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Kentucky Retirement Systems Pension

Quarterly Executive Summary

March 31, 2021

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Capital Market Update

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

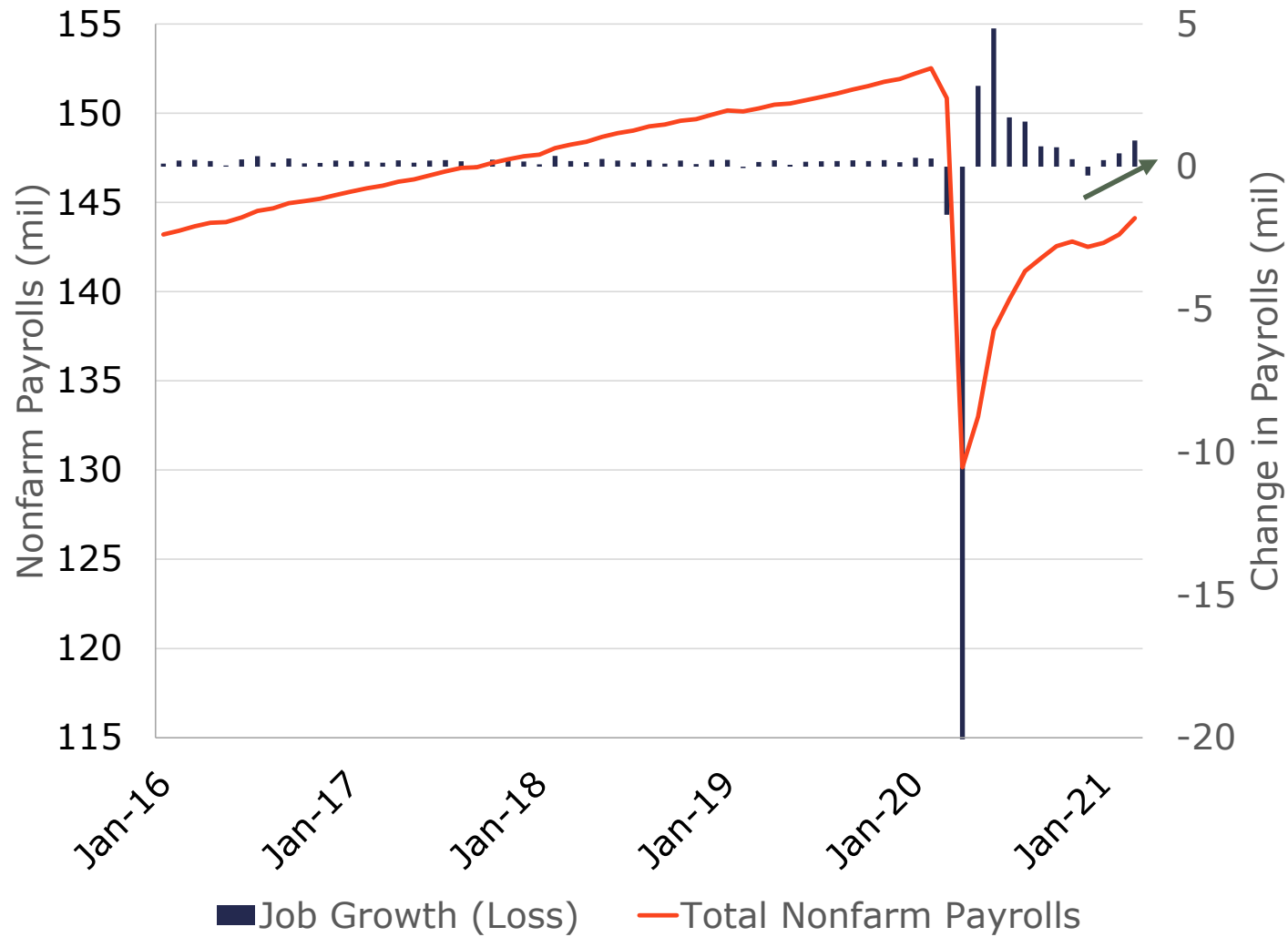
The U.S. Treasury yield curve was up significantly across most maturities during the first quarter, with the long end approaching pre-COVID levels. The 10-year Treasury yield ended the quarter at 1.74%, up 82 basis points from December. The Federal Open Market Committee met twice during the quarter with 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.

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 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	7.15	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 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

Q1 REBOUND IN JOBS

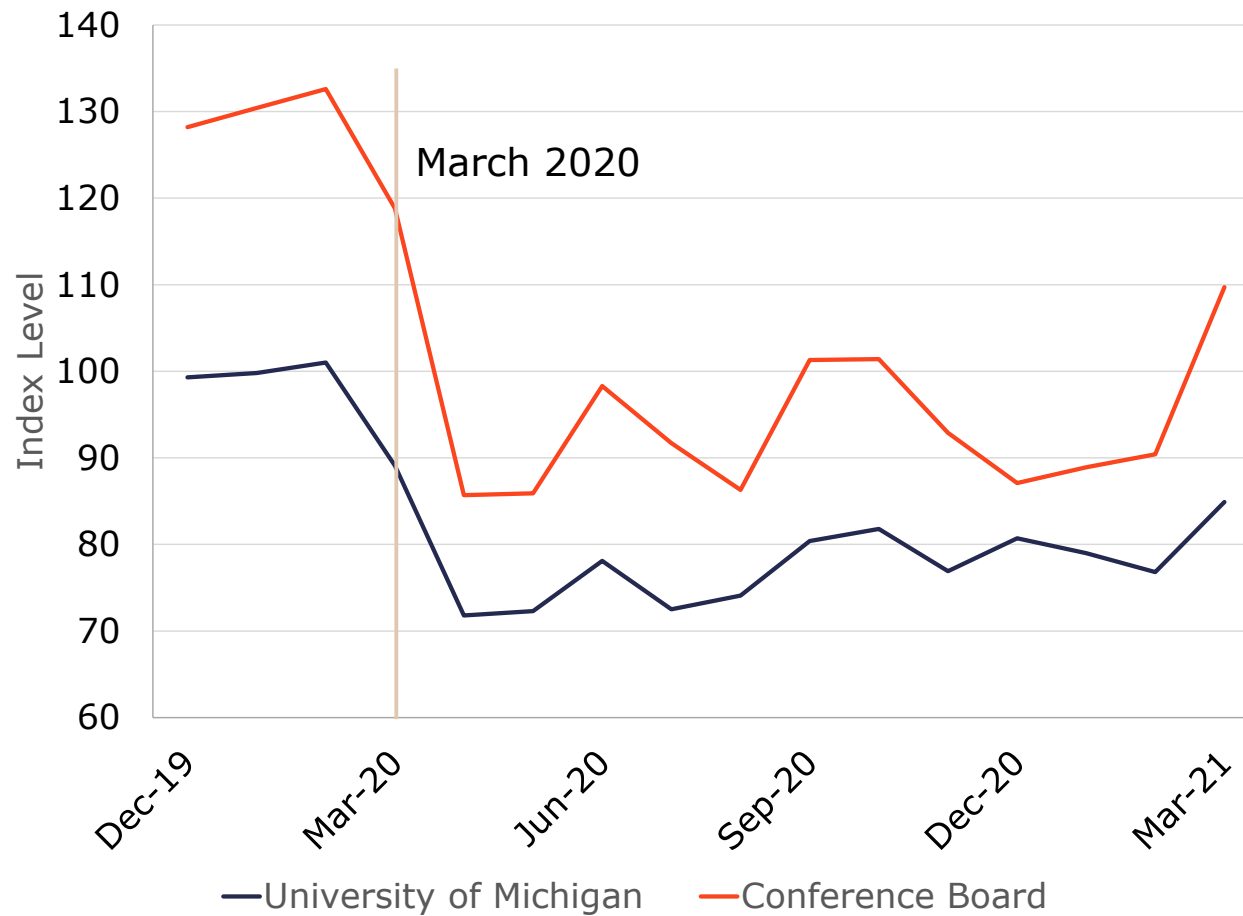
After decelerating in Q4 2020, change in Non-farm Payrolls accelerated in Q1.

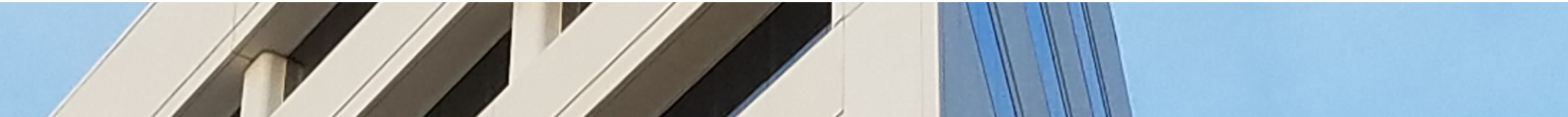


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CONSUMER CONFIDENCE

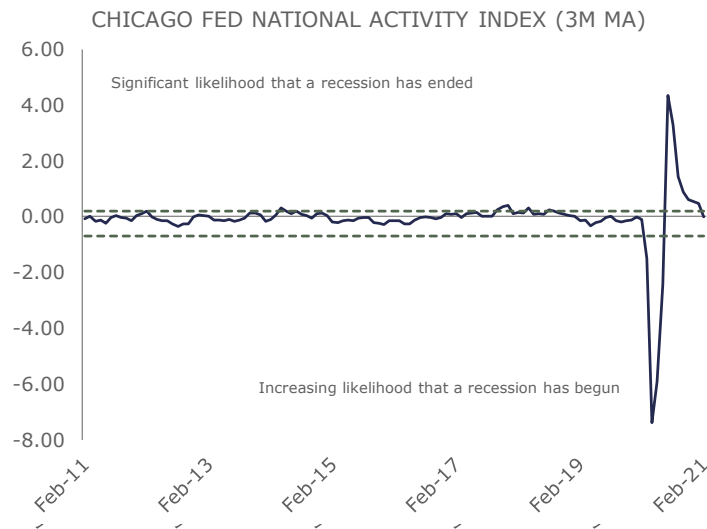
Highest levels since the onset of COVID-19



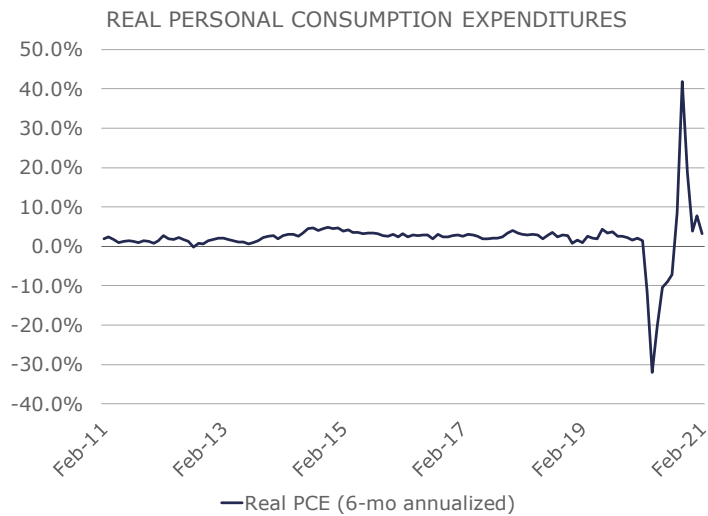
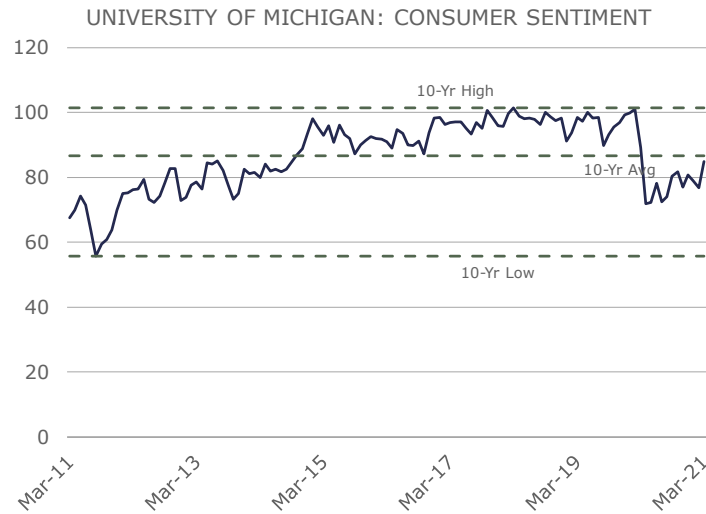


Economic/Market Activity

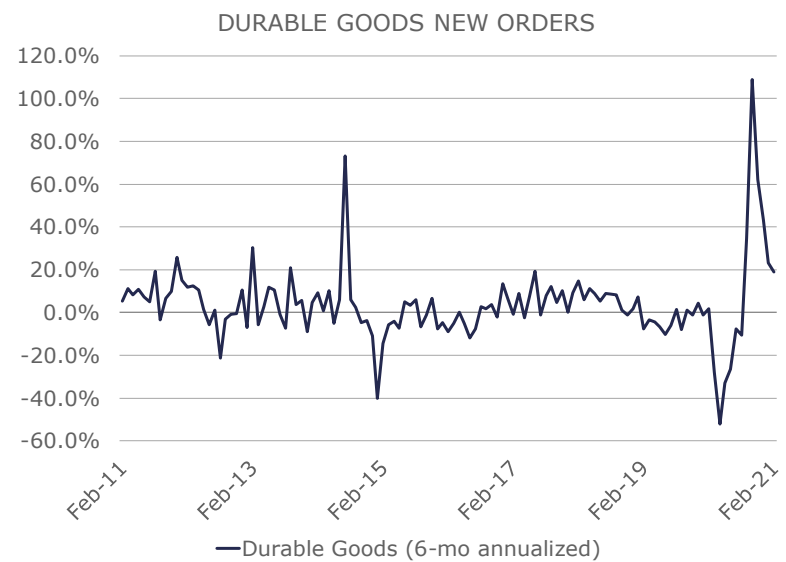
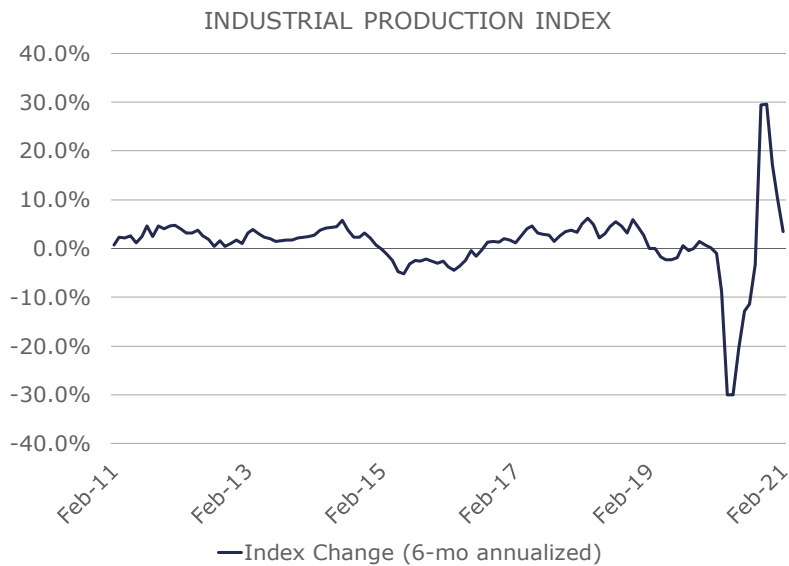
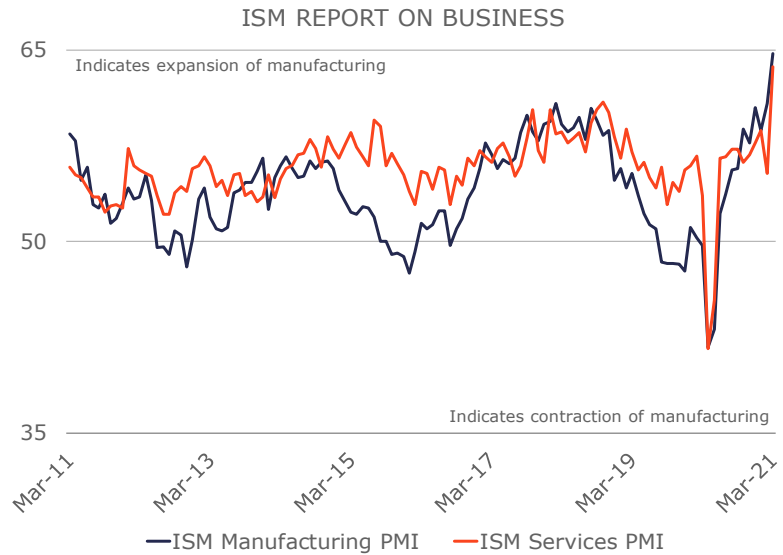
ECONOMIC GROWTH



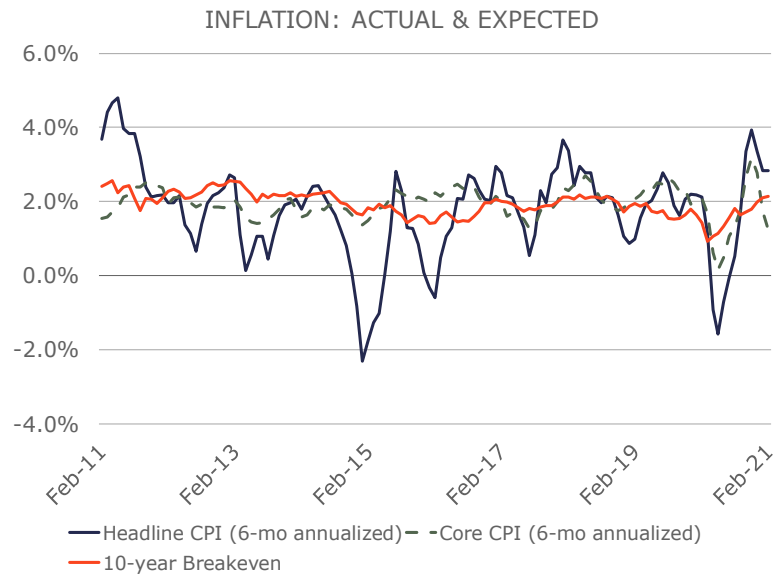
CONSUMER ACTIVITY



BUSINESS ACTIVITY



INFLATION AND EMPLOYMENT

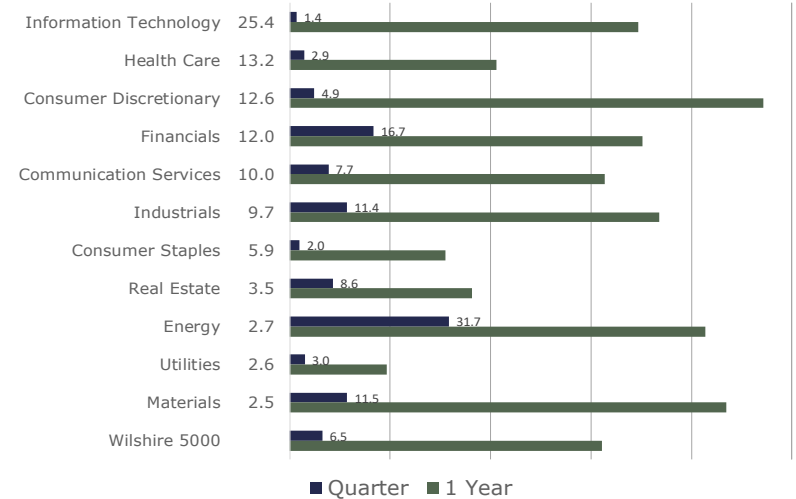


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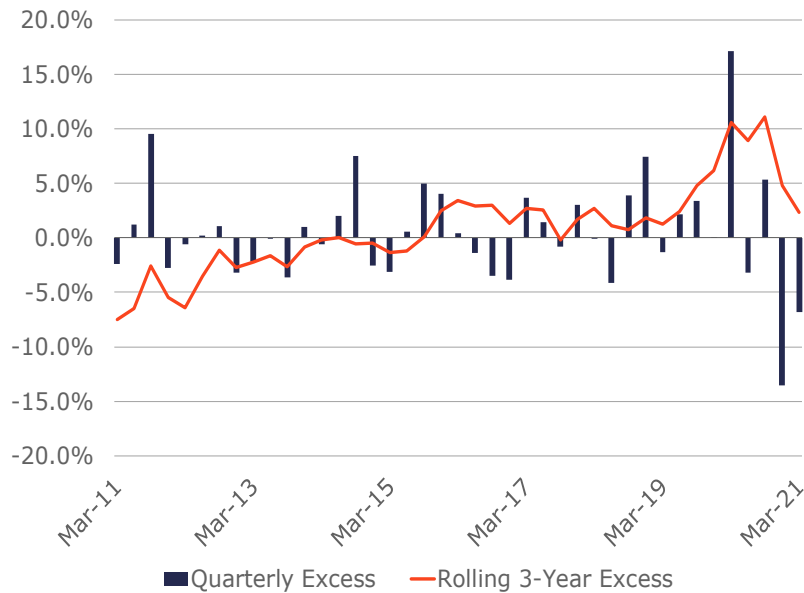
U.S. EQUITY MARKET

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

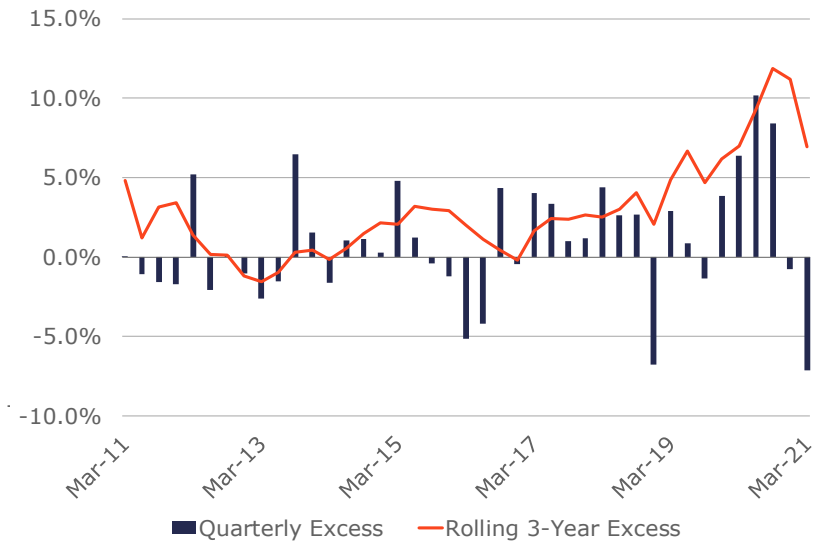
U.S. SECTOR WEIGHT AND RETURN (%)



LARGE CAP VS SMALL CAP



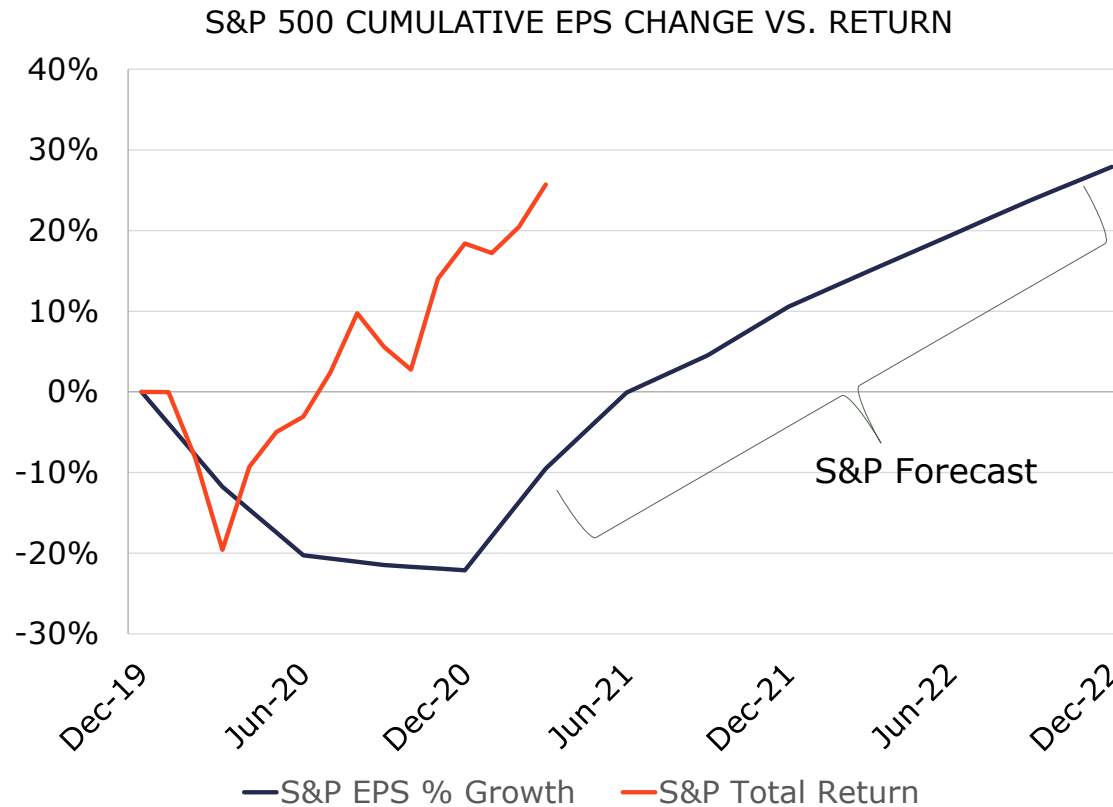
LARGE GROWTH VS LARGE VALUE



Data sources: Bloomberg, WilshireAtlas

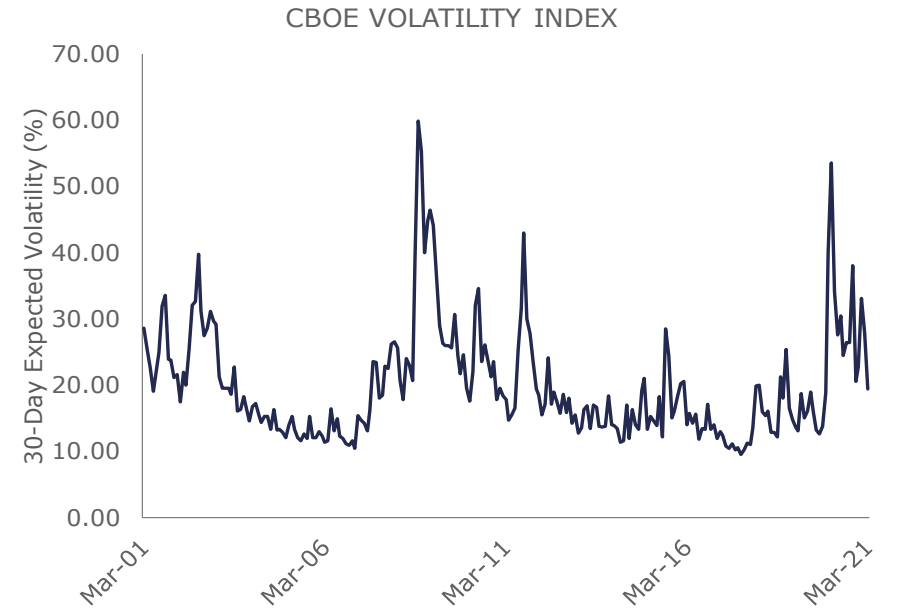
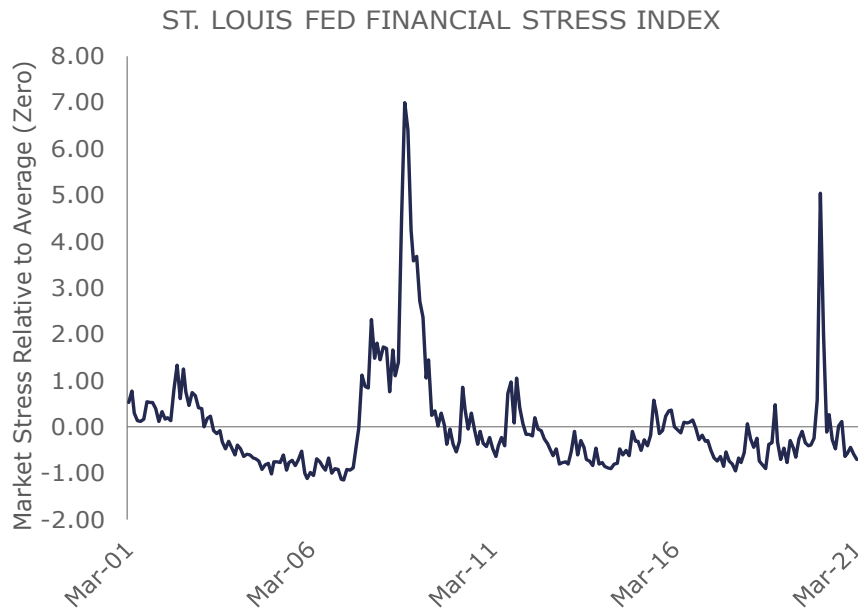
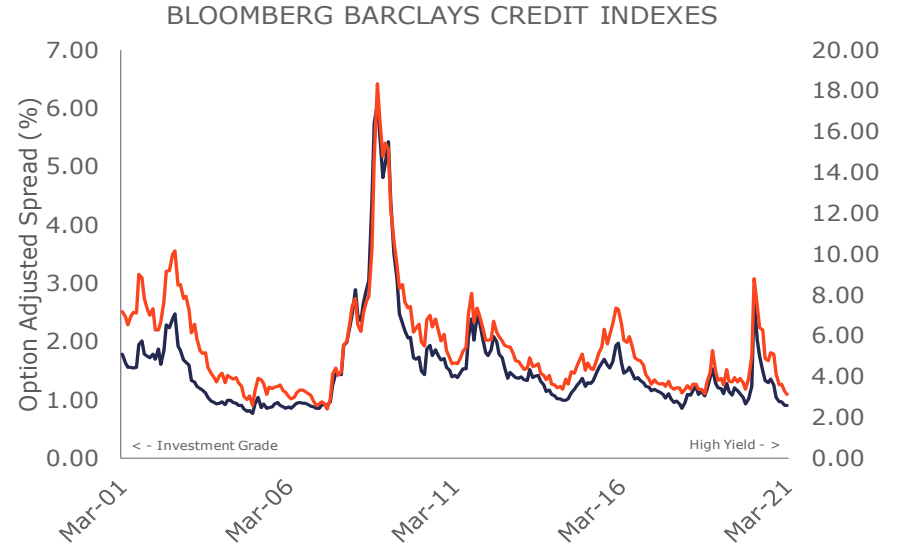
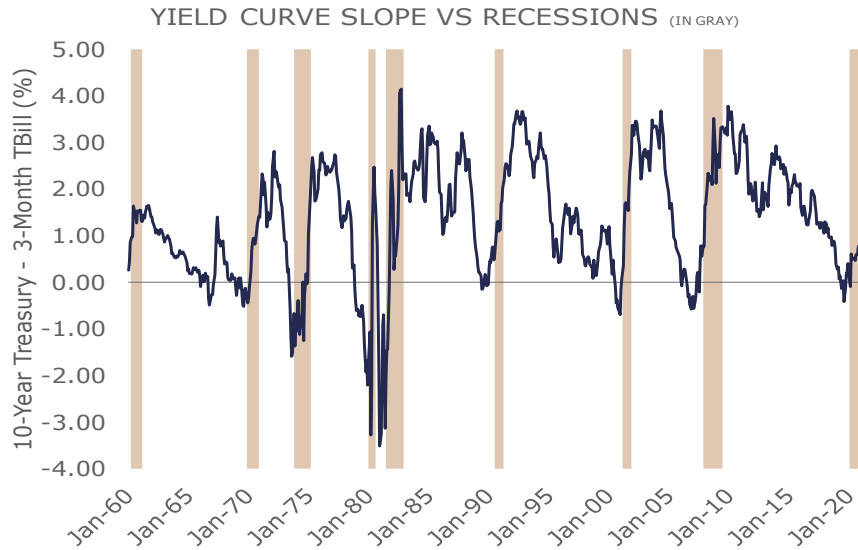
U.S. CORPORATE EARNINGS

- 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



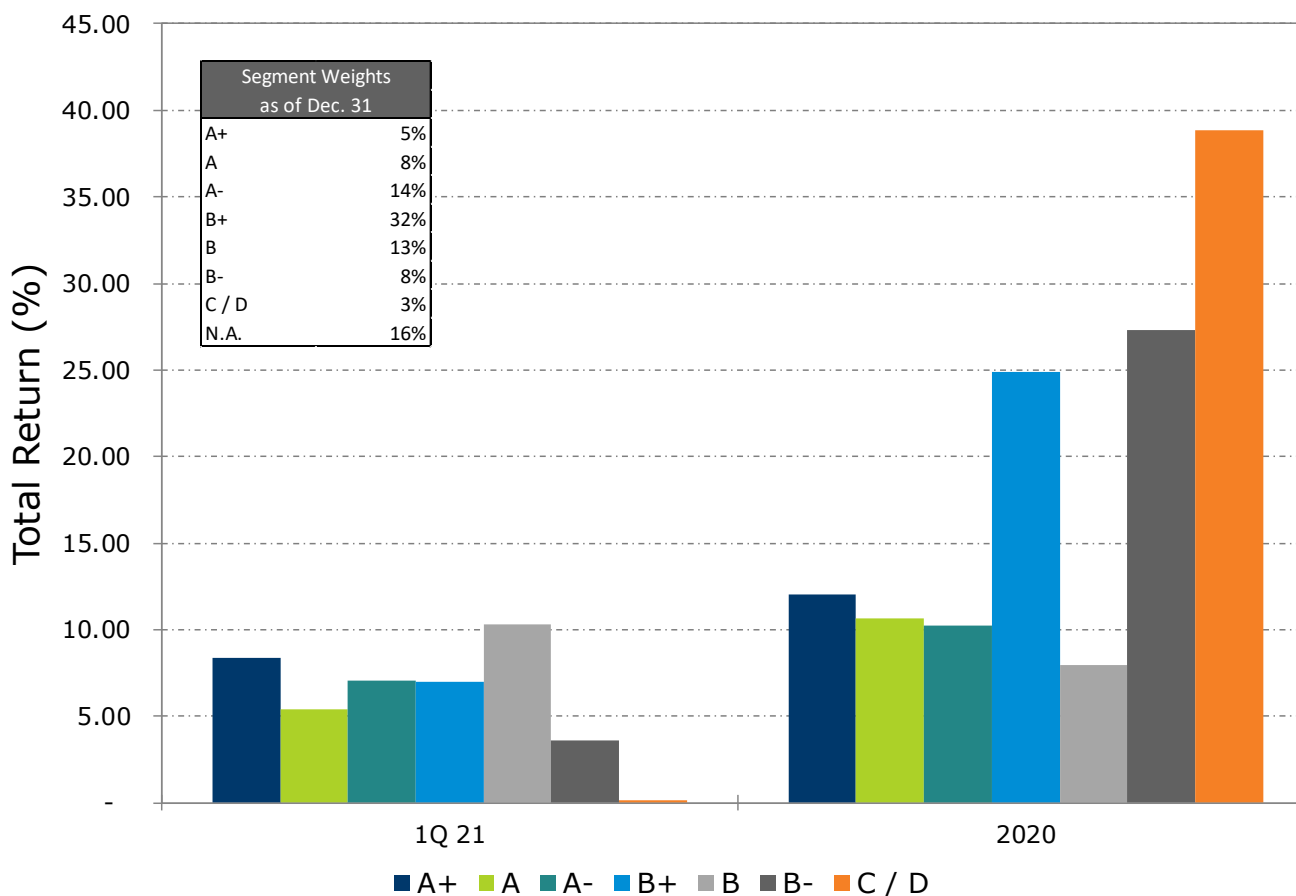
Data sources: Bloomberg

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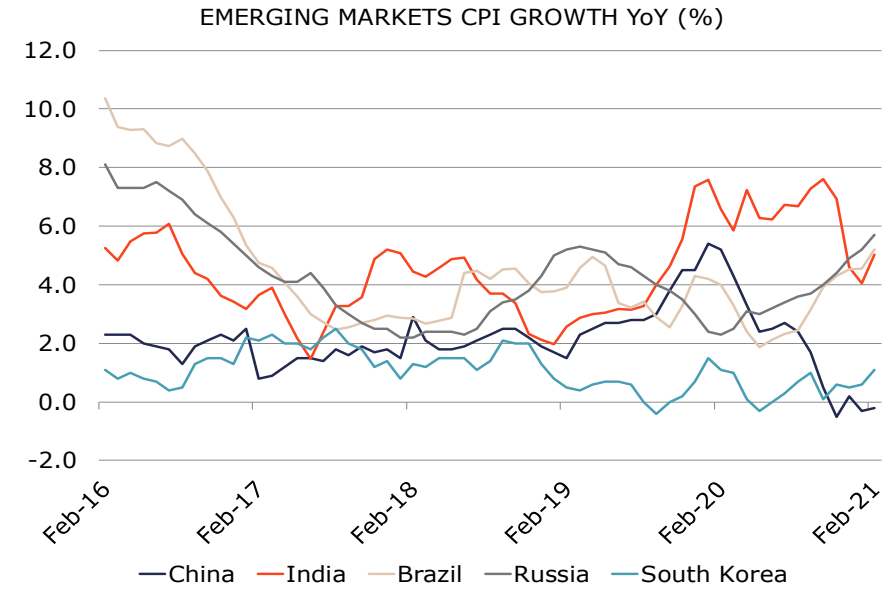
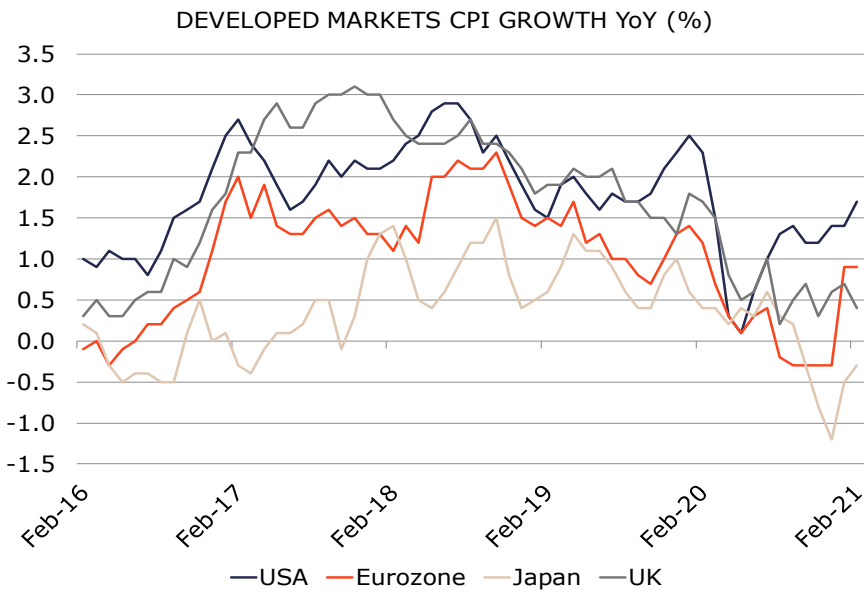
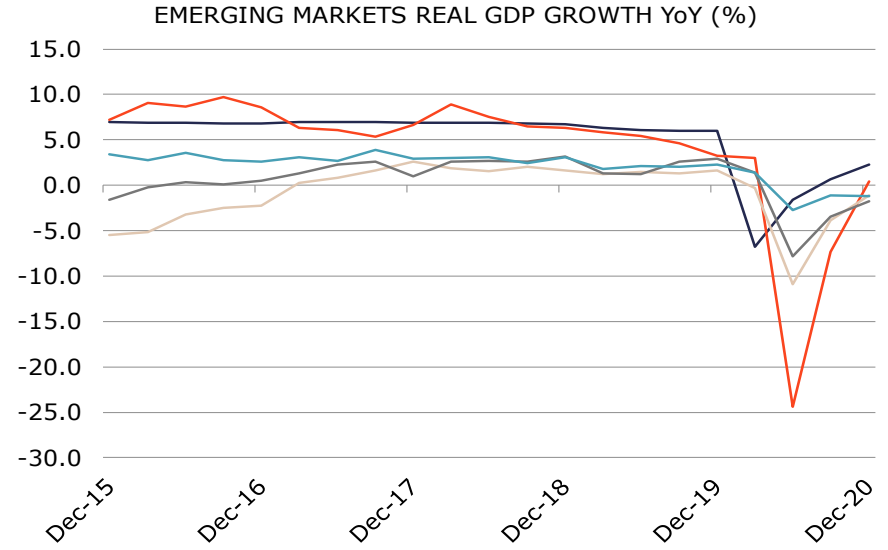
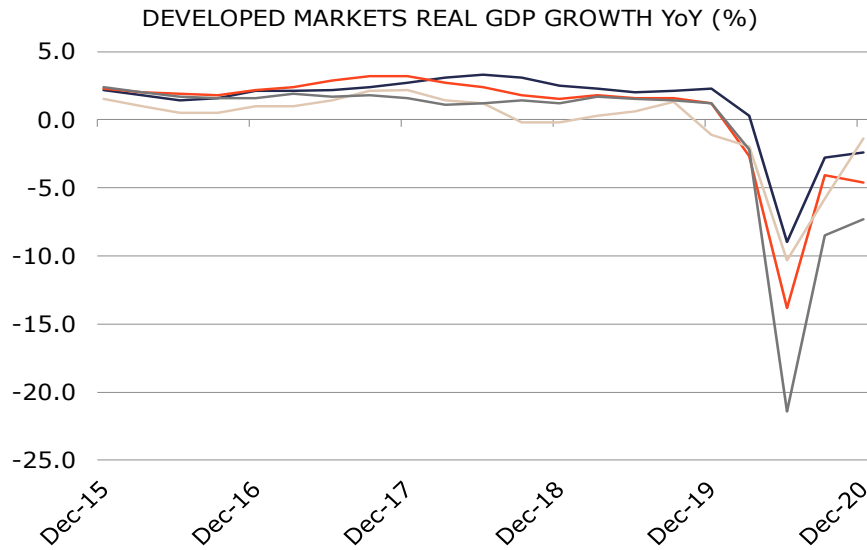
RETURNS BY QUALITY SEGMENT

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

RETURN BY S&P QUALITY RATING



NON-U.S. GROWTH AND INFLATION



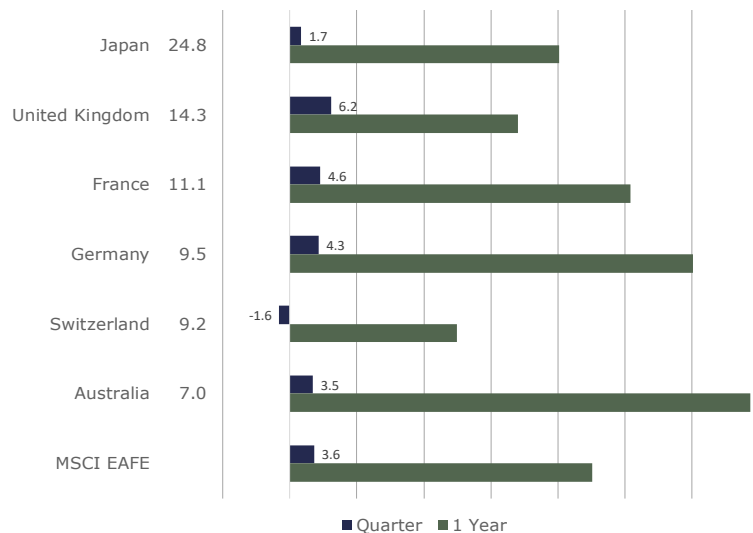
Data sources: Bloomberg

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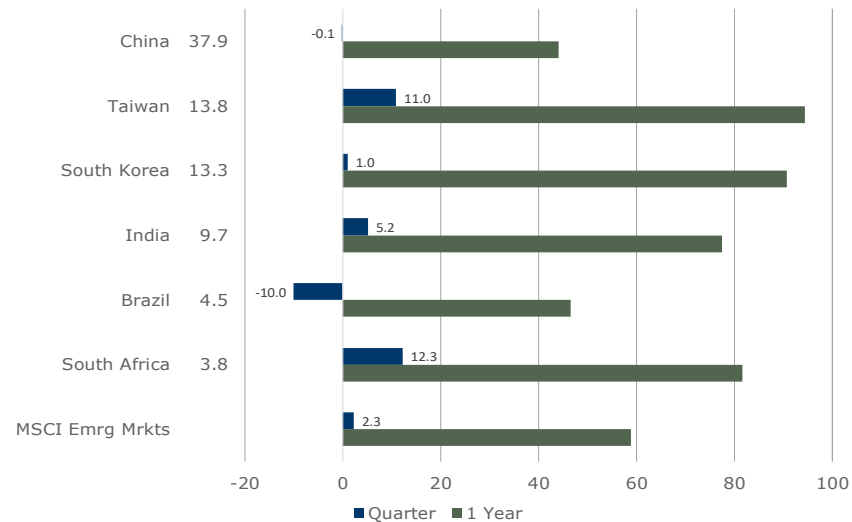
NON-U.S. EQUITY MARKET

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 (%)



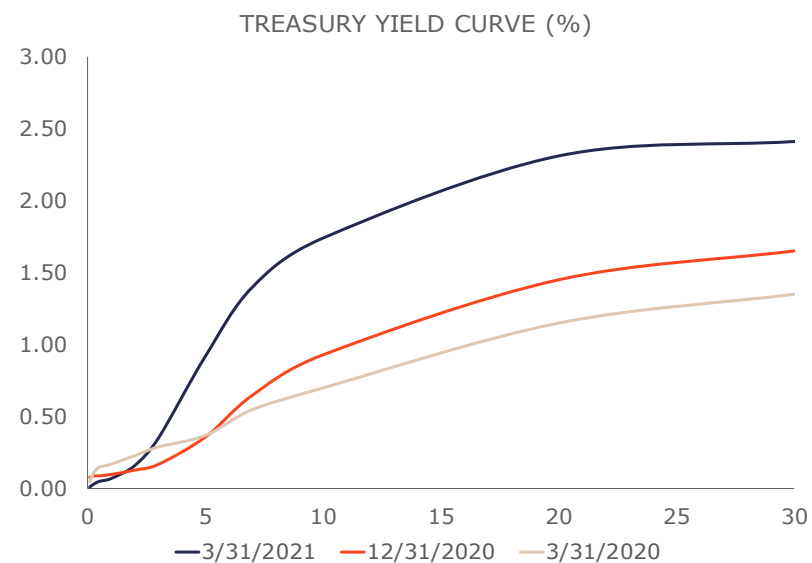
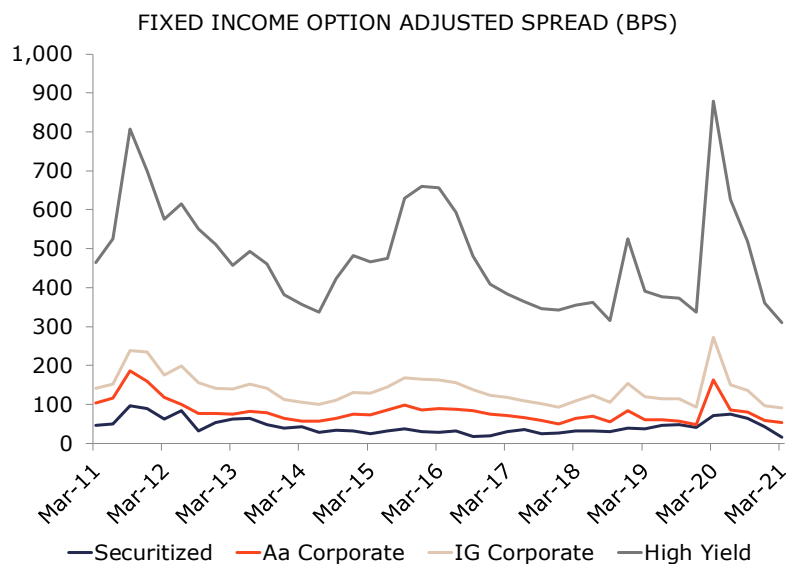
Data sources: Bloomberg

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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 Gov't-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 Govt-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

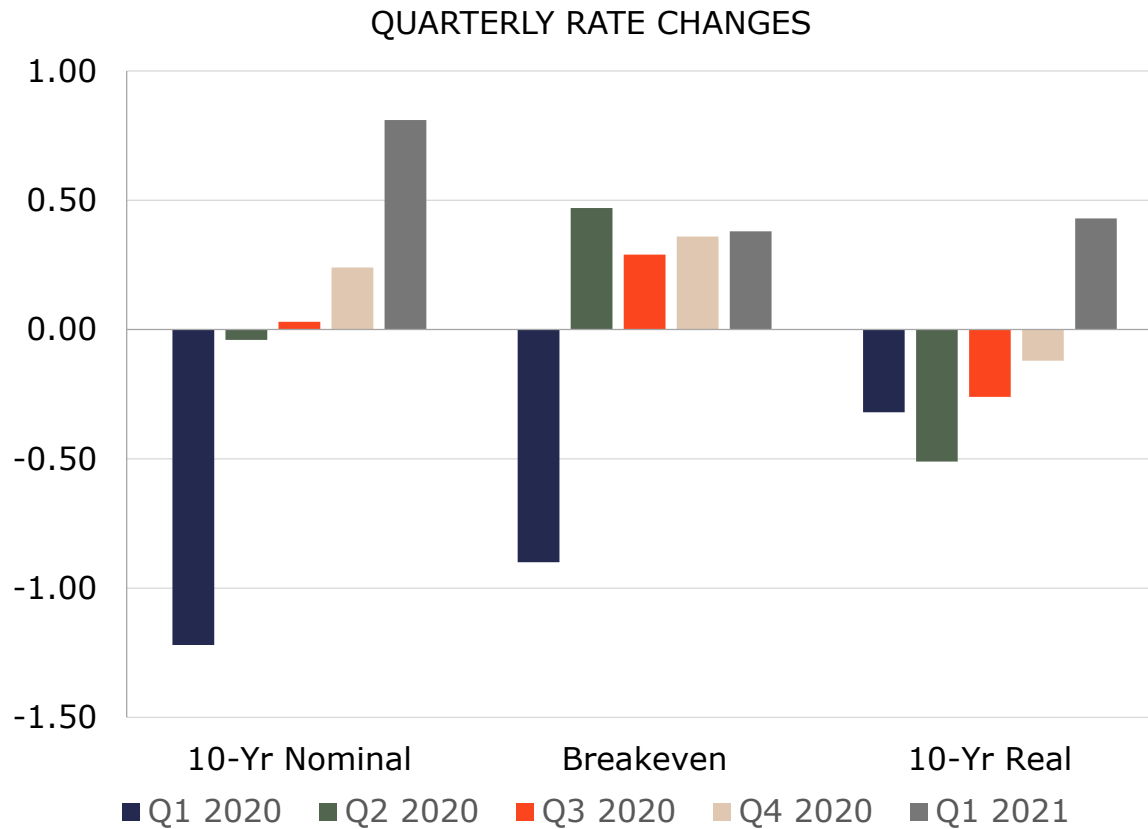


Data sources: Bloomberg

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RATE CHANGE ATTRIBUTION

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

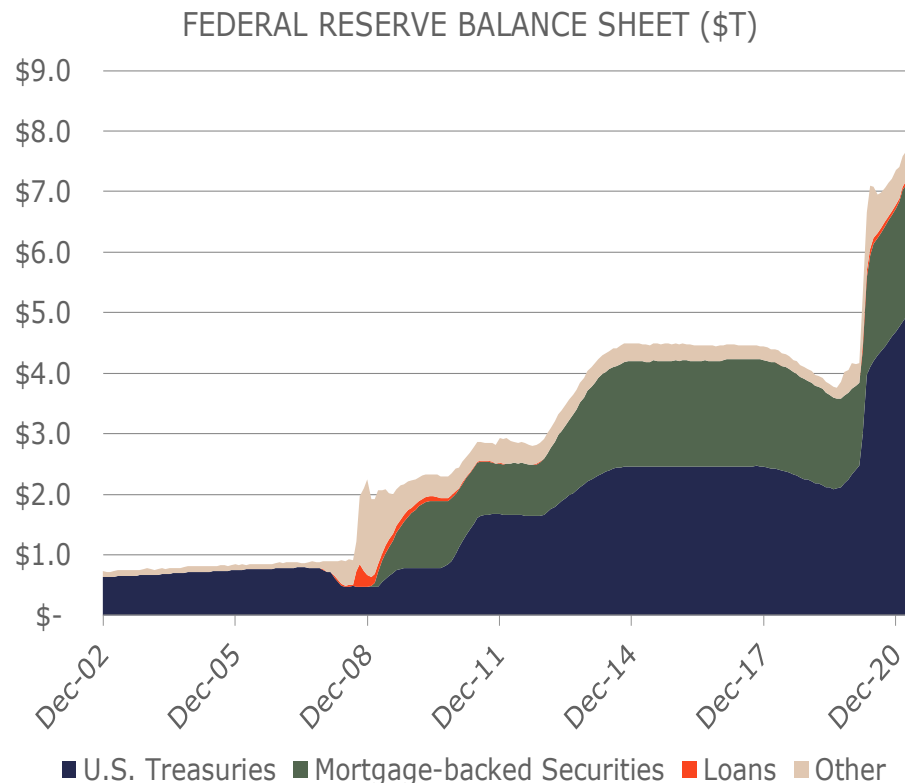
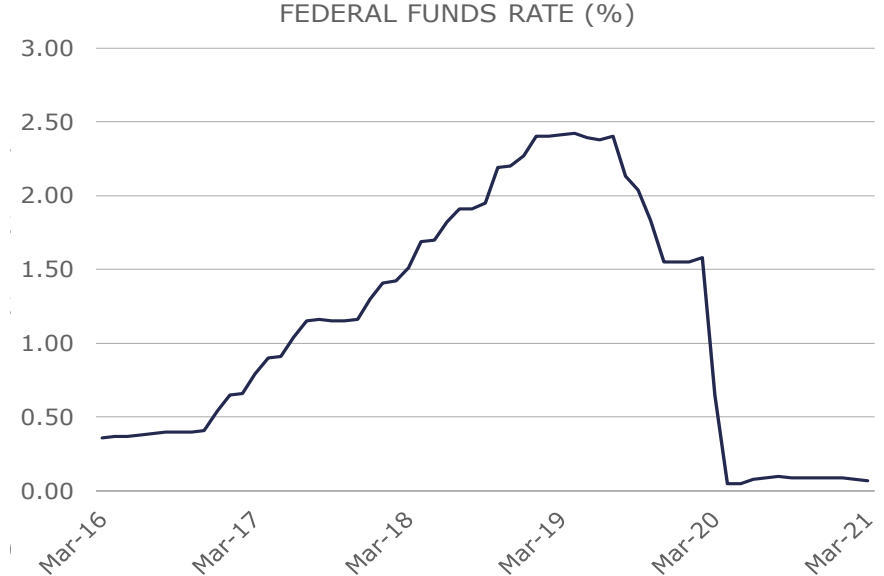


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FEDERAL RESERVE

- 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

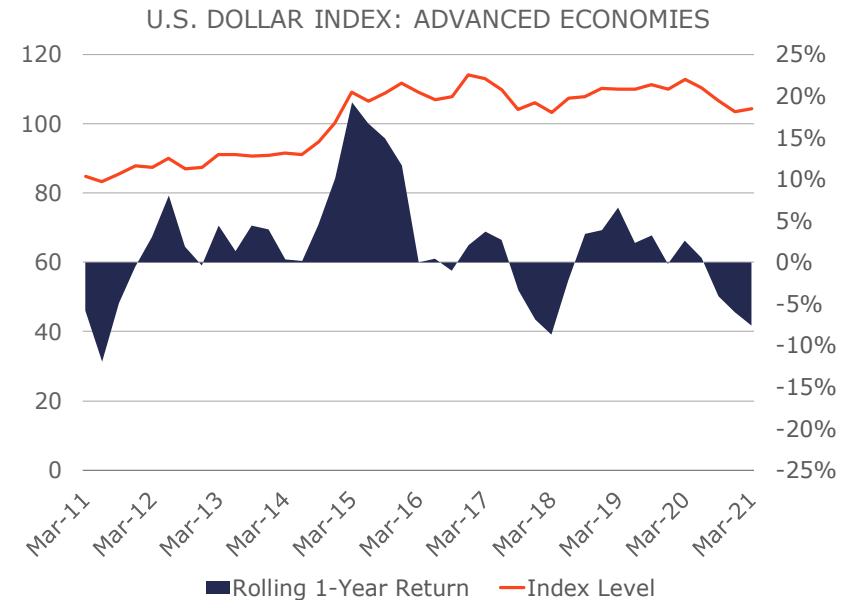
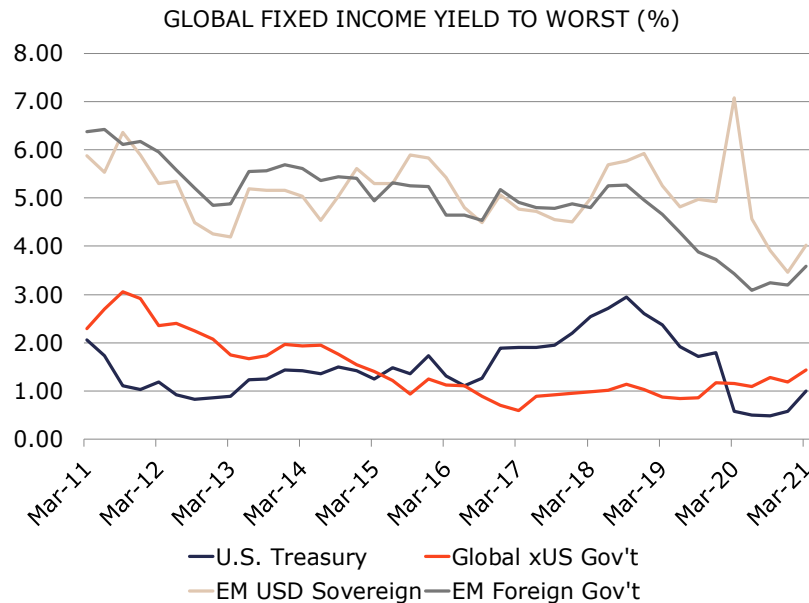
	Announced	Closed	Amount (bil)
QE1	11/25/2008	3/31/2010	\$1,403
QE2	11/3/2010	6/29/2012	\$568
QE3	9/13/2012	10/29/2014	\$1,674
QE4	3/23/2020		\$3,809



NON-U.S. FIXED INCOME

AS OF 3/31/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
DEVELOPED MARKETS						
Blmbrg Brclys Global Aggregate xUS	-5.3	-5.3	7.2	1.1	2.1	1.3
Blmbrg Brclys Global Aggregate xUS *	-1.9	-1.9	1.5	3.9	3.3	4.2
Blmbrg Brclys Global Inflation Linked xUS	-4.6	-4.6	14.9	2.0	4.0	3.4
Blmbrg Brclys Global Inflation Linked xUS *	-3.3	-3.3	5.6	4.4	5.5	5.8
EMERGING MARKETS (HARD CURRENCY)						
Blmbrg Brclys EM USD Aggregate	-3.5	-3.5	13.6	4.8	5.2	5.5
EMERGING MARKETS (FOREIGN CURRENCY)						
Blmbrg Brclys EM Local Currency Gov't	-3.7	-3.7	9.7	1.4	3.6	2.0
Blmbrg Brclys EM Local Currency Gov't *	-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.

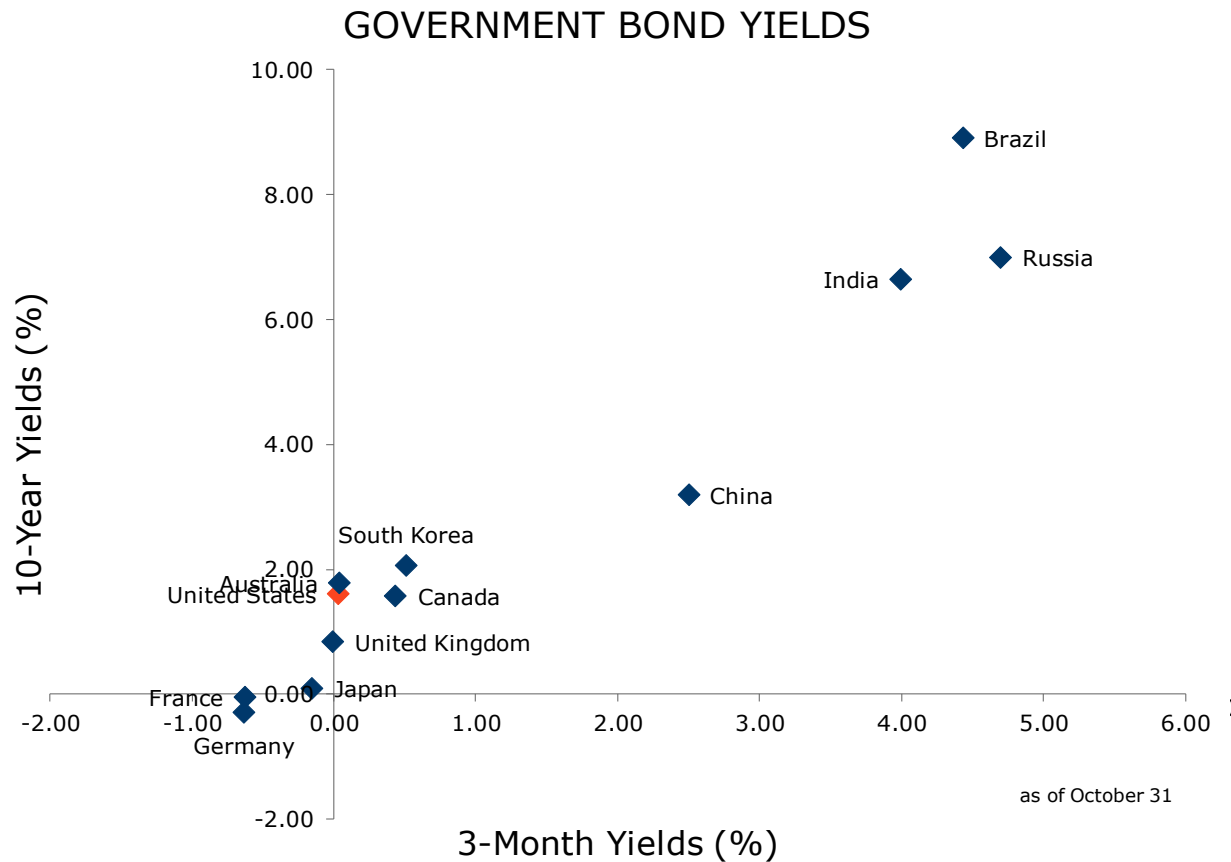


Data sources: Bloomberg

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GLOBAL INTEREST RATES

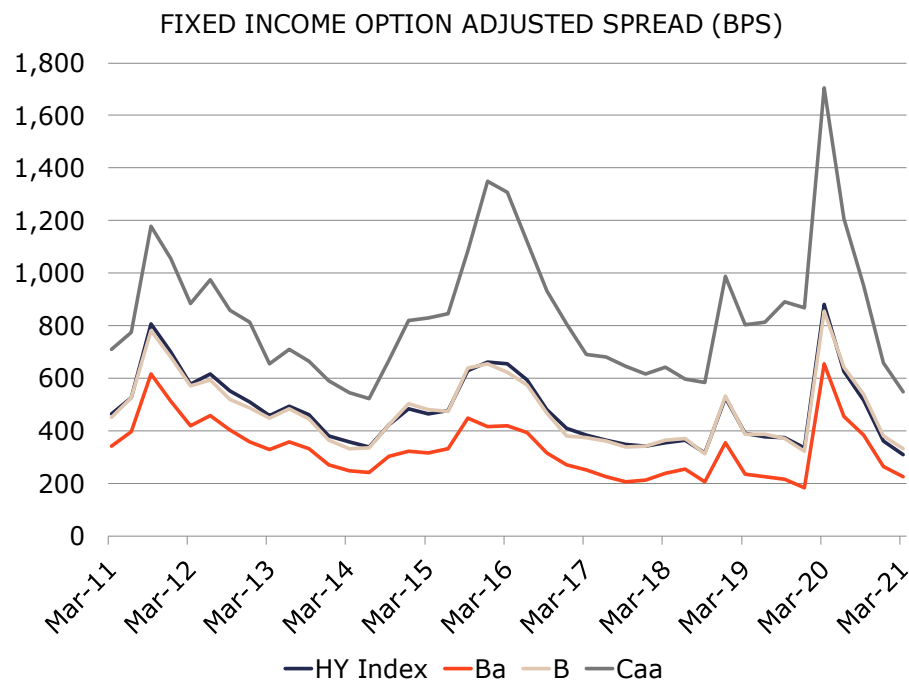
Negative rates found in Germany and France; low but positive rates, and at similar levels, in the U.S. and Australia while the U.K. approaches zero.



Data sources: Bloomberg

HIGH YIELD BOND MARKET

AS OF 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

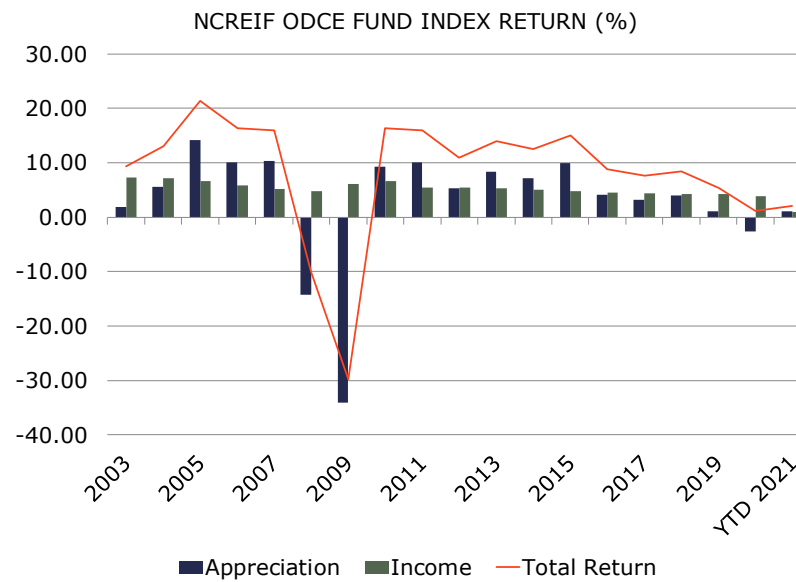
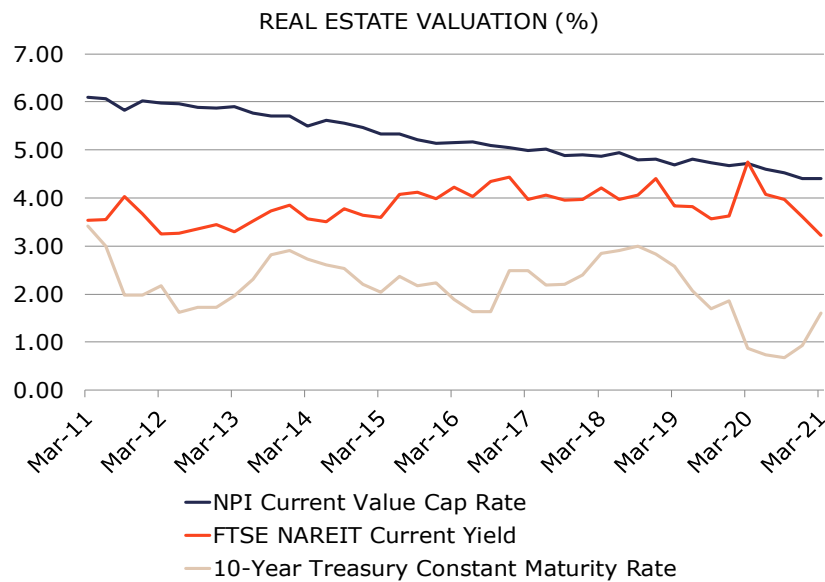


Data sources: Bloomberg

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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 Misstream Energy	20.9	20.9	74.5	4.2	4.8	n.a.



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

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

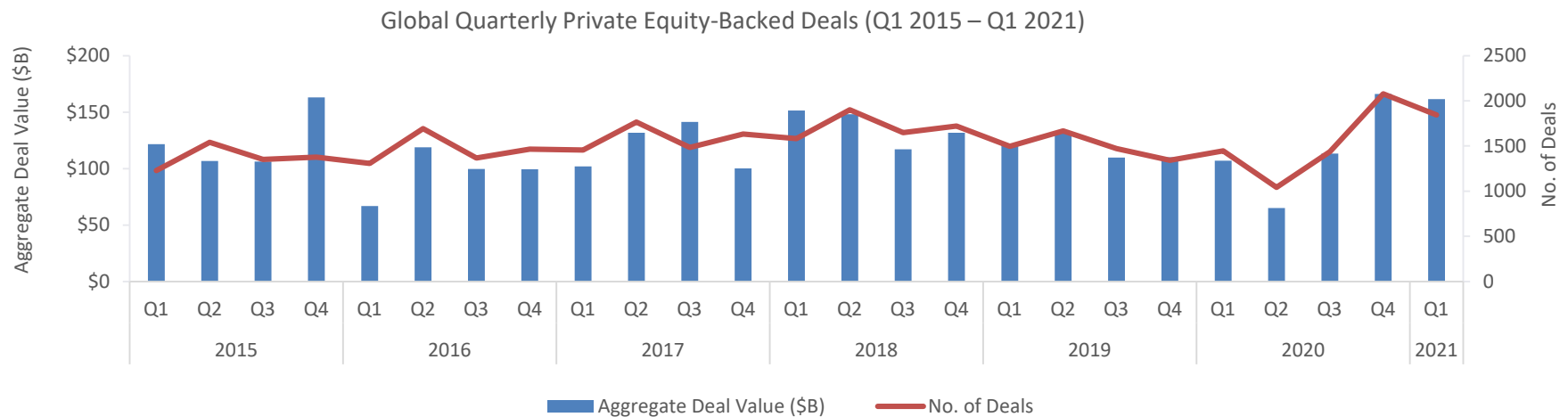
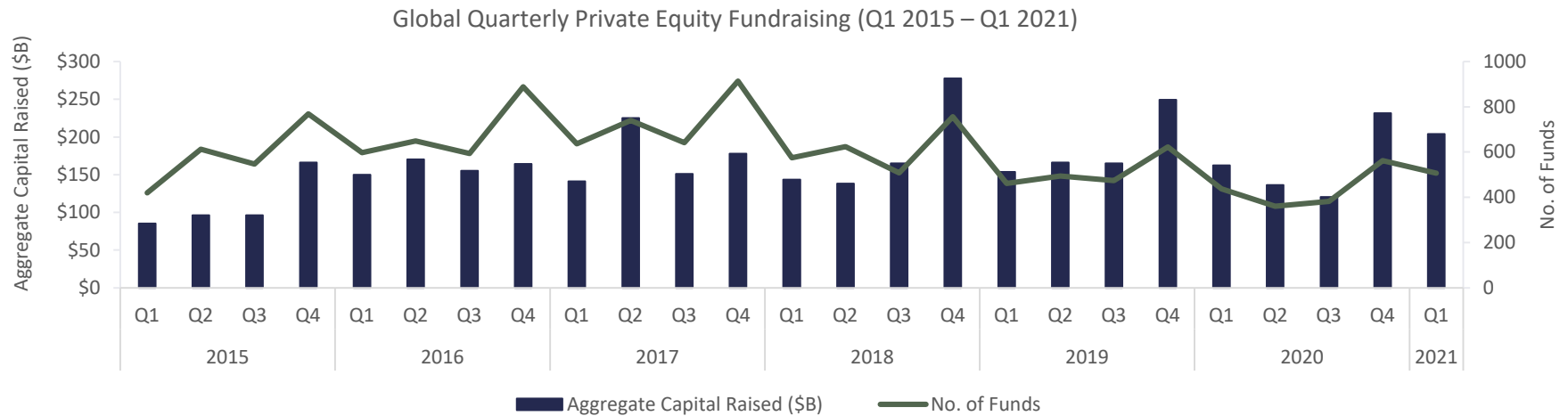
Note: Developed asset class is developed equity markets ex-U.S., ex-Canada



APPENDIX: PRIVATE MARKETS TRENDS

Wilshire Private Markets

PRIVATE EQUITY – FUNDRAISING & INVESTMENT ACTIVITY

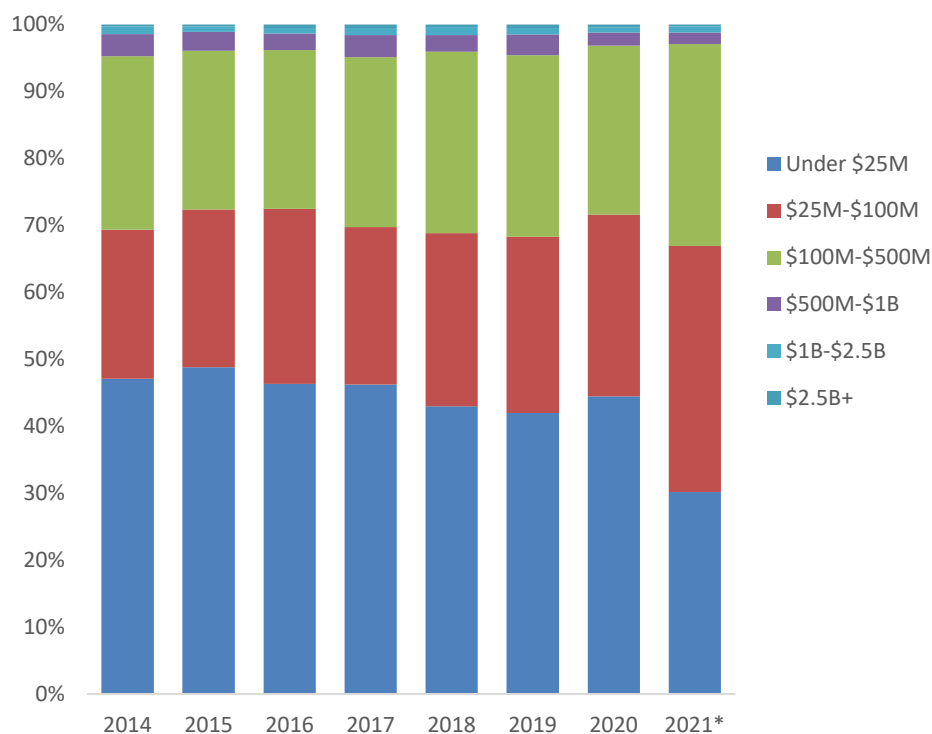


Data Source: Preqin, as of March 31, 2021.

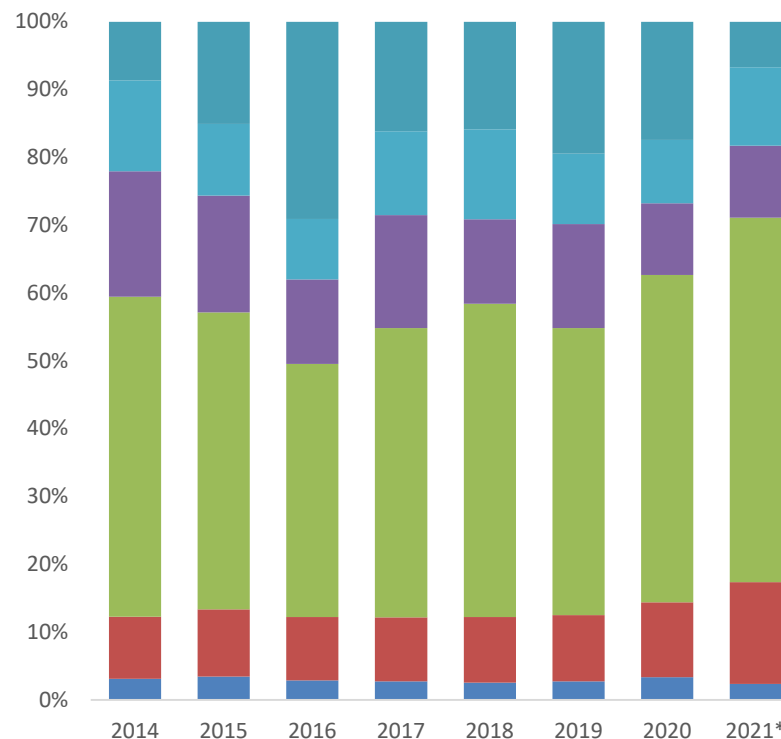
Wilshire Private Markets

U.S. INVESTMENT ACTIVITY BY DEAL SIZE

Percentage of Deal Volume by Deal Size (by Count)



Percentage of Deal Volume by Deal Size (by Dollars)



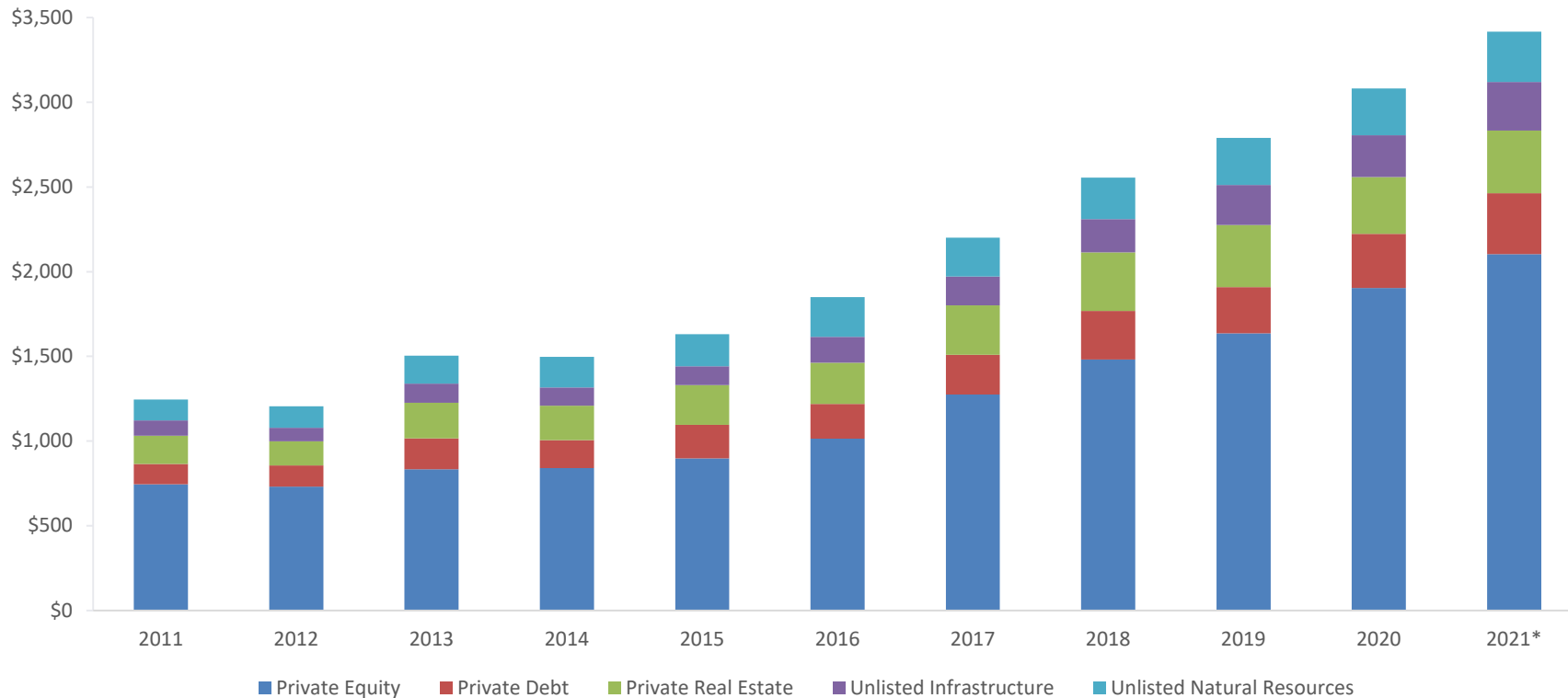
- Deal volume continues to be dominated by lower middle market deals with investment sizes below \$100 million through the first quarter of 2021
- However, deals with below \$100 million check sizes comprised only 17% of all deal volume by amount of capital invested in the first quarter of 2021

Source: PitchBook, *as of March 31, 2021.

Wilshire Private Markets

PRIVATE CAPITAL DRY POWDER

Private Capital Dry Powder by Fund Type (2011 – April 2021)

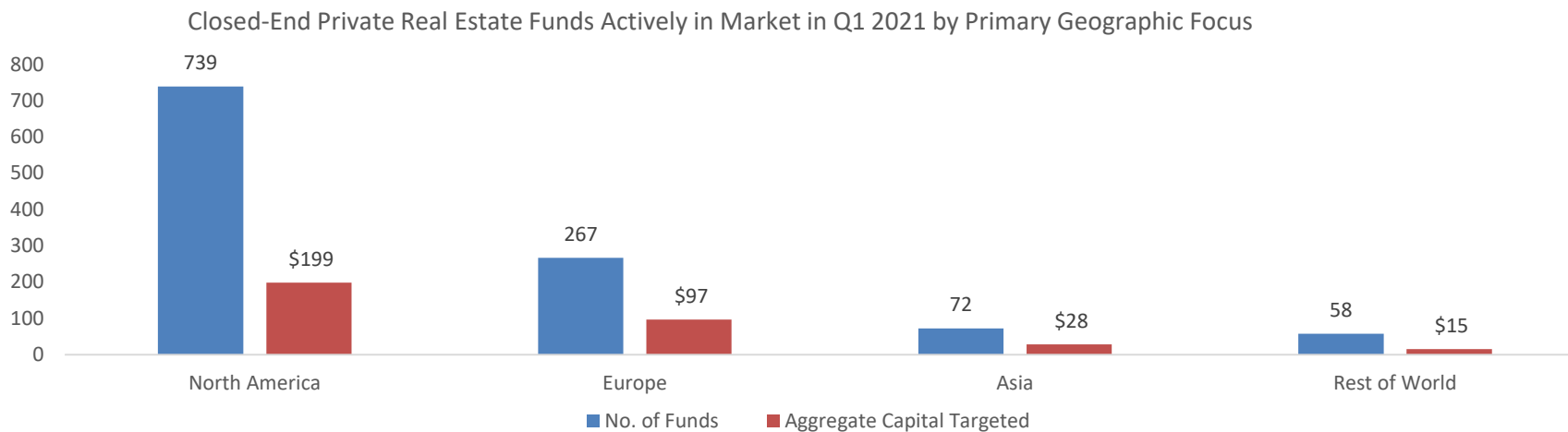
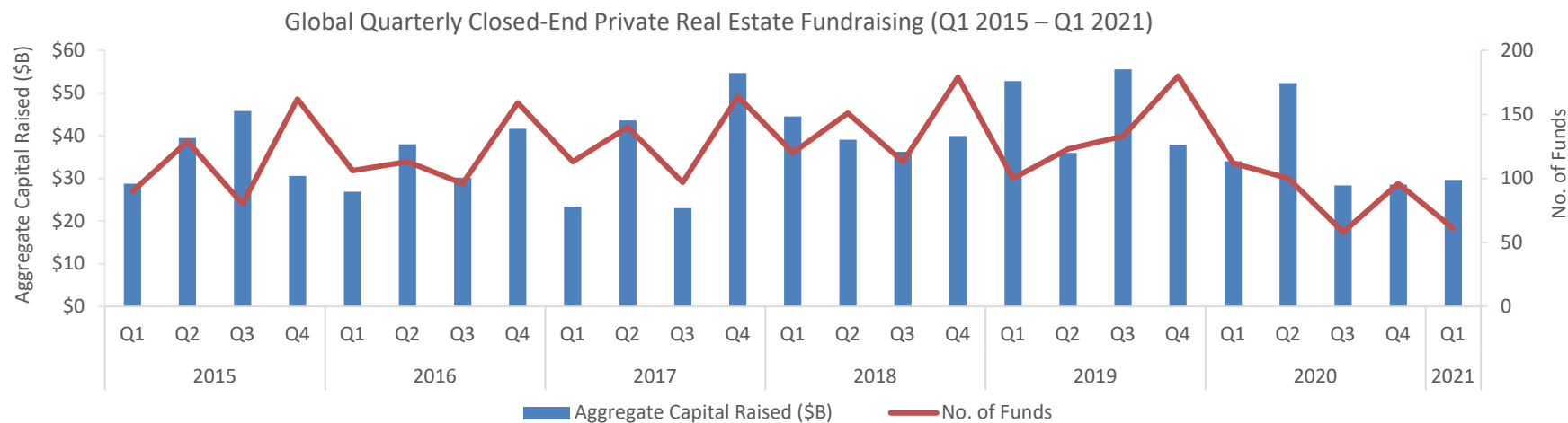


- Global private capital dry power continues to increase, topping \$3.4 trillion across all fund types
- Private equity comprises just over 61% of total dry powder in the market as of April 2021

Source: Preqin, *as of April 22, 2021.

Wilshire Private Markets

PRIVATE REAL ESTATE – FUNDRAISING ACTIVITY

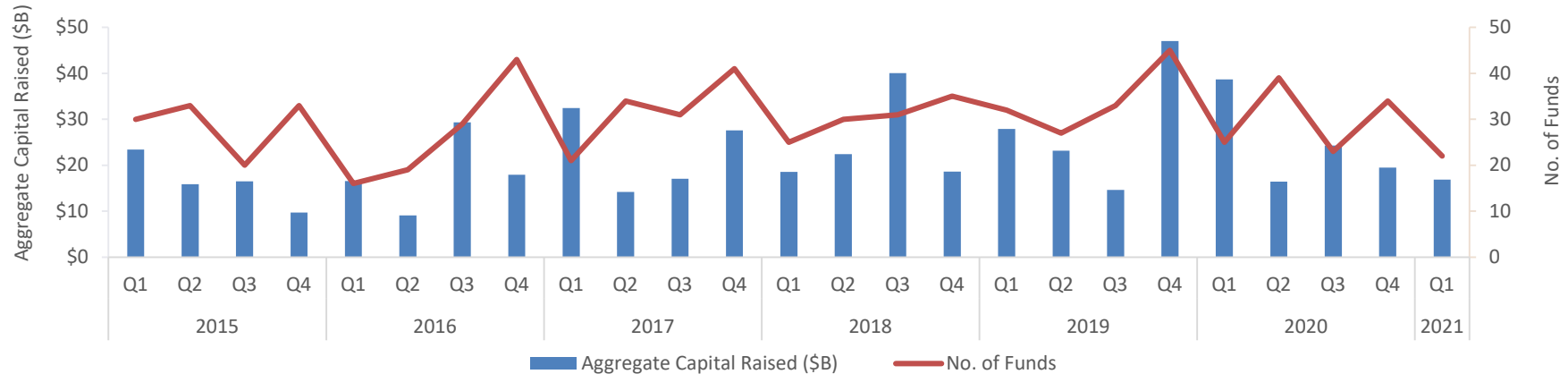


Source: Preqin, as of March 31, 2021.

