Q2 2021 INVESTMENT SUMMARY: BOARD REPORT

MODOT & PATROL EMPLOYEES' RETIREMENT SYSTEM

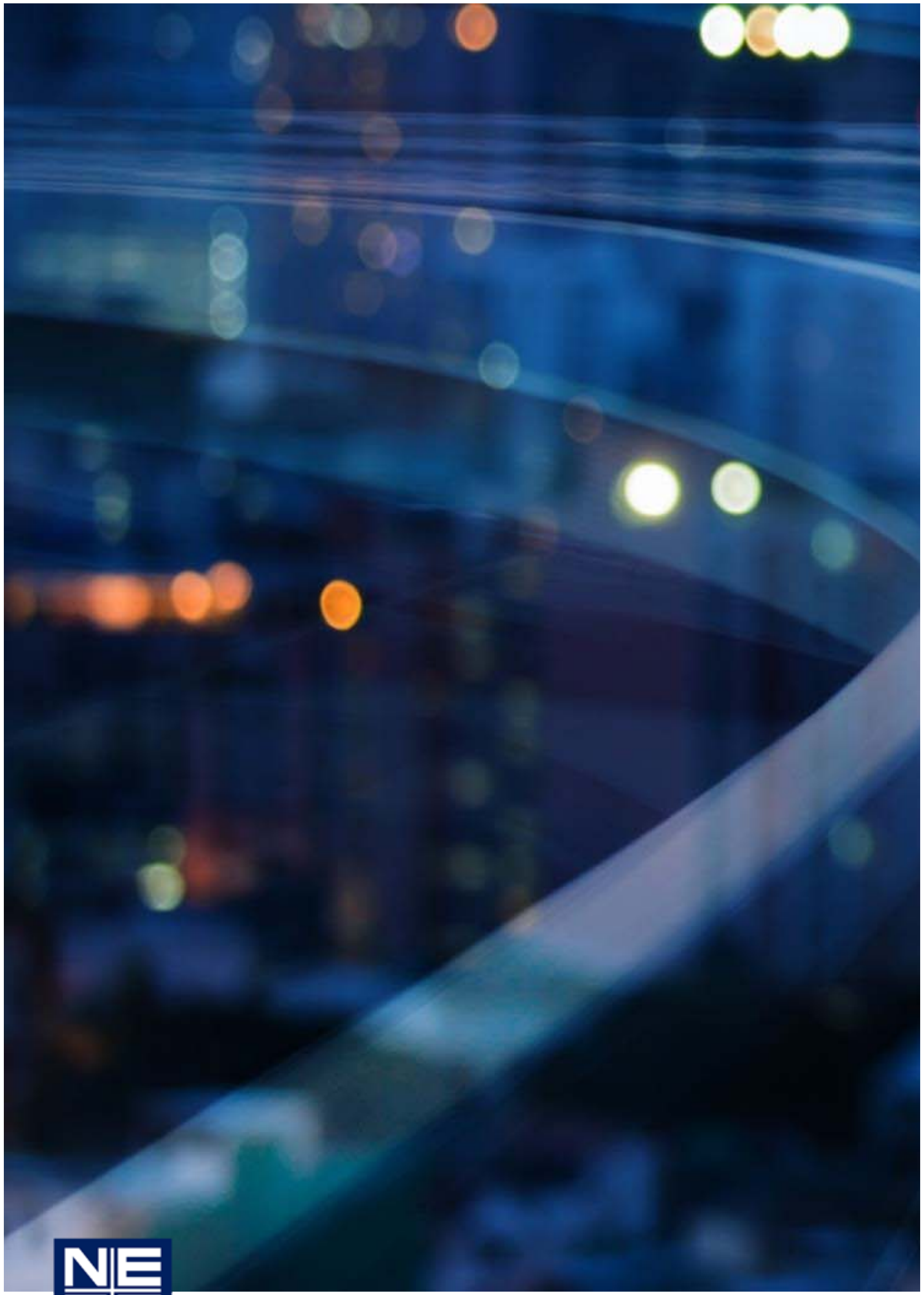
AUGUST 2021

Kevin Leonard, Partner

Will Forde, CFA, CAIA, Principal

Kiley Fischer, Analyst

TABLE OF CONTENTS



MARKET UPDATE

MARKET OVERVIEW

Macro

U.S. Dollar	VIX	US 10-Year
↓	↓	↑
-0.9%	-3.6	-28.8 bps

Equity

S&P 500	MSCI EAFE	MSCI EM
↑	↑	↑
8.5%	5.2%	5.0%

Credit

US Agg.	High Yield	Dollar EMD
↑	↑	↑
1.8%	2.7%	4.1%

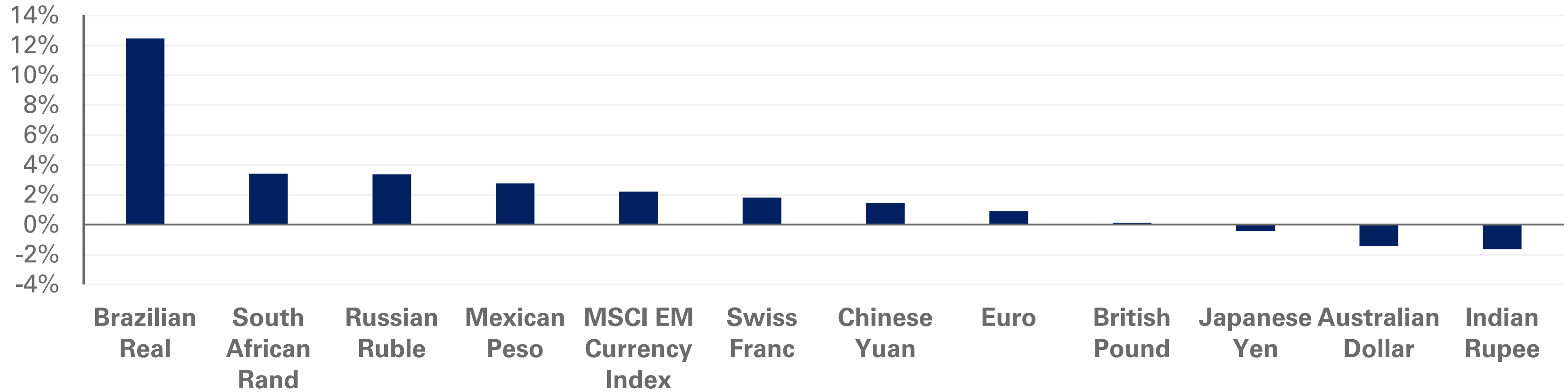
Real Assets

Oil	Gold	REITS
↑	↑	↑
24.2%	3.6%	11.7%

Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), US Agg (Barclays US Aggregate Bond Index), High Yield (Barclays US High Yield Index), Dollar EMD (JPM EMBI Global Diversified Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index).
Source: CBOE, S&P, MSCI, Bloomberg, JPM, NAREIT, FactSet

MACRO OVERVIEW

CURRENCY PERFORMANCE RELATIVE TO U.S. DOLLAR

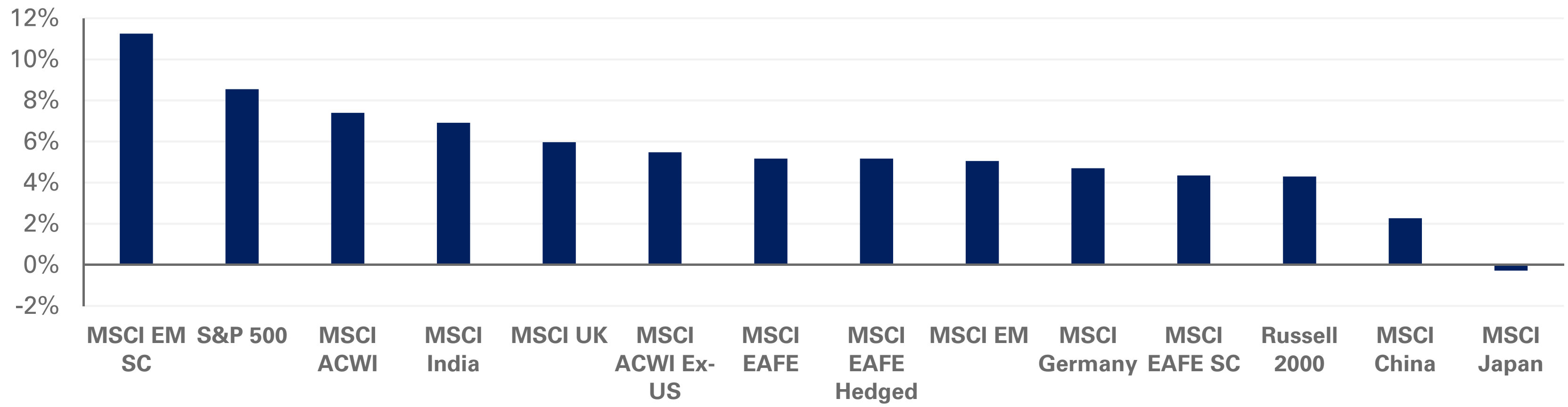


Central Banks	Current Rate	CPI YOY	Notes from the Quarter
Federal Reserve	0.00% - 0.25%	5.3%	The Fed maintained current levels of monthly asset purchases and projected two rate hikes by the end of 2023
European Central Bank	0.00%	1.9%	The ECB left rates unchanged and maintained its €1.85T emergency bond-buying program until at least March 2022
Bank of Japan	-0.10%	-0.1%	The BoJ will continue to maintain pandameic-relief measures QE program with inflation remaining well below target

Source (Top): MSCI, FactSet
Source (Bottom): MSCI, FactSet

EQUITY OVERVIEW

QUARTERLY RETURN

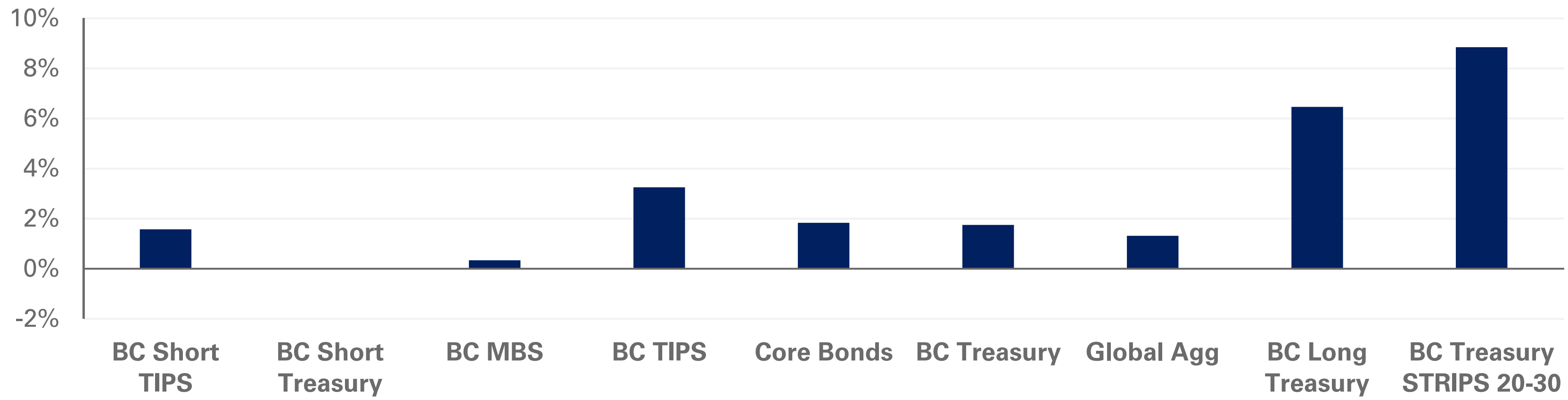


Russell 3000 QTD Sector Returns	QTD	1 year
Technology	13.7%	49.1%
Health Care	8.2%	29.5%
Consumer Discretionary	5.6%	50.5%
Consumer Staples	2.8%	24.3%
Energy	11.6%	58.3%
Materials & Processing	4.7%	53.4%
Producer Durables	6.0%	50.1%
Financial Services	6.9%	59.6%
Utilities	0.4%	17.6%

Source (Top): MSCI, Russell, S&P, FactSet
Source (Bottom): Russell, FactSet

RATES OVERVIEW

QUARTERLY RETURN

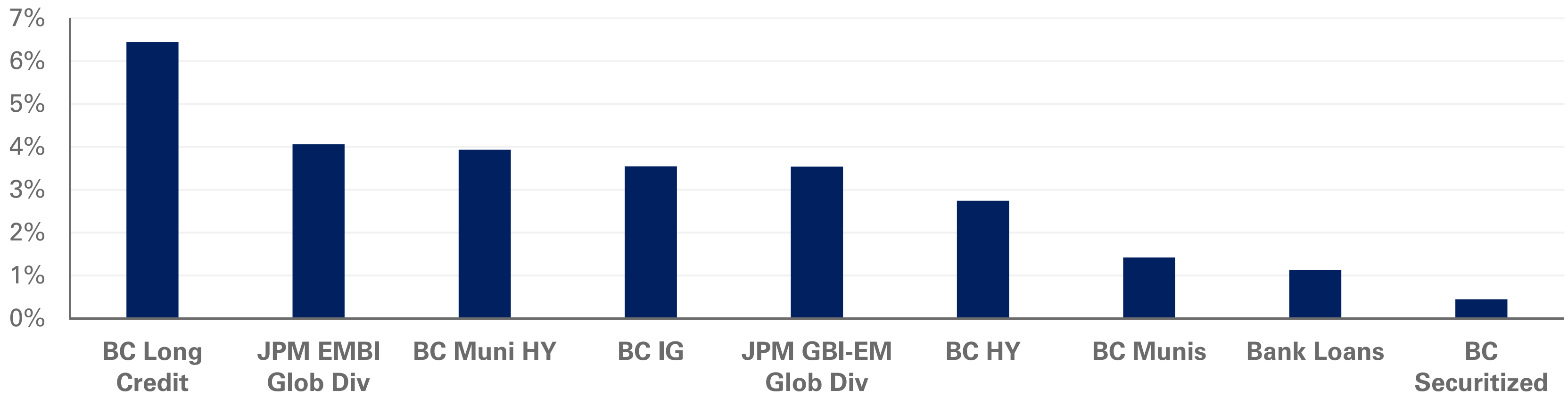


	Previous Quarter	Current Quarter	|Δ|
US 10-Year	1.74%	1.45%	-0.29%
US 30-Year	2.42%	2.06%	-0.36%
US Real 10-Year	-0.63%	-0.87%	-0.24%
German 10-Year	-0.30%	-0.21%	0.09%
Japan 10-Year	0.09%	0.05%	-0.03%
China 10-Year	3.21%	3.13%	-0.09%
EM Local Debt	4.99%	4.98%	-0.01%

