Western States Office & Professional Employees Pension Fund

Investment Performance Review

Period Ending: June 30, 2025

Verus

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2nd quarter summary

THE ECONOMY

— Real GDP growth beat expectations in Q2, coming in at 3.0% quarter-over-quarter annualized (2.0% year-over-year) relative to expectations for a growth number in the mid-2s. This report was welcome news to investors and served as further evidence that the economy is moving along at a moderate pace, rather than slowing abruptly. Calendar year 2025 growth will likely be much milder than the surprising strength shown during 2024.

— U.S. inflation remained sticky and above the Fed's target, rising from 2.4% to 2.7%. There is evidence of price increases across particular items such as televisions, auto parts, and medical equipment, but these rises so far are not large enough to materially lift the overall inflation rate. Some broad inflation categories such as 'apparel' and 'new automobiles' have fallen in price since March.

EQUITY

— If U.S. businesses mostly choose to absorb the cost of tariffs rather than hike prices, that would be good for inflation. But this scenario would be damaging to corporate earnings as tariffs hit profit margins. Year-over-year Q2 S&P 500 earnings growth is expected to be +5.6%, according to FactSet as of July 11th. This would mark the weakest growth rate since Q4 2023. Earnings growth is expected to ramp up in the coming quarters, with +9.3% growth for calendar year 2025, according to FactSet.

FIXED INCOME

— The 10-year U.S. Treasury yield ended Q2 relatively unchanged at 4.23%. Shorter-term bond yields came down slightly, contributing to a positive return on short- and medium-term Treasury bonds.

— Credit spreads widened in April following tariff "Liberation Day", but quickly rebounded after delays, progress regarding negotiations, and muted economic impacts helped improve the outlook. Despite widening by nearly 1% in April, high yield bond spreads ended the quarter tighter by 56bps at 2.96%. Investment grade spreads similarly tightened, ending the quarter at 0.88%. These levels are extremely tight relative to history.

ASSET ALLOCATION ISSUES

— Regional equity markets delivered similar returns. U.S. investors experienced substantial underperformance from domestic equities. However, most of this under-performance was a product of changes in U.S. dollar value, rather than differences in returns between domestic and non-U.S. equity. Depreciation in the dollar resulted in large currency gains for unhedged investors.

— Market-priced volatility spiked above 50 to extreme levels in early April as trade policies shocked markets and led to fears of a trade slowdown and global recession. Bilateral de-escalation of tariffs has eased market volatility, as well as announcements of new trade agreements.

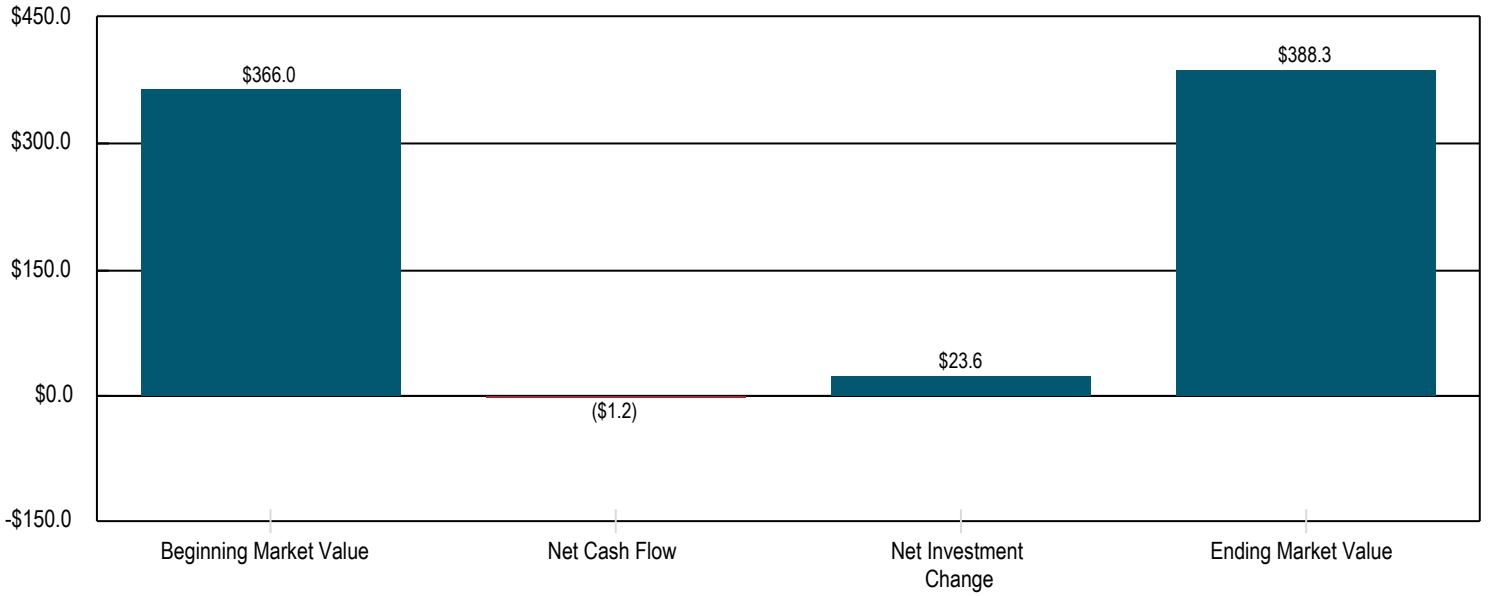
The U.S. job market, household spending, and business investment have remained fairly resilient

Surprisingly strong economic data suggests the likelihood of recession is low

Portfolio Reconciliation

	3 Mo	YTD
Beginning Market Value	$365,962,760	$356,354,263
Net Cash Flow	-$1,203,781	$3,311,370
Net Investment Change	$23,646,457	$28,844,498
Ending Market Value	**$388,315,881**	**$388,315,881**

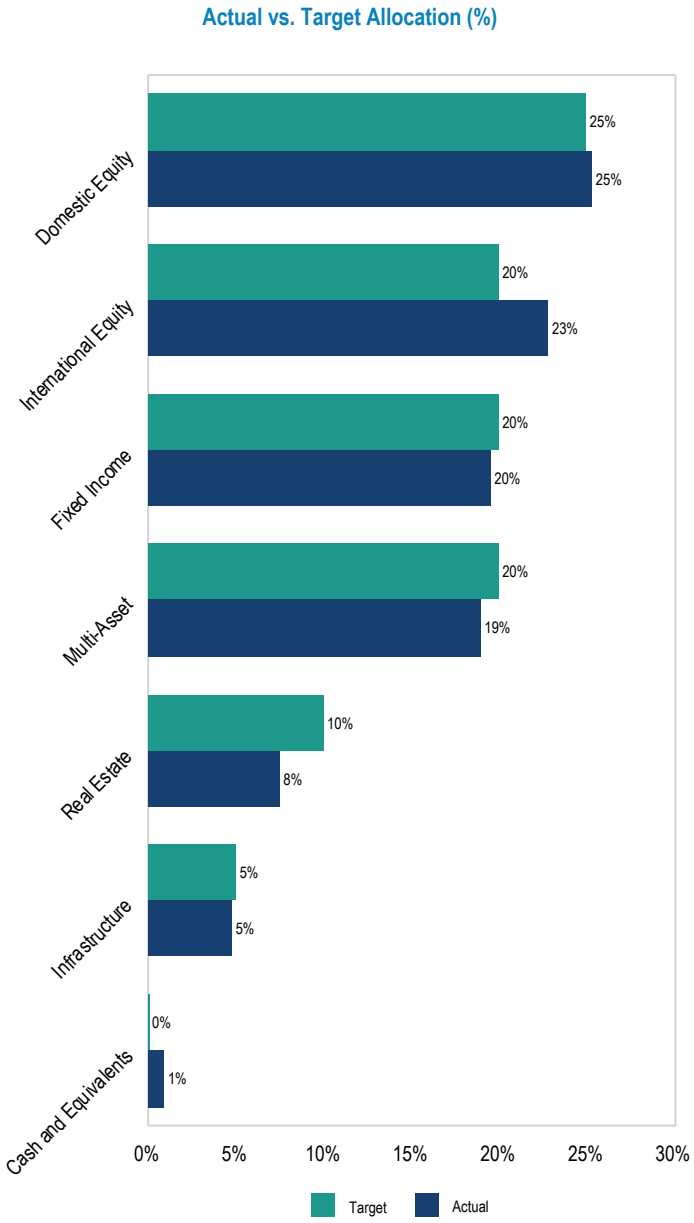
Change in Market Value
Last Three Months



Contributions and withdrawals may include intra-account transfers between managers/funds. Total Fund does not include SFA Funds.

	Beginning Market Value	Contributions	Distributions	Net Transfers	Net Cash Flows	Net Investment Change	Ending Market Value
BlackRock Equity Index NL	$68,840,771	$2,000,000	$0	$1,600,000	$3,600,000	$7,886,490	$80,327,262
INTECH US Adaptive Volatility	$22,282	$616	$0	$0	$616	$240	$23,138
Vanguard Small Cap Index Ins	$16,457,693	$0	$0	$400,000	$400,000	$1,226,580	$18,084,273
WCM Focused International Growth Fund, L.P.	$38,111,456	$0	$0	$0	$0	$7,588,950	$45,700,406
Causeway International Value Ins	$39,135,413	$0	$0	$0	$0	$3,925,921	$43,061,335
Loomis Sayles Core Plus	$74,883,002	$0	$0	$0	$0	$1,203,630	$76,086,632
ASB Allegiance Real Estate	$17,852,910	$0	$0	$0	$0	$313,526	$18,122,519
JPMorgan Special Situation Property	$11,354,057	$0	$0	$0	$0	-$273,591	$11,034,828
IFM Global Infrastructure (US) LP	$10,384,386	$0	$0	-$48,799	-$48,799	$259,508	$10,595,095
JPMorgan IIF ERISA LP	$7,549,304	$0	-$16,373	-$110,110	-$126,483	$490,126	$7,912,947
Invesco Balanced-Risk Allocation	$72,660,490	$0	$0	$0	$0	$1,010,200	$73,670,690
US Bank Checking Account	$3,757,903	$2,283,532	-$12,745,436	$8,731,849	-$1,730,054	$0	$2,027,849
US Bank Clearing Account	$3,615,131	$7,029,048	-$10,514,388	$0	-$3,485,340	$0	$129,791
IFM Cash	$774,037	$0	$0	$48,799	$48,799	$8,513	$831,349
JPMorgan IIF Erisa Cash	$563,190	$0	$0	$110,110	$110,110	$6,094	$679,393
JPMorgan Special Situation Cash	$309	$27,370	$0	$0	$27,370	$265	$27,944
WCM Cash	$426	$0	$0	$0	$0	$4	$431
Invesco - PBGC Funds	$205,270,609	$0	-$5,080	-$10,731,849	-$10,736,929	$3,205,245	$197,738,925
Total Fund	**$571,233,369**	**$11,340,566**	**-$23,281,277**	**$0**	**-$11,940,711**	**$26,851,702**	**$586,054,806**

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund ex PBGC	**388,315,881**	**100.0**	**6.4**	**7.8**	**10.6**	**7.5**	**7.2**	**6.5**
Total Fund Policy Index			*7.2*	*7.3*	*11.8*	*10.3*	*8.1*	*7.0*
Target Asset Allocation Policy Index			*7.3*	*6.5*	*11.7*	*10.6*	*8.9*	*7.8*
Total Domestic Equity	**98,411,535**	**25.3**	**10.2**	**4.8**	**14.1**	**16.7**	**14.0**	**11.2**
Dow Jones U.S. Total Stock Market Index			*11.1*	*5.7*	*15.2*	*19.1*	*15.9*	*12.9*
Total International Equity	**88,761,740**	**22.9**	**14.9**	**23.4**	**21.8**	**19.2**	**13.3**	**8.7**
Total Public Int'l Equity Benchmark (MSCI ACWI ex US IMI)			*12.7*	*17.9*	*17.8*	*13.9*	*10.2*	*6.2*
Total Fixed Income	**76,086,632**	**19.6**	**1.5**	**4.8**	**6.3**	**3.3**	**0.3**	**2.7**
Total Fixed Income Benchmark (Bloomberg Aggregate)			*1.2*	*4.0*	*6.1*	*2.5*	*-0.7*	*1.8*
Total Real Estate	**29,157,347**	**7.5**	**-0.2**	**0.3**	**-0.8**	**-14.5**	**-3.7**	**0.9**
NCREIF ODCE Net			*0.8*	*1.7*	*2.7*	*-6.2*	*2.5*	*4.4*
Total Infrastructure	**18,508,042**	**4.8**	**4.2**	**7.6**	**13.4**	**9.4**	**9.8**	**9.1**
CPI + 5%			*2.1*	*4.7*	*7.8*	*8.0*	*9.8*	*8.2*
Total Multi-Asset	**73,670,690**	**19.0**	**1.3**	**2.9**	**2.9**	**3.6**	**4.9**	**4.3**
60% MSCI ACWI Net/40% FTSE WGBI			*8.8*	*9.0*	*13.2*	*11.0*	*7.1*	*6.4*
Total Cash	**3,719,895**	**1.0**	**0.2**	**0.4**	**0.7**	**0.5**	**0.3**	**0.9**



Policy Index as of 4/17/2018: 45% MSCI World, 25% Bloomberg Aggregate, 10% NCREIF-ODCE net, 20% (60% MSCI ACWI Net/40% CITI WGBI). Target Asset Allocation Policy Index: 25% Dow Jones US Total Stock, 20% MSCI ACWI ex US IMI, 20% Bloomberg Aggregate, 10% NCREIF-ODCE, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI). Data prior to 3Q 2015 is from previous consultant.Total Fund does not include SFA Funds.

