Board of Trustees

1000 Mill Street
San Luis Obispo, CA 93408
Phone: (805) 781-5465
Fax: (805) 781-5697
www.SLOPensionTrust.org

San Luis Obispo County Pension Trust
SLOCPT

Date: May 22, 2020

To: Board of Trustees

From: Carl Nelson – Executive Director
Amy Burke – Deputy Director

Item 14: Monthly Investment Report for April 2020

	April	**Year to Date 2020**		2019	2018	2017	2016	2015
Total Trust Investments ($ millions)	$1,308			$1,446 year end	$1,285 year end	$1,351 year end	$1,196 year end	$1,148 year end
Total Fund Return	4.7% Gross	**-8.2**% Gross		16.3 % Gross	-3.2 % Gross	15.5 % Gross	6.6 % Gross	-0.8% Gross
Policy Index Return (r)	5.0%	-4.3%		16.4 %	-3.2 %	13.4 %	7.7 %	-0.5 %

(r) Policy index as of April 1, 2020 revision to Strategic Asset Allocation Policy: 21% domestic equity, 21% international equity, 15% core bonds, 6% bank loans, 5% global bonds, 5% emerging market debt, 17% real estate, 0% commodities, 5% private equity, 5% private credit.

SLOCPT Investment Returns:

The attached report from Verus covers the preliminary investment returns of the SLOCPT portfolio and general market conditions through the end of April. The attached market commentary from Verus details market conditions in April, but subsequent activity in May is not yet factored into these numbers.

Staff estimates on a preliminary basis that Total Fund Return in **May month-to-date is approximately 0%.**

The Economy and Capital Markets:

- **Covid-19 Pandemic Impact -**
  - The rapid global spread of the SARS-CoV-2 virus continues, but with some "flattening of the curve in the U.S. While infection rates in New York have declined from very high peaks in April, the remainder of the U.S. continues to see modest increase in the rate of infection. This stretches out hopes for reopening of economic activity as the danger abates.
  - Comparisons of the Covid-19 outbreak to previous outbreaks of SARS, MERS, Ebola, and Swine Flu illustrate why this pandemic is more widespread and economically disruptive.
    - SARS-CoV-2 has a high rate of transmissibility – still to be accurately measured but, estimated at an R_0 factor of about 1.5 to 3.5. The R_0 factor is the number of people infected by one infected person – i.e., a R_0 factor of 2 = a squared exponential growth rate. The mortality rate for SARS-CoV-2 is around 1.4% or 14x higher than seasonal influenza.
    - In contrast the mortality rate for SARS (9.6%), MERS (34%), and Ebola (50%) are far higher, but the R_0 transmissibility factor is a fraction of that of SARS-CoV-2. These diseases are transmissible generally only during and after symptoms are apparent and with close contact. Hence, these other diseases are dangerous, but infect exponentially smaller numbers.
    - The 2009 pandemic of Swine Flu – H1N1 – was highly transmissible like SARS-CoV-2 including pre-symptomatic transmission. The R_0 factor for transmissibility of H1N1 is about 1.4 to 1.6. H1N1 may have infected over 1 billion people by the end of 2010. However, H1N1's symptoms were far milder and had a mortality rate less than 0.1%.
    - SARS-CoV-2 as the virus that causes Covid-19 combines the potent combination of a high R_0 transmissibility factor, pre-symptomatic transmission, highly damaging health impairments and a moderately high mortality rate. Hence, the economic disruption caused by efforts to limit Covid-19 is necessarily severe.

- **Global Recession -**
  - Fed Chair Powell at a May 12th address included comments that were sobering to the capital markets –
    - On the topic of fiscal policy responses Powell commented "The recovery may take some time to gather momentum, and the passage of time can turn liquidity problems into solvency problems."… "Additional fiscal support could be costly, but worth it if it helps avoid long-term economic damage and leaves us with a stronger recovery"
    - Powell commented that the Fed had the ability to act as a "bridge across temporary disruptions to liquidity" but suggested that far more than a temporary bridge may be needed to counter the large and uncertain impact on the economy.

- “While the economic response has been both timely and appropriately large, it may not be the final chapter, given that the path ahead is both highly uncertain and subject to significant downside risk. Since the answers are currently unknowable, policies will need to be ready to address a range of possible outcomes.”
- On unemployment, Mr. Powell said that America’s unemployment rate will probably peak “over the course of the next month or so” and might come down sharply as the economy recovers, but that it will probably take some time to get back to the very-low jobless levels that prevailed before the coronavirus.”

➢ **Policy Responses**

- Monetary Policy – The Fed continued with its 0% Fed Funds rate floor and unprecedented provision of liquidity to the financial markets through nine emergency lending programs.
- Fiscal Policy – The Federal government continues to debate new phases of economic stimulus. The initial rounds of stimulus with an unprecedented addition to the deficit from a rapid $2+ trillion series of measures. Pending points of contention include stimulus aid to state and local governments that face massive shortfalls in revenue and increases in necessary social expenditures.

➢ **Economic Recovery**

- Forecasts of whether the U.S. economic recovery will be a protracted “U-shaped” recovery are highly speculative and depend on complex variables for unprecedented circumstances. In other words – no one really knows.
- The apparent most common outlooks are for a protracted U-shaped recovery with negative GDP growth n 2Q20 and 3Q20 and flat for 4Q20. Followed be a mild bounce back in 2021. While the underlying economic conditions going into the pandemic crises were strong which encourages a rapid return to normal, lingering effects of a protracted pandemic on consumer spending may slow the return to growth and employment.
- A more positive outlook for a V-shaped recovery was recently published by Beacon Economics, a well-known Central Coast economics firm. The following are excerpts from the conclusions of Beacon’s May report – *“The Post Covid-19 Economy – A Case for the “V”.”*

  “There is no doubt that the 10 million plus people who are entering into unemployment will face a challenging period even with expanded unemployment benefits and direct payments from the Federal government. Many small businesses are also being pushed close to the edge as they wait to restart operations. But among much of the consuming public, savings rates are good, debt burdens are low, and consumers are maintaining their earnings. For this group the inability to spend money during the public health mandated shutdowns will lead to a surge in savings and significant pent up demand. While some households will not be able to spend as much post-pandemic, others will likely spend considerably more than usual. The same applies to businesses and investors.”

"All this does not suggest a "U", but a very large and rapid "V". The second quarter will definitely post record negatives, but that will be followed by record positives in the last half of the year as we quickly return to normalcy. We see GDP growth as follows: 0% in Q1, -30% in Q2, 25% in Q3, and 5% in Q4, with unemployment falling back to the low 4's over the year. Not all of the damage will be erased, but much of it will and things should largely return to normal faster than many expect. Indeed, we may find that the second quarter will be the only negative growth quarter of the year, which will cause plenty of debate over whether this was or wasn't a true recession." …

"The Fed has now injected trillions of dollars into short term credit markets, but it looks like much of the panic has already passed. Credit markets are settling down and the economy will, in the short term at least, enjoy record low interest rates along with lower gas prices and all the other benefits that come from falling commodity prices. This will also help with the third quarter bounce."…

"While we believe that the most likely outcome for the U.S. economy is better than what most forecasts are currently suggesting, we must also be humble in the face of such an unprecedented shock. In this case there are two major wildcards. The first, of course, is the virus itself. They are wily things and can take strange and unanticipated twists and turns. If the spread of the Coronavirus should spiral out of control again, public health mandates will once again take over and more damage will be done. But even in such a case, public response should be faster and more forceful the second time around, allowing us to weather the storm better. The global population has experienced a big learning curve and we are likely to continue behaving vigilantly, which will help limit negative outcomes."

