

Investment Update

Regional Stakeholder Meeting

June 27, 2023

Collinsville, IL

Seasoned Investment Professionals

- Kent Custer, CFA – Chief Investment Officer
 - MBA, Chartered Financial Analyst
 - US Navy Nuclear Submarine Officer
 - “Sell-side” investment analyst
 - Illinois Teachers’ Retirement System
 - “Turn-around” CIO – Illinois Prepaid Tuition Fund, Dallas Police and Fire Pension
- Steve Yoon – Investment Officer
 - Northern Trust, Chicago Municipal Retirement System
- Barb Meyer, CIPM – Investment Officer
 - MA, Ibbotson, Northern Trust, Chicago Teachers Pension
 - Certificate in Investment Performance Measurement
- Investment Consultant – Verus Investments
 - Scott Whalen, CFA, CAIA – Lead Consultant

Key Investment Milestones

2021

- April – Hire CIO and consultant
- June – Procurement of Investment Services Policy
- July – Select investment custodian
- August – Steve Yoon joins
- September – Select Transition Manager
- October – Select Passive Investment Managers, Select CPA firms, Approve Transfer of Assets Rule
- November – Approve Investment Structure

- December – Selected EY as Transition Consultant and Foster and Foster as Actuary. Approve Authorized Agents Rule. Approve Investment Policy Statement

2022

- January – Approve Cash Management Policy, Valuation and Cost Rule.
- March – Begin asset transfers
- May – Circuit court rules affirming consolidation
- July – Barb Meyer joins as Investment Officer
- December – End of Transition Period

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

Transition Management Review

- Portfolio Transitions have been very successful
- \$8.7 Billion transitioned through February 2023
- Implementation Shortfall: \$2.8 million
 - Amount transition portfolio lagged the target portfolio
- Commissions: \$1.5 million (hit cap in September)
- Total Cost \$4.3 million, 4.9 basis points (bps) (0.049%) vs. weighted average estimate of 8.0 bps

Asset Type	Market Value	In-Kind Value	In-Kind %
Mutual Funds	\$4,189	0	0%
ETFs	559	0	0%
Stocks	579	374	65%
Bonds	2,969	482	16%

Dollars in Millions

Asset Allocation

- Primary driver of investment returns
- Use capital market assumptions and mean-variance optimization to estimate investment return and volatility for different asset mixes
- Establish target weights for each asset class
- Rebalance to target weights periodically
- IPOPIF has adopted short-term and long-term asset allocation targets
 - Initial lower weight to stocks based on heightened valuation and interest rate risks in 2021
 - Time needed to build out diversified strategies, including private market investments

IPOPIF Strategic Asset Allocation

IPOPIF Asset Allocation	03/01/22	04/14/23*		Long-term	New vs LT
		Change	New ST		
Growth (Stocks)	50.0%	8.0%	58.0%	65.0%	-7.0%
US Large	18.0%	+5.0%	23.0%	23.0%	0.0%
US Small	5.0%		5.0%	5.0%	0.0%
International Developed	15.0%	+3.0%	18.0%	18.0%	0.0%
International Developed Small	5.0%		5.0%	5.0%	0.0%
Emerging Markets	7.0%		7.0%	7.0%	0.0%
Private Equity (Direct)	0.0%		0.0%	7.0%	-7.0%
Income (Bonds)	16.0%	0.0%	16.0%	14.0%	2.0%
Bank Loans	0.0%		0.0%	3.0%	-3.0%
High Yield Corp. Credit	10.0%		10.0%	3.0%	7.0%
Emerging Market Debt	6.0%		6.0%	3.0%	3.0%
Private Credit	0.0%		0.0%	5.0%	-5.0%
Inflation Protection	9.0%	0.0%	9.0%	11.0%	-2.0%
US TIPS	3.0%		3.0%	3.0%	0.0%
REITs	4.0%		4.0%	0.0%	4.0%
Real Estate/Infrastructure	2.0%		2.0%	8.0%	-6.0%
Risk Mitigation	25.0%	-8.0%	17.0%	10.0%	7.0%
Cash	3.0%	-2.0%	1.0%	1.0%	0.0%
Short-Term Gov't/Credit	15.0%	-2.0%	13.0%	3.0%	10.0%
US Treasury	0.0%		0.0%	3.0%	-3.0%
Core Fixed Income	7.0%	-4.0%	3.0%	0.0%	3.0%
Core Plus Fixed Income	0.0%		0.0%	3.0%	-3.0%
Total	100.0%	0.0%	100.0%	100.0%	0.0%

