



# Quarterly Investment Performance Analysis

Municipality of Anchorage Trust Fund

Period Ended: December 31, 2022



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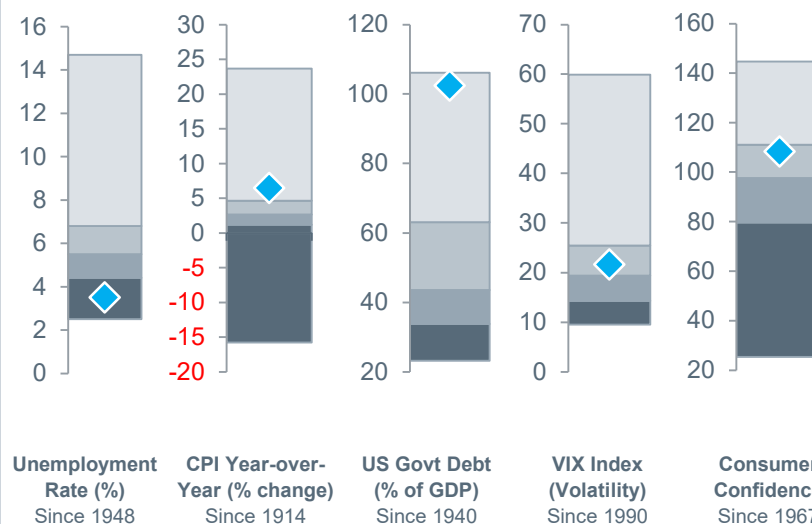
# Capital Markets Review



**Fourth Quarter Economic Environment**

In Q4, equity and fixed income markets delivered improved results while continuing to experience elevated volatility. However, positive quarterly returns came on the tail of a significantly negative year for many investors. Regarding economic conditions, the impact of tightening monetary policy and persistent inflation, combined with supply shocks and an energy crisis in Europe, are leading to increasing odds of a global recession in 2023. On a relatively positive note, recent data indicates that the inflationary environment is showing signs of abating. Notably, the US Consumer Price Index declined for a sixth straight month in December with a reading of 6.5%, the lowest level since October 2021. In December, the FOMC did slow the pace of policy rate hikes with a 50 basis point increase, following a series of four straight 75 basis point increases. Internationally, the war in Ukraine caused an energy price shock and trade tensions continue to test economic and political relationships across multiple regions. Within emerging markets, investor attention is focused on China with some pointing to signs of a softening stance toward pandemic restrictions as reason to be optimistic regarding the country's outlook. However, these views are countered with concerns over indications of social unrest and the consolidation of power around President Xi Jinping. With all this considered, global GDP growth forecasts continue to moderate with the OECD forecasting growth of 3.1% in 2022 with an expected decline to 2.2% global GDP growth in 2023.

**Key Economic Indicators**



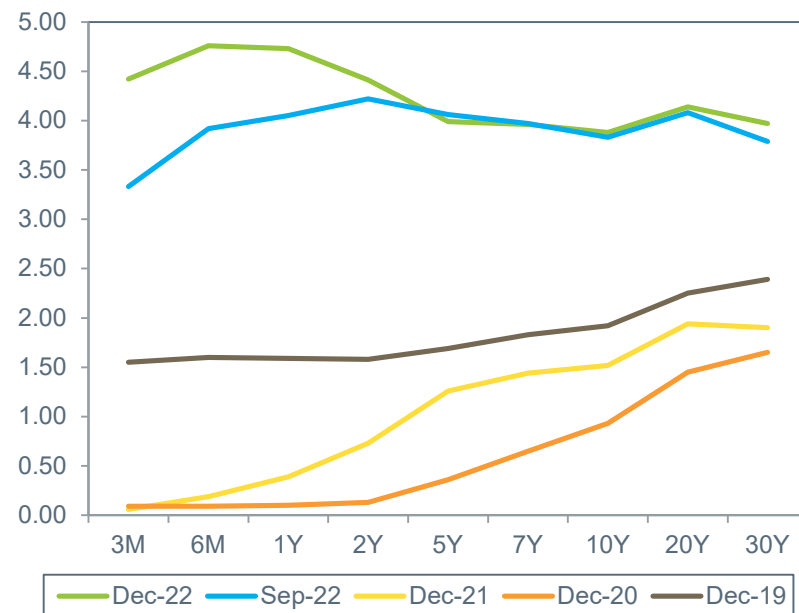
**Economic Indicators**

	Dec-22	Sep-22	Dec-21	Dec-19	20 Yr
Federal Funds Rate (%)	4.33 ▲	3.08	0.07	1.55	1.30
Breakeven Infl. - 5 Yr (%)	2.38 ▲	2.16	2.91	1.70	1.92
Breakeven Infl. - 10 Yr (%)	2.30 ▲	2.15	2.59	1.79	2.08
CPI YoY (Headline) (%)	6.5 ▼	8.2	7.0	2.3	2.5
Unemployment Rate (%)	3.5 —	3.5	3.9	3.6	6.0
Real GDP YoY (%)	1.0 ▼	1.8	5.7	2.6	2.0
PMI - Manufacturing	48.4 ▼	50.9	58.8	47.9	53.7
USD Total Wtd Idx	121.51 ▼	127.64	115.37	114.67	103.33
WTI Crude Oil per Barrel (\$)	80.3 ▲	79.5	75.2	61.1	67.9
Gold Spot per Oz (\$)	1,824 ▲	1,661	1,829	1,517	1,160

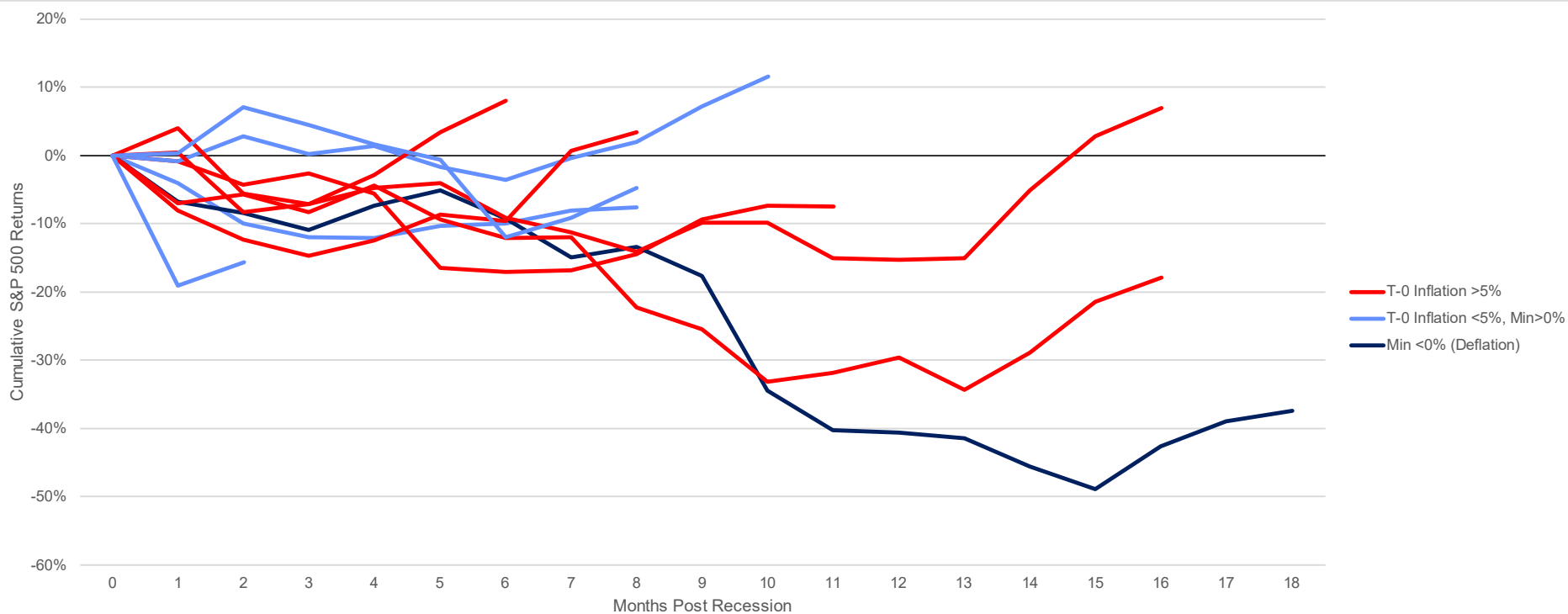
**Market Performance (%)**

	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	7.56	-18.11	-18.11	9.42	12.56
Russell 2000	6.23	-20.44	-20.44	4.13	9.01
MSCI EAFE (Net)	17.34	-14.45	-14.45	1.54	4.67
MSCI EAFE SC (Net)	15.79	-21.39	-21.39	-0.05	6.21
MSCI Emg Mkts (Net)	9.70	-20.09	-20.09	-1.40	1.44
Bloomberg US Agg Bond	1.87	-13.01	-13.01	0.02	1.06
ICE BofAML 3 Mo US T-Bill	0.84	1.46	1.46	1.26	0.76
NCREIF ODCE (Gross)	-4.96	7.47	7.47	8.68	10.10
FTSE NAREIT Eq REIT (TR)	5.24	-24.37	-24.37	3.68	6.53
HFRI FOF Comp	1.79	-5.25	-5.25	3.02	3.51
Bloomberg Cmdty (TR)	2.22	16.09	16.09	6.44	-1.29

**Treasury Yield Curve (%)**



### S&P 500 Performance - Recessionary Periods and Inflation Levels (1957 - Present)



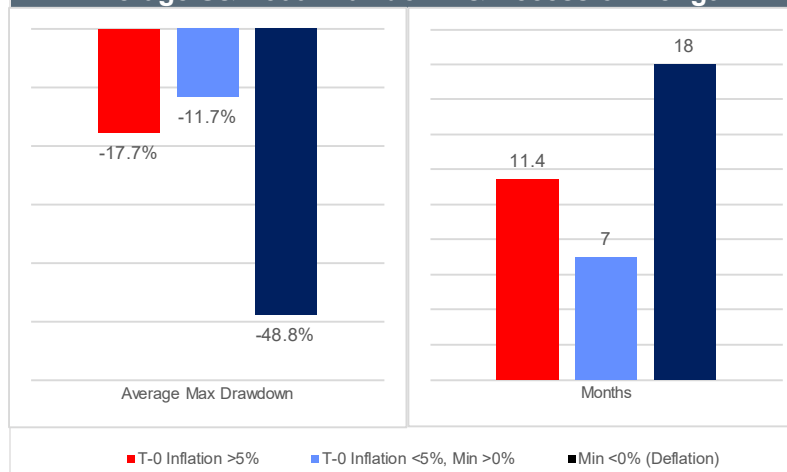
#### Recession Statistics

Start Date	Length Months	YoY CPI% @ T-0	Max YoY CPI%	Min YoY CPI%	Max Drawdown From T-0	Cumulative Return
9/30/1957	8	2.9	3.4	2.8	-12.0%	-7.6%
5/31/1960	10	1.6	1.6	0.9	-3.6%	11.6%
1/31/1970	11	5.9	5.9	5.0	-17.0%	-7.5%
12/31/1973	16	8.4	11.2	8.4	-34.2%	-17.9%
2/29/1980	6	13.0	13.5	12.1	-7.1%	8.0%
8/31/1981	16	9.9	9.9	4.1	-15.3%	7.0%
8/31/1990	8	5.5	6.0	4.6	-14.7%	3.4%
4/30/2001	8	3.0	3.0	1.7	-11.9%	-4.7%
1/31/2008	18	3.9	5.5	-2.0	-48.8%	-37.4%
3/31/2020	2	1.2	1.2	0.3	-19.1%	-15.7%

#### Averages

T-0 Inflation > 5%	11.4	8.5	9.3	6.8	-17.7%	-1.4%
T-0 Inflation < 5%, Min > 0%	7.0	2.2	2.3	1.4	-11.7%	-4.1%
Min < 0% (Deflation)	18.0	3.9	5.5	-2.0	-48.8%	-37.4%

#### Average S&P 500 Drawdown & Recession Length



Performance for each period begins where T-0 is equal to the start of an official recession and runs until the official end of the recession (as reported by the National Bureau of Economic Reporting).

Inflation is measured as the YoY % change in CPI. T-0 = the official recession start date.

Max and Min refer to the maximum and minimum observed YoY CPI% change during the recessionary period.

Source: RVK calculations, based on data from S&P Dow Jones Indices and FRED Database.

Fourth Quarter Review

**Broad Market**

US equity markets experienced a decrease in volatility in Q4 with short term spikes around CPI release dates and Fed meetings. Returns were positive across market cap and style groups in Q4. The reversal to growth seen in Q3 was short-lived, as value stocks led growth by a wide margin in Q4. Energy had its best year on record with the S&P 500 Energy Index gaining 65.72%.

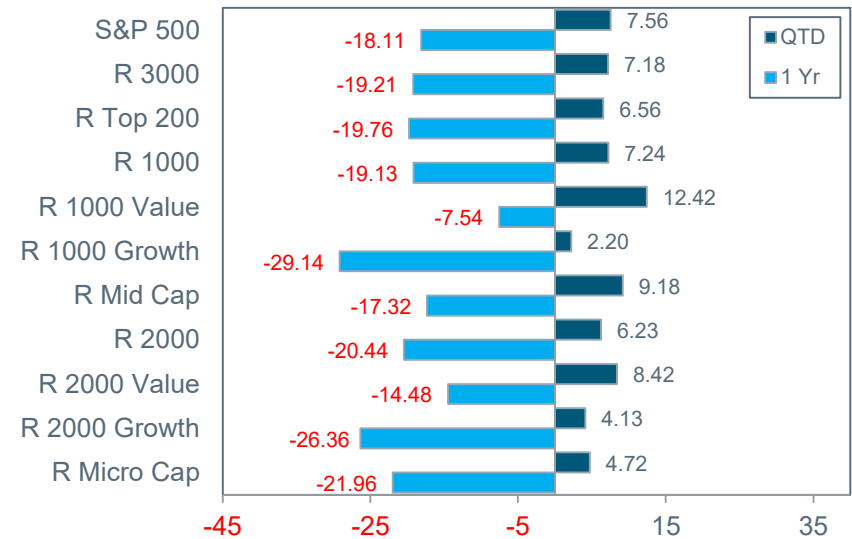
**Market Cap**

This year marks the worst performance of US equities across market cap groups since the GFC, and only the third time in the last 15 years that the Russell 3000 Index has generated negative returns.

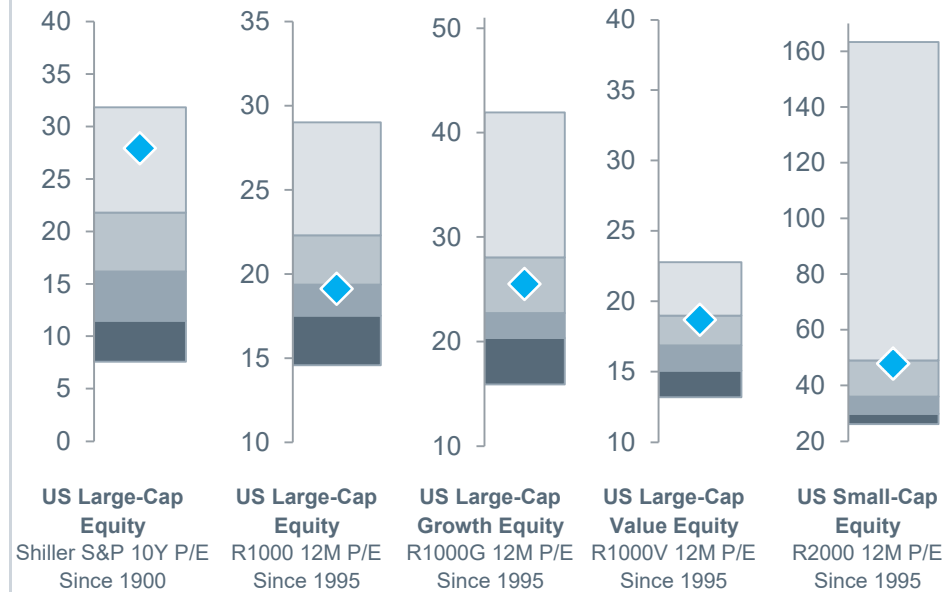
**Style and Sector**

Value-oriented managers had a higher success rate than core or growth managers in the small- and mid-cap spaces, while large-cap core and growth managers fared better than value managers. Growth managers across the market cap spectrum struggled to provide downside protection in 2022, while value and core managers were broadly successful.

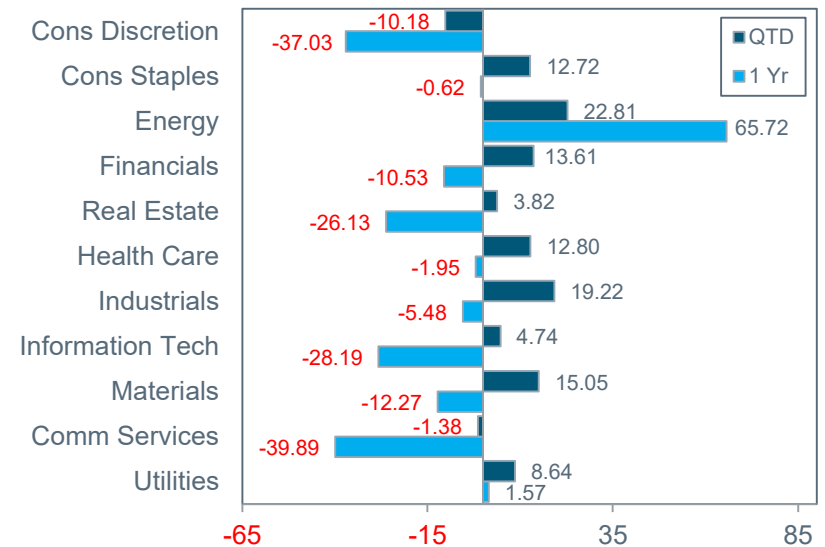
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)



Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, Irrational Exuberance, Second Edition (2000). P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.



**Fourth Quarter Review**

**Developed Markets**

International developed markets meaningfully outperformed their domestic counterparts in Q4 with the MSCI EAFE Index realizing a 17.3% return for the period. Value stocks rebounded back into favor, outperforming growth in a reversal from the prior quarter, while large-cap continued its outperformance over small-cap stocks. Overall, market trends pointed to investors anticipating moderating inflation and easing of rate hikes despite the ongoing uncertainty led by the conflict in Ukraine and near-term recession fears.

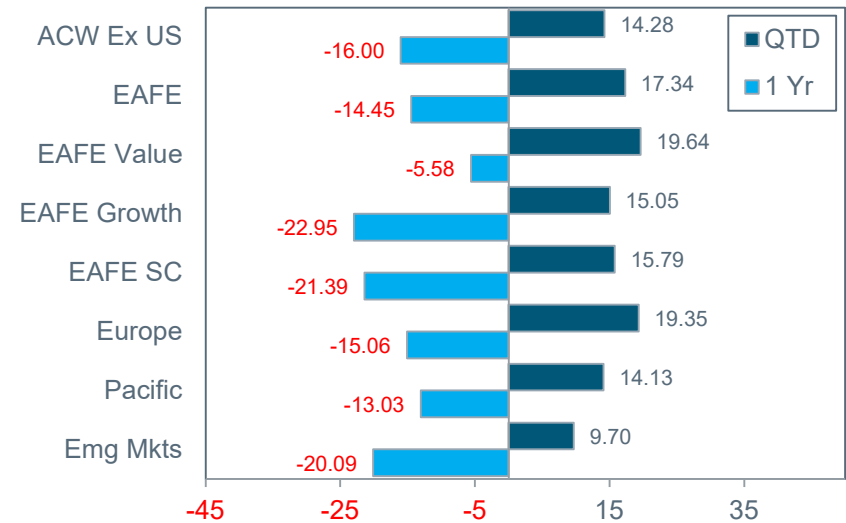
**Emerging Markets**

Emerging markets lagged behind developed during the quarter with the MSCI Emerging Markets Index finishing with a 9.7% return. Value stocks narrowly outperformed growth and large-cap beat small-cap.

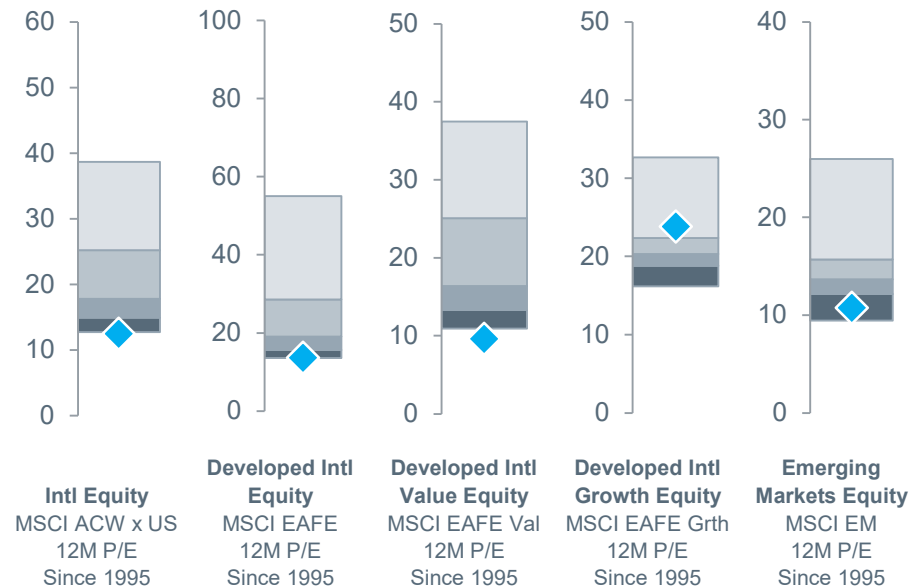
**Market Cap & Style**

The majority of active managers in emerging markets outperformed the index in Q4; however, active managers in international developed mostly underperformed.

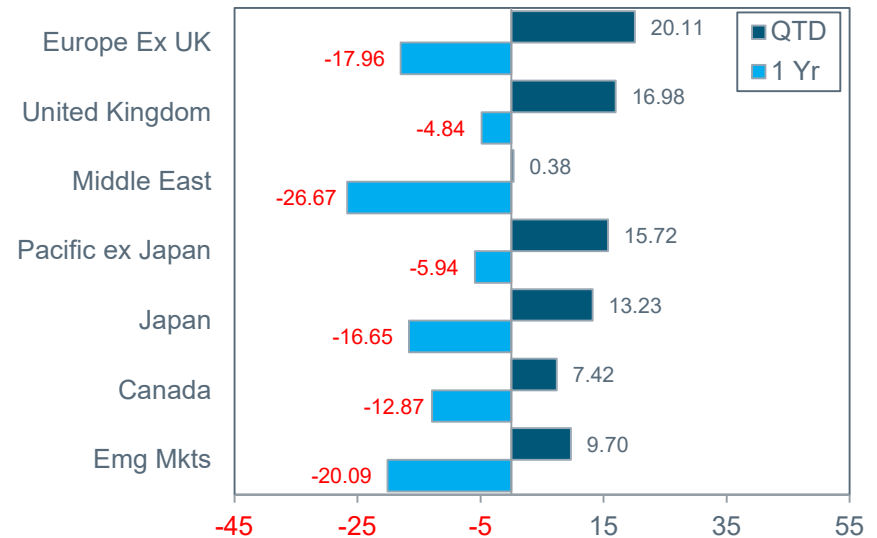
**MSCI Style and Capitalization Market Performance (%)**



**Valuations**



**MSCI Region Performance (%)**



Valuation data courtesy of Bloomberg Professional Service.

P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.

All returns are shown net of foreign taxes on dividends.



**Fourth Quarter Review**

**Broad Market**

The Bloomberg US Aggregate Index finished Q4 with a return of 1.9%, capping off a decline of -13.0% in 2022, the most negative calendar year on record for the index. The year was defined by rising interest rates, as treasury yields rose 236 basis points from 1.5% to 3.9% as measured by the 10-year US Treasury yield. The Federal Reserve aggressively hiked the Federal Funds rate in response to persistent inflation over the course of the year.

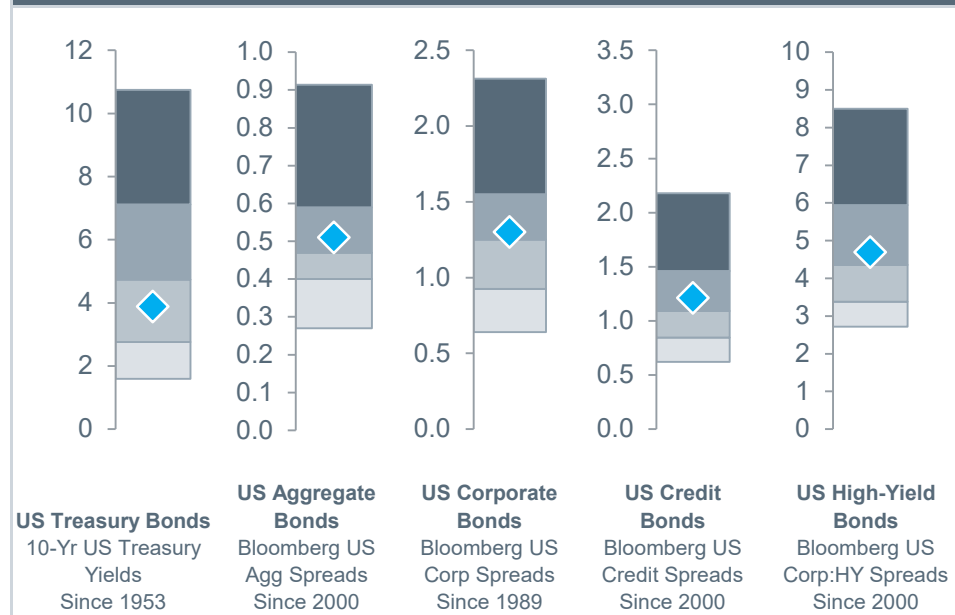
**Credit Market**

US investment grade corporate bonds rebounded in Q4 as low supply and softer Federal Reserve rhetoric bolstered credit markets. Non-investment grade corporate credit relatively outperformed investment grade over the year.

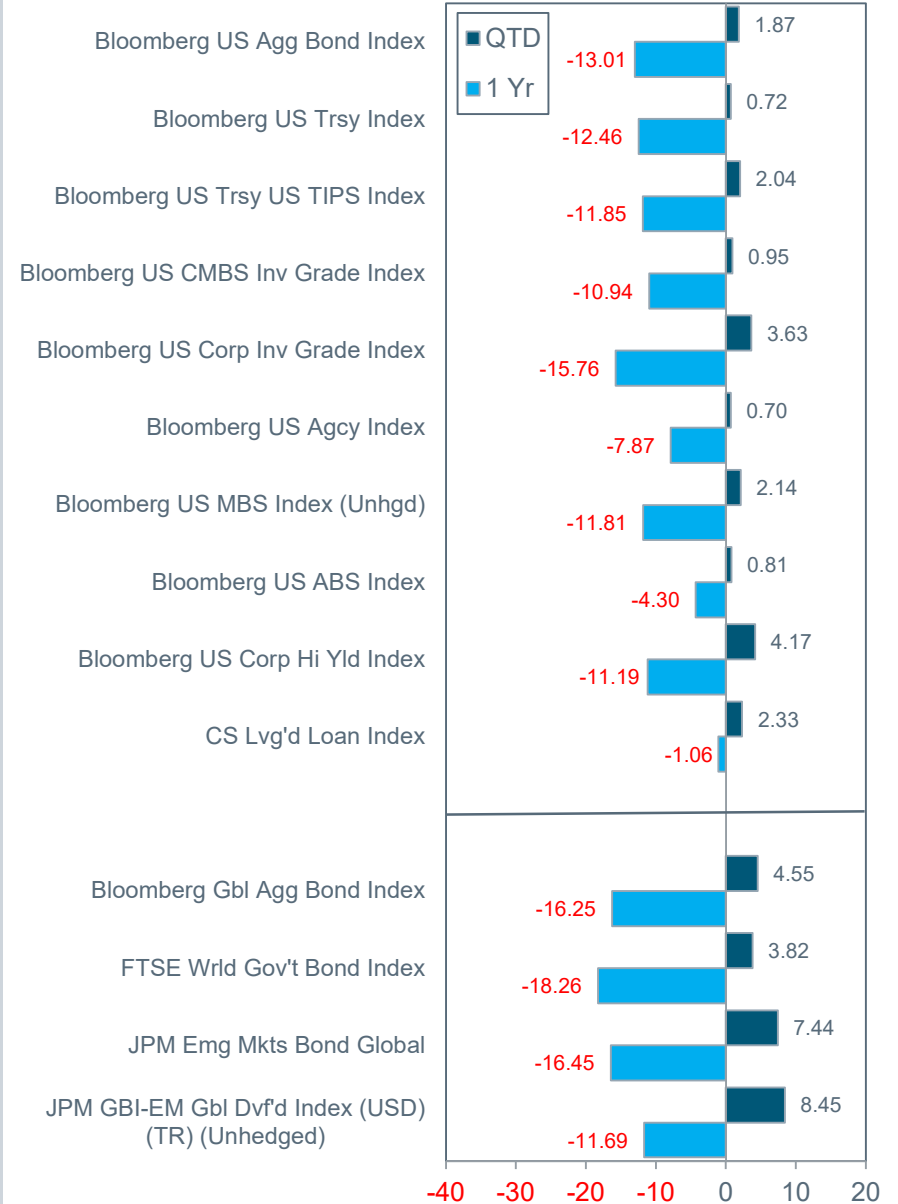
**Emerging Market Debt**

Conditions in global fixed income markets were defined by concerns over low growth, persistent inflation, rising interest rates, a strong US Dollar, and geopolitical conflict. The Bloomberg Global Aggregate Index returned 1.0% in Q4 and -11.2% in 2022, while the JPM EMBI Global Diversified returned 8.1% and -17.8% over these respective periods.

**Valuations**



**Fixed Income Performance (%)**



Valuation data courtesy of Bloomberg Professional Service. Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.





**Fourth Quarter Review - Absolute Return**

**General Market - Hedge Funds**

Despite a highly challenging market backdrop, hedge funds broadly delivered much-needed capital preservation to institutional investors. The year also ended on a strong note given most managers were reducing leverage and overall market exposure going into Q4. The HFRI Fund-Asset-Weighted Composite Index delivered an annual return of 1.0% while its Asset-Weighted counterpart ended the year at -4.0%.

**General Market - Global Tactical Asset Allocation (GTAA)**

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely posted significant gains with moderate dispersion to close an otherwise challenging year. Given a strong quarter for non-US equity, as well as value-oriented equity within the US, nearly all active managers with significant diversification outperformed a US centric blend of 60% equity and 40% fixed income. The top performing long-biased GTAA strategies were those who have included meaningful market neutral idiosyncratic relative valuation exposures. While those who moderately underperformed peers benefitted from a value bias despite maintaining US equity and fixed income exposures.

**Fourth Quarter Review - Real Assets**

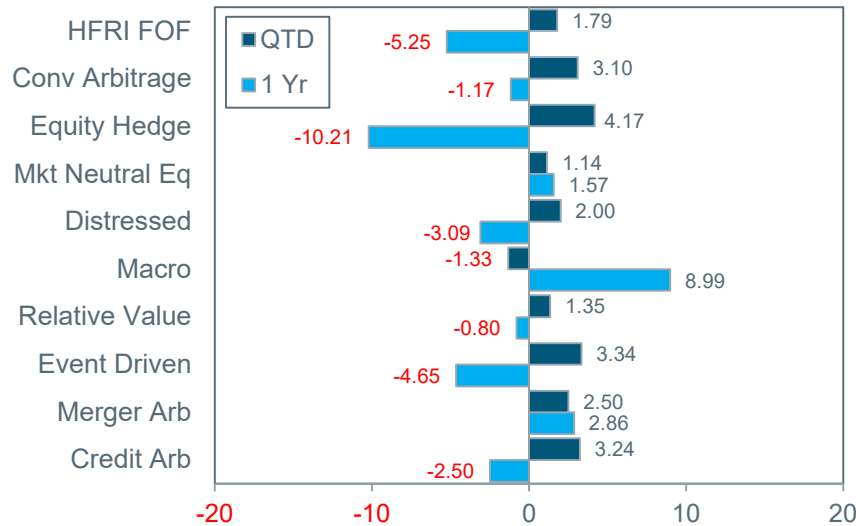
**General Market - Diversified Inflation Strategies (DIS)**

DIS managers tracked closely by RVK have outperformed a US-centric blend of 60% equity and 40% fixed income both year to date, and over the quarter. After responding positively to record inflationary pressures in Q1 of 2022, DIS posted losses in the second and third quarters that followed. Strong Q4 performance has materialized across the peer group, with those who rely on income-oriented investment processes and those who hold larger TIPS allocation lagging the group to a moderate degree.