Source (Top): Bloomberg, FactSet
Source (Bottom): JPM, FactSet

CREDIT OVERVIEW

QUARTERLY RETURN

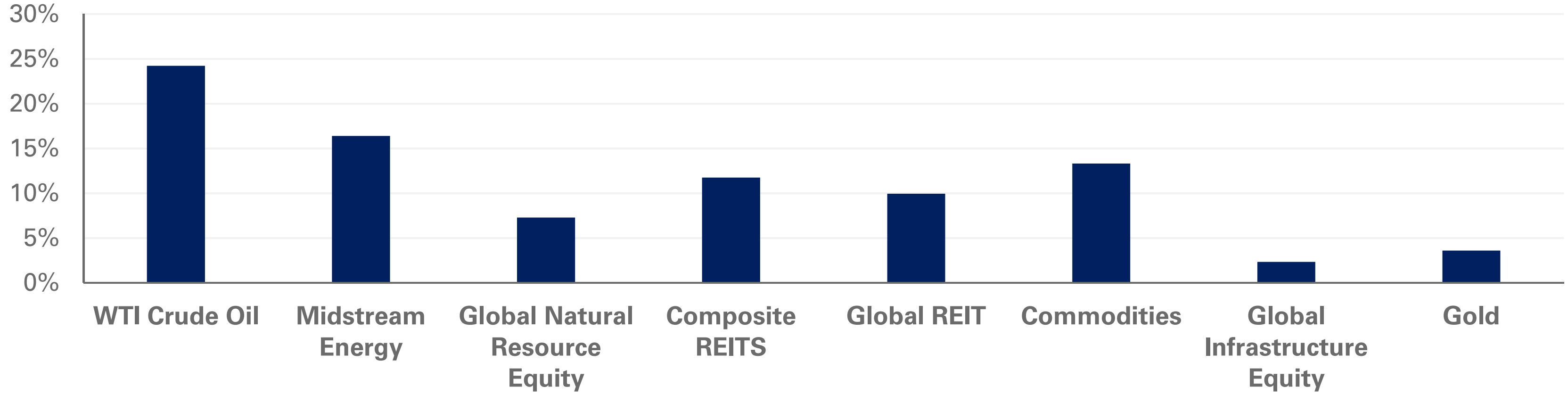


Credit Spread (Basis Points)	3/31/2021	6/30/2021	|Δ|	Median
BC IG Credit	91	80	-11	136
BC Long Credit	126	118	-8	175
BC Securitized	16	29	13	49
BC High Yield	310	268	-42	477
Muni HY	364	309	-55	631
JPM EMBI Glob Div	354	340	-14	344
Bank Loans - Libor	355	355	0	428

Notes: Medians calculated since 11/30/2000
Source (Top): Bloomberg, JPM, FactSet
Source (Bottom): Bloomberg, JPM, FactSet

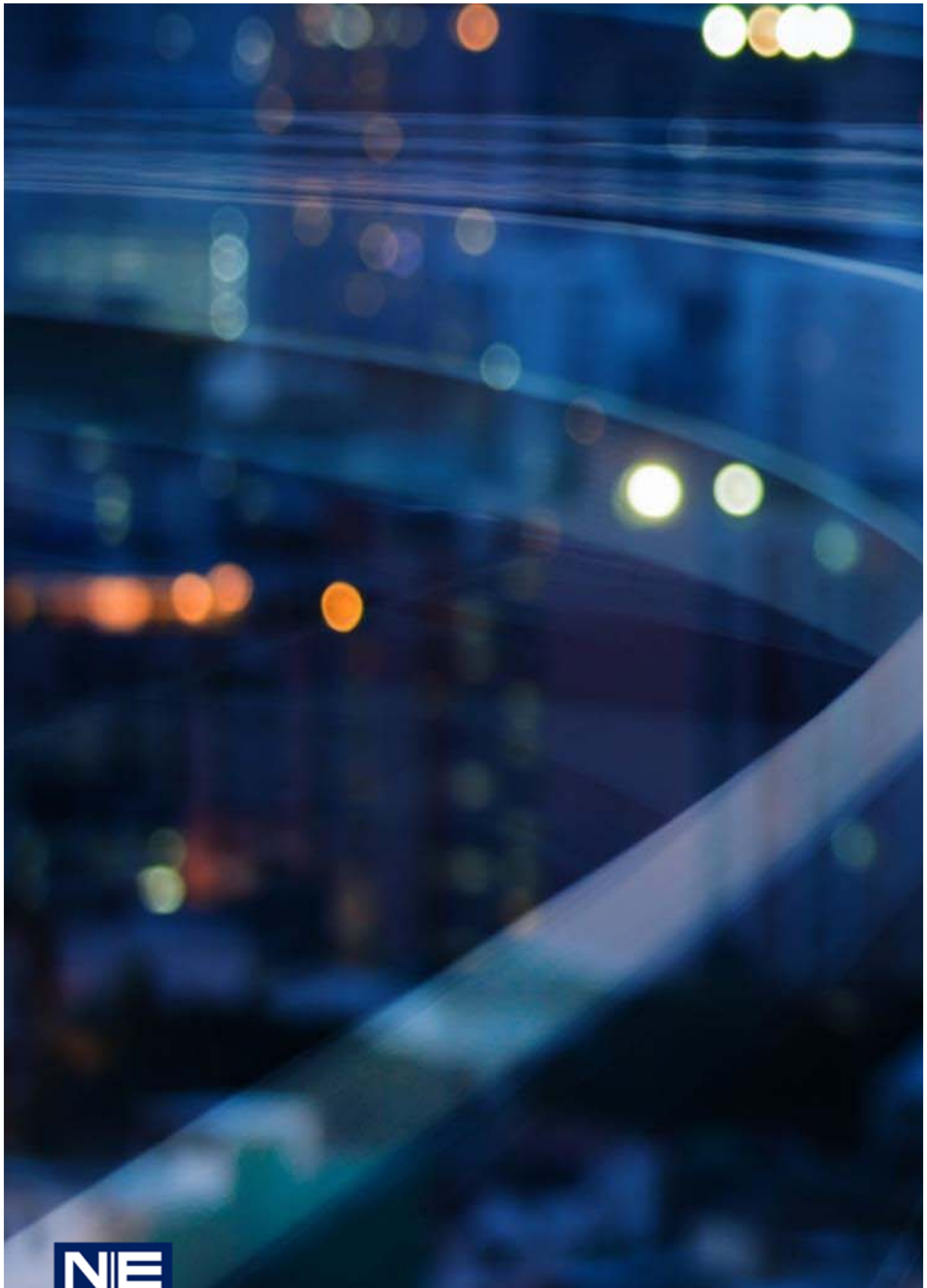
REAL ASSET OVERVIEW

QUARTERLY RETURN



Real Asset Yields	Previous Quarter	Current Quarter
Midstream Energy	6.6%	5.9%
Core Real Estate	3.0%	3.0%
US REITs	3.6%	3.1%
Global Infrastructure Equities	3.0%	2.9%
Global Natural Resource Equities	3.0%	3.0%
Commodity Index Roll Yield	3.3%	2.8%
US 10-Year Breakeven Inflation	2.37%	2.32%

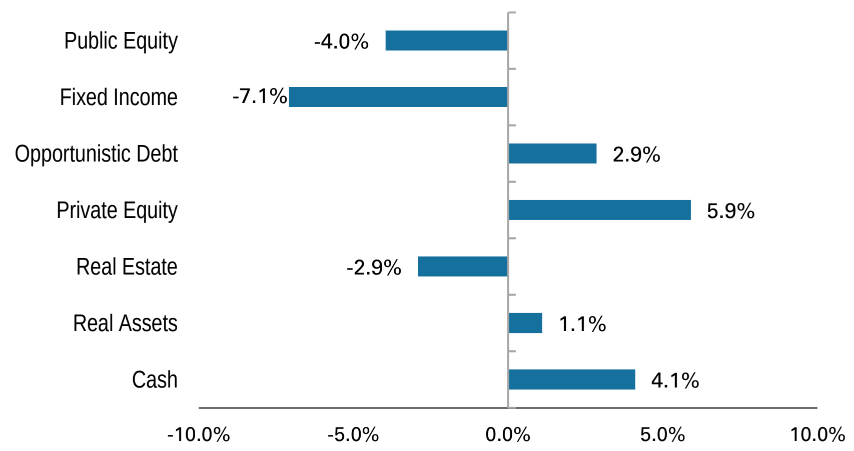
Note: Core Real Estate* yields are subject to a one quarter lag
Source (Top): S&P, MSCI, Russell, JPM, FactSet
Source (Bottom): Alerian, NAREIT, Barclays, NEPC, FactSet



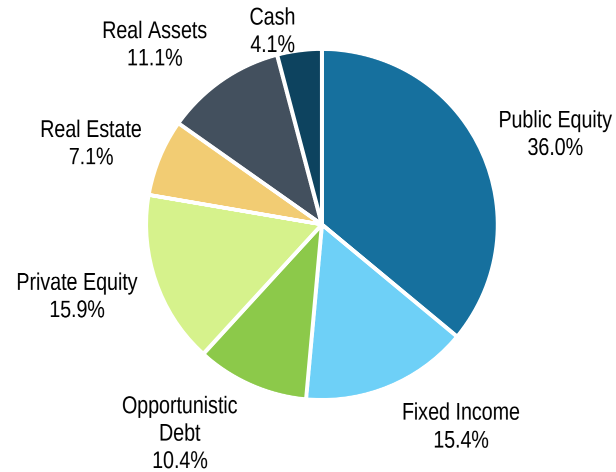
EXECUTIVE SUMMARY

ASSET ALLOCATION – CURRENT vs. POLICY

Current Allocation vs. Policy Allocation



Current Asset Allocation

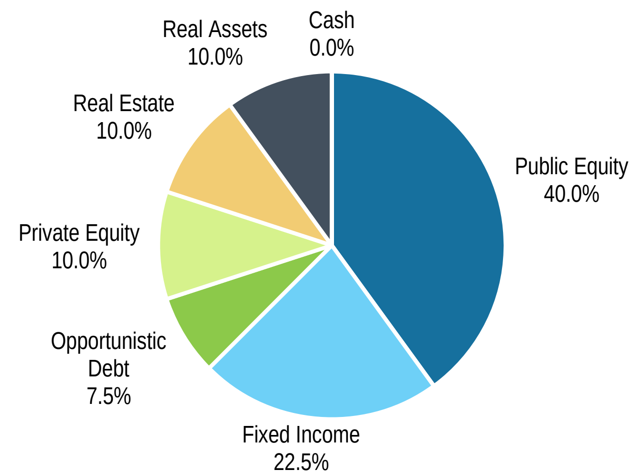


Current Allocation vs. Policy Allocation

	Current	Policy	Current	Difference*
Public Equity	$1,081,977,296	40.0%	36.0%	-4.0%
Fixed Income	$462,785,799	22.5%	15.4%	-7.1%
Opportunistic Debt	$310,913,594	7.5%	10.4%	2.9%
Private Equity	$477,536,803	10.0%	15.9%	5.9%
Real Estate	$212,966,617	10.0%	7.1%	-2.9%
Real Assets	$333,377,752	10.0%	11.1%	1.1%
Cash	$123,275,859	--	4.1%	4.1%
Total	$3,002,833,720	100.0%	100.0%	

* Difference between Policy and Current Allocation

Policy Asset Allocation

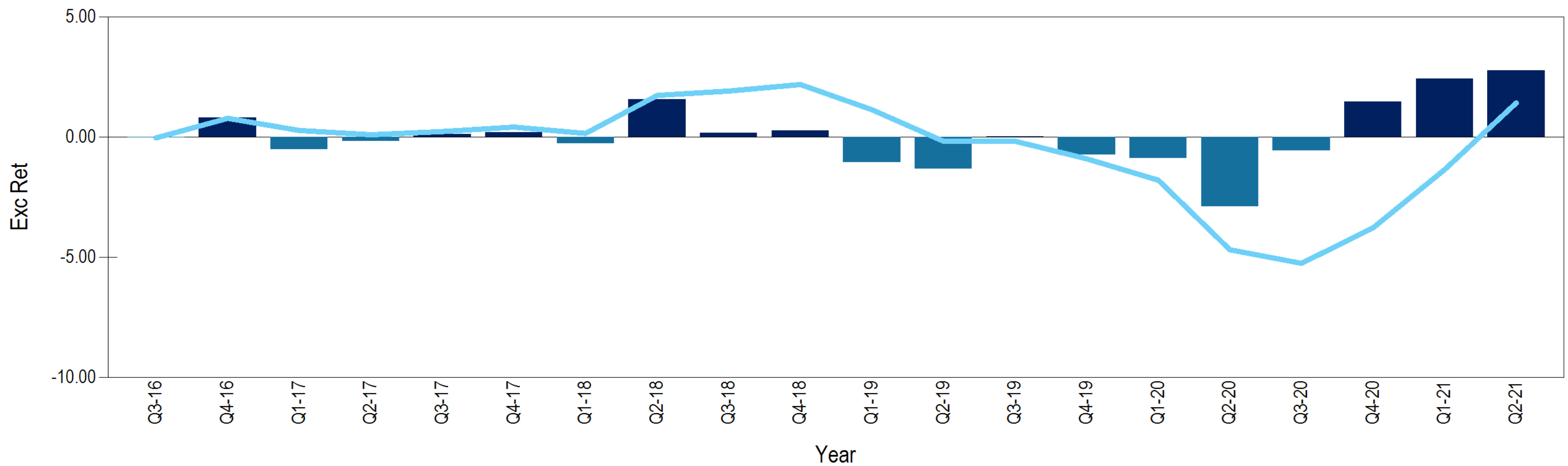


MPERS

TOTAL FUND PERFORMANCE SUMMARY

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Composite	**$3,002,833,720**	**7.96%**	**13.46%**	**30.80%**	**11.63%**	**11.11%**	**9.59%**
Policy Index		*5.19%*	*7.99%*	*23.47%*	*11.80%*	*10.83%*	*8.81%*
InvMetrics Public DB Net Median		*5.28%*	*8.78%*	*26.72%*	*11.58%*	*11.00%*	*8.51%*

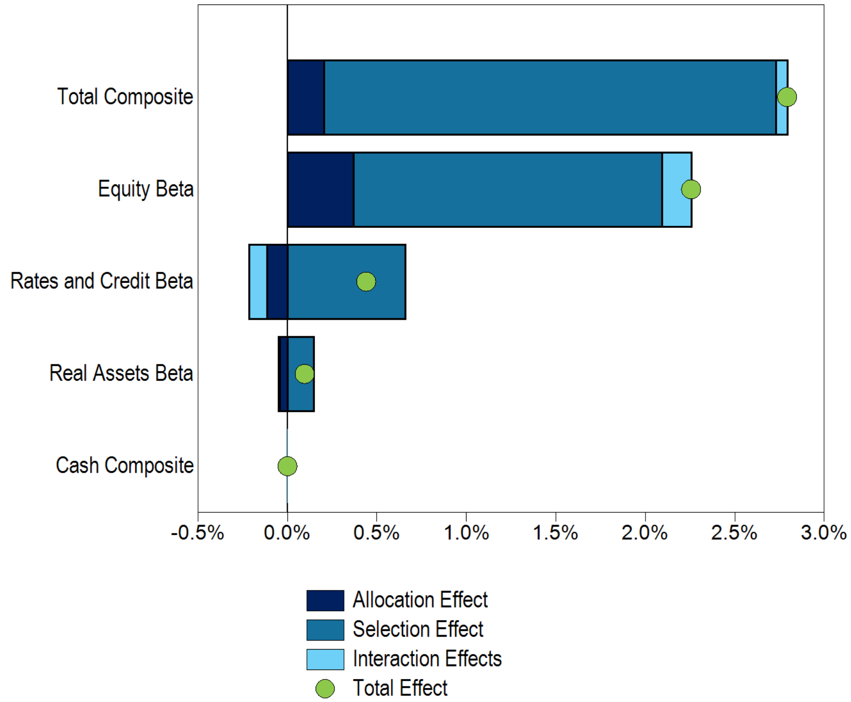
Quarterly and Cumulative Excess Performance



MPERS

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
3 Months Ending June 30, 2021



Attribution Summary
3 Months Ending June 30, 2021

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Equity Beta	10.8%	7.3%	3.5%	1.7%	0.1%	0.2%	2.0%
Rates and Credit Beta	4.6%	2.5%	2.1%	0.7%	0.1%	-0.1%	0.7%
Real Asset Beta	4.6%	3.9%	0.7%	0.1%	0.0%	0.0%	0.2%
Cash Composite	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	**8.0%**	**5.2%**	**2.8%**	**2.5%**	**0.2%**	**0.1%**	**2.8%**

Note: Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total returns shown may vary from the calculated return shown on the performance summary.

