



Executive Summary of Investment Performance

As of June 30, 2021



Wilshire

IMRF Performance Summary

- **The Illinois Municipal Retirement Fund (“IMRF”) ended June 2021 with a market value of \$54.7 billion, up for the quarter by approximately \$3.1 billion**
 - Over the one-year period, from June 30, 2020 to June 30, 2021, IMRF’s value grew by approximately \$11.6 billion, net of benefit payments
- **IMRF outperformed its benchmark during the Second Quarter 2021, returning 6.65% versus 5.08% for the benchmark. Relative to peers, IMRF ranks at the 19th Percentile during the quarter, outperforming 81% of peers.**
 - Over the trailing one-year, IMRF returned 30.23% versus its benchmark of 23.07% and ranked at the 19th Percentile.
 - Over three- and five-years, IMRF’s Total Fund ranks at the 11th Percentile and 9th Percentile, respectively, relative to peers.
- **The Domestic Equity Composite returned 8.32% during the quarter, outperforming the Russell 3000 Index, which returned 8.24%. Investment manager performance, particularly in Large Cap Value and Small Cap Growth added to relative outperformance as these managers collectively outperformed their benchmarks.**
 - Relative to peers, the Domestic Equity Composite ranked at the 29th Percentile during the quarter, and 15th Percentile over the trailing one-year.
- **The International Equity Composite returned 7.05% during the quarter, outperforming the MSCI ACWI ex-U.S. Index, which returned 5.48%. Strong investment manager performance was the largest contributor to outperformance during the quarter, as managers in Large Cap Growth, Large Cap Core, Small Cap, and Emerging Markets outperformed their respective benchmarks.**
 - Relative to peers, the International Equity Composite ranked at the 10th Percentile during the quarter and 16th Percentile over the trailing one-year.
- **The Fixed Income Composite benefited from declining interest rates during the quarter, returning 2.16% and outperforming the benchmark, which returned 1.83%. Investment managers in Core, Core Plus, Bank Loans and Emerging Markets outperformed their respective benchmarks during the quarter.**
 - Relative to peers, the Fixed Income Composite ranked at the 69th Percentile during the quarter and 59th Percentile over the trailing one-year.
- **As of June 2021 quarter-end, Domestic Equity and International Equity were 5.0% and 4.4%, respectively, over their target. The current Statement of Investment Policy states that when actual allocations of the asset classes differ by more than four percentage points, a recommendation for rebalancing will be made to the Board of Trustees. The Chief Investment Officer, Investment Staff and Consultant will provide a recommendation for rebalancing at the August 2021 Meeting.**

Asset Class Performance

ASSET CLASS RETURNS - BEST TO WORST						ANNUALIZED 5-YEAR AS OF 6/21
2016	2017	2018	2019	2020	2021 YTD	
MLPs 18.3%	Emrg Mrkts 37.7%	T-Bills 1.9%	U.S. Equity 31.0%	U.S. Equity 20.8%	Midstream 40.7%	U.S. Equity 18.0%
High Yield 17.1%	Developed 25.6%	Core Bond 0.0%	REITs 25.8%	Emrg Mrkts 18.7%	REITs 22.8%	Emrg Mrkts 13.4%
U.S. Equity 13.4%	U.S. Equity 21.0%	U.S. TIPS -1.3%	Developed 22.7%	U.S. TIPS 11.0%	Commodities 21.1%	Developed 10.8%
Commodities 11.8%	High Yield 7.5%	High Yield -2.1%	Emrg Mrkts 18.9%	Developed 8.3%	U.S. Equity 15.5%	High Yield 7.5%
Emrg Mrkts 11.6%	REITs 4.2%	REITs -4.8%	High Yield 14.3%	Core Bond 7.5%	Developed 9.2%	REITs 6.4%
REITs 7.2%	Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%	High Yield 7.1%	Emrg Mrkts 7.6%	Midstream 4.3%
U.S. TIPS 4.7%	U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%	T-Bills 0.7%	High Yield 3.6%	U.S. TIPS 4.2%
Core Bond 2.6%	Commodities 1.7%	MLPs -12.4%	Commodities 7.7%	Commodities -3.1%	U.S. TIPS 1.7%	Core Bond 3.0%
Developed 1.5%	T-Bills 0.8%	Developed -13.4%	MLPs 6.6%	REITs -7.9%	T-Bills 0.0%	Commodities 2.4%
T-Bills 0.3%	MLPs -6.5%	Emrg Mrkts -14.2%	T-Bills 2.3%	Midstream -23.4%	Core Bond -1.6%	T-Bills 1.2%

Data Sources: Bloomberg

Note: Developed asset class is developed equity markets ex-U.S., ex-Canada

Market Commentary

U.S. Equity

The U.S. stock market, represented by the Wilshire 5000 Total Market IndexSM, was up 8.4% for the second quarter. Nearly all eleven sectors were in positive territory, with Energy (+12.8%) and Communication Services (+12.1%) representing the best performing sectors. From a size perspective, large-cap outperformed small-cap while style-based results were mixed as large-growth outperformed value while growth underperformed within the small-cap space.

Inflation continues to accelerate in 2021, and it is unclear as to whether this is the beginning of a persistent trend or one effect of a rapidly reopening economy. U.S. CPI is up 6.5% (annualized) YTD through May, largely due to a spike in energy prices, with oil up more than 50%. Fed Chair Jerome Powell believes that price increases will wane, saying that current pressure points “don’t speak to a broadly tight economy.”

Non-U.S. Equity

Economic conditions are rapidly improving in the U.K., led by the services sector as retail and hospitality businesses are benefitting from an economy that has almost totally reopened. Conditions in Germany, Europe’s largest economy, are also improving as pandemic-related restrictions are being lifted.

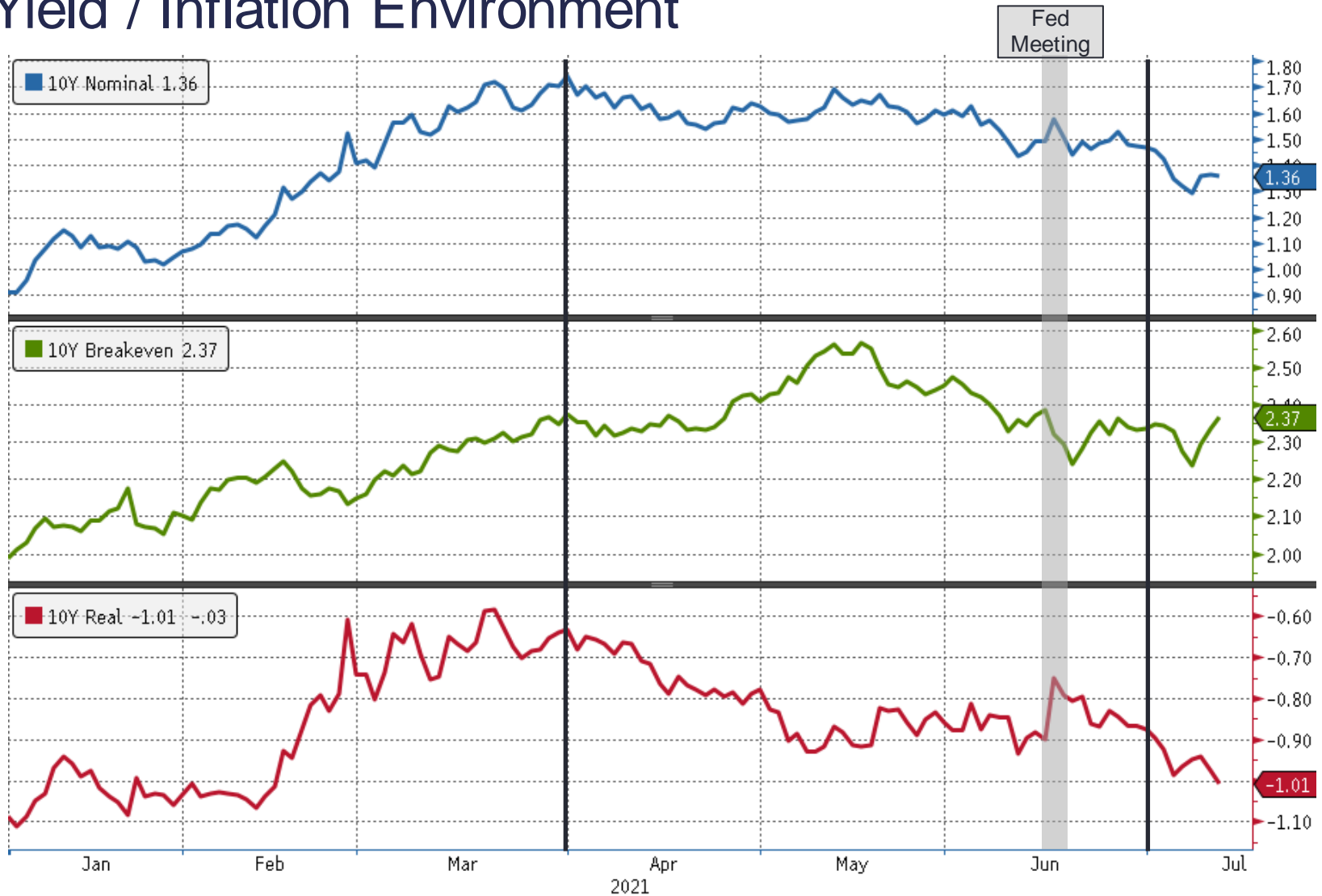
Fixed Income

The U.S. Treasury yield curve flattened during the quarter with yields beyond a 3-year maturity falling and shorter-term rates generally rising. The 10-year Treasury yield ended the quarter at 1.47%, down 27 basis points from March. The Federal Open Market Committee (FOMC) recently opened the conversation on possible tapering of bond purchases and their median forecast for the future overnight rate moved from no change to a 0.5% increase – albeit in 2023. However, Chair Jerome Powell indicated that the Fed would not raise rates “preemptively” on possible inflation fears.

June 2021 Asset Class Assumptions

	Equity						Fixed Income						Real Assets						
	U.S. STOCK	DEV EX-U.S. STOCK	EMG. MRKT. STOCK	GLOBAL EX-U.S. STOCK	GLOBAL STOCK	PRIVATE EQUITY	CASH	CORE BOND	LT CORE BOND	U.S. TIPS	HIGH YIELD	NON-U.S. BOND (HDG)	U.S. REAL ESTATE SECS	GLOBAL REAL ESTATE SECS	PRIVATE REAL ESTATE	CMDTY	REAL ASSETS	U.S. CPI	
Compound Return (%)	4.75	5.75	5.75	6.00	5.40	7.80	1.40	1.85	2.25	1.45	3.50	0.70	4.70	4.85	6.20	3.85	5.75	2.45	
Arithmetic Return (%)	6.10	7.25	8.75	7.65	6.75	11.15	1.40	1.95	2.65	1.65	4.00	0.80	6.05	6.00	7.10	4.90	6.25	2.45	
Expected Risk (%)	17.00	18.00	26.00	19.15	17.15	28.00	0.75	4.30	8.85	6.00	10.00	4.30	17.00	15.85	14.00	15.00	10.15	1.75	
Cash Yield (%)	1.50	2.25	1.75	2.10	1.75	0.00	1.40	3.05	3.50	2.35	7.50	1.85	2.85	2.85	2.20	1.40	1.95	0.00	
Growth Expoure	8.00	8.00	8.00	8.00	8.00	13.50	0.00	-0.80	-2.10	-3.00	4.00	-1.00	6.00	6.00	3.50	0.00	1.80	0.00	
Inflation Expoure	-3.00	0.00	5.00	1.55	-1.10	-3.80	0.00	-2.45	-6.55	2.50	-1.00	-3.00	1.00	1.95	1.00	12.00	4.90	1.00	
Correlations																			
US Stock	1.00																		
Dev ex-US Stock (USD)	0.81	1.00																	
Emerging Mkt Stock	0.74	0.74	1.00																
Global ex-US Stock	0.83	0.96	0.87	1.00															
Global Stock	0.95	0.92	0.83	0.94	1.00														
Private Equity	0.74	0.64	0.62	0.67	0.74	1.00													
Cash Equivalents	-0.05	-0.09	-0.05	-0.08	-0.07	0.00	1.00												
Core Bond	0.28	0.13	0.00	0.09	0.20	0.31	0.19	1.00											
LT Core Bond	0.31	0.16	0.01	0.12	0.23	0.32	0.11	0.92	1.00										
TIPS	-0.05	0.00	0.15	0.05	0.00	-0.03	0.20	0.59	0.47	1.00									
High Yield Bond	0.54	0.39	0.49	0.45	0.51	0.34	-0.10	0.25	0.32	0.05	1.00								
Dev ex-US Bond (Hdg)	0.16	0.25	-0.01	0.17	0.18	0.26	0.10	0.66	0.65	0.39	0.26	1.00							
US RE Securities	0.58	0.47	0.44	0.49	0.56	0.50	-0.05	0.17	0.23	0.10	0.56	0.05	1.00						
Global RE Securities	0.64	0.58	0.56	0.61	0.65	0.58	-0.05	0.17	0.22	0.11	0.61	0.03	0.96	1.00					
Private Real Estate	0.54	0.44	0.44	0.47	0.52	0.51	-0.05	0.19	0.25	0.09	0.57	0.05	0.77	0.75	1.00				
Commodities	0.25	0.34	0.39	0.38	0.32	0.27	0.00	-0.02	-0.02	0.25	0.29	-0.10	0.25	0.28	0.25	1.00			
Real Assets	0.48	0.51	0.58	0.57	0.54	0.47	-0.02	0.23	0.25	0.39	0.56	0.05	0.70	0.75	0.70	0.65	1.00		
Inflation (CPI)	-0.10	-0.15	-0.13	-0.15	-0.13	-0.10	0.10	-0.12	-0.12	0.15	-0.08	-0.08	0.05	0.03	0.05	0.44	0.26	1.00	

Yield / Inflation Environment

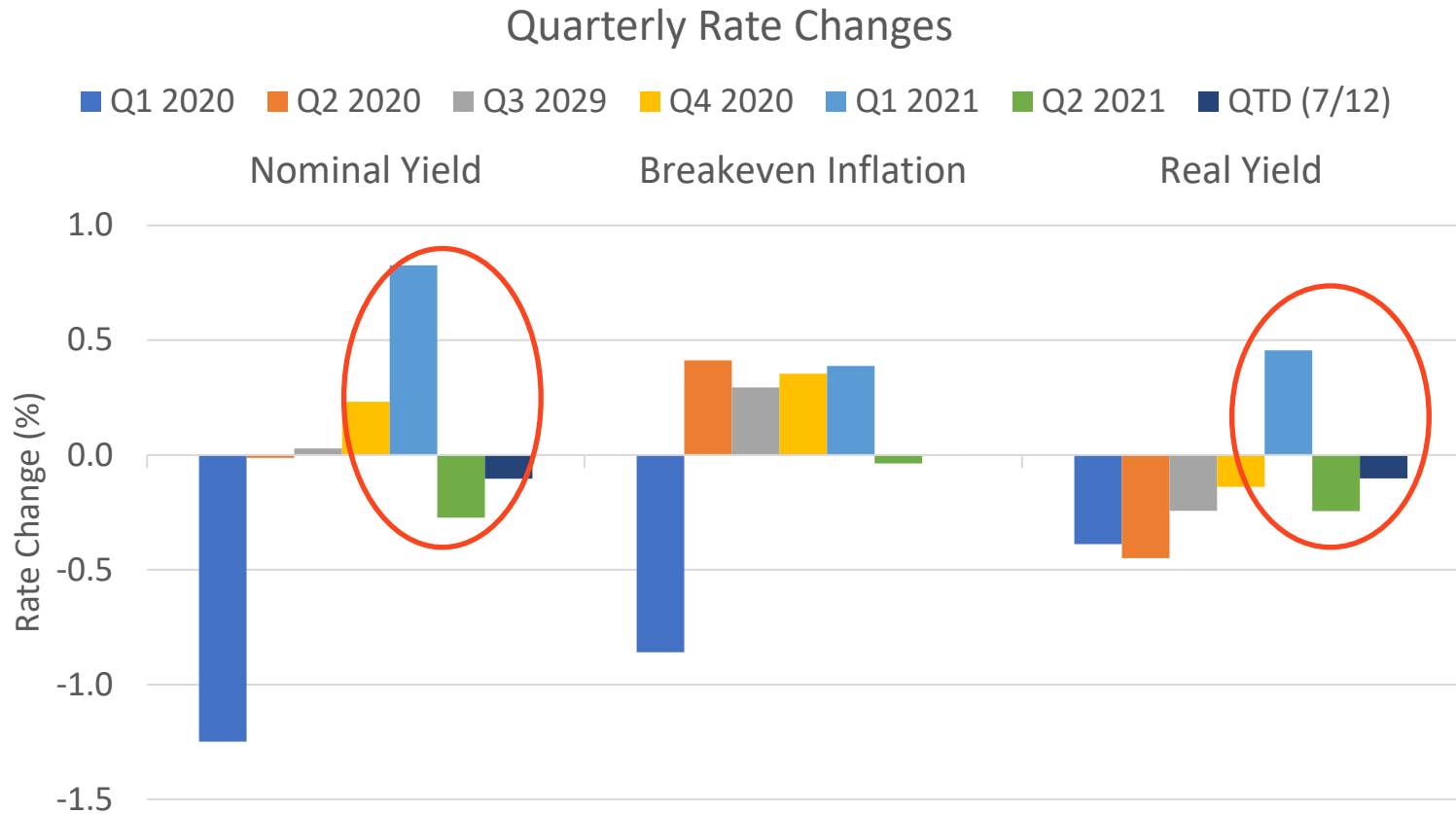


USGG10YR Index (US Generic Govt 10 Yr) 10yr Intraday Daily 31DEC2020-13JUL2021 Copyright© 2021 Bloomberg Finance L.P. 13-Jul-2021 05:40:01

Data Source: Bloomberg

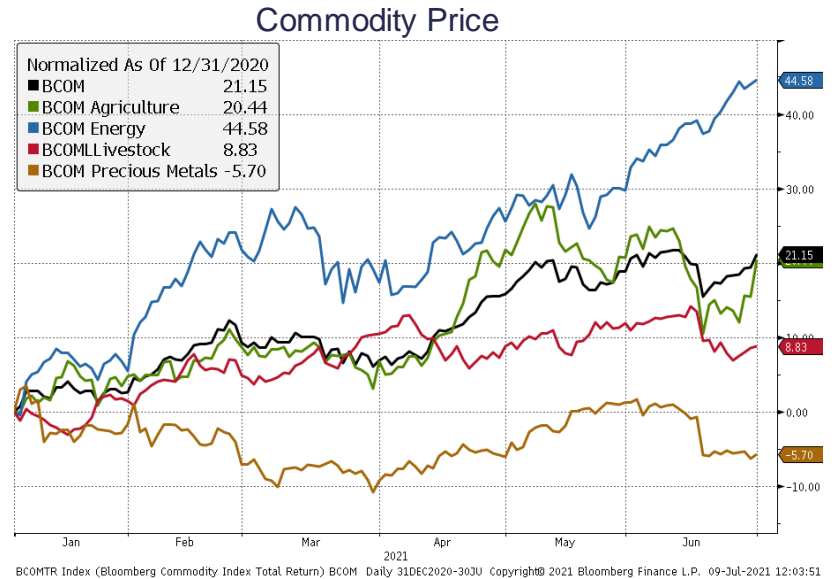
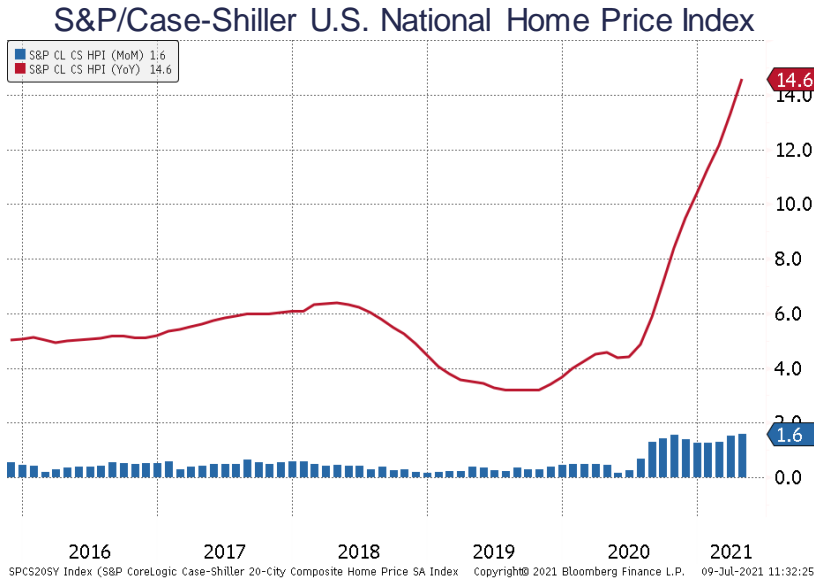
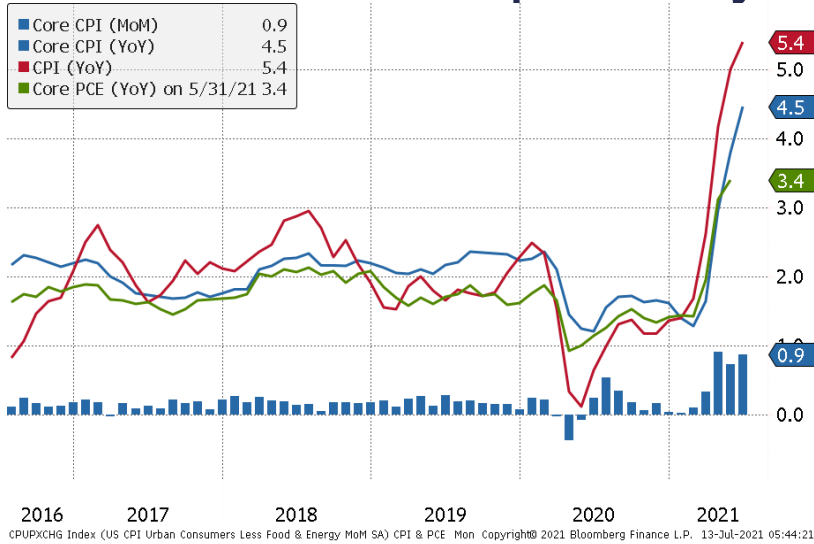
Rate Change Attribution

Reversal in Q1 rise in real yields, while BE inflation rate moderates...



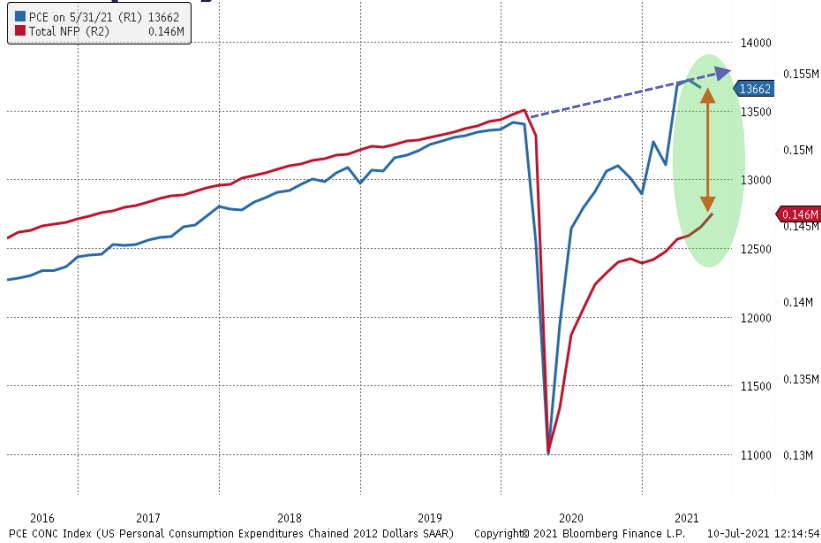
Data Source: Bloomberg

Inflation in most places you look...

