

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

Illinois Police Officers' Pension Investment Fund  
Period Ending: April 30, 2025

	Market Value	% of Portfolio	Target (%)	1 Mo	QTD	Fiscal YTD	YTD	1 Yr	3 Yrs	Since Inception	Inception Date
<b>Total Fund with Member and Transition Accounts</b>	<b>12,844,258,105</b>	<b>100.0</b>	<b>100.0</b>	<b>1.2</b>	<b>1.2</b>	<b>5.9</b>	<b>1.7</b>	<b>10.0</b>	<b>6.8</b>	<b>4.9</b>	<b>03/01/22</b>
<i>Policy Index</i>				1.1	1.1	5.7	1.6	9.7	6.7	4.8	
<i>Policy Index- Broad Based</i>				1.5	1.5	5.6	1.2	10.5	7.2	4.5	
<b>IPOPIF Investment Portfolio</b>	<b>12,844,258,105</b>	<b>100.0</b>	<b>100.0</b>	<b>1.2</b>	<b>1.2</b>	<b>5.7</b>	<b>1.6</b>	<b>9.8</b>	<b>6.7</b>	<b>4.7</b>	<b>04/01/22</b>
<i>Policy Index</i>				1.1	1.1	5.7	1.6	9.7	6.7	4.8	
<i>Policy Index- Broad Based</i>				1.5	1.5	5.6	1.2	10.5	7.2	4.5	
<b>Growth</b>	<b>7,575,522,791</b>	<b>59.0</b>	<b>58.0</b>	<b>2.0</b>	<b>2.0</b>	<b>5.6</b>	<b>1.4</b>	<b>11.0</b>	<b>8.8</b>	<b>5.8</b>	<b>04/01/22</b>
<i>Growth Benchmark</i>				1.9	1.9	5.6	1.4	10.8	8.6	5.7	
RhumbLine Russell 1000 Index	2,930,003,307	22.8	23.0	-0.6	-0.6	3.5	-5.1	11.9	11.8	8.1	04/01/22
<i>Russell 1000 Index</i>				-0.6	-0.6	3.5	-5.1	11.9	11.9	8.2	
RhumbLine Russell 2000 Index	616,906,913	4.8	5.0	-2.4	-2.4	-3.0	-11.5	0.9	3.1	-0.4	04/01/22
<i>Russell 2000 Index</i>				-2.3	-2.3	-3.0	-11.6	0.9	3.3	-0.3	
SSgA Non-US Developed Index	2,544,004,499	19.8	19.0	4.6	4.6	11.1	11.3	13.4	10.1	7.5	04/01/22
<i>MSCI World ex U.S. (Net)</i>				4.6	4.6	10.8	11.0	13.1	9.7	7.1	
<b>International Developed Small Cap Equity</b>	<b>685,155,226</b>	<b>5.3</b>	<b>5.0</b>	<b>6.1</b>	<b>6.1</b>	<b>11.5</b>	<b>8.3</b>	<b>15.3</b>	<b>6.2</b>	<b>3.6</b>	<b>04/01/22</b>
<i>MSCI World ex U.S. Small Cap Index (Net)</i>				5.5	5.5	11.0	9.1	12.5	5.1	2.6	
Acadian ACWI ex US Small-Cap Fund	337,583,519	2.6	2.5	4.7	4.7	10.0	6.5	14.7	-	15.5	02/01/24
<i>MSCI AC World ex USA Small Cap (Net)</i>				4.7	4.7	6.0	5.4	8.2	-	8.6	
WCM International Small Cap Growth Fund	168,456,897	1.3	1.3	9.2	9.2	9.5	5.2	13.6	-	6.9	03/01/24
<i>MSCI AC World ex USA Small Cap (Net)</i>				4.7	4.7	6.0	5.4	8.2	-	8.3	
LSV International Small Cap Value Equity Fund	179,114,810	1.4	1.3	6.0	6.0	16.3	15.1	18.2	-	16.9	03/01/24
<i>S&amp;P Developed Ex-U.S. SmallCap (Net)</i>				5.9	5.9	8.0	9.2	9.8	-	9.7	
<b>Emerging Market Equities</b>	<b>799,452,846</b>	<b>6.2</b>	<b>6.0</b>	<b>4.0</b>	<b>4.0</b>	<b>-2.4</b>	<b>2.0</b>	<b>2.9</b>	<b>1.9</b>	<b>0.0</b>	<b>04/01/22</b>
<i>Emerging Markets Equity Benchmark</i>				3.9	3.9	-1.6	2.1	3.4	2.0	0.1	
William Blair Emerging Markets ex China Growth Fund	398,660,816	3.1	1.4	4.3	4.3	-	-5.9	-	-	-5.9	01/01/25
<i>MSCI Emerging Markets ex China IMI (Net)</i>				3.8	3.8	-	1.1	-	-	1.1	
ARGA Emerging Markets Ex China Equity	400,792,030	3.1	2.3	4.3	4.3	-	9.1	-	-	5.1	12/01/24
<i>MSCI Emerging Markets ex China (Net)</i>				3.9	3.9	-	2.1	-	-	0.9	

