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#### **Absolute Return Portfolio Review**

Rhode Island State Investment Commission

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**Observations and Recommendations** 

#### Observations and Recommendations

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

Most funds in the portfolio have met expectations

#### Two recommendations:

- 1. Redemption from Winton due to performance and overlap with CPC portfolio
- 2. Evaluate other Market Neutral strategies for potential replacement of Winton

#### Notes on analysis:

- 1. Actual returns and pro forma returns are shown for the portfolio. Pro forma return represents what the portfolio would have returned using the current managers, the actual returns of the current managers, and the current manager weights.
- 2. Alpha and beta calculations based on regression calculations and are relative to MSCI ACWI





Portfolio Objectives

## 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

#### **NEPC Assumptions:**

Return 5.7% Risk 8.1%





Performance Evaluation through June 2020

### Performance Review – Total Return

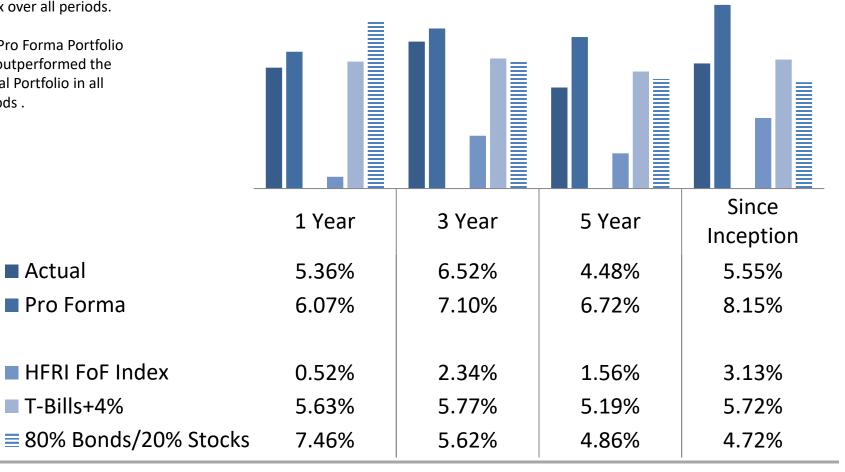
Pro Forma and Actual portfolios have outperformed HFRI FoF Index over all periods.

