



Los Angeles • New York

Absolute Return Portfolio Review

Rhode Island State Investment Commission

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CLIFFWATER^{LIC}

Portfolio Background

New Absolute Return Portfolio Objectives

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

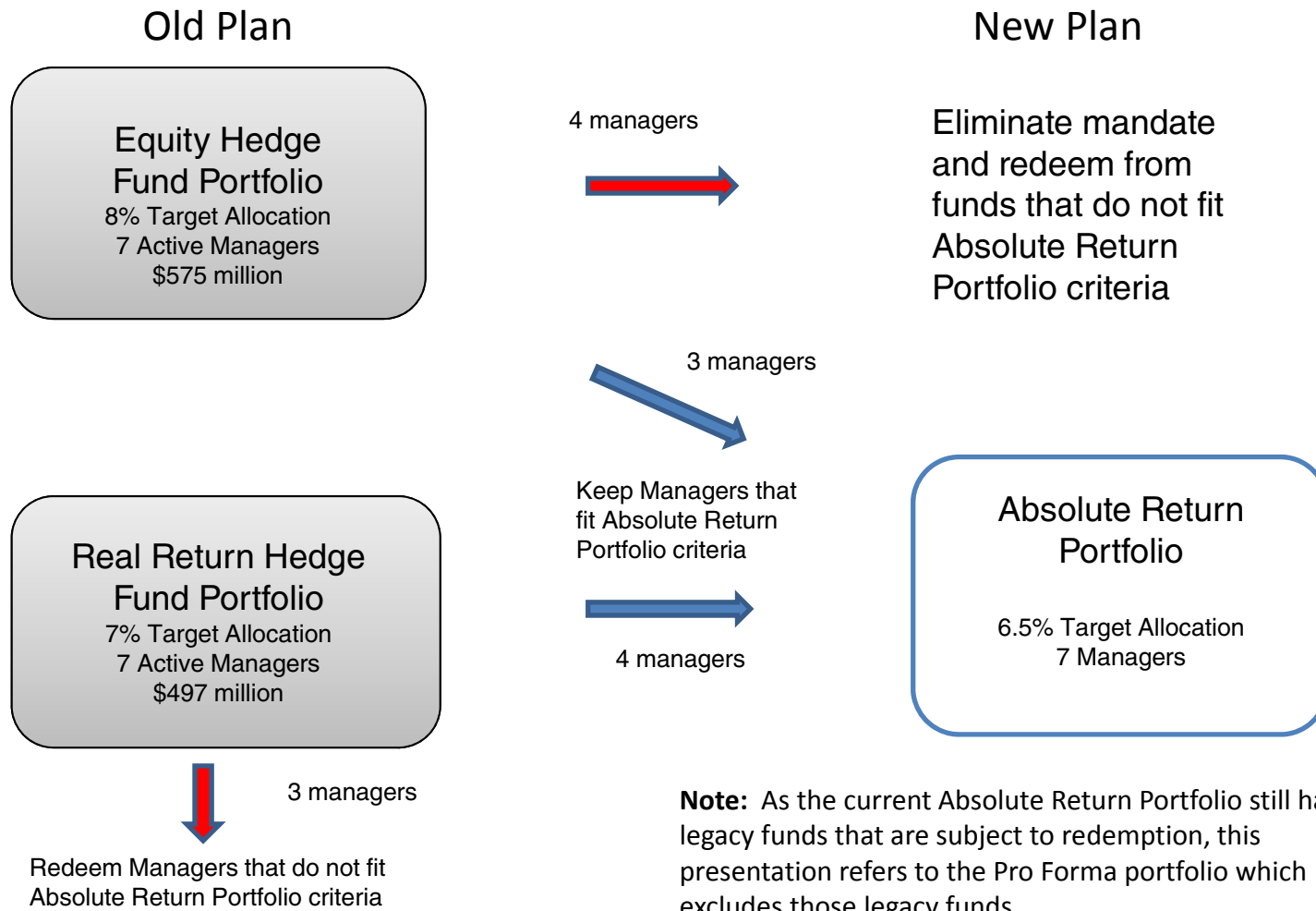
Portfolio objectives:

- Low equity beta/correlation
- Equity market downside protection
- Good alpha generation

PCA Assumptions:

- Return 4.95%
- Risk 9.75%

Transition Plan Overview





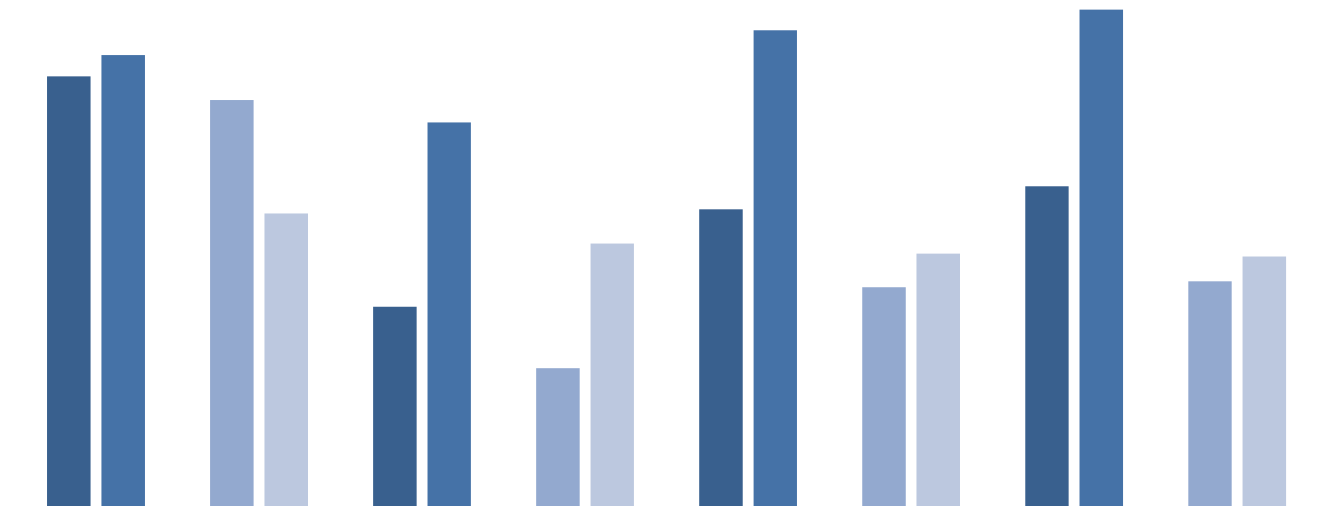
Performance Evaluation through February 2018

Performance Review – Total Return

Pro Forma and Actual portfolios have outperformed HFRI FoF Index over all periods.

