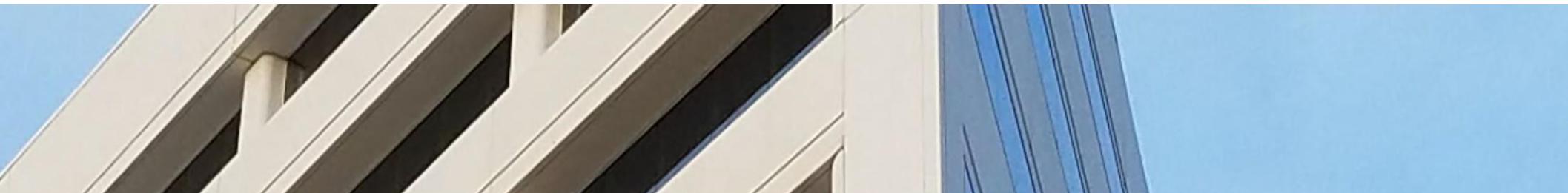




WILSHIRE



First Quarter 2021 Quarterly Performance Report

As of March 31, 2021

IMRF Performance Highlights

As of March 31, 2021



- The Illinois Municipal Retirement Fund ("IMRF") ended March 2021 with a market value of \$51.6 billion, up for the quarter by approximately \$1.7 billion.
- For the quarter, IMRF outperformed its benchmark +3.71% versus +2.53%. The Fund's First Quarter 2021 return ranks at the 37th percentile relative to peers. Over the trailing one year, IMRF outpaced its benchmark +37.50% versus +30.76% and ranks in the top quintile relative to peers (18th percentile).
 - Longer term, IMRF's peer rankings are near or above the top decile relative to peers. The Fund's 10-year return of +8.93% ranks at the 11th percentile.
- The Domestic Equity composite (+7.01%) outperformed the Russell 3000 benchmark (+6.35%) for the quarter and continues to rank well relative to peers (39th percentile). Strong investment manager performance was the largest contributor to relative outperformance during the quarter with Large Cap Value, Small Cap Growth and Small Cap Value all outperforming their benchmarks. Additionally, the Portfolio's tilt to Small Cap Value was additive to relative outperformance, as the Russell 2000 Value Index returned +21.17% during the quarter.
 - Longer-term, IMRF's Domestic Equity composite ranks at the 34th percentile over 10 years.
- The International Equity composite (+3.48%) performed in-line with the MSCI ACWI ex-US benchmark (+3.49%) for the quarter as investment manager performance was mixed. In aggregate, managers in Large Cap Growth, Small Cap and Emerging Markets underperformed their benchmark, while managers in Large Cap Value and Large Cap Core outperformed their benchmark.
 - Relative to peers, the International Equity composite ranked at the 74th percentile during the quarter.
- The Fixed Income composite (-2.73%) provided strong downside protection relative to the benchmark as interest rates rose during the quarter, challenging fixed income returns. The Bloomberg Barclays U.S. Aggregate Index was down -3.38% during the quarter. IMRF's dedicated allocation to credit was beneficial to relative outperformance during the quarter, while investment managers in Core Fixed Income, Bank Loans and High Yield also outperformed their benchmarks.
 - Fixed Income composite ranked at the 43rd percentile for the quarter. Longer-term, Fixed Income composite ranks near median relative to peers.
- As of March 2021 quarter end, Domestic Equity and International Equity were 4.9% and 4.2%, respectively, over their targets. The current Statement of Investment Policy states that when actual allocations of the asset classes differ by more than four percentage points from their policy target, a recommendation for rebalancing will be made to the Board of Trustees. The Interim Chief Investment Officer, Investment Staff and Consultant are actively reviewing portfolio rebalancing considerations at this time.

ASSET CLASS PERFORMANCE

ASSET CLASS RETURNS - BEST TO WORST						ANNUALIZED 5-YEAR AS OF 3/21
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 20.9%	U.S. Equity 16.7%
High Yield 17.1%	Developed 25.6%	Core Bond 0.0%	REITs 25.8%	Emrg Mrkts 18.7%	REITs 8.8%	Emrg Mrkts 12.5%
U.S. Equity 13.4%	U.S. Equity 21.0%	U.S. TIPS -1.3%	Developed 22.7%	U.S. TIPS 11.0%	Commodities 6.9%	Developed 9.4%
Commodities 11.8%	High Yield 7.5%	High Yield -2.1%	Emrg Mrkts 18.9%	Developed 8.3%	U.S. Equity 6.5%	High Yield 8.1%
Emrg Mrkts 11.6%	REITs 4.2%	REITs -4.8%	High Yield 14.3%	Core Bond 7.5%	Developed 3.6%	REITs 5.0%
REITs 7.2%	Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%	High Yield 7.1%	Emrg Mrkts 2.3%	Midstream 4.8%
U.S. TIPS 4.7%	U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%	T-Bills 0.7%	High Yield 0.8%	U.S. TIPS 3.9%
Core Bond 2.6%	Commodities 1.7%	MLPs -12.4%	Commodities 7.7%	Commodities -3.1%	T-Bills 0.0%	Core Bond 3.1%
Developed 1.5%	T-Bills 0.8%	Developed -13.4%	MLPs 6.6%	REITs -7.9%	U.S. TIPS -1.5%	Commodities 2.3%
T-Bills 0.3%	MLPs -6.5%	Emrg Mrkts -14.2%	T-Bills 2.3%	Midstream -23.4%	Core Bond -3.4%	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 6.5% for the first quarter of 2021. All eleven sectors were in positive territory with Energy (+31.7%) and Financials (+16.7%) representing the best performing sectors. There was meaningful return dispersion between size and styles as the large-cap value index outperformed growth by 7.8% and small-cap outperformed large-cap by 7.7%.

Inflation indexes have been on the rise during the past few months, with growth rates meaningfully above 2%. A jump in energy prices accounted for more than two-thirds of the increase in the Producer Price Index (PPI) in February, while both gasoline and food prices weigh on consumers. Investors are expecting at least some continued inflation as the 10-year breakeven inflation rate equaled 2.38% at quarter-end, the highest level in more than five years.

Non-U.S. Equity

Economic indicators out of the U.K. have been encouraging recently as Prime Minister Boris Johnson announced a “roadmap” for reopening the economy from the U.K.’s third lockdown. Conditions in Germany are more concerning as AstraZeneca’s COVID-19 vaccine has been suspended due to concerns about serious complications.

Fixed Income

The U.S. Treasury yield curve was up significantly across most maturities during the first quarter, with the long end approaching pre-COVID levels. The 10-year Treasury yield ended the quarter at 1.74%, up 82 basis points from December. The Federal Open Market Committee met twice during the quarter with no change to their overnight rate. The Committee’s “dot plot” indicated that a few members are currently supporting a rate hike for next year, although the median forecast remains unchanged at zero increases through 2023.

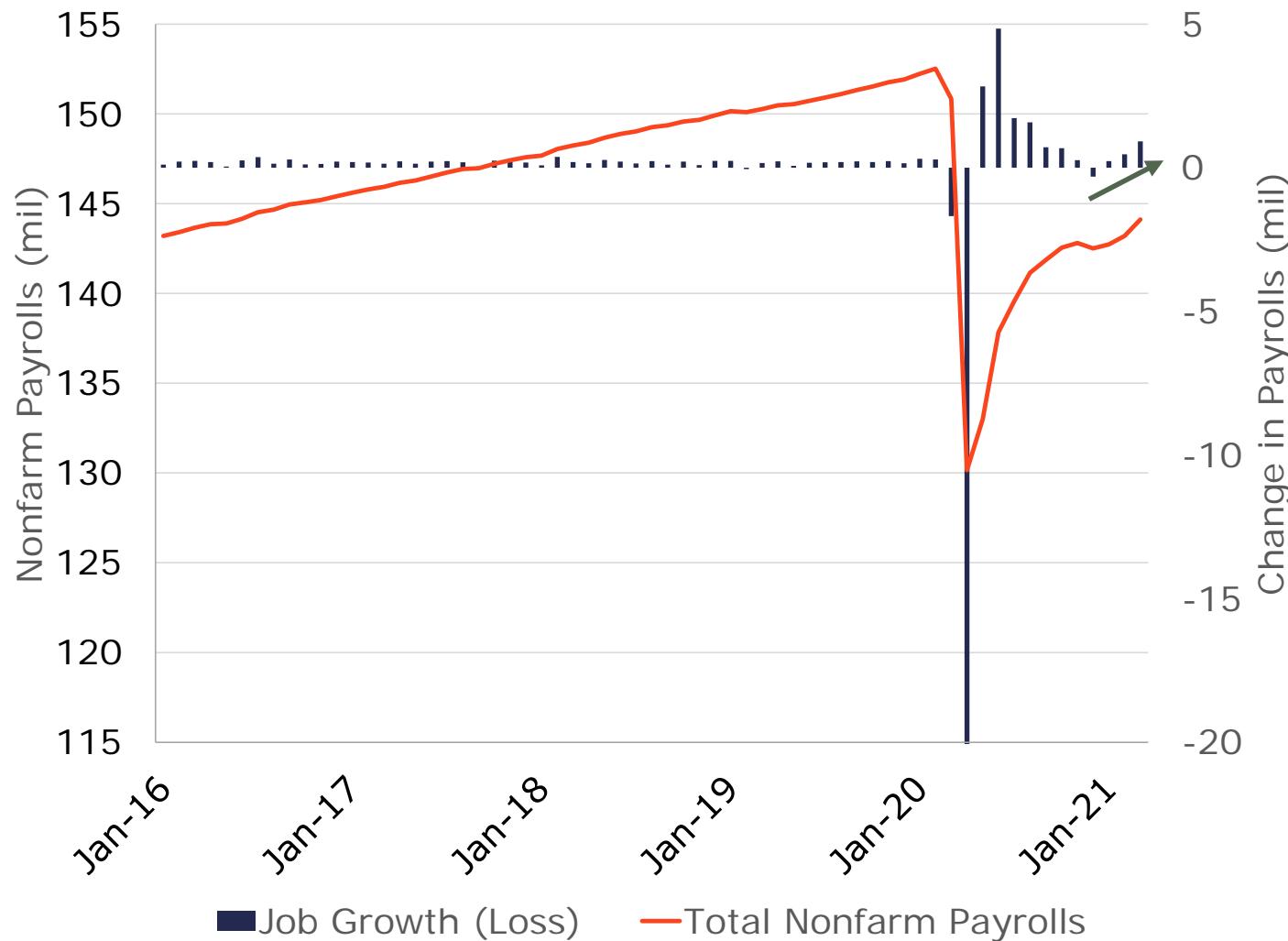
Wilshire Consulting

MARCH 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 SEC'S	GLOBAL REAL ESTATE SEC'S	PRIVATE REAL ESTATE	CMDTY	REAL ASSETS	U.S. CPI																	
Compound Return (%)	4.75	5.75	5.75	6.00	5.40	7.15	1.25	2.05	2.60	1.70	3.90	0.70	5.15	5.30	6.00	3.70	5.80	2.45																	
Arithmetic Return (%)	6.10	7.25	8.75	7.65	6.75	10.55	1.25	2.15	3.00	1.90	4.40	0.80	6.50	6.45	6.90	4.75	6.30	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	1.25	3.35	3.80	2.65	7.95	2.05	3.30	3.30	2.25	1.25	2.10	0.00																	
Growth Exposure	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 Exposure	-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	0.25	-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																	

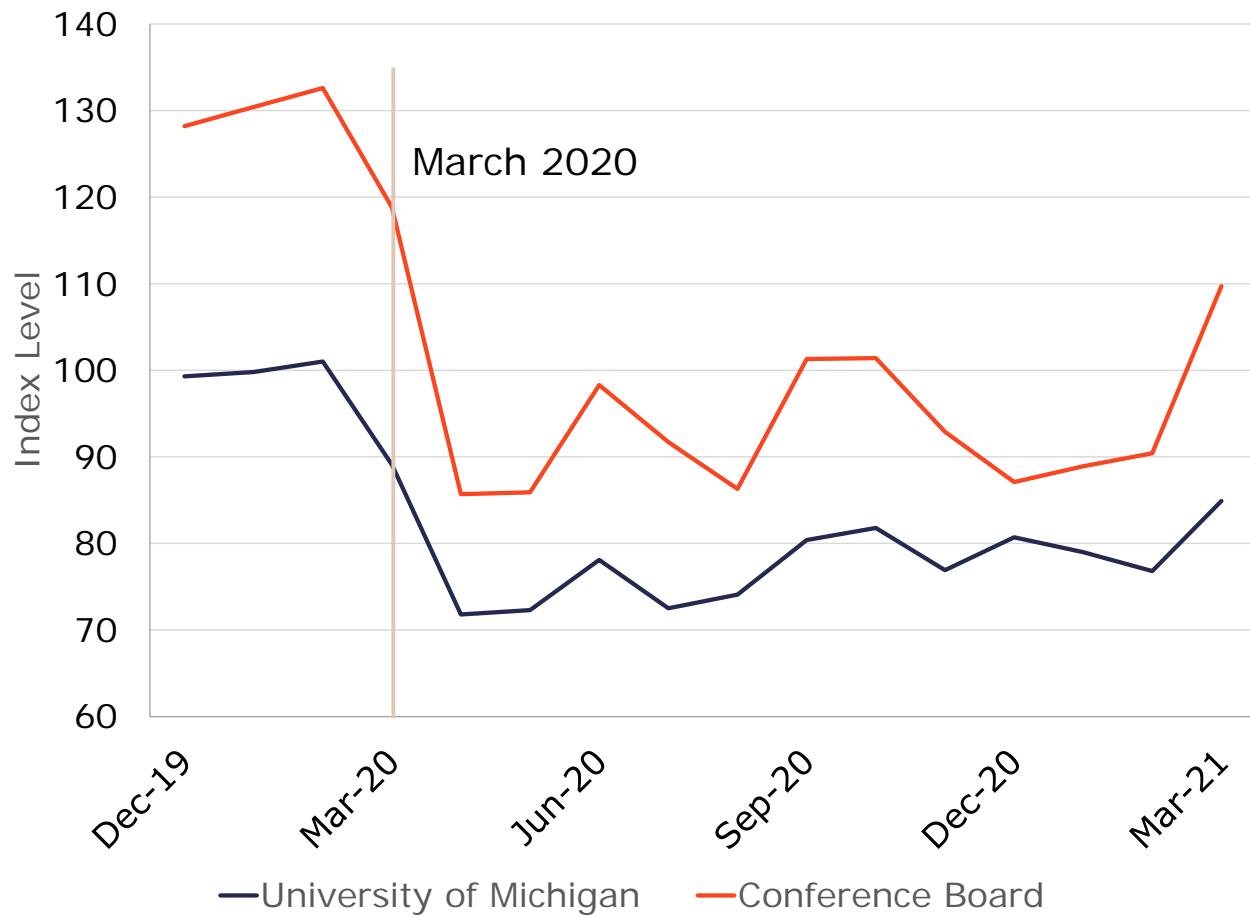
Q1 REBOUND IN JOBS

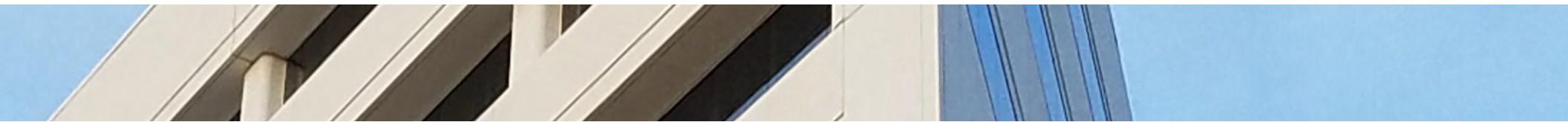
After decelerating in Q4 2020, change in Non-farm Payrolls accelerated in Q1.



CONSUMER CONFIDENCE

Highest levels since the onset of COVID-19

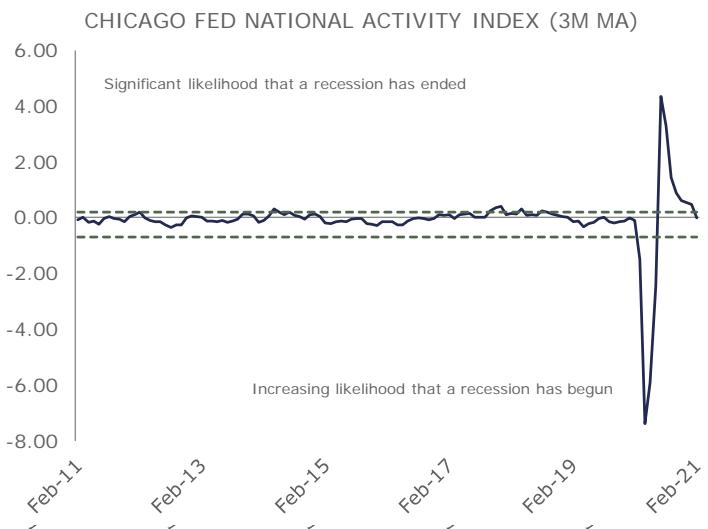




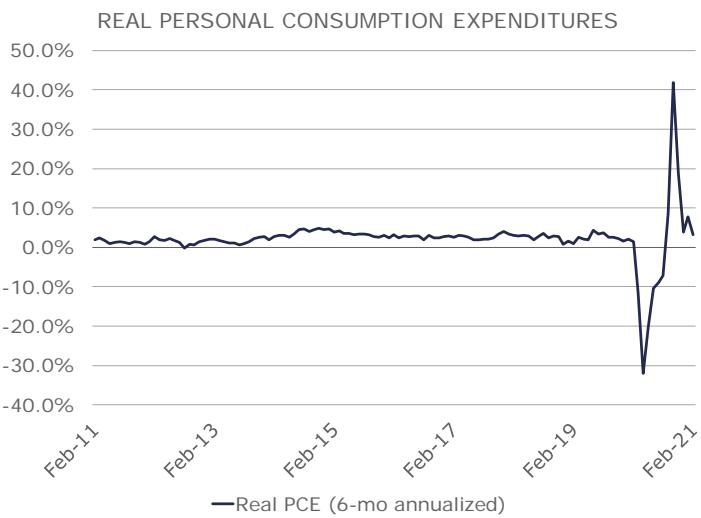
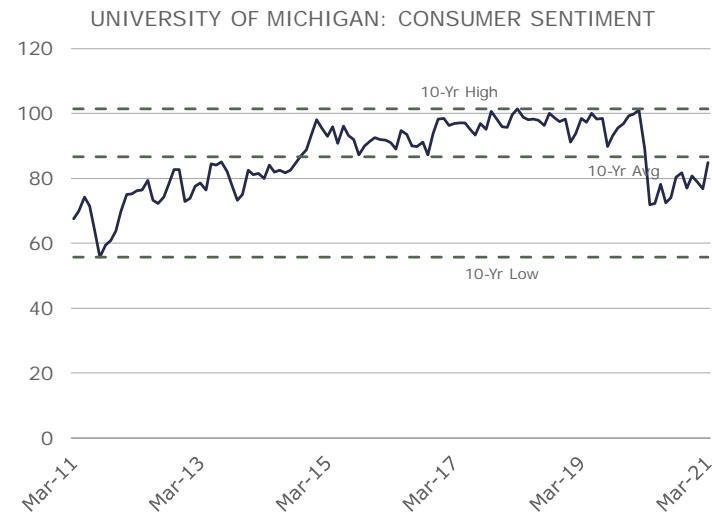
Economic/Market Activity

Wilshire Consulting

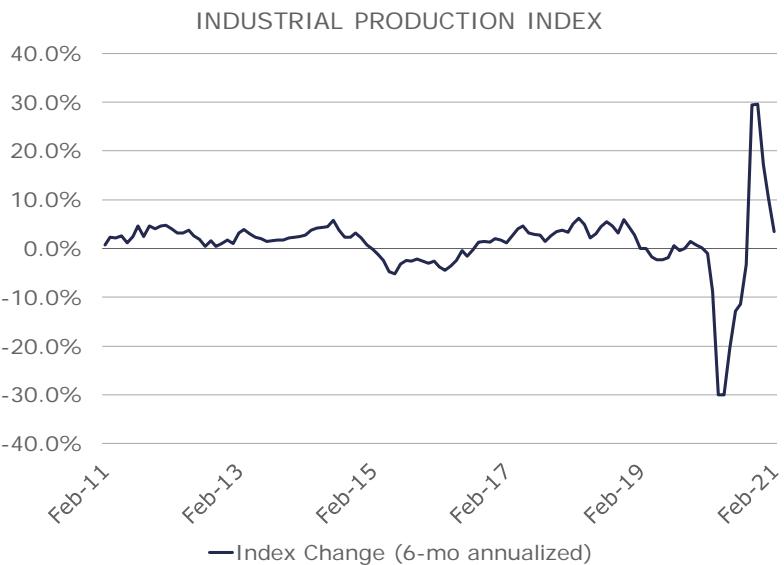
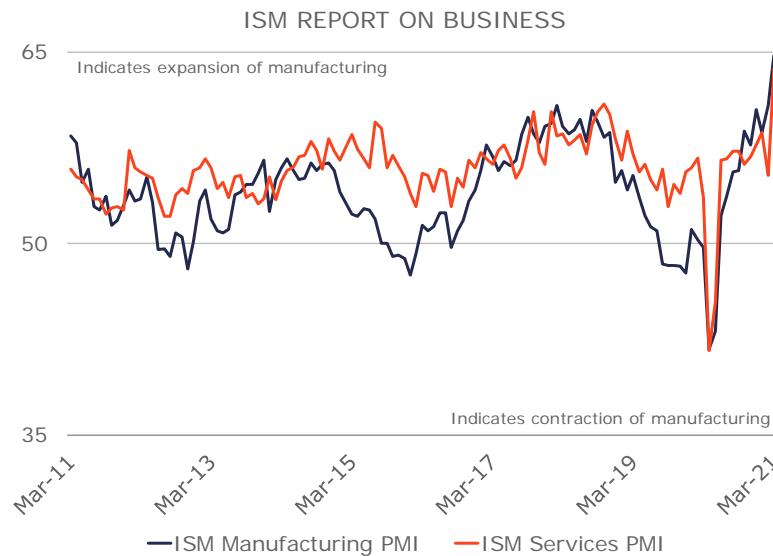
ECONOMIC GROWTH



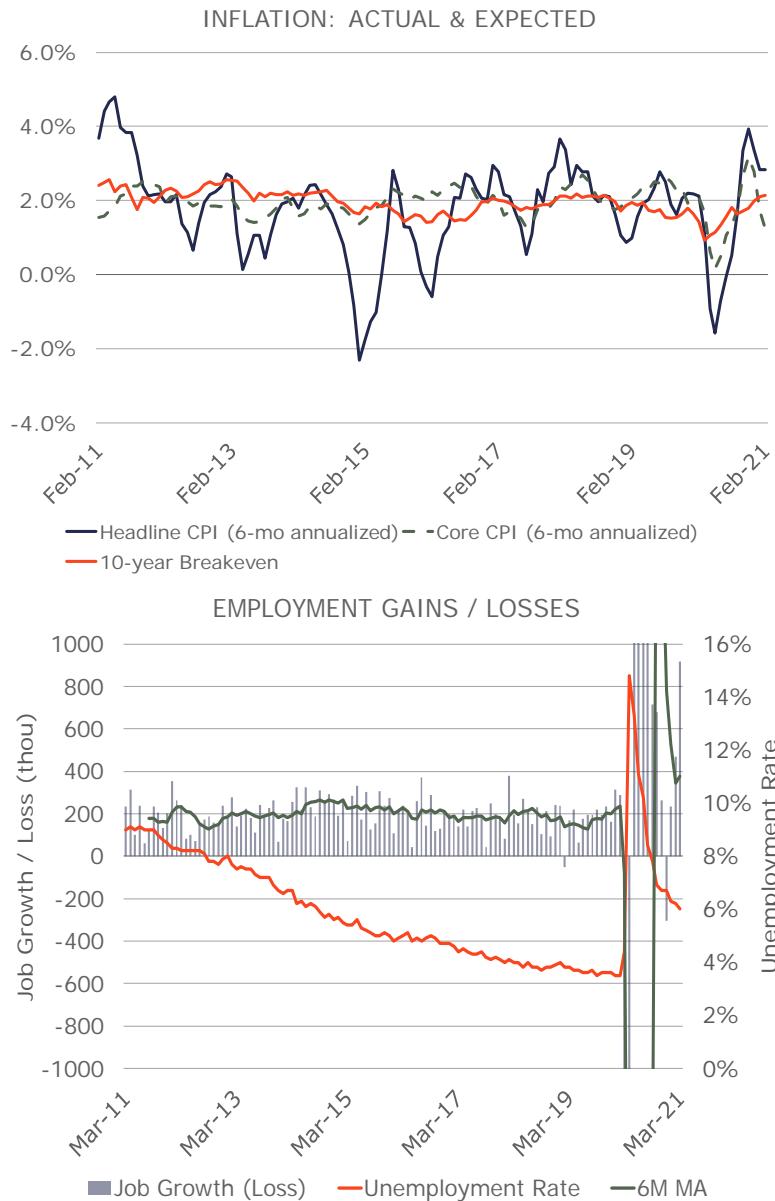
Wilshire Consulting
CONSUMER ACTIVITY



BUSINESS ACTIVITY



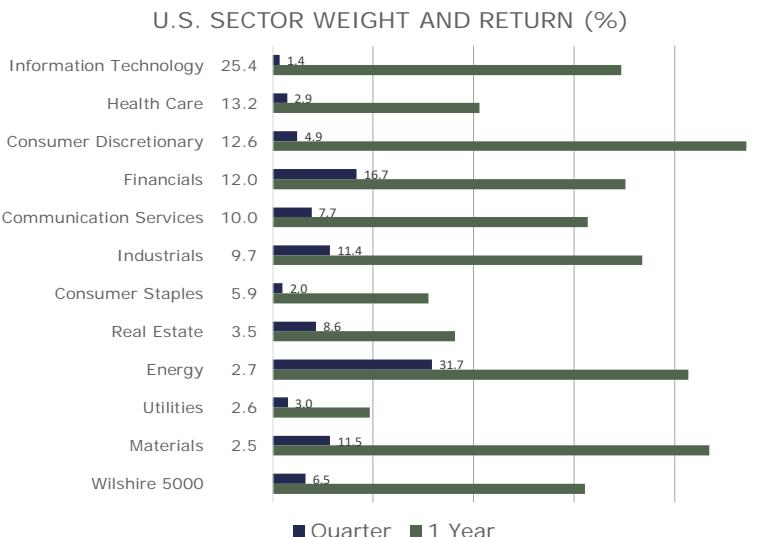
INFLATION AND EMPLOYMENT



Wilshire Consulting

U.S. EQUITY MARKET

AS OF 3/31/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Wilshire 5000 Index	6.5	6.5	62.2	17.2	16.7	13.8
Wilshire U.S. Large Cap	5.8	5.8	59.6	17.4	16.8	14.0
Wilshire U.S. Small Cap	13.5	13.5	94.3	14.8	15.6	12.0
Wilshire U.S. Large Growth	2.0	2.0	66.5	21.3	20.7	15.9
Wilshire U.S. Large Value	9.8	9.8	51.3	13.4	12.9	12.0
Wilshire U.S. Small Growth	9.0	9.0	96.7	17.7	18.9	13.1
Wilshire U.S. Small Value	18.2	18.2	91.5	11.9	12.3	10.8
Wilshire REIT Index	8.8	8.8	34.7	9.0	5.0	8.5
MSCI USA Min. Vol. Index	2.3	2.3	30.6	12.4	11.9	13.1
FTSE RAFI U.S. 1000 Index	14.4	14.4	67.9	14.1	14.3	12.6



