FIRST QUARTER MARKET THOUGHTS

We Will Meet Again

April 2020

In these trying times, amid the COVID-19 pandemic, we take this moment to think about the debt of gratitude—immeasurable and unrepayable—we owe to those on the frontlines. These men and women—first responders or healthcare workers on their fourth straight shift, teachers demystifying fractions in virtual classrooms, grocery-store employees stocking and disinfecting shelves, sanitation workers and delivery drivers—are out there, every day, putting their wellbeing and that of their families on the line to ensure our health and safety. It is their untiring efforts and steely resolve that will pave the way for a future in which we will meet again. We hope for their safety and wellbeing. We thank them. We salute them. And we try to pay it forward.

At NEPC, we are focused on doing our part to prepare our clients for the vastly changed investment landscape and position their portfolios for long-term financial success. As the virus shuts down economies, whipsaws capital markets and disrupts asset valuations, we are witnesses to the most extreme price fluctuation we have seen in our lifetime. While volatility breeds opportunity, it also generates uncertainty. Faced with a confounding array of potential economic outcomes, this is what we are sure of: it remains imperative to follow a disciplined rebalancing approach, aimed at preserving long-term strategic asset-allocation targets. We also encourage investors to set aside cash covering one quarter of spending needs.

At the same time, we suggest investors begin to explore the possibility of raising the strategic asset-allocation targets of risk assets. We are fully aware that this is not an easy ask but our return outlook is designed to highlight the strategic direction for portfolios over a long-term planning cycle. Our recently updated capital-market assumptions underscore wider risk premiums for equities. We believe the return differential between equities and government bonds will likely remain elevated for considerably longer, as the significant price dislocations of the first quarter and our key market theme of permanent interventions foreshadow that low interest rates are here to stay. That said, we believe that safe-haven fixed income will continue to play a prominent role in a diversified portfolio. Accordingly, we encourage investors to maintain a dedicated allocation to Treasuries to provide liquidity and diversification during times of market stress.

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Our strategic outlook shows an increasing bias to equity exposure that stems from our recently updated 10-year return expectations for asset classes. While we saw big shifts in return expectations for most assets due to the wide price swings in capital markets, our long-term outlook for corporate earnings has not materially changed even though the earnings visibility over the next few years for stocks is extremely unclear. This assumption for corporate earnings is a critical component of NEPC's building-block approach to construct return expectations for equities. It reinforces our belief that we are likely to see elevated risk premiums for equities given that interest rates are expected to remain low over the long term.

GLOBAL EQUITIES

Equities nosedived in the first quarter as volatility tore through markets. The S&P 500 Index plunged 29.5% over 18 trading days between February and March, ending the quarter down 19.6%. The MSCI EAFE and Emerging Markets indexes also recorded steep losses of 22.8% and 23.6%, respectively. Growth and large-cap companies outperformed value and small caps; the gap was the widest in the US with the Russell 1000 Growth Index declining 14.1% compared to losses of 35.7% for the Russell 2000 Value Index. Energy companies, particularly in the exploration and production sector, were the hardest hit with the S&P 500 Energy Sector Index down 50.5% for the three months ended March 31.

Moving to private equity, fundraising totaled $133 billion in the first quarter, up from $119 billion a year earlier, according to data from Preqin; this pace will likely slow, though successful firms that launched fundraises prior to the spread of COVID-19 will probably be successful in raising capital. US buyout activity totaled $186 billion for the quarter, in line with the quarterly averages of 2019, according to PitchBook data; we expect a sharp drop in the volume of new deals for the rest of this year. Exit activity was the lowest since 2013, totaling $61 billion in the first quarter, compared to a quarterly average of $92 billion in the prior four quarters. In venture capital, deal activity stood at $34 billion during the quarter, up from $31 billion in the fourth quarter. During the same period, exit activity fell to $19 billion from $24 billion in the prior quarter. While the exit value is significantly lower than the prior four quarters, the data is skewed by a blockbuster second quarter in 2019, which saw an exit value of $145 billion.