The target return shown for each composite is a custom index, based on aggregated policy indices. This policy index asset weights the underlying policy indices of each option in the plan and the respective benchmark return.

The allocation, selection, and interaction effects are calculated using the custom indexdescribed above along with the policy or target weight of each composite.

May not add due to rounding

Allocation Effect - The return attributable to the asset allocation of the portfolio

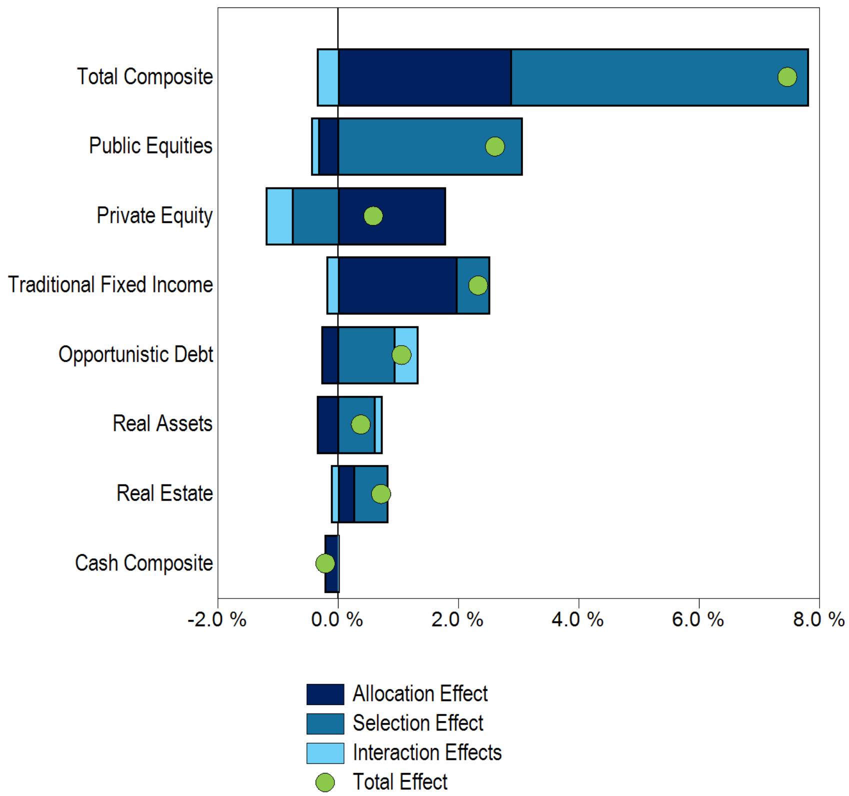
Selection Effect - The return attributable to the managers' security selection

Interaction Effect - The return attributable to the interaction between the Allocation and Selection Effects

MPERS

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects Relative to Policy Index
1 Year Ending June 30, 2021



Attribution Summary
1 Year Ending June 30, 2021

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Public Equities	47.7%	39.3%	8.4%	3.0%	-0.4%	-0.1%	2.5%
Private Equity	52.2%	60.9%	-8.7%	-0.8%	1.7%	-0.4%	0.5%
Traditional Fixed Income	1.5%	-0.4%	1.9%	0.5%	1.9%	-0.2%	2.3%
Opportunistic Debt	27.4%	15.4%	12.0%	0.9%	-0.3%	0.4%	1.1%
Real Assets	14.9%	9.6%	5.3%	0.6%	-0.3%	0.1%	0.4%
Real Estate	12.8%	8.0%	4.8%	0.5%	0.3%	-0.1%	0.7%
Cash Composite	0.1%	0.1%	0.0%	0.0%	-0.2%	0.0%	-0.2%
Total	**30.8%**	**23.5%**	**7.3%**	**4.9%**	**2.7%**	**-0.4%**	**7.3%**

Note: Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total returns shown may vary from the calculated return shown on the performance summary.

The target return shown for each composite is a custom index, based on aggregated policy indices. This policy index asset weights the underlying policy indices of each option in the plan and the respective benchmark return.

The allocation, selection, and interaction effects are calculated using the custom indexdescribed above along with the policy or target weight of each composite.

May not add due to rounding

Allocation Effect - The return attributable to the asset allocation of the portfolio

Selection Effect - The return attributable to the managers' security selection

Interaction Effect - The return attributable to the interaction between the Allocation and Selection Effects

MPERS

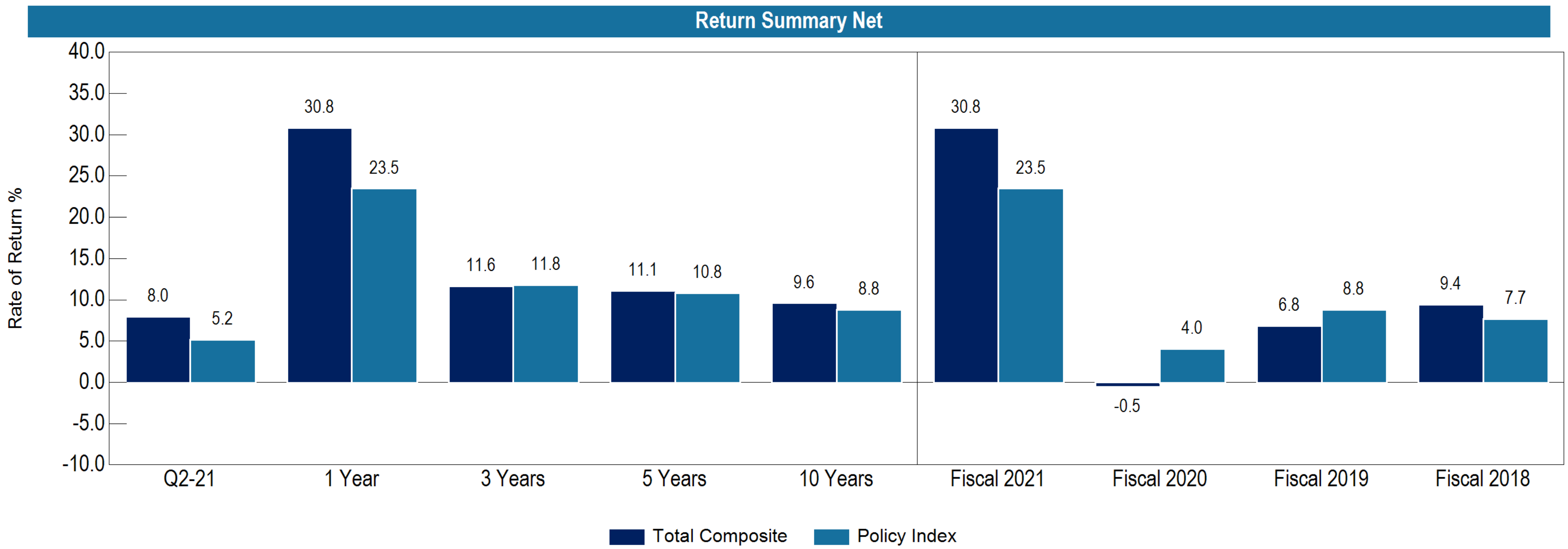
TOTAL COMPOSITE

	Policy %	% of Portfolio	Market Value ($)	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Composite	100.0	100.0	3,002,833,720	8.0	1	13.5	1	30.8	9	11.6	50	11.1	47	9.6	14
Policy Index				*5.2*	*56*	*8.0*	*72*	*23.5*	*83*	*11.8*	*45*	*10.8*	*57*	*8.8*	*40*
Equity Beta	50.0	51.9	1,559,514,099	10.8		19.0		49.0							
Public Equities*	40.0	36.0	1,081,977,296	6.8	57	15.6	21	47.7	25	12.6	67	13.3	62	9.8	56
MSCI ACWI				*7.4*	*45*	*12.3*	*48*	*39.3*	*61*	*14.6*	*55*	*14.6*	*53*	*9.9*	*55*
Private Equity	10.0	15.9	477,536,803	21.6		28.0		52.2		22.3		18.7		15.5	
MO Hwy Priv. Equ. Index - Lagged				*6.9*		*20.8*		*60.9*		*20.2*		*19.7*		*17.3*	
Rates and Credit Beta	30.0	25.8	773,699,393	4.7		5.3		11.4							
Traditional Fixed Income	22.5	15.4	462,785,799	2.5	27	-0.6	56	1.5	92	6.9	24	5.3	35	6.3	8
Fixed Income Custom Benchmark				*2.4*	*33*	*-2.0*	*74*	*-0.4*	*97*	*5.9*	*46*	*3.6*	*67*	*3.8*	*48*
Opportunistic Debt	7.5	10.4	310,913,594	7.8	1	14.3	1	27.4	2	9.1	4				
BBgBarc US High Yield TR				*2.7*	*39*	*3.6*	*48*	*15.4*	*37*	*7.4*	*29*	*7.5*	*26*	*6.7*	*19*
Real Assets Beta	20.0	18.2	546,344,369	4.6		10.1		14.1							
Real Assets	10.0	11.1	333,377,752	5.1		11.2		14.9		2.7		5.5			
CPI + 4% (Unadjusted)				*3.6*		*6.4*		*10.0*		*6.8*		*6.6*		*6.0*	
Real Estate	10.0	7.1	212,966,617	3.8		8.4		12.8		9.0		8.8		10.6	
MODOT Real Estate Blend				*4.2*		*6.3*		*8.0*		*5.2*		*6.1*		*8.9*	
Cash Composite	0.0	4.1	123,275,859	0.0		0.0		0.1		1.2		1.0		0.6	
91 Day T-Bills				*0.0*		*0.0*		*0.1*		*1.2*		*1.1*		*0.6*	

** May include the use of derivatives*

Total Composite is ranked in the IFx Public DB (peer) Net+ Universe
Public Equities Composite is ranked in the eV Global All Cap Equity Net Universe Fixed Income Composite is ranked in the eV All Global Fixed Inc Net Universe Opportunistic Debt Composite is ranked in the eV US High Yield Fixed Inc Net Universe

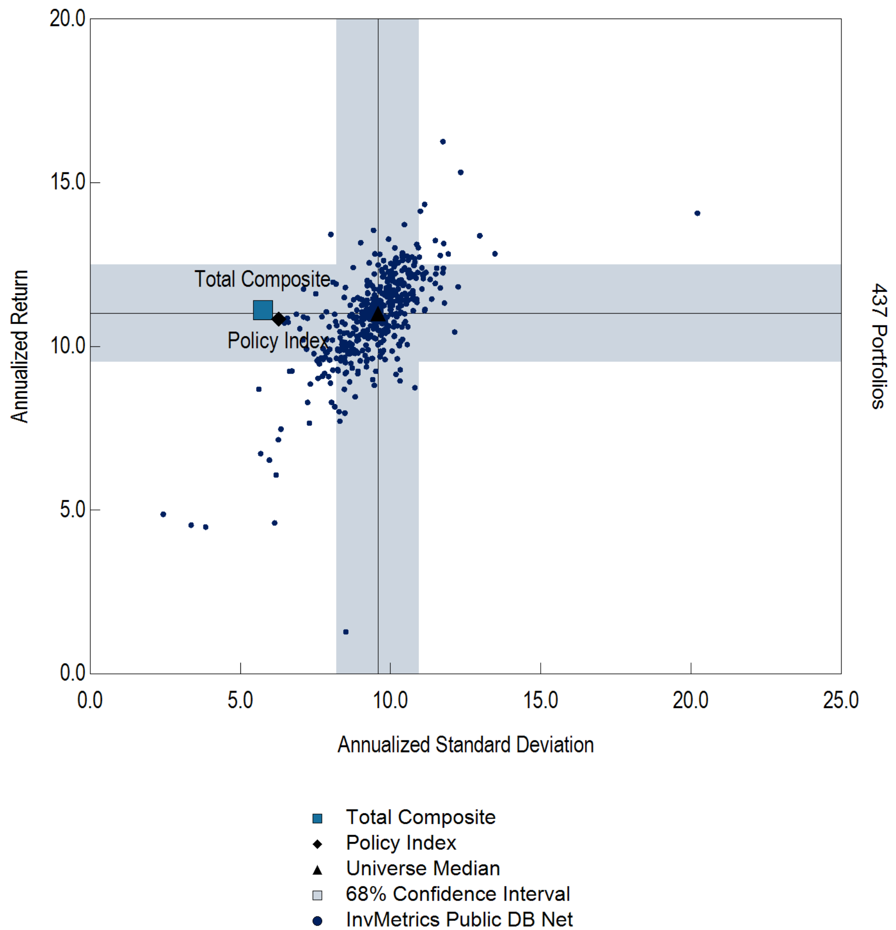
MPERS
TOTAL FUND RETURN SUMMARY



MPERS

TOTAL FUND RISK/RETURN - 5 YEARS

5 Years Ending June 30, 2021



Statistics Summary
5 Years Ending June 30, 2021

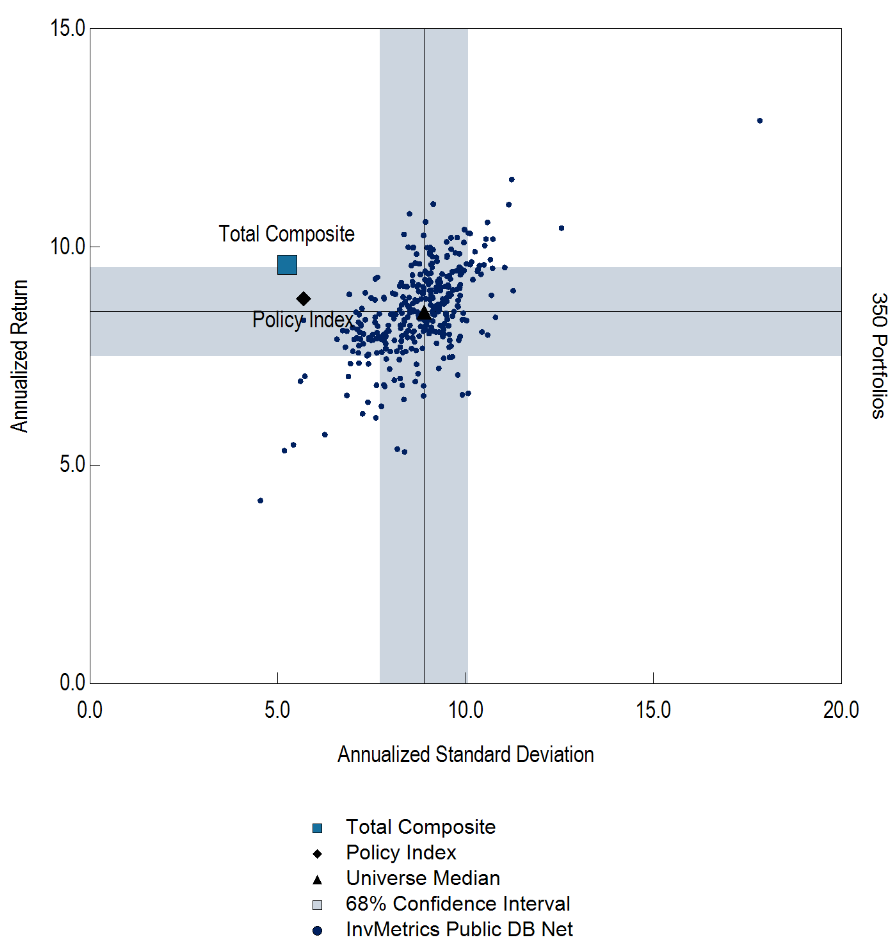
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Composite	11.11%	47	5.75%	1
Policy Index	10.83%	57	6.27%	2

