation to spike. While pockets of inflation may appear as the economy responds to these measures, we believe several factors make a sustained and broad-based rise in prices unlikely near term, including:

- negative real yields;
- aging demographics; and
- net-deflationary effects from energy and tech innovation.

Negative real yields are helping to keep a lid on inflation. One side effect of QE is lowering long-term interest rates, which we believe is ultimately deflationary. And when you're already in an economic cycle where global growth is slow, it has turned longer-term rates negative on an inflation-adjusted basis. This brings the "term premium" into play, or the theoretical value for taking on the risk of owning long-term bonds over short-term ones. That term premium in the United States turned negative in 2015 and is currently near its lowest level on record (hit back in March at –1.3%). This is just a theoretical index by the way, but it highlights the "much lower for much longer" mentality that is likely to remain as long as global central banks keep policy rates negative. This, in turn, is forcing investors to reach for yield in riskier or less liquid asset classes. The days of getting 5% on cash are long gone; investors are lucky to get that on some high-yield bonds these days! Within fixed income, we've seen the rise of leveraged loans as an asset class, both in mutual fund form and in private debt funds as well.

Demographics are a powerful structural headwind for the inflation outlook. Across the developed world, and even in China, the population is aging as people live longer and population growth is slowing. At the current trend, the United Nations estimates that the world's population growth will fall to 0% by year 2100 and the median age will be 42 years. An aging population typically sees a rise in entitlement spending, which can act as a curb on economic growth. According to the OECD, France ranks number 1, spending over 30% of its GDP on entitlement programs; the United States is toward the bottom at 19%; and South Korea is the lowest at just 10%. We believe it's no coincidence that countries with younger populations have fewer social programs and higher interest rates and economic growth expectations.

Energy and information technology-driven innovation tends to have net-deflationary effects. While fracking was a boon to the Energy industry initially, unconventional drilling has ultimately had a long-lasting impact on supply-demand forces, as well as the price of oil itself. The average price per barrel of West Texas Intermediate (WTI) crude oil over the last business cycle was $72; today it's about $40. In most business cycles, oil prices move higher throughout the cycle, rather than peaking mid-cycle like what occurred most recently. We believe a sustainable shift in oil supply-demand dynamics is necessary to move prices meaningfully higher from current levels. At present, oil is not acting as a tailwind for inflation like it has in basically every other business cycle over the last 100 years. The technology innovation story is another powerful disruptive force. Just consider the small sample of examples over the past 15 years: The iPhone came out in 2007; Twitter had 100 million users by 2012; Uber was valued above $1 billion by 2013; in 2019 Amazon started offering one-day shipping; and in 2020 Zoom Video Communications Inc. saw its market cap explode from $20 billion at the start of the year to nearly $70 billion by June 19. None of these products or solutions existed in any other business cycle, but they're all deflationary to the industries they've disrupted.

In the shorter term, elevated unemployment and subdued output levels should put unit labor costs under pressure.

Stubbornly low energy prices may also keep higher inflation at bay. Although oil prices have been cut in half over the past two years (and even briefly went negative in April), we believe a catalyst to support a sustained price increase remains elusive. Recent policy action will likely create some *pockets* of inflation in the near term. For example, CPI food-at-home ticked up 4.83% in May as consumers spent more heavily at grocery stores. However, during the same month, CPI gasoline fell 33.8% and CPI airline fares fell 28.8%. While we may see the prices of some goods increase more than expected, this is unlikely to translate into a broad-based boost to inflation either.

From an asset allocation perspective, we are not currently advocating adjustments to capitalize on a significant, sustained rise in inflation. With inflation expectations so low for so long, it's a key reason to reinforce why we generally do not recommend Treasury Inflation Protected Securities (TIPS) as a strategic asset allocation unless the goal is aiming to match an inflation-adjusted liability stream. TIPS might work during brief periods of unexpected inflation surprises, but this is not part of our base case forecast. Nor do we recommend taking long-only exposures in commodities. Such positions do not generate much in the way of adequate risk premiums relative to other asset classes and do not typically generate cash flows. In the long run, portfolios tend to be better protected by equities, and particularly those that have been growing dividends and boast strong balance sheets, as a hedge against higher inflation.