The Principal USPA Real Estate Fund is benchmarked against the NCREIF ODCE index on a quarterly basis and against itself for the purpose of monthly flash reports due to quarterly index data availability.

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

Illinois Police Officers' Pension Investment Fund  
Period Ending: April 30, 2025

	Market Value	% of Portfolio	Target (%)	1 Mo	QTD	Fiscal YTD	YTD	1 Yr	3 Yrs	Since Inception	Inception Date
<b>Income</b>	<b>2,044,769,498</b>	<b>15.9</b>	<b>16.0</b>	<b>0.0</b>	<b>0.0</b>	<b>6.4</b>	<b>1.5</b>	<b>8.5</b>	<b>5.7</b>	<b>3.8</b>	<b>04/01/22</b>
<i>Income Benchmark</i>				-0.1	-0.1	6.1	1.3	8.3	6.1	4.4	
SSgA High Yield Corporate Credit	882,934,684	6.9	7.0	-0.1	-0.1	6.5	0.8	8.7	6.1	4.6	04/01/22
<i>Spliced SSgA U.S. High Yield Index</i>				0.0	0.0	6.4	0.9	8.7	6.1	4.6	
<b>Emerging Market Debt</b>	<b>764,168,718</b>	<b>5.9</b>	<b>6.0</b>	<b>0.2</b>	<b>0.2</b>	<b>6.9</b>	<b>2.8</b>	<b>9.5</b>	<b>5.4</b>	<b>2.7</b>	<b>04/01/22</b>
<i>Emerging Markets Debt Benchmark</i>				-0.2	-0.2	6.2	2.0	8.8	6.0	3.8	
SSgA EMD Hard Index Fund	564,855,638	4.4	4.5	-0.2	-0.2	6.6	2.1	9.1	5.2	2.6	04/01/22
<i>Spliced SSgA EMD Hard Index</i>				-0.2	-0.2	6.2	2.0	8.8	5.3	3.0	
Capital Group Emerging Markets Debt	199,313,080	1.6	1.5	1.2	1.2	-	4.9	-	-	3.0	11/01/24
<i>Spliced Capital Group EMD Index</i>				1.5	1.5	-	4.8	-	-	3.4	
<b>Bank Loans</b>	<b>397,666,096</b>	<b>3.1</b>	<b>3.0</b>	<b>0.1</b>	<b>0.1</b>	<b>4.9</b>	<b>0.6</b>	<b>6.1</b>	<b>-</b>	<b>6.7</b>	<b>03/01/24</b>
<i>S&amp;P UBS Leveraged Loan Index</i>				-0.1	-0.1	5.0	0.5	6.2	-	6.7	
Ares Institutional Loan Fund	132,494,252	1.0	1.0	0.2	0.2	5.3	0.5	6.8	-	7.1	03/01/24
<i>S&amp;P UBS Leveraged Loan Index</i>				-0.1	-0.1	5.0	0.5	6.2	-	6.7	
Aristotle Institutional Loan Fund	265,171,844	2.1	2.0	0.1	0.1	4.7	0.6	5.8	-	6.4	03/01/24