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

Actual

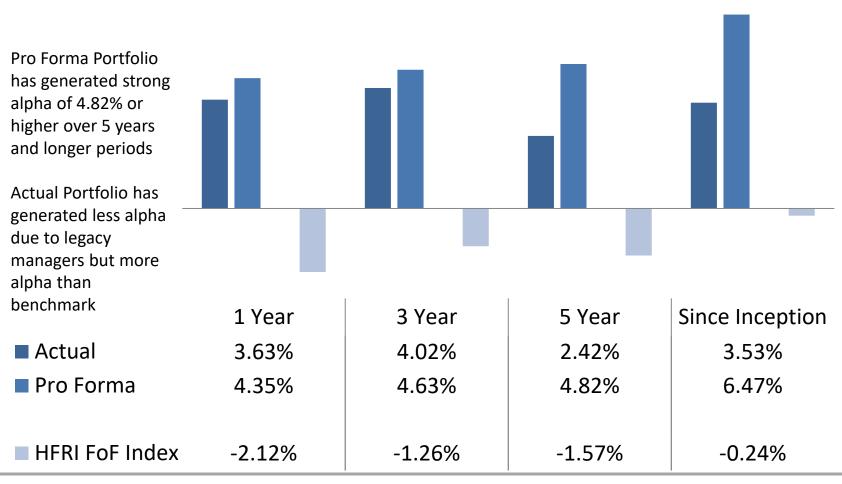
■ Pro Forma

■ T-Bills+4%



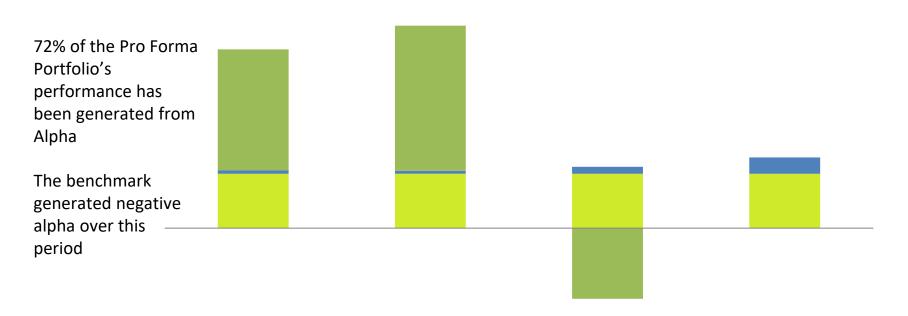


## Performance Review – Alpha (to MSCI ACWI)





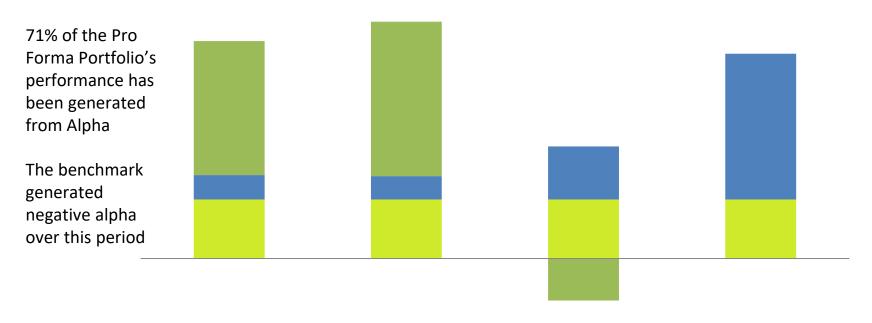
### Performance Review – One Year Attribution



	Actual	Pro Forma	HFRI FoF Index	MSCI ACWI
Alpha	3.63%	4.35%	-2.12%	0.00%
Beta	0.10%	0.09%	0.21%	0.49%
Risk Free	1.63%	1.63%	1.63%	1.63%



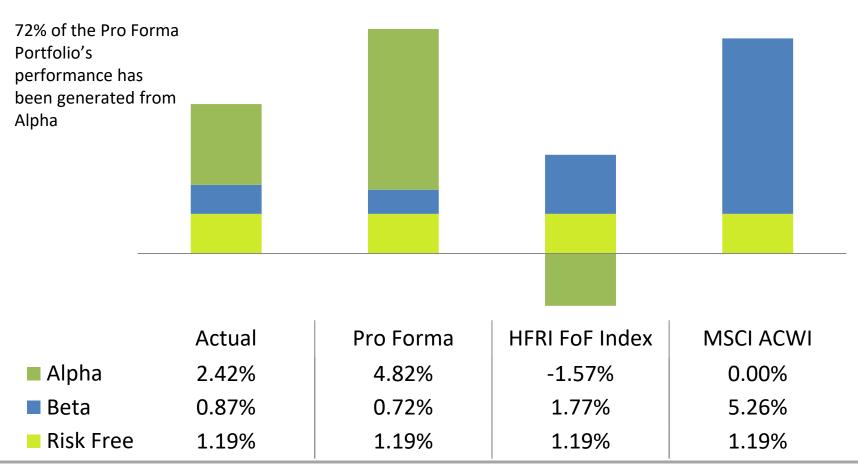
### Performance Review – Three Year Attribution



	Actual	Pro Forma	HFRI FoF Index	MSCI ACWI
Alpha	4.02%	4.63%	-1.26%	0.00%
■ Beta	0.73%	0.70%	1.59%	4.37%
Risk Free	1.77%	1.77%	1.77%	1.77%