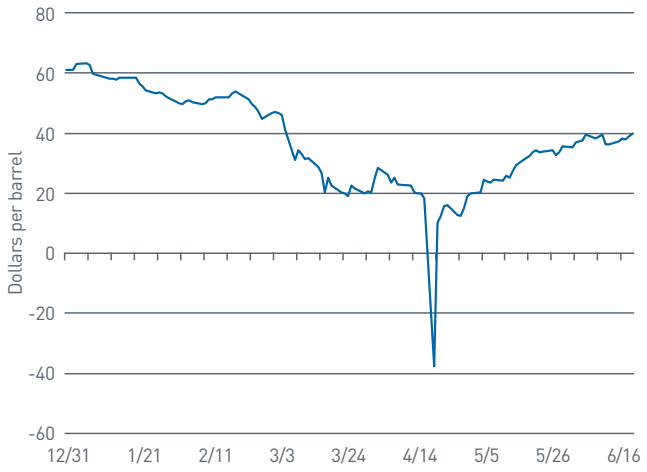
Q *What is happening in oil markets, and what does the path forward look like?*

A A nearly four-year stalemate between OPEC+ and the North American shale industry ended on March 8, 2020, when Saudi Arabia initiated a price war with Russia for failing to adhere to previously agreed upon production cuts. The COVID-19 pandemic has severely impaired global oil demand, and the Energy Information Agency forecasts that demand will average 83.3 million barrels per day (mb/d) in second-quarter 2020, which is 16.6 mb/d lower than this time last year. This, combined with the flood of production suddenly unleashed on the global oil market by the Saudis, led the price per barrel of WTI oil to decline from $41.28 just before the March meeting to -$37.63 per barrel at the worst point in the correction (Chart 11, page 15). This is the first time in history that oil has ever traded at negative prices. Since then, oil prices have rebounded and many companies across the energy complex have seen their stock prices rebound in rather dramatic fashion, despite lacking fundamentals that exhibit the same level of improvement.

At the June 6, 2020, OPEC+ meeting, members half-heartedly agreed to extend current production cuts (9.7 mb/d) by another month. The challenge with making production decisions on a month-by-month basis is that it effectively creates the potential for a rolling cliff. The minute production cuts expire, the pressure on WTI is likely to swiftly resume. This is why we continue to remain fixated on the level and trajectory of WTI prices: We believe stabilization

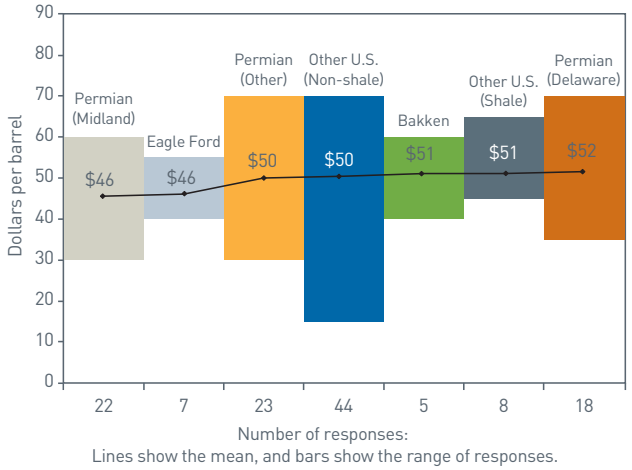
So what exactly drove oil prices into negative territory? There are two different types of players in the futures markets — investors and speculators. A natural buyer of oil in this market is an airline, for example, because it is trying to hedge against future price movements in oil given it is a heavy and recurring consumer of oil. But there are also speculators in this market that have no intention of taking physical oil deliveries and are merely trading oil price movements. So how is it mathematically possible to get to negative prices? It occurs when the natural buyers (e.g., airlines) exit the market because they have no demand needs for oil and all that's left are the traders. Demand went away because of the COVID-19 global shutdowns, meanwhile OPEC+ just kept on ramping production. Additionally, oil storage is basically near maximum capacity, meaning everyone who is a natural buyer already has all the oil they need. Exacerbating the situation, speculators are going to sell at any price (even negative levels) because they don't want to take physical delivery of barrels of oil. Because we're talking futures contracts — key word being *contracts* — there's a requirement to accept physical delivery at settlement.