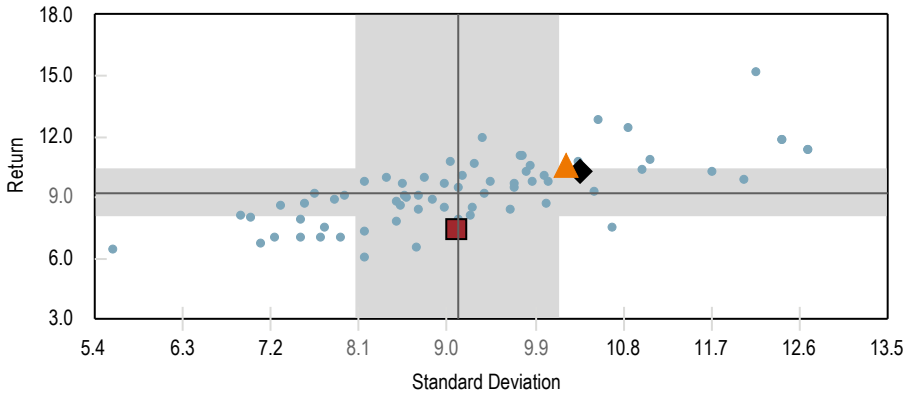
3 Year

	Anlzd Standard Deviation	Ann Excess BM Return	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio
Total Fund	9.1	3.2	-1.4	0.9	1.0	83.6	93.2	-1.5	1.8	0.3
Total Fund Policy Index	*10.4*	*5.9*	*0.0*	*1.0*	*1.0*	*100.0*	*100.0*	-	*0.0*	*0.6*
Target Asset Allocation Policy Index	*10.2*	*6.2*	*0.5*	*1.0*	*1.0*	*99.2*	*96.0*	*0.3*	*0.8*	*0.6*

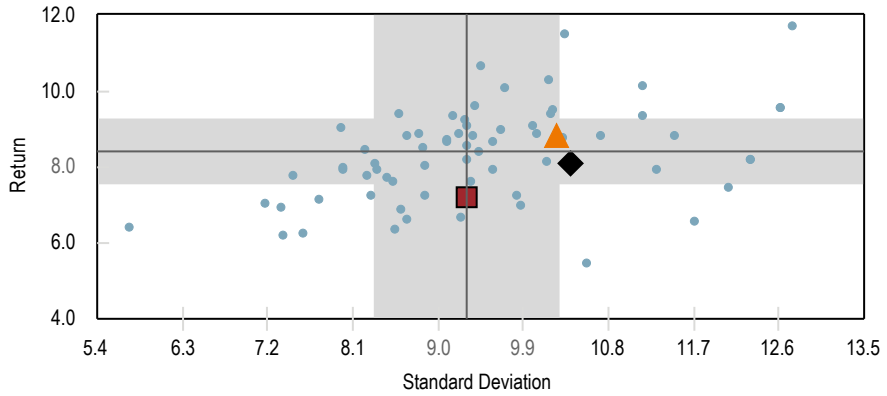
5 Year

	Anlzd Standard Deviation	Ann Excess BM Return	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio
Total Fund	9.3	4.7	0.0	0.9	1.0	89.2	89.4	-0.5	1.8	0.5
Total Fund Policy Index	*10.4*	*5.6*	*0.0*	*1.0*	*1.0*	*100.0*	*100.0*	-	*0.0*	*0.5*
Target Asset Allocation Policy Index	*10.2*	*6.3*	*0.8*	*1.0*	*1.0*	*100.5*	*94.8*	*0.9*	*0.8*	*0.6*

3 Year



5 Year



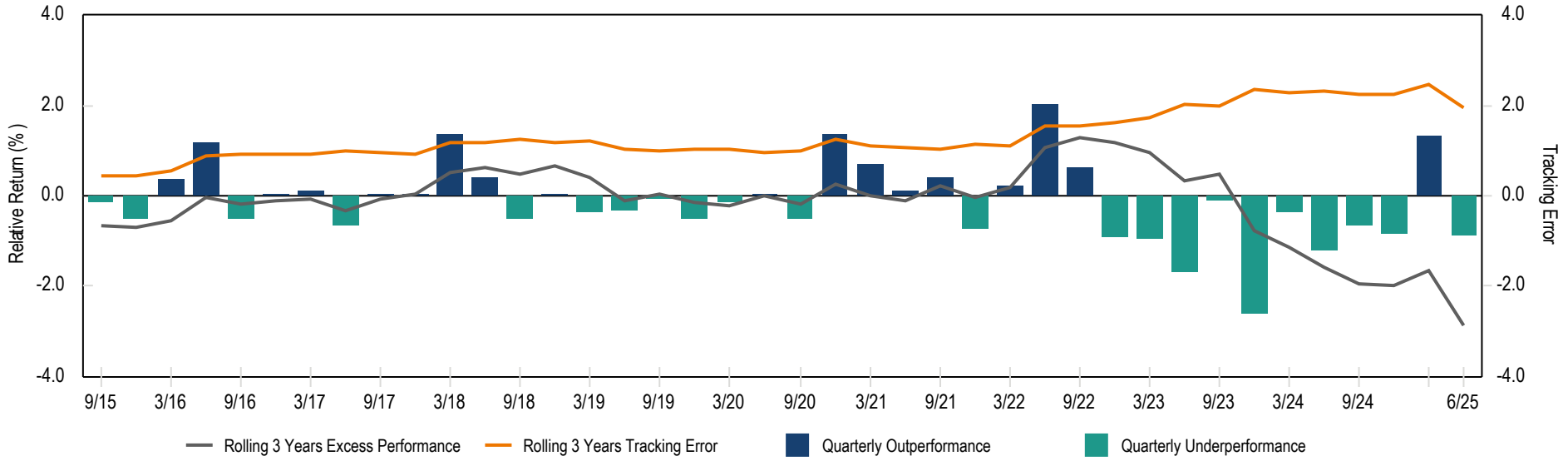
InvMetrics Taft Hartley DB $250mm- $1B Net

	Return	Standard Deviation
Total Fund	7.47	9.10
Total Fund Policy Index	10.33	10.36
Target Asset Allocation Policy Index	10.65	10.22
Median	9.24	9.11
Population	67	67

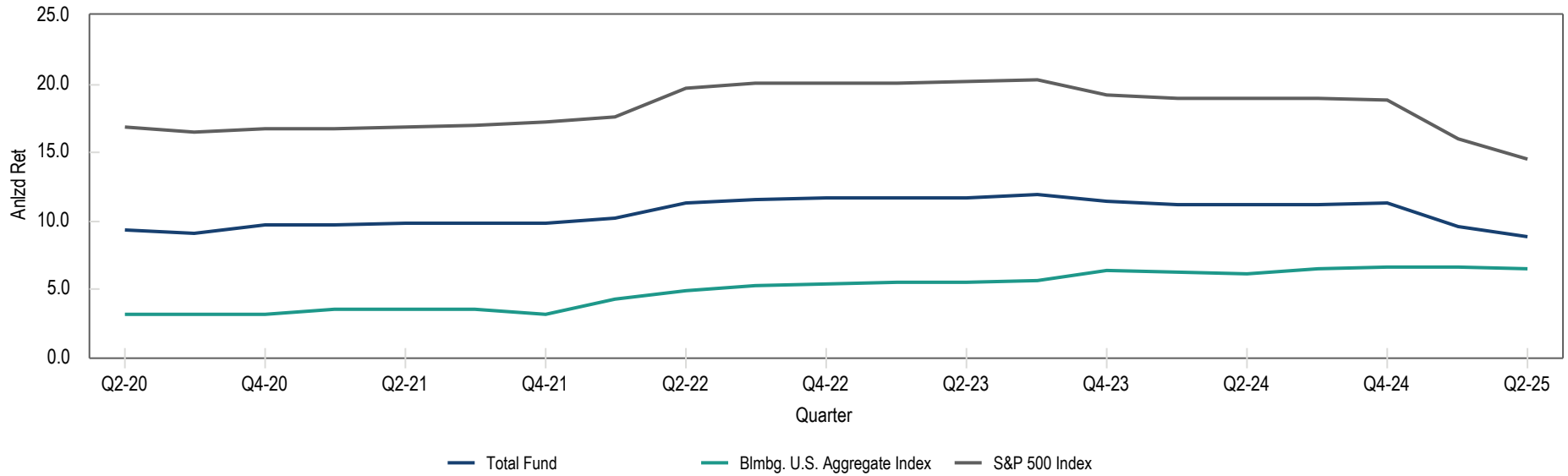
InvMetrics Taft Hartley DB $250mm- $1B Net

	Return	Standard Deviation
Total Fund	7.21	9.31
Total Fund Policy Index	8.10	10.41
Target Asset Allocation Policy Index	8.87	10.25
Median	8.40	9.30
Population	67	67

Rolling Annualized Excess Performance and Tracking Error



Rolling 5 Year Annualized Standard Deviation



	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2024	2023	2022	2021	2020	Inception	Inception Date
Total Fund	**388,315,881**	**100.0**	**6.4**	**7.8**	**10.6**	**7.5**	**7.2**	**6.5**	**6.8**	**7.8**	**-12.4**	**13.4**	**13.3**	**7.3**	**Jan-90**
Total Fund Policy Index			*7.2*	*7.3*	*11.8*	*10.3*	*8.1*	*7.0*	*10.1*	*13.5*	*-14.3*	*12.8*	*12.6*	*6.9*	
Target Asset Allocation Policy Index			*7.3*	*6.5*	*11.7*	*10.6*	*8.9*	*7.8*	*11.3*	*13.8*	*-13.5*	*13.9*	*13.9*	*-*	
Domestic Equity	**98,411,535**	**25.3**													
BlackRock Equity Index NL	80,327,262	20.7	10.9	6.2	15.1	19.8	16.7	13.6	25.2	26.3	-18.1	28.7	18.4	13.6	May-10
S&P 500 Index			*10.9*	*6.2*	*15.2*	*19.7*	*16.6*	*13.6*	*25.0*	*26.3*	*-18.1*	*28.7*	*18.4*	*13.7*	
eV US Large Cap Core Equity Rank			*41*	*41*	*28*	*29*	*27*	*13*	*30*	*27*	*65*	*31*	*40*	*23*	
Vanguard Small Cap Index Ins	18,084,273	4.7	7.3	-0.6	10.2	12.2	11.8	8.6	14.2	18.2	-17.6	17.7	19.1	3.1	May-21
Vanguard Spliced Small Cap Index (Net)			*7.3*	*-0.6*	*10.1*	*12.1*	*11.8*	*8.5*	*14.2*	*18.1*	*-17.6*	*17.7*	*19.1*	*3.0*	
eV US Small Cap Core Equity Rank			*47*	*43*	*28*	*29*	*57*	*36*	*28*	*41*	*58*	*83*	*37*	*49*	
International Equity	**88,761,740**	**22.9**													
WCM Focused International Growth Fund, L.P.	45,700,406	11.8	19.9	25.6	22.6	18.2	11.1	-	7.9	16.7	-28.6	17.6	33.1	12.3	Jul-16
MSCI AC World ex USA (Net)			*12.0*	*17.9*	*17.7*	*14.0*	*10.1*	*-*	*5.5*	*15.6*	*-16.0*	*7.8*	*10.7*	*8.1*	
eV ACWI ex-US All Cap Growth Eq Rank			*5*	*10*	*15*	*18*	*10*	*-*	*35*	*45*	*51*	*3*	*32*	*8*	
Causeway International Value Ins	43,061,335	11.1	10.0	21.2	20.8	20.2	15.9	-	3.7	27.3	-6.8	9.1	5.4	9.2	Jul-16
MSCI EAFE (Net)			*11.8*	*19.4*	*17.7*	*16.0*	*11.2*	*-*	*3.8*	*18.2*	*-14.5*	*11.3*	*7.8*	*8.5*	
Foreign Large Value Rank			*76*	*62*	*65*	*7*	*9*	*-*	*61*	*2*	*28*	*80*	*26*	*31*	
Fixed Income	**76,086,632**	**19.6**													
Loomis Sayles Core Plus	76,086,632	19.6	1.5	4.8	6.3	3.3	0.3	-	1.1	6.4	-12.7	-1.1	11.3	2.5	Apr-17
Blmbg. U.S. Aggregate Index			*1.2*	*4.0*	*6.1*	*2.5*	*-0.7*	*-*	*1.3*	*5.5*	*-13.0*	*-1.5*	*7.5*	*1.6*	
eV US Core Plus Fixed Inc Rank			*41*	*9*	*69*	*71*	*59*	*-*	*92*	*68*	*27*	*78*	*9*	*41*	

Policy Index as of 4/17/2018: 45% MSCI World, 25% Bloomberg Aggregate, 10% NCREIF-ODCE Net, 20% (60% MSCI ACWI Net/40% CITI WGBI). Target Asset Allocation Policy Index: 25% Dow Jones US Total Stock, 20% MSCI ACWI ex US IMI, 20% Bloomberg Aggregate, 10% NCREIF-ODCE, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI). Data prior to 3Q 2015 is from previous consultant. Includes Intech liquidated value of $23,137.66.Total Fund does not include SFA Funds.