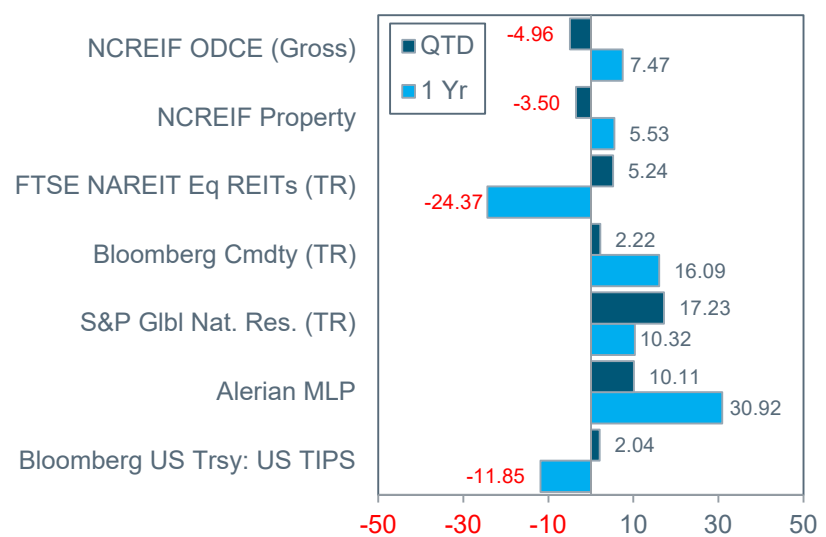
**General Market - Real Estate**

Core private real estate generated a negative return of -5.0% in Q4 (on a preliminary and gross of fee basis), as reported by the NFI-ODCE Index, with the total return comprising of 0.8% income and -5.8% price appreciation. Investors of publicly traded real estate significantly outperformed their private market counterparts by a meaningful margin. Publicly traded real estate delivered a fourth quarter total return of 4.5%, as measured by FTSE/NAREIT All REITs Index.

**HFRI Hedge Fund Performance (%)**



**Real Asset Performance (%)**



Annual Asset Class Performance

As of December 31, 2022

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	CYTD
Best	8.44	78.51	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	19.96	43.24	16.09
	5.24	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	18.40	28.71	7.47
	2.06	46.78	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	18.31	27.11	1.46
	-2.35	31.78	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	24.96	16.12	22.17	-5.25
	-10.01	28.01	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	22.01	12.34	14.82	-11.19
	-21.37	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-4.02	19.59	10.99	11.26	-11.85
	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.42	10.88	10.10	-13.01
	-33.79	18.91	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	14.32	7.82	6.17	-14.45
	-35.65	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-4.68	8.72	7.51	5.96	-18.11
	-37.00	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.01	8.43	7.11	5.28	-20.09
	-37.74	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.25	8.39	1.19	0.05	-20.44
	-43.33	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.73	7.69	0.67	-1.55	-21.39
	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.57	5.34	-3.12	-2.52	-24.37
Worst	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.89	2.28	-8.00	-2.54	-27.09
	S&P 500 - US Large Cap	R 2000 - US Small Cap	MSCI EAFE (Net) - Int'l Dev.	MSCI EAFE SC (Net) - Int'l SC	MSCI EM (Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - FI	Bloombrg US Corp Hi Yield - FI	Bloombrg US Trsy US TIPS - FI	Bloombrg US Gov Credit Lng - FI	NCREIF ODCE (Gross) - Real Estate	FTSE NAREIT Eq REITs Index (TR)	HFRI FOF Comp Index - ARS	Bloombrg Comdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv	

NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.

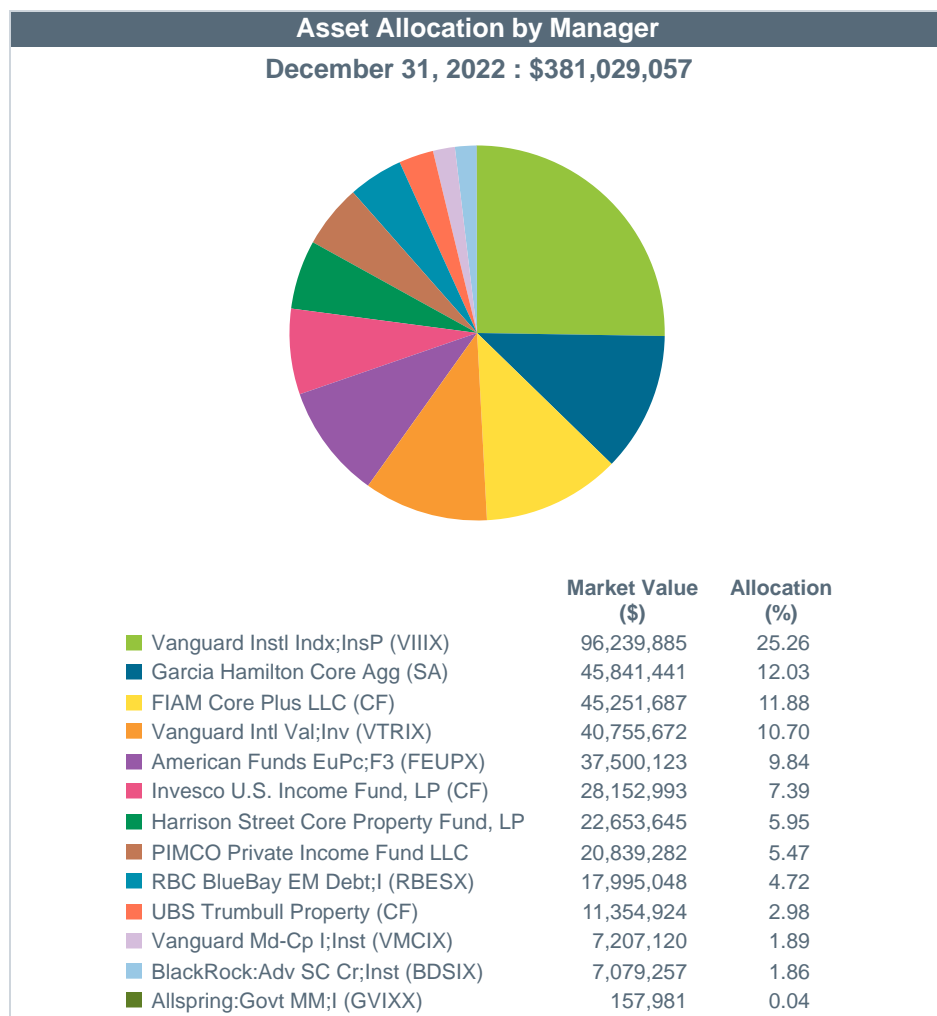


# Total Portfolio



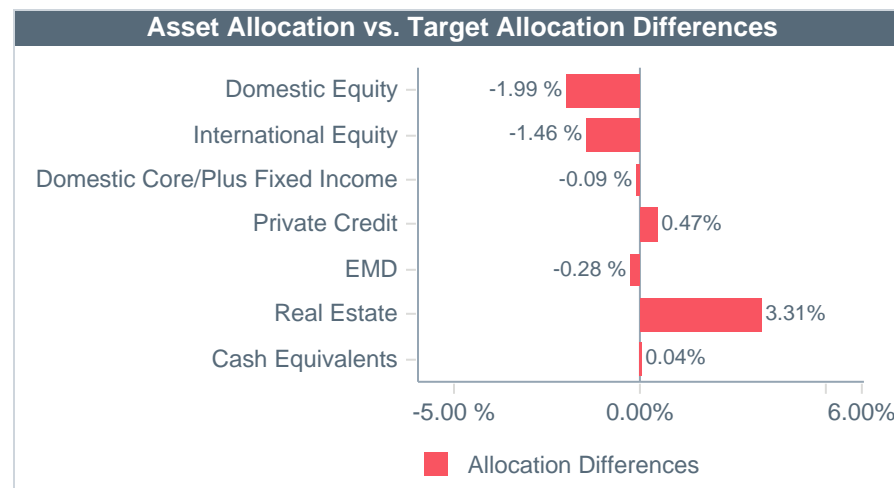
Municipality of Anchorage Trust Fund  
 Asset Alloc. by Manager, Asset Alloc. vs. Target & Schedule of Investable Assets

As of December 31, 2022



### Asset Allocation vs. Target Allocation

	Market Value (\$)	Allocation (%)	Target (%)	Min (%)	Max (%)
<b>Total Fund</b>	<b>381,029,057</b>	<b>100.00</b>	<b>100.00</b>	<b>-</b>	<b>-</b>
Domestic Equity	110,526,262	29.01	31.00	26.00	36.00
International Equity	78,255,795	20.54	22.00	18.00	26.00
Domestic Core/Plus Fixed Income	91,093,128	23.91	24.00	21.00	27.00
Private Credit	20,839,282	5.47	5.00	2.00	8.00
EMD	17,995,048	4.72	5.00	0.00	8.00
Real Estate	62,161,562	16.31	13.00	10.00	16.00
Cash Equivalents	157,981	0.04	0.00	0.00	15.00



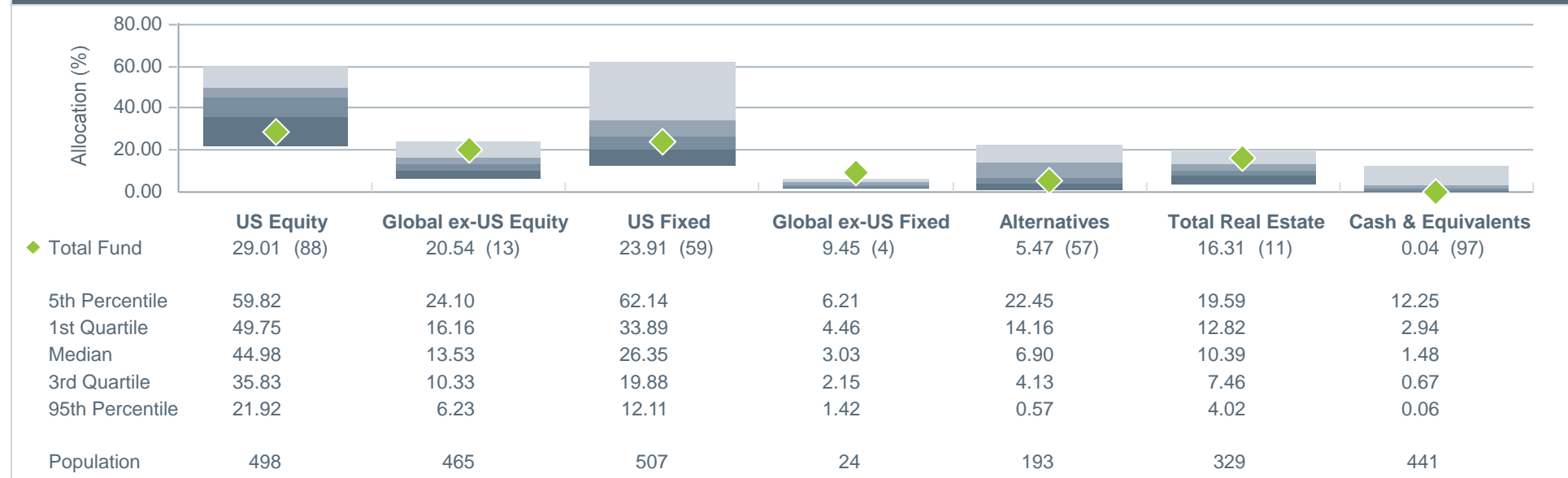
### Schedule of Investable Assets

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
CYTD	447,901,104	-14,746,506	-52,125,540	381,029,057	-11.94

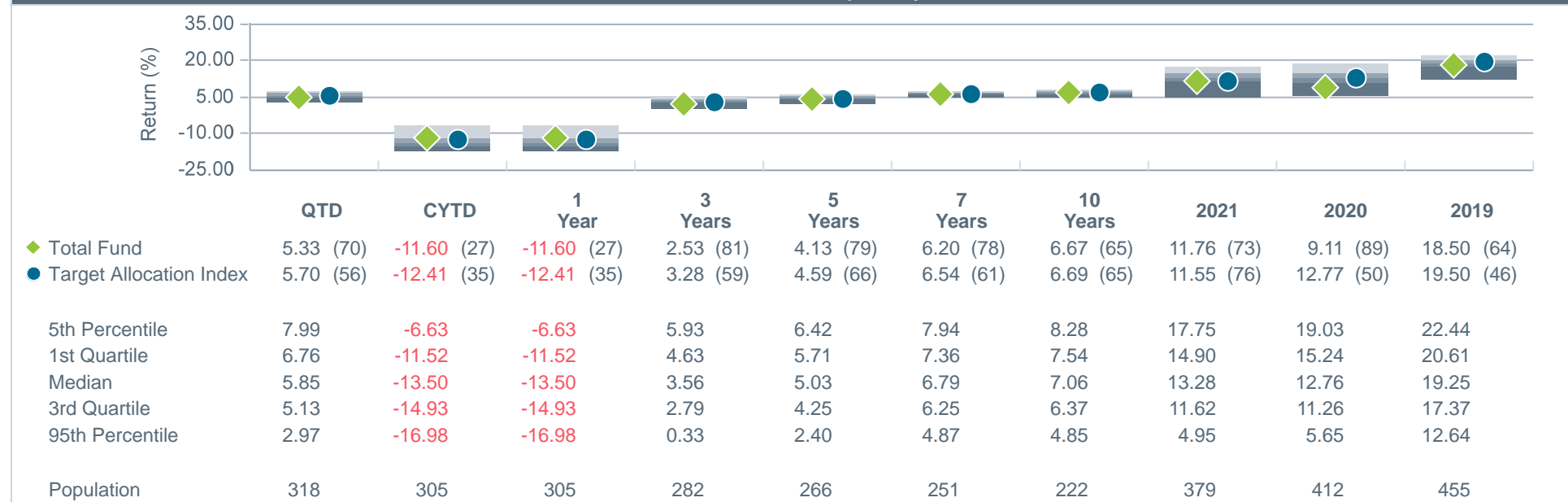
Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is net of fees.



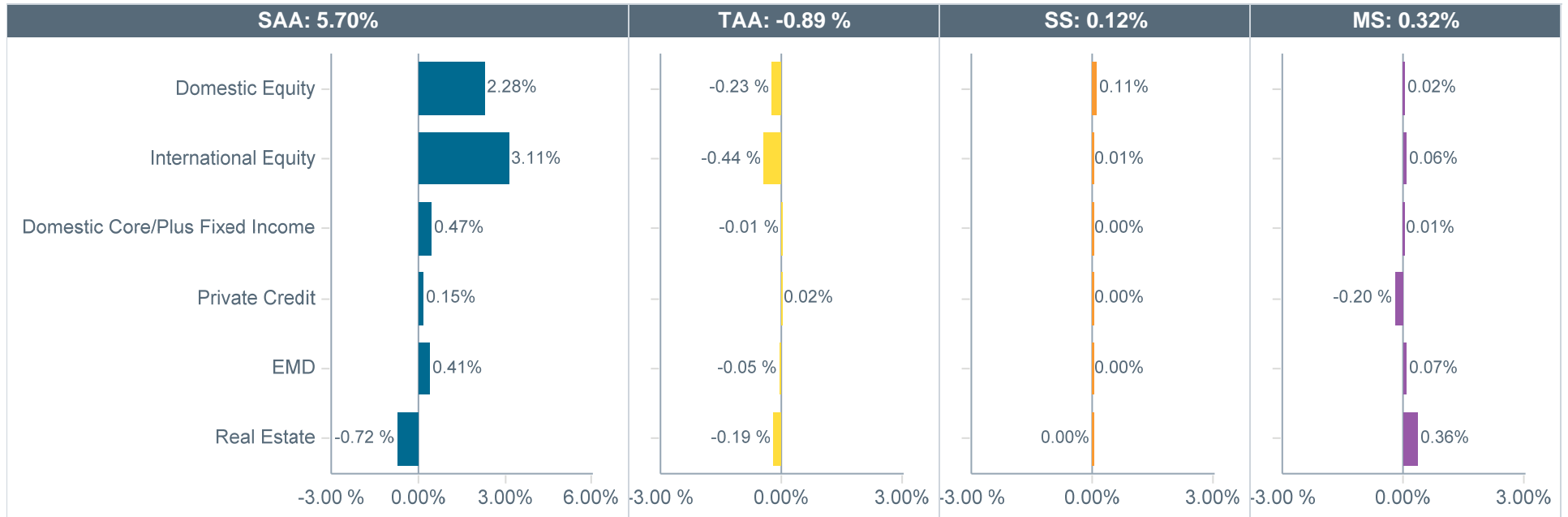
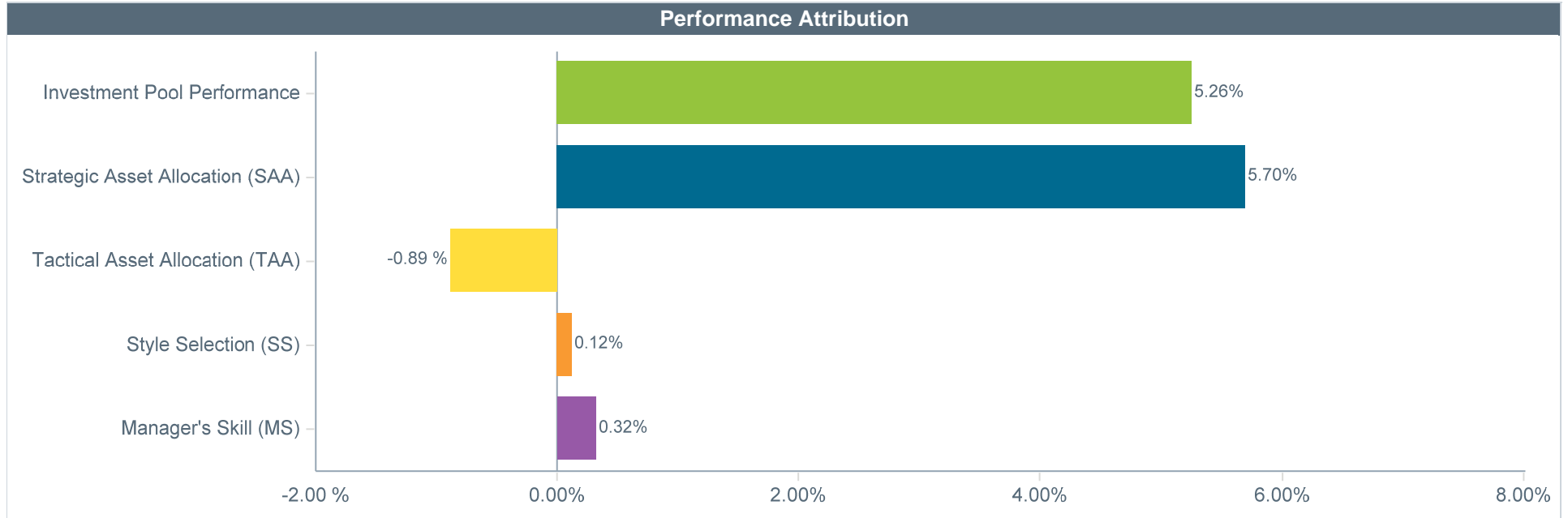
Total Fund Asset Allocation



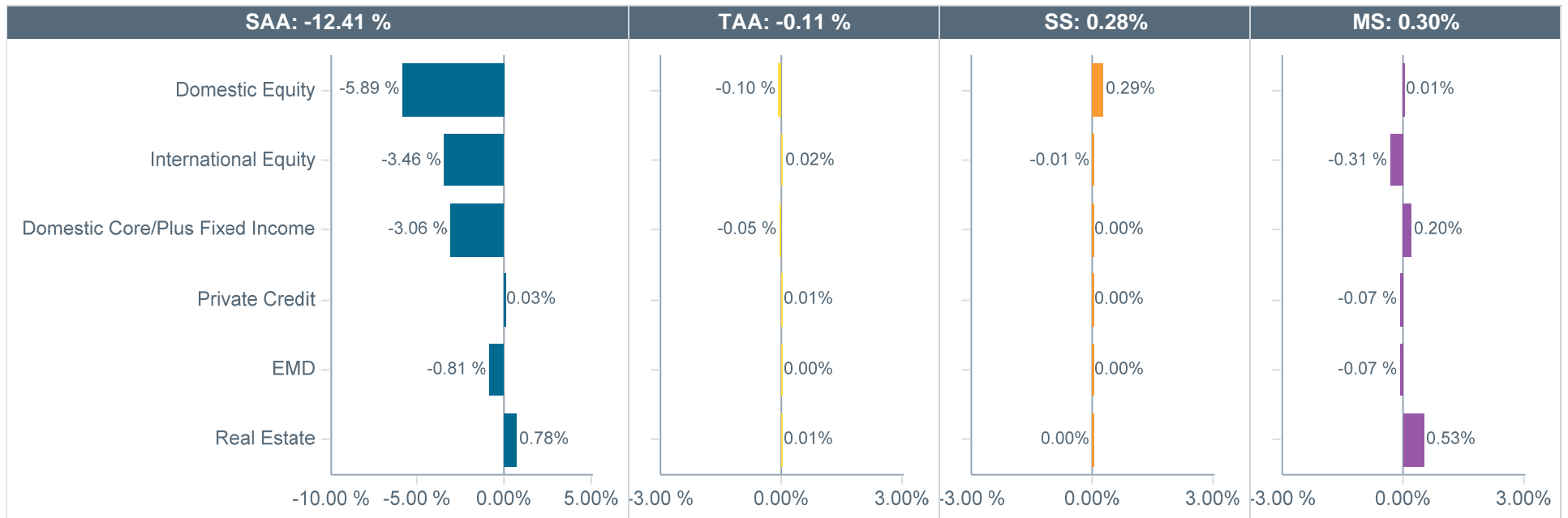
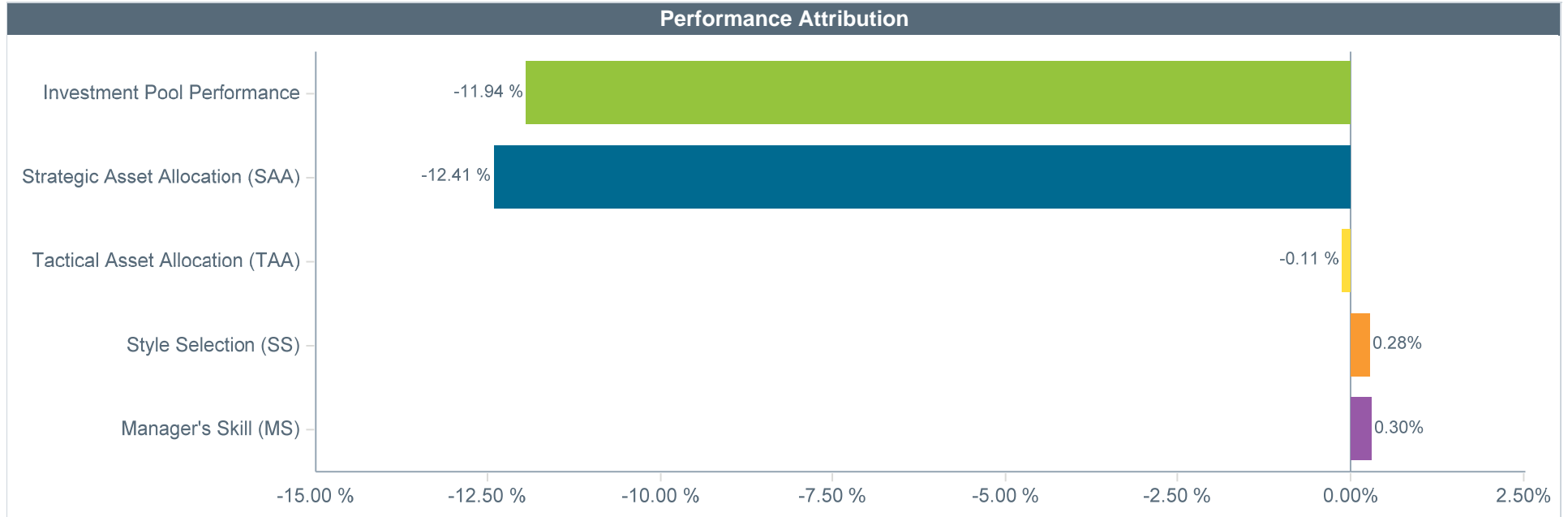
Total Fund Peer Group Analysis



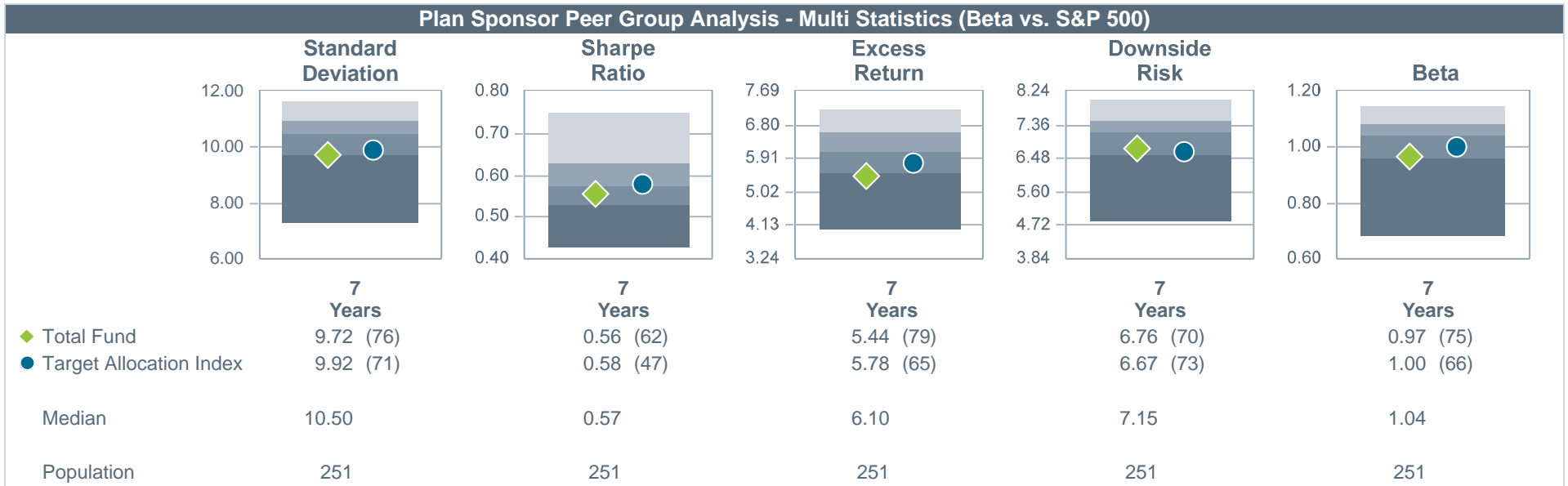
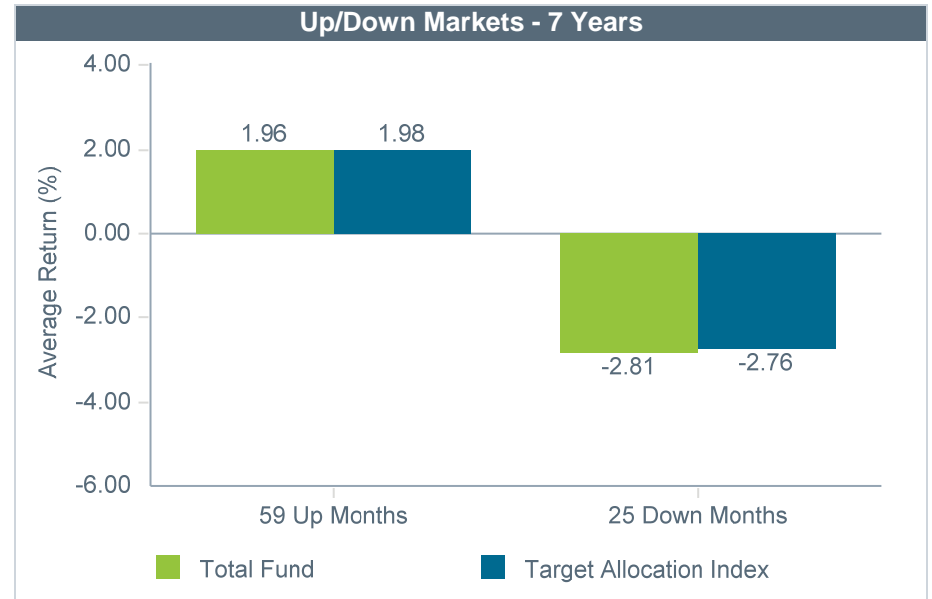
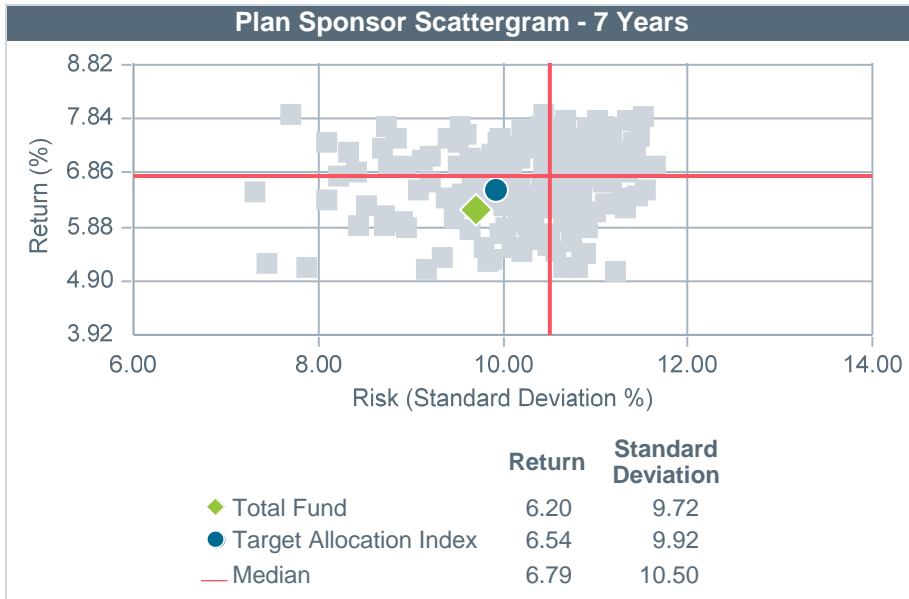
Parentheses contain percentile ranks. Performance shown is gross of fees. Composite performance prior to 01/2016 consists of gross performance for separate accounts and commingled fund investments, and net performance for mutual fund investments. Calculation is based on monthly periodicity.



Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

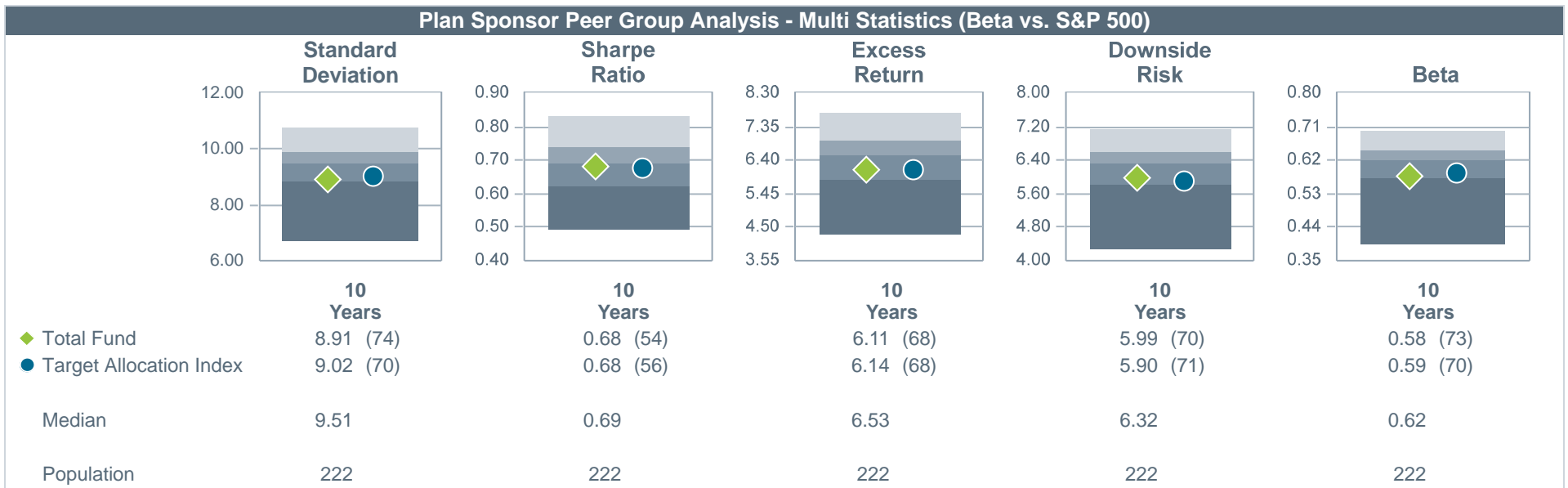
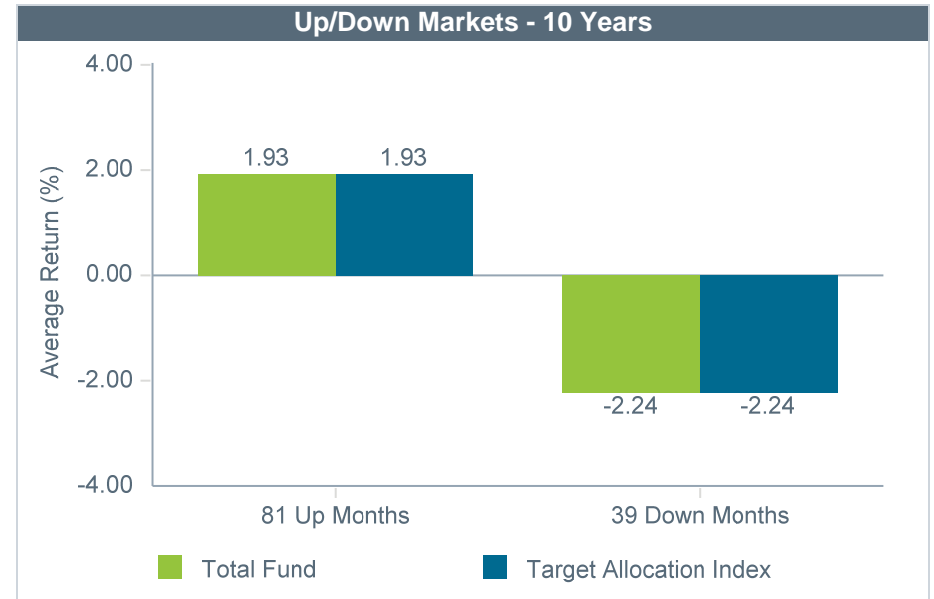
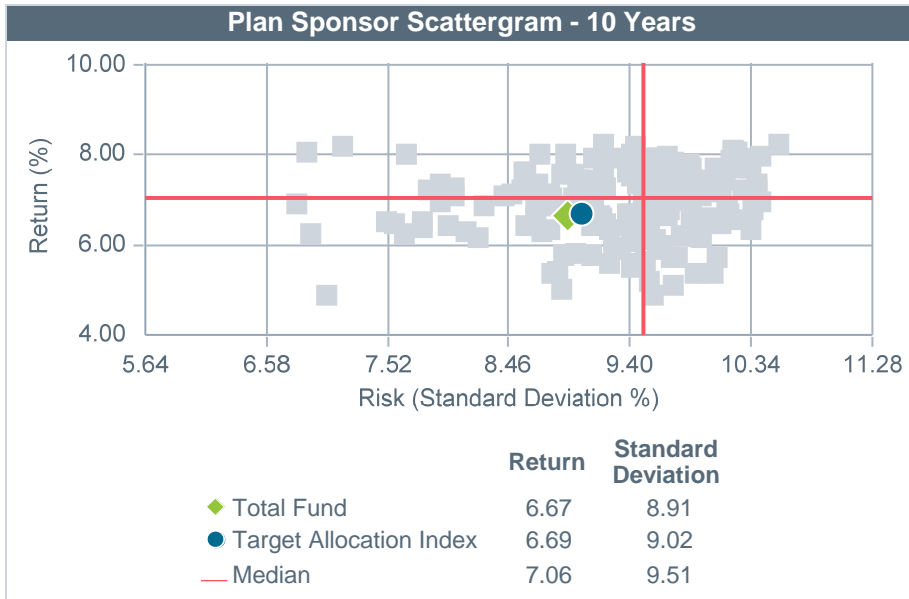


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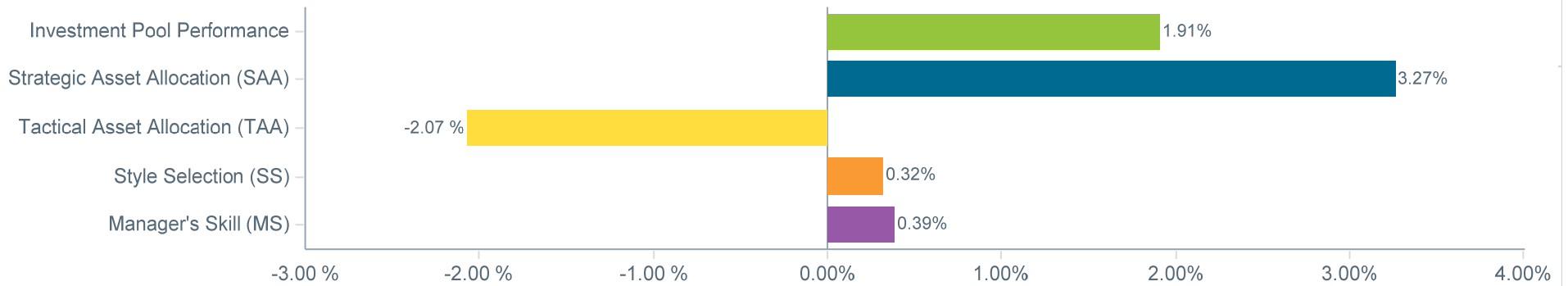
Municipality of Anchorage Trust Fund  
ML&P Cash Proceeds Impact on Performance

As of December 31, 2022

Comparative Performance

	MTD	QTD	CYTD	1 Year	Since 10/01/20	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
<b>Total Fund</b>	<b>-2.96</b>	<b>5.23</b>	<b>-11.94</b>	<b>-11.94</b>	<b>1.91</b>	<b>2.17</b>	<b>3.76</b>	<b>5.80</b>	<b>6.31</b>	<b>11.37</b>	<b>8.75</b>	<b>18.08</b>	<b>5.41</b>	<b>10/01/1999</b>
Target Allocation Index (Trust)	-2.72	5.70	-12.41	-12.41	3.27	3.28	4.59	6.54	6.69	11.55	12.77	19.50	5.36	
Difference	-0.24	-0.47	0.47	0.47	-1.36	-1.11	-0.83	-0.74	-0.38	-0.18	-4.02	-1.42	0.05	
Target Allocation Index (Wtd Cash) (Trust)	-2.72	5.70	-12.41	-12.41	1.83	2.20	3.93	6.06	-	11.55	9.26	19.50	-	
Difference	-0.24	-0.47	0.47	0.47	0.08	-0.03	-0.17	-0.26	-	-0.18	-0.51	-1.42	-	
Consumer Price Index+4%	0.02	0.98	10.71	10.71	10.25	9.12	7.93	7.43	6.70	11.32	5.42	6.38	6.58	
Difference	-2.98	4.25	-22.65	-22.65	-8.34	-6.95	-4.17	-1.63	-0.39	0.05	3.33	11.70	-1.17	
<b>Total Fund Ex-Cash</b>	<b>-2.96</b>	<b>5.26</b>	<b>-11.94</b>	<b>-11.94</b>	<b>3.36</b>	<b>3.27</b>	<b>4.43</b>	<b>6.30</b>	<b>-</b>	<b>11.55</b>	<b>12.11</b>	<b>18.08</b>	<b>6.30</b>	<b>01/01/2016</b>
Target Allocation Index (Trust)	-2.72	5.70	-12.41	-12.41	3.27	3.28	4.59	6.54	6.69	11.55	12.77	19.50	6.54	
Difference	-0.24	-0.44	0.47	0.47	0.09	-0.01	-0.16	-0.24	-	0.00	-0.66	-1.42	-0.24	

Performance Attribution - Since 10/01/2020

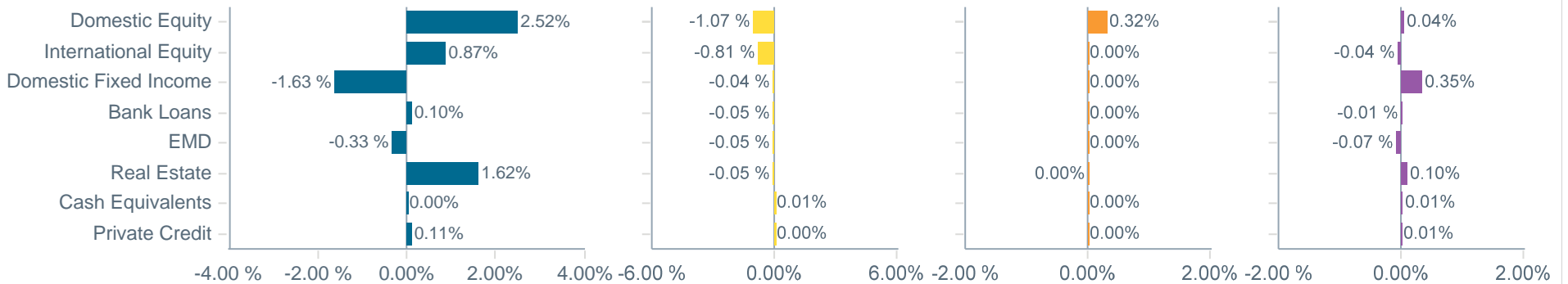


SAA: 3.27%

TAA: -2.07%

SS: 0.32%

MS: 0.39%



Performance shown is net of fees. Performance is annualized for periods greater than one year. Please see the Addendum for custom index definitions. The Target Allocation Index (Weighted Cash) (Trust) consists of a 37% allocation to cash during 11/2020 and a 12% allocation to cash during 12/2020. Remaining allocations were adjusted on a pro rata basis to fill the remaining stated targets.



Municipality of Anchorage Trust Fund  
Comparative Performance

As of December 31, 2022

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	Since Incep.	Inception Date
<b>Total Fund</b>	<b>5.23</b>	<b>-11.94</b>	<b>-11.94</b>	<b>2.17</b>	<b>3.76</b>	<b>5.80</b>	<b>6.31</b>	<b>11.37</b>	<b>8.75</b>	<b>18.08</b>	<b>-4.49</b>	<b>5.41</b>	<b>10/01/1999</b>
Target Allocation Index (Trust)	5.70	-12.41	-12.41	3.28	4.59	6.54	6.69	11.55	12.77	19.50	-4.93	5.36	
Difference	-0.47	0.47	0.47	-1.11	-0.83	-0.74	-0.38	-0.18	-4.02	-1.42	0.44	0.05	
Consumer Price Index+4%	0.98	10.71	10.71	9.12	7.93	7.43	6.70	11.32	5.42	6.38	5.99	6.58	
Difference	4.25	-22.65	-22.65	-6.95	-4.17	-1.63	-0.39	0.05	3.33	11.70	-10.48	-1.17	
<b>Domestic Equity</b>	<b>7.64</b>	<b>-18.28</b>	<b>-18.28</b>	<b>6.95</b>	<b>8.89</b>	<b>10.72</b>	<b>11.94</b>	<b>27.79</b>	<b>17.14</b>	<b>31.54</b>	<b>-4.88</b>	<b>6.82</b>	<b>10/01/1999</b>
Russell 3000 Index	7.18	-19.21	-19.21	7.07	8.79	11.04	12.13	25.66	20.89	31.02	-5.24	7.09	
Difference	0.46	0.93	0.93	-0.12	0.10	-0.32	-0.19	2.13	-3.75	0.52	0.36	-0.27	
<b>Domestic Large Cap Equity</b>	<b>7.55</b>	<b>-18.13</b>	<b>-18.13</b>	<b>7.27</b>	<b>9.19</b>	<b>11.01</b>	<b>12.34</b>	<b>28.85</b>	<b>17.02</b>	<b>31.55</b>	<b>-4.42</b>	<b>6.84</b>	<b>10/01/1999</b>
Russell 1000 Index	7.24	-19.13	-19.13	7.35	9.13	11.26	12.37	26.45	20.96	31.43	-4.78	7.04	
Difference	0.31	1.00	1.00	-0.08	0.06	-0.25	-0.03	2.40	-3.94	0.12	0.36	-0.20	
<b>Vanguard Instl Indx;InsP (VMIIX)</b>	<b>7.55</b>	<b>-18.13</b>	<b>-18.13</b>	<b>7.65</b>	<b>9.40</b>	<b>11.46</b>	<b>12.54</b>	<b>28.69</b>	<b>18.40</b>	<b>31.46</b>	<b>-4.42</b>	<b>6.84</b>	<b>10/01/1999</b>
S&P 500 Index (Cap Wtd)	7.56	-18.11	-18.11	7.66	9.42	11.48	12.56	28.71	18.40	31.49	-4.38	6.83	
Difference	-0.01	-0.02	-0.02	-0.01	-0.02	-0.02	-0.02	-0.02	0.00	-0.03	-0.04	0.01	
IM U.S. Large Cap Core Equity (MF) Median	7.82	-18.72	-18.72	6.96	8.77	10.64	11.68	26.95	18.39	30.70	-5.45	6.50	
Rank	57	46	46	29	30	21	16	26	50	37	32	32	
<b>Domestic Mid Cap Equity</b>	<b>9.01</b>	<b>-18.71</b>	<b>-18.71</b>	<b>5.72</b>	<b>7.05</b>	<b>9.33</b>	<b>10.97</b>	<b>24.65</b>	<b>16.61</b>	<b>31.09</b>	<b>-9.23</b>	<b>8.46</b>	<b>07/01/2006</b>
Vanguard Spl Mid Cap Index	9.03	-18.68	-18.68	6.19	7.34	9.53	11.13	24.52	18.24	31.09	-9.22	8.57	
Difference	-0.02	-0.03	-0.03	-0.47	-0.29	-0.20	-0.16	0.13	-1.63	0.00	-0.01	-0.11	
<b>Vanguard Md-Cp I;Inst (VMCIX)</b>	<b>9.01</b>	<b>-18.70</b>	<b>-18.70</b>	<b>6.18</b>	<b>7.32</b>	<b>9.51</b>	<b>11.09</b>	<b>24.53</b>	<b>18.23</b>	<b>31.03</b>	<b>-9.23</b>	<b>8.54</b>	<b>07/01/2006</b>
Vanguard Spl Mid Cap Index	9.03	-18.68	-18.68	6.19	7.34	9.53	11.13	24.52	18.24	31.09	-9.22	8.57	
Difference	-0.02	-0.02	-0.02	-0.01	-0.02	-0.02	-0.04	0.01	-0.01	-0.06	-0.01	-0.03	
IM U.S. Mid Cap Core Equity (MF) Median	9.63	-13.21	-13.21	5.90	5.94	8.50	9.49	25.73	8.44	28.59	-11.64	7.29	
Rank	65	93	93	45	24	27	12	60	15	27	22	15	
<b>Domestic Small Cap Equity</b>	<b>7.50</b>	<b>-19.87</b>	<b>-19.87</b>	<b>3.01</b>	<b>5.66</b>	<b>7.61</b>	<b>7.52</b>	<b>15.69</b>	<b>17.88</b>	<b>32.15</b>	<b>-8.83</b>	<b>5.48</b>	<b>01/01/2000</b>
Small Cap Custom Index	6.23	-20.44	-20.44	3.10	4.13	6.80	8.99	14.82	19.96	25.53	-11.01	7.25	
Difference	1.27	0.57	0.57	-0.09	1.53	0.81	-1.47	0.87	-2.08	6.62	2.18	-1.77	
<b>BlackRock:Adv SC Cr;Inst (BDSIX)</b>	<b>7.50</b>	<b>-19.87</b>	<b>-19.87</b>	<b>3.19</b>	<b>5.76</b>	<b>-</b>	<b>-</b>	<b>14.67</b>	<b>19.57</b>	<b>32.12</b>	<b>-8.83</b>	<b>7.05</b>	<b>12/01/2016</b>
Russell 2000 Index	6.23	-20.44	-20.44	3.10	4.13	7.90	9.01	14.82	19.96	25.53	-11.01	6.21	
Difference	1.27	0.57	0.57	0.09	1.63	-	-	-0.15	-0.39	6.59	2.18	0.84	
IM U.S. Small Cap Core Equity (MF) Median	9.65	-15.77	-15.77	5.17	4.76	8.01	8.97	25.13	9.89	23.94	-12.71	6.18	
Rank	81	82	82	74	25	-	-	91	14	3	13	31	

Performance shown is net of fees. Performance is annualized for periods greater than one year. Please see the Addendum for custom index definitions.



Municipality of Anchorage Trust Fund  
Comparative Performance

As of December 31, 2022

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	Since Incep.	Inception Date
<b>International Equity</b>	<b>14.81</b>	<b>-17.25</b>	<b>-17.25</b>	<b>0.30</b>	<b>0.50</b>	<b>4.00</b>	<b>4.01</b>	<b>5.82</b>	<b>15.22</b>	<b>19.36</b>	<b>-14.87</b>	<b>4.93</b>	<b>10/01/1999</b>
MSCI ACW Ex US Index (USD) (Net)	14.28	-16.00	-16.00	0.07	0.88	4.80	3.80	7.82	10.65	21.51	-14.20	4.03	
Difference	0.53	-1.25	-1.25	0.23	-0.38	-0.80	0.21	-2.00	4.57	-2.15	-0.67	0.90	
<b>Vanguard Intl Val;Inv (VTRIX)</b>	<b>15.76</b>	<b>-11.66</b>	<b>-11.66</b>	-	-	-	-	<b>7.97</b>	-	-	-	<b>9.46</b>	<b>06/01/2020</b>
MSCI ACW Ex US Val Index (USD) (Net)	15.70	-8.59	-8.59	0.06	-0.05	4.19	2.72	10.46	-0.77	15.72	-13.97	10.45	
Difference	0.06	-3.07	-3.07	-	-	-	-	-2.49	-	-	-	-0.99	
IM ACWI Ex US Value (MF) Median	18.06	-11.04	-11.04	0.24	-0.27	3.35	2.53	10.01	3.69	17.82	-16.03	9.44	
Rank	64	61	61	-	-	-	-	73	-	-	-	50	
<b>American Funds EuPc;F3 (FEUPX)</b>	<b>13.79</b>	<b>-22.73</b>	<b>-22.73</b>	<b>-0.16</b>	<b>1.53</b>	<b>5.21</b>	<b>5.25</b>	<b>2.85</b>	<b>25.24</b>	<b>27.42</b>	<b>-14.91</b>	<b>5.55</b>	<b>10/01/1999</b>
MSCI ACW Ex US Grth Index (USD) (Net)	12.89	-23.05	-23.05	-0.40	1.49	5.17	4.68	5.09	22.20	27.34	-14.43	-	
Difference	0.90	0.32	0.32	0.24	0.04	0.04	0.57	-2.24	3.04	0.08	-0.48	-	
IM ACWI Ex US Growth (MF) Median	13.69	-26.63	-26.63	-0.30	1.70	4.86	4.87	7.93	22.75	27.84	-14.32	4.85	
Rank	46	30	30	47	54	37	33	77	36	59	57	14	
<b>Domestic Fixed Income</b>	<b>1.42</b>	<b>-10.23</b>	<b>-10.23</b>	<b>-1.38</b>	<b>0.87</b>	<b>2.20</b>	<b>1.85</b>	<b>-0.07</b>	<b>6.90</b>	<b>8.75</b>	<b>0.11</b>	<b>4.54</b>	<b>10/01/1999</b>
Bloomberg US Agg Bond Index	1.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.01	3.94	
Difference	-0.45	2.78	2.78	1.33	0.85	1.31	0.79	1.48	-0.61	0.03	0.10	0.60	
<b>Domestic Core/Plus Fixed Income</b>	<b>1.91</b>	<b>-12.15</b>	<b>-12.15</b>	<b>-2.08</b>	<b>0.47</b>	<b>1.88</b>	-	<b>-0.87</b>	<b>7.80</b>	<b>8.89</b>	<b>0.17</b>	<b>1.88</b>	<b>01/01/2016</b>
Bloomberg US Agg Bond Index	1.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.01	0.89	
Difference	0.04	0.86	0.86	0.63	0.45	0.99	-	0.68	0.29	0.17	0.16	0.99	
<b>FIAM Core Plus LLC (CF)</b>	<b>1.95</b>	<b>-12.63</b>	<b>-12.63</b>	<b>-1.84</b>	<b>0.78</b>	<b>2.10</b>	<b>1.92</b>	<b>0.68</b>	<b>7.52</b>	<b>10.49</b>	<b>-0.54</b>	<b>3.83</b>	<b>10/01/2007</b>
Bloomberg US Agg Bond Index	1.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.01	2.82	
Difference	0.08	0.38	0.38	0.87	0.76	1.21	0.86	2.23	0.01	1.77	-0.55	1.01	
IM U.S. Broad Market Core+ Fixed Income (MF) Median	1.81	-13.75	-13.75	-2.46	0.10	1.17	1.20	-0.94	8.58	9.33	-0.97	3.13	
Rank	41	19	19	24	19	10	16	8	73	23	33	10	
<b>Garcia Hamilton Core Agg (SA)</b>	<b>1.88</b>	<b>-11.66</b>	<b>-11.66</b>	<b>-2.25</b>	-	-	-	<b>-2.40</b>	<b>8.34</b>	<b>7.31</b>	-	<b>0.35</b>	<b>02/01/2018</b>
Bloomberg US Agg Bond Index	1.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.01	0.26	
Difference	0.01	1.35	1.35	0.46	-	-	-	-0.85	0.83	-1.41	-	0.09	
IM U.S. Broad Market Core Fixed Income (MF) Median	1.71	-13.66	-13.66	-2.72	-0.07	0.92	1.02	-1.33	8.16	8.76	-0.62	0.14	
Rank	34	8	8	24	-	-	-	95	44	88	-	29	

Performance shown is net of fees. Performance is annualized for periods greater than one year. Please see the Addendum for custom index definitions.

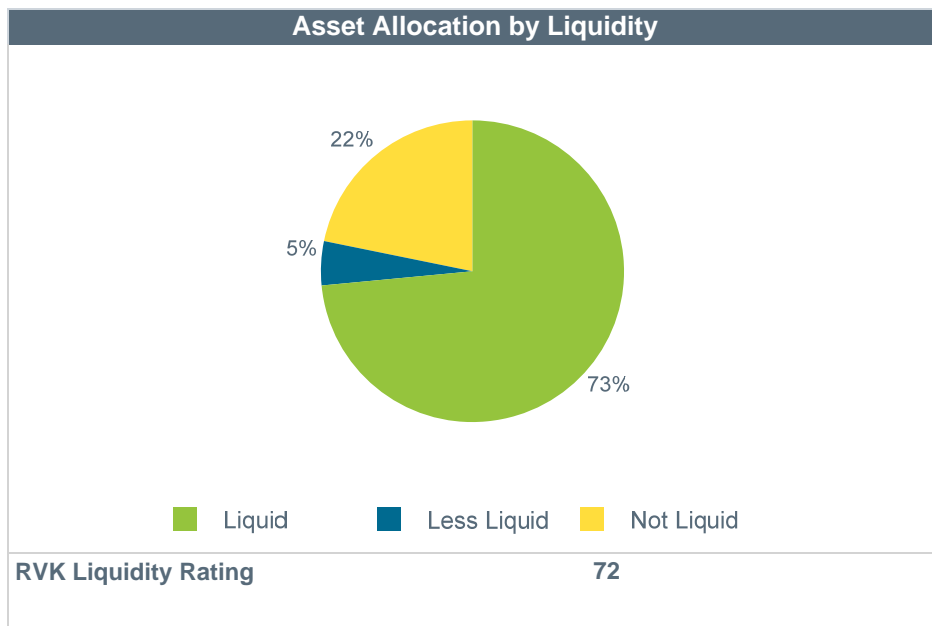
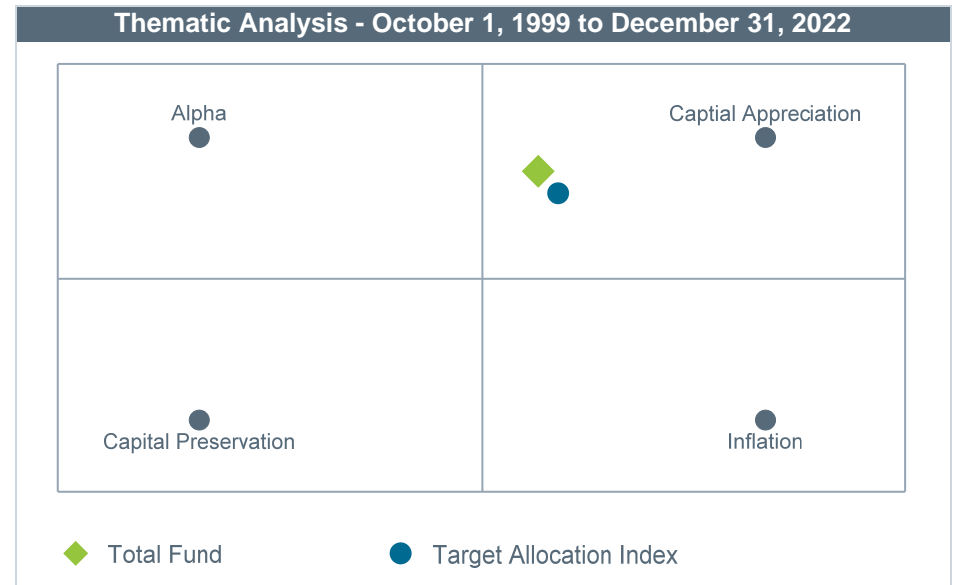
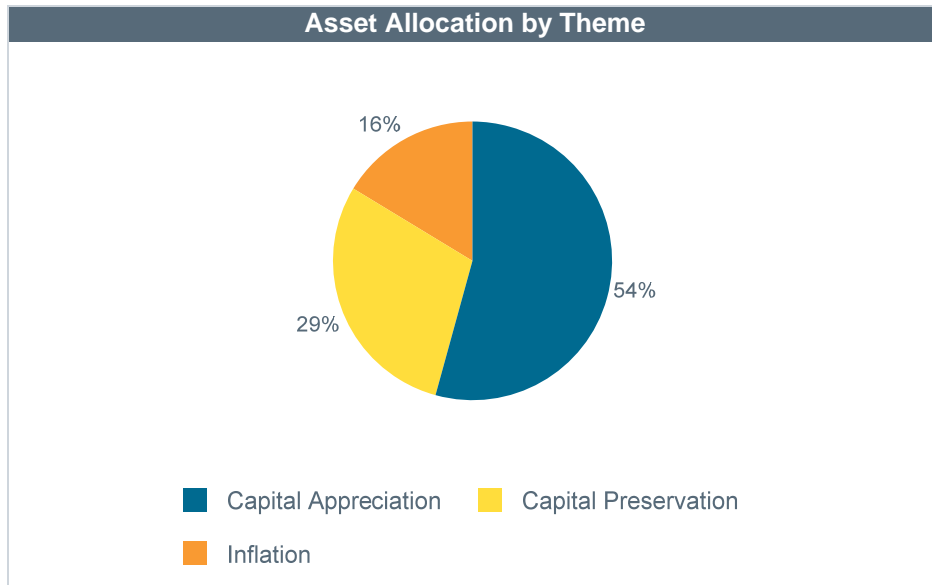


Municipality of Anchorage Trust Fund  
Comparative Performance

As of December 31, 2022

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	Since Incep.	Inception Date
<b>Private Credit</b>	<b>-0.71</b>	<b>-0.55</b>	<b>-0.55</b>	-	-	-	-	-	-	-	-	<b>2.66</b>	<b>06/01/2021</b>
CS Lvg'd Loan Index+2%	2.84	0.92	0.92	4.39	5.30	6.39	5.86	7.51	4.83	10.34	3.16	2.76	
Difference	-3.55	-1.47	-1.47	-	-	-	-	-	-	-	-	-0.10	
<b>PIMCO Private Income Fund LLC</b>	<b>-0.71</b>	<b>-0.55</b>	<b>-0.55</b>	-	-	-	-	-	-	-	-	<b>2.66</b>	<b>06/01/2021</b>
CS Lvg'd Loan Index+2%	2.84	0.92	0.92	4.39	5.30	6.39	5.86	7.51	4.83	10.34	3.16	2.76	
Difference	-3.55	-1.47	-1.47	-	-	-	-	-	-	-	-	-0.10	
<b>Emerging Markets Debt</b>	<b>9.77</b>	<b>-17.73</b>	<b>-17.73</b>	<b>-7.14</b>	-	-	-	<b>-6.44</b>	<b>4.04</b>	<b>12.57</b>	-	<b>-2.05</b>	<b>07/01/2018</b>
EMD Blended Index	8.11	-16.36	-16.36	-5.28	-	-	-	-2.83	4.56	13.59	-	-0.60	
Difference	1.66	-1.37	-1.37	-1.86	-	-	-	-3.61	-0.52	-1.02	-	-1.45	
<b>RBC BlueBay EM Debt;I (RBESX)</b>	<b>9.77</b>	<b>-15.27</b>	<b>-15.27</b>	<b>-4.11</b>	-	-	-	<b>-2.76</b>	<b>7.01</b>	<b>15.38</b>	-	<b>0.59</b>	<b>07/01/2018</b>
JPM Emg Mkts Bond Gbl Dvf'd Index (TR)	8.11	-17.78	-17.78	-5.28	-1.31	1.85	1.59	-1.80	5.26	15.04	-4.26	-0.28	
Difference	1.66	2.51	2.51	1.17	-	-	-	-0.96	1.75	0.34	-	0.87	
IM Emerging Markets Debt (MF) Median	8.62	-15.10	-15.10	-4.27	-1.19	2.02	0.50	-2.96	5.74	13.63	-5.92	-0.10	
Rank	27	52	52	47	-	-	-	48	29	16	-	33	
<b>Real Estate</b>	<b>-3.15</b>	<b>10.21</b>	<b>10.21</b>	<b>7.36</b>	<b>4.96</b>	<b>5.14</b>	<b>6.71</b>	<b>17.92</b>	<b>-4.78</b>	<b>-2.92</b>	<b>6.04</b>	<b>4.46</b>	<b>10/01/2007</b>
NCREIF ODCE Index (AWA) (Net)	-5.17	6.55	6.55	8.97	7.72	7.57	9.11	21.02	0.34	4.39	7.36	5.31	
Difference	2.02	3.66	3.66	-1.61	-2.76	-2.43	-2.40	-3.10	-5.12	-7.31	-1.32	-0.85	
<b>UBS Trumbull Property (CF)</b>	<b>-5.41</b>	<b>5.02</b>	<b>5.02</b>	<b>4.92</b>	<b>3.52</b>	<b>4.12</b>	<b>5.98</b>	<b>15.48</b>	<b>-4.78</b>	<b>-2.92</b>	<b>6.04</b>	<b>3.99</b>	<b>10/01/2007</b>
NCREIF ODCE Index (AWA) (Net)	-5.17	6.55	6.55	8.97	7.72	7.57	9.11	21.02	0.34	4.39	7.36	5.31	
Difference	-0.24	-1.53	-1.53	-4.05	-4.20	-3.45	-3.13	-5.54	-5.12	-7.31	-1.32	-1.32	
<b>Invesco U.S. Income Fund, LP (CF)</b>	<b>-4.13</b>	<b>12.61</b>	<b>12.61</b>	-	-	-	-	<b>25.00</b>	-	-	-	<b>18.64</b>	<b>01/01/2021</b>
NCREIF ODCE Index (AWA) (Net)	-5.17	6.55	6.55	8.97	7.72	7.57	9.11	21.02	0.34	4.39	7.36	13.55	
Difference	1.04	6.06	6.06	-	-	-	-	3.98	-	-	-	5.09	
<b>Harrison Street Core Property Fund, LP</b>	<b>-0.69</b>	<b>10.15</b>	<b>10.15</b>	-	-	-	-	-	-	-	-	<b>10.57</b>	<b>04/01/2021</b>
NCREIF ODCE Index (AWA) (Net)	-5.17	6.55	6.55	8.97	7.72	7.57	9.11	21.02	0.34	4.39	7.36	14.40	
Difference	4.48	3.60	3.60	-	-	-	-	-	-	-	-	-3.83	

Performance shown is net of fees. Performance is annualized for periods greater than one year. Please see the Addendum for custom index definitions.