<i>S&amp;P UBS Leveraged Loan Index</i>				-0.1	-0.1	5.0	0.5	6.2	-	6.7	
<b>Real Assets</b>	<b>704,464,670</b>	<b>5.5</b>	<b>6.0</b>	<b>-1.8</b>	<b>-1.8</b>	<b>5.9</b>	<b>-1.0</b>	<b>11.4</b>	<b>0.0</b>	<b>-0.3</b>	<b>04/01/22</b>
<i>Real Assets Benchmark</i>				-1.7	-1.7	5.6	-0.6	10.7	-1.9	-2.8	
SSgA REITs Index	489,579,629	3.8	4.0	-2.8	-2.8	6.9	-1.6	15.1	-0.7	-2.3	04/01/22
<i>Dow Jones U.S. Select REIT Total Return Index</i>				-2.8	-2.8	6.9	-1.6	15.2	-0.8	-2.3	
Principal USPA	214,885,040	1.7	2.0	0.5	0.5	1.5	0.5	0.4	-5.5	-5.5	05/01/22
<b>Risk Mitigation</b>	<b>2,519,501,146</b>	<b>19.6</b>	<b>20.0</b>	<b>0.6</b>	<b>0.6</b>	<b>5.4</b>	<b>2.8</b>	<b>7.1</b>	<b>3.4</b>	<b>2.9</b>	<b>04/01/22</b>
<i>Risk Mitigation Benchmark</i>				0.7	0.7	5.4	2.9	7.1	3.4	2.9	
SSgA US Treasury Index	376,153,854	2.9	3.0	0.6	0.6	5.1	3.6	7.7	-	7.7	05/01/24
<i>Blmbg. U.S. Treasury Index</i>				0.6	0.6	5.1	3.6	7.7	-	7.7	
SSgA Core Fixed Income Index	375,822,872	2.9	3.0	0.4	0.4	5.3	3.2	8.1	2.0	0.6	04/01/22
<i>Blmbg. U.S. Aggregate Index</i>				0.4	0.4	5.2	3.2	8.0	2.0	0.6	
SSgA Short-Term Gov't/Credit Index	1,262,517,493	9.8	10.0	0.8	0.8	5.5	2.4	6.8	3.6	3.3	04/01/22
<i>Bloomberg U.S. Gov/Credit 1-3 Year Index</i>				0.8	0.8	5.4	2.4	6.8	3.5	3.3	
SSgA US TIPS Index	377,545,420	2.9	3.0	0.7	0.7	6.3	3.8	8.0	3.4	3.3	04/01/22
<i>Blmbg. U.S. TIPS 0-5 Year</i>				0.8	0.8	6.3	3.9	8.0	3.5	3.4	
Cash	127,126,157	1.0	1.0	0.3	0.3	3.7	1.2	4.6	4.0	3.9	04/01/22
<i>90 Day U.S. Treasury Bill</i>				0.3	0.3	4.0	1.4	4.9	4.3	4.2	
IPOPIF Pool Fixed Income Transition	335,351	0.0	-								
Member Accounts	-	0.0	-								
Transition Account	-	0.0	-								

The Principal USPA Real Estate Fund is benchmarked against the NCREIF ODCE index on a quarterly basis and against itself for the purpose of monthly flash reports due to quarterly index data availability.