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2024	2023	2022	2021	2020	Inception	Inception Date
Real Estate	**29,157,347**	**7.5**													
ASB Allegiance Real Estate	18,122,519	4.7	1.5	2.3	0.8	-13.2	-3.4	0.7	-15.7	-22.2	9.6	13.8	1.4	1.2	Apr-15
NCREIF ODCE Net			*0.8*	*1.7*	*2.7*	*-6.2*	*2.5*	*4.4*	*-2.3*	*-12.7*	*6.5*	*21.0*	*0.3*	*4.7*	
JPMorgan Special Situation Property	11,034,828	2.8	-2.8	-2.7	-3.4	-16.3	-4.2	1.6	-11.3	-23.9	-2.1	22.6	2.0	2.5	Jan-15
NCREIF ODCE Net			*0.8*	*1.7*	*2.7*	*-6.2*	*2.5*	*4.4*	*-2.3*	*-12.7*	*6.5*	*21.0*	*0.3*	*4.9*	
Infrastructure	**18,508,042**	**4.8**													
IFM Global Infrastructure (US) LP	10,595,095	2.7	2.5	5.3	11.9	8.1	10.3	10.8	6.1	8.4	8.2	17.4	3.1	9.5	Feb-09
CPI + 5%			*2.1*	*4.7*	*7.8*	*8.0*	*9.8*	*8.2*	*8.0*	*8.5*	*11.8*	*12.4*	*6.4*	*7.7*	
JPMorgan IIF ERISA LP	7,912,947	2.0	6.5	10.8	14.9	11.3	8.9	7.2	6.7	9.9	4.0	4.0	8.4	6.5	Oct-10
CPI + 5%			*2.1*	*4.7*	*7.8*	*8.0*	*9.8*	*8.2*	*8.0*	*8.5*	*11.8*	*12.4*	*6.4*	*7.8*	
Multi-Asset	**73,670,690**	**19.0**													
Invesco Balanced-Risk Allocation	73,670,690	19.0	1.3	2.9	2.9	3.6	4.9	4.7	4.8	7.0	-13.7	10.9	10.8	6.3	Feb-10
60% MSCI ACWI Net/40% FTSE WGBI			*8.8*	*9.0*	*13.2*	*11.0*	*7.1*	*6.4*	*9.0*	*15.2*	*-18.1*	*7.8*	*14.5*	*6.4*	
FTSE 3-Month T-bill +6%			*2.6*	*5.2*	*11.2*	*11.0*	*9.1*	*8.1*	*11.8*	*11.6*	*7.6*	*6.0*	*6.6*	*7.4*	
eV Global Balanced Rank			*100*	*93*	*100*	*100*	*77*	*75*	*73*	*92*	*30*	*57*	*53*	*50*	
Cash and Equivalents	**3,719,895**	**1.0**													

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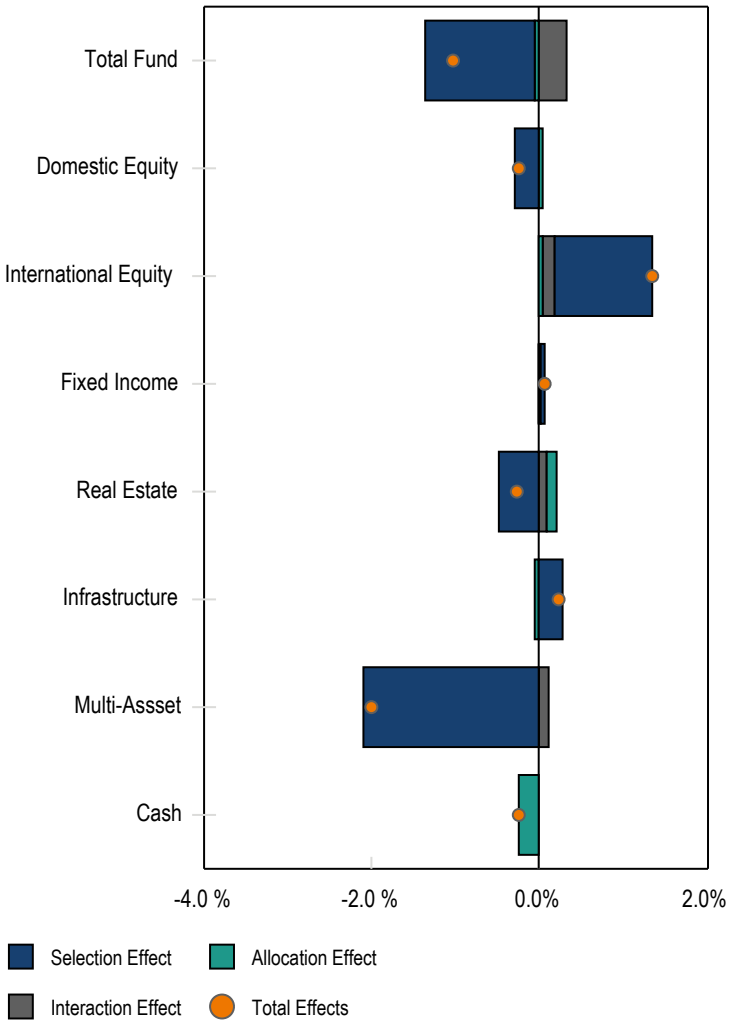
	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2024	2023	2022	2021	2020	Inception	Inception Date
PBGC	**197,738,925**	**1.6**	**3.5**	**6.8**	**-**	**-**	**-**	**4.5**	**-**	**-**	**-**	**-**	**6.7**	**May-23**
Invesco - PBGC Funds	197,738,925	1.6	3.5	6.8	-	-	-	4.5	-	-	-	-	7.0	Oct-23
Blmbg. U.S. Aggregate Index		*1.2*	*4.0*	*6.1*	*2.5*	*-0.7*	*1.8*	*1.3*	*5.5*	*-13.0*	*-1.5*	*7.5*	*7.0*	

PBGC funded 5/24/2023.

Attribution Effects
1 Year Ending June 30, 2025



Performance Attribution
1 Year Ending June 30, 2025

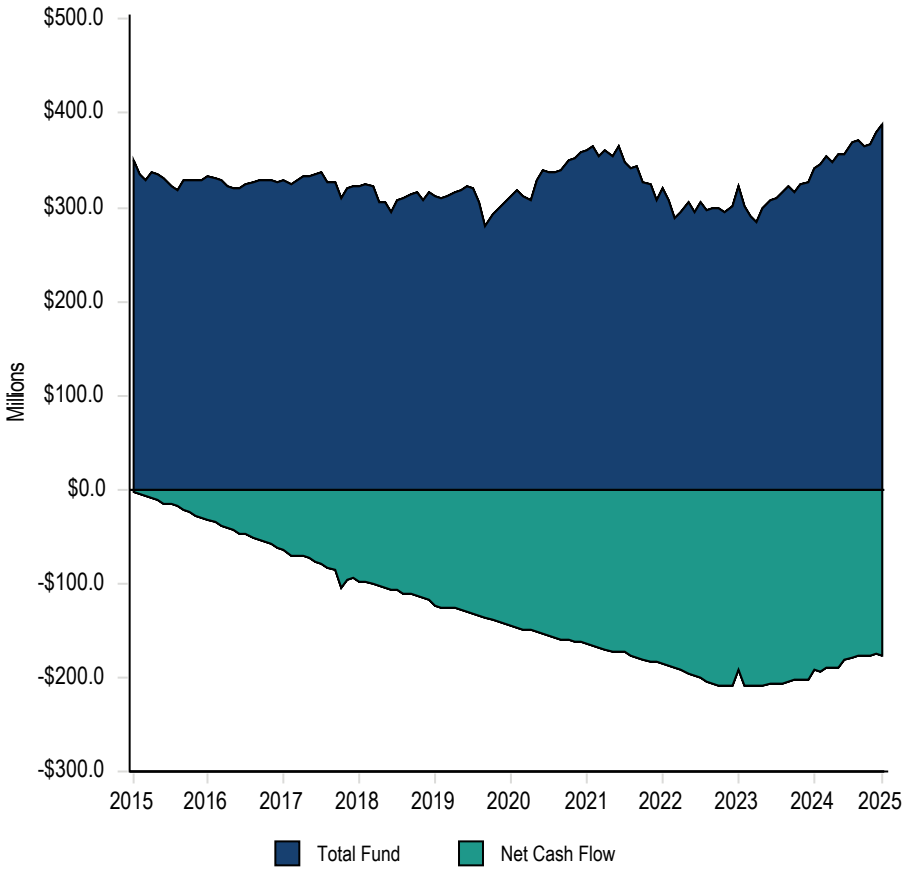
	1 Yr
Wtd. Actual Return	10.6
Wtd. Index Return	11.7
Excess Return	**-1.0**
Selection Effect	-1.3
Allocation Effect	0.0
Interaction Effect	0.3

Attribution Summary
1 Year Ending June 30, 2025

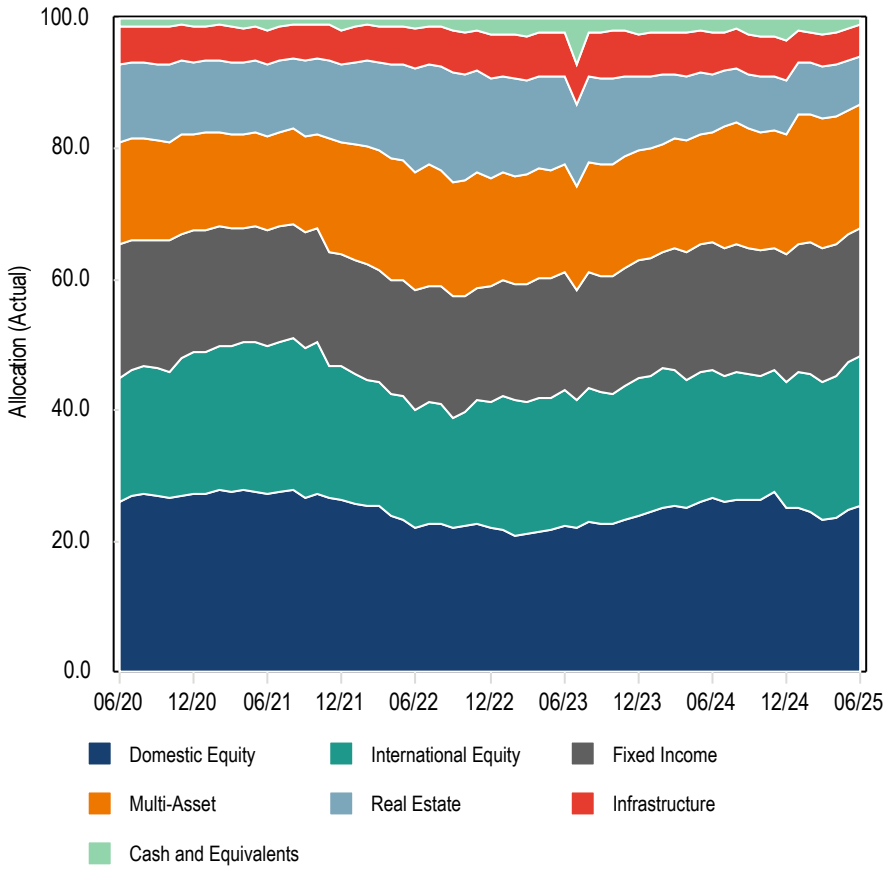
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Domestic Equity	14.1	15.2	-1.2	-0.3	0.0	0.0	-0.2
International Equity	21.8	15.9	5.9	1.2	0.1	0.1	1.4
Fixed Income	6.3	6.1	0.3	0.1	0.0	0.0	0.1
Real Estate	-0.8	3.5	-4.3	-0.5	0.1	0.1	-0.3
Infrastructure	13.4	7.8	5.6	0.3	0.0	0.0	0.2
Multi-Assset	2.9	13.2	-10.3	-2.1	0.0	0.1	-2.0
Cash	0.7	4.7	-4.0	0.0	-0.2	0.0	-0.2
Total Fund	**10.6**	**11.7**	**-1.0**	**-1.4**	**0.0**	**0.3**	**-1.0**

Weighted returns shown in attribution analysis may differ from actual returns. Wtd. Actual Return is the sum of the products of each group's return and its respective weight at the beginning of the period.

