

February 2023

State of Rhode Island State Investment Commission

Absolute Return Portfolio Review as of December 2022



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Absolute Return portfolio has achieved its investment objectives over both the short and long term

Most funds in the portfolio have met expectations

Notes on analysis:

- 1.All returns are net of fees. Returns are annualized if the period is 12 months or longer.
- 2.Alpha and beta calculations based on regression calculations and are relative to MSCI ACWI

Role in the total fund is to reduce total fund risk by reducing return volatility

Portfolio objectives:

- Low equity beta/correlation

- Equity market downside protection

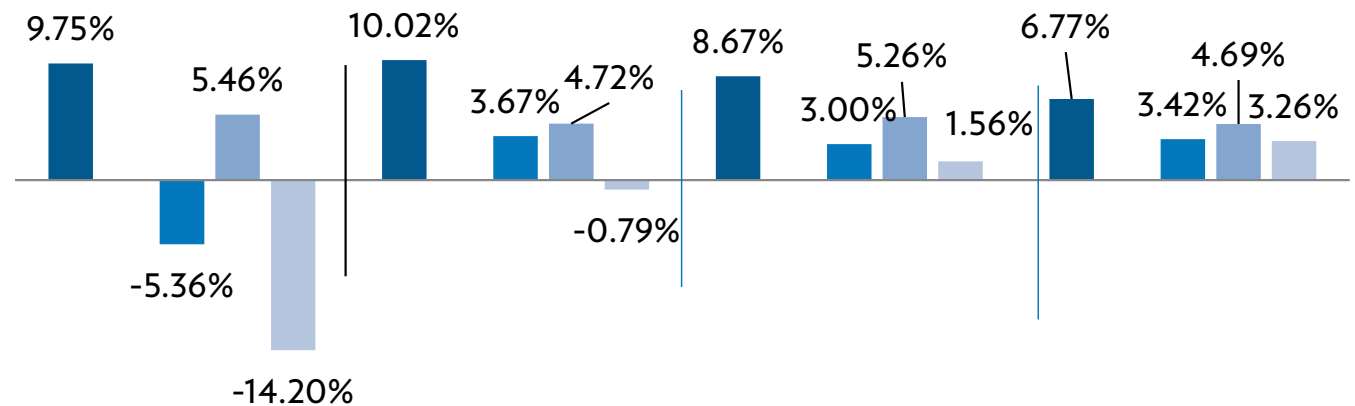
- Good alpha generation

Performance Evaluation

Total Return (net of fees)

The RI Portfolios have outperformed HFRI FoF Index over all periods.

Annualized Net Returns through December 2022



■ RI Portfolio

■ HFRI FoF Index

■ T-Bills+4%

■ 75% Bonds/25% Stocks

1 Year

3 Year

5 Year

Since Inception

9.75%

10.02%

8.67%

6.77%

-5.36%

3.67%

3.00%

3.42%

5.46%

4.72%

5.26%

4.69%

-14.20%

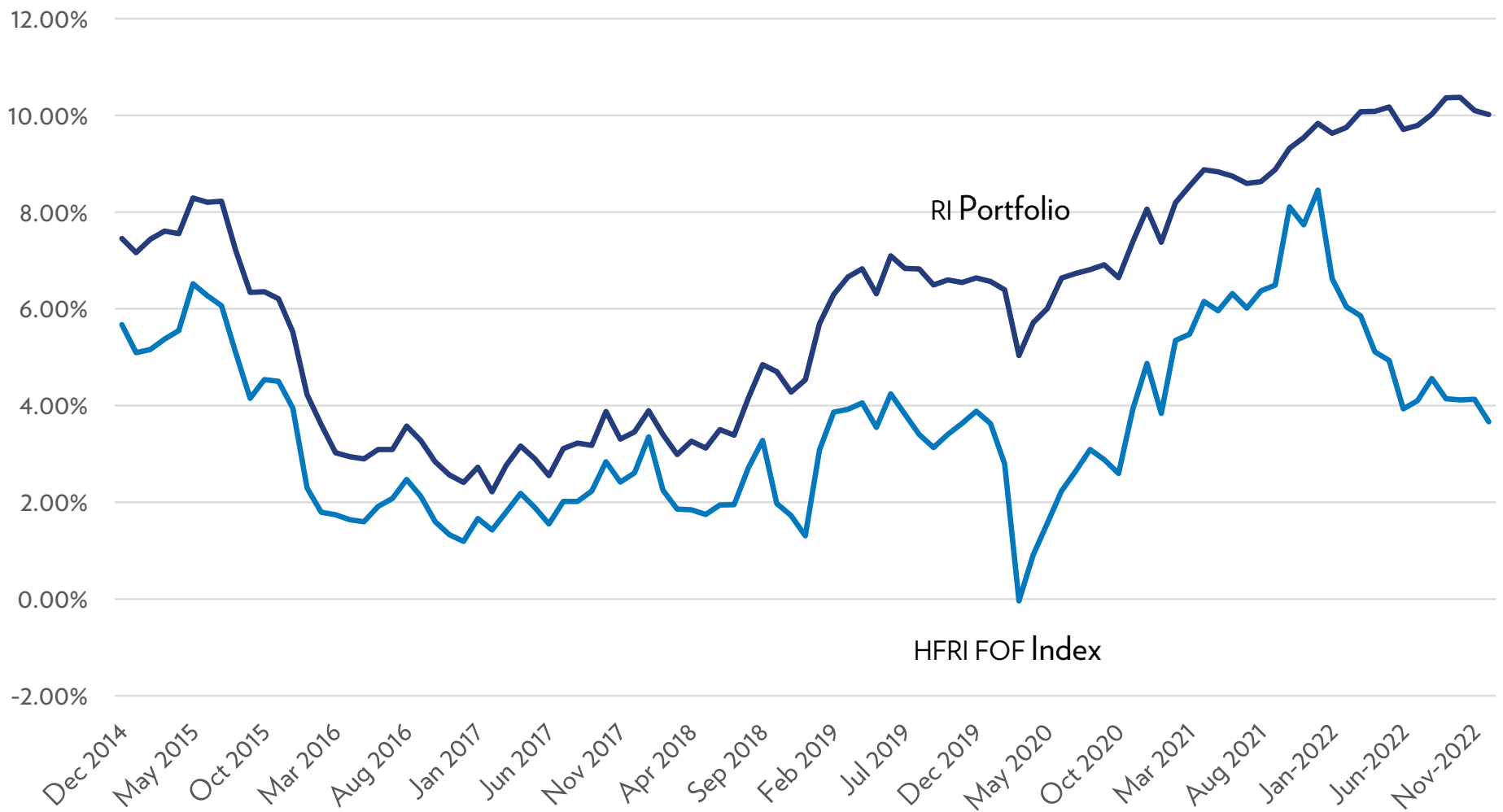
-0.79%

1.56%

3.26%

Performance Evaluation

Three Year Rolling Total Returns (net of fees since inception through 12/31/22)