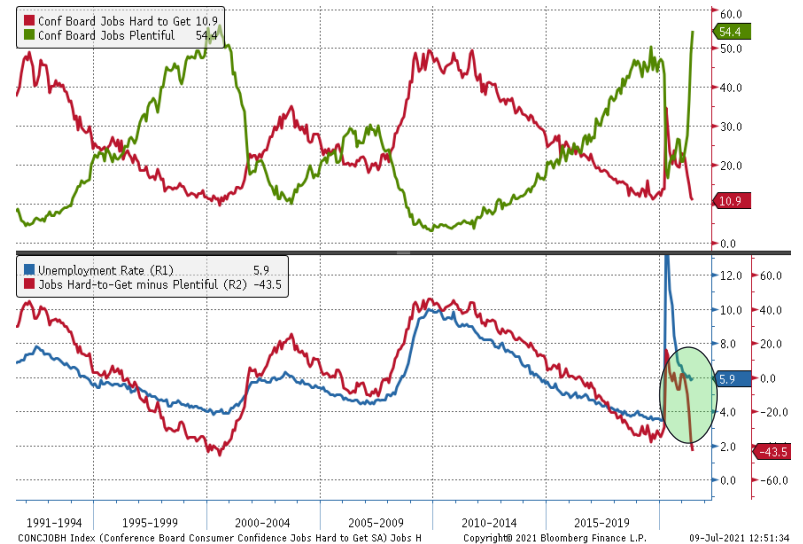
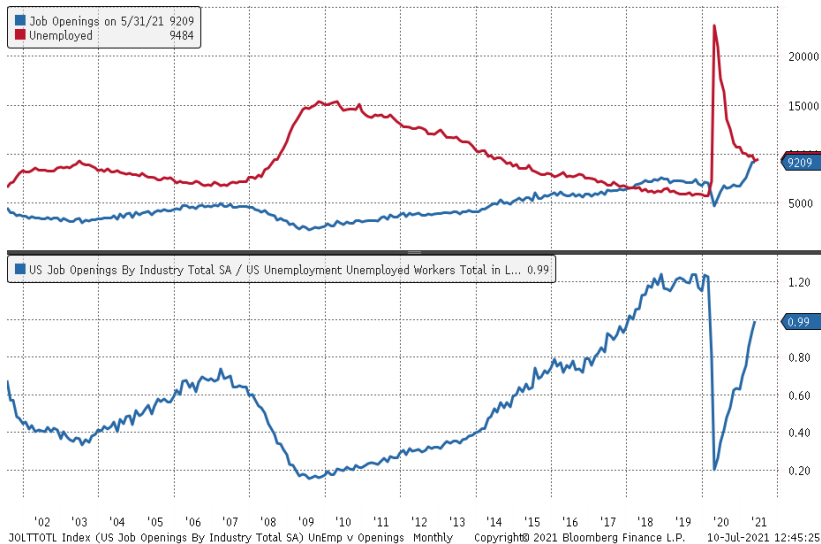
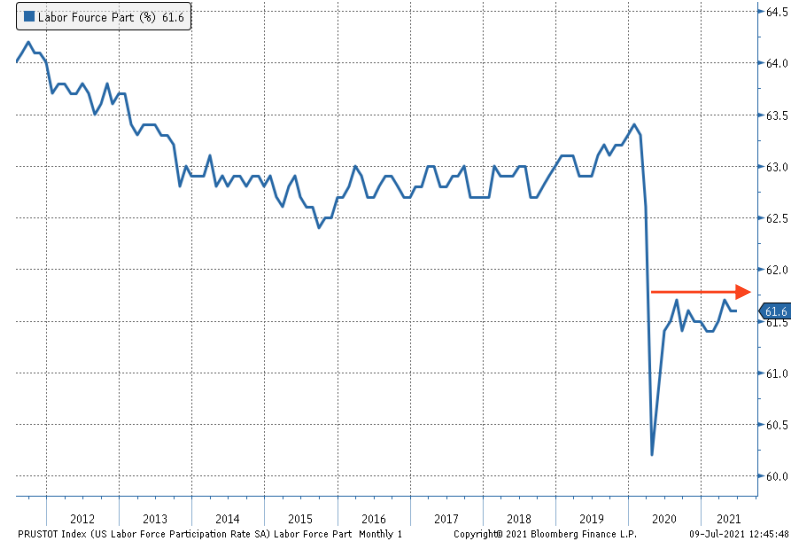


Data Source: Bloomberg

Employment Conditions



U.S. Labor Force Participation Rate

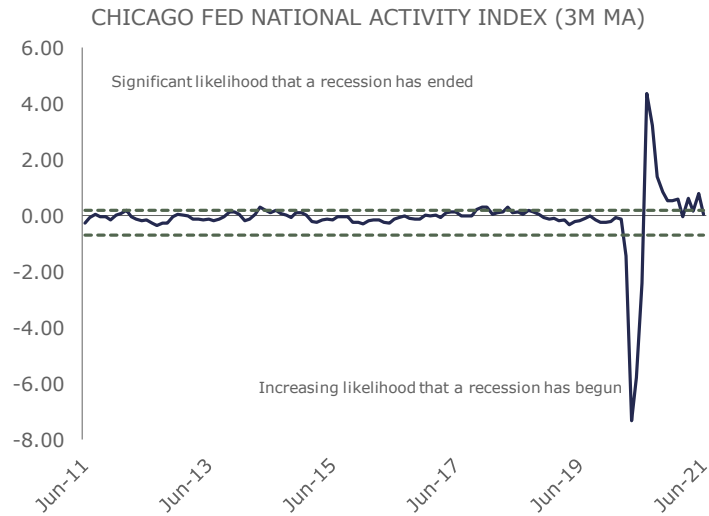


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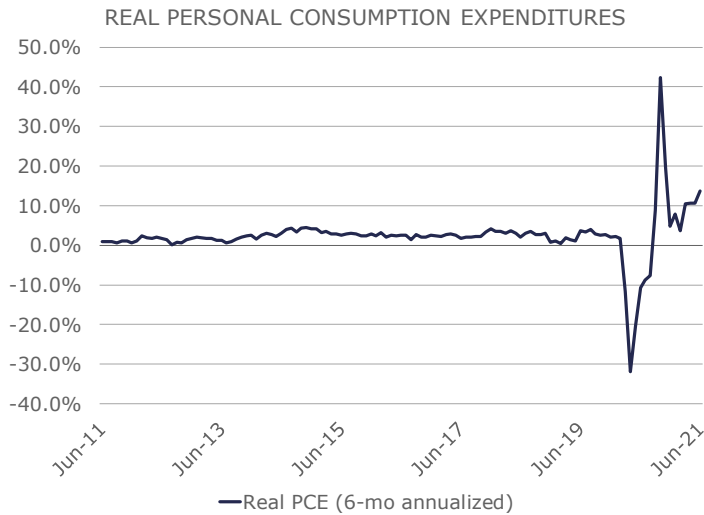
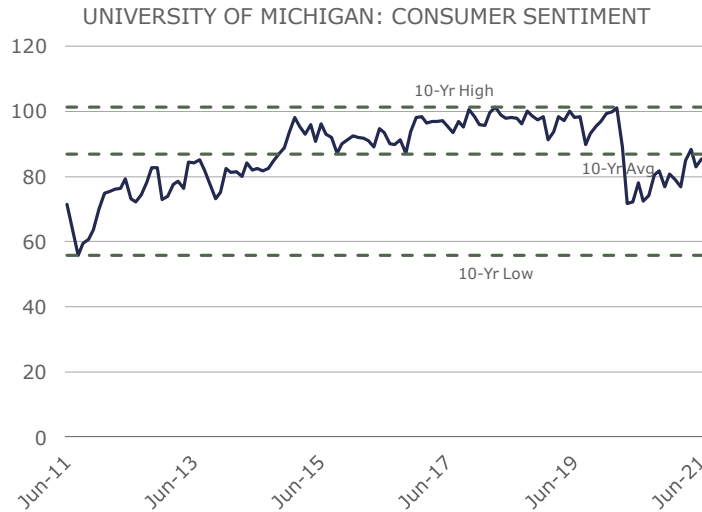
Economic/Market Activity

Wilshire

Economic Growth

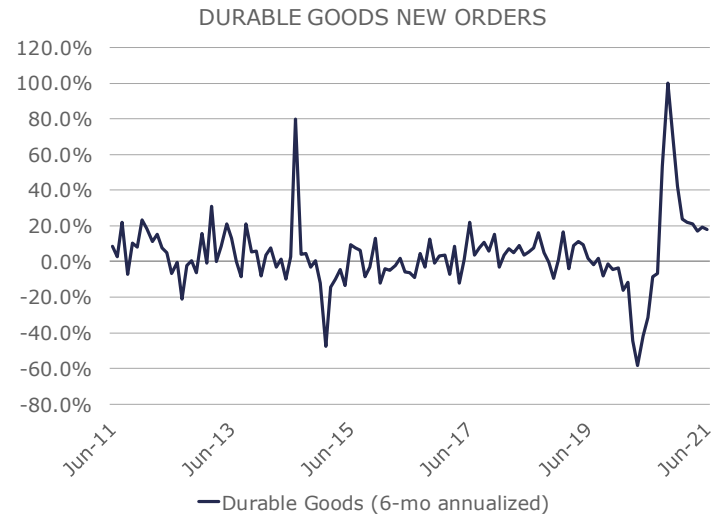
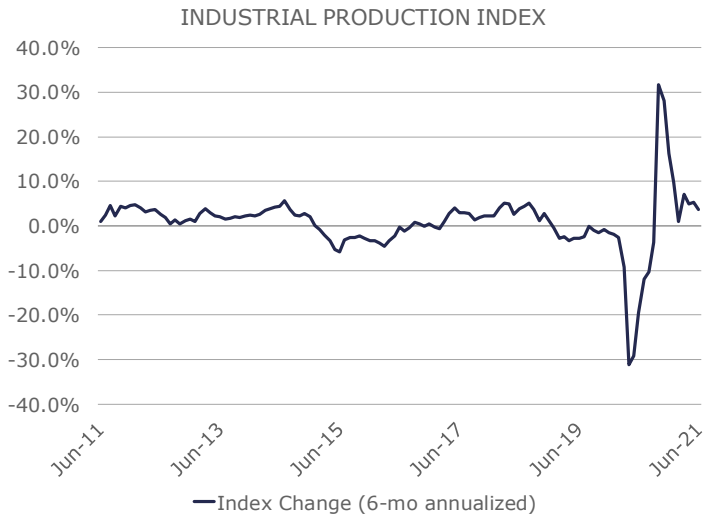
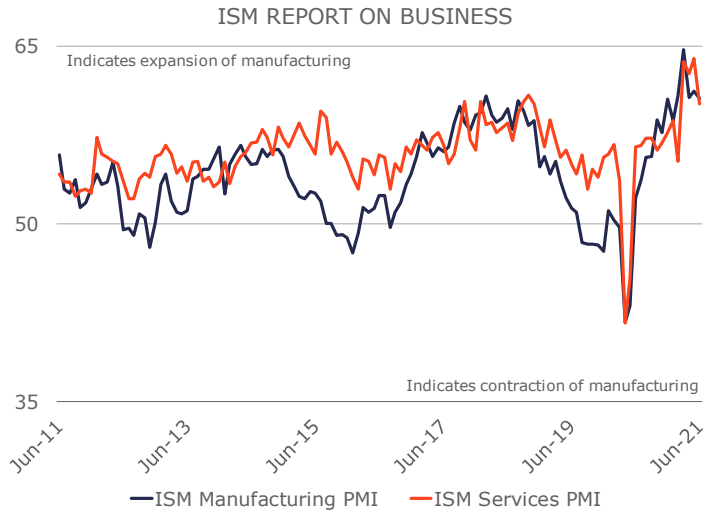


Consumer Activity



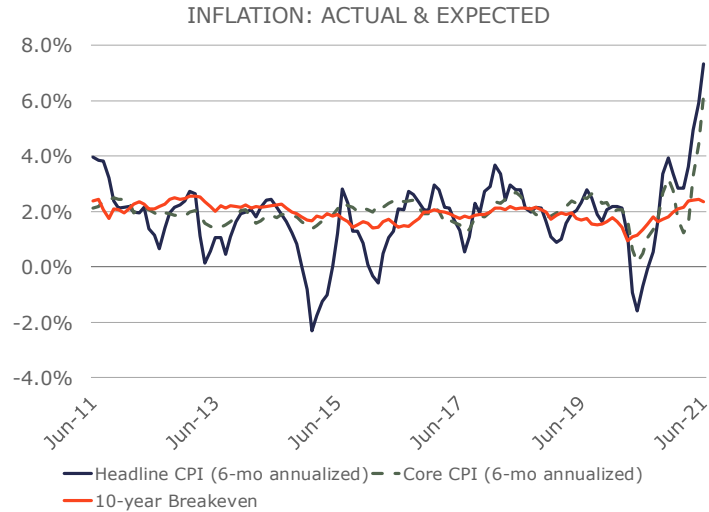
Data Sources: Bloomberg

Business Activity



Data Sources: Bloomberg

Inflation and Employment

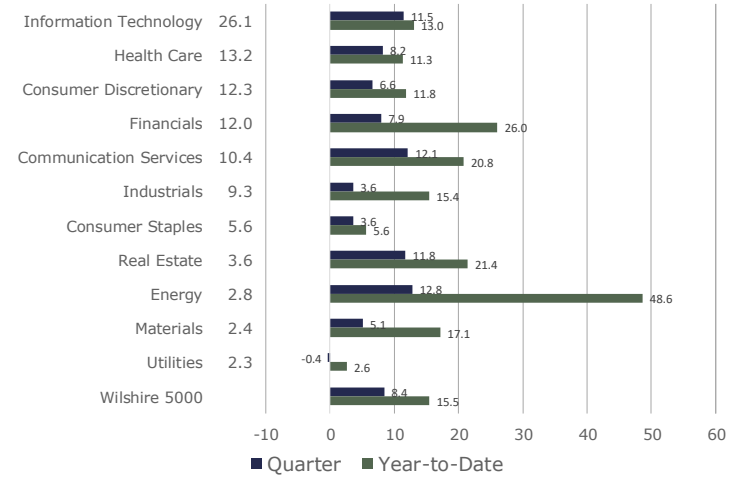


Data Sources: Bloomberg

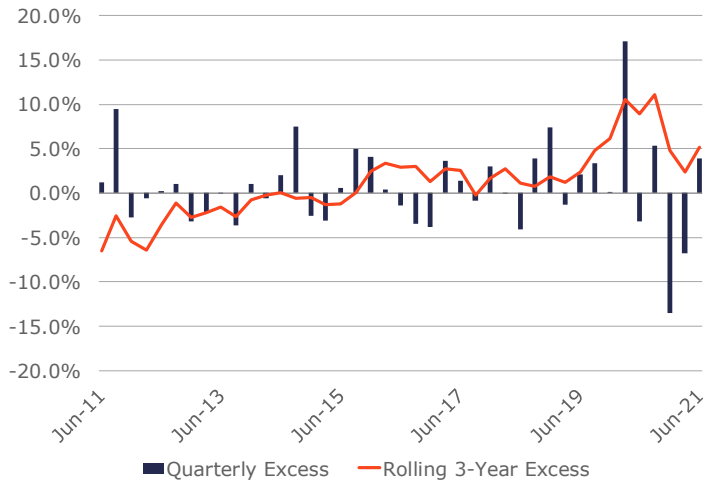
U.S. Equity Market

AS OF 6/30/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Wilshire 5000 Index	8.4	15.5	44.2	18.9	18.0	14.8
Wilshire U.S. Large Cap	8.8	15.1	42.7	19.5	18.2	15.0
Wilshire U.S. Small Cap	4.8	18.9	62.0	13.6	15.8	12.7
Wilshire U.S. Large Growth	11.9	14.1	46.3	23.9	23.3	17.3
Wilshire U.S. Large Value	5.1	15.4	37.7	14.5	13.0	12.5
Wilshire U.S. Small Growth	3.2	12.4	56.2	16.5	19.1	13.5
Wilshire U.S. Small Value	6.2	25.6	67.7	10.8	12.4	11.7
Wilshire REIT Index	12.8	22.8	37.5	10.1	6.4	9.4
MSCI USA Min. Vol. Index	6.8	9.3	23.6	13.9	12.1	13.4
FTSE RAFI U.S. 1000 Index	6.4	21.7	51.2	15.4	14.9	13.3

U.S. SECTOR WEIGHT AND RETURN (%)



LARGE CAP VS SMALL CAP



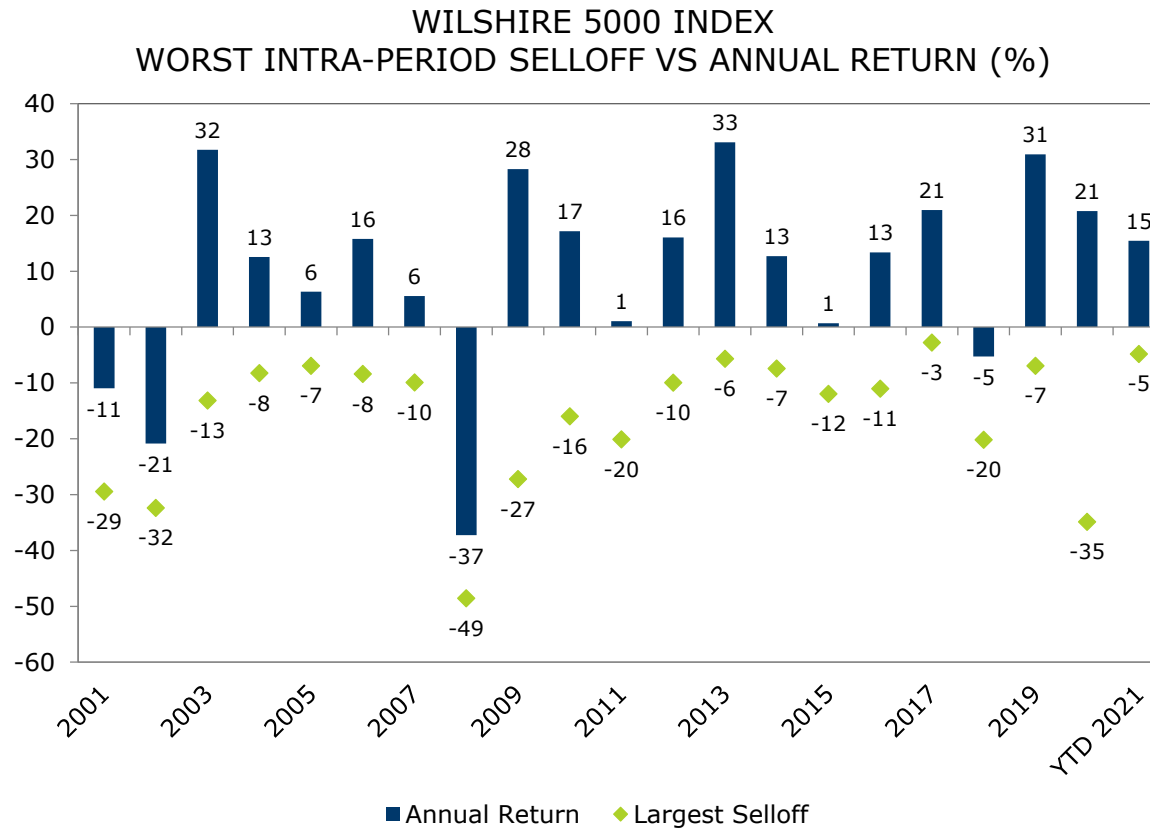
LARGE GROWTH VS LARGE VALUE



Data Sources: Bloomberg, Wilshire Atlas

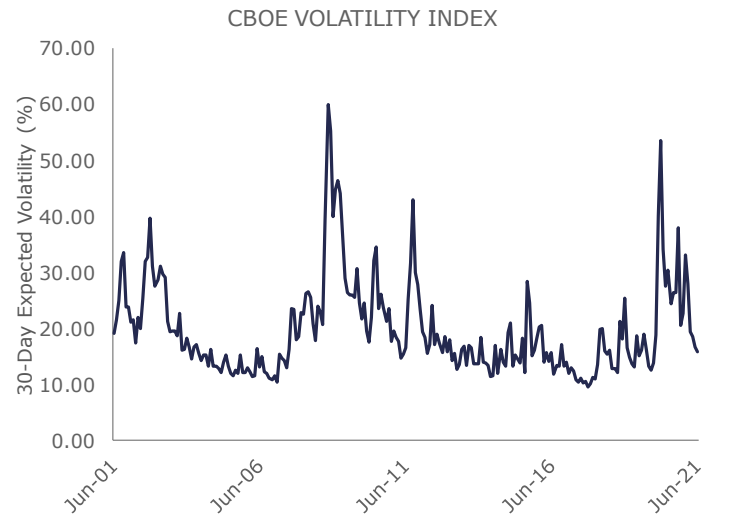
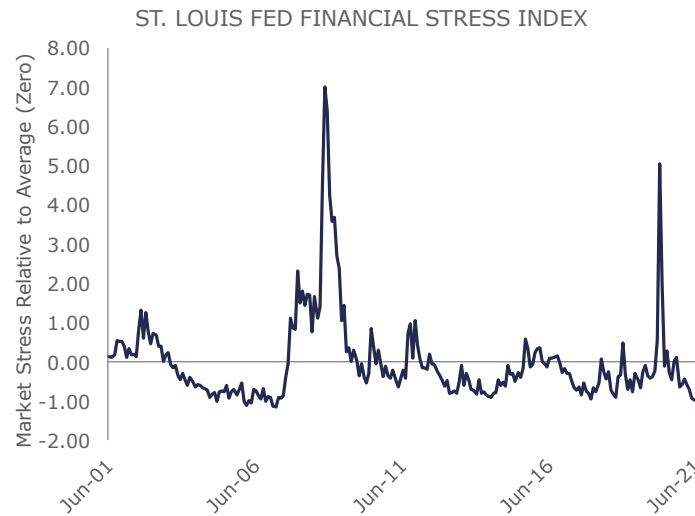
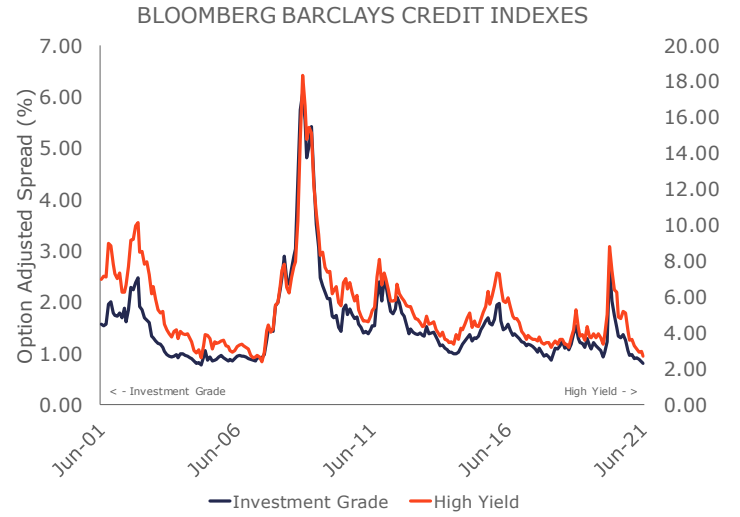
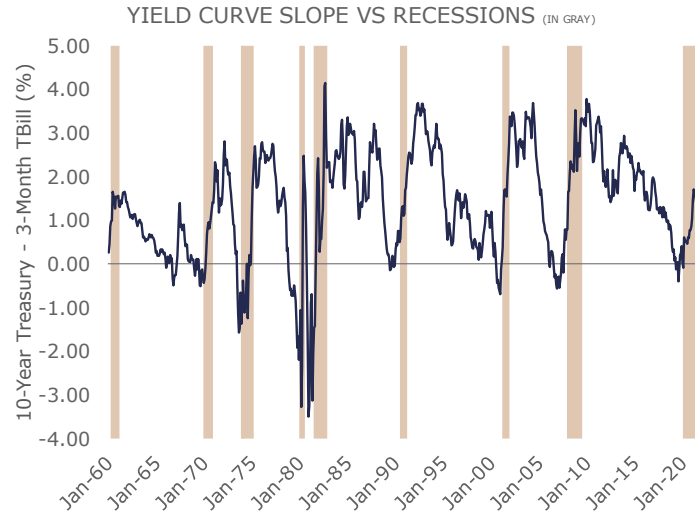
Annual Returns

U.S. Equity enjoyed a banner first half with a relatively minor sell-off



Data Sources: Wilshire, Bloomberg

Risk Monitor

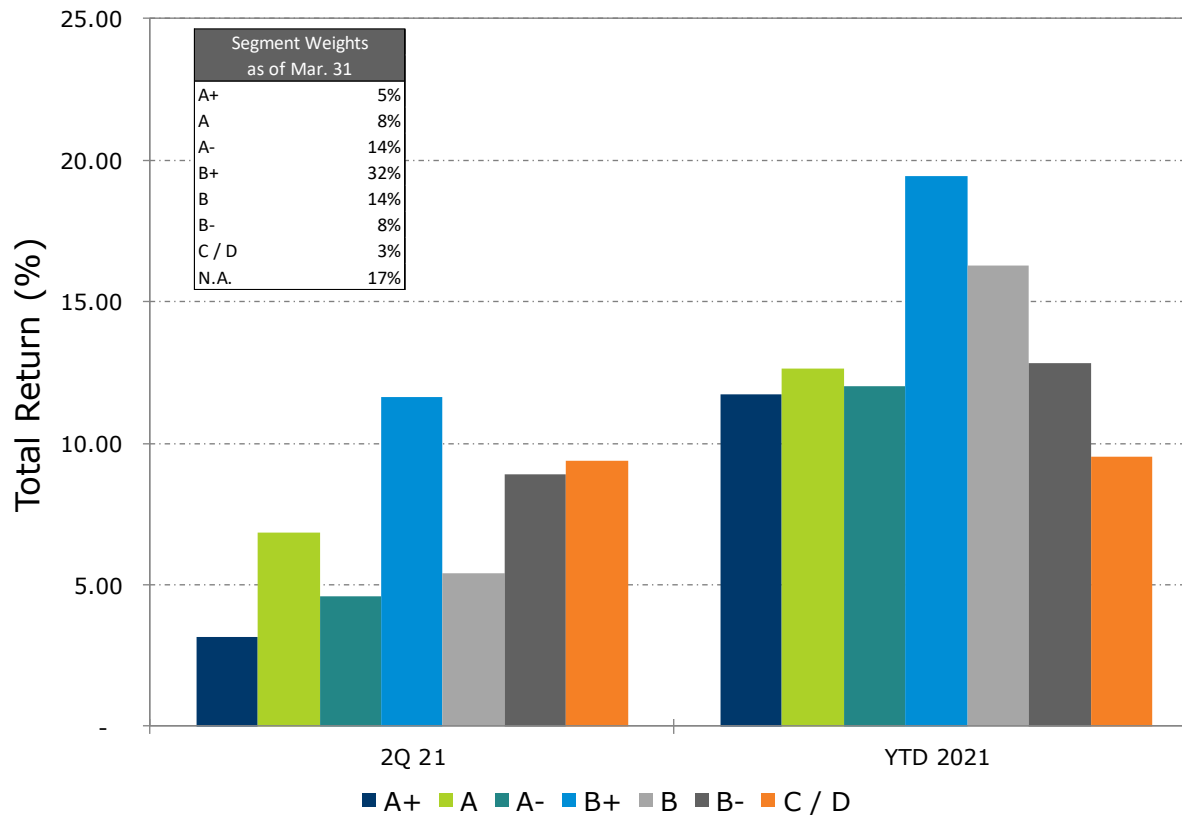


Data Sources: Bloomberg

Returns by Quality Segment

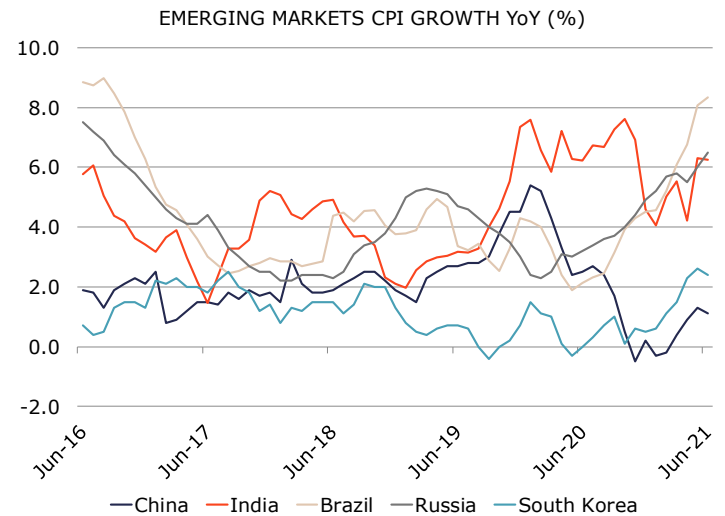
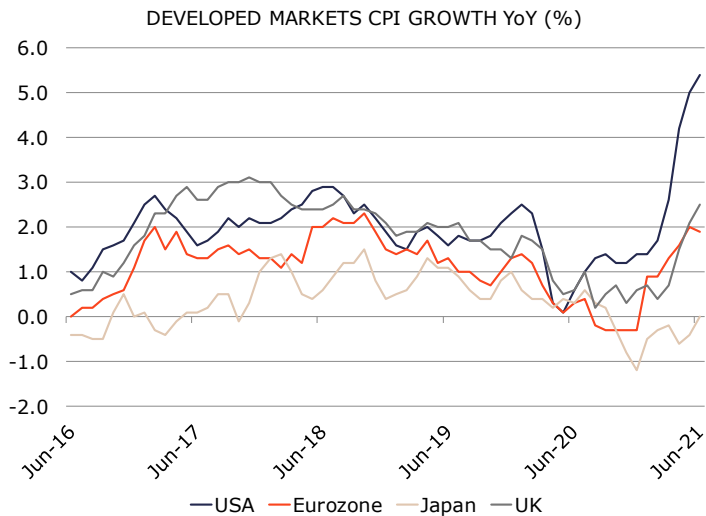
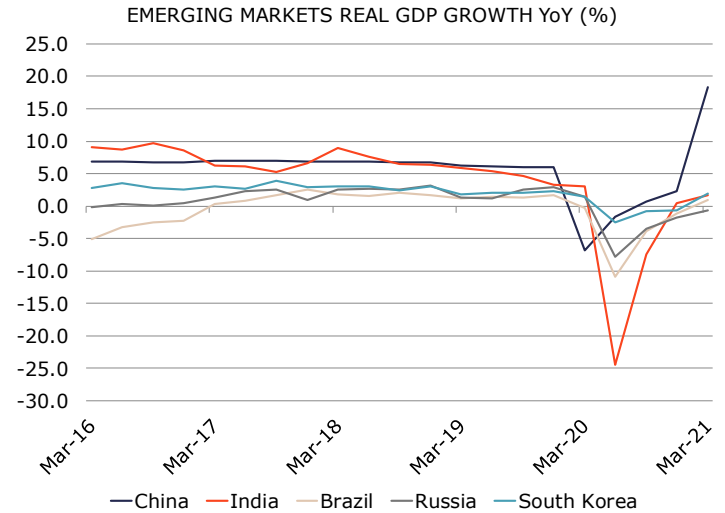
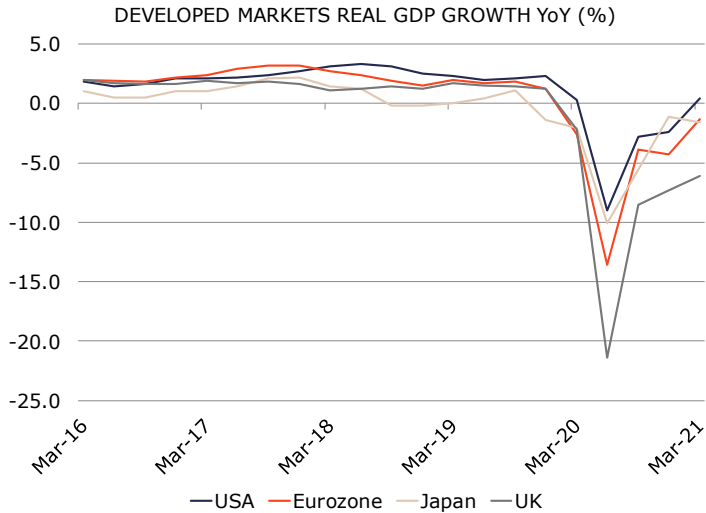
Mid-tier quality names are leading gains so far this year, which also represents the largest portion of the U.S. Equity market

