

Investment Update

As of June 2, 2023

Operations Summary

- 332 funds have transferred assets to IPOPIF
 - 97% of non-litigant funds, 99% of assets
 - May transfer went well, One fund scheduled for 8/1/23
- Catching up on custody and SSGA invoicing
- Cash management participation near full
- EMD valuation adjustment to be implemented effective May 1.
- Transferred \$90 million from Core Bonds to Non-US Equity on May 24.

Transfer Schedule

Tranche #	Assigned Transfer	Number of Funds		\$ millions	
		Tranche	Total	Tranche	Total
1	March 1, 2022	14	14	220	220
2	April 1, 2022	18	32	458	678
3	May 2, 2022	14	46	354	1,032
4	June 1, 2022	27	73	770	1,803
5	June 24, 2022	45	118	1,271	3,074
6	August 1, 2022	36	154	1,463	4,537
7	September 1, 2022	63	217	1,922	6,459
8	October 3, 2022	54	271	990	7,449
9	November 1, 2022	35	306	376	7,825
10	December 1, 2022	22	328	738	8,562
12*	May 1, 2023	4	332	35	8,597
13	August 1, 2023	1	333	11	8,608
DNT	Did Not Transfer	9	342	63	8,671
LIT	litigation plaintiffs	15	357	1,233	9,905

*T11 designation used for February transition of assets received since December

Non-Transferred Funds

Litigants (15)	Est. \$M
ARLINGTON HEIGHTS	162
AURORA	245
CHAMPAIGN	121
CHICAGO HEIGHTS	48
CHICAGO RIDGE	29
DEKALB	45
ELGIN	157
ELMHURST	78
EVANSTON	158
MOKENA	25
PALOS HEIGHTS	29
RANTOUL	30
VILLA PARK	36
WOOD DALE	26
WOODRIDGE	45
Total \$M	1,233

Did Not Transfer (10)	Est. \$M
FAIRVIEW HEIGHTS	29
EAST ST LOUIS	19
SOUTH CHICAGO HEIGHTS	4
MARYVILLE	4
STONE PARK (Annuities)	4
MONTICELLO	1
WASHINGTON PARK	1
VENICE	0.3
ROBBINS (no assets)	0.2
Total \$M	63

8/1/23 transfer (1)	Est. \$M
GLENWOOD	11

Transfer Status

- All transferrable assets received to date.
- May 1 transfer of four funds went smoothly, and reconciliations have been sent.
- Closed out and reconciled 3 of 4 open 2022 transfers.
- Finalizing one Tranche-9 (November) fund.
 - Outstanding \$1M finally received on May 31.
- Transfer participation
 - 97% of non-litigant funds, 99% of assets
- 1 fund (~\$11M) scheduled to transfer 8/1/23
- 15 litigant funds (~\$1.2B)
- 9 non-litigant funds (~\$63M) did not transfer assets

Investment Operational Highlights

- Invoicing
 - Custody invoices paid through December 2022. Waiting on 2023 invoices.
 - RhumbLine paid through April 2023, SSGA paid through March.
- Cash Management
 - April: 273 PPF eCFM transactions and 2 PPF cash LODs
 - May: 279 PPF eCFM transactions and 4 PPF cash LODs
PPF: Participating Police Pension Fund, LOD: Letter of Direction
 - April/May: Approved 19 additional funds and 62 users for eCFM access. eCFM access up to 304 funds and 819 users
- Valuation Adjustments
 - Completed adjustments for Mortgage Back Securities in April
 - Implementing adjustments in May for SSGA Emerging Market Debt (EMD) pricing issue.
- May 23 glidepath implementation: transferred \$90M from Core Bonds to Non-US Equity

Performance Summary

- Key drivers
 - High Beta (Mkt. Sensitivity) due to low allocation to alternative assets in short-term allocation
 - Overweight to Non-US and small-cap stocks
 - Passive (index fund) implementation in short term
- Expectations
 - Outperformance vs. Broad Benchmark (70/30) and peers over the long-term horizon.
 - Match Policy Benchmark due to passive implementation
 - Underperformance vs. Broad Benchmark in rally
 - Underperformance vs. peers in drawdown

Results	2Q22	3Q22	4Q22	1Q23	12 Mo.
Broad Benchmark	-13.6%	-6.6%	+8.4%	+5.8%	-7.6%
Policy Benchmark	-10.4%	-5.0%	+6.6%	+4.3%	-5.3%
IPOPIF Pool	-10.4%	-4.8%	+6.8%	+4.3%	-5.1%
Peer rank (>\$1B)	83	75	12	29	72

