



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: JUNE 30, 2021

Investment Performance Review for

San Mateo County Employees' Retirement Association

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2nd quarter summary

THE ECONOMIC CLIMATE

- Real GDP grew at a 0.4% rate year-over-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that GDP will fully recover in Q2.
- The U.S. unemployment rate has been slow to rebound, despite a full recovery in economic activity. This might suggest that government spending has had an outsized impact, and raises risks around a stimulus “hangover” when spending programs end.
- Economies around the world continued to recover as life began moving back to normal. This description does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.

PORTFOLIO IMPACTS

- Credit spreads grew even tighter during Q2, driven by investor demand and improvements in economic fundamentals. High yield spreads tightened to 2.68%—a new cycle low. Investment grade tightened 11 basis points to end the quarter at 0.80%.
- Inflation surprised on the upside in Q2, adding to investor fears. U.S. core CPI rose 4.5% year-over-year, while headline came in at 5.4%. The jump in prices has been concentrated in a few areas, including energy (+24.5% YoY) and used car & truck prices (+45.2% YoY).

THE INVESTMENT CLIMATE

- The Biden Administration’s Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for \$4.1 trillion in spending, comprised of \$3.5 trillion in “human infrastructure” and \$600 billion towards “traditional infrastructure” It is unclear whether this proposal will gain sufficient support from Democrats.
- It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, realized market volatility, and the risks reflected in asset prices are very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few threats on the horizon.

ASSET ALLOCATION ISSUES

- U.S. equities were a top performer again in Q2 (S&P 500 +8.5%). International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.1% MSCI Emerging Markets Index) on an unhedged currency basis.
- Factor performance suffered during Q2, reversing much of the gains from the prior quarter. Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%).

Economic progress continues to exceed expectations, though strong optimism may already be reflected in asset prices

We believe a neutral risk stance is warranted in the current environment

U.S. economics summary

— Real GDP grew at a 0.4% rate year-over-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that gross domestic product (GDP) will fully recover in Q2.

— The U.S. unemployment rate has been slow to improve, falling very slightly from 6.0% in March to 5.9% in June. The labor market remains materially weaker relative to pre-pandemic conditions. This might suggest that a significant portion of the economic recovery has been fueled by government spending, and raises concerns about whether recent strength may prove fleeting when government intervention slows.

— The Biden Administration’s Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached

an agreement for \$4.1 trillion in spending, comprised of \$3.5 trillion in “human infrastructure” and \$600 billion towards “traditional infrastructure” It is unclear whether this proposal will garner sufficient support from Democrats.

— Inflation surprised on the upside in Q2, adding to investor concerns around a potential sustained rise. U.S. core inflation, which excludes food & energy prices, rose 4.5% year-over-year in June. U.S. headline inflation came in at 5.4%. The rise in prices has so far been concentrated in a few specific areas, including energy (+24.5% YoY) and used car and truck prices (+45.2% YoY).

— Consumer sentiment further improved over the quarter, but has only regained roughly half of the deterioration post-pandemic.

	Most Recent	12 Months Prior
GDP (YoY)	0.4% 3/31/21	0.3% 3/31/20
Inflation (CPI YoY, Core)	4.5% 6/30/21	1.2% 6/30/20
Expected Inflation (5yr-5yr forward)	2.20% 6/30/21	1.5% 6/30/20
Fed Funds Target Range	0% – 0.25% 6/30/21	0% – 0.25% 6/30/20
10-Year Rate	1.47% 6/30/21	0.66% 6/30/20
U-3 Unemployment	5.9% 6/30/21	11.1% 6/30/20
U-6 Unemployment	9.8% 6/30/21	18.0% 6/30/20

International economics summary

- Economies around the world continued to recover as COVID-19 fears eased, government shutdown orders were removed, and life began moving back to normal. This description of course does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.
- While expanding access to quality vaccines enabled mainland Europe to close the gap relative to the U.K. and the U.S. regarding vaccination rates, many countries in Asia, Africa, and Central Europe continued to face procurement issues, which has led public policymakers to respond more forcefully to pickups in case growth.
- Inflation has risen around the world, with the U.S. experiencing one of the largest rises. This will likely be a key theme for markets in the coming months.
- The U.S. trade balance of goods and services remained at a near all-time-low level of \$75B per month, perhaps indicating that the relative strength of the U.S. consumer has pushed up domestic imports to levels above exports. The U.S. trade deficit might be primed to recede if the global recovery were to broaden.
- The pace of global manufacturing sector activity growth remained high, while services sector activity in many countries began to expand.
- Chinese GDP growth reportedly moderated from a year-over-year pace of 18.3% in Q1 to 7.9% in Q2—slightly missing expectations (+8.0%), but keeping the 6% annual target in range. Retail sales (+12.1%) and industrial production (+8.3%) both grew by more than forecast, but policymakers continue to worry that the economic recovery has been uneven in composition, which could weigh on future growth.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	0.4% 3/31/21	5.4% 6/30/21	5.9% 6/30/21
Eurozone	(1.3%) 3/31/21	1.9% 6/30/21	7.9% 5/31/21
Japan	(1.6%) 3/31/21	0.0% 6/30/21	3.1% 5/31/21
BRICS Nations	13.3% 3/31/21	2.5% 6/30/21	5.7% 12/31/20
Brazil	1.0% 3/31/21	8.4% 6/30/21	14.7% 4/30/21
Russia	(0.7%) 3/31/21	6.5% 6/30/21	4.9% 5/31/21
India	1.6% 3/31/21	6.3% 6/30/21	9.2% 6/30/21
China	7.9% 6/30/21	1.1% 6/30/21	5.0% 5/31/21

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.

Equity environment

- U.S. equities were a top performer again in Q2, returning +8.5%. International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.0% MSCI Emerging Markets Index) on an unhedged currency basis.
- Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2. Growth stocks beat value by 6.7% during the quarter, dampening excitement for a value comeback.
- U.S. small-cap stocks (+4.3%) lagged large-cap stocks (+8.5%) as the reflation trade lost steam, but have still outperformed by 21.2% over the last year.
- It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, actual market volatility, and the risk reflected in asset prices is very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few risks on the horizon.
- Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of Q2 2021 is 64.0%. If that rate were to materialize, it would mark the highest year-over-year growth rate reported by the index since Q4 2009 (109.1%).
- Global equities have marched higher without many hiccups over the last six months. The MSCI ACWI Index has not closed more than 5% below its prior peak level since November 2nd, 2020. In the second quarter, the furthest the ACWI ever closed below its prior high-water-mark was 3.3%.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	8.5%		40.8%	
US Small Cap (Russell 2000)	4.3%		62.0%	
US Large Value (Russell 1000 Value)	5.2%		43.7%	
US Large Growth (Russell 1000 Growth)	11.9%		42.5%	
International Large (MSCI EAFE)	5.2%	4.9%	32.4%	28.0%
Eurozone (Euro Stoxx 50)	5.8%	5.1%	35.4%	29.7%
U.K. (FTSE 100)	5.8%	5.7%	31.9%	18.5%
Japan (NIKKEI 225)	(1.6%)	(1.0%)	27.0%	31.7%
Emerging Markets (MSCI Emerging Markets)	5.0%	3.5%	40.9%	35.1%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/21

Domestic equity

U.S. equities were a top performer again in Q2, returning +8.5%. Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of June 30th was 64.0%. If that rate were to materialize, it would mark the highest year-over-year rate reported by the index since Q4 2009 (109.1%).

Concerns over the potential of the coronavirus delta variant to crimp the growth outlook helped to drive a rotation away from the more cyclical sectors that had driven the advance in U.S. equities since last August. Interest rates fell substantially, supporting outperformance of the Real Estate (+13.1%), IT

(+11.6%), and Telecom (+10.7%) sectors. The shift in sentiment towards more cautious risk positioning led the quality factor (+10.6%) to outperform relative to MSCI's suite of long-only factor indices.

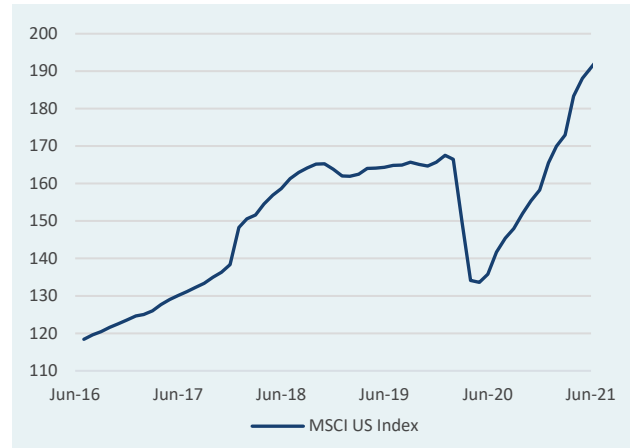
While it appears possible that equities could continue rallying into next year, the road could well become bumpier from here, given high valuations and the level of optimism baked into prices. We retain a cautiously optimistic view, given the uncertainty which shrouds the outlook.

S&P 500 INDEX



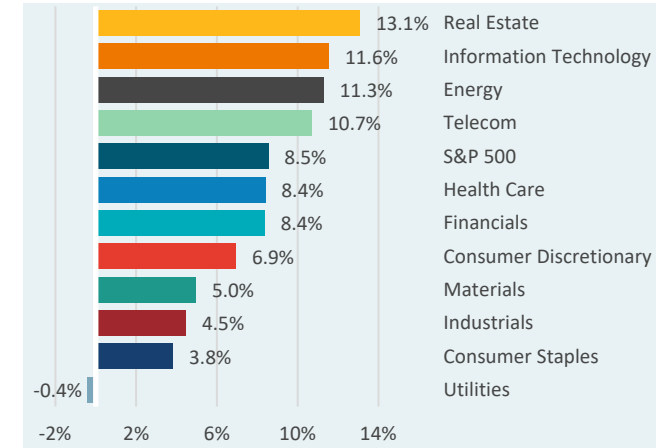
Source: Standard & Poor's, as of 6/30/21

FORWARD 12-MONTH EARNINGS PER SHARE



Source: MSCI, as of 6/30/21

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/21

Domestic equity size & style

Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%), as investors rotated portfolios away from riskier exposures to larger, more quality names amid a more cautious risk outlook.

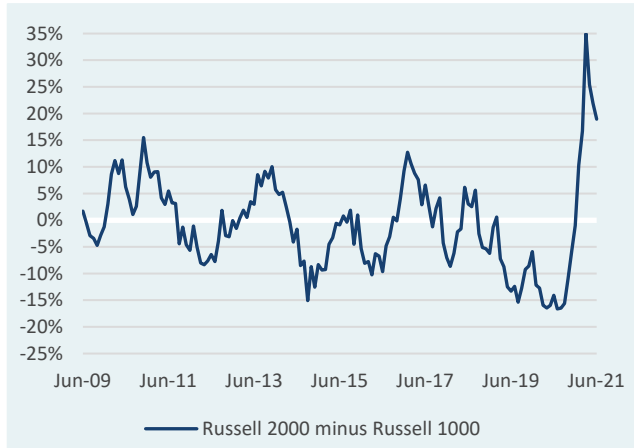
Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2, dampening excitement for a value comeback. As we have noted recently, sector trends can have large impacts on

factor behavior. This may have been the case with value in the first quarter. Small capitalization stocks have exhibited a spectacular run over the past year, outperforming large cap stocks by 21.2% (Russell 2000 +62.0, Russell 1000 +43.1%).

In general, factor performance tends to be noisy and difficult to predict, which suggests that style investing should in most cases involve a longer-term focus.

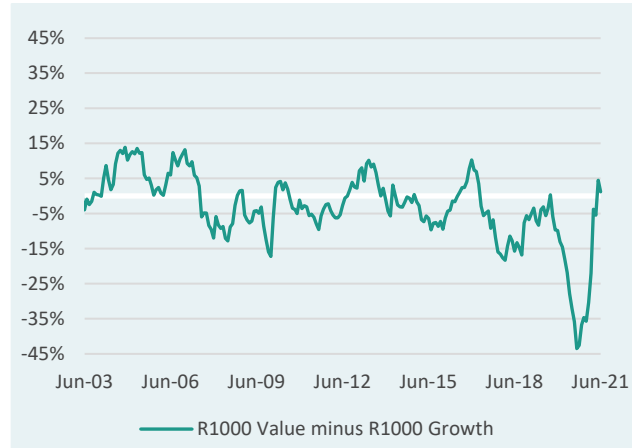
Small cap and value stocks delivered strong relative performance during Q1

SMALL CAP VS LARGE CAP (YOY)



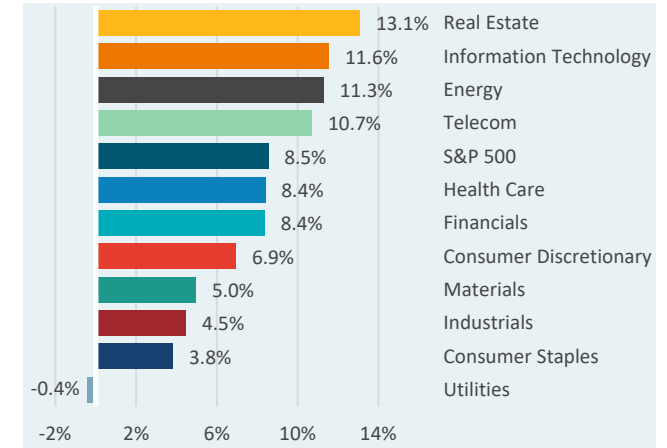
Source: FTSE, as of 6/30/21

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/21

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/21

International developed equity

International equities delivered +5.2% (MSCI EAFE Index) during the quarter on an unhedged currency basis, lagging U.S. equities but in line with emerging market equities (MSCI Emerging Markets +5.0%). Broad dollar weakness over most of the quarter boosted returns for unhedged investors in international developed equities by 0.3%, European equities by 0.7%, and emerging markets by 1.5%. The Japanese yen depreciated slightly relative to the U.S. dollar, which presented headwinds for unhedged investors in Japanese equities. Fading of risk-on sentiment in June helped to spur a turnaround in the U.S. dollar late in the quarter, though short

covering dynamics also played a factor.

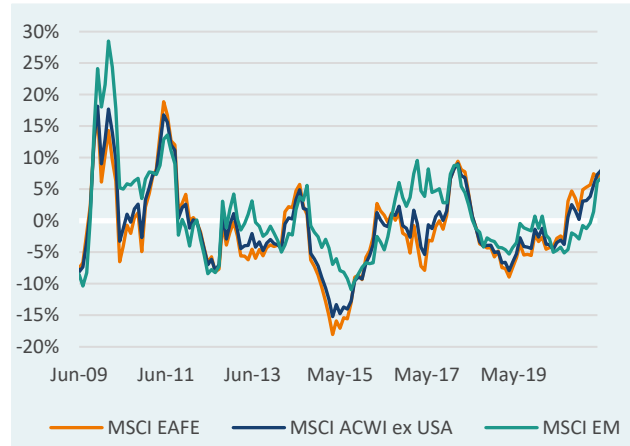
Fresh concerns over the growth outlook following the emergence of the new, more virulent delta strain of the coronavirus pushed ECB policymakers to accelerate the pace of weekly asset purchases within the Pandemic Emergency Purchase Programme slightly, with the goal being to preserve financial conditions supporting a strong recovery. The commitment to easier policy over the short-to-intermediate term helped to keep interest rates at relatively low levels, which buoyed the valuation of European equities.

INTERNATIONAL DEVELOPED EQUITIES



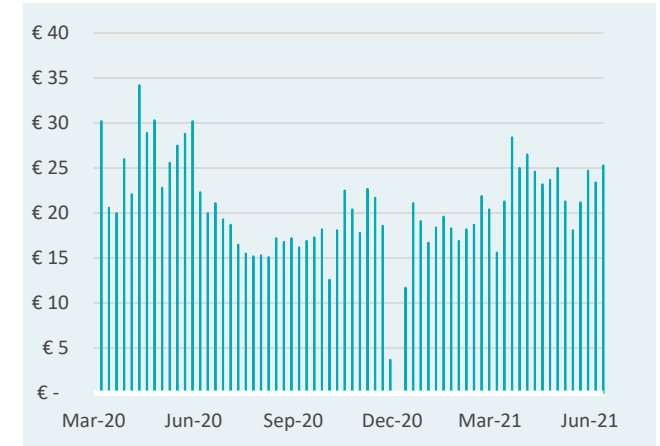
Source: MSCI, as of 6/30/21

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 6/30/21

ECB WEEKLY PEPP PURCHASES (BILLIONS)



Source: Bloomberg, ECB, as of 7/9/21

Emerging market equity

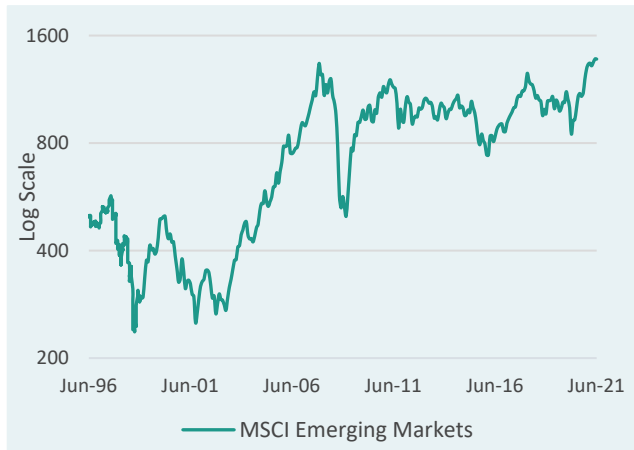
Emerging market equities (MSCI EM +5.0%) underperformed U.S. (S&P 500 +8.6%) and were in line with international developed equities (MSCI EAFE +5.2%) during the second quarter.

Latin American equities once again took the lead during the second quarter, outperforming the broader index by 10% (MSCI Latin America 15.0%, MSCI Emerging Markets +5.0%). Much of this performance was due to the notable underperformance of Chinese equities, which lagged the overall index by -2.8% during Q2 and -14.4% over the past year. Single countries in the emerging markets complex often

display high volatility. In other words, large idiosyncratic moves such as the one witnessed recently by Chinese equities are not unusual.

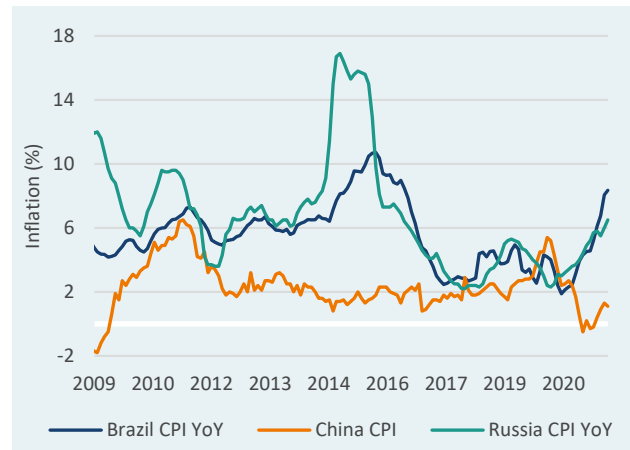
Headline Inflation in Brazil has risen to 8.4%, which is double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25% to 5.50%. This might suggest that central banks around the world have different views regarding how “transitory” the recent inflation rise will be, although volatile rates of inflation are common in the emerging markets.

EMERGING MARKET EQUITY



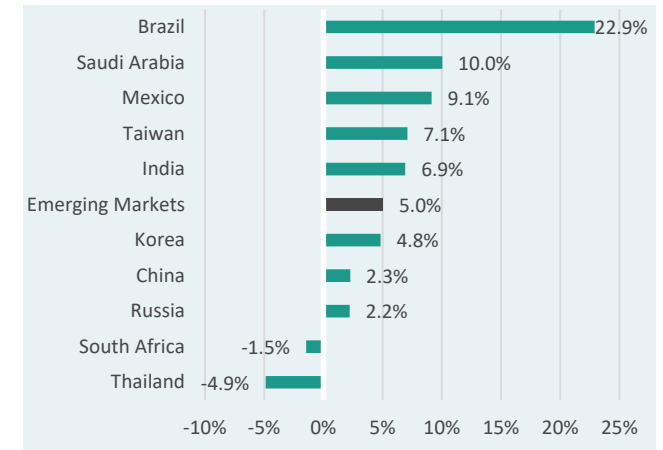
Source: MSCI, as of 6/30/21

INFLATION (YOY)



Source: Bloomberg, as of 6/30/21 or most recent data

Q2 PERFORMANCE – TOP 10 EM CONSTITUENTS



Source: Bloomberg, MSCI, as of 6/30/21, performance in USD terms

Fixed income environment

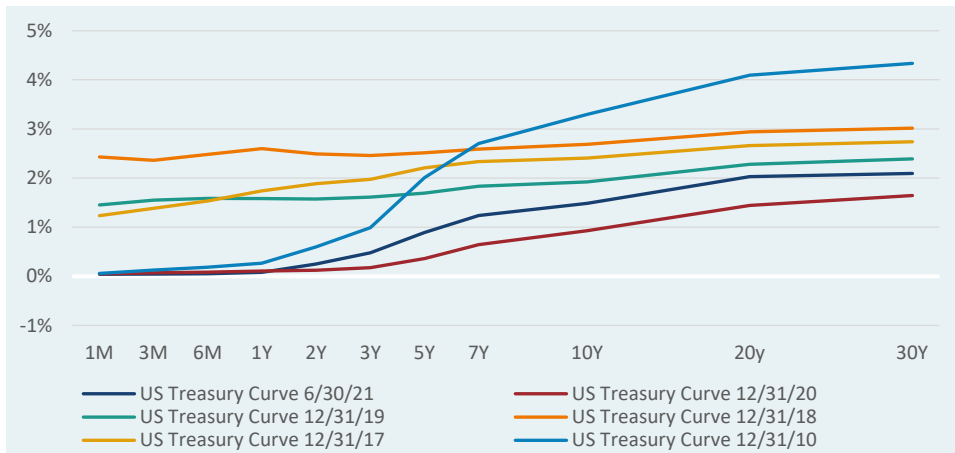
- The 10-year U.S. Treasury yield moved lower during Q2, from 1.75% to 1.44%. Many have attributed this trend to the Federal Reserve’s recent indications that monetary policy will be kept very easy for the medium term. “Lower-for-longer” interest rates may act as a support to risk asset prices.
- Despite very dovish communication from central banks, derivative markets suggest investors are pricing between a 0-0.4% rise in interest rates over the next year in most developed countries.
- Headline Inflation in Brazil has risen to 8.4%, double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25 to 5.5%. This might suggest that central banks around the world have different views regarding how “transitory” the recent inflation rise will be.
- Risky credit outperformed over the quarter as spread levels compressed to decade-lows in the United States, and emerging markets debt bounced back. Hard-currency denominated emerging market debt returned 4.1% and high yield credit in the U.S. returned 2.7%.
- Policy shifts from the People’s Bank of China resulted in a drawdown of liquidity across Asian markets over most of the quarter, which weighed on valuations for larger tech companies across the region. More recent concerns over the pace of the economic recovery in China may lead the government to withdraw liquidity more gradually.
- While some developed market central banks (Bank of Canada, Bank of Korea, Norges Bank) have started to marginally tighten (or signal tighter) policy, the Federal Reserve and the European Central Bank are expected to keep policies accommodative for at least the next year to 18 months.

	QTD Total Return	1 Year Total Return
Core Fixed Income (BBgBarc U.S. Aggregate)	1.8%	(0.3%)
Core Plus Fixed Income (BBgBarc U.S. Universal)	2.0%	1.1%
U.S. Treasuries (BBgBarc U.S. Treasury)	1.7%	(3.2%)
U.S. High Yield (BBgBarc U.S. Corporate HY)	2.7%	15.4%
Bank Loans (S&P/LSTA Leveraged Loan)	1.4%	11.7%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	3.5%	6.6%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	4.1%	7.5%
Mortgage-Backed Securities (BBgBarc MBS)	0.3%	(0.4%)

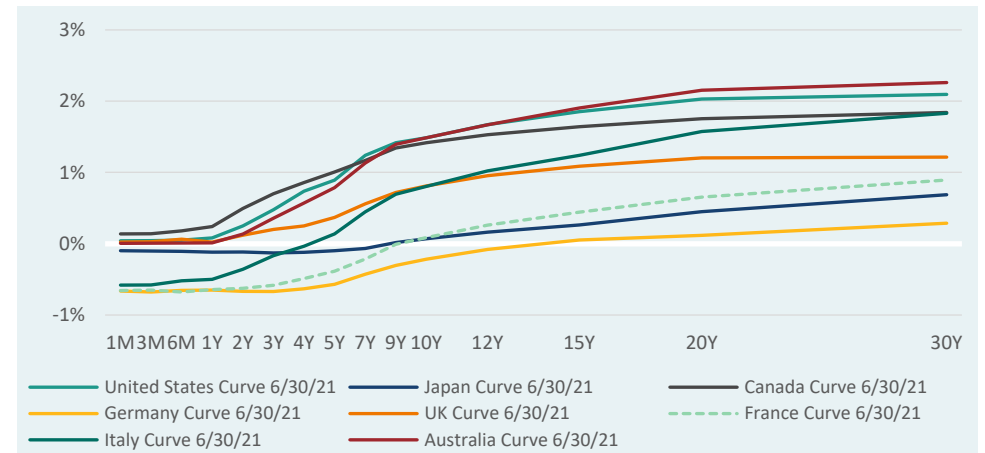
Source: Bloomberg, as of 6/30/21

Yield environment

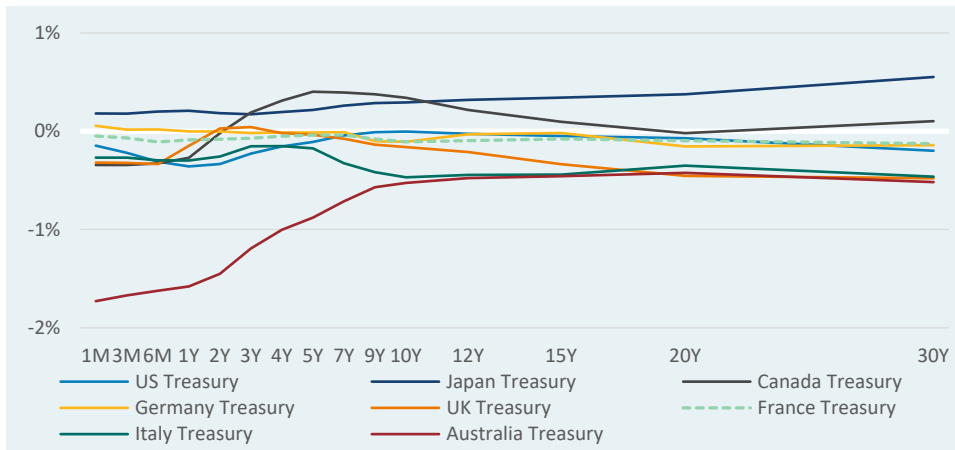
U.S. YIELD CURVE



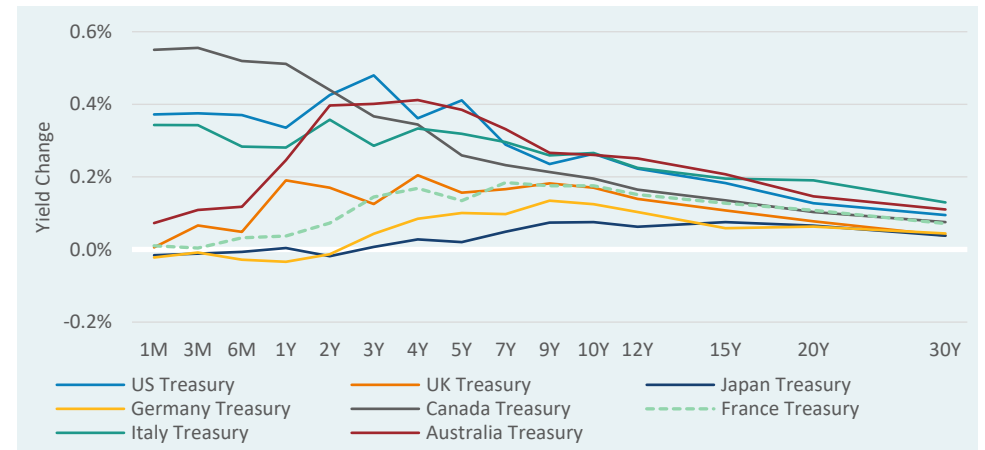
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/21

Currency

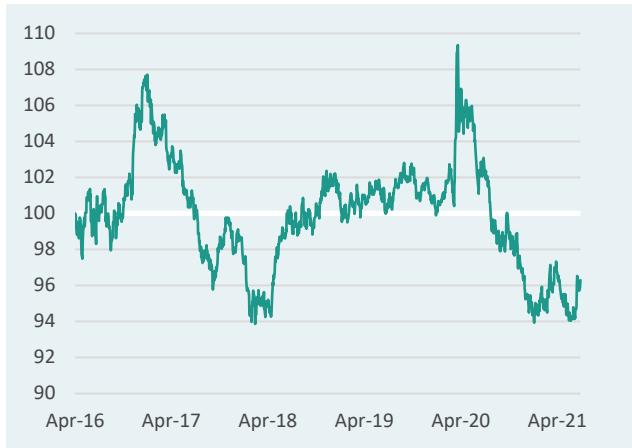
The stabilization in the U.S. dollar that took place in the first quarter as Treasury yields rose began to fade as longer-term interest rates declined from pandemic-era high levels. The dollar sold off relative to major currencies in April and May, before finding a bid in June on the back of slightly more cautious sentiment. Investors remain quite polarized over the medium-to-long term path of the dollar, which might increase the probability of more volatility in the future.

Despite U.S. dollar weakness relative to the euro and British pound over the quarter, those two European currencies remain relatively cheap on a purchasing power parity basis. The

Japanese yen became even cheaper relative to the dollar over the period, while the Swiss franc and Norwegian Krone remained at relatively expensive valuations.

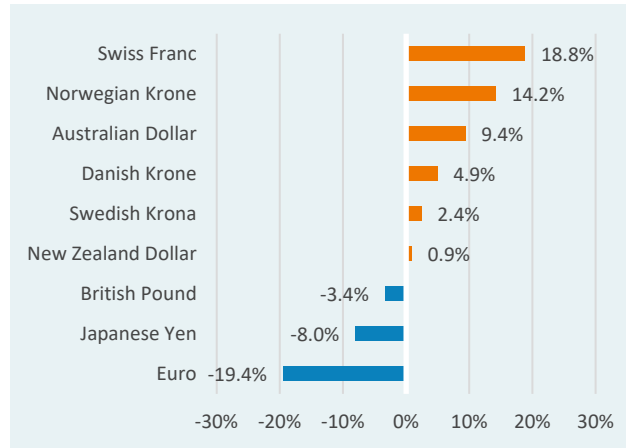
The embedded currency portfolio of the MSCI EAFE Index returned 0.3% over the quarter, but returned 4.4% over the trailing year on the back of a weakening U.S. dollar. Within Verus' preferred currency beta benchmark, the momentum factor (-6.8%) contributed significant headwinds to one-year trailing returns, as frequent shifts in market risk sentiment limited the capacity of risk-on and risk-off currencies from sustaining trends in one direction or the other.

BLOOMBERG DOLLAR SPOT INDEX



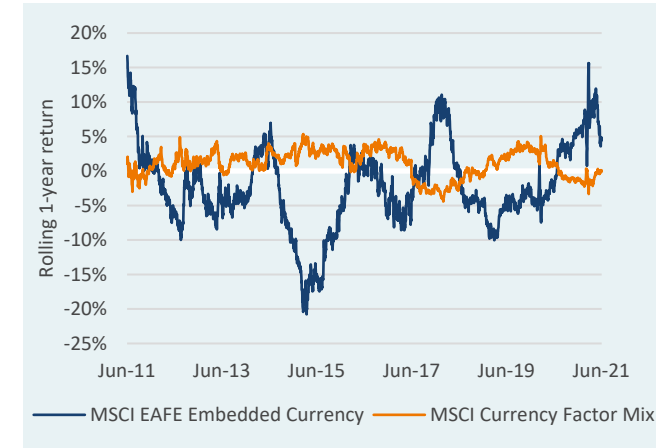
Source: Bloomberg, as of 6/30/21

PURCHASING POWER PARITY VALUATIONS VS. U.S. DOLLAR (OECD)



Source: Bloomberg, as of 6/30/21

CURRENCY BETA RELATIVE PERFORMANCE



Source: Bloomberg, MSCI, as of 6/30/21

- The Total Fund, net of manager fees, returned 5.0% in the first quarter of 2021 and in the ranked 54th percentile among other public plans greater than \$1 billion (median of 5.1%). It beat the policy index return of 4.7%. The Total Fund ex Overlay returned 5.0% for the quarter. The Total Fund one-year return of 24.3% beat the policy index return of 23.5% and ranked in the 86th percentile of its peer universe. The three-year return of 9.4% (84th percentile) lagged the median large public plan (10.7) and the policy index (10.3%).

- First quarter results were enhanced by the following factors:
 1. Brigade rose 3.7% beating its index (2.4%) placing them in the top 5% of its high yield peers. Brigade's outperformance was largely driven by outperforming positions in the energy sector.
 2. The private equity composite gained 12.6% for the quarter with one year outperformance of approximately 20% vs its benchmark.
 3. Baillie Gifford outperformed the MSCI ACWI ex US gaining 6.6% vs 5.6% for the index. It's growthy bias helped this quarter, as the MSCI ACWI ex US Growth gained 6.7%.

