

Kern County Employees' Retirement Association

Investment Performance Review

Period Ending: September 30, 2020



[VERUSINVESTMENTS.COM](https://www.verusinvestments.com)

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

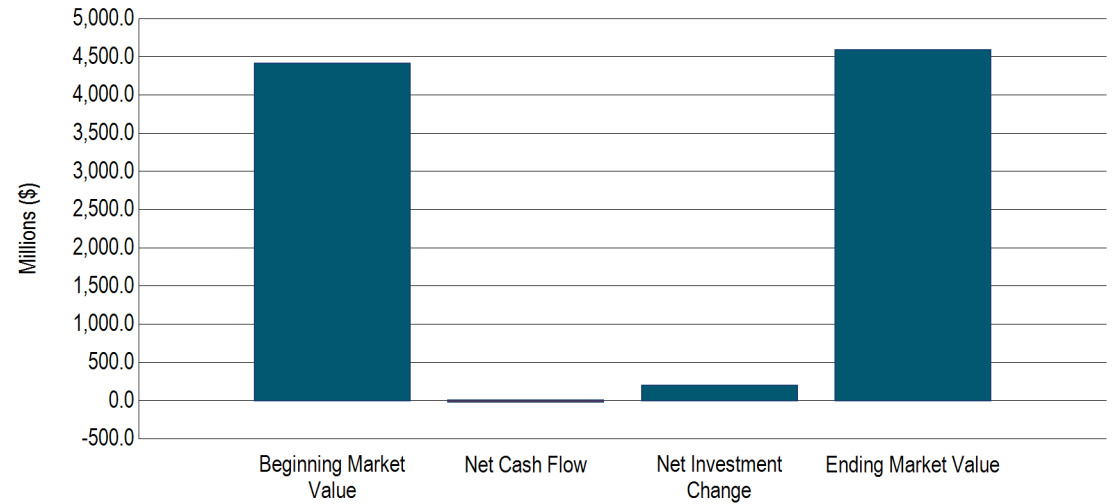
Total Fund Portfolio Reconciliation

Period Ending: September 30, 2020

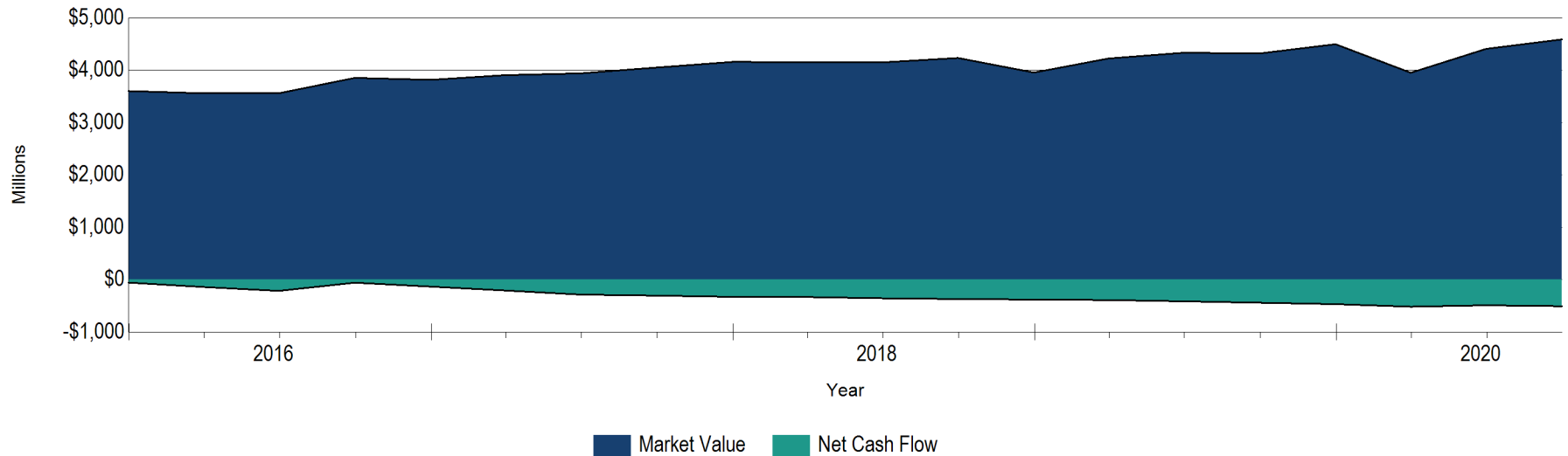
Portfolio Reconciliation

	Last Three Months
Beginning Market Value	\$4,408,240,184
Net Cash Flow	-\$10,217,637
Net Investment Change	\$192,096,233
Ending Market Value	\$4,590,118,780

Change in Market Value Last Three Months



Market Value History

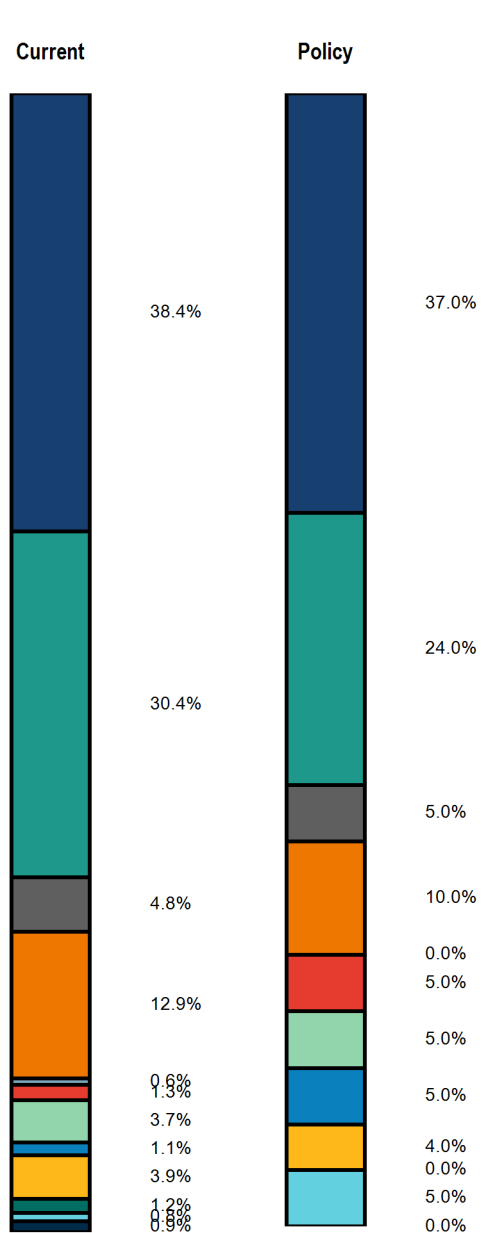


Contributions and withdrawals may include intra-account transfers between managers/funds. The Kern County Property Fund was removed at the beginning of 1Q 2016.

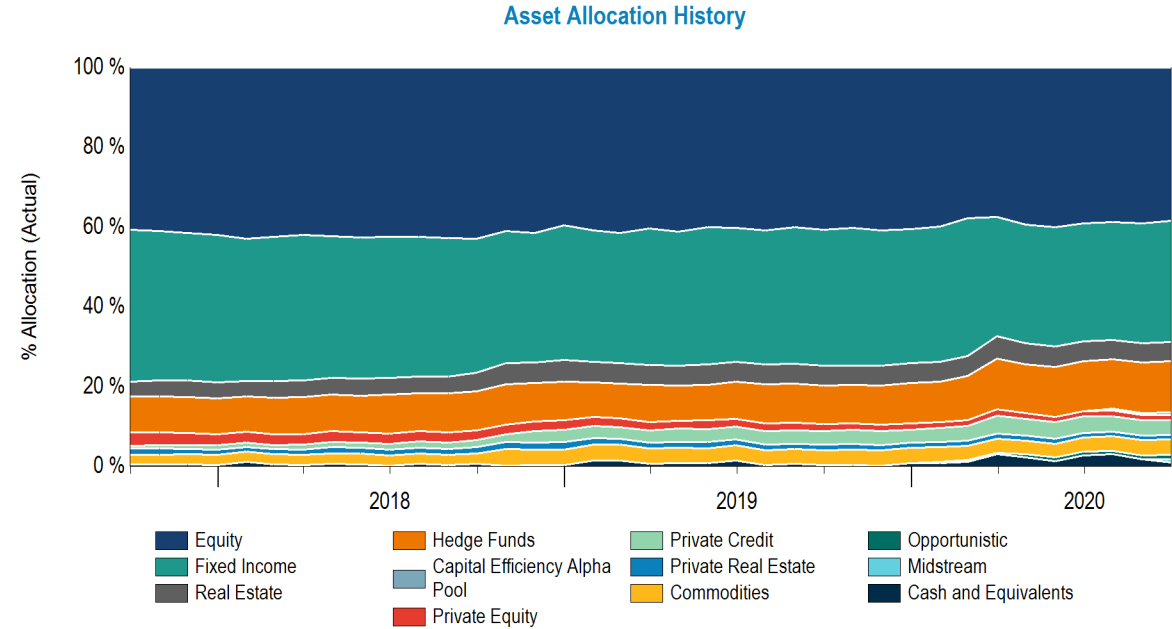
Total Fund

Asset Allocation vs. Policy

Period Ending: September 30, 2020



	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
Equity	\$1,764,347,089	38.4%	37.0%	\$66,033,620	32.0% - 46.0%	Yes
Fixed Income	\$1,393,224,590	30.4%	24.0%	\$291,615,854	20.0% - 34.0%	Yes
Real Estate	\$221,150,548	4.8%	5.0%	-\$8,351,272	3.0% - 7.0%	Yes
Hedge Funds	\$592,428,341	12.9%	10.0%	\$133,424,701	5.0% - 15.0%	Yes
Capital Efficiency Alpha Pool	\$25,751,817	0.6%	0.0%	\$25,751,817	0.0% - 7.0%	Yes
Private Equity	\$59,636,244	1.3%	5.0%	-\$169,865,576	0.0% - 10.0%	Yes
Private Credit	\$171,265,493	3.7%	5.0%	-\$58,236,327	0.0% - 10.0%	Yes
Private Real Estate	\$52,040,967	1.1%	5.0%	-\$177,460,853	0.0% - 10.0%	Yes
Commodities	\$176,913,329	3.9%	4.0%	-\$6,688,127	2.0% - 6.0%	Yes
Opportunistic	\$54,934,224	1.2%	0.0%	\$54,934,224	0.0% - 10.0%	Yes
Midstream	\$35,000,000	0.8%	5.0%	-\$194,501,820	0.0% - 7.0%	Yes
Cash and Equivalents	\$43,343,759	0.9%	0.0%	\$43,343,759	0.0% - 5.0%	Yes
Total	\$4,590,036,401	100.0%	100.0%			



Total Fund
Executive Summary (Gross of Fees)

Period Ending: September 30, 2020

	Net Notional Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016
Total Fund	4,590,118,780	4.5	2.7	4.5	7.5	5.6	7.6	7.3	3.2	5.7	6.8	12.1	0.2
<i>Policy Index</i>		4.5	2.4	4.5	7.1	6.0	7.4	6.8	3.3	6.4	7.0	10.0	0.4
<i>InvMetrics Public DB > \$1B Gross Rank</i>		61	19	61	32	35	52	73	16	42	96	74	55
Equity	1,764,429,468	7.4	-0.4	7.4	8.6	6.7	10.6	9.9	0.7	5.3	12.4	20.6	-2.1
<i>MSCI ACWI IMI GR</i>		8.2	0.9	8.2	10.1	7.0	10.6	9.0	1.7	5.1	11.7	19.6	-3.3
<i>Domesitc Equity</i>	<i>934,872,993</i>	7.9	3.9	7.9	13.2	11.3	14.2	--	6.3	9.2	16.1	19.4	4.0
<i>Russell 3000</i>		9.2	5.4	9.2	15.0	11.6	13.7	--	6.5	9.0	14.8	18.5	2.1
<i>International Developed Equity</i>	<i>593,804,279</i>	5.7	-6.5	5.7	1.7	0.9	6.0	--	-5.5	-0.6	9.1	23.1	-9.8
<i>MSCI World ex USA GR</i>		5.0	-6.7	5.0	0.6	1.1	5.9	--	-5.0	1.8	7.6	20.1	-9.4
<i>Emerging Markets Equity</i>	<i>235,751,811</i>	9.2	-6.4	9.2	2.1	-1.5	6.1	--	-10.9	0.4	4.0	20.4	-5.3
<i>MSCI Emerging Markets</i>		9.6	-1.2	9.6	10.5	2.4	9.0	--	-3.4	1.2	8.2	23.7	-12.1
Fixed Income	1,393,224,590	2.2	6.0	2.2	7.3	5.1	5.5	4.4	6.6	7.9	0.2	4.6	4.2
<i>Fixed Income Custom Benchmark</i>		1.6	3.9	1.6	5.1	4.5	4.9	4.2	5.2	8.4	0.0	3.2	5.1
<i>Core Plus Fixed Income</i>	<i>828,234,842</i>	1.3	7.9	1.3	8.5	5.8	5.1	--	9.5	8.0	0.0	1.4	5.7
<i>BBgBarc US Aggregate TR</i>		0.6	6.8	0.6	7.0	5.2	4.2	--	8.7	7.9	-0.4	-0.3	6.0
<i>High Yield/ Specialty Credit</i>	<i>382,825,923</i>	4.2	0.8	4.2	2.8	4.3	5.5	--	0.0	7.5	3.3	10.4	-2.7
<i>ICE BofAML High Yield Master II</i>		4.7	-0.3	4.7	2.3	3.8	6.6	--	-1.1	7.6	2.5	12.8	1.7
<i>Emerging Market Debt</i>	<i>182,005,090</i>	2.0	-1.3	2.0	2.8	0.6	5.3	--	-1.2	8.5	-3.6	9.6	2.9
<i>50 JPM EMBI Global Div/ 50 JPM GBI EM</i>		1.9	-4.8	1.9	-1.0	1.4	5.4	--	-3.0	11.2	-1.8	6.5	5.5
Commodities	176,913,329	7.2	-7.2	7.2	-2.4	-0.9	-0.3	--	-10.7	-6.2	13.7	-3.1	-14.8
<i>Bloomberg Commodity Index TR USD</i>		9.1	-12.1	9.1	-8.2	-4.2	-3.1	--	-17.4	-6.8	7.3	-6.5	-13.3
Hedge Funds	592,428,341	4.6	9.5	4.6	12.9	6.5	5.8	6.2	7.3	2.6	7.6	8.0	-3.1
<i>75% 90 Day TBills +4% / 25% MSCI ACWI</i>		2.8	3.5	2.8	6.9	6.4	6.8	5.9	5.1	6.6	7.0	8.1	2.5
Capital Efficiency Alpha Pool	25,751,817	3.0	--	3.0	--	--	--	--	--	--	--	--	--
<i>91-Day TBills +4%</i>		1.0	--	1.0	--	--	--	--	--	--	--	--	--
Midstream Energy	35,000,000	--	--	--	--	--	--	--	--	--	--	--	--
<i>Alerian Midstream Index</i>		--	--	--	--	--	--	--	--	--	--	--	--
Core Real Estate	221,150,548	0.0	0.4	0.0	2.4	4.9	6.3	--	2.3	6.1	7.4	6.0	12.8
<i>NCREIF-ODCE</i>		0.5	-0.1	0.5	1.4	5.2	6.6	--	2.2	6.4	8.4	7.9	11.8
Private Real Estate	52,040,967	-4.8	-0.5	-4.8	0.9	3.2	6.5	--	4.4	9.0	5.4	6.4	16.7

