



Q2 2024 INVESTMENT SUMMARY: BOARD REPORT

MODOT & PATROL EMPLOYEES'
RETIREMENT SYSTEM

SEPTEMBER 2024

Kevin Leonard, Partner

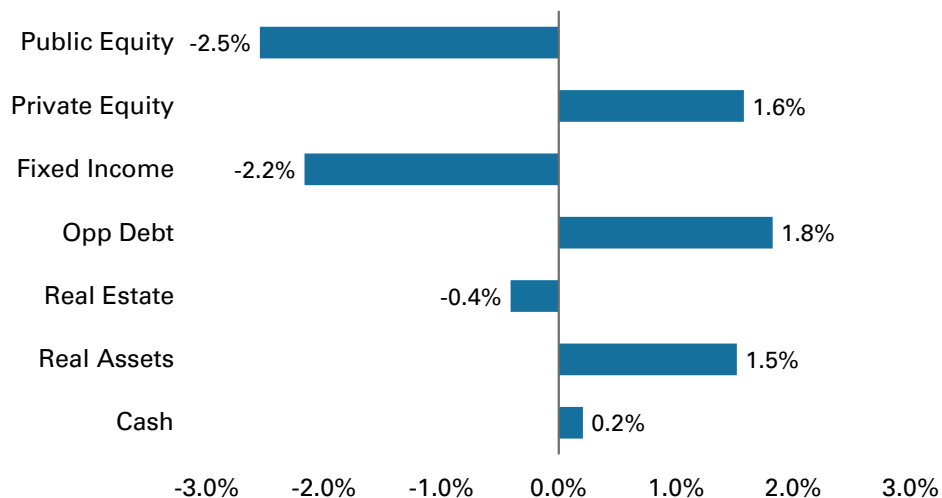
Keith Stronkowsky, Sr. Consultant

Kiley Murphy, Sr. Consulting Specialist

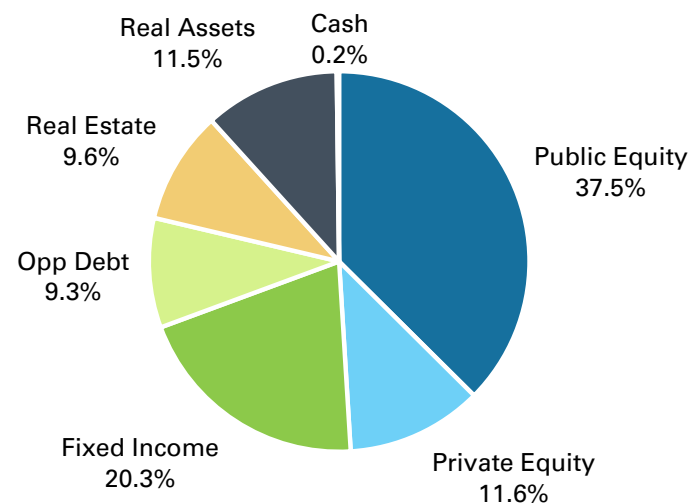


ASSET ALLOCATION – CURRENT vs. POLICY

Current Notional Allocation vs. Policy



Current Notional Allocation

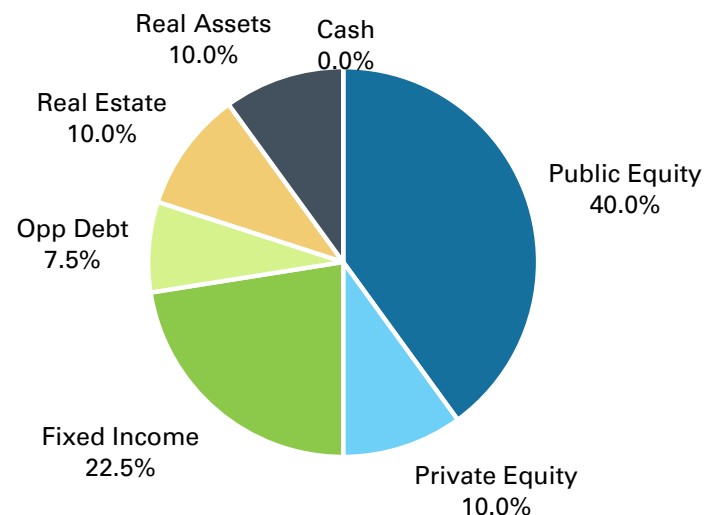


Current Notional Allocation vs. Policy

	Current (\$)	Current %	Policy %	Difference*
Public Equity	\$1,420,792,289	37.5%	40.0%	-2.5%
Private Equity	\$439,215,287	11.6%	10.0%	1.6%
Fixed Income	\$771,387,917	20.3%	22.5%	-2.2%
Opp Debt	\$353,654,165	9.3%	7.5%	1.8%
Real Estate	\$363,775,318	9.6%	10.0%	-0.4%
Real Assets	\$436,926,643	11.5%	10.0%	1.5%
Cash	\$7,810,388	0.2%	0.0%	0.2%
Total	\$3,793,562,007	100.0%	100.0%	0.0%