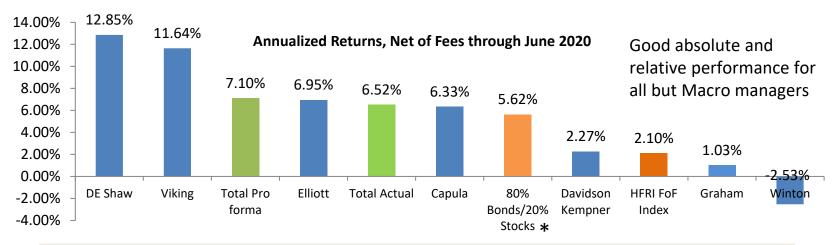


#### Performance Review – Five Year Attribution





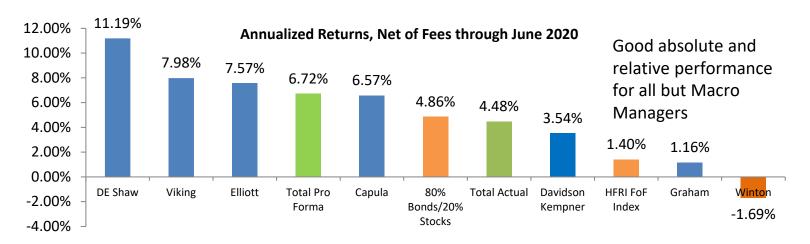
## Manager Performance – Three Years



	Total	Total Pro					Davidson		j	HFRI FoF
Three Years	Actual	Forma	Capula	DE Shaw	Graham	Winton	Kempner	Elliott	Viking	Index
#months	36	36	36	36	36	36	36	36	36	36
Total Return	6.52%	7.10%	6.33%	12.85%	1.03%	-2.53%	2.27%	6.95%	11.64%	2.10%
Total Risk	3.28%	3.20%	1.41%	4.35%	9.89%	9.30%	5.78%	3.08%	8.54%	6.39%
Return/Risk	1.99	2.22	4.50	2.95	0.10	(0.27)	0.39	2.25	1.36	0.33
Correlation	0.80	0.78	(0.13)	0.15	0.73	0.46	0.73	0.28	0.70	0.92
Beta	0.17	0.16	(0.00)	0.05	0.45	0.26	0.26	0.06	0.37	0.36
Beta Return	0.73%	0.70%	-0.02%	0.20%	1.95%	1.16%	1.15%	0.26%	1.61%	1.59%
Beta Risk	2.70%	2.59%	-0.08%	0.76%	7.25%	4.30%	4.28%	0.95%	5.99%	5.92%
Alpha	4.02%	4.63%	4.59%	10.88%	-2.69%	-5.45%	-0.65%	4.93%	8.26%	-1.26%
Alpha Risk	1.86%	1.88%	1.41%	4.28%	6.73%	8.24%	3.87%	2.93%	6.08%	2.39%
Info Ratio*	2.16	2.47	3.27	2.54	(0.40)	(0.66)	(0.17)	1.68	1.36	(0.53)
Risk-free	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%	1.77%