*4/14/23 allocation to be implemented gradually at CIO discretion

Investment Structure

Mandate	Weight	Manager	Manager Benchmark*	Vehicle**
Growth (Stocks)	58.0%			
US Large	23.0%	RhumbLine	Russell 1000	SMA
US Small	5.0%	RhumbLine	Russell 2000	SMA
International Developed	18.0%	SSGA	MSCI World ex US	CIT
International Developed Small	5.0%	SSGA	MSCI World ex US SC	CIT
Emerging Markets	7.0%	SSGA	MSCI Emerging Mkts. ND	CIT
Income (Bonds)	16.0%			
High Yield Corp. Credit	10.0%	SSGA	BB US Corporate High Yield	CIT
Emerging Market Debt	6.0%	SSGA	JPM EMBI Global Diversified	CIT
Inflation Protection	9.0%			
US TIPS	3.0%	SSGA	BB US TIPS 0-5 Years	SMA
REITs	4.0%	SSGA	Dow Jones US Select REIT	CIT
Real Estate	2.0%	Principal	NFI-ODCE	Open-End Fund
Risk Mitigation	17.0%			
Cash	1.0%	SSGA	\$1	Money Mkt MF
Short-Term Gov't/Credit	13.0%	SSGA	BB 1-3 year Gov/Credit	CIT
Core Fixed Income	3.0%	SSGA	BB US Aggregate	CIT
Total	100.0%			

*BB: Bloomberg, JPM: JP Morgan

NFI-ODCE: National Council of Real Estate Investment Fiduciaries (NCREIF) Fund Index – Open End Diversified Core Equity

**SMA: Separately Managed Account, CIT: Commingled Investment Trust

RhumbLine and SSGA are passive “index” managers.