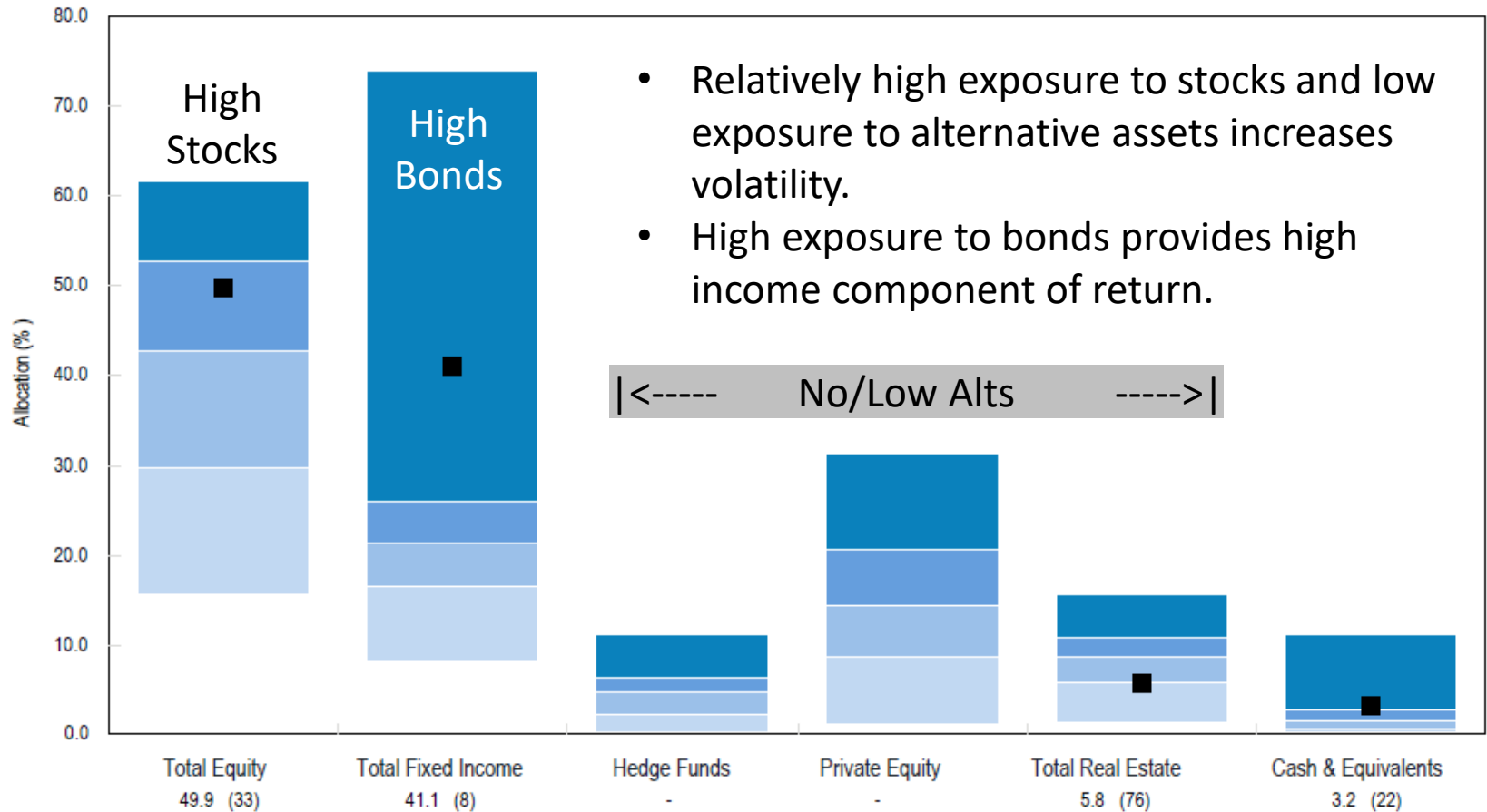
Asset Allocation 6/1/23

Account	Current		Target		Variance	
	\$M	%	\$M	%	\$M	%
Growth	4,650	50.7%	5,322	58.0%	(672)	-7.3%
RHUMBLINE US LARGE*	1,692	18.4%	2,110	23.0%	(418)	-4.6%
RHUMBLINE US SMALL	422	4.6%	459	5.0%	(37)	-0.4%
SSGA NON-US DEVELOPED*	1,463	15.9%	1,652	18.0%	(188)	-2.1%
SSGA NON-US DEVELOPED SC	445	4.9%	459	5.0%	(14)	-0.1%
SSGA EM EQUITY	628	6.8%	642	7.0%	(14)	-0.2%
Income	1,455	15.9%	1,468	16.0%	(13)	-0.1%
SSGA HIGH YIELD	914	10.0%	918	10.0%	(4)	0.0%
SSGA EM DEBT	542	5.9%	551	6.0%	(9)	-0.1%
Inflation Protection	792	8.6%	826	9.0%	(34)	-0.4%
SSGA TIPS	272	3.0%	275	3.0%	(3)	0.0%
SSGA REITS	343	3.7%	367	4.0%	(24)	-0.3%
PRINCIPAL US PROPERTY	176	1.9%	184	2.0%	(7)	-0.1%
Risk Mitigation	2,278	24.8%	1,560	17.0%	719	7.8%
IPOPIF CASH	352	3.8%	92	1.0%	260	2.8%
SSGA ST GOV-CREDIT	1,374	15.0%	1,193	13.0%	181	2.0%
SSGA CORE BONDS	551	6.0%	275	3.0%	276	3.0%
IPOPIF Pool Transition	2	0.0%	-	-	2	0.0%
Total Investment Pool	9,175	100.0%	9,175	100.0%	-	0.0%
Transition Pool	0					
Participant Fund Accounts	1					
Grand Total	9,177					

* Allocations to US Large Cap and Non-US Developed equity will be increased gradually at CIO discretion