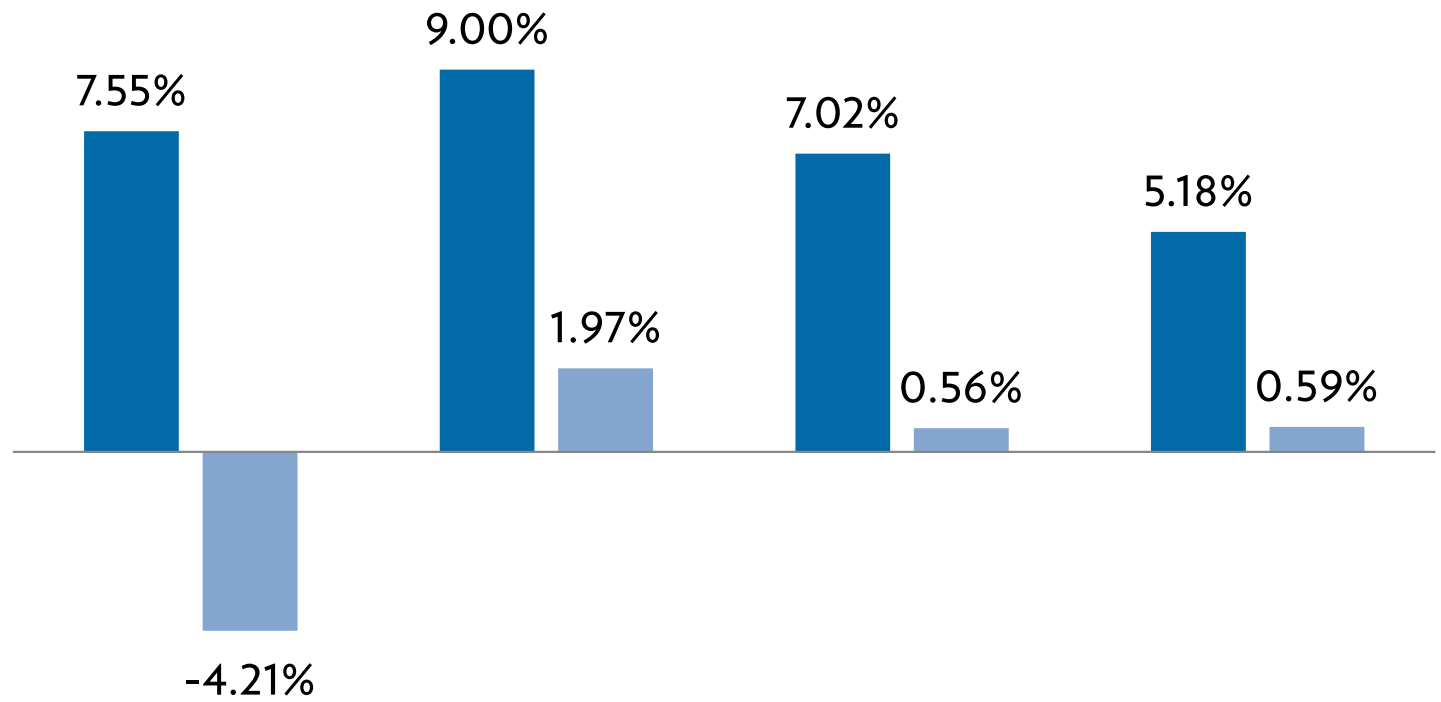


Alpha Return (net of fees)

Annualized Net Returns through December 2022

RI Portfolio has generated 5% or more Alpha over all periods.

RI Portfolio has generated more Alpha than HFRI FoF Index over all periods.



■ RI Portfolio
■ HFRI FoF Index

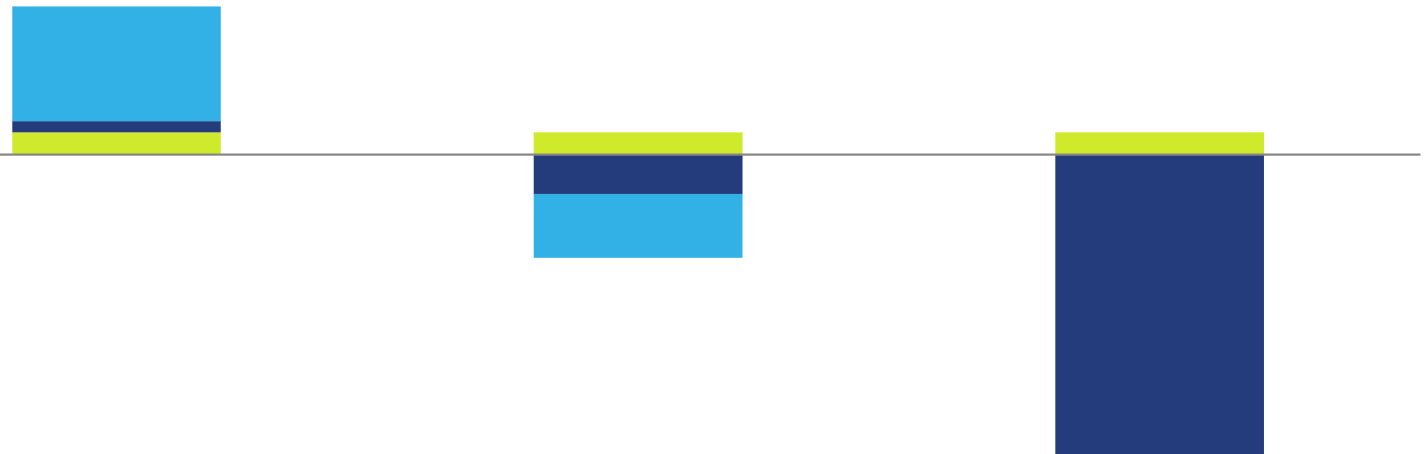
1 Year	3 Year	5 Year	Since Inception
7.55%	9.00%	7.02%	5.18%
-4.21%	1.97%	0.56%	0.59%