Statistics Summary
5 Years Ending June 30, 2021

	Sharpe Ratio	Rank
Total Composite	1.74	1
Policy Index	1.55	1

MPERS
TOTAL FUND RISK/RETURN - 10 YEARS

10 Years Ending June 30, 2021



Statistics Summary
10 Years Ending June 30, 2021

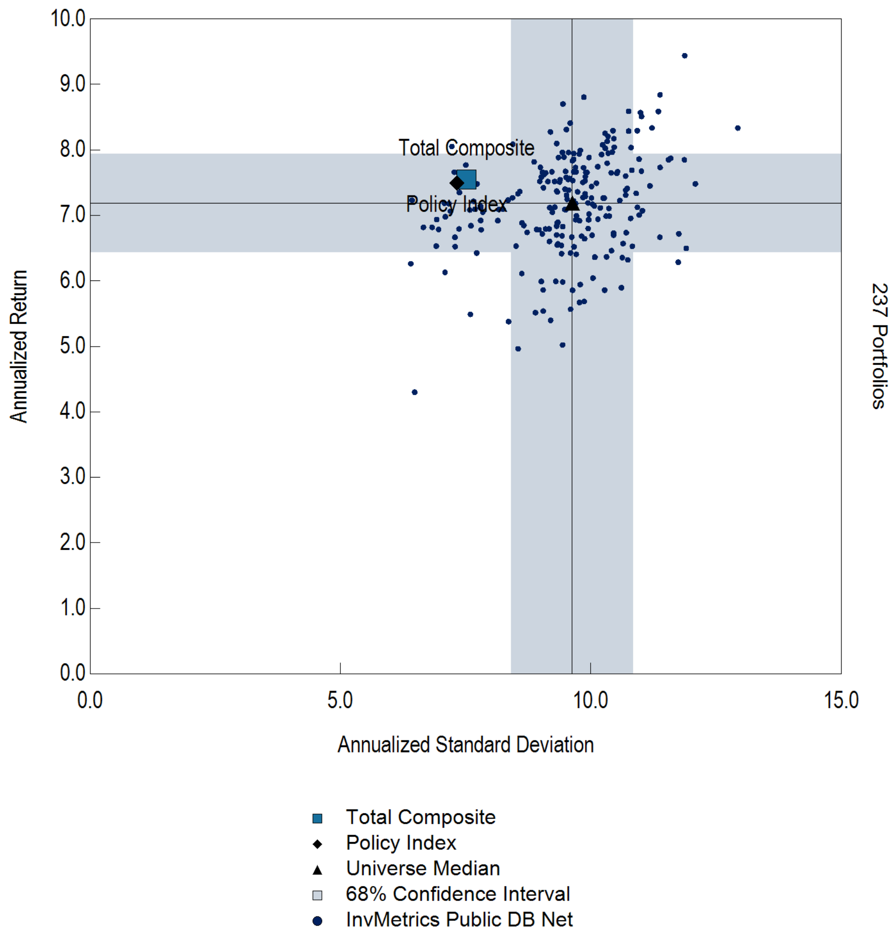
	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Composite	9.59%	14	5.24%	1
Policy Index	8.81%	40	5.68%	2

Statistics Summary
10 Years Ending June 30, 2021

	Sharpe Ratio	Rank
Total Composite	1.72	1
Policy Index	1.45	1

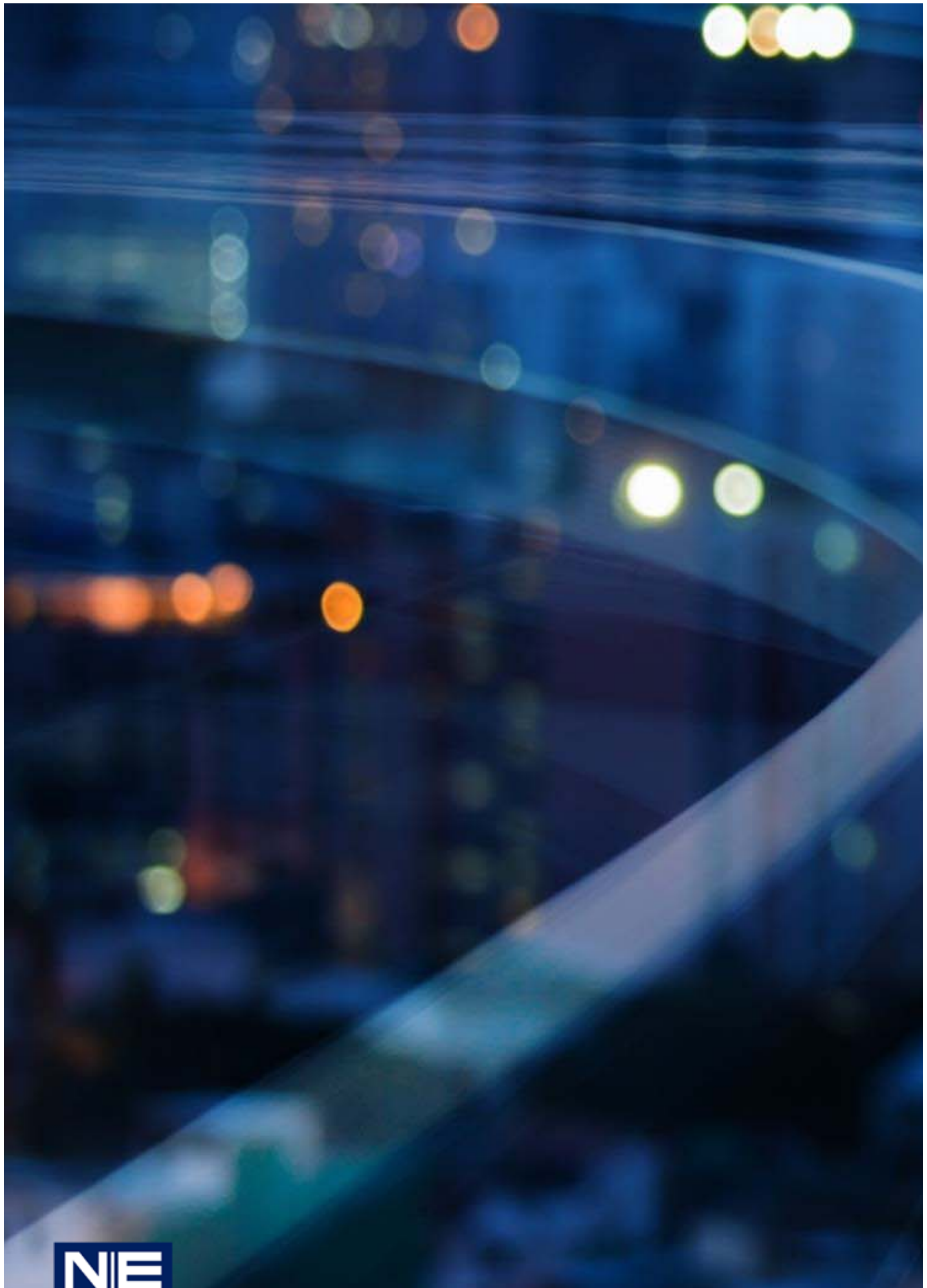
TOTAL FUND RISK/RETURN - 15 YEARS

15 Years Ending June 30, 2021



Statistics Summary 15 Years Ending June 30, 2021	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Composite	7.55%	32	7.52%	10
Policy Index	7.49%	36	7.33%	8

Statistics Summary 15 Years Ending June 30, 2021	Sharpe Ratio	Rank
Total Composite	0.88	4
Policy Index	0.89	3



TOTAL FUND PERFORMANCE

MPERS

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Composite	**3,002,833,720**	**100.00**	**100.00**	**7.96**	**13.46**	**30.80**	**11.63**	**11.11**	**9.59**
Policy Index				*5.19*	*7.99*	*23.47*	*11.80*	*10.83*	*8.81*
Allocation Index				*5.03*	*9.61*	*26.25*	*11.39*	*10.55*	*--*
Equity Beta	**1,559,514,099**	**51.93**	**50.00**	**10.82**	**18.97**	**48.97**	**--**	**--**	**--**
Public Equities	**1,081,977,296**	**36.03**	**40.00**	**6.83**	**15.59**	**47.71**	**12.56**	**13.25**	**9.80**
MSCI ACWI				*7.39*	*12.30*	*39.26*	*14.57*	*14.61*	*9.90*
Global Public Equities w/ MLPs	**949,341,643**	**31.61**	**--**	**6.48**	**15.38**	**47.54**	**12.43**	**13.53**	**12.57**
MLPS	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Global Public Equities	**949,341,643**	**31.61**	**--**	**6.48**	**15.38**	**47.54**	**12.93**	**14.56**	**--**
MSCI ACWI				*7.39*	*12.30*	*39.26*	*14.57*	*14.61*	*9.90*
International Public Equities	**275,565,262**	**9.18**	**--**	**5.45**	**15.30**	**41.18**	**8.41**	**11.65**	**6.74**
MSCI ACWI ex USA				*5.48*	*9.16*	*35.72*	*9.38*	*11.08*	*5.45*
Acadian Int'l Small Cap	59,505,795	1.98		7.66	17.16	48.90	10.40	13.58	--
MSCI ACWI ex US Small Cap				*6.35*	*12.24*	*47.04*	*9.78*	*11.97*	*7.02*
Acadian Non-US Microcap	49,460,965	1.65		8.12	21.55	60.12	15.07	--	--
MSCI EAFE Small Cap				*4.34*	*9.04*	*40.98*	*8.40*	*12.03*	*8.38*
Silchester	165,610,404	5.52		3.94	13.04	34.38	5.74	9.46	7.71
MSCI EAFE				*5.17*	*8.83*	*32.35*	*8.27*	*10.28*	*5.89*
Transition Account	988,098	0.03		2.25	-2.43	-9.34	-7.72	-4.66	-6.73
Domestic Public Equities	**673,776,381**	**22.44**	**--**	**6.86**	**15.41**	**49.73**	**15.14**	**16.01**	**13.62**
Russell 3000				*8.24*	*15.11*	*44.16*	*18.73*	*17.88*	*14.70*
Large Cap US Public Equities	**580,941,935**	**19.35**	**--**	**7.23**	**14.35**	**47.03**	**16.07**	**16.19**	**14.04**
Cash Overlay *	232,588,721	7.75		0.28	1.46	24.93	9.94	12.59	--
S&P 500				*8.55*	*15.25*	*40.79*	*18.67*	*17.65*	*14.84*
Parametric Overlay	348,353,214	11.60		11.22	22.36	--	--	--	--
Small Cap US Public Equities	**92,834,447**	**3.09**	**--**	**4.24**	**24.25**	**74.71**	**10.24**	**14.82**	**12.00**
Russell 2000				*4.29*	*17.54*	*62.02*	*13.52*	*16.47*	*12.34*
Kennedy Capital	48,823,104	1.63		3.13	17.53	68.69	12.83	16.27	--
Russell Microcap				*4.14*	*29.02*	*75.77*	*14.47*	*18.13*	*13.06*
Kennedy Small-Cap Banking	44,011,343	1.47		5.51	32.90	81.85	7.23	--	--
Russell 2000 Value				*4.56*	*26.69*	*73.28*	*10.27*	*13.62*	*10.85*

** May include the use of derivatives*

MPERS

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Hedge Equity*	**132,635,653**	**4.42**	**0.00**	**9.58**	**17.30**	**49.26**	**13.07**	**11.40**	**9.48**
Beta Overlay*	**45,220,819**	**1.51**	**--**	**23.50**	**47.39**	**169.20**	**--**	**--**	**--**
HFRI Fund of Funds Composite Index				*2.89*	*4.97*	*18.31*	*6.33*	*6.13*	*3.86*
Equity Oriented Hedge Funds	45,220,819	1.51		23.50	47.39	169.20	--	--	--
Equity Hedge Funds	**87,414,834**	**2.91**	**--**	**3.58**	**6.00**	**21.46**	**4.10**	**6.02**	**4.43**
Alpstone Capital	10,625,842	0.35		-1.20	-9.04	-12.09	-1.60	--	--
Bridgewater Pure Alpha	18,954,632	0.63		3.95	2.65	13.16	-1.16	3.90	3.48
Indus Pacific Opp. Fund	19,691,391	0.66		7.69	8.79	38.08	10.69	11.48	--
Metacapital	1,292,751	0.04		1.32	8.46	20.12	-15.20	-8.01	--
Millenium USA LP	19,374,349	0.65		2.83	12.39	25.27	13.64	11.89	--
Pentwater	17,475,869	0.58		2.97	9.38	29.13	8.67	14.37	--
Private Equity	**477,536,803**	**15.90**	**10.00**	**21.64**	**28.04**	**52.17**	**22.29**	**18.68**	**15.52**
MO Hwy Priv. Equ. Index - Lagged				*6.95*	*20.80*	*60.87*	*20.24*	*19.74*	*17.30*
PE Fund of Funds	**246,071,482**	**8.19**	**--**	**32.50**	**32.42**	**59.90**	**22.63**	**18.63**	**15.23**
Grove Street - MP Ventures	85,207,746	2.84		40.09	40.06	67.09	29.95	19.59	15.72
Grove Street - MP Ventures II	156,837,494	5.22		30.09	29.99	58.59	19.42	18.28	14.41
Vectis H & L II	4,026,242	0.13		8.32	8.32	19.33	26.25	26.77	19.02
PE Direct Funds	**231,465,321**	**7.71**	**--**	**11.45**	**23.72**	**44.92**	**23.39**	**21.95**	**--**
Abry Partners VI	184,601	0.01		2.88	-13.22	-8.90	2.85	24.16	26.27
Abry Partners VII	1,751,632	0.06		11.69	22.04	30.48	-2.38	4.63	--
Aisling	18,322,612	0.61		-5.93	49.32	72.96	28.00	23.77	--
Arrowroot Capital III	15,089,245	0.50		1.78	1.78	4.76	7.93	--	--
Arrowroot Capital IV	15,766,665	0.53		22.31	22.31	88.02	--	--	--
Blackstone Asia	18,978,656	0.63		75.21	105.17	148.60	44.14	--	--
DC Capital Partners	10,480,574	0.35		-0.06	8.36	15.44	30.99	--	--
Drive 0verdrive I	10,307,254	0.34		0.23	12.69	68.85	--	--	--
Drive III	3,980,737	0.13		11.47	9.14	17.74	--	--	--
DYAL IV	7,810,814	0.26		115.12	87.65	96.23	--	--	--
Heartwood Partners II	10,351,375	0.34		5.40	8.98	20.91	5.90	14.82	--
Heartwood Partners III	10,374,954	0.35		10.92	17.45	21.86	7.46	--	--
KPS IV	10,549,749	0.35		10.32	17.13	36.73	15.87	--	--
KPS Mid Cap	3,454,157	0.12		0.11	9.98	4.42	--	--	--
KPS V	3,408,484	0.11		0.04	0.49	-3.86	--	--	--