### Correlation Matrix - 10 Years

	A	B	C	D
A	1.00			
B	0.53	1.00		
C	-0.15	-0.01	1.00	
D	0.47	0.78	0.11	1.00

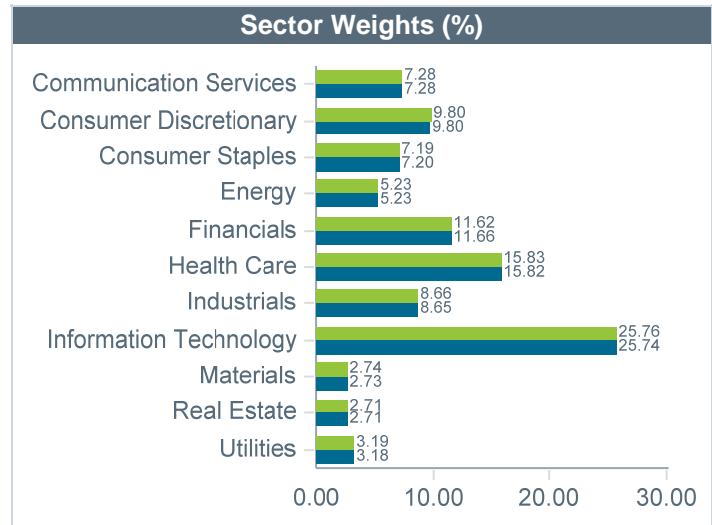
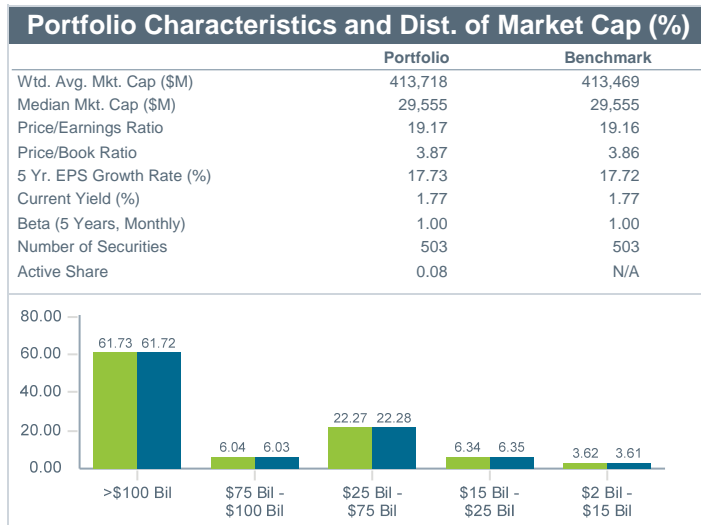
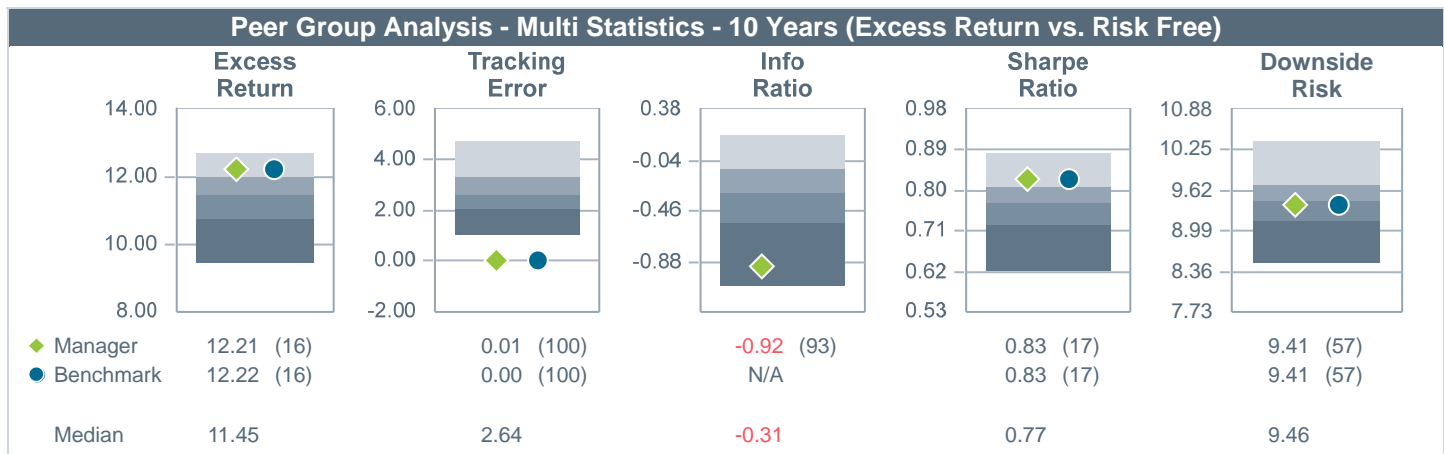
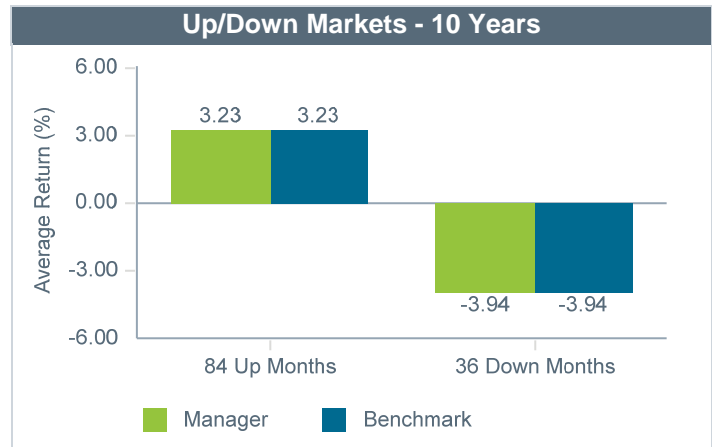
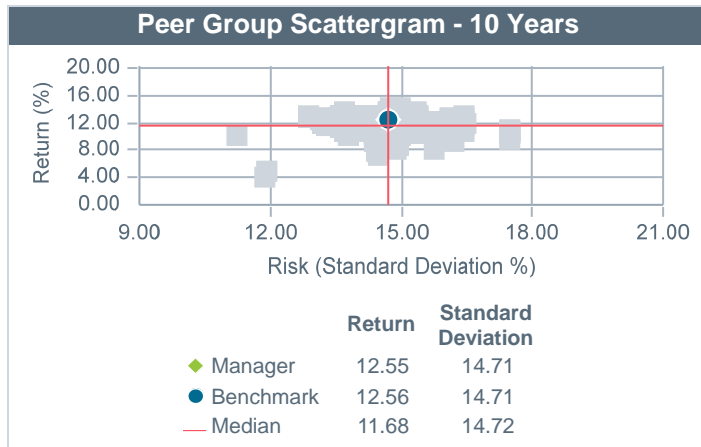
A = HFRI EH: Equity Market Neutral Index (Alpha)  
 B = MSCI ACW Index (USD) (Gross) (Capital Appreciation)  
 C = Bloomberg US Gov't Bond Index (Capital Preservation)  
 D = Real Return Custom Index (Inflation)

Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic and custom index descriptions.

# Investment Manager Profiles



Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
<b>Manager</b>	<b>7.55</b>	<b>-18.13</b>	<b>7.65</b>	<b>9.41</b>	<b>11.47</b>	<b>12.55</b>	<b>28.69</b>	<b>18.41</b>	<b>31.48</b>	<b>-4.41</b>	<b>21.82</b>
Benchmark	7.56	-18.11	7.66	9.42	11.48	12.56	28.71	18.40	31.49	-4.38	21.83
Difference	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.02	0.01	-0.01	-0.03	-0.01
Peer Group Median	7.82	-18.72	6.96	8.77	10.64	11.68	26.95	18.39	30.70	-5.45	21.46
Rank	57	46	29	30	21	16	26	50	37	32	45
Population	657	633	552	498	445	397	606	584	583	580	559



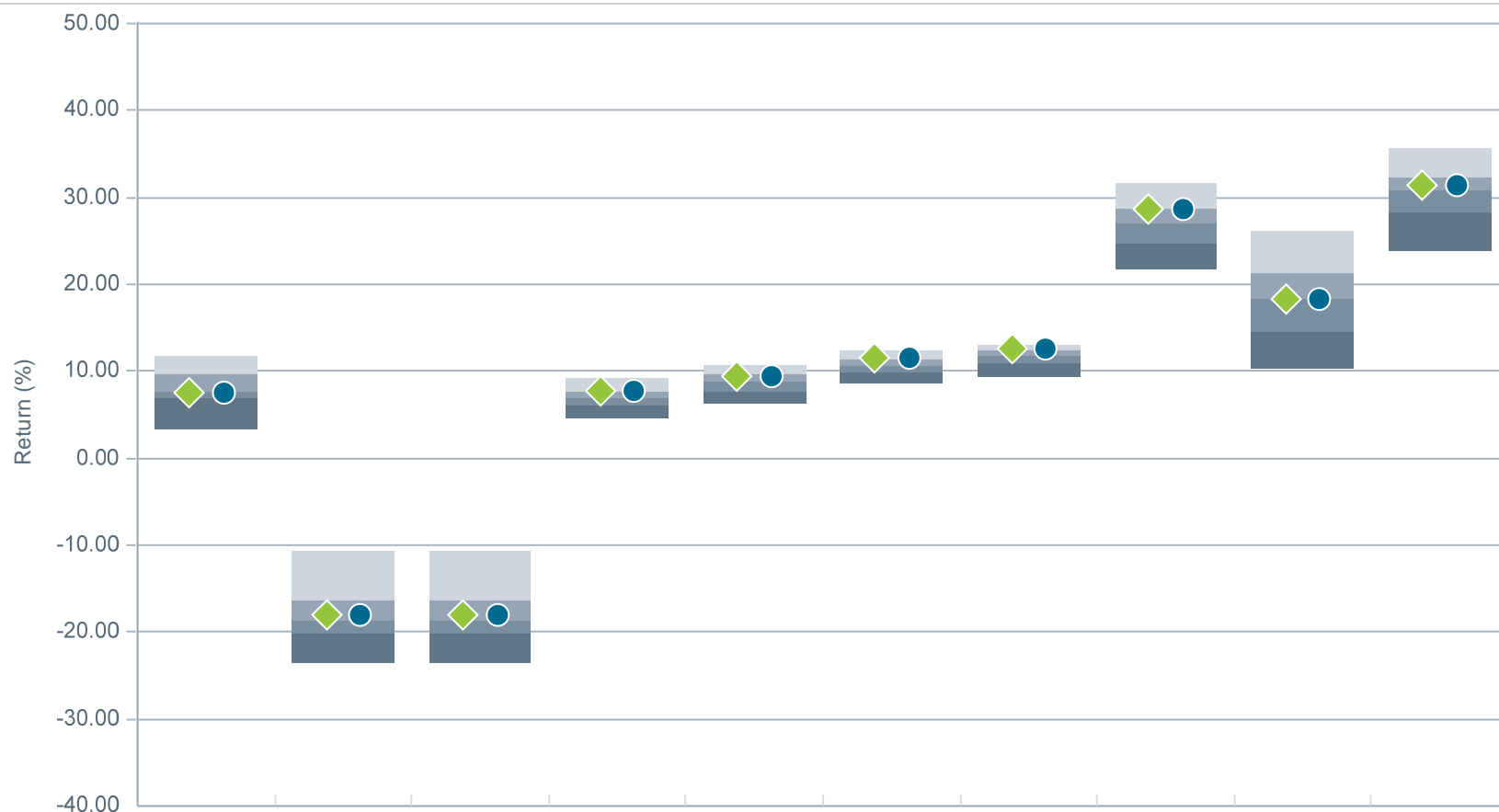
Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.





Municipality of Anchorage Trust Fund  
IM U.S. Large Cap Core Equity (MF)  
Peer Group Analysis

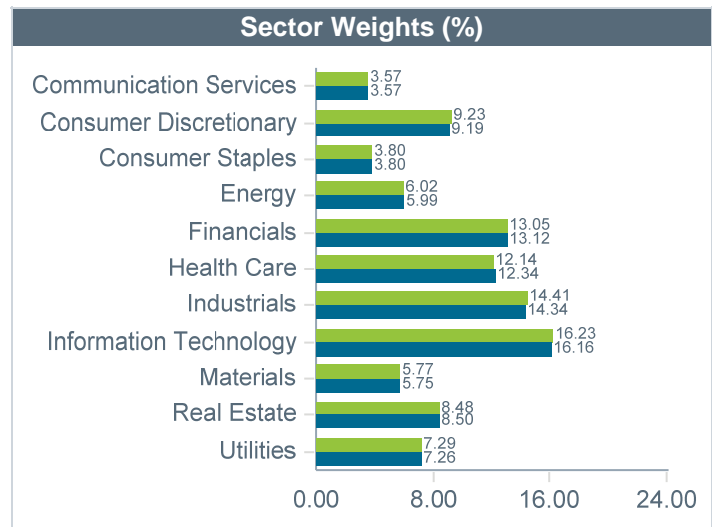
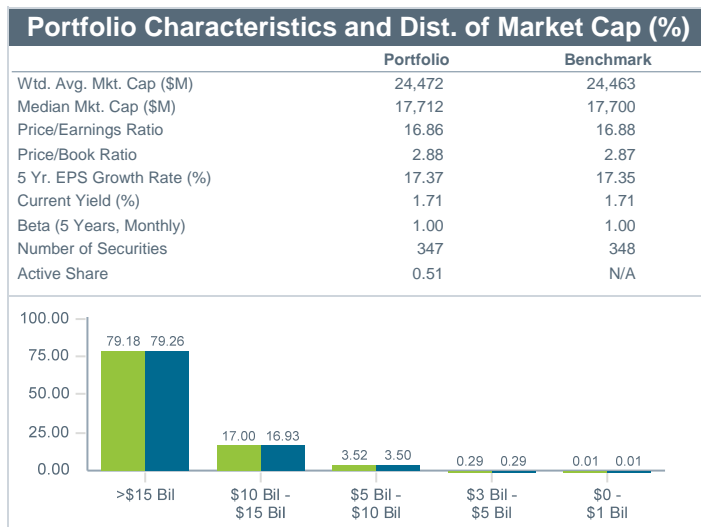
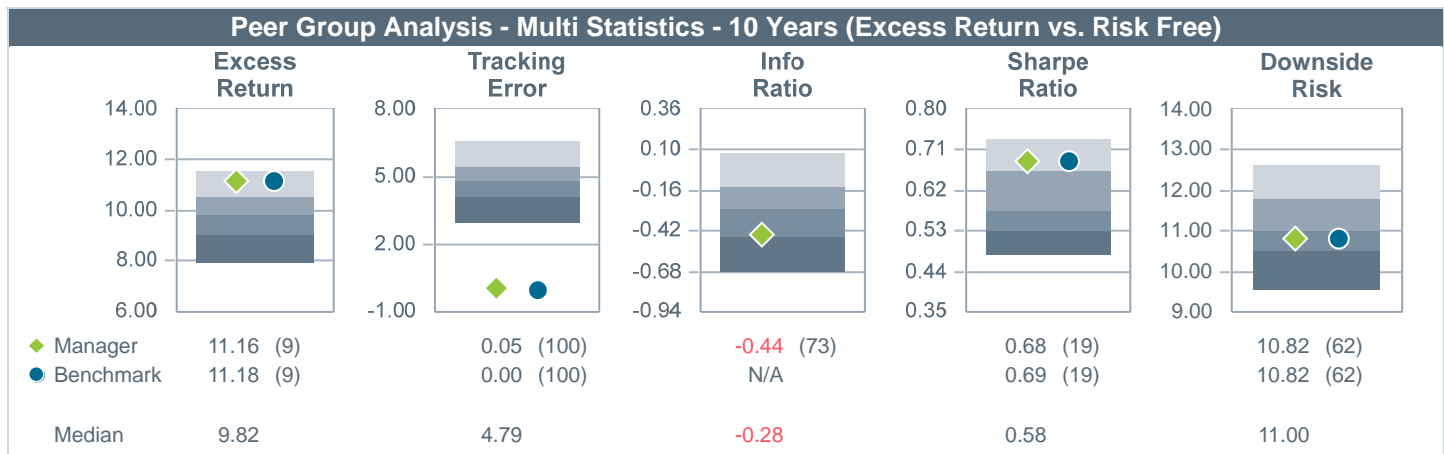
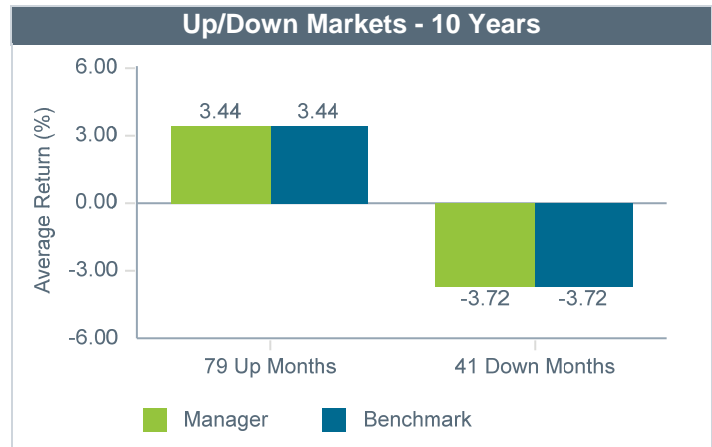
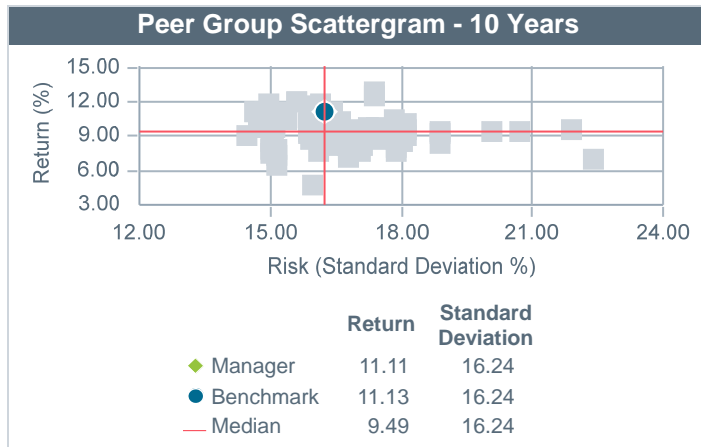
As of December 31, 2022



	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
◆ Vanguard Instl Indx;InsP (VIII X)	7.55 (57)	-18.13 (46)	-18.13 (46)	7.65 (29)	9.41 (30)	11.47 (21)	12.55 (16)	28.69 (26)	18.41 (50)	31.48 (37)
● S&P 500 Index (Cap Wtd)	7.56 (57)	-18.11 (45)	-18.11 (45)	7.66 (29)	9.42 (30)	11.48 (21)	12.56 (15)	28.71 (25)	18.40 (50)	31.49 (36)
5th Percentile	11.77	-10.56	-10.56	9.33	10.73	12.43	13.07	31.53	26.04	35.58
1st Quartile	9.55	-16.26	-16.26	7.82	9.55	11.30	12.32	28.69	21.30	32.26
Median	7.82	-18.72	-18.72	6.96	8.77	10.64	11.68	26.95	18.39	30.70
3rd Quartile	6.92	-20.23	-20.23	5.96	7.68	9.82	10.88	24.71	14.61	28.28
95th Percentile	3.39	-23.52	-23.52	4.64	6.25	8.49	9.53	21.59	10.32	23.76
Population	657	633	633	552	498	445	397	606	584	583

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
<b>Manager</b>	9.01	-18.70	6.18	7.32	9.52	11.11	24.53	18.26	31.04	-9.24	19.29
Benchmark	9.03	-18.68	6.19	7.34	9.53	11.13	24.52	18.24	31.09	-9.22	19.30
Difference	-0.02	-0.02	-0.01	-0.02	-0.01	-0.02	0.01	0.02	-0.05	-0.02	-0.01
Peer Group Median	9.63	-13.21	5.90	5.94	8.50	9.49	25.73	8.44	28.59	-11.64	14.94
Rank	65	93	45	24	26	12	60	14	27	22	19
Population	252	241	232	219	180	134	239	246	261	276	276

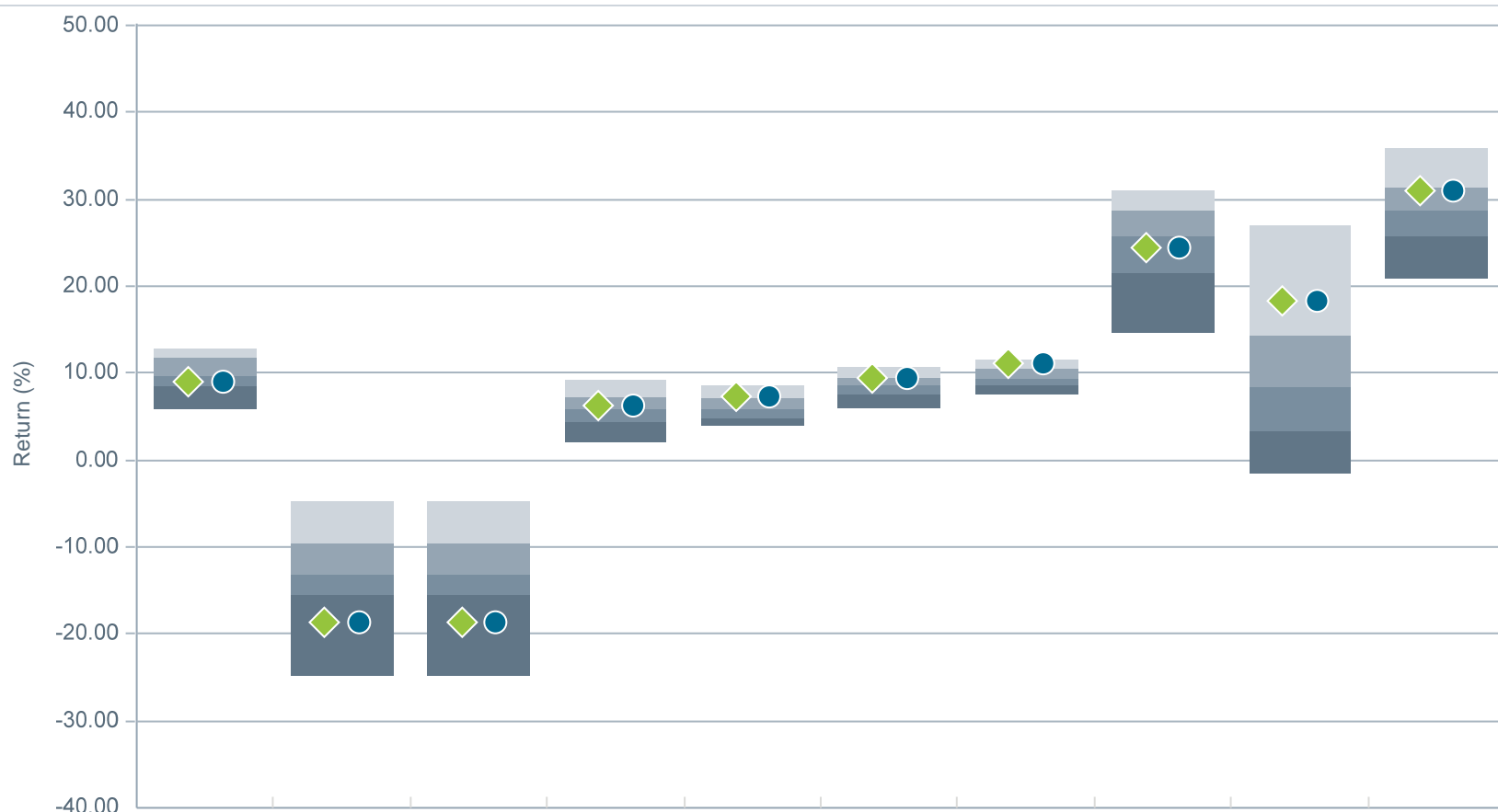


Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Benchmark consists of S&P Mid Cap 400 Index (Cap Wtd) through 05/16/03; MSCI US Mid Cap 450 Index through 01/30/13; and CRSP US Mid Cap Index thereafter.



Municipality of Anchorage Trust Fund  
IM U.S. Mid Cap Core Equity (MF)  
Peer Group Analysis

As of December 31, 2022

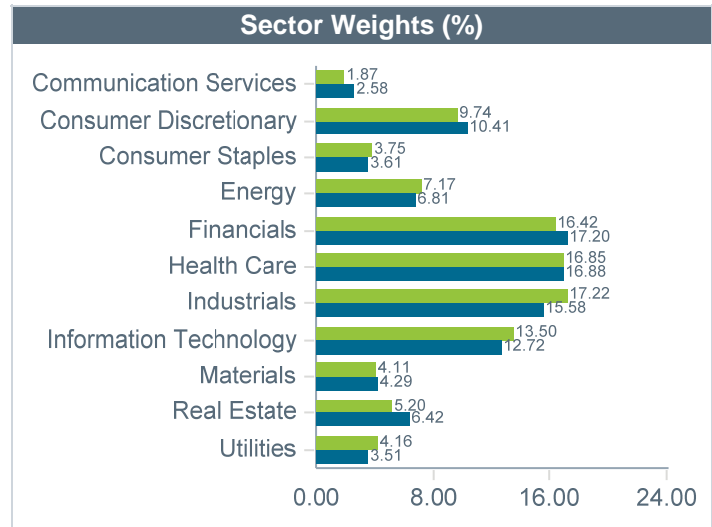
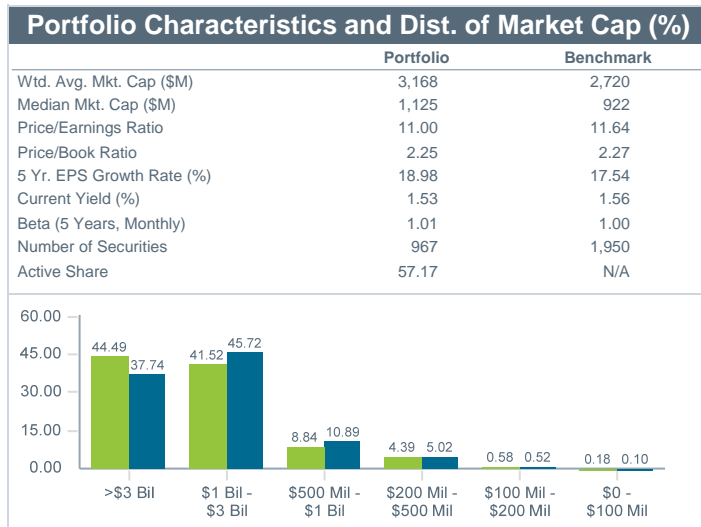
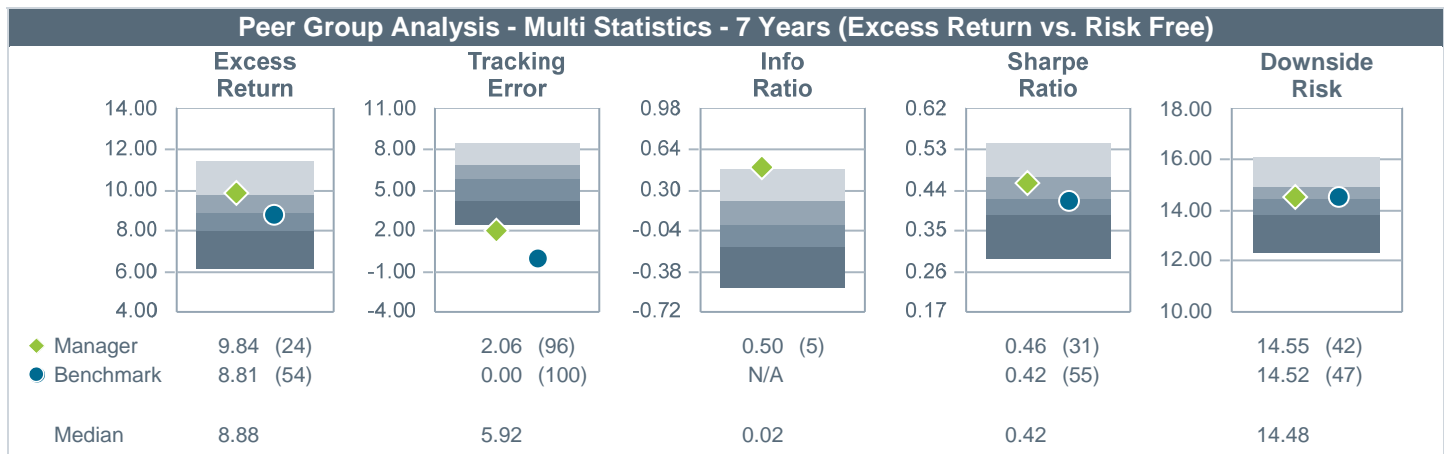
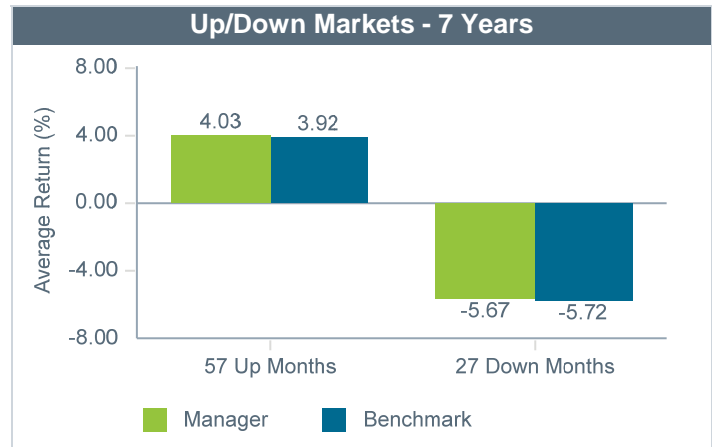
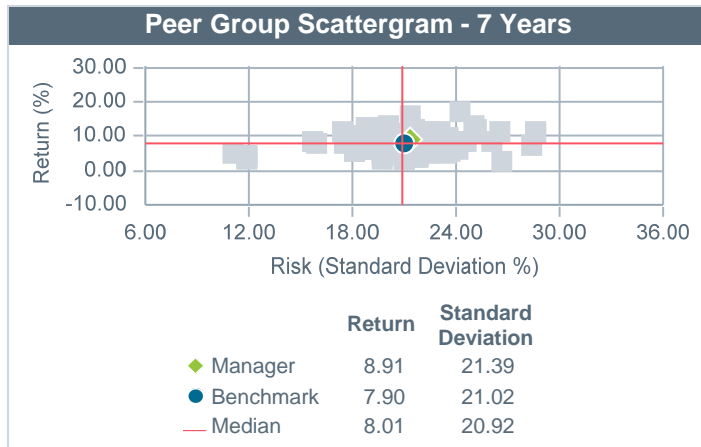


	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
◆ Vanguard Md-Cp I;Inst (VMCIX)	9.01 (65)	-18.70 (93)	-18.70 (93)	6.18 (45)	7.32 (24)	9.52 (26)	11.11 (12)	24.53 (60)	18.26 (14)	31.04 (27)
● Vanguard Spl Mid Cap Index	9.03 (64)	-18.68 (93)	-18.68 (93)	6.19 (45)	7.34 (24)	9.53 (26)	11.13 (11)	24.52 (60)	18.24 (15)	31.09 (27)
5th Percentile	12.80	-4.81	-4.81	9.13	8.58	10.62	11.64	31.03	27.01	35.93
1st Quartile	11.73	-9.55	-9.55	7.30	7.18	9.54	10.45	28.72	14.20	31.35
Median	9.63	-13.21	-13.21	5.90	5.94	8.50	9.49	25.73	8.44	28.59
3rd Quartile	8.52	-15.51	-15.51	4.33	4.87	7.56	8.60	21.53	3.24	25.60
95th Percentile	5.89	-24.76	-24.76	2.05	3.97	6.14	7.62	14.80	-1.62	20.76
Population	252	241	241	232	219	180	134	239	246	261