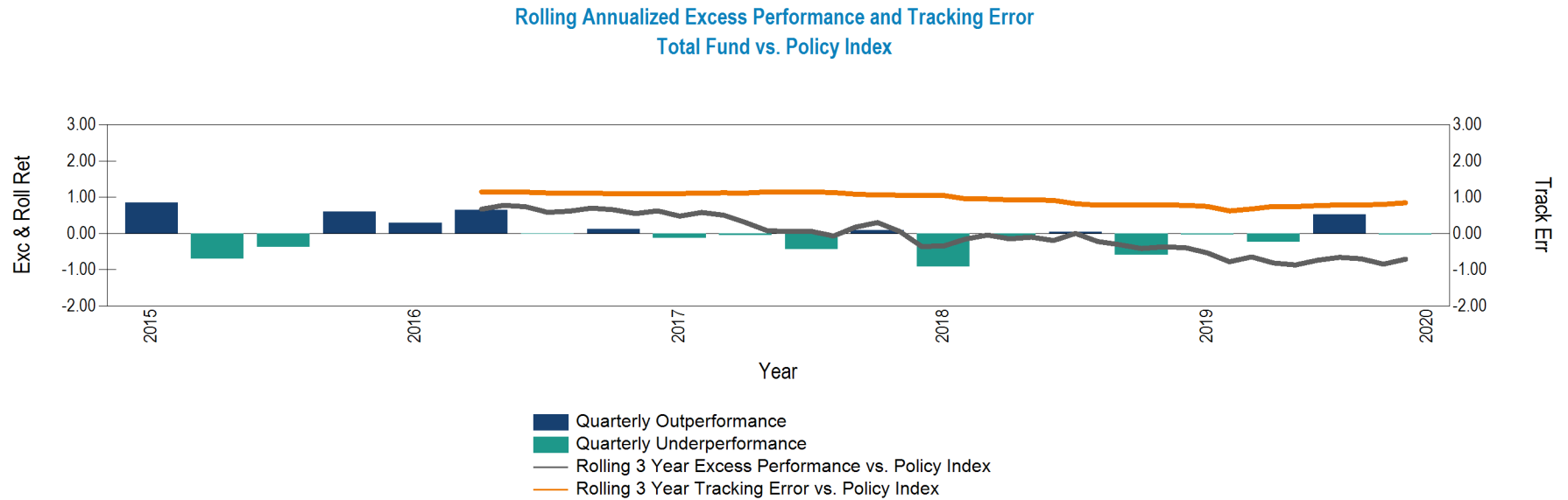
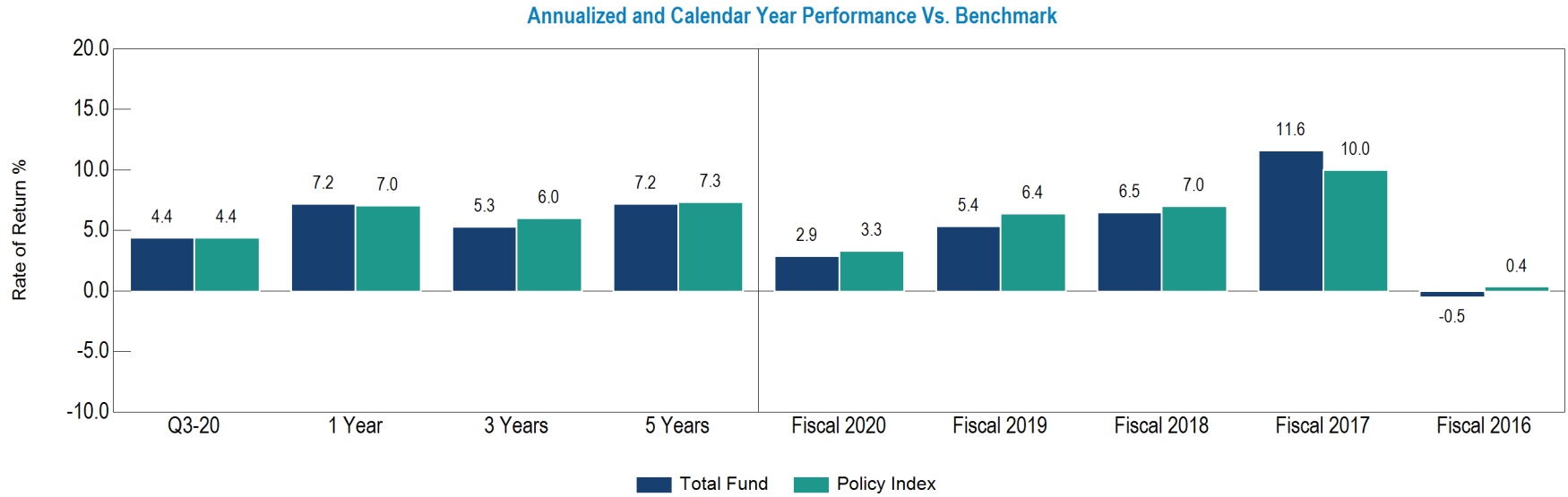
Total Fund
Executive Summary (Gross of Fees)

Period Ending: September 30, 2020

	Net Notional Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016
Private Equity	59,636,244	12.3	-1.5	12.3	-0.6	5.6	6.9	9.3	-10.5	10.9	7.8	14.8	4.5
Private Credit	171,265,492	-1.2	2.3	-1.2	3.4	7.2	--	--	5.9	9.7	9.3	10.2	--
Opportunistic	54,934,224	7.8	-1.9	7.8	--	--	--	--	--	--	--	--	--
Assumed Rate of Return +3%		2.5	7.7	2.5	--	--	--	--	--	--	--	--	--
Cash	43,343,759												

Total Fund
Performance vs. Policy (Net of Fees)

Period Ending: September 30, 2020



Performance and Attribution

Total Fund
Performance (Net of Fees)

Period Ending: September 30, 2020

	Net Notional Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Inception	Inception Date
Total Fund	4,590,118,780	100.0	4.4	2.5	4.4	7.2	5.3	7.2	6.9	2.9	5.4	6.5	11.6	-0.5		
<i>Policy Index</i>			4.5	2.4	4.5	7.1	6.0	7.4	6.8	3.3	6.4	7.0	10.0	0.4		
Equity	1,764,429,468	38.4	7.3	-0.7	7.3	8.1	6.2	10.1	9.4	0.3	4.8	11.8	20.1	-2.5		
<i>MSCI ACWI IMI GR</i>			8.2	0.9	8.2	10.1	7.0	10.6	9.0	1.7	5.1	11.7	19.6	-3.3		
Domestic Equity	934,872,993	20.4	7.9	3.6	7.9	12.8	10.9	13.8	--	6.0	8.8	15.5	18.9	3.6		
<i>Russell 3000</i>			9.2	5.4	9.2	15.0	11.6	13.7	--	6.5	9.0	14.8	18.5	2.1		
Equity Beta Exposure	56,648,800	1.2	--	--	--	--	--	--	--	--	--	--	--	--	3.0	Jul-20
<i>S&P 500</i>			--	--	--	--	--	--	--	--	--	--	--	--	3.1	Jul-20
Mellon DB SL Stock Index	434,451,407	9.5	8.9	5.6	8.9	15.1	--	--	--	7.5	10.4	--	--	--	11.8	Oct-17
<i>S&P 500</i>			8.9	5.6	8.9	15.1	--	--	--	7.5	10.4	--	--	--	11.8	Oct-17
Mellon NSL Dynamic US Equity	159,008,551	3.5	8.0	6.6	8.0	16.4	13.9	16.6	--	10.9	12.1	16.1	18.0	9.8	13.2	Sep-14
<i>S&P 500</i>			8.9	5.6	8.9	15.1	12.3	14.1	--	7.5	10.4	14.4	17.9	4.0	11.1	Sep-14
PIMCO StocksPLUS	159,116,103	3.5	9.4	6.2	9.4	16.0	12.5	14.6	14.6	7.7	10.6	14.1	19.1	2.7	10.5	Jul-03
<i>S&P 500</i>			8.9	5.6	8.9	15.1	12.3	14.1	13.7	7.5	10.4	14.4	17.9	4.0	9.6	Jul-03
AB US Small Cap Value Equity	63,450,244	1.4	1.5	-23.4	1.5	-17.4	-6.4	3.2	--	-19.4	-6.9	13.2	23.9	--	1.2	Jul-15
<i>Russell 2000 Value</i>			2.6	-21.5	2.6	-14.9	-5.1	4.1	--	-17.5	-6.2	13.1	24.9	--	1.8	Jul-15
Geneva Capital Small Cap Growth	62,197,889	1.4	1.9	6.5	1.9	14.1	11.7	13.7	--	9.3	8.6	22.7	21.2	--	11.5	Jul-15
<i>Russell 2000 Growth</i>			7.2	3.9	7.2	15.7	8.2	11.4	--	3.5	-0.5	21.9	24.4	--	7.6	Jul-15
International Developed Equity	593,804,279	12.9	5.7	-6.7	5.7	1.4	0.6	5.6	--	-5.7	-0.9	8.7	22.6	-10.2		
<i>MSCI World ex USA IMI GR</i>			5.7	-6.3	5.7	1.6	1.2	6.1	--	-4.7	0.7	8.3	20.3	-8.5		
Mellon DB SL World ex-US Index	223,181,846	4.9	5.0	-7.0	5.0	-0.3	--	--	--	-5.5	--	--	--	--	0.0	Jul-18
<i>MSCI World ex USA GR</i>			5.0	-6.7	5.0	0.6	--	--	--	-5.0	--	--	--	--	0.7	Jul-18
BlackRock International Alpha Tilts	268,111,907	5.8	4.9	-7.8	4.9	0.0	0.0	5.5	5.5	-6.8	0.4	7.9	24.4	-10.3	6.5	Sep-03
<i>MSCI EAFE Gross</i>			4.9	-6.7	4.9	0.9	1.1	5.8	5.1	-4.7	1.6	7.4	20.8	-9.7	6.4	Sep-03
Cevian Capital II	24,389,031	0.5	6.0	-9.5	6.0	-0.2	-1.7	5.7	--	-8.2	-5.0	2.9	32.9	-12.3	2.6	Dec-14
<i>MSCI Europe</i>			4.5	-8.8	4.5	-0.8	-0.6	4.2	--	-6.8	1.9	5.3	21.1	-11.2	2.7	Dec-14
Fidelity Non-US Small Cap Equity	78,039,116	1.7	10.7	-0.2	10.7	11.6	2.7	7.2	8.0	-1.2	-6.0	11.5	20.0	-2.6	5.1	Jun-08
<i>S&P Developed Ex-U.S. SmallCap</i>			10.3	-3.5	10.3	7.8	1.4	7.2	7.0	-3.7	-5.7	11.4	21.8	-3.8	4.6	Jun-08

Total Fund

Executive Summary (Net of Fees)

Period Ending: September 30, 2020

	Net Notional Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Inception	Inception Date
Emerging Markets Equity	235,751,811	5.1	9.0	-7.1	9.0	1.1	-2.5	5.1	--	-11.8	-0.6	2.9	19.3	-6.0		
<i>MSCI EM IMI GR</i>			9.9	-1.0	9.9	10.5	2.4	8.8	--	-3.6	0.9	8.3	23.2	-11.8		
DFA Emerging Markets Value I	84,964,662	1.9	5.3	-15.1	5.3	-6.9	-4.0	5.4	--	-17.7	2.0	5.7	27.6	-11.7	1.1	Mar-14
<i>MSCI EM IMI GR</i>			9.9	-1.0	9.9	10.5	2.4	8.8	--	-3.6	0.9	8.3	23.2	-11.8	4.5	Mar-14
AB Emerging Markets Strategic Core Equity	96,237,059	2.1	12.1	1.3	12.1	9.3	-0.4	--	--	-5.1	-2.6	1.2	--	--	5.8	Nov-16
<i>MSCI Emerging Markets Gross</i>			9.7	-0.9	9.7	10.9	2.8	--	--	-3.0	1.6	8.6	--	--	9.1	Nov-16
Mellon Emerging Markets Stock Index	54,550,089	1.2	9.6	--	9.6	--	--	--	--	--	--	--	--	--	9.2	Jun-20
<i>MSCI Emerging Markets Gross</i>			9.7	--	9.7	--	--	--	--	--	--	--	--	--	17.8	Jun-20
Fixed Income	1,393,224,590	30.4	2.1	5.8	2.1	7.0	4.8	5.2	4.2	6.3	7.6	-0.1	4.3	3.9		
<i>Fixed Income Custom Benchmark</i>			1.6	3.9	1.6	5.1	4.5	4.9	4.2	5.2	8.4	0.0	3.2	5.1		
Core Plus Fixed Income	828,234,842	18.0	1.2	7.8	1.2	8.3	5.7	4.9	--	9.3	7.9	-0.2	1.3	5.6		
<i>BBgBarc US Aggregate TR</i>			0.6	6.8	0.6	7.0	5.2	4.2	--	8.7	7.9	-0.4	-0.3	6.0		
Fixed Income Overlay	55,807,656	1.2	--	--	--	--	--	--	--	--	--	--	--	--	0.1	Aug-20
<i>BBgBarc US Treasury 7-10 Yr TR</i>			--	--	--	--	--	--	--	--	--	--	--	--	-0.6	Aug-20
Mellon DB SL Aggregate Bond Index Fund	232,077,167	5.1	0.6	6.8	0.6	7.0	5.2	4.2	--	8.8	7.9	-0.4	-0.3	5.9	3.8	Jan-11
<i>BBgBarc US Aggregate TR</i>			0.6	6.8	0.6	7.0	5.2	4.2	--	8.7	7.9	-0.4	-0.3	6.0	3.9	Jan-11
PIMCO Core Plus	270,999,915	5.9	1.0	7.6	1.0	8.0	5.2	4.6	--	8.7	6.3	1.0	1.4	4.2	4.0	Jan-11
<i>BBgBarc US Aggregate TR</i>			0.6	6.8	0.6	7.0	5.2	4.2	--	8.7	7.9	-0.4	-0.3	6.0	3.9	Jan-11
Western Asset Core Plus	269,350,104	5.9	2.0	7.3	2.0	8.7	6.2	5.8	4.9	9.3	9.4	-0.4	3.0	6.3	5.4	May-04
<i>BBgBarc US Aggregate TR</i>			0.6	6.8	0.6	7.0	5.2	4.2	3.6	8.7	7.9	-0.4	-0.3	6.0	4.5	May-04
High Yield/ Specialty Credit	382,825,923	8.3	4.1	0.5	4.1	2.3	3.8	5.1	--	-0.5	7.0	2.8	9.9	-3.0		
<i>ICE BofAML High Yield Master II</i>			4.7	-0.3	4.7	2.3	3.8	6.6	--	-1.1	7.6	2.5	12.8	1.7		
Western Asset High Yield Fixed Income	257,082,414	5.6	4.9	-1.6	4.9	1.3	3.7	6.0	6.2	-2.2	8.3	2.2	11.7	0.2	6.8	May-05
<i>50% BBgBarc US HY Ba 2%/50% BBgBarc US HY B 2% CAP</i>			4.2	1.8	4.2	4.4	4.9	6.8	6.5	2.1	8.8	1.8	10.9	1.9	6.8	May-05
TCW Securitized Opportunities	125,743,509	2.7	2.4	3.3	2.4	3.3	4.1	--	--	2.2	5.2	4.3	6.3	--	4.5	Feb-16
<i>BBgBarc US HY 2% Issuer Cap</i>			4.6	0.6	4.6	3.2	4.2	--	--	0.0	7.5	2.6	12.7	--	8.1	Feb-16
Emerging Market Debt	182,005,090	4.0	1.9	-1.5	1.9	2.4	0.1	4.7	--	-1.7	7.9	-4.2	8.9	2.3		
<i>50 JPM EMBI Global Div/ 50 JPM GBI EM</i>			1.9	-4.8	1.9	-1.0	1.4	5.4	--	-3.0	11.2	-1.8	6.5	5.5		
Stone Harbor Emerging Markets Debt	79,423,714	1.7	2.1	-3.0	2.1	0.9	0.5	4.9	--	-1.8	8.2	-3.1	6.3	4.6	0.8	Aug-12
<i>50 JPM GBI-EM Global Div/ 40 JPM EMBI Global Div/ 10 JPM Corporate EM Bond Idx</i>			1.5	-3.1	1.5	0.3	2.0	5.5	--	-0.8	10.6	-1.7	6.3	5.5	2.3	Aug-12

Total Fund

Executive Summary (Net of Fees)

