

Investment Board and Benefits Advisory Committee Meeting Agenda

Thursday, December 7, 2023

8:30 a.m. – 11:45 a.m.

IPERS Board Room, 7401 Register Drive, Des Moines, IA

Conference Telephone Number: 312-626-6799

Meeting ID: 818-6288-6758#

- 8:30 a.m. Call to Order**
- 8:30 a.m. Approval of Minutes from Previous Board Meetings**
- September 27, 2023, Meeting
 - September 28, 2023, Meeting
- 8:35 a.m. CEO Report**
Greg Samorajski, *IPERS*
- 8:45 a.m. Securities Litigation Review and Recommendation**
Elizabeth Hennessey, *IPERS*
- 8:50 a.m. IPERS Investment Staff Reports**
- Beta Report – Sriram Lakshminarayanan
 - Alpha Report – Investment Team
 - Private Market Program – Investment Team
 - Risk Report – Sriram Lakshminarayanan
 - FY2023 Investment Management Expenses – Sriram Lakshminarayanan
 - CIO Updates – Sriram Lakshminarayanan
- 9:15 a.m. Private Markets Investment Policy**
Bill Bemis and Kris Rowley, *Investment Board*
- 9:25 a.m. CY2024 Private Markets Commitments**
Pat Reinhardt and Marcus Dong, *IPERS*
- 9:45 a.m. Break**
- 10:00 a.m. Closed Session CEO Evaluation and Reappointment**
Greg Samorajski, *IPERS*
- 10:30 a.m. 2023 Actuarial Valuation Report**
Brent Banister and Bryan Hoge, *Cavanaugh Macdonald Consulting, LLC*
- 11:30 a.m. Public Comments**
- 11:40 a.m. Other Business**
- Confirm Next Meeting – Friday, March 22, 2024
 - Next BAC Meeting – Monday, January 22, 2024
- 11:45 a.m. Adjourn**



INVESTMENT BOARD MEETING MINUTES

IPERS Board Room

7401 Register Drive, Des Moines, Iowa

September 27, 2023

The following people participated in the IPERS Investment Board Meeting held in the IPERS Board Room on Wednesday, September 27, 2023.

Members of the Board - Present

Justin Kirchhoff, Chair

Bill Bemis, Vice Chair

Treasurer Roby Smith

Tami Loge

Kris Rowley

Matt Watters

Representative Amy Nielsen

Representative Martin Graber

Senator Molly Donahue

Members of the Board - Absent

Senator Mark Lofgren

Administration and Staff

Greg Samorajski, CEO

Sriram Lakshminarayanan, CIO

John Fujiwara, Head of Strategy

Sheldon Lien, Senior Investment Officer

Keith Scholten, Senior Investment Officer

Marcus Dong, Retirement Investment Officer

Kate Fishman, Retirement Investment Officer

Kevin Terdal, Retirement Investment Officer

Melinda McElroy, Executive Assistant

David Martin, Chief Benefits Officer

Rick Hindman, Chief Operations Officer

Shawna Lode, Director of Communications

Elizabeth Hennessey, General Counsel

Tara Hagan, Chief Financial Officer

Wilshire

Thomas Toth

Ali Kazemi

Presenters

Brent Banister, Cavanaugh Macdonald

Bryan Hoge, Cavanaugh Macdonald

Proceedings

Chair Justin Kirchhoff called the meeting to order at 1:00 p.m.

Actuarial Education

Brent Banister and Bryan Hoge of Cavanaugh Macdonald provided the Board with an educational session on actuarial valuation basics, understanding IPERS' valuation results and an analysis of risk with alternative portfolios.

Adjournment

The meeting adjourned at 3:35 p.m.



INVESTMENT BOARD MEETING MINUTES

IPERS Headquarters

7401 Register Drive, Des Moines, Iowa

September 28, 2023

The following people participated in the IPERS Investment Board meeting held on Thursday, September 28, 2023.

Members of the Board – Present

Justin Kirchhoff, Chair

Bill Bemis, Vice Chair

Treasurer Roby Smith

Tami Loge

Kris Rowley

Matt Waters

Representative Amy Nielsen

Representative Martin Graber

Senator Molly Donahue

Senator Mark Lofgren

Members of the Board – Absent

None

Administration and Staff

Greg Samorajski, CEO

Sriram Lakshminarayanan, CIO

Sheldon Lien, Senior Investment Officer

Keith Scholten, Senior Investment Officer

Marcus Dong, Retirement Investment Officer

John Fujiwara, Retirement Investment Officer

Kevin Terdal, Retirement Investment Officer

Melinda McElroy, Executive Assistant

Elizabeth Hennessey, General Counsel

Shawna Lode, Communications Director

Tara Hagan, Chief Financial Officer

David Martin, Chief Benefits Officer

Rick Hindman, Chief Operations Officer

Consultant – Wilshire

Thomas Toth

Ali Kazemi

Ned McGuire

Presenter - CEM Benchmarking

Christopher Doll

Proceedings

Chair Justin Kirchhoff called the meeting to order at 8:30 a.m.

Approval of Minutes

Kris Rowley moved to approve the meeting minutes from the June 15, 2023, Investment Board meeting. Treasurer Smith seconded. The motion carried by unanimous voice vote.

CEO Report

Greg Samorajski reported on the Governor's initiative to review the efficiency and effectiveness of all boards and commissions created in Iowa law. The Boards and Commissions Review Committee proposed no changes to the Investment Board and a slight change to the Benefits Advisory Committee (BAC). The proposed change allows the Director of the Department of Administrative Services to assign a designee to serve on the BAC. Greg next mentioned the BAC voted to support legislation eliminating the Favorable Experience Dividend (FED) and Supplemental Accounts for Active Members (SAAM) programs and to broaden eligibility for the November Dividend program.

IPERS FY2025 Budget

Greg Samorajski reviewed IPERS' proposed FY2025 budget noting that all IPERS expenditures are paid from the Trust Fund, and no state general funds are appropriated to IPERS. IPERS' appropriation request must initially be entered as a status quo budget. IPERS will seek budget increase of \$1.017 million, which the Governor and Legislature must approve. The Board expressed their support of the budget request.

CEM Investment Benchmarking Review for CY2022

Christopher Doll of CEM Benchmarking reviewed IPERS' investment benchmarking results for the 5-year period ending December 31, 2022. IPERS once again ranked as a low-cost fund based on CEM's analysis for the calendar year. Christopher reported IPERS' 5-year net value added was 1.7%, exceeding the peer median of 0.8%.

FY2023 Investment Performance Review

Thomas Toth and Ali Kazemi of Wilshire presented IPERS' investment performance for the fiscal year ended June 30, 2023. The portfolio returned 5.41% (net of fees) in FY2023, slightly outperforming its policy benchmark return of 5.27% over the same period.

Annual Asset Allocation Review

Thomas Toth and Ali Kazemi of Wilshire presented the annual asset allocation review. Wilshire recommended reducing international equity by 3.5% and increasing core fixed income by 3.5%. This allocation reduces risk from 13.2% to 12.6% and maintains a 7% return target.

Annual Review of Investment Policy and Goal Statement

Sriram Lakshminarayanan explained IPERS' current Private Market Investment policy is too instructional and reduces the effectiveness in communicating the Board's investment objectives for the private market program. He proposed the Board establish a review subcommittee. Justin Kirchhoff, Bill Bemis and Kris Rowley volunteered.

Sriram Lakshminarayanan next reviewed the proposed asset allocation changes to Appendix B of the Investment Policy and Goal Statement. The changes included reducing the benchmark weights for international equity by 3.5%, increasing the benchmark weights for core fixed income by 3.5% and setting asset limits at +/- 3%.

Bill Bemis moved to approve the recommended changes. Matt Watters seconded. The motion carried by unanimous roll call vote.

Ayes: Justin Kirchhoff, Bill Bemis, Treasurer Smith, Tami Loge, Kris Rowley and Matt Watters

Nays: None

MOTION PASSED

While the Investment Board subcommittee and staff review and rewrite the Private Markets Investment Policy, the Board approved giving investment staff authorization to create an entity for direct co-investments within the private credit and private real assets portfolios.

Matt Watters moved to approve the recommendation. Bill Bemis seconded. The motion carried by unanimous roll call vote.

Ayes: Justin Kirchhoff, Bill Bemis, Treasurer Smith, Tami Loge, Kris Rowley and Matt Watters

Nays: None

MOTION PASSED

Absolute Return Search Manager Hiring Recommendations

Sriram Lakshminarayanan reported the evaluation committee recommended the Investment Board approve the hiring of the following seven investment firms/strategies for the Absolute Return search, subject to final due diligence and successful contract negotiations.

Firm Name	Strategy Name
DCM Systematic	Diversified Alpha
Neuberger Berman	Insurance-Linked Strategies
Contrarian Capital Management	Emerging Markets Distressed
Kosmos	Life Insurance Paired Policies
Orion	Orion Commodities Fund
Invesco	Dynamic Multifactor Strategy
Jupiter	Strategic Absolute Return Bond

Kris Rowley moved to approve the hiring recommendations. Treasurer Smith seconded. The motion carried by unanimous roll call vote.

Ayes: Justin Kirchhoff, Bill Bemis, Treasurer Smith, Tami Loge, Kris Rowley and Matt Watters

Nays: None

MOTION PASSED

IPERS Investment Staff Reports

Beta Report

Sriram Lakshminarayanan reported all asset classes were within acceptable policy ranges as of September 15, 2023, and the Total Fund market value estimate was \$40.9 billion on that date.

Alpha Report

The investment staff reviewed the alpha report. International equity manager Columbia was flagged for underperformance issues, and LARS manager PGIM Wadhvani was flagged because of key personnel departures.

Private Markets Program

Pat Reinhardt reviewed the three private markets investment management firms currently being monitored for performance issues: Clarion Partners, Forest Investment Associates and UBS Farmland.

Risk Report

Sriram Lakshminarayanan presented IPERS' risk monitoring report.

CIO Updates

Sriram Lakshminarayanan reported on the status of two RFPs: private real assets equity RFP and the RFP for co-investment administrative services.

Election of Chair and Vice Chair

Treasurer Smith nominated Justin Kirchhoff for chair and Bill Bemis as vice chair. Kris Rowley seconded the nominations. The motion carried by unanimous roll call vote.

Ayes: Justin Kirchhoff, Bill Bemis, Treasurer Smith, Tami Loge, Kris Rowley and Matt Watters

Nays: None

MOTION PASSED

Public Comments

Senator Patrick Deluhery made comments.

Confirm Next Meeting Date and Adjournment

The next regularly scheduled IPERS Investment Board meeting is Thursday, December 7, 2023. With no further business to come before the Board, Bill Bemis moved to adjourn the meeting. Treasurer Smith seconded. The meeting adjourned at 11:40 a.m.

BETA REPORT
IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM PORTFOLIO
PRELIMINARY (Unreconciled) MARKET VALUES AT
11/24/2023

	Actual	Overlay	Total	Policy	Difference
PUBLIC MARKETS					
Domestic	\$ 8,693,951,634	\$ (277,622,426)	\$ 8,416,329,209	\$ 8,305,720,733	\$ 110,608,476
International	\$ 5,217,568,210	\$ 62,251,582	\$ 5,279,819,792	\$ 5,140,656,688	\$ 139,163,104
Global Smart Beta	\$ 2,041,808,798		\$ 2,041,808,798	\$ 1,975,592,642	\$ 66,216,156
Total Equities	\$ 15,953,328,642		\$ 15,737,957,799	\$ 15,421,970,063	\$ 315,987,736
Core Fixed Income	\$ 9,965,631,148	\$ 36,824,846	\$ 10,002,455,995	\$ 10,087,869,929	\$ (85,413,934)
Public Credit	\$ 1,211,594,726		\$ 1,211,594,726	\$ 1,185,355,585	\$ 26,239,141
Cash	\$ 562,871,391	\$ 178,545,998	\$ 741,417,388	\$ 399,234,346	\$ 342,183,042
PRIVATE MARKETS	\$ 13,464,754,137		\$ 13,464,754,137	\$ 14,063,750,121	\$ (598,995,984)
Private Equity	\$ 7,877,169,198		\$ 7,877,169,198	\$ 8,235,751,827	\$ (358,582,629)
Private Credit	\$ 2,301,354,161		\$ 2,301,354,161	\$ 2,395,406,079	\$ (94,051,918)
Private Real Assets	\$ 3,286,230,778		\$ 3,286,230,778	\$ 3,432,592,216	\$ (146,361,438)
TOTAL FUND	\$ 41,158,180,045			\$ 41,158,180,045	\$ -

	Actual	Overlay	Total	Policy	Difference
PUBLIC MARKETS					
Domestic	21.12%	-0.67%	20.45%	20.18%	0.27%
International	12.68%	0.15%	12.83%	12.49%	0.34%
Global Smart Beta	4.96%		4.96%	4.80%	0.16%
Total Equities	38.76%		38.24%	37.47%	0.77%
Core Plus	24.21%	0.09%	24.30%	24.51%	-0.21%
Public Credit	2.94%		2.94%	2.88%	0.06%
Cash	1.37%	0.43%	1.80%	0.97%	0.83%
PRIVATE MARKETS	32.71%		32.71%	34.17%	-1.46%
Private Equity	19.14%		19.14%	20.01%	-0.87%
Private Credit	5.59%		5.59%	5.82%	-0.23%
Private Real Assets	7.98%		7.98%	8.34%	-0.36%
TOTAL FUND	100.00%			100.00%	0.00%

BETA REPORT				
IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM PORTFOLIO				
PRELIMINARY (Unreconciled) MARKET VALUES AT				
11/24/2023				
PUBLIC PORTFOLIO	67.29%	\$	27,693,425,908	
Manager Name	Manager % of Asset Class		Total Market Value	
Blackrock R2000 SAE	2.54%	\$	220,958,430	
Blackrock Russell 1000 Alpha Tilts	26.75%	\$	2,325,442,310	
DOMESTIC EQUITY - ACTIVE			\$ 2,546,400,740	
Mellon - Russell 1000 Index	67.66%	\$	5,882,284,335	
Mellon - Russell 2000 Index	2.48%	\$	215,508,701	
Rhumblin Advisers	0.00%	\$	-	
Parametric - Domestic Equity	0.57%	\$	49,757,859	
NT Transition Manager	0.00%	\$	-	
DOMESTIC EQUITY - PASSIVE	70.14%		\$ 6,147,550,895	
TOTAL DOMESTIC EQUITY	21.12%		\$ 8,693,951,634	
Blackrock - Canada	7.72%	\$	402,745,015	
Passive - Blackrock EAFE	22.49%	\$	1,173,434,085	
Parametric - Int'l Equity	0.78%	\$	40,757,101	
Mellon Passive Emerging	15.36%	\$	801,664,389	
INTERNATIONAL EQUITY - PASSIVE	45.57%		\$ 2,418,600,589	
Blackrock EAFE SAE	26.10%	\$	1,361,854,963	
Blackrock EM SAE	7.80%	\$	407,096,949	
Blackrock Europe Alpha Tilt	0.21%	\$	10,833,181	
BMO EAFE	0.05%	\$	2,509,384	
International Equity Transition	0.01%	\$	322,142	
Oechsle	0.01%	\$	743,324	
PanAgora Dynamic EAFE	7.20%	\$	375,713,047	
Columbia EAFE Equity	7.42%	\$	387,397,498	
Wellington EM	4.84%	\$	252,497,131	
INTERNATIONAL EQUITY - ACTIVE	53.65%		\$ 2,798,967,621	
TOTAL INTERNATIONAL EQUITY	12.68%		\$ 5,217,568,210	
PRIVATE PORTFOLIO	32.71%	\$	13,464,754,137	
Manager Name	Manager % of Asset Class		Total Market Value	
Legacy Portfolio	12.65%	\$	996,715,013	
Pathway PE Fund XXV	87.35%	\$	6,880,454,186	
PRIVATE EQUITY	19.14%		\$ 7,877,169,198	
BlackRock	36.78%	\$	346,075,844	
Pathway XXV-B	16.30%	\$	153,388,562	
Monroe Capital	46.92%	\$	441,499,850	
DIRECT LENDING	2.29%		\$ 940,964,256	
ArrowMark	11.92%	\$	95,374,523	
Crestline Opps Credit IA	25.38%	\$	203,052,521	
Audax Mezzanine Fund V	3.16%	\$	25,322,092	
Marathon SPS IA Fund, L.P.	14.73%	\$	117,824,960	
KKR Goldfinch	34.58%	\$	276,649,057	
Ares Private Credit Solutions II	8.38%	\$	67,081,404	
Audax Mezzanine Coinvest IA	1.85%	\$	14,809,505	
OPPORTUNISTIC	1.94%		\$ 800,114,063	
ITE	2.93%	\$	16,415,495	
IFM USIDF	11.79%	\$	66,045,575	
PGIM RE Global Debt	33.27%	\$	186,419,669	
Principal RE Debt II	2.02%	\$	11,296,599	
KARED IV	18.29%	\$	102,472,298	
IPERS GTIF	17.56%	\$	98,409,123	
Heitman Credit	14.14%	\$	79,217,083	
REAL ASSETS CREDIT	1.36%		\$ 560,275,842	
PRIVATE CREDIT	5.59%		\$ 2,301,354,161	
GRAND TOTAL			\$ 41,158,180,045	
	PERCENT	DOLLARS		
PUBLIC MARKET	67.29%	\$	27,693,425,908	
PRIVATE MARKET	32.71%	\$	13,464,754,137	
TOTAL	100.00%		\$ 41,158,180,045	
Manager Name	Manager % of Asset Class		Total Market Value	
Western	0.00%	\$	354,691	
IPERS MESIROW EM CURRENCY	2.49%	\$	247,848,654	
IPERS MAN EM GLOBAL MACRO	1.07%	\$	106,150,000	
Blackrock	0.00%	\$	-	
Principal Global Investors	0.00%	\$	11,366	
TCW	0.00%	\$	100,565	
Prudential	0.00%	\$	1,038	
BlackRock Universal Alpha	2.85%	\$	283,932,898	
BlackRock Universal Beta	3.23%	\$	322,188,878	
Mackay Shields	0.01%	\$	552,956	
PGIM GLRV Alpha	2.61%	\$	260,345,447	
PGIM GLRV Beta	2.40%	\$	238,975,372	
CORE PLUS - ACTIVE	14.65%		\$ 1,460,461,865	
Parametric - Fixed Income	0.22%	\$	21,805,530	
Mellon SLH Agg	85.13%	\$	8,483,363,754	
CORE PLUS - PASSIVE	85.13%		\$ 8,505,169,284	
TOTAL CORE PLUS	24.21%		\$ 9,965,631,148	
Oaktree Capital Management	0.10%	\$	1,205,338	
Aegon USA	32.94%	\$	399,097,647	
Prudential EMD	33.41%	\$	404,822,681	
PGIM High Yield	33.55%	\$	406,469,060	
TOTAL PUBLIC CREDIT	2.94%		\$ 1,211,594,726	
UBS - US	59.15%	\$	1,207,760,984	
UBS - Developed ex US	30.50%	\$	622,832,614	
UBS - EM	10.34%	\$	211,215,200	
TOTAL GLOBAL SMART BETA EQUITIES	4.96%		\$ 2,041,808,798	
Cash Account	58.17%	\$	327,412,258	
LARS Liquid Assets	41.83%	\$	235,459,133	
Parametric - Directed Trades	0.00%	\$	-	
Parametric - Synthetic Cash	0.00%	\$	-	
Public Real Assets Cash	0.00%	\$	-	
Pending Cash	0.00%	\$	-	
CASH ACCOUNT	1.37%		\$ 562,871,391	
Manager Name	Manager % of Asset Class		Total Market Value	
RREEF	123.63%	\$	802,815,899	
Clarion Partners	66.41%	\$	431,258,238	
Invesco	133.97%	\$	869,986,725	
UBS Realty	82.05%	\$	532,787,277	
REAL ESTATE	6.41%		\$ 2,636,848,138	
Brookfield Super Core Infrastructure	48.59%	\$	315,545,039	
Forest Invest	35.03%	\$	227,456,023	
UBS Farmland Investors	16.38%	\$	106,381,577	
OTHER REAL ASSETS	1.58%		\$ 649,382,639	
PRIVATE REAL ASSETS	7.98%		\$ 3,286,230,778	
RECENT MARKET VALUES				
11/24/2023	\$	41,158,180,045		
11/17/2023	\$	40,987,271,243		
11/10/2023	\$	40,312,736,097		
11/3/2023	\$	40,292,731,026		
10/27/2023	\$	39,316,036,527		
10/20/2023	\$	39,489,566,252		
10/13/2023	\$	39,992,851,861		
10/6/2023	\$	39,768,236,542		
9/29/2023	\$	40,025,136,107		

IPERS Portfolio Structure and Allocations
Quarter End September 30, 2023
\$40.2 Billion

Public Markets – 67% of Total Fund (Equities 39%)				
Domestic Equity \$8.2 Billion 20.4%		International Equity \$5.5 Billion 13.7%		Global Smart Beta \$2.0 Billion 4.9%
Active \$2.4 Billion 29.2%	Passive \$5.8 Billion 70.8%	Active \$3.2 Billion 57.7%	Passive \$2.3 Billion 42.3%	Passive \$2.0 Billion 100.0%
BlackRock (R1000 SAE) \$2.2 billion	BNY Mellon (R1000) \$5.5 billion	BlackRock (EAFE SAE) \$1.7 billion	BlackRock (EAFE) \$1.1 billion	UBS (U.S. Equity Smart Beta) \$1.1 billion
BlackRock (R2000 SAE) \$216.8 million	BNY Mellon (R2000) \$212.3 million	Columbia (EAFE) \$372.4 million	BlackRock (Canada) \$390.5 million	UBS (Developed ex U.S. Smart Beta) \$654.0 million
	Parametric (Synthetic) \$59.2 million	Panagora (Dynamic EAFE) \$360.9 million	BNY Mellon (Emerging) \$777.6 million	UBS (Emerging Market Smart Beta) \$205.6 million
		BlackRock (Emerging SAE) \$494.1 million	Parametric (Synthetic) \$36.8 million	
		Wellington (Emerging) \$244.7 million		

Terminated managers with residual amounts in their accounts are not included.