Return Attribution – One Year

Annualized Net Returns through December 2022

78% of the Portfolio's performance has been generated from Alpha

The benchmark generated negative Alpha over this period



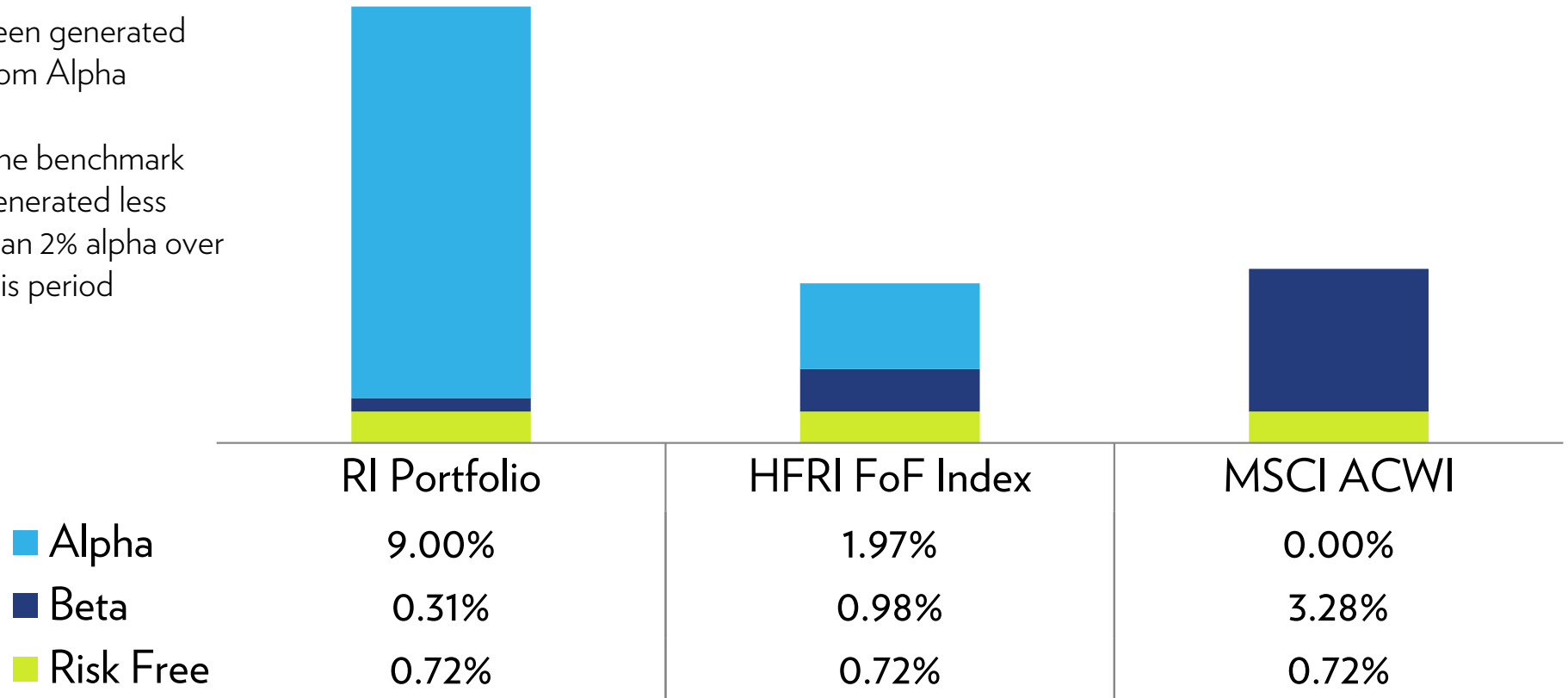
	RI Portfolio	HFRI FoF Index	MSCI ACWI
■ Alpha	7.57%	-4.21%	0.00%
■ Beta	0.74%	-2.60%	-19.82%
■ Risk Free	1.46%	1.46%	1.46%

Performance Attribution – Three Years

Annualized Net Returns through December 2022

90% of the Portfolio's performance has been generated from Alpha

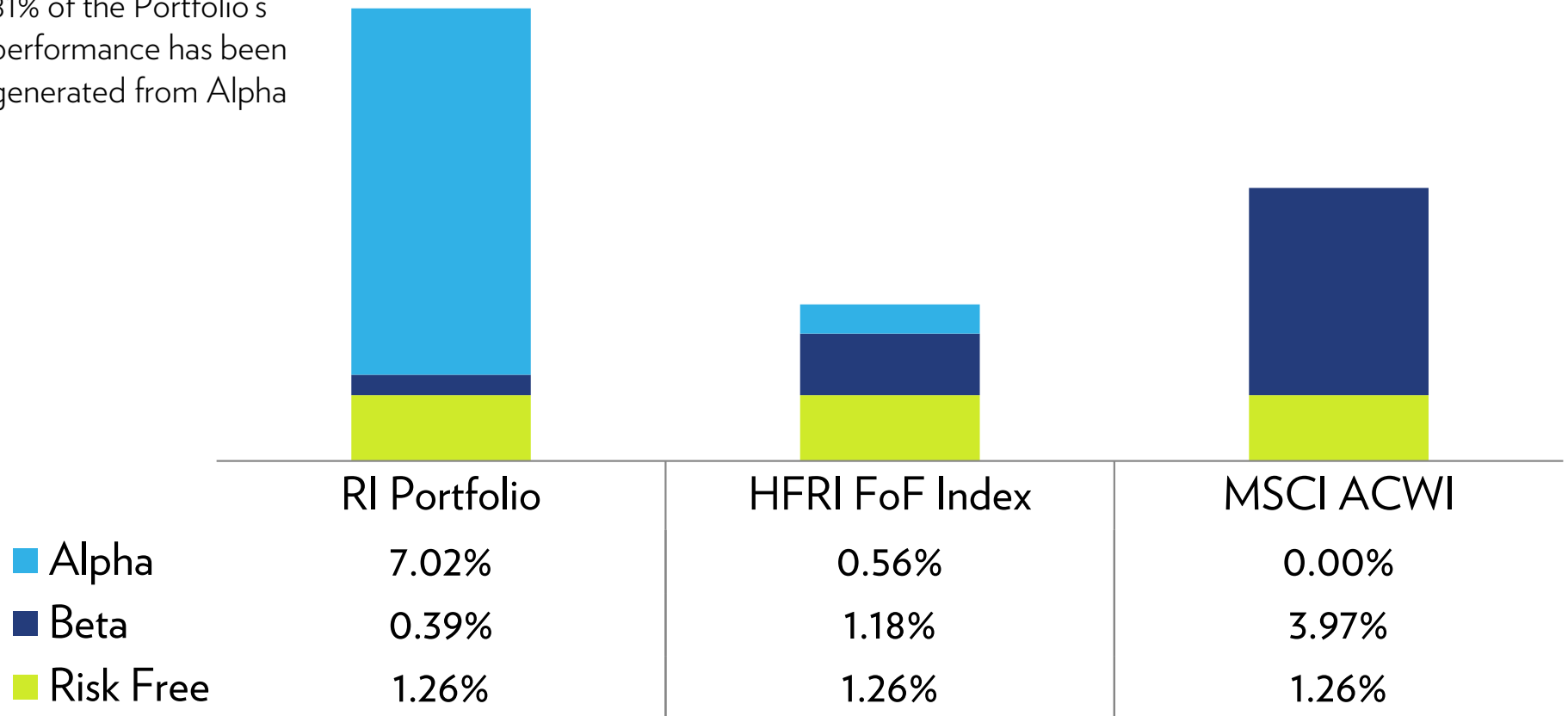
The benchmark generated less than 2% alpha over this period



