APRIL 1, 2020

BRAVE NEW WORLD

It was worse. It could have been worse. It could get worse. These three terse phases summarize our perspectives on financial markets at the end of a calendar quarter that began with an entirely different mindset. The investor utopia of 2019 – the very positive spin taken by capital markets' *wheel of fortune* that we referenced in our early January summary of last year's strong total returns – is now a distant memory. Three months into a new decade, we are now collectively confronting unique global societal and economic crises of uncertain dimensions and duration that have, in turn, created a novel set of investment unknowns.

The precipitating cause of markets' unease was, to state the obvious, the global spread of COVID-19 as 2020 began. The evolving information, data, and expertise being both proffered and consumed daily on this critical topic is beyond the scope of this investment-focused update. Suffice it to say our professional focus remains on thinking about how the virus' spread and its eventual containment might impact economies, capital markets, and investment portfolios. Accordingly, this quarterly summary reflects our current perspectives on how the evolving economic environment may affect the risks taken and the returns earned on investors' portfolios across both near- and longer-term horizons.

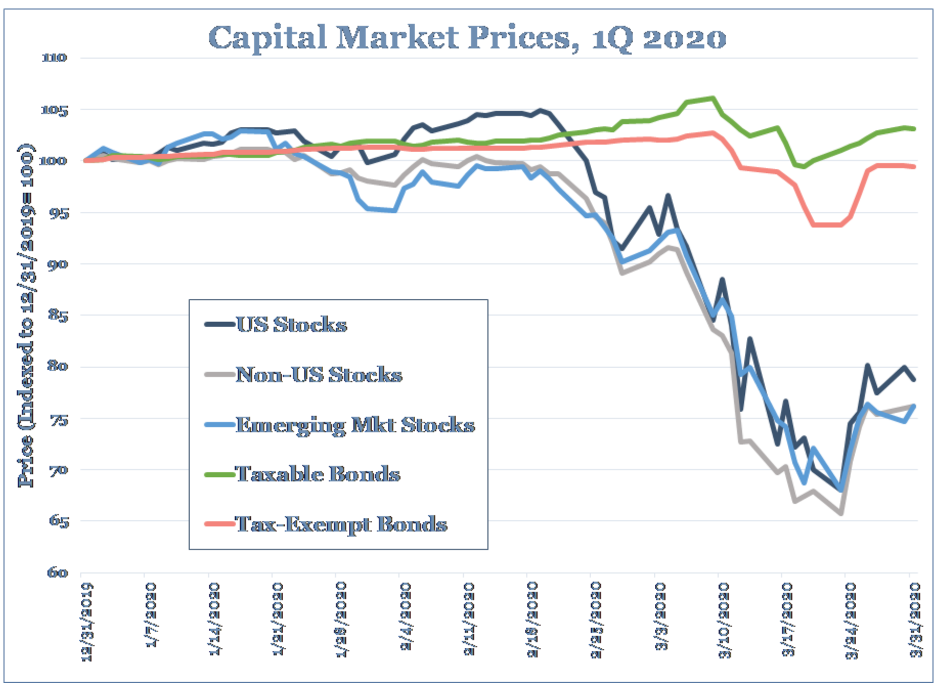
Policymakers to the Rescue

We expect that economic historians will note favorably the steps taken by US and global governments to quickly deploy a wide variety of policy tools to curtail the short-run impacts of the COVID-19 crisis. In the US, the Federal Reserve drew on its institutional memory of the 2008 financial crisis, intervening quickly to provide liquidity to uncertain bond markets and announcing (on March 23) planned funding of credit and lending programs for consumers, businesses, and municipalities. It had earlier made a stunning and unprecedented Sunday (March 15) -100 basis point cut to its benchmark Fed Funds rate. Elsewhere in the world, central bankers and governments reacted similarly quickly and planned to spend liberally to support their respective economies and populaces.

Bipartisan efforts in Congress – an eventuality that absent such a profound crisis would not have been possible just two months ago – resulted in passage of the estimated $2.2 trillion CARES (Coronavirus Aid, Relief, and Economic Security) Act on Friday, March 27. It was the government's third, largest, and broadest action yet to blunt the virus' impact on individuals and businesses. The many program details aside, CARES is notable because it is significantly larger, more consumer-focused, more immediate, and more timely than the economic stimulus package Congress adopted in February 2009 (the American Recovery and Reinvestment Act), when the economy was already five months into the Global Financial Crisis (GFC).

From a capital markets perspective, things were materially worse immediately prior to these late-March policy decisions. Equities trading in US and other markets declined a similar -31% to -35% from their February 19 highs to March 23. Rising credit concerns and a lack of liquidity (more investors seeking to sell than the supply of willing buyers) sharply dislocated prices in the taxable and tax-exempt bond markets across the three weeks ending March 20 (see our earlier write-up, *A Passel of Known Unknowns*).