The Pro Forma Portfolio has outperformed the Actual Portfolio in all periods .

Annualized Net Returns through February 2018



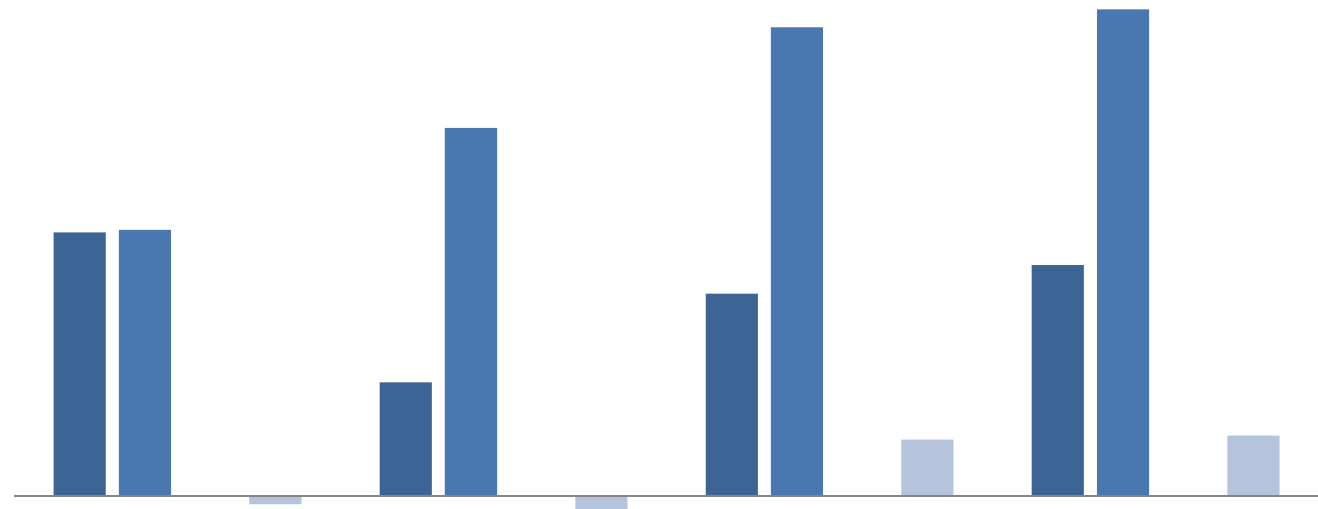
	1 Year	3 Year	5 Year	Since Inception
Actual	7.31%	3.41%	5.06%	5.45%
Pro Forma	7.67%	6.53%	8.09%	8.44%
HFRI FoF Index	6.91%	2.37%	3.74%	3.84%
T-Bills+4%	4.99%	4.48%	4.31%	4.26%

Performance Review – Alpha (to MSCI ACWI)

Annualized Net Returns through February 2018

Pro Forma Portfolio has generated strong alpha of 4.00% or higher over all periods

Actual Portfolio has generated less alpha due to legacy managers but more alpha than benchmark



■ Actual
 ■ Pro Forma
 ■ HFRI FoF Index

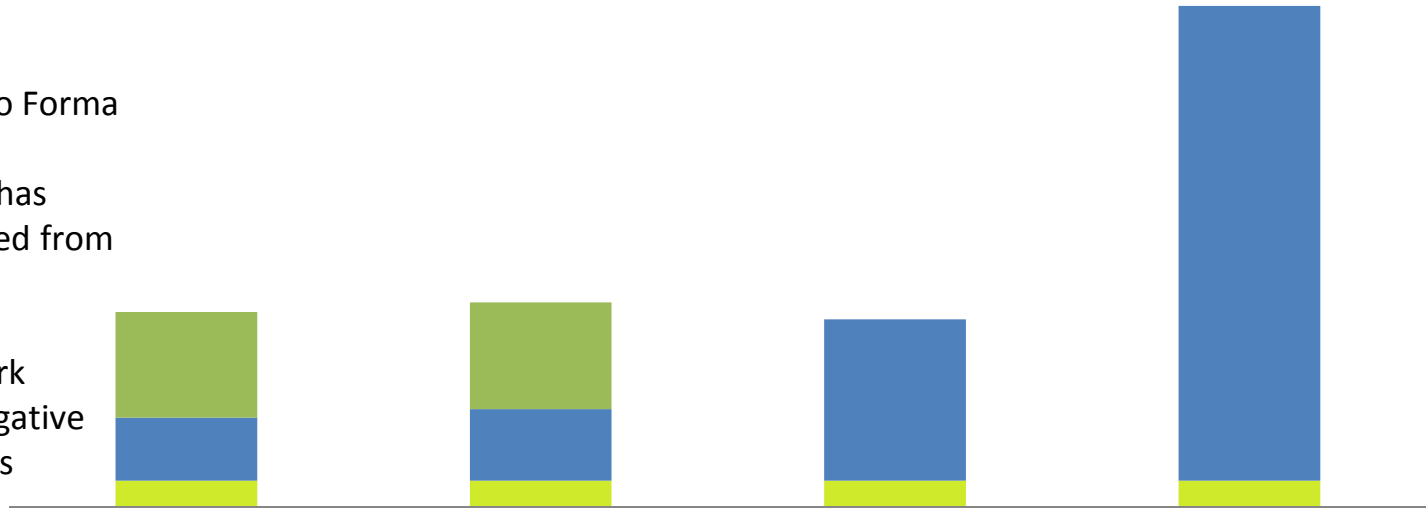
	1 Year	3 Year	5 Year	Since Inception
Actual	3.96%	1.71%	3.04%	3.47%
Pro Forma	4.00%	5.53%	7.04%	7.31%
HFRI FoF Index	-0.12%	-0.21%	0.85%	0.91%

