# Total Fund

### Illinois Police Officers' Pension Investment Fund Period Ending: October 31, 2025

Asset Allocation & Performance (Net of Fees) - Preliminary

	Market Value	% of Portfolio	Target (%)	1 Mo	QTD	Fiscal YTD	YTD	1 Yr	3 Yrs	Since Inception	Inception Date
Total Fund with Member and Transition Accounts	14,700,901,859	100.0	100.0	1.5	1.5	6.7	16.1	16.2	14.4	8.0	03/01/22
Policy Index				1.4	1.4	6.7	15.4	15.5	14.5	7.8	
Policy Index- Broad Based				1.4	1.4	7.0	16.8	17.1	16.3	8.0	
IPOPIF Investment Portfolio	14,700,901,859	100.0	100.0	1.5	1.5	6.7	16.0	16.2	14.4	8.0	04/01/22
Policy Index				1.4	1.4	6.7	15.4	15.5	14.5	7.9	
Policy Index- Broad Based				1.4	1.4	7.0	16.8	17.1	16.3	8.1	
Growth	8,936,992,981	60.8	58.0	2.2	2.2	9.5	23.0	23.3	20.3	10.8	04/01/22
Growth Benchmark				2.1	2.1	9.6	22.4	22.5	20.3	10.5	
RhumbLine Russell 1000 Index	3,437,123,496	23.4	23.0	2.2	2.2	10.3	17.1	21.1	22.3	13.4	04/01/22
Russell 1000 Index				2.2	2.2	10.3	17.1	21.1	22.3	13.5	
Domestic Small Cap Equity	783,080,732	5.3	5.0	1.8	1.8	14.3	12.3	14.3	11.9	6.6	04/01/22
Russell 2000 Index				1.8	1.8	14.4	12.4	14.4	11.9	6.7	
RhumbLine Russell 2000 Index	280,376,363	1.9	2.0	1.8	1.8	14.3	12.3	14.3	11.9	6.6	04/01/22
Russell 2000 Index				1.8	1.8	14.4	12.4	14.4	11.9	6.7	
US Transition Manager Account	502,704,368	3.4	3.0								
SSgA Non-US Developed Index	2,836,241,354	19.3	19.0	1.1	1.1	6.5	27.1	24.1	20.3	10.4	04/01/22
MSCI World ex U.S. (Net)				1.1	1.1	6.5	26.7	23.6	19.9	10.0	
International Developed Small Cap Equity	811,333,664	5.5	5.0	-0.9	-0.9	4.6	27.9	27.6	19.1	8.0	04/01/22
MSCI World ex U.S. Small Cap Index (Net)				-0.7	-0.7	6.5	28.7	25.8	18.0	7.0	
Acadian ACWI ex US Small-Cap Fund	399,877,340	2.7	2.5	-0.3	-0.3	6.3	25.8	25.3	-	21.9	02/01/24
MSCI AC World ex USA Small Cap (Net)				0.2	0.2	6.9	25.8	22.6	-	17.3	
WCM International Small Cap Growth Fund	198,136,873	1.3	1.3	-2.1	-2.1	-0.2	23.7	25.3	-	15.5	03/01/24
MSCI AC World ex USA Small Cap (Net)				0.2	0.2	6.9	25.8	22.6	-	17.6	
LSV International Small Cap Value Equity Fund	213,319,451	1.5	1.3	-1.0	-1.0	6.4	36.6	34.6	-	23.6	03/01/24
S&P Developed Ex-U.S. SmallCap (Net)				-0.6	-0.6	6.4	28.9	24.7	-	17.8	
Emerging Market Equities	1,069,213,735	7.3	6.0	8.8	8.8	15.9	36.4	29.9	20.4	8.4	04/01/22
Emerging Markets Equity Benchmark				7.8	7.8	15.0	31.7	25.8	19.5	7.5	
William Blair Emerging Markets ex China Growth Fund	533,318,635	3.6	3.0	9.4	9.4	16.7	25.7	-	-	25.7	01/01/25
MSCI Emerging Markets ex China IMI (Net)				7.1	7.1	13.9	29.8	-	-	29.8	
ARGA Emerging Markets Ex China Equity	535,895,100	3.6	3.0	8.3	8.3	15.0	45.8	-	-	40.5	12/01/24
MSCI Emerging Markets ex China (Net)				7.8	7.8	15.0	31.7	-	-	30.1	