Although a hypothesis that market pricing would have worsened absent Fed and Congressional actions cannot be proven, markets' strong late-March price increases suggests some investor confidence in the policies' overall efficacy. A return of liquidity to the bond markets boosted prices, particularly in the outflow-challenged muni bond mutual fund market. Credit spreads improved somewhat, boosting prices on both investment grade and lower-quality corporate bonds. And US and global equity markets rebounded +15.7% and +15.0, respectively between March 23-31. Nevertheless, it was the worst quarter for equities (e.g., the S&P 500 Index returned -19.6%) since the 4 th Quarter of 2008 (-22.8%). Bonds largely played their expected role in diversified investment portfolios, dampening the net quarterly decline in investors' total assets.



Whistling in the Dark?

From a health and healthcare provider perspective, it seems certain that the COVID-19 crisis has not yet reached its apex. It could get much worse before it gets better. At a minimum, a majority of the US by geography will be affected, and necessary social distancing practices and a near complete closure of businesses and various non-essential public sector services will dominate lives for the quarter ahead. The same things could be said for most (with the exception of an improving/re-opening China) of the world.

US and global economies, therefore, will inevitably fare poorly during the year's second quarter. Economists continue to wrestle with calculations on the extent to which activity will shrink; there are no relevant modern precedents upon which to draw. [1] A year-over-year GDP decline of -5.0% across the Second Quarter – an outcome that "annualizes" to a falloff of more than -20% – or worse would exceed the GFC's worst single quarter (-3.9% for the period ended June 30, 2009). Unemployment (usually a lagging economic indicator; its sharpest rise typically occurs after a recession is already underway) will likely surge well-beyond its 50-year low of 3.5% by the end of April based on recent unemployment filings and announced furloughs and layoffs. And consumer confidence, one measure of which recently fell to its lowest level since 2016, seems likely to erode further in coming months, crimping spending.

This evolving story of already slow-growth economies declining into COVID-19 induced recessions now falls into the category of "known unknowns". Global capital markets are not ignorant of the issues and the attendant risks for owners of bonds and stocks. And just as epidemiologists and the healthcare sector are diligently seeking to *flatten the curve* of virus case growth, recently implemented government spending policies to offset some portion of the collateral damage of widespread business shutdowns should also serve to flatten (make less worse) the depth and length of the contraction.

The good news: other major economies (China and South Korea) have shown that it is possible to contain the virus and, especially in China's case, re-start a previously shuttered economy. The fervent hope – of economists, politicians, businesses, and consumers – is that life can return to some modicum of normalcy by mid-year. Although confidence in a rapid, V- shaped snap back of the US economy may now be waning, some growth across the year's second half should ultimately curtail the length of the economic contraction (especially relative to the GFC's four consecutive negative GDP quarters) and set the stage for above-average growth in 2021.

Investing in a Time of Coronavirus

Beyond any immediate health-related concerns, investors currently face two very divergent fears. One fear is that the equity markets will re-test their March 23rd lows and perhaps fall further. A second investor fear is that they remain on the proverbial sidelines and miss an opportunity for strong gains if markets move appreciably higher. Further complicating any "market timing" decisions: it is virtually impossible to ascribe accurate valuations (e.g., Price-to-Earnings ratios) to markets. Neither company managements nor equity market analysts can reasonably estimate earnings across the next quarter, much less the next year, given current uncertainties. Therefore, we expect that very few companies will elect to provide forward earnings guidance during the current (now through mid-May) quarterly earnings season.

The best way to address these divergent investment fears and the conundrum of valuation uncertainties: investors should establish a target additional amount to be invested in US and global equity markets and set a reasonable timetable (not too urgent; not overly cautious) across which to put such portfolio risk capital to work. Markets could get worse; markets could get better. History suggests that the former is a possibility (bear markets can experience brief, large upturns before going on to achieve new lows). History also suggests that the latter is a virtual certainty. Investors with long-term (5-10 years) horizons nearly always earn positive total returns; the size of these returns and the speed with which they are earned are characteristically greatest immediately following an economic downturn and attendant bear market.

We have, on several recent occasions, drawn capital market parallels between the GFC of 2008-2009 and the current COVID-19 crisis. There were three distinct periods during the worst (post-Lehman Brothers bankruptcy filing) part of the earlier crisis: an initial -25%/19 trading day decline, a subsequent +12%/16 trading day rebound, and a long (83 trading days) and ugly (-33%) end to that bear market. It got worse. But as discussed above, the US government did not step in with comprehensive fiscal stimulus policies until February 17, 2009. Not entirely uncoincidentally, the US equity market hit its GFC period low 14 trading days later, on March 9.