- First quarter results were hindered by the following factors:
 1. Acadian Managed Vol and PanAgora Defensive Equity both lagged the Russell 1000 (8.5%) gaining 6.8% and 5.3% respectively. The underweights to information technology and overweight to utilities inherent in low vol strategies hurt relative returns as IT gained 11.4% during the quarter while utilities lost -0.5%.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2021

	3 Mo (%)	Rank*	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Fund**	5.0	54	7.8	80	24.3	86	11.4	88	9.4	84	9.5	86	8.1	51
<i>Policy Index¹</i>	4.7	71	8.7	56	23.5	89	12.1	81	10.3	67	10.2	65	8.6	30
<i>InvMetrics Public DB > \$1B Net Median</i>	5.1		8.8		26.3		13.5		10.7		10.5		8.2	
Total Fund ex Overlay	5.0	54	7.8	80	24.3	86	11.4	88	9.3	87	9.4	87	8.0	62
<i>Policy Index¹</i>	4.7	71	8.7	56	23.5	89	12.1	81	10.3	67	10.2	65	8.6	30
<i>InvMetrics Public DB > \$1B Net Median</i>	5.1		8.8		26.3		13.5		10.7		10.5		8.2	
Public Equity	6.3	88	12.0	78	37.8	89	17.7	88	13.2	86	13.8	88	10.5	67
<i>Blended Public Equity Index¹</i>	6.9	69	13.1	50	39.7	75	19.4	56	14.4	62	14.9	54	11.1	48
<i>InvMetrics All DB Total Eq Net Median</i>	7.2		13.1		41.4		19.7		15.0		15.0		11.0	
US Equity	7.1	72	13.5	92	38.6	96	19.1	92	15.1	88	15.7	85	13.1	75
<i>Blended US Equity Index¹</i>	8.2	16	15.1	61	44.2	54	23.9	16	18.7	13	17.9	18	14.5	15
<i>Russell 3000</i>	8.2	16	15.1	61	44.2	54	23.9	16	18.7	13	17.9	22	14.7	11
<i>InvMetrics All DB US Eq Net Median</i>	7.6		15.3		44.3		22.4		17.4		17.2		13.7	
Large Cap Equity	7.4	51	12.8	75	37.0	74	19.2	59	16.0	56	16.5	45	13.8	44
<i>Russell 1000</i>	8.5	35	15.0	52	43.1	37	24.0	33	19.2	35	18.0	33	14.9	29
<i>eV US Large Cap Equity Net Median</i>	7.5		15.0		40.5		20.8		16.8		15.9		13.3	
<i>Acadian US MGD V</i>	6.8	75	11.1	89	26.7	95	11.1	96	--	--	--	--	--	--
<i>BlackRock Russell 1000</i>	8.5	27	15.0	50	43.1	23	24.0	17	19.2	21	--	--	--	--
<i>DE Shaw</i>	7.7	50	10.9	90	40.9	38	21.3	46	16.1	61	17.1	31	15.0	12
<i>PanAgora Defuseq</i>	5.3	91	11.0	89	27.6	93	11.4	95	--	--	--	--	--	--
<i>Russell 1000</i>	8.5	26	15.0	51	43.1	23	24.0	17	19.2	22	18.0	15	14.9	13
<i>eV US Large Cap Core Equity Net Median</i>	7.7		15.0		39.5		20.7		16.9		16.1		13.6	

* 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, 2021

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Small Cap Equity	4.1	61	21.2	41	57.8	56	16.1	84	7.7	89	11.7	84	9.7	88
<i>Russell 2000</i>	4.3	58	17.5	57	62.0	45	23.0	41	13.5	48	16.5	45	12.3	47
<i>eV US Small Cap Equity Net Median</i>	4.6		18.7		59.6		21.1		13.2		15.4		12.1	
QMA US Small Cap	4.1	64	21.2	33	57.8	55	16.1	87	7.7	95	--	--	--	--
<i>Russell 2000</i>	4.3	60	17.5	60	62.0	37	23.0	39	13.5	40	16.5	35	12.3	47
<i>eV US Small Cap Core Equity Net Median</i>	4.7		18.6		59.0		21.2		12.8		15.4		12.1	
Domestic Equity Overlay	0.2	--	10.8	--	56.3	--	--	--	--	--	--	--	--	--
International Equity	5.4	67	10.4	25	36.9	62	16.0	36	11.0	27	11.5	43	6.3	48
<i>Blended International Equity Index¹</i>	5.2	80	10.8	20	34.5	85	14.2	74	9.4	64	11.3	52	5.9	62
<i>MSCI EAFE Gross</i>	5.4	72	9.2	57	32.9	90	12.5	87	8.8	79	10.8	73	6.4	46
<i>InvMetrics All DB ex-US Eq Net Median</i>	5.6		9.4		37.8		15.1		9.8		11.3		6.2	
Baillie Gifford	6.6	64	6.9	55	41.7	38	26.2	25	16.9	23	16.1	46	--	--
<i>MSCI ACWI ex US¹</i>	5.6	75	9.4	24	36.3	58	14.2	95	9.9	93	11.6	96	--	--
<i>MSCI ACWI ex US Growth</i>	6.7	63	6.7	60	34.1	73	19.3	62	13.6	56	13.8	71	--	--
<i>eV ACWI ex-US Growth Equity Net Median</i>	7.7		7.1		38.4		21.9		14.7		15.7		9.1	
Mondrian	4.6	56	11.0	66	37.1	72	9.3	78	6.9	41	8.0	62	4.8	59
<i>MSCI ACWI ex USA Value Gross</i>	4.5	57	12.1	63	38.3	65	8.6	83	5.8	58	9.2	47	4.1	85
<i>MSCI ACWI ex USA Gross</i>	5.6	28	9.4	85	36.3	74	14.2	35	9.9	18	11.6	22	5.9	37
<i>eV ACWI ex-US Value Equity Net Median</i>	4.9		13.7		42.4		11.3		6.1		8.7		5.1	
BlackRock MSCI ACWI EX-US IMI	5.7	53	9.7	48	37.4	67	--	--	--	--	--	--	--	--
<i>MSCI ACWI ex USA IMI</i>	5.6	54	9.6	56	37.2	68	14.3	74	9.4	73	11.2	74	5.7	84
<i>eV ACWI ex-US All Cap Core Eq Net Median</i>	6.1		9.7		39.0		17.3		12.1		12.5		7.2	
Int'l Equity Currency Overlay														
International Equity Overlay	-4.2	--	3.6	--	21.5	--	--	--	--	--	--	--	--	--

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2021

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Fixed Income	2.1	42	1.0	16	5.7	25	5.2	43	5.7	49	5.1	25	4.7	28
<i>Blended Fixed Income Index¹</i>	2.0	52	-0.2	42	3.5	50	4.9	49	6.1	36	4.1	53	3.8	60
<i>InvMetrics All DB Total Fix Inc Net Median</i>	2.0		-0.5		3.5		4.9		5.7		4.1		4.0	
Core Fixed	2.1	--	-0.8	--	1.6	--	4.6	--	5.4	--	3.7	--	4.0	--
<i>BBgBarc US Aggregate TR</i>	1.8	--	-1.6	--	-0.3	--	4.1	--	5.3	--	3.0	--	3.4	--
DoubleLine	2.4	6	-0.3	65	1.4	59	--	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	1.8	10	-1.6	99	-0.3	90	4.1	10	5.3	6	3.0	51	3.4	49
<i>eV US Securitized Fixed Inc Net Median</i>	0.7		0.1		2.3		2.8		3.9		3.0		3.2	
FIAM Bond	2.1	36	-1.0	30	1.8	26	5.7	7	6.5	11	4.1	6	4.2	17
NISA Core Bond	1.9	66	-1.6	67	-0.2	78	--	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	1.8	78	-1.6	72	-0.3	82	4.1	80	5.3	78	3.0	77	3.4	79
<i>eV US Core Fixed Inc Net Median</i>	2.0		-1.3		0.7		4.6		5.7		3.4		3.7	
Western TRU	1.8	83	-0.4	9	6.1	2	4.8	39	5.2	87	4.7	3	--	--
<i>3-Month Libor Total Return USD</i>	0.0	99	0.1	5	0.2	67	0.9	99	1.4	99	1.4	99	0.9	99
<i>BBgBarc US Aggregate TR</i>	1.8	78	-1.6	72	-0.3	82	4.1	80	5.3	78	3.0	77	3.4	79
<i>eV US Core Fixed Inc Net Median</i>	2.0		-1.3		0.7		4.6		5.7		3.4		3.7	
Core Fixed Income Overlay	2.2	--	-3.2	--	-4.0	--	--	--	--	--	--	--	--	--
Opportunistic Credit	2.3	--	4.4	--	14.0	--	6.3	--	6.4	--	7.6	--	7.7	--
<i>BBgBarc BA Intermediate HY</i>	2.4	--	2.5	--	11.5	--	7.3	--	8.0	--	6.7	--	5.8	--
AG CSF Annex Dislocation Fund ⁺	3.1	--	8.6	--	23.1	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	2.4	--	2.5	--	11.5	--	7.3	--	8.0	--	6.7	--	5.8	--
Angelo Gordon Opportunistic ⁺	4.4	--	9.8	--	30.9	--	6.0	--	7.9	--	12.8	--	--	--
Angelo Gordon Credit Solutions ⁺	6.5	1	16.3	1	35.5	1	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	2.4	70	2.5	85	11.5	83	7.3	36	8.0	13	6.7	56	5.8	72
<i>eV US High Yield Fixed Inc Net Median</i>	2.6		3.5		14.4		6.7		6.8		6.9		6.2	

⁺ Preliminary return as of 6/30/2021.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2021

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Beach Point Select	3.5	7	9.7	2	27.0	2	12.4	1	9.9	3	10.2	3	--	--
BBgBarc BA Intermediate HY	2.4	70	2.5	85	11.5	83	7.3	36	8.0	13	6.7	56	5.8	72
eV US High Yield Fixed Inc Net Median	2.6		3.5		14.4		6.7		6.8		6.9		6.2	
Brigade Capital	3.7	5	10.6	2	27.2	2	8.6	13	6.5	66	8.0	15	6.2	52
BBgBarc BA Intermediate HY	2.4	70	2.5	85	11.5	83	7.3	36	8.0	13	6.7	56	5.8	72
50% Barclays HY/ 50% Bank Loan	2.1	80	3.6	50	13.5	64	6.0	72	5.9	77	6.3	73	5.6	78
eV US High Yield Fixed Inc Net Median	2.6		3.5		14.4		6.7		6.8		6.9		6.2	
PIMCO Diversified	2.8	37	0.2	99	7.5	97	4.8	90	6.5	67	--	--	--	--
Blended PIMCO Diversified Index ¹	2.8	37	0.3	99	7.6	97	5.3	79	6.8	55	5.3	89	5.7	76
BBgBarc BA Intermediate HY	2.4	70	2.5	85	11.5	83	7.3	36	8.0	13	6.7	56	5.8	72
eV US High Yield Fixed Inc Net Median	2.6		3.5		14.4		6.7		6.8		6.9		6.2	
Franklin Templeton	1.5	67	-1.7	72	-1.4	99	-4.6	99	-1.3	99	0.8	99	1.7	89
BBgBarc Multiverse TR	1.4	68	-3.0	82	3.2	83	3.5	79	4.3	74	2.6	84	2.2	78
eV All Global Fixed Inc Net Median	1.8		-0.1		7.3		5.3		5.8		4.6		3.6	
Private Credit	0.3	--	2.6	--	8.5	--	6.6	--	6.9	--	--	--	--	--
Cliffwater Direct Lending Index*	3.2	--	6.6	--	14.4	--	8.0	--	8.2	--	8.7	--	9.4	--
Blackrock DL Feeder IX-U*	0.0	99	1.9	94	6.7	98	--	--	--	--	--	--	--	--
Cliffwater Direct Lending Index	3.2	10	6.6	6	14.4	50	8.0	19	8.2	12	8.7	6	9.4	1
eV US High Yield Fixed Inc Net Median	2.6		3.5		14.4		6.7		6.8		6.9		6.2	
PIMCO Private Income*	0.0	99	5.0	14	14.9	44	9.1	9	--	--	--	--	--	--
BBgBarc BA Intermediate HY	2.4	70	2.5	85	11.5	83	7.3	36	8.0	13	6.7	56	5.8	72
Cliffwater Direct Lending Index	3.2	10	6.6	6	14.4	50	8.0	19	8.2	12	8.7	6	9.4	1
eV US High Yield Fixed Inc Net Median	2.6		3.5		14.4		6.7		6.8		6.9		6.2	

* Preliminary return as of 6/30/2021.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2021

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
TCP Direct Lending VIII*	1.4	95	3.6	47	9.0	93	6.4	63	7.0	40	--	--	--	--
White Oak Yield*	0.0	99	1.6	99	4.9	99	5.1	85	5.8	79	--	--	--	--
White Oak YSF V**	0.0	99	0.0	99	--	--	--	--	--	--	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	3.2	10	6.6	6	14.4	50	8.0	19	8.2	12	8.7	6	9.4	1
<i>eV US High Yield Fixed Inc Net Median</i>	2.6		3.5		14.4		6.7		6.8		6.9		6.2	
Alternatives	7.4	--	8.6	--	47.8	--	23.1	--	16.6	--	13.8	--	8.8	--
<i>Blended Alternatives Index¹</i>	3.8	--	11.6	--	30.9	--	14.4	--	12.7	--	12.4	--	9.4	--
Private Equity*** **	12.6	20	14.7	56	86.4	2	47.6	2	35.8	2	28.7	2	18.8	5
<i>Blended Private Equity Index¹</i>	7.2	47	23.7	30	65.5	12	24.7	23	20.2	23	19.1	21	16.8	12
<i>InvMetrics All DB Private Eq Net Median</i>	6.3		17.5		37.2		17.6		15.3		14.3		11.7	
Hedge Fund/Absolute Return	2.4	62	2.5	88	7.9	91	-3.0	95	-3.9	98	-2.2	98	1.3	94
<i>Absolute Return Custom Index¹</i>	0.9	80	1.9	88	4.1	95	4.7	81	5.3	59	5.3	61	4.7	47
<i>InvMetrics All DB Hedge Funds Net Median</i>	2.9		6.7		21.0		8.9		5.9		5.7		4.6	
Aberdeen Standard GARS	0.4	85	-1.7	92	5.9	79	4.4	68	4.3	62	2.9	76	--	--
Acadian MAAR Fund LLC**	1.3	77	1.3	81	--	--	--	--	--	--	--	--	--	--
CFM Systematic Global Macro**	6.3	20	12.1	24	--	--	--	--	--	--	--	--	--	--
Graham Quant Macro	4.3	37	2.8	73	10.2	70	--	--	--	--	--	--	--	--
PIMCO MAARS Fund LP	-0.7	90	0.9	84	1.2	91	--	--	--	--	--	--	--	--
<i>Absolute Return Custom Index</i>	0.9	81	1.9	78	4.1	83	4.7	65	5.3	56	5.3	59	4.7	56
<i>eV Alt All Multi-Strategy Median</i>	2.7		6.5		17.4		7.6		6.1		6.3		5.7	

* Preliminary return as of 6/30/2021.

* Funded December 2020.

** Funded October 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, 2021

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Inflation Hedge	4.8	--	9.4	--	16.5	--	2.1	--	2.2	--	3.8	--	--	--
<i>Blended Inflation Hedge Index¹</i>	4.9	--	11.5	--	20.8	--	6.3	--	5.8	--	5.8	--	--	--
Real Estate	3.7	32	5.5	50	7.6	48	5.0	40	5.7	36	6.6	26	9.2	22
<i>NCREIF ODCE</i>	3.9	26	6.1	30	8.0	32	5.1	38	5.5	37	6.6	26	9.6	8
<i>InvMetrics All DB Real Estate Pub Net Median</i>	3.3	--	5.5	--	7.4	--	4.7	--	5.2	--	5.8	--	8.5	--
<i>Harrison Street Core Property</i>	2.8	--	4.3	--	6.7	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	3.9	--	6.1	--	8.0	--	5.1	--	5.5	--	6.6	--	9.6	--
<i>Invesco</i>	4.7	--	6.2	--	7.5	--	4.2	--	5.0	--	6.2	--	8.9	--
<i>NCREIF ODCE</i>	3.9	--	6.1	--	8.0	--	5.1	--	5.5	--	6.6	--	9.6	--
<i>Invesco US Val IV</i>	4.2	--	4.3	--	11.1	--	7.6	--	9.1	--	9.6	--	--	--
<i>NCREIF ODCE</i>	3.9	--	6.1	--	8.0	--	5.1	--	5.5	--	6.6	--	9.6	--
<i>NCREIF ODCE + 2%</i>	4.4	--	7.2	--	10.2	--	7.2	--	7.6	--	8.7	--	11.8	--
<i>Invesco US Val V</i>	3.1	--	12.9	--	18.2	--	9.9	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	3.9	--	6.1	--	8.0	--	5.1	--	5.5	--	6.6	--	9.6	--
<i>NCREIF ODCE + 2%</i>	4.4	--	7.2	--	10.2	--	7.2	--	7.6	--	8.7	--	11.8	--
<i>PGIM RE US Debt Fund</i>	1.4	--	2.8	--	5.3	--	5.2	--	5.7	--	--	--	--	--
<i>NCREIF ODCE</i>	3.9	--	6.1	--	8.0	--	5.1	--	5.5	--	6.6	--	9.6	--
Private Real Asset^{**}	4.6	--	18.6	--	27.6	--	8.3	--	3.3	--	1.3	--	--	--
<i>Blended Private Real Asset Index¹</i>	5.8	--	23.4	--	48.4	--	6.3	--	7.0	--	5.7	--	--	--
<i>Blended Secondary CA Private RA Index¹</i>	4.8	--	11.1	--	18.1	--	0.9	--	2.0	--	6.4	--	--	--
Public Real Assets	6.2	--	11.5	--	29.3	--	-1.7	--	-1.5	--	--	--	--	--
<i>Blended Public Real Asset Index¹</i>	6.1	--	11.4	--	29.2	--	4.6	--	3.4	--	5.4	--	--	--
<i>SSgA Custom Real Asset</i>	6.2	--	11.5	--	29.3	--	4.6	--	3.4	--	--	--	--	--
<i>SSgA Custom Real Asset Index¹</i>	6.1	--	11.4	--	29.2	--	4.6	--	3.4	--	--	--	--	--

** Returns are one-quarter lag.

1. See Appendix for Benchmark History.

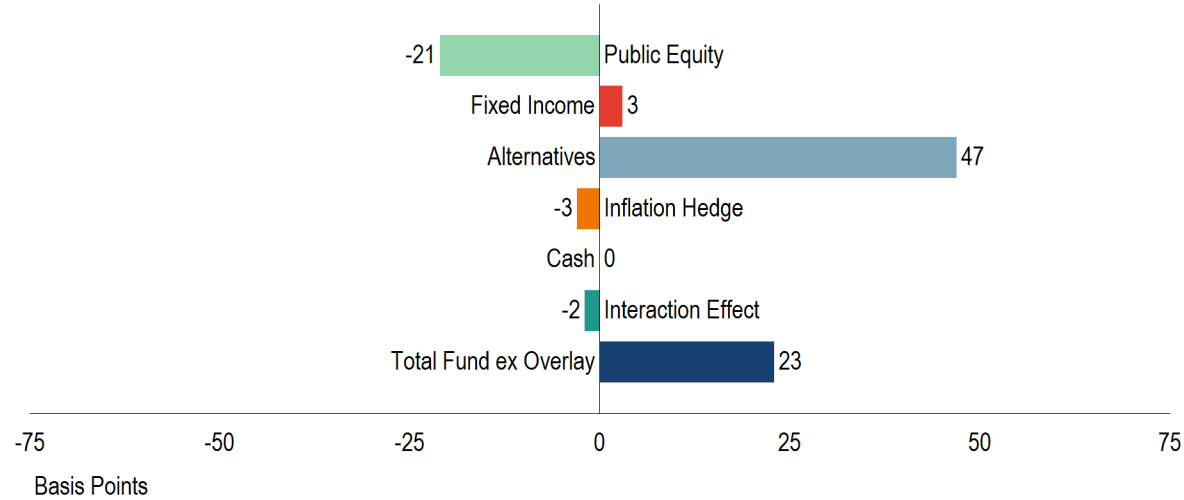
Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2021

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Cash	0.1	--	0.2	--	0.5	--	0.7	--	0.9	--	0.9	--	0.8	--
91 Day T-Bills	0.0	--	0.0	--	0.1	--	0.7	--	1.2	--	1.1	--	0.6	--
General Account	0.1	--	0.3	--	0.6	--	1.3	--	2.6	--	2.3	--	1.5	--
Treasury & LAIF	0.4	--	0.6	--	1.4	--	1.8	--	2.4	--	2.2	--	1.5	--
91 Day T-Bills	0.0	--	0.0	--	0.1	--	0.7	--	1.2	--	1.1	--	0.6	--
Currency Hedge Cash Overlay	-0.1	--	-0.1	--	-0.3	--	--	--	--	--	--	--	--	--

Total Fund ex Overlay
Performance Attribution

Period Ending: June 30, 2021

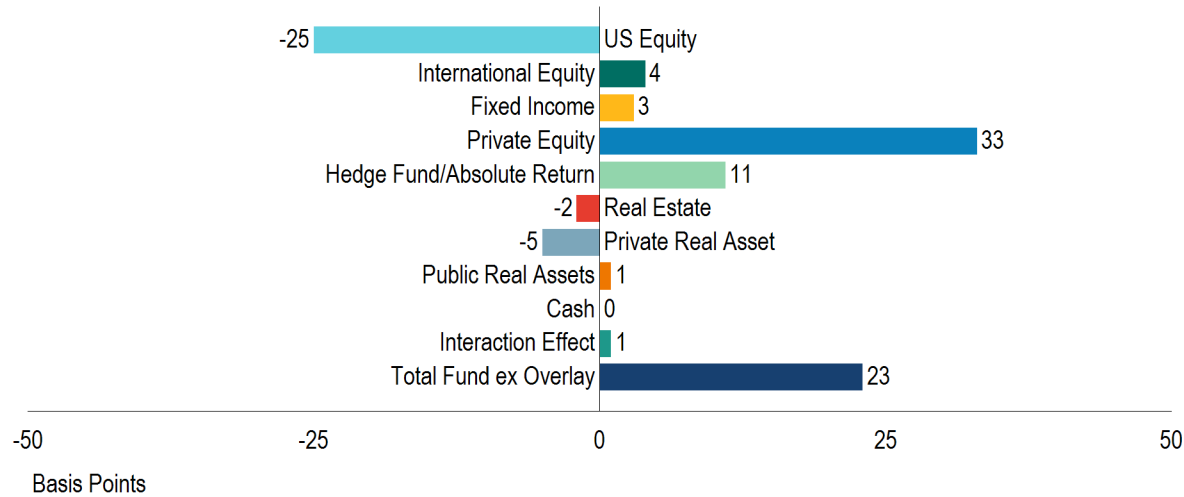


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	6.34%	6.86%	-0.52%	-0.21%	0.02%	0.00%	-0.20%
Fixed Income	2.14%	2.02%	0.11%	0.03%	0.01%	0.00%	0.04%
Alternatives	7.41%	3.79%	3.61%	0.47%	0.00%	-0.01%	0.47%
Inflation Hedge	4.76%	4.92%	-0.15%	-0.03%	0.00%	0.00%	-0.03%
Cash	0.07%	0.00%	0.07%	0.00%	-0.05%	0.00%	-0.05%
Total	4.93%	4.71%	0.23%	0.26%	-0.02%	-0.02%	0.23%

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, 2021

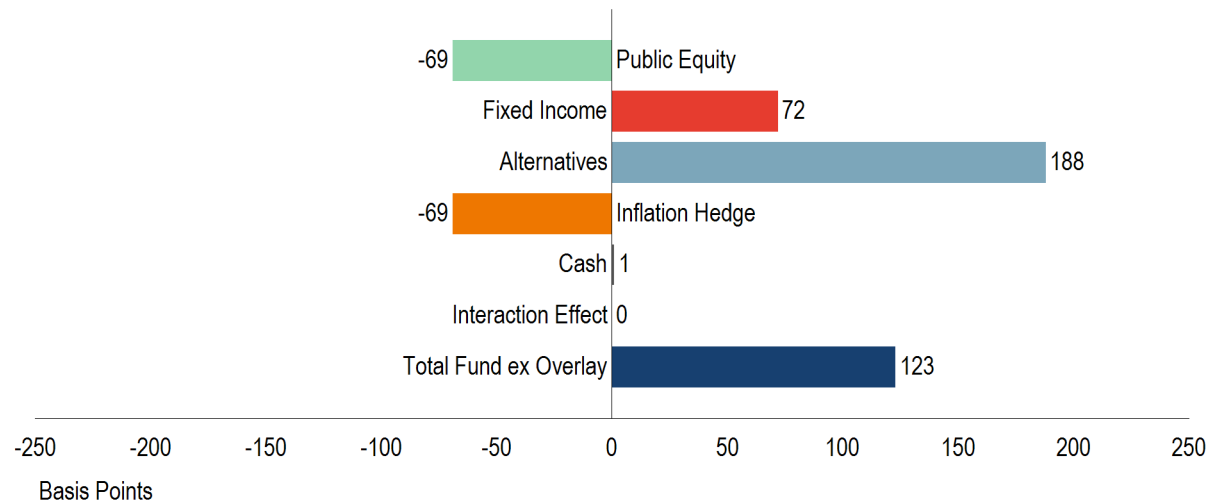


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction * Effects	Total Effects
US Equity	7.10%	8.24%	-1.14%	-0.25%	0.02%	0.00%	-0.23%
International Equity	5.44%	5.24%	0.20%	0.04%	0.00%	0.00%	0.04%
Fixed Income	2.14%	2.02%	0.11%	0.03%	0.01%	0.00%	0.04%
Private Equity	12.57%	7.24%	5.33%	0.33%	0.04%	-0.01%	0.36%
Hedge Fund/Absolute Return	2.43%	0.88%	1.55%	0.11%	0.01%	-0.01%	0.12%
Real Estate	3.74%	3.93%	-0.19%	-0.02%	0.01%	0.00%	-0.01%
Private Real Asset	4.63%	5.82%	-1.20%	-0.05%	-0.02%	0.02%	-0.05%
Public Real Assets	6.19%	6.06%	0.14%	0.01%	0.01%	0.00%	0.02%
Cash	0.07%	0.00%	0.07%	0.00%	-0.05%	0.00%	-0.05%
Total	4.93%	4.71%	0.23%	0.20%	0.02%	0.01%	0.23%

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, 2021

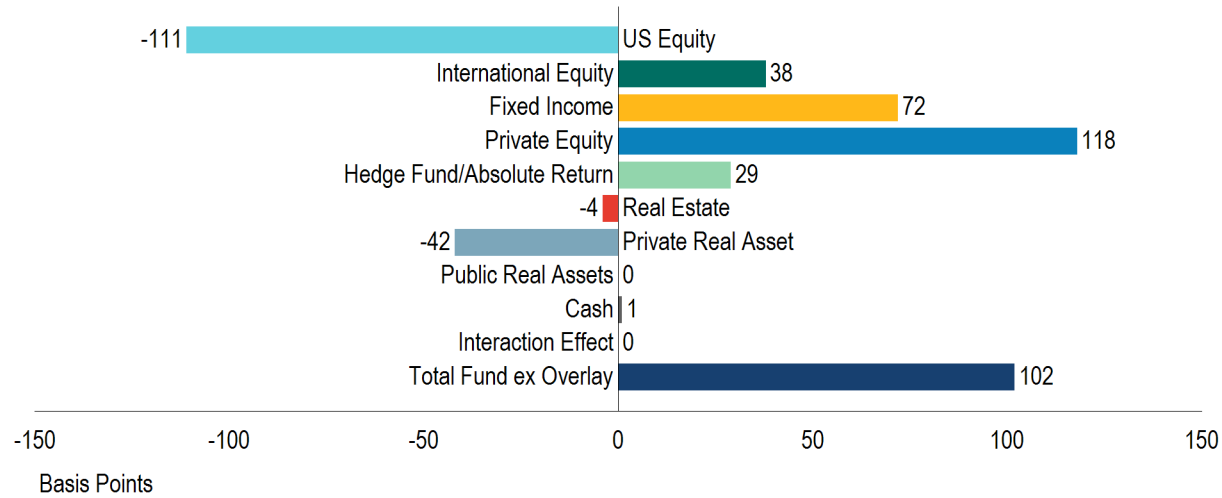


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	37.84%	39.67%	-1.83%	-0.69%	0.00%	0.00%	-0.69%
Fixed Income	5.66%	3.47%	2.19%	0.72%	0.00%	0.00%	0.72%
Alternatives	47.79%	30.86%	16.94%	1.88%	0.00%	0.00%	1.88%
Inflation Hedge	16.48%	20.83%	-4.36%	-0.69%	0.00%	0.00%	-0.69%
Cash	0.47%	0.05%	0.42%	0.01%	0.00%	0.00%	0.01%
Total	24.30%	23.07%	1.23%	1.23%	0.00%	0.00%	1.23%

Attribution does not include the impact of the Parametric Minneapolis strategy. Risk Parity closed June 2020.
* Interaction Effects include Residual Effects.

Total Fund ex Overlay
Performance Attribution (1 Year)

Period Ending: June 30, 2021



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction*	Total Effects
US Equity	38.61%	44.16%	-5.55%	-1.11%	0.00%	0.00%	-1.11%
International Equity	36.88%	34.50%	2.38%	0.38%	0.00%	0.00%	0.38%
Fixed Income	5.66%	3.47%	2.19%	0.72%	0.00%	0.00%	0.72%
Private Equity	86.40%	65.53%	20.87%	1.18%	0.00%	0.00%	1.18%
Hedge Fund/Absolute Return	7.87%	4.07%	3.81%	0.29%	0.00%	0.00%	0.29%
Real Estate	7.56%	8.02%	-0.46%	-0.04%	0.00%	0.00%	-0.04%
Private Real Asset	27.58%	48.41%	-20.83%	-0.42%	0.00%	0.00%	-0.42%
Public Real Assets	29.32%	29.24%	0.08%	0.00%	0.00%	0.00%	0.00%
Cash	0.47%	0.05%	0.42%	0.01%	0.00%	0.00%	0.01%
Total	24.34%	23.31%	1.02%	1.02%	0.00%	0.00%	1.02%

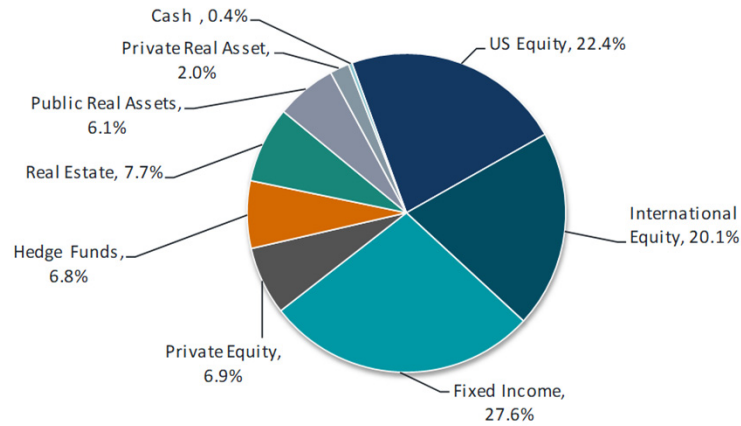
Attribution does not include the impact of the Parametric Minneapolis strategy. Risk Parity closed June 2020.
* Interaction Effects include Residual Effects.

Total Fund

Asset Allocation Analysis

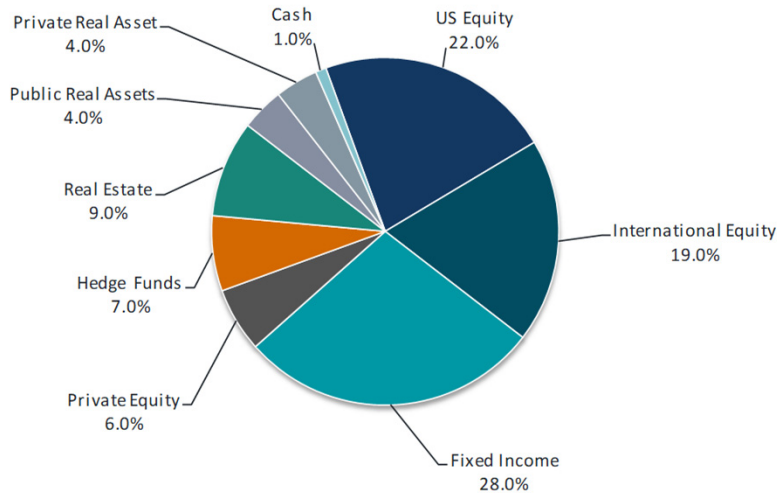
Period Ending: June 30, 2021

Current w/ Overlay



ASSET ALLOCATION	MARKET VALUE W/ OVERLAY	W/ OVERLAY	W/O OVERLAY
US Equity	1,311,453,508	22.4%	22.2%
International Equity	1,176,393,747	20.1%	19.2%
Fixed Income	1,618,987,041	27.6%	27.1%
Private Equity	406,570,411	6.9%	6.9%
Hedge Funds	401,402,928	6.8%	6.8%
Real Estate	452,270,511	7.7%	7.7%
Public Real Assets	360,643,196	6.1%	6.1%
Private Real Asset	114,919,200	2.0%	2.0%
Cash	22,029,869	0.4%	2.0%
TOTAL	5,864,670,411	100.0%	100.0%

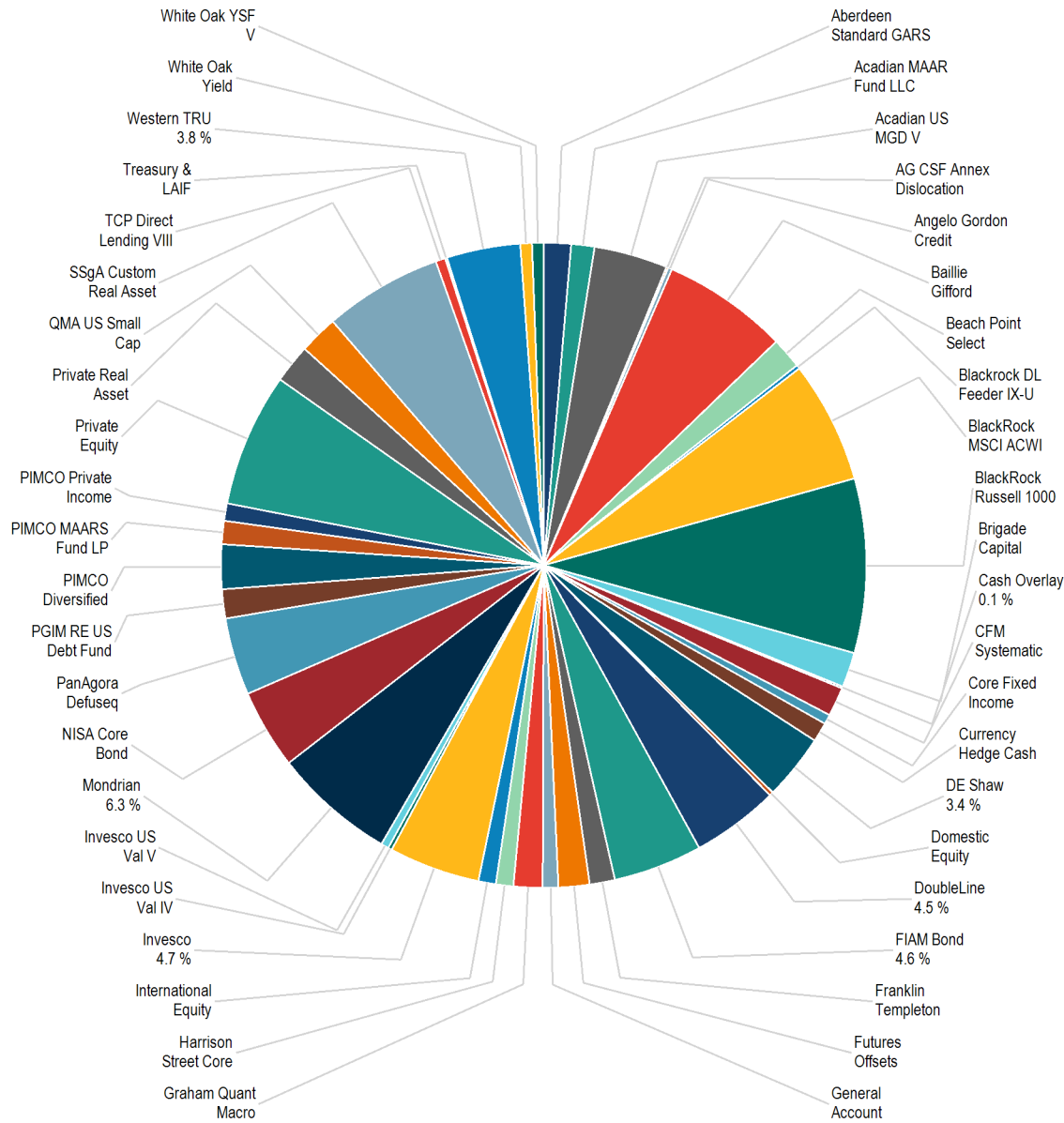
Target



ASSET ALLOCATION	W/ OVERLAY	TARGET	DIFF
US Equity	22.4%	22.0%	0.4%
International Equity	20.1%	19.0%	1.1%
Fixed Income	27.6%	28.0%	-0.4%
Private Equity	6.9%	6.0%	0.9%
Hedge Funds	6.8%	7.0%	-0.2%
Real Estate	7.7%	9.0%	-1.3%
Public Real Assets	6.1%	4.0%	2.1%
Private Real Asset	2.0%	4.0%	-2.0%
Cash	0.4%	1.0%	-0.6%
TOTAL	100.0%	100.0%	0.0%

Total Fund Manager Allocation Analysis

Period Ending: June 30, 2021



	Actual	Actual
Aberdeen Standard GARS	\$79,934,625	1%
Acadian MAAR Fund LLC	\$72,000,012	1%
Acadian US MGD V	\$223,919,722	4%
AG CSF Annex Dislocation Fund	\$7,182,351	0%
Angelo Gordon Credit Solutions	\$14,384,034	0%
Angelo Gordon Opportunistic	\$2,190,000	0%
Baillie Gifford	\$383,954,782	7%
Beach Point Select	\$92,655,659	2%
Blackrock DL Feeder IX-U	\$12,474,533	0%
BlackRock MSCI ACWI EX-US IMI	\$372,152,063	6%
BlackRock Russell 1000	\$530,596,488	9%
Brigade Capital	\$107,261,688	2%
Cash Overlay	\$7,864,507	0%
CFM Systematic Global Macro	\$88,294,656	2%
Core Fixed Income Overlay	\$30,914,258	1%
Currency Hedge Cash Overlay	\$55,837,135	1%
DE Shaw	\$198,434,973	3%
Domestic Equity Overlay	\$11,578,280	0%
DoubleLine	\$260,988,274	4%
FIAM Bond	\$269,060,232	5%
Franklin Templeton	\$77,700,193	1%
Futures Offsets (SMCE02001)	-\$95,267,672	-2%
General Account	\$44,971,843	1%
Graham Quant Macro	\$90,043,453	2%
Harrison Street Core Property	\$53,357,728	1%
International Equity Overlay	\$52,775,134	1%
Invesco	\$274,859,704	5%
Invesco US Val IV	\$13,877,128	0%
Invesco US Val V	\$24,631,503	0%
Mondrian	\$367,511,768	6%
NISA Core Bond	\$237,639,033	4%
PanAgora Defuseq	\$232,253,685	4%
PGIM RE US Debt Fund	\$85,544,448	1%
PIMCO Diversified	\$134,577,606	2%
PIMCO MAARS Fund LP	\$71,130,182	1%
PIMCO Private Income	\$53,173,408	1%
Private Equity	\$406,570,411	7%
Private Real Asset	\$114,919,200	2%
QMA US Small Cap	\$114,670,360	2%
SSgA Custom Real Asset	\$360,643,196	6%
TCP Direct Lending VIII	\$28,026,092	0%
Transition Account	\$9	0%
Treasury & LAIF	\$8,624,047	0%
Western TRU	\$224,383,666	4%
White Oak Yield	\$32,964,449	1%
White Oak YSF V	\$33,411,565	1%
Total	\$5,864,670,411	100%

Statistics Summary

3 Years

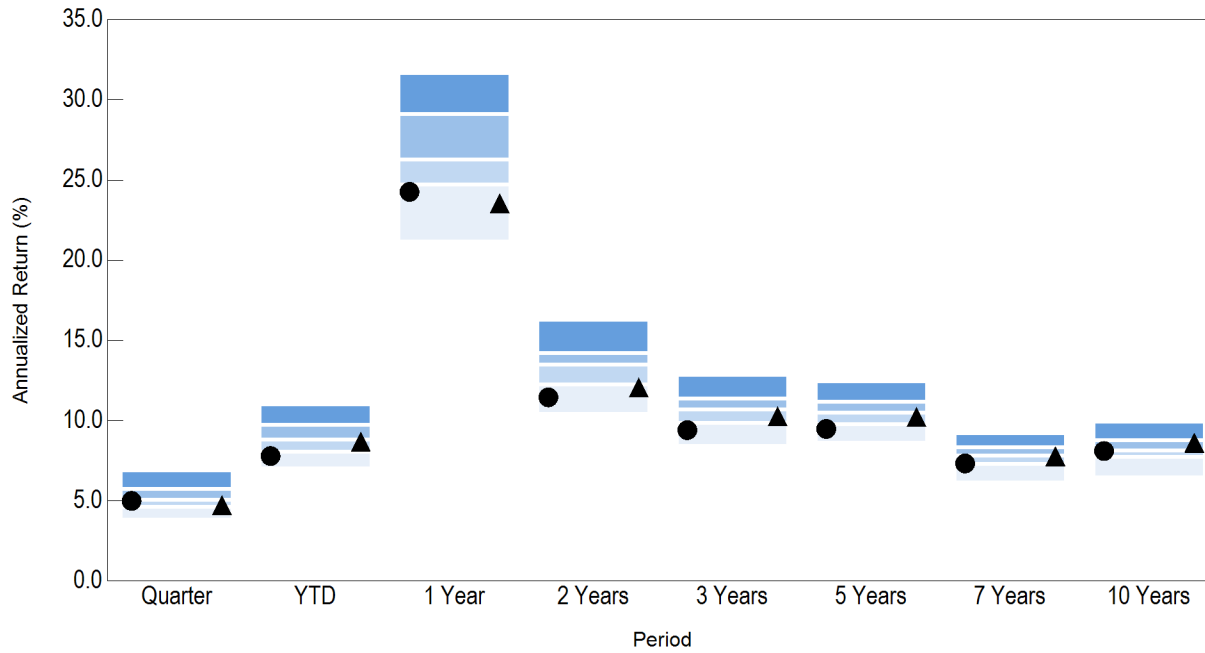
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	9.4%	84	9.4%	25	0.9	45	-0.4	66	2.3%	79
Policy Index	10.3%	67	9.3%	23	1.0	28	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	10.7%	--	10.9%	--	0.8	--	-0.1	--	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	9.5%	86	7.7%	25	1.1	36	-0.4	81	1.9%	77
Policy Index	10.2%	65	7.6%	23	1.2	26	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	10.5%	--	8.8%	--	1.1	--	0.0	--	1.3%	--