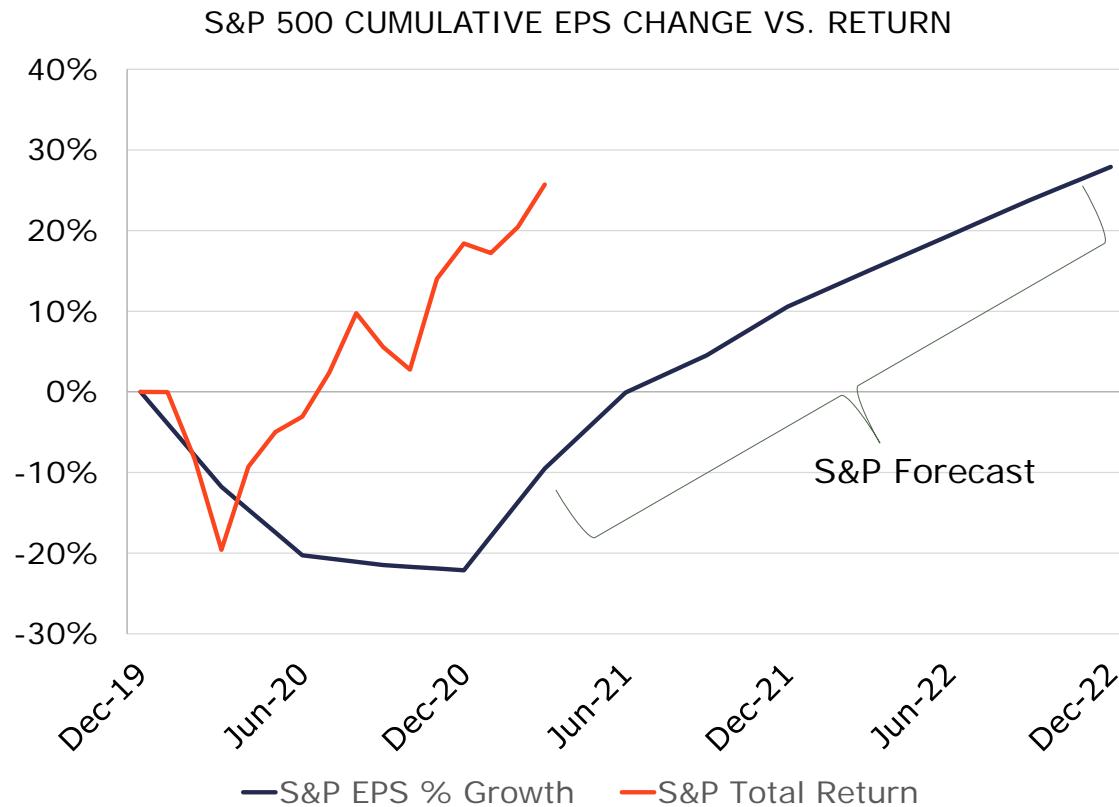
LARGE CAP VS SMALL CAP



Data sources: Bloomberg, Wilshire Atlas

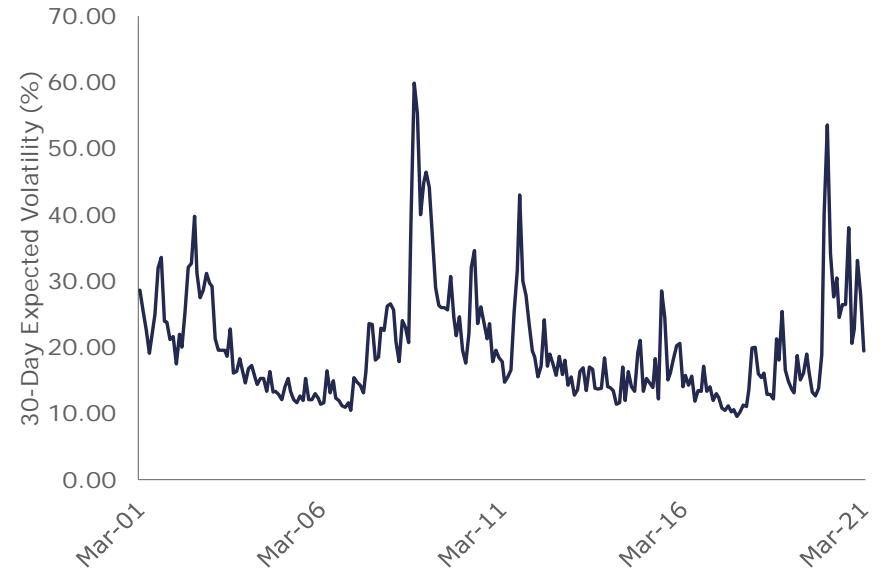
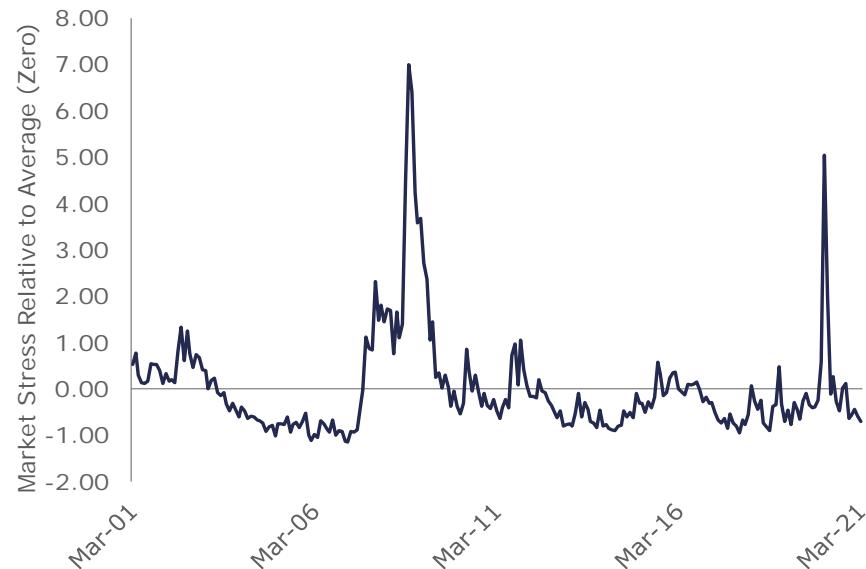
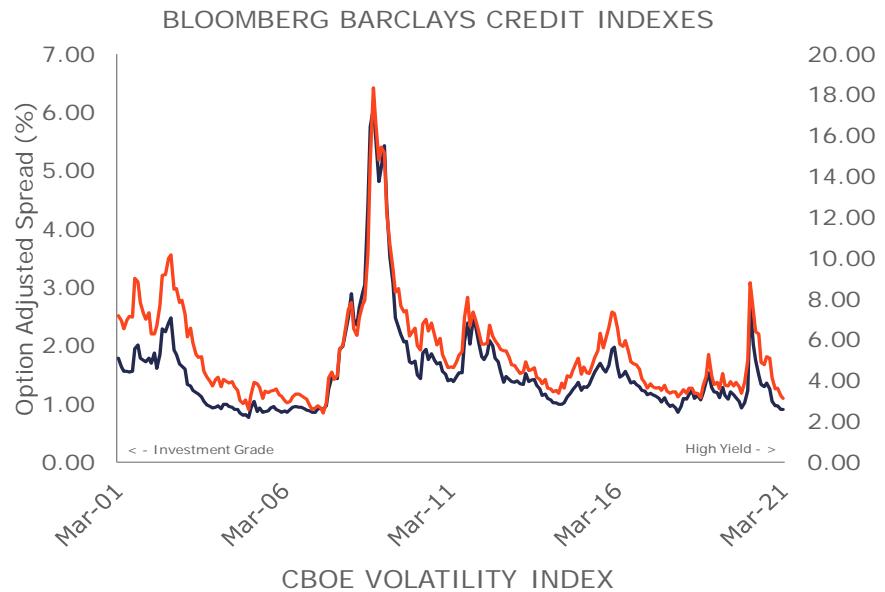
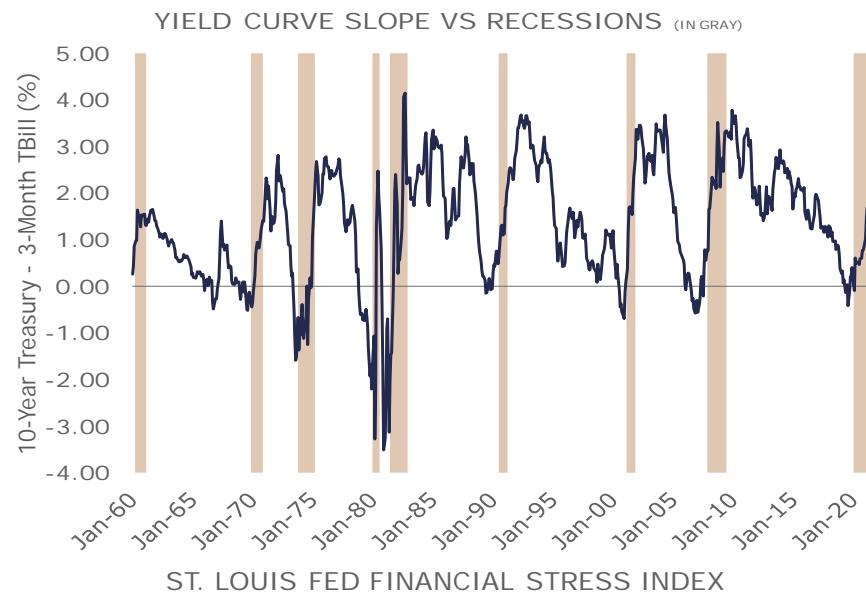
U.S. CORPORATE EARNINGS

- If current S&P 500 Operating EPS estimates are realized (up ~40% in 2021 & ~15% in 2022), it would result in a 28% cumulative growth rate versus pre-COVID (Dec. 2019) levels
- Cumulative S&P 500 total return is already equal to 25.7% as of March 2021



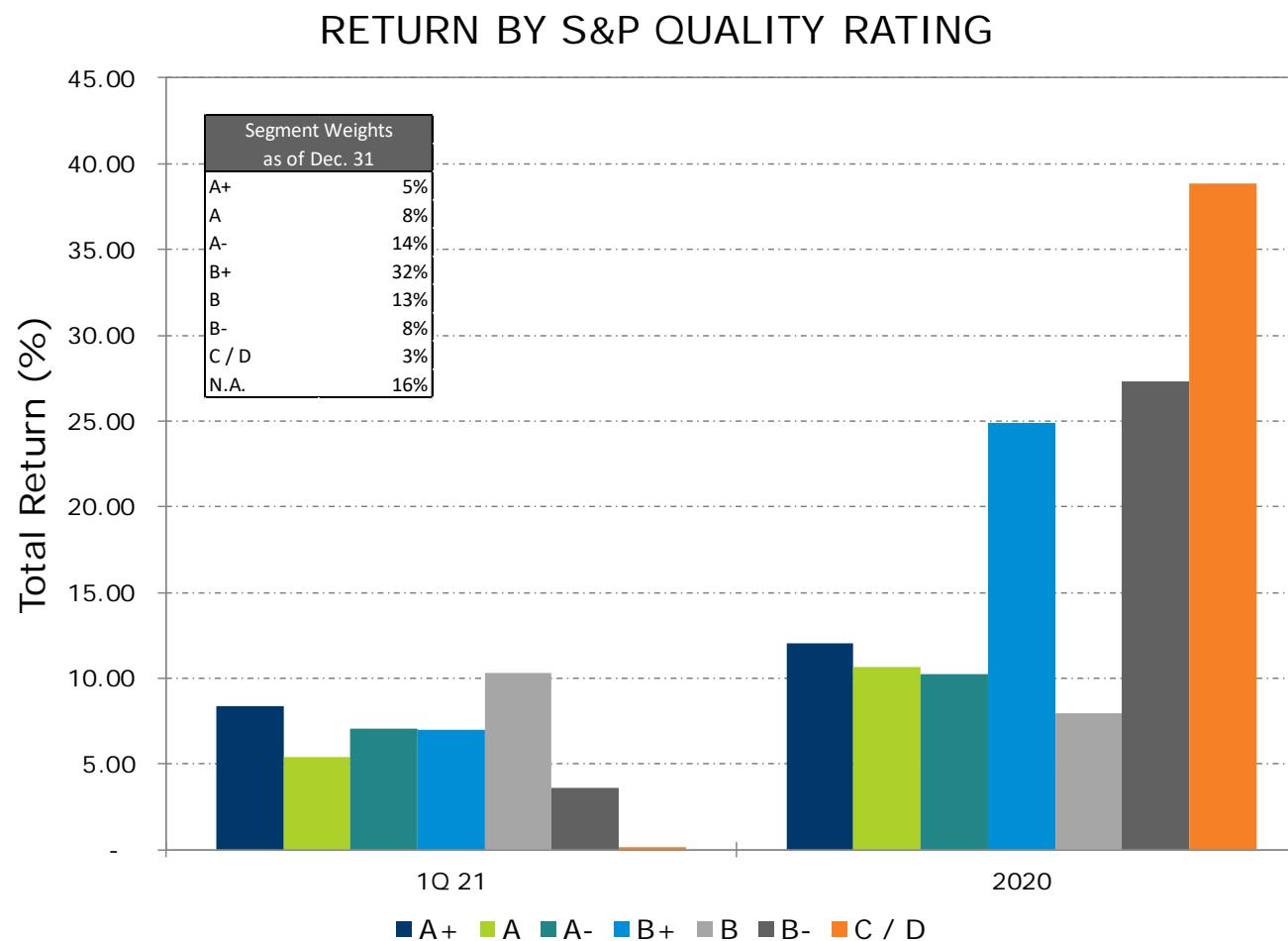
Data Sources: Bloomberg, S&P Dow Jones

RISK MONITOR



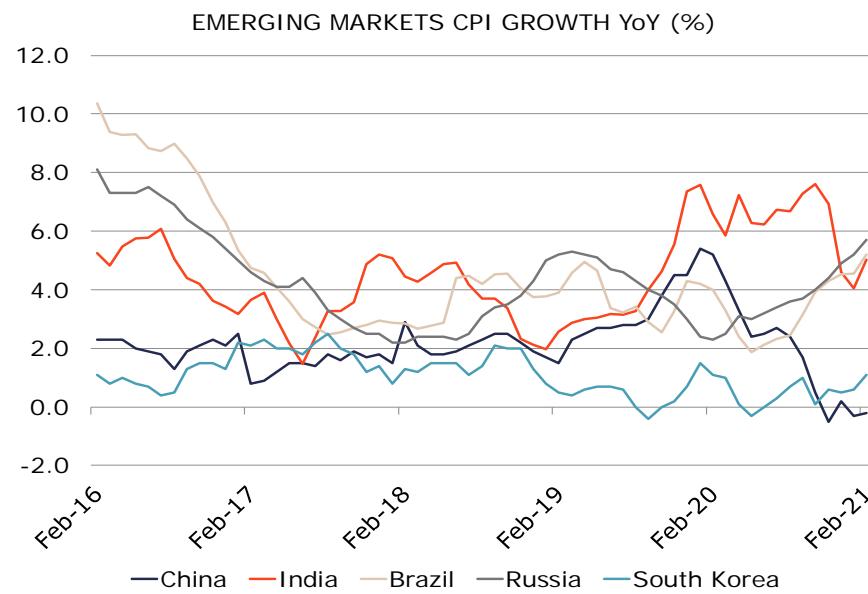
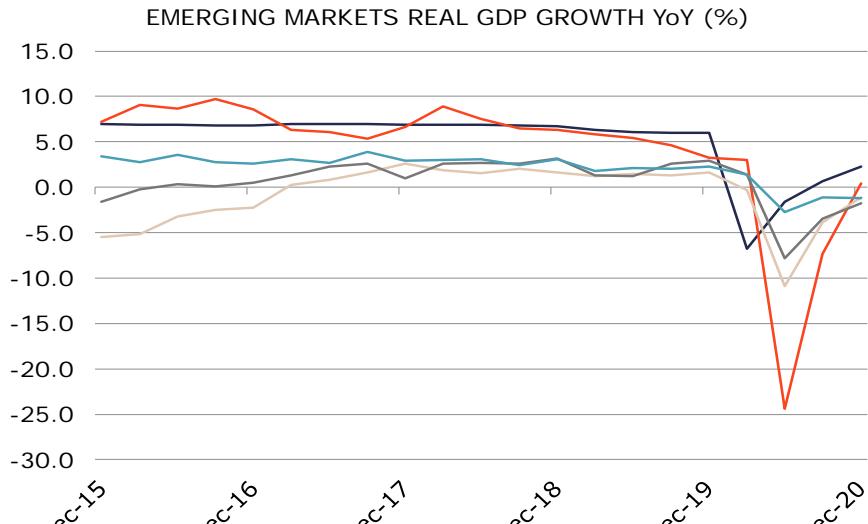
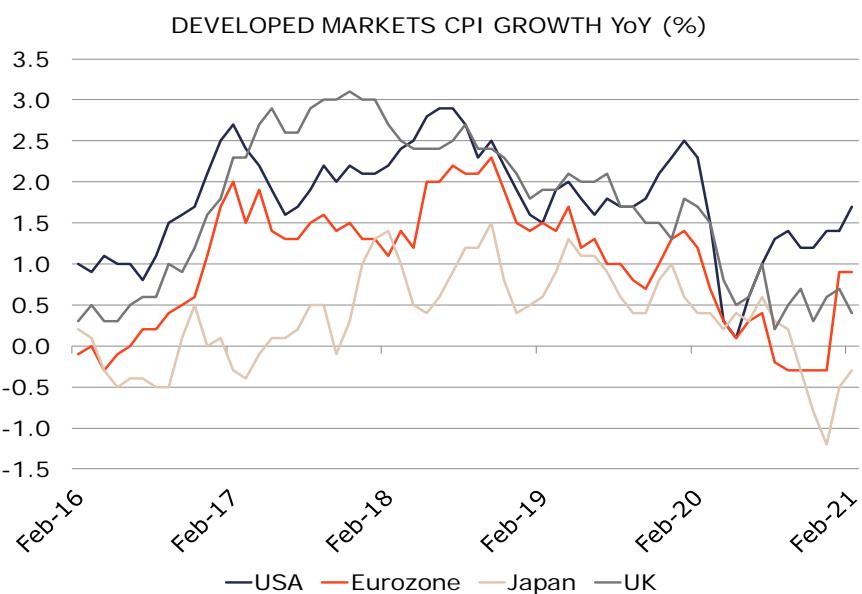
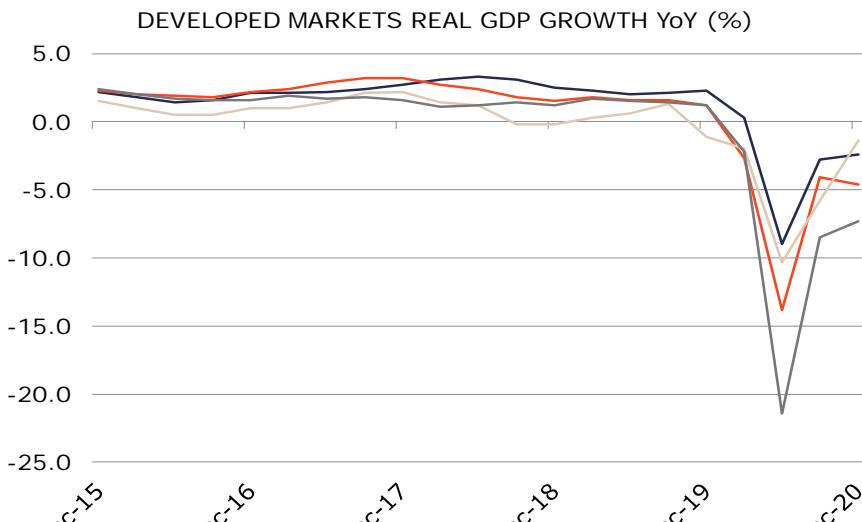
RETURNS BY QUALITY SEGMENT

Gains were broad based during the first quarter, while lower quality names exceeded during 2020



Wilshire Consulting

NON-U.S. GROWTH AND INFLATION



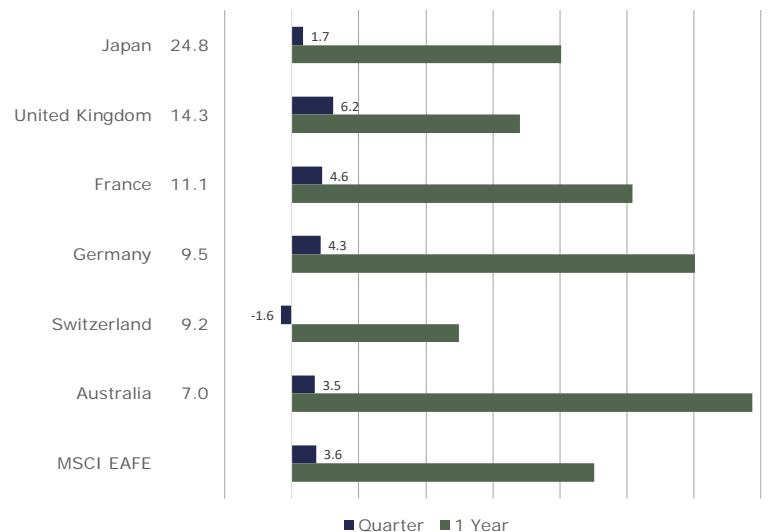
Data sources: Bloomberg

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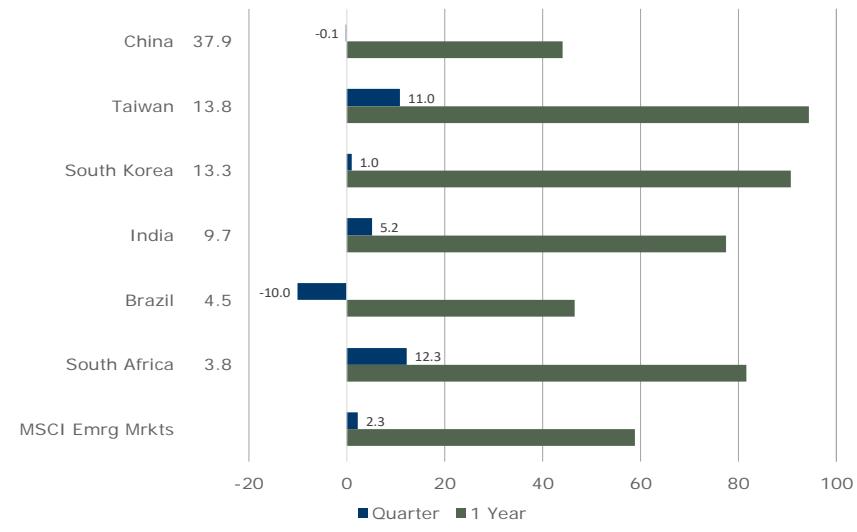
NON-U.S. EQUITY MARKET