RETURN BY S&P QUALITY RATING



Data Sources: Wilshire Atlas

Non-U.S. Growth and Inflation

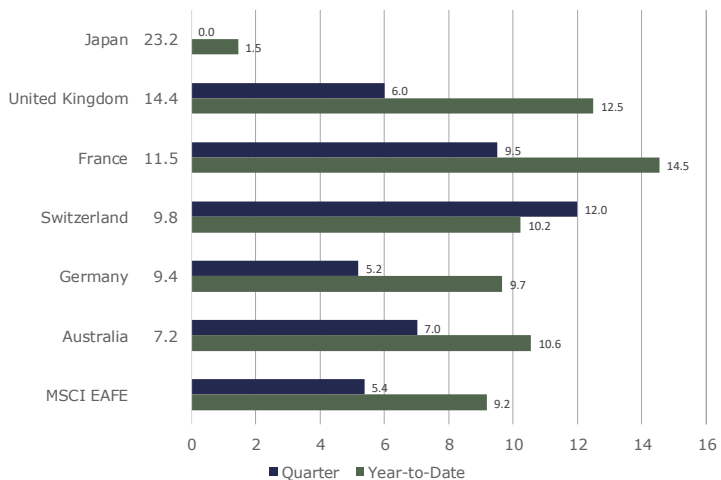


Data Sources: Bloomberg

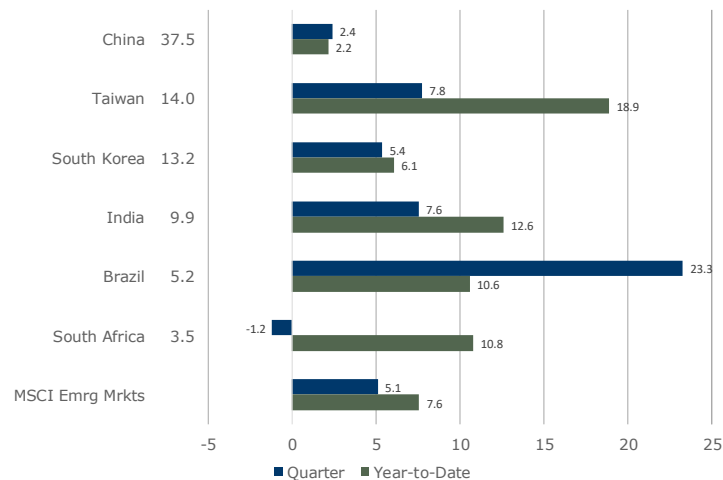
Non-U.S. Equity Market

AS OF 6/30/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI ex-US (\$G)	5.6	9.4	36.3	9.9	11.6	5.9
MSCI EAFE (\$G)	5.4	9.2	32.9	8.8	10.8	6.4
MSCI Emerging Markets (\$G)	5.1	7.6	41.4	11.7	13.4	4.7
MSCI Frontier Markets (\$G)	7.3	0.8	23.7	2.1	3.5	2.6
MSCI ACWI ex-US Growth (\$G)	6.7	6.7	34.1	13.6	13.8	7.6
MSCI ACWI ex-US Value (\$G)	4.7	12.4	39.8	6.1	9.4	4.4
MSCI ACWI ex-US Small (\$G)	6.5	12.5	47.6	10.2	12.4	7.4
MSCI ACWI Minimum Volatility	5.4	7.4	20.0	10.2	9.1	9.9
MSCI EAFE Minimum Volatility	5.2	4.7	17.0	5.4	6.5	7.0
FTSE RAFI Developed ex-US	4.8	13.8	42.3	7.0	10.4	5.0
MSCI EAFE LC (G)	5.0	13.1	27.6	8.0	10.5	8.6
MSCI Emerging Markets LC (G)	3.9	8.1	36.5	12.4	14.0	8.0

DEVELOPED MARKETS WEIGHT AND RETURN (%)



EMERGING MARKETS WEIGHT AND RETURN (%)

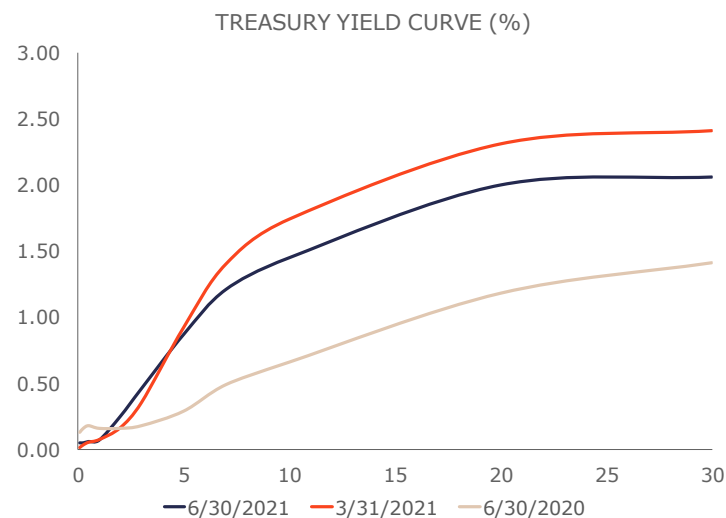
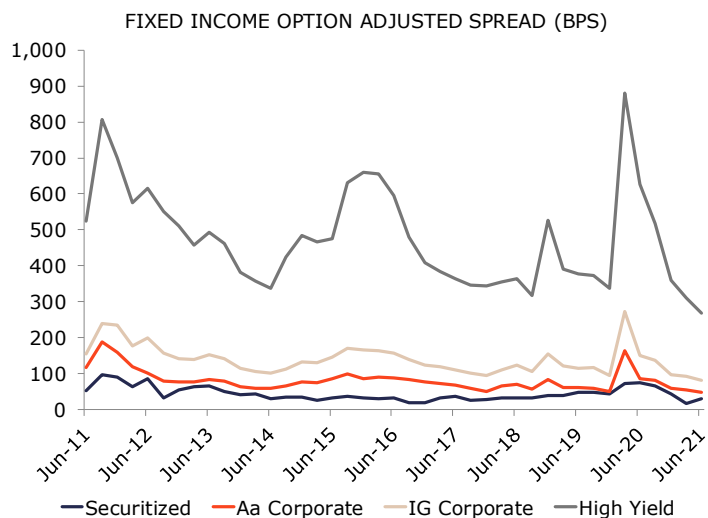


Data Sources: Bloomberg

U.S. Fixed Income

AS OF 6/30/2021	YTW	DUR.	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Barclays Aggregate	1.5	6.6	1.8	-1.6	-0.3	5.3	3.0	3.4
Bloomberg Barclays Treasury	0.9	7.0	1.7	-2.6	-3.2	4.7	2.2	2.8
Bloomberg Barclays Gov't-Rel.	1.4	6.2	1.7	-1.2	0.8	5.1	3.0	3.2
Bloomberg Barclays Securitized	1.7	4.2	0.4	-0.7	-0.2	3.9	2.4	2.7
Bloomberg Barclays Corporate	2.0	8.7	3.5	-1.3	3.3	7.8	4.9	5.2
Bloomberg Barclays LT Gov't/Credit	2.7	16.6	6.4	-4.6	-1.9	9.9	5.4	7.3
Bloomberg Barclays LT Treasury	2.0	18.8	6.5	-7.9	-10.6	8.0	3.1	6.7
Bloomberg Barclays LT Gov't-Rel.	3.1	13.8	5.0	-2.8	2.1	8.3	5.0	6.7
Bloomberg Barclays LT Corporate	3.1	15.4	6.6	-2.4	4.5	11.1	6.9	7.7
Bloomberg Barclays U.S. TIPS *	1.4	8.1	3.2	1.7	6.5	6.5	4.2	3.4
Bloomberg Barclays High Yield	3.7	3.8	2.7	3.6	15.4	7.4	7.5	6.7
Treasury Bills	0.0	0.3	0.0	0.0	0.1	1.4	1.2	0.7

* Yield and Duration statistics are for a proxy index based on similar maturity, the Bloomberg Barclays U.S. Treasury 7-10 Year Index

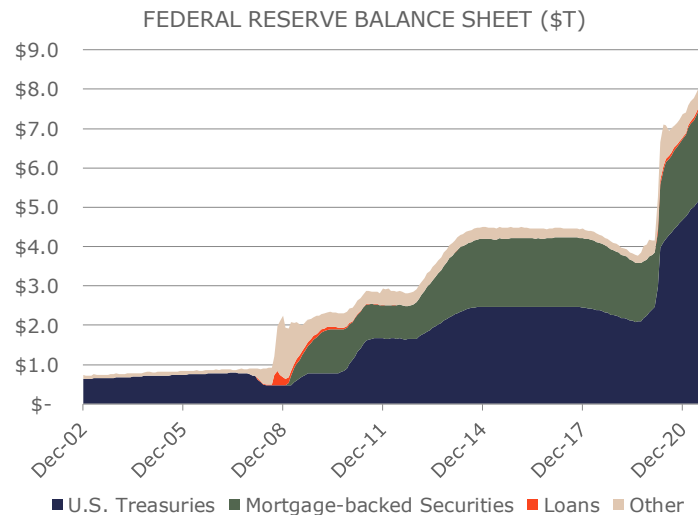
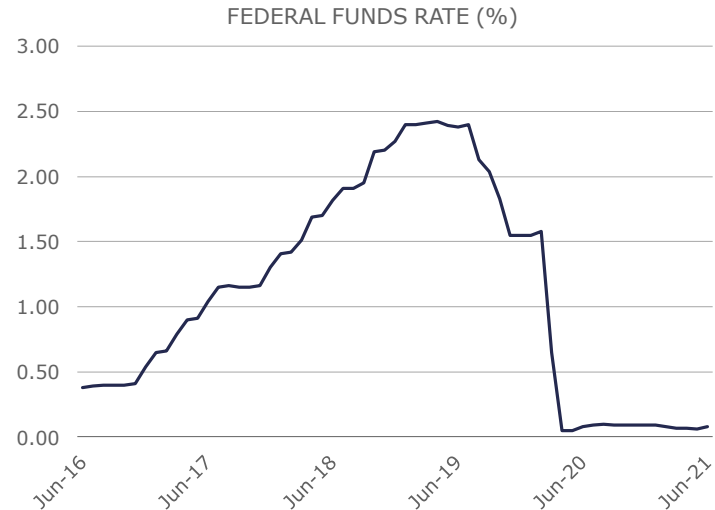


Data Sources: Bloomberg

Federal Reserve

- **Current FOMC expectation for the Fed-funds rate is to remain near zero through 2022**
- **Federal Reserve has added nearly \$4 trillion in assets to their balance sheet during the past year**
- **QE4 is now larger than the 3 phases of quantitative easing – combined – following the global financial crisis**

	Announced	Closed	Amount (bil)
QE1	11/25/2008	3/31/2010	\$1,403
QE2	11/3/2010	6/29/2012	\$568
QE3	9/13/2012	10/29/2014	\$1,674
QE4	3/23/2020		\$3,943

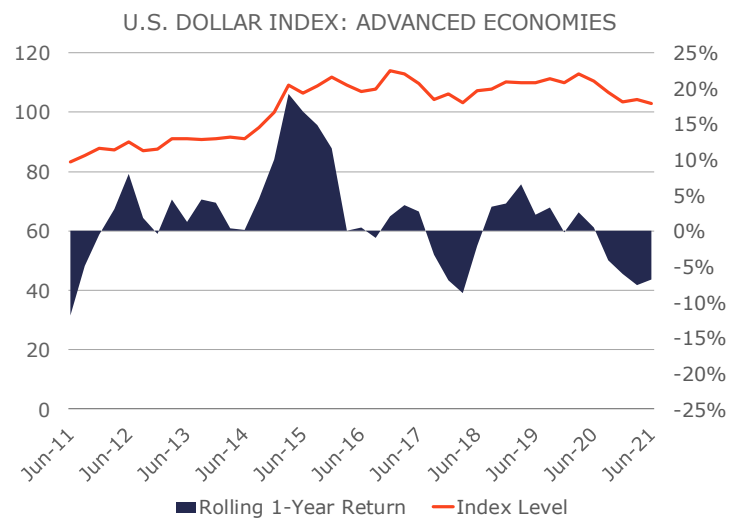
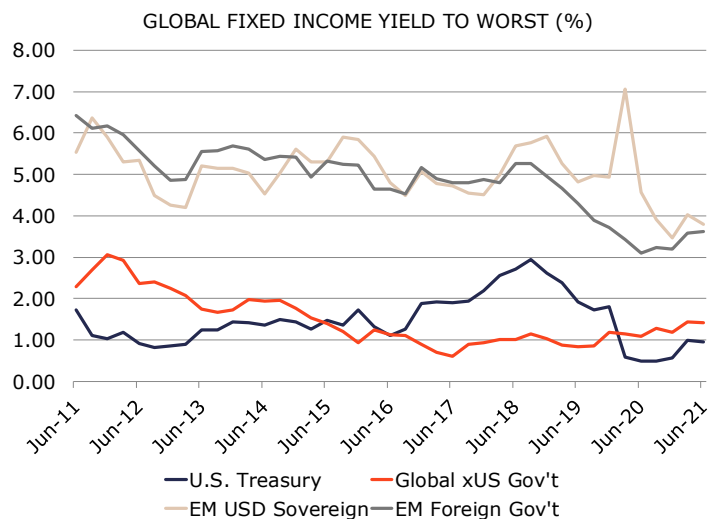


Data Sources: Bloomberg

Non-U.S. Fixed Income

AS OF 6/30/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
DEVELOPED MARKETS						
Blmbrg Brclys Global Aggregate xUS	0.9	-4.4	4.6	3.1	1.6	1.0
Blmbrg Brclys Global Aggregate xUS *	0.3	-1.6	0.0	3.8	2.8	4.1
Blmbrg Brclys Global Inflation Linked xUS	2.7	-2.1	8.9	5.0	4.3	3.2
Blmbrg Brclys Global Inflation Linked xUS *	2.4	-1.0	0.6	5.3	4.8	5.7
EMERGING MARKETS (HARD CURRENCY)						
Blmbrg Brclys EM USD Aggregate	3.0	-0.6	6.3	6.7	4.9	5.4
EMERGING MARKETS (FOREIGN CURRENCY)						
Blmbrg Brclys EM Local Currency Gov't	2.9	-1.0	8.0	5.3	3.8	1.9
Blmbrg Brclys EM Local Currency Gov't *	0.7	-1.3	-1.0	4.5	2.9	3.2
Euro vs. Dollar	1.1	-2.9	5.6	0.5	1.3	-2.0
Yen vs. Dollar	-0.4	-7.1	-2.9	-0.1	-1.5	-3.2
Pound vs. Dollar	0.3	1.2	11.5	1.6	0.8	-1.5

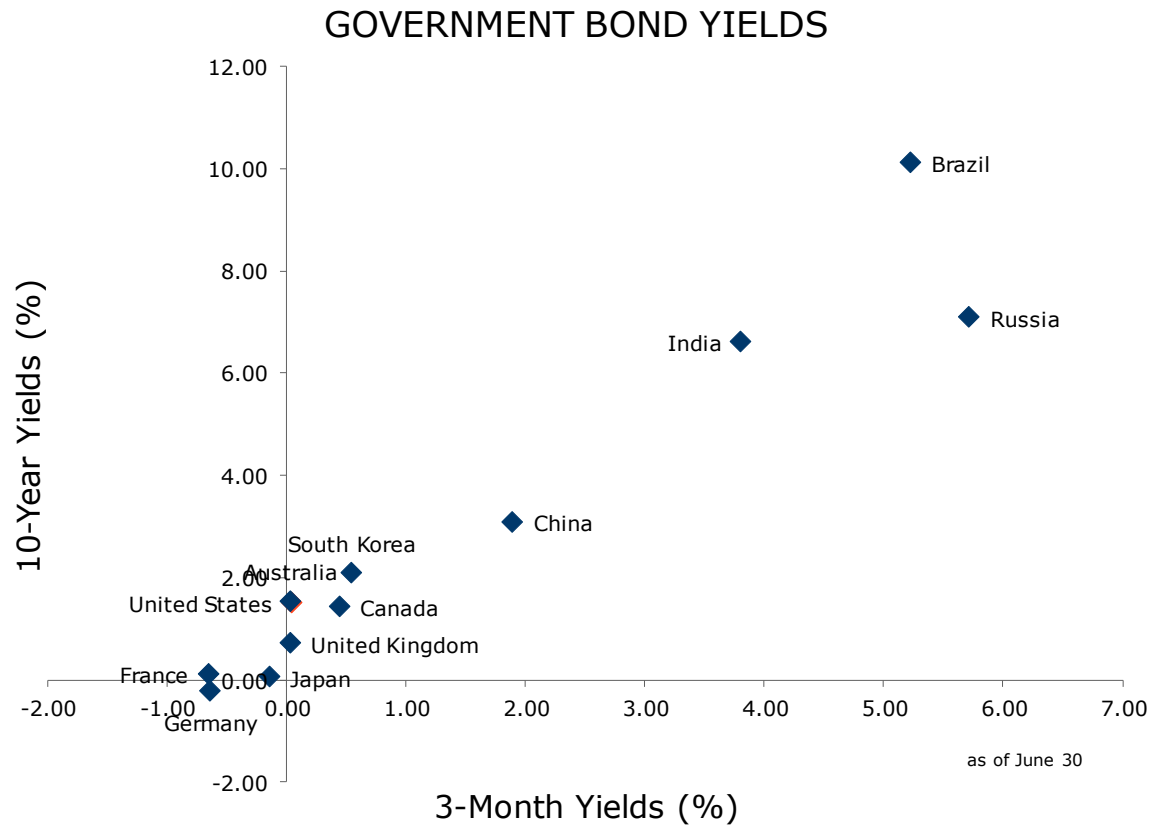
* Returns are reported in terms of local market investors, which removes currency effects.



Data Sources: Bloomberg

Global Interest Rates

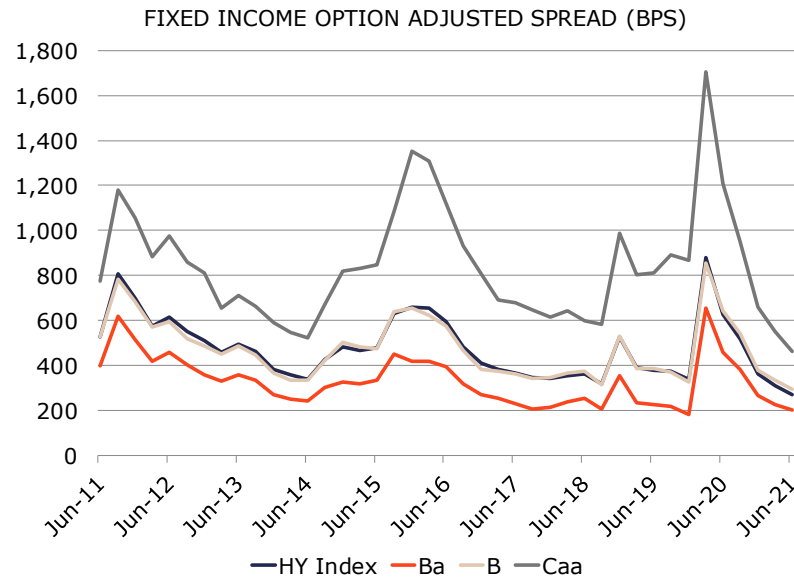
Negative rates found in Germany and France; low but positive rates, and at similar levels, in the U.S. and Australia while the U.K. approaches zero



Data Sources: Bloomberg

High Yield Bond Market

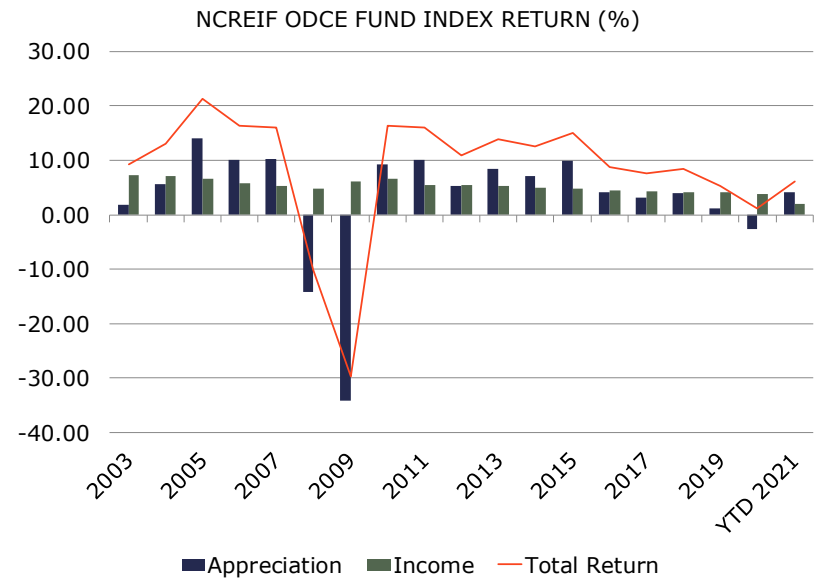
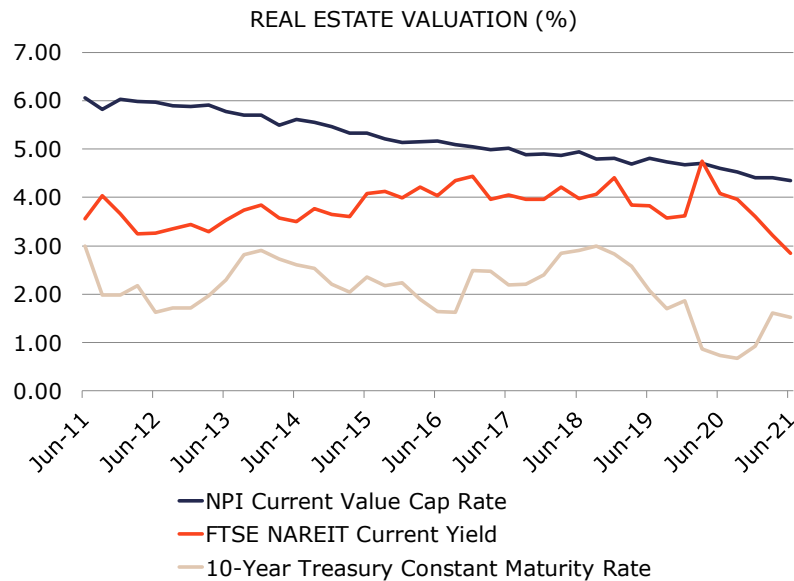
AS OF 6/30/2021		YTW	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Barclays High Yield		3.7	2.7	3.6	15.4	7.4	7.5	6.7
S&P LSTA Leveraged Loan		3.7	1.1	2.2	9.4	4.3	4.7	4.1
HIGH YIELD QUALITY DISTRIBUTION		WEIGHT						
Ba U.S. High Yield	54.3%	3.0	2.9	2.7	12.9	9.1	7.5	7.0
B U.S. High Yield	33.0%	4.1	2.2	3.3	14.3	6.7	7.1	6.2
Caa U.S. High Yield	12.4%	5.6	3.5	7.2	26.5	3.8	7.6	6.5
Ca to D U.S. High Yield	0.4%	16.0	12.5	28.9	84.4	2.3	14.2	-2.0
Non-Rated U.S. High Yield	0.0%	0.0	0.0	0.0	0.0	-0.3	1.8	2.8



Data Sources: Bloomberg

Real Assets

AS OF 6/30/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Barclays U.S. TIPS	3.2	1.7	6.5	6.5	4.2	3.4
Bloomberg Commodity Index	13.3	21.1	45.6	3.9	2.4	-4.4
Bloomberg Gold Index	3.2	-7.0	-3.9	10.6	4.8	0.8
Wilshire Global RESI Index	10.7	18.1	35.6	8.1	6.1	8.0
NCREIF ODCE Fund Index	3.9	6.1	8.0	5.5	6.6	9.6
NCREIF Timberland Index	1.7	2.5	3.1	2.1	2.7	4.7
Alerian Midstream Energy	16.4	40.7	53.2	4.9	4.3	n.a.