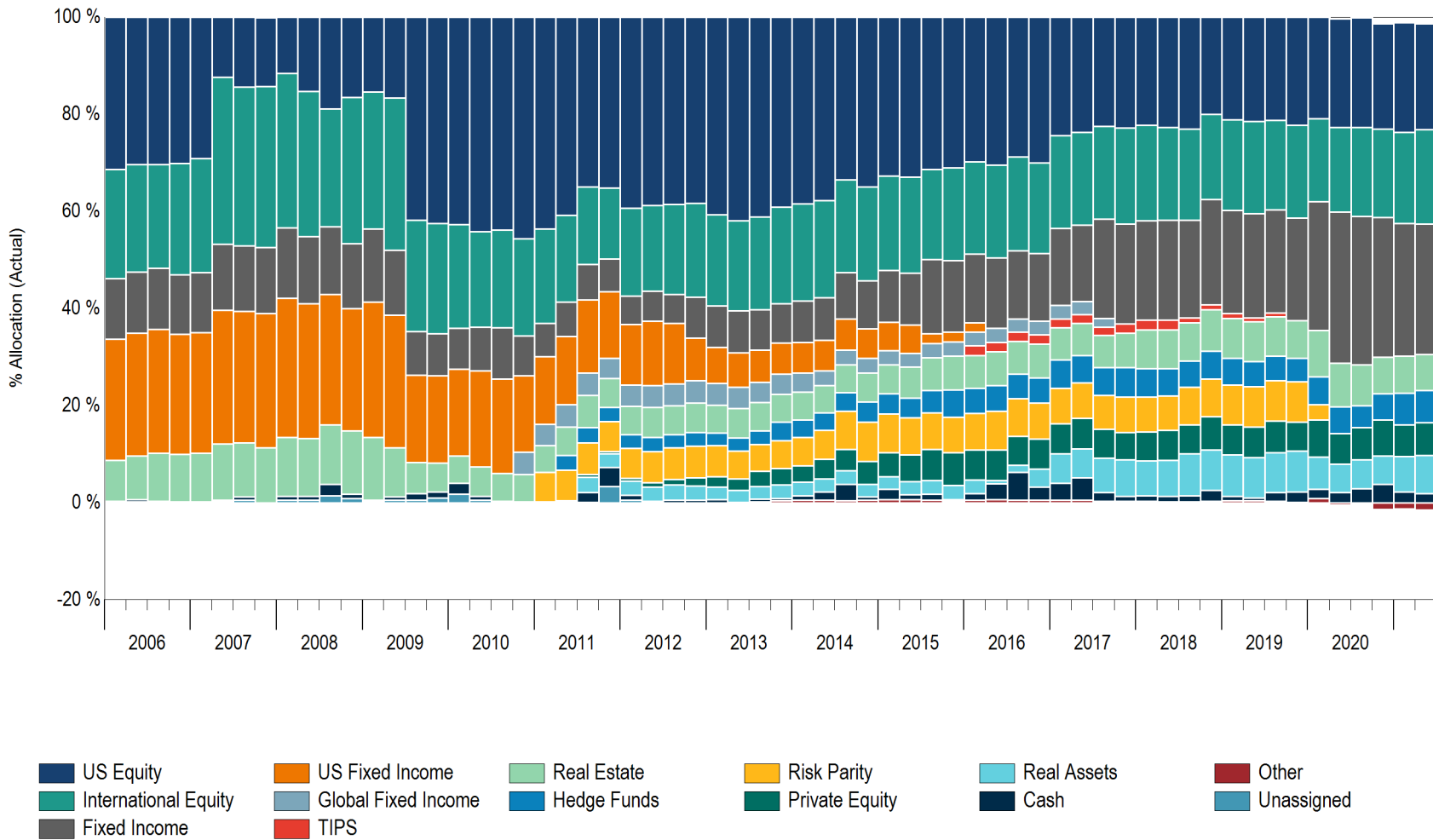
InvMetrics Public DB > \$1B Net Return Comparison



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Return (Rank)								
5th Percentile	6.9	11.0	31.6	16.3	12.8	12.4	9.2	9.9
25th Percentile	5.7	9.8	29.1	14.2	11.4	11.2	8.4	8.8
Median	5.1	8.8	26.3	13.5	10.7	10.5	7.8	8.2
75th Percentile	4.6	8.1	24.7	12.3	9.9	9.8	7.3	7.7
95th Percentile	3.8	7.0	21.2	10.4	8.4	8.6	6.2	6.5
# of Portfolios	57	57	57	57	57	57	57	54
● Total Fund	5.0 (54)	7.8 (80)	24.3 (86)	11.4 (88)	9.4 (84)	9.5 (86)	7.3 (75)	8.1 (51)
▲ Policy Index	4.7 (71)	8.7 (56)	23.5 (89)	12.1 (81)	10.3 (67)	10.2 (65)	7.8 (52)	8.6 (30)

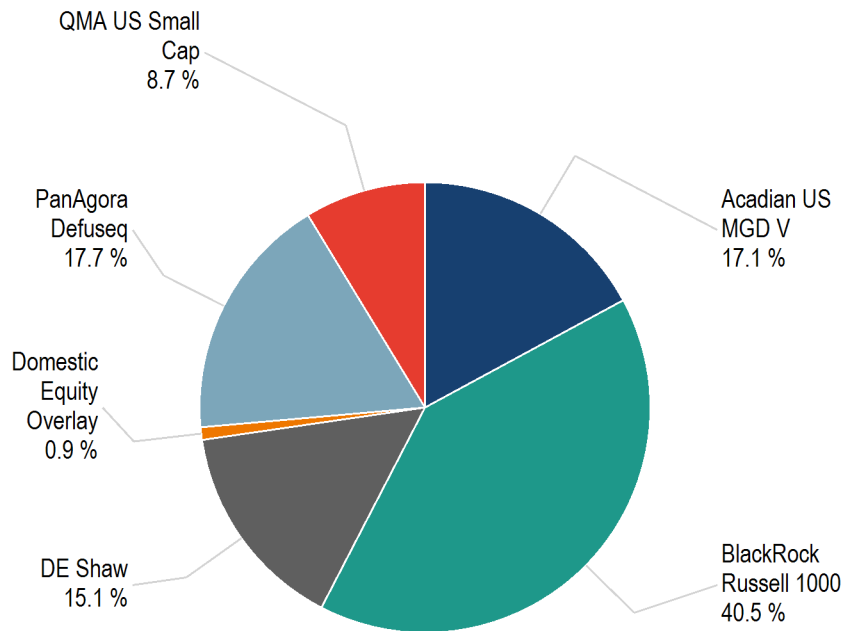
Total Fund
Asset Allocation History

Period Ending: June 30, 2021



US Equity
 Manager Allocation Analysis

Period Ending: June 30, 2021



	Actual \$	Actual %	Manager Contribution to Excess Return %
Acadian US MGD V	\$223,919,722	17.1%	-0.3%
BlackRock Russell 1000	\$530,596,488	40.5%	0.0%
DE Shaw	\$198,434,973	15.1%	-0.1%
PanAgora Defuseq	\$232,253,685	17.7%	-0.5%
QMA US Small Cap	\$114,670,360	8.7%	0.0%
Domestic Equity Overlay	\$11,578,280	0.9%	0.0%
Actual vs. Policy Weight Difference			-0.2%
Total	\$1,311,453,508	100.0%	-1.1%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	15.1%	18.8%	0.7	-2.1	1.7%
Blended US Equity Index	18.7%	19.4%	0.9	--	0.0%
Russell 3000	18.7%	19.4%	0.9	--	0.0%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	16.0%	18.2%	0.8	-1.7	1.9%
Russell 1000	19.2%	19.1%	0.9	--	0.0%
BlackRock Russell 1000	19.2%	19.1%	0.9	0.5	0.0%
Russell 1000	19.2%	19.1%	0.9	--	0.0%
DE Shaw	16.1%	19.5%	0.8	-1.1	2.8%
Russell 1000	19.2%	19.1%	0.9	--	0.0%
Small Cap Equity	7.7%	27.1%	0.2	-1.1	5.1%
Russell 2000	13.5%	25.6%	0.5	--	0.0%
QMA US Small Cap	7.7%	27.1%	0.2	-1.1	5.1%
Russell 2000	13.5%	25.6%	0.5	--	0.0%

Statistics Summary

5 Years

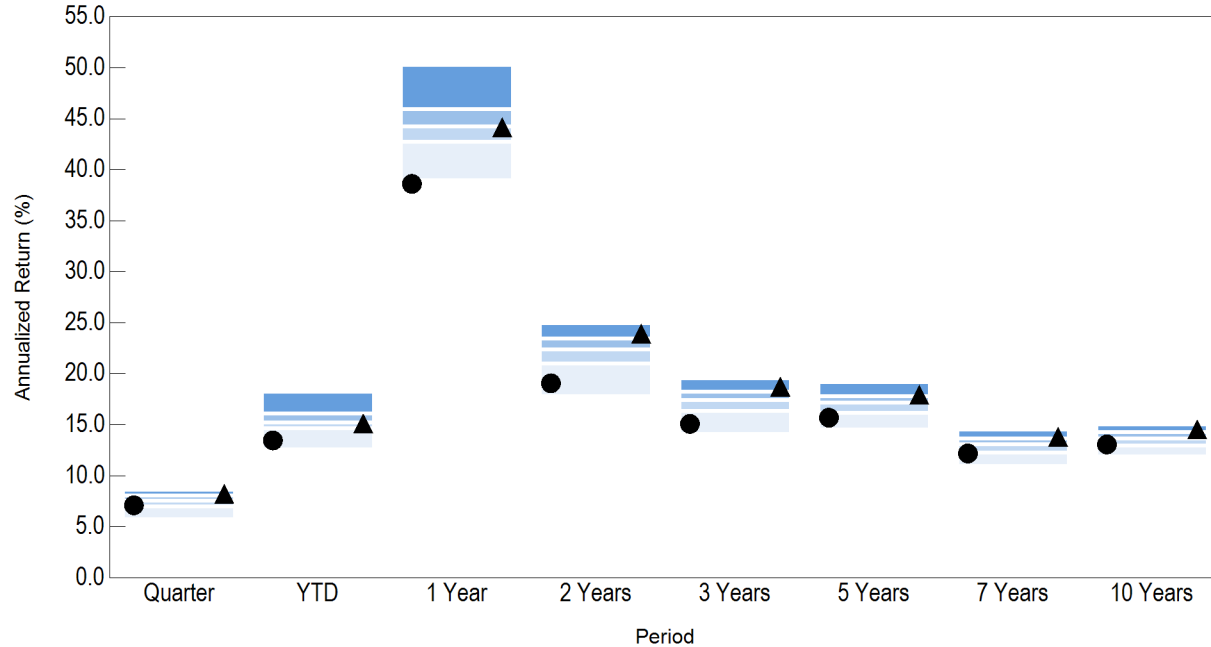
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	15.7%	15.2%	1.0	-1.6	1.5%
Blended US Equity Index	17.9%	15.7%	1.1	--	0.0%
Russell 3000	17.9%	15.6%	1.1	-0.7	0.1%

Statistics Summary

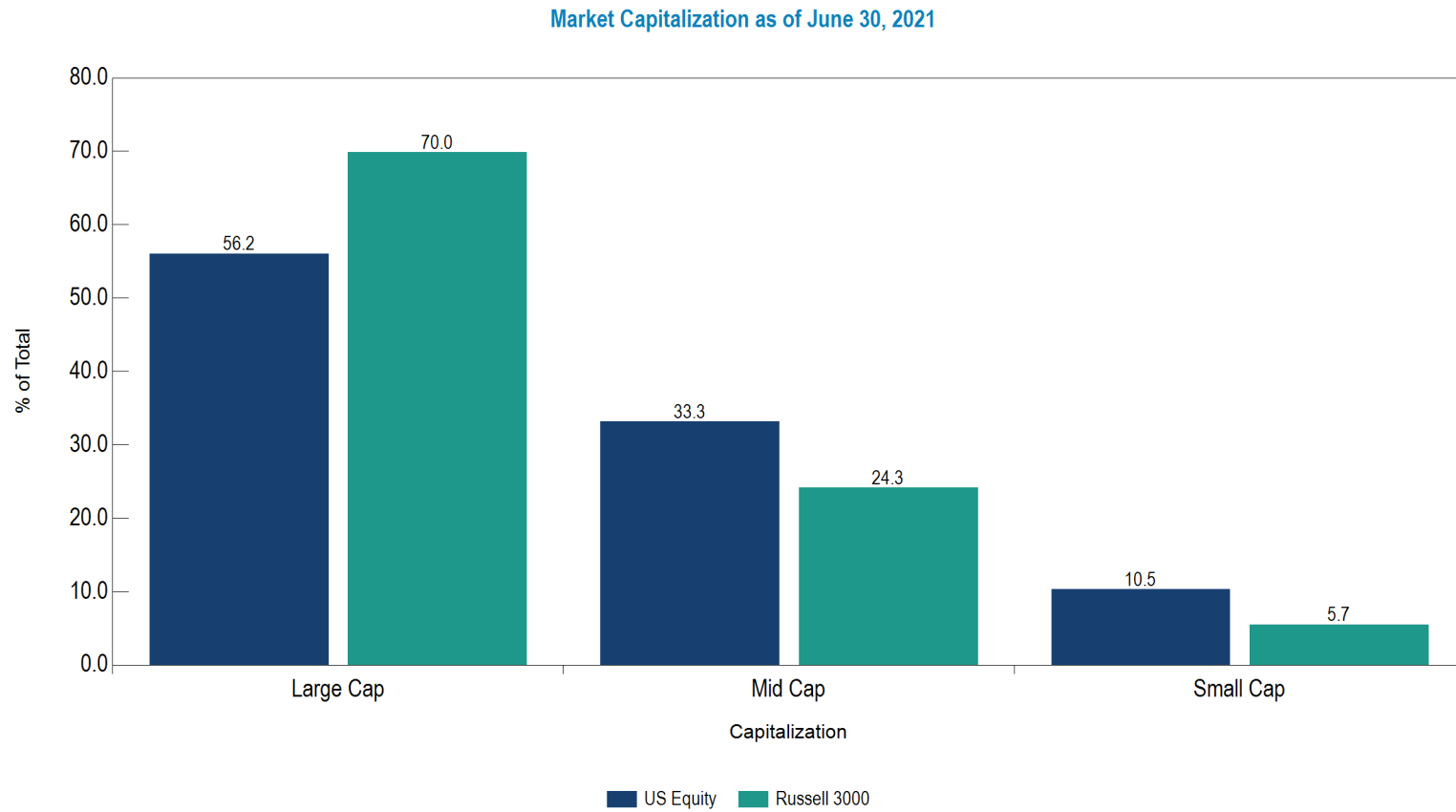
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	16.5%	14.7%	1.1	-0.9	1.7%
Russell 1000	18.0%	15.4%	1.1	--	0.0%
DE Shaw	17.1%	15.6%	1.0	-0.3	2.6%
Russell 1000	18.0%	15.4%	1.1	--	0.0%
Small Cap Equity	11.7%	22.1%	0.5	-1.1	4.3%
Russell 2000	16.5%	21.0%	0.7	--	0.0%

InvMetrics All DB US Eq Net Return Comparison



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	8.6	18.2	50.3	24.9	19.5	19.2	14.5	15.0
25th Percentile	8.1	16.1	46.0	23.5	18.3	17.8	13.7	14.3
Median	7.6	15.3	44.3	22.4	17.4	17.2	13.1	13.7
75th Percentile	7.0	14.7	42.8	21.0	16.4	16.2	12.3	13.0
95th Percentile	5.8	12.6	39.0	17.9	14.1	14.5	11.0	11.9
# of Portfolios	436	436	433	433	429	401	386	313
● US Equity	7.1 (72)	13.5 (92)	38.6 (96)	19.1 (92)	15.1 (88)	15.7 (85)	12.2 (78)	13.1 (75)
▲ Blended US Equity Index	8.2 (16)	15.1 (61)	44.2 (54)	23.9 (16)	18.7 (13)	17.9 (18)	13.8 (19)	14.5 (15)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,914	2,916
Weighted Avg. Market Cap. (\$B)	334.9	408.7
Median Market Cap. (\$B)	4.5	2.8
Price To Earnings	23.9	26.5
Price To Book	4.1	4.4
Price To Sales	2.6	3.2
Return on Equity (%)	19.6	18.4
Yield (%)	1.4	1.3

Top Holdings

APPLE INC	3.7%
MICROSOFT CORP	3.6%
AMAZON.COM INC	2.0%
ALPHABET INC	1.8%
FACEBOOK INC	1.4%
ALPHABET INC	0.9%
VERIZON COMMUNICATIONS INC	0.9%
TESLA INC	0.9%
JOHNSON & JOHNSON	0.9%
BERKSHIRE HATHAWAY INC	0.8%

Best Performers

	Return %
AMC ENTERTAINMENT HOLDINGS INC (AMC)	455.1%
SILVERBOW RESOURCES INC (SBOW)	198.5%
PDS BIOTECHNOLOGY CORP (PDSB)	175.8%
Peabody Energy Corp (BTU)	159.2%
APOLLO MEDICAL HOLDINGS INC (AMEH)	131.9%
AGILITI INC	116.5%
BIONTECH SE (BNTX)	105.0%
PROTHENA CORP PLC (PRTA)	104.7%
ALPHA METALLURGICAL RESOURCE INC (AMR)	102.9%
J JILL INC (JILL)	102.2%

Worst Performers

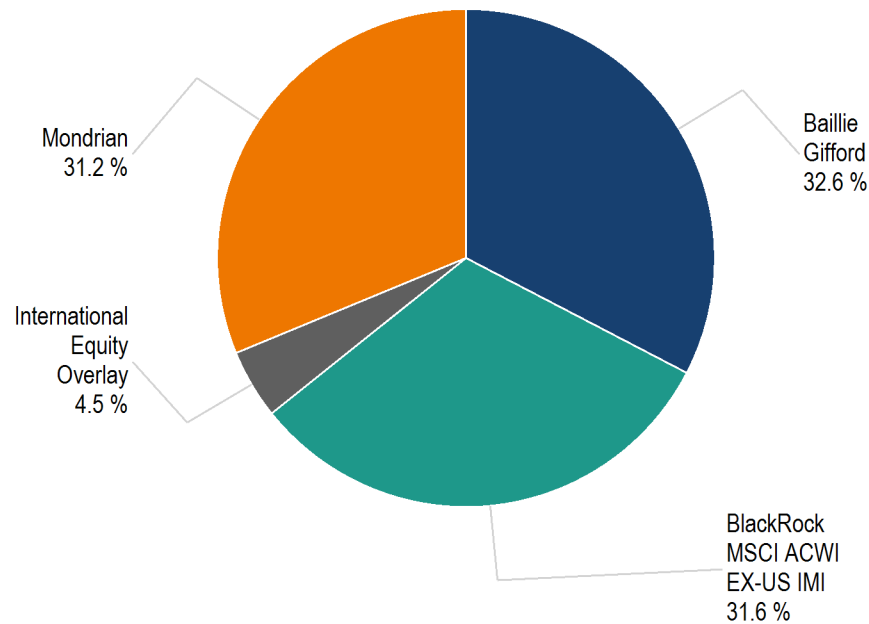
	Return %
CHEMOCENTRYX INC (CCXI)	-73.9%
ATEA PHARMACEUTICALS INC (AVIR)	-65.2%
ADVERUM BIOTECHNOLOGIES INC (ADVM)	-64.5%
AVENUE THERAPEUTICS INC (ATXI)	-58.6%
BLACK DIAMOND THERAPEUTICS INC (BDTX)	-49.8%
VYNE THERAPEUTICS INC (VYNE)	-48.7%
ARRAY TECHNOLOGIES INC (ARRY)	-47.7%
ATRECA INC (BCEL)	-44.4%
PRAXIS PRECISION MEDICINES I COMMON STOCK USD.0001 (PRAX)	-44.2%
SCHOLAR ROCK HOLDING CORP (SRRK)	-43.0%

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%	15.4%	12.4%	2.7%	2.3%			
Materials	-0.1%	0.0%	0.0%	0.0%	3.6%	4.9%	4.2%	2.9%			
Industrials	0.0%	0.0%	0.0%	0.0%	4.1%	3.9%	9.5%	9.9%			
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	6.7%	6.7%	11.3%	12.3%			
Consumer Staples	-0.3%	-0.1%	-0.2%	0.0%	2.5%	3.6%	9.5%	5.6%			
Health Care	-0.1%	-0.1%	0.0%	0.0%	7.6%	8.2%	14.1%	13.6%			
Financials	-0.1%	-0.1%	0.0%	0.0%	6.4%	7.3%	9.0%	11.7%			
Information Technology	-0.3%	-0.2%	-0.1%	0.0%	10.7%	11.4%	22.3%	25.7%			
Communication Services	-0.2%	-0.2%	0.0%	0.0%	8.7%	11.0%	9.9%	10.0%			
Utilities	-0.1%	0.0%	-0.1%	0.0%	-0.1%	-0.4%	4.1%	2.6%			
Real Estate	0.0%	0.0%	0.0%	0.0%	11.7%	11.7%	3.2%	3.3%			
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	--	0.2%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	8.4%	--	0.1%	0.0%			
Portfolio	-1.0%	=	-0.6%	+	-0.4%	+	0.0%	7.2%	8.2%	100.0%	100.0%

U.S. Effective Style Map





	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$383,954,782	32.6%	0.3%
Mondrian	\$367,511,768	31.2%	0.0%
BlackRock MSCI ACWI EX-US IMI	\$372,152,063	31.6%	0.0%
International Equity Overlay	\$52,775,134	4.5%	0.0%
Actual vs. Policy Weight Difference			-0.2%
Total	\$1,176,393,747	100.0%	0.2%

Statistics Summary

3 Years

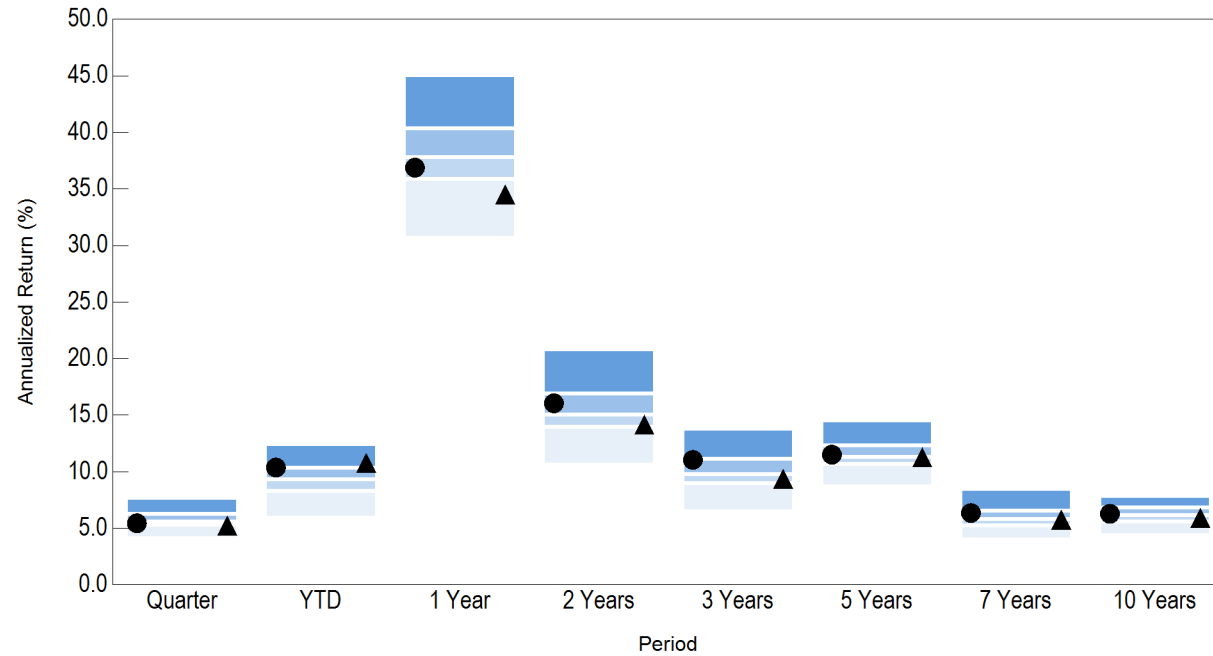
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	11.0%	16.6%	0.6	1.1	1.5%
Blended International Equity Index	9.4%	16.7%	0.5	--	0.0%
Baillie Gifford	16.9%	18.5%	0.8	1.1	6.2%
MSCI ACWI ex US	9.9%	17.6%	0.5	--	0.0%
Mondrian	6.9%	18.9%	0.3	0.4	2.8%
MSCI ACWI ex USA Value Gross	5.8%	20.1%	0.2	--	0.0%

Statistics Summary

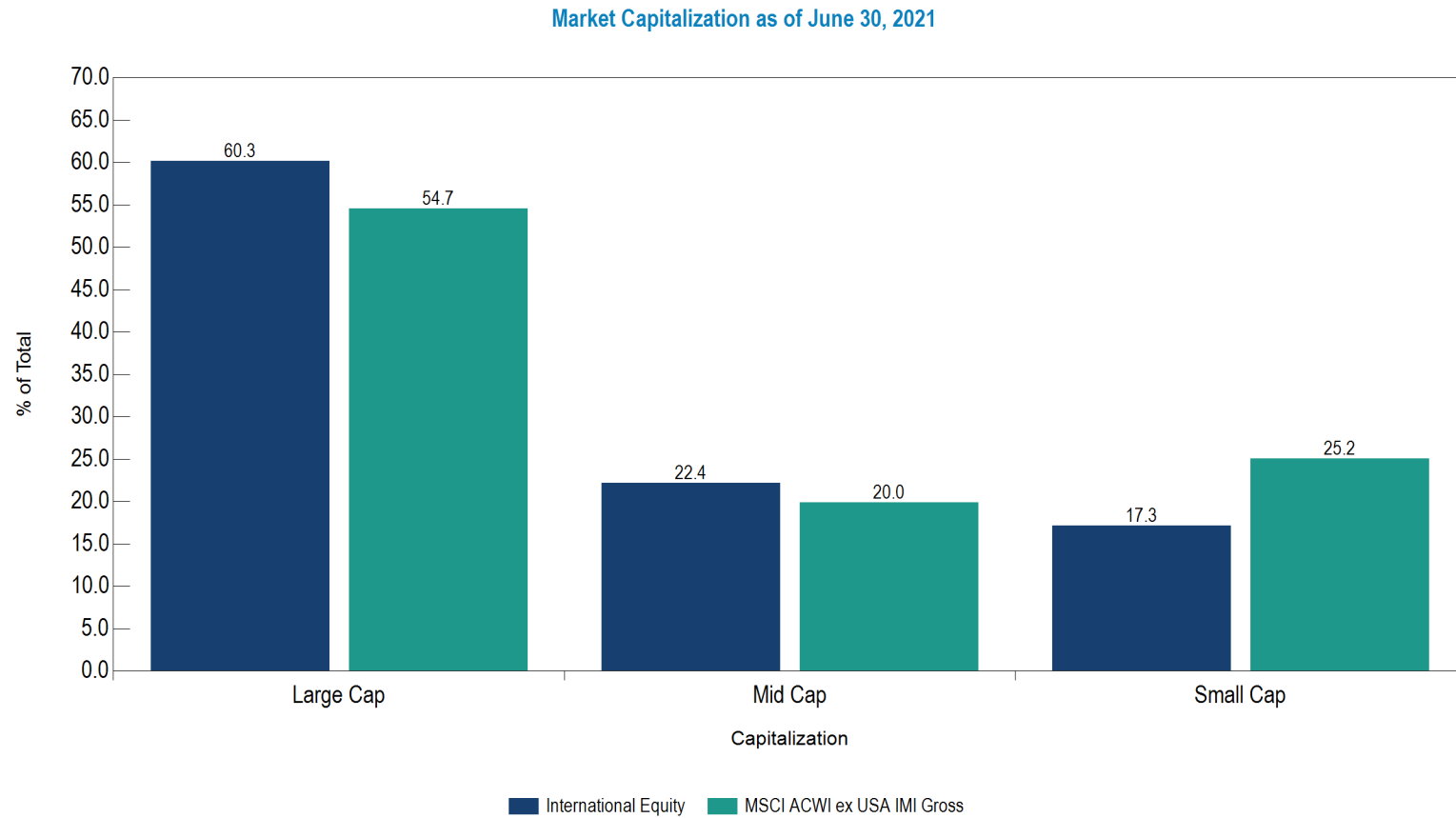
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	11.5%	14.0%	0.7	0.1	1.6%
Blended International Equity Index	11.3%	13.9%	0.7	--	0.0%
Baillie Gifford	16.1%	15.6%	1.0	0.8	5.7%
MSCI ACWI ex US	11.6%	14.6%	0.7	--	0.0%
Mondrian	8.0%	15.7%	0.4	-0.4	3.4%
MSCI ACWI ex USA Value Gross	9.2%	16.5%	0.5	--	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	7.7	12.4	45.0	20.8	13.8	14.5	8.4	7.8
25th Percentile	6.3	10.4	40.4	17.0	11.2	12.4	6.6	6.9
Median	5.6	9.4	37.8	15.1	9.8	11.3	5.9	6.2
75th Percentile	5.3	8.4	35.9	14.0	9.0	10.7	5.3	5.6
95th Percentile	4.2	6.0	30.7	10.7	6.5	8.8	4.0	4.5
# of Portfolios	286	286	285	285	282	262	251	199
● International Equity	5.4 (67)	10.4 (25)	36.9 (62)	16.0 (36)	11.0 (27)	11.5 (43)	6.3 (31)	6.3 (48)
▲ Blended International Equity Index	5.2 (80)	10.8 (20)	34.5 (85)	14.2 (74)	9.4 (64)	11.3 (52)	5.8 (53)	5.9 (62)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	6,769	6,755
Weighted Avg. Market Cap. (\$B)	93.1	91.0
Median Market Cap. (\$B)	2.0	2.0
Price To Earnings	20.2	18.9
Price To Book	2.9	2.7
Price To Sales	1.6	1.5
Return on Equity (%)	10.8	10.9
Yield (%)	2.2	2.4

Top Holdings

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.4%
ASML HOLDING NV	1.4%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.3%
ALIBABA GROUP HOLDING LTD	1.2%
UNITED OVERSEAS BANK LTD	1.2%
SANOFI	1.0%
ZALANDO SE	1.0%
CK HUTCHISON HOLDINGS LTD	0.9%
BANCO SANTANDER SA	0.8%
SHOPIFY INC	0.8%

Best Performers

	Return %
WAN HAI LINES (TW:WHL)	494.7%
YANG MING MARINE TRANSPORT CORP	394.1%
EVERGREEN MARINE CORP (TAIWAN) LTD	341.9%
GENEONE LIFE SCIENCE INC	303.2%
CELLID CO LTD	232.3%
UXIN LTD (UXIN)	229.1%
XTEP INTERNATIONAL HOLDINGS LTD	225.5%
CHUNG HUNG STEEL (TW:UUE)	220.4%
WISDOM MARINE LINES CO LTD	215.1%
NATURECELL CO LTD	202.6%

Worst Performers

	Return %
FOCUS DYNAMICS GROUP BHD	-93.3%
Perennial Energy Holdings Limited	-88.1%
F&F HOLDINGS CO LTD	-85.2%
SERBA DINAMIK HOLDINGS BERHAD	-80.7%
POSEIDON CONCEPTS CORP (POOSF)	-80.0%
PIRAEUS FINANCIAL HOLDINGS SA	-79.1%
KINEMASTER CORP	-65.0%
BIT MINING LTD (BTCM)	-63.1%
AI INSIDE INC	-62.4%
CHINA ONLINE EDUCATION GROUP (COE)	-61.5%

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%	0.0%	0.0%	6.1%	8.9%	3.8%	4.2%			
Materials	-0.1%	0.0%	0.0%	0.0%	6.3%	6.6%	5.1%	8.6%			
Industrials	0.1%	0.1%	0.0%	0.0%	5.9%	5.4%	13.5%	13.2%			
Consumer Discretionary	0.2%	0.2%	0.0%	0.1%	6.0%	4.8%	17.1%	13.6%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	6.2%	7.5%	7.3%	8.0%			
Health Care	-0.1%	-0.1%	0.0%	0.0%	8.9%	10.1%	9.4%	8.7%			
Financials	0.0%	0.0%	0.0%	-0.1%	4.3%	4.5%	14.5%	17.8%			
Information Technology	0.3%	0.3%	0.0%	0.0%	8.8%	6.9%	14.8%	12.5%			
Communication Services	0.0%	0.0%	-0.1%	0.0%	2.0%	1.6%	8.6%	6.6%			
Utilities	0.0%	0.0%	0.0%	0.0%	1.1%	0.8%	3.0%	3.2%			
Real Estate	0.0%	0.1%	0.0%	0.0%	6.3%	4.5%	1.5%	3.6%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.0%	--	1.4%	0.0%			
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%			
Portfolio	0.1%	=	0.3%	+	-0.1%	+	-0.1%	5.9%	5.8%	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	9.1%	10.6%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	9.6%	9.6%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	14.1%	13.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	18.1%	13.0%	0.8%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%
Finland	4.2%	10.7%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	11.4%	9.4%	5.8%	6.3%	0.1%	0.0%	0.0%	0.0%	0.1%
Germany	10.7%	5.4%	4.2%	5.6%	0.3%	0.0%	0.0%	-0.1%	0.2%
Greece*	6.1%	6.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	14.5%	14.6%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	4.7%	2.9%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	0.4%	5.3%	1.8%	1.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Luxembourg	3.2%	5.8%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	7.5%	7.2%	3.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Norway	4.3%	4.5%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	19.9%	19.7%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	9.3%	0.9%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	13.5%	14.4%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	8.6%	4.7%	2.1%	1.5%	0.1%	0.0%	0.0%	0.0%	0.1%
Sweden	9.7%	7.3%	3.5%	2.6%	0.1%	0.0%	0.0%	0.0%	0.1%
Switzerland	12.0%	11.8%	3.5%	5.5%	0.0%	-0.1%	0.0%	0.0%	-0.1%
United Kingdom	5.0%	5.8%	12.1%	9.4%	-0.1%	0.0%	0.0%	0.0%	-0.1%

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

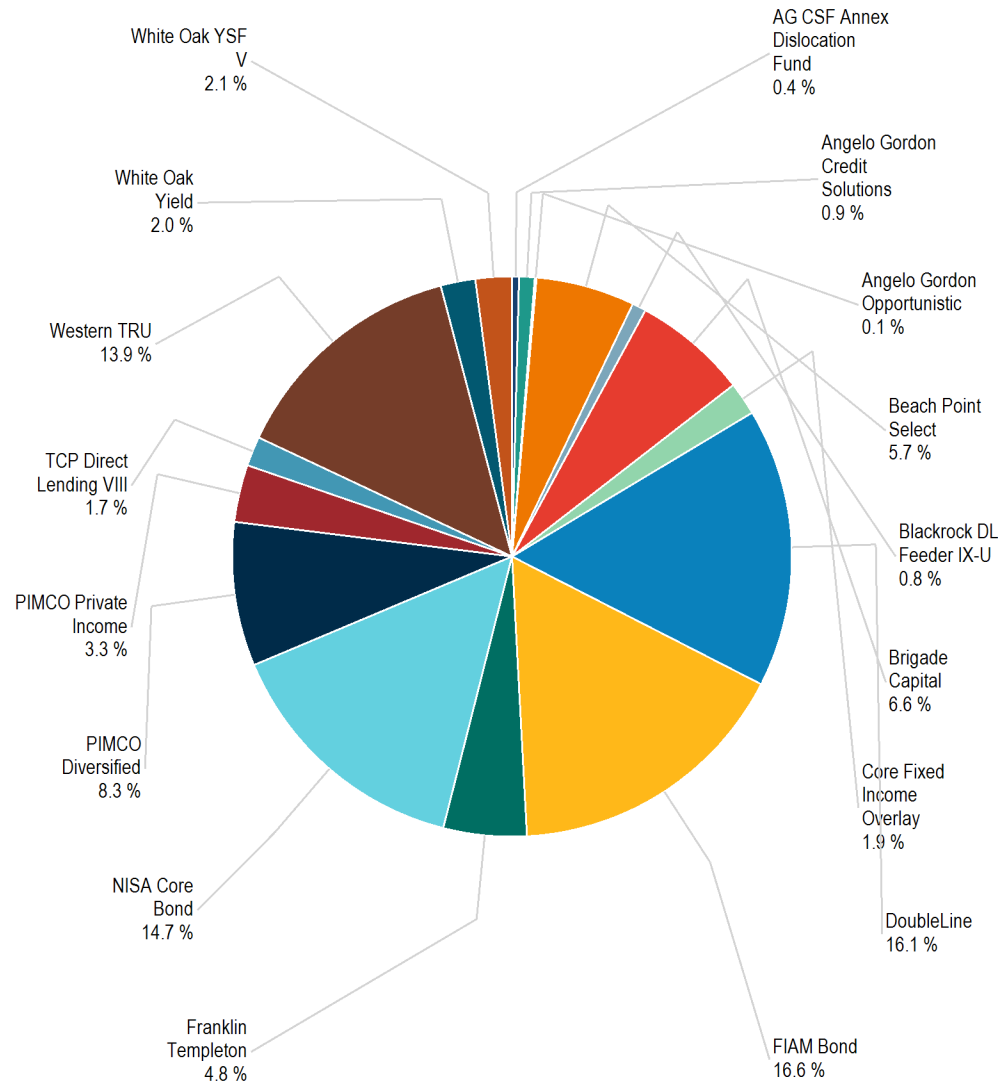
	Returns and Weights				Attribution Effects				Total Effects	
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect		
AsiaPacific										
Australia	10.3%	6.9%	2.6%	4.6%	0.2%	-0.1%	0.0%	-0.1%	0.0%	
China*	7.1%	2.7%	10.1%	10.5%	0.5%	0.0%	0.0%	0.0%	0.5%	
Hong Kong	2.1%	2.5%	4.0%	2.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%	
India*	6.7%	8.3%	3.7%	3.1%	-0.1%	0.0%	0.0%	0.0%	0.0%	
Indonesia*	-6.6%	-4.7%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
Japan	0.2%	-0.3%	19.2%	16.1%	0.1%	-0.2%	0.0%	0.0%	-0.1%	
Korea*	4.9%	5.2%	2.7%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Malaysia*	-4.0%	-3.8%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
New Zealand	5.6%	-1.2%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Pakistan*	0.2%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Philippines*	7.4%	7.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Singapore	0.3%	0.7%	1.7%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	
Taiwan*	3.4%	7.8%	4.7%	4.4%	-0.2%	0.0%	0.0%	0.0%	-0.2%	
Thailand*	-5.2%	-3.7%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
Americas										
Argentina*	5.8%	7.8%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Brazil*	17.7%	24.6%	1.2%	1.4%	-0.1%	0.0%	0.0%	0.0%	-0.1%	
Canada	16.4%	10.2%	4.0%	6.7%	0.5%	-0.1%	-0.1%	-0.2%	0.1%	
Chile*	-12.9%	-12.8%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Colombia*	-3.8%	-3.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Mexico*	9.7%	9.3%	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
Peru*	-11.1%	-9.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
United States	19.0%	8.8%	0.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	