IPERS Portfolio Structure and Allocations
Quarter End September 30, 2023
\$40.2 Billion

Public Markets – 67% of Total Fund (Fixed Income and Cash 28%)					
Core Fixed Income \$9.0 Billion 22.5%			Public Credit \$1.2 Billion 2.9%		Cash \$877.6 Million 2.2%
Active \$1.5 Billion 16.1%		Passive \$7.6 Billion 83.9%	Active \$1.2 Billion 100.0%		
BlackRock (Core Plus) \$0.5 million	Western Asset (Core Plus) \$0.2 million	BNY Mellon Agg (Core) \$7.5 billion	Aegon USA (High Yield) \$390.9 million		BNY Mellon (Cash) \$642.9 million
Principal Global (Core Plus) \$0.1 million	MacKay Shields (Core Plus) \$0.7 million	Parametric (Synthetic) \$26.7 million	PGIM (High Yield) \$399.7 million		LARS Liquid Assets (Cash) \$234.7 million
PGIM (Core Plus) \$0.4 million	TCW (Core Plus) \$1.8 million		PGIM (Emerging Market Debt) \$390.1 million		
BlackRock Universal (Relative Value) \$596.6 million	PGIM Universal (Relative Value) \$491.9 million				
Man EM Global Macro (Relative Value) \$110.0 million	Mesirow EM Currency (Relative Value) \$250.1 million				

Terminated managers with residual amounts in their accounts are not included.

IPERS Portfolio Structure and Allocations
Quarter End September 30, 2023
\$40.2 Billion

Private Markets – 33% of Total Fund				
Private Equity \$7.9 Billion 19.7%	Private Real Assets \$3.2 Billion 8.0%	Private Credit \$2.3 Billion 5.7%		
Pathway Capital (Private Equity) \$7.9 billion	Clarion Partners (RE Equity) \$408.5 million	Tennenbaum Capital (Direct Lending) \$346.1 million	Principal Global II (Real Assets Credit) \$11.3 million	Audax Mezz Coinvest (Opportunistic Credit) \$12.1 million
	Invesco (RE Equity) \$849.5 million	Monroe Capital (Direct Lending) \$452.5 million	PGIM RE Global Debt (Real Assets Credit) \$186.4 million	Audax Mezz V (Opportunistic Credit) \$22.6 million
	RREEF (RE Equity) \$777.1 million	Pathway Capital (Direct Lending) \$138.9 million	Kayne Anderson IV (Real Assets Credit) \$105.1 million	Arrowmark (Opportunistic Credit) \$99.0 million
	UBS Realty (RE Equity) \$534.0 million		Heitman Credit (Real Asset Credit) \$81.0 million	Crestline Opp Credit (Opportunistic Credit) \$198.5 million
	Forest Investment (Timber) \$227.5 million		IFM USIDF (Real Asset Credit) \$61.9 million	Marathon SPS IA (Opportunistic Credit) \$110.3 million
	UBS Farmland Investors (Farmland) \$106.4 million		JP Morgan GTIF (Real Asset Credit) \$100.6 million	ARES PCS II (Opportunistic Credit) \$64.9 million
	Brookfield (Infrastructure) \$315.5 million			KKR Goldfinch (Opportunistic Credit) \$276.6 million

Alpha Report

For periods ending September 30, 2023

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IPERS' Active Manager Alpha Scorecard

Net of Fees as of 3Q23	3Q23	1 Year	3 Year	5 Year	SI	Perf	Org	People	Process
Domestic Equity									
BlackRock - Russell 1000 SAE	0.00%	0.24%	NA	NA	-0.18%				
BlackRock - Russell 2000 SAE	0.65%	0.62%	0.72%	NA	1.45%				
International Equity									
BlackRock – EAFE SAE	0.34%	2.58%	1.87%	NA	1.27%				
Columbia - EAFE	2.65%	1.21%	0.09%	NA	-1.04%				
PanAgora - Dynamic EAFE	1.04%	2.23%	2.23%	NA	0.54%				
Wellington - Emerging Markets	-1.50%	-2.04%	-0.67%	1.42%	0.01%				
BlackRock - Emerging Markets SAE	0.47%	0.89%	-0.83%	NA	-0.49%				
Core Fixed Income									
BlackRock - Universal	0.34%	-0.40%	NA	NA	0.94%				
PGIM - Universal	0.30%	5.65%	NA	NA	0.14%				
Public Credit									
PGIM - High Yield	0.29%	-1.20%	0.82%	NA	0.68%				
Aegon USA - High Yield	0.26%	-1.11%	0.40%	-0.05%	0.32%				
PGIM - Emerging Market Debt	0.27%	1.87%	0.71%	0.04%	0.66%				
LARS									
Aspect Capital	1.38%	0.25%	NA	NA	0.87%				
Graham Capital Management	2.02%	-0.57%	11.24%	0.59%	5.14%				
P/E Global	6.03%	-1.23%	6.87%	0.63%	5.04%				
PIMCO	3.32%	19.45%	NA	NA	18.22%				
PGIM Wadhvani	-3.76%	-17.15%	7.66%	0.57%	5.38%				
Welton Global	-1.73%	-17.92%	0.15%	NA	0.15%				
ARP	0.79%	-1.78%	NA	NA	-1.78%				

 No Concerns

 Minor Concerns

 Material Concerns

IPERS' Active Manager Listing

MANAGER	INCEPTION DATE	MANDATE	BENCHMARK
Domestic Equity			
BlackRock - Russell 1000 SAE	May 2022	Large Cap	Russell 1000
BlackRock - Russell 2000 SAE	May 2019	Small Cap	Russell 2000
International Equity			
BlackRock – EAFE SAE	May 2019	Developed EAFE	MSCI EAFE Index (net)
Columbia - EAFE	May 2019	Developed EAFE	MSCI EAFE Index (net)
PanAgora - Dynamic EAFE	May 2019	Developed EAFE	MSCI EAFE Index (net)
Wellington - Emerging Markets	February 2009	Global Emerging Markets	MSCI Emerging Markets (net)
BlackRock - Emerging Markets SAE	May 2019	Global Emerging Markets	MSCI Emerging Markets (net)
Core Fixed Income			
BlackRock - Universal	November 2020	Relative Value	Bloomberg Barclays U.S. Aggregate
PGIM - Universal	March 2021	Relative Value	Bloomberg Barclays U.S. Aggregate
Public Credit			
PGIM - High Yield	June 2019	High Yield	Bloomberg US HY 2% Capped Index
Aegon USA - High Yield	February 2012	High Yield	High Yield Policy Index
PGIM - Emerging Market Debt	April 2016	Emerging Market Debt	JP Morgan EMBI Global
LARS			
Aspect Capital	March 2022	Diversified Trend	Absolute Return
Graham Capital Management	December 2016	Tactical Trend	Absolute Return
P/E Global	December 2016	FX Strategy	Absolute Return
PIMCO	July 2022	Commodity Alpha	Absolute Return
PGIM Wadhvani	March 2017	Keynes Leveraged Quantitative Strategy	Absolute Return
Welton Global	June 2021	Welton Global	Absolute Return
ARP	November 2022	Alternative Risk Premium	Absolute Return

Private Market Program Manager Updates

For periods ending September 30, 2023

IPERS' PMP Manager Scorecard

	1 Year	5 Year	10 Year	SI	Performance	Organization	People	Process
Private Equity								
Multi-Strategy								
Pathway	2.1%	18.2%	17.1%	13.0%				
Private Credit								
Direct Lending								
BlackRock	7.4%	7.1%	N/A	7.2%				
Monroe	8.3%	6.9%	N/A	7.4%				
Pathway	8.4%	N/A	N/A	5.7%				
Opportunistic								
Arrowmark	11.4%	N/A	N/A	7.2%				
Ares Private Credit Solutions II	4.5%	N/A	N/A	2.9%				
Audax Mezzanine Fund V	5.2%	N/A	N/A	24.2%				
Audax Mezzanine Co-Invest Fund	10.3%	N/A	N/A	10.8%				
Crestline	12.6%	N/A	N/A	7.5%				
KKR	5.0%	N/A	N/A	7.1%				
Marathon	8.6%	N/A	N/A	6.2%				
Real Assets								
Heitman CREDIT	-1.1%	N/A	N/A	-1.1%				
IFM USIDF	N/A	N/A	N/A	2.6%				
PGIM Global Real Estate Debt	5.8%	6.3%	N/A	6.3%				
Principal Real Estate Debt II	-0.5%	4.7%	N/A	5.8%				
Kayne Anderson Real Estate Debt IV	8.7%	N/A	N/A	6.4%				
JP Morgan GTIF	N/A	N/A	N/A	0.7%				
Private Real Assets								
Real Estate								
Clarion Partners	-24.8%	-1.1%	4.6%	5.2%				
Invesco	-1.9%	15.7%	14.5%	11.1%				
RREEF	-10.1%	9.8%	10.6%	9.8%				
UBS Realty	-3.6%	13.5%	12.4%	10.4%				
Other Real Assets								
Brookfield	8.0%	N/A	N/A	6.6%				
Forest Investment Associates	11.2%	6.5%	5.4%	6.0%				
UBS Farmland	6.7%	4.1%	N/A	7.0%				



No Concerns



Minor Concerns



Material Concerns

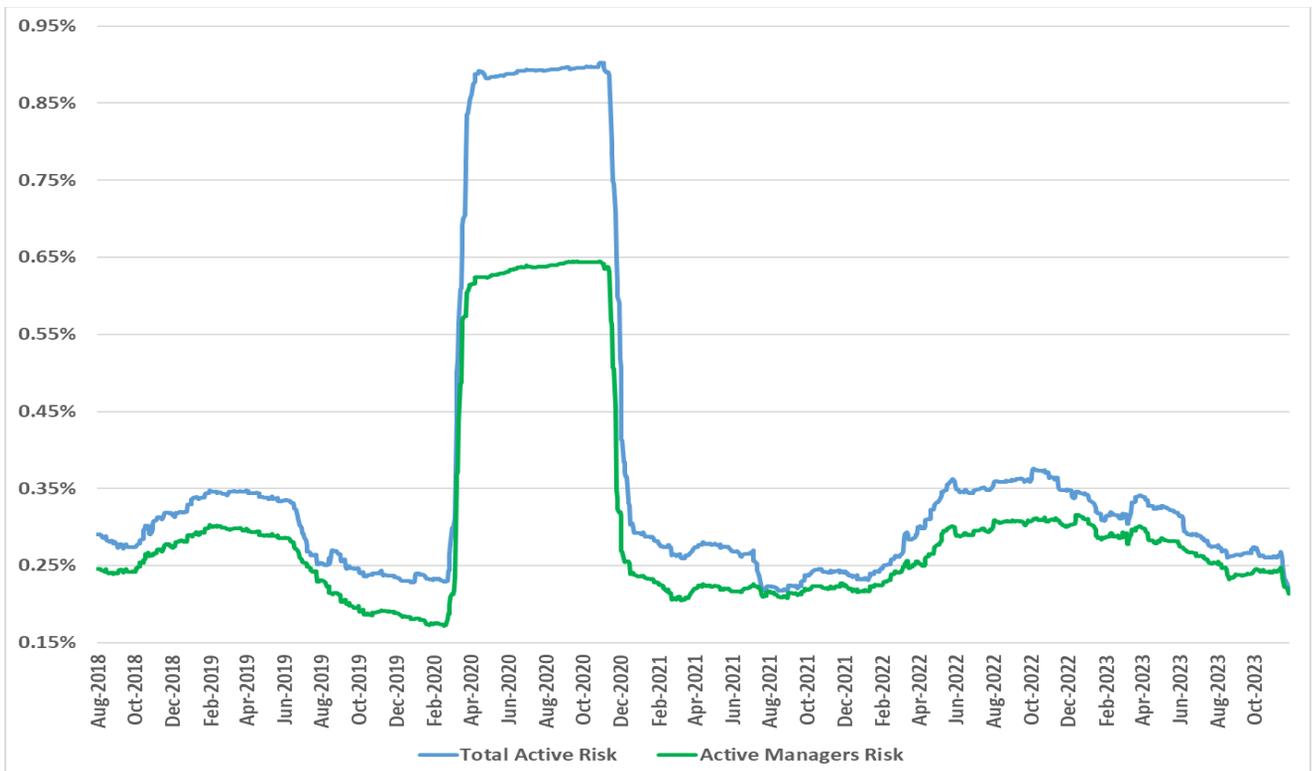
Active Risk –180 Days (Nov 2023)

	Active	Passive	Misfit	Total
Equities				
Domestic Equities	0.08%	0.01%	0.00%	0.08%
International Equities	0.12%	0.02%	0.00%	0.12%
Global Smart Beta Equities	-	0.01%	0.00%	0.01%
Fixed Income				
Core-Plus Fixed Income	0.11%	0.08%	0.01%	0.13%
Public Credit	0.03%	-	0.00%	0.03%
Cash/LARS	0.07%	-	-	0.07%
Asset Allocation	-	0.08%	-	0.08%
Total Public Markets	0.21%	0.11%	0.03%	0.22%

- Plan-level Total Active Risk reduced from 0.27% to 0.22%
- Active risk expected to stabilize in the next few months
- Core-Plus Fixed Income active risk is ticking down, will be compensated in part by new portable alpha mandates.

Target	1.50%
Upper Limit	3.00%

External Active Risk –180 Days (Nov 2023)