Chart 11
WTI Crude Oil Prices
12/31/2019 - 6/19/2020



Source: Bloomberg L.P., PNC

Chart 12
Federal Reserve Bank of Dallas Survey
"In the top two areas in which your firm is active: What WTI oil prices does your firm need to profitably drill a new well?"



Executives from 92 exploration & production firms answered this question during the survey collection period, March 11–19, 2020.

Source: Strategas, Federal Reserve Bank of Dallas

of both measures will be the key to determining the path forward for the sector.

While the Saudis *can* produce oil at an estimated breakeven price in the mid-teens, its fiscal breakeven price is estimated to be greater than $80 per barrel, according to the International Monetary Fund. That is part of the reason the Saudis were unsuccessful a few years ago in taking US shale production offline permanently. The country can only withstand extremely low oil prices for a brief period of time. This is also why we do not believe the current challenges with OPEC+ will ultimately become a permanent supply shock. But as we saw the last time the Saudis increased production in 2014-16, it can still deliver significant near-term damage to the oil and gas industry and to the broader supply chains. According to a recent Federal Reserve Bank of Dallas survey (Chart 12), the breakeven oil price for North American shale producers to drill a new well is $46-52 per barrel. However, the breakeven price to maintain operations, including current capex spending and other capital allocation activities, such as share buybacks or dividends, is an estimated $55 per barrel, according to Bloomberg L.P. While the OPEC+ situation remains fluid, we do not see material upside for oil prices. At the current price of approximately $40 per barrel for WTI, it might be "just enough" to enable North American shale producers to muddle through for a brief period by drawing on their existing wells and storage, but it is not enough, in our view, to justify or support a sustainable capex revival.

With WTI under significant pressure, US producers have taken oil and gas rigs rapidly offline. These breakeven levels are also likely to translate to some degree into natural caps on WTI prices. While the reopening of the global economy will help improve the demand side of the equation, as soon as WTI reaches about $45 per barrel North American shale production should start to reopen and come back online, putting downward pressure on prices. Given the strained supply-demand dynamics across the global energy complex, we think achieving $50 per barrel for WTI will be hard unless a fundamental breakthrough occurs via a supply-side shock.

When it comes to oil and the Energy sector, these issues are a *demand* problem, which is unique to prior business cycles when most of the impact on oil pricing came from the supply side. If oil companies were only in crisis over the March OPEC+ meeting, a near-term production agreement might actually have been salvageable, in our view. However, the COVID-19 situation is a much larger problem because of its extreme short-term impact on demand, not to mention any longer-term impact on consumption patterns. On the one hand, sustained low oil prices should be a net-positive, all else equal, in stimulating global economic growth. However, the ripple effects loom larger, in our view, by affecting capex, job creation, lending activities, and so on.

This rather bearish outlook has important implications not only for Energy sector positioning in portfolios but also

for related exposures across the energy supply chain that spill over into Industrials, Materials, and even Financials, particularly at the smaller end of the market capitalization spectrum. Thus, we remain cautious and recommend using the recent rebound in equity prices and commensurate improvement in credit spreads to right-size or reduce Energy sector and security-level exposure for both equities and fixed income allocations in portfolios.

Q *Does the March selloff across asset classes indicate investors should rethink portfolio diversification?*

A Of the many records set during the peak of the COVID-19 crisis, one stands out: In March, every single major asset class delivered negative returns (Table 1). One popular assumption regarding diversification, that when stock prices go down, bond prices go up, did not hold in March. That concept of diversification is rooted in Modern Portfolio Theory (MPT)[1], developed by Nobel Prize-winning economist Harry Markowitz in 1952. Rather than readily dismissing decades of financial concepts, we believe a frame of reference is required for what occurred in March. When COVID-19 cases began to appear in late February/early March, provocative headlines suggested the pandemic would lead to global supply chain disruptions, stock exchanges would have to close, not to mention estimates of 2 million fatalities in the United States. That initial hysteria created a crisis of confidence over the invisible threat of a once-in-a-hundred-year pandemic. Thus, many investors reacted not with a flight to safety, but with a more extreme "dash for cash" impulse. Total cash allocations (retail and institutional investors) as reported by Investment Company Institute increased 49% year-over-year in March, the biggest monthly percentage increase since 2009.