* Difference between the Policy (unlevered) and Current Notional Allocation

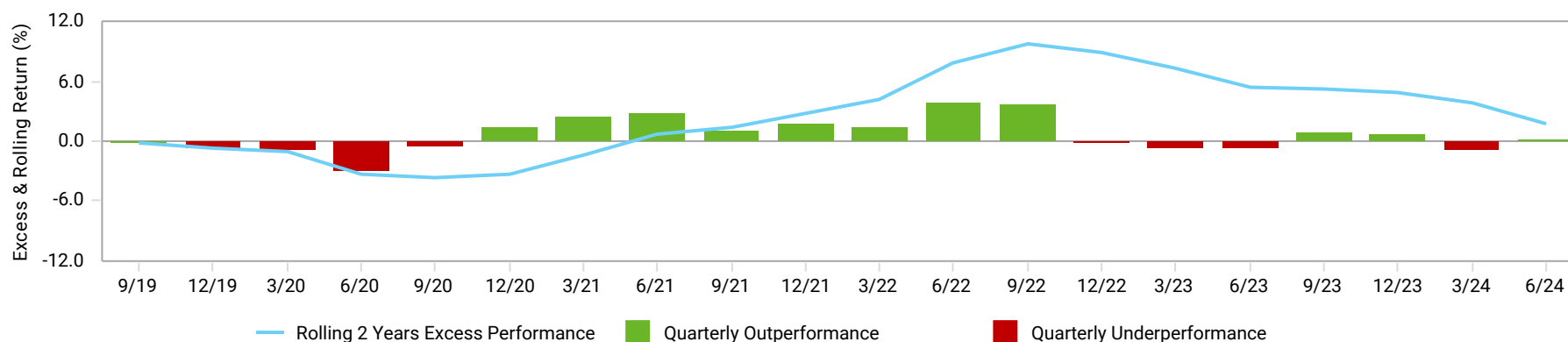
Policy Allocation - Unlevered



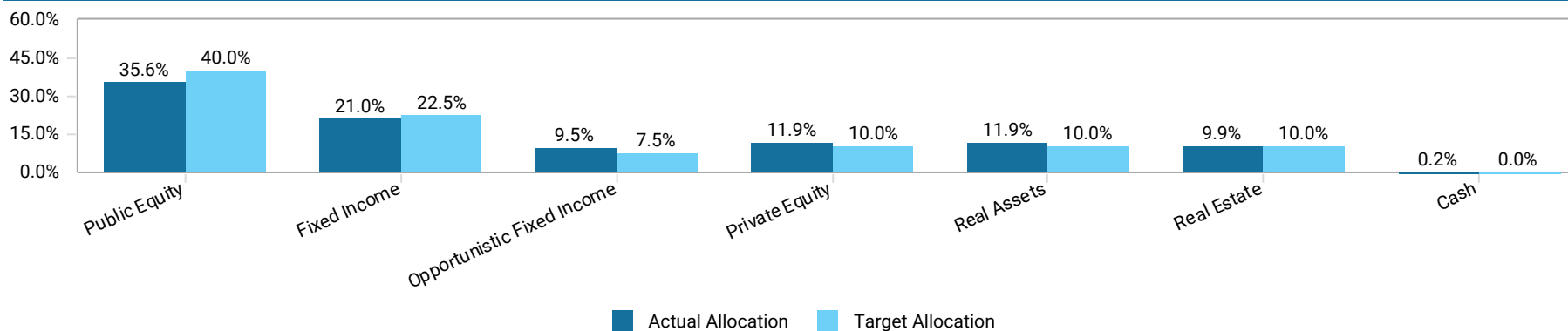
TOTAL FUND PERFORMANCE SUMMARY

	Market Value (\$)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)
Total Composite	3,667,853,950	2.6 (3)	6.6 (32)	13.3 (20)	8.6 (1)	10.8 (1)	8.9 (1)	8.1 (2)
<i>Policy Index</i>		2.4 (3)	7.4 (17)	12.3 (33)	4.6 (7)	8.0 (24)	7.4 (14)	7.2 (12)
<i>All Public DB Plans Median</i>		1.0	6.0	11.4	2.8	7.3	6.6	6.5