Data Sources: Bloomberg, National Council of Real Estate Investment Fiduciaries



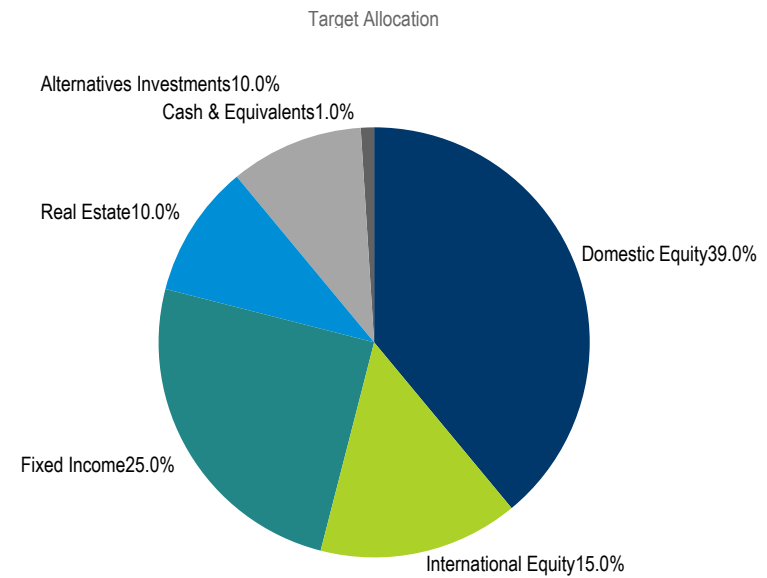
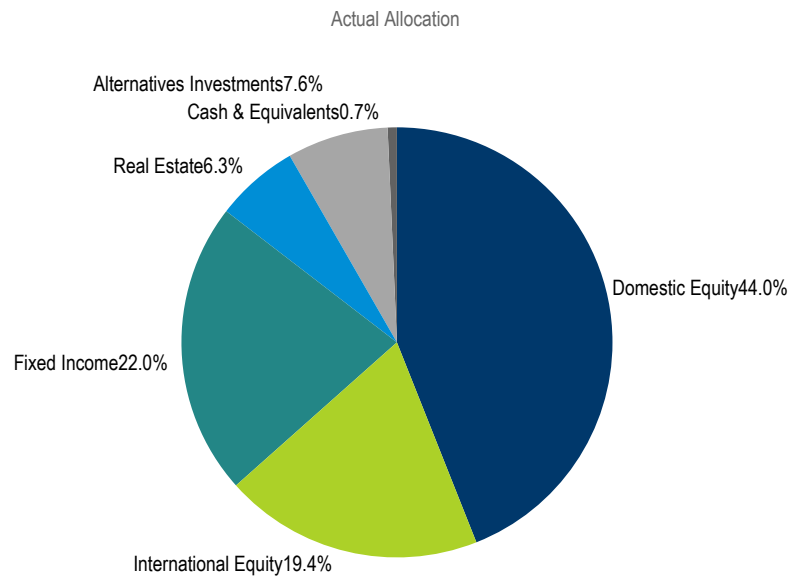
Total Fund

Wilshire Consulting

Asset Allocation

Total Fund

Periods Ended As of June 30, 2021



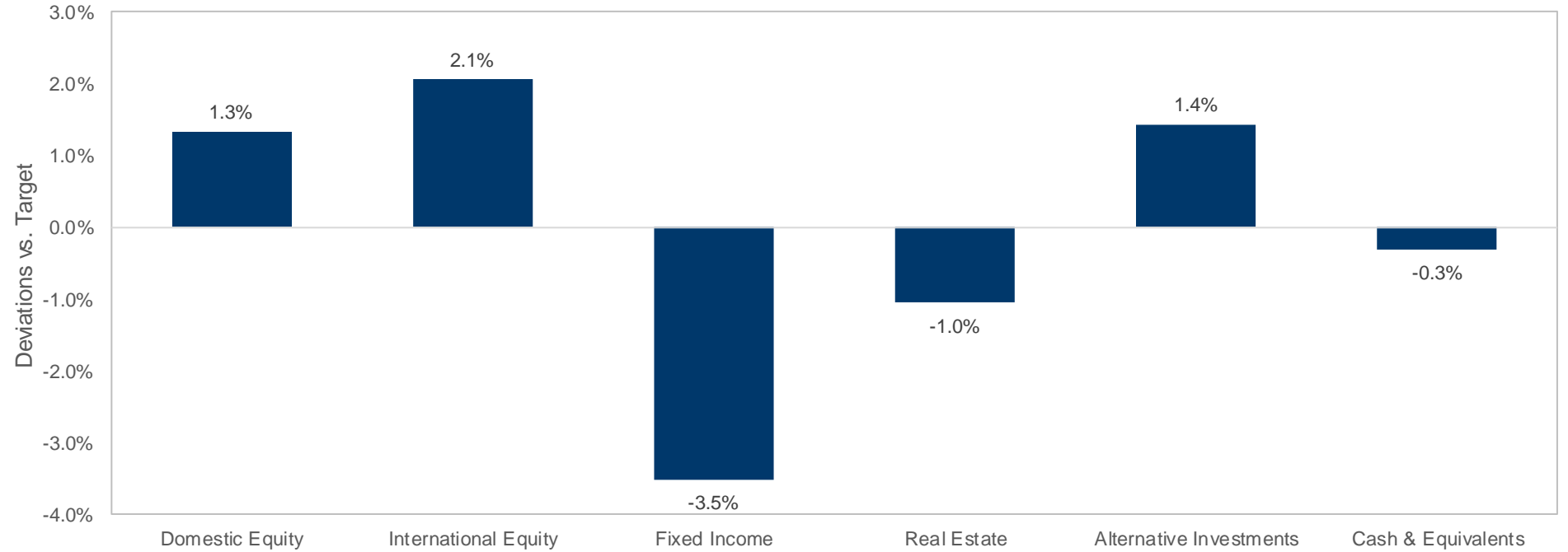
■ Domestic Equity
 ■ International Equity
 ■ Fixed Income
 ■ Real Estate
 ■ Alternatives Investments
 ■ Cash & Equivalents

	Actual Allocation \$Millions	Actual Allocation %	Target Allocation %	Differences %	Differences \$Millions
Total Fund	54,702	100.0	100.0	0.0	
Domestic Equity	24,069	44.0	39.0	5.0	2,735
International Equity	10,620	19.4	15.0	4.4	2,415
Fixed Income	12,053	22.0	25.0	-3.0	-1,623
Real Estate	3,430	6.3	10.0	-3.7	-2,041
Alternatives Investments	4,151	7.6	10.0	-2.4	-1,320
Cash & Equivalents	380	0.7	1.0	-0.3	-167

Projected Deviation From Benchmark

Period Ending June 30, 2021

Projected Asset Allocation Differences vs. Target



- Includes committed, but unfunded amounts for real estate (\$1,469.5 million) and alternatives (\$2,107.0 million). Assumes real estate and alternatives allocations are fully funded as of month's end.
- Assumes that outstanding commitments are funded from a basket of public markets asset classes (domestic equity, international equity and/or fixed income) that best reflects the expectations of risk, yield and regional allocations of the asset class.

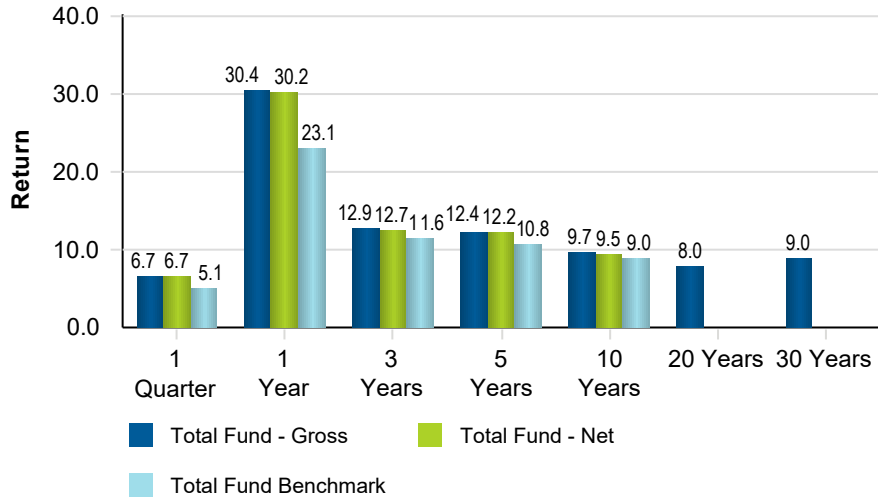
Private Equity Proxy: 60% domestic equity, 40% international equity
 Real Estate Proxy: 50% domestic equity, 30% international equity, 20% fixed income

Composite Performance Summary

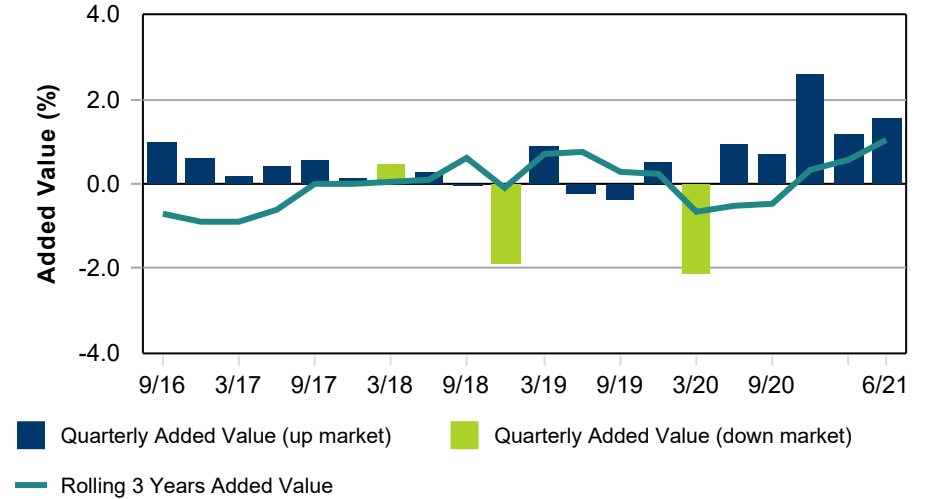
Total Fund

Periods Ended June 30, 2021

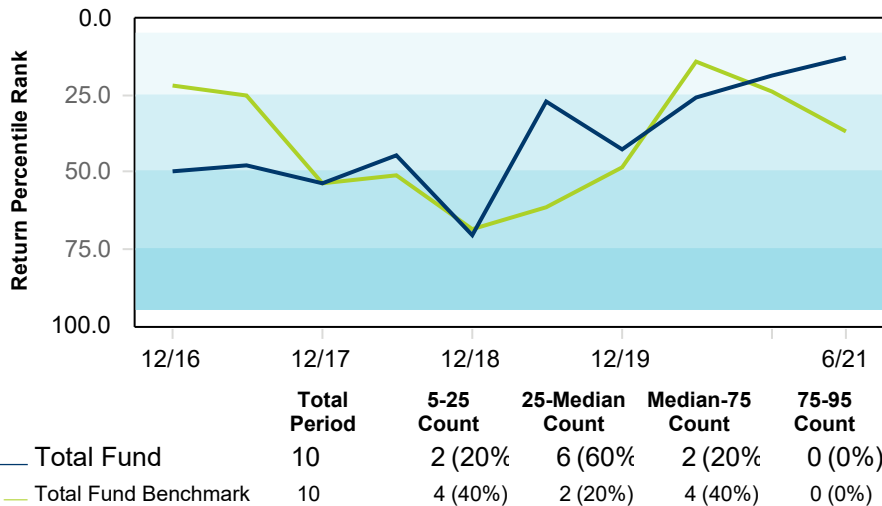
Comparative Performance



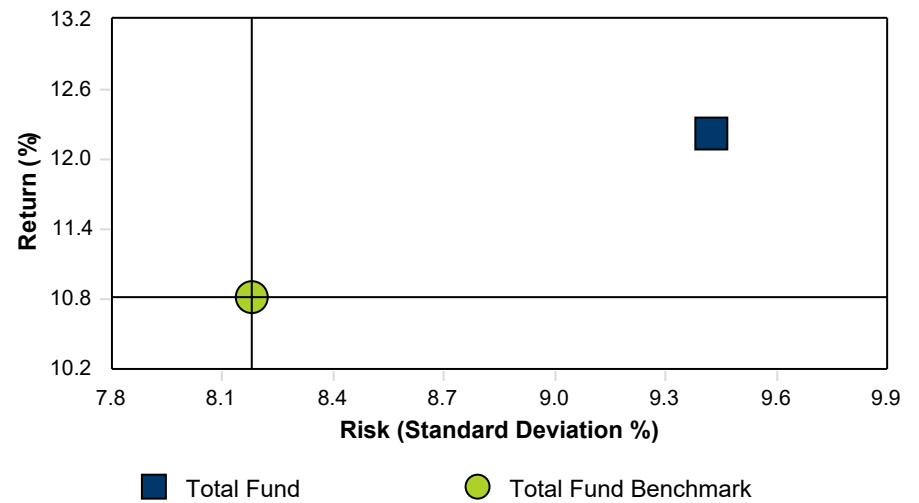
Added Value History



Rolling Percentile Rank : All Public Plans > \$1B - Total Fund



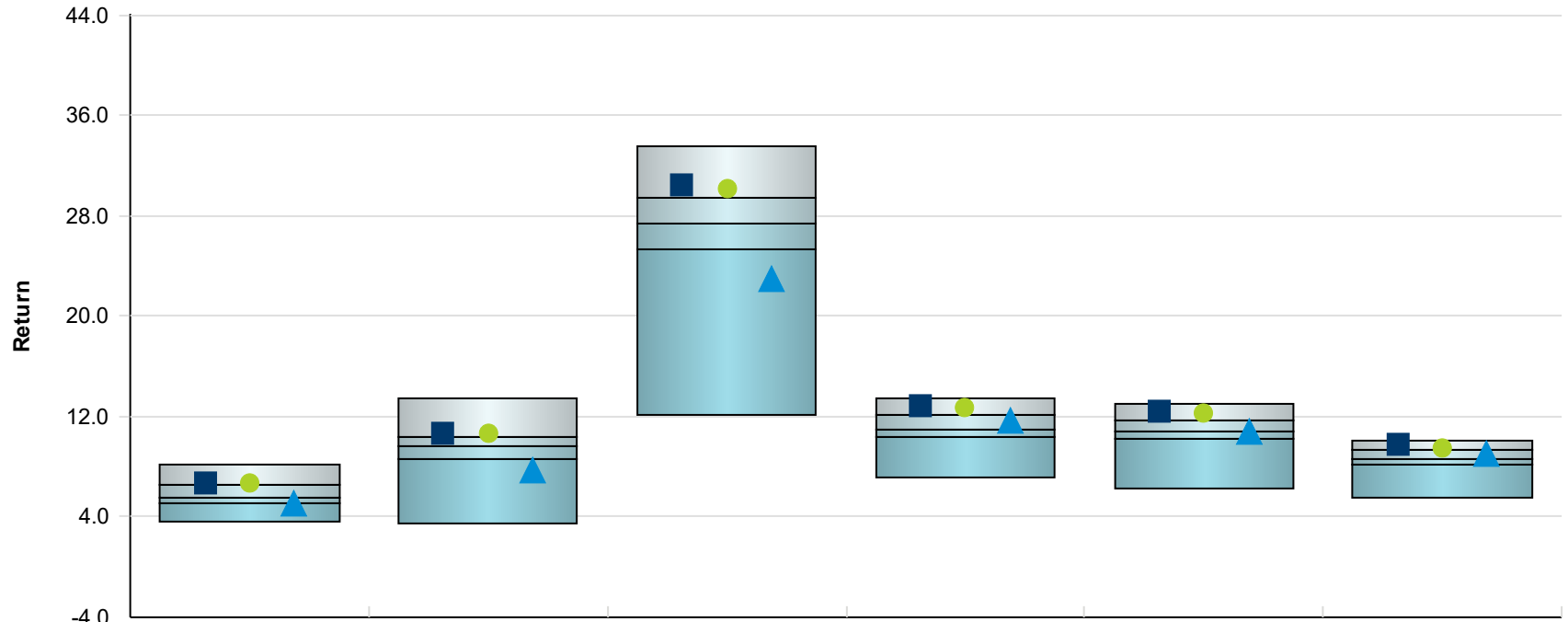
Risk and Return 07/01/16 - 06/30/21



Plan Sponsor Peer Group Analysis

Total Fund vs All Public Plans > \$1B-Total Fund(Gross)

Periods Ended June 30, 2021



	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ Total Fund	6.69 (19)	10.70 (22)	30.44 (19)	12.85 (11)	12.43 (9)	9.75 (12)
● Total Fund - Net	6.65 (21)	10.61 (23)	30.23 (20)	12.66 (13)	12.22 (10)	9.52 (16)
▲ Total Fund Benchmark	5.08 (74)	7.73 (88)	23.07 (90)	11.63 (37)	10.82 (51)	9.01 (37)
5th Percentile	8.15	13.47	33.61	13.40	12.97	10.13
1st Quartile	6.50	10.46	29.40	12.15	11.76	9.29
Median	5.60	9.59	27.34	11.03	10.84	8.61
3rd Quartile	5.04	8.55	25.32	10.40	10.31	8.12
95th Percentile	3.70	3.45	12.15	7.11	6.33	5.47
Population	152	152	151	150	148	143

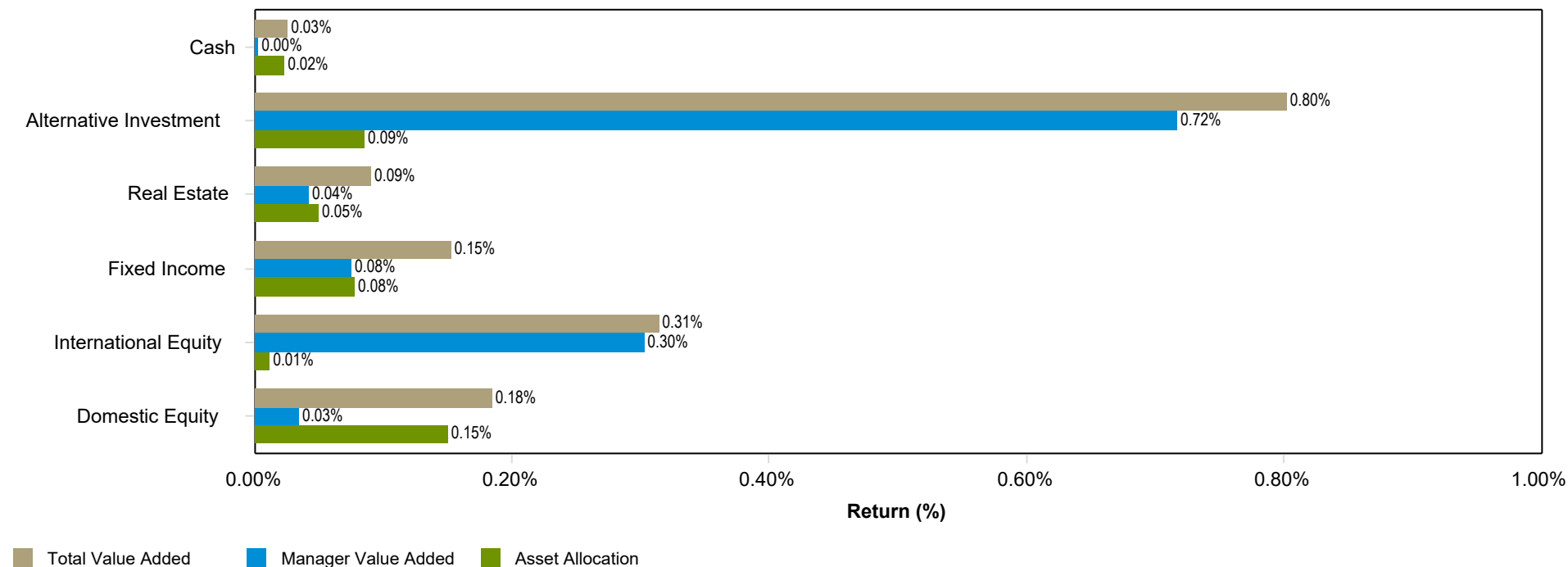
Total Fund Benchmark = 39.0% Russell 3000 Index, 25.0% Blmbg Aggregate, 15.0% MSCI ACWI ex US, 10.0% NCREIF NFI-ODCE Val Wt Nt, 10.0% 9% Annually and 1.0% 3-month Treasury Bill.

Total Fund Attribution

Total Fund

1 Quarter Ending June 30, 2021

Relative Attribution by Asset Class



Relative Attribution Effects

	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	44.1	39.0	8.32	8.24	0.03	0.15	0.18
International Equity	19.4	15.0	7.05	5.48	0.30	0.01	0.31
Fixed Income	22.5	25.0	2.16	1.83	0.08	0.08	0.15
Real Estate	6.4	10.0	4.40	3.68	0.04	0.05	0.09
Alternative Investment	7.1	10.0	12.25	2.18	0.72	0.09	0.80
Cash	0.5	1.0	0.64	0.00	0.00	0.02	0.03
Total Fund	100.0	100.0	6.65	5.08	1.17	0.40	1.58

Total Fund Benchmark = 39.0% Russell 3000 Index, 25.0% Blmbg Aggregate, 15.0% MSCI ACWI ex US, 10.0% NCREIF NFI-ODCE Val Wt Nt, 10.0% 9% Annually and 1.0% 3-month Treasury Bill.

Wilshire Consulting

Asset Class Returns

Periods Ended June 30, 2021

	Performance (%)									
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
Total Fund	6.69	10.70	30.44	12.85	12.43	9.75	8.03	9.04	10.17	1/1/1982
Total Fund - Net	6.65	10.61	30.23	12.66	12.22	9.52				
Total Fund Benchmark	5.08	7.73	23.07	11.63	10.82	9.01				
Domestic Equity	8.36	16.01	47.85	17.90	18.20	14.39	9.29	11.36	12.18	1/1/1982
Domestic Equity - Net	8.32	15.91	47.60	17.68	17.98	14.14				
Blended Benchmark (U.S. Equity)	8.24	15.11	44.16	18.73	17.89	14.68	9.11	10.90		
U.S. Equity IMRF Custom Benchmark	8.18	15.14	44.14	16.83	16.64					
International Equity	7.13	10.95	41.28	11.14	12.42	7.34	7.56	8.01	8.23	9/1/1986
International Equity - Net	7.05	10.78	40.79	10.77	12.04	6.99				
MSCI AC World ex USA (Net)	5.48	9.16	35.72	9.38	11.08	5.45	6.46			
International Equity IMRF Custom Benchmark	5.42	9.08	36.43	9.43	11.19					
Fixed Income	2.18	-0.59	2.59	5.89	4.01	4.27	5.37	6.35	8.06	1/1/1982
Fixed Income - Net	2.16	-0.64	2.50	5.77	3.87	4.13				
Blmbg. Barc. U.S. Aggregate	1.83	-1.61	-0.34	5.34	3.03	3.39	4.56	5.65	7.52	
Fixed Income IMRF Custom Benchmark	1.90	-1.04	1.27	5.48	3.44					
Real Estate	4.42	6.51	10.27	8.71	8.81	10.27	7.44	5.33	5.63	5/1/1985
Blended Benchmark (Real Estate)	3.68	5.64	7.09	4.60	5.62	8.84	7.07	7.27	7.54	
Alternatives Investments	12.25	22.64	40.11	18.68	15.79	11.37	8.36	12.70	11.38	2/1/1986
Alternatives Investments - Net	12.25	22.62	40.07	18.62	15.66	11.14				
Alternatives Custom Benchmark	2.18	4.40	9.00	9.00	9.00	9.00	10.61	12.05	12.50	
Private Equity	14.51	26.86	46.78	22.36	19.41	13.97	10.06	15.46	13.69	2/1/1986
Alternatives Custom Benchmark	2.18	4.40	9.00	9.00	9.00	9.00	10.61	12.05	12.50	
Agriculture	-1.99	-1.88	-1.40	-0.07	-1.69	8.02	6.96		6.63	10/1/1997
NCREIF Farmland Index	1.47	2.34	4.97	4.82	5.51	10.24	12.09		11.28	
Timberland	1.15	-7.36	-7.02	-1.60	0.13	1.76	3.01		6.82	10/1/1992
NCREIF Timberland Index	1.70	2.47	3.10	2.12	2.65	4.66	5.78		8.27	

Benchmark definitions on the following pages.

Real Estate, Private Equity, Agriculture, Timberland, Unlisted Infrastructure returns shown are gross of fees.

Wilshire Consulting

Asset Class Returns

Periods Ended June 30, 2021

	Performance (%)									
	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
Unlisted Infrastruct	1.64	6.66	25.41	13.08					12.49	4/1/2018
Alternatives Custom Benchmark	2.18	4.40	9.00	9.00					9.00	
Cash	0.64	0.97	1.89	2.83	2.31	1.27	1.53	3.08	3.76	7/1/1986
90 Day US Treasury Bill	0.00	0.02	0.09	1.34	1.16	0.61	1.34	2.51	3.17	

Benchmark definitions on the following pages.

Real Estate, Private Equity, Agriculture, Timberland, Unlisted Infrastructure returns shown are gross of fees.

Wilshire Consulting

Asset Class Returns

Periods Ended June 30, 2021

	Performance (%)										
	YTD	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Total Fund	10.70	14.98	19.77	-4.23	16.02	8.01	0.53	6.15	20.20	13.84	-0.29
Total Fund - Net	10.61	14.79	19.57	-4.40	15.78	7.77	0.29	5.90	19.94	13.58	-0.50
Total Fund Benchmark	7.73	13.16	18.68	-3.12	14.37	7.89	1.37	7.33	15.84	12.19	1.47
Domestic Equity	16.01	22.07	29.23	-6.08	19.83	12.62	0.04	9.81	37.65	17.39	-0.74
Domestic Equity - Net	15.91	21.86	29.00	-6.25	19.59	12.35	-0.22	9.54	37.32	17.09	-0.99
Blended Benchmark (U.S. Equity)	15.11	20.89	31.02	-5.24	21.13	12.74	0.48	12.47	33.47	16.38	1.08
International Equity	10.95	13.52	23.76	-14.13	27.95	3.56	-1.90	-2.80	20.24	19.11	-12.27
International Equity - Net	10.78	13.08	23.39	-14.41	27.52	3.21	-2.23	-3.10	19.87	18.70	-12.50
MSCI AC World ex USA (Net)	9.16	10.65	21.51	-14.20	27.19	4.50	-5.66	-3.87	15.29	16.83	-13.71
Fixed Income	-0.59	7.87	9.50	-0.24	4.82	4.87	0.25	5.97	-0.59	7.41	7.60
Fixed Income - Net	-0.64	7.75	9.37	-0.39	4.66	4.71	0.10	5.81	-0.75	7.24	7.44
Blmbg. Barc. U.S. Aggregate	-1.61	7.51	8.72	0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84
Real Estate	6.51	4.20	9.81	8.36	10.03	8.97	12.54	13.02	10.82	12.85	12.29
Real Estate - Net	6.48	4.16	9.76	8.36	10.03	8.97	12.46	13.02	10.82	12.85	12.29
Blended Benchmark (Real Estate)	5.64	0.34	4.39	7.36	6.66	7.79	13.95	11.46	12.90	11.54	15.26
Alternatives Investments	22.64	12.31	9.48	17.32	12.09	5.32	6.90	11.63	12.11	6.24	5.05
Alternative Investments - Net	22.62	12.27	9.43	17.14	11.91	5.00	6.47	11.16	11.86	6.00	4.84
Alternatives Custom Benchmark	4.40	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Private Equity	26.86	14.50	11.78	21.46	15.61	8.60	8.41	13.72	14.13	5.61	12.33
Alternatives Custom Benchmark	4.40	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Agriculture	-1.88	4.69	-5.82	0.28	-4.58	-0.47	20.18	24.73	25.68	13.55	9.70
NCREIF Farmland Index	2.34	3.08	4.81	6.74	6.19	7.09	10.35	12.63	20.91	18.58	15.16
Timberland	-7.36	4.51	1.00	-3.62	4.68	-4.58	4.99	12.83	9.14	-3.59	3.20
NCREIF Timberland Index	2.47	0.81	1.30	3.21	3.63	2.59	4.97	10.48	9.69	7.75	1.57
Unlisted Infrastruct	6.66	15.90	9.65								
Alternatives Custom Benchmark	4.40	9.00	9.00								

Benchmark definitions on the following pages.