Performance Attribution – Five Years

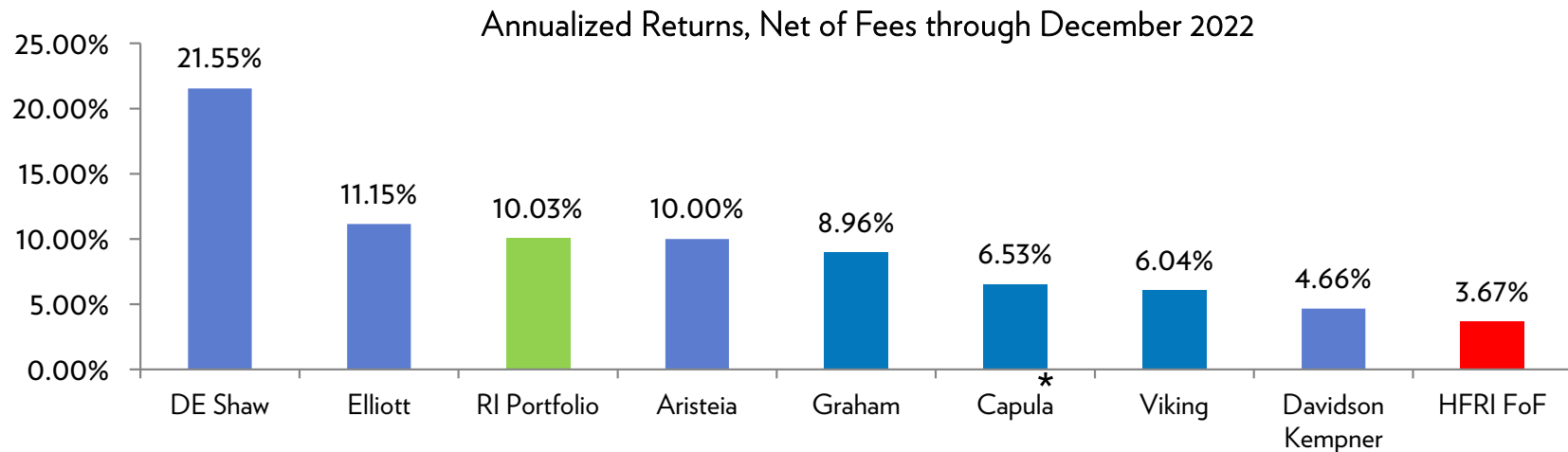
Annualized Net Returns through December 2022

81% of the Portfolio's performance has been generated from Alpha



Performance Evaluation

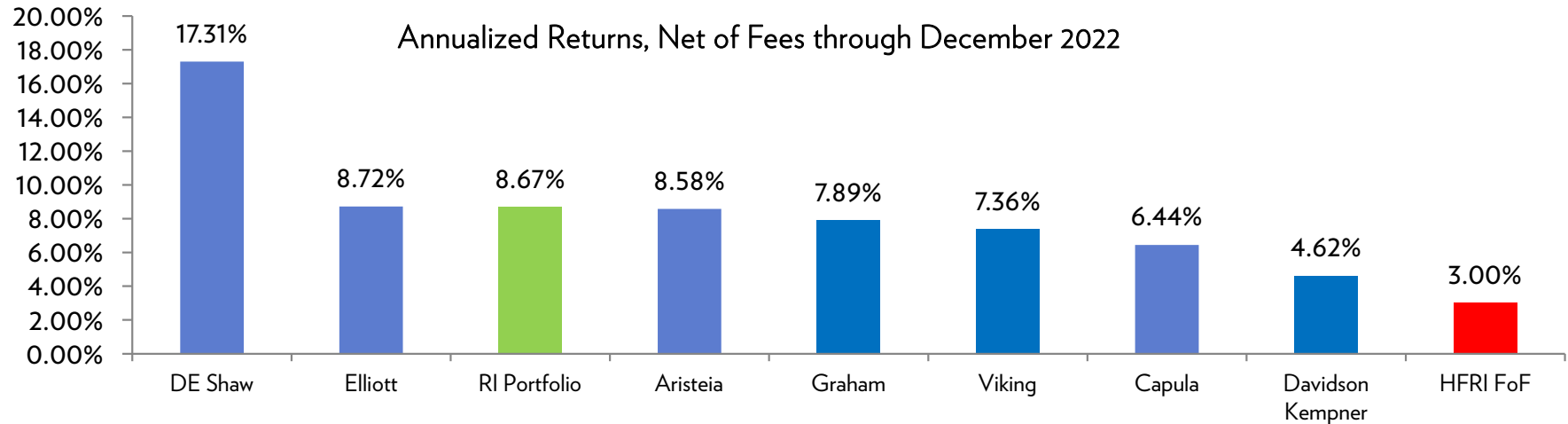
Manager Performance – Three Years



Three Years	DE Shaw	Elliott	Total Actual	Aristeia	Graham	Capula	Viking	Davidson Kempner	HFRI FoF Index
#months	36	36	36	36	36	36	36	36	36
Total Return	21.55%	11.15%	10.03%	10.00%	8.96%	6.53%	6.04%	4.66%	3.67%
Total Risk	3.70%	3.29%	3.49%	6.31%	10.97%	2.01%	10.03%	6.58%	7.26%
Return/Risk	5.82	3.39	2.87	1.59	0.82	3.24	0.60	0.71	0.51
Correlation	0.24	(0.04)	0.50	0.44	0.26	(0.38)	0.54	0.66	0.82
Beta	0.05	0.00	0.09	0.14	0.15	(0.03)	0.27	0.22	0.30
Beta Return	0.17%	0.00%	0.31%	0.47%	0.49%	-0.11%	0.89%	0.73%	0.98%
Beta Risk	1.03%	0.02%	1.88%	2.90%	3.02%	-0.65%	5.48%	4.47%	6.02%
Alpha	20.66%	10.42%	9.00%	8.80%	7.75%	5.91%	4.43%	3.21%	1.97%
Alpha Risk	3.55%	3.29%	2.94%	5.60%	10.54%	1.91%	8.40%	4.83%	4.06%
Info Ratio*	5.81	3.17	3.06	1.57	0.74	3.10	0.53	0.66	0.48
Risk-free	0.72%	0.72%	0.72%	0.72%	0.72%	0.72%	0.72%	0.72%	0.72%