# Total Fund

## Data Sources and Methodology Page

# Illinois Police Officers' Pension Investment Fund

## Period Ending: April 30, 2025

### 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	Manager	Inception Date	Data Source
RhumbLine Russell 1000 Index Fund	3/15/2022	State Street	SSgA EMD Hard Index Fund	3/14/2022	State Street
RhumbLine Russell 2000 Index Fund	3/15/2022	State Street	Capital Group Emerging Markets Debt Fund	10/21/2024	State Street
SSgA Non-US Developed Index Fund	3/10/2022	State Street	Ares Institutional Loan Fund	3/1/2024	Ares
SSgA Non-US Developed SC Index Fund	3/10/2022	State Street	Aristotle Institutional Loan Fund	3/1/2024	Aristotle
Acadian ACWI ex US Small-Cap Fund	1/30/2024	State Street	Principal USPA	4/6/2022	State Street
WCM International Small Cap Growth Fund	3/1/2024	WCM	SSgA REITs Index Fund	3/10/2022	State Street
LSV International Small Cap Value Equity Fund	3/1/2024	LSV	SSgA US Treasury Index Fund	5/1/2024	State Street
SSgA Emerging Markets Equity Index Fund	3/1/2022	State Street	SSgA Core Fixed Income Index Fund	3/17/2022	State Street
SSgA Emerging Markets ex China Equity Index Fur	5/1/2024	State Street	SSgA Short-Term Gov't/Credit Index Fund	3/17/2022	State Street
William Blair EM ex China Growth Fund	12/9/2024	William Blair	SSgA US TIPS Index Fund	3/17/2022	State Street
ARGA Emerging Markets Ex China Equity	12/1/2024	ARGA	Cash	3/22/2022	State Street
SSgA High Yield Corporate Credit	3/18/2022	State Street			

### Custom Benchmark Composition

Benchmark	Time period	Composition
Policy Index -Broad Benchmark	4/1/2022 - Present	70% MSCI ACWI IMI (Net) and 30% Bloomberg Global Multiverse.
Spliced SSgA EMD Hard Benchmark	7/1/2023 - Present	100% JPM EMBI Global Diversified Index
Spliced SSgA EMD Hard Benchmark	3/14/2022 - 6/30/2022	100% JPM EMBI Global Core Index
Spliced SSgA U.S. High Yield Index	12/1/2022 - Present	100% ICE BofA US High yield Master II Constrained
Spliced SSgA U.S. High Yield Index	4/1/2022 - 11/30/2022	100% Bloomberg U.S. High Yield Very Liquid Index
Spliced Capital Group EMD Benchmark	1/1/2025 - Present	50% JPM GBI EM GD/30% JPM EMBI GD/20% JPM CEMBI BD
Spliced Capital Group EMD Benchmark	10/21/2024 - 12/31/2024	50% JPM EMBI GD/50% JPM GBI EM GD

# Total Fund

## Data Sources and Methodology Page

# Illinois Police Officers' Pension Investment Fund

## Period Ending: April 30, 2025

Policy Index Composition					
As of 12/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23.0%	39.7%			
Russell 2000	5.0%	8.6%			
MSCI World ex U.S.	19.0%	32.8%			
MSCI World ex U.S. Small Cap	5.0%	8.6%			
MSCI Emerging Markets ex China	6.0%	10.3%			
Bloomberg US Corporate High Yield Index	7.0%		43.8%		
JPM EMBI Global Diversified Index	6.0%		37.5%		
S&P UBS Leveraged Loan Index	3.0%		18.8%		
NFI-ODCE Equal-Weighted Index	2.0%			33.3%	
Dow Jones US Select REIT Index	4.0%			66.7%	
Bloomberg US Aggregate 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 US TIPS 0-5 Year	3.0%				15.0%
90 Day US Treasury Bill Index	1.0%				5.0%

As of 11/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	0.7%	1.2%			
MSCI Emerging Markets ex China	5.3%	9.2%			
Bloomberg US Corporate High Yield Index	7%		43.8%		
JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Treasury Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	10%				50.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

As of 10/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	0.8%	1.4%			
MSCI Emerging Markets ex China	5.2%	9.0%			
Bloomberg US Corporate High Yield Index	7%		43.8%		
JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Treasury Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	10%				50.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

As of 9/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	1.5%	2.6%			
MSCI Emerging Markets ex China	4.5%	7.8%			
Bloomberg US Corporate High Yield Index	7%		43.8%		
JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Treasury Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	10%				50.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