Table 1
Negative Returns for Major Asset Classes During COVID-19 Peak
As of 3/31/2020

Index	March 2020 Total Return
S&P 500	-12.35%
S&P 400	-20.25%
Russell 2000	-21.73%
MSCI World ex-USA	-14.03%
MSCI Emerging Markets	-15.38%
Bloomberg Barclays Aggregate Bond	-0.59%
Bloomberg Barclays High Yield Bond	-11.46%
HFRI Fund of Funds Index	-7.61%
MSCI USA Real Estate	-21.92%
CBOE Volatility Index (VIX)	102.76%

Source: Bloomberg L.P., PNC

In our view, the level of investor panic in March 2020 is best captured by the VIX, commonly referred to as the "fear gauge" by investors. Panic appeared to reach a fever-pitch on March 16 when the VIX touched a price level of roughly 83, breaking its all-time record of 81 set in November 2008. For perspective, the business cycle (June 2009-February 2020) average for the VIX was just 17, implying market volatility was nearly 5x above the cycle average. In that sense, the one "asset class" that had a positive return in March 2020 was volatility itself!

Less widely followed than the VIX is the comparison of price correlations across stocks within the S&P 500, which broke records in March. Historically over the business cycle, S&P 500 price correlations averaged about 0.41. However, due to the extreme volatility in the month, stock price correlations reached an all-time high of 0.99 on March 16, which is remarkable considering the upper limit is 1.0! With that level of price correlation, it may be surprising to know that 44 stocks actually generated *positive* returns in March (primarily in the Health Care and Consumer Staples sectors, known as the "stay-at-home" trade). Furthermore, of the 11 GICS sectors, 10 were represented with stocks that had positive performance. No Utilities stocks had a positive return in March, undoubtedly reflecting the crowded dynamics of the bond proxy trade (i.e., high yielding Consumer Staples, Real Estate, and Utilities) pre-COVID-19.

With the S&P 500 down 12% in March and every other major asset class lower as well, should investors change their

[1] Markowitz, Harry, "Portfolio Selection," *Journal of Finance*, 1952.

Table 2
Certain Asset Classes Rebounded in April and May
As of May 2020

Index	April - May 2020 Total Return	1-Month S&P 500 Correlation (March 2020)	1-Year S&P 500 Correlation (3/31/2019-3/31/2020)	5-Year S&P 500 Correlation (3/31/2015-3/31/2020)
S&P 500	18.19%	1.000	1.000	1.000
S&P 400	22.54%	0.995	0.982	0.942
Russell 2000	21.14%	0.969	0.950	0.920
MSCI World ex-USA	11.73%	0.802	0.850	0.691
MSCI Emerging Markets	10.04%	0.939	0.845	0.577
Bloomberg Barclays Aggregate Bond	2.25%	0.930	0.390	-0.234
Bloomberg Barclays High Yield Bond	9.11%	0.999	0.890	0.571
HFRX Global Hedge Fund Index	5.72%	0.544	0.913	0.935
MSCI USA Real Estate	10.72%	0.999	0.905	0.812
CBOE Volatility Index (VIX)	-48.62%	-0.629	-0.372	-0.714

Source: Bloomberg L.P., PNC

thinking on diversification? Long-term investors need only look at what happened in the following weeks to know that changing one's investment process mid-course based on rapidly changing prices isn't much of a rigorous, disciplined process to begin with. We are emerging from a compressed period of unprecedented market behavior amid extreme global macroeconomic uncertainty. As such, we believe making a wholesale shift away from a key investing tenet like diversification would be a mistake longer term. As shown in Table 2, those same asset classes that sold off in March experienced a rebound of varying degrees in April and May. Also shown in the table are asset class correlations relative to the S&P 500 over varying time periods. To see an asset class like high yield bonds register a one-month correlation with the S&P 500 of 0.999 should be an indication of the severity of the event, not a preview of a "new normal" going forward. That is why we include 1- and 5-year correlations as well, which helps demonstrate the power of diversification over a longer period of time.