Private Equity, Agriculture, Timberland, Unlisted Infrastructure returns shown are gross of fees.

Wilshire Consulting

Asset Class Returns

Periods Ended June 30, 2021

	Performance (%)										
	YTD	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Cash	0.97	2.56	3.59	2.36	1.67	0.63	0.29	0.17	0.11	0.23	0.24
90 Day US Treasury Bill	0.02	0.67	2.28	1.87	0.86	0.25	0.03	0.04	0.05	0.08	0.08

Benchmark definitions on the following pages.

Private Equity, Agriculture, Timberland, Unlisted Infrastructure returns shown are gross of fees.

Benchmark Definitions

Account Name	From Date	To Date	Benchmark
Domestic Equity Blended	1/1/2015	Present	100% Russell 3000 Index
Benchmark	1/1/1982	12/31/2014	100% Dow Jones US Total Stock Market Index
Real Estate Blended	1/1/2013	Present	100% NCREIF Fund Index-ODCE (VW) (Net)** 100%
Benchmark	1/1/2007	12/31/2012	100% NPI + 1%
	1/1/2005	12/31/2016	100% Consumer Price Index + 5%
Alternatives Custom	7/1/2010	Present	100% Annualized rate of 9.0%
Benchmark	1/1/2004	6/30/2010	100% Annualized rate of 12.0%
	1/1/2003	12/31/2003	100% Annualized rate of 13.0%
	2/1/1986	12/31/2002	100% Annualized rate of 15.0%
U.S. Equity IMRF Custom Benchmark			Blend of the U.S. Equity Style benchmarks returns, dollar weighted by the actual allocation at pervious month end.
International Equity IMRF Custom Benchmark			Blend of the the International Equity Style benchmarks returns, dollar weighted by the actual allocation at previous month end.
Fixed Income IMRF Custom Benchmark			Blend of the the Fixed Income Style benchmarks returns, dollar weighted by the actual allocation at previous month end.

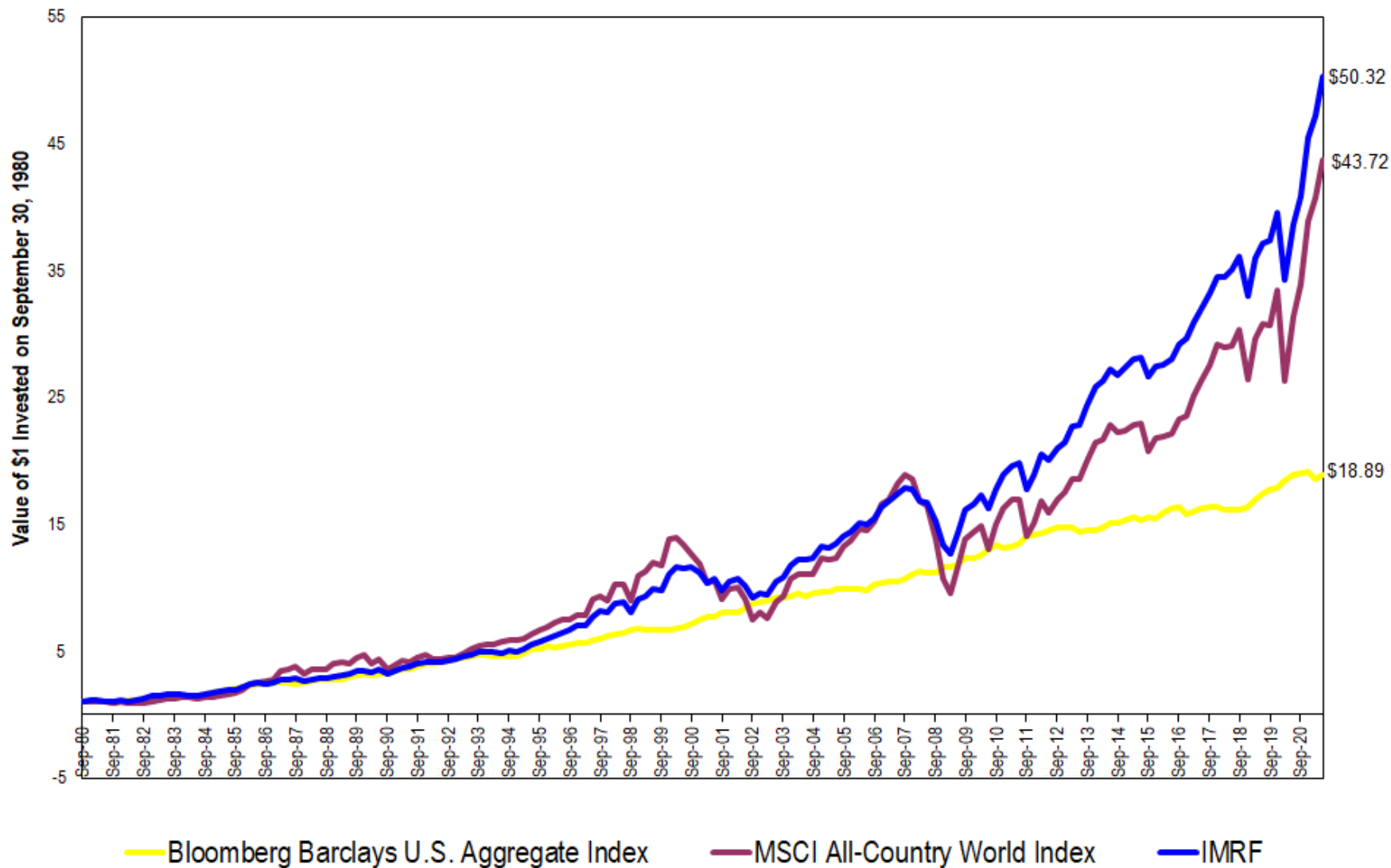
**ODCE returns are updated quarterly.

Benchmark Definitions

Account Name	From Date	To Date	Benchmark
Total Fund Benchmark	1/1/2021	Present	The total fund benchmark is a blend of the asset class benchmark returns weighted by the target allocation for each asset class: 39% Russell 3000 Index, 25% Blmbg. Barc. U.S. Aggregate, 15% MSCI AC World ex USA (Net), 10% NCREIF Fund Index-ODCE (VW) (Net), 10% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill.
	3/1/2018	12/31/2020	37% Russell 3000 Index, 28% Blmbg. Barc. U.S. Aggregate, 18% MSCI AC World ex USA (Net), 9% NCREIF Fund Index-ODCE (VW) (Net), 7% Alternatives Custom Benchmark, 1% 90 Day US Treasury Bill.

Total Fund Growth of a Dollar

Growth of a Dollar - As of June 30, 2021



Investment Manager Asset Allocation

Periods Ended June 30, 2021

	Mar-2021		Jun-2021	
	\$	%	\$	%
Domestic Equity	22,649,748,730	43.90	24,069,084,986	44.00
Large Cap Growth	8,440,345,948	16.36	9,133,053,519	16.70
NTGI S&P 500 Growth	3,297,762,451	6.39	3,690,513,569	6.75
Sands Capital	3,196,521,258	6.19	3,264,374,903	5.97
Xponance Russell 1000 G	1,946,062,239	3.77	2,178,165,047	3.98
Large Cap Value	4,548,829,433	8.82	4,821,809,911	8.81
Dodge & Cox	1,685,049,882	3.27	1,826,952,979	3.34
LSV Asset	1,434,818,250	2.78	1,496,173,585	2.74
NTGI S&P 500 Value	1,428,961,301	2.77	1,498,683,347	2.74
Large Cap Pass. Core	3,138,745,951	6.08	3,398,577,933	6.21
NTGI MarketCap Idx.	3,138,745,951	6.08	3,398,577,933	6.21
Factor Diversity Strategies	1,162,122,487	2.25	1,255,998,413	2.30
U.S. Large Cap FDP-GSAM	1,162,122,487	2.25	1,255,998,413	2.30
Quantitative Factor Strategies	1,126,798,294	2.18	1,209,996,999	2.21
Quantitative US Equity - SciBeta	1,126,798,294	2.18	1,209,996,999	2.21
Small Cap Growth	1,147,873,915	2.22	1,160,293,183	2.12
Frontier Capital	960,669,712	1.86	964,847,439	1.76
FIAM Small Cap	187,204,202	0.36	195,445,744	0.36
Small Cap Value	2,041,246,442	3.96	2,114,919,967	3.87
Channing	327,500,674	0.63	333,057,183	0.61
DFA Small Cap Val.	791,003,741	1.53	827,658,649	1.51
Inv. Couns. Maryland	922,742,027	1.79	954,204,135	1.74

Investment Manager Asset Allocation

Periods Ended June 30, 2021

	Mar-2021		Jun-2021	
	\$	%	\$	%
Micro Cap	333,840,271	0.65	224,891,761	0.41
DFA Micro Cap (9-10)	333,840,271	0.65	224,891,761	0.41
Public Real Assets	709,945,989	1.38	749,543,302	1.37
Brookfield	167,800,978	0.33	181,944,002	0.33
Cohen & Steers	542,145,011	1.05	567,599,300	1.04
International Equity	9,915,523,571	19.22	10,620,150,178	19.41
Intl Large Cap Growth	1,690,043,270	3.28	1,838,913,514	3.36
EARNEST Part. Intl	584,659,324	1.13	627,836,196	1.15
William Blair	1,105,383,946	2.14	1,211,077,317	2.21
Intl Large Cap Value	1,345,777,820	2.61	1,415,007,681	2.59
Brandes Investment	579,082,076	1.12	615,028,051	1.12
Mondrian	628,004,172	1.22	655,567,379	1.20
Lazard	138,691,572	0.27	144,412,250	0.26
Intl Large Cap Core	4,606,139,088	8.93	4,943,885,212	9.04
Arrowstreet Capital	1,023,970,341	1.98	1,125,244,504	2.06
Brown Capital	598,149,136	1.16	650,536,026	1.19
GlobeFlex Capital	819,991,954	1.59	884,712,321	1.62
Xponance Intl EQ	101,354,712	0.20	107,482,445	0.20
NTGI MSCI EAFE	2,061,678,572	4.00	2,174,943,503	3.98
Progress Intl Equity	874,657	0.00	846,696	0.00
Transition Account	119,717	0.00	119,718	0.00
Intl All Cap Developed	160,489,030	0.31	170,019,885	0.31

Investment Manager Asset Allocation

Periods Ended June 30, 2021

	Mar-2021		Jun-2021	
	\$	%	\$	%
Ativo International	160,489,030	0.31	170,019,885	0.31
International Small Cap	647,601,196	1.26	706,538,238	1.29
Franklin Templeton	242,842,062	0.47	259,693,686	0.47
William Blair IntSC	404,759,133	0.78	446,844,552	0.82
Emerging Mkt Equity	1,465,473,166	2.84	1,545,785,649	2.83
Genesis Asset Mngrs.	1,465,473,166	2.84	1,545,785,649	2.83

Investment Manager Asset Allocation

Periods Ended June 30, 2021

	Mar-2021		Jun-2021	
	\$	%	\$	%
Fixed Income	11,825,453,489	22.92	12,052,637,222	22.03
Domestic Fixed Core	3,761,233,177	7.29	3,827,438,231	7.00
Attucks Fixed Income	97,188,928	0.19	99,648,372	0.18
Brandes FI Core	366,932,725	0.71	373,691,110	0.68
EARNEST Partners	1,008,379,261	1.95	1,025,034,588	1.87
Xponance Yield Advantage Agg.	1,085,418,354	2.10	1,109,271,045	2.03
Garcia Hamilton	1,073,858,845	2.08	1,087,003,802	1.99
Ramirez Asset Management	129,455,065	0.25	132,789,313	0.24
Domestic Fixed Passive Core	3,585,665,266	6.95	3,653,581,639	6.68
NTGI Blmbg Agg.	1,781,620,274	3.45	1,816,156,108	3.32
BlackRock US Debt I	1,804,044,992	3.50	1,837,425,530	3.36
Domestic Fixed Core Plus	2,876,459,417	5.57	2,939,767,840	5.37
LM Capital Group FI	951,118,496	1.84	964,191,576	1.76
Progress Inv. FI	3,673	0.00	1,721	0.00
BMO - TCH	646,047,821	1.25	660,429,037	1.21
Western Asset	1,097,833,147	2.13	1,129,386,459	2.06
Longfellow Core Plus	181,456,280	0.35	185,759,048	0.34
Bank Loans	569,147,387	1.10	574,216,967	1.05
Barings Global Loan Fund	569,147,387	1.10	574,216,967	1.05
Emerging Markets Debt	223,505,873	0.43	232,656,510	0.43
Standish-Mellon EMD	223,505,873	0.43	232,656,510	0.43
High Yield	809,442,369	1.57	824,976,036	1.51
MacKay Shields	809,421,202	1.57	824,955,304	1.51
FIAM High Yield	21,167	0.00	20,732	0.00

Investment Manager Asset Allocation

Periods Ended June 30, 2021

	Mar-2021		Jun-2021	
	\$	%	\$	%
Real Estate	3,275,781,250	6.35	3,429,574,704	6.27
Real Estate Core Cmp	1,781,271,388	3.45	1,836,015,652	3.36
TA Assoc. Buckhead	627,524,281	1.22	659,233,580	1.21
Barings Euro Core Property	139,013,969	0.27	141,713,875	0.26
Blackstone Property Euro	152,174,244	0.29	158,726,776	0.29
INVESCO Core Real Estate	204,127,320	0.40	203,919,196	0.37
INVESCO European real estate	62,296,251	0.12	63,343,340	0.12
AEW Core Property Tr	232,820,696	0.45	235,414,221	0.43
CBRE Core Partners	212,273,644	0.41	217,552,560	0.40
JPM Strategic Property Fund	151,040,983	0.29	156,112,104	0.29
RE Non-Core Cmp	1,494,509,862	2.90	1,593,559,052	2.91
Artemis MWBE Spruce	227,728,377	0.44	241,674,333	0.44
Franklin T. EMREFF	6,570,093	0.01	6,865,209	0.01
Security Capital	56,693,900	0.11	66,614,519	0.12
Dune II	18,138,649	0.04	8,810,759	0.02
Non-Core Real Estate Funds	969,094,289	1.88	1,052,149,698	1.92
Non-Core Intl Real Estate	216,185,532	0.42	217,346,608	0.40
Almanac ARS V	99,022	0.00	97,925	0.00
Alternatives Investments	3,599,708,770	6.98	4,150,572,118	7.59
Absolute Return	152,405	0.00	138,938	0.00
Aurora Investment	152,405	0.00	138,938	0.00
Private Equity	3,053,092,706	5.92	3,589,198,550	6.56

Investment Manager Asset Allocation

Periods Ended June 30, 2021

	Mar-2021		Jun-2021	
	\$	%	\$	%
Abbott S/A Comp.	415,140,229	0.80	490,816,756	0.90
Muller Monroe MPEFF	3,477,598	0.01	557,400	0.00
Pantheon S/A Comp.	284,915,943	0.55	333,814,055	0.61
Private Equity Fund - Domestic	1,868,473,298	3.62	2,157,588,556	3.94
Private Equity Fund - International	437,433,482	0.85	547,493,829	1.00
Oakbrook Opportunities Fund	43,652,156	0.08	58,927,953	0.11
Private Credit	189,885,315	0.37	199,180,246	0.36
Private Credit Fund - Domestic	189,885,315	0.37	199,180,246	0.36
Agriculture	216,346,325	0.42	212,042,460	0.39
Premiere Partners IV	216,346,325	0.42	212,042,460	0.39
Timberland	68,053,687	0.13	67,469,042	0.12
Forest Investment	68,053,687	0.13	67,469,042	0.12
Unlisted Infrastructure	72,178,332	0.14	82,542,882	0.15
Unlisted Infrastructure Funds	72,178,332	0.14	82,542,882	0.15
Cash & Equivalents	333,131,868	0.65	379,519,222	0.69
Total Fund	51,599,347,678	100.00	54,701,538,430	100.00



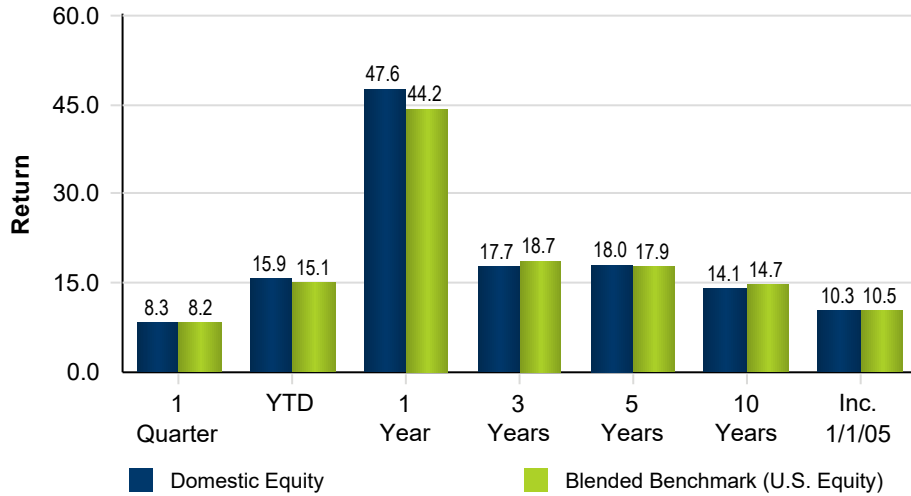
Domestic Equity

Composite Performance Summary

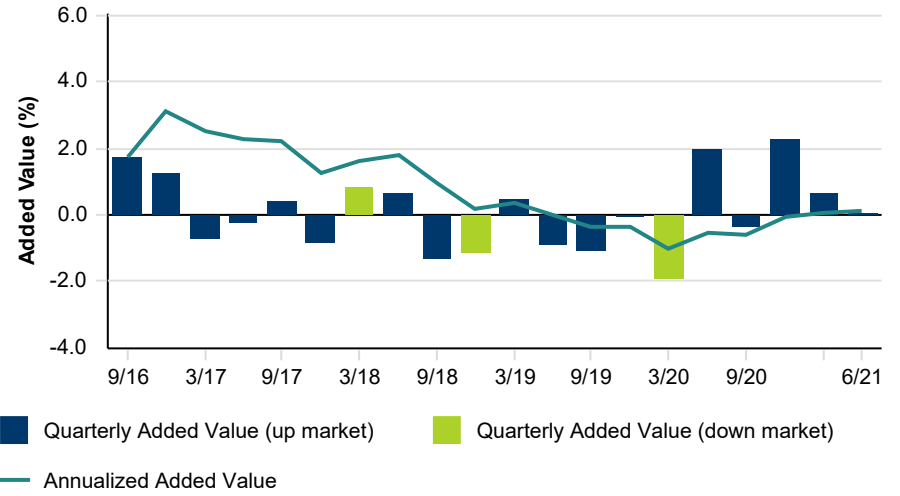
Domestic Equity

Periods Ended June 30, 2021

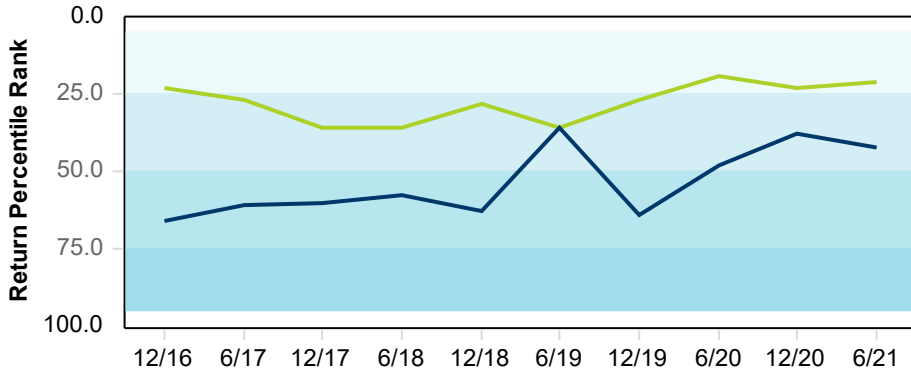
Comparative Performance



Added Value History

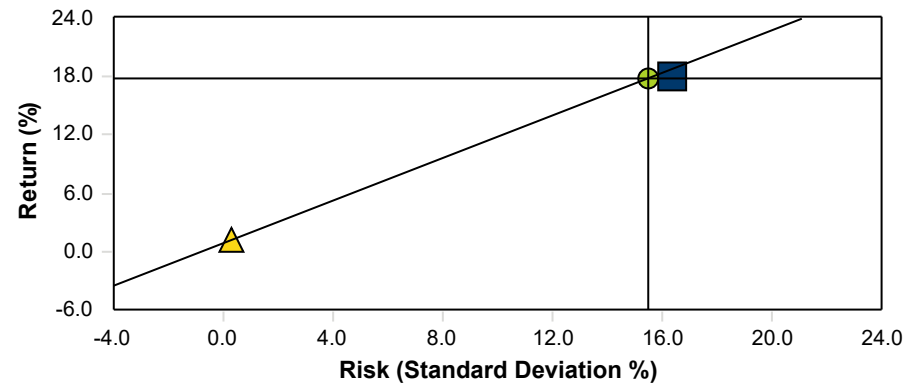


Rolling Percentile Rank: All Public Plans > \$1B-US Equity Segment



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Domestic Equity	10	0 (0%)	4 (40%)	6 (60%)	0 (0%)
Benchmark	10	4 (40%)	6 (60%)	0 (0%)	0 (0%)

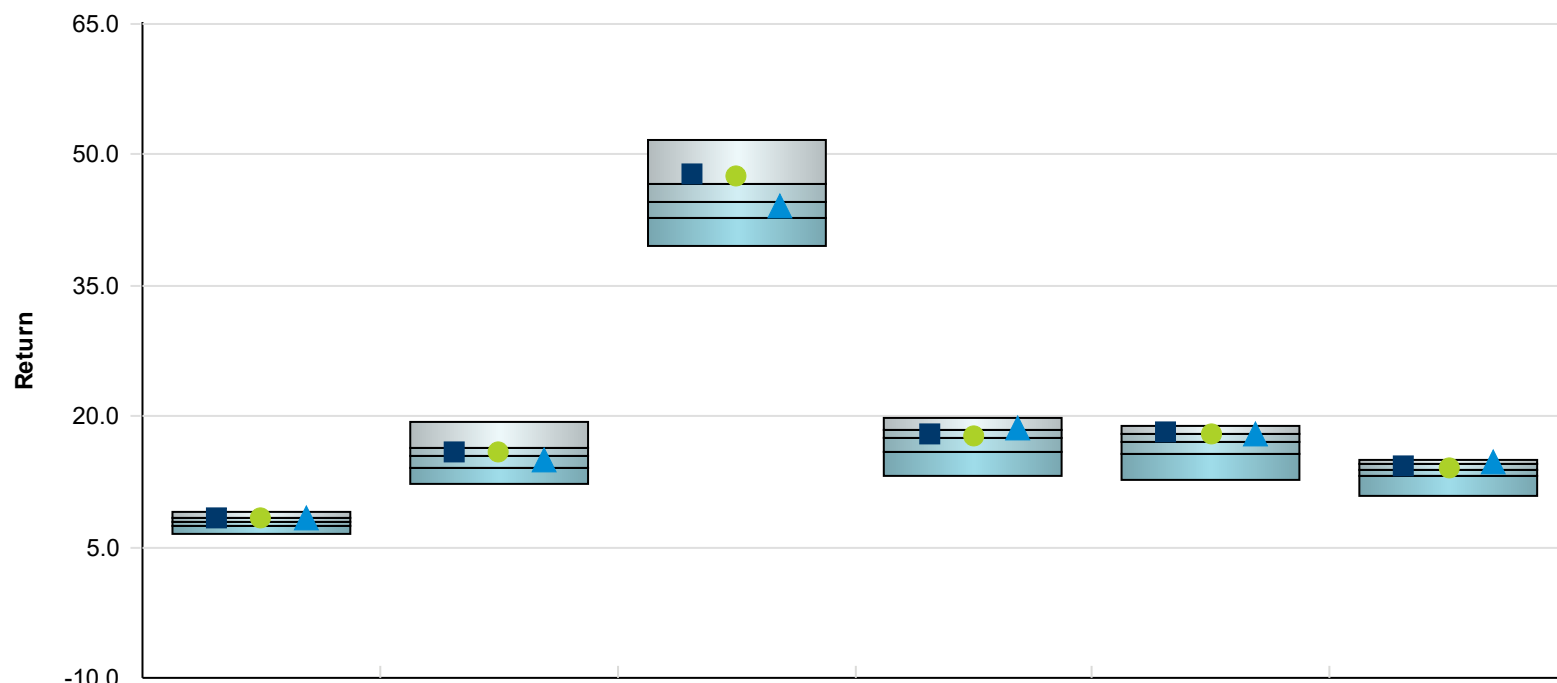
Risk and Return 07/1/16 - 06/30/21



Plan Sponsor Peer Group Analysis

Domestic Equity vs All Public Plans > \$1B-US Equity Segment(Gross)