Performance Evaluation

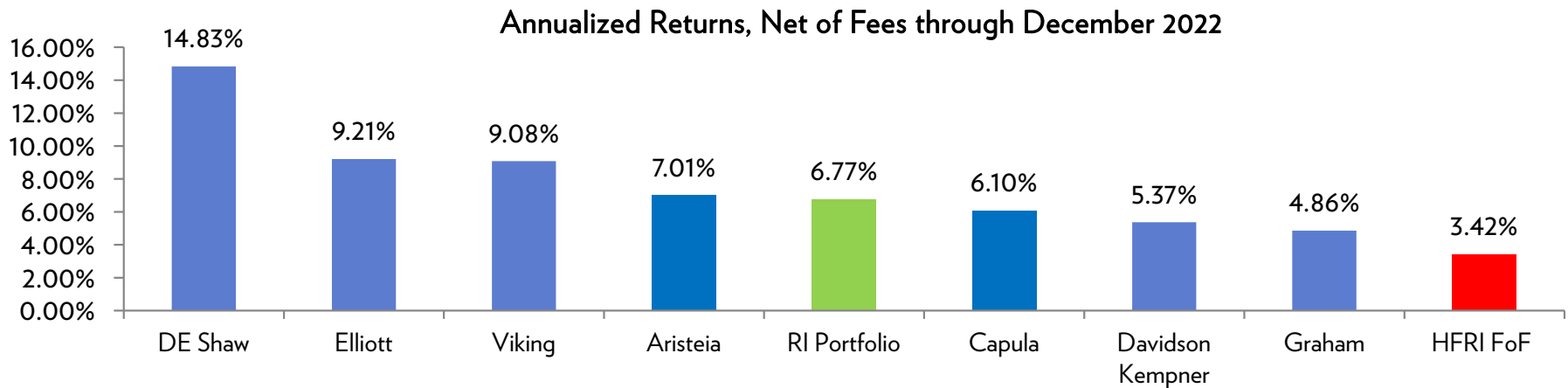
Manager Performance – Five Years



Five Years	DE Shaw	Elliott	Total Actual	Aristeia	Graham	Viking	Capula	Davidson Kempner	HFRI FoF Index
#months	60	60	60	60	60	60	60	60	60
Total Return	17.31%	8.72%	8.67%	8.58%	7.89%	7.36%	6.44%	4.62%	3.00%
Total Risk	4.07%	3.32%	3.09%	5.13%	9.59%	9.52%	1.78%	5.24%	6.23%
Return/Risk	4.25	2.63	2.80	1.67	0.82	0.77	3.61	0.88	0.48
Correlation	0.10	0.06	0.54	0.35	0.32	0.58	(0.26)	0.65	0.83
Beta	0.03	0.02	0.10	0.11	0.18	0.31	(0.02)	0.20	0.30
Beta Return	0.12%	0.07%	0.39%	0.42%	0.71%	1.25%	-0.09%	0.78%	1.18%
Beta Risk	0.52%	0.29%	1.74%	1.90%	3.16%	5.57%	-0.39%	3.49%	5.27%
Alpha	15.93%	7.39%	7.02%	6.89%	5.92%	4.85%	5.27%	2.58%	0.56%
Alpha Risk	4.04%	3.30%	2.55%	4.76%	9.05%	7.73%	1.74%	3.91%	3.33%
Info Ratio*	3.95	2.24	2.75	1.45	0.65	0.63	3.03	0.66	0.17
Risk-free	1.26%	1.26%	1.26%	1.26%	1.26%	1.26%	1.26%	1.26%	1.26%

Performance Evaluation

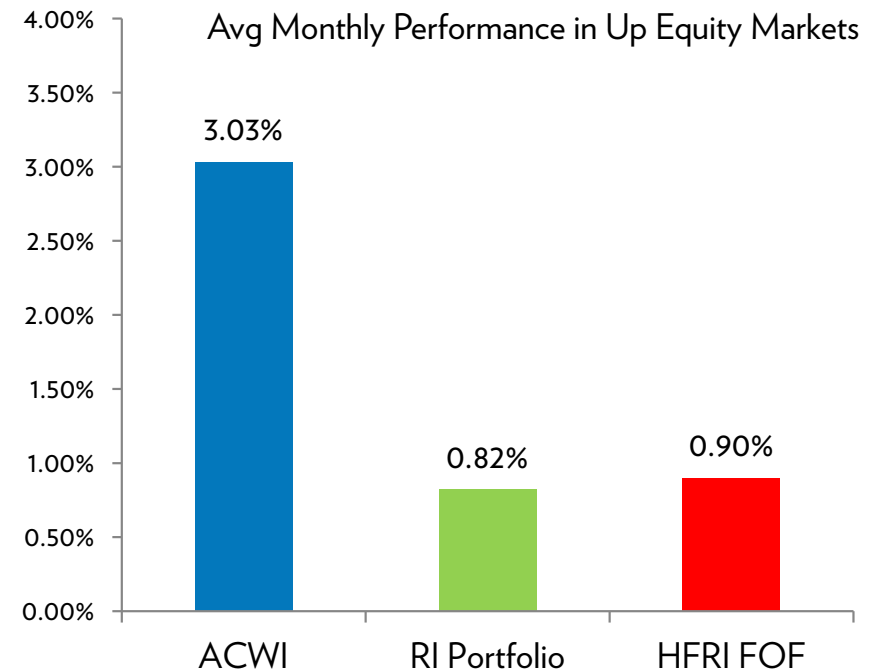
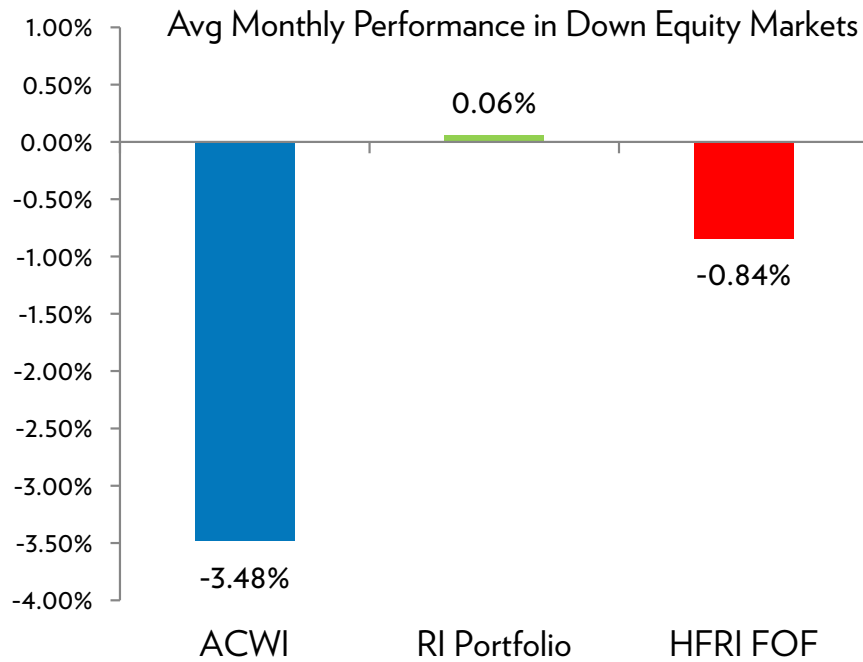
Manager Performance – Since Inception