Period Ending: September 30, 2020

	Net Notional Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Inception	Inception Date
PIMCO EMD	102,581,376	2.2	1.8	--	1.8	--	--	--	--	--	--	--	--	--	-2.5	Jan-20
<i>50 JPM EMBI Global Div/ 50 JPM GBI EM</i>			1.9	--	1.9	--	--	--	--	--	--	--	--	--	-4.8	Jan-20
Commodities	176,913,329	3.9	7.2	-7.4	7.2	-2.6	-1.0	-0.5	--	-10.9	-6.3	13.7	-3.5	-15.3		
<i>Bloomberg Commodity Index TR USD</i>			9.1	-12.1	9.1	-8.2	-4.2	-3.1	--	-17.4	-6.8	7.3	-6.5	-13.3		
Gresham MTAP Commodity	67,680,460	1.5	9.0	-11.4	9.0	-6.5	-3.5	-2.3	--	-16.3	-9.0	12.4	-3.8	-15.7	-6.7	Sep-13
<i>Bloomberg Commodity Index TR USD</i>			9.1	-12.1	9.1	-8.2	-4.2	-3.1	--	-17.4	-6.8	7.3	-6.5	-13.3	-7.2	Sep-13
Wellington Commodities	109,232,869	2.4	6.0	-4.3	6.0	0.4	0.8	1.1	--	-6.8	-4.6	15.0	-3.0	-13.7	-4.4	Sep-13
<i>Bloomberg Commodity Index TR USD</i>			9.1	-12.1	9.1	-8.2	-4.2	-3.1	--	-17.4	-6.8	7.3	-6.5	-13.3	-7.2	Sep-13
Hedge Funds	592,428,341	12.9	4.5	9.3	4.5	12.7	6.4	5.2	5.4	7.0	2.5	7.6	7.1	-4.7		
<i>75% 90 Day TBills +4% / 25% MSCI ACWI</i>			2.8	3.5	2.8	6.9	6.4	6.8	5.9	5.1	6.6	7.0	8.1	2.5		
Aristeia International Limited	58,000,120	1.3	6.8	13.2	6.8	15.5	10.0	8.2	--	8.7	9.2	2.6	13.1	-1.7	4.3	May-14
Brevan Howard	65,002,767	1.4	2.7	24.6	2.7	25.8	14.5	8.0	--	20.5	12.7	7.8	1.0	-6.0	7.7	Nov-13
D.E. Shaw	46,960,990	1.0	2.7	13.2	2.7	14.1	12.3	11.8	--	15.6	11.5	11.3	8.0	11.6	12.1	Jul-13
HBK Fund II	49,997,525	1.1	1.9	2.3	1.9	3.7	4.0	4.2	--	1.5	5.5	3.0	6.7	-0.7	3.5	Nov-13
Hudson Bay	83,395,053	1.8	4.4	15.6	4.4	17.8	--	--	--	16.2	--	--	--	--	16.0	Jun-19
Indus Pacific Opportunities	32,913,014	0.7	13.0	27.9	13.0	39.7	4.4	7.1	--	15.8	-19.2	15.8	15.1	-8.3	7.9	Jun-14
Magnetar Structured Credit	10,136,086	0.2	1.6	0.4	1.6	0.9	4.6	4.4	--	-0.2	5.4	7.7	8.6	-2.4	5.0	May-14
Myriad Opportunities Offshore	55,267,879	1.2	6.9	-3.7	6.9	-0.1	-2.4	--	--	-9.2	-8.4	10.4	8.2	--	1.7	May-16
Pharo Macro Fund LTD	53,538,264	1.2	2.1	5.2	2.1	--	--	--	--	--	--	--	--	--	5.2	Dec-19
PIMCO Commodity Alpha	68,804,361	1.5	3.5	4.8	3.5	9.7	6.4	--	--	4.8	5.2	10.4	17.0	--	9.5	May-16
River Birch	1,418,060	0.0	9.6	-6.2	9.6	-6.2	-3.6	-0.7	--	-19.9	-0.5	2.8	9.6	--	-0.8	Aug-15
Sculptor Enhanced Domestic Partners	54,973,840	1.2	6.8	11.0	6.8	21.0	--	--	--	6.5	--	--	--	--	18.2	Mar-19
Systematica Trend Following Fund	12,020,382	0.3	-0.7	0.6	-0.7	-2.4	--	--	--	0.6	--	--	--	--	2.5	Mar-19
Capital Efficiency Alpha Pool	25,751,817	0.6	3.0	--	3.0	--	--	--	--	--	--	--	--	--		
<i>91-Day TBills +4%</i>			1.0	--	1.0	--	--	--	--	--	--	--	--	--		
Hudson Bay	25,751,817	0.6	--	--	--	--	--	--	--	--	--	--	--	--	3.0	Jul-20
Midstream Energy	35,000,000	0.8	--	--	--	--	--	--	--	--	--	--	--	--		
<i>Alerian Midstream Index</i>			--	--	--	--	--	--	--	--	--	--	--	--		
Harvest Midstream	35,000,000	0.8	--	--	--	--	--	--	--	--	--	--	--	--	0.0	Sep-20

Total Fund
Executive Summary (Net of Fees)

Period Ending: September 30, 2020

	Net Notional Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Inception	Inception Date
Core Real Estate	221,150,548	4.8	-0.2	-0.2	-0.2	1.5	4.4	5.8	--	1.4	5.9	7.4	5.6	11.8		
<i>NCREIF-ODCE</i>			0.5	-0.1	0.5	1.4	5.2	6.6	10.3	2.2	6.4	8.4	7.9	11.8		
ASB Real Estate	115,695,948	2.5	-0.1	0.7	-0.1	2.2	4.9	5.3	--	1.5	6.8	7.1	3.3	10.7	7.4	Sep-13
<i>NCREIF-ODCE</i>			0.5	-0.1	0.5	1.4	5.2	6.6	10.3	2.2	6.4	8.4	7.9	11.8	8.6	Sep-13
J.P. Morgan Strategic Property	105,454,600	2.3	-0.3	-1.2	-0.3	0.8	3.9	5.5	--	1.3	5.0	7.6	7.4	10.0	6.9	Jul-14
<i>NCREIF-ODCE</i>			0.5	-0.1	0.5	1.4	5.2	6.6	10.3	2.2	6.4	8.4	7.9	11.8	8.1	Jul-14
Private Real Estate	52,040,967	1.1	-4.8	-0.5	-4.8	0.9	3.2	6.1	--	4.4	9.0	5.4	5.7	14.8		
Private Equity	59,636,244	1.3	12.3	-1.5	12.3	-0.6	5.6	6.2	8.8	-10.5	10.9	7.8	14.1	1.7		
Private Credit	171,265,493	4.0	-1.2	2.3	-1.2	3.4	7.2	--	--	5.9	9.7	9.3	10.2	--		
Opportunistic	54,934,224	0.9	7.8	-1.9	7.8	--	--	--	--	--	--	--	--	--		
<i>Assumed Rate of Return +3%</i>			2.5	7.7	2.5	10.4	--	--	--	10.4	--	--	--	--		
Cash	43,343,759	0.9	0.0	0.5	0.0	0.7	1.8	2.2	--	1.0	2.0	3.2	2.7	2.2		

IRR Analysis as of IRR date												
Vintage Year	Manager/Fund	Estimated Market Value as of 9/30/2020	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value as of IRR date	Distrib./ Paid-In (DPI) ¹	Tot. Value/ Paid-In (TVPI) ²	Net IRR Since Inception ³	IRR Date
Private Equity												
2001	Abbott Capital PE IV*	\$1,228,338	\$50,000,000	\$49,650,000	99%	\$350,000	\$85,714,140	\$1,228,338	1.73x	1.75x	11.0%	12/31/19
2005	Abbott Capital PE V*	\$10,858,080	\$65,000,000	\$62,790,000	97%	\$2,210,000	\$80,558,107	\$10,858,080	1.28x	1.46x	6.7%	06/30/20
2008	Abbott Capital PE VI*	\$28,032,610	\$50,000,000	\$49,500,000	99%	\$500,000	\$54,446,969	\$25,763,526	1.10x	1.67x	11.4%	03/31/20
2006	Pantheon Global III*	\$1,865,668	\$50,000,000	\$47,300,000	95%	\$2,700,000	\$49,850,000	\$1,865,668	1.05x	1.09x	2.0%	06/30/20
1998	Pantheon USA III*	\$58,984	\$7,500,000	\$7,335,000	98%	\$165,000	\$8,197,500	\$58,984	1.12x	1.13x	1.9%	06/30/20
2002	Pantheon USA V*	\$469,541	\$25,000,000	\$24,350,000	97%	\$650,000	\$37,950,000	\$469,541	1.56x	1.58x	9.0%	06/30/20
2004	Pantheon USA VI*	\$2,622,668	\$35,000,000	\$33,075,000	95%	\$1,925,000	\$48,523,827	\$2,622,668	1.47x	1.55x	6.8%	06/30/20
2006	Pantheon USA VII*	\$14,070,410	\$50,000,000	\$46,600,000	93%	\$3,400,000	\$66,974,999	\$14,470,410	1.44x	1.74x	9.7%	06/30/20
2020	Vista Equity Partners IV	\$429,945	\$25,000,000	\$429,945	2%	\$24,570,055						
Total Private Equity		\$59,636,244	\$357,500,000	\$321,029,945	90%	\$36,470,055	\$432,215,542	\$57,337,215	1.35x	1.53x		
% of Portfolio (Market Value)		1.3%										

¹(DPI) is equal to (capital returned / capital called)

²(TVPI) is equal to (market value + capital returned) / capital called

³Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

* Market Values are as of 6/30/2020 and accounts for all capital calls and distributions through 9/30/2020.

IRR Analysis as of IRR date												
Vintage		Estimated Market Value	Total	Capital	%	Remaining	Capital	Market Value	Distrib./	Tot. Value/	Net IRR	IRR
Year	Manager/Fund	as of 9/30/2020	Commitment	Called	Called	Commitment	Returned	as of IRR date	Paid-In (DPI) ¹	Paid-In (TVPI) ²	Since Inception ³	Date
Private Credit												
2015	Colony Distressed Credit IV** ⁴	\$53,780,017	\$60,000,000	\$70,783,873	118%	-\$2,944,644	\$24,003,132	\$53,780,017	0.34x	1.10x	4.0%	6/30/20
2017	Brookfield Real Estate Finance Fund V**	\$24,634,530	\$50,000,000	\$27,069,177	54%	\$22,930,823	\$10,178,870	\$23,191,827	0.38x	1.29x	8.1%	6/30/20
2017	TSSP Adjacent Opportunities Partners**	\$30,477,506	\$50,000,000	\$31,632,288	63%	\$18,367,712	\$14,217,245	\$30,930,862	0.45x	1.41x	8.0%	3/31/20
2018	Magnetar Constellation*	\$53,774,056	\$60,000,000	\$63,785,879	106%	-\$3,785,879	\$6,361,051	N/A	0.10x	0.94x	N/A	N/A
2019	H.I.G Bayside Loan Opportunity Fund V	\$5,508,616	\$60,000,000	\$7,500,000	12%	\$52,500,000	\$1,930,727	N/A	0.26x	0.99x	N/A	N/A
2020	Blue Torch Credit Opportunities	\$3,090,768										
Total Private Credit		\$171,265,493	\$280,000,000	\$200,771,217	72%	\$34,568,012	\$54,760,298	\$107,902,706	0.27x	1.13x		
% of Portfolio (Market Value)		3.7%										

¹(DPI) is equal to (capital returned / capital called)

²(TVPI) is equal to (market value + capital returned) / capital called

³Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

⁴\$14,360,749 is recallable capital as of 6/30/2020.

*Market Values are as of 3/31/2020 and accounts for all capital calls and distributions through 9/30/2020.

**Market Values are as of 6/30/2020 and accounts for all capital calls and distributions through 9/30/2020.

IRR Analysis as of IRR date												
Vintage		Estimated Market Value	Total	Capital	%	Remaining	Capital	Market Value	Distrib./	Tot. Value/	Net IRR	IRR
Year	Manager/Fund	as of 9/30/2020	Commitment	Called	Called	Commitment	Returned	as of IRR date	(DPI) ¹	(TVPI) ²	Since Inception ³	Date
Private Real Estate												
2012	Invesco Real Estate III*	\$3,607,757	\$60,000,000	\$55,519,583	93%	\$4,480,417	\$72,861,953	\$3,607,757	1.31x	1.38x	12.0%	06/30/20
2014	Invesco Real Estate IV*	\$24,381,911	\$50,000,000	\$43,637,717	87%	\$6,362,283	\$31,934,211	\$24,381,911	0.73x	1.29x	12.2%	06/30/20
2017	Landmark Real Estate Partners VIII*	\$18,123,606	\$60,000,000	\$25,033,714	42%	\$34,966,286	\$9,256,829	\$19,896,999	0.37x	1.09x	13.6%	\$43,921
2018	Long Wharf Real Estate Partners VI*	\$5,927,692	\$50,000,000	\$6,769,080	14%	\$43,230,920	\$788,018	N/A	N/A	N/A	N/A	N/A
Total Private Real Assets		\$52,040,967	\$220,000,000	\$130,960,094	60%	\$89,039,906	\$114,841,011	\$47,886,667	0.88x	1.27x		
% of Portfolio (Market Value)		1.1%										

¹(DPI) is equal to (capital returned / capital called)

²(TVPI) is equal to (market value + capital returned) / capital called

³Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

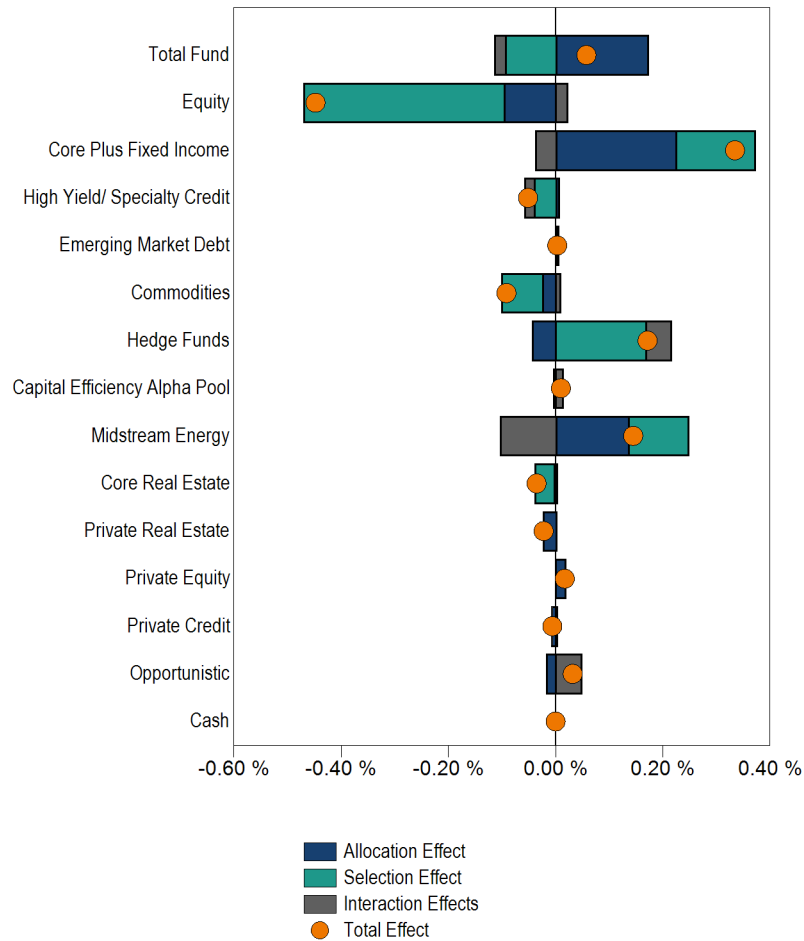
*Market Values are as of 6/30/2020 and accounts for all capital calls and distributions through 9/30/2020.

Total Fund
Attribution Analysis - Asset Class Level (Net of Fees)

Period Ending: September 30, 2020

Attribution Effects
Last Three Months

Performance Attribution



	Quarter	Fiscal YTD
Wtd. Actual Return	4.39%	4.39%
Wtd. Index Return *	4.49%	4.49%
Excess Return	-0.10%	-0.10%
Selection Effect	-0.09%	-0.09%
Allocation Effect	0.17%	0.17%
Interaction Effect	-0.02%	-0.02%

*Calculated from benchmark returns and weightings of each component.