Performance Review – One Year Attribution

Annualized Net Returns through February 2018

52% of the Pro Forma Portfolio's performance has been generated from Alpha

The benchmark generated negative alpha over this period



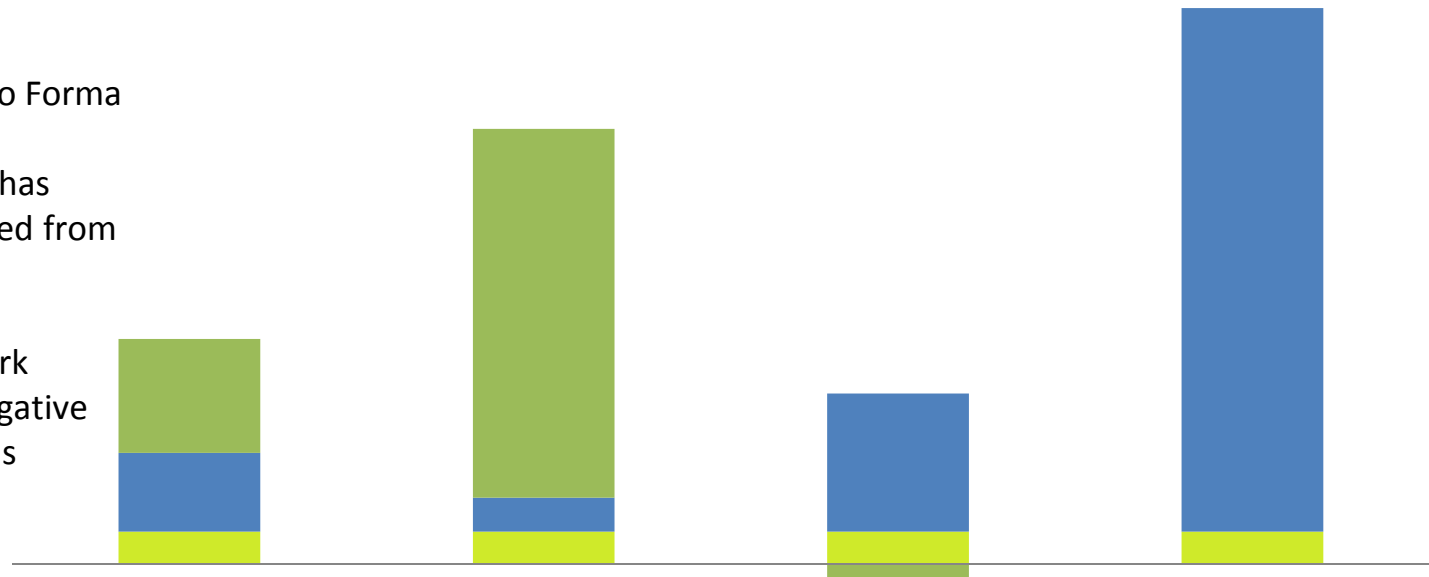
	Actual	Pro Forma	HFRI FoF Index	MSCI ACWI
Alpha	3.96%	4.00%	-0.12%	0.00%
Beta	2.36%	2.68%	6.04%	17.79%
Risk Free	0.99%	0.99%	0.99%	0.99%