SI	DE Shaw	Elliott	Viking	Aristeia	Total Actual	Capula	Davidson Kempner	Graham	HFRI FoF Index
#months	134	134	133	134	134	133	134	132	134
Total Return	14.83%	9.21%	9.08%	7.01%	6.77%	6.10%	5.37%	4.86%	3.42%
Total Risk	4.15%	3.45%	8.28%	4.90%	3.08%	1.83%	3.78%	7.48%	4.80%
Return/Risk	3.58	2.67	1.10	1.43	2.20	3.33	1.42	0.65	0.71
Correlation	0.13	0.15	0.52	0.29	0.53	(0.26)	0.61	0.21	0.82
Beta	0.04	0.04	0.31	0.10	0.12	(0.03)	0.17	0.11	0.28
Beta Return	0.31%	0.31%	2.42%	0.77%	0.89%	-0.24%	1.25%	0.90%	2.13%
Beta Risk	0.58%	0.57%	4.33%	1.45%	1.68%	-0.43%	2.35%	1.61%	4.00%
Alpha	13.83%	8.21%	5.96%	5.54%	5.18%	5.64%	3.43%	3.25%	0.59%
Alpha Risk	4.11%	3.40%	7.06%	4.68%	2.58%	1.78%	2.97%	7.31%	2.67%
Info Ratio*	3.37	2.41	0.84	1.18	2.01	3.17	1.16	0.45	0.22
Risk-free	0.69%	0.69%	0.70%	0.69%	0.69%	0.70%	0.69%	0.70%	0.69%

Note: Inception date for the portfolio is 11/2011. . Not all managers were in the portfolio as of 11/21.

Downside Protection and Upside Capture



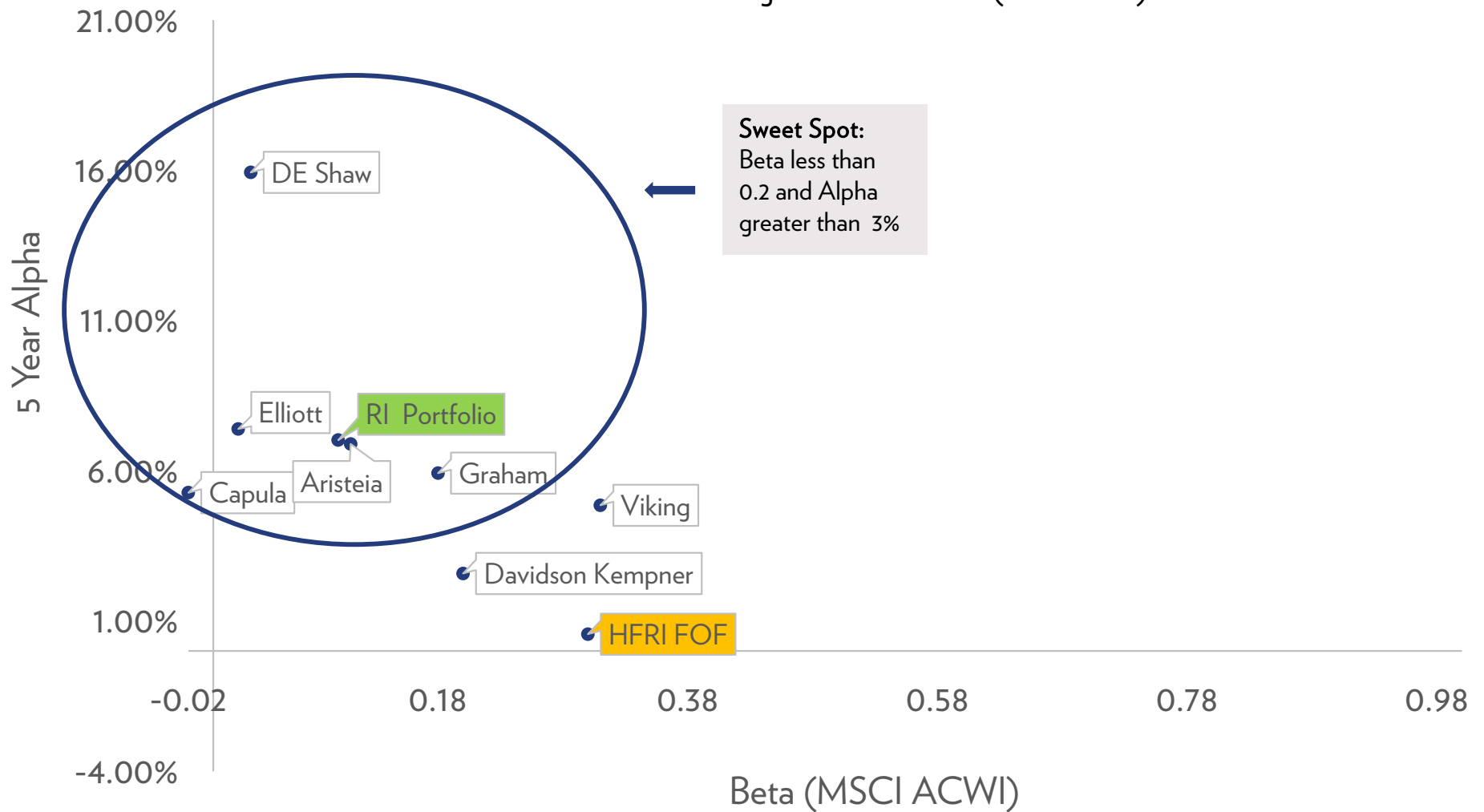
The RI Portfolio has produced superior downside capture generating on average positive returns in down equity markets

The RI Portfolio has produced upside market capture comparable to HFRI Fund of Funds Index