** May include the use of derivatives*

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Long Ridge II	17,878,835	0.60		8.08	26.28	48.55	57.66	--	--
Monomoy Capital Partners III	5,144,510	0.17		-3.79	8.65	60.90	14.54	--	--
Newquest Fund	8,398,734	0.28		0.40	28.48	33.93	20.98	--	--
Nexus	13,027,402	0.43		5.28	15.12	66.49	48.11	--	--
Nexus Special Sits III	2,539,163	0.08		-3.20	-10.29	--	--	--	--
Opengate Capital II	6,015,851	0.20		2.11	27.99	49.14	--	--	--
Opengate Capital Partners	9,229,279	0.31		2.89	11.77	33.09	14.83	17.71	--
Pfingsten Fund V	8,080,006	0.27		8.66	15.56	-4.08	7.83	1.31	--
Shore Capital Partners GP I LP	17,903,358	0.60		23.10	24.68	61.75	56.43	44.97	--
Shoreline China Valu III	2,436,674	0.08		3.26	8.17	6.78	0.97	5.17	--
MO Hwy Priv. Equ. Index - Lagged				*6.95*	*20.80*	*60.87*	*20.24*	*19.74*	*17.30*
Rates and Credit Beta	**773,699,393**	**25.77**	**30.00**	**4.65**	**5.25**	**11.38**	**--**	**--**	**--**
Traditional Fixed Income	**462,785,799**	**15.41**	**22.50**	**2.53**	**-0.61**	**1.52**	**6.93**	**5.28**	**6.32**
Fixed Income Custom Benchmark				*2.42*	*-1.96*	*-0.39*	*5.95*	*3.59*	*3.80*
Core Fixed Income	**284,959,497**	**9.49**	**10.00**	**0.92**	**1.26**	**4.15**	**4.55**	**3.09**	**3.99**
BBgBarc US Govt/Credit TR				*2.42*	*-1.96*	*-0.39*	*5.95*	*3.31*	*3.71*
Aberdeen	7,523,846	0.25		2.12	3.99	9.48	5.09	6.42	6.54
BBgBarc US Aggregate TR				*1.83*	*-1.60*	*-0.33*	*5.34*	*3.03*	*3.39*
Internal Fixed - Core	230,078,227	7.66		0.75	0.69	2.07	4.55	1.98	--
BBgBarc US Govt/Credit TR				*2.42*	*-1.96*	*-0.39*	*5.95*	*3.31*	*3.71*
Octagon Senior Debt	30,985,397	1.03		0.74	3.26	7.56	3.30	3.63	--
BBgBarc US Aggregate TR				*1.83*	*-1.60*	*-0.33*	*5.34*	*3.03*	*3.39*
Principal CMBS Fixed	16,372,027	0.55		2.88	2.26	10.78	4.93	4.40	--
BBgBarc US CMBS Investment Grade				*1.92*	*-0.22*	*2.94*	*5.92*	*3.51*	*4.08*
Long Duration	**154,099,888**	**5.13**	**7.50**	**4.91**	**-3.14**	**-2.52**	**8.36**	**4.76**	**6.25**
BBgBarc US Govt Long TR				*6.43*	*-7.82*	*-10.42*	*7.97*	*3.18*	*6.62*
Internal Fixed - Long Duration	154,099,888	5.13		4.91	-3.14	-2.52	8.36	4.76	6.32
BBgBarc US Aggregate TR				*1.83*	*-1.60*	*-0.33*	*5.34*	*3.03*	*3.39*
US TIPS	**23,726,414**	**0.79**	**5.00**	**6.10**	**0.25**	**4.84**	**6.01**	**4.19**	**3.68**
Internal US TIPS	23,726,414	0.79		6.10	0.25	4.84	6.01	4.19	3.68
BBgBarc US TIPS TR				*3.25*	*1.73*	*6.51*	*6.53*	*4.17*	*3.40*

Fixed Income Custom Benchmark was BBgBarc US Universal TR preceding 01/01/2017. As of 01/01/2017 the benchmark is BBgBarc US Agg Govt/Credit.

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Opportunistic Debt	**310,913,594**	**10.35**	**7.50**	**7.77**	**14.31**	**27.40**	**9.13**	**--**	**--**
BBgBarc US High Yield TR				*2.74*	*3.62*	*15.37*	*7.44*	*7.48*	*6.66*
Direct Lending	**155,287,141**	**5.17**	**--**	**6.27**	**12.23**	**22.35**	**--**	**--**	**--**
Core Direct Lending	**75,896,023**	**2.53**	**--**	**6.43**	**14.76**	**31.97**	**--**	**--**	**--**
Ares BDC	39,709,609	1.32		7.81	22.54	--	--	--	--
Internal Fixed - Nonrated	12,198,412	0.41		8.19	10.03	14.62	8.38	6.93	--
M&G III	1,261,849	0.04		1.14	5.84	21.67	7.03	7.42	--
MGG	12,629,429	0.42		4.47	8.10	13.28	9.18	--	--
Owl Rock	10,096,724	0.34		2.63	5.06	20.07	7.66	--	--
Opportunistic Direct Lending	**77,813,292**	**2.59**	**--**	**6.12**	**9.91**	**14.43**	**--**	**--**	**--**
GSO Energy II	1,518,455	0.05		10.86	18.29	114.69	--	--	--
GSO Energy Select Opps	3,990,961	0.13		15.58	25.24	55.30	3.47	10.21	--
GSO I	222,116	0.01		9.52	18.13	44.89	-18.64	-15.23	-0.32
GSO II	1,985,982	0.07		3.22	17.60	31.83	1.95	5.82	--
GSO III	10,912,709	0.36		5.52	10.86	22.10	10.02	--	--
Northern Shipping II	3,029,988	0.10		14.24	17.32	10.90	5.81	6.24	--
Northern Shipping III	6,492,314	0.22		2.54	4.72	9.47	8.68	7.33	--
OCP Asia	27,506,466	0.92		2.86	6.75	11.49	7.29	10.60	--
OCP Asia IV	3,860,358	0.13		12.57	--	--	--	--	--
Riverstone Credit Partners	8,497,307	0.28		6.85	10.60	5.32	-0.37	5.68	--
Riverstone Credit Partners II	9,796,636	0.33		8.43	10.11	8.72	7.01	--	--
Distressed /Special Sits	**113,760,691**	**3.79**	**--**	**10.83**	**15.30**	**26.99**	**--**	**--**	**--**
Anchorage Capital III	564,916	0.02		-0.67	-0.98	-25.62	-15.20	-6.98	--
Anchorage Illiquid Opps V	14,488,855	0.48		9.27	14.83	24.60	11.84	11.26	--
Banner Ridge III	20,514,112	0.68		41.75	41.75	73.30	--	--	--
Banner Ridge IV	1,577,826	0.05		--	--	--	--	--	--
CVI Credit Value	64,680	0.00		-2.81	-2.07	-0.12	7.83	9.23	15.41
CVI Credit Value Fund III	4,890,905	0.16		1.98	3.36	6.91	3.73	7.18	--
CVI Global Value	12,488	0.00		-0.08	25.32	29.24	13.16	8.52	9.83
Fortress Credit Opps. Fund	3,787,682	0.13		3.58	1.87	--	--	--	--
FP Credit Partners	7,247,340	0.24		5.62	9.33	43.53	--	--	--
Longford II	9,581,567	0.32		0.20	6.38	5.97	--	--	--
Longford III	1,823,203	0.06		-1.78	-15.46	-28.63	--	--	--
Miravast ILS Credit Opp	16,041,069	0.53		2.85	2.54	12.78	--	--	--
Silver Point Distressed	19,363,738	0.64		14.86	32.41	60.96	--	--	--
Varde Asia Credit Fund	13,802,310	0.46		2.08	4.22	11.68	4.81	--	--

MPERS

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Liquid Credit	**43,443,589**	**1.45**	**--**	**5.48**	**19.27**	**47.26**	**--**	**--**	**--**
ABRY ASF	96,190	0.00		4.82	7.57	3.21	-10.65	-4.56	7.66
Anchorage Structured Credit	20,009,411	0.67		6.36	23.46	53.74	--	--	--
GSO Credit Alpha Fund	9,110,736	0.30		4.08	10.32	33.63	2.86	7.06	--
Och-Ziff Struct Products II	314,544	0.01		0.65	5.50	24.90	6.06	18.91	--
Octagon Opportunistic	13,912,708	0.46		5.68	21.40	56.66	7.13	11.25	--
Real Assets Beta	**546,344,369**	**18.19**	**20.00**	**4.63**	**10.10**	**14.05**	**--**	**--**	**--**
Real Assets	**333,377,752**	**11.10**	**10.00**	**5.13**	**11.21**	**14.89**	**2.75**	**5.47**	**--**
CPI + 4% (Unadjusted)				*3.58*	*6.36*	*10.04*	*6.78*	*6.60*	*5.98*
Natural Resources	**193,528,702**	**6.44**	**--**	**7.44**	**12.57**	**17.25**	**0.74**	**5.91**	**--**
Ares Energy	9,487,242	0.32		9.53	12.35	-29.76	--	--	--
Blue Road	14,774,105	0.49		10.44	10.44	26.23	13.03	10.27	--
EMG I	5,165,981	0.17		-0.02	42.73	53.04	8.73	5.88	--
EMG II	10,522,887	0.35		-0.70	17.58	22.00	8.88	10.06	--
EMG III	11,655,861	0.39		-0.18	-3.92	-4.50	-18.57	-10.10	--
EMG IV	19,933,000	0.66		-0.58	6.12	10.81	2.09	9.94	--
EMG V	14,344,474	0.48		4.75	32.35	37.98	--	--	--
Grey Rock Energy Fund II	9,206,217	0.31		17.42	17.42	20.01	4.97	--	--
Grey Rock Energy Fund III	16,520,086	0.55		21.35	21.35	50.57	12.99	--	--
NGP IX	391,368	0.01		14.09	85.19	84.67	70.89	47.53	--
NGP X	1,305,664	0.04		-3.22	-15.28	-24.23	-30.07	-13.34	--
NGP XI	11,064,868	0.37		10.40	12.89	9.74	-7.22	6.35	--
Orion II	17,263,517	0.57		-1.49	-3.06	33.85	17.96	--	--
Orion III	6,315,562	0.21		-1.55	3.33	33.70	--	--	--
Orion Mine Finance Fund I	6,638,622	0.22		2.62	7.41	10.83	-3.73	6.20	--
Orion Mineral Royalty	6,140,532	0.20		12.88	27.14	29.75	--	--	--
Quantum VII	9,872,059	0.33		44.66	44.66	67.78	4.66	--	--
Ridgewood Energy	7,336,622	0.24		15.61	16.64	20.14	-5.87	1.13	--
Ridgewood III	8,049,955	0.27		7.79	5.39	22.33	2.21	3.41	--
Ridgewood IV	1,053,381	0.04		0.00	0.00	--	--	--	--
Turnbridge Capital Partners I	6,486,699	0.22		1.11	1.11	-16.79	-11.91	-7.01	--

MPERS

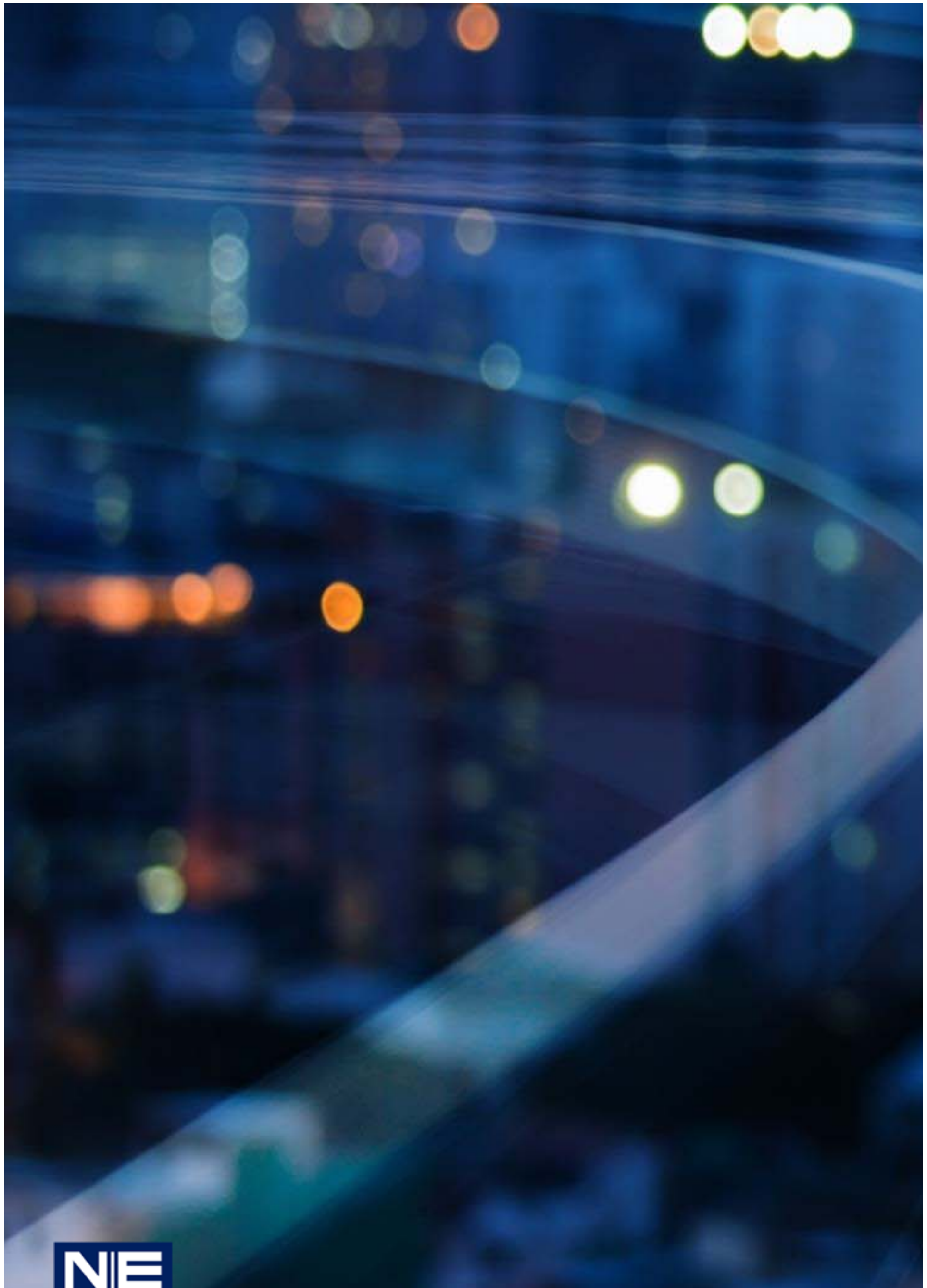
TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Infrastructure & Transport	**52,749,449**	**1.76**	**--**	**3.05**	**3.78**	**8.38**	**7.91**	**7.00**	**--**
American Infrastructure I MLP	5,959,617	0.20		0.36	-1.69	-1.25	4.68	6.71	--
American Infrastructure II MLP	1,944,063	0.06		-0.45	8.57	29.97	25.07	12.48	--
Apollo Aviation III	1,838,122	0.06		4.32	-5.98	14.14	17.93	15.57	--
CBRE Caledon's Global	10,067,512	0.34		2.44	2.26	--	--	--	--
CIM INFRA FUND II	11,000,527	0.37		3.55	12.86	18.30	13.42	--	--
Columbia Spectrum IV-A	1	0.00		-99.77	-99.77	--	--	--	--
Corrum Capital Aviation	16,001,514	0.53		-2.33	-7.45	-9.51	-0.26	--	--
EIF - US Power III	2,649,706	0.09		12.70	30.66	23.84	-4.47	-4.01	--
Sciens Marine Investments	3,288,387	0.11		41.41	44.03	34.58	-5.34	7.27	--
CPI + 4% (Unadjusted)				*3.58*	*6.36*	*9.59*	*6.63*	*6.51*	*5.94*
Timber	**87,099,601**	**2.90**	**--**	**1.39**	**11.65**	**12.83**	**4.31**	**4.12**	**--**
MP Timber	31,600,184	1.05		4.60	6.33	7.52	3.59	3.89	--
MPATC	27,205,292	0.91		-1.09	0.70	0.86	-2.59	--	--
MPCTT	1,858,094	0.06		0.00	40.70	82.35	54.23	--	--
MPMCB	25,552,799	0.85		-0.35	31.26	32.94	10.01	--	--
Russellville Land Timber	883,232	0.03		-0.03	-1.33	-2.75	-1.42	--	--
NCREIF Timberland 1 Qtr. Lag				*0.76*	*1.34*	*1.47*	*1.71*	*2.53*	*4.56*
Real Estate	**212,966,617**	**7.09**	**10.00**	**3.83**	**8.38**	**12.79**	**8.96**	**8.83**	**10.64**
MODOT Real Estate Blend				*4.17*	*6.33*	*7.96*	*5.19*	*6.09*	*8.86*
REITS	**10,007,022**	**0.33**	**--**	**11.10**	**18.55**	**38.60**	**8.76**	**5.67**	**5.20**
CBRE Investors	10,007,022	0.33		11.10	18.55	38.60	8.76	5.67	5.20
FTSE NAREIT Developed				*9.17*	*15.50*	*33.55*	*6.39*	*4.98*	*6.38*
Core	**70,173,269**	**2.34**	**--**	**3.93**	**7.05**	**9.11**	**6.93**	**7.56**	**10.89**
Clarion Partners Lion Prop Fd	11,320,555	0.38		5.27	7.33	9.65	6.09	7.32	9.52
Principal CMBS	1,074,741	0.04		-0.27	-0.03	3.29	20.11	11.59	14.64
Principal Enhanced Property	56,986,149	1.90		3.76	7.24	9.17	6.44	8.09	12.34
Principal U.S. Property Fund	791,824	0.03		3.65	6.10	7.85	5.76	6.86	9.57