Performance Summary

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%

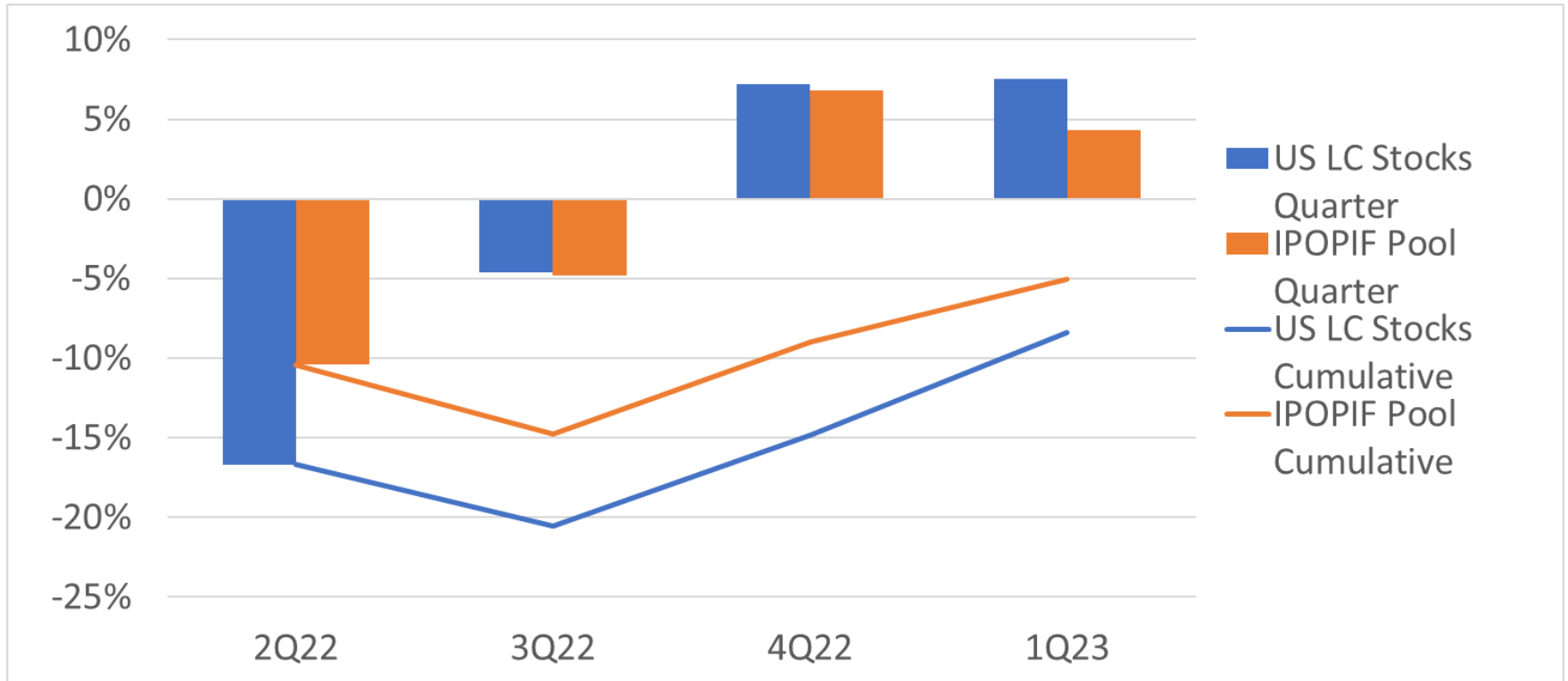
- **Benchmarks**

- Broad Benchmark (70/30 global stocks/bonds) indicates success of asset allocation.
- Policy Benchmark – Weighted average of asset class benchmarks indicates success of implementation

- **Results are in line with expectations**

- Outperformance vs. Broad Benchmark due to stock underweight
- Matched Policy Benchmark due to passive implementation

Market Perspective



- IPOPIF Pool performance vs. US Large Cap. Stocks (Russell 1000)
- Down-market protection was helpful in 2022
- IPOPIF will be correlated with the stock market

IPOPIF Investment Portfolio
Investment Fund Fee Analysis

Illinois Police Officers' Pension Investment Fund
Period Ending: March 31, 2023

Name	Asset Class	Vehicle Type	Market Value	% of Portfolio	Estimated Fee Value	Expense Fee (%)
RhumbLine Russell 1000 Index	Domestic Equity	Separate Account	\$1,634,473,270	18.1895	\$81,724	0.005
RhumbLine Russell 2000 Index	Domestic Equity	Separate Account	\$425,256,624	4.7325	\$21,263	0.005
SSgA Non-US Developed Index	Non-U.S. Equity	Commingled Fund	\$1,354,428,782	15.0730	\$216,709	0.016
SSgA Non-US Developed SC Index	Non-U.S. Equity	Commingled Fund	\$443,433,194	4.9348	\$70,949	0.016
SSgA Emerging Markets Equity Index	Emerging Markets Equity	Commingled Fund	\$630,311,503	7.0145	\$100,850	0.016
SSgA High Yield Corporate Credit	Fixed Income	Commingled Fund	\$895,381,257	9.9644	\$143,261	0.016
SSgA EMD Hard Index Fund	Fixed Income	Commingled Fund	\$536,818,786	5.9741	\$85,891	0.016
SSgA US TIPS Index	Fixed Income	Separate Account	\$271,260,172	3.0188	\$43,402	0.016
Principal USPA	Real Estate	Commingled Fund	\$176,225,353	1.9612	\$1,409,803	0.800
SSgA REITs Index	Real Estate	Commingled Fund	\$342,064,940	3.8067	\$54,730	0.016
SSgA Core Fixed Income Index	Fixed Income	Commingled Fund	\$637,599,953	7.0956	\$102,016	0.016
SSgA Short-Term Gov't/Credit Index	Fixed Income	Commingled Fund	\$1,350,576,692	15.0301	\$216,092	0.016
Cash	Cash and Equivalents	Commingled Fund	\$287,978,562	3.2048		
IPOPIF Investment Portfolio			\$8,985,809,088	100.0000	\$2,546,689	0.028

SSGA charges a flat 0.0155% fee through 2Q23 and an aggregate asset-based fee thereafter (~0.018% expected for 2H23).

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	Recruiting now for one or two investment officers. Screening interviews and CIO first-round interviews completed. Evaluating top candidates. HR/CIO conducted compensation survey.
Evaluate small cap equity and credit mandates for active search recommendation	Drafting RFP for international small cap equity for July Board meeting. Credit search recommendation targeted for September.

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 and reconciled.
Develop plan for addressing non-transferrable assets	Some annuity information collected. Verus developing evaluation framework.
Develop Investment Communication Materials	Developed 2022 Transfer Performance Summary. Broader materials to be developed.
Develop compliance review and reporting matrix	In Process.