Periods Ended June 30, 2021



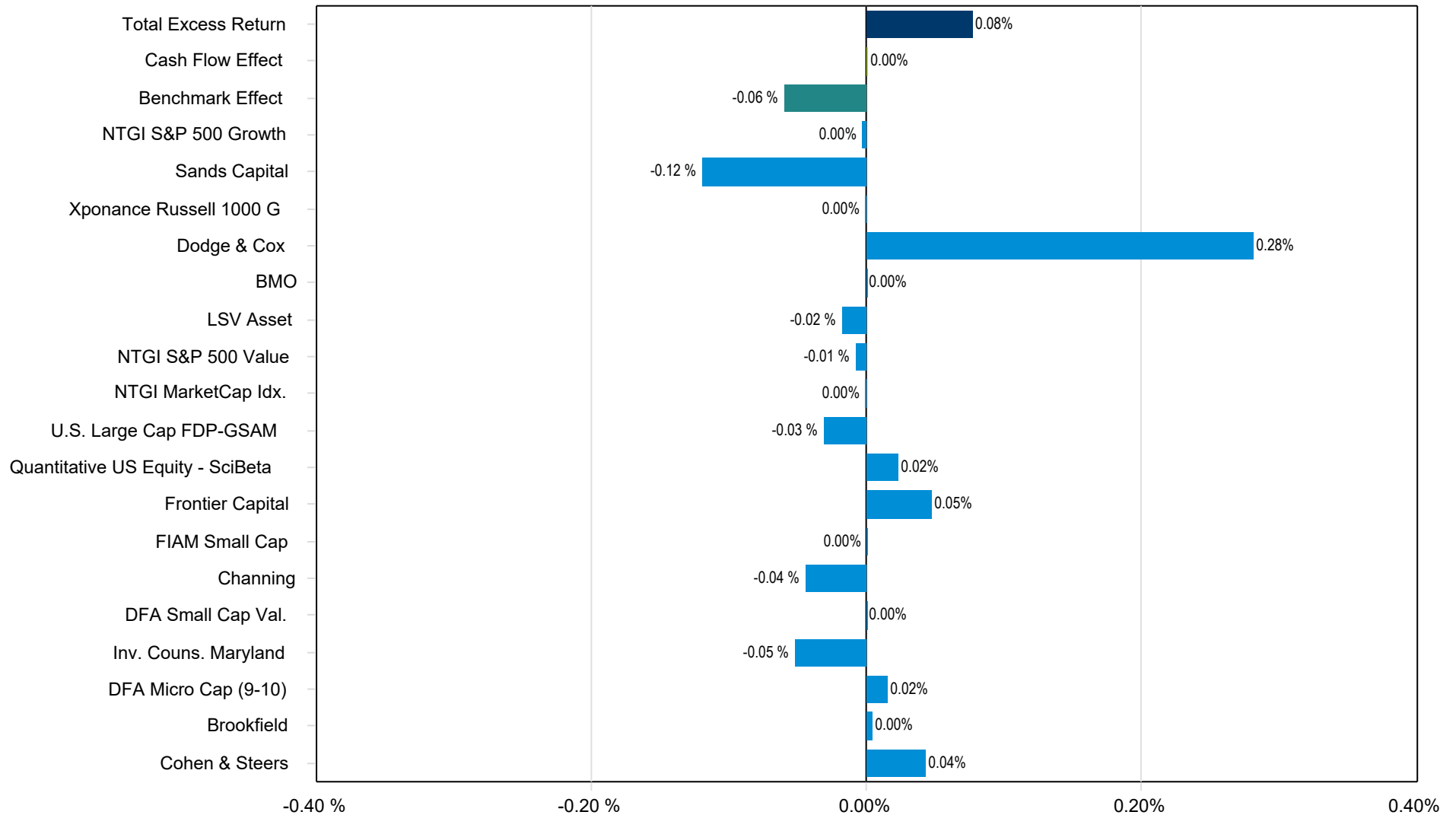
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ Domestic Equity	8.36 (29)	16.01 (33)	47.85 (15)	17.90 (36)	18.20 (19)	14.39 (26)
● Domestic Equity - Net	8.32 (30)	15.91 (33)	47.60 (16)	17.68 (42)	17.98 (24)	14.14 (39)
▲ Blended Benchmark (U.S. Equity)	8.24 (33)	15.11 (60)	44.16 (55)	18.73 (21)	17.89 (26)	14.68 (19)
5th Percentile	9.15	19.28	51.78	19.76	18.89	15.10
1st Quartile	8.44	16.27	46.66	18.38	17.89	14.44
Median	7.98	15.45	44.54	17.42	17.02	13.83
3rd Quartile	7.43	14.07	42.74	15.93	15.66	13.14
95th Percentile	6.57	12.32	39.44	13.09	12.82	10.81
Population	58	57	53	48	45	31

Asset Class Attribution

Domestic Equity

Periods Ended 1 Quarter Ending June 30, 2021

1 Quarter



Domestic Equity
Periods Ended June 30, 2021

	Market Value \$	Performance (%)							
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Domestic Equity	24,069,084,986	8.36 (29)	16.01 (33)	47.85 (15)	17.90 (36)	18.20 (19)	14.39 (26)	12.18	1/1/1982
Domestic Equity - Net		8.32 (30)	15.91 (33)	47.60 (16)	17.68 (42)	17.98 (24)	14.14 (39)		
Blended Benchmark (U.S. Equity)		8.24 (33)	15.11 (60)	44.16 (55)	18.73 (21)	17.89 (26)	14.68 (19)		
Russell 3000 Index		8.24 (33)	15.11 (60)	44.16 (55)	18.73 (21)	17.89 (26)	14.70 (19)	12.06	
U.S. Equity IMRF Custom Benchmark		8.18 (37)	15.14 (60)	44.14 (56)	16.83 (64)	16.64 (64)			
Large Cap Equity	18,609,439,775	9.37 (7)	14.99 (52)	45.54 (12)	19.41 (12)	18.99 (6)	15.13 (5)	11.92 (38)	1/1/1982
Large Cap Equity - Net		9.35 (7)	14.95 (55)	45.42 (13)	19.31 (13)	18.88 (7)	14.99 (7)		
Russell 1000 Index		8.54 (25)	14.95 (54)	43.07 (26)	19.16 (15)	17.99 (15)	14.90 (9)	12.20 (28)	
Large Cap Growth	9,133,053,519	11.59 (35)	11.70 (68)	44.49 (20)	26.00 (17)	25.14 (18)	17.94 (21)	13.01 (16)	1/1/1982
Large Cap Growth - Net		11.57 (36)	11.65 (69)	44.37 (21)	25.89 (18)	25.01 (19)	17.77 (25)		
LCG Blended Benchmark*		11.93 (25)	12.99 (44)	42.50 (37)	25.14 (26)	23.66 (33)	17.87 (22)		
Russell 1000 Growth Index		11.93 (25)	12.99 (44)	42.50 (37)	25.14 (26)	23.66 (33)	17.87 (22)	12.14 (39)	
NTGI S&P 500 Growth	3,690,513,569	11.91 (27)	14.31 (24)	41.34 (46)	23.06 (50)	21.78 (57)	17.28 (33)	9.91 (37)	8/1/2001
NTGI S&P 500 Growth - Net		11.91 (27)	14.31 (24)	41.33 (46)	23.05 (50)	21.78 (57)	17.27 (33)		
S&P 500 Growth		11.93 (25)	14.31 (24)	41.36 (46)	23.08 (49)	21.83 (56)	17.29 (33)	9.89 (38)	
Xponance Russell 1000 G	2,178,165,047	11.93 (26)	12.98 (44)	42.48 (37)				23.69 (29)	10/1/2018
Xponance Russell 1000 G - Net		11.92 (26)	12.97 (45)	42.46 (37)				23.67 (30)	
Russell 1000 Growth Index		11.93 (25)	12.99 (44)	42.50 (37)				23.71 (29)	
Sands Capital	3,264,374,903	11.07 (47)	8.47 (91)	47.98 (10)	29.74 (6)	30.02 (5)	20.47 (5)	15.31 (3)	11/1/2003
Sands Capital - Net		11.01 (48)	8.36 (92)	47.69 (11)	29.47 (6)	29.75 (5)	20.21 (5)		
LCG Blended Benchmark*		11.93 (25)	12.99 (44)	42.50 (37)	25.14 (26)	23.66 (33)	17.87 (22)	12.26 (30)	
Russell 1000 Growth Index		11.93 (25)	12.99 (44)	42.50 (37)	25.14 (26)	23.66 (33)	17.87 (22)	12.31 (30)	
Large Cap Value	4,821,809,911	6.42 (20)	22.16 (10)	50.22 (19)	13.20 (28)	14.17 (16)	12.83 (8)	10.65 (69)	10/1/1982
Large Cap Value - Net		6.38 (21)	22.08 (10)	50.01 (20)	13.04 (31)	14.00 (18)	12.64 (11)		
LCV Blended Benchmark**		5.21 (57)	17.05 (52)	43.68 (45)	12.42 (42)	11.87 (56)	11.61 (33)		
Russell 1000 Value Index		5.21 (57)	17.05 (52)	43.68 (45)	12.42 (42)	11.87 (56)	11.61 (33)	11.98 (2)	

* The LCG Blended Benchmark is currently the Russell 1000 Growth Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Growth Index.

** The LCV Blended Benchmark is currently the Russell 1000 Value Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Value Index.

*** Public Real Assets benchmark is 1/3 Dow Jones Global Infrastructure Composite Index + 2/3 FTSE Global Core Infrastructure 50/50 Net Tax Index.

Domestic Equity
Periods Ended June 30, 2021

	Market Value \$	Performance (%)							Inception Date
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
Dodge & Cox	1,826,952,979	8.96 (2)	26.14 (2)	58.33 (7)	15.69 (9)	17.33 (3)	14.13 (2)	10.77 (3)	9/1/2003
Dodge & Cox - Net		8.91 (2)	26.03 (2)	58.02 (7)	15.45 (10)	17.09 (3)	13.89 (2)		
LCV Blended Benchmark**		5.21 (57)	17.05 (52)	43.68 (45)	12.42 (42)	11.87 (56)	11.61 (33)	9.01 (39)	
Russell 1000 Value Index		5.21 (57)	17.05 (52)	43.68 (45)	12.42 (42)	11.87 (56)	11.61 (33)	9.16 (33)	
LSV Asset	1,496,173,585	4.97 (66)	23.38 (7)	52.75 (13)	11.54 (58)	13.45 (24)	12.74 (10)	11.39 (3)	2/1/2003
LSV Asset - Net		4.91 (69)	23.24 (7)	52.38 (14)	11.27 (63)	13.18 (27)	12.47 (13)		
LCV Blended Benchmark**		5.21 (57)	17.05 (52)	43.68 (45)	12.42 (42)	11.87 (56)	11.61 (33)	9.82 (33)	
Russell 1000 Value Index		5.21 (57)	17.05 (52)	43.68 (45)	12.42 (42)	11.87 (56)	11.61 (33)	9.83 (33)	
NTGI S&P 500 Value	1,498,683,347	4.88 (71)	16.25 (64)	39.49 (66)	13.21 (28)	12.65 (37)	11.94 (23)	6.70 (64)	8/1/1999
NTGI S&P 500 Value - Net		4.88 (71)	16.25 (64)	39.48 (66)	13.20 (28)	12.64 (37)	11.93 (23)		
S&P 500 Value		4.99 (66)	16.30 (63)	39.53 (66)	13.14 (29)	12.54 (40)	11.85 (25)	6.67 (66)	
Large Cap Pass. Core	3,398,577,933	8.28 (47)	15.28 (51)	44.26 (26)	18.71 (45)	17.92 (42)	14.73 (46)	11.81 (70)	1/1/1985
Large Cap Pass. Core - Net		8.28 (47)	15.27 (51)	44.25 (26)	18.70 (45)	17.91 (43)	14.73 (46)		
Dow Jones US Total Stock Market Index		8.29 (47)	15.27 (51)	44.29 (25)	18.69 (45)	17.86 (44)	14.66 (48)		
NTGI MarketCap Idx.	3,398,577,933	8.28 (47)	15.28 (51)	44.26 (26)	18.71 (45)	17.92 (42)	14.73 (46)	11.59 (72)	2/1/1985
NTGI MarketCap Idx. - Net		8.28 (47)	15.27 (51)	44.25 (26)	18.70 (45)	17.91 (43)	14.73 (46)		
Dow Jones US Total Stock Market Index		8.29 (47)	15.27 (51)	44.29 (25)	18.69 (45)	17.86 (44)	14.66 (48)		
Factor Diversity Strategies	1,255,998,413	8.08	14.38					30.14	8/18/2020
U.S. Large Cap FDP-GSAM	1,255,998,413	8.08	14.38					30.14	8/18/2020
U.S. Large Cap FDP-GSAM - Net		8.06	14.34					30.06	
Solactive GBS U.S. 1000 Index		8.66	14.84					30.37	
GSAM Active Beta US. Large Cap FDC Index		8.09	14.39					29.99	
Quantitative Factor Strategies	1,209,996,999	7.38	15.65	37.97				16.83	9/17/2019
Quantitative US Equity - SciBeta	1,209,996,999	7.38	15.65	37.97				16.83	9/17/2019
Quantitative US Equity - SciBeta - Net		7.37	15.62	37.68				16.52	
SciBeta US Hi-Fctr-Intst Div Multi-Beta Multi-Strat Index		6.92	14.84	37.52				15.85	

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*** Public Real Assets benchmark is 1/3 Dow Jones Global Infrastructure Composite Index + 2/3 FTSE Global Core Infrastructure 50/50 Net Tax Index.

Wilshire Consulting Performance



Domestic Equity
Periods Ended June 30, 2021

	Market Value \$	Performance (%)							
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Small Cap	3,500,104,910	4.18 (60)	23.10 (34)	70.96 (24)	14.02 (43)	16.47 (45)	12.60 (53)	12.73 (45)	7/1/1988
Small Cap Composite - Net		4.07 (63)	22.69 (37)	69.97 (26)	13.38 (50)	15.84 (51)	11.99 (67)		
Russell 2000 Index		4.29 (57)	17.54 (60)	62.03 (48)	13.52 (49)	16.47 (45)	12.34 (61)	10.18 (96)	
Small Cap Growth	1,160,293,183	5.01 (45)	16.33 (16)	67.07 (10)	21.37 (32)	20.99 (44)	14.75 (32)	13.99 (1)	7/1/1988
Small Cap Growth - Net		4.89 (48)	15.67 (18)	65.78 (11)	20.51 (39)	20.24 (48)	14.09 (47)		
Russell 2000 Growth Index		3.92 (67)	8.98 (60)	51.36 (51)	15.94 (68)	18.76 (60)	13.52 (63)	9.13 (99)	
Frontier Capital	964,847,439	5.13 (43)	16.65 (14)	69.18 (9)	23.63 (20)	25.53 (18)	15.63 (21)	14.40 (1)	8/1/1988
Frontier Capital - Net		5.01 (45)	15.93 (17)	67.74 (10)	22.51 (27)	24.59 (22)	14.89 (30)		
Russell 2000 Growth Index		3.92 (67)	8.98 (60)	51.36 (51)	15.94 (68)	18.76 (60)	13.52 (63)	9.21 (99)	
FIAM Small Cap	195,445,744	4.40 (57)	14.72 (24)	58.74 (20)	15.40 (73)	16.02 (85)	13.44 (64)	13.98 (4)	8/1/1988
FIAM Small Cap - Net		4.29 (59)	14.36 (26)	58.08 (21)	15.03 (78)	15.60 (88)	12.92 (73)		
Russell 2000 Index		4.29 (59)	17.54 (12)	62.03 (16)	13.52 (87)	16.47 (81)	12.34 (81)	10.24 (80)	
Russell 2000 Growth Index		3.92 (67)	8.98 (60)	51.36 (51)	15.94 (68)	18.76 (60)	13.52 (63)	9.21 (99)	
Small Cap Value	2,114,919,967	3.61 (66)	26.75 (43)	72.97 (40)	10.38 (34)	14.20 (15)	11.80 (15)	12.19 (4)	9/1/1989
Small Cap Value - Net		3.51 (67)	26.51 (46)	72.16 (43)	9.83 (42)	13.61 (24)	11.26 (20)		
Russell 2000 Value Index		4.56 (43)	26.69 (43)	73.28 (38)	10.27 (36)	13.62 (24)	10.85 (30)	10.52 (42)	
Channing	333,057,183	1.70 (90)	17.08 (96)	64.51 (68)	11.83 (17)	13.88 (18)	12.24 (9)	12.24 (10)	7/1/2011
Channing - Net		1.60 (90)	16.83 (97)	63.80 (70)	11.28 (21)	13.32 (29)	11.65 (17)	11.65 (17)	
Russell 2000 Value Index		4.56 (43)	26.69 (43)	73.28 (38)	10.27 (36)	13.62 (24)	10.85 (30)	10.85 (30)	
DFA Small Cap Val.	827,658,649	4.63 (42)	32.69 (9)	83.91 (13)	9.69 (45)	13.37 (28)	11.49 (18)	12.47 (1)	2/1/1996
DFA Small Cap Val. - Net		4.52 (44)	32.41 (11)	83.11 (14)	9.17 (54)	12.81 (38)	10.95 (25)		
Russell 2000 Value Index		4.56 (43)	26.69 (43)	73.28 (38)	10.27 (36)	13.62 (24)	10.85 (30)	10.17 (66)	
Inv. Couns. Maryland	954,204,135	3.41 (69)	25.50 (54)	67.35 (61)	10.48 (32)	15.10 (10)	12.48 (7)	12.10 (9)	5/1/1999
Inv. Couns. Maryland - Net		3.32 (72)	25.29 (56)	66.48 (63)	9.91 (40)	14.49 (14)	11.95 (12)		
Russell 2000 Value Index		4.56 (43)	26.69 (43)	73.28 (38)	10.27 (36)	13.62 (24)	10.85 (30)	9.84 (63)	

* The LCG Blended Benchmark is currently the Russell 1000 Growth Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Growth Index.

** The LCV Blended Benchmark is currently the Russell 1000 Value Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Value Index.

*** Public Real Assets benchmark is 1/3 Dow Jones Global Infrastructure Composite Index + 2/3 FTSE Global Core Infrastructure 50/50 Net Tax Index.

Domestic Equity
Periods Ended June 30, 2021

	Market Value \$	Performance (%)							Inception Date
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
Micro Cap	224,891,761	5.37 (35)	26.70 (19)	72.55 (22)	11.37 (68)	14.51 (67)	11.07 (85)	11.96 (79)	7/1/1984
Micro Cap - Net		5.21 (37)	26.36 (20)	71.63 (23)	10.79 (74)	13.88 (73)	10.39 (91)		
Russell Microcap Index		4.14 (60)	29.02 (12)	75.77 (16)	14.47 (40)	18.13 (30)	13.06 (46)		
DFA Micro Cap (9-10)	224,891,761	5.37 (35)	26.70 (19)	72.55 (22)	11.50 (67)	15.71 (53)	13.11 (45)	11.67 (54)	8/1/1987
DFA Micro Cap (9-10) - Net		5.21 (37)	26.36 (20)	71.63 (23)	10.93 (71)	15.12 (59)	12.55 (54)		
Russell 2000 Index		4.29 (57)	17.54 (60)	62.03 (48)	13.52 (49)	16.47 (45)	12.34 (61)	9.58 (91)	
Russell 2000 Value Index		4.56 (48)	26.69 (19)	73.28 (20)	10.27 (79)	13.62 (76)	10.85 (87)	10.30 (88)	
Public Real Assets	749,543,302	5.58	9.65	20.39	9.13			7.42	8/1/2017
Public Real Assets - Net		5.48	9.44	19.92	8.66			6.98	
Public Real Assets Benchmark***		4.48	9.47	19.31	7.55			5.58	
Brookfield	181,944,002	8.43	13.63	23.60	7.02			5.13	8/1/2017
Brookfield - Net		8.30	13.35	22.97	6.46			4.61	
Dow Jones Brookfield Global Infrastructure Composi		7.73	14.34	20.85	6.66			4.62	
Cohen & Steers	567,599,300	4.70	8.44	19.40	10.24			8.61	8/1/2017
Cohen & Steers - Net		4.61	8.25	18.97	9.80			8.20	
FTSE GLOBAL CORE INFRASTRUCTURE 50/50 INDEX (Net)		2.89	7.09	18.51	7.97			6.02	

* The LCG Blended Benchmark is currently the Russell 1000 Growth Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Growth Index.

** The LCV Blended Benchmark is currently the Russell 1000 Value Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Value Index.

*** Public Real Assets benchmark is 1/3 Dow Jones Global Infrastructure Composite Index + 2/3 FTSE Global Core Infrastructure 50/50 Net Tax Index.



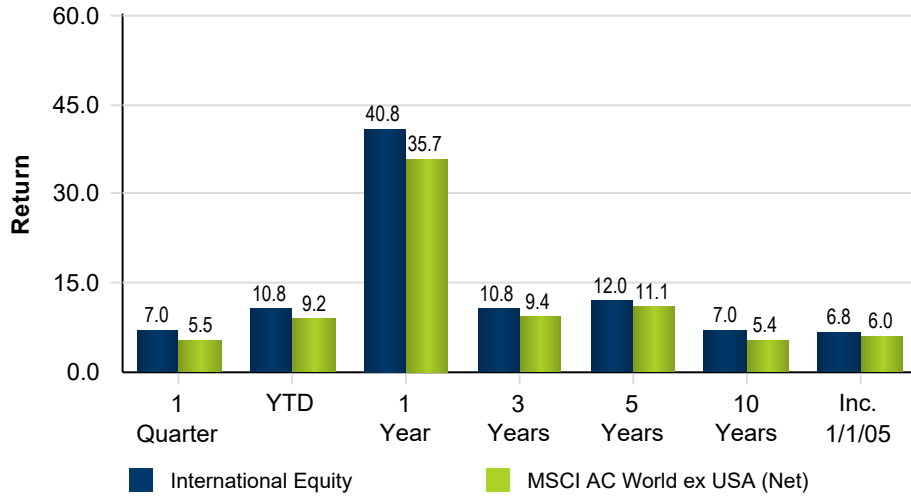
International Equity

Composite Performance Summary

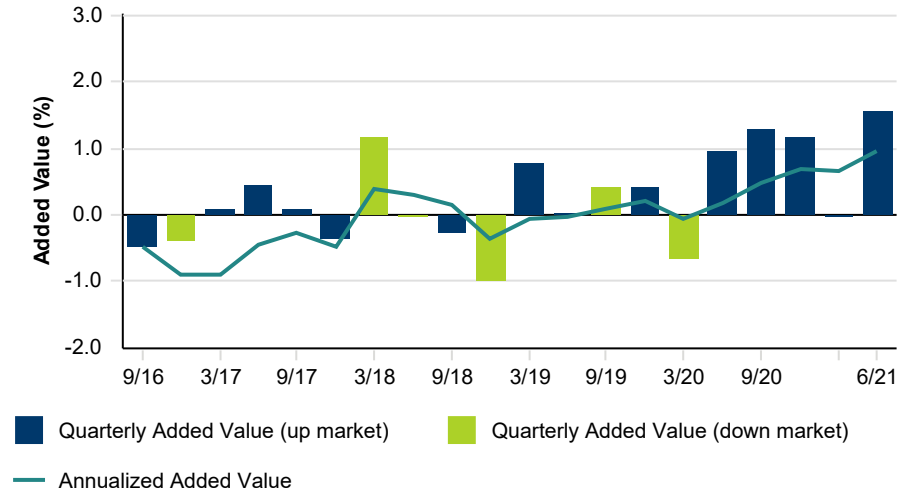
International Equity

Periods Ended June 30, 2021

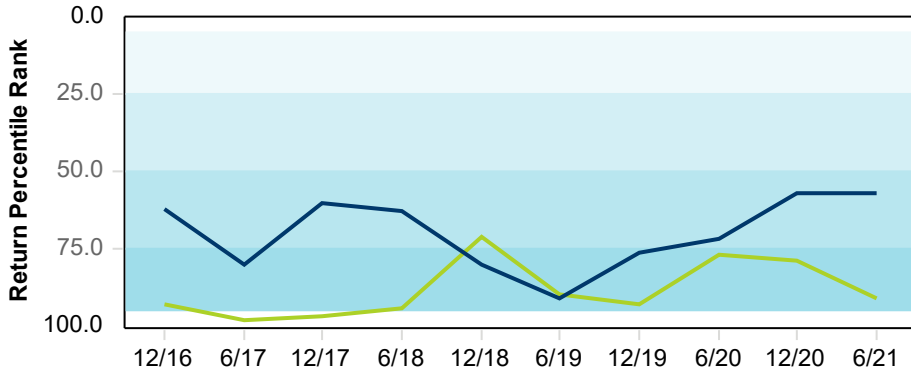
Comparative Performance



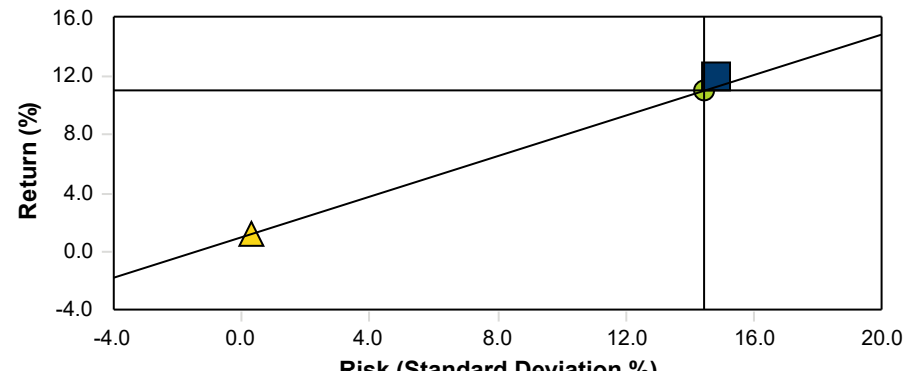
Added Value History



Rolling Percentile Rank: All Public Plans > \$1B-Intl. Equity Segment



Risk and Return 07/1/16 - 06/30/21



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
International Equity	10	0 (0%)	0 (0%)	6 (60%)	4 (40%)
Benchmark	10	0 (0%)	0 (0%)	1 (10%)	9 (90%)

- International Equity
- MSCI AC World ex USA (Net)
- 90 Day US Treasury Bill

Plan Sponsor Peer Group Analysis

International Equity vs All Public Plans > \$1B-Intl. Equity Segment(Gross)

Periods Ended June 30, 2021



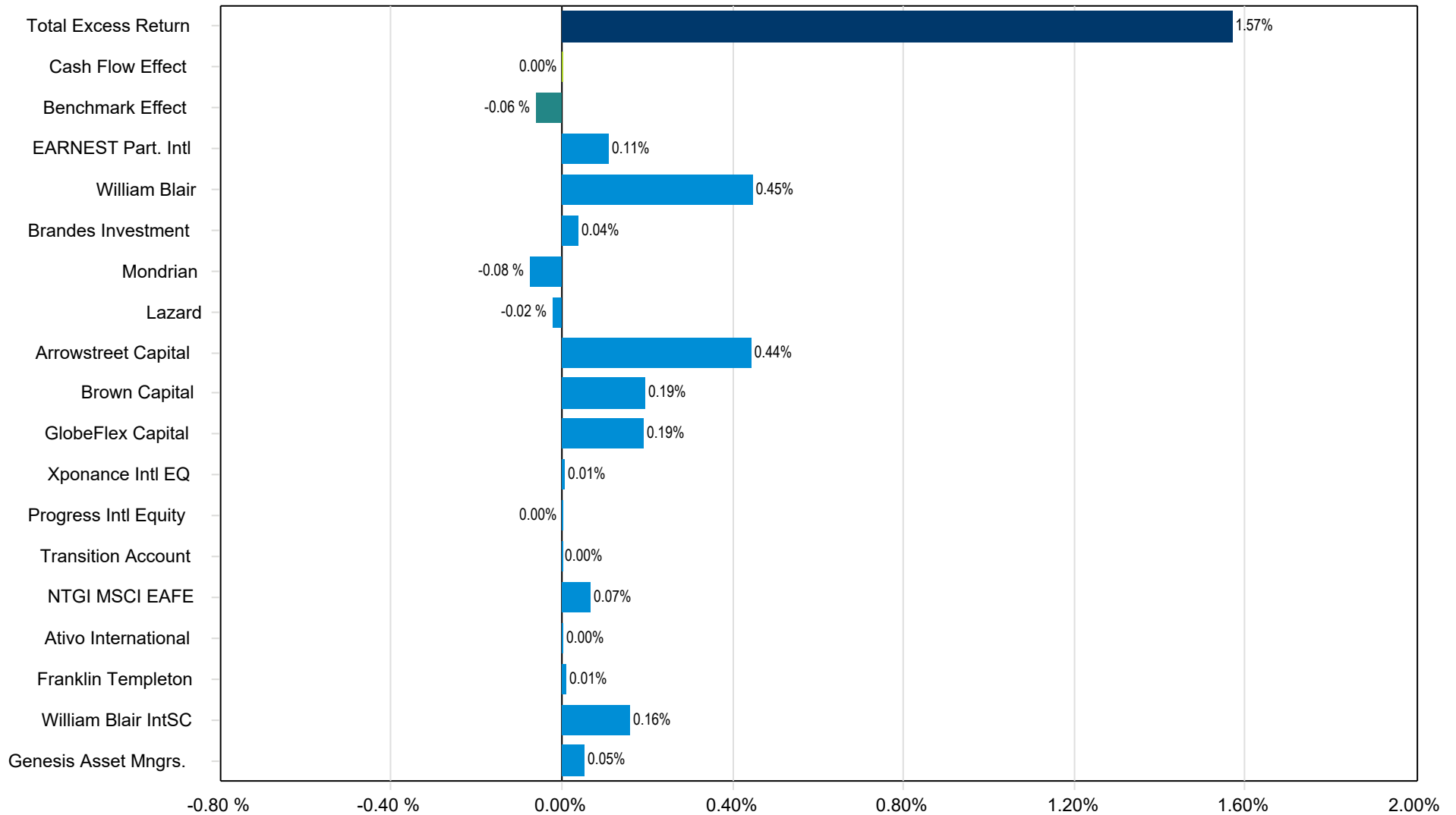
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ International Equity	7.13 (10)	10.95 (38)	41.28 (16)	11.14 (52)	12.42 (48)	7.34 (29)
● International Equity - Net	7.05 (10)	10.78 (41)	40.79 (23)	10.77 (57)	12.04 (62)	6.99 (56)
▲ MSCI AC World ex USA (Net)	5.48 (79)	9.16 (78)	35.72 (82)	9.38 (91)	11.08 (89)	5.45 (99)
5th Percentile	7.47	13.50	43.15	13.53	14.31	8.71
1st Quartile	6.53	11.43	40.54	12.63	13.32	7.53
Median	6.07	10.28	39.59	11.20	12.33	7.03
3rd Quartile	5.55	9.28	37.82	10.01	11.58	6.49
95th Percentile	4.56	7.62	32.50	8.49	10.81	5.73
Population	58	58	54	50	49	32