### Total Fund Asset Allocation & Performance (Net of Fees) - Preliminary

	Market Value	% of Portfolio	Target (%)	1 Mo	QTD	Fiscal YTD	YTD	1 Yr	3 Yrs	Since Inception	Inception Date
Income	2,267,073,991	15.4	16.0	0.8	8.0	3.5	8.6	9.1	11.0	5.2	04/01/22
Income Benchmark				0.9	0.9	3.7	8.5	9.0	11.0	5.8	
SSgA High Yield Corporate Credit	605,818,244	4.1	4.0	0.1	0.1	2.8	7.3	8.1	10.3	5.8	04/01/22
Spliced SSgA U.S. High Yield Index				0.2	0.2	2.6	7.3	8.0	10.1	5.7	
Emerging Market Debt	843,260,849	5.7	6.0	1.7	1.7	6.3	13.4	12.8	13.2	5.2	04/01/22
Emerging Markets Debt Benchmark				2.1	2.1	7.0	13.0	12.8	13.3	6.3	
SSgA EMD Hard Index Fund	625,627,196	4.3	4.5	2.1	2.1	6.9	13.1	12.9	13.2	5.2	04/01/22
Spliced SSgA EMD Hard Index				2.1	2.1	7.0	13.0	12.8	13.0	5.5	
Capital Group Emerging Markets Debt	217,633,653	1.5	1.5	8.0	8.0	4.4	14.4	12.3	-	12.3	11/01/24
Spliced Capital Group EMD Index				0.9	0.9	4.3	13.2	11.7	-	11.7	
Bank Loans	416,721,143	2.8	3.0	0.5	0.5	2.5	5.4	7.0		7.6	03/01/24
S&P UBS Leveraged Loan Index				0.3	0.3	2.0	5.0	6.5	-	7.4	
Ares Institutional Loan Fund	138,536,530	0.9	1.0	0.3	0.3	2.3	5.1	6.8	-	7.8	03/01/24
S&P UBS Leveraged Loan Index				0.3	0.3	2.0	5.0	6.5	-	7.4	
Aristotle Institutional Loan Fund	278,184,613	1.9	2.0	0.6	0.6	2.5	5.5	7.0	-	7.5	03/01/24
S&P UBS Leveraged Loan Index				0.3	0.3	2.0	5.0	6.5	-	7.4	
Oaktree Blue Credit 1	401,273,755	2.7	3.0	0.0	0.0	2.0	-	-	-	4.0	05/01/25
Real Assets	791,316,966	5.4	6.0	-0.9	-0.9	3.0	3.2	1.3	4.1	0.9	04/01/22
Real Assets Benchmark				-0.8	-0.8	3.0	3.2	1.6	3.8	-1.4	
SSgA REITs Index	570,205,140	3.9	4.0	-1.3	-1.3	3.7	3.1	0.1	8.4	-0.7	04/01/22
Dow Jones U.S. Select REIT Total Return Index				-1.3	-1.3	3.7	3.1	0.1	8.4	-0.7	
Principal USPA	221,111,825	1.5	2.0	0.3	0.3	1.5	3.4	4.1	-5.1	-3.9	05/01/22