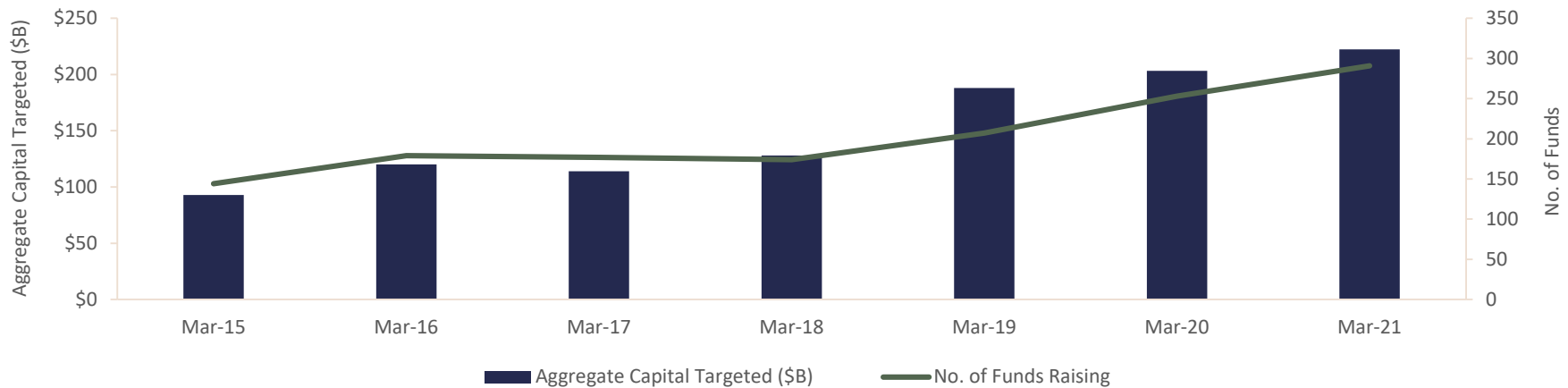
Wilshire Private Markets

UNLISTED INFRASTRUCTURE– FUNDRAISING & INVESTMENT ACTIVITY

Global Quarterly Unlisted Infrastructure Fundraising (Q1 2015 – Q1 2021)



Unlisted Infrastructure Funds in Market over Time (March 2015 – March 2021)

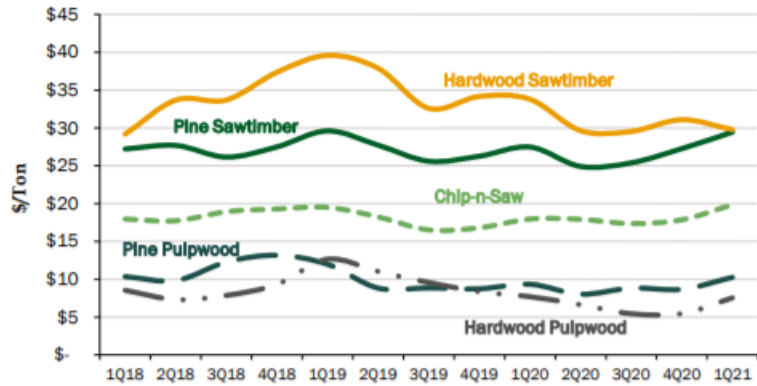


Source: Preqin, as of March 31, 2021.

Wilshire Private Markets

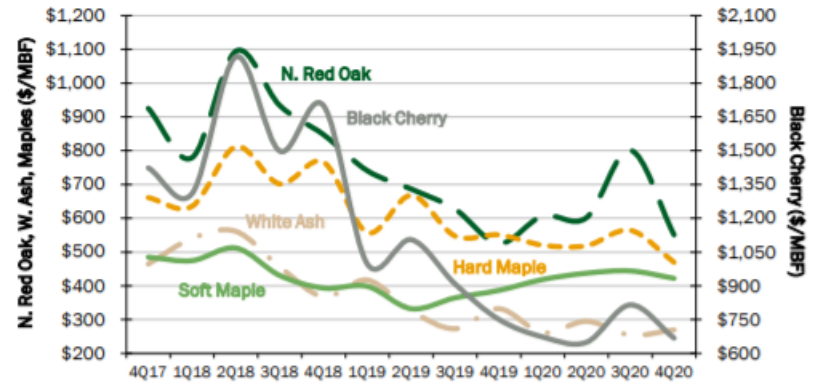
TIMBER INVESTMENTS

Southeastern Timber Prices



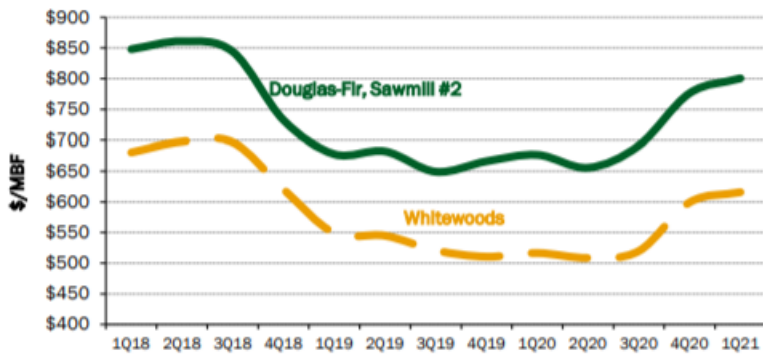
Source: Forest2Market®

Northeastern Hardwood Timber Prices



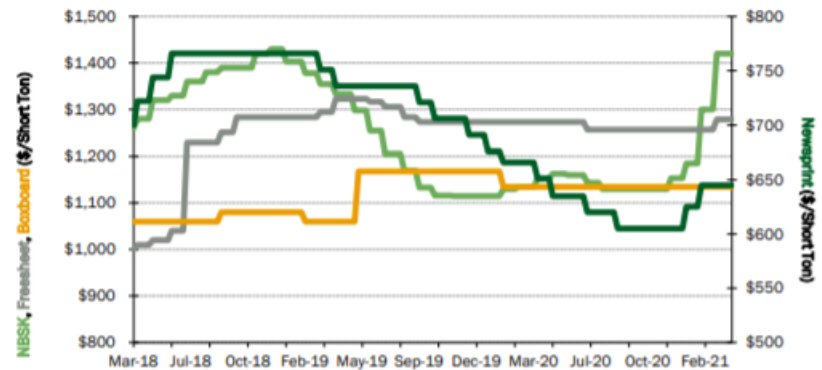
Source: Pennsylvania Woodlands Timber Market Report - Northwest Region

Pacific Northwest Timber Prices



Source: Fastmarkets RISI - Log Lines®

Pulp and Paper



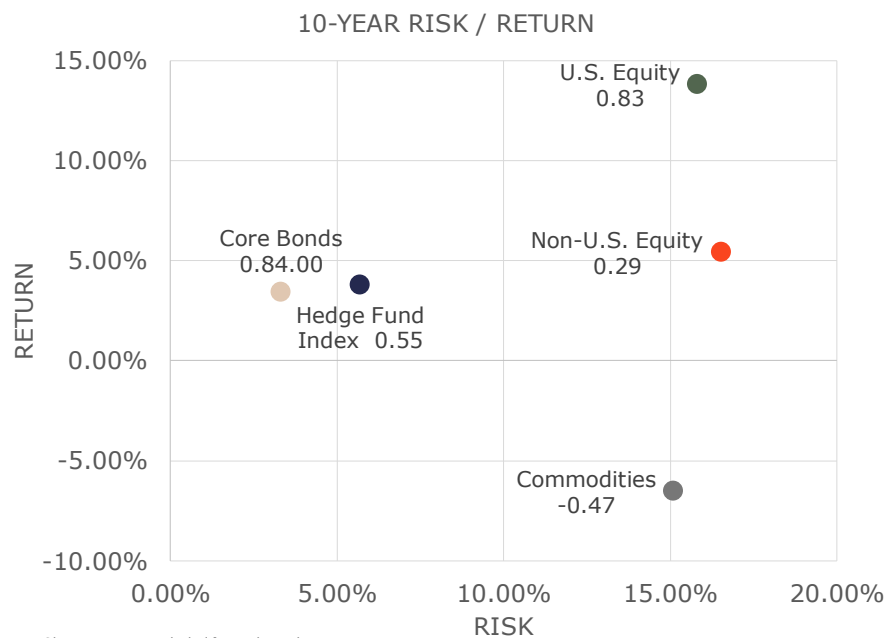
Source: Fastmarkets RISI

Data Sources: Forest Investment Associates

Wilshire Private Markets

HEDGE FUND PERFORMANCE

AS OF 3/31/2021	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Credit Suisse Hedge Fund Index	2.1	2.1	19.3	4.6	5.0	3.8
Event Driven	4.6	4.6	32.9	5.2	5.9	3.1
Global Macro	1.2	1.2	17.3	5.7	5.2	4.1
Long/Short Equity	1.6	1.6	23.4	5.1	6.0	4.9
Multi-Strategy	1.0	1.0	14.0	3.6	4.9	5.3
Wilshire 5000 Index	6.5	6.5	62.2	17.2	16.7	13.8
MSCI ACWI ex-US (\$G)	3.6	3.6	50.0	7.0	10.3	5.4
Bloomberg Barclays Aggregate	-3.4	-3.4	0.7	4.7	3.1	3.4
Bloomberg Commodity Index	10.2	10.2	-3.1	-2.5	1.0	-6.5



Data Sources: Bloomberg



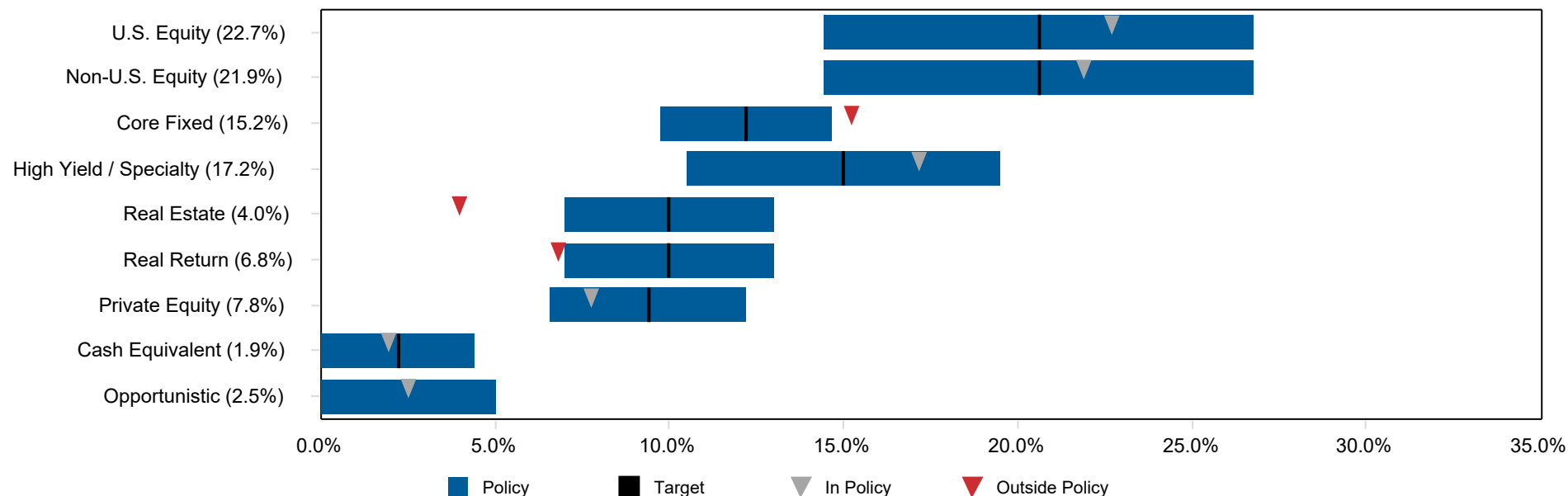
KRS Pension Plan

Asset Allocation Compliance

KRS Pension Plan

Periods Ended As of March 31, 2021

Executive Summary

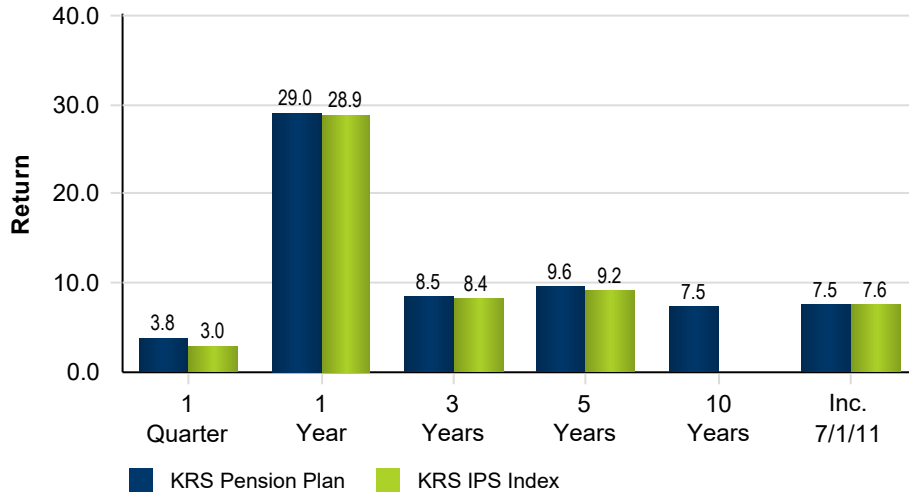


	Asset Allocation \$	Asset Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebalance \$
U.S. Equity	3,368,632,303	22.7	14.4	26.8	20.6	-310,468,637
Non-U.S. Equity	3,250,518,383	21.9	14.4	26.8	20.6	-192,354,717
Core Fixed	2,263,311,445	15.2	9.8	14.6	12.2	-452,165,973
High Yield / Specialty	2,546,489,496	17.2	10.5	19.5	15.0	-319,671,293
Real Estate	589,400,002	4.0	7.0	13.0	10.0	895,145,467
Real Return	1,011,388,853	6.8	7.0	13.0	10.0	473,156,616
Private Equity	1,155,001,941	7.8	6.6	12.2	9.4	240,470,800
Cash Equivalent	285,262,649	1.9	0.0	4.4	2.2	41,337,354
Opportunistic	375,449,617	2.5	0.0	5.0	0.0	-375,449,617
Total Fund	14,845,454,688	100.0			100.0	

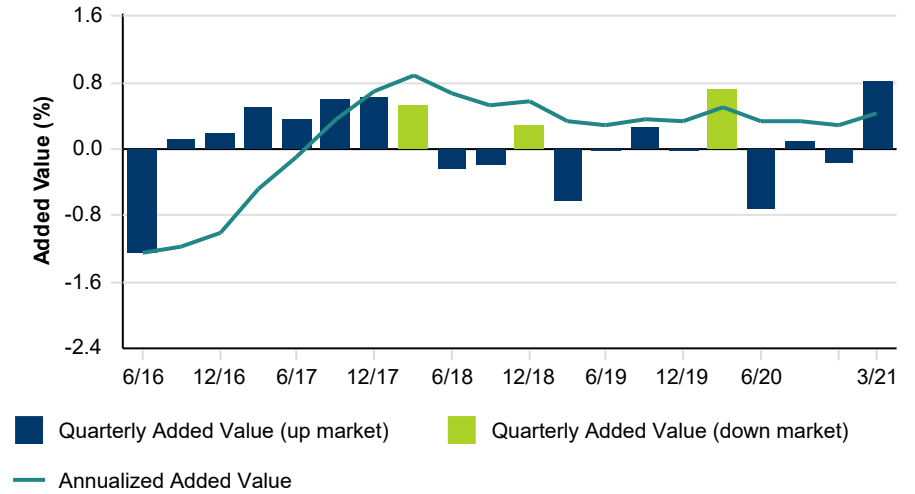
Total Fund Summary

KRS Pension Plan
 Periods Ended March 31, 2021

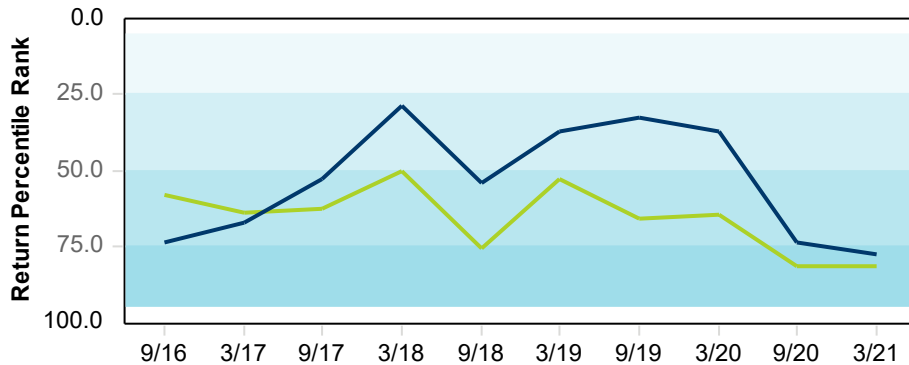
Comparative Performance



Added Value History

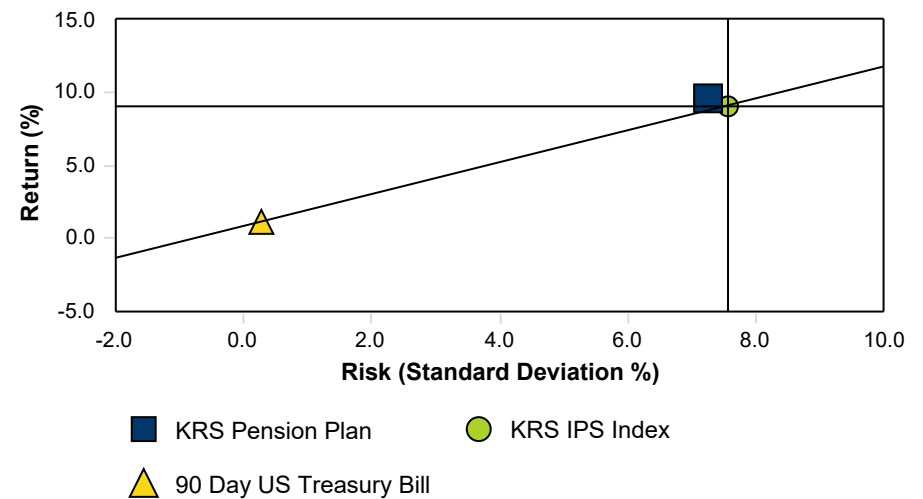


Rolling Percentile Rank: All Public Plans-Total Fund



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
— KRS Pension Plan	10	0 (0%)	4 (40%)	5 (50%)	1 (10%)
— Benchmark	10	0 (0%)	1 (10%)	6 (60%)	3 (30%)

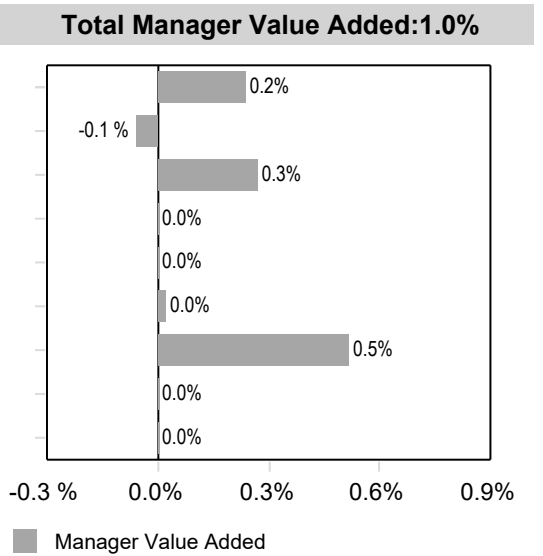
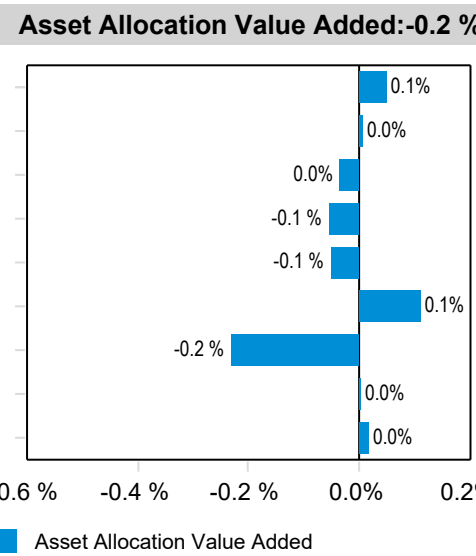
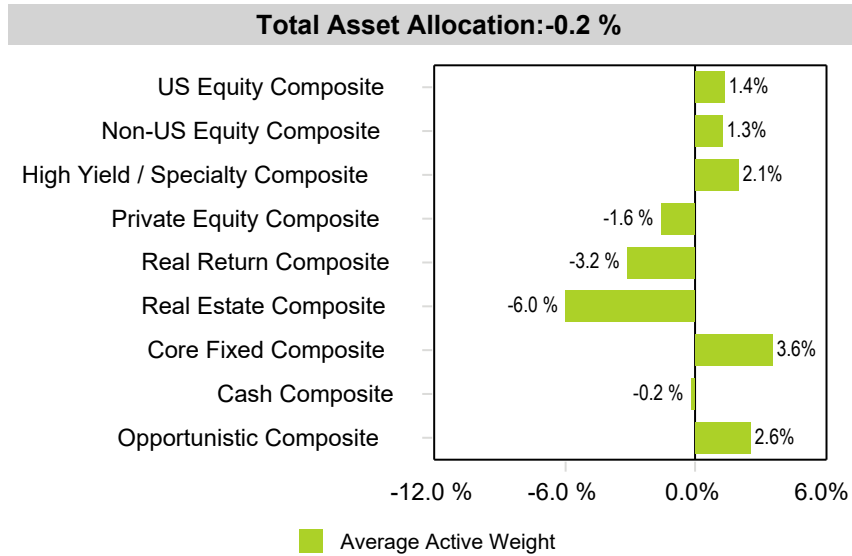
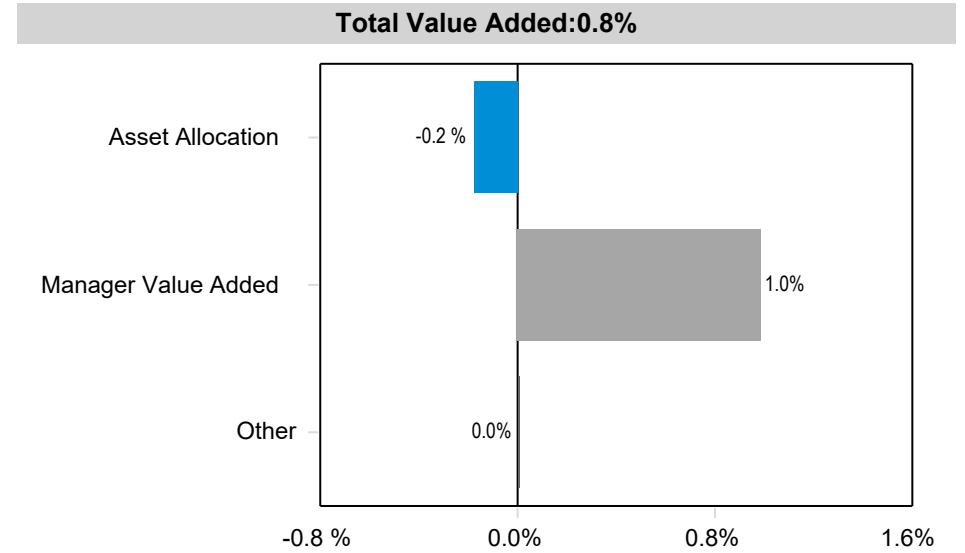
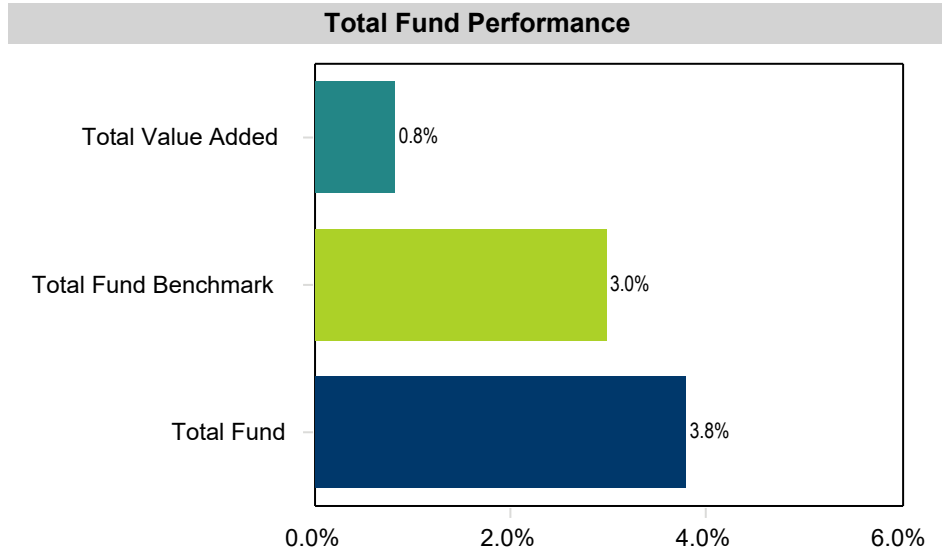
Risk and Return 04/1/16 - 03/31/21



Total Fund Attribution

KRS Pension Plan

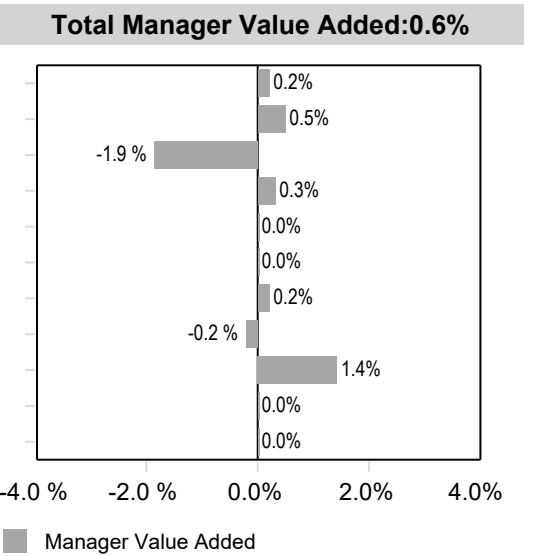
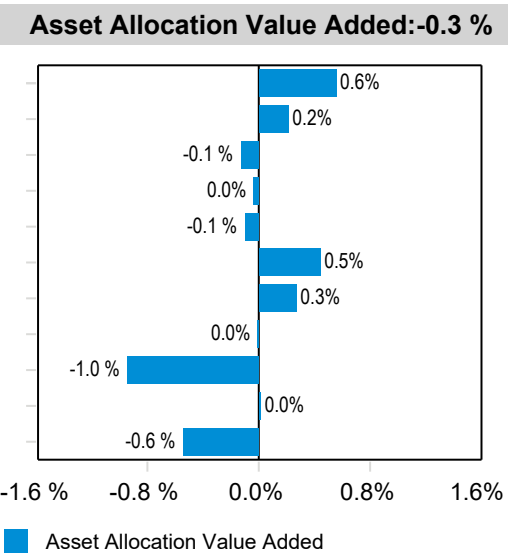
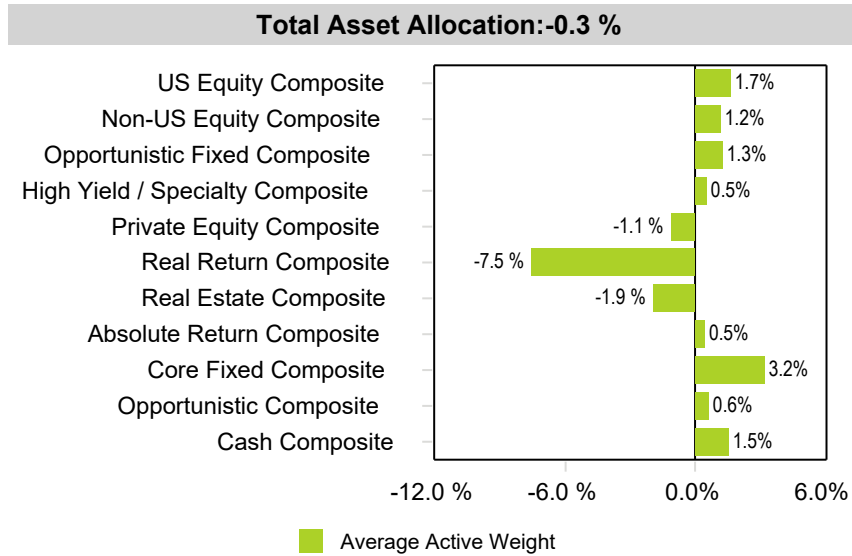
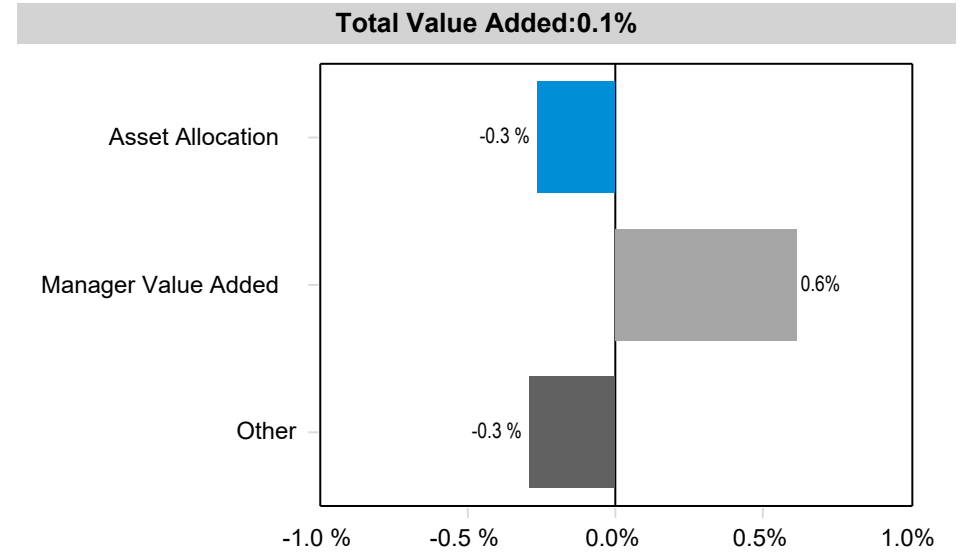
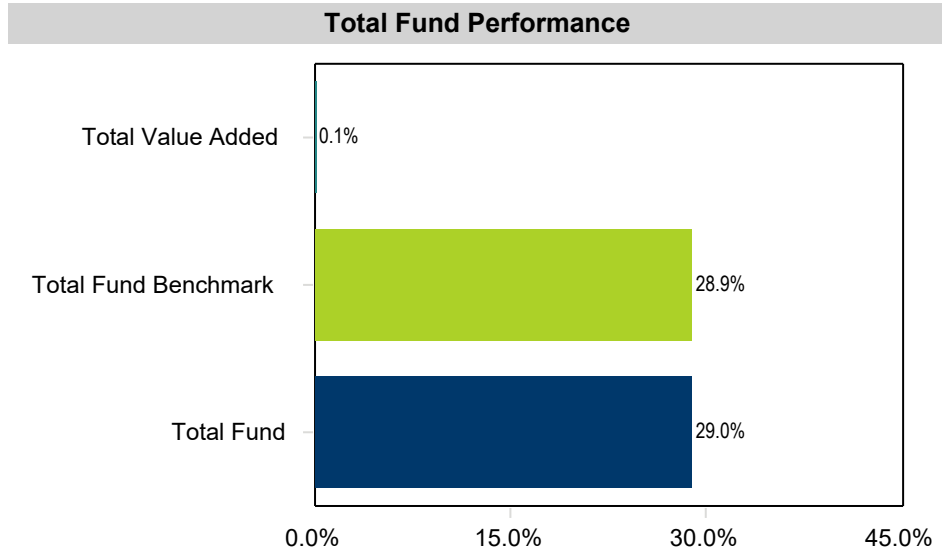
Periods Ended 1 Quarter Ending March 31, 2021



Total Fund Attribution

KRS Pension Plan

Periods Ended 1 Year Ending March 31, 2021



Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
KRS Pension Plan	14,845,454,688	100.00	1.92	3.79	18.42	28.99	8.51	9.61	9.13	4/1/1984
KRS IPS Index			1.63	2.98	17.59	28.93	8.37	9.17		
Value Added			0.29	0.81	0.83	0.06	0.14	0.44		
KERS Pension Plan	2,706,296,494	18.23	1.62	3.24	16.45	26.53	8.26	9.00	9.05	4/1/1984
KERS IPS Index			1.12	2.07	15.64	26.93	7.80			
Value Added			0.50	1.17	0.81	-0.40	0.46			
Assumed Rate 5.25%			0.43	1.29	3.91	5.25	5.25			
Value Added			1.19	1.95	12.54	21.28	3.01			
KERS (H) Pension Plan	825,636,857	5.56	1.92	3.80	18.70	29.79	8.47	9.59	9.14	4/1/1984
KERS (H) IPS Index			1.75	3.22	18.09	29.46	8.52			
Value Added			0.17	0.58	0.61	0.33	-0.05			
Assumed Rate 6.25%			0.51	1.53	4.65	6.25	6.25			
Value Added			1.41	2.27	14.05	23.54	2.22			
CERS Pension Plan	8,201,883,085	55.25	2.01	3.95	18.98	29.65	8.54	9.73	9.14	4/1/1984
CERS IPS Index			1.76	3.22	18.02	29.32	8.48			
Value Added			0.25	0.73	0.96	0.33	0.06			
Assumed Rate 6.25%			0.51	1.53	4.65	6.25	6.25			
Value Added			1.50	2.42	14.33	23.40	2.29			
CERS (H) Pension Plan	2,780,134,311	18.73	2.01	3.93	18.95	29.56	8.52	9.69	9.14	4/1/1984
CERS (H) IPS Index			1.77	3.24	18.07	29.37	8.47			
Value Added			0.24	0.69	0.88	0.19	0.05			
Assumed Rate 6.25%			0.51	1.53	4.65	6.25	6.25			
Value Added			1.50	2.40	14.30	23.31	2.27			

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
SPRS Pension Plan	331,503,939	2.23	1.58	3.23	16.14	26.61	8.10	9.03	9.02	4/1/1984
SPRS IPS Index			1.16	2.10	14.07	24.18	7.83			
Value Added			0.42	1.13	2.07	2.43	0.27			
Assumed Rate 5.25%			0.43	1.29	3.91	5.25	5.25			
Value Added			1.15	1.94	12.23	21.36	2.85			

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
KRS Pension Plan	14,845,454,688	100.00	1.92	3.79	18.42	28.99	8.51	9.61	9.13	4/1/1984
KRS IPS Index			1.63	2.98	17.59	28.93	8.37	9.17		
Value Added			0.29	0.81	0.83	0.06	0.14	0.44		
GROWTH										
US Equity Composite	3,368,632,303	22.69	3.78	7.45	34.33	63.73	16.52	16.00	11.73	4/1/1984
Russell 3000 Index			3.58	6.35	33.19	62.53	17.12	16.64	11.63	
Value Added			0.20	1.10	1.14	1.20	-0.60	-0.64	0.10	
S&P 500 Index	2,049,133,096	13.80	4.37	6.17	29.61	56.54	17.26	16.57	8.69	7/1/2001
S&P 500 Index			4.38	6.17	29.71	56.35	16.78	16.29	8.27	
Value Added			-0.01	0.00	-0.10	0.19	0.48	0.28	0.42	
Scientific Beta	221,010,199	1.49	5.14	7.19	29.25	54.82	12.53		13.10	7/1/2016
S&P 500 Index			4.38	6.17	29.71	56.35	16.78		16.62	
Value Added			0.76	1.02	-0.46	-1.53	-4.25		-3.52	
River Road FAV	252,853,437	1.70	5.45	7.45	34.97	54.60	12.98		14.57	7/1/2016
Russell 3000 Value Index			5.84	11.89	38.26	58.38	10.99		11.48	
Value Added			-0.39	-4.44	-3.29	-3.78	1.99		3.09	
Westfield Capital	242,294,579	1.63	1.20	2.90	28.59	63.67	23.12	20.97	15.88	7/1/2011
Russell 3000 Growth Index			1.37	1.19	28.38	64.31	22.39	20.87	16.73	
Value Added			-0.17	1.71	0.21	-0.64	0.73	0.10	-0.85	
Internal US Mid Cap	198,493,351	1.34	4.69	13.50	47.74	84.18	14.37	15.01	12.34	8/1/2014
S&P MidCap 400 Index			4.67	13.47	47.86	83.46	13.40	14.37	11.93	
Value Added			0.02	0.03	-0.12	0.72	0.97	0.64	0.41	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
NTGI Structured	270,316,777	1.82	1.73	14.68	54.01	88.79	15.15	16.27	10.93	10/1/1999
Russell 2000 Index			1.00	12.70	55.36	94.85	14.76	16.35	9.41	
Value Added			0.73	1.98	-1.35	-6.06	0.39	-0.08	1.52	
Next Century Growth	134,401,035	0.91	-2.57	14.68	94.01	188.30			88.74	11/1/2019
Russell Microcap Growth Index			-3.13	16.86	60.68	123.08			56.23	
Value Added			0.56	-2.18	33.33	65.22			32.51	
Abel Noser Transition	42,381	0.00								
Invesco	49,485	0.00								
Transition Account	37,963	0.00								
Non-US Equity Composite	3,250,518,383	21.90	1.37	3.48	30.14	54.87	8.18	11.13	4.23	7/1/2000
Policy Index			1.37	3.77	29.91	51.94	6.51	10.01	4.14	
Value Added			0.00	-0.29	0.23	2.93	1.67	1.12	0.09	
BlackRock World Ex US	976,583,783	6.58	2.65	4.19	26.85	46.50	5.80	9.41	7.35	7/1/2009
Policy Index			2.55	4.04	26.46	45.86	5.44	9.10	7.10	
Value Added			0.10	0.15	0.39	0.64	0.36	0.31	0.25	
American Century	477,881,664	3.22	-1.73	0.49	32.11	62.62	14.93	15.77	9.80	7/1/2014
Policy Index			1.37	3.77	29.91	51.94	6.51	10.00	4.98	
Value Added			-3.10	-3.28	2.20	10.68	8.42	5.77	4.82	
Franklin Templeton	356,956,919	2.40	-1.74	-2.08	22.91	57.99	11.24	14.45	9.51	7/1/2014
Policy Index			1.37	3.77	29.91	51.94	6.51	10.00	4.98	
Value Added			-3.11	-5.85	-7.00	6.05	4.73	4.45	4.53	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Lazard Asset Mgmt	530,408,295	3.57	2.94	4.16	30.61	51.79	6.86	9.81	6.00	7/1/2014
Policy Index			1.37	3.77	29.91	51.94	6.51	10.00	4.98	
Value Added			1.57	0.39	0.70	-0.15	0.35	-0.19	1.02	
LSV Asset Mgmt	429,855,325	2.90	4.16	8.65	29.40	45.99	3.92	8.46	3.88	7/1/2014
Policy Index			1.37	3.77	29.91	51.94	6.51	10.00	4.98	
Value Added			2.79	4.88	-0.51	-5.95	-2.59	-1.54	-1.10	
NTGI Int'l Small Cap	102,955,329	0.69	2.18	5.26	37.58	69.20	6.76	10.64	12.00	12/1/2008
MSCI AC World ex USA Small Cap (Net)			2.03	5.53	38.25	69.82	6.61	10.40	12.20	
Value Added			0.15	-0.27	-0.67	-0.62	0.15	0.24	-0.20	
JP Morgan Emerging Markets	188,345,631	1.27	-3.70	-1.54	36.77	76.16			26.82	11/1/2019
MSCI Emerging Markets IMI			-1.16	2.91	35.79	61.63			21.01	
Value Added			-2.54	-4.45	0.98	14.53			5.81	
Pzena Emerging Markets	186,365,232	1.26	3.50	10.55	48.86	74.71			18.75	11/1/2019
MSCI Emerging Markets (Net)			-1.51	2.29	34.13	58.39			20.25	
Value Added			5.01	8.26	14.73	16.32			-1.50	
Pyramis Intl	4,038	0.00								
Non-US Equity Transition	1,162,168	0.01								
High Yield / Specialty Credit Composite	2,546,489,496	17.15	1.60	2.90	12.06	13.44			6.23	10/1/2018
Policy Index			0.07	1.32	11.17	22.23			5.37	
Value Added			1.53	1.58	0.89	-8.79			0.86	
Adams St SPC II A	42,766,224	0.29	4.35	4.35	8.26				8.26	6/1/2020
Adams St SPC II B	43,215,573	0.29	5.00	5.00	9.52				9.52	6/1/2020

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Blue Torch	67,957,876	0.46	0.72	0.72					1.99	8/1/2020
BSP Coinvestment	25,857,720	0.17	1.77	1.77	4.08	7.01			5.86	10/1/2019
S&P/LSTA Leverage Loan Index			0.00	1.78	10.03	20.71			4.47	
Value Added			1.77	-0.01	-5.95	-13.70			1.39	
BSP Private Credit	87,671,632	0.59	5.47	5.47	14.47	4.71	4.50		4.26	2/1/2018
S&P/LSTA Leverage Loan Index			0.00	1.78	10.03	20.71	4.13		4.06	
Value Added			5.47	3.69	4.44	-16.00	0.37		0.20	
Capital Springs	41,975,209	0.28	2.38	2.38	19.55	14.04			11.92	2/1/2020
S&P/LSTA Leverage Loan Index			0.00	1.78	10.03	20.71			3.74	
Value Added			2.38	0.60	9.52	-6.67			8.18	
Cerberus Capital Mgmt	133,538,771	0.90	1.15	3.56	9.36	9.59	9.27	8.78	8.62	9/1/2014
S&P/LSTA Leverage Loan Index			0.00	1.78	10.03	20.71	4.13	5.28	3.95	
Value Added			1.15	1.78	-0.67	-11.12	5.14	3.50	4.67	
Columbia	507,694,264	3.42	0.14	0.34	10.86	20.81	7.18	7.10	6.93	11/1/2011
Blmbg. Barc. U.S. Corp: High Yield			0.15	0.85	12.29	23.72	6.84	8.06	6.83	
Value Added			-0.01	-0.51	-1.43	-2.91	0.34	-0.96	0.10	
Manulife Asset Mgmt	355,891,532	2.40	0.09	0.59	9.98	17.85	6.63	5.09	4.93	12/1/2011
Policy Index			-1.16	-3.05	-0.83	2.95	4.86	3.59	2.28	
Value Added			1.25	3.64	10.81	14.90	1.77	1.50	2.65	
Marathon Bluegrass	458,318,245	3.09	3.92	5.50	14.86	6.52	5.54	6.98	6.64	1/1/2016
Blmbg. Barc. U.S. Corp: High Yield			0.15	0.85	12.29	23.72	6.84	8.06	8.34	
Value Added			3.77	4.65	2.57	-17.20	-1.30	-1.08	-1.70	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Shenkman Capital	203,199,966	1.37	-0.10	1.24	9.27	20.35	4.26	4.96	4.62	10/1/2010
S&P/LSTA Leverage Loan Index			0.00	1.78	10.03	20.71	4.13	5.28	4.60	
Value Added			-0.10	-0.54	-0.76	-0.36	0.13	-0.32	0.02	
Waterfall	247,609,095	1.67	1.34	5.39	16.71	17.41	4.05	8.13	9.96	2/1/2010
Policy Index			0.11	0.81	8.61	16.92	5.10	6.07	5.21	
Value Added			1.22	4.58	8.10	0.49	-1.05	2.06	4.75	
White Oak Yield Spectrum	162,663,265	1.10	2.17	2.17	7.53	5.19	5.28		5.13	3/1/2018
S&P/LSTA Leverage Loan Index			0.00	1.78	10.03	20.71	4.13		4.11	
Value Added			2.17	0.39	-2.50	-15.52	1.15		1.02	
H/2 Credit Partner	89,045,869	0.60	3.70	12.19	29.46	8.13	1.74	4.35	4.83	7/1/2011
Mesa West Core Lend	58,214,766	0.39	0.00	0.00	2.86	3.49	6.39	6.85	6.52	5/1/2013
Mesa West IV	20,832,428	0.14	1.06	1.06	4.08	6.58	7.06		5.83	3/1/2017
Loomis	37,062	0.00								
Private Equity Composite	1,155,001,941	7.78	4.52	5.96	21.67	14.43	11.77	12.15	11.28	7/1/2002
KRS Short-Term PE Index			4.52	5.96	21.67	14.43	11.77	12.15	11.28	
Value Added			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Russell 3000 +3% 1 Quarter Lag			4.76	15.53	56.25	24.51	17.93	18.90	12.28	
Value Added			-0.24	-9.57	-34.58	-10.08	-6.16	-6.75	-1.00	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
DIVERSIFYING STRATEGIES										
Real Return Composite	1,011,388,853	6.81	2.12	4.60	16.82	25.44	3.76	5.26	3.80	7/1/2011
Real Return (P)			2.12	4.60	16.82	25.44	4.23	3.95	2.94	
Value Added			0.00	0.00	0.00	0.00	-0.47	1.31	0.86	
Putnam	570,430,839	3.84	1.73	3.31	18.51				18.51	7/1/2020
Policy Index			1.60	2.36	18.32				18.32	
Value Added			0.13	0.95	0.19				0.19	
Tortoise Capital	117,013,270	0.79	5.92	18.08	26.56	64.63	-4.40	-1.23	6.42	8/1/2009
Alerian MLP Index			6.91	21.95	35.26	103.13	-2.98	-1.30	3.83	
Value Added			-0.99	-3.87	-8.70	-38.50	-1.42	0.07	2.59	
Amerra AGRI Fund II	24,854,870	0.17	2.29	2.23	2.86	3.38	5.80	4.32	5.18	12/1/2012
Amerra AGRI Holdings	45,836,480	0.31	-2.51	-2.51	0.22	-0.83	-0.99	-1.10	-1.03	8/1/2015
BTG Pactual	23,440,730	0.16	5.39	5.39	5.22	-9.89	-2.74	0.44	-6.71	12/1/2014
IFM Infrastructure	45,602,641	0.31	2.00	2.00	3.71	2.14			2.86	7/1/2019
Magnetar MTP EOF II	26,003,495	0.18	12.83	12.83	64.28	18.30	10.45	10.98	6.31	8/1/2015
Oberland Capital	8,221,636	0.06	6.17	6.17	7.87	24.98			15.42	8/1/2018
Taurus Mine Finance	13,729,557	0.09	-3.67	-3.67	-4.21	-15.20	1.99	9.08	7.96	4/1/2015
TPF II	773,085	0.01	0.00	0.00	-0.18	-0.35	4.07	-2.29	-1.87	10/1/2008
Internal TIPS	127,934	0.00								
Nuveen Real Asset	194,614	0.00								

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Blackstone Strat Opp	1,630,194	0.01	0.34	-6.73	-7.90	-17.09	-7.12		-5.08	8/1/2017
Luxor Capital	1,067,357	0.01	-0.05	-2.43	6.19	-13.51	-8.13	3.35	-2.76	4/1/2014
Myriad Opportunities	27,804,715	0.19	0.52	10.45	30.83	15.55	1.79		5.32	5/1/2016
Pine River	83,415	0.00	-1.44	1.77	6.01	0.78	10.22	7.39	4.46	5/1/2014
PRISMA Capital	98,109,835	0.66	0.00	0.85	-0.02	1.12	1.06	2.68	3.01	9/1/2011
SRS Partners US	4,889,016	0.03	3.71	12.46	9.52	4.54	7.47		9.99	8/1/2017
Tricadia Select	1,575,171	0.01	0.00	0.00	0.00	0.00	-7.11		-6.89	9/1/2017
Real Estate Composite	589,400,002	3.97	0.33	1.65	4.99	4.79	8.05	8.69	6.20	7/1/1984
NCREIF ODCE NOF 1 Quarter Lag			1.10	1.10	-0.41	0.34	3.99	5.27		
Value Added			-0.77	0.55	5.40	4.45	4.06	3.42		
Baring	70,114,116	0.47	-2.94	-3.71	9.61	16.43			24.33	1/1/2019
Barings Euro RE II	473,814	0.00	-30.29	-30.85					-29.27	12/1/2020
Divcowest IV	2,801,910	0.02	-1.27	-1.27	5.91	-3.01	8.86	16.40	17.16	3/1/2014
Fundamental Partners III	55,168,523	0.37	4.97	4.97	12.76	13.26	12.38		10.76	5/1/2017
Greenfield Acq VI	328,838	0.00	-25.58	-25.58	-30.98	-41.38	-41.21	-28.08	-13.23	12/1/2012
Greenfield Acq VII	13,487,649	0.09	15.12	15.12	17.94	12.51	14.47	14.04	13.33	7/1/2014
Harrison Street	83,830,549	0.56	0.00	0.00	2.49	4.15	6.20	7.70	7.97	5/1/2012
Lubert Adler VII	23,179,234	0.16	-4.18	-4.18	-13.98	-19.84	-1.80	1.80	-2.64	7/1/2014

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Lubert Adler VII B	30,220,343	0.20	2.79	2.79	7.06	8.65	10.33		6.82	7/1/2017
Patron Capital	22,605,412	0.15	-6.22	-8.16	3.96	-8.10	2.46		0.96	8/1/2016
Prologis Targeted US	154,335,029	1.04	0.00	5.93	7.49	9.97	14.46	15.26	14.73	10/1/2014
Rubenstein PF II	16,450,038	0.11	-3.29	-3.29	-5.65	-8.50	2.04	5.16	9.04	7/1/2013
Stockbridge Sm/Mkts	89,350,025	0.60	2.27	2.27	4.63	3.29	6.16	7.11	7.98	5/1/2014
Walton St RE VI	11,268,970	0.08	-0.78	-0.78	-0.12	-10.98	-2.47	-1.27	-15.02	5/1/2009
Walton St RE VII	8,485,550	0.06	0.95	0.95	-4.90	-16.73	-6.53	0.19	5.28	7/1/2013
Perimeter Park	7,300,002	0.05								
LIQUIDITY										
Core Fixed Composite	2,263,311,445	15.25	-0.15	-0.21	2.56	8.02			5.75	10/1/2018
Blmbg. Barc. U.S. Aggregate			-1.25	-3.38	-2.13	0.71			5.67	
Value Added			1.10	3.17	4.69	7.31			0.08	
Loomis Sayles Intmd	463,878,080	3.12	-0.56	-1.58	-0.07	3.71			5.37	2/1/2019
Blmbg. Barc. U.S. Intermediate Aggregate			-0.69	-1.61	-0.73	1.38			4.46	
Value Added			0.13	0.03	0.66	2.33			0.91	
Lord Abbett	1,635,977,889	11.02	0.05	0.52	3.79	10.07			3.93	10/1/2018
ICE BofAML 1-3 Year U.S. Corporate			-0.08	0.02	1.50	5.95			4.16	
Value Added			0.13	0.50	2.29	4.12			-0.23	
NISA	163,455,475	1.10	-0.94	-3.43	-1.76	2.01	5.05	3.43	4.22	2/1/2009
Blmbg. Barc. U.S. Aggregate			-1.25	-3.38	-2.13	0.71	4.65	3.10	3.96	
Value Added			0.31	-0.05	0.37	1.30	0.40	0.33	0.26	

Asset Allocation & Performance

KRS Pension Plan
 Periods Ended March 31, 2021

	Allocation		Performance (%) net of fees							
	Market Value \$	%	1 Month	QTD	FYTD	1 Year	3 Years	5 Years	Since Inception	Inception Date
Cash Composite	285,262,649	1.92	0.02	0.09	0.33	0.48	1.77	1.61	3.44	1/1/1988
90 Day US Treasury Bill			0.01	0.02	0.09	0.12	1.49	1.18	3.07	
Value Added			0.01	0.07	0.24	0.36	0.28	0.43	0.37	
OPPORTUNISTIC	375,449,617	2.53								
Arrowmark	375,449,617	2.53	1.03	3.61	16.99	24.64			8.45	6/1/2018
S&P/LSTA Leverage Loan Index			0.00	1.78	10.03	20.71			4.16	
Value Added			1.03	1.83	6.96	3.93			4.29	

Historical Hybrid Composition

Kentucky Retirement Systems Pension

Periods Ended March 31, 2021

Policy Index	Weight (%)
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Jul-2011

Russell 3000 Index	17.50
MSCI AC World ex USA IMI	17.50
KRS Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
Real Return (P)	10.00
Blmbg. Barc. U.S. Corp: High Yield	22.70
Blmbg. Barc. U.S. Universal Index	5.10
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.20

Oct-2017

Russell 3000 Index	17.50
MSCI AC World ex USA IMI (Net)	17.50
KRS Short-Term PE Index	10.00
HFRI FOF Div 1 Month Lag	10.00
Real Return (P)	10.00
Blmbg. Barc. U.S. Corp: High Yield	22.70
Blmbg. Barc. U.S. Universal Index	5.10
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	2.20

Policy Index	Weight (%)
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Jul-2018

Russell 3000 Index	18.25
MSCI AC World ex USA IMI (Net)	18.25
KRS Short-Term PE Index	9.50
HFRI FOF: Diversified Index	3.00
Real Return (P)	15.00
Blmbg. Barc. U.S. Corp: High Yield	15.00
Blmbg. Barc. U.S. Universal Index	14.75
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.25

Oct-2018

Russell 3000 Index	18.25
MSCI AC World ex USA IMI (Net)	18.25
KRS Short-Term PE Index	9.50
HFRI FOF: Diversified Index	3.00
Real Return (P)	15.00
Blmbg. Barc. U.S. Aggregate	14.88
Blmbg. Barc. U.S. Corp: High Yield	7.44
S&P/LSTA Leverage Loan Index	7.44
NCREIF ODCE NOF 1 Quarter Lag	5.00
FTSE 3 Month T-Bill	1.25

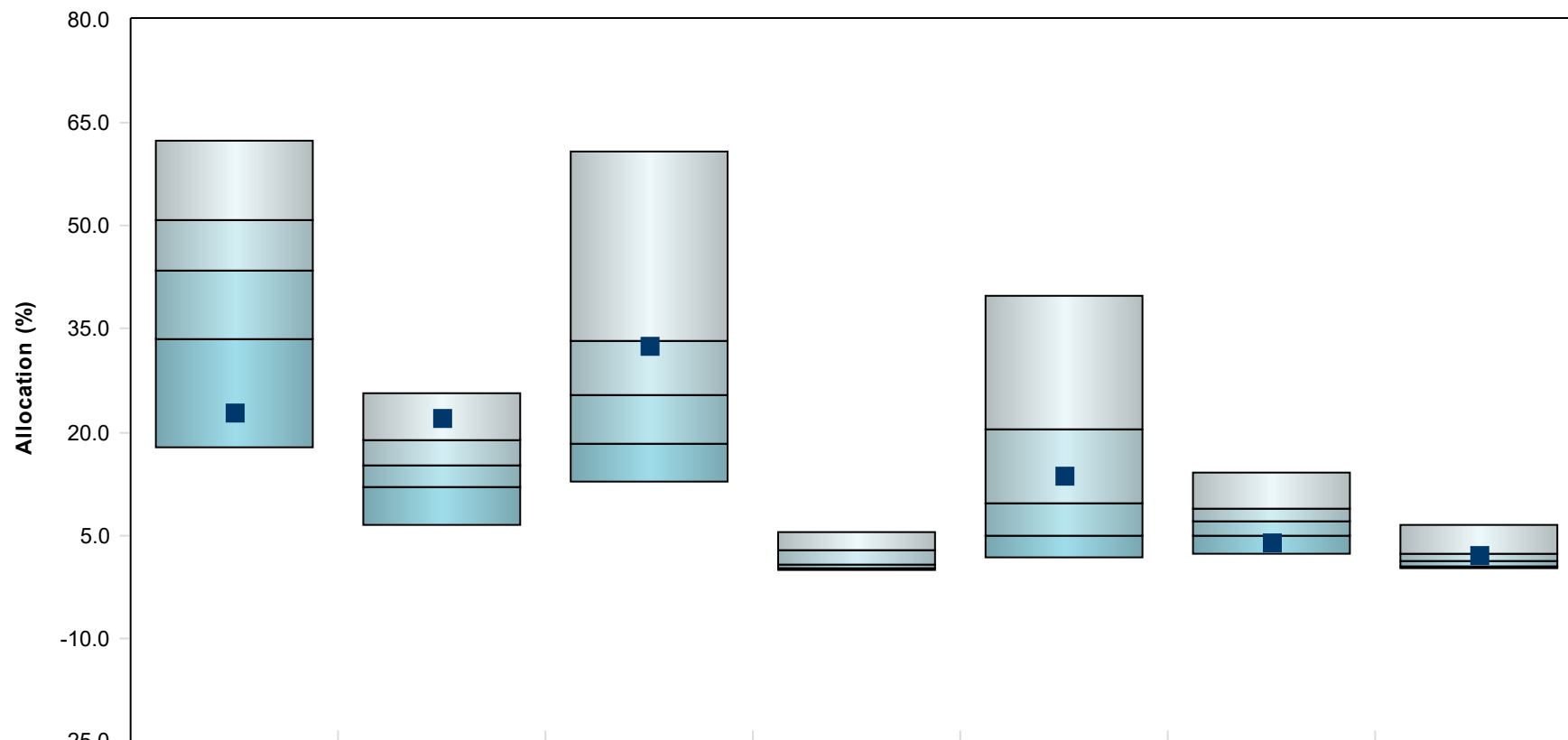
Jan-2021

Russell 3000 Index	20.60
MSCI AC World ex USA IMI (Net)	20.60
KRS Short-Term PE Index	9.40
Policy Index	15.00
Blmbg. Barc. U.S. Aggregate	12.20
FTSE 3 Month T-Bill	2.20
NCREIF ODCE NOF 1 Quarter Lag	10.00
Real Return (P)	10.00

Plan Sponsor TF Asset Allocation

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2021

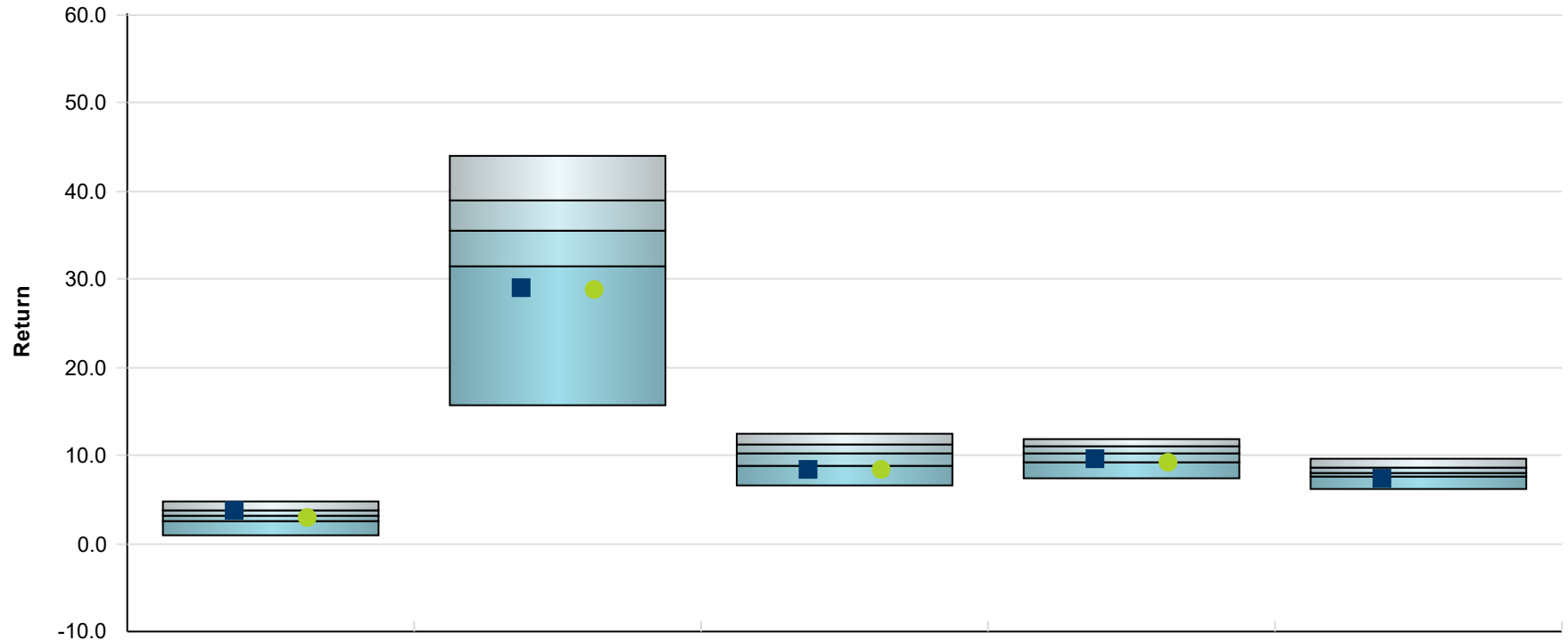


	US Equity	Global ex-US Equity	US Fixed	Global ex-US Fixed	Alternatives	Total Real Estate	Cash & Equivalents
■ KRS Pension Plan	22.69	21.90	32.40		13.68	3.97	1.92
5th Percentile	62.39	25.57	60.94	5.45	39.88	14.21	6.49
1st Quartile	50.97	18.92	33.22	2.95	20.38	8.83	2.25
Median	43.45	15.26	25.35	0.72	9.67	7.05	1.25
3rd Quartile	33.42	11.91	18.42	0.16	4.88	4.82	0.54
95th Percentile	17.69	6.40	12.71	0.02	1.86	2.18	0.08

Plan Sponsor Peer Group Analysis

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2021



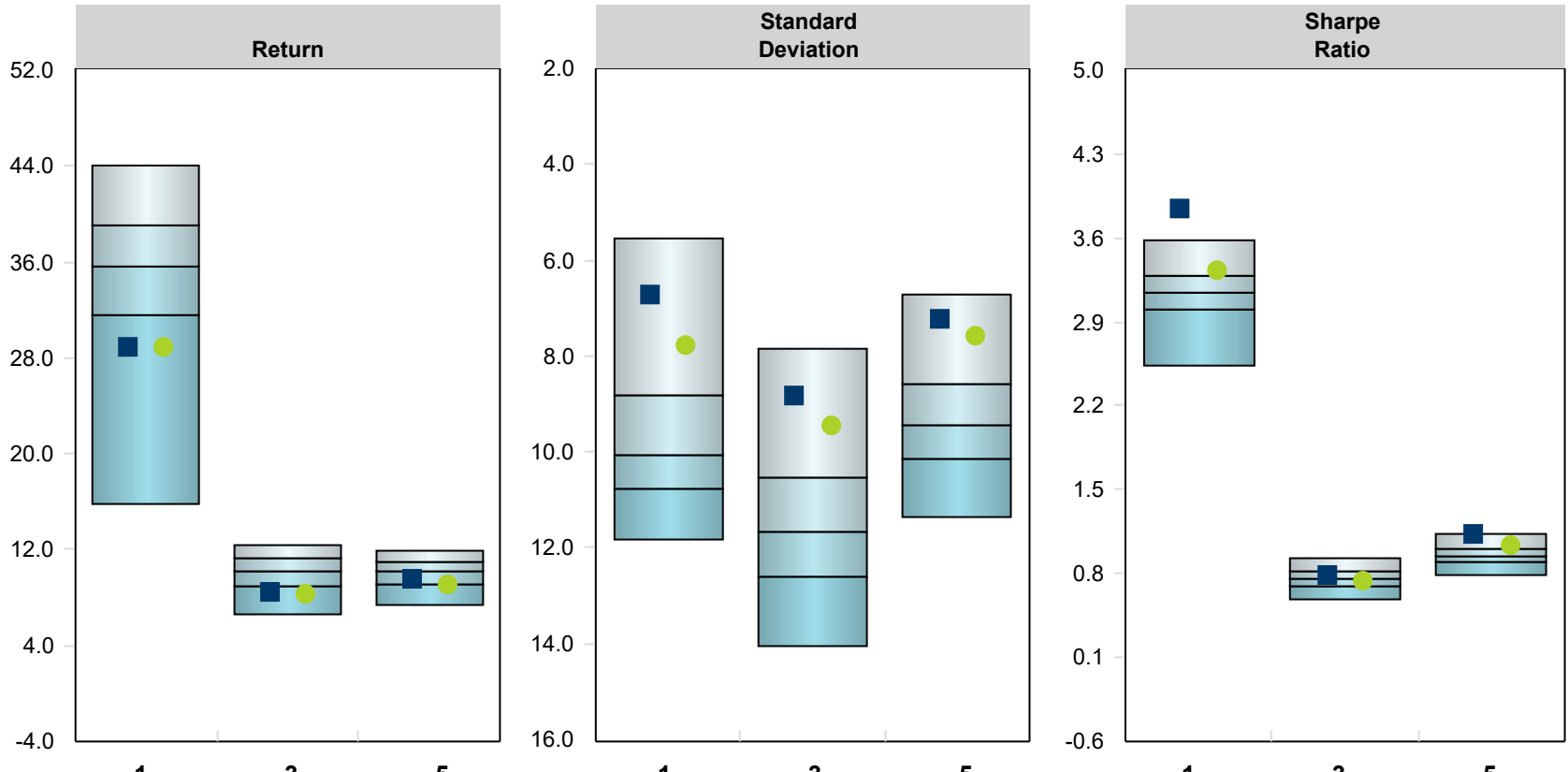
	QTD	1 Year	3 Years	5 Years	10 Years
■ KRS Pension Plan	3.79 (21)	28.99 (86)	8.51 (84)	9.61 (66)	7.47 (78)
● KRS IPS Index	2.98 (55)	28.93 (86)	8.37 (85)	9.17 (75)	
5th Percentile	4.81	44.04	12.43	11.92	9.55
1st Quartile	3.70	39.06	11.29	10.95	8.60
Median	3.10	35.60	10.16	10.16	7.97
3rd Quartile	2.49	31.52	8.89	9.16	7.50
95th Percentile	0.99	15.75	6.56	7.42	6.11
Population	417	416	398	377	310

Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Peer Group Analysis - Multi Statistics

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended March 31, 2021



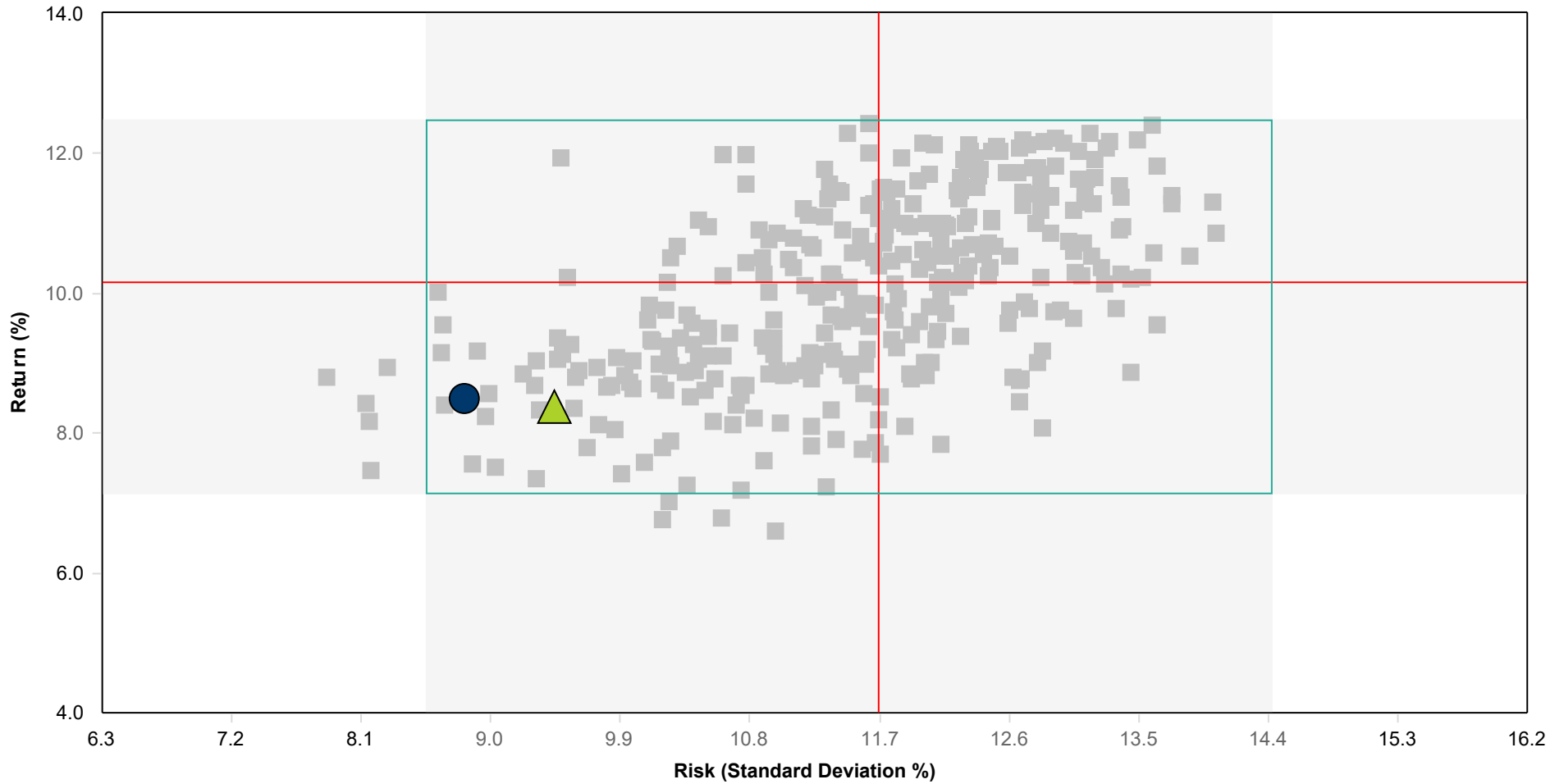
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ KRS Pension Plan	28.99 (86)	8.51 (84)	9.61 (66)	6.72 (6)	8.82 (7)	7.24 (7)	3.84 (2)	0.79 (37)	1.13 (6)
● KRS IPS Index	28.93 (86)	8.37 (85)	9.17 (75)	7.76 (11)	9.44 (10)	7.57 (8)	3.33 (19)	0.73 (62)	1.03 (16)
5th Percentile	44.04	12.43	11.92	5.55	7.85	6.73	3.58	0.93	1.13
1st Quartile	39.06	11.29	10.95	8.82	10.55	8.58	3.28	0.83	1.00
Median	35.60	10.16	10.16	10.07	11.69	9.45	3.14	0.76	0.95
3rd Quartile	31.52	8.89	9.16	10.77	12.61	10.16	3.01	0.69	0.89
95th Percentile	15.75	6.56	7.42	11.83	14.04	11.36	2.53	0.58	0.79

Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Plan Sponsor Scattergram

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended 3 Years Ending March 31, 2021

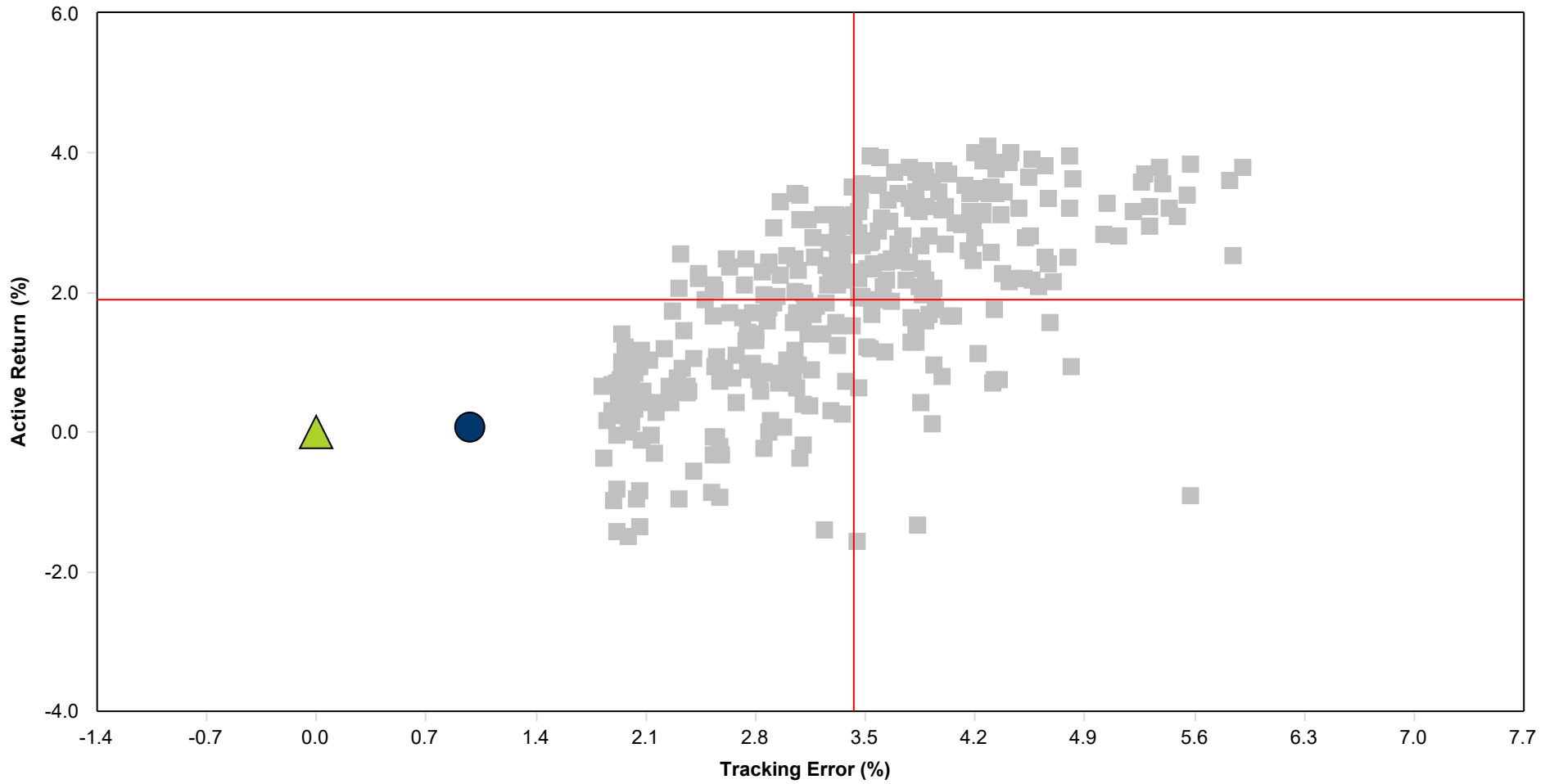


	Return	Standard Deviation
● KRS Pension Plan	8.51	8.82
▲ KRS IPS Index	8.37	9.44
— Median	10.16	11.69

Calculation based on monthly periodicity.

Plan Sponsor Scattergram

KRS Pension Plan vs All Public Plans-Total Fund
 Periods Ended 3 Years Ending March 31, 2021



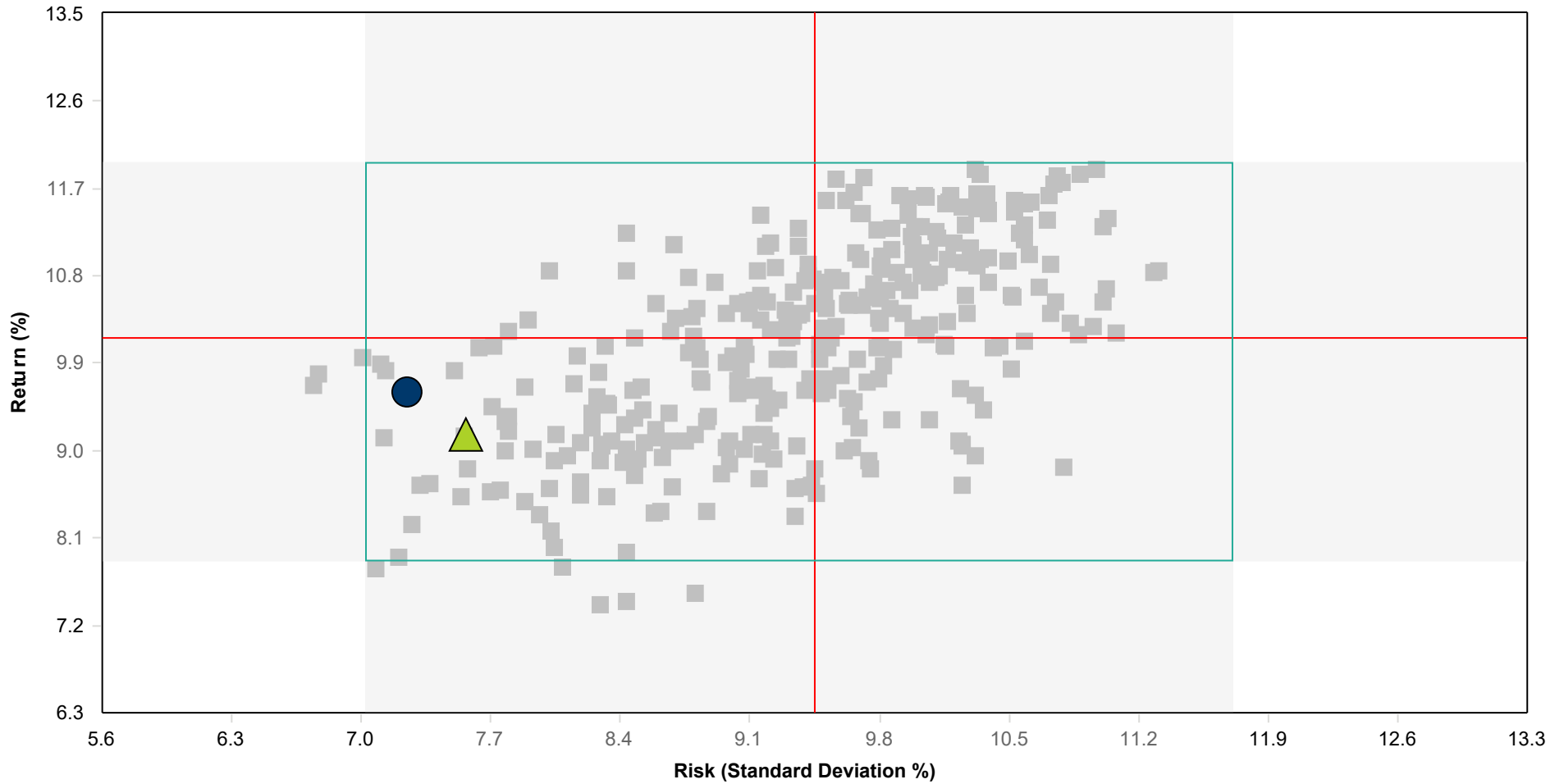
	Active Return	Tracking Error
● KRS Pension Plan	0.07	0.97
▲ KRS IPS Index	0.00	0.00
— Median	1.91	3.42

Calculation based on monthly periodicity.

Plan Sponsor Scattergram

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended 5 Years Ending March 31, 2021



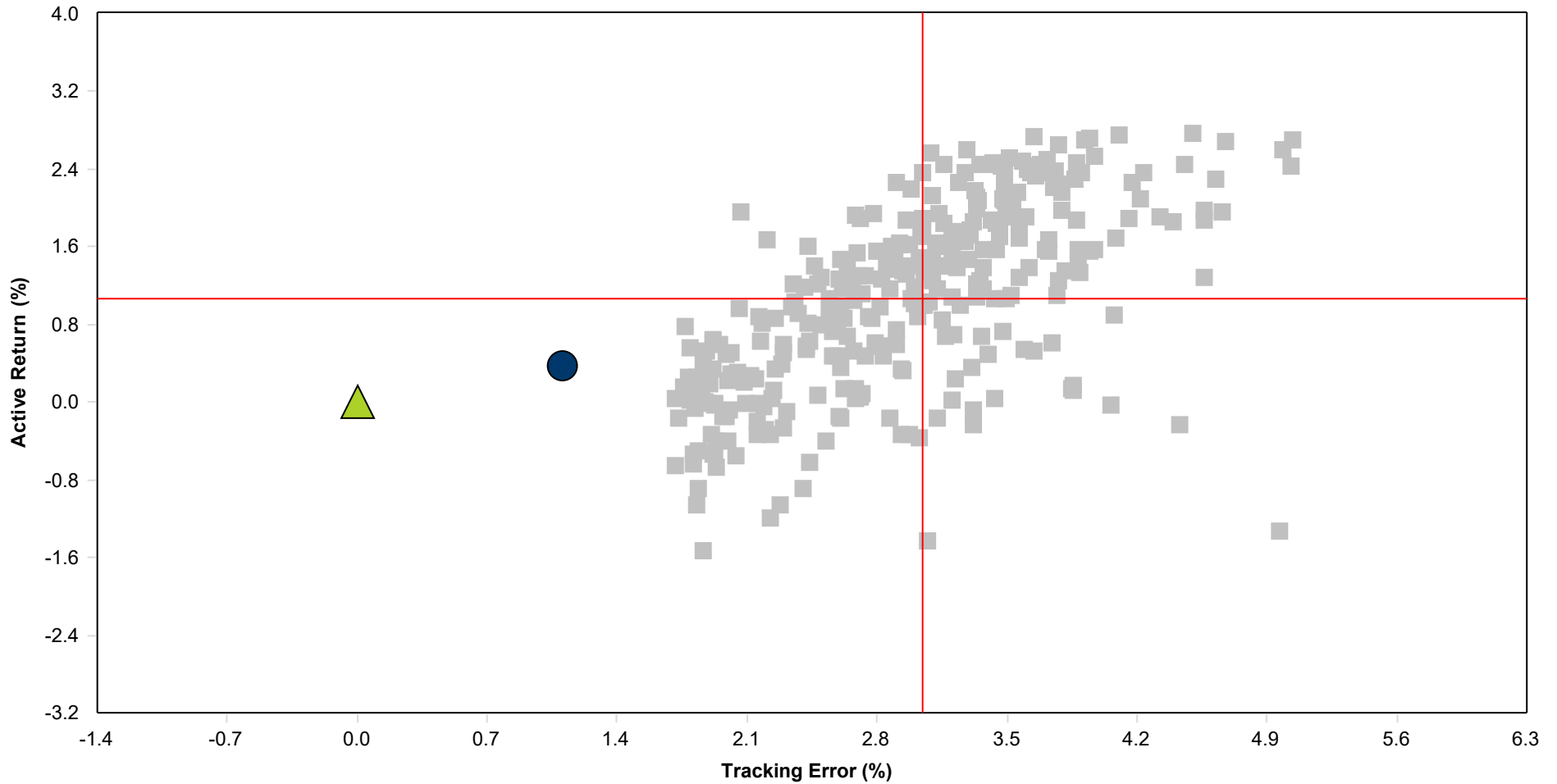
	Return	Standard Deviation
● KRS Pension Plan	9.61	7.24
▲ KRS IPS Index	9.17	7.57
— Median	10.16	9.45

Calculation based on monthly periodicity.

Plan Sponsor Scattergram

KRS Pension Plan vs All Public Plans-Total Fund

Periods Ended 5 Years Ending March 31, 2021



	Active Return	Tracking Error
● KRS Pension Plan	0.38	1.10
▲ KRS IPS Index	0.00	0.00
— Median	1.07	3.05

Calculation based on monthly periodicity.