Asset Class Attribution

International Equity

Periods Ended 1 Quarter Ending June 30, 2021

1 Quarter



Wilshire Consulting Performance

International Equity
Periods Ended June 30, 2021

	Market Value \$	Performance (%)							
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
International Equity	10,620,150,178	7.13 (10)	10.95 (38)	41.28 (16)	11.14 (52)	12.42 (48)	7.34 (29)	8.23	9/1/1986
International Equity - Net		7.05 (10)	10.78 (41)	40.79 (23)	10.77 (57)	12.04 (62)	6.99 (56)		
MSCI AC World ex USA (Net)		5.48 (79)	9.16 (78)	35.72 (82)	9.38 (91)	11.08 (89)	5.45 (99)		
International Equity IMRF Custom Benchmark		5.42 (80)	9.08 (80)	36.43 (79)	9.43 (91)	11.19 (87)			
Intl Large Cap Equity	8,197,806,406	7.28 (16)	11.90 (19)	41.11 (21)	10.80 (52)	12.17 (48)	7.30 (49)	8.20 (96)	9/1/1986
Intl LargeCap Equity - Net		7.21 (17)	11.77 (20)	40.72 (25)	10.50 (56)	11.87 (53)	7.02 (54)		
MSCI AC World ex USA (Net)		5.48 (51)	9.16 (52)	35.72 (54)	9.38 (63)	11.08 (62)	5.45 (86)		
Intl Large Cap Grwth	1,838,913,514	8.81 (14)	10.04 (27)	46.69 (4)	14.16 (42)	14.86 (43)	8.16 (61)	9.70 (50)	9/1/2002
Intl Large Cap Grwth - Net		8.74 (15)	9.89 (28)	46.26 (5)	13.87 (43)	14.56 (46)	7.83 (70)		
MSCI AC World ex USA (Net)		5.48 (73)	9.16 (34)	35.72 (48)	9.38 (84)	11.08 (88)	5.45 (100)	7.96 (100)	
EARNEST Part. Intl	627,836,196	7.39 (39)	13.56 (7)	54.16 (1)	9.88 (80)	12.67 (64)	5.92 (99)	9.73 (34)	10/1/2004
EARNEST Part. Intl - Net		7.34 (40)	13.45 (7)	53.79 (1)	9.67 (81)	12.46 (69)	5.63 (100)		
MSCI AC World ex USA (Net)		5.48 (73)	9.16 (34)	35.72 (48)	9.38 (84)	11.08 (88)	5.45 (100)	6.79 (100)	
MSCI AC World ex USA Growth (Net)		6.60 (53)	6.52 (77)	33.68 (63)	13.23 (48)	13.37 (57)	7.28 (78)	7.96 (78)	
William Blair	1,211,077,317	9.56 (11)	8.29 (46)	43.09 (17)	17.02 (18)	16.22 (27)	10.04 (23)	11.26 (24)	10/1/2002
William Blair - Net		9.48 (11)	8.12 (48)	42.64 (18)	16.62 (21)	15.82 (31)	9.64 (32)		
MSCI AC World ex USA (Net)		5.48 (73)	9.16 (34)	35.72 (48)	9.38 (84)	11.08 (88)	5.45 (100)	8.65 (98)	
MSCI AC World ex USA Growth (Net)		6.60 (53)	6.52 (77)	33.68 (63)	13.23 (48)	13.37 (57)	7.28 (78)	9.26 (80)	
Intl Large Cap Val.	1,415,007,681	5.15 (31)	12.52 (30)	39.45 (45)	6.80 (62)	8.77 (70)	5.51 (74)	8.76 (26)	10/1/1995
Intl Large Cap Val. - Net		5.07 (35)	12.35 (31)	39.04 (47)	6.46 (64)	8.41 (80)	5.14 (79)		
MSCI AC World ex USA (Net)		5.48 (25)	9.16 (77)	35.72 (63)	9.38 (35)	11.08 (39)	5.45 (75)	5.85 (100)	
Brandes Investment	615,028,051	6.21 (21)	15.87 (8)	44.52 (25)	5.61 (77)	8.97 (66)	5.69 (68)	8.90 (20)	1/1/1996
Brandes Investment - Net		6.16 (21)	15.75 (9)	44.22 (25)	5.39 (80)	8.72 (71)	5.45 (75)		
MSCI AC World ex USA (Net)		5.48 (25)	9.16 (77)	35.72 (63)	9.38 (35)	11.08 (39)	5.45 (75)	5.76 (100)	
MSCI AC World ex USA Value		4.53 (49)	12.06 (34)	38.32 (52)	5.83 (73)	9.17 (61)	4.07 (96)		

* Custom benchmark is calculated as a weighted average of each funds respective benchmark until 12/2017. After 12/2017 the benchmark is MSCI ACWI ex US - Net.

** Genesis is NOF NAV commingled fund.

Wilshire Consulting Performance

International Equity
Periods Ended June 30, 2021

	Market Value \$	Performance (%)							
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Mondrian	655,567,379	4.39 (53)	10.93 (50)	36.07 (62)	7.97 (50)	8.60 (74)		6.47 (80)	4/1/2012
Mondrian - Net		4.29 (55)	10.72 (54)	35.54 (63)	7.49 (55)	8.10 (84)		5.97 (90)	
MSCI AC World ex USA (Net)		5.48 (25)	9.16 (77)	35.72 (63)	9.38 (35)	11.08 (39)		6.80 (70)	
MSCI AC World ex USA Value		4.53 (49)	12.06 (34)	38.32 (52)	5.83 (73)	9.17 (61)		5.31 (94)	
Lazard	144,412,250	4.13 (59)	6.30 (94)	34.12 (73)	8.70 (40)	9.46 (57)		7.52 (54)	4/1/2012
Lazard - Net		4.07 (60)	6.18 (95)	33.80 (74)	8.43 (43)	9.19 (61)		7.03 (66)	
MSCI AC World ex USA (Net)		5.48 (25)	9.16 (77)	35.72 (63)	9.38 (35)	11.08 (39)		6.80 (70)	
MSCI AC World ex USA Value		4.53 (49)	12.06 (34)	38.32 (52)	5.83 (73)	9.17 (61)		5.31 (94)	
Intl Large Cap Active Core	2,768,941,709	8.83 (3)	15.23 (3)	45.71 (4)	12.91 (18)	13.85 (20)	8.98 (11)	6.88 (5)	2/1/2008
Intl Large Cap Active Core - Net		8.73 (3)	15.04 (3)	44.95 (6)	12.37 (22)	13.28 (23)	8.43 (17)		
MSCI AC World ex USA (Net)		5.48 (57)	9.16 (66)	35.72 (46)	9.38 (52)	11.08 (57)	5.45 (100)	3.91 (94)	
Arrowstreet Capital	1,125,244,504	9.89 (2)	20.00 (1)	59.46 (1)	18.09 (3)	16.99 (5)	10.49 (2)	8.05 (1)	3/1/2008
Arrowstreet Capital - Net		9.78 (2)	19.75 (1)	58.79 (1)	17.55 (3)	16.46 (6)	9.98 (3)	7.55 (1)	
MSCI AC World ex USA (Net)		5.48 (57)	9.16 (66)	35.72 (46)	9.38 (52)	11.08 (57)	5.45 (100)	3.72 (94)	
Brown Capital	650,536,026	8.76 (3)	6.11 (94)	29.72 (88)	13.12 (18)	12.66 (29)	9.63 (5)	9.17 (6)	10/1/2004
Brown Capital - Net		8.69 (4)	5.98 (95)	28.62 (90)	12.60 (20)	11.89 (45)	8.80 (12)		
MSCI AC World ex USA (Net)		5.48 (57)	9.16 (66)	35.72 (46)	9.38 (52)	11.08 (57)	5.45 (100)	6.79 (87)	
GlobeFlex Capital	884,712,321	7.89 (6)	17.76 (2)	44.67 (7)	8.46 (64)	11.64 (49)	7.45 (37)	6.05 (44)	3/1/2006
GlobeFlex Capital - Net		7.81 (6)	17.56 (2)	44.14 (8)	8.02 (72)	11.21 (54)	7.01 (61)	5.60 (66)	
MSCI AC World ex USA (Net)		5.48 (57)	9.16 (66)	35.72 (46)	9.38 (52)	11.08 (57)	5.45 (100)	4.94 (88)	
Xponance Intl EQ	107,482,445	6.05 (39)						12.05 (21)	2/1/2021
Xponance Intl EQ - Net		5.90 (40)						11.90 (25)	
MSCI EAFE Index (Net)		5.17 (63)						10.00 (64)	
Progress Intl Equity*	846,696								

* Custom benchmark is calculated as a weighted average of each funds respective benchmark until 12/2017. After 12/2017 the benchmark is MSCI ACWI ex US - Net.

** Genesis is NOF NAV commingled fund.

Wilshire Consulting Performance

International Equity
Periods Ended June 30, 2021

	Market Value \$	Performance (%)							
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Intl Large Cap Passive Core	2,174,943,503	5.49 (55)	9.03 (69)	32.66 (73)	8.62 (63)	10.68 (60)	6.30 (83)	4.58 (98)	2/1/2000
Intl Large Cap Passive Core - Net		5.49 (56)	9.02 (69)	32.65 (73)	8.62 (63)	10.67 (60)	6.29 (84)		
MSCI EAFE Index (Net)		5.17 (63)	8.83 (70)	32.35 (73)	8.27 (66)	10.28 (65)	5.89 (94)	4.18 (100)	
NTGI MSCI EAFE	2,174,943,503	5.49 (55)	9.03 (69)	32.66 (73)	8.62 (63)	10.68 (60)	6.30 (83)	4.57 (98)	2/1/2000
NTGI MSCI EAFE - Net		5.49 (56)	9.02 (69)	32.65 (73)	8.62 (63)	10.67 (60)	6.29 (84)		
MSCI EAFE Index (Net)		5.17 (63)	8.83 (70)	32.35 (73)	8.27 (66)	10.28 (65)	5.89 (94)	4.18 (100)	
Intl All Cap Developed	170,019,885	5.94 (44)	10.63 (41)	31.72 (80)				12.09 (77)	2/1/2019
Intl All Cap Developed - Net		5.82 (47)	10.37 (42)	31.11 (82)				11.60 (79)	
MSCI EAFE + Canada (Net)		5.65 (50)	9.92 (50)	33.60 (72)				13.29 (69)	
Ativo International	170,019,885	5.94 (44)	10.63 (41)	31.72 (80)				12.09 (77)	2/1/2019
Ativo International - Net		5.82 (47)	10.37 (42)	31.11 (82)				11.60 (79)	
MSCI EAFE + Canada (Net)		5.65 (50)	9.92 (50)	33.60 (72)				13.29 (69)	
Intl Small Cap Eqty	706,538,238	9.10 (17)	10.61 (59)	46.35 (38)	12.83 (24)	14.10 (38)	9.29 (52)	6.81 (100)	12/1/2005
Intl Small Cap Eqty - Net		8.92 (17)	10.23 (59)	45.34 (47)	11.99 (29)	13.26 (50)	8.49 (76)		
MSCI AC World ex USA Small Cap (Net)		6.35 (64)	12.24 (47)	47.04 (36)	9.78 (53)	11.97 (67)	7.02 (94)	7.40 (95)	
Custom Benchmark (Intl Small Cap)		6.35 (64)	12.24 (47)	47.04 (36)	9.78 (53)	11.97 (67)	7.02 (94)	6.74 (100)	
Franklin Templeton	259,693,686	6.94 (50)	13.88 (29)	47.43 (34)	9.07 (60)	12.69 (57)		8.18 (84)	8/1/2011
Franklin Templeton - Net		6.77 (54)	13.50 (32)	46.43 (38)	8.27 (73)	11.87 (68)		7.41 (93)	
MSCI AC World ex USA Small Cap (Net)		6.35 (64)	12.24 (47)	47.04 (36)	9.78 (53)	11.97 (67)		7.08 (95)	
William Blair IntSC	446,844,552	10.40 (5)	8.80 (69)	45.73 (42)	15.29 (16)	14.87 (28)	10.16 (32)	12.00 (39)	9/1/2010
William Blair IntSC - Net		10.21 (6)	8.42 (72)	44.71 (51)	14.42 (19)	14.01 (41)	9.31 (52)	11.15 (55)	
MSCI AC World ex USA Small Cap (Net)		6.35 (64)	12.24 (47)	47.04 (36)	9.78 (53)	11.97 (67)	7.02 (94)	8.79 (95)	
Custom Benchmark (Intl Small Cap)		6.35 (64)	12.24 (47)	47.04 (36)	9.78 (53)	11.97 (67)	7.02 (94)	9.07 (94)	
Emerging Mkt Equity	1,545,785,649	5.63 (49)	6.34 (73)	41.18 (63)	13.42 (39)	13.73 (52)	6.37 (45)	9.61 (42)	2/1/1992
Emerging Mkt Equity - Net		5.48 (52)	6.05 (75)	40.41 (64)	12.78 (48)	13.07 (59)	5.75 (52)		
MSCI Emerging Markets Index		5.12 (56)	7.58 (60)	41.36 (63)	11.67 (61)	13.43 (56)	4.65 (72)	7.71 (99)	

* Custom benchmark is calculated as a weighted average of each funds respective benchmark until 12/2017. After 12/2017 the benchmark is MSCI ACWI ex US - Net.

** Genesis is NOF NAV commingled fund.

Wilshire Consulting Performance

International Equity
Periods Ended June 30, 2021

	Market Value \$	Performance (%)							
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Genesis Asset Mngrs.**	1,545,785,649	5.63 (49)	6.34 (73)	41.18 (63)	13.42 (39)	13.73 (52)	6.37 (45)	11.90 (20)	5/1/2004
Genesis Asset Mngrs. - Net		5.48 (52)	6.05 (75)	40.41 (64)	12.78 (48)	13.07 (59)	5.75 (52)		
MSCI Emerging Markets Index		5.12 (56)	7.58 (60)	41.36 (63)	11.67 (61)	13.43 (56)	4.65 (72)	9.78 (77)	

* Custom benchmark is calculated as a weighted average of each funds respective benchmark until 12/2017. After 12/2017 the benchmark is MSCI ACWI ex US - Net.

** Genesis is NOF NAV commingled fund.



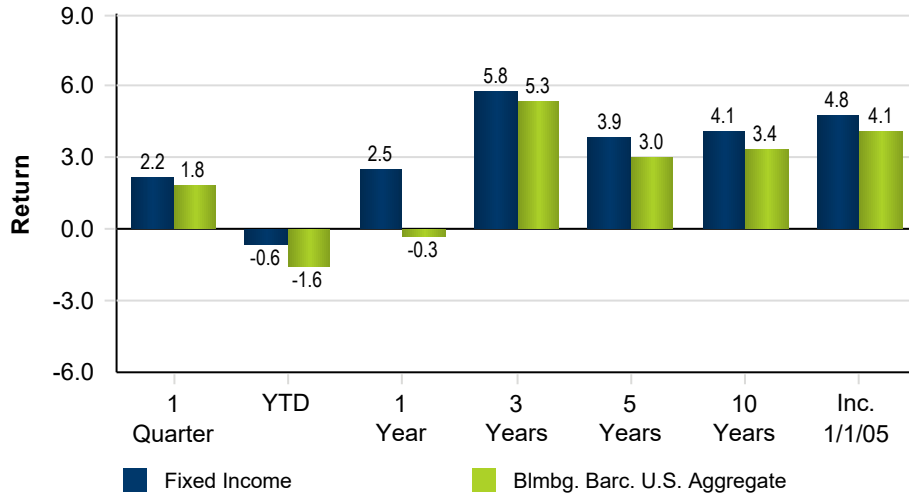
Fixed Income

Composite Performance Summary

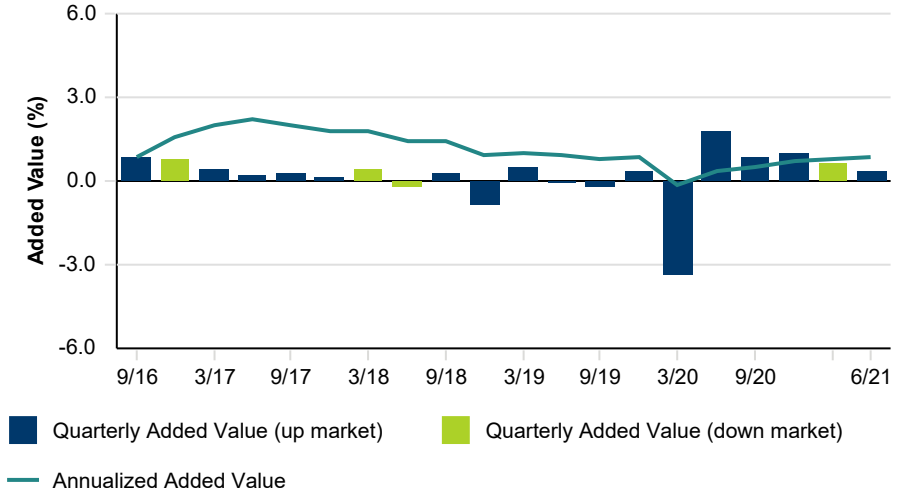
Fixed Income

Periods Ended June 30, 2021

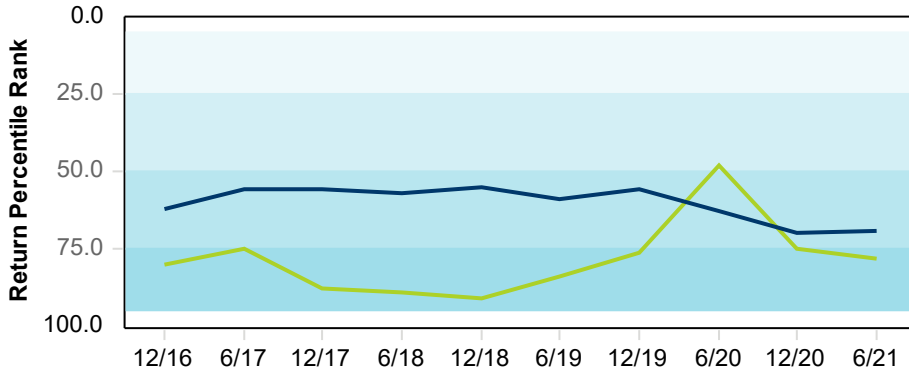
Comparative Performance



Added Value History

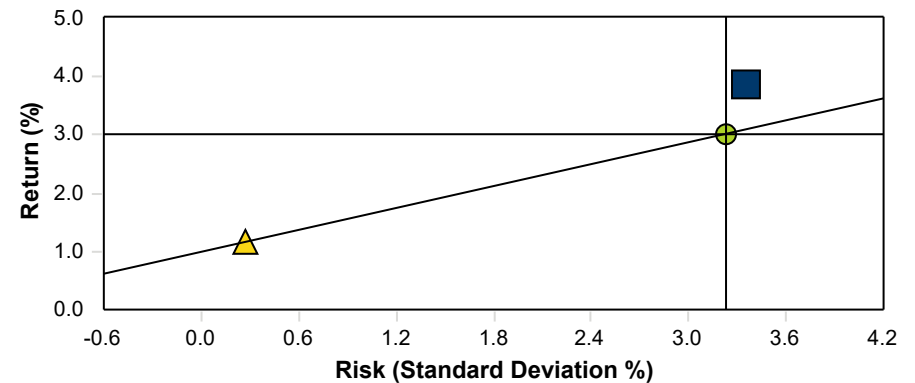


Rolling Percentile Rank: All Public Plans > \$1B-US Fixed Income Segment



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Fixed Income	10	0 (0%)	0 (0%)	10 (100%)	0 (0%)
Benchmark	10	0 (0%)	1 (10%)	2 (20%)	7 (70%)

Risk and Return 07/1/16 - 06/30/21

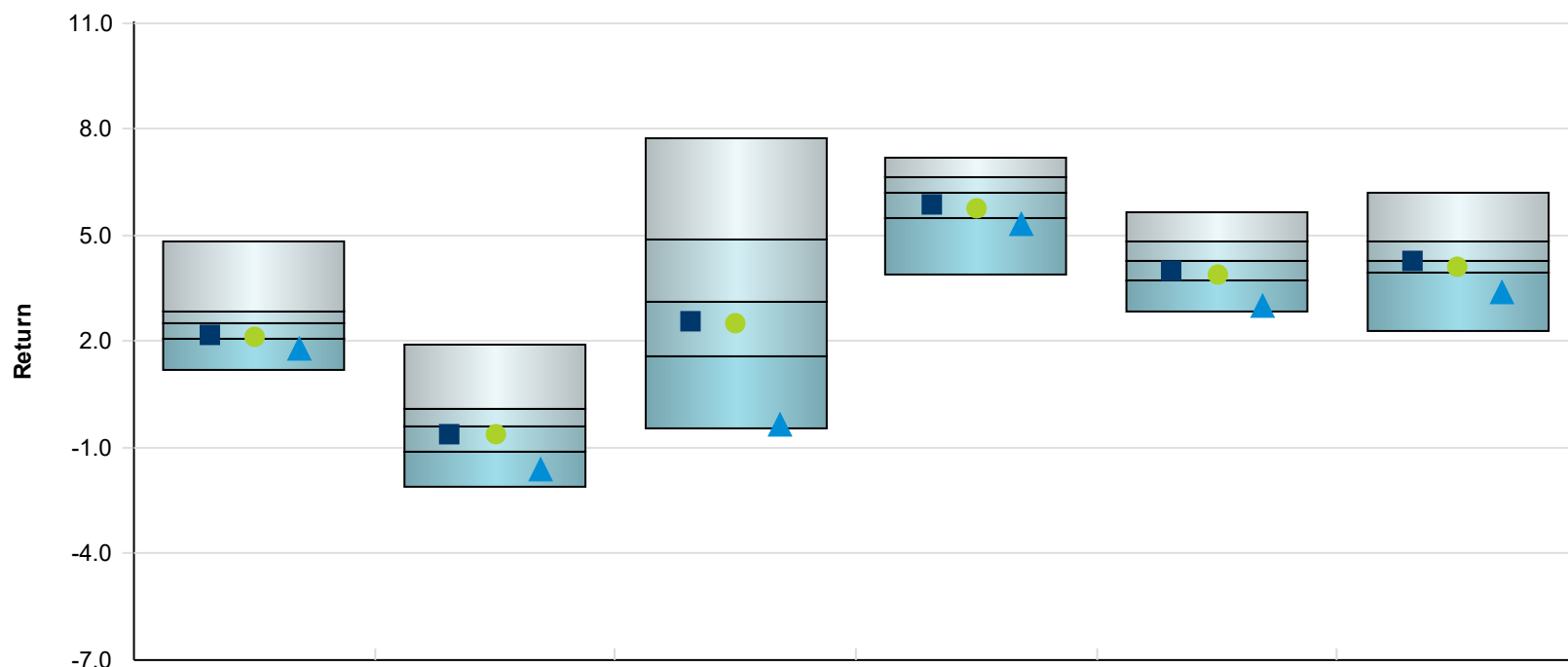


- Fixed Income
- Blmbg. Barc. U.S. Aggregate
- 90 Day US Treasury Bill

Plan Sponsor Peer Group Analysis

Fixed Income vs All Public Plans > \$1B-US Fixed Income Segment(Gross)