Performance Review – Three Year Attribution

Annualized Net Returns through February 2018

85% of the Pro Forma Portfolio's performance has been generated from Alpha

The benchmark generated negative alpha over this period



Alpha

Beta

Risk Free

Actual

1.71%

1.18%

0.48%

Pro Forma

5.53%

0.51%

0.48%

HFRI FoF Index

-0.21%

2.07%

0.48%

MSCI ACWI

0.00%

7.85%

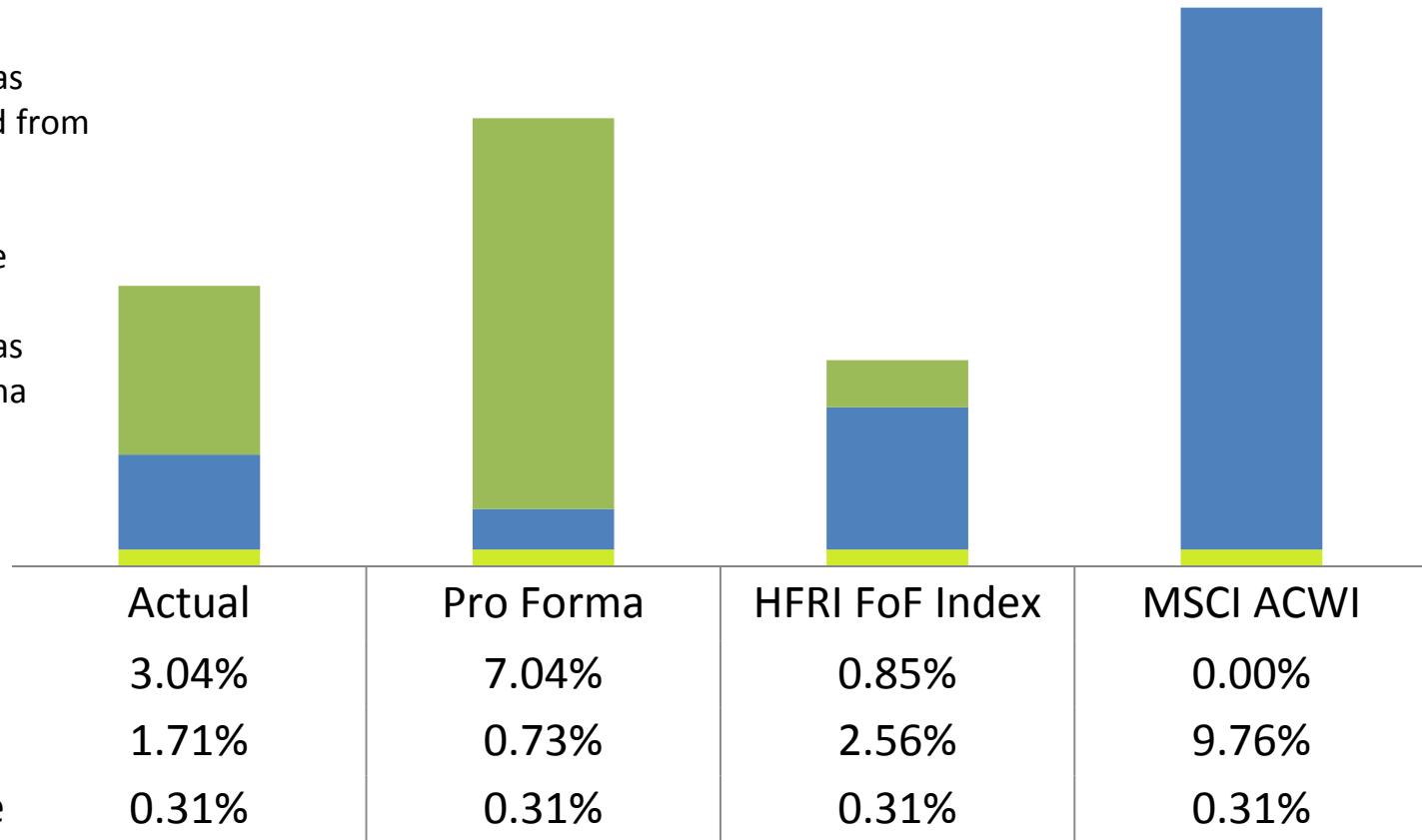
0.48%

Performance Review – Five Year Attribution

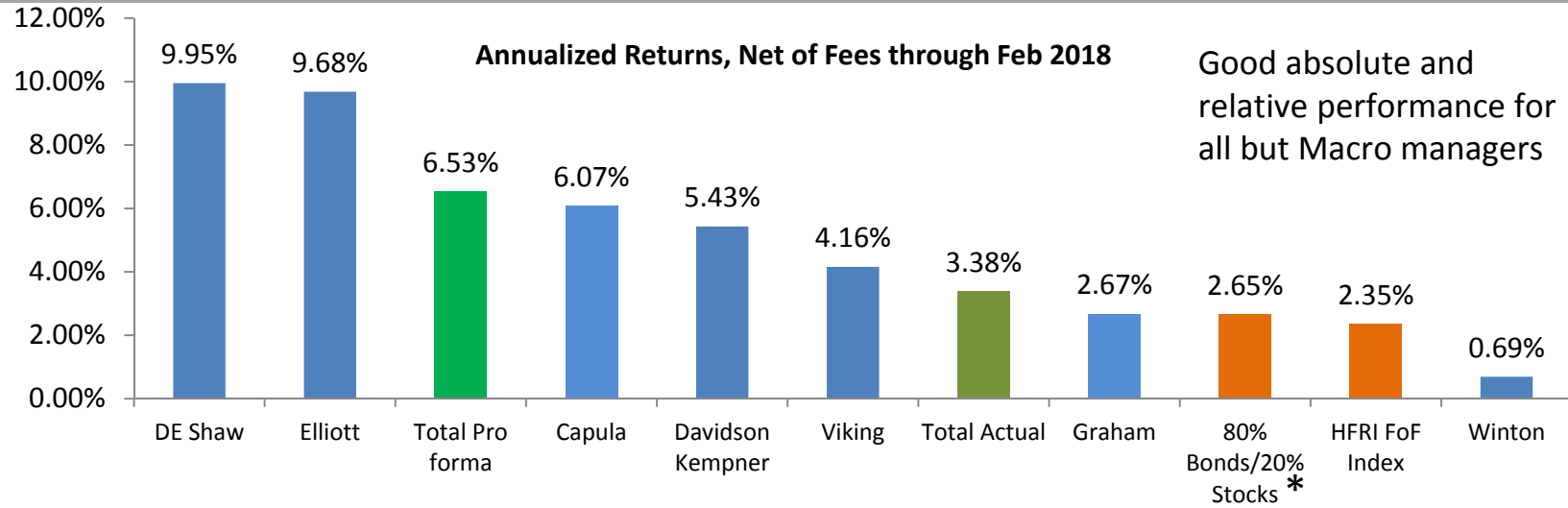
Annualized Net Returns through February 2018

