



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: JUNE 30, 2020

Investment Performance Review for

San Mateo County Employees' Retirement Association

Table of Contents



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

Market Environment

TAB I

Alternatives

TAB VI

Total Fund

TAB II

Inflation Hedge

TAB VII

US Equity

TAB III

Appendix

TAB VIII

International Equity

TAB IV

Fixed Income

TAB V

2nd quarter summary

THE ECONOMIC CLIMATE

- U.S. GDP grew at a 0.3% rate year-over-year in Q1 (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed, businesses cut back investment, inventories were drawn down, and exports weakened. Q2 GDP growth forecasts suggest a severe contraction of -35%, though estimates vary widely.
- The U.S. labor market experienced a historic shock in Q2, as unemployment jumped from 4.4% in March to 14.7% in April, then recovered partially to 11.1% in June. Recent labor market data have beat expectations materially, but the severity of the shock is notable. A majority of the unemployed have reported their job losses as temporary. It will be important to watch what portion of these losses are indeed temporary rather than permanent.

PORTFOLIO IMPACTS

- Most major equity benchmarks are within 15% of all-time highs, despite major damage that COVID-19 has inflicted on the global economy. Some of this damage has been mitigated by government support, but some damage is likely yet to be felt.
- U.S. core inflation fell steeply from 2.1% in March to 1.2% in June, while food prices have risen. COVID-19 has led to a significant rise in at-home meal preparation (greater demand for certain items), while reportedly negatively impacting food processing facilities (less supply).

THE INVESTMENT CLIMATE

- The Federal Reserve continued to roll out the litany of support programs that were announced in the first quarter. The Fed's balance sheet grew from \$5.3 trillion to \$7.1 trillion over the second quarter.
- Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85 on March 18th, and closing June at 30.
- The Fed expanded the list of eligible securities for purchase to include corporate debt. While the Fed will primarily target investment grade debt securities, it will also buy some non-investment grade debt from "fallen angels" which were investment-grade prior to the pandemic.

ASSET ALLOCATION ISSUES

- U.S. equities delivered an incredible comeback, following a sudden and significant sell-off in March. The S&P 500 rallied +20.5% in the second quarter, bringing year-to-date performance to -3.1%, and positive +7.5% over the past twelve months.
- The U.S. dollar weakened in Q2, falling -2.3%. The market recovery (less demand for safe-haven currencies) and materially lower U.S. interest rates (less attractive U.S. dollar) have likely contributed to depreciation.

A mildly underweight risk stance appears appropriate in today's environment

We remain watchful of the COVID-19 second wave and its impact on economic reopening

U.S. economics summary

- U.S. GDP grew at a 0.3% rate year-over-year in Q1 (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed, businesses cut back investment, inventories were drawn down, and exports weakened. Q2 GDP growth forecasts suggest a severe contraction of -35%, though estimates vary widely.
- As of June 29th there were 34 states with a transmission rate of COVID-19 above 1.0, an indication that the virus continues to spread exponentially. Southern states and Sun Belt states are in retreat—taking lockdown steps reminiscent of March and April—only weeks after governors began to reopen their economies.
- The U.S. labor market experienced a historic shock in Q2 as unemployment jumped from 4.4% in March to 14.7% in April, then recovered partially to 11.1% in June.
- U.S. core inflation exhibited a steep drop from 2.1% in March to 1.2% in June. Headline inflation also slowed from 1.5% to 0.6%, pushed lower by the recent decline in energy prices. On the other hand, food prices have been rising—specifically meats, poultry, fish and eggs—due in large part to interruptions at processing plants.
- The Bloomberg Consumer Comfort Index experienced a dramatic weakening year-to-date, falling from a near-record high of 67.3 in late January to 34.7 in May, then ending June at 43.3.
- It has been reported that 8.6% of all mortgages in the U.S. are in forbearance. To put this number into perspective, during the 2008-2009 housing crisis the mortgage default rate reached approximately 10%. If a large portion of loans in forbearance later face foreclosure, this could put significant pressure on the housing market.

	Most Recent	12 Months Prior
GDP (YoY)	(9.5%) 6/30/20	2.0% 6/30/19
Inflation (CPI YoY, Core)	1.2% 5/31/20	2.0% 5/31/19
Expected Inflation (5yr-5yr forward)	1.5% 6/30/20	1.8% 6/30/19
Fed Funds Target Range	0% – 0.25% 6/30/20	2.25% – 2.50% 6/30/19
10 Year Rate	0.7% 6/30/20	2.0% 6/30/19
U-3 Unemployment	11.1% 6/30/20	3.7% 6/30/19
U-6 Unemployment	18.0% 6/30/20	7.2% 6/30/19

International economics summary

— In Q1, most international economies began contracting in what will likely turn out to be a global recession. The steady and stable economic expansion in recent years has shifted suddenly with the onset of COVID-19. The IMF now expects 2020 global GDP to fall -4.9%, followed by a +5.4% recovery in 2021.

— Policymakers in Brussels achieved unanimous approval on a €750 billion stimulus package to help support an economic recovery within the European Union. After much debate, officials decided to distribute €390 billion in the form of grants to member states hardest hit by the pandemic (Italy/Spain), and the other €360 in low-interest, non-concessionary loans for members of the bloc.

— U.S.-China relations were further strained Q2. The Trump administration placed restrictions on U.S. exports to Hong Kong in response to a Chinese law which

effectively tightens control over the territory. The restrictions apply to only 2.2% of U.S. exports, but sanctions on China could unravel an already fragile agreement between the two global powers. U.S.-China tensions have been escalating and will warrant close monitoring in the coming months.

— Headline consumer prices fell materially over the second quarter as spending at brick-and-mortar stores, restaurants, and bars weakened alongside the implementation of social distancing controls. Continued broad-based price declines could soon lead to deflation risks for many economies.

— Since hitting lows of -304.6 in early May, the Citi Eurozone Economic Surprise Index rallied back to -99.8, indicating that economic data have been improving relative to median economist estimates. Continued relative strengthening could be supportive to the equity market.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	(9.5%) <i>6/30/20</i>	0.1% <i>5/31/20</i>	11.1% <i>6/30/20</i>
Eurozone	(3.1%) <i>3/31/20</i>	0.3% <i>6/30/20</i>	7.4% <i>5/31/20</i>
Japan	(1.7%) <i>3/31/20</i>	0.3% <i>6/30/20</i>	2.9% <i>5/31/20</i>
BRICS Nations	(4.1%) <i>3/31/20</i>	4.9% <i>3/31/20</i>	5.1% <i>3/31/20</i>
Brazil	(0.3%) <i>3/31/20</i>	1.9% <i>5/31/20</i>	12.9% <i>5/31/20</i>
Russia	1.6% <i>3/31/20</i>	2.9% <i>5/31/20</i>	6.1% <i>5/31/20</i>
India	4.7% <i>12/31/19</i>	5.8% <i>3/31/20</i>	8.5% <i>12/31/17</i>
China	(6.8%) <i>3/31/20</i>	2.4% <i>5/31/20</i>	3.7% <i>3/31/20</i>

Equity environment

- U.S. equities delivered an incredible comeback, following the sudden sell-off in March. The S&P 500 rallied +20.5% in Q2, bringing year-to-date performance to -3.1%, and positive +7.5% over the past twelve months. International developed equities (MSCI EAFE +12.9% QTD, -5.1% YoY) and emerging market equities (MSCI EM +18.1% QTD, -3.4% YoY) lagged the domestic market.
- Most major equity benchmarks are within 15% of all-time highs, despite major damage that COVID-19 has inflicted on the global economy. Some of this damage has been mitigated by government support, but some damage is likely yet to be felt.
- According to FactSet, the estimated S&P 500 year-over-year decline in earnings for Q2 is -43.8%. This would mark the largest decline in earnings since Q4 2008 (-69.1%).
- Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85.0 on March 18th, and closing June at 30.4.
- The U.S. dollar weakened in Q2, falling -2.3% according to the Bloomberg Dollar Spot Index. The market recovery (less demand for save-haven currencies) and materially lower U.S. interest rates (less attractive U.S. Dollar) have likely contributed to the move.
- Growth stocks beat value stocks for the ninth consecutive month. The Russell 1000 Growth Index (+27.8%) outperformed the Russell 1000 Value Index (+14.3%). Sector performance disparity continues to impact the behavior of value. While energy delivered outsized returns relative to the overall index, other value-tilted sectors such as utilities and financials delivered poor performance.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	20.5%		7.5%	
US Small Cap (Russell 2000)	25.4%		(6.6%)	
US Large Value (Russell 1000 Value)	14.3%		(8.8%)	
US Large Growth (Russell 1000 Growth)	27.8%		23.3%	
International Large (MSCI EAFE)	14.9%	12.9%	(5.1%)	(2.1%)
Eurozone (Euro Stoxx 50)	20.1%	17.8%	(6.4%)	(2.7%)
U.K. (FTSE 100)	9.0%	9.2%	(15.9%)	(12.2%)
Japan (NIKKEI 225)	17.9%	18.2%	6.6%	9.0%
Emerging Markets (MSCI Emerging Markets)	18.1%	16.6%	(3.4%)	1.7%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/20

Domestic equity

U.S. equities delivered an incredible comeback, following the sudden and significant sell-off in March. The S&P 500 rallied +20.5% in the second quarter, bringing the year-to-date performance to -3.1%, and positive +7.5% over the past year.

While the Consumer Discretionary (+32.9%) and IT (+30.5%) sectors did post outsized performance, participation in the rebound was broad-based and not confined to mega-cap tech names such as Amazon. The S&P 500 Equal-Weighted Index outperformed the S&P 500 Index by 1.2%.

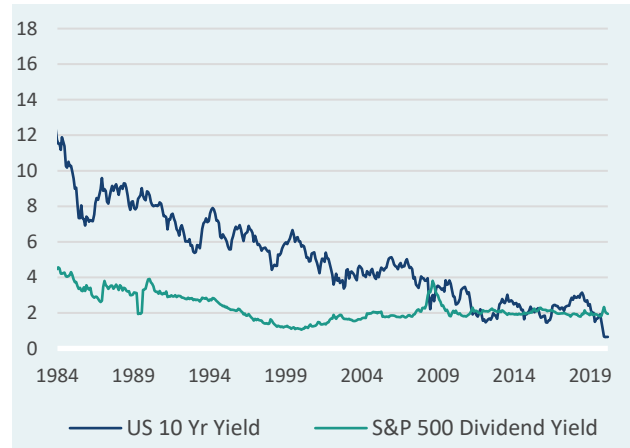
U.S. Treasury yields have moved closer to zero in 2020, which has reignited an ongoing discussion around the extent to which this dynamic will affect the equity market. We believe that the recent decline in interest rates should foundationally have a lifting effect on the value of equities, all else equal, since the value of a stock equals the present value of all future cash flows from that stock (lower interest rates result in higher present values). Generationally-low interest rates also create difficulties in holding higher quality fixed income due to inherent drag on portfolio performance. This potentially puts pressure on investors to make larger allocations to risky assets.

S&P 500



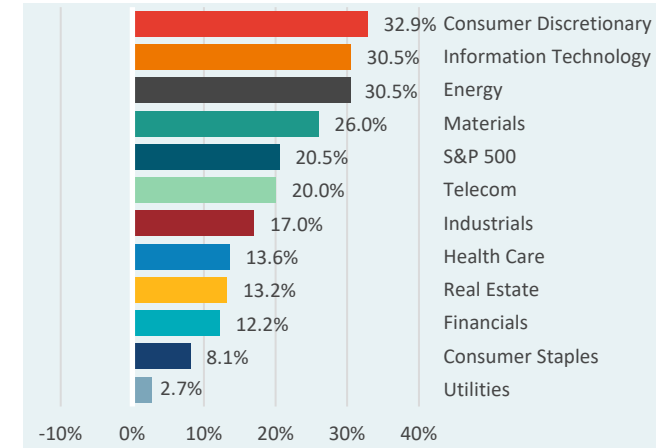
Source: Standard & Poor's, as of 6/30/20

DIVIDEND YIELD VS BOND YIELD



Source: Standard & Poor's, as of 6/30/20

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/20

Domestic equity size & style

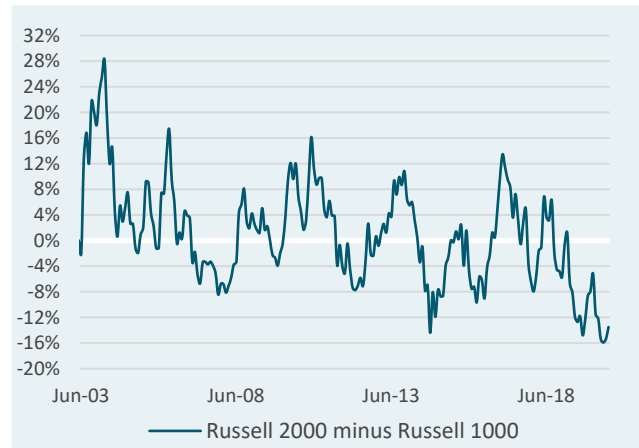
Growth stocks beat value stocks for the ninth consecutive month. The Russell 1000 Growth Index (+27.8%) outperformed the Russell 1000 Value Index (+14.3%). Small stocks beat large during the quarter (Russell 2000 +25.4%, Russell 1000 +21.8%), but continue to lag significantly over the longer-term.

Sector performance disparity continues to impact the behavior of value. While energy (+32.6%) delivered outsized returns over the quarter relative to the overall index (+21.8%), other value-tilted sectors such as financials (+16.3%), consumer staples (+9.0%), and utilities (+4.0%)

presented a drag on overall index performance.

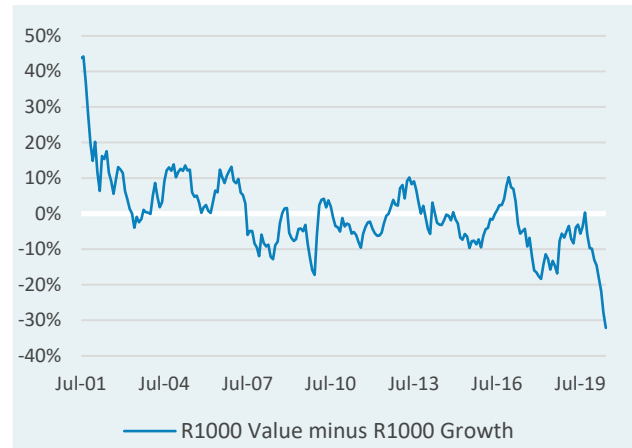
We believe it is extremely difficult to successfully make short-term bets on style factors. Factor performance can be incredibly noisy and vulnerable to sector randomness. Value has become historically cheap, to arguably attractive levels, though a catalyst for a value turnaround is not yet evident. We are watching closely the developments in this space to identify potential opportunities. However, we continue to believe that consistent long-term exposure to the value factor is an ideal implementation approach for most investors, most of the time.

SMALL CAP VS LARGE CAP (YOY)



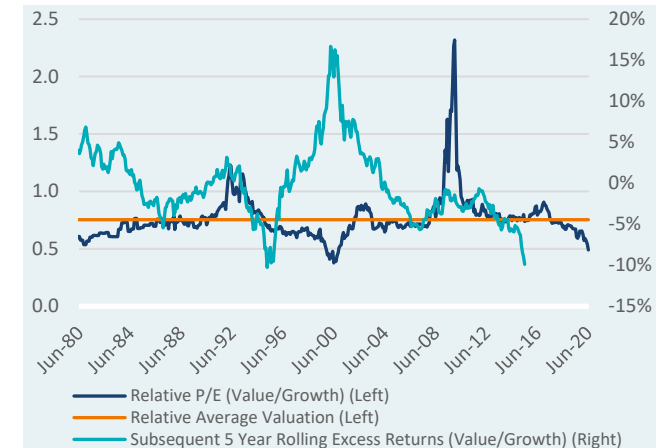
Source: FTSE, as of 6/30/20

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/20

VALUE APPEARS HISTORICALLY CHEAP



Source: Russell, Bloomberg, as of 6/30/20

International developed equity

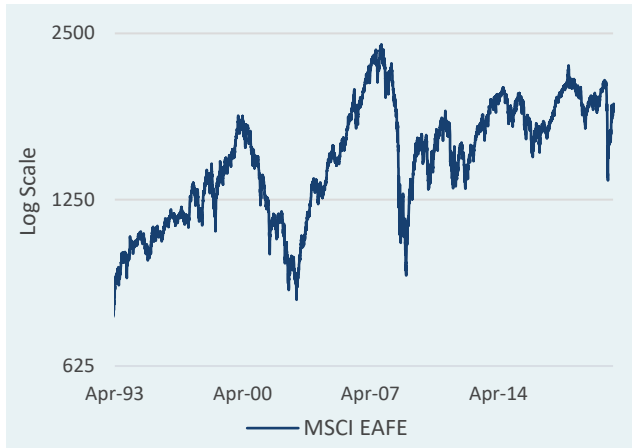
Equity markets around the world delivered a surprisingly strong recovery in the second quarter, rising between 12% to 20%. U.K. equities have lagged, only rising +7.8% over the quarter and remained down -23.3% over the year-to-date. Eurozone equities were among the top performers (MSCI Euro +19.6%). However, international equities lagged domestic markets (S&P 500 +20.5%).

On a one-year basis, the volatility of currency markets detracted from the performance of investors with unhedged currency exposure. Investors in international developed

equities lost -3.0% due to currency movement (MSCI EAFE), and investors in emerging markets lost -5.1% (MSCI EM).

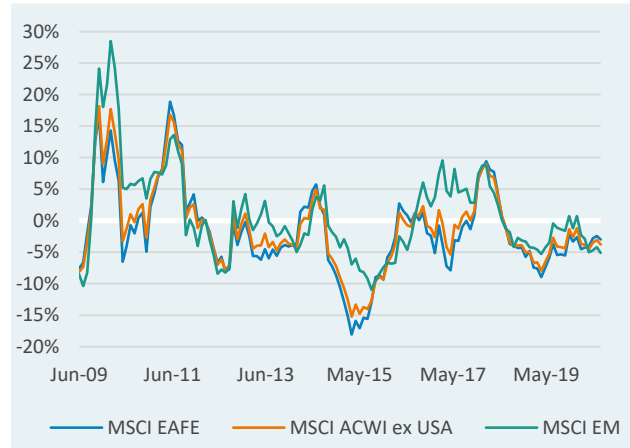
Earnings have fallen materially while equity prices recovered much of their losses. These two effects have led to a significant jump in equity valuations. This dynamic is not uncommon in environments where investors “look to the other side” of a crisis and generally expect tough conditions to be short-lived. With that said, if earnings do not recover to prior levels in a timely manner, investors may begin to question elevated multiples.

INTERNATIONAL DEVELOPED EQUITIES



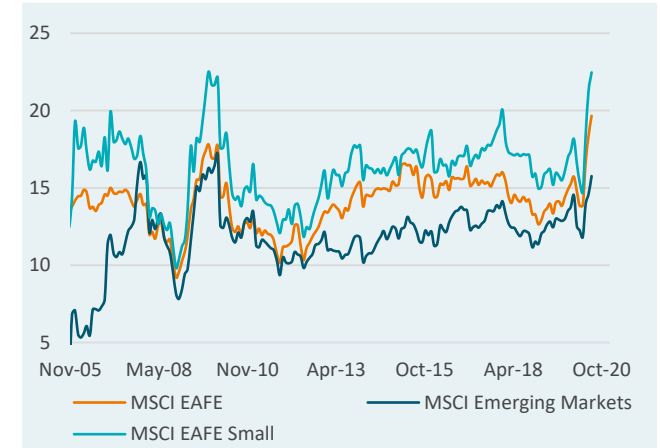
Source: MSCI, as of 6/30/20

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 6/30/20

FORWARD P/E



Source: MSCI, as of 6/30/20

Emerging market equity

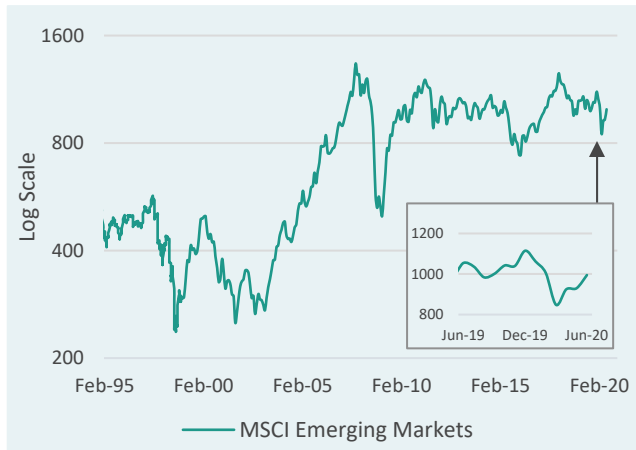
Emerging market equities (MSCI EM +18.1%) underperformed U.S. (S&P 500 +20.5%) while outperforming international developed equities (MSCI EAFE +14.9%) over the quarter. Within the emerging market complex, Latin American equities outperformed Asia over the quarter (MSCI EM Latin American +19.1% vs. MSCI EM Asia +17.8%) but underperformed year-to-date (-35.2% vs. -3.5%).

Low inflation in emerging economies may allow central banks more room to maneuver relative to developed economies with regard to the use of monetary policy in

encouraging economic growth during the global slowdown.

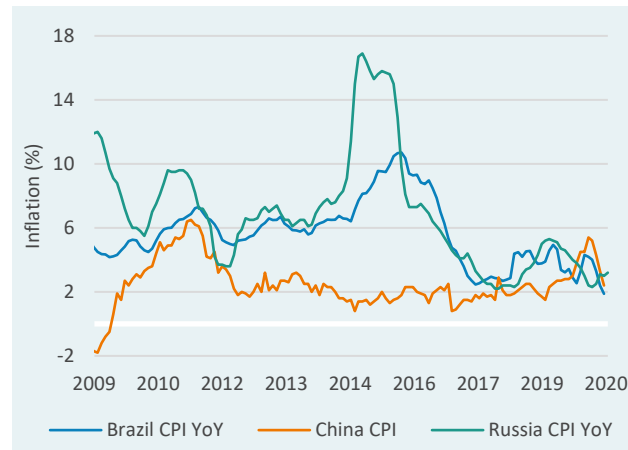
Emerging currencies appreciated in Q2, which was additive to performance (MSCI EM Unhedged +18.1%, MSCI EM Hedged +16.6%). The significant depreciation of the Brazilian real and Turkish lira provided material headwinds for the performance of U.S. investors who have unhedged exposure to emerging markets. On the other hand, the Russian ruble saw large gains as the currency benefitted from rising oil prices.

EMERGING MARKET EQUITY



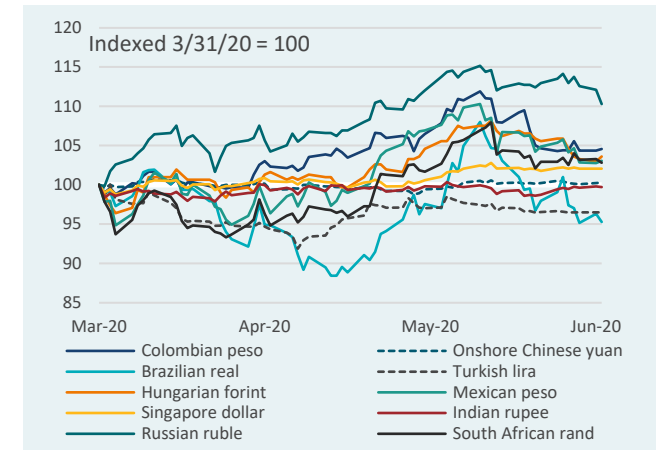
Source: MSCI, as of 6/30/20

INFLATION (YOY)



Source: Bloomberg, as of 6/30/20

J.P. MORGAN EMCI CONSTITUENTS (VS. USD)



Source: Bloomberg, as of 6/30/20

Interest rate environment

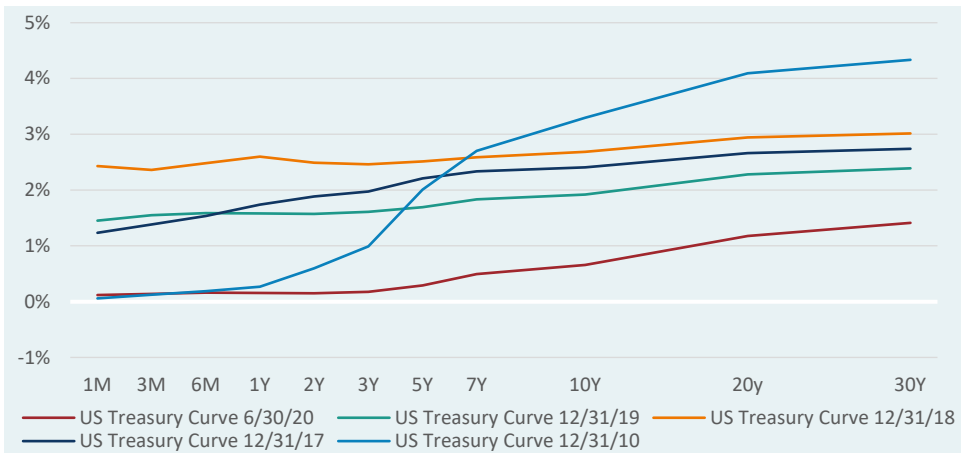
- The Federal Reserve continued to roll out the litany of support programs it announced in the first quarter. The Fed’s balance sheet grew from \$5.3 trillion to \$7.1 trillion over the second quarter.
- It appears the Federal Reserve may implement a yield curve control policy as a component of its policy toolkit. At the June Fed meeting, officials acknowledged that while setting intermediate-term yield caps may help strengthen short-term rate guidance, they remained concerned about several potential implications of beginning down that path.
- The Fed also expanded the list of eligible securities for purchase through its Primary and Secondary Market Credit Facilities to include corporate debt, either directly through companies or through exchange-traded funds. The Fed indicated that it would primarily target investment grade debt securities, and that it would also purchase certain non-investment grade debt from “fallen angels” which held investment-grade debt ratings prior to the pandemic.
- The European Central Bank increased the size of its Pandemic Emergency Purchase Programme from the initial €750 billion to a total of €1.35 trillion. The ECB will now be able to deploy the funds in a “flexible manner over time, across asset classes and among jurisdictions” through June 2021, which may help reduce borrowing costs.
- Real yields continued to decline around the globe as nominal sovereign bond yields were largely unchanged and longer-term inflation expectations recovered.
- Emerging market debt yields fell considerably in the second quarter, likely supported by disinflationary effects of the sell-off in commodities which emboldened central bankers to adopt more accommodative policy.

Area	Short Term (3M)	10-Year
United States	0.13%	0.66%
Germany	(0.56%)	(0.46%)
France	(0.52%)	(0.11%)
Spain	(0.49%)	0.46%
Italy	(0.29%)	1.26%
Greece	0.32%	1.20%
U.K.	0.01%	0.17%
Japan	(0.17%)	0.02%
Australia	0.21%	0.87%
China	1.74%	2.84%
Brazil	2.04%	6.83%
Russia	4.57%	5.92%

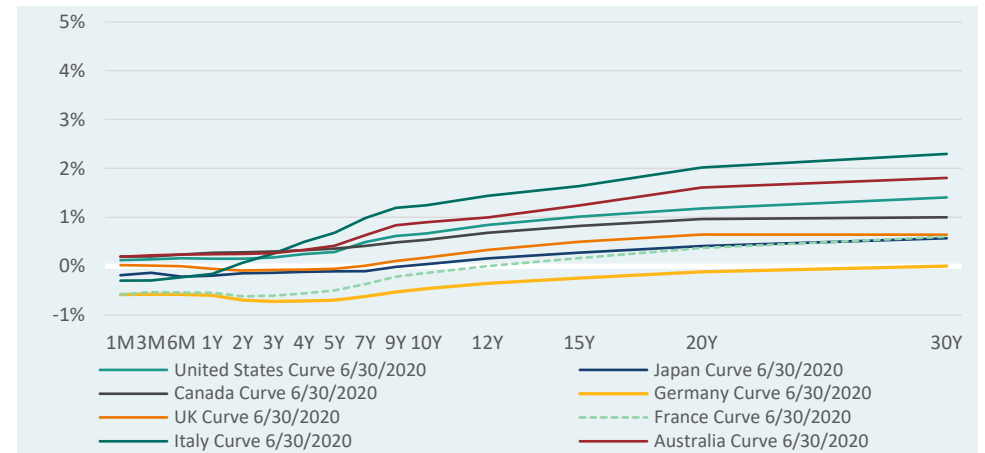
Source: Bloomberg, as of 6/30/20

Yield environment

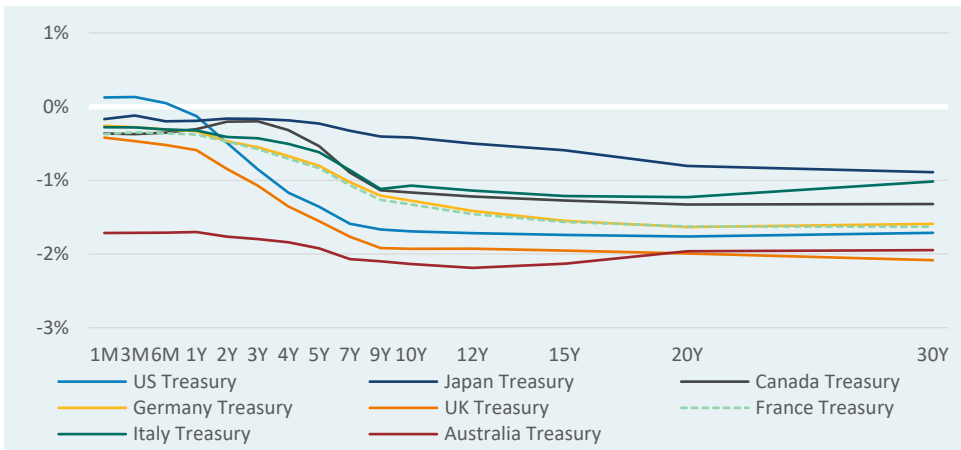
U.S. YIELD CURVE



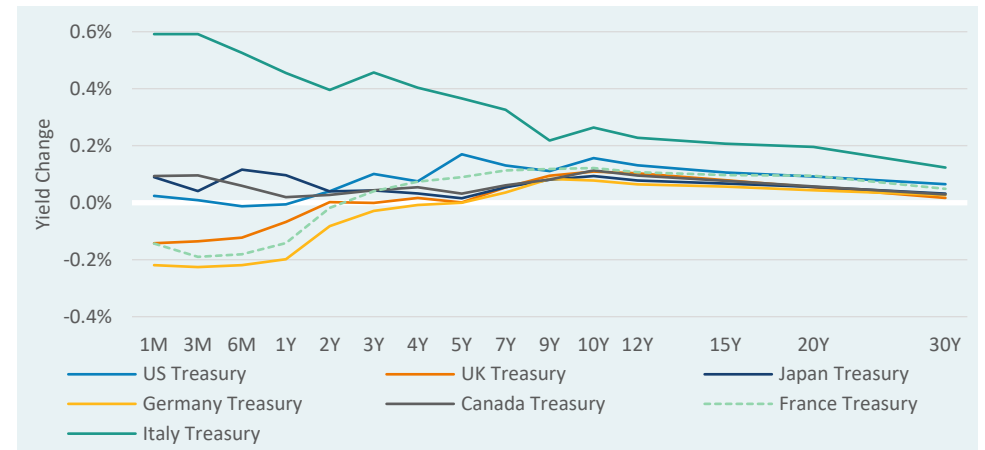
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/20

Currency

The U.S. dollar weakened in the second quarter, falling -2.3% according to the Bloomberg Dollar Spot Index. The dollar fell -2.4% against the Euro, appreciated +0.4% against the British pound, and fell -0.1% relative to the Japanese yen. The market recovery (less demand for safe-haven currencies) and materially lower U.S. interest rates (less attractive U.S. dollar) have likely contributed to the move lower.

As the euro strengthened in Q2, some currency analysts have adopted a more optimistic view on the common currency. Improved macroeconomic conditions relative to the United

States, the potential implications of a strong cyclical rebound, as well as the ECB's apparent unwillingness to push rates much lower below 0%, may be leading to euro appreciation.

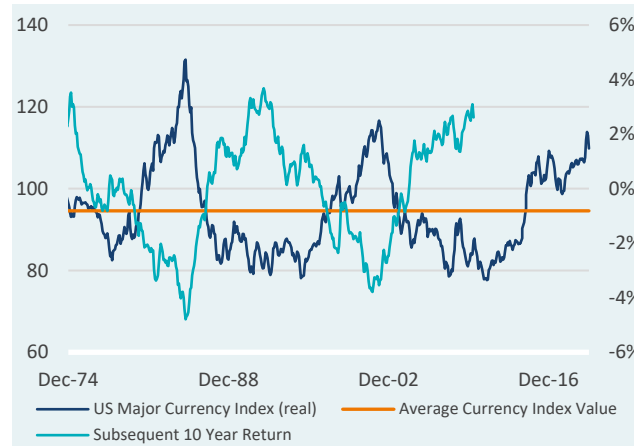
The MSCI Currency Factor Mix Index, constructed as a combination of individual currency factor indices (carry, value, momentum) declined 1.7% in Q2. The momentum factor (-7.8%) drove declines in the overall index as the U.S. dollar began to weaken relative to other major currency pairs following a period of strong appreciation.

BLOOMBERG DOLLAR SPOT INDEX



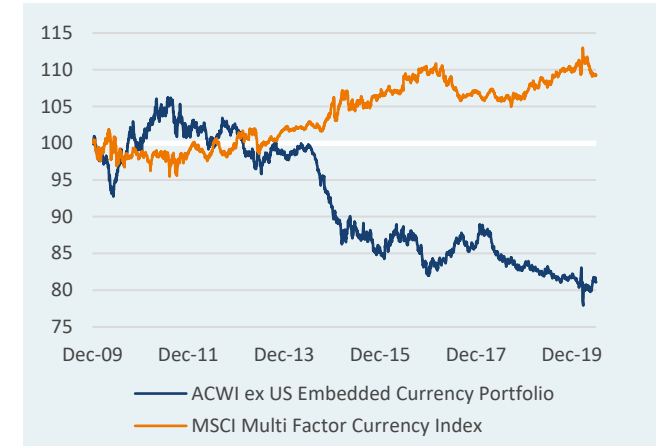
Source: Bloomberg, as of 6/30/20

USD CURRENCY LEVEL & SUBSEQUENT RETURN



Source: Federal Reserve, as of 6/30/20

EMBEDDED CURRENCY VS CURRENCY BETA



Source: MSCI, Bloomberg, as of 6/30/20

- The Total Fund, net of manager fees, returned 8.3% in the second quarter of 2020 and in the ranked 77th percentile among other public plans greater than \$1 billion (median of 10.1%). It exceeded the policy index return of 8.0%. The Total Fund ex Overlay returned 8.2% for the quarter. The Total Fund one-year return of -0.2% lagged the policy index return of 1.6% and ranked in the 79th percentile of its peer universe. The three-year return of 3.9% (87th percentile) lagged the median large public plan (5.0%) and the policy index (5.3%).

- Second quarter results were enhanced by the following factors:
 1. Baillie Gifford gained 25.7% outperformed the MSCI ACWI ex US (16.3%). The strategy benefited from the online revolution and evolution of consumer behavior to online retail. Their investments in companies in these sectors contributed to their outperformance.
 2. Western TRU had a strong recovery gaining 9.3%. Their credit allocation contributed to the outperformance as confidence came back to markets and spreads tightened. This was a stark contrast to Q1 when widening spreads hurt Western TRU.

- Second quarter results were hindered by the following factors:
 1. Acadian Managed Vol gained 14.6% and PanAgora (15.5%) trailing the Russell 1000 (21.8%). Both low volatility managers had lower allocations to information technology which led the gains during the recovery.
 2. Private Equity lost -2.7% (the lagged returns are from Q1,) however they outperformed the private equity benchmark which lost -19.7%.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank *	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Fund**	8.3	77	-5.4	77	-0.2	79	2.6	76	3.9	87	4.9	72	8.0	38
<i>Policy Index¹</i>	8.0	78	-4.0	44	1.6	36	4.1	29	5.3	33	5.9	31	8.6	20
<i>InvMetrics Public DB > \$1B Net Median</i>	10.1		-4.3		1.3		3.3		5.0		5.4		7.8	
Total Fund ex Overlay	8.2	78	-5.3	76	-0.1	78	2.5	76	3.9	87	4.9	80	7.9	42
<i>Policy Index¹</i>	8.0	78	-4.0	44	1.6	36	4.1	29	5.3	33	5.9	31	8.6	20
<i>InvMetrics Public DB > \$1B Net Median</i>	10.1		-4.3		1.3		3.3		5.0		5.4		7.8	
Public Equity	18.5	91	-7.6	59	0.5	60	2.7	67	5.3	70	6.3	69	10.0	61
<i>Blended Public Equity Index¹</i>	19.3	74	-6.3	39	2.1	37	3.5	52	6.2	49	6.8	46	10.4	54
<i>InvMetrics All DB Total Eq Net Median</i>	20.4		-7.1		1.3		3.6		6.1		6.8		10.5	
US Equity	19.8	88	-6.5	69	2.3	65	4.9	64	8.1	61	8.5	57	12.7	50
<i>Blended US Equity Index¹</i>	22.0	42	-3.5	21	6.5	14	7.7	13	10.0	16	9.9	17	13.6	13
<i>Russell 3000</i>	22.0	42	-3.5	21	6.5	14	7.7	13	10.0	16	10.0	12	13.7	10
<i>InvMetrics All DB US Eq Net Median</i>	21.8		-5.5		3.2		5.6		8.6		8.8		12.6	
Large Cap Equity	19.4	54	-5.3	48	3.7	50	6.8	47	9.5	41	10.0	36	13.4	38
<i>Russell 1000</i>	21.8	37	-2.8	39	7.5	37	8.7	38	10.6	36	10.5	33	14.0	30
<i>eV US Large Cap Equity Net Median</i>	19.8		-5.7		3.5		6.2		8.1		8.4		12.5	
<i>Acadian US MGD V</i>	14.6	89	-9.8	87	-2.5	92	--	--	--	--	--	--	--	--
<i>BlackRock Russell 1000</i>	21.8	24	-2.8	30	7.5	23	8.8	26	10.7	22	--	--	--	--
<i>DE Shaw</i>	20.2	44	-5.4	55	4.4	47	5.4	67	9.4	36	10.2	22	14.1	12
<i>PanAgora Defuseq</i>	15.5	83	-8.7	84	-2.7	93	--	--	--	--	--	--	--	--
<i>Russell 1000</i>	21.8	24	-2.8	31	7.5	24	8.7	26	10.6	22	10.5	18	14.0	12
<i>eV US Large Cap Core Equity Net Median</i>	19.6		-5.1		3.9		6.6		8.7		8.8		12.8	

* Total Fund and asset class aggregates are ranked in InvMetrics universes. Managers are ranked in eVest (eA) manager universes.