Periods Ended June 30, 2021



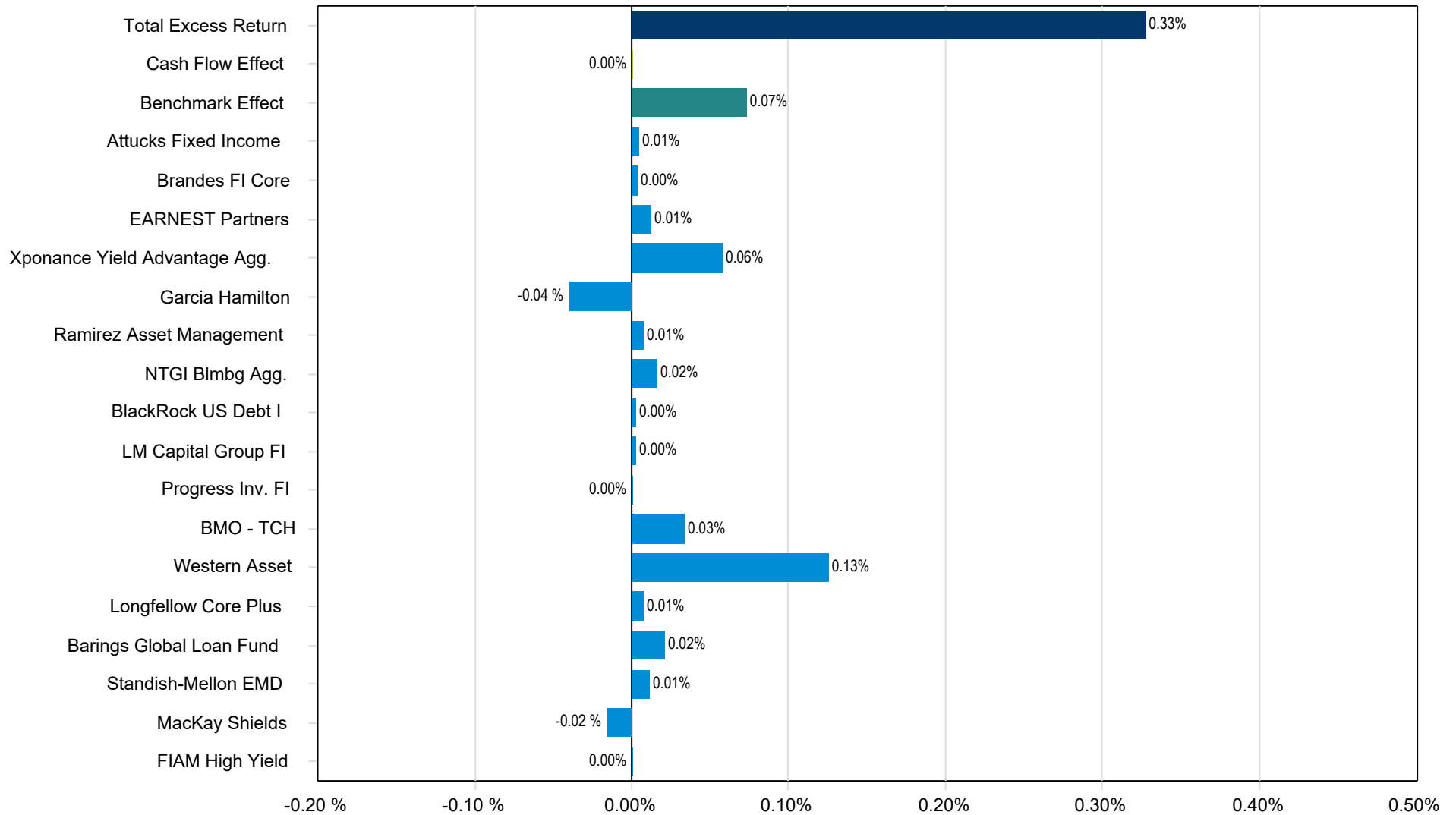
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ Fixed Income	2.18 (69)	-0.59 (60)	2.59 (59)	5.89 (63)	4.01 (61)	4.27 (52)
● Fixed Income - Net	2.16 (69)	-0.64 (61)	2.50 (59)	5.77 (69)	3.87 (69)	4.13 (59)
▲ Blmbg. Barc. U.S. Aggregate	1.83 (85)	-1.61 (90)	-0.34 (95)	5.34 (78)	3.03 (91)	3.39 (89)
5th Percentile	4.83	1.94	7.77	7.21	5.65	6.20
1st Quartile	2.86	0.12	4.87	6.66	4.84	4.84
Median	2.51	-0.41	3.15	6.21	4.29	4.30
3rd Quartile	2.07	-1.09	1.56	5.51	3.73	3.95
95th Percentile	1.18	-2.09	-0.46	3.89	2.85	2.29
Population	62	61	57	51	50	36

Asset Class Attribution

Fixed Income

Periods Ended 1 Quarter Ending June 30, 2021

1 Quarter



Wilshire Consulting Performance

Fixed Income

Periods Ended June 30, 2021

	Market Value \$	Performance (%)							
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Fixed Income	12,052,637,222	2.18 (69)	-0.59 (60)	2.59 (59)	5.89 (63)	4.01 (61)	4.27 (52)	8.06	1/1/1982
Fixed Income - Net		2.16 (69)	-0.64 (61)	2.50 (59)	5.77 (69)	3.87 (69)	4.13 (59)		
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (90)	-0.34 (95)	5.34 (78)	3.03 (91)	3.39 (89)	7.52	
Fixed Income IMRF Custom Benchmark		1.90 (83)	-1.04 (74)	1.27 (80)	5.48 (76)	3.44 (85)			
Active Fixed Core	3,827,438,231	2.01 (46)	-1.02 (38)	1.02 (51)	5.48 (83)	3.45 (66)	3.96 (51)	4.59 (88)	4/1/2001
Active Fixed Core - Net		1.98 (50)	-1.07 (41)	0.91 (53)	5.37 (92)	3.34 (72)	3.81 (66)		
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (80)	-0.34 (86)	5.34 (94)	3.03 (92)	3.39 (94)	4.53 (93)	
Attucks Fixed Income	99,648,372	2.53 (9)						-0.30 (28)	2/1/2021
Attucks Fixed Income - Net		2.45 (11)						-0.37 (32)	
Blmbg. Barc. U.S. Aggregate		1.83 (85)						-0.89 (83)	
Brandes FI Core	373,691,110	1.94 (58)	-1.46 (66)	-0.29 (84)	4.86 (99)	2.83 (97)		3.14 (97)	3/1/2016
Brandes FI Core - Net		1.94 (58)	-1.46 (66)	-0.29 (84)	4.86 (99)	2.83 (97)		3.14 (97)	
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (80)	-0.34 (86)	5.34 (94)	3.03 (92)		3.43 (93)	
EARNEST Partners	1,025,034,588	2.01 (46)	-0.41 (15)	1.49 (40)	5.74 (69)	3.44 (67)	4.05 (45)	4.61 (56)	5/1/2005
EARNEST Partners - Net		1.98 (50)	-0.47 (17)	1.36 (41)	5.60 (78)	3.29 (74)	3.87 (55)	4.42 (73)	
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (80)	-0.34 (86)	5.34 (94)	3.03 (92)	3.39 (94)	4.15 (93)	
Xponance Yield Advantage Agg.	1,109,271,045	2.49 (10)	-0.49 (18)	2.49 (20)	5.82 (65)	3.70 (48)	3.96 (50)	4.46 (67)	6/1/2005
Xponance Yield Advantage Agg. - Net		2.46 (10)	-0.56 (21)	2.36 (23)	5.68 (73)	3.56 (60)	3.81 (66)	4.28 (79)	
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (80)	-0.34 (86)	5.34 (94)	3.03 (92)	3.39 (94)	4.11 (93)	
Garcia Hamilton	1,087,003,802	1.42 (97)	-2.12 (100)	-0.69 (96)	4.92 (99)	3.24 (78)		3.58 (73)	6/1/2015
Garcia Hamilton - Net		1.40 (97)	-2.15 (100)	-0.77 (97)	4.84 (99)	3.15 (82)		3.49 (77)	
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (80)	-0.34 (86)	5.34 (94)	3.03 (92)		3.28 (94)	
Ramirez Asset Management	132,789,313	2.58 (7)	-0.12 (11)	2.86 (15)				5.20 (12)	5/1/2020
Ramirez Asset Management - Net		2.53 (9)	-0.21 (11)	2.69 (17)				5.05 (14)	
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (80)	-0.34 (86)				0.65 (90)	

Taplin, Canada, Habacht switched from core to core plus effective 10/01/2010.

* Custom Benchmark is Credit Suisse US Leveraged Loan Index and the Credit Suisse Western European Leveraged Loan Index, weighted by the portfolio's market value to each sector.

** Custom Benchmark is 50% JPM GBI-EM Index, 25% JPM EMBI Global Index and 25% JPM Corporate EMBI Diversified Index.

Wilshire Consulting Performance

Fixed Income

Periods Ended June 30, 2021

	Market Value \$	Performance (%)							
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Pass. Core Fixed Income	3,653,581,639	1.89 (67)	-1.62 (82)	-0.30 (85)	5.41 (86)	3.08 (86)	3.45 (88)	5.83 (97)	1/1/1990
Pass. Core Fixed Income - Net		1.89 (67)	-1.62 (82)	-0.31 (85)	5.40 (88)	3.07 (86)	3.44 (88)		
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (80)	-0.34 (86)	5.34 (94)	3.03 (92)	3.39 (94)	5.81 (97)	
BlackRock US Debt I	1,837,425,530	1.85 (77)	-1.60 (80)	-0.26 (83)	5.44 (85)	3.12 (82)		3.57 (82)	10/1/2013
BlackRock US Debt I - Net		1.85 (77)	-1.60 (80)	-0.27 (83)	5.43 (85)	3.12 (83)		3.57 (82)	
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (80)	-0.34 (86)	5.34 (94)	3.03 (92)		3.45 (94)	
NTGI Blmbg Agg.	1,816,156,108	1.94 (59)	-1.63 (85)	-0.35 (86)	5.38 (91)	3.04 (91)	3.43 (88)	5.88 (97)	2/1/1990
NTGI Blmbg Agg. - Net		1.94 (59)	-1.63 (85)	-0.35 (88)	5.37 (92)	3.03 (92)	3.42 (89)		
Blmbg. Barc. U.S. Aggregate		1.83 (85)	-1.61 (80)	-0.34 (86)	5.34 (94)	3.03 (92)	3.39 (94)	5.87 (97)	
Core Plus Fixed Income	2,939,767,840	2.56 (23)	-1.02 (80)	2.95 (61)	6.61 (55)	4.30 (58)	4.49 (56)	7.97 (100)	1/1/1982
Core Plus Fixed Income - Net		2.53 (24)	-1.08 (83)	2.81 (64)	6.44 (63)	4.12 (68)	4.31 (66)		
Blmbg. Barc. U.S. Aggregate		1.83 (93)	-1.61 (98)	-0.34 (100)	5.34 (93)	3.03 (100)	3.39 (96)	7.52 (100)	
LM Capital Group FI	964,191,576	1.91 (88)	-0.97 (78)	3.18 (56)	6.63 (54)	4.06 (71)	4.26 (67)	5.02 (65)	5/1/2005
LM Capital Group FI - Net		1.87 (90)	-1.05 (81)	3.01 (60)	6.46 (63)	3.89 (74)	4.09 (78)	4.85 (81)	
Blmbg. Barc. U.S. Aggregate		1.83 (93)	-1.61 (98)	-0.34 (100)	5.34 (93)	3.03 (100)	3.39 (96)	4.15 (99)	
Progress Inv. FI	1,721								
Progress Inv. FI - Net									
BMO - TCH	660,429,037	2.48 (29)	-0.65 (60)	2.08 (75)	6.05 (78)	4.51 (48)	4.67 (44)	5.05 (62)	5/1/2005
BMO - TCH - Net		2.45 (30)	-0.71 (65)	1.94 (77)	5.90 (82)	4.37 (53)	4.53 (53)	4.92 (74)	
Blmbg. Barc. U.S. Aggregate		1.83 (93)	-1.61 (98)	-0.34 (100)	5.34 (93)	3.03 (100)	3.39 (96)	4.15 (99)	
Western Asset	1,129,386,459	3.19 (8)	-1.41 (94)	3.36 (51)	7.12 (29)	4.75 (40)	4.95 (30)	5.55 (37)	11/1/2001
Western Asset - Net		3.19 (8)	-1.44 (95)	3.25 (55)	7.01 (33)	4.63 (44)	4.81 (34)		
Blmbg. Barc. U.S. Aggregate		1.83 (93)	-1.61 (98)	-0.34 (100)	5.34 (93)	3.03 (100)	3.39 (96)	4.29 (99)	
Longfellow Core Plus	185,759,048	2.37 (35)	-0.23 (39)	3.30 (54)				4.59 (68)	5/1/2020
Longfellow Core Plus - Net		2.32 (43)	-0.33 (45)	3.11 (58)				4.43 (70)	
Blmbg. Barc. U.S. Aggregate		1.83 (93)	-1.61 (98)	-0.34 (100)				0.65 (100)	

Taplin, Canada, Habacht switched from core to core plus effective 10/01/2010.

* Custom Benchmark is Credit Suisse US Leveraged Loan Index and the Credit Suisse Western European Leveraged Loan Index, weighted by the portfolio's market value to each sector.

** Custom Benchmark is 50% JPM GBI-EM Index, 25% JPM EMBI Global Index and 25% JPM Corporate EMBI Diversified Index.

Wilshire Consulting Performance

Fixed Income

Periods Ended June 30, 2021

	Market Value \$	Performance (%)							
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Bank Loans	574,216,967	1.87 (18)	4.60 (8)	13.80 (8)	4.52 (43)	5.48 (19)		4.62 (20)	8/1/2014
Bank Loans - Net		1.87 (18)	4.60 (8)	13.80 (8)	4.38 (47)	5.15 (32)		4.22 (42)	
Barings Custom Benchmark		1.43 (79)	3.44 (44)	11.41 (39)	4.60 (41)	5.20 (31)		4.28 (40)	
Barings Global Loan Fund	574,216,967	1.87 (18)	4.60 (8)	13.80 (8)	4.52 (43)	5.48 (19)		4.62 (20)	8/1/2014
Barings Global Loan Fund - Net		1.87 (18)	4.60 (8)	13.80 (8)	4.38 (47)	5.15 (32)		4.22 (42)	
Barings Custom Benchmark*		1.43 (79)	3.44 (44)	11.41 (39)	4.60 (41)	5.20 (31)		4.28 (40)	
Emerging Markets Debt	232,656,510	4.11 (40)	-2.11 (76)	9.06 (75)	5.94 (66)	4.79 (65)		3.22 (63)	8/1/2014
Emerging Markets Debt - Net		4.02 (45)	-2.28 (79)	8.60 (80)	5.58 (75)	4.43 (76)		2.87 (66)	
Custom Benchmark (EMD)		3.43 (70)	-1.92 (76)	7.01 (90)	5.67 (73)	4.30 (79)		2.67 (67)	
Standish-Mellon EMD	232,656,510	4.11 (40)	-2.11 (76)	9.06 (75)	5.94 (66)	4.79 (65)		3.22 (63)	8/1/2014
Standish EM MRK - Net		4.02 (45)	-2.28 (79)	8.60 (80)	5.58 (75)	4.43 (76)		2.87 (66)	
Custom Benchmark**		3.43 (70)	-1.92 (76)	7.01 (90)	5.67 (73)	4.30 (79)		2.67 (67)	
High Yield	824,976,036	2.60 (67)	4.63 (29)	13.94 (72)	8.31 (16)	8.03 (22)	7.07 (24)	9.48 (2)	4/1/1986
High Yield - Net		2.52 (70)	4.55 (32)	13.58 (76)	7.99 (25)	7.69 (40)	6.70 (43)		
ICE BofAML US High Yield, Cash Pay Index		2.75 (56)	3.59 (61)	15.48 (52)	7.13 (64)	7.28 (60)	6.48 (58)	8.24 (55)	
MacKay Shields	824,955,304	2.60 (67)	4.63 (29)	13.96 (72)	8.31 (16)	8.10 (18)	7.36 (11)	8.80 (9)	11/1/2000
MacKay Shields - Net		2.52 (70)	4.55 (32)	13.60 (76)	7.99 (25)	7.76 (34)	7.00 (27)		
ICE BofAML US High Yield, Cash Pay Index		2.75 (56)	3.59 (61)	15.48 (52)	7.13 (64)	7.28 (60)	6.48 (58)	7.53 (63)	

Taplin, Canada, Habacht switched from core to core plus effective 10/01/2010.

* Custom Benchmark is Credit Suisse US Leveraged Loan Index and the Credit Suisse Western European Leveraged Loan Index, weighted by the portfolio's market value to each sector.

** Custom Benchmark is 50% JPM GBI-EM Index, 25% JPM EMBI Global Index and 25% JPM Corporate EMBI Diversified Index.

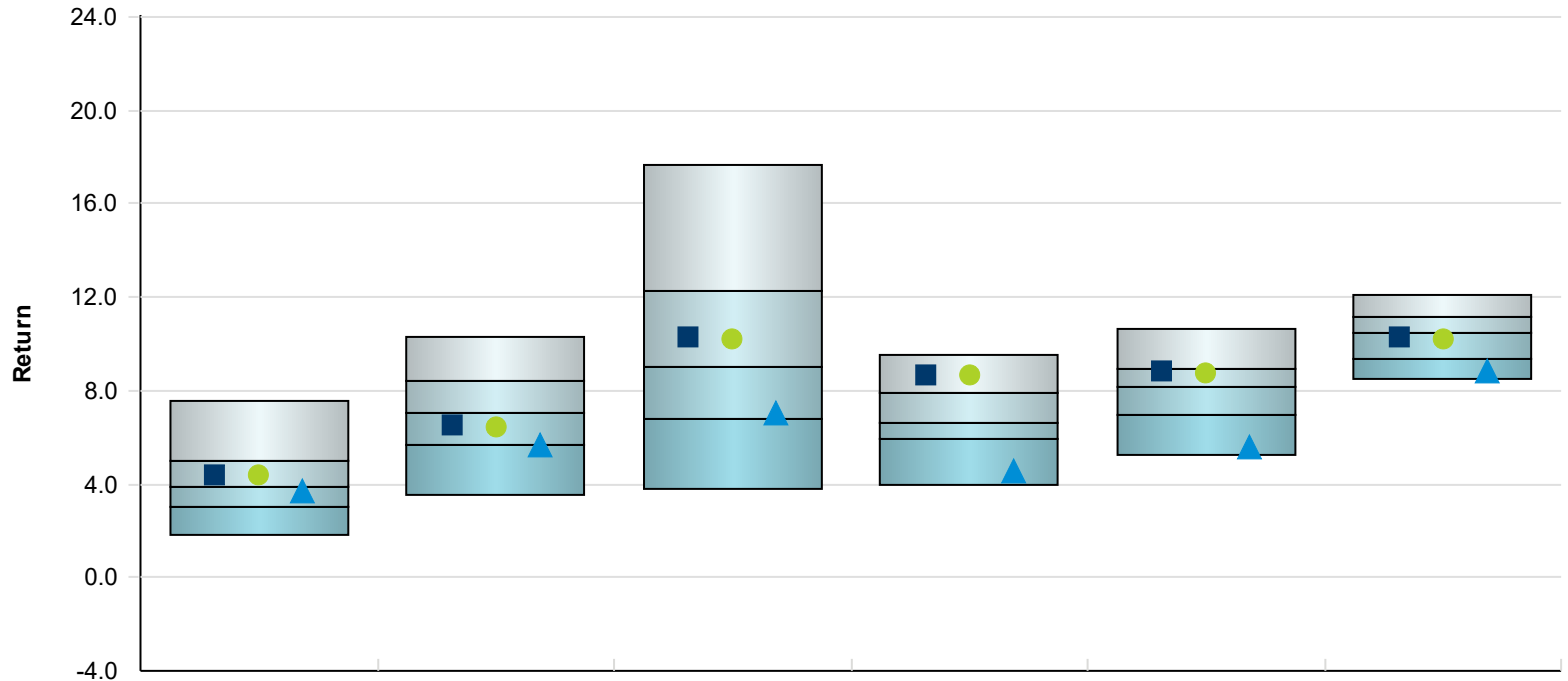


Real Estate

Plan Sponsor Peer Group Analysis

Real Estate vs All Public Plans > \$1B-Real Estate Segment(Gross)

Periods Ended June 30, 2021



	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ Real Estate	4.42 (41)	6.51 (60)	10.27 (35)	8.71 (13)	8.81 (30)	10.27 (65)
● Real Estate - Net	4.40 (42)	6.48 (61)	10.20 (36)	8.67 (14)	8.79 (31)	10.25 (65)
▲ Blended Benchmark (Real Estate)	3.68 (55)	5.64 (76)	7.09 (72)	4.60 (84)	5.62 (90)	8.84 (85)
5th Percentile	7.54	10.28	17.62	9.54	10.61	12.06
1st Quartile	4.96	8.38	12.27	7.90	8.97	11.13
Median	3.90	7.09	8.98	6.60	8.19	10.43
3rd Quartile	3.01	5.65	6.79	5.97	6.99	9.33
95th Percentile	1.84	3.53	3.81	3.93	5.23	8.49
Population	45	40	35	26	21	12

Asset Allocation & Performance

Real Estate

Periods Ended June 30, 2021

	Market Value \$	Performance (%)							Inception Date
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
Real Estate	3,429,574,704	4.42	6.51	10.27	8.71	8.81	10.27	5.63	5/1/1985
Real Estate - Net		4.40	6.48	10.20	8.67	8.79	10.25		
Blended Benchmark (Real Estate)		3.68	5.64	7.09	4.60	5.62	8.84	7.54	
Real Estate Core Cmp	1,836,015,652	3.38	5.11	9.87	10.29	9.41	10.33	7.53	4/1/1999
TA Assoc. Buckhead	659,233,580	5.39	11.06	17.84	16.13	13.24	12.52	11.01	8/1/1995
Blended Benchmark (Real Estate)		3.68	5.64	7.09	4.60	5.62	8.84	7.19	
Barings Euro Core Property	141,713,875	1.94	-0.30	8.54	16.76			14.93	3/1/2017
Blended Benchmark (Real Estate)		3.68	5.64	7.09	4.60			5.37	
Blackstone Property Euro	158,726,776	4.31	4.60	16.80	10.10			8.40	12/1/2017
Blended Benchmark (Real Estate)		3.68	5.64	7.09	4.60			5.10	
INVESCO Core Real Estate	203,919,196	0.50	1.12	-2.38	3.27	5.31	7.56	7.97	4/1/2011
Blended Benchmark (Real Estate)		3.68	5.64	7.09	4.60	5.62	8.84	9.05	
INVESCO European real estate	63,343,340	1.68	-2.33	10.46	3.95			1.92	4/1/2018
Blended Benchmark (Real Estate)		3.68	5.64	7.09	4.60			4.81	
AEW Core Property Tr	235,414,221	1.94	1.94	3.66	4.43	5.06		7.20	10/1/2013
Blended Benchmark (Real Estate)		3.68	5.64	7.09	4.60	5.62		7.77	
CBRE Core Partners	217,552,560	2.49	2.49	4.77	6.87	8.19		8.82	12/1/2013
Blended Benchmark (Real Estate)		3.68	5.64	7.09	4.60	5.62		7.67	
JPM Strategic Property Fund	156,112,104	3.36	4.07					4.07	1/1/2021
Blended Benchmark (Real Estate)		3.68	5.64					5.64	
RE Non-Core Cmp	1,593,559,052	5.65	8.20	10.79	6.93	8.16	10.26	10.95	1/1/2010

Returns are time-weighted and are reported net of fee for all real estate managers.

The Blended Benchmark (Real Estate) is currently the NCREIF ODCE VW Net Index. Prior to January 1, 2013, it was the NCREIF Property Index + 1%. Returns prior to January, 2007, reflect those of the Consumer Price Index + 5%.

Asset Allocation & Performance

Real Estate

Periods Ended June 30, 2021

	Market Value \$	Performance (%)							Inception Date
		1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	
Artemis MWBE Spruce Blended Benchmark (Real Estate)	241,674,333	0.08 3.68	2.89 5.64	5.26 7.09	6.35 4.60	4.07 5.62		4.00 5.66	6/1/2016
Franklin T. EMREFF Blended Benchmark (Real Estate)	6,865,209								9/1/2011
Security Capital Blended Benchmark (Real Estate)	66,614,519	18.65 3.68	21.78 5.64	42.17 7.09	16.00 4.60	7.70 5.62	8.26 8.84		7/1/1997
Dune II Blended Benchmark (Real Estate)	8,810,759								2/1/2009
Non-Core Real Estate Funds Blended Benchmark (Real Estate)	1,052,149,698	7.42 3.68	11.07 5.64	12.60 7.09	7.59 4.60	9.28 5.62		10.33 8.69	10/1/2011
Almanac ARS V	97,925								
Non-Core Intl Real Estate Blended Benchmark (Real Estate)	217,346,608	0.87 3.68	-1.19 5.64	4.56 7.09	2.95 4.60	4.20 5.62		-1.60 7.37	8/1/2014

Returns are time-weighted and are reported net of fee for all real estate managers.

The Blended Benchmark (Real Estate) is currently the NCREIF ODCE VW Net Index. Prior to January 1, 2013, it was the NCREIF Property Index + 1%. Returns prior to January, 2007, reflect those of the Consumer Price Index + 5%.



Alternative Investments

Asset Allocation & Performance

Alternatives Investments

Periods Ended June 30, 2021

	Allocation	Performance (%)							
	Market Value \$	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Alternatives Investments	4,150,572,118	12.25	22.64	40.11	18.68	15.79	11.37	11.38	2/1/1986
Alternatives Custom Benchmark		2.18	4.40	9.00	9.00	9.00	9.00	12.50	
Absolute Return	138,938	0.32	-5.14	-41.75	-31.27	-13.85	-5.99	-0.64	1/1/2002
Aurora Investment	138,938								11/1/2001
Private Equity	3,589,198,550	14.51	26.86	46.78	22.36	19.41	13.97	13.69	2/1/1986
Alternatives Custom Benchmark		2.18	4.40	9.00	9.00	9.00	9.00	12.50	
Abbott S/A Comp.	490,816,756	22.93	35.15	58.03	24.35	21.74	14.90	14.72	6/1/1987
Muller Monroe MPEFF	557,400								5/1/2008
Pantheon S/A Comp.	333,814,055	17.53	17.53	30.86	22.30	18.56	13.58	11.02	10/1/2000
Private Equity Fund - Domestic	2,157,588,556	10.93	26.32	47.80	24.17	20.05		14.60	6/1/2012
Private Equity Fund - International	547,493,829	22.35	31.19	50.34	16.63	17.60		-3.38	7/1/2015
Oakbrook Opportunities Fund	58,927,953	-0.06	7.15	18.33				-1.30	6/1/2019
Private Credit	199,180,246	0.90	6.59	26.96				1.71	10/1/2019
Private Credit Fund - Domestic	199,180,246	0.90	6.59	26.96				1.71	10/1/2019
Agriculture	212,042,460	-1.99	-1.88	-1.40	-0.07	-1.69	8.02	6.63	10/1/1997
NCREIF Farmland Index		1.47	2.34	4.97	4.82	5.51	10.24	11.28	
Premiere Partners IV	212,042,460	-1.99	-1.88	-1.40	-0.07	-1.69		1.65	3/1/2015
Timberland	67,469,042	1.15	-7.36	-7.02	-1.60	0.13	1.76	6.82	10/1/1992
Blended Benchmark (Real Estate)		3.68	5.64	7.09	4.60	5.62	8.84	7.24	

Returns are time-weighted and are reported net of fee for all real estate managers. The Alternatives Custom Benchmark is based on an annualized return of 9%. Prior to July 1, 2010, it was based on an annual return of 12%. Prior to 2004, it was based on an annualized return of 13%. Prior to 2003, it was based on an annual return of 15%.

Asset Allocation & Performance

Alternatives Investments

Periods Ended June 30, 2021

	Allocation	Performance (%)							
	Market Value \$	1 Quarter	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Forest Investment	67,469,042	1.15	-7.36	-7.02	-1.60	0.13	2.07	6.98	10/1/1992
Alternatives Custom Benchmark (Timberland)		1.70	2.47	3.10	2.12	2.65	5.34		
Unlisted Infrastructure	82,542,882	1.64	6.66	25.41	13.08			12.49	4/1/2018
Alternatives Custom Benchmark		2.18	4.40	9.00	9.00			9.00	
Unlisted Infrastructure Funds	82,542,882	1.64	6.66	25.41	13.08			12.49	4/1/2018
Alternatives Custom Benchmark		2.18	4.40	9.00	9.00			9.00	

Returns are time-weighted and are reported net of fee for all real estate managers. The Alternatives Custom Benchmark is based on an annualized return of 9%. Prior to July 1, 2010, it was based on an annual return of 12%. Prior to 2004, it was based on an annualized return of 13%. Prior to 2003, it was based on an annual return of 15%.

Manager Watch List

Period Ending June 30, 2021



Organization

Investment Manager	Asset Class	Effective Date	Resolution
Standish-Mellon	Emerging Markets Debt (Fixed Income)	May 2021	Continue Monitoring