87% of the Pro Forma Portfolio's performance has been generated from Alpha

Only 23% of the benchmark's performance has come from Alpha

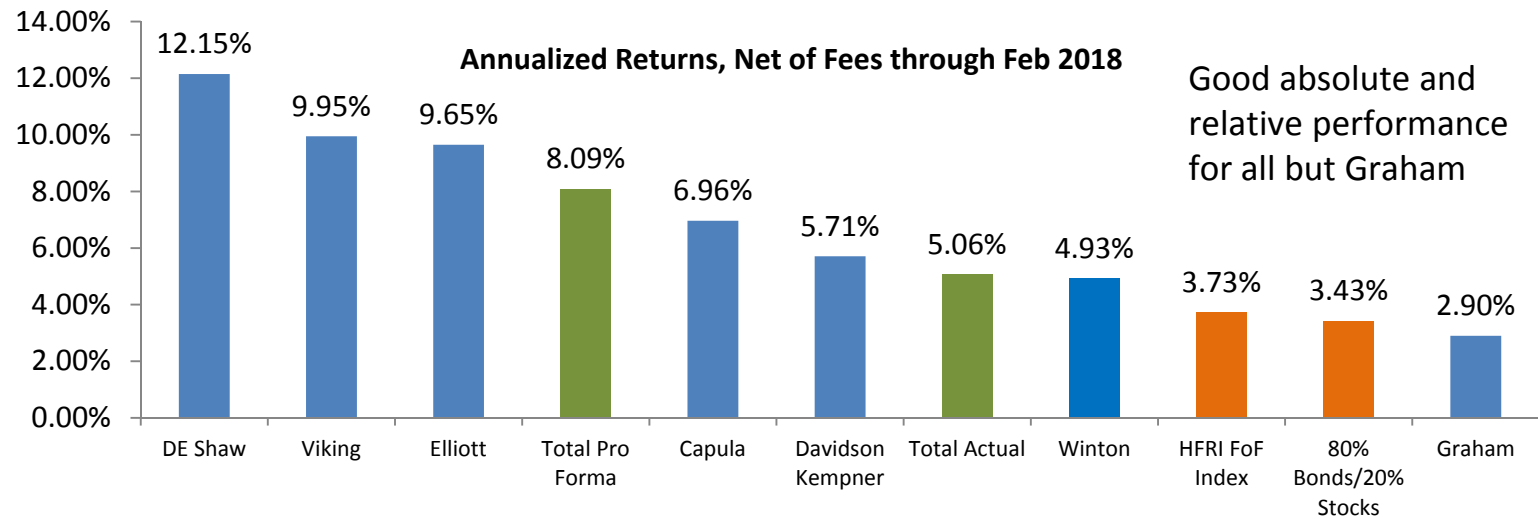


Manager Performance – Three Years



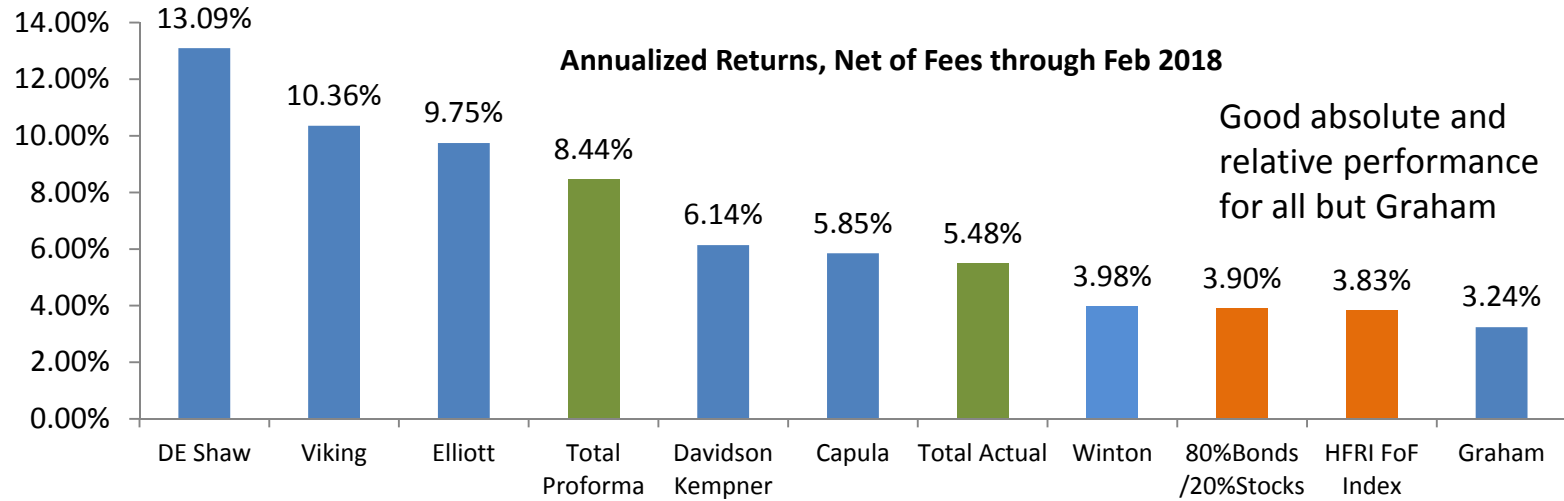
Three Years	Total Actual	Total Proforma	Capula	DE Shaw	Graham	Winton	Davidson Kempner	Elliott	Viking	HFRI FoF Index
#months	36	36	36	36	36	36	36	36	36	36
Total Return	3.38%	6.53%	6.07%	9.95%	2.67%	0.69%	5.43%	9.68%	4.16%	2.35%
Total Risk	2.89%	1.92%	1.67%	3.39%	6.96%	9.51%	1.70%	3.66%	8.21%	3.54%
Return/Risk	1.17	3.41	3.63	2.93	0.38	0.07	3.19	2.64	0.51	0.66
Correlation	0.58	0.39	(0.35)	0.17	0.09	0.06	0.48	0.13	0.41	0.82
Beta	0.15	0.07	(0.06)	0.05	0.05	0.05	0.07	0.04	0.31	0.26
Beta Return	1.18%	0.51%	-0.45%	0.39%	0.41%	0.36%	0.57%	0.31%	2.44%	2.07%
Beta Risk	1.63%	0.71%	-0.62%	0.54%	0.56%	0.49%	0.79%	0.43%	3.36%	2.86%
Alpha	1.71%	5.53%	6.04%	9.08%	1.78%	-0.15%	4.38%	8.88%	1.24%	-0.21%
Alpha Risk	2.38%	1.78%	1.55%	3.35%	6.93%	9.50%	1.51%	3.64%	7.49%	2.08%
Info Ratio*	0.72	3.11	3.89	2.71	0.26	(0.02)	2.90	2.44	0.17	(0.10)
Risk-free	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%

Manager Performance – Five Years



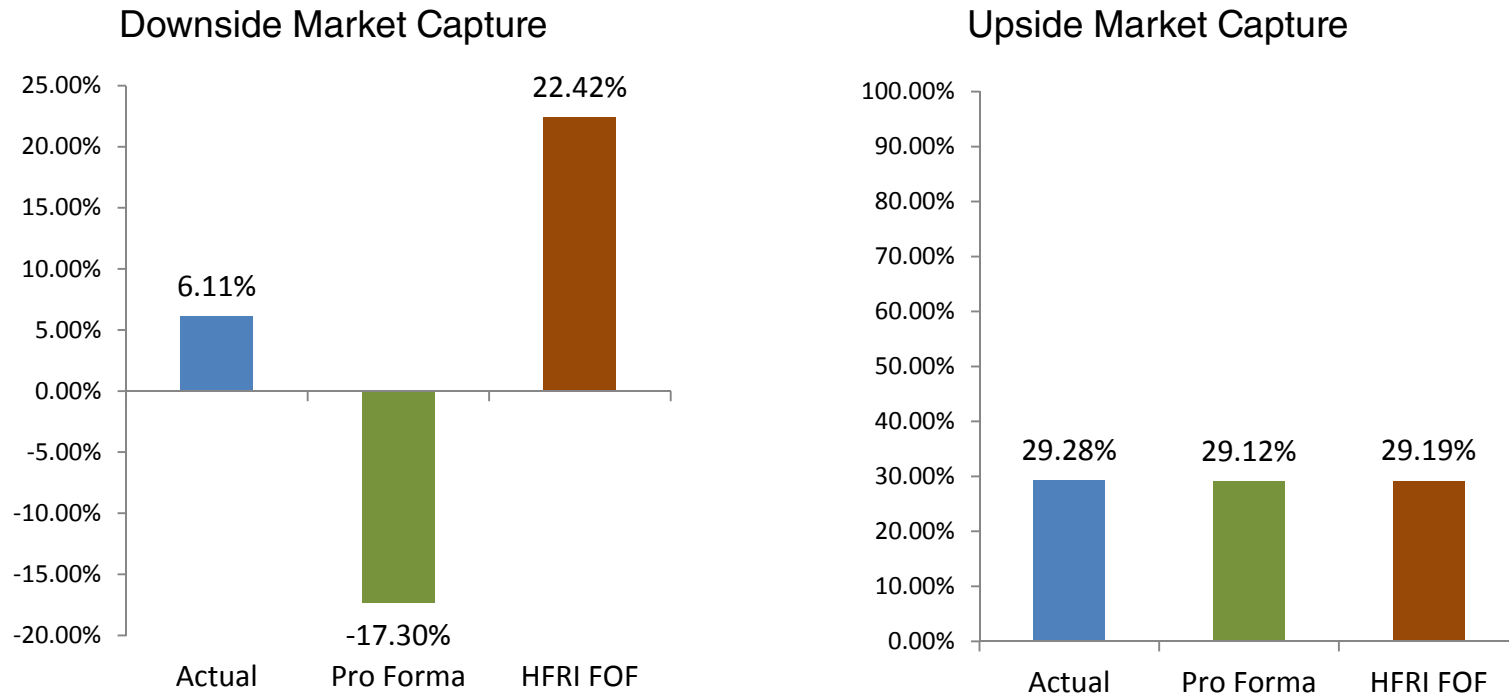
	Total Actual	Total Proforma	Capula	DE Shaw	Graham	Winton	Davidson Kempner	Elliott	Viking	HFRI FoF Index
Five Years										
#months	60	60	60	60	60	60	60	60	60	60
Total Return	5.06%	8.09%	6.96%	12.15%	2.90%	4.93%	5.71%	9.65%	9.95%	3.73%
Total Risk	3.09%	2.11%	1.78%	4.03%	6.15%	9.26%	2.06%	3.42%	7.78%	3.36%
Return/Risk	1.64	3.83	3.92	3.01	0.47	0.53	2.77	2.82	1.28	1.11
Correlation	0.59	0.37	(0.25)	0.17	(0.00)	0.22	0.43	0.07	0.43	0.81
Beta	0.18	0.08	(0.04)	0.07	(0.00)	0.20	0.09	0.02	0.33	0.26
Beta Return	1.71%	0.73%	-0.43%	0.66%	-0.04%	1.94%	0.83%	0.21%	3.22%	2.56%
Beta Risk	1.80%	0.77%	-0.45%	0.69%	-0.05%	2.04%	0.88%	0.22%	3.39%	2.69%
Alpha	3.04%	7.04%	7.08%	11.18%	2.63%	2.67%	4.56%	9.12%	6.42%	0.85%
Alpha Risk	2.52%	1.97%	1.72%	3.98%	6.15%	9.03%	1.87%	3.41%	7.00%	2.01%
Info Ratio*	1.21	3.58	4.12	2.81	0.43	0.30	2.44	2.67	0.92	0.42
Risk-free	0.31%	0.31%	0.31%	0.31%	0.31%	0.31%	0.31%	0.31%	0.31%	0.31%