The second wildcard is whether there will be a dramatic shift in consumer behavior after the pandemic ends. Certainly, people will wash their hands more often and handshakes may well become a thing of the past, but will consumers stop going to ballgames and music festivals? Will they be too afraid to go to restaurants?"…

"While we believe a "V" recovery is ahead, we say so very cautiously, and hope the false narrative that the 'cure is worse than the disease' is not allowed to push us off our current path."

Let's hope Beacon Economics is right.

- **Equity Markets**
  - Equity markets globally responded to the pandemic and its economic fallout with unprecedented rapidity of their falls in March. The U.S. domestic stock S&P 500 index declined from a high of 3,386 in mid-February to a bottom on March 23rd at 2,237 – a 33% drop. Since that date, the S&P 500 has rallied – albeit with heightened volatility – to 2,955 on May 22nd. Thus far the S&P 500 has retraced about over half of its fall and is+32% off its March 23rd bottom and down -12% from its February peak.

- **Debt Markets**
  - With the aggressive monetary policy response Treasury Bond yields fell precipitously with the 10-year Treasury bond going from about a 1.50% yield in mid-February to a 0.66% yield on May 22nd. The March expansion of credit spreads (corporate debt yields less the corresponding maturity Treasury yield) that severely lowered total bond returns abated somewhat in April.

- **Fed Policy and Interest Rates –**
  - At the April 29th FOMC meeting the Fed reiterated its commitment to support the economy and investment market functioning through near-unlimited provision of liquidity via asset purchases. The Fed indicated no hurry to increase interest rates and intends to keep the Fed Funds rate nears its lower bound of 0% until economic recovery.

- **Oil Prices –**
  - Oil prices recovered to more normal levels in the $33/barrel range in mid-May. The global reduction in oil demand and the production cutbacks of OPEC and Russia stabilized the oil market. However, oil prices are roughly half of what they were in 2019.

- **Inflation –**
  - The outlook for inflation is another source of uncertainty in the pandemic and recovery.
  - In the near/medium term the demand shock of a global contraction due to the pandemic and oil market turmoil is likely disinflationary (a falling rate of inflation, but not necessarily widespread deflation). The disinflationary/deflationary impact may fall more heavily on sectors suffering longer term demand contractions such as airlines and hotels.
  - In the longer term, inflationary pressures are less clear and may be impacted by –
    - Cost-Push Inflation – As many suppliers to the consumer economy contend with cost impacts (e.g., restaurants operating at ½ capacity) some consumer prices may increase. Also, supply chain reorganization as globalization partially recedes and producers seeking resiliency in their sources shorten their supply chains may contribute to higher costs.
    - Monetary Policy based Inflation - The unprecedented creation of money supply through deficit spending may tap into the classic source of inflation – too many dollars chasing too few goods. However, this interpretation is suspect given that the monetary policy response is primarily building central bank balance sheets as they purchase debt instruments – not wholesale pouring of money out to the populace.

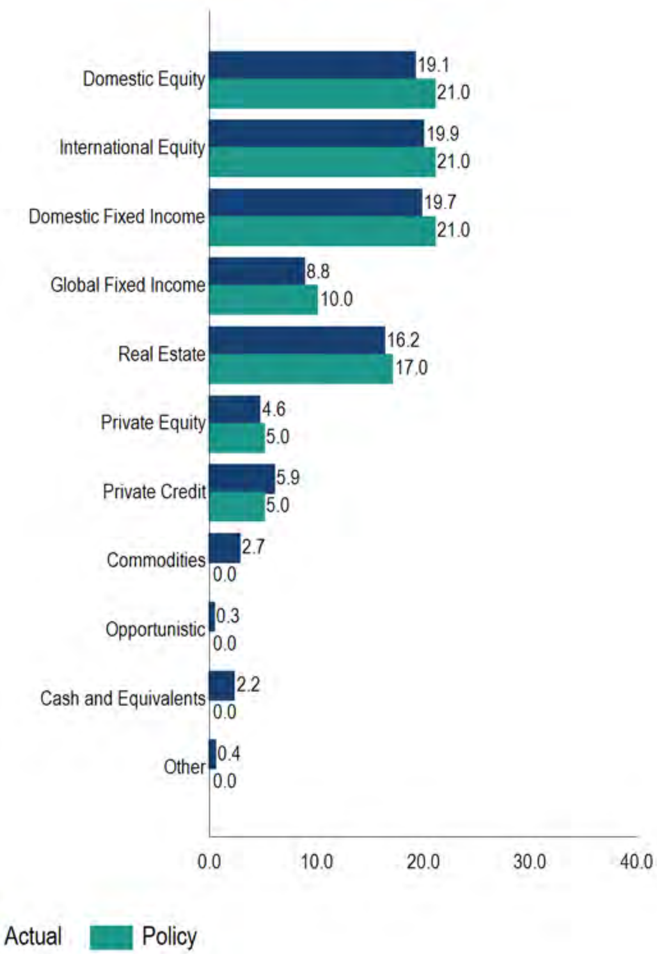
- **Employment and Wages –**
  - The April DOL report from the BLS on nonfarm employment showed that Unemployment surged to 14.7% - from its February low of 3.5%. A 20% unemployment rate is conceivable on a short-term basis.
  - Unemployment - by May 21st, applications for unemployment benefits in the U.S. over the last nine weeks surged past 36 million. Effectively about ¼ of the workforce. While many job losses are temporary layoffs that may be reversed within months as the economy reopens in stages, it is likely that unemployment will be above 10% through year end.
  - The impact on income from the Covid crisis is substantially softened by the large stimulus contained in the CARES Act. Michael Cembalest of JP Morgan in his May 4th Eye on the Market newsletter commented on income effects –

    "Is US fiscal stimulus "enough"? Hard to define exactly, but here are some metrics we have seen that put stimulus in context. Overall worker incomes may only decline by 3% in 2020; the original 11% hit to incomes may be offset by 8% from government transfers. Furthermore, 65%-75% of workers laid off may be receiving more state and local unemployment benefits than lost wages (at least through the program's initial expiration date at the end of July), all of which may result in a remarkable 0.5% increase in personal disposable income this year vs 2019."

Respectfully Submitted,

	Market Value	% of Portfolio	1 Mo	YTD
Total Fund	**1,307,925,345**	**100.0**	**4.7**	**-8.2**
Policy Index			*5.0*	*-4.3*
Total Domestic Equity	**249,982,907**	**19.1**	**12.2**	**-13.9**
Russell 3000			*13.2*	*-10.4*
PIMCO RAE Fundamental PLUS Instl	50,049,700	3.8	11.3	-19.7
S&P 500			*12.8*	*-9.3*
Loomis Sayles Large Cap Growth	82,403,120	6.3	12.1	-0.4
Russell 1000 Growth			*14.8*	*-1.4*
Boston Partners Large Cap Value	64,653,104	4.9	12.1	-20.4
Russell 1000 Value			*11.2*	*-18.5*
Atlanta Capital Mgmt	52,876,983	4.0	13.4	-17.4
Russell 2500			*14.6*	*-19.5*
Total International Equity	**260,685,673**	**19.9**	**8.4**	**-16.5**
MSCI ACWI ex USA Gross			*7.6*	*-17.4*
Dodge & Cox Intl Stock	111,075,134	8.5	7.6	-25.1
MSCI EAFE Gross			*6.5*	*-17.7*
WCM International Growth	149,610,539	11.4	8.9	-8.9
MSCI ACWI ex USA Gross			*7.6*	*-17.4*
Total Domestic Fixed Income	**258,046,296**	**19.7**	**3.2**	**0.8**
BBgBarc US Aggregate TR			*1.8*	*5.0*
BlackRock Core Bond	94,985,717	7.3	3.4	4.0
BBgBarc US Aggregate TR			*1.8*	*5.0*
Dodge & Cox Income Fund	97,246,382	7.4	3.0	2.4
BBgBarc US Aggregate TR			*1.8*	*5.0*
Pacific Asset Corporate Loan	65,814,196	5.0	3.3	-6.4
S&P/LSTA Leveraged Loan Index			*4.5*	*-9.1*
Total Global Fixed	**114,642,970**	**8.8**	**2.6**	**-14.8**
FTSE World Govt Bond Index			*1.2*	*3.2*
Brandywine Global Fixed Income	55,723,089	4.3	2.5	-10.0
FTSE WGBI ex US TR			*1.5*	*-0.4*
Ashmore EM Blended Debt Fund	58,919,881	4.5	2.6	-19.4
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+			*2.4*	*-10.5*