Quarterly and Cumulative Excess Performance

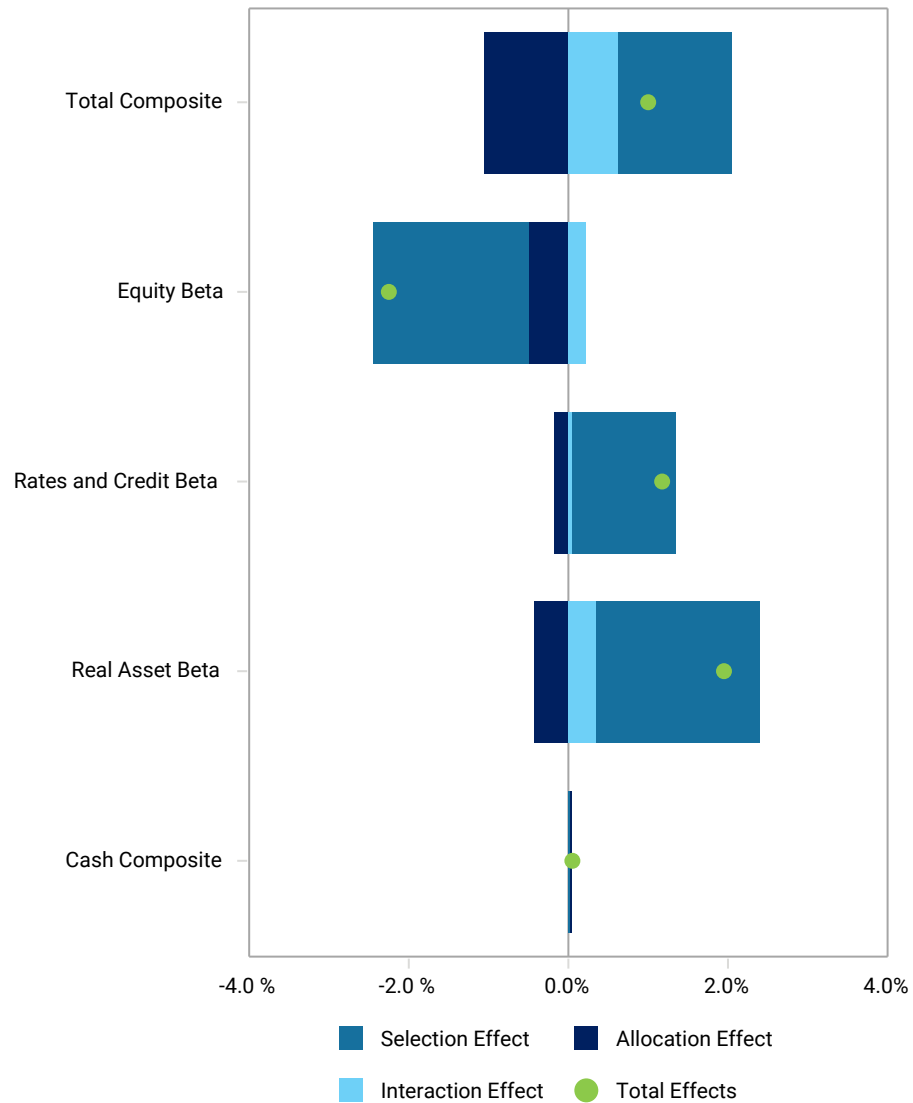


Asset Allocation vs. Target



TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
1 Year Ending June 30, 2024



Attribution Summary
1 Year Ending June 30, 2024

	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Interaction Effects (%)	Total Effects (%)
Equity Beta	18.3	22.5	-4.3	-1.9	-0.5	0.2	-2.3
Rates and Credit Beta	8.7	4.6	4.0	1.3	-0.2	0.1	1.2
Real Asset Beta	9.1	-0.4	9.5	2.1	-0.4	0.3	2.0
Cash Composite	5.2	5.4	-0.2	0.0	0.0	0.0	0.0
Total Composite	13.3	12.3	1.0	1.4	-1.1	0.6	1.0

Allocation Effect - The return attributable to the asset allocation of the portfolio
 Selection Effect - The return attributable to the managers' security selection