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	7.50	-19.87	3.19	5.76	8.91	N/A	14.67	19.57	32.12	-8.83	10.79
Benchmark	6.23	-20.44	3.10	4.13	7.90	9.01	14.82	19.96	25.53	-11.01	14.65
Difference	1.27	0.57	0.09	1.63	1.01	N/A	-0.15	-0.39	6.59	2.18	-3.86
Peer Group Median	9.65	-15.77	5.17	4.76	8.01	8.97	25.13	9.89	23.94	-12.71	12.09
Rank	81	82	74	25	26	N/A	91	14	3	13	62
Population	688	683	654	614	525	415	703	722	742	776	774

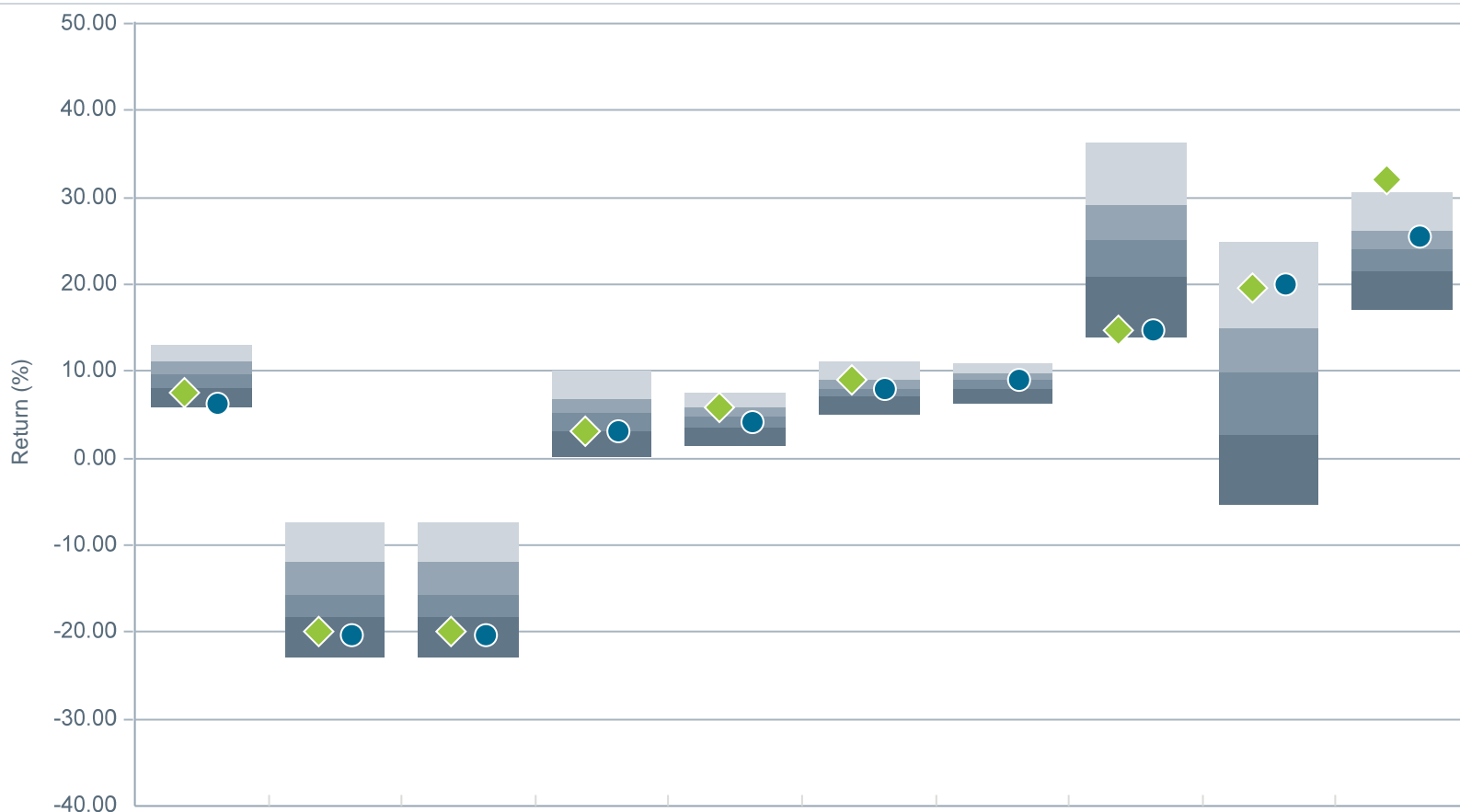


Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Municipality of Anchorage Trust Fund  
IM U.S. Small Cap Core Equity (MF)  
Peer Group Analysis

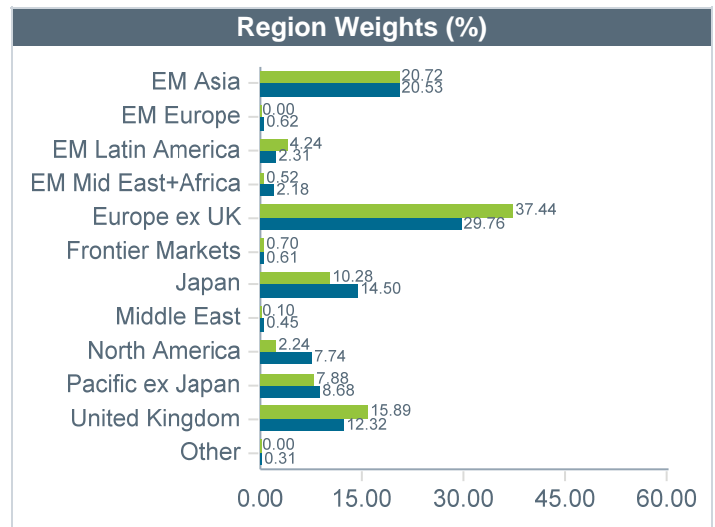
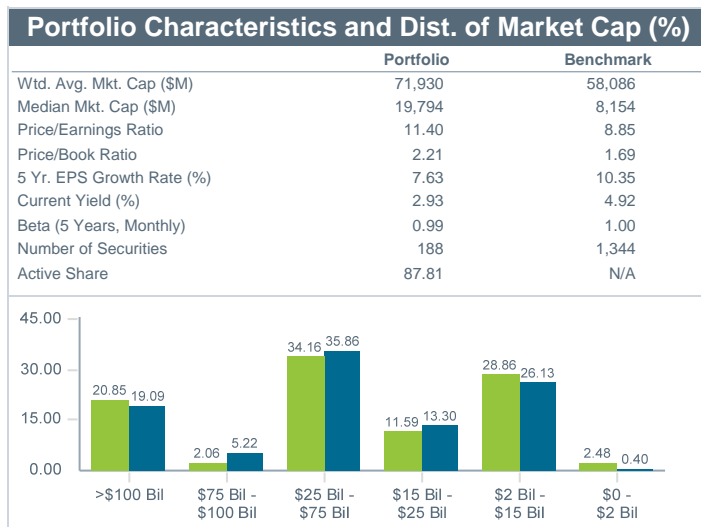
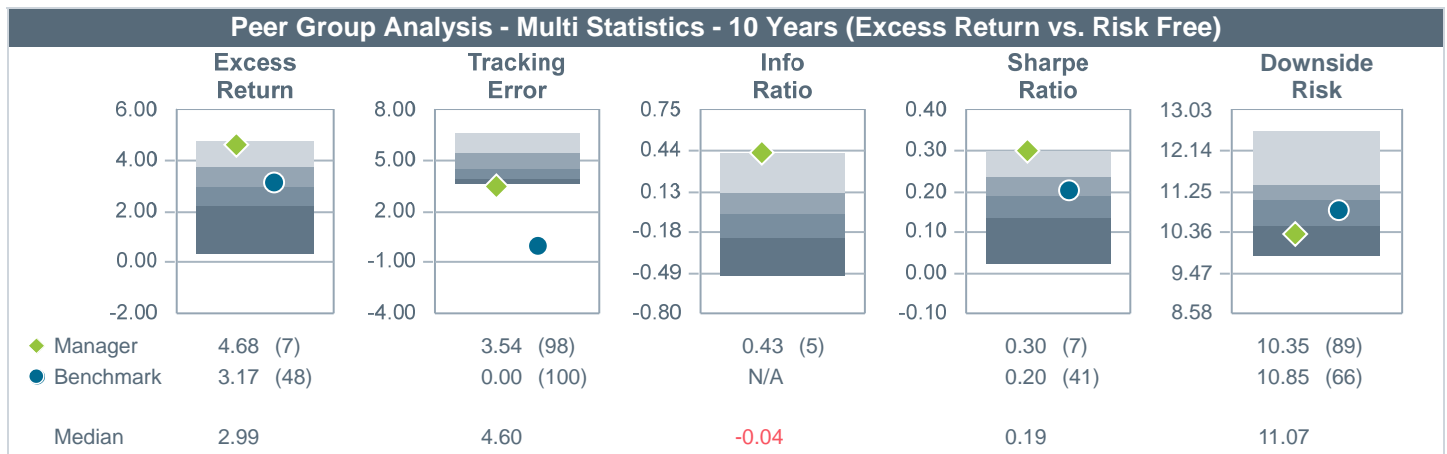
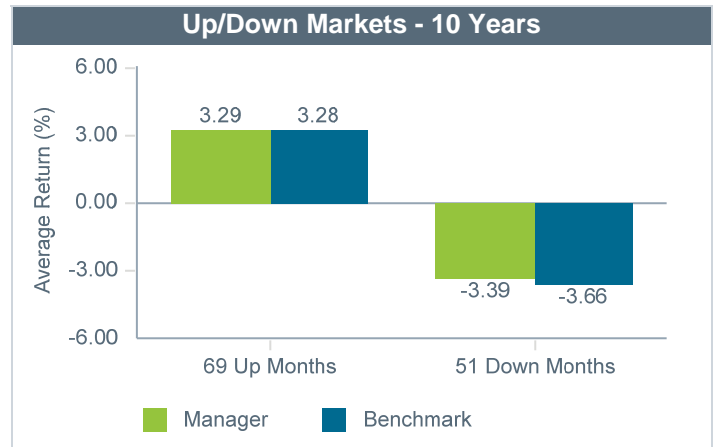
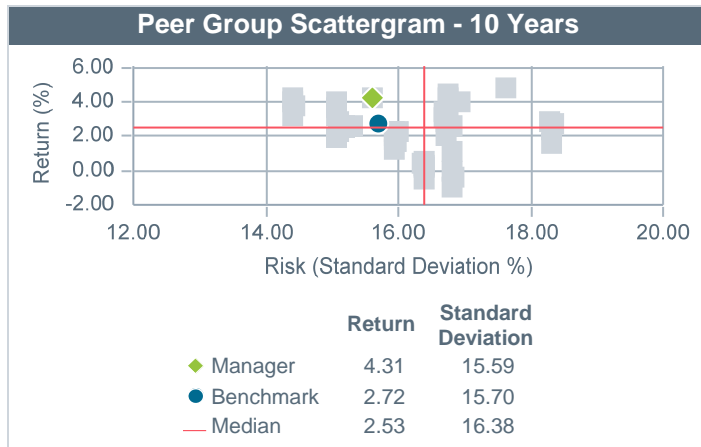
As of December 31, 2022



	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
◆ BlackRock:Adv SC Cr;Inst (BDSIX)	7.50 (81)	-19.87 (82)	-19.87 (82)	3.19 (74)	5.76 (25)	8.91 (26)	N/A	14.67 (91)	19.57 (14)	32.12 (3)
● Russell 2000 Index	6.23 (92)	-20.44 (87)	-20.44 (87)	3.10 (75)	4.13 (64)	7.90 (53)	9.01 (49)	14.82 (89)	19.96 (12)	25.53 (33)
5th Percentile	13.07	-7.39	-7.39	10.16	7.58	11.03	10.82	36.29	24.95	30.46
1st Quartile	11.03	-11.97	-11.97	6.83	5.74	8.95	9.88	29.15	14.85	26.22
Median	9.65	-15.77	-15.77	5.17	4.76	8.01	8.97	25.13	9.89	23.94
3rd Quartile	8.17	-18.31	-18.31	3.06	3.44	7.09	7.98	20.75	2.78	21.56
95th Percentile	5.81	-22.99	-22.99	0.16	1.33	4.93	6.19	13.94	-5.33	17.14
Population	688	683	683	654	614	525	415	703	722	742

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
<b>Manager</b>	<b>15.76</b>	<b>-11.66</b>	<b>1.30</b>	<b>1.36</b>	<b>5.24</b>	<b>4.31</b>	<b>7.97</b>	<b>8.99</b>	<b>20.39</b>	<b>-14.52</b>	<b>27.96</b>
Benchmark	15.70	-8.59	0.06	-0.05	4.19	2.72	10.46	-0.77	15.72	-13.97	22.66
Difference	0.06	-3.07	1.24	1.41	1.05	1.59	-2.49	9.76	4.67	-0.55	5.30
Peer Group Median	18.06	-11.04	0.24	-0.27	3.35	2.53	10.01	3.69	17.82	-16.03	22.88
Rank	64	61	14	4	9	5	73	20	26	8	15
Population	62	62	62	62	57	44	62	67	68	68	72

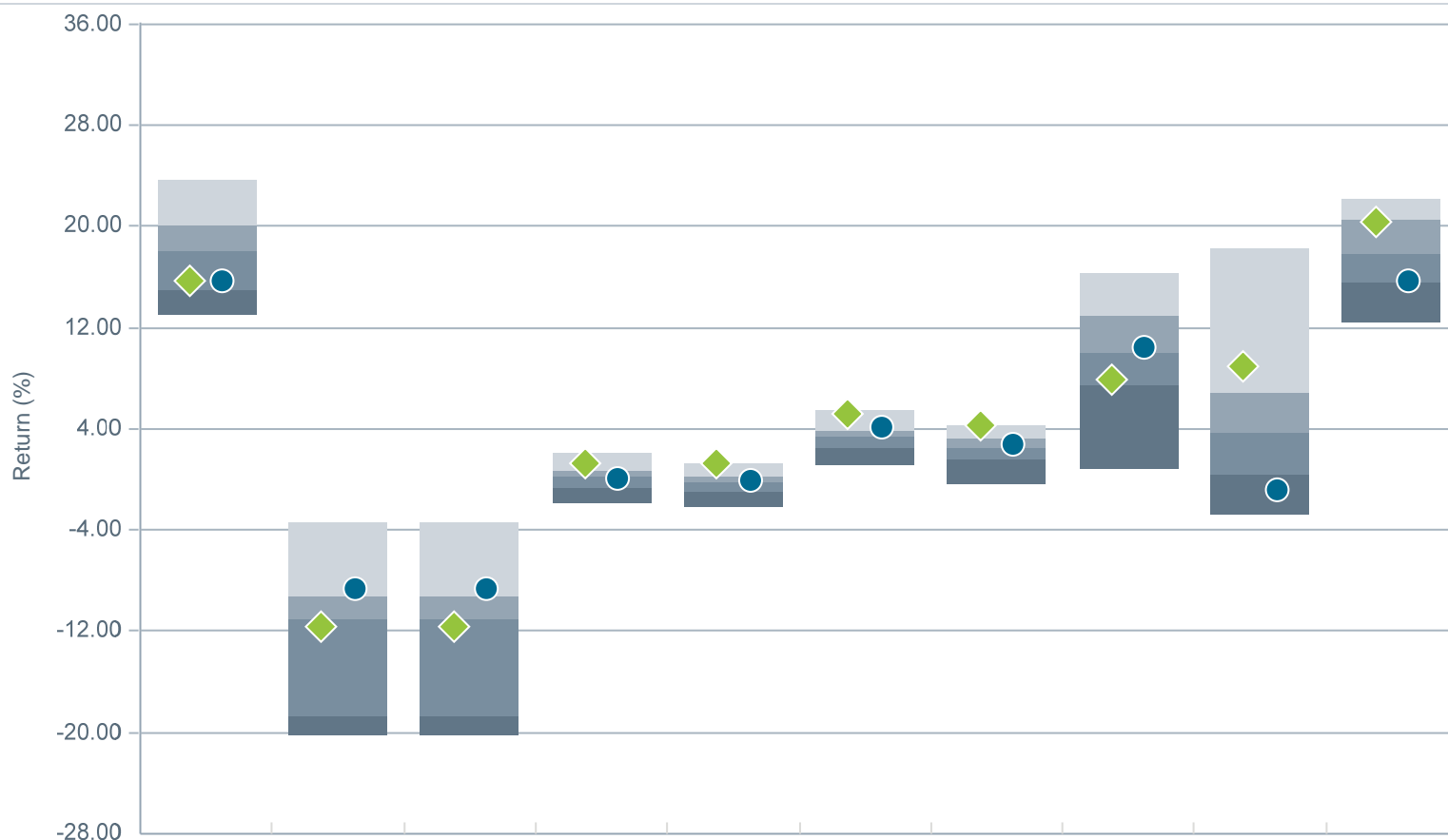


Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Municipality of Anchorage Trust Fund  
IM ACWI Ex US Value (MF)  
Peer Group Analysis

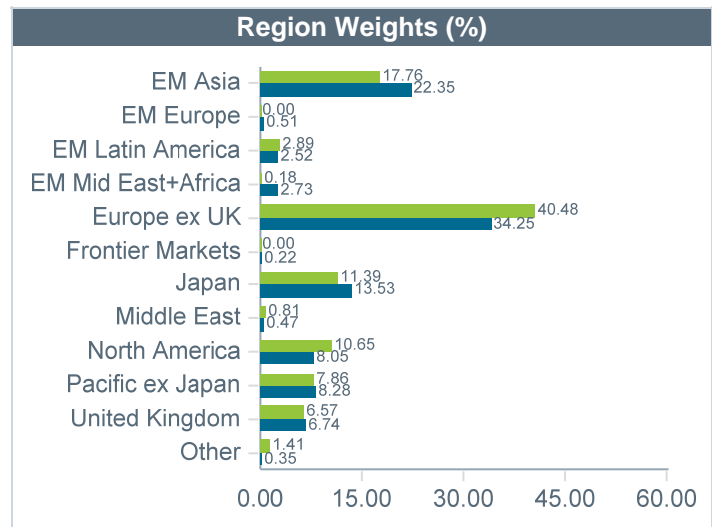
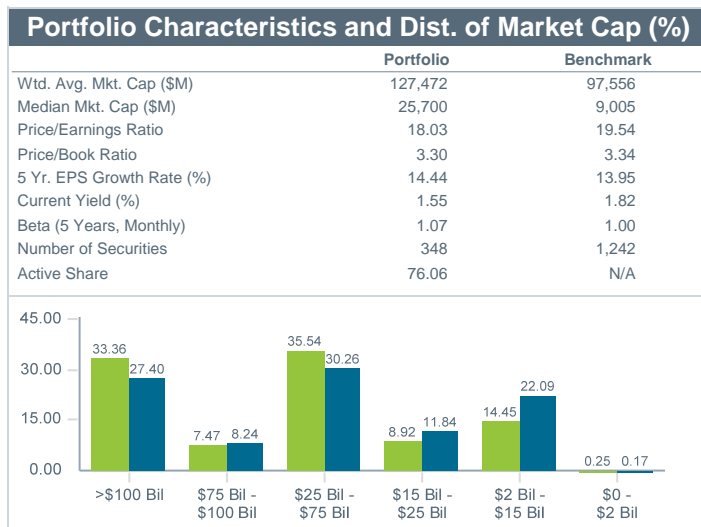
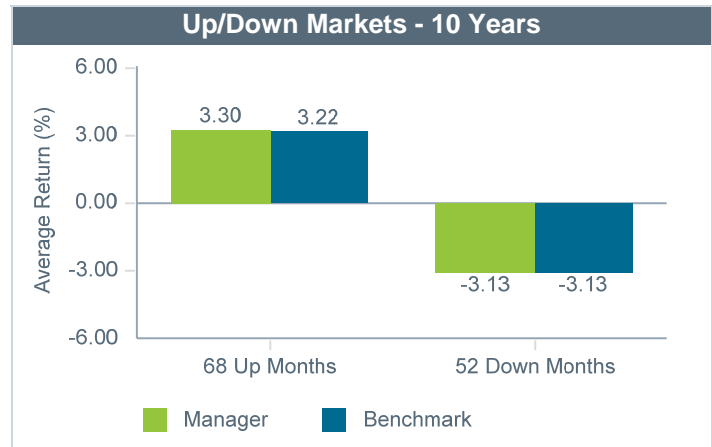
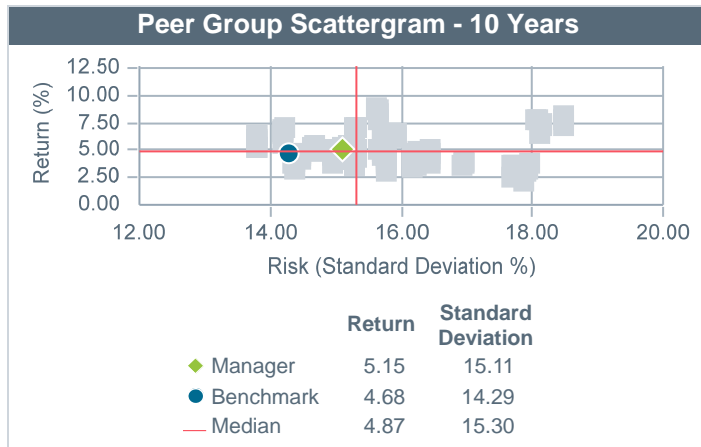
As of December 31, 2022



	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
◆ Vanguard Intl Val;Inv (VTRIX)	15.76 (64)	-11.66 (61)	-11.66 (61)	1.30 (14)	1.36 (4)	5.24 (9)	4.31 (5)	7.97 (73)	8.99 (20)	20.39 (26)
● MSCI ACW Ex US Val Index (USD) (Net)	15.70 (65)	-8.59 (20)	-8.59 (20)	0.06 (57)	-0.05 (43)	4.19 (20)	2.72 (43)	10.46 (43)	-0.77 (87)	15.72 (74)
5th Percentile	23.69	-3.29	-3.29	2.07	1.24	5.53	4.31	16.31	18.29	22.13
1st Quartile	20.15	-9.25	-9.25	0.76	0.29	3.92	3.28	13.01	6.91	20.47
Median	18.06	-11.04	-11.04	0.24	-0.27	3.35	2.53	10.01	3.69	17.82
3rd Quartile	14.97	-18.71	-18.71	-0.67	-0.95	2.45	1.65	7.51	0.41	15.51
95th Percentile	13.08	-20.22	-20.22	-1.78	-2.15	1.07	-0.32	0.90	-2.75	12.38
Population	62	62	62	62	62	57	44	62	67	68

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
<b>Manager</b>	<b>13.79</b>	<b>-22.73</b>	<b>-0.16</b>	<b>1.53</b>	<b>5.18</b>	<b>5.15</b>	<b>2.85</b>	<b>25.24</b>	<b>27.42</b>	<b>-14.91</b>	<b>31.13</b>
Benchmark	12.89	-23.05	-0.40	1.49	5.17	4.68	5.09	22.20	27.34	-14.43	32.01
Difference	0.90	0.32	0.24	0.04	0.01	0.47	-2.24	3.04	0.08	-0.48	-0.88
Peer Group Median	13.69	-26.63	-0.30	1.70	4.86	4.87	7.93	22.75	27.84	-14.32	32.37
Rank	46	30	47	54	38	38	77	36	59	57	64
Population	170	170	170	170	152	121	170	170	172	176	188



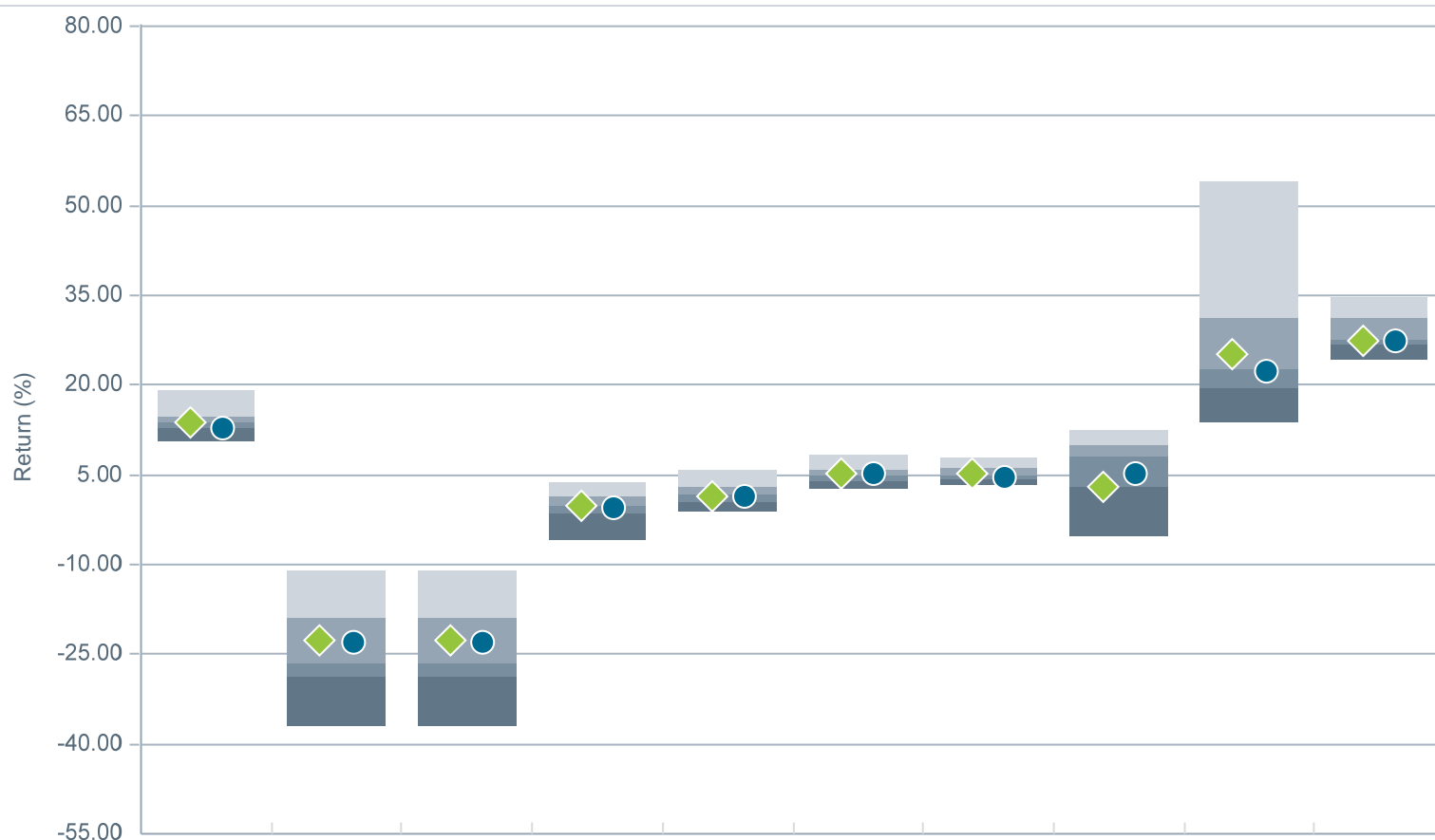
Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.





Municipality of Anchorage Trust Fund  
IM ACWI Ex US Growth (MF)  
Peer Group Analysis

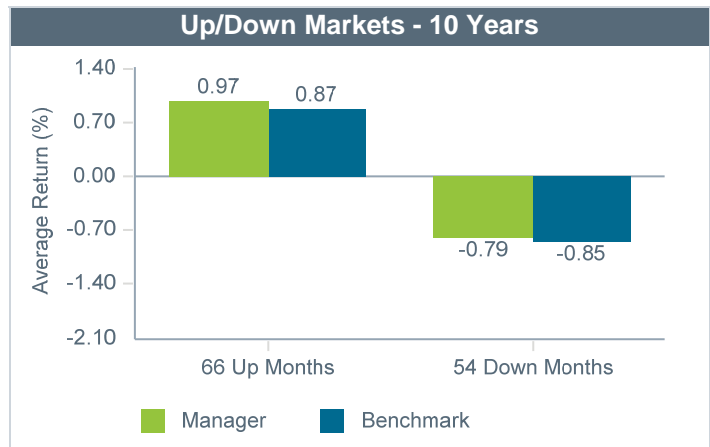
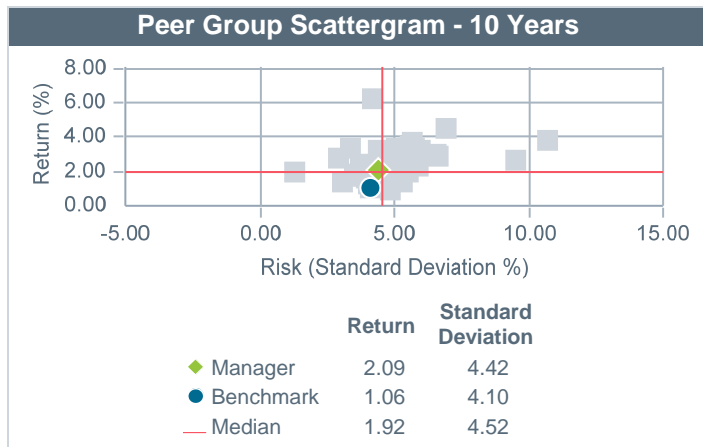
As of December 31, 2022



	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
◆ American Funds EuPc;F3 (FEUPX)	13.79 (46)	-22.73 (30)	-22.73 (30)	-0.16 (47)	1.53 (54)	5.18 (38)	5.15 (38)	2.85 (77)	25.24 (36)	27.42 (59)
● MSCI ACW Ex US Grth Index (USD) (Net)	12.89 (76)	-23.05 (34)	-23.05 (34)	-0.40 (54)	1.49 (56)	5.17 (38)	4.68 (55)	5.09 (64)	22.20 (58)	27.34 (63)
5th Percentile	19.09	-10.84	-10.84	3.60	5.88	8.48	7.76	12.48	54.09	34.74
1st Quartile	14.60	-18.93	-18.93	1.49	2.85	5.93	6.01	10.08	31.08	31.14
Median	13.69	-26.63	-26.63	-0.30	1.70	4.86	4.87	7.93	22.75	27.84
3rd Quartile	12.91	-28.54	-28.54	-1.42	0.42	4.01	4.14	3.01	19.32	26.86
95th Percentile	10.55	-36.93	-36.93	-5.95	-1.01	2.80	3.33	-5.19	13.77	24.32
Population	170	170	170	170	170	152	121	170	170	172

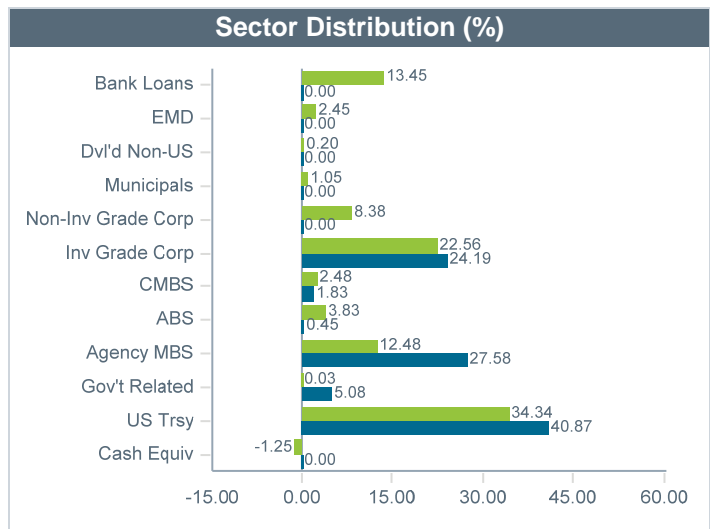
Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	2.00	-12.41	-1.60	1.03	2.35	2.09	0.90	7.80	10.71	-0.23	5.00
Benchmark	1.87	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.01	3.54
Difference	0.13	0.60	1.11	1.01	1.46	1.03	2.45	0.29	1.99	-0.24	1.46
Peer Group Median	2.14	-12.95	-1.73	0.84	1.93	1.92	-0.25	8.97	9.90	-0.24	4.78
Rank	63	33	42	33	32	41	21	82	28	49	43
Population	143	143	138	134	129	126	155	163	166	173	178