Attribution Summary
Last Three Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Equity	7.31%	8.23%	-0.92%	-0.37%	-0.10%	0.02%	-0.45%
Core Plus Fixed Income	1.25%	0.62%	0.63%	0.15%	0.22%	-0.04%	0.33%
High Yield/ Specialty Credit	4.06%	4.71%	-0.65%	-0.04%	0.01%	-0.02%	-0.05%
Emerging Market Debt	1.94%	1.88%	0.06%	0.00%	0.00%	0.00%	0.00%
Commodities	7.19%	9.07%	-1.88%	-0.07%	-0.02%	0.01%	-0.09%
Hedge Funds	4.52%	2.84%	1.68%	0.17%	-0.04%	0.04%	0.17%
Capital Efficiency Alpha Pool	3.01%	1.01%	2.00%	0.00%	0.00%	0.01%	0.01%
Midstream Energy	--	-10.50%	--	0.11%	0.14%	-0.10%	0.14%
Core Real Estate	-0.17%	0.48%	-0.65%	-0.03%	0.00%	0.00%	-0.04%
Private Real Estate	-4.80%	-4.80%	0.00%	0.00%	-0.02%	0.00%	-0.02%
Private Equity	12.29%	12.29%	0.00%	0.00%	0.02%	0.00%	0.02%
Private Credit	-1.16%	-1.16%	0.00%	0.00%	-0.01%	0.00%	-0.01%
Opportunistic	7.82%	2.52%	5.31%	0.00%	-0.02%	0.05%	0.03%
Cash	--	--	--	--	--	--	--
Total	4.39%	4.49%	-0.10%	-0.09%	0.17%	-0.02%	0.06%

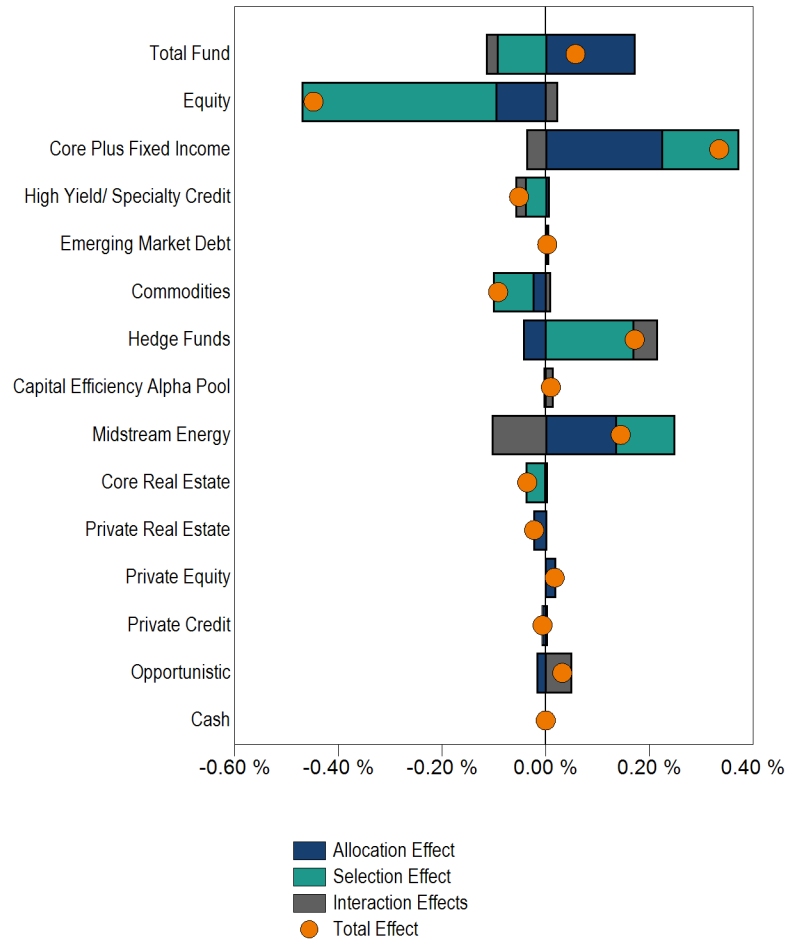
Weighted returns shown in attribution analysis may differ from actual returns.

Total Fund

Attribution Analysis - Asset Class Level (Net of Fees)

Period Ending: September 30, 2020

Attribution Effects Fiscal YTD



Performance Attribution

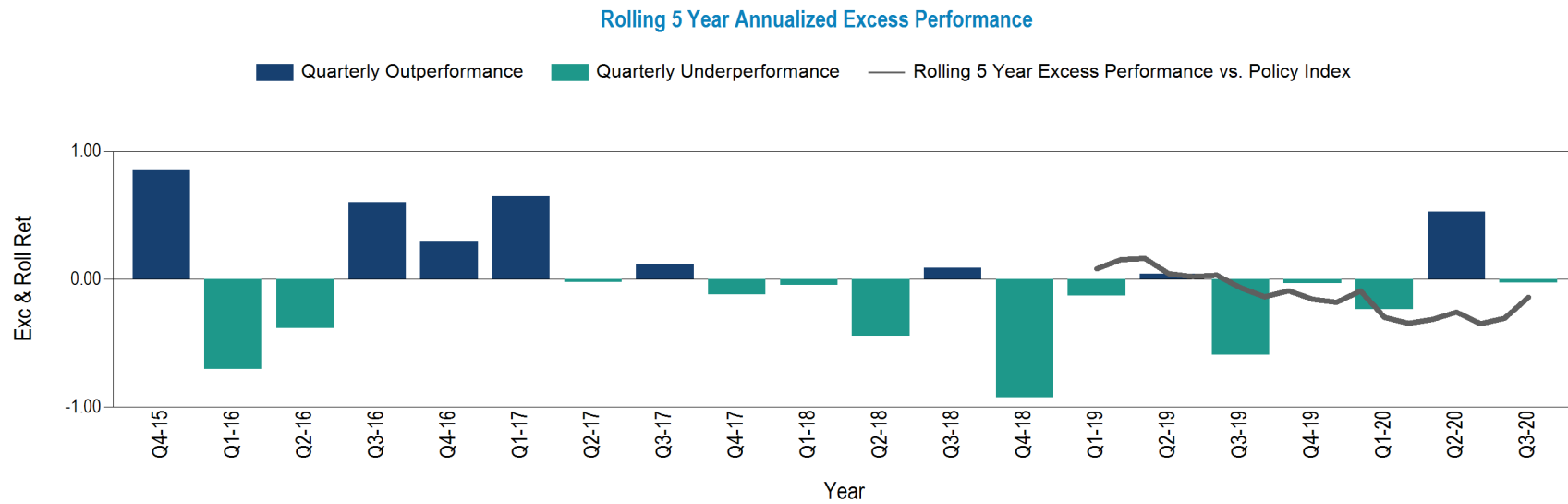
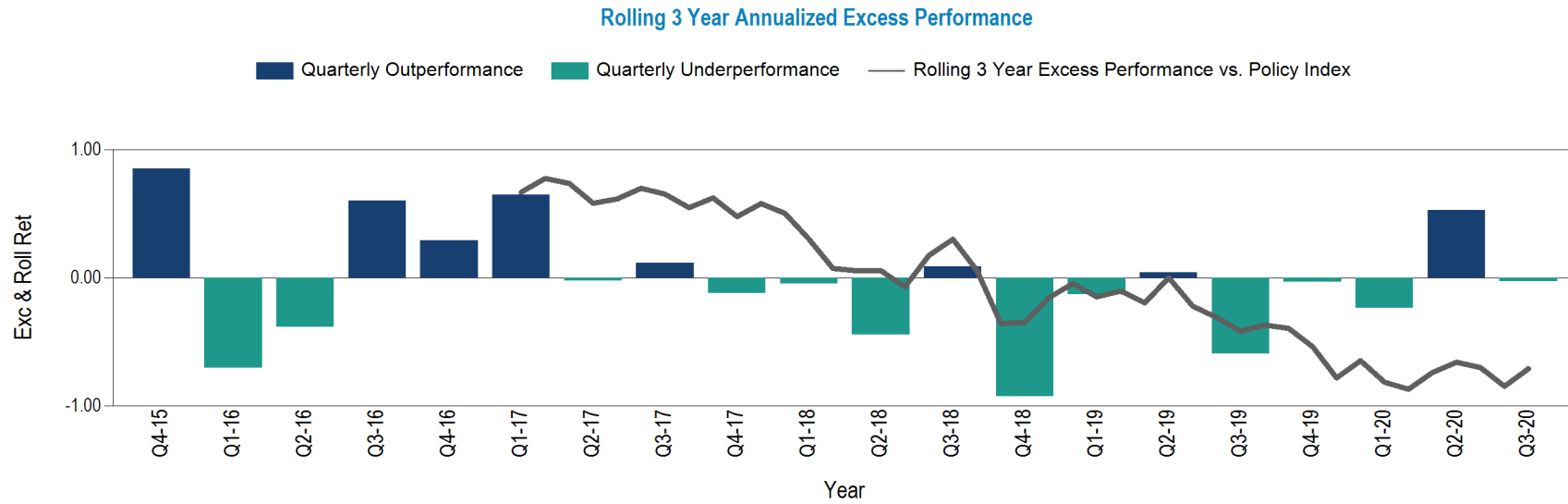
	Quarter	Fiscal YTD
Wtd. Actual Return	4.39%	4.39%
Wtd. Index Return *	4.49%	4.49%
Excess Return	-0.10%	-0.10%
Selection Effect	-0.09%	-0.09%
Allocation Effect	0.17%	0.17%
Interaction Effect	-0.02%	-0.02%

*Calculated from benchmark returns and weightings of each component.

Attribution Summary Fiscal YTD

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Equity	7.3%	8.2%	-0.9%	-0.4%	-0.1%	0.0%	-0.4%
Core Plus Fixed Income	1.2%	0.6%	0.6%	0.1%	0.2%	0.0%	0.3%
High Yield/ Specialty Credit	4.1%	4.7%	-0.6%	0.0%	0.0%	0.0%	-0.1%
Emerging Market Debt	1.9%	1.9%	0.1%	0.0%	0.0%	0.0%	0.0%
Commodities	7.2%	9.1%	-1.9%	-0.1%	0.0%	0.0%	-0.1%
Hedge Funds	4.5%	2.8%	1.7%	0.2%	0.0%	0.0%	0.2%
Capital Efficiency Alpha Pool	3.0%	1.0%	2.0%	0.0%	0.0%	0.0%	0.0%
Midstream Energy	--	-10.5%	--	0.1%	0.1%	-0.1%	0.1%
Core Real Estate	-0.2%	0.5%	-0.7%	0.0%	0.0%	0.0%	0.0%
Private Real Estate	-4.8%	-4.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Private Equity	12.3%	12.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Private Credit	-1.2%	-1.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Opportunistic	7.8%	2.5%	5.3%	0.0%	0.0%	0.0%	0.0%
Cash	--	--	--	--	--	--	--
Total	4.4%	4.5%	-0.1%	-0.1%	0.2%	0.0%	0.1%

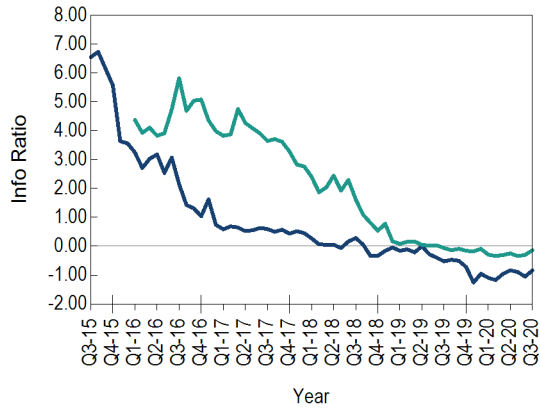
Weighted returns shown in attribution analysis may differ from actual returns.



Total Fund Rolling Risk Statistics (Net of Fees)

Period Ending: September 30, 2020

Rolling Information Ratio



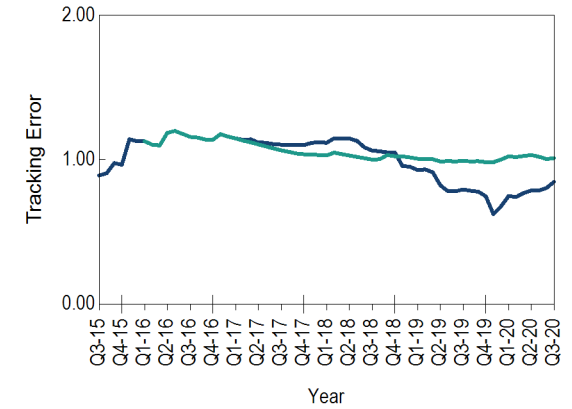
— Total Fund Rolling 3 Year — Total Fund Rolling 5 Year

Rolling Annual Excess Benchmark Return



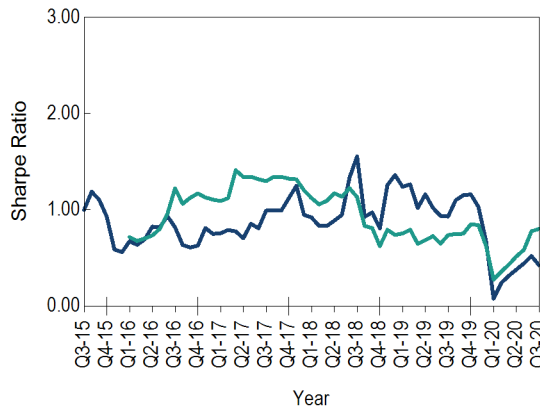
— Total Fund Rolling 3 Year — Total Fund Rolling 5 Year

Rolling Tracking Error



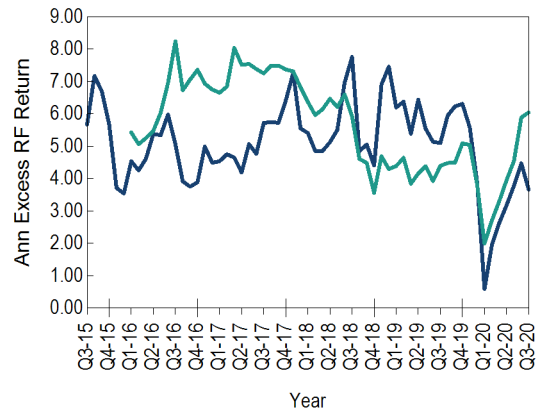
— Total Fund Rolling 3 Year — Total Fund Rolling 5 Year

Rolling Sharpe Ratio



— Total Fund Rolling 3 Year — Total Fund Rolling 5 Year

Rolling Annual Excess Risk Free Return



— Total Fund Rolling 3 Year — Total Fund Rolling 5 Year

Rolling Annualized Standard Deviation



— Total Fund Rolling 3 Year — Total Fund Rolling 5 Year

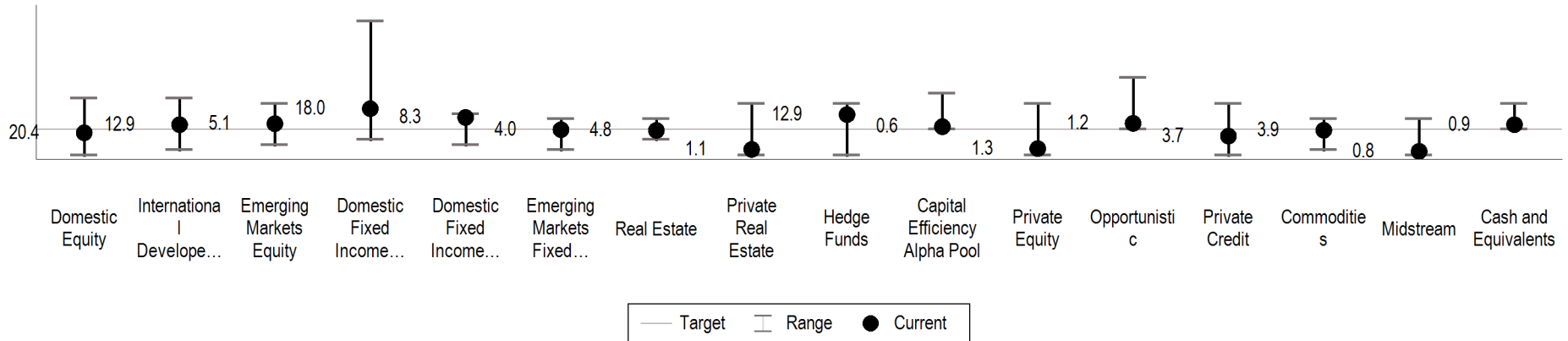
Asset Allocation

Total Fund Sub-Asset Class Allocation

Period Ending: September 30, 2020

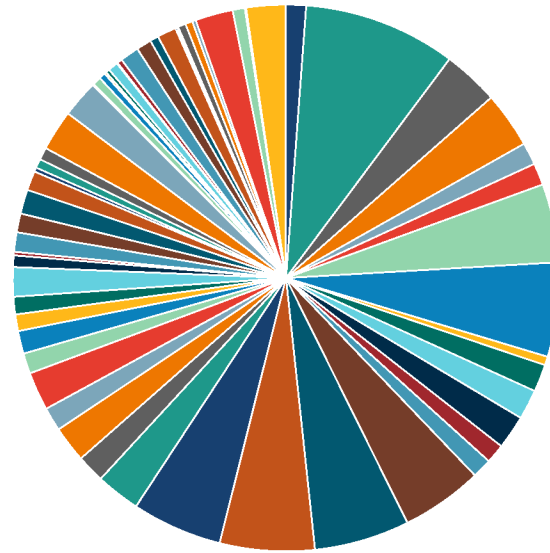
	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
Domestic Equity	\$934,873,378	20.4%	21.0%	-\$29,034,267	16.0% - 27.0%	Yes
International Developed Equity	\$593,721,900	12.9%	12.0%	\$42,917,532	8.0% - 18.0%	Yes
Emerging Markets Equity	\$235,751,811	5.1%	4.0%	\$52,150,355	1.0% - 9.0%	Yes
Domestic Fixed Income Core Plus	\$828,393,577	18.0%	14.0%	\$185,788,481	12.0% - 35.0%	Yes
Domestic Fixed Income High Yield	\$382,825,923	8.3%	6.0%	\$107,423,739	3.0% - 9.0%	Yes
Emerging Markets Fixed Income	\$182,005,090	4.0%	4.0%	-\$1,596,366	0.0% - 6.0%	Yes
Real Estate	\$221,150,548	4.8%	5.0%	-\$8,351,272	3.0% - 7.0%	Yes
Private Real Estate	\$52,040,967	1.1%	5.0%	-\$177,460,853	0.0% - 10.0%	Yes
Hedge Funds	\$592,428,341	12.9%	10.0%	\$133,424,701	5.0% - 15.0%	Yes
Capital Efficiency Alpha Pool	\$25,751,817	0.6%	0.0%	\$25,751,817	0.0% - 7.0%	Yes
Private Equity	\$59,636,244	1.3%	5.0%	-\$169,865,576	0.0% - 10.0%	Yes
Opportunistic	\$54,934,224	1.2%	0.0%	\$54,934,224	0.0% - 10.0%	Yes
Private Credit	\$171,265,493	3.7%	5.0%	-\$58,236,327	0.0% - 10.0%	Yes
Commodities	\$176,913,329	3.9%	4.0%	-\$6,688,127	0.0% - 6.0%	Yes
Midstream	\$35,000,000	0.8%	5.0%	-\$194,501,820	0.0% - 7.0%	Yes
Cash and Equivalents	\$43,343,759	0.9%	0.0%	\$43,343,759	0.0% - 5.0%	Yes
Total	\$4,590,036,401	100.0%	100.0%			

Actual vs. Target



International Developed Equity market value and allocation does not include J.P Morgan Fleming EAFE Plus Equity market value of \$82,379.63.