### Total Fund Asset Allocation & Performance (Net of Fees) - Preliminary

	Market Value	% of Portfolio	Target (%)	1 Mo	QTD	Fiscal YTD	YTD	1 Yr	3 Yrs	Since Inception	Inception Date
Risk Mitigation	2,705,517,921	18.4	20.0	0.4	0.4	1.8	5.2	5.4	5.2	3.1	04/01/22
Risk Mitigation Benchmark				0.4	0.4	1.8	5.2	5.4	5.2	3.1	
SSgA US Treasury Index	385,047,446	2.6	3.0	0.6	0.6	2.1	6.0	5.2	-	6.7	05/01/24
Blmbg. U.S. Treasury Index				0.6	0.6	2.1	6.0	5.2	-	6.7	
SSgA Core Fixed Income Index	389,019,137	2.6	3.0	0.6	0.6	2.7	6.8	6.2	5.6	1.5	04/01/22
Blmbg. U.S. Aggregate Index				0.6	0.6	2.7	6.8	6.2	5.6	1.5	
SSgA Short-Term Gov't/Credit Index	1,356,090,242	9.2	10.0	0.3	0.3	1.5	4.5	5.1	4.9	3.4	04/01/22
Bloomberg U.S. Gov/Credit 1-3 Year Index				0.3	0.3	1.5	4.5	5.1	4.8	3.4	
SSgA US TIPS Index	384,567,636	2.6	3.0	0.0	0.0	1.6	5.7	6.1	5.2	3.3	04/01/22
Blmbg. U.S. TIPS 0-5 Year				0.1	0.1	1.6	5.7	6.1	5.1	3.4	
Cash	189,816,279	1.3	1.0	0.3	0.3	1.4	3.3	4.1	4.6	4.0	04/01/22
90 Day U.S. Treasury Bill				0.3	0.3	1.4	3.5	4.3	4.8	4.2	
IPOPIF Pool Fixed Income Transition	977,181	0.0	-								
Member Accounts	-	0.0	-								
Transition Account	-	0.0	-								

#### **Performance Return Calculations**

Performance is calculated using 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.

Manager Line Up							
Manager	Inception	Date Data Source	<u>Manager</u>		Inception Date	Data Source	
RhumbLine Russell 1000 Index Fo	und 3/15/202	22 State Street	SSgA EMI	D Hard Index Fund	3/14/2022	State Street	
RhumbLine Russell 2000 Index Fo	und 3/15/202	22 State Street	Capital Gr	oup Emerging Markets Debt Fund	10/21/2024	State Street	
SSgA Non-US Developed Index F	und 3/10/202	22 State Street	Ares Instit	utional Loan Fund	3/1/2024	Ares	
SSgA Non-US Developed SC Inde	ex Fund 3/10/202	22 State Street	: Aristotle Ir	nstitutional Loan Fund	3/1/2024	Aristotle	
Acadian ACWI ex US Small-Cap I	Fund 1/30/202	24 State Street	Principal U	JSPA	4/6/2022	State Street	
WCM International Small Cap Gro	wth Fund 3/1/202	4 WCM	Oaktree B	lue Credit 1	5/1/2025	Oaktree	
LSV International Small Cap Value	e Equity Fund 3/1/202	4 LSV	SSgA REI	Ts Index Fund	3/10/2022	State Street	
SSgA Emerging Markets Equity Ir	idex Fund 3/1/202	2 State Street	SSgA US	Treasury Index Fund	5/1/2024	State Street	
SSgA Emerging Markets ex China	Equity Index Fur 5/1/202	4 State Street	SSgA Cor	e Fixed Income Index Fund	3/17/2022	State Street	
William Blair EM ex China Growth	Fund 12/9/202	24 William Blair	SSgA Sho	ort-Term Gov't/Credit Index Fund	3/17/2022	State Street	
ARGA Emerging Markets Ex Chin	a Equity 12/1/202	24 ARGA	SSgA US	TIPS Index Fund	3/17/2022	State Street	
SSgA High Yield Corporate Credit	3/18/202	22 State Street	Cash		3/22/2022	State Street	