### Portfolio Characteristics

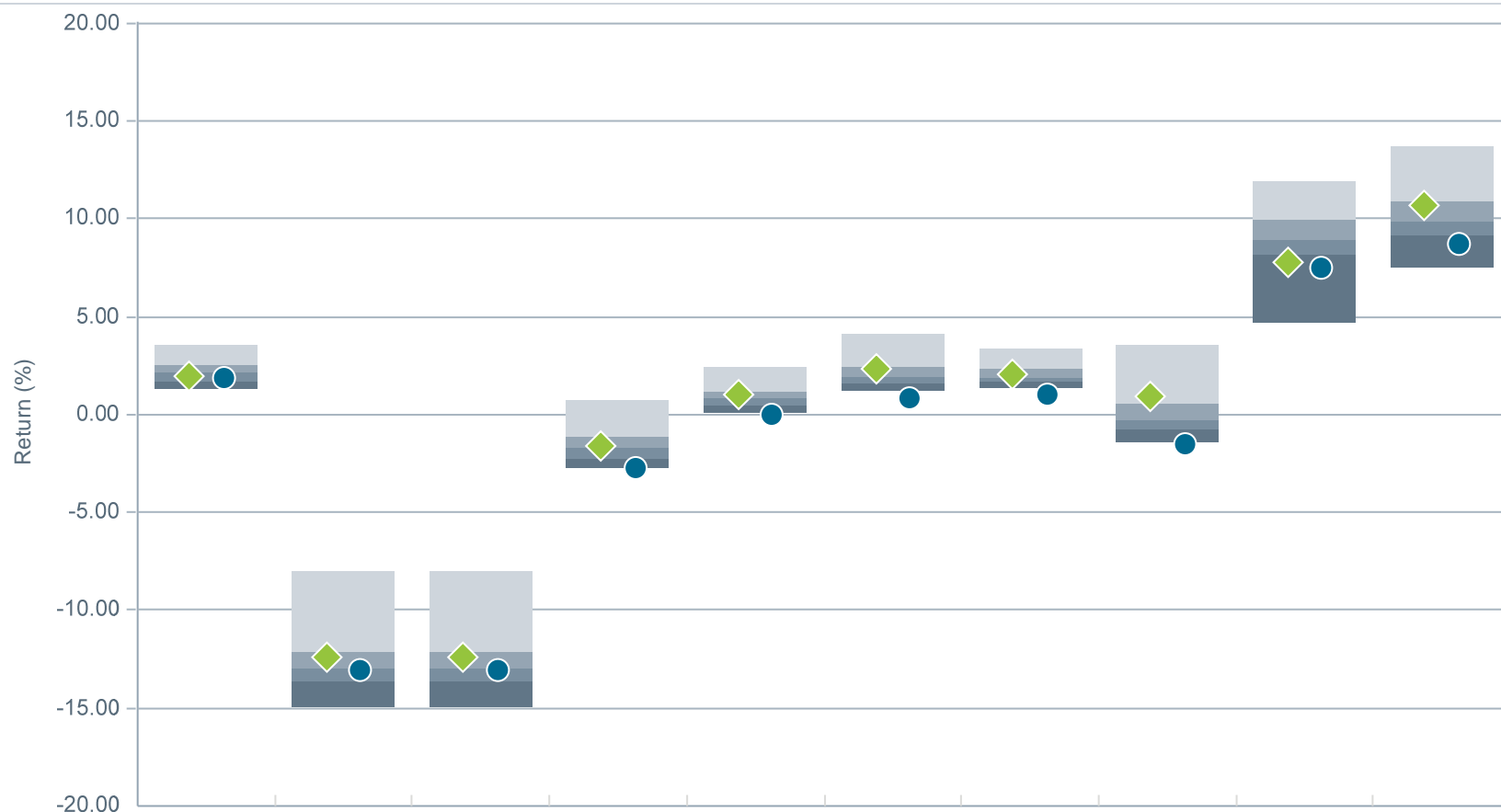
	Portfolio	Benchmark
Effective Duration	6.08	6.17
Spread Duration	6.63	N/A
Avg. Maturity	10.71	8.44
Avg. Quality	A1	Aa1/Aa2
Yield To Maturity (%)	N/A	4.68
Coupon Rate (%)	3.80	2.69
Current Yield (%)	4.38	N/A
Holdings Count	2,639	13,133



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Municipality of Anchorage Trust Fund  
IM U.S. Broad Market Core+ Fixed Income (SA+CF)  
Peer Group Analysis

As of December 31, 2022

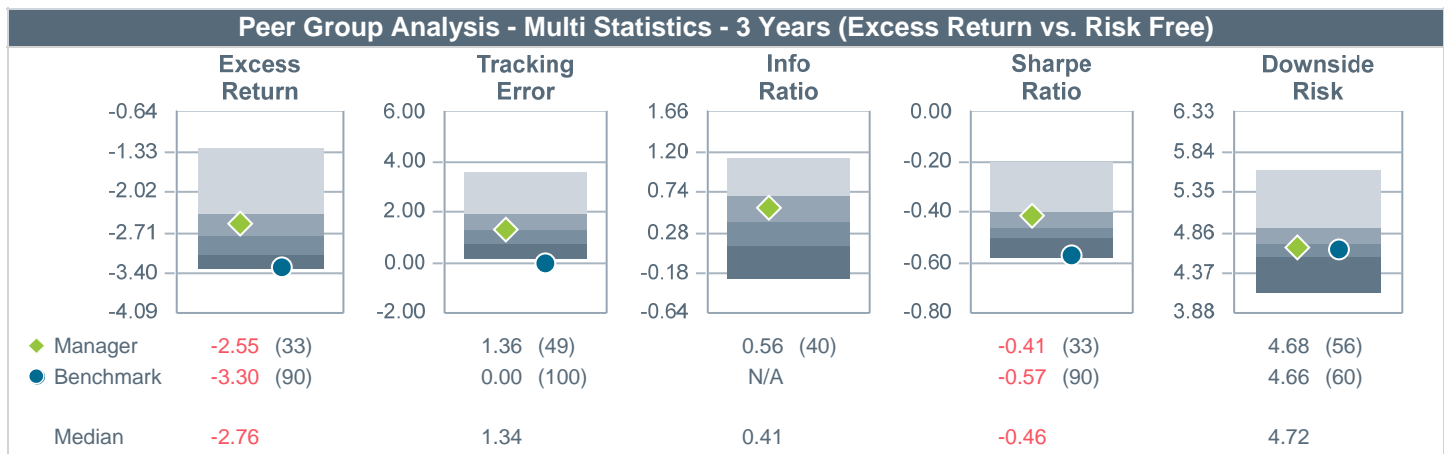
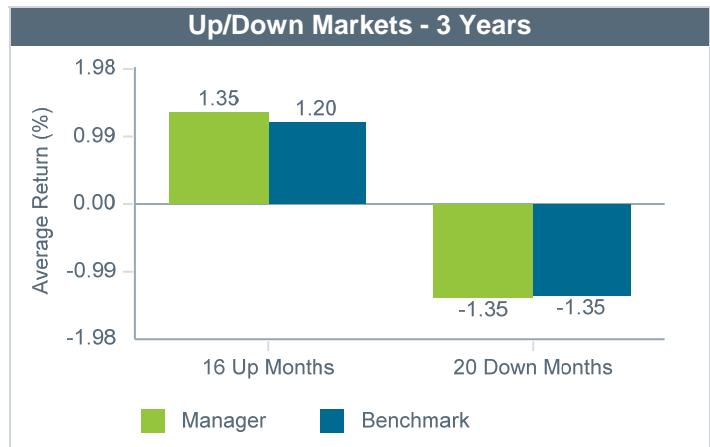
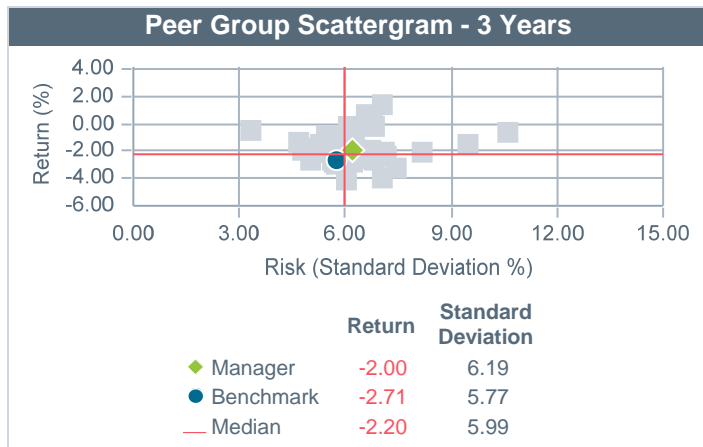


	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
◆ FIAM Core Plus LLC (CF)	2.00 (63)	-12.41 (33)	-12.41 (33)	-1.60 (42)	1.03 (33)	2.35 (32)	2.09 (41)	0.90 (21)	7.80 (82)	10.71 (28)
● Bloomberg US Agg Bond Index	1.87 (69)	-13.01 (53)	-13.01 (53)	-2.71 (97)	0.02 (98)	0.89 (100)	1.06 (100)	-1.55 (99)	7.51 (85)	8.72 (89)
5th Percentile	3.53	-8.01	-8.01	0.71	2.42	4.11	3.38	3.60	11.96	13.73
1st Quartile	2.53	-12.15	-12.15	-1.08	1.20	2.42	2.31	0.58	9.91	10.94
Median	2.14	-12.95	-12.95	-1.73	0.84	1.93	1.92	-0.25	8.97	9.90
3rd Quartile	1.72	-13.60	-13.60	-2.26	0.46	1.56	1.66	-0.77	8.19	9.18
95th Percentile	1.28	-14.94	-14.94	-2.68	0.11	1.20	1.37	-1.40	4.73	7.52
Population	143	143	143	138	134	129	126	155	163	166

Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

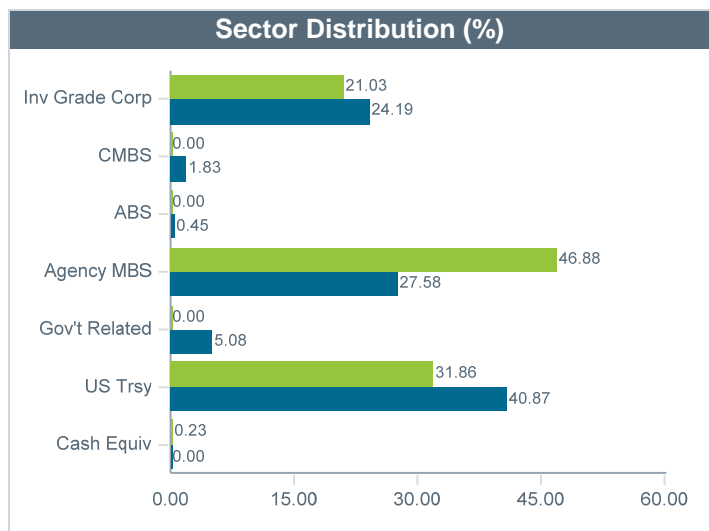


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	1.94	-11.44	-2.00	N/A	N/A	N/A	-2.18	8.65	7.51	N/A	N/A
Benchmark	1.87	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.01	3.54
Difference	0.07	1.57	0.71	N/A	N/A	N/A	-0.63	1.14	-1.21	N/A	N/A
Peer Group Median	1.82	-12.95	-2.20	0.45	1.39	1.50	-1.23	8.51	9.19	0.06	4.01
Rank	33	10	33	N/A	N/A	N/A	100	45	95	N/A	N/A
Population	132	132	132	129	127	122	146	154	156	163	168



### Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	6.90	6.17
Spread Duration	3.28	N/A
Avg. Maturity	8.47	8.44
Avg. Quality	Aa1	Aa1/Aa2
Yield To Maturity (%)	4.68	4.68
Coupon Rate (%)	3.03	2.69
Current Yield (%)	3.38	N/A
Holdings Count	33	13,133

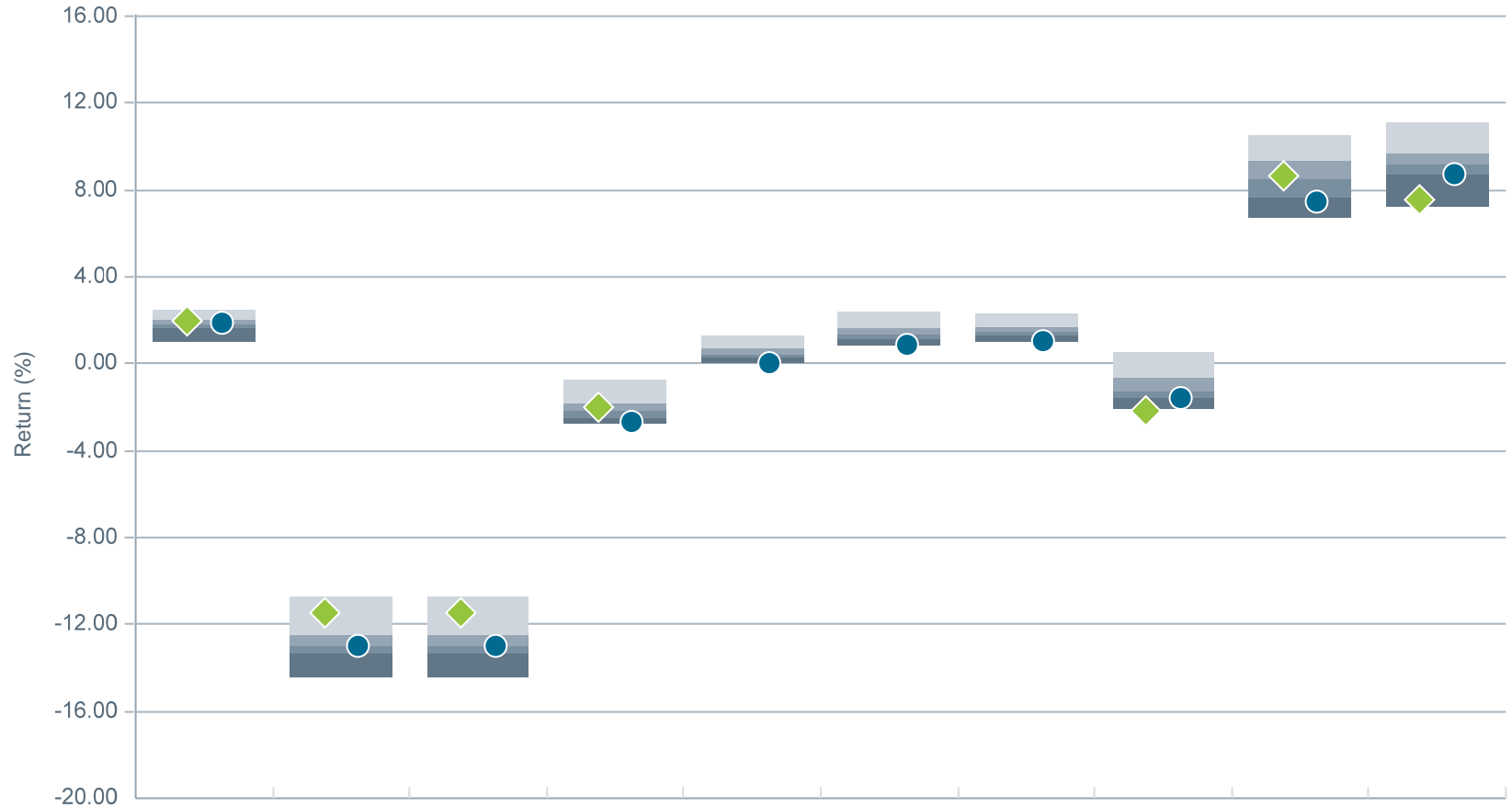


Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Municipality of Anchorage Trust Fund  
IM U.S. Broad Market Core Fixed Income (SA+CF)  
Peer Group Analysis

As of December 31, 2022

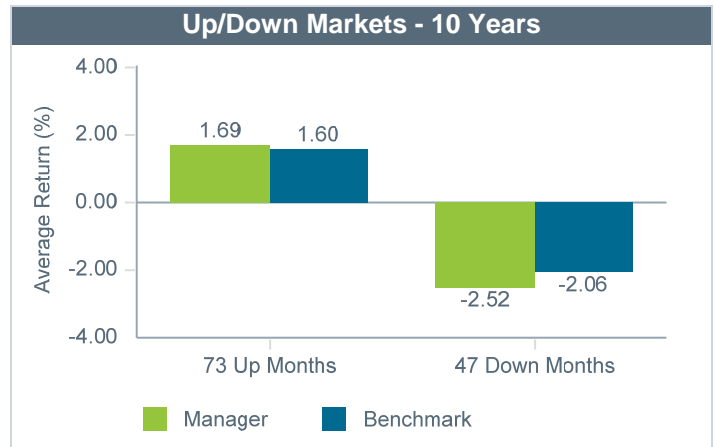
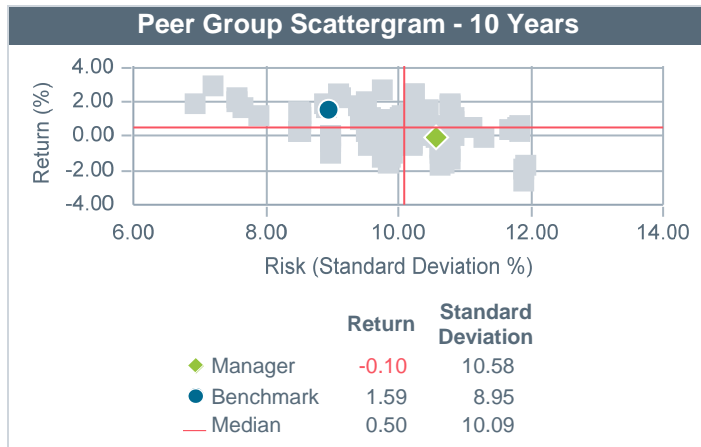


	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
◆ Garcia Hamilton Core Agg (SA)	1.94 (33)	-11.44 (10)	-11.44 (10)	-2.00 (33)	N/A	N/A	N/A	-2.18 (100)	8.65 (45)	7.51 (95)
● Bloomberg US Agg Bond Index	1.87 (42)	-13.01 (55)	-13.01 (55)	-2.71 (90)	0.02 (92)	0.89 (91)	1.06 (95)	-1.55 (68)	7.51 (87)	8.72 (78)
5th Percentile	2.46	-10.70	-10.70	-0.73	1.27	2.37	2.30	0.50	10.54	11.07
1st Quartile	2.05	-12.44	-12.44	-1.82	0.70	1.59	1.73	-0.63	9.29	9.67
Median	1.82	-12.95	-12.95	-2.20	0.45	1.39	1.50	-1.23	8.51	9.19
3rd Quartile	1.60	-13.29	-13.29	-2.55	0.25	1.15	1.28	-1.60	7.67	8.74
95th Percentile	1.06	-14.46	-14.46	-2.76	0.01	0.87	1.05	-2.06	6.74	7.24
Population	132	132	132	132	129	127	122	146	154	156

Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

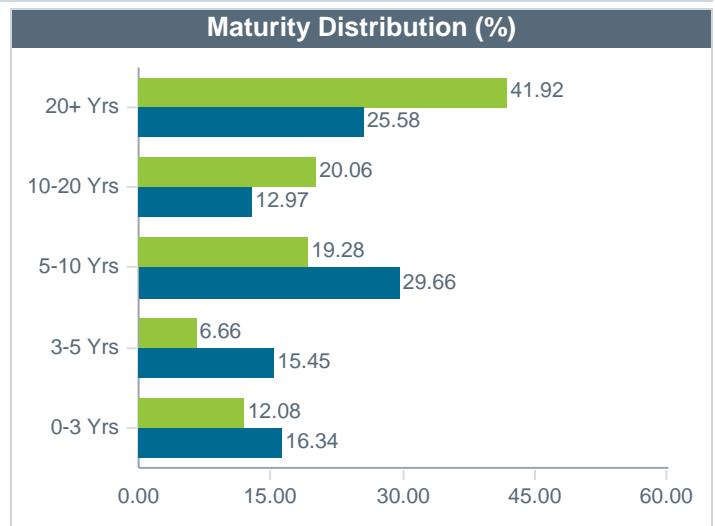


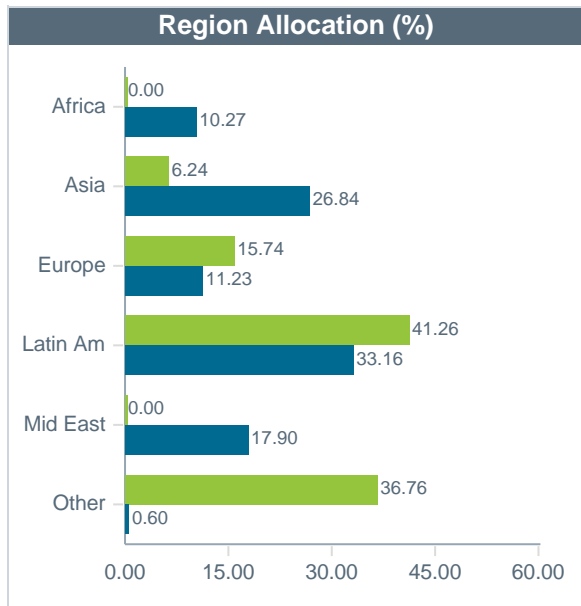
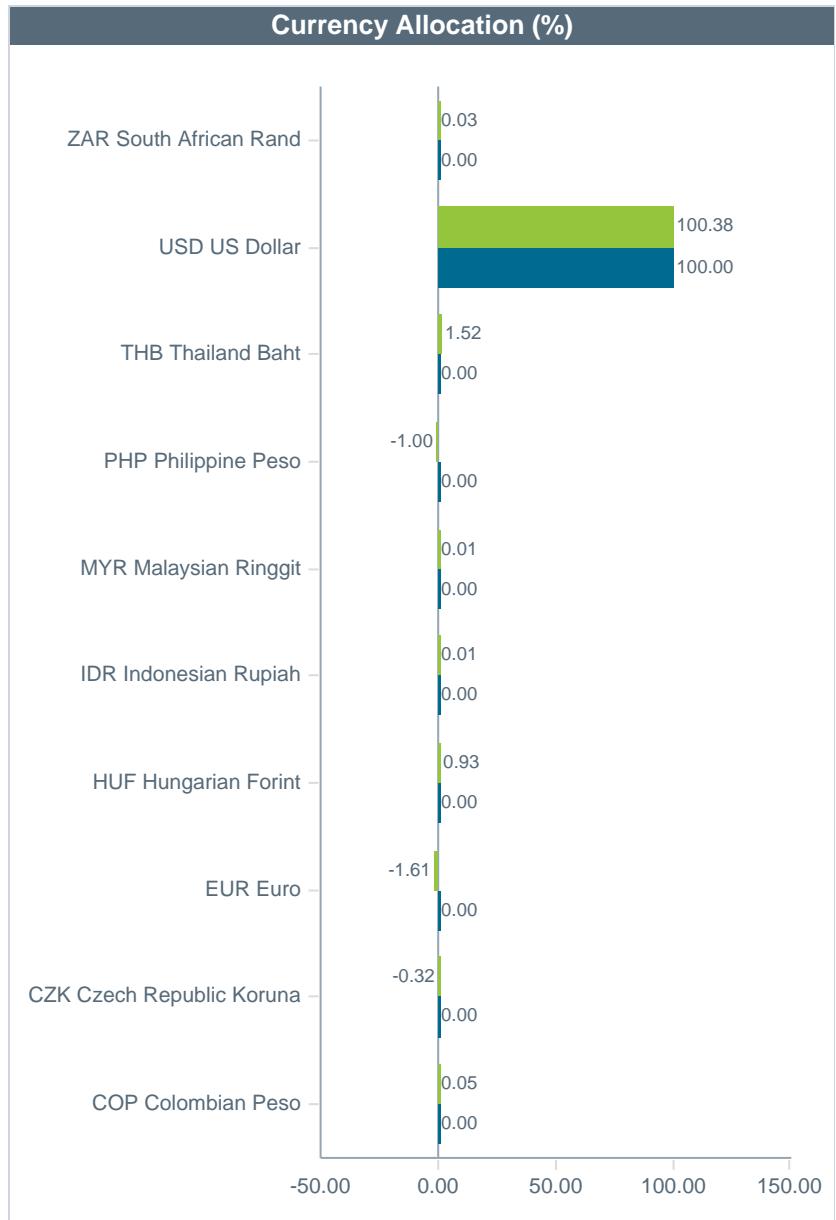
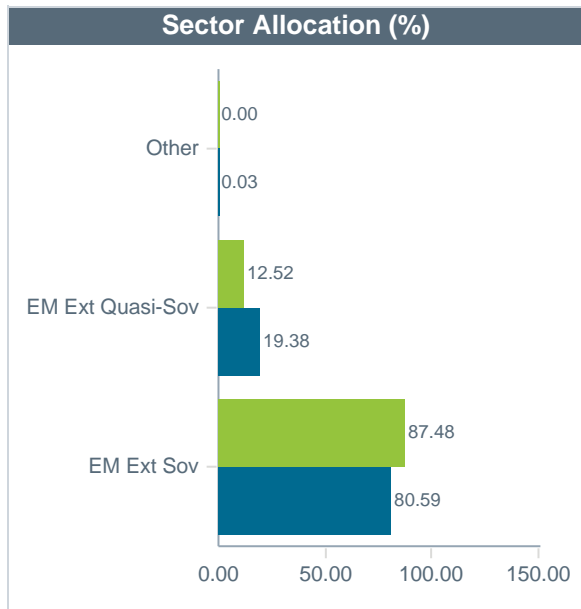
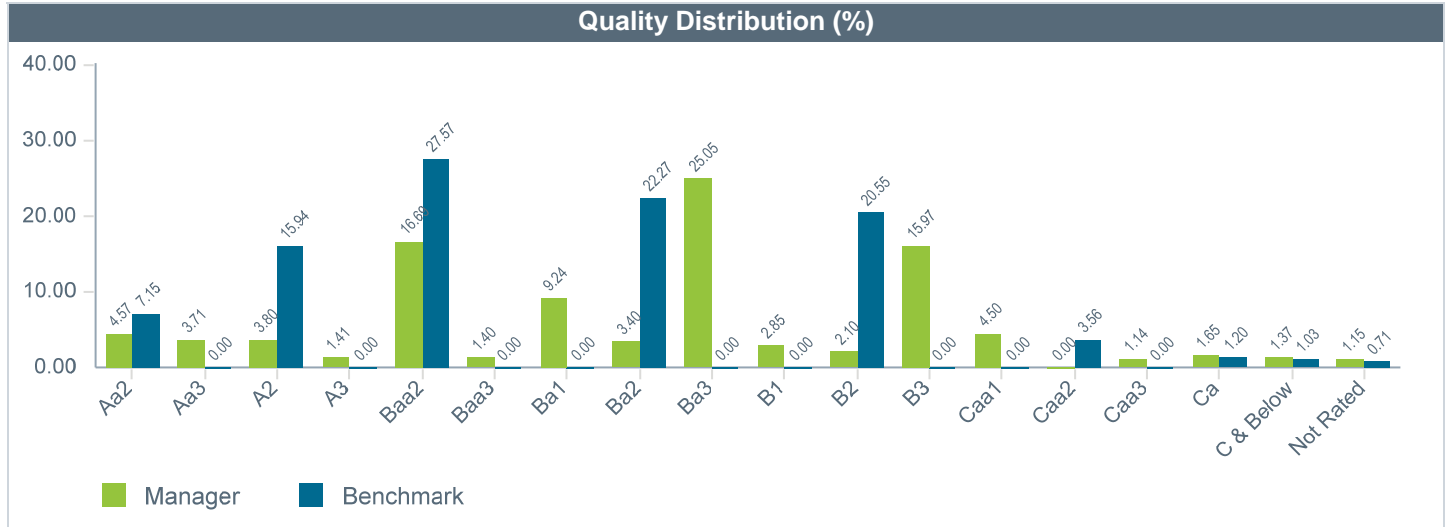
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	9.77	-15.27	-4.11	-0.69	2.17	-0.10	-2.76	7.01	15.38	-5.06	12.78
Benchmark	8.11	-17.78	-5.28	-1.31	1.85	1.59	-1.80	5.26	15.04	-4.26	10.26
Difference	1.66	2.51	1.17	0.62	0.32	-1.69	-0.96	1.75	0.34	-0.80	2.52
Peer Group Median	8.62	-15.10	-4.27	-1.19	2.02	0.50	-2.96	5.74	13.63	-5.92	10.54
Rank	27	52	47	36	45	72	48	29	16	37	22
Population	259	254	233	218	174	108	264	263	273	273	262



### Portfolio Characteristics (%)

	Portfolio	Benchmark
Effective Duration	6.45	6.70
Spread Duration	7.17	6.70
Avg. Maturity	12.92	12.10
Avg. Quality	Ba1	Ba1
Yield To Maturity (%)	8.86	7.55
Coupon Rate (%)	4.63	4.95
Current Yield (%)	5.51	5.95
Holdings Count	101	929

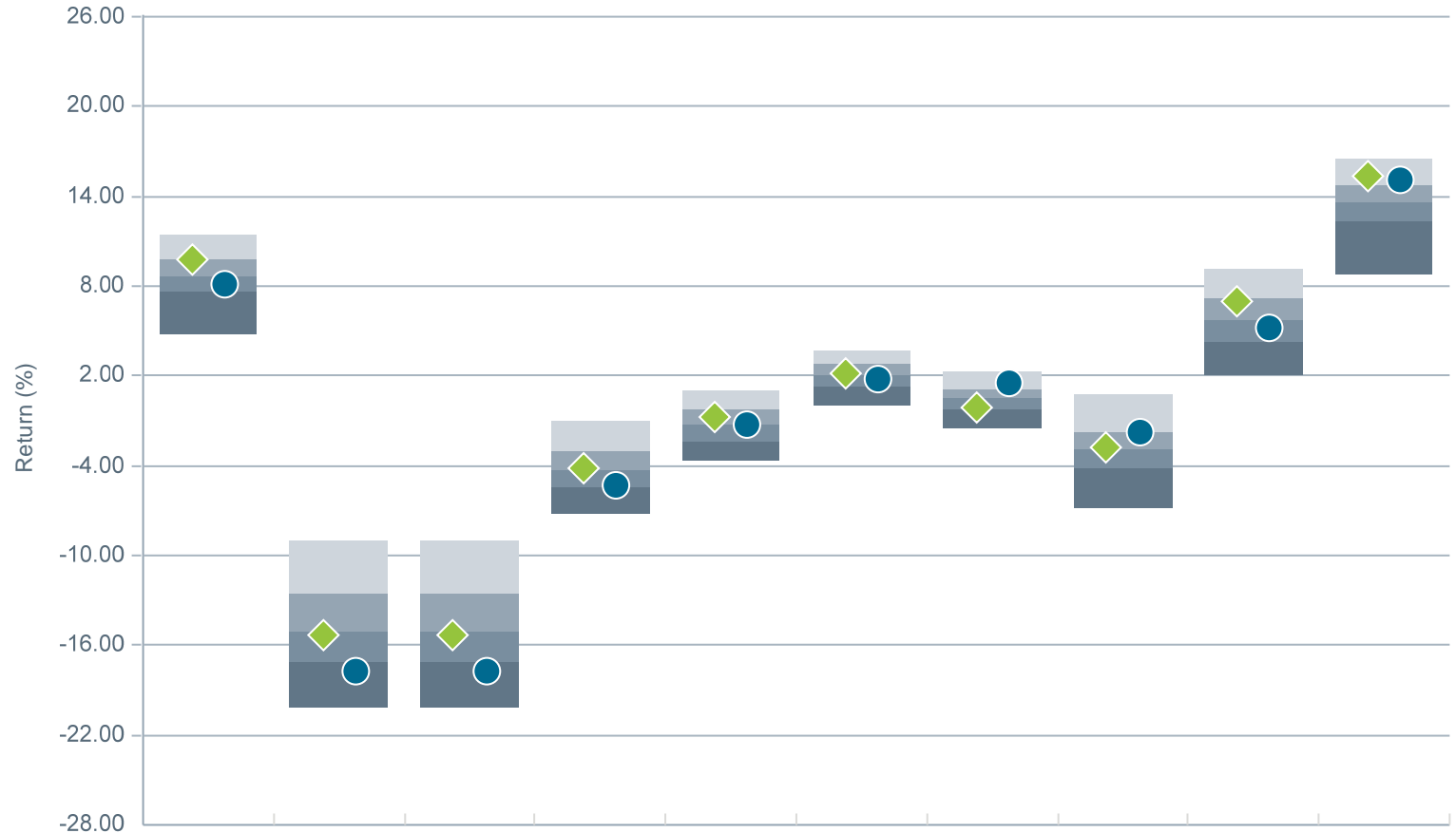




Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Benchmark Sector allocation to "Other" consists of chemicals. Manager Region allocation to "Other" consists of Africa/Middle East, North America, cash, and derivatives. Benchmark Region allocation to "Other" consists of cash.