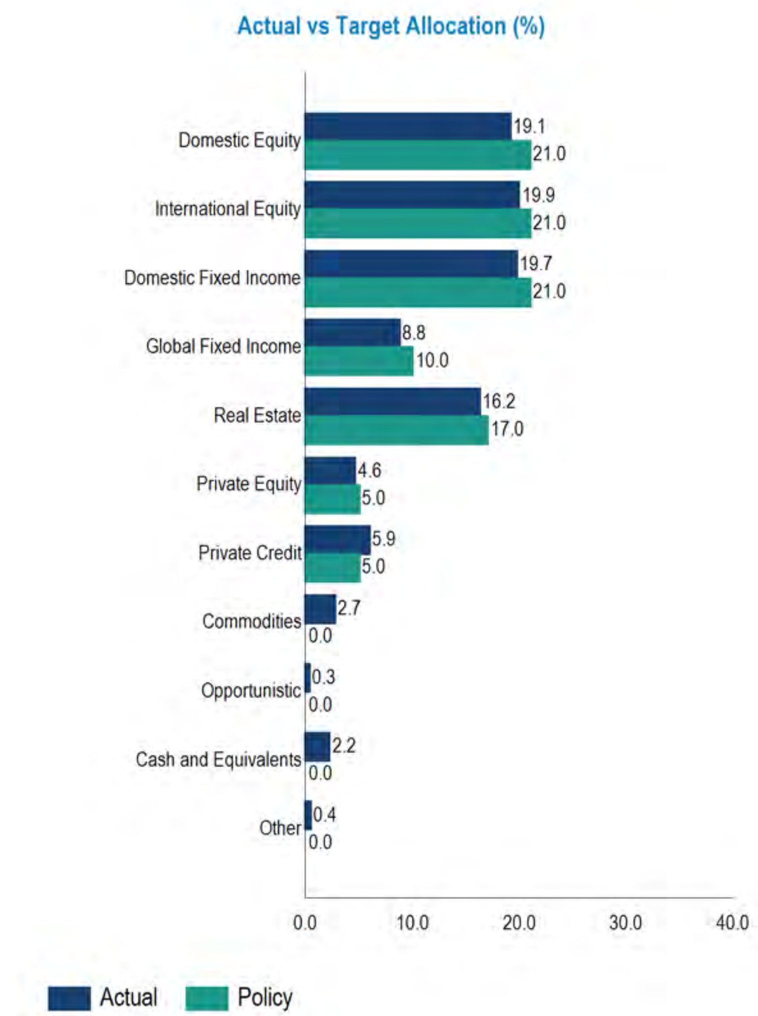
Actual vs Target Allocation (%)



**Other balance represents Clifton Group.*

Policy Index (4/1/2020): 21% Russell 3000, 21% MSCI ACWI ex. US, 31% BBgBarc Aggregate, 17% NCREIF Property, 5% Russell 3000 + 300 bp lagged, 5% BBgBarc High Yield + 200 bp lagged. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. Boston Partners funded 2/1/2017. WCM Intl Growth replaced Vontobel on 2/15/2017. Pathway 9 funded 4/7/2017. SSGA TIPS liquidated on 12/7/2017. Fidelity Real Estate Growth III liquidated on 12/29/2017. SSGA Flagship S&P 500 liquidated 2/1/2018. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor liquidated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidated 5/3/2019. Pathway 10 funded 3/25/2020. TPG Adjacent Opportunities Partners funded 4/16/2020. Most recently reported market values for private equity/credit, opportunistic, and illiquid real estate funds adjusted for calls and distributions through the report end date. All data is preliminary.

	Market Value	% of Portfolio	1 Mo	YTD
Total Real Estate	**212,494,111**	**16.2**	**0.4**	**1.9**
NCREIF Property Index			*0.0*	*0.7*
JP Morgan Core Real Estate	173,625,226	13.3	0.2	1.6
NCREIF-ODCE			*0.0*	*1.0*
NCREIF Property Index			*0.0*	*0.7*
ARA American Strategic Value Realty	38,868,885	3.0	1.2	3.5
NCREIF-ODCE			*0.0*	*1.0*
NCREIF Property Index			*0.0*	*0.7*
Total Commodities	**35,343,674**	**2.7**	**-0.4**	**-25.4**
Bloomberg Commodity Index TR USD			*-1.5*	*-24.5*
Gresham MTAP Commodity Builder	35,343,674	2.7	-0.4	-25.4
Bloomberg Commodity Index TR USD			*-1.5*	*-24.5*
Total Private Equity	**60,123,930**	**4.6**		
Harbourvest Partners IX Buyout Fund L.P.	15,820,636	1.2		
Pathway Private Equity Fund Investors 9 L.P.	35,304,431	2.7		
Harbourvest 2018 Global Fund L.P.	7,898,185	0.6		
Pathway Private Equity Fund Investors 10 L.P.	1,100,678	0.1		
Total Private Credit	**69,922,012**	**5.3**		
TPG Diversified Credit Program	69,922,012	5.3		
Total Cash	**28,780,721**	**2.2**	**0.5**	**1.0**
91 Day T-Bills			*0.0*	*0.4*
Cash Account	28,780,721	2.2	0.5	1.0
91 Day T-Bills			*0.0*	*0.4*
Total Opportunistic	**12,108,230**	**0.9**		
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	4,225,695	0.3		
PIMCO Distressed Credit Fund	100,628	0.0		
TPG Adjacent Opportunities Partners	7,781,907	0.6		



**Other balance represents Clifton Group.*

Policy Index (4/1/2020): 21% Russell 3000, 21% MSCI ACWI ex. US, 31% BBgBarc Aggregate, 17% NCREIF Property, 5% Russell 3000 + 300 bp lagged, 5% BBgBarc High Yield + 200 bp lagged. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. Boston Partners funded 2/1/2017. WCM Intl Growth replaced Vontobel on 2/15/2017. Pathway 9 funded 4/7/2017. SSGA TIPS liquidated on 12/7/2017. Fidelity Real Estate Growth III liquidated on 12/29/2017. SSGA Flagship S&P 500 liquidated 2/1/2018. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor liquidated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidated 5/3/2019. Pathway 10 funded 3/25/2020. TPG Adjacent Opportunities Partners funded 4/16/2020. Most recently reported market values for private equity/credit, opportunistic, and illiquid real estate funds adjusted for calls and distributions through the report end date. All data is preliminary.

Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

APRIL 2020
Capital Markets Update

Market commentary

U.S. ECONOMICS

— In Q1, real GDP contracted at an annualized quarterly rate of -4.8% (exp. -3.7%). Personal consumption expenditures, which account for nearly 70% of the economy, detracted -5.3% from total growth. On a year-over-year basis, GDP expanded 0.3%. Growth in the second quarter is still expected to be far worse than Q1 growth.

— In April, total nonfarm payrolls fell by 20.5 million (exp. 22m) and unemployment rose to 14.7%, the highest level since the Great Depression. The underemployment rate, which includes part-time workers who would prefer full-time jobs and workers in full-time jobs not using all their skills, spiked from 8.7% to 22.8%.

— The ISM Manufacturing PMI contracted further in April, dropping to 41.5 from 49.1 in March. The ISM Services PMI fell from 52.5 to 41.8 dropping into the contractionary territory below 50.0, and to its lowest level since April 2009.