AS OF 3/31/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI ex-US (\$G)	3.6	3.6	50.0	7.0	10.3	5.4
MSCI EAFE (\$G)	3.6	3.6	45.2	6.5	9.4	6.0
MSCI Emerging Markets (\$G)	2.3	2.3	58.9	6.9	12.5	4.0
MSCI Frontier Markets (\$G)	-6.0	-6.0	34.0	-4.0	2.8	1.8
MSCI ACWI ex-US Growth (\$G)	0.0	0.0	49.8	10.7	12.4	7.1
MSCI ACWI ex-US Value (\$G)	7.3	7.3	51.7	3.2	8.1	3.9
MSCI ACWI ex-US Small (\$G)	5.6	5.6	70.4	7.0	10.8	6.7
MSCI ACWI Minimum Volatility	1.9	1.9	25.1	8.5	9.0	9.8
MSCI EAFE Minimum Volatility	-0.5	-0.5	19.5	3.4	5.6	7.0
FTSE RAFI Developed ex-US	8.6	8.6	54.5	4.7	9.0	4.6
MSCI EAFE LC (G)	7.7	7.7	37.1	7.6	9.3	8.0
MSCI Emerging Markets LC (G)	4.0	4.0	53.5	9.7	13.3	7.3

DEVELOPED MARKETS WEIGHT AND RETURN (%)



EMERGING MARKETS WEIGHT AND RETURN (%)

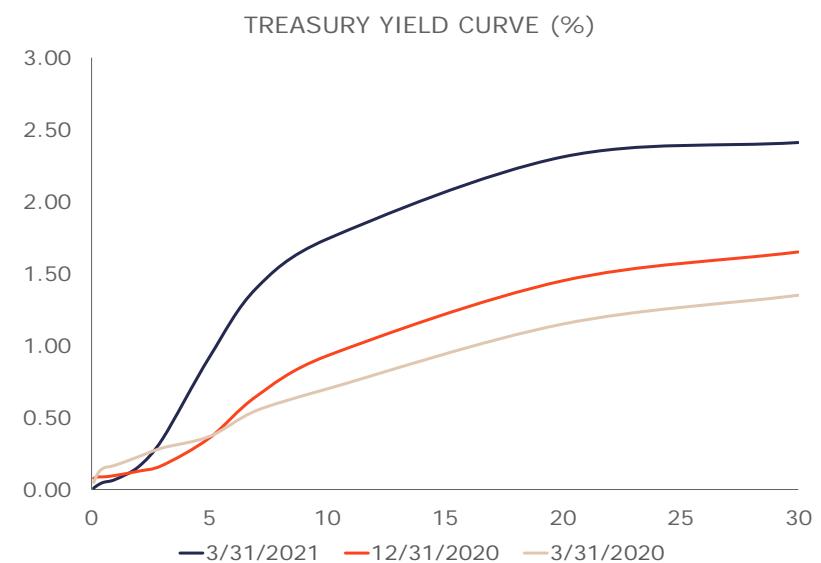
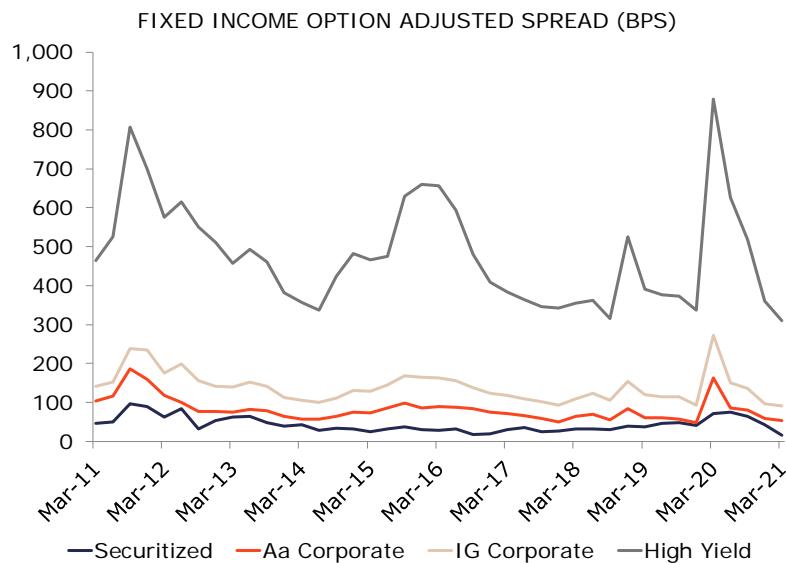


Wilshire Consulting

U.S. FIXED INCOME

AS OF 3/31/2021	YTW	DUR.	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Barclays Aggregate	1.6	6.4	-3.4	-3.4	0.7	4.7	3.1	3.4
Bloomberg Barclays Treasury	1.0	6.8	-4.3	-4.3	-4.4	4.1	2.2	2.9
Bloomberg Barclays Govt-Rel.	1.5	6.0	-2.9	-2.9	2.4	4.4	3.1	3.3
Bloomberg Barclays Securitized	1.8	4.2	-1.2	-1.2	0.3	3.9	2.5	2.9
Bloomberg Barclays Corporate	2.3	8.5	-4.6	-4.6	8.7	6.2	4.9	5.0
Bloomberg Barclays LT Govt/Credit	3.0	16.3	-10.4	-10.4	-2.1	7.1	5.5	7.0
Bloomberg Barclays LT Treasury	2.3	18.6	-13.5	-13.5	-15.8	5.9	3.1	6.3
Bloomberg Barclays LT Gov't-Rel.	3.4	13.5	-7.4	-7.4	5.2	6.1	5.3	6.7
Bloomberg Barclays LT Corporate	3.5	15.1	-8.5	-8.5	9.2	7.7	6.9	7.3
Bloomberg Barclays U.S. TIPS *	1.6	8.1	-1.5	-1.5	7.5	5.7	3.9	3.4
Bloomberg Barclays High Yield	4.2	3.9	0.8	0.8	23.7	6.8	8.1	6.5
Treasury Bills	0.0	0.3	0.0	0.0	0.1	1.5	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

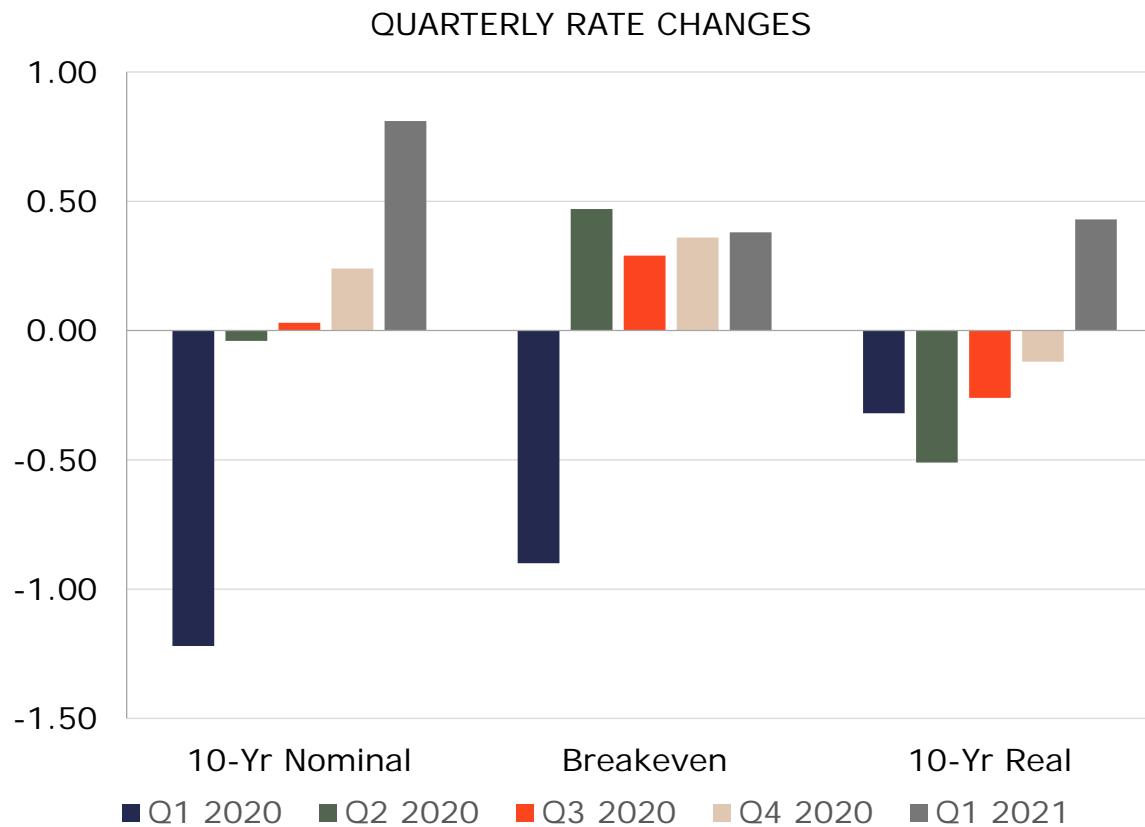


Data sources: Bloomberg

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RATE CHANGE ATTRIBUTION

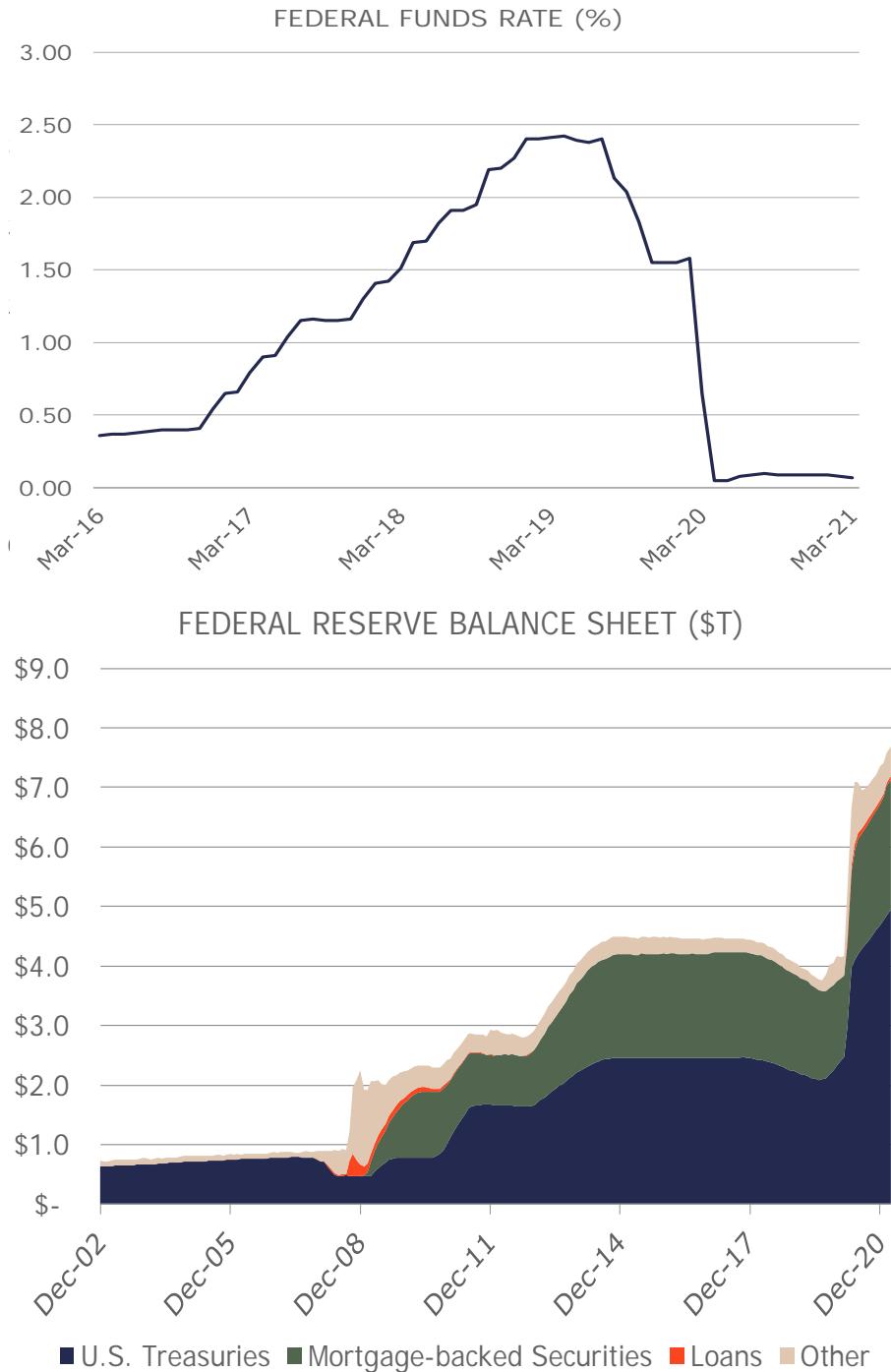
After dropping in four consecutive quarters, Real Yields up nearly 50 bps in Q1



FEDERAL RESERVE

- Current expectation for the Fed-funds rate is to remain near zero through 2023
- 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

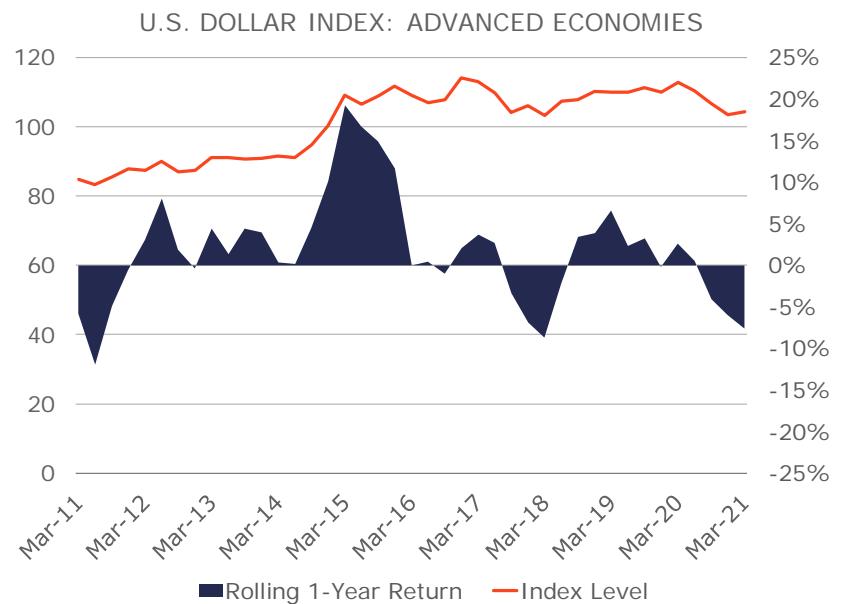
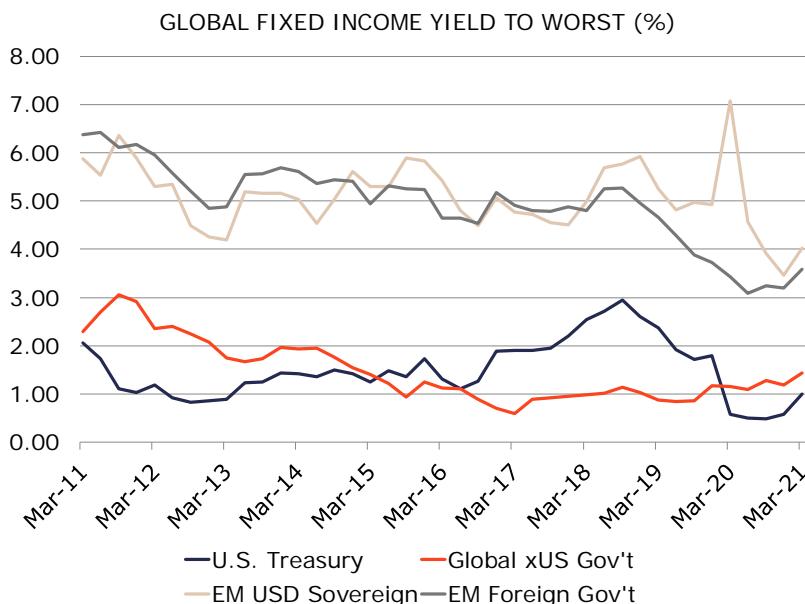
	Announced	Closed	Amount (bil)
QE1	11/25/2008	3/31/2010	\$1,403
QE2	11/3/2010	6/29/2012	\$568
QE3	9/13/2012	10/29/2014	\$1,674
QE4	3/23/2020		\$3,809



NON-U.S. FIXED INCOME

AS OF 3/31/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
DEVELOPED MARKETS						
Bloomberg Brclys Global Aggregate xUS	-5.3	-5.3	7.2	1.1	2.1	1.3
Bloomberg Brclys Global Aggregate xUS *	-1.9	-1.9	1.5	3.9	3.3	4.2
Bloomberg Brclys Global Inflation Linked xUS	-4.6	-4.6	14.9	2.0	4.0	3.4
Bloomberg Brclys Global Inflation Linked xUS *	-3.3	-3.3	5.6	4.4	5.5	5.8
EMERGING MARKETS (HARD CURRENCY)						
Bloomberg EM USD Aggregate	-3.5	-3.5	13.6	4.8	5.2	5.5
EMERGING MARKETS (FOREIGN CURRENCY)						
Bloomberg EM Local Currency Gov't	-3.7	-3.7	9.7	1.4	3.6	2.0
Bloomberg EM Local Currency Govt *	-2.0	-2.0	0.5	3.7	3.2	3.3
Euro vs. Dollar	-4.0	-4.0	6.3	-1.6	0.6	-1.9
Yen vs. Dollar	-6.7	-6.7	-2.9	-1.4	0.3	-2.8
Pound vs. Dollar	0.8	0.8	11.0	-0.6	-0.8	-1.5

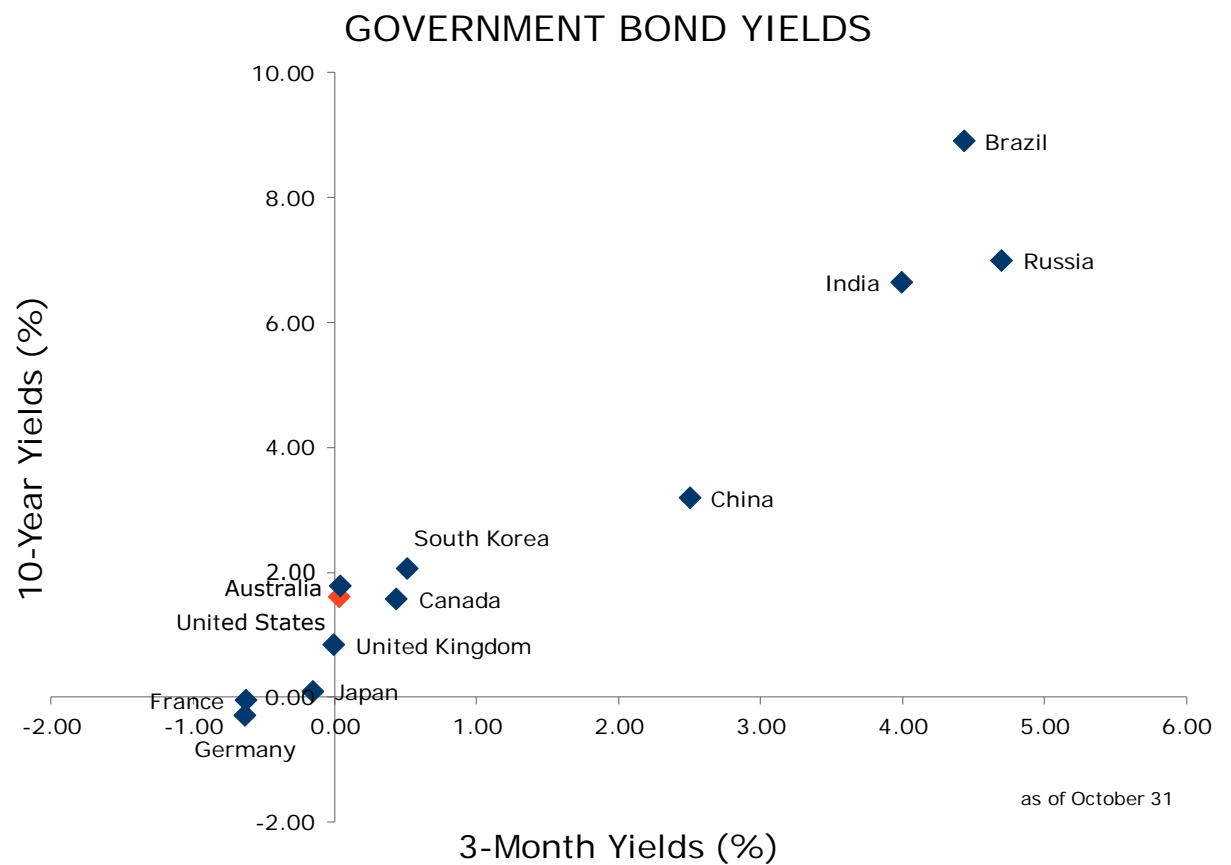
* Returns are reported in terms of local market investors, which removes currency effects.



Data sources: Bloomberg

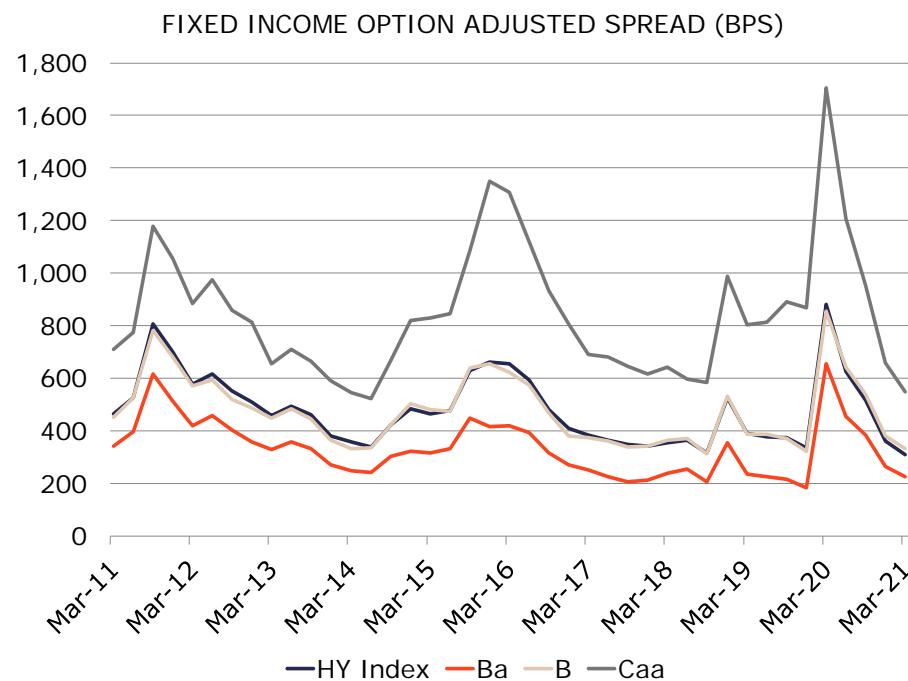
GLOBAL INTEREST RATES

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.



HIGH YIELD BOND MARKET

AS OF 3/31/2021		YTW	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Barclays High Yield		4.2	0.8	0.8	23.7	6.8	8.1	6.5
S&P LSTA Leveraged Loan		3.7	1.0	1.0	15.3	4.1	5.0	3.9
HIGH YIELD QUALITY DISTRIBUTION	WEIGHT							
Ba U.S. High Yield	53.2%	3.4	-0.1	-0.1	22.4	8.0	7.6	6.9
B U.S. High Yield	33.5%	4.5	1.2	1.2	21.6	6.4	7.6	6.1
Caa U.S. High Yield	12.8%	6.5	3.6	3.6	33.3	3.6	9.3	6.2
Ca to D U.S. High Yield	0.5%	17.2	14.6	14.6	67.3	4.2	18.2	-3.3
Non-Rated U.S. High Yield	0.0%	0.0	0.0	0.0	6.1	0.1	3.8	2.8

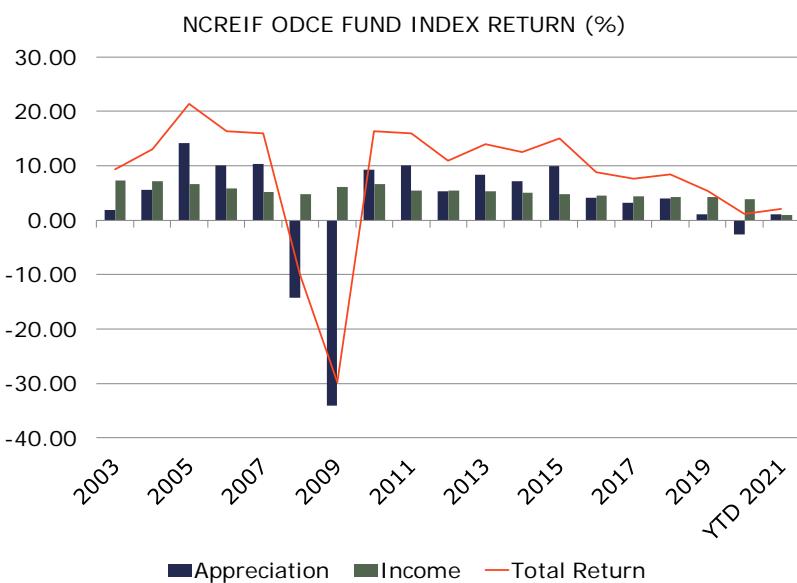
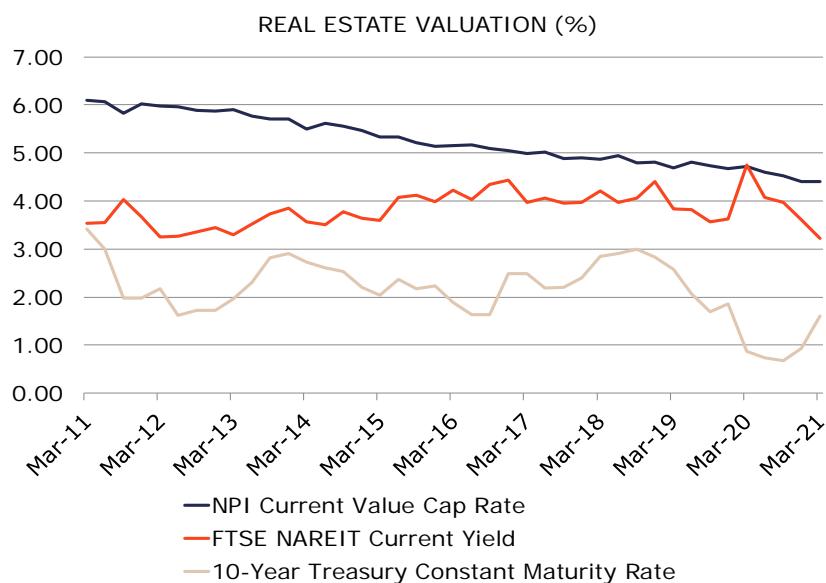


Data sources: Bloomberg

Wilshire Consulting

REAL ASSETS

AS OF 3/31/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Barclays U.S. TIPS	-1.5	-1.5	7.5	5.7	3.9	3.4
Bloomberg Commodity Index	6.9	6.9	35.0	-0.2	2.3	-6.3
Bloomberg Gold Index	-9.8	-9.8	4.4	7.4	5.5	0.9
Wilshire Global RESI Index	6.6	6.6	34.1	6.6	4.8	7.3
NCREIF ODCE Fund Index	2.1	2.1	2.3	4.9	6.2	9.7
NCREIF Timberland Index	0.8	0.8	1.5	1.8	2.6	4.6
Alerian Midstream Energy	20.9	20.9	74.5	4.2	4.8	n.a.