Cu	stom	Ben	chmark	Composition

Benchmark Policy Index -Broad Benchmark	Time period 4/1/2022 - Present	Composition 70% MSCI ACWI IMI (Net) and 30% Bloomberg Global Multiverse.
Spliced SSgA EMD Hard Benchmark Spliced SSgA EMD Hard Benchmark	7/1/2023 - Present 3/14/2022 - 6/30/2022	100% JPM EMBI Global Diversified Index 100% JPM EMBI Global Core Index
Spliced SSgA U.S. High Yield Index Spliced SSgA U.S. High Yield Index	12/1/2022 - Present 4/1/2022 - 11/30/2022	100% ICE BofA US High yield Master II Constrained 100% Bloomberg U.S. High Yield Very Liquid Index





Policy Index Composition							Policy				Risk
As of 9/1/2025	Policy Index	Growth	Income	Real Assets	Risk Mitigation	As of 8/1/2025	Index	Growth	Income	Real Assets	Mitigatio
Russell 1000	23.0%	39.7%	moomo	Rour Accets	rtion mitigation	Russell 1000	23.0%	39.7%	moome	Hour Hoodto	Mitigatio
Russell 2000	5.0%	8.6%				Russell 2000	5.0%	8.6%			
ASCI World ex U.S.	19.0%	32.8%				MSCI World ex U.S.	19.0%	32.8%			
	5.0%	8.6%									
MSCI World ex U.S. Small Cap						MSCI World ex U.S. Small Cap	5.0%	8.6%			
MSCI Emerging Markets ex China	6.0%	10.3%				MSCI Emerging Markets ex China	6.0%	10.3%	00.40/		
Bloomberg US Corporate High Yield Index	4.0%		25.0%			Bloomberg US Corporate High Yield Index	4.5%		28.1%		
IPM EMBI Global Diversified Index	6.0%		37.5%			JPM EMBI Global Diversified Index	6.0%		37.5%		
S&P UBS Leveraged Loan Index	3.0%		18.8%			S&P UBS Leveraged Loan Index	3.0%		18.8%		
Private Credit Actual Performance	3.0%		18.8%			Private Credit Actual Performance	2.5%		15.6%		
NFI-ODCE Equal-Weighted Index	2.0%			33.3%		NFI-ODCE Equal-Weighted Index	2.0%			33.3%	
Dow Jones US Select REIT Index	4.0%			66.7%		Dow Jones US Select REIT Index	4.0%			66.7%	
Bloomberg US Aggregate Index	3.0%				15.0%	Bloomberg US Aggregate Index	3.0%				15.0%
Bloomberg US Treasury Index	3.0%				15.0%	Bloomberg US Treasury Index	3.0%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	10.0%				50.0%	Bloomberg 1-3 Year Gov/Credit Index	10.0%				50.0%
Bloomberg US TIPS 0-5 Year	3.0%				15.0%	Bloomberg US TIPS 0-5 Year	3.0%				15.0%
	1.0%										5.0%
00 Day US Treasury Bill Index	1.0%				5.0%	90 Day US Treasury Bill Index	1.0%				5.0%
			_				Policy		_		Risk
As of 7/1/2025	Policy Index	Growth	Income	Real Assets	Risk Mitigation	As of 6/1/2025	Index	Growth	Income	Real Assets	Mitigation
Russell 1000	23.0%	39.7%				Russell 1000	23.0%	39.7%			
Russell 2000	5.0%	8.6%				Russell 2000	5.0%	8.6%			
MSCI World ex U.S.	19.0%	32.8%				MSCI World ex U.S.	19.0%	32.8%			
MSCI World ex U.S. Small Cap	5.0%	8.6%				MSCI World ex U.S. Small Cap	5.0%	8.6%			
MSCI Emerging Markets ex China	6.0%	10.3%				MSCI Emerging Markets ex China	6.0%	10.3%			