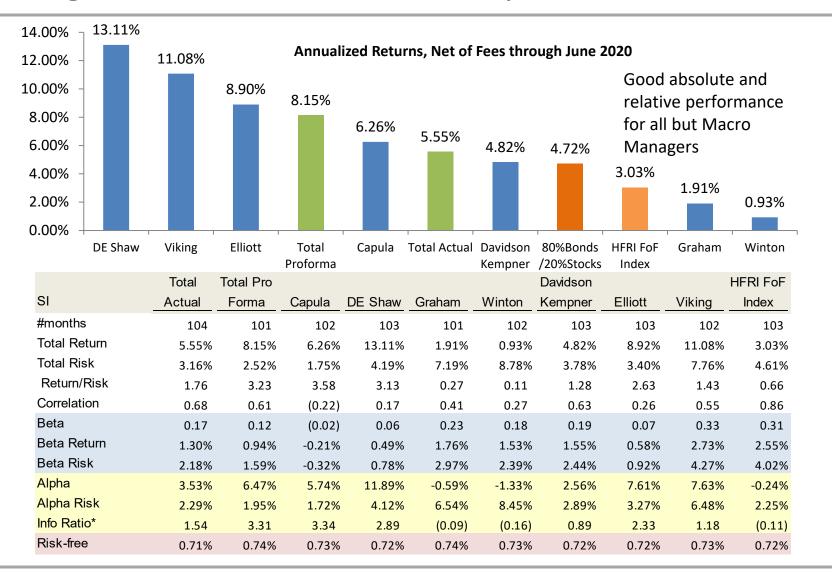
## Manager Performance – Five Years



	Total	Total Pro					Davidson			HFRI FoF
Five Years	Actual	Forma	Capula	DE Shaw	Graham	Winton	Kempner	Elliott	Viking	Index
#months	60	60	60	60	60	60	60	60	60	60
Total Return	4.48%	6.72%	6.57%	11.19%	1.16%	-1.69%	3.54%	7.57%	7.98%	1.40%
Total Risk	3.22%	2.66%	1.54%	3.90%	8.69%	8.98%	4.60%	3.56%	8.93%	5.40%
Return/Risk	1.39	2.52	4.27	2.87	0.13	(0.19)	0.77	2.13	0.89	0.26
Correlation	0.73	0.72	(0.16)	0.17	0.52	0.27	0.67	0.24	0.59	0.89
Beta	0.17	0.14	(0.01)	0.05	0.32	0.17	0.22	0.06	0.36	0.34
Beta Return	0.87%	0.72%	-0.06%	0.26%	1.66%	0.89%	1.14%	0.33%	1.91%	1.77%
Beta Risk	2.40%	1.97%	-0.18%	0.73%	4.58%	2.45%	3.15%	0.92%	5.26%	4.88%
Alpha	2.42%	4.82%	5.44%	9.74%	-1.70%	-3.77%	1.20%	6.05%	4.87%	-1.57%
Alpha Risk	2.16%	1.79%	1.53%	3.83%	7.39%	8.64%	3.35%	3.44%	7.22%	2.31%
Info Ratio*	1.12	2.69	3.56	2.54	(0.23)	(0.44)	0.36	1.76	0.68	(0.68)
Risk-free	1.19%	1.19%	1.19%	1.19%	1.19%	1.19%	1.19%	1.19%	1.19%	1.19%

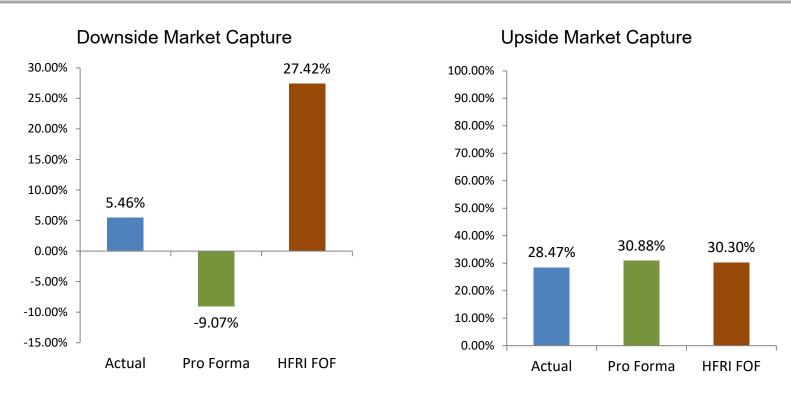


## Manager Performance – Since Inception





### Downside/Upside Equity Market (MSCI ACWI) 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 – June 2020





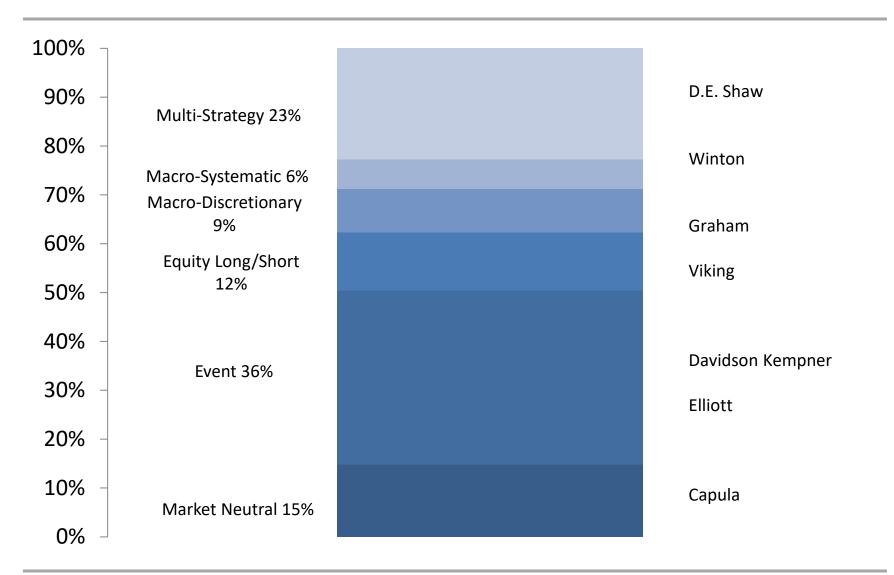
Portfolio Exposures

# Portfolio versus Construction Objectives

Five Year Beta (AC	CWI)		Five Year Alpha (annualized, net)
Capula	(0.01)		9.74% DE Shaw
DE Shaw	0.05	Objective for the Absolute Return	6.05% Elliott
Elliott	0.06	Absolute Neturn	5.44% Capula
Total Pro Forma	0.14	← Low Beta	4.87% Viking
Winton	0.17	and	4.82% Total Pro Forma
Davidson Kempner	0.22	anu	1.20% Davidson Kempner
Graham	0.32	High Alpha	-1.57% HFRI FoF Index
HFRI FoF Index	0.34		-1.70% Graham
Viking	0.36		-3.77% Winton