Cash Flow Summary

KRS Pension Plan

1 Quarter Ending March 31, 2021

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
KRS Pension Plan	14,364,876,427	772,145,842	-836,530,505	-16,348,690	-14,693,945	576,005,558	14,845,454,688
GROWTH							
US Equity Composite	3,149,136,371		-14,439,832	-779,362	11,077	234,704,049	3,368,632,303
S&P 500 Index	1,940,463,444		-10,507,408		5,815	119,171,245	2,049,133,096
Scientific Beta	207,664,751		-1,497,683		-30,448	14,873,579	221,010,199
River Road FAV	236,192,250		-878,241	-169,352	-1,539	17,710,319	252,853,437
Westfield Capital	235,909,331		-445,554	-223,168	-543	7,054,513	242,294,579
Internal US Mid Cap	175,044,983		-177,658		-316	23,626,342	198,493,351
NTGI Structured	236,475,130		-861,645	-93,416	29,539	34,767,169	270,316,777
Next Century Growth	117,256,092		-71,640	-293,426	8,569	17,501,441	134,401,035
Abel Noser Transition	42,380					1	42,381
Invesco	49,486		-2			2	49,485
Transition Account	38,525		-1			-561	37,963
Non-US Equity Composite	3,146,519,534	2,119	-5,463,038	-2,503,581	5,264	111,958,085	3,250,518,383
BlackRock World Ex US	937,347,584	2,119		-79,095	-2,119	39,315,294	976,583,783
American Century	475,731,453		-202,040	-484,234	-718	2,837,203	477,881,664
Franklin Templeton	364,668,266		-137,987	-345,846	-1,064	-7,226,450	356,956,919
Lazard Asset Mgmt	512,477,261		-3,288,954	-327,250	10,356	21,536,882	530,408,295
LSV Asset Mgmt	396,895,612		-1,283,928	-632,178	-4,900	34,880,719	429,855,325
NTGI Int'l Small Cap	97,807,592			-28,706		5,176,442	102,955,329
JP Morgan Emerging Markets	191,596,826		-317,759	-347,429	2,290	-2,588,297	188,345,631
Pzena Emerging Markets	168,798,075		-232,371	-258,842	2,009	18,056,361	186,365,232
Pyramis Intl	4,036					1	4,038
Non-US Equity Transition	1,192,828				-589	-30,071	1,162,168
High Yield / Specialty Credit Composite	2,435,764,675	60,324,203	-20,713,151	-6,621,196	-2,658,322	80,393,286	2,546,489,496
Adams St SPC II A	37,648,762	3,335,768		-69,999	-690,330	2,542,023	42,766,224

Cash Flow Summary

KRS Pension Plan

1 Quarter Ending March 31, 2021

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Adams St SPC II B	37,823,706	3,335,768			-485,924	2,542,023	43,215,573
Blue Torch	20,807,390	46,666,667		-39,080	-187,922	710,821	67,957,876
BSP Coinvestment	25,926,170		-517,539			449,089	25,857,720
BSP Private Credit	85,033,740		-1,907,337	-251,123		4,796,352	87,671,632
Capital Springs	34,418,902	6,986,000	-405,481	-126,065	-431,418	1,533,270	41,975,209
Cerberus Capital Mgmt	128,942,700			-867,307	-811,071	6,274,449	133,538,771
Columbia	513,674,186		-7,715,642	-443,382	1,405	2,177,697	507,694,264
Manulife Asset Mgmt	357,575,590		-3,768,734	-218,324	-2,278	2,305,278	355,891,532
Marathon Bluegrass	434,445,312			-3,620,469		27,493,401	458,318,245
Shenkman Capital	201,366,013		-664,561	-199,095	-95	2,697,705	203,199,966
Waterfall	234,943,487		-2,215	-304,856	921	12,971,758	247,609,095
White Oak Yield Spectrum	161,858,757		-2,651,894	-408,199	-82,685	3,947,286	162,663,265
H/2 Credit Partner	79,367,198					9,678,671	89,045,869
Mesa West Core Lend	59,741,594		-1,526,828				58,214,766
Mesa West IV	22,154,107		-1,552,918	-73,298	31,075	273,462	20,832,428
Loomis	37,062		-1			1	37,062
Private Equity Composite	1,139,236,934	6,928,358	-59,190,077	-2,433,010	-6,514,863	76,974,599	1,155,001,941
DIVERSIFYING STRATEGIES							
Real Return Composite	847,105,839	1,612,760	-24,743,233	-959,777	-1,838,453	190,211,718	1,011,388,853
Putnam	555,518,941		-3,443,928	-477,210	-6,160	18,839,196	570,430,839
Tortoise Capital	99,105,578		-13,168	-109,170	4,329	18,025,701	117,013,270
Amerra AGRI Fund II	24,416,918		-104,871	-45,145	-145,187	733,155	24,854,870
Amerra AGRI Holdings	45,994,551	1,024,194		-237,209	-73,903	-871,153	45,836,480
BTG Pactual	22,241,454			-110,118	127,356	1,182,037	23,440,730
IFM Infrastructure	44,703,728	588,566	-584,965	-39,334	-48,948	983,593	45,602,641
Magnetar MTP EOF II	26,758,956		-3,711,616	-86,091	-1,151,860	4,194,106	26,003,495
Oberland Capital	7,743,973			-34,214	-102,556	614,433	8,221,636

Cash Flow Summary

KRS Pension Plan

1 Quarter Ending March 31, 2021

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Taurus Mine Finance	19,510,499		-5,257,486	356,006	-441,526	-437,937	13,729,557
TPF II	773,085						773,085
Blackstone Strat Opp	1,870,619		-115,025			-125,400	1,630,194
Governors Lane Onshore	253,314		-253,314				
Luxor Capital	1,093,904					-26,547	1,067,357
Myriad Opportunities	35,986,526		-11,207,950	-70,599		3,096,738	27,804,715
Pine River	104,781		-23,106	-123		1,863	83,415
PRISMA Capital	97,281,070					828,766	98,109,835
SRS Partners US	4,347,283			-106,570		648,303	4,889,016
Tricadia Select	1,575,171						1,575,171
PAAMCO	7,095		-25,339			18,245	
Internal TIPS	127,934		-4			4	127,934
Nuveen Real Asset	210,222		-2,461			-13,147	194,614
Real Estate Composite	584,165,093	4,705,699	-8,969,742	-930,283	-3,101,278	13,530,511	589,400,002
Baring	74,749,858	159	-1,919,198		-160	-2,716,543	70,114,116
Barings Euro RE II	685,188				-491,796	280,422	473,814
Divcowest IV	3,013,510		-175,588	-6,692		-29,320	2,801,910
Fundamental Partners III	55,298,740		-2,819,739	-133,878	-841,021	3,664,421	55,168,523
Greenfield Acq VI	441,896			-1,433	28,263	-139,888	328,838
Greenfield Acq VII	12,224,626		-508,829	-97,991	-406,906	2,276,749	13,487,649
Harrison Street	84,545,215		-714,666				83,830,549
Lubert Adler VII	24,189,419			-66,737	-23,828	-919,619	23,179,234
Lubert Adler VII B	29,504,247	868,750	-953,313	-67,640	-153,391	1,021,689	30,220,343
Patron Capital	20,922,968	3,422,810			-156,134	-1,584,232	22,605,412
Prologis Targeted US	146,837,549		-1,150,358	-226,583	-1,056,306	9,930,727	154,335,029
Rubenstein PF II	16,595,377	413,981		-54,467		-504,852	16,450,038
Stockbridge Sm/Mkts	88,093,060		-727,730	-185,594		2,170,289	89,350,025
Walton St RE VI	11,357,123			-27,611		-60,542	11,268,970

Cash Flow Summary

KRS Pension Plan

1 Quarter Ending March 31, 2021

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Walton St RE VII	8,406,316		-321	-61,656		141,211	8,485,550
Perimeter Park	7,300,002						7,300,002
LIQUIDITY							
Core Fixed Composite	2,282,848,158		-14,771,682	-526,789	-99,939	-4,138,303	2,263,311,445
Loomis Sayles Intmd	473,886,937		-2,555,549	8,989	-81,263	-7,381,033	463,878,080
Lord Abbett	1,638,663,048		-11,191,584	-473,283	-18,801	8,998,510	1,635,977,889
NISA	170,298,173		-1,024,548	-62,495	126	-5,755,781	163,455,475
Cash Composite	266,674,138	690,886,543	-671,927,782		-497,431	127,182	285,262,649
OPPORTUNISTIC		7,686,160	-16,311,968	-1,594,691		385,670,116	375,449,617
Arrowmark	370,905,924	7,686,160	-16,311,968	-1,594,691		14,764,193	375,449,617



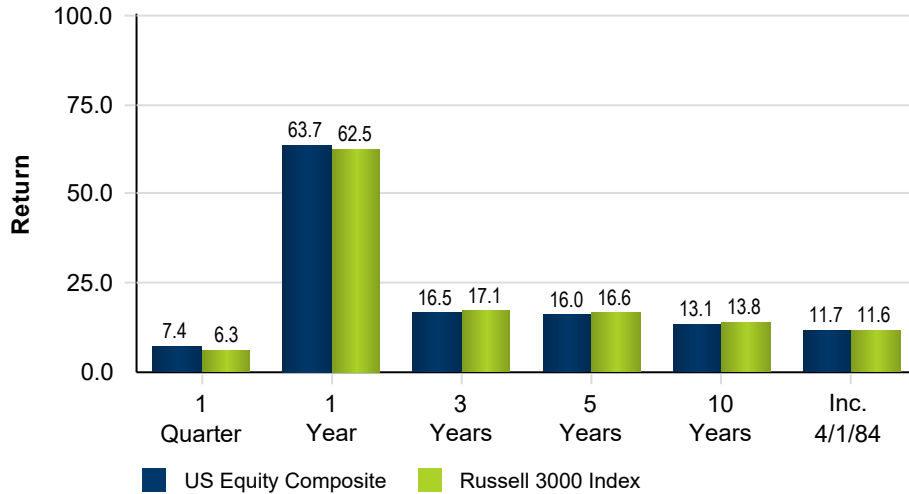
US Equity Composite

Composite Performance Summary

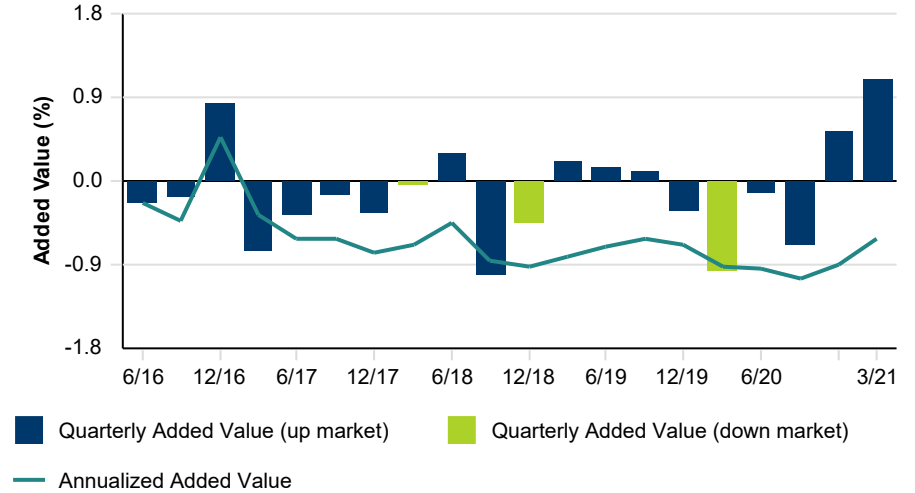
US Equity Composite

Periods Ended March 31, 2021

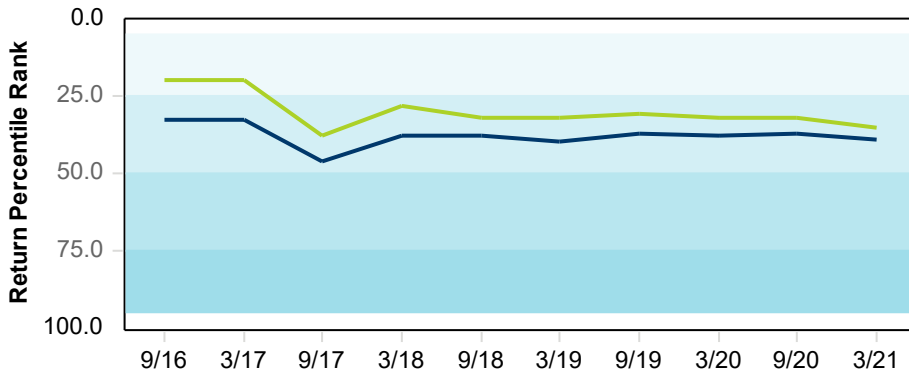
Comparative Performance



Added Value History

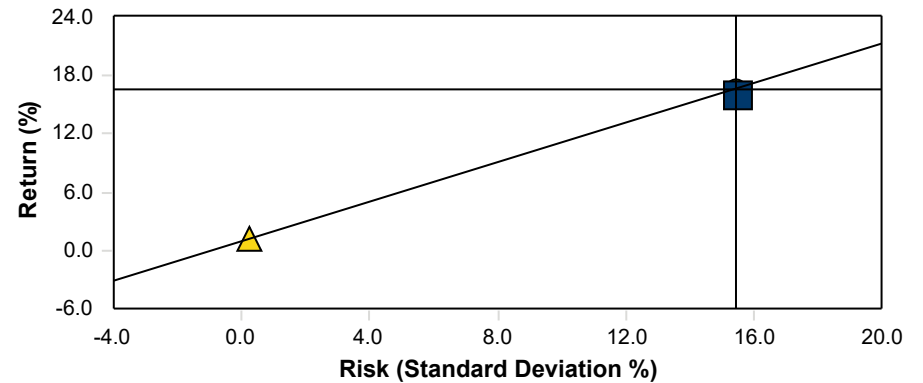


Rolling Percentile Rank: IM U.S. Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
US Equity Composite	10	0 (0%)	10 (100%)	0 (0%)	0 (0%)
Benchmark	10	2 (20%)	8 (80%)	0 (0%)	0 (0%)

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



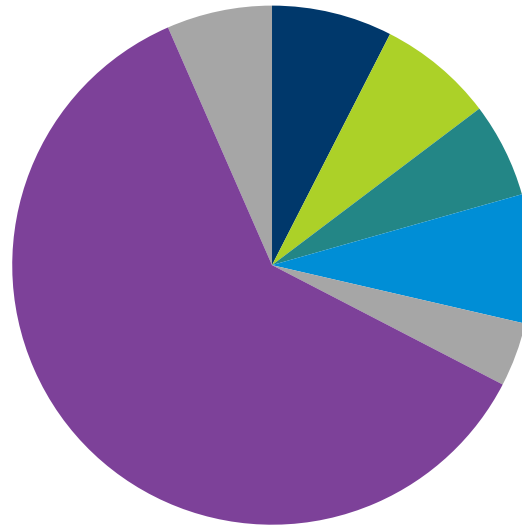
- US Equity Composite
- Russell 3000 Index
- 90 Day US Treasury Bill

Asset Allocation By Manager

US Equity Composite

Periods Ended March 31, 2021

Mar-2021 : 3,368,632,303

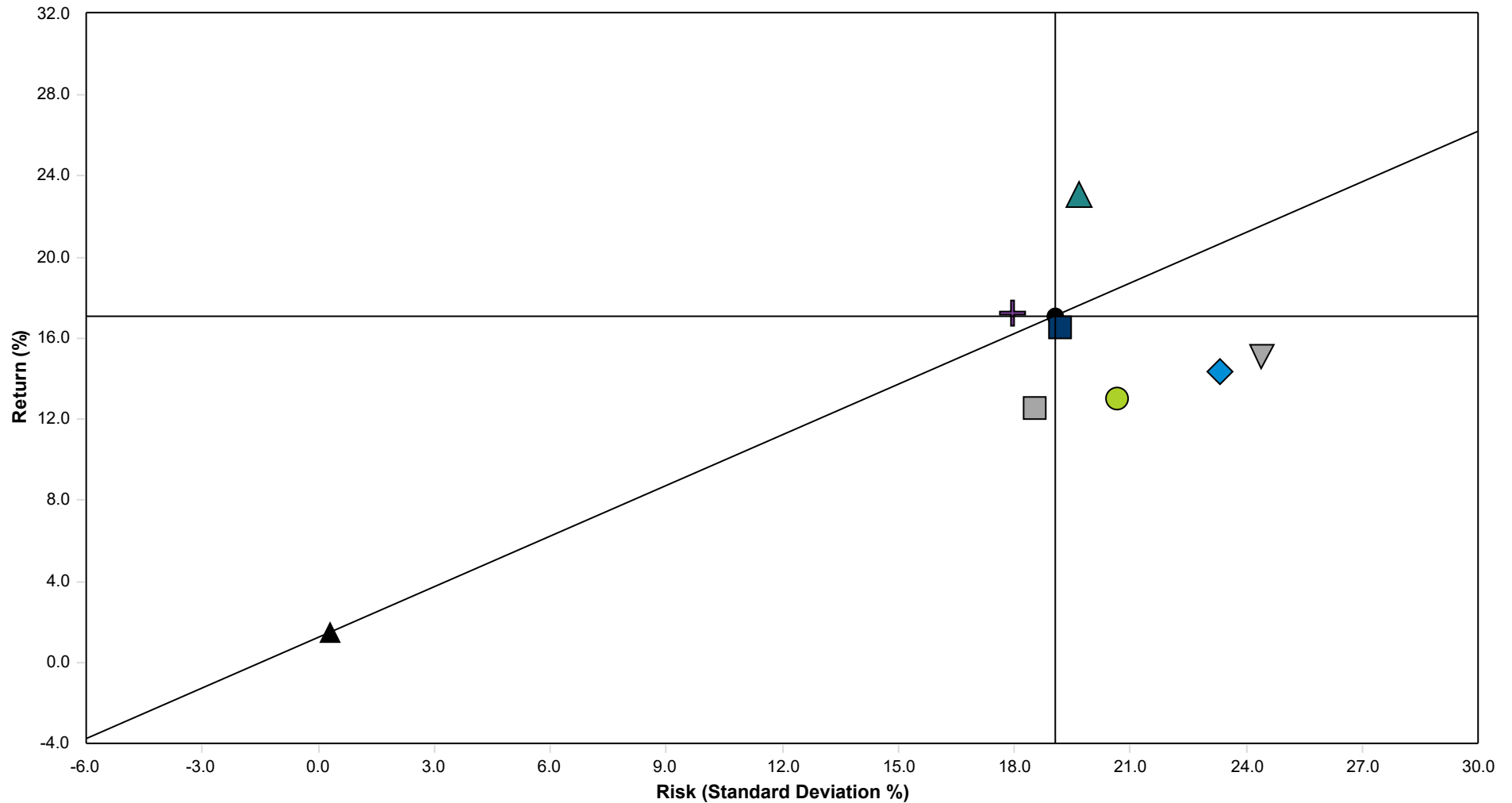


	Market Value \$	Allocation (%)
■ River Road FAV	252,853,437	7.5
■ Westfield Capital	242,294,579	7.2
■ Internal US Mid Cap	198,493,351	5.9
■ NTGI Structured	270,316,777	8.0
■ Next Century Growth	134,401,035	4.0
■ Invesco	49,485	0.0
■ Transition Account	37,963	0.0
■ S&P 500 Index	2,049,133,096	60.8
■ Scientific Beta	221,010,199	6.6
■ Abel Noser Transition	42,381	0.0

Risk vs. Return

US Equity Composite

Periods Ended 3 Years Ending March 31, 2021



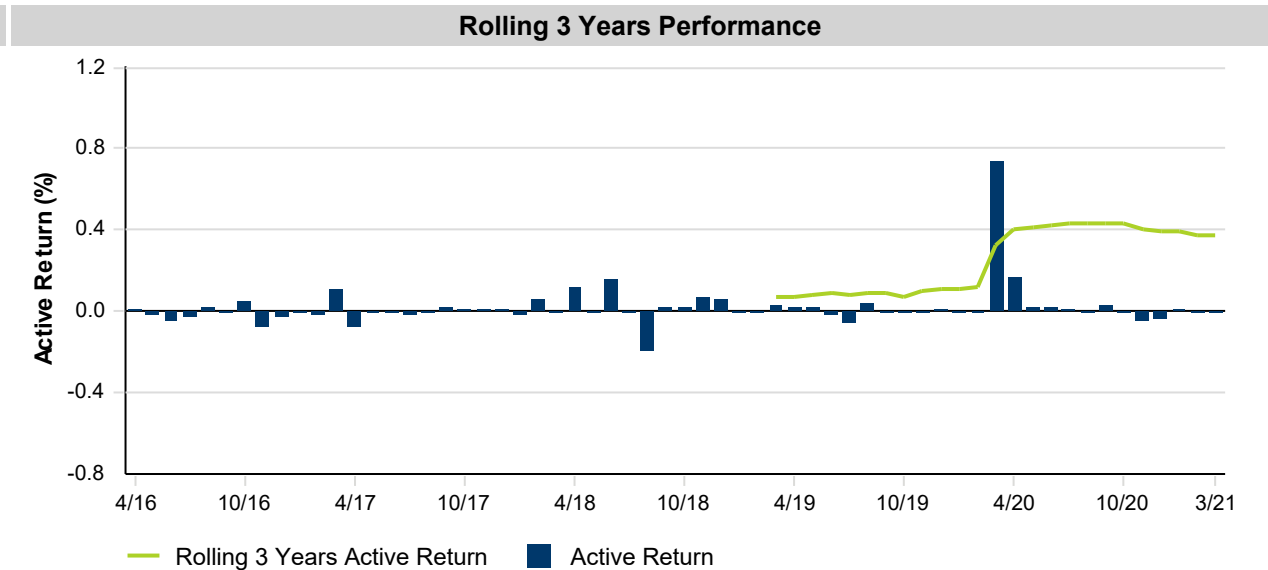
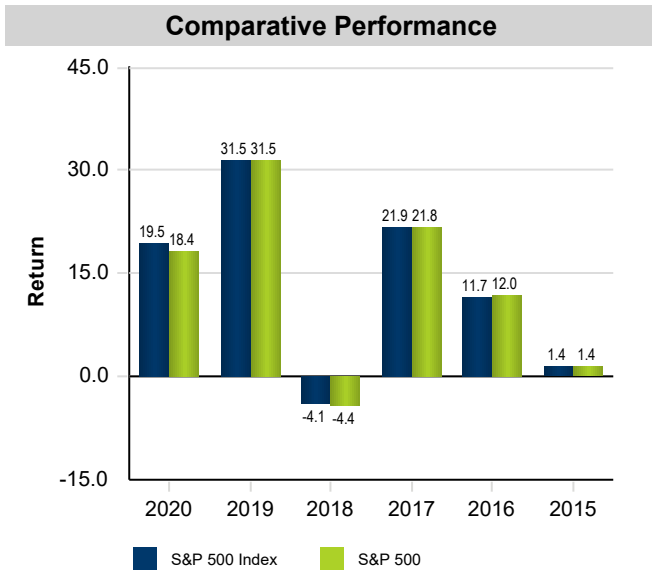
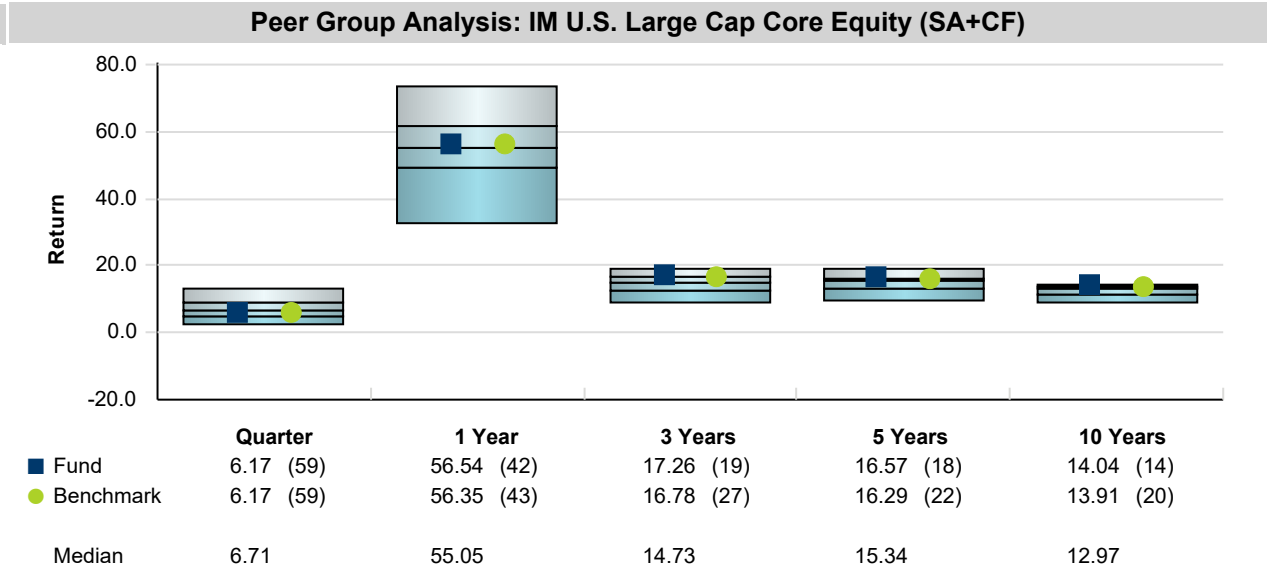
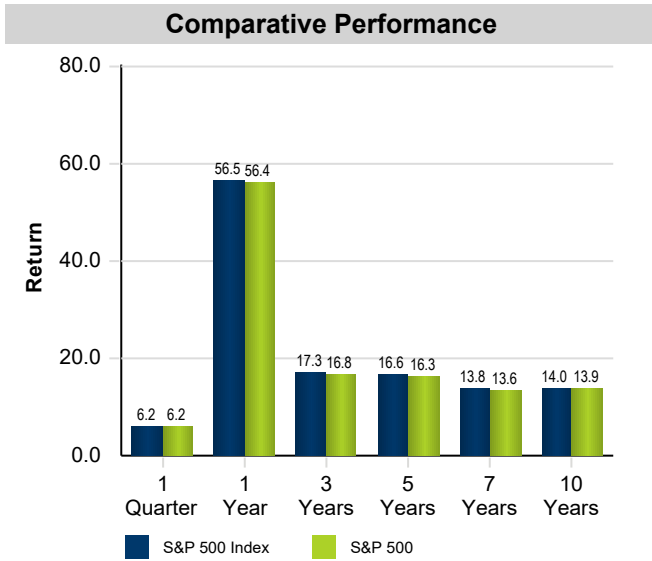
- US Equity Composite
- River Road FAV
- ▲ Westfield Capital
- ◆ Internal US Mid Cap
- ▼ NTGI Structured
- Next Century Growth
- + S&P 500 Index
- Scientific Beta
- Russell 3000 Index
- ▲ 90 Day US Treasury Bill

Calculation based on monthly periodicity.

Performance Summary

S&P 500 Index

Periods Ended March 31, 2021



Summary Statistics

S&P 500 Index

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>S&P 500 Index</u>	<u>S&P 500</u>
Maximum Return	12.99	12.82
Minimum Return	-3.77	-3.80
Return	56.54	56.35
Cumulative Return	56.54	56.35
Active Return	0.13	0.00
Excess Return	46.87	46.74

Risk Summary Statistics

	<u>S&P 500 Index</u>	<u>S&P 500</u>
Upside Risk	6.05	6.03
Downside Risk	4.73	4.75
Beta	1.00	1.00

Risk/Return Summary Statistics

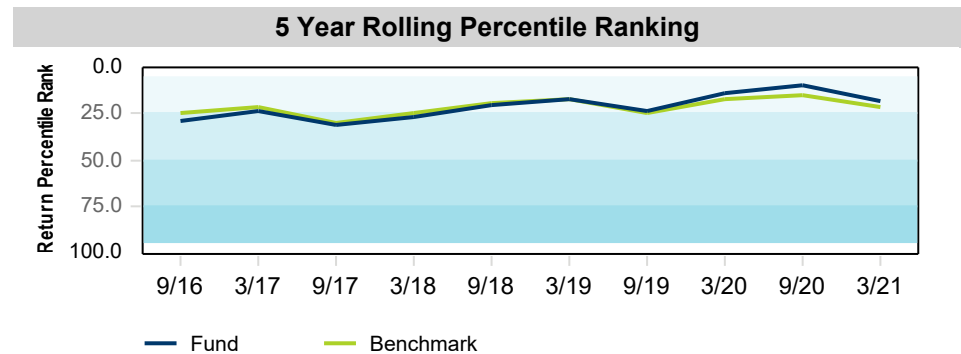
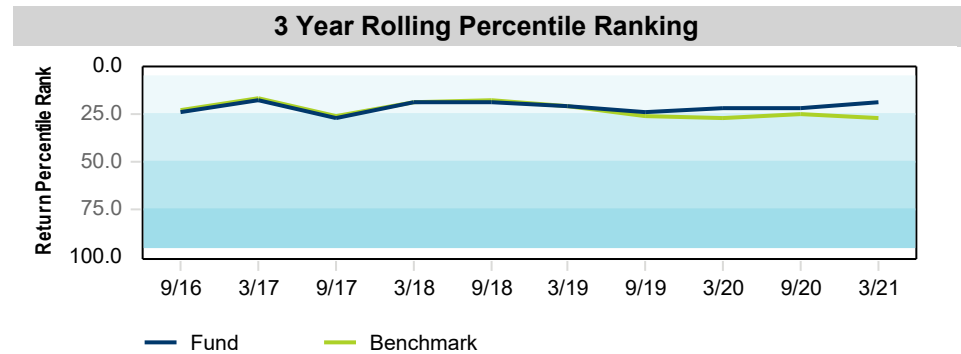
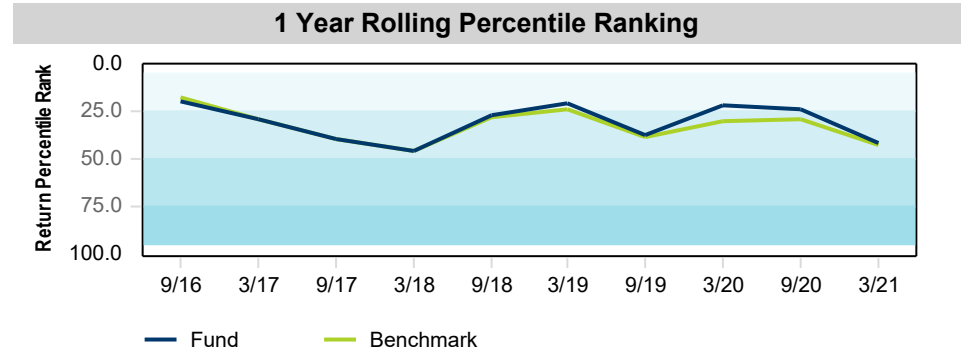
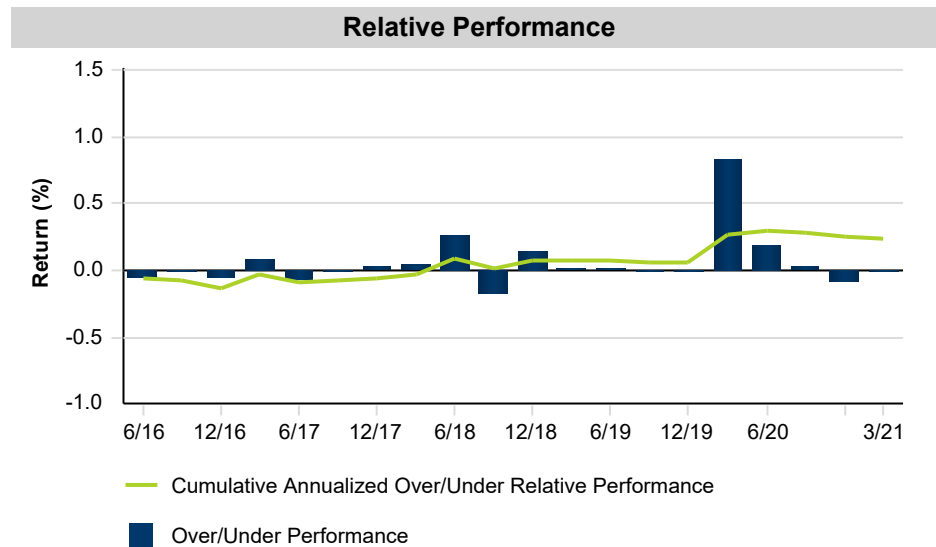
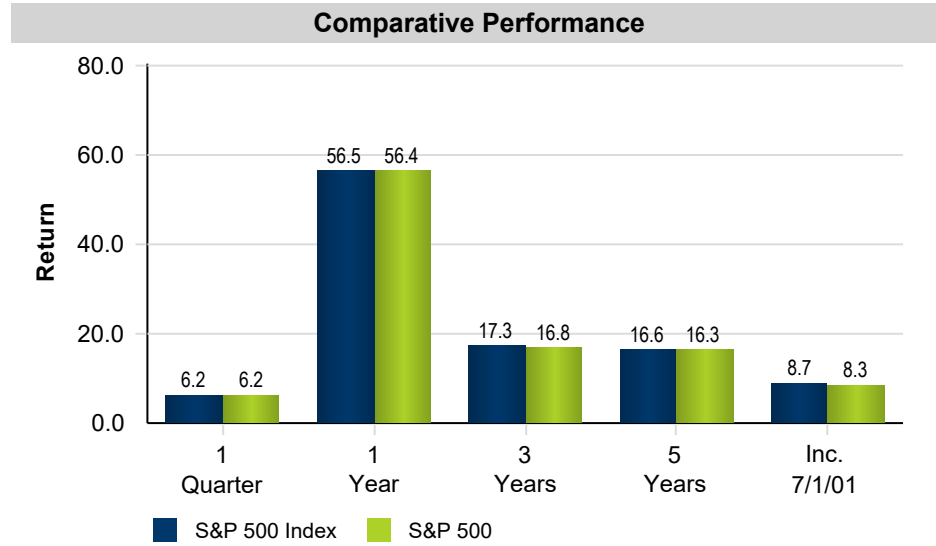
	<u>S&P 500 Index</u>	<u>S&P 500</u>
Standard Deviation	16.65	16.59
Alpha	-0.03	0.00
Active Return/Risk	0.01	0.00
Tracking Error	0.18	0.00
Information Ratio	0.72	
Sharpe Ratio	2.81	2.82

Correlation Statistics

	<u>S&P 500 Index</u>	<u>S&P 500</u>
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

Manager Summary

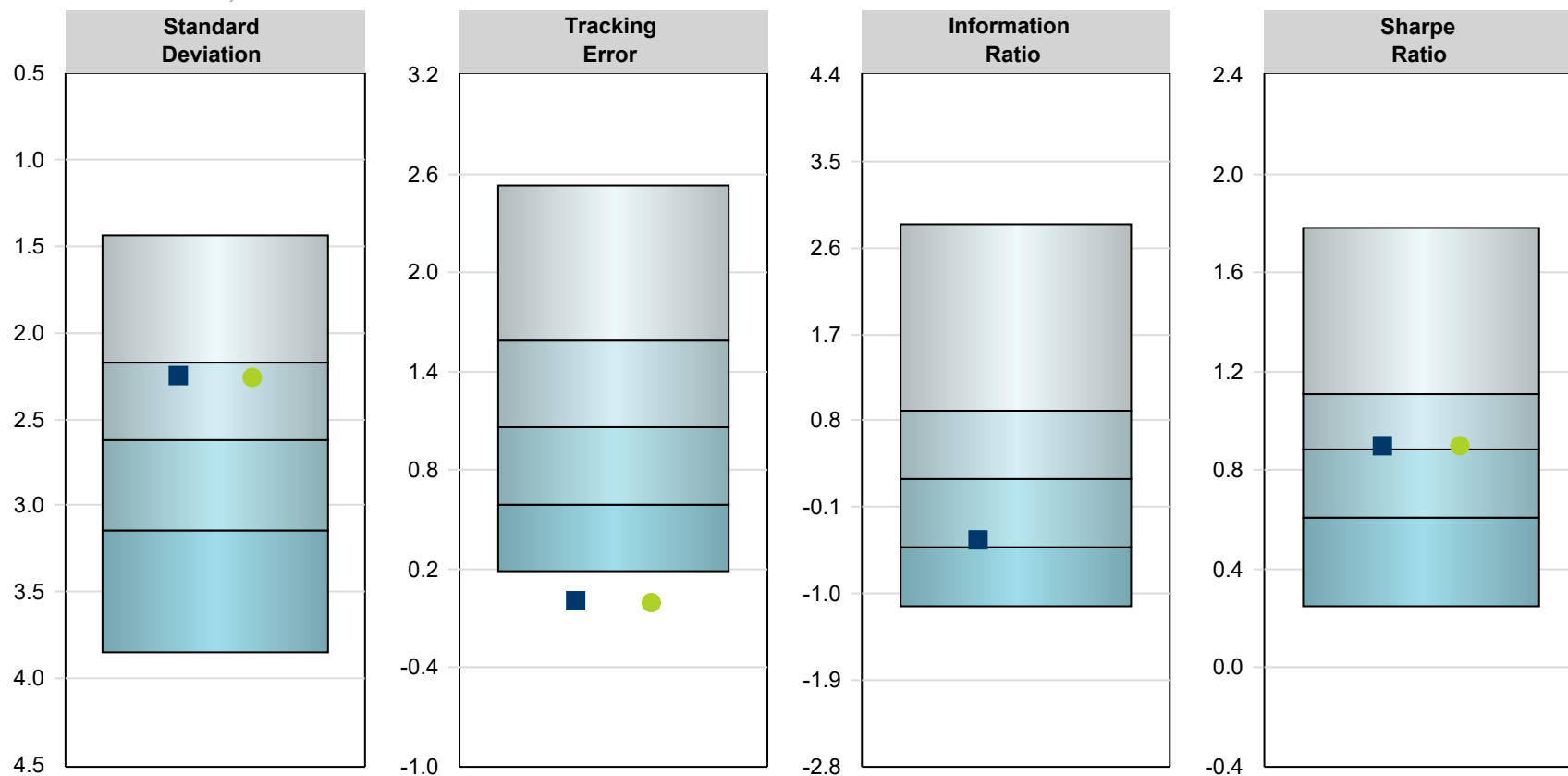
S&P 500 Index vs IM U.S. Large Cap Core Equity (SA+CF)
 Periods Ended March 31, 2021



Peer Group Analysis - Multi Statistics

S&P 500 Index

Periods Ended March 31, 2021



	Standard Deviation		Tracking Error		Information Ratio		Sharpe Ratio	
	QTD		QTD		QTD		QTD	
■ S&P 500 Index	2.25	(31)	0.01	(100)	-0.44	(72)	0.90	(46)
● S&P 500	2.26	(31)	0.00	(100)			0.90	(47)
5th Percentile	1.44		2.52		2.84		1.78	
1st Quartile	2.18		1.59		0.91		1.11	
Median	2.62		1.06		0.20		0.89	
3rd Quartile	3.15		0.59		-0.52		0.61	
95th Percentile	3.84		0.18		-1.12		0.25	

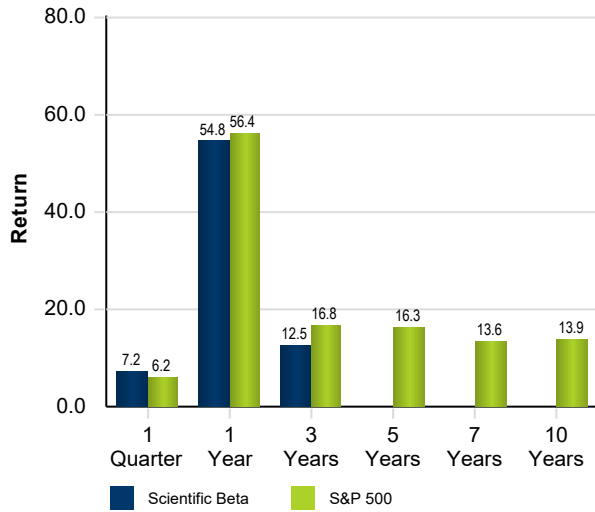
Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

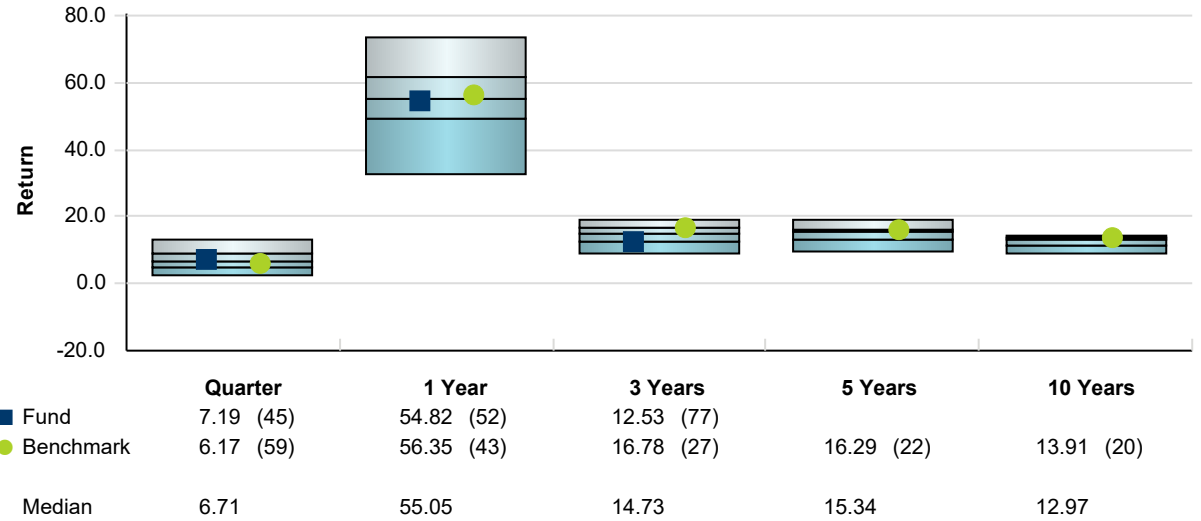
Scientific Beta

Periods Ended March 31, 2021

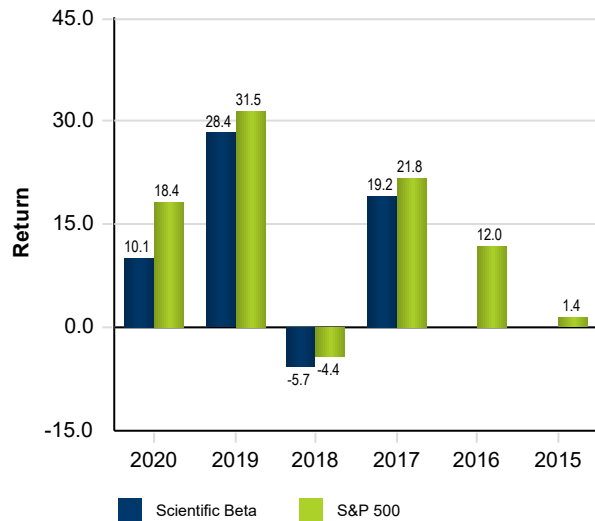
Comparative Performance



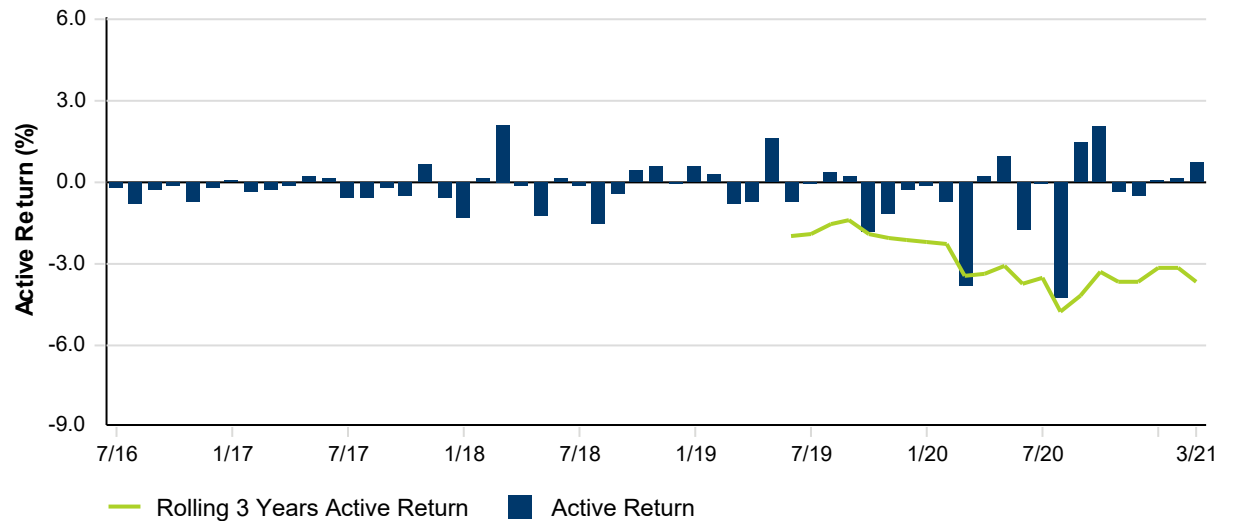
Peer Group Analysis: IM U.S. Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Scientific Beta

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Scientific Beta</u>	<u>S&P 500</u>
Maximum Return	13.03	12.82
Minimum Return	-2.33	-3.80
Return	54.82	56.35
Cumulative Return	54.82	56.35
Active Return	-1.24	0.00
Excess Return	45.50	46.74

Risk Summary Statistics

	<u>Scientific Beta</u>	<u>S&P 500</u>
Upside Risk	5.77	6.03
Downside Risk	2.57	4.75
Beta	0.87	1.00

Risk/Return Summary Statistics

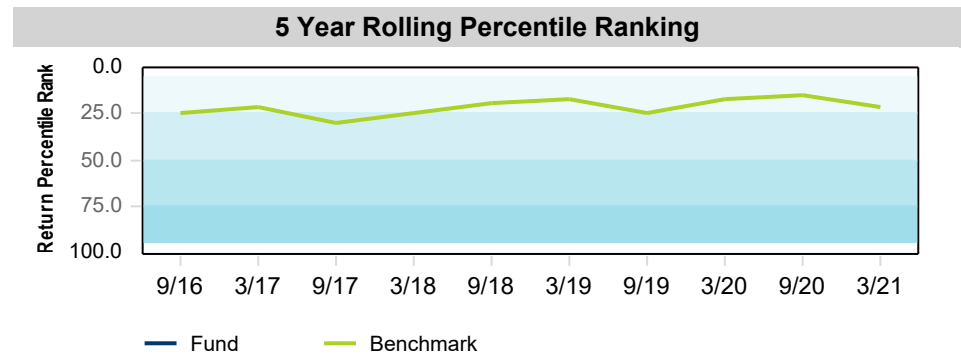
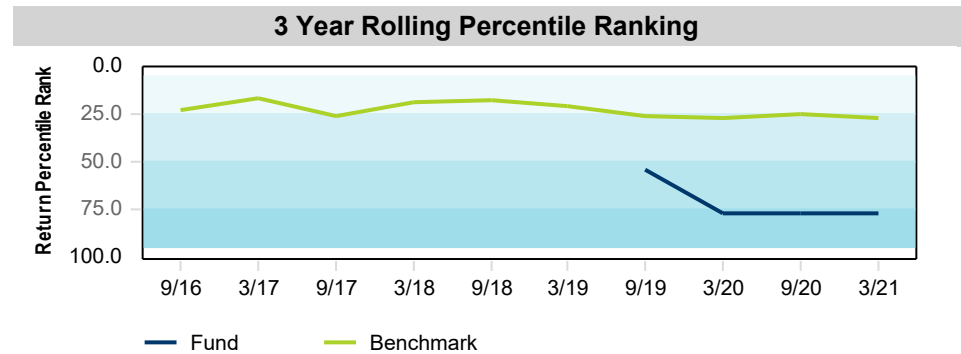
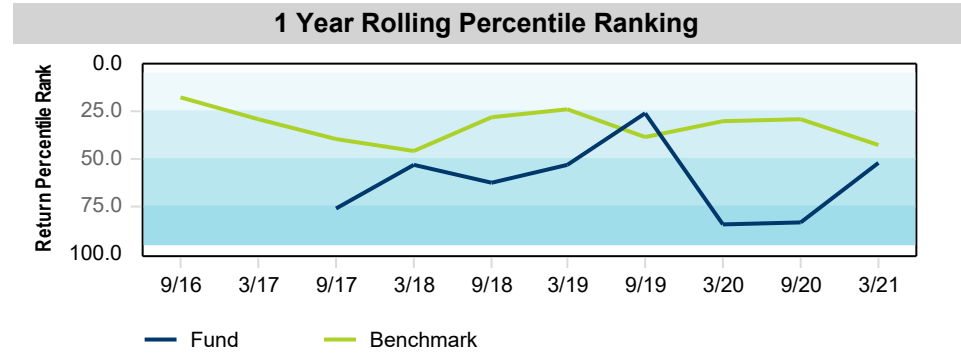
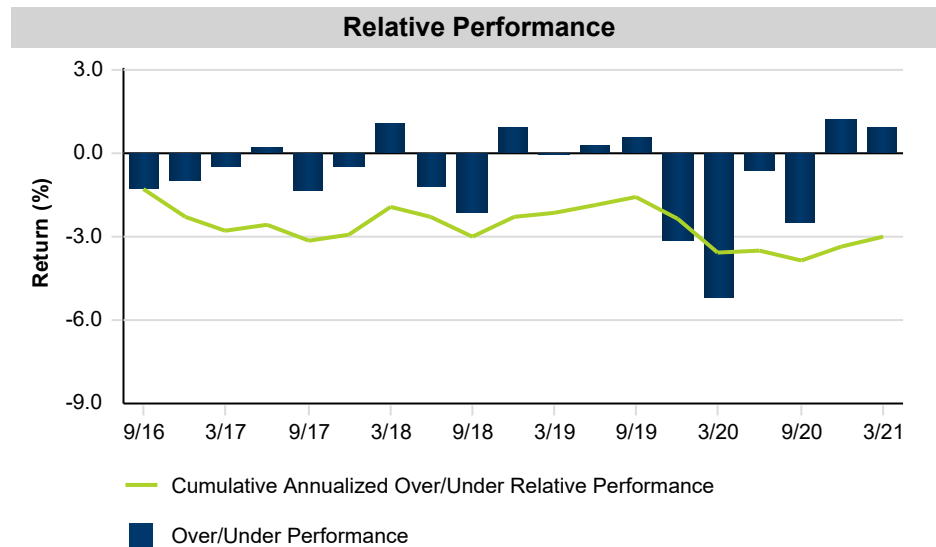
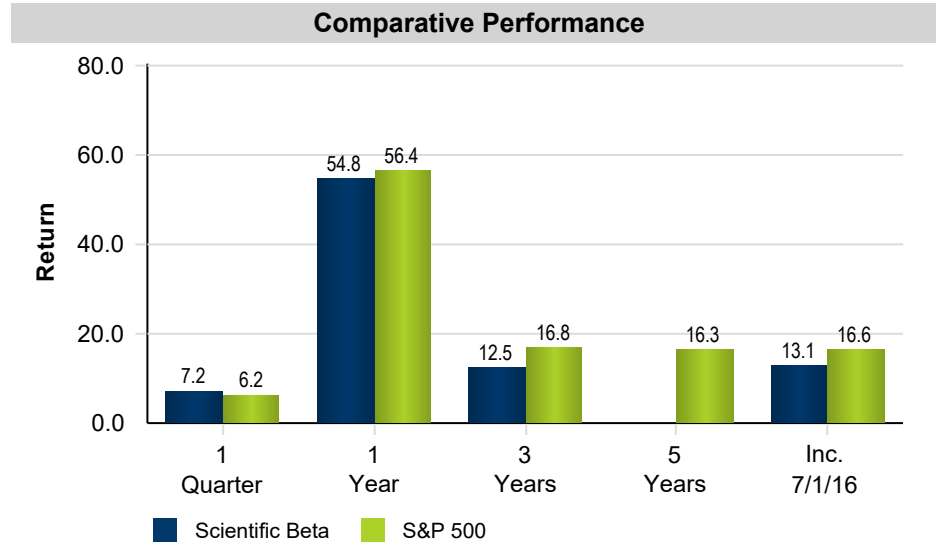
	<u>Scientific Beta</u>	<u>S&P 500</u>
Standard Deviation	15.28	16.59
Alpha	4.94	0.00
Active Return/Risk	-0.08	0.00
Tracking Error	5.41	0.00
Information Ratio	-0.23	
Sharpe Ratio	2.98	2.82

Correlation Statistics

	<u>Scientific Beta</u>	<u>S&P 500</u>
R-Squared	0.89	1.00
Actual Correlation	0.95	1.00

Manager Summary

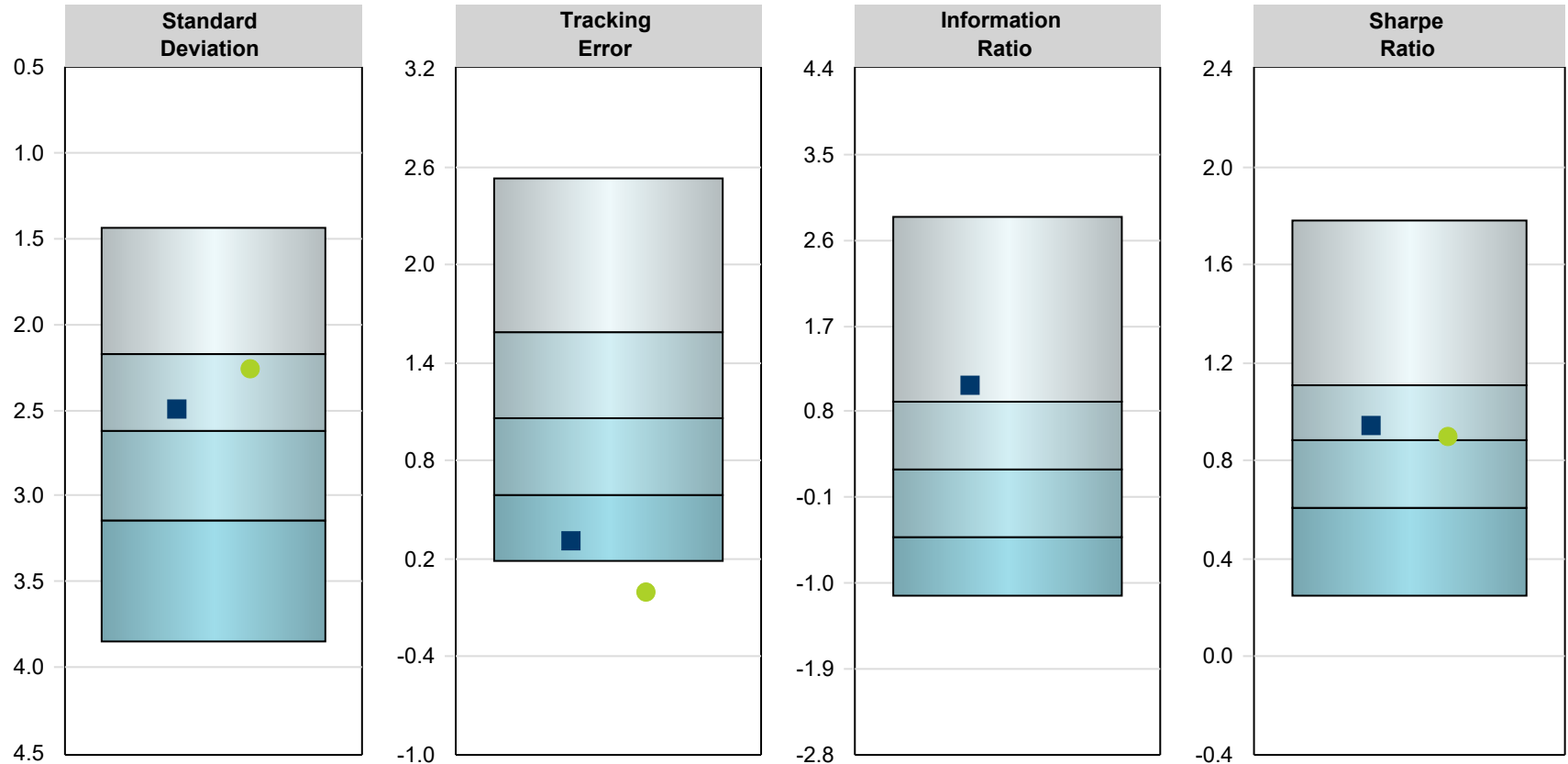
Scientific Beta vs IM U.S. Large Cap Core Equity (SA+CF)
 Periods Ended March 31, 2021



Peer Group Analysis - Multi Statistics

Scientific Beta

Periods Ended March 31, 2021



	Standard Deviation		Tracking Error		Information Ratio		Sharpe Ratio	
	Scientific Beta	S&P 500	Scientific Beta	S&P 500	Scientific Beta	S&P 500	Scientific Beta	S&P 500
QTD	2.50 (43)	2.26 (31)	0.31 (90)	0.00 (100)	1.07 (24)	0.95 (42)	0.95 (42)	0.90 (47)
5th Percentile	1.44		2.52		2.84		1.78	
1st Quartile	2.18		1.59		0.91		1.11	
Median	2.62		1.06		0.20		0.89	
3rd Quartile	3.15		0.59		-0.52		0.61	
95th Percentile	3.84		0.18		-1.12		0.25	

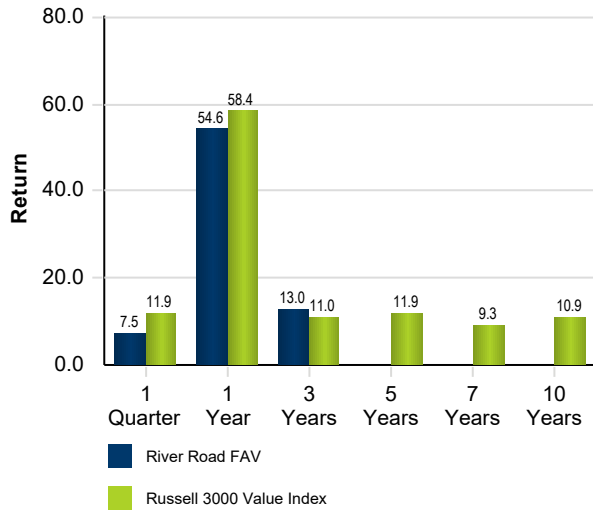
Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

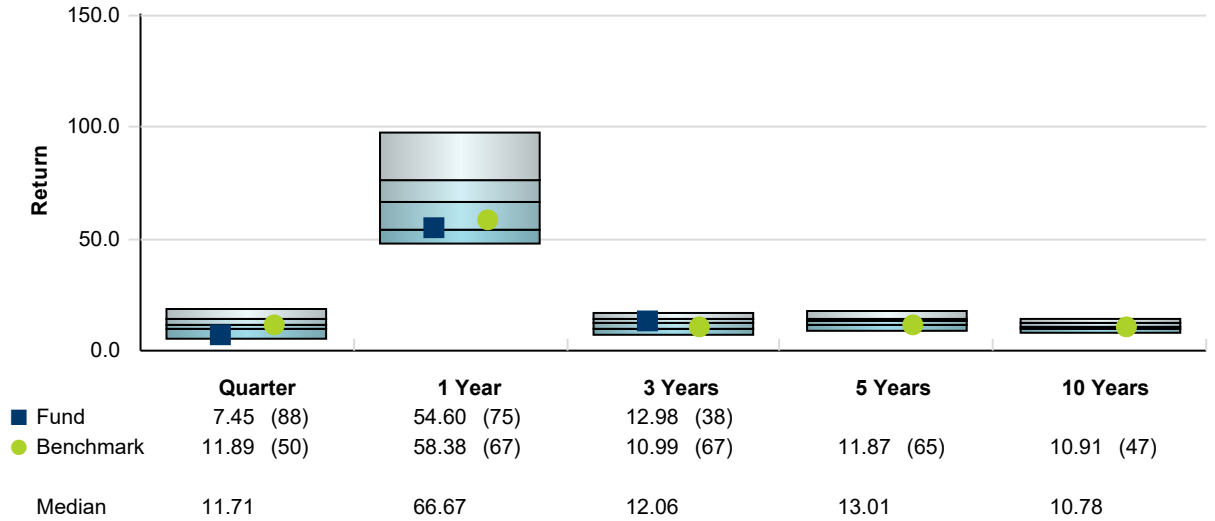
River Road FAV

Periods Ended March 31, 2021

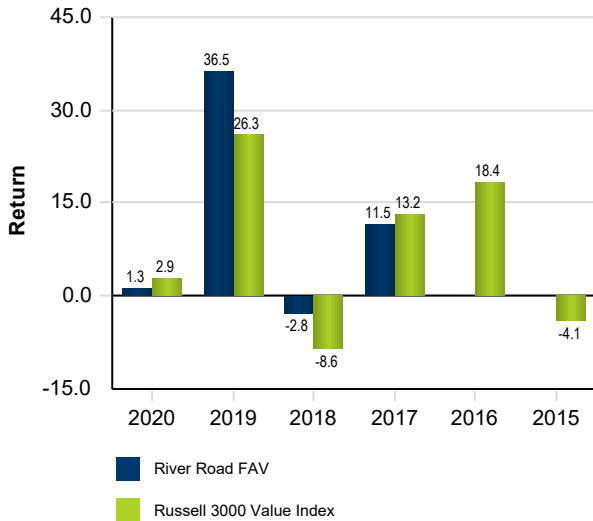
Comparative Performance



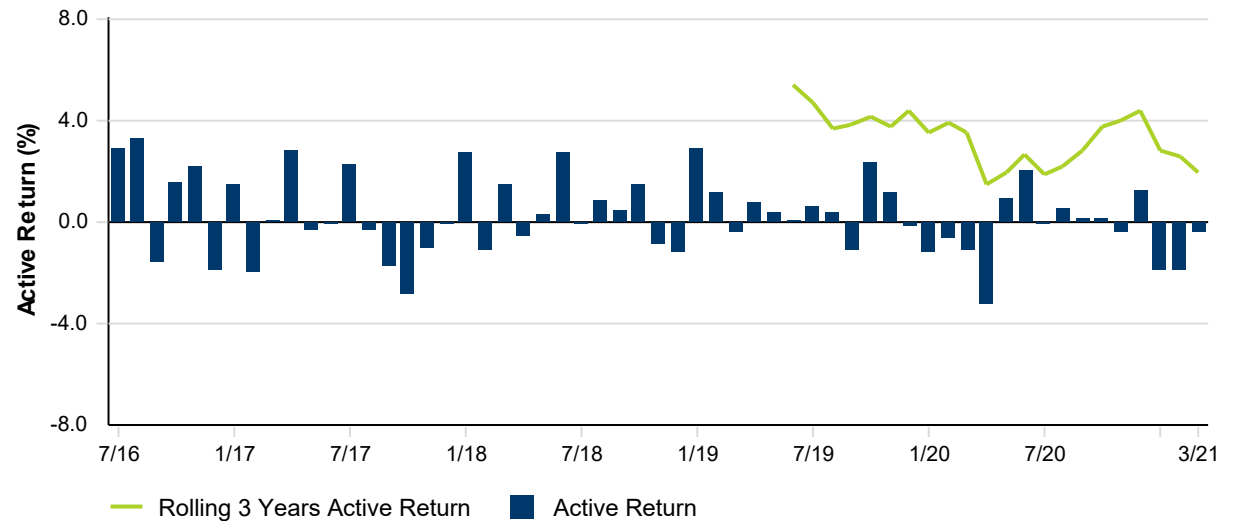
Peer Group Analysis: IM U.S. All Cap Value Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

River Road FAV

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>River Road FAV</u>	<u>Russell 3000 Value Index</u>
Maximum Return	13.37	13.80
Minimum Return	-2.41	-2.58
Return	54.60	58.38
Cumulative Return	54.60	58.38
Active Return	-2.72	0.00
Excess Return	45.30	48.02

Risk Summary Statistics

	<u>River Road FAV</u>	<u>Russell 3000 Value Index</u>
Upside Risk	5.63	6.14
Downside Risk	3.51	2.87
Beta	0.87	1.00

Risk/Return Summary Statistics

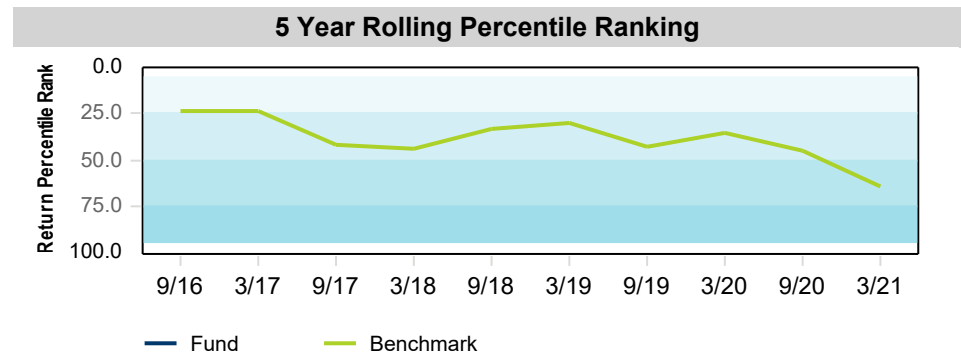
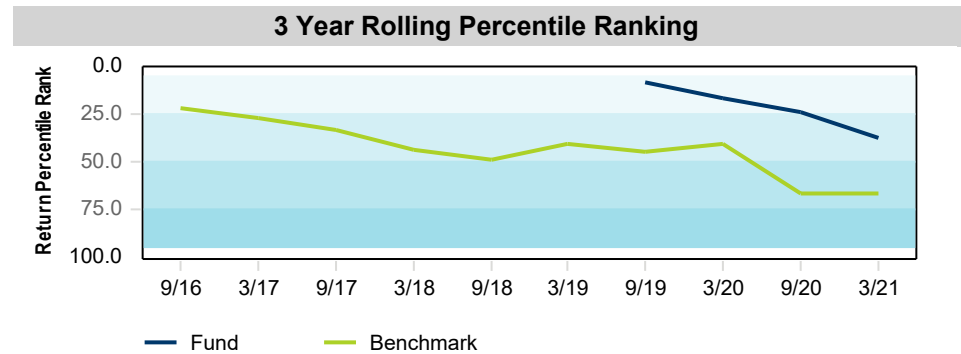
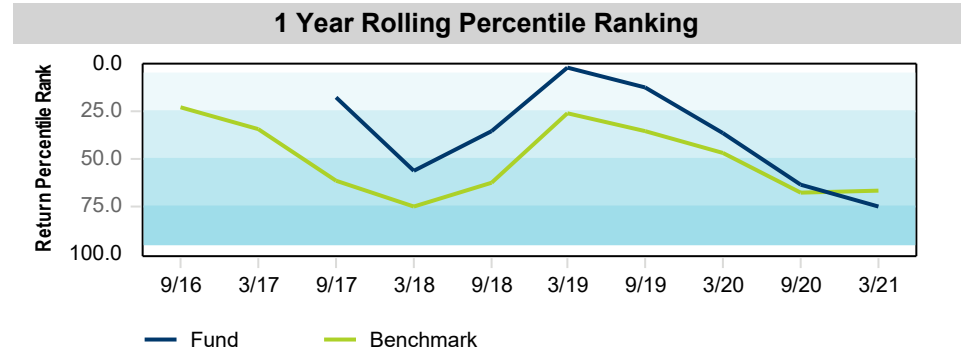
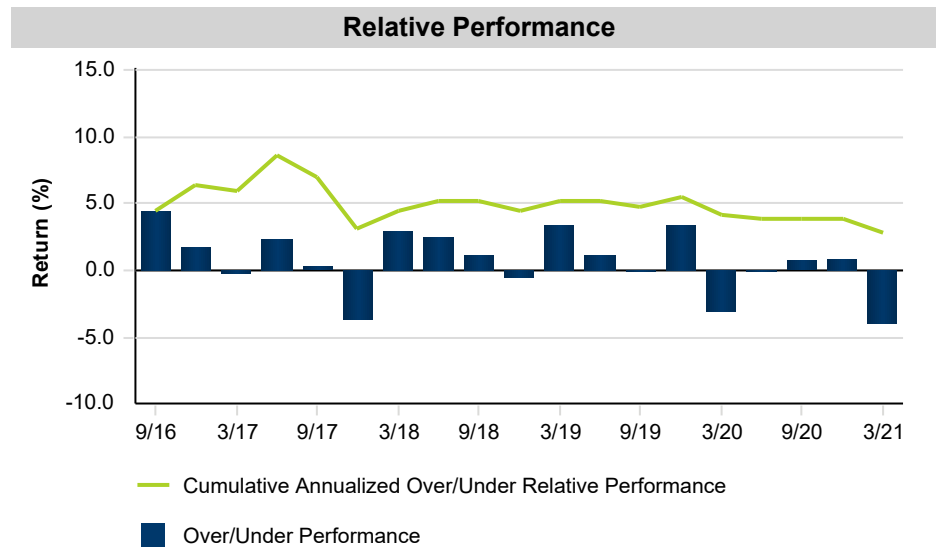
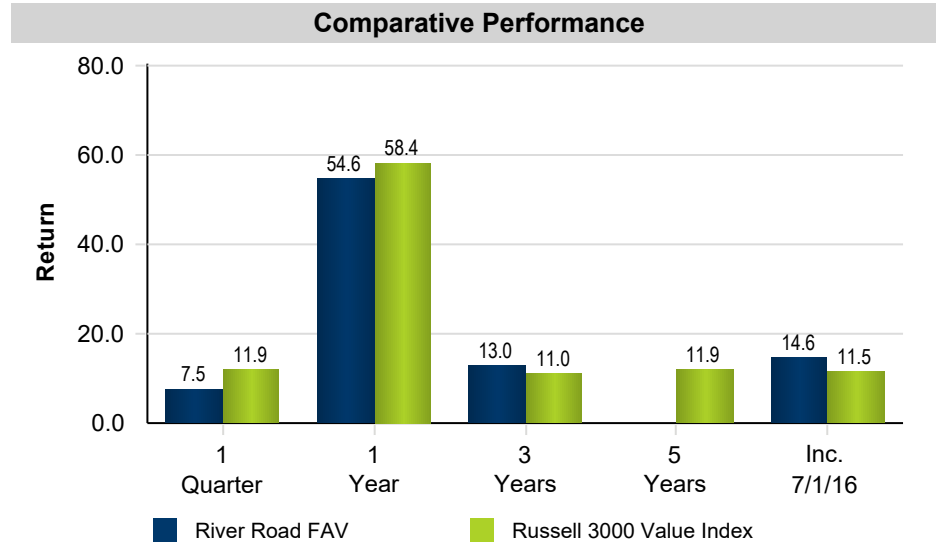
	<u>River Road FAV</u>	<u>Russell 3000 Value Index</u>
Standard Deviation	14.84	16.35
Alpha	3.75	0.00
Active Return/Risk	-0.18	0.00
Tracking Error	4.91	0.00
Information Ratio	-0.55	
Sharpe Ratio	3.05	2.94

Correlation Statistics

	<u>River Road FAV</u>	<u>Russell 3000 Value Index</u>
R-Squared	0.91	1.00
Actual Correlation	0.96	1.00

Manager Summary

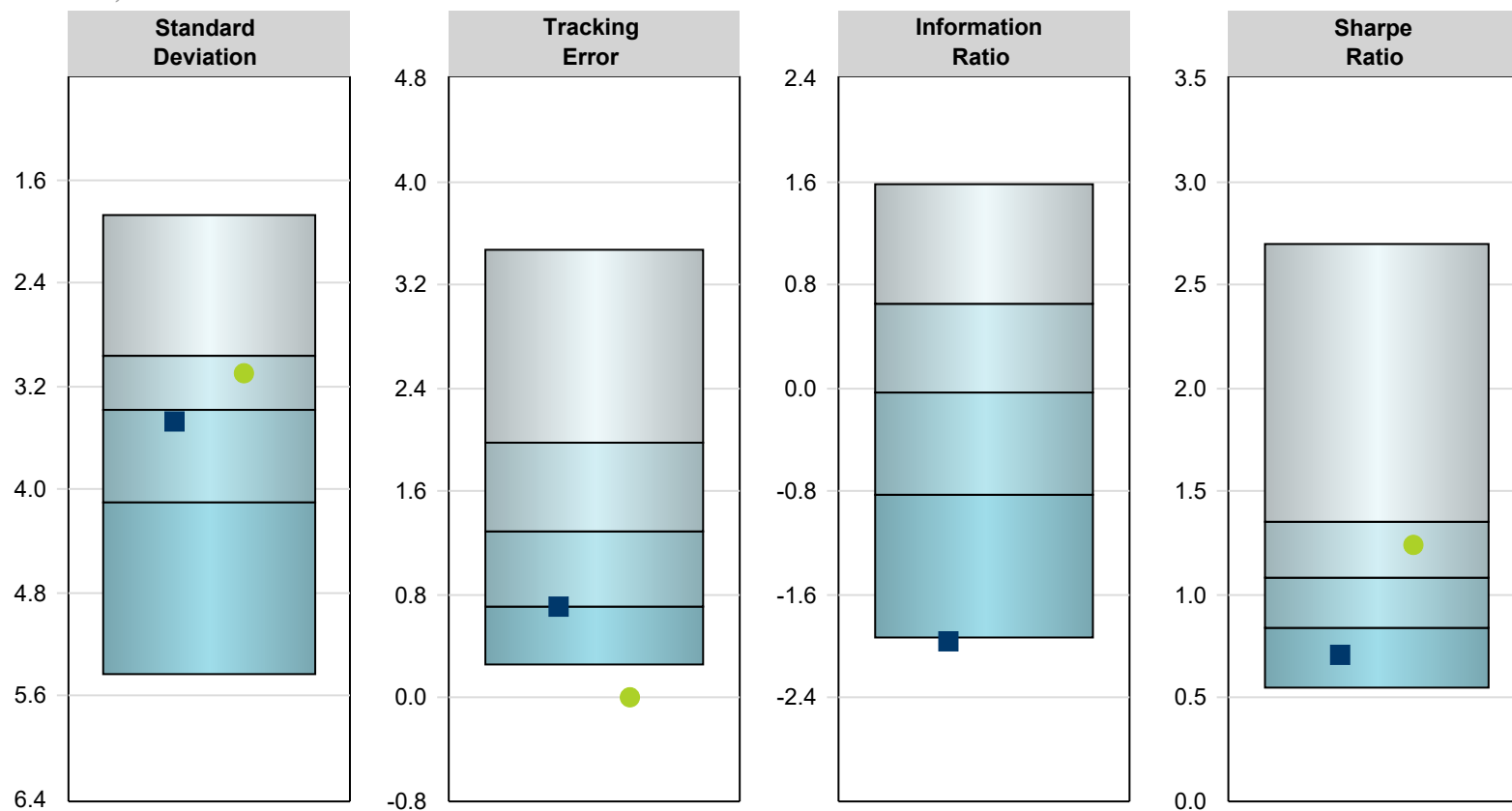
River Road FAV vs IM U.S. All Cap Value Equity (SA+CF)
 Periods Ended March 31, 2021



Peer Group Analysis - Multi Statistics

River Road FAV

Periods Ended March 31, 2021



	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio
■ River Road FAV	3.47 (56)	0.70 (76)	-1.96 (96)	0.71 (90)
● Russell 3000 Value Index	3.10 (33)	0.00 (100)		1.24 (36)
5th Percentile	1.87	3.47	1.57	2.69
1st Quartile	2.96	1.97	0.66	1.35
Median	3.39	1.30	-0.03	1.08
3rd Quartile	4.10	0.71	-0.82	0.84
95th Percentile	5.42	0.26	-1.93	0.55

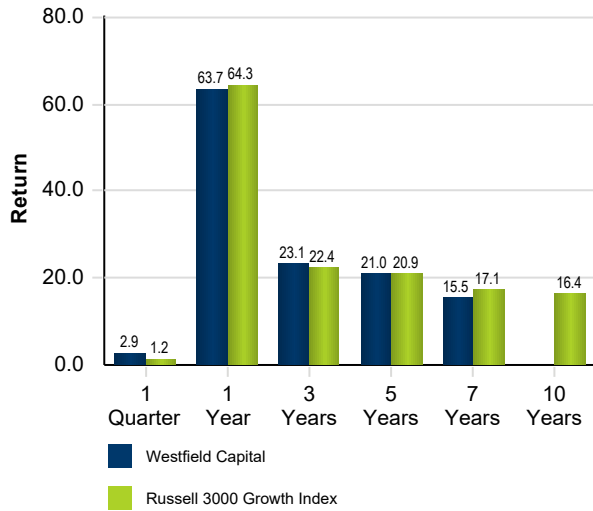
Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

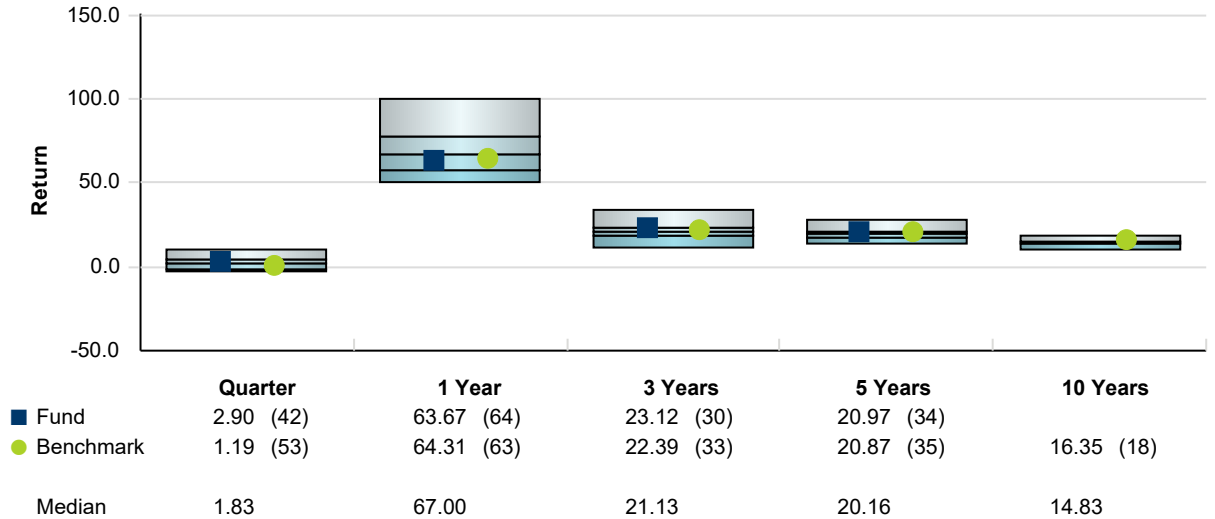
Westfield Capital

Periods Ended March 31, 2021

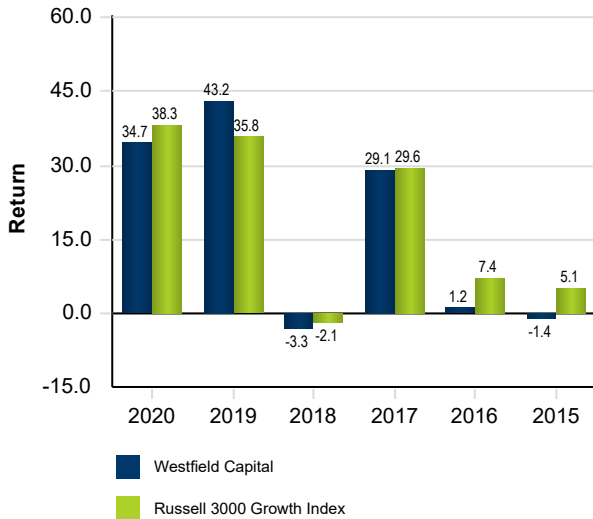
Comparative Performance



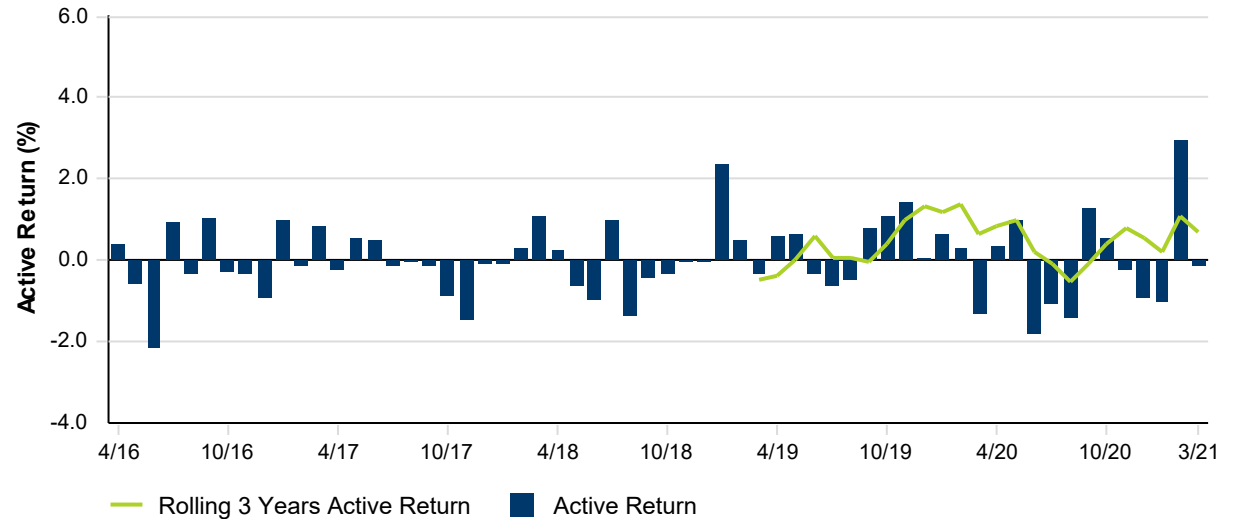
Peer Group Analysis: IM U.S. All Cap Growth Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Westfield Capital

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Westfield Capital</u>	<u>Russell 3000 Growth Index</u>
Maximum Return	15.14	14.80
Minimum Return	-3.29	-4.57
Return	63.67	64.31
Cumulative Return	63.67	64.31
Active Return	-0.61	0.00
Excess Return	51.81	52.42

Risk Summary Statistics

	<u>Westfield Capital</u>	<u>Russell 3000 Growth Index</u>
Upside Risk	6.76	6.96
Downside Risk	4.43	5.57
Beta	0.92	1.00

Risk/Return Summary Statistics

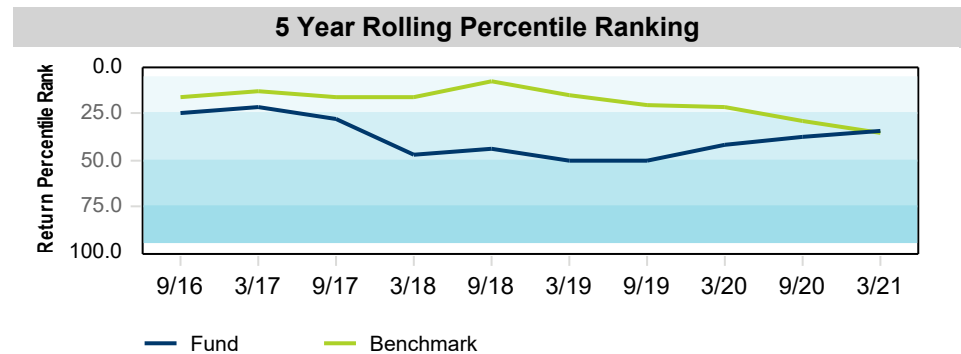
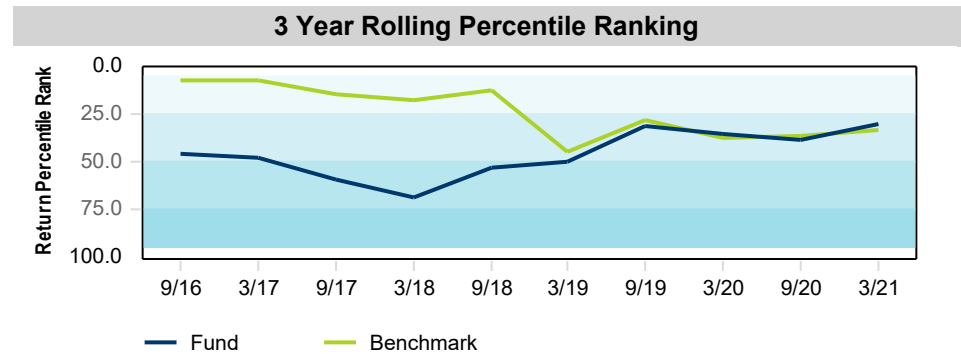
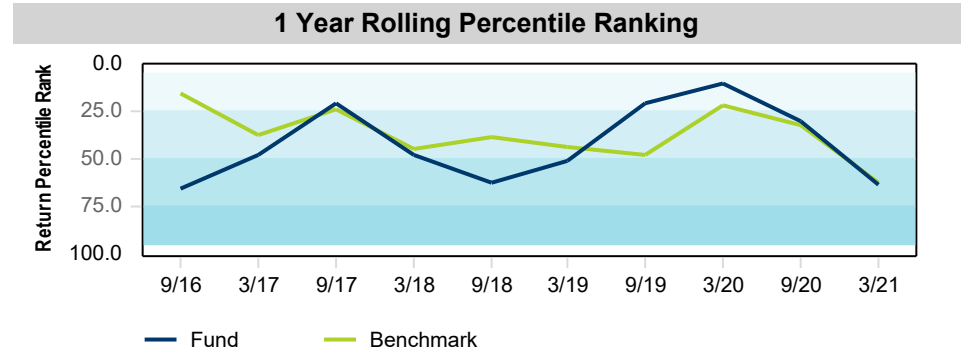
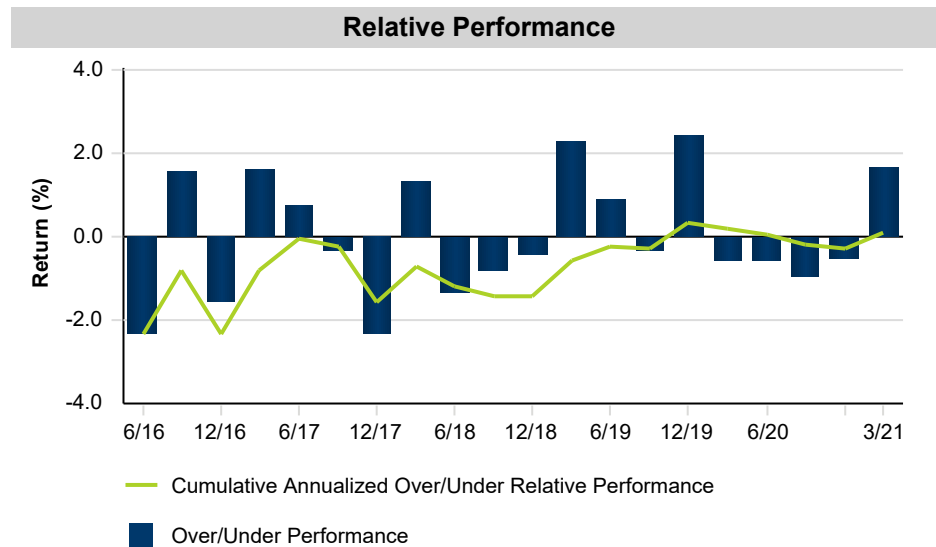
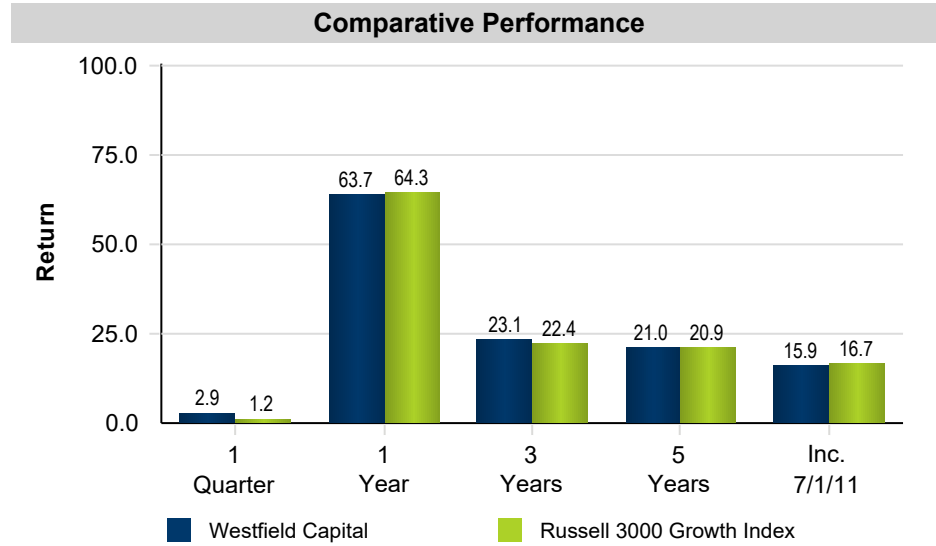
	<u>Westfield Capital</u>	<u>Russell 3000 Growth Index</u>
Standard Deviation	18.53	19.56
Alpha	3.54	0.00
Active Return/Risk	-0.03	0.00
Tracking Error	4.49	0.00
Information Ratio	-0.14	
Sharpe Ratio	2.80	2.68

Correlation Statistics

	<u>Westfield Capital</u>	<u>Russell 3000 Growth Index</u>
R-Squared	0.95	1.00
Actual Correlation	0.97	1.00

Manager Summary

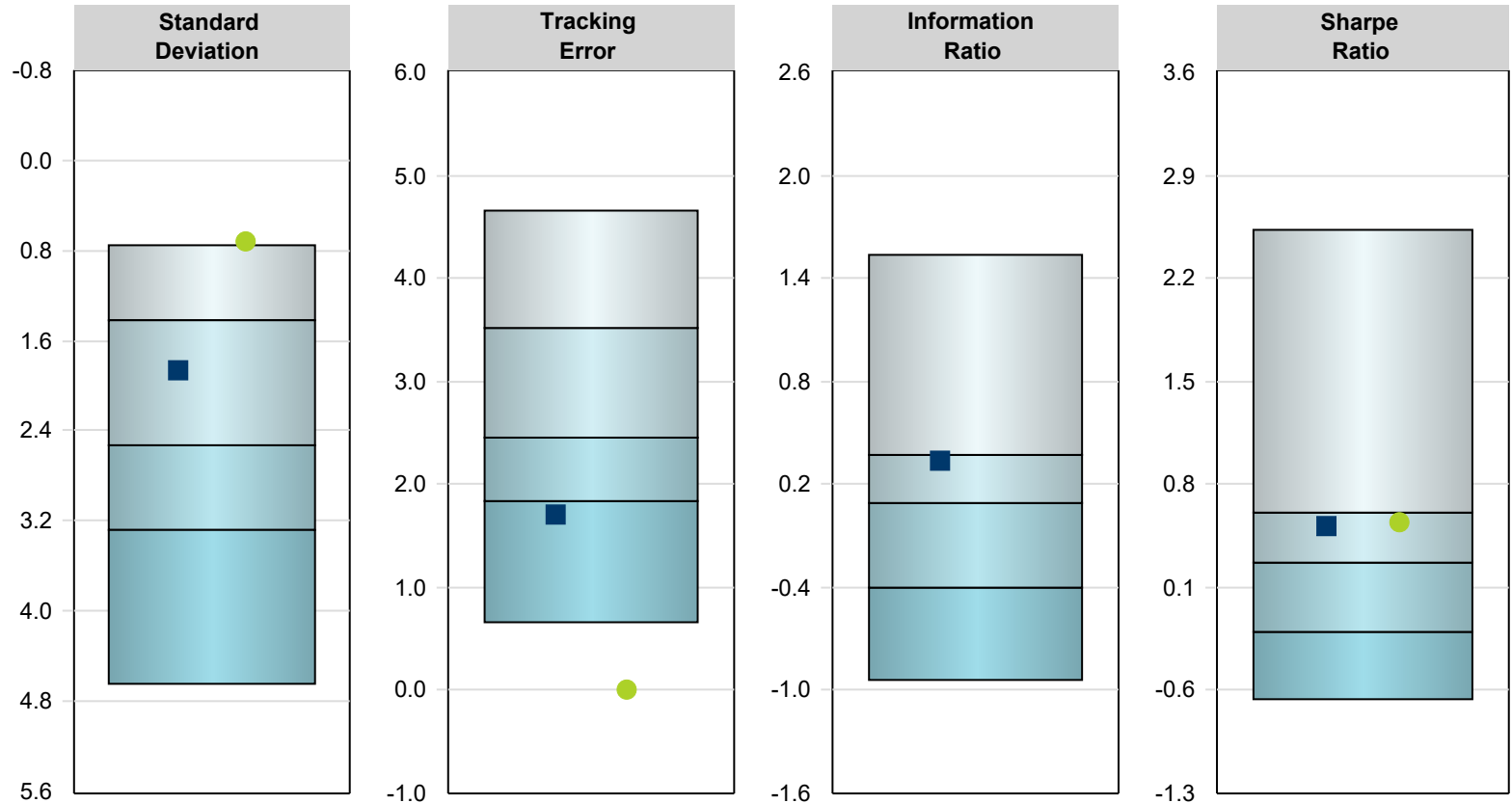
Westfield Capital vs IM U.S. All Cap Growth Equity (SA+CF)
 Periods Ended March 31, 2021