Investment Management Expenses

FY2023

Sriram Lakshminarayanan – CIO

December 7, 2023



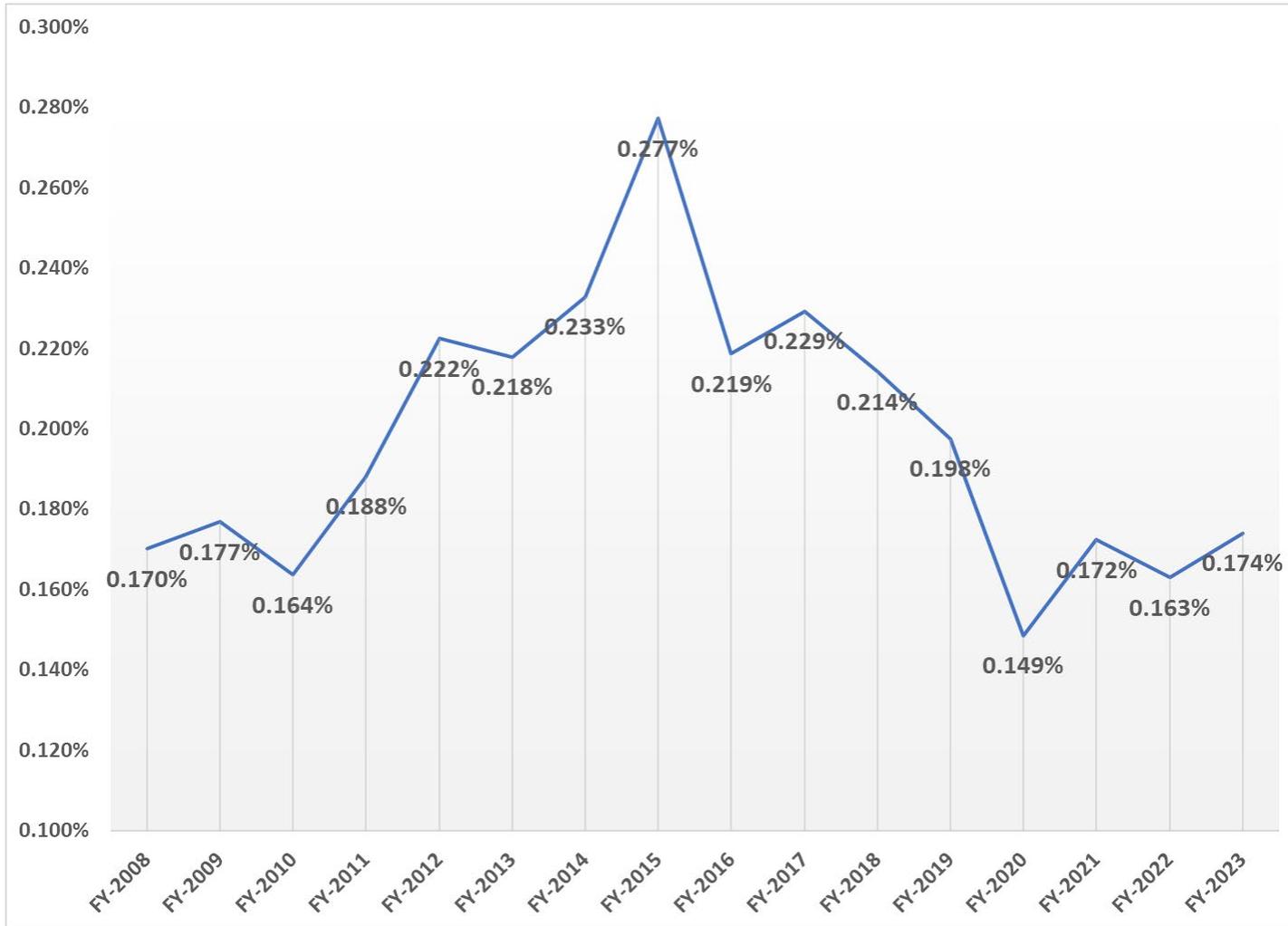
Investment Management Expenses

PRELIMINARY	FY23	FY23	FY23	FY23 Average	Cost as % of
	Mgmt. Fee	Incentive Fee	Total Fees	Market Value	Avg. Assets
<u>Investment Manager Fees</u>					
Core Plus - Passive	\$ (3,450)	N.A.	\$ (3,450)	\$ 3,702,289,500	0.000%
Core Plus - Active	\$ 1,202,252	\$ 407,258	\$ 1,609,510	\$ 4,989,270,500	0.032%
Public Credit	\$ 487,131	\$ -	\$ 487,131	\$ 1,216,474,250	0.040%
Domestic Equity - Passive	\$ (128,586)	N.A.	\$ (128,586)	\$ 5,730,132,250	-0.002%
Domestic Equity - Active	\$ 229,501	\$ 3,934,144	\$ 4,163,645	\$ 2,220,971,500	0.187%
International Equity - Passive	\$ 348,572	N.A.	\$ 348,572	\$ 2,677,585,250	0.013%
International Equity - Active	\$ 1,896,058	\$ 4,374,568	\$ 6,270,626	\$ 3,574,394,250	0.175%
Global Smart Beta	\$ 654,362	N.A.	\$ 654,362	\$ 1,973,072,000	0.033%
Cash - STIF*	\$ -	N.A.	\$ -	\$ 218,498,750	0.000%
Cash - LARS	\$ -	\$ 3,967,718	\$ 3,967,718	\$ 226,602,000	1.751%
Private Equity**	\$ 11,175,586		\$ 11,175,586	\$ 7,817,790,750	0.143%
Private Real Assets	\$ 16,505,257		\$ 16,505,257	\$ 3,414,589,750	0.483%
Private Credit***	\$ 12,659,342		\$ 12,659,342	\$ 1,940,521,000	0.652%
Total Manager Fees	\$ 45,026,026	\$ 12,683,689	\$ 57,709,714	\$ 39,702,191,750	0.145%
<u>Investment Related Services Fees</u>					
Investment Consultants	\$ 480,000	N.A.	\$ 480,000	\$ 39,702,191,750	0.001%
Custody Services	\$ 871,385	N.A.	\$ 871,385	\$ 39,702,191,750	0.002%
Total Services Fees	\$ 1,351,385		\$ 1,351,385	\$ 39,702,191,750	0.003%
<u>Administrative Costs</u>					
Commission Expenses	\$ 5,804,870	N.A.	\$ 5,804,870	\$ 39,702,191,750	0.015%
Investment Staff & Board Expenses	\$ 2,204,061	N.A.	\$ 2,204,061	\$ 39,702,191,750	0.006%
Miscellaneous Expenses	\$ 2,034,681	N.A.	\$ 2,034,681	\$ 39,702,191,750	0.005%
Total Administrative Costs	\$ 10,043,612		\$ 10,043,612	\$ 39,702,191,750	0.025%
TOTAL	\$ 56,421,023	\$ 12,683,689	\$ 69,104,711	\$ 39,702,191,750	0.174%
* Short Term Investment Fund (STIF) is managed by BNY Mellon, the System's custodian bank. The STIF charges a management fee of 10 bps per annum, which is netted from the earnings credited to the STIF.					
** Management fees and incentive fees paid to private equity partnerships are not recorded as an investment management expense, but are recorded as a reduction in the net appreciation in the fair value of private equity investments.					
*** Incentive fees paid to private credit funds are not recorded as an investment management expense, but are recorded as a reduction in the net appreciation in the fair value of private credit investments.					

Year-Over-Year Changes in Costs

Fee Category	FY23 Expenses	FY22 Expenses	Change in Dollars	Percentage Change
<u>Investment Manager Fees</u>				
Core Plus	\$ 1,606,060	\$ 5,123,938	\$ (3,517,878)	-68.7%
Public Credit	\$ 487,131	\$ 2,166,580	\$ (1,679,449)	-77.5%
Domestic Equity	\$ 4,035,059	\$ 1,075,536	\$ 2,959,523	275.2%
International Equity	\$ 6,619,198	\$ 4,052,547	\$ 2,566,652	63.3%
Global Smart Beta	\$ 654,362	\$ 786,607	\$ (132,245)	-16.8%
Cash - LARS	\$ 3,967,718	\$ 16,503,385	\$ (12,535,667)	-76.0%
Private Equity	\$ 11,175,586	\$ 10,439,602	\$ 735,984	7.0%
Private Real Assets	\$ 16,505,257	\$ 12,802,537	\$ 3,702,720	28.9%
Private Credit	\$ 12,659,342	\$ 7,023,253	\$ 5,636,089	80.2%
Total Manager Fees	\$ 57,709,714	\$ 59,973,985	\$ (2,264,271)	-3.8%
<u>Investment Related Services Fees</u>				
Investment Consultants	\$ 480,000	\$ 441,800	\$ 38,200	8.6%
Custody Services	\$ 871,385	\$ 823,394	\$ 47,991	5.8%
Total Services Fees	\$ 1,351,385	\$ 1,265,194	\$ 86,191	6.8%
<u>Administrative Costs</u>				
Commission Expenses	\$ 5,804,870	\$ 4,978,522	\$ 826,349	16.6%
Investment Staff & Board Expenses	\$ 2,204,061	\$ 2,247,923	\$ (43,862)	-2.0%
Miscellaneous Expenses	\$ 2,034,681	\$ 1,785,591	\$ 249,090	14.0%
Total Administrative Costs	\$ 10,043,612	\$ 9,012,036	\$ 1,031,577	11.4%
TOTAL	\$ 69,104,712	\$ 70,251,216	\$ (1,146,503)	-1.6%

Historical Trend



Comments

- **Investment Management expenses were 0.174% (17.4 basis points) of the Fund's FY2023 average market value**
- **Total investment management expenses decreased 1.6% from FY2022**
 - Investment manager fees reduced by 3.8%
 - Consultant and Custody costs increased by 6.8%
 - Administrative costs increased by 11.4%



IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Gregory S. Samorajski, CFA
Chief Executive Officer

Kim Reynolds
Governor

Adam Gregg
Lt. Governor

December 7, 2023

TO: IPERS Investment Board

FR: Policy Review Subcommittee and Investment Staff

RE: **Proposed Revisions to Investment Policies**

Private Markets Investment Policy

IPERS' current Private Markets Investment Policy is a long and enveloping document that addresses asset introductions, the policy and lastly the procedural aspects of illiquid portfolio management. Staff's concern was that over the years the Policy had become too wordy and instructional, reducing the effectiveness in communicating the Board's investment objectives for the private market program. Furthermore, specification of intricate constraints reduces the ability of staff and investments managers to be nimble and more topical in their decision making. The proposed change to the Policy attempts to address these concerns.

Areas deemed educational and/or procedural are being recommended for removal from the Policy with most of these procedural items being moved to an internal procedures document that shall be maintained by investment staff and reviewed on an annual basis.

Below is a summary of what we believe are the major policy revisions. However, we strongly recommend that you review the red line to the existing Policy to fully appreciate the scope of the changes. We look forward to discussing the proposed policy revisions in more detail at the Board meeting.

Summary of Proposed Revisions

1. **Clear accountability is a key theme.** The proposed policy attempts to define the key policymaking duties of the Board and clearly delegate decision-making for all other matters to the investment staff, subject to the guidelines established in the Policy and any statutory requirements or prohibitions.
2. **Focus on policy, not on instructions.** Several sections of the Policy are too "procedural" and such wordiness reduces the focus on the policies. As a result, lengthy investment philosophies, investment limitations, investment descriptions of each asset class, and procedures were eliminated or significantly reduced in the proposed Policy.
3. **Investment processes and procedures.** The proposed Policy requires the investment staff to maintain written processes and procedures around the private markets program, including the direct co-

investment program. A final processes and procedures document would be in place prior to the implementation of the CY2024 private market investment plan.

4. **Direct co-investments.** Investment staff are given authorization to make direct co-investments within the private credit and private real assets portfolios. In addition, the Investment Board grants staff the explicit authority to establish and maintain holding entities (such as Limited Liability Companies) to insulate the trust fund from single investment risks.
5. **Benchmarking Changes.** Private real assets have traditionally contained core real estate investments as an anchor with infrastructure, farmland and timber as satellite strategies. With farmland and timber mandates scheduled for potential liquidation, it makes sense to flip the order of importance of our asset class benchmarks to the NCREIF ODCE first and then to a secondary benchmark of CPI + 500bps.

IPGS - Summary of Proposed Revisions

1. **Clarity on tactical decisions by staff.**
 - a. The board has already authorized the CIO/staff to make tactical decisions on behalf of IPERS. The added language clarifies staff ability to buy/sell assets that may not be cleanly slotted into an existing asset class. For example, if staff would like to employ currency hedges or allocate a small amount to TIPS or short-term fixed-income instruments, this language clarifies the limits to which such transactions can be made.
 - b. Furthermore, some of these assets may have to be invested through a fully funded vehicle such as a Collective Trust Fund or a cleared swap or FX forwards etc. So, existing restrictions were relaxed to give discretion to staff on choosing the most cost efficient and liquid instruments.

APPENDIX - C -

PRIVATE MARKETS INVESTMENT POLICY

Pursuant to Iowa Code §97B, the Iowa Public Employees' Retirement System (IPERS) Investment Board (Board) establishes this Private Markets Investment Policy (Policy) that sets forth the responsibilities, investments and long-term objectives for the program.

The Board shall annually review the Policy, the program's investment plan (Plan) and the performance of the private markets portfolios.

IPERS recognizes that private market investments are illiquid. Vehicles that maximize investor control are preferred. IPERS may utilize the following investment vehicles within the private markets program: individually managed account vehicle, private limited partnerships, limited liability companies and other types of commingled fund structures. The Board authorizes staff to establish and maintain investment vehicles to house private market investments.

As it pertains to this Policy, the responsibilities of staff shall include the following:

- Review and recommend any proposed policy revisions to the Board.
- Inform the Board of the private markets plan, including the commitment allocations and any subsequent adjustments that may be necessary.
- Maintain investment processes and procedures, including monitoring investment guidelines and concentration limits.
- Recommend the hiring of specific managers to the Board.
- Maintain and monitor a list of Board-approved bench managers for future investments.
- Make direct co-investments within the private markets program, as authorized.

IPERS' private markets program consists of three portfolios: private equity, private credit and private real assets. The portfolios serve complementary roles within the program and at the total fund level. The role of private equity is to provide excess returns over the public equity markets. Private credit provides excess returns over the public credit markets, diversification and income. Private real assets provide diversification, income and an inflation hedge.

I. PRIVATE MARKET PORTFOLIOS

A. Private Equity

Private equity is equity capital that is not quoted or traded on a public exchange. Private equity investments are generally investments in buyout, venture capital, or special situations funds, as well as co-investments alongside these types of funds. Private equity investments may also include secondary offerings or private equity interests from other investors purchased in the secondary market.

The long-term return objective is 300 basis points (3 percent) greater than the Russell 3000 Index, net of investment management fees, calculated on an internal rate of return (IRR) basis over rolling 10-year periods.

Performance on both the portfolio and the benchmark shall be calculated on an internal, or dollar-weighted, rate of return basis. In recognition of the fact that IRRs are not meaningful in the early years of a private equity investment's life, the IRR performance calculation for the benchmark may be adjusted so that contributions made in the most recent three years of the rolling ten-year period are assumed to earn 91-day U.S. Treasury Bill returns.

B. Private Credit

Private credit is generally the investment in loans to companies, individuals and organizations for a variety of transactions including asset-based and cash flow-based financings, recapitalizations and acquisition-related financings. Private credit shall also include direct co-investments made in companies alongside IPERS' current private credit managers. For the purposes of this Policy, a direct co-investment is defined as a debt financing sourced from an existing IPERS private credit manager deemed in good standing.

The long-term return objective for IPERS' private credit program is to exceed the Morningstar LSTA Leveraged Loan Index plus 1 percent, net of investment management fees, calculated on an internal rate of return basis over rolling five-year periods.

C. Private Real Assets

Private real assets are physical assets that have intrinsic value due to their substance or properties, and mainly includes investments in commercial real estate (real estate) and infrastructure (other real assets). Private real assets shall also include direct co-investments made in companies alongside IPERS' current private real assets equity managers. For purposes of this Policy, a direct co-investment is defined as an equity investment sourced from an existing IPERS' private real assets manager deemed in good standing.

The primary return objective for the real assets portion of the program is to exceed the National Council of Real Estate Investment Fiduciaries' Open-End Diversified Core Index (ODCE), net of investment management fees, calculated on a time-weighted basis over rolling 10-year periods.

The secondary return objective for the other real assets portion of the program is to exceed CPI + 5 percent, net of investment management fees, calculated on a time-weighted basis over rolling 10-year periods.

APPENDIX - C -

PRIVATE MARKETS INVESTMENT POLICY

Pursuant to Iowa Code §97B, the Iowa Public Employees' Retirement System (IPERS) Investment Board (Board) establishes this Private Markets Investment Policy (Policy) that sets forth the responsibilities, investments, and long-term objectives ~~and policies for the program.~~ private market investments. ~~Allocations to the private markets program shall be determined through the asset allocation review process.~~

The Board shall annually review the Policy, the program's investment plan (Plan), and the performance of the private markets portfolios.

IPERS recognizes that private market investments are illiquid in nature. Vehicles that maximize investor control are preferred. IPERS may utilize the following investment vehicles within the private markets program: individually managed account vehicle, private limited partnerships, limited liability companies and other types of commingled fund structures. ~~In addition, The Board authorizes staff IPERS may act to to establish and maintain holding entities investment vehicles for the purpose of holding its investments and/or assets to house private market investments.~~

As it pertains to this Policy, the responsibilities of staff shall include the following:

- Review and recommend any proposed policy revisions to the Board.
- Inform the Board of the private markets plan, including the commitment allocations and any subsequent adjustments that may be necessary.
- Maintain investment processes and procedures, including monitoring investment guidelines and concentration limits.
- Recommend the hiring of specific managers to the Board.
- Maintain and monitor a list of Board-approved bench managers for future investments.
- Make direct co-investments with the private markets program, as authorized.

IPERS' private markets program consists of three portfolios: private equity, private credit and private real assets. The portfolios serve complementary roles within the program and at the total fund level. The role of private equity is to provide excess returns over the public equity markets; ~~Pp~~ private credit provides excess returns over the public credit markets, diversification and income; ~~while Pp~~ private real assets provide diversification, income and an inflation hedge.

~~Each of the program's portfolios are described below. Also integral to this Policy is Exhibit A, a description of permitted investments for the program's three portfolios, and Exhibit B, the program's procedural policies.~~

I. PRIVATE ~~MARKET PORTFOLIOS~~ EQUITY

A. ~~Private Equity~~ Definition

Private equity is equity capital that is not quoted or traded on a public exchange. Private equity investments are generally investments in buyout, venture capital, or special situations funds, as well as co-investments alongside these types of funds. ~~Private equity investments may also~~ but may include secondary offerings or private equity interests from other investors purchased in the secondary market. ~~some co-investment alongside these types of funds. Exhibit A provides a more detailed description of the types of permitted investments.~~

B. ~~Investment Philosophy~~

~~Traditional public equity markets have become increasingly efficient. The private equity market, however, remains inefficient and illiquid partially because of privately negotiated, non-auction pricing mechanisms. Return premiums exist for investors who accept the illiquid and inefficient characteristics of the private equity market, and who are willing to take an opportunistic investment approach.~~

~~Because of the inefficiencies found in the private equity market, successful investment requires an active, targeted and opportunistic approach. In an inefficient market, passive investment in a broad array of market segments is likely to lead to underperformance. Therefore, IPERS will delegate investment selection to an experienced, qualified manager. The Manager will utilize a systematic approach to the identification of and participation in specific investments. The following screening criteria will be utilized by the Manager as a key element of the systematic approach to the identification of suitable venture capital and special equity investment opportunities for the System:~~

- ~~———— Experience, qualifications and responsibilities of the general partners~~
- ~~———— Past investment results of the general partners~~
- ~~———— Quality of the general partners' deal flow sources~~
- ~~———— Demonstrated deal exiting capability on the part of the general partners~~
- ~~———— Special expertise of the general partner, unique deal flow source, or other competitive advantage~~
- ~~———— Limit of liability by the pension fund to the amount of their investment (for example limited partnerships)~~
- ~~———— General contribution of the opportunity to the diversification of the program~~

C. ~~Return Objective~~

The long-term return objective is 300 basis points (3 percent) greater than the Russell 3000 Index, net of investment management fees, calculated on an internal rate of return (IRR) basis over rolling ~~ten~~10-year periods.

Performance on both the portfolio and the benchmark shall be calculated on an internal, or dollar-weighted, rate of return basis. In recognition of the fact that IRRs are not meaningful in the early years of a private equity investment's life, the IRR performance calculation for the benchmark may be adjusted so that contributions made in the most recent three years of the rolling ten-year period are assumed to earn 91-day U.S. Treasury Bill returns.

D.B. Private Credit~~Investment Policies~~

~~1. Co-Investments and Secondaries~~

~~The Manager may utilize direct co-investments in companies alongside of IPERS' current general partners. For purposes of this Policy, a direct co-investment is defined as a direct investment in the equity of a portfolio company alongside an existing IPERS partnership deemed in good standing. A direct co-investment does not include a co-investment fund (a partnership organized with the goal of investing in multiple direct co-investments). In addition, the Manager may also participate in secondary offerings or purchase private equity interests from other investors on the secondary market.~~

~~2. Investment Limits~~

- ~~a. The maximum investment in any limited partnership, group trust, or limited liability company vehicle shall not exceed 20 percent of the total capital committed by all partners at the time of the final closing for each fund, and shall not exceed \$80 million without the prior approval of the Board.~~
- ~~b. The maximum investment in any single direct co-investment shall not exceed \$15 million. IPERS' total investment in direct co-investments shall not exceed 15 percent of the IPERS private equity portfolio on a cost basis at the time of investment.~~

II. Private Credit

A. Definition

Private credit is generally the investment in loans to companies, individuals and organizations for a variety of transactions including asset-based and cash flow-

based financings, recapitalizations and acquisition-related financings. ~~Exhibit A provides a more detailed list of permitted private credit investments. Private credit shall also include direct co-investments made in companies alongside of IPERS' current private credit managers. For the purposes of this Policy, a direct co-investment is defined as a debt financing sourced from an existing IPERS' private credit manager deemed in good standing.~~

~~B. Investment Philosophy~~

~~Traditional public credit markets offer a relatively liquid market for issuers of debt securities and buyers of debt instruments. The private credit markets, where borrower and lender agree to terms via privately negotiated transactions, are by nature illiquid. Return premiums exist for investors who accept the illiquid and inefficient characteristics of the private credit market, and who are willing to take an opportunistic investment approach throughout the credit cycle.~~

~~C. Return Objective~~

~~The long-term return objective for IPERS' private credit program is to exceed the MorningstarS&P/_LSTA Leveraged Loan Index plus 1 percent, net of investment management fees, calculated on an internal rate of return basis over rolling five-year periods.~~

~~D. Investment Policies~~

~~1. Credit~~

~~IPERS may commit capital to partnerships or separate account vehicles for the purpose of investing in private credit or credit-like strategies with a primary focus on current income. IPERS will seek investment managers for private credit mandates that have expertise in underwriting credit and the operational resources required to adequately monitor and manage a large diversified loan or leasing portfolio.~~

~~2. Direct Credit Co-Investments and Secondaries~~

~~Managers may utilize direct credit co-investments in companies alongside of IPERS' current private credit or private equity mandates. For purposes of this Policy, a direct credit co-investment is defined as either (i) a co-investment alongside of an existing IPERS' private credit mandate deemed in good standing or (ii) a debt financing investment sourced from an existing IPERS' private equity partnership deemed in good standing. In addition, the Managers may also participate in secondary offerings or purchase private credit interests from other investors on the secondary market.~~

~~3. Investment Limits~~

- ~~a. The System's investment in any limited partnership, limited liability company vehicle or other type of fund structure shall not exceed 20 percent of the total capital committed by all partners at the time of the final closing for each fund.~~

~~The maximum investment in any single direct credit co-investment shall not exceed \$15 million. IPERS' total investment in direct credit co-investments shall not exceed 15 percent of the IPERS private credit portfolio on a cost basis at the time of investment.~~

~~III. Private Real Assets~~

~~C. Private Real Assets Definition~~

~~Private real assets are physical assets that have intrinsic value due to their substance or properties, and mainly includes investments in commercial real estate (real estate) ~~and farmland, timber~~ and infrastructure (other real assets). Private real assets shall also include direct co-investments made in companies alongside of IPERS' current private real assets equity managers. For purposes of this Policy, a direct co-investment is defined as an equity investment sourced from an existing IPERS' private real assets manager deemed in good standing.~~

~~A. Investment Philosophy~~

~~The primary role of the private real assets program is to provide diversification through low correlation with other portfolio asset classes; the secondary role is to provide income; and the third role is to provide inflation protection.~~

Return Objectives

~~1. Private Real Assets Portfolio Program~~

~~The long-term return objective for IPERS' private real assets program is to exceed CPI-U (NSA) by 500 basis points (CPI + 5 percent), net of investment management fees, calculated on a time-weighted basis over rolling ten~~10~~-year periods.~~

~~2. Portfolio Program Investments~~

The primary return objective for the real ~~estate assets~~ portion of the program is to exceed the National Council of Real Estate Investment Fiduciaries' Open-End Diversified Core Index (ODCE), net of investment management fees, calculated on a time-weighted basis over rolling ~~10~~ten-year periods. ~~Portfolio level returns will be utilized in the evaluation of manager performance.~~

The secondary return objective for the other real assets portion of the program is to exceed CPI + 5 percent, net of investment management fees, calculated on a time-weighted basis over rolling ~~10~~ten-year periods.