** Includes Parametric Minneapolis manager funded in August 2013.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Small Cap Equity	24.5	52	-21.2	75	-14.6	70	-11.1	77	-3.2	74	0.2	82	8.4	75
<i>Russell 2000</i>	25.4	48	-13.0	46	-6.6	44	-5.0	47	2.0	44	4.3	46	10.5	46
<i>eV US Small Cap Equity Net Median</i>	25.0		-14.9		-9.8		-5.3		0.9		3.7		10.1	
QMA US Small Cap	24.5	50	-21.2	95	-14.6	90	-11.1	92	-3.2	93	--	--	--	--
<i>Russell 2000</i>	25.4	44	-13.0	45	-6.6	44	-5.0	45	2.0	41	4.3	52	10.5	52
<i>eV US Small Cap Core Equity Net Median</i>	24.3		-14.1		-8.6		-5.3		1.4		4.3		10.5	
Domestic Equity Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
International Equity	16.8	81	-8.8	28	-1.6	28	0.0	20	2.1	25	3.3	25	5.4	56
<i>Blended International Equity Index¹</i>	15.9	89	-9.8	37	-3.1	42	-1.4	42	1.6	35	2.9	31	5.6	52
<i>MSCI EAFE Gross</i>	15.1	93	-11.1	63	-4.7	71	-1.6	46	1.3	42	2.5	43	6.2	25
<i>InvMetrics All DB ex-US Eq Net Median</i>	18.6		-10.6		-3.8		-1.8		1.0		2.4		5.6	
Developed Markets	15.6	85	-11.2	60	-3.5	53	-1.1	49	1.4	54	2.9	51	5.5	73
<i>MSCI ACWI ex USA Gross</i>	16.3	70	-10.8	56	-4.4	57	-1.3	50	1.6	51	2.7	53	5.5	76
<i>InvMetrics All DB Dev Mkt ex-US Eq Net Median</i>	17.1		-10.0		-2.7		-1.6		1.7		2.9		6.3	
Baillie Gifford	25.7	38	0.9	34	12.3	21	6.2	28	7.3	48	7.1	48	--	--
<i>MSCI ACWI ex US¹</i>	16.3	95	-10.8	96	-4.4	97	-1.3	93	1.6	95	2.7	95	--	--
<i>MSCI ACWI ex US Growth¹</i>	19.2	76	-2.4	58	6.1	56	4.6	42	6.4	59	6.0	62	--	--
<i>eV ACWI ex-US Growth Equity Net Median</i>	24.4		-1.3		7.1		3.8		7.2		7.0		8.3	
Mondrian	11.1	92	-19.1	53	-12.9	64	-5.6	25	-2.6	37	-0.1	39	4.2	54
<i>MSCI ACWI ex USA Value Gross</i>	13.0	71	-19.2	54	-14.8	73	-7.4	40	-3.4	42	-0.7	57	3.4	71
<i>MSCI ACWI ex USA Gross</i>	16.3	22	-10.8	3	-4.4	7	-1.3	6	1.6	6	2.7	11	5.5	21
<i>eV ACWI ex-US Value Equity Net Median</i>	14.2		-19.0		-11.7		-8.4		-4.1		-0.4		4.4	
BlackRock MSCI ACWI EX-US IMI ¹	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>MSCI ACWI ex USA IMI</i>	17.0	52	-11.2	77	-4.7	78	-2.3	78	1.0	78	2.3	77	5.1	79
<i>eV ACWI ex-US All Cap Core Eq Net Median</i>	17.0		-8.5		-1.9		-0.1		2.9		3.1		6.6	

* Funded June 2020.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Emerging Markets	21.7	28	-15.7	78	-12.8	87	-5.1	81	-2.5	80	0.1	90	--	--
MSCI Emerging Markets Gross	18.2	77	-9.7	35	-3.0	31	-0.7	31	2.3	18	3.2	26	3.6	27
InvMetrics All DB Emg Mkt Eq Net Median	20.0		-10.9		-5.1		-2.0		-0.1		1.8		2.3	
Int'l Equity Currency Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
International Equity Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fixed Income	4.6	69	1.7	80	4.4	74	5.6	72	4.0	68	4.3	36	4.9	26
Blended Fixed Income Index ¹	5.1	55	3.2	62	6.4	53	7.5	32	4.9	36	4.5	31	4.0	61
InvMetrics All DB Total Fix Inc Net Median	5.4		4.3		6.6		6.7		4.5		4.1		4.2	
Core Fixed	4.3	--	5.1	--	7.7	--	7.3	--	4.7	--	4.4	--	4.5	--
BBgBarc US Aggregate TR	2.9	--	6.1	--	8.7	--	8.3	--	5.3	--	4.3	--	3.8	--
BlackRock Intermediate Govt	0.7	78	5.9	48	7.2	53	6.7	53	4.3	48	--	--	--	--
BBgBarc US Govt Int TR	0.5	87	5.8	50	7.0	55	6.6	55	4.1	51	3.0	59	2.5	72
BBgBarc US Aggregate TR	2.9	1	6.1	44	8.7	33	8.3	18	5.3	21	4.3	1	3.8	3
eV US Government Fixed Inc Net Median	1.0		5.7		7.5		7.0		4.1		3.6		3.1	
DoubleLine*	3.3	46	--	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	2.9	51	6.1	1	8.7	1	8.3	1	5.3	1	4.3	9	3.8	52
eV US Securitized Fixed Inc Net Median	2.9		1.5		2.9		4.0		3.5		3.3		4.2	
FIAM Bond	5.8	12	6.9	21	9.9	14	8.9	17	5.9	9	4.9	10	4.6	16
NISA Core Bond**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	2.9	93	6.1	47	8.7	45	8.3	49	5.3	50	4.3	60	3.8	72
eV US Core Fixed Inc Net Median	4.4		6.1		8.6		8.3		5.3		4.4		4.1	
Western TRU	9.3	1	-0.4	99	3.5	99	4.8	99	2.9	99	--	--	--	--
3-Month Libor Total Return USD	0.1	99	0.5	99	1.5	99	2.1	99	2.0	99	1.5	99	0.9	99
BBgBarc US Aggregate TR	2.9	93	6.1	47	8.7	45	8.3	49	5.3	50	4.3	60	3.8	72
eV US Core Fixed Inc Net Median	4.4		6.1		8.6		8.3		5.3		4.4		4.1	
Core Fixed Income Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--

* Funded March 2020.

** Funded May 2020.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Opportunistic Credit	5.3	--	-4.7	--	-2.0	--	2.1	--	2.8	--	4.6	--	7.9	--
<i>BBgBarc BA Intermediate HY¹</i>	10.1	--	-0.9	--	3.2	--	6.3	--	4.3	--	5.1	--	5.4	--
AG CSF Annex Dislocation Fund*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	--	-0.9	--	3.2	--	6.3	--	4.3	--	5.1	--	5.4	--
Angelo Gordon Opportunistic*	7.4	--	-18.6	--	-14.1	--	-2.0	--	6.2	--	6.8	--	--	--
Angelo Gordon STAR*	11.4	--	-1.5	--	2.7	--	11.7	--	14.4	--	11.9	--	--	--
<i>BBgBarc US Aggregate TR</i>	2.9	--	6.1	--	8.7	--	8.3	--	5.3	--	4.3	--	3.8	--
Angelo Gordon Credit Solutions*	0.0	99	-18.7	99	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
Beach Point Select	8.7	63	-5.2	74	-0.5	49	2.3	66	3.9	11	5.9	3	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
Brigade Capital	10.5	23	-9.8	99	-7.3	99	-2.5	99	-0.3	99	2.5	97	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
50% Barclays HY/ 50% Bank Loan	9.9	31	-4.3	55	-1.1	61	2.3	66	2.7	52	3.9	59	5.5	81
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
PIMCO Diversified	7.1	84	-0.7	4	2.1	9	6.0	2	--	--	--	--	--	--
<i>Blended PIMCO Diversified Index¹</i>	9.3	46	-0.6	3	3.0	4	6.4	2	4.3	4	5.1	9	5.9	62
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
Franklin Templeton	0.0	99	-5.7	89	-7.7	99	-1.2	98	-1.6	99	0.4	97	--	--
<i>BBgBarc Multiverse TR</i>	3.7	87	2.5	34	3.8	42	4.9	45	3.7	42	3.6	54	3.0	72
<i>eV All Global Fixed Inc Net Median</i>	8.3		0.3		2.6		4.3		3.3		3.8		4.2	

* Preliminary return as of 06/30/2020.

* Funded April 2020.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Private Credit	1.3	--	-2.3	--	1.3	--	4.4	--	5.2	--	--	--	--	--
<i>Cliffwater Direct Lending Index*</i>	-4.8	--	-9.4	--	-6.1	--	0.9	--	3.5	--	5.3	--	8.5	--
<i>Blackrock DL Feeder IX-U+*</i>	0.0	99	--	--	--	--	--	--	--	--	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	-4.8	99	-9.4	99	-6.1	98	0.9	87	3.5	20	5.3	7	8.5	1
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
<i>PIMCO Private Income*</i>	0.0	99	-8.6	98	-3.8	89	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
<i>Cliffwater Direct Lending Index</i>	-4.8	99	-9.4	99	-6.1	98	0.9	87	3.5	20	5.3	7	8.5	1
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
<i>TCP Direct Lending VIII*</i>	4.2	97	1.9	1	4.8	1	6.5	1	6.4	1	--	--	--	--
<i>White Oak Yield*</i>	0.0	99	-0.9	4	2.7	5	4.9	13	5.0	2	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	-4.8	99	-9.4	99	-6.1	98	0.9	87	3.5	20	5.3	7	8.5	1
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
Risk Parity	3.1	--	-9.4	--	-5.0	--	2.6	--	3.9	--	4.3	--	--	--
<i>Blended Risk Parity Index¹</i>	12.4	--	-1.6	--	4.6	--	6.0	--	6.4	--	6.9	--	--	--
Alternatives	-1.3	--	-3.1	--	2.5	--	3.6	--	3.3	--	5.1	--	--	--
<i>Blended Alternatives Index¹</i>	-9.6	--	-4.7	--	0.0	--	4.6	--	6.4	--	6.5	--	--	--
Private Equity** **	-2.7	33	4.7	7	16.9	4	15.9	4	13.7	17	14.4	9	--	--
<i>Blended Private Equity Index¹</i>	-19.7	99	-11.8	95	-6.1	86	2.4	75	6.0	76	8.8	51	14.5	6
<i>InvMetrics All DB Private Eq Net Median</i>	-5.4		-3.3		2.0		6.5		8.8		8.9		10.2	
Hedge Fund/Absolute Return	0.8	83	-11.6	84	-12.7	88	-9.3	89	-7.5	93	-2.4	81	--	--
<i>Libor 1 month +4%</i>	1.1	82	2.3	10	5.4	11	5.9	6	5.8	9	5.3	5	4.8	21
<i>InvMetrics All DB Hedge Funds Net Median</i>	7.2		-5.0		-1.4		0.6		2.1		1.7		3.8	

* Preliminary return as of 06/30/2020.

* Funded March 2020.

** Returns are one-quarter lag.

** Excludes EnCap Energy Capital Fund and Sheridan Production Partners.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
AQR DELTA XN	-6.1	97	-27.8	98	-30.8	99	-22.0	99	-16.7	99	-8.2	98	--	--
Aberdeen Standard GARS	2.6	66	-0.1	38	2.8	35	3.5	32	1.7	54	--	--	--	--
Graham Quant Macro*	2.8	66	--	--	--	--	--	--	--	--	--	--	--	--
PIMCO MAARS Fund LP***	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Libor 1 month +4%</i>	1.1	71	2.3	28	5.4	26	5.9	21	5.8	21	5.3	26	4.8	48
<i>eV Alt All Multi-Strategy Median</i>	6.0		-2.5		-0.4		1.1		2.3		2.6		4.5	
Inflation Hedge	0.1	--	-12.5	--	-10.5	--	-4.2	--	-0.7	--	--	--	--	--
<i>Blended Inflation Hedge Index¹</i>	-0.4	--	-9.2	--	-6.7	--	-1.1	--	1.6	--	--	--	--	--
Real Estate	-2.9	99	-1.6	74	2.4	41	4.7	34	5.7	30	7.3	24	10.7	6
NCREIF ODCE	-1.6	85	-0.6	54	2.2	47	4.3	46	5.7	32	7.3	21	10.8	5
<i>InvMetrics All DB Real Estate Pub Net Median</i>	-0.4		-0.4		1.8		4.2		5.2		6.4		9.6	
Harrison Street Core Property**	-0.3	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--
Invesco	-4.5	--	-3.0	--	1.1	--	3.8	--	5.2	--	6.8	--	10.5	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--
Invesco US Val IV	-4.5	--	-3.9	--	4.3	--	8.1	--	9.3	--	--	--	--	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--
<i>NCREIF ODCE + 2%</i>	-1.1	--	0.4	--	4.3	--	6.4	--	7.8	--	9.4	--	13.0	--
Invesco US Val V	-4.3	--	-3.3	--	2.1	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--
<i>NCREIF ODCE + 2%</i>	-1.1	--	0.4	--	4.3	--	6.4	--	7.8	--	9.4	--	13.0	--
PGIM RE US Debt Fund	0.9	--	2.0	--	5.0	--	5.9	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--

* Funded February 2020.

** Funded January 2020.

*** Funded April 2020.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

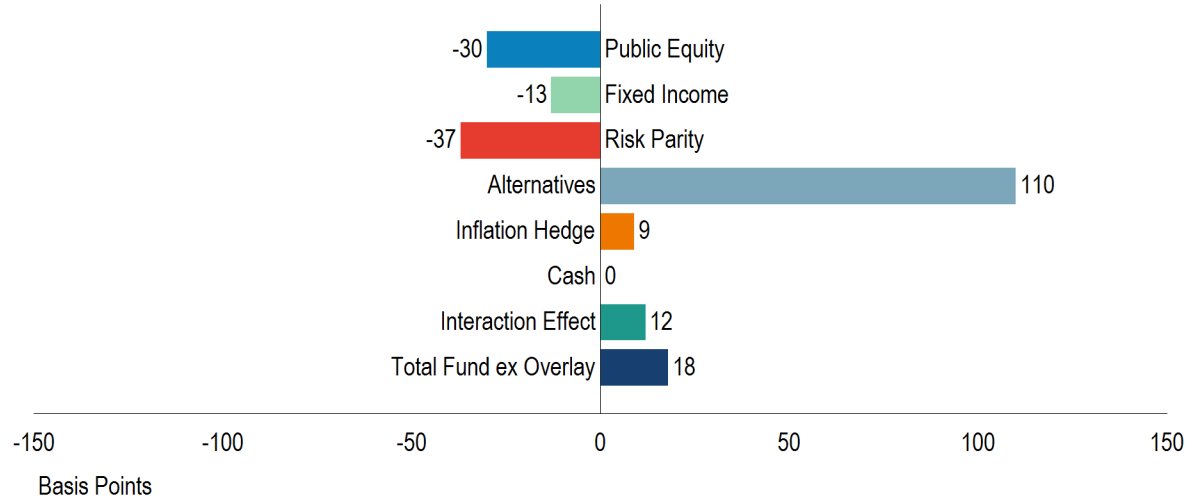
	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Private Real Asset**	-8.1	--	-7.5	--	-8.1	--	-7.1	--	-6.7	--	2.9	--	--	--
<i>Blended Private Real Asset Index¹</i>	-30.1	--	-25.5	--	-24.8	--	-10.1	--	-6.2	--	-1.6	--	--	--
<i>Blended Secondary CA Private RA Index¹</i>	-13.0	--	-12.7	--	-13.8	--	-5.2	--	-0.1	--	2.5	--	--	--
Public Real Assets	11.7	--	-26.3	--	-25.4	--	-14.0	--	-6.6	--	--	--	--	--
<i>Blended Public Real Asset Index¹</i>	12.7	--	-17.8	--	-15.3	--	-7.5	--	-2.0	--	1.4	--	--	--
SSgA Custom Real Asset	11.7	--	-17.9	--	-15.4	--	-7.5	--	-2.0	--	--	--	--	--
<i>SSgA Custom Real Asset Index¹</i>	12.7	--	-17.8	--	-15.3	--	-7.5	--	-2.0	--	--	--	--	--
Cash	0.1	--	0.4	--	0.9	--	1.1	--	1.1	--	1.1	--	0.9	--
<i>91 Day T-Bills</i>	0.0	--	0.4	--	1.3	--	1.8	--	1.7	--	1.1	--	0.6	--
General Account	0.4	--	0.8	--	1.9	--	3.6	--	3.3	--	2.6	--	1.5	--
Treasury & LAIF	0.5	--	0.7	--	2.2	--	2.9	--	3.0	--	2.1	--	1.5	--
<i>91 Day T-Bills</i>	0.0	--	0.4	--	1.3	--	1.8	--	1.7	--	1.1	--	0.6	--
Currency Hedge Cash Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cash Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--

** Returns are one-quarter lag.

1. See Appendix for Benchmark History.

Total Fund ex Overlay
Performance Attribution

Period Ending: June 30, 2020

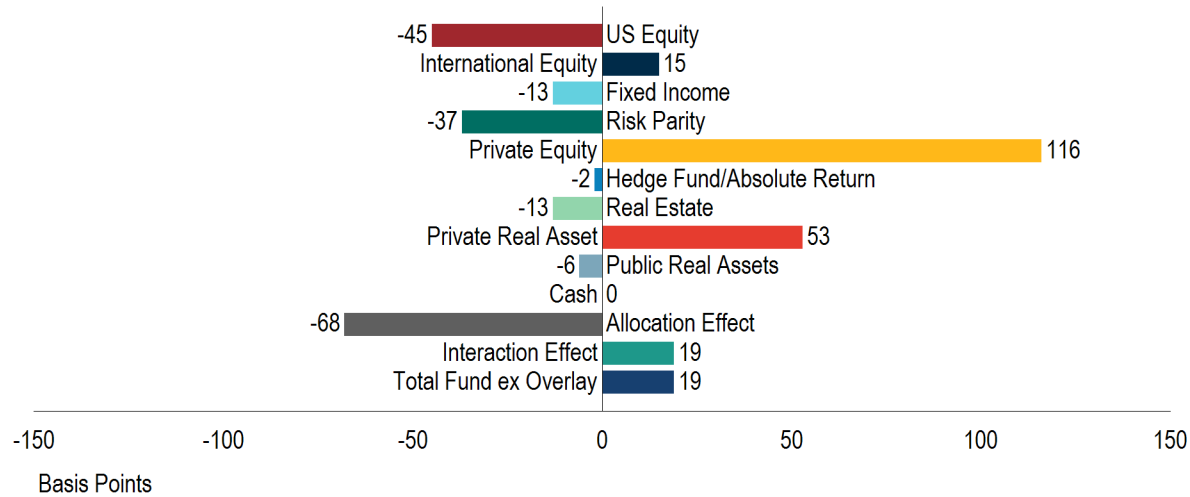


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	18.49%	19.29%	-0.80%	-0.30%	-0.12%	0.01%	-0.42%
Fixed Income	4.58%	5.10%	-0.52%	-0.13%	-0.01%	0.02%	-0.12%
Risk Parity	3.10%	12.40%	-9.31%	-0.37%	-0.09%	0.14%	-0.32%
Alternatives	-1.27%	-9.62%	8.35%	1.10%	-0.08%	-0.03%	1.00%
Inflation Hedge	0.07%	-0.40%	0.47%	0.09%	0.09%	-0.02%	0.16%
Cash	0.12%	0.03%	0.09%	0.00%	-0.12%	0.00%	-0.12%
Total	8.18%	8.00%	0.18%	0.38%	-0.32%	0.12%	0.18%

Attribution does not include the impact of the Parametric Minneapolis strategy.
* Interaction Effects include Residual Effects.

Total Fund ex Overlay
Performance Attribution

Period Ending: June 30, 2020

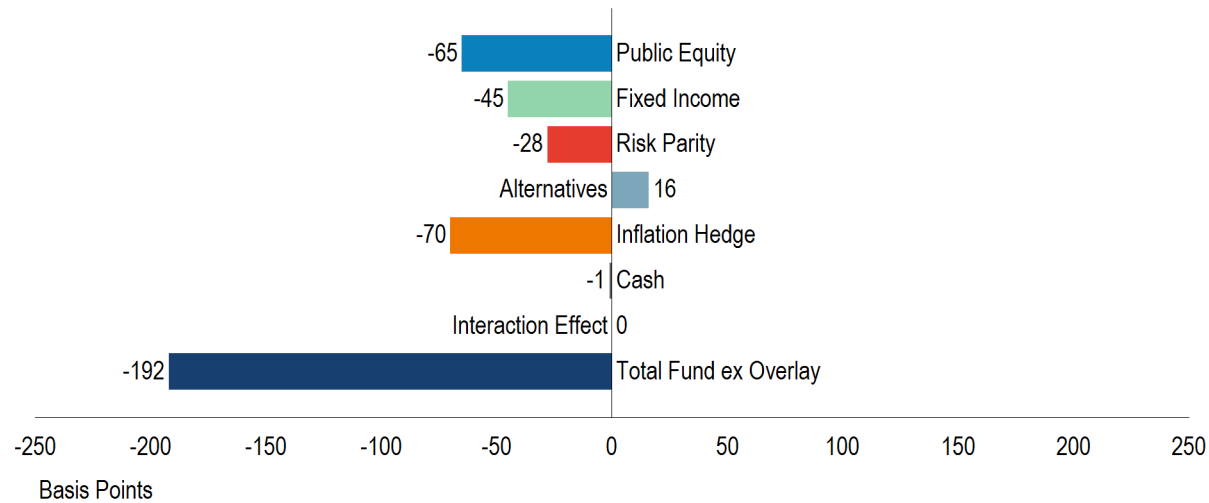


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
US Equity	19.83%	22.03%	-2.20%	-0.45%	-0.06%	0.00%	-0.51%
International Equity	16.80%	15.93%	0.87%	0.15%	-0.05%	-0.02%	0.08%
Fixed Income	4.58%	5.10%	-0.52%	-0.13%	-0.01%	0.02%	-0.12%
Risk Parity	3.10%	12.40%	-9.31%	-0.37%	-0.09%	0.14%	-0.32%
Private Equity	-2.67%	-19.74%	17.07%	1.16%	-0.24%	0.07%	1.00%
Hedge Fund/Absolute Return	0.79%	1.07%	-0.28%	-0.02%	0.03%	0.00%	0.01%
Real Estate	-2.95%	-1.55%	-1.40%	-0.13%	-0.06%	-0.01%	-0.20%
Private Real Asset	-8.07%	-30.09%	22.02%	0.53%	0.00%	-0.03%	0.50%
Public Real Assets	11.65%	12.74%	-1.08%	-0.06%	-0.08%	0.02%	-0.12%
Cash	0.12%	0.03%	0.09%	0.00%	-0.12%	0.00%	-0.12%
Total	8.20%	8.00%	0.19%	0.68%	-0.68%	0.19%	0.19%

Attribution does not include the impact of the Parametric Minneapolis strategy.
* Interaction Effects include Residual Effects.

Total Fund ex Overlay
Performance Attribution (1 Year)

Period Ending: June 30, 2020

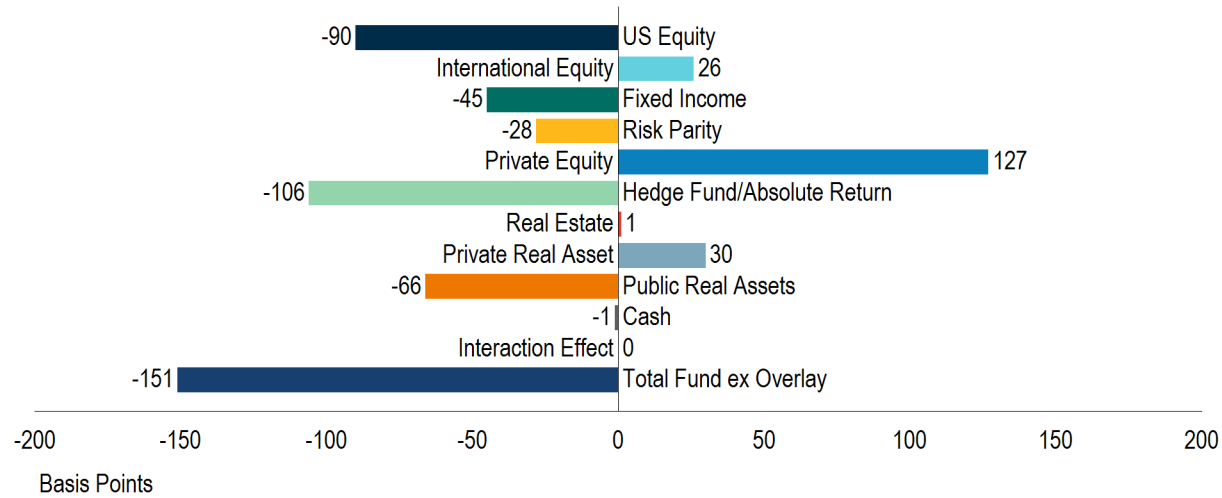


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	0.52%	2.12%	-1.60%	-0.65%	0.00%	0.00%	-0.65%
Fixed Income	4.39%	6.44%	-2.05%	-0.45%	0.00%	0.00%	-0.45%
Risk Parity	-5.02%	4.65%	-9.67%	-0.28%	0.00%	0.00%	-0.28%
Alternatives	2.48%	-0.02%	2.50%	0.16%	0.00%	0.00%	0.16%
Inflation Hedge	-10.46%	-6.69%	-3.77%	-0.70%	0.00%	0.00%	-0.70%
Cash	0.92%	1.30%	-0.38%	-0.01%	0.00%	0.00%	-0.01%
Total	-0.14%	1.78%	-1.92%	-1.92%	0.00%	0.00%	-1.92%

Attribution does not include the impact of the Parametric Minneapolis strategy.
* Interaction Effects include Residual Effects.

Total Fund ex Overlay
Performance Attribution (1 Year)

Period Ending: June 30, 2020



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
US Equity	2.28%	6.53%	-4.25%	-0.90%	0.00%	0.00%	-0.90%
International Equity	-1.59%	-3.10%	1.52%	0.26%	0.00%	0.00%	0.26%
Fixed Income	4.39%	6.44%	-2.05%	-0.45%	0.00%	0.00%	-0.45%
Risk Parity	-5.02%	4.65%	-9.67%	-0.28%	0.00%	0.00%	-0.28%
Private Equity	16.93%	-6.13%	23.06%	1.27%	0.00%	0.00%	1.27%
Hedge Fund/Absolute Return	-12.72%	5.40%	-18.12%	-1.06%	0.00%	0.00%	-1.06%
Real Estate	2.44%	2.23%	0.21%	0.01%	0.00%	0.00%	0.01%
Private Real Asset	-8.15%	-24.83%	16.68%	0.30%	0.00%	0.00%	0.30%
Public Real Assets	-25.35%	-15.31%	-10.05%	-0.66%	0.00%	0.00%	-0.66%
Cash	0.92%	1.30%	-0.38%	-0.01%	0.00%	0.00%	-0.01%
Total	-0.14%	1.37%	-1.51%	-1.51%	0.00%	0.00%	-1.51%

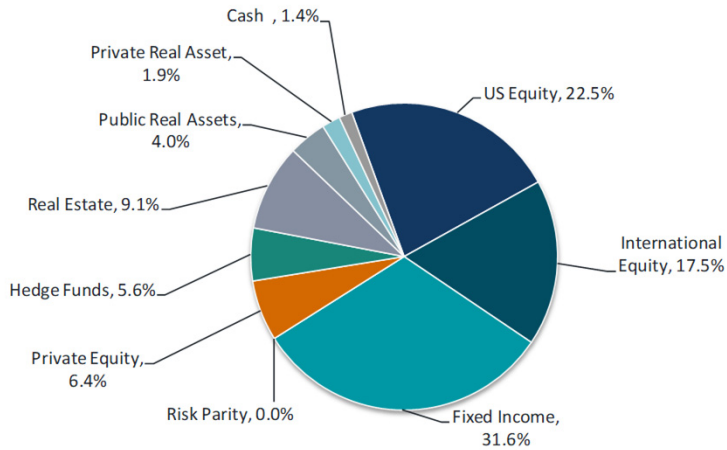
Attribution does not include the impact of the Parametric Minneapolis strategy.
* Interaction Effects include Residual Effects.

Total Fund

Asset Allocation Analysis

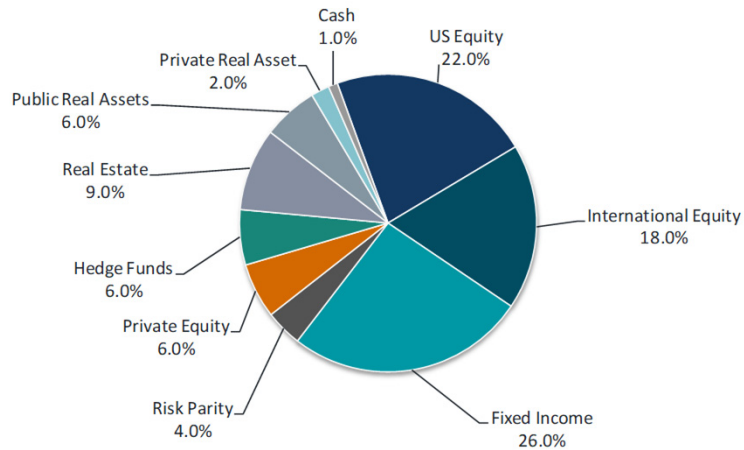
Period Ending: June 30, 2020

Current w/ Overlay



ASSET ALLOCATION	MARKET VALUE W/ OVERLAY	W/ OVERLAY	W/O OVERLAY
US Equity	1,049,072,354	22.5%	22.4%
International Equity	817,163,787	17.5%	17.6%
Fixed Income	1,475,210,140	31.6%	30.8%
Risk Parity	0	0.0%	0.0%
Private Equity	298,746,088	6.4%	6.4%
Hedge Funds	259,097,759	5.6%	5.6%
Real Estate	425,695,843	9.1%	9.1%
Public Real Assets	186,589,155	4.0%	4.0%
Private Real Asset	90,431,259	1.9%	1.9%
Cash	64,624,264	1.4%	2.2%
TOTAL	4,666,630,649	100.0%	100.0%

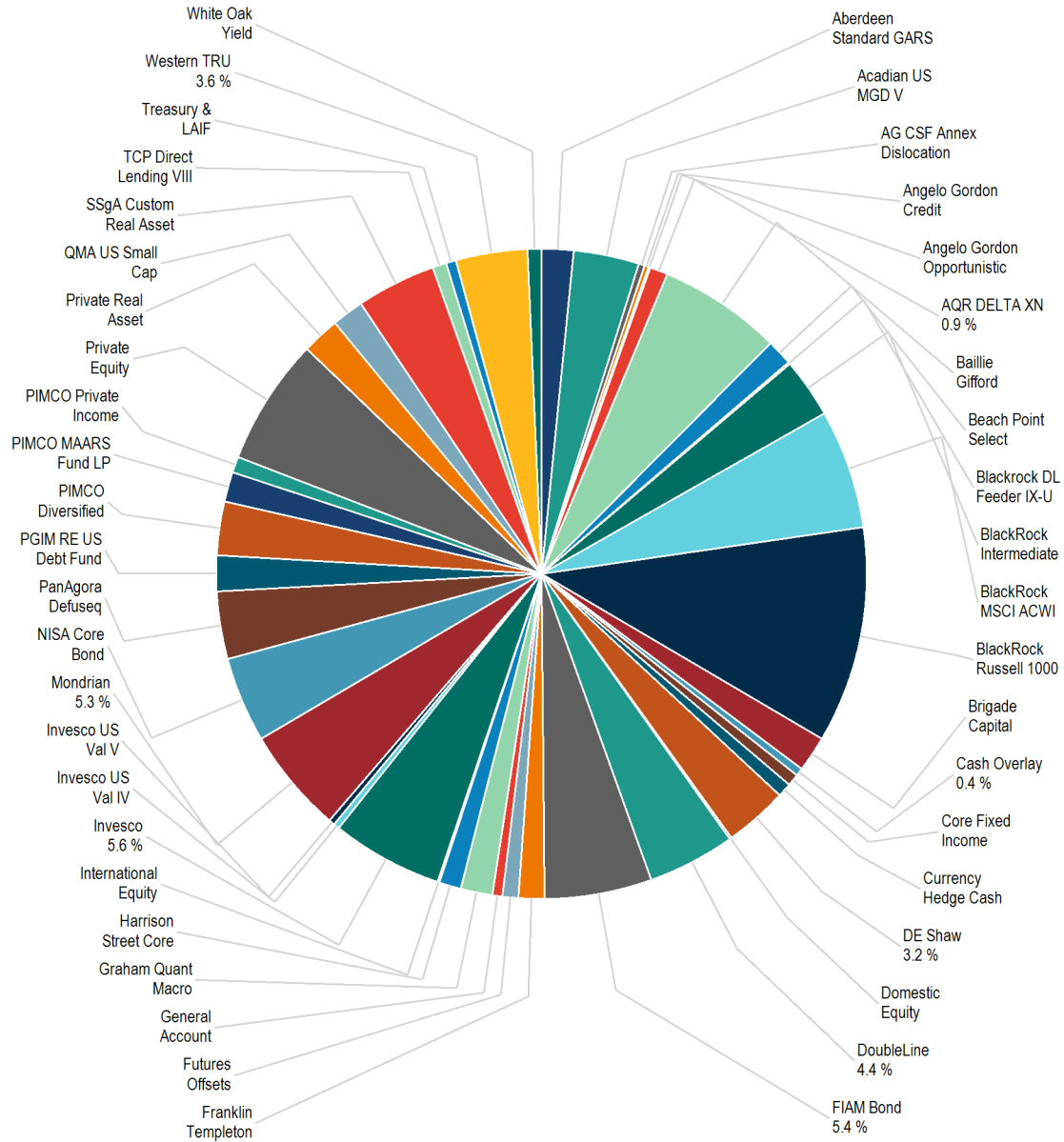
Target



ASSET ALLOCATION	W/ OVERLAY	TARGET	DIFF
US Equity	22.5%	22.0%	0.5%
International Equity	17.5%	18.0%	-0.5%
Fixed Income	31.6%	26.0%	5.6%
Risk Parity	0.0%	4.0%	-4.0%
Private Equity	6.4%	6.0%	0.4%
Hedge Funds	5.6%	6.0%	-0.4%
Real Estate	9.1%	9.0%	0.1%
Public Real Assets	4.0%	6.0%	-2.0%
Private Real Asset	1.9%	2.0%	-0.1%
Cash	1.4%	1.0%	0.4%
TOTAL	100.0%	100.0%	0.0%

Total Fund Manager Allocation Analysis

Period Ending: June 30, 2020



	Actual	Actual
Aberdeen Standard GARS	\$75,460,730	2%
Acadian US MGD V	\$152,777,264	3%
AG CSF Annex Dislocation Fund	\$13,250,000	0%
Angelo Gordon Credit Solutions	\$10,962,280	0%
Angelo Gordon Opportunistic	\$3,290,565	0%
Angelo Gordon STAR	\$2,177,589	0%
AQR DELTA XN	\$40,903,083	1%
Baillie Gifford	\$290,983,967	6%
Beach Point Select	\$62,964,674	1%
Blackrock DL Feeder IX-U	\$3,495,374	0%
BlackRock Intermediate Govt	\$140,187,907	3%
BlackRock MSCI ACWI EX-US IMI	\$282,258,931	6%
BlackRock Russell 1000	\$508,417,716	11%
Brigade Capital	\$84,304,302	2%
Cash Overlay	\$18,405,614	0%
Core Fixed Income Overlay	\$29,206,922	1%
Currency Hedge Cash Overlay	\$34,693,639	1%
DE Shaw	\$151,663,091	3%
Domestic Equity Overlay	\$6,281,160	0%
DoubleLine	\$207,139,743	4%
FIAM Bond	\$254,181,628	5%
Franklin Templeton	\$58,546,690	1%
Futures Offsets (SMCE02001)	-\$39,560,063	-1%
General Account	\$25,631,312	1%
Graham Quant Macro	\$72,465,450	2%
Harrison Street Core Property	\$50,001,859	1%
International Equity Overlay	\$4,071,981	0%
Invesco	\$263,266,557	6%
Invesco US Val IV	\$14,581,505	0%
Invesco US Val V	\$12,756,030	0%
Mondrian	\$246,820,176	5%
NISA Core Bond	\$202,783,331	4%
PanAgora Defuseq	\$158,230,591	3%
PGIM RE US Debt Fund	\$85,089,892	2%
PIMCO Diversified	\$125,154,334	3%
PIMCO MAARS Fund LP	\$70,268,496	2%
PIMCO Private Income	\$37,495,209	1%
Private Equity	\$298,746,088	6%
Private Real Asset	\$90,431,259	2%
QMA US Small Cap	\$72,448,674	2%
SSGA Custom Real Asset	\$186,589,155	4%
TCP Direct Lending VIII	\$34,077,448	1%
Transition Account	\$5,026	0%
Treasury & LAIF	\$24,213,009	1%
Western TRU	\$167,628,873	4%
White Oak Yield	\$31,881,588	1%
Total	\$4,666,630,649	100%

Statistics Summary

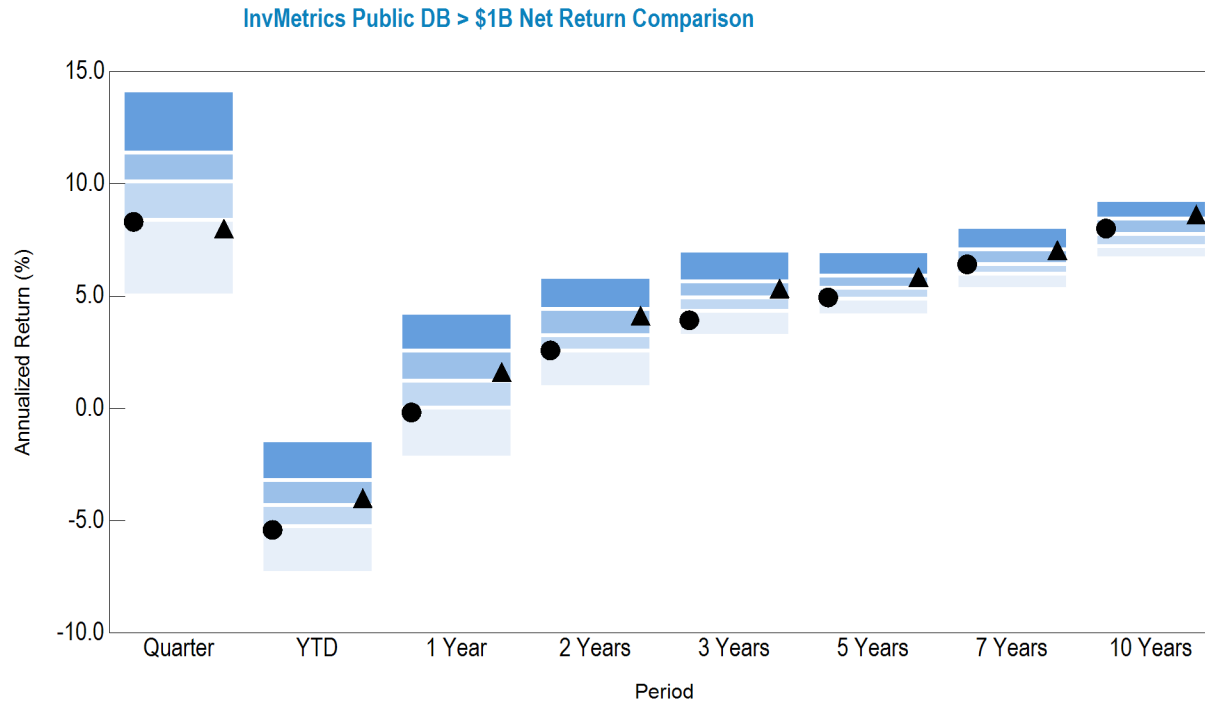
3 Years

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	3.9%	87	8.8%	42	0.3	85	-0.9	83	1.6%	61
Policy Index	5.3%	33	8.6%	31	0.4	31	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	5.0%	--	9.3%	--	0.4	--	-0.3	--	1.4%	--

Statistics Summary

5 Years

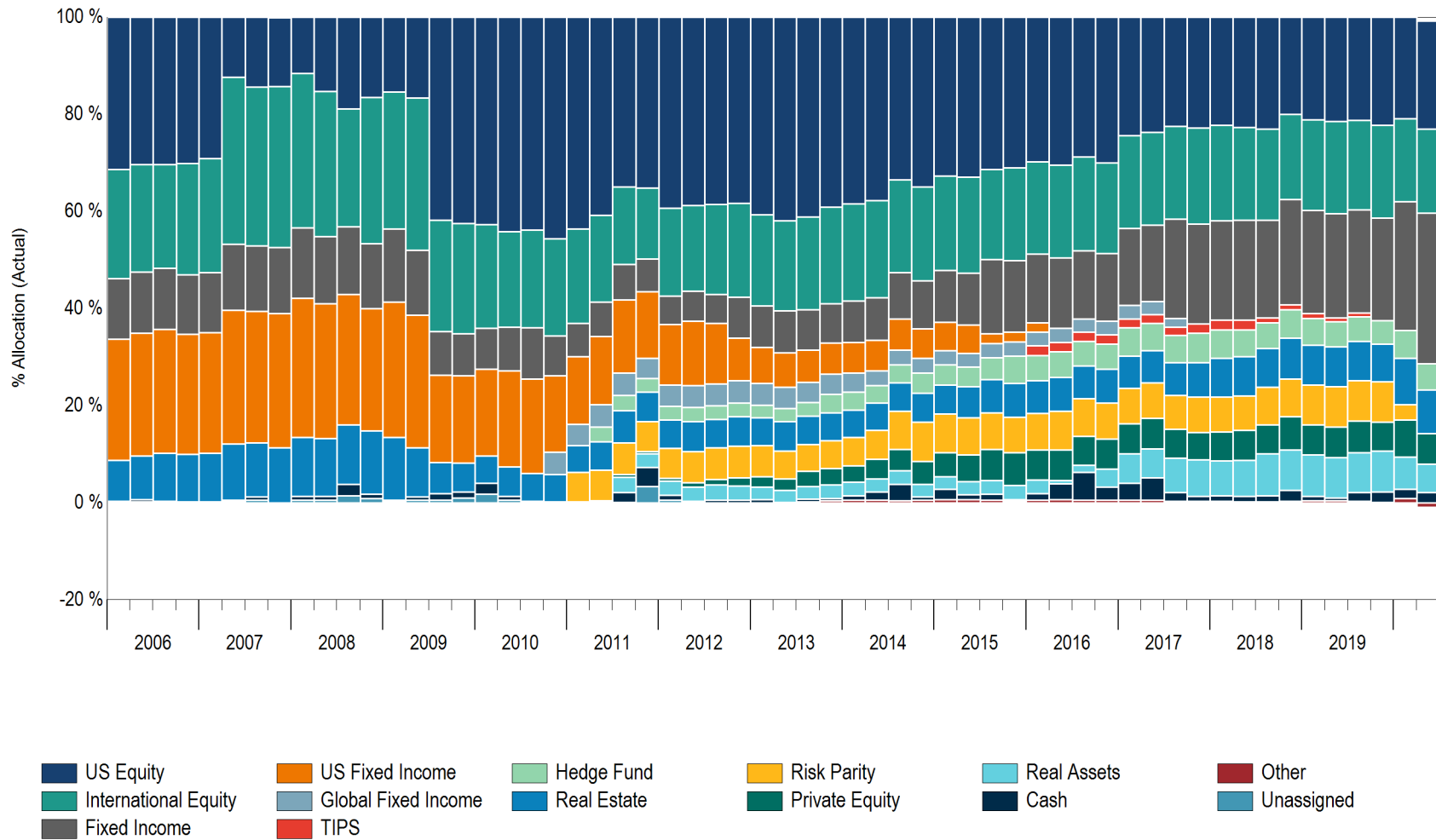
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	4.9%	72	8.0%	43	0.5	60	-0.6	79	1.5%	58
Policy Index	5.9%	31	8.0%	43	0.6	36	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	5.4%	--	8.3%	--	0.5	--	-0.3	--	1.3%	--