TOTAL FUND ALLOCATION AND RETURN SUMMARY

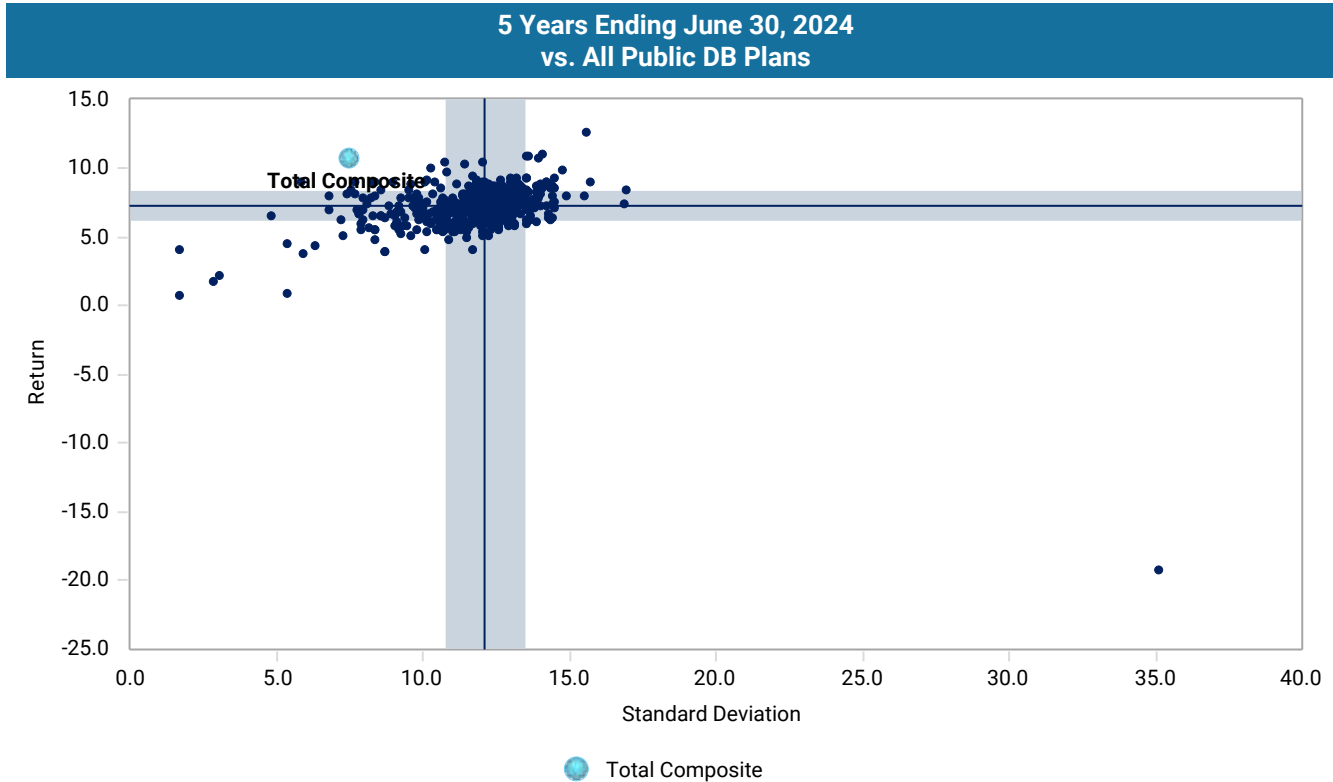
	Asset Allocation				Returns (%)									
	Capital Allocation (\$)	Notional Allocation (\$)	Notional Allocation	Target Allocation	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	20 Yrs	Rank
Total Composite	\$3,667,853,950	\$3,793,562,007	100.0%	100.0%	13.29	20	8.63	1	10.79	1	8.86	1	8.08	2
<i>Policy Index</i>					12.29	33	4.57	7	7.99	24	7.41	14	7.19	12
Equity Beta	\$1,734,299,519	\$1,860,007,576	49.0%	50.0%	18.28		9.14		13.74		-		-	
Public Equities	\$1,295,084,232	\$1,420,792,289	37.5%	40.0%	22.15	18	8.53	8	12.49	20	8.81	36	8.21	30
<i>MSCI ACWI</i>					19.38	29	5.43	32	10.76	37	8.43	43	7.55	57
Private Equity	\$439,215,287	\$439,215,287	11.6%	10.0%	8.16		9.65		15.71		14.04		-	
<i>MO Hwy PE. Index - Lag</i>					33.69		14.81		18.46		16.32		13.34	
Rates and Credit Beta	\$1,125,042,082	\$1,125,042,082	29.7%	30.0%	8.66		4.33		5.72		-		-	