Municipality of Anchorage Trust Fund  
IM Emerging Markets Debt (MF)  
Peer Group Analysis

As of December 31, 2022

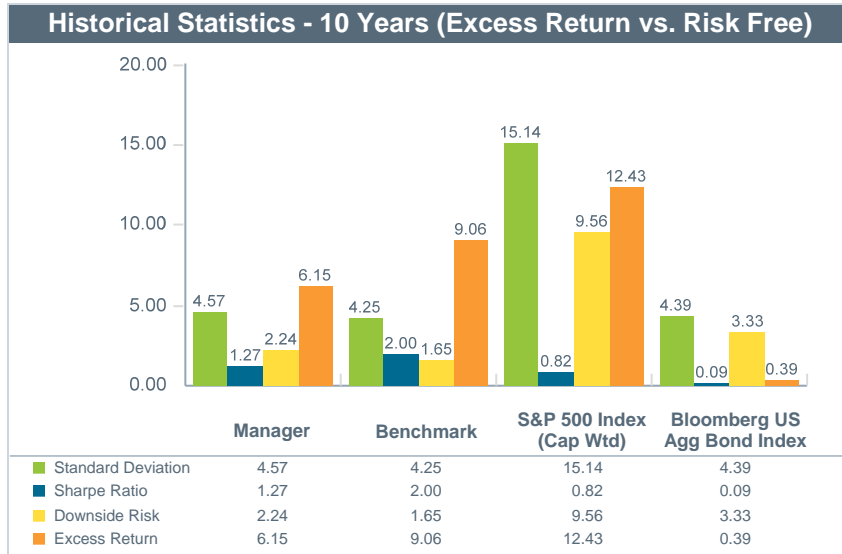


	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
◆ RBC BlueBay EM Debt;I (RBESX)	9.77 (27)	-15.27 (52)	-15.27 (52)	-4.11 (47)	-0.69 (36)	2.17 (45)	-0.10 (72)	-2.76 (48)	7.01 (29)	15.38 (16)
● JPM Emg Mkts Bond Gbl Dv'd Index (TR)	8.11 (65)	-17.78 (84)	-17.78 (84)	-5.28 (71)	-1.31 (53)	1.85 (58)	1.59 (15)	-1.80 (26)	5.26 (55)	15.04 (21)
5th Percentile	11.45	-8.96	-8.96	-0.97	1.03	3.71	2.26	0.80	9.15	16.50
1st Quartile	9.84	-12.50	-12.50	-3.08	-0.18	2.85	1.14	-1.79	7.23	14.72
Median	8.62	-15.10	-15.10	-4.27	-1.19	2.02	0.50	-2.96	5.74	13.63
3rd Quartile	7.57	-17.04	-17.04	-5.49	-2.36	1.22	-0.19	-4.17	4.27	12.26
95th Percentile	4.87	-20.19	-20.19	-7.24	-3.61	0.04	-1.52	-6.81	2.06	8.77
Population	259	254	254	233	218	174	108	264	263	273

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

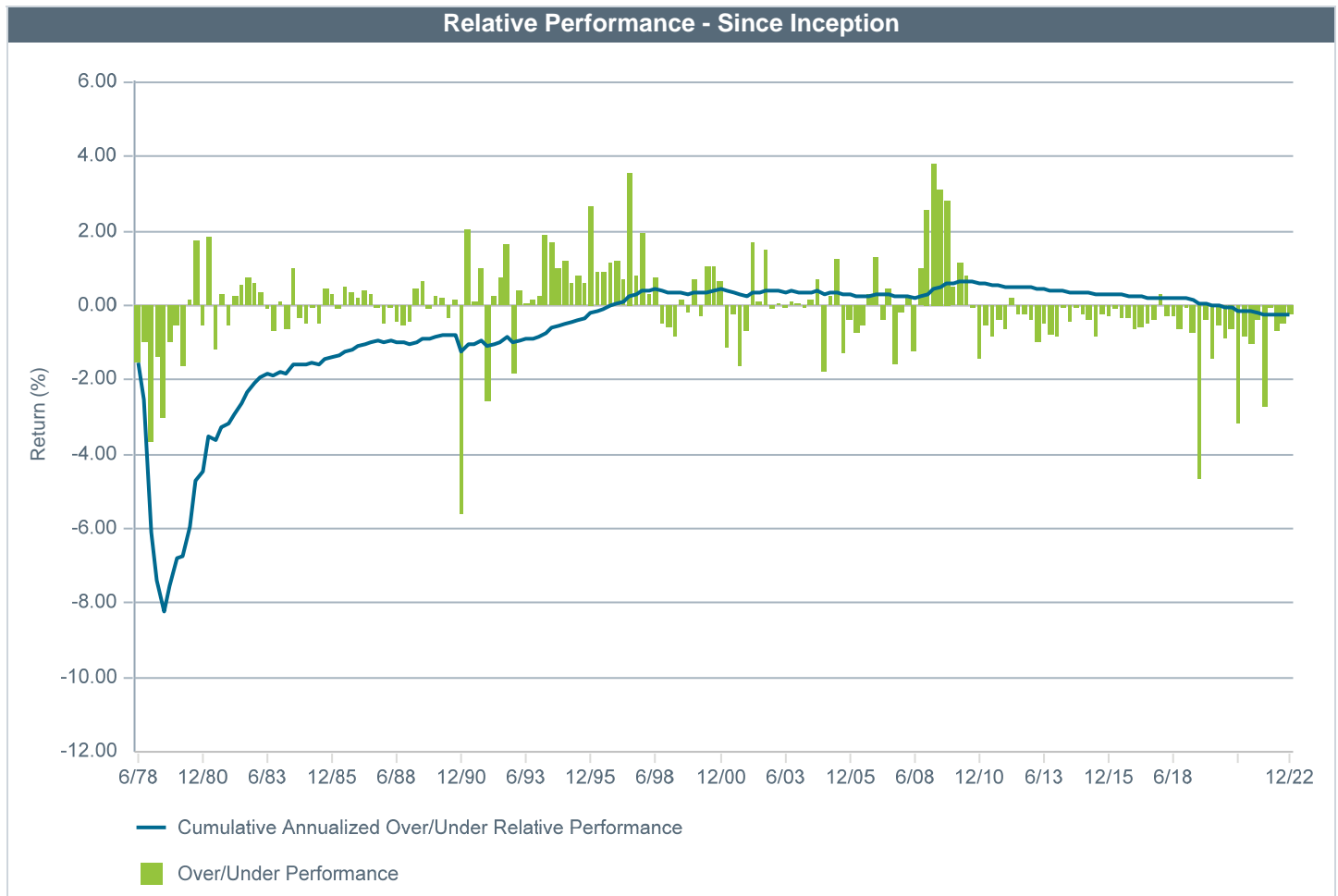


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-5.21	5.91	5.72	4.35	5.03	6.99	16.24	-4.04	-2.10	6.99	6.30
Benchmark	-4.97	7.47	9.93	8.68	8.54	10.10	22.17	1.19	5.34	8.35	7.62
Difference	-0.24	-1.56	-4.21	-4.33	-3.51	-3.11	-5.93	-5.23	-7.44	-1.36	-1.32



### Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.92
S&P 500 Index (Cap Wtd)	-0.31
Russell 2000 Index	-0.37
MSCI EAFE Index (USD) (Net)	-0.43
MSCI Emg Mkts Index (USD) (Net)	-0.44
Bloomberg US Agg Bond Index	-0.41
Bloomberg US Trsy US TIPS Index	-0.34
Wilshire US REIT Index	-0.06
HFRI FOF Comp Index	-0.37
Bloomberg Cmdty Index (TR)	0.04
ICE BofAML 3 Mo US T-Bill Index	-0.57
Cons Price Index (Unadjusted)	0.34



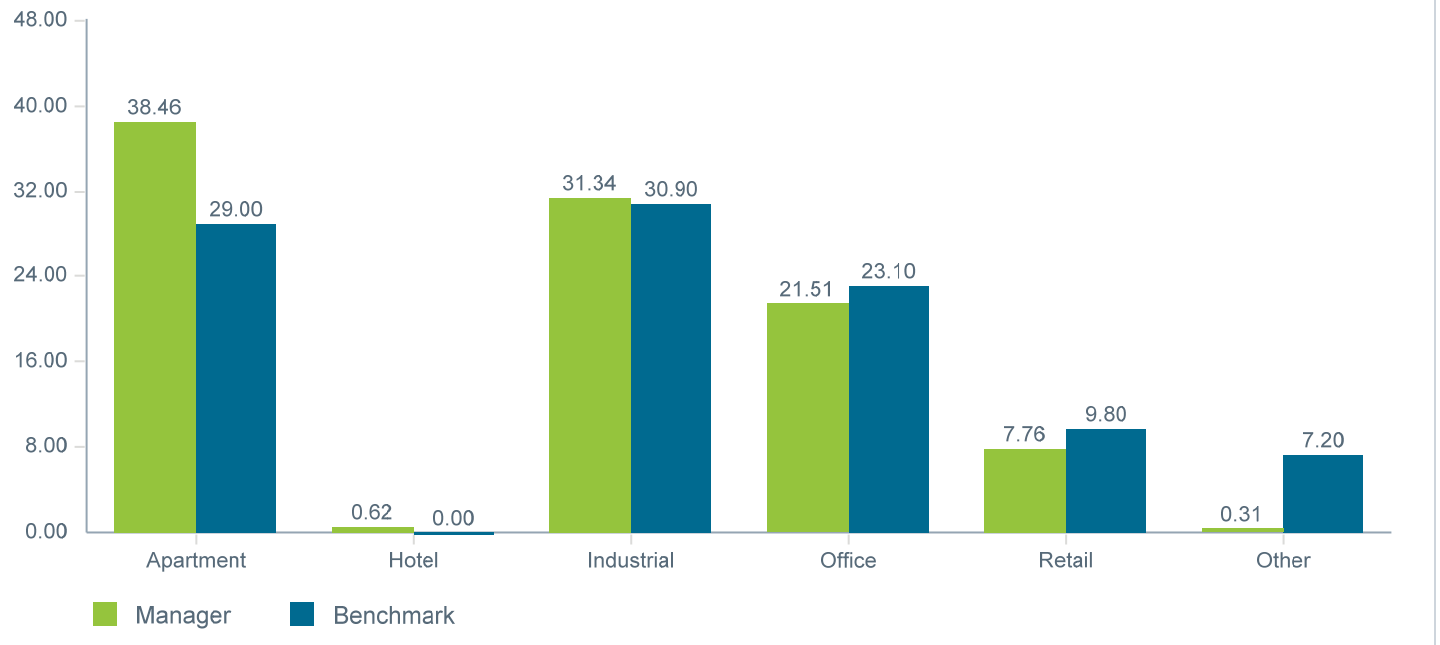
**Investment Strategy**

The Fund pursues a diversified core real estate strategy that seeks to produce attractive risk-adjusted returns by focusing on selective acquisitions, diversification, active portfolio management, and asset management. The Fund invests in well-leased, stabilized assets in major US metropolitan markets and receives the majority of its return from the income component. Diversification for the Fund is consistently pursued on many levels, including geographic region, property type, and economic sector. The Fund has historically maintained a leverage ratio significantly lower than the NCREIF ODCE Index and invests 5-15% of its gross assets in value-added type real estate investment opportunities.

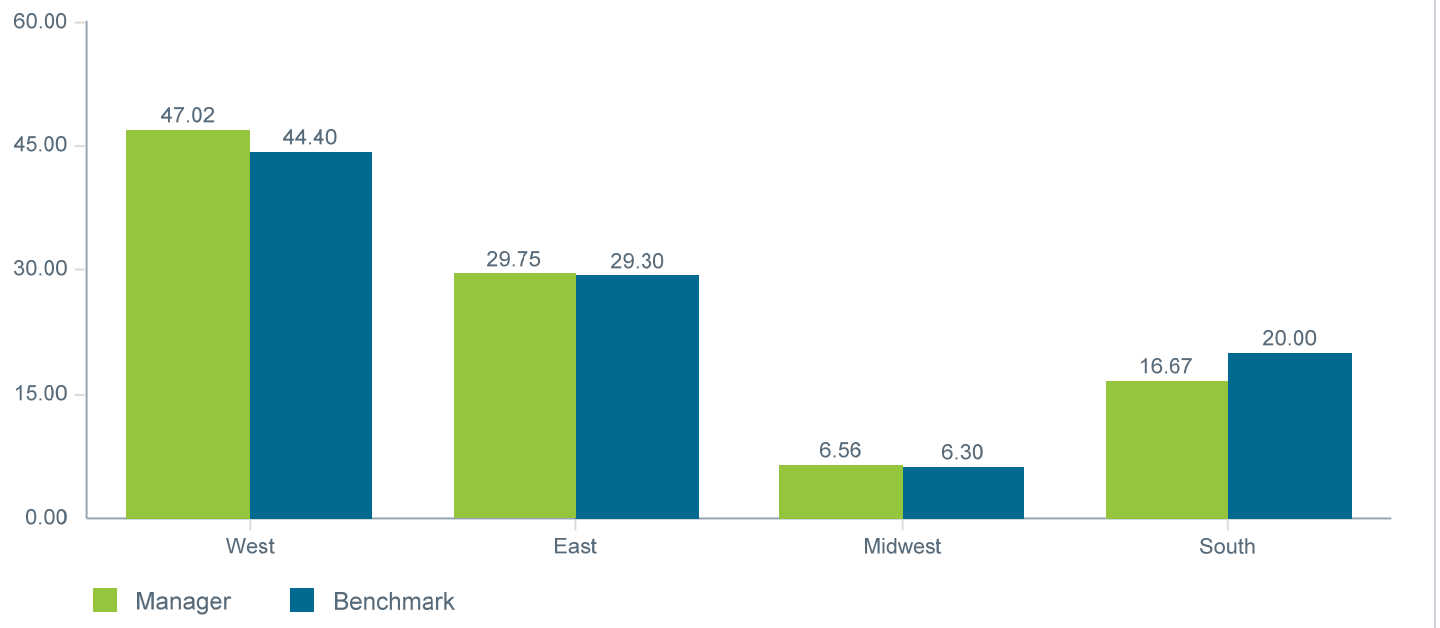
**Investment Profile**

Fund Inception	1978
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	17,839
Fund Leverage %	17.90
Portfolio Occupancy %	92.30
Cash Reserve %	1.30
Number of Investments	145
Number of Limited Partners	439

**Property Type Allocation (%)**



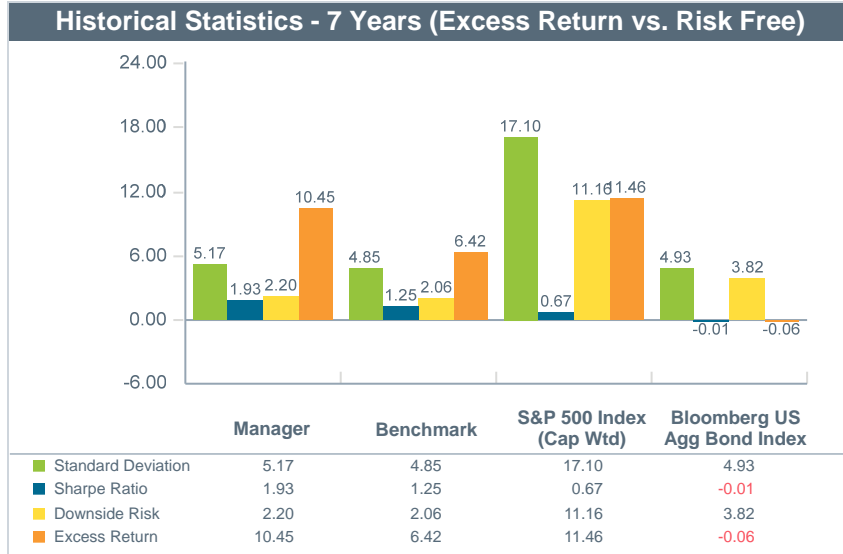
**Geographic Allocation (%)**



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of self-storage. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.

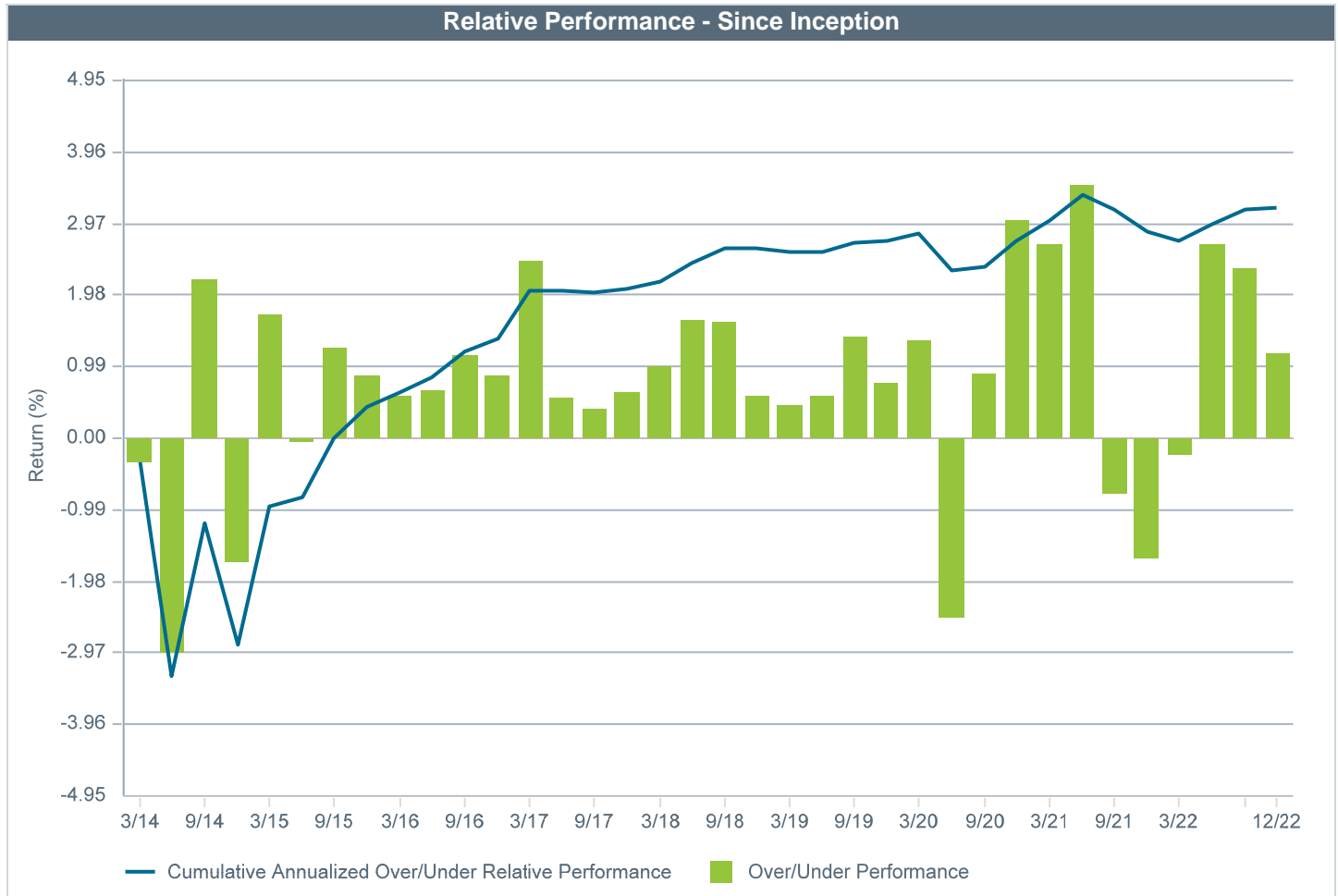


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-4.06	13.04	13.50	12.16	11.88	N/A	25.50	3.07	7.78	12.61	11.05
Benchmark	-5.17	6.55	8.97	7.72	7.57	9.11	21.02	0.34	4.39	7.36	6.66
Difference	1.11	6.49	4.53	4.44	4.31	N/A	4.48	2.73	3.39	5.25	4.39



### Actual Correlation - 7 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Net)	0.86
S&P 500 Index (Cap Wtd)	-0.33
Russell 2000 Index	-0.29
MSCI EAFE Index (USD) (Net)	-0.41
MSCI Emg Mkts Index (USD) (Net)	-0.38
Bloomberg US Agg Bond Index	-0.51
Bloomberg US Trsy US TIPS Index	-0.41
Wilshire US REIT Index	-0.09
HFRI FOF Comp Index	-0.29
Bloomberg Cmdb Index (TR)	0.19
ICE BofAML 3 Mo US T-Bill Index	-0.47
Cons Price Index (Unadjusted)	0.68



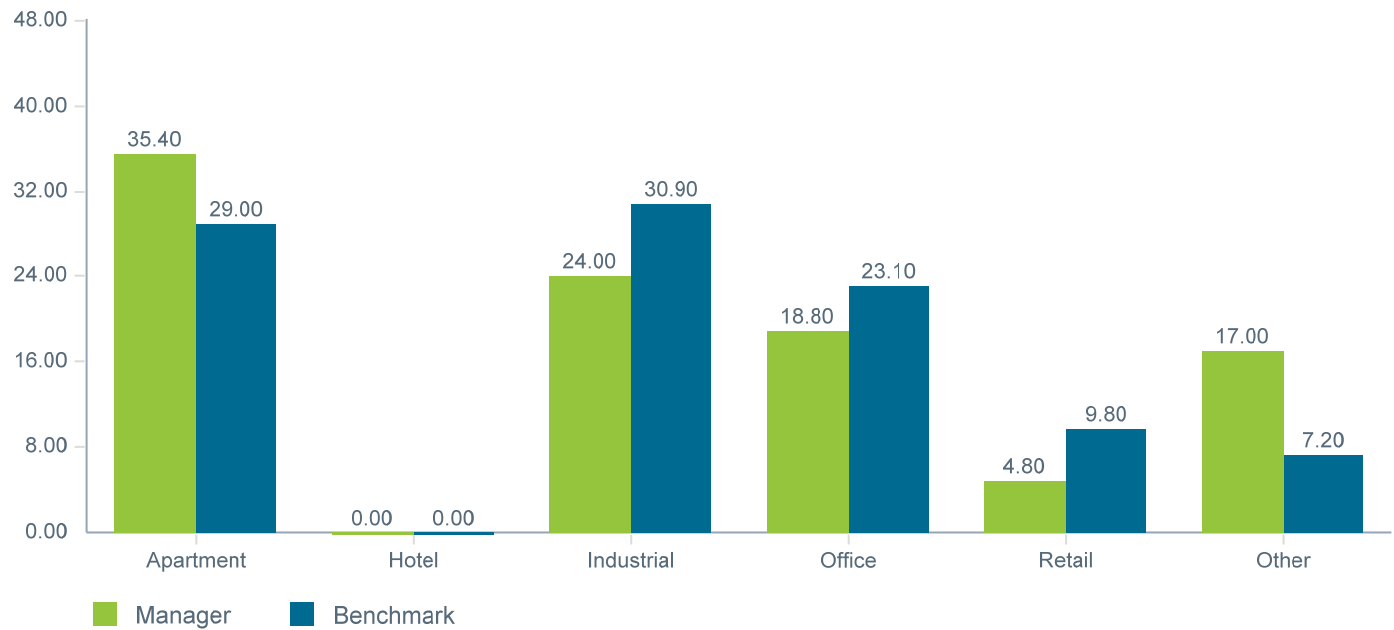
**Investment Strategy**

The Fund pursues a diversified core-plus real estate strategy with the objective of generating consistent, predictable performance while avoiding capital loss. The Fund targets multi-family, retail, industrial and office assets that have in-place, high relative income that are located in well-known primary and secondary markets. The Fund's investment return objective is to exceed the NFI-ODCE income return by 200 basis points and to equal or exceed the NFI-ODCE total return on a three and five-year rolling basis with a target leverage range of 40% to 45%.

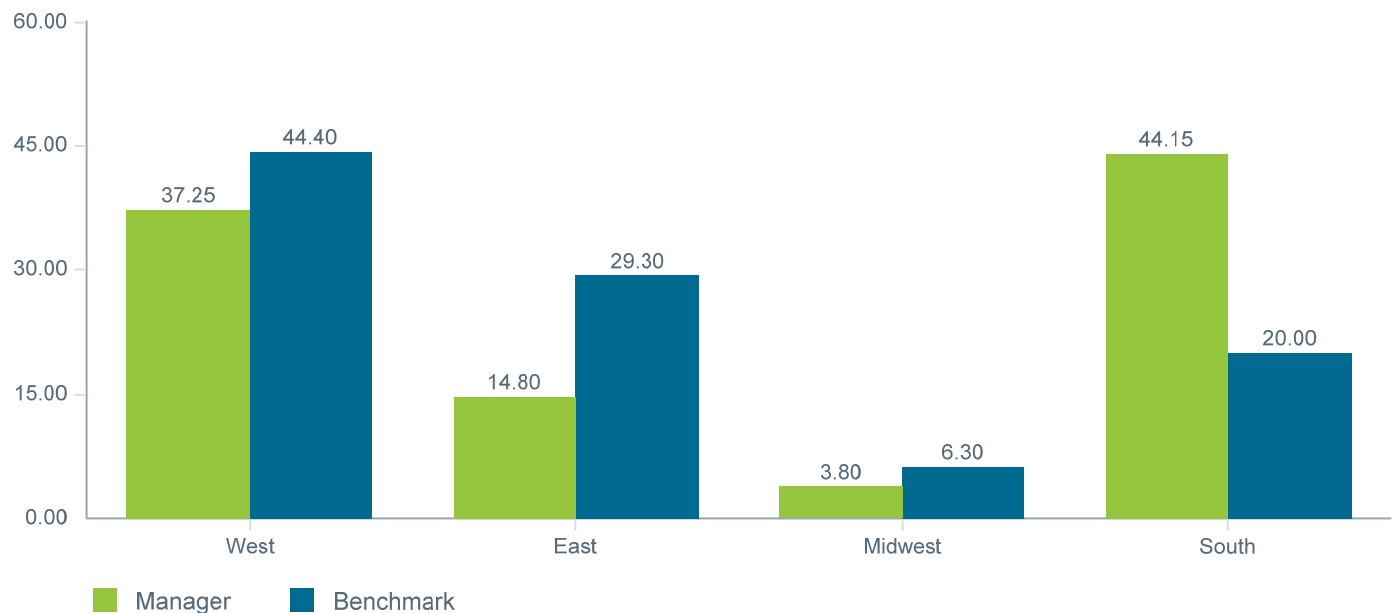
**Investment Profile**

Fund Inception	2013
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	5,039
Fund Leverage %	36.20
Portfolio Occupancy %	94.50
Cash Reserve %	2.11
Number of Investments	45
Number of Limited Partners	34

**Property Type Allocation (%)**



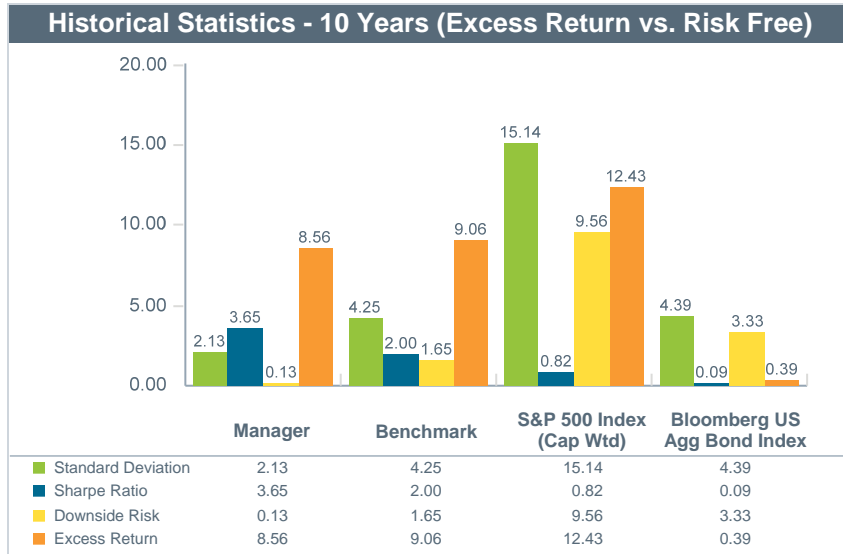
**Geographic Allocation (%)**



Performance shown is net of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of self-storage, life science, and Medical Office. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.