Bloomberg US Corporate High Yield Index	5.1%	10.070	31.7%			Bloomberg US Corporate High Yield Index	5.7%	10.070	35.3%		
JPM EMBI Global Diversified Index	6.0%		37.5%			JPM EMBI Global Diversified Index	6.0%		37.5%		
S&P UBS Leveraged Loan Index	3.0%		18.8%				3.0%		18.8%		
						S&P UBS Leveraged Loan Index					
Private Credit Actual Performance	1.9%		12.0%			Private Credit Actual Performance	1.4%		8.4%		
NFI-ODCE Equal-Weighted Index	2.0%			33.3%		NFI-ODCE Equal-Weighted Index	2.0%			33.3%	
Dow Jones US Select REIT Index	4.0%			66.7%		Dow Jones US Select REIT Index	4.0%			66.7%	
Bloomberg US Aggregate Index	3.0%				15.0%	Bloomberg US Aggregate Index	3.0%				15.0%
Bloomberg US Treasury Index	3.0%				15.0%	Bloomberg US Treasury Index	3.0%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	10.0%				50.0%	Bloomberg 1-3 Year Gov/Credit Index	10.0%				50.0%
Bloomberg US TIPS 0-5 Year	3.0%				15.0%	Bloomberg US TIPS 0-5 Year	3.0%				15.0%
90 Day US Treasury Bill Index	1.0%				5.0%	90 Day US Treasury Bill Index	1.0%				5.0%
							Policy				Risk
As of 5/1/2025	Policy Index	Growth	Income	Real Assets	Risk Mitigation	As of 12/1/2024	Index	Growth	Income	Real Assets	Mitigati
Russell 1000	23.0%	39.7%	_			Russell 1000	23.0%	39.7%			
Russell 2000	5.0%	8.6%				Russell 2000	5.0%	8.6%			
/ISCI World ex U.S.	19.0%	32.8%				MSCI World ex U.S.	19.0%	32.8%			
MSCI World ex U.S. Small Cap	5.0%	8.6%				MSCI World ex U.S. Small Cap	5.0%	8.6%			
MSCI Emerging Markets ex China	6.0%	10.3%				MSCI Emerging Markets ex China	6.0%	10.3%			
	6.2%	10.370	38.9%				7.0%	10.370	43.8%		
Bloomberg US Corporate High Yield Index						Bloomberg US Corporate High Yield Index					
IPM EMBI Global Diversified Index	6.0%		37.5%			JPM EMBI Global Diversified Index	6.0%		37.5%		
&P UBS Leveraged Loan Index	3.0%		18.8%			S&P UBS Leveraged Loan Index	3.0%		18.8%		
Private Credit Actual Performance	0.8%		4.8%			NFI-ODCE Equal-Weighted Index	2.0%			33.3%	
IFI-ODCE Equal-Weighted Index	2.0%			33.3%		Dow Jones US Select REIT Index	4.0%			66.7%	
Now Jones US Select REIT Index	4.0%			66.7%		Bloomberg US Aggregate Index	3.0%				15.09
Bloomberg US Aggregate Index	3.0%			******	15.0%	Bloomberg US Treasury Index	3.0%				15.09
Bloomberg US Treasury Index	3.0%				15.0%	Bloomberg 1-3 Year Gov/Credit Index	10.0%				50.09
Bloomberg 1-3 Year Gov/Credit Index	10.0%				50.0%	Bloomberg US TIPS 0-5 Year	3.0%				15.09
					50.0% 15.0%	90 Day US Treasury Bill Index	1.0%				
DI LIO TIDO O 5 X					15 (1%	VIII 113V IIS Treasury Bill Index	7 11%				5.0%
Bloomberg US TIPS 0-5 Year 90 Day US Treasury Bill Index	3.0% 1.0%				5.0%	90 Day US Treasury Bill Index	1%				5.0%