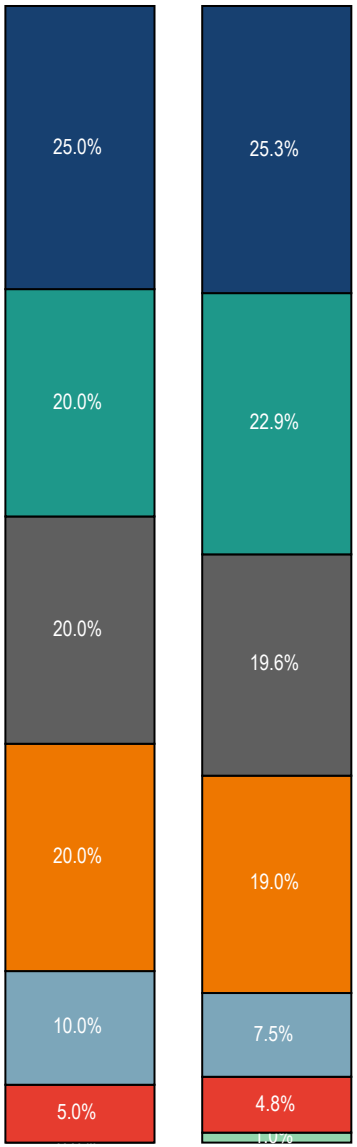
Market Value History



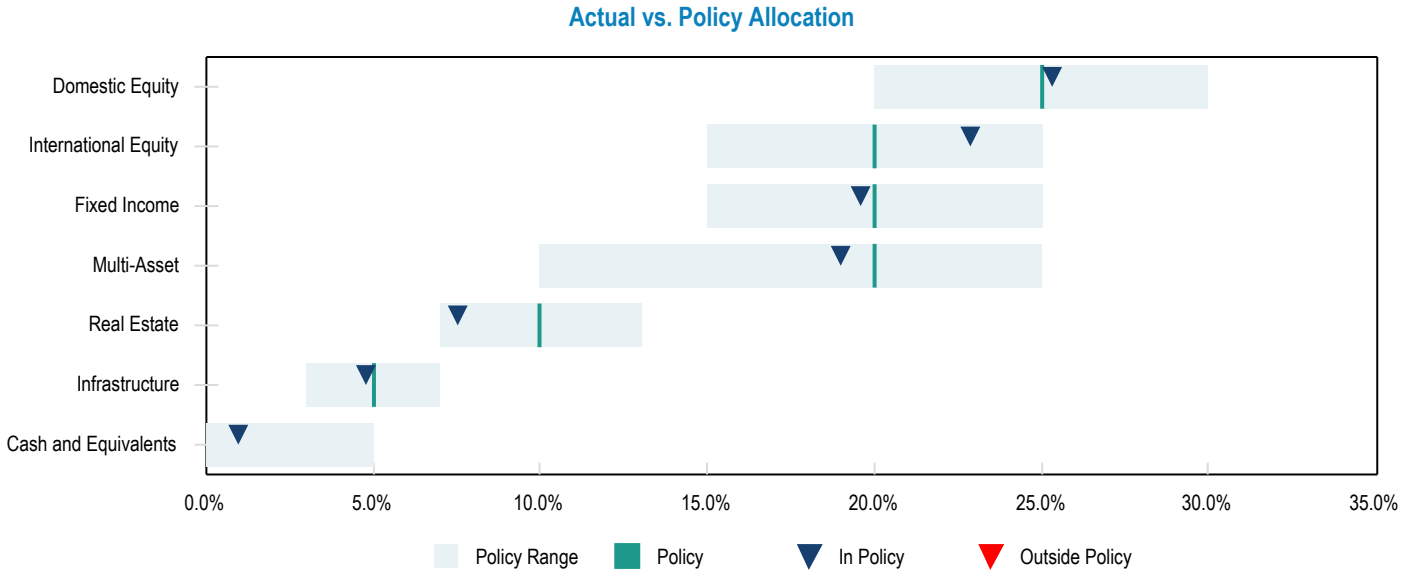
Asset Allocation History



Net cash flow shown above is cumulative.



	Current Balance ($)	Current Allocation (%)	Policy Allocation (%)	Excess Allocation (%)	Policy Range (%)	Within IPS Range?
Domestic Equity	98,411,535	25.3	25.0	0.3	20.0 - 30.0	Yes
International Equity	88,761,740	22.9	20.0	2.9	15.0 - 25.0	Yes
Fixed Income	76,086,632	19.6	20.0	-0.4	15.0 - 25.0	Yes
Multi-Asset	73,670,690	19.0	20.0	-1.0	10.0 - 25.0	Yes
Real Estate	29,157,347	7.5	10.0	-2.5	7.0 - 13.0	Yes
Infrastructure	18,508,042	4.8	5.0	-0.2	3.0 - 7.0	Yes
Cash and Equivalents	3,719,895	1.0	0.0	1.0	0.0 - 5.0	Yes
Total	**388,315,881**	**100.0**	**100.0**	**0.0**		



Total Fund does not include SFA Funds.

Name	Asset Class	Fee Schedule	Market Value	% of Portfolio	Estimated Fee Value	Estimated Fee (%)
BlackRock Equity Index NL	Domestic Equity	0.03 % of Assets	$80,327,262	13.7	$24,098	0.0
Vanguard Small Cap Index Ins	Domestic Equity	0.04 % of Assets	$18,084,273	3.1	$7,234	0.0
WCM Focused International Growth Fund, L.P.	International Equity	0.75 % of Assets	$45,700,406	7.80	$342,753	0.75
Causeway International Value Ins	International Equity	0.85 % of Assets	$43,061,335	7.35	$366,021	0.85
Loomis Sayles Core Plus	Fixed Income	0.27 % of Assets	$76,086,632	12.98	$205,434	0.27
ASB Allegiance Real Estate	Real Estate	1.00 % of Assets	$18,122,519	3.09	$181,225	1.00
JPMorgan Special Situation Property	Real Estate	1.60 % of Assets	$11,034,828	1.88	$176,557	1.60
IFM Global Infrastructure (US) LP	Infrastructure	0.77 % of Assets	$10,595,095	1.81	$81,582	0.77
JPMorgan IIF ERISA LP	Infrastructure	1.25 % of First $50 M 1.15 % of Next $50 M 1.05 % Thereafter	$7,912,947	1.35	$98,912	1.25
Invesco Balanced-Risk Allocation	Multi-Asset	0.38 % of First $250 M 0.35 % of Next $500 M 0.33 % of Next $250 M 0.30 % Thereafter	$73,670,690	12.57	$276,265	0.38
Invesco - PBGC Funds	Cash and Equivalents		$197,738,925	33.74	$395,478	0.20
Total Fund			**$586,054,806**	**100.00**	**$2,155,652**	**0.37**

Total Fund includes cash amount of $3,719,894.51

Fund Name	Asset Class	Overall Status	Outperformed Index (3yrs)	Outperformed Median Rank (3yrs)	Outperformed Index (5yrs)	Outperformed Median Rank (5 yrs)	Concern	Index Fund Tracking Error exeeds .25% of Benchmark (1 yr)
BlackRock Equity Index NL	Domestic Equity		-	-	-	-	-	✔
Vanguard Small Cap Index Ins	Domestic Equity		-	-	-	-	-	✔
WCM Focused International Growth Fund, L.P.	International Equity		✔	✔	✔	✔	-	-
Causeway International Value Ins	International Equity		✔	✔	✔	✔	-	-
Loomis Sayles Core Plus	Fixed Income		✔	⚑	✔	⚑	-	-
ASB Allegiance Real Estate	Real Estate		⚑	-	⚑	-	-	-
JPMorgan Special Situation Property	Real Estate		⚑	-	⚑	-	-	-
IFM Global Infrastructure (US) LP	Infrastructure		✔	-	✔	-	-	-
JPMorgan IIF ERISA LP	Infrastructure		✔	-	⚑	-	-	-
Invesco Balanced-Risk Allocation	Multi-Asset		⚑	⚑	⚑	⚑	-	-

Legend For Overall Status

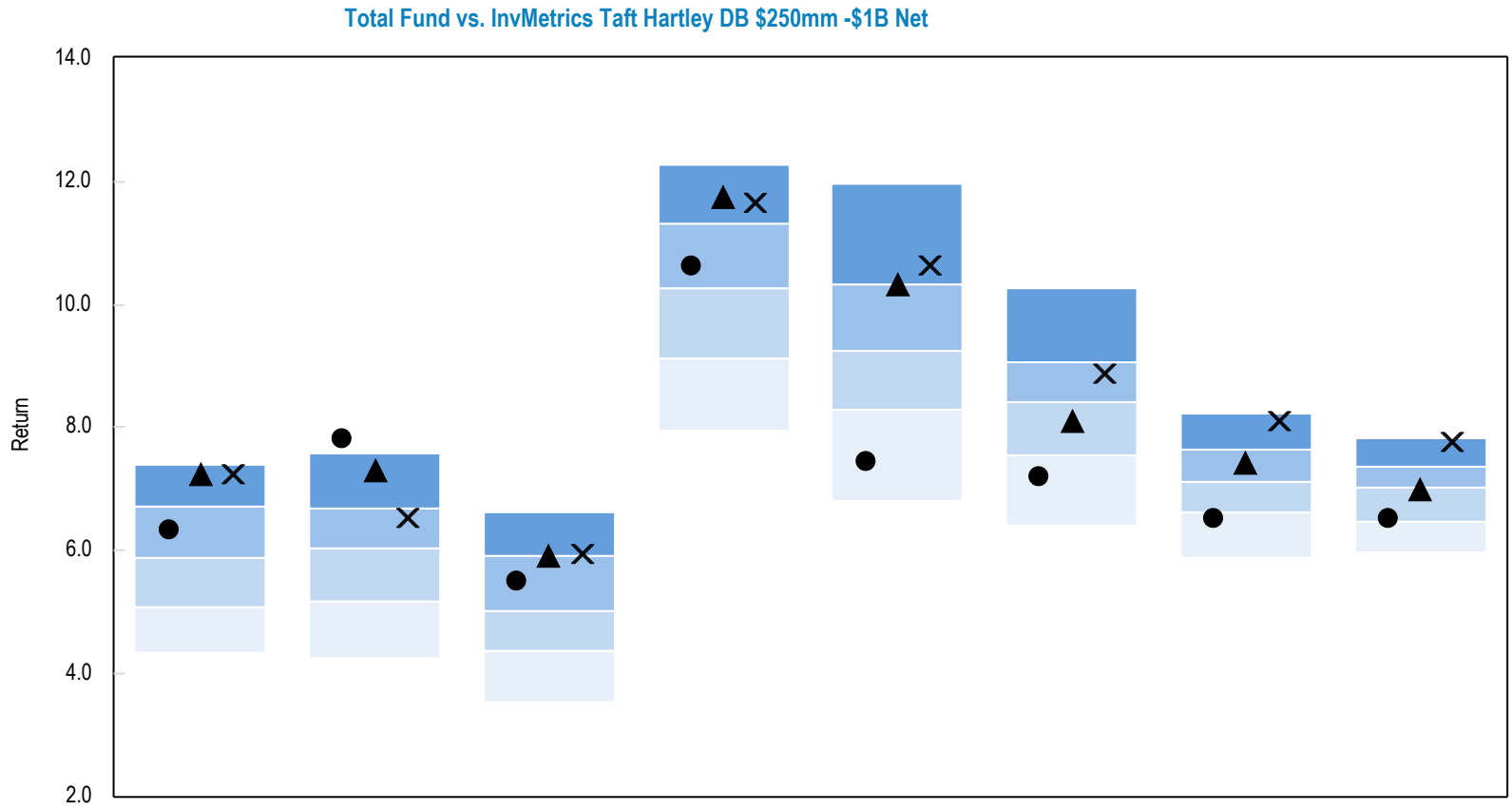
No Issues
Watch
Terminate

Legend for Standards

Pass ✓
Fail ⚑

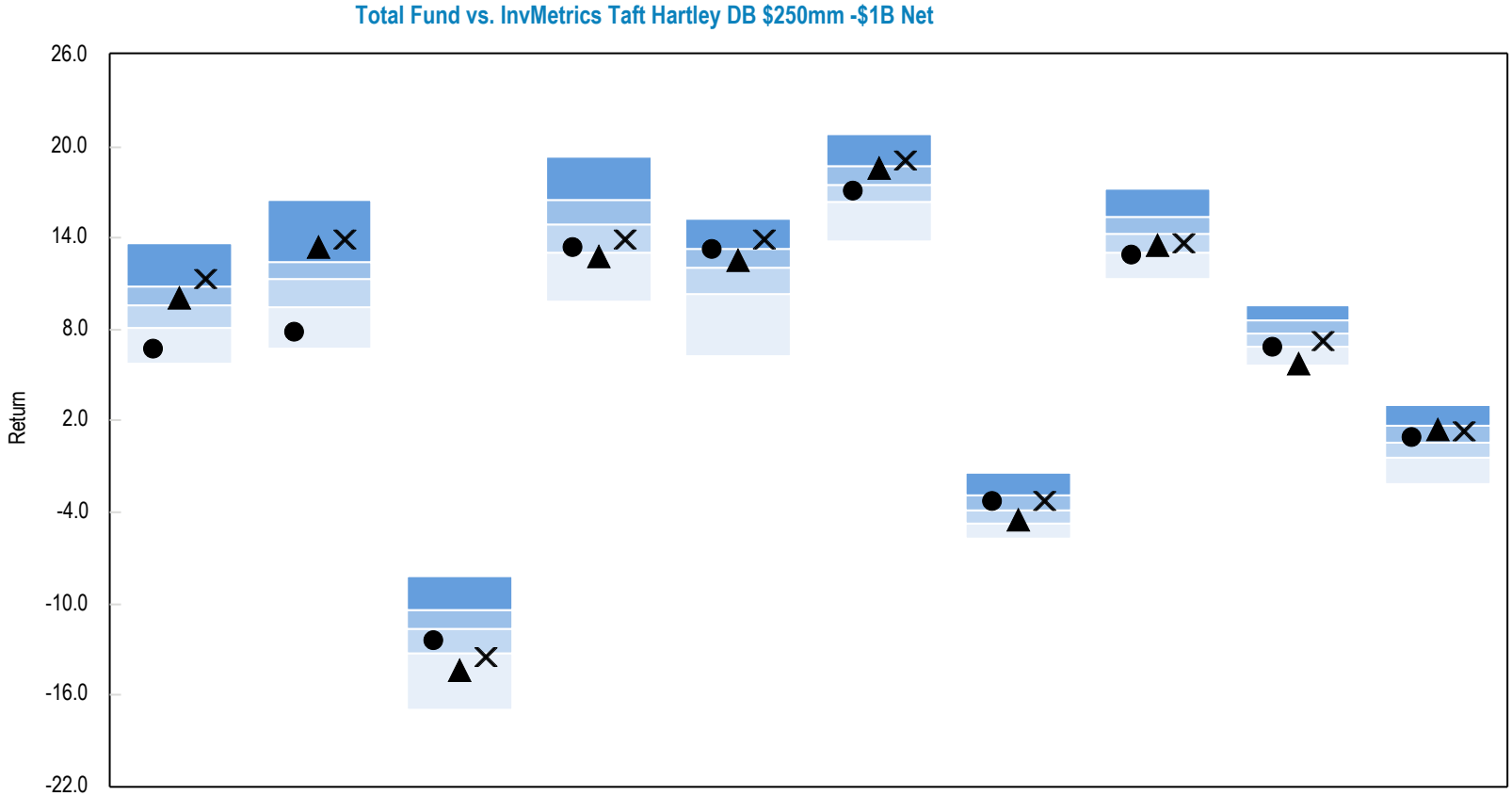
Legend for Concern

Provisional P
Restricted R
No Issues --



	Quarter	2 Quarters	3 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years
● Total Fund	6.36 (33)	7.83 (3)	5.51 (34)	10.64 (40)	7.47 (87)	7.21 (81)	6.53 (78)	6.54 (73)
▲ Total Fund Policy Index	7.25 (11)	7.30 (11)	5.92 (25)	11.75 (16)	10.33 (25)	8.10 (58)	7.44 (37)	6.99 (52)
× Target Asset Allocation Policy Index	7.26 (11)	6.52 (29)	5.95 (24)	11.66 (18)	10.65 (22)	8.87 (34)	8.12 (7)	7.78 (8)
5th Percentile	7.39	7.59	6.63	12.27	11.96	10.26	8.24	7.84
1st Quartile	6.71	6.68	5.91	11.30	10.33	9.08	7.66	7.38
Median	5.88	6.05	5.01	10.28	9.24	8.40	7.11	7.02
3rd Quartile	5.09	5.18	4.39	9.11	8.28	7.54	6.62	6.49
95th Percentile	4.35	4.26	3.55	7.95	6.80	6.40	5.90	5.99
Population	67	67	67	67	67	67	67	65

Policy Index as of 4/17/2018: 45% MSCI World, 25% Bloomberg Aggregate, 10% NCREIF-ODCE Net, 20% (60% MSCI ACWI Net/40% CITI WGBI).
Target Asset Allocation Policy Index: 25% Dow Jones US Total Stock, 20% MSCI ACWI ex US IMI, 20% Bloomberg Aggregate, 10% NCREIF-ODCE, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI).