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Return (Rank)								
5th Percentile	14.2	-1.5	4.2	5.8	7.0	7.0	8.1	9.3
25th Percentile	11.4	-3.2	2.6	4.4	5.7	5.9	7.1	8.5
Median	10.1	-4.3	1.3	3.3	5.0	5.4	6.4	7.8
75th Percentile	8.4	-5.2	0.0	2.6	4.4	4.9	6.0	7.2
95th Percentile	5.0	-7.3	-2.2	1.0	3.2	4.2	5.3	6.7
# of Portfolios	71	71	71	71	71	70	68	64
● Total Fund	8.3 (77)	-5.4 (77)	-0.2 (79)	2.6 (76)	3.9 (87)	4.9 (72)	6.4 (52)	8.0 (38)
▲ Policy Index	8.0 (78)	-4.0 (44)	1.6 (36)	4.1 (29)	5.3 (33)	5.9 (31)	7.1 (27)	8.6 (20)

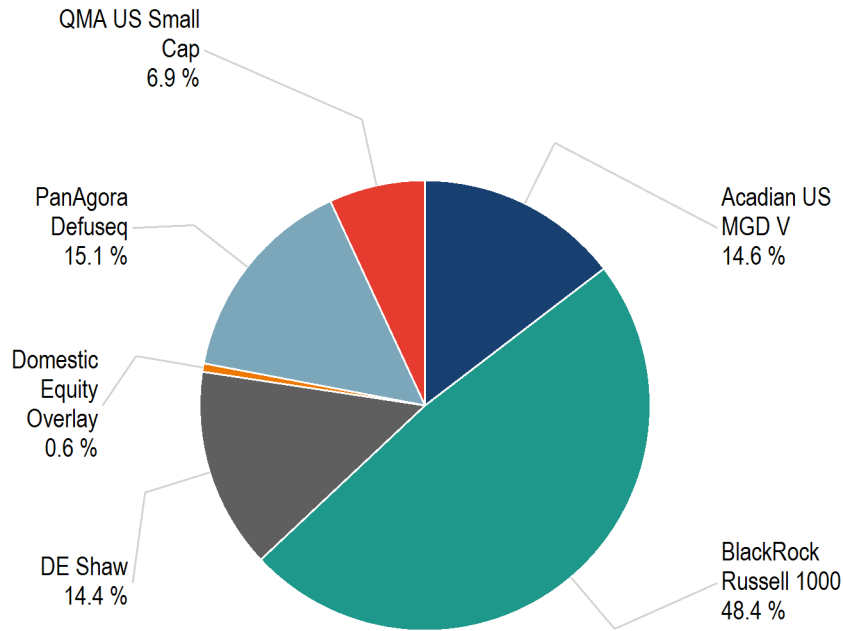
Total Fund
Asset Allocation History

Period Ending: June 30, 2020



US Equity
 Manager Allocation Analysis

Period Ending: June 30, 2020



	Actual \$	Actual %	Manager Contribution to Excess Return %
Acadian US MGD V	\$152,777,264	14.6%	-1.1%
BlackRock Russell 1000	\$508,417,716	48.4%	0.0%
DE Shaw	\$151,663,091	14.4%	-0.2%
PanAgora Defuseq	\$158,230,591	15.1%	-0.9%
QMA US Small Cap	\$72,448,674	6.9%	-0.1%
Domestic Equity Overlay	\$6,281,160	0.6%	0.0%
Actual vs. Policy Weight Difference			0.1%
Total	\$1,049,818,495	100.0%	-2.2%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	8.1%	17.4%	0.4	-1.7	1.1%
Blended US Equity Index	10.0%	17.7%	0.5	--	0.0%
Russell 3000	10.0%	17.7%	0.5	--	0.0%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	9.5%	16.7%	0.5	-0.9	1.3%
Russell 1000	10.6%	17.4%	0.5	--	0.0%
BlackRock Russell 1000	10.7%	17.4%	0.5	0.7	0.0%
Russell 1000	10.6%	17.4%	0.5	--	0.0%
DE Shaw	9.4%	17.2%	0.4	-0.5	2.4%
Russell 1000	10.6%	17.4%	0.5	--	0.0%
Small Cap Equity	-3.2%	24.8%	-0.2	-1.5	3.6%
Russell 2000	2.0%	22.9%	0.0	--	0.0%
QMA US Small Cap	-3.2%	24.8%	-0.2	-1.5	3.6%
Russell 2000	2.0%	22.9%	0.0	--	0.0%

Statistics Summary

5 Years

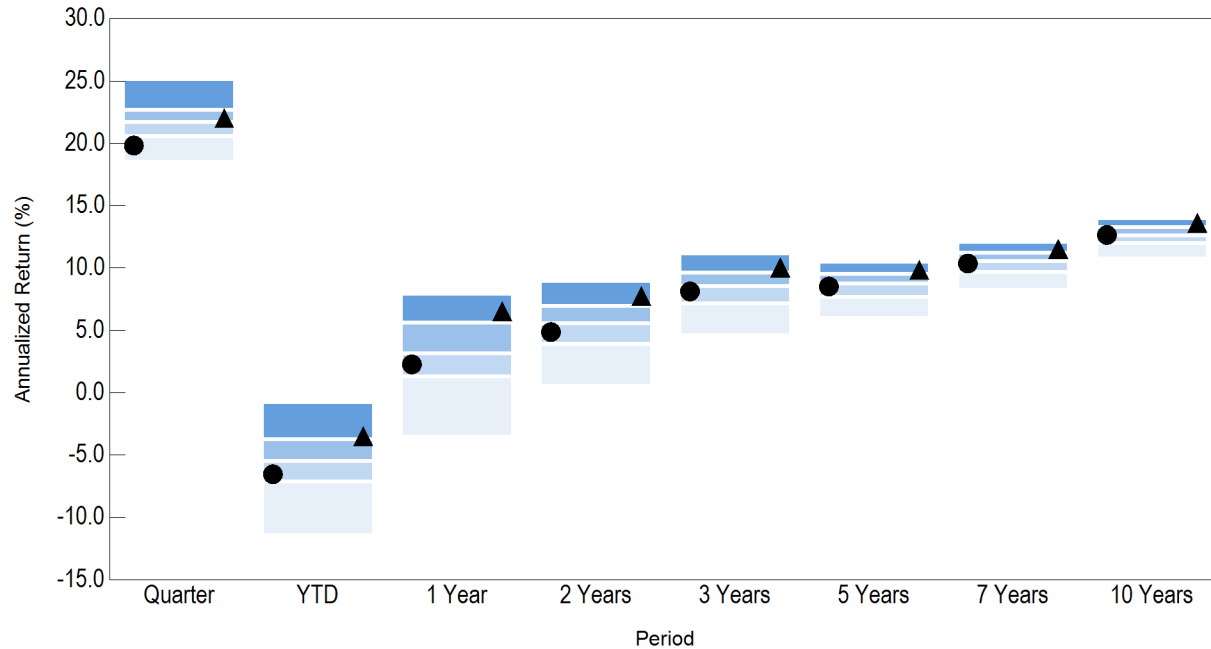
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	8.5%	15.1%	0.5	-1.3	1.0%
Blended US Equity Index	9.9%	15.4%	0.6	--	0.0%
Russell 3000	10.0%	15.4%	0.6	0.5	0.4%

Statistics Summary

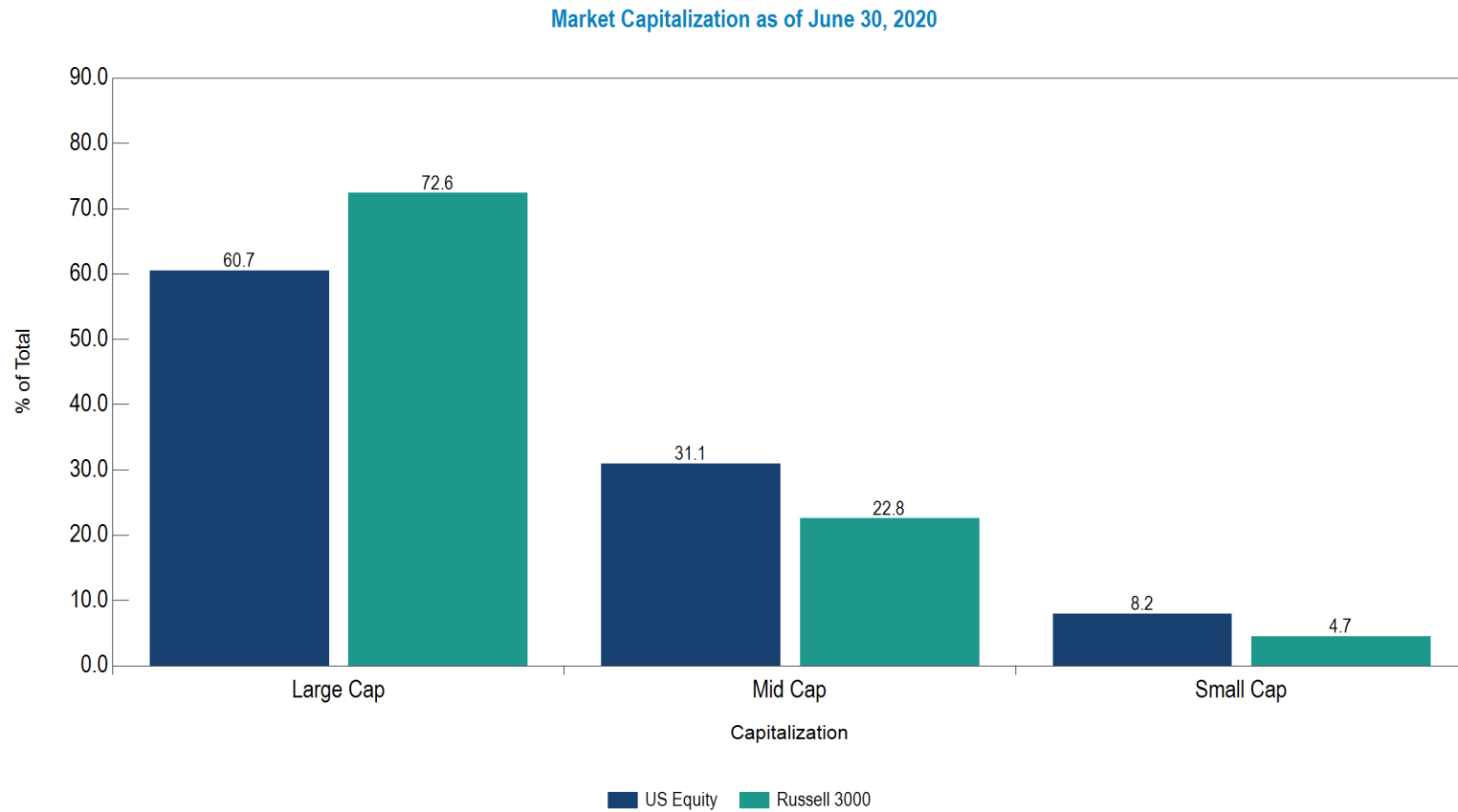
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	10.0%	14.7%	0.6	-0.4	1.4%
Russell 1000	10.5%	15.1%	0.6	--	0.0%
DE Shaw	10.2%	15.0%	0.6	-0.1	2.2%
Russell 1000	10.5%	15.1%	0.6	--	0.0%
Small Cap Equity	0.2%	21.4%	0.0	-1.2	3.4%
Russell 2000	4.3%	20.3%	0.2	--	0.0%

InvMetrics All DB US Eq Net Return Comparison



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	25.1	-0.8	7.9	8.9	11.2	10.5	12.1	14.0
25th Percentile	22.7	-3.7	5.7	7.0	9.6	9.5	11.3	13.3
Median	21.8	-5.5	3.2	5.6	8.6	8.8	10.6	12.6
75th Percentile	20.6	-7.1	1.3	4.0	7.2	7.7	9.7	12.0
95th Percentile	18.6	-11.4	-3.5	0.6	4.6	6.0	8.3	10.8
# of Portfolios	574	574	574	569	556	527	490	377
● US Equity	19.8 (88)	-6.5 (69)	2.3 (65)	4.9 (64)	8.1 (61)	8.5 (57)	10.4 (58)	12.7 (50)
▲ Blended US Equity Index	22.0 (42)	-3.5 (21)	6.5 (14)	7.7 (13)	10.0 (16)	9.9 (17)	11.5 (15)	13.6 (13)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,989	3,009
Weighted Avg. Market Cap. (\$B)	238.1	309.4
Median Market Cap. (\$B)	2.7	1.4
Price To Earnings	20.8	22.4
Price To Book	3.7	4.0
Price To Sales	2.3	2.5
Return on Equity (%)	19.5	19.5
Yield (%)	1.9	1.7
Beta (holdings; domestic)	1.0	1.0

Top Holdings

MICROSOFT CORP	3.9%
APPLE INC	3.6%
AMAZON.COM INC	2.6%
JOHNSON & JOHNSON	1.2%
ALPHABET INC	1.1%
FACEBOOK INC	1.1%
VERIZON COMMUNICATIONS INC	1.0%
PROCTER & GAMBLE CO (THE)	1.0%
JPMORGAN CHASE & CO	0.9%
VISA INC	0.8%

Best Performers

	Return %
NOVAVAX INC (NVAX)	513.8%
REMARK HOLDINGS INC (MARK)	500.8%
CARPARTS.COM INC (PRTS)	394.9%
CAMPING WORLD HOLDINGS INC (CWH)	380.5%
MACROGENICS INC (MGNX)	379.7%
LOVESAC CO (THE) (LOVE)	349.9%
FASTLY INC (FSLY)	348.5%
MICHAELS COS INC (THE) (MIK)	336.4%
MERSANA THERAPEUTICS INC (MRSN)	301.4%
QEP RESOURCES INC (QEP)	285.7%

Worst Performers

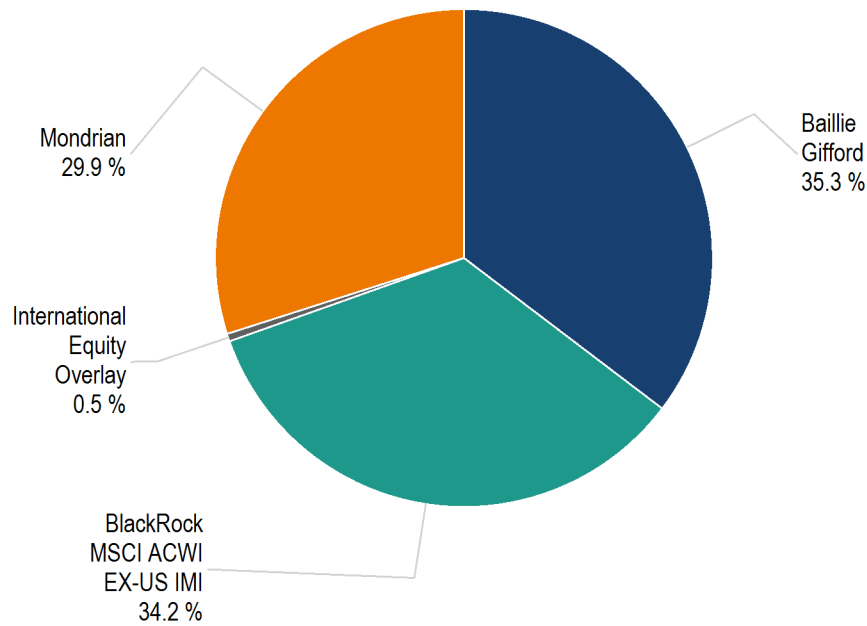
	Return %
DIAMOND OFFSHORE DRILLING INC. (DOFSQ)	-86.0%
CHESAPEAKE ENERGY CORP (CHKAQ)	-85.8%
PYXUS INTERNATIONAL INC (PYXSQ)	-84.9%
STAGE STORES INC (SSINQ)	-80.7%
HERTZ GLOBAL HOLDINGS INC (HTZ)	-77.2%
VIVUS INC (VVUSQ)	-77.2%
UNIT CORP (UNTCQ)	-72.5%
EXTRACTION OIL & GAS INC (XOGAQ)	-71.3%
MILLENDO THERAPEUTICS INC (MLND)	-66.7%
INTELSAT SA (INTEQ)	-64.7%

US Equity Performance Attribution vs. Russell 3000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.1%	0.0%	0.0%	36.2%	31.7%	2.1%	2.5%			
Materials	0.0%	0.0%	0.0%	0.0%	26.2%	26.1%	3.3%	2.6%			
Industrials	0.1%	0.1%	0.0%	0.0%	19.3%	18.0%	8.1%	8.9%			
Consumer Discretionary	-0.4%	-0.4%	0.0%	0.0%	33.9%	37.4%	9.9%	10.1%			
Consumer Staples	-0.1%	0.1%	-0.2%	0.0%	9.7%	8.3%	8.8%	7.1%			
Health Care	0.0%	0.0%	0.0%	0.0%	16.8%	16.7%	15.8%	15.5%			
Financials	0.3%	0.3%	0.1%	0.0%	15.0%	12.7%	10.7%	11.5%			
Information Technology	-0.7%	-0.5%	-0.3%	0.1%	29.9%	31.7%	21.7%	24.6%			
Communication Services	-0.3%	-0.3%	0.0%	0.0%	17.5%	21.0%	9.8%	9.9%			
Utilities	-0.6%	-0.1%	-0.5%	0.0%	0.8%	2.7%	6.0%	3.5%			
Real Estate	0.0%	-0.1%	0.0%	0.0%	12.2%	13.5%	3.5%	3.9%			
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	--	0.2%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	20.1%	22.0%	0.1%	0.0%			
Portfolio	-1.6%	=	-0.7%	+	-1.0%	+	0.0%	20.3%	22.0%	100.0%	100.0%

U.S. Effective Style Map





	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$290,983,967	35.3%	5.0%
Mondrian	\$246,820,176	29.9%	-0.9%
BlackRock MSCI ACWI EX-US IMI	\$282,258,931	34.2%	0.0%
Int'l Equity Currency Overlay	\$0	0.0%	0.0%
International Equity Overlay	\$4,071,981	0.5%	0.0%
Actual vs. Policy Weight Difference			-3.2%
Total	\$824,135,055	100.0%	0.9%

Statistics Summary

3 Years

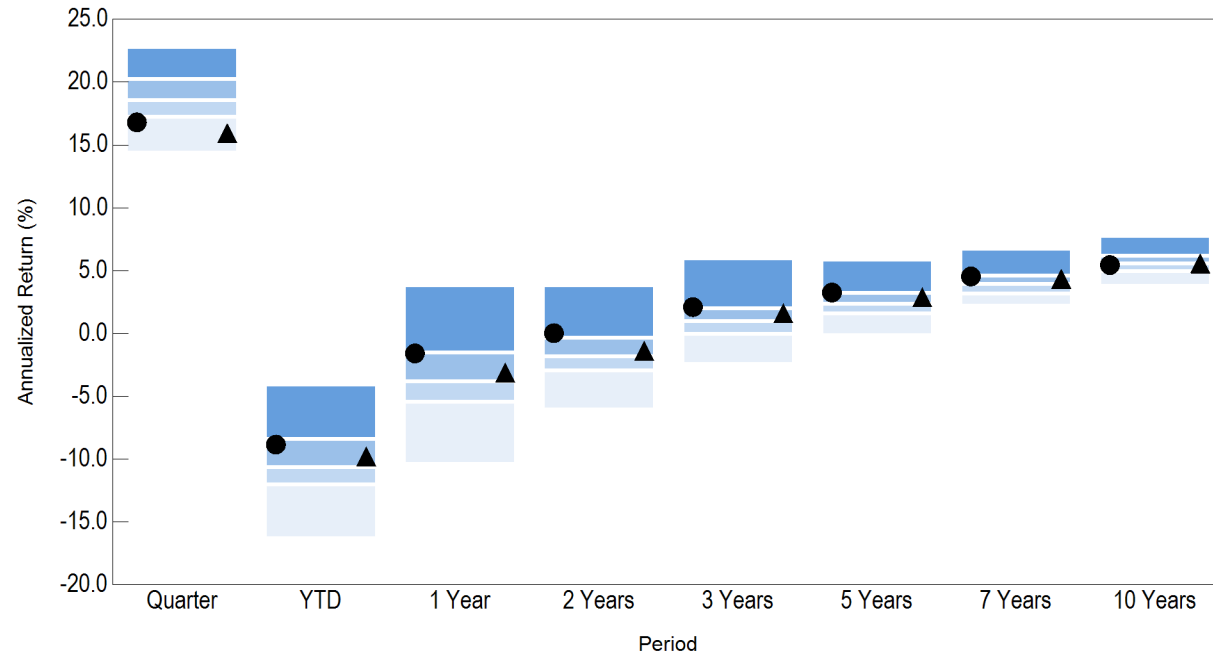
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	2.1%	15.2%	0.0	0.3	1.4%
Blended International Equity Index	1.6%	15.4%	0.0	--	0.0%
Developed Markets	1.4%	15.8%	0.0	-0.1	2.2%
MSCI ACWI ex USA Gross	1.6%	15.9%	0.0	--	0.0%
Baillie Gifford	7.3%	17.0%	0.3	1.0	5.8%
MSCI ACWI ex US	1.6%	15.9%	0.0	--	0.0%
Mondrian	-2.6%	16.8%	-0.3	0.4	2.3%
MSCI ACWI ex USA Value Gross	-3.4%	17.4%	-0.3	--	0.0%
Emerging Markets	-2.5%	19.5%	-0.2	-0.9	5.5%
MSCI Emerging Markets Gross	2.3%	18.5%	0.0	--	0.0%

Statistics Summary

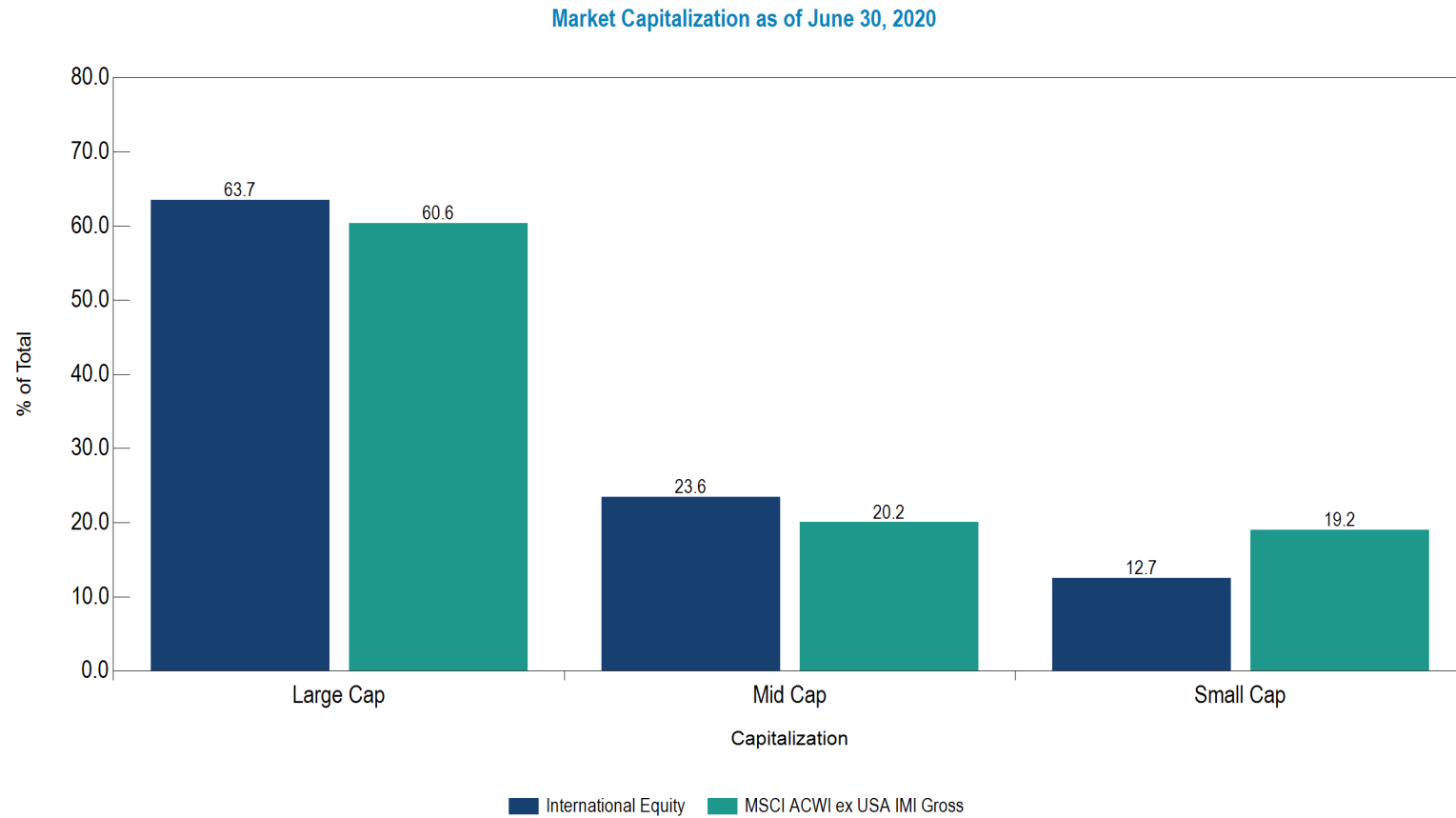
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	3.3%	14.4%	0.1	0.2	1.7%
Blended International Equity Index	2.9%	14.5%	0.1	--	0.0%
Developed Markets	2.9%	14.8%	0.1	0.1	2.3%
MSCI ACWI ex USA Gross	2.7%	14.9%	0.1	--	0.0%
Baillie Gifford	7.1%	16.2%	0.4	0.8	5.3%
MSCI ACWI ex US	2.7%	14.9%	0.1	--	0.0%
Mondrian	-0.1%	15.2%	-0.1	0.1	4.0%
MSCI ACWI ex USA Value Gross	-0.7%	16.1%	-0.1	--	0.0%
Emerging Markets	0.1%	18.0%	-0.1	-0.6	5.0%
MSCI Emerging Markets Gross	3.2%	17.9%	0.1	--	0.0%

InvMetrics All DB ex-US Eq Net Return Comparison



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	22.8	-4.1	3.8	3.8	5.9	5.9	6.7	7.7
25th Percentile	20.3	-8.4	-1.5	-0.3	2.1	3.3	4.7	6.2
Median	18.6	-10.6	-3.8	-1.8	1.0	2.4	4.0	5.6
75th Percentile	17.3	-12.0	-5.4	-2.9	0.0	1.6	3.2	5.0
95th Percentile	14.4	-16.2	-10.3	-6.0	-2.4	-0.1	2.2	3.8
# of Portfolios	379	379	378	376	363	341	313	238
● International Equity	16.8 (81)	-8.8 (28)	-1.6 (28)	0.0 (20)	2.1 (25)	3.3 (25)	4.5 (28)	5.4 (56)
▲ Blended International Equity Index	15.9 (89)	-9.8 (37)	-3.1 (42)	-1.4 (42)	1.6 (35)	2.9 (31)	4.4 (34)	5.6 (52)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	6,484	6,439
Weighted Avg. Market Cap. (\$B)	62.6	69.5
Median Market Cap. (\$B)	2.2	1.5
Price To Earnings	17.7	16.2
Price To Book	2.9	2.7
Price To Sales	1.3	1.3
Return on Equity (%)	13.1	13.5
Yield (%)	2.5	2.8
Beta (holdings; global)	1.0	0.9

Top Holdings

SHOPIFY INC	1.8%
ALIBABA GROUP HOLDING LTD	1.6%
UNITED OVERSEAS BANK LTD	1.1%
ASML HOLDING NV	1.1%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.1%
SANOFI	1.0%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	0.9%
COMPAGNIE DE SAINT GOBAIN SA	0.9%
TENCENT HOLDINGS LTD	0.9%
GLAXOSMITHKLINE PLC	0.9%

Best Performers

	Return %
ONENESS BIOTECH CO LTD	927.0%
DOOSAN FUEL CELL CO LTD	528.2%
GMO CLOUD KK	500.0%
SUPERMAX CORP BERHAD	377.2%
ZIP CO LTD	271.2%
SASOL LTD	268.0%
AFTERPAY LTD	264.9%
VODAFONE IDEA LIMITED	242.6%
ALTEOGEN INC	228.9%
ANGES MG (J:ANGE)	223.7%

Worst Performers

	Return %
WIRECARD AG	-93.6%
NOVA GROUP HOLDINGS LTD	-92.8%
CHINA METAL RESOURCES UTILIZATION LTD	-82.7%
PT NUSANTARA PROPERTI INTERNATIONAL TBK	-72.6%
NORWEGIAN AIR SHUTTLE (N:NAS)	-67.3%
GENFIT (F:GNFT)	-61.8%
PT PELAYARAN TAMARIN SAMUDRA TBK	-59.4%
AVIANCA HOLDINGS SA	-56.6%
NORSTAR HOLDINGS INC	-55.5%
BUMRUNGRAD HOSPITAL PUBLIC CO LTD	-50.1%

International Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	-0.1%	0.1%	-0.1%	8.4%	12.4%	3.6%	4.5%			
Materials	-0.6%	-0.3%	-0.2%	-0.1%	21.9%	27.3%	4.5%	7.3%			
Industrials	0.4%	0.3%	0.0%	0.1%	20.9%	18.4%	13.3%	12.4%			
Consumer Discretionary	0.6%	0.5%	0.0%	0.0%	24.7%	20.5%	12.4%	11.7%			
Consumer Staples	-0.1%	-0.1%	0.0%	-0.1%	9.6%	10.9%	10.1%	10.1%			
Health Care	-0.1%	-0.1%	0.0%	0.0%	16.4%	17.3%	10.9%	10.3%			
Financials	-0.2%	-0.3%	0.2%	-0.1%	10.1%	12.2%	14.7%	18.2%			
Information Technology	0.4%	0.4%	0.0%	-0.1%	29.7%	26.0%	10.3%	10.4%			
Communication Services	0.3%	0.2%	0.0%	0.0%	21.7%	18.5%	7.6%	7.1%			
Utilities	0.1%	0.1%	0.0%	0.0%	14.1%	12.7%	3.1%	3.7%			
Real Estate	0.2%	0.0%	0.2%	-0.1%	10.2%	9.4%	1.7%	4.2%			
Cash	-1.2%	0.0%	-1.2%	0.0%	0.0%	--	7.7%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	-4.9%	17.2%	0.0%	0.0%			
Portfolio	-0.5%	=	0.7%	+	-0.9%	+	-0.3%	16.7%	17.2%	100.0%	100.0%

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Europe									
Austria	20.9%	14.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	13.5%	14.1%	0.3%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	22.7%	23.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	18.0%	19.9%	0.9%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Finland	21.4%	22.4%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	19.1%	16.8%	5.7%	6.6%	0.1%	0.0%	0.0%	0.0%	0.1%
Germany	34.2%	27.8%	6.7%	5.4%	0.3%	0.1%	0.0%	0.1%	0.6%
Greece*	20.0%	16.6%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	11.6%	14.6%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	20.1%	20.4%	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	14.4%	17.3%	1.6%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Luxembourg	9.2%	17.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	22.2%	25.8%	2.7%	2.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Norway	15.4%	21.3%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	29.5%	23.0%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	-1.2%	13.5%	0.5%	0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Russia*	22.0%	19.3%	0.8%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%
Spain	5.3%	10.5%	1.8%	1.7%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Sweden	22.3%	23.5%	3.1%	2.2%	0.0%	0.0%	0.1%	0.0%	0.0%
Switzerland	12.2%	12.3%	5.2%	6.8%	0.0%	0.1%	0.0%	0.0%	0.0%
United Kingdom	14.2%	10.0%	11.2%	9.9%	0.4%	-0.1%	0.0%	0.1%	0.4%

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

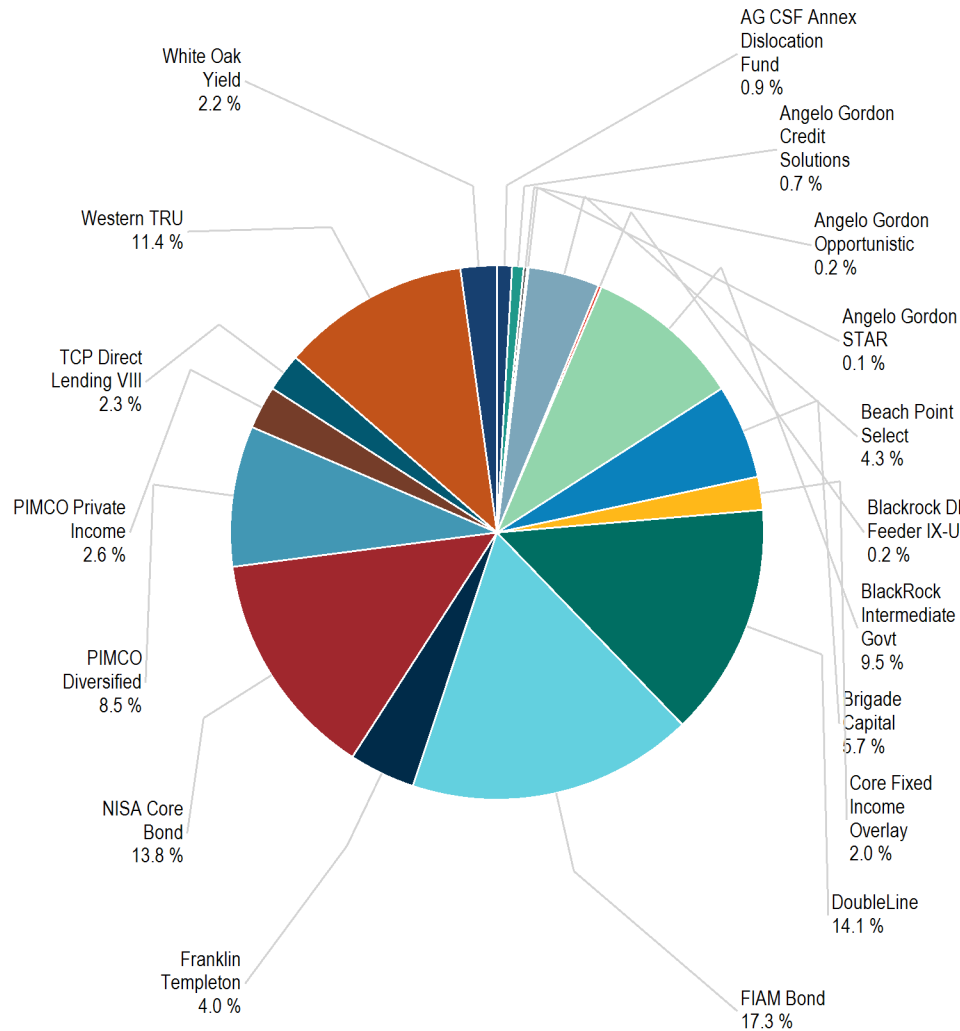
	Returns and Weights				Attribution Effects				Total Effects	
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect		
AsiaPacific										
Australia	27.3%	31.8%	2.9%	4.0%	-0.1%	0.0%	-0.2%	0.0%	-0.3%	
China*	15.0%	14.7%	4.4%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Hong Kong	8.4%	9.5%	4.7%	2.4%	0.0%	-0.1%	0.0%	0.0%	-0.2%	
India*	22.5%	22.3%	2.5%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Indonesia*	26.8%	26.2%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
Japan	11.6%	11.8%	20.1%	18.4%	0.0%	-0.1%	0.0%	0.0%	-0.1%	
Korea*	26.5%	20.5%	1.7%	3.3%	0.2%	-0.1%	0.0%	-0.1%	0.0%	
Malaysia*	14.1%	16.4%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
New Zealand	44.2%	27.3%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	
Pakistan*	19.7%	15.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Philippines*	20.2%	19.7%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Singapore	5.1%	12.0%	2.3%	0.9%	-0.1%	-0.1%	0.0%	-0.1%	-0.2%	
Taiwan*	19.6%	23.4%	2.2%	3.6%	-0.1%	-0.1%	-0.1%	0.0%	-0.2%	
Thailand*	14.6%	27.6%	0.3%	0.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%	
Americas										
Argentina*	18.1%	35.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Brazil*	8.6%	23.8%	1.2%	1.4%	-0.2%	0.0%	0.0%	0.0%	-0.2%	
Canada	95.5%	23.3%	1.2%	6.3%	4.8%	-0.1%	-0.3%	-3.9%	0.5%	
Chile*	20.3%	18.6%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Colombia*	11.2%	10.3%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Mexico*	10.1%	11.8%	0.8%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
Peru*	5.0%	9.9%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
United States	48.9%	21.6%	1.3%	0.0%	0.0%	0.1%	0.0%	0.3%	0.4%	

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
Other									
Egypt*	10.4%	10.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Israel	9.9%	15.1%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait**	17.3%	15.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	10.9%	8.8%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	17.5%	17.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Saudi Arabia*	--	14.2%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
South Africa*	25.9%	27.6%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Turkey*	27.9%	23.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	18.3%	17.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Totals									
Americas	40.0%	22.4%	5.2%	8.6%	1.8%	-0.2%	-0.3%	-0.7%	0.7%
Europe	18.9%	16.8%	42.5%	41.9%	0.9%	0.0%	0.0%	0.0%	0.9%
Asia/Pacific	14.5%	16.6%	42.8%	46.8%	-0.7%	0.0%	-0.3%	0.1%	-0.9%
Other	21.4%	19.0%	1.8%	2.8%	0.1%	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	--	7.7%	0.0%	0.0%	-1.2%	0.0%	0.0%	-1.2%
Total	16.7%	17.2%	100.0%	100.0%	2.0%	-1.3%	-0.6%	-0.7%	-0.5%
Totals									
Developed	18.0%	16.6%	74.2%	73.4%	1.5%	0.0%	-0.5%	0.0%	1.0%
Emerging*	18.6%	18.9%	18.0%	26.6%	-0.1%	-0.2%	-0.1%	0.0%	-0.4%
Frontier**	17.3%	--	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	--	7.7%	0.0%	0.0%	-1.2%	0.0%	0.0%	-1.2%

Fixed Income Manager Allocation Analysis

Period Ending: June 30, 2020



	Actual \$	Actual %	Manager Contribution to Excess Return %
AG CSF Annex Dislocation Fund	\$13,250,000	0.9%	0.0%
Angelo Gordon Credit Solutions	\$10,962,280	0.7%	-0.1%
Angelo Gordon Opportunistic	\$3,290,565	0.2%	0.0%
Angelo Gordon STAR	\$2,177,589	0.1%	0.0%
Beach Point Select	\$62,964,674	4.3%	-0.1%
Blackrock DL Feeder IX-U	\$3,495,374	0.2%	0.0%
BlackRock Intermediate Govt	\$140,187,907	9.5%	0.0%
Brigade Capital	\$84,304,302	5.7%	0.0%
DoubleLine	\$207,139,743	14.1%	0.1%
FIAM Bond	\$254,181,628	17.3%	0.6%
Franklin Templeton	\$58,546,690	4.0%	-0.2%
NISA Core Bond	\$202,783,331	13.8%	0.0%
PIMCO Diversified	\$125,154,334	8.5%	-0.2%
PIMCO Private Income	\$37,495,209	2.6%	-0.2%
TCP Direct Lending VIII	\$34,077,448	2.3%	0.3%
Western TRU	\$167,628,873	11.4%	1.0%
White Oak Yield	\$31,881,588	2.2%	0.1%
Core Fixed Income Overlay	\$29,206,922	2.0%	0.0%
Actual vs. Policy Weight Difference			-2.0%
Total	\$1,468,728,457	100.0%	-0.5%

Fixed Income
Risk vs. Return (3 Years)