Global Equity Market Returns as of 3/31/2020				
Global Equity	**Quarter**	**1 Year**	**3 Yrs**	**5 Yrs**
MSCI ACWI	-21.4%	-11.3%	1.5%	2.8%
US Equity	**Quarter**	**1 Year**	**3 Yrs**	**5 Yrs**
S&P 500	-19.6%	-7.0%	5.1%	6.7%
Russell 1000 Growth	-14.1%	0.9%	11.3%	10.4%
Russell 1000 Value	-26.7%	-17.2%	-2.2%	1.9%
Russell 2000	-30.6%	-24.0%	-4.6%	-0.2%
Russell 2000 Growth	-25.8%	-18.6%	0.1%	1.7%
Russell 2000 Value	-35.7%	-29.6%	-9.5%	-2.4%
International Equity	**Quarter**	**1 Year**	**3 Yrs**	**5 Yrs**
MSCI EAFE	-22.8%	-14.4%	-1.8%	-0.6%
MSCI EAFE Hedged USD	-20.5%	-12.6%	-1.8%	-0.1%
MSCI EAFE Small Cap	-27.5%	-18.1%	-2.9%	1.0%
MSCI Europe	-24.3%	-15.5%	-2.3%	-1.3%
MSCI Japan	-16.8%	-6.7%	1.0%	1.8%
MSCI Emerging Markets	-23.6%	-17.7%	-1.6%	-0.4%
MSCI Emerging Markets Small Cap	-31.4%	-29.0%	-9.6%	-5.2%
Alternative	**Quarter**	**1 Year**	**3 Yrs**	**5 Yrs**
HFRI Equity Hedge	-13.0%	-8.1%	0.0%	1.3%
HFRI Emerging Markets	-11.4%	-7.8%	-0.3%	1.5%
HFRI ED: Activist	-33.1%	-27.9%	-10.0%	-4.4%
HFRI ED: Merger Arbitrage	-10.2%	-6.5%	0.8%	1.6%

Within hedge funds, long/short equity held up moderately well in the first quarter, with the HFRI Equity Hedge (Total) Index losing 13%; the asset class captured around 60% of the decline in the MSCI ACWI Index and two-thirds of the fall in the S&P 500 for the quarter. Sector-focused strategies in healthcare and technology led performance, down 6.2% and 8.2%, respectively. Gross leverage decreased during the quarter, led by the deleveraging of quantitative strategies, while net exposure increased as fundamental managers marginally defended their long exposure and covered shorts. Hedge funds ended the quarter with overweight positions in consumer discretionary, technology and communications-services sectors, and underweights in energy, staples, financials and utilities.

GLOBAL FIXED INCOME

Fixed income experienced significant spread widening across the credit spectrum in the first quarter amid market illiquidity, rapid deleveraging and fire sales in March. Government bond yields fell as investors took refuge in safe-haven securities. The Bloomberg Barclays Aggregate Index was up 3.1% as gains in Treasuries were offset by negative returns from investment-grade credit. Debt rated below

investment grade suffered larger losses with the Bloomberg Barclays High Yield Index down 12.7% and the S&P LSTA Leveraged Loan Index declining 9.9%.

Global Fixed-Income Market Returns as of 3/31/2020				
Global Fixed Income	**Quarter**	**1 Year**	**3 Yrs**	**5 Yrs**
BC Global Aggregate	-0.3%	4.2%	3.6%	2.6%
JPM EMBI Global Diversified	-13.4%	-6.8%	0.4%	2.8%
JPM GBI-EM Global Diversified	-15.2%	-6.5%	-0.8%	0.3%
Domestic Fixed Income	**Quarter**	**1 Year**	**3 Yrs**	**5 Yrs**
BC Aggregate Bond	3.1%	8.9%	4.8%	3.4%
BC Municipal Bond	-0.6%	3.8%	4.0%	3.2%
BC TIPS	1.7%	6.8%	3.5%	2.7%
BC US Treasury	8.2%	13.2%	5.8%	3.6%
BC US Long Treasury	20.9%	32.6%	13.4%	7.3%
BC MBS	2.8%	7.0%	4.0%	2.9%
BC US Credit	-3.1%	5.1%	4.2%	3.3%
BC US Long Credit	-4.7%	9.0%	6.6%	4.7%
BC High Yield	-12.7%	-6.9%	0.8%	2.8%
BC Muni High Yield	-6.9%	-0.7%	4.4%	4.2%
S&P LSTA Lev. Loan	-9.9%	-5.1%	0.5%	1.6%
BC T-Bills	0.6%	2.4%	1.8%	1.2%
Alternative	**Quarter**	**1 Year**	**3 Yrs**	**5 Yrs**
HFRI Credit Index	-4.4%	-1.4%	1.8%	2.7%
HFRI ED: Credit Arbitrage	-23.5%	-17.9%	-3.0%	-0.3%
HFRI ED: Distressed/Restructuring	-6.9%	-7.1%	-0.8%	1.0%
HFRI Relative Value	-4.1%	-0.8%	1.8%	2.6%

Credit hedge funds were not immune to the market dislocation, with the HFRI Relative Value index down 4.1%. Emerging market debt was also in the red with the JPM EMBI Index declining 13.4% and the JPM GBI-EM Index losing 15.2% for the quarter.