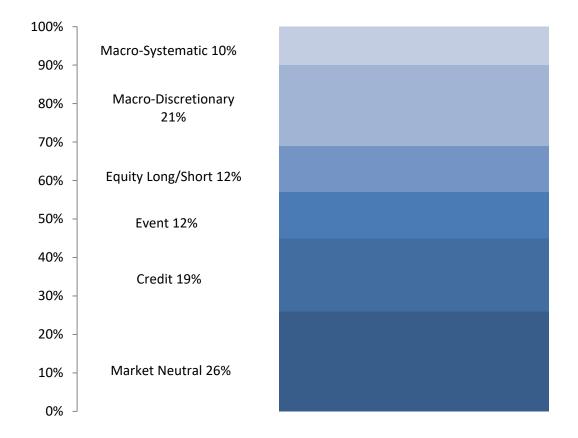


#### Portfolio Construction (Strategy Allocation by Cliffwater Manager Designation)



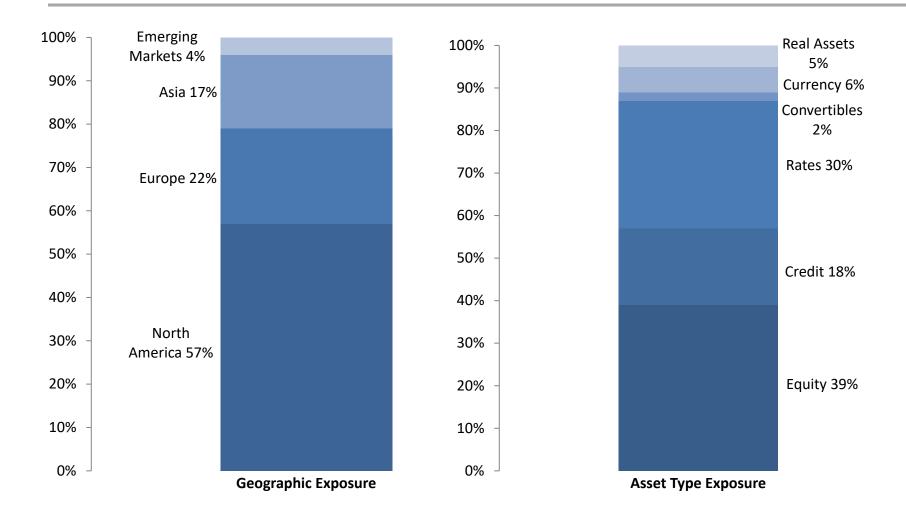


### Portfolio Construction (Manager Portfolio Positioning)





### Portfolio Construction – Geography and Asset Type

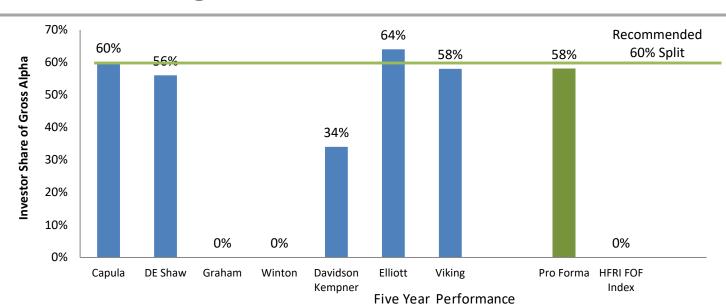






Fees and Economics

## Fees and Sharing of Economics



			Net of	Fees	Gross of	Fees		
	Management	Performance	Total		Total		Gross Alp	ha Split
_	Fee	Fee	Return	Alpha	Return	Alpha	Manager	Investor
Capula	2.00%	20.00%	6.57%	5.44%	10.21%	9.08%	40%	60%
DE Shaw	3.00%	30.00%	11.19%	9.74%	18.99%	17.53%	44%	56%
Graham	1.80%	20.00%	1.16%	-1.70%	3.25%	0.39%	535%	-435%
Winton	0.80%	16.00%	-1.69%	-3.77%	-1.21%	-3.30%	-14%	114%
Davidson Kempner	1.50%	20.00%	3.54%	1.20%	5.93%	3.59%	66%	34%
Elliott	1.50%	20.00%	7.57%	6.05%	10.96%	9.44%	36%	64%
Viking	1.50%	20.00%	7.98%	4.87%	11.47%	8.37%	42%	58%
Total Pro Forma	1.85%	21.62%	6.72%	4.82%	10.24%	8.33%	42%	58%
HFRI FOF Index	1.50%	20.00%	1.40%	-1.57%	3.25%	0.28%	657%	-557%