Peer Group Analysis - Multi Statistics

Westfield Capital

Periods Ended March 31, 2021



	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio
■ Westfield Capital	1.86 (32)	1.70 (77)	0.34 (34)	0.52 (32)
● Russell 3000 Growth Index	0.73 (4)	0.00 (100)		0.54 (31)
5th Percentile	0.75	4.65	1.53	2.53
1st Quartile	1.42	3.52	0.38	0.61
Median	2.52	2.46	0.10	0.27
3rd Quartile	3.27	1.83	-0.40	-0.20
95th Percentile	4.64	0.65	-0.93	-0.66

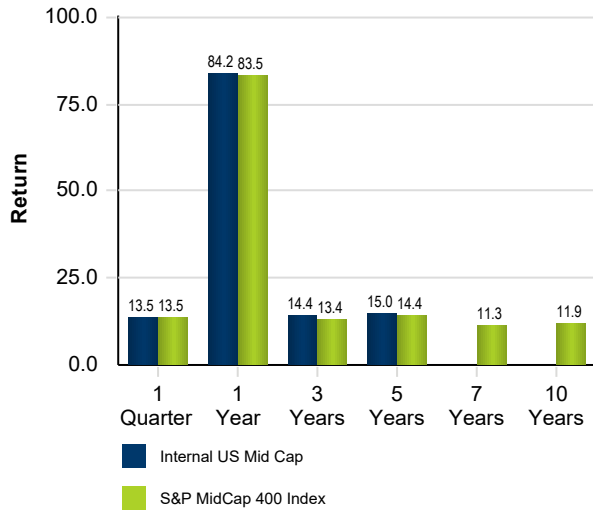
Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

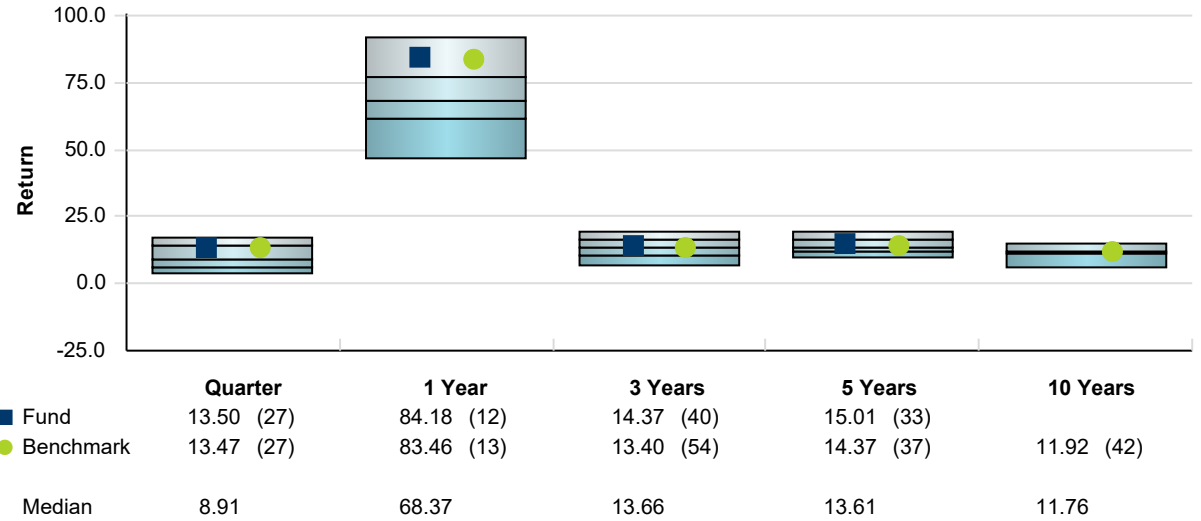
Internal US Mid Cap

Periods Ended March 31, 2021

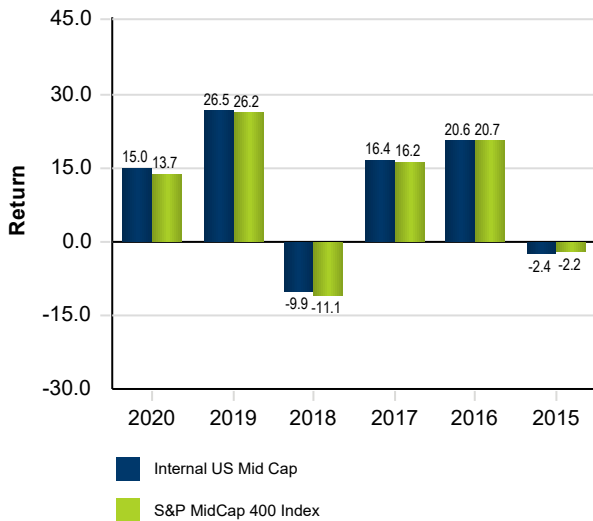
Comparative Performance



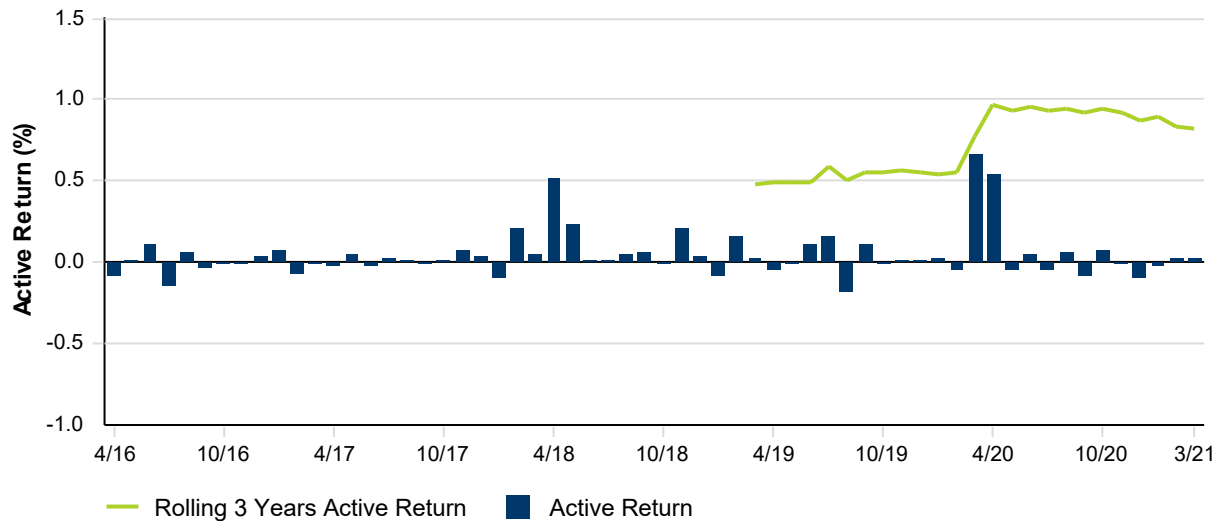
Peer Group Analysis: IM U.S. Mid Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Internal US Mid Cap

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Internal US Mid Cap</u>	<u>S&P MidCap 400 Index</u>
Maximum Return	14.73	14.28
Minimum Return	-3.33	-3.25
Return	84.18	83.46
Cumulative Return	84.18	83.46
Active Return	0.46	0.00
Excess Return	63.92	63.46

Risk Summary Statistics

	<u>Internal US Mid Cap</u>	<u>S&P MidCap 400 Index</u>
Upside Risk	7.22	7.14
Downside Risk	3.33	3.25
Beta	1.02	1.00

Risk/Return Summary Statistics

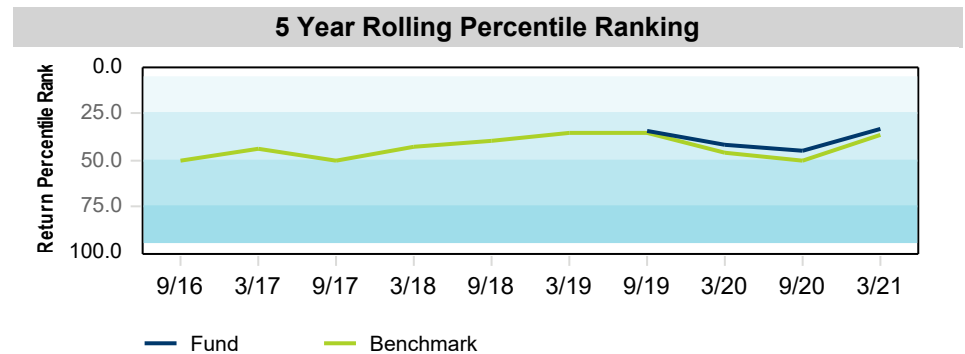
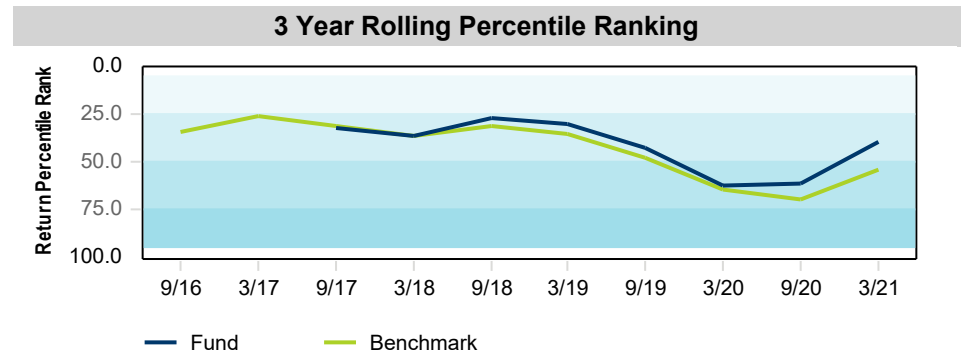
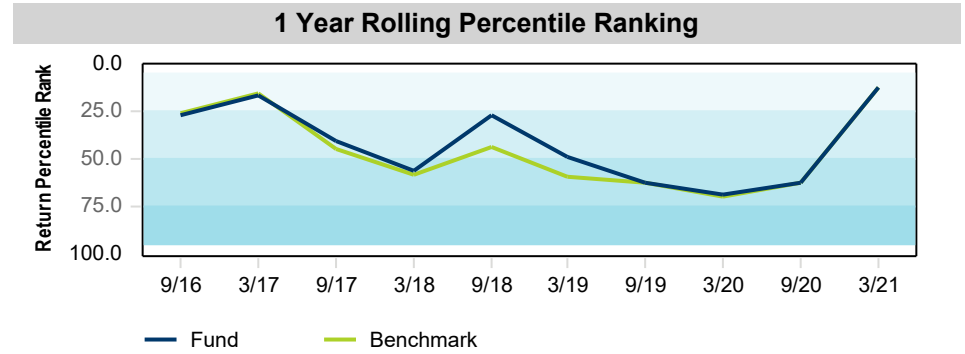
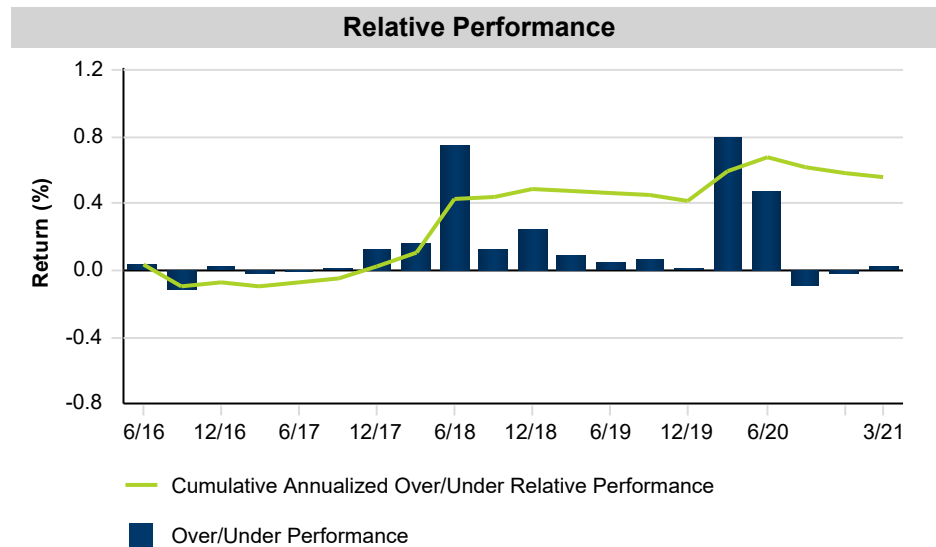
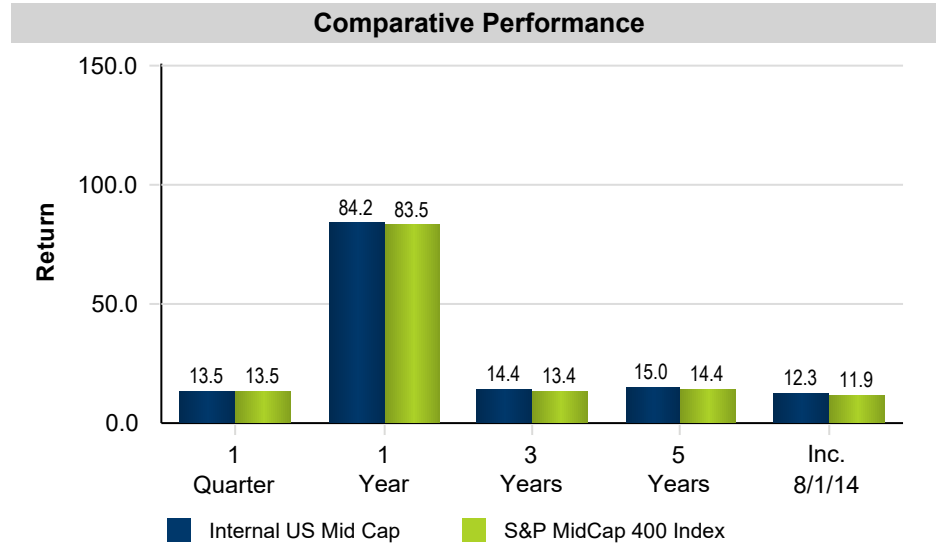
	<u>Internal US Mid Cap</u>	<u>S&P MidCap 400 Index</u>
Standard Deviation	17.18	16.88
Alpha	-0.65	0.00
Active Return/Risk	0.03	0.00
Tracking Error	0.56	0.00
Information Ratio	0.82	
Sharpe Ratio	3.72	3.76

Correlation Statistics

	<u>Internal US Mid Cap</u>	<u>S&P MidCap 400 Index</u>
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

Manager Summary

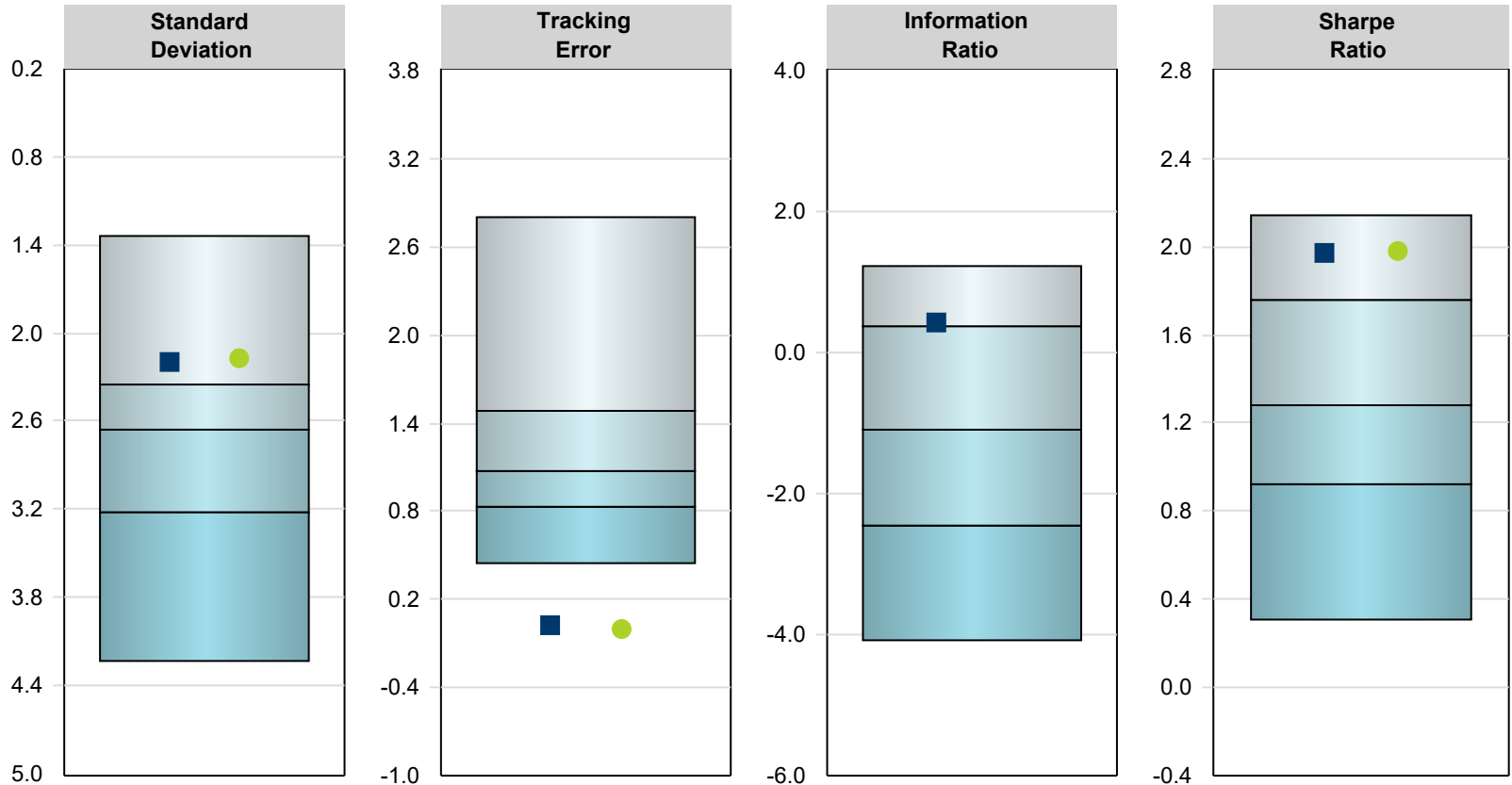
Internal US Mid Cap vs IM U.S. Mid Cap Core Equity (SA+CF)
 Periods Ended March 31, 2021



Peer Group Analysis - Multi Statistics

Internal US Mid Cap

Periods Ended March 31, 2021



	QTD	QTD	QTD	QTD
■ Internal US Mid Cap	2.20 (21)	0.02 (100)	0.44 (25)	1.97 (12)
● S&P MidCap 400 Index	2.18 (21)	0.00 (100)		1.98 (11)
5th Percentile	1.34	2.80	1.23	2.14
1st Quartile	2.35	1.49	0.38	1.76
Median	2.65	1.08	-1.08	1.28
3rd Quartile	3.22	0.83	-2.45	0.93
95th Percentile	4.23	0.44	-4.08	0.31

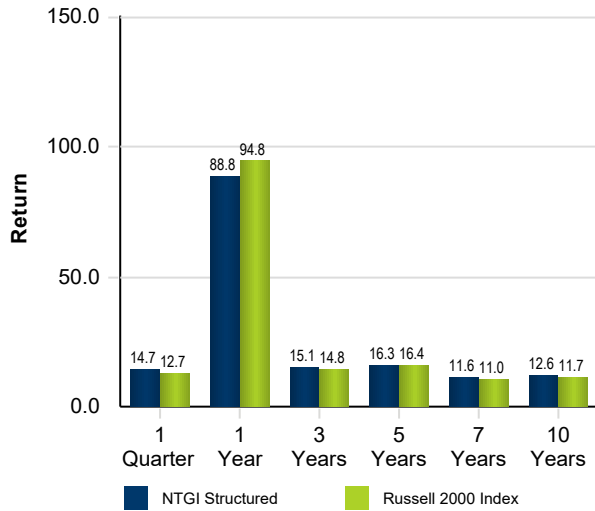
Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

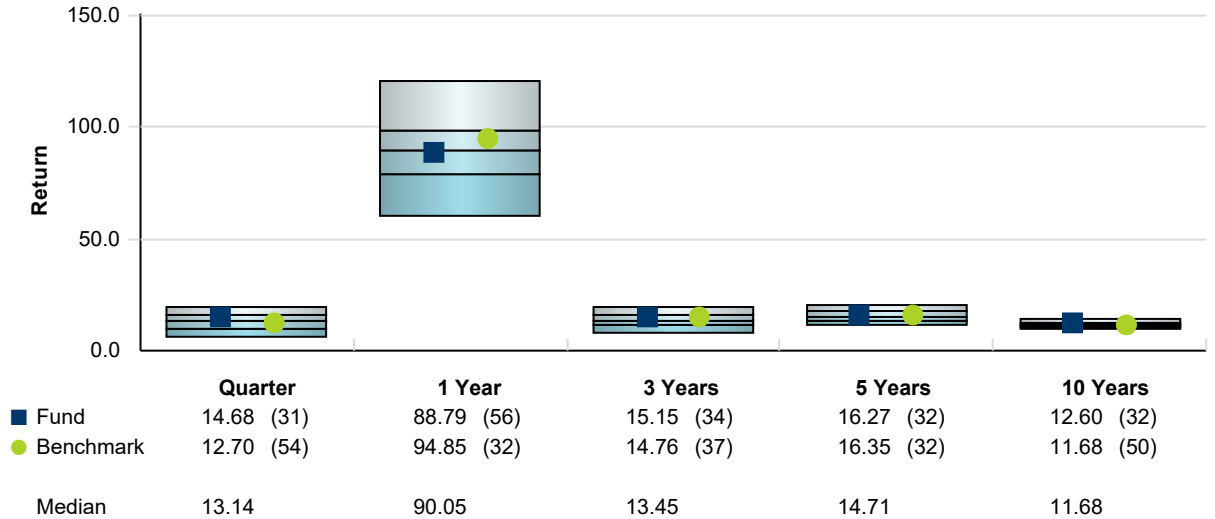
NTGI Structured

Periods Ended March 31, 2021

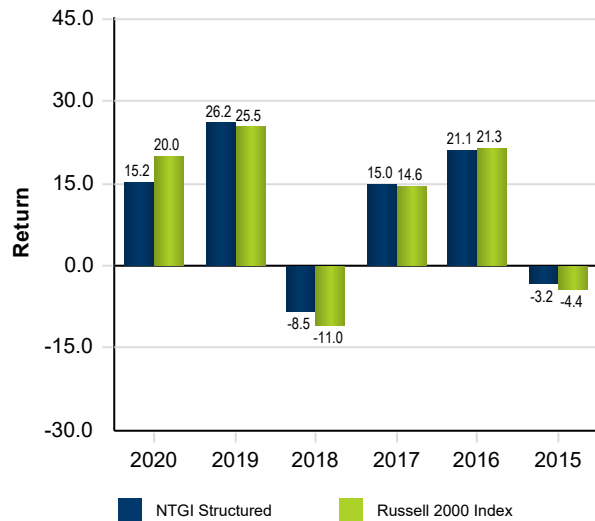
Comparative Performance



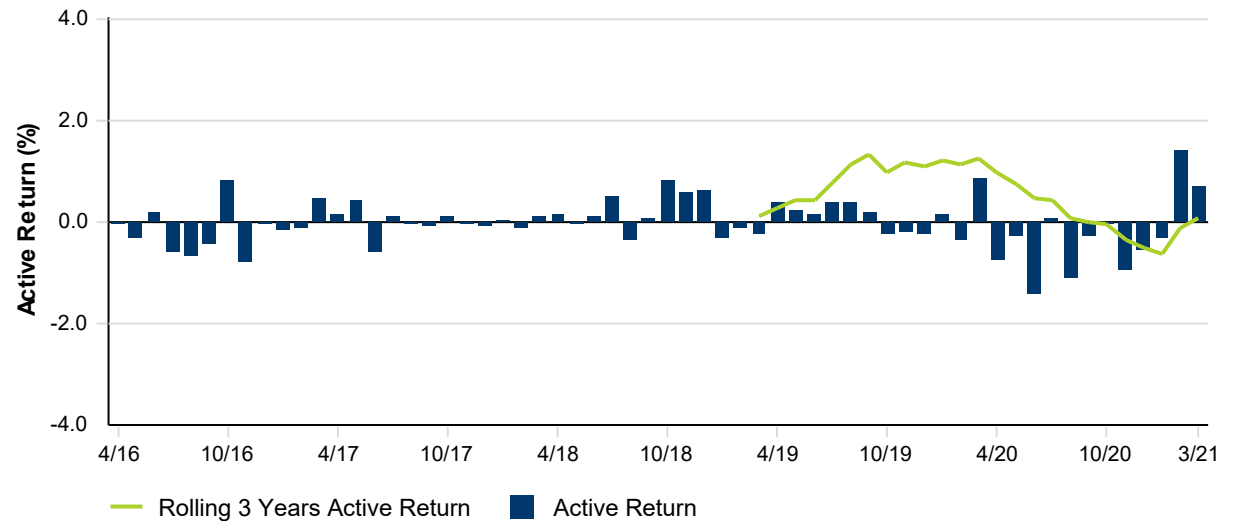
Peer Group Analysis: IM U.S. Small Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

NTGI Structured

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>NTGI Structured</u>	<u>Russell 2000 Index</u>
Maximum Return	17.48	18.43
Minimum Return	-3.62	-3.34
Return	88.79	94.85
Cumulative Return	88.79	94.85
Active Return	-3.44	0.00
Excess Return	66.73	70.17

Risk Summary Statistics

	<u>NTGI Structured</u>	<u>Russell 2000 Index</u>
Upside Risk	7.64	8.00
Downside Risk	3.62	3.34
Beta	0.96	1.00

Risk/Return Summary Statistics

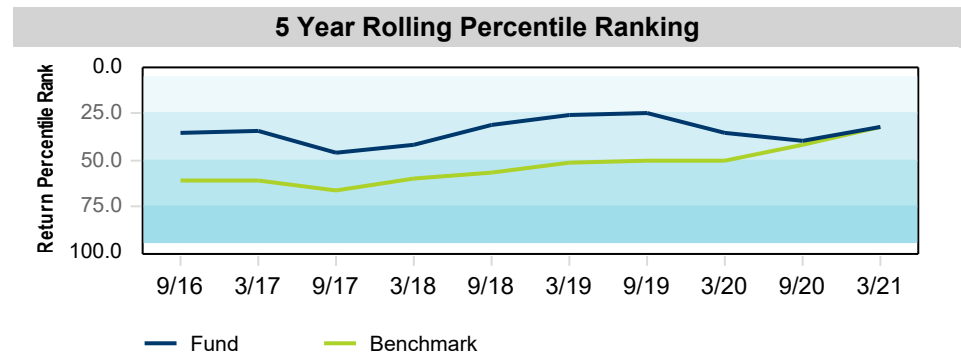
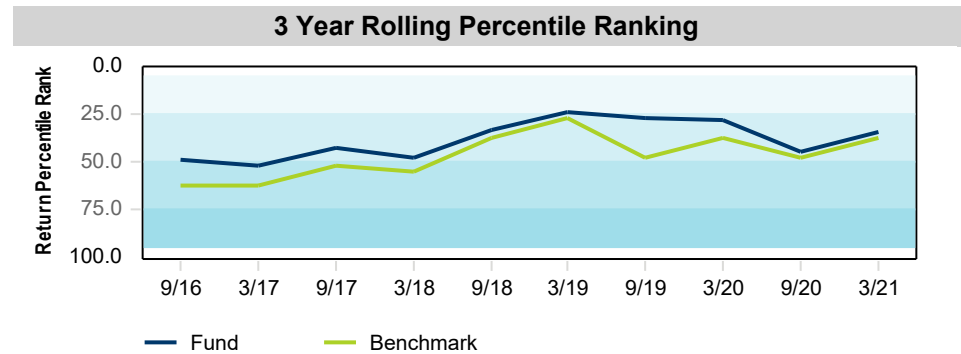
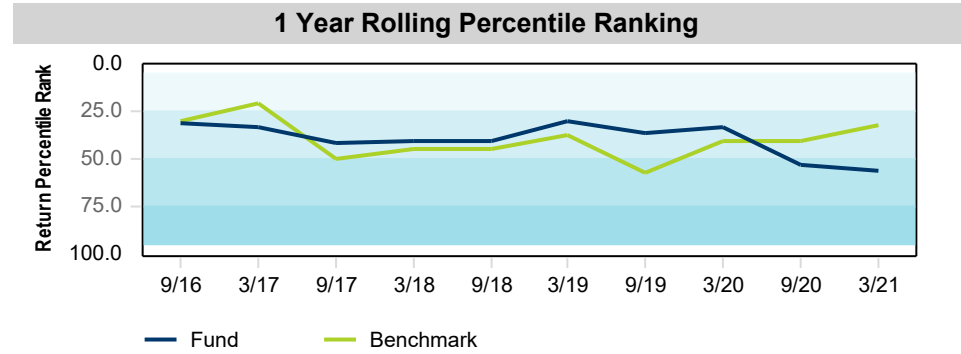
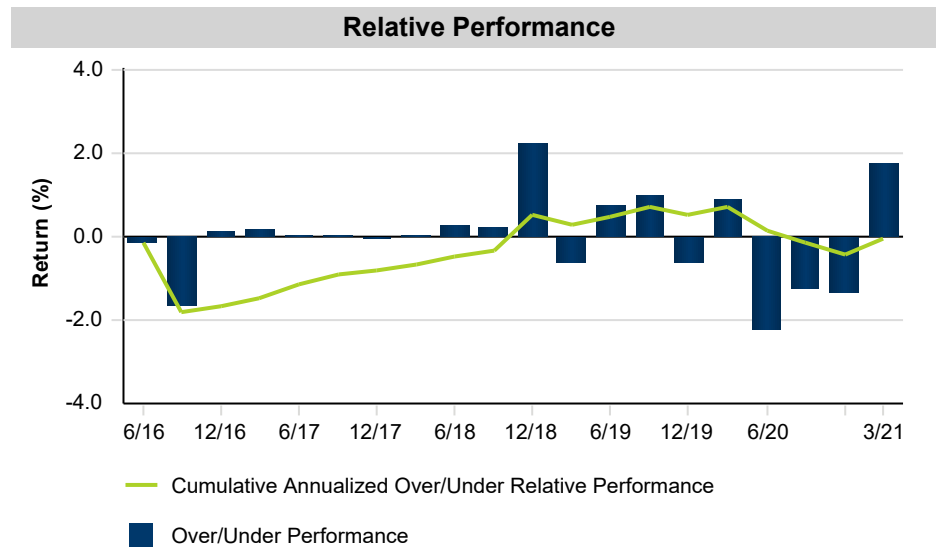
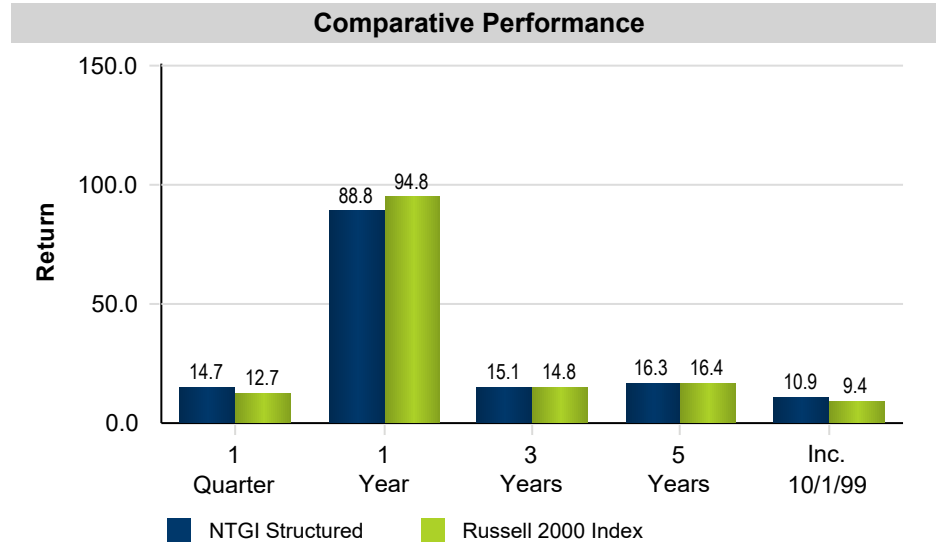
	<u>NTGI Structured</u>	<u>Russell 2000 Index</u>
Standard Deviation	18.46	19.15
Alpha	-0.32	0.00
Active Return/Risk	-0.19	0.00
Tracking Error	2.58	0.00
Information Ratio	-1.33	
Sharpe Ratio	3.61	3.66

Correlation Statistics

	<u>NTGI Structured</u>	<u>Russell 2000 Index</u>
R-Squared	0.98	1.00
Actual Correlation	0.99	1.00

Manager Summary

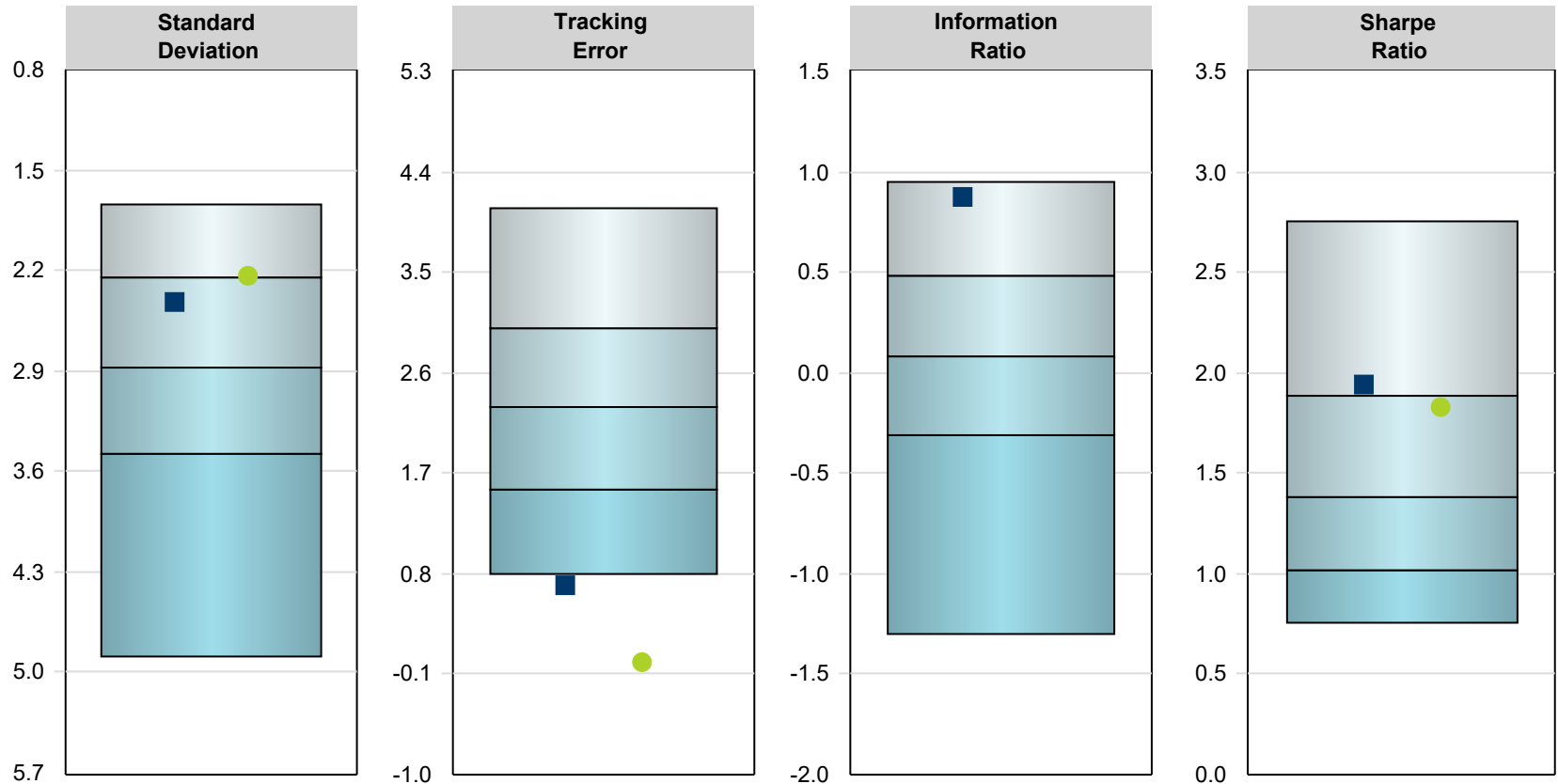
NTGI Structured vs IM U.S. Small Cap Core Equity (SA+CF)
 Periods Ended March 31, 2021



Peer Group Analysis - Multi Statistics

NTGI Structured

Periods Ended March 31, 2021



	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio
■ NTGI Structured	2.41 (27)	0.70 (97)	0.87 (8)	1.94 (24)
● Russell 2000 Index	2.24 (24)	0.00 (100)		1.83 (28)
5th Percentile	1.75	4.07	0.94	2.75
1st Quartile	2.25	3.00	0.48	1.88
Median	2.87	2.29	0.08	1.38
3rd Quartile	3.47	1.55	-0.31	1.02
95th Percentile	4.89	0.80	-1.30	0.76

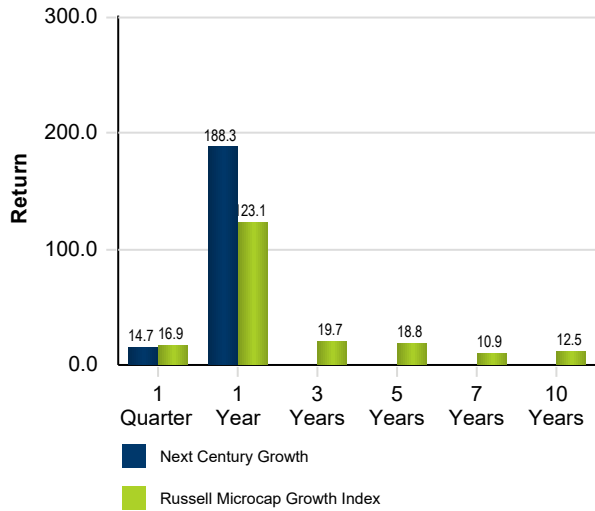
Parenteses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

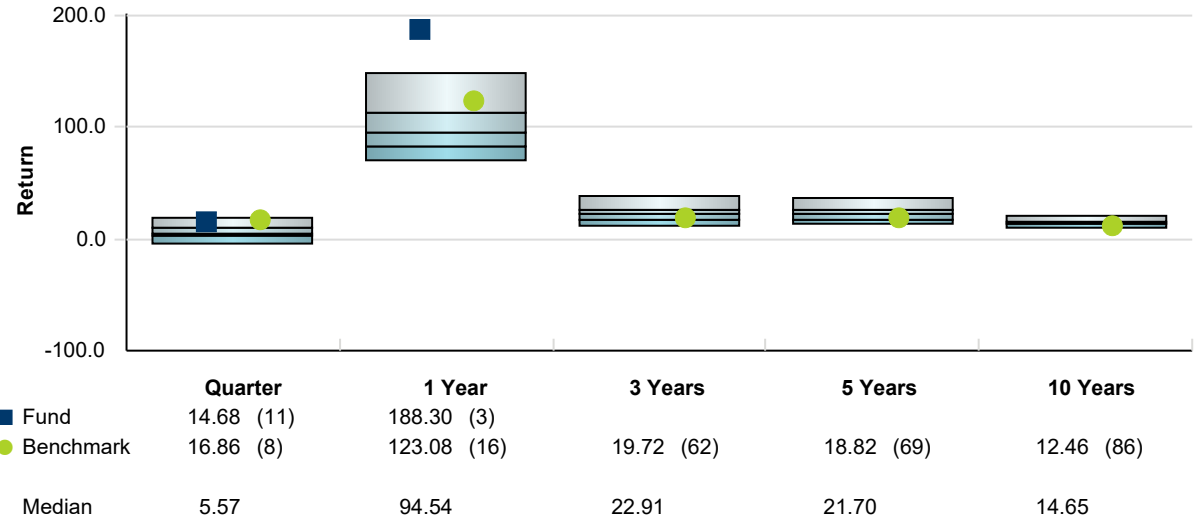
Next Century Growth

Periods Ended March 31, 2021

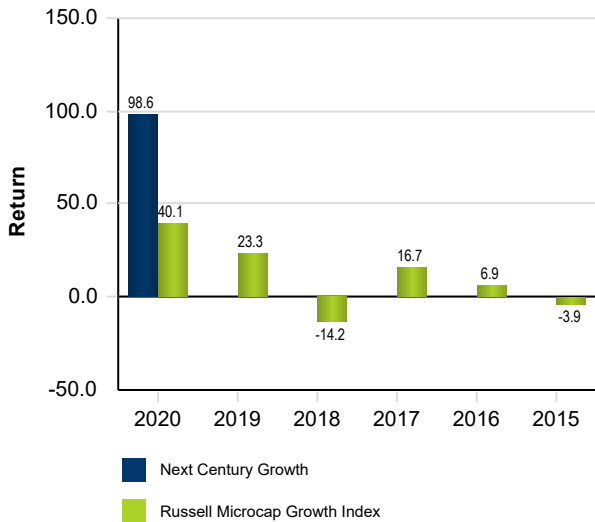
Comparative Performance



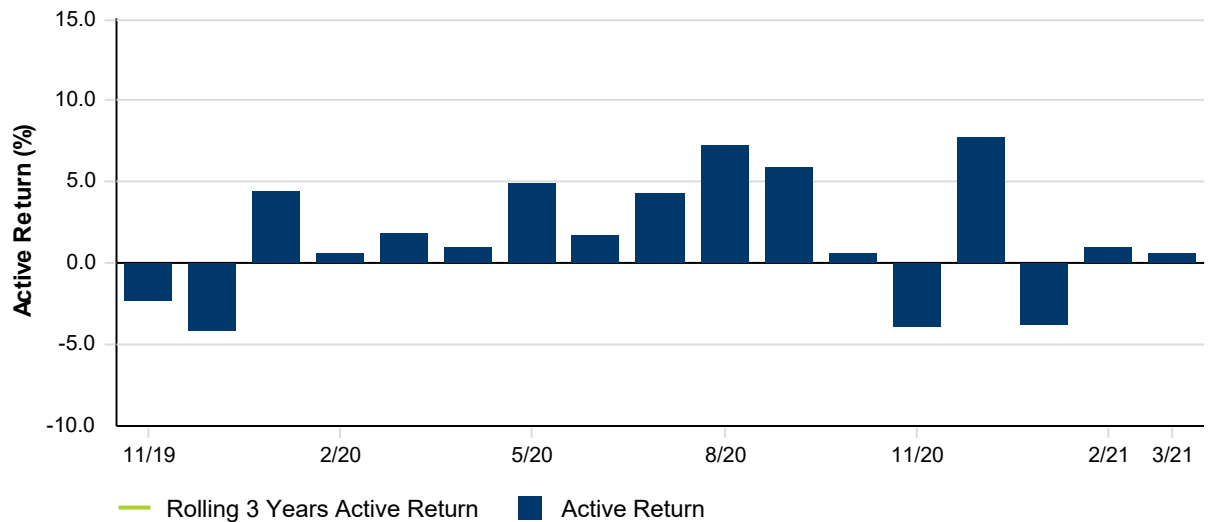
Peer Group Analysis: IM U.S. Small Cap Growth Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Next Century Growth

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Next Century Growth</u>	<u>Russell Microcap Growth Index</u>
Maximum Return	19.93	21.59
Minimum Return	-2.57	-3.13
Return	188.30	123.08
Cumulative Return	188.30	123.08
Active Return	27.14	0.00
Excess Return	113.13	85.99

Risk Summary Statistics

	<u>Next Century Growth</u>	<u>Russell Microcap Growth Index</u>
Upside Risk	11.59	10.32
Downside Risk	2.70	4.25
Beta	0.79	1.00

Risk/Return Summary Statistics

	<u>Next Century Growth</u>	<u>Russell Microcap Growth Index</u>
Standard Deviation	23.48	26.07
Alpha	56.37	0.00
Active Return/Risk	1.16	0.00
Tracking Error	12.74	0.00
Information Ratio	2.13	
Sharpe Ratio	4.82	3.30

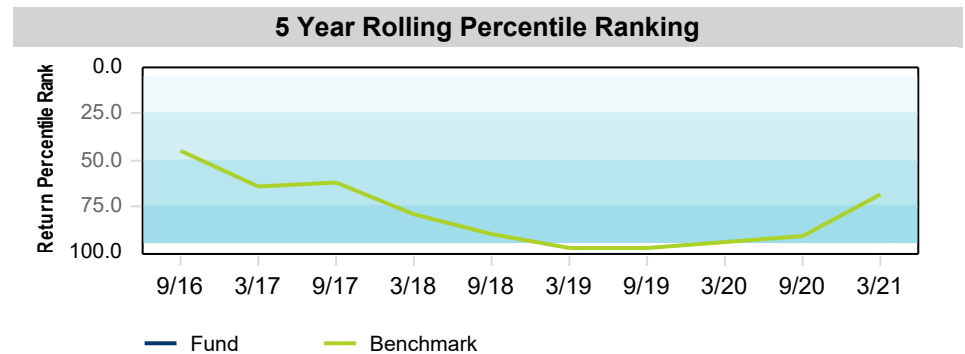
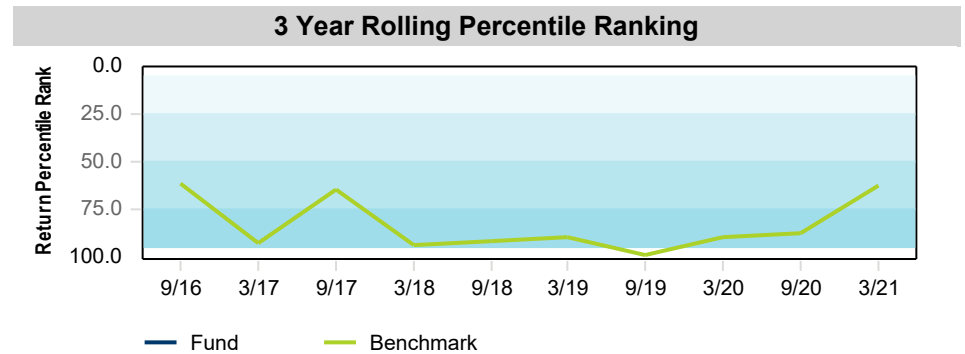
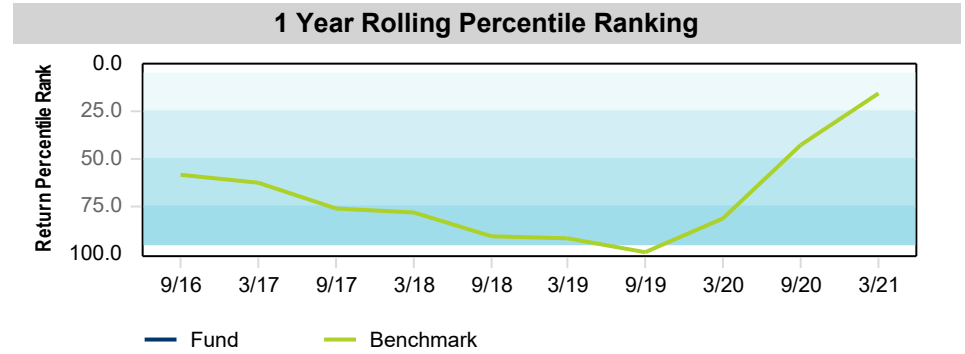
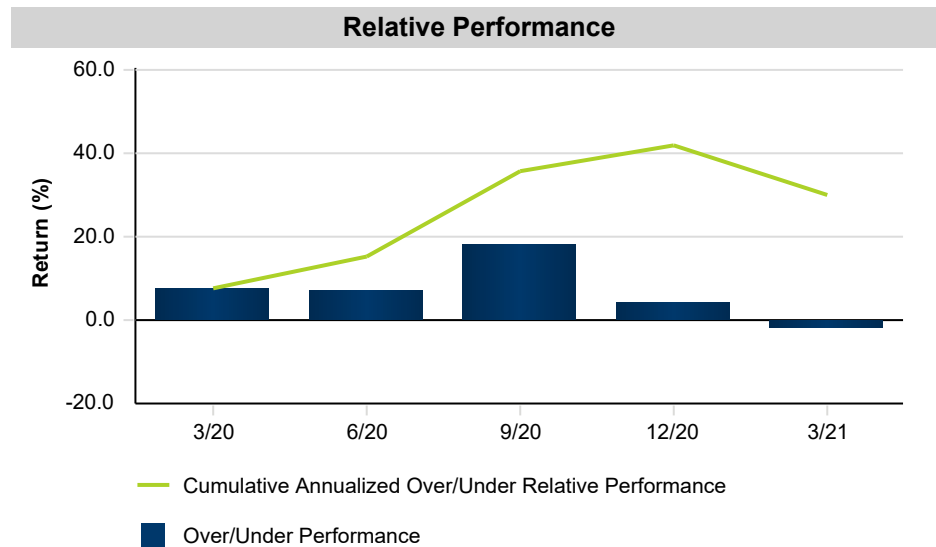
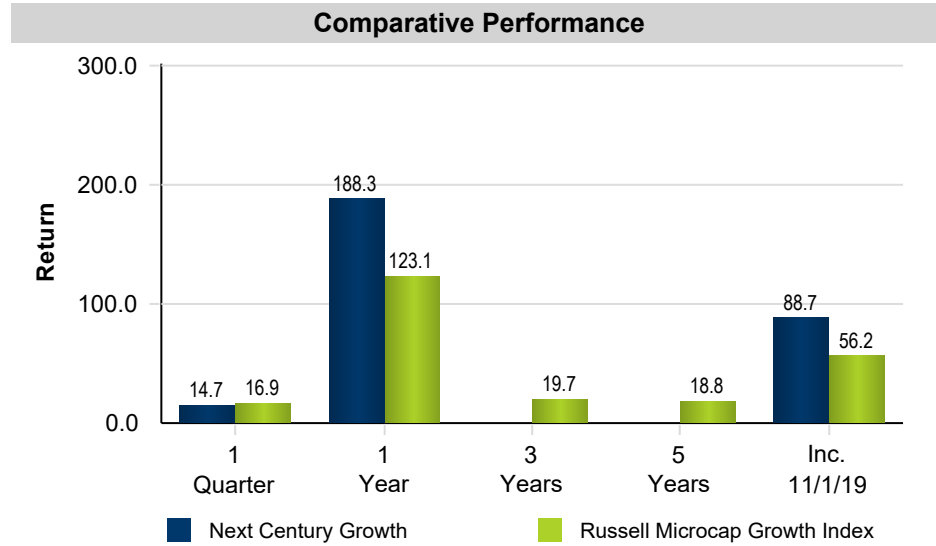
Correlation Statistics

	<u>Next Century Growth</u>	<u>Russell Microcap Growth Index</u>
R-Squared	0.76	1.00
Actual Correlation	0.87	1.00

Manager Summary

Next Century Growth vs IM U.S. Small Cap Growth Equity (SA+CF)

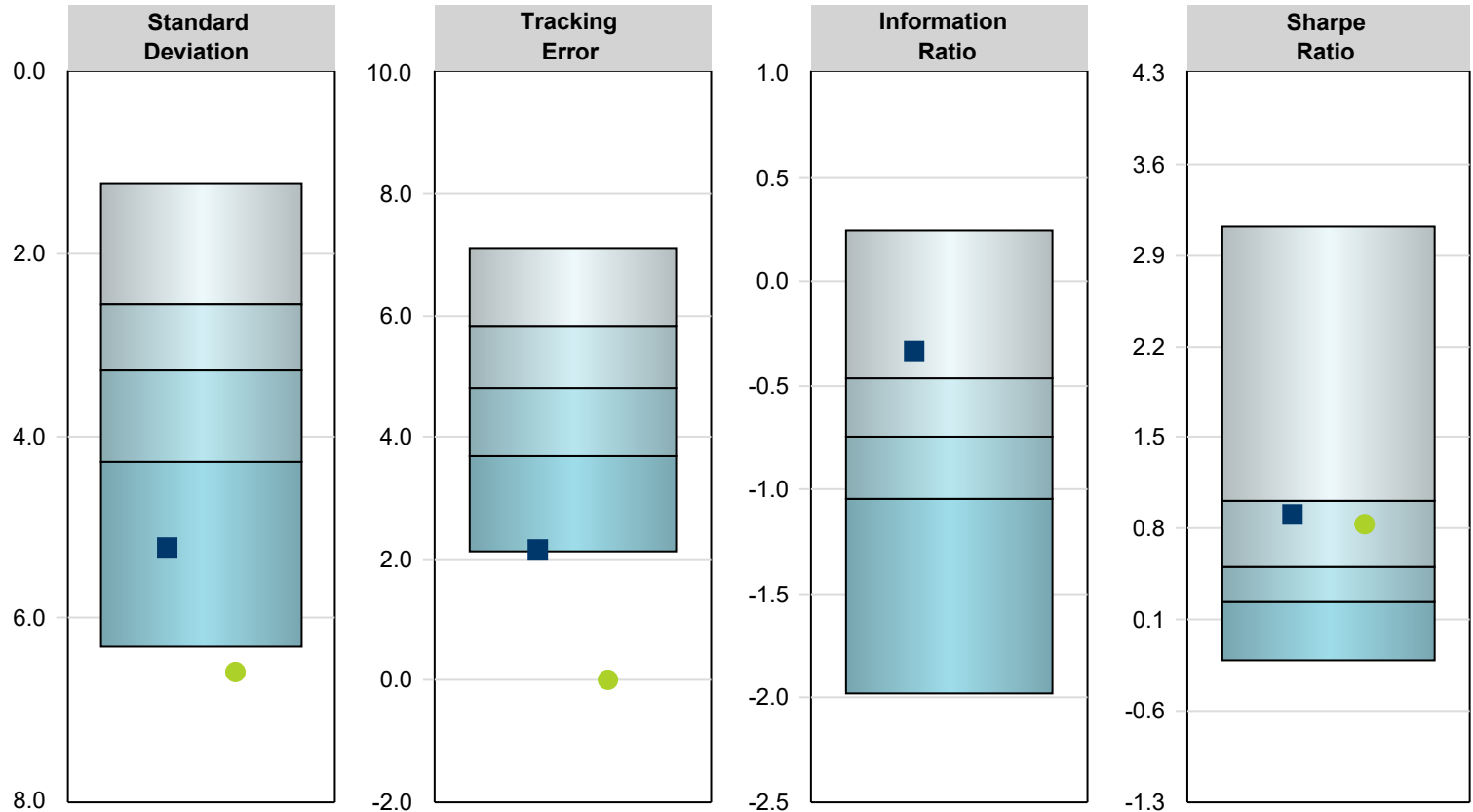
Periods Ended March 31, 2021



Peer Group Analysis - Multi Statistics

Next Century Growth

Periods Ended March 31, 2021



	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio
■ Next Century Growth	5.24 (85)	2.17 (95)	-0.34 (22)	0.92 (29)
● Russell Microcap Growth Index	6.60 (96)	0.00 (100)		0.84 (33)
5th Percentile	1.25	7.12	0.25	3.12
1st Quartile	2.57	5.84	-0.46	1.02
Median	3.28	4.82	-0.75	0.50
3rd Quartile	4.29	3.71	-1.04	0.24
95th Percentile	6.31	2.13	-1.98	-0.21

Parenteses contain percentile rankings.
Calculation based on monthly periodicity.



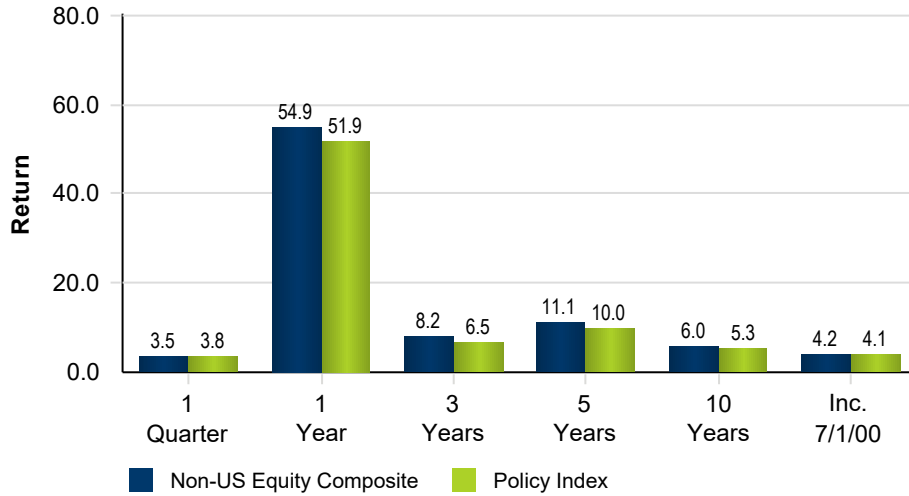
Non-US Equity Composite

Composite Performance Summary

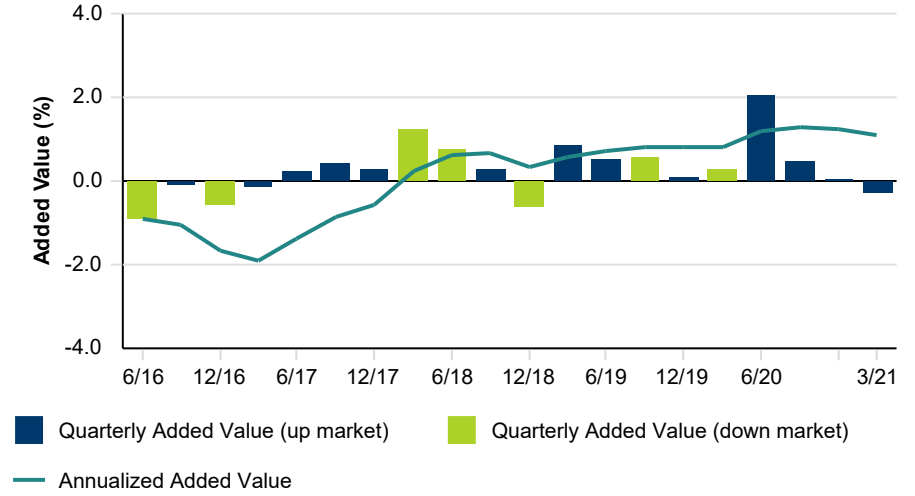
Non-US Equity Composite

Periods Ended March 31, 2021

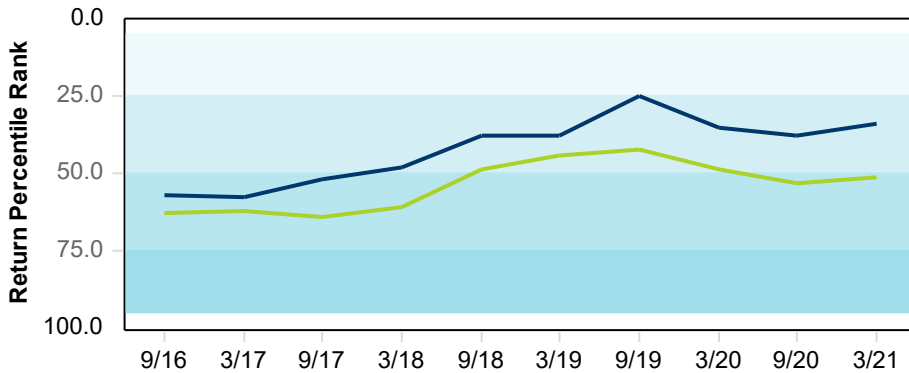
Comparative Performance



Added Value History

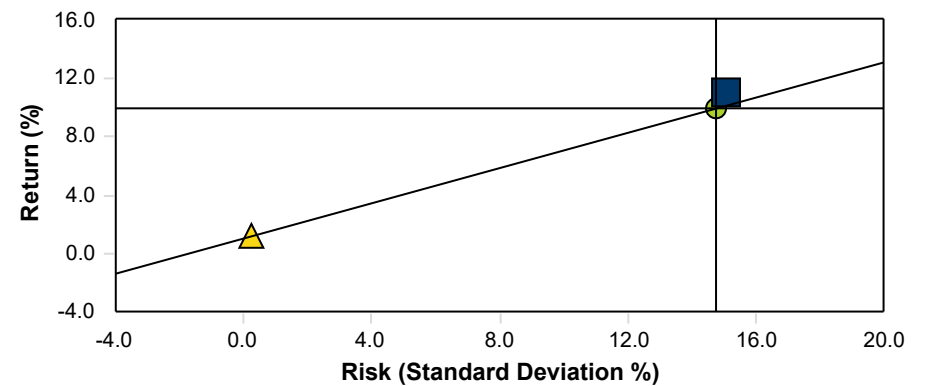


Rolling Percentile Rank: IM International Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Non-US Equity Composite	10	1 (10%)	6 (60%)	3 (30%)	0 (0%)
Benchmark	10	0 (0%)	4 (40%)	6 (60%)	0 (0%)

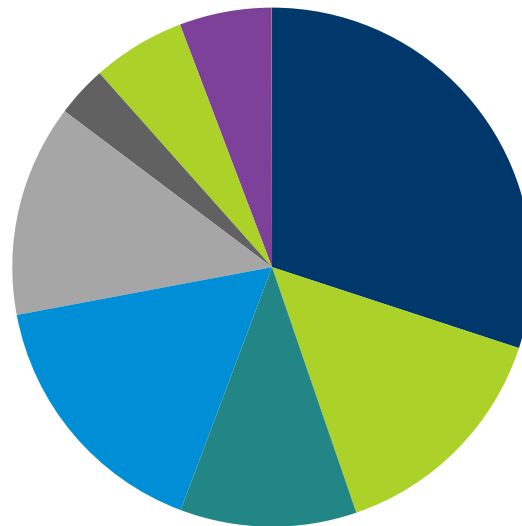
Risk and Return 04/1/16 - 03/31/21



Asset Allocation By Manager

Non-US Equity Composite
 Periods Ended March 31, 2021

Mar-2021 : 3,250,518,383

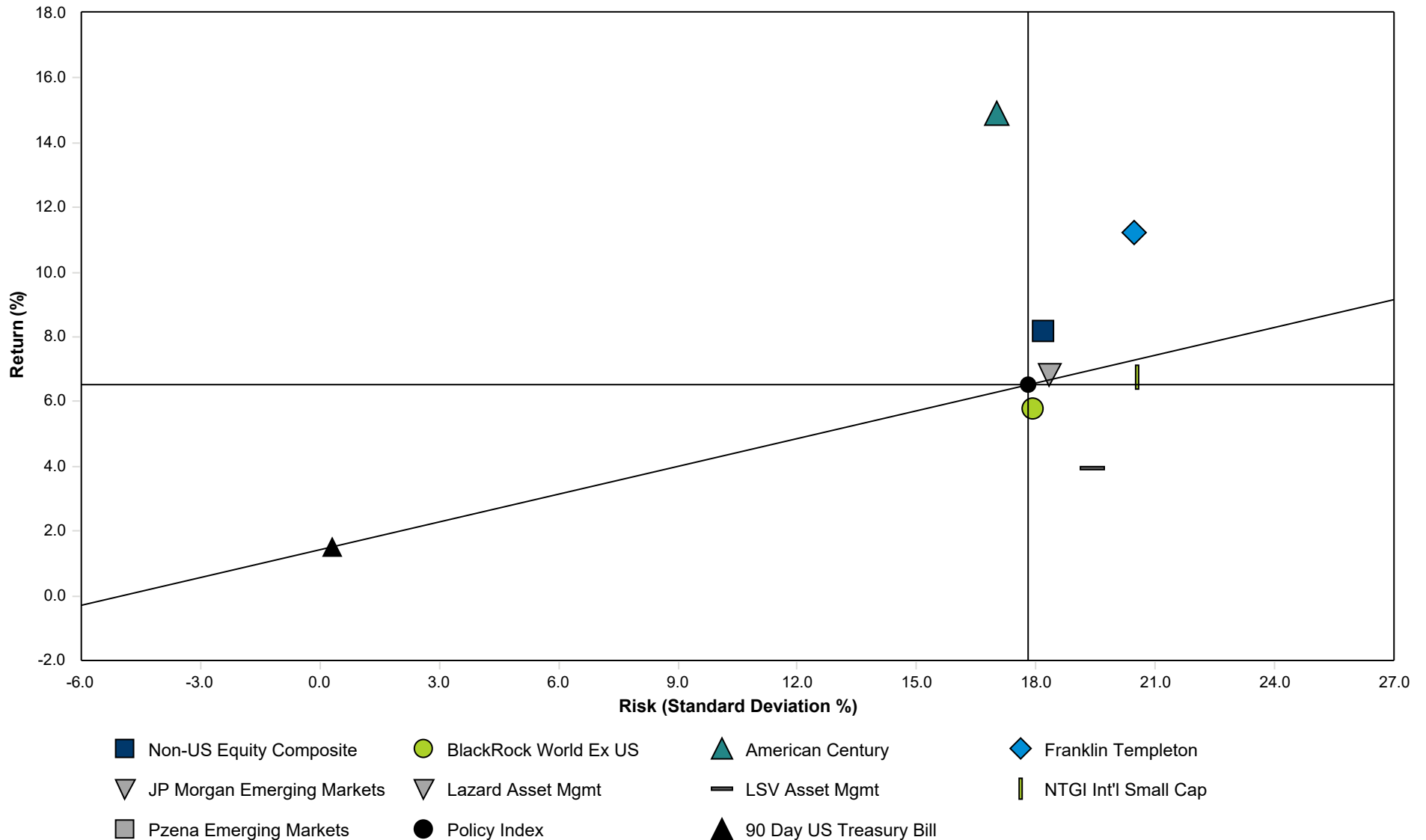


	Market Value \$	Allocation (%)
■ BlackRock World Ex US	976,583,783	30.0
■ American Century	477,881,664	14.7
■ Franklin Templeton	356,956,919	11.0
■ Lazard Asset Mgmt	530,408,295	16.3
■ LSV Asset Mgmt	429,855,325	13.2
■ NTGI Int'l Small Cap	102,955,329	3.2
■ JP Morgan Emerging Markets	188,345,631	5.8
■ Pzena Emerging Markets	186,365,232	5.7
■ Pyramis Intl	4,038	0.0
■ Non-US Equity Transition	1,162,168	0.0

Risk vs. Return

Non-US Equity Composite

Periods Ended 3 Years Ending March 31, 2021



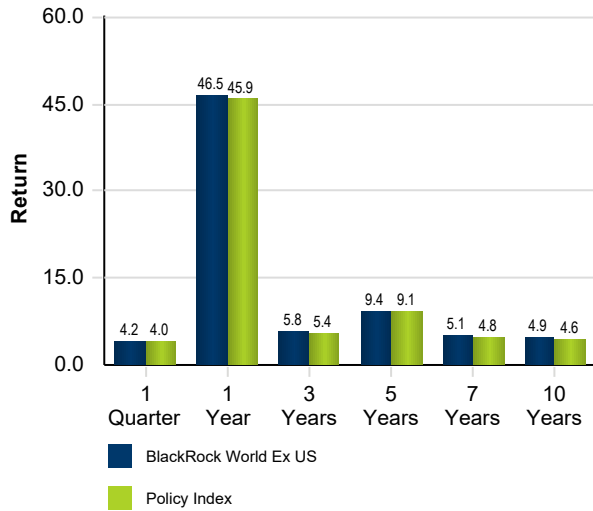
Calculation based on monthly periodicity.

Performance Summary

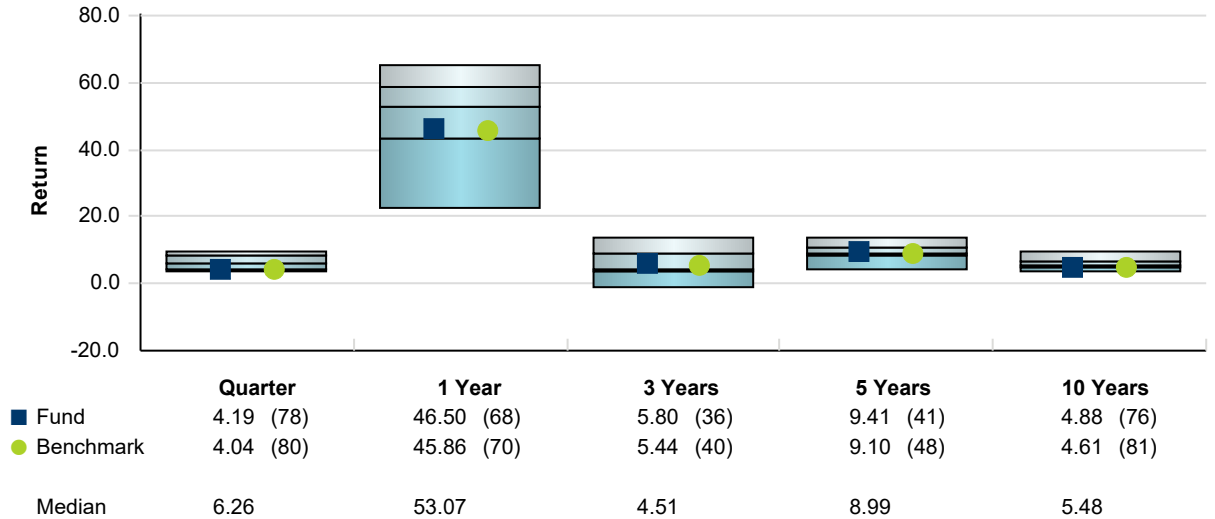
BlackRock World Ex US

Periods Ended March 31, 2021

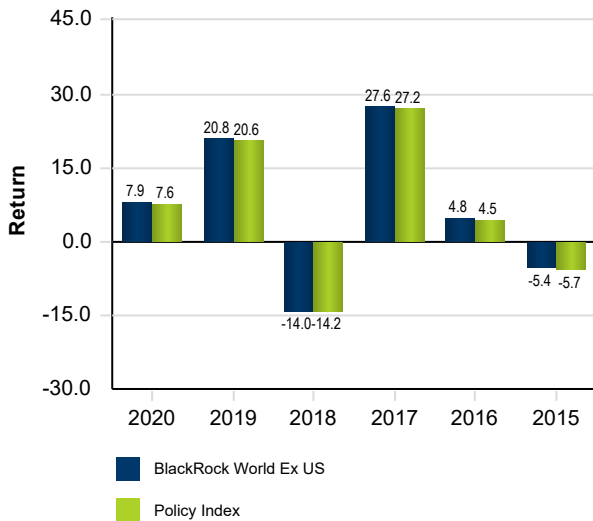
Comparative Performance



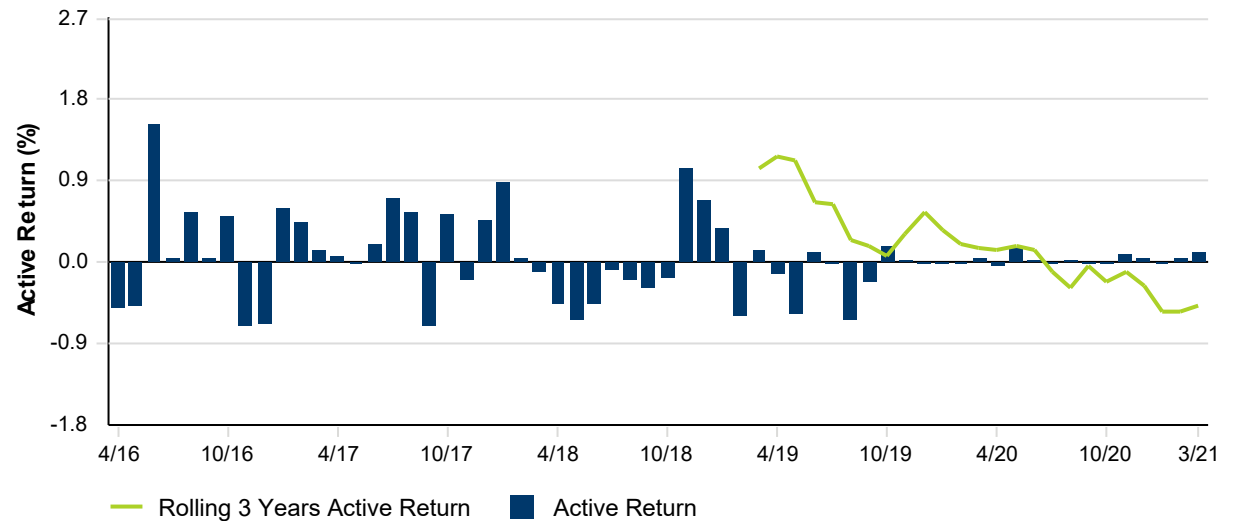
Peer Group Analysis: IM Enhanced and Indexed International Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

BlackRock World Ex US

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>BlackRock World Ex US</u>	<u>Policy Index</u>
Maximum Return	15.44	15.34
Minimum Return	-3.92	-3.93
Return	46.50	45.86
Cumulative Return	46.50	45.86
Active Return	0.46	0.00
Excess Return	39.99	39.53

Risk Summary Statistics

	<u>BlackRock World Ex US</u>	<u>Policy Index</u>
Upside Risk	5.68	5.64
Downside Risk	4.94	4.95
Beta	1.00	1.00

Risk/Return Summary Statistics

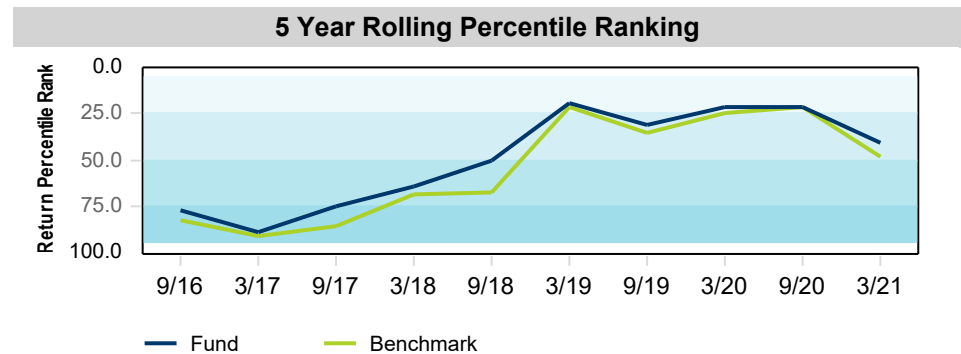
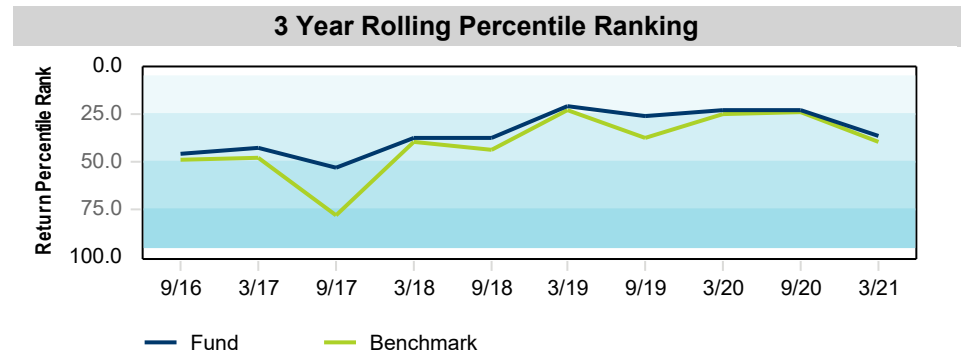
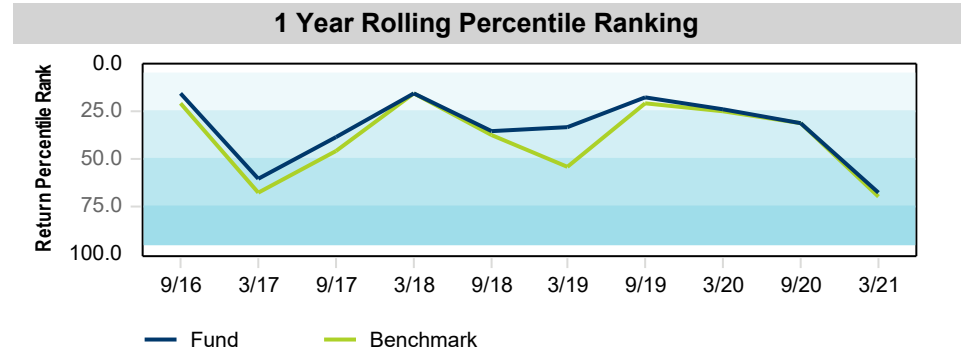
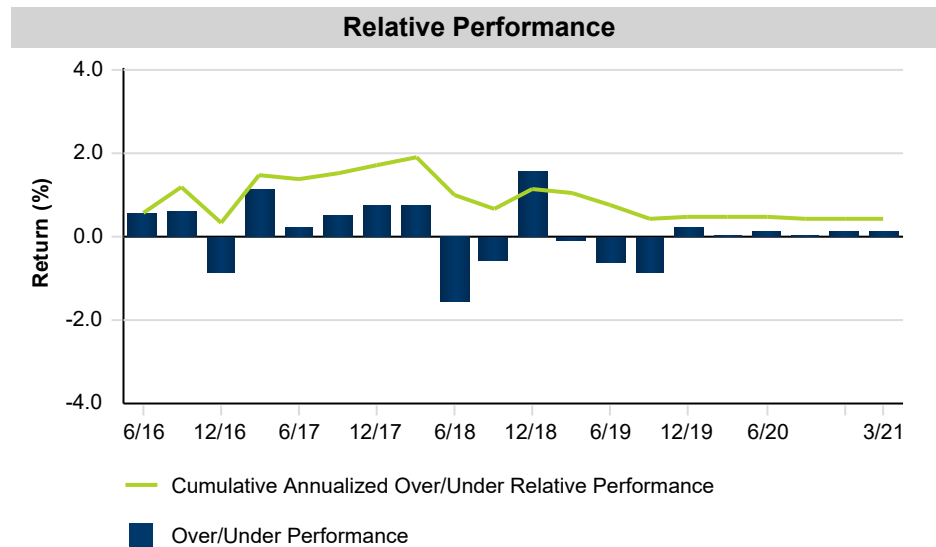
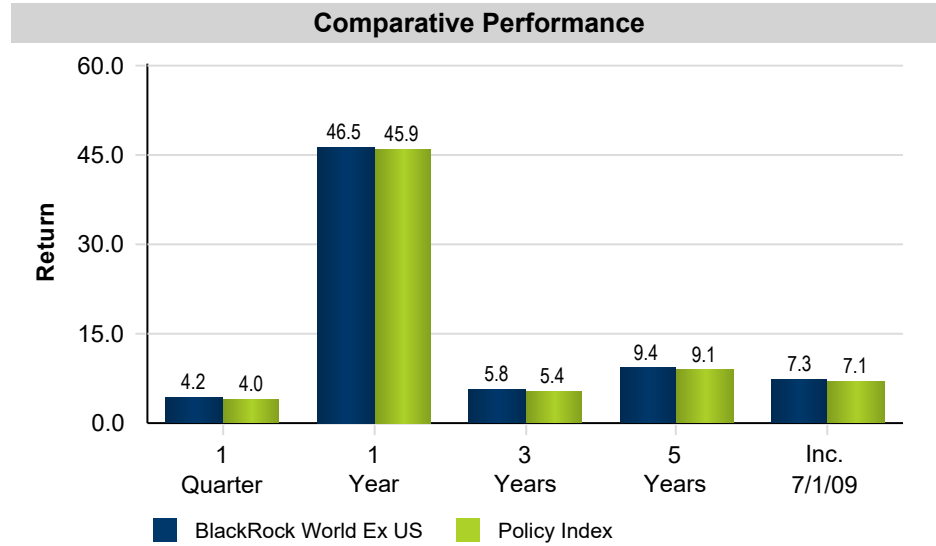
	<u>BlackRock World Ex US</u>	<u>Policy Index</u>
Standard Deviation	16.64	16.58
Alpha	0.30	0.00
Active Return/Risk	0.03	0.00
Tracking Error	0.18	0.00
Information Ratio	2.57	
Sharpe Ratio	2.40	2.38

Correlation Statistics

	<u>BlackRock World Ex US</u>	<u>Policy Index</u>
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

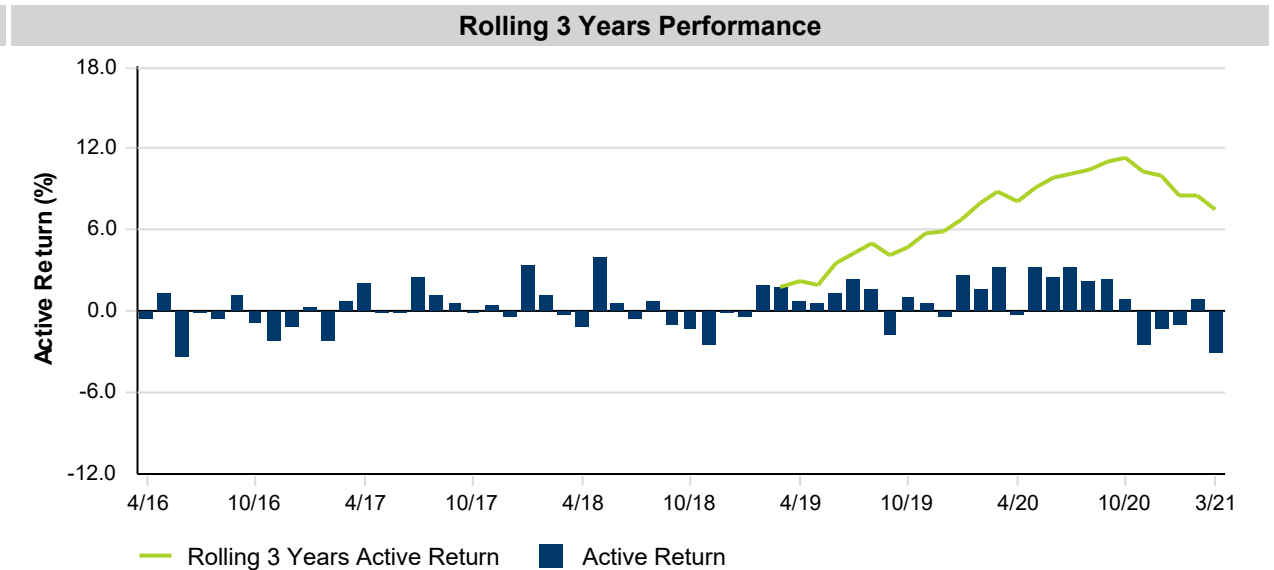
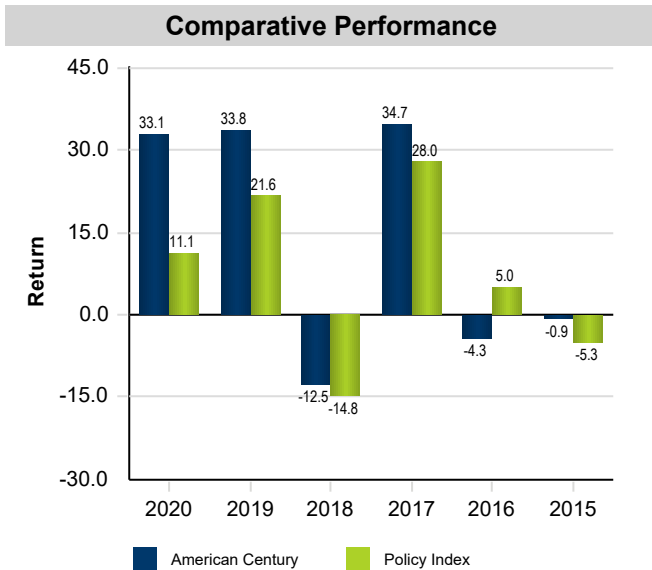
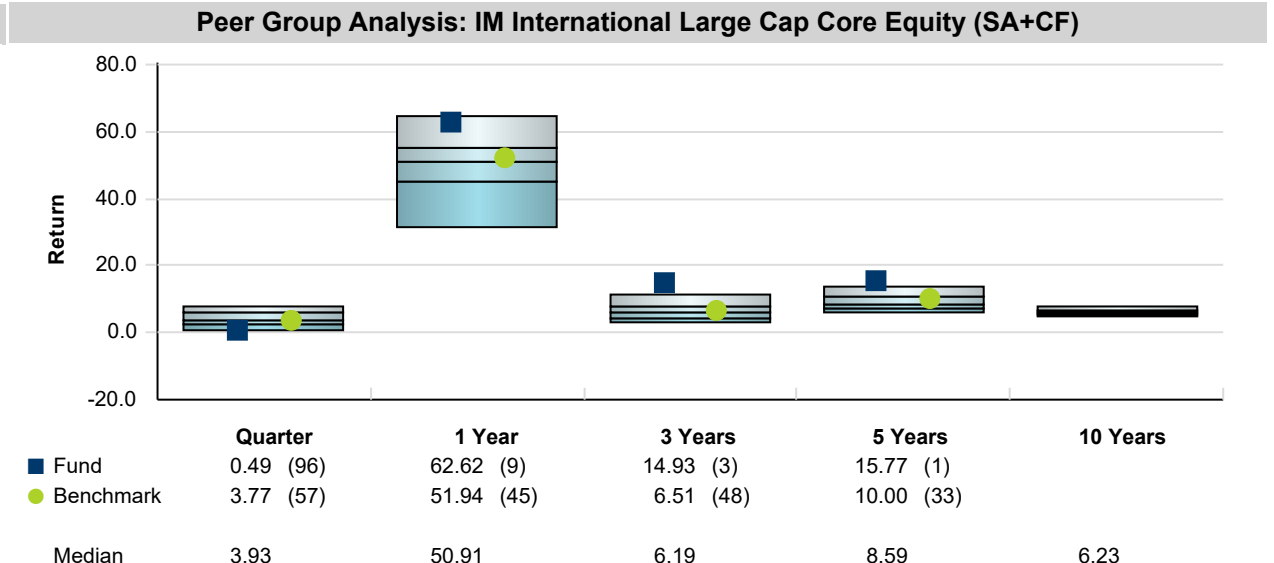
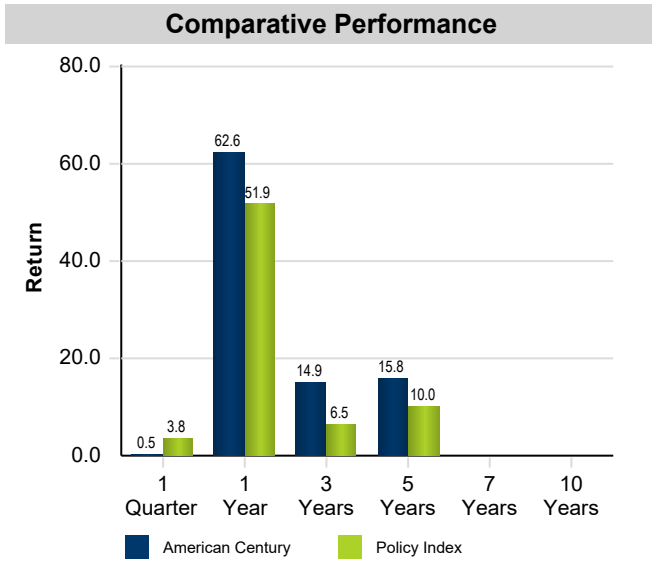
Manager Summary

BlackRock World Ex US vs IM Enhanced and Indexed International Equity (SA+CF)
 Periods Ended March 31, 2021