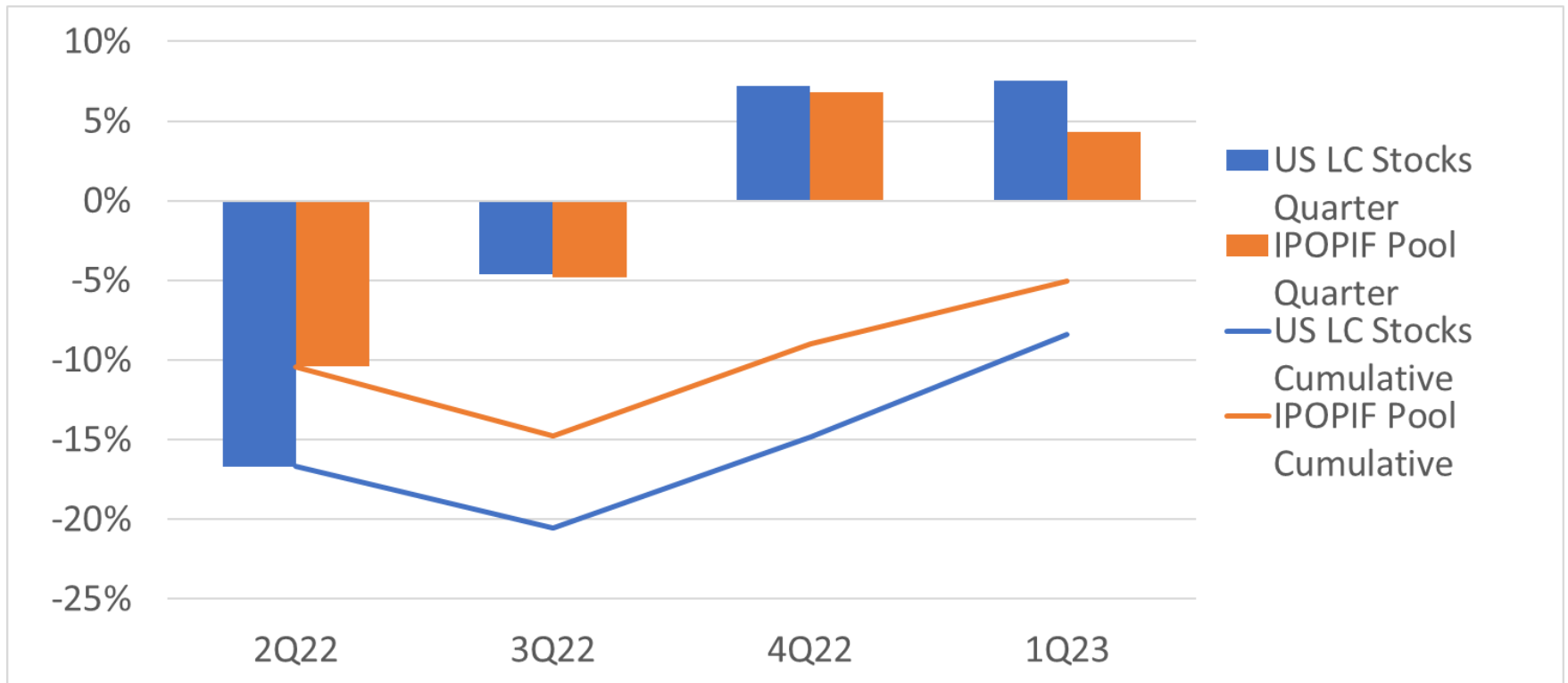
Short-Term Allocation vs. Peers

Total Plan Allocation vs. All Public Plans > \$1B-Total Fund
As of March 31, 2023



Source: 3/31/23 Verus report, annotated by IPOPIF staff

Market Perspective



- IPOPIF Pool performance vs. US Large Cap. Stocks (Russell 1000)
- Bars represent the quarterly return,
- and the lines represent the cumulative return.

Growth Portfolio

As of 3/31/23	Market	% of	3 Mo	1 Yr
Source Verus Quarterly Report	Value	Portfolio		
Growth	4,487,903,373	49.8	6.5	-7.2
<i>Growth Benchmark</i>			6.5	-7.6
RhumbLine Russell 1000 Index	1,634,473,270	18.1	7.5	-8.6
<i>Russell 1000 Index</i>			7.5	-8.4
<i>eV US Large Cap Core Equity Rank</i>			22	74
RhumbLine Russell 2000 Index	425,256,624	4.7	2.7	-11.9
<i>Russell 2000 Index</i>			2.7	-11.6
<i>eV US Small Cap Core Equity Rank</i>			73	86
SSgA Non-US Developed Index	1,354,428,782	15.0	8.1	-2.3
<i>MSCI World ex U.S. (Net)</i>			8.0	-2.7
<i>eV EAFE Core Equity Rank</i>			42	42
SSgA Non-US Developed SC Index	443,433,194	4.9	5.0	-9.8
<i>MSCI World ex U.S. Small Cap Index (Net)</i>			5.0	-10.1
<i>eV EAFE Small Cap Core Rank</i>			78	77
SSgA Emerging Markets Equity Index	630,311,503	7.0	4.1	-9.7