Current Allocation: by Manager



- | | | | | | |
|-------------------------------------|---|--------------------------------|-------------------------------------|--|---------------------------------|
| Equity Beta Exposure | AB Emerging Markets Strategic Core Equity | Wellington Commodities | PIMCO Commodity Alpha | Long Wharf Real Estate | Blue Torch Credit Opportunities |
| Mellon DB SL Stock Index | Mellon Emerging Markets Stock Index | Aristeia International Limited | Sculptor Enhanced Domestic Partners | Abbott V | DP Investors Fund IV |
| Mellon NSL Dynamic US Equity | Fixed Income Overlay | Brevar Howard | Systematica Trend Following Fund | Abbott VI | TAO Contingent |
| PIMCO StocksPLUS | Mellon DB SL Aggregate Bond Index Fund | D.E. Shaw | Hudson Bay | Pantheon VI | Short Term Cash Account |
| AB US Small Cap Value Equity | PIMCO Core Plus | HBK Fund II | Harvest Midstream | Pantheon VII | Short Term Investment Funds |
| Geneva Capital Small Cap Growth | Western Asset Core Plus | Hudson Bay | ASB Real Estate | Colony Distressed Credit IV | Parametric Cash Overlay |
| Mellon DB SL World ex-US Index | Western Asset High Yield Fixed Income | Indus Pacific Opportunities | J.P. Morgan Strategic Property | TSSP Adjacent Opportunities Partners | Goldman Sachs Cash Account |
| BlackRock International Alpha Tilts | TCW Securitized Opportunities | Magnetar Structured Credit | Invesco Real Estate III | Brookfield Real Estate Finance Fund V | Futures Offset |
| Cevian Capital II | Stone Harbor Emerging Markets Debt | Myriad Opportunities Offshore | Invesco Real Estate IV | Magnetar Constellation | |
| Fidelity Non-US Small Cap Equity | PIMCO EMD | Pharo Macro Fund LTD | Landmark Real Estate Partners VIII | H.I.G. Bayside Loan Opportunity Fund V | |
| DFA Emerging Markets Value I | Gresham MTAP Commodity | | | | |

Total Fund
3 Year Correlation Matrix (Net of Fees)

Period Ending: September 30, 2020

Correlation Matrix
3 Years Ending September 30, 2020

	Total Fund Equity	Global Equity	Domestic Equity	International Developed Equity	Emerging Markets Equity	Fixed Income	Core Plus Fixed Income	High Yield/ Specialty Credit	Emerging Market Debt	Commodities	Hedge Funds	Core Real Estate	Private Equity	Private Credit	Private Real Estate	Policy Index	
Total Fund	1.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Equity	1.00	1.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Global Equity	0.26	0.27	1.00	--	--	--	--	--	--	--	--	--	--	--	--	--	
Domestic Equity	0.99	0.99	0.29	1.00	--	--	--	--	--	--	--	--	--	--	--	--	
International Developed Equity	0.99	0.99	0.27	0.98	1.00	--	--	--	--	--	--	--	--	--	--	--	
Emerging Markets Equity	0.94	0.94	0.15	0.89	0.94	1.00	--	--	--	--	--	--	--	--	--	--	
Fixed Income	0.85	0.83	0.24	0.81	0.82	0.80	1.00	--	--	--	--	--	--	--	--	--	
Core Plus Fixed Income	0.40	0.36	0.19	0.36	0.35	0.29	0.79	1.00	--	--	--	--	--	--	--	--	
High Yield/ Specialty Credit	0.97	0.96	0.20	0.95	0.95	0.90	0.87	0.43	1.00	--	--	--	--	--	--	--	
Emerging Market Debt	0.88	0.87	0.29	0.82	0.87	0.94	0.89	0.50	0.86	1.00	--	--	--	--	--	--	
Commodities	0.96	0.96	0.17	0.94	0.97	0.93	0.73	0.22	0.93	0.79	1.00	--	--	--	--	--	
Hedge Funds	0.91	0.90	0.12	0.88	0.90	0.90	0.81	0.41	0.85	0.85	0.88	1.00	--	--	--	--	
Core Real Estate	-0.44	-0.42	0.16	-0.42	-0.39	-0.39	-0.71	-0.74	-0.49	-0.48	-0.33	-0.56	1.00	--	--	--	
Private Equity	-0.19	-0.20	-0.71	-0.20	-0.18	-0.10	-0.39	-0.55	-0.12	-0.28	-0.07	-0.30	0.33	1.00	--	--	
Private Credit	-0.71	-0.70	0.17	-0.67	-0.70	-0.75	-0.71	-0.38	-0.76	-0.69	-0.71	-0.81	0.71	0.12	1.00	--	
Private Real Estate	-0.54	-0.53	0.35	-0.48	-0.57	-0.56	-0.52	-0.27	-0.61	-0.44	-0.66	-0.61	0.57	-0.13	0.77	1.00	
Policy Index	1.00	1.00	0.26	0.99	0.99	0.94	0.85	0.40	0.98	0.88	0.96	0.90	-0.44	-0.18	-0.72	-0.56	1.00

Cash Flows

Total Fund
Net Cash Flow - Three Months Ended

Period Ending: September 30, 2020

	Equity					
	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Dodge & Cox Global Stock Fund	\$0	\$0	\$0	\$0	\$0	\$0
SGA Global Equity	\$183,935	\$0	-\$47,304	-\$3,808	-\$136,616	\$15
Equity Beta Exposure	\$0	\$55,148,415	-\$174,380	\$0	\$1,674,765	\$56,648,800
Mellon DB SL Stock Index	\$495,345,350	\$0	-\$105,000,000	-\$35,234	\$44,106,057	\$434,451,407
Mellon NSL Dynamic US Equity	\$147,088,828	\$0	\$0	-\$199,817	\$11,919,722	\$159,008,551
PIMCO StocksPLUS	\$180,604,241	\$0	-\$35,000,000	-\$199,436	\$13,511,862	\$159,116,103
AB US Small Cap Value Equity	\$62,369,413	\$0	\$0	-\$146,278	\$1,080,831	\$63,450,244
Geneva Capital Small Cap Growth	\$60,915,720	\$0	\$0	-\$119,219	\$1,282,169	\$62,197,889
Mellon DB SL World ex-US Index	\$213,192,106	\$10,000,000	-\$10,000,000	\$0	\$9,989,740	\$223,181,846
BlackRock International Alpha Tilts	\$255,368,656	\$0	\$0	-\$280,228	\$12,743,252	\$268,111,907
Cevian Capital II	\$23,014,480	\$0	\$0	\$0	\$1,374,551	\$24,389,031
J.P. Morgan Fleming EAFE Plus Equity	\$99,236	\$0	\$0	-\$90	-\$16,857	\$82,380
Fidelity Non-US Small Cap Equity	\$70,441,297	\$0	\$0	-\$77,056	\$7,597,819	\$78,039,116
DFA Emerging Markets Value I	\$80,669,243	\$0	\$0	-\$115,698	\$4,295,420	\$84,964,662
AB Emerging Markets Strategic Core Equity	\$85,535,436	\$0	\$0	-\$345,861	\$10,701,623	\$96,237,059
Mellon Emerging Markets Stock Index	\$49,792,236	\$0	\$0	\$0	\$4,757,854	\$54,550,089
Transition Equity	\$352	\$0	\$0	\$0	\$17	\$369
Total	\$1,724,620,529	\$65,148,415	-\$150,221,684	-\$1,522,724	\$124,882,208	\$1,764,429,468

	Fixed Income					
	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Fixed Income Overlay	--	\$55,775,671	\$0	\$0	\$31,986	\$55,807,656
Mellon DB SL Aggregate Bond Index Fund	\$230,674,753	\$0	\$0	-\$17,890	\$1,402,414	\$232,077,167
PIMCO Core Plus	\$268,029,526	\$0	\$0	-\$193,248	\$2,970,388	\$270,999,915
Western Asset Core Plus	\$264,049,199	\$0	\$0	-\$138,691	\$5,300,905	\$269,350,104
Western Asset High Yield Fixed Income	\$244,962,908	\$0	\$0	-\$128,806	\$12,119,506	\$257,082,414
TCW Securitized Opportunities	\$122,803,850	\$0	\$0	-\$311,758	\$2,939,659	\$125,743,509
Stone Harbor Emerging Markets Debt	\$77,823,720	\$0	\$0	-\$120,635	\$1,599,995	\$79,423,714
PIMCO EMD	\$95,863,812	\$5,000,000	\$0	-\$8,715	\$1,717,564	\$102,581,376
Transition Fixed Income	\$3,579	\$0	\$0	\$0	\$155,155	\$158,735
Total	\$1,304,211,347	\$60,775,671	\$0	-\$919,742	\$28,237,572	\$1,393,224,590

Total Fund

Net Cash Flow - Three Months Ended

Period Ending: September 30, 2020

Commodities

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Gresham MTAP Commodity	\$62,105,195	\$0	\$0	-\$83,534	\$5,575,265	\$67,680,460
Wellington Commodities	\$92,001,640	\$12,000,000	\$0	\$0	\$5,231,229	\$109,232,869
Total	\$154,106,834	\$12,000,000	\$0	-\$83,534	\$10,806,495	\$176,913,329

Hedge Funds

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Aristeia International Limited	\$54,296,301	\$0	\$0	\$0	\$3,703,819	\$58,000,120
Brevan Howard	\$48,580,625	\$15,000,000	\$0	\$0	\$1,422,142	\$65,002,767
D.E. Shaw	\$45,727,559	\$0	\$0	\$0	\$1,233,431	\$46,960,990
HBK Fund II	\$47,859,395	\$0	\$0	\$0	\$2,138,130	\$49,997,525
Hudson Bay	\$79,854,926	\$0	\$0	\$0	\$3,540,127	\$83,395,053
Indus Pacific Opportunities	\$29,134,931	\$0	\$0	\$0	\$3,778,083	\$32,913,014
Magnetar Structured Credit	\$11,403,304	\$0	-\$1,429,886	\$0	\$162,668	\$10,136,086
Myriad Opportunities Offshore	\$51,695,431	\$0	\$0	\$0	\$3,572,448	\$55,267,879
Pharo Macro Fund LTD	\$52,445,402	\$0	\$0	\$0	\$1,092,862	\$53,538,264
PIMCO Commodity Alpha	\$66,483,066	\$0	\$0	-\$261,318	\$2,321,294	\$68,804,361
River Birch	\$1,293,766	\$0	\$0	\$0	\$124,295	\$1,418,060
Sculptor Enhanced Domestic Partners	\$51,480,186	\$0	\$0	\$0	\$3,493,655	\$54,973,840
Systematica Trend Following Fund	\$12,100,665	\$0	\$0	\$0	-\$80,283	\$12,020,382
Total	\$552,355,556	\$15,000,000	-\$1,429,886	-\$261,318	\$26,502,671	\$592,428,341

Capital Efficiency Alpha Pool

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Hudson Bay	\$0	\$0	\$0	\$0	\$25,751,817	\$25,751,817
Total	\$0	\$0	\$0	\$0	\$25,751,817	\$25,751,817

Midstream Energy

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Harvest Midstream	--	\$35,000,000	\$0	\$0	\$0	\$35,000,000
Total	\$0	\$35,000,000	\$0	\$0	\$0	\$35,000,000

Total Fund

Net Cash Flow - Three Months Ended

Period Ending: September 30, 2020

Core Real Estate

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
ASB Real Estate	\$115,572,147	\$229,430	\$0	-\$229,430	-\$105,629	\$115,695,948
J.P. Morgan Strategic Property	\$105,729,922	\$0	\$0	-\$246,309	-\$275,322	\$105,454,600
Total	\$221,302,069	\$229,430	\$0	-\$475,739	-\$380,951	\$221,150,548

Private Real Estate

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Invesco Real Estate III	\$3,566,567	\$0	\$0	\$0	\$41,190	\$3,607,757
Invesco Real Estate IV	\$25,340,547	\$0	\$0	\$0	-\$958,636	\$24,381,911
Landmark Real Estate Partners VIII	\$19,896,999	\$0	-\$520,843	\$0	-\$1,252,550	\$18,123,606
Long Wharf Real Estate	\$6,093,721	\$297,324	\$0	\$0	-\$463,353	\$5,927,692
Total	\$54,897,834	\$297,324	-\$520,843	\$0	-\$2,633,349	\$52,040,967

Private Equity

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Abbott IV	\$1,214,216	\$0	\$0	\$0	\$14,122	\$1,228,338
Abbott V	\$9,821,481	\$0	\$0	\$0	\$1,036,599	\$10,858,080
Abbott VI	\$25,763,526	\$250,000	-\$1,750,000	\$0	\$3,769,084	\$28,032,610
Pantheon Secondary III	\$1,653,918	\$0	\$0	\$0	\$211,750	\$1,865,668
Pantheon III	\$60,252	\$0	\$0	\$0	-\$1,268	\$58,984
Pantheon V	\$469,775	\$0	\$0	\$0	-\$234	\$469,541
Pantheon VI	\$2,597,503	\$0	\$0	\$0	\$25,165	\$2,622,668
Pantheon VII	\$12,824,125	\$0	-\$400,000	\$0	\$1,646,285	\$14,070,410
Vista Foundation IV	\$0	\$429,945	\$0	\$0	\$0	\$429,945
Total	\$54,404,796	\$679,945	-\$2,150,000	\$0	\$6,701,503	\$59,636,244

Total Fund

Net Cash Flow - Three Months Ended

Period Ending: September 30, 2020

Private Credit

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Colony Distressed Credit IV	\$58,609,784	\$0	\$0	\$0	-\$4,829,767	\$53,780,017
TSSP Adjacent Opportunities Partners	\$35,067,259	\$0	-\$4,706,439	\$0	\$116,686	\$30,477,506
Brookfield Real Estate Finance Fund V	\$22,850,543	\$1,442,903	\$0	\$0	\$341,084	\$24,634,530
Magnetar Constellation	\$57,683,355	\$0	-\$6,179,910	\$0	\$2,270,611	\$53,774,056
H.I.G. Bayside Loan Opportunity Fund V	\$6,330,741	\$0	-\$822,126	\$0	\$0	\$5,508,616
Blue Torch Credit Opportunities	--	\$3,090,768	\$0	\$0	\$0	\$3,090,768
Total	\$180,541,683	\$4,533,671	-\$11,708,474	\$0	-\$2,101,387	\$171,265,493

Opportunistic

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
DP Investors Fund IV	\$19,932,792	\$0	\$0	\$0	\$2,181,051	\$22,113,843
TAO Contingent	\$19,472,064	\$0	\$0	\$0	\$922,166	\$20,394,230
TSSP	--	\$12,426,151	\$0	\$0	\$0	\$12,426,151
Total	\$39,404,856	\$12,426,151	\$0	\$0	\$3,103,217	\$54,934,224

Cash

	Beginning Market Value	Contributions	Withdrawals	Fees	Net Investment Change	Ending Market Value
Short Term Cash Account	\$11,229,592	\$2,427,827	-\$3,338,231	\$0	\$0	\$10,319,189
Short Term Investment Funds	\$111,165,087	\$166,489,839	-\$170,560,626	\$0	\$75,875	\$107,170,176
Parametric Cash Overlay	\$0	\$48,226,018	-\$13,719,268	\$0	\$5,277	\$34,512,028
Goldman Sachs Cash Account	\$0	\$8,420,245	-\$4,621,421	\$0	\$0	\$3,798,823
Futures Offset	--	\$2,396,548	-\$114,848,269	\$0	-\$4,735	-\$112,456,456
Total	\$122,394,680	\$227,960,477	-\$307,087,815	\$0	\$76,417	\$43,343,759

Total Fund
Cash Flow History

Period Ending: September 30, 2020

Portfolio Reconciliation

	Quarter-To-Date	Fiscal Year-To-Date	One Year	Three Years	Five Years	Ten Years
Beginning Market Value	\$4,408,240,184	\$4,408,240,184	\$4,321,363,278	\$4,052,385,749	\$3,570,411,486	--
Contributions	\$455,712,854	\$455,712,854	\$1,960,203,461	\$4,093,781,332	\$6,570,508,706	\$9,951,348,502
Withdrawals	-\$469,780,472	-\$469,780,472	-\$2,013,782,913	-\$4,258,405,234	-\$6,999,913,388	-\$9,794,934,815
Fees	-\$3,263,057	-\$3,263,057	-\$13,267,085	-\$38,387,039	-\$76,671,351	-\$94,550,627
Net Cash Flow	-\$14,067,619	-\$14,067,619	-\$53,579,452	-\$164,623,902	-\$429,404,682	\$156,413,687
Net Investment Change	\$195,946,215	\$195,946,215	\$322,334,954	\$702,356,933	\$1,449,111,977	\$4,433,705,093
Ending Market Value	\$4,590,118,780	\$4,590,118,780	\$4,590,118,780	\$4,590,118,780	\$4,590,118,780	\$4,590,118,780
Net Change	\$181,878,596	\$181,878,596	\$268,755,502	\$537,733,031	\$1,019,707,295	\$4,590,118,780

Contribution and withdrawals include transfers in and out of accounts. Ending market value is net of fees.