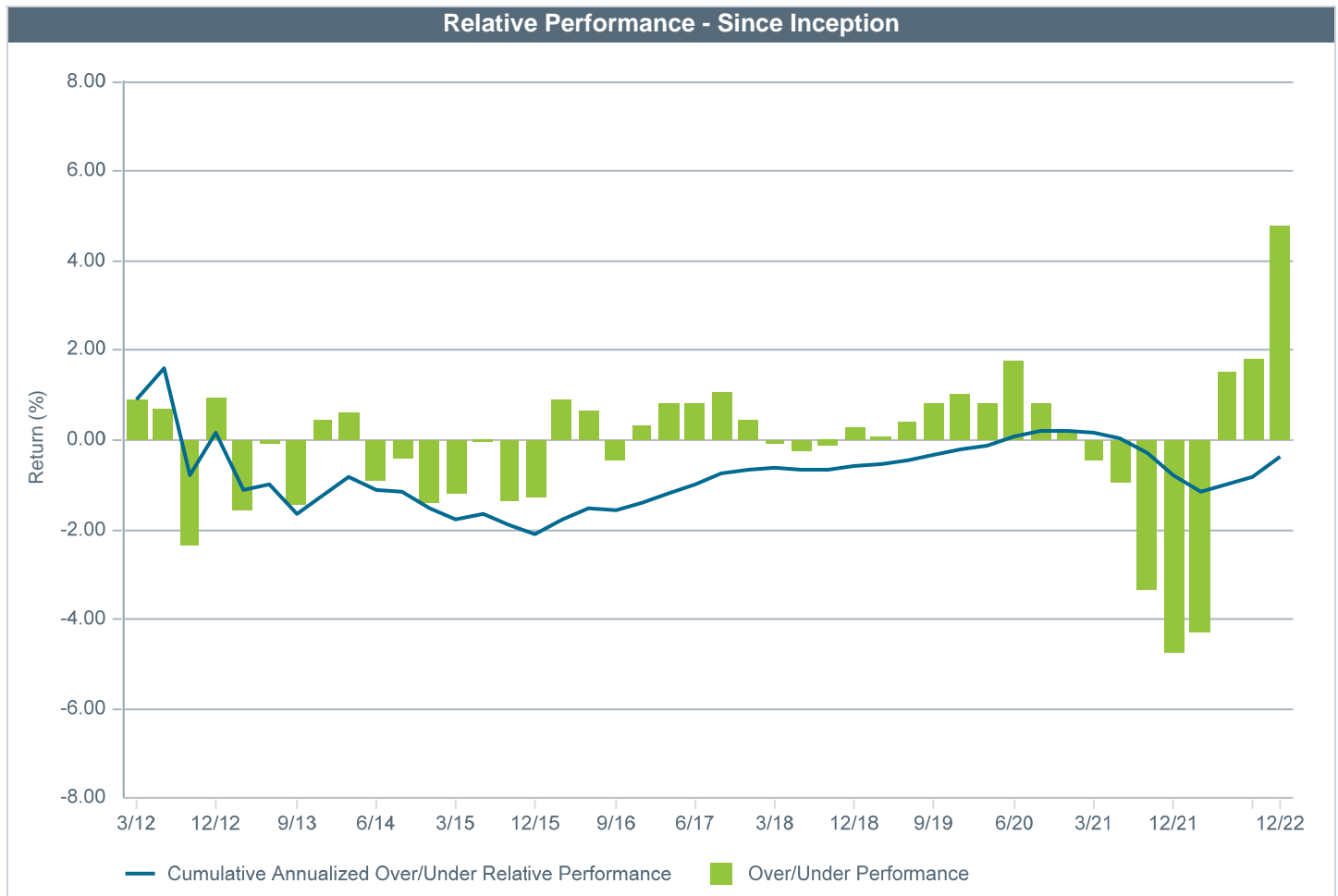


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-0.41	11.43	9.05	8.64	9.23	9.63	10.94	4.91	7.87	8.18	11.11
Benchmark	-4.97	7.47	9.93	8.68	8.54	10.10	22.17	1.19	5.34	8.35	7.62
Difference	4.56	3.96	-0.88	-0.04	0.69	-0.47	-11.23	3.72	2.53	-0.17	3.49



### Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.63
S&P 500 Index (Cap Wtd)	-0.44
Russell 2000 Index	-0.41
MSCI EAFE Index (USD) (Net)	-0.46
MSCI Emg Mkts Index (USD) (Net)	-0.35
Bloomberg US Agg Bond Index	-0.43
Bloomberg US Trsy US TIPS Index	-0.51
Wilshire US REIT Index	-0.37
HFRI FOF Comp Index	-0.37
Bloomberg Cmdty Index (TR)	-0.03
ICE BofAML 3 Mo US T-Bill Index	-0.36
Cons Price Index (Unadjusted)	0.39
NCREIF ODCE Index (AWA) (Gross)	0.63



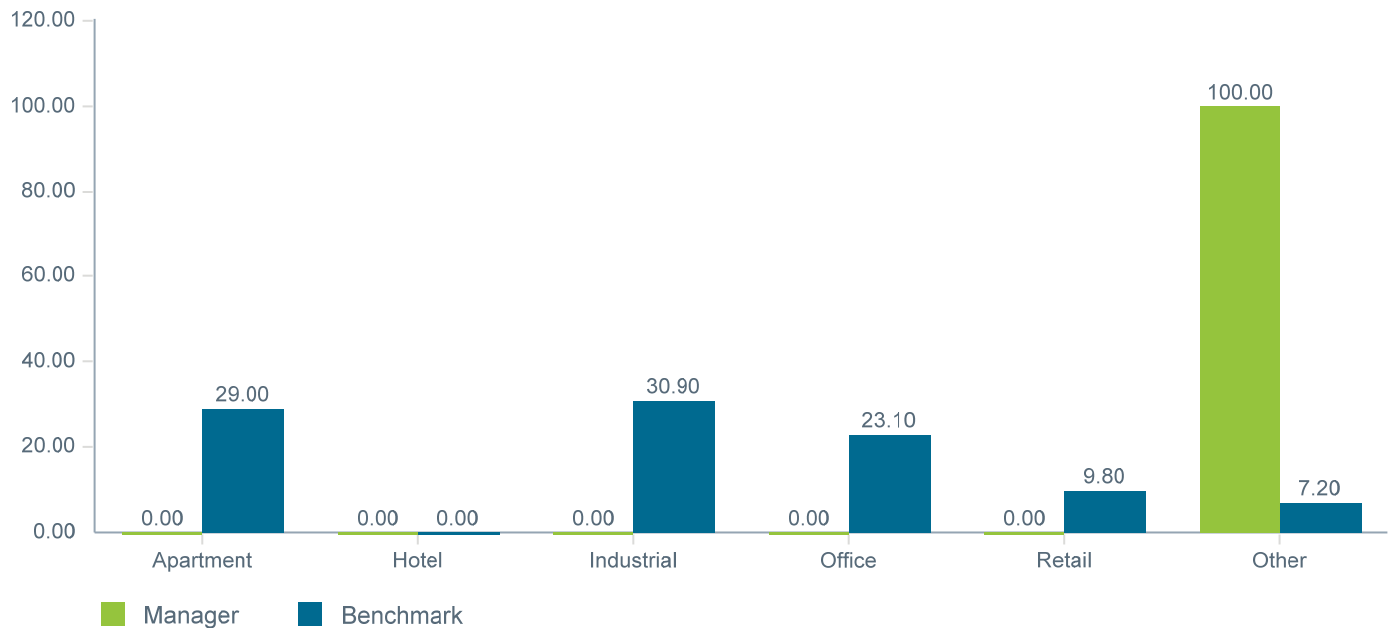
**Investment Strategy**

The Fund's strategy is on primarily stabilized income-producing investments in niche sectors; Education, Health, and Storage. Within these sectors the fund invests in student housing, seniors housing, medical office buildings, life science buildings, and self-storage. The majority of the return from the Fund is expected to be realized from current income, with a modest portion of the return to be derived from asset appreciation. Harrison Street believes that the primary property types it targets will provide better risk/return profiles than properties in traditional core portfolios across all economic cycles.

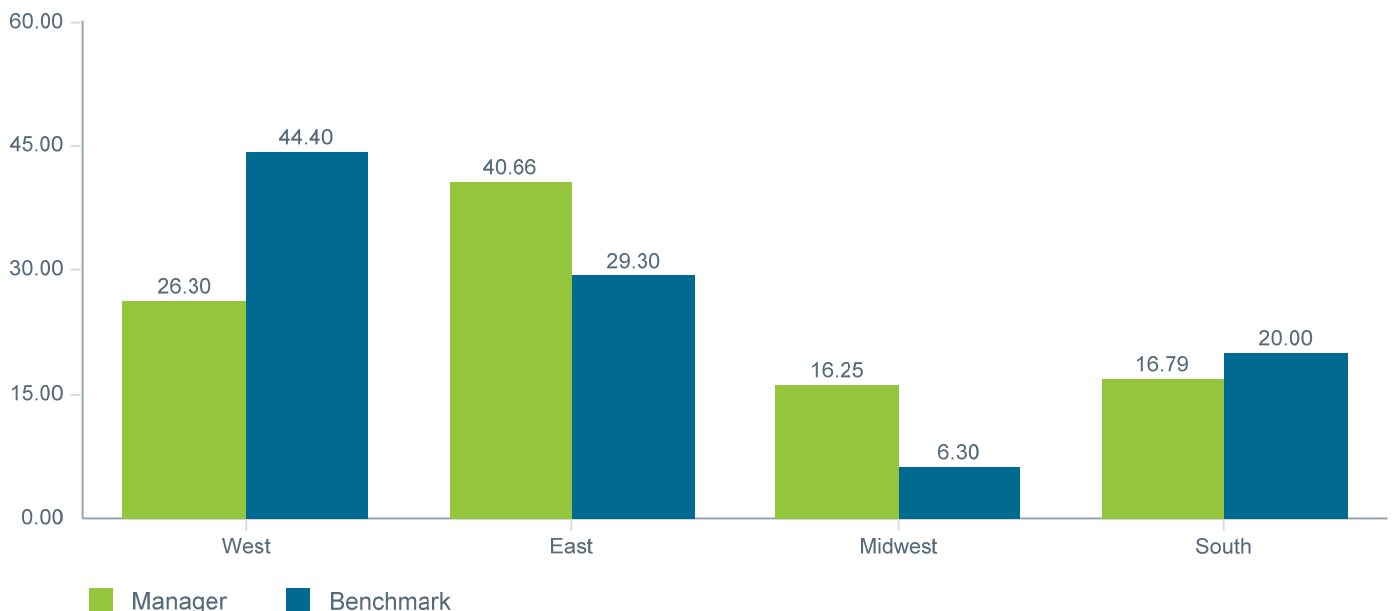
**Investment Profile**

Fund Inception	2011
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	14,134
Fund Leverage %	22.88
Portfolio Occupancy %	89.80
Cash Reserve %	0.45
Number of Investments	396
Number of Limited Partners	243

**Property Type Allocation (%)**

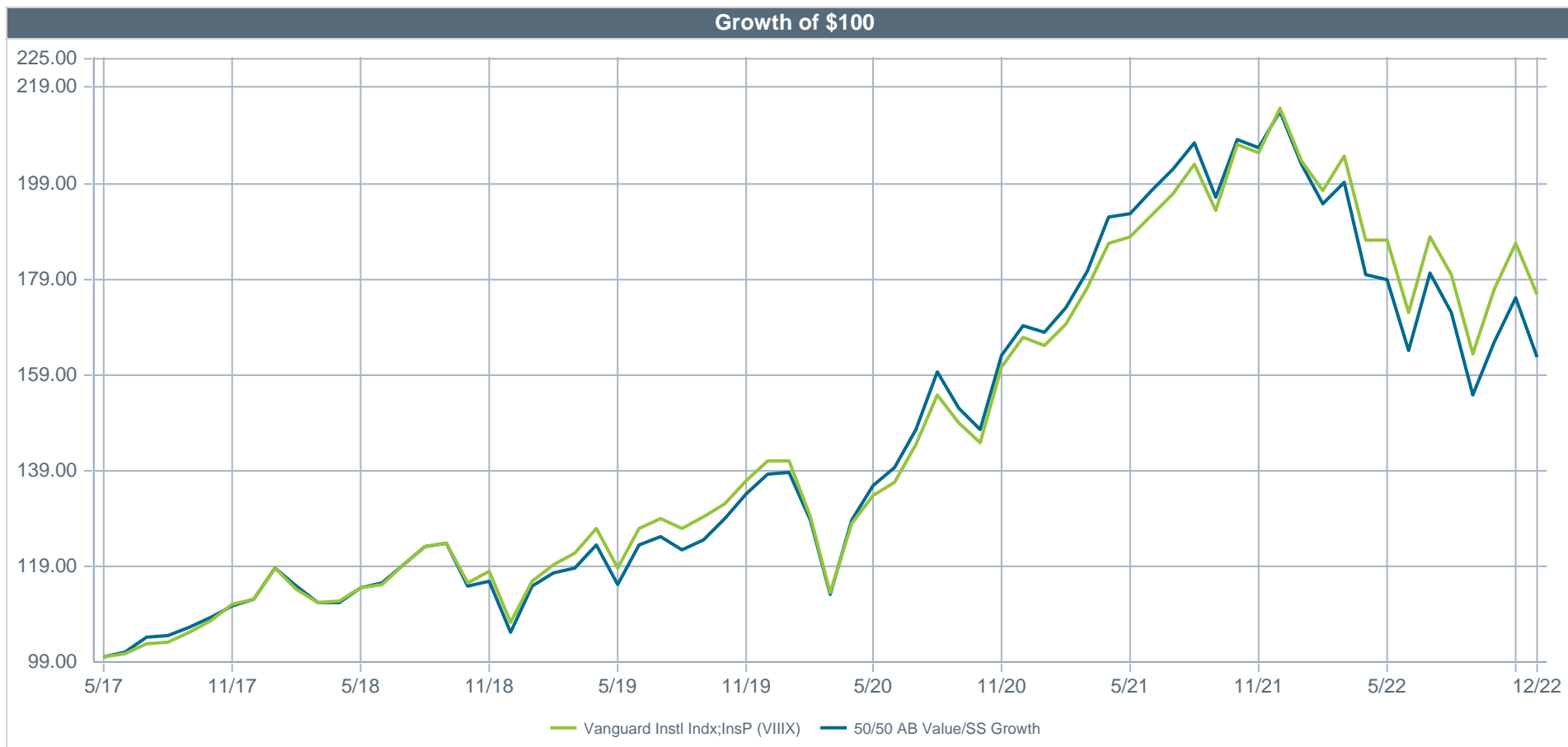


**Geographic Allocation (%)**



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of education, healthcare, senior housing, and storage real estate. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.

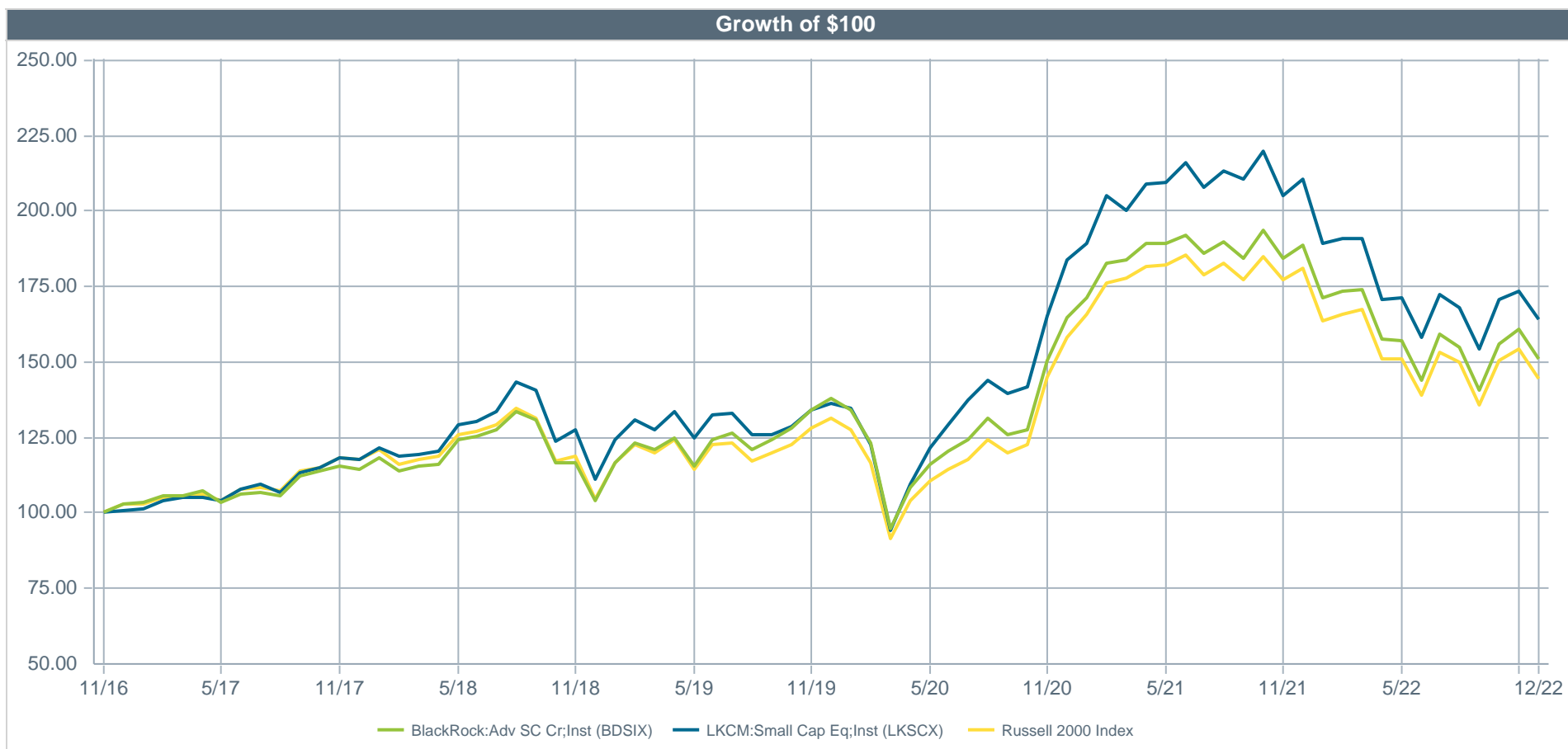




**Comparative Performance**

	Jun-2017 To Dec-2022	1 Year	3 Years	5 Years	10 Years
<b>Vanguard Instl Indx;InsP (VIXX)</b>	<b>10.63</b>	<b>-18.13</b>	<b>7.65</b>	<b>9.41</b>	<b>12.55</b>
S&P 500 Index (Cap Wtd)	10.64	-18.11	7.66	9.42	12.56
Difference	-0.01	-0.02	-0.01	-0.01	-0.01
<b>50/50 AB Value/SS Growth</b>	<b>9.12</b>	<b>-23.88</b>	<b>5.61</b>	<b>7.72</b>	<b>11.52</b>
S&P 500 Index (Cap Wtd)	10.64	-18.11	7.66	9.42	12.56
Difference	-1.52	-5.77	-2.05	-1.70	-1.04

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity.



**Comparative Performance**

	Dec-2016 To Dec-2022	1 Year	3 Years	5 Years	10 Years
<b>BlackRock:Adv SC Cr;Inst (BDSIX)</b>	<b>7.04</b>	<b>-19.87</b>	<b>3.19</b>	<b>5.76</b>	<b>N/A</b>
Russell 2000 Index	6.21	-20.44	3.10	4.13	9.01
Difference	0.83	0.57	0.09	1.63	N/A
<b>LKCM:Small Cap Eq;Inst (LKSCX)</b>	<b>8.47</b>	<b>-22.11</b>	<b>6.32</b>	<b>6.82</b>	<b>8.20</b>
Russell 2500 Grth Index	8.88	-26.21	2.88	5.97	10.62
Difference	-0.41	4.10	3.44	0.85	-2.42

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity.



# Addendum & Glossary



**Municipality of Anchorage Trust Fund  
Fee Addendum**

**As of December 31, 2022**

	<b>Fee Schedule</b>	<b>Market Value As of 12/31/2022 (\$)</b>	<b>Estimated Annual Fee (\$)</b>	<b>Estimated Annual Fee (%)</b>
<b>Total Fund</b>		<b>381,029,057</b>	<b>1,699,770</b>	<b>0.45</b>
Vanguard Instl Indx;InsP (VFIIX)	0.02 % of Assets	96,239,885	19,248	0.02
Vanguard Md-Cp I;Inst (VMCIX)	0.04 % of Assets	7,207,120	2,883	0.04
BlackRock:Adv SC Cr;Inst (BDSIX)	0.50 % of Assets	7,079,257	35,396	0.50
Vanguard Intl Val;Inv (VTRIX)	0.36 % of Assets	40,755,672	146,720	0.36
American Funds EuPc;F3 (FEUPX)	0.46 % of Assets	37,500,123	172,501	0.46
FIAM Core Plus LLC (CF)	0.25 % of First \$50 M 0.22 % of Next \$50 M 0.20 % of Next \$100 M 0.17 % Thereafter	45,251,687	113,129	0.25
Garcia Hamilton Core Agg (SA)	0.25 % of Assets	45,841,441	114,604	0.25
PIMCO Private Income Fund LLC	1.25 % of Assets	20,839,282	260,491	1.25
RBC BlueBay EM Debt;I (RBESX)	0.79 % of Assets	17,995,048	142,161	0.79
UBS Trumbull Property (CF)	0.83 % of Assets	11,354,924	93,969	0.83
Harrison Street Core Property Fund, LP	1.15 % of First \$25 M 1.05 % of Next \$25 M 0.95 % of Next \$25 M 0.90 % of Next \$25 M 0.85 % Thereafter	22,653,645	260,517	1.15
Invesco U.S. Income Fund, LP (CF)	1.20 % of First \$50 M 1.10 % of Next \$50 M 1.00 % of Next \$100 M 0.85 % of Next \$300 M 0.80 % Thereafter	28,152,993	337,836	1.20
Allspring:Govt MM;I (GVIXX)	0.20 % of Assets	157,981	316	0.20

Mutual fund fees are sourced from Morningstar and/or the investment manager.

UBS Trumbull Property (CF) - 0.955% on first \$10M, 0.825% on next \$15M, 0.805% on next \$25M, 0.79% on next \$50M, 0.67% on next \$150M, 0.60% on next \$150M, 0.56% on next \$200M and 0.52% thereafter. An incentive fee, up to 0.25%, is calculated quarterly based on trailing 12-month performance. The incentive fee has been suspended from 04/2018 until 03/2024.

\*The fee schedule shown for UBS Trumbull Property (CF) is based on the effective rates as of the most recently available quarter end data for the combined assets of Anchorage Police & Fire Retirement System and Municipality of Anchorage, and includes incentive fees.

**Performance Related Comments**

- Performance shown is net of fees, unless otherwise noted.
- Inception dates shown reflect the first full month of client specific performance.
- RVK began monitoring the assets of the Municipality of Anchorage as of 01/01/2016. Prior historical data was provided by the previous investment consultant.
- Performance for Vanguard Instl Indx;InsP (VIII) prior to 11/2020 consists of the returns from the previous share class Vanguard Instl Indx;Inst (VINIX).
- Performance for Vanguard Md-Cp I;Inst (VMCIX) prior to 11/2020 consists of the returns from the previous share class Vanguard Md-Cp I;Adm (VIMAX).

**Manager Transition Comments**

- The cash account was transitioned to WellsFargo:Govt MM;I (GVIXX) during 09/2019.
- During 12/2019, RBC BlueBay EM Debt;I (RBESX) switched to the JPM Emg Mkts Bond Gbl Dvf'd Index (TR) benchmark.
- TIF:Internatl Equity;Prm (TFEQX) was liquidated beginning in 05/2020 and Vanguard Intl Val;Inv (VTRIX) was funded by the proceeds.
- During 11/2020, assets invested in Vanguard Instl Indx;Inst (VINIX) were transferred via share class exchange to Vanguard Instl Indx;InsP (VIII).
- During 11/2020, assets invested in Vanguard Md-Cp I;Adm (VIMAX) were transferred via share class exchange to Vanguard Md-Cp I;Inst (VMCIX).
- During 01/2021, the Invesco U.S. Income Fund, LP (CF) was funded via capital call.
- During 04/2021, Harrison Street Core Property Fund, LP was funded via capital call.
- During 05/2021, PIMCO Private Income Fund Onshore Feeder LLC was funded via capital call.
- During 06/2021, Western Asset Floating Rate High Income (CF) was liquidated from the total fund.
- During 05/2022, Ashmore:EM Tot Rtn;Inst (EMKIX) was liquidated and proceeds were used to purchase RBC BlueBay EM Debt;I (RBESX).

**Custom Index Comments**

- The Target Allocation Index is calculated monthly and consists of 31% Russell 3000 Index, 22% MSCI ACW Ex US Index (USD) (Net), 24% Bloomberg US Agg Bond Index, 5% Credit Suisse Leveraged Loan Index +2%, 5% EMD Blended Index, and 13% NCREIF ODCE Index (AWA) (Net). The Target Allocation Index and its current targets are effective as of 06/2021.
- The Target Allocation Index (Weighted Cash) (Trust) consists of a 37% allocation to cash during 11/2020 and a 12% allocation to cash during 12/2020. Remaining allocations were adjusted on a pro rata basis to fill the remaining stated targets.
- The Vanguard Spl Mid Cap Index consists of the S&P Mid Cap 400 Index (Cap Wtd) through 05/16/2003; MSCI US Mid Cap 450 Index through 01/30/2013; and CRSP US Mid Cap Index thereafter.
- The Small Cap Custom Index consists of the Russell 2000 Index through 06/2006, the Russell 2000 Growth Index through 11/2016, and the Russell 2000 Index thereafter.
- The EMD Blended Index is calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark return.

**Miscellaneous Comments**

- In 12/2021, due to the sale of Wells Fargo Asset Management (WFAM) by Wells Fargo & Company to GTCR LLC and Reverence Capital Partners, L.P., the WellsFargo:Govt MM;I (GVIXX) name has been changed to reflect the new company name of Allspring:Govt MM;I (GVIXX).

## Glossary

**Active Return** - The difference between the investment manager/composite performance relative to the performance of an appropriate market benchmark.

**Active Share** - Measures the degree to which the holdings of a fund differ from the holdings of the benchmark. Active share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the fund versus the weight of each holding in the benchmark and dividing by two.

**Alpha** - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

**Alpha Ratio** - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

**Average Quality** - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. *Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager.* There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers), such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. *Standard & Poor's (S&P)* employs a system that uses + and - along with letters, such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>	<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>
<b>Higher Credit Quality – Investment Grade</b>			<b>Lower Credit Quality – Below Investment Grade</b>		
AAA	Aaa	Prime/Highest credit quality	BB+	Ba1	Speculative/Low credit quality
AA+	Aa1	High credit quality	BB	Ba2	
AA	Aa2		BB-	Ba3	
AA-	Aa3		B+	B1	Highly speculative
A+	A1	Upper-medium credit quality	B	B2	
A	A2		B-	B3	
A-	A3		CCC+	Caa1	Substantial credit/default risk
BBB+	Baa1	Lower-medium credit quality	CCC	Caa2	Extremely speculative
BBB	Baa2		CCC-	Caa3	
BBB-	Baa3		CC	Ca	Vulnerable to default
			C	Ca	
			D	C	In default

**Benchmark Effect** - The difference between the blended return of each respective managers' benchmark within a composite and the composite's benchmark return.

**Beta** - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

**Box Plots** - A graphical representation of the distribution of observations. From top to bottom, the four boxes represent the spread between the maximum value and the minimum value in each quartile. A quartile represents the values that divide the observations into four quarters (i.e., 1<sup>st</sup> quartile, 2<sup>nd</sup> quartile, 3<sup>rd</sup> quartile, and 4<sup>th</sup> quartile). The median observation is where the 2<sup>nd</sup> quartile and 3<sup>rd</sup> quartile meet.

**Buy and Hold Attribution** - At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

**Sector** - Attribution is calculated using the Global Industry Classification Standard (GICS), which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector as defined by S&P Capital IQ data. Attribution to "other" is the result of securities based in industries that do not fit into any GICS classification.

**Country/Region** - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data, and thus may differ from the classification of the investment manager and/or index provider. Attribution to "other" is the result of securities based in countries/regions that do not fit into any MSCI classification.

**Style** - Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, and names that make up the subsequent 1/3 of the total market capitalization are assigned to the neutral category, while the balance of the names are assigned to the value category. Stocks are unclassified when there is not enough data to determine a size and style metric.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.

### Capital Markets Review -

**Breakeven Inflation** - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflation-linked maturity curve and the yield of the closest nominal Treasury maturity.

**Consumer Confidence** - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.

**Consumer Price Index (CPI)** - Measures the change in the price level of consumer goods and services.



## Glossary

- Federal Funds Rate** - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.
- Option-Adjusted Spread** - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.
- Purchasing Managers Index (PMI)** - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.
- Real Gross Domestic Product (Real GDP)** - An inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year.
- Unemployment Rate** - The percentage of the total labor force that is unemployed but actively seeking employment.
- US Dollar Total Weighted Index** - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.
- VIX** - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."
- Cash Flow Effect** – The composite's active return minus the sum of each managers' active return minus the benchmark effect.
- Consistency** - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.
- Convexity** - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.
- Correlation** - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.
- Coupon Rate** - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.
- Current Yield** - The annual income of a security divided by the security's current price.
- Down Market Capture** - Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.
- Downside Risk** - A measure similar to standard deviation that focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative returns for the selected periodicity. The higher the factor, the riskier the product.
- Earnings Per Share** - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.
- Effective Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield.
- Excess Return vs. Market** - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.
- Excess Return vs. Risk Free** - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.
- Excess Risk** - A measure of the standard deviation of a portfolio's performance relative to the risk-free return.
- Expense Ratios** - Morningstar is the source for mutual fund expense ratios.
- Gain/Loss** - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.
- Indices** - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used, or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability, and/or completeness.
- Information Ratio** - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.
- Liability Driven Investing (LDI)** - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.
- Estimated Funded Status** - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.
- Estimated PV of Liabilities** - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.
- Duration of Liabilities** - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.
- Duration of Assets** - The dollar-weighted average duration of all the individual Plan assets.
- Estimated Plan Hedge Ratio** - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and

## Glossary

multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

**Modified Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

**Mutual Fund Performance** - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

**Net Cash Flow** - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.

### Peer Groups -

**Plan Sponsor Peer Groups** - RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client performance compiled from consultant and custodian data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans.

**Investment Manager Peer Groups** - RVK utilizes Investment Metrics' Peer Groups for investment manager peer comparison and ranking. The Investment Metrics Peer Group database includes performance and other quantitative data for over 840 investment management firms and 29,000 investments products, across more than 160 standard peer groups. Mutual Fund Peer Groups are net of fees.

**Percentile Rankings** - Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value                      100 - Lowest Statistical Value

*Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4<sup>th</sup> percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.*

**Performance Methodology** - RVK calculates performance for investment managers and composites using different methodologies.

**Investment Managers** - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of  $\geq 10\%$  of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month.

**Composites** - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

**Portfolio Characteristics** - Due to disclosure guidelines set by each investment manager, portfolio characteristics shown are as of the most recent date available.

**Price to Earnings Ratio** - The ratio valuing a company's current share price relative to its trailing 12-month per-share earnings (EPS).

**Private Equity Quartile Ranks** - Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

**R-Squared** - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

**Return** - Compounded rate of return for the period.

**% Return** - The time-weighted rate of return of a portfolio for a given period.

**Risk Free Benchmark** - ICE BofAML 3 Mo US T-Bill Index unless specified otherwise.

## Glossary

**RVK Liquidity Rating** - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

<u>Asset Class</u>	<u>RVK Liquidity Rating</u>	<u>Asset Class</u>	<u>RVK Liquidity Rating</u>
<u>Liquid Investments</u>		<u>Less Liquid Investments</u>	
T-Bills and Treasuries	100	Fixed Income Plus Sector	50
Cash Equivalents	98	Stable Value (Plan Sponsor Directed)	50
TIPS	95	Hedge Funds of Funds	35
US Large Cap Equity	95		
Diversified Real Return	93		
Stable Value (Participant Directed)	91		
Global Equity	90	<u>Not Liquid Investments</u>	
Non-US Large Cap Equity	90	Core Real Estate	25
Global Tactical Asset Allocation	88	Core Plus Real Estate	15
MLPs	85	Non-Core Real Estate	5
US Mid Cap Equity	85	Private Equity Funds of Funds	5
US SMid Cap Equity	85		
US Small Cap Equity	85		
REITs	85		
Non-US Small Cap Equity	85		
Emerging Markets Equity	85		
Core Fixed Income	85		
Core Plus Fixed Income	80		

**Sector Allocation** - Negative fixed income sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps.

**Sharpe Ratio** - Represents the excess rate of return over the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

**Simple Alpha** - The difference between the manager's return and the benchmark's return.

**Spread Duration** - The approximate percentage change in a bond's price for a 100 basis point change in its spread over a Treasury of the same maturity.

**Standard Deviation** - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period.

**Thematic Classification** - Represents dedicated manager allocations; as such, thematic allocations are approximations. RVK categorizes the following asset classes as Alpha, Capital Appreciation, Capital Preservation, and Inflation:

<u>Alpha</u>	<u>Capital Appreciation</u>	<u>Capital Preservation</u>	<u>Inflation</u>
Absolute Return Strategies	Public Equity	Core Fixed Income	TIPS
Currency Overlay	Private Equity	CMBS Fixed Income	Bank Loans
	Preferred Securities	Asset Backed Fixed Income	Core Real Estate
	High Yield	Domestic Core Plus Fixed Income	Real Return
	Convertible Fixed Income	Mortgage Backed Fixed Income	Inflation Hedges
	TALF Funds	International Developed Fixed Income	REITs
	Distressed Debt	Cash Equivalents	Commodities
	Emerging Market Fixed Income	Stable Value	
	Value Added Real Estate		
	Opportunistic Real Estate		

**Time Period Abbreviations** - **QTD** - Quarter-to-Date. **CYTD** - Calendar Year-to-Date. **FYTD** - Fiscal Year-to-Date. **YOY** - Year Over Year.

**Total Fund Attribution** - The Investment Decision Process (IDP) model provides an approach to evaluating investment performance that applies to all asset classes and investment styles. The IDP model is based on a top-down hierarchy framework of investment decisions, with each decision contributing to the overall profit or loss. The IDP approach starts from the strategic asset allocation and follows the flow of the investments down to the manager's skill.

**Strategic Asset Allocation (SAA)** - The percentage return gained or lost from the long-term strategic asset allocation decision, the most significant determinant of long-term performance. SAA is the product of the target asset allocation multiplied by the corresponding benchmark returns.

**Tactical Asset Allocation (TAA)** - The percentage return gained or lost from not having been precisely allocated at the target asset allocation mix, whether by deviations that are tactical in nature or a by-product of moving towards the target mix. TAA is the product of the actual asset allocation multiplied by the broad asset class benchmarks, less the SAA.

**Style Selection (SS)** - The percentage return gained or lost from intentional style biases within each asset class (e.g. value rather than core or overweight to emerging markets relative to benchmark). SS is the product of the actual manager allocation within each asset class multiplied by their specific benchmark, less TAA.

**Manager's Skill (MS)** - The percentage return gained or lost from manager value added relative to their specific benchmark. MS is the product of the actual manager allocation multiplied by their achieved excess return.

**Total Fund Beta** - Total Fund Beta is calculated using the S&P 500 as the benchmark. It represents a measure of the sensitivity of the total fund to movements in the S&P 500 and is a measure of the Total Fund's non-diversifiable or systematic risk.



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**Tracking Error** - A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

**Treynor Ratio** - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

**Unit Value** - The dollar value of a portfolio, assuming an initial nominal investment of \$100, growing at the compounded rate of %Return for a given period.

**Up Market Capture** - Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolio's return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

**Yield to Maturity** - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return. The 30-Day SEC Yield is similar to the Yield to Maturity and is reported for mutual funds.

**Yield to Worst** - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.



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