	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
● Total Fund	6.75 (87)	7.82 (91)	-12.36 (64)	13.42 (74)	13.25 (25)	17.13 (56)	-3.28 (38)	12.93 (79)	6.93 (75)	0.94 (40)
▲ Total Fund Policy Index	10.07 (41)	13.45 (15)	-14.32 (84)	12.82 (77)	12.57 (40)	18.58 (30)	-4.52 (65)	13.48 (66)	5.76 (95)	1.41 (29)
× Target Asset Allocation Policy Index	11.31 (20)	13.85 (12)	-13.53 (79)	13.89 (65)	13.90 (15)	19.13 (21)	-3.20 (36)	13.71 (63)	7.20 (70)	1.32 (30)
5th Percentile	13.69	16.53	-8.12	19.28	15.27	20.86	-1.38	17.27	9.64	2.99
1st Quartile	10.88	12.47	-10.36	16.55	13.24	18.71	-2.89	15.42	8.63	1.71
Median	9.58	11.35	-11.67	14.87	12.04	17.54	-3.90	14.24	7.74	0.62
3rd Quartile	8.06	9.51	-13.29	13.08	10.39	16.33	-4.70	12.99	6.93	-0.39
95th Percentile	5.75	6.70	-16.93	9.82	6.26	13.84	-5.70	11.32	5.66	-2.12
Population	141	143	156	169	180	166	144	157	146	141

Policy Index as of 4/17/2018: 45% MSCI World, 25% Bloomberg Aggregate, 10% NCREIF-ODCE Net, 20% (60% MSCI ACWI Net/40% CITI WGBI).
Target Asset Allocation Policy Index: 25% Dow Jones US Total Stock, 20% MSCI ACWI ex US IMI, 20% Bloomberg Aggregate, 10% NCREIF-ODCE, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI).

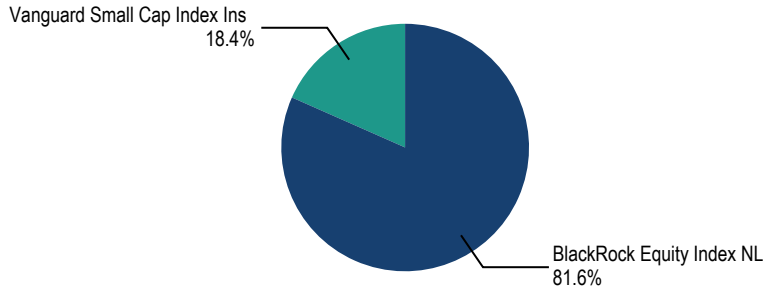
Total Domestic Equity

Total Domestic Equity
Performance Summary (Net of Fees)

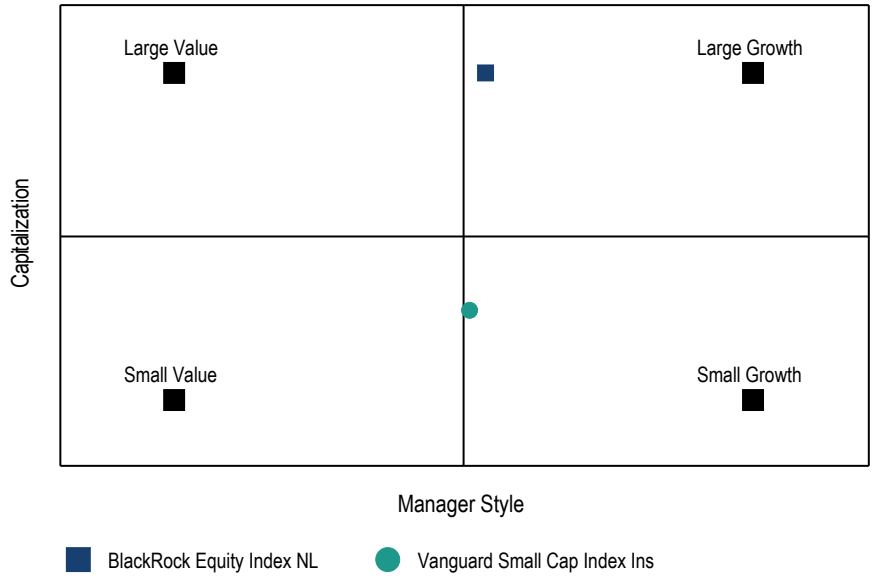
Western States Office & Professional Employees Pension Fund
Period Ending: June 30, 2025

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2024	2023	2022	2021	2020
Total Domestic Equity	**98,411,535**	**100.0**	**10.2**	**4.8**	**14.1**	**16.7**	**14.0**	**11.2**	**23.0**	**19.8**	**-17.3**	**23.6**	**15.9**
Dow Jones U.S. Total Stock Market Index			*11.1*	*5.7*	*15.2*	*19.1*	*15.9*	*12.9*	*23.9*	*26.1*	*-19.5*	*25.7*	*20.8*
Domestic Equity	**98,411,535**	**100.0**											
BlackRock Equity Index NL	80,327,262	81.6	10.9	6.2	15.1	19.8	16.7	13.6	25.2	26.3	-18.1	28.7	18.4
S&P 500 Index			*10.9*	*6.2*	*15.2*	*19.7*	*16.6*	*13.6*	*25.0*	*26.3*	*-18.1*	*28.7*	*18.4*
eV US Large Cap Core Equity Rank			*41*	*41*	*28*	*29*	*27*	*13*	*30*	*27*	*65*	*31*	*40*
Vanguard Small Cap Index Ins	18,084,273	18.4	7.3	-0.6	10.2	12.2	11.8	8.6	14.2	18.2	-17.6	17.7	19.1
Vanguard Spliced Small Cap Index (Net)			*7.3*	*-0.6*	*10.1*	*12.1*	*11.8*	*8.5*	*14.2*	*18.1*	*-17.6*	*17.7*	*19.1*
eV US Small Cap Core Equity Rank			*53*	*47*	*34*	*45*	*66*	*63*	*40*	*48*	*60*	*85*	*39*

Total Domestic Equity
Current Allocation

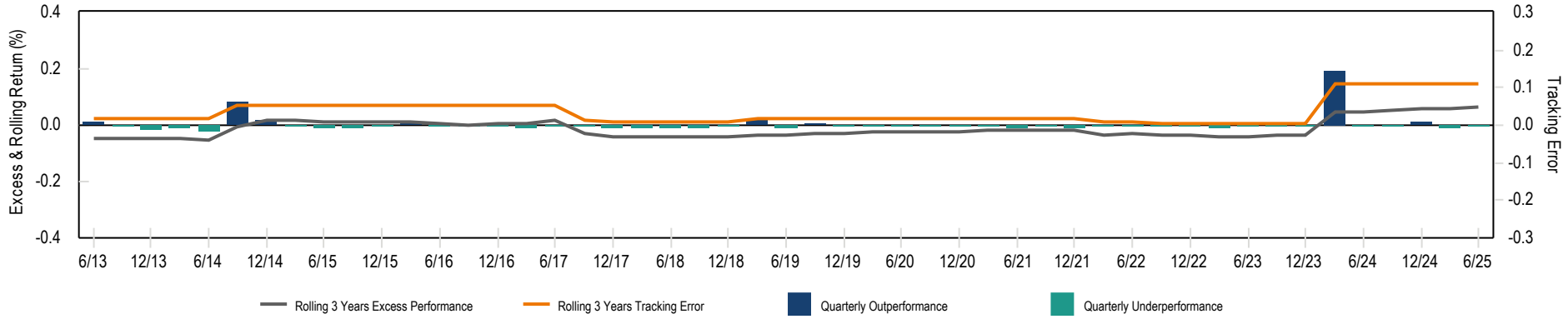


Domestic Effective Style Map
3 Years

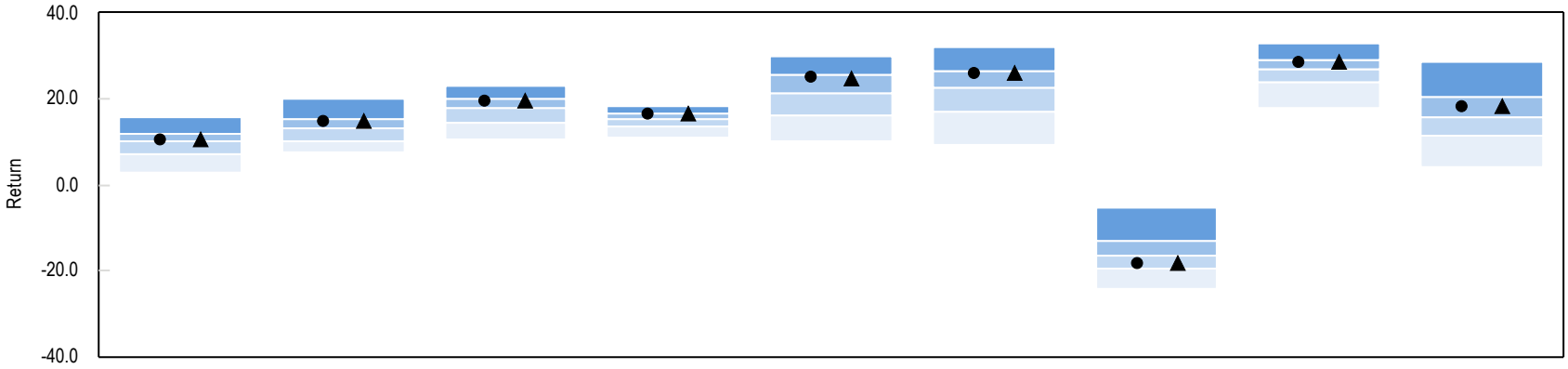


Managers need 3 years of history to be included in the style map.