Policy Index Composition											
•							Policy				Risk
As of 11/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation	As of 10/1/2024	Index	Growth	Income	Real Assets	Mitigatio
Russell 1000	23%	39.7%				Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%				Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%				MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%				MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	0.7%	1.2%				MSCI Emerging Markets	0.8%	1.4%			
MSCI Emerging Markets ex China	5.3%	9.2%				MSCI Emerging Markets ex China	5.2%	9.0%			
Bloomberg US Corporate High Yield Index	7%		43.8%			Bloomberg US Corporate High Yield Index	7%		43.8%		
IPM EMBI Global Diversified Index	6%		37.5%			JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%			S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%		NFI-ODCE Equal-Weighted Index	2%			33.3%	
ow Jones US Select REIT Index	4%			66.7%		Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%	Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Treasury Index	3%				15.0%	Bloomberg US Treasury Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	10%				50.0%	Bloomberg 1-3 Year Gov/Credit Index	10%				50.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%	Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%	90 Day US Treasury Bill Index	1%				5.0%
o Bay Se Treasary Bill Index	.,,				0.070	oo bay oo maaaa, baa maax					
A 5 0/4/0004	Dallan Inda	0		Deel Acces	Diele Mildieren	A 5 0/4/000 4	Policy	0		Deel Acces	Risk
As of 9/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation	As of 8/1/2024	Index	Growth	Income	Real Assets	Mitigatio
Russell 1000	23%	39.7%				Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%				Russell 2000	5%	8.6%			
ISCI World ex U.S.	19%	32.8%				MSCI World ex U.S.	19%	32.8%			
ISCI World ex U.S. Small Cap	5%	8.6%				MSCI World ex U.S. Small Cap	5%	8.6%			
ASCI Emerging Markets	1.5%	2.6%				MSCI Emerging Markets	2%	3.4%			
ASCI Emerging Markets ex China	4.5%	7.8%				MSCI Emerging Markets ex China	4%	6.9%			
Bloomberg US Corporate High Yield Index	7%		43.8%			Bloomberg US Corporate High Yield Index	7%		43.8%		
JPM EMBI Global Diversified Index	6%		37.5%			JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%			S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%		NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%		Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%	Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Treasury Index	3%				15.0%	Bloomberg US Treasury Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	10%				50.0%	Bloomberg 1-3 Year Gov/Credit Index	10%				50.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%	Bloomberg US TIPS 0-5 Year	3%				15.0%
00 Day US Treasury Bill Index	1%				5.0%	90 Day US Treasury Bill Index	1%				5.0%
							Deller				Di-I-
As of 7/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation	As of 6/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigatio
Russell 1000	23%	39.7%	income	INEAI ASSELS	Kisk Willigation	Russell 1000	23%	36.5%	income	Neal Assets	wiitigatio
Russell 2000	5%	8.6%				Russell 2000	5%	7.9%			
lusseli 2000		32.8%									
100114/1-1110	400/					MSCI World ex U.S.	19%	30.1%			
	19%										
ISCI World ex U.S. Small Cap	5%	8.6%				MSCI World ex U.S. Small Cap	5%	7.9%			
ASCI World ex U.S. Small Cap ASCI Emerging Markets	5% 3%	8.6% 5.2%				MSCI Emerging Markets	4%	6.3%			
MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China	5% 3% 3%	8.6%				MSCI Emerging Markets MSCI Emerging Markets ex China	4% 2%				
MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index	5% 3% 3% 7%	8.6% 5.2%	43.8%			MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index	4% 2% 7%	6.3%	64.1%		
MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index PM EMBI Global Diversified Index	5% 3% 3% 7% 6%	8.6% 5.2%	37.5%			MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index JPM EMBI Global Diversified Index	4% 2% 7% 6%	6.3%	54.9%		
MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index PM EMBI Global Diversified Index S&P UBS Leveraged Loan Index	5% 3% 3% 7% 6% 3%	8.6% 5.2%				MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index JPM EMBI Global Diversified Index S&P UBS Leveraged Loan Index	4% 2% 7% 6% 3%	6.3%			
MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index PM EMBI Global Diversified Index BLOOMBER CONTROLLED IN THE CONTROLLED	5% 3% 3% 7% 6% 3% 2%	8.6% 5.2%	37.5%	33.3%		MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index JPM EMBI Global Diversified Index	4% 2% 7% 6% 3% 2%	6.3%	54.9%	33.3%	
MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index PM EMBI Global Diversified Index BP UBS Leveraged Loan Index IFI-ODCE Equal-Weighted Index	5% 3% 3% 7% 6% 3%	8.6% 5.2%	37.5%	33.3% 66.7%		MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index JPM EMBI Global Diversified Index S&P UBS Leveraged Loan Index	4% 2% 7% 6% 3%	6.3%	54.9%	33.3% 66.7%	
MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index IPM EMBI Global Diversified Index S&P UBS Leveraged Loan Index NFI-ODCE Equal-Weighted Index Dow Jones US Select REIT Index	5% 3% 3% 7% 6% 3% 2%	8.6% 5.2%	37.5%		15.0%	MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index JPM EMBI Global Diversified Index S&P UBS Leveraged Loan Index NFI-ODCE Equal-Weighted Index	4% 2% 7% 6% 3% 2%	6.3%	54.9%		15.0%
MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index IPM EMBI Global Diversified Index S&P UBS Leveraged Loan Index IFI-ODCE Equal-Weighted Index Dow Jones US Select REIT Index Bloomberg US Aggregate Index	5% 3% 3% 7% 6% 3% 2% 4%	8.6% 5.2%	37.5%		15.0% 15.0%	MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index JPM EMBI Global Diversified Index S&P UBS Leveraged Loan Index NFI-ODCE Equal-Weighted Index Dow Jones US Select REIT Index Bloomberg US Aggregate Index	4% 2% 7% 6% 3% 2% 4%	6.3%	54.9%		
MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index PM EMBI Global Diversified Index S&P UBS Leveraged Loan Index MFI-ODCE Equal-Weighted Index Oow Jones US Select REIT Index Bloomberg US Aggregate Index Bloomberg US Treasury Index	5% 3% 7% 6% 3% 2% 4% 3% 3%	8.6% 5.2%	37.5%		15.0%	MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index JPM EMBI Global Diversified Index S&P UBS Leveraged Loan Index NFI-ODCE Equal-Weighted Index Dow Jones US Select REIT Index Bloomberg US Aggregate Index Bloomberg US Treasury Index	4% 2% 7% 6% 3% 2% 4% 3% 2%	6.3%	54.9%		10.0%
MSCI World ex U.S. MSCI World ex U.S. Small Cap MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index JPM EMBI Global Diversified Index S&P UBS Leveraged Loan Index NFI-ODCE Equal-Weighted Index Dow Jones US Select REIT Index Bloomberg US Treasury Index Bloomberg US Treasury Index Bloomberg 1-3 Year Gov/Credit Index Bloomberg US TIPS 0-5 Year	5% 3% 3% 7% 6% 3% 2% 4% 3%	8.6% 5.2%	37.5%			MSCI Emerging Markets MSCI Emerging Markets ex China Bloomberg US Corporate High Yield Index JPM EMBI Global Diversified Index S&P UBS Leveraged Loan Index NFI-ODCE Equal-Weighted Index Dow Jones US Select REIT Index Bloomberg US Aggregate Index	4% 2% 7% 6% 3% 2% 4% 3%	6.3%	54.9%		15.0% 10.0% 55.0% 15.0%