Asset Class Details

Total Fund

Risk Analysis - 3 Years (Net of Fees)

Period Ending: September 30, 2020

	Alpha	Beta	R-Squared	Anlzd Return	Information Ratio	Ann Excess BM Return	Tracking Error	Sharpe Ratio	Ann Excess RF Return	Anlzd Standard Deviation	Sortino Ratio	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Total Fund	-0.06%	1.01	0.99	5.31%	-0.84	-0.71%	0.85%	0.42	3.66%	8.69%	0.64	96.48%	102.76%
Equity	-0.06%	1.00	1.00	6.20%	-1.06	-0.81%	0.77%	0.27	4.63%	17.36%	0.42	96.90%	100.71%
Global Equity	-2.09%	0.41	0.02	-45.51%	-0.99	-53.19%	53.67%	-0.88	-47.08%	53.21%	-0.57	-59.15%	96.74%
Domestic Equity	-0.06%	1.01	1.00	10.93%	-0.77	-0.71%	0.92%	0.50	9.36%	18.60%	0.74	99.04%	101.65%
International Developed Equity	-0.05%	1.00	0.99	0.60%	-0.43	-0.63%	1.47%	-0.06	-0.98%	16.26%	0.04	99.29%	101.71%
Emerging Markets Equity	-0.40%	0.95	0.97	-2.45%	-1.53	-4.86%	3.18%	-0.22	-4.03%	18.41%	-0.17	76.03%	100.37%
Fixed Income	0.00%	1.07	0.98	4.83%	0.39	0.29%	0.75%	0.70	3.25%	4.67%	0.96	105.20%	102.22%
Core Plus Fixed Income	0.02%	1.04	0.90	5.68%	0.37	0.43%	1.18%	1.11	4.10%	3.69%	2.98	110.44%	111.65%
High Yield/ Specialty Credit	0.05%	0.82	0.97	3.81%	-0.01	-0.02%	2.12%	0.29	2.24%	7.66%	0.33	77.14%	72.75%
Emerging Market Debt	-0.10%	1.04	0.95	0.12%	-0.45	-1.28%	2.81%	-0.12	-1.46%	11.87%	0.01	93.24%	103.27%
Commodities	0.27%	0.97	0.90	-0.98%	0.71	3.19%	4.47%	-0.18	-2.56%	14.11%	-0.10	116.81%	95.70%
Hedge Funds	0.10%	0.82	0.46	6.42%	0.00	-0.01%	3.80%	0.96	4.84%	5.07%	1.23	78.37%	47.24%
Core Real Estate	0.12%	0.56	0.71	4.43%	-0.46	-0.75%	1.65%	1.47	2.85%	1.95%	3.13	57.74%	75.26%

Total Fund
Risk Return Statistics: Last Three Years

Period Ending: September 30, 2020

Last Three Years			Last Three Years		Last Three Years		Last Three Years				
Equity	MSCI ACWI	IMI GR	Core Plus Fixed Income	BBgBarc US Aggregate TR	High Yield/ Specialty Credit	ICE BofAML High Yield Master II	Emerging Market Debt	50 JPM EMBI Global Div/ 50 JPM GBI EM			
RETURN SUMMARY STATISTICS			RETURN SUMMARY STATISTICS		RETURN SUMMARY STATISTICS		RETURN SUMMARY STATISTICS				
Number of Periods	36	36	Number of Periods	36	36	Number of Periods	36	36	Number of Periods	36	36
Maximum Return	11.26	11.06	Maximum Return	2.64	2.59	Maximum Return	3.61	4.78	Maximum Return	6.74	5.49
Minimum Return	-14.74	-14.33	Minimum Return	-1.93	-1.15	Minimum Return	-10.52	-11.76	Minimum Return	-13.80	-12.61
Annualized Return	6.20	7.02	Annualized Return	5.68	5.24	Annualized Return	3.81	3.83	Annualized Return	0.12	1.40
Total Return	19.79	22.57	Total Return	18.01	16.56	Total Return	11.89	11.94	Total Return	0.36	4.25
Annualized Excess Return Over Risk Free	4.63	5.44	Annualized Excess Return Over Risk Free	4.10	3.66	Annualized Excess Return Over Risk Free	2.24	2.26	Annualized Excess Return Over Risk Free	-1.46	-0.18
Annualized Excess Return	-0.81	0.00	Annualized Excess Return	0.43	0.00	Annualized Excess Return	-0.02	0.00	Annualized Excess Return	-1.28	0.00
RISK SUMMARY STATISTICS			RISK SUMMARY STATISTICS		RISK SUMMARY STATISTICS		RISK SUMMARY STATISTICS				
Beta	1.00	1.00	Beta	1.04	1.00	Beta	0.82	1.00	Beta	1.04	1.00
Upside Deviation	9.05	9.11	Upside Deviation	2.70	2.64	Upside Deviation	3.69	5.14	Upside Deviation	6.19	5.64
Downside Deviation	14.68	14.06	Downside Deviation	1.91	1.34	Downside Deviation	11.43	11.40	Downside Deviation	12.25	10.72
RISK/RETURN SUMMARY STATISTICS			RISK/RETURN SUMMARY STATISTICS		RISK/RETURN SUMMARY STATISTICS		RISK/RETURN SUMMARY STATISTICS				
Annualized Standard Deviation	17.36	17.29	Annualized Standard Deviation	3.69	3.37	Annualized Standard Deviation	7.66	9.26	Annualized Standard Deviation	11.87	11.07
Alpha	-0.06	0.00	Alpha	0.02	0.00	Alpha	0.05	0.00	Alpha	-0.10	0.00
Sharpe Ratio	0.27	0.31	Sharpe Ratio	1.11	1.09	Sharpe Ratio	0.29	0.24	Sharpe Ratio	-0.12	-0.02
Excess Return Over Market / Risk	-0.05	0.00	Excess Return Over Market / Risk	0.12	0.00	Excess Return Over Market / Risk	0.00	0.00	Excess Return Over Market / Risk	-0.11	0.00
Tracking Error	0.77	0.00	Tracking Error	1.18	0.00	Tracking Error	2.12	0.00	Tracking Error	2.81	0.00
Information Ratio	-1.06	--	Information Ratio	0.37	--	Information Ratio	-0.01	--	Information Ratio	-0.45	--
CORRELATION STATISTICS			CORRELATION STATISTICS		CORRELATION STATISTICS		CORRELATION STATISTICS				
R-Squared	1.00	1.00	R-Squared	0.90	1.00	R-Squared	0.97	1.00	R-Squared	0.95	1.00
Correlation	1.00	1.00	Correlation	0.95	1.00	Correlation	0.99	1.00	Correlation	0.97	1.00

91 Day T-Bills used as risk-free proxy

Total Fund
Risk Return Statistics: Last Three Years

Period Ending: September 30, 2020

Last Three Years			Last Three Years			Last Three Years		
	Commodities	Bloomberg Commodity Index TR USD	Hedge Funds	75% 90 Day TBills +4% / 25% MSCI ACWI		Core Real Estate		NCREIF-ODCE
RETURN SUMMARY STATISTICS			RETURN SUMMARY STATISTICS			RETURN SUMMARY STATISTICS		
Number of Periods	36	36	36	36	36	36		36
Maximum Return	8.05	6.76	3.99	2.94	2.94	1.45		2.20
Minimum Return	-12.62	-12.81	-5.24	-3.02	-3.02	-1.17		-1.55
Annualized Return	-0.98	-4.18	6.42	6.43	6.43	4.43		5.18
Total Return	-2.92	-12.01	20.52	20.55	20.55	13.89		16.36
Annualized Excess Return Over Risk Free	-2.56	-5.75	4.84	4.85	4.85	2.85		3.60
Annualized Excess Return	3.19	0.00	-0.01	0.00	0.00	-0.75		0.00
RISK SUMMARY STATISTICS			RISK SUMMARY STATISTICS			RISK SUMMARY STATISTICS		
Beta	0.97	1.00	0.82	1.00	1.00	0.56		1.00
Upside Deviation	7.55	6.18	3.09	2.28	2.28	1.64		1.94
Downside Deviation	10.16	10.67	5.21	3.08	3.08	1.41		--
RISK/RETURN SUMMARY STATISTICS			RISK/RETURN SUMMARY STATISTICS			RISK/RETURN SUMMARY STATISTICS		
Annualized Standard Deviation	14.11	13.80	5.07	4.18	4.18	1.95		2.92
Alpha	0.27	0.00	0.10	0.00	0.00	0.12		0.00
Sharpe Ratio	-0.18	-0.42	0.96	1.16	1.16	1.47		1.23
Excess Return Over Market / Risk	0.23	0.00	0.00	0.00	0.00	-0.39		0.00
Tracking Error	4.47	0.00	3.80	0.00	0.00	1.65		0.00
Information Ratio	0.71	--	0.00	--	--	-0.46		--
CORRELATION STATISTICS			CORRELATION STATISTICS			CORRELATION STATISTICS		
R-Squared	0.90	1.00	0.46	1.00	1.00	0.71		1.00
Correlation	0.95	1.00	0.68	1.00	1.00	0.84		1.00

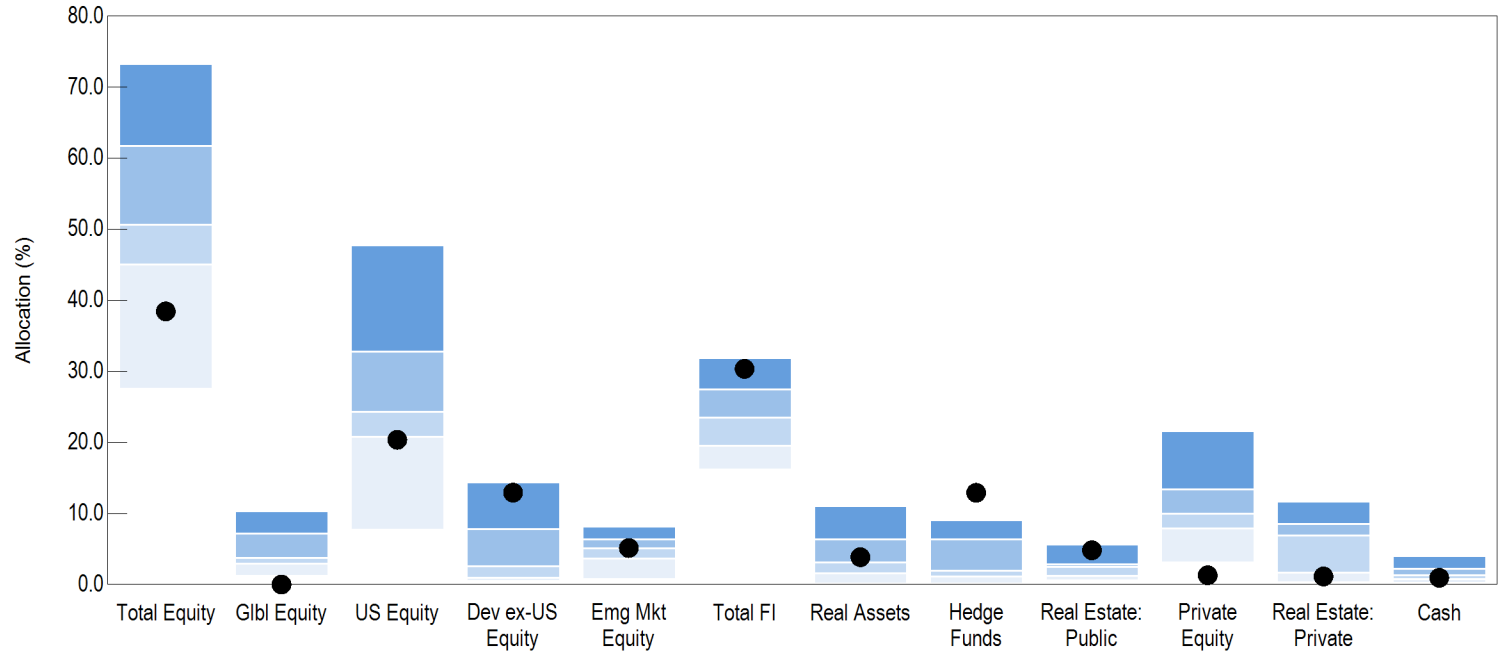
91 Day T-Bills used as risk-free proxy

Peer Comparison

Total Fund
Peer Universe Comparison: Asset Allocation

Period Ending: September 30, 2020

Total Plan Allocation vs. InvMetrics Public DB > \$1B Gross
As of September 30, 2020

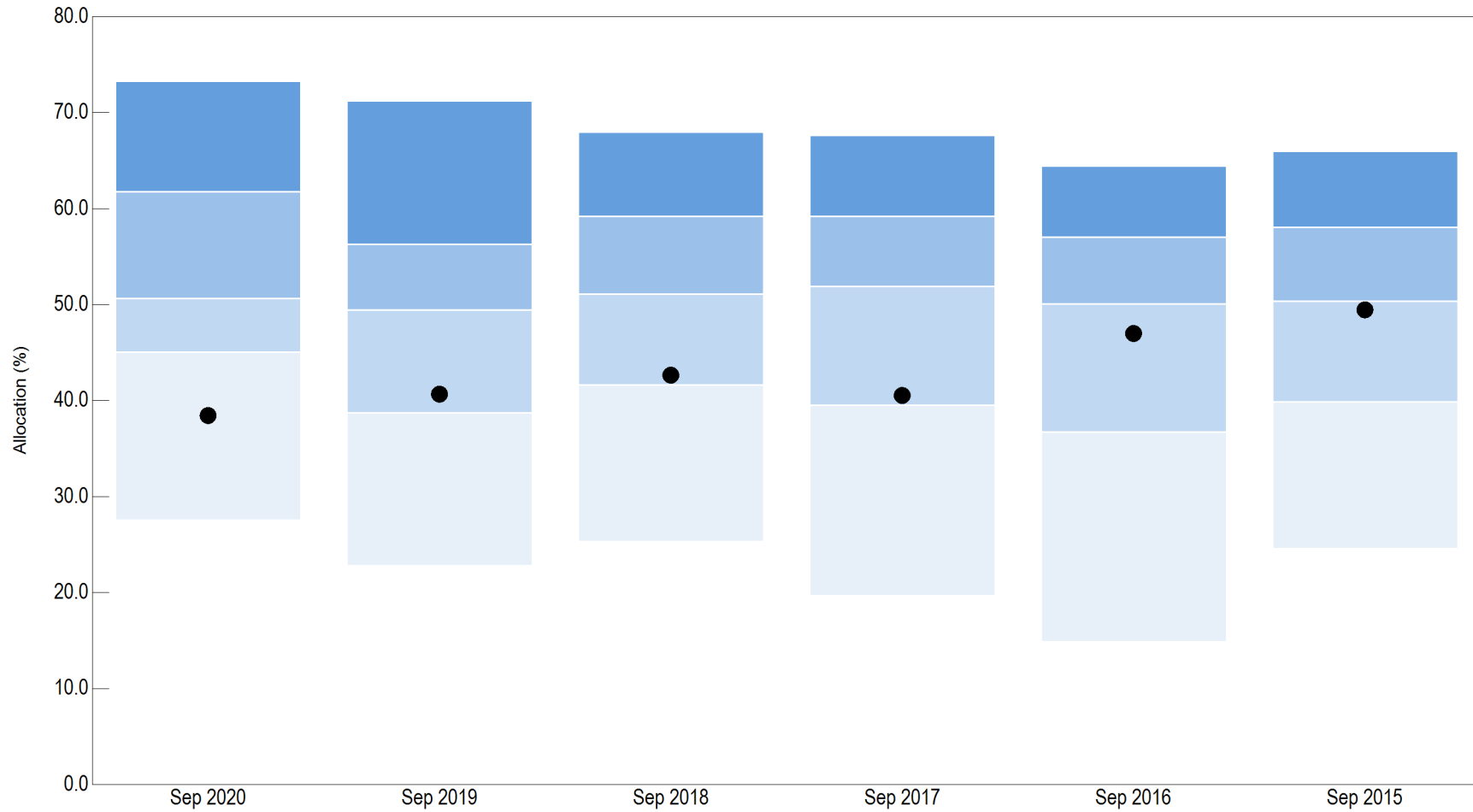


Allocation (Rank)

5th Percentile	73.3	10.3	47.8	14.4	8.2	31.9	11.0	9.1	5.6	21.6	11.7	4.0	--
25th Percentile	61.8	7.3	32.9	7.8	6.4	27.5	6.5	6.5	2.9	13.4	8.6	2.3	--
Median	50.7	3.9	24.4	2.7	5.2	23.6	3.2	2.0	2.6	10.0	7.0	1.4	--
75th Percentile	45.1	3.0	20.8	1.0	3.8	19.6	1.6	1.2	1.3	8.0	1.7	0.9	--
95th Percentile	27.6	1.3	7.8	0.6	0.8	16.2	0.2	0.3	0.7	3.2	0.4	0.3	--
# of Portfolios	24	11	18	10	17	24	8	14	6	18	19	23	--
● Total Fund	38.4 (91)	0.0 (99)	20.4 (78)	12.9 (9)	5.1 (52)	30.4 (13)	3.9 (44)	12.9 (1)	4.8 (10)	1.3 (99)	1.1 (78)	0.9 (73)	--

Private Credit allocation of 3.7% not included in the above chart. Opportunistic and midstream allocations not included in chart.