Investment Policies

~~1. Investment Diversification~~

~~Real estate investments will constitute at least 50 percent of the private real asset investment value; other real assets will not exceed 50 percent of the private real assets investment value. The 50 percent minimum and 50 percent maximum above shall be applied to the sum of the private real asset portfolio's current investments at net asset value plus unfunded commitments.~~

~~Real estate investments shall be diversified such that core real estate constitutes at least 80 percent of the real estate portfolio and non-core and market driven opportunity investments (as those terms are defined in Exhibit A) shall not exceed 20 percent of the real estate portfolio.~~

~~Staff will strive to ensure that IPERS' core real estate portfolio has property type and regional weightings that are within +/- 10 percent of the weightings reported by NCREIF for the ODCE Index.~~

~~IPERS will diversify its real estate investment manager structure such that no manager will manage more than 35 percent of the real estate program assets.~~

~~Timberland investments will be diversified by region, land class (raw land, pre-merchantable timber and merchantable timber), timber type and age class.~~

~~Farmland investments will be diversified geographically throughout the United States and by crop type. The three primary categories of crops that shall be included are commodity crops (corn, soybeans, wheat, cotton, etc.), vegetable crops (lettuce, green vegetables, etc.) and permanent crops (fruits, nuts, grapes, citrus, etc.).~~

~~Infrastructure investments shall be diversified geographically and across the transportation, energy and utility sectors.~~

~~2. Investment Limits~~

~~The maximum investment or co-investment in any single real estate or other real assets investment is 0.5 percent of IPERS' total Fund market value at the time of the commitment. IPERS shall not hold more than a 20 percent interest in any commingled fund vehicle.~~

~~3. Leverage~~

~~Leverage on real estate investments is limited to 40 percent at the manager portfolio level, 50 percent at the property level for core investments and 60 percent at the property level for non-core investments. These limits shall apply at the time of acquisition or the placement of debt. Changing market conditions or circumstances beyond IPERS' control that occur after acquisition or placement of debt may cause these limitations to be exceeded temporarily.~~

~~Given their stable cash flow and low variability of revenue, infrastructure assets can support more debt. For this reason, infrastructure investments may utilize up to 65 percent debt at the fund level and will be expected to use no more than 80 percent on any given asset. These limits will be reviewed on a case by case basis and determination of the debt level will be dependent on the investment type and risk characteristics of the investment.~~

~~Farmland and timberland investments shall not utilize leverage.~~

EXHIBIT A
INVESTMENT DESCRIPTIONS

Permitted investments for each portfolio of the private markets investment program are described below:—

I. PRIVATE EQUITY

A. U.S. and non-U.S. venture capital investments

- ~~1. Early venture— Focuses on initial financing of start-up and early-stage companies. Companies at this stage often do not have fully formed management teams or completely defined products, and usually do not have sales or earnings.~~
- ~~2. Growth venture— Aims to provide expansion capital to mid- and late-stage companies that are increasing capacity and expanding market share.~~
- ~~3. Established growth venture— Focuses on investments in mature companies which are well-established in the market, operating profitably or at cash flow break-even and growing at an above-industry growth rate. Investment is made due to an opportunity for further expansion.~~

B. U.S. and non-U.S. special equity investments

- ~~1. Corporate finance— Includes leverage buy-out, management buy-out and influence-block investment strategies.~~
- ~~2. Recovery securities— Includes equity and debt instruments of companies involved in turnaround, restructuring, deleveraging or bankruptcy situations.~~
- ~~3. Mezzanine securities— Placed between debt and equity in a company's capital structure, mezzanine securities are typically subordinated debt instruments for late-stage venture and mature companies, and offer income through a current coupon and equity participation through a warrant.~~
- ~~4. Other investments— Includes those investments not defined above. This category is designed to capture those innovative investment opportunities created by the marketplace that do not fit an existing category. The Manager may not invest in investments that would fall within this subcategory without specific approval from the staff.~~

~~II. PRIVATE CREDIT~~

~~A. Real Assets Credit~~

~~Any loan secured by a lien on the borrower's collateral. These loans will be predominately made in commercial real estate, which includes any income-producing real estate that is used solely for business purposes, such as retail centers, office complexes, hotels and apartments. Other examples of potential loans that may be made within real assets credit would include infrastructure, energy, trade finance and transportation loans. Real assets credit may also include strategies focused on leasing including transportation or other assets. These strategies will resemble credit-like return profiles, focused primarily on current income, and are reliant on third-party credit for the lease of the assets.~~

~~B. Middle Market Direct Lending~~

~~Primarily first lien senior secured floating rate loans to middle market companies. These loans are typically made for the purposes of leveraged buyouts, recapitalizations, acquisitions and funding of growth strategies by investors and/or businesses.~~

~~C. Opportunistic Credit~~

~~Investments in closed-end funds or separately managed accounts that invest in specific types of credit or lending strategies, or opportunistically invest across multiple types of credit and lending strategies. Opportunistic credit may encompass asset-based lending and/or cash-flow lending strategies.~~

~~III. PRIVATE REAL ASSETS~~

~~A. Real Estate~~

~~1. Core real estate investments are commercial properties located in the United States which derive their value primarily from current income production, and therefore represent lower risk profiles than non-core properties. It is anticipated that core investments will generate at least 70 percent of their total returns from income. Core investments are stabilized, substantially leased properties in the four major property types:~~

~~a. Office: Central business district or suburban.~~

~~b. Retail: Neighborhood centers, community centers, regional/super-regional centers (malls), specialty centers, power centers and single tenant properties.~~

- ~~e. Industrial: Flex space, research and development facilities, warehouse and other (manufacturing and office showroom).~~
 - ~~d. Apartments: High-rise, low-rise and garden-type apartments.~~
- ~~2. Non-core real estate investments are commercial properties located in the United States that represent a higher risk profile than core properties. It is anticipated that non-core investments will generate at least 50 percent of their total return from income over the underwriting period. These investments include the following:~~
-
- ~~a. Properties which are acquired primarily for high appreciation potential, and are expected to derive their value primarily from appreciation returns.~~
 - ~~b. Properties which would be core except for an identifiable and correctable deficiency such as the need for lease-up, renovation, or conversion of an existing property, or the need for development adjacent to an existing owned property.~~
- ~~3. Market driven opportunities are tactical investments in commercial properties located in the United States that have been approved by IPERS staff due to the perceived opportunity for IPERS to earn a higher risk-adjusted return than what can be provided by core private real estate investments. These investments include the following:~~
- ~~a. Specialty property types including, but not limited to: hotel, self-storage, senior living and raw land.~~
 - ~~b. Development of assets (build to core) on a very selective basis. IPERS will not assume construction risk but may assume lease-up risk.~~
- ~~4. The private real estate investment program shall not include special-purpose facilities such as casinos and factories, which generally carry unacceptable business risks.~~

~~B. Other Real Assets~~

- ~~1. Farmland investments are equity ownership in commercial agricultural properties. IPERS will seek to build a farmland portfolio that is well-diversified geographically throughout the United States and by crop type. The three primary categories of crops that shall be included are commodity crops (corn, soybeans, wheat, cotton, etc.), vegetable crops (lettuce, green vegetables, etc.) and permanent crops (fruits, nuts, grapes, citrus, etc.).~~

- ~~2. The timberland portion of private real assets may be invested in three primary regions across the United States: Pacific Northwest, Southeast and Northeast. In addition, this portion of the program will be diversified by land class (raw land, pre-merchantable timber and merchantable timber), timber type and age class.~~
- ~~3. IPERS may invest in partnerships or funds that invest predominantly in stabilized, income producing infrastructure assets (aka brownfield infrastructure), which may include transportation (toll roads, bridges, tunnels, sea ports, airports, etc.) and energy and utility (gas, electricity, water, etc.) infrastructure assets.~~

EXHIBIT B
PROCEDURAL POLICIES

I. ~~DUE DILIGENCE~~

~~Due diligence shall be performed through the selection, evaluation, acquisition, monitoring and disposition stages of the investment process. Thorough due diligence shall be accomplished by the following means:~~

- ~~A. Establishing and adhering to investment evaluation criteria which shall identify key sources of risk to be monitored during the life of each investment.~~
- ~~B. Reviewing the track record of the manager; evaluating the risk of loss and the potential for gain of each investment; evaluating the suitability of the financial structure; and evaluating costs, time horizon and the manager's exit strategy.~~
- ~~C. Negotiating and structuring fundamental rights and protections with each manager which shall permit remedial action when necessary. These basic rights and protections shall include where appropriate distribution covenants and specific "exit" or voting rights in the event of a change of control or material adverse change.~~
- ~~D. Seeking special reporting covenants to apply throughout the life of the investment.~~
- ~~E. Reviewing each investment at least annually to determine whether retaining the investment is warranted on a risk-adjusted basis within the context of IPERS' total portfolio and relative to the investment objectives established for that particular investment.~~
- ~~F. Maintaining an investment Watch List. It is expected that over time some investments shall experience difficulty due to economic or market-specific factors. IPERS staff and consultant shall maintain the Watch List, which will set forth the key issues to monitor and action plans to improve investment results.~~
- ~~G. Specifying the valuation methodology for the life of the investment. The timing of valuations shall vary across the portfolio. IPERS preference is to have independent third party appraisers utilized by the manager for determining value. IPERS shall reserve the right to engage its own appraiser to value the investments, and may adopt and maintain its own valuation accounting conventions.~~
- ~~H. Controlling investment risks by limiting the potential of any one investment to negatively impact long term results, IPERS and its Manager will diversify the~~

~~portfolio in the following areas: manager/general partner, vintage year, geographic and economic region, industry, and investment type.~~

- ~~I. Ensuring that no investment is made or held without a qualified manager or independent fiduciary under contract to provide the appropriate investment monitoring and guidance.~~

~~II. INVESTMENT POLICIES~~

~~A. Investment Roles~~

- ~~1. The Board shall approve the Private Markets Investment Policy (Policy) and the portfolio Investment Plans (Plans); retain qualified managers; and review at least annually the performance of the private markets portfolios.~~
- ~~2. The staff shall recommend to the Board the Policy and the Plans; recommend the hiring of specific managers; maintain and monitor a Board approved bench manager list for potential future investments; approve investment allocations to specific managers and investment opportunities; monitor, communicate and meet with managers; monitor and evaluate investment performance; negotiate business terms and compensation packages; develop implementation plans; coordinate the receipt and distribution of capital between the managers with respect to investments and dispositions; and serve on any advisory boards or committees associated with the approved investments.~~
- ~~3. The staff shall determine the annual maximum investment commitment amount and communicate such amounts to the Manager(s) in writing. The annual commitment amount decision will be based on portfolio diversification, current allocation, target allocation, expectations for future pace of drawdowns and distributions, expected market environment, etc. Staff will inform the Board of its annual commitment allocation decision and also of any subsequent adjustments that may occur based on market conditions or fundraising schedules.~~
- ~~4. The Managers shall acquire, manage and dispose of private market investments on behalf of IPERS in accordance with the Policy, the Plans, and the terms of the investment agreement executed between IPERS and the Manager, or any applicable investment vehicle's governing documentation. They shall also communicate key issues and overall performance to the Board, staff and consultant.~~

~~For fund-of-fund or fund-of-one investments, the Manager shall actively negotiate partnership agreements on behalf of IPERS or the fund's investors. The foremost duty of the Manager in negotiating partnership agreements shall be to ensure that the interests of the general partner are aligned with the interests of IPERS and the other limited partners. The Manager shall negotiate terms that adequately compensate the general partner for its efforts, while ensuring that the partnership is structured so that IPERS is treated fairly and is adequately compensated for the risk taken by investing in the partnership.~~

- ~~5. The consultant shall monitor the private markets program for compliance with the Policy and the Plans, and shall recommend revisions to the Policy, the Plans, the manager roster and the investments. The consultant shall further be responsible for identifying investment opportunities and participating with staff in conducting manager searches and negotiating business terms and performance compensation packages. Technical advice and support also shall be provided. Finally, the consultant shall provide performance measurement analysis. The Board and staff shall expand or contract these responsibilities as needed.~~

~~B. Evaluation and Review of Policy~~

~~The Policy shall be reviewed, by the staff and consultant no less than annually. Any proposed Policy revisions shall be submitted for approval to the Board.~~

~~C. Investment Vehicles~~

~~IPERS recognizes that private market investments are illiquid in nature. Vehicles that maximize investor control are preferred. IPERS may utilize the following investment vehicles within the private markets program: individually managed account vehicle, private limited partnerships, limited liability companies and other types of commingled fund structures. In addition, IPERS may act to establish and maintain title holding entities for the purpose of taking title to and holding its investments and/or assets.~~

~~D. Private Market Investment Plans~~

~~The Plans for each portfolio of the private markets investment program are established to identify and communicate the investment goals and needs of the program's portfolios for each calendar year. The particular needs for each Plan will be established in light of the structure, objectives, and performance of the existing program, as well as current market opportunities. The Plans will be reviewed and revised annually.~~

Investment Policy and Goal Statement

I. INTRODUCTION

The Iowa Public Employees' Retirement System (IPERS or System) is governed by Iowa Code chapter 97B. System assets are held in trust and invested for the exclusive purposes of providing benefits to participants and their beneficiaries, minimizing contributions, and defraying reasonable expenses of administering the System. The investment activities of the System are governed by the "prudent person" rules as defined in §97B.7A. The investment policy and the investment strategies will be periodically reviewed to ensure they conform to §§97B.7A and 97B.8A.

The Investment Board (Board) is the trustee of the IPERS Trust Fund (Fund). The Board shall establish the System's tolerance for investment risk, and shall diversify the System's investments to minimize the risk of unacceptable large losses and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so. The Board also adopts the actuarial assumptions and methods, approves the retention of service providers in matters relating to the actuarial valuation of the System's assets and liabilities, and adopts the System's contribution rate funding policy. A list of the statutory and administrative duties of Board and staff is provided in Appendix A.

The chief investment officer (CIO), under the supervision of the chief executive officer (CEO), is responsible for the administration of the System's investment program pursuant to the policies of the Board.

II. INVESTMENT OBJECTIVES

The investment activities will be designed to provide a return on the Fund that, when coupled with the periodic contributions of the membership and employers, will meet or exceed the benefit funding requirements of the plan over time while staying within the Board's tolerance for risk expressed in this policy.

The objective of the CIO is to execute the asset allocation policy established by the Board (the policy benchmark defined in this policy), and to attempt to add value relative to the policy benchmark while staying within the Board's tolerance for active risk.

III. DECISION MAKING

The Board is responsible for establishing broad policy guidelines and benchmarks that will enable the Fund to achieve its investment objectives. Board decisions are required in the following areas:

1. Establish asset allocation targets through adoption of a policy benchmark
2. Establish acceptable ranges around the policy benchmark targets

3. Establish the Fund- and program-level benchmarks
4. Establish the active risk budget

Beyond these broad policy decisions, the Board delegates to the CIO all other decision-making relating to the investment of IPERS assets, subject to the guidelines established in this policy and any statutory requirements or prohibitions.

The Board may utilize the services of investment consultants to assist them in their decision-making. Such services include, but are not limited to, conducting asset-liability and asset allocation studies, investment performance reviews, policy reviews and topical studies.

IV. ASSET ALLOCATION

The Board's asset allocation policy is established in the policy benchmark and the asset class ranges specified in Appendix B. The policy benchmark weights set the Board's target exposure to each asset class, measured on a market value basis, while the asset class ranges establish the ranges within which actual weights may fluctuate. Positioning within a specified asset class range is acceptable and constitutes compliance with the policy benchmark.

IPERS' assets are divided into two groups for allocation purposes: *private markets* and *public markets*. Private market assets are generally illiquid, infrequently priced investments with long horizons. The Board has established a private markets investment policy specifying investment objectives, benchmarks, etc. for these types of assets. (See Appendix C)

It is the responsibility of the CIO to manage the allocation weights within the public market asset class ranges and keep them close to target, unless the CIO decides to tactically over- or under-weight a particular public market asset class. However, staff cannot quickly rebalance private markets to target weights due to the illiquid nature of private market assets, so any excess or deficiency between actual and target allocation for private market assets as a whole will be proportionately reallocated across all public market asset classes when rebalancing occurs.

The policy benchmark return is the sum of the products of the policy benchmark weights and the respective policy benchmark index returns for the period, with the exception that IPERS' actual weights and actual returns for each private market asset class shall be used in the calculation. If staff utilizes derivatives for rebalancing or tactical allocation decisions, the notional amount of derivatives contracts shall be used in calculating compliance with policy benchmark weights and asset class ranges.

V. ACTIVE RISK ALLOCATION AND MANAGEMENT

“Alpha” is the excess return resulting from active management decisions. IPERS believes positive alpha can be earned by employing a combination of active strategies that have low return correlation with one another, exhibit low correlation with beta returns and higher correlation to liability returns.

The Board has established an active risk budget in Appendix B as a means of controlling the active risk in the IPERS Trust Fund. The active risk budget consists of two components: risk allocated for external active management and risk allocated for internal active management through tactical allocation decisions. Active risk is measured as tracking error, which is the standard deviation of excess returns.

IPERS will seek to maintain a diversified alpha portfolio, and may utilize any strategy that in the discretion of the CIO will enhance the risk-adjusted return of the alpha portfolio, including but not limited to traditional long-only, long/short, portable alpha, derivative overlay and leveraged strategies. The CIO must formally authorize any tactical allocation decisions, and each decision shall be documented and tracked for performance evaluation purposes. Tactical allocation decisions by staff shall not result in allocations that would violate the asset class ranges set by the Board.