Preliminary Agenda Planning

7/21/23	9/15/23	12/15/23	March 2024
International small cap search request	Intl. small cap recommendation	US small cap search request	US small cap recommendation
	Credit search request	Credit search recommendation	Next Credit search request
	Private Markets Strategic Plan & Search Request	Private Markets Search Recommendation	
	Principal US Property Account Review	Custodian Review	Investment Consultant Review

Quarterly: Investment Update, Performance Review, Compliance Review, Investment Implementation Status

Investment Information Resources

<https://www.ipopif.org/reports/investment-reports/>

[Investment Policy Statement - PP-2021-08](#)

[IPOPIF Illinois Economic Opportunity Report - October 31, 2022](#)

[IPOPIF MWDBE Report- December 2022](#)

[IPOPIF Capital Market Assumptions](#)

[IPOPIF Investment Performance Review - Verus Quarterly](#)

[IPOPIF Investment Performance Reports - Monthly Statements](#)

[IPOPIF Transition and Investment Updates](#)

Article 3 Fund Reports

<https://www.ipopif.org/reports/article-3-reports/>

Article 3 Fund Monthly Reports (Guide to Access and Overview)

-IPOPIF Trust Fund Unit Details-

<https://my.statestreet.com/>

- Only for eCFM cash transactions
- No valuation or performance information

<https://www.your-fundaccount.com/IPOPIF/>

- Northeast Retirement Systems (NRS) portal
- Reporting affiliate for State Street
- NRS performs the “unitization”
- Monthly reports available
- Daily reporting soon

Investment Manager Supplement

RhumbLine Advisers LP

RhumbLine Advisers LP	
Firm Description	Index Fund Manager
Headquarters	Boston, MA
Firm MWDBE Ownership Category	Female
Firm AUM 12/31/2022	\$88 Billion
IPOPIF contract date	12/29/2021

	RhumbLine US Large	RhumbLine US Small
IPOPIF Investment strategies	Russell 1000 Index Fund	Russell 2000 Index Fund
IPOPIF inception date	3/14/2022	3/14/2022
Vehicle	Separate Account	Separate Account
Benchmark	Russell 1000	Russell 2000
Annual Fee Rate	Flat 0.0050%	Flat 0.0050%
MWDBE brokerage for 1Q2023	100%	98%
IPOPIF 3/31/23 Value	\$1,634 Mil	\$425 Mil
Weight of IPOPIF portfolio on 3/31/23	18.1%	4.7%
IPOPIF ST target as of 3/31/23	18%	5%
IPOPIF ST target as of 4/30/23	23%	5%

State Street Global Advisors

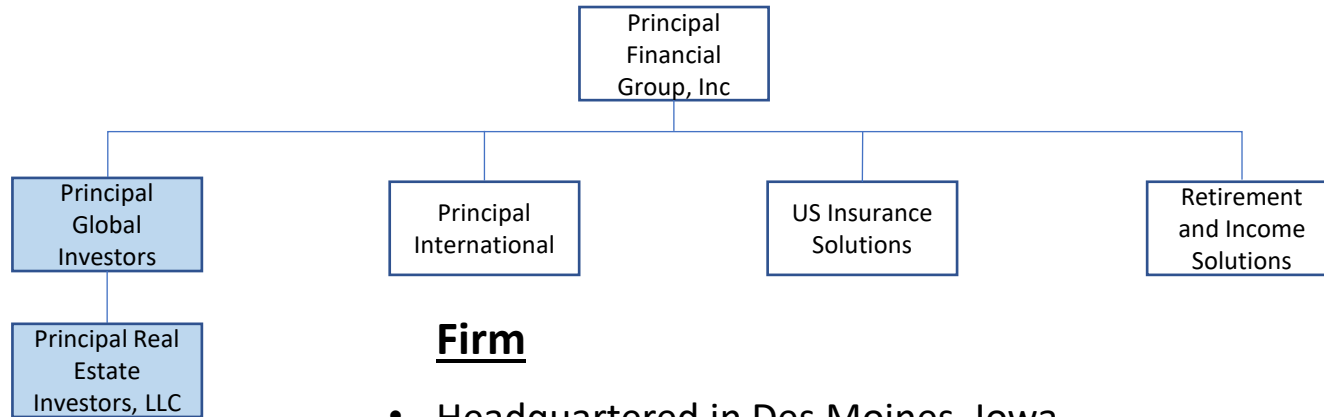
State Street Global Advisors ("SSGA")	
Firm Description	Index Fund, ETF, and Sector Fund specialists
Headquarters	New York, NY
Firm MWDBE Ownership Category	Majority
Firm AUM 12/31/2022	\$3.5 Trillion
IPOPIF contract date	12/29/2021