Period Ending: June 30, 2020

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	4.0%	3.3%	0.7	-0.5	1.6%
Blended Fixed Income Index	4.9%	3.8%	0.9	--	0.0%
Core Fixed	4.7%	2.7%	1.1	-0.4	1.5%
BBgBarc US Aggregate TR	5.3%	3.3%	1.1	--	0.0%
BlackRock Intermediate Govt	4.3%	2.5%	1.0	3.1	0.1%
BBgBarc US Govt Int TR	4.1%	2.6%	0.9	--	0.0%
FIAM Bond	5.9%	3.7%	1.1	0.4	1.5%
BBgBarc US Aggregate TR	5.3%	3.3%	1.1	--	0.0%
Western TRU	2.9%	6.5%	0.2	0.1	6.5%
3-Month Libor Total Return USD	2.0%	0.2%	1.7	--	0.0%
Opportunistic Credit	2.8%	6.4%	0.2	-0.4	3.7%
BBgBarc BA Intermediate HY	4.3%	7.5%	0.4	--	0.0%
Angelo Gordon Opportunistic	6.2%	17.5%	0.3	0.0	17.4%
BBgBarc US Aggregate TR	5.3%	3.3%	1.1	--	0.0%
Angelo Gordon STAR	14.4%	12.1%	1.1	0.8	12.1%
BBgBarc US Aggregate TR	5.3%	3.3%	1.1	--	0.0%
Beach Point Select	3.9%	8.2%	0.3	-0.1	3.9%
BBgBarc BA Intermediate HY	4.3%	7.5%	0.4	--	0.0%
Brigade Capital	-0.3%	11.5%	-0.2	-0.7	6.4%
BBgBarc BA Intermediate HY	4.3%	7.5%	0.4	--	0.0%
Franklin Templeton	-1.6%	7.0%	-0.5	-0.7	7.7%
BBgBarc Multiverse TR	3.7%	4.0%	0.5	--	0.0%

Statistics Summary

3 Years

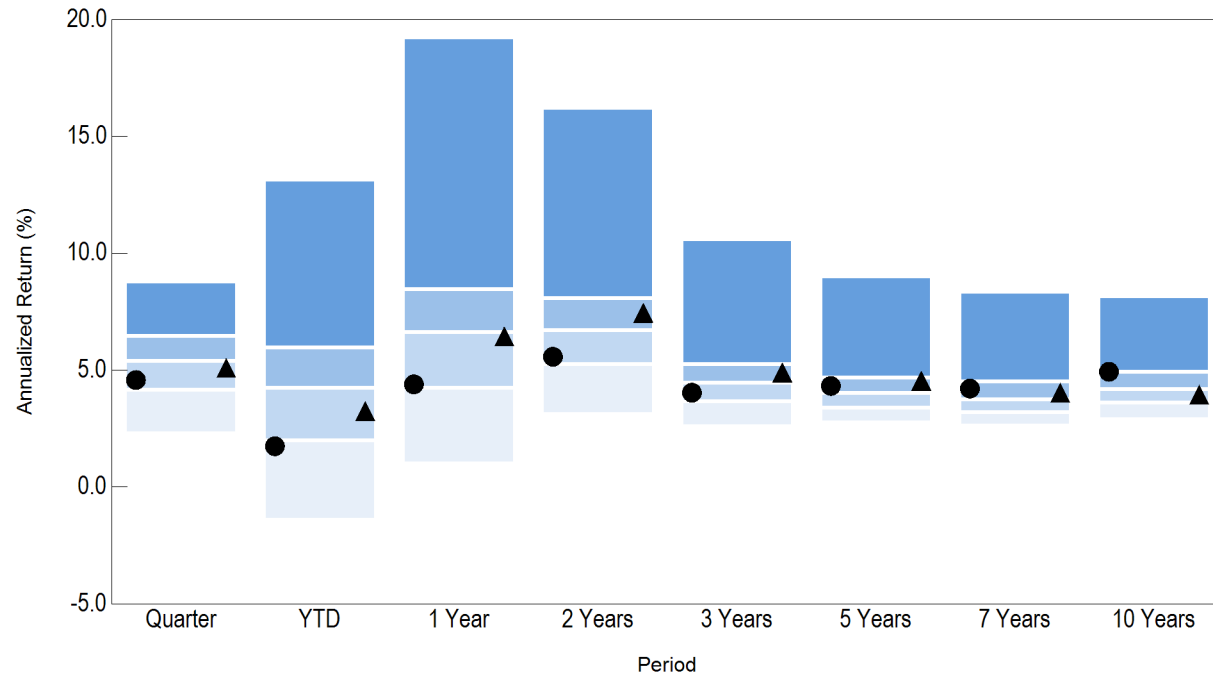
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Private Credit	5.2%	3.3%	1.1	0.4	4.1%
Cliffwater Direct Lending Index	3.5%	5.5%	0.3	--	0.0%
TCP Direct Lending VIII	6.4%	3.2%	1.5	0.5	5.7%
Cliffwater Direct Lending Index	3.5%	5.5%	0.3	--	0.0%
White Oak Yield	5.0%	3.5%	1.0	0.3	4.3%
Cliffwater Direct Lending Index	3.5%	5.5%	0.3	--	0.0%

Statistics Summary

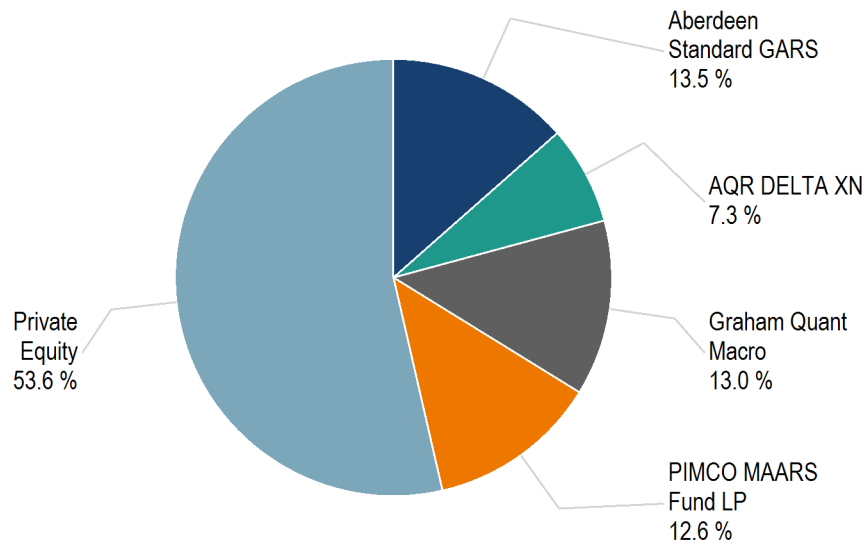
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	4.3%	3.2%	1.0	-0.1	2.0%
Blended Fixed Income Index	4.5%	3.5%	1.0	--	0.0%
Core Fixed	4.4%	2.7%	1.2	0.0	1.8%
BBgBarc US Aggregate TR	4.3%	3.1%	1.0	--	0.0%
FIAM Bond	4.9%	3.4%	1.1	0.5	1.4%
BBgBarc US Aggregate TR	4.3%	3.1%	1.0	--	0.0%
Opportunistic Credit	4.6%	5.7%	0.6	-0.1	3.5%
BBgBarc BA Intermediate HY	5.1%	6.5%	0.6	--	0.0%
Angelo Gordon Opportunistic	6.8%	13.9%	0.4	0.2	14.0%
BBgBarc US Aggregate TR	4.3%	3.1%	1.0	--	0.0%
Angelo Gordon STAR	11.9%	10.1%	1.1	0.7	10.3%
BBgBarc US Aggregate TR	4.3%	3.1%	1.0	--	0.0%
Beach Point Select	5.9%	7.0%	0.7	0.2	3.5%
BBgBarc BA Intermediate HY	5.1%	6.5%	0.6	--	0.0%
Brigade Capital	2.5%	10.3%	0.1	-0.4	6.0%
BBgBarc BA Intermediate HY	5.1%	6.5%	0.6	--	0.0%
Franklin Templeton	0.4%	7.1%	-0.1	-0.4	8.5%
BBgBarc Multiverse TR	3.6%	4.6%	0.5	--	0.0%

InvMetrics All DB Total Fix Inc Net Return Comparison



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	8.8	13.1	19.2	16.2	10.6	9.0	8.4	8.2
25th Percentile	6.5	6.0	8.5	8.1	5.3	4.7	4.5	5.0
Median	5.4	4.3	6.6	6.7	4.5	4.1	3.8	4.2
75th Percentile	4.2	2.0	4.3	5.3	3.7	3.4	3.2	3.6
95th Percentile	2.3	-1.4	1.0	3.1	2.6	2.8	2.6	2.9
# of Portfolios	335	335	335	331	320	302	284	219
● Fixed Income	4.6 (69)	1.7 (80)	4.4 (74)	5.6 (72)	4.0 (68)	4.3 (36)	4.2 (33)	4.9 (26)
▲ Blended Fixed Income Index	5.1 (55)	3.2 (62)	6.4 (53)	7.5 (32)	4.9 (36)	4.5 (31)	4.0 (37)	4.0 (61)



	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR DELTA XN	\$40,903,083	7.3%	-1.3%
Aberdeen Standard GARS	\$75,460,730	13.5%	0.2%
Graham Quant Macro	\$72,465,450	13.0%	0.2%
PIMCO MAARS Fund LP	\$70,268,496	12.6%	0.0%
Private Equity	\$298,746,088	53.6%	9.8%
Actual vs. Policy Weight Difference			-0.6%
Total	\$557,843,847	100.0%	8.3%

Statistics Summary

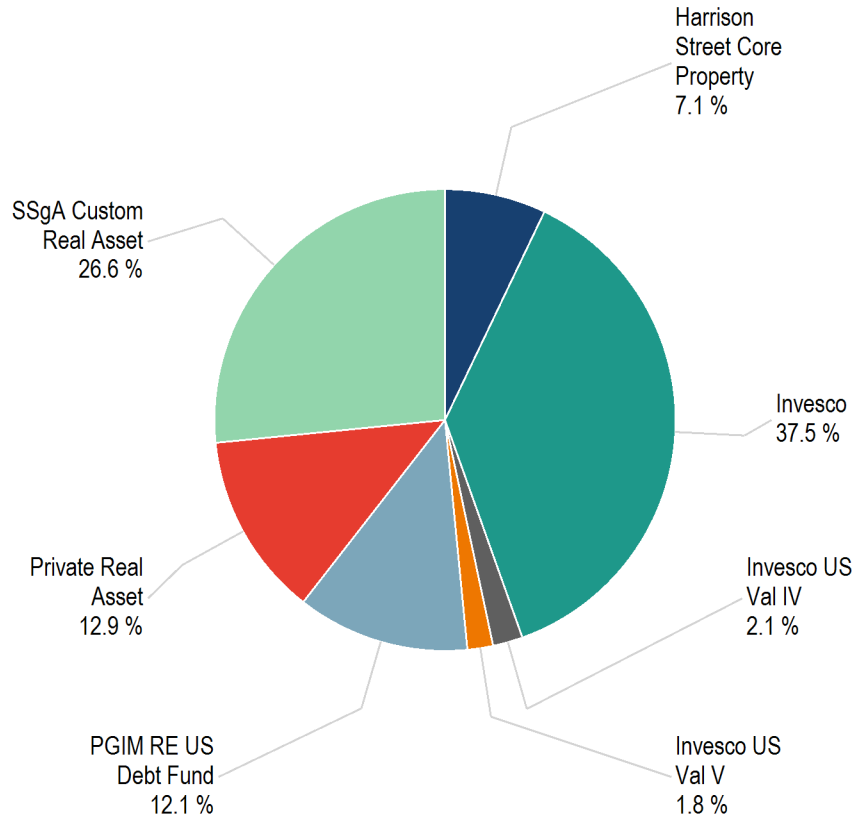
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	3.3%	7.3%	0.2	-0.3	9.5%
Blended Alternatives Index	6.4%	8.0%	0.6	--	0.0%
Private Equity	13.7%	11.7%	1.0	0.5	16.6%
Blended Private Equity Index	6.0%	15.9%	0.3	--	0.0%
Hedge Fund/Absolute Return	-7.5%	6.7%	-1.4	-2.0	6.7%
Libor 1 month +4%	5.8%	0.2%	21.5	--	0.0%
AQR DELTA XN	-16.7%	11.0%	-1.7	-2.0	11.0%
Libor 1 month +4%	5.8%	0.2%	21.5	--	0.0%
Aberdeen Standard GARS	1.7%	4.5%	0.0	-0.9	4.6%
Libor 1 month +4%	5.8%	0.2%	21.5	--	0.0%

Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	5.1%	6.7%	0.6	-0.2	8.5%
Blended Alternatives Index	6.5%	7.2%	0.7	--	0.0%
Private Equity	14.4%	10.8%	1.2	0.4	15.3%
Blended Private Equity Index	8.8%	14.0%	0.5	--	0.0%
Hedge Fund/Absolute Return	-2.4%	6.0%	-0.6	-1.3	6.1%
Libor 1 month +4%	5.3%	0.2%	17.5	--	0.0%
AQR DELTA XN	-8.2%	9.6%	-1.0	-1.4	9.6%
Libor 1 month +4%	5.3%	0.2%	17.5	--	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
Harrison Street Core Property	\$50,001,859	7.1%	0.1%
Invesco	\$263,266,557	37.5%	-1.1%
Invesco US Val IV	\$14,581,505	2.1%	-0.1%
Invesco US Val V	\$12,756,030	1.8%	0.0%
PGIM RE US Debt Fund	\$85,089,892	12.1%	0.3%
Private Real Asset	\$90,431,259	12.9%	3.0%
SSgA Custom Real Asset	\$186,589,155	26.6%	-0.3%
Actual vs. Policy Weight Difference			-1.4%
Total	\$702,716,258	100.0%	0.5%

Statistics Summary

3 Years

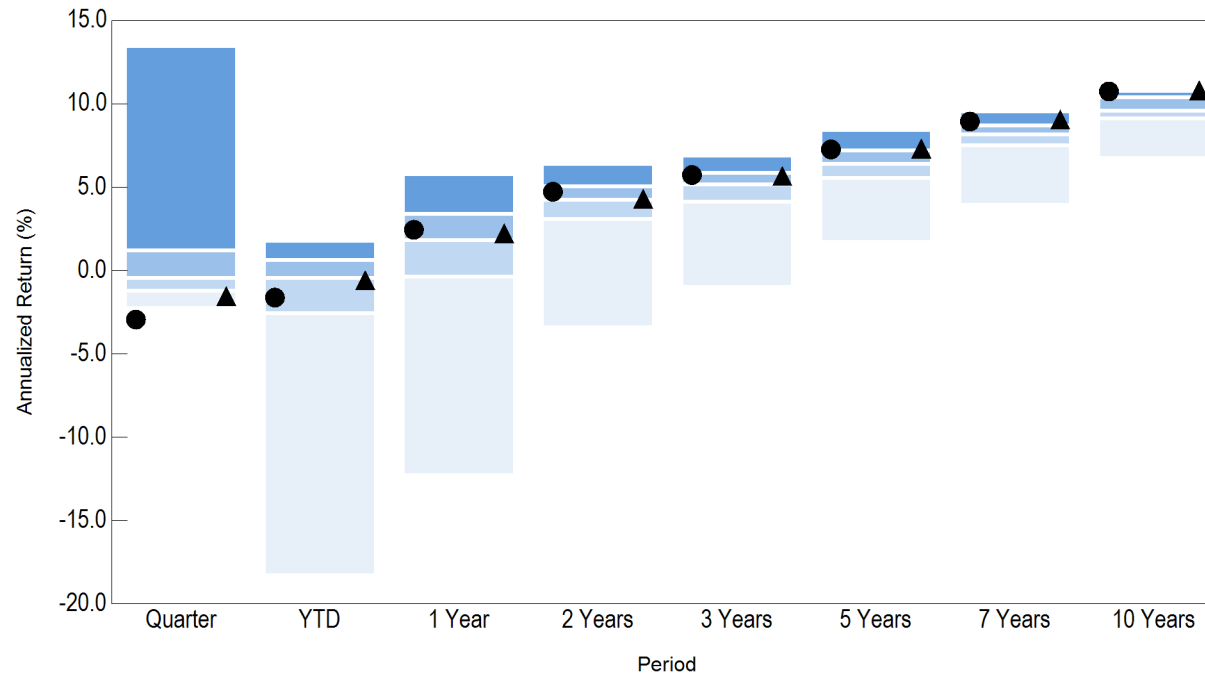
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	-0.7%	6.8%	-0.4	-1.0	2.4%
Blended Inflation Hedge Index	1.6%	5.7%	0.0	--	0.0%
Real Estate	5.7%	3.6%	1.1	0.1	1.1%
NCREIF ODCE	5.7%	3.0%	1.3	--	0.0%
Invesco	5.2%	4.2%	0.8	-0.3	1.9%
NCREIF ODCE	5.7%	3.0%	1.3	--	0.0%
Invesco US Val IV	9.3%	6.3%	1.2	0.9	4.0%
NCREIF ODCE	5.7%	3.0%	1.3	--	0.0%
Private Real Asset	-6.7%	9.0%	-0.9	0.0	18.0%
Blended Private Real Asset Index	-6.2%	17.4%	-0.5	--	0.0%
Public Real Assets	-6.6%	19.0%	-0.4	-1.0	4.4%
Blended Public Real Asset Index	-2.0%	15.7%	-0.2	--	0.0%
SSgA Custom Real Asset	-2.0%	15.5%	-0.2	0.0	0.8%
SSgA Custom Real Asset Index	-2.0%	15.7%	-0.2	--	0.0%

Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	7.3%	3.8%	1.6	0.0	35
NCREIF ODCE	7.3%	3.6%	1.7	--	1
Invesco	6.8%	4.2%	1.4	-0.3	--
NCREIF ODCE	7.3%	3.6%	1.7	--	--
Private Real Asset	2.9%	21.9%	0.1	0.2	--
Blended Private Real Asset Index	-1.6%	13.6%	-0.2	--	--

InvMetrics All DB Real Estate Pub Net Return Comparison



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	13.4	1.8	5.7	6.4	6.9	8.4	9.5	10.8
25th Percentile	1.2	0.7	3.4	5.1	5.9	7.2	8.7	10.4
Median	-0.4	-0.4	1.8	4.2	5.2	6.4	8.2	9.6
75th Percentile	-1.2	-2.5	-0.3	3.1	4.2	5.6	7.5	9.1
95th Percentile	-2.2	-18.3	-12.3	-3.4	-1.0	1.7	4.0	6.8
# of Portfolios	96	96	96	92	88	87	80	64
● Real Estate	-2.9 (99)	-1.6 (74)	2.4 (41)	4.7 (34)	5.7 (30)	7.3 (24)	8.9 (17)	10.7 (6)
▲ NCREIF ODCE	-1.6 (85)	-0.6 (54)	2.2 (47)	4.3 (46)	5.7 (32)	7.3 (21)	9.1 (14)	10.8 (5)

Acadian Asset Management – Acadian U.S. Managed Volatility

Acadian attempts to take advantage of the mispricing of risk by building low-risk equity portfolios that hold predominantly low-risk stocks, and then also adding information on the correlation structure of equities to help further reduce risk through diversification.

Angelo, Gordon & Co. – AG STAR Fund

The STAR Fund will focus on CMBS and non-Agency RMBS priced between 25-75% of par, which AG believes are even today mispriced due to their complex nature and a dearth of natural buyers capable of accurately valuing these assets. In addition, AG will target securities that are well-positioned to benefit from home and commercial property price stabilization and recovery, and/or borrower credit quality improvement. In this regard the STAR Fund will be more aggressive than the PPIP Fund since it will target securities that are more geared to a recovery of the commercial and residential real estate markets. The Fund will utilize a moderate amount of leverage (1x to 1.5x) and is targeting a base-case 15% net IRR with a downside return in the mid/high single digits and an upside projection of 25%+ returns.

Angelo, Gordon & Co. – AG Opportunistic Whole Loan Fund

As bank balance sheets have strengthened since the crisis, Angelo Gordon expects approximately \$40 billion of re-performing loans and non-performing loans will trade hands each year in the near term. By acquiring these loans at a discounted price and replacing original servicers with better-focused special servicers, Angelo Gordon believes it can improve operational efficiency and generate attractive returns. To take advantage of this opportunity, Angelo Gordon established this Opportunistic Whole Loan Fund to make investments primarily in a portfolio of non-performing loans and re-performing, but will also include investments in new residential mortgage loans and excess mortgage servicing rights. Opportunistic investments in commercial mortgage loans and other mortgage related investments may also be included in the Fund's portfolio. Angelo Gordon has been an active participant in the residential and consumer debt market since 2008. The Partnership's investment approach to residential mortgage loans and securities is guided by an analytically based investment process anchored by distressed asset valuation and cash flow modeling. Angelo Gordon's analysis of re-performing and non-performing loans begins with its loan due diligence process. This process will include a review of substantially all of the properties in the pool, as well as a review of the loan files backing the loan pool. In addition, a macro overlay is embedded in the investment process which incorporates general economic trends, along with specific views on interest rates, unemployment, collateral appreciation or depreciation, governmental intervention in creditors' rights and liquidation timelines.

Angelo, Gordon & Co. – Credit Solutions

This fund is Angelo, Gordon's re-entry into the special situations private fund market. The fund expects to hold concentrated positions in the US and within Europe in both public and private markets.

Angelo, Gordon & Co. – CSF (Annex) Dislocation

Angelo Gordon completed syndication of its AG Credit Solutions Fund (“CSF”) in December of 2019. CSF was designed to capture opportunities in a late-cycle credit market and the initial stages of a market dislocation. Angelo Gordon designed and documented CSF to allow the placement of an annex fund in times of dislocation and credit deterioration. Given the price movements in the credit markets in March of 2020, driven by the lack of liquidity, financing needs of investment grade and non-investment grade borrowers, and anticipated impacts (restructurings, rescue financings, liquidations, etc.), Angelo Gordon came to market with the \$1.8 billion AG CSF Annex Dislocation Fund (“ADF”). ADF’s investment aim is to target senior securities of world-class businesses with irreplaceable assets and strong cash flow profiles which, because of market stress, can be purchased at a material discount to what we believe is a company’s long-term intrinsic value. ADF will address corporate credit-based opportunities created in three main areas: 1) trading-based price dislocations that reduce creation multiples (price through the debt that must be repaid before value accrues to other stakeholders) while generating high current income; 2) opportunities in issuers tied to industries directly impacted by COVID-19 where the market’s perception of the impact differs from the actual impact; and 3) corporate debt issuers that will be materially impacted by the crisis and will need to restructure, but whose creation value is materially lower than the issuer’s intrinsic value.

AQR Capital Management - AQR Delta

The AQR DELTA Fund aims to deliver efficient exposure to a well-diversified portfolio of hedge fund strategies, including Convertible Arbitrage, Event Driven, Fixed Income Relative Value, Equity Market Neutral, Long/Short Equity, Dedicated Short Bias, Global Macro, Managed Futures, and Emerging Markets. The Delta Fund’s approach is to capture and deliver the “hedge fund risk premiums” that explain much of the returns of each of these strategies by building bottom-up positions in each strategy. AQR’s research has demonstrated that many hedge funds use similar strategies to generate returns. These strategies are often well-known, widely understood and share common exposures. AQR’s experience and research suggests much of the insight underlying these strategies - as well as a meaningful portion of their returns - can be captured using a dynamic, disciplined investment approach. Just as the equity risk premium can explain a large portion of the returns from equity investing, hedge fund risk premiums can explain the returns from hedge fund investing. Importantly, while compensation for equity risk is dependent on economic growth, hedge fund risk premiums are largely unrelated to economic activity, and thus provide attractive diversification properties.

Baillie Gifford – ACWI ex US Focus Equities

ACWI ex US Focus is a fundamental growth strategy. Research is organized primarily by regional teams, with each member of the ACWI ex US Focus Portfolio Construction Group representing a regional team. Four global sector groups also contribute research. Baillie Gifford conducts approximately 2000 company meetings annually both in Edinburgh and onsite. Companies are evaluated on their growth opportunity relative to the average company, their ability to execute on that opportunity, and the degree to which probability of future success is already valued by the market. Baillie Gifford’s basic philosophy is that share prices ultimately follow earnings. They believe that the stock market has a recurring tendency to under-appreciate the value of long-term compound growth. The process seeks to add value through use of proprietary fundamental research to identify companies exhibiting some combination of sustained above average growth, and attractive financial characteristics. The portfolio generally holds 80-120 stocks, with country and sector weights +/-6% relative to the index and industry weights +/- 5% relative to the index.

Beach Point Capital Management, L.P. - Beach Point Select Fund

Beach Point Select Fund is a commingled fund vehicle within the firm's Opportunistic Credit strategy. This fund focuses on off-the-run, complex, and less-liquid securities. It is a best ideas portfolio of distressed debt, special situations, private/direct loans, catalyst-driven high yield bonds and bank loans, and credit-informed equities with a North American and European focus. The Select Fund differs from other funds and accounts in the Opportunistic Credit strategy by pursuing a more concentrated portfolio and emphasizing a higher percentage of less-liquid/private investments. Beach Point invests up and down the entire capital structure and it constructs portfolios with a bottom-up, research-driven approach that also takes into account top-down macro considerations. Its investment process includes idea generation, detailed credit analysis, relative value decision making and investment selection, portfolio construction and on-going monitoring. The ultimate goal of its investment process is to produce a well-diversified investment portfolio with limited downside risk and substantial upside potential.

BlackRock – Intermediate Government Index

The Intermediate Government Index Fund seeks to track the results of an index composed of U.S. dollar-denominated government, government related, and investment grade U.S. corporate bonds with maturities between 1 and 10 years.

BlackRock – MSCI ACWI ex US IMI Index

The ACWI ex US IMI Index Fund seeks to replicate the return of the MSCI ACWI ex US IMI Index. This index represents the developed equity markets outside of North America, including small cap equity.

BlackRock – Russell 1000 Index

The Russell 1000 Index Fund tracks large U.S. companies and achieve broad diversification with low costs by fully replicating the Russell 1000 Index.

BlackRock – Direct Lending Fund

Upon completion of the TCP acquisition, the former TCP team is raising a direct lending portfolio. The fund will invest in privately originated, performing senior secured debt primarily in North American based companies with an average EV of \$750 million.

Brigade – Opportunistic Credit

Opportunistic Credit is a fundamental, bottom-up strategy focused on high yield corporate bonds and bank loans with tactical allocations to structured securities, convertibles and other sectors of the bond markets as they become attractive on a relative value basis. While performing credits represent the majority, Brigade will invest up to 35% of the portfolio in distressed securities and restructuring situations if these types of opportunities are attractive on a risk-adjusted basis and the timing is right with respect to the credit cycle. The portfolio is comprised of mostly North American issuers, but they are not restricted geographically and expect to have a moderate allocation to Europe over time. Although the portfolio is generally long-only, Brigade has the ability to implement a limited amount of tactical macro hedges.

DE Shaw – DE Shaw US Broad Market Core Alpha Extension Fund

The D. E. Shaw group believes that there exist some market inefficiencies that may be identified through quantitative analysis, advanced technology, and the insight of practitioners. Identifying these inefficiencies involves a process of hypothesis formulation, testing, and validation. Importantly, to avoid data-mining, the hypothesis formulation precedes the analysis of the historical data. D.E. Shaw's Structured Equity strategies rely largely on quantitative and computational investment techniques developed by the D. E. Shaw over the last 19 years in the course of research conducted for purposes of managing the firm's hedge funds. In addition to its beta one strategies, D.E. Shaw manages substantial assets in its hedge fund strategies. D.E. Shaw's investment process involves a suite of quantitative models, each designed to capitalize on a distinct and uncorrelated set of market inefficiencies. Some of these models are technical in nature and involve price and volume inputs. Other models rely on fundamental data, such as figures gleaned from corporate balance sheets or income statements. Still others, again quantitative, anticipate or react to a particular corporate event or set of events. These models typically operate with forecast horizons of a few weeks to many months. The ability to trade on shorter-term signals distinguishes D.E. Shaw from many of its long only and 130/30 peers. Portfolio construction involves the use of a proprietary optimizer which runs dynamically throughout the trading day. The portfolio is broadly diversified with several hundred long and short positions. Over- and under-weighting of sectors and industries relative to the benchmark will be quite modest, with the intention that most of the alpha be generated by security selection. The US Broad Market Core Alpha Extension Fund is a 130/30 strategy which maintains a beta that is approximately neutral to the Russell 1000 Index.

DoubleLine – Securitized Income

The DoubleLine Securitized Income strategy is an actively managed, liquid, long only, intermediate-term fixed income product. The primary objective of the strategy is to seek and maximize current income and total return by utilizing a combination of Agency MBS and structured credit. The DoubleLine Structured Products team aims to offer clients investment grade exposure to both interest rate duration and credit spread to provide a more attractive total return profile compared to the benchmark in its Securitized Income portfolios.

Franklin Templeton Investments – Global Fixed Income

Franklin Templeton manages the global bond mandate in an unconstrained fashion using a top-down, fundamental framework. In the short term and on a country-by-country basis there are often inefficiencies in global bond and currency markets, however, over the longer term the market will generally price to fundamentals. Thus, FT focuses on fundamental research to identify long-term opportunities and uses short-term market inefficiencies to build positions in such investments. The investment and portfolio construction process begin with the determination of the Fund's or institutional client's investment objectives, resulting in a set of risk-return parameters and exposure limits within which the portfolio is managed. Next the firm's global economic outlook for the industrialized countries is developed, with a focus on interest rate and exchange rate forecasts. The portfolio's interest rate outlook is a function of global general equilibrium macroeconomic analysis as well as country-specific research. Macroeconomic conditions in the G-3 economies are analyzed first, primarily with respect to how current and projected growth and inflation dynamics are expected to influence monetary policy. This analysis is then extended out to the rest of the industrialized countries (G-13) as well as emerging markets, which results in broad targets for cash, duration, currencies and the developed/emerging market mix. Using the firm's interest rate and exchange rate outlook, probability-weighted horizon returns for bonds of various countries are then calculated. This analysis is used to establish specific country weights and duration targets based on risk-adjusted expected total return measured in the portfolio's base currency. Analysis of emerging markets includes sovereign credit analysis along with greater emphasis on capital flows, inter-market dynamics and trends in the level of risk aversion in the market.

Graham – Quant Macro Fund

Graham Quant Macro ("GQM") is a directional, long and short strategy that utilizes fundamental and price-based indicators to establish return forecasts across global interest rates, foreign exchange, stock indices and commodities. The strategy incorporates a variety of submodels that generate macro fundamental forecasts, assess yield and earnings differentials, compare current valuations relative to historic fair value, and analyze directional price trends across markets. Quantitative risk management and portfolio construction techniques are used to diversify risk across the portfolio and enhance risk-adjusted returns. Historically, the average holding period has been approximately eight to ten weeks, although the sub-models will make daily adjustments to positions. The strategy is designed to have low correlation to traditional markets and other alternative strategies and has the potential to provide significant portfolio diversification benefits.

Harrison Street Core Property

Based in Chicago, Harrison Street's exclusive focus since inception in 2005 has been investing in non-core property sectors of the real estate market. The Harrison Street Core Fund is an open-end fund that invests primarily in stabilized education, healthcare, and self-storage real estate assets in the United States using modest leverage with an emphasis on generating current income. The focus on these alternative property types is intended to concentrate on areas of the real estate market that are less GDP sensitive with demand drivers that are more demographic driven such as aging populations, education growth and healthcare delivery. Each of these areas tend to be less tied to the business cycle, have fragmented ownership and more operationally intensive. The fund acts as a diversifier within real estate portfolios with sector exposures that are not a typical focus of other core ODCE funds.

INVESCO Realty Advisors – INVESCO Core Equity, LLC

SamCERA is a founding member of INVESCO's open-end Core Equity real estate fund and rolled its separate account properties into the fund. INVESCO Core Equity, LLC (the "Fund") is a perpetual life, open-end vehicle which invests in a diversified portfolio of institutional quality office, retail, industrial and multifamily residential real estate assets. The Fund buys core properties that are located within the United States, typically requiring an investment of \$10 million or more. The portfolio cannot be more than 30% leveraged.

INVESCO Realty Advisors – INVESCO US Val IV

Invesco has provided SamCERA with Core Real Estate exposure since 2004 through the Invesco Core Equity Fund. The Invesco real estate team manages around \$62B in assets with investments and offices around the globe. Invesco Value Fund IV will look to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments will be limited to direct equity interests in office, multi-family, retail and industrial properties across the US. The Fund is expected to be geographically concentrated in U.S. gateway cities and top 25 Metropolitan Statistical Areas (MSA's). Invesco Value Fund IV will provide a nice compliment to the more conservative Invesco Core Fund and offer the potential of enhanced returns to the SamCERA Real Estate portfolio.

INVESCO Realty Advisors – INVESCO US Val V

Invesco has provided SamCERA with Core Real Estate exposure since 2004 through the Invesco Core Equity Fund and through the Invesco US Value IV Fund since December 2015. The Invesco real estate team manages around \$62B in assets with investments and offices around the globe. Invesco Value Fund V will be similar to the Value Add IV and look to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments will be limited to direct equity interests in office, multi-family, retail and industrial properties across the US. The Fund is expected to be geographically concentrated in U.S. gateway cities and top 25 Metropolitan Statistical Areas (MSA's).

Mondrian Investment Partners – International Equity

Mondrian is a value-oriented, defensive manager whose investment philosophy is based on the principle that investments must be evaluated for their fundamental long-term value. The firm's philosophy involves three stated investment objectives: 1) provide a rate of return meaningfully greater than the client's domestic rate of inflation, 2) structure client portfolios that preserve capital during protracted international market declines, and 3) provide portfolio performance that is less volatile than benchmark indices and other international managers. Mondrian applies typical value screening criteria to a universe of 1,500 stocks, from which 500 are selected for more detailed work. Through fundamental research, and the deliberations of the Investment Committee, the universe is further reduced to a list of 150 stocks. The investment team conducts detailed fundamental analysis on the remaining stocks, a process which includes applying the firm's dividend discount model consistently across all markets and industries. Mondrian also uses a purchasing power parity model to give an accurate currency comparison of the value of the stocks under consideration. The firm will only consider buying stocks in countries with good investor protection practices and relatively simple repatriation procedures. A computer-based optimization program is employed in the portfolio construction process. Mondrian's portfolio holds 80-125 issues.

NISA – Core Bond

NISA's investment strategy consists of strategic top-down and tactical bottom-up decisions. The Investment committee meets monthly and sets the strategic parameters including sector selection and yield curve positioning.

PanAgora Asset Management – Defensive U.S. Equity Low Volatility

PanAgora's Defensive Equity strategy seeks to balance risk exposures within the portfolio across multiple dimensions to achieve true diversification. The Defensive Equity approach is used to construct equity portfolios designed to achieve tailored exposure to certain factors, including low volatility, multi-factor (value, quality, and momentum), and high dividend yield while maintaining less risk concentration throughout the portfolio.

Parametric Currency Overlay – Currency Hedge

An overlay hedge placed on half of the notional value of international equities. The portfolio uses Parametric for this overlay.

PIMCO Diversified

PIMCO Diversified Income Fund offers a broad and flexible multi-credit approach in a liquid and cost-effective format. The Diversified Income Fund seeks to produce consistent above benchmark performance using diversified sources of alpha from a universe that includes global credit as well as "non-core" credit sectors (ex., securitized, emerging markets).

PIMCO – MAARS

PIMCO MAARS is an alternative risk premia strategy that looks for risks associated with: (1) Supply and Demand Constraints, (2) Behavioral Biases, and (3) Asymmetric Risks (event risk).

PIMCO Private Income Fund

PIMCO Private Income Fund provides an attractive total return oriented global credit exposure utilizing both top-down sector relative value and bottom up security selection. The strategy invests across private residential, commercial, corporate and specialty finance markets.

PGIM RE Debt

PGIM Real Estate US Debt Fund focuses on a loan origination strategy with a mix of 20% senior long duration loans on stable assets, 60% senior short/medium duration loans on stable and transitional assets, and 20% mezzanine mid/long duration debt.

Pyramis Global Advisors – Broad Market Duration Commingled Pool

Pyramis' Broad Market Duration (BMD) investment strategy seeks to achieve absolute and risk-adjusted returns in excess of the BC U.S. Aggregate Index, focusing its investments in US Treasuries, agencies, investment grade corporate bonds, mortgage-backed and asset-backed securities. The BMD commingled pool can also hold small, opportunistic positions in out-of-benchmark securities, such as inflation-linked bonds. The investable universe includes all US dollar denominated, investment grade debt securities. The BMD investment approach emphasizes issuer and sector valuation and individual security selection. Through the integration of fundamental and quantitative research and trading, the BMD strategy is implemented in a team environment. Risk management technology is utilized to explicitly quantify benchmark exposures on a daily basis, and Pyramis uses the same analytical framework to assess both index and portfolio risk. Tracking error should range between 40 and 60 basis points per annum over the benchmark, and stringent portfolio construction risk control rules are strictly adhered to.

Quantitative Management Associates – QMA Small-Cap Core

Quantitative Management Associates (QMA) utilizes a bottom-up quantitative framework in order provide a diversified exposure to core U.S. small-cap stocks, while attempting to produce consistent outperformance versus the benchmark with moderate tracking error levels. QMA uses an adaptive, systematic investment process to exploit opportunities created by mispriced securities to consistently add value over long time periods. Bottom-up stock selection drives exposure to key sources of alpha (valuation, growth, and quality). The QMA stock selection model adapts to changes in company growth rates and market environments by putting more emphasis on valuation for slowly growing companies, and more emphasis on future growth projections for companies with higher projected growth rates.

Standard Life Aberdeen Global Absolute Return Strategy (GARS)

The Standard Life Aberdeen Global Absolute Return Strategy (GARS) was initially launched in 2005 to help address Standard Life's own pension plan's deficit problem. GARS' primary investment objective is to deliver a positive absolute return over the medium to long term with lower volatility than equities, irrespective of market conditions. It seeks returns through dynamic allocation to investment opportunities in traditional and advanced asset classes, and also separately exploits the team's security selection expertise. In the search for attractive investment positions, the team follows a rigorous research process. This includes a variety of research techniques, including broad global macro-economic, fundamental analysis, quantitative research and valuation modeling. The GARS investment process is designed to capitalize on an array of research and investment techniques and draws together the team's three-year investment insights. The team then rigorously examines and review position proposals to approve a high conviction, short list of positions that work well together. Having a cash benchmark means that GARS has a potentially unrestricted investment universe and all portfolio holdings are at the Portfolio Manager's discretion. The GARS portfolio also routinely uses a variety of conventional derivatives for investment, liquidity, efficiency and hedging purposes. The GARS strategy has experienced significant growth in its asset under management since it becomes available to external investors in 2006.

State Street Global Advisors (SSgA) Custom Real Asset

SSgA Custom Real Asset portfolio uses a portfolio of liquid real assets to proxy private real assets. The portfolio is comprised of equal weightings of the Bloomberg Commodity Index, S&P Global Natural Resources Index, and S&P Global Infrastructure Index. The portfolio is used to fund upcoming private real asset mandates.

Tennenbaum Capital Partners - TCP Direct Lending Fund VIII

TCP Direct Lending Fund VIII is a private investment fund managed by Tennenbaum Capital Partners (“TCP”). The Fund is designed to continue TCP’s successful strategy of investing in privately-originated, performing senior secured debt primarily in North America-based companies with target enterprise values between \$100 million and \$1.5 billion. The Fund will include positions in 1st lien, 2nd lien and unitranche debt, with a preference for floating-rate debt, which TCP believes provides better flexibility to adapt to market conditions. TCP’s direct lending strategy has generated attractive investment opportunities across market cycles, as evidenced by the Firm’s prior direct lending track record. Fund VIII targets an unlevered annual yield of approximately 9-12%, with its return primarily driven by current income.

Western Asset Management – Total Return Unconstrained (TRU)

Western Asset’s Total Return Unconstrained strategy (TRU) seeks to provide bond-like risk and return over the long term but does not have a benchmark. This allows for asset allocation based on value rather than using the construction of a benchmark as baseline positioning. The investment approach is active with very broad latitude on duration (-3 to +8 years) and on asset allocation across all of the eligible sectors in a core plus mandate. The portfolio must have at least 50% of its holdings in investment-grade securities. The flexibility offered by this strategy allows for defensive positioning in rising rate environments and opportunistic deployment of capital when value opportunities arise. It also allows the portfolio managers to emphasize (or deemphasize) either credit or rates when one or the other appears to offer greater (or lesser) value. um non-US exposure.

White Oak - White Oak Yield Spectrum Fund

The White Oak Yield Spectrum Fund’s objective is to earn substantial current income by originating, extending, and/or investing in a diversified portfolio of primarily senior secured corporate credit and debt instruments consisting of term loans, asset-based loans and equipment leases and loans issued by small to middle-market companies located primarily in the United States and Canada. It focuses on providing self-originated deals for predominantly non-sponsored, privately-held borrowers.