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*	-4.5%	-4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Israel	8.1%	8.0%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait*	9.6%	10.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	2.4%	2.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Saudi Arabia*	10.5%	10.5%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-7.4%	0.2%	1.0%	1.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Turkey*	-4.9%	-4.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	11.1%	11.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Totals									
Americas	15.3%	11.7%	7.0%	8.9%	0.4%	-0.1%	-0.1%	-0.1%	0.1%
Europe	8.2%	7.8%	39.7%	40.3%	0.2%	0.0%	-0.1%	0.0%	0.1%
Asia/Pacific	3.3%	2.9%	50.1%	47.5%	0.2%	-0.1%	0.0%	0.0%	0.1%
Other	-1.1%	5.2%	1.7%	3.2%	-0.2%	0.0%	0.0%	0.1%	-0.1%
Cash	0.0%	--	1.4%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Total	5.9%	5.8%	100.0%	100.0%	0.5%	-0.2%	-0.2%	0.0%	0.2%
Totals									
Developed	6.1%	5.8%	72.1%	70.1%	0.3%	0.0%	-0.1%	0.0%	0.3%
Emerging*	5.8%	5.7%	26.4%	29.9%	0.1%	0.0%	-0.1%	0.0%	0.0%
Cash	0.0%	--	1.4%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%

Fixed Income Manager Allocation Analysis

Period Ending: June 30, 2021



	Actual \$	Actual %	Manager Contribution to Excess Return %
AG CSF Annex Dislocation Fund	\$7,182,351	0.4%	0.0%
Angelo Gordon Credit Solutions	\$14,384,034	0.9%	0.0%
Angelo Gordon Opportunistic	\$2,190,000	0.1%	0.0%
Beach Point Select	\$92,655,659	5.7%	0.1%
Blackrock DL Feeder IX-U	\$12,474,533	0.8%	0.0%
Brigade Capital	\$107,261,688	6.6%	0.1%
DoubleLine	\$260,988,274	16.1%	0.1%
FIAM Bond	\$269,060,232	16.6%	0.0%
Franklin Templeton	\$77,700,193	4.8%	0.0%
NISA Core Bond	\$237,639,033	14.7%	0.0%
PIMCO Diversified	\$134,577,606	8.3%	0.0%
PIMCO Private Income	\$53,173,408	3.3%	-0.1%
TCP Direct Lending VIII	\$28,026,092	1.7%	0.0%
Western TRU	\$224,383,666	13.9%	0.2%
White Oak Yield	\$32,964,449	2.0%	-0.1%
White Oak YSF V	\$33,411,565	2.1%	-0.1%
Core Fixed Income Overlay	\$30,914,258	1.9%	0.0%
Actual vs. Policy Weight Difference			-0.2%
Total	\$1,618,987,041	100.0%	0.1%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	5.7%	3.5%	1.3	-0.2	1.8%
Blended Fixed Income Index	6.1%	4.1%	1.2	--	0.0%
Core Fixed	5.4%	3.0%	1.4	0.0	1.5%
BBgBarc US Aggregate TR	5.3%	3.5%	1.2	--	0.0%
FIAM Bond	6.5%	4.0%	1.3	0.7	1.6%
BBgBarc US Aggregate TR	5.3%	3.5%	1.2	--	0.0%
Western TRU	5.2%	6.6%	0.6	0.6	6.6%
3-Month Libor Total Return USD	1.4%	0.3%	0.8	--	0.0%
Opportunistic Credit	6.4%	6.8%	0.8	-0.4	4.3%
BBgBarc BA Intermediate HY	8.0%	7.9%	0.9	--	0.0%
Angelo Gordon Opportunistic	7.9%	17.8%	0.4	0.1	17.9%
BBgBarc US Aggregate TR	5.3%	3.5%	1.2	--	0.0%
Beach Point Select	9.9%	8.9%	1.0	0.4	4.9%
BBgBarc BA Intermediate HY	8.0%	7.9%	0.9	--	0.0%
Brigade Capital	6.5%	12.2%	0.4	-0.2	7.1%
BBgBarc BA Intermediate HY	8.0%	7.9%	0.9	--	0.0%
PIMCO Diversified	6.5%	6.9%	0.8	-0.2	1.3%
Blended PIMCO Diversified Index	6.8%	7.7%	0.7	--	0.0%
Franklin Templeton	-1.3%	6.6%	-0.4	-0.7	7.5%
BBgBarc Multiverse TR	4.3%	4.5%	0.7	--	0.0%

Statistics Summary

3 Years

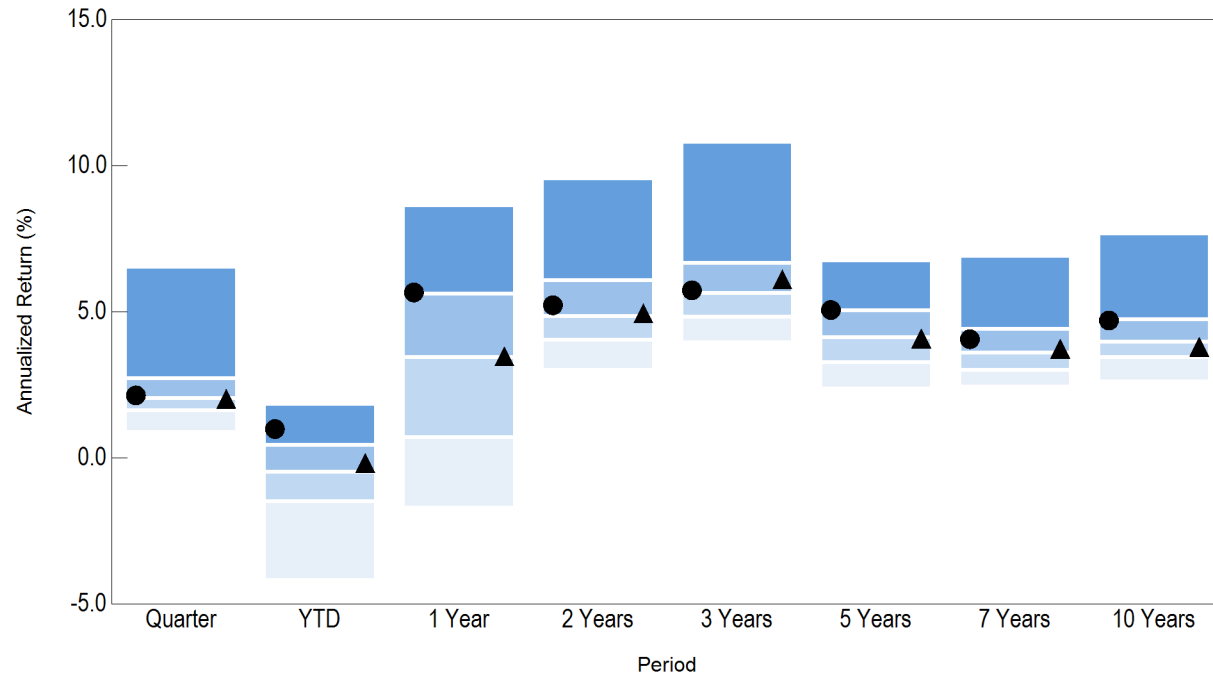
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Private Credit	6.9%	4.1%	1.4	-0.4	2.8%
Cliffwater Direct Lending Index	8.2%	5.6%	1.2	--	0.0%
TCP Direct Lending VIII	7.0%	3.0%	2.0	-0.2	4.7%
Cliffwater Direct Lending Index	8.2%	5.6%	1.2	--	0.0%
White Oak Yield	5.8%	3.1%	1.5	-0.7	3.6%
Cliffwater Direct Lending Index	8.2%	5.6%	1.2	--	0.0%

Statistics Summary

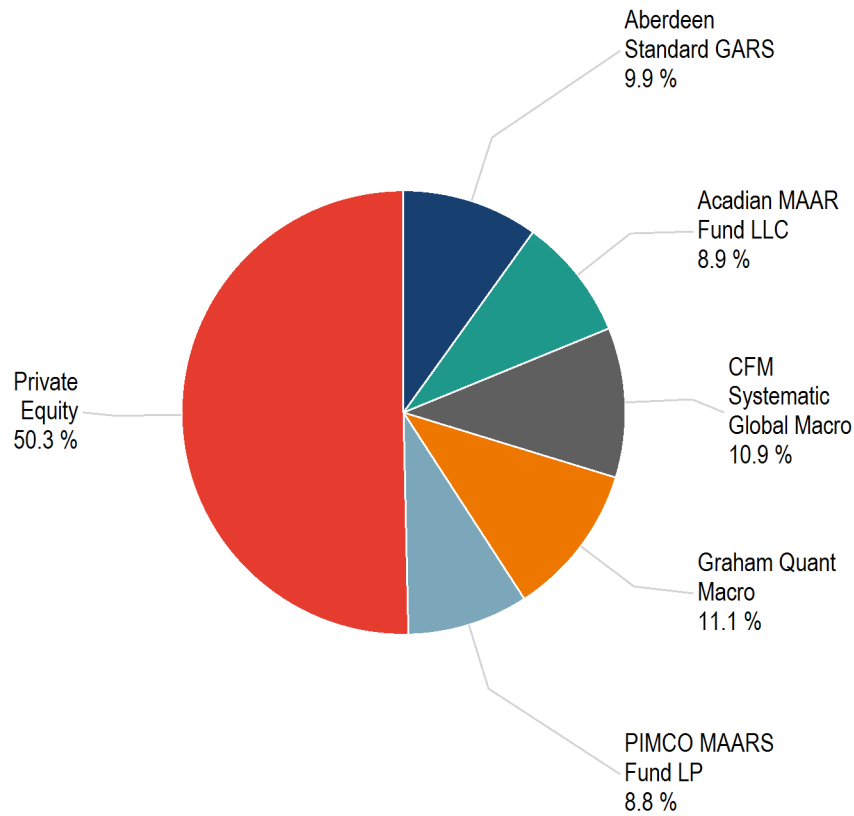
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	5.1%	3.0%	1.3	0.5	1.8%
Blended Fixed Income Index	4.1%	3.6%	0.8	--	0.0%
Core Fixed	3.7%	2.8%	1.0	0.6	1.3%
BBgBarc US Aggregate TR	3.0%	3.3%	0.6	--	0.0%
FIAM Bond	4.1%	3.6%	0.8	0.8	1.2%
BBgBarc US Aggregate TR	3.0%	3.3%	0.6	--	0.0%
Western TRU	4.7%	5.4%	0.7	0.6	5.5%
3-Month Libor Total Return USD	1.4%	0.3%	1.3	--	0.0%
Opportunistic Credit	7.6%	5.5%	1.2	0.2	3.7%
BBgBarc BA Intermediate HY	6.7%	6.3%	0.9	--	0.0%
Angelo Gordon Opportunistic	12.8%	15.1%	0.8	0.6	15.3%
BBgBarc US Aggregate TR	3.0%	3.3%	0.6	--	0.0%
Beach Point Select	10.2%	7.0%	1.3	0.9	4.0%
BBgBarc BA Intermediate HY	6.7%	6.3%	0.9	--	0.0%
Brigade Capital	8.0%	9.7%	0.7	0.2	5.7%
BBgBarc BA Intermediate HY	6.7%	6.3%	0.9	--	0.0%
Franklin Templeton	0.8%	6.3%	0.0	-0.2	7.7%
BBgBarc Multiverse TR	2.6%	4.6%	0.3	--	0.0%

InvMetrics All DB Total Fix Inc Net Return Comparison



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Return (Rank)								
5th Percentile	6.5	1.8	8.6	9.5	10.8	6.8	6.9	7.7
25th Percentile	2.7	0.5	5.6	6.1	6.7	5.1	4.4	4.8
Median	2.0	-0.5	3.5	4.9	5.7	4.1	3.6	4.0
75th Percentile	1.6	-1.5	0.7	4.0	4.8	3.3	3.0	3.5
95th Percentile	0.9	-4.2	-1.7	3.0	4.0	2.4	2.4	2.6
# of Portfolios	256	256	255	255	253	235	224	188
● Fixed Income	2.1 (42)	1.0 (16)	5.7 (25)	5.2 (43)	5.7 (49)	5.1 (25)	4.1 (32)	4.7 (28)
▲ Blended Fixed Income Index	2.0 (52)	-0.2 (42)	3.5 (50)	4.9 (49)	6.1 (36)	4.1 (53)	3.7 (44)	3.8 (60)



	Actual \$	Actual %	Manager Contribution to Excess Return %
Aberdeen Standard GARS	\$79,934,625	9.9%	0.0%
Acadian MAAR Fund LLC	\$72,000,012	8.9%	0.0%
CFM Systematic Global Macro	\$88,294,656	10.9%	0.6%
Graham Quant Macro	\$90,043,453	11.1%	0.3%
PIMCO MAARS Fund LP	\$71,130,182	8.8%	-0.1%
Private Equity	\$406,570,411	50.3%	2.6%
Actual vs. Policy Weight Difference			0.2%
Total	\$807,973,339	100.0%	3.6%

Statistics Summary

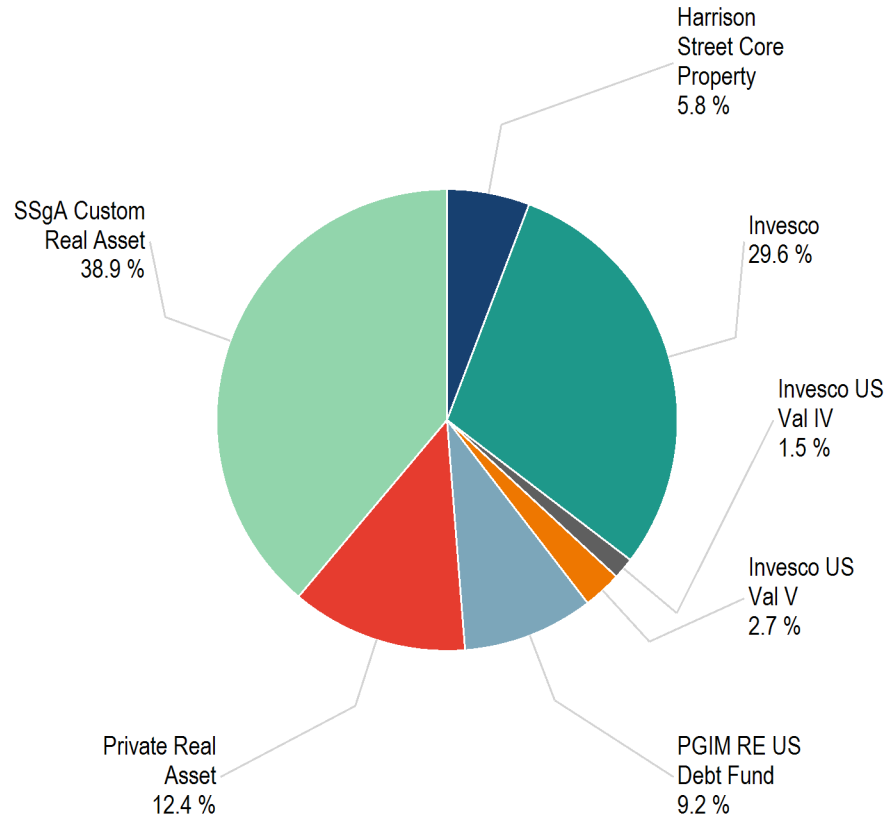
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	16.6%	14.8%	1.0	0.3	14.8%
Blended Alternatives Index	12.7%	9.3%	1.2	--	0.0%
Private Equity	35.8%	24.9%	1.4	0.6	25.5%
Blended Private Equity Index	20.2%	18.7%	1.0	--	0.0%
Hedge Fund/Absolute Return	-3.9%	6.7%	-0.8	-1.4	6.8%
Absolute Return Custom Index	5.3%	0.3%	13.1	--	0.0%
Aberdeen Standard GARS	4.3%	4.7%	0.7	-0.2	4.7%
Absolute Return Custom Index	5.3%	0.3%	13.1	--	0.0%

Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	13.8%	12.0%	1.1	0.1	11.9%
Blended Alternatives Index	12.4%	7.7%	1.5	--	0.0%
Private Equity	28.7%	20.2%	1.4	0.5	20.9%
Blended Private Equity Index	19.1%	15.4%	1.2	--	0.0%
Hedge Fund/Absolute Return	-2.2%	5.9%	-0.6	-1.3	5.9%
Absolute Return Custom Index	5.3%	0.3%	15.9	--	0.0%
Aberdeen Standard GARS	2.9%	4.1%	0.4	-0.6	4.2%
Absolute Return Custom Index	5.3%	0.3%	15.9	--	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
Harrison Street Core Property	\$53,357,728	5.8%	-0.1%
Invesco	\$274,859,704	29.6%	0.2%
Invesco US Val IV	\$13,877,128	1.5%	0.0%
Invesco US Val V	\$24,631,503	2.7%	0.0%
PGIM RE US Debt Fund	\$85,544,448	9.2%	-0.3%
Private Real Asset	\$114,919,200	12.4%	-0.1%
SSGA Custom Real Asset	\$360,643,196	38.9%	0.1%
Actual vs. Policy Weight Difference			0.0%
Total	\$927,832,907	100.0%	-0.2%

Statistics Summary

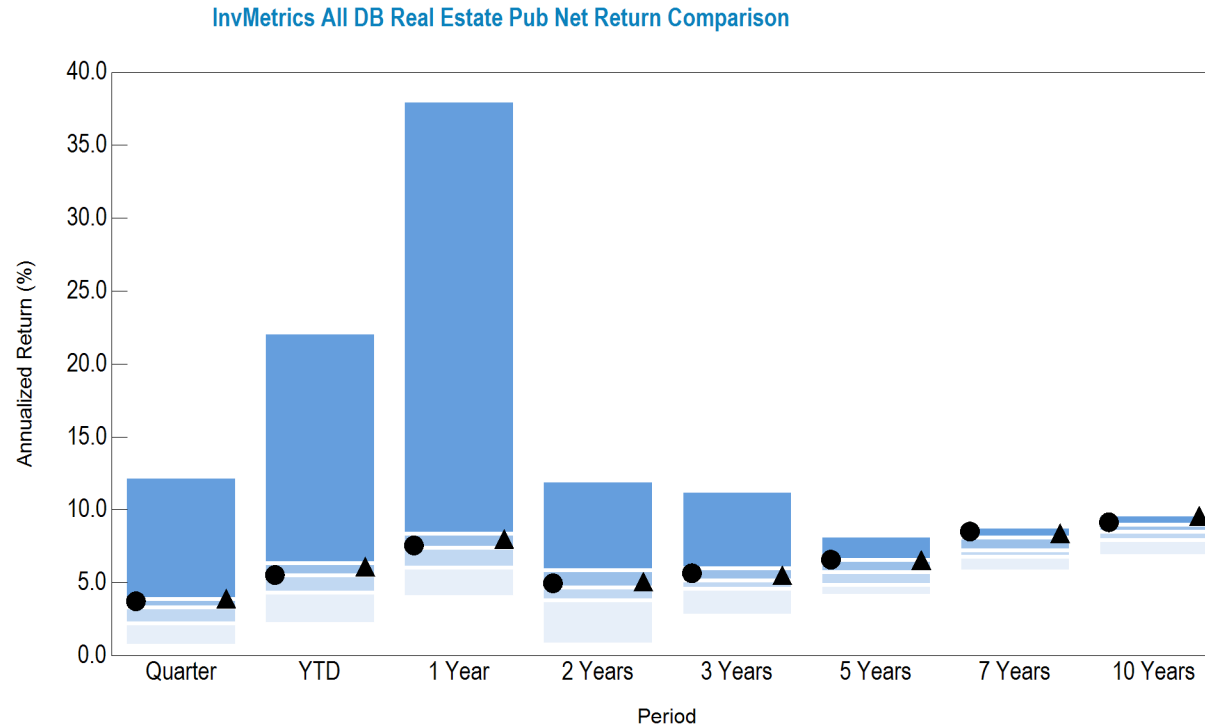
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	2.2%	7.1%	0.1	-1.0	3.4%
Blended Inflation Hedge Index	5.8%	6.5%	0.7	--	0.0%
Real Estate	5.7%	3.8%	1.2	0.1	1.2%
NCREIF ODCE	5.5%	3.3%	1.3	--	0.0%
Invesco	5.0%	4.7%	0.8	-0.2	2.0%
NCREIF ODCE	5.5%	3.3%	1.3	--	0.0%
Invesco US Val IV	9.1%	6.6%	1.2	0.8	4.4%
NCREIF ODCE	5.5%	3.3%	1.3	--	0.0%
PGIM RE US Debt Fund	5.7%	2.2%	2.1	0.1	2.7%
NCREIF ODCE	5.5%	3.3%	1.3	--	0.0%
Private Real Asset	3.3%	12.6%	0.2	-0.2	21.5%
Blended Private Real Asset Index	7.0%	20.2%	0.3	--	0.0%
Public Real Assets	-1.5%	19.9%	-0.1	-1.1	4.4%
Blended Public Real Asset Index	3.4%	16.7%	0.1	--	0.0%
SSgA Custom Real Asset	3.4%	16.4%	0.1	0.0	0.8%
SSgA Custom Real Asset Index	3.4%	16.7%	0.1	--	0.0%

Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	6.6%	3.6%	1.5	0.0	13
NCREIF ODCE	6.6%	3.3%	1.6	--	1
Invesco	6.2%	4.2%	1.2	-0.2	--
NCREIF ODCE	6.6%	3.3%	1.6	--	--
Invesco US Val IV	9.6%	5.9%	1.4	0.8	--
NCREIF ODCE	6.6%	3.3%	1.6	--	--
Private Real Asset	1.3%	10.4%	0.0	-0.2	--
Blended Private Real Asset Index	5.7%	16.3%	0.3	--	--



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Return (Rank)								
5th Percentile	12.3	22.2	38.0	12.0	11.3	8.2	8.8	9.7
25th Percentile	3.9	6.4	8.4	5.9	6.0	6.6	8.1	9.0
Median	3.3	5.5	7.4	4.7	5.2	5.8	7.3	8.5
75th Percentile	2.3	4.3	6.1	3.8	4.6	4.9	6.8	8.0
95th Percentile	0.7	2.2	4.0	0.8	2.8	4.1	5.8	6.9
# of Portfolios	73	73	73	73	71	67	66	54
● Real Estate	3.7 (32)	5.5 (50)	7.6 (48)	5.0 (40)	5.7 (36)	6.6 (26)	8.5 (15)	9.2 (22)
▲ NCREIF ODCE	3.9 (26)	6.1 (30)	8.0 (32)	5.1 (38)	5.5 (37)	6.6 (26)	8.4 (17)	9.6 (8)

Aberdeen Standard (ASI) Global Absolute Return Strategy (GARS)

The Aberdeen Standard Global Absolute Return Strategy (GARS) was designed in 2005 to address the needs of Standard Life's own Defined Benefit pension plan, with an objective to generate absolute returns with significantly less volatility than equity investments. 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 examines and reviews position proposals to approve a high conviction, short list of positions that should work well together. The GARS strategy is built using a broad range of return-seeking positions (i.e. multi-strategy) that incorporate multiple risk views when constructing the portfolio. The strategy will take some directional risk at times if the portfolio management team believes that it will earn positive returns over their three-year time horizon. Given the scale of the GARS portfolio, the team requires all investment positions to be both scalable and suitably liquid. In addition, the strategy's risk-based approach requires the team to be able to reliably model the risk behavior of each selected investment, so all assets used must be well-understood from a risk perspective before going into the portfolio.

Acadian Asset Management – Acadian U.S. Managed Volatility

Acadian's goal is to build a portfolio focused on absolute return and risk with the aim of achieving an absolute return similar to or better than that of a domestic equity index but with lower volatility over the long term. Acadian targets absolute risk to be 25-35% less than a typical capitalization-weighted benchmark. That said, tracking error is not a major consideration and can appear relatively high due in part to Acadian's comfort with carrying large sector variations versus the benchmark. Acadian seeks to combine the values of all of the security-level factors to determine a peer-relative return forecast for each stock. Separately they make a top-down forecast for the stock's peer group, and then add that forecast to the stock's score. Acadian's managed volatility strategies utilize the same alpha forecasts as Acadian's active equity strategies but with risk being the initial consideration when constructing portfolios. Alpha forecasts play a modest role relative to the importance of risk estimates but are important to the goal of achieving a higher risk-adjusted return. Incorporation of alpha forecasts generally results in higher exposure to value, size and quality.

Acadian Asset Management – MAARS Fund

Acadian Multi-Asset Absolute Return (MAARS) strategy was inceptioned in November 2017. MAARS targets a volatility of 6%-8% and a return of cash plus 5%. This is a multi-factor strategy that aims to exploit behavioral inefficiencies within and across global markets and is designed to be diversifying, dynamic and defensive. It is market neutral, implemented using long and short positions across five primary asset classes (equity, fixed income, currency, commodities, and volatility) and over 100 underlying assets with a focus on liquid instruments. Return forecasts incorporate asset-specific and macroeconomic insights and are utilized to harvest active returns from within and across asset classes through market selection and directional positioning. The strategy integrates risk and return across asset classes. Avoidance of downside events is highlighted in the approach with a greater weighting in their models allocated to down market beneficiaries, such as quality factors, and asymmetric positioning which reduces positions when risk rises. Differentiated attributes of this approach are its approach and weighting to commodities and its volatility sleeve which can incorporate long volatility.

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

The Angelo Gordon Opportunistic Whole Loan (OWL) Fund was established to make investments primarily in a portfolio of non-performing loans (NPLs) and re-performing loans (RPLs). AG sees a lot of operational inefficiency in the market place. By acquiring these loans at a discounted price and replacing original servicers with better-focused special servicers, AG believes it can improve operational efficiency and generate attractive returns. In addition, OWL may 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. OWL is towards the end of its fund life and is continuing to sell down the fund's holdings and distribute proceeds to LPs.

Angelo, Gordon & Co. – Credit Solutions

The Angelo Gordon (AG) Credit Solutions Fund (CSF) expects to hold concentrated positions of 5-8% of NAV (averaging 30 positions over the life of the Fund with recycling). The Fund is targeting a net 15% IRR with a 5-7% current yield. The Fund should be 70% concentrated in the U.S. with the balance in Europe. Finally, while the opportunities can be sourced from both the public markets and the private markets, AG is finding compelling sources of return at this time through structuring new privately placed secured term loans out of public investments made by the firm. CSF 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 pandemic and will need to restructure, but whose creation value is materially lower than the issuer's intrinsic value.

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 they 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 pandemic and will need to restructure, but whose creation value is materially lower than the issuer's intrinsic value.

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 60-90 stocks, with country and sector weights +/-10% relative to the index and stock 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 – 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 monitors their funds daily to ensure that additions and deletions to the indexes, mergers and acquisitions, restructurings and other capitalization changes are made to the fund in such a way as to minimize tracking error and transactions costs.

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 monitors their funds daily to ensure that additions and deletions to the indexes, mergers and acquisitions, restructurings and other capitalization changes are made to the fund in such a way as to minimize tracking error and transactions costs.

BlackRock (formerly Tennenbaum Capital Partners) - Direct Lending Funds VIII and IX

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. SamCERA committed \$35 million to DLF VIII in June 2016 in its unlevered fund sleeve and \$35 million to the DLF IX in June 2019.

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.

CFM - Systematic Global Macro

Capital Fund Management (CFM) Systematic Global Macro (SCM) is a directional strategy that takes long and short positions in liquid future and forwards across 130+ markets and across equities, bonds, currencies, and commodities. It is a new strategy that draws on model signals from existing strategies at the firm – Discus (diversified CTA), CFM ISTrends (trend following) and CFM ISTrend Equity Capped (defensive trend following) - and SamCERA is a seed investor with an attractive fee. SGM’s objective is to provide absolute returns that are uncorrelated with traditional asset classes over a long time horizon with an annualized volatility target between 8% and 12%. SGM uses a diverse set of trading strategies that are based on factors (momentum, value, carry, macro and sentiment) across asset classes. These technical and fundamental factors operate at different time scales and can have varying degrees of influence on performance depending on market and economic conditions. An additional global macro defensive overlay is combined with these outputs in constructing the final portfolio. CFM uses a form of portfolio construction known as agnostic risk parity to ensure that the SGM portfolio is diversified on an out-of-sample basis. The goal of SGM is to generate consistent returns while limiting drawdowns.

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 two decades in the course of research conducted for purposes of managing the firm’s hedge funds. 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. Securitized Income seeks to maximize income and total return by investing across the structured products universe, focusing on agency mortgage-backed securities (MBS) and investment grade securitized credit. DoubleLine takes a barbelled approach to investing in the securitized market, and they will separate rates from credit and will adjust the allocations to both at the based on the economic cycle and opportunities. Duration positioning is achieved through Agency MBS, Agency CMBS, and treasuries while credit exposure is attained through all areas of structured credit.

Fidelity (FIAM) – 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.

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 looks to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments are 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 provides a complement to the more conservative Invesco Core Fund and offers 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 applies a risk-controlled approach to all of its fixed income portfolios. This approach does not permit large bets or positions that generate significant tracking error versus the benchmark. Instead, NISA invests in a large number of small, diversified, active positions which seek tight tracking error to the chosen benchmark. Benchmark weight is a significant consideration when constructing and managing portfolios. The investment strategy is comprised of strategic (top-down) and tactical (bottom-up) decisions. Strategic decisions include sector selection and yield curve positioning while tactical decisions include industry and security selection and trading activity. Review of both strategic and tactical decisions is continual. The amount of portfolio risk budget devoted to one aspect versus the other will change as market conditions warrant. In general, strategic decisions change relatively infrequently, while tactical decisions, especially security selection, will change fairly often as market conditions provide opportunities. Over a typical market cycle, the bottom-up is expected to contribute to 70% of value-added while top-down is roughly 30%.

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

PanAgora's Defensive Equity strategy seeks to harness the 'low-volatility premium' through a systematic, factor-based investment approach focused on achieving market-like returns with less risk. This is accomplished by leveraging PanAgora's proprietary Risk Parity portfolio construction methodology, which seeks to efficiently capture the equity premium associated with low volatility, while taking minimal unintended risks. Since the firm's inception, PanAgora has been using quantitative techniques to integrate fundamental insights with large amounts of dynamic market data. They score individual securities on a factor basis and also on a diversification basis, in the context of a broadly diversified portfolio. The portfolio construction process optimizes the portfolio around the intended factor exposure (volatility) while maintaining equal risk contribution across sectors (ex., overweight utilities and consumer staples, underweight financials and technology). Shorter term volatility and longer term correlation analysis is combined in the approach. The result for the US Defensive Equity strategy is a portfolio expected to have lower volatility (beta around 0.65-0.75), and similar returns relative to the capitalization-weighted benchmark over a full market cycle. PanAgora expects the strategy to participate in approximately 75% of up markets and 55% in down markets.

Parametric Overlay – Cash Overlay and Currency Hedge

Parametric's cash overlay program is an efficient way for SamCERA to maintain its target asset allocation in a systematic fashion through cash securitization at the fund and manager level, transition/reallocation support and asset class rebalancing back to target within defined bands. The cash overlay program is invested synthetically using liquid futures with cash balances reviewed daily. A combination of large and small cap futures implementation is the proxy for private equity. SamCERA's investment guidelines initially allowed only for cash overlay. Rebalancing was added to the SamCERA program in January 2014. Cash overlay and rebalancing is expected to add 10-20 bps to the portfolio over time. An additional currency overlay hedge placed on half of the notional value of developed international equities. The addition of currency hedging started in September 2018 and was fully implemented on 10/1/2019. The purpose of the currency is first and foremost to lower portfolio risk and secondarily to add incremental performance.

PIMCO Diversified

PIMCO's Diversified Income (DI) Fund is a multi-sector strategy that invests across a broad spectrum of global credit market sectors, including investment grade and high yield corporate debt, as well as emerging markets. The allocation among these will vary based on PIMCO's assessment of global trends and relative valuations. This active and dynamic approach allows for increased responsiveness in asset allocation to changing economic and market conditions while remaining anchored by PIMCO's investment process and longer-term orientation. The ability to invest globally helps to improve diversification and may allow investors to benefit from differences in business cycles across regions and credit quality trends across credit sectors. PIMCO's DI investment strategy seeks to provide high yield-like returns with lower volatility against a blended index (1/3 Bloomberg Barclays Global Agg Credit ex-EM; 1/3 BofA Merrill Lynch BB-B rated Developed Markets High Yield; 1/3 JPMorgan EMBI Global). The fund allows for a duration band of 3-8 years. The team focuses its investments into these groups: credit strategies (investment grade, high yield, emerging markets and non-core credits including MBS, municipals and other govt-related sectors); duration strategies (U.S. and non-U.S. duration) and currencies (tactical non-USD exposure).

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). As reflected in the design of the MAARS strategies, PIMCO believes that alternative risk premia strategies are best implemented using a systematic approach that minimizes the discretionary inputs in day-to-day portfolio management. MAARS places a greater emphasis and weighting on global interest rates, currencies and commodities and a lesser emphasis on equities than many of its Alt Beta peers. Relative to Alt Beta peers, the strategy's rates and currency (FX) models are particularly robust, reflective of PIMCO's core competency and long history managing these asset classes using derivative instruments.

PIMCO Private Income Fund

PIMCO Private Income Fund (PIF) uses an opportunistic and flexible approach to global private credit. PIF provides a 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. PIMCO's Private Income Fund (PIF) is targeting 8-12% net returns with income providing most of the fund's returns. The Private Income Investment Committee (IC) identifies market themes and direction for their relative value framework, and sector specialists provide recommendations to the PM team within that construct. PIF has the ability to invest throughout the capitalization structure. The fund can use a moderate amount of leverage to enhance portfolio returns (1.5 times with a hard cap of 2 times).

PGIM RE Debt

PGIM Real Estate US Debt Fund (PREDS) 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. SamCERA was a founding investor in the PREDS strategy which invests in US commercial real estate debt in an open-ended vehicle with a return target of 7-8% (gross) coming from stable current income. The fund makes investments in first lien mortgages and mezzanine debt. First lien mortgages can be floating rate or fixed rate, but only floating rate loans will use leverage. Subordinate investments (mezzanine debt and preferred equity) will be limited by design. The fund can source and invest in secondary loans through a variety of Prudential real estate professionals, but the primary focus will be on direct origination through the real estate finance team.

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.

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 Roll Select Commodity Index, S&P Global Mid-Large Cap Natural Resources Index, S&P Global Infrastructure Index, and Bloomberg Barclays TIPS Index. SSgA provides beta exposure through these underlying liquid components which can be customized to changing client needs (ex., TIPS was added in May 2020 with the other three parts of the portfolio reduced pro-rata). The portfolio is used to fund upcoming private real asset mandates.

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.