Performance Summary

American Century
Periods Ended March 31, 2021



Summary Statistics

American Century

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>American Century</u>	<u>Policy Index</u>
Maximum Return	10.94	13.50
Minimum Return	-1.73	-2.30
Return	62.62	51.94
Cumulative Return	62.62	51.94
Active Return	7.01	0.00
Excess Return	50.47	43.46

Risk Summary Statistics

	<u>American Century</u>	<u>Policy Index</u>
Upside Risk	5.83	5.48
Downside Risk	2.30	3.20
Beta	0.84	1.00

Risk/Return Summary Statistics

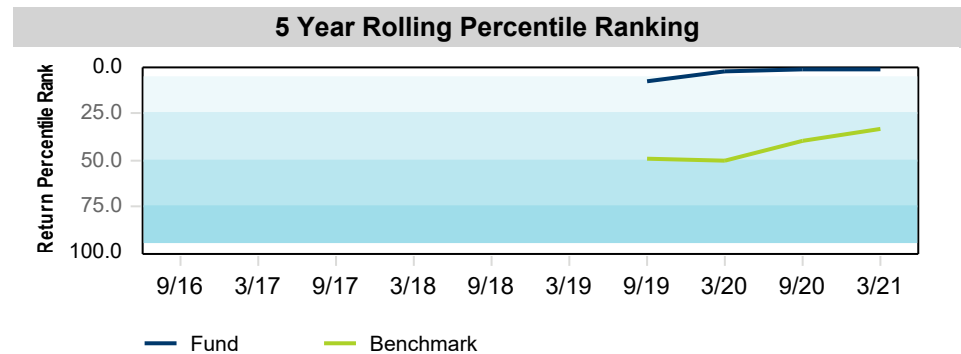
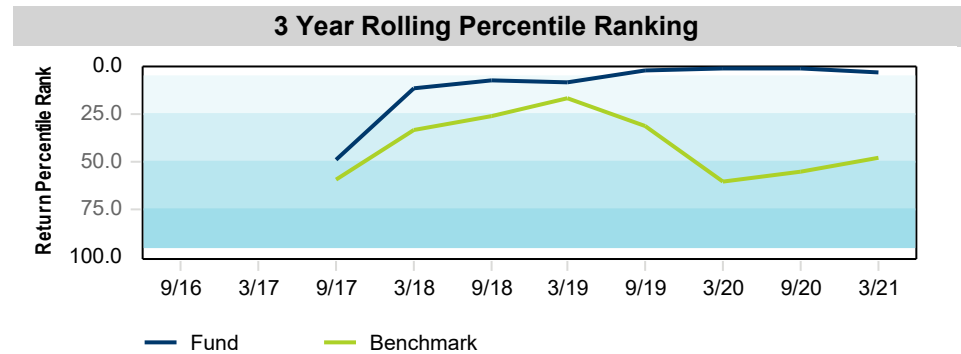
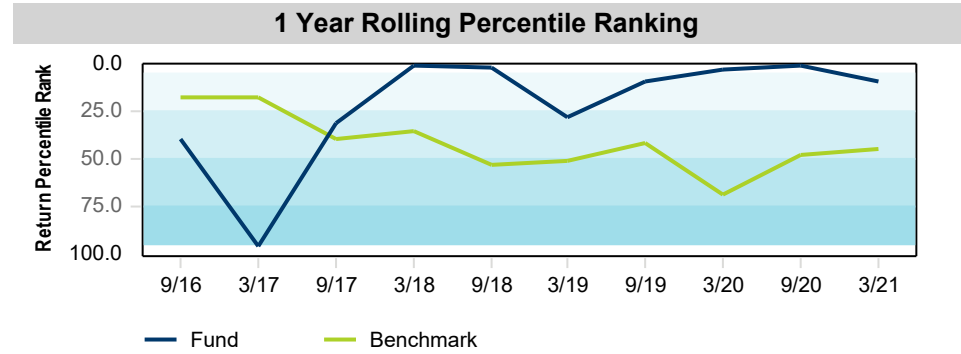
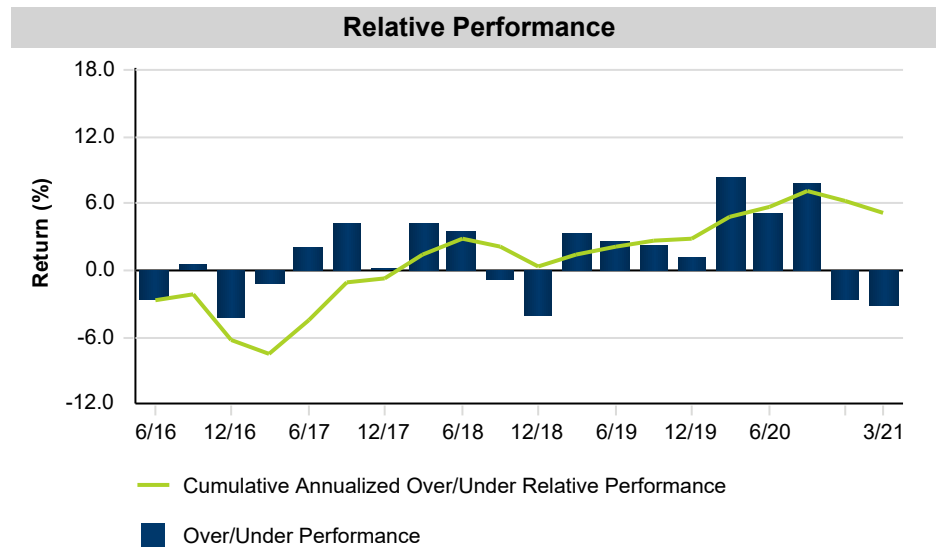
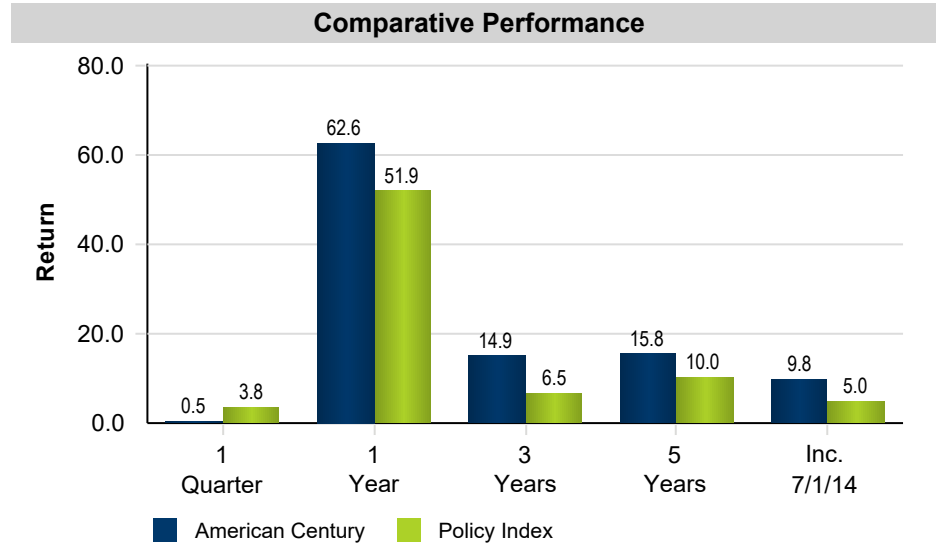
	<u>American Century</u>	<u>Policy Index</u>
Standard Deviation	14.15	14.58
Alpha	14.73	0.00
Active Return/Risk	0.50	0.00
Tracking Error	7.36	0.00
Information Ratio	0.95	
Sharpe Ratio	3.57	2.98

Correlation Statistics

	<u>American Century</u>	<u>Policy Index</u>
R-Squared	0.76	1.00
Actual Correlation	0.87	1.00

Manager Summary

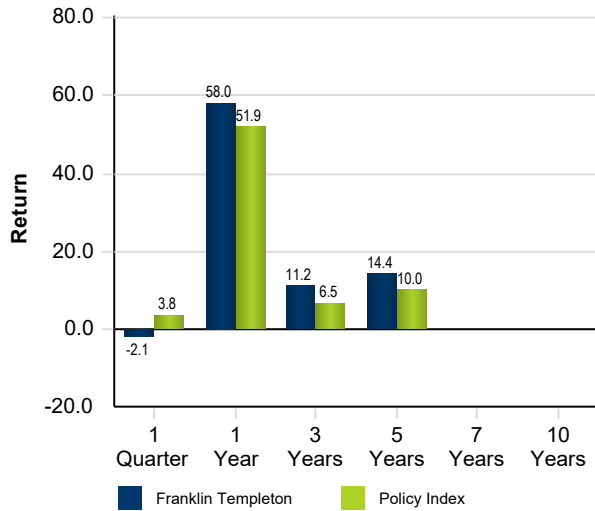
American Century vs IM International Large Cap Core Equity (SA+CF)
 Periods Ended March 31, 2021



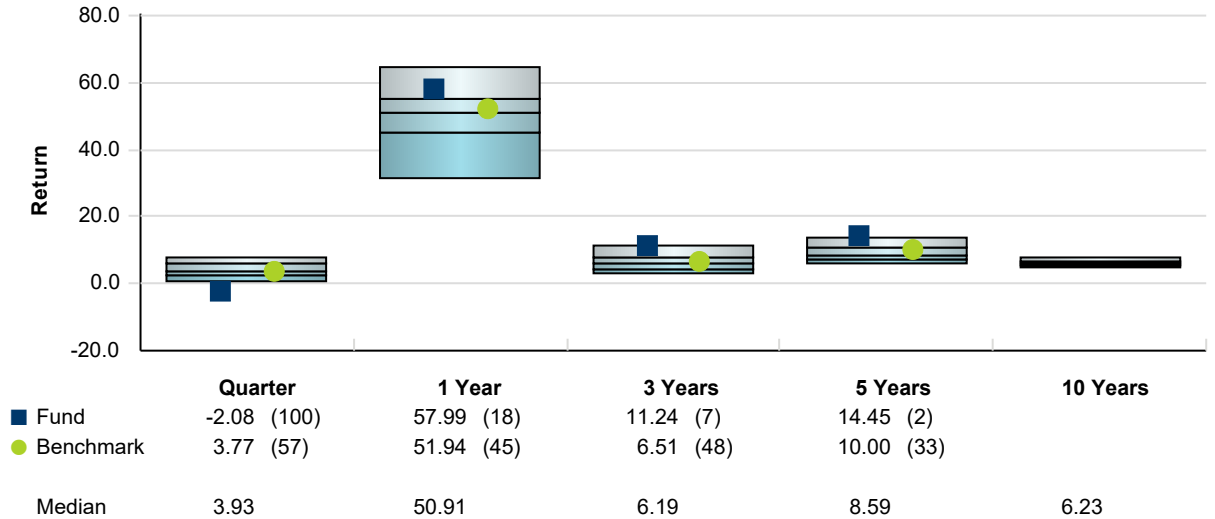
Performance Summary

Franklin Templeton
 Periods Ended March 31, 2021

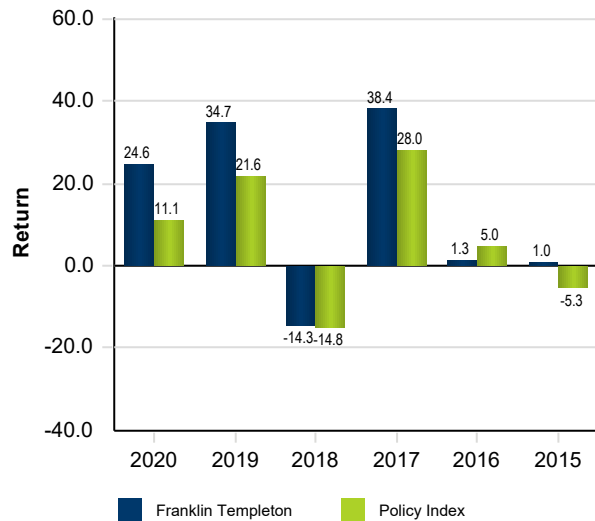
Comparative Performance



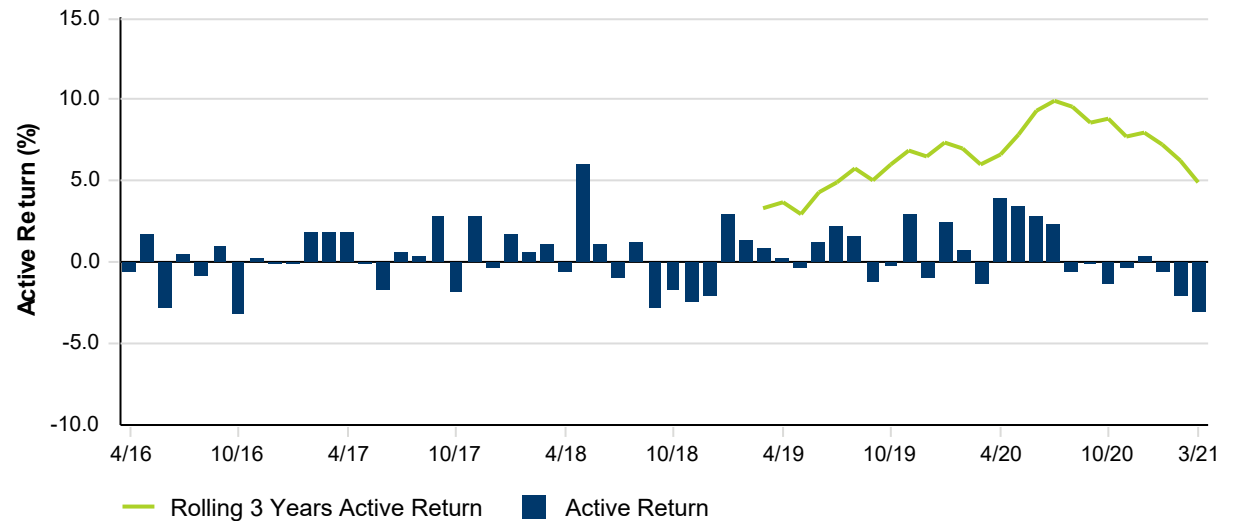
Peer Group Analysis: IM International Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Franklin Templeton

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Franklin Templeton</u>	<u>Policy Index</u>
Maximum Return	13.11	13.50
Minimum Return	-3.55	-2.30
Return	57.99	51.94
Cumulative Return	57.99	51.94
Active Return	4.69	0.00
Excess Return	48.15	43.46

Risk Summary Statistics

	<u>Franklin Templeton</u>	<u>Policy Index</u>
Upside Risk	6.56	5.48
Downside Risk	4.60	3.20
Beta	1.18	1.00

Risk/Return Summary Statistics

	<u>Franklin Templeton</u>	<u>Policy Index</u>
Standard Deviation	18.55	14.58
Alpha	-3.08	0.00
Active Return/Risk	0.25	0.00
Tracking Error	7.43	0.00
Information Ratio	0.63	
Sharpe Ratio	2.60	2.98

Correlation Statistics

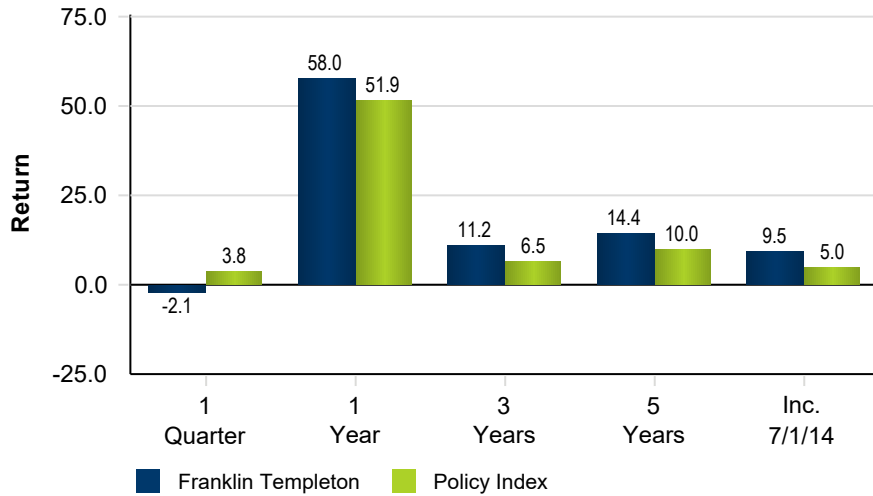
	<u>Franklin Templeton</u>	<u>Policy Index</u>
R-Squared	0.86	1.00
Actual Correlation	0.93	1.00

Manager Summary

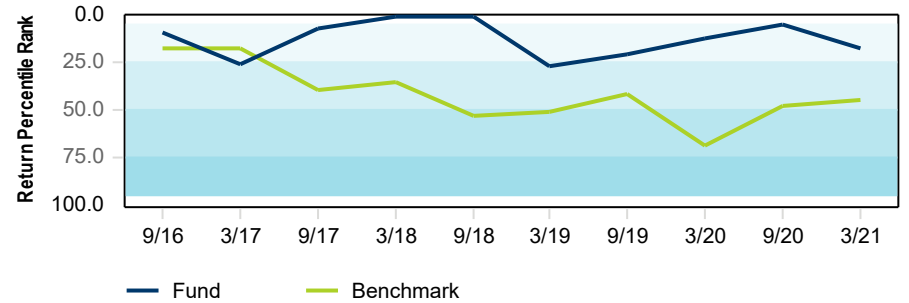
Franklin Templeton vs IM International Large Cap Core Equity (SA+CF)

Periods Ended March 31, 2021

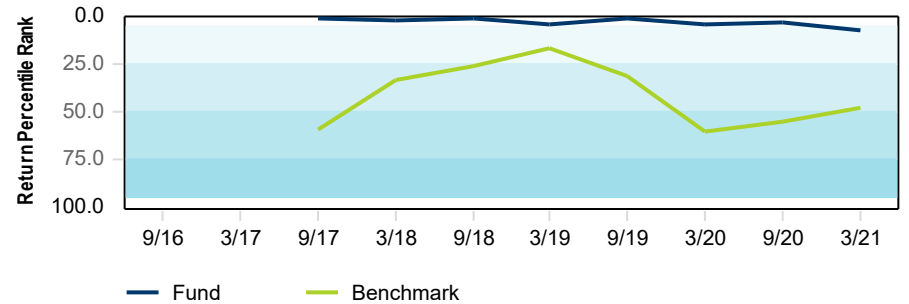
Comparative Performance



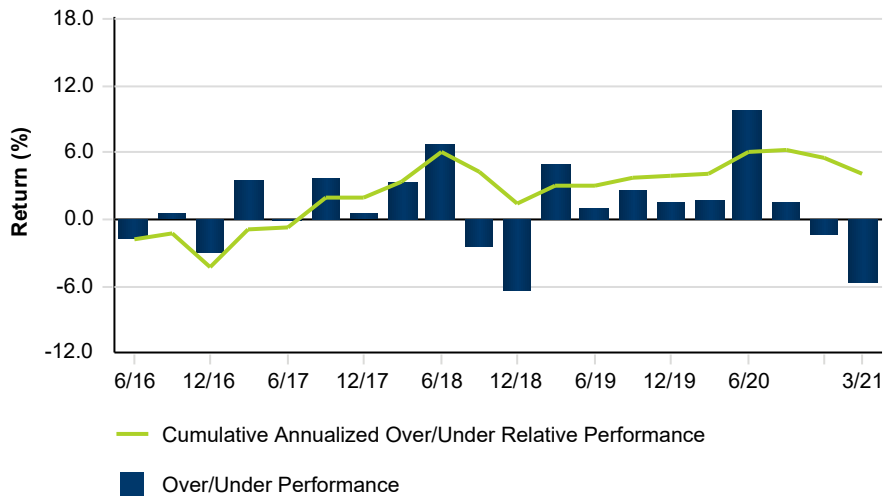
1 Year Rolling Percentile Ranking



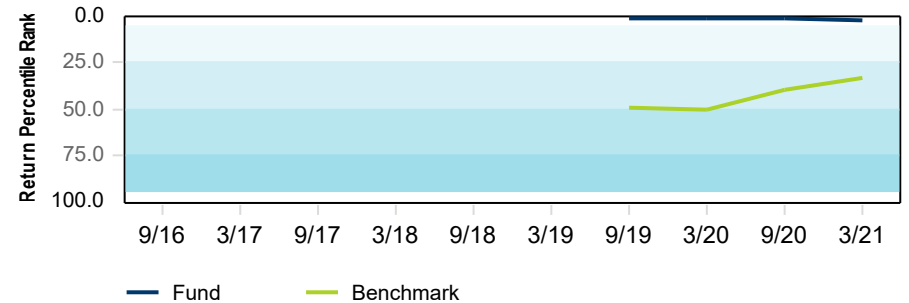
3 Year Rolling Percentile Ranking



Relative Performance

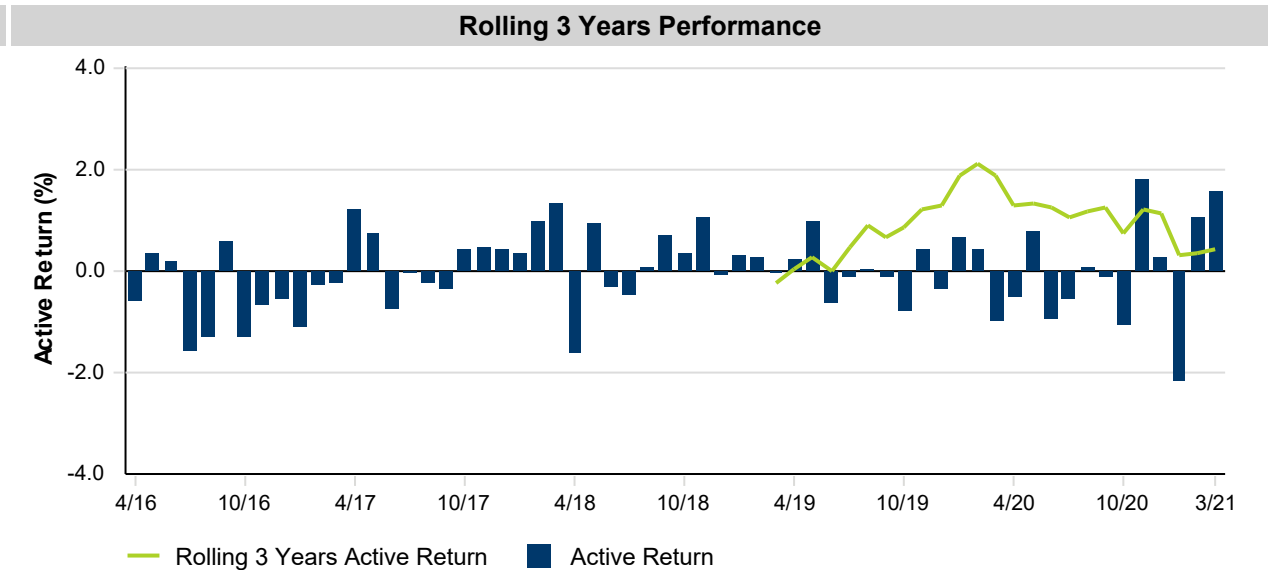
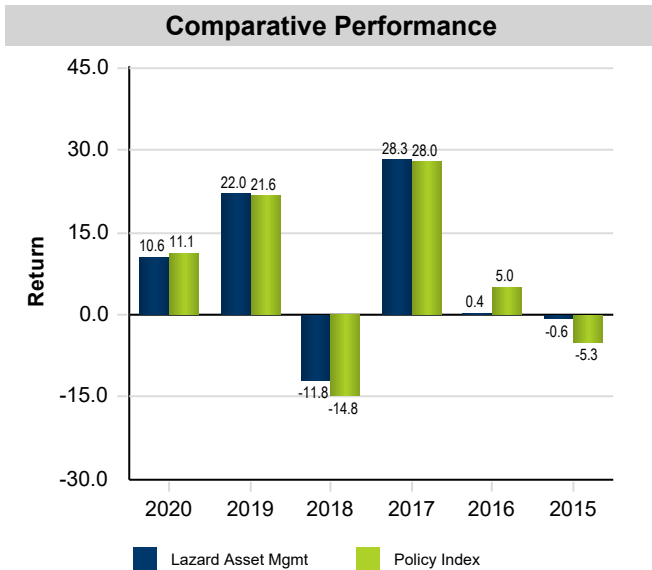
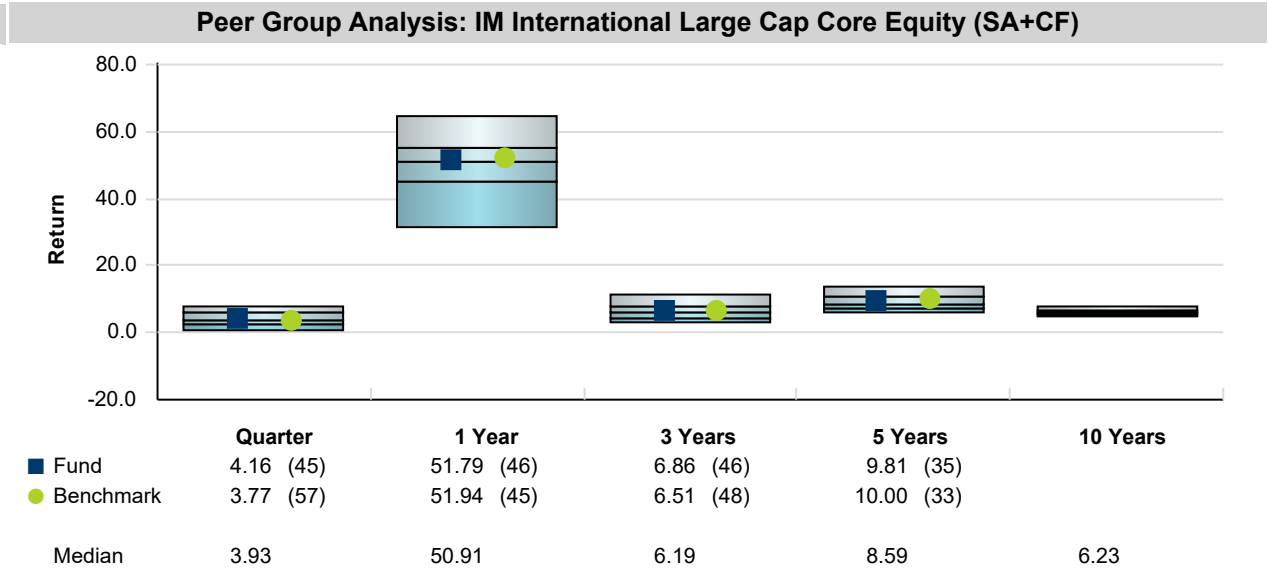
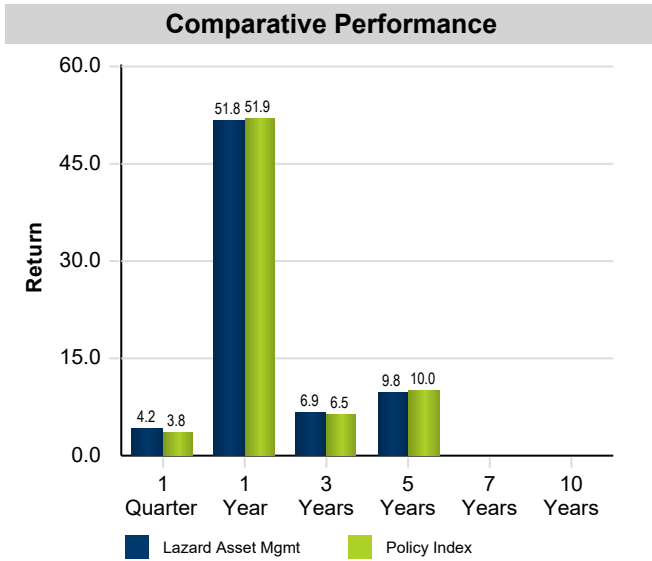


5 Year Rolling Percentile Ranking



Performance Summary

Lazard Asset Mgmt
Periods Ended March 31, 2021



Summary Statistics

Lazard Asset Mgmt

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Lazard Asset Mgmt</u>	<u>Policy Index</u>
Maximum Return	15.32	13.50
Minimum Return	-3.28	-2.30
Return	51.79	51.94
Cumulative Return	51.79	51.94
Active Return	0.20	0.00
Excess Return	43.66	43.46

Risk Summary Statistics

	<u>Lazard Asset Mgmt</u>	<u>Policy Index</u>
Upside Risk	5.88	5.48
Downside Risk	4.55	3.20
Beta	1.12	1.00

Risk/Return Summary Statistics

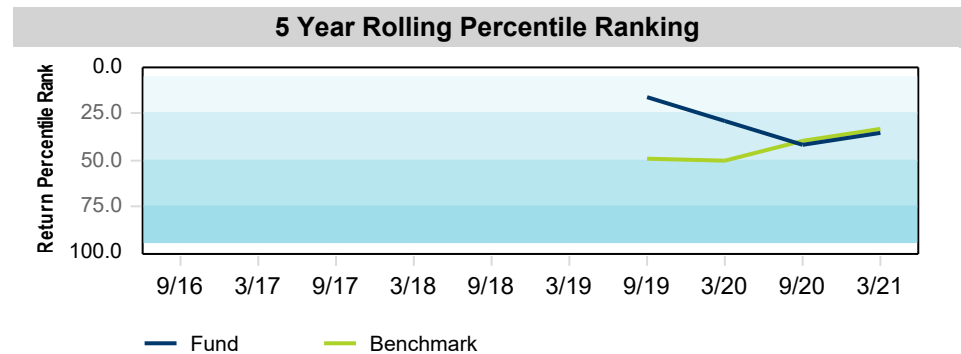
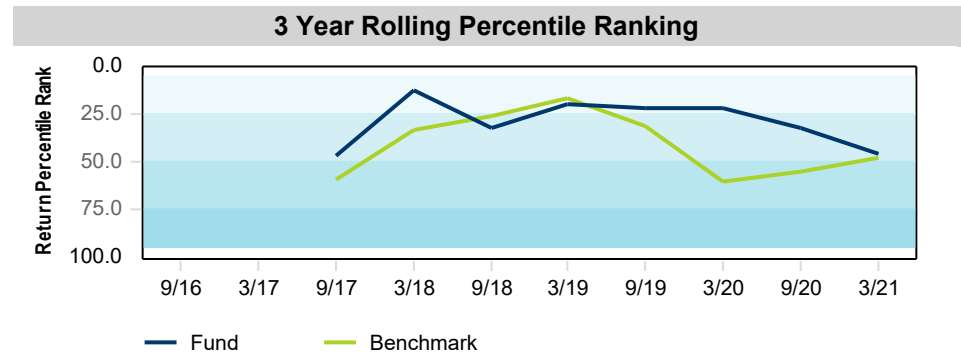
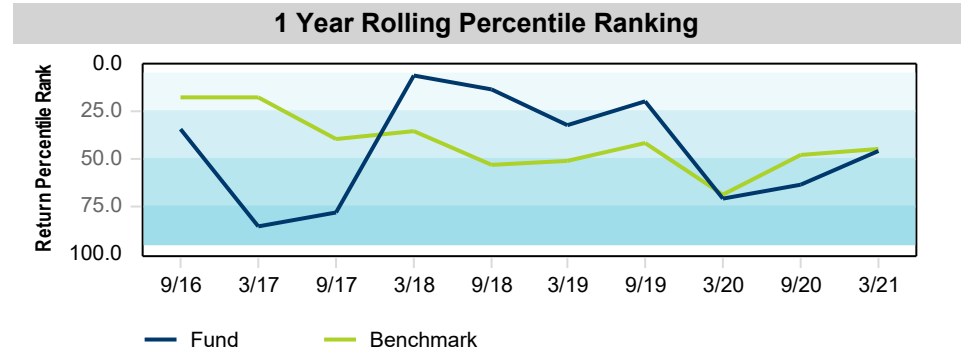
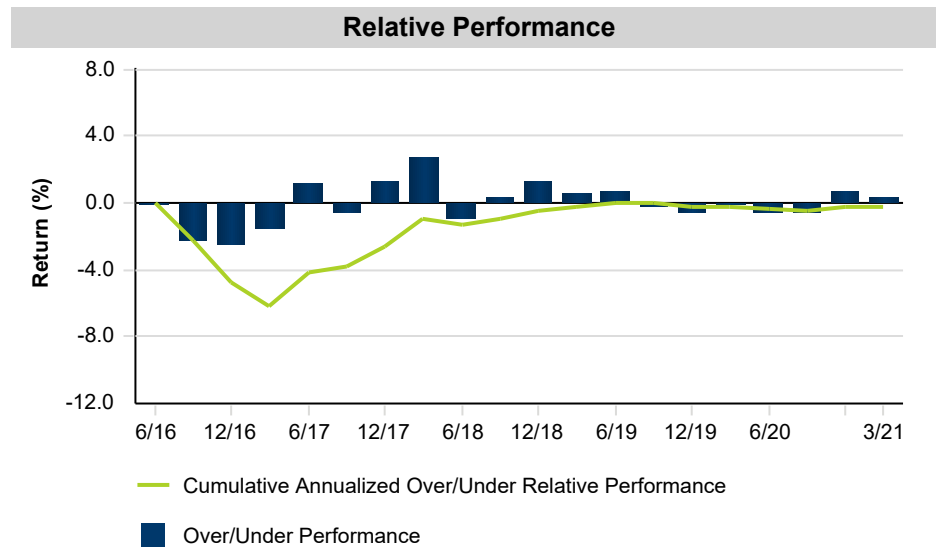
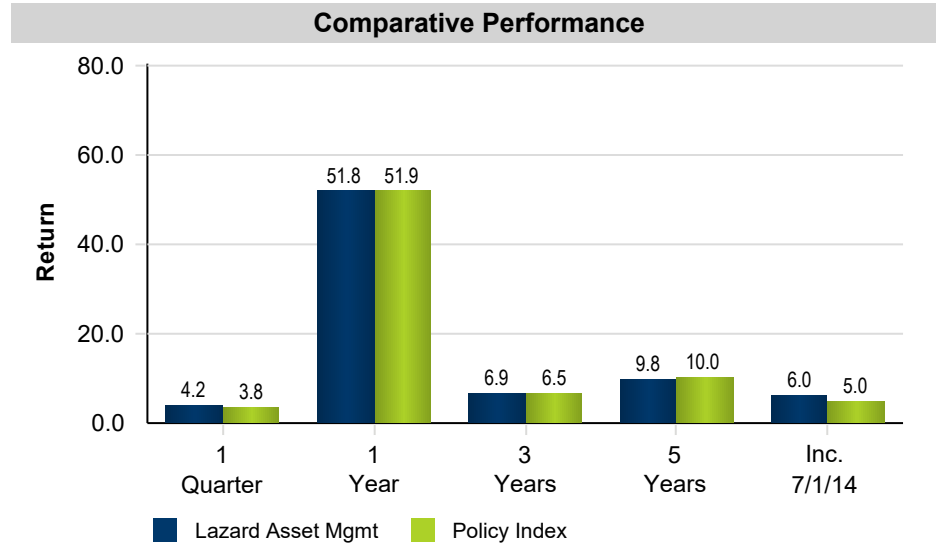
	<u>Lazard Asset Mgmt</u>	<u>Policy Index</u>
Standard Deviation	16.63	14.58
Alpha	-4.72	0.00
Active Return/Risk	0.01	0.00
Tracking Error	3.86	0.00
Information Ratio	0.05	
Sharpe Ratio	2.63	2.98

Correlation Statistics

	<u>Lazard Asset Mgmt</u>	<u>Policy Index</u>
R-Squared	0.96	1.00
Actual Correlation	0.98	1.00

Manager Summary

Lazard Asset Mgmt vs IM International Large Cap Core Equity (SA+CF)
 Periods Ended March 31, 2021

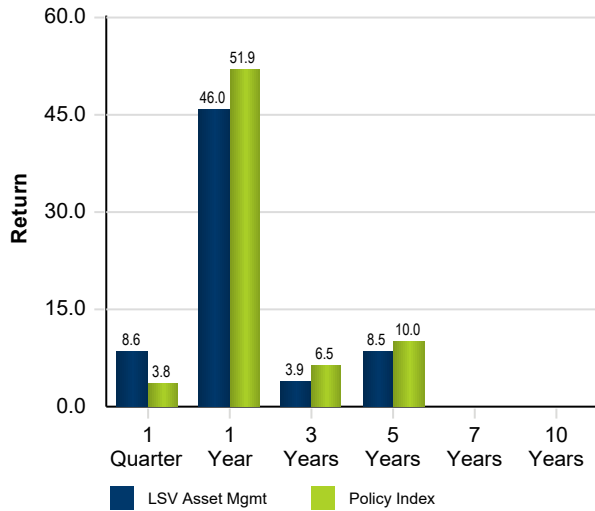


Performance Summary

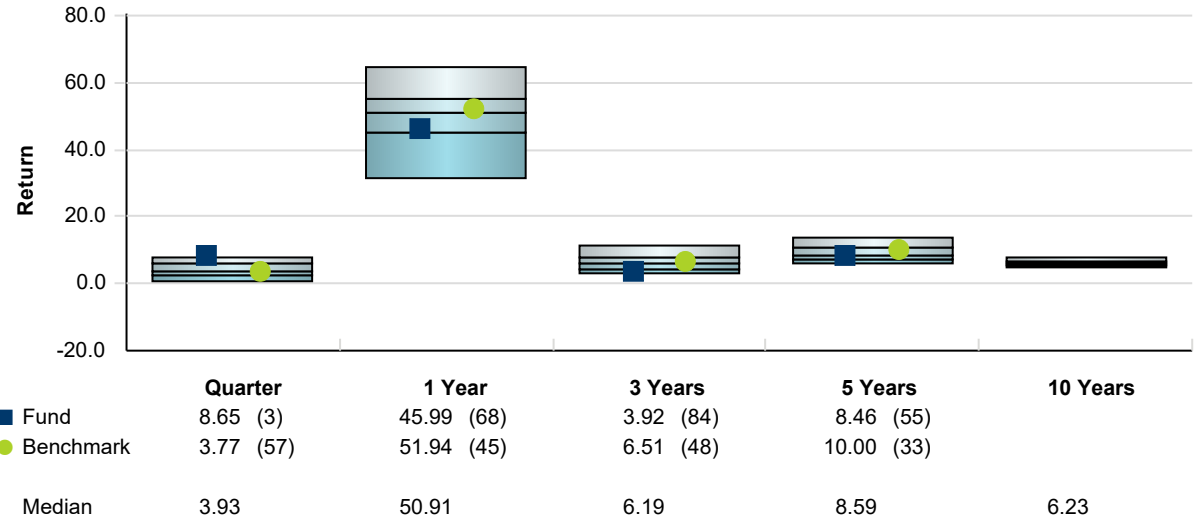
LSV Asset Mgmt

Periods Ended March 31, 2021

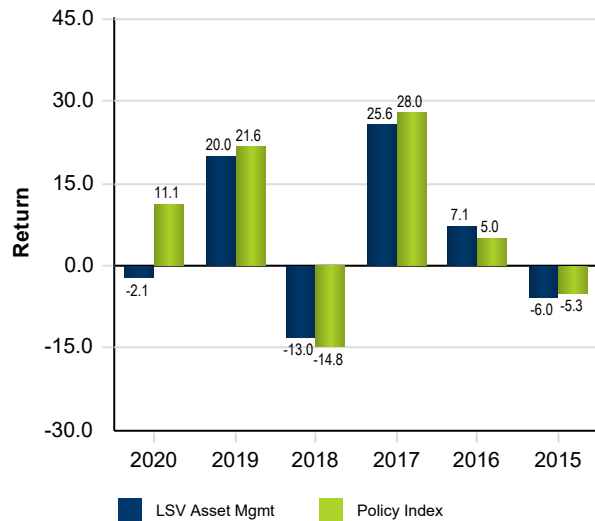
Comparative Performance



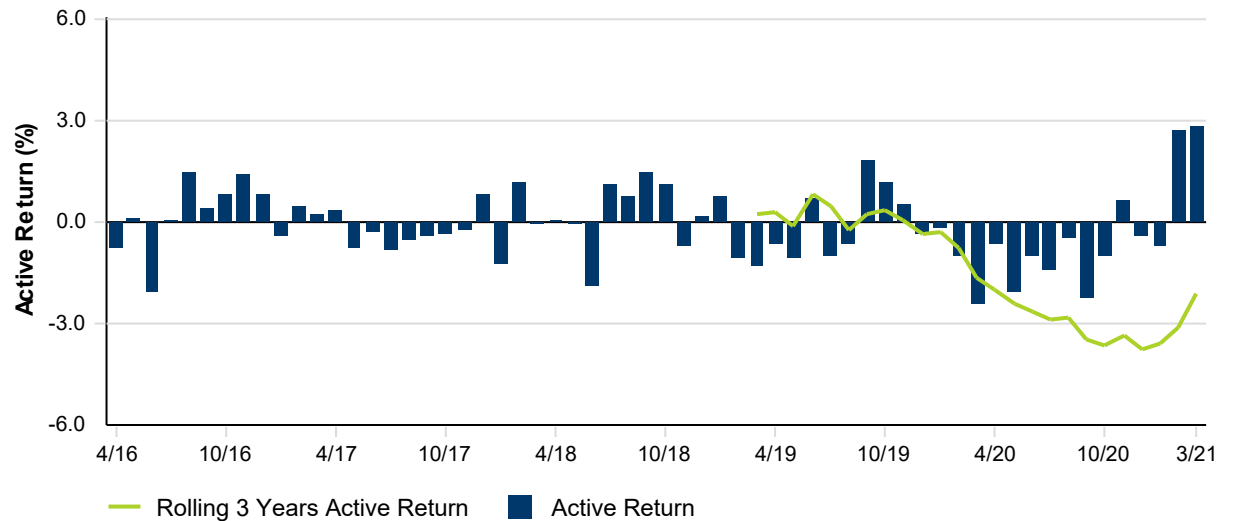
Peer Group Analysis: IM International Large Cap Core Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

LSV Asset Mgmt

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>LSV Asset Mgmt</u>	<u>Policy Index</u>
Maximum Return	14.16	13.50
Minimum Return	-4.55	-2.30
Return	45.99	51.94
Cumulative Return	45.99	51.94
Active Return	-3.87	0.00
Excess Return	39.59	43.46

Risk Summary Statistics

	<u>LSV Asset Mgmt</u>	<u>Policy Index</u>
Upside Risk	5.52	5.48
Downside Risk	5.59	3.20
Beta	1.06	1.00

Risk/Return Summary Statistics

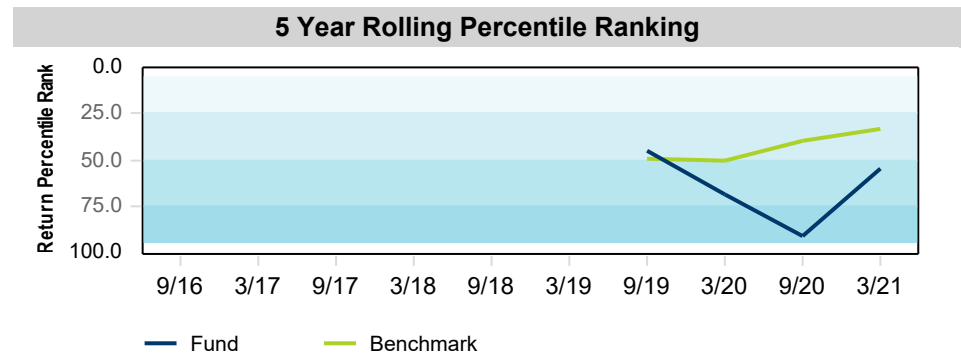
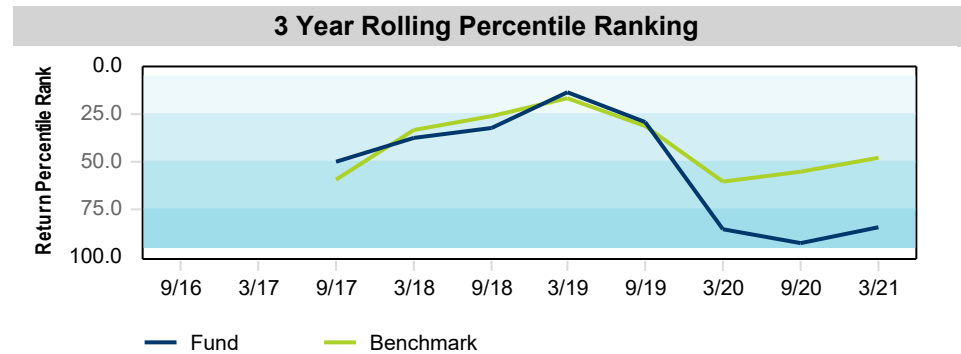
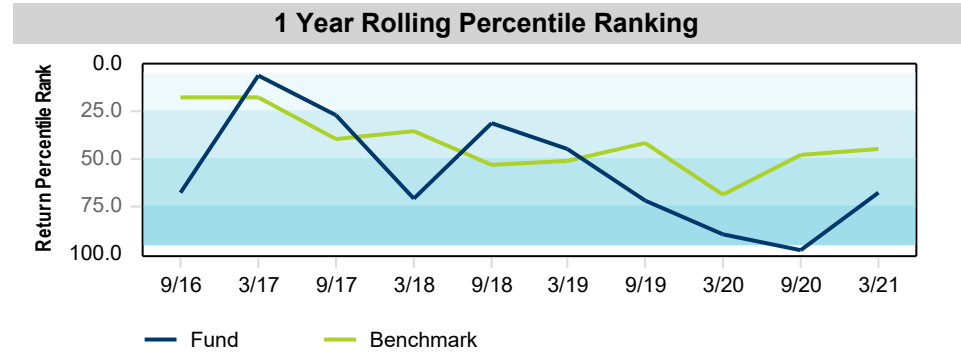
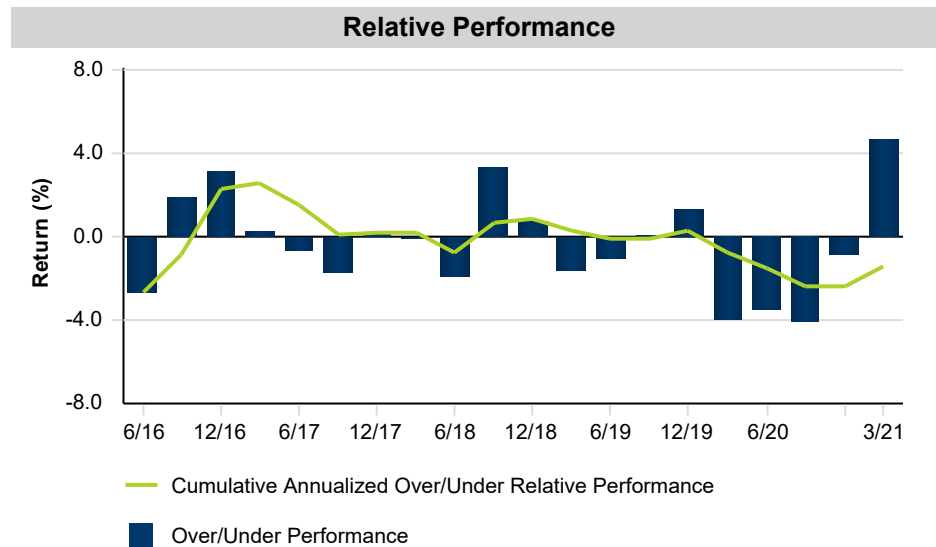
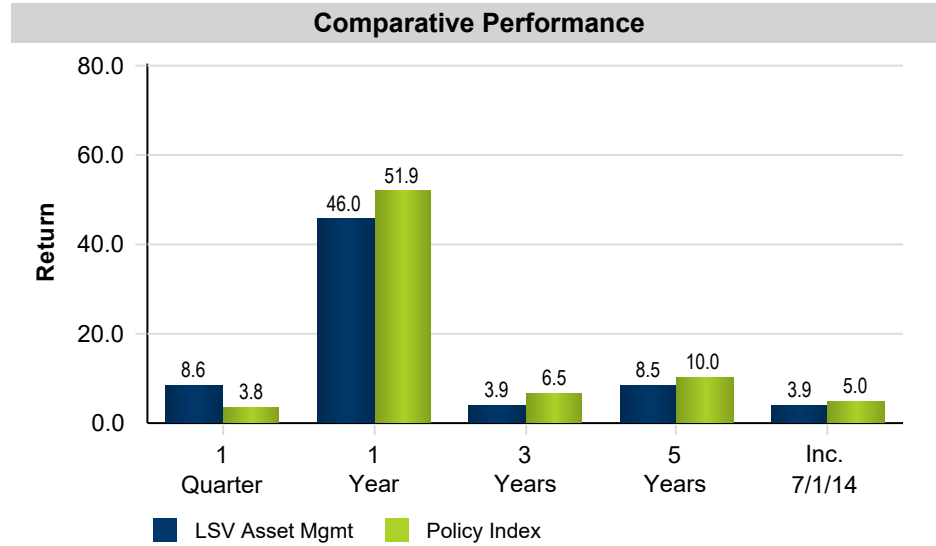
	<u>LSV Asset Mgmt</u>	<u>Policy Index</u>
Standard Deviation	16.28	14.58
Alpha	-6.10	0.00
Active Return/Risk	-0.24	0.00
Tracking Error	5.38	0.00
Information Ratio	-0.72	
Sharpe Ratio	2.43	2.98

Correlation Statistics

	<u>LSV Asset Mgmt</u>	<u>Policy Index</u>
R-Squared	0.89	1.00
Actual Correlation	0.95	1.00

Manager Summary

LSV Asset Mgmt vs IM International Large Cap Core Equity (SA+CF)
 Periods Ended March 31, 2021

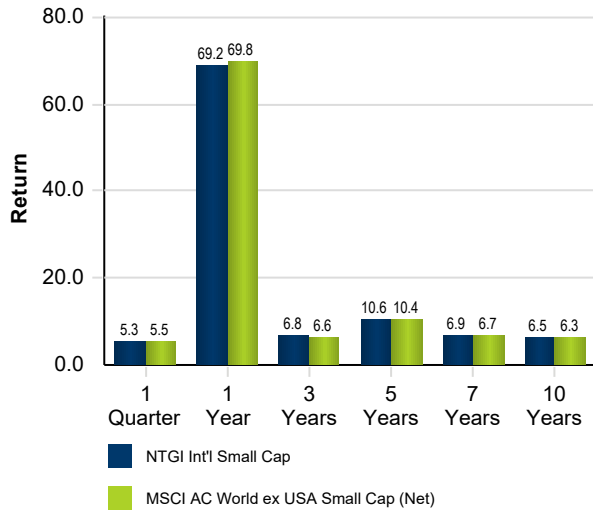


Performance Summary

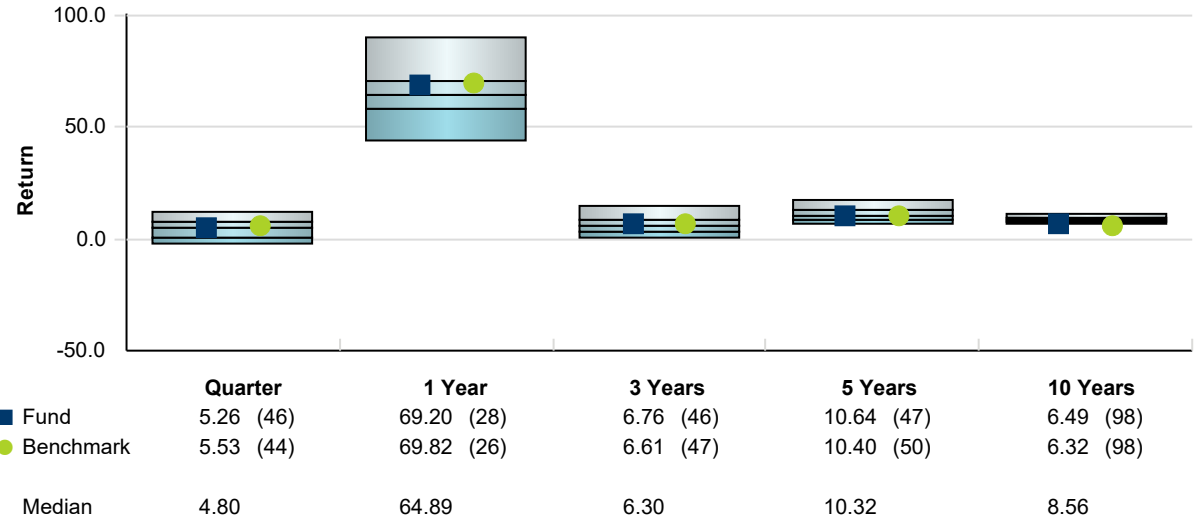
NTGI Int'l Small Cap

Periods Ended March 31, 2021

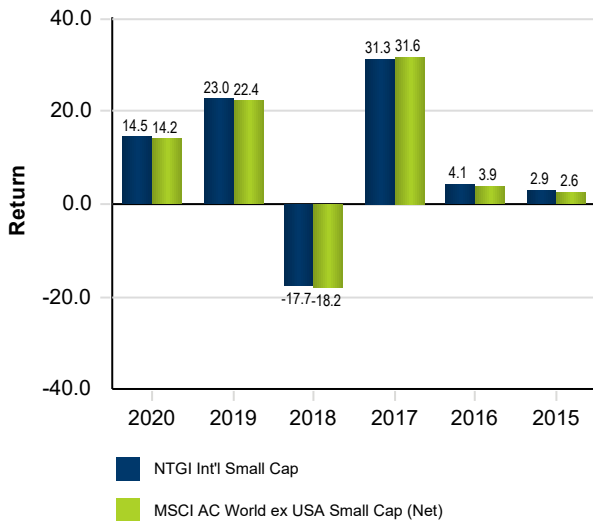
Comparative Performance



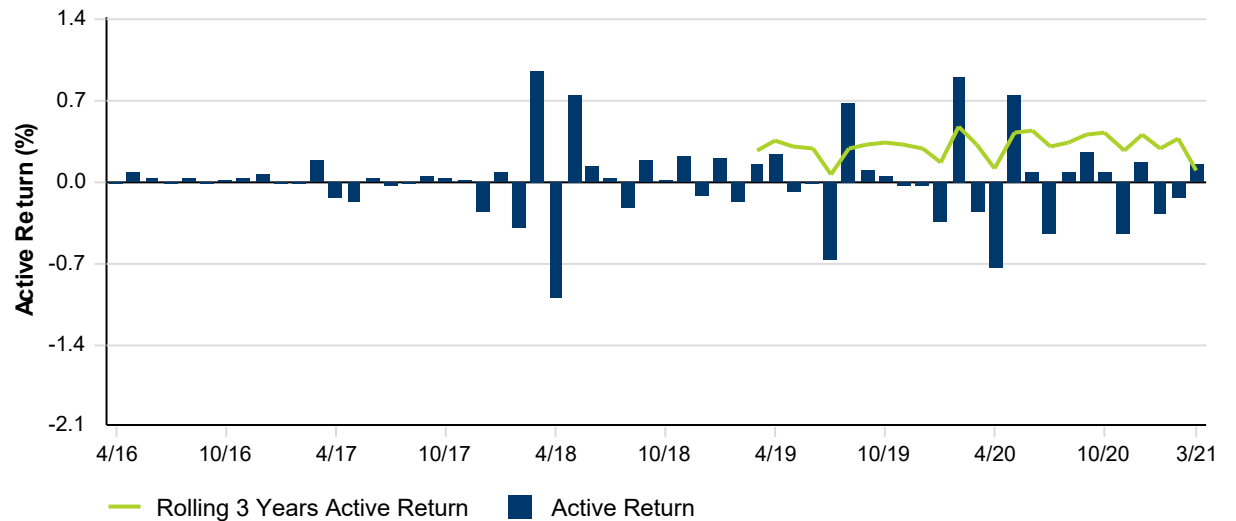
Peer Group Analysis: IM International Small Cap Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

NTGI Int'l Small Cap

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>NTGI Int'l Small Cap</u>	<u>MSCI AC World ex USA Small Cap (Net)</u>
Maximum Return	13.40	13.84
Minimum Return	-2.57	-2.66
Return	69.20	69.82
Cumulative Return	69.20	69.82
Active Return	-0.46	0.00
Excess Return	54.86	55.32

Risk Summary Statistics

	<u>NTGI Int'l Small Cap</u>	<u>MSCI AC World ex USA Small Cap (Net)</u>
Upside Risk	6.46	6.59
Downside Risk	2.80	2.95
Beta	0.97	1.00

Risk/Return Summary Statistics

	<u>NTGI Int'l Small Cap</u>	<u>MSCI AC World ex USA Small Cap (Net)</u>
Standard Deviation	16.02	16.54
Alpha	1.44	0.00
Active Return/Risk	-0.03	0.00
Tracking Error	1.32	0.00
Information Ratio	-0.35	
Sharpe Ratio	3.42	3.34

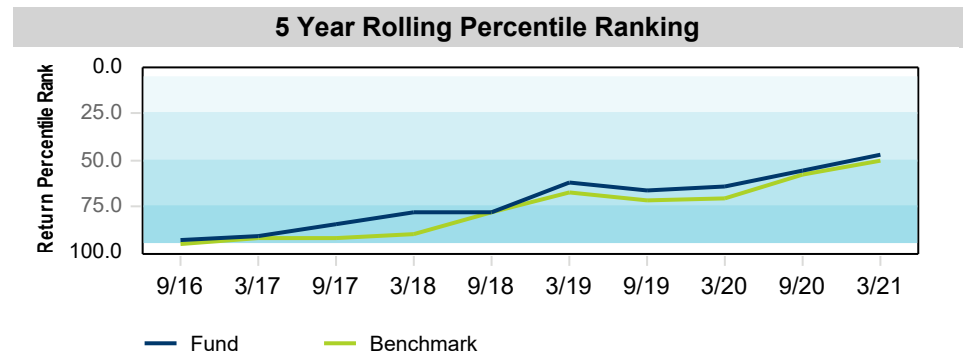
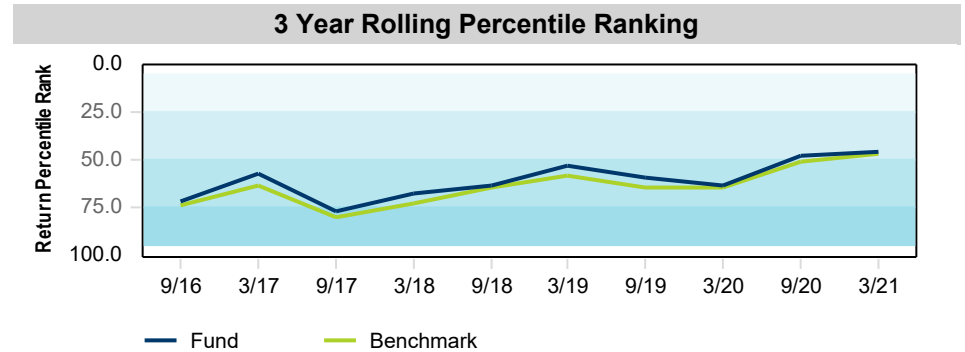
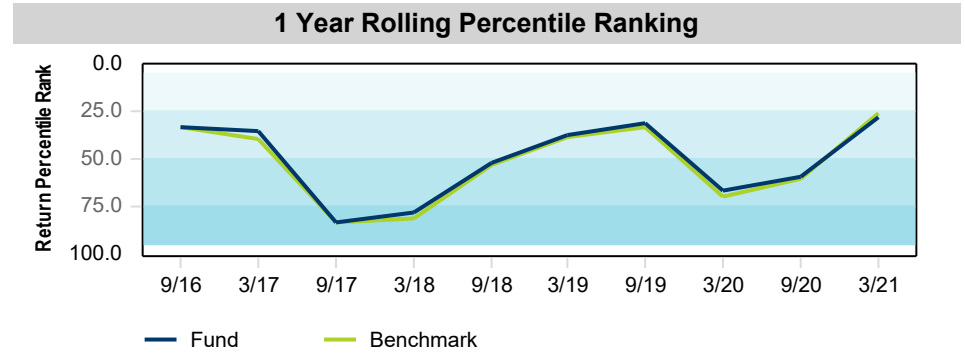
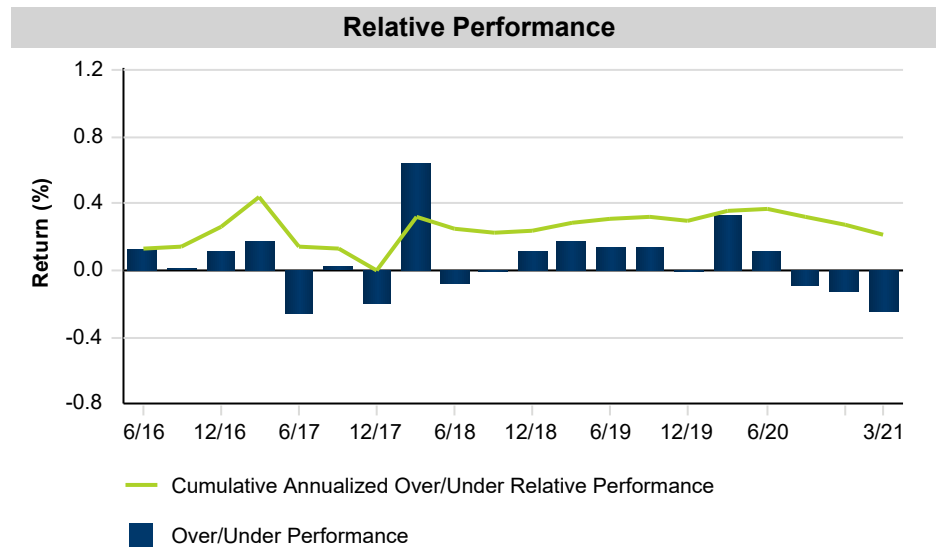
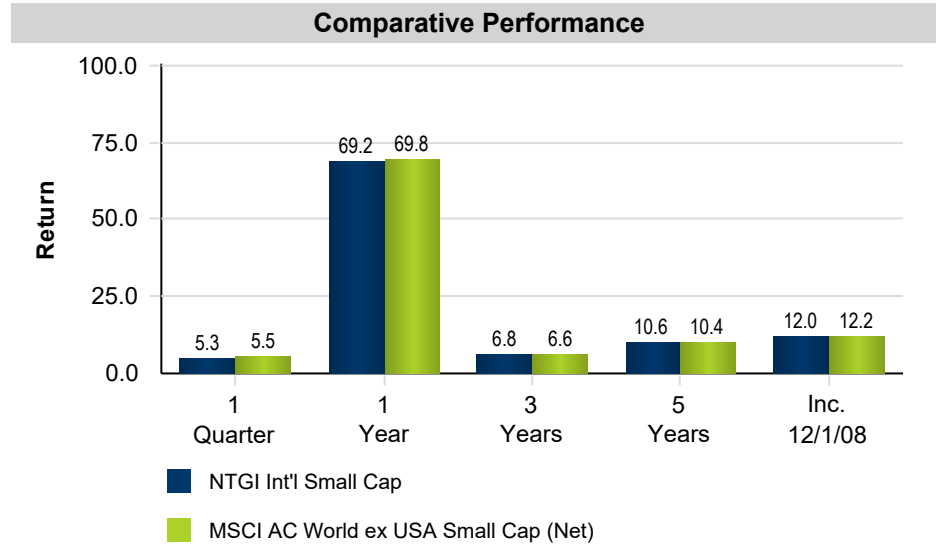
Correlation Statistics

	<u>NTGI Int'l Small Cap</u>	<u>MSCI AC World ex USA Small Cap (Net)</u>
R-Squared	0.99	1.00
Actual Correlation	1.00	1.00

Manager Summary

NTGI Int'l Small Cap vs IM International Small Cap Equity (SA+CF)

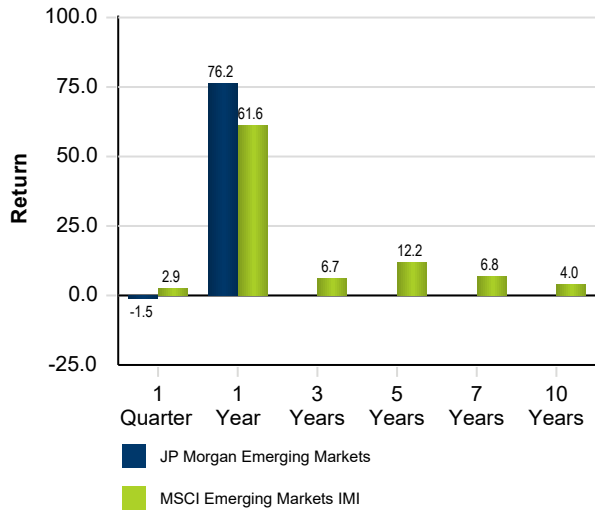
Periods Ended March 31, 2021



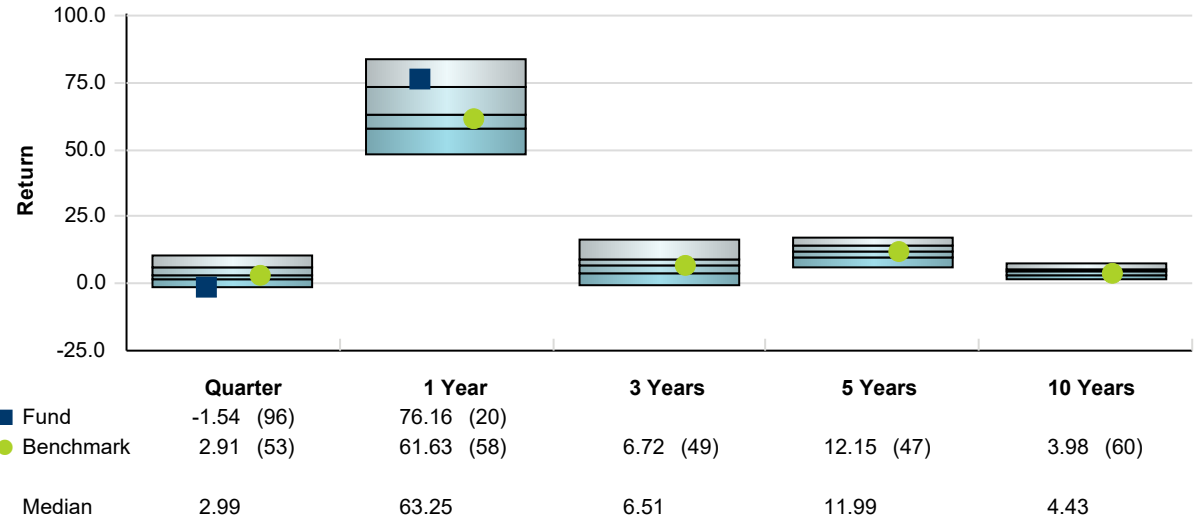
Performance Summary

JP Morgan Emerging Markets
Periods Ended March 31, 2021

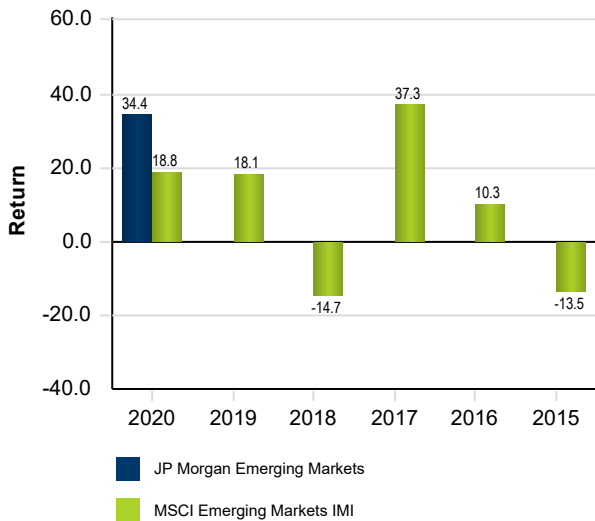
Comparative Performance



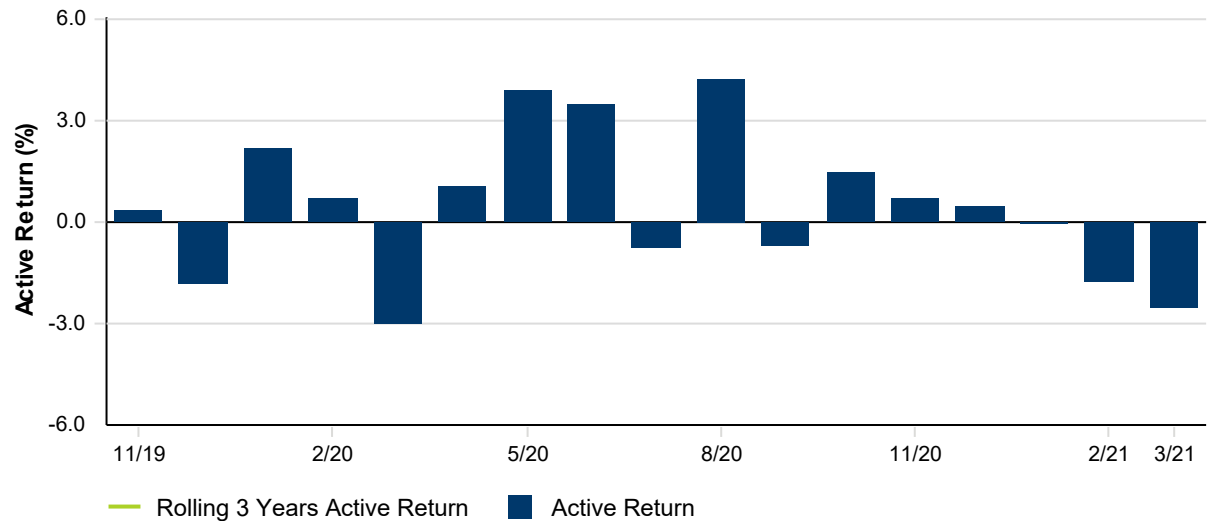
Peer Group Analysis: IM Emerging Markets Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

JP Morgan Emerging Markets

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>JP Morgan Emerging Markets</u>	<u>MSCI Emerging Markets IMI</u>
Maximum Return	11.01	9.72
Minimum Return	-3.70	-1.58
Return	76.16	61.63
Cumulative Return	76.16	61.63
Active Return	9.43	0.00
Excess Return	59.25	49.82

Risk Summary Statistics

	<u>JP Morgan Emerging Markets</u>	<u>MSCI Emerging Markets IMI</u>
Upside Risk	6.84	5.78
Downside Risk	4.37	1.97
Beta	1.09	1.00

Risk/Return Summary Statistics

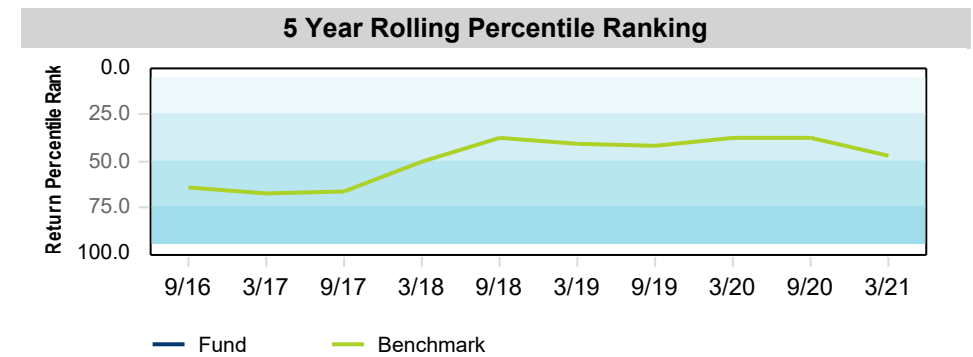
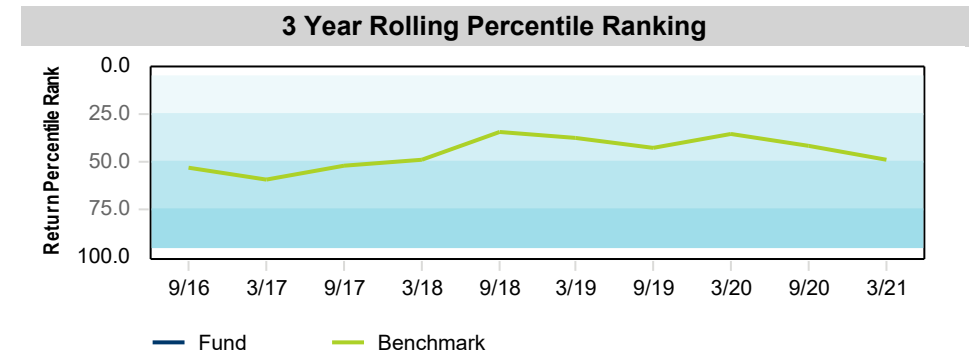
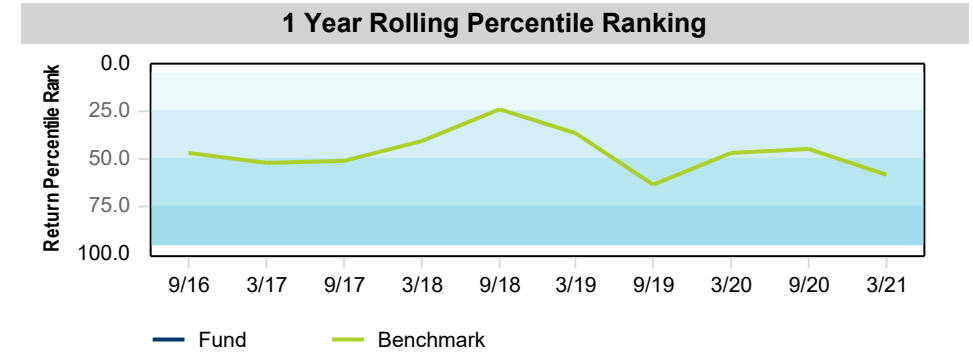
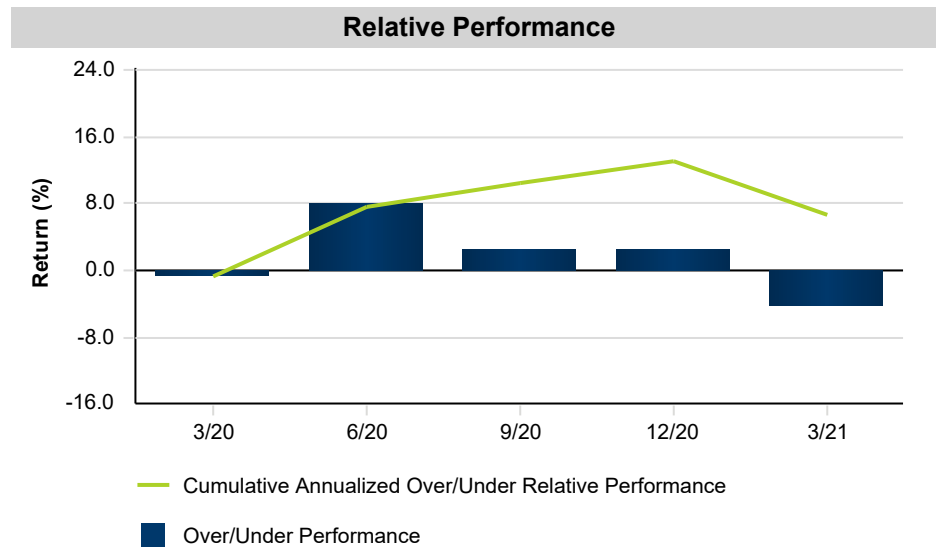
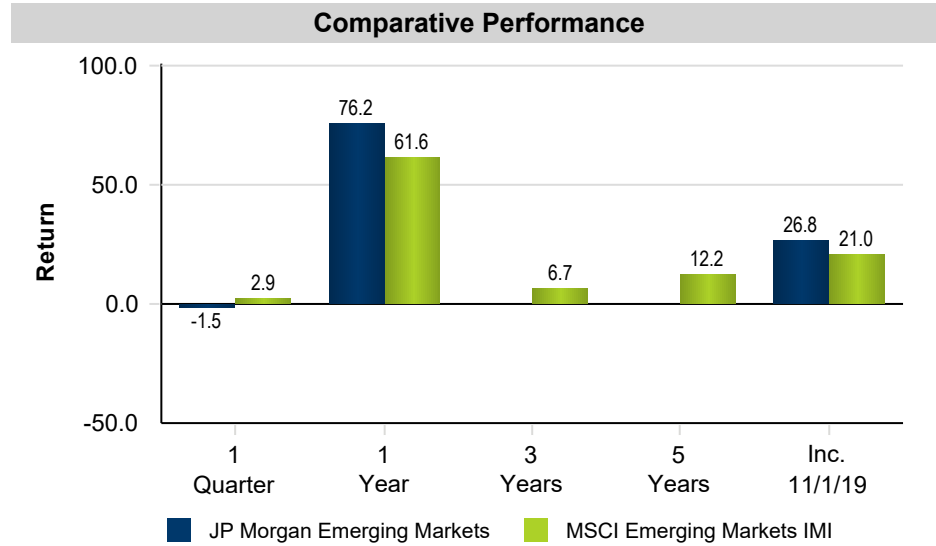
	<u>JP Morgan Emerging Markets</u>	<u>MSCI Emerging Markets IMI</u>
Standard Deviation	16.93	14.05
Alpha	4.82	0.00
Active Return/Risk	0.56	0.00
Tracking Error	7.21	0.00
Information Ratio	1.31	
Sharpe Ratio	3.50	3.55

Correlation Statistics

	<u>JP Morgan Emerging Markets</u>	<u>MSCI Emerging Markets IMI</u>
R-Squared	0.82	1.00
Actual Correlation	0.91	1.00

Manager Summary

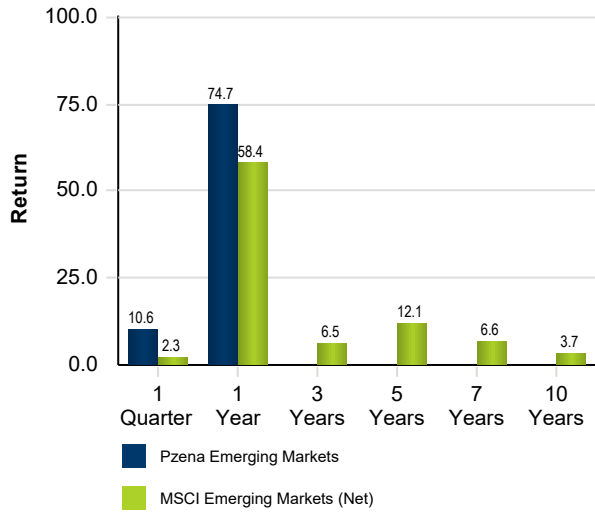
JP Morgan Emerging Markets vs IM Emerging Markets Equity (SA+CF)
 Periods Ended March 31, 2021



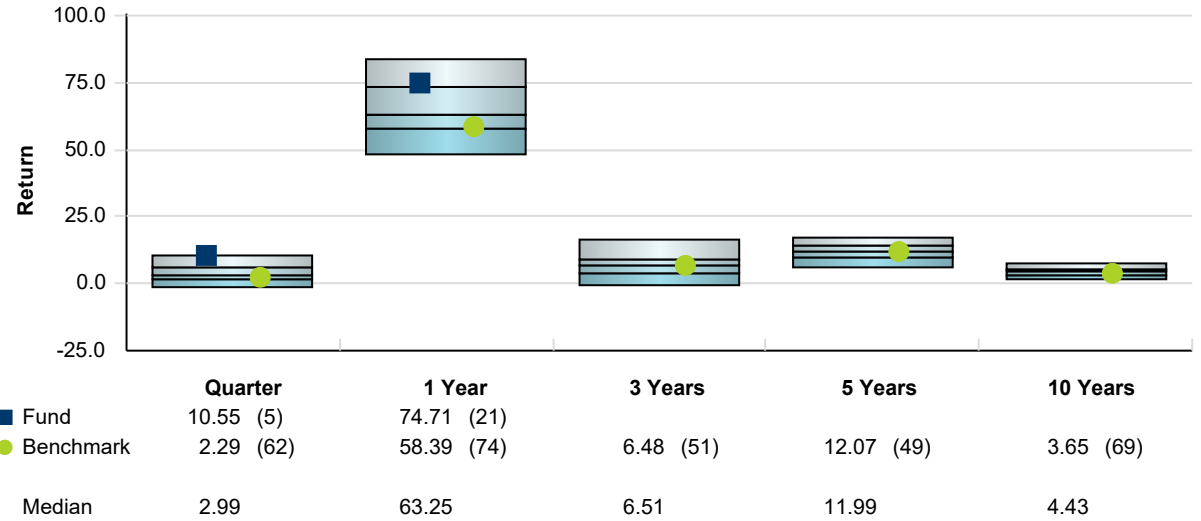
Performance Summary

Pzena Emerging Markets
Periods Ended March 31, 2021

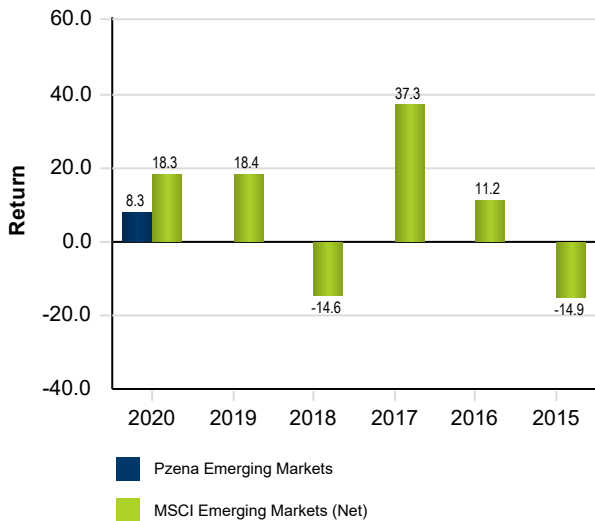
Comparative Performance



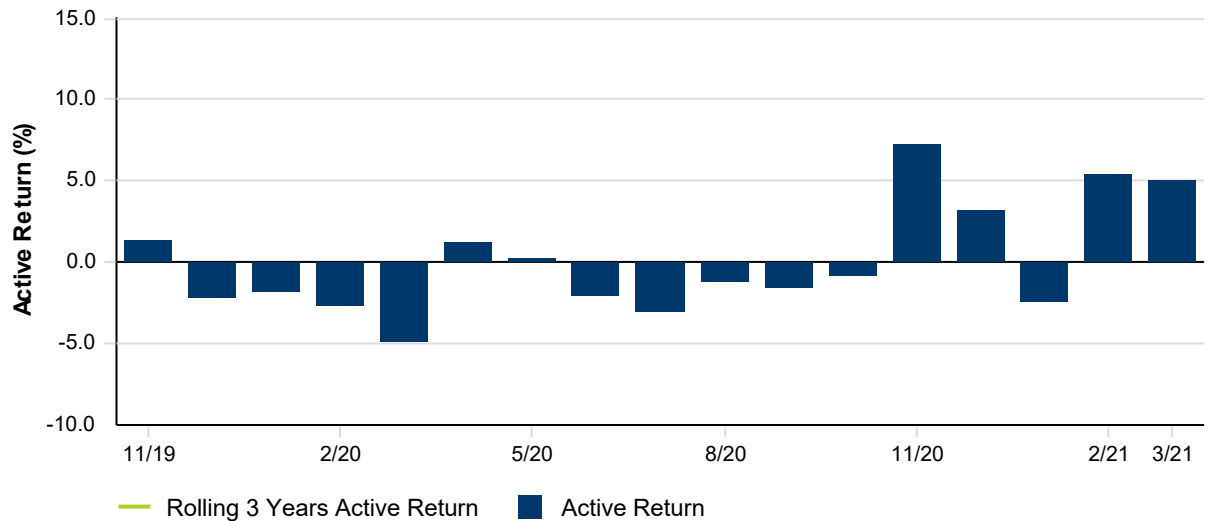
Peer Group Analysis: IM Emerging Markets Equity (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Pzena Emerging Markets

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Pzena Emerging Markets</u>	<u>MSCI Emerging Markets (Net)</u>
Maximum Return	16.46	9.25
Minimum Return	-3.23	-1.60
Return	74.71	58.39
Cumulative Return	74.71	58.39
Active Return	10.84	0.00
Excess Return	58.53	47.68

Risk Summary Statistics

	<u>Pzena Emerging Markets</u>	<u>MSCI Emerging Markets (Net)</u>
Upside Risk	7.09	5.61
Downside Risk	3.23	2.20
Beta	1.01	1.00

Risk/Return Summary Statistics

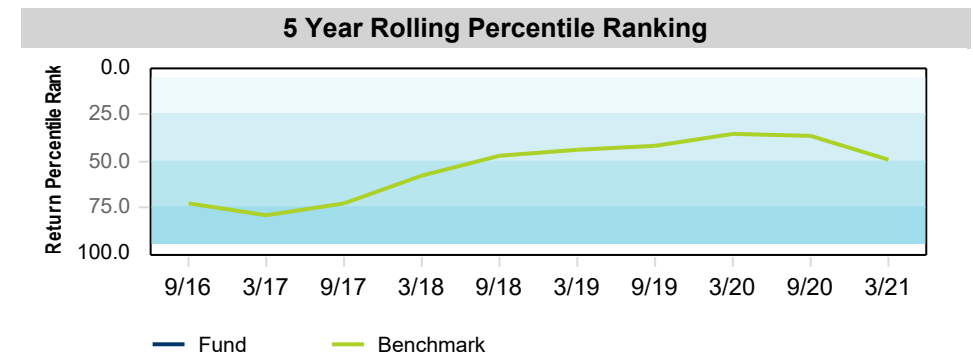
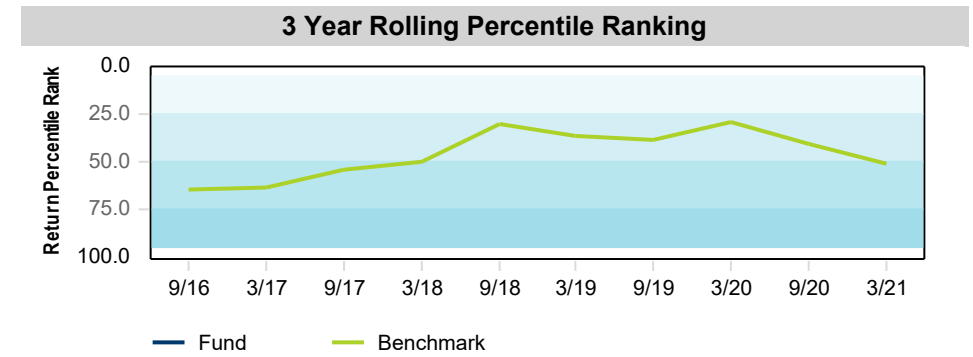
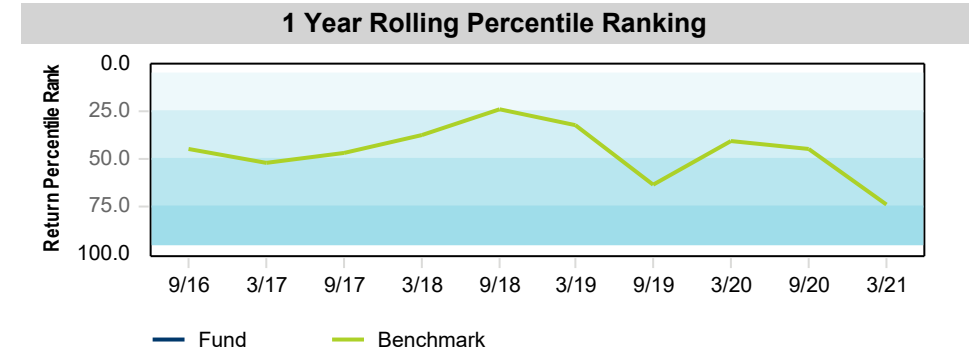
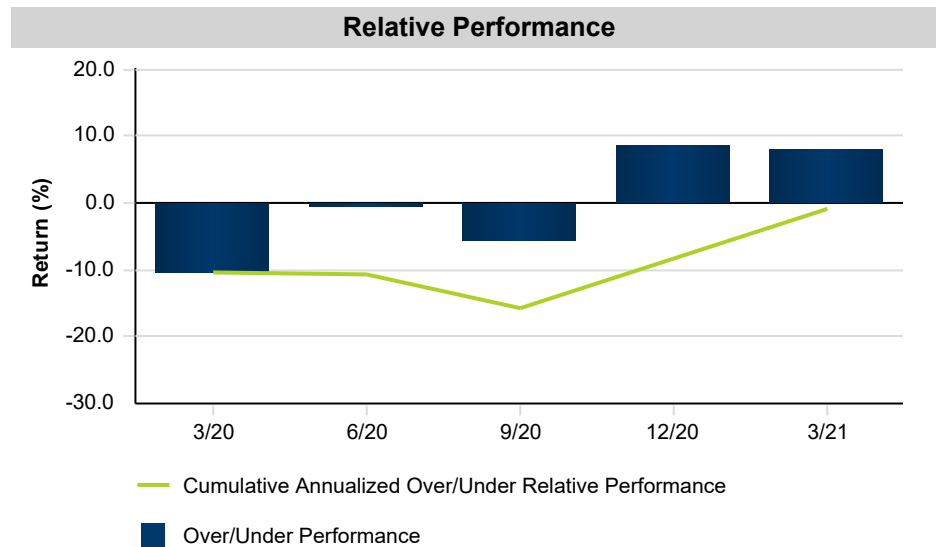
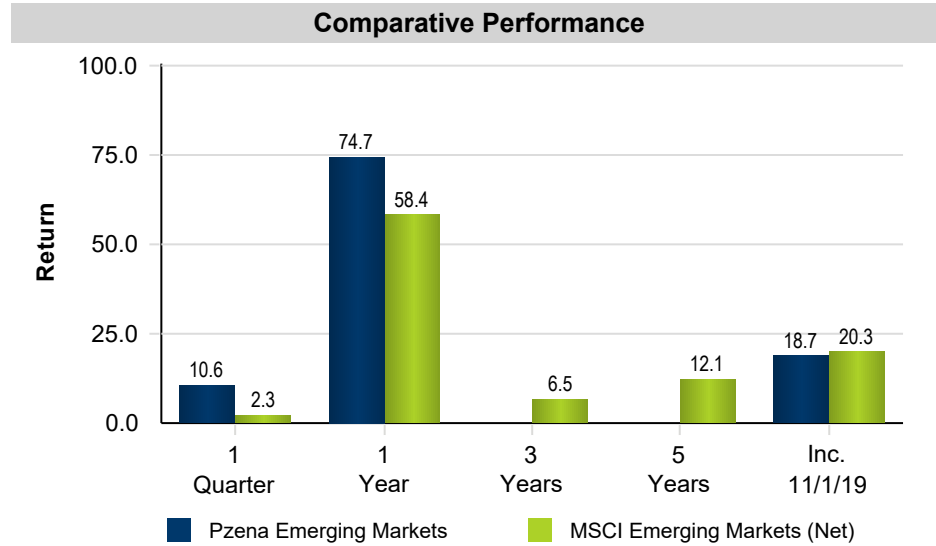
	<u>Pzena Emerging Markets</u>	<u>MSCI Emerging Markets (Net)</u>
Standard Deviation	18.09	13.84
Alpha	10.83	0.00
Active Return/Risk	0.60	0.00
Tracking Error	11.47	0.00
Information Ratio	0.95	
Sharpe Ratio	3.24	3.45