3 Years Rolling Annualized Excess Performance and Tracking Error

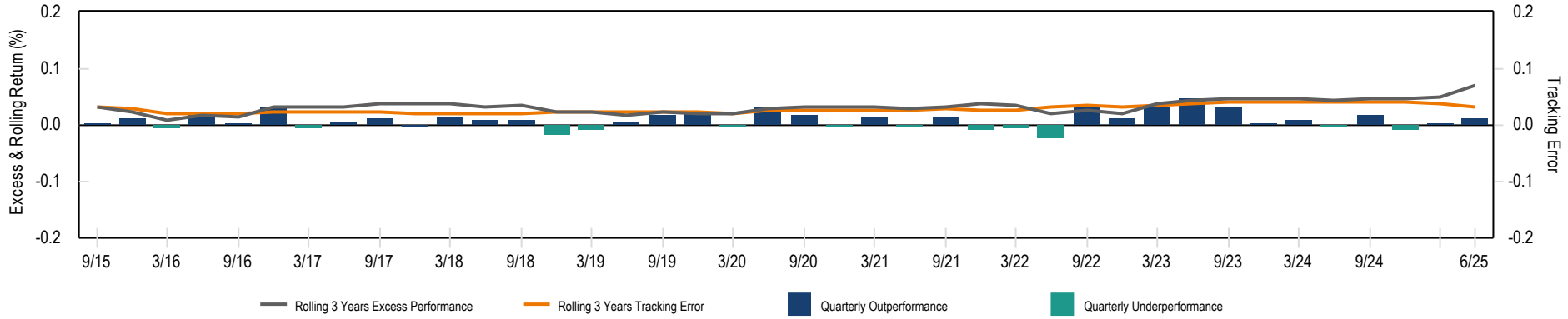


BlackRock Equity Index NL vs. eV US Large Cap Core Equity

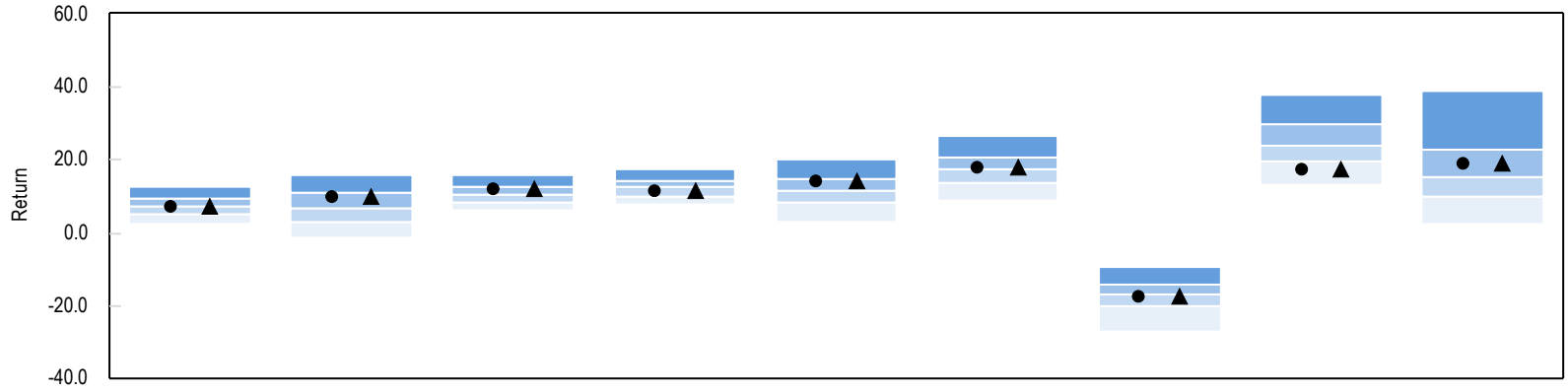


	3 Mo	1 Yr	3 Yrs	5 Yrs	2024	2023	2022	2021	2020
● BlackRock Equity Index NL	10.93 (41)	15.15 (28)	19.76 (29)	16.66 (27)	25.23 (30)	26.26 (27)	-18.13 (65)	28.67 (31)	18.38 (40)
▲ S&P 500 Index	10.94 (41)	15.16 (28)	19.71 (30)	16.64 (27)	25.02 (31)	26.29 (27)	-18.11 (65)	28.71 (30)	18.40 (40)
5th Percentile	15.83	20.17	23.38	18.68	30.00	32.47	-5.07	33.09	28.96
1st Quartile	11.95	15.38	20.14	16.71	25.77	26.58	-12.76	29.18	20.84
Median	10.27	13.26	17.99	15.33	21.70	22.85	-16.48	26.96	16.00
3rd Quartile	7.42	10.45	14.60	13.61	16.29	17.37	-19.21	23.98	11.73
95th Percentile	3.04	7.77	10.90	11.34	10.43	9.30	-24.26	18.22	4.39
Population	392	392	371	343	410	412	413	416	423

3 Years Rolling Annualized Excess Performance and Tracking Error



Vanguard Small Cap Index Ins vs. eV US Small Cap Core Equity



	3 Mo	1 Yr	3 Yrs	5 Yrs	2024	2023	2022	2021	2020
● Vanguard Small Cap Index Ins	7.30 (47)	10.16 (28)	12.18 (29)	11.85 (57)	14.23 (28)	18.22 (41)	-17.63 (58)	17.73 (83)	19.12 (37)
▲ Vanguard Spliced Small Cap Index (Net)	7.28 (47)	10.14 (28)	12.11 (31)	11.81 (57)	14.22 (28)	18.09 (43)	-17.64 (58)	17.71 (83)	19.07 (37)
5th Percentile	12.82	15.68	15.68	17.30	20.24	26.89	-9.36	38.17	38.90
1st Quartile	9.42	11.08	12.73	14.18	14.69	20.79	-14.13	29.81	22.97
Median	7.09	6.77	10.72	12.54	11.60	17.27	-16.69	24.15	15.37
3rd Quartile	4.94	3.09	8.39	10.16	8.45	13.85	-20.36	19.82	9.85
95th Percentile	2.21	-1.50	6.17	7.97	3.11	8.80	-27.14	13.26	2.66
Population	187	187	179	171	198	210	208	210	213

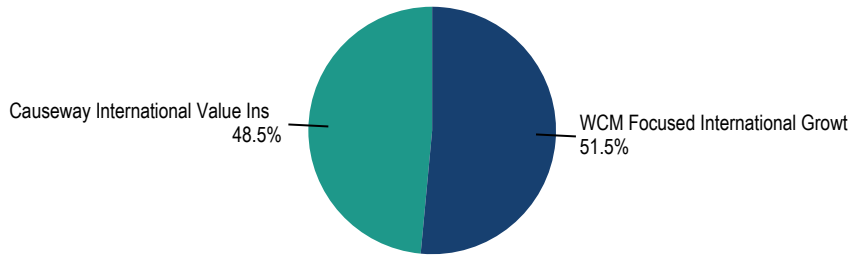
International Equity

Total International Equity
Performance Summary (Net of Fees)

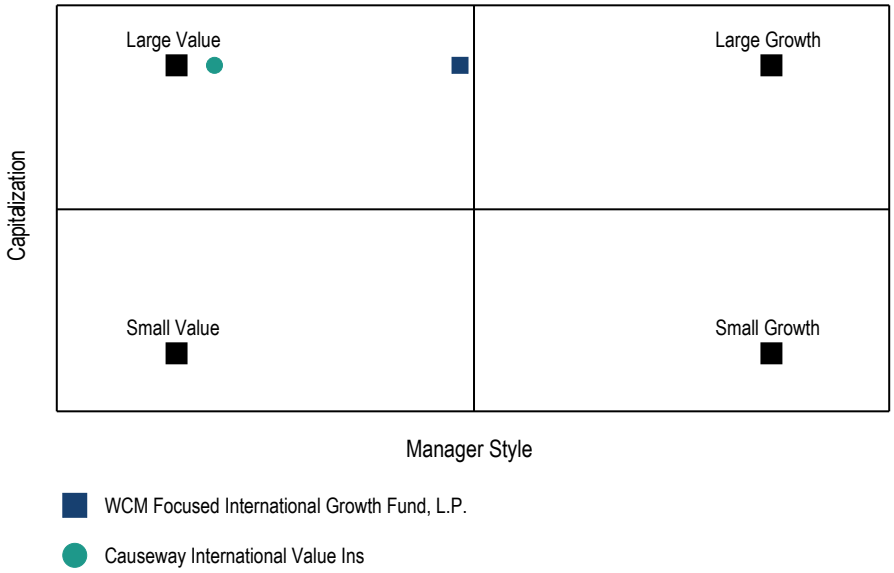
Western States Office & Professional Employees Pension Fund
Period Ending: June 30, 2025

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2024	2023	2022	2021	2020
Total International Equity	**88,761,740**	**100.0**	**14.9**	**23.4**	**21.8**	**19.2**	**13.3**	**8.7**	**5.7**	**21.9**	**-20.0**	**14.6**	**21.7**
Total Public Int'l Equity Benchmark (MSCI ACWI ex US IMI)			*12.7*	*17.9*	*17.8*	*13.9*	*10.2*	*6.2*	*5.2*	*15.6*	*-16.6*	*8.5*	*11.1*
International Equity	**88,761,740**	**100.0**											
WCM Focused International Growth Fund, L.P.	45,700,406	51.5	19.9	25.6	22.6	18.2	11.1	-	7.9	16.7	-28.6	17.6	33.1
MSCI AC World ex USA (Net)			*12.0*	*17.9*	*17.7*	*14.0*	*10.1*	-	*5.5*	*15.6*	*-16.0*	*7.8*	*10.7*
eV ACWI ex-US All Cap Growth Eq Rank			*5*	*10*	*15*	*18*	*10*	-	*35*	*45*	*51*	*3*	*32*
Causeway International Value Ins	43,061,335	48.5	10.0	21.2	20.8	20.2	15.9	-	3.7	27.3	-6.8	9.1	5.4
MSCI EAFE (Net)			*11.8*	*19.4*	*17.7*	*16.0*	*11.2*	-	*3.8*	*18.2*	*-14.5*	*11.3*	*7.8*
Foreign Large Value Rank			*76*	*62*	*65*	*7*	*9*	-	*61*	*2*	*28*	*80*	*26*

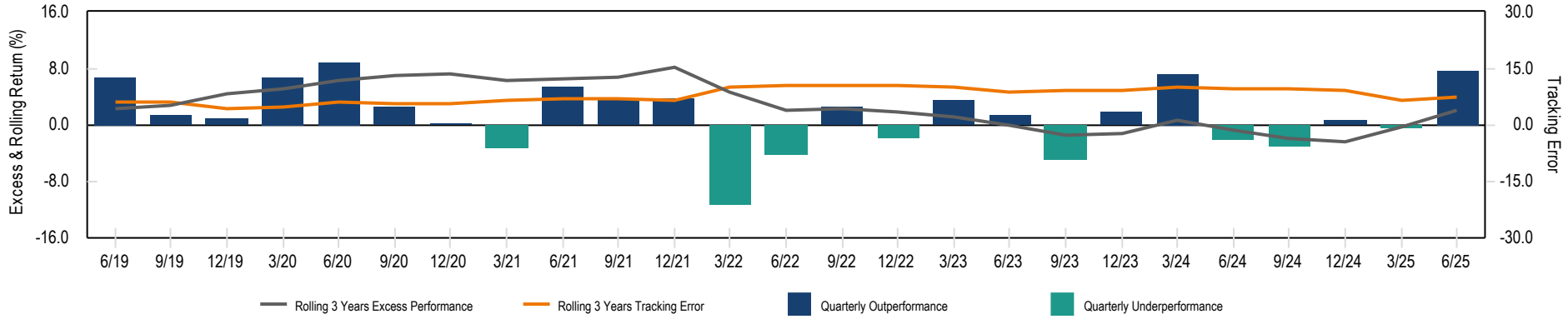
Total International Equity
Current Allocation



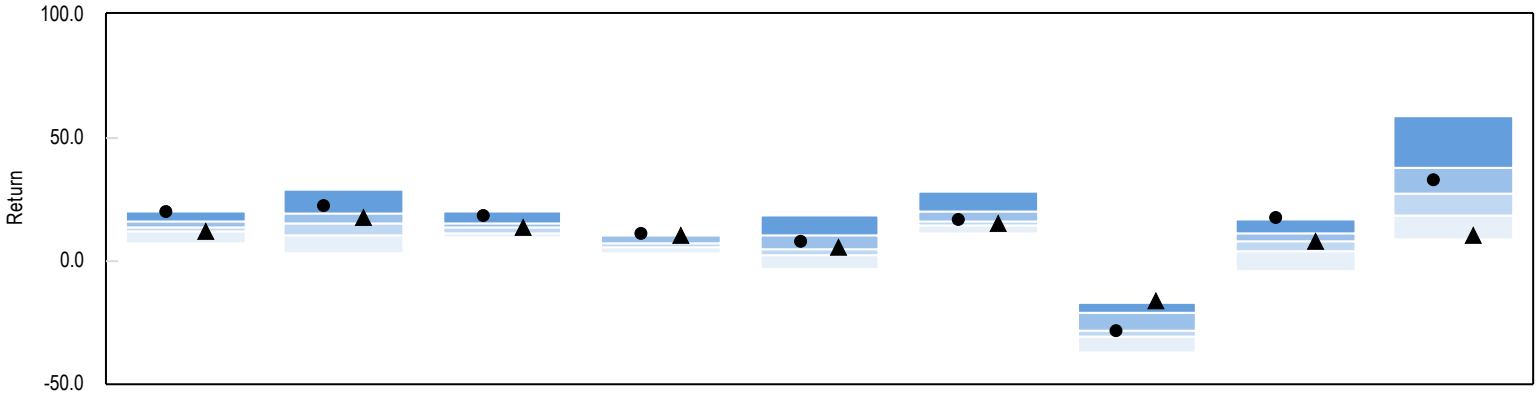
International Equity Effective Style Map
3 Years