Policy Index Composition											
1 oney mack composition							Policy				Risk
As of 5/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation	As of 4/1/2024	Index	Growth	Income	Real Assets	Mitigation
Russell 1000	23%	39.7%				Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%				Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%				MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%				MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	5%	8.6%				MSCI Emerging Markets	6%	10.3%			
MSCI Emerging Markets ex China	1%	1.7%				Bloomberg US Corporate High Yield Index	7%		43.8%		
Bloomberg US Corporate High Yield Index	7%		43.8%			JPM EMBI Global Diversified Index	6%		37.5%		
JPM EMBI Global Diversified Index	6%		37.5%			S&P UBS Leveraged Loan Index	3%		18.8%		
S&P UBS Leveraged Loan Index	3%		18.8%			NFI-ODCE Equal-Weighted Index	2%			33.3%	
NFI-ODCE Equal-Weighted Index	2%		10.070	33.3%		Dow Jones US Select REIT Index	4%			66.7%	
Dow Jones US Select REIT Index	4%			66.7%		Bloomberg US Aggregate Index	3%			00.1.70	15.0%
Bloomberg US Aggregate Index	3%			00.1 70	15.0%	Bloomberg 1-3 Year Gov/Credit Index	13%				65.0%
Bloomberg US Treasury Index	1%				5.0%	Bloomberg US TIPS 0-5 Year	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	12%				60.0%	90 Day US Treasury Bill Index	1%				5.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%	30 Day 03 Treasury Bill Index	1 70				3.070
90 Day US Treasury Bill Index	1%				5.0%						
90 Day OS Treasury Bill Illuex	1 70				3.070						
							Policy				Risk
As of 3/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation	As of 5/1/2023	Index	Growth	Income	Real Assets	Mitigation
Russell 1000	23%	39.7%		110417100010	Tion minguion	Russell 1000	23%	39.7%		110417100010	mingunon
Russell 2000	5%	8.6%				Russell 2000	5%	8.6%			
MSCI World ex U.S.	18%	31.0%				MSCI World ex U.S.	18%	31.0%			
MSCI World ex U.S. Small Cap	5%	8.6%				MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	7%	12.1%				MSCI Emerging Markets	7%	12.1%			
Bloomberg US Corporate High Yield Index	8.5%	12.170	53.1%			Bloomberg US Corporate High Yield Index	10%	12.170	62.5%		
	6%						6%				
JPM EMBI Global Diversified Index			37.5%			JPM EMBI Global Diversified Index			37.5%	00.00/	
S&P UBS Leveraged Loan Index	1.5%		9.4%	00.00/		NFI-ODCE Equal-Weighted Index	2%			33.3%	
NFI-ODCE Equal-Weighted Index	2%			33.3%		Dow Jones US Select REIT Index	4%			66.7%	4 = 00/
Dow Jones US Select REIT Index	4%			66.7%		Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Aggregate Index	3%				15.0%	Bloomberg 1-3 Year Gov/Credit Index	13%				65.0%
Bloomberg 1-3 Year Gov/Credit Index	13%				65.0%	Bloomberg US TIPS 0-5 Year	3%				15.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%	90 Day US Treasury Bill Index	1%				5.0%
90 Day US Treasury Bill Index	1%				5.0%						
							Policy				Risk
As of 1/1/2023	Policy Index	<u>Growth</u>	Income	Real Assets	Risk Mitigation	As of 3/31/2022	<u>Index</u>	<u>Growth</u>	Income	Real Assets	<u>Mitigation</u>
Russell 1000	18%	36.0%				Russell 3000	23%	46.0%			
Russell 2000	5%	10.0%				MSCI ACWI ex USA IMI	20%	40.0%			
MSCI World ex U.S.	15%	30.0%				MSCI Emerging Markets IMI	7%	14.0%			
MSCI World ex U.S. Small Cap	5%	10.0%				Bloomberg US Corporate High Yield Index	10%		62.5%		
MSCI Emerging Markets	7%	14.0%				50% JPM EMBI GD/50% JPM GBI EM GD	6%		37.5%		
Bloomberg US Corporate High Yield Index	10%		62.5%			NCREIF Property Index	2%			66.7%	
JPM EMBI Global Diversified Index	6%		37.5%			Dow Jones US Select REIT Index	4%			33.3%	
NFI-ODCE Equal-Weighted Index	2%			33.3%		Bloomberg US Aggregate Index	7%				25.0%
Dow Jones US Select REIT Index	4%			66.7%		Bloomberg 1-3 Year Gov/Credit Index	15%				53.6%
Bloomberg US Aggregate Index	7%				25.0%	Bloomberg US TIPS 0-5 Year	3%				10.7%
Bloomberg 1-3 Year Gov/Credit Index	15%				53.6%	90 Day US Treasury Bill Index	3%				10.7%
Bloomberg US TIPS 0-5 Year	3%				10.7%	,	0.0				10.1.70
90 Day US Treasury Bill Index	3%				10.7%						
oo bay oo measury biii index	0 /0				10.770						





### 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, 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 lock step, a correlation of 1 means the returns of 1 me

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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