U.S. EQUITIES

— The S&P 500 climbed 12.8% in April, marking the highest monthly return for the index since 1974. Despite posting its first monthly advance of the year, the S&P 500 was still down -9.3% year-to-date.

— With roughly 88% of S&P 500 companies reporting Q1 earnings, aggregate sales and earnings growth have come in at 1.0% and -7.5%, respectively. Sales growth has exceeded expectations by 1.1% and earnings growth has beaten estimates by 0.6%.

— The forward 12-month P/E ratio of the S&P 500 was 20.5 at month-end, above the 16.3x multiple which was recorded at the end of the first quarter (March 31). The last time the forward 12-month P/E was above 20.0 was in April 2002.

U.S. FIXED INCOME

— In the May FOMC meeting, the Federal Reserve guided that interest rates would remain near zero percent for as long as necessary to achieve its dual mandate of full employment and stable prices. The Federal Reserve balance sheet has grown by $2.4 trillion over the past two months.

— On April 9th, the Federal Reserve created the Municipal Liquidity Facility which will backstop $500 billion in municipal borrowing. During the Global Financial Crisis, the Federal Reserve elected not to intervene in the municipal and state funding markets.

— In order to finance the large amount of fiscal stimulus spending approved by Congress, the Treasury has begun issuing long-term debt, taking advantage of historically low financing costs.

INTERNATIONAL MARKETS

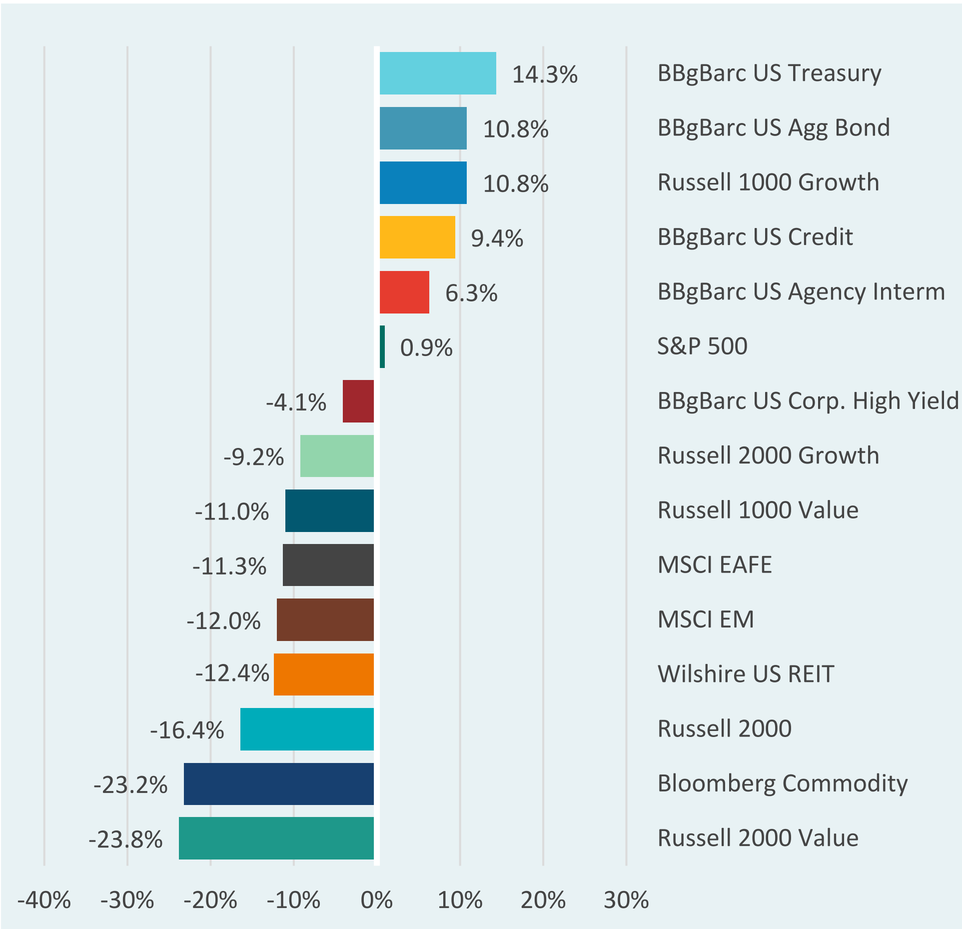
— COVID-19 left few places in the world untouched. Global confirmed cases increased by 2.3 million people in April, and the death toll climbed to 233,824. After months of government-enforced lockdowns and halts to international travel, countries are beginning to set the stage for a gradual reopening.

— In Q1 2020, GDP contracted at a quarterly annualized rate of -3.3% in the Eurozone, -4.1% in Spain, -4.8% in Italy, and -5.4% in France. Global governments have stepped in, providing an unprecedented amount of stimulus to combat mass layoffs and other economic fallout from COVID-19.

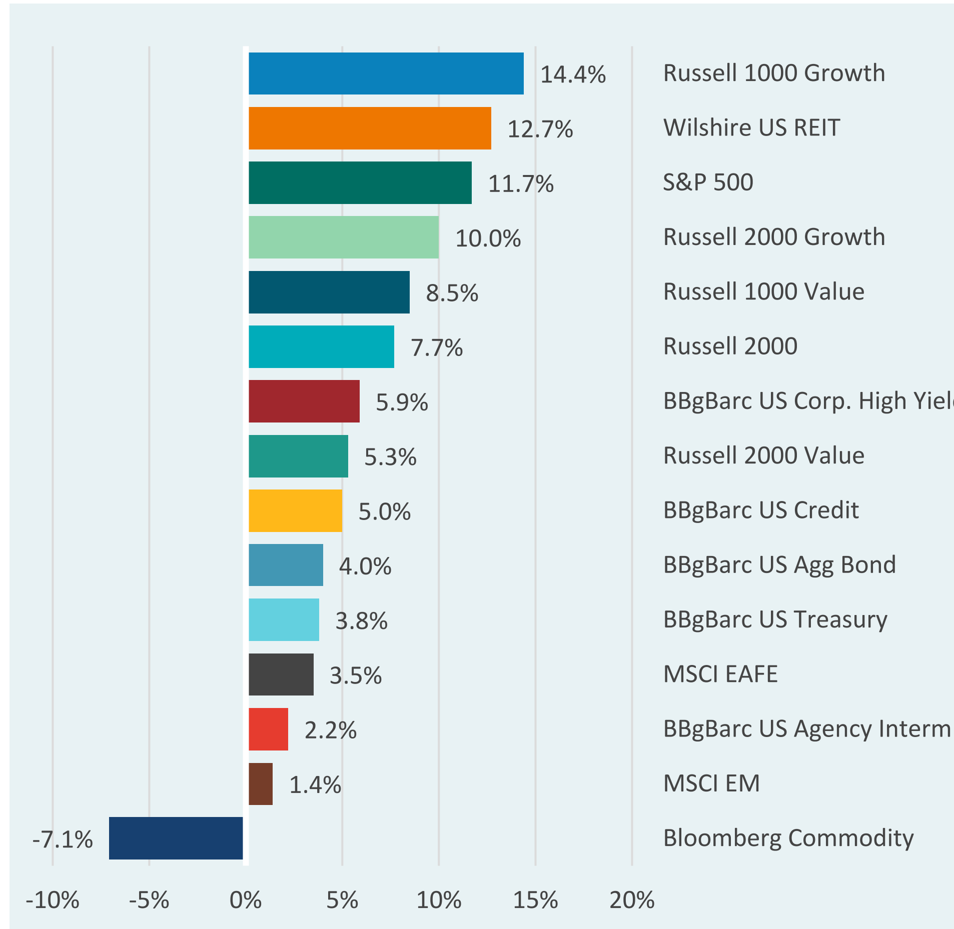
— The European Central Bank's Public Sector Purchase Program, which was introduced as quantitative easing in 2015, was ruled by German authorities to be in violation of E.U. treaties.