Policy Index and Benchmark History

Period Ending: June 30, 2020

Total Plan Policy Index	As of									
	4/1/20	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	4/1/18	10/1/17	2/1/17	1/1/17
10 Year Treasury +2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	4.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
91 Day T-Bills	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	18.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	12.0%	10.0%
BBgBarc BA Intermediate HY	8.0%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	6.0%	6.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%
BBgBarc TIPS	0.0%	1.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Bloomberg Commodity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Citigroup non-US WGBl	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CPI + 5% (RA)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Public Real Asset	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	0.0%	0.0%
Blended Private Real Asset	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	8.0%	7.0%	5.0%
Labor +4% (HF)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	9.0%	9.0%	7.6%	5.7%	3.8%	1.9%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	19.0%
MSCI ACWI ex-US IMI (Net)	9.0%	9.0%	11.4%	13.3%	15.2%	17.1%	19.0%	19.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NCREIF ODCE	9.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	7.0%	7.0%
NCREIF Property	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 2000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	21.0%	21.0%	23.0%	28.0%
Russell 3000 +3% (PE)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	7.0%	7.0%
Russell 3000 +3% 1Q Lag (PE)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	7.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Total Plan Policy Index	As of:													
	10/1/16	9/1/16	1/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	1/1/09	5/1/07	6/1/00	3/1/99	9/1/98	7/1/96
10 Year Treasury +2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	10.0%	10.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
60/40 Russell 3000/BBgBarc US Aggregate (RP)	8.0%	8.0%	8.0%	8.0%	8.0%	6.0%	6.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
91 Day T-Bills	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	10.0%	10.0%	10.0%	10.0%	9.3%	11.0%	11.0%	12.9%	27.0%	27.0%	29.0%	25.0%	21.0%	21.0%
BBgBarc BA Intermediate HY	6.0%	5.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	3.0%	3.0%	3.0%	3.0%	3.8%	4.4%	4.4%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc TIPS	2.0%	2.0%	2.0%	2.0%	2.0%	3.1%	3.3%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Commodity	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Citigroup non-US WGBl	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	9.0%	9.0%
CPI + 5% (RA)	0.0%	2.0%	2.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Public Real Asset	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Private Real Asset	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Labor +4% (HF)	5.0%	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	18.0%	18.0%	18.0%	21.0%	21.0%	15.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	19.0%	20.0%	20.0%	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI (Net)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%
NCREIF ODCE	7.0%	7.0%	7.0%	6.0%	6.0%	5.0%	5.0%	5.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NCREIF Property	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	0.0%	24.0%	24.0%	24.0%	28.0%	28.0%	28.0%	37.0%	37.0%	40.0%	22.0%	20.0%	20.0%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	0.0%
Russell 2000	0.0%	0.0%	4.0%	6.0%	6.0%	7.0%	7.0%	7.0%	9.0%	9.0%	10.0%	15.0%	15.0%	15.0%
Russell 3000	28.0%	28.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% (PE)	7.0%	7.0%	7.0%	7.0%	7.0%	8.0%	8.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% 1Q Lag (PE)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Policy Index and Benchmark History

Period Ending: June 30, 2020

Public Equity Benchmark	As of:																
	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	10/1/17	2/1/17	10/1/16	9/1/16	1/1/16	1/1/14	10/1/10	5/1/07	6/1/00	3/1/99	9/1/98	1/1/96
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.0%	31.3%	23.1%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	22.5%	18.5%	13.9%	9.3%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	47.5%	45.2%	40.4%	41.7%	41.7%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI (Net)	22.5%	27.8%	32.4%	37.0%	41.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.3%	33.3%	33.3%
Russell 1000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	48.0%	52.8%	55.2%	61.5%	35.5%	33.3%	33.3%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	8.4%	0.0%
Russell 2000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	12.0%	13.2%	13.5%	15.4%	24.2%	25.0%	25.0%
Russell 3000	55.0%	53.7%	53.7%	53.7%	53.7%	52.5%	54.8%	59.6%	58.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

US Equity Benchmark	As of:						
	9/1/16	1/1/16	6/1/00	3/1/99	9/1/98	7/1/96	1/1/95
Russell 1000	0.0%	85.7%	80.0%	52.0%	50.0%	50.0%	69.0%
Russell 1000 Value	0.0%	0.0%	0.0%	12.0%	12.5%	0.0%	0.0%
Russell 2000	0.0%	14.3%	20.0%	36.0%	37.5%	37.5%	14.0%
Russell 3000	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S & P 500	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	17.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

International Equity Benchmark	As of:								
	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	10/1/17	1/1/14	6/1/00	1/1/96
MSCI ACWI ex US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	50.0%	40.0%	30.0%	20.0%	10.0%	0.0%	0.0%	100.0%	0.0%
MSCI ACWI ex US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
MSCI ACWI ex US IMI (Net)	50.0%	60.0%	70.0%	80.0%	90.0%	100.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Fixed Income Benchmark	As of:													
	4/1/20	10/1/19	10/1/17	2/1/17	10/1/16	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	6/1/00	3/1/99	7/1/96
BBgBarc Aggregate	69.2%	63.6%	66.7%	57.1%	52.6%	55.5%	50.0%	46.3%	50.0%	50.0%	58.6%	100.0%	83.3%	70.0%
BBgBarc BA Intermediate HY	30.8%	36.4%	33.3%	28.6%	31.6%	27.8%	25.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.3%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	15.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	0.0%	0.0%	0.0%	14.3%	15.8%	16.7%	15.0%	18.8%	20.0%	20.0%	20.5%	0.0%	0.0%	0.0%
BBgBarc TIPS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	10.0%	14.0%	15.0%	13.6%	0.0%	0.0%	0.0%
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	30.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Opportunistic Credit Benchmark	As of:	
	1/1/14	12/1/09
BBgBarc BA Intermediate HY	100.0%	0.0%
BBgBarc Credit BAA	0.0%	100.0%
	100.0%	100.0%

Risk Parity Benchmark	As of:	
	1/1/17	10/1/10
BBgBarc Aggregate	0.0%	40.0%
BBgBarc Global Aggregate	40.0%	0.0%
MSCI World	60.0%	0.0%
Russell 3000	0.0%	60.0%
	100.0%	100.0%

Policy Index and Benchmark History

Period Ending: June 30, 2020

Alternatives Benchmark	As of:						
	10/1/18	4/1/18	2/1/17	4/1/16	1/1/16	1/1/14	1/1/11
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%
Bloomberg Commodity	0.0%	0.0%	0.0%	0.0%	17.7%	18.8%	15.0%
CPI + 5% (RA)	0.0%	0.0%	0.0%	0.0%	11.8%	12.5%	0.0%
Libor +4% (HF)	50.0%	46.2%	46.2%	41.7%	29.4%	25.0%	15.0%
Russell 3000 +3% (PE)	0.0%	0.0%	53.8%	58.3%	41.2%	43.8%	40.0%
Russell 3000 +3% 1Q Lag (PE)	50.0%	53.8%	0.0%	0.0%	0.0%	0.0%	0.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Private Equity Benchmark	As of:	
	4/1/18	10/1/10
Russell 3000 +3% 1Q Lag	100.0%	0.0%
Russell 3000 +3%	0.0%	100.0%
	100.0%	100.0%

Hedge Fund Benchmark	As of:
	10/1/10
Libor +4%	100.0%
	100.0%

Inflation Hedge	As of:					
	4/1/20	10/1/19	4/1/18	2/1/17	10/1/16	4/1/16
BBgBarc TIPS	0.00%	5.88%	11.11%	12.5%	14.3%	14.3%
Bloomberg Commodity	0.00%	0.00%	0.00%	0.0%	0.0%	21.4%
CPI + 5% (RA)	0.00%	0.00%	0.00%	0.0%	0.0%	14.3%
Blended Liquid Real Asset	35.29%	35.29%	33.34%	0.0%	0.0%	0.0%
Blended Private Real Asset	11.77%	11.77%	11.11%	43.8%	35.7%	0.0%
NCREIF ODCE	52.94%	47.06%	44.44%	43.8%	50.0%	50.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Public Real Asset Benchmark	As of:		
	5/1/20	10/1/16	1/1/14
Bloomberg Roll Select Commodity	25.0%	33.3%	0.0%
S&P Global Large-MidCap Commodity and Resources	25.0%	33.3%	0.0%
S&P Global Infrastructure	25.0%	33.4%	0.0%
CPI + 5%	0.0%	0.0%	100.0%
BBgBarc TIPS	25.0%	0.0%	0.0%
	100.0%	100.0%	100.0%

Private Real Asset Benchmark	As of:		
	4/1/18	10/1/16	1/1/14
Bloomberg Roll Select Commodity	0.0%	34.0%	0.0%
S&P Global Large-MidCap Commodity and Resources	0.0%	33.0%	0.0%
50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	100.0%	0.0%	0.0%
S&P Global Infrastructure	0.0%	33.0%	0.0%
CPI + 5%	0.0%	0.0%	100.0%
	100.0%	100.0%	100.0%

Private RA Secondary Benchmark	As of:
	9/1/14
Cambridge Associates Private Natural Resources 1 Qtr Lag	50.0%
Cambridge Associates Private Infrastructure 1 Qtr Lag	50.0%
	100.0%

Real Estate Benchmark	As of:		
	1/1/09	6/1/00	7/1/96
10 Year Treasury +2%	0.0%	0.0%	100.0%
NCREIF ODCE	100.0%	0.0%	0.0%
NCREIF Property	0.0%	100.0%	0.0%
	100.0%	100.0%	100.0%

Policy Index and Benchmark History

Period Ending: June 30, 2020

Baillie Gifford Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US	100.0%	0.0%
MSCI EAFE	0.0%	100.0%
	100.0%	100.0%

Baillie Gifford Secondary Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US Growth	100.0%	0.0%
MSCI EAFE Growth	0.0%	100.0%
	100.0%	100.0%

Brigade Secondary Benchmark	As of:	
	8/1/10	
BBgBarc High Yield	50.0%	
Credit Suisse Leveraged Loans	50.0%	
	100.0%	

PIMCO Diversified	As of:	
	9/1/17	
JPMorgan EMBI Global	33.333%	
BofAMLBB-BRatedDvlpdMktsHYHgdUSD	33.333%	
Global Agg Credit Ex EM USD hedged	33.334%	
	100.0%	

SSgA Custom Real Asset	As of:	
	5/1/20	11/1/16
Bloomberg Roll Select Commodity	25.00%	33.33%
S&P Global Large-MidCap Commodity and Resources	25.00%	33.33%
S&P Global Infrastructure	25.00%	33.34%
BBgBarc TIPS	25.00%	0.00%
	100.0%	100.0%

Fee Schedule

Period Ending: June 30, 2020

Acadian Asset Management

First \$50 million:	0.27% per annum
Next \$50 million:	0.225% per annum
Thereafter:	0.18% per annum

Baillie Gifford

First \$25 million:	0.60% per annum
Next \$75 million:	0.50% per annum
Next \$300 million:	0.40% per annum
Thereafter:	0.30% per annum

BlackRock-EAFE Equity Index Fund

On All Assets:	0.03% per annum
----------------	-----------------

BlackRock-Russell 1000 Index Fund

On All Assets:	0.01% per annum
----------------	-----------------

BlackRock-Intermediate Govt Bond Index Fund

On All Assets:	0.025% per annum
----------------	------------------

BlackRock-MSCI ACWI ex US IMI Index Fund

On All Assets:	0.045% per annum
----------------	------------------

DoubleLine

On All Assets:	0.30% per annum
----------------	-----------------

Franklin Templeton Investment

First \$50 million:	0.40% per annum
Next \$50 million:	0.30% per annum
Thereafter:	0.25% per annum

FIAM Bond

First \$50 million:	0.20% per annum
Next \$50 million:	0.175% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.085% per annum

PanAgora Asset Management

First \$50 million:	0.25% per annum
Next \$50 million:	0.15% per annum
Thereafter:	0.10% per annum

Parametric

On All Assets:	0.30% per annum
----------------	-----------------

Parametric Overlay

First \$50 million:	0.12% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.05% per annum
Plus monthly reporting fee of \$1500	

Parametric Currency Overlay

First \$250 million:	0.05% per annum
Thereafter:	0.03% per annum

PIMCO Diversified

On All Assets:	0.75% per annum
----------------	-----------------

QMA

First \$50 million:	0.55% per annum
Thereafter:	0.50% per annum

Western Asset Management

On All Assets:	0.25% per annum
Performance Fee:	20.00%

Mondrian Investment Partners

Assets Below \$190 million

First \$20 million:	1.00% per annum
Thereafter:	0.33% per annum

Assets Above \$190 million

First \$50 million:	1.00% per annum
Next \$150 million:	0.19% per annum
Thereafter:	0.33% per annum

NISA

First \$500 million:	0.15% per annum
Thereafter:	0.125% per annum

Manager Compliance (Net)

Period Ending: June 30, 2020

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000	--	--	--
DE Shaw	Russell 1000	R	✓	R
PanAgora Defuseq	Russell 1000	--	--	--
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	✓	✓	✓
Mondrian	MSCI ACWI ex USA Value Gross	✓	✓	✓
DoubleLine	BBgBarc US Aggregate TR	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
NISA Core Bond	BBgBarc US Aggregate TR	--	--	--
Western TRU	3-Month Libor Total Return USD	--	--	--
AG CSF Annex Dislocation Fund	BBgBarc BA Intermediate HY	--	--	--
Angelo Gordon Opportunistic	BBgBarc US Aggregate TR	✓	--	R
Angelo Gordon STAR	BBgBarc US Aggregate TR	✓	--	✓
Angelo Gordon Credit Solutions	BBgBarc BA Intermediate HY	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	✓	✓	✓
Brigade Capital	BBgBarc BA Intermediate HY	R	R	R
PIMCO Diversified	Blended PIMCO Diversified Index	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	--	--	--
Blackrock DL Feeder IX-U	Cliffwater Direct Lending Index	--	--	--
PIMCO Private Income	BBgBarc BA Intermediate HY	--	--	--
TCP Direct Lending VIII	Cliffwater Direct Lending Index	--	--	--
White Oak Yield	Cliffwater Direct Lending Index	--	--	--
AQR DELTA XN	Libor 1 month +4%	R	R	R
Aberdeen Standard GARS	Libor 1 month +4%	--	--	--
Graham Quant Macro	Libor 1 month +4%	--	--	--
PIMCO MAARS Fund LP	Libor 1 month +4%	--	--	--

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive

Manager Compliance (Gross)

Period Ending: June 30, 2020

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000	--	--	--
DE Shaw	Russell 1000	✓	✓	✓
PanAgora Defuseq	Russell 1000	--	--	--
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	✓	✓	✓
Mondrian	MSCI ACWI ex USA Value Gross	✓	✓	✓
DoubleLine	BBgBarc US Aggregate TR	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
NISA Core Bond	BBgBarc US Aggregate TR	--	--	--
Western TRU	3-Month Libor Total Return USD	--	--	--
AG CSF Annex Dislocation Fund	BBgBarc BA Intermediate HY	--	--	--
Angelo Gordon Opportunistic	BBgBarc US Aggregate TR	✓	--	✗
Angelo Gordon STAR	BBgBarc US Aggregate TR	✓	--	✓
Angelo Gordon Credit Solutions	BBgBarc BA Intermediate HY	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	✓	✓	✓
Brigade Capital	BBgBarc BA Intermediate HY	✗	✗	✗
PIMCO Diversified	Blended PIMCO Diversified Index	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	--	--	--
Blackrock DL Feeder IX-U	Cliffwater Direct Lending Index	--	--	--
PIMCO Private Income	BBgBarc BA Intermediate HY	--	--	--
TCP Direct Lending VIII	Cliffwater Direct Lending Index	--	--	--
White Oak Yield	Cliffwater Direct Lending Index	--	--	--
AQR DELTA XN	Libor 1 month +4%	✗	✗	✗
Aberdeen Standard GARS	Libor 1 month +4%	--	--	--
Graham Quant Macro	Libor 1 month +4%	--	--	--
PIMCO MAARS Fund LP	Libor 1 month +4%	--	--	--

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

3RD QUARTER 2020
Investment Landscape

Recent Verus research

Visit: <https://www.verusinvestments.com/insights/>

Annual outlooks

2020 REAL ASSETS OUTLOOK

The ongoing impact of COVID-19 on the global economy has dramatically altered our outlook on inflation, risk and asset class returns. Going into 2020, valuations for many risk assets were rich and expected returns were low. In a matter of weeks, we've seen a broad market sell-off, improving valuations.

- A combination of poor performance, high volatility and ESG-related concerns are driving a shift in investor preference within real assets.
- The shutdowns of economies around the globe will likely have lasting impacts and create some stress and distress for affected assets and those with highly levered capital structures.
- Negative impacts in real estate will likely take several quarters to flow through the appraisal cycle on the private side, creating challenges for existing assets and opportunities for fresh capital.

Topics of interest

BROADENING DIVERSITY CONSIDERATION

CIO Ian Toner, CFA, and Public Markets Managing Director Marianne Feeley, CFA, outline broader elements of diversity – beyond ownership – that may be used to characterize the demographic qualities of an investment firm. It frames the broader approach to understanding diversity that we are adapting at Verus, which is an integral part of our process of collecting and using information about investment managers.

STRATEGIC LIQUIDITY

An analysis of illiquid allocations across a universe of portfolios suggests that institution type and size may be the determining factors in how much capital is allocated to illiquid assets. We believe illiquid allocations should be based on the financial situation of the institution. Verus has developed a framework to analyze the impact illiquid asset programs have on the overall portfolio.

Sound thinking

KNOWING WHERE YOU'RE GOING MATTERS

CIO Ian Toner, CFA, and Public Markets Managing Director Marianne Feeley, CFA, outline broader elements of diversity – beyond ownership – that may be used to characterize the demographic qualities of an investment firm.

It frames the broader approach to understanding diversity that we are adapting at Verus, which is an integral part of our process of collecting and using information about investment managers.

Table of contents



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

Economic environment 6

Fixed income rates & credit 22

Equity 27

Other assets 38

Appendix 41

2nd quarter summary

THE ECONOMIC CLIMATE

- U.S. GDP grew at a 0.3% rate year-over-year in Q1 (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed, businesses cut back investment, inventories were drawn down, and exports weakened. Q2 GDP growth forecasts suggest a severe contraction of -35%, though estimates vary widely. **p. 11**
- The U.S. labor market experienced a historic shock in Q2, as unemployment jumped from 4.4% in March to 14.7% in April, then recovered partially to 11.1% in June. Recent labor market data have beat expectations materially, but the severity of the shock is notable. A majority of the unemployed have reported their job losses as temporary. It will be important to watch what portion of these losses are indeed temporary rather than permanent. **p. 13**

PORTFOLIO IMPACTS

- Most major equity benchmarks are within 15% of all-time highs, despite major damage that COVID-19 has inflicted on the global economy. Some of this damage has been mitigated by government support, but some damage is likely yet to be felt. **p. 28**
- U.S. core inflation fell steeply from 2.1% in March to 1.2% in June, while food prices have risen. COVID-19 has led to a significant rise in at-home meal preparation (greater demand for certain items), while reportedly negatively impacting food processing facilities (less supply). **p. 12**

THE INVESTMENT CLIMATE

- The Federal Reserve continued to roll out the litany of support programs that were announced in the first quarter. The Fed's balance sheet grew from \$5.3 trillion to \$7.1 trillion over the second quarter. **p. 23**
- Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85 on March 18th, and closing June at 30. **p. 36**
- The Fed expanded the list of eligible securities for purchase to include corporate debt. While the Fed will primarily target investment grade debt securities, it will also buy some non-investment grade debt from "fallen angels" which were investment-grade prior to the pandemic. **p. 23**

ASSET ALLOCATION ISSUES

- U.S. equities delivered an incredible comeback, following a sudden and significant sell-off in March. The S&P 500 rallied +20.5% in the second quarter, bringing year-to-date performance to -3.1%, and positive +7.5% over the past twelve months. **p. 30**
- The U.S. dollar weakened in Q2, falling -2.3%. The market recovery (less demand for safe-haven currencies) and materially lower U.S. interest rates (less attractive U.S. dollar) have likely contributed to depreciation. **p. 39**

A mildly underweight risk stance appears appropriate in today's environment

We remain watchful of the COVID-19 second wave and its impact on economic reopening

What drove the market in Q2?

“The second wave of coronavirus: How bad will it be as lockdowns ease?”

U.S. DAILY NEW CONFIRMED COVID-19 CASES

1/31	2/29	3/31	4/30	5/31	6/30
2	8	26,169	29,419	19,665	45,596

Article Source: *The Philadelphia Inquirer*, May 6th, 2020

“Early results from Moderna coronavirus vaccine trial show participants developed antibodies against the virus”

MODERNA U.S. EQUITY SHARE PRICE

1/31	2/29	3/31	4/30	5/31	6/30
\$20.51	\$25.93	\$29.95	\$45.99	\$61.50	\$64.21

Article Source: *CNN*, May 18th, 2020

“Nasdaq erases losses for 2020 as mega-cap tech rallies offset coronavirus drag”

NASDAQ COMPOSITE INDEX TOTAL RETURN MINUS S&P 500 TOTAL RETURN

Jan	Feb	Mar	Apr	May	Jun
+2.1%	+2.0%	+2.3%	+2.7%	+2.1%	+4.1%

Article Source: *Business Insider*, May 7th, 2020

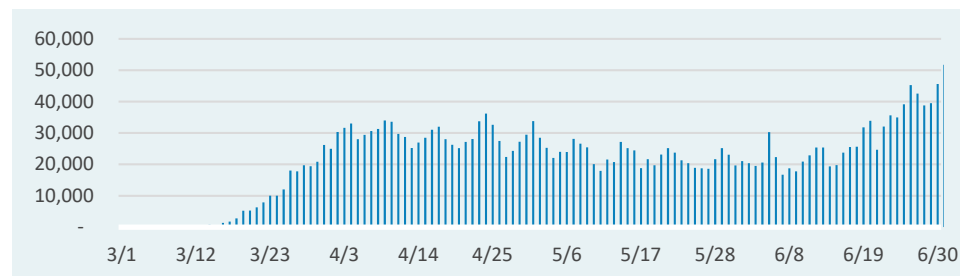
“How China’s national security law could change Hong Kong forever”

HONG KONG VISITOR ARRIVALS (YEAR OVER YEAR CHANGE)

Dec	Jan	Feb	Mar	Apr	May
-51.5%	-52.7%	-96.4%	-98.6%	-99.9%	-99.9%

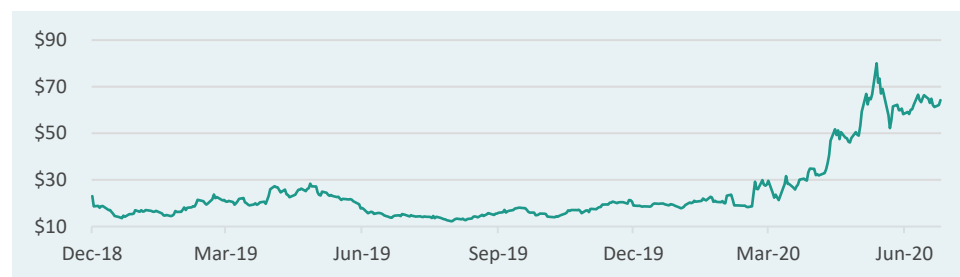
Article Source: *CNBC*, July 1st, 2020

DAILY NEW COVID-19 CASES (UNITED STATES)



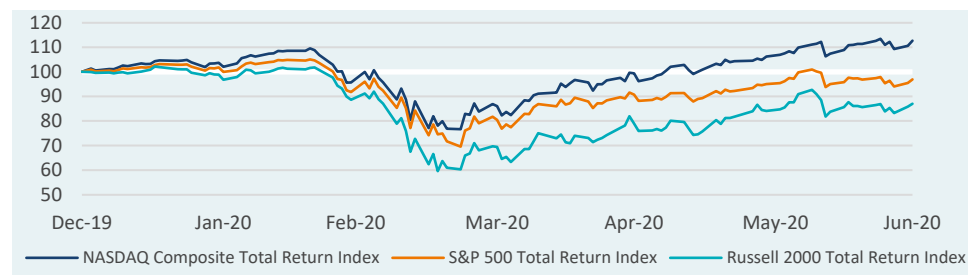
Source: *Bloomberg*, as of 6/30/20

MODERNA INC. SHARE PRICE



Source: *Bloomberg*, as of 6/30/20

U.S. EQUITY INDEX PERFORMANCE (INDEXED 12/31/2019=100)



Source: *NASDAQ*, *Standard and Poor's*, *FTSE Russell*, *Bloomberg*, as of 6/30/20

Economic environment

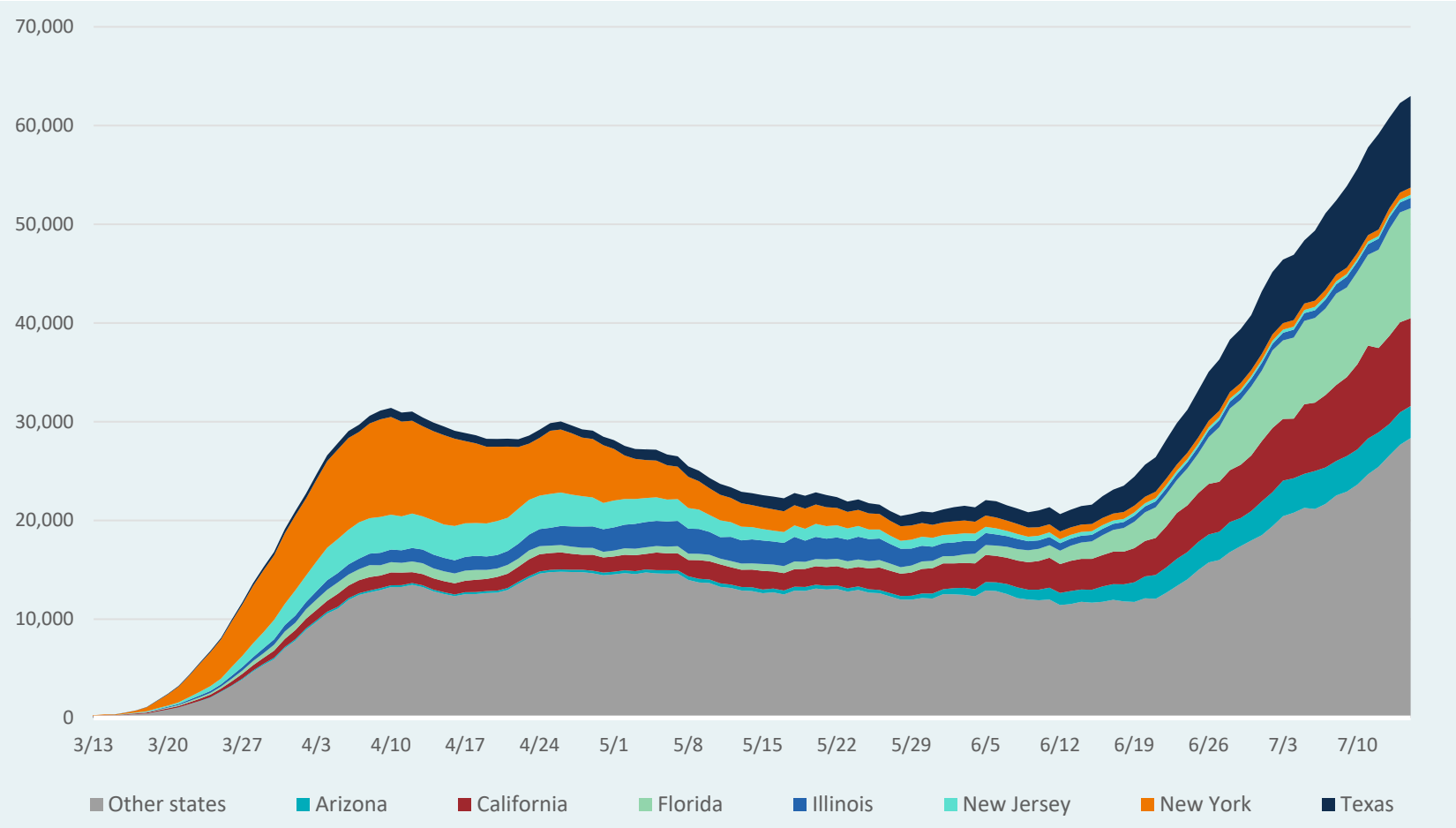
U.S. economics summary

- U.S. GDP grew at a 0.3% rate year-over-year in Q1 (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed, businesses cut back investment, inventories were drawn down, and exports weakened. Q2 GDP growth forecasts suggest a severe contraction of -35%, though estimates vary widely.
- As of June 29th there were 34 states with a transmission rate of COVID-19 above 1.0, an indication that the virus continues to spread exponentially. Southern states and Sun Belt states are in retreat—taking lockdown steps reminiscent of March and April—only weeks after governors began to reopen their economies.
- The U.S. labor market experienced a historic shock in Q2 as unemployment jumped from 4.4% in March to 14.7% in April, then recovered partially to 11.1% in June.
- U.S. core inflation exhibited a steep drop from 2.1% in March to 1.2% in June. Headline inflation also slowed from 1.5% to 0.6%, pushed lower by the recent decline in energy prices. On the other hand, food prices have been rising—specifically meats, poultry, fish and eggs—due in large part to interruptions at processing plants.
- The Bloomberg Consumer Comfort Index experienced a dramatic weakening year-to-date, falling from a near-record high of 67.3 in late January to 34.7 in May, then ending June at 43.3.
- It has been reported that 8.6% of all mortgages in the U.S. are in forbearance. To put this number into perspective, during the 2008-2009 housing crisis the mortgage default rate reached approximately 10%. If a large portion of loans in forbearance later face foreclosure, this could put significant pressure on the housing market.

	Most Recent	12 Months Prior
GDP (YoY)	0.3% 3/31/20	2.7% 3/31/19
Inflation (CPI YoY, Core)	1.2% 5/31/20	2.0% 5/31/19
Expected Inflation (5yr-5yr forward)	1.5% 6/30/20	1.8% 6/30/19
Fed Funds Target Range	0% – 0.25% 6/30/20	2.25% – 2.50% 6/30/19
10 Year Rate	0.7% 6/30/20	2.0% 6/30/19
U-3 Unemployment	11.1% 6/30/20	3.7% 6/30/19
U-6 Unemployment	18.0% 6/30/20	7.2% 6/30/19

COVID-19 update

U.S. DAILY NEW CASES DECOMPOSITION (7-DAY TRAILING AVERAGE)



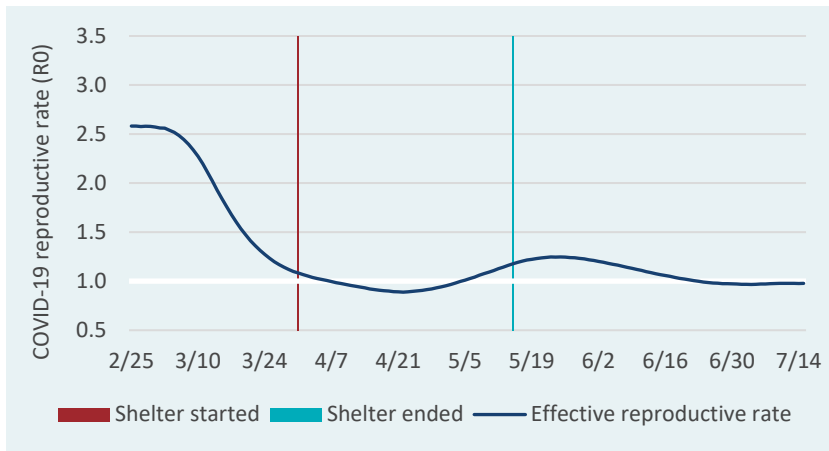
Toward the end of June, daily case growth began to indicate the emergence of a second wave of COVID-19

Most of the resurgence has occurred across a small group of U.S. states

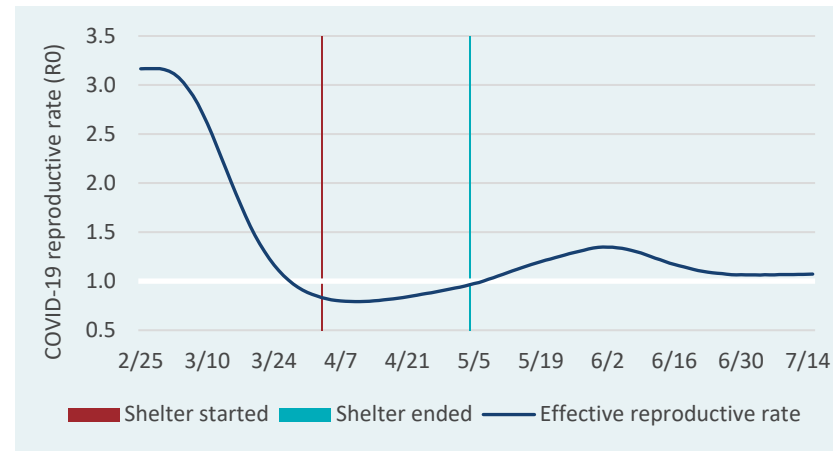
Source: Bloomberg, as of 7/15/20

Reproductive rates (R0) by state hot spot

ARIZONA

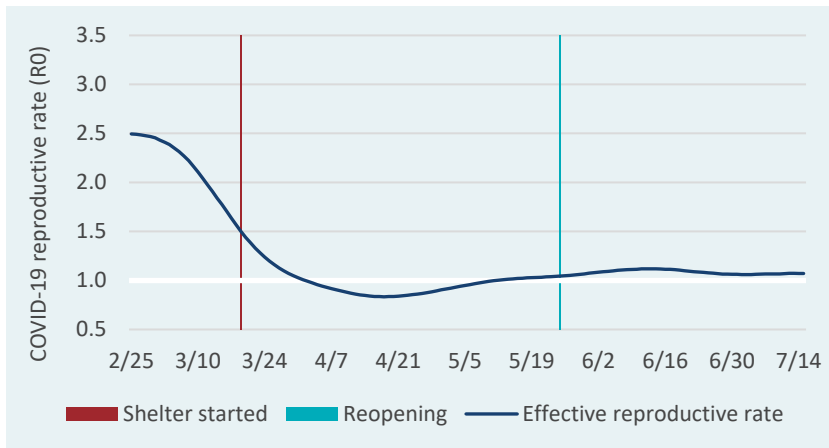


FLORIDA

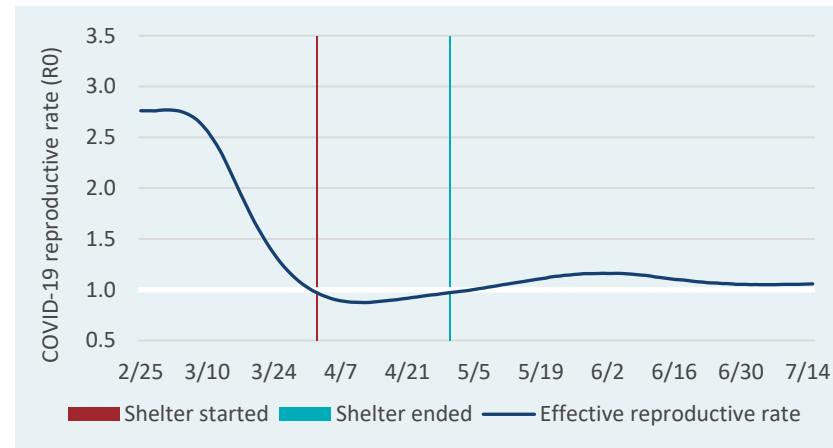


In many states around the country, resurgences in R0 rates above 1.0 began prior to the formal ending of shelter-in-place orders

CALIFORNIA



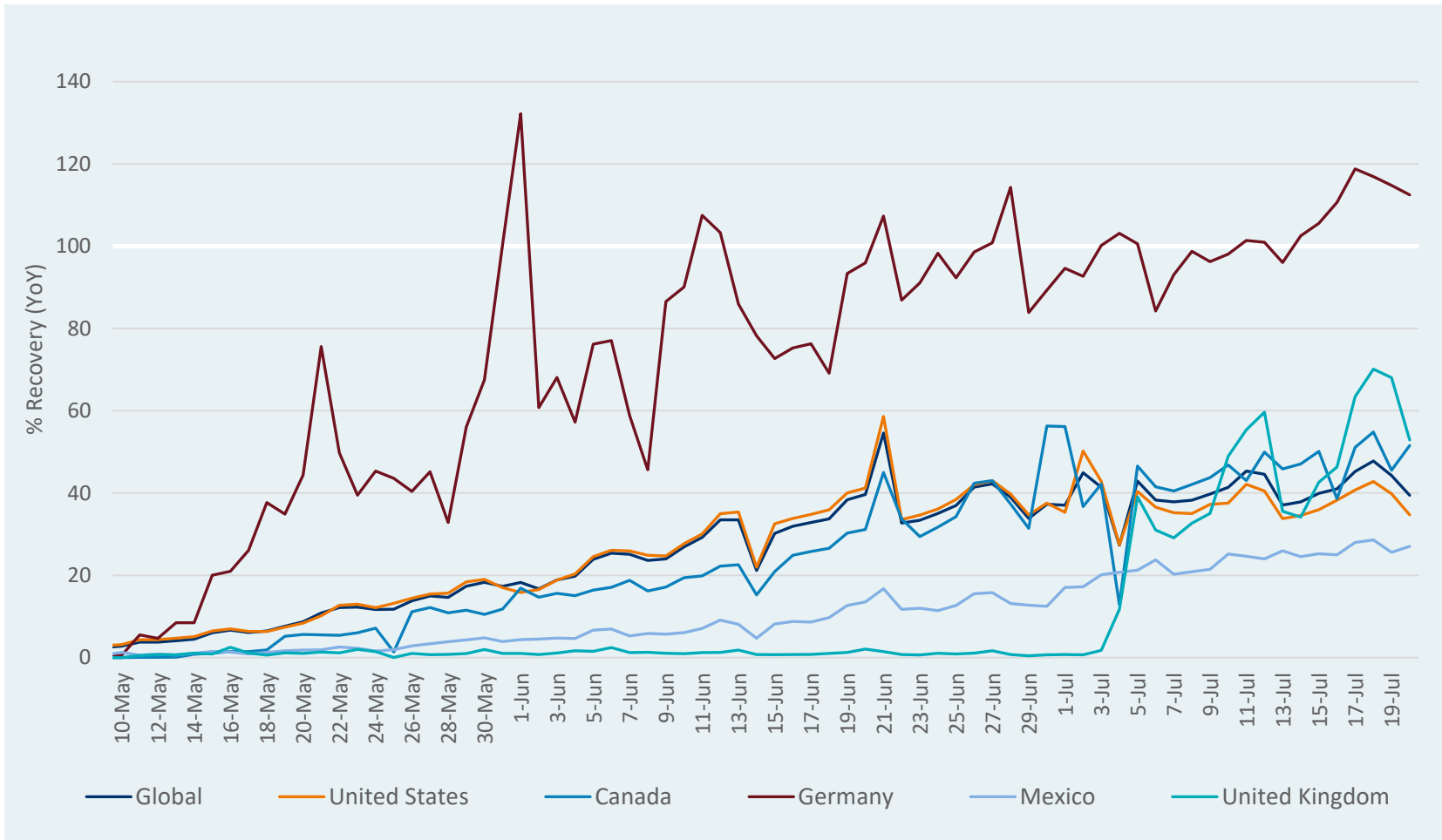
TEXAS



Source: rt.live, as of 7/15/20. The R0 rate represents the average number of additional people each infected person will transmit the virus to. R0 rates below 1.0 indicate the virus will decline and eventually die out.

Restaurants reopening

RECOVERY OF RESTAURANT INDUSTRY



Restaurant activity recovered notably from May through June, but remains far below pre-pandemic levels

Source: OpenTable, as of 7/20/20 – Number of meals served for a given week relative to the same week of the prior year

GDP growth

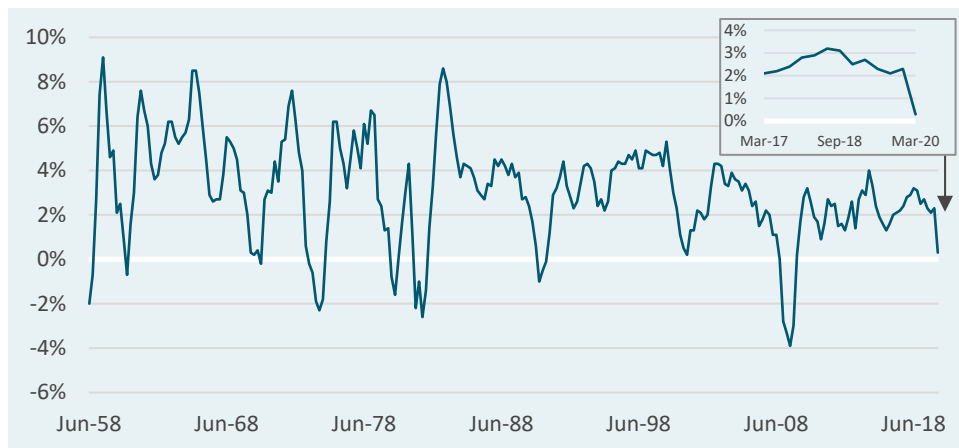
Real GDP grew at a 0.3% rate year-over-year in the first quarter (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed notably, businesses cut back on investment, inventories were drawn down, and exports weakened. Forecasts of Q2 GDP growth suggest a severe economic contraction of roughly -35%, though estimates vary widely.