White Oak - White Oak Yield Spectrum Fund V

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, 2021

Total Plan Policy Index	As of													
	2/1/21	1/1/21	7/1/20	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	
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%
10 Year Treasury +2%	0.0%	0.0%	0.0%	4.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
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)	1.0%	1.0%	1.0%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
91 Day T-Bills	18.0%	21.0%	21.0%	18.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	12.0%	10.0%
BBgBarc Aggregate	10.0%	10.0%	10.0%	8.0%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	6.0%	6.0%
BBgBarc BA Intermediate HY	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 BBB	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 Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%
BBgBarc Multiverse	0.0%	0.0%	0.0%	0.0%	1.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BBgBarc TIPS	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%
Bloomberg Commodity	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%
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%	0.0%	0.0%
CPI + 5% (RA)	4.0%	4.0%	4.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	0.0%	0.0%	0.0%
Blended Public Real Asset	4.0%	3.0%	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	8.0%	7.0%	5.0%	5.0%
Blended Private Real Asset	0.0%	0.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.0%
Libor +4% (HF)	7.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	9.5%	9.0%	9.0%	9.0%	9.0%	7.6%	5.7%	3.8%	1.9%	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%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	19.0%	19.0%
MSCI ACWI ex-US IMI (Net)	9.5%	9.0%	9.0%	9.0%	9.0%	11.4%	13.3%	15.2%	17.1%	19.0%	19.0%	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%
NCREIF ODCE	9.0%	10.0%	10.0%	9.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	7.0%	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%	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%	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%	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%	0.0%	0.0%	0.0%	0.0%
Russell 3000	22.0%	21.0%	21.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	21.0%	21.0%	23.0%	28.0%	28.0%
Russell 3000 +3% (PE)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	7.0%	7.0%	7.0%
Russell 3000 +3% 1Q Lag (PE)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	7.0%	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%
	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, 2021

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
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%	8.0%	10.0%	10.0%
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%	0.0%	0.0%	0.0%
60/40 MSCI World/BBgBarc Global 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%
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%	0.0%	0.0%	0.0%	0.0%
91 Day T-Bills	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 Aggregate	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 BA Intermediate HY	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 BBB	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 Credit BAA	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 Multiverse	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%
BBgBarc TIPS	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%
Bloomberg Commodity	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%
Citigroup non-US WGBI	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%
CPI + 5% (RA)	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 Public 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%
Blended Private Real Asset	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%
Libor +4% (HF)	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	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%	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%	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, 2021

Public Equity Benchmark	As of:																			
	2/1/21	7/1/20	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%	0.0%	0.0%	34.0%	31.3%	23.1%	0.0%	0.0%	0.0%	
MSCI ACWI ex US IMI 100% Hedged (Net)	23.2%	23.1%	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%	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%	
MSCI ACWI ex US IMI (Net)	23.2%	23.1%	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%	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%	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%	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%	0.0%	0.0%	8.3%	12.0%	13.2%	13.5%	15.4%	24.2%	25.0%	25.0%	
Russell 3000	53.7%	53.9%	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%	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%	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:															
	2/1/21	7/1/20	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	64.3%	67.7%	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	35.7%	32.3%	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%	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%	0.0%	0.0%	16.0%	15.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	15.8%	16.7%	15.0%	18.8%	20.0%	20.5%	0.0%	0.0%	0.0%	0.0%
BBgBarc TIPS	0.0%	0.0%	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%	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%	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%

Alternatives Benchmark	As of:								
	2/1/21	1/1/21	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%	0.0%	0.0%	30.0%
Bloomberg Commodity	0.0%	0.0%	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%	0.0%	0.0%	0.0%	11.8%	12.5%
Libor +4% (HF)	0.0%	0.0%	50.0%	46.2%	46.2%	41.7%	29.4%	25.0%	15.0%
SOFR +4% (HF)	53.8%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% (PE)	0.0%	0.0%	0.0%	0.0%	53.8%	58.3%	41.2%	43.8%	40.0%
Russell 3000 +3% 1Q Lag (PE)	46.2%	50.0%	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%	100.0%	100.0%

Policy Index and Benchmark History

Period Ending: June 30, 2021

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:	1/1/21	10/1/10
Libor +4%	0.00%	100.00%
SOFR +4%	100.0%	0.0%
	100.0%	100.0%

Inflation Hedge

As of:	2/1/21	7/1/20	4/1/20	10/1/19	4/1/18	2/1/17	10/1/16	4/1/16
BBgBarc TIPS	0.00%	0.00%	0.00%	5.88%	11.1%	12.5%	14.3%	14.3%
Bloomberg Commodity	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	21.4%
CPI + 5% (RA)	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	14.3%
Blended Public Real Asset	23.53%	23.53%	35.29%	35.29%	33.3%	0.0%	0.0%	0.0%
Blended Private Real Asset	23.53%	17.65%	11.77%	11.77%	11.1%	43.8%	35.7%	0.0%
NCREIF ODCE	52.94%	58.82%	52.94%	47.06%	44.4%	43.8%	50.0%	50.0%
	100.0%	100.0%	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%	34.0%	0.0%
S&P Global Large-MidCap Commodity and Resources	25.0%	33.0%	0.0%
S&P Global Infrastructure	25.0%	33.0%	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:	1/1/21	4/1/18	10/1/16	1/1/14
Bloomberg Roll Select Commodity	0.00%	0.00%	34.00%	0.0%
S&P Global Large-MidCap Commodity and Resources	0.00%	0.00%	33.00%	0.0%
S&P Global Infrastructure	0.00%	0.00%	33.00%	0.0%
50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	0.00%	100.00%	0.00%	0.0%
75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	100.00%	0.00%	0.00%	0.0%
CPI + 5%	0.00%	0.00%	0.00%	100.0%
	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, 2021

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-BRatedDvlpdMktsHYHdgdUSD	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, 2021

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-Russell 1000 Index Fund

On All Assets:	0.01% per annum
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BlackRock-MSCI ACWI ex US IMI Index Fund

On All Assets:	0.045% per annum
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DoubleLine

On All Assets:	0.30% per annum
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NISA

First \$500 million:	0.15% per annum
Next \$1 billion:	0.125% per annum
Next \$1 billion:	0.105% per annum
Next \$1.5 billion:	0.085% per annum
Thereafter:	0.065% 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:	0.25% per annum
Next \$50 million:	0.20% per annum
Next \$100 million:	0.125% per annum
Thereafter:	0.10% 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 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
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QMA

First \$100 million:	0.55% per annum
Next \$100 million:	0.53% per annum
Thereafter:	0.49% 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

Manager Compliance (Net)

Period Ending: June 30, 2021

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	R	R	R
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	✓	✓	R
AG CSF Annex Dislocation Fund	BBgBarc BA Intermediate HY	--	--	--
Angelo Gordon Opportunistic	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
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	--	--	--
White Oak YSF V	Cliffwater Direct Lending Index	--	--	--
Aberdeen Standard GARS	Absolute Return Custom Index	R	R	R
Acadian MAAR Fund LLC	Absolute Return Custom Index	--	--	--
CFM Systematic Global Macro	Absolute Return Custom Index	--	--	--
Graham Quant Macro	Absolute Return Custom Index	--	--	--
PIMCO MAARS Fund LP	Absolute Return Custom Index	--	--	--

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, 2021

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	R	R	R
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	✓	✓	R
AG CSF Annex Dislocation Fund	BBgBarc BA Intermediate HY	--	--	--
Angelo Gordon Opportunistic	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
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	--	--	--
White Oak YSF V	Cliffwater Direct Lending Index	--	--	--
Aberdeen Standard GARS	Absolute Return Custom Index	R	R	R
Acadian MAAR Fund LLC	Absolute Return Custom Index	--	--	--
CFM Systematic Global Macro	Absolute Return Custom Index	--	--	--
Graham Quant Macro	Absolute Return Custom Index	--	--	--
PIMCO MAARS Fund LP	Absolute Return Custom Index	--	--	--

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 2021
Investment Landscape**

Recent Verus research

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Topics of interest

MEASURING & BUDGETING ACTIVE RISK

Active risk budgeting is valuable in the construction, monitoring, and overall governance of the investment portfolio. An active risk budget identifies how much risk an investor wants to take in the portfolio and where the investor plans to allocate that risk. In this paper we provide an introduction to active risk and demonstrate how to measure and budget that risk. We also discuss the individual sources that drive active risk and why they're important to identify. Last, we review a practical example of how active risk can inform portfolio construction and demonstrate how the Verus active management environment research can be used to inform active/passive allocations throughout the portfolio.

Sound thinking

THINKING SKEPTICALLY

Risk markets are currently trading at all-time highs, cryptocurrencies are soaring, and investment markets are looking forward to a broadly positive post-COVID future. At times like these it can be valuable to consider the role that skepticism plays in the investment process. This short paper is designed to help clarify the role that skepticism can play, and also to clarify how investors can use it as a tool without being captured by it, because excessive skepticism may lead to missed opportunities.

Annual research

2021 REAL ASSETS OUTLOOK

In last year's outlook, COVID-19 was front and center in our views and outlooks across all asset classes. A year later, we are beginning to return to a more normalized pre-COVID lifestyle and with that, a recovery in many of the sectors impacted in 2020. One of the topics being debated among investors is the potential for inflationary pressure, a portfolio risk that hasn't emerged in several decades. That discussion has reignited interest in real assets and capital flows into the asset class.

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2nd quarter summary

THE ECONOMIC CLIMATE

- Real GDP grew at a 0.4% rate year-over-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that GDP will fully recover in Q2. **p. 12**
- The U.S. unemployment rate has been slow to rebound, despite a full recovery in economic activity. This might suggest that government spending has had an outsized impact, and raises risks around a stimulus “hangover” when spending programs end. **p. 14**
- Economies around the world continued to recover as life began moving back to normal. This description does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus. **p. 20**

PORTFOLIO IMPACTS

- Credit spreads grew even tighter during Q2, driven by investor demand and improvements in economic fundamentals. High yield spreads tightened to 2.68%—a new cycle low. Investment grade tightened 11 basis points to end the quarter at 0.80%. **p. 25**
- Inflation surprised on the upside in Q2, adding to investor fears. U.S. core CPI rose 4.5% year-over-year, while headline came in at 5.4%. The jump in prices has been concentrated in a few areas, including energy (+24.5% YoY) and used car & truck prices (+45.2% YoY). **p. 13**

THE INVESTMENT CLIMATE

- The Biden Administration’s Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for \$4.1 trillion in spending, comprised of \$3.5 trillion in “human infrastructure” and \$600 billion towards “traditional infrastructure” It is unclear whether this proposal will gain sufficient support from Democrats. **p. 12**
- It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, realized market volatility, and the risks reflected in asset prices are very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few threats on the horizon. **p. 35**

ASSET ALLOCATION ISSUES

- U.S. equities were a top performer again in Q2 (S&P 500 +8.5%). International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.1% MSCI Emerging Markets Index) on an unhedged currency basis. **p. 28**
- Factor performance suffered during Q2, reversing much of the gains from the prior quarter. Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%). **p. 30**

Economic progress continues to exceed expectations, though strong optimism may already be reflected in asset prices

We believe a neutral risk stance is warranted in the current environment

What drove the market in Q2?

“Delta Covid variant first found in India spreads to 62 countries, hot spots form in Asia and Africa, WHO says”

GLOBAL COVID-19 CASES (MILLIONS)

Jan	Feb	Mar	Apr	May	Jun
26.3	28.7	30.5	32.3	33.3	33.7

Article Source: CNBC, as of June 2nd, 2021

“Inflation: Is it transitory or not?”

CORE CPI GROWTH (YEAR-OVER-YEAR)

Jan	Feb	Mar	Apr	May	Jun
1.4%	1.3%	1.6%	3.0%	3.8%	4.5%

Article Source: Yahoo Finance, June 15th, 2021

“TREASURIES-U.S. Treasury yield curve flattens as Fed seen more proactive on inflation”

IMPLIED EFFECTIVE FED FUNDS RATE IN DECEMBER 2023

Jan	Feb	Mar	Apr	May	Jun
0.15%	0.30%	0.40%	0.47%	0.49%	0.80%

Article Source: Reuters, June 18th, 2021

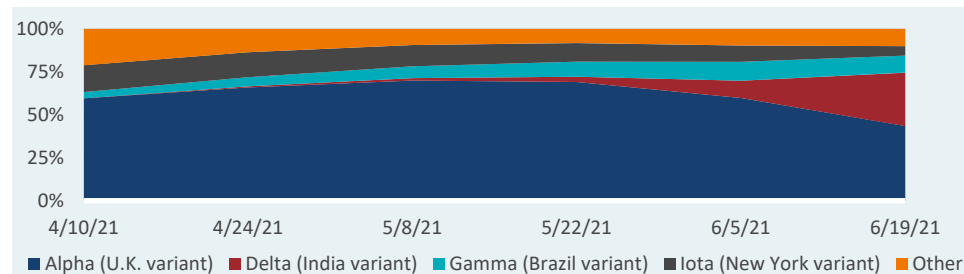
“Is the reflation trade over? What stock-market investors need to watch”

TEN-YEAR U.S. TREASURY YIELD

Jan	Feb	Mar	Apr	May	Jun
1.07%	1.40%	1.74%	1.63%	1.59%	1.47%

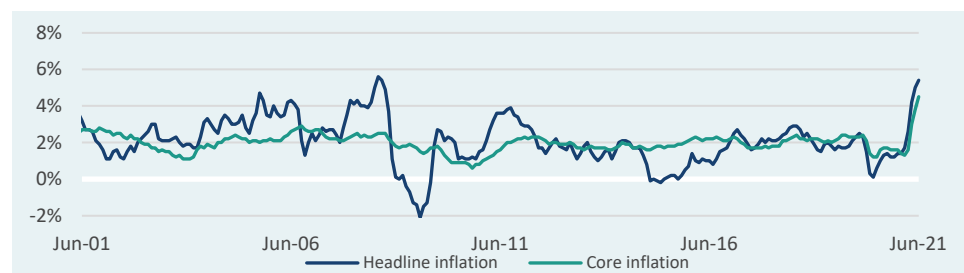
Article Source: MarketWatch, June 21st, 2021

SHARE OF U.S. COVID-19 CASE GROWTH BY VIRUS VARIANT



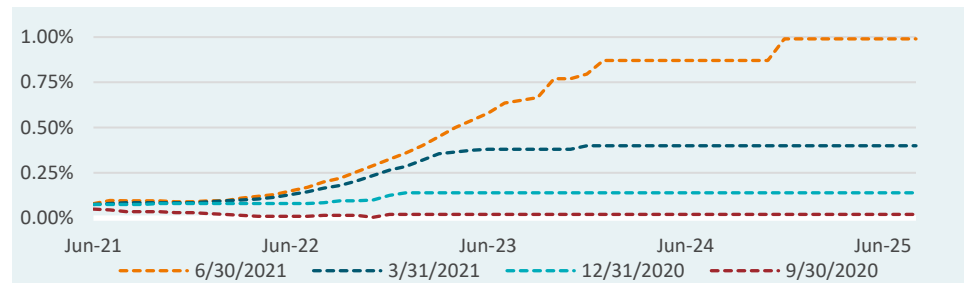
Source: U.S. Center for Disease Control, as of 6/19/21

U.S. INFLATION RATES (YEAR-OVER-YEAR)



Source: Bloomberg, as of 6/30/21

IMPLIED EFFECTIVE FED FUNDS RATE



Source: Bloomberg, as of 6/30/21

Economic environment

U.S. economics summary

— Real GDP grew at a 0.4% rate year-over-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that gross domestic product (GDP) will fully recover in Q2.

— The U.S. unemployment rate has been slow to improve, falling very slightly from 6.0% in March to 5.9% in June. The labor market remains materially weaker relative to pre-pandemic conditions. This might suggest that a significant portion of the economic recovery has been fueled by government spending, and raises concerns about whether recent strength may prove fleeting when government intervention slows.

— The Biden Administration’s Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached

an agreement for \$4.1 trillion in spending, comprised of \$3.5 trillion in “human infrastructure” and \$600 billion towards “traditional infrastructure” It is unclear whether this proposal will garner sufficient support from Democrats.

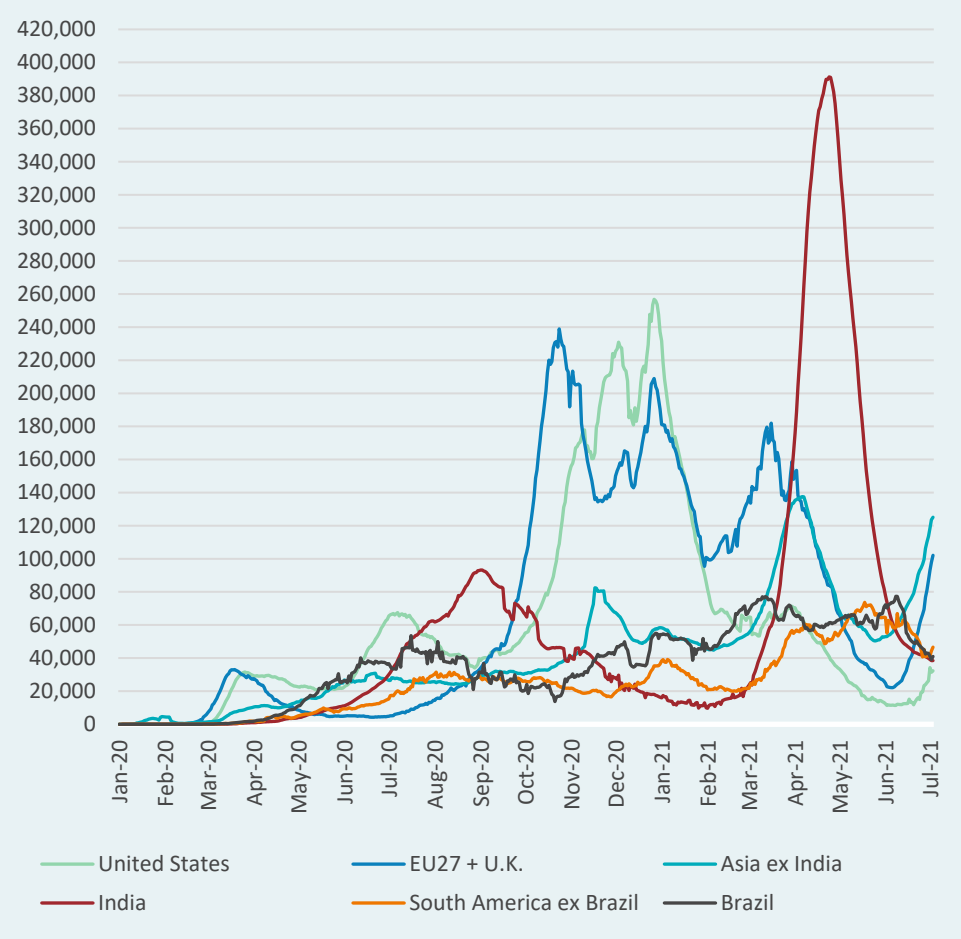
— Inflation surprised on the upside in Q2, adding to investor concerns around a potential sustained rise. U.S. core inflation, which excludes food & energy prices, rose 4.5% year-over-year in June. U.S. headline inflation came in at 5.4%. The rise in prices has so far been concentrated in a few specific areas, including energy (+24.5% YoY) and used car and truck prices (+45.2% YoY).

— Consumer sentiment further improved over the quarter, but has only regained roughly half of the deterioration post-pandemic.

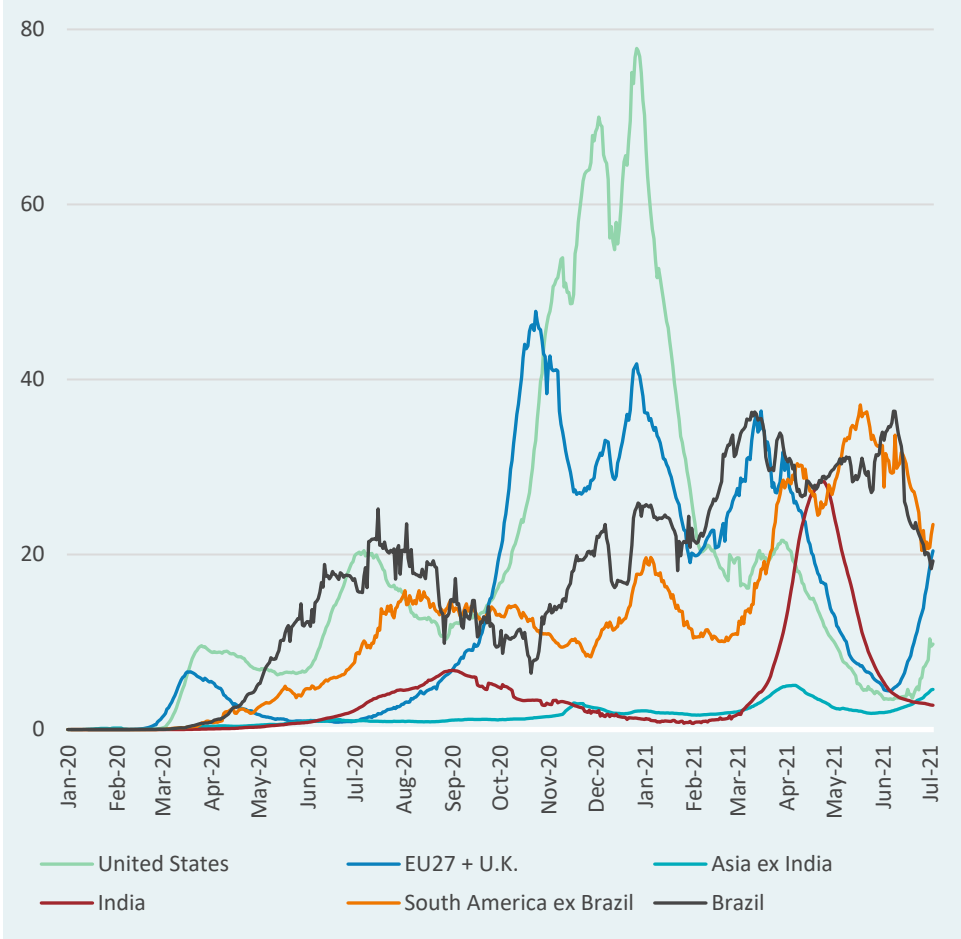
	Most Recent	12 Months Prior
GDP (YoY)	0.4% 3/31/21	0.3% 3/31/20
Inflation (CPI YoY, Core)	4.5% 6/30/21	1.2% 6/30/20
Expected Inflation (5yr-5yr forward)	2.20% 6/30/21	1.5% 6/30/20
Fed Funds Target Range	0% – 0.25% 6/30/21	0% – 0.25% 6/30/20
10-Year Rate	1.47% 6/30/21	0.66% 6/30/20
U-3 Unemployment	5.9% 6/30/21	11.1% 6/30/20
U-6 Unemployment	9.8% 6/30/21	18.0% 6/30/20

COVID-19 case growth

SEVEN-DAY AVERAGE DAILY CASE GROWTH



SEVEN-DAY AVERAGE DAILY CASE GROWTH – PER 100,000 RESIDENTS

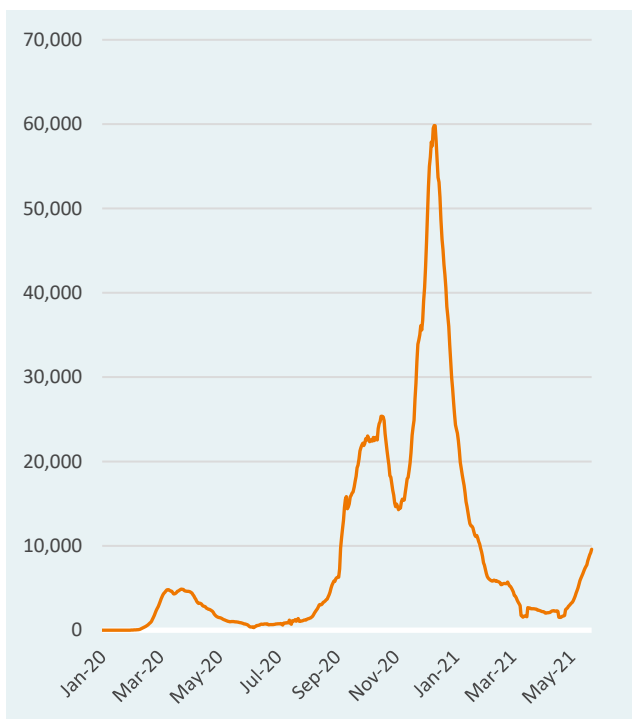


Source: Bloomberg, as of 7/18/21

Delta variant

Spread of the more virulent delta variant (which originated in India) of the coronavirus within the U.K. led officials to push back the date for reopening from mid-June to mid-July, and has sparked concerns in recent months that material spread outside of the U.K. could lead to a reintroduction of social distancing controls.

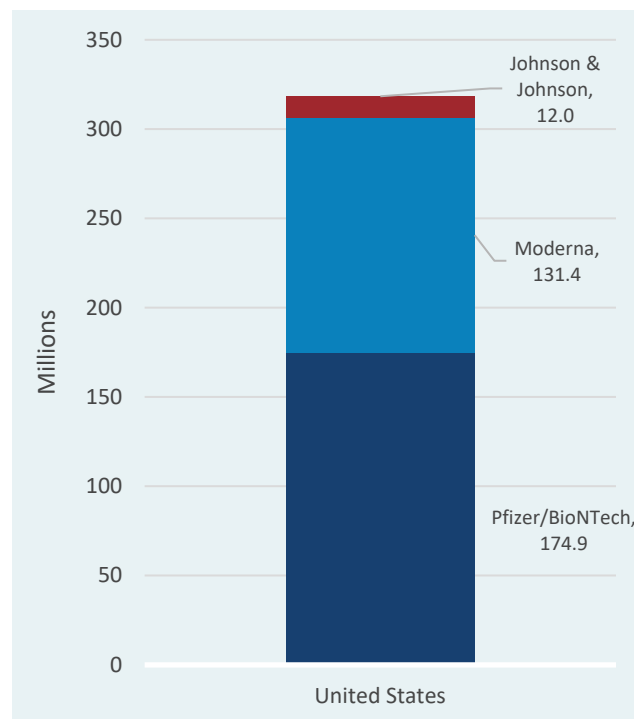
U.K. – SEVEN-DAY AVERAGE CASE GROWTH



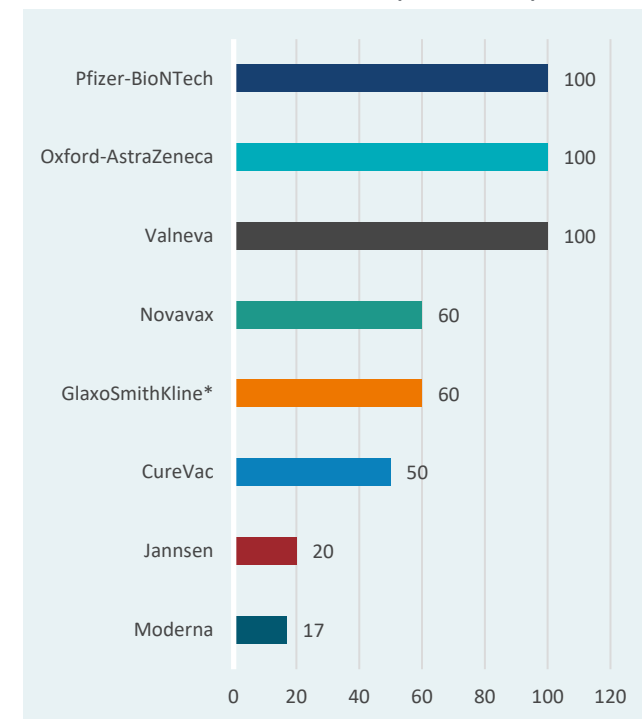
Source: Bloomberg, BBC, U.K. government, as of 6/21/21

*Joint project with Sanofi Pasteur.

U.S. – VACCINE DOSES ADMINISTERED BY TYPE



U.K. VACCINE DOSE ORDERS (MILLIONS)

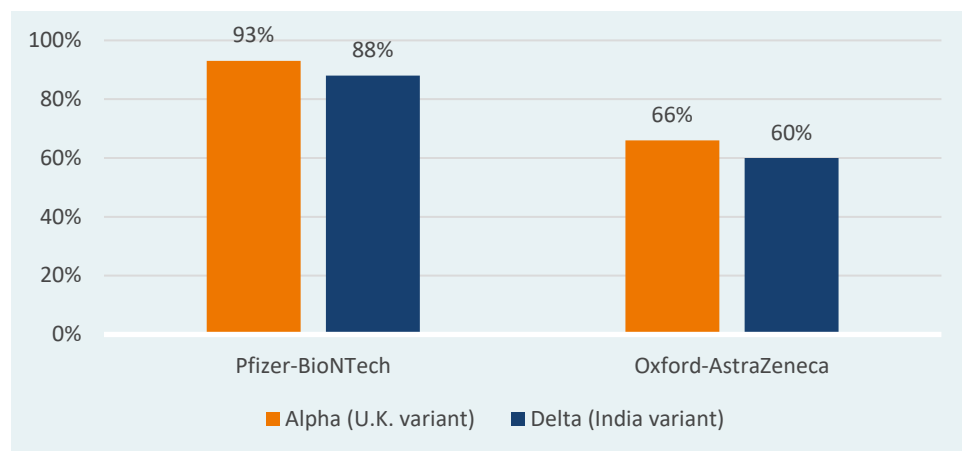


Public Health England (PHE) findings

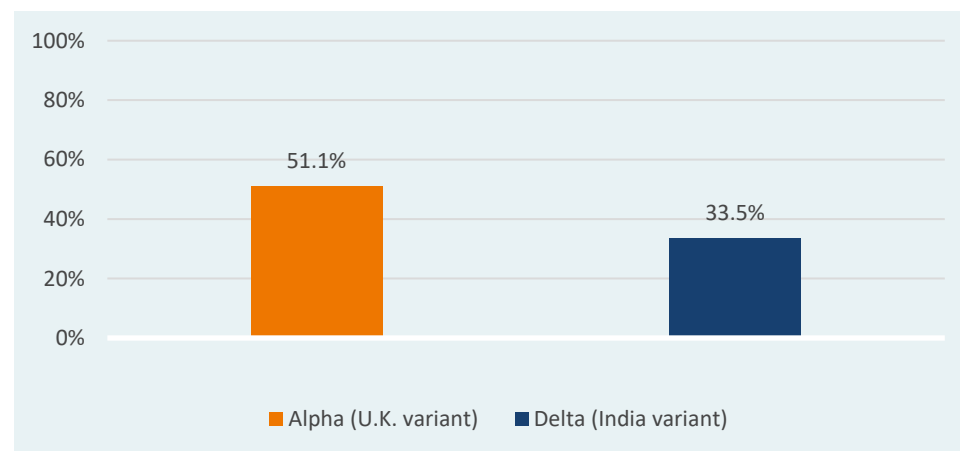
While case growth has picked up from very low levels within the U.K., there are several factors in play which probably reduce the likelihood that delta case growth picks up materially in the U.S.

1. The U.K. has a much higher exposure to the Astra vaccine, which is significantly less effective at preventing symptomatic infection.
2. Early prioritization of the one-dose vaccine regimen in the U.K. resulted in lower levels of protection.

TWO-DOSE REGIMEN EFFECTIVENESS FOR PFIZER AND ASTRAZENECA



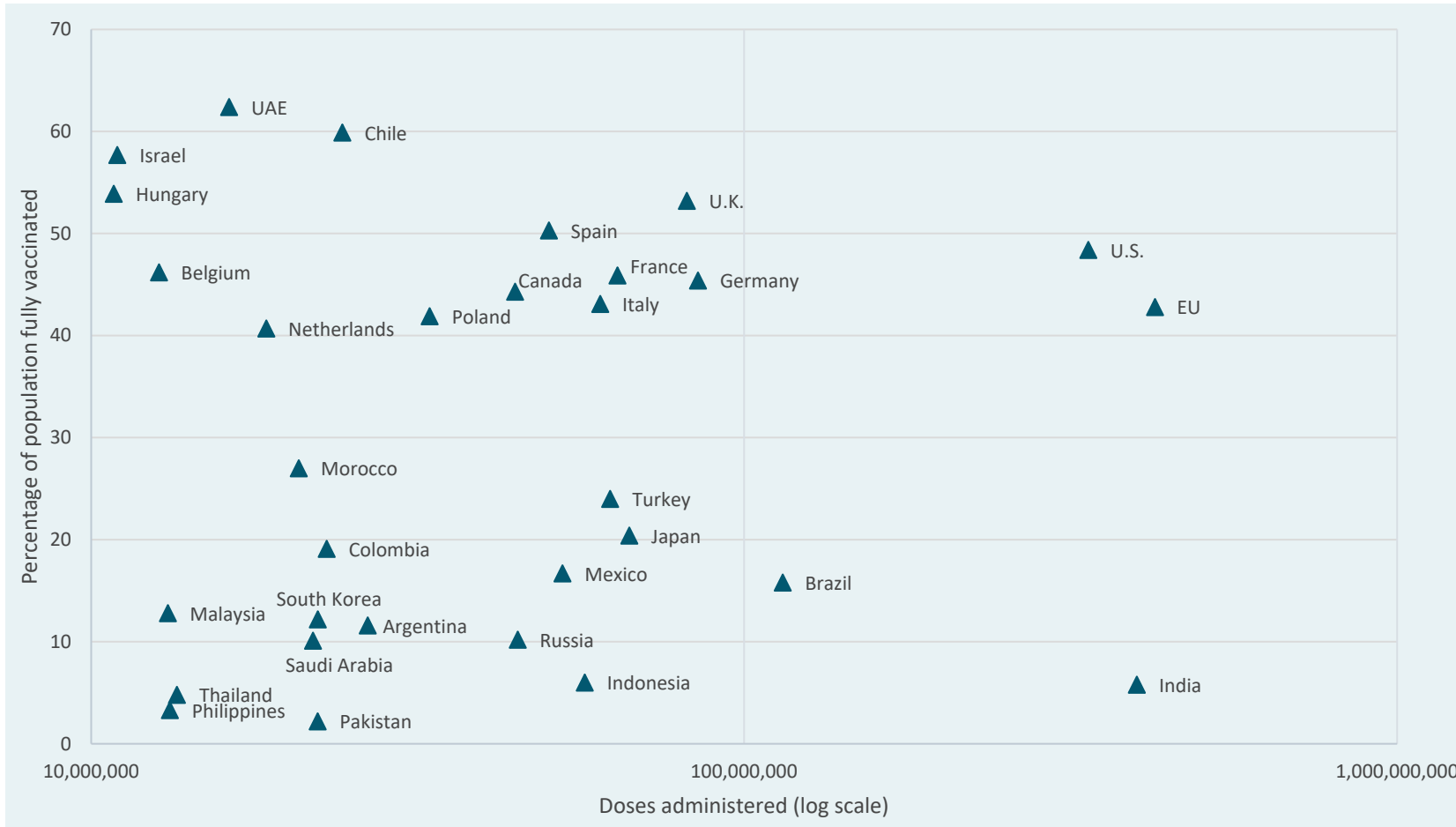
ONE-DOSE REGIMEN EFFECTIVENESS FOR PFIZER AND ASTRAZENECA



Source: <https://www.medrxiv.org/content/10.1101/2021.05.22.21257658v1>

Global vaccination campaign

DOSES ADMINISTERED RELATIVE TO PERCENTAGE OF POPULATION FULLY VACCINATED



The EU has closed the vaccine gap relative to the U.S. and the U.K., led by a pickup in administration in Germany

Source: Bloomberg, as of 7/16/21

GDP growth

Real GDP grew at a 0.4% rate year-over-year in Q1 (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that real gross domestic product (GDP) will once again reach its pre-pandemic level in Q2. The Atlanta Fed GDPNow estimate suggests a 7.9% Q2 growth rate as of July 9th (seasonally-adjusted quarterly annualized rate).

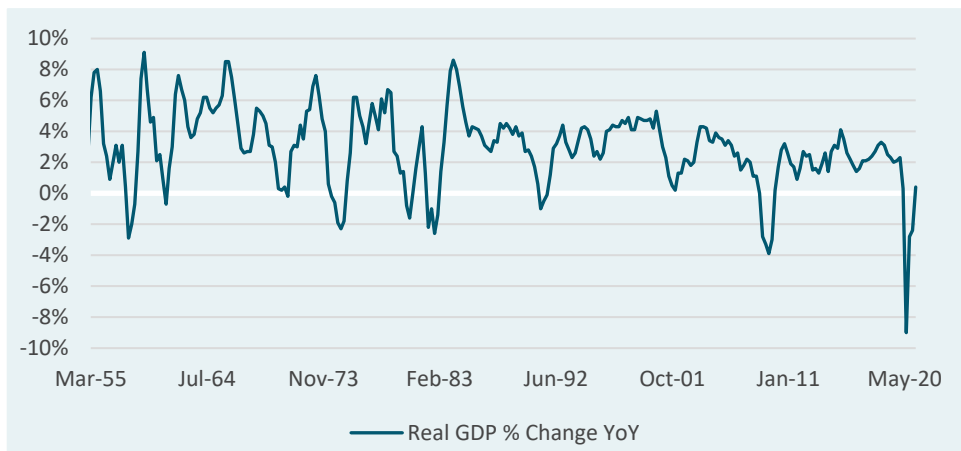
The Biden Administration's Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for \$4.1 trillion in spending, comprised of \$3.5 trillion in "human infrastructure" (Medicare funding, childcare, government-funded college, and energy transition), and \$600 billion towards "traditional

infrastructure" (roads, bridges, power infrastructure, rail, broadband internet, and water infrastructure). It is unclear whether this proposal will garner adequate buy-in, and it is also unclear whether Republicans will withdraw support, now that Democrats appear ready to proceed with many of the more controversial spending items that the RNC negotiated against.

The Biden Administration has held strong in its push for further government spending, despite an arguably speedy economic recovery. These efforts have been met with opposition, as some view these proposals as excessive, given the stronger state of the economy. Additional government spending may increase the risk of economic overheating and inflation.

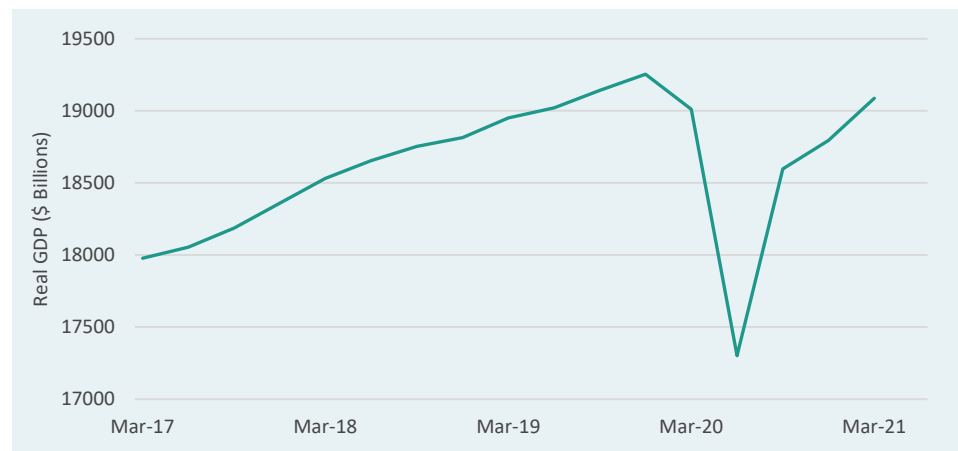
The U.S. economy likely fully recovered during Q2 2021

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 3/31/21

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 3/31/21

Inflation

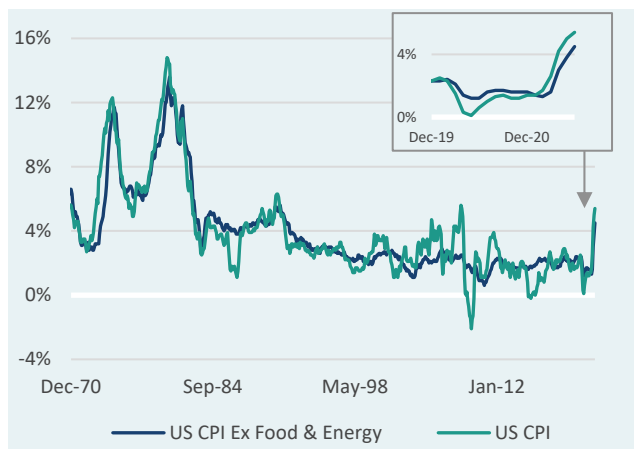
Inflation surprised on the upside in Q2, adding to investor concerns around a sustained rise. U.S. core CPI, which excludes food & energy prices, rose 4.5% YoY in June. U.S. headline inflation came in at 5.4%. The rise in prices has so far been concentrated in a few areas. Energy prices (+24.5% YoY) have had the most significant impact, with extreme gasoline price rises (+45.1% YoY) being very noticeable at the pump. Used automobile prices (+45.2% YoY) have also seen large gains.