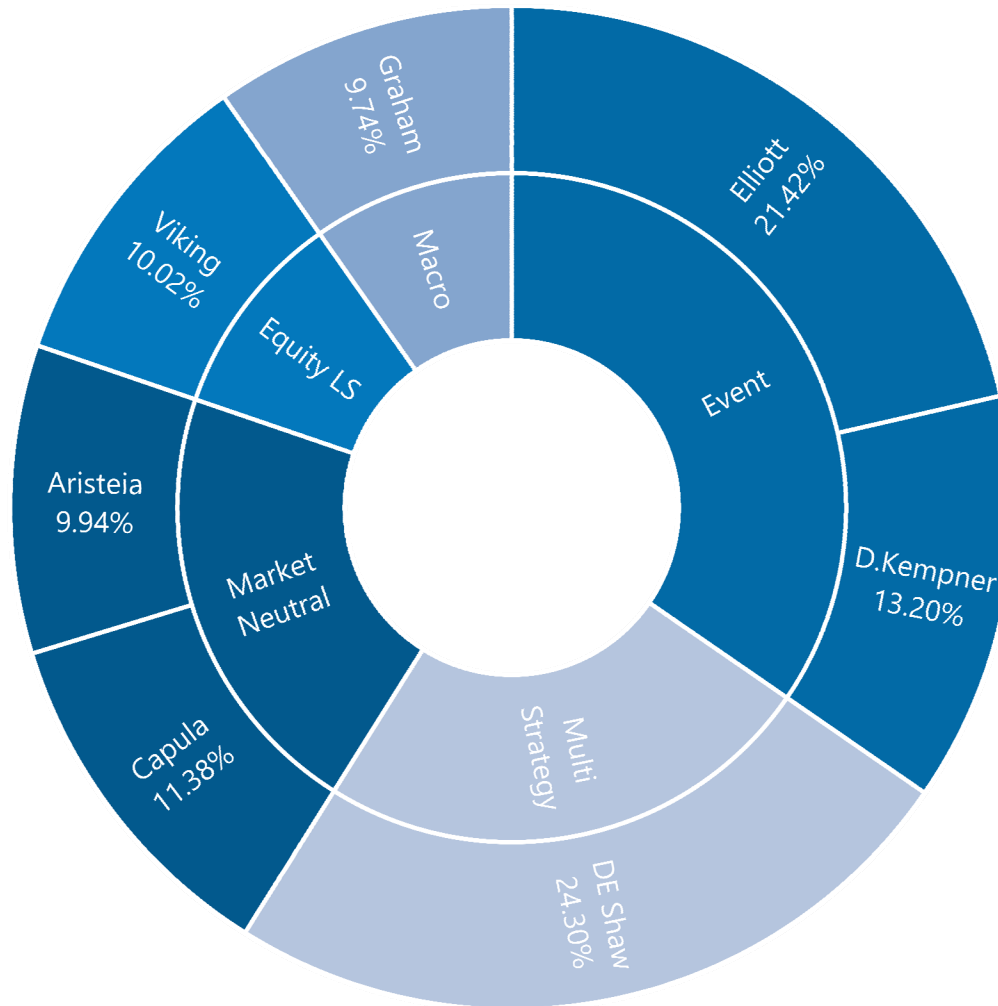
Portfolio Exposures

Beta and Alpha

5 Years ending December 2022 (net of fees)



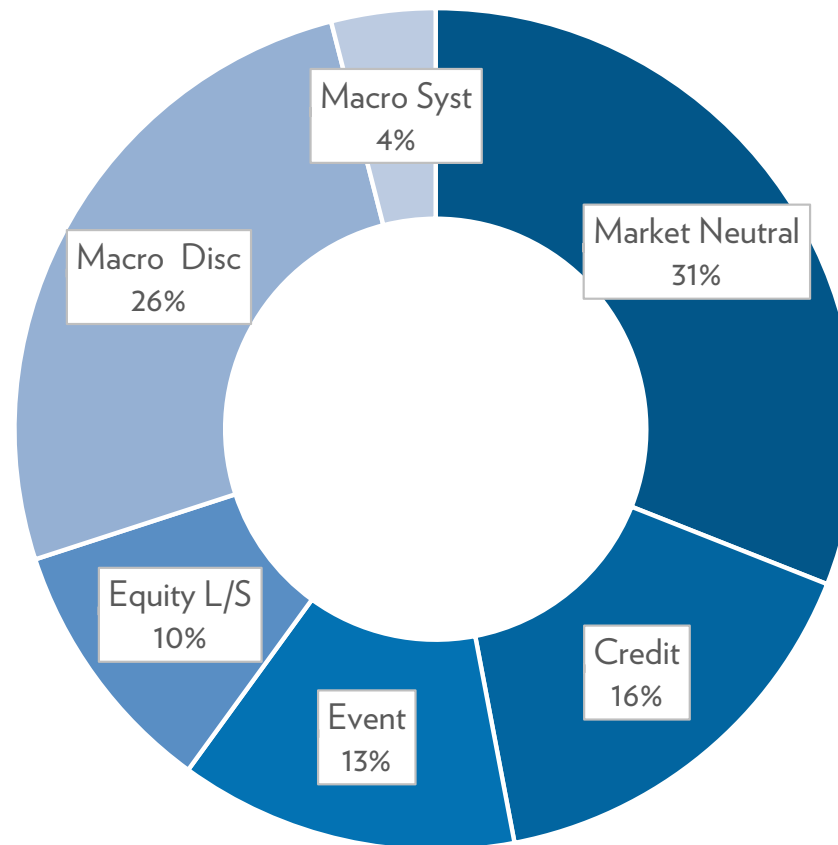
Strategy Exposure by Manager Target Strategy Q4 2022