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Non-Core	**132,786,326**	**4.42**	**--**	**3.26**	**8.45**	**13.47**	**10.71**	**10.46**	**10.21**
Value-Add	**116,377,888**	**3.88**	**--**	**3.73**	**8.66**	**13.52**	**10.25**	**10.55**	**9.30**
Centersquare III	19,248,918	0.64		2.79	4.71	4.28	15.31	12.61	--
Centersquare IV	32,162,191	1.07		3.19	8.28	11.79	--	--	--
Centersquare V	3,685,443	0.12		-13.74	--	--	--	--	--
M&G II	682,553	0.02		10.20	23.73	42.46	15.11	13.18	--
New Mountain	8,885,459	0.30		3.49	13.50	28.39	7.38	--	--
Oak Street IV	9,510,215	0.32		11.82	42.54	50.92	21.29	--	--
Och Ziff RE Credit FD LP	7,797,268	0.26		8.24	10.78	18.47	10.62	--	--
Torchlight Debt Opp II	58,319	0.00							
Torchlight Debt Opp III	35,616	0.00		0.00	-1.83	-1.83	-17.43	-3.21	--
Torchlight Debt Opps V	3,545,219	0.12		3.04	6.27	6.71	7.22	10.52	--
Tristan EPISO	619,255	0.02		13.36	-45.12	-39.22	-36.89	-22.87	-9.47
Tristan EPISO 3	3,897,822	0.13		0.55	5.97	16.39	-6.76	7.58	--
Tristan EPISO 4	15,871,012	0.53		5.87	9.87	21.08	10.79	8.74	--
Tristan EPISO 5	10,378,599	0.35		2.34	-4.88	-6.90	--	--	--
NCREIF Property Index				*3.59*	*5.37*	*7.38*	*5.50*	*6.13*	*8.79*
Opportunistic	**16,408,437**	**0.55**	**--**	**-0.39**	**7.39**	**14.76**	**17.54**	**13.25**	**12.92**
AEW Partners V	1	0.00							
Apollo European III	98,043	0.00		3.97	2.47	6.58	-23.52	-21.16	-10.68
Apollo Real Estate	17,646	0.00		0.00	0.38	1.69	46.09	27.65	20.79
Clarion Part Lion Mexico Fund	853,778	0.03		-0.74	-8.79	-13.08	-13.92	-16.45	-13.02
Colony Capital VIII	188,500	0.01		-0.37	13.01	-2.89	-11.80	-2.29	-3.02
Och-Ziff RE III	2,379,673	0.08		3.96	8.30	16.23	14.05	17.86	--
Sculptor IV	3,603,293	0.12		0.70	7.51	195.07	--	--	--
Stockdale I-A	9,267,503	0.31		-2.07	11.83	16.10	--	--	--
NCREIF Property Index				*3.59*	*5.37*	*7.38*	*5.50*	*6.13*	*8.79*
Cash Composite *	**123,275,859**	**4.11**	**0.00**	**0.00**	**0.00**	**0.06**	**1.23**	**1.04**	**0.56**
91 Day T-Bills				*0.00*	*0.01*	*0.05*	*1.20*	*1.11*	*0.59*

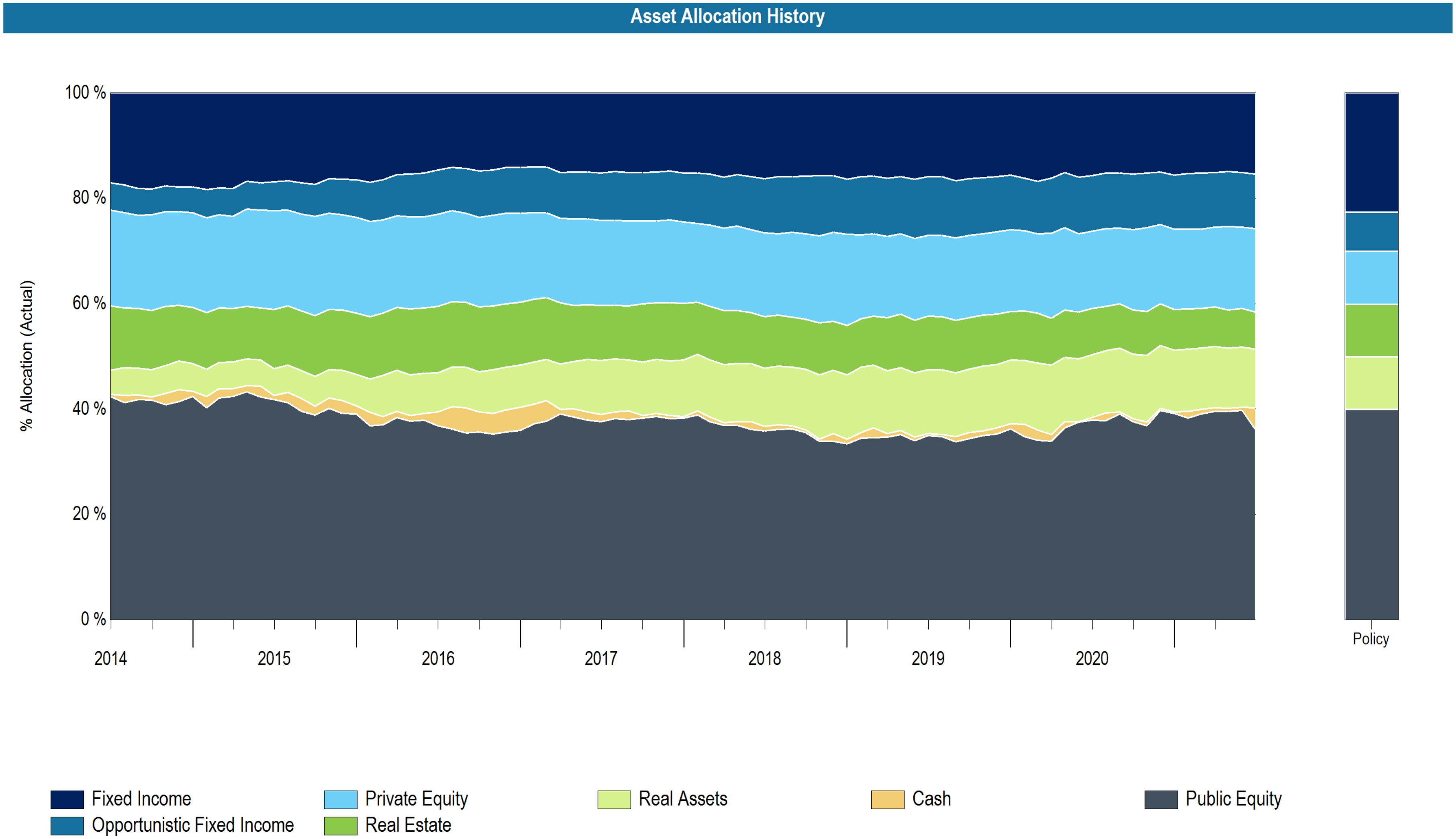
** May include the use of derivatives*



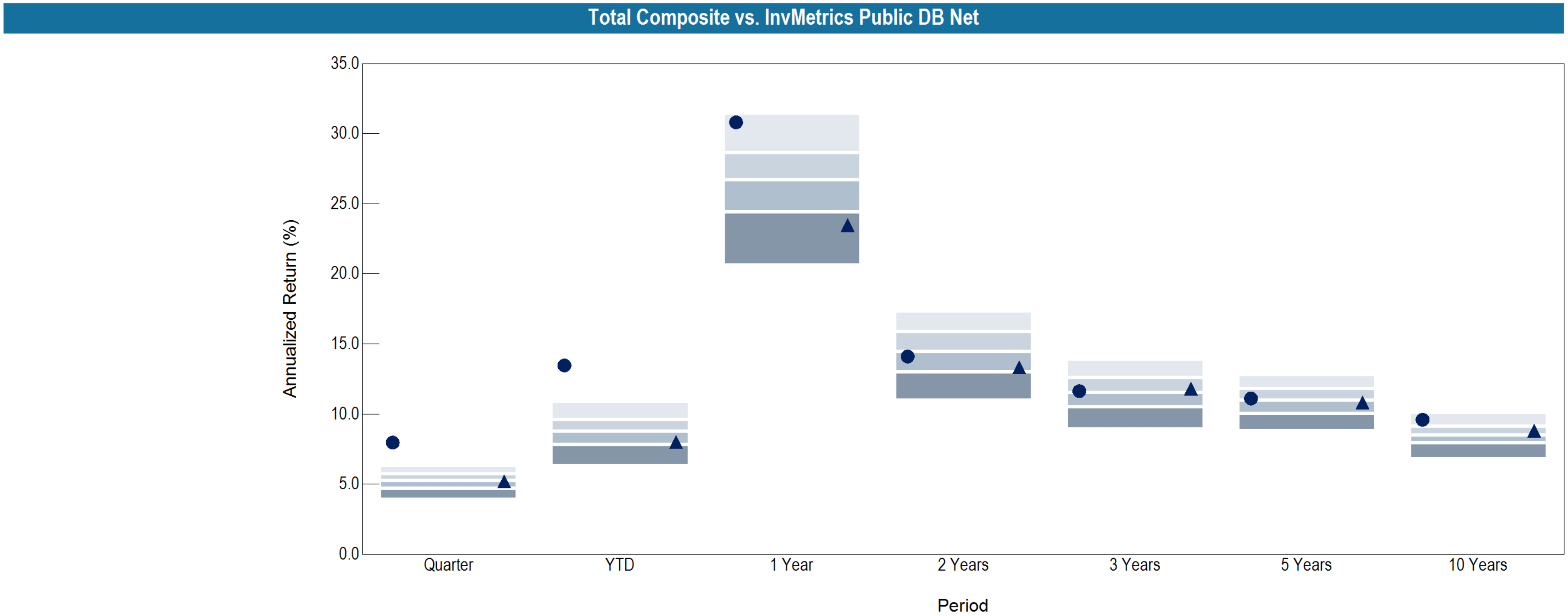
APPENDIX

MPERS

TOTAL FUND ASSET ALLOCATION HISTORY



TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

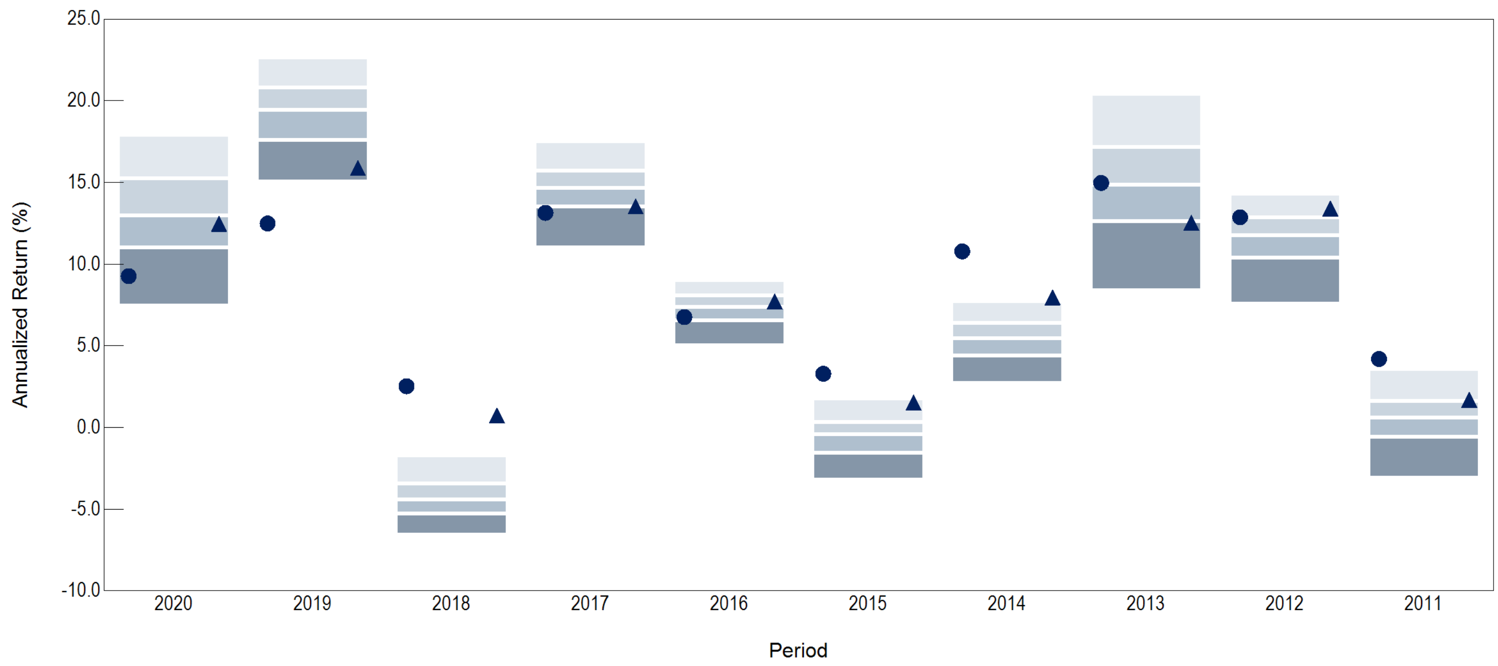


	Quarter		YTD		1 Year		2 Years		3 Years		5 Years		10 Years	
	Return (Rank)													
5th Percentile	6.3		10.9		31.4		17.3		13.9		12.8		10.1	
25th Percentile	5.8		9.6		28.7		15.9		12.6		11.8		9.1	
Median	5.3		8.8		26.7		14.5		11.6		11.0		8.5	
75th Percentile	4.7		7.9		24.4		13.0		10.5		10.1		8.0	
95th Percentile	3.9		6.4		20.7		11.0		9.0		8.8		6.8	
# of Portfolios	473		471		468		464		455		437		350	
● Total Composite	8.0	(1)	13.5	(1)	30.8	(9)	14.1	(58)	11.6	(50)	11.1	(47)	9.6	(14)
▲ Policy Index	5.2	(56)	8.0	(72)	23.5	(83)	13.3	(69)	11.8	(45)	10.8	(57)	8.8	(40)