Traditional Fixed Income	\$771,387,917	\$771,387,917	20.3%	22.5%	7.19	38	0.53	28	2.72	27	4.12	9	4.99	16
<i>MoDOT Fixed Inc. Blend</i>					2.74	74	-3.11	67	-0.07	69	1.55	58	3.44	53
Opportunistic Debt	\$353,654,165	\$353,654,165	9.3%	7.5%	11.70	11	10.33	1	10.19	1	-		-	
<i>Bloomberg US High Yield</i>					10.44	34	1.64	58	3.92	42	4.31	31	6.59	13
Real Assets Beta	\$800,701,961	\$800,701,961	21.1%	20.0%	9.11		14.10		9.93		-		-	
Real Assets	\$436,926,643	\$436,926,643	11.5%	10.0%	14.29		17.58		10.61		7.22		-	
<i>CPI + 4% Unadjusted</i>					7.09		9.16		8.34		6.91		6.68	
Real Estate	\$363,775,318	\$363,775,318	9.6%	10.0%	2.58		9.23		8.82		9.49		-	
<i>MoDOT Real Estate Blend</i>					-7.42		2.22		3.24		6.14		-	
Cash Composite	\$7,810,388	\$7,810,388	0.2%	0.0%	5.24		2.96		2.07		1.43		1.45	
<i>90 Day T-Bill</i>					5.40		3.03		2.16		1.50		1.43	
Bank Line	-	-												

Leverage Metrics	
Fund Leverage (%)	3.4%
Fund Leverage (\$)	\$ 125,708,057
Leverage by Type	
Public Equities	\$ 125,708,057
Bank Line	-