Of note, over short periods of time, when correlations rise *across* multiasset classes (not just *within* an asset class) that can spell trouble for certain specialty strategies such as risk parity hedge funds. They are a subset of hedge funds that attempt to make allocation decisions based on asset class risk metrics. As such, these strategies typically have levered exposure to perceived safe haven asset classes, such as bonds. As we discussed, those safe haven asset classes did not behave as some of these large risk parity funds were expecting, leaving them exposed to significant risk. We have to wonder if this situation is why the Fed held an emergency FOMC meeting on Sunday, March 22, when it didn't appear that any traditional financial institution was anywhere close to a credit crunch. In the weeks that followed, it came to light that indeed there were several sizeable hedge funds that suffered significant losses and were forced to unwind these positions.

The S&P 500 has been one of the strongest performing indices across the investment landscape over the business cycle. As that market leadership evolves or changes in the next business cycle, those correlations may look different in the years ahead. Going forward, investors may not need to rethink diversification per se, but exposures to certain asset classes that provide ballast beyond traditional investment grade bonds (i.e., less risk per unit of return). Possible solutions that come to mind include private real estate, infrastructure, and certain hedge fund strategies, or even custom, structured solutions that are "long volatility." Tried and true beliefs on what a "safe haven asset"[2] really is, and what sort of role it plays in a portfolio should always be reevaluated. It was not that long ago when gold was commonly viewed as a safe haven inflation hedge before the US dollar was lifted from the gold standard. The narrowness of market leadership this cycle has impacted the relationships of other asset classes, but as that evolves future correlations could be quite different — thus, the market continues to be a complex, adaptive system, further reinforcing the evidence of diversification benefits.

[2] Safe haven assets are investments that investors turn to during times of market volatility and instability, that is, to "weather the storm." These investments are perceived to be safe from losses during market turmoil or are negatively correlated to the market at large, meaning they may go up in price when the majority of other assets, mainly stocks, are losing value.

Q *With interest rates so low, have cash allocations become relatively more attractive than fixed income?*

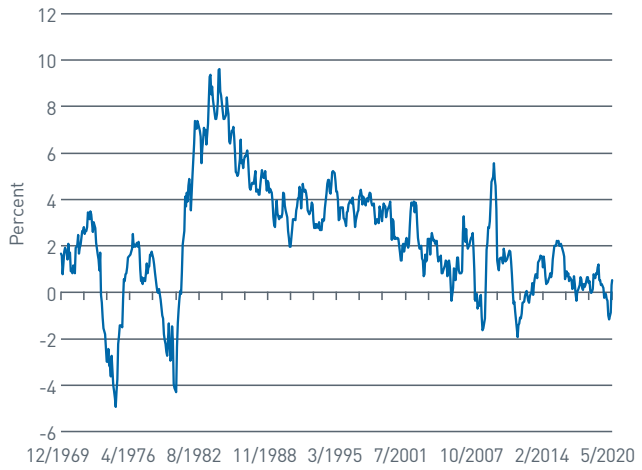
A Investors may be surprised to learn that 10-year US Treasuries have traded at negative interest rates no less than six distinct time periods going back to the 1973. In fact, more recently, the 10-year Treasury traded at a negative yield from June 2019 through March 2020 (Chart 13). These points are all tongue-in-cheek of course, because we are describing interest rates on an inflation-adjusted basis. To illustrate, the 10-year Treasury had an average nominal yield of 88 bps in March, but given the CPI level of 1.5%, the yield on an inflation-adjusted basis was -62 bps.