	Non-US Developed	Non-US Developed SC	EM Equity	High Yield	EM Debt	TIPS	REITS	Core Bonds	ST Gov-Credit
IPOPIF Investment strategies									
IPOPIF inception date	3/10/22	3/10/22	3/10/22	3/18/22	6/28/22	3/18/22	3/16/22	3/18/22	3/18/22
Vehicle	Commingled Fund	Commingled Fund	Commingled Fund	Commingled Fund	Commingled Fund	Separate Account	Commingled Fund	Commingled Fund	Commingled Fund
Benchmark	MSCI World ex US (Net)	MSCI World ex US Small Cap Index (Net)	MSCI Emerging Markets (Net)	Bloomberg U.S. High Yield Very Liquid Ind	JPM EMBI Global Diversified Index	Blmbg. US TIPS 0-5 Year	Dow Jones U.S. Select REIT	Blmbg. U.S. Aggregate Index	Blmbg. 1-3 Year Gov/Credit index
MWDBE brokerage for 1Q23	13%	4%	6%	0%	0%	0%	4%	0%	0%
IPOPIF 3/31/23 Value	\$1,354 Mil	\$443 Mil	\$630 Mil	\$895 Mil	\$537 Mil	\$271 Mil	\$342 Mil	\$638 Mil	\$ 1,351
Portfolio weight 3/31/23	15.0%	4.9%	7.0%	9.9%	6.0%	3.0%	3.8%	7.1%	15.0%
IPOPIF ST target as of 3/31/23	15%	5%	7%	10%	6%	3%	4%	7%	15%
IPOPIF ST target as of 4/30/23	18%	5%	7%	10%	6%	3%	4%	3%	13%

Fees

- Flat fee on all strategies through 6/30/2023: 0.015%. Flat fee on \$9 Billion: \$962,550.
- Tiered fee beginning 7/1/2023. Blended fee on \$9 Billion: \$1,095,500; average 0.0176%.
 - Tiered fee on Strategies:
 - 0.02% on the first \$1,000,000,000 (in aggregate)
 - 0.015% on the next \$1,000,000,000
 - 0.005% thereafter
 - Additional fee on three of the strategies:
 - Non-applicable on the first \$1,000,000,00; 0.05% thereafter.
 - Applicable for SGA EM Equity, SSGA High Yield, and SSGA EM Debt.

Principal US Property Account



Firm

- Headquartered in Des Moines, Iowa.
- Principal Real Estate Investor is a wholly owned subsidiary of Principal Global Investors (PGI) which is a distinct business segment of a publicly traded company, Principal Financial Group, Inc. (Ticker PFG).
- Principal US Property Account (USPA) is a private core real estate commingled strategy managed by Principal Real Estate Investor. Core Strategies are invested across Office, Residential, Industrial, and Retail.
- Total AUM: \$13 billion as of 3/31/2023
- Total Investments: 160 properties as of 3/31/2023

History

- 25 Article 3 Funds were invested in USPA; 20 Funds consolidated, and 5 Funds remaining.
- Post consolidation fee schedule of 80 BPS compared to average of 102 BPS, providing estimated fee savings of 21%.

Performance Supplement

Asset Allocation 6/23/23

Account	Current		Target		Variance	
	\$M	%	\$M	%	\$M	%
Growth	4,827	52.2%	5,361	58.0%	(534)	-5.8%
RHUMBLINE US LARGE*	1,834	19.8%	2,126	23.0%	(291)	-3.2%
RHUMBLINE US SMALL	435	4.7%	462	5.0%	(27)	-0.3%
SSGA NON-US DEVELOPED*	1,474	15.9%	1,664	18.0%	(190)	-2.1%
SSGA NON-US DEVELOPED SC	443	4.8%	462	5.0%	(19)	-0.2%
SSGA EM EQUITY	640	6.9%	647	7.0%	(7)	-0.1%
Income	1,464	15.8%	1,479	16.0%	(15)	-0.2%
SSGA HIGH YIELD	912	9.9%	924	10.0%	(12)	-0.1%
SSGA EM DEBT	552	6.0%	555	6.0%	(3)	0.0%
Inflation Protection	784	8.5%	832	9.0%	(48)	-0.5%
SSGA TIPS	272	2.9%	277	3.0%	(5)	-0.1%
SSGA REITS	338	3.7%	370	4.0%	(32)	-0.3%
PRINCIPAL US PROPERTY	173	1.9%	185	2.0%	(11)	-0.1%
Risk Mitigation	2,168	23.5%	1,571	17.0%	597	6.5%
IPOPIF CASH	263	2.8%	92	1.0%	170	1.8%
SSGA ST GOV-CREDIT	1,359	14.7%	1,202	13.0%	157	1.7%
SSGA CORE BONDS	547	5.9%	277	3.0%	270	2.9%
Total Investment Pool	9,242	100.0%	9,242	100.0%	-	0.0%
Transition Pool	0.13					
Participant Fund Accounts	0.00					
Grand Total	9,243					

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

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