Manager Performance – Since Inception



SI	Total Actual	Total Proforma	Capula	DE Shaw	Graham	Winton	Davidson Kempner	Elliott	Viking	HFRI FoF Index
#months	76	74	75	76	74	75	76	76	75	76
Total Return	5.48%	8.44%	5.85%	13.09%	3.24%	3.98%	6.14%	9.75%	10.36%	3.83%
Total Risk	3.00%	2.06%	1.89%	4.12%	5.65%	8.81%	1.96%	3.54%	7.10%	3.39%
Return/Risk	1.83	4.09	3.10	3.18	0.57	0.45	3.13	2.75	1.46	1.13
Correlation	0.60	0.40	(0.32)	0.18	0.04	0.17	0.50	0.25	0.43	0.81
Beta	0.17	0.08	(0.06)	0.07	0.02	0.14	0.09	0.08	0.28	0.26
Beta Return	1.74%	0.86%	-0.64%	0.71%	0.22%	1.55%	0.93%	0.85%	3.15%	2.65%
Beta Risk	1.80%	0.82%	-0.61%	0.74%	0.21%	1.50%	0.96%	0.88%	3.03%	2.74%
Alpha	3.47%	7.31%	6.22%	12.12%	2.75%	2.16%	4.94%	8.63%	6.94%	0.91%
Alpha Risk	2.40%	1.89%	1.79%	4.05%	5.64%	8.68%	1.71%	3.43%	6.42%	1.99%
Info Ratio*	1.45	3.86	3.48	2.99	0.49	0.25	2.89	2.52	1.08	0.46
Risk-free	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%

Downside/Upside Equity Market Capture



The Pro Forma Portfolio has produced superior downside capture (negative), generating on average positive returns in down equity markets

The Pro Forma Portfolio has produced upside market capture comparable to Actual Portfolio and HFRI Fund of Funds Index

Note: Data for period Jan 2012 – Feb 2018

Comparison to Public Fund Universe (Four Years through Fiscal 2016)

Fund	FY 2013	FY 2014	FY 2015	FY 2016	4-Year Return (annualized)
Texas TRS	28.80%	12.30%	13.60%	6.20%	14.93%
Rhode Island - Pro Forma	11.69%	10.41%	8.83%	4.14%	8.73%
MPERS (MoDOT & Patrol ERS)	8.71%	23.84%	5.20%	-8.49%	6.70%
Missouri PSRS / PEERS	8.50%	15.80%	3.20%	-1.40%	6.33%
South Carolina RS	12.21%	9.99%	8.62%	-4.94%	6.25%
MOSERS	8.50%	8.90%	5.90%	1.10%	6.05%
Vermont MERS / SERS / STRS	12.90%	16.10%	1.10%	-4.90%	5.95%
Illinois Judges / SERS	12.60%	15.00%	6.00%	-8.90%	5.75%
TCDRS	12.70%	10.59%	3.60%	-4.65%	5.34%
CalStrs	7.91%	6.05%	5.40%	2.00%	5.32%
Alaska PERS / TRS	8.41%	6.51%	9.24%	-3.09%	5.15%
New Jersey PERS	12.58%	9.74%	4.21%	-5.13%	5.13%
Rhode Island - Actual	11.31%	8.81%	4.70%	-3.77%	5.11%
Illinois Teachers	10.50%	9.10%	3.90%	-2.60%	5.10%
Mass PRIT/PRIM	12.24%	10.78%	3.68%	-5.37%	5.10%
CalPERS	7.40%	7.10%	7.30%	-1.70%	4.95%
Texas TRS	5.50%	5.10%	5.20%	2.50%	4.57%
Pennsylvania Public Schools ERS	4.01%	13.12%	4.30%	-3.43%	4.34%
Alaska Permanent Fund	8.70%	7.61%	1.70%	-1.92%	3.93%
North Carolina RS	6.50%	8.21%	1.50%	-1.50%	3.60%
Texas TRS	10.00%	12.60%	1.40%	-9.20%	3.34%
New Mexico PERA	9.45%	1.89%	6.24%	-3.93%	3.29%
New Mexico Permanent Fund (SIC)	8.33%	9.22%	0.01%	-4.43%	3.12%
West Virginia Inv Mgm't Board	10.72%	0.10%	6.00%	-4.70%	2.86%
Wisconsin RS (SWIB) Core Fund	6.52%	6.17%	4.39%	-5.21%	2.85%
Connecticut RS	6.39%	6.63%	3.98%	-5.32%	2.80%
Ohio School Employees RS	11.00%	0.10%	3.70%	-3.50%	2.69%
Kentucky ERS Pension Fund	12.30%	8.46%	-3.98%	-6.26%	2.33%
New Mexico ERB	4.80%	1.60%	4.70%	-1.90%	2.26%
Maryland State RPS	3.40%	7.60%	0.70%	-3.00%	2.10%