<i>MSCI Emerging Markets (Net)</i>			4.0	-10.7
<i>eV Emg Mkts Equity Rank</i>			66	55

- Overweight to Non-US detracted in 1Q23 but was a benefit over past year.
- Overweight to Small Cap was a detractor for the quarter and the year. Expect future benefit.
- Passive performance near benchmark as expected.
- Low rank for passive small cap may indicate potential for active alpha.
- Modest tracking error expected for non-US mandates, related to fair value pricing, which protects against market timing arbitrage.

Income Portfolio

As of 3/31/23 Source Verus Quarterly Report	Market Value	% of Portfolio	3 Mo	1 Yr
Income	1,432,200,043	15.9	3.0	-6.3
<i>Income Benchmark</i>			2.9	-4.0
SSgA High Yield Corporate Credit	895,381,257	9.9	3.7	-4.3
<i>Bloomberg U.S. High Yield Very Liquid Ind eV US High Yield Fixed Inc Rank</i>			3.8 25	-3.9 77
SSgA EMD Hard Index Fund	536,818,786	6.0	1.9	-9.0
<i>JPM EMBI Global Diversified Index Emerging Markets Bond Rank</i>			1.9 50	-7.6 91

- Both High Yield and EMD (Emerging Market Debt) detracted during 2022 market correction.
- EMD underperformance in 2Q & 3Q22 related to benchmark mismatch and fair value pricing. Recent performance in line with benchmark.