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

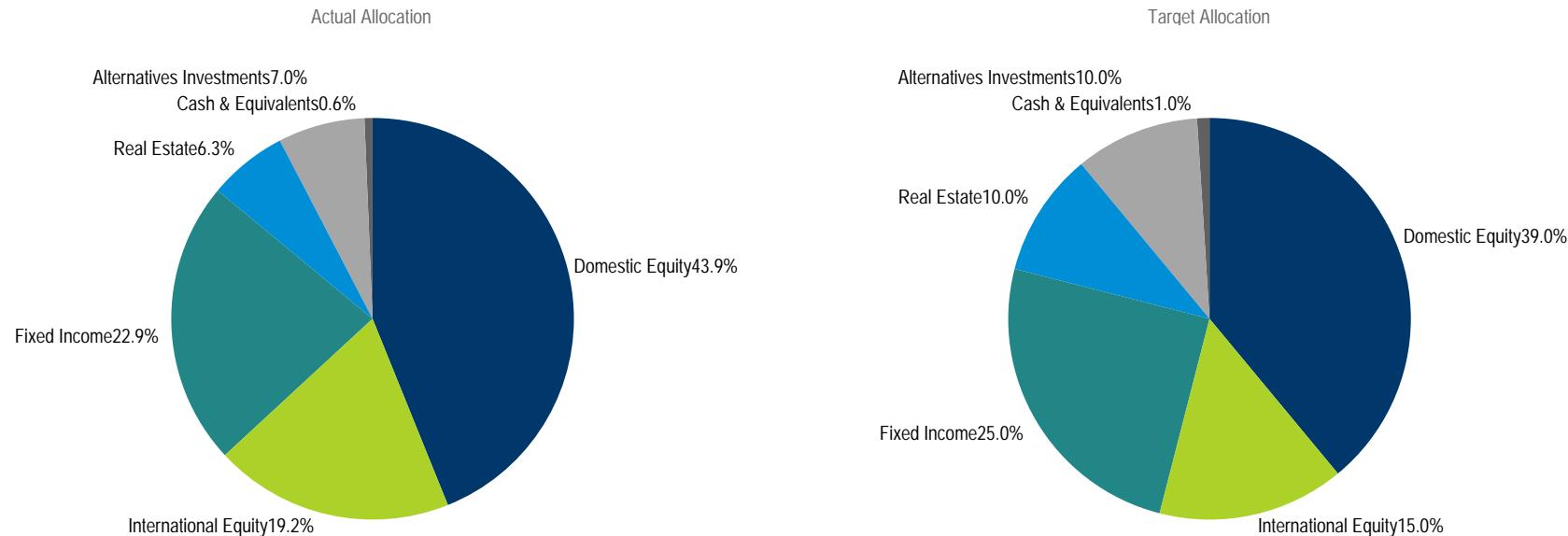


Total Fund

Wilshire Consulting

Asset Allocation

Total Fund
 Periods Ended As of March 31, 2021



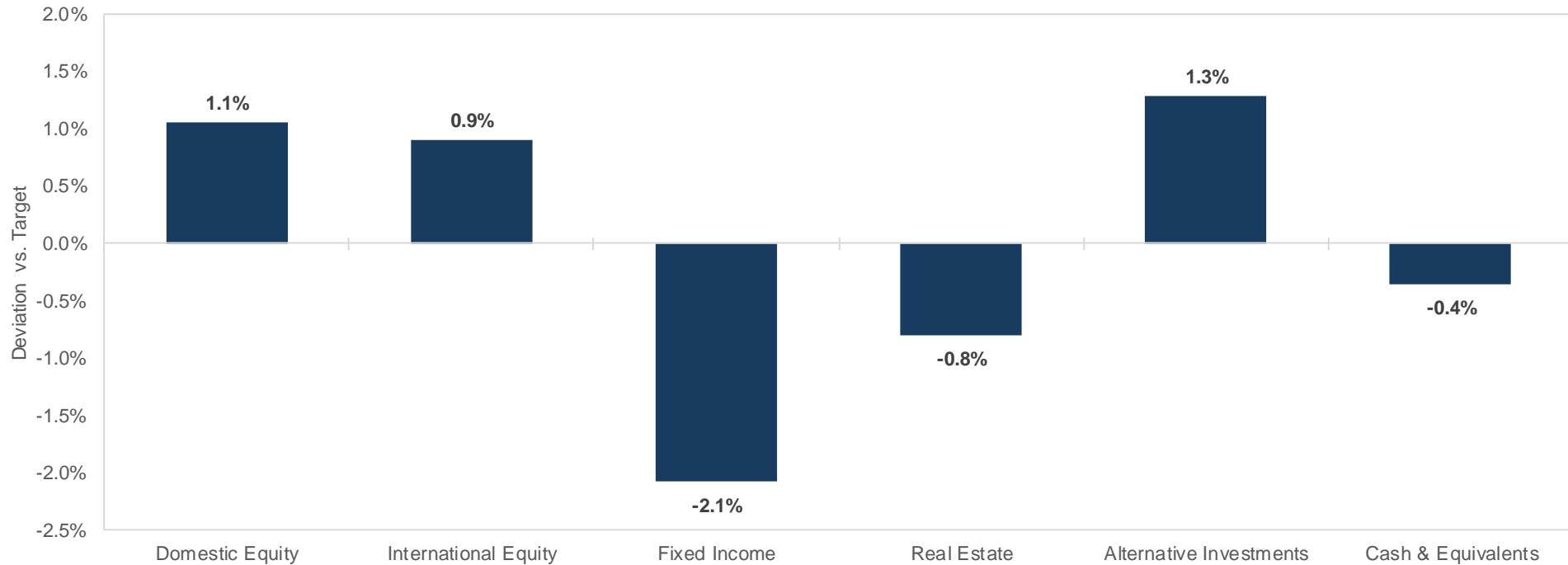
■ Domestic Equity ■ International Equity ■ Fixed Income ■ Real Estate ■ Alternatives Investments ■ Cash & Equivalents

	Actual Allocation \$Millions	Actual Allocation %	Target Allocation %	Differences %	Differences \$Millions
Total Fund	51,599	100.0	100.0	0.0	
■ Domestic Equity	22,650	43.9	39.0	4.9	2,526
■ International Equity	9,916	19.2	15.0	4.2	2,176
■ Fixed Income	11,825	22.9	25.0	-2.1	-1,074
■ Real Estate	3,276	6.3	10.0	-3.7	-1,884
■ Alternatives Investments	3,600	7.0	10.0	-3.0	-1,560
■ Cash & Equivalents	333	0.6	1.0	-0.4	-183

Projected Deviation From Benchmark

Period Ending March 31, 2021

Projected Asset Allocation Differences vs. Target

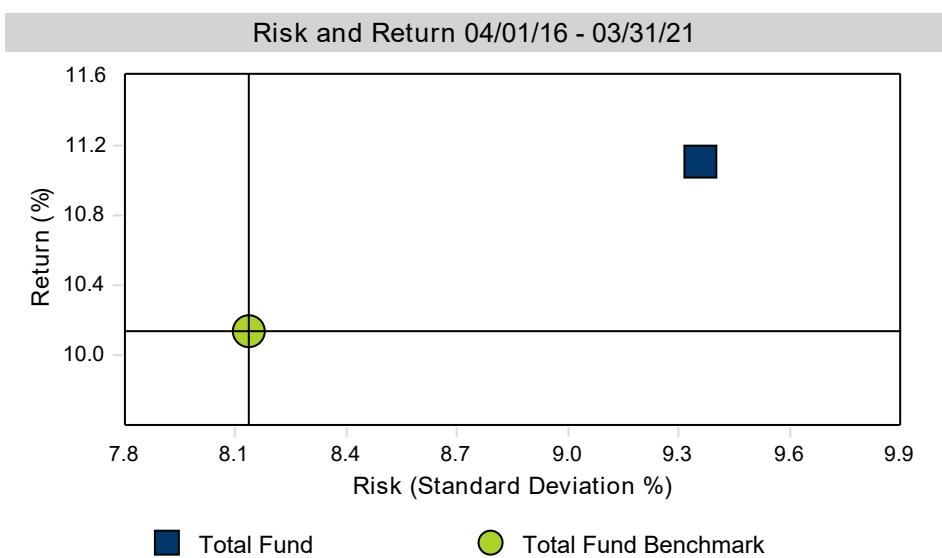
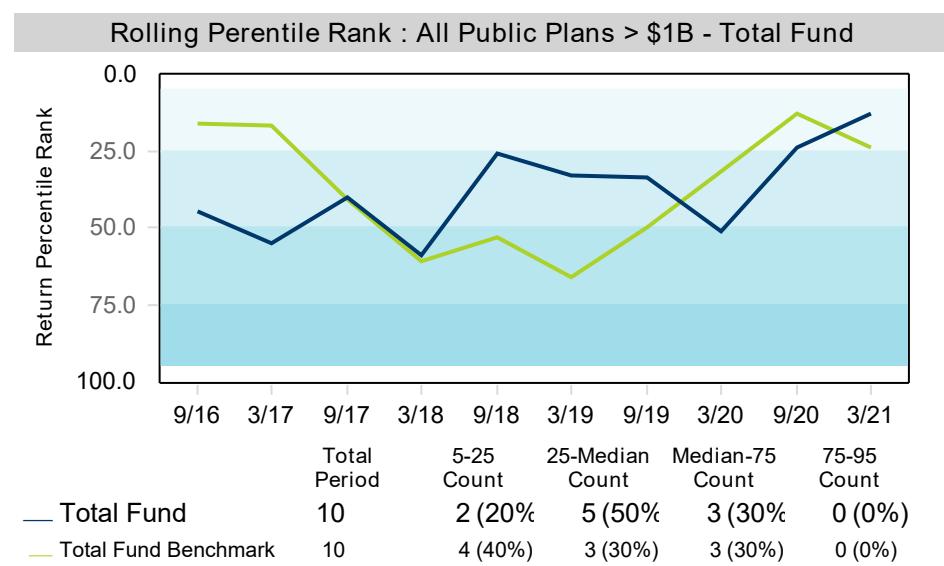
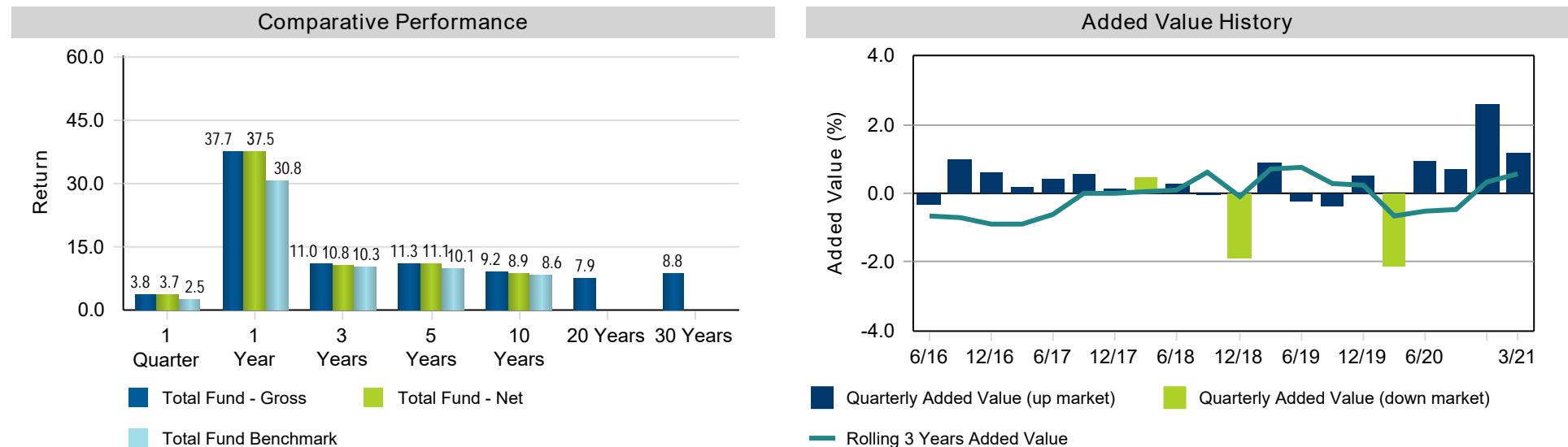


- Includes committed, but unfunded amounts for real estate (\$1,470.2 million) and alternatives (\$2,221.4 million). Assumes real estate and alternatives allocations are fully funded as of month's end.
- Assumes that outstanding commitments are funded from overweight public markets asset classes (domestic equity, international equity and/or fixed income) and places an emphasis on asset classes that are most overweight relative to target.

Composite Performance Summary

Total Fund

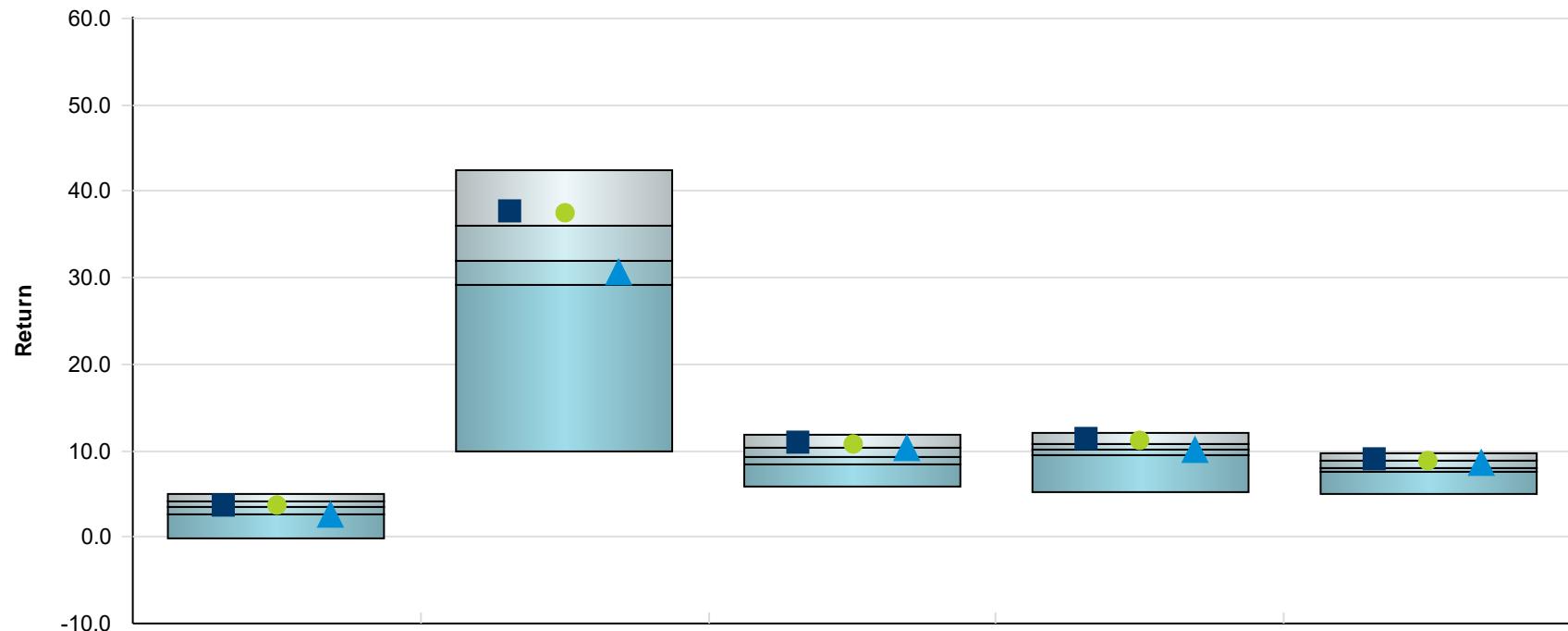
Periods Ended March 31, 2021



Plan Sponsor Peer Group Analysis

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

Periods Ended March 31, 2021



	QTD	1 Year	3 Years	5 Years	10 Years
■ Total Fund	3.75 (37)	37.73 (18)	11.01 (11)	11.32 (10)	9.16 (11)
● Total Fund - Net	3.71 (40)	37.50 (20)	10.83 (13)	11.11 (12)	8.93 (18)
▲ Total Fund Benchmark	2.53 (75)	30.76 (63)	10.26 (24)	10.13 (48)	8.59 (30)
5th Percentile	5.02	42.36	11.80	11.99	9.59
1st Quartile	4.15	35.94	10.24	10.82	8.77
Median	3.43	31.89	9.22	10.04	8.09
3rd Quartile	2.52	29.16	8.44	9.38	7.59
95th Percentile	-0.24	9.92	5.74	5.19	4.94
Population	147	147	144	142	134

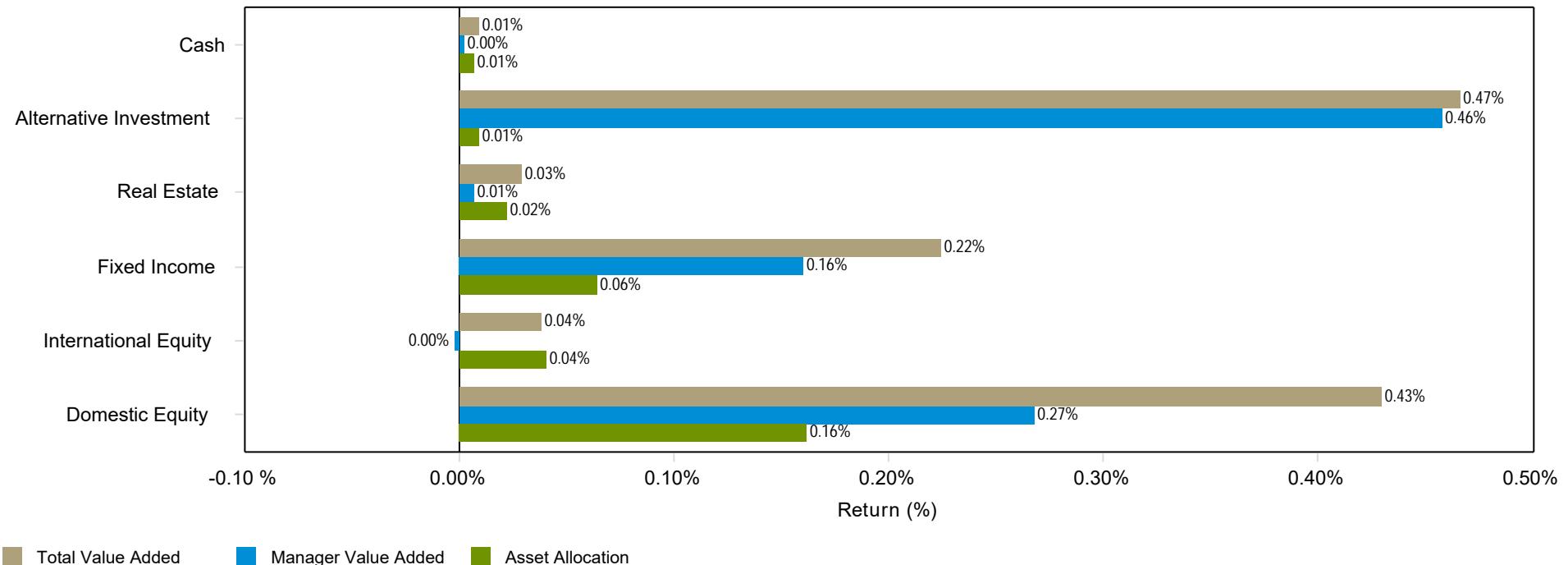
Total Fund Benchmark = 39.0% Russell 3000 Index, 25.0% Blmbg Aggregate, 15.0% MSCI ACWI ex US, 10.0% NCREIF NFI-ODCE Val Wt Nt, 10.0% 9% Annually and 1.0% 3-month Treasury Bill.

Total Fund Attribution

Total Fund

1 Quarter Ending March 31, 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	43.2	39.0	7.01	6.35	0.27	0.16	0.43
International Equity	19.2	15.0	3.48	3.49	0.00	0.04	0.04
Fixed Income	24.1	25.0	-2.73	-3.38	0.16	0.06	0.22
Real Estate	6.4	10.0	1.99	1.89	0.01	0.02	0.03
Alternative Investment	6.5	10.0	9.24	2.18	0.46	0.01	0.47
Cash	0.6	1.0	0.33	0.02	0.00	0.01	0.01
Total Fund	100.0	100.0	3.71	2.53	0.89	0.31	1.18

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 March 31, 2021

	Performance (%)								
	1 Quarter	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
Total Fund	3.75	37.73	11.01	11.32	9.16	7.87	8.83	10.06	1/1/1982
Total Fund - Net	3.71	37.50	10.83	11.11	8.93				
Total Fund Benchmark	2.53	30.76	10.26	10.13	8.59				
Domestic Equity	7.06	69.27	16.53	16.74	13.47	9.30	11.06	12.04	1/1/1982
Domestic Equity - Net	7.01	68.98	16.31	16.51	13.21				
Blended Benchmark (U.S. Equity)	6.35	62.53	17.12	16.64	13.78	9.07	10.59		
U.S. Equity IMRF Custom Benchmark	6.43	61.76	15.37	15.51					
International Equity	3.56	54.57	7.68	10.74	6.78	7.25	7.63	8.08	9/1/1986
International Equity - Net	3.48	54.00	7.32	10.37	6.44				
MSCI AC World ex USA (Net)	3.49	49.41	6.51	9.76	4.93	6.16			
International Equity IMRF Custom Benchmark	3.47	50.72	6.52	9.85					
Fixed Income	-2.72	5.17	5.01	4.12	4.27	5.26	6.35	8.06	1/1/1982
Fixed Income - Net	-2.73	5.06	4.89	3.99	4.12				
Blmbg. Barc. U.S. Aggregate	-3.38	0.71	4.65	3.10	3.44	4.50	5.65	7.52	
Fixed Income IMRF Custom Benchmark	-2.89	3.06	4.76	3.56					
Real Estate	2.00	4.15	7.67	8.25	10.30	7.27	5.24	5.54	5/1/1985
Blended Benchmark (Real Estate)	1.89	1.47	3.96	5.26	8.89	7.00	7.21	7.48	
Alternatives Investments	9.25	20.54	15.54	13.27	10.39	7.19	12.27	11.10	2/1/1986
Alternatives Investments - Net	9.24	20.50	15.45	13.13	10.15				
Alternatives Custom Benchmark	2.18	9.00	9.00	9.00	9.00	10.68	12.10	12.52	
Private Equity	10.78	24.94	18.78	16.37	13.10	8.76	14.94	13.35	2/1/1986
Alternatives Custom Benchmark	2.18	9.00	9.00	9.00	9.00	10.68	12.10	12.52	
Agriculture	0.11	0.10	-0.16	-1.26	8.20	7.07		6.79	10/1/1997
NCREIF Farmland Index	0.86	4.08	4.71	5.46	10.24	12.08		11.33	

Benchmark definitions on following pages.

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

Wilshire Consulting

Asset Class Returns

Periods Ended March 31, 2021

	Performance (%)								
	1 Quarter	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years	Since Inception	Inception Date
Timberland	-8.41	-7.55	-2.27	-0.32	1.84	2.84		6.84	10/1/1992
NCREIF Timberland Index	0.76	1.46	1.71	2.51	4.55	5.69		8.28	
Unlisted Infrastructure	4.93	22.04	12.98					12.98	4/1/2018
Alternatives Custom Benchmark	2.18	9.00	9.00					9.00	
Cash	0.33	2.10	2.78	2.20	1.21	1.61	3.11	3.77	7/1/1986
90 Day US Treasury Bill	0.02	0.12	1.49	1.18	0.62	1.39	2.56	3.19	

Benchmark definitions on following pages.