IPERS’ investment in an investment manager’s actively managed strategies shall not exceed 20 percent of the manager’s total actively managed assets under management. The CIO shall have discretion to determine what types of similar products offered by a manager can be included in the definition of “actively managed strategies” for purposes of this calculation.

Cost efficiency is important, and the CIO should seek to implement active strategies with a high conversion ratio of active return (after fees) to the risk deployed. Active strategies shall use performance incentive fee structures, where appropriate, to ensure the economic interests of IPERS and the manager are properly aligned.

Investment staff has been granted the authority to buy and sell widely available, exchange-traded futures contracts and exchange-traded funds (ETFs) liquid and cost-efficient financial instruments, including but not limited to ETFs, futures, swaps and other derivatives for the purpose of implementing risk management or tactical asset allocation strategies. Tactical positions that are taken on assets that do not form a part of the policy will be accounted for in the Cash asset class on a net notional exposure basis. Investment staff is also authorized to invest in swaps for an Alternative Risk Premia internal investment program (the “ARP Program”), and may create or utilize limited liability corporations (LLCs) for the purpose of implementing the ARP Program. The Board authorizes staff to establish and maintain investment vehicles such as individually managed accounts, private limited partnerships, limited liability companies

and other types of commingled fund structures to house the ARP Program and other authorized initiatives.

VI. EXTERNAL INVESTMENT MANAGEMENT

The Board shall approve the hiring of investment management and investment consulting services. The CIO has full authority to terminate investment manager contracts provided the Board is notified of the termination prior to the effective date of the termination. The CIO also has full authority to negotiate and renegotiate contract terms and fees.

The CIO is responsible for ensuring that adequate due diligence is being performed in the evaluation of potential and existing investment managers. The CIO may hire operational due diligence consultants, attorneys, auditors and other service providers as needed to assist in the due diligence and performance evaluation of external investment management firms.

External investment managers shall have full discretion to direct and manage the investment and reinvestment of assets allocated to their accounts in accordance with this document, applicable federal and state statutes and regulations, and the executed contracts. Each contract for a public market active management strategy shall clearly define investment objectives, permitted investments, concentration limits, risk budgeting parameters and performance benchmarks.

Investment managers shall have full discretion to establish and execute trades through accounts with one or more securities broker/dealers as the managers may select. However, the System may require investment managers to clear trades through clearing brokers that are under contract to IPERS in order to control risk and costs. Investment managers will attempt to obtain "best execution" with respect to all transactions. Best execution is defined as the process and price that results in the best overall performance impact, taking into account market conditions at the time of the trade. IPERS will generally discourage a manager's use of soft dollar arrangements for IPERS' account, but may allow it if the usage is regularly monitored for reasonableness.

The CIO will provide the Board a summary of active management performance at least quarterly, and will highlight any concerns regarding performance, personnel turnover, or changes in the organization or investment process. The investment consultant will provide the Board semi-annual performance reviews of total Fund, asset class, and manager performance. To the extent possible, investment results will be reviewed in the context of risk-adjusted returns.

Any voting rights of securities held in any separate account, or any collective, common, or pooled fund will be exercised by the manager, trustees, or agents of said account or fund in accordance with their own proxy voting policies, provided that such policies

have been reviewed by the System and deemed to be in the best economic interests of IPERS. The System shall periodically review each investment manager's proxy voting policy and its compliance with such policies.

VII. RISK MANAGEMENT

The Fund's risk management objectives are to: (1) maintain the asset allocation as close to the policy benchmark as possible through rebalancing, and (2) manage the active risk of the alpha portfolio such that its tracking error does not exceed the upper limit established in the active risk budget in Appendix B.

The CIO and Chief Risk Officer (CRO) shall develop appropriate policies and procedures for the measurement, monitoring, management and reporting of risk to the Board, CEO and staff. The CRO is responsible for obtaining and/or developing the appropriate systems, models, tools and reporting processes that will allow for the timely and efficient management of investment risk. The CRO shall report any breach of risk limits established in this policy to the Board as soon as possible after the discovery of any material breach.

VIII. CUSTODY

The Treasurer of the State of Iowa (Treasurer) is the custodian of the Fund. The Treasurer will hold the System's assets in a custody/recordkeeping account in a master custody bank located in a national money center and in the international sub-custodian banks under contract to the custodian bank. The Treasurer shall consult with the Board prior to selecting the master custody bank. A formal written agreement shall be established between the Treasurer and any third-party custodian. The custodian bank agreement shall be reviewed periodically by the CIO and Board.

Certain strategies involving derivatives may require the use of a prime broker or clearing broker who will hold the System's cash or securities per the terms of a collateral agreement or futures clearing agreement. IPERS shall seek to ensure that such brokers do not require IPERS to post margin amounts that materially exceed the minimum required margin amounts set by an exchange or the terms of a collateral agreement.

IX. SECURITIES LENDING

The primary objective of the securities lending program shall be to safely generate income from lending the System's securities to qualified borrowers. The program will only utilize lending agents that agree to indemnification provisions in the event of a counterparty insolvency.

Cash collateral received against loans of securities shall be prudently invested in a low-risk investment strategy that invests only in: (1) commingled funds or money market funds managed in accordance with the regulations and criteria specified in Rule 2(a)(7)

promulgated under the Investment Company Act of 1940, or (2) separate accounts that have investment guidelines identical to those required of a 2(a)(7) fund, or (3) overnight repurchase agreements collateralized with obligations issued by the United States Treasury or obligations issued by agencies or government-sponsored entities of the United States government. The key investment objectives for investing the cash collateral shall be to: (1) safeguard principal; (2) maintain adequate liquidity; and (3) consistent with the foregoing objectives, optimize the spread between the collateral earnings and the rebate paid to the borrower of securities.

The Investment Board may select its own securities lending agent or authorize the Treasurer to manage the securities lending program in accordance with the risk guidelines established herein. Staff shall execute a formal written agreement between any lending agent (or the Treasurer, as the case may be) and IPERS stipulating the risk parameters and performance benchmarks of the program, which shall be in accordance with these guidelines. The securities lending program will be annually reviewed by the Board, and the ongoing operation of such program shall be subject to periodic reauthorization by the Board.

X. DERIVATIVES

The System recognizes that derivative instruments can be useful tools in portfolio and risk management, but can also introduce unique risks. The CIO shall develop written policies and procedures to control the risks associated with derivatives, but at a minimum such procedures shall require: (1) a counterparty credit rating equivalent to at least "A" for over-the-counter derivatives; (2) payment netting arrangements; (3) daily marking-to-market; and (4) collateralization of net amounts owed under the contracts after meeting minimum threshold for transfers.

The CIO shall ensure that the derivatives policies and procedures are addressed in any external management services contract, as necessary. The CIO shall develop procedures for monitoring the use and exposure of derivatives within an investment manager's account. Mortgage-backed and asset-backed securities are not derivatives for the purpose of this policy.

XI. OTHER POLICIES

A. Social Investing

As fiduciaries, the IPERS Investment Board, staff and investment managers must perform their duties for the exclusive benefit and in the best economic interest of the System's members and beneficiaries. The System and the Board will not support investment policies or strategies which seek to promote specific social issues or agendas through investment or divestment of IPERS' assets. To act otherwise could be construed as a violation of fiduciary duty and could endanger the System's tax-exempt status.

B. Securities Monitoring and Litigation

IPERS has a fiduciary duty to preserve trust assets to meet the retirement promises made to its members. Included in this duty is the obligation to recover investments in public securities that incur losses as a result of corporate mismanagement and/or fraud. To preserve trust assets, the Board has adopted a securities monitoring and litigation policy to guide the System's involvement in and monitoring of securities litigation. (See Appendix D)

C. Confidential Investment Information

Iowa Code §22.7 and §97B.17(2)e provide that certain records and information in IPERS' possession are considered confidential and thus are exceptions to Iowa's Open Records (chapter 22) laws. Included in the exceptions is information which, if released:

1. Could result in a loss to the System or to the provider of the information.
2. Would give advantage to competitors and serve no public purpose.
3. Would violate trade secrets which are recognized and protected by law.

While the staff shall provide the Board with all essential information about the investment program, communication of information that is confidential under the above Iowa Code provisions will be identified as such in the communication.

Iowa Code §97B.8A(5), an explicit exception to Iowa's Open Meetings (chapter 21) laws, reinforces the need and obligation to maintain the confidentiality of such information by expressly authorizing the Board to hold closed sessions for discussion of this information.

D. Ethics

Fiduciaries of the System must exercise the highest standards of care in acting for the exclusive benefit of the plan participants. IPERS has adopted an ethics policy to govern the activities of Board members, staff, consultants and managers as it relates to the System. (See Appendix E)

If the CEO, CIO, CRO, any investment officer, or any IPERS attorney is in possession of information which would lead a reasonable person familiar with such matters to conclude that an investment, a commitment to an investment, or a decision to engage or terminate a contracted service provider, contradicts the fiduciary duties of the party or parties having the final authority to take such actions, it is the Board's expectation that the issue will be placed on a Board meeting agenda for review.

E. Leverage

The CIO may utilize leverage within staff tactical decisions up to the maximum negative allocation allowed by the asset class ranges for cash as specified in Appendix B. The CIO may also allow the use of leverage within external active investment management strategies and products consistent with the active risk budget. The private markets investment policy in Appendix C addresses the use of leverage for private market investments.

F. Board Meetings

Board meeting dates for the fiscal year shall be set by members of the Board at the first meeting of the fiscal year. At the first meeting in each fiscal year, the voting Board members shall elect a chair and vice chair.

Parties wishing to present items for the Board's next meeting agenda shall file a written request with the chair at least five business days prior to the meeting. To the extent there is no law, statute, or administrative rule governing a procedure, Board meetings shall be governed by the procedural rules established in the latest version of *Robert's Rules of Order*.

APPENDIX A
STATUTORY RESPONSIBILITIES OF THE INVESTMENT BOARD AND STAFF

1. The Board shall annually adopt an Investment Policy and Goal Statement. *Iowa Code §§97B.7A and 97B.8A*
2. The Board shall at least annually conduct a review of the investment policies and procedures utilized by the System. *Iowa Code §97B.8A.2(a)*
3. The Board shall at least annually conduct a public meeting to review the policies and the investment performance of the Fund. *Iowa Code §97B.8A.2(a)*
4. With the approval of the Board, the Treasurer of State may conduct a program of lending securities in the IPERS portfolio. *Iowa Code §12.8.3*
5. The Board shall review and approve the hiring of each investment manager and investment consultant. *Iowa Code §97B.4.3(f)*
6. The Board shall select the actuary for the System, and shall adopt the mortality tables and actuarial assumptions and methods the actuary will use for the annual actuarial valuation. *Iowa Code §§97B.4.3(c) and 97B.8A.3*
7. The CEO will consult with the Board prior to employing a CIO. *Iowa Code §97B.4.3(a)*
8. The Board shall participate in the annual performance evaluation of the CIO. *Iowa Code §97B.8A.2(c)*
9. The CEO shall consult with the Board on the budget program for the System. *Iowa Code §97B.4.2(c)*
10. The Treasurer of State shall consult with the Board prior to selecting any bank or other third party for purposes of investment asset safekeeping, other custody, or settlement services. *Iowa Code §97B.7.2*
11. The Board shall consist of seven voting members and four nonvoting members. Four voting members of the Board shall constitute a quorum. *Iowa Code §97B.8A*
12. Staff shall provide advance notice to the public of the time, date, tentative agenda and place of each Board meeting in compliance with Iowa Code chapter 21.
13. The Board shall set the salary of the CEO. *Iowa Code §97B.3.1*

APPENDIX B
ASSET ALLOCATION POLICY AND ACTIVE RISK BUDGET

I. Asset Allocation Policy¹

Asset Class	Asset Class Ranges	Policy Benchmark Weights	Policy Benchmark Index
Equities		39%	
Domestic Equities	+/- 3%	21%	Russell 3000
International Equities	+/- 3%	13%	MSCI ACWI ex-U.S. (Net)
Global Smart Beta Equities	+/- 3%	5%	Custom Index ²
Fixed Income		29.5%	
Core Fixed Income	+/- 3%	25.5%	Bloomberg U.S. Aggregate
Public Credit	+/- 3%	3%	Custom Index ³
Cash	+/- 3%	1%	Merrill Lynch 91-Day T-Bill
TOTAL PUBLIC MARKETS		68.5%	
	Asset Class Targets	Policy Benchmark Weights	Policy Benchmark Index
Private Equity	17%	Actual ⁴	Portfolio ⁵
Private Credit	5.5%	Actual ⁴	Portfolio ⁵
Private Real Assets	9%	Actual ⁴	Portfolio ⁵
TOTAL PRIVATE MARKETS		31.5%	

¹On September 17, 2020, September 22, 2022, and September 28, 2023, the Investment Board revised the Asset Allocation Policy, as reflected in the table below. However, the Board stipulated that core fixed income assets should be reduced as needed to fund new allocations to the private markets. Therefore, beginning October 1, 2020 and revised as of October 1, 2022, and October 1, 2023, the target weight for private equity will be increased to 17 percent and core fixed income will be lowered to 22.5 percent, with target weights being adjusted quarterly in the future to reflect the progress in funding the increased allocations to private credit and private real assets.

Asset Class	Current Weight	Target Weight
Core Fixed Income	25.5%	22.5%
Private Credit	5.5%	8%
Private Real Assets	9%	9.5%

²This benchmark index is defined as 60 percent Russell 1000 Comprehensive Factor Index + 30 percent FTSE Developed ex U.S. Comprehensive Factor Index + 10 percent FTSE Emerging Comprehensive Factor Index.

³This benchmark index is defined as 67 percent Bloomberg U.S. High Yield 2% Issuer Capped Index + 33 percent JP Morgan EMBI Global Index.

⁴The benchmark weight for each private market asset class is the actual percentage of each asset class relative to the total fund portfolio.

⁵The benchmark index for each private market asset class is the return of the portfolio itself.

II. Active Risk Budget

	Target⁶	Upper Limit⁶
Total Fund	1.50%	3.00%
External Managers	1.00%	2.50%
Investment Staff	1.00%	2.50%

⁶Measured as tracking error (the standard deviation of excess return) at the Total Fund level.

Sense, Sensibilities and Profit – Commitment Plan

CY2024

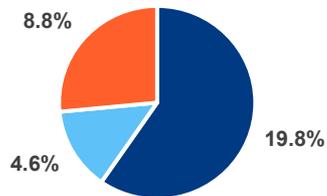
Marcus Dong, Pat Reinhardt, Sriram Lakshminarayanan

December 7, 2023



Time will explain

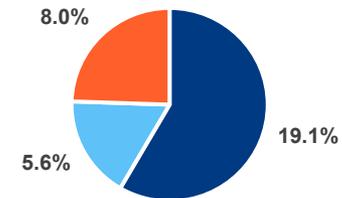
Last Year



■ Private Equity ■ Private Credit ■ Private Real Assets

Unaudited as of November 18, 2022

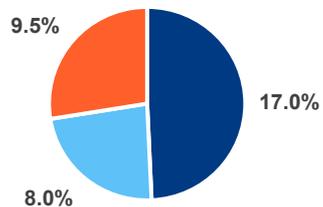
Now



■ Private Equity ■ Private Credit ■ Private Real Assets

Unaudited as of November 24, 2023

Long-Term Target



■ Private Equity ■ Private Credit ■ Private Real Assets

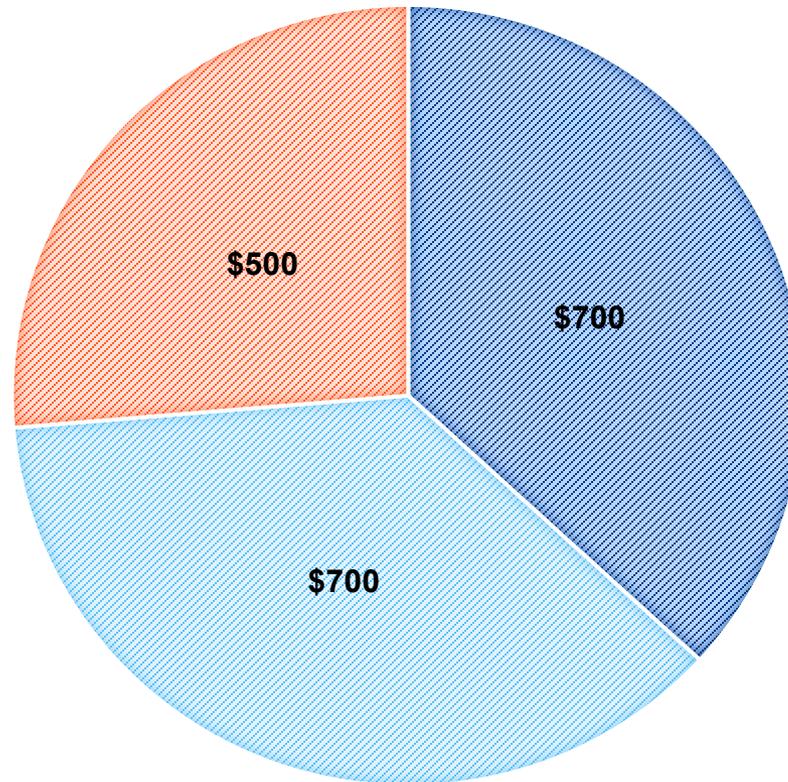
Equity (+2.1%); Distributions > Contributions

Credit (-2.4%); added 1%, 4 new mandates

Real Assets (-1.5%); Write Downs

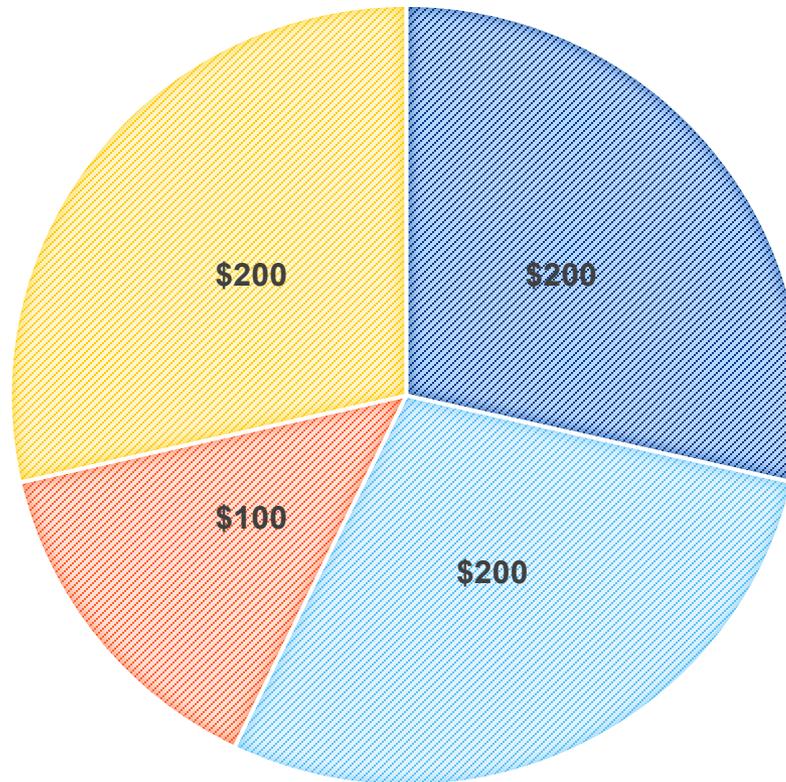
Ambitious Design – Total Commitments

■ Private Equity ■ Private Credit ■ Private Real Assets



Private Credit – Miles to go before we rest!