Product	High Yield	EMD
Current Yield	6.6%	5.9%
Yield to Maturity	8.5%	7.5%

Source: 3/31/23 SSGA quarterly report

Inflation Protection Portfolio

As of 3/31/23 Source Verus Quarterly Report	Market Value	% of Portfolio	3 Mo	1 Yr
Inflation Protection	789,550,465	8.8	1.1	-8.1
<i>Inflation Protection Benchmark</i>			1.5	-10.2
SSgAUS TIPS Index	271,260,172	3.0	2.2	-0.8
<i>Blmbg. U.S. TIPS 0-5 Year</i>			2.2	-0.3
<i>eV US TIPS / Inflation Fixed Inc Rank</i>			92	1
SSgAREITs Index	342,064,940	3.8	2.8	-21.0
<i>Dow Jones U.S. Select REIT</i>			2.8	-21.0
<i>eV US REIT Rank</i>			53	75
Principal USPA	176,225,353	2.0	-3.2	-
<i>NCREIF ODCE</i>			-3.4	-3.9

- Inflation Protection Portfolio not fulfilling role so far due to REIT equity correlation. Also seeing lagged price correction in Private Real Estate (Principal). REITs continuing to struggle in May.
- Relatively low exposure to office sector, but valuation pressure in multi-family may add pressure.

Real Estate Sector Exposure 3/31/23

- SSGA DJ REIT

Sector	Mandate I
Apartments	15.70%
Diversified	4.32%
Factory Outlets	0.23%
Healthcare	10.05%
Hotels	3.90%
Industrial	28.75%
Malls	4.35%
Manufactured Homes	3.35%
Mixed Industrial/Office	0.79%
Office	5.02%
Retail/Other	0.57%
Self-Storage	10.58%
Strip Centers	11.73%
Total	99.34%

- Principal US Property

Sector Weighting



Residential	34%
Industrial	33%
Office	20%
Retail	10%
Other & Land	2%
Self Storage	1%

Risk Mitigation Portfolio

As of 3/31/23 Source Verus Quarterly Report	Market Value	% of Portfolio	3 Mo	1 Yr
Risk Mitigation	2,276,155,207	25.2	2.0	-0.9
<i>Risk Mitigation Benchmark</i>			1.9	-0.9
SSgA Core Fixed Income Index	637,599,953	7.1	3.2	-4.9
<i>Blmbg. U.S. Aggregate Index</i>			3.0	-4.8
<i>eV US Core Fixed Inc Rank</i>			36	55
SSgA Short-Term Govt/Credit Index	1,350,576,692	15.0	1.6	0.3
<i>Blmbg. 1-3 Year Gov/Credit index</i>			1.5	0.3
<i>eV US Short Duration Fixed Inc Rank</i>			50	40
Cash	287,978,562	3.2	0.8	1.6
<i>90 Day U.S. Treasury Bill</i>			1.1	2.5

- Risk mitigation working as expected although core bonds were hurt by rising rates. Passive performance aligned with benchmarks.
- Comparative bond yields are shown below. The 30-day yield on the cash vehicle was 4.4% as of 3/31/23.

Product	Core Bonds	Short-Term Bonds
Current Yield	3.1%	2.5%
Yield to Maturity	4.4%	4.4%

Source: 3/31/23 SSGA quarterly report

Income Yield Estimates

Name	Beginning Market Value	Net Cash Flow	1Q23 Income	Net Investment Change	Ending Market Value	Annual Yield Estimate
RhumbLine Russell 1000 Index	1,419,543,922	105,854,970	6,723,021	102,362,127	1,634,473,270	1.8%
RhumbLine Russell 2000 Index	385,767,696	29,916,281	1,785,690	7,789,887	425,256,624	1.8%
SSgA Non-US Developed Index	1,227,651,529	27,863,076	10,333,594	88,581,613	1,354,428,782	3.2%
SSgA Non-US Developed SC Index	409,690,499	13,588,897	3,214,867	16,940,155	443,433,194	3.0%
SSgA Emerging Markets Equity Index	579,104,090	28,482,621	3,880,343	18,846,192	630,311,503	2.6%
SSgA High Yield Corporate Credit	814,479,099	50,869,469	14,245,627	15,787,654	895,381,257	6.7%
SSgA EMD Hard Index Fund	499,100,060	28,693,521	9,116,937	(91,732)	536,818,786	7.0%
SSgA US TIPS Index	243,800,835	21,805,870	351,674	5,301,982	271,260,172	0.5%
Principal USPA	177,550,286	4,452,423	1,738,053	(7,515,409)	176,225,353	3.9%
SSgA REITs Index	299,184,364	34,962,243	3,234,504	4,684,670	342,064,940	4.0%
SSgA Core Fixed Income Index	573,459,757	45,673,492	4,692,819	13,775,547	637,599,953	3.1%
SSgA Short-Term Gov't/Credit Index	1,227,903,318	102,528,651	7,880,878	12,267,557	1,350,576,692	2.4%
Cash	267,346,893	17,900,831	2,730,838	-	287,978,562	3.9%
Transition Account	280,635,591	(261,458,744)	-	11,933,445	31,110,292	
Member Accounts	33,905,897	(36,089,084)	-	2,187,959	4,771	
Total	8,439,123,836	215,044,517	69,928,845	292,851,647	9,016,924,151	3.2%