Cliffwater Low-Risk Model Portfolio

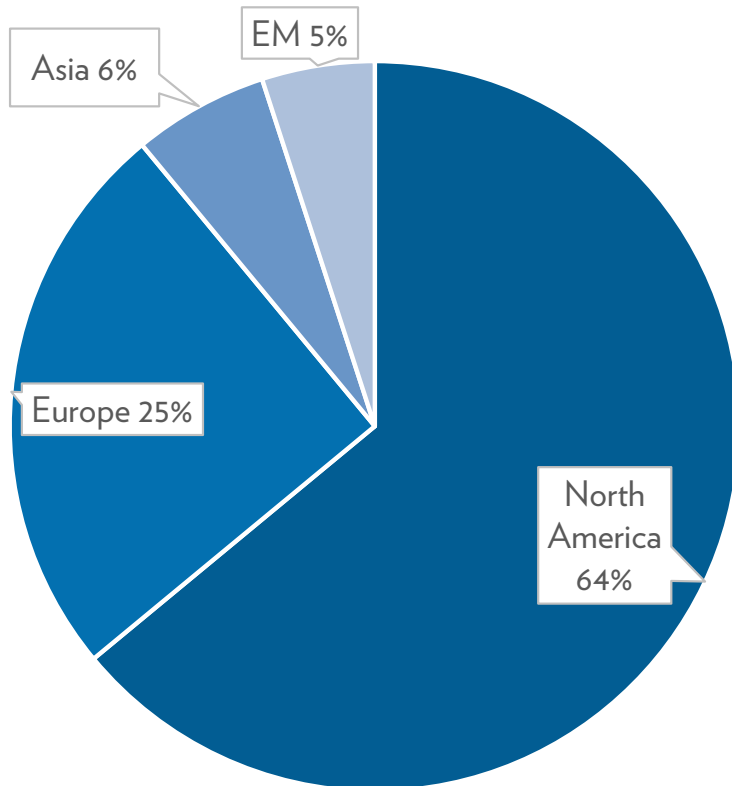
Sector	Target Weight
Market Neutral/Multi-Strategy	33%
Event Driven/Credit	30%
Macro	20%
Equity Long/Short	17%

Strategy Exposures by Manager Positioning Q4 2022

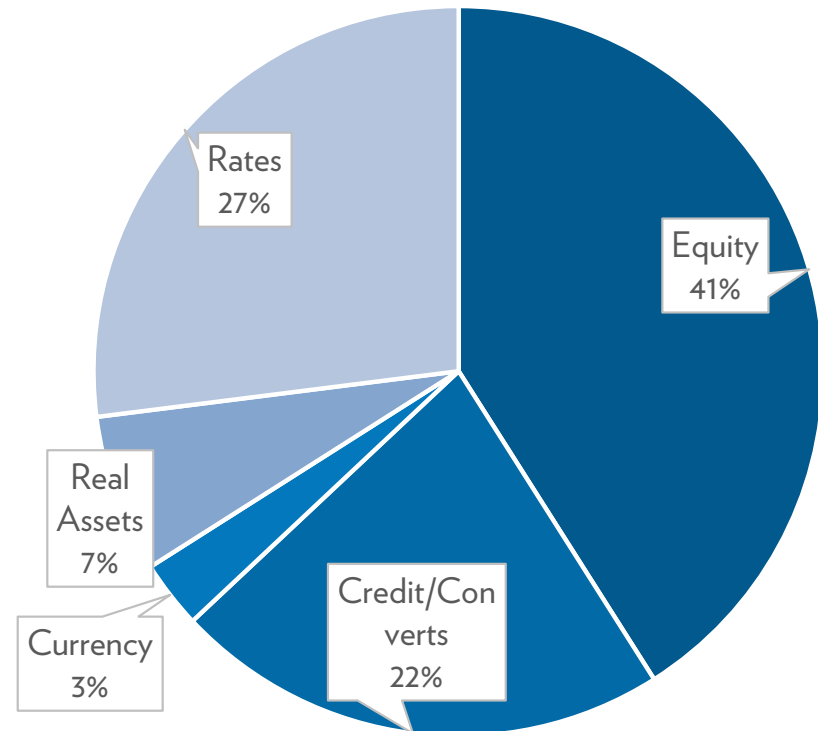


Portfolio Construction by Manager Positioning Q4 2022

Geographic Exposure



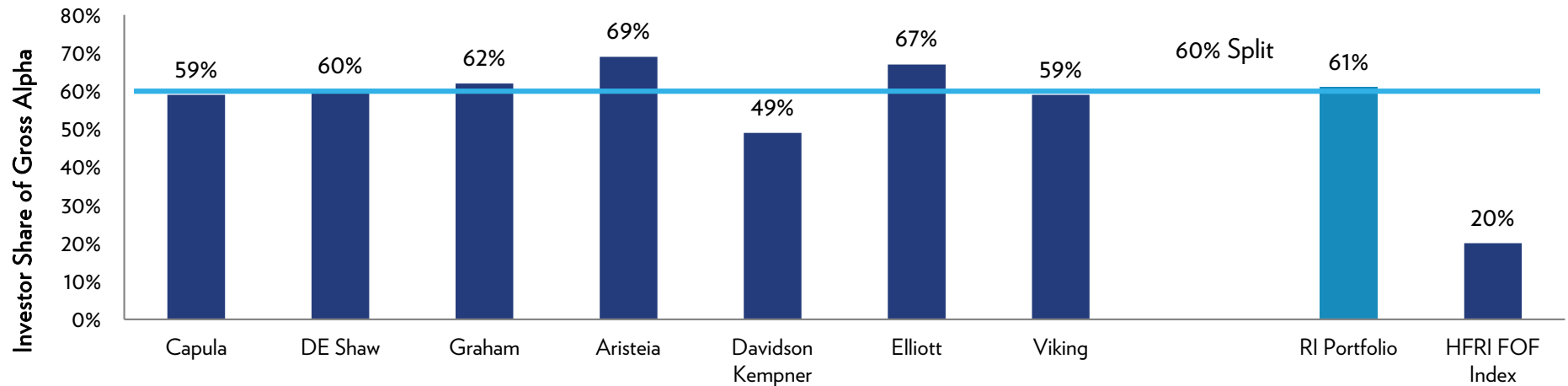
Asset Type Exposure



Fees Evaluation

Fee Evaluation

Share of Alpha



Five Year Performance

	Management Fee	Performance Fee	Net of Fees		Gross of Fees		Gross Alpha Split	
			Total Return	Alpha	Total Return	Alpha	Manager	Investor
			Capula	2.00%	20.00%	6.44%	5.27%	10.06%
DE Shaw	3.00%	30.00%	17.31%	15.93%	27.73%	26.35%	40%	60%
Graham	1.80%	20.00%	7.89%	5.92%	11.67%	9.70%	39%	61%
Aristeia	1.00%	20.00%	8.58%	6.89%	11.72%	10.04%	31%	69%
Davidson Kempner	1.50%	20.00%	4.62%	2.58%	7.28%	5.23%	51%	49%
Elliott	1.50%	20.00%	8.72%	7.39%	12.40%	11.07%	33%	67%
Viking	1.50%	20.00%	7.36%	4.85%	10.70%	8.19%	41%	59%
RI Portfolio	1.93%	22.55%	8.67%	7.02%	13.13%	11.47%	39%	61%
HFRI FOF Index	1.50%	20.00%	3.00%	0.56%	5.25%	2.81%	80%	20%

Note: HFRI FOF fees are assumed at industry norm of 1.50% and 20%. Data through Dec 2022