Believe it or not, short-term interest rates in the United States have already traded at negative yields sporadically during the last few months. The difference here is that these negative yields are *nominal*, not real. From overnight repos out to 6-month Treasury bills, the precedent to trade fixed income instruments at negative yields has already been set. But how can that be if the Fed does not have a negative interest rate policy in place? In our view, the answer highlights the scarcity of perceived "safe haven" assets across the globe. Thus, the environment finds foreign investors flooding into US markets, willing to take on those dollar-denominated securities at any price, even if it means accepting a negative nominal yield.

In our view, the question is not what happens if interest rates go negative, but rather should investors just stick with cash or money market securities as opposed to investing in negative yielding bonds? It is important to remember that the fixed income market, ranging from overnight repos to bonds with maturities greater than 100 years, is a vast universe, and only 21% of global assets have negative yields. Common fixed income asset classes familiar to most bond investors do *not* have negative yields on either a nominal or inflation-adjusted basis (Table 3). The one exception is the Barclays Global Aggregate ex-US Bond Index, which has significant exposure to countries like Germany, Japan, and Switzerland, which have long-term sovereign bonds with negative yields.

One of the pitfalls of negative interest rates is performance expectations. Once a bond is purchased at a negative yield, the only scenario where the investor generates positive total return is if someone else is willing to buy that bond at a lower (i.e., *more* negative) yield. That strategy has been practiced in Europe for some time. In fact, the Bloomberg Barclays Euro Aggregate Bond Index has an average yield of approximately 50 bps over the past five years, yet its total return is 280 bps on an annualized basis. In other words, the overwhelming source of returns for European bonds has been capital appreciation rather than income generation — the opposite of what most investors expect from their fixed income

Chart 13
Real 10-Year Yield based on Headline CPI
12/31/1969 - 5/29/2020



Source: FactSet Research Systems Inc., PNC

Table 3
Common Fixed Income Asset Classes Do *Not* Have Negative Yields
As of 6/19/2020

Index	Yield	Negative Nominal Yield?	Negative Inflation-Adjusted* Yield?
Agg	1.30%	No	No
IG Corporates	2.16%	No	No
IG Securitized	1.47%	No	No
HY	6.44%	No	No
Global Agg ex-US	0.65%	No	Yes
EM Debt	4.66%	No	No
Bankrate.com money market national average	0.28%	No	Yes

*Inflation is based on US CPI

Source: Bloomberg L.P., PNC

investments. (For an indepth discussion of NIRP, please see our fourth-quarter 2019 *Strategy Insights: The "Upside Down" of Negative Interest Rates.)*

Investors take note, the table highlights that cash/money markets do not deliver yields above any of these fixed income asset classes. In a low interest rate environment, even countries with NIRP still manage to generate positive returns for fixed income investors. We believe cash is not an investment, but continues to remain suited as dry powder for reserves and portfolio optionality.

The Only Way Out Is Through

This year has been a rollercoaster for the economy and global markets, as investors continue to grapple with the market volatility resulting from the COVID-19 pandemic and a dramatic decline in the outlook for earnings growth. Yet the S&P 500 has rebounded, and has found a way to "keep on truckin'," thanks in large part to the unprecedented monetary and fiscal stimulus.

The wildcard going forward may continue to be the COVID-19 pandemic. Progress on a vaccine seems to have been slower than anticipated, and after two months of gradual decline, new cases of the virus are on the uptick. A lack of encouraging case data will make it difficult for economic activity to fully resume, which makes current valuations and a path higher for most equity and fixed income markets difficult to justify.

It's a lot for investors to digest, but this is not the time to make abrupt changes to portfolio allocations or to stray from a disciplined investment process. With valuations elevated across many asset classes, markets may have a choppy summer ahead, dependent on COVID-19 curves, economic developments, and second-quarter earnings results. However, we recommend adhering to current asset allocation targets, which we believe will best deliver results against clients' long-term investment goals. The year 2020 has been one for the ages (or one to cancel?!), leaving a lot of investors with more questions than answers at the halfway point of the year. It's been a long year already, and parts of it have certainly been strange, but investors shouldn't get "tripped up" and abandon their long-term investment programs; we believe now is the time to "keep on truckin'."

For more information, please contact your PNC advisor.

For definitions of indexes used in this publication, please refer to pnc.com/indexdefinitions.

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