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

Asset Class Returns

Periods Ended March 31, 2021

	Performance (%)										
	YTD	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Total Fund	3.75	14.98	19.77	-4.23	16.02	8.01	0.53	6.15	20.20	13.84	-0.29
Total Fund - Net	3.71	14.79	19.57	-4.40	15.78	7.77	0.29	5.90	19.94	13.58	-0.50
Total Fund Benchmark	2.53	13.16	18.68	-3.12	14.37	7.89	1.37	7.33	15.84	12.19	1.47
Domestic Equity	7.06	22.07	29.23	-6.08	19.83	12.62	0.04	9.81	37.65	17.39	-0.74
Domestic Equity - Net	7.01	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)	6.35	20.89	31.02	-5.24	21.13	12.74	0.48	12.47	33.47	16.38	1.08
International Equity	3.56	13.52	23.76	-14.13	27.95	3.56	-1.90	-2.80	20.24	19.11	-12.27
International Equity - Net	3.48	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)	3.49	10.65	21.51	-14.20	27.19	4.50	-5.66	-3.87	15.29	16.83	-13.71
Fixed Income	-2.72	7.87	9.50	-0.24	4.82	4.87	0.25	5.97	-0.59	7.41	7.60
Fixed Income - Net	-2.73	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	-3.38	7.51	8.72	0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84
Real Estate	2.00	4.20	9.81	8.36	10.03	8.97	12.54	13.02	10.82	12.85	12.29
Real Estate - Net	1.99	4.16	9.76	8.36	10.03	8.97	12.46	13.02	10.82	12.85	12.29
Blended Benchmark (Real Estate)	1.89	0.34	4.39	7.36	6.66	7.79	13.95	11.46	12.90	11.54	15.26
Alternatives Investments	9.25	12.31	9.48	17.32	12.09	5.32	6.90	11.63	12.11	6.24	5.05
Alternative Investments - Net	9.24	12.27	9.43	17.14	11.91	5.00	6.47	11.16	11.86	6.00	4.84
Alternatives Custom Benchmark	2.18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Private Equity	10.78	14.50	11.78	21.46	15.61	8.60	8.41	13.72	14.13	5.61	12.33
Alternatives Custom Benchmark	2.18	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Agriculture	0.11	4.69	-5.82	0.28	-4.58	-0.47	20.18	24.73	25.68	13.55	9.70
NCREIF Farmland Index	0.86	3.08	4.81	6.74	6.19	7.09	10.35	12.63	20.91	18.58	15.16
Timberland	-8.41	4.51	1.00	-3.62	4.68	-4.58	4.99	12.83	9.14	-3.59	3.20
NCREIF Timberland Index	0.76	0.81	1.30	3.21	3.63	2.59	4.97	10.48	9.69	7.75	1.57
Unlisted Infrastructure	4.93	15.90	9.65								
Alternatives Custom Benchmark	2.18	9.00	9.00								

Benchmark definitions on following pages.

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

Wilshire Consulting

Asset Class Returns

Periods Ended March 31, 2021

	Performance (%)										
	YTD	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Cash	0.33	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 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 Benchmark	1/1/2015 1/1/1982	Present 12/31/2014	100% Russell 3000 Index 100% Dow Jones US Total Stock Market Index
Real Estate Blended Benchmark	1/1/2013 1/1/2007 1/1/2005	Present 12/31/2012 12/31/2016	100% NCREIF Fund Index-ODCE (VW) (Net)** 100% 100% NPI + 1% 100% Consumer Price Index + 5%
Alternatives Custom Benchmark	7/1/2010 1/1/2004 1/1/2003 2/1/1986	Present 6/30/2010 12/31/2003 12/31/2002	100% Annualized rate of 9.0% 100% Annualized rate of 12.0% 100% Annualized rate of 13.0% 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 previous month end.
International Equity IMRF Custom Benchmark			Blend of the International Equity Style benchmarks returns, dollar weighted by the actual allocation at previous month end.
Fixed Income IMRF Custom Benchmark			Blend of the Fixed Income Style benchmarks returns, dollar weighted by the actual allocation at previous month end.

**ODCE returns are updated quarterly.

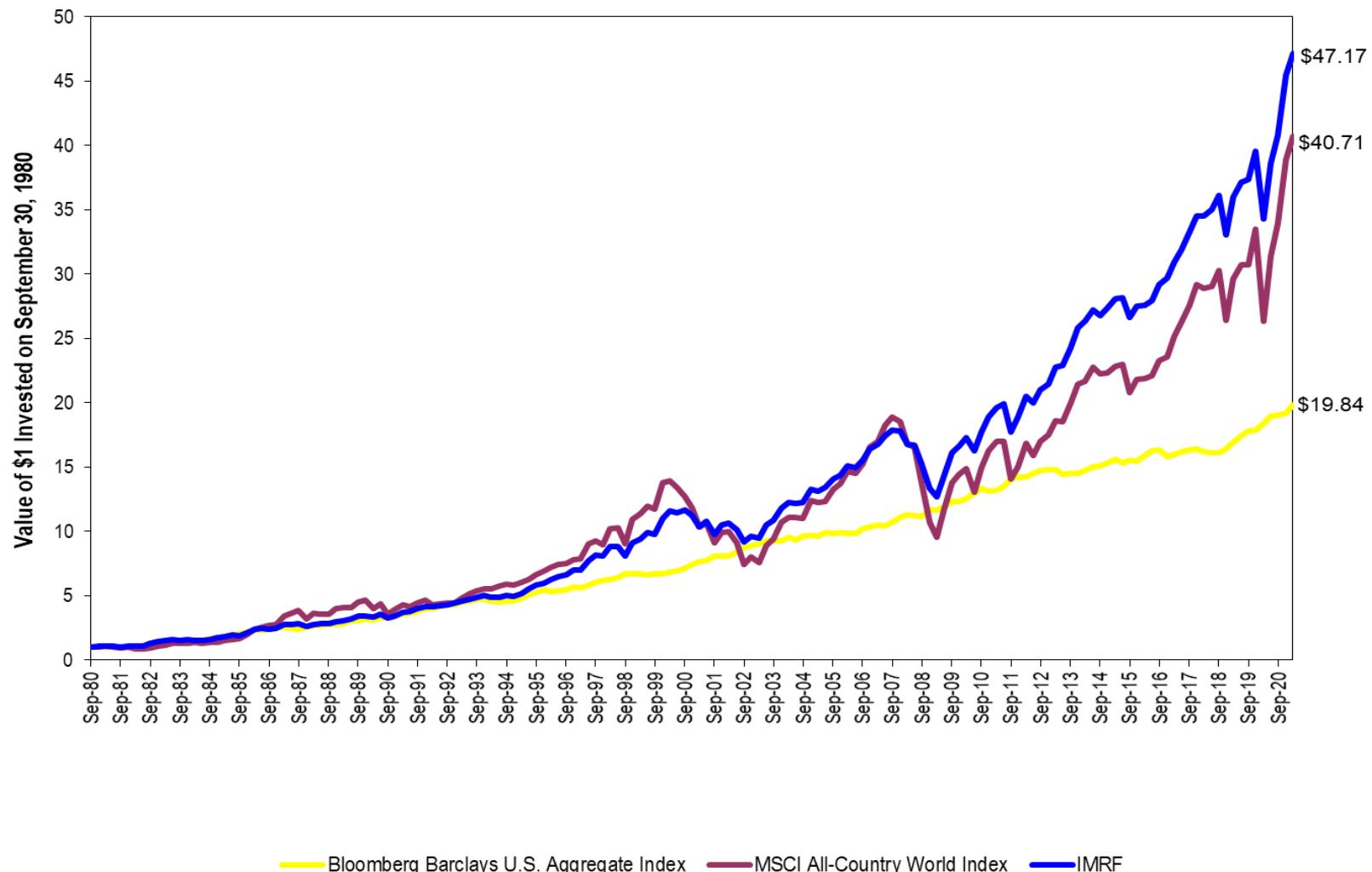
Benchmark Definitions

Account Name	From Date	To Date	Benchmark
Total Fund Benchmark	1/1/2021	Present	<p>The total fund benchmark is a blend of the asset class benchmark returns weighted by the target allocation for each asset class:</p> <p>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.</p> <p>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.</p>

Total Fund Growth of a Dollar

Period Ending March 31, 2021

Growth of a Dollar - As of March 31, 2021



Investment Manager Asset Allocation

Periods Ended March 31, 2021

	Dec-2020		Mar-2021	
	\$	%	\$	%
Domestic Equity	21,463,906,127	43.03	22,649,748,730	43.90
Large Cap Growth	8,609,247,538	17.26	8,440,345,948	16.36
NTGI S&P 500 Growth	3,228,524,751	6.47	3,297,762,451	6.39
Sands Capital	3,452,849,176	6.92	3,196,521,258	6.19
Xponance Russell 1000 G	1,927,873,611	3.86	1,946,062,239	3.77
Large Cap Value	4,054,025,952	8.13	4,548,829,433	8.82
Dodge & Cox	1,461,604,174	2.93	1,685,049,882	3.27
BMO	74,927,467	0.15		0.00
LSV Asset	1,228,327,832	2.46	1,434,818,250	2.78
NTGI S&P 500 Value	1,289,166,479	2.58	1,428,961,301	2.77
Large Cap Pass. Core	2,948,174,624	5.91	3,138,745,951	6.08
NTGI MarketCap Idx.	2,948,174,624	5.91	3,138,745,951	6.08
Factor Diversity Strategies	1,098,112,816	2.20	1,162,122,487	2.25
U.S. Large Cap FDP-GSAM	1,098,112,816	2.20	1,162,122,487	2.25
Quantitative Factor Strategies	1,046,216,386	2.10	1,126,798,294	2.18
Quantitative US Equity - SciBeta	1,046,216,386	2.10	1,126,798,294	2.18
Small Cap Growth	1,036,204,380	2.08	1,147,873,915	2.22
Frontier Capital	865,833,273	1.74	960,669,712	1.86
FIAM Small Cap	170,371,107	0.34	187,204,202	0.36
Small Cap Value	1,668,609,553	3.35	2,041,246,442	3.96
Channing	284,485,075	0.57	327,500,674	0.63
DFA Small Cap Val.	623,763,500	1.25	791,003,741	1.53
Inv. Couns. Maryland	760,360,978	1.52	922,742,027	1.79

Investment Manager Asset Allocation

Periods Ended March 31, 2021

	Dec-2020		Mar-2021	
	\$	%	\$	%
Micro Cap	319,746,036	0.64	333,840,271	0.65
DFA Micro Cap (9-10)	319,746,036	0.64	333,840,271	0.65
Public Real Assets	683,568,840	1.37	709,945,989	1.38
Brookfield	160,119,864	0.32	167,800,978	0.33
Cohen & Steers	523,448,976	1.05	542,145,011	1.05
International Equity	9,576,479,786	19.20	9,915,523,571	19.22
Intl Large Cap Growth	1,671,253,979	3.35	1,690,043,270	3.28
EARNEST Part. Intl	552,926,812	1.11	584,659,324	1.13
William Blair	1,118,327,167	2.24	1,105,383,946	2.14
Intl Large Cap Value	1,257,629,247	2.52	1,345,777,820	2.61
Brandes Investment	530,780,045	1.06	579,082,076	1.12
Mondrian	590,987,037	1.18	628,004,172	1.22
Lazard	135,862,165	0.27	138,691,572	0.27
Intl Large Cap Core	4,397,530,551	8.82	4,606,139,088	8.93
Arrowstreet Capital	937,740,929	1.88	1,023,970,341	1.98
Brown Capital	613,090,514	1.23	598,149,136	1.16
GlobeFlex Capital	751,289,770	1.51	819,991,954	1.59
Xponance Intl EQ		0.00	101,354,712	0.20
NTGI MSCI EAFE	2,094,370,592	4.20	2,061,678,572	4.00
Progress Intl Equity	919,025	0.00	874,657	0.00
Transition Account	119,721	0.00	119,717	0.00
Intl All Cap Developed	153,679,137	0.31	160,489,030	0.31

Investment Manager Asset Allocation

Periods Ended March 31, 2021

	Dec-2020		Mar-2021	
	\$	%	\$	%
Ativo International	153,679,137	0.31	160,489,030	0.31
International Small Cap	638,774,927	1.28	647,601,196	1.26
Franklin Templeton	228,057,930	0.46	242,842,062	0.47
William Blair IntSC	410,716,996	0.82	404,759,133	0.78
Emerging Mkt Equity	1,457,611,946	2.92	1,465,473,166	2.84
Genesis Asset Mngrs.	1,457,611,946	2.92	1,465,473,166	2.84

Investment Manager Asset Allocation

Periods Ended March 31, 2021

	Dec-2020		Mar-2021	
	\$	%	\$	%
Fixed Income	12,227,353,235	24.51	11,825,453,489	22.92
Domestic Fixed Core	3,808,794,036	7.64	3,761,233,177	7.29
Attucks Fixed Income		0.00	97,188,928	0.19
Brandes FI Core	383,313,604	0.77	366,932,725	0.71
EARNEST Partners	1,046,710,291	2.10	1,008,379,261	1.95
Xponance Yield Advantage Agg.	1,125,966,650	2.26	1,085,418,354	2.10
Garcia Hamilton	1,119,856,879	2.24	1,073,858,845	2.08
Ramirez Asset Management	132,946,611	0.27	129,455,065	0.25
Domestic Fixed Passive Core	3,813,613,446	7.65	3,585,665,266	6.95
NTGI Blmbg Agg.	1,946,269,369	3.90	1,781,620,274	3.45
BlackRock US Debt I	1,867,344,078	3.74	1,804,044,992	3.50
Domestic Fixed Core Plus	3,002,040,647	6.02	2,876,459,417	5.57
LM Capital Group FI	986,159,372	1.98	951,118,496	1.84
Progress Inv. FI	3,800	0.00	3,673	0.00
BMO - TCH	671,046,103	1.35	646,047,821	1.25
Western Asset	1,158,645,034	2.32	1,097,833,147	2.13
Longfellow Core Plus	186,186,338	0.37	181,456,280	0.35
Bank Loans	559,830,899	1.12	569,147,387	1.10
Barings Global Loan Fund	559,830,899	1.12	569,147,387	1.10
Emerging Markets Debt	237,699,989	0.48	223,505,873	0.43
Standish-Mellon EMD	237,699,989	0.48	223,505,873	0.43
High Yield	805,374,217	1.61	809,442,369	1.57
MacKay Shields	805,330,405	1.61	809,421,202	1.57
FIAM High Yield	43,812	0.00	21,167	0.00

Investment Manager Asset Allocation

Periods Ended March 31, 2021

	Dec-2020		Mar-2021	
	\$	%	\$	%
Real Estate	3,203,259,355	6.42	3,275,781,250	6.35
Real Estate Core Cmp	1,762,237,868	3.53	1,781,271,388	3.45
TA Assoc. Buckhead	602,288,923	1.21	627,524,281	1.22
Barings Euro Core Property	142,142,517	0.28	139,013,969	0.27
Blackstone Property Euro	151,742,349	0.30	152,174,244	0.29
INVESCO Core Real Estate	204,127,320	0.41	204,127,320	0.40
INVESCO European real estate	64,860,847	0.13	62,296,251	0.12
AEW Core Property Tr	234,802,268	0.47	232,820,696	0.45
CBRE Core Partners	212,273,644	0.43	212,273,644	0.41
JPM Strategic Property Fund	150,000,000	0.30	151,040,983	0.29
RE Non-Core Cmp	1,441,021,487	2.89	1,494,509,862	2.90
Artemis MWBE Spruce	222,427,276	0.45	227,728,377	0.44
Franklin T. EMREFF	6,569,896	0.01	6,570,093	0.01
Security Capital	56,889,276	0.11	56,693,900	0.11
Dune II	19,434,746	0.04	18,138,649	0.04
Non-Core Real Estate Funds	928,593,002	1.86	969,094,289	1.88
Non-Core Intl Real Estate	206,974,024	0.41	216,185,532	0.42
Rockwood Fund VIII	10,993	0.00		0.00
Almanac ARS V	122,274	0.00	99,022	0.00
Alternatives Investments	3,185,071,765	6.39	3,599,708,770	6.98
Absolute Return	178,877	0.00	152,405	0.00
Aurora Investment	178,877	0.00	152,405	0.00
Private Equity	2,677,935,501	5.37	3,053,092,706	5.92

Investment Manager Asset Allocation

Periods Ended March 31, 2021

	Dec-2020		Mar-2021	
	\$	%	\$	%
Abbott S/A Comp.	395,861,433	0.79	415,140,229	0.80
Muller Monroe MPEFF	3,777,402	0.01	3,477,598	0.01
Pantheon S/A Comp.	287,747,121	0.58	284,915,943	0.55
Private Equity Fund - Domestic	1,570,645,561	3.15	1,868,473,298	3.62
Private Equity Fund - International	387,317,574	0.78	437,433,482	0.85
Oakbrook Opportunities Fund	32,586,410	0.07	43,652,156	0.08
Private Credit	156,369,215	0.31	189,885,315	0.37
Private Credit Fund - Domestic	156,369,215	0.31	189,885,315	0.37
Agriculture	217,350,363	0.44	216,346,325	0.42
Premiere Partners IV	217,350,363	0.44	216,346,325	0.42
Timberland	75,287,900	0.15	68,053,687	0.13
Forest Investment	75,287,900	0.15	68,053,687	0.13
Unlisted Infrastructure	57,949,909	0.12	72,178,332	0.14
Unlisted Infrastructure Funds	57,949,909	0.12	72,178,332	0.14
Cash & Equivalents	226,342,503	0.45	333,131,868	0.65
Total Fund	49,882,412,771	100.00	51,599,347,678	100.00

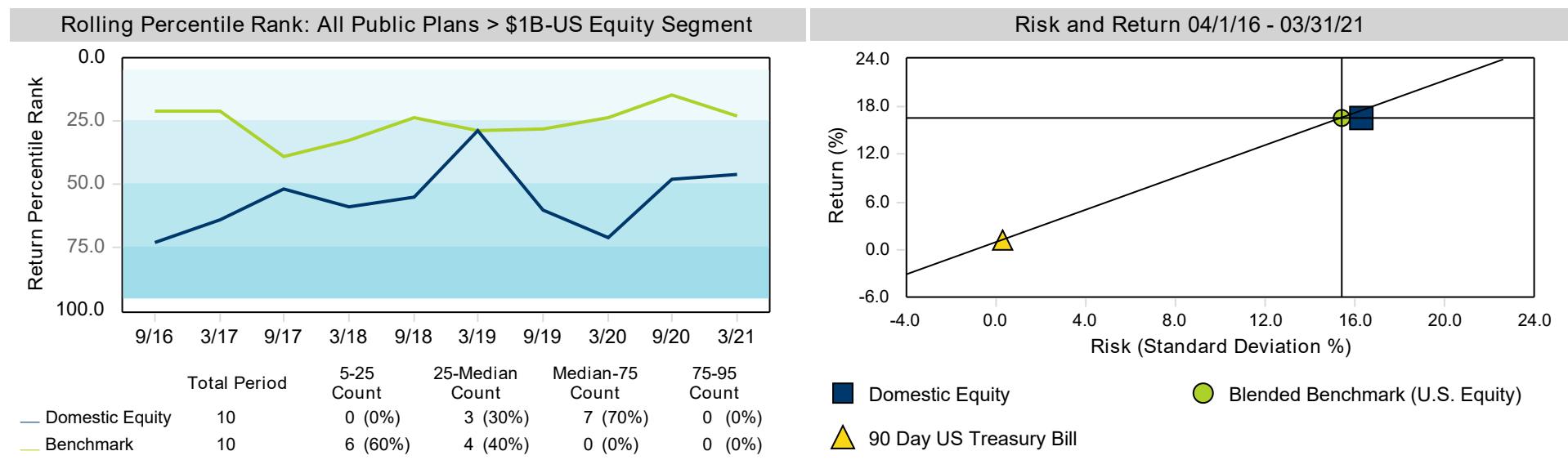
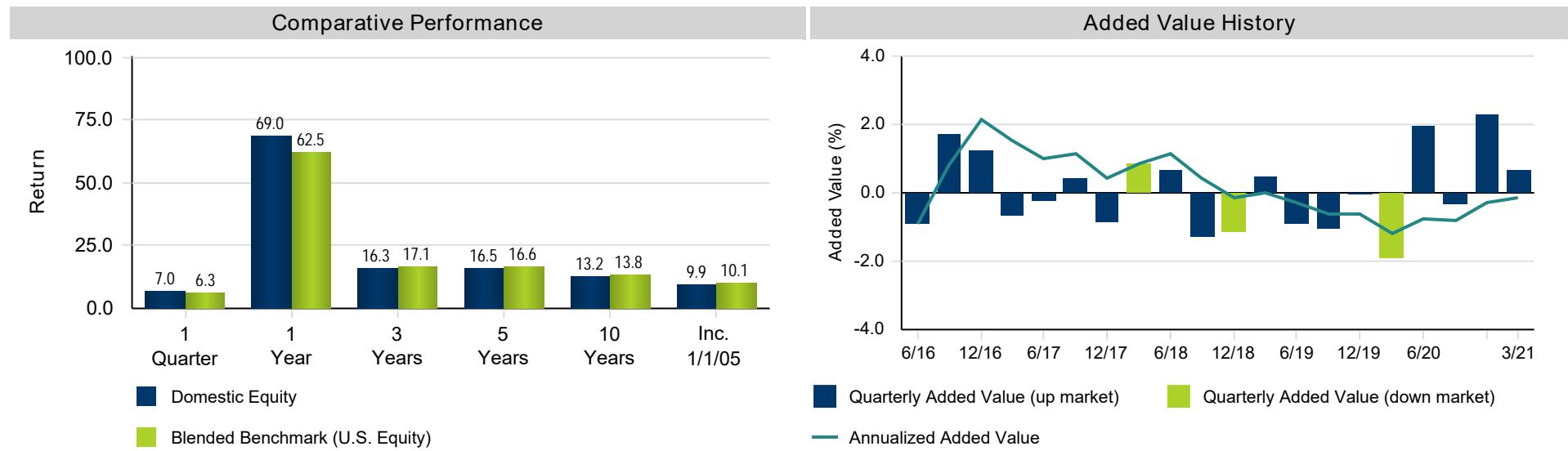