We maintain our belief that recent price rises will generally prove transitory as most increases can be explained either by base effects or one-time effects from pandemic supply and spending dynamics. Energy price growth is an example of 'base effects',

where prices fell dramatically in spring 2020 and then recovered by spring 2021, creating the mirage of high inflation (inflation is a 12-month price change measurement). Higher used car prices is likely an example of 'one-time effects' from supply issues (chip shortages led to decreased supply of new cars) and also consumer spending habit changes during COVID (fear of public transportation led to auto purchases, and stimulus checks provided funds for purchases). As auto sales slow, we believe this will mitigate high prices. However, there are also some signs of more structural price rises, such as owner's equivalent rent (OER) which is much slower moving due to the impact of lease arrangements and the longer time it takes for home price increases to impact household budgets more broadly.

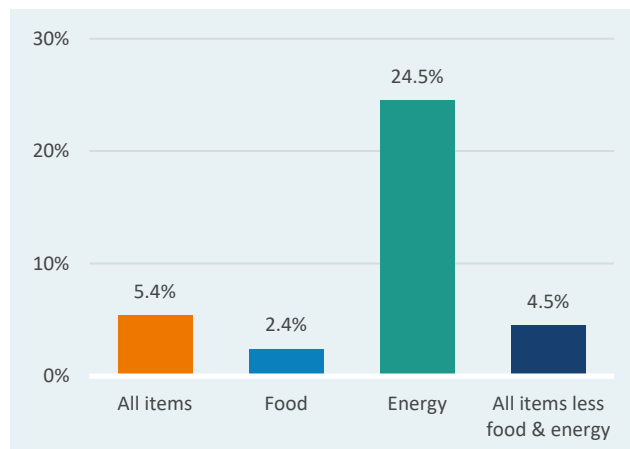
It is important to distinguish between *one-time* and *transitory* price rises in the current environment

U.S. CPI (YOY)



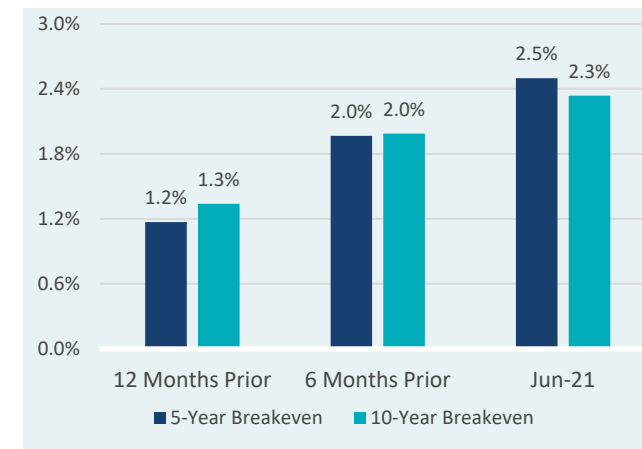
Source: Bloomberg, as of 6/30/21

U.S. CPI (YOY)



Source: BLS, as of 6/30/21

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 6/30/21

Labor market

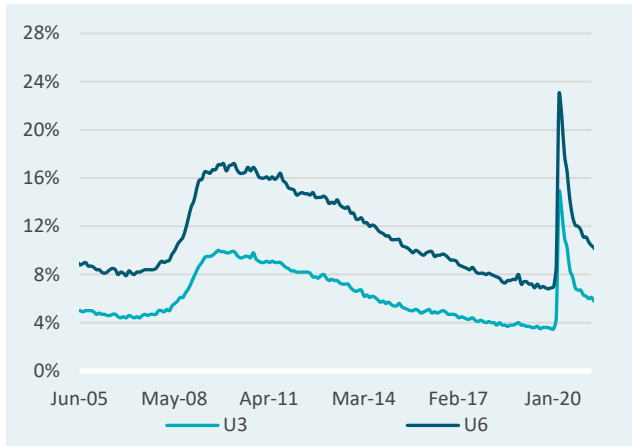
The U.S. labor market rate has been slow to recover, as unemployment fell only slightly from 6.0% in March to 5.9% in June. Labor participation also paints a lukewarm picture, rising from 61.5% to 61.6% during the quarter. The labor market remains materially weaker relative to pre-pandemic conditions. This might suggest that a significant portion of the economic recovery has been fueled by government spending and raises concerns about whether recent strength may prove fleeting once government spending slows.

Beginning mid-June, a few U.S. states decided to stop accepting Federal emergency unemployment benefits. Among the benefits were a \$300 weekly unemployment add-on, expanded eligibility,

and an extension of the duration of benefits overall. Research regarding the impacts of these programs on joblessness are mixed. Based on one study from the Federal Reserve Bank of St. Louis, states that have stopped these programs have seen unemployment fall by 5% more than states that have continued offering expanded benefits (12% unemployment vs. 7%). This study suggests that many unemployed workers may come back into the workforce as government subsidies roll off. It is worth mentioning that other factors are in play regarding the timid labor market recovery, including parents declining work to care for children, fears of workplace safety, and early retirements. These labor dynamics are complex and it may be overly simplistic to attribute problems to a single cause.

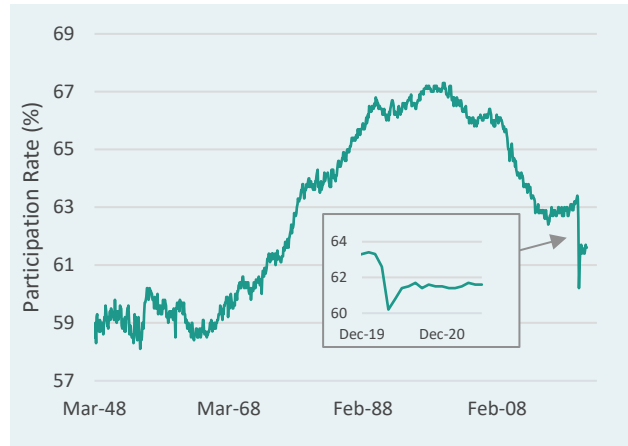
A large portion of the U.S. labor force remains neither employed nor seeking work

U.S. UNEMPLOYMENT



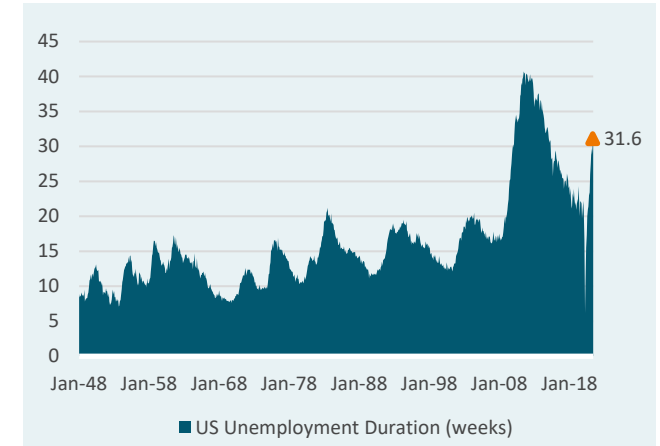
Source: FRED, as of 6/30/21

LABOR PARTICIPATION RATE



Source: FRED, as of 6/30/21

UNEMPLOYMENT DURATION



Source: FRED, as of 6/30/21

Employment conditions

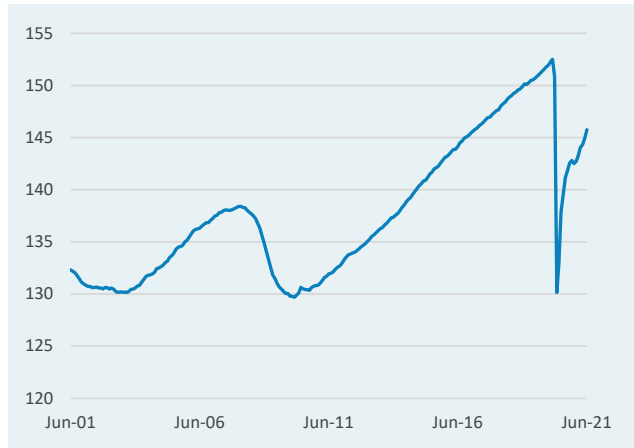
Nonfarm payrolls expanded by 567,000 per month on average in the second quarter, reaching a total of 145.8 million by quarter-end. This number was 6.8 million below the pre-pandemic peak of February 2020. Labor market conditions have been improving overall, but the road has been bumpy, given the ebb and flow of virus cases and the impact on individual state and city policy decisions.

Job openings rose to a fresh record of 9.2 million in May, underscoring the fact that the recent bounce back in consumer demand has outpaced the ability of business owners to hire to meet that demand. In order to address that shortfall, many business owners have begun to raise wages,

offer signing bonuses, offer more flexible work hours, and offer the ability to work from home. Said another way, the sellers have the upper hand in the labor market at present. The number of people who quit their jobs in May (3.6 million) remained near record levels, reflecting workers' confidence in their ability to find other employment.

While employers are struggling to find qualified employees in the current environment, the expiration of a litany of additional unemployment insurance programs through the end of the year could push up labor market supply. Whether the skills of the currently not-working contingent matches up with current labor demand remains to be seen.

U.S. EMPLOYEES ON NONFARM PAYROLLS



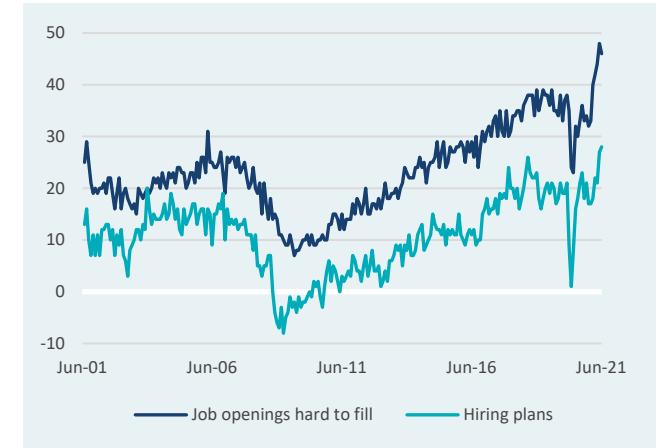
Source: BLS, as of 6/30/21

U.S. JOB OPENINGS (MILLIONS)



Source: BLS, as of 5/31/21

SMALL BUSINESS OWNERS' HIRING CONDITIONS



Source: NFIB, as of 6/30/21

The consumer

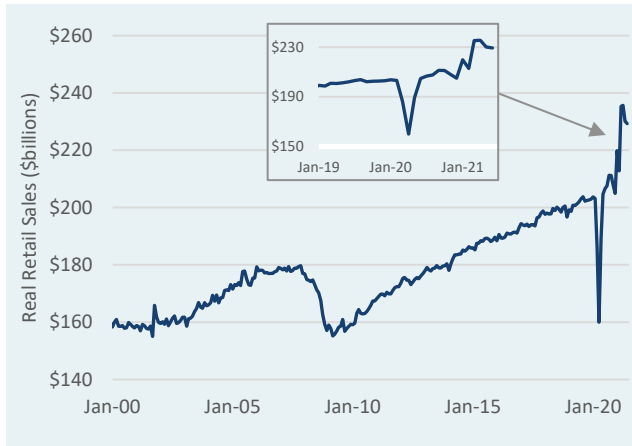
U.S. retail sales would appear red hot if defined on a year-over-year growth basis (+12%). But, as we have mentioned during past quarters, year-over-year numbers are skewed due to the events of early-2020. In reality, retail sales fell -2.5% from Q1 to Q2.

As vast government stimulus translated to hot consumer spending, it might be reasonable to ask what will happen to recent trends as government spending slows and once stimulus money has been spent. This effect might in part explain the recent drop in U.S. auto sales, which have fallen to the lowest level since 2014. We remain cautious about assuming a clean economic turnaround, as much of the recent rebound has been due to government spending rather

than a natural rebound in jobs, spending, and household economic/financial security. This effect may tie closely with the more muted improvement in consumer sentiment and comfort indicators, as illustrated on slide 18.

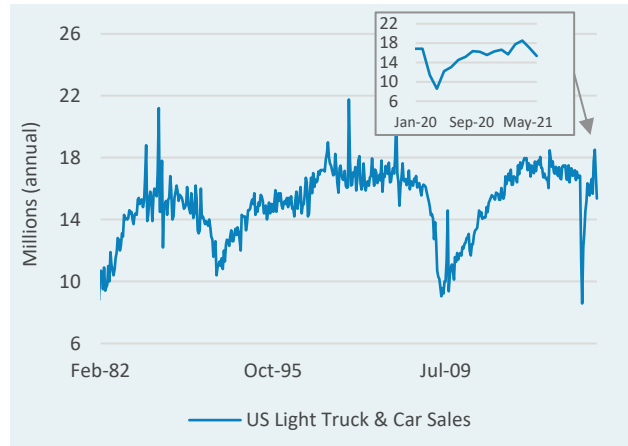
According to anonymized cellular phone data collected by Google for COVID-19 public health research, Americans appear to have returned to normal life in most respects. Travel to the workplace and transit usage, however, remain notably depressed relative to pre-COVID activity. If work-from-home policies are extended or even made permanent at many businesses, it is likely that this type of travel remains lower.

REAL RETAIL SALES



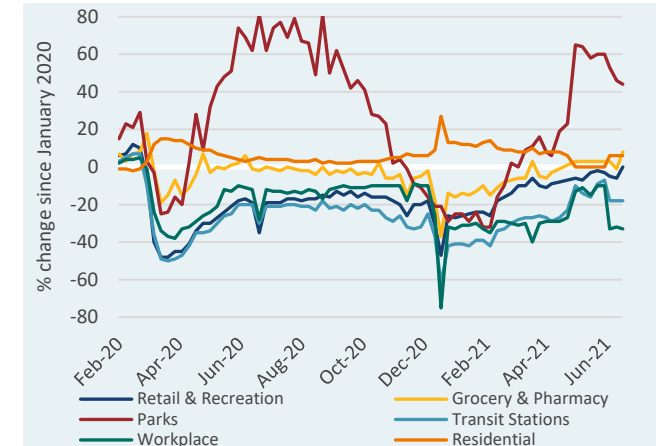
Source: FRED, as of 6/30/21

AUTO SALES



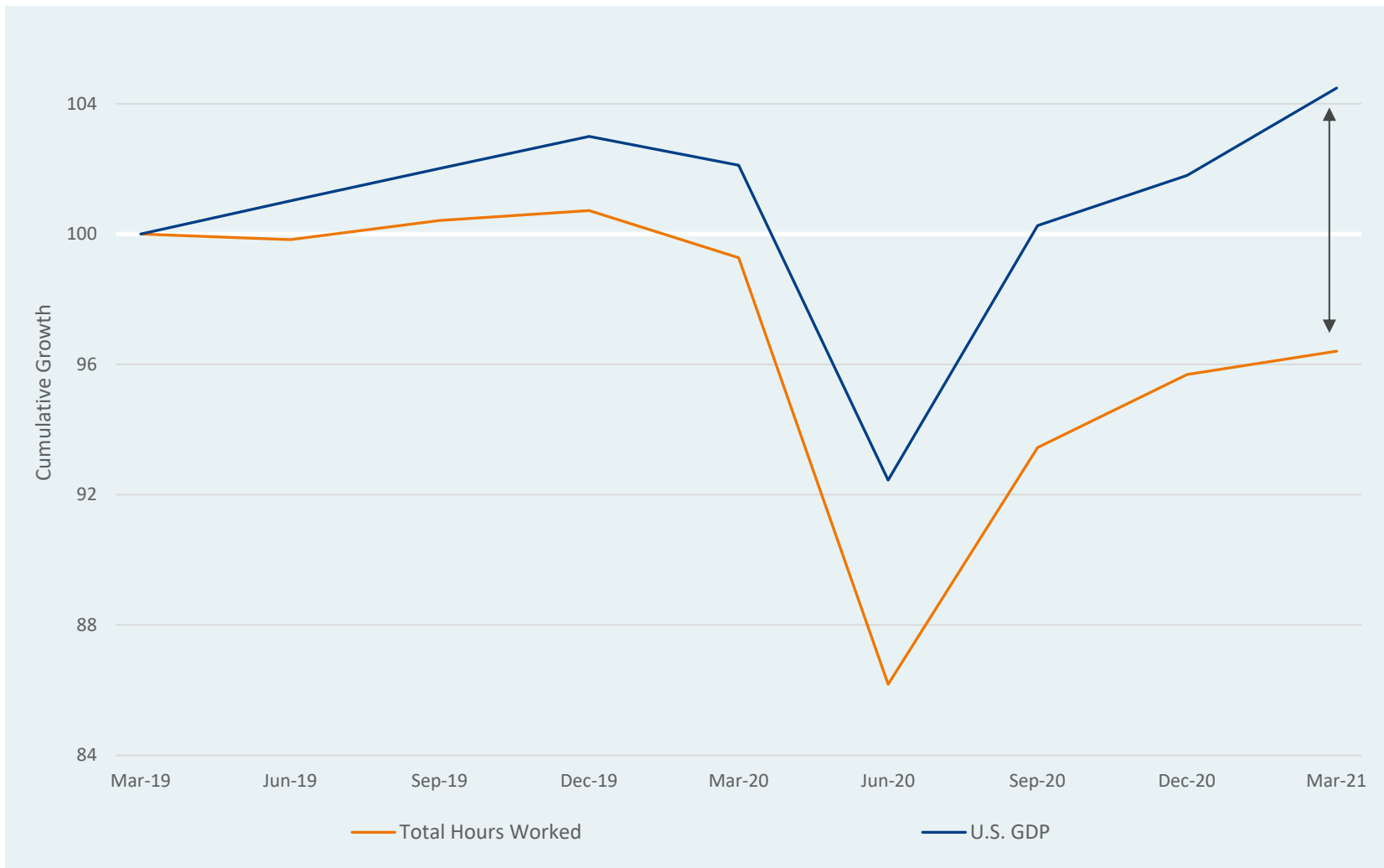
Source: Federal Reserve, as of 6/30/21

GOOGLE U.S. ACTIVITY TRACKER



Source: Google anonymized U.S. citizen mobility, as of 6/30/21

An unbalanced recovery



Despite the strong recovery in U.S. GDP, the labor market remains depressed

The stark contrast between GDP and the total number of hours worked by Americans illustrates this divide

Source: Fred, Verus, as of 3/31/21 – Nonfarm business sector total hours worked, nominal U.S. gross domestic product (GDP)

Sentiment

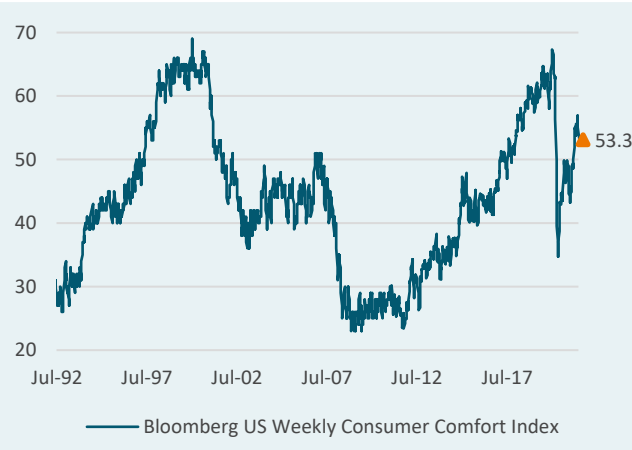
Consumer sentiment further improved over the quarter but has only recovered roughly half of the deterioration post-COVID, according to the indices below.

The Bloomberg Consumer Comfort Index attempts to gauge Americans’ views on the economy, their personal financial situations, and buying conditions. The index rose from 50.0 to 53.3. The University of Michigan Consumer Sentiment Survey attempts to gauge attitudes about the business climate, personal finances, and spending conditions. The index jumped from 84.9 to 85.5. As reported by the university, “...consumers’ complaints about rising prices on

homes, vehicles, and household durables reached an all-time record.” The survey surmised that Americans have accumulated significant savings, and a critical issue going forward will be whether these savings are held for safety or are spent.

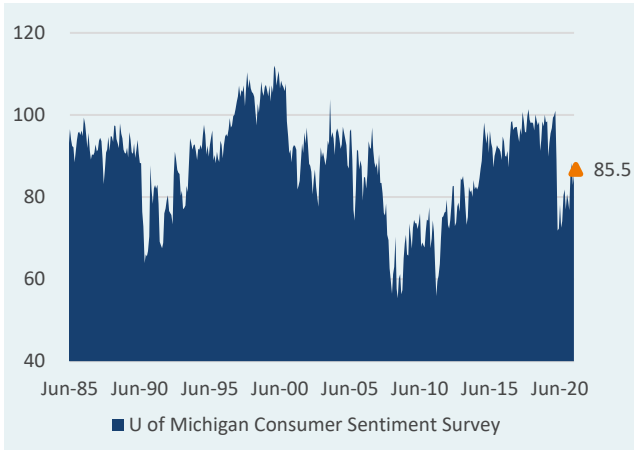
Small business optimism improved over the quarter but remained below pre-pandemic levels. Business owners are optimistic on the outlook, supported by expectations for gradual economic reopening, but continue to struggle to fill open positions due to a shortage of qualified employees in the labor pool.

CONSUMER COMFORT



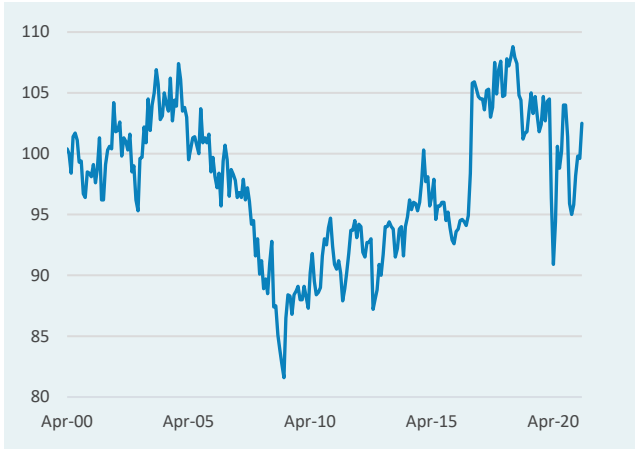
Source: Bloomberg, as of 6/30/21

CONSUMER SENTIMENT



Source: University of Michigan, as of 6/30/21

SMALL BUSINESS OPTIMISM



Source: NFIB, as of 6/30/21

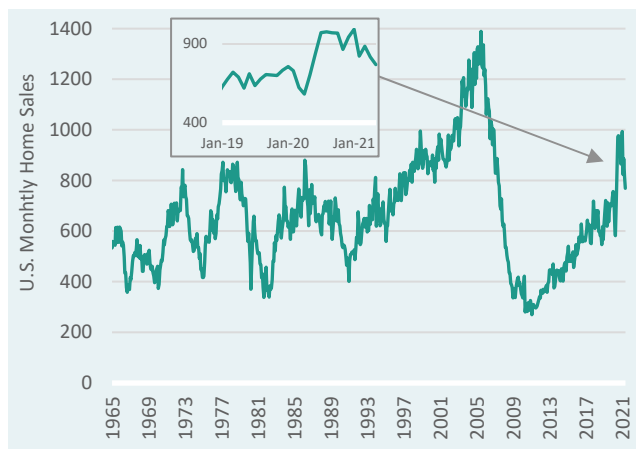
Housing

Home sales activity surged considerably in late 2020, but has slowed year-to-date, closer to pre-COVID levels in May. The median home sales price in May was 23.6% higher than one year prior, pushed upward by very low inventory and very high demand. Recent price rises have been some of the strongest on record, generating wealth for many Americans, but also hurting affordability and diminishing the chance of homeownership for prospective future homeowners.

The strength of the recent housing boom has been surprising. It is not yet clear whether the current upward

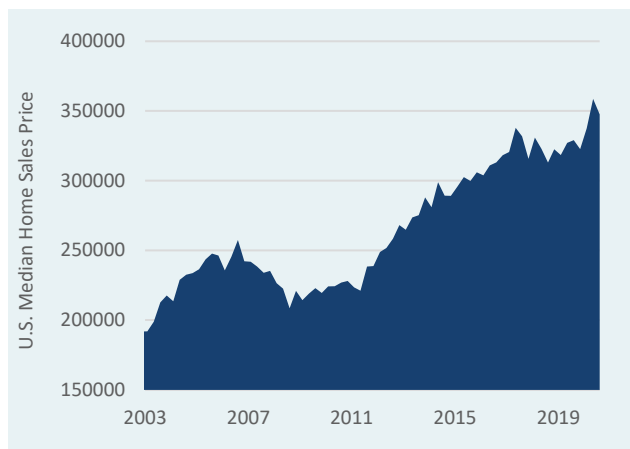
trend will persist. Housing inventory has improved, now standing at 5.1 months of supply, which is closer to pre-pandemic levels. This likely eases some price pressure. Earlier in the year it appeared that mortgage interest rates were rebounding towards prior levels, beginning the year at 2.67% and reaching 3.18% by the end of March. However, this trend reversed course during the second quarter, as rates fell back to 2.98%. An increasing volume of new home construction is likely easing tight inventories, as demonstrated below.

U.S. MONTHLY HOME SALES



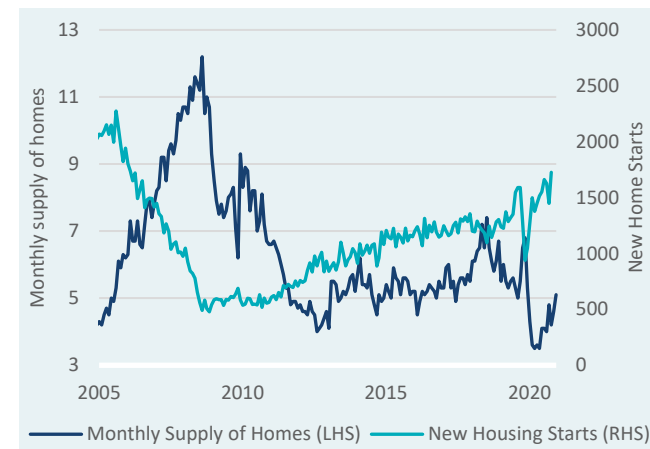
Source: U.S. Census Bureau, as of 5/31/21

U.S. MEDIAN HOME SALES PRICE



Source: FRED, as of 6/30/21

HOUSING SUPPLY VS NEW CONSTRUCTION



Source: FRED, as of 5/31/21

International economics summary

- Economies around the world continued to recover as COVID-19 fears eased, government shutdown orders were removed, and life began moving back to normal. This description of course does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.
- While expanding access to quality vaccines enabled mainland Europe to close the gap relative to the U.K. and the U.S. regarding vaccination rates, many countries in Asia, Africa, and Central Europe continued to face procurement issues, which has led public policymakers to respond more forcefully to pickups in case growth.
- Inflation has risen around the world, with the U.S. experiencing one of the largest rises. This will likely be a key theme for markets in the coming months.
- The U.S. trade balance of goods and services remained at a near all-time-low level of \$75B per month, perhaps indicating that the relative strength of the U.S. consumer has pushed up domestic imports to levels above exports. The U.S. trade deficit might be primed to recede if the global recovery were to broaden.
- The pace of global manufacturing sector activity growth remained high, while services sector activity in many countries began to expand.
- Chinese GDP growth reportedly moderated from a year-over-year pace of 18.3% in Q1 to 7.9% in Q2—slightly missing expectations (+8.0%), but keeping the 6% annual target in range. Retail sales (+12.1%) and industrial production (+8.3%) both grew by more than forecast, but policymakers continue to worry that the economic recovery has been uneven in composition, which could weigh on future growth.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	0.4% 3/31/21	5.4% 6/30/21	5.9% 6/30/21
Eurozone	(1.3%) 3/31/21	1.9% 6/30/21	7.9% 5/31/21
Japan	(1.6%) 3/31/21	0.0% 6/30/21	3.1% 5/31/21
BRICS Nations	13.3% 3/31/21	2.5% 6/30/21	5.7% 12/31/20
Brazil	1.0% 3/31/21	8.4% 6/30/21	14.7% 4/30/21
Russia	(0.7%) 3/31/21	6.5% 6/30/21	4.9% 5/31/21
India	1.6% 3/31/21	6.3% 6/30/21	9.2% 6/30/21
China	7.9% 6/30/21	1.1% 6/30/21	5.0% 5/31/21

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.

International economics

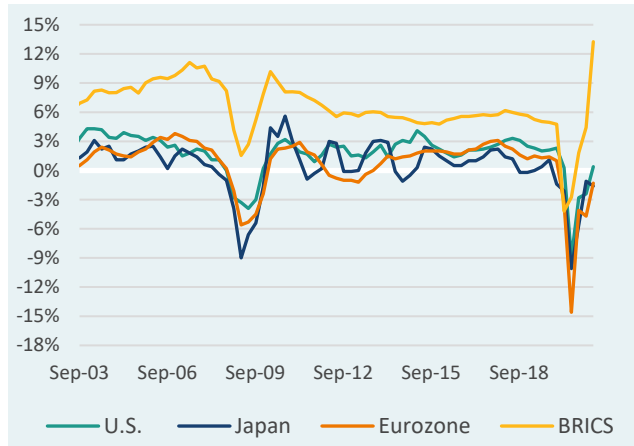
Economies around the world continued to recover, as COVID-19 fears eased, government shutdown orders were removed, and life began moving back to normal. This description of course does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.

A third wave of COVID has hit the Asia-Pacific region, as the Delta variant triggered economic restrictions in the area. Slower vaccination rollouts in many countries has resulted in greater vulnerability to new variants.

Inflation has jumped nearly everywhere across the globe, though the U.S. has seen one of the largest rises. This will likely be a key theme for markets and central banks in the coming months.

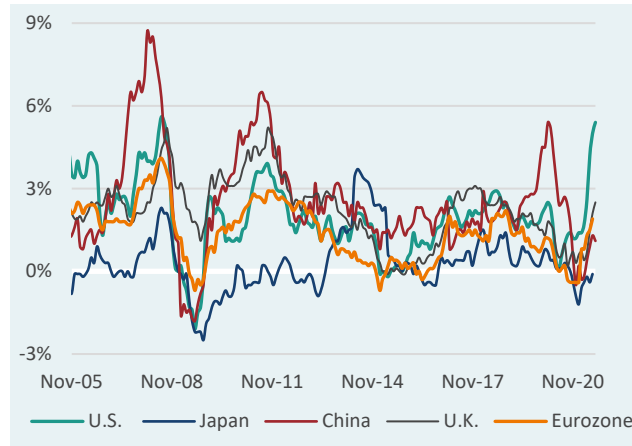
The rate of unemployment was mixed during the second quarter. The U.S. and Eurozone labor markets improved moderately over the quarter, while Japan saw a rise in joblessness. As we have described in prior quarters, governments have taken very different approaches to supporting workers, which has made global labor market trends difficult to compare.

REAL GDP GROWTH (YOY)



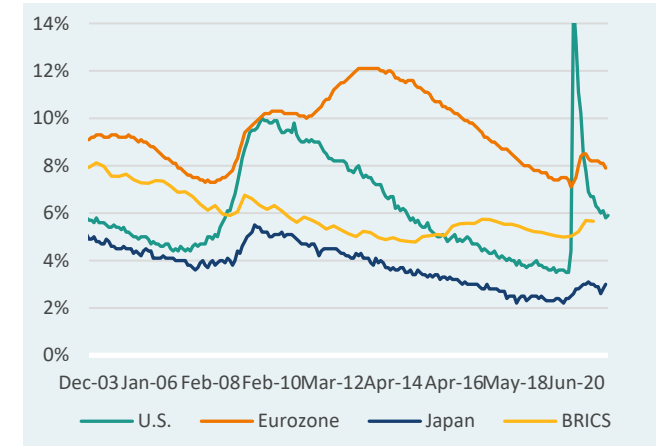
Source: Bloomberg, as of 3/31/21

INFLATION (CPI YOY)



Source: Bloomberg, as of 6/30/21 – or most recent release

UNEMPLOYMENT



Source: Bloomberg, as of 6/30/21 – or most recent release

Fixed income rates & credit

Fixed income environment

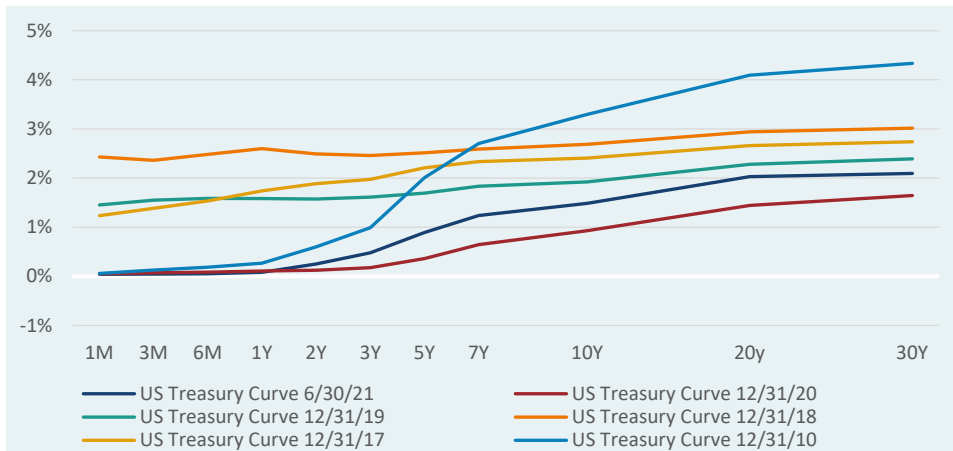
- The 10-year U.S. Treasury yield moved lower during Q2, from 1.75% to 1.44%. Many have attributed this trend to the Federal Reserve’s recent indications that monetary policy will be kept very easy for the medium term. “Lower-for-longer” interest rates may act as a support to risk asset prices.
- Despite very dovish communication from central banks, derivative markets suggest investors are pricing between a 0-0.4% rise in interest rates over the next year in most developed countries.
- Headline Inflation in Brazil has risen to 8.4%, double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25 to 5.5%. This might suggest that central banks around the world have different views regarding how “transitory” the recent inflation rise will be.
- Risky credit outperformed over the quarter as spread levels compressed to decade-lows in the United States, and emerging markets debt bounced back. Hard-currency denominated emerging market debt returned 4.1% and high yield credit in the U.S. returned 2.7%.
- Policy shifts from the People’s Bank of China resulted in a drawdown of liquidity across Asian markets over most of the quarter, which weighed on valuations for larger tech companies across the region. More recent concerns over the pace of the economic recovery in China may lead the government to withdraw liquidity more gradually.
- While some developed market central banks (Bank of Canada, Bank of Korea, Norges Bank) have started to marginally tighten (or signal tighter) policy, the Federal Reserve and the European Central Bank are expected to keep policies accommodative for at least the next year to 18 months.