Major asset class returns

ONE YEAR ENDING APRIL



TEN YEARS ENDING APRIL



**Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.*

Source: Morningstar, as of 4/30/20

Source: Morningstar, as of 4/30/20

U.S. large cap equities

— In April, the S&P 500 Index bounced back, returning 12.9% following a precipitous slide in equity prices in the first quarter. The advance was likely supported by evidence that the transmission of COVID-19 was slowing in certain hot spots, as well as promises of both fiscal and monetary support.

— Analysts slashed earnings estimates for S&P 500 companies. During the month of April, the median EPS estimate for the index declined -28.4%. The largest decline in quarterly EPS estimates during the Global Financial Crisis was -20.6% back in Q1 2009.

— All eleven GICS sectors contributed positively to returns, and the Energy sector (+29.8%) was the top performer as concerns around oversupply faded following an OPEC+ decision to cut oil production. The Consumer Discretionary sector (+20.5%) fueled the move higher for the overall index.

— The CBOE VIX Index of implied volatility fell 19.8 points in April, starting the month at 57.1 and closing the month at 37.2. The popular “fear gauge” is still well above its 3-year average of 18.7.

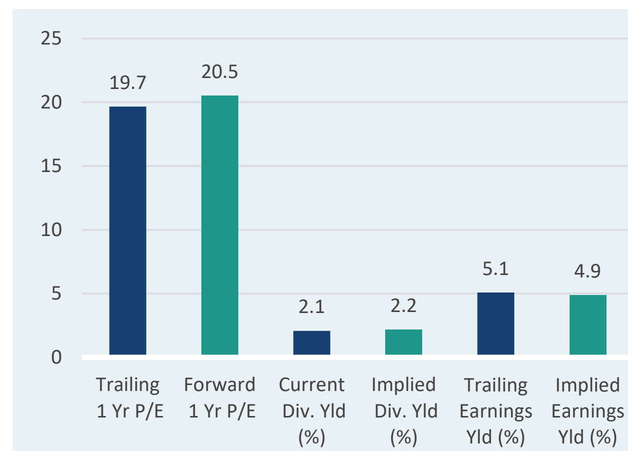
S&P 500 PRICE INDEX

Source: Bloomberg, as of 4/30/20

IMPLIED VOLATILITY (VIX INDEX)

Source: CBOE, as of 4/30/20

S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 4/30/20

Domestic equity size and style

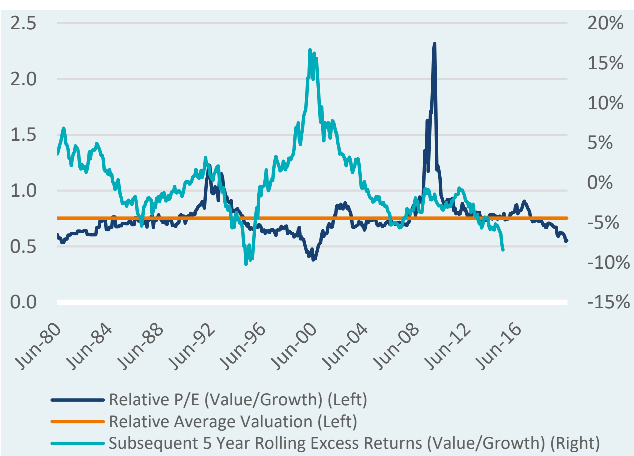
— The Russell 3000 Value Index (+11.3%) continued to underperform the Russell 3000 Growth Index (+14.8%). The underperformance of the value factor relative to the growth factor was attributable to the Health Care and Consumer Discretionary sectors being more highly weighted in the growth index.

— The Russell 2000 Index advanced 13.7% while the Russell 1000 Index gained 13.2%. Small-cap equities, which tend to outperform in anticipation of higher economic growth, notched their best monthly performance since April 2011.

— The Russell Mid-Cap Index (+14.4%) outperformed the small- and large-cap indexes measured, respectively, by the Russell 2000 (+13.7%) and the Russell Top 200 (+12.8%). Some analysts have argued mid-caps are well positioned, being large enough to weather the impact of the pandemic and small enough that global supply chain disruptions may not affect them quite as hard.

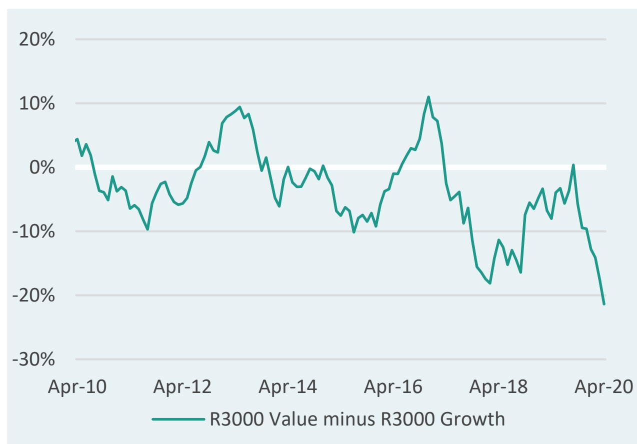
— The S&P 500 Low Volatility High Dividend Index (+10.7%) underperformed the S&P 500 Index (+12.8%). Mega-cap tech stocks powered the S&P 500 rebound in April while safer, higher-yielding stocks lagged.

VALUE VS. GROWTH RELATIVE VALUATIONS



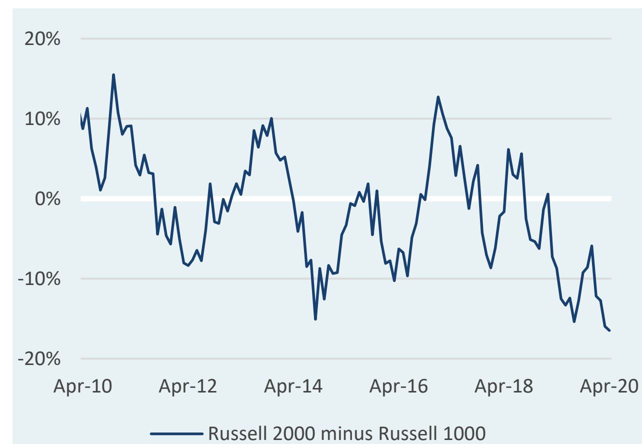
Source: Russell, Bloomberg, as of 4/30/20

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 4/30/20

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 4/30/20

Fixed income

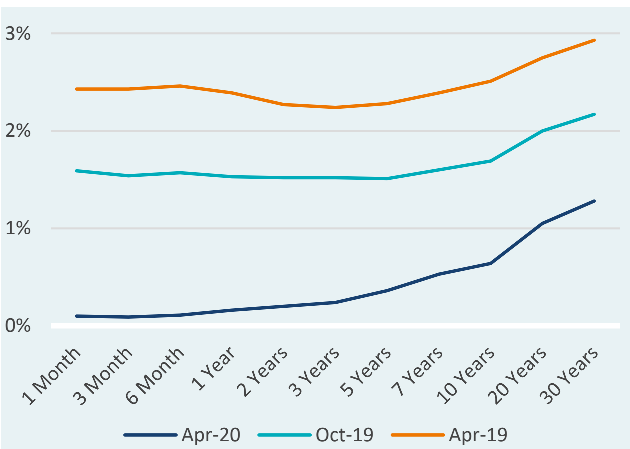
— On April 9th, the Federal Reserve announced that the Primary and Secondary Corporate Credit Facilities, which were initially slated to support $100 billion in new financing, were expanded. The facilities will now backstop up to $750 billion in corporate debt.