Winton Replacement Analysis

### Background

Purpose of analysis is to quantify to impact of substituting various alpha sources/strategies for Winton

Four alpha sources/strategies were used: credit, market neutral, event driven, equity long/short

#### Two substitution analyses were performed:

- 1. Manager universe data as proxy for adding to strategies. Cliffwater universe of institutional quality funds were used as benchmarks for alpha sources/strategies
- 2. Actual manager replacements comparing impact on pro forma portfolio results. Four managers were selected from Cliffwater's A-Rated universe of managers:

Credit – GCA Credit Opportunities

Market Neutral-Laurion Partners

Event Driven - P Squared

Equity Long/Short – MW Global Opportunity

Returns over the past five years ending June 30, 2020 were used



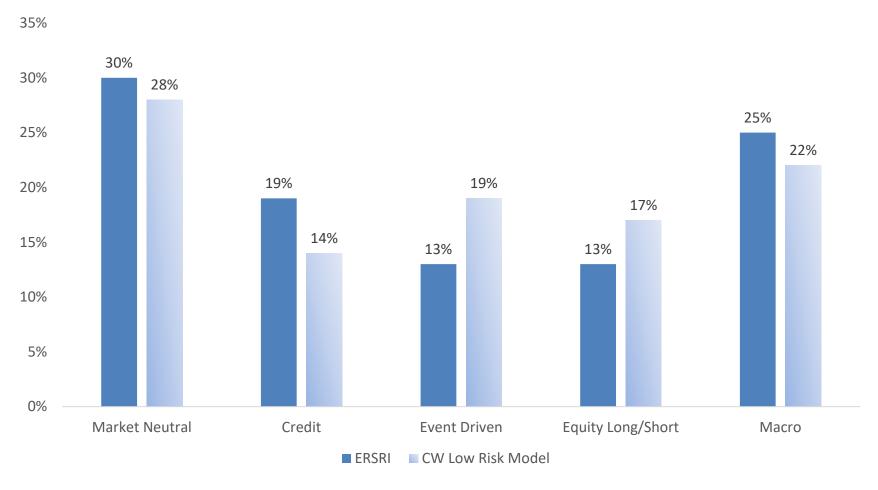
## Portfolio Strategy Exposure (as allocated by manager)

Absolute Return Portfolio (including Winton) versus Cliffwater Low Risk Model Portfolio 35% 31% 30% 28% 24% 25% 22% 19% 19% 20% 17% 14% 15% 13% 13% 10% 5% 0% Market Neutral Credit **Event Driven** Equity Long/Short Macro CW Low Risk Model ERSRI



## Portfolio Strategy Exposure (as allocated by manager)

Absolute Return Portfolio Adjusted by Replacing Market Neutral for Winton versus Cliffwater Low Risk Model Portfolio





## Alpha Source Substitutes – Manager Universe

Fund/ Strategy	Return	Risk	Sharpe Ratio	Beta	Beta Return	Beta Risk	Alpha Return	Alpha Risk	Info Ratio
Portfolio - Actual	4.48%	3.22%	1.39	0.17	0.87%	2.40%	2.42%	2.16%	1.12
Portfolio – Pro Forma	6.72%	2.66%	2.52	0.14	0.72%	1.97%	4.82%	1.79%	2.69
Winton	-1.69%	8.98%	-0.19	0.17	0.88%	2.48%	-3.76%	8.63%	-0.44
		ı	Alpha Sour	ce Substiti	utes – Mana	ger Univer	se		
Credit	2.01%	5.86%	0.34	0.29	1.49%	4.22%	-0.67%	4.06%	-0.17
Market Neutral	2.59%	1.99%	1.30	0.08	0.41%	1.15%	0.99%	1.62%	0.61
Event Driven	0.85%	6.97%	0.12	0.43	2.20%	6.22%	-2.54%	3.13%	-0.81
Equity Long/Short	2.17%	7.08%	0.31	0.42	2.13%	6.03%	-1.15%	3.72%	- 0.31