Domestic Equity

Composite Performance Summary

Domestic Equity

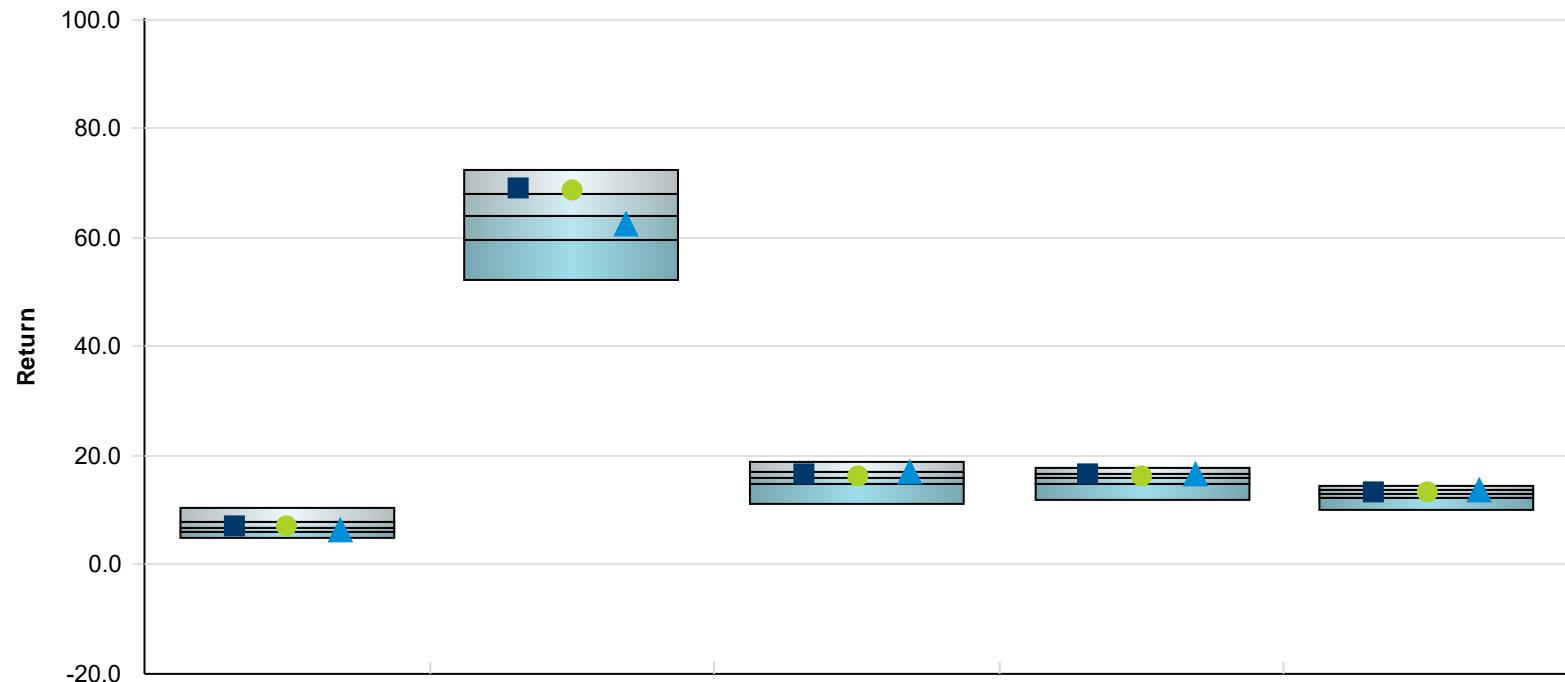
Periods Ended March 31, 2021



Plan Sponsor Peer Group Analysis

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

Periods Ended March 31, 2021



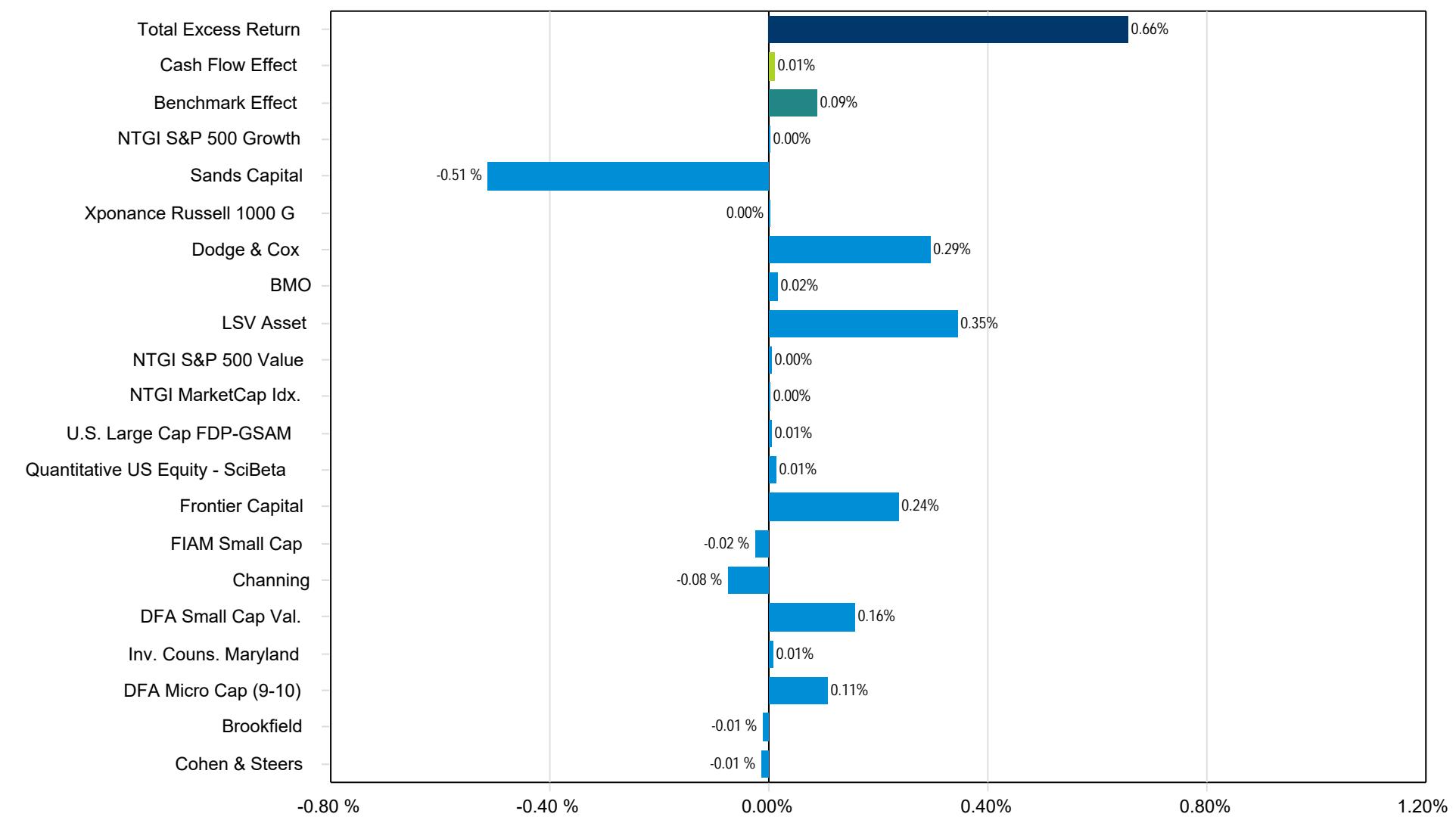
	QTD	1 Year	3 Years	5 Years	10 Years
■ Domestic Equity	7.06 (39)	69.27 (18)	16.53 (38)	16.74 (24)	13.47 (34)
● Domestic Equity - Net	7.01 (44)	68.98 (20)	16.31 (46)	16.51 (36)	13.21 (46)
▲ Blended Benchmark (U.S. Equity)	6.35 (64)	62.53 (62)	17.12 (23)	16.64 (29)	13.78 (22)
5th Percentile	10.58	72.58	18.94	17.63	14.42
1st Quartile	7.76	67.97	17.05	16.69	13.71
Median	6.78	64.04	15.96	16.06	13.07
3rd Quartile	6.08	59.68	14.76	14.88	12.47
95th Percentile	5.08	52.39	11.29	12.02	10.09
Population	60	53	50	47	31

Asset Class Attribution

Domestic Equity

Periods Ended 1 Quarter Ending March 31, 2021

1 Quarter



Wilshire Consulting

Performance

Domestic Equity
Periods Ended March 31, 2021

	Market Value \$	Performance (%)						
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Domestic Equity	22,649,748,730	7.06 (39)	69.27 (18)	16.53 (38)	16.74 (24)	13.47 (34)	12.04	1/1/1982
Domestic Equity - Net		7.01 (44)	68.98 (20)	16.31 (46)	16.51 (36)	13.21 (46)		
Blended Benchmark (U.S. Equity)		6.35 (64)	62.53 (62)	17.12 (23)	16.64 (29)	13.78 (22)		
Russell 3000 Index		6.35 (64)	62.53 (62)	17.12 (23)	16.64 (29)	13.79 (22)	11.92	
Large Cap Equity	17,290,043,820	5.14 (79)	65.49 (10)	17.36 (11)	17.25 (6)	14.12 (6)	11.75 (38)	1/1/1982
Large Cap Equity - Net		5.12 (80)	65.35 (10)	17.25 (13)	17.13 (7)	13.98 (8)		
Russell 1000 Index		5.91 (68)	60.59 (26)	17.31 (12)	16.66 (12)	13.97 (8)	12.04 (28)	
Large Cap Growth	8,440,345,948	0.10 (80)	70.07 (20)	24.64 (14)	22.53 (18)	16.80 (18)	12.78 (18)	1/1/1982
Large Cap Growth - Net		0.08 (80)	69.93 (21)	24.52 (14)	22.40 (19)	16.64 (21)		
LCG Blended Benchmark*		0.94 (65)	62.74 (41)	22.80 (27)	21.05 (31)	16.63 (21)		
Russell 1000 Growth Index		0.94 (65)	62.74 (41)	22.80 (27)	21.05 (31)	16.63 (21)	11.90 (40)	
NTGI S&P 500 Growth	3,297,762,451	2.14 (45)	59.36 (60)	20.55 (52)	19.32 (55)	16.15 (30)	9.42 (36)	8/1/2001
NTGI S&P 500 Growth - Net		2.14 (45)	59.34 (60)	20.55 (52)	19.31 (55)	16.14 (30)		
S&P 500 Growth		2.12 (46)	59.43 (59)	20.58 (52)	19.35 (55)	16.16 (29)	9.40 (37)	
Xponance Russell 1000 G	1,946,062,239	0.94 (65)	62.72 (41)				20.78 (31)	10/1/2018
Xponance Russell 1000 G - Net		0.94 (65)	62.69 (41)				20.76 (31)	
Russell 1000 Growth Index		0.94 (65)	62.74 (41)				20.80 (30)	
Sands Capital	3,196,521,258	-2.34 (92)	84.14 (9)	29.65 (5)	27.27 (4)	19.63 (3)	14.85 (2)	11/1/2003
Sands Capital - Net		-2.39 (93)	83.80 (9)	29.38 (5)	27.00 (5)	19.36 (4)		
LCG Blended Benchmark*		0.94 (65)	62.74 (41)	22.80 (27)	21.05 (31)	16.63 (21)	11.73 (30)	
Russell 1000 Growth Index		0.94 (65)	62.74 (41)	22.80 (27)	21.05 (31)	16.63 (21)	11.77 (29)	
Large Cap Value	4,548,829,433	14.80 (16)	64.05 (24)	11.25 (33)	13.18 (18)	12.05 (9)	10.54 (68)	10/1/1982
Large Cap Value - Net		14.75 (17)	63.82 (25)	11.09 (37)	13.01 (19)	11.87 (12)		
LCV Blended Benchmark**		11.26 (48)	56.09 (49)	10.96 (40)	11.74 (46)	10.99 (33)		
Russell 1000 Value Index		11.26 (48)	56.09 (49)	10.96 (40)	11.74 (46)	10.99 (33)	11.91 (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.

Wilshire Consulting Performance

Domestic Equity
Periods Ended March 31, 2021

	Market Value \$	Performance (%)						
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Dodge & Cox	1,685,049,882	15.77 (10)	72.63 (10)	13.41 (10)	15.76 (3)	13.20 (3)	10.40 (4)	9/1/2003
Dodge & Cox - Net		15.72 (11)	72.28 (10)	13.17 (12)	15.52 (3)	12.96 (3)		
LCV Blended Benchmark**		11.26 (48)	56.09 (49)	10.96 (40)	11.74 (46)	10.99 (33)	8.83 (39)	
Russell 1000 Value Index		11.26 (48)	56.09 (49)	10.96 (40)	11.74 (46)	10.99 (33)	8.98 (32)	
LSV Asset	1,434,818,250	17.54 (5)	69.42 (14)	9.59 (67)	12.72 (23)	12.11 (8)	11.26 (2)	2/1/2003
LSV Asset - Net		17.47 (5)	68.98 (15)	9.32 (71)	12.45 (27)	11.83 (13)		
LCV Blended Benchmark**		11.26 (48)	56.09 (49)	10.96 (40)	11.74 (46)	10.99 (33)	9.66 (33)	
Russell 1000 Value Index		11.26 (48)	56.09 (49)	10.96 (40)	11.74 (46)	10.99 (33)	9.67 (32)	
NTGI S&P 500 Value	1,428,961,301	10.84 (56)	50.67 (68)	11.96 (23)	12.44 (28)	11.24 (25)	6.55 (65)	8/1/1999
NTGI S&P 500 Value - Net		10.84 (56)	50.66 (68)	11.95 (23)	12.43 (28)	11.24 (25)		
S&P 500 Value		10.77 (57)	50.37 (69)	11.83 (25)	12.31 (30)	11.15 (27)	6.51 (66)	
Large Cap Pass. Core	3,138,745,951	6.46 (57)	62.61 (20)	17.08 (38)	16.66 (41)	13.82 (45)	11.65 (69)	1/1/1985
Large Cap Pass. Core - Net		6.46 (57)	62.60 (20)	17.07 (38)	16.65 (41)	13.81 (45)		
Dow Jones US Total Stock Market Index		6.45 (58)	62.68 (20)	17.05 (39)	16.60 (43)	13.75 (48)		
NTGI MarketCap Idx.	3,138,745,951	6.46 (57)	62.61 (20)	17.08 (38)	16.66 (41)	13.82 (45)	11.43 (71)	2/1/1985
NTGI MarketCap Idx. - Net		6.46 (57)	62.60 (20)	17.07 (38)	16.65 (41)	13.81 (45)		
Dow Jones US Total Stock Market Index		6.45 (58)	62.68 (20)	17.05 (39)	16.60 (43)	13.75 (48)		
Factor Diversity Strategies	1,162,122,487	5.83					20.41	8/18/2020
U.S. Large Cap FDP-GSAM	1,162,122,487	5.83					20.41	8/18/2020
U.S. Large Cap FDP-GSAM - Net		5.81					20.35	
Solactive GBS U.S. 1000 Index		5.69					19.98	
GSAM Active Beta US. Large Cap FDC Index		5.83					20.26	
Quantitative Factor Strategies	1,126,798,294	7.70	53.25				14.46	9/17/2019

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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 March 31, 2021

	Market Value \$	Performance (%)						
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Quantitative US Equity - SciBeta	1,126,798,294	7.70	53.25				14.46	9/17/2019
Quantitative US Equity - SciBeta - Net		7.68	52.74				14.13	
SciBeta US Hi-Fctr-Intst Div Multi-Beta Multi-Strat Index		7.41	51.85				13.67	

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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 March 31, 2021

	Market Value \$	Performance (%)						
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Small Cap	3,522,960,628	18.16 (31)	108.01 (21)	15.30 (40)	16.07 (45)	11.99 (53)	12.69 (51)	7/1/1988
Small Cap Composite - Net		17.89 (33)	106.80 (22)	14.63 (48)	15.44 (52)	11.39 (66)		
Russell 2000 Index		12.70 (63)	94.85 (47)	14.76 (46)	16.35 (42)	11.68 (60)	10.12 (94)	
Small Cap Growth	1,147,873,915	10.78 (18)	118.72 (9)	22.29 (34)	20.27 (46)	14.06 (35)	13.93 (1)	7/1/1988
Small Cap Growth - Net		10.28 (20)	117.04 (10)	21.40 (37)	19.53 (52)	13.40 (52)		
Russell 2000 Growth Index		4.88 (50)	90.20 (46)	17.16 (63)	18.61 (59)	13.02 (61)	9.07 (99)	
Frontier Capital	960,669,712	10.95 (18)	127.43 (5)	26.27 (14)	24.73 (19)	14.72 (25)	14.35 (1)	8/1/1988
Frontier Capital - Net		10.40 (20)	125.46 (6)	25.13 (20)	23.80 (25)	13.98 (38)		
Russell 2000 Growth Index		4.88 (50)	90.20 (46)	17.16 (63)	18.61 (59)	13.02 (61)	9.16 (99)	
FIAM Small Cap	187,204,202	9.88 (24)	89.81 (48)	15.80 (79)	15.50 (86)	12.96 (64)	13.95 (3)	8/1/1988
FIAM Small Cap - Net		9.66 (25)	89.19 (50)	15.40 (81)	15.07 (88)	12.44 (73)		
Russell 2000 Index		12.70 (10)	94.85 (38)	14.76 (84)	16.35 (81)	11.68 (82)	10.18 (80)	
Russell 2000 Growth Index		4.88 (50)	90.20 (46)	17.16 (63)	18.61 (59)	13.02 (61)	9.16 (99)	
Small Cap Value	2,041,246,442	22.33 (32)	103.72 (37)	11.90 (22)	13.92 (15)	11.18 (10)	12.16 (1)	9/1/1989
Small Cap Value - Net		22.22 (33)	102.72 (39)	11.34 (28)	13.33 (24)	10.64 (18)		
Russell 2000 Value Index		21.17 (43)	97.05 (52)	11.57 (26)	13.56 (21)	10.06 (30)	10.45 (39)	
Channing	327,500,674	15.12 (95)	103.66 (37)	12.92 (13)	14.55 (10)		12.38 (6)	7/1/2011
Channing - Net		15.00 (95)	102.71 (39)	12.36 (16)	13.99 (14)		11.79 (13)	
Russell 2000 Value Index		21.17 (43)	97.05 (52)	11.57 (26)	13.56 (21)		10.64 (29)	
DFA Small Cap Val.	791,003,741	26.81 (6)	116.48 (13)	10.85 (35)	12.59 (33)	10.60 (19)	12.40 (1)	2/1/1996
DFA Small Cap Val. - Net		26.67 (6)	115.55 (14)	10.31 (43)	12.03 (43)	10.07 (29)		
Russell 2000 Value Index		21.17 (43)	97.05 (52)	11.57 (26)	13.56 (21)	10.06 (30)	10.08 (64)	
Inv. Couns. Maryland	922,742,027	21.36 (41)	93.94 (59)	12.46 (15)	15.29 (6)	11.99 (2)	12.08 (8)	5/1/1999
Inv. Couns. Maryland - Net		21.26 (41)	92.89 (60)	11.87 (22)	14.67 (9)	11.46 (9)		
Russell 2000 Value Index		21.17 (43)	97.05 (52)	11.57 (26)	13.56 (21)	10.06 (30)	9.73 (63)	

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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 March 31, 2021

	Market Value \$	Performance (%)						
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Micro Cap	333,840,271	20.25 (22)	101.19 (32)	12.27 (65)	14.12 (65)	10.38 (85)	11.88 (89)	7/1/1984
Micro Cap - Net		20.10 (23)	100.20 (33)	11.69 (72)	13.49 (73)	9.70 (92)		
Russell Microcap Index		23.89 (9)	120.33 (9)	16.57 (33)	18.10 (28)	12.20 (49)		
DFA Micro Cap (9-10)	333,840,271	20.25 (22)	101.19 (32)	12.70 (62)	15.05 (56)	12.30 (48)	11.59 (56)	8/1/1987
DFA Micro Cap (9-10) - Net		20.10 (23)	100.20 (33)	12.14 (66)	14.48 (62)	11.74 (58)		
Russell 2000 Index		12.70 (63)	94.85 (47)	14.76 (46)	16.35 (42)	11.68 (60)	9.52 (88)	
Russell 2000 Value Index		21.17 (17)	97.05 (40)	11.57 (74)	13.56 (72)	10.06 (90)	10.23 (86)	
Public Real Assets	709,945,989	3.86	25.72	8.57			6.36	8/1/2017
Public Real Assets - Net		3.75	25.22	8.09			5.92	
Public Real Assets Benchmark***		4.77	27.08	7.23			4.71	
Brookfield	167,800,978	4.80	28.17	6.04			3.19	8/1/2017
Brookfield - Net		4.66	27.48	5.48			2.67	
Dow Jones Brookfield Global Infrastructure Composit		6.14	27.13	5.82			2.83	
Cohen & Steers	542,145,011	3.57	24.76	9.73			7.86	8/1/2017
Cohen & Steers - Net		3.48	24.32	9.29			7.45	
FTSE GLOBAL CORE INFRASTRUCTURE 50/50 INDEX (Net)		4.08	27.01	7.90			5.62	

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** 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.

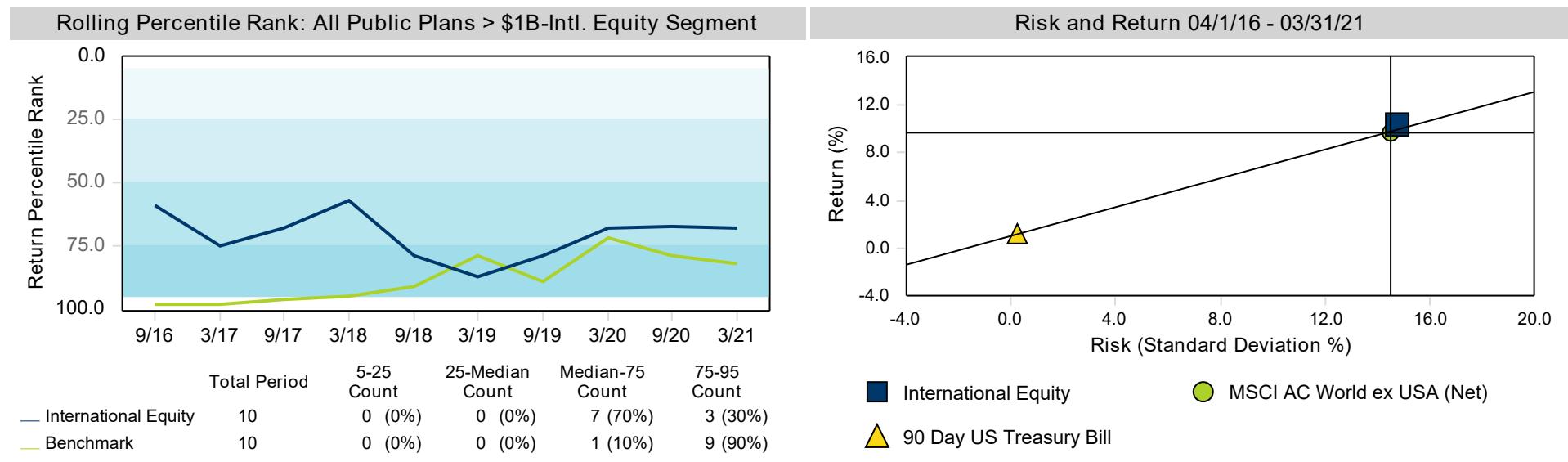
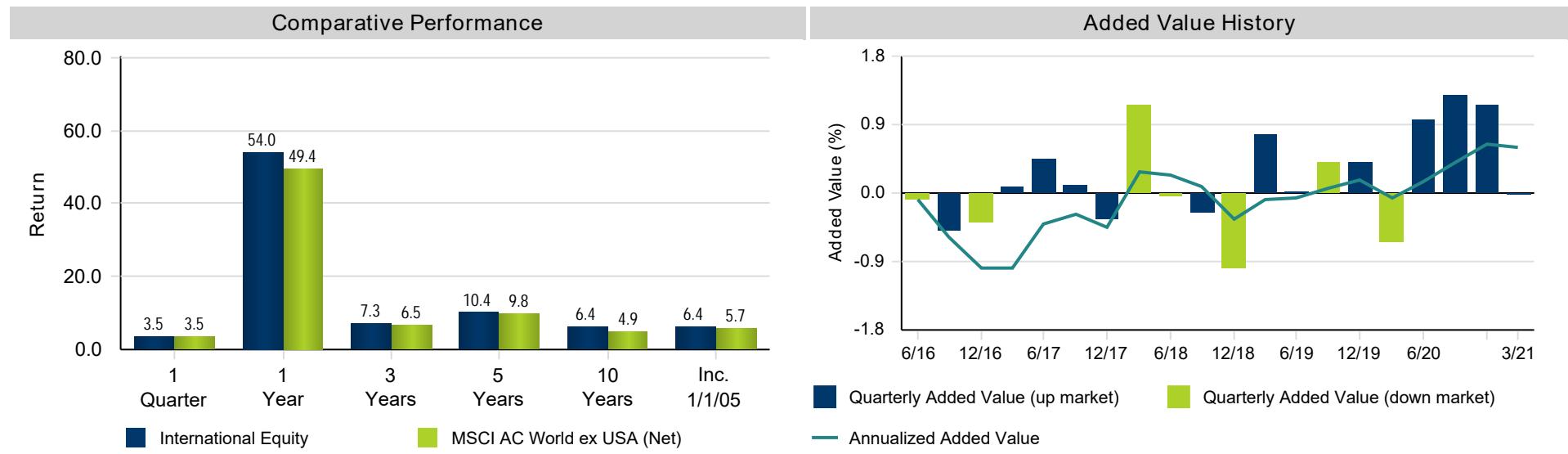