— The Fed also announced the establishment of the Main Street Lending Program aimed at supporting businesses too large to participate in the Paycheck Protection Program and too small to qualify for the Corporate Credit Facility loans. The program will fund up to $600 billion in four-year loans.

— In a bounce-back month for riskier credit, local-currency denominated emerging market debt (J.P. Morgan GBI-EM +3.9%) outperformed hard-currency denominated emerging market debt (J.P. Morgan EMBI +2.2%). Outperformance was partly attributed to emerging market currency tailwinds.

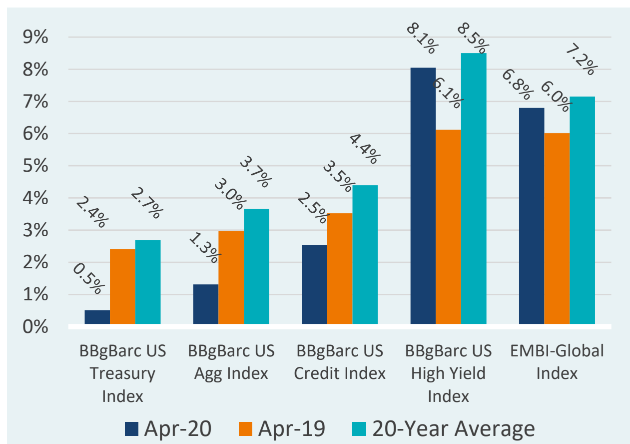
— Five-year breakeven inflation rates have fallen 1.2% since April 2019. Some analysts have expressed the view that despite the massive fiscal and monetary policy response, the pandemic is likely to introduce disinflationary, rather than inflationary pressures.

U.S. TREASURY YIELD CURVE



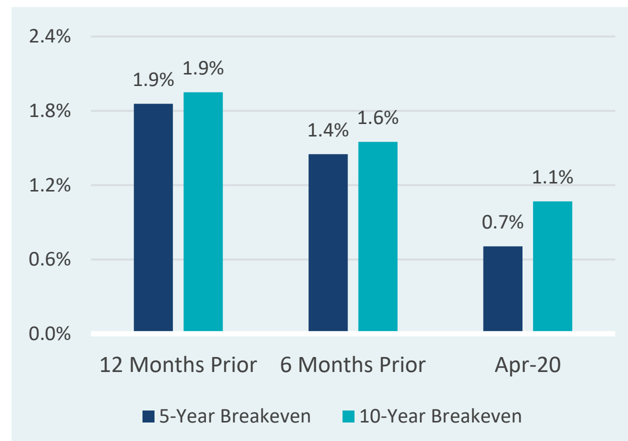
Source: Bloomberg, as of 4/30/20

NOMINAL YIELDS



Source: Morningstar, as of 4/30/20

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 4/30/20

Verus

Agenda Item 14

Global markets

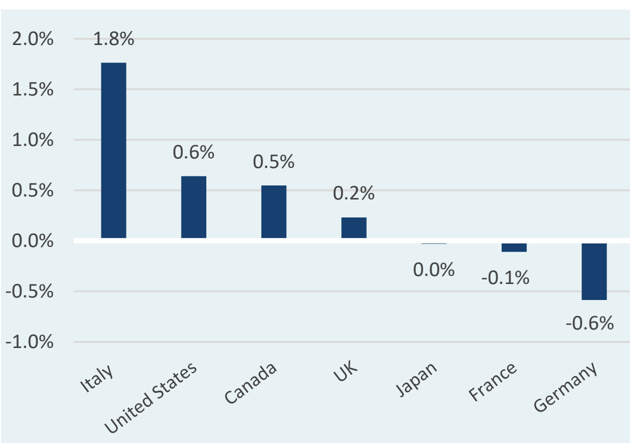
— The pound rallied +1.7% against the U.S. dollar, resulting in currency tailwinds for unhedged U.S. investors in U.K. equities. The MSCI United Kingdom Index, hedged to U.S. dollars, returned +3.5%, while the unhedged index returned +5.1%.

— In Q1 2020, Chinese GDP contracted at a -6.8% quarter over quarter annualized rate, marking the first contraction since 1992. The People's Bank of China has stepped forward to provide support to its economy, which was battered by COVID-19 related disruptions in Q1. Aggregate financing to the real economy increased 12.0% year-over-year in April, a 22-month high.

— Global equities (MSCI ACWI +10.7%) outperformed both emerging market equities (MSCI EM +9.2%) and international developed equities (MSCI EAFE +6.5%), likely buoyed by a bounce back in U.S. equities. The four countries with the largest economies in the Eurozone were among the top six countries in terms of confirmed COVID-19 cases.

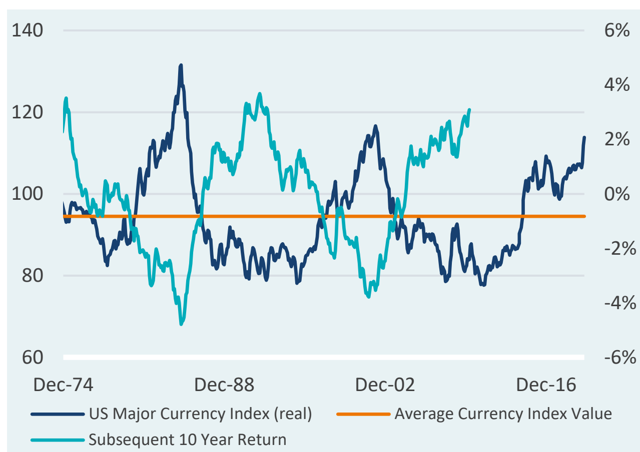
— The J.P. Morgan Global FX Volatility Index declined from 11.0% to 8.6%, after hitting multi-year peaks at 15.0% in mid-March. Currency markets have calmed down markedly following the Fed's rollout of liquidity programs which have eased dollar funding pressures.

GLOBAL SOVEREIGN 10-YEAR YIELDS



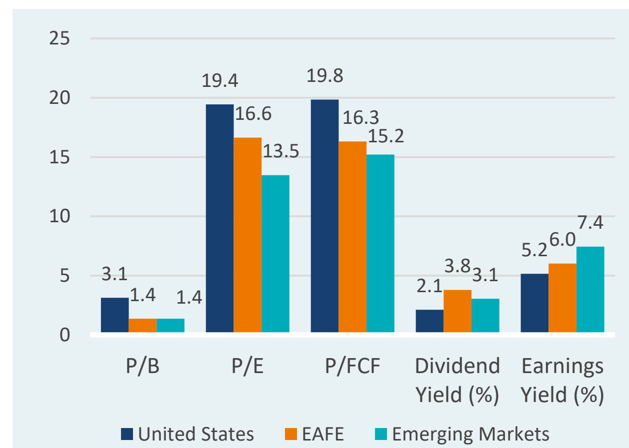
Source: Bloomberg, as of 4/30/20

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 4/30/20

MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 4/30/20

Commodities

— The Bloomberg Commodity Index fell -1.5% during the month of April. Precious Metals (+5.9%) and Industrial Metals (+2.3%) significantly outperformed the index overall. The Petroleum component (-14.9%) was a major laggard for the second month in row.

— WTI crude oil futures pricing briefly dropped into negative territory prior to the rolling of the front-month contract from May to June. The precipitous decline in oil demand resulted in a supply glut and the eventual depletion of storage capacity. This forced investors unable to take physical receipt of oil to sell their contracts at negative prices, namely, paying other investors to take their oil.

— On April 12th, to prop up oil prices amidst withered demand, OPEC+ agreed to cut production by 9.7 million barrels per day effective May 1st and extending through June. The U.S. Secretary of Energy said about two to three million barrels per day will be taken offline in the U.S. this year due to low prices.