MPERS

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

Total Composite vs. InvMetrics Public DB Net



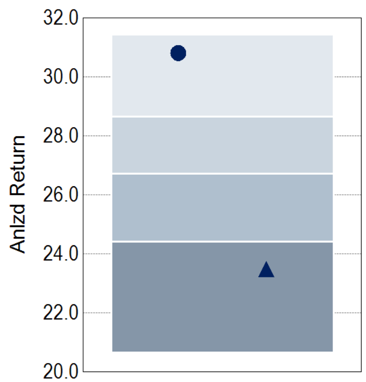
	Return (Rank)																			
5th Percentile	17.9		22.6		-1.7		17.5		9.0		1.7		7.7		20.4		14.3		3.6	
25th Percentile	15.3		20.8		-3.4		15.8		8.1		0.4		6.4		17.2		12.9		1.6	
Median	13.0		19.5		-4.4		14.7		7.4		-0.4		5.5		14.9		11.8		0.6	
75th Percentile	11.0		17.6		-5.2		13.6		6.6		-1.5		4.4		12.7		10.4		-0.5	
95th Percentile	7.5		15.1		-6.5		11.1		5.0		-3.2		2.7		8.4		7.6		-3.1	
# of Portfolios	596		550		496		269		269		262		210		191		159		137	
● Total Composite	9.3	(89)	12.5	(99)	2.5	(1)	13.1	(83)	6.8	(70)	3.3	(1)	10.8	(1)	15.0	(49)	12.9	(26)	4.2	(3)
▲ Policy Index	12.5	(57)	15.9	(92)	0.7	(1)	13.5	(76)	7.7	(39)	1.5	(7)	8.0	(4)	12.5	(76)	13.4	(15)	1.7	(24)

MPERS

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

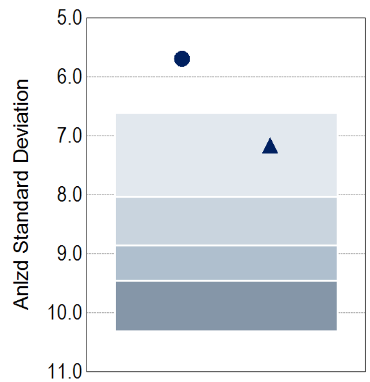
Total Composite vs. IFx Public DB Net + (USD)
1 Year

Anlzd Return



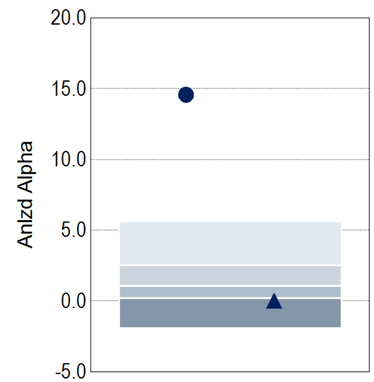
● Total Composite	
Value	30.80
Rank	9
▲ Policy Index	
Value	23.47
Rank	83
Universe	
5th %tile	31.43
25th %tile	28.66
Median	26.72
75th %tile	24.43
95th %tile	20.67

Anlzd Standard Deviation



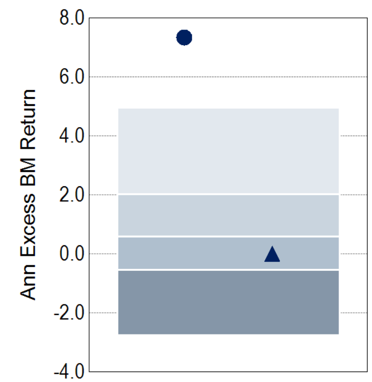
● Total Composite	
Value	5.70
Rank	2
▲ Policy Index	
Value	7.16
Rank	12
Universe	
5th %tile	6.61
25th %tile	8.02
Median	8.85
75th %tile	9.45
95th %tile	10.31

Anlzd Alpha



● Total Composite	
Value	14.56
Rank	3
▲ Policy Index	
Value	0.00
Rank	82
Universe	
5th %tile	5.63
25th %tile	2.56
Median	1.10
75th %tile	0.24
95th %tile	-1.87

Ann Excess BM Return



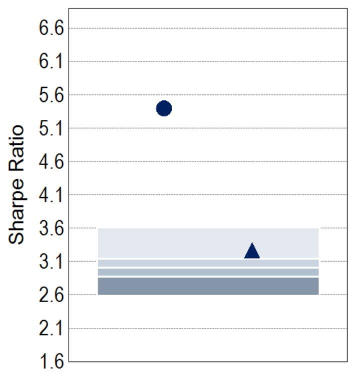
● Total Composite	
Value	7.33
Rank	5
▲ Policy Index	
Value	0.00
Rank	66
Universe	
5th %tile	4.94
25th %tile	2.03
Median	0.59
75th %tile	-0.53
95th %tile	-2.75

MPERS

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

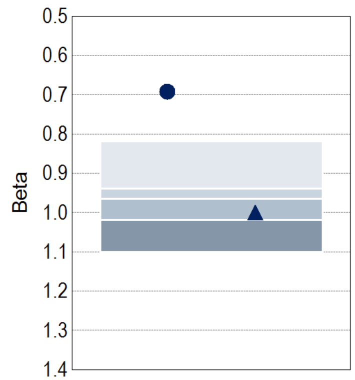
Total Composite vs. IFx Public DB Net + (USD)
1 Year

Sharpe Ratio



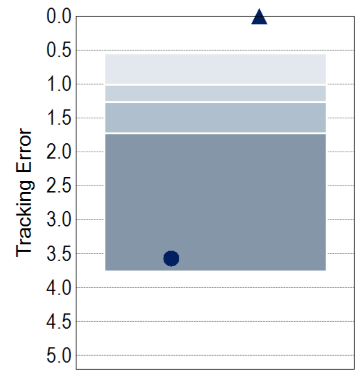
● Total Composite	
Value	5.40
Rank	1
▲ Policy Index	
Value	3.27
Rank	17
Universe	
5th %tile	3.61
25th %tile	3.16
Median	3.01
75th %tile	2.88
95th %tile	2.60

Beta



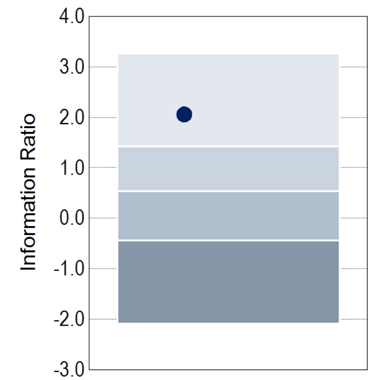
● Total Composite	
Value	0.69
Rank	3
▲ Policy Index	
Value	1.00
Rank	66
Universe	
5th %tile	0.82
25th %tile	0.94
Median	0.96
75th %tile	1.02
95th %tile	1.10

Tracking Error



● Total Composite	
Value	3.57
Rank	94
▲ Policy Index	
Value	0.00
Rank	1
Universe	
5th %tile	0.55
25th %tile	1.00
Median	1.25
75th %tile	1.72
95th %tile	3.75

Information Ratio



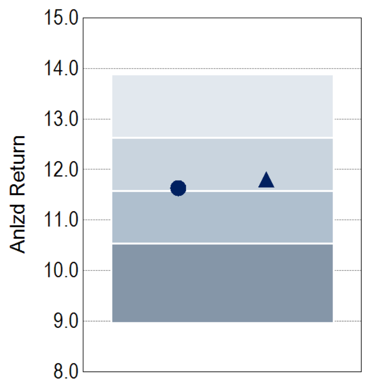
● Total Composite	
Value	2.05
Rank	18
▲ Policy Index	
Value	--
Rank	--
Universe	
5th %tile	3.27
25th %tile	1.43
Median	0.55
75th %tile	-0.43
95th %tile	-2.08

MPERS

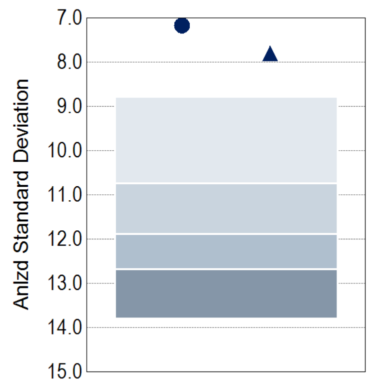
TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Composite vs. IFx Public DB Net + (USD)
3 Years

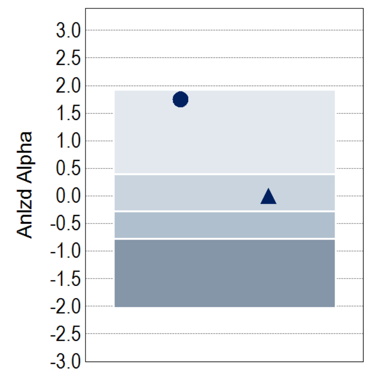
Anlzd Return



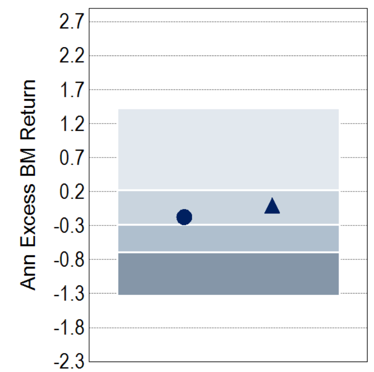
Anlzd Standard Deviation



Anlzd Alpha



Ann Excess BM Return



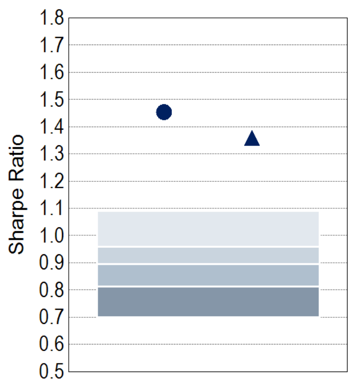
	Anlzd Return	Anlzd Standard Deviation	Anlzd Alpha	Ann Excess BM Return
● Total Composite				
Value	11.63	7.17	1.75	-0.17
Rank	50	2	6	44
▲ Policy Index				
Value	11.80	7.81	0.00	0.00
Rank	45	3	36	34
Universe				
5th %tile	13.88	8.78	1.92	1.43
25th %tile	12.64	10.73	0.41	0.23
Median	11.58	11.87	-0.27	-0.27
75th %tile	10.54	12.67	-0.76	-0.68
95th %tile	8.97	13.79	-2.02	-1.32

MPERS

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

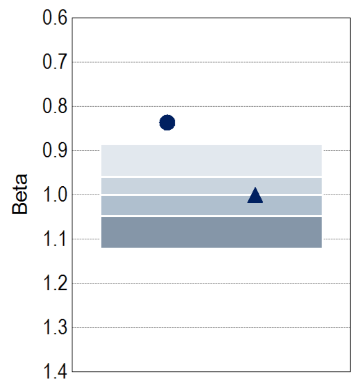
Total Composite vs. IFx Public DB Net + (USD)
3 Years

Sharpe Ratio



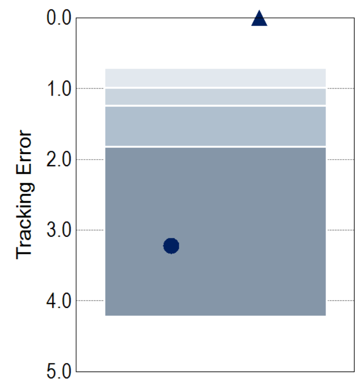
● Total Composite	
Value	1.45
Rank	1
▲ Policy Index	
Value	1.36
Rank	1
Universe	
5th %tile	1.09
25th %tile	0.96
Median	0.90
75th %tile	0.81
95th %tile	0.70

Beta



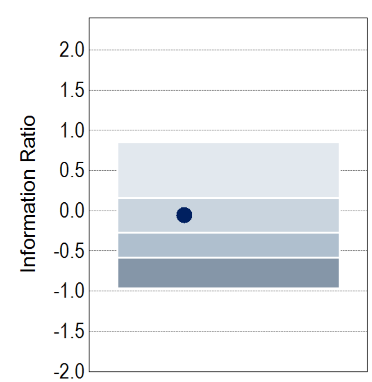
● Total Composite	
Value	0.84
Rank	4
▲ Policy Index	
Value	1.00
Rank	51
Universe	
5th %tile	0.89
25th %tile	0.96
Median	1.00
75th %tile	1.05
95th %tile	1.12

Tracking Error



● Total Composite	
Value	3.22
Rank	93
▲ Policy Index	
Value	0.00
Rank	1
Universe	
5th %tile	0.71
25th %tile	0.98
Median	1.24
75th %tile	1.81
95th %tile	4.22

Information Ratio



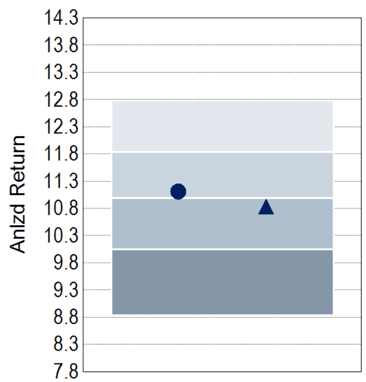
● Total Composite	
Value	-0.05
Rank	37
▲ Policy Index	
Value	--
Rank	--
Universe	
5th %tile	0.85
25th %tile	0.17
Median	-0.27
75th %tile	-0.58
95th %tile	-0.96

MPERS

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

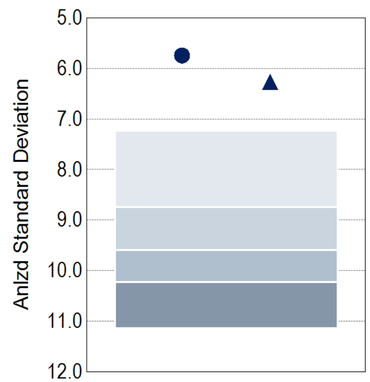
Total Composite vs. IFx Public DB Net + (USD)
5 Years

Anlzd Return



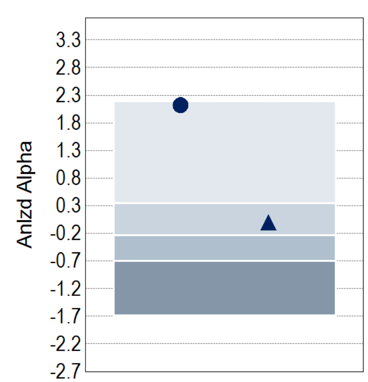
● Total Composite	
Value	11.11
Rank	47
▲ Policy Index	
Value	10.83
Rank	57
Universe	
5th %tile	12.78
25th %tile	11.84
Median	11.00
75th %tile	10.06
95th %tile	8.84

Anlzd Standard Deviation



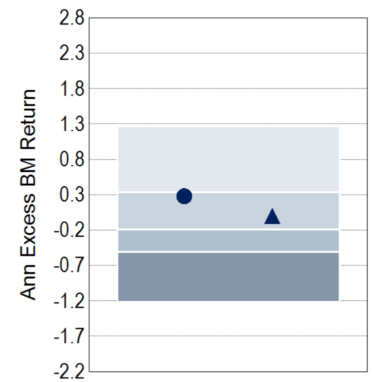
● Total Composite	
Value	5.75
Rank	1
▲ Policy Index	
Value	6.27
Rank	2
Universe	
5th %tile	7.23
25th %tile	8.73
Median	9.58
75th %tile	10.21
95th %tile	11.13

Anlzd Alpha



● Total Composite	
Value	2.12
Rank	6
▲ Policy Index	
Value	0.00
Rank	40
Universe	
5th %tile	2.20
25th %tile	0.35
Median	-0.23
75th %tile	-0.68
95th %tile	-1.68