Correlation Statistics

	<u>Pzena Emerging Markets</u>	<u>MSCI Emerging Markets (Net)</u>
R-Squared	0.60	1.00
Actual Correlation	0.77	1.00

Manager Summary

Pzena Emerging Markets vs IM Emerging Markets Equity (SA+CF)
 Periods Ended March 31, 2021



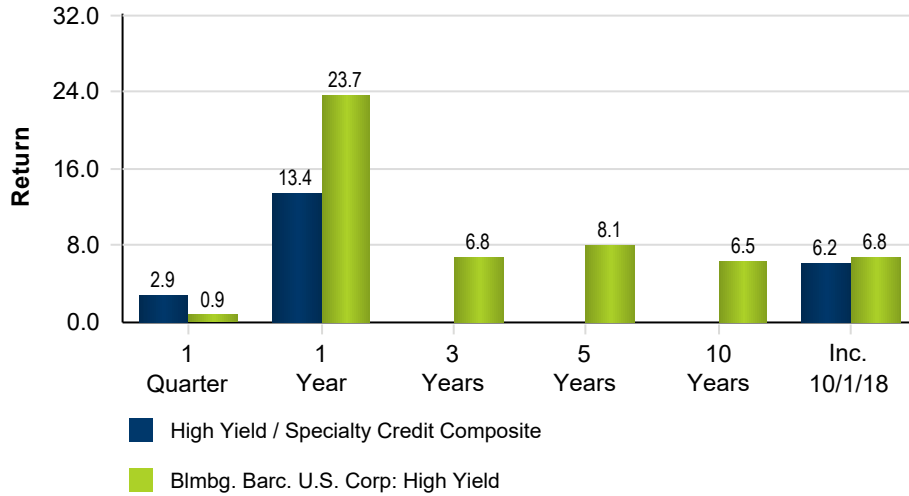


High Yield / Specialty Credit Composite

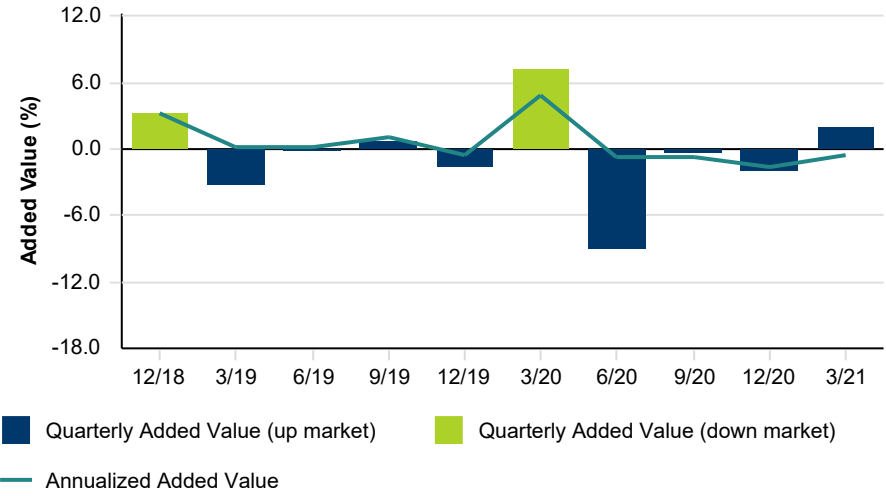
Composite Performance Summary

High Yield / Specialty Credit Composite
 Periods Ended March 31, 2021

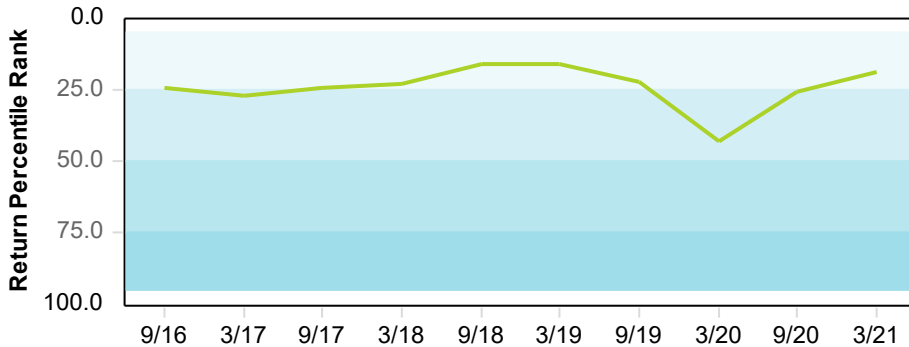
Comparative Performance



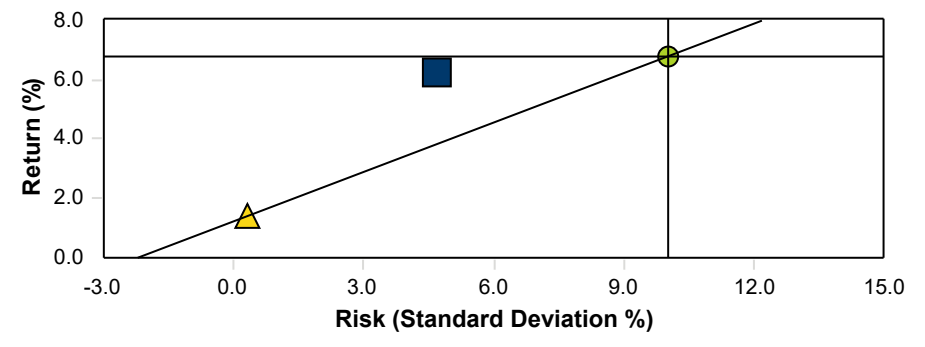
Added Value History



Rolling Percentile Rank: IM U.S. High Yield Bonds (SA+CF)



Risk and Return 10/1/18 - 03/31/21



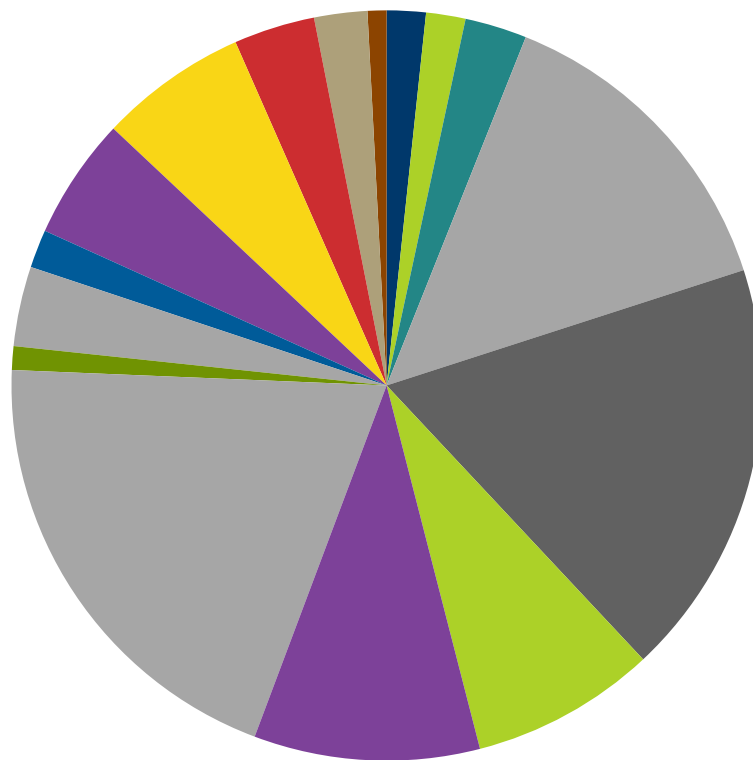
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
High Yield / Specialty Credit Composite	0	0	0	0	0
Benchmark	10	7 (70%)	3 (30%)	0 (0%)	0 (0%)

Asset Allocation By Manager

High Yield / Specialty Credit Composite

Periods Ended March 31, 2021

Mar-2021 : 2,546,489,496

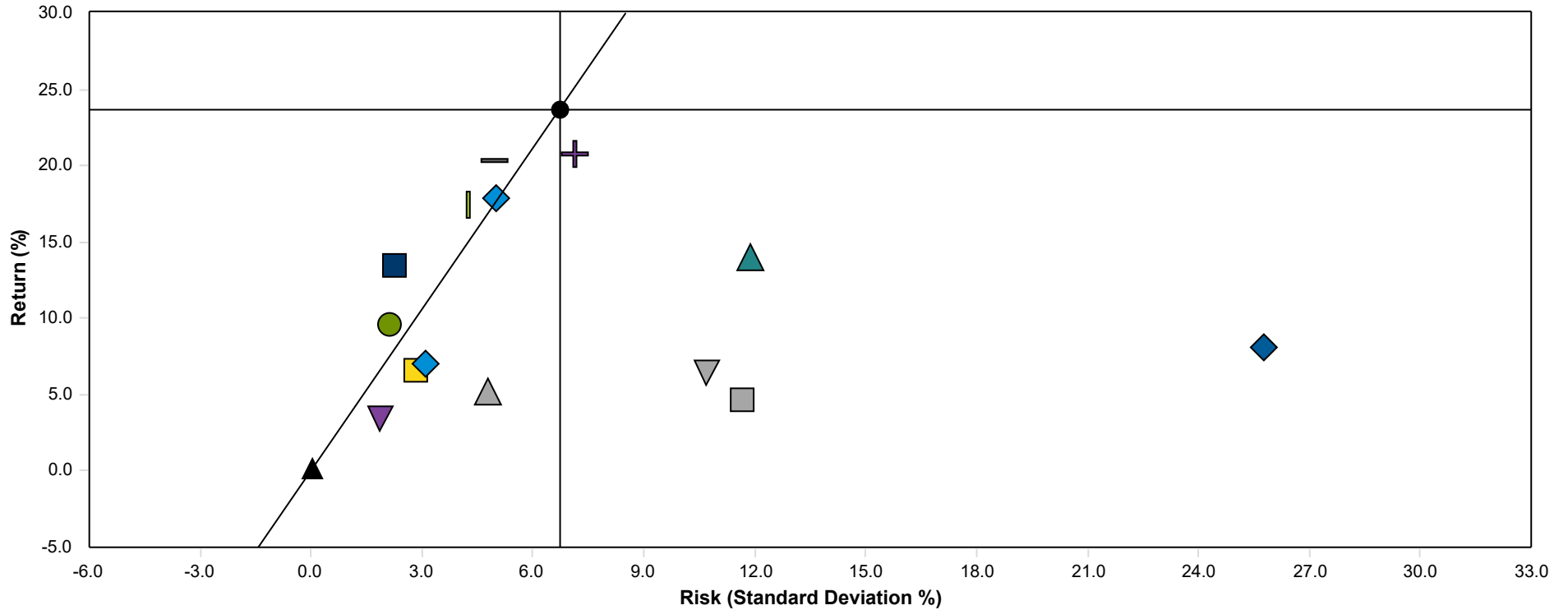


	Market Value \$	Allocation (%)
Adams St SPC II A	42,766,224	1.7
Adams St SPC II B	43,215,573	1.7
Blue Torch	67,957,876	2.7
Loomis	37,062	0.0
Manulife Asset Mgmt	355,891,532	14.0
Marathon Bluegrass	458,318,245	18.0
Shenkman Capital	203,199,966	8.0
Waterfall	247,609,095	9.7
Columbia	507,694,264	19.9
BSP Coinvestment	25,857,720	1.0
BSP Private Credit	87,671,632	3.4
Capital Springs	41,975,209	1.6
Cerberus Capital Mgmt	133,538,771	5.2
White Oak Yield Spectrum	162,663,265	6.4
H/2 Credit Partner	89,045,869	3.5
Mesa West Core Lend	58,214,766	2.3
Mesa West IV	20,832,428	0.8

Risk vs. Return

High Yield / Specialty Credit Composite

Periods Ended 1 Year Ending March 31, 2021



- High Yield / Specialty Credit Composite
- ◆ Blue Torch
- ▲ Capital Springs
- ◆ Manulife Asset Mgmt
- || Waterfall
- ▼ Mesa West Core Lend
- ▲ 90 Day US Treasury Bill
- Adams St SPC II A
- ◆ BSP Coinvestment
- Cerberus Capital Mgmt
- ▼ Marathon Bluegrass
- ▲ White Oak Yield Spectrum
- Mesa West IV
- ▲ Adams St SPC II B
- BSP Private Credit
- ✚ Columbia
- Shenkman Capital
- ◆ H/2 Credit Partner
- Blmbg. Barc. U.S. Corp: High Yield

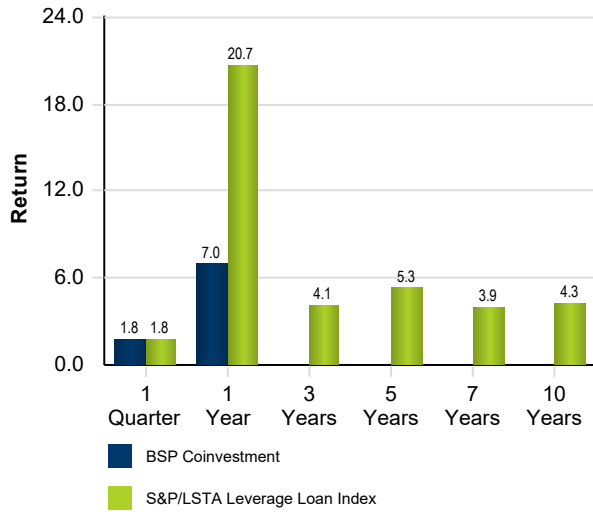
Calculation based on monthly periodicity.

Performance Summary

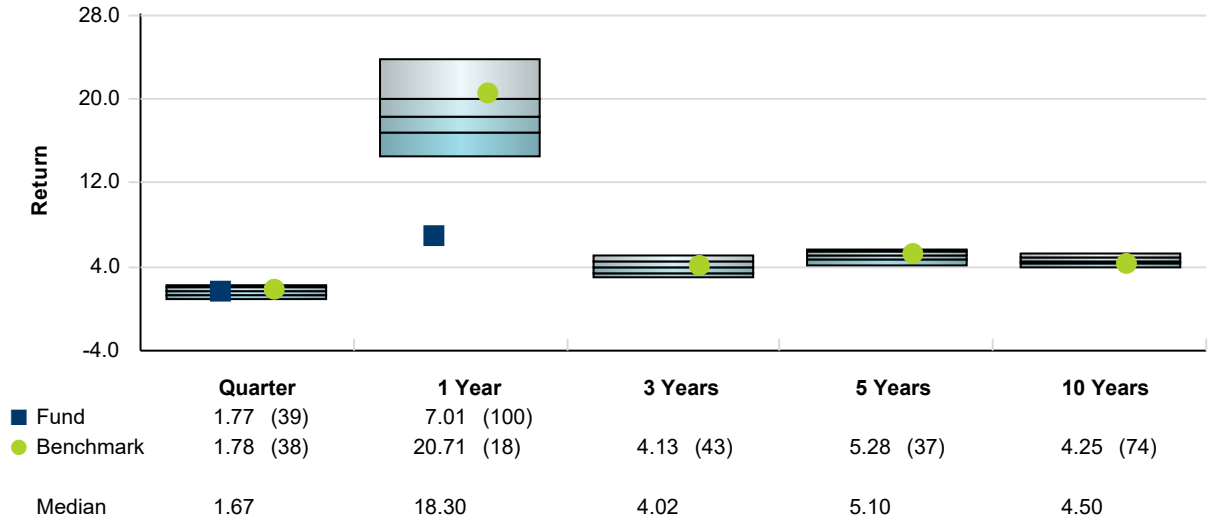
BSP Coinvestment

Periods Ended March 31, 2021

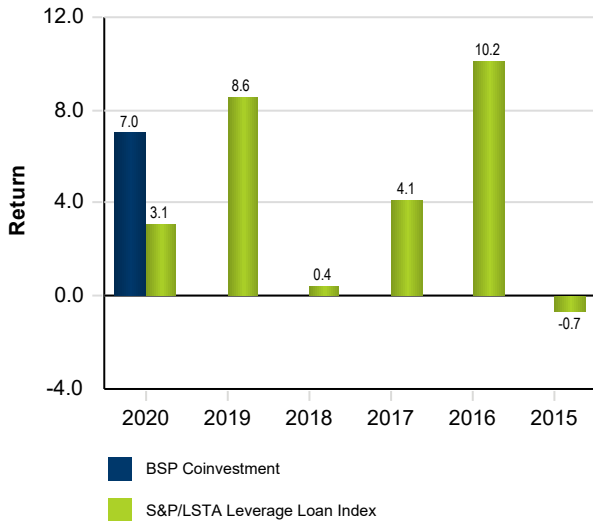
Comparative Performance



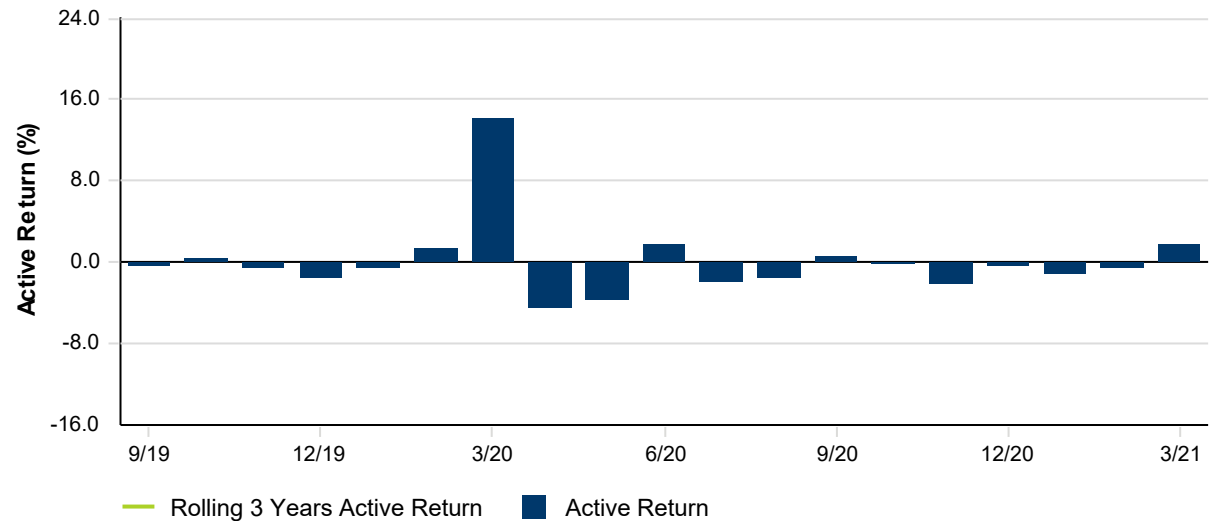
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

BSP Coinvestment

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>BSP Coinvestment</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	2.81	4.50
Minimum Return	0.00	0.00
Return	7.01	20.71
Cumulative Return	7.01	20.71
Active Return	-12.23	0.00
Excess Return	6.72	18.95

Risk Summary Statistics

	<u>BSP Coinvestment</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	3.69	2.06
Downside Risk	0.00	0.00
Beta	-0.27	1.00

Risk/Return Summary Statistics

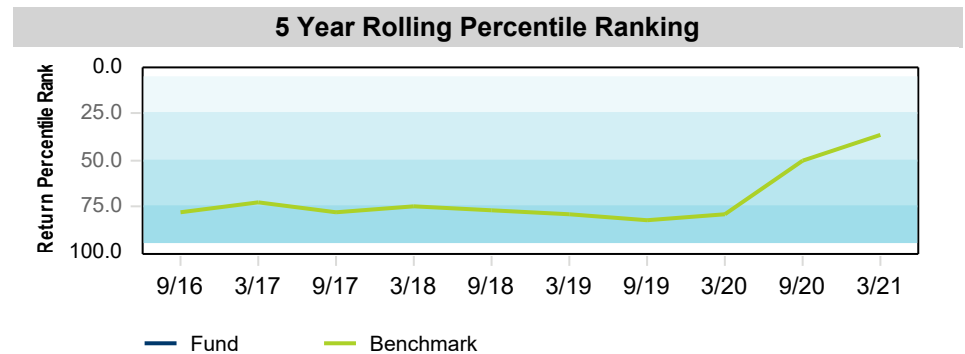
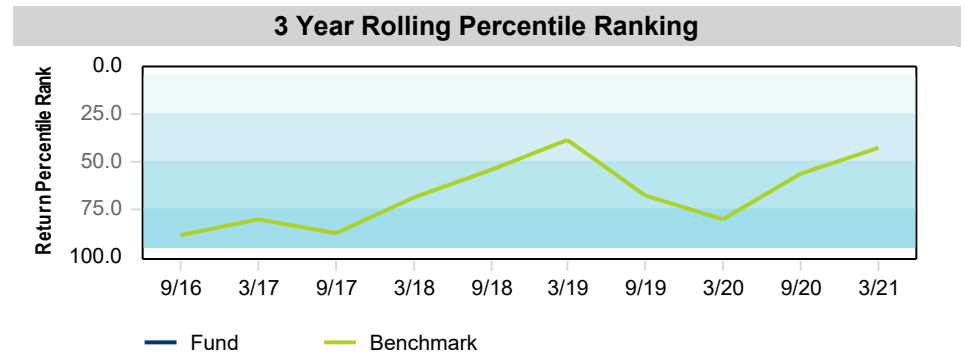
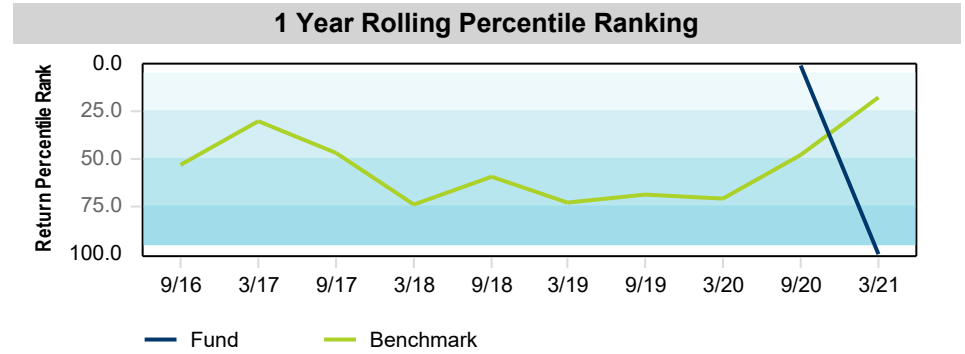
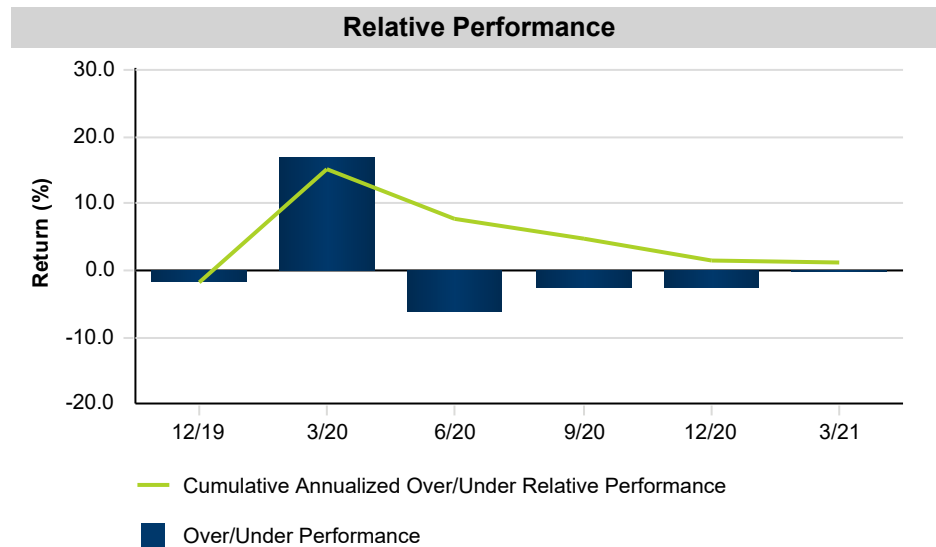
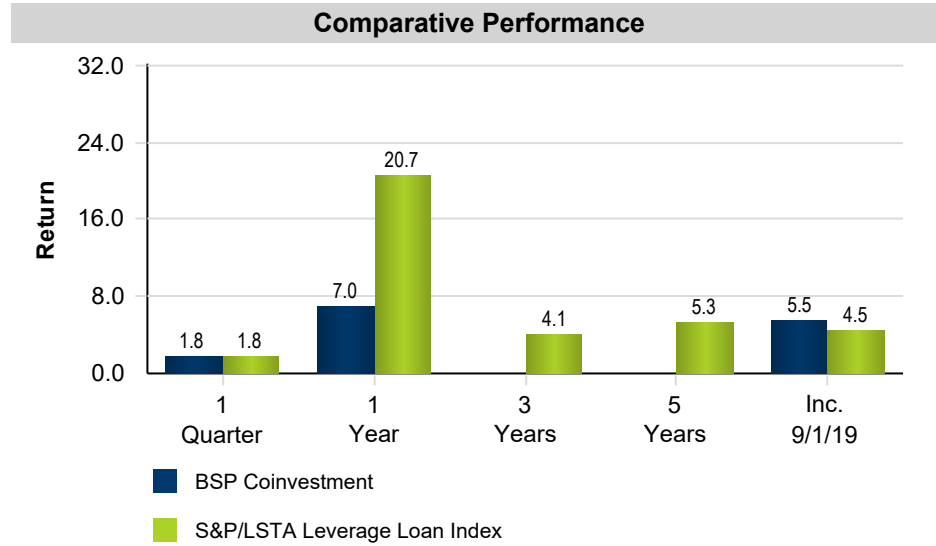
	<u>BSP Coinvestment</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	3.11	4.55
Alpha	12.58	0.00
Active Return/Risk	-3.93	0.00
Tracking Error	6.43	0.00
Information Ratio	-1.90	
Sharpe Ratio	2.16	4.16

Correlation Statistics

	<u>BSP Coinvestment</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.15	1.00
Actual Correlation	-0.39	1.00

Manager Summary

BSP Coinvestment vs IM U.S. Bank Loans (SA+CF)
 Periods Ended March 31, 2021

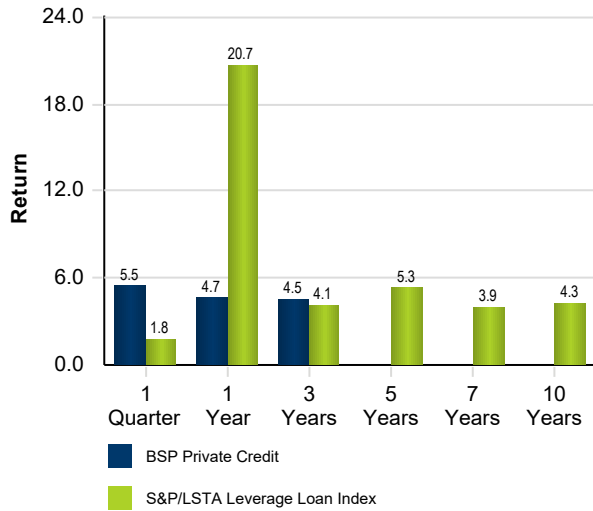


Performance Summary

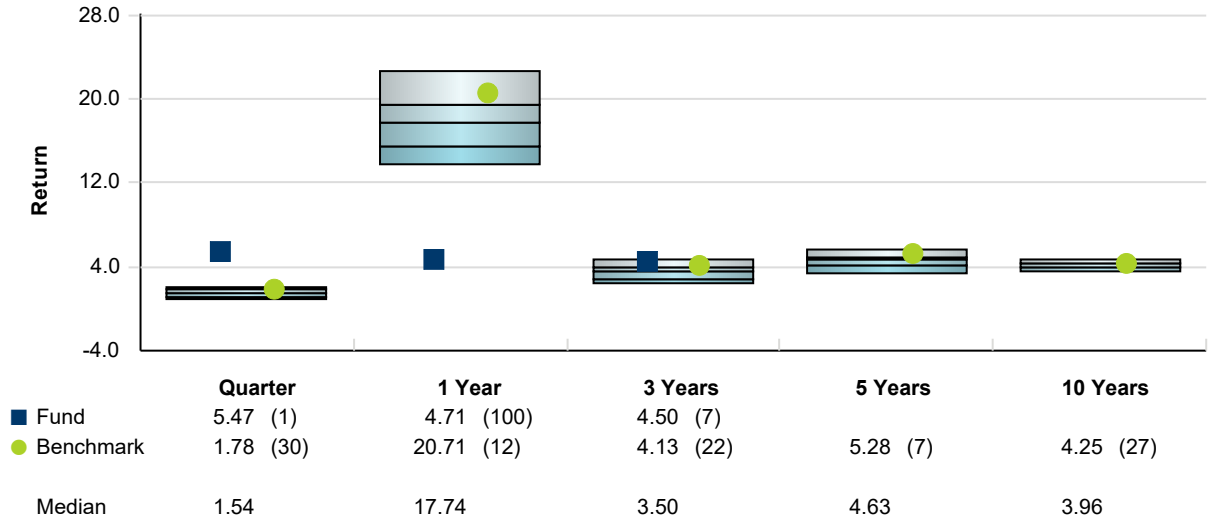
BSP Private Credit

Periods Ended March 31, 2021

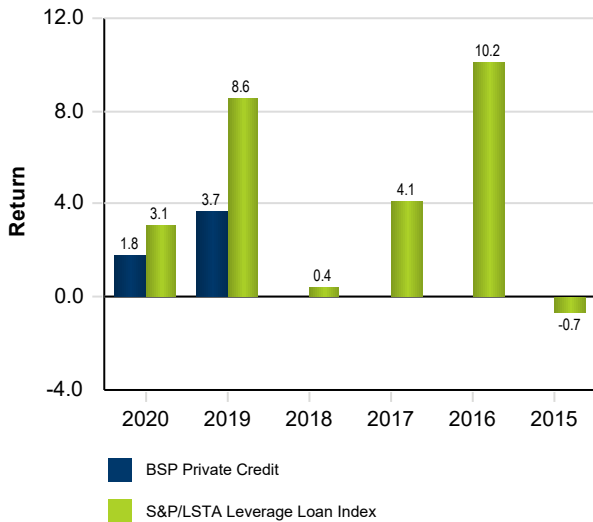
Comparative Performance



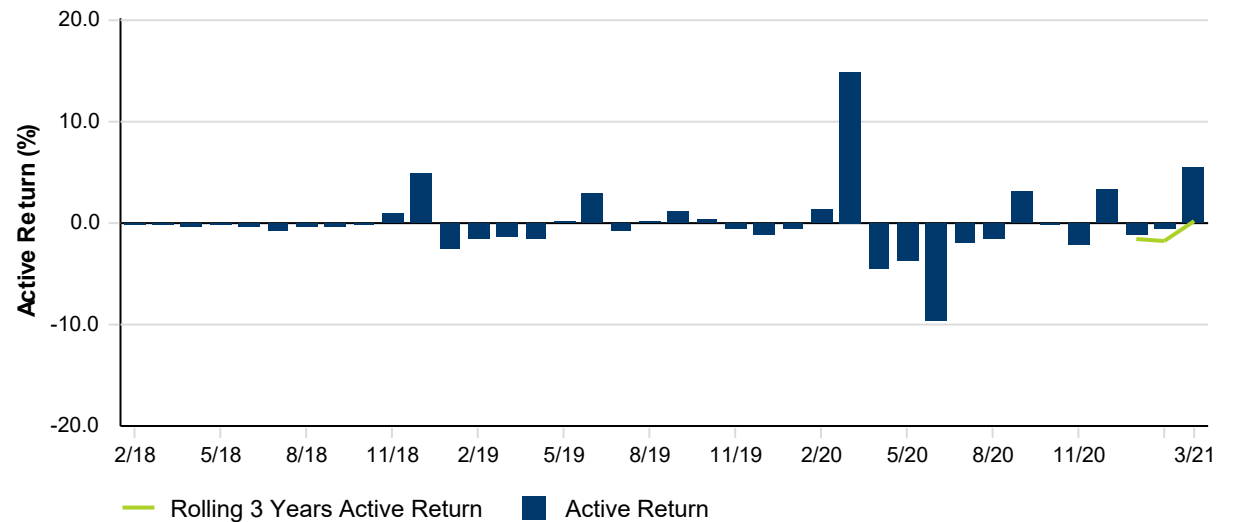
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

BSP Private Credit

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>BSP Private Credit</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	5.47	4.50
Minimum Return	-8.53	0.00
Return	4.71	20.71
Cumulative Return	4.71	20.71
Active Return	-13.77	0.00
Excess Return	5.19	18.95

Risk Summary Statistics

	<u>BSP Private Credit</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	2.33	2.06
Downside Risk	8.53	0.00
Beta	-0.46	1.00

Risk/Return Summary Statistics

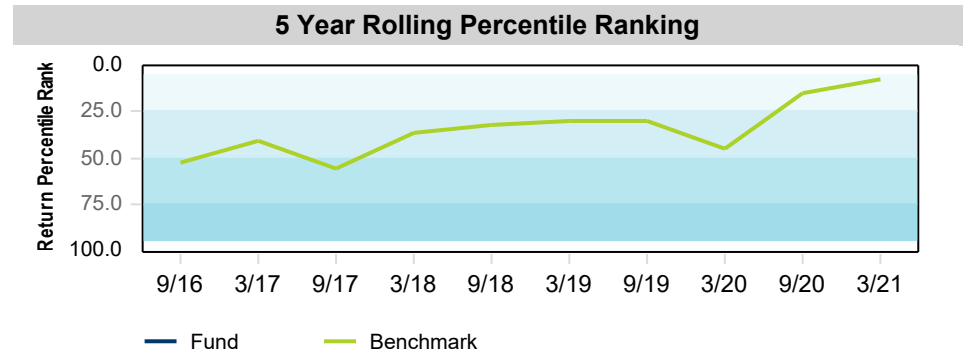
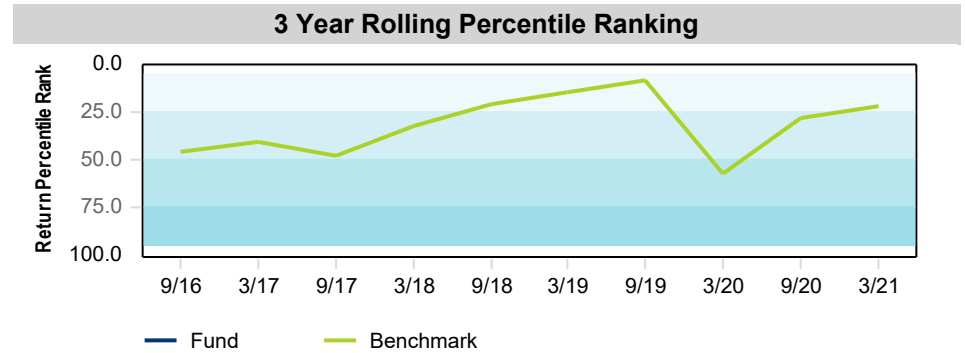
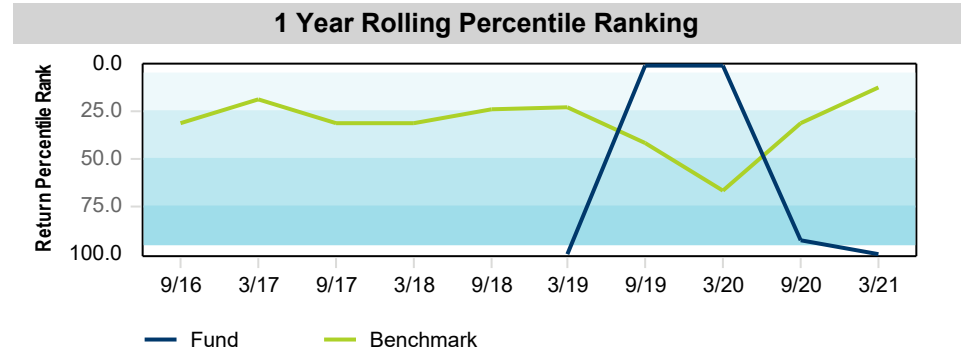
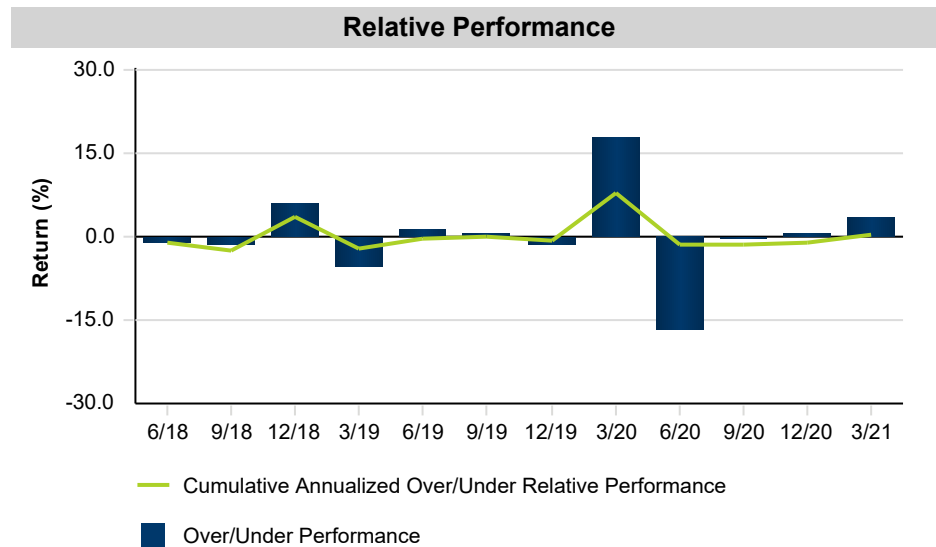
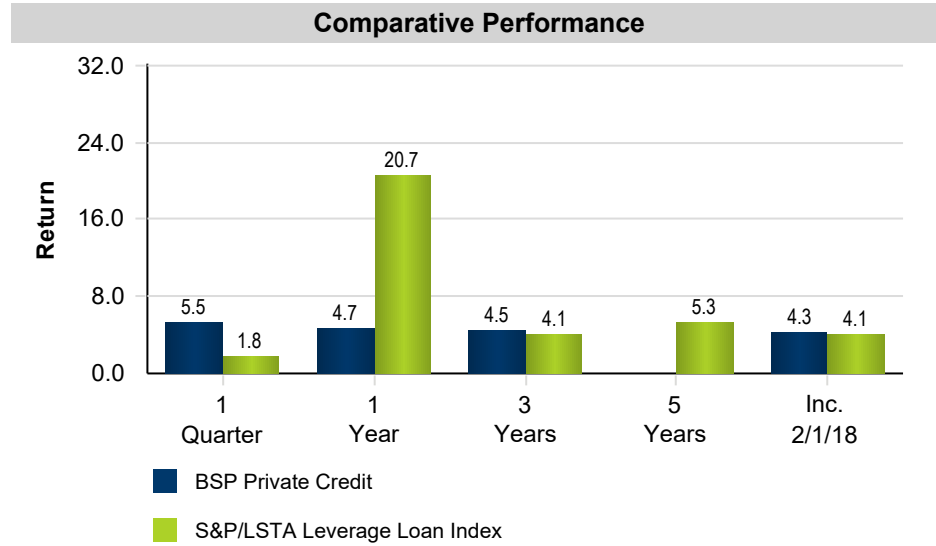
	<u>BSP Private Credit</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	11.65	4.55
Alpha	15.04	0.00
Active Return/Risk	-1.18	0.00
Tracking Error	13.25	0.00
Information Ratio	-1.04	
Sharpe Ratio	0.45	4.16

Correlation Statistics

	<u>BSP Private Credit</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.03	1.00
Actual Correlation	-0.18	1.00

Manager Summary

BSP Private Credit vs IM U.S. Bank Loans (SA+CF)
 Periods Ended March 31, 2021

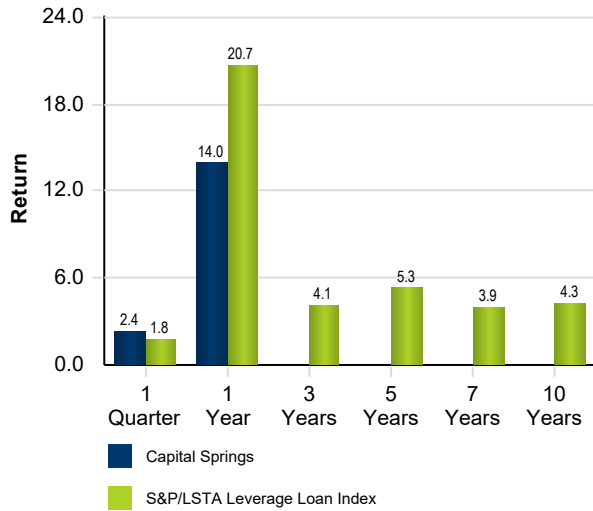


Performance Summary

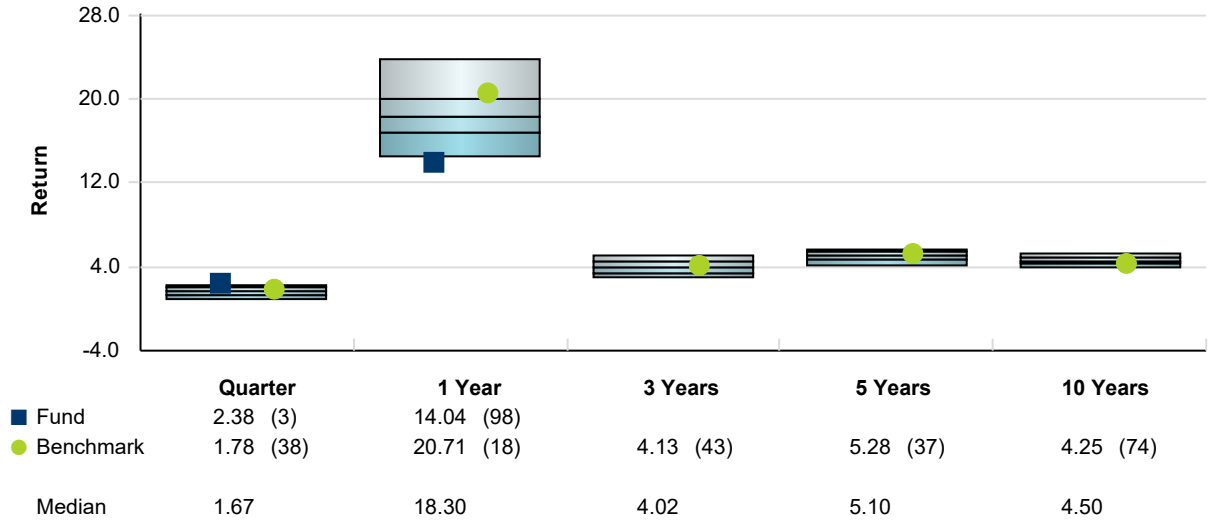
Capital Springs

Periods Ended March 31, 2021

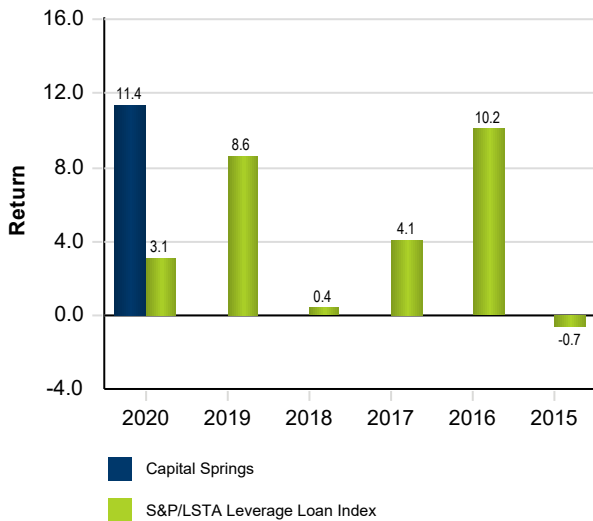
Comparative Performance



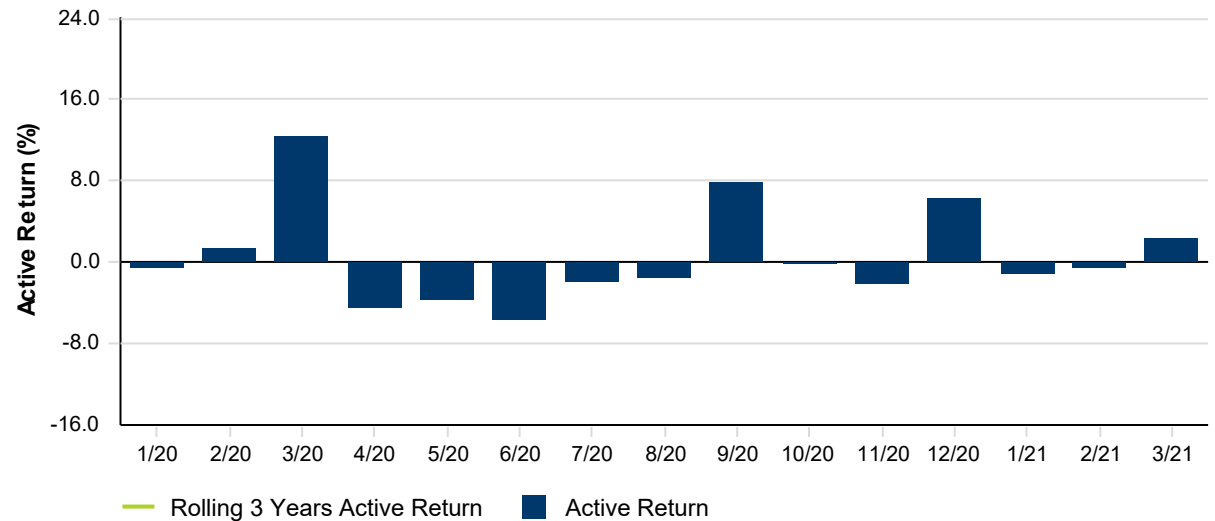
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Capital Springs

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Capital Springs</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	8.52	4.50
Minimum Return	-4.61	0.00
Return	14.04	20.71
Cumulative Return	14.04	20.71
Active Return	-5.18	0.00
Excess Return	13.78	18.95

Risk Summary Statistics

	<u>Capital Springs</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	3.37	2.06
Downside Risk	4.61	0.00
Beta	-0.57	1.00

Risk/Return Summary Statistics

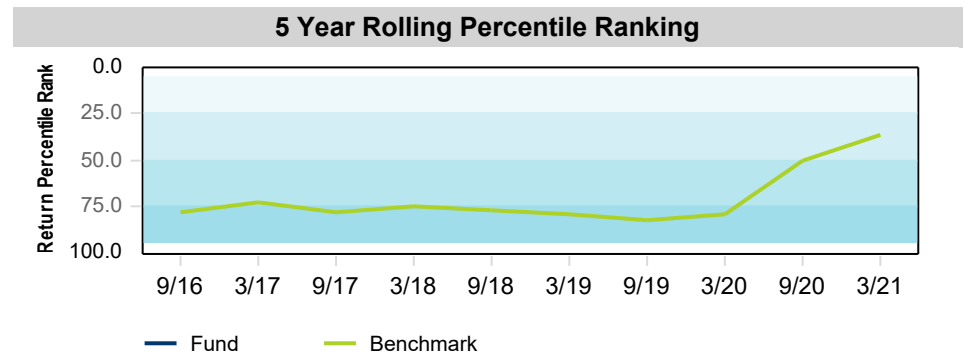
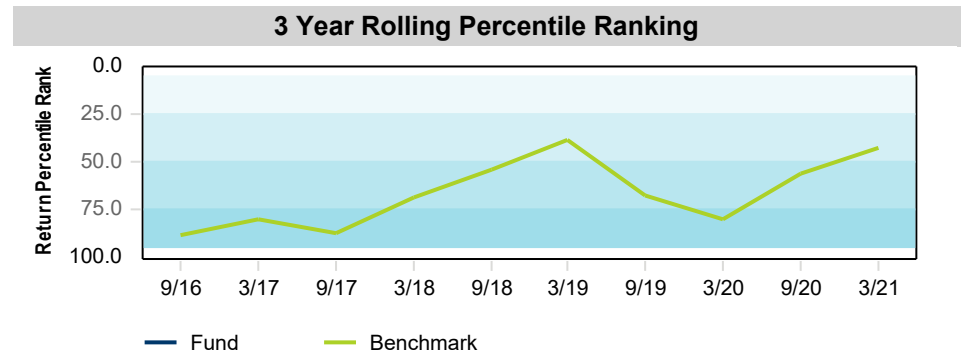
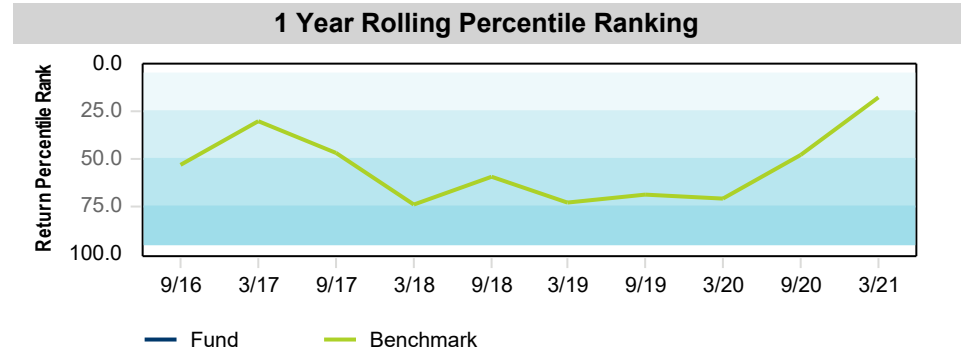
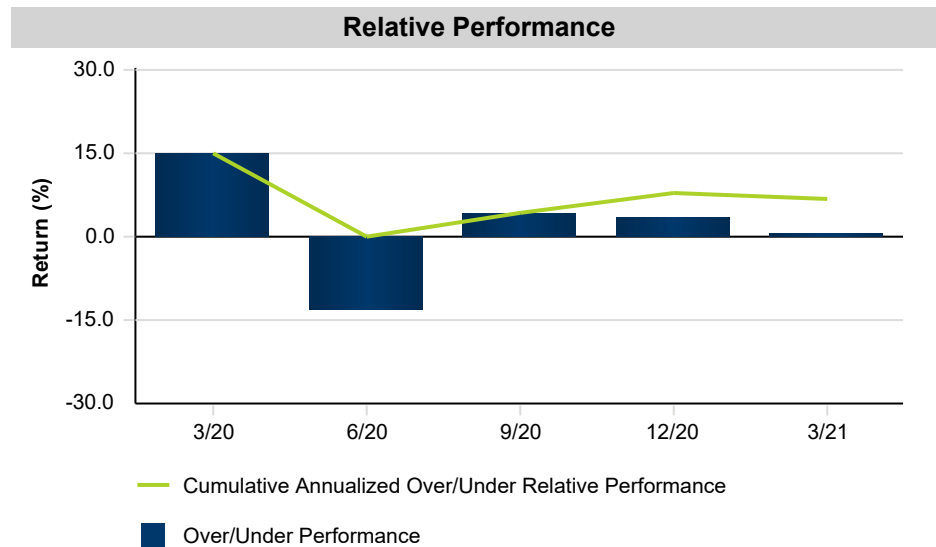
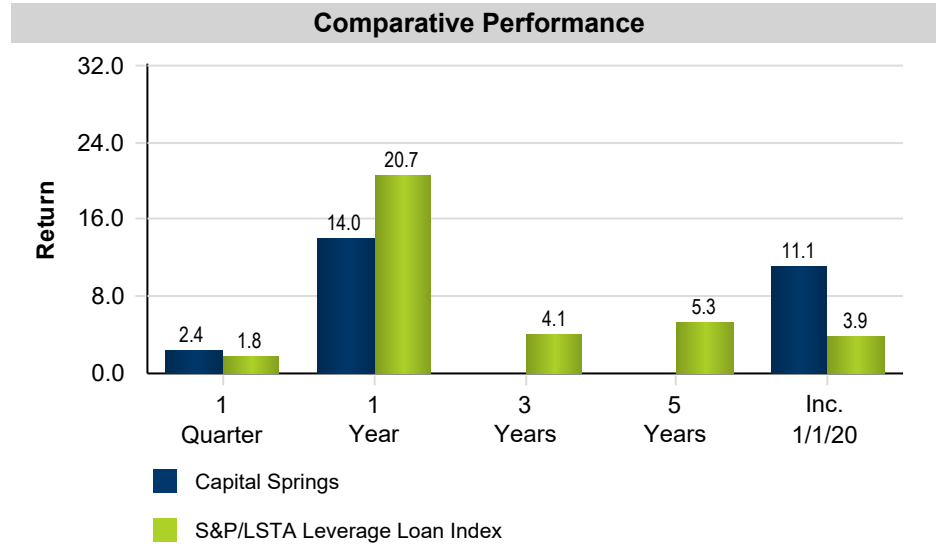
	<u>Capital Springs</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	11.88	4.55
Alpha	27.66	0.00
Active Return/Risk	-0.44	0.00
Tracking Error	13.61	0.00
Information Ratio	-0.38	
Sharpe Ratio	1.16	4.16

Correlation Statistics

	<u>Capital Springs</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.05	1.00
Actual Correlation	-0.22	1.00

Manager Summary

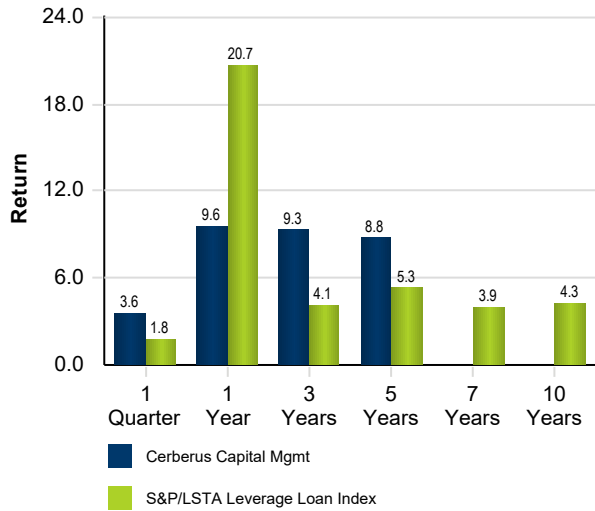
Capital Springs vs IM U.S. Bank Loans (SA+CF)
 Periods Ended March 31, 2021



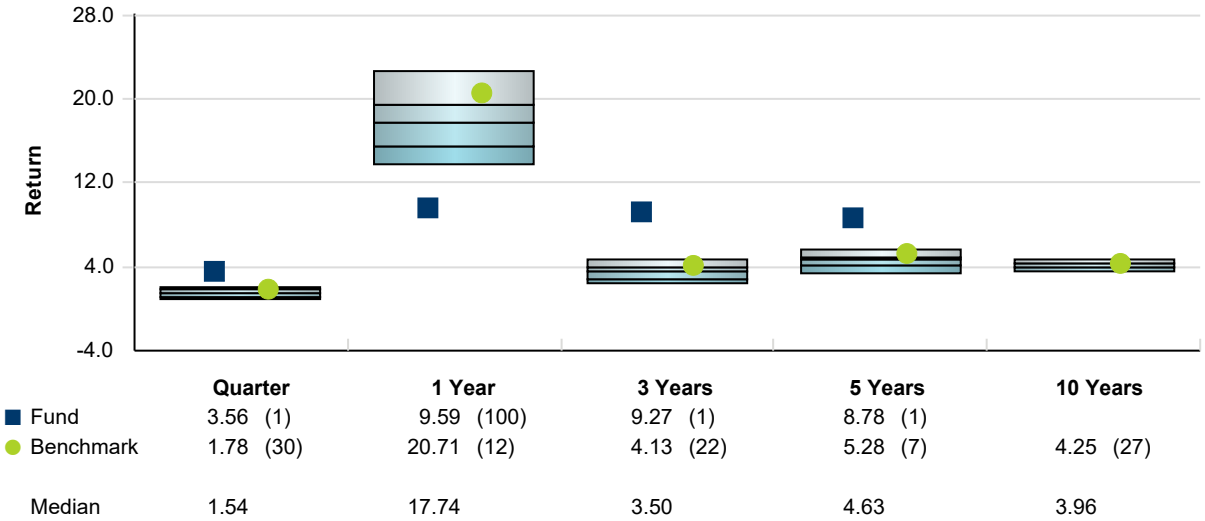
Performance Summary

Cerberus Capital Mgmt
 Periods Ended March 31, 2021

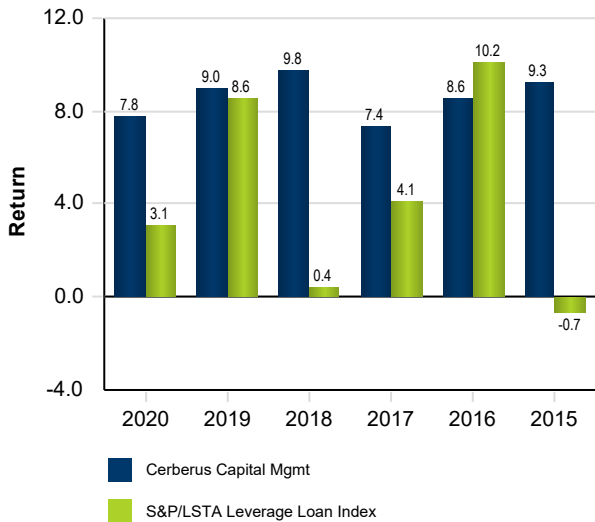
Comparative Performance



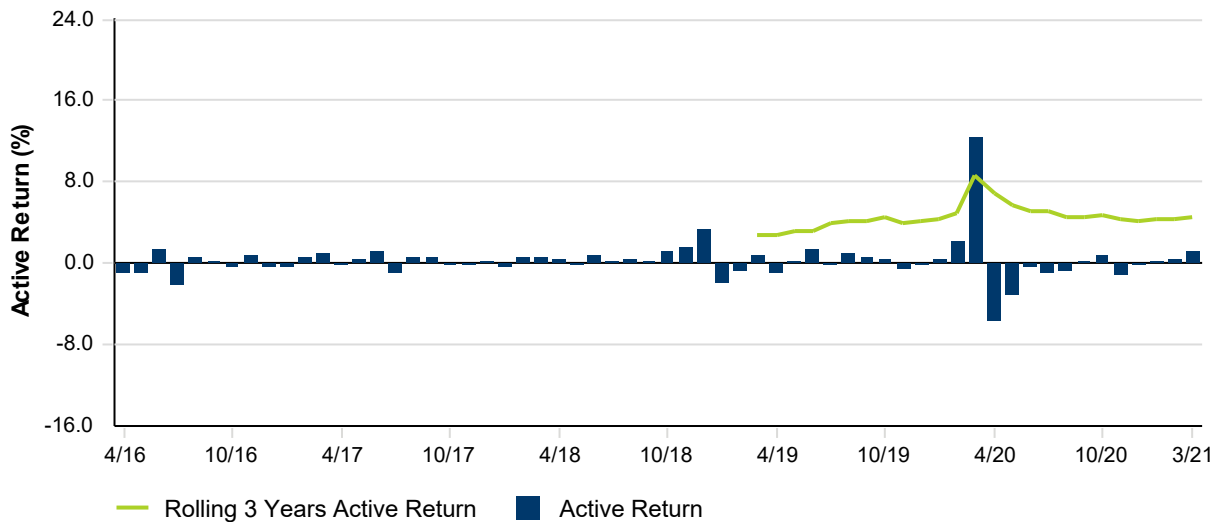
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Cerberus Capital Mgmt

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Cerberus Capital Mgmt</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	1.39	4.50
Minimum Return	-1.17	0.00
Return	9.59	20.71
Cumulative Return	9.59	20.71
Active Return	-9.85	0.00
Excess Return	9.10	18.95

Risk Summary Statistics

	<u>Cerberus Capital Mgmt</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	0.92	2.06
Downside Risk	1.17	0.00
Beta	-0.33	1.00

Risk/Return Summary Statistics

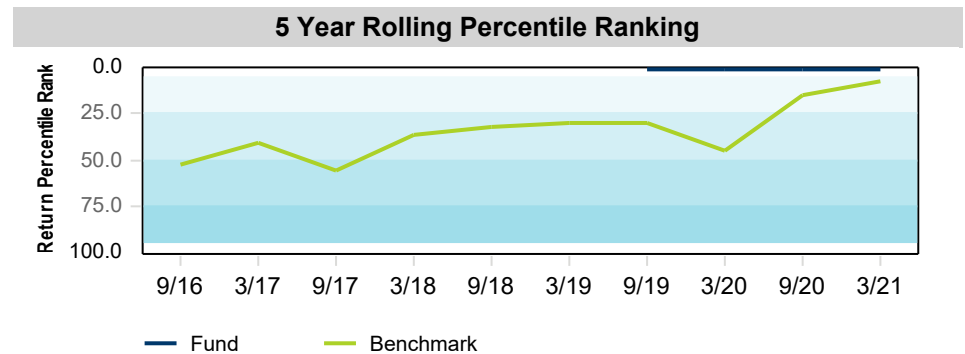
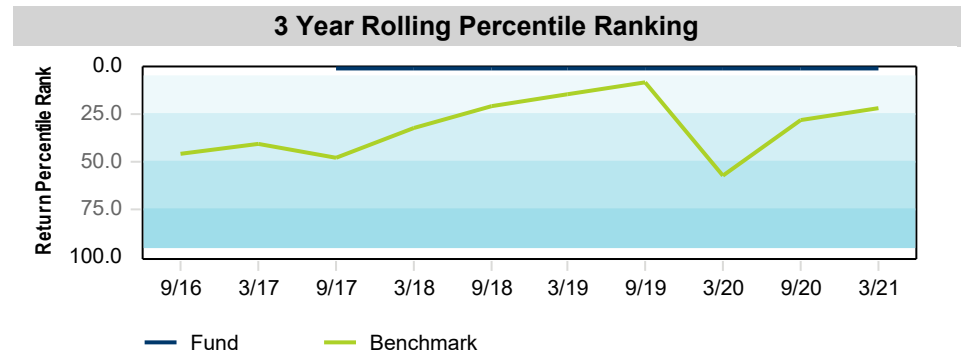
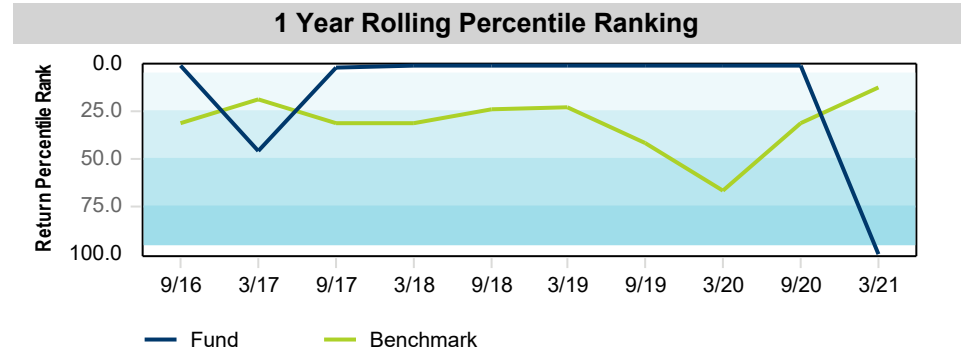
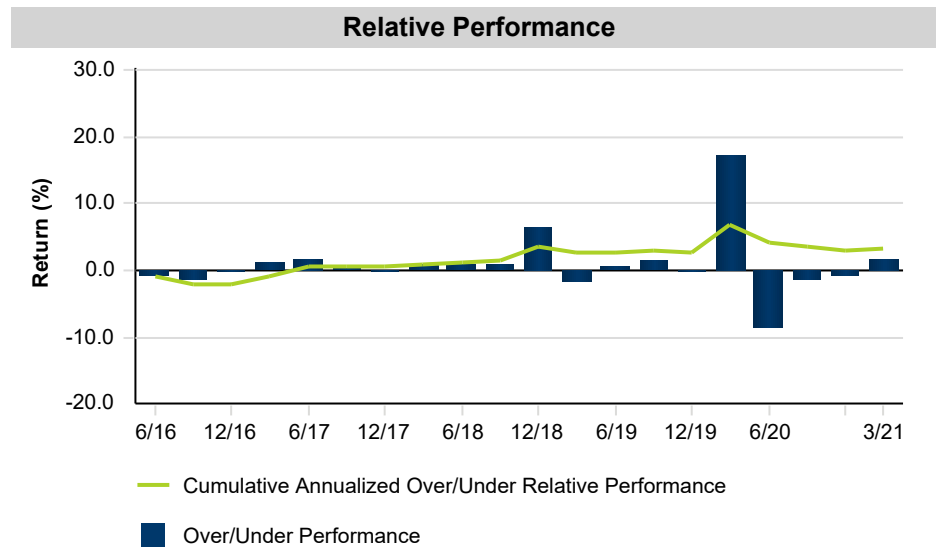
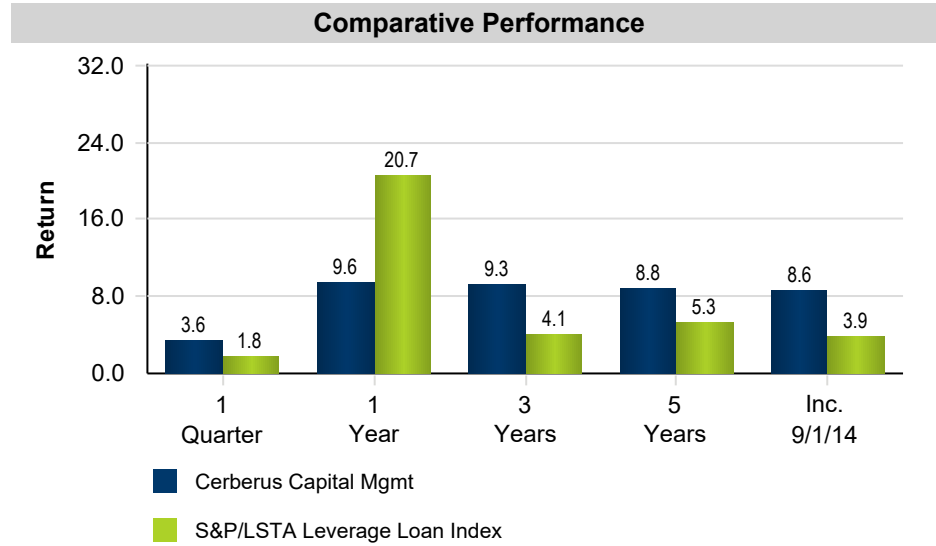
	<u>Cerberus Capital Mgmt</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	2.13	4.55
Alpha	16.76	0.00
Active Return/Risk	-4.63	0.00
Tracking Error	6.25	0.00
Information Ratio	-1.58	
Sharpe Ratio	4.28	4.16

Correlation Statistics

	<u>Cerberus Capital Mgmt</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.51	1.00
Actual Correlation	-0.71	1.00

Manager Summary

Cerberus Capital Mgmt vs IM U.S. Bank Loans (SA+CF)
 Periods Ended March 31, 2021

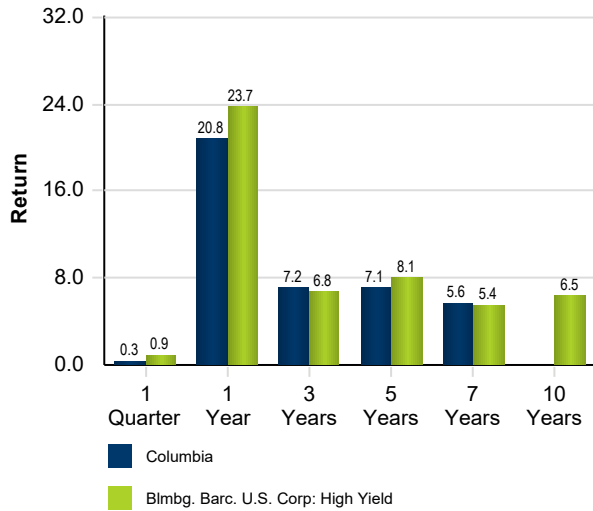


Performance Summary

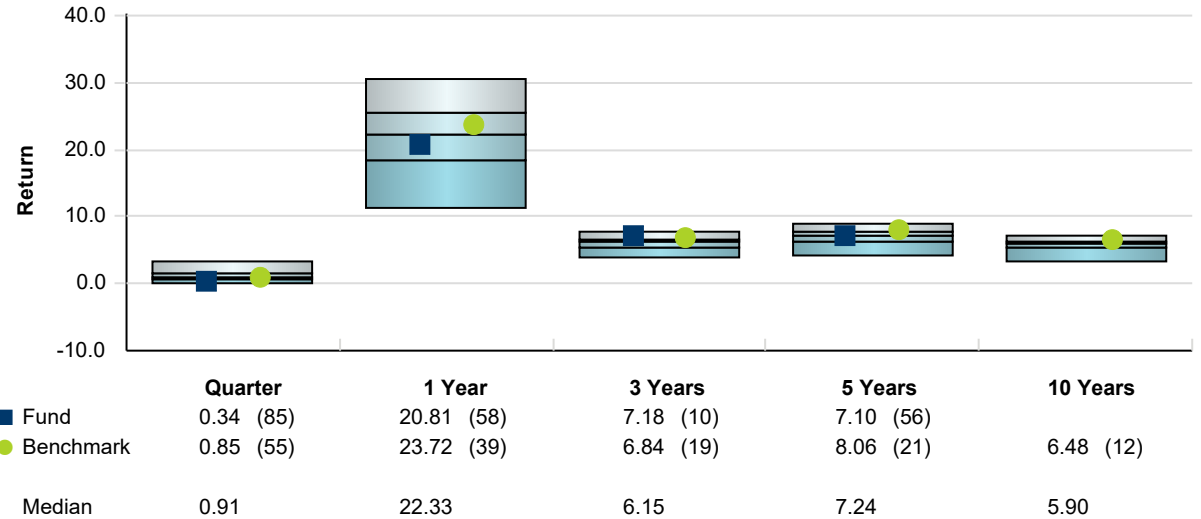
Columbia

Periods Ended March 31, 2021

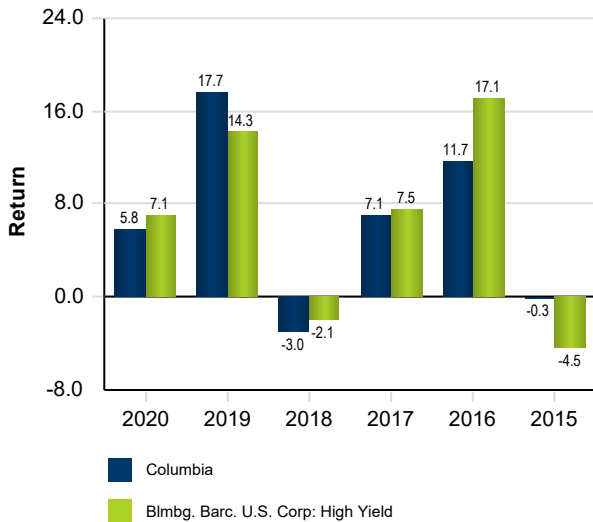
Comparative Performance



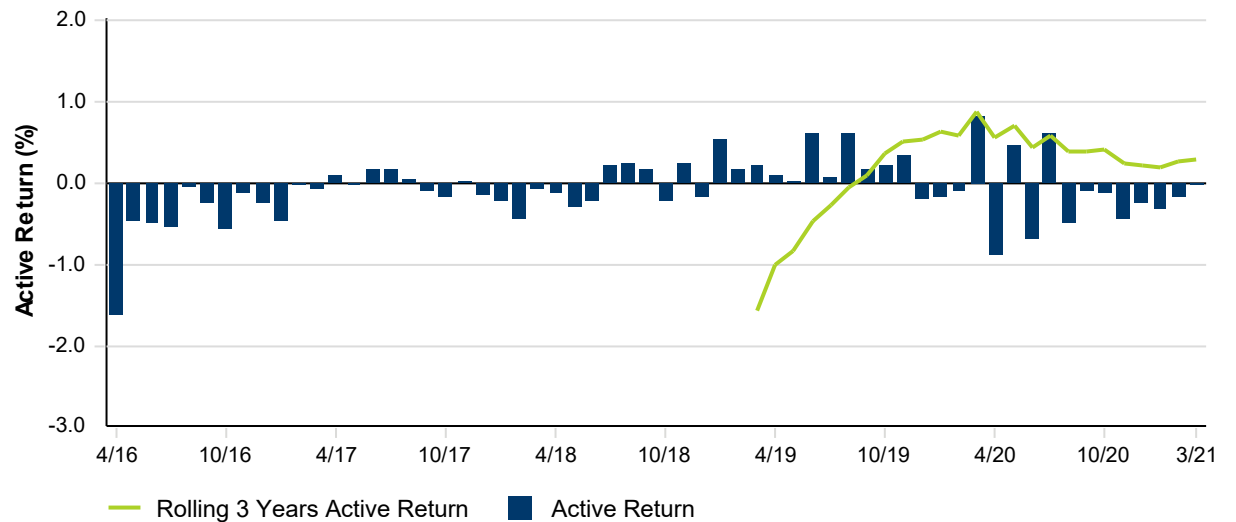
Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Columbia

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Columbia</u>	<u>Blmbg. Barc. U.S. Corp: High Yield</u>
Maximum Return	5.30	4.69
Minimum Return	-1.13	-1.03
Return	20.81	23.72
Cumulative Return	20.81	23.72
Active Return	-2.39	0.00
Excess Return	19.18	21.58

Risk Summary Statistics

	<u>Columbia</u>	<u>Blmbg. Barc. U.S. Corp: High Yield</u>
Upside Risk	2.59	2.63
Downside Risk	1.13	1.03
Beta	1.04	1.00

Risk/Return Summary Statistics

	<u>Columbia</u>	<u>Blmbg. Barc. U.S. Corp: High Yield</u>
Standard Deviation	7.12	6.72
Alpha	-3.20	0.00
Active Return/Risk	-0.34	0.00
Tracking Error	1.41	0.00
Information Ratio	-1.70	
Sharpe Ratio	2.70	3.21

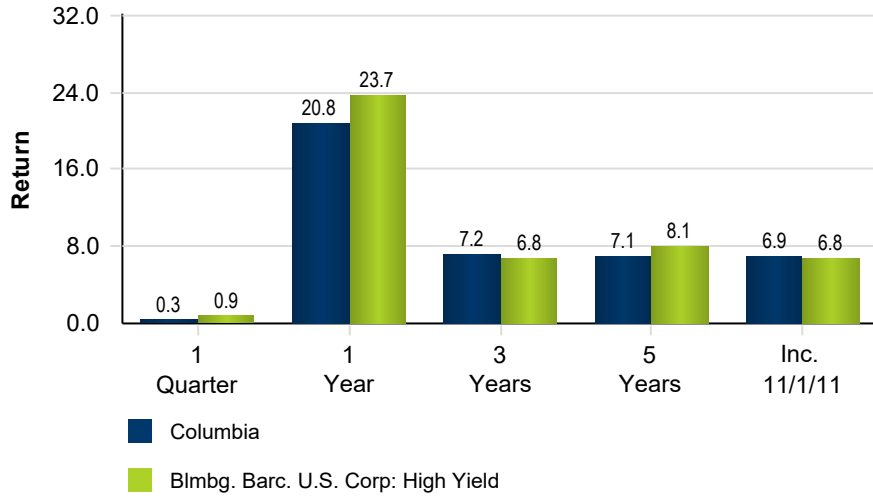
Correlation Statistics

	<u>Columbia</u>	<u>Blmbg. Barc. U.S. Corp: High Yield</u>
R-Squared	0.96	1.00
Actual Correlation	0.98	1.00

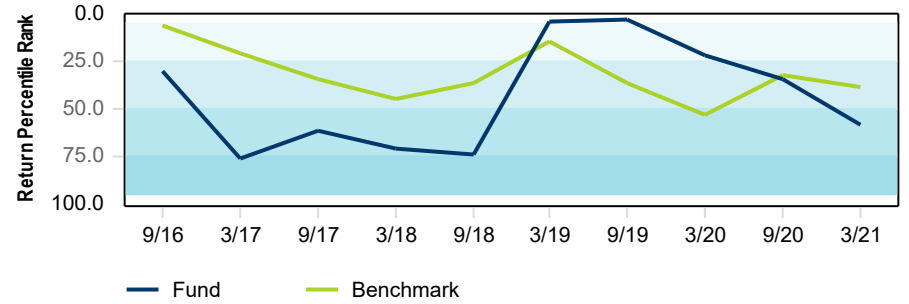
Manager Summary

Columbia vs IM U.S. High Yield Bonds (SA+CF)
 Periods Ended March 31, 2021

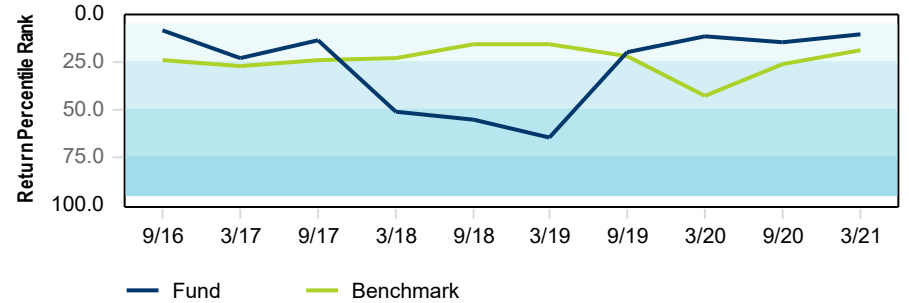
Comparative Performance



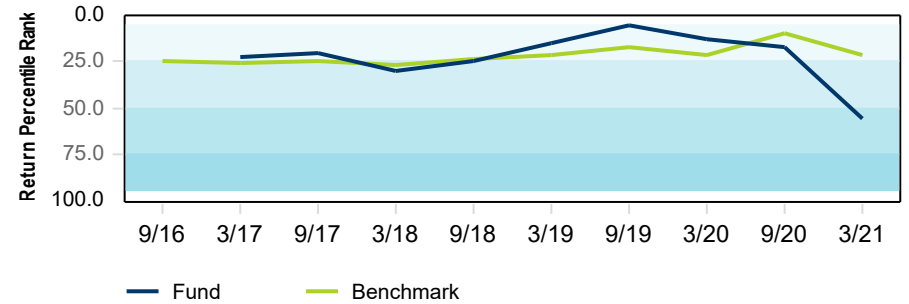
1 Year Rolling Percentile Ranking



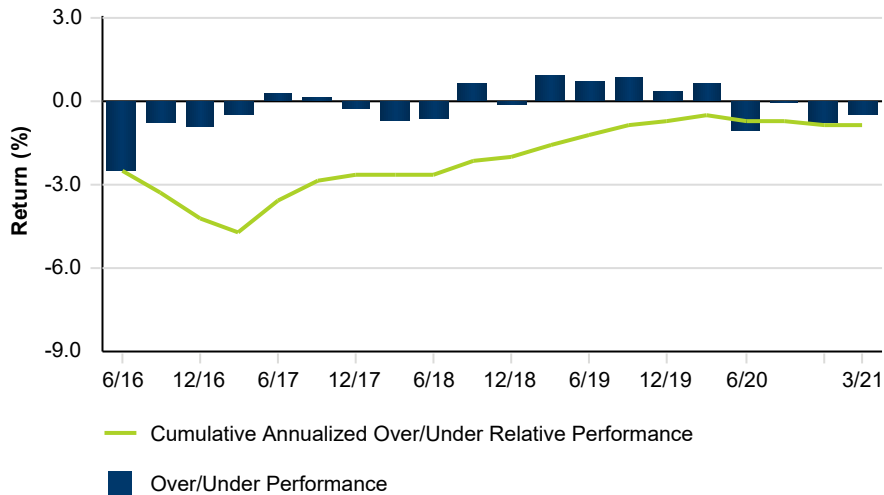
3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Relative Performance

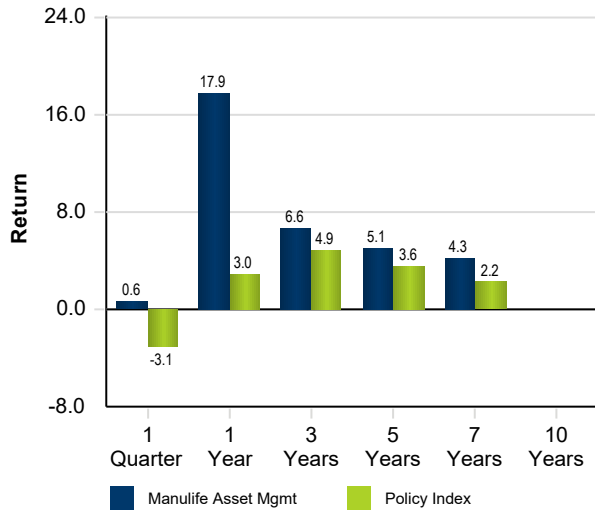


Performance Summary

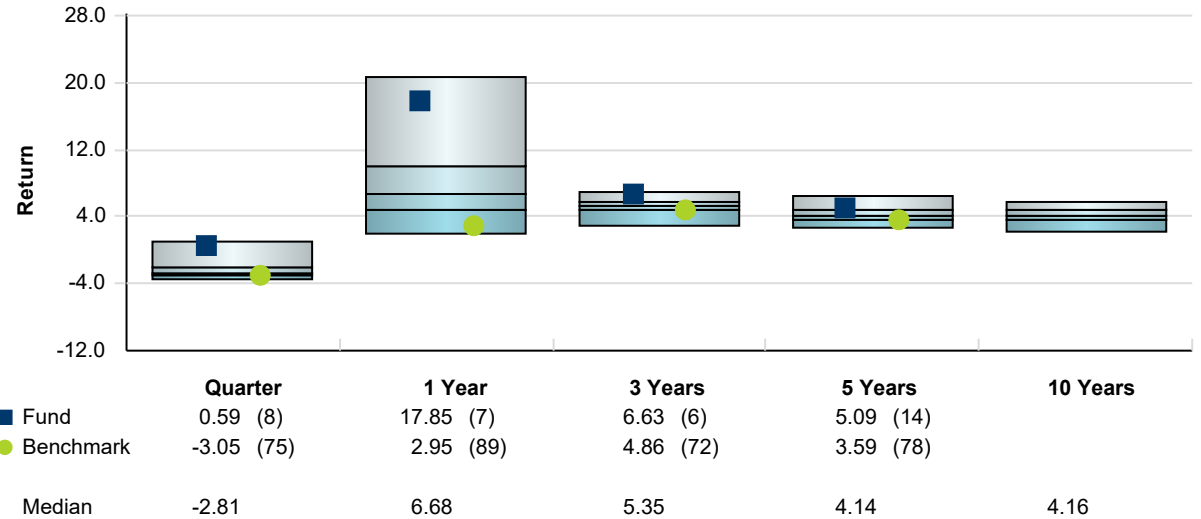
Manulife Asset Mgmt

Periods Ended March 31, 2021

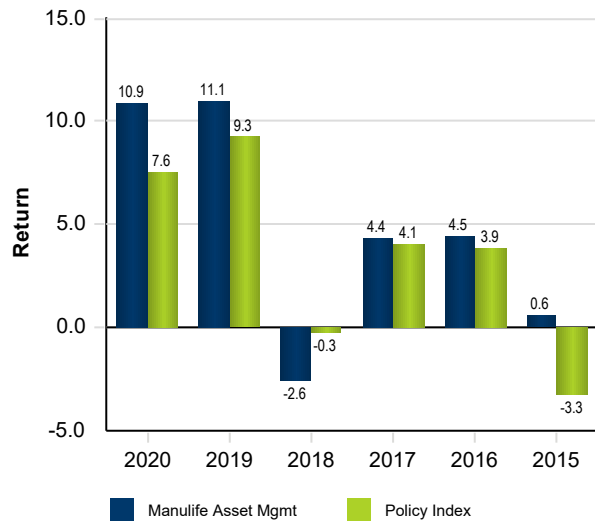
Comparative Performance



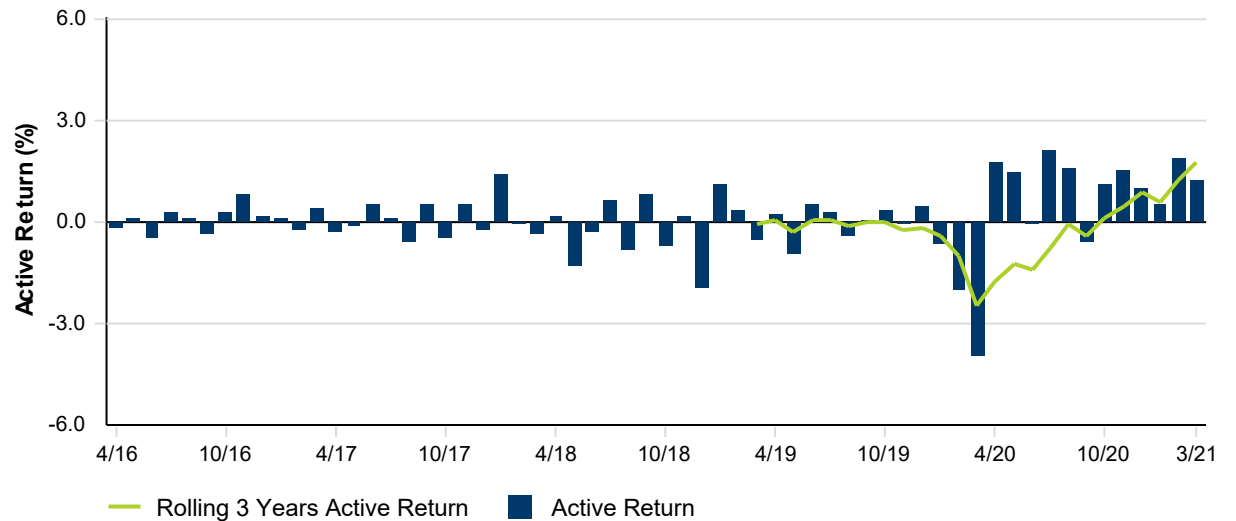
Peer Group Analysis: IM U.S. Broad Market Core+ Fixed Income (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Manulife Asset Mgmt