International Equity

Composite Performance Summary

International Equity

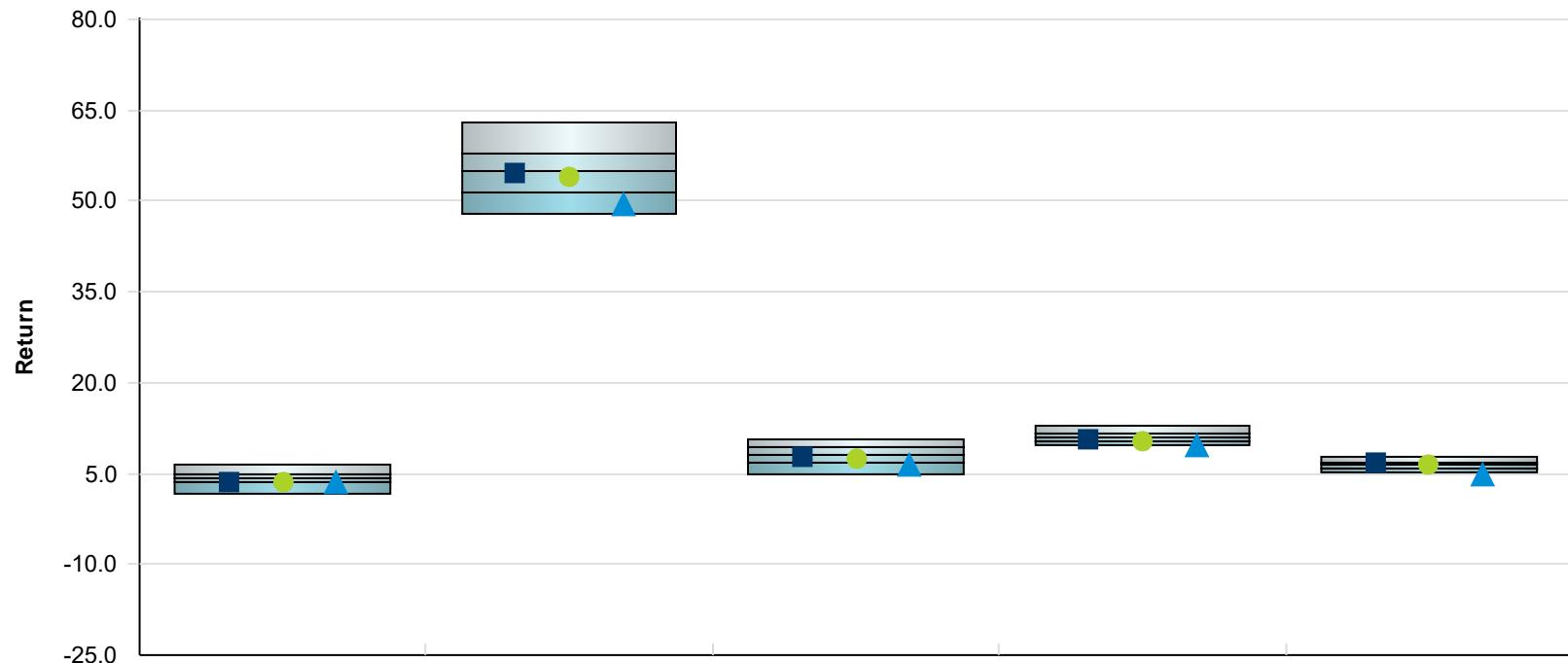
Periods Ended March 31, 2021



Plan Sponsor Peer Group Analysis

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

Periods Ended March 31, 2021



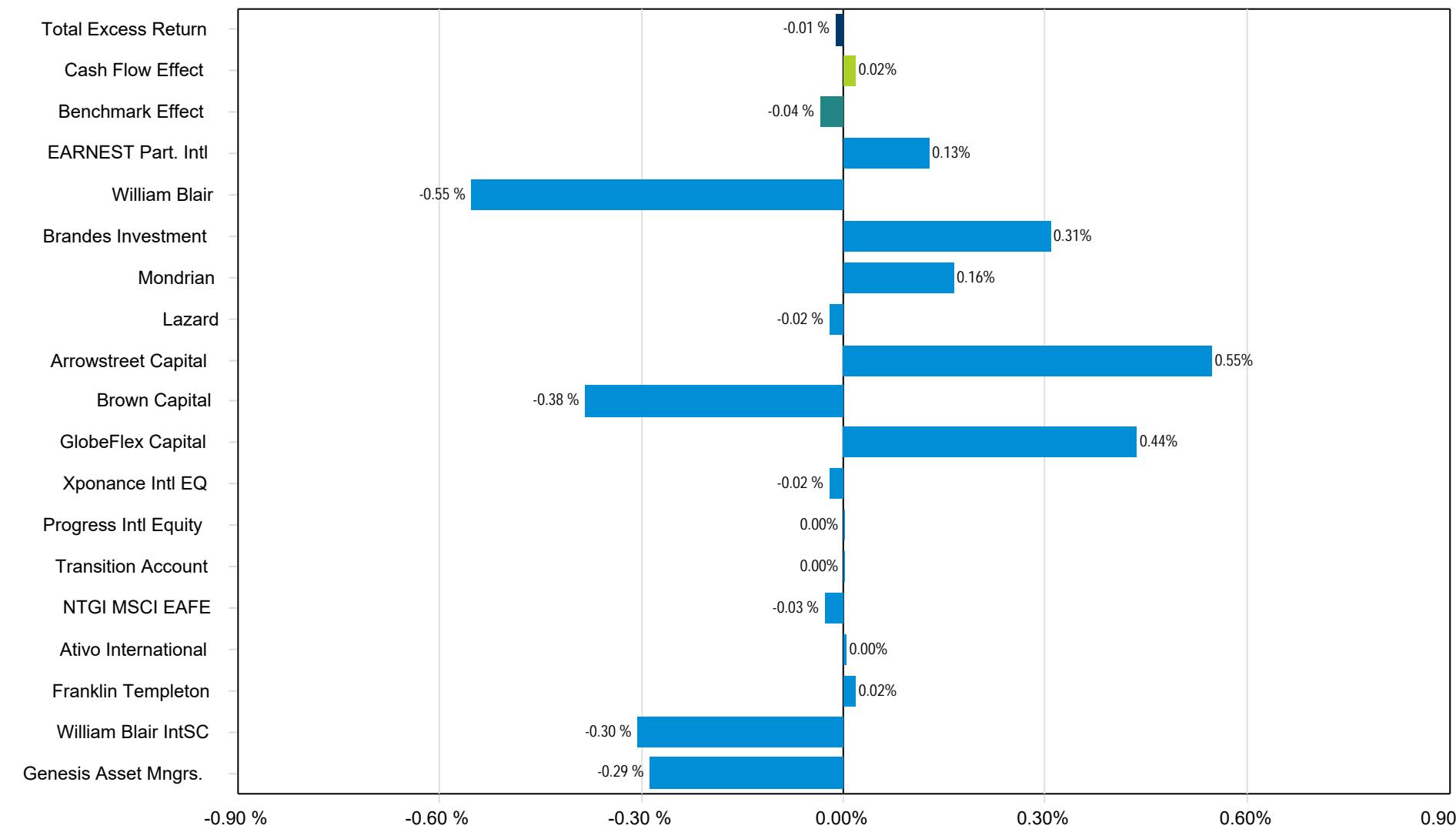
	QTD	1 Year	3 Years	5 Years	10 Years
International Equity	3.56 (74)	54.57 (55)	7.68 (62)	10.74 (59)	6.78 (26)
International Equity - Net	3.48 (77)	54.00 (60)	7.32 (68)	10.37 (70)	6.44 (54)
MSCI AC World ex USA (Net)	3.49 (77)	49.41 (89)	6.51 (82)	9.76 (93)	4.93 (98)
5th Percentile	6.39	62.95	10.56	12.84	7.87
1st Quartile	4.97	57.91	9.32	11.69	6.82
Median	4.27	55.10	8.13	10.96	6.50
3rd Quartile	3.53	51.53	6.94	10.18	5.82
95th Percentile	1.73	47.95	4.82	9.59	5.09
Population	59	56	52	51	32

Asset Class Attribution

International Equity

Periods Ended 1 Quarter Ending March 31, 2021

1 Quarter



Wilshire Consulting

Performance

International Equity
Periods Ended March 31, 2021

	Market Value \$	Performance (%)							
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
International Equity	9,915,523,571	3.56 (74)	54.57 (55)	7.68 (62)	10.74 (59)	6.78 (26)	8.08	9/1/1986	
International Equity - Net		3.48 (77)	54.00 (60)	7.32 (68)	10.37 (70)	6.44 (54)			
MSCI AC World ex USA (Net)		3.49 (77)	49.41 (89)	6.51 (82)	9.76 (93)	4.93 (98)			
Intl Large Cap Equity	7,641,960,179	4.31 (41)	52.84 (50)	7.49 (60)	10.40 (53)	6.74 (53)	8.05 (100)	9/1/1986	
Intl LargeCap Equity - Net		4.25 (42)	52.40 (52)	7.20 (62)	10.10 (57)	6.45 (59)			
MSCI AC World ex USA (Net)		3.49 (48)	49.41 (64)	6.51 (67)	9.76 (61)	4.93 (88)			
Intl Large Cap Grwth	1,690,043,270	1.13 (51)	63.81 (14)	10.22 (57)	12.75 (49)	7.43 (72)	9.34 (52)	9/1/2002	
Intl Large Cap Grwth - Net		1.06 (52)	63.32 (15)	9.94 (60)	12.45 (53)	7.09 (77)			
MSCI AC World ex USA (Net)		3.49 (19)	49.41 (69)	6.51 (89)	9.76 (87)	4.93 (100)	7.76 (99)		
EARNEST Part. Intl	584,659,324	5.74 (6)	64.97 (13)	6.31 (89)	10.84 (67)	5.15 (100)	9.41 (34)	10/1/2004	
EARNEST Part. Intl - Net		5.70 (7)	64.55 (13)	6.11 (90)	10.63 (69)	4.86 (100)			
MSCI AC World ex USA (Net)		3.49 (19)	49.41 (69)	6.51 (89)	9.76 (87)	4.93 (100)	6.55 (100)		
MSCI AC World ex USA Growth (Net)		-0.08 (77)	49.36 (69)	10.31 (56)	12.03 (57)	6.69 (83)	7.67 (74)		
William Blair	1,105,383,946	-1.16 (87)	63.20 (15)	12.94 (28)	13.98 (32)	9.30 (29)	10.87 (26)	10/1/2002	
William Blair - Net		-1.23 (88)	62.67 (17)	12.55 (34)	13.58 (40)	8.90 (37)			
MSCI AC World ex USA (Net)		3.49 (19)	49.41 (69)	6.51 (89)	9.76 (87)	4.93 (100)	8.46 (98)		
MSCI AC World ex USA Growth (Net)		-0.08 (77)	49.36 (69)	10.31 (56)	12.03 (57)	6.69 (83)	9.01 (83)		
Intl Large Cap Val.	1,345,777,820	7.01 (37)	48.51 (66)	4.18 (64)	7.52 (72)	5.09 (77)	8.64 (17)	10/1/1995	
Intl Large Cap Val. - Net		6.93 (37)	48.05 (68)	3.85 (69)	7.15 (77)	4.73 (83)			
MSCI AC World ex USA (Net)		3.49 (80)	49.41 (62)	6.51 (39)	9.76 (41)	4.93 (78)	5.69 (100)		
Brandes Investment	579,082,076	9.10 (14)	52.80 (48)	3.24 (76)	7.19 (77)	5.18 (76)	8.73 (17)	1/1/1996	
Brandes Investment - Net		9.04 (14)	52.45 (49)	3.01 (79)	6.94 (80)	4.93 (78)			
MSCI AC World ex USA (Net)		3.49 (80)	49.41 (62)	6.51 (39)	9.76 (41)	4.93 (78)	5.60 (100)		
MSCI AC World ex USA Value		7.20 (32)	49.52 (62)	3.02 (79)	7.89 (64)	3.62 (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 March 31, 2021

	Market Value \$	Performance (%)						
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Mondrian	628,004,172	6.26 (46)	44.67 (73)	5.06 (57)	7.79 (66)		6.15 (75)	4/1/2012
Mondrian - Net		6.17 (48)	44.08 (74)	4.59 (62)	7.29 (76)		5.65 (90)	
MSCI AC World ex USA (Net)		3.49 (80)	49.41 (62)	6.51 (39)	9.76 (41)		6.37 (73)	
MSCI AC World ex USA Value		7.20 (32)	49.52 (62)	3.02 (79)	7.89 (64)		4.94 (94)	
Lazard	138,691,572	2.08 (89)	48.15 (67)	5.85 (49)	8.48 (57)		7.25 (53)	4/1/2012
Lazard - Net		2.03 (89)	47.79 (68)	5.59 (51)	8.12 (60)		6.76 (63)	
MSCI AC World ex USA (Net)		3.49 (80)	49.41 (62)	6.51 (39)	9.76 (41)		6.37 (73)	
MSCI AC World ex USA Value		7.20 (32)	49.52 (62)	3.02 (79)	7.89 (64)		4.94 (94)	
Intl Large Cap Active Core	2,544,460,516	5.88 (24)	55.90 (26)	8.79 (30)	11.79 (24)	8.31 (13)	6.33 (8)	2/1/2008
Intl Large Cap Active Core - Net		5.80 (25)	55.03 (33)	8.26 (34)	11.23 (31)	7.76 (21)		
MSCI AC World ex USA (Net)		3.49 (57)	49.41 (56)	6.51 (57)	9.76 (51)	4.93 (99)	3.57 (91)	
Arrowstreet Capital	1,023,970,341	9.20 (2)	73.15 (1)	13.02 (8)	15.20 (4)	9.72 (2)	7.43 (1)	3/1/2008
Arrowstreet Capital - Net		9.09 (2)	72.39 (1)	12.50 (11)	14.67 (6)	9.21 (3)	6.93 (2)	
MSCI AC World ex USA (Net)		3.49 (57)	49.41 (56)	6.51 (57)	9.76 (51)	4.93 (99)	3.37 (93)	
Brown Capital	598,149,136	-2.44 (100)	41.88 (88)	10.58 (19)	10.07 (48)	8.81 (5)	8.76 (8)	10/1/2004
Brown Capital - Net		-2.50 (100)	40.68 (90)	10.07 (22)	9.32 (61)	8.00 (16)		
MSCI AC World ex USA (Net)		3.49 (57)	49.41 (56)	6.51 (57)	9.76 (51)	4.93 (99)	6.55 (86)	
GlobeFlex Capital	819,991,954	9.14 (2)	55.38 (31)	4.29 (89)	9.49 (58)	6.93 (47)	5.62 (51)	3/1/2006
GlobeFlex Capital - Net		9.05 (2)	54.75 (34)	3.86 (94)	9.07 (64)	6.50 (59)	5.17 (71)	
MSCI AC World ex USA (Net)		3.49 (57)	49.41 (56)	6.51 (57)	9.76 (51)	4.93 (99)	4.65 (90)	
Xponance Intl EQ	101,354,712						5.67 (37)	2/1/2021
Xponance Intl EQ - Net							5.67 (37)	
MSCI EAFE Index (Net)							4.59 (52)	
Progress Intl Equity*	874,657							

* 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 March 31, 2021

	Market Value \$	Performance (%)							
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
Intl Large Cap Passive Core	2,061,678,572	3.35 (61)	44.56 (83)	6.24 (61)	9.23 (62)	5.92 (86)	4.37 (98)	2/1/2000	
Intl Large Cap Passive Core - Net		3.35 (61)	44.55 (83)	6.23 (62)	9.22 (62)	5.91 (87)			
MSCI EAFE Index (Net)		3.48 (57)	44.57 (83)	6.02 (64)	8.85 (67)	5.52 (95)	3.99 (100)		
NTGI MSCI EAFE	2,061,678,572	3.35 (61)	44.56 (83)	6.24 (61)	9.23 (62)	5.92 (86)	4.37 (98)	2/1/2000	
NTGI MSCI EAFE - Net		3.35 (61)	44.55 (83)	6.23 (62)	9.22 (62)	5.91 (87)			
MSCI EAFE Index (Net)		3.48 (57)	44.57 (83)	6.02 (64)	8.85 (67)	5.52 (95)	3.99 (100)		
Intl All Cap Developed	160,489,030	4.43 (46)	44.81 (81)				10.60 (78)	2/1/2019	
Intl All Cap Developed - Net		4.31 (47)	44.11 (83)				10.12 (81)		
MSCI EAFE + Canada (Net)		4.04 (50)	45.86 (78)				12.06 (71)		
Ativo International	160,489,030	4.43 (46)	44.81 (81)				10.60 (78)	2/1/2019	
Ativo International - Net		4.31 (47)	44.11 (83)				10.12 (81)		
MSCI EAFE + Canada (Net)		4.04 (50)	45.86 (78)				12.06 (71)		
Intl Small Cap Eqty	647,601,196	1.38 (68)	69.74 (29)	8.49 (32)	11.51 (45)	8.65 (63)	6.32 (99)	12/1/2005	
Intl Small Cap Eqty - Net		1.21 (69)	68.53 (37)	7.68 (45)	10.68 (61)	7.85 (76)			
MSCI AC World ex USA Small Cap (Net)		5.53 (39)	69.82 (28)	6.61 (56)	10.40 (65)	6.32 (96)	7.10 (94)		
Custom Benchmark (Intl Small Cap)		5.53 (39)	69.82 (28)	6.61 (56)	10.40 (65)	6.39 (93)	6.43 (99)		
Franklin Templeton	242,842,062	6.48 (35)	69.25 (32)	5.71 (62)	10.39 (65)		7.65 (83)	8/1/2011	
Franklin Templeton - Net		6.31 (35)	68.05 (38)	4.93 (71)	9.59 (80)		6.88 (90)		
MSCI AC World ex USA Small Cap (Net)		5.53 (39)	69.82 (28)	6.61 (56)	10.40 (65)		6.59 (96)		
William Blair IntSC	404,759,133	-1.45 (92)	70.03 (26)	10.35 (19)	12.13 (40)	9.38 (40)	11.25 (45)	9/1/2010	
William Blair IntSC - Net		-1.62 (93)	68.81 (36)	9.51 (26)	11.28 (51)	8.54 (65)	10.41 (65)		
MSCI AC World ex USA Small Cap (Net)		5.53 (39)	69.82 (28)	6.61 (56)	10.40 (65)	6.32 (96)	8.37 (94)		
Custom Benchmark (Intl Small Cap)		5.53 (39)	69.82 (28)	6.61 (56)	10.40 (65)	6.39 (93)	8.66 (93)		

* 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 March 31, 2021

	Market Value \$	Performance (%)							
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
Emerging Mkt Equity	1,465,473,166	0.68 (81)	59.68 (66)	8.86 (38)	13.26 (48)	5.85 (46)	9.49 (44)	2/1/1992	
Emerging Mkt Equity - Net		0.54 (82)	58.73 (69)	8.24 (43)	12.59 (59)	5.24 (53)			
MSCI Emerging Markets Index		2.34 (60)	58.92 (68)	6.87 (56)	12.48 (60)	4.02 (73)	7.59 (99)		
Genesis Asset Mngrs.**	1,465,473,166	0.68 (81)	59.68 (66)	8.86 (38)	13.26 (48)	5.85 (46)	11.73 (21)	5/1/2004	
Genesis Asset Mngrs. - Net		0.54 (82)	58.73 (69)	8.24 (43)	12.59 (59)	5.24 (53)			
MSCI Emerging Markets Index		2.34 (60)	58.92 (68)	6.87 (56)	12.48 (60)	4.02 (73)	9.60 (79)		

* 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.

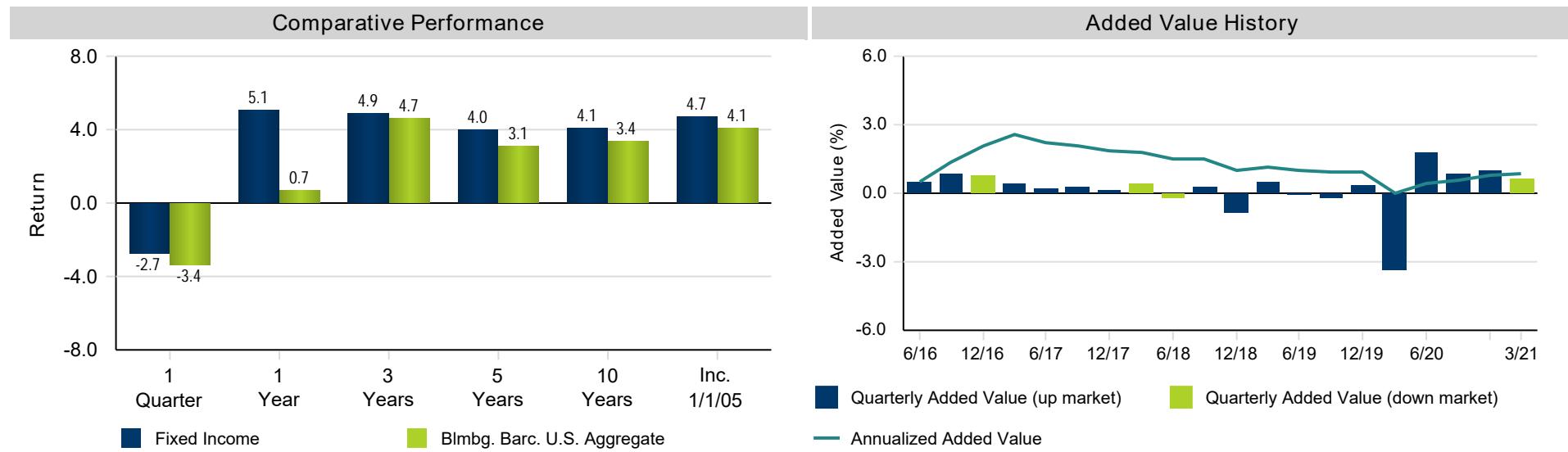


Fixed Income

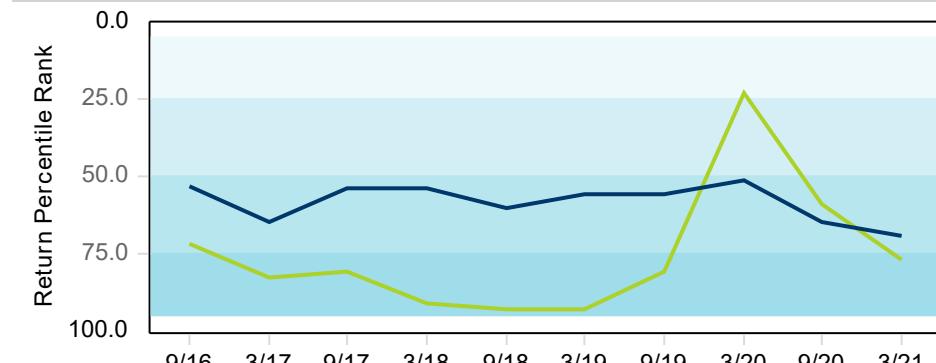
Composite Performance Summary

Fixed Income

Periods Ended March 31, 2021

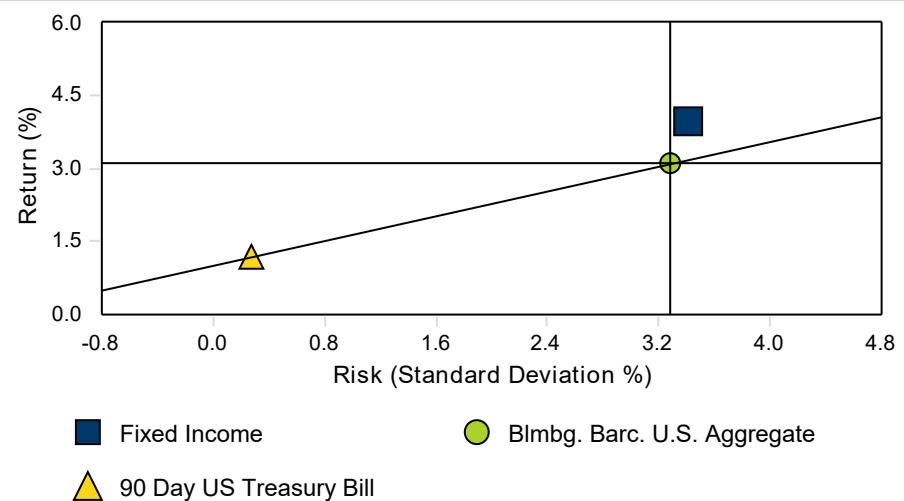


Rolling Percentile Rank: All Public Plans > \$1B-US Fixed Income Segment



	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	1 (10%)	0 (0%)	2 (20%)	7 (70%)