The United States runs a significant trade deficit, and imports far more than it exports in U.S. dollar terms. As a result, the slowdown in global trade in the first quarter provided a tailwind for GDP growth as exports fell less in nominal terms than imports, leading to a reduction in the size of the trade deficit. Additionally, the recent inventory drawdowns

may leave room for inventory builds to contribute positively to GDP growth in the coming quarters. Still, consumption accounts for roughly 70% of GDP. The financial health of the consumer and the willingness of the consumer to spend will likely drive growth through the remainder of the year.

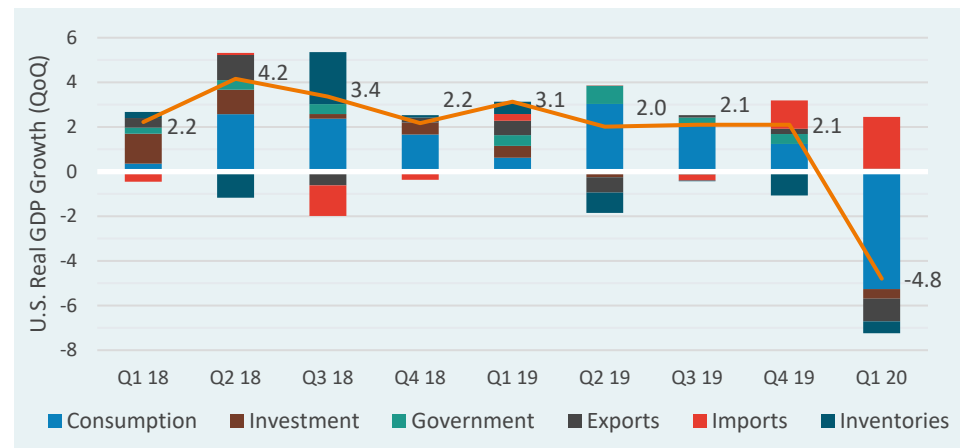
Thus far, fiscal support through the CARES Act and other packages have amounted to roughly 12% of U.S. GDP. Only Japan (42%) has spent more as a percentage of GDP. Moving forward into Q3, the ability and willingness of Congress to provide further accommodation will feature prominently in discussions around the economic outlook.

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 3/31/20

U.S. GDP GROWTH ATTRIBUTION



Source: BEA, annualized quarterly rate, as of 3/31/20

Inflation

U.S. core inflation exhibited a steep drop from 2.1% in March to 1.2% in June. Headline inflation also slowed from 1.5% to 0.6%, pushed lower by the recent decline in energy prices.

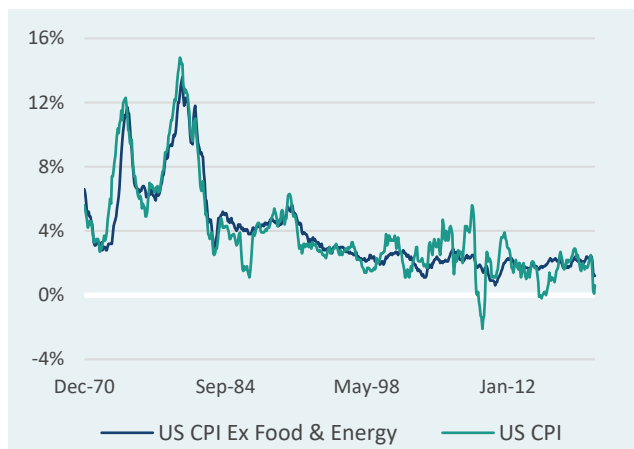
On the other hand, food prices have been increasing—specifically meats, poultry, fish and eggs. COVID-19 has led to a significant rise in at-home meal preparation (greater demand for certain items), while reportedly interrupting food processing plants (less supply). Both effects may be contributing to recent price increases.

The 10yr U.S. TIPS inflation breakeven rate recovered to 1.3%

from a low of 0.5% on March 19th. The breakeven rate is at a level not seen since 2016 at the depths of an oil crash that sparked broad fears of deflation.

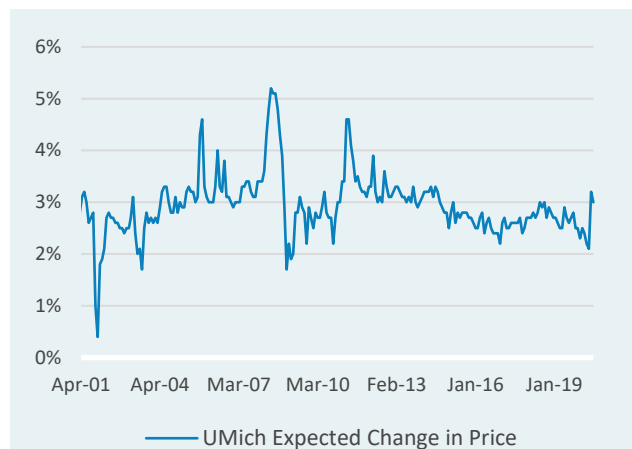
Interestingly, consumer inflation surveys indicate that expectations jumped significantly from 2.1% in April to 3.0% in June. Investors have engaged in an ongoing debate regarding the possible direction of inflation throughout the economic recovery. There seem to be reasonable arguments for inflationary pressures, but also for deflationary pressures, as a result of the COVID-19 induced economic slowdown.

U.S. CPI (YOY)



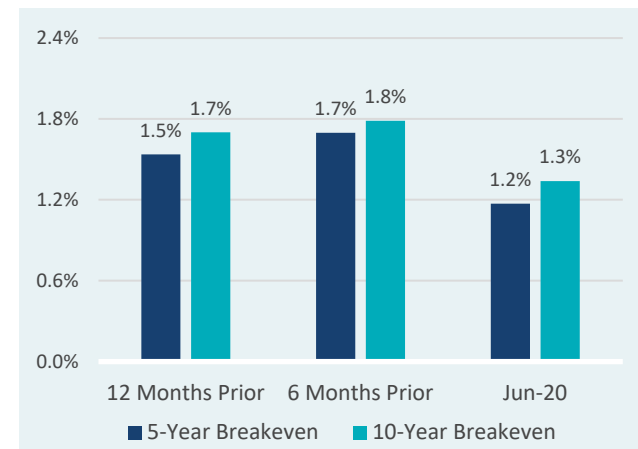
Source: Bloomberg, as of 6/30/20

CONSUMER INFLATION EXPECTATIONS



Source: University of Michigan, as of 6/30/20

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 6/30/20

Labor market

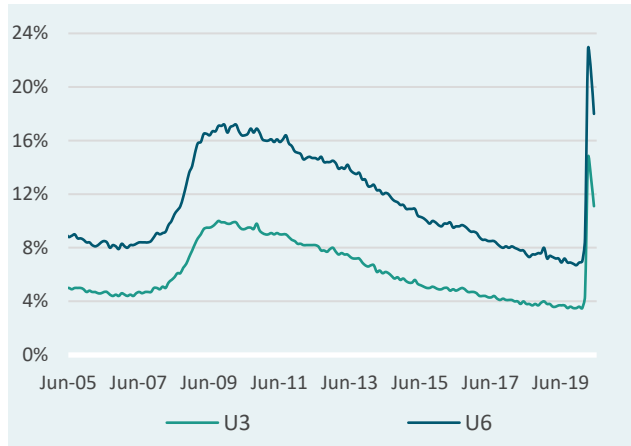
The U.S. labor market experienced a historic shock in Q2, as unemployment jumped from 4.4% in March to 14.7% in April, before recovering partially to 11.1% in June. However, many workers were not present at work but remained categorized as employed. If these workers were instead counted as jobless, the true unemployment rate may have reached 20% before recovering to around 12%. Although recent labor market data has generally beat expectations by a wide margin, the severity of the shock and current magnitude of dislocation is notable. Most of the unemployed have reported their joblessness to be temporary and believe that their employer will be calling them back to work.

It will be important to watch what portion of job losses are indeed temporary, and what portion end up being more permanent in nature.

Churn within the labor market has remained extremely elevated as businesses have contended with the constantly-evolving COVID-19 situation and its impacts on mandated social distancing controls. Additionally, some employers have decided to remain closed until the end of July to allow their employees the flexibility to receive an additional \$600 in weekly unemployment benefits set to expire on July 31st.

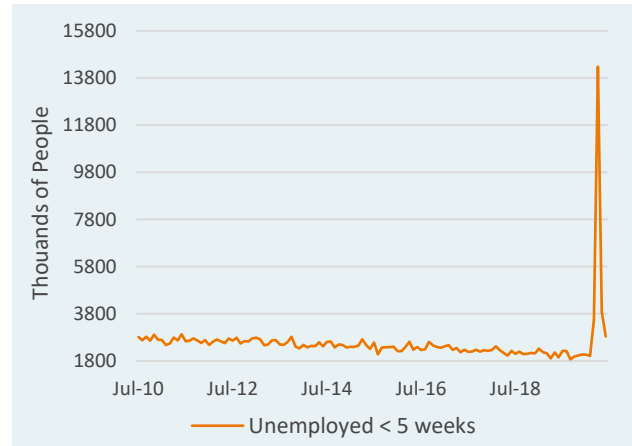
U.S. labor market experienced the largest negative shock in modern history

U.S. UNEMPLOYMENT



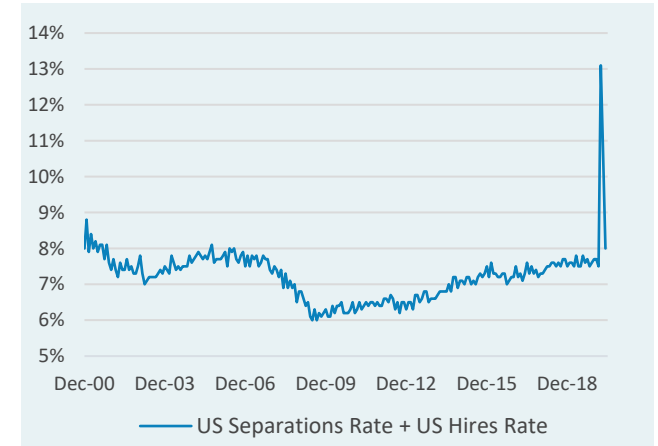
Source: FRED, as of 6/30/20

U.S. UNEMPLOYMENT DURATION



Source: U.S. Bureau of Labor Statistics, as of 6/30/20

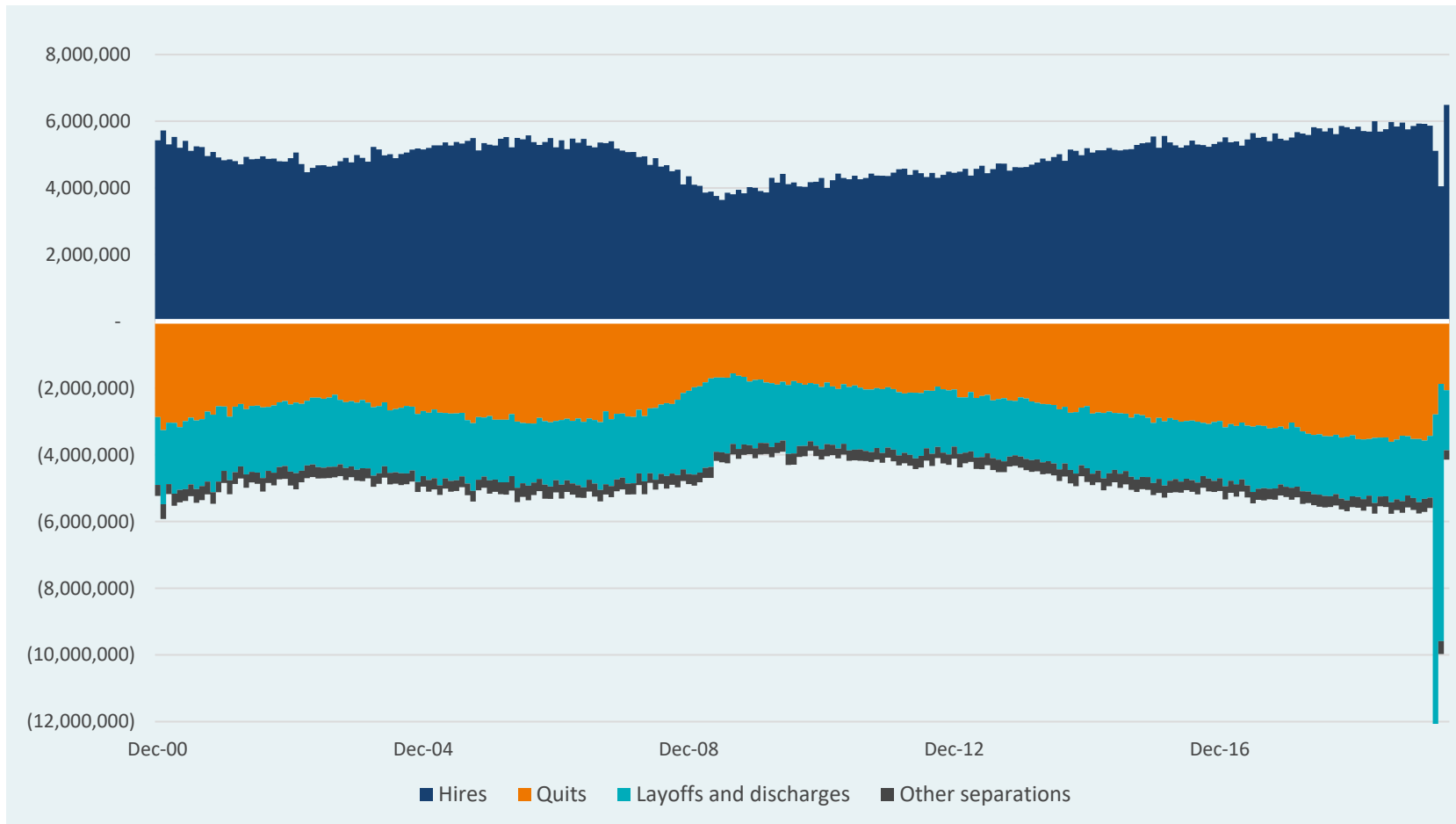
U.S. LABOR MARKET CHURN



Source: BLS, as of 5/31/20 – Chart illustrates the total number of U.S. workers departing work and starting new work

Labor market churn

MONTHLY JOB HIRES, QUILTS, LAYOFFS & DISCHARGES, AND OTHER SEPARATIONS LEVELS

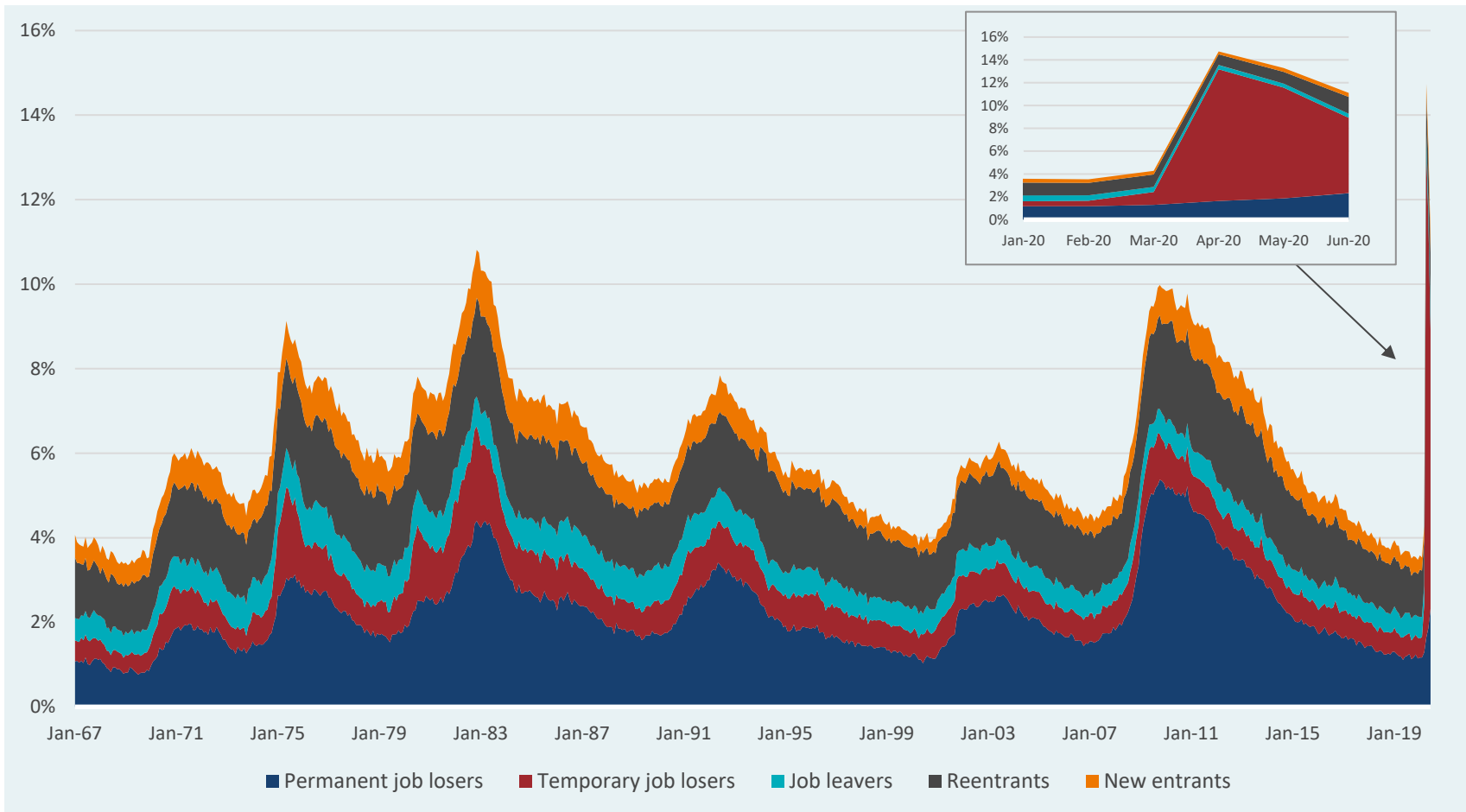


While voluntary separations (quits) have slowed, both hires and involuntary separations have spiked to record levels

Source: BLS, as of 5/31/20

Permanent job losses are increasing...

U-3 UNEMPLOYMENT RATE – CONTRIBUTION BY COHORT



Many temporarily unemployed workers have gone back to work

Some temporary job losses have become permanent, while many unemployed have reignited their job search

Source: BLS, as of 6/30/20

The consumer

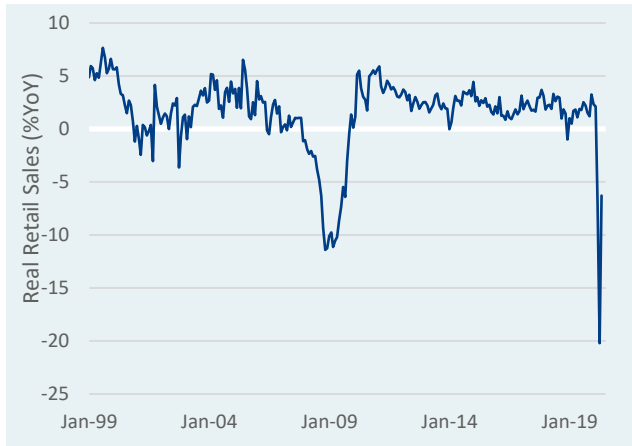
The U.S. consumer has been the greatest support to moderate domestic economic growth in recent years. Consumers have also shown conservatism in their spending habits and restraint in the use of credit, with household balance sheets remaining robust. The economic slowdown resulted in a severe drop in spending—a drop-off in fact nearly double the size of the contraction experienced during the 2008-2009 Global Financial Crisis.

Between February and May, revolving U.S. consumer credit outstanding shrunk by about \$104 billion to \$996 billion, indicating that American consumers have been paying down

their credit card debts significantly. Some of this deleveraging has been made possible by recent fiscal stimulus.

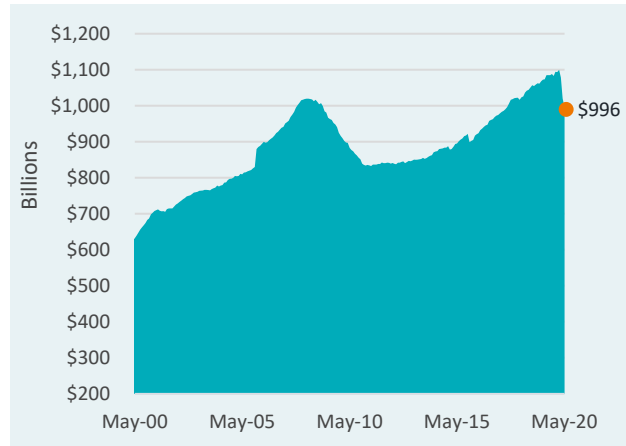
The U.S. personal savings rate reached 32% in April—the highest reading since its inception in the 1960s. The extreme conservatism shown recently has likely been fueled by uncertainty around job security, but also by a simple inability to spend as restaurants and businesses which typically are the recipients of discretionary spending have been forced to (or have willingly) closed their doors, and vacation plans have been delayed or canceled.

REAL RETAIL SALES GROWTH (YOY)



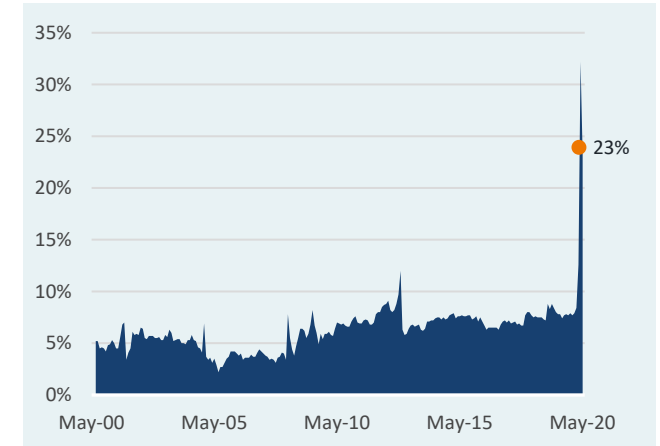
Source: FRED, as of 5/31/20

U.S. REVOLVING CREDIT OUTSTANDING



Source: Federal Reserve, as of 5/31/20

PERSONAL SAVINGS RATE



Source: FRED, as of 5/31/20

Sentiment

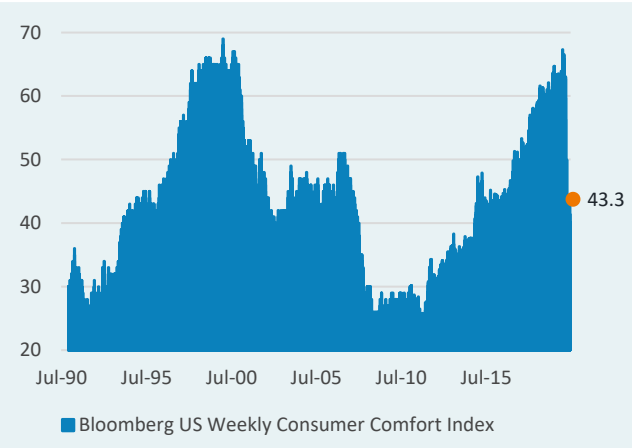
The Bloomberg Consumer Comfort Index attempts to gauge Americans' view on the economy, their personal financial situation, and buying conditions. The index experienced a dramatic weakening year-to-date, falling from a near-record high of 67.3 in late January to 34.7 in May, then ending June at 43.3.

The University of Michigan Consumer Sentiment Survey is similar in purpose to the Bloomberg index. The survey attempts to gauge attitudes about the business climate, personal finances, and spending conditions. This index also showed a significant weakening in Q2 which was comparable

in magnitude to past U.S. economic slowdowns, falling from 101.0 in February to 71.8 in April, before partially rebounding to 78.1 in June. The rebound was reportedly supported by gains in employment. Few survey respondents anticipated favorable economic conditions anytime soon.

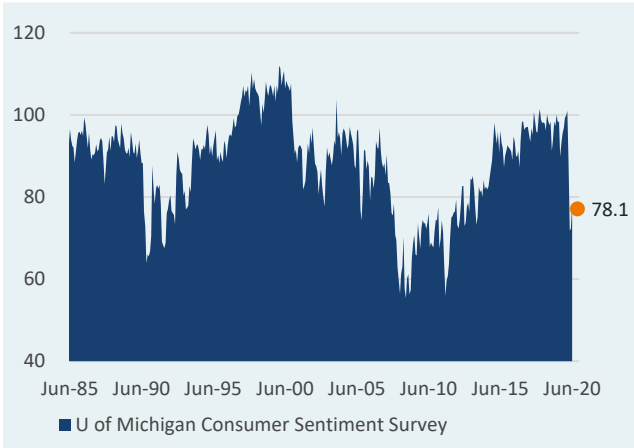
The Small Business Optimism Index has rebounded since the onset of COVID-19 and the subsequent economic slowdown. The index rose to 100.6, as many business owners reportedly expect sales to improve, remain optimistic about future business conditions, and generally expect the recession to be short-lived.

CONSUMER COMFORT



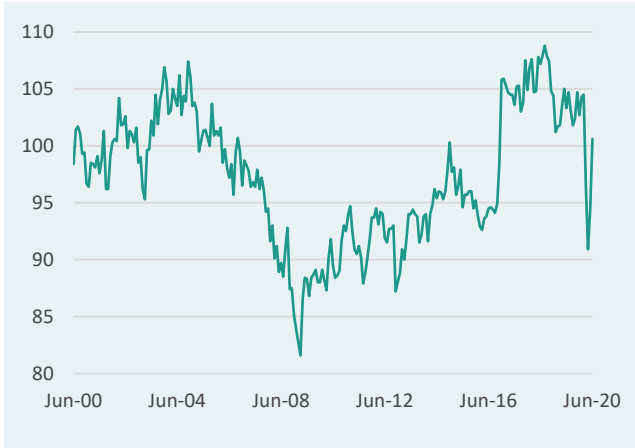
Source: Bloomberg, as of 6/30/20

CONSUMER SENTIMENT



Source: University of Michigan, as of 6/30/20

SMALL BUSINESS OPTIMISM



Source: NFIB, as of 6/30/20

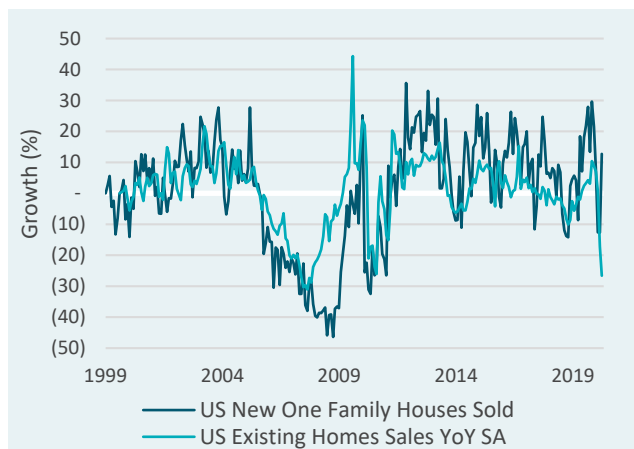
Housing

Existing home sales slowed significantly in Q2, dropping -26.6% year-over-year in June. The 30-year fixed mortgage interest rate fell further, finishing the second quarter at 3.07%. Near record-low interest rates have likely boosted home demand, helping to mitigate the significant effects of the economic recession. Trends in the housing market are typically slower-moving and often lag economic downturns, which may mean the true impact of COVID-19 on the U.S. housing market has yet to be seen.

backed mortgages who have been affected by COVID-19 are able to request forbearance on mortgage payments for up to 180 days, with an option to extend for an additional 180 days. According to Black Knight, a mortgage data provider, 8.6% of all mortgages in the United States were in forbearance during late-June. To put this number into perspective, during the 2008-2009 housing crisis the mortgage default rate reached approximately 10%. If these loans in forbearance later face foreclosure, it could put significant pressure on the housing market.

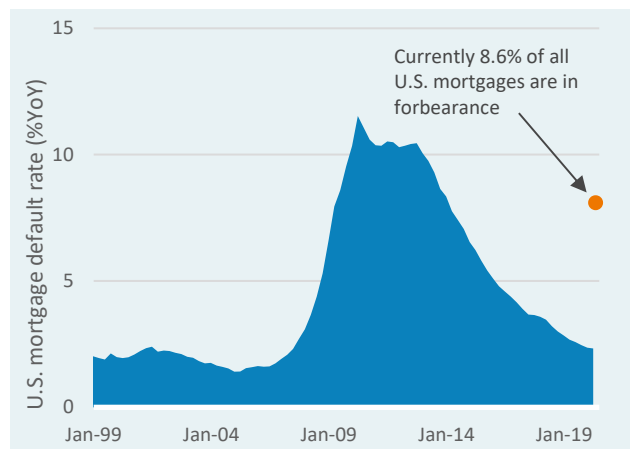
Under the new CARES Act, homeowners with federally-

U.S. HOME SALES (YOY)



Source: FRED, as of 5/31/20

MORTGAGE DEFAULT RATE (%)



Source: FRED, as of 3/31/20

30YR FIXED RATE MORTGAGE



Source: FRED, as of 6/30/20

International economics summary

— In Q1, most international economies began contracting in what will likely turn out to be a global recession. The steady and stable economic expansion in recent years has shifted suddenly with the onset of COVID-19. The IMF now expects 2020 global GDP to fall -4.9%, followed by a +5.4% recovery in 2021.

— Policymakers in Brussels achieved unanimous approval on a €750 billion stimulus package to help support an economic recovery within the European Union. After much debate, officials decided to distribute €390 billion in the form of grants to member states hardest hit by the pandemic (Italy/Spain), and the other €360 in low-interest, non-concessionary loans for members of the bloc.

— U.S.-China relations were further strained Q2. The Trump administration placed restrictions on U.S. exports to Hong Kong in response to a Chinese law which

effectively tightens control over the territory. The restrictions apply to only 2.2% of U.S. exports, but sanctions on China could unravel an already fragile agreement between the two global powers. U.S.-China tensions have been escalating and will warrant close monitoring in the coming months.

— Headline consumer prices fell materially over the second quarter as spending at brick-and-mortar stores, restaurants, and bars weakened alongside the implementation of social distancing controls. Continued broad-based price declines could soon lead to deflation risks for many economies.

— Since hitting lows of -304.6 in early May, the Citi Eurozone Economic Surprise Index rallied back to -99.8, indicating that economic data have been improving relative to median economist estimates. Continued relative strengthening could be supportive to the equity market.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	0.3% <i>3/31/20</i>	0.1% <i>5/31/20</i>	11.1% <i>6/30/20</i>
Eurozone	(3.1%) <i>3/31/20</i>	0.3% <i>6/30/20</i>	7.4% <i>5/31/20</i>
Japan	(1.7%) <i>3/31/20</i>	0.3% <i>6/30/20</i>	2.9% <i>5/31/20</i>
BRICS Nations	(4.1%) <i>3/31/20</i>	4.9% <i>3/31/20</i>	5.1% <i>3/31/20</i>
Brazil	(0.3%) <i>3/31/20</i>	1.9% <i>5/31/20</i>	12.9% <i>5/31/20</i>
Russia	1.6% <i>3/31/20</i>	2.9% <i>5/31/20</i>	6.1% <i>5/31/20</i>
India	4.7% <i>12/31/19</i>	5.8% <i>3/31/20</i>	8.5% <i>12/31/17</i>
China	(6.8%) <i>3/31/20</i>	2.4% <i>5/31/20</i>	3.7% <i>3/31/20</i>

International economics

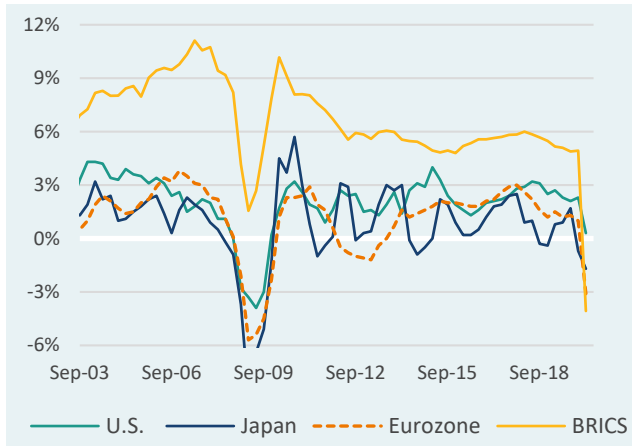
In the first quarter, most international economies began contracting, in what will likely turn out to be a global recession. The steady and stable economic expansion in recent years has shifted suddenly with the onset of COVID-19. The IMF now expects 2020 global GDP to fall -4.9%, followed by a +5.4% recovery in 2021.

Headline consumer prices fell internationally over Q2 as spending at brick-and-mortar stores, restaurants, and bars weakened alongside the implementation of social distancing controls. Continued broad-based price declines could soon lead to deflation risks for many economies. A large contributor to disinflation has been the recent sell-off in crude oil. The price of a barrel of Brent crude oil fell from

around \$80 per barrel at year-end to around \$30 per barrel at the end of Q1, and bottomed at \$22.90 on April 28th. Oil later recovered, due in part to certain economies beginning to gradually reopen, as well as price-supportive output cuts announced by OPEC+.

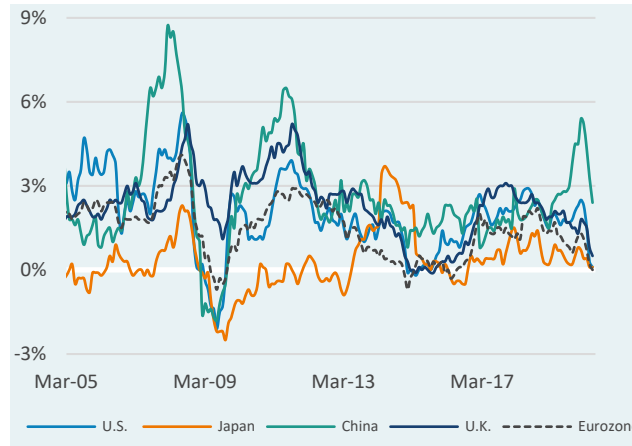
Policymakers in Brussels managed to achieve unanimous approval on a €750 billion stimulus package to help support an economic recovery within the European Union. After much debate, officials decided to distribute €390 billion in the form of grants to member states hardest hit by the pandemic (Italy/Spain), and the other €360 in low-interest, non-concessionary loans for members of the bloc.

REAL GDP GROWTH (YOY)



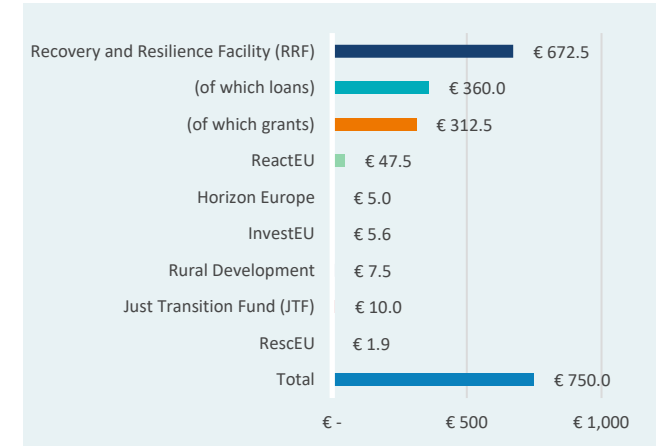
Source: Bloomberg, as of 3/31/20

INFLATION (CPI YOY)



Source: Bloomberg, inflation range of past 5 years, as of 5/31/20

E.U. STIMULUS PACKAGE (BILLIONS)



Source: European Council, as of 7/21/20

U.S.-China tensions escalating



Fixed income rates & credit

Interest rate environment

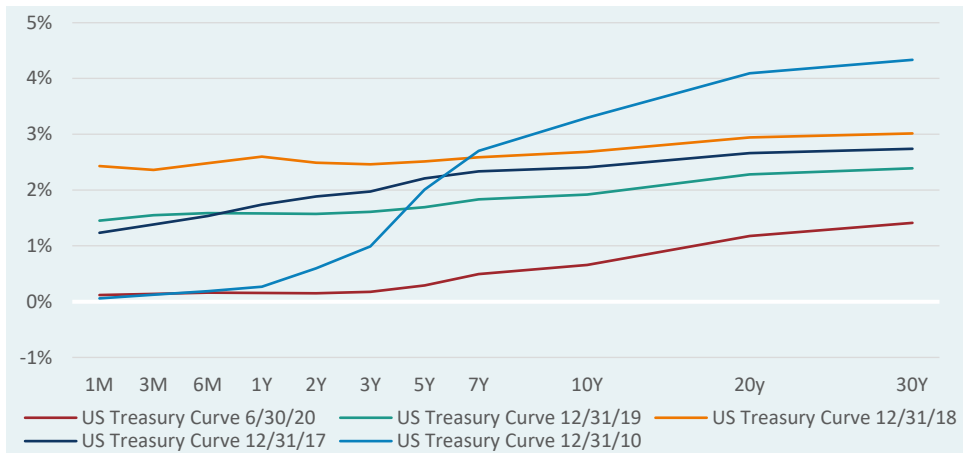
- The Federal Reserve continued to roll out the litany of support programs it announced in the first quarter. The Fed’s balance sheet grew from \$5.3 trillion to \$7.1 trillion over the second quarter.
- It appears the Federal Reserve may implement a yield curve control policy as a component of its policy toolkit. At the June Fed meeting, officials acknowledged that while setting intermediate-term yield caps may help strengthen short-term rate guidance, they remained concerned about several potential implications of beginning down that path.
- The Fed also expanded the list of eligible securities for purchase through its Primary and Secondary Market Credit Facilities to include corporate debt, either directly through companies or through exchange-traded funds. The Fed indicated that it would primarily target investment grade debt securities, and that it would also purchase certain non-investment grade debt from “fallen angels” which held investment-grade debt ratings prior to the pandemic.
- The European Central Bank increased the size of its Pandemic Emergency Purchase Programme from the initial €750 billion to a total of €1.35 trillion. The ECB will now be able to deploy the funds in a “flexible manner over time, across asset classes and among jurisdictions” through June 2021, which may help reduce borrowing costs.
- Real yields continued to decline around the globe as nominal sovereign bond yields were largely unchanged and longer-term inflation expectations recovered.
- Emerging market debt yields fell considerably in the second quarter, likely supported by disinflationary effects of the sell-off in commodities which emboldened central bankers to adopt more accommodative policy.