Note: Alpha source substitutes consist of composite results of Cliffwater's universe of institutional quality funds for each strategy/alpha source. Data represents five years ending June 30, 2020



# Alpha Source Substitutes – Manager Universe

Fund/ Strategy	Return	Risk	Sharpe Ratio	Beta	Beta Return	Beta Risk	Alpha Return	Alpha Risk	Info Ratio			
Portfolio - Actual	4.48%	3.22%	1.39	0.17	0.87%	2.40%	2.42%	2.16%	1.12			
Portfolio- Pro Forma	6.72%	2.66%	2.52	0.14	0.72%	1.97%	4.82%	1.79%	2.69			
Pro Forma Excluding Winton	7 72%	2 70%	2.69	0 12	0.70%	1 0/10/	5 22%	1 07%	2 05			
	Pro Forma Portfolio Replacing Winton with Each Substitute											
Credit	6.93%	2.80%	2.47	0.14	0.75%	2.07%	4.98%	1.89%	2.64			
Market   Neutral	6.96%	2.61%	2.67	0.13	0.69%	1.90%	5.08%	1.79%	2.84			
Event Driven	6.86%	2.86%	2.40	0.15	0.79%	2.19%	4.88%	1.84%	2.64			
Equity Long/Short	6.94%	2.88%	2.41	0.15	0.79%	2.18%	4.96%	1.89%	2.62			

Portfolio shows material improvement in risk and return with exclusion of Winton
All strategy replacements provided improved risk and return relative to current portfolio
Market Neutral provides moderate risk improvements relative to the portfolio excluding Winton



# Alpha Source Substitutes –Actual Managers

Alpha	E d	Datama	D:-I-	Sharpe	D - t -	Beta	Beta	Alpha	Alpha	Info
Source	Fund	Return	Risk	Ratio	Beta	Return	Risk	Return	Risk	Ratio
	Portfolio									
	-Actual	4.48%	3.22%	1.39	0.17	0.87%	2.40%	2.42%	2.16%	1.12
	Winton	-1.69%	8.98%	-0.19	0.17	0.88%	2.48%	-3.76%	8.63%	-0.44
Credit	GCA	3.87%	2.09%	1.85	0.08	0.41%	1.13%	2.26%	1.76%	1.28
Market Neutral	Laurion	10.51%	6.48%	1.62	-0.10	-0.55%	-1.51%	9.86%	6.30%	1.57
Event Driven	Psquared	9.55%	5.50%	1.74	0.05	0.26%	0.73%	8.09%	5.45%	1.49
Equity Long/Short	MW GO	6.93%	6.34%	1.09	0.01	0.06%	0.15%	5.68%	6.34%	0.90

Note: Alpha source substitutes consist of selected managers by strategy that are A-Rated by Cliffwater. Data represents five years ending June 30, 2020



# Substitution Analysis – Actual Managers

Alpha Source	Fund	Return	Risk	Sharpe Ratio	Beta	Beta Return	Beta Risk	Alpha Return	Alpha Risk	Info Ratio
Portfolio -	Actual	4.48%	3.22%	1.39	0.17	0.87%	2.40%	2.42%	2.16%	1.12
Portfolio –	Pro Forma	6.72%	2.66%	2.52	0.14	0.72%	1.97%	4.82%	1.79%	2.69
Potential Actions Using Actual Managers										
Redeem but not replace Winton		7.23%	2.70%	2.68	0.13	0.70%	1.94%	5.33%	1.87%	2.85
Replace W	inton with:									
Credit	GCA	7.04%	2.61%	2.70	0.13	0.69%	1.90%	5.15%	1.79%	2.88
MN	Laurion	7.43%	2.51%	2.96	0.12	0.63%	1.72%	5.60%	1.81%	3.10
ED	Psquared	7.37%	2.62%	2.81	0.13	0.68%	1.87%	5.50%	1.84%	2.99
ELS	MW GO	7.22%	2.60%	2.78	0.13	0.67%	1.84%	5.36%	1.84%	2.92

Portfolio shows material improvement in risk and return with exclusion of Winton All alpha source replacements provided improved risk and return relative to current portfolio Market Neutral, Event, and ELS add alpha return relative to X-Winton portfolio Market Neutral provides the largest improvement in results



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