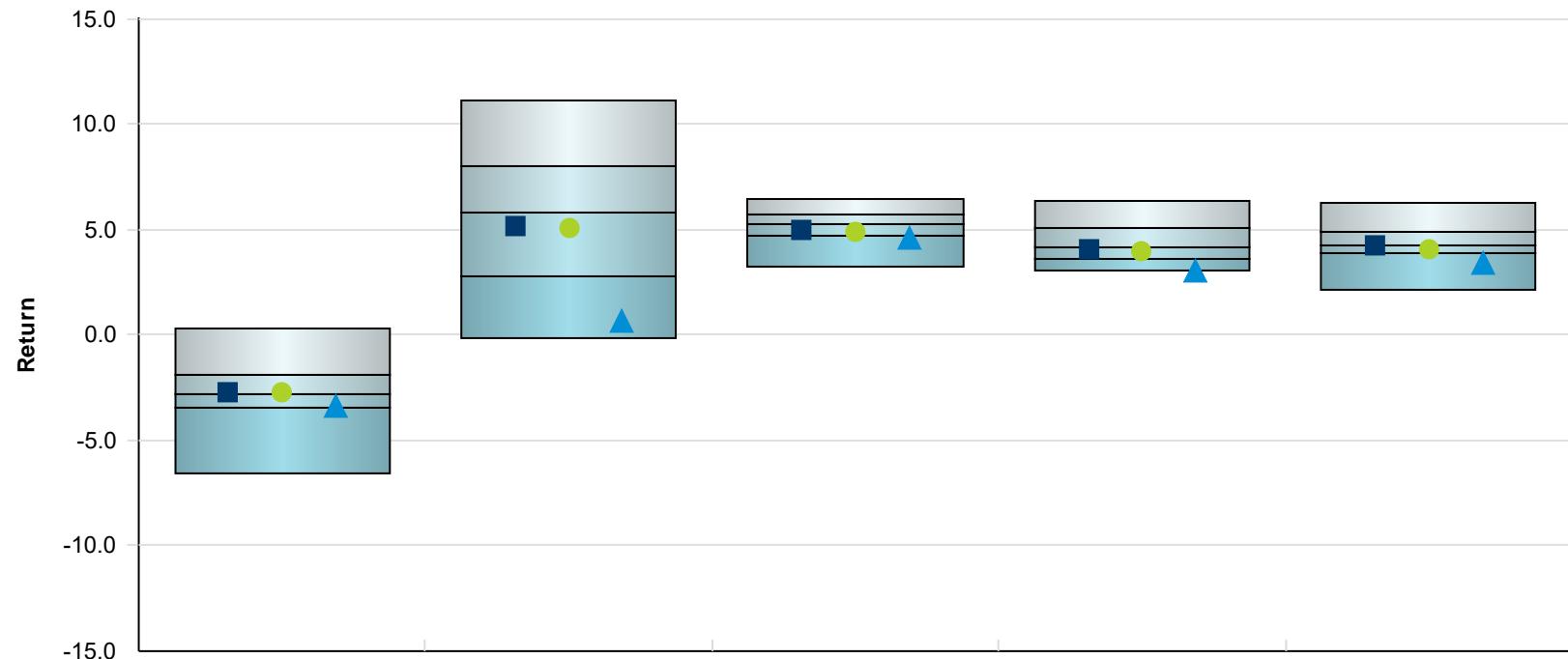
Risk and Return 04/1/16 - 03/31/21



Plan Sponsor Peer Group Analysis

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

Periods Ended March 31, 2021



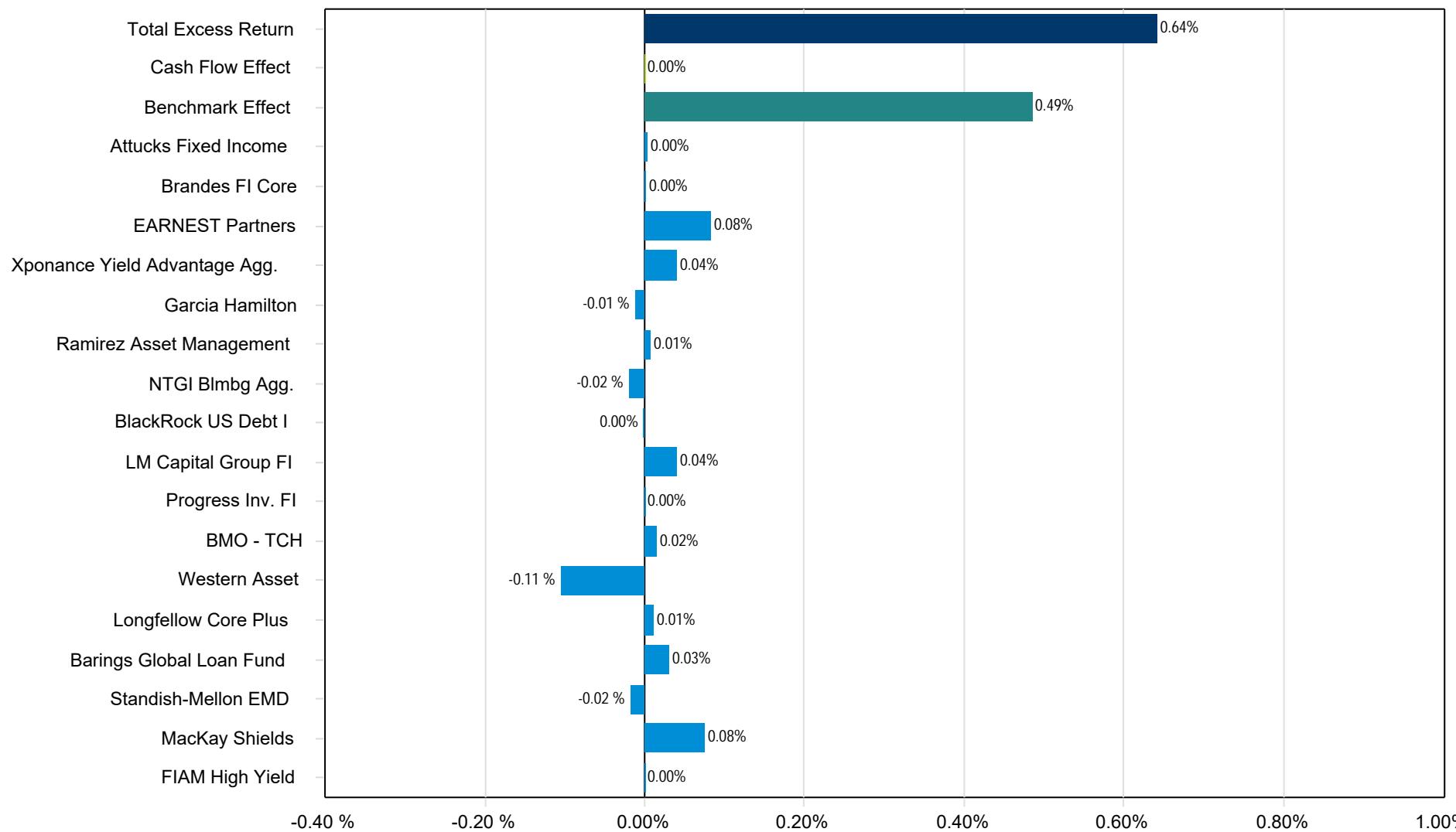
	QTD	1 Year	3 Years	5 Years	10 Years
■ Fixed Income	-2.72 (43)	5.17 (59)	5.01 (65)	4.12 (52)	4.27 (52)
● Fixed Income - Net	-2.73 (44)	5.06 (59)	4.89 (69)	3.99 (58)	4.12 (57)
▲ Blmbg. Barc. U.S. Aggregate	-3.38 (72)	0.71 (90)	4.65 (77)	3.10 (94)	3.44 (89)
5th Percentile	0.31	11.19	6.43	6.36	6.31
1st Quartile	-1.87	7.99	5.74	5.06	4.91
Median	-2.79	5.80	5.27	4.21	4.30
3rd Quartile	-3.47	2.84	4.72	3.60	3.93
95th Percentile	-6.59	-0.13	3.29	3.04	2.16
Population	61	56	52	51	35

Asset Class Attribution

Fixed Income

Periods Ended 1 Quarter Ending March 31, 2021

1 Quarter



Wilshire Consulting Performance

Fixed Income
Periods Ended March 31, 2021

	Market Value \$	Performance (%)							
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
Fixed Income	11,825,453,489	-2.72 (43)	5.17 (59)	5.01 (65)	4.12 (52)	4.27 (52)	8.06	1/1/1982	
Fixed Income - Net		-2.73 (44)	5.06 (59)	4.89 (69)	3.99 (58)	4.12 (57)			
Blmbg. Barc. U.S. Aggregate		-3.38 (72)	0.71 (90)	4.65 (77)	3.10 (94)	3.44 (89)	7.52		
Active Fixed Core	3,761,233,177	-2.96 (35)	2.84 (59)	4.80 (80)	3.52 (68)	3.96 (52)	4.54 (89)	4/1/2001	
Active Fixed Core - Net		-2.99 (37)	2.73 (62)	4.71 (87)	3.41 (74)	3.81 (67)			
Blmbg. Barc. U.S. Aggregate		-3.38 (69)	0.71 (92)	4.65 (93)	3.10 (93)	3.44 (93)	4.50 (93)		
Attucks Fixed Income	97,188,928							-2.76 (85)	2/1/2021
Attucks Fixed Income - Net								-2.76 (85)	
Blmbg. Barc. U.S. Aggregate								-2.67 (65)	
Brandes FI Core	366,932,725	-3.34 (64)	-0.29 (96)	4.27 (100)	2.90 (97)		2.90 (98)	3/1/2016	
Brandes FI Core - Net		-3.34 (64)	-0.29 (96)	4.27 (100)	2.90 (97)		2.90 (98)		
Blmbg. Barc. U.S. Aggregate		-3.38 (69)	0.71 (92)	4.65 (93)	3.10 (93)		3.24 (94)		
EARNEST Partners	1,008,379,261	-2.37 (12)	2.78 (59)	5.00 (70)	3.47 (73)	4.07 (45)	4.55 (55)	5/1/2005	
EARNEST Partners - Net		-2.40 (12)	2.65 (67)	4.86 (79)	3.32 (79)	3.89 (57)	4.36 (73)		
Blmbg. Barc. U.S. Aggregate		-3.38 (69)	0.71 (92)	4.65 (93)	3.10 (93)	3.44 (93)	4.10 (93)		
Xponance Yield Advantage Agg.	1,085,418,354	-2.91 (31)	4.56 (30)	4.88 (78)	3.74 (51)	3.90 (56)	4.37 (69)	6/1/2005	
Xponance Yield Advantage Agg. - Net		-2.94 (33)	4.43 (33)	4.74 (83)	3.60 (63)	3.74 (73)	4.19 (82)		
Blmbg. Barc. U.S. Aggregate		-3.38 (69)	0.71 (92)	4.65 (93)	3.10 (93)	3.44 (93)	4.05 (92)		
Garcia Hamilton	1,073,858,845	-3.48 (87)	1.92 (78)	4.57 (94)	3.37 (75)		3.48 (69)	6/1/2015	
Garcia Hamilton - Net		-3.50 (88)	1.84 (78)	4.49 (95)	3.28 (80)		3.39 (73)		
Blmbg. Barc. U.S. Aggregate		-3.38 (69)	0.71 (92)	4.65 (93)	3.10 (93)		3.10 (93)		
Ramirez Asset Management	129,455,065	-2.63 (20)					3.43 (16)	5/1/2020	
Ramirez Asset Management - Net		-2.67 (20)					3.31 (17)		
Blmbg. Barc. U.S. Aggregate		-3.38 (69)					-1.05 (91)		

Taplin, Canida, 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 March 31, 2021

	Market Value \$	Performance (%)							
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
Pass. Core Fixed Income	3,585,665,266	-3.44 (82)	0.67 (93)	4.70 (87)	3.15 (87)	3.49 (88)	5.81 (97)	1/1/1990	
Pass. Core Fixed Income - Net		-3.45 (82)	0.66 (93)	4.70 (88)	3.15 (87)	3.48 (89)			
Blmbg. Barc. U.S. Aggregate		-3.38 (69)	0.71 (92)	4.65 (93)	3.10 (93)	3.44 (93)	5.80 (98)		
BlackRock US Debt I	1,804,044,992	-3.39 (72)	0.84 (88)	4.75 (83)	3.20 (85)		3.44 (84)	10/1/2013	
BlackRock US Debt I - Net		-3.39 (73)	0.84 (88)	4.74 (83)	3.20 (86)		3.43 (84)		
Blmbg. Barc. U.S. Aggregate		-3.38 (69)	0.71 (92)	4.65 (93)	3.10 (93)		3.32 (95)		
NTGI Blmbg Agg.	1,781,620,274	-3.50 (88)	0.50 (95)	4.66 (92)	3.10 (93)	3.46 (90)	5.86 (97)	2/1/1990	
NTGI Blmbg Agg. - Net		-3.50 (88)	0.49 (95)	4.65 (93)	3.10 (93)	3.45 (91)			
Blmbg. Barc. U.S. Aggregate		-3.38 (69)	0.71 (92)	4.65 (93)	3.10 (93)	3.44 (93)	5.85 (97)		
Core Plus Fixed Income	2,876,459,417	-3.49 (94)	5.85 (64)	5.49 (62)	4.34 (57)	4.46 (53)	7.95 (100)	1/1/1982	
Core Plus Fixed Income - Net		-3.52 (95)	5.68 (66)	5.31 (73)	4.15 (64)	4.28 (64)			
Blmbg. Barc. U.S. Aggregate		-3.38 (90)	0.71 (99)	4.65 (92)	3.10 (100)	3.44 (97)	7.52 (100)		
LM Capital Group FI	951,118,496	-2.83 (56)	5.55 (67)	5.75 (51)	4.12 (68)	4.31 (62)	4.97 (59)	5/1/2005	
LM Capital Group FI - Net		-2.87 (59)	5.38 (69)	5.58 (58)	3.95 (75)	4.15 (71)	4.81 (75)		
Blmbg. Barc. U.S. Aggregate		-3.38 (90)	0.71 (99)	4.65 (92)	3.10 (100)	3.44 (97)	4.10 (98)		
Progress Inv. FI	3,673								
BMO - TCH	646,047,821	-3.05 (75)	3.75 (84)	5.05 (81)	4.71 (42)	4.65 (42)	4.97 (59)	5/1/2005	
BMO - TCH - Net		-3.09 (78)	3.60 (85)	4.91 (86)	4.58 (45)	4.52 (50)	4.84 (71)		
Blmbg. Barc. U.S. Aggregate		-3.38 (90)	0.71 (99)	4.65 (92)	3.10 (100)	3.44 (97)	4.10 (98)		
Western Asset	1,097,833,147	-4.45 (100)	7.70 (37)	5.52 (60)	4.74 (41)	4.85 (29)	5.45 (39)	11/1/2001	
Western Asset - Net		-4.49 (100)	7.56 (44)	5.40 (68)	4.61 (44)	4.72 (35)			
Blmbg. Barc. U.S. Aggregate		-3.38 (90)	0.71 (99)	4.65 (92)	3.10 (100)	3.44 (97)	4.25 (99)		

Taplin, Canida, 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 March 31, 2021

	Market Value \$	Performance (%)							
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
Longfellow Core Plus	181,456,280	-2.54 (39)					2.93 (68)		5/1/2020
Longfellow Core Plus - Net		-2.59 (43)					2.80 (69)		
Blmbg. Barc. U.S. Aggregate		-3.38 (90)					-1.05 (99)		
Bank Loans	569,147,387	2.68 (3)	22.54 (12)	4.17 (44)	5.67 (20)		4.51 (18)		8/1/2014
Bank Loans - Net		2.68 (3)	22.54 (12)	3.98 (55)	5.31 (37)		4.09 (49)		
Barings Custom Benchmark		1.99 (28)	21.11 (18)	4.38 (36)	5.46 (31)		4.22 (39)		
Barings Global Loan Fund	569,147,387	2.68 (3)	22.54 (12)	4.17 (44)	5.67 (20)		4.51 (18)		8/1/2014
Barings Global Loan Fund - Net		2.68 (3)	22.54 (12)	3.98 (55)	5.31 (37)		4.09 (49)		
Barings Custom Benchmark*		1.99 (28)	21.11 (18)	4.38 (36)	5.46 (31)		4.22 (39)		
Emerging Markets Debt	223,505,873	-5.97 (79)	17.05 (80)	1.43 (72)	4.89 (67)		2.72 (64)		8/1/2014
Emerging Markets Debt - Net		-6.05 (80)	16.65 (81)	1.08 (75)	4.53 (75)		2.38 (67)		
Custom Benchmark (EMD)		-5.17 (72)	14.54 (90)	2.14 (67)	4.37 (81)		2.25 (68)		
Standish-Mellon EMD	223,505,873	-5.97 (79)	17.05 (80)	1.43 (72)	4.89 (67)		2.72 (64)		8/1/2014
Standish EM MRK - Net		-6.05 (80)	16.65 (81)	1.08 (75)	4.53 (75)		2.38 (67)		
Custom Benchmark**		-5.17 (72)	14.54 (90)	2.14 (67)	4.37 (81)		2.25 (68)		
High Yield	809,442,369	1.98 (23)	22.59 (56)	7.50 (18)	8.66 (16)	6.89 (24)	9.47 (1)		4/1/1986
High Yield - Net		1.98 (23)	22.30 (60)	7.17 (31)	8.31 (30)	6.53 (42)			
ICE BofAML US High Yield, Cash Pay Index		0.81 (63)	23.15 (50)	6.51 (54)	7.90 (48)	6.30 (57)	8.22 (54)		
MacKay Shields	809,421,202	1.98 (23)	22.61 (55)	7.50 (17)	8.78 (14)	7.22 (12)	8.77 (9)		11/1/2000
MacKay Shields - Net		1.98 (23)	22.32 (60)	7.18 (31)	8.43 (23)	6.85 (24)			
ICE BofAML US High Yield, Cash Pay Index		0.81 (63)	23.15 (50)	6.51 (54)	7.90 (48)	6.30 (57)	7.48 (64)		

Taplin, Canida, 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.

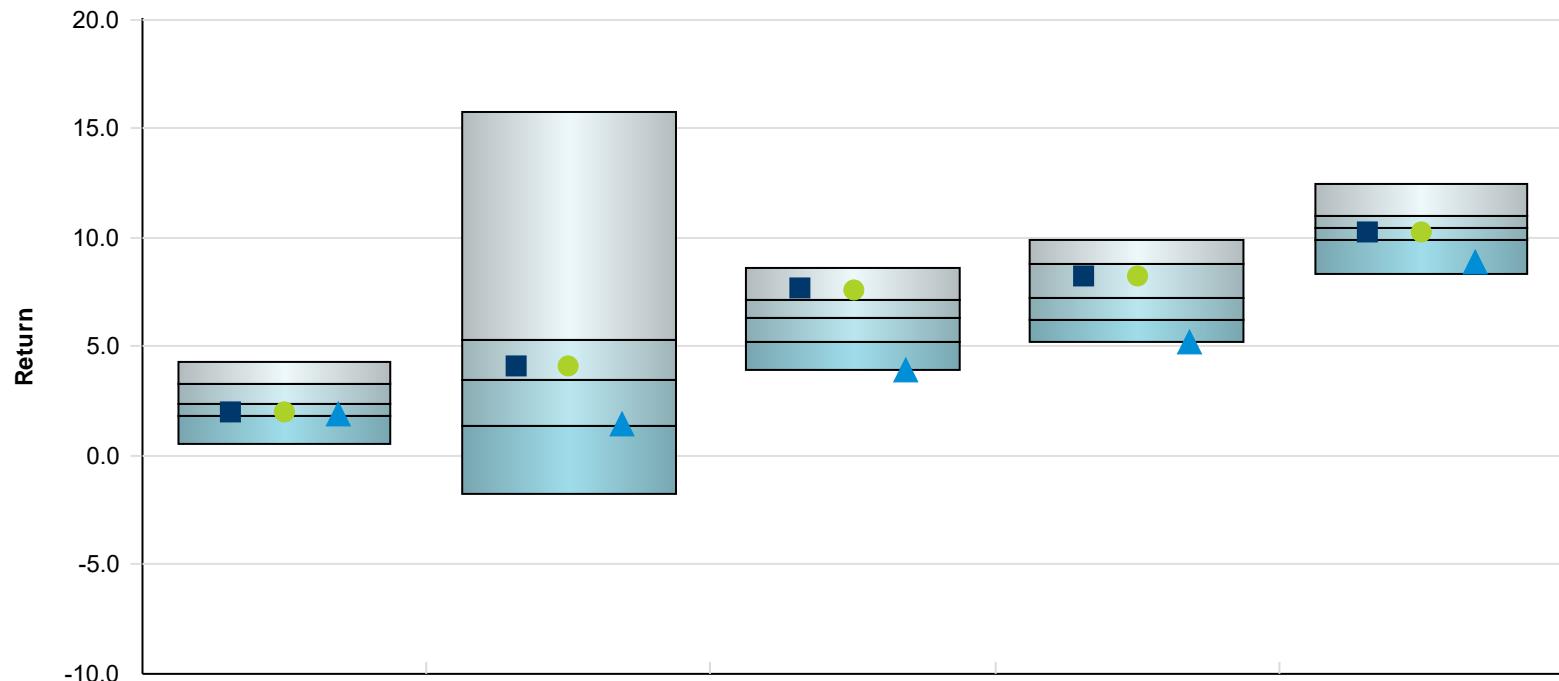


Real Estate

Plan Sponsor Peer Group Analysis

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

Periods Ended March 31, 2021



	QTD	1 Year	3 Years	5 Years	10 Years
■ Real Estate	2.00 (69)	4.15 (40)	7.67 (23)	8.25 (35)	10.30 (57)
● Real Estate - Net	1.99 (69)	4.10 (41)	7.63 (23)	8.23 (35)	10.28 (58)
▲ Blended Benchmark (Real Estate)	1.89 (74)	1.47 (73)	3.96 (93)	5.26 (95)	8.89 (84)
5th Percentile	4.32	15.77	8.60	9.87	12.48
1st Quartile	3.31	5.35	7.17	8.76	11.00
Median	2.37	3.50	6.35	7.26	10.45
3rd Quartile	1.83	1.38	5.21	6.24	9.90
95th Percentile	0.58	-1.72	3.94	5.25	8.39
Population	44	38	29	24	13

Asset Allocation & Performance

Real Estate

Periods Ended March 31, 2021

	Market Value \$	Performance (%)							Inception Date
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception		
Real Estate	3,275,781,250	2.00	4.15	7.67	8.25	10.30	5.54		5/1/1985
Real Estate - Net		1.99	4.10	7.63	8.23	10.28			
Blended Benchmark (Real Estate)		1.89	1.47	3.96	5.26	8.89	7.48		
Real Estate Core Cmp	1,781,271,388	1.67	7.56	9.43	9.08	10.49	7.46		4/1/1999
TA Assoc. Buckhead	627,524,281	5.38	12.85	14.63	12.46	12.25	10.89		8/1/1995
Blended Benchmark (Real Estate)		1.89	1.47	3.96	5.26	8.89	7.12		
Barings Euro Core Property	139,013,969	-2.20	12.06	14.02			15.37		3/1/2017
Blended Benchmark (Real Estate)		1.89	1.47	3.96			4.77		
Blackstone Property Euro	152,174,244	0.28	15.44	7.50			7.69		12/1/2017
Blended Benchmark (Real Estate)		1.89	1.47	3.96			4.36		
INVESCO Core Real Estate	204,127,320	0.61	-2.35	3.87	5.47	8.12	8.12		4/1/2011
Blended Benchmark (Real Estate)		1.89	1.47	3.96	5.26	8.89	8.89		
INVESCO European real estate	62,296,251	-3.94	10.63	1.51			1.51		4/1/2018
Blended Benchmark (Real Estate)		1.89	1.47	3.96			3.96		
AEW Core Property Tr	232,820,696	0.00	0.64	4.27	5.04		7.18		10/1/2013
Blended Benchmark (Real Estate)		1.89	1.47	3.96	5.26		7.52		
CBRE Core Partners	212,273,644	0.00	3.74	6.94	8.05		8.77		12/1/2013
Blended Benchmark (Real Estate)		1.89	1.47	3.96	5.26		7.41		
JPM Strategic Property Fund	151,040,983	0.69					0.69		1/1/2021
Blended Benchmark (Real Estate)		1.89					1.89		
RE Non-Core Cmp	1,494,509,862	2.41	0.43	5.69	7.31	10.12	10.66		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 March 31, 2021

	Market Value \$	Performance (%)							Inception Date
		1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception		
Artemis MWBE Spruce Blended Benchmark (Real Estate)	227,728,377	2.80 1.89	6.93 1.47	6.51 3.96			4.19 5.17	6/1/2016	
Franklin T. EMREFF Blended Benchmark (Real Estate)	6,570,093	0.00 1.89	-17.58 1.47	-9.10 3.96	0.32 5.26		4.85 8.57	9/1/2011	
Security Capital Blended Benchmark (Real Estate)	56,693,900	2.64 1.89	10.61 1.47	13.77 3.96	5.50 5.26	6.76 8.89	10.99 7.08	11/1/1997	
Dune II Blended Benchmark (Real Estate)	18,138,649	1.94 1.89	-12.51 1.47	-0.40 3.96	3.39 5.26	11.20 8.89	4.90 7.42	2/1/2009	
Non-Core Real Estate Funds Blended Benchmark (Real Estate)	969,094,289	3.39 1.89	-1.36 1.47	6.05 3.96	8.18 5.26		9.78 8.52	10/1/2011	
Almanac ARS V	99,022								
Non-Core Intl Real Estate Blended Benchmark (Real Estate)	216,185,532	-2.04 1.89	2.07 1.47	-0.35 3.96	1.37 5.26		-1.78 7.07	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 March 31, 2021

	Allocation	Performance (%)							
		Market Value \$	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Alternatives Investments	3,599,708,770	9.25	20.54	15.54	13.27	10.39	11.10	2/1/1986	
Alternatives Custom Benchmark		2.18	9.00	9.00	9.00	9.00	9.00	12.52	
Absolute Return	152,405	-5.44	-57.48	-30.95	-13.75	-6.03	-0.67	1/1/2002	
Aurora Investment	152,405								11/1/2001
Private Equity	3,053,092,706	10.78	24.94	18.78	16.37	13.10	13.35	2/1/1986	
Alternatives Custom Benchmark		2.18	9.00	9.00	9.00	9.00	9.00	12.52	
Abbott S/A Comp.	415,140,229	9.94	27.12	19.03	17.04	13.23	14.14	6/1/1987	
Muller Monroe MPEFF	3,477,598	-0.39	1.39	1.44	3.84	8.50	4.97	5/1/2008	
Pantheon S/A Comp.	284,915,943	0.00	16.41	16.00	14.91	12.31	10.29	10/1/2000	
Private Equity Fund - Domestic	1,868,473,298	13.87	27.68	22.42	17.92		13.70	6/1/2012	
Private Equity Fund - International	437,433,482	7.22	18.29	7.22	8.09		-6.85	7/1/2015	
Oakbrook Opportunities Fund	43,652,156	7.21	10.87				-1.45	6/1/2019	
Private Credit	189,885,315	5.63	-0.83				1.39	10/1/2019	
Private Credit Fund - Domestic	189,885,315	5.63	-0.83				1.39	10/1/2019	
Agriculture	216,346,325	0.11	0.10	-0.16	-1.26	8.20	6.79	10/1/1997	
NCREIF Farmland Index		0.86	4.08	4.71	5.46	10.24	11.33		
Premiere Partners IV	216,346,325	0.11	0.10	-0.16	-1.26		2.05	3/1/2015	
Timberland	68,053,687	-8.41	-7.55	-2.27	-0.32	1.84	6.84	10/1/1992	
Blended Benchmark (Real Estate)		1.89	1.47	3.96	5.26	8.89	7.17		

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 March 31, 2021

	Allocation	Performance (%)							
		Market Value \$	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Forest Investment Alternatives Custom Benchmark (Timberland)	68,053,687	-8.41 0.76	-7.55 1.46	-2.27 1.71	-0.32 2.51	2.17 5.59	7.00	10/1/1992	
Unlisted Infrastructure Alternatives Custom Benchmark	72,178,332	4.93	22.04	12.98			12.98	4/1/2018	
Unlisted Infrastructure Funds Alternatives Custom Benchmark	72,178,332	4.93 2.18	22.04 9.00	12.98 9.00			12.98 9.00	4/1/2018	

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%.

Wilshire Consulting
Manager Watch List
Period Ending March 31, 2021



Organization

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