Area	Short Term (3M)	10-Year
United States	0.13%	0.66%
Germany	(0.56%)	(0.46%)
France	(0.52%)	(0.11%)
Spain	(0.49%)	0.46%
Italy	(0.29%)	1.26%
Greece	0.32%	1.20%
U.K.	0.01%	0.17%
Japan	(0.17%)	0.02%
Australia	0.21%	0.87%
China	1.74%	2.84%
Brazil	2.04%	6.83%
Russia	4.57%	5.92%

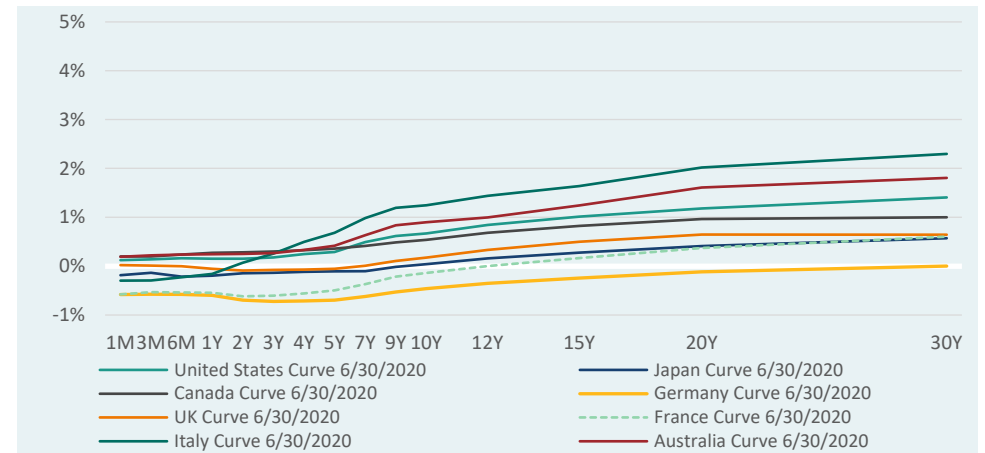
Source: Bloomberg, as of 6/30/20

Yield environment

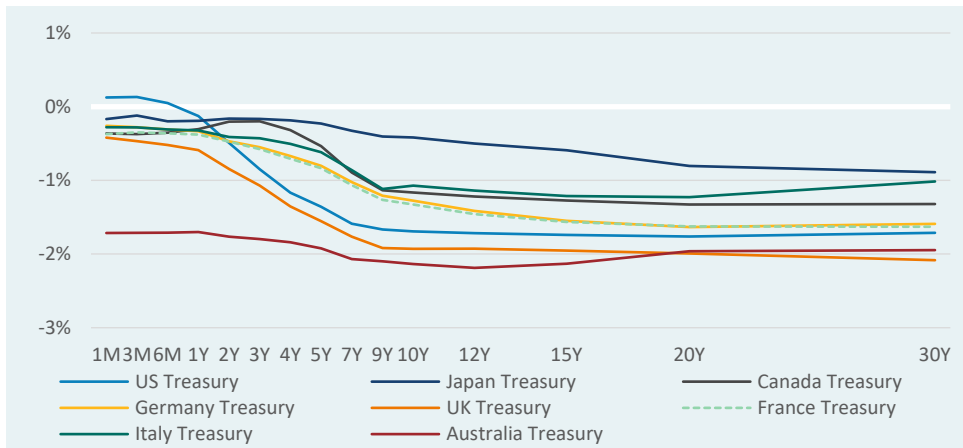
U.S. YIELD CURVE



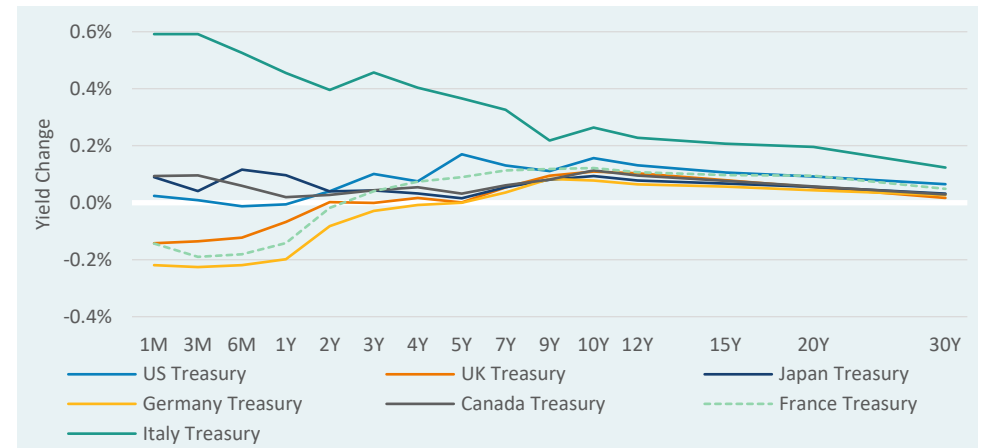
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/20

Credit environment

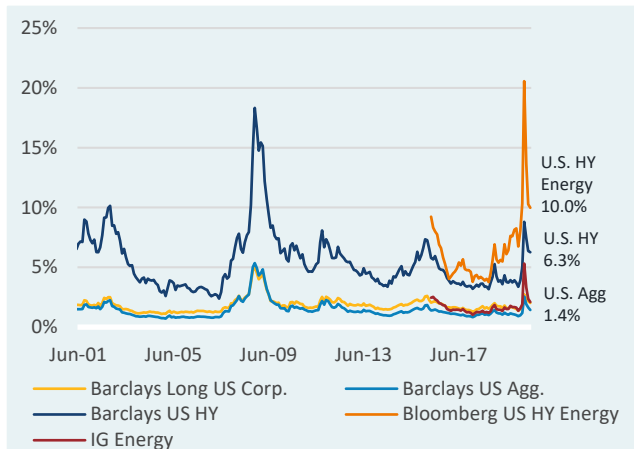
Despite historically weak economic data releases throughout Q2, a significant degree of confidence and liquidity was restored to credit markets due to continued support from the Federal Reserve, which ended the quarter with nearly \$10 billion in corporate debt on its balance sheet. Accordingly, credit markets displayed a dramatic recovery, with some of the worst performing sectors of Q1 leading the rebound. High yield and leveraged loans returned 10.2% and 9.7%, respectively, while the broad U.S. Credit Index returned 8.2%. Within U.S. credit, longer-duration and lower-quality issues tended to perform best.

of the first quarter, and high yield spreads moved from 880 bps to 626 bps.

U.S. investment grade downgrades slowed dramatically in June, with only two issuers deteriorating to high yield status. This was down from three issuers in May, five issuers in April, and a peak of 10 issuers in March. So far in 2020, a majority of downgrades have come from the energy and automotive sectors, which have contributed 40% and 25% of total fallen angels, respectively.

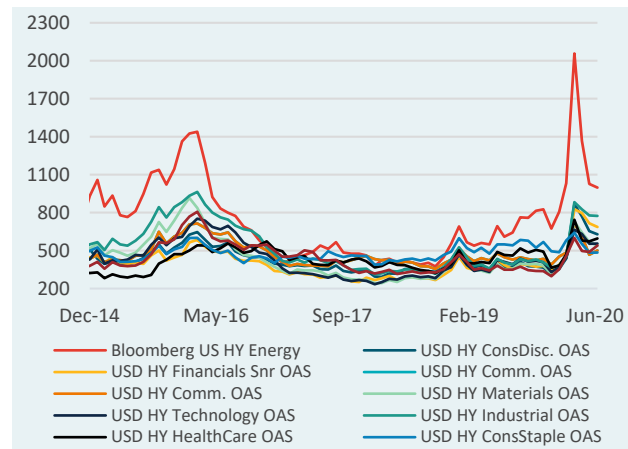
Credit spreads tightened across the board in Q2, as U.S. corporate investment grade tightened to 150 bps from 272 bps at the end

SPREADS



Source: Barclays, Bloomberg, as of 6/30/20

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/20

Market	Credit Spread (OAS)	
	6/30/20	6/30/19
Long U.S. Corp	2.0%	1.6%
U.S. Inv Grade Corp	1.5%	1.2%
U.S. High Yield	6.3%	3.8%
U.S. Bank Loans*	6.2%	4.4%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/20

*Discount margin (4-year life)

Default & issuance

The second quarter saw a broad upsurge in default activity with \$76.2 billion of defaults. This figure was only slightly below the \$76.6 billion worth of defaults seen in Q1 2009.

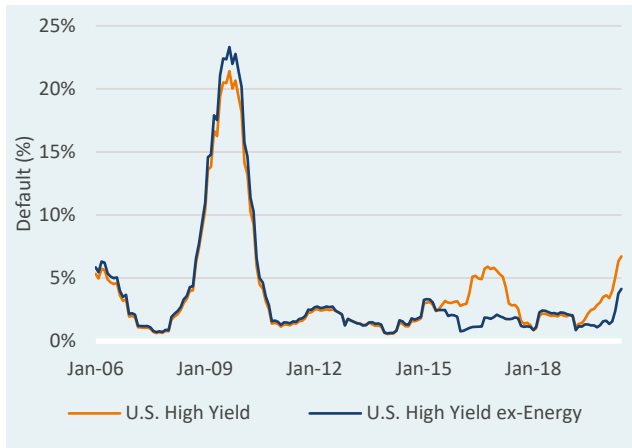
Through the first half of 2020, 60 companies defaulted which pushed the par-weighted U.S. high yield default rate to a 10-year high of 6.2%. The default rate of bank loans rose to 4.0% from 1.9% in Q1, remaining at a lower level than high yield largely due to less representation from the energy sector.

The energy sector continues to experience the greatest pain year-to-date, with 18 defaults/distressed transactions comprising 30% of the

\$106 billion total. The next hardest-hit sectors have been telecommunications (15.8%), cable & satellite (13.6%), and retail (10.4%).

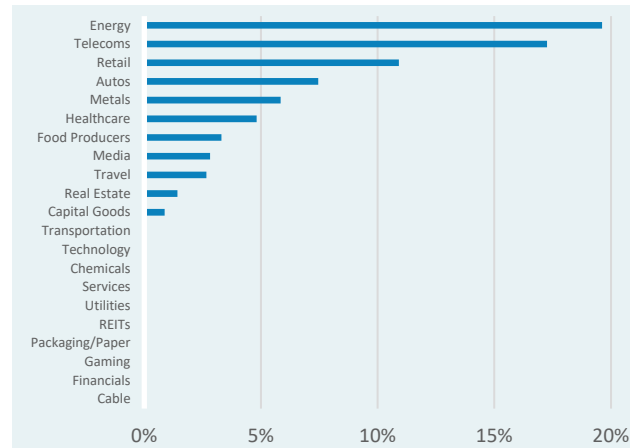
So far, 2020 has seen record issuance of investment grade and high yield bonds. Investment grade issuance peaked in April with \$284 billion of new issues, before falling back to a still elevated level of \$163 billion in June. Year-to-date net issuance of investment grade was \$781 billion, driven by a record \$1.2 trillion of new issuance. High yield has also seen aggressive new issuance, with \$218 billion over 330 new issues.

HY DEFAULT RATE (ROLLING 1-YEAR)



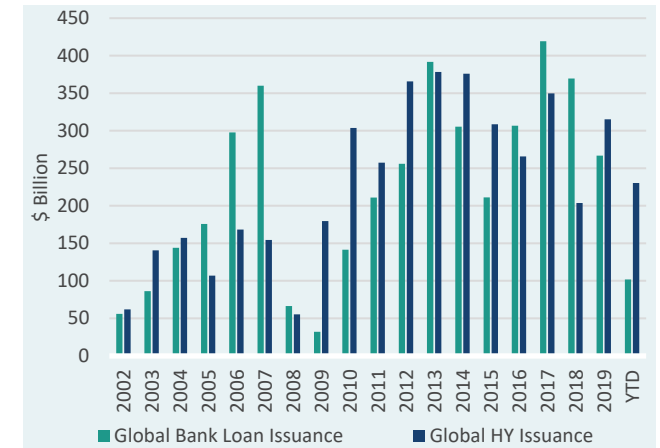
Source: BofA Merrill Lynch, as of 6/30/20

U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)



Source: BofA Merrill Lynch, as of 6/30/20 – par weighted

GLOBAL ISSUANCE (\$ BILLIONS)



Source: Bloomberg, BofA Merrill Lynch, as of 6/30/20

Equity

Equity environment

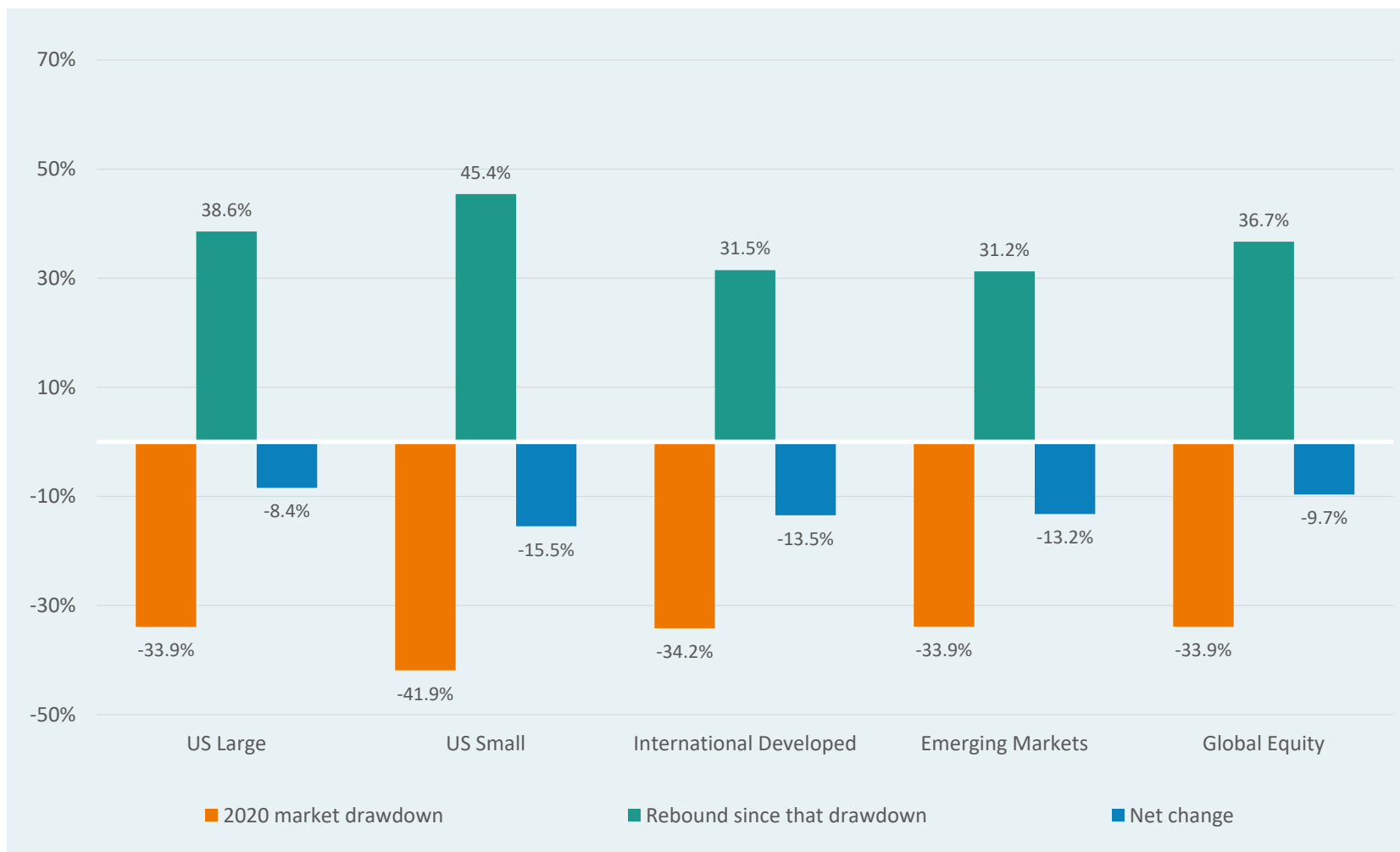
- U.S. equities delivered an incredible comeback, following the sudden sell-off in March. The S&P 500 rallied +20.5% in Q2, bringing year-to-date performance to -3.1%, and positive +7.5% over the past twelve months. International developed equities (MSCI EAFE +12.9% QTD, -5.1% YoY) and emerging market equities (MSCI EM +18.1% QTD, -3.4% YoY) lagged the domestic market.
- Most major equity benchmarks are within 15% of all-time highs, despite major damage that COVID-19 has inflicted on the global economy. Some of this damage has been mitigated by government support, but some damage is likely yet to be felt.
- According to FactSet, the estimated S&P 500 year-over-year decline in earnings for Q2 is -43.8%. This would mark the largest decline in earnings since Q4 2008 (-69.1%).
- Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85.0 on March 18th, and closing June at 30.4.
- The U.S. dollar weakened in Q2, falling -2.3% according to the Bloomberg Dollar Spot Index. The market recovery (less demand for save-haven currencies) and materially lower U.S. interest rates (less attractive U.S. Dollar) have likely contributed to the move.
- Growth stocks beat value stocks for the ninth consecutive month. The Russell 1000 Growth Index (+27.8%) outperformed the Russell 1000 Value Index (+14.3%). Sector performance disparity continues to impact the behavior of value. While energy delivered outsized returns relative to the overall index, other value-tilted sectors such as utilities and financials delivered poor performance.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	20.5%		7.5%	
US Small Cap (Russell 2000)	25.4%		(6.6%)	
US Large Value (Russell 1000 Value)	14.3%		(8.8%)	
US Large Growth (Russell 1000 Growth)	27.8%		23.3%	
International Large (MSCI EAFE)	14.9%	12.9%	(5.1%)	(2.1%)
Eurozone (Euro Stoxx 50)	20.1%	17.8%	(6.4%)	(2.7%)
U.K. (FTSE 100)	9.0%	9.2%	(15.9%)	(12.2%)
Japan (NIKKEI 225)	17.9%	18.2%	6.6%	9.0%
Emerging Markets (MSCI Emerging Markets)	18.1%	16.6%	(3.4%)	1.7%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/20

Equity market peak-to-trough

Equity markets around the world have recovered most of their losses



As of 6/30/20 - "Peak-to-trough" is defined as the total loss from the highest value achieved in 2020 to the lowest value achieved following the COVID-19 market drawdown. "Net change" is the difference between the market price on June 30th and the highest value achieved in 2020. Indexes include: S&P 500, Russell 2000, MSCI EAFE, MSCI Emerging Markets, MSCI ACWI.

Domestic equity

U.S. equities delivered an incredible comeback, following the sudden and significant sell-off in March. The S&P 500 rallied +20.5% in the second quarter, bringing the year-to-date performance to -3.1%, and positive +7.5% over the past year.

While the Consumer Discretionary (+32.9%) and IT (+30.5%) sectors did post outsized performance, participation in the rebound was broad-based and not confined to mega-cap tech names such as Amazon. The S&P 500 Equal-Weighted Index outperformed the S&P 500 Index by 1.2%.

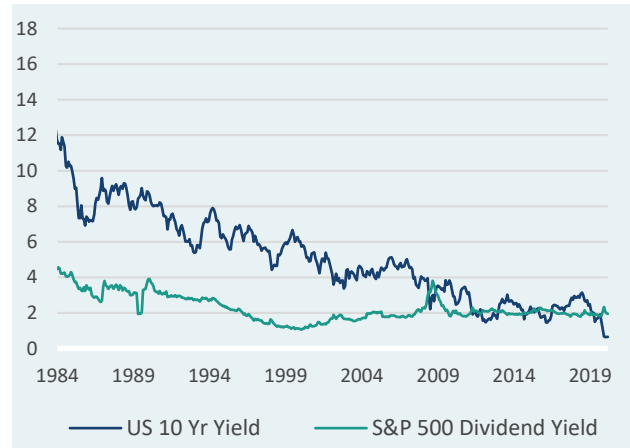
U.S. Treasury yields have moved closer to zero in 2020, which has reignited an ongoing discussion around the extent to which this dynamic will affect the equity market. We believe that the recent decline in interest rates should foundationally have a lifting effect on the value of equities, all else equal, since the value of a stock equals the present value of all future cash flows from that stock (lower interest rates result in higher present values). Generationally-low interest rates also create difficulties in holding higher quality fixed income due to inherent drag on portfolio performance. This potentially puts pressure on investors to make larger allocations to risky assets.

S&P 500



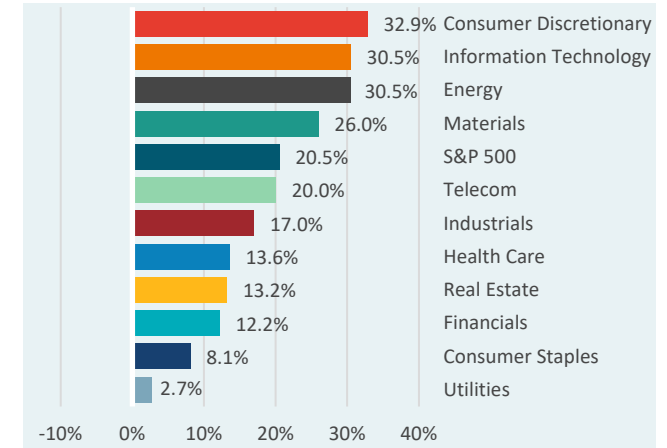
Source: Standard & Poor's, as of 6/30/20

DIVIDEND YIELD VS BOND YIELD



Source: Standard & Poor's, as of 6/30/20

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/20

Domestic equity size & style

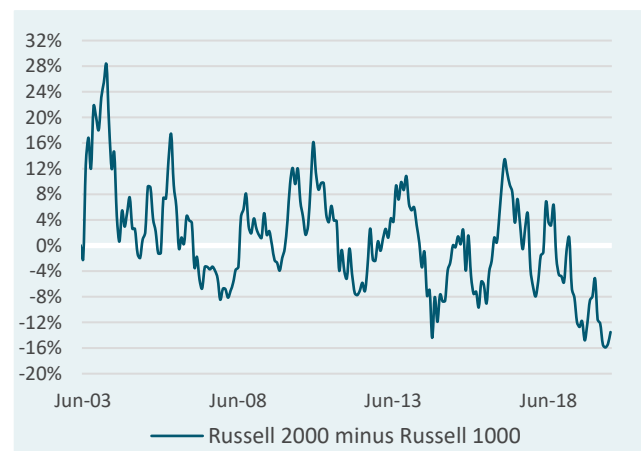
Growth stocks beat value stocks for the ninth consecutive month. The Russell 1000 Growth Index (+27.8%) outperformed the Russell 1000 Value Index (+14.3%). Small stocks beat large during the quarter (Russell 2000 +25.4%, Russell 1000 +21.8%), but continue to lag significantly over the longer-term.

Sector performance disparity continues to impact the behavior of value. While energy (+32.6%) delivered outsized returns over the quarter relative to the overall index (+21.8%), other value-tilted sectors such as financials (+16.3%), consumer staples (+9.0%), and utilities (+4.0%)

presented a drag on overall index performance.

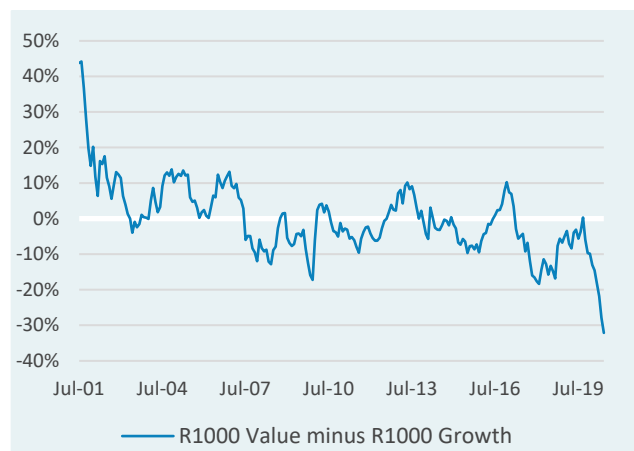
We believe it is extremely difficult to successfully make short-term bets on style factors. Factor performance can be incredibly noisy and vulnerable to sector randomness. Value has become historically cheap, to arguably attractive levels, though a catalyst for a value turnaround is not yet evident. We are watching closely the developments in this space to identify potential opportunities. However, we continue to believe that consistent long-term exposure to the value factor is an ideal implementation approach for most investors, most of the time.

SMALL CAP VS LARGE CAP (YOY)



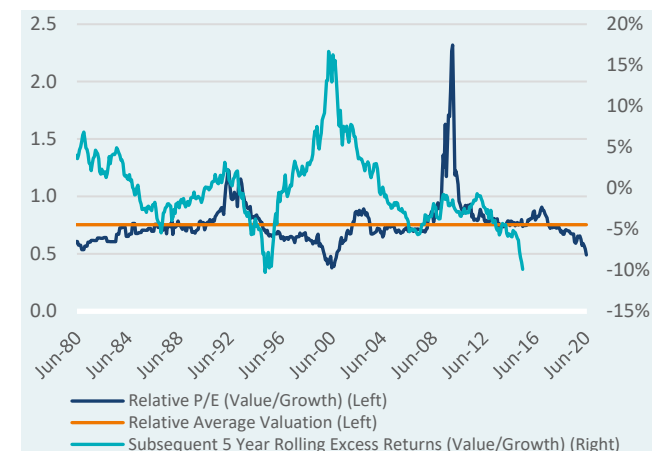
Source: FTSE, as of 6/30/20

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/20

VALUE APPEARS HISTORICALLY CHEAP



Source: Russell, Bloomberg, as of 6/30/20

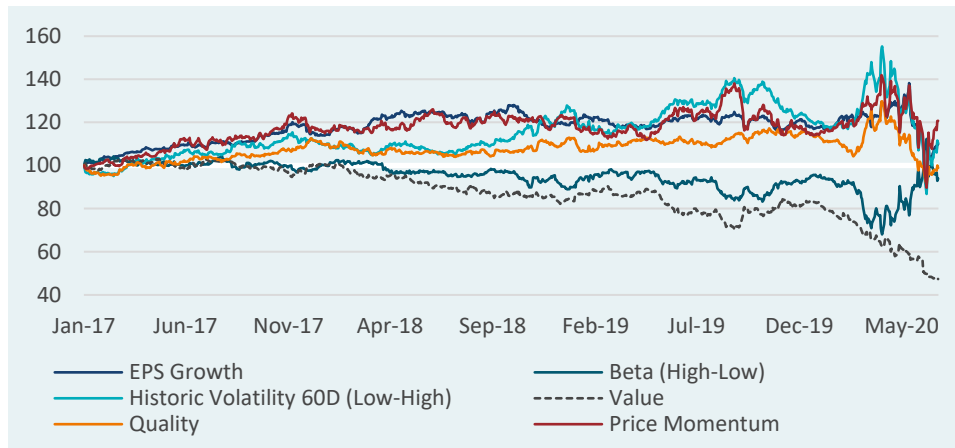
Equity factor monitor

A significant rotation into higher beta, higher volatility, and/or lower quality (long/short, sector neutral, S&P 500 Index quintiles) stocks occurred during the second quarter. The change in investor preferences began in early April and was likely triggered by a combination of extraordinary central bank intervention, along with better than initially expected economic news and COVID-19 pandemic-related data. The rotation began moderating in mid-June as higher quality stocks bounced back.

From a longer-term perspective, the Q2 rotation did not come close to reversing the longer-term positive results accruing to the momentum and low volatility equity factors.

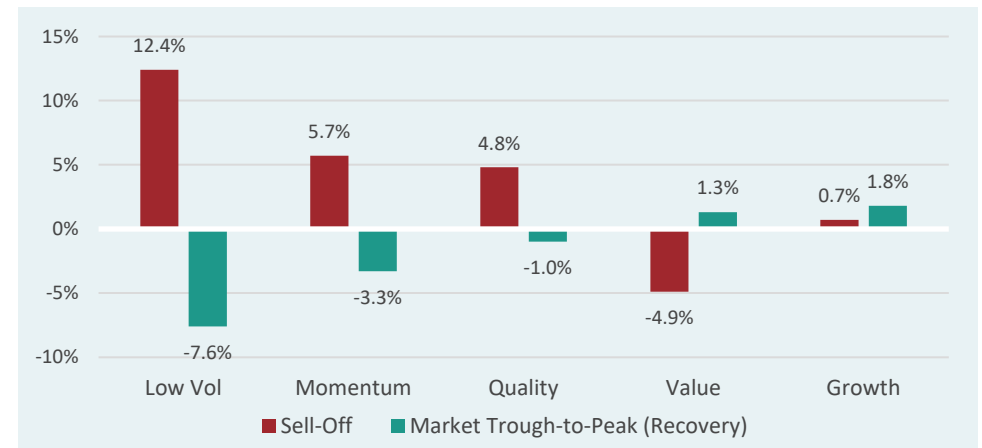
The value factor continued its long-term run of weak results during the quarter. Some have speculated that the value factor returns may benefit from a change in market regime from the current low growth and inflation backdrop to an environment of higher growth and inflation. The rise of factor-focused investing through dedicated smart beta ETFs could also be playing a role. Historical analysis suggests growth is the only factor showing relatively low sensitivity to both upturns and downturns. This analysis also indicates that low volatility, momentum, and quality factors were better protectors of capital during sell-offs.

FACTOR PERFORMANCE (INDEXED 1/2/2017=100)



Source: J.P. Morgan, as of 6/26/20

MEDIAN STYLE PERFORMANCE DURING MARKET SELL-OFF & RECOVERY



Source: J.P. Morgan, as of 6/26/20

International developed equity

Equity markets around the world delivered a surprisingly strong recovery in the second quarter, rising between 12% to 20%. U.K. equities have lagged, only rising +7.8% over the quarter and remained down -23.3% over the year-to-date. Eurozone equities were among the top performers (MSCI Euro +19.6%). However, international equities lagged domestic markets (S&P 500 +20.5%).

On a one-year basis, the volatility of currency markets detracted from the performance of investors with unhedged currency exposure. Investors in international developed

equities lost -3.0% due to currency movement (MSCI EAFE), and investors in emerging markets lost -5.1% (MSCI EM).

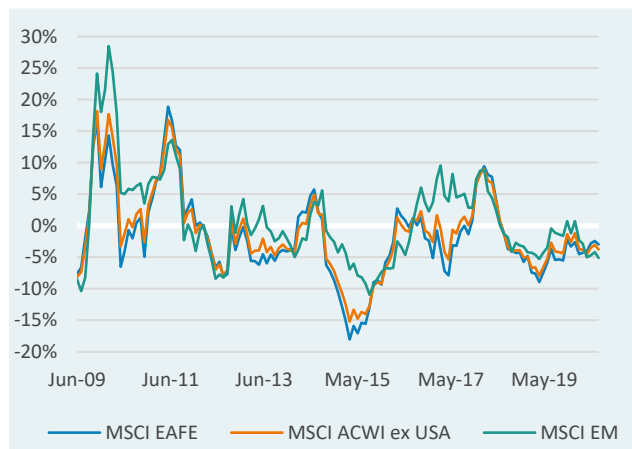
Earnings have fallen materially while equity prices recovered much of their losses. These two effects have led to a significant jump in equity valuations. This dynamic is not uncommon in environments where investors “look to the other side” of a crisis and generally expect tough conditions to be short-lived. With that said, if earnings do not recover to prior levels in a timely manner, investors may begin to question elevated multiples.

INTERNATIONAL DEVELOPED EQUITIES



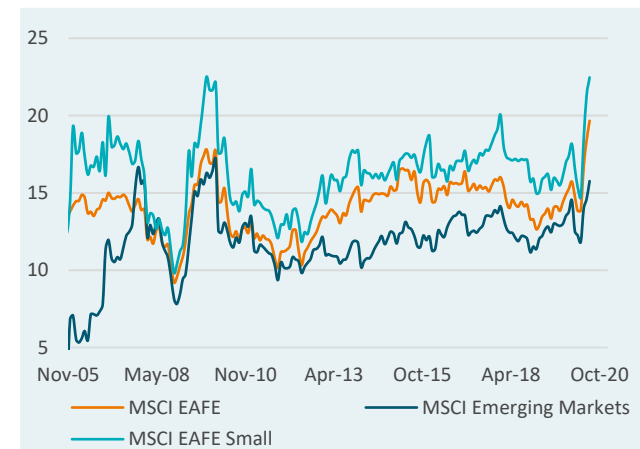
Source: MSCI, as of 6/30/20

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 6/30/20

FORWARD P/E



Source: MSCI, as of 6/30/20

Emerging market equity

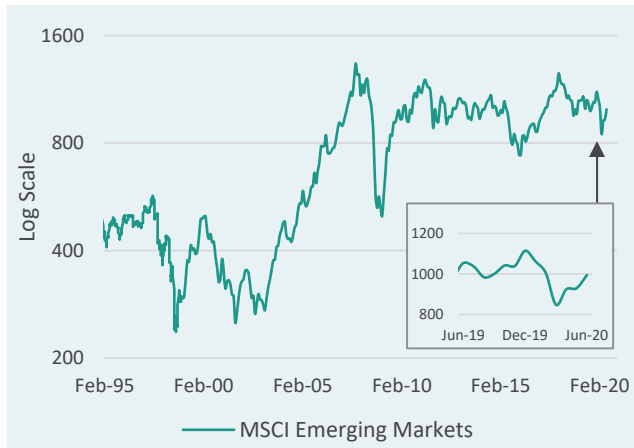
Emerging market equities (MSCI EM +18.1%) underperformed U.S. (S&P 500 +20.5%) while outperforming international developed equities (MSCI EAFE +14.9%) over the quarter. Within the emerging market complex, Latin American equities outperformed Asia over the quarter (MSCI EM Latin American +19.1% vs. MSCI EM Asia +17.8%) but underperformed year-to-date (-35.2% vs. -3.5%).

Low inflation in emerging economies may allow central banks more room to maneuver relative to developed economies with regard to the use of monetary policy in

encouraging economic growth during the global slowdown.

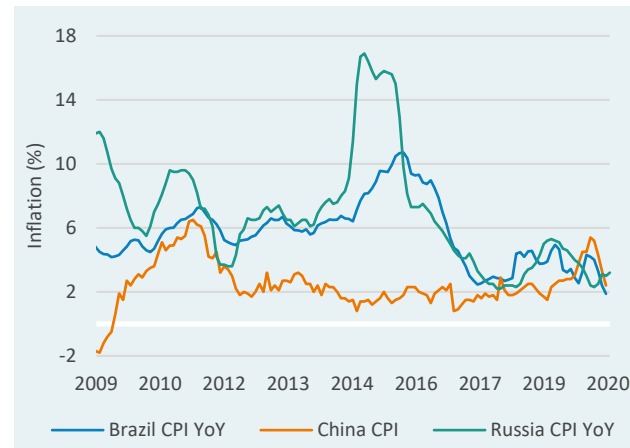
Emerging currencies appreciated in Q2, which was additive to performance (MSCI EM Unhedged +18.1%, MSCI EM Hedged +16.6%). The significant depreciation of the Brazilian real and Turkish lira provided material headwinds for the performance of U.S. investors who have unhedged exposure to emerging markets. On the other hand, the Russian ruble saw large gains as the currency benefitted from rising oil prices.

EMERGING MARKET EQUITY



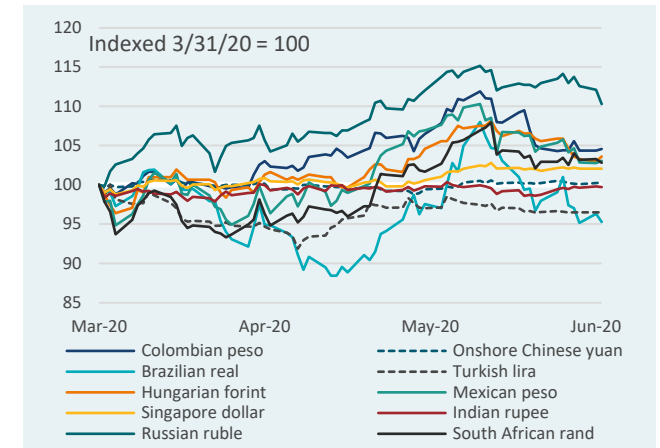
Source: MSCI, as of 6/30/20

INFLATION (YOY)



Source: Bloomberg, as of 6/30/20

J.P. MORGAN EMCI CONSTITUENTS (VS. USD)



Source: Bloomberg, as of 6/30/20

Equity valuations

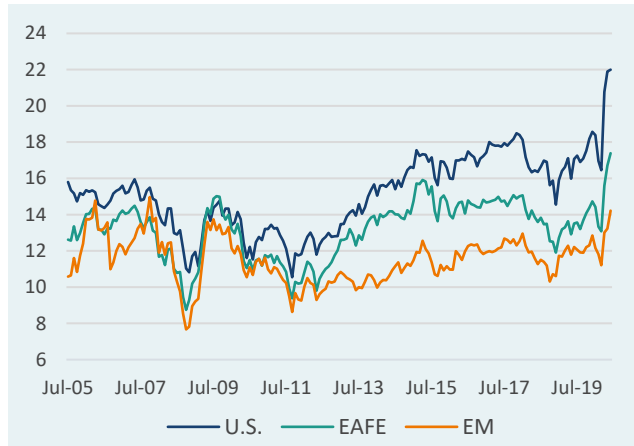
Equity valuations fell in Q1 alongside the broad market selloff. In Q2, valuations reflated significantly as investors seemed to interpret the pandemic-induced earnings recession as more temporary in nature.

Equity prices are typically viewed as the present value of the sum of future cash flows. If the earnings drawdown is indeed temporary and “v-shaped” in nature, this implies mathematically a more modest loss of equity value. Furthermore, near zero interest rates in the developed world likely offset some of this impact (lower interest rates increase

the present value of equity). While we do not necessarily disagree with the argument that the equity rebound has been *too much too soon*, these two effects (potentially quick recovery but very low interest rates) may help us to better understand the recent rally.

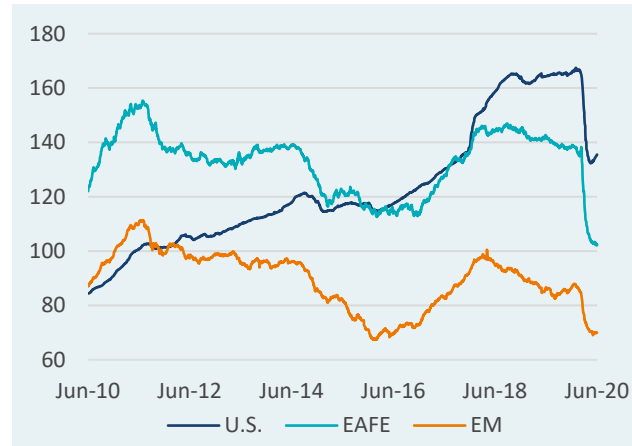
Expected earnings over the next 12 months appear to have bottomed in the United States and look close to bottoming for the international developed and emerging markets. These expectations may provide some stability to equity valuations in the coming months.

FORWARD P/E RATIOS



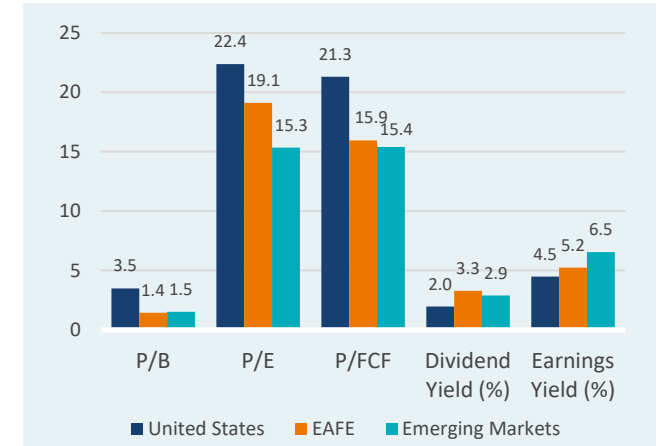
Source: MSCI, 12m forward P/E, as of 3/31/20

BLENDED FORWARD 12-MONTH EPS ESTIMATES



Source: MSCI, 12m forward EPS, as of 6/30/20

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 6/30/20 - trailing P/E

Equity volatility

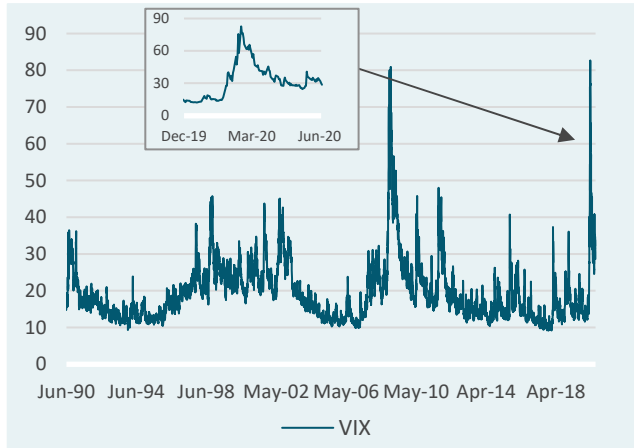
Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85.0 on March 18th, and closing June at 30.4.

The VIX futures curve, which reflects expectations for future implied volatility of S&P 500 Index options, has taken on an inverted “v-shape” over the next six months, indicating market participants are pricing in higher S&P 500 volatility toward the end of the year around the U.S. election. After October, the market expectation is for volatility to subside

considerably. In normal circumstances, the VIX futures curve exhibits a moderate upward slope due to the skewed and mean-reverting nature of volatility generally (it is low most of the time, though there are occasional, large, short-lived spikes).

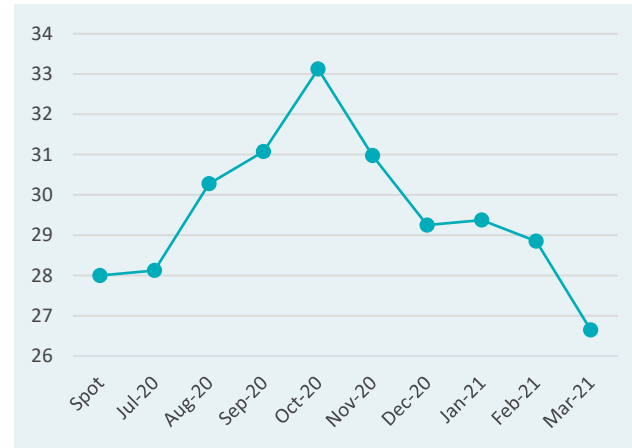
In the first quarter, the implied volatility on S&P 500 Index out-of-the-money put options spiked relative to similarly out-of-the-money call options, indicating investor preference for downside protection. That preference faded over the second quarter, but remained fairly strong relative to recent history.