Total Equity Allocation vs. InvMetrics Public DB > \$1B Gross

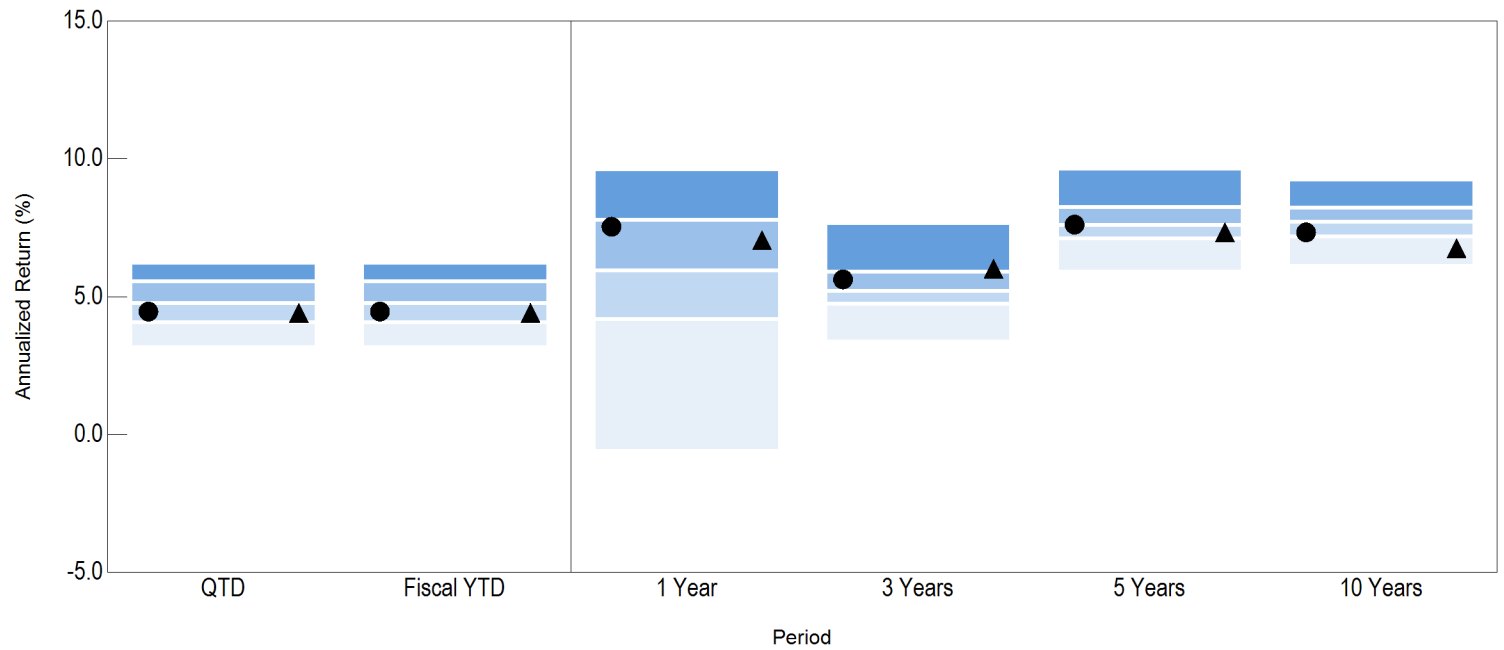


Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

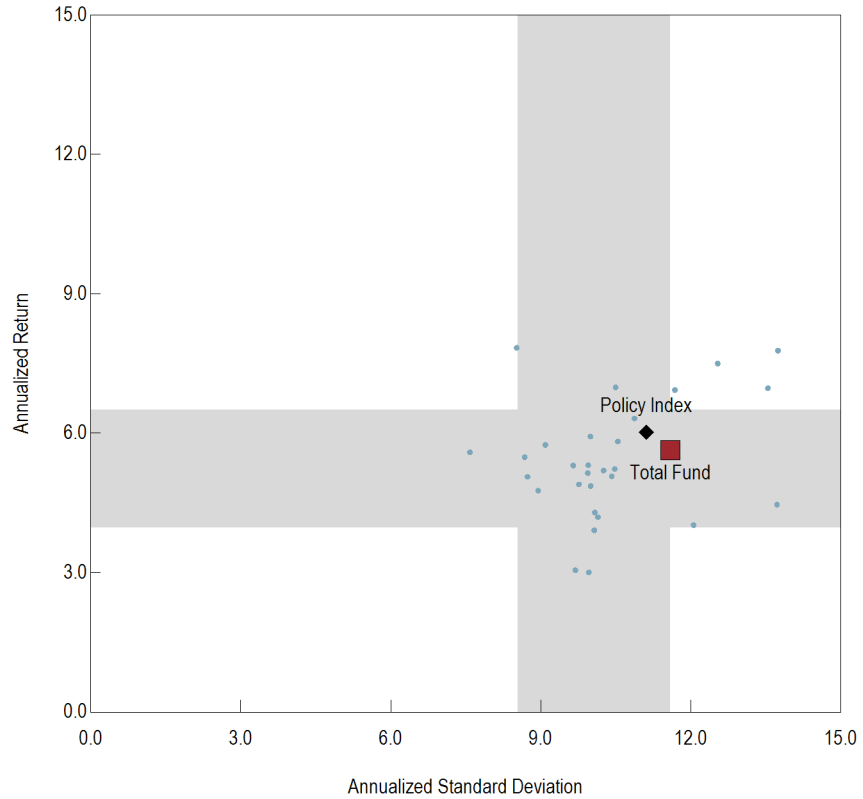
Period Ending: September 30, 2020

InvMetrics Public DB > \$1B Gross Return Comparison
Ending September 30, 2020



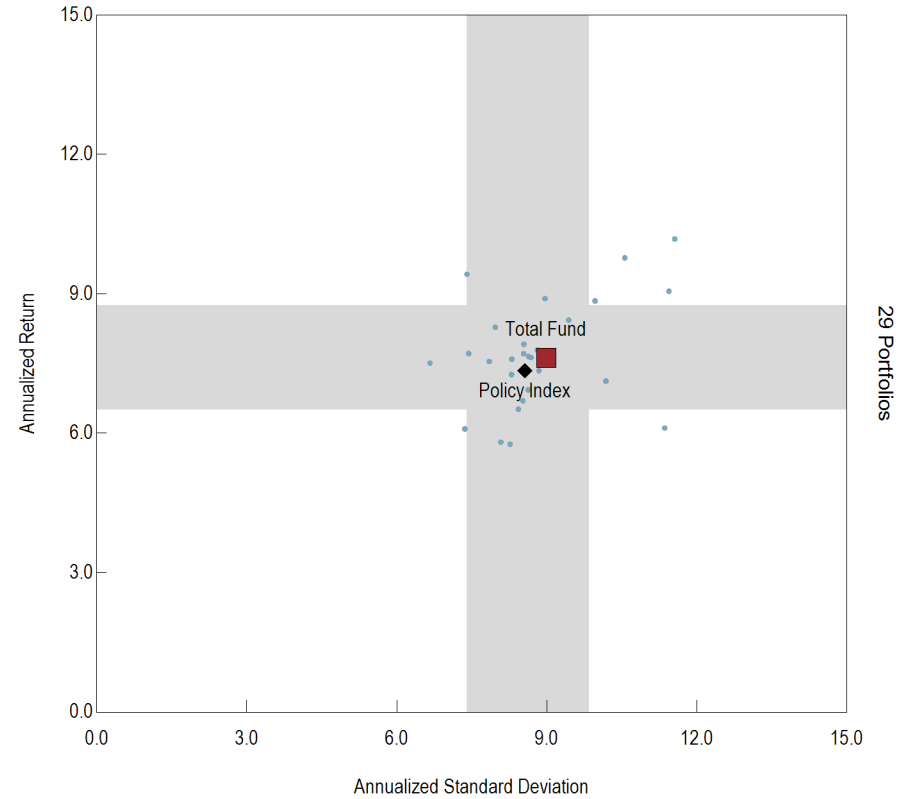
	QTD		Fiscal YTD		1 Year		3 Years		5 Years		10 Years	
Return (Rank)												
5th Percentile	6.2		6.2		9.6		7.7		9.6		9.2	
25th Percentile	5.6		5.6		7.8		5.9		8.3		8.2	
Median	4.8		4.8		6.0		5.2		7.6		7.7	
75th Percentile	4.1		4.1		4.2		4.8		7.1		7.2	
95th Percentile	3.2		3.2		-0.6		3.4		5.9		6.1	
# of Portfolios	29		29		29		29		29		27	
● Total Fund	4.5	(61)	4.5	(61)	7.5	(32)	5.6	(35)	7.6	(52)	7.3	(73)
▲ Policy Index	4.4	(62)	4.4	(62)	7.0	(35)	6.0	(25)	7.3	(68)	6.8	(93)

Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2020



- Total Fund
- ◆ Policy Index
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

Annualized Return vs. Annualized Standard Deviation
5 Years Ending September 30, 2020



- Total Fund
- ◆ Policy Index
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Gross

Other

Total Fund Investment Fund Fee Analysis

Period Ending: September 30, 2020

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Equity Beta Exposure		\$56,648,800		
Mellon DB SL Stock Index	0.03% of Assets	\$434,451,407	\$130,335	0.03%
Mellon NSL Dynamic US Equity	0.50% of Assets	\$159,008,551	\$795,043	0.50%
PIMCO StocksPLUS	0.50% of Assets	\$159,116,103	\$795,581	0.50%
AB US Small Cap Value Equity	1.00% of First 25.0 Mil, 0.90% of Next 25.0 Mil, 0.75% Thereafter	\$63,450,244	\$575,877	0.91%
Geneva Capital Small Cap Growth	0.75% of Assets	\$62,197,889	\$466,484	0.75%
Mellon DB SL World ex-US Index		\$223,181,846		
BlackRock International Alpha Tilts	0.45% of First 100.0 Mil, 0.40% Thereafter	\$268,111,907	\$1,122,448	0.42%
Cevian Capital II	Performance-based 1.50 and 18.00	\$24,389,031	\$365,835	1.50%
Fidelity Non-US Small Cap Equity	0.40% of Assets	\$78,039,116	\$312,156	0.40%
DFA Emerging Markets Value I	0.54% of Assets	\$84,964,662	\$458,809	0.54%
AB Emerging Markets Strategic Core Equity	1.45% of Assets	\$96,237,059	\$1,395,437	1.45%
Mellon Emerging Markets Stock Index	0.05% of Assets	\$54,550,089	\$27,275	0.05%
Fixed Income Overlay		\$55,807,656		
Mellon DB SL Aggregate Bond Index Fund	0.05% of First 50.0 Mil, 0.04% of Next 50.0 Mil, 0.02% Thereafter	\$232,077,167	\$71,415	0.03%
PIMCO Core Plus	0.50% of First 25.0 Mil, 0.38% of Next 25.0 Mil, 0.25% Thereafter	\$270,999,915	\$771,250	0.28%
Western Asset Core Plus	0.30% of First 100.0 Mil, 0.15% Thereafter	\$269,350,104	\$554,025	0.21%
Western Asset High Yield Fixed Income	0.20% of Assets	\$257,082,414	\$514,165	0.20%
TCW Securitized Opportunities	1.00% of Assets	\$125,743,509	\$1,257,435	1.00%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund Investment Fund Fee Analysis

Period Ending: September 30, 2020

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
TCW Securitized Opportunities	1.00% of Assets	\$125,743,509	\$1,257,435	1.00%
Stone Harbor Emerging Markets Debt	0.60% of First 100.0 Mil, 0.55% Thereafter	\$79,423,714	\$476,542	0.60%
PIMCO EMD	0.05% of Assets	\$102,581,376	\$51,291	0.05%
Gresham MTAP Commodity	0.75% of Assets	\$67,680,460	\$507,603	0.75%
Wellington Commodities	0.75% of Assets	\$109,232,869	\$819,247	0.75%
Aristeia International Limited	Performance-based 1.00 and 20.00	\$58,000,120	\$684,231	1.18%
Brevan Howard	Performance-based 2.00 and 20.00	\$65,002,767	\$1,300,055	2.00%
D.E. Shaw	Performance-based 2.50 and 25.00	\$46,960,990	\$1,174,025	2.50%
HBK Fund II	Performance-based 1.50 and 20.00	\$49,997,525	\$749,963	1.50%
Hudson Bay		\$83,395,053		
Indus Pacific Opportunities	Performance-based 1.50 and 20.00	\$32,913,014	\$650,143	1.98%
Magnetar Structured Credit	Performance-based 1.50 and 20.00	\$10,136,086	\$152,041	1.50%
Myriad Opportunities Offshore	Performance-based 2.00 and 20.00	\$55,267,879	\$1,120,023	2.03%
Pharo Macro Fund LTD		\$53,538,264		
PIMCO Commodity Alpha	Performance-based 1.70 and 20.00	\$68,804,361	\$1,169,674	1.70%
River Birch	Performance-based 1.50 and 20.00	\$1,418,060	\$47,340	3.34%
Sculptor Enhanced Domestic Partners		\$54,973,840		
Systematica Trend Following Fund		\$12,020,382		
Hudson Bay		\$25,751,817		
Harvest Midstream		\$35,000,000		
ASB Real Estate	1.25% of First 5.0 Mil, 1.00% of Next 10.0 Mil, 0.75% Thereafter	\$115,695,948	\$917,720	0.79%
J.P. Morgan Strategic Property	1.00% of Assets	\$105,454,600	\$1,054,546	1.00%
Invesco Real Estate III	1.50% of Assets	\$3,607,757	\$54,116	1.50%
Invesco Real Estate IV	1.50% of Assets	\$24,381,911	\$365,729	1.50%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund Investment Fund Fee Analysis