	\$ 125,708,057

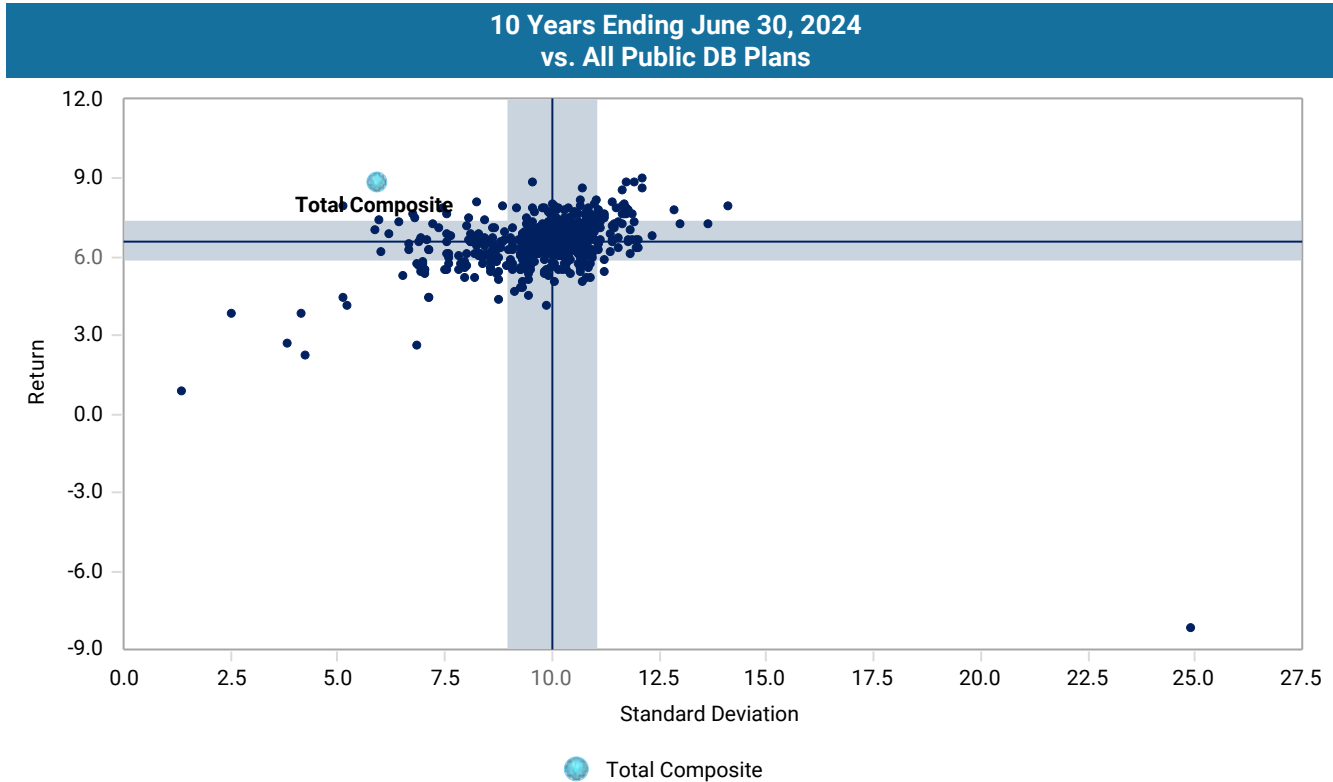


TOTAL FUND RISK/RETURN - 5 YEARS



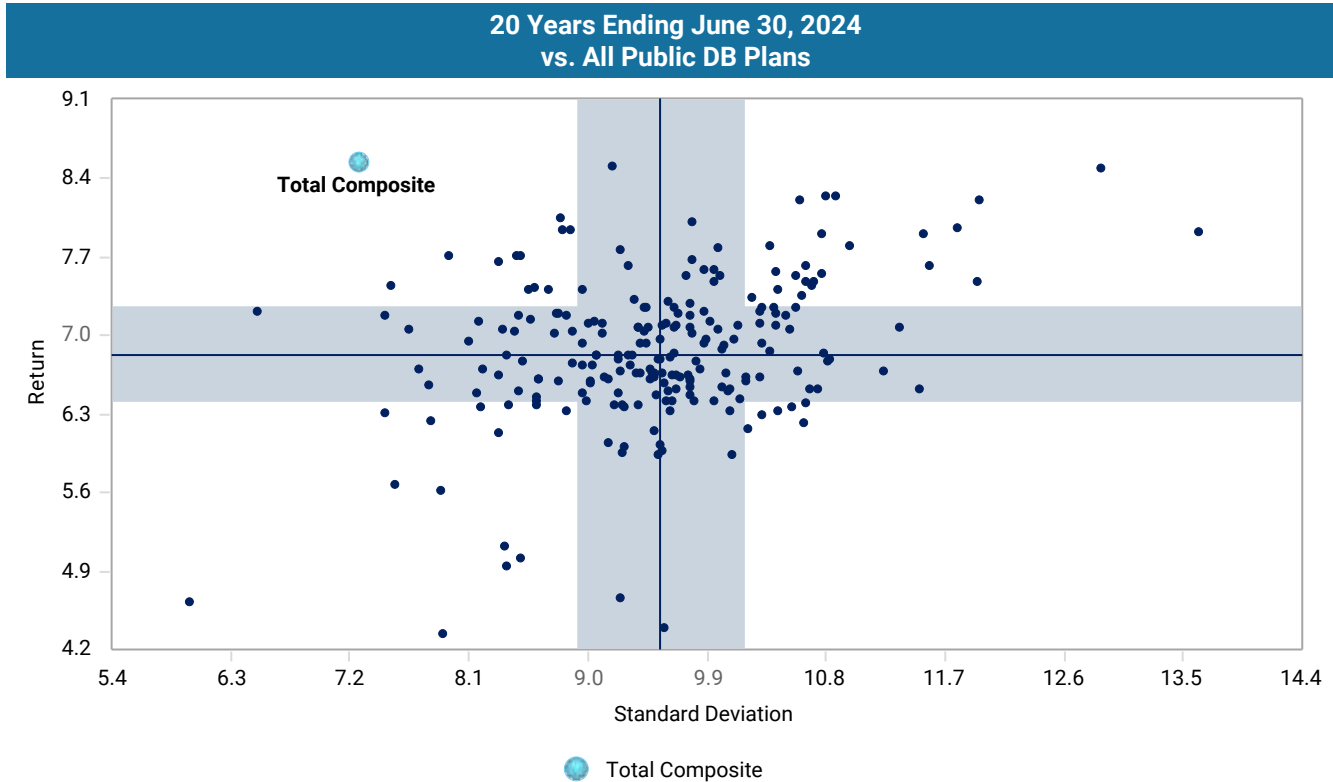
Statistics Summary 5 Years Ending June 30, 2024			
	5 Years Return	5 Years Standard Deviation	5 Years Sharpe Ratio
Total Composite	10.8 (1)	7.5 (2)	1.1 (1)
<i>Policy Index</i>	<i>8.0 (24)</i>	<i>8.7 (6)</i>	<i>0.7 (5)</i>

TOTAL FUND RISK/RETURN - 10 YEARS



Statistics Summary 10 Years Ending June 30, 2024			
	10 Years Return	10 Years Standard Deviation	10 Years Sharpe Ratio
Total Composite	8.9 (1)	5.9 (1)	1.2 (1)
<i>Policy Index</i>	<i>7.4 (14)</i>	<i>6.8 (3)</i>	<i>0.9 (2)</i>

TOTAL FUND RISK/RETURN - 20 YEARS



Statistics Summary 20 Years Ending June 30, 2024			
	20 Years Return	20 Years Standard Deviation	20 Years Sharpe Ratio
Total Composite	8.6 (1)	7.3 (1)	1.0 (1)
<i>Policy Index</i>	<i>7.7 (10)</i>	<i>7.3 (1)</i>	<i>0.8 (1)</i>

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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.

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