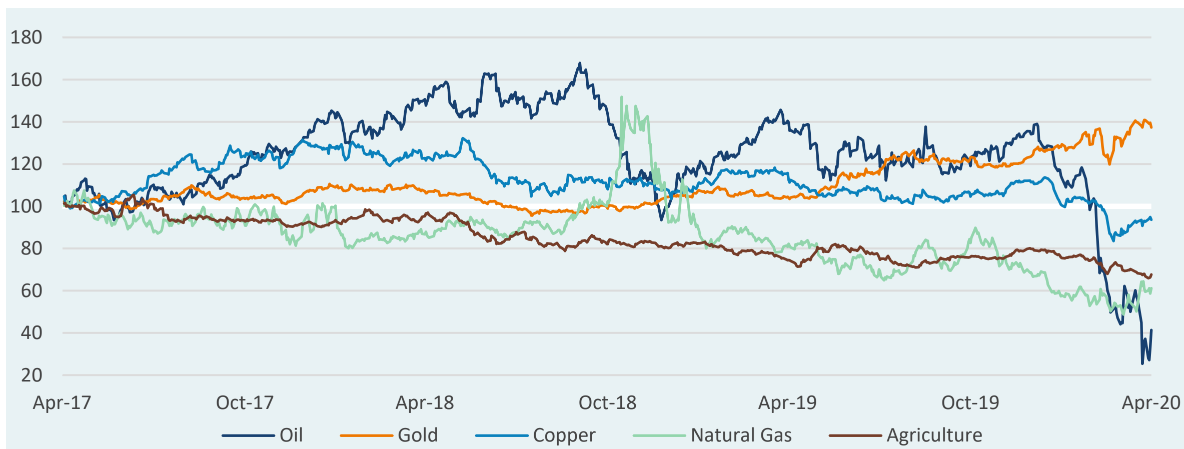
— The Bloomberg Precious Metals Sub-Index posted a +5.9% return for the month as investors sought a store of value amidst many economies' vast stimulus spending. Gold prices rose +6.1% in April to $1,690 per ounce. Other precious metals including platinum showed their largest monthly gains in almost four years.

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(1.5)	(1.5)	(24.5)	(23.2)	(8.6)	(9.1)	(7.1)
Bloomberg Agriculture	(5.7)	(5.7)	(15.0)	(7.6)	(10.5)	(8.2)	(4.4)
Bloomberg Energy	(3.5)	(3.5)	(52.8)	(56.4)	(20.0)	(21.4)	(17.6)
Bloomberg Grains	(6.0)	(6.0)	(12.7)	(4.7)	(9.6)	(9.0)	(4.8)
Bloomberg Industrial Metals	2.3	2.3	(16.6)	(18.1)	(3.7)	(4.4)	(5.5)
Bloomberg Livestock	(5.1)	(5.1)	(31.8)	(37.3)	(14.6)	(11.0)	(6.2)
Bloomberg Petroleum	(14.9)	(14.9)	(66.0)	(66.3)	(22.6)	(23.4)	(16.1)
Bloomberg Precious Metals	5.9	5.9	4.7	23.6	5.9	4.6	1.7
Bloomberg Softs	(3.6)	(3.6)	(19.8)	(14.5)	(15.5)	(9.5)	(6.2)

Source: Morningstar, as of 4/30/20

COMMODITY PERFORMANCE



Source: Bloomberg, as of 4/30/20

Appendix

Periodic table of returns

BEST

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	5-Year	10-Year
US Bonds	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	5.0	13.3	14.4
Real Estate	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	0.7	8.7	11.6
Cash	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	0.4	7.7	10.2
Large Cap Growth	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	-1.4	5.2	10.0
Hedge Funds of Funds	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	-6.0	4.0	8.5
60/40 Global Portfolio	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	-7.0	3.9	7.7
Large Cap Equity	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	-9.7	3.8	5.4
Small Cap Growth	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	-14.7	2.9	5.3
Emerging Markets Equity	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	-16.6	1.1	4.0
International Equity	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	-17.8	0.6	3.5
Large Cap Value	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	-18.5	0.3	2.0
Small Cap Equity	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	-21.1	-0.1	1.4
Commodities	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	-24.5	-0.2	0.6
Small Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-27.7	-9.1	-7.1

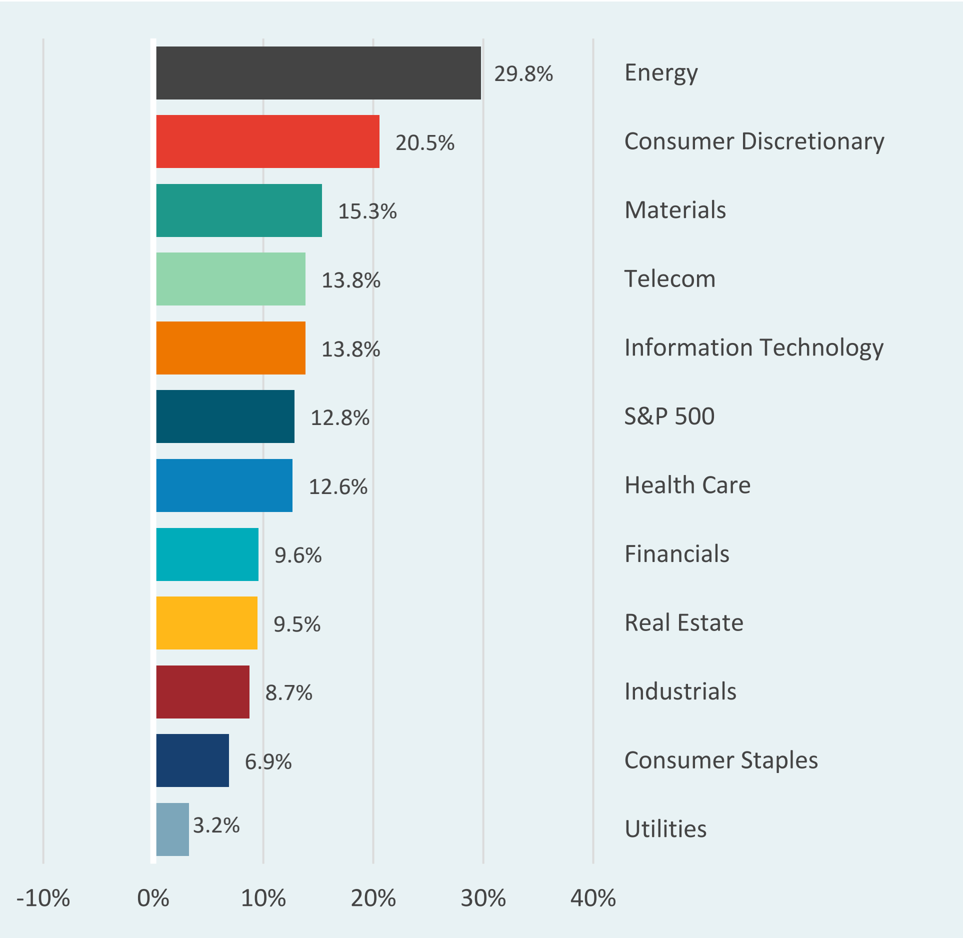
WORST

- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash
- Commodities
- Real Estate
- Hedge Funds of Funds
- 60% MSCI ACWI/40% BBgBarc Global Bond

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 3/31/20.