While monetary and fiscal measures have eased concerns around volatility and liquidity for the time being, significant uncertainty remains around the overall fallout from COVID-19. We see current market opportunities in structured credit such as asset-backed securities and residential mortgage-backed securities, as potential rating downgrades may create broader dislocations in investment-grade corporate credit. These structured credit opportunities can be accessed through hedge funds and investment mandates such as the TALF program. We believe medium- and longer-term opportunities will subsequently present themselves as the market evolves and we encourage investors to remain mindful of market liquidity.

REAL ASSETS

Energy markets were slammed in the first quarter as restrictions on travel and movement sharply curtailed global demand for crude oil at a time of plentiful supply. WTI and Brent plunged more than 60%, while natural gas fared better with a 25% drop. Equities for companies in the exploration and production, and midstream spaces plummeted; the Alerian North American Midstream Index fell 47%. Oil producers are aggressively slashing capital expenditures and dividends in efforts to survive. We expect to see consolidation in the industry as undercapitalized companies struggle to service their debt.

Within real estate investment trusts, the FTSE NAREIT Composite Index sold off 25%. Certain property types were hit harder than others as public-market investors scrambled to position their portfolios. Hospitality, retail and senior-housing lagged, while data centers, life science and industrial REITs stood their ground. Although dividend yields in this space appear attractive, it remains to be seen if those dividends payments are sustainable.

In private real estate, transaction volumes stalled as investors grapple to quantify the economic impact of the pandemic. Some open-end real-estate funds have begun to institute redemption gates due to uncertainty around valuations in the first quarter and a desire to retain cash in this uncertain environment. We expect modest declines in valuations for hotel and retail assets as we await data on first-quarter performance; we believe valuations in the second quarter will more accurately represent the economic

Real Asset Returns as of 3/31/2020				
	Quarter	1 Year	3 Yrs	5 Yrs
Bloomberg Commodity	-23.3%	-22.3%	-8.6%	-7.8%
GSCI Commodity	-42.3%	-41.0%	-13.3%	-12.8%
Gold Spot	4.0%	22.1%	8.1%	5.9%
WTI Crude Oil Spot	-67.1%	-66.6%	-26.4%	-15.9%
BBG Commodity - Agriculture	-9.9%	-5.3%	-9.1%	-7.2%
BBG Commodity - Energy	-51.1%	-52.9%	-19.8%	-18.8%
BBG Commodity - Industrial Metals	-18.5%	-22.7%	-5.5%	-3.4%
BBG Commodity - Precious Metals	-1.1%	15.7%	3.7%	3.2%
S&P Global Natural Resource Equities	-34.7%	-31.7%	-6.7%	-5.9%
NAREIT Composite Index	-25.5%	-18.1%	-0.9%	1.5%
NAREIT Global REIT Index	-30.2%	-24.2%	-4.2%	-1.6%
Alerian MLP	-47.9%	-49.6%	-18.5%	-13.6%

slowdown. We reiterate our belief that selection of property type will be a large driver of relative performance for managers in the sector.

Certain pockets of the infrastructure market are experiencing headwinds as development and construction come to a standstill. Demand for transportation assets, for instance, airports, is depressed amid widespread travel restrictions. While these temporary disruptions will create challenges for investors, low interest rates should continue to drive capital flows from income-focused allocators.

FINAL THOUGHTS

Often, the greatest investment challenges are the ones that test our core beliefs. To that end, 2020 is likely to be one of our greatest trials. At this moment, the outcome of the efforts to contain COVID-19 and the full extent of the economic damage inflicted by the virus are highly uncertain; what we can rely on are key investment principles that tell us to maintain discipline, stay committed to diversification, and focus on strategic objectives. We encourage investors to confirm their risk tolerance and strategic objectives as these heightened levels of volatility can test even the most disciplined investment framework. We also urge investors to conservatively size liquidity levels of their portfolios relative to spending needs. While the months ahead will test our resolve, we draw strength from the resilience of our communities and the knowledge that each of us is doing our part to ensure the well-being of those around us. Until we meet again, stay safe and keep well.

DISCLAIMERS AND DISCLOSURES

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.
- The information in this report has been obtained from sources NEPC believes to be reliable. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
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