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Manulife Asset Mgmt</u>	<u>Policy Index</u>
Maximum Return	3.89	2.00
Minimum Return	-0.77	-1.29
Return	17.85	2.95
Cumulative Return	17.85	2.95
Active Return	13.68	0.00
Excess Return	16.55	2.86

Risk Summary Statistics

	<u>Manulife Asset Mgmt</u>	<u>Policy Index</u>
Upside Risk	1.99	0.93
Downside Risk	0.78	1.98
Beta	1.16	1.00

Risk/Return Summary Statistics

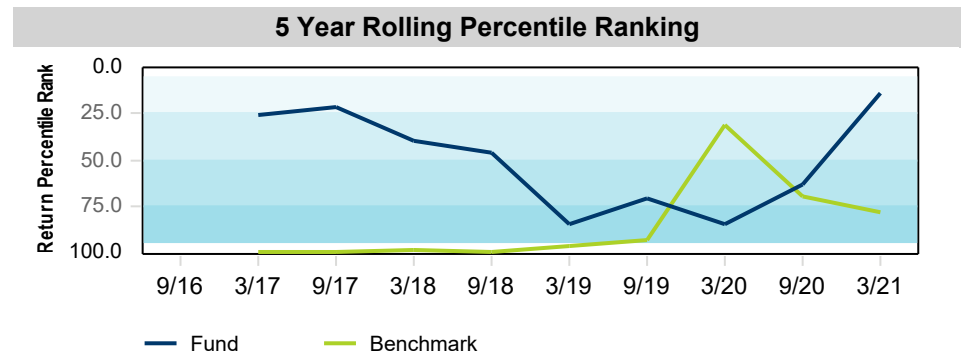
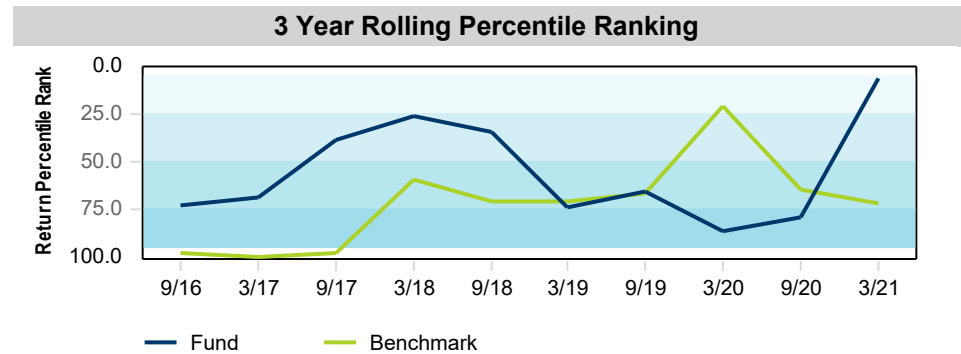
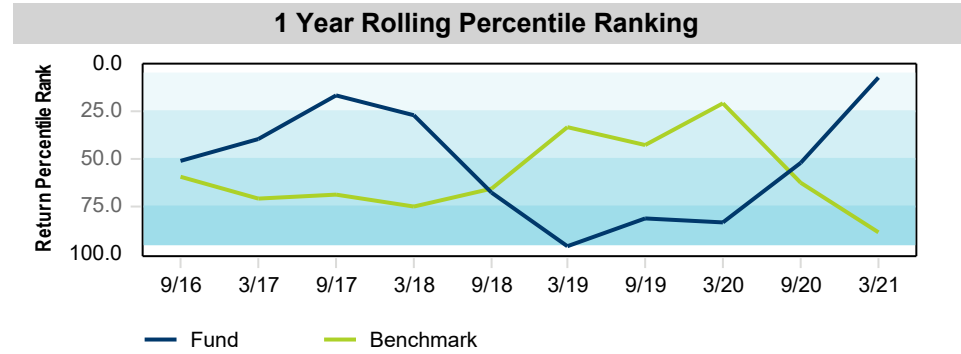
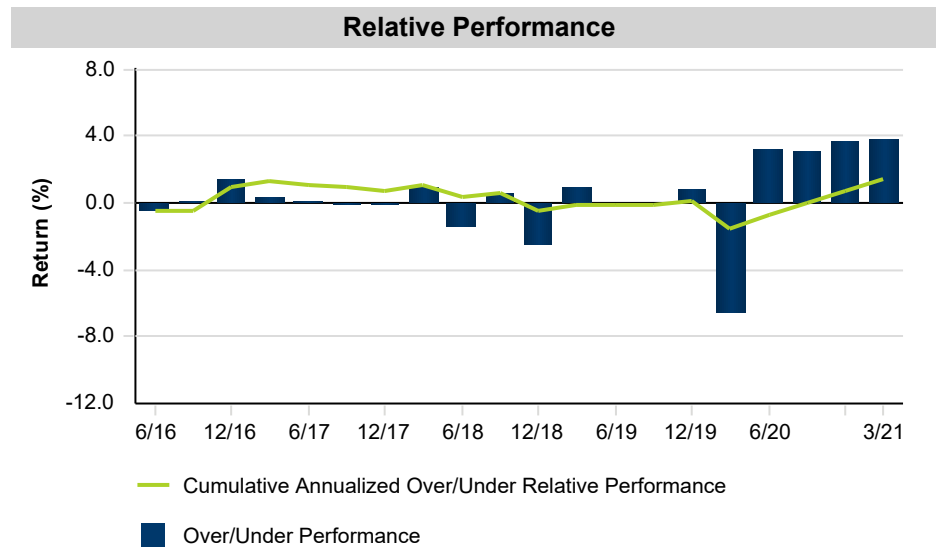
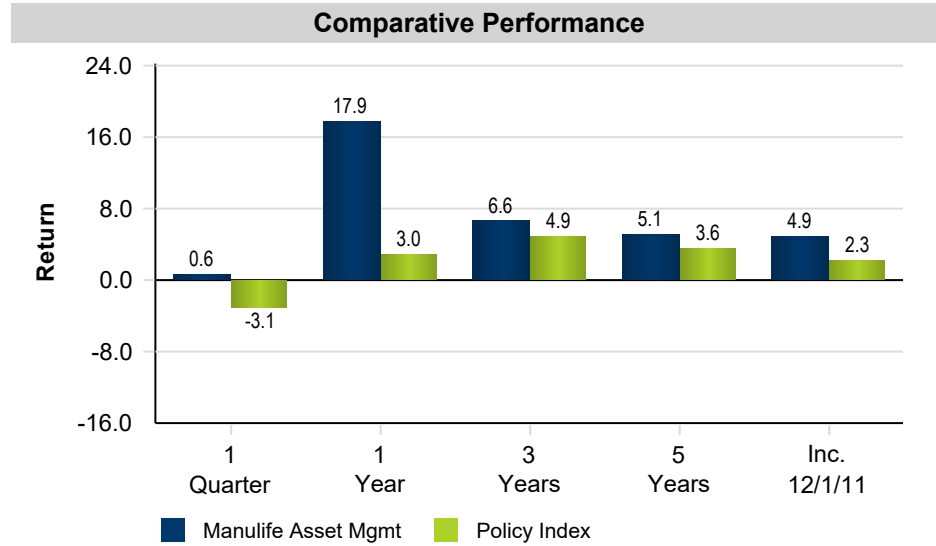
	<u>Manulife Asset Mgmt</u>	<u>Policy Index</u>
Standard Deviation	5.02	3.70
Alpha	14.04	0.00
Active Return/Risk	2.73	0.00
Tracking Error	2.68	0.00
Information Ratio	5.11	
Sharpe Ratio	3.30	0.78

Correlation Statistics

	<u>Manulife Asset Mgmt</u>	<u>Policy Index</u>
R-Squared	0.73	1.00
Actual Correlation	0.85	1.00

Manager Summary

Manulife Asset Mgmt vs IM U.S. Broad Market Core+ Fixed Income (SA+CF)
 Periods Ended March 31, 2021

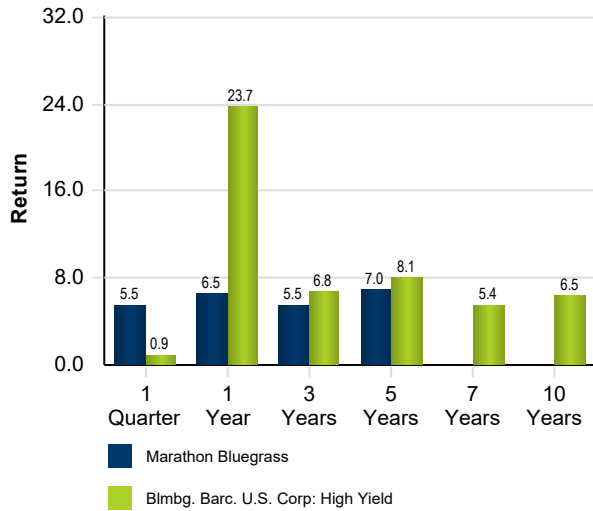


Performance Summary

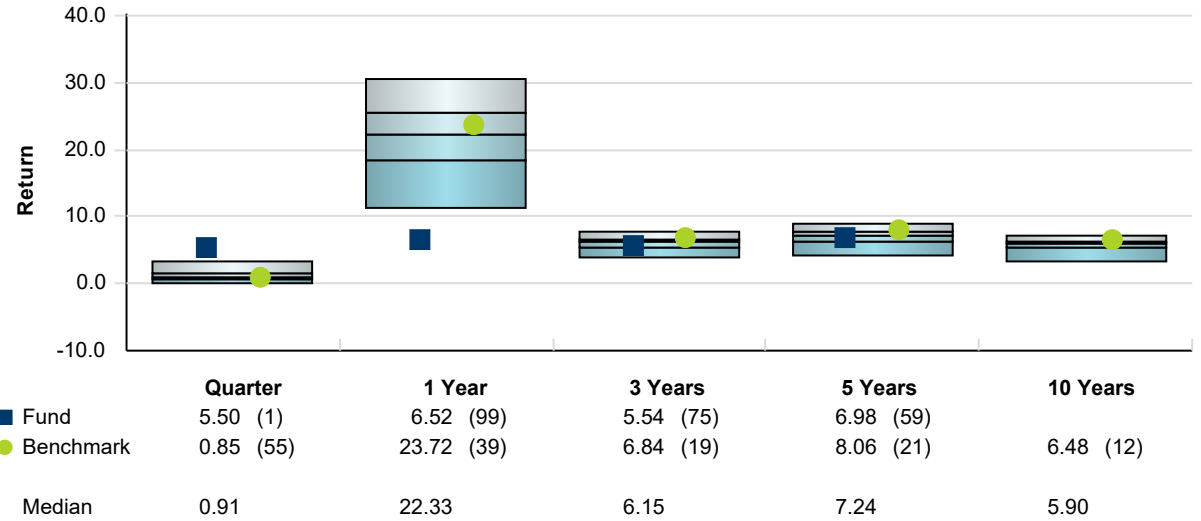
Marathon Bluegrass

Periods Ended March 31, 2021

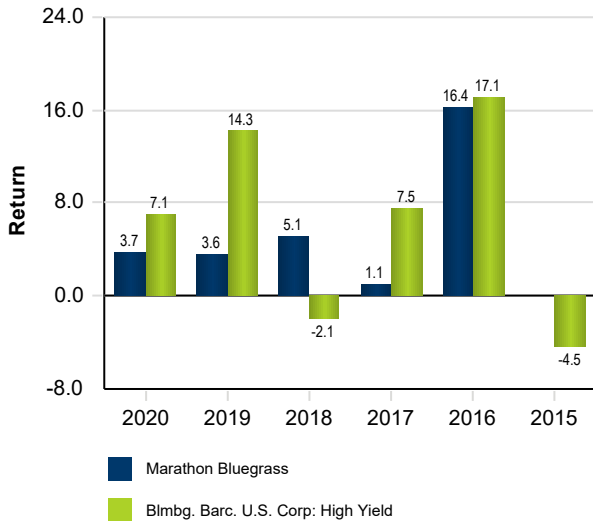
Comparative Performance



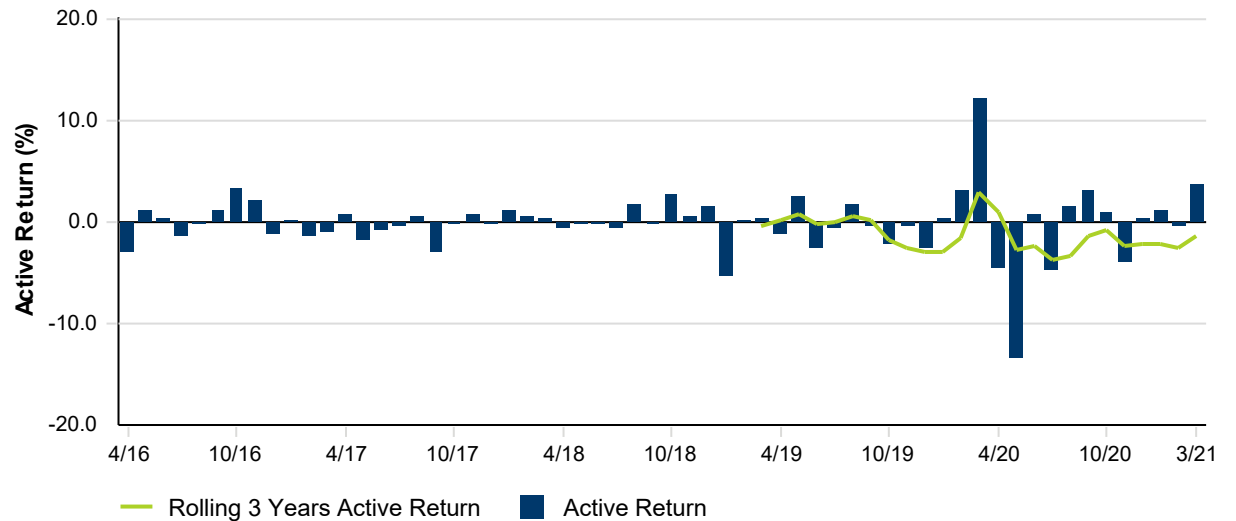
Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Marathon Bluegrass

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Marathon Bluegrass</u>	<u>Blmbg. Barc. U.S. Corp: High Yield</u>
Maximum Return	3.92	4.69
Minimum Return	-8.86	-1.03
Return	6.52	23.72
Cumulative Return	6.52	23.72
Active Return	-14.77	0.00
Excess Return	6.81	21.58

Risk Summary Statistics

	<u>Marathon Bluegrass</u>	<u>Blmbg. Barc. U.S. Corp: High Yield</u>
Upside Risk	1.81	2.63
Downside Risk	8.86	1.03
Beta	-0.96	1.00

Risk/Return Summary Statistics

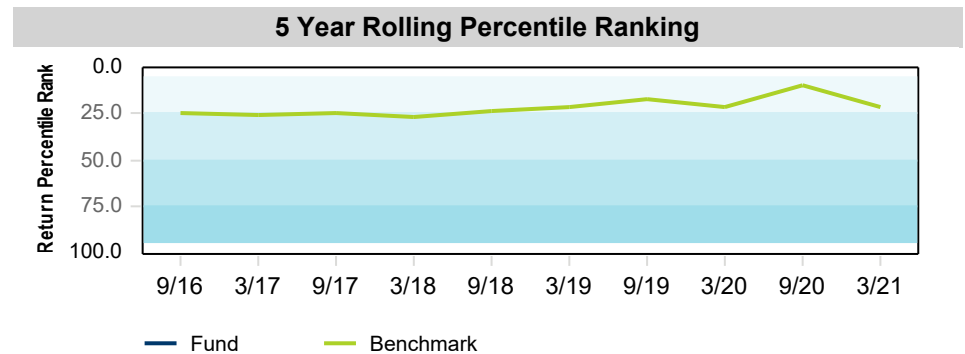
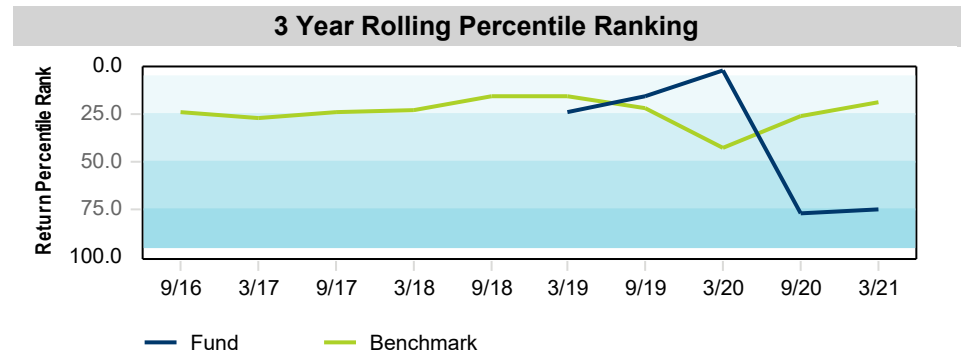
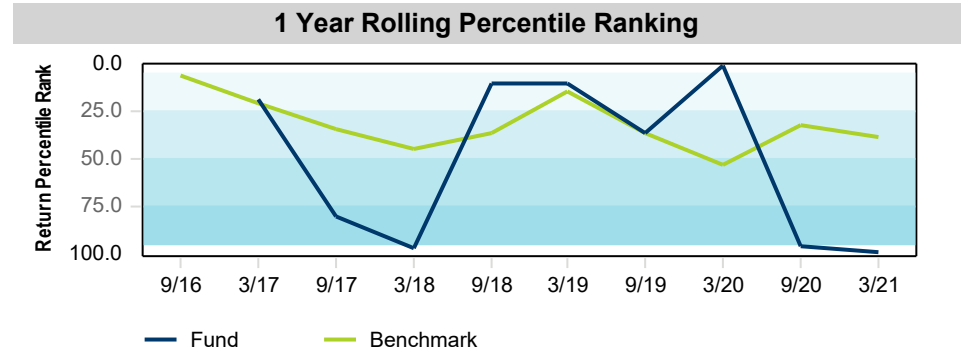
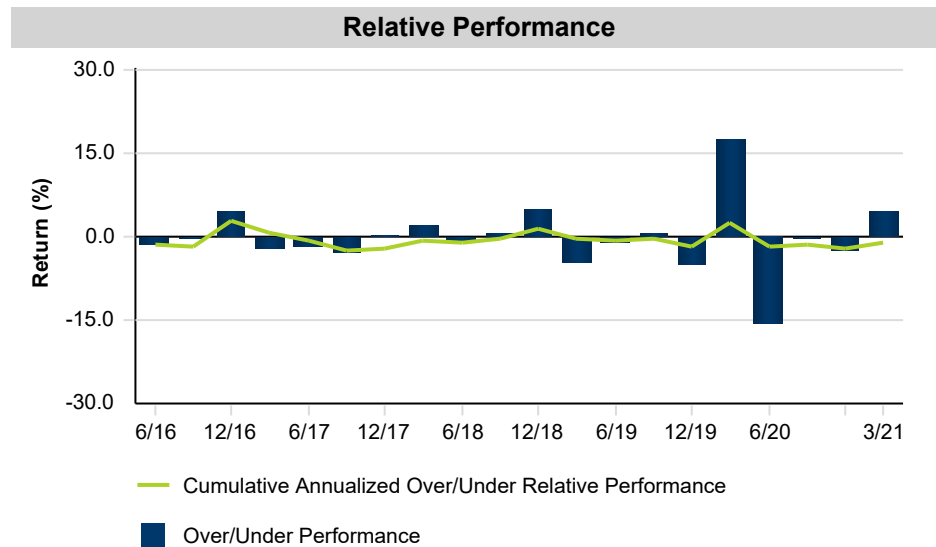
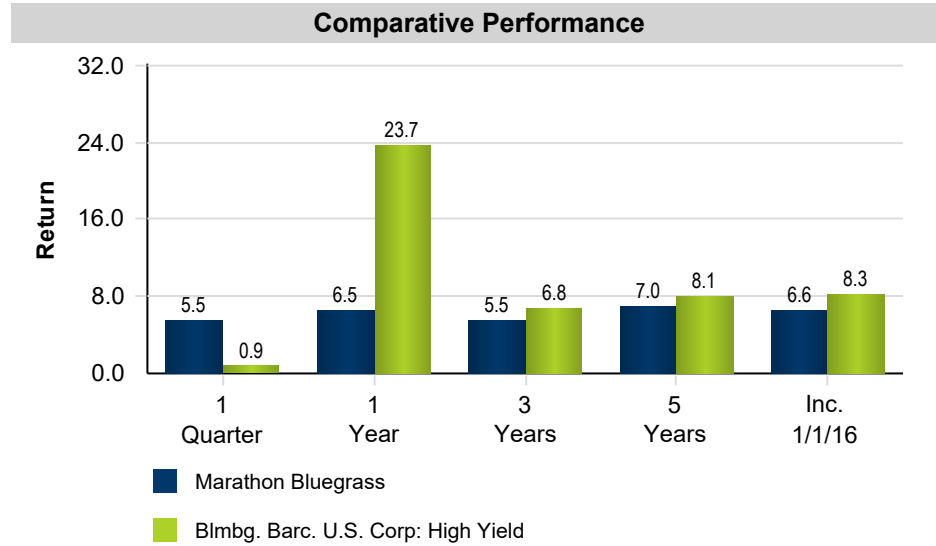
	<u>Marathon Bluegrass</u>	<u>Blmbg. Barc. U.S. Corp: High Yield</u>
Standard Deviation	10.68	6.72
Alpha	31.50	0.00
Active Return/Risk	-1.38	0.00
Tracking Error	15.67	0.00
Information Ratio	-0.94	
Sharpe Ratio	0.64	3.21

Correlation Statistics

	<u>Marathon Bluegrass</u>	<u>Blmbg. Barc. U.S. Corp: High Yield</u>
R-Squared	0.36	1.00
Actual Correlation	-0.60	1.00

Manager Summary

Marathon Bluegrass vs IM U.S. High Yield Bonds (SA+CF)
 Periods Ended March 31, 2021



Summary Statistics

Shenkman Capital

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Shenkman Capital</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	4.50	4.50
Minimum Return	-0.10	0.00
Return	20.35	20.71
Cumulative Return	20.35	20.71
Active Return	-0.28	0.00
Excess Return	18.67	18.95

Risk Summary Statistics

	<u>Shenkman Capital</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	2.12	2.06
Downside Risk	0.10	0.00
Beta	1.08	1.00

Risk/Return Summary Statistics

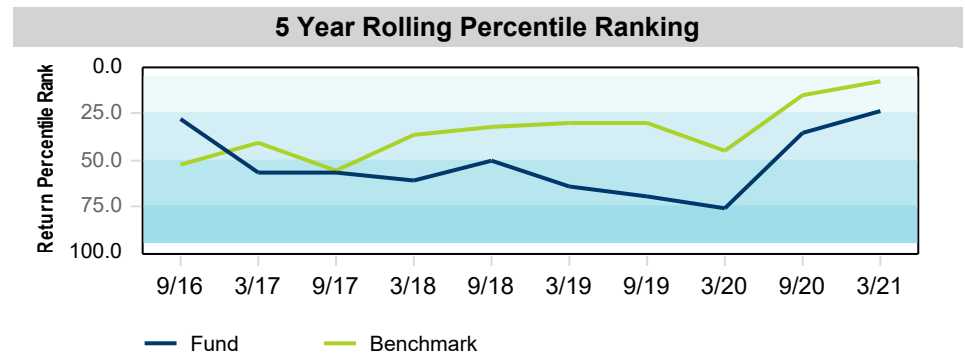
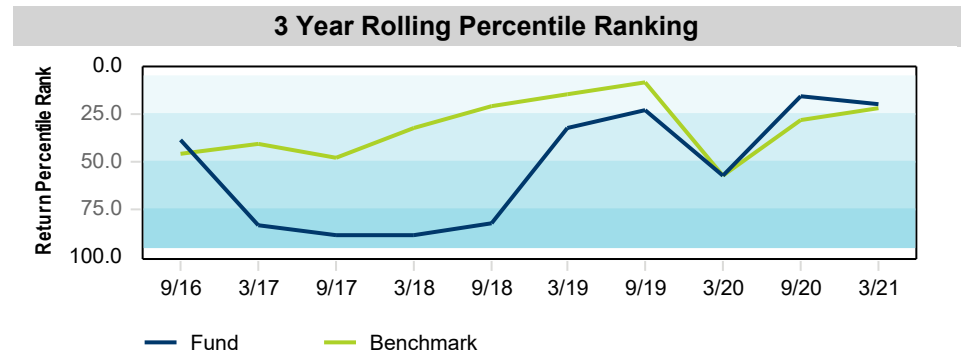
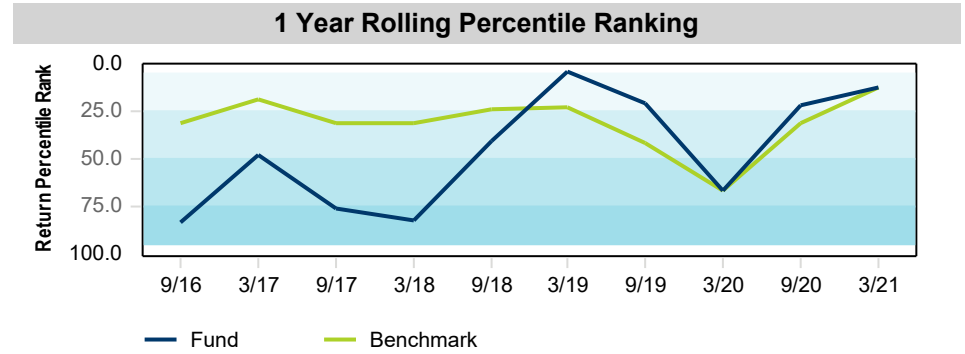
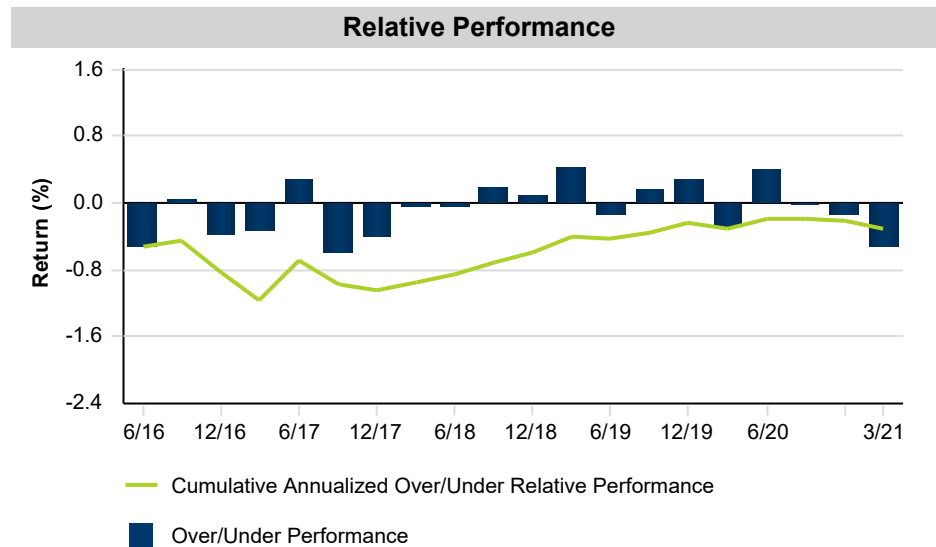
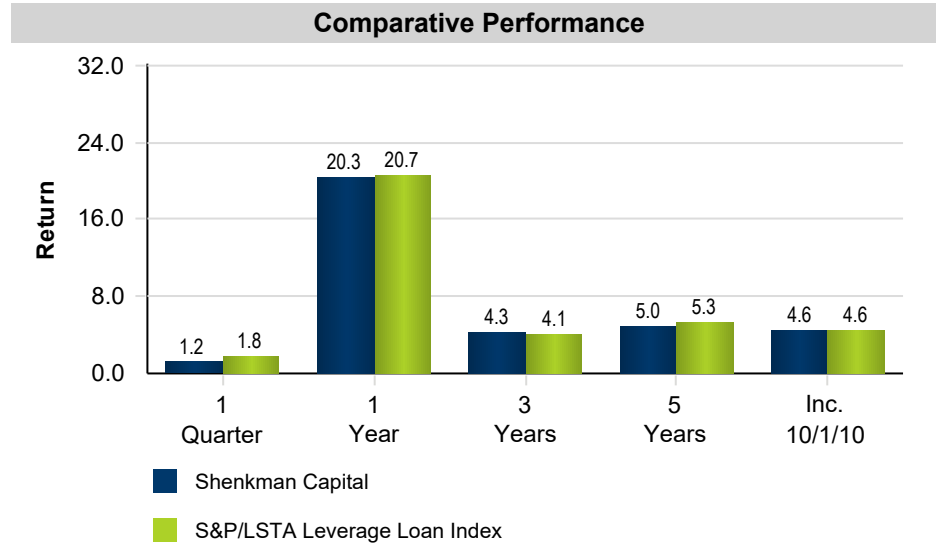
	<u>Shenkman Capital</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	4.97	4.55
Alpha	-1.71	0.00
Active Return/Risk	-0.06	0.00
Tracking Error	0.96	0.00
Information Ratio	-0.29	
Sharpe Ratio	3.75	4.16

Correlation Statistics

	<u>Shenkman Capital</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.97	1.00
Actual Correlation	0.98	1.00

Manager Summary

Shenkman Capital vs IM U.S. Bank Loans (SA+CF)
 Periods Ended March 31, 2021

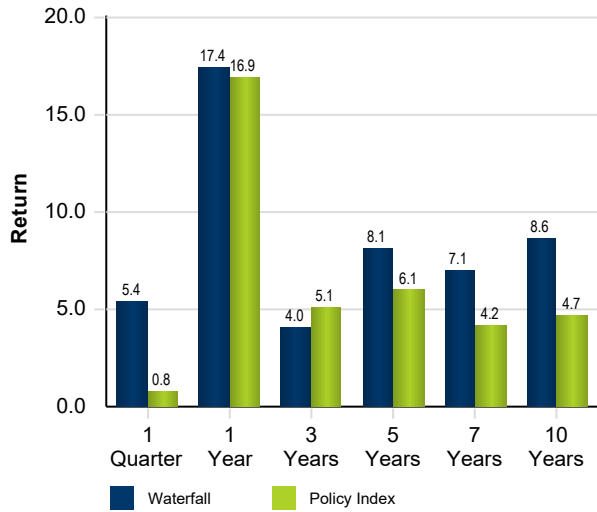


Performance Summary

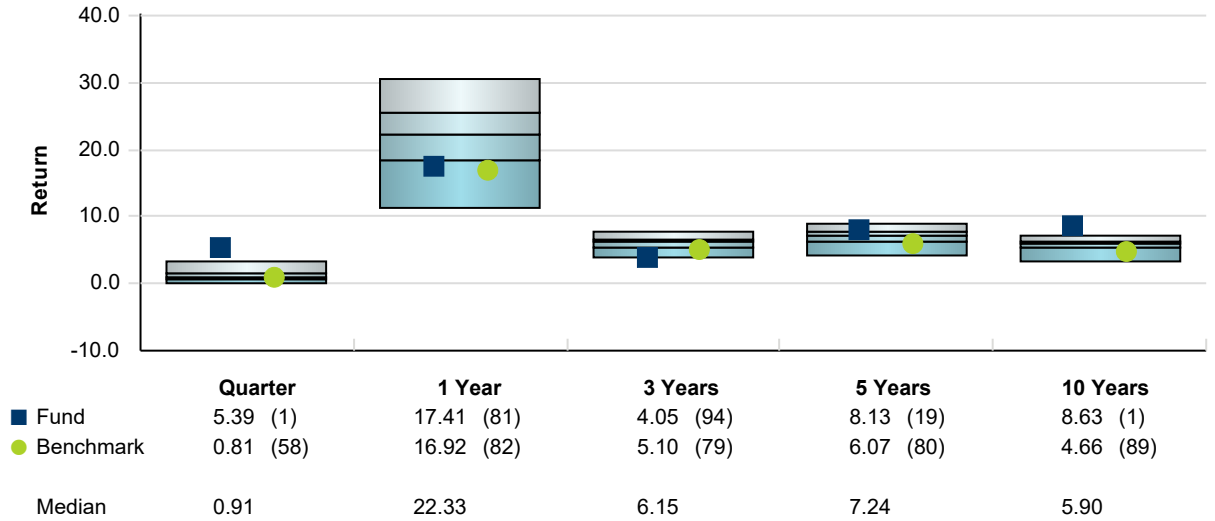
Waterfall

Periods Ended March 31, 2021

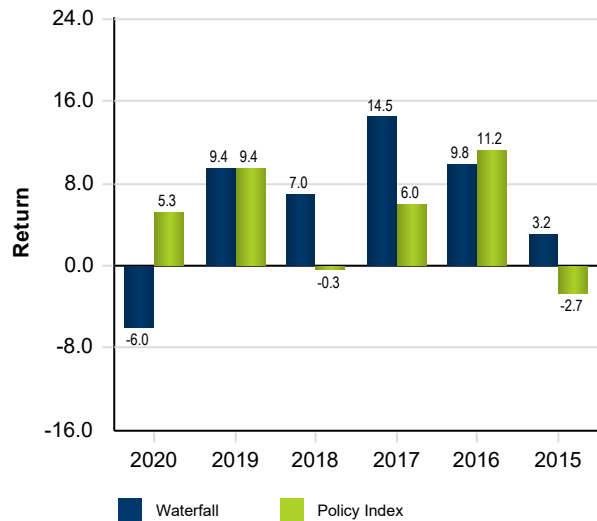
Comparative Performance



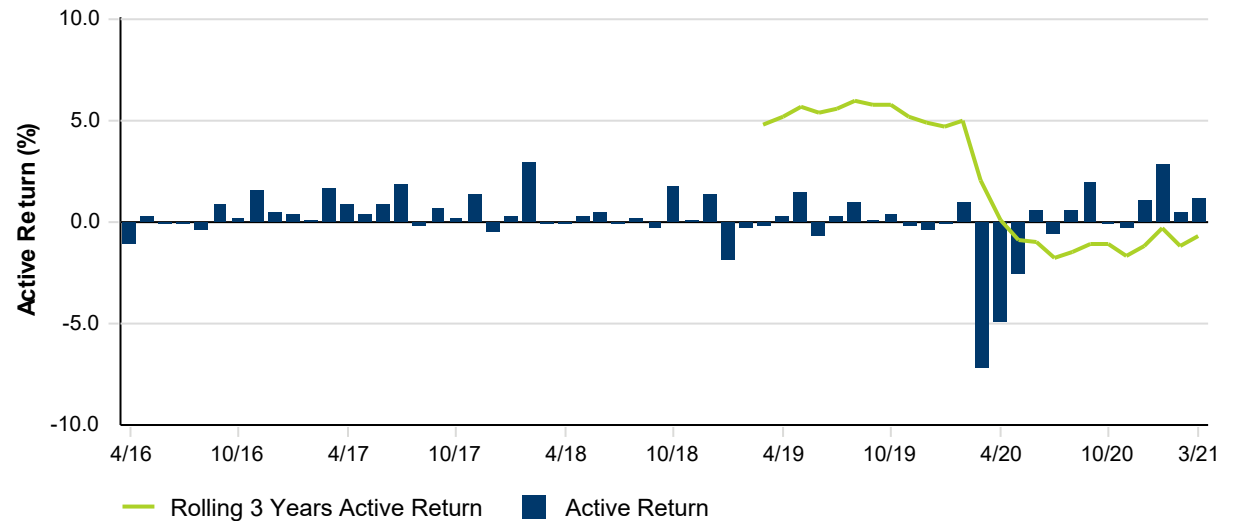
Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Waterfall

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Waterfall</u>	<u>Policy Index</u>
Maximum Return	3.19	3.19
Minimum Return	-1.76	-0.52
Return	17.41	16.92
Cumulative Return	17.41	16.92
Active Return	0.42	0.00
Excess Return	16.13	15.71

Risk Summary Statistics

	<u>Waterfall</u>	<u>Policy Index</u>
Upside Risk	1.75	1.81
Downside Risk	1.76	0.52
Beta	-0.27	1.00

Risk/Return Summary Statistics

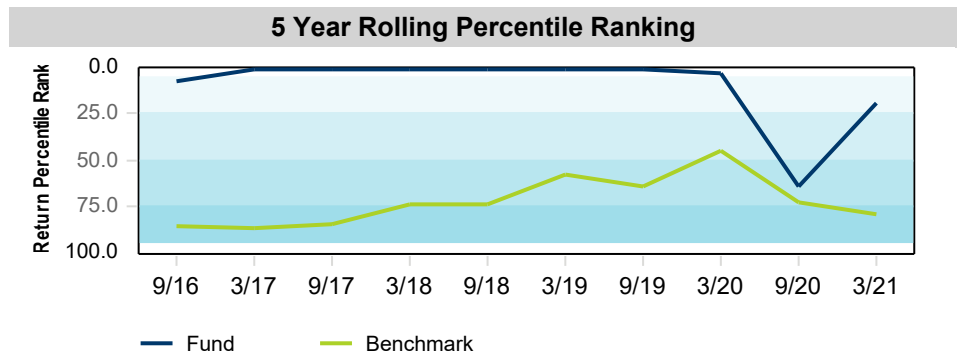
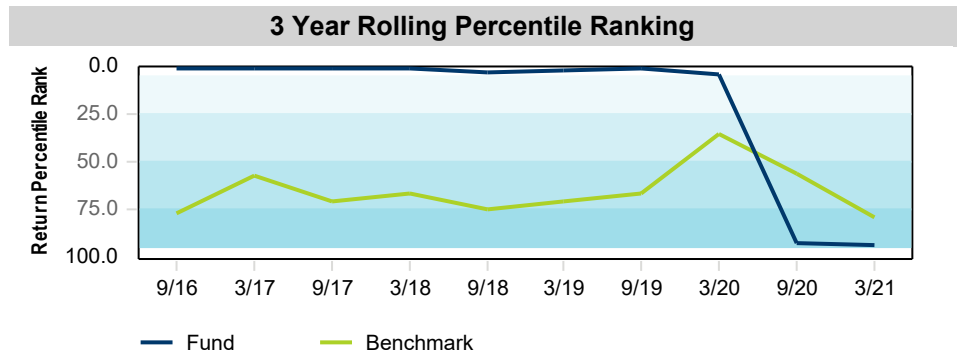
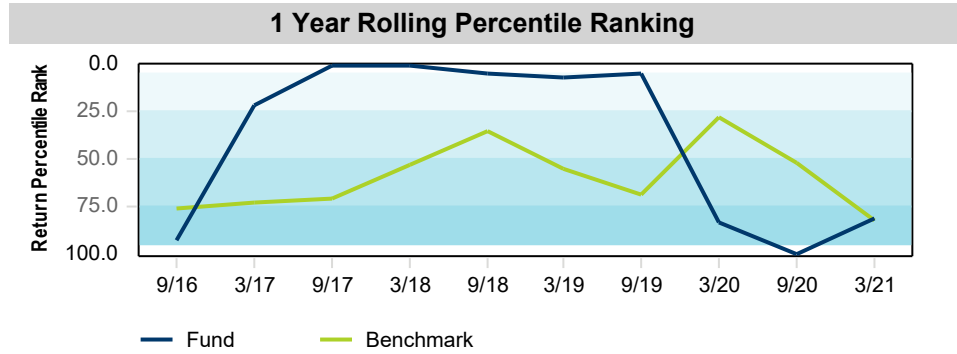
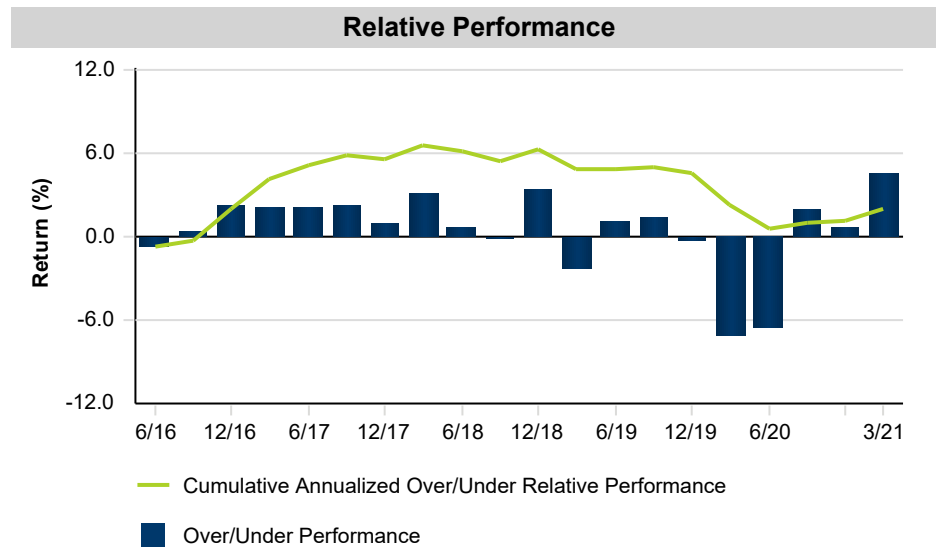
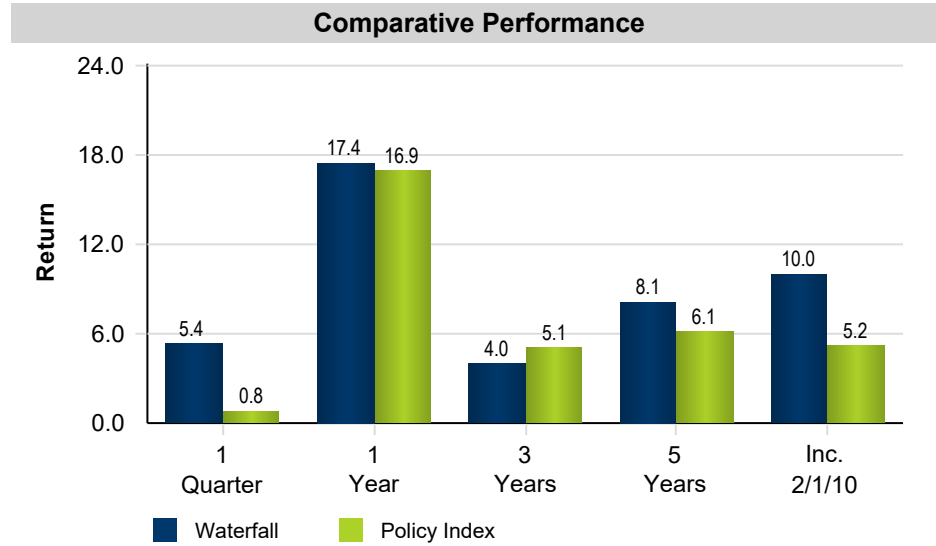
	<u>Waterfall</u>	<u>Policy Index</u>
Standard Deviation	4.23	4.30
Alpha	22.58	0.00
Active Return/Risk	0.10	0.00
Tracking Error	6.82	0.00
Information Ratio	0.06	
Sharpe Ratio	3.81	3.65

Correlation Statistics

	<u>Waterfall</u>	<u>Policy Index</u>
R-Squared	0.08	1.00
Actual Correlation	-0.28	1.00

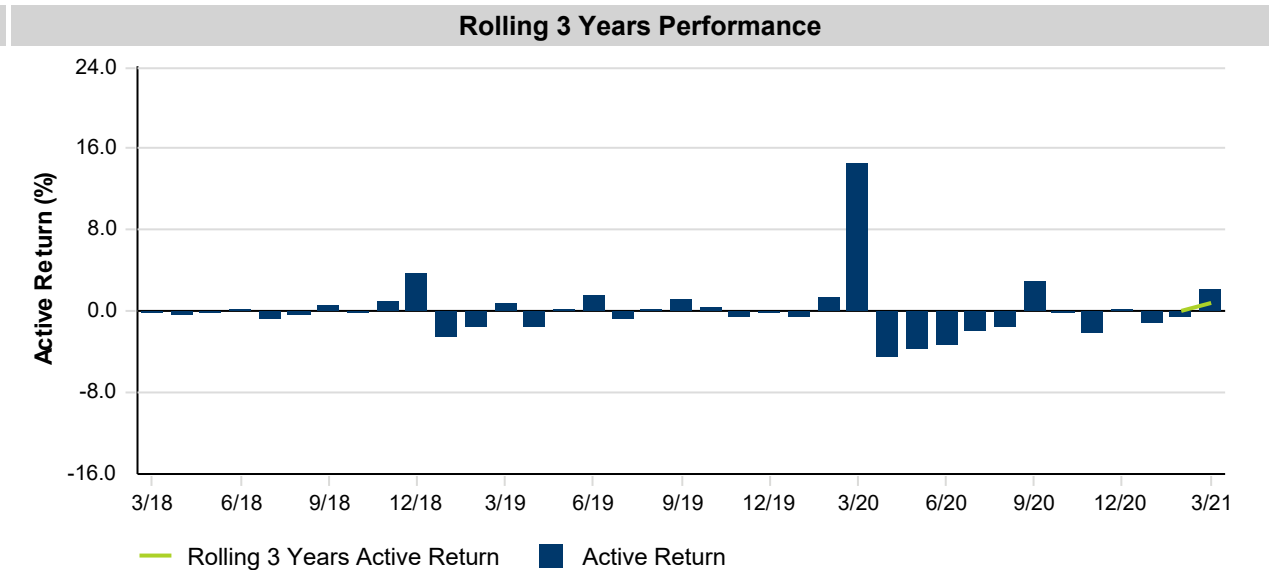
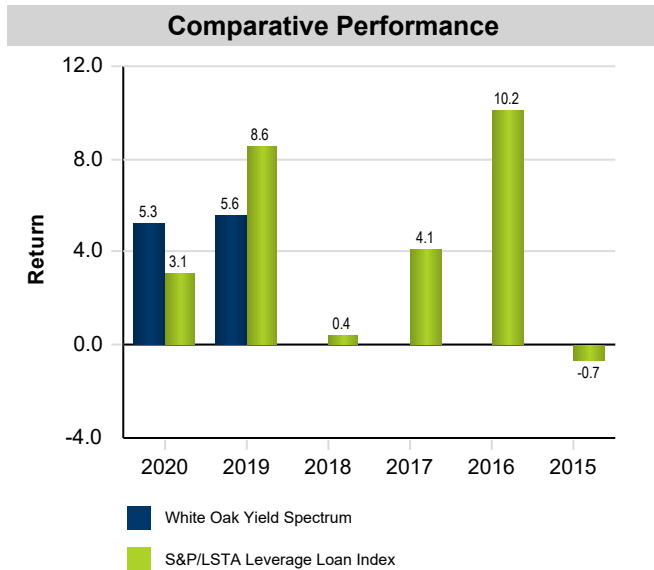
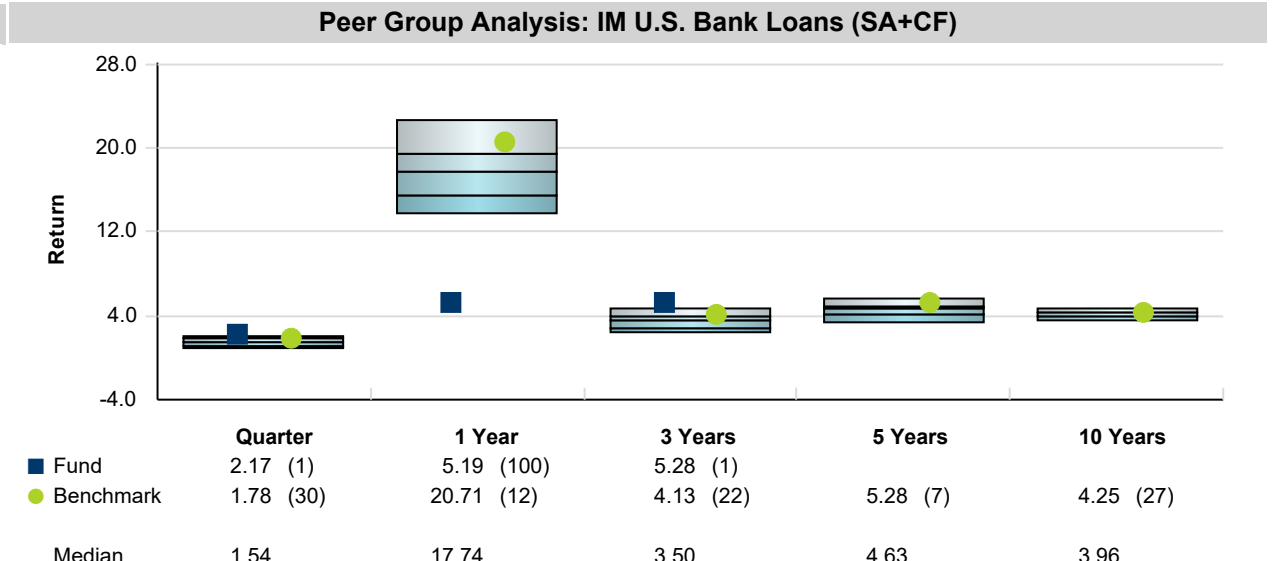
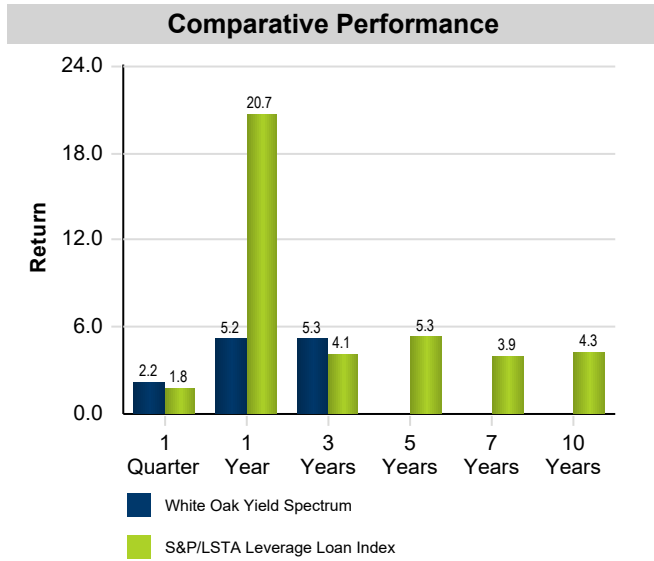
Manager Summary

Waterfall vs IM U.S. High Yield Bonds (SA+CF)
 Periods Ended March 31, 2021



Performance Summary

White Oak Yield Spectrum
 Periods Ended March 31, 2021



Summary Statistics

White Oak Yield Spectrum

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>White Oak Yield Spectrum</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	3.63	4.50
Minimum Return	-2.18	0.00
Return	5.19	20.71
Cumulative Return	5.19	20.71
Active Return	-13.89	0.00
Excess Return	5.07	18.95

Risk Summary Statistics

	<u>White Oak Yield Spectrum</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	1.30	2.06
Downside Risk	2.18	0.00
Beta	-0.31	1.00

Risk/Return Summary Statistics

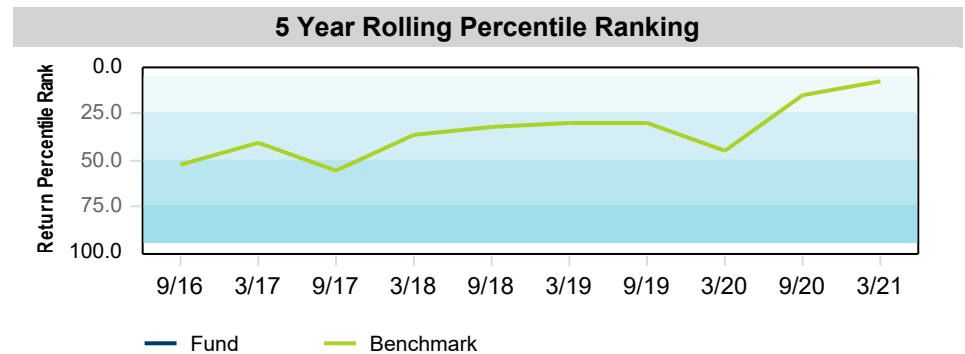
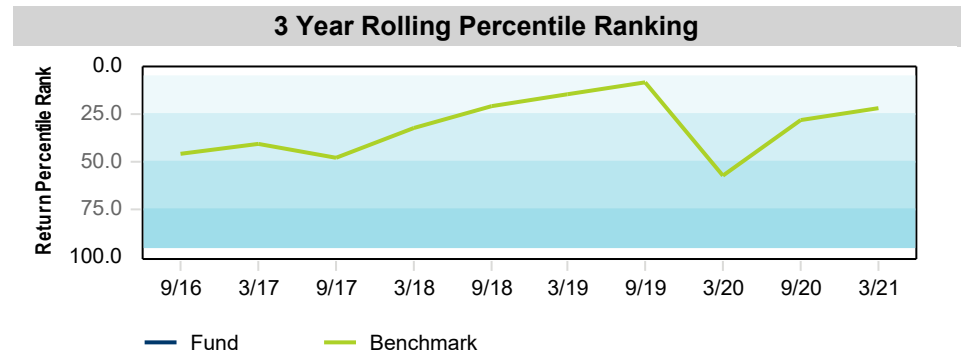
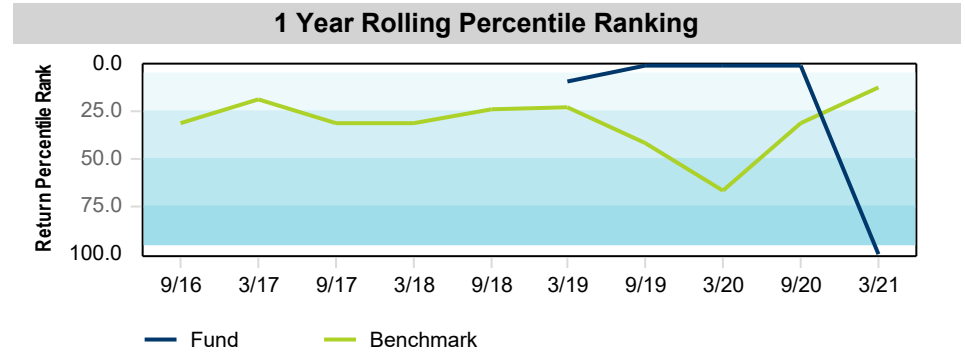
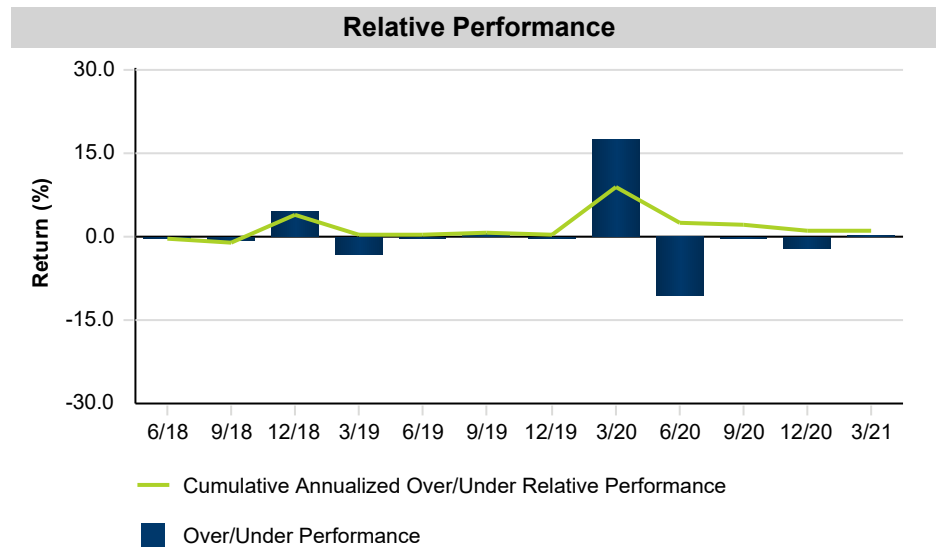
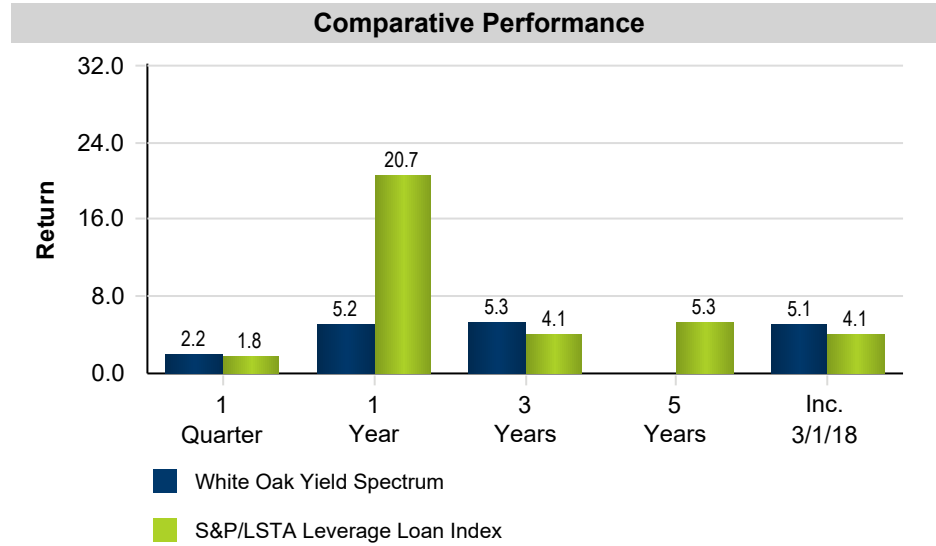
	<u>White Oak Yield Spectrum</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	4.78	4.55
Alpha	11.57	0.00
Active Return/Risk	-2.91	0.00
Tracking Error	7.49	0.00
Information Ratio	-1.85	
Sharpe Ratio	1.06	4.16

Correlation Statistics

	<u>White Oak Yield Spectrum</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.08	1.00
Actual Correlation	-0.29	1.00

Manager Summary

White Oak Yield Spectrum vs IM U.S. Bank Loans (SA+CF)
 Periods Ended March 31, 2021





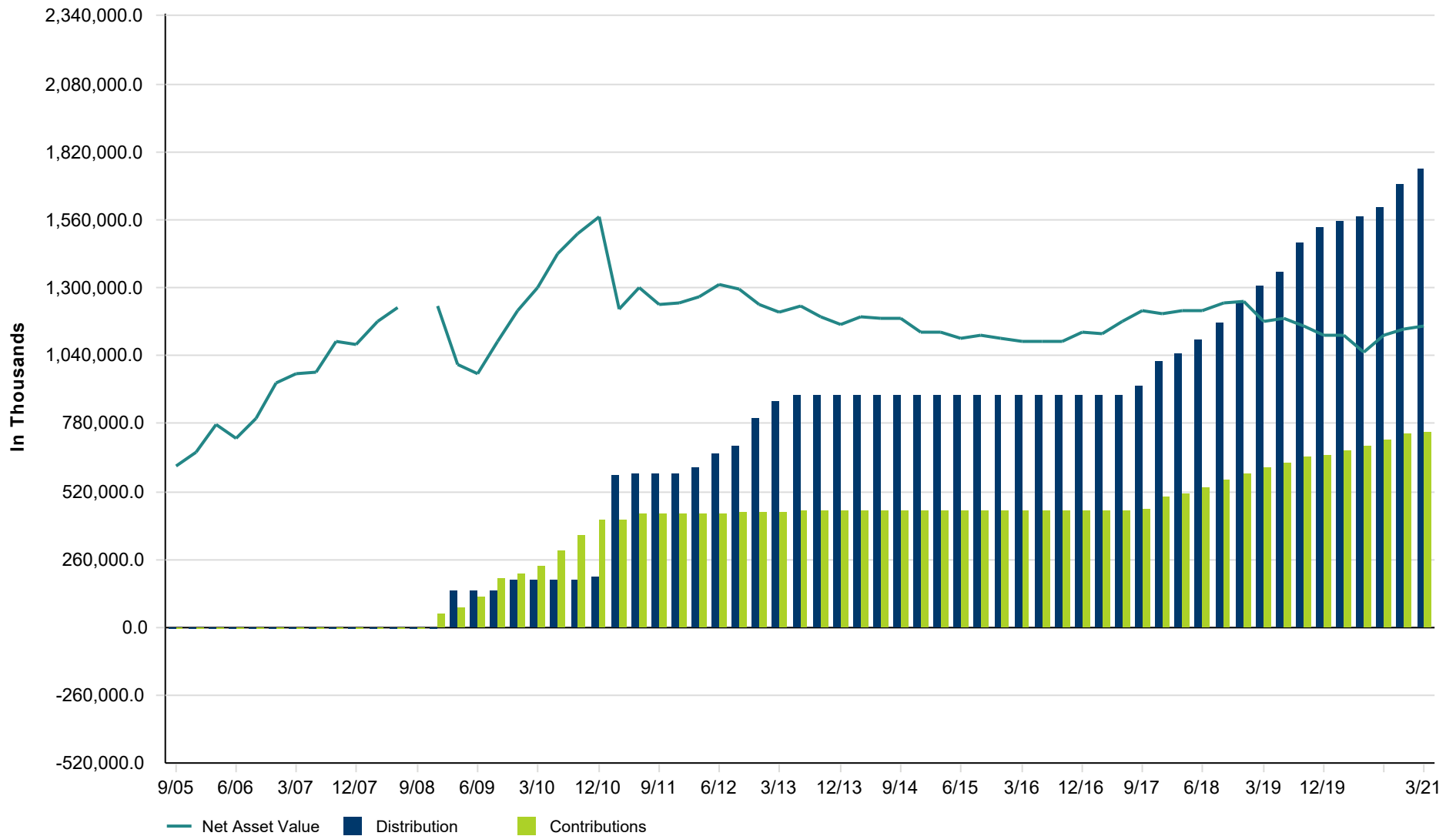
Private Equity Composite

Private Equity Composite Overview

Private Equity Composite

Periods Ended As of March 31, 2021

Cash Flow Analysis





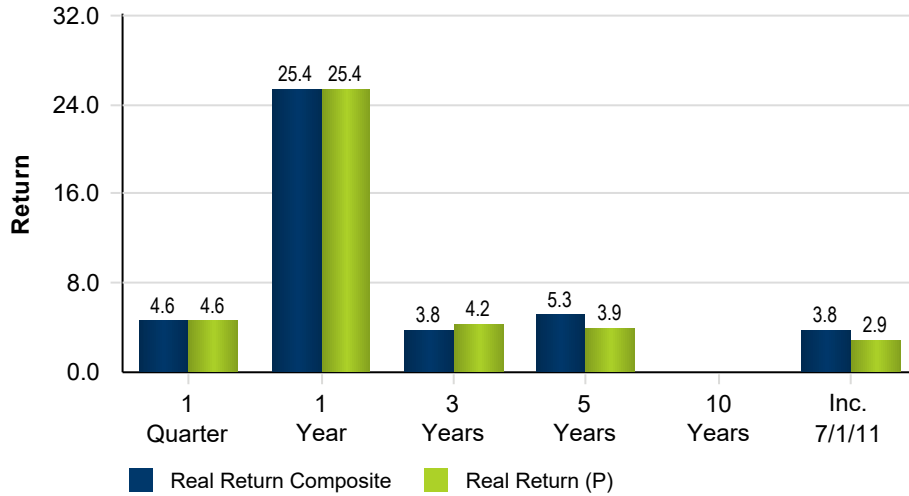
Real Return Composite

Composite Performance Summary

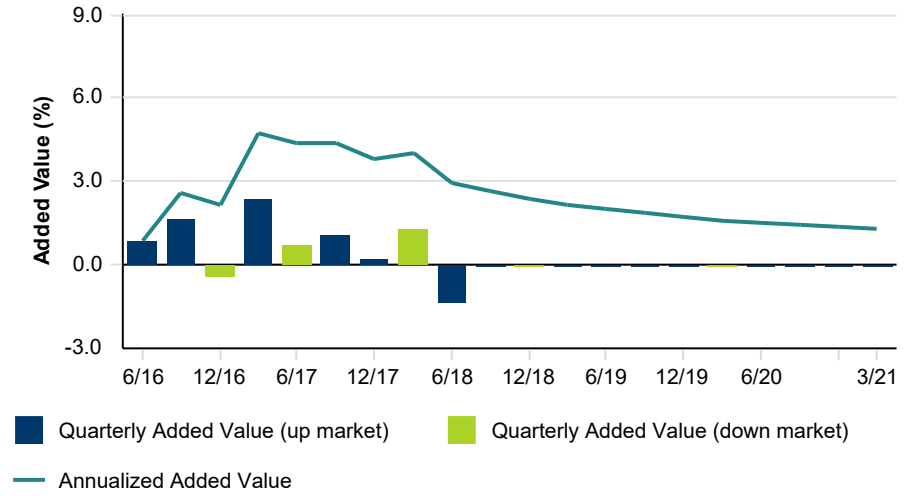
Real Return Composite

Periods Ended March 31, 2021

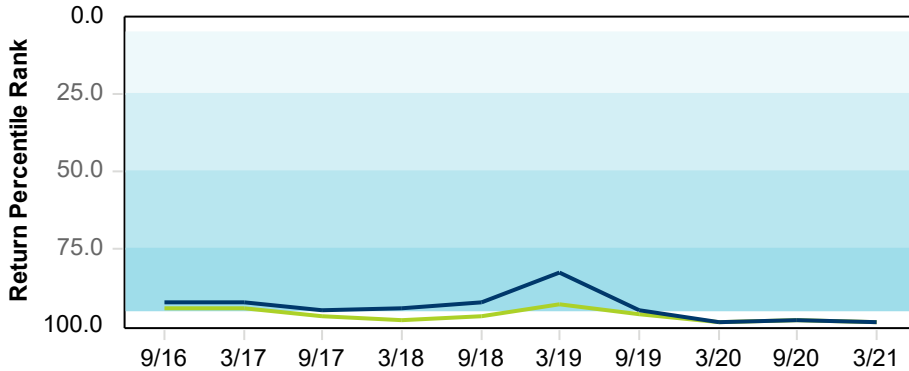
Comparative Performance



Added Value History

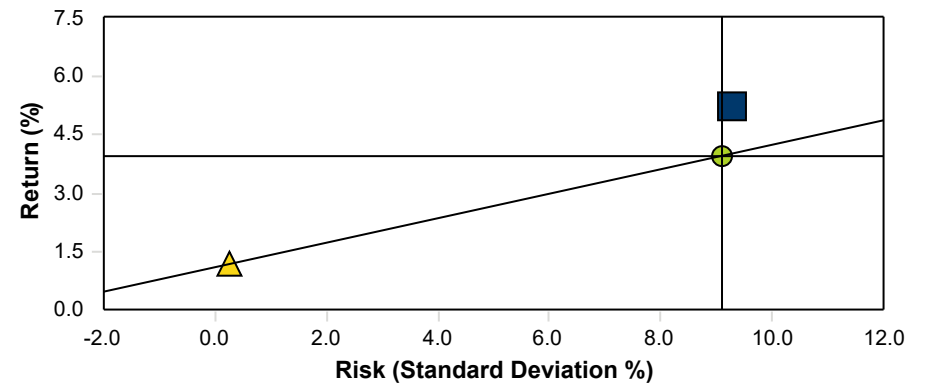


Rolling Percentile Rank: IM U.S. Tactical Asset Allocation (TAA) (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Real Return Composite	10	0 (0%)	0 (0%)	0 (0%)	10 (100%)
Benchmark	10	0 (0%)	0 (0%)	0 (0%)	10 (100%)

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



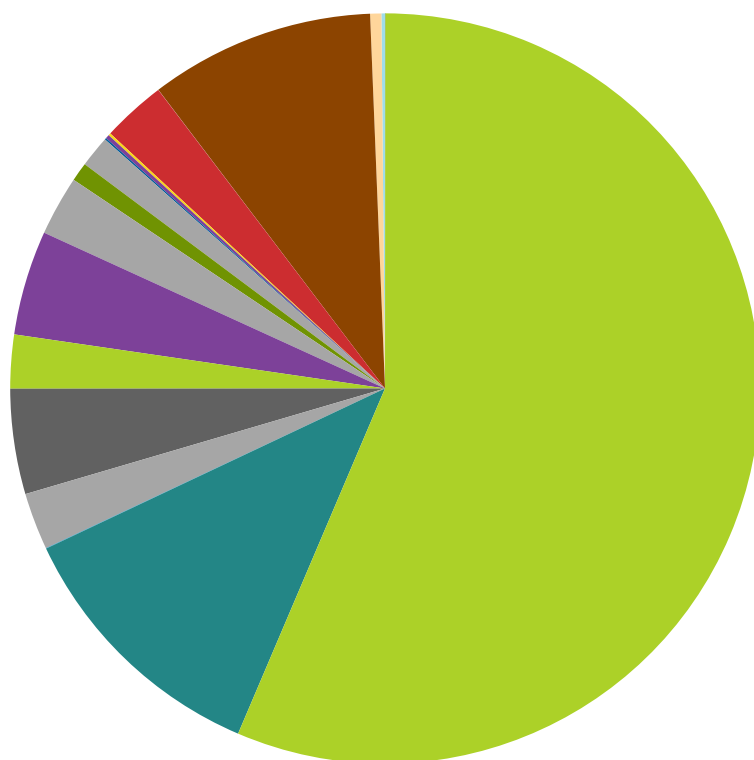
- Real Return Composite
- Real Return (P)
- 90 Day US Treasury Bill

Asset Allocation By Manager

Real Return Composite

Periods Ended March 31, 2021

Mar-2021 : 1,011,388,853

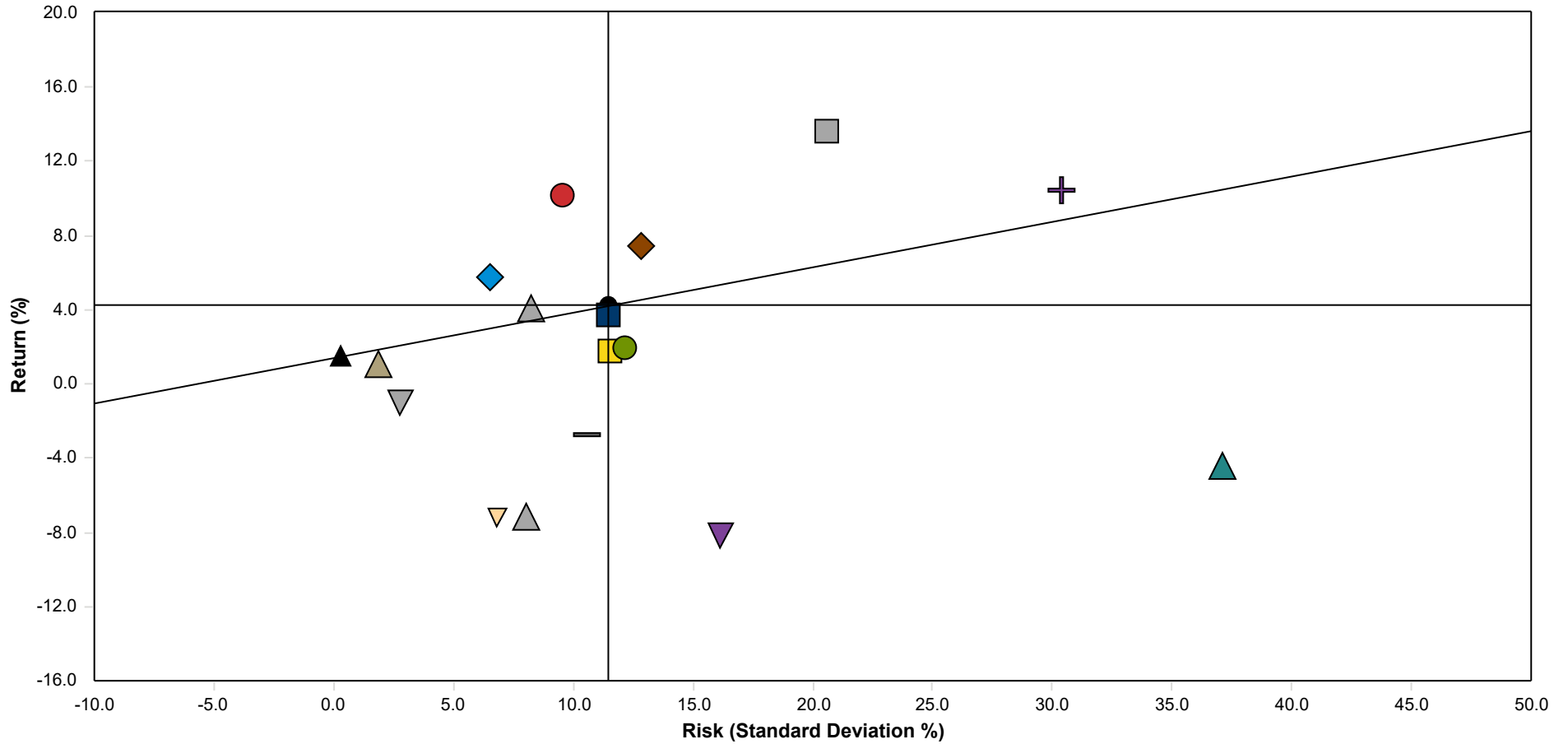


	Market Value \$	Allocation (%)
Internal TIPS	127,934	0.0
Putnam	570,430,839	56.4
Tortoise Capital	117,013,270	11.6
Nuveen Real Asset	194,614	0.0
Amerra AGRI Fund II	24,854,870	2.5
Amerra AGRI Holdings	45,836,480	4.5
BTG Pactual	23,440,730	2.3
IFM Infrastructure	45,602,641	4.5
Magnetar MTP EOF II	26,003,495	2.6
Oberland Capital	8,221,636	0.8
Taurus Mine Finance	13,729,557	1.4
TPF II	773,085	0.1
Blackstone Strat Opp	1,630,194	0.2
Luxor Capital	1,067,357	0.1
Myriad Opportunities	27,804,715	2.7
Pine River	83,415	0.0
PRISMA Capital	98,109,835	9.7
SRS Partners US	4,889,016	0.5
Tricadia Select	1,575,171	0.2

Risk vs. Return

Real Return Composite

Periods Ended 3 Years Ending March 31, 2021



- Real Return Composite
- Putnam
- ▲ Tortoise Capital
- ◆ Amerra AGRI Fund II
- ▼ Amerra AGRI Holdings
- BTG Pactual
- | IFM Infrastructure
- + Magnetar MTP EOF II
- Oberland Capital
- Taurus Mine Finance
- ▲ TPF II
- ▲ Blackstone Strat Opp
- ▼ Luxor Capital
- Myriad Opportunities
- Pine River
- ▲ PRISMA Capital
- ◆ SRS Partners US
- ▼ Tricadia Select
- Real Return (P)
- ▲ 90 Day US Treasury Bill

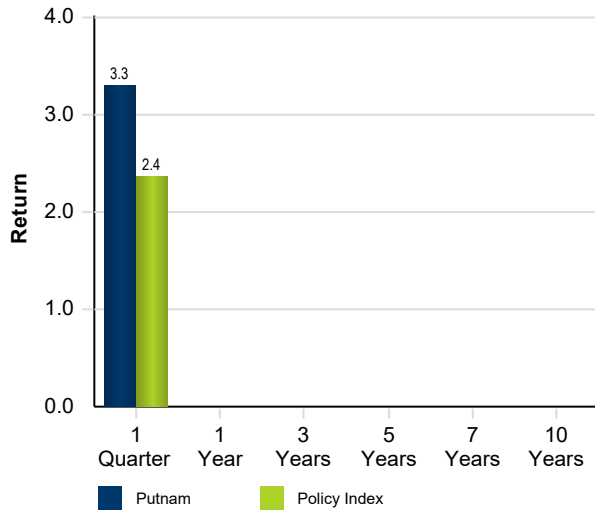
Calculation based on monthly periodicity.