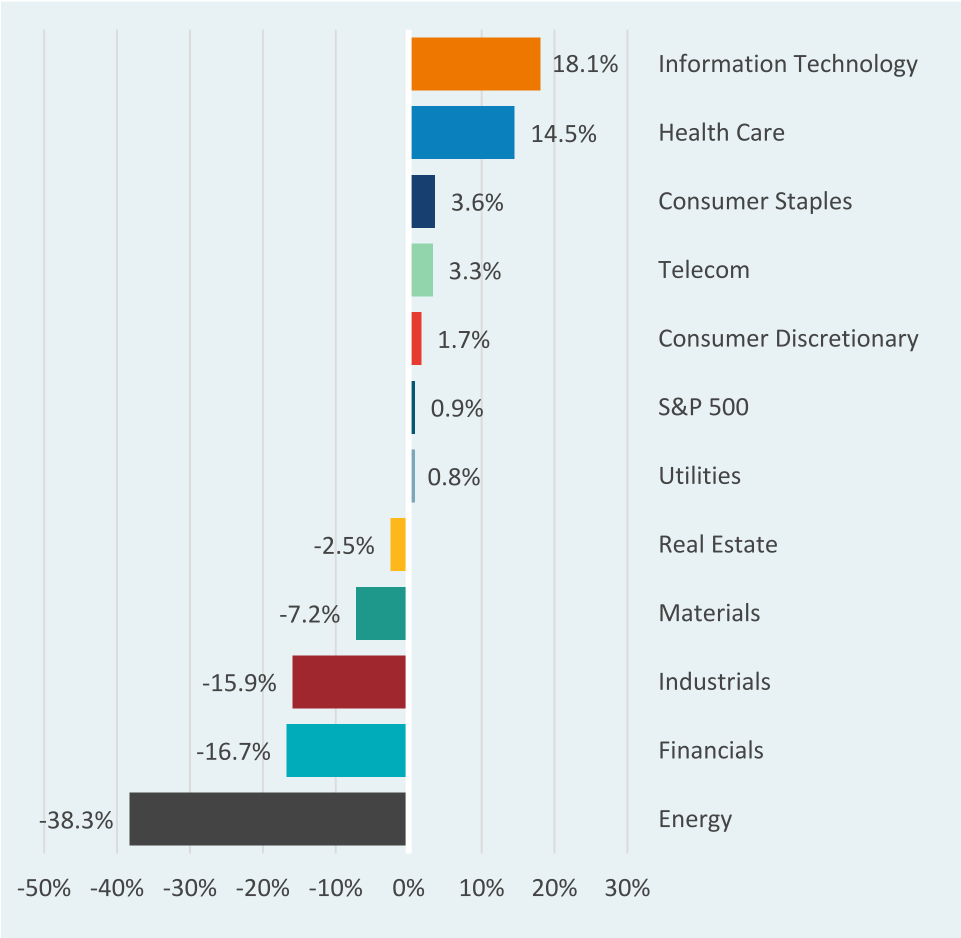
S&P 500 sector returns

QTD



Source: Morningstar, as of 4/30/20

ONE YEAR ENDING APRIL



Source: Morningstar, as of 4/30/20

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	12.8	12.8	(9.3)	0.9	9.0	9.1	11.7
S&P 500 Equal Weighted	14.4	14.4	(16.1)	(8.9)	3.9	5.5	10.4
DJ Industrial Average	11.2	11.2	(14.1)	(6.2)	7.7	9.1	11.0
Russell Top 200	12.8	12.8	(7.1)	3.9	10.7	10.3	12.2
Russell 1000	13.2	13.2	(9.7)	0.1	8.7	8.7	11.6
Russell 2000	13.7	13.7	(21.1)	(16.4)	(0.8)	2.9	7.7
Russell 3000	13.2	13.2	(10.4)	(1.0)	8.0	8.3	11.3
Russell Mid Cap	14.4	14.4	(16.6)	(10.0)	3.5	4.8	9.8
Style Index							
Russell 1000 Growth	14.8	14.8	(1.4)	10.8	15.7	13.3	14.4
Russell 1000 Value	11.2	11.2	(18.5)	(11.0)	1.4	3.9	8.5
Russell 2000 Growth	14.9	14.9	(14.7)	(9.2)	4.2	5.2	10.0
Russell 2000 Value	12.3	12.3	(27.7)	(23.8)	(6.1)	0.3	5.3

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	2.8	2.8	4.5	9.5	4.2	3.1	3.5
BBgBarc US Treasury Bills	0.0	0.0	0.6	2.2	1.8	1.2	0.7
BBgBarc US Agg Bond	1.8	1.8	5.0	10.8	5.2	3.8	4.0
Duration							
BBgBarc US Treasury 1-3 Yr	0.1	0.1	2.9	5.3	2.7	1.9	1.4
BBgBarc US Treasury Long	2.0	2.0	23.4	37.8	13.6	8.4	8.9
BBgBarc US Treasury	0.6	0.6	8.9	14.3	5.8	3.9	3.8
Issuer							
BBgBarc US MBS	0.6	0.6	3.5	7.8	4.0	3.1	3.3
BBgBarc US Corp. High Yield	4.5	4.5	(8.8)	(4.1)	1.9	3.4	5.9
BBgBarc US Agency Interm	0.4	0.4	3.3	6.3	3.2	2.4	2.2
BBgBarc US Credit	4.6	4.6	1.3	9.4	5.4	4.3	5.0

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	10.7	10.7	(12.9)	(5.0)	4.5	4.4	6.9
MSCI ACWI ex US	7.6	7.6	(17.5)	(11.5)	(0.3)	(0.2)	2.9
MSCI EAFE	6.5	6.5	(17.8)	(11.3)	(0.6)	(0.2)	3.5
MSCI EM	9.2	9.2	(16.6)	(12.0)	0.6	(0.1)	1.4
MSCI EAFE Small Cap	10.4	10.4	(20.0)	(12.3)	(1.0)	2.1	5.7
Style Index							
MSCI EAFE Growth	7.4	7.4	(11.4)	(2.1)	4.4	3.2	5.6
MSCI EAFE Value	5.4	5.4	(24.4)	(20.5)	(5.7)	(3.7)	1.3
Regional Index							
MSCI UK	5.1	5.1	(25.1)	(20.8)	(3.9)	(3.7)	2.2
MSCI Japan	5.4	5.4	(12.3)	(3.0)	2.4	2.2	4.4
MSCI Euro	5.7	5.7	(22.9)	(17.8)	(3.8)	(1.7)	2.1
MSCI EM Asia	9.2	9.2	(10.6)	(5.7)	3.6	1.8	4.2
MSCI EM Latin American	6.3	6.3	(42.2)	(37.3)	(11.2)	(6.6)	(6.1)

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	(1.5)	(1.5)	(24.5)	(23.2)	(8.6)	(9.1)	(7.1)
Wilshire US REIT	8.4	8.4	(19.4)	(12.4)	0.2	5.7	12.7
CS Leveraged Loans	4.3	4.3	(9.5)	(7.1)	0.5	4.6	5.0
Alerian MLP	47.6	47.6	(38.2)	(43.1)	(19.7)	(15.6)	(1.3)
Regional Index							
JPM EMBI Global Div	2.2	2.2	(11.4)	(5.0)	0.7	2.9	5.1
JPM GBI-EM Global Div	3.9	3.9	(11.9)	(2.7)	0.1	0.4	0.7
Hedge Funds							
HFRI Composite	4.8	4.8	(6.6)	(3.4)	1.2	1.5	3.0
HFRI FOF Composite	2.7	2.7	(6.0)	(3.4)	0.8	0.6	2.0
Currency (Spot)							
Euro	(0.2)	(0.2)	(2.4)	(2.3)	0.2	(0.5)	(1.9)
Pound	1.7	1.7	(4.8)	(3.2)	(0.8)	(3.9)	(1.9)
Yen	1.0	1.0	1.6	4.2	1.4	2.3	(1.3)

Source: Morningstar, HFR, as of 4/30/20

Notices & disclosures

Past performance is no guarantee of future results. *This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other "forward-looking statements." No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus Advisory Inc. ("Verus") file a single form ADV under the United States Investment Advisors Act of 1940, as amended. Additional information about Verus Advisory, Inc. available on the SEC's website at www.adviserinfo.sec.gov.*

Verus – also known as Verus Advisory™.

This page left blank intentionally.