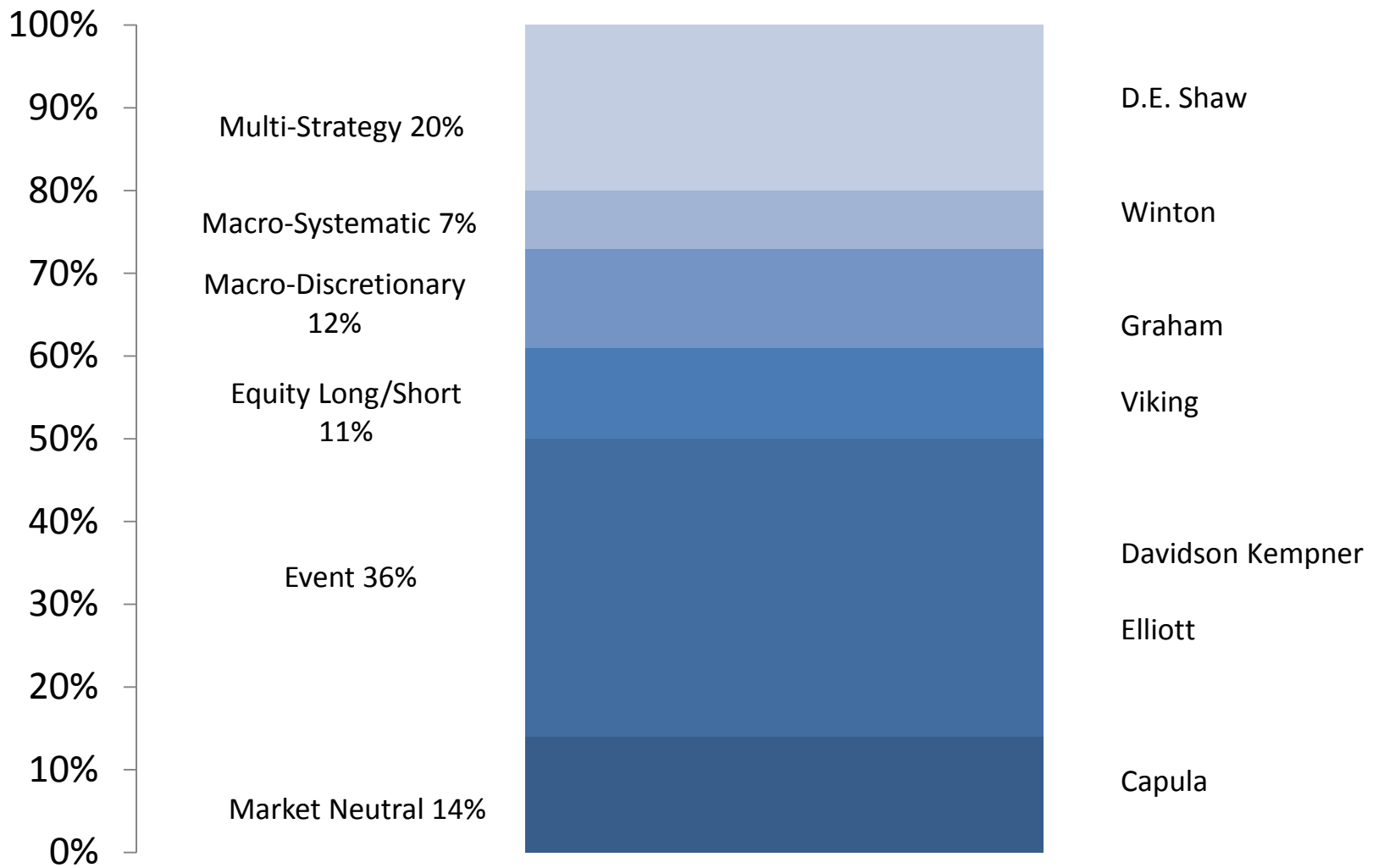
Portfolio Exposures – Pro Forma Portfolio

Portfolio versus Construction Objectives

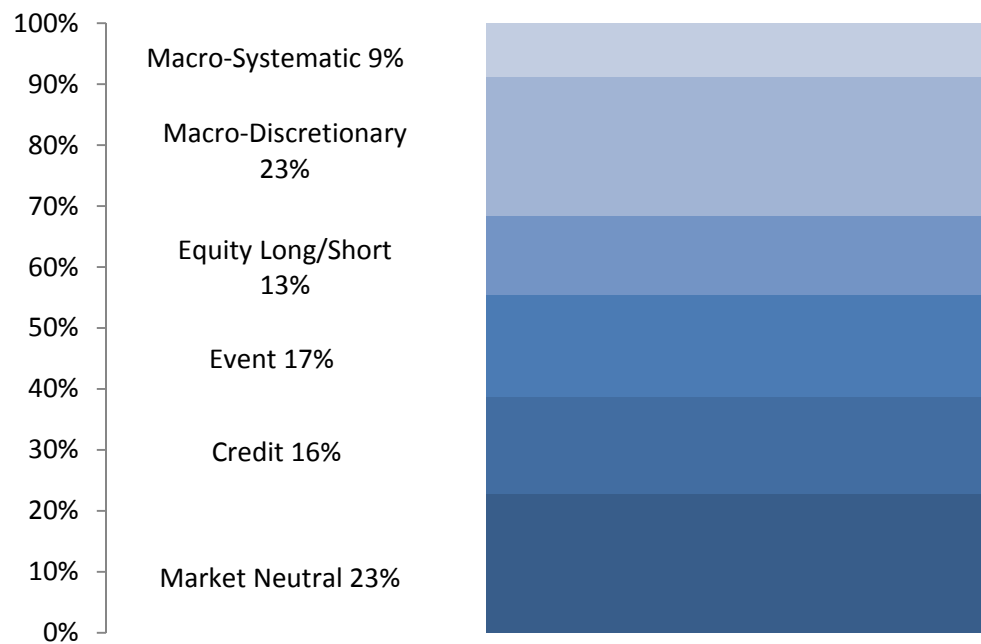
Five Year Beta (ACWI)			Five Year Alpha (annualized, net)	
Capula	(0.04)		11.18%	DE Shaw
Graham	0.00		9.12%	Elliott
Elliott	0.02		7.08%	Capula
DE Shaw	0.07		7.04%	Total Pro Forma
Total Pro Forma	0.08	← Low Beta	6.42%	Viking
Davidson Kempner	0.09		4.56%	Davidson Kempner
Total Actual	0.18	and	3.04%	Total Actual
Winton	0.20		2.67%	Winton
HFRI FoF Index	0.26		2.63%	Graham
Viking	0.33		0.85%	HFRI FoF Index