	QTD Total Return	1 Year Total Return
Core Fixed Income (BBgBarc U.S. Aggregate)	1.8%	(0.3%)
Core Plus Fixed Income (BBgBarc U.S. Universal)	2.0%	1.1%
U.S. Treasuries (BBgBarc U.S. Treasury)	1.7%	(3.2%)
U.S. High Yield (BBgBarc U.S. Corporate HY)	2.7%	15.4%
Bank Loans (S&P/LSTA Leveraged Loan)	1.4%	11.7%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	3.5%	6.6%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	4.1%	7.5%
Mortgage-Backed Securities (BBgBarc MBS)	0.3%	(0.4%)

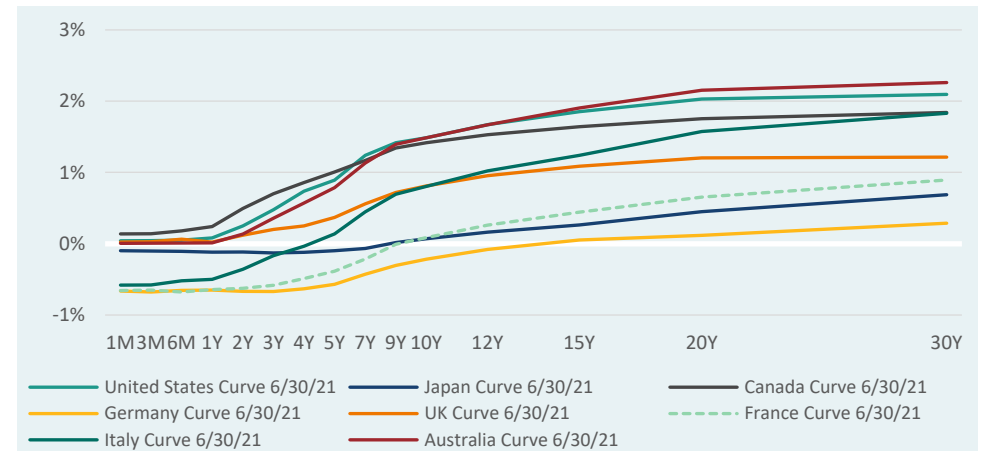
Source: Bloomberg, as of 6/30/21

Yield environment

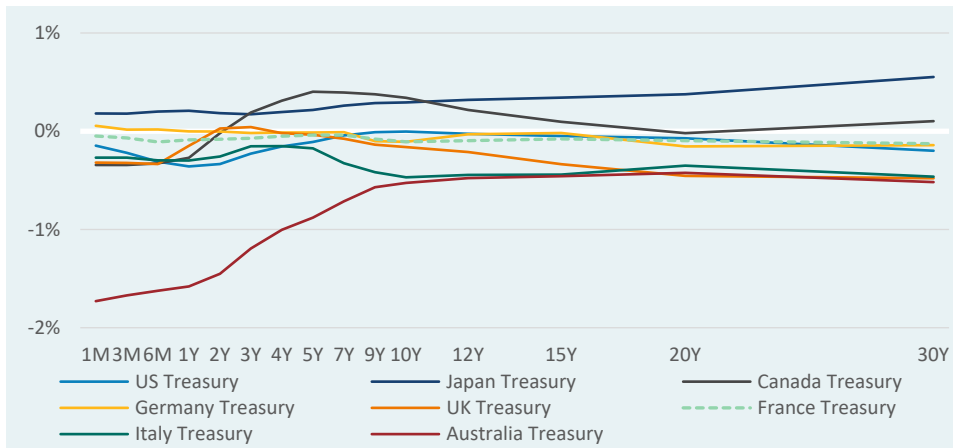
U.S. YIELD CURVE



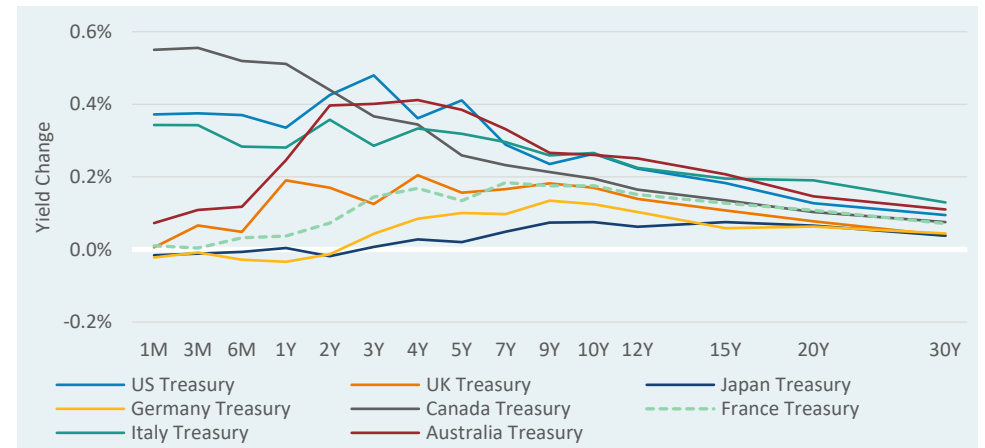
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/21

Credit environment

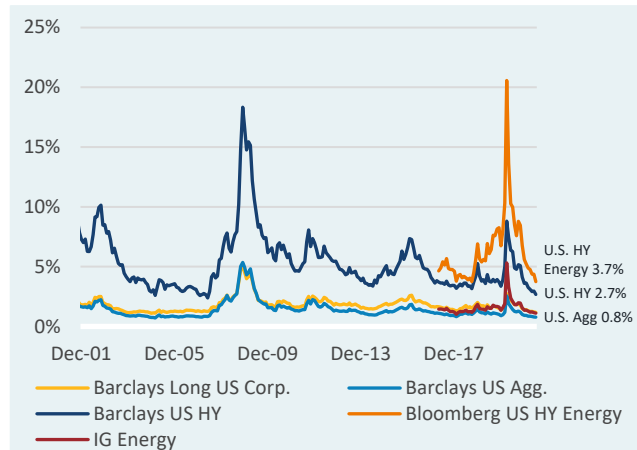
Credit markets performed positively in the second quarter, supported by strong corporate earnings, strong inflows and the expectation that supply will moderate in the second half of the year. Interest rates, specifically on the long-end of the curve, fell over the quarter, providing further duration tailwinds for fixed income securities. Corporate investment grade credit returned +3.6% over the quarter while high yield and leverage loans returned +2.7% and +1.4%, respectively.

Credit spreads grew tighter during the quarter, driven by strong investor demand and continued improvements in

economic fundamentals. High yield spreads tightened 42 basis points to 268 basis points, a new cycle low. Investment grade tightened a more modest 11 basis points to end the quarter at 80 basis points.

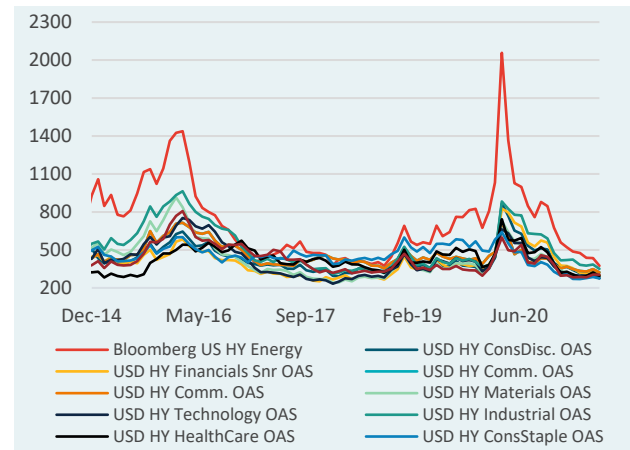
Lower quality bonds continue to outperform within both high yield and leverage loans. CCC bonds have now outperformed the broad high yield bond index in 10 of the past 11 months while split B/CCC loans have outperformed in 11 consecutive months.

SPREADS



Source: Barclays, Bloomberg, as of 6/30/21

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/21

Market	Credit Spread (OAS)	
	6/30/21	6/30/20
Long U.S. Corp	1.2%	2.0%
U.S. Inv Grade Corp	0.8%	1.5%
U.S. High Yield	2.7%	6.3%
U.S. Bank Loans*	4.3%	6.2%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/21

*Discount margin (4-year life)

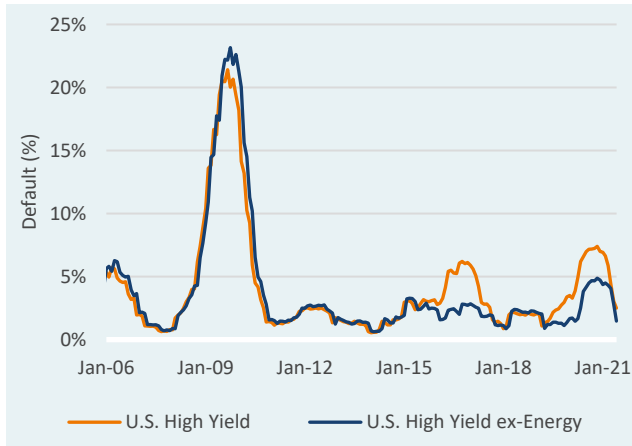
Default & issuance

Default activity remained modest over the quarter, with defaults totaling \$3.5 billion on bonds and loans. Notably, fewer defaults occurred during the past two quarters than at any time in the past two years—an impressive development, given that the U.S. economy is still recovering from the pandemic. In addition, rolling twelve-month defaults have fallen as larger default volumes experienced last June exited the rolling window. This brought the par-weighted U.S. high yield default rate down 3.4% to end the quarter at 2.5%. Similarly, the loan par-weighted default rate ended the quarter at 1.9%, down 1.9% since March and down 2.5% year-to-date.

High yield bond issuance remains elevated, but has slowed from the record-setting levels experienced last quarter. Gross issuance for the quarter was \$160.8 billion, bringing the year-to-date total to \$338.4 billion. This was notably greater than the \$238.0 billion issued in the first half of 2020. Leveraged loan issuance also slowed to \$119.3, down from \$163.9 billion issued in the first quarter.

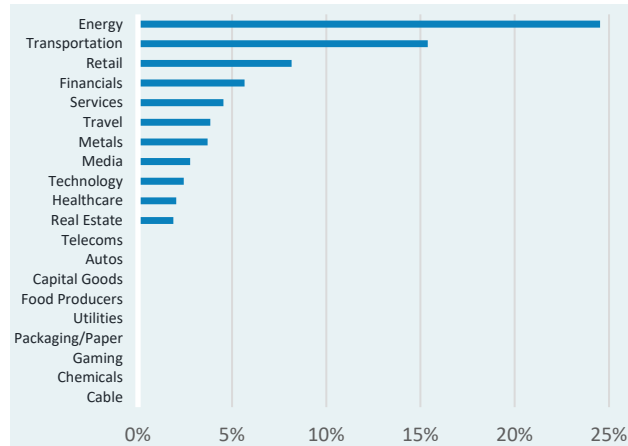
Investment grade issuance for the quarter totaled \$350 billion, below the four-year average second quarter issuance of \$401, and less than the \$423 billion issued in Q1.

HY DEFAULT RATE (ROLLING 1-YEAR)



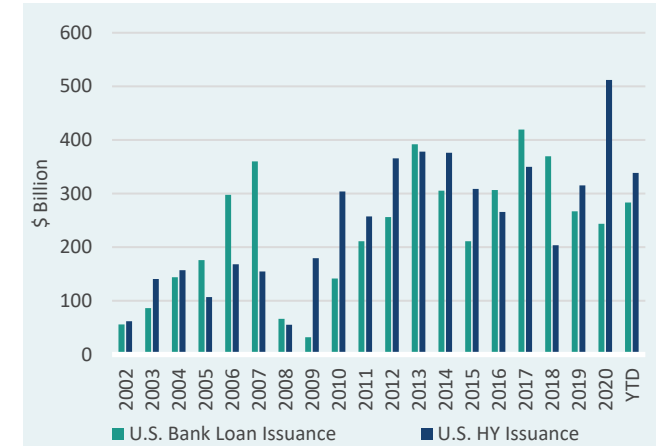
Source: BofA Merrill Lynch, as of 6/30/21

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



Source: BofA Merrill Lynch, as of 6/30/21 – par weighted

U.S. ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, as of 6/30/21

Equity

Equity environment

- U.S. equities were a top performer again in Q2, returning +8.5%. International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.0% MSCI Emerging Markets Index) on an unhedged currency basis.
- Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2. Growth stocks beat value by 6.7% during the quarter, dampening excitement for a value comeback.
- U.S. small-cap stocks (+4.3%) lagged large-cap stocks (+8.5%) as the reflation trade lost steam, but have still outperformed by 21.2% over the last year.
- It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, actual market volatility, and the risk reflected in asset prices is very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few risks on the horizon.
- Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of Q2 2021 is 64.0%. If that rate were to materialize, it would mark the highest year-over-year growth rate reported by the index since Q4 2009 (109.1%).
- Global equities have marched higher without many hiccups over the last six months. The MSCI ACWI Index has not closed more than 5% below its prior peak level since November 2nd, 2020. In the second quarter, the furthest the ACWI ever closed below its prior high-water-mark was 3.3%.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	8.5%		40.8%	
US Small Cap (Russell 2000)	4.3%		62.0%	
US Large Value (Russell 1000 Value)	5.2%		43.7%	
US Large Growth (Russell 1000 Growth)	11.9%		42.5%	
International Large (MSCI EAFE)	5.2%	4.9%	32.4%	28.0%
Eurozone (Euro Stoxx 50)	5.8%	5.1%	35.4%	29.7%
U.K. (FTSE 100)	5.8%	5.7%	31.9%	18.5%
Japan (NIKKEI 225)	(1.6%)	(1.0%)	27.0%	31.7%
Emerging Markets (MSCI Emerging Markets)	5.0%	3.5%	40.9%	35.1%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/21

Domestic equity

U.S. equities were a top performer again in Q2, returning +8.5%. Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of June 30th was 64.0%. If that rate were to materialize, it would mark the highest year-over-year rate reported by the index since Q4 2009 (109.1%).

Concerns over the potential of the coronavirus delta variant to crimp the growth outlook helped to drive a rotation away from the more cyclical sectors that had driven the advance in U.S. equities since last August. Interest rates fell substantially, supporting outperformance of the Real Estate (+13.1%), IT

(+11.6%), and Telecom (+10.7%) sectors. The shift in sentiment towards more cautious risk positioning led the quality factor (+10.6%) to outperform relative to MSCI's suite of long-only factor indices.

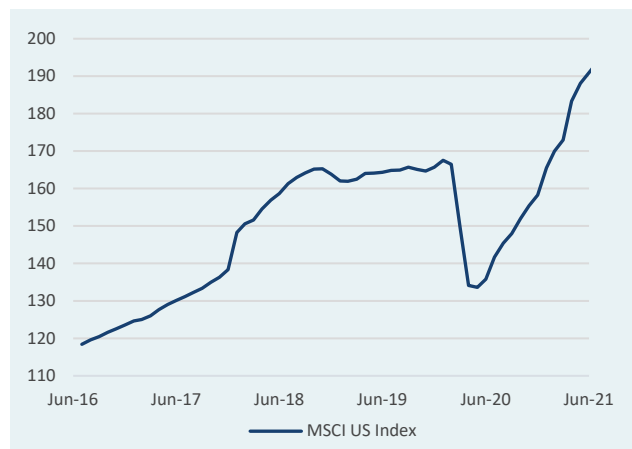
While it appears possible that equities could continue rallying into next year, the road could well become bumpier from here, given high valuations and the level of optimism baked into prices. We retain a cautiously optimistic view, given the uncertainty which shrouds the outlook.

S&P 500 INDEX



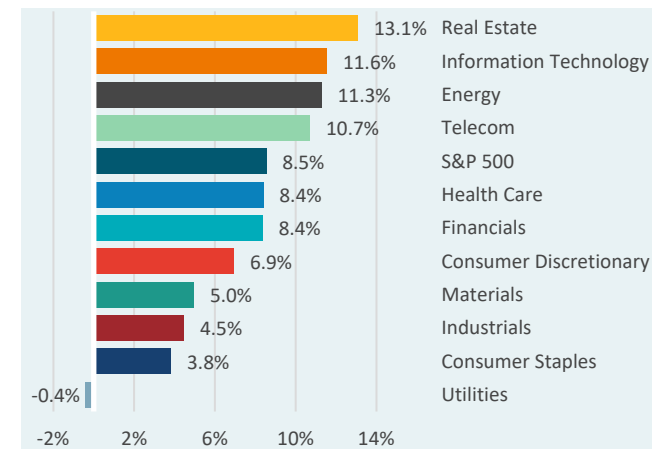
Source: Standard & Poor's, as of 6/30/21

FORWARD 12-MONTH EARNINGS PER SHARE



Source: MSCI, as of 6/30/21

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/21

Domestic equity size & style

Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%), as investors rotated portfolios away from riskier exposures to larger, more quality names amid a more cautious risk outlook.

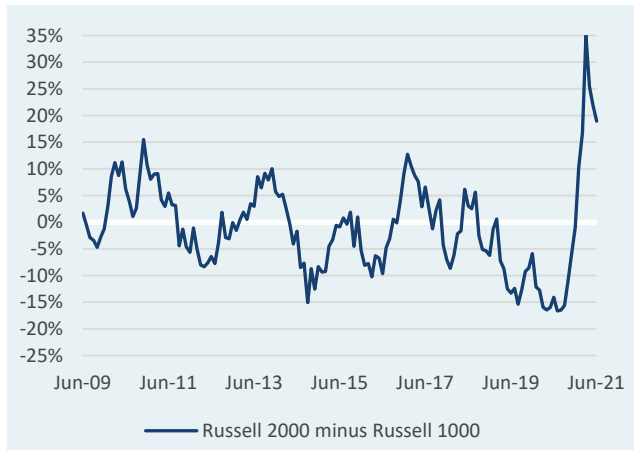
Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2, dampening excitement for a value comeback. As we have noted recently, sector trends can have large impacts on

factor behavior. This may have been the case with value in the first quarter. Small capitalization stocks have exhibited a spectacular run over the past year, outperforming large cap stocks by 21.2% (Russell 2000 +62.0, Russell 1000 +43.1%).

In general, factor performance tends to be noisy and difficult to predict, which suggests that style investing should in most cases involve a longer-term focus.

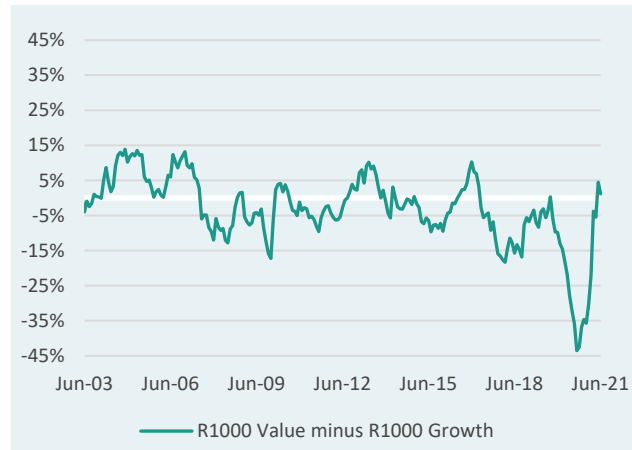
Small cap and value stocks delivered strong relative performance during Q1

SMALL CAP VS LARGE CAP (YOY)



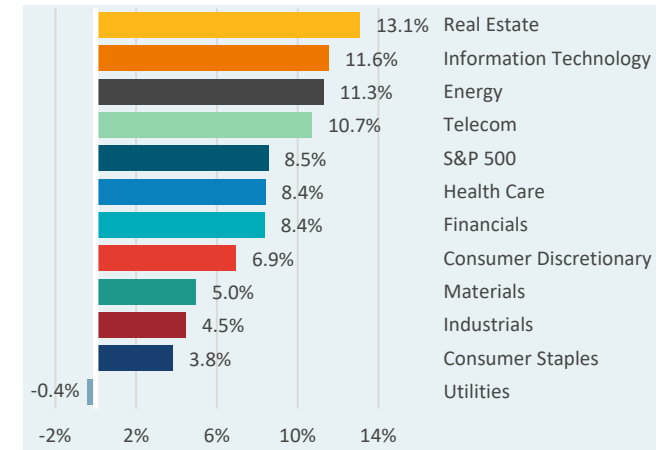
Source: FTSE, as of 6/30/21

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/21

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/21

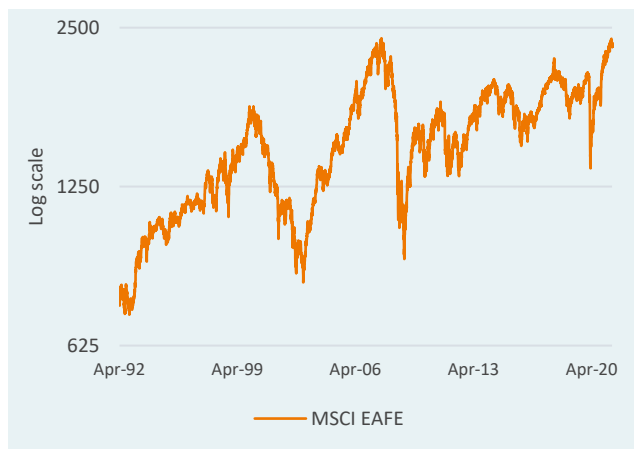
International developed equity

International equities delivered +5.2% (MSCI EAFE Index) during the quarter on an unhedged currency basis, lagging U.S. equities but in line with emerging market equities (MSCI Emerging Markets +5.0%). Broad dollar weakness over most of the quarter boosted returns for unhedged investors in international developed equities by 0.3%, European equities by 0.7%, and emerging markets by 1.5%. The Japanese yen depreciated slightly relative to the U.S. dollar, which presented headwinds for unhedged investors in Japanese equities. Fading of risk-on sentiment in June helped to spur a turnaround in the U.S. dollar late in the quarter, though short

covering dynamics also played a factor.

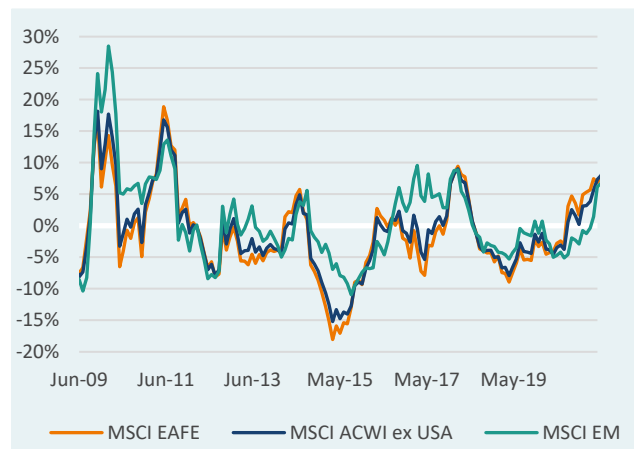
Fresh concerns over the growth outlook following the emergence of the new, more virulent delta strain of the coronavirus pushed ECB policymakers to accelerate the pace of weekly asset purchases within the Pandemic Emergency Purchase Programme slightly, with the goal being to preserve financial conditions supporting a strong recovery. The commitment to easier policy over the short-to-intermediate term helped to keep interest rates at relatively low levels, which buoyed the valuation of European equities.

INTERNATIONAL DEVELOPED EQUITIES



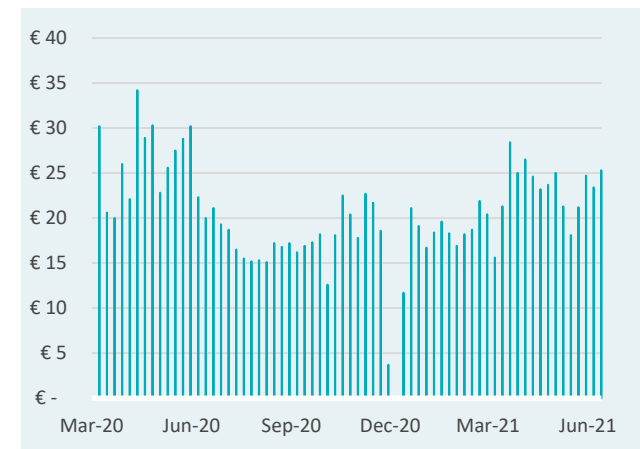
Source: MSCI, as of 6/30/21

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 6/30/21

ECB WEEKLY PEPP PURCHASES (BILLIONS)



Source: Bloomberg, ECB, as of 7/9/21

Emerging market equity

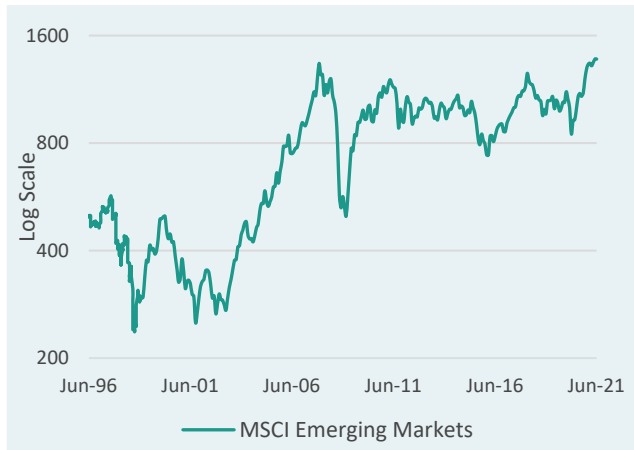
Emerging market equities (MSCI EM +5.0%) underperformed U.S. (S&P 500 +8.6%) and were in line with international developed equities (MSCI EAFE +5.2%) during the second quarter.

Latin American equities once again took the lead during the second quarter, outperforming the broader index by 10% (MSCI Latin America 15.0%, MSCI Emerging Markets +5.0%). Much of this performance was due to the notable underperformance of Chinese equities, which lagged the overall index by -2.8% during Q2 and -14.4% over the past year. Single countries in the emerging markets complex often

display high volatility. In other words, large idiosyncratic moves such as the one witnessed recently by Chinese equities are not unusual.

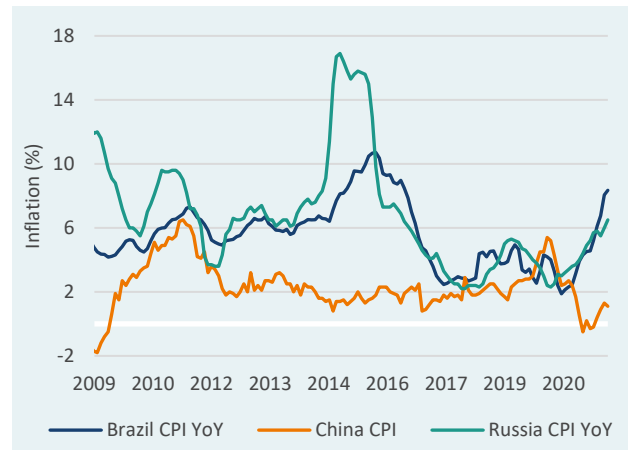
Headline Inflation in Brazil has risen to 8.4%, which is double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25% to 5.50%. This might suggest that central banks around the world have different views regarding how “transitory” the recent inflation rise will be, although volatile rates of inflation are common in the emerging markets.

EMERGING MARKET EQUITY



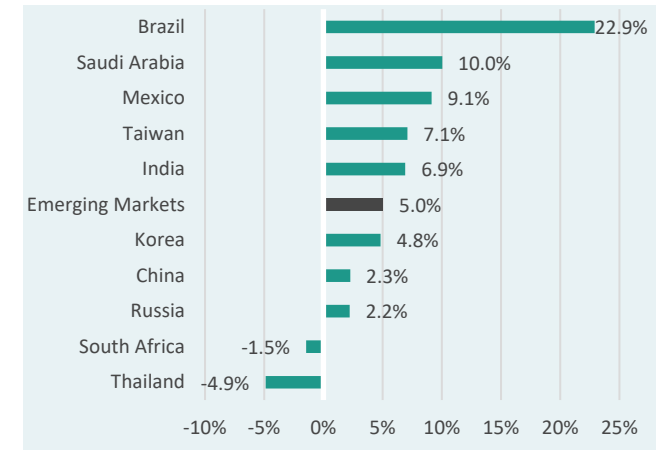
Source: MSCI, as of 6/30/21

INFLATION (YOY)



Source: Bloomberg, as of 6/30/21 or most recent data

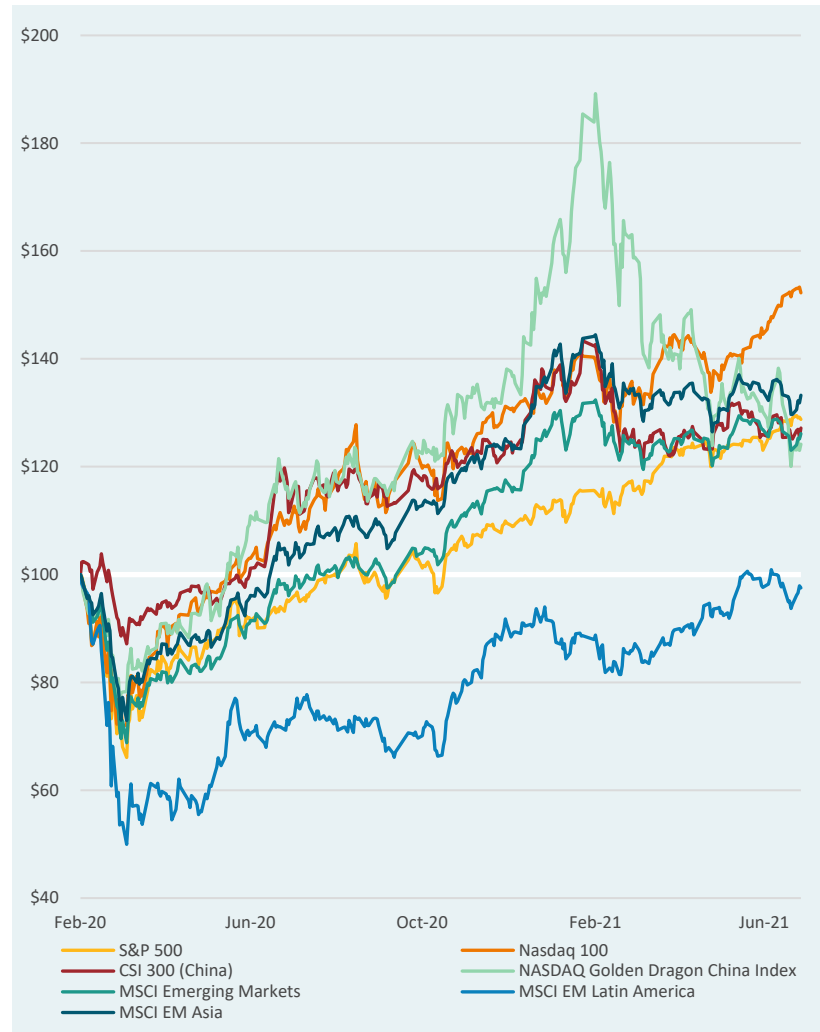
Q2 PERFORMANCE – TOP 10 EM CONSTITUENTS



Source: Bloomberg, MSCI, as of 6/30/21, performance in USD terms

Chinese markets

- The Chinese equity market has now lagged the broader emerging markets by -1.1% on a 3-year annualized basis, -13.8% on a 1-year basis, and -5.7% year-to-date (MSCI China, MSCI Emerging Markets).
- Chinese equities began to sell off in late February, with the initial catalyst appearing to be a decision by the People's Bank of China to shift its focus away from an accommodative financial stance towards tightening, with the aim of limiting the risks that excessive leverage within certain segments of the economy poses to the economy.
- This shift in focus from ensuring economic recovery to managing the risks of financial excesses came in the form of a marginal tightening of liquidity across the country, which sparked a sell-off in some of the high-flying tech companies that had driven outperformance in the early days of the pandemic. Losses in China accelerated in the second quarter of 2021 when regulators cracked down on some national champions in the IT industry, reportedly over concerns around the risks of the data gathered by those companies falling into the wrong hands, which could undermine the position of the Communist Party of China. While it appears that both general liquidity conditions have begun to improve and the tech crackdown has showed signs of easing, these issues remain front and center for the broader emerging market universe.
- Recent larger idiosyncratic moves in the Chinese market highlight the benefits of gaining diversified exposure to the asset class.



Chinese tech companies listed in the U.S. but whose business is primarily conducted in China have sold off significantly since late February 2021

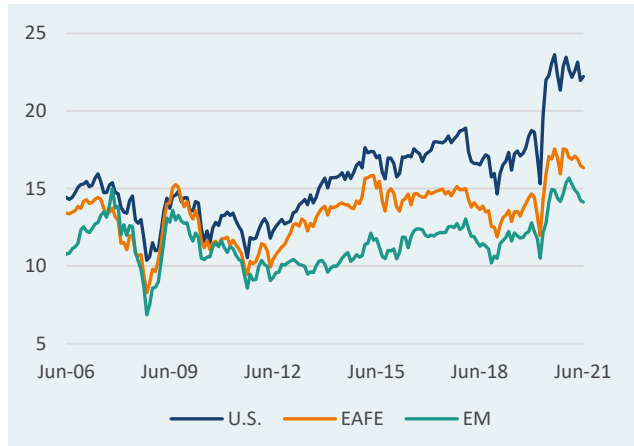
Equity valuations

Industry analysts forecast a 11.2% gain over the next 12 months for the S&P 500, according to FactSet, despite record-high valuations.

Valuations remain at very high levels relative to history, supported by extremely low interest rates, central bank accommodation, and unprecedented government spending. As is often the case when valuations rise, opinions differ regarding whether: a) valuations are supported by the environment and will stay elevated for the long-term, resulting in lower expected returns, or b) valuations are

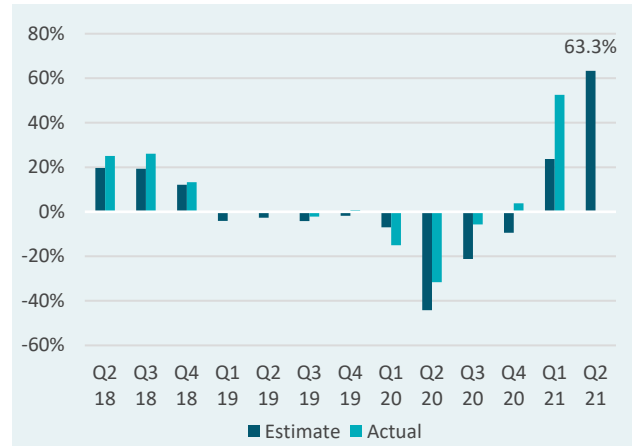
excessive and will come back down due to a market correction. Some investors might question the possibility of a third scenario – that future earnings growth will be strong enough to naturally bring down valuations. However, this third scenario is not currently supported by earnings forecasts. Our view on these conditions continues to be somewhat aligned with scenario “a”—that valuations are indeed high, but that unusual conditions and a potentially synchronized global economic comeback may support these high prices for the medium term. Nonetheless, with such optimism baked into risk asset prices, it will be important to watch closely for any disruptions to the market’s optimistic outlook.

FORWARD P/E RATIOS



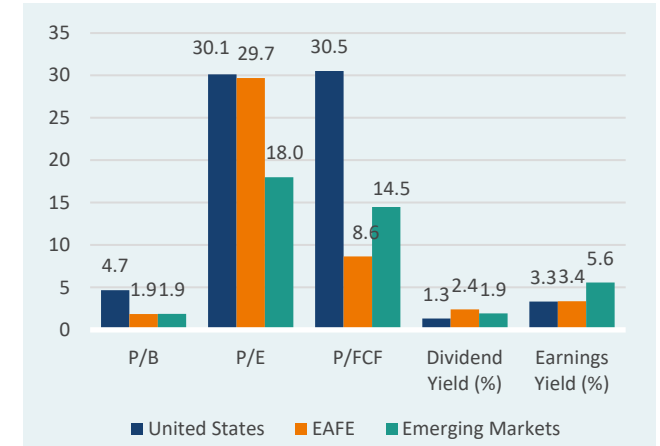
Source: MSCI, 12m forward P/E, as of 6/30/21

S&P 500 EARNINGS GROWTH VS. FORECASTS



Source: Bloomberg, as of 6/30/21

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 6/30/21 - trailing P/E

Equity volatility

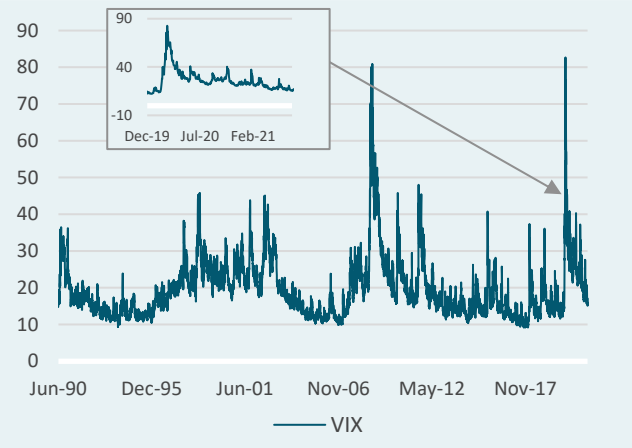
The Cboe VIX Index has fallen further year-to-date, reaching 15 in June. This compares to the longer-term average of 19. One-year trailing realized volatility has now returned to pre-COVID levels.

It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, actual market volatility, and the risk reflected in asset prices is very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few risks on the horizon. However, it is reasonable to question the degree to

which unprecedented government stimulus and easy money has influenced markets as of late.

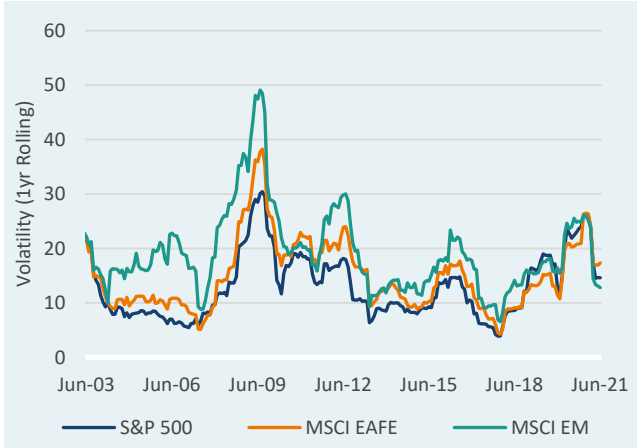
The Cboe Skew Index, which measures the perceived tail risk of the distribution of S&P 500 Index returns over a 30-day horizon, rose to 161.9, 35% above its average level since inception in 1990. The high level of the skew index indicates a steep implied volatility curve, which could be interpreted as more bearish bears, more bullish bulls, or both. In any case, disagreement among investors appears to be wide at present, which could allow for larger short-term price swings.