Period Ending: September 30, 2020

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Landmark Real Estate Partners VIII	777,717 Annually	\$18,123,606	\$777,717	4.29%
Long Wharf Real Estate	1.50% of Assets	\$5,927,692	\$88,915	1.50%
Abbott IV	330,000 Annually	\$1,228,338	\$330,000	26.87%
Abbott V	545,000 Annually	\$10,858,080	\$545,000	5.02%
Abbott VI	1.00% of First 25.0 Mil, 0.90% Thereafter	\$28,032,610	\$277,293	0.99%
Pantheon Secondary III	73,114 Quarterly	\$1,865,668	\$292,456	15.68%
Pantheon III	0 Annually	\$58,984	\$0	0.00%
Pantheon V	16,345 Quarterly	\$469,541	\$65,380	13.92%
Pantheon VI	149,262 Annually	\$2,622,668	\$149,262	5.69%
Pantheon VII	303,750 Annually	\$14,070,410	\$303,750	2.16%
Vista Foundation IV		\$429,945		
Colony Distressed Credit IV	0.38% of Assets	\$53,780,017	\$201,675	0.38%
TSSP Adjacent Opportunities Partners	1.35% of Assets	\$42,903,657	\$579,199	1.35%
Magnetar Constellation	Performance-based 1.50 and 17.50	\$53,774,056	\$806,611	1.50%
H.I.G. Bayside Loan Opportunity Fund V		\$5,508,616		
Blue Torch Credit Opportunities		\$3,090,768		
DP Investors Fund IV		\$22,113,843		
TAO Contingent		\$20,394,230		
Short Term Cash Account		\$10,319,189		
Short Term Investment Funds		\$107,170,176		
Parametric Cash Overlay		\$34,512,028		
Goldman Sachs Cash Account		\$3,798,823		
Futures Offset		-\$112,456,456		
Total		\$4,565,242,766	\$25,325,120	0.55%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund Watch List (Gross of Fees)

Period Ending: September 30, 2020

Name	Allocation Group	Status	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6	Rule 7	Rule 8	Rule 9
Dodge & Cox Global Stock Fund	Global Equity	No Issues	✓	⚠	⚠	⚠	⚠	--	--	--	--
SGA Global Equity	Global Equity	No Issues	✓	⚠	⚠	⚠	⚠	--	--	--	--
Equity Beta Exposure		No Issues	--	--	--	--	--	--	--	--	--
Mellon DB SL Stock Index	Domestic Equity	No Issues	--	--	--	--	--	--	--	--	✓
Mellon NSL Dynamic US Equity	Domestic Equity	No Issues	✓	✓	✓	✓	✓	✓	✓	--	--
PIMCO StocksPLUS	Domestic Equity	No Issues	✓	✓	✓	✓	✓	✓	✓	--	--
AB US Small Cap Value Equity	Domestic Equity	No Issues	✓	✓	⚠	⚠	⚠	⚠	✓	--	--
Geneva Capital Small Cap Growth	Domestic Equity	No Issues	✓	✓	⚠	⚠	✓	⚠	✓	--	--
Mellon DB SL World ex-US Index	International Developed Equity	No Issues	--	--	--	--	--	--	--	--	⚠
BlackRock International Alpha Tilts	International Developed Equity	No Issues	✓	✓	⚠	⚠	⚠	⚠	✓	--	--
Fidelity Non-US Small Cap Equity	International Developed Equity	Watch	✓	✓	✓	✓	✓	✓	✓	⚠	--
DFA Emerging Markets Value I	Emerging Markets Equity	No Issues	✓	⚠	⚠	⚠	⚠	⚠	⚠	--	--
AB Emerging Markets Strategic Core Equity	Emerging Markets Equity	No Issues	✓	✓	⚠	⚠	⚠	--	--	--	--
Mellon Emerging Markets Stock Index	Emerging Markets Equity	No Issues	--	--	--	--	--	--	--	--	--
Fixed Income Overlay		No Issues	--	--	--	--	--	--	--	--	--
Mellon DB SL Aggregate Bond Index Fund	Domestic Fixed Income Core Plus	No Issues	--	--	--	--	--	--	--	--	✓

Rule 1 - Manager has outperformed the 10th percentile in the appropriate style universe for the one year period.

Rule 2 - Manager has underperformed the 75th percentile in the appropriate style universe for the one year period.

Rule 3 - Manager has underperformed the benchmark index for the one year period.

Rule 4 - Manager has underperformed the 50th percentile in the appropriate style universe for the three year period.

Rule 5 - Manager has underperformed the benchmark index for the three year period.

Rule 6 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 7 - Manager has underperformed the benchmark index for the five year period.

Rule 8 - Fund experiences non-performance related issues including personnel turnover, changes in investment philosophy or drift, excessive asset growth, change in ownership and any other reason that raises concern.

PIMCO: Provisional: While we do not believe that this change will have a significant impact on the underlying portfolios; however, we are placing a provisional flag on the following strategies to signal that a key departure has taken place at the senior level. DFA: Provisional: In October 2019, DFA began a gradual unwinding of the 17.5% country caps for all emerging markets strategy. Western Asset: Provisional: In February 2020, Franklin announced their intention to acquire 100% of Legg Mason in an all cash deal. Western Asset strategies flagged to note change but no serious concerns present.

Total Fund Watch List (Gross of Fees)

Period Ending: September 30, 2020

Name	Allocation Group	Status	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6	Rule 7	Rule 8	Rule 9
TCW Securitized Opportunities	Domestic Fixed Income High Yield	No Issues	✓	✓	✓	✓	✓	--	--	--	--
Stone Harbor Emerging Markets Debt	Emerging Markets Fixed Income	No Issues	✓	✓	✓	Ⓡ	Ⓡ	Ⓡ	Ⓡ	Ⓡ	--
PIMCO EMD	Emerging Markets Fixed Income	No Issues	--	--	--	--	--	--	--	--	--
Gresham MTAP Commodity	Commodities	Watch	✓	✓	✓	✓	✓	Ⓡ	✓	--	--
Wellington Commodities	Commodities	No Issues	Ⓡ	✓	✓	✓	✓	✓	✓	--	--
Hudson Bay	Hedge Funds	No Issues	--	--	✓	--	--	--	--	--	--
Pharo Macro Fund LTD	Hedge Funds	No Issues	--	--	--	--	--	--	--	--	--
Sculptor Enhanced Domestic Partners	Hedge Funds	No Issues	--	--	✓	--	--	--	--	--	--
Systematica Trend Following Fund	Hedge Funds	No Issues	--	--	Ⓡ	--	--	--	--	--	--
Hudson Bay	Capital Efficiency Alpha Pool	No Issues	--	--	--	--	--	--	--	--	--
Harvest Midstream	Midstream	No Issues	--	--	--	--	--	--	--	--	--
ASB Real Estate	Real Estate	No Issues	--	--	✓	--	✓	--	Ⓡ	--	--
J.P. Morgan Strategic Property	Real Estate	No Issues	--	--	✓	--	Ⓡ	--	Ⓡ	--	--

Rule 1 - Manager has outperformed the 10th percentile in the appropriate style universe for the one year period.

Rule 2 - Manager has underperformed the 75th percentile in the appropriate style universe for the one year period.

Rule 3 - Manager has underperformed the benchmark index for the one year period.

Rule 4 - Manager has underperformed the 50th percentile in the appropriate style universe for the three year period.

Rule 5 - Manager has underperformed the benchmark index for the three year period.

Rule 6 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 7 - Manager has underperformed the benchmark index for the five year period.

Rule 8 - Fund experiences non-performance related issues including personnel turnover, changes in investment philosophy or drift, excessive asset growth, change in ownership and any other reason that raises concern.

Rule 9 - Index Fund Tracking Error exceeds 0.25% of the appropriate benchmark over the one year period.

Total Fund
Quarterly Historical Net Returns

Period Ending: September 30, 2020

	2020 Q3	2020 Q2	2020 Q1	2019 Q4	2019 Q3	2019 Q2	2019 Q1	2018 Q4	2018 Q3	2018 Q2	2018 Q1	2017 Q4
Total Fund	4.4	10.7	-11.3	4.6	0.2	3.1	6.8	-6.4	2.3	0.3	-0.1	3.0
<i>Policy Index</i>	4.4	10.2	-11.1	4.6	0.8	3.0	7.0	-5.5	2.2	0.7	-0.1	3.2

	2017 Q3	2017 Q2	2017 Q1	2016 Q4	2016 Q3	2016 Q2	2016 Q1	2015 Q4	2015 Q3	2015 Q2	2015 Q1	2014 Q4
Total Fund	3.2	2.7	4.2	0.8	3.5	1.9	1.1	2.2	-5.4	0.7	2.4	0.8
<i>Policy Index</i>	3.1	2.8	3.5	0.5	2.9	2.2	1.8	1.4	-4.9	0.4	2.0	0.4

	2014 Q3	2014 Q2	2014 Q1	2013 Q4	2013 Q3	2013 Q2	2013 Q1	2012 Q4	2012 Q3	2012 Q2	2012 Q1	2011 Q4
Total Fund	-1.5	3.6	2.1	4.1	4.4	-0.6	4.4	2.2	4.2	-1.4	7.5	4.9
<i>Policy Index</i>	-1.4	3.4	2.4	3.8	4.4	-0.5	3.4	1.5	4.1	-1.0	6.5	3.5

Performance Return Calculations

Performance is calculated using a Time Weighted Rates of Return (TWRR) methodology. Monthly returns are linked geometrically and annualized for periods longer than one year.

Data Source

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

Illiquid Alternatives

Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

Manager Line Up

<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>	<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>
AB Emerging Markets Strategic Core	11/3/2016	Northern Trust	Mellon Dynamic US Equity Fund	9/23/2014	Mellon
AB US Small Cap Value Equity	7/7/2015	Northern Trust	Mellon EB DV Stock Index	10/18/2017	Mellon
Abbott Capital PE IV	7/13/2001	Abbott Capital	Mellon EB DV World ex-US Index	8/1/2018	Mellon
Abbott Capital PE V	5/25/2005	Abbott Capital	Myriad Opportunities Offshore	5/19/2016	Northern Trust
Abbott Capital PE VI	3/31/2008	Abbott Capital	OZ Domestic Partners II	6/30/2013	Northern Trust
Aristeia International Limited	5/1/2014	Northern Trust	Pantheon Global III		Pantheon
ASB Real Estate	9/30/2013	ASB	Pantheon USA III		Pantheon
BlackRock International Alpha Tilts	9/30/2003	BlackRock	Pantheon USA V		Pantheon
Blue Torch Credit Opportunities	7/24/2020	Blue Torch	Pantheon USA VI		Pantheon
Brevan Howard	11/1/2013	Northern Trust	Pantheon USA VII		Pantheon
Brookfield Real Estate Finance Fund V	12/18/2017	Northern Trust	Parametric Overlay/ Cap Efficiency Program	7/31/2020	Parametric
Cevian Capital II	12/30/2014	Northern Trust	PMF LTD	12/27/2019	Northern Trust
Colony Distressed Debt IV	12/28/2015	Colony	PIMCO Commodity Alpha	5/4/2016	PIMCO
D.E. Shaw	6/30/2013	Northern Trust	PIMCO Core Plus	1/21/2011	Northern Trust
DFA Emerging Markets Value I	3/7/2014	Northern Trust	PIMCO EMD		Northern Trust
DP Investors	1/30/2020	Northern Trust	PIMCO StocksPLUS	7/14/2003	PIMCO
Gresham MTAP Commodity	9/3/2013	Gresham	Fidelity Non-US Small Cap Equity	6/10/2008	Northern Trust
Harvest Midstream	9/28/2020	Harvest Midstream	River Birch	8/3/2015	Northern Trust
HBK Fund II	11/1/2013	Northern Trust	Short Term Cash Account		Northern Trust
Henderson Smallcap Growth	7/22/2015	Northern Trust	Short Term Investment Funds		Northern Trust
H.I.G Bayside Loan Opportunities Fund V	7/24/2019	H.I.G. Capital	Stone Harbor Emerging Markets Debt	8/8/2012	Stone Harbor
Hudson Bay	6/7/2019	Northern Trust	Systematica Trend Following Fund		Northern Trust
Indus Pacific Opportunities	6/30/2014	Northern Trust	TCW Securitized Opportunities	2/3/2016	TCW
Invesco Real Estate III	6/30/2013	Invesco	Transition Equity		Northern Trust
Invesco Real Estate IV	12/18/2015	Invesco	Transition Fixed Income		Northern Trust
J.P. Morgan Fleming EAFE Plus Equity	11/5/2003	Northern Trust	TSSP Adjacent Opportunities Partners	11/17/2017	TPG Sixth Street
J.P. Morgan Strategic Property	7/2/2014	J.P. Morgan	Vista Equity Partners	7/24/2020	Vista Equity
Landmark Real Estate Partners VIII	4/29/2018	Landmark	Wellington Commodities	9/10/2013	Wellington
Long Wharf Real Estate	6/27/2019	Long Wharf	Western Asset Core Plus	5/31/2004	Northern Trust
Magnetar Structured Credit	5/1/2014	Northern Trust	Western Asset High Yield Fixed income	5/31/2005	Northern Trust
Mellon Aggregate Bond Index Fund	1/14/2011	Mellon	Western Asset Core Plus	5/31/2004	Northern Trust

Policy & Custom Index Composition		Western Asset High Yield Fixed Income	5/31/2005	Northern Trust
Policy Index: 7/1/2020-Present	37% MSCI ACWI IMI, 14% BBgBarc US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 1% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 4% MSCI ACWI*, 5% BBgBarc US Aggregate, 1% Alerian Midstream, 4% BBgBarc US			
Policy Index: 4/1/2020-6/30/2020	37% MSCI ACWI IMI, 19% BBgBarc US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 1% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 5% BBgBarc US Aggregate*.			
Policy Index: 1/1/2020-3/31/2020	37% MSCI ACWI IMI, 19% BBgBarc US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 5% BBgBarc US Aggregate*.			
Policy Index: 10/1/2019-12/31/2019	37% MSCI ACWI IMI, 19% BBgBarc US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 3% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 6% BBgBarc US Aggregate*.			
Policy Index: 7/1/2019-9/30/2019	37% MSCI ACWI IMI, 19% BBgBarc US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 4% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 5% BBgBarc US Aggregate*.			
Policy Index: 4/1/2019-6/30/2019	37% MSCI ACWI IMI, 19% BBgBarc US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 3% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 6% BBgBarc US Aggregate*.			
Policy Index: 1/1/2019-3/31/2019	37% MSCI ACWI IMI, 19% BBgBarc US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 3% actual time-weighted Private Credit Returns*, 2% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 5% BBgBarc US Aggregate*.			
Policy Index: 10/1/2018-12/31/2018	37% MSCI ACWI IMI, 19% BBgBarc US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 2% actual time-weighted Private Equity Returns*, 2% actual time-weighted Private Credit Returns*, 2% actual time-weighted Private Real Estate Returns*, 3% MSCI ACWI*, 6% BBgBarc US Aggregate*.			
Policy Index: 7/1/2018-9/30/2018	37% MSCI ACWI IMI, 19% BBgBarc US Aggregate, 6% Ice BofA ML High Yield Master II Index, 2% JPM Emerging Markets Bond Index Global Diversified, 2% JPM Government Bond Index-Emerging Markets, 4% Bloomberg Commodity Index, 7.5% 3-Month T-bill +400bps, 2.5% MSCI ACWI, 5% NCREIF-ODCE, 3% actual time-weighted Private Equity Returns*, 2% actual time-weighted Private Credit Returns*, 1% actual time-weighted Private Real Estate Returns*, 2% MSCI ACWI*, 7% BBgBarc US Aggregate*.			
Policy Index: 1/1/2017- 6/30/2018	19% Russell 3000 Index, 18% MSCI ACWI ex US, 29% BBgBarc US Aggregate, 10% NCREIF-ODCE, 4% Bloomberg Commodity Index, 7.5% 91-day T-bills + 400bps, 2.5% MSCI ACWI, 5% Russell 3000 Index + 300 bps, 5% ICE BofA ML High Yield + 200 bps.			
Policy Index: 4/1/2014-12/31/2016	23% Russell 3000 Index, 29% BBgBarc US Aggregate, 22% MSCI ACWI ex US,			

Other Disclosures

*Private Asset actual weights, rounded to 1%, and actual time-weighted returns of Private Equity, Private Credit, Private Real Estate used in policy with the difference in weight versus target allocated to private market's public market "equivalent". Private Equity to Global Equity, Private Credit and Private Real Estate to Core Plus.

All data prior to 2Q 2011 has been provided by the investment managers.

Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$.

Benchmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price-to-Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

R-Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$.

Sortino Ratio: Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

Standard Deviation: A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

Disclaimer

This report contains confidential and proprietary information and is subject to the terms and conditions of the Consulting Agreement. It is being provided for use solely by the customer. The report may not be sold or otherwise provided, in whole or in part, to any other person or entity without written permission from Verus Advisory, Inc., (hereinafter Verus) or as required by law or any regulatory authority. The information presented does not constitute a recommendation by Verus and cannot be used for advertising or sales promotion purposes. This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities or any other financial instruments or products.

The information presented has been prepared using data from third party sources that Verus believes to be reliable. While Verus exercised reasonable professional care in preparing the report, it cannot guarantee the accuracy of the information provided by third party sources. Therefore, Verus makes no representations or warranties as to the accuracy of the information presented. Verus takes no responsibility or liability (including damages) for any error, omission, or inaccuracy in the data supplied by any third party. Nothing contained herein is, or should be relied on as a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the investor should be prepared to bear.

The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management, (c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Verus receives universe data from InvMetrics, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.