Performance Summary

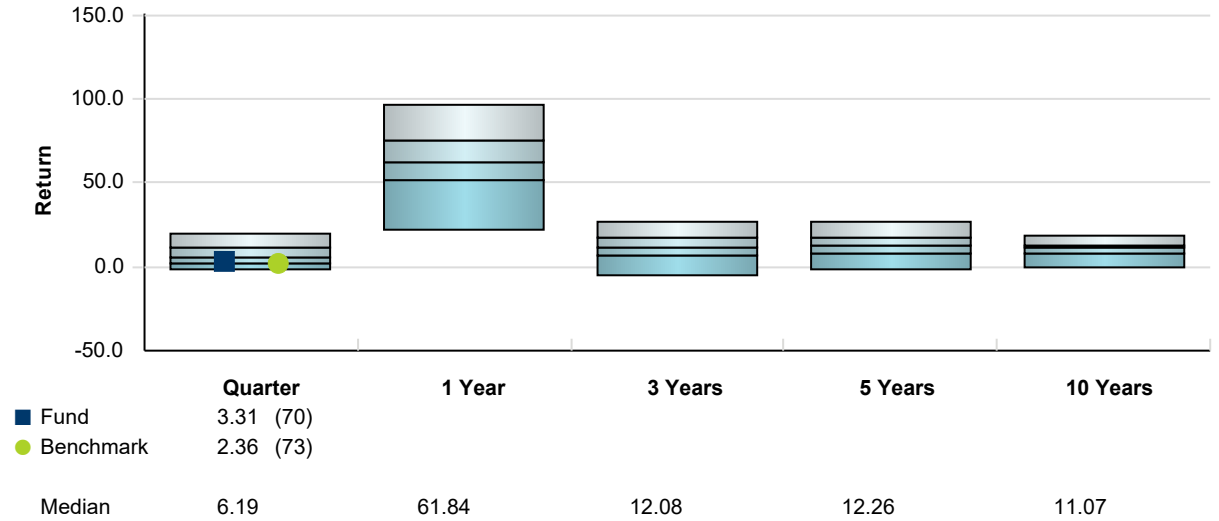
Putnam

Periods Ended March 31, 2021

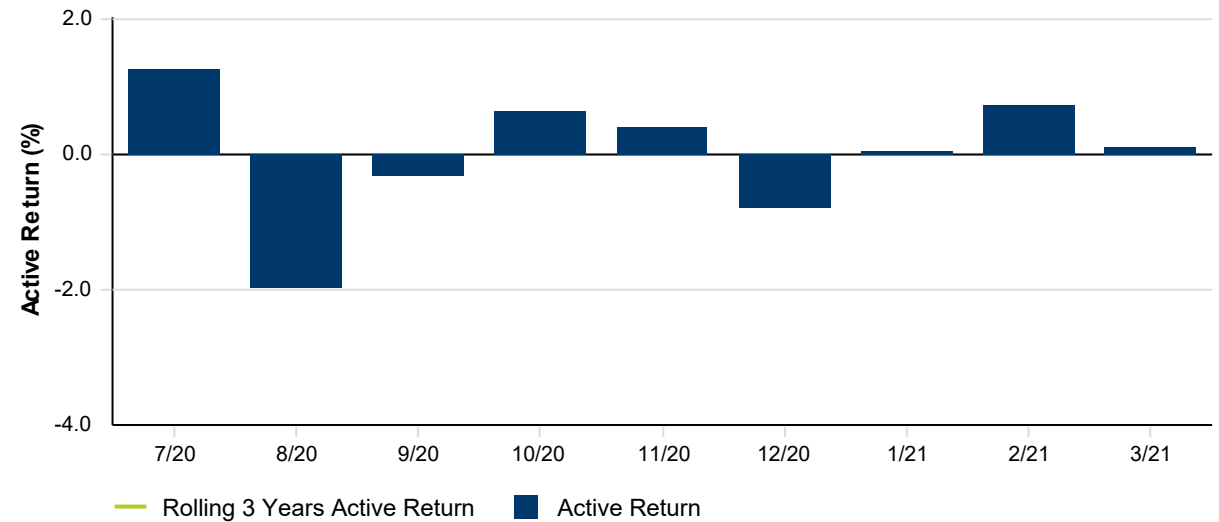
Comparative Performance



Peer Group Analysis: IM U.S. Other Equity (SA+CF)



Rolling 3 Years Performance



Summary Statistics

Putnam

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

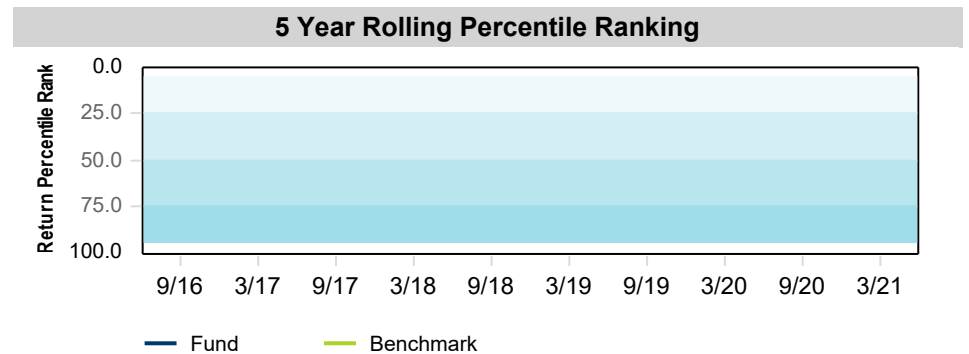
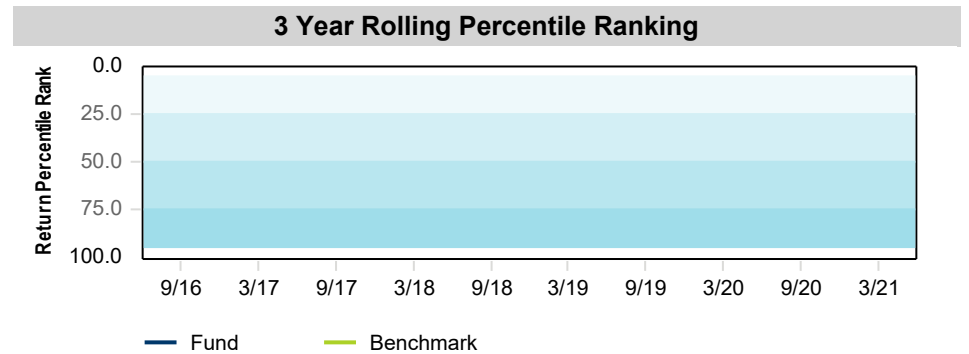
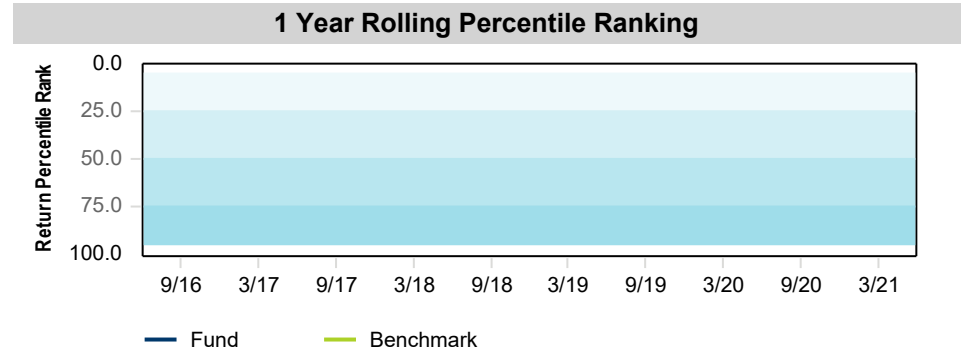
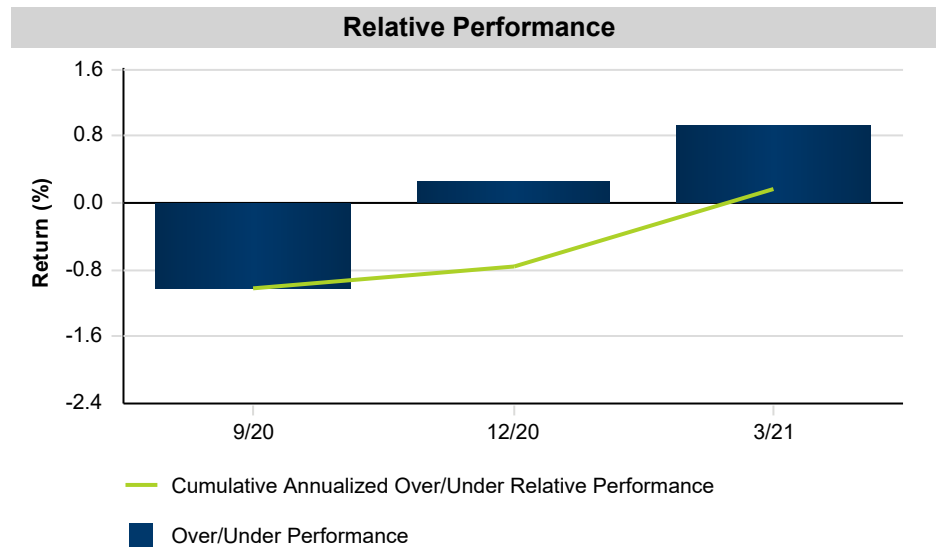
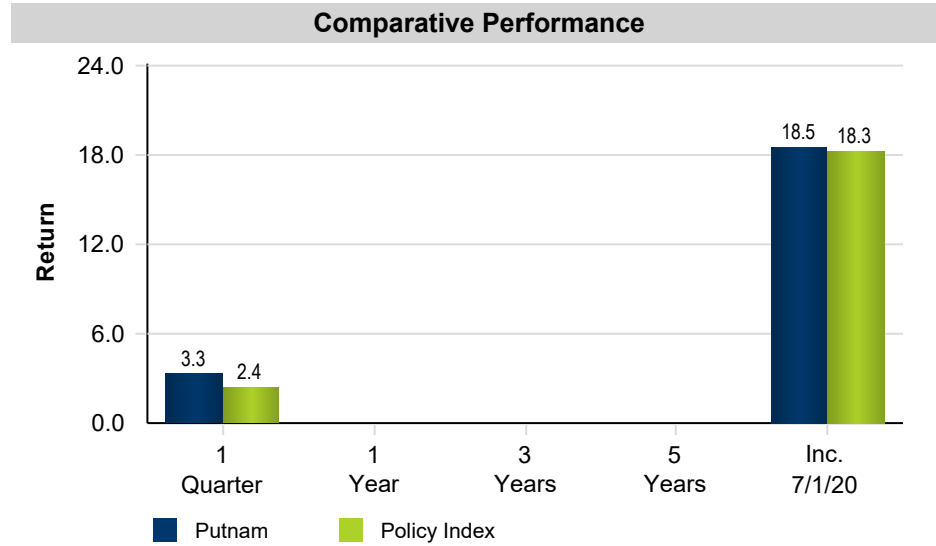
Risk Summary Statistics

Risk/Return Summary Statistics

Correlation Statistics

Manager Summary

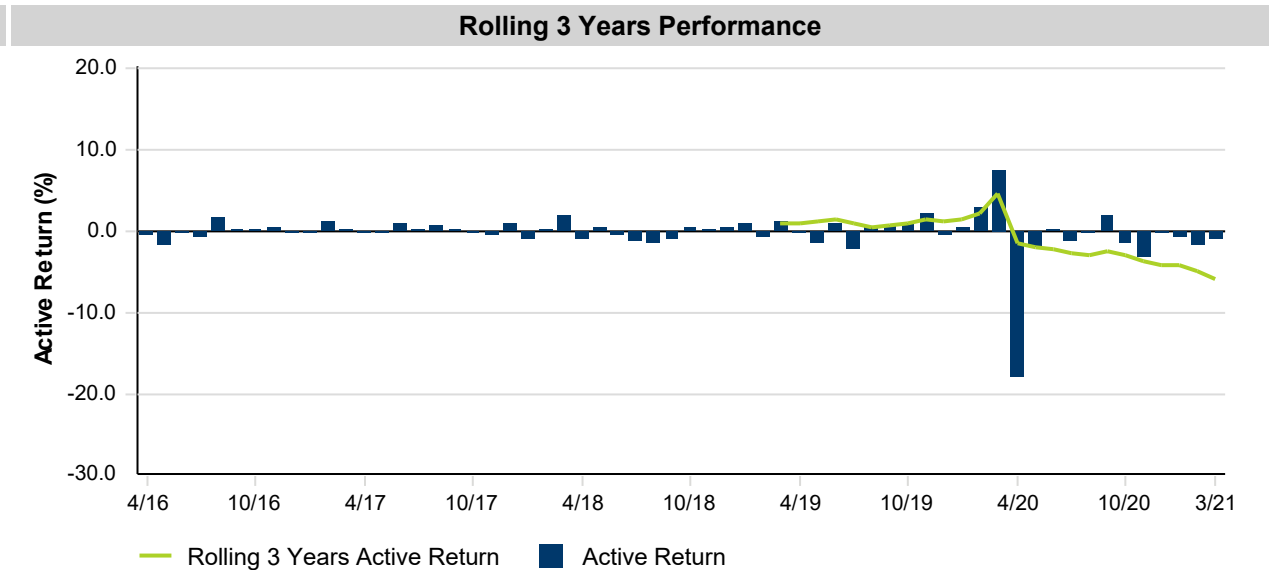
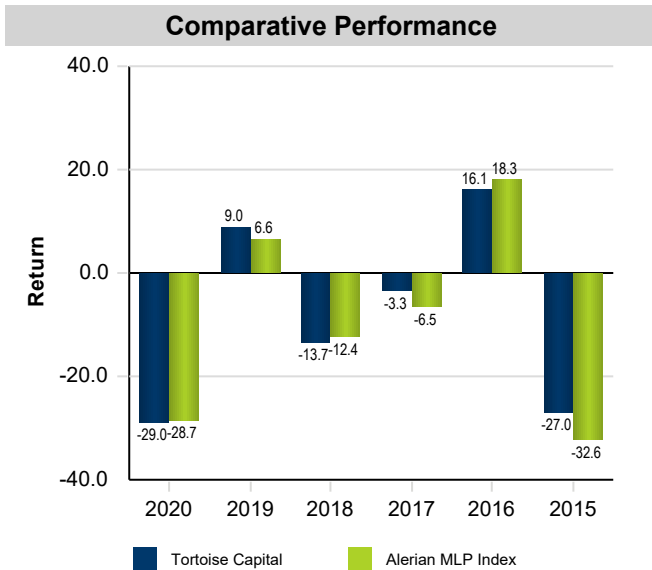
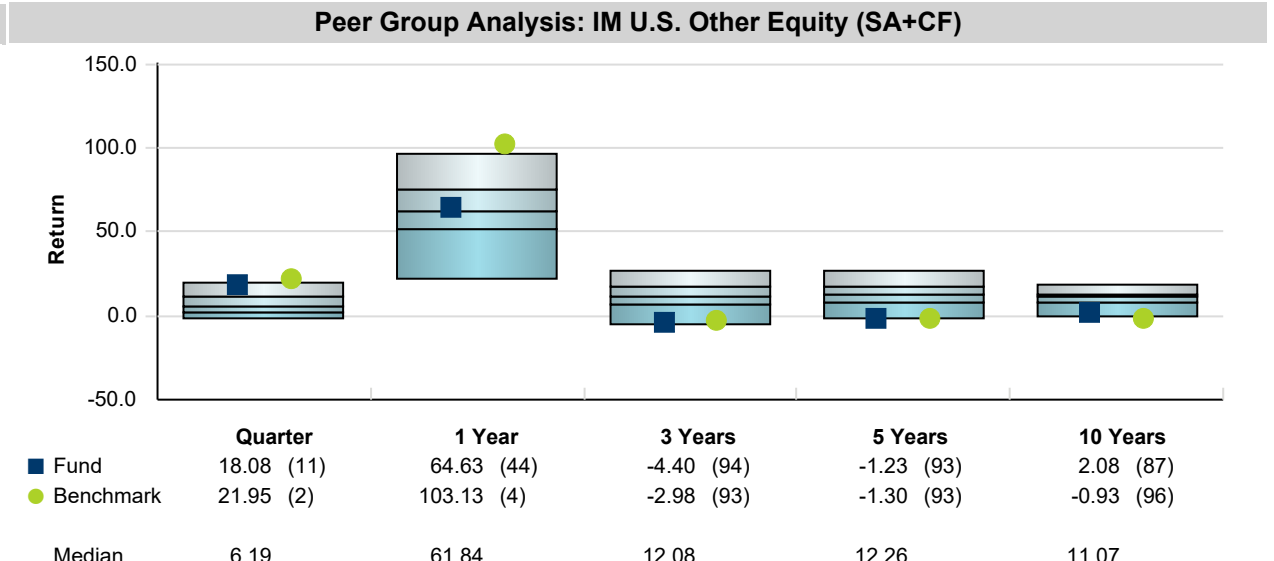
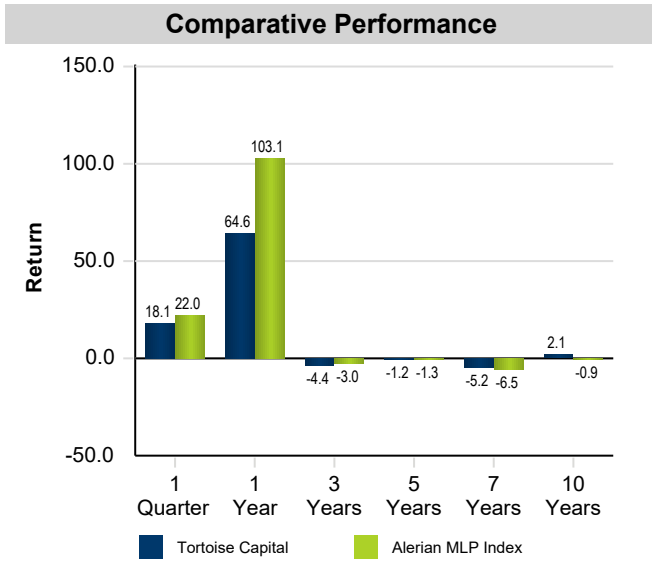
Putnam vs IM U.S. Other Equity (SA+CF)
 Periods Ended March 31, 2021



Performance Summary

Tortoise Capital

Periods Ended March 31, 2021



Summary Statistics

Tortoise Capital

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Tortoise Capital</u>	<u>Alerian MLP Index</u>
Maximum Return	31.64	49.62
Minimum Return	-11.60	-13.62
Return	64.63	103.13
Cumulative Return	64.63	103.13
Active Return	-27.44	0.00
Excess Return	57.68	85.12

Risk Summary Statistics

	<u>Tortoise Capital</u>	<u>Alerian MLP Index</u>
Upside Risk	11.50	16.52
Downside Risk	14.66	16.13
Beta	0.71	1.00

Risk/Return Summary Statistics

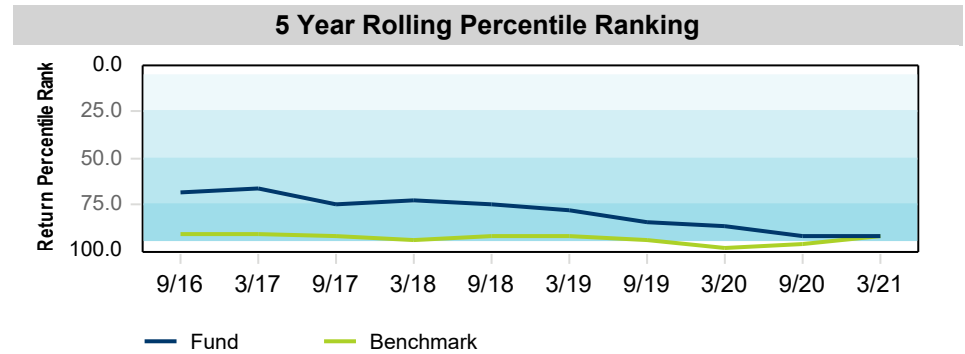
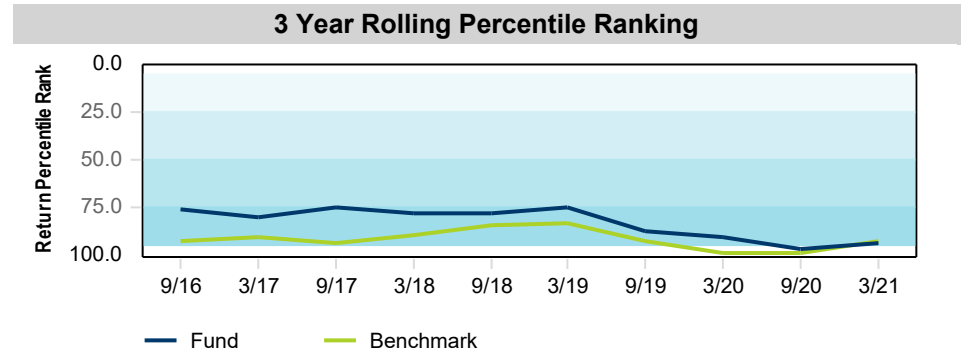
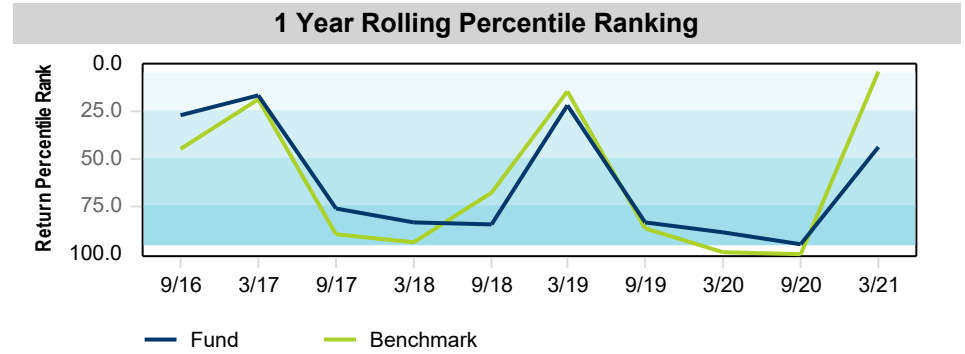
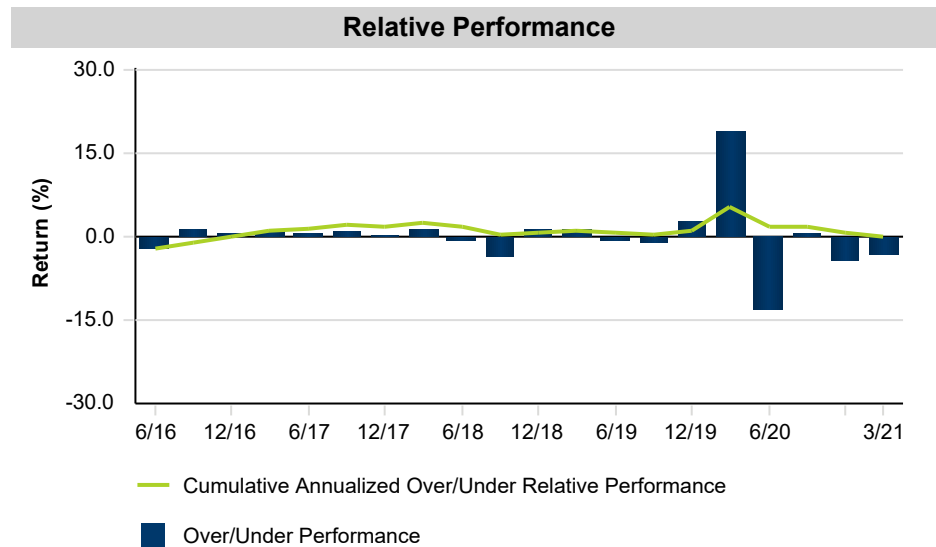
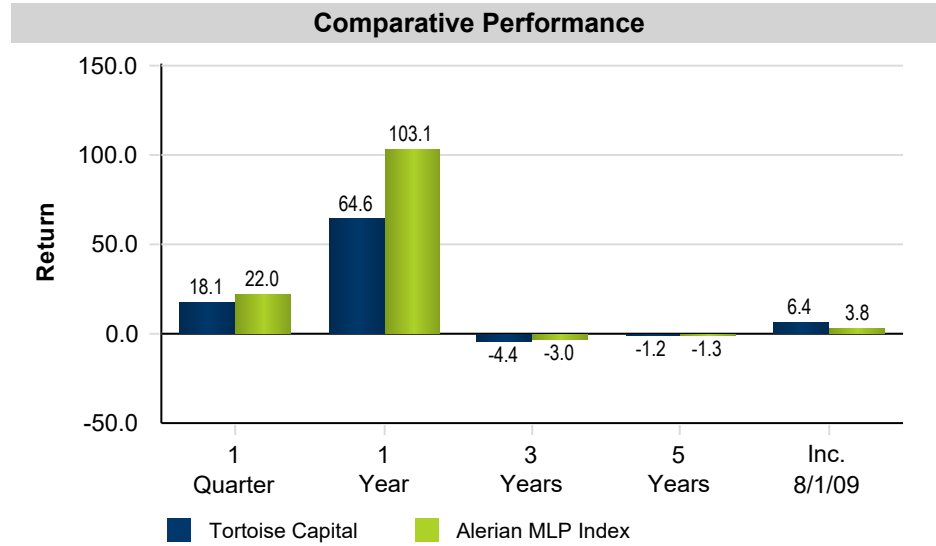
	<u>Tortoise Capital</u>	<u>Alerian MLP Index</u>
Standard Deviation	39.02	54.13
Alpha	-2.76	0.00
Active Return/Risk	-0.70	0.00
Tracking Error	16.94	0.00
Information Ratio	-1.62	
Sharpe Ratio	1.48	1.57

Correlation Statistics

	<u>Tortoise Capital</u>	<u>Alerian MLP Index</u>
R-Squared	0.97	1.00
Actual Correlation	0.99	1.00

Manager Summary

Tortoise Capital vs IM U.S. Other Equity (SA+CF)
 Periods Ended March 31, 2021



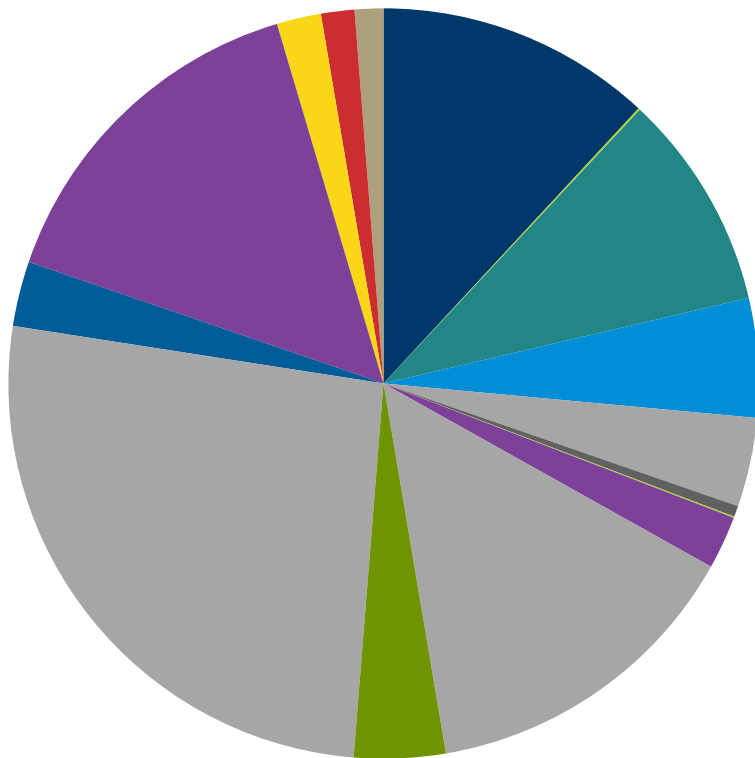


Real Estate Composite

Asset Allocation By Manager

Real Estate Composite
 Periods Ended March 31, 2021

Mar-2021 : 589,400,002

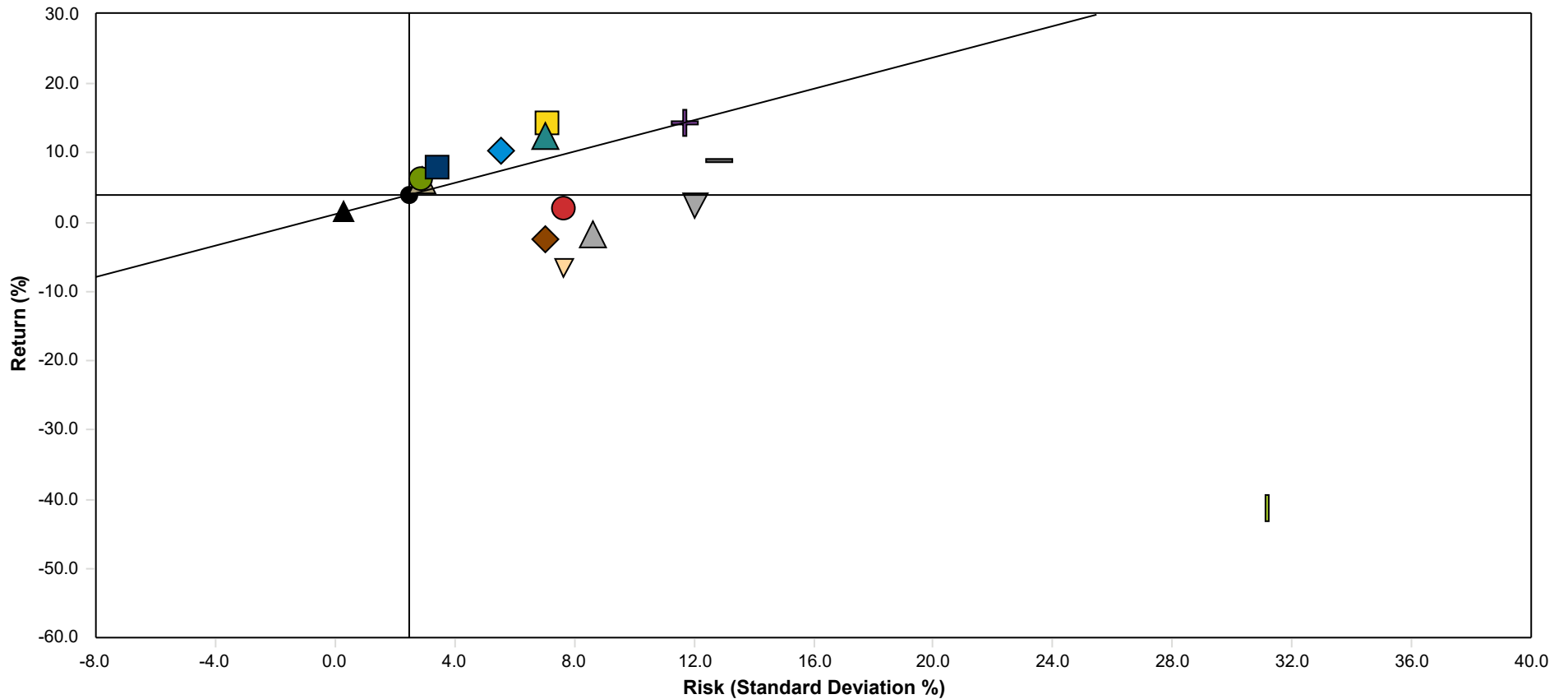


	Market Value \$	Allocation (%)
Baring	70,114,116	11.9
Barings Euro RE II	473,814	0.1
Fundamental Partners III	55,168,523	9.4
Lubert Adler VII B	30,220,343	5.1
Patron Capital	22,605,412	3.8
Divcowest IV	2,801,910	0.5
Greenfield Acq VI	328,838	0.1
Greenfield Acq VII	13,487,649	2.3
Harrison Street	83,830,549	14.2
Lubert Adler VII	23,179,234	3.9
Prologis Targeted US	154,335,029	26.2
Rubenstein PF II	16,450,038	2.8
Stockbridge Sm/Mkts	89,350,025	15.2
Walton St RE VI	11,268,970	1.9
Walton St RE VII	8,485,550	1.4
Perimeter Park	7,300,002	1.2

Risk vs. Return

Real Estate Composite

Periods Ended 3 Years Ending March 31, 2021



- Real Estate Composite
- ◆ Lubert Adler VII B
- ⊕ Greenfield Acq VII
- Rubenstein PF II
- NCREIF ODCE NOF 1 Quarter Lag
- Baring
- ▽ Patron Capital
- Harrison Street
- ▲ Stockbridge Sm/Mkts
- ▲ Barings Euro RE II
- Divcowest IV
- ▲ Lubert Adler VII
- ◆ Walton St RE VI
- ▲ Fundamental Partners III
- ▮ Greenfield Acq VI
- Prologis Targeted US
- ▽ Walton St RE VII

Calculation based on monthly periodicity.



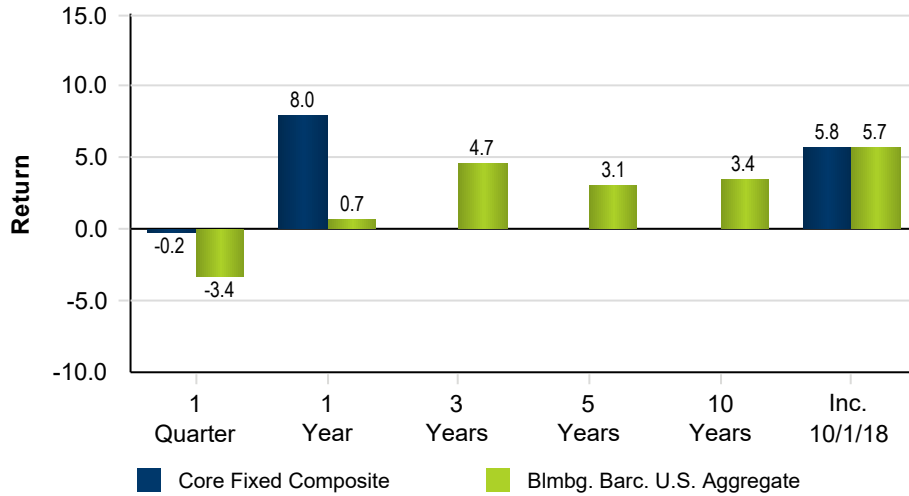
Core Fixed Composite

Composite Performance Summary

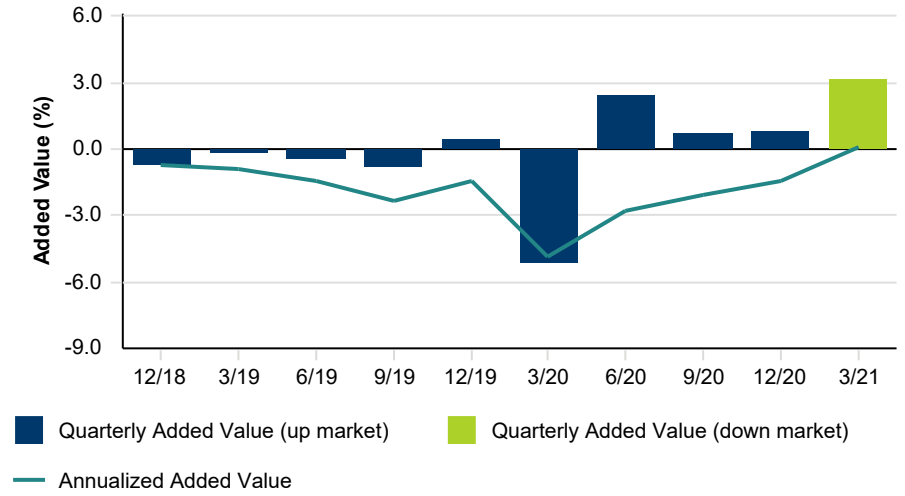
Core Fixed Composite

Periods Ended March 31, 2021

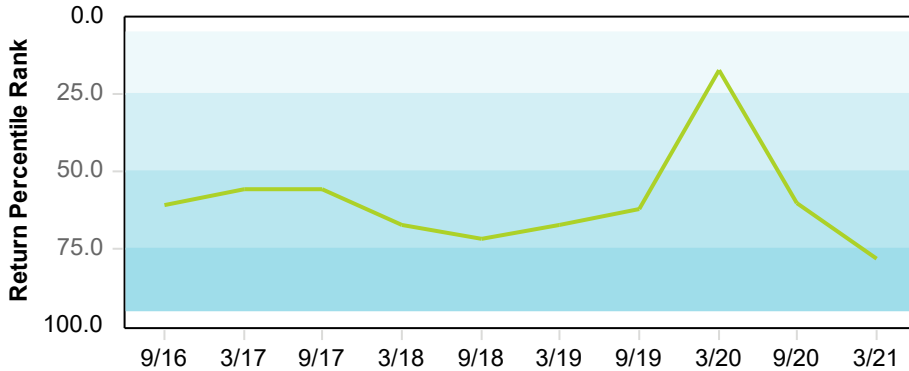
Comparative Performance



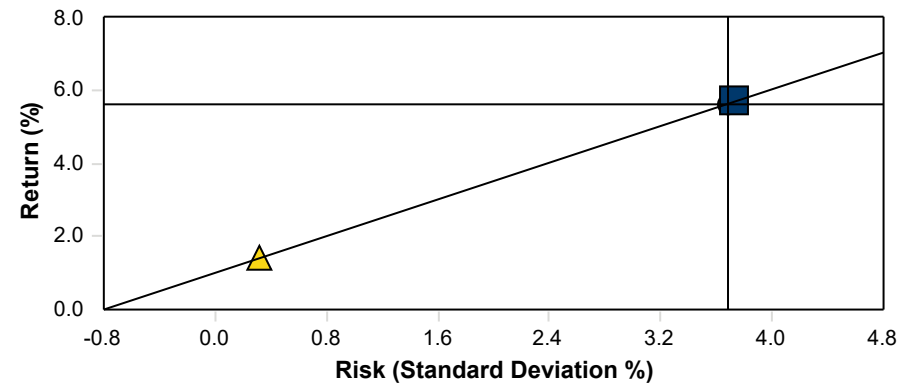
Added Value History



Rolling Percentile Rank: IM U.S. Broad Market Core Fixed Income (SA+CF)



Risk and Return 10/1/18 - 03/31/21



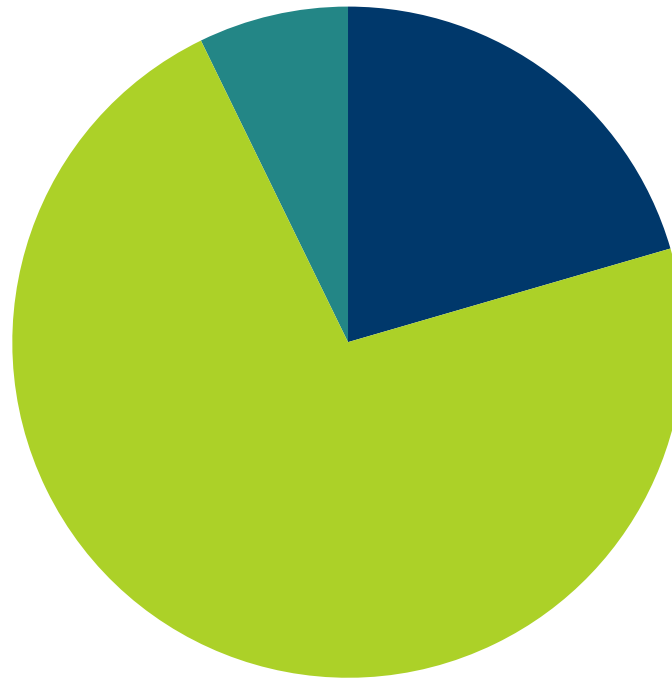
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Core Fixed Composite	0	0	0	0	0
Benchmark	10	1 (10%)	0 (0%)	8 (80%)	1 (10%)

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

Asset Allocation By Manager

Core Fixed Composite
Periods Ended March 31, 2021

Mar-2021 : 2,263,311,445

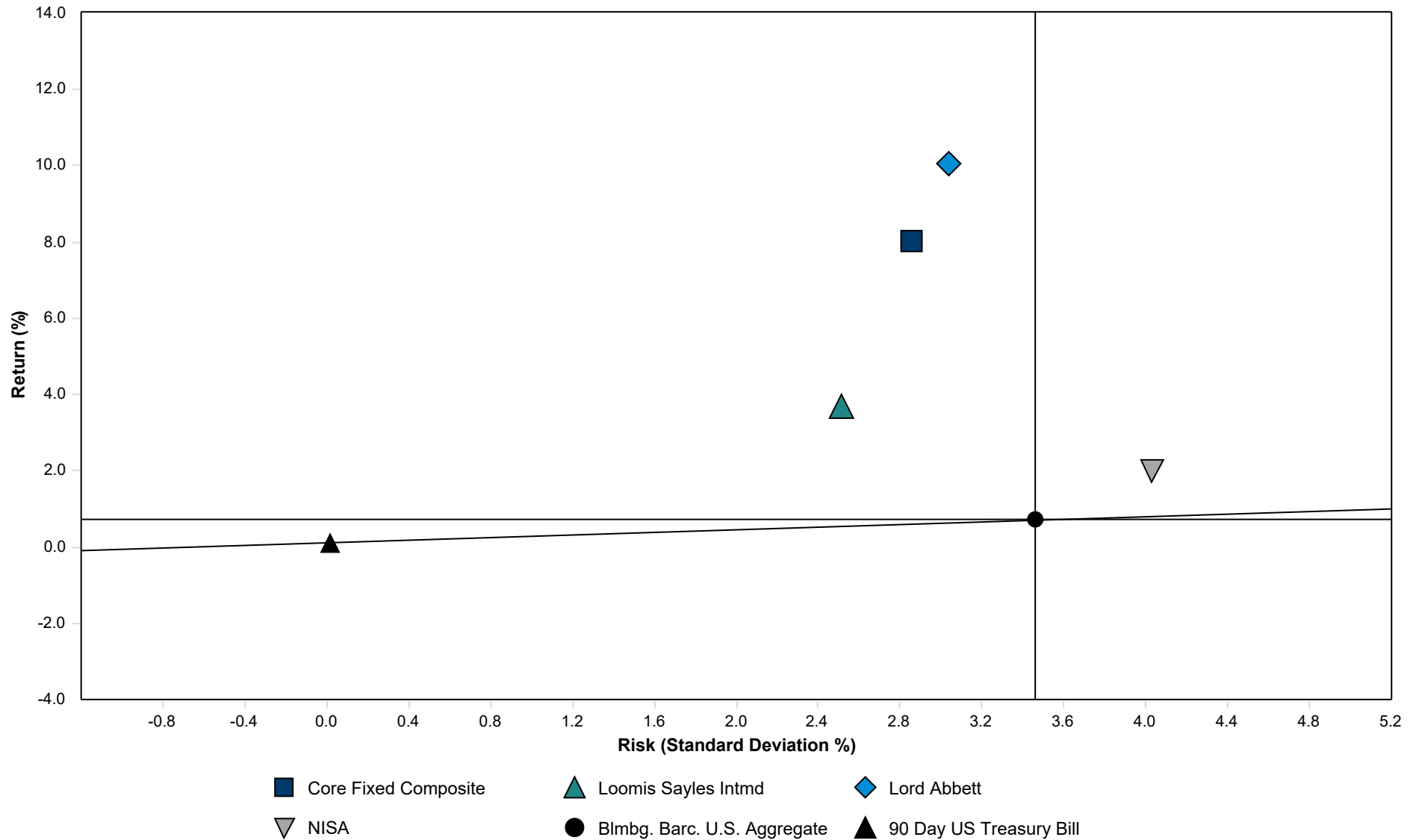


	Market Value \$	Allocation (%)
■ Loomis Sayles Intmd	463,878,080	20.5
■ Lord Abbett	1,635,977,889	72.3
■ NISA	163,455,475	7.2

Risk vs. Return

Core Fixed Composite

Periods Ended 1 Year Ending March 31, 2021

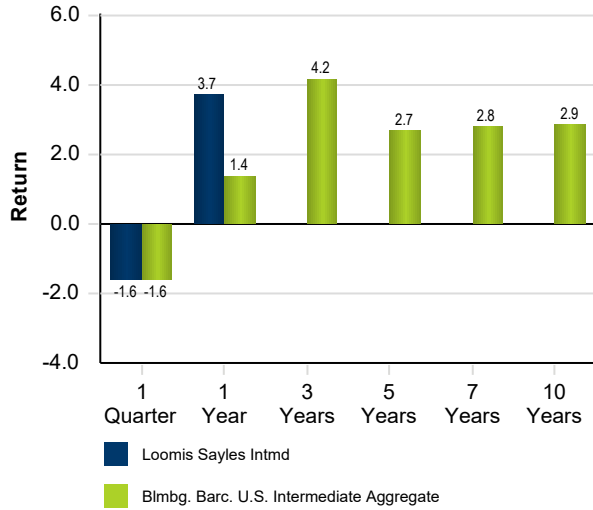


Calculation based on monthly periodicity.

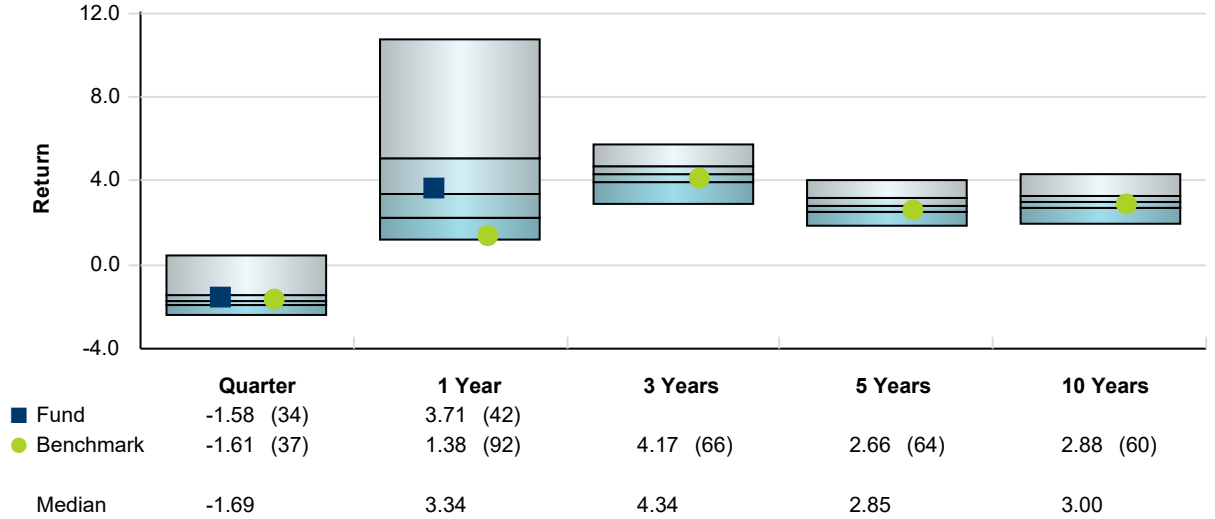
Performance Summary

Loomis Sayles Intmd
 Periods Ended March 31, 2021

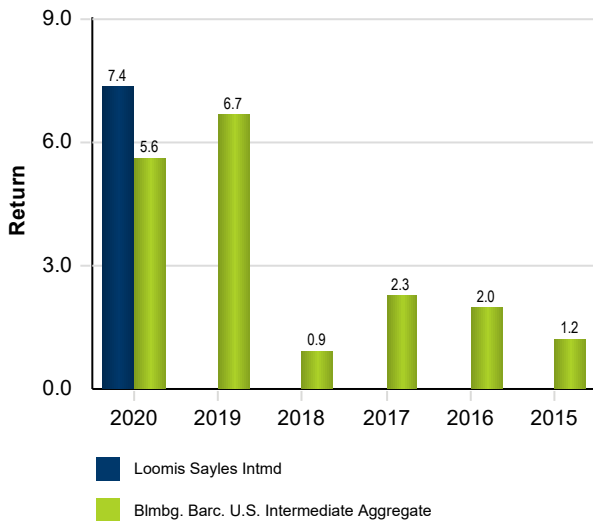
Comparative Performance



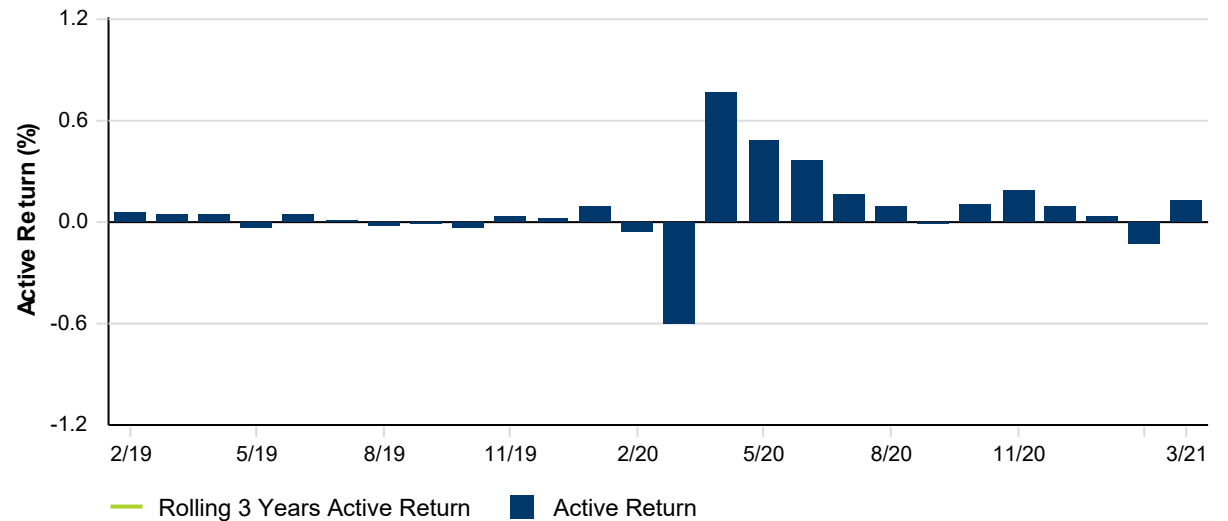
Peer Group Analysis: IM U.S. Intermediate Duration (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Loomis Sayles Intmd

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Loomis Sayles Intmd</u>	<u>Blmbg. Barc. U.S. Intermediate Aggregate</u>
Maximum Return	1.92	1.15
Minimum Return	-0.90	-0.77
Return	3.71	1.38
Cumulative Return	3.71	1.38
Active Return	2.28	0.00
Excess Return	3.56	1.27

Risk Summary Statistics

	<u>Loomis Sayles Intmd</u>	<u>Blmbg. Barc. U.S. Intermediate Aggregate</u>
Upside Risk	0.72	0.44
Downside Risk	1.07	1.07
Beta	1.37	1.00

Risk/Return Summary Statistics

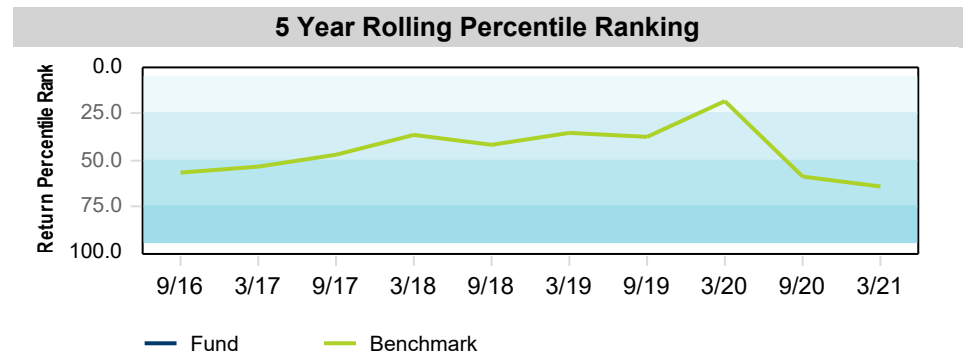
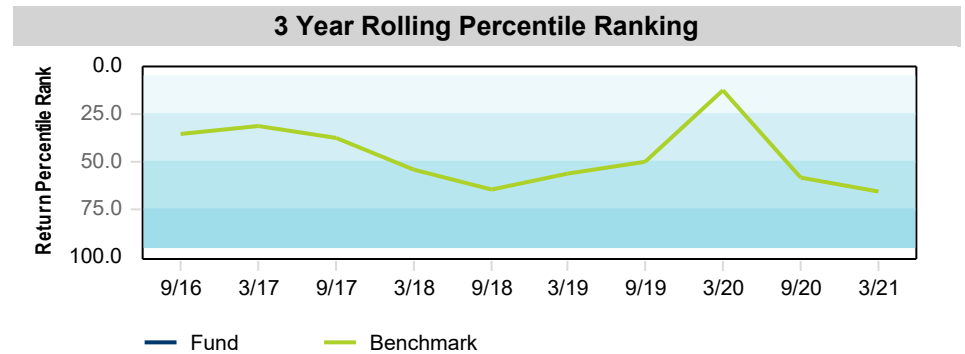
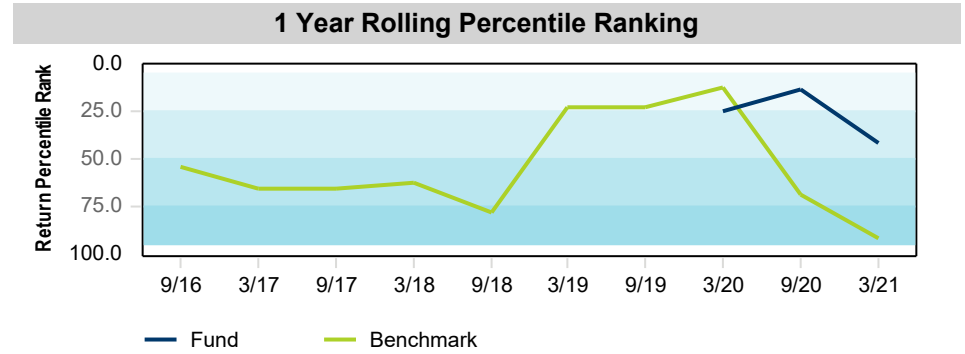
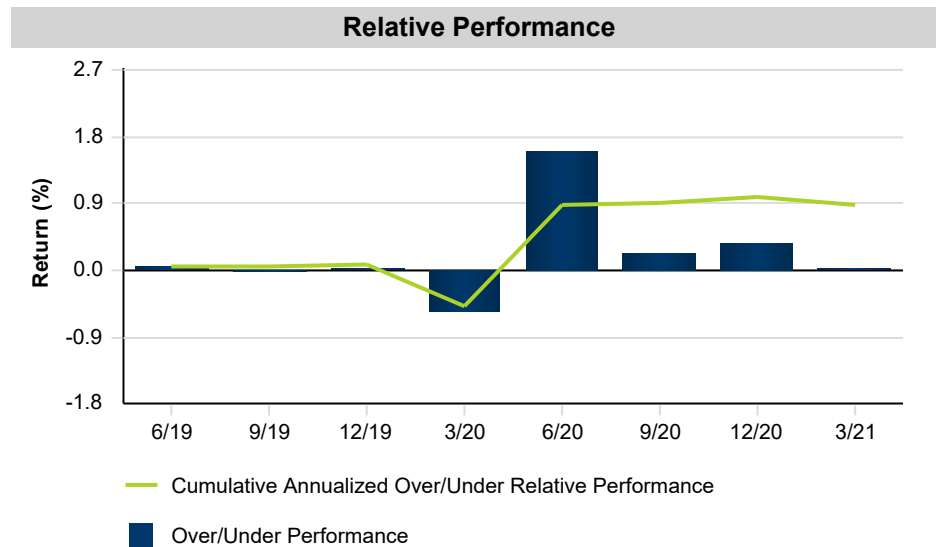
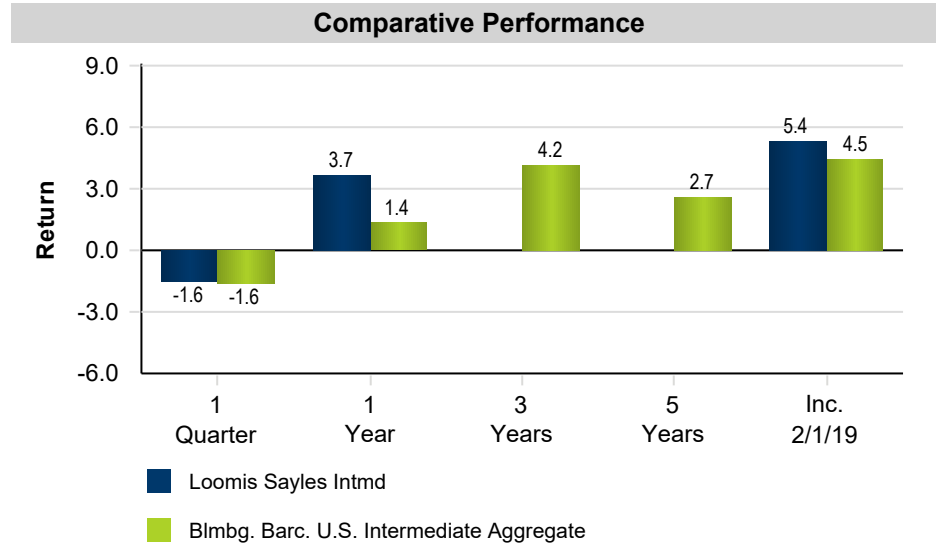
	<u>Loomis Sayles Intmd</u>	<u>Blmbg. Barc. U.S. Intermediate Aggregate</u>
Standard Deviation	2.51	1.81
Alpha	1.79	0.00
Active Return/Risk	0.91	0.00
Tracking Error	0.80	0.00
Information Ratio	2.84	
Sharpe Ratio	1.42	0.70

Correlation Statistics

	<u>Loomis Sayles Intmd</u>	<u>Blmbg. Barc. U.S. Intermediate Aggregate</u>
R-Squared	0.97	1.00
Actual Correlation	0.98	1.00

Manager Summary

Loomis Sayles Intmd vs IM U.S. Intermediate Duration (SA+CF)
 Periods Ended March 31, 2021

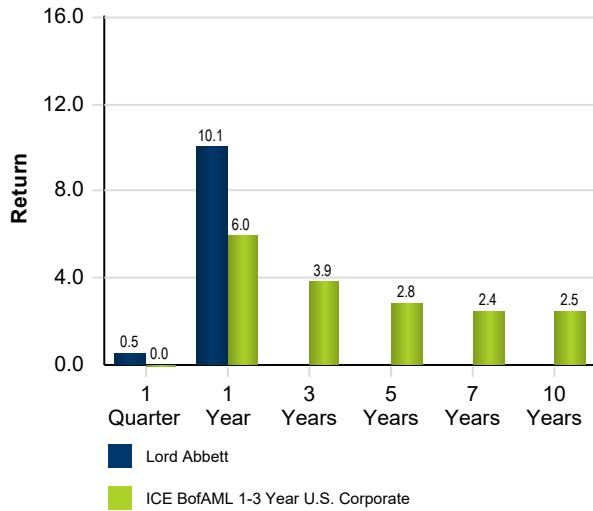


Performance Summary

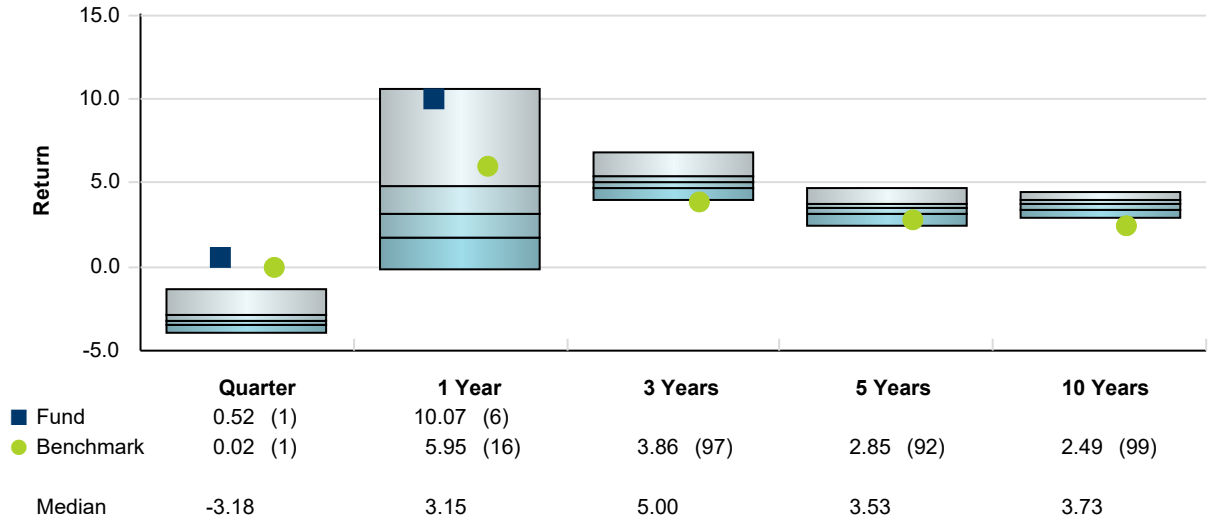
Lord Abbett

Periods Ended March 31, 2021

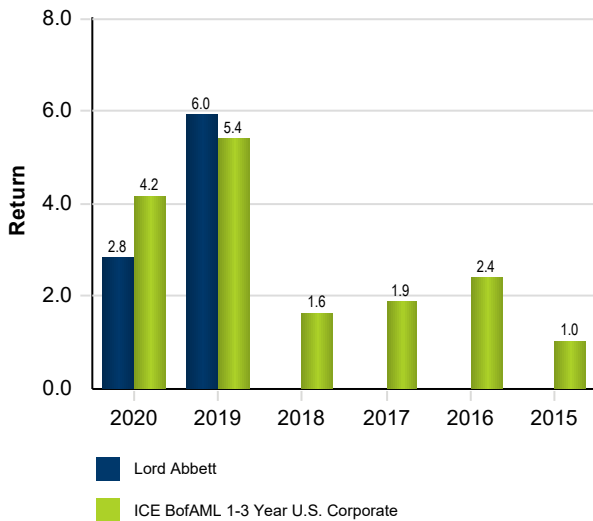
Comparative Performance



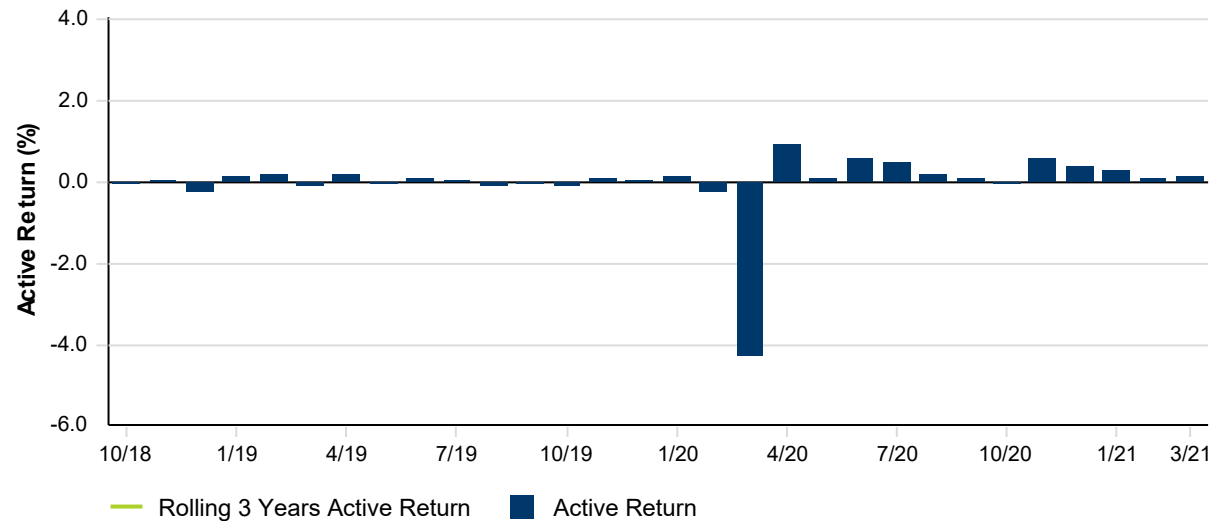
Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Lord Abbett

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Lord Abbett</u>	<u>ICE BofAML 1-3 Year U.S. Corporate</u>
Maximum Return	3.32	2.37
Minimum Return	0.05	-0.08
Return	10.07	5.95
Cumulative Return	10.07	5.95
Active Return	3.85	0.00
Excess Return	9.56	5.71

Risk Summary Statistics

	<u>Lord Abbett</u>	<u>ICE BofAML 1-3 Year U.S. Corporate</u>
Upside Risk	4.13	0.82
Downside Risk	0.00	0.08
Beta	1.29	1.00

Risk/Return Summary Statistics

	<u>Lord Abbett</u>	<u>ICE BofAML 1-3 Year U.S. Corporate</u>
Standard Deviation	3.04	2.30
Alpha	2.20	0.00
Active Return/Risk	1.27	0.00
Tracking Error	0.93	0.00
Information Ratio	4.14	
Sharpe Ratio	3.15	2.48

Correlation Statistics

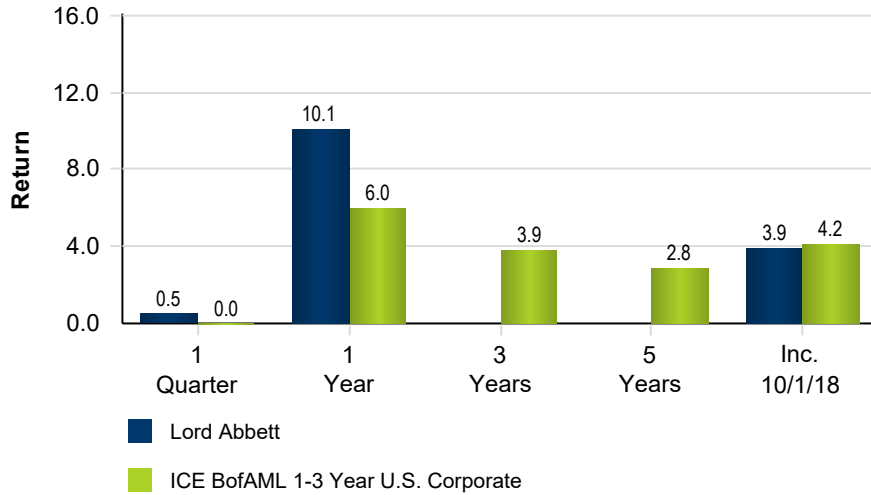
	<u>Lord Abbett</u>	<u>ICE BofAML 1-3 Year U.S. Corporate</u>
R-Squared	0.95	1.00
Actual Correlation	0.98	1.00

Manager Summary

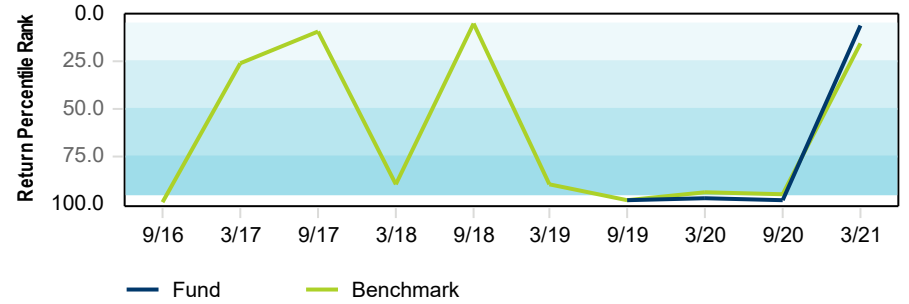
Lord Abbett vs IM U.S. Broad Market Core Fixed Income (SA+CF)

Periods Ended March 31, 2021

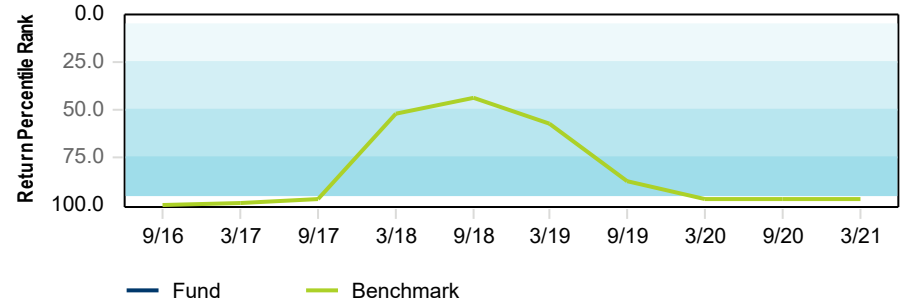
Comparative Performance



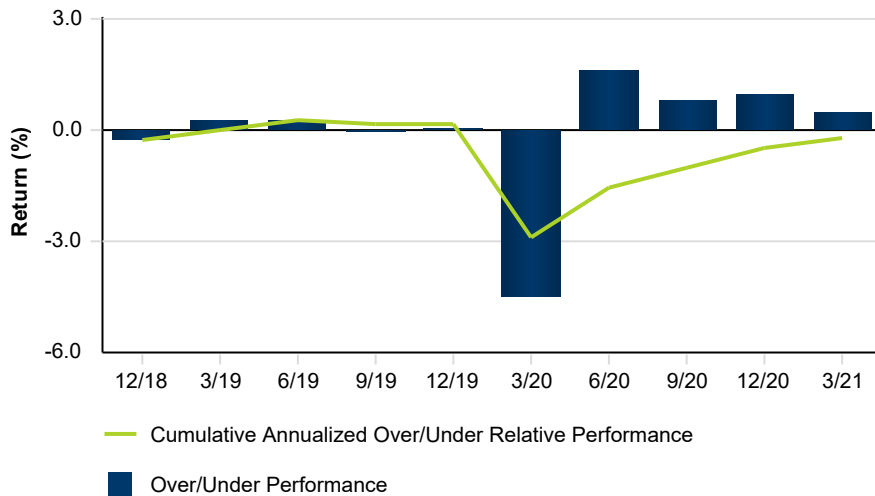
1 Year Rolling Percentile Ranking



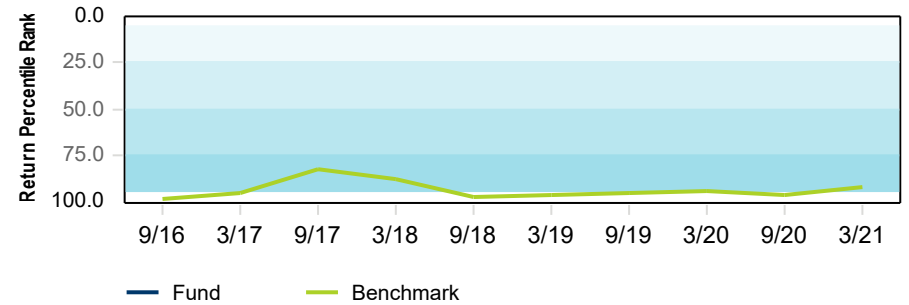
3 Year Rolling Percentile Ranking



Relative Performance



5 Year Rolling Percentile Ranking

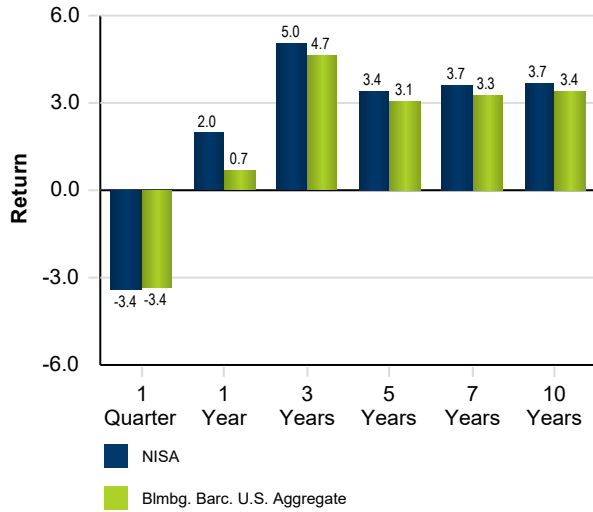


Performance Summary

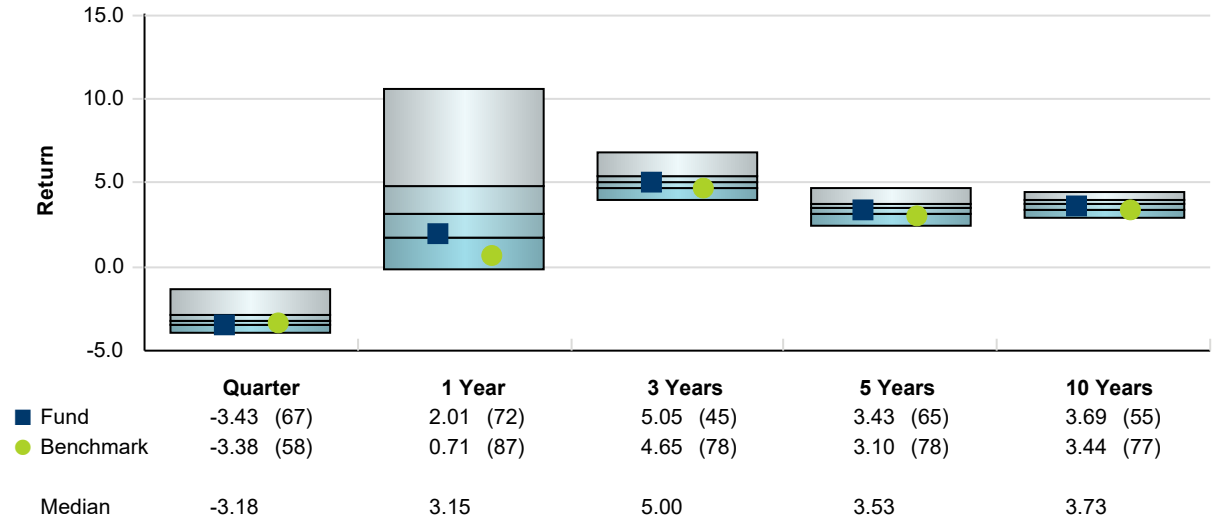
NISA

Periods Ended March 31, 2021

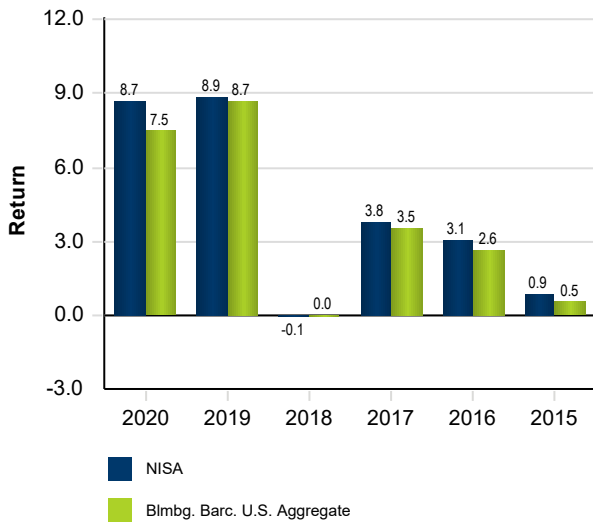
Comparative Performance



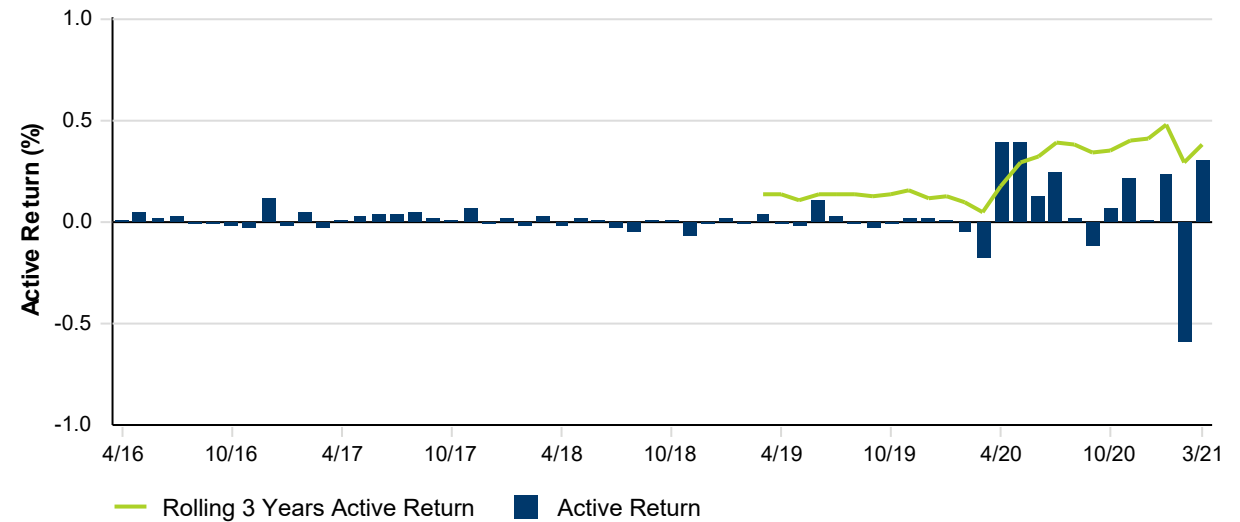
Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

NISA

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>NISA</u>	<u>Blmbg. Barc. U.S. Aggregate</u>
Maximum Return	2.17	1.78
Minimum Return	-2.04	-1.44
Return	2.01	0.71
Cumulative Return	2.01	0.71
Active Return	1.31	0.00
Excess Return	1.95	0.65

Risk Summary Statistics

	<u>NISA</u>	<u>Blmbg. Barc. U.S. Aggregate</u>
Upside Risk	0.94	0.76
Downside Risk	2.46	2.24
Beta	1.14	1.00

Risk/Return Summary Statistics

	<u>NISA</u>	<u>Blmbg. Barc. U.S. Aggregate</u>
Standard Deviation	4.03	3.46
Alpha	1.20	0.00
Active Return/Risk	0.32	0.00
Tracking Error	0.90	0.00
Information Ratio	1.45	
Sharpe Ratio	0.49	0.19

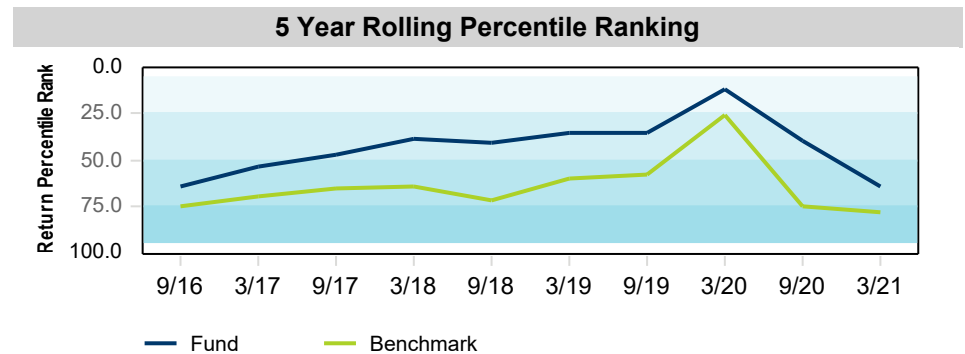
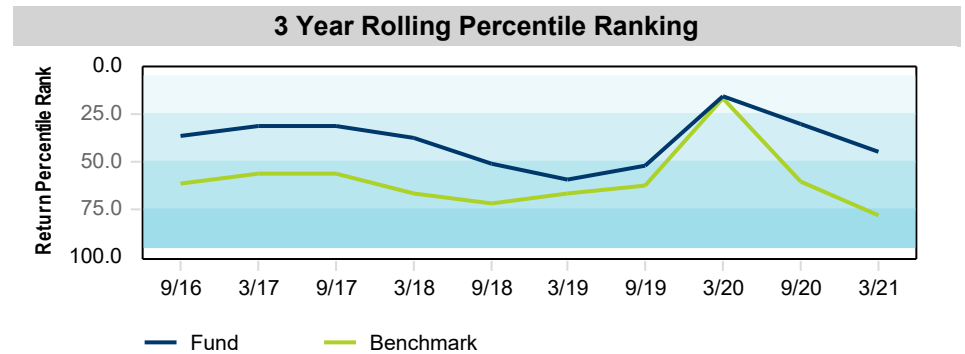
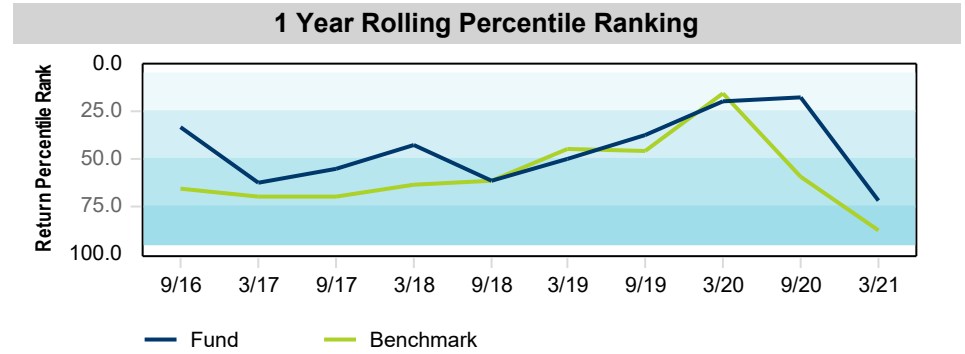
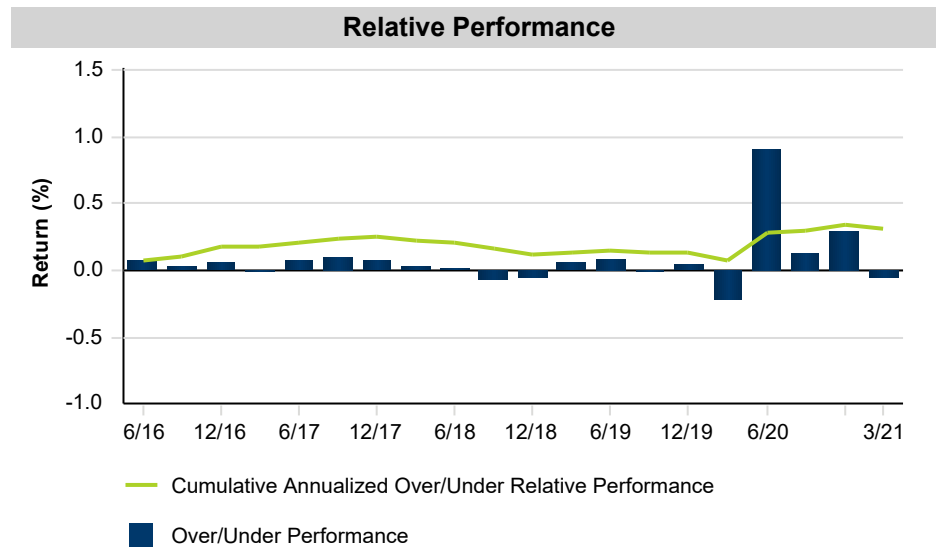
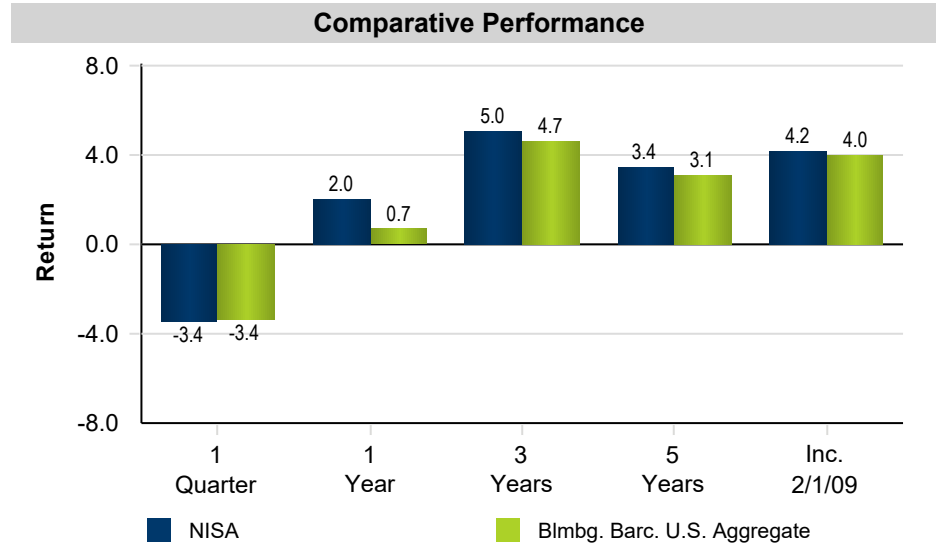
Correlation Statistics

	<u>NISA</u>	<u>Blmbg. Barc. U.S. Aggregate</u>
R-Squared	0.97	1.00
Actual Correlation	0.98	1.00

Manager Summary

NISA vs IM U.S. Broad Market Core Fixed Income (SA+CF)

Periods Ended March 31, 2021



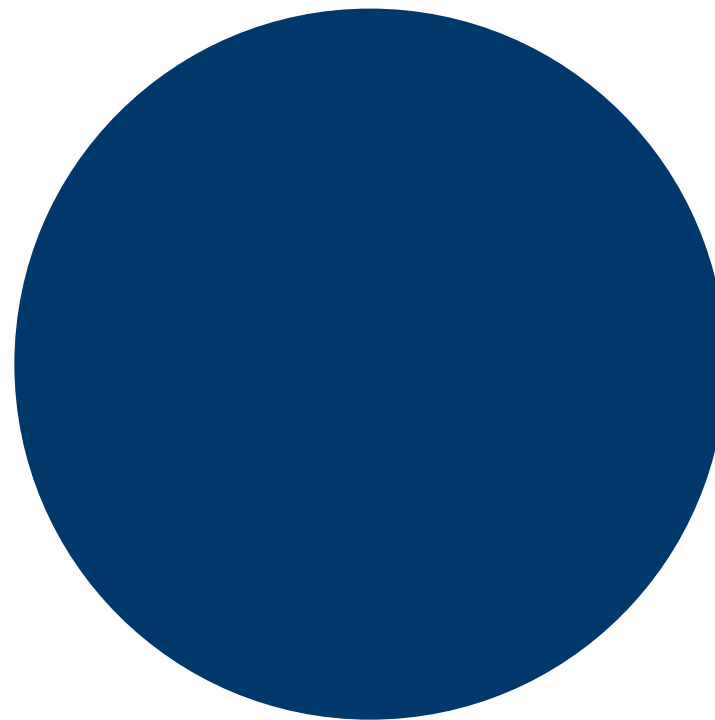


Opportunistic Composite

Asset Allocation By Manager

Opportunistic Composite
Periods Ended March 31, 2021

Mar-2021 : 375,449,617

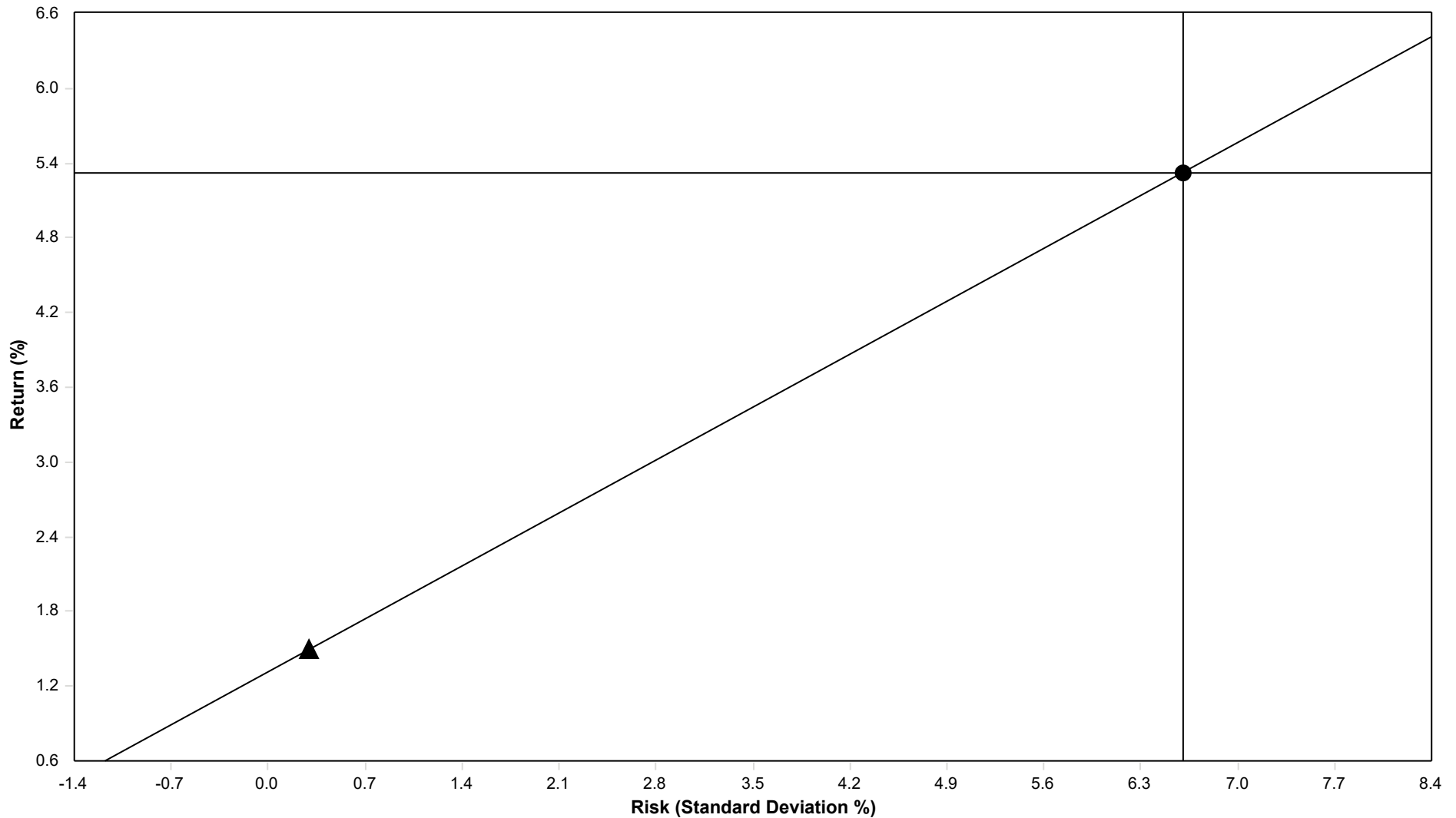


	Market Value \$	Allocation (%)
■ Arrowmark	375,449,617	100.0

Risk vs. Return

Opportunistic Composite

Periods Ended 3 Years Ending March 31, 2021



Opportunistic Composite Arrowmark HFRI FOF Div 1 Month Lag 90 Day US Treasury Bill

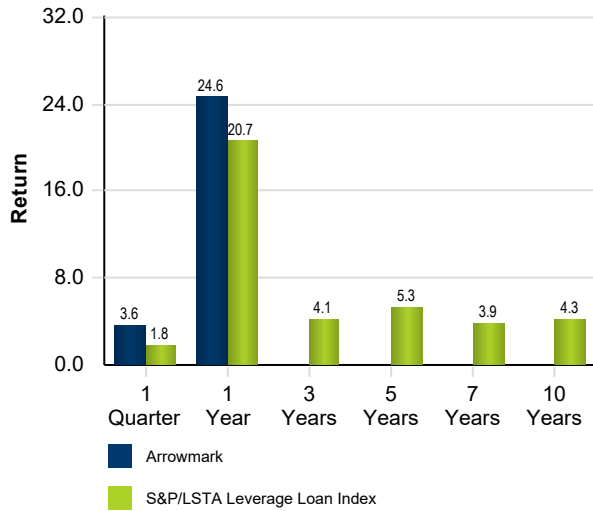
Calculation based on monthly periodicity.

Performance Summary

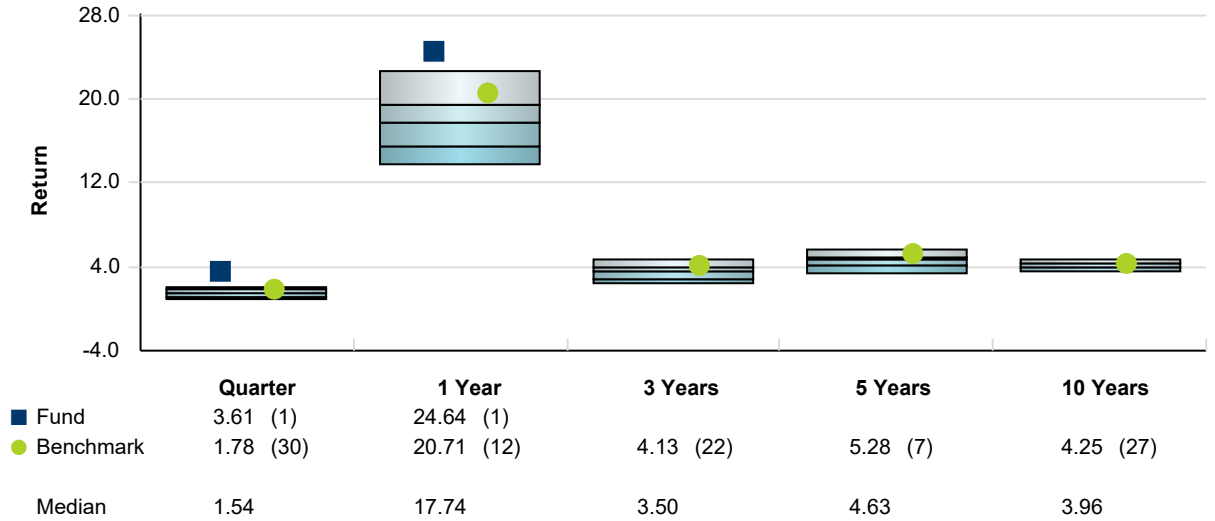
Arrowmark

Periods Ended March 31, 2021

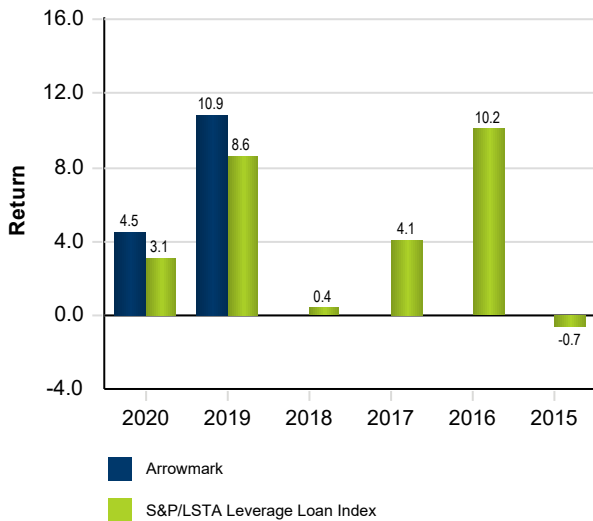
Comparative Performance



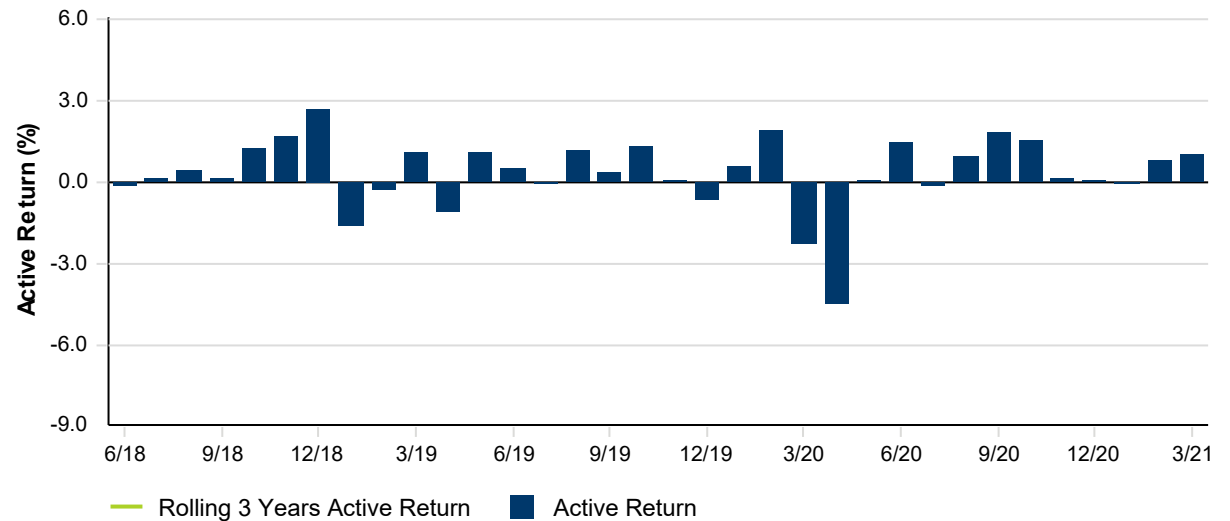
Peer Group Analysis: IM U.S. Bank Loans (SA+CF)



Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Arrowmark

Periods Ended 1 Year Ending March 31, 2021

Return Summary Statistics

	<u>Arrowmark</u>	<u>S&P/LSTA Leverage Loan Index</u>
Maximum Return	3.86	4.50
Minimum Return	0.00	0.00
Return	24.64	20.71
Cumulative Return	24.64	20.71
Active Return	3.21	0.00
Excess Return	22.16	18.95

Risk Summary Statistics

	<u>Arrowmark</u>	<u>S&P/LSTA Leverage Loan Index</u>
Upside Risk	7.20	2.06
Downside Risk	0.00	0.00
Beta	0.03	1.00

Risk/Return Summary Statistics

	<u>Arrowmark</u>	<u>S&P/LSTA Leverage Loan Index</u>
Standard Deviation	3.24	4.55
Alpha	24.00	0.00
Active Return/Risk	0.99	0.00
Tracking Error	5.47	0.00
Information Ratio	0.59	
Sharpe Ratio	6.83	4.16

Correlation Statistics

	<u>Arrowmark</u>	<u>S&P/LSTA Leverage Loan Index</u>
R-Squared	0.00	1.00
Actual Correlation	0.04	1.00

Manager Summary

Arrowmark vs IM U.S. Bank Loans (SA+CF)
 Periods Ended March 31, 2021