High Alpha ↗

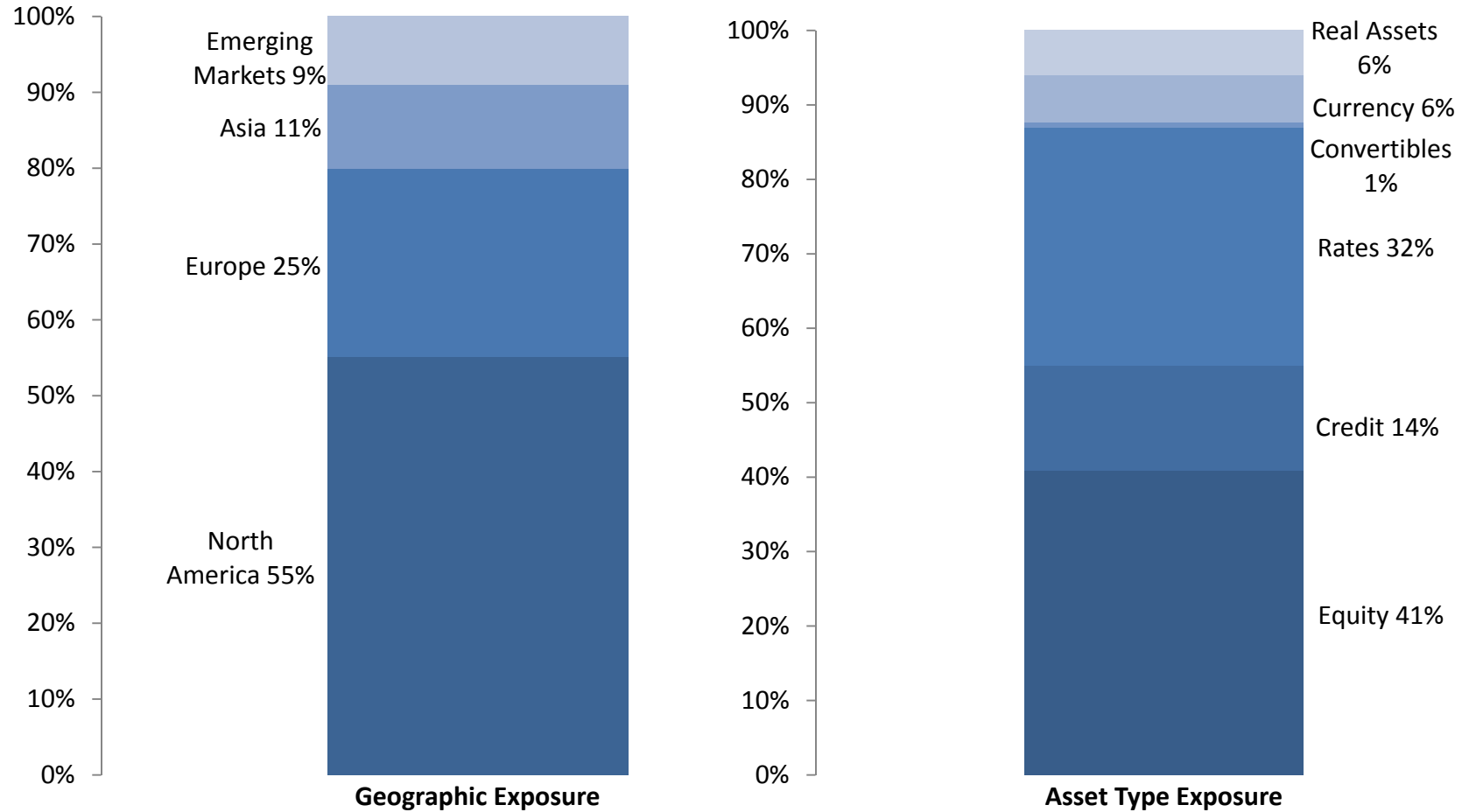
Portfolio Construction (Strategy Allocation by Cliffwater Manager Designation)



Portfolio Construction (Manager Portfolio Positioning)



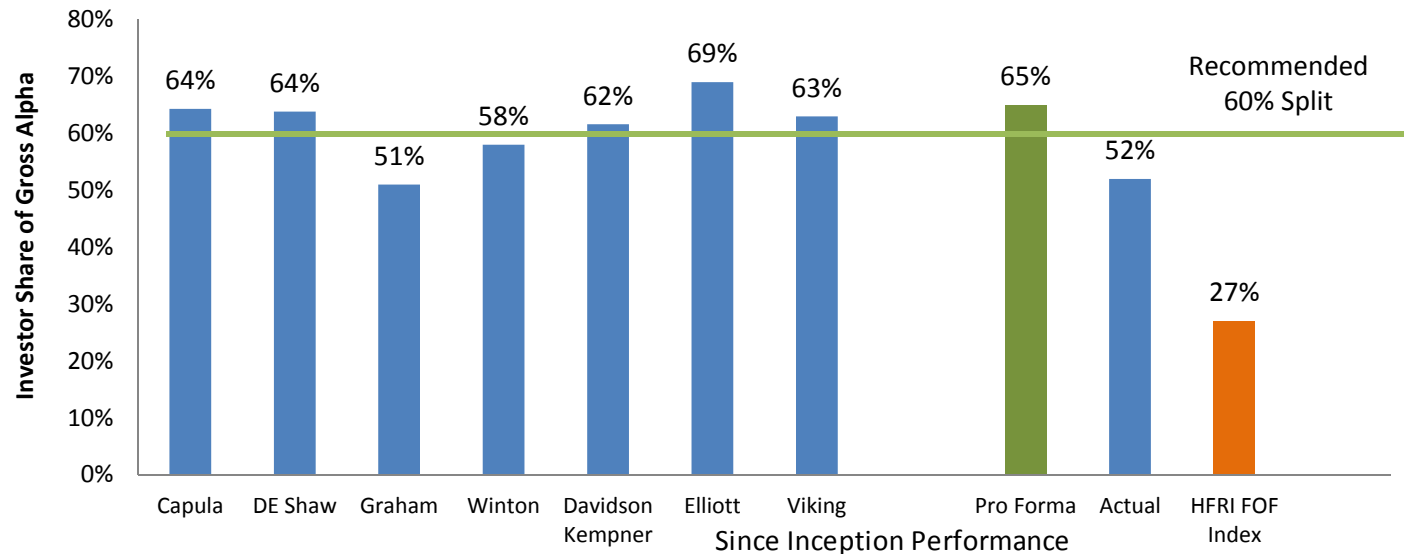
Portfolio Construction – Geography and Asset Type





Fees and Economics

Fees and Sharing of Economics



	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%	5.85%	6.22%	9.31%	9.68%	36%	64%
DE Shaw	2.50%	25.00%	13.09%	12.12%	19.96%	18.98%	36%	64%
Graham	1.80%	20.00%	3.24%	2.75%	5.85%	5.36%	49%	51%
Winton	0.80%	16.00%	3.98%	2.16%	5.53%	3.71%	42%	58%
Davidson Kempner	1.50%	20.00%	6.14%	4.94%	9.18%	7.98%	38%	62%
Elliott	1.50%	20.00%	9.75%	8.63%	13.68%	12.57%	31%	69%
Viking	1.50%	20.00%	10.36%	6.94%	14.44%	11.03%	37%	63%
Total Pro Forma	1.76%	20.67%	8.44%	7.31%	12.40%	11.27%	35%	65%
Actual Portfolio	1.75%	20.48%	5.48%	3.47%	8.64%	6.63%	48%	52%
HFRI FOF Index	1.50%	20.00%	3.83%	0.91%	6.29%	3.37%	73%	27%

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