U.S. IMPLIED VOLATILITY (VIX)



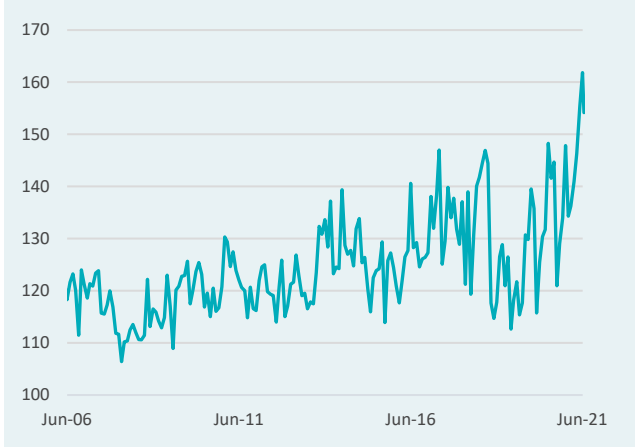
Source: Cboe, as of 6/30/21

REALIZED VOLATILITY



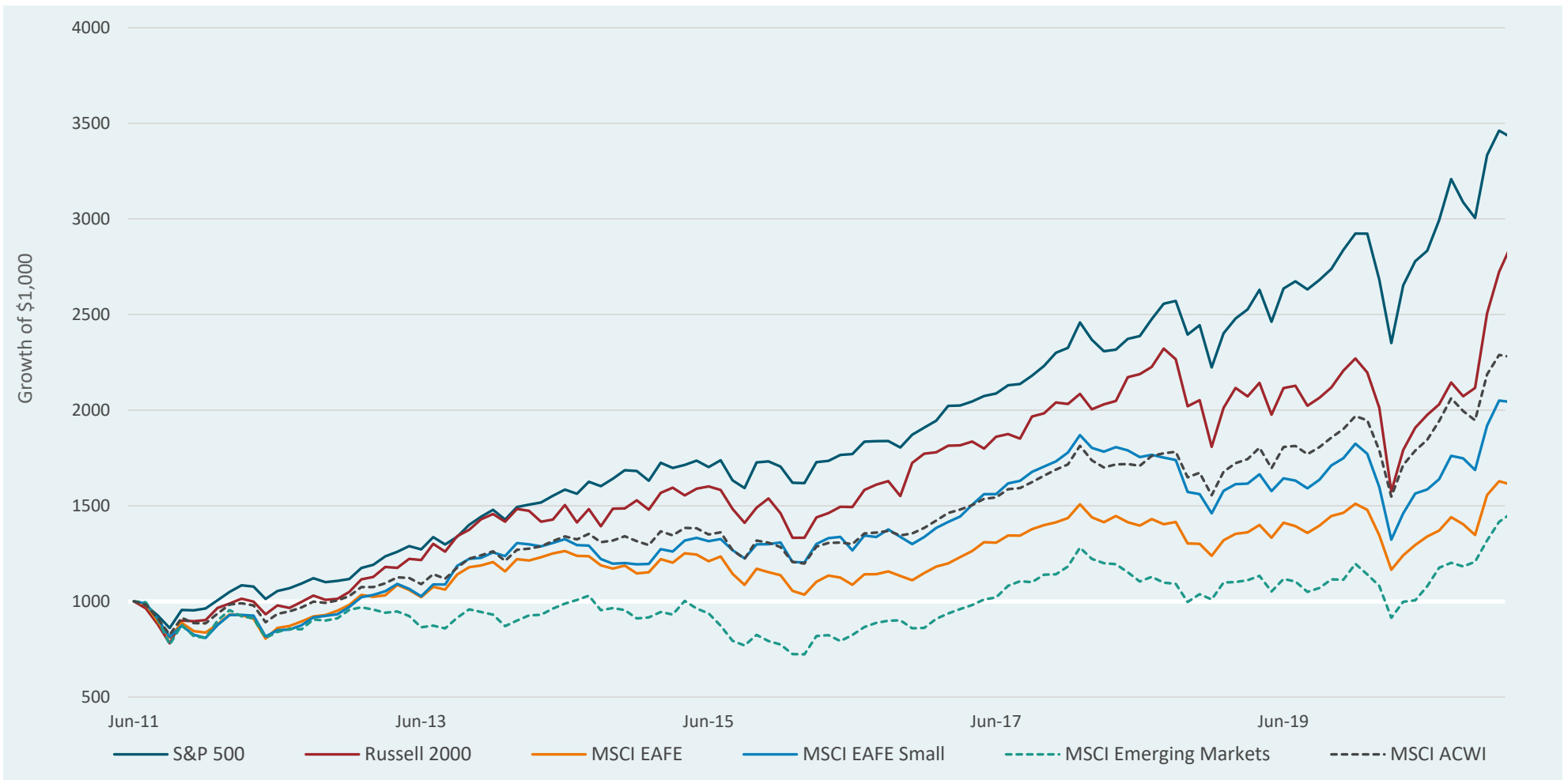
Source: Standard & Poor's, MSCI, as of 6/30/21

CBOE SKEW INDEX



Source: Cboe, Bloomberg, as of 6/30/21

Long-term equity performance



Source: Morningstar, as of 6/30/21

Other assets

Currency

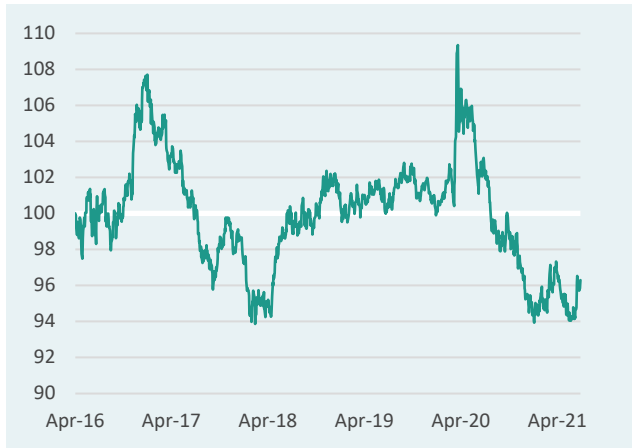
The stabilization in the U.S. dollar that took place in the first quarter as Treasury yields rose began to fade as longer-term interest rates declined from pandemic-era high levels. The dollar sold off relative to major currencies in April and May, before finding a bid in June on the back of slightly more cautious sentiment. Investors remain quite polarized over the medium-to-long term path of the dollar, which might increase the probability of more volatility in the future.

Despite U.S. dollar weakness relative to the euro and British pound over the quarter, those two European currencies remain relatively cheap on a purchasing power parity basis. The

Japanese yen became even cheaper relative to the dollar over the period, while the Swiss franc and Norwegian Krone remained at relatively expensive valuations.

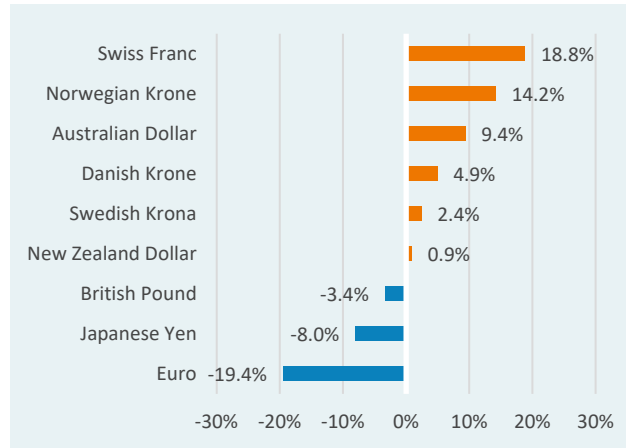
The embedded currency portfolio of the MSCI EAFE Index returned 0.3% over the quarter, but returned 4.4% over the trailing year on the back of a weakening U.S. dollar. Within Verus' preferred currency beta benchmark, the momentum factor (-6.8%) contributed significant headwinds to one-year trailing returns, as frequent shifts in market risk sentiment limited the capacity of risk-on and risk-off currencies from sustaining trends in one direction or the other.

BLOOMBERG DOLLAR SPOT INDEX



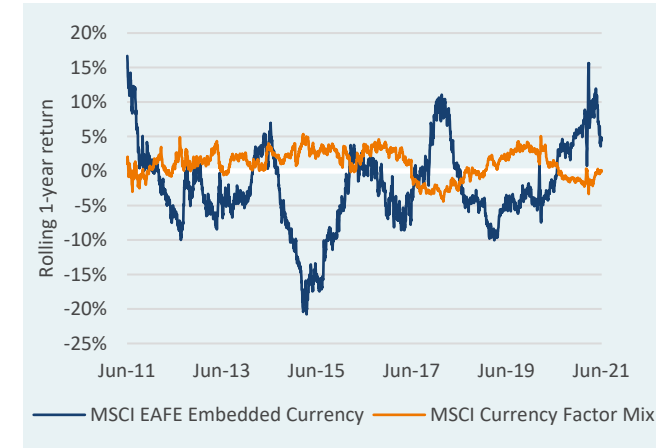
Source: Bloomberg, as of 6/30/21

PURCHASING POWER PARITY VALUATIONS VS. U.S. DOLLAR (OECD)



Source: Bloomberg, as of 6/30/21

CURRENCY BETA RELATIVE PERFORMANCE



Source: Bloomberg, MSCI, as of 6/30/21

Appendix

Periodic table of returns

BEST

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	5-Year	10-Year
Small Cap Value	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	38.5	26.7	23.7	17.9
Commodities	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	34.6	21.1	18.8	14.9
Small Cap Equity	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	21.0	17.5	18.0	13.5
Large Cap Value	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	20.0	17.0	16.5	12.3
Large Cap Equity	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	18.3	15.0	13.6	11.6
Large Cap Growth	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	14.0	13.0	13.0	10.8
Small Cap Growth	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	10.3	9.0	11.9	8.8
International Equity	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	7.8	8.8	10.3	6.9
Emerging Markets Equity	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	7.5	7.4	9.8	5.9
60/40 Global Portfolio	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	4.6	6.0	6.1	4.3
Hedge Funds of Funds	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	2.8	4.7	5.8	3.8
Real Estate	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	0.5	1.7	3.0	3.4
Cash	-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	0.5	0.0	2.4	0.6
US Bonds	-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	-3.1	-1.6	1.1	-4.4

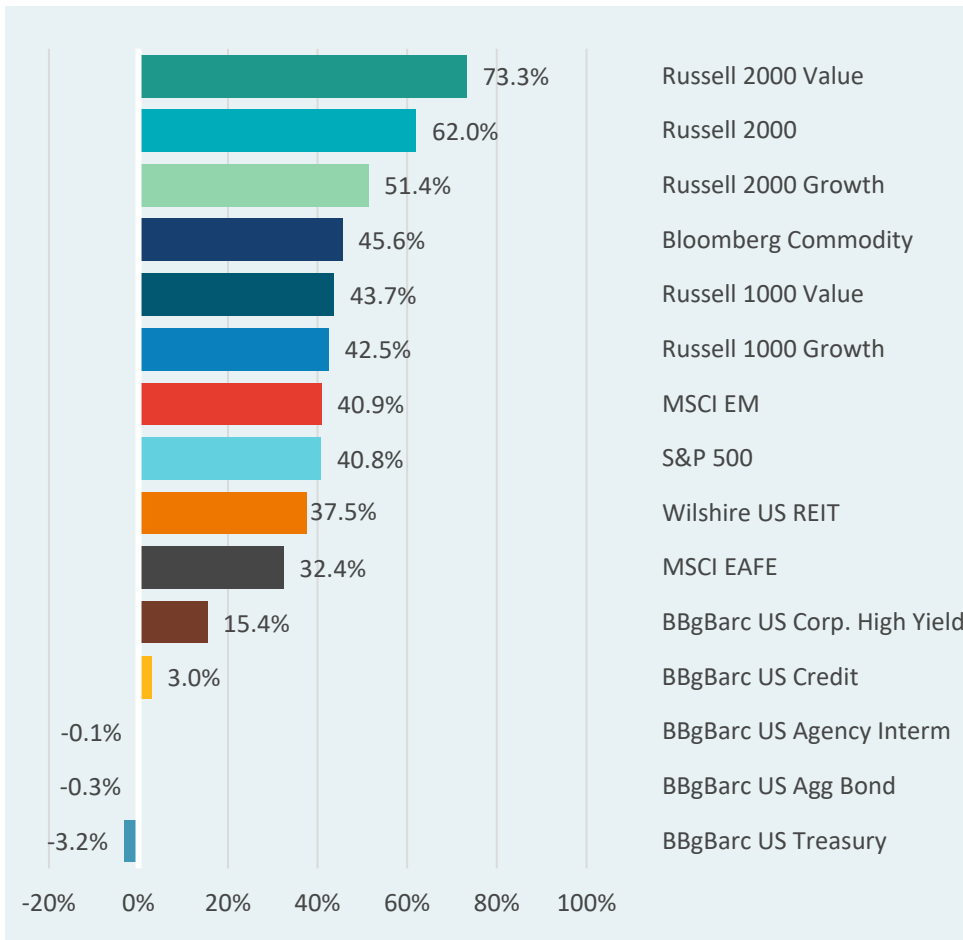
WORST

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

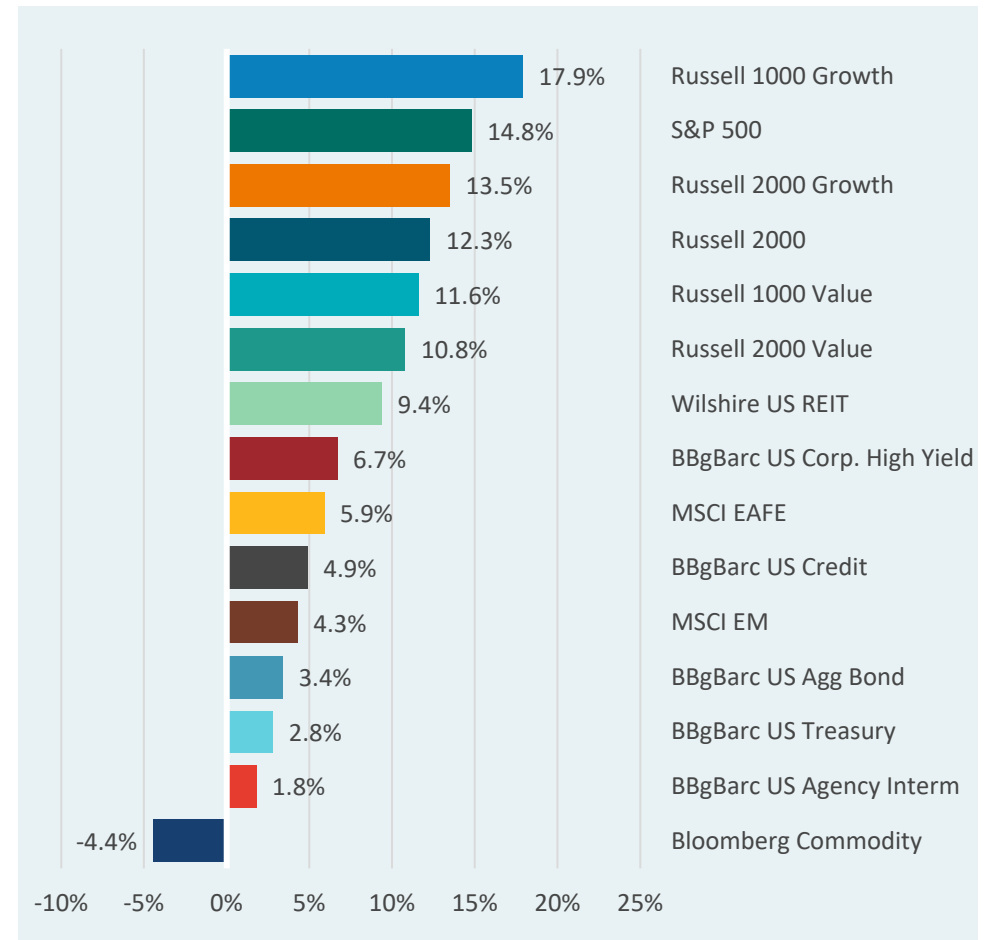
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 3/31/21.

Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



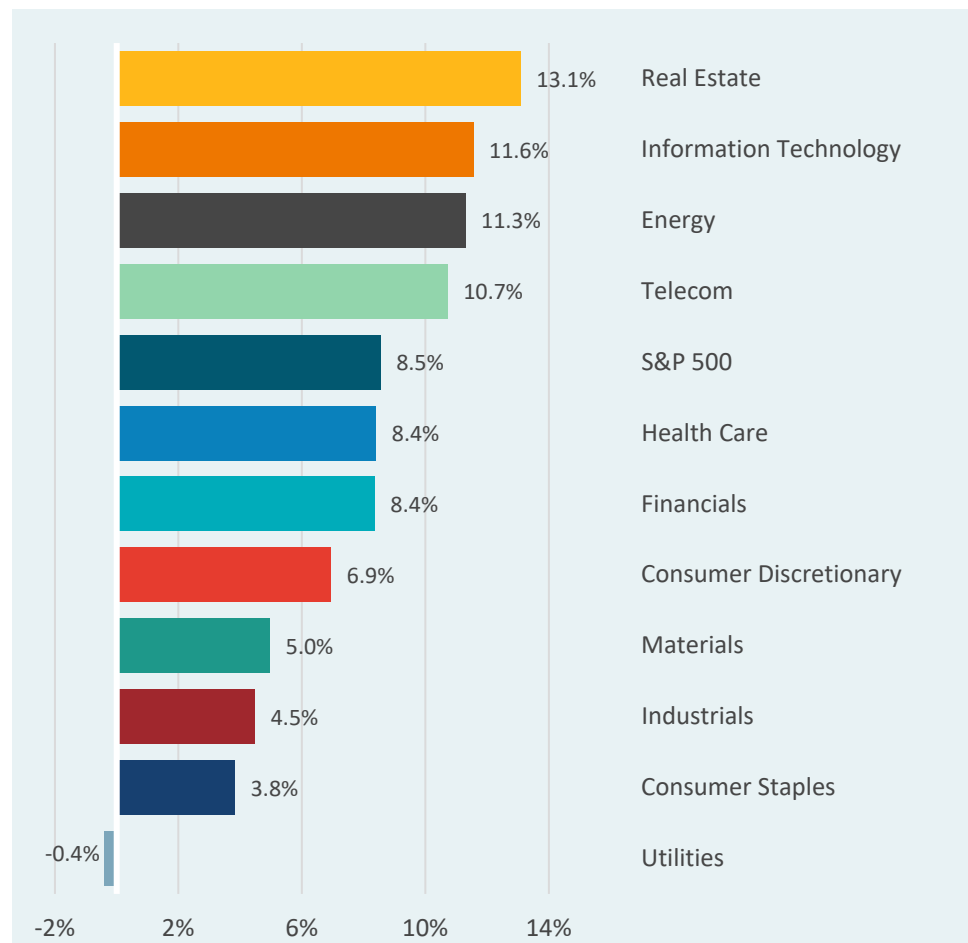
*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 6/30/21

Source: Morningstar, as of 6/30/21

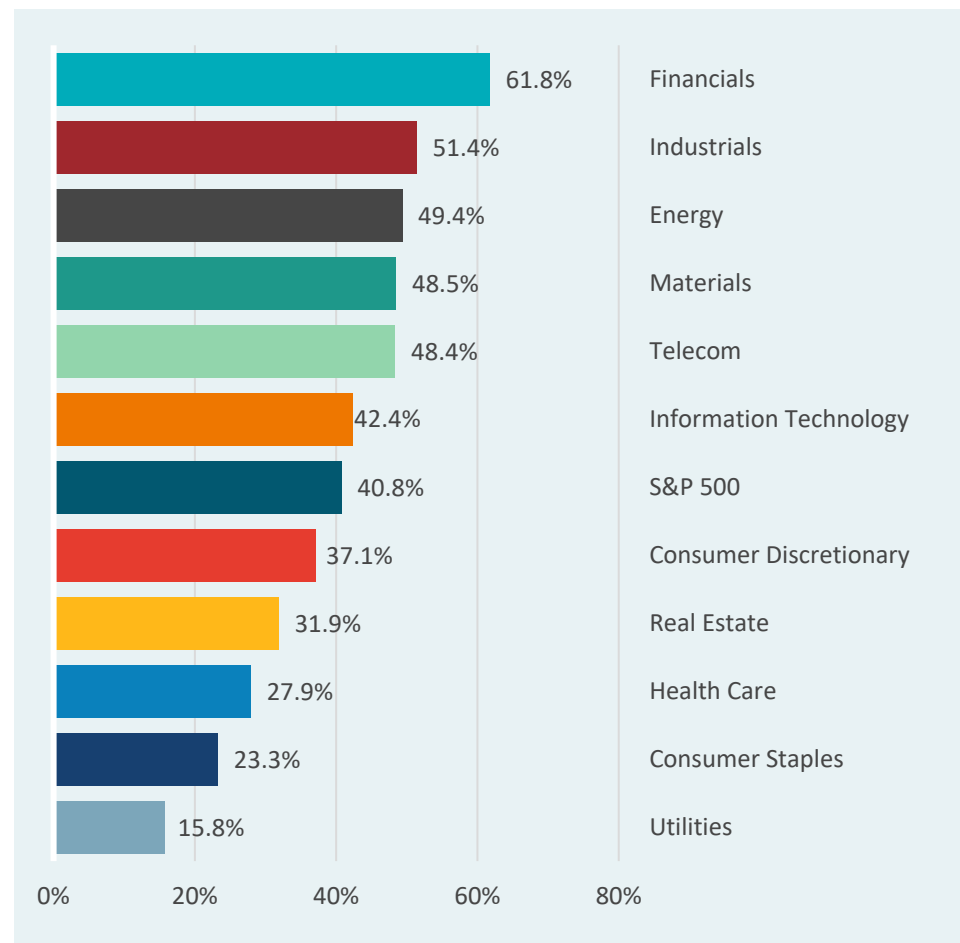
S&P 500 sector returns

Q2 2021



Source: Morningstar, as of 6/30/21

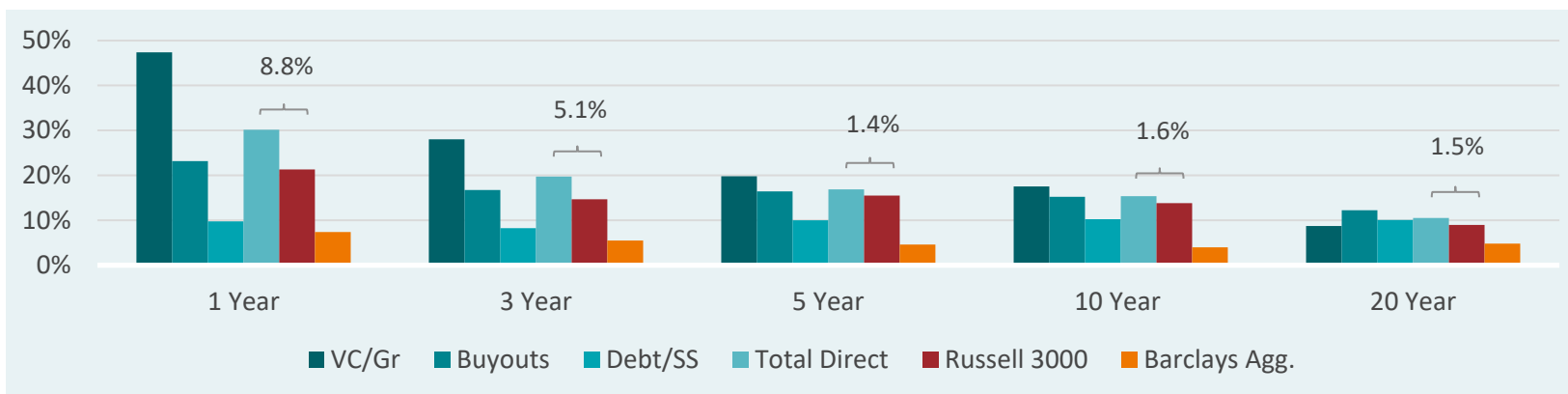
ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/21

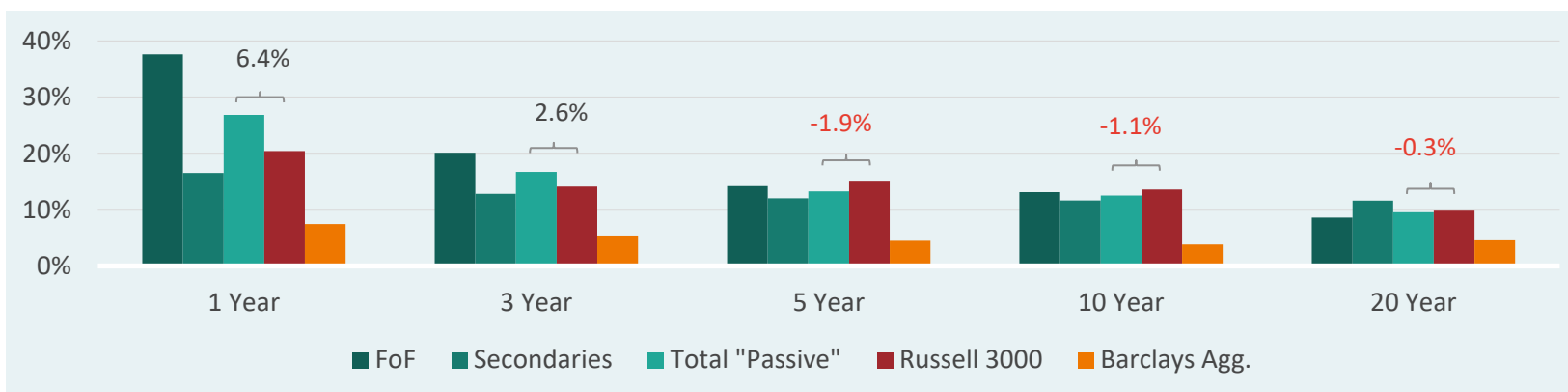
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E. Fund Investments outperformed comparable public equities across all time periods.

“PASSIVE” STRATEGIES

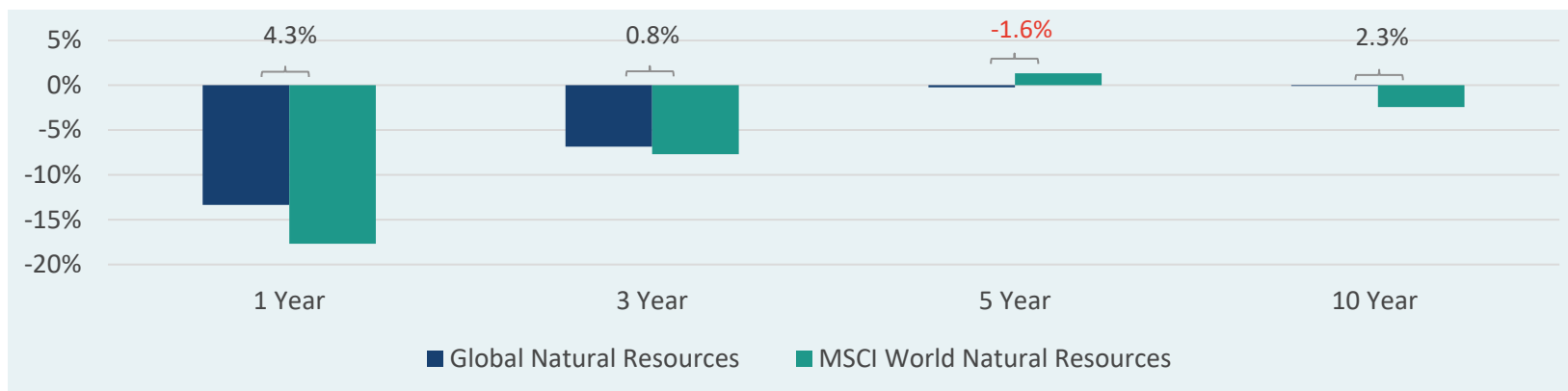


“Passive” strategies underperformed comparable public equities across all time periods, aside from the 1 and 3-year basis.

Sources: Thomson Reuters Cambridge Universe’s PME Module: U.S. Private Equity Funds sub asset classes as of December 31, 2020. Public Market Equivalent returns resulted from “Total Passive” and Total Direct’s identical cash flows invested into and distributed from respective traditional asset comparable.

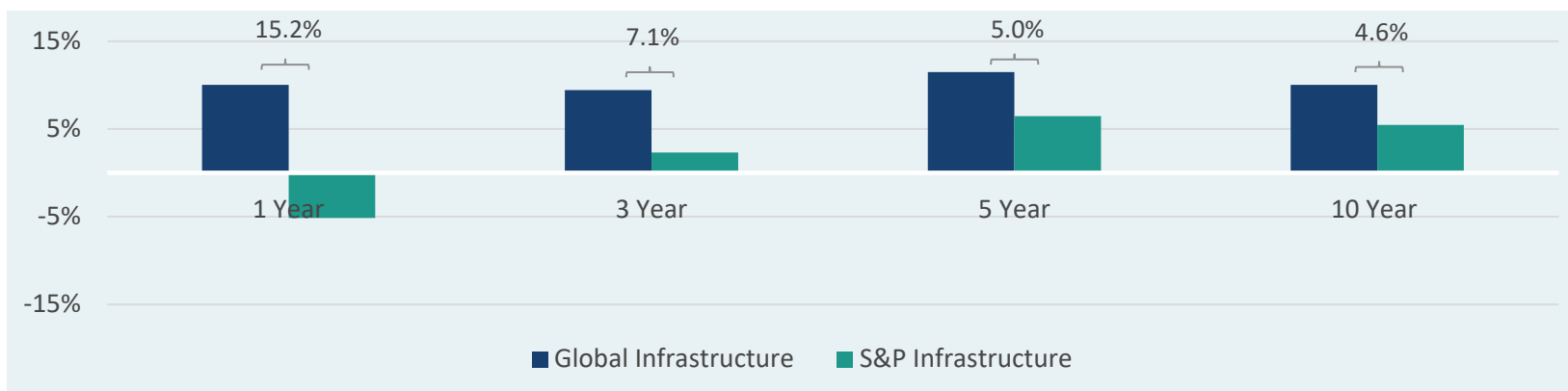
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



N.R. funds outperformed the MSCI World Natural Resources benchmark across all time periods, aside on a 5-year basis.

GLOBAL INFRASTRUCTURE FUNDS

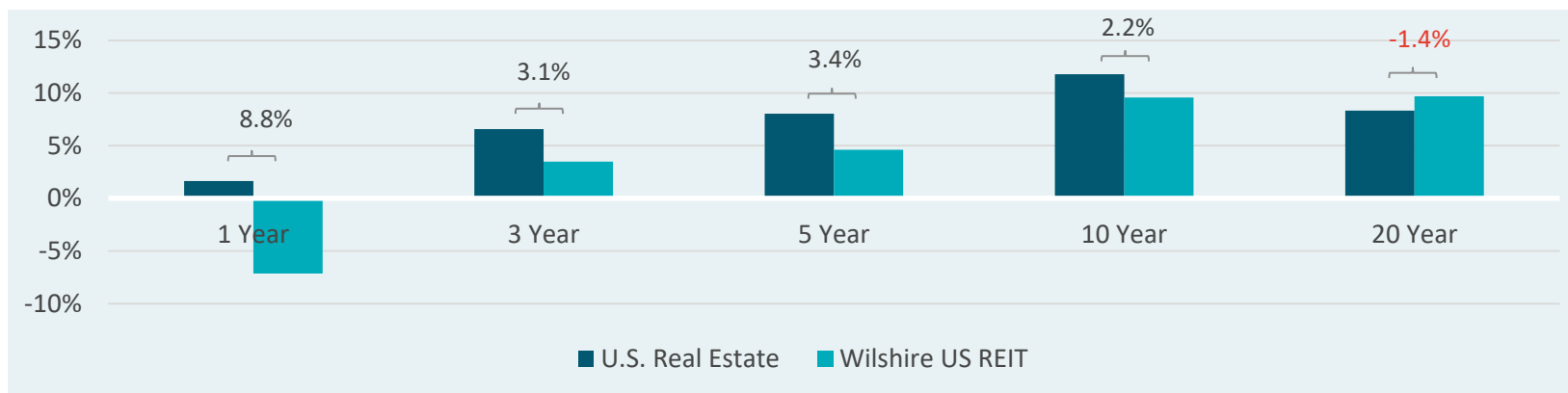


Infra. funds outperformed the S&P Infra. across all periods.

Sources: Thomson Reuters C|A 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, 2020. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

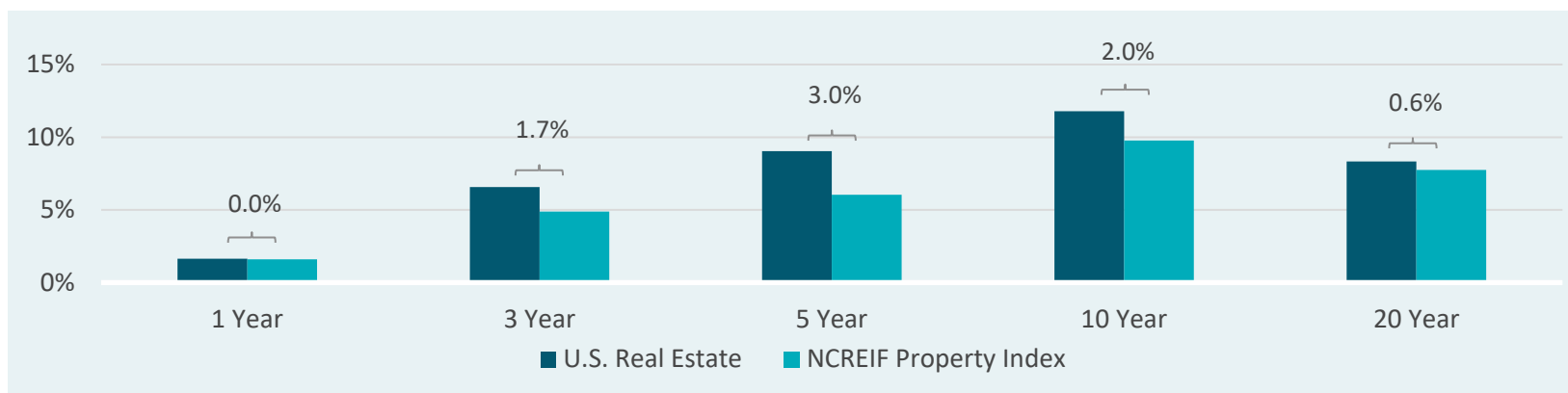
Private vs. liquid and core real estate performance

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



U.S. Private R.E. funds outperformed the Wilshire U.S. REIT Index over the past 10 years, but have lagged on a 20-year basis.

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



U.S. Private R.E. Funds outperformed the NCREIF Property Index across all time periods, besides the past year.

Sources: Thomson Reuters C|A PME: Global and U.S. Real Estate universes as of December 31, 2020. 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	2.3	8.5	15.3	40.8	18.7	17.6	14.8
S&P 500 Equal Weighted	0.1	6.9	19.2	50.7	16.4	15.7	13.8
DJ Industrial Average	0.0	5.1	13.8	36.3	15.0	16.7	13.5
Russell Top 200	2.9	8.9	14.5	40.8	20.2	18.9	15.6
Russell 1000	2.5	8.5	15.0	43.1	19.2	18.0	14.9
Russell 2000	1.9	4.3	17.5	62.0	13.5	16.5	12.3
Russell 3000	2.5	8.2	15.1	44.2	18.7	17.9	14.7
Russell Mid Cap	1.5	7.5	16.2	49.8	16.4	15.6	13.2
Style Index							
Russell 1000 Growth	6.3	11.9	13.0	42.5	25.1	23.7	17.9
Russell 1000 Value	(1.1)	5.2	17.0	43.7	12.4	11.9	11.6
Russell 2000 Growth	4.7	3.9	9.0	51.4	15.9	18.8	13.5
Russell 2000 Value	(0.6)	4.6	26.7	73.3	10.3	13.6	10.8

INTERNATIONAL EQUITY

Broad Index							
MSCI ACWI	1.3	7.4	12.3	39.3	14.6	14.6	9.9
MSCI ACWI ex US	(0.6)	5.5	9.2	35.7	9.4	11.1	5.4
MSCI EAFE	(1.1)	5.2	8.8	32.4	8.3	10.3	5.9
MSCI EM	0.2	5.0	7.4	40.9	11.3	13.0	4.3
MSCI EAFE Small Cap	(1.7)	4.3	9.0	41.0	8.4	12.0	8.4
Style Index							
MSCI EAFE Growth	0.0	7.4	6.8	31.0	12.5	12.5	7.8
MSCI EAFE Value	(2.3)	3.0	10.7	33.5	3.8	7.8	3.9
Regional Index							
MSCI UK	(2.4)	6.0	12.5	31.3	1.9	5.7	3.7
MSCI Japan	(0.3)	(0.3)	1.3	24.8	7.2	10.2	7.2
MSCI Europe	0.7	6.7	(1.1)	1.1	5.6	3.5	3.7
MSCI EM Asia	0.1	3.8	6.0	41.0	13.1	15.3	7.0
MSCI EM Latin American	2.7	15.0	8.9	44.9	5.1	5.9	(2.5)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	0.6	3.2	1.7	6.5	6.5	4.2	3.4
BBgBarc US Treasury Bills	(0.0)	0.0	0.0	0.1	1.4	1.2	0.7
BBgBarc US Agg Bond	0.7	1.8	(1.6)	(0.3)	5.3	3.0	3.4
BBgBarc US Universal	0.7	2.0	(1.1)	1.1	5.6	3.5	3.7
Duration							
BBgBarc US Treasury 1-3 Yr	(0.2)	(0.0)	(0.1)	0.1	2.7	1.6	1.2
BBgBarc US Treasury Long	3.6	6.5	(7.9)	(10.6)	8.0	3.1	6.7
BBgBarc US Treasury	0.6	1.7	(2.6)	(3.2)	4.7	2.2	2.8
Issuer							
BBgBarc US MBS	(0.0)	0.3	(0.8)	(0.4)	3.8	2.3	2.6
BBgBarc US Corp. High Yield	1.3	2.7	3.6	15.4	7.4	7.5	6.7
BBgBarc US Agency Interim	(0.1)	0.5	(0.6)	(0.1)	3.3	1.9	1.8
BBgBarc US Credit	1.5	3.3	(1.3)	3.0	7.4	4.6	4.9
OTHER							
Index							
Bloomberg Commodity	1.9	13.3	21.1	45.6	3.9	2.4	(4.4)
Wilshire US REIT	3.1	12.8	22.8	37.5	10.1	6.4	9.4
CS Leveraged Loans	0.4	1.4	3.5	11.7	4.4	5.0	4.5
Alerian MLP	5.2	21.2	47.8	64.0	(1.1)	(2.0)	1.3
Regional Index							
JPM EMBI Global Div	0.7	4.1	(0.7)	7.5	6.7	4.9	5.7
JPM GBI-EM Global Div	(1.2)	3.5	(3.4)	6.6	4.1	3.2	0.5
Hedge Funds							
HFRI Composite	0.4	4.0	10.0	27.4	8.7	7.9	5.1
HFRI FOF Composite	0.3	2.7	4.7	18.1	6.2	6.1	3.8
Currency (Spot)							
Euro	(3.0)	0.9	(3.1)	5.6	0.5	1.3	(2.0)
Pound Sterling	(2.8)	0.1	1.1	11.8	1.5	0.7	(1.5)
Yen	(1.4)	(0.4)	(7.0)	(2.8)	(0.1)	(1.6)	(3.1)

Source: Morningstar, HFRI, as of 6/30/21

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.

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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.

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