■ Opportunistic ■ Direct Lending ■ Real Assets Credit ■ Internal Co-Investments



Internal Co-Investments

- CY2024 commitment **\$200 million**
 - Allocated across the private credit and private real assets
 - Opportunities to be sourced through existing managers
 - At most 20 deals with the initial commitment
- On-boarding Update
 - Sourcing discussions with managers completed
 - Administrator has been selected
 - Co-Investment holding entity is being created. Plan to have in place by 1Q24

Private Credit – 2023 – Setting the Stage

- The ask for CY2023 - \$850 million
- Commitments through 3Q23 - \$200 million. Why?
 - Nature – Onboarding credit requires layers of due-diligence – 18 to 24 month underwriting process
 - Nurture – Long term targets - Risk off mindset
- Commitments in 4Q23
 - \$200 million re-up of opportunistic credit
 - \$200 million new commitment to real asset credit
- Overall, commitment utilization is not linear / steady

Private Credit

- Opportunistic private credit (Up to \$200 million)
 - Re-up - mezzanine
 - Add-on with existing specialty finance mandate
 - Onboard previously approved specialty situation manager
- Direct Lending Sub-Portfolio (Up to \$200 million)
 - Add-on commitment to existing mandates
 - Evaluate previously approved manager
- Real Assets Credit Sub-Portfolio (Up to \$100 million)
 - Add-on commitment to existing real estate debt manager
 - Evaluate other already approved managers

Private Equity – Tap the brakes

(\$mm)	2015	2016	2017	2018	2019	2020	2021	2022	2023 ¹	2024 ²
Commitments	\$799	\$800	\$808	\$760	\$704	\$740	\$960	\$858	\$632	\$700
Contributions	\$677	\$613	\$744	\$701	\$766	\$747	\$982	\$799	\$495	\$600-\$800

¹Unaudited as of November 24, 2023

²Projected commitments and contributions

- Continue to tap the brakes on commitments
- CY2024 - **\$700 million** to private equity, same as CY2023
- Split between primaries, co-investments and secondaries

Private Real Assets – Reuse & Recycle

- CY2024 – Commitments up to **\$500 million**
- Reuse - Real Estate - Up to **\$200 million**
 - Investment activity to be slow – price discovery continues
 - Match exits and acquisitions – steady as she goes
- Recycle - Other Real Assets - Up to **\$300 million**
 - Timber and Farmland – 2+ year liquidation plan
 - Liquidation proceeds can be committed to new opportunities
 - New infra commitments (current RFP) + Co-Investments



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve



Presentation of IPERS June 30, 2023 Valuation

Presented by:
Brent A. Banister, FSA
Bryan K. Hoge, FSA

December 7, 2023



Topics for Discussion



- Actuarial Valuation Process
- June 30, 2023 Valuation Results
- FY 2023 GASB Results

Purpose of an Actuarial Valuation



- Develop a strategy to systematically fund the benefits of the system
- Measure assets and liabilities (future benefit payments)
- Determine actuarial contribution rates (6/30/23 valuation results are used to set the FY 2025 contribution rates)
- Analyze experience (actual vs. expected) in last year
- Report on trends and analyze actuarial risks



- Snapshot picture of the System as of a single date (June 30, 2023)
- Statistical projection of amount/timing of future benefits to be paid
 - Uses one set (best estimate) of assumptions out of many possible scenarios
 - Other reasonable sets of assumptions exist
 - Different assumptions would produce different results, potentially significant
- Actual experience determines the true costs of the System (actual benefit payments paid to members)



➤ Actuarial experience: actual versus assumed

- Return of 5.41% on the market value of assets for FY 2023. Due to asset smoothing method, the return on actuarial assets was 7.17% which resulted in an actuarial gain of \$65 million
- Liability loss of \$382 million, largely due to salary increases

➤ June 30, 2023 Valuation Results:

- Total system UAL increased
- Funded ratio (using actuarial value of assets) increased
- Required contribution rate remained the same for all three groups
- All three groups continue to have a contribution margin

Key Valuation Results for the Total System



	<u>June 30, 2023</u>	<u>June 30, 2022</u>
Actuarial Liability (\$M)	\$ 45,720	\$ 43,970
Actuarial Assets (\$M)	<u>41,013</u>	<u>39,354</u>
Unfunded Actuarial Liability	\$ 4,707	\$ 4,615
Funded Ratio – AVA	89.7%	89.5%
Funded Ratio – MVA	90.1%	91.4%
Actuarial Contribution Rate*	13.89%	13.96%
Required Contribution Rate*	<u>(15.73%)</u>	<u>(15.73%)</u>
Shortfall/(Margin)*	(1.84%)	(1.77%)

* Regular members only

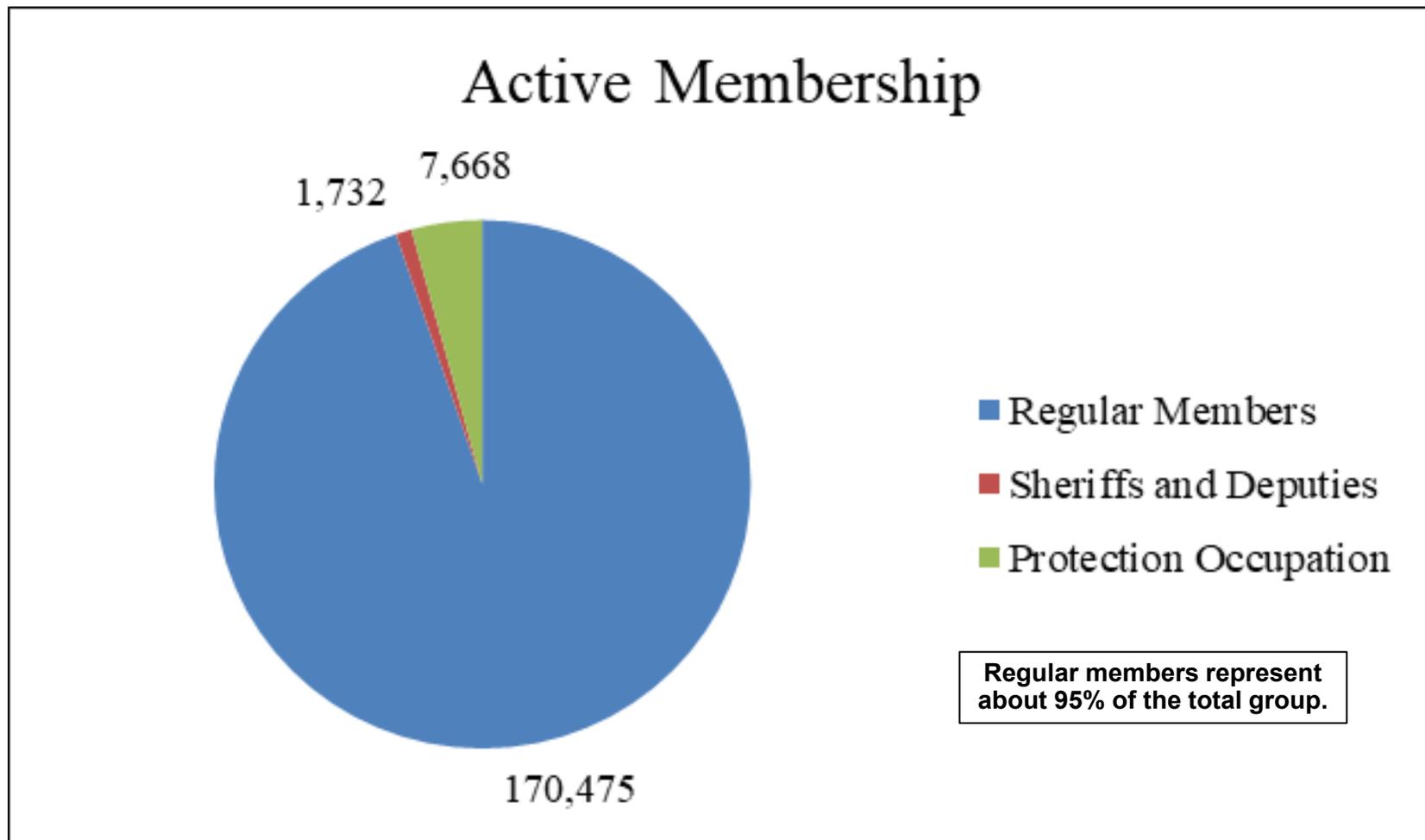
Note: Numbers may not add due to rounding.

Key Valuation Results By Member Group



Contribution Rate for FY 2025			
	Regular Membership	Sheriffs and Deputies	Protection Occupation
1. Normal Cost Rate	10.62%	16.80%	15.34%
2. Amortization of UAL	<u>3.27%</u>	<u>0.00%</u>	<u>0.00%</u>
3. Actuarial Contribution Rate	13.89%	16.80%	15.34%
4. Required Contribution Rate	15.73%	17.02%	15.52%
5. Shortfall/(Margin) (3) – (4)	(1.84%)	(0.22%)	(0.18%)
6. Employee Contribution Rate	6.29%	8.51%	6.21%
7. Employer Contribution Rate (4) - (6)	9.44%	8.51%	9.31%
8. Unfunded Actuarial Liability (\$M)	\$4,795	(\$24)	(\$64)
9. Funded Ratio	88.76%	102.60%	102.96%

Active Membership By Group





- Market value not used directly in funding valuation
- Asset valuation method used to smooth the effect of market fluctuations
- Actuarial value is expected value (based on the expected return of 7.0% and contributions and benefit payments) plus 25% of difference between actual and expected values
- Resulting value of actuarial assets must be within a corridor of 80-120% of pure market value (corridor did not apply this year)

Asset Values (\$M) Total System

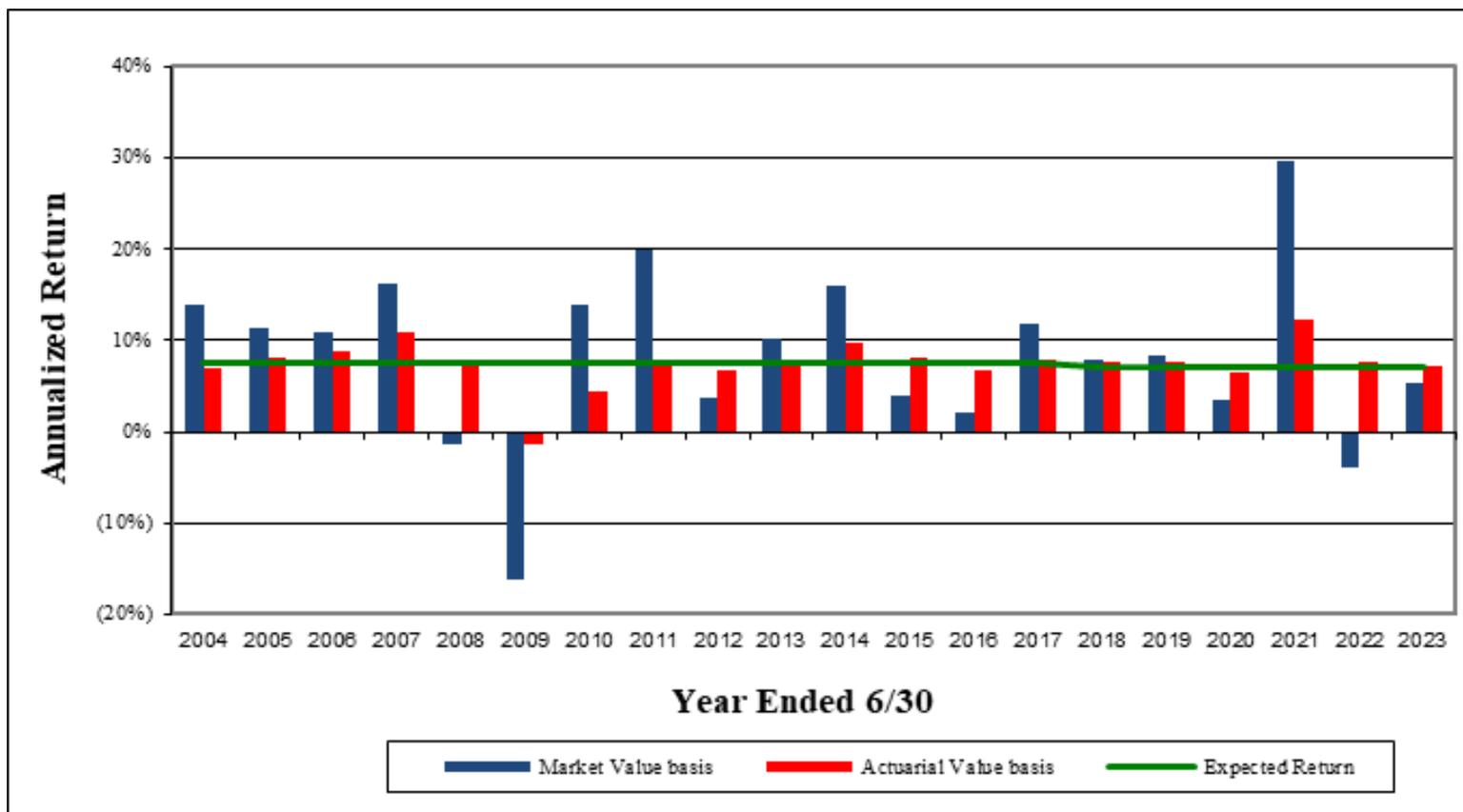


	<u>Market Value</u>	<u>Actuarial Value</u>
Assets, June 30, 2022	\$ 40,192	\$ 39,354
▪ Contributions	1,511	1,511
▪ Benefit Payments	(2,634)	(2,634)
▪ Investment Income	2,137	2,782
▪ FED Transfer	0	0
Assets, June 30, 2023	\$ 41,206	\$ 41,013
Estimated Rate of Return	5.41%*	7.17%

* As reported by IPERS

The 7.17% return on actuarial value of assets resulted in a \$65 million actuarial gain. The market value and actuarial value of assets is currently about the same.

Historical Asset Returns



Expected return is 7.5% for all years through 2017 and 7.0% thereafter.

UAL by Group (\$ in Millions as of 6/30/23)



	<u>Regular</u>	<u>Sheriffs & Deputies</u>	<u>Protection Occupation</u>	<u>Total</u>
Actuarial Liability	\$42,651	\$910	\$2,159	\$45,720
Actuarial Value of Assets	<u>37,856</u>	<u>934</u>	<u>2,223</u>	<u>41,013</u>
Unfunded Actuarial Liability (UAL)	\$4,795	\$(24)	\$(64)	\$4,707
Funded Ratio	88.8%	102.6%	103.0%	89.7%

Note: Numbers may not add due to rounding.

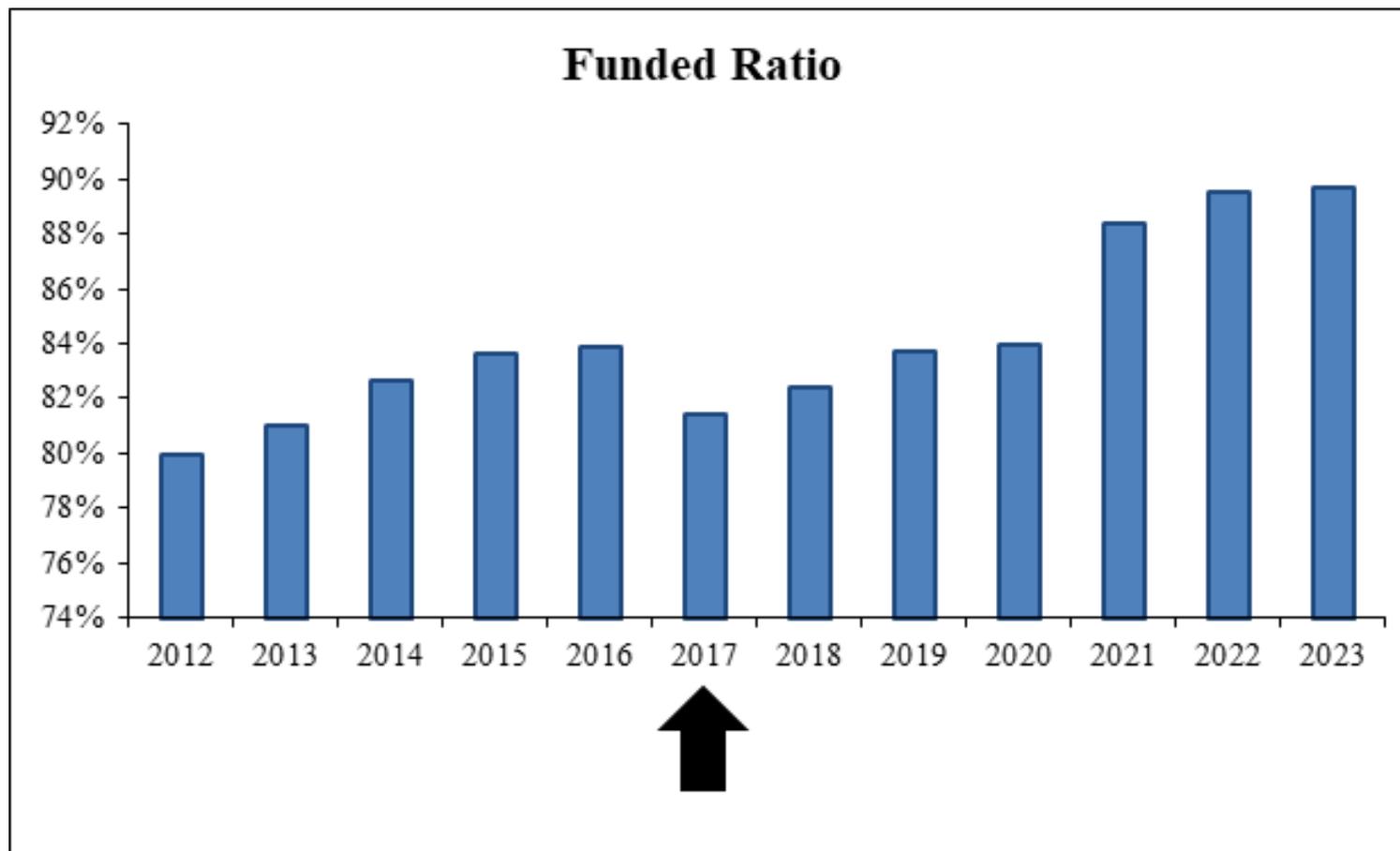
Change in Unfunded Actuarial Liability (UAL \$M)



	<u>Regular Members</u>	<u>Sheriffs & Deputies</u>	<u>Protection Occupation</u>	<u>Total</u>
UAL June 30, 2022	\$4,745	\$(40)	\$(89)	\$4,615
Contributions above actuarial rate	(145)	(1)	(1)	(147)
Expected decrease	9	(3)	(6)	(1)
Investment experience	(60)	0	(4)	(65)
Liability experience	317	22	43	382
Other	<u>(70)</u>	<u>(2)</u>	<u>(6)</u>	<u>(77)</u>
UAL June 30, 2023	\$4,795	\$(24)	\$(64)	\$4,707

Note: Numbers may not add due to rounding.

Historical Funded Ratio (All Groups)



**Investment Return
Lowered to 7.0%**

Favorable Experience Dividend Reserve (FED)



- Final FED payment was made in January 2014.
- FED reserve account assets remain \$0 as of June 30, 2023.
- Contribution Rate Funding Policy was modified by the Board to prevent increasing the contributions to pre-fund FED transfers.
- No future transfers to FED reserve account are assumed in the valuation results.