As of 8/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	2%	3.4%			
MSCI Emerging Markets ex China	4%	6.9%			
Bloomberg US Corporate High Yield Index	7%		43.8%		
JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Treasury Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	10%				50.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

As of 7/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	3%	5.2%			
MSCI Emerging Markets ex China	3%	5.2%			
Bloomberg US Corporate High Yield Index	7%		43.8%		
JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Treasury Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	10%				50.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

Total Fund  
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Illinois Police Officers' Pension Investment Fund  
Period Ending: April 30, 2025

**Policy Index Composition**

As of 6/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	4%	6.9%			
MSCI Emerging Markets ex China	2%	3.4%			
Bloomberg US Corporate High Yield Index	7%		43.8%		
JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Treasury Index	2%				10.0%
Bloomberg 1-3 Year Gov/Credit Index	11%				55.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

As of 4/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	6%	10.3%			
Bloomberg US Corporate High Yield Index	7%		43.8%		
JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	13%				65.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

As of 5/1/2023	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	18%	31.0%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	7%	12.1%			
Bloomberg US Corporate High Yield Index	10%		62.5%		
JPM EMBI Global Diversified Index	6%		37.5%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	13%				65.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

**Policy Index Composition**

As of 5/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	19%	32.8%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	5%	8.6%			
MSCI Emerging Markets ex China	1%	1.7%			
Bloomberg US Corporate High Yield Index	7%		43.8%		
JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	3%		18.8%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg US Treasury Index	1%				5.0%
Bloomberg 1-3 Year Gov/Credit Index	12%				60.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

As of 3/1/2024	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	23%	39.7%			
Russell 2000	5%	8.6%			
MSCI World ex U.S.	18%	31.0%			
MSCI World ex U.S. Small Cap	5%	8.6%			
MSCI Emerging Markets	7%	12.1%			
Bloomberg US Corporate High Yield Index	8.5%		53.1%		
JPM EMBI Global Diversified Index	6%		37.5%		
S&P UBS Leveraged Loan Index	1.5%		9.4%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	3%				15.0%
Bloomberg 1-3 Year Gov/Credit Index	13%				65.0%
Bloomberg US TIPS 0-5 Year	3%				15.0%
90 Day US Treasury Bill Index	1%				5.0%

As of 1/1/2023	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 1000	18%	36.0%			
Russell 2000	5%	10.0%			
MSCI World ex U.S.	15%	30.0%			
MSCI World ex U.S. Small Cap	5%	10.0%			
MSCI Emerging Markets	7%	14.0%			
Bloomberg US Corporate High Yield Index	10%		62.5%		
JPM EMBI Global Diversified Index	6%		37.5%		
NFI-ODCE Equal-Weighted Index	2%			33.3%	
Dow Jones US Select REIT Index	4%			66.7%	
Bloomberg US Aggregate Index	7%				25.0%
Bloomberg 1-3 Year Gov/Credit Index	15%				53.6%
Bloomberg US TIPS 0-5 Year	3%				10.7%
90 Day US Treasury Bill Index	3%				10.7%

**Policy Index Composition**

As of 3/31/2022	Policy Index	Growth	Income	Real Assets	Risk Mitigation
Russell 3000	23%	46.0%			
MSCI ACWI ex USA IMI	20%	40.0%			
MSCI Emerging Markets IMI	7%	14.0%			
Bloomberg US Corporate High Yield Index	10%		62.5%		
50% JPM EMBI GD/50% JPM GBI EM GD	6%		37.5%		
NCREIF Property Index	2%			66.7%	
Dow Jones US Select REIT Index	4%			33.3%	
Bloomberg US Aggregate Index	7%				25.0%
Bloomberg 1-3 Year Gov/Credit Index	15%				53.6%
Bloomberg US TIPS 0-5 Year	3%				10.7%
90 Day US Treasury Bill Index	3%				10.7%

# Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## Disclosure

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