U.S. IMPLIED VOLATILITY (VIX)



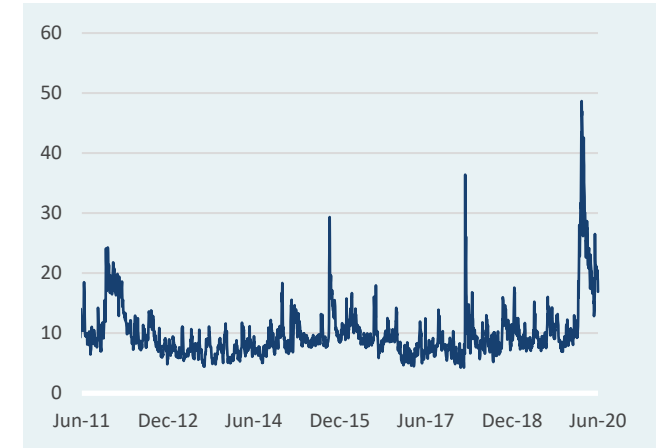
Source: CBOE, as of 6/30/20

VIX FUTURES CURVE



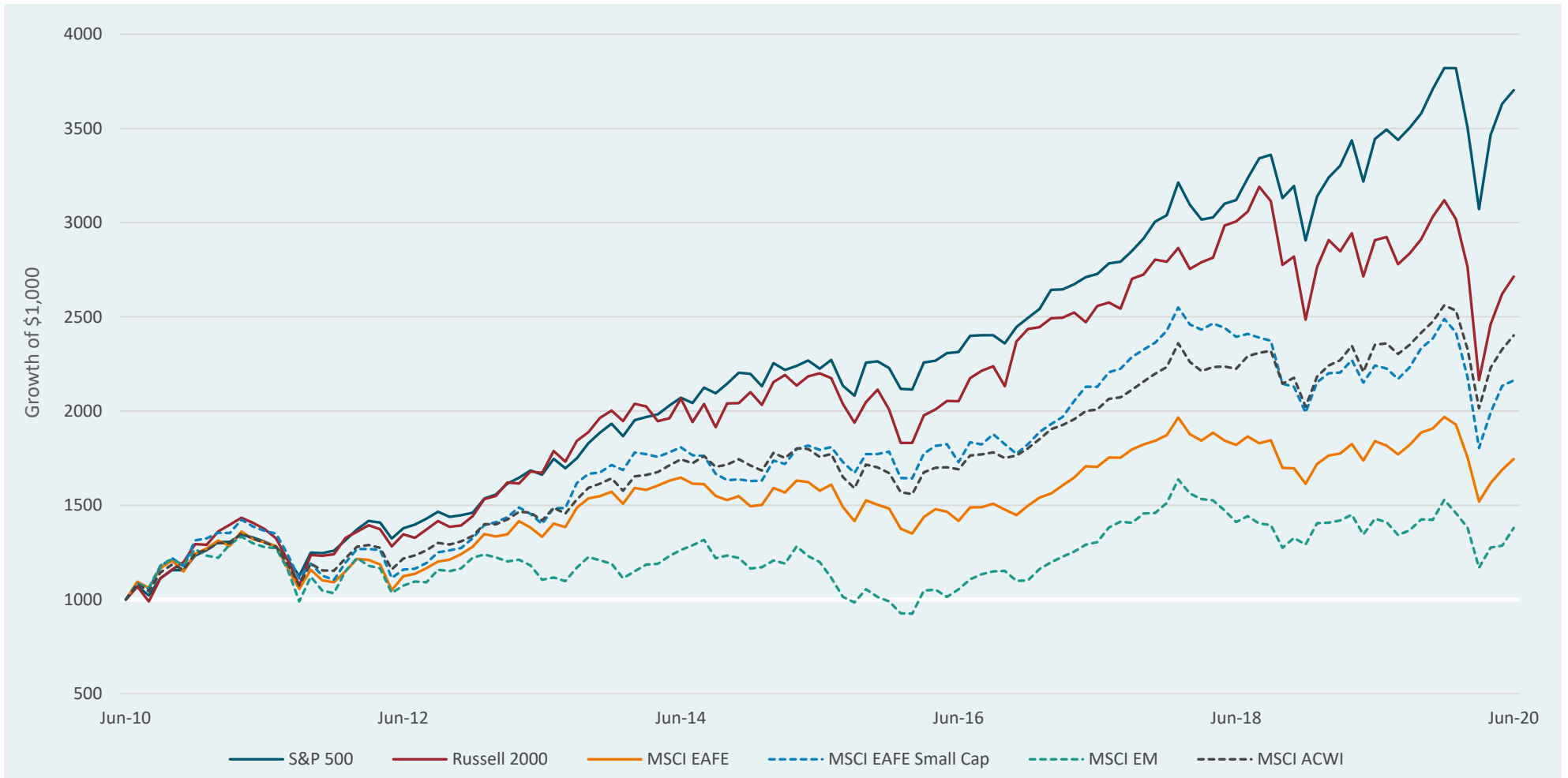
Source: CBOE, Bloomberg, as of 6/30/20

30-DAY 10-DELTA SKEW (S&P 500 OPTIONS)



Source: CBOE, Bloomberg, as of 6/30/20

Long-term equity performance



Source: Morningstar, as of 6/30/20

Other assets

Currency

The U.S. dollar weakened in the second quarter, falling -2.3% according to the Bloomberg Dollar Spot Index. The dollar fell -2.4% against the Euro, appreciated +0.4% against the British pound, and fell -0.1% relative to the Japanese yen. The market recovery (less demand for safe-haven currencies) and materially lower U.S. interest rates (less attractive U.S. dollar) have likely contributed to the move lower.

As the euro strengthened in Q2, some currency analysts have adopted a more optimistic view on the common currency. Improved macroeconomic conditions relative to the United

States, the potential implications of a strong cyclical rebound, as well as the ECB's apparent unwillingness to push rates much lower below 0%, may be leading to euro appreciation.

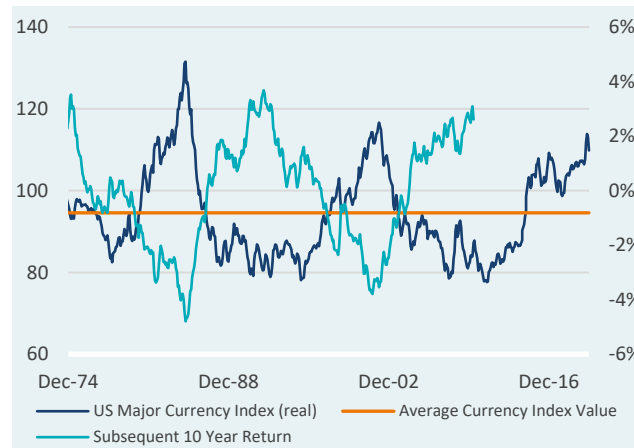
The MSCI Currency Factor Mix Index, constructed as a combination of individual currency factor indices (carry, value, momentum) declined 1.7% in Q2. The momentum factor (-7.8%) drove declines in the overall index as the U.S. dollar began to weaken relative to other major currency pairs following a period of strong appreciation.

BLOOMBERG DOLLAR SPOT INDEX



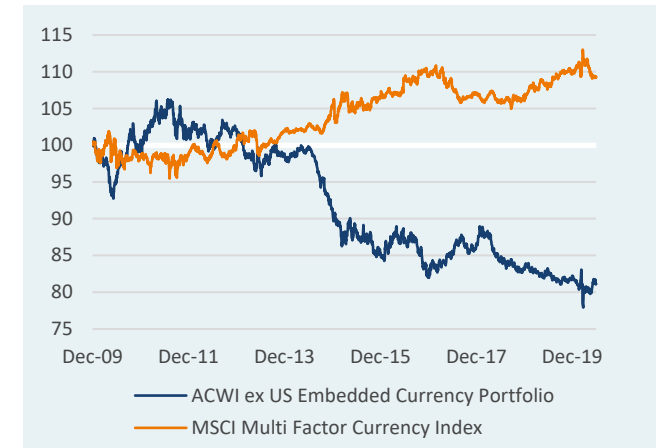
Source: Bloomberg, as of 6/30/20

USD CURRENCY LEVEL & SUBSEQUENT RETURN



Source: Federal Reserve, as of 6/30/20

EMBEDDED CURRENCY VS CURRENCY BETA



Source: MSCI, Bloomberg, as of 6/30/20

Commodities

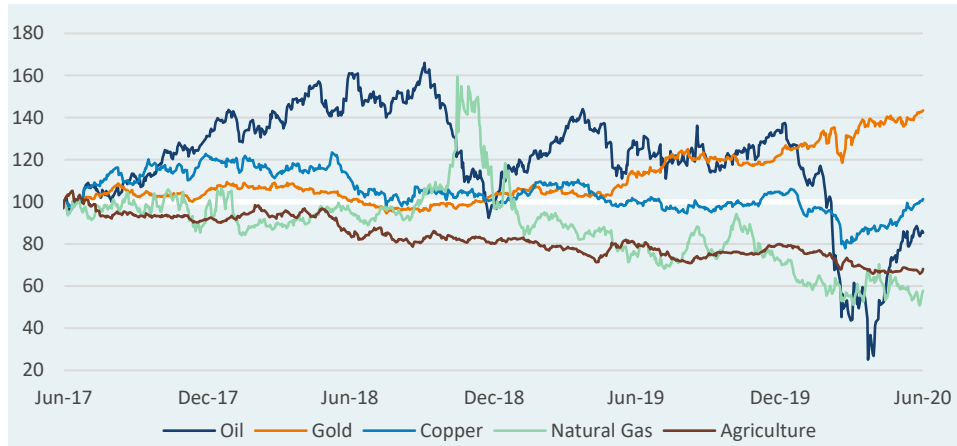
The Bloomberg Commodity Index returned 5.1% in the second quarter, though the index remains depressed year-to-date (-19.4%). A global recession driven by COVID-19 has led to an unprecedented industrial slowdown, severely impacting the demand for energy. The energy (-46.3%) and petroleum (-49.8%) components of the index have dragged performance lower year-to-date.

Gold prices climbed higher during Q2 amidst a backdrop of heightened geopolitical and economic uncertainty, lower global real yields (which diminish the opportunity cost of holding gold), and a weakening U.S. dollar. Spot gold prices

rose from \$1577/oz to \$1781/oz, their highest level since 2011, and have returned 17.1% so far this year. Industrial metals (+12.3%) were bid higher in the second quarter alongside oil, perhaps on enthusiasm around reopening plans and a possible economic rebound. Copper (+21.2%) experienced supply-side tailwinds as COVID-19 spread through Peru, raising production concerns.

Some of the poor recent performance of commodities has been caused by an upward sloping futures curve, which can generate losses due to negative “roll return”. Unattractive futures curve shape continues to contribute to performance.

COMMODITY PERFORMANCE



Source: Bloomberg, as of 6/30/20

COMMODITIES ROLL RETURN



Source: Standard & Poor's, as of 6/30/20

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
Large Cap Growth	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	9.8	15.9	17.2
US Bonds	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	6.1	10.5	14.0
Real Estate	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	0.7	7.0	12.9
Cash	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	0.4	6.9	10.5
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	-2.3	5.5	10.4
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	-2.3	4.6	9.8
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	-2.8	4.3	7.8
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	-3.1	4.3	6.8
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	-9.8	2.9	5.7
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	-11.3	2.1	3.8
Small Cap Equity	-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	-13.0	1.4	3.3
Large Cap Value	-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	-16.3	1.3	2.7
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	-19.4	1.1	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	-23.5	-7.7	-5.8

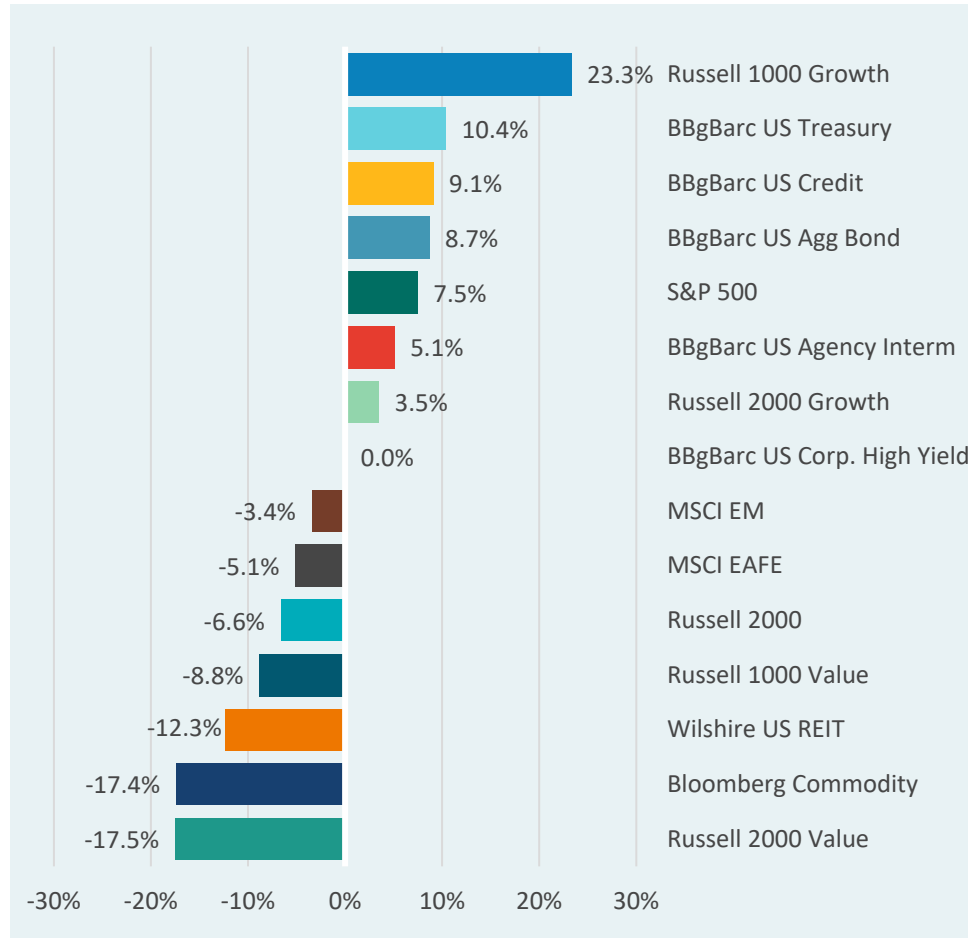
↓ WORST



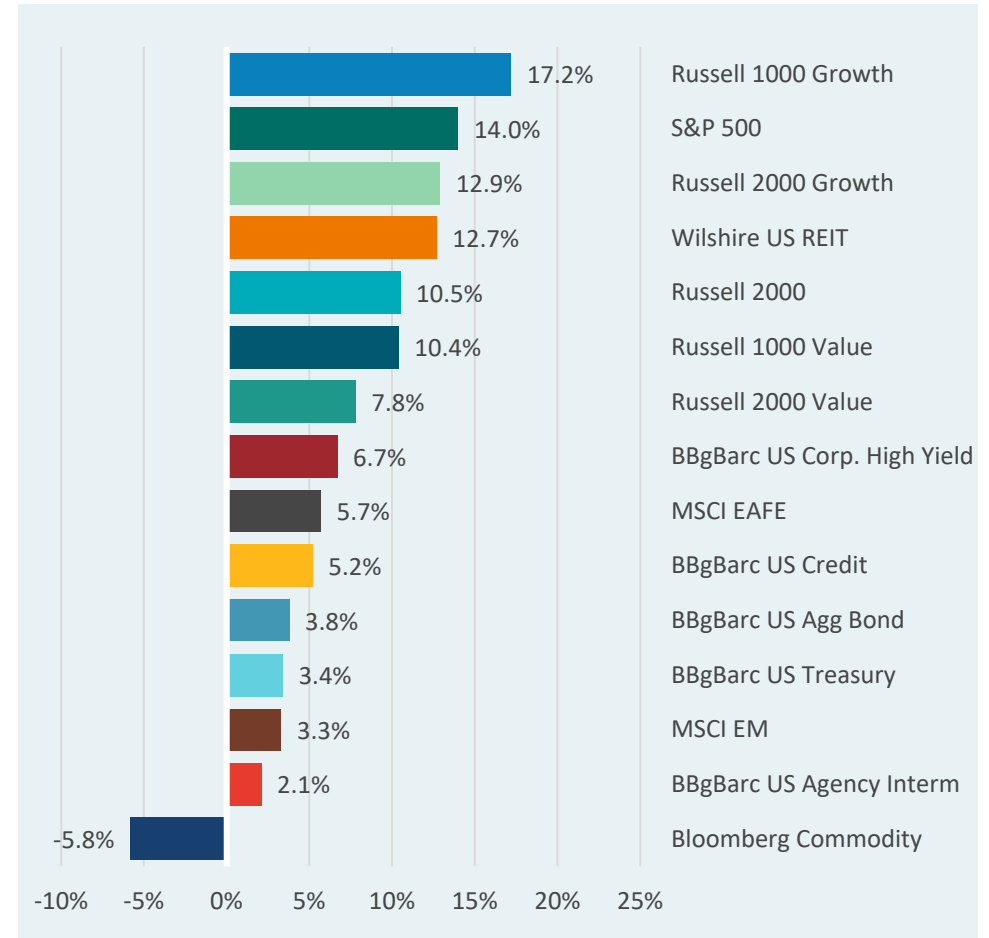
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill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

Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



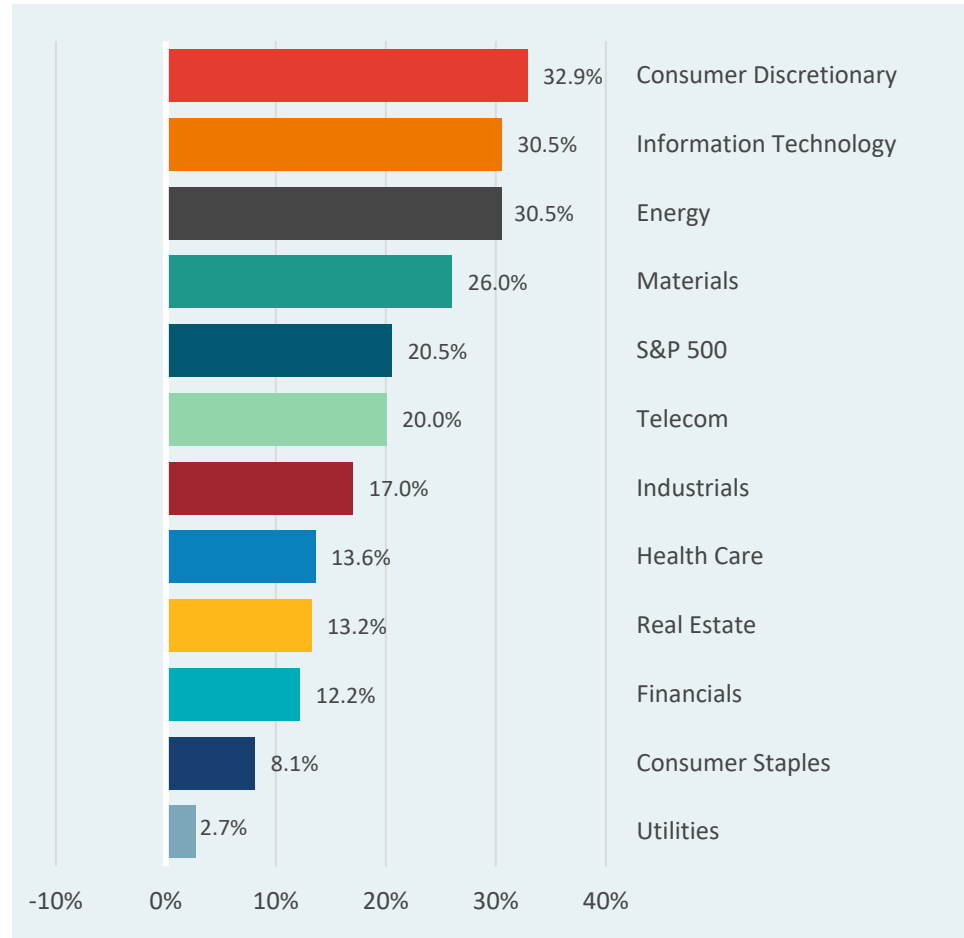
*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 6/30/20

Source: Morningstar, as of 6/30/20

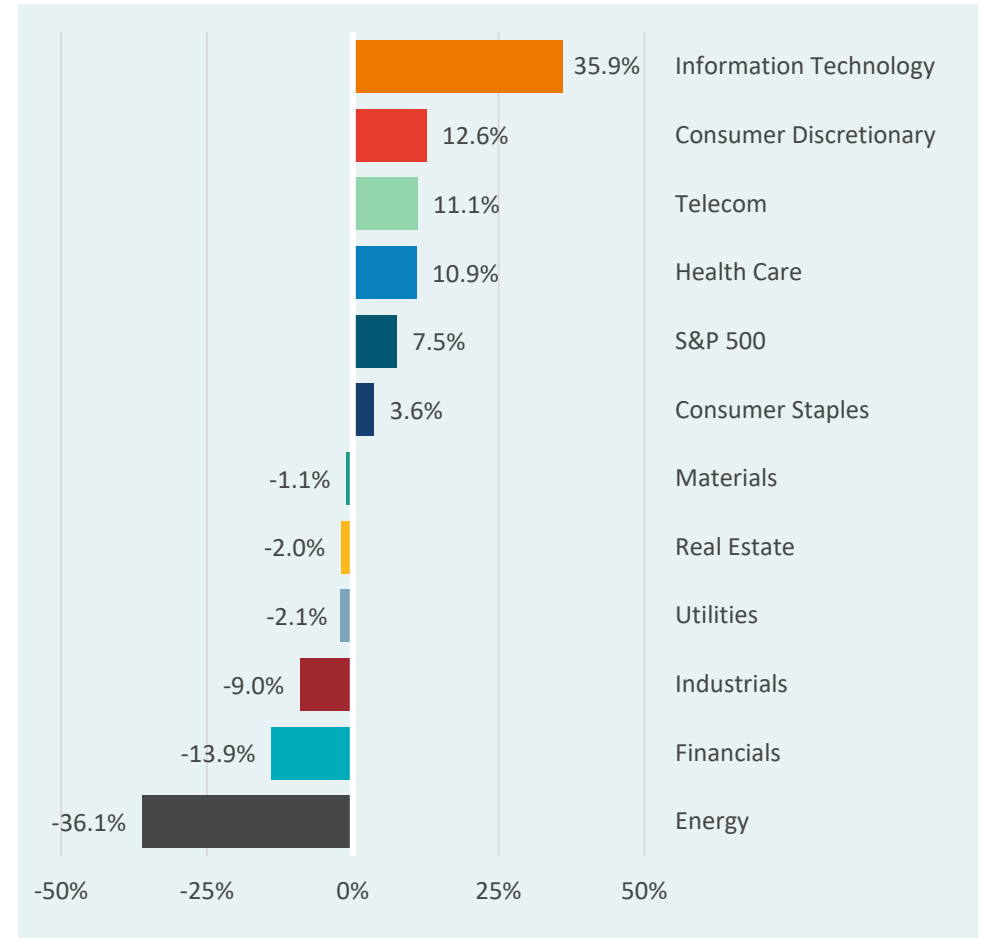
S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/20

ONE YEAR ENDING JUNE

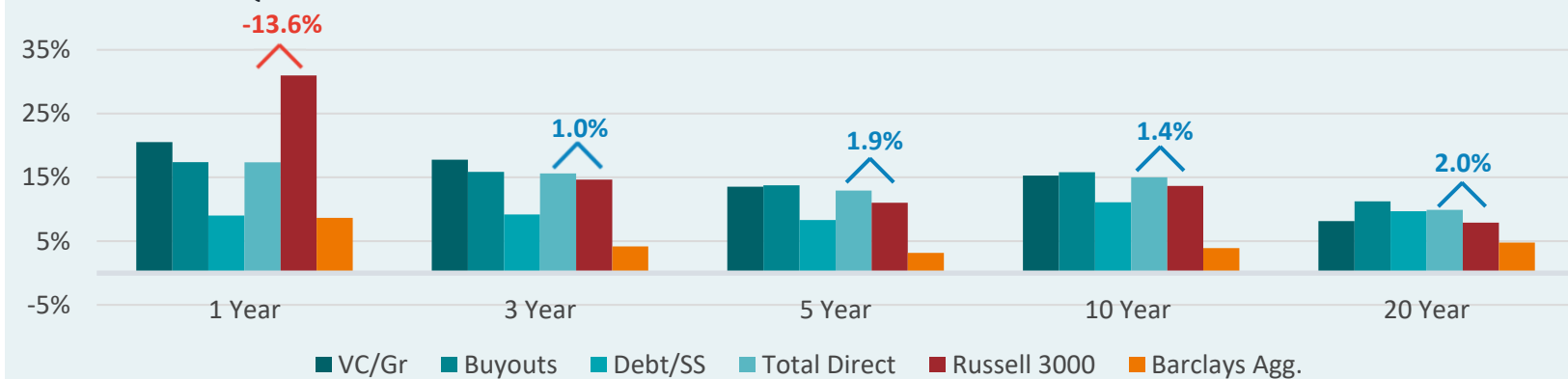


Source: Morningstar, as of 6/30/20

Private equity vs. public performance

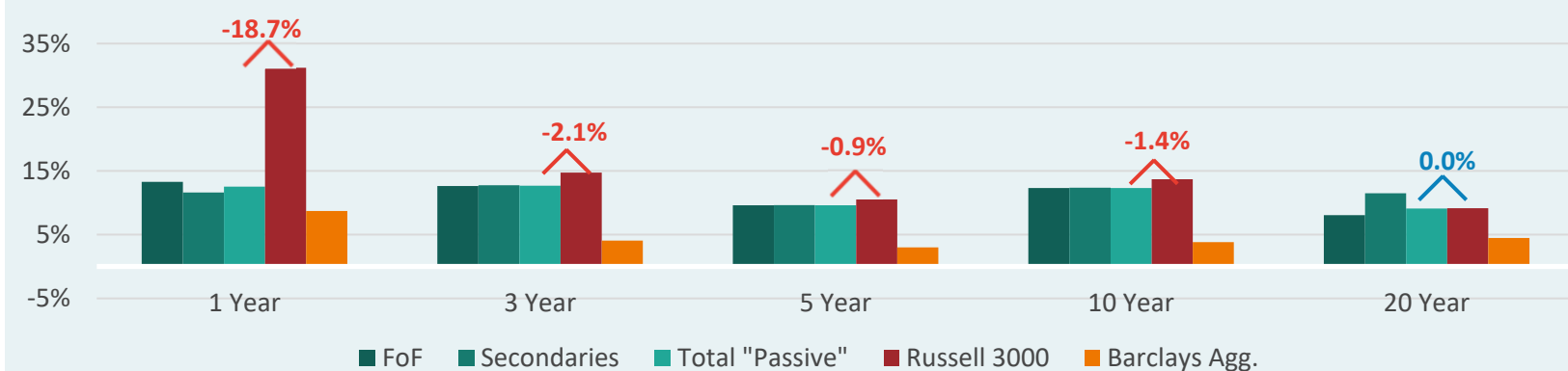
As of 12/31/2019

DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments outperformed comparable public equities across all time periods, except on a 1-year basis

"PASSIVE" STRATEGIES



"Passive" strategies underperformed comparable public equities across all time periods, except on a 20-year basis

Sources: Thomson Reuters Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of December 31, 2019. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

Private equity vs. liquid real assets performance

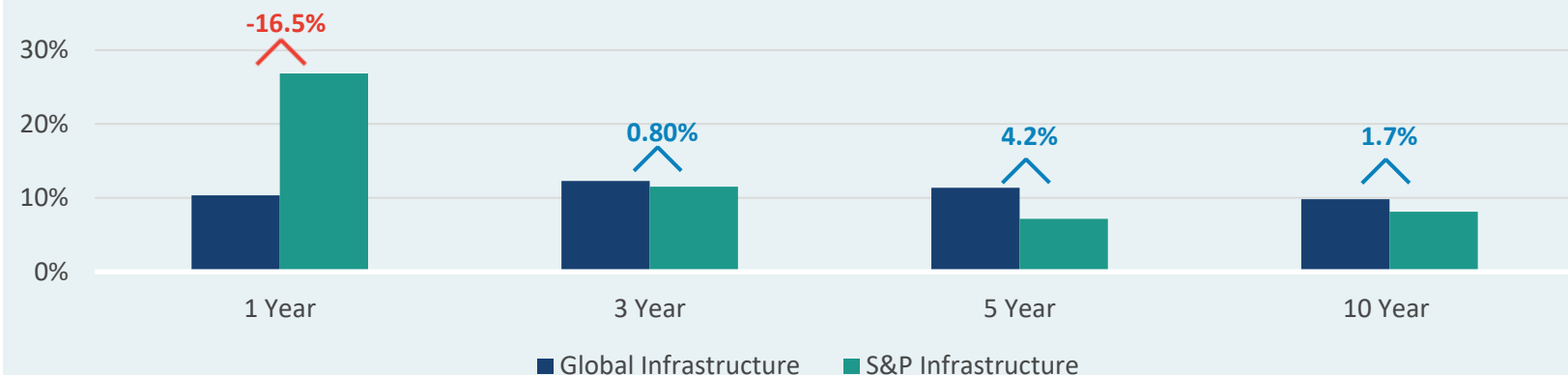
As of 12/31/2019

GLOBAL NATURAL RESOURCES FUNDS



N.R. funds underperformed the MSCI World Natural Resources benchmark across all time periods, except on a 10 year basis

GLOBAL INFRASTRUCTURE FUNDS



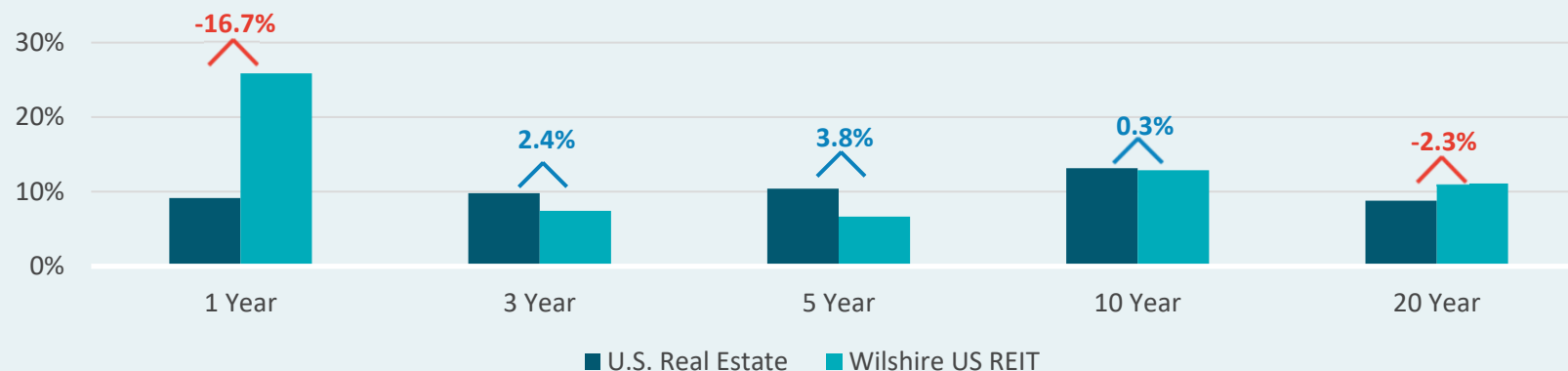
Infra. funds outperformed the S&P Infra. across all periods, except on a 1-year basis

Sources: Thomson Reuters CJA PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of December 31, 2019. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

Private vs. liquid & core real estate performance

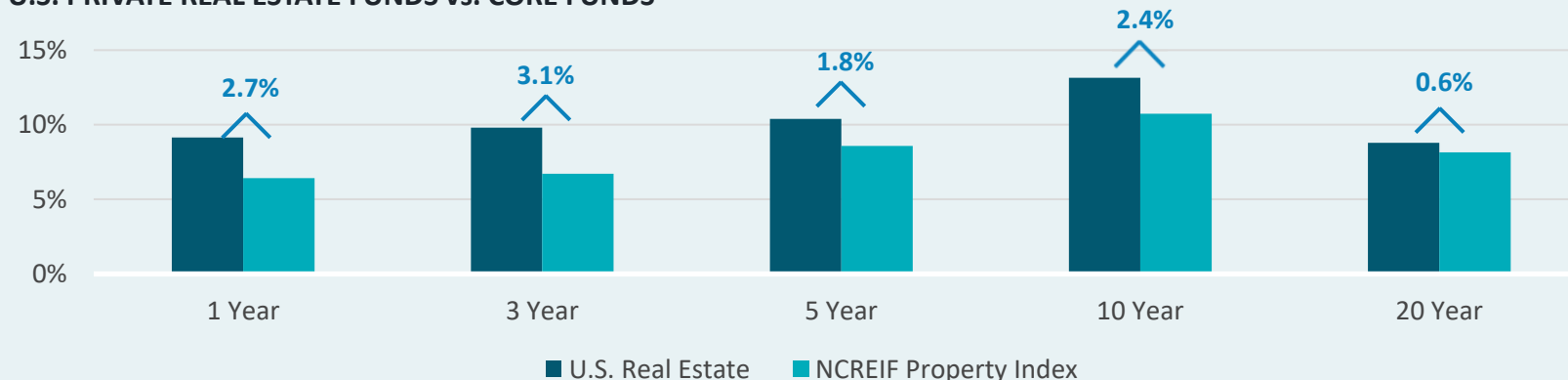
As of 12/31/2019

U.S. PRIVATE REAL ESTATE FUNDS vs. LIQUID UNIVERSE



U.S. Private R.E. funds underperformed the Wilshire U.S. REIT Index on a 1- and 20-year basis, but not over 3-, 5-, and 10-years basis.

U.S. PRIVATE REAL ESTATE FUNDS vs. CORE FUNDS



U.S. Private R.E. Funds outperformed the NCREIF Property Index over all time periods

Sources: Thomson Reuters C|A PME: U.S. Real Estate universes as of December 31, 2019. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	2.0	20.5	(3.1)	7.5	10.7	10.7	14.0
S&P 500 Equal Weighted	1.6	21.7	(10.8)	(3.2)	5.4	7.1	12.6
DJ Industrial Average	1.8	18.5	(8.4)	(0.5)	9.1	10.6	13.0
Russell Top 200	2.4	20.9	(0.5)	11.2	12.5	11.9	14.6
Russell 1000	2.2	21.8	(2.8)	7.5	10.6	10.5	14.0
Russell 2000	3.5	25.4	(13.0)	(6.6)	2.0	4.3	10.5
Russell 3000	2.3	22.0	(3.5)	6.5	10.0	10.0	13.7
Russell Mid Cap	1.8	24.6	(9.1)	(2.2)	5.8	6.8	12.3
Style Index							
Russell 1000 Growth	4.4	27.8	9.8	23.3	19.0	15.9	17.2
Russell 1000 Value	(0.7)	14.3	(16.3)	(8.8)	1.8	4.6	10.4
Russell 2000 Growth	3.8	30.6	(3.1)	3.5	7.9	6.9	12.9
Russell 2000 Value	2.9	18.9	(23.5)	(17.5)	(4.3)	1.3	7.8

INTERNATIONAL EQUITY

Broad Index							
MSCI ACWI	3.2	19.2	(6.3)	2.1	6.1	6.5	9.2
MSCI ACWI ex US	4.5	16.1	(11.0)	(4.8)	1.1	2.3	5.0
MSCI EAFE	3.4	14.9	(11.3)	(5.1)	0.8	2.1	5.7
MSCI EM	7.4	18.1	(9.8)	(3.4)	1.9	2.9	3.3
MSCI EAFE Small Cap	1.4	19.9	(13.1)	(3.5)	0.5	3.8	8.0
Style Index							
MSCI EAFE Growth	3.2	16.9	(3.5)	4.2	5.9	5.5	7.8
MSCI EAFE Value	3.6	12.4	(19.3)	(14.5)	(4.4)	(1.6)	3.5
Regional Index							
MSCI UK	1.4	7.8	(23.3)	(17.7)	(3.9)	(2.5)	3.9
MSCI Japan	(0.0)	11.6	(7.1)	3.1	3.0	3.4	6.1
MSCI Euro	6.2	19.6	(12.7)	(7.7)	(0.9)	1.6	5.0
MSCI EM Asia	8.2	17.8	(3.5)	4.9	4.1	4.8	5.8
MSCI EM Latin American	5.3	19.1	(35.2)	(32.5)	(7.2)	(3.2)	(3.8)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	1.1	4.2	6.0	8.3	5.0	3.7	3.5
BBgBarc US Treasury Bills	0.0	0.0	0.7	1.7	1.8	1.2	0.7
BBgBarc US Agg Bond	0.6	2.9	6.1	8.7	5.3	4.3	3.8
Duration							
BBgBarc US Treasury 1-3 Yr	0.0	0.2	3.0	4.1	2.7	1.9	1.3
BBgBarc US Treasury Long	0.1	0.2	21.2	25.4	12.0	9.3	7.7
BBgBarc US Treasury	0.1	0.5	8.7	10.4	5.6	4.1	3.4
Issuer							
BBgBarc US MBS	(0.1)	0.7	3.5	5.7	4.0	3.2	3.1
BBgBarc US Corp. High Yield	1.0	10.2	(3.8)	0.0	3.3	4.8	6.7
BBgBarc US Agency Interm	0.1	0.8	3.7	5.1	3.3	2.5	2.1
BBgBarc US Credit	1.8	8.2	4.8	9.1	6.1	5.5	5.2

OTHER

Index							
Bloomberg Commodity	2.3	5.1	(19.4)	(17.4)	(6.1)	(7.7)	(5.8)
Wilshire US REIT	2.3	10.6	(17.8)	(12.3)	0.2	5.7	12.7
CS Leveraged Loans	1.3	9.7	(4.8)	(2.3)	2.1	4.6	5.0
Alerian MLP	(8.2)	47.2	(38.3)	(44.1)	(18.3)	(13.6)	(1.4)
Regional Index							
JPM EMBI Global Div	3.5	12.3	(2.8)	0.5	3.6	5.3	6.0
JPM GBI-EM Global Div	0.5	9.8	(6.9)	(2.8)	1.1	2.3	1.6
Hedge Funds							
HFRI Composite	1.9	9.0	(3.5)	(0.6)	2.1	2.3	3.7
HFRI FOF Composite	1.3	7.2	(2.3)	(0.2)	2.0	1.4	2.7
Currency (Spot)							
Euro	1.0	2.4	0.1	(1.4)	(0.5)	0.2	(0.9)
Pound	(0.1)	(0.4)	(6.7)	(2.9)	(1.7)	(4.7)	(1.9)
Yen	(0.1)	0.1	0.7	(0.1)	1.4	2.6	(2.0)

Source: Morningstar, HFR, as of 6/30/20

Definitions

Bloomberg US Weekly Consumer Comfort Index - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. (www.lanqerresearch.com)

University of Michigan Consumer Sentiment Index - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. (www.Bloomberg.com)

NFIB Small Business Outlook - Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (<http://www.nfib-sbet.org/about/>)

NAHB Housing Market Index - the housing market index is a weighted average of separate diffusion indices for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula $(\text{Good-Poor} + 100)/2$ to the present and future sales series and $(\text{High/Very High-Low/Very Low} + 100)/2$ to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.

Notices & disclosures

Past performance is no guarantee of future results. This report or presentation is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and should not be relied upon by 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. The opinions and information expressed are current as of the date provided or cited only and are subject to change without notice. This information is obtained from sources deemed reliable, but there is no representation or warranty as to its accuracy, completeness or reliability. Verus Advisory Inc. expressly disclaim any and all implied warranties or originality, accuracy, completeness, non-infringement, merchantability and fitness for a particular purpose. This report or presentation cannot be used by the recipient for advertising or sales promotion purposes.

The material may include estimates, outlooks, projections and other "forward-looking statements." Such statements can be identified by the use of terminology such as "believes," "expects," "may," "will," "should," "anticipates," or the negative of any of the foregoing or comparable terminology, or by discussion of strategy, or assumptions such as economic conditions underlying other statements. No assurance can be given that future results described or implied by any forward looking information will be achieved. Actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. Risk controls and models do not promise any level of performance or guarantee against loss of principal.

"VERUS ADVISORY" and any associated designs are the respective trademarks of Verus Advisory, Inc. Additional information is available upon request.

Verus⁷⁷⁷ is a registered trademark of Verus Advisory, Inc.

Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$.

Benchmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price-to-Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

R-Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$.

Sortino Ratio: Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

Standard Deviation: A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

Disclaimer

This report contains confidential and proprietary information and is subject to the terms and conditions of the Consulting Agreement. It is being provided for use solely by the customer. The report may not be sold or otherwise provided, in whole or in part, to any other person or entity without written permission from Verus Advisory, Inc., (hereinafter Verus) or as required by law or any regulatory authority. The information presented does not constitute a recommendation by Verus and cannot be used for advertising or sales promotion purposes. This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities or any other financial instruments or products.

The information presented has been prepared using data from third party sources that Verus believes to be reliable. While Verus exercised reasonable professional care in preparing the report, it cannot guarantee the accuracy of the information provided by third party sources. Therefore, Verus makes no representations or warranties as to the accuracy of the information presented. Verus takes no responsibility or liability (including damages) for any error, omission, or inaccuracy in the data supplied by any third party. Nothing contained herein is, or should be relied on as a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the investor should be prepared to bear.

The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management, (c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Verus receives universe data from InvMetrics, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.