3 Years Rolling Annualized Excess Performance and Tracking Error

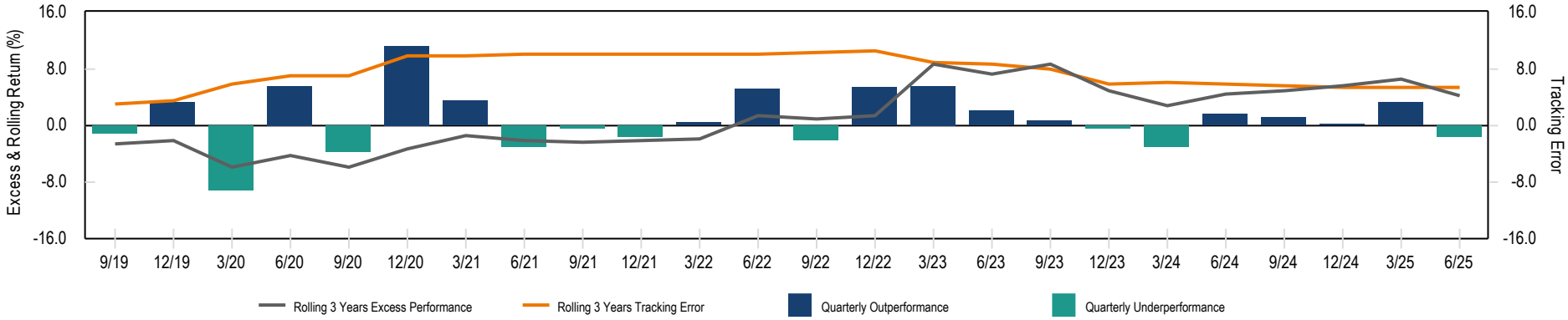


WCM Focused International Growth Fund, L.P. vs. eV ACWI ex-US All Cap Growth Eq

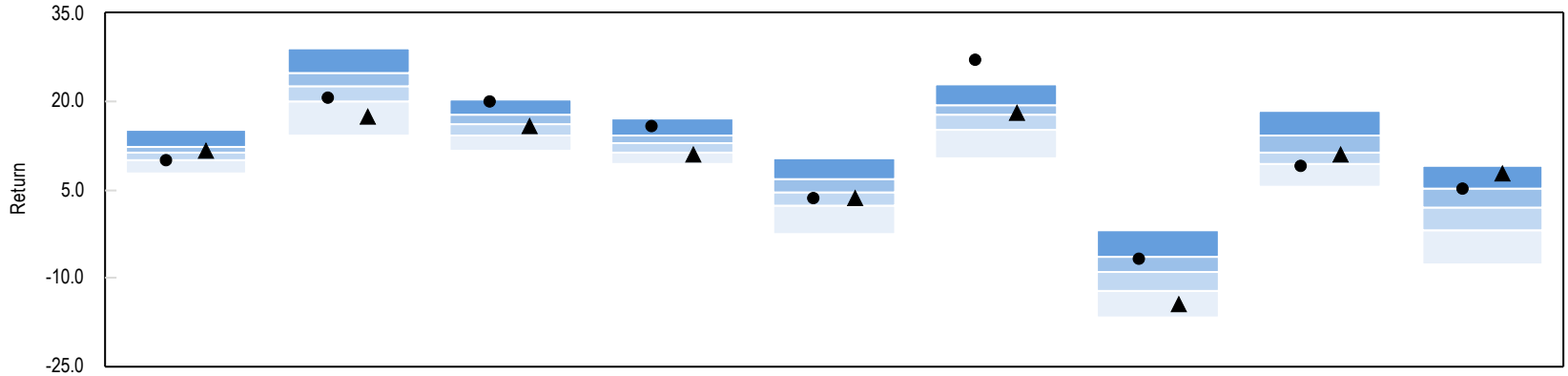


	3 Mo	1 Yr	3 Yrs	5 Yrs	2024	2023	2022	2021	2020
● WCM Focused International Growth Fund, L.P.	19.91 (5)	22.57 (15)	18.16 (18)	11.13 (10)	7.93 (35)	16.68 (45)	-28.60 (51)	17.64 (3)	33.07 (32)
▲ MSCI AC World ex USA (Net)	12.03 (75)	17.72 (43)	13.99 (51)	10.13 (27)	5.53 (46)	15.62 (54)	-16.00 (4)	7.82 (52)	10.65 (94)
5th Percentile	19.81	28.95	20.11	11.57	18.91	27.86	-17.32	16.57	59.22
1st Quartile	16.40	19.22	15.20	10.55	10.13	19.91	-21.33	10.91	38.24
Median	14.06	15.70	14.00	7.51	4.90	16.02	-28.59	7.88	27.10
3rd Quartile	11.99	10.58	11.58	5.97	2.73	14.62	-30.96	3.99	18.63
95th Percentile	7.66	3.07	9.39	2.87	-3.47	10.96	-36.88	-3.63	8.64
Population	34	34	34	33	34	37	41	43	43

3 Years Rolling Annualized Excess Performance and Tracking Error



Causeway International Value Ins vs. Foreign Large Value

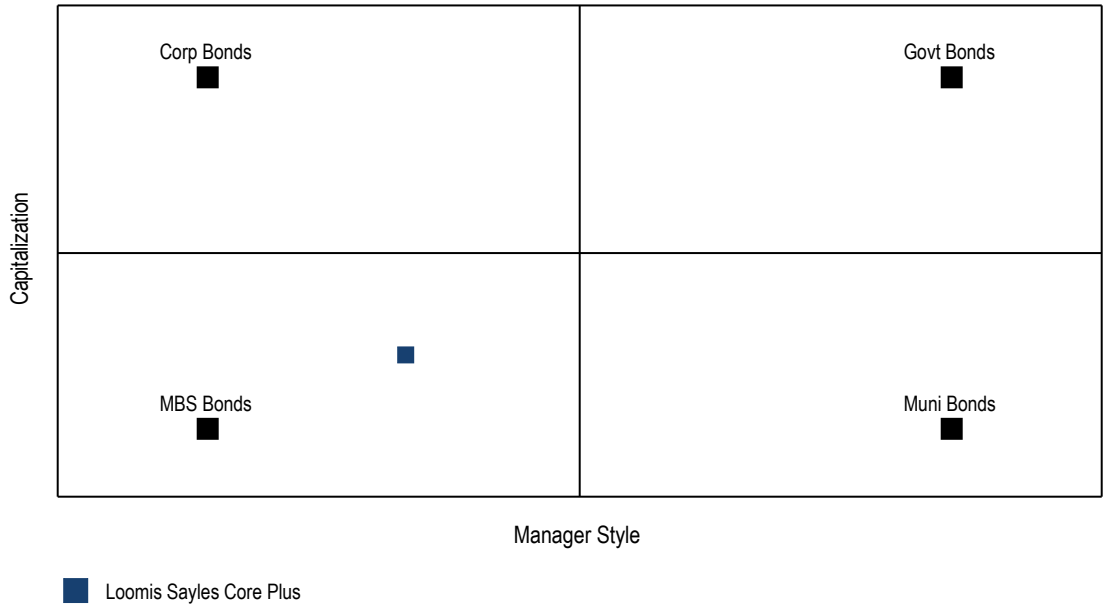


	3 Mo	1 Yr	3 Yrs	5 Yrs	2024	2023	2022	2021	2020
● Causeway International Value Ins	10.03 (76)	20.85 (65)	20.20 (7)	15.92 (9)	3.70 (61)	27.32 (2)	-6.76 (28)	9.07 (80)	5.40 (26)
▲ MSCI EAFE (Net)	11.78 (41)	17.73 (88)	15.97 (56)	11.16 (78)	3.82 (59)	18.24 (42)	-14.45 (89)	11.26 (52)	7.82 (11)
5th Percentile	15.32	29.18	20.62	17.17	10.62	23.02	-1.81	18.41	9.29
1st Quartile	12.41	25.09	18.02	14.49	6.84	19.54	-6.42	14.41	5.43
Median	11.40	22.64	16.39	13.04	4.71	17.78	-8.96	11.38	2.25
3rd Quartile	10.05	20.08	14.43	11.33	2.37	15.23	-12.21	9.49	-1.83
95th Percentile	7.91	14.41	11.88	9.49	-2.27	10.37	-16.62	5.77	-7.64
Population	144	138	132	124	142	149	149	142	138

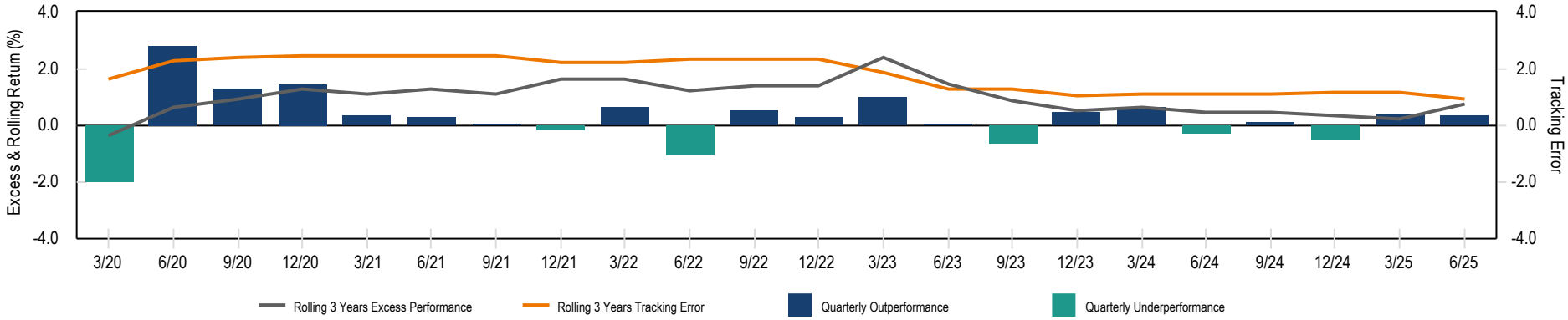
Domestic Fixed Income

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2024	2023	2022	2021	2020
Total Fixed Income	**76,086,632**	**100.0**	**1.5**	**4.8**	**6.3**	**3.3**	**0.3**	**2.7**	**1.1**	**6.4**	**-12.7**	**-1.1**	**11.3**
Total Fixed Income Benchmark (Bloomberg Aggregate)			*1.2*	*4.0*	*6.1*	*2.5*	*-0.7*	*1.8*	*1.3*	*5.5*	*-13.0*	*-1.5*	*7.5*
Loomis Sayles Core Plus	76,086,632	100.0	1.5	4.8	6.3	3.3	0.3	-	1.1	6.4	-12.7	-1.1	11.3
Blmbg. U.S. Aggregate Index			*1.2*	*4.0*	*6.1*	*2.5*	*-0.7*	-	*1.3*	*5.5*	*-13.0*	*-1.5*	*7.5*
eV US Core Plus Fixed Inc Rank			*41*	*9*	*69*	*71*	*59*	-	*92*	*68*	*27*	*78*	*9*

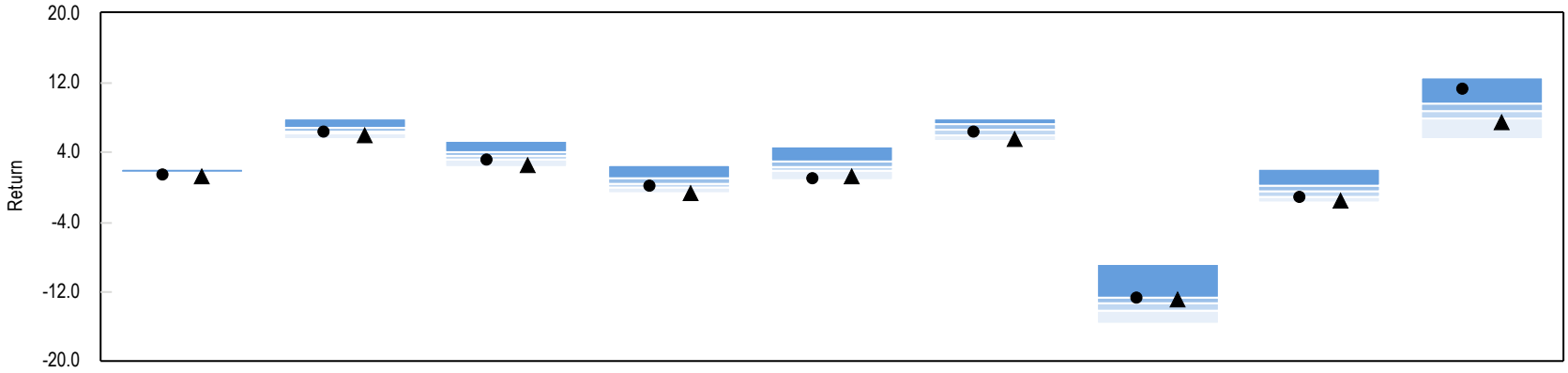
Fixed Income Effective Style Map



3 Years Rolling Annualized Excess Performance and Tracking Error



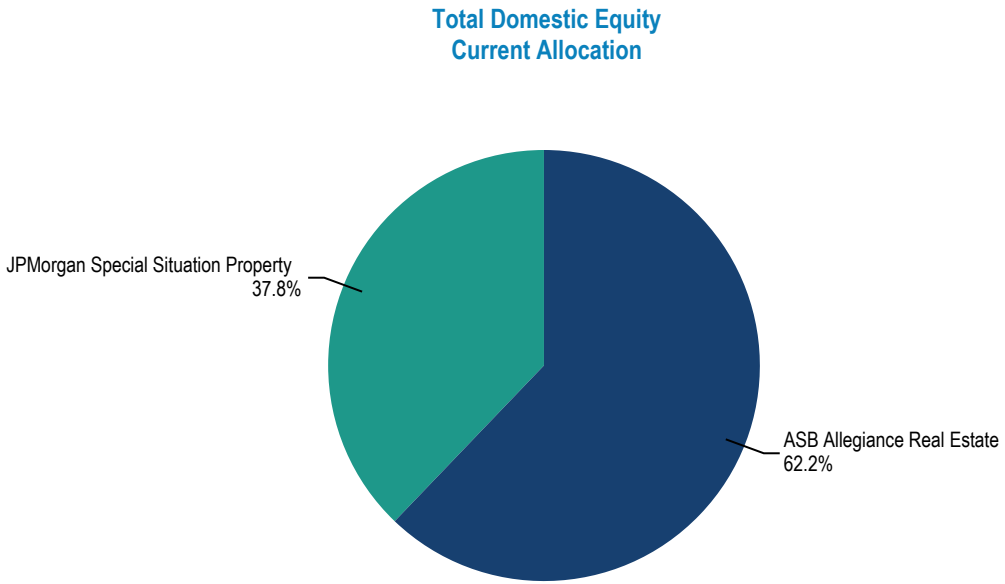
Loomis Sayles Core Plus vs. eV US Core Plus Fixed Inc