➤ Components:

- Normal Cost (ongoing cost for actives)
- Amortization payment on Unfunded Actuarial Liability (UAL)

➤ UAL Amortization Policy (Layered Amortization)

- June 30, 2014 base (legacy base) is amortized over a closed 30-year period (21 years remaining).
- In subsequent years, changes in the expected and actual UAL are established as a new base and amortized over a closed 20-year period.
- Changes in UAL due to assumption changes in 2017, 2018 and 2022 valuations were amortized over separate closed 20-year periods.
- Once a group becomes 100% funded, all outstanding bases are eliminated, and surplus is amortized over an open 30-year period.

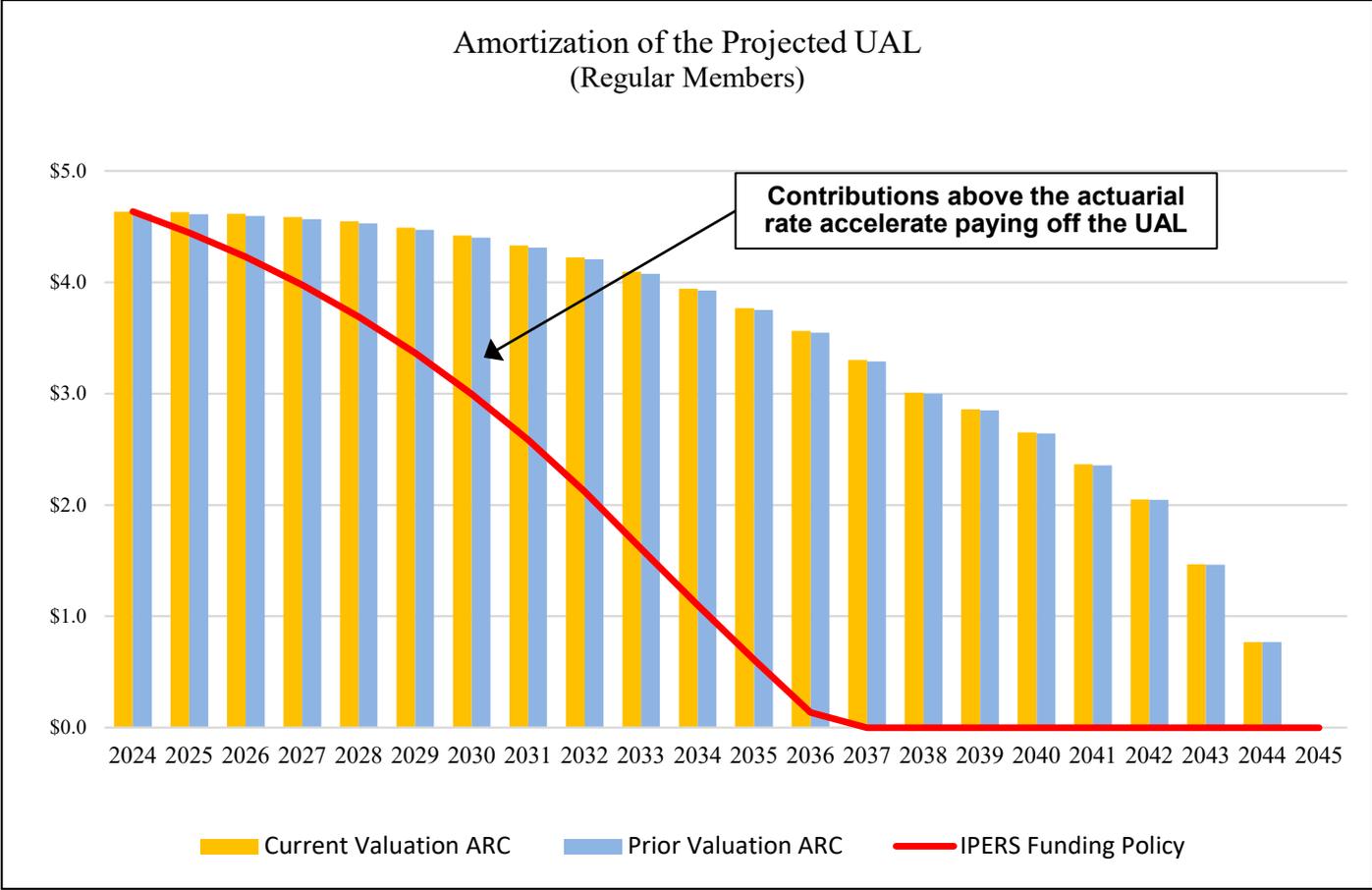
UAL Amortization Bases (Regular Members)



Amortization Bases	Original Amount	Remaining Payments	Projected July 1, 2024 Balance	Annual Payment*
2014 Initial UAL	\$ 5,592,056,086	21	\$ 6,099,030,956	\$ 419,357,085
2015 Experience	(193,648,198)	12	(172,904,367)	(17,998,804)
2016 Experience	21,763,596	13	19,930,639	1,947,017
2017 Experience	(158,062,524)	14	(147,597,681)	(13,610,398)
2017 Assumption Changes	1,435,708,789	14	1,340,654,843	123,625,559
2018 Experience	(310,129,854)	15	(295,655,145)	(25,863,984)
2018 Assumption Changes	75,130,979	15	71,624,386	6,265,719
2019 Experience	(384,733,612)	16	(372,824,248)	(31,075,771)
2020 Experience	67,832,112	17	66,562,107	5,306,487
2021 Experience	(1,670,503,783)	18	(1,654,347,495)	(126,569,520)
2022 Experience	(351,647,258)	19	(350,410,178)	(25,804,702)
2022 Assumption Changes	9,926,473	19	9,891,552	728,428
2023 Experience	19,791,982	20	19,791,982	1,406,665
Total			\$ 4,633,747,351	\$ 317,713,781

* Payment amounts reflect mid-year timing and increase 3.25% with the assumed increase in payroll growth.

UAL Balance Under Amortization Schedule





➤ Contribution Rate Funding Policy

- Compares Required Contribution Rate (RCR) from prior year to Actuarial Contribution Rate (ACR) in current year
- If $ACR < \text{previous RCR}$, then:
 - ✓ If difference is $< 0.50\%$, RCR is unchanged
 - ✓ If difference is $\geq 0.50\%$, RCR is lowered by 0.50% provided funded ratio is 95% or higher
- If $ACR > \text{previous RCR}$, then current RCR shall be:
 - ✓ Regular members: increased to ACR or 1% more than previous RCR, whichever is smaller
 - ✓ Sheriffs/Deputies: increased to ACR
 - ✓ Protection Occupation: increased to ACR

Contribution Rate (Regular Members)



Valuation Date

(Contribution Rates for FY 2025/FY 2024)

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
Normal Cost	10.62%	10.60%
UAL Payment	<u>3.27%</u>	<u>3.36%</u>
Total Actuarial Rate	13.89%	13.96%
Required Contribution*	<u>15.73%</u>	<u>15.73%</u>
Shortfall/(Margin)	(1.84%)	(1.77%)
*Employee Rate	6.29%	6.29%
*Employer Rate	9.44%	9.44%

Note: The Regular group is less than 95% funded so the Required Contribution Rate does not Change despite the reduction in the Actuarial Contribution Rate.

Contribution Rate (Sheriffs & Deputies)



Valuation Date

(Contribution Rates for FY 2025/FY 2024)

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
UAL Payment	(0.89%)	(1.66%)
Funded Ratio	102.6%	104.7%
Normal Cost	16.80%	16.78%
Applicable UAL Rate*	<u>0.00%</u>	<u>0.00%</u>
Total Actuarial Contribution Rate	16.80%	16.78%
Employee Rate	8.51%	8.51%
Employer Rate	<u>8.51%</u>	<u>8.51%</u>
Required Contribution Rate	17.02%	17.02%
Shortfall/(Margin)	(0.22%)	(0.24%)

*The UAL Rate is allowed to be negative only if the funded ratio was at least 110% for the last three years.

Note: The ACR is not less than the prior year's RCR by more than 0.50% so the RCR was not decreased by 0.50%.

Contribution Rate (Protection Occupation)



Valuation Date

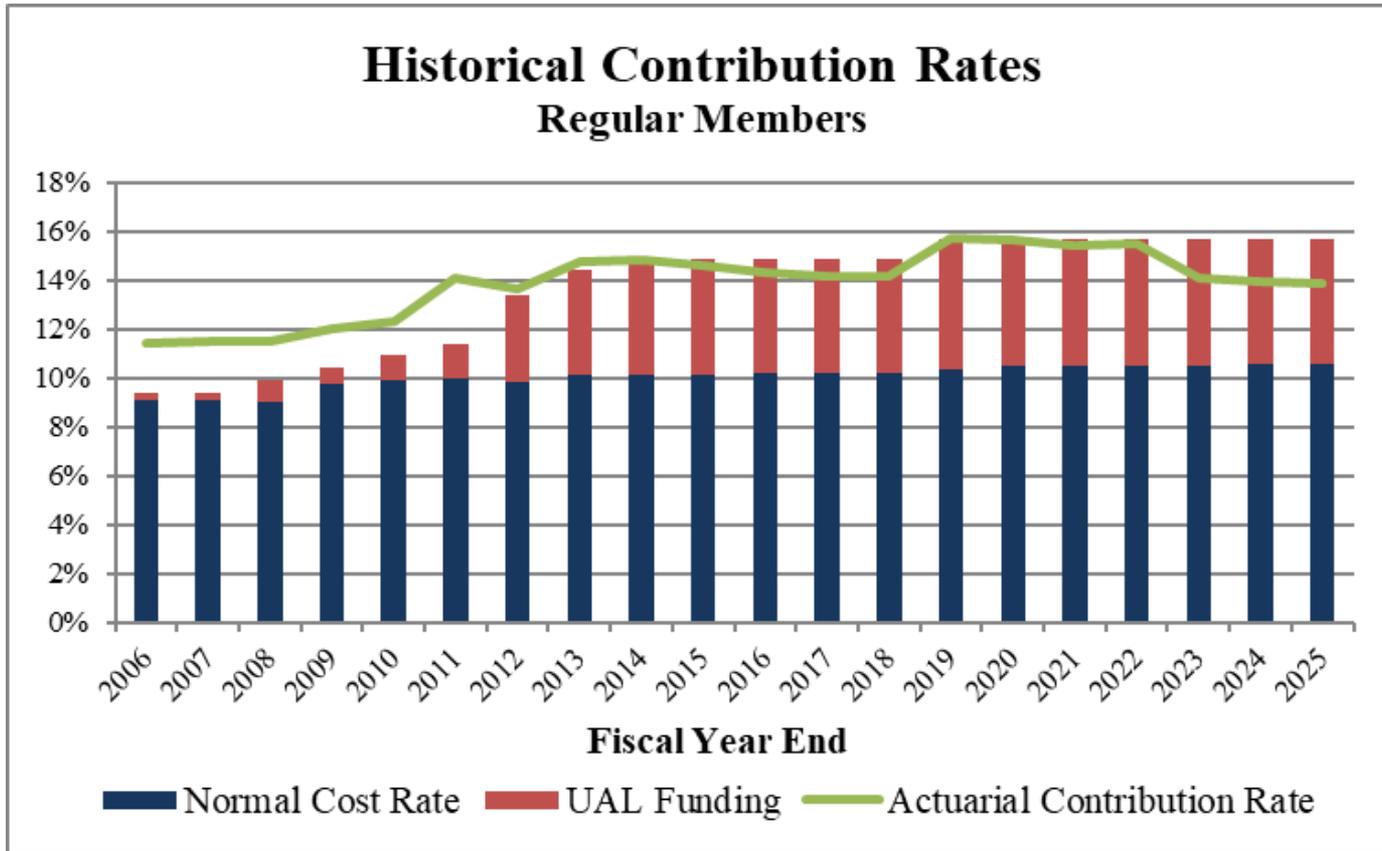
(Contribution Rates for FY 2025/FY 2024)

	<u>June 30, 2023</u>	<u>June 30, 2022</u>
UAL Payment	(0.76%)	(1.18%)
Funded Ratio	103.0%	104.4%
Normal Cost	15.34%	15.31%
Applicable UAL Rate*	<u>0.00%</u>	<u>0.00%</u>
Total Actuarial Contribution Rate	15.34%	15.31%
Employee Rate	6.21%	6.21%
Employer Rate	<u>9.31%</u>	<u>9.31%</u>
Required Contribution Rate	15.52%	15.52%
Shortfall/(Margin)	(0.18%)	(0.21%)

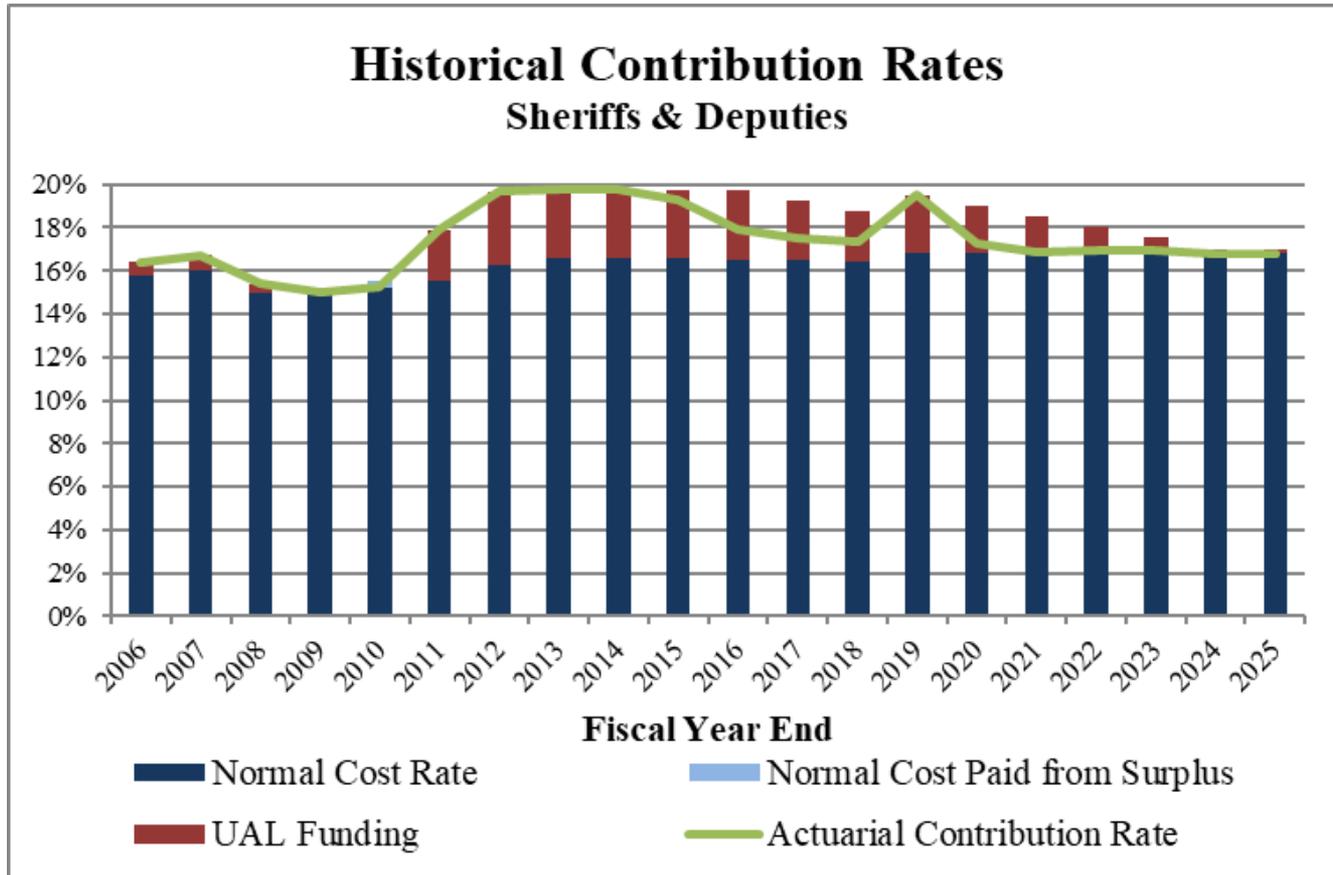
*The UAL Rate is allowed to be negative only if the funded ratio was at least 110% for the last three years.

Note: The ACR is not less than the prior year's RCR by more than 0.50% so the RCR was not decreased by 0.50%.

Regular Membership

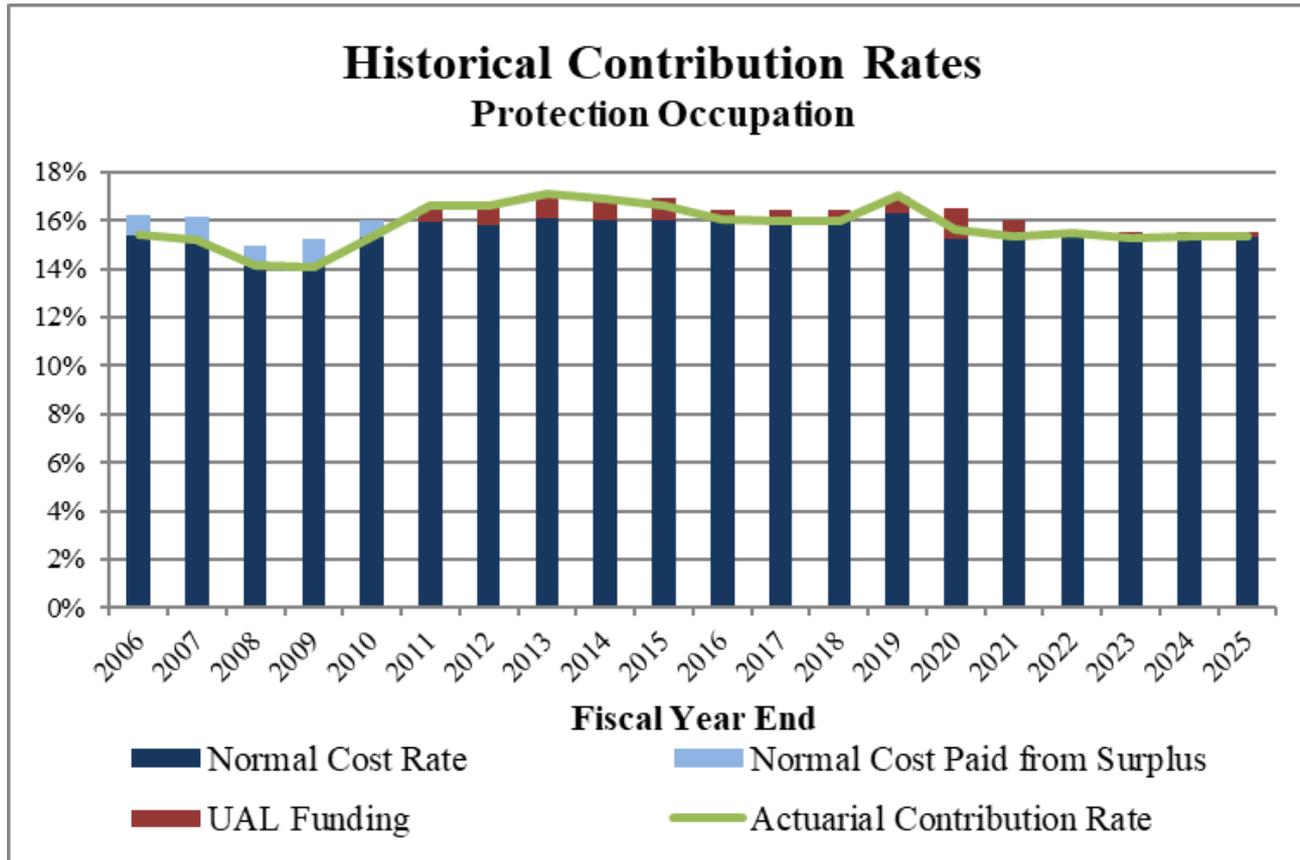


In the first part of this period, the contribution rates were fixed in statute. The ability for the IPERS Board to set the contribution rate beginning in 2013, within certain parameters, has resulted in an actual contribution rate equal to or above the actuarial contribution rate for the last twelve years.