Beyond a warning that more price volatility could still lay ahead, the above example underpins an analysis we undertook to illustrate how to take advantage of comparatively low equity prices without fully participating in any potential additional downward moves. Using market data from 2008-2009, we compared longer-term outcomes for a variety of different approaches that investors could have implemented for averaging into that market. They could have:

- Invested the full target amount immediately after the crisis' first month (i.e., at the end of October 2008),
- Invested the target amount evenly across a 3-month to 18-month long period, or
- Waited to invest until two months after the crisis appeared to have ended (i.e., on April 30, 2009), then went "all in".

As shown in the table below, investors fared very well across an extended (2-3 year) investment horizon **no matter what course of action was chosen in 2008-2009** . It paid to take risk. But comparatively, it did not pay as well to be overly aggressive (invest everything immediately) or to be overly cautious (average into the market across 18 months). In this case – which we caution may not be completely or even partly reprised currently – programmatically putting funds to work across 6-9 months produced the best long-term total returns (65-68%). These two approaches' annualized returns (12.7%-13.3%) through December 31, 2012 were well-above long-run stock market norms.

Returns from Averaging Into the US Stock Market, 2008-2009*

Total Growth of Investments	Pace of Dollar Cost Averaging						
	Immediate	3 Months	6 Months	Waited	9 Months	12 Months	18 months
As of 2/28/2009	-24.1%	-20.2%	-12.0%	0.0%	-8.0%	-6.0%	-4.0%
12/31/2010	12.8%	15.4%	20.0%	18.4%	18.8%	16.7%	13.4%
12/31/2011	29.8%	36.5%	48.4%	44.1%	45.3%	39.8%	31.4%
12/31/2012	47.2%	54.7%	68.3%	63.4%	64.8%	58.5%	49.0%

**based on S&P 500 Index. Source: Bloomberg LP and Mill Creek analysis*

Looking Beyond COVID-19

We chose Brave New World as the title to this quarterly report not because of its negative literal connotations or (necessarily) in a deliberately literary sense [2] . But as it is used colloquially to reference a "recently changed situation", brave new world seems to well-capture the world in which we are living now and are perhaps going to live post-crisis. There will be, no doubt, a surfeit of hyperbolic pronouncements in the periods just ahead to the effect that COVID-19 will permanently change how we work, how we approach healthcare, how we think about and fund societal safety nets, etc. We will confine our perspectives to the topics with which we have more experience and professional perspective. With respect to post-COVID 19 capital markets, then, the following seem particularly likely:

- The fundamental structure of financial markets will be unchanged. Equity market volatility – low for so long, recently so elevated – will normalize. Bond market liquidity will likewise return, stabilizing prices and shrinking bid/offer spreads.

- Massive US government borrowing will semi-permanently alter the taxable bond market; spreads paid by corporate borrowers may necessarily need to widen to attract investor interest, but inflation and interest rates may not rise materially.

- The Federal Reserve's balance sheet – which it was unable to reduce to pre-GFC levels prior to the current crisis – will likewise remain inflated as it seeks to maintain markets' liquidity and to provide funding in support of state, local government, and businesses finances.

- The financial structure of some industry sectors and companies therein (e.g., the airline industry, hoteliers/cruise lines/other travel-dependent businesses) will be dramatically changed if government funding is required to sustain them. These industries are the current crisis' version of the banking industry post-GFC.

- Problems in the energy sector will likely get far worse (in the face of $20/barrel crude oil prices and a Saudi-led glut of supply in the face of plunging demand) before they get better. Defaults and bankruptcies may rival those in other now-challenged sectors and those of past energy bear markets.

- The technology/consumer communications sectors and major players therein – so recently the poster children for polarizing people and damaging the world's social fabric – have demonstrated the important role it can play in a social distancing world. Healthcare – including recently unloved "big pharma" – will likely benefit from global spending to prepare for/avoid the next pandemic. Post-crisis, strong cash flows and earnings may produce more winners in these economic sectors than elsewhere in the economy and in global stock markets.

Like you, we look forward to the prospect of better news about COVID-19, the end of virus-limiting practices of shutting down nearly everything, and volatile capital markets. In the interim, we will do our best to keep you informed as to salient market developments and our perspectives on the changing risks and returns to which investment portfolios are prospectively exposed.

Investment Strategy Team
Mill Creek Capital Advisors
April 1, 2020

[1] During the Great Depression (1929-1933), real US GDP shrank a cumulative -26%
[2] Brave New World, a novel written by Aldous Huxley in 1932, satirically portrayed a future utopian society in which there was near-total reliance on technology and science to the detriment of individuals' and society's humanity.

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