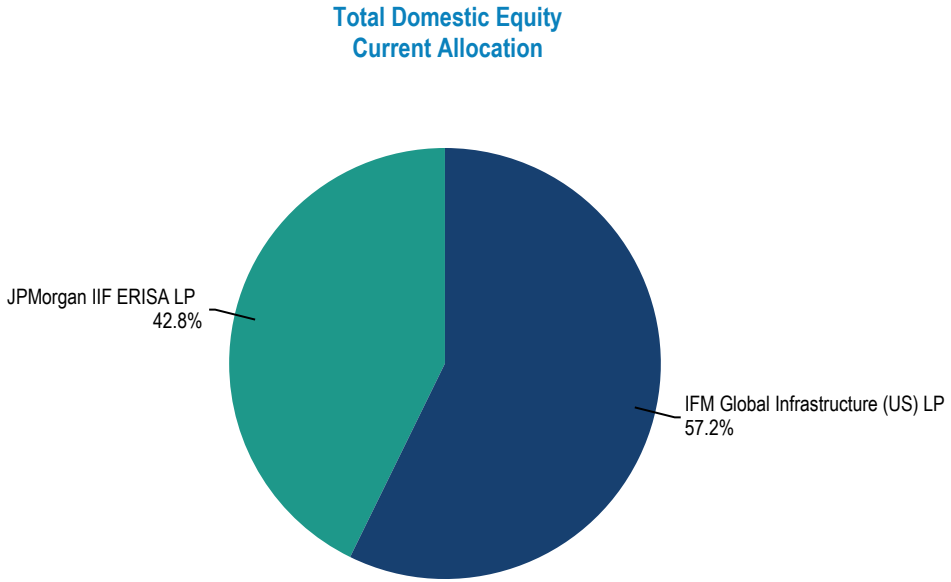
	3 Mo	1 Yr	3 Yrs	5 Yrs	2024	2023	2022	2021	2020
● Loomis Sayles Core Plus	1.54 (41)	6.35 (69)	3.31 (71)	0.27 (59)	1.10 (92)	6.36 (68)	-12.66 (27)	-1.06 (78)	11.29 (9)
▲ Blmbg. U.S. Aggregate Index	1.21 (89)	6.08 (86)	2.55 (93)	-0.73 (97)	1.25 (89)	5.53 (92)	-13.01 (40)	-1.55 (91)	7.51 (82)
5th Percentile	2.17	7.95	5.33	2.63	4.69	7.87	-8.84	2.08	12.60
1st Quartile	1.66	6.91	4.07	1.04	3.02	7.22	-12.59	0.14	9.59
Median	1.48	6.55	3.66	0.36	2.42	6.70	-13.39	-0.42	8.80
3rd Quartile	1.31	6.23	3.19	-0.02	1.87	6.08	-14.12	-0.97	7.86
95th Percentile	1.11	5.64	2.39	-0.61	0.89	5.33	-15.65	-1.66	5.55
Population	143	143	141	135	148	155	157	158	155

Alternatives

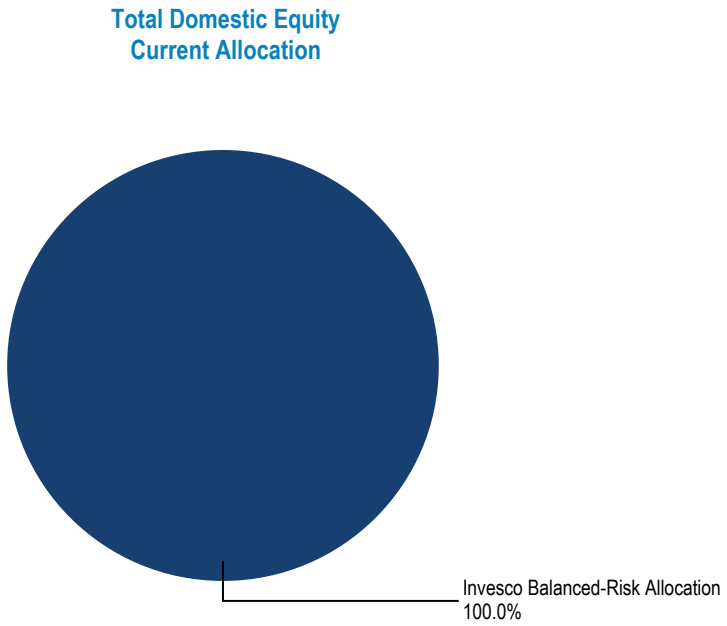
	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2024	2023	2022	2021	2020
Total Real Estate	**29,157,347**	**100.0**	**-0.2**	**0.3**	**-0.8**	**-14.5**	**-3.7**	**0.9**	**-14.0**	**-22.9**	**4.6**	**17.4**	**1.7**
NCREIF ODCE			*0.8*	*1.7*	*2.7*	*-6.2*	*2.5*	*4.4*	*-2.3*	*-12.7*	*6.5*	*21.0*	*0.3*
ASB Allegiance Real Estate	18,122,519	62.2	1.5	2.3	0.8	-13.2	-3.4	0.7	-15.7	-22.2	9.6	13.8	1.4
NCREIF ODCE			*0.8*	*1.7*	*2.7*	*-6.2*	*2.5*	*4.4*	*-2.3*	*-12.7*	*6.5*	*21.0*	*0.3*
JPMorgan Special Situation Property	11,034,828	37.8	-2.8	-2.7	-3.4	-16.3	-4.2	1.6	-11.3	-23.9	-2.1	22.6	2.0
NCREIF ODCE			*0.8*	*1.7*	*2.7*	*-6.2*	*2.5*	*4.4*	*-2.3*	*-12.7*	*6.5*	*21.0*	*0.3*



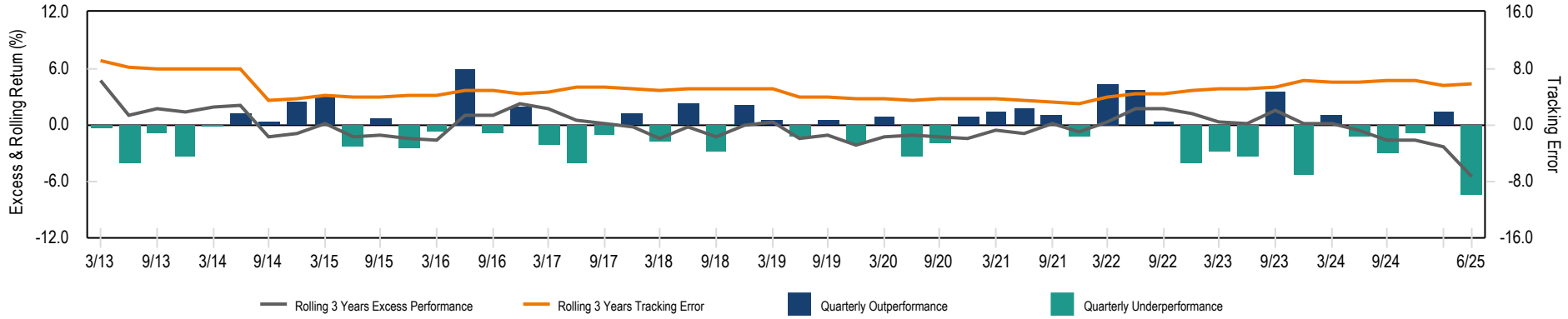
	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2024	2023	2022	2021	2020
Total Infrastructure	**18,508,042**	**100.0**	**4.2**	**7.6**	**13.4**	**9.4**	**9.8**	**9.1**	**6.4**	**8.9**	**6.5**	**11.7**	**5.4**
CPI + 5%			*2.1*	*4.7*	*7.8*	*8.0*	*9.8*	*8.2*	*8.0*	*8.5*	*11.8*	*12.4*	*6.4*
IFM Global Infrastructure (US) LP	10,595,095	57.2	2.5	5.3	11.9	8.1	10.3	10.8	6.1	8.4	8.2	17.4	3.1
CPI + 5%			*2.1*	*4.7*	*7.8*	*8.0*	*9.8*	*8.2*	*8.0*	*8.5*	*11.8*	*12.4*	*6.4*
JPMorgan IIF ERISA LP	7,912,947	42.8	6.5	10.8	14.9	11.3	8.9	7.2	6.7	9.9	4.0	4.0	8.4
CPI + 5%			*2.1*	*4.7*	*7.8*	*8.0*	*9.8*	*8.2*	*8.0*	*8.5*	*11.8*	*12.4*	*6.4*



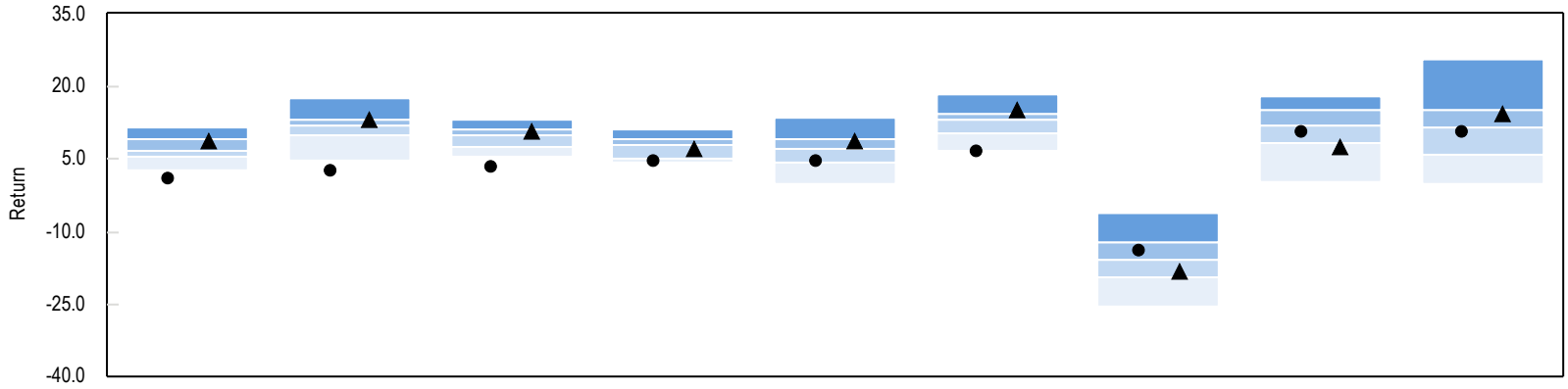
	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2024	2023	2022	2021	2020
Total Multi-Asset	**73,670,690**	**100.0**	**1.3**	**2.9**	**2.9**	**3.6**	**4.9**	**4.3**	**4.8**	**7.0**	**-13.7**	**10.9**	**10.8**
60% MSCI ACWI Net/40% FTSE WGBI			*8.8*	*9.0*	*13.2*	*11.0*	*7.1*	*6.4*	*9.0*	*15.2*	*-18.1*	*7.8*	*14.5*
eV Global Balanced Rank			*100*	*93*	*100*	*100*	*77*	*80*	*73*	*92*	*30*	*57*	*53*
Invesco Balanced-Risk Allocation	73,670,690	100.0	1.3	2.9	2.9	3.6	4.9	4.7	4.8	7.0	-13.7	10.9	10.8
60% MSCI ACWI Net/40% FTSE WGBI			*8.8*	*9.0*	*13.2*	*11.0*	*7.1*	*6.4*	*9.0*	*15.2*	*-18.1*	*7.8*	*14.5*
eV Global Balanced Rank			*100*	*93*	*100*	*100*	*77*	*75*	*73*	*92*	*30*	*57*	*53*



3 Years Rolling Annualized Excess Performance and Tracking Error



Invesco Balanced-Risk Allocation vs. eV Global Balanced



	3 Mo	1 Yr	3 Yrs	5 Yrs	2024	2023	2022	2021	2020
● Invesco Balanced-Risk Allocation	1.30 (100)	2.87 (100)	3.59 (100)	4.93 (77)	4.78 (73)	6.95 (92)	-13.70 (30)	10.89 (57)	10.83 (53)
▲ 60% MSCI ACWI Net/40% FTSE WGBI	8.76 (33)	13.17 (26)	10.97 (27)	7.08 (58)	8.97 (32)	15.20 (13)	-18.14 (71)	7.76 (79)	14.53 (33)
5th Percentile	11.66	17.69	13.39	11.34	13.69	18.45	-6.15	18.17	25.58
1st Quartile	9.12	13.20	11.05	9.27	9.21	14.35	-12.08	15.08	15.41
Median	6.90	11.91	9.87	8.02	7.02	13.34	-15.69	12.19	11.48
3rd Quartile	5.50	10.12	7.76	4.98	4.25	10.55	-19.24	8.19	5.78
95th Percentile	2.72	4.78	5.46	4.35	-0.15	6.73	-25.56	0.33	0.12
Population	55	55	50	42	59	61	59	59	61

Performance Return Calculations

Performance is calculated using Modified Dietz and for time periods with large cash flow (generally greater than 10% of portfolio value), Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked 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

Manager	Fund Incepted	Data Source	Manager	Fund Incepted	Data Source
BlackRock Equity Index NL	4/30/2010	BlackRock	JPMorgan SSP	12/31/2014	JP Morgan
Vanguard Small Cap Index Ins	4/14/2021	US Bank	IFM Global Infrastructure (US) LP	1/31/2009	IFM
WCM Focused International Growth	7/1/2016	WCM	JPMorgan IIF ERISA LP	9/30/2010	JP Morgan
Causeway International Value	7/27/2016	US Bank	Invesco Balanced-Risk Allocation	1/31/2010	Invesco
Loomis Sayles Core Plus	3/21/2017	Loomis Sayles	US Bank Checking Account	N/A	US Bank
ASB Allegiance Real Estate	3/31/2015	ASB	US Bank Clearing Account	N/A	US Bank
Invesco PBGC Fund	10/1/2023	US Bank			

Performance Devations from Manager

Policy Index:	45% MSCI World, 25% Bloomberg Aggregate, 10% NCREIF-ODCE Net, 20% (60% MSCI ACWI Net/40% CITI WGBI).
Target Asset Allocation Policy:	25% Dow Jones US Total Stock, 20% MSCI ACWI ex US IMI, 20% Bloomberg Aggregate, 10% NCREIF-ODCE, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI).

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: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - 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: Portfolio Excess Return / 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.

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