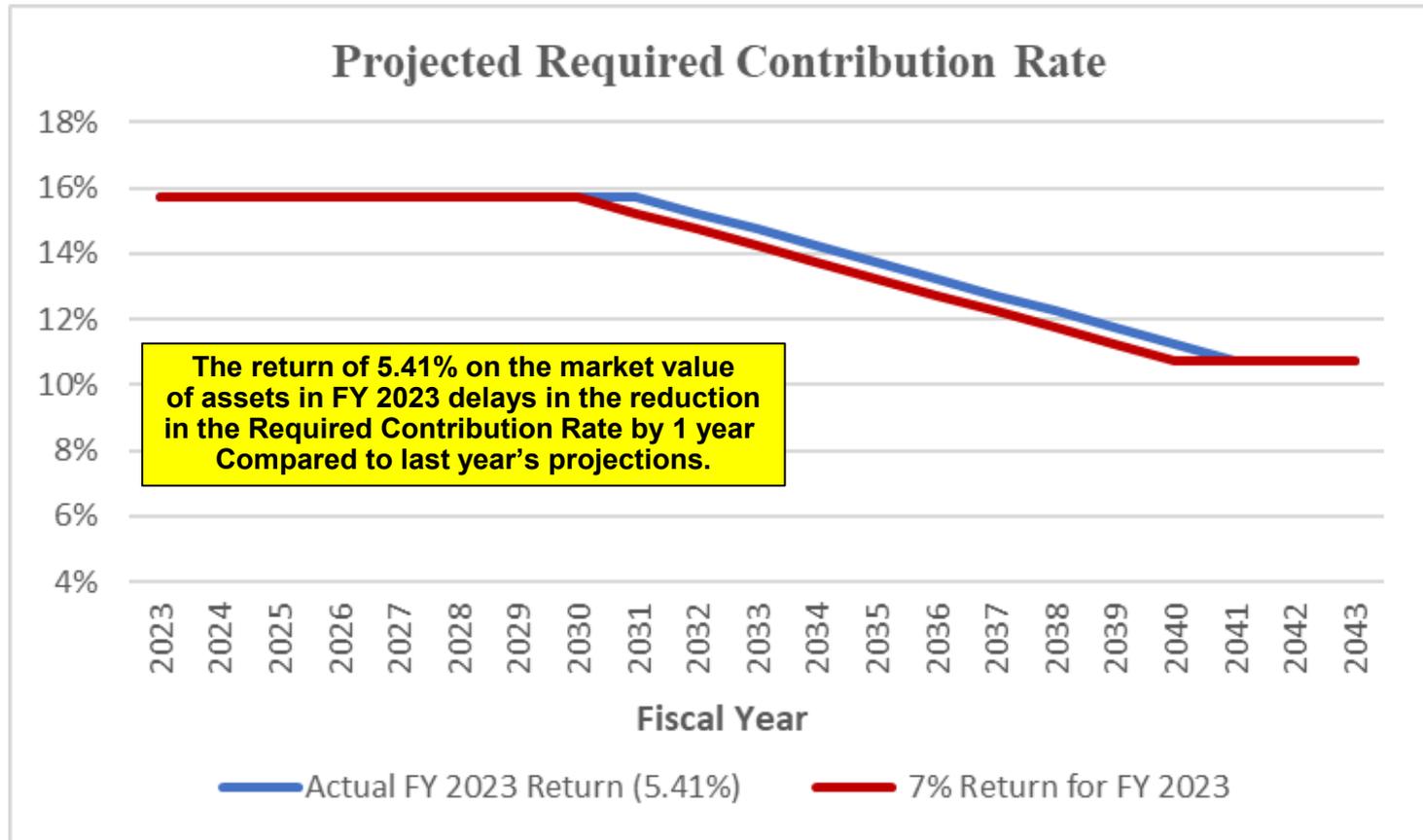
In contrast to the Regular membership, the actuarial contribution rate has always been contributed for this group. With the implementation of the Contribution Rate Funding Policy, the same criteria applies to setting the Required Contribution Rate.

Protection Occupation



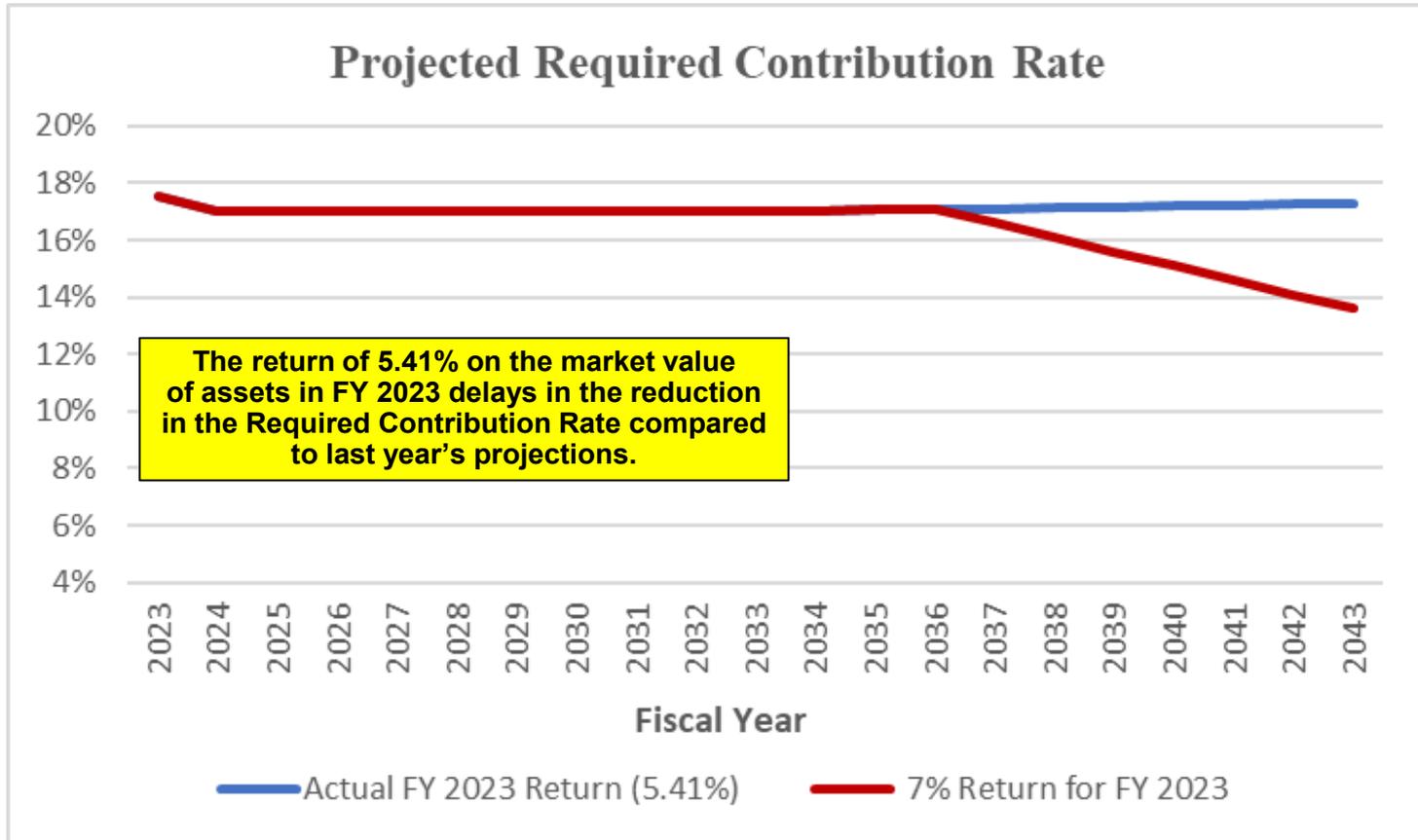
In contrast to the Regular membership, the actuarial contribution rate has always been contributed for this group. With the implementation of the Contribution Rate Funding Policy, the same criteria applies to setting the Required Contribution Rate.

Regular Membership



Projections are based on the 6/30/2022 valuation model.

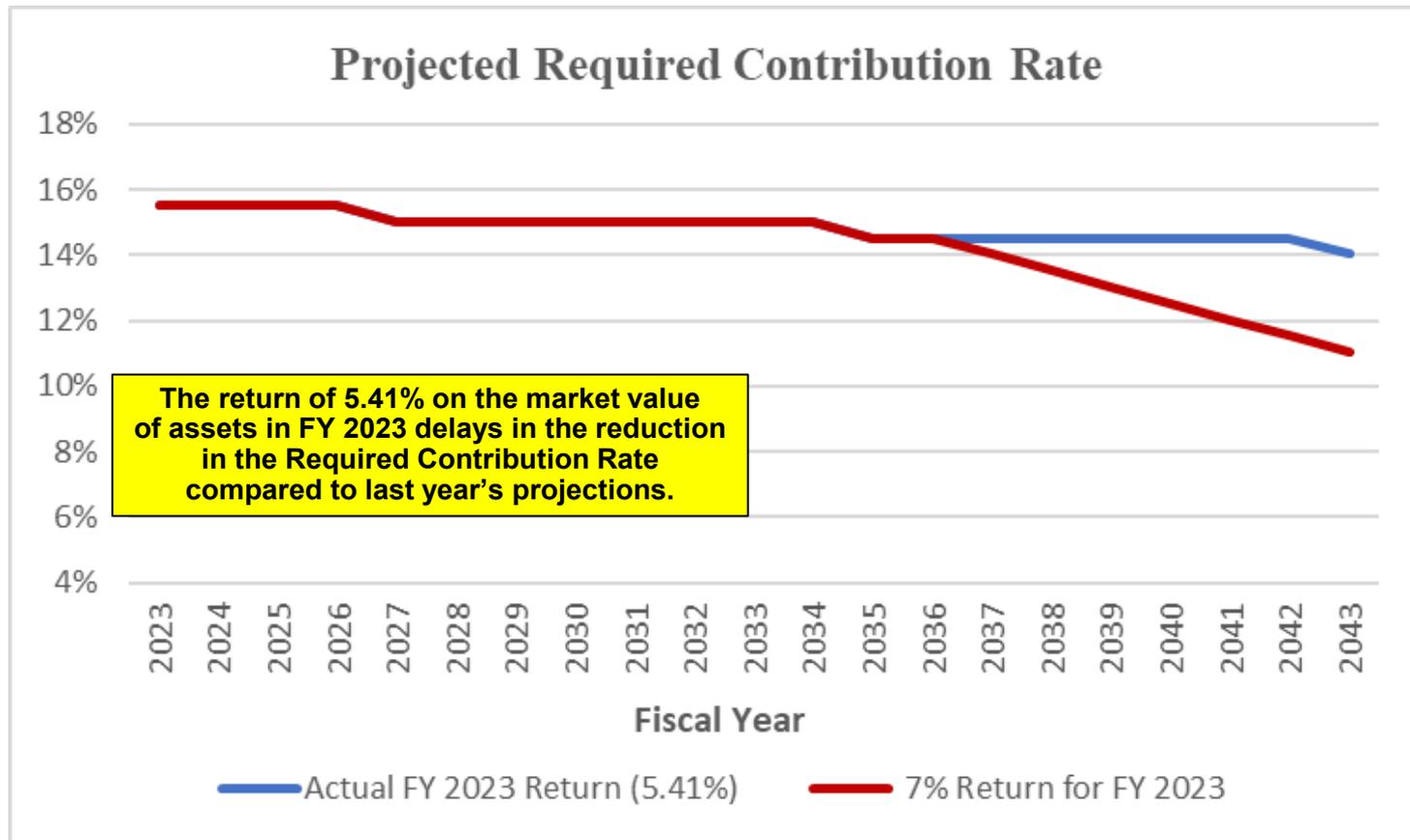
6/30/2023 projections may differ from the blue line once demographic experience is reflected.



Projections are based on the 6/30/2022 valuation model.

6/30/2023 projections may differ from the blue line once demographic experience is reflected.

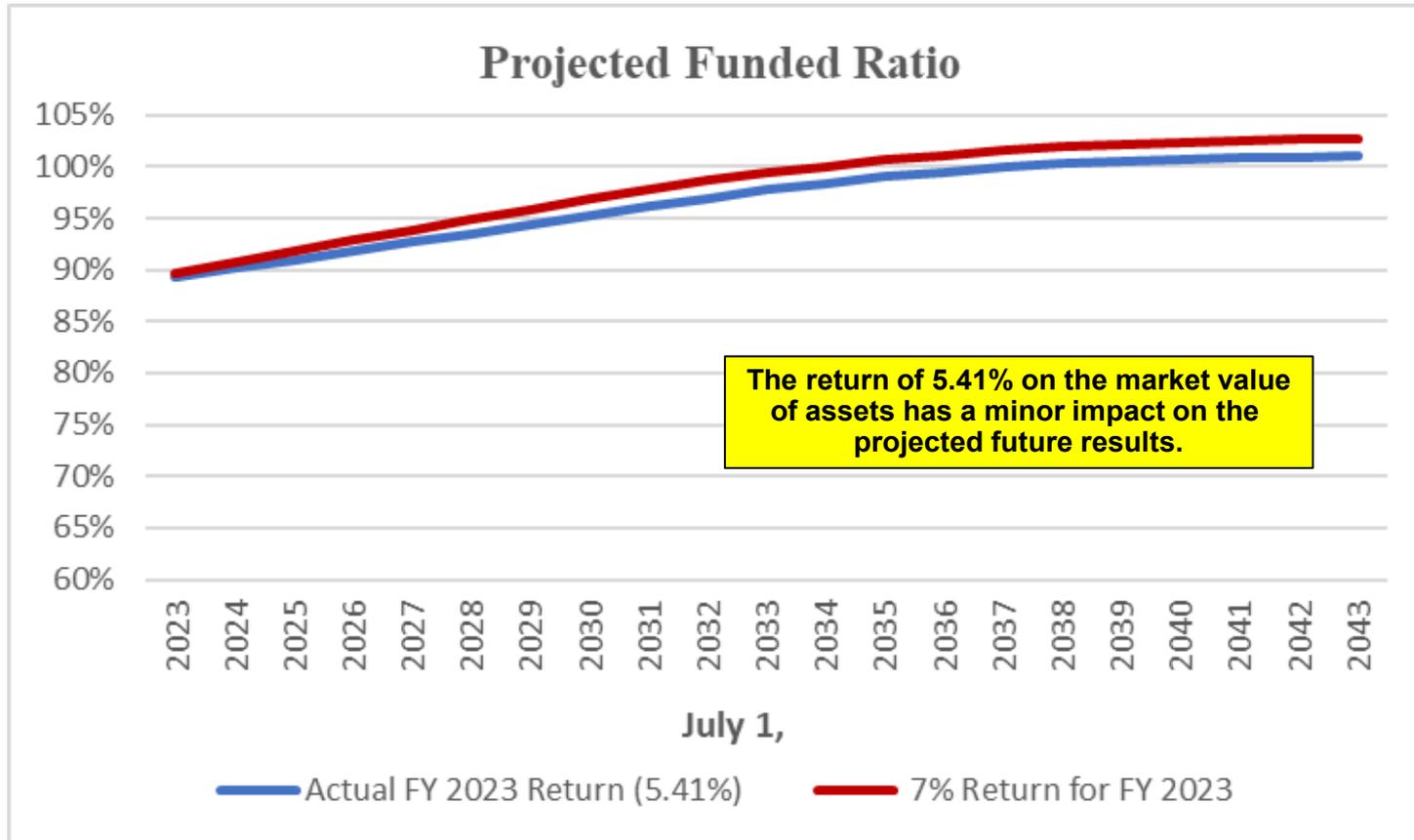
Protection Occupation



Projections are based on the 6/30/2022 valuation model.

6/30/2023 projections may differ from the blue line once demographic experience is reflected.

Regular Membership



Projections are based on the 6/30/2022 valuation model.

6/30/2023 projections may differ from the blue line once demographic experience is reflected.



➤ Unfavorable actuarial experience (actual vs expected) for FY 2023

- Despite a return of 5.4% on market value of assets, there was a gain on actuarial value of assets of \$65 million
- Market value of asset now exceeds actuarial value by \$194 million, down from \$832 million last year
- Net actuarial loss on liabilities of \$382 million
- Unfunded actuarial liability for entire System increased from \$4.62 billion last year to \$4.71 billion in the 2023 valuation

➤ Contribution Rate Funding Policy

- Required Contribution Rate is unchanged for all three groups
- Required Contribution Rate for FY 2025 is greater than Actuarial Contribution Rate for all three groups



➤ Effective since FY 2014

- Applies to ACFR disclosures only
- **Does not affect funding calculations**

➤ Requires some additional calculations

- Projection to determine the Single Equivalent Interest Rate – using funding rate of 7.0% since fund is not depleted using GASB criteria
- Liabilities are calculated using Entry Age Normal (the same as for funding)
- Assets are on market value basis
- Discount rate sensitivity must be disclosed (+/- 1%)



➤ Total Pension Liability (TPL)

- For IPERS, same as Actuarial Accrued Liability in funding valuation

➤ Fiduciary Net Position (FNP)

- The market value of assets

➤ Net Pension Liability (NPL)

- $NPL = TPL - FNP$
- Essentially the UAL on market value basis



	<u>June 30, 2023</u>	<u>June 30, 2022</u>
Total Pension Liability (TPL)	\$ 45.720	\$ 43.970
Fiduciary Net Position (FNP)	<u>41.206</u>	<u>40.192</u>
Net Pension Liability (NPL)	\$ 4.514	\$ 3.778
Ratio of FNP to TPL	90.13%	91.40%

Dollar amounts shown are in billions. Numbers may not add due to rounding.

GASB 67 Sensitivity Analysis



	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
TPL	\$ 51.301	\$ 45.720	\$ 41.042
FNP	<u>41.206</u>	<u>41.206</u>	<u>41.206</u>
NPL	\$ 10.095	\$ 4.514	\$ (0.164)
FNP/TPL	80.32%	90.13%	100.40%

Dollar amounts are shown in billions. Numbers may not add due to rounding.

Note: Because the TPL and the FNP are of similar magnitude, the NPL is significantly smaller than the TPL. When the TPL changes due to the discount rate change, the NPL changes by the same dollar amount, but it is a much larger proportionate amount.



We, Brent A. Banister, FSA, and Bryan K. Hoge, FSA are consulting actuaries with Cavanaugh Macdonald Consulting, LLC. We are members of the American Academy of Actuaries, Fellows of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. We are available to answer any questions or provide additional information as needed.

A handwritten signature in blue ink that reads "Brent A. Banister".

Brent A. Banister, Ph.D., FSA, EA, FCA, MAAA
Chief Actuary

A handwritten signature in blue ink that reads "Bryan K. Hoge".

Bryan K. Hoge, FSA, EA, FCA, MAAA
Consulting Actuary

2024

Board Meetings

JANUARY						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
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28	29	30	31			

FEBRUARY						
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MARCH						
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31						

APRIL						
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MAY						
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JUNE						
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30						

JULY						
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21	22	23	24	25	26	27
28	29	30	31			

AUGUST						
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SEPTEMBER						
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29	30					

OCTOBER						
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27	28	29	30	31		

NOVEMBER						
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17	18	19	20	21	22	23
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DECEMBER						
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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

March 22, 2024

CY2023 Investment Performance

June 20, 2024

Private Markets Program Review

September 25-26, 2024

Continuing Education Session

FY2024 Investment Performance Review

Asset Allocation

Investment Policy and Goal Statement

December

12/5/24 - Investment Board & BAC Mtg

(Actuarial Valuation Presentation)