Source: 3/31/23 Verus report, staff calculations

Investment Structure Summary

- Evaluating Long Term Investment Manager Structure
 - How many managers? Active vs. passive, Investment approach, Diversification
 - **Work-in-process ideas.** No consensus/recommendation
 - CIO bias toward maintaining passive core exposure
- Search priority on broad mandates first
 - Broad expertise and discretion
 - Then complete portfolios with passive or niche active mgrs
- Potential for changes to long-term asset allocation
- Awareness of fees and complexity
- Parallel paths
 - Moving forward where able: small cap, multi-asset credit, private market strategy
 - Verus and staff to continue evaluation of allocation and structure options

Structure Ideas – Growth Portfolio

- General approach of passive core with one to two active managers in each asset class.
- US small and large, International small and large, EM
- $5 \times 2 = 10$ active managers
- Priority on small-cap and Emerging Markets (EM).
- Large cap searches later or stay passive
- Consider global approaches that combine US and Non-US. Include in International search, then adjust US %.
- Can reduce cost and complexity with fewer active managers.
 - Core vs. balanced focus
 - Heavier reliance on passive

Structure Ideas – Income Portfolio

- Current 3% allocation each to Bank Loans, High Yield, and Emerging Markets Debt (EMD).
- Considering potential role of multi-asset credit (MAC) managers
 - Invests across multiple credit asset classes
 - Prioritize MAC search
 - Then adjust credit asset class allocations
 - Stay passive or hire dedicated managers

Structure Ideas – Remainder

- Inflation Protection
 - 3% allocation to TIPS – stay passive, consider higher allocation and longer duration in future
 - 8% allocation to Real Estate – example structure
 - 3% - Open-end Core RE, 3% - Value-Add/Opportunistic RE, 2% - Infrastructure
- Risk Mitigation
 - 3% allocation each to short-term bonds, core bonds, and Treasuries.
 - Passive for planning. Potential active longer-term
 - Issues under evaluation
 - Staying with passive core bonds vs. moving to active core plus
 - Or eliminating core/core-plus bonds with corresponding increase to Treasuries

Key Investment Initiatives (1)

Initiative	Status
Develop long-term asset allocation implementation plan	Completed brainstorm project list. Need to organize and formalize using project planning processes, tools, and exhibits to show path and progress.
Revise Short-term Asset Allocation	Approved by Board in April. Will be implemented gradually.
Investment Staff Recruitment	Received 42 applications. HR conducted screening interviews with good fit candidates. CIO interviews being scheduled for week of June 5. HR/CIO conducted compensation survey.
Evaluate small cap equity and multi-asset class credit (MAC) for search recommendation	Steve Yoon completed evaluation for CIO review. Verus is supportive.

Key Investment Initiatives (2)

Initiative	Status
Gather information in preparation for potential private markets consultant search recommendation	Conducted numerous education meetings across spectrum of service providers. Verus providing private markets education at June Board meeting. Planning request for private markets search in September.
Transfer outstanding assets	Closed out all open transfers. All assets now received. One reconciliation in process.
Develop plan for addressing non-transferrable assets	Some annuity information collected. PPF communication needed. Verus to assist with evaluation.
Develop Investment Communication Materials	Developed 2022 Transfer Performance Summary. Broader materials to be developed.
Develop compliance review and reporting matrix	To be developed

Preliminary Agenda Planning

6/9/23	9/15/23	12/15/23	March 2024
Small cap search request	Small Cap search recommendation	High-yield search request	High-yield search recommendation
	Multi-asset credit (MAC) search request	MAC search recommendation	Bank Loan search request
Private Markets Education	Private Markets Strategic Plan & Search Request	Private Markets Search Recommendation	
Passive Manager Review	Principal US Property Account Review	Custodian Review	Investment Consultant Review
Quarterly: Investment Update, Performance Review, Compliance Review, Investment Implementation Status			