Ann Excess BM Return



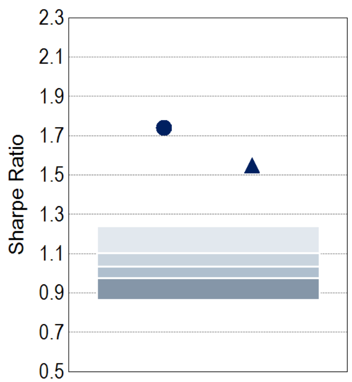
● Total Composite	
Value	0.28
Rank	27
▲ Policy Index	
Value	0.00
Rank	40
Universe	
5th %tile	1.26
25th %tile	0.34
Median	-0.18
75th %tile	-0.50
95th %tile	-1.21

MPERS

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

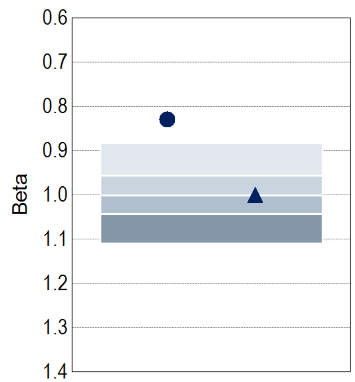
Total Composite vs. IFx Public DB Net + (USD)
5 Years

Sharpe Ratio



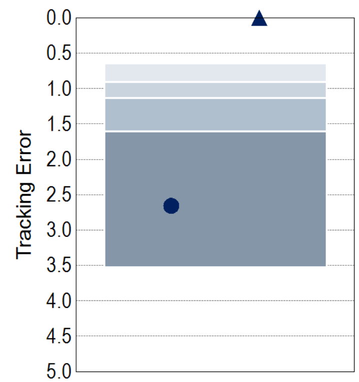
● Total Composite	
Value	1.74
Rank	1
▲ Policy Index	
Value	1.55
Rank	1
Universe	
5th %tile	1.24
25th %tile	1.10
Median	1.04
75th %tile	0.98
95th %tile	0.87

Beta



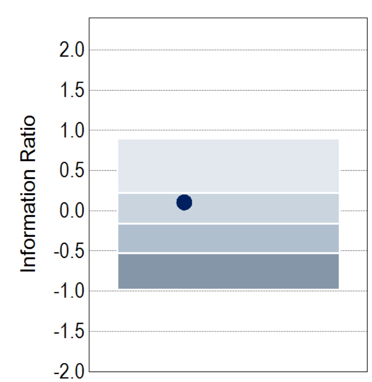
● Total Composite	
Value	0.83
Rank	4
▲ Policy Index	
Value	1.00
Rank	50
Universe	
5th %tile	0.88
25th %tile	0.96
Median	1.00
75th %tile	1.04
95th %tile	1.11

Tracking Error



● Total Composite	
Value	2.66
Rank	93
▲ Policy Index	
Value	0.00
Rank	1
Universe	
5th %tile	0.65
25th %tile	0.90
Median	1.12
75th %tile	1.60
95th %tile	3.52

Information Ratio

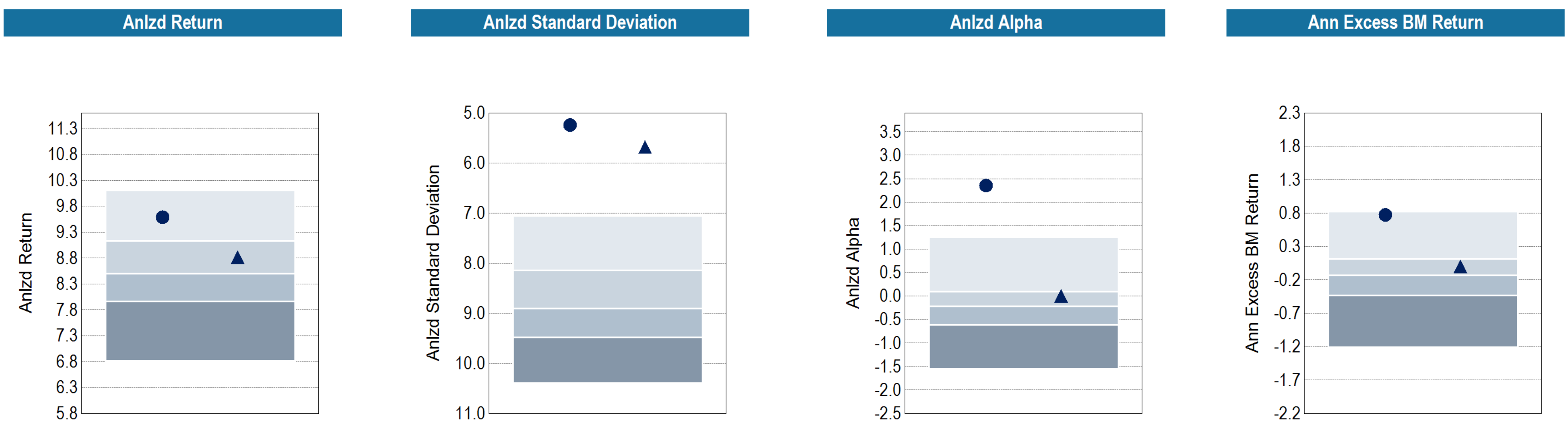


● Total Composite	
Value	0.10
Rank	32
▲ Policy Index	
Value	--
Rank	--
Universe	
5th %tile	0.90
25th %tile	0.23
Median	-0.16
75th %tile	-0.52
95th %tile	-0.97

MPERS

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Composite vs. IFx Public DB Net + (USD)
10 Years



Anlzd Return

● Total Composite	
Value	9.59
Rank	14
▲ Policy Index	
Value	8.81
Rank	40
Universe	
5th %tile	10.11
25th %tile	9.14
Median	8.51
75th %tile	7.97
95th %tile	6.83

Anlzd Standard Deviation

● Total Composite	
Value	5.24
Rank	1
▲ Policy Index	
Value	5.68
Rank	2
Universe	
5th %tile	7.05
25th %tile	8.13
Median	8.89
75th %tile	9.47
95th %tile	10.39

Anlzd Alpha

● Total Composite	
Value	2.35
Rank	3
▲ Policy Index	
Value	0.00
Rank	33
Universe	
5th %tile	1.26
25th %tile	0.11
Median	-0.21
75th %tile	-0.60
95th %tile	-1.54

Ann Excess BM Return

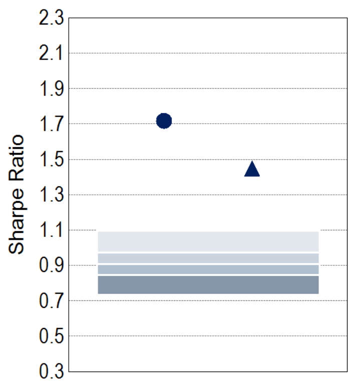
● Total Composite	
Value	0.77
Rank	7
▲ Policy Index	
Value	0.00
Rank	35
Universe	
5th %tile	0.82
25th %tile	0.12
Median	-0.12
75th %tile	-0.43
95th %tile	-1.20

MPERS

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

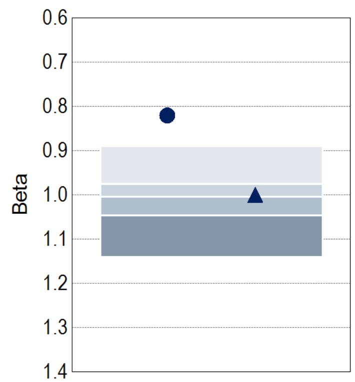
Total Composite vs. IFx Public DB Net + (USD)
10 Years

Sharpe Ratio



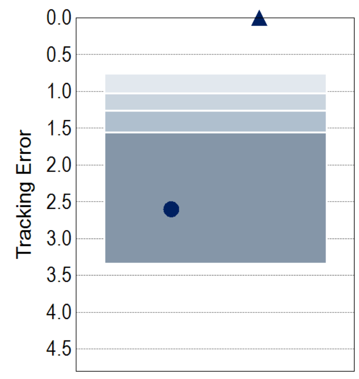
● Total Composite	
Value	1.72
Rank	1
▲ Policy Index	
Value	1.45
Rank	1
Universe	
5th %tile	1.10
25th %tile	0.98
Median	0.91
75th %tile	0.85
95th %tile	0.74

Beta



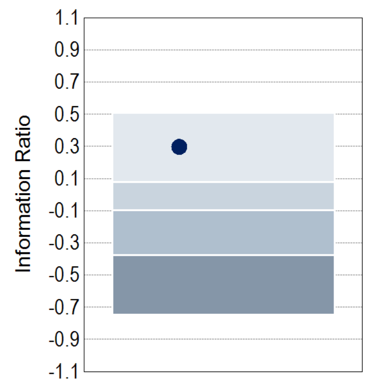
● Total Composite	
Value	0.82
Rank	3
▲ Policy Index	
Value	1.00
Rank	48
Universe	
5th %tile	0.89
25th %tile	0.97
Median	1.00
75th %tile	1.05
95th %tile	1.14

Tracking Error



● Total Composite	
Value	2.60
Rank	93
▲ Policy Index	
Value	0.00
Rank	1
Universe	
5th %tile	0.76
25th %tile	1.02
Median	1.25
75th %tile	1.55
95th %tile	3.34

Information Ratio



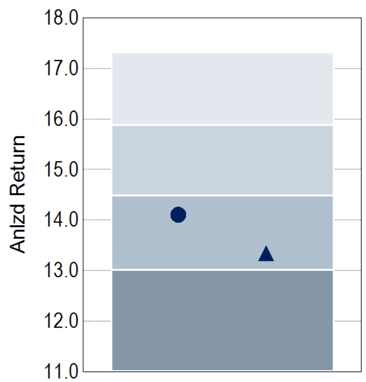
● Total Composite	
Value	0.30
Rank	15
▲ Policy Index	
Value	--
Rank	--
Universe	
5th %tile	0.51
25th %tile	0.08
Median	-0.09
75th %tile	-0.37
95th %tile	-0.74

MPERS

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

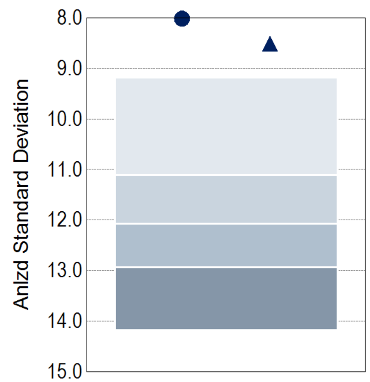
Total Composite vs. IFx Public DB Net + (USD)
15 Years

Anlzd Return



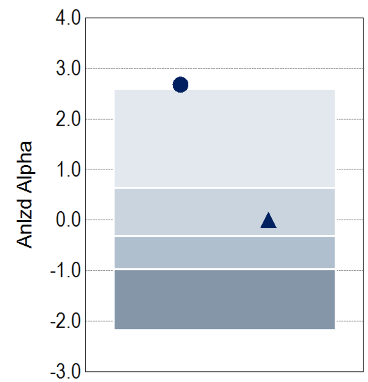
● Total Composite	
Value	14.10
Rank	58
▲ Policy Index	
Value	13.34
Rank	69
Universe	
5th %tile	17.31
25th %tile	15.89
Median	14.50
75th %tile	13.02
95th %tile	11.01

Anlzd Standard Deviation



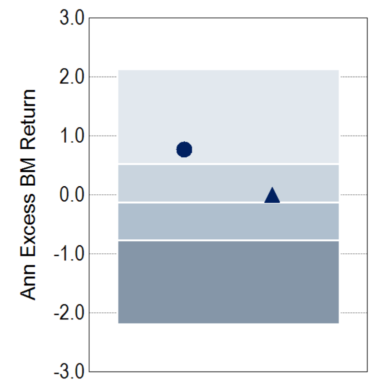
● Total Composite	
Value	8.02
Rank	2
▲ Policy Index	
Value	8.51
Rank	4
Universe	
5th %tile	9.18
25th %tile	11.10
Median	12.06
75th %tile	12.92
95th %tile	14.17

Anlzd Alpha



● Total Composite	
Value	2.68
Rank	5
▲ Policy Index	
Value	0.00
Rank	44
Universe	
5th %tile	2.59
25th %tile	0.65
Median	-0.31
75th %tile	-0.96
95th %tile	-2.17

Ann Excess BM Return



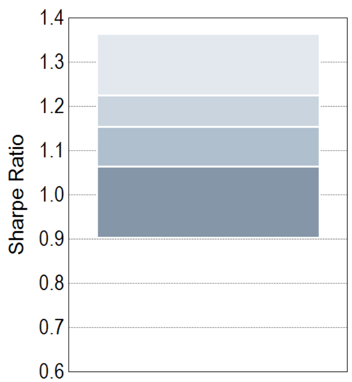
● Total Composite	
Value	0.77
Rank	20
▲ Policy Index	
Value	0.00
Rank	47
Universe	
5th %tile	2.13
25th %tile	0.52
Median	-0.12
75th %tile	-0.77
95th %tile	-2.19

MPERS

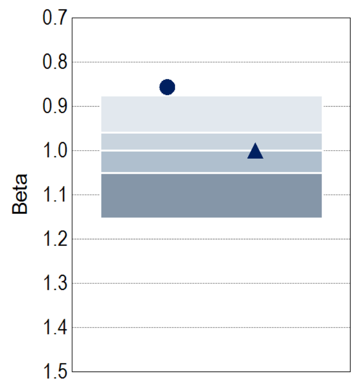
TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Composite vs. IFx Public DB Net + (USD)
15 Years

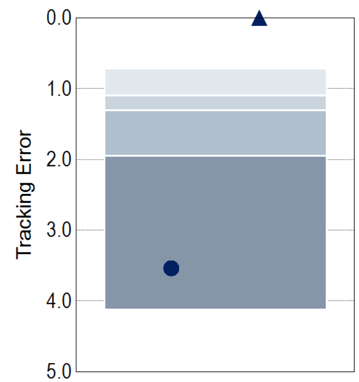
Sharpe Ratio



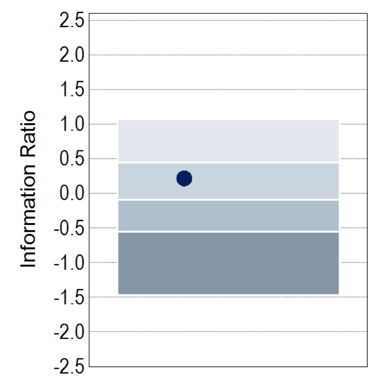
Beta



Tracking Error



Information Ratio



	Sharpe Ratio	Beta	Tracking Error	Information Ratio
● Total Composite				
Value	1.67	0.86	3.54	0.22
Rank	1	4	92	35
▲ Policy Index				
Value	1.49	1.00	0.00	--
Rank	3	52	1	--
Universe				
5th %tile	1.36	0.88	0.72	1.07
25th %tile	1.23	0.96	1.08	0.45
Median	1.15	1.00	1.30	-0.08
75th %tile	1.07	1.05	1.94	-0.55
95th %tile	0.90	1.15	4.11	-1.46

DISCLAIMERS & DISCLOSURES

Past performance is no guarantee of future results.

Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.

A "since inception" return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

NEPC's preferred data source is the plan's custodian bank or record-keeper. If data cannot be obtained from one of the preferred data sources, data provided by investment managers may be used. Information on market indices and security characteristics is received from additional providers. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within. In addition, some index returns displayed in this report or used in calculation of a policy index, allocation index or other custom benchmark may be preliminary and subject to change.

All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.

The opinions presented herein represent the good faith views of NEPC as of the date of this presentation and are subject to change at any time. Neither fund performance nor universe rankings contained in this report should be considered a recommendation by NEPC.

This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv