

Board Packet List of Documents

Board of Trustees Meeting January 12, 2026

- Meeting Agenda
- Reports by Staff
 - 2. ERS Operations Report – Dec 2025
 - 3. Accounting Branch Staff Report
- New Business
 - 2.1.1 BUF-09(26) A Bill for an Act Relating to the ERS Employer Contributions.
 - 2.1.2 BUF-10(26) A Bill for an Act Relating to the Exemption from Civil Service of Executive Personnel of the ERS.
 - 2.2 Annual Report to the Legislature, Act 85/2017 Regarding the Actuarial Asset and Liability Stress Test 2025.
 - 2.3 Annual Report to the Legislature, Act 87/2015 Regarding Status of Employer Reporting of Information 2025.
 - 2.4 Annual Report to the Legislature, Act 192/2007 Regarding Direct Holdings in Sudan Scrutinized Companies 2025.
 - 2.5 Annual Report to the Legislature, Act 260/2007 Regarding the Innovation Economy (Hawaii Targeted Investment Program (HiTIP)).
 - 3.1 Annual Actuarial Valuation Report by Gabriel, Roeder, Smith & Company for the Year Ending June 30, 2025.
 - 4.1 Total Fund Performance Report by Meketa for Period Ending September 30, 2025.
 - 4.2 Real Asset Strategic Summary Scorecard.
 - 4.2.1 Real Asset Class Performance Review.
 - 4.3 Annual Investment Policy Statement Review.
 - 4.4 Annual Benchmark Review.
 - 4.5 Annual Liquidity Target Review.
- APPROVAL OF MINUTES – Nov 10, 2025

Board Packet Documents are available for public for inspection on the Employees' Retirement System's Website: <https://ers.ehawaii.gov/board-and-committee-agendas-and-meeting-packets>; and in the Employees' Retirement System's Office, 201 Merchant Street, Suite 1400, Honolulu, HI 96813

NOTICE OF REGULAR MEETING

AGENCY: Board of Trustees of the Employees' Retirement System of the State of Hawaii

DATE: Monday, January 12, 2026; 9:00 a.m.

PLACE: City Financial Tower, 201 Merchant Street, Suite 1200, Honolulu, Hawaii 96813

The meeting will be conducted pursuant to HRS §92-3.7, under which Members of the Board of Trustees and members of the public may participate via interactive conference technology or in person at the meeting place stated above.

Members of the public may attend the meeting by teleconference, either audio or video, at the following link or phone number:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_NjM2ZWZiMmYtZWI3Zi00NDg5LWE4OTUtMDQ3MjQ4MThiZTRm%40thread.v2/0?context=%7b%22Tid%22%3a%223847dec6-63b2-43f9-a6d0-58a40aaa1a10%22%2c%22Oid%22%3a%22e8f0b873-923c-44ce-9dd5-b951be2213c6%22%7d

Or join by entering meeting ID: [249 731 726 852 46](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NjM2ZWZiMmYtZWI3Zi00NDg5LWE4OTUtMDQ3MjQ4MThiZTRm%40thread.v2/0?context=%7b%22Tid%22%3a%223847dec6-63b2-43f9-a6d0-58a40aaa1a10%22%2c%22Oid%22%3a%22e8f0b873-923c-44ce-9dd5-b951be2213c6%22%7d) Passcode: [Wn3YH3C8](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NjM2ZWZiMmYtZWI3Zi00NDg5LWE4OTUtMDQ3MjQ4MThiZTRm%40thread.v2/0?context=%7b%22Tid%22%3a%223847dec6-63b2-43f9-a6d0-58a40aaa1a10%22%2c%22Oid%22%3a%22e8f0b873-923c-44ce-9dd5-b951be2213c6%22%7d)

Members of the public may provide testimony in person or by teleconference. Individuals testifying at the meeting are requested to limit their testimony to three (3) minutes or an amount of time otherwise designated by the Chairperson.

Or [+1 808-829-4853](tel:+18088294853) United States, Honolulu (Toll)
Conference ID: [986 562 965#](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NjM2ZWZiMmYtZWI3Zi00NDg5LWE4OTUtMDQ3MjQ4MThiZTRm%40thread.v2/0?context=%7b%22Tid%22%3a%223847dec6-63b2-43f9-a6d0-58a40aaa1a10%22%2c%22Oid%22%3a%22e8f0b873-923c-44ce-9dd5-b951be2213c6%22%7d)

In the event audiovisual communication cannot be maintained with participating Trustees and quorum is lost, the meeting shall be automatically recessed for up to 30 minutes, during which time, an attempt to restore audiovisual communication will be made. If such attempt is unsuccessful, all Trustees, members of the public, staff and other interested individuals may continue to participate in the meeting via telephone using the above-listed telephone and conference ID numbers, whereby audio-only communication will be established for all participants and the meeting will continue. If reconvening the meeting is not possible because neither audiovisual nor audio-only communication can be re-established, the meeting will be terminated.

AGENDA

QUORUM/CALL TO ORDER

PUBLIC COMMENT

Members of the public may submit written testimony on these agenda items via e-mail or postal mail with receipt recommended by 4:30 p.m. on Friday, January 9, 2026, in order to ensure it is distributed in time for consideration. Please address written testimony if by e-mail to: dale.kanae@hawaii.gov or by postal mail to: Employees' Retirement System of the State of Hawaii, Board of Trustees, 201 Merchant Street, Suite 1400, Honolulu, HI 96813.

REPORTS BY STAFF

1. Executive Director's Report on the Administration of the System with Respect to Significant Developments in Investments, Policy, Potential Legislation, and Regulatory Matters.
2. Deputy Executive Director's Report on the Operations of the System with Respect to Issues Affecting Member Services, Accounting, and Information Systems.
3. Accounting Branch Report on General Duties, Current and Future Projects, Goals, and Achievements.

Pursuant to HRS §92-5(a)(4), the Board of Trustees may enter into Executive Session to consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities with respect to these matters.

NEW BUSINESS

1. 2026 Board of Trustees Election of Officers and Committee Assignments.
2. Report of Activity by the Legislative Committee.
 - 2.1. 2026 Legislative Proposals Relating to the Employees' Retirement System.
 - 2.1.1. BUF-09(26) "A Bill for an Act Relating to the Employees' Retirement System's Employer Contributions for Normal Cost and Accrued Liability," proposes to increase employer contributions for normal cost and accrued liability for a specified group of employees to ensure that the Employees' Retirement System of the State of Hawaii's unfunded accrued liability does not exceed the maximum funding period.
 - 2.1.2. BUF-10(26) "A Bill for an Act Relating to the Exemption from Civil Service of Executive Personnel of the Employees' Retirement System," proposes to allow the Board of Trustees of the Employees' Retirement System (ERS Board), through its Executive Director, to appoint the Deputy Executive Director (DED), Chief Compliance Officer (CCO), and Information Security Officer (ISO) of the Employees' Retirement System of Hawaii, and to exempt these positions from the State's Civil Service requirements.
 - 2.2. Annual Report to the Legislature Required by Act 85/2017 Regarding the Actuarial Asset and Liability Stress Test 2025.
 - 2.3. Annual Report to the Legislature Required by Act 87/2015 Regarding Status of Employer Reporting of Information 2025.
 - 2.4. Annual Report to the Legislature Required by Act 192/2007 Regarding Direct Holdings in Sudan Scrutinized Companies 2025.
 - 2.5. Annual Report to the Legislature Required by Act 260/2007 Regarding the Innovation Economy (Hawaii Targeted Investment Program (HiTIP)).
 3. Report of Activity by the Administrative & Audit Committee.
 - 3.1. Approval of Annual Actuarial Valuation Report by Gabriel, Roeder, Smith & Company for the Year Ending June 30, 2025.
 4. Report of Activity by Investment Committee.
 - 4.1. Total Fund Performance Review for Period Ending September 30, 2025.
 - 4.2. Rotating Alternative Asset Class Review: Townsend – Real Assets for Period Ending June 30, 2025.
 - 4.3. Annual Investment Policy Statement Review.
 - 4.4. Annual Benchmarking Review.
 - 4.5. Annual Plan Liquidity Target Review.

Pursuant to HRS §92-5(a)(4), the Board of Trustees may enter into Executive Session to consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities with respect to these matters.

APPROVAL OF MINUTES – November 10, 2025

EXECUTIVE SESSION

1. Executive Session, pursuant to HRS §92-5(a)(4), to consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities and liabilities with respect to the Trustees' Fiduciary Duties and Immunities, Appeals, and the Sunshine Law.
2. Executive Session pursuant to HRS §92-5 (a)(4) and (8), to consider information that must be kept confidential pursuant to State law, and to consult with the Board's attorney on questions and issues pertaining to the Board's powers, duties, and privileges, immunities, and liabilities with respect to an Update on Ongoing Litigation and appropriate action for Linda S. Martell, CAAP-22-0000534 and CAAP-22-0000545.

3. Executive Session, pursuant to HRS §92-5(a)(8), to Review and Approve Executive Session Minutes of November 10, 2025.
4. Executive Session, pursuant to HRS §92-5(a)(8), to Review and Approve the Confidential Executive Session Minutes of November 10, 2025.

ADJOURNMENT

If you require auxiliary aid/service or other accommodation due to a disability, please contact Dale Kehau Kanae at (808) 586-1706 or dale.kanae@hawaii.gov as soon as possible, preferably by Wednesday, January 7, 2026, and the ERS will try to obtain the auxiliary aid/service or accommodation but cannot guarantee that the request can be fulfilled.

Upon request, this notice can be made available in large print.

Employees' Retirement System
Monthly Operations Report Highlights – December 2025

• **STAFFING (updated through 1/6/2026)**

	Position Title	Vacant Date	Recruitment Status
1.	Program Specialist	4/1/25	4/3/25 – rqst sent to ARO-HR to open recruitment
2.	Program Specialist	New pos.	4/19/24 – draft Position Description (PD) sent to ARO-HR for review and approval
3.	Account Clerk V	10/17/22	11/14/25 – draft Position Description (PD) sent to ARO-HR for review and approval
4.	Account Clerk V	5/1/24	6/30/25 – revised PD in review w/ARO-HR
5.	Account Clerk V	1/1/25	Pending PD update
6.	Account Clerk V	8/1/25	11/14/25 – draft Position Description (PD) sent to ARO-HR for review and approval
7.	Administrative Assistant II	7/25/23	7/1/25 – reorg required per ARO-HR
8.	Information Technology Band C (Applications Supervisor)	3/22/23	7/28/25 – requested new Cert list
9.	Information Technology Band B (Programmer)	11/1/24	2/21/25 – rqst sent to ARO-HR to open recruitment
10.	Information Technology Band A (Systems)	12/17/24	2/21/25 – rqst sent to ARO-HR to open recruitment
11.	Information Technology Band B (Systems)	12/16/25	12/19/25 – rqst sent to ARO-HR to open recruitment
12.	General Professional VI	5/1/24	2/21/25 – rqst sent to ARO-HR to open recruitment
13.	General Professional VI (NIOSS)	5/16/20	2/24/25 – requested new Cert list
14.	General Professional VI	3/16/22	9/12/24 – requested new Cert list
15.	Retirement Claims Examiner V	1/1/24	3/1/24 – rqst sent to ARO-HR to open recruitment
16.	Retirement Claims Examiner III	5/1/24	5/1/25 – requested new Cert list
17.	Retirement Claims Examiner III	6/17/24	4/22/25 – requested new Cert list
18.	Retirement Claims Examiner IV	7/29/24	3/7/25 – request sent to ARO-HR to swap positions internally.
19.	Retirement Claims Examiner IV	8/1/25	9/19/25 – rqst sent to ARO-HR to open recruitment
20.	Retirement Claims Examiner III	11/3/25	12/19/25 – rqst sent to ARO-HR to open recruitment
21.	Office Assistant IV	10/1/25	10/29/25 – rqst sent to ARO-HR to open recruitment
22.	Office Assistant IV	1/1/26	In process of opening recruitment
23.	Office Assistant III	4/30/25	6/25/25 – rqst sent to ARO-HR to open recruitment
24.	Investment Officer	New pos.	7/1/25- draft PD sent to ARO for review and approval
25.	Senior Investment Officer	9/1/23	Active recruitment in process
26.	Investment Specialist	10/3/23	12/1/25 – selection made, awaiting ARO-HR approval to make a conditional offer

- **MAJOR ACHIEVEMENTS, etc.**

- A. Retirement Benefits Branch (RBB)

- Finals – The Team finalized 186 retirees on estimated pension with 1,075 pending. The Team has 83 applications over the 6-month standard. Currently, the Team continues to finalize June 2025 retirements.
 - Neighbor Island & Outreach Activities
 - 12/1/2025 - New Employee Orientation (Kauai)
 - 12/2/2025 – Police New Employee Orientation (Maui)
 - 12/16/2025 - New Employee Orientation (Kauai)
 - 12/22/2025 – DOE Pre Retirement (Oahu)
 - Call Center Activities

Calls Received

TOTAL	Retiree	Active	Other	Action Request Call Backs
2,753	695	1,710	336	12

Types of Inquiries

Retirement	General Office	Taxes (W4P & 1099)	EUTF	HIDRO	THP	Enrollment	Website	Refunds	Income Verification	Other
1,697	69	57	168	17	59	33	53	258	159	183

- B. Accounting Branch

- ERS FY 2025 financial statements (unaudited) provided to KKDLY LLC (auditor) and Gabriel Roeder Smith & Co (actuary)
 - FY 2025 audit started, audit report scheduled to be issued in Summer 2026
 - Continued working with Vitech/Linea on documenting V3/V3locity user test cases to help validate employer/member data in Pension Administration System
 - Temporary Hazard Pay (THP) adjustments taking longer than expected due to employer data reporting issues
 - Preparing 2025 IRS Form 1099-R for ERS retirees (To be mailed out by January 31, 2026)

- C. Information Systems Branch (IS)

- Monthly patching/updating of non-prod for Operational and Pension Administration System (PAS) servers.

- Class Code Reports – Processed: 172
- Received internal approvals for 2026 build calendar and sent to vendors
- Updated PAS with 2026 Contribution and Tax Tables
- Sent Vitech 10/28 data to refresh their In-House (IH) environments
- Created 2026 Personnel Interface File Access database file
- Completed installation and setup of display and computer in 12th Floor Breakroom
- 3 WIFI access point setup in 12th Floor Breakroom, 12D Conference Room, and ERS office space
- Data Center air conditioner repair completed
- Completed installation and setup of new security monitoring software on ERS servers

D. Administration

- Completed 3 Uniform Information Practices Act research and responses
- HRS 88-64 (Act 46, SLH 2023) implementation, process requests to review related cases, tax treatment of reported contributions
- Attended V3locity Meetings
- Winter 2025 Holomua distributed to members (via HR/Admin) and retirees
- Final 2026 Legislation proposals submitted (via B&F) (session starts 1/21/2026)
- ERS office meeting logistics and presentation coordination on 12/11/2025.
- ER Act 87 Report to Legislature submitted
- Composed and sent 23 points-of-contact request memos for the FY 2026 Employer Reporting Review
- Hawaii Domestic Relations Order reviews and Requests for Information completed; see attached semi-annual reporting of statistics (July - December 2025)
- ERS Customer Satisfaction Survey Stats; see attached quarterly report (October - December 2025)

E. Staff Support Services Branch (SSS)

- Walk in members: 609 in December, compared to 565 in November.
- Document Scanning and Indexing (on-going) – major backlog (approx. +2 million)

Activities (December)	Documents Completed
Time Sensitive	7,671
Indexed (backlog)	3,682

Due to V3 upgrade QA count no longer available

• WEB STATISTICS for December 2025

- Member Information – Sessions = 17,181
- General ERS Website – Sessions = 19,780

Top 12 viewed site pages (descending order):

	Page	Page views
1.	Benefits Calculator	6,251
2.	Members > Planning for Retirement	5,727
3.	Members > Member Forms	4,020
4.	Resources > Contact Us	3,350
5.	Members > Active	3,190
6.	Resources > All Forms	2,708
7.	Retirees > Pension Info	1,756
8.	Home > Administration	1,530
9.	Retirees > retirees FAQ	919
10.	Members > member FAQ	856
11.	Members > leaving employment	796
12.	About-the-ERS	795

RETIREMENT BENEFITS BRANCH ACTIVITIES – December 2025

Activities	Standard	Completed	Standard Percentage	Pending	Remarks
1. Enrollment	Within 1 month of receipt - Enrollment Forms	1454	100% (Nov 100%)	35	35 pending from: 12/30/2025
2. Estimates Requests	Within 6 months of retirement date	238	100% (Nov 100%)	54	
3. Initial Payments	After 1 month of retirement date	127	100% (Nov 100%)	0	
4. Refund Requests	Within 1 month after request, send letter	103	100% (Nov 100%)	24	
5. Refund Payments	Within 2 months after receipt of applications	132	100% (Nov 100%)	39	2 out of 39 pending payments: incomplete applications.
6. Deaths (Active members)	Within 1 month of report of death, send letter	32	97% (Nov 76%)	1	4 of 32 deaths reported – No benefits.
7. Death Payment (Active members)	Within 1 month of receipt of death claim form(s)	11	100% (Nov 85%)	0	282 Pending cases: Claim forms not received/other required documents.
8. Deaths (Retiree/Beneficiary)	Within 1 month of report of death, send letter	131	(87%) 1 of 2 staff team was out sick 6 days	371	371 pending – includes reported & non reported notifications; no action taken on vendor reported unless there is a benefit to be paid.
9. Death Payments (Beneficiary)	Within 1 month of receipt of death claim form(s)	39	100% (Nov 100%)	0	274 Pending – No death claims and forms from beneficiaries and estates
10. Ordinary Disability	Within 6 months complete application	6	100% (Nov 75%)	34	6 of 8 met the 6-month standard.
11. Service-Connected Disability/Death	Within 14 months complete application	3	100% (Nov 0%)	42	3 of 3 met the 14-month standard

Disability Standard – Below are the disability applications completed in December 2025 by the ERS Administration (Executive Director) based on the revised Chapter 23, Hawaii Administrative Rules, on the Preliminary Decisions by the Medical Board (MB). All applications are now reviewed by the Deputy Attorney General (DAG) after staff's review.

Disability	Initials	Date Application Filed	Date Completed	Months
Ordinary	GF	10/10/2025	12/8/2025	2
	MK	11/5/2025	12/8/2025	1
	DN	9/24/2025	12/8/2025	2
	KT	9/26/2025	12/8/2025	2
	SY	10/24/2025	12/8/2025	1
	NY	9/4/2025	12/8/2025	3
			Average	2
Service-Connected	KA	5/6/2025	11/17/2025	7
	WM	11/29/2024	11/17/2025	12
	SO	9/24/2025	12/8/2025	2
			Average	7

Finals Report
Board of Trustees Meeting
December 31, 2025

Finals Production as of December 31, 2025

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Retirements Filed													
LY Finalized	259	292	180	192	204	208	279	167	209	186	195	180	2551
TY Projection	170	180	200	220	220	220	220	230	230	230	230	230	2580
Actual (filed)	119	121	160	155	152	135	277	203	132	114	138	182	1888
Ord. Death	1	1	3	1	0	3	4	2	6	2	4	4	31
RMD	1	0	0	0	1	2	0	1	2	8	0	0	15
Total Finalized	121	122	163	156	153	140	281	206	140	124	142	186	1934
Begin Pending	512	990	976	914	889	882	1058	1065	1095	1105	1130	1130	
New Retirements	582	103	96	126	137	305	274	229	141	135	128	126	2382
Add'l (BOT & svc adj.)	15	4	2	4	8	9	10	4	7	4	10	1	78
Completion	-119	-121	-160	-155	-152	-138	-277	-203	-138	-114	-138	-182	-1897
End Pending	990	976	914	889	882	1058	1065	1095	1105	1130	1130	1075	

1. Highlights

- 186 Cases were finalized and paid in December.
- 182 Retirements, including 6 disability retirements and 0 RMD.
- 4 Active death monthly pension
- 3 cases were finalized with Act 134 Interest paid totaling \$16.88.
 - \$5.63 average interest paid.
- 39 Anti-spiking (Act 153) cases
- 1,075 Service and Disability retirements pending finalization.
 - Continue finalizing June 2025 retirements with 92.3% of the inventory within benchmark.
- Resources are currently at 4 Retirement Claims Examiner IV at full-time status.

2. Aging Status Standard: To finalize pensions within 6 months or interest starts on the 7th month

Pending Status:

Backlog Cases over 6 months: 83 (7.7%) including 0 Disability retirements.

Benchmark Cases within 6 months: 992 (92.3%) including 36 disability retirements.

Total: 1,075

3. Re-Finalization (On Hold)

- Finals team has been re-finalizing DOE hazard pay cases.
- Non-Finals staff have started refinalizations for UPW THP cases on overtime.
- Pay adjustments due to late HIP reporting and retroactive pay increases per CBA add to backlog

Domestic Relations Orders (DROs) submitted to ERS for review (7/1/2025 - 12/31/2025)

Type of DRO Rec'd

Court-Filed Pre-Retirement	18
Court-Filed Post-Retirement	10
Proposed Pre-Retirement	4
Proposed Post-Retirement	
	Total Rec'd
	32

Status of DRO

Total Pending Review (Waiting for \$300 fee to be cleared)	1
Total Rejected (Court-Filed and Proposed DROs) (Preliminary review does not pass and DRO & payment is returned)	13
Total Qualified (Court-Filed DROs)	14
Total Denied (Court-Filed DROs) (Preliminary review passes but DRO does not meet our ERS requirements, payment is kept)	1
Total Meets Requirements (Proposed DROs)	2
Total Does Not Meet (Proposed DROs) (Preliminary review passes but DRO does not meet our ERS requirements, payment is kept)	2
Total Rescinded/Cancelled by Requestor	0
	Total
	33 *

*Count is 1 higher as it includes 1 that was pending review from 1/1/2025 - 6/30/2025 stats

DROs qualified and payments processed to Alternate Payees (APs)

Total Processed in 2025 (7/1/2025 - 12/31/2025)	12
	Total
	12

Request for Information (RFI) (7/1/2025 - 12/31/2025)

RFI Submitted by

Submitted by Member/Retirant or Attorney for Member/Retirant	3
Submitted by Alternate Payee (AP) or Attorney for AP	6
	Total Rec'd
	9

Status of RFI

Total Pending Review/Response	
Total Rejected	
Total Fulfilled	11
	Total
	11 *

*Count is 2 higher as it includes 2 that were pending review from 1/1/2025 - 6/30/2025 stats

ERS Customer Satisfaction Survey Feedback for 2025

(October - December 2025)

ERS Operations Report – December 2025
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	Oct	Nov	Dec	TOTAL
TOTAL WALK INS (FROM OPS REPORT)	710	565	609	1884

REASON FOR VISIT

Questions about benefits & eligibility	10	4	4	18
Filing for retirement	15	10	8	33
Filing for other benefits	1	1	0	2
Pension/tax info	1	1	3	5
Dropping off forms	5	2	4	11
Other	2	0	0	2
TOTAL	34	18	19	71

HAVE AN APPOINTMENT?

YES	1	1	1	3
NO	25	14	14	53

QUESTIONS ANSWERED CLEARLY?

Strongly Agree	23	15	14	52
Agree	3	0	0	3
Neither Agree nor Disagree	0	0	0	0
Disagree	0	0	0	0
Strongly Disagree	0	0	1	1

RATE OVERALL EXPERIENCE

Very Satisfied	24	14	14	52
Satisfied	2	0	0	2
Neither Satisfied nor Dissatisfied	0	0	0	0
Dissatisfied	0	0	0	0
Very Dissatisfied	0	1	1	2

As of 12/31/2025

#	Month	Comment
1	October	The RCE is an excellent communicator and really is knowledgeable, efficient, and professional. Helped me with aspects of beneficiary designation I didn't know I needed. Came away very informed and enlightened. Thank you
2	October	It was a pleasant surprise to have a meeting right away and have all my questions answered. My experience during this visit was exceptional.
3	October	You are well organized.
4	October	When I came in, I was nervous. When I sat in the conference room with the RCE his demeanor was friendly and light, it relaxed me. He was polite and professional answered all my questions. Thanks to the RCE.
5	October	The RCE = patient, kind, compassionate, made sure my questions/concerns were answered, and I understood my options; welcomed me back for any future discussion. That is integrity. Mahalo Nui Loa
6	October	You guys are great
7	October	Each time I've been to or emailed ERS, each person was polite and patient, answered all my questions and gave me information I didn't think to ask about. I understand ERS is very busy with handling all state and city government workers' retirement. I'd like to thank all the staff I've worked with. Very efficient and knowledgeable with their work. Thank you again!
8	October	Thank you RCE, for answering all my questions and explaining the paperwork that I was signing and the process I will have to go through before retirement is finalized.
9	October	I thought the RCE and the RCE Supervisor did a great job helping me. Very knowledgeable and helpful. Thank you 
10	October	Sorry. I don't recall the name of the person who greeted me at the door.
11	October	Nothing. It was great!
12	October	Thank you! The RCE is so wonderful! Doing excellent! All questions answered and gave more information about retiring.
13	October	I feel less anxious. Very informative by answering all questions. What a relief. Doing excellent job. Thank you!
14	October	Wonderful staff from reception to counselors. 5 stars on yelp!
15	October	Outstanding customer service from the RCE and the receptionist. Very satisfied!!
16	October	The RCE and everyone were super helpful and very friendly. It made the process much less frightening. Mahalo!
17	October	Nice reception and no wait time. Friendly rep
18	October	Awesome job. Very helpful.
19	October	Mahalo to receptionist who told me about the parking
20	November	Absolutely friendly - courteous. Very informative, knowledgeable - pleasant
21	November	Both times I've come, the counselors have been very professional, organized and knowledgeable. They patiently went over all of my options and answered all of my questions. It was like visiting the happiest place on earth. Thank you for making this transition a positive experience.
22	November	The front desk staff is extremely friendly and always so helpful. We adore her!
23	November	I want to give shout out to the receptionist in the front. She is super helpful and kind.
24	November	The RCE was patient and knowledgeable. He made me feel comfortable and easy to talk to. An asset to your department.
25	November	Very helpful & knowledgeable
26	November	My request for income verification over the phone was efficient. My in-person help by the receptionist was pleasant and efficient today. Mahalo
27	November	The RCE was very helpful and patient. He took the time to answer all our questions and didn't make us feel rushed even though it was getting close to closing time. We feel we had all our questions answered! Thank you to the RCE!!
28	November	The RCE took time to explained the max allowance and options if I took 50% or 100% refund. Filed once before and that representative didn't explain that at all. She is awesome!! Very patient.
29	November	The RCE was very helpful and understanding she was knowledgeable that made me understand.
30	November	Much Mahalo to the RCE for explaining and being very patient
31	November	She was very professional and understanding. 5 stars
32	November	The RCE was very knowledgeable and helped ease my worries about retirement.
33	December	Very good
34	December	The RCE was very informative and helpful in scheduling and answering questions over the phone.
35	December	The RCE is excellent; very calm with explanations that are simple and make sense
36	December	No comment
37	December	Called him for help on one issue and he made sure I was okay with any question that pertained to me.
38	December	Excellent!
39	December	Very professional, clear
40	December	Excellent info and very professional+helpful
41	December	The RCE was very knowledgeable on giving us the information we needed. She was very patient and helped us to understand our options. Good personality and welcoming feeling. Even if we were stressed, she made us feel comfortable. Always smiling and supportive. The RCE is an outstanding representative!!!
42	December	A++
43	December	Great information I have a plan now.

ERS Customer Survey Comments
October - December 2025

#	Month	Comment
44	December	The RCE was the most unprofessional and rudest person. Her demeanor was sourly lacking.
45	December	Thank you so much to the RCE! I am so happy that I came in.



Employees' Retirement System of the State of Hawaii

ERS Board of Trustees
Accounting Branch Update
January 12, 2026

Larry Wolfe, Accounting Manager



ERS Accounting Branch Short term and Intermediate Goals (continued):

1. Financial Auditor – KKDLY LLC
 - Starting Fiscal Year 2025 Audit; targeting to issue in Summer 2026
2. Improve Financial processing and reporting
 - Expand investment reporting on new Custodian Bank contract
 - FY goals: Streamline operations to automate processing to reduce manual processes
 - Instruction Capture for payment processing; Account Opening functions; General Ledger processing for reporting.
 - Document/update policies and procedures
3. Staff development and hiring
 - 5 vacancies (or 26%) in recruitment process
 - Develop and expand staff training

ERS Accounting Branch Short term and Intermediate Goals:

4. V3locity Pension Administration System (PAS)
 - Pre Migration work continues continuing with RBB, Accounting, IS, SSS, and Administration
5. Employer Reporting Team (Act 87, SLH 2015)
 - Continuing with RBB, Accounting and Chief Compliance Officer in Year 2 will be auditing all employers (in of contract with KMH LLP)
 - Payroll reporting issues – impacting ERS payroll and personnel reporting
6. Procurement
 - Complete Fiscal Year 2026 procurements on-time
7. THP payments
 - Settlements continue with employers. Impacting V3 employer reporting process, financial reporting process and actuary valuation files.

_____.B. NO._____

A BILL FOR AN ACT

RELATING TO THE EMPLOYEES' RETIREMENT SYSTEM'S EMPLOYER CONTRIBUTIONS FOR NORMAL COST AND ACCRUED LIABILITY.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. Section 88-122, Hawaii Revised Statutes, is
2 amended by amending subsection (e) to read as follows:
3 "(e) Commencing with fiscal year 2005-2006 and each
4 subsequent fiscal year until fiscal year 2007-2008, the employer
5 contributions for normal cost and accrued liability for each of
6 the two groups of employees in subsection (a) shall be based on
7 fifteen and three-fourths per cent of the member's compensation
8 for police officers, firefighters, and corrections officers and
9 thirteen and three-fourths per cent of the member's compensation
10 for all other employees. Commencing with fiscal year 2008-2009
11 and each subsequent fiscal year until fiscal year 2011-2012, the
12 employer contributions for normal cost and accrued liability for
13 each of the two groups of employees in subsection (a) shall be
14 based on nineteen and seven-tenths per cent of the member's
15 compensation for police officers, firefighters, and corrections
16 officers and fifteen per cent of the member's compensation for
17 all other employees. In fiscal year 2012-2013, the employer

_____.B. NO._____

1 contributions for normal cost and accrued liability for each of
2 the two groups of employees in subsection (a) shall be based on
3 twenty-two per cent of the member's compensation for police
4 officers, firefighters, and corrections officers and fifteen and
5 one-half per cent of the member's compensation for all other
6 employees. In fiscal year 2013-2014, the employer contributions
7 for normal cost and accrued liability for each of the two groups
8 of employees in subsection (a) shall be based on twenty-three
9 per cent of the member's compensation for police officers,
10 firefighters, and corrections officers and sixteen per cent of
11 the member's compensation for all other employees. In fiscal
12 year 2014-2015, the employer contributions for normal cost and
13 accrued liability for each of the two groups of employees in
14 subsection (a) shall be based on twenty-four per cent of the
15 member's compensation for police officers, firefighters, and
16 corrections officers and sixteen and one-half per cent of the
17 member's compensation for all other employees. Commencing with
18 fiscal year 2015-2016 until fiscal year 2016-2017, the employer
19 contributions for normal cost and accrued liability for each of
20 the two groups of employees in subsection (a) shall be based on
21 twenty-five per cent of the member's compensation for police
22 officers, firefighters, and corrections officers and seventeen

_____.B. NO._____

1 per cent of the member's compensation for all other employees.

2 In fiscal year 2017-2018, the employer contributions for normal

3 cost and accrued liability for each of the two groups of

4 employees in subsection (a) shall be based on twenty-eight per

5 cent of the member's compensation for police officers,

6 firefighters, and corrections officers and eighteen per cent of

7 the member's compensation for all other employees. In fiscal

8 year 2018-2019, the employer contributions for normal cost and

9 accrued liability for each of the two groups in subsection (a)

10 shall be based on thirty-one per cent of the member's

11 compensation for police officers, firefighters, and corrections

12 officers and nineteen per cent of the member's compensation for

13 all other employees. In fiscal year 2019-2020, the employer

14 contributions for normal cost and accrued liability for each of

15 the two groups in subsection (a) shall be based on thirty-six

16 per cent of the member's compensation for police officers,

17 firefighters, and corrections officers and twenty-two per cent

18 of the member's compensation for all other employees.

19 Commencing with fiscal year 2020-2021 and each subsequent fiscal

20 year[–] until fiscal year 2025-2026, the employer contributions

21 for normal cost and accrued liability for each of the two groups

22 in subsection (a) shall be based on forty-one per cent of the

_____.B. NO._____

1 member's compensation for police officers, firefighters, and
2 corrections officers and twenty-four per cent of the member's
3 compensation for all other employees. Commencing with fiscal
4 year 2026-2027 and each subsequent fiscal year, the employer
5 contributions for normal cost and accrued liability for each of
6 the two groups of employees in subsection (a) shall be based on
7 forty-four per cent of the member's compensation for police
8 officers, firefighters, and corrections officers and twenty-four
9 per cent of the member's compensation for all other employees.
10 The contribution rates shall amortize the total unfunded accrued
11 liability of the entire plan over a period not to exceed the
12 maximum funding period.

13 The contribution rates shall be subject to adjustment:
14 (1) If the actual period required to amortize the unfunded
15 accrued liability exceeds the maximum funding period;
16 (2) If there is no unfunded accrued liability; or
17 (3) Based on the actuarial investigation conducted in
18 accordance with section 88-105."

19 SECTION 2. Statutory material to be repealed is bracketed
20 and stricken. New statutory material is underscored.

.B. NO.

1 SECTION 3. This Act, upon its approval, shall take effect
2 on July 1, 2026.

3

4 INTRODUCED BY: _____

5 BY REQUEST

_____.B. NO._____

Report Title:

ERS; Employer Contributions

Description:

Increases employer contributions for normal cost and accrued liability for a specified group of employees to ensure the unfunded accrued liability of the Employees' Retirement System of the State of Hawaii does not exceed the maximum funding period.

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.

JUSTIFICATION SHEET

DEPARTMENT: Budget and Finance

TITLE: A BILL FOR AN ACT RELATING TO THE EMPLOYEES' RETIREMENT SYSTEM'S EMPLOYER CONTRIBUTIONS FOR NORMAL COST AND ACCRUED LIABILITY.

PURPOSE: To increase employer contributions for normal cost and accrued liability for a specified group of employees to ensure that the unfunded accrued liability of the Employees' Retirement System of the State of Hawaii (ERS) does not exceed the maximum funding period.

MEANS: Amend section 88-122(e), Hawaii Revised Statutes (HRS).

JUSTIFICATION: Section 88-122, HRS, outlines the employer's normal cost and accrued liability contributions that are required to be made to ERS to ensure that the plan does not exceed the maximum funding period.

The bill increases employer contributions for the group comprised of police officers, firefighters, and corrections officers. The increase is necessary due to recent higher than anticipated salary increases for the group.

Impact on the public: None.

Impact on the department and other agencies: The contribution rates are subject to adjustment to ensure the unfunded accrued liability does not exceed the maximum funding period. Increasing the employer contributions for the specified group will prevent increases for all employers.

GENERAL FUND: See above.

OTHER FUNDS: See above.

PPBS PROGRAM

DESIGNATION: BUF-141/Retirement.

OTHER AFFECTED

AGENCIES: State and county departments and agencies.

EFFECTIVE DATE:

July 1, 2026.

_____.B. NO._____

A BILL FOR AN ACT

RELATING TO THE EXEMPTION FROM CIVIL SERVICE OF EXECUTIVE PERSONNEL OF THE EMPLOYEES' RETIREMENT SYSTEM.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. Chapter 88, Hawaii Revised Statutes, is amended
2 by adding to part II, subpart A, a new section to be
3 appropriately designated and to read as follows:
4 "§88- Executive personnel. The board, through its
5 executive director, may appoint a deputy executive director, a
6 chief compliance officer, and an information security officer.
7 Each appointee shall serve under the direction of the executive
8 director, with duties and qualifications prescribed and each
9 appointee's salary fixed by the board, and shall be exempt from
10 chapter 76."

11 SECTION 2. Section 76-16, Hawaii Revised Statutes, is
12 amended by amending subsection (b) to read as follows:
13 "(b) The civil service to which this chapter applies shall
14 comprise all positions in the State now existing or hereafter
15 established and embrace all personal services performed for the
16 State, except the following:

_____.B. NO._____

_____.B. NO._____

- 1 (5) Employees in the office of the governor and office of
- 2 the lieutenant governor, and household employees at
- 3 Washington Place;
- 4 (6) Positions filled by popular vote;
- 5 (7) Department heads, officers, and members of any board,
- 6 commission, or other state agency whose appointments
- 7 are made by the governor or are required by law to be
- 8 confirmed by the senate;
- 9 (8) Judges, referees, receivers, masters, jurors, notaries
- 10 public, land court examiners, court commissioners, and
- 11 attorneys appointed by a state court for a special
- 12 temporary service;
- 13 (9) One bailiff for the chief justice of the supreme court
- 14 who shall have the powers and duties of a court
- 15 officer and bailiff under section 606-14; one
- 16 secretary or clerk for each justice of the supreme
- 17 court, each judge of the intermediate appellate court,
- 18 and each judge of the circuit court; one secretary for
- 19 the judicial council; one deputy administrative
- 20 director of the courts; three law clerks for the chief
- 21 justice of the supreme court, two law clerks for each
- 22 associate justice of the supreme court and each judge

_____.B. NO._____

1 of the intermediate appellate court, one law clerk for
2 each judge of the circuit court, two additional law
3 clerks for the civil administrative judge of the
4 circuit court of the first circuit, two additional law
5 clerks for the criminal administrative judge of the
6 circuit court of the first circuit, one additional law
7 clerk for the senior judge of the family court of the
8 first circuit, two additional law clerks for the civil
9 motions judge of the circuit court of the first
10 circuit, two additional law clerks for the criminal
11 motions judge of the circuit court of the first
12 circuit, and two law clerks for the administrative
13 judge of the district court of the first circuit; and
14 one private secretary for the administrative director
15 of the courts, the deputy administrative director of
16 the courts, each department head, each deputy or first
17 assistant, and each additional deputy, or assistant
18 deputy, or assistant defined in paragraph (16);
19 (10) First deputy and deputy attorneys general, the
20 administrative services manager of the department of
21 the attorney general, one secretary for the
22 administrative services manager, an administrator and

_____.B. NO._____

1 any support staff for the criminal and juvenile
2 justice resources coordination functions, and law
3 clerks;

4 (A) Teachers, principals, vice-principals, complex
5 area superintendents, deputy and assistant
6 superintendents, other certificated personnel,
7 and no more than twenty noncertificated
8 administrative, professional, and technical
9 personnel not engaged in instructional work;

10 (B) Effective July 1, 2003, teaching assistants,
11 educational assistants, bilingual or bicultural
12 school-home assistants, school psychologists,
13 psychological examiners, speech pathologists,
14 athletic health care trainers, alternative school
15 work study assistants, alternative school
16 educational or supportive services specialists,
17 alternative school project coordinators, and
18 communications aides in the department of
19 education;

20 (C) The special assistant to the state librarian and
21 one secretary for the special assistant to the
22 state librarian; and

_____.B. NO._____

1 (D) Members of the faculty of the university of
2 Hawaii, including research workers, extension
3 agents, personnel engaged in instructional work,
4 and administrative, professional, and technical
5 personnel of the university;

6 (12) Employees engaged in special, research, or
7 demonstration projects approved by the governor;

8 (13) (A) Positions filled by inmates, patients of state
9 institutions, and persons with severe physical or
10 mental disabilities participating in the work
11 experience training programs;

12 (B) Positions filled with students in accordance with
13 guidelines for established state employment
14 programs; and

15 (C) Positions that provide work experience training
16 or temporary public service employment that are
17 filled by persons entering the workforce or
18 persons transitioning into other careers under
19 programs such as the federal Workforce Investment
20 Act of 1998, as amended, or the Senior Community
21 Service Employment Program of the Employment and
22 Training Administration of the United States

____ B. NO. _____

3 (14) A custodian or guide at Iolani Palace, the Royal
4 Mausoleum, and Hulihee Palace;

5 (15) Positions filled by persons employed on a fee,
6 contract, or piecework basis, who may lawfully perform
7 their duties concurrently with their private business
8 or profession or other private employment and whose
9 duties require only a portion of their time, if it is
10 impracticable to ascertain or anticipate the portion
11 of time to be devoted to the service of the State;

12 (16) Positions of first deputies or first assistants of
13 each department head appointed under or in the manner
14 provided in section 6, article V, of the Hawaii State
15 Constitution; three additional deputies or assistants
16 either in charge of the highways, harbors, and
17 airports divisions or other functions within the
18 department of transportation as may be assigned by the
19 director of transportation, with the approval of the
20 governor; one additional deputy in the department of
21 human services either in charge of welfare or other
22 functions within the department as may be assigned by

_____.B. NO._____

the director of human services; four additional
2 deputies in the department of health, each in charge
3 of one of the following: behavioral health,
4 environmental health, hospitals, and health resources
5 administration, including other functions within the
6 department as may be assigned by the director of
7 health, with the approval of the governor; two
8 additional deputies in charge of the law enforcement
9 programs, administration, or other functions within
10 the department of law enforcement as may be assigned
11 by the director of law enforcement, with the approval
12 of the governor; three additional deputies each in
13 charge of the correctional institutions,
14 rehabilitation services and programs, and
15 administration or other functions within the
16 department of corrections and rehabilitation as may be
17 assigned by the director of corrections and
18 rehabilitation, with the approval of the governor; two
19 administrative assistants to the state librarian; and
20 an administrative assistant to the superintendent of
21 education;

.B. NO.

1 (17) Positions specifically exempted from this part by any
2 other law; provided that:
3 (A) Any exemption created after July 1, 2014, shall
4 expire three years after its enactment unless
5 affirmatively extended by an act of the
6 legislature; and
7 (B) All of the positions defined by paragraph (9)
8 shall be included in the position classification
9 plan;
10 (18) Positions in the state foster grandparent program and
11 positions for temporary employment of senior citizens
12 in occupations in which there is a severe personnel
13 shortage or in special projects;
14 (19) Household employees at the official residence of the
15 president of the university of Hawaii;
16 (20) Employees in the department of education engaged in
17 the supervision of students during meal periods in the
18 distribution, collection, and counting of meal
19 tickets, and in the cleaning of classrooms after
20 school hours on a less than half-time basis;
21 (21) Employees hired under the tenant hire program of the
22 Hawaii public housing authority; provided that no more

.B. NO.

1 than twenty-six per cent of the authority's workforce
2 in any housing project maintained or operated by the
3 authority shall be hired under the tenant hire
4 program;

5 (22) Positions of the federally funded expanded food and
6 nutrition program of the university of Hawaii that
7 require the hiring of nutrition program assistants who
8 live in the areas they serve;

9 (23) Positions filled by persons with severe disabilities
10 who are certified by the state vocational
11 rehabilitation office that they are able to perform
12 safely the duties of the positions;

13 (24) The sheriff;

14 (25) A gender and other fairness coordinator hired by the
15 judiciary;

16 (26) Positions in the Hawaii National Guard youth and adult
17 education programs;

18 (27) In the Hawaii state energy office in the department of
19 business, economic development, and tourism, all
20 energy program managers, energy program specialists,
21 energy program assistants, and energy analysts;

_____.B. NO._____

- 1 (28) Administrative appeals hearing officers in the
- 2 department of human services;
- 3 (29) In the Med-QUEST division of the department of human
- 4 services, the division administrator, finance officer,
- 5 health care services branch administrator, medical
- 6 director, and clinical standards administrator;
- 7 (30) In the director's office of the department of human
- 8 services, the enterprise officer, information security
- 9 and privacy compliance officer, security and privacy
- 10 compliance engineer, security and privacy compliance
- 11 analyst, information technology implementation
- 12 manager, assistant information technology
- 13 implementation manager, resource manager, community or
- 14 project development director, policy director, special
- 15 assistant to the director, and limited English
- 16 proficiency project manager or coordinator;
- 17 (31) The Alzheimer's disease and related dementia services
- 18 coordinator in the executive office on aging;
- 19 (32) In the Hawaii emergency management agency, the
- 20 executive officer, public information officer, civil
- 21 defense administrative officer, branch chiefs, and
- 22 emergency operations center state warning point

.B. NO.

1 personnel; provided that for state warning point
2 personnel, the director shall determine that
3 recruitment through normal civil service recruitment
4 procedures would result in delay or noncompliance;

5 (33) The executive director and seven full-time
6 administrative positions of the school facilities
7 authority;

8 (34) Positions in the Mauna Kea stewardship and oversight
9 authority;

10 (35) In the office of homeland security of the department
11 of law enforcement, the statewide interoperable
12 communications coordinator;

13 (36) In the social services division of the department of
14 human services, the business technology analyst;

15 (37) The executive director and staff of the 911 board;

16 (38) The software developer supervisor and senior software
17 developers in the department of taxation;

18 (39) In the department of law enforcement, five Commission
19 on Accreditation for Law Enforcement Agencies, Inc.,
20 coordinator positions;

21 (40) The state fire marshal and deputy state fire marshal
22 in the office of the state fire marshal;

_____.B. NO._____

1 (41) The administrator for the law enforcement standards
2 board;

3 (42) In the office of the director of taxation, the data
4 privacy officer and tax business analysts; [and
5 +] (43)[+] All positions filled by the Hawaii tourism
6 authority within the department of business, economic
7 development, and tourism[-]; and
8 (44) In the employees' retirement system of the State of
9 Hawaii, the deputy executive director, the chief
10 compliance officer and the information security
11 officer.

12 The director shall determine the applicability of this
13 section to specific positions.

14 Nothing in this section shall be deemed to affect the civil
15 service status of any incumbent as it existed on July 1, 1955."

16 SECTION 3. Statutory material to be repealed is bracketed
17 and stricken. New statutory material is underscored.

18 SECTION 4. This Act shall take effect upon its approval.

19

20 INTRODUCED BY: _____

21

BY REQUEST

_____.B. NO._____

Report Title:

ERS; Executive Personnel; Civil Service Exemption

Description:

Allows the Board of Trustees of the Employees' Retirement System, through its Executive Director, to appoint specified executive personnel positions of the Employees' Retirement System of the State of Hawaii and exempts these positions from the State's civil service requirements.

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.

JUSTIFICATION SHEET

DEPARTMENT: BUDGET AND FINANCE

TITLE: A BILL FOR AN ACT RELATING TO THE EXEMPTION FROM CIVIL SERVICE OF EXECUTIVE PERSONNEL OF THE EMPLOYEES' RETIREMENT SYSTEM.

PURPOSE: To allow the Board of Trustees of the Employees' Retirement System (ERS Board), through its Executive Director, to appoint the Deputy Executive Director (DED), Chief Compliance Officer (CCO), and Information Security Officer (ISO) of the Employees' Retirement System of the State of Hawaii (ERS), and to exempt these positions from the State's civil service requirements.

MEANS: Add a new section to subpart A of part II of chapter 88, Hawaii Revised Statutes (HRS), and amend section 76-16(b), HRS.

JUSTIFICATION: The continued strength of ERS depends on experienced management that is responsive to the ERS Board, its Executive Director, and ERS membership. The responsibilities of these executive-level managerial positions have increased with the growth of the ERS membership and staff, advancement in technology, and changes in regulatory requirements. Specialized pension management skills, leadership experience, and commensurate compensation are essential to maintaining the professionalism that the ERS requires.

The Executive Director currently serves as an exempt position reporting to the ERS Board. The DED reports to the Executive Director, serves as acting Executive Director when the Executive Director is unavailable, and oversees day-to-day operations of the ERS. The CCO, under the direction of the Executive Director, manages the ethics, risk, and compliance programs that are integral to protecting ERS assets and ensuring the ERS' long-term stability

and sustainability. The ISO is a new position, created during the 2025 legislative session. As with other information technology positions across government agencies, recruitment and retention for this position will be difficult due to the high level of expertise required.

These executive-level positions periodically report to the ERS Board, which is responsible for the proper operation of the ERS. Providing the ERS Board with more direct oversight of these executive-level managerial positions will strengthen accountability and governance.

The stakeholders of the ERS, which include state and county employees, are reliant on a strong and professionally managed ERS to secure current and future benefits.

Impact on the public: None.

Impact on the department and other agencies: The proposed amendments primarily impact the ERS, which is an attached agency of the Department of Budget and Finance.

GENERAL FUND: None.

OTHER FUNDS: None.

PPBS PROGRAM
DESIGNATION: BUF-141/Retirement.

OTHER AFFECTED
AGENCIES: None.

EFFECTIVE DATE: Upon approval.

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LIEUTENANT GOVERNOR



KALBERT K. YOUNG
EXECUTIVE DIRECTOR

GAIL STROHL
DEPUTY EXECUTIVE DIRECTOR

**STATE OF HAWAI'I
EMPLOYEES' RETIREMENT SYSTEM**

January 12, 2026

TO: Board of Trustees
Employees' Retirement System of the State of Hawaii

FROM: Kalbert K. Young, Executive Director
Employees' Retirement System of the State of Hawaii

SUBJECT: Actuarial Asset and Liability Stress Test 2025 Report to the Legislature

Attached for your information and review is the 2025 Actuarial Asset and Liability Stress Test of the Employees' Retirement System (ERS) in accordance with the provisions of Act 85, Session Laws of Hawaii 2017.

This report has been forwarded to the Director of Budget and Finance for transmittal to the Legislature.

The 2025 report is attached and can also be found on the ERS web page.
<https://ers.ehawaii.gov/resources/reports-to-legislature>.

Board Action Required: Receive and file.

Attachment

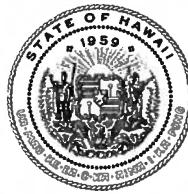


City Financial Tower • 201 Merchant Street, Suite 1400 • Honolulu, Hawaii 96813-2980
Telephone (808) 586-1735 • Fax (808) 586-1677 • <http://ers.ehawaii.gov>

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LIEUTENANT GOVERNOR

EMPLOYEES' RETIREMENT SYSTEM
HAWAII' EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER



SETH S. COLBY, Ph.D.
ACTING DIRECTOR

SABRINA NASIR
DEPUTY DIRECTOR

STATE OF HAWAI'I
DEPARTMENT OF BUDGET AND FINANCE
Ka 'Oihana Mālama Mo'ohelu a Kālā
P.O. BOX 150
HONOLULU, HAWAI'I 96810-0150

ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
OFFICE OF FEDERAL AWARDS MANAGEMENT

December 15, 2025

The Honorable Ronald D. Kouchi
President and Members
of the Senate
Thirty-Third State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Nadine K. Nakamura
Speaker and Members of the
House of Representatives
Thirty-Third State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Nakamura and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Actuarial Asset and Liability Stress Test 2025 report, as required by Act 85, Session Laws of Hawaii 2017. In accordance with Section 93-16, Hawaii Revised Statutes, a copy of this report has been transmitted to the Legislative Reference Bureau and the report may be viewed electronically at <http://ers.ehawaii.gov/resources/reports-to-legislature>.

Sincerely,

SETH S. COLBY, Ph.D.
Acting Director of Finance

Enclosure

c: Legislative Reference Bureau

ec: Governor's Office: Gov.ReportsDistribution@hawaii.gov
Lieutenant Governor's Office: LtGov.ReportsDistribution@hawaii.gov
Legislative Auditor: auditors2@auditor.state.hi.us
Department of Budget and Finance: DBFLeg.DIR@hawaii.gov

December 12, 2025

Board of Trustees
Employees' Retirement System of
The State of Hawaii
City Financial Tower
201 Merchant St., Ste. 1400
Honolulu, HI 96813-2980

Re: Stress Test Annual Report

Dear Members of the Board:

The purpose of this report is to provide the Employees' Retirement System of the State of Hawaii (ERS) with the information it must submit to the legislature as required by ACT – 85 (2017). Act – 85 (2017) requires that the actuary of the ERS perform an annual stress test as defined by the legislation and described below. This stress test is based on the preliminary valuation results of ERS as of July 1, 2025.

Requirements of Annual Stress Test Report

The annual stress test must address the following scenarios:

1. A 30-year projection of the ERS's assets, liabilities, pension debt, service costs, employee contributions, employer contributions, net amortization, benefit payments, payroll, and funded ratio assuming the current actuarial assumptions are met, including a 7% return projected from the actuarial, or smoothed, value of assets. See Stress Test Exhibit 1.
2. Two 30-year projections of the same items above assuming the actual investment performance in future years is 2% less than the assumed rate of return, starting from the market value of assets as of the valuation date, but with two different contribution policies.
 - a. The first scenario shows the projected items assuming that the employer contribution rate in future years would increase if necessary to meet the current funding policy. In other words, if the funding period in a future year exceeds maximum funding period under the statute for the given valuation, the contribution rates would be adjusted to bring the funding period down to the maximum funding period (see discussion of maximum funding period later in this report). See Stress Test Exhibit 2A.
 - b. The second scenario shows the projected items assuming no change in the current statutory contribution rates. See Stress Test Exhibit 2B.

3. Two 30-year projections of the same items above assuming the actual investment performance in the first year is a negative 20% followed by a 20-year period where investment performance is 2% less than the assumed rate of return, but with two different contribution policies.
 - a. The first scenario shows the projected items assuming that the employer contribution rate in future years would increase if necessary to meet the current funding policy. In other words, if the funding period in a future year exceeds maximum funding period under the statute for the given valuation, the contribution rates would be adjusted to bring the funding period down to the maximum funding period (see discussion of maximum funding period later in this report). See Stress Test Exhibit 3A.
 - b. The second scenario shows the projected items assuming no change in the current statutory contribution rates. See Stress Test Exhibit 3B.
4. The estimated actuarial accrued liability, the total normal cost for each benefit tier, and the employer normal cost for each benefit tier under the current investment return assumption and using the 10-year average of the 30-year treasuries notes as of the valuation date. See Stress Test Exhibit 4.

Stress Test Summary Results

The information required by the legislation is contained in the tables that follow this letter. The following is some brief commentary concerning the results themselves.

1. As shown in Stress Test Exhibit 1, the ERS is expected to be fully funded (100% funded ratio) in fiscal year ending 2046. **Important Note:** the Statutes governing the ERS contemplate that the employer contribution rates would be changed when the ERS is fully funded. However, because the statutes governing the stress test require the use of the same contribution pattern for Scenario's 1, 2B and 3B, we felt it would be inappropriate to change the contribution rates for Scenario #1 since the contribution rates would not change under the ERS statute in Scenarios 2B and 3B.
2. Under the first part of the 2nd Stress Test (see Stress Test Exhibit 2A) the employer contribution rates would remain constant at 24.00% of pay for All Other Employees and would gradually increase to 48.00% of pay for Police and Firefighters and remain at that level for the foreseeable future. As shown in both the Stress Test Exhibit 2a and Stress Test Exhibit 2B (Employer Contributions remain at statutory rates) the funded ratios would stay relatively stable in the mid to low 60's%, but over the next 30 years there would be no marked improvement in the funded ratio.

3. Under the first part of the 3rd Stress Test (see Stress Test Exhibit 3A) the employer contribution rates would increase over several years to 31.00% of pay and then remain constant for All Other Employees and increase over several years to 64.00% of pay for Police and Firefighters and remain at that level for the foreseeable future. As shown in Stress Test Exhibit 3B (Employer Contributions remain at statutory rates) the funded ratio would decline to the mid 30's% but the trust is never exhausted. The funded ratio would begin to slowly climb once the impact of the 20-year period of 5% returns ends.
4. The 10-year average of the 30-year treasury notes is 3.02% as of July 1, 2025.

Based on the information reviewed for this report, the stress test shows that the System is sustainable in the protracted low return environment of Scenario #2, but would require an increase in the Police and Fire contribution rate and the rates would need to be maintained for a much longer period of time than is currently expected. While we believe the likelihood of Scenario #3 occurring is remote, if it did occur it would require an increase in the employer contribution rates under the current statutes and the higher rates would be required for many years.

Maximum Funding Period

As the Board is aware, in 2024 Legislation was passed by the Legislature and signed by the Governor that gradually lowers the maximum funding period of ERS. With the new law the maximum funding period for the June 30, 2025 valuation is 24 years and that maximum will decrease by 1 each year in the future until it reaches 20 with the June 30, 2029 valuation. It will then remain at 20 years. While this new law is not expected to impact the ERS in consistent financial markets, it does impact the Stress Test because the Stress Test scenarios have severe underperformance which causes larger increases in the contribution rates than shown in stress tests from years prior to 2024.

Disclosures

The information contained in this report is based on the liabilities associated with the preliminary valuation results of the ERS as of June 30, 2025. The assets used in this report were estimated based on information provided by ERS. While the actual valuation results may be slightly different, it is not expected that those changes will have any material impact on the information contained herein.

Except as noted, the data, financial information, and actuarial methods and assumptions are those used in the June 30, 2025 actuarial valuation. These assumptions are detailed in the actuarial valuation report dated January 2026. The results of the actuarial valuation and this "Stress Test" are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. Based on the scope of this engagement, we have not performed analysis on the potential range of future measurements based on other factors. The actuarial calculations are intended to provide information for rational decision making.



Temporary Hazardous Duty Pay

As you are aware there have been many settlements between the employers and the employee groups regarding Temporary Hazardous Duty Pay (THDP) as a result of employment during the COVID-19 period. If the payments to employees from the settlements occurred prior to April 1st 2025, then they are reflected in those employees' liabilities in this valuation. If the payments had not yet occurred then they will be reflected in the June 30, 2026 valuation. In addition, many retirees will have their benefits adjusted due to these settlements. For most retirees these adjustments had not occurred when the census data was prepared as of March 31, 2025. We will reflect the changes to the retirees' benefits when it is reflected in the census data provided for the actuarial valuation.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Joe Newton is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

We look forward to discussing the results of this analysis with the Board.

Sincerely,



Lewis Ward
Consultant



Joseph P. Newton
Pension Market Leader and Actuary
Enclosures

Hawaii Employees Retirement System
Stress Test Projections
(Dollar Amounts in \$ Millions)

Valuation Date	Unfunded												Funded Ratio
	Market Value of Assets	Actuarial Value of Assets	Actuarial Accrued Liability	Actuarial Accrued Liability	Normal Cost	Projected Employee Contributions	Projected Employer Contributions	Net Amortization	Benefit Payments	Covered Payroll			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)
30-Jun-25	\$ 24,608	\$ 24,963	\$ 39,560	\$ 14,597	\$ 787	\$ 377	\$ 1,395	\$ 2	\$ 2,094	\$ 5,400			63.1%
30-Jun-26	26,356	26,356	40,955	14,599	801	394	1,427	(34)	2,218	5,528			64.4%
30-Jun-27	27,767	27,767	42,333	14,566	819	412	1,465	(75)	2,336	5,681			65.6%
30-Jun-28	29,212	29,212	43,704	14,491	838	430	1,505	(120)	2,454	5,838			66.8%
30-Jun-29	30,697	30,697	45,068	14,371	858	449	1,546	(170)	2,570	6,002			68.1%
30-Jun-30	32,226	32,226	46,428	14,201	879	468	1,589	(225)	2,686	6,172			69.4%
30-Jun-31	33,805	33,805	47,782	13,977	900	488	1,633	(285)	2,804	6,347			70.7%
30-Jun-32	35,438	35,438	49,131	13,692	922	508	1,678	(350)	2,922	6,527			72.1%
30-Jun-33	37,130	37,130	50,473	13,343	944	529	1,725	(422)	3,040	6,713			73.6%
30-Jun-34	38,888	38,888	51,810	12,922	967	550	1,775	(500)	3,157	6,905			75.1%
30-Jun-35	40,720	40,720	53,142	12,422	991	573	1,826	(586)	3,275	7,104			76.6%
30-Jun-36	42,634	42,634	54,471	11,836	1,016	595	1,879	(679)	3,393	7,308			78.3%
30-Jun-37	44,637	44,637	55,795	11,158	1,042	618	1,933	(780)	3,508	7,520			80.0%
30-Jun-38	46,740	46,740	57,119	10,379	1,069	642	1,990	(889)	3,622	7,741			81.8%
30-Jun-39	48,955	48,955	58,445	9,490	1,098	666	2,049	(1,008)	3,732	7,971			83.8%
30-Jun-40	51,297	51,297	59,779	8,482	1,128	691	2,111	(1,137)	3,839	8,211			85.8%
30-Jun-41	53,780	53,780	61,125	7,345	1,160	717	2,175	(1,277)	3,945	8,461			88.0%
30-Jun-42	56,420	56,420	62,489	6,069	1,193	743	2,241	(1,428)	4,048	8,720			90.3%
30-Jun-43	59,232	59,232	63,874	4,642	1,228	769	2,310	(1,590)	4,150	8,988			92.7%
30-Jun-44	62,234	62,234	65,286	3,052	1,264	796	2,382	(1,766)	4,250	9,267			95.3%
30-Jun-45	65,443	65,443	66,730	1,287	1,302	824	2,456	(1,956)	4,349	9,554			98.1%
30-Jun-46	68,877	68,877	68,209	(668)	1,341	852	2,532	(2,161)	4,446	9,852			101.0%
30-Jun-47	72,559	72,559	69,731	(2,828)	1,382	881	2,612	(2,382)	4,542	10,161			104.1%
30-Jun-48	76,510	76,510	71,301	(5,209)	1,424	910	2,694	(2,619)	4,637	10,479			107.3%
30-Jun-49	80,752	80,752	72,925	(7,827)	1,468	940	2,778	(2,875)	4,734	10,808			110.7%
30-Jun-50	85,309	85,309	74,607	(10,702)	1,514	971	2,865	(3,151)	4,832	11,147			114.3%
30-Jun-51	90,204	90,204	76,352	(13,852)	1,561	1,002	2,955	(3,448)	4,932	11,495			118.1%
30-Jun-52	95,462	95,462	78,162	(17,300)	1,610	1,035	3,047	(3,768)	5,035	11,854			122.1%
30-Jun-53	101,109	101,109	80,041	(21,067)	1,660	1,068	3,142	(4,113)	5,140	12,223			126.3%
30-Jun-54	107,173	107,173	81,993	(25,179)	1,711	1,101	3,239	(4,482)	5,250	12,602			130.7%
30-Jun-55	113,681	113,681	84,020	(29,661)	1,764	1,137	3,339	(4,881)	5,363	12,992			135.3%



Hawaii Employees' Retirement System

Stress Test Exhibit 2A - Actual Returns are 5% (2% Less than Assumed)

Scenario A - Contribution Rates Adjusted if Necessary to Keep Future Valuations' Funding Periods at Maximum Funding Period or Less
(Dollar Amounts in \$ Millions)

Valuation Date	Unfunded												Funded Ratio
	Market Value of Assets	Actuarial Value of Assets	Actuarial Accrued Liability	Actuarial Accrued Liability	Normal Cost	Projected Employee Contributions	Projected Employer Contributions	Net Amortization	Benefit Payments	Covered Payroll	(11)	(12)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
30-Jun-25	\$ 24,608	\$ 24,963	\$ 39,560	\$ 14,597	\$ 787	\$ 377	\$ 1,395	\$ 2	\$ 2,094	\$ 5,400	63.1%		
30-Jun-26	25,487	26,080	40,955	14,875	801	394	1,433	(20)	2,218	5,528	63.7%		
30-Jun-27	26,338	27,096	42,333	15,237	819	412	1,477	(40)	2,336	5,681	64.0%		
30-Jun-28	27,173	28,007	43,704	15,697	838	430	1,523	(55)	2,454	5,838	64.1%		
30-Jun-29	27,995	28,867	45,068	16,201	858	449	1,571	(68)	2,570	6,002	64.1%		
30-Jun-30	28,808	29,711	46,428	16,717	879	468	1,627	(88)	2,686	6,172	64.0%		
30-Jun-31	29,616	30,548	47,782	17,234	900	488	1,672	(97)	2,804	6,347	63.9%		
30-Jun-32	30,411	31,370	49,131	17,761	922	508	1,724	(112)	2,922	6,527	63.8%		
30-Jun-33	31,198	32,182	50,473	18,291	944	529	1,773	(124)	3,040	6,713	63.8%		
30-Jun-34	31,973	32,983	51,810	18,827	967	550	1,823	(137)	3,157	6,905	63.7%		
30-Jun-35	32,739	33,776	53,142	19,367	991	573	1,876	(152)	3,275	7,104	63.6%		
30-Jun-36	33,500	34,561	54,471	19,909	1,016	595	1,930	(167)	3,393	7,308	63.4%		
30-Jun-37	34,255	35,342	55,795	20,453	1,042	618	1,986	(184)	3,508	7,520	63.3%		
30-Jun-38	35,011	36,122	57,119	20,997	1,069	642	2,044	(202)	3,622	7,741	63.2%		
30-Jun-39	35,770	36,906	58,445	21,539	1,098	666	2,105	(223)	3,732	7,971	63.1%		
30-Jun-40	36,541	37,702	59,779	22,076	1,128	691	2,168	(245)	3,839	8,211	63.1%		
30-Jun-41	37,331	38,517	61,125	22,608	1,160	717	2,234	(270)	3,945	8,461	63.0%		
30-Jun-42	38,144	39,356	62,489	23,133	1,193	743	2,303	(296)	4,048	8,720	63.0%		
30-Jun-43	38,988	40,226	63,874	23,648	1,228	769	2,373	(325)	4,150	8,988	63.0%		
30-Jun-44	39,868	41,134	65,286	24,152	1,264	796	2,447	(356)	4,250	9,267	63.0%		
30-Jun-45	40,792	42,086	66,730	24,644	1,302	824	2,523	(390)	4,349	9,554	63.1%		
30-Jun-46	41,765	43,089	68,209	25,120	1,341	852	2,602	(427)	4,446	9,852	63.2%		
30-Jun-47	42,796	44,151	69,731	25,580	1,382	881	2,683	(467)	4,542	10,161	63.3%		
30-Jun-48	43,891	45,280	71,301	26,021	1,424	910	2,767	(509)	4,637	10,479	63.5%		
30-Jun-49	45,058	46,482	72,925	26,443	1,468	940	2,854	(555)	4,734	10,808	63.7%		
30-Jun-50	46,304	47,764	74,607	26,843	1,514	971	2,943	(604)	4,832	11,147	64.0%		
30-Jun-51	47,633	49,134	76,352	27,218	1,561	1,002	3,035	(657)	4,932	11,495	64.4%		
30-Jun-52	49,051	50,594	78,162	27,568	1,610	1,035	3,130	(713)	5,035	11,854	64.7%		
30-Jun-53	50,563	52,152	80,041	27,890	1,660	1,068	3,227	(774)	5,140	12,223	65.2%		
30-Jun-54	52,175	53,812	81,993	28,181	1,711	1,101	3,328	(838)	5,250	12,602	65.6%		
30-Jun-55	53,891	55,579	84,020	28,441	1,764	1,137	3,431	(908)	5,363	12,992	66.2%		



Hawaii Employees' Retirement System
Stress Test Exhibit 2B - Actual Returns are 5% (2% Less than Assumed)
Scenario B - Contribution Rates Kept at Current Statutory Rates
(Dollar Amounts in \$ Millions)

Valuation Date	Unfunded												Funded Ratio
	Market Value of Assets	Actuarial Value of Assets	Actuarial Accrued Liability	Actuarial Accrued Liability	Normal Cost	Projected Employee Contributions	Projected Employer Contributions	Net Amortization	Benefit Payments	Covered Payroll	(11)	(12)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
30-Jun-25	\$ 24,608	\$ 24,963	\$ 39,560	\$ 14,597	\$ 787	\$ 377	\$ 1,395	\$ 2	\$ 2,094	\$ 5,400	63.1%		
30-Jun-26	25,487	26,080	40,955	14,875	801	394	1,427	(14)	2,218	5,528	63.7%		
30-Jun-27	26,332	27,089	42,333	15,244	819	412	1,465	(27)	2,336	5,681	64.0%		
30-Jun-28	27,155	27,988	43,704	15,716	838	430	1,505	(35)	2,454	5,838	64.0%		
30-Jun-29	27,957	28,828	45,068	16,240	858	449	1,546	(39)	2,570	6,002	64.0%		
30-Jun-30	28,742	29,644	46,428	16,783	879	468	1,589	(44)	2,686	6,172	63.9%		
30-Jun-31	29,508	30,438	47,782	17,344	900	488	1,633	(49)	2,804	6,347	63.7%		
30-Jun-32	30,258	31,213	49,131	17,917	922	508	1,678	(54)	2,922	6,527	63.5%		
30-Jun-33	30,990	31,970	50,473	18,503	944	529	1,725	(60)	3,040	6,713	63.3%		
30-Jun-34	31,706	32,710	51,810	19,100	967	550	1,775	(68)	3,157	6,905	63.1%		
30-Jun-35	32,410	33,438	53,142	19,704	991	573	1,826	(76)	3,275	7,104	62.9%		
30-Jun-36	33,103	34,154	54,471	20,316	1,016	595	1,879	(85)	3,393	7,308	62.7%		
30-Jun-37	33,786	34,860	55,795	20,935	1,042	618	1,933	(96)	3,508	7,520	62.5%		
30-Jun-38	34,464	35,560	57,119	21,558	1,069	642	1,990	(107)	3,622	7,741	62.3%		
30-Jun-39	35,140	36,259	58,445	22,186	1,098	666	2,049	(120)	3,732	7,971	62.0%		
30-Jun-40	35,822	36,964	59,779	22,815	1,128	691	2,111	(134)	3,839	8,211	61.8%		
30-Jun-41	36,517	37,681	61,125	23,445	1,160	717	2,175	(150)	3,945	8,461	61.6%		
30-Jun-42	37,229	38,415	62,489	24,074	1,193	743	2,241	(167)	4,048	8,720	61.5%		
30-Jun-43	37,964	39,173	63,874	24,701	1,228	769	2,310	(186)	4,150	8,988	61.3%		
30-Jun-44	38,729	39,962	65,286	25,324	1,264	796	2,382	(207)	4,250	9,267	61.2%		
30-Jun-45	39,529	40,787	66,730	25,943	1,302	824	2,456	(230)	4,349	9,554	61.1%		
30-Jun-46	40,370	41,654	68,209	26,556	1,341	852	2,532	(255)	4,446	9,852	61.1%		
30-Jun-47	41,260	42,571	69,731	27,160	1,382	881	2,612	(282)	4,542	10,161	61.1%		
30-Jun-48	42,206	43,545	71,301	27,756	1,424	910	2,694	(311)	4,637	10,479	61.1%		
30-Jun-49	43,213	44,583	72,925	28,342	1,468	940	2,778	(343)	4,734	10,808	61.1%		
30-Jun-50	44,288	45,691	74,607	28,916	1,514	971	2,865	(378)	4,832	11,147	61.2%		
30-Jun-51	45,437	46,873	76,352	29,478	1,561	1,002	2,955	(415)	4,932	11,495	61.4%		
30-Jun-52	46,662	48,135	78,162	30,026	1,610	1,035	3,047	(455)	5,035	11,854	61.6%		
30-Jun-53	47,970	49,482	80,041	30,559	1,660	1,068	3,142	(499)	5,140	12,223	61.8%		
30-Jun-54	49,364	50,919	81,993	31,075	1,711	1,101	3,239	(544)	5,250	12,602	62.1%		
30-Jun-55	50,849	52,448	84,020	31,573	1,764	1,137	3,339	(595)	5,363	12,992	62.4%		



Hawaii Employees' Retirement System

Stress Test Exhibit 3A - Negative 20% Return Followed by 20-Year Period with 5% Returns

Scenario A - Contribution Rates Adjusted if Necessary to Keep Future Valuations' Funding Periods at Maximum Funding Period or Less
(Dollar Amounts in \$ Millions)

Valuation Date	Unfunded												Funded Ratio
	Market Value of Assets	Actuarial Value of Assets	Actuarial Accrued Liability	Actuarial Accrued Liability	Normal Cost	Projected Employee Contributions	Projected Employer Contributions	Net Amortization	Benefit Payments	Covered Payroll	(11)	(12)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
30-Jun-25	\$ 24,608	\$ 24,963	\$ 39,560	\$ 14,597	\$ 787	\$ 377	\$ 1,395	\$ 2	\$ 2,094	\$ 5,400	63.1%		
30-Jun-26	19,378	24,553	40,955	16,402	801	394	1,433	86	2,218	5,528	60.0%		
30-Jun-27	19,923	23,884	42,333	18,449	819	412	1,603	55	2,336	5,681	56.4%		
30-Jun-28	20,567	23,100	43,704	20,604	838	430	1,830	(29)	2,454	5,838	52.9%		
30-Jun-29	21,373	22,336	45,068	22,732	858	449	2,066	(123)	2,570	6,002	49.6%		
30-Jun-30	22,361	23,193	46,428	23,234	879	468	2,123	(144)	2,686	6,172	50.0%		
30-Jun-31	23,356	24,128	47,782	23,654	900	488	2,181	(174)	2,804	6,347	50.5%		
30-Jun-32	24,359	25,125	49,131	24,006	922	508	2,239	(209)	2,922	6,527	51.1%		
30-Jun-33	25,372	26,162	50,473	24,312	944	529	2,303	(251)	3,040	6,713	51.8%		
30-Jun-34	26,399	27,219	51,810	24,591	967	550	2,369	(298)	3,157	6,905	52.5%		
30-Jun-35	27,446	28,298	53,142	24,844	991	573	2,437	(349)	3,275	7,104	53.3%		
30-Jun-36	28,518	29,403	54,471	25,067	1,016	595	2,507	(403)	3,393	7,308	54.0%		
30-Jun-37	29,616	30,536	55,795	25,259	1,042	618	2,580	(462)	3,508	7,520	54.7%		
30-Jun-38	30,748	31,704	57,119	25,414	1,069	642	2,656	(526)	3,622	7,741	55.5%		
30-Jun-39	31,922	32,915	58,445	25,530	1,098	666	2,735	(595)	3,732	7,971	56.3%		
30-Jun-40	33,146	34,177	59,779	25,602	1,128	691	2,817	(670)	3,839	8,211	57.2%		
30-Jun-41	34,431	35,501	61,125	25,624	1,160	717	2,903	(750)	3,945	8,461	58.1%		
30-Jun-42	35,785	36,896	62,489	25,593	1,193	743	2,992	(837)	4,048	8,720	59.0%		
30-Jun-43	37,216	38,372	63,874	25,502	1,228	769	3,084	(930)	4,150	8,988	60.1%		
30-Jun-44	38,736	39,938	65,286	25,348	1,264	796	3,179	(1,030)	4,250	9,267	61.2%		
30-Jun-45	40,354	41,604	66,730	25,125	1,302	824	3,278	(1,137)	4,349	9,554	62.3%		
30-Jun-46	42,079	43,381	68,209	24,828	1,341	852	3,380	(1,253)	4,446	9,852	63.6%		
30-Jun-47	44,763	45,491	69,731	24,240	1,382	881	3,486	(1,391)	4,542	10,161	65.2%		
30-Jun-48	47,673	47,979	71,301	23,322	1,424	910	3,595	(1,554)	4,637	10,479	67.3%		
30-Jun-49	50,829	50,893	72,925	22,032	1,468	940	3,708	(1,747)	4,734	10,808	69.8%		
30-Jun-50	54,254	54,280	74,607	20,327	1,514	971	3,824	(1,971)	4,832	11,147	72.8%		
30-Jun-51	57,968	57,977	76,352	18,375	1,561	1,002	3,944	(2,215)	4,932	11,495	75.9%		
30-Jun-52	61,992	61,995	78,162	16,167	1,610	1,035	4,067	(2,480)	5,035	11,854	79.3%		
30-Jun-53	66,352	66,353	80,041	13,689	1,660	1,068	4,193	(2,767)	5,140	12,223	82.9%		
30-Jun-54	71,071	71,071	81,993	10,922	1,711	1,101	4,323	(3,077)	5,250	12,602	86.7%		
30-Jun-55	76,175	76,175	84,020	7,846	1,764	1,137	4,457	(3,412)	5,363	12,992	90.7%		



Hawaii Employees' Retirement System
Stress Test Exhibit 3B - Negative 20% Return Followed by 20-Year Period with 5% Returns
Scenario B - Contribution Rates Kept at Current Statutory Rates
(Dollar Amounts in \$ Millions)

Valuation Date	Unfunded												Funded Ratio
	Market Value of Assets	Actuarial Value of Assets	Actuarial Accrued Liability	Actuarial Accrued Liability	Normal Cost	Projected Employee Contributions	Projected Employer Contributions	Net Amortization	Benefit Payments	Covered Payroll	(11)	(12)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
30-Jun-25	\$ 24,608	\$ 24,963	\$ 39,560	\$ 14,597	\$ 787	\$ 377	\$ 1,395	\$ 2	\$ 2,094	\$ 5,400	63.1%		
30-Jun-26	19,378	24,553	40,955	16,402	801	394	1,427	93	2,218	5,528	60.0%		
30-Jun-27	19,917	23,878	42,333	18,455	819	412	1,465	197	2,336	5,681	56.4%		
30-Jun-28	20,419	22,951	43,704	20,753	838	430	1,505	318	2,454	5,838	52.5%		
30-Jun-29	20,885	21,842	45,068	23,226	858	449	1,546	450	2,570	6,002	48.5%		
30-Jun-30	21,316	22,133	46,428	24,295	879	468	1,589	482	2,686	6,172	47.7%		
30-Jun-31	21,711	22,454	47,782	25,329	900	488	1,633	509	2,804	6,347	47.0%		
30-Jun-32	22,071	22,789	49,131	26,342	922	508	1,678	536	2,922	6,527	46.4%		
30-Jun-33	22,394	23,115	50,473	27,358	944	529	1,725	559	3,040	6,713	45.8%		
30-Jun-34	22,680	23,410	51,810	28,400	967	550	1,775	583	3,157	6,905	45.2%		
30-Jun-35	22,933	23,671	53,142	29,472	991	573	1,826	607	3,275	7,104	44.5%		
30-Jun-36	23,152	23,898	54,471	30,572	1,016	595	1,879	633	3,393	7,308	43.9%		
30-Jun-37	23,337	24,091	55,795	31,704	1,042	618	1,933	658	3,508	7,520	43.2%		
30-Jun-38	23,493	24,253	57,119	32,866	1,069	642	1,990	685	3,622	7,741	42.5%		
30-Jun-39	23,621	24,387	58,445	34,058	1,098	666	2,049	711	3,732	7,971	41.7%		
30-Jun-40	23,727	24,497	59,779	35,281	1,128	691	2,111	739	3,839	8,211	41.0%		
30-Jun-41	23,817	24,591	61,125	36,534	1,160	717	2,175	767	3,945	8,461	40.2%		
30-Jun-42	23,893	24,671	62,489	37,818	1,193	743	2,241	795	4,048	8,720	39.5%		
30-Jun-43	23,962	24,742	63,874	39,132	1,228	769	2,310	824	4,150	8,988	38.7%		
30-Jun-44	24,026	24,809	65,286	40,477	1,264	796	2,382	854	4,250	9,267	38.0%		
30-Jun-45	24,091	24,876	66,730	41,853	1,302	824	2,456	884	4,349	9,554	37.3%		
30-Jun-46	24,161	24,948	68,209	43,262	1,341	852	2,532	914	4,446	9,852	36.6%		
30-Jun-47	24,713	25,148	69,731	44,583	1,382	881	2,612	937	4,542	10,161	36.1%		
30-Jun-48	25,314	25,496	71,301	45,805	1,424	910	2,694	952	4,637	10,479	35.8%		
30-Jun-49	25,972	26,011	72,925	46,914	1,468	940	2,778	957	4,734	10,808	35.7%		
30-Jun-50	26,695	26,711	74,607	47,896	1,514	971	2,865	951	4,832	11,147	35.8%		
30-Jun-51	27,487	27,492	76,352	48,860	1,561	1,002	2,955	942	4,932	11,495	36.0%		
30-Jun-52	28,354	28,356	78,162	49,806	1,610	1,035	3,047	930	5,035	11,854	36.3%		
30-Jun-53	29,303	29,304	80,041	50,737	1,660	1,068	3,142	914	5,140	12,223	36.6%		
30-Jun-54	30,341	30,341	81,993	51,652	1,711	1,101	3,239	896	5,250	12,602	37.0%		
30-Jun-55	31,471	31,472	84,020	52,549	1,764	1,137	3,339	873	5,363	12,992	37.5%		



Hawaii Employees' Retirement System

Stress Test Exhibit 4 - Comparison of Cost Items at Current Investment Return Assumption (7.00%) and 10-Year Average of 30-Year Treasuries (3.02%)

All Other Employees

	Valuation Assumptions		10-Year Average of 30-Year Treasuries	
	Hired Prior to July 1, 2012	Hired After June 30, 2012	Hired Prior to July 1, 2012	Hired After June 30, 2012
Membership Tier				
Actuarial Accured Liability	\$29,103	\$2,412	\$48,432	\$5,588
Total Normal Cost %	12.85%	12.23%	39.26%	32.03%
Employer Normal Cost %	8.28%	4.16%	34.69%	23.96%

Police and Fire Employees

	Valuation Assumptions		10-Year Average of 30-Year Treasuries	
	Hired Prior to July 1, 2012	Hired After June 30, 2012	Hired Prior to July 1, 2012	Hired After June 30, 2012
Membership Tier				
Actuarial Accured Liability	\$7,707	\$338	\$13,226	\$819
Total Normal Cost %	29.52%	22.99%	84.61%	64.60%
Employer Normal Cost %	17.32%	8.79%	72.41%	50.40%

Dollar Amounts are in \$ Millions



JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LIEUTENANT GOVERNOR



KALBERT K. YOUNG
EXECUTIVE DIRECTOR

GAIL STROHL
DEPUTY EXECUTIVE DIRECTOR

**STATE OF HAWAI'I
EMPLOYEES' RETIREMENT SYSTEM**

January 12, 2026

TO: Board of Trustees
Employees' Retirement System of the State of Hawaii

FROM: Kalbert K. Young, Executive Director
Employees' Retirement System of the State of Hawaii

SUBJECT: 2025 Report on Act 87 (2015) – Employer Reporting

Annually, the Employees' Retirement System of the State of Hawaii provides a publicly available report related to the Status of Employer Reporting of Information in support of Act 87, Session Laws of Hawaii 2015.

This report has been forwarded to the Director of Budget and Finance for transmittal to the Legislature.

The 2025 report is attached and can also be found on the ERS web page.
<https://ers.ehawaii.gov/resources/reports-to-legislature>.

Board Action Required: Receive and file.

Attachment



JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LIEUTENANT GOVERNOR

EMPLOYEES' RETIREMENT SYSTEM
HAWAII' EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER



SETH S. COLBY, Ph.D.
ACTING DIRECTOR

SABRINA NASIR
DEPUTY DIRECTOR

STATE OF HAWAI'I
DEPARTMENT OF BUDGET AND FINANCE
Ka 'Oihana Mālama Mo'ohelu a Kālā
P.O. BOX 150
HONOLULU, HAWAI'I 96810-0150

ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
OFFICE OF FEDERAL AWARDS MANAGEMENT

December 15, 2025

The Honorable Ronald D. Kouchi
President and Members
of the Senate
Thirty-Third State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Nadine K. Nakamura
Speaker and Members of the
House of Representatives
Thirty-Third State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Nakamura and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Employees' Retirement System's Employer Reporting of Information report for 2025, as required by Act 87, Session Laws of Hawaii 2015. In accordance with Section 93-16, Hawaii Revised Statutes, a copy of this report has been transmitted to the Legislative Reference Bureau and the report may be viewed electronically at <http://ers.ehawaii.gov/resources/reports-to-legislature>.

Sincerely,

A handwritten signature in blue ink.

SETH S. COLBY, Ph.D.
Acting Director of Finance

Enclosure

c: Legislative Reference Bureau

ec: Governor's Office: Gov.ReportsDistribution@hawaii.gov
Lieutenant Governor's Office: LtGov.ReportsDistribution@hawaii.gov
Legislative Auditor: auditors2@auditor.state.hi.us
Department of Budget and Finance: DBFLeg.DIR@hawaii.gov

**EMPLOYEES' RETIREMENT SYSTEM
OF THE STATE OF HAWAII**

**ACT 87, SESSION LAWS OF HAWAII 2015
RELATING TO THE EMPLOYEES' RETIREMENT SYSTEM**

**STATUS OF EMPLOYER REPORTING OF INFORMATION
FOR 2025**

The Employees' Retirement System (ERS) hereby submits its report on the progress of employer reporting of personnel and payroll information, as required by Act 87, Session Laws of Hawaii 2015 ("Act 87, SLH 2015") for 2025.

Importance of Employer Reporting

The ERS administers retirement, death, and disability benefits for eligible State and county employees. Because benefits eligibility and entitlement are determined using payroll data (compensation information) and personnel data (service credit information), it is essential that the ERS receive timely and accurate data from State and county employers, who are the sole source of such data.

To that end, Act 87, SLH 2015 requires State and county employers to "furnish the information required by the system pursuant to this section in the format required by the system." Act 87, SLH 2015 further requires State and county employers to pay a penalty to the ERS should they fail to furnish the ERS with the information required in the format required.

Progress of Employer Reporting

In 2025, the ERS Employer Team, comprised of benefits, accounting, information system and administrative support staff members, continued to assist employers in their compliance efforts.

In January 2025, the ERS onboarded KMH LLP (KMH), a third-party accounting, consulting, and audit firm, to assist with the review and analysis of personnel and payroll data. Memos were sent to employers on March 12, 2025 and August 14, 2025 to notify them that the ERS has contracted KMH to assist in the audit and to engage with the requested employer-provided points of contact for personnel and payroll data. During the period from June through September of 2025, KMH worked with the employers to request the corroborating data for analysis.

ERS is continuing to collaborate with the KMH and employers to establish an appropriate audit process and related controls. ERS recommends that no employer be subject to the pre-payment of contributions for failing to submit data in the required format during Fiscal Year 2026 as final audit standards continue to be developed and finalized.

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LIEUTENANT GOVERNOR



KALBERT K. YOUNG
EXECUTIVE DIRECTOR

GAIL STROHL
DEPUTY EXECUTIVE DIRECTOR

**STATE OF HAWAII
EMPLOYEES' RETIREMENT SYSTEM**

January 12, 2026

TO: Board of Trustees
Employees' Retirement System of the State of Hawaii

FROM: Kristin Varela, Chief Investment Officer Employees' Retirement System of the State of Hawaii

SUBJECT: 2025 Report on Act 192 (2007) — Sudan Holdings

Annually, the Employees' Retirement System of the State of Hawaii provides a publicly available report related to Hawaii venture capital investments in support of Act 192, Session Laws of Hawaii 2007.

The 2025 report is attached and can also be found on the ERS web page.
<http://ers.ehawaii.gov/resources/reports-to-legislature>.

Board Action Required: Receive and file.

Attachment

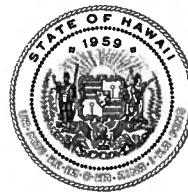


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JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LIEUTENANT GOVERNOR

EMPLOYEES' RETIREMENT SYSTEM
HAWAII' EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER



SETH S. COLBY, Ph.D.
ACTING DIRECTOR

SABRINA NASIR
DEPUTY DIRECTOR

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DEPARTMENT OF BUDGET AND FINANCE
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ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
OFFICE OF FEDERAL AWARDS MANAGEMENT

December 15, 2025

The Honorable Ronald D. Kouchi
President and Members
of the Senate
Thirty-Third State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Nadine K. Nakamura
Speaker and Members of the
House of Representatives
Thirty-Third State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Nakamura and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Direct Holdings in Sudan Scrutinized Companies 2025 report, as required by Act 192, Session Laws of Hawaii 2007. In accordance with Section 93-16, HRS, a copy of this report has been transmitted to the Legislative Reference Bureau and the report may be viewed electronically at <http://ers.ehawaii.gov/resources/reports-to-legislature>.

Sincerely,

A handwritten signature in blue ink.

SETH S. COLBY, Ph.D.
Acting Director of Finance

Enclosure

c: Legislative Reference Bureau

ec: Governor's Office: Gov.ReportsDistribution@hawaii.gov
Lieutenant Governor's Office: LtGov.ReportsDistribution@hawaii.gov
Legislative Auditor: auditors2@auditor.state.hi.us
Department of Budget and Finance: DBFLeg.DIR@hawaii.gov

**EMPLOYEES' RETIREMENT SYSTEM
OF THE STATE OF HAWAII
DIRECT HOLDINGS IN SUDAN SCRUTINIZED COMPANIES
2025**

Act 192, Session Laws of Hawaii 2007, expresses the State's desire to not participate in ownership of companies that provide significant practical support for genocide activities being conducted by the Sudanese government in the Darfur region.

The Board of Trustees of the Employees' Retirement System recognizes the intent of Act 192 and will abide by its requirements. The Board, however, must also apply a decision framework to act for the exclusive benefit of ERS Plan participants. In this respect, the Board recognized that divestment activities could potentially increase the portfolio's idiosyncratic investment risk. Divestment guidelines and procedures, codified in the ERS's *Sudan Investment Policy* ("Policy"), were therefore developed to minimize the impact of the Sudan divestment policy upon the investment results of the ERS portfolio. The Sudan divestment policy is intended to also avoid:

- Discriminating against companies whose Sudan-related business activities are supported by the U.S. government,
- Discriminating against companies whose Sudan-related business activities do not support genocide activities,
- Unnecessarily harming U.S. companies and jobs, and
- Compromising the Board of Trustees' duties to the beneficiaries of the ERS.

The ERS was required to make its best efforts to identify all of its direct holdings in scrutinized companies within 180 days after July 1, 2007. Those efforts were to include:

- Reviewing publicly available information regarding companies with business operations in Sudan provided by nonprofit organizations and other appropriate parties;
- Contacting ERS's asset managers with investments in scrutinized companies; and
- Contacting other institutional investors that have divested from or engaged with companies that have business operations in Sudan.

Each year thereafter, Act 192 requires the ERS to provide to the legislature a publicly available report that includes activity under section 4, to include: 1) A summary or correspondence with companies engaged by the public fund; 2) All investments sold, redeemed, divested, or withdrawn; 3) All prohibited investments; and 4) Any progress made. The ERS respectfully reports all pertinent activity in 2025 related to Sudan Scrutinized Companies as outlined in Act 192.

The ERS relied on the *Sudan Company Report* prepared by the EIRIS Conflict Risk Network (CRN) to determine “scrutinized companies,” that certain business activities in Sudan may determine their status as a “highest offender.” Highest offenders are subject to possible divestment in accordance with the Policy.

Before taking any action against the company, the ERS Board considers any additional information they may provide. The ERS will send a letter to the scrutinized company to inform them of their Sudan-related activities and encourage them to cease their scrutinized active business operations within 90 days. If the company continues to have scrutinized active business operations after ninety days following the first engagement by ERS, the Board will consider divestment or other corrective actions to the extent possible with due consideration from among other things, return on investment, diversification, and the ERS’s other legal obligations. Failure to respond to the ERS letter may lead to divestment action.

In 2025, there were no identified “scrutinized companies” held in the ERS portfolio.

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LIEUTENANT GOVERNOR



KALBERT K. YOUNG
EXECUTIVE DIRECTOR

GAIL STROHL
DEPUTY EXECUTIVE DIRECTOR

**STATE OF HAWAII
EMPLOYEES' RETIREMENT SYSTEM**

January 12, 2026

TO: Board of Trustees
Employees' Retirement System of the State of Hawaii

FROM: Kristin Varela, Chief Investment Officer Employees' Retirement System of the State of Hawaii

SUBJECT: 2025 Report on Act 260 (2007) — Hawaii Targeted Investment Program (HiTIP)

Annually, the Employees' Retirement System of the State of Hawaii provides a publicly available report related to Hawaii venture capital investments in support of Act 260, Session Laws of Hawaii 2007.

The 2025 report is attached and can also be found on the ERS web page.
<http://ers.ehawaii.gov/resources/reports-to-legislature>.

Board Action Required: Receive and file.

Attachment

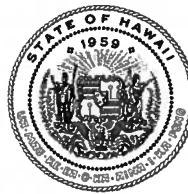


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GOVERNOR

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EMPLOYEES' RETIREMENT SYSTEM
HAWAII' EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
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ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
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December 15, 2025

The Honorable Ronald D. Kouchi
President and Members
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State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Nadine K. Nakamura
Speaker and Members of the
House of Representatives
Thirty-Third State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Nakamura and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Innovation Economy 2025 report, as required by Act 260, Session Laws of Hawaii 2007. In accordance with Section 93-16, Hawaii Revised Statutes, a copy of this report has been transmitted to the Legislative Reference Bureau and the report may be viewed electronically at <http://ers.ehawaii.gov/resources/reports-to-legislature>.

Sincerely,

A handwritten signature in blue ink that appears to read "Seth S. Colby".

SETH S. COLBY, Ph.D.
Acting Director of Finance

Enclosure

c: Legislative Reference Bureau

ec: Governor's Office: Gov.ReportsDistribution@hawaii.gov
Lieutenant Governor's Office: LtGov.ReportsDistribution@hawaii.gov
Legislative Auditor: auditors2@auditor.state.hi.us
Department of Budget and Finance: DBFLeg.DIR@hawaii.gov

**EMPLOYEES' RETIREMENT SYSTEM
OF THE STATE OF HAWAII**

**ACT 260, SESSION LAWS OF HAWAII 2007
RELATING TO THE INNOVATION ECONOMY**

**HAWAII VENTURE CAPITAL INVESTMENT
2025**

Act 260, Session Laws of Hawaii 2007, expresses the State's desire to increase economic growth through the development of the State's human resources, and employing these highly skilled resources to leverage increases in innovation across the State's economy.

The Board of Trustees of the Employees' Retirement System (ERS) acknowledges the intent of Act 260. Accordingly, the ERS, through its investment policies and an appropriate-sized funding allocation, has demonstrated a commitment to supporting an innovation economy while at the same time pursuing its objectives of achieving attractive venture capital investment return for the benefit of its beneficiaries.

The ERS Board approved the creation of a Hawaii Targeted Investment Program (HiTIP) Policies and Procedures on March 10, 2008, which included the adoption of funding criteria, as required by Act 260. A \$25 million program funding allocation and a comprehensive HiTIP operating structure were approved on November 10, 2008, and December 8, 2008, respectively. A \$35 million program for HiTIP II was approved on September 12, 2016 and closed in the first quarter of 2017. A \$50 million program for HiTIP III was approved on November 12, 2019 and closed in December 2019. In May 2020, the allocation to HiTIP III was increased by \$25 million to a total of \$75 million. The purpose of the HiTIP is to invest venture capital in locally based early-stage technology companies through a portfolio of local, regional, and national venture capital funds within an institutional investment program structure. Under a competitive search process, the ERS selected a discretionary investment manager to operate and manage the HiTIP, which is projected to have a program lifespan of up to 15 years per fund.

The ERS is required to annually report any Hawaii venture capital investment. For calendar-year 2025, the ERS has supported Act 260 through the following investment measures:

- Since inception, \$135.75 million has been committed across three tranches. HiTIP I, at \$25.25 million of total capital, is fully committed to eight investments, which include seven private equity funds and one co-investment. HiTIP II, at \$35.25 million of total capital is fully committed to twelve private equity funds. HiTIP III, a \$75.25 million pool, began investing in late 2019 and is fully committed into sixteen private equity funds. Note, two underlying fund investments are split across HiTIP

II & HiTIP III so the total number of unique private equity investments across all three HiTIP programs is thirty-four.

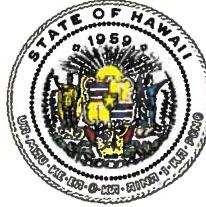
- HiTIP seeks to invest in the major industry sectors of the Hawaiian entrepreneurial ecosystem. The sector exposure of HiTIP I, as a percent of remaining value as of September 30, 2025, is 70% Healthcare/Biotechnology/Biopharmaceuticals, 11% Consumer Products and Services, 7% Tech and Software, and 12% Other. For HiTIP II the sector exposure, as a percent of remaining value as of September 30, 2025, is 60% Tech and Software, 11% Healthcare Services, 6% Business Products and Services, 3% Real Estate, and 20% Other. For HiTIP III, the sector exposure, as a percent of remaining value as of September 30, 2025, is 58% Tech and Software, 13% Healthcare Services, 7% Financial Services, 3% Real Estate, and 19% Other.
- Since inception, HiTIP funds have looked at 3,553 investment opportunities with 1,978 Hawaii based companies. Of these companies, 226 are currently being tracked for a potential future investment.
- HiTIP I funds have invested into five companies operating in or that were started in Hawaii. Total direct investment by HiTIP I funds into Hawaiian companies is \$35.8 million, 142% of ERS's HiTIP I commitment. Including capital from co-investors, \$423 million has been invested into Hawaiian companies, 1,675% of ERS's HiTIP I commitment. HiTIP II funds have invested into nineteen companies operating in or that were started in Hawaii. Total direct investment by HiTIP II funds into Hawaiian companies is \$5.0 million, 14.1% of ERS' HiTIP II commitment. Including capital from co-investors, \$62.1 million, 176.3% of ERS' HiTIP II commitment. HiTIP III funds, which in aggregate are still in their investment periods, have invested into fifteen companies operating in or that were started in Hawaii. Total direct investments by HiTIP III funds into Hawaiian companies is \$6.5 million, 8.7% of ERS' HiTIP III commitment. Including capital from co-investors, \$17.9 million, 23.7% of ERS' HiTIP III commitment. In total \$494.8 million has been invested into thirty-six unique local Hawaii companies, three of these companies are included in both HiTIP II & HiTIP III.
- As of September 2025, the HiTIP I portfolio has distributed 128.1% of invested capital. A major source of the portfolio's liquidity has come from eighteen Initial Public Offerings (IPOs). Over this respective time period, HiTIP I has a gross Internal Rate of Return (IRR) of 7.7% with a Distributed to Paid-In Ratio (DPI) of 1.28x and a Total Value to Paid-In Ratio (TVPI) of 1.61x.
- As of September 2025, the majority of the HiTIP II funds are in the portfolio development stage, having distributed 19.5% of invested capital. Over this respective time period, HiTIP II has a gross Internal Rate of Return (IRR) of 9.2% with a Distributed to Paid-In Ratio (DPI) of 0.19x and a Total Value to Paid-In Ratio (TVPI) of 1.48x. Since inception a total of 396 investments have been made across these funds.
- As of September 2025, the majority of the HiTIP III funds are still in the active investment stage with only 1.3% of invested capital being distributed. Over this respective time period, HiTIP III has a gross Internal Rate of Return (IRR) of 4.9% with a Distributed to Paid-In Ratio (DPI) of .01x and a Total Value to Paid-In Ratio

(TVPI) of 1.12x. Since inception a total of 469 investments have been made across these funds.

- For the 12 months ended June 30, 2025, HiTIP Fund managers were able to accumulate 24 trips and 137 days to Hawaii. In these sessions, approximately 76.8% of the reported activity related to instances of one-on-one mentorship for local companies and 23.2% related to conferences, diligence and other activities.
- Hawaiian HiTIP fund companies have spent \$26.9 million in Hawaii and produced a gross output of \$43.5 million in goods and services in the state. These companies employed 707 people in total, 249 of which were based in Hawaii. The companies have also paid \$16.5 million in wages and salaries to full-time employees and \$961 thousand to part-time employees in Hawaii.

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LIEUTENANT GOVERNOR



KALBERT K. YOUNG
EXECUTIVE DIRECTOR

GAIL STROHL
DEPUTY EXECUTIVE DIRECTOR

**STATE OF HAWAII
EMPLOYEES' RETIREMENT SYSTEM**

January 12, 2026

TO: Board of Trustees
Employees' Retirement System of the State of Hawaii

FROM: Kalbert K. Young, Executive Director Employees' Retirement System of the State of Hawaii

SUBJECT: Annual Actuarial Valuation Report for June 30, 2025

Attached for your review and approval is the Actuarial Valuation Report as of June 30, 2025, as prepared by Gabriel, Roeder, Smith and Company, actuaries for the Employees' Retirement System of the State of Hawaii.

Board Action Requested: Approval of Annual Actuarial Valuation Report for the Year Ending June 30, 2025.

Attachments

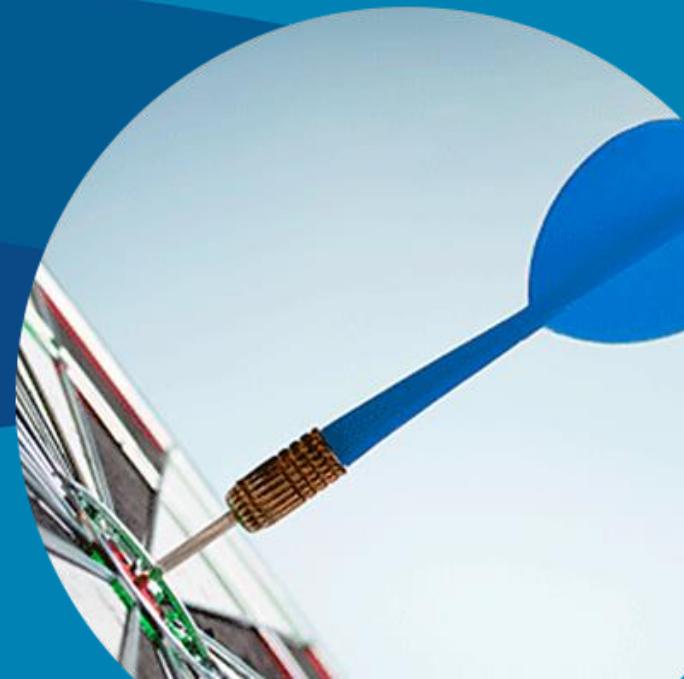


City Financial Tower • 201 Merchant Street, Suite 1400 • Honolulu, Hawaii 96813-2980
Telephone (808) 586-1735 • Fax (808) 586-1677 • <http://ers.ehawaii.gov>

Employees' Retirement System of the State of Hawaii

Actuarial Valuation Results for Fiscal Year Ending June 30, 2025
January 12, 2026

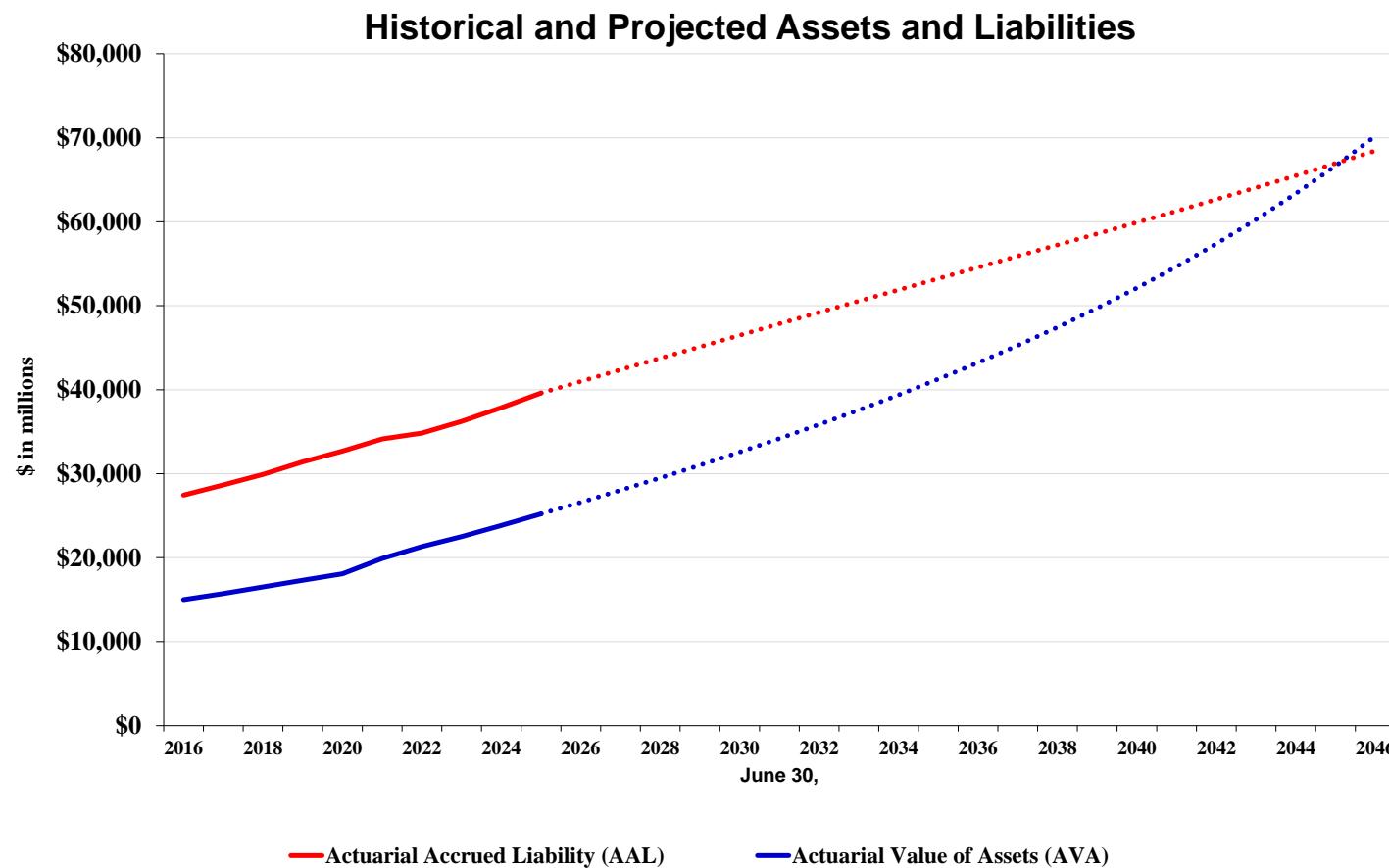
Prepared by
Joe Newton & Lewis Ward



Purpose of the Actuarial Valuation

- Annual “health checkup” of ERS
- The ***primary*** purpose is to assess the current contribution policy set in statute
 - Determine whether the current contribution rates are expected to fully amortize the unfunded actuarial accrued liability (UAAL) over a period of 24 years or less (Statutory Maximum)
 - Recommend changes if found not adequate
 - Recommend possible improvements in methods or policies
- Funding Period: the estimated number of years it will take to fully extinguish the current UAAL assuming current contributions remain in place and all assumptions are met
 - UAAL: the difference between the actuarial liabilities and the actuarial assets

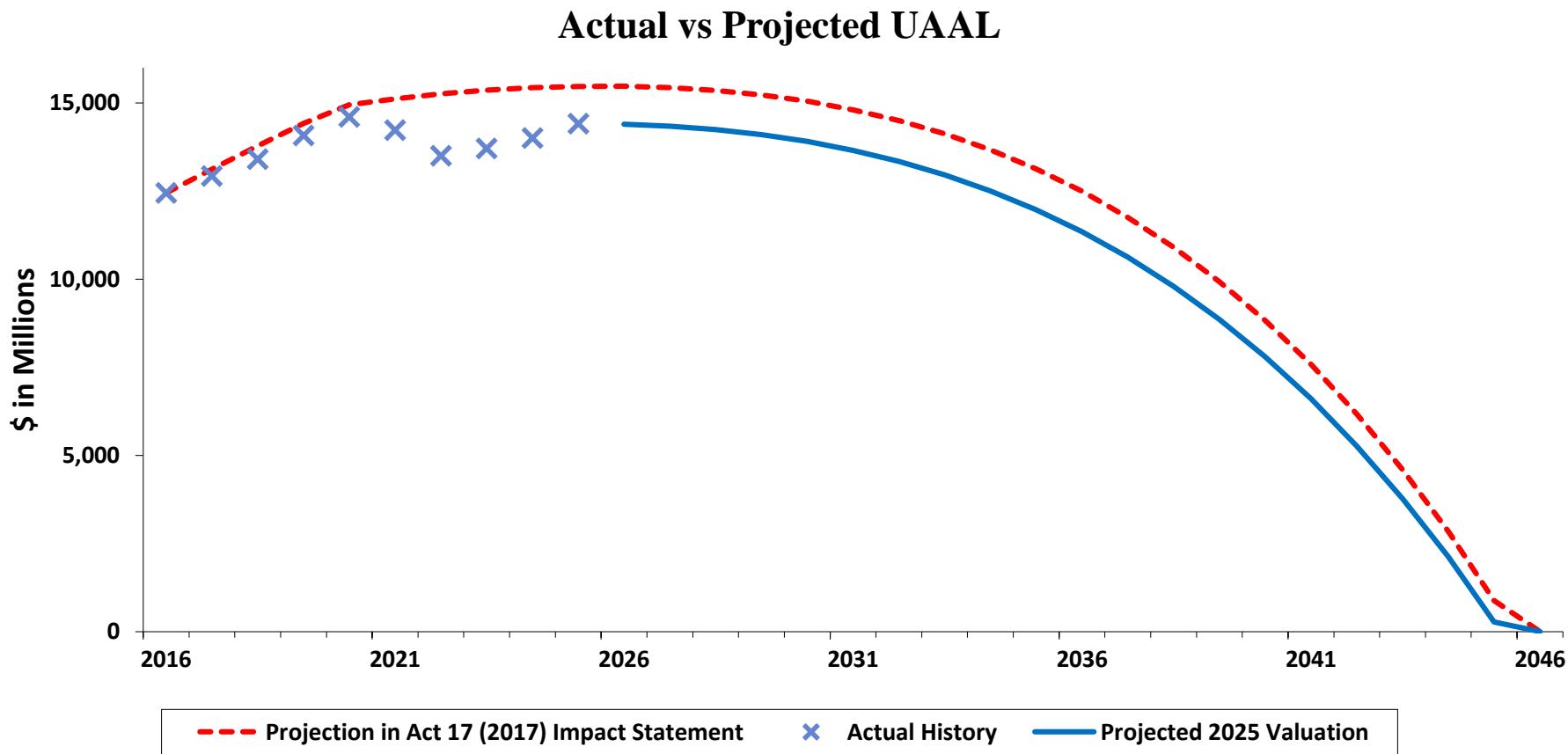
Assets are Projected to Meet Liabilities in 2046. This is 21 years from 2025 = Funding Period



Actuarial Valuation Highlights

- Results remain on track, if not ahead of, original projections from Act 17 (2017)
- The funding period decreased as expected from 22 years to 21 years
 - This is less than the current Statutory Maximum of 24 years for FY 2025
- The funded ratio improved from 63.0% to 63.6%
 - Funded Ratio: is the ratio of the actuarial assets to the actuarial liabilities
- The UAAL increased by approximately \$370 million, from \$14.0b to \$14.4b
 - While the UAAL was expected to increase slightly, this increase was larger than expected
 - Mainly caused by larger than expected increases in salary
 - 6.1% on average vs 4.7% expected for All Other Employees
 - 9.2% on average vs 5.6% expected for Police and Fire

While the financing of the UAAL remains ahead of schedule, the UAAL was expected to grow year over year until FY26 or FY27. The UAAL is currently expected to begin to decline in FY26 if all assumptions are met.

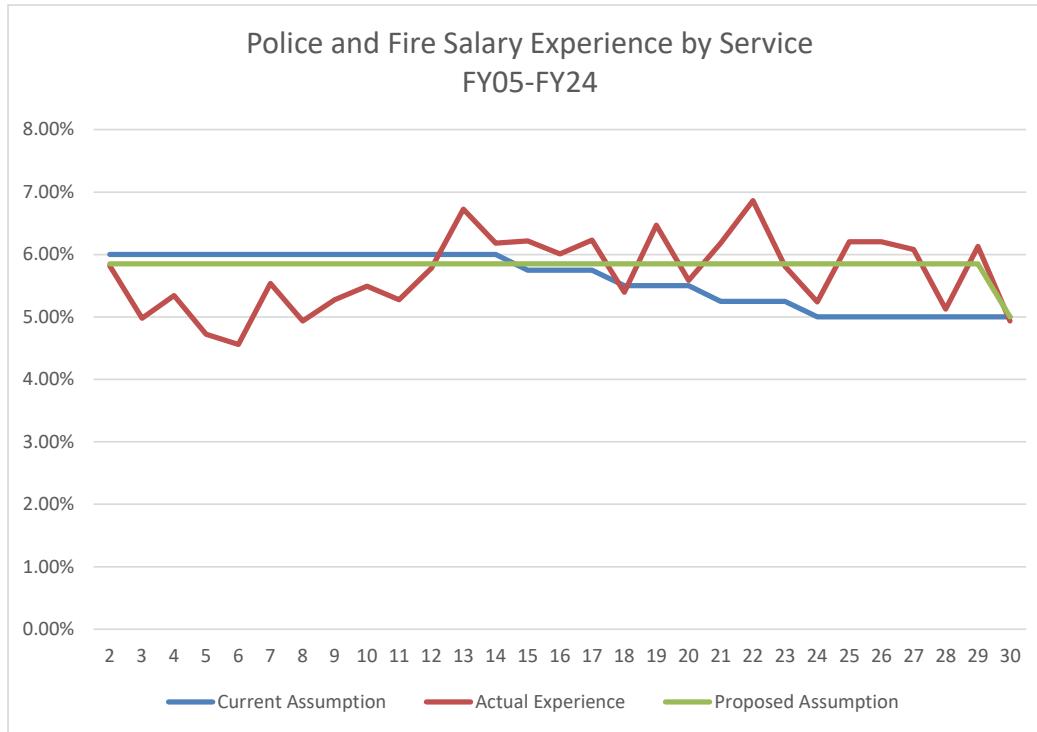


Assumes all assumptions met, including 7.00% return each year on the June 30, 2025 smoothed value of assets

2025 Experience Study

- The valuation results are heavily based on a series of assumptions about future behavior and events
- These assumptions are not static; they should occasionally change to reflect new information or techniques
- While we monitor the appropriateness of the assumptions annually, ERS Statute requires a formal process occur every three years
- The 2025 Experience study was rather uneventful in total, but there was a material change to the salary increases for Police and Fire Employees (again)

The experience study increased the assumed future salary increases for late career Police and Fire Employees



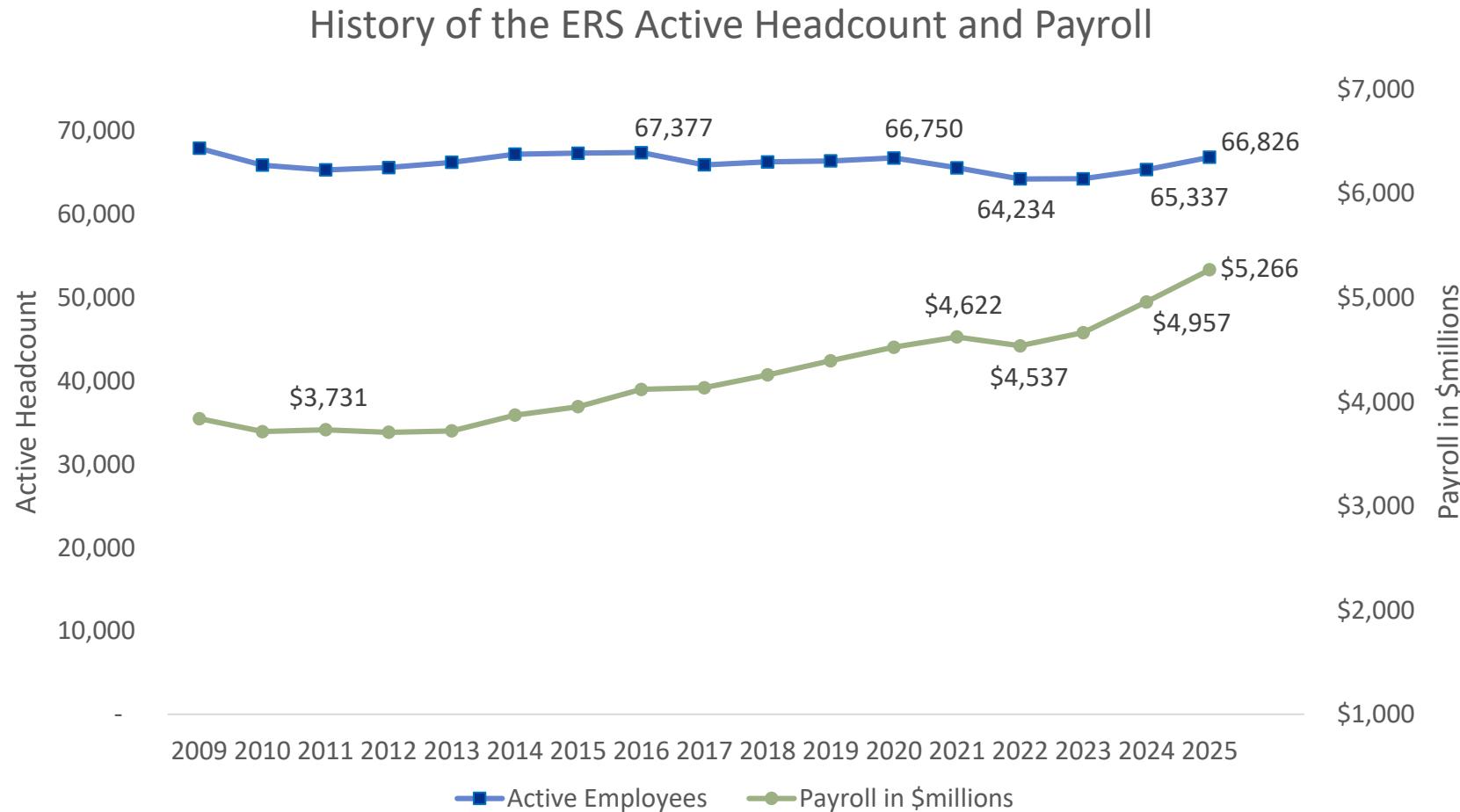
Average Career Increase	25 year career	30 year career
Current Assumption	5.74%	5.62%
Actual	5.84%	5.84%
Proposed	5.85%	5.82%

The new assumption for Police and Fire is impactful enough to increase the funding period 2 years for that group. There is now a significant difference in the funding periods between the two groups.

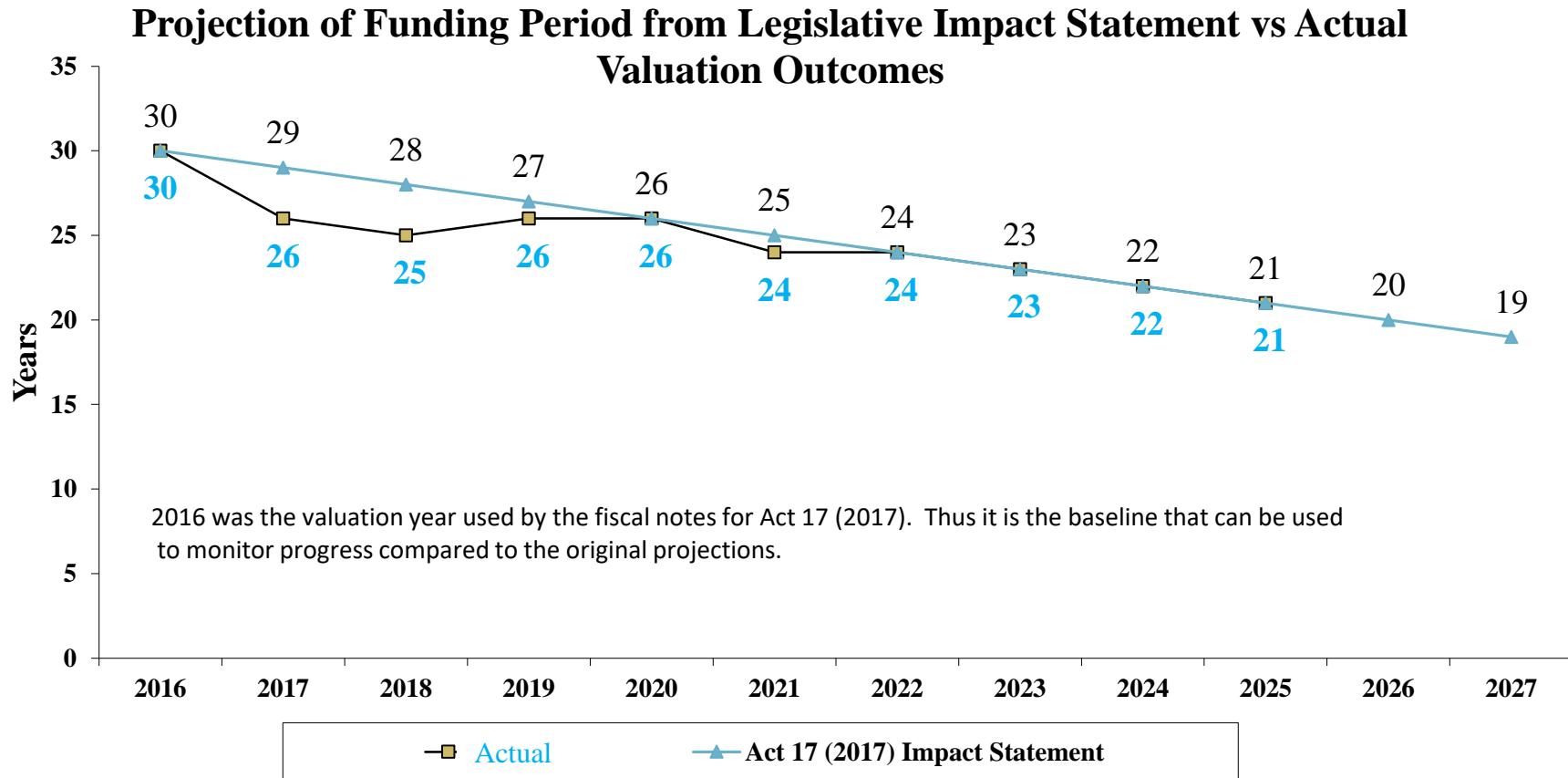
- The impact of the Experience Study on the All Other Employees group was immaterial.
- The Funding Period for All Other Employees decreased by 2 years from 2024 instead of the expected 1 year because of an increase in active headcount.

		June 30, 2025 Results	
Item	June 30, 2024 Results	Previous Assumptions	New Assumptions
Unfunded Accrued Liability (\$ in billions)	\$14.0	\$14.2	\$14.4
Funded ratio	63.0%	63.9%	63.6%
Funding Period	22 Years	21 Years	21 Years
Police and Fire Employees			
Unfunded Accrued Liability (\$ in billions)	\$2.2	\$2.3	\$2.4
Funding Period	22 years	22 years	24 years
All Other Employees			
Unfunded Accrued Liability (\$ in billions)	\$11.7	\$12.0	\$12.0
Funding Period	22 years	20 years	20 years

The Headcount grew 2.3% from 2024 to 2025, back close to 2020 levels. This allowed covered payroll to grow and offset the impact from the salary increases. The headcount is only 0.8% below the 67,377 used in the Act 17 (2017) impact statement.

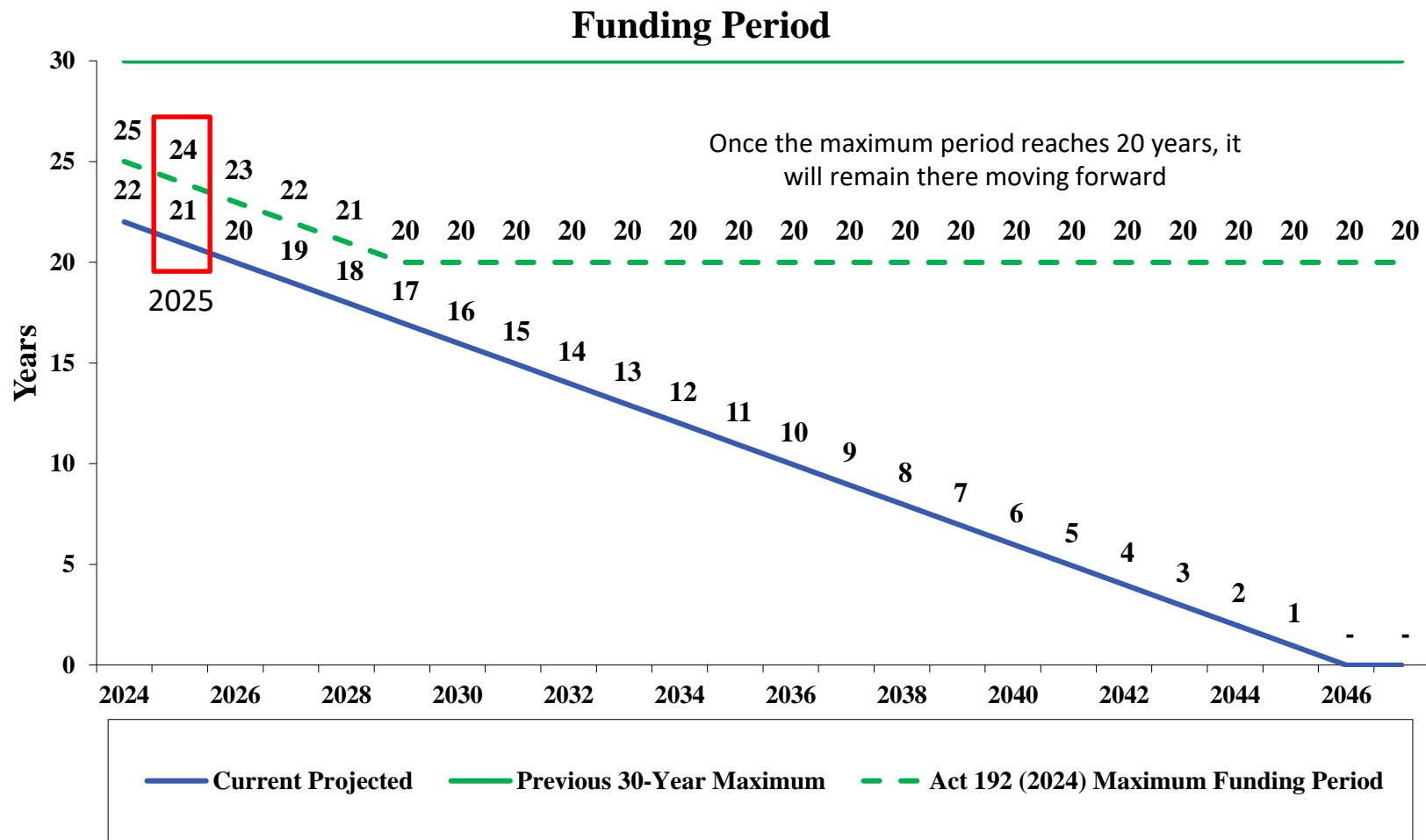


The Funding Period as of 2025 continues to track with the original projections from Act 17 (2017)

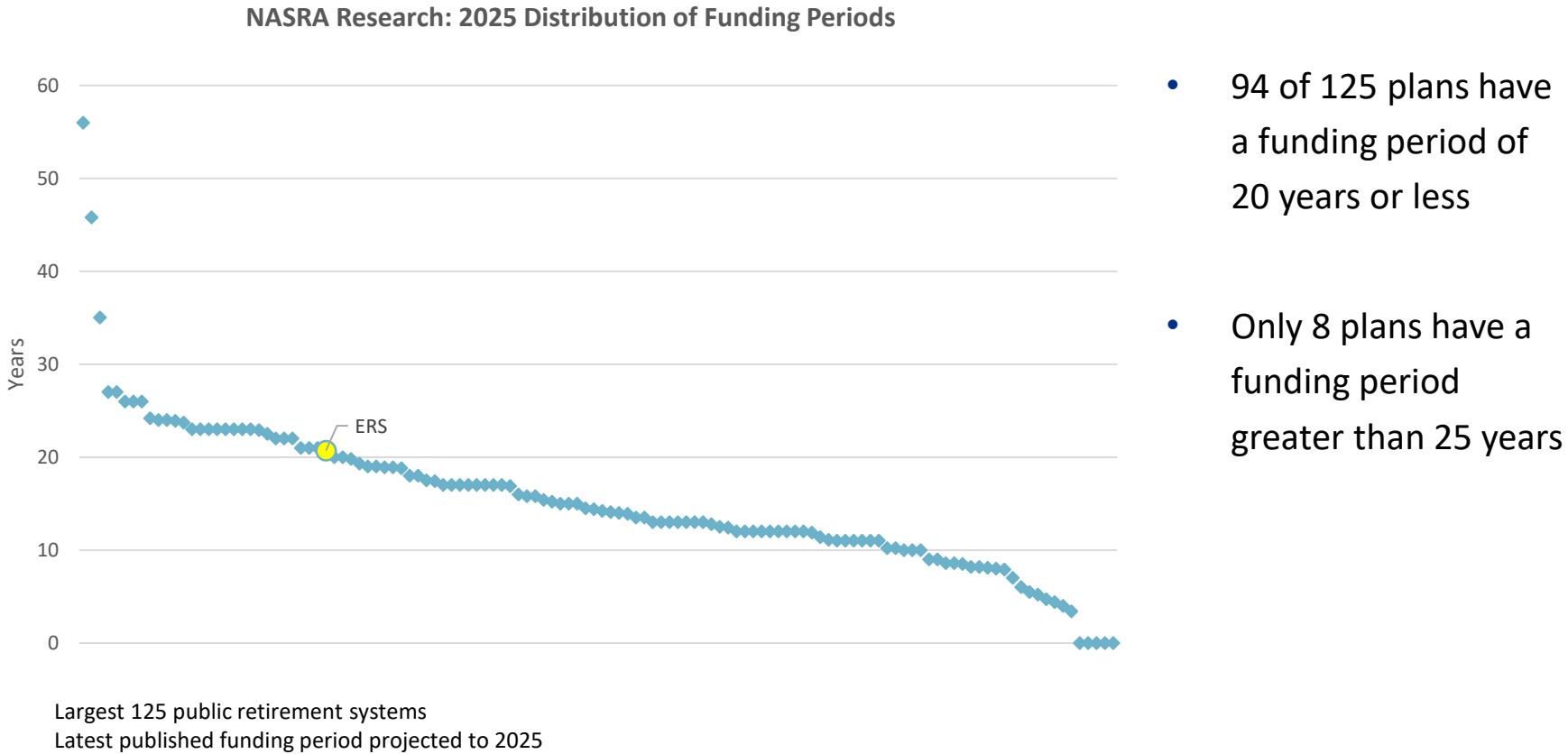


Assumes all assumptions met, including 7.00% return each year on the June 30, 2025 smoothed value of assets

Act 192 (2024) lowered the maximum allowable funding period from 30 to 25 years as of 2024, and begins a process of lowering the maximum period by 1 each year until reaching 20.

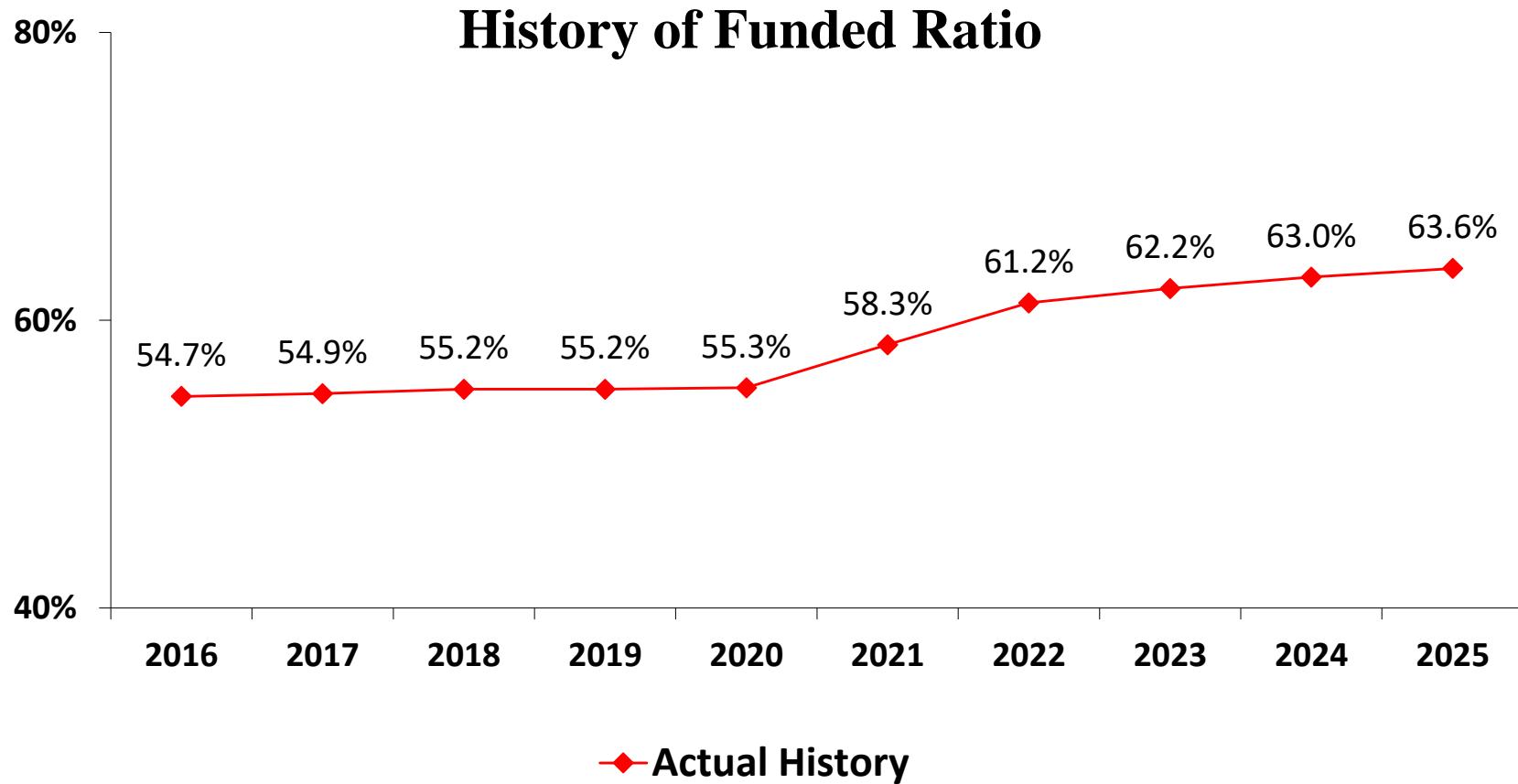


ERS' 21-year Funding Period Ranks 96th Out of 125 Largest Asset Public Plans, but is within industry best practices

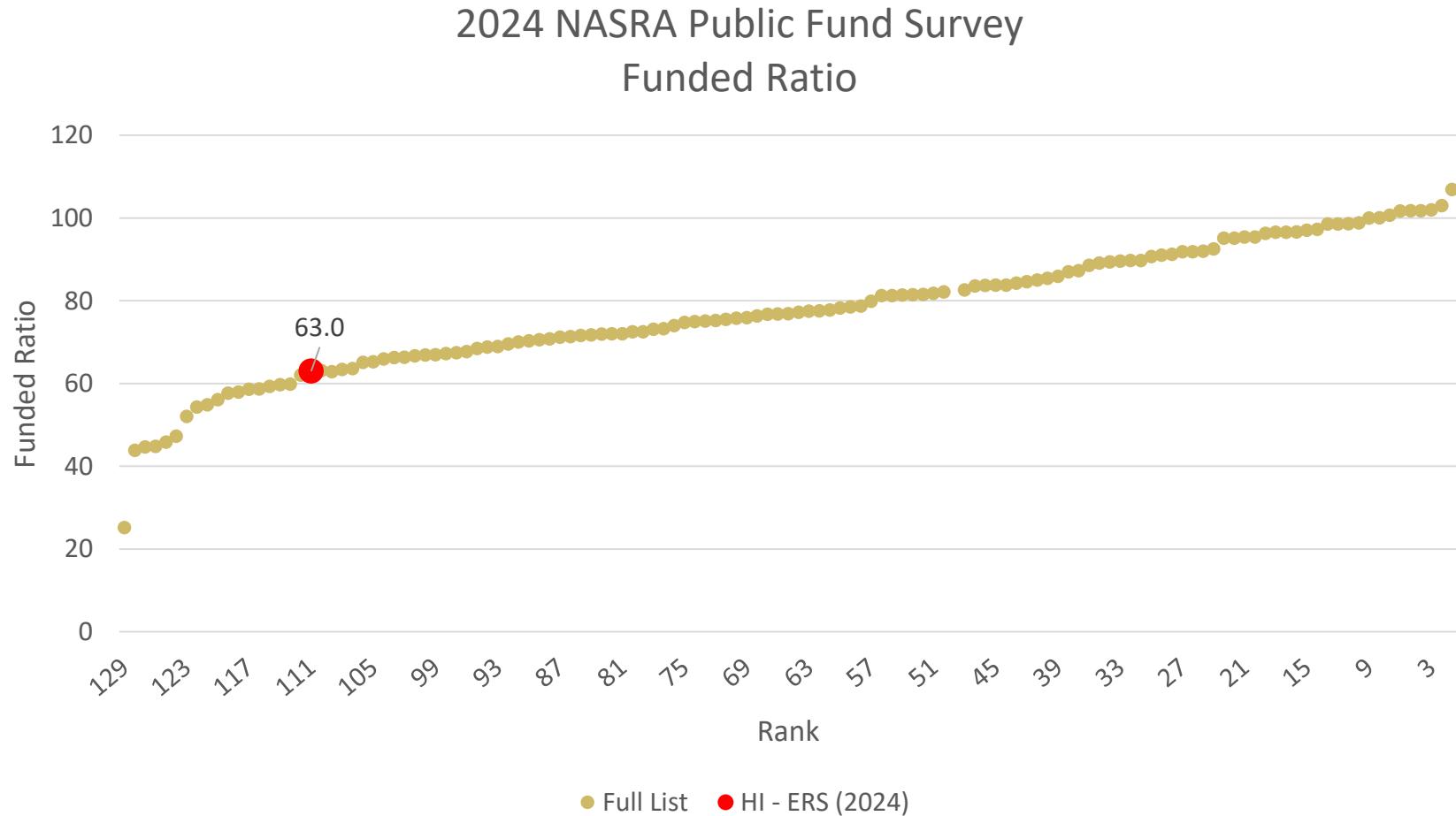


After being relatively flat while the contribution increases were phasing in, the Funded Ratio continues to improve with the disciplined, higher contributions.

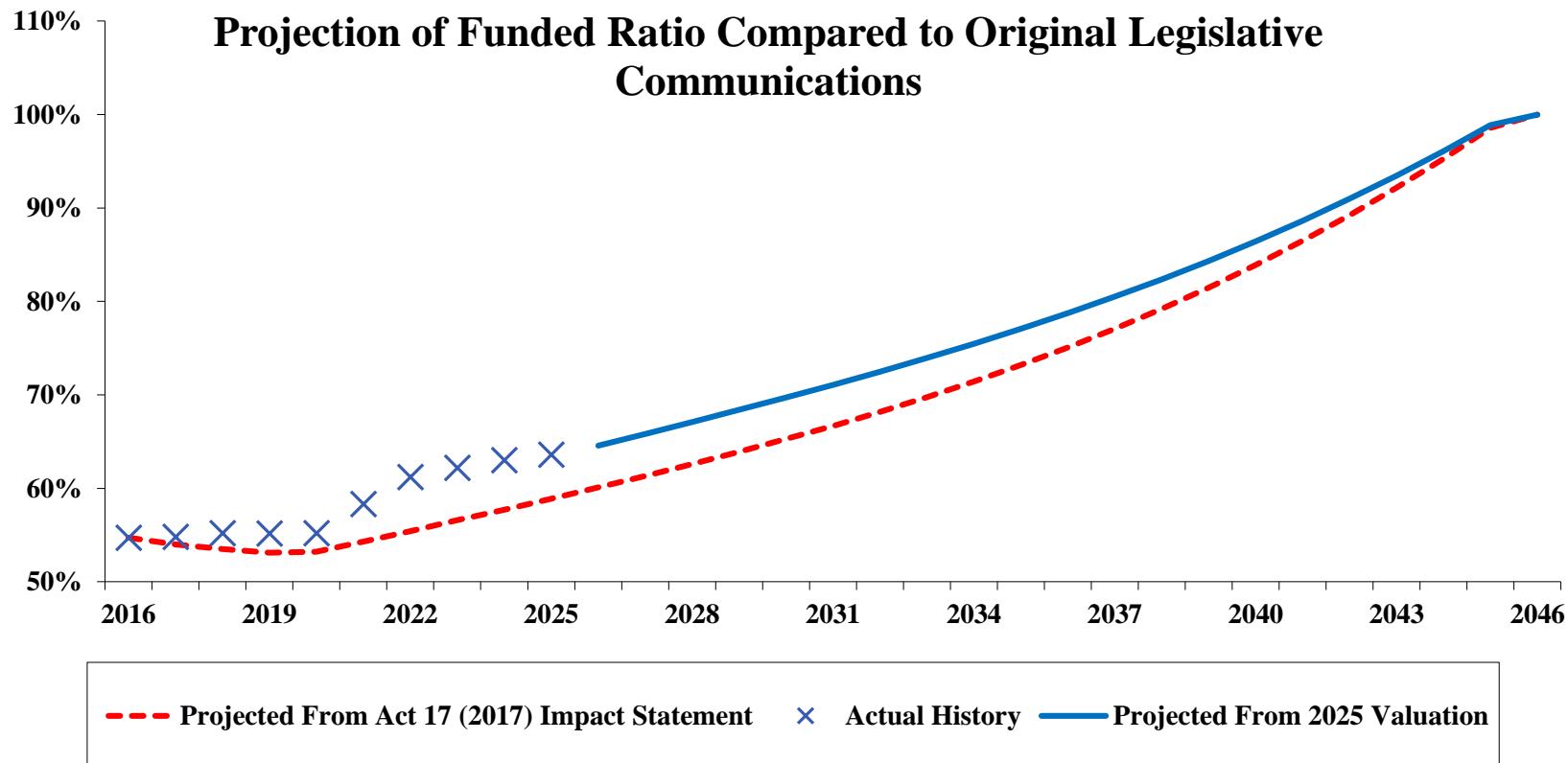
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For funded status, HI ERS ranked 110th out of 129 in the 2024 NASRA survey of large public sector retirement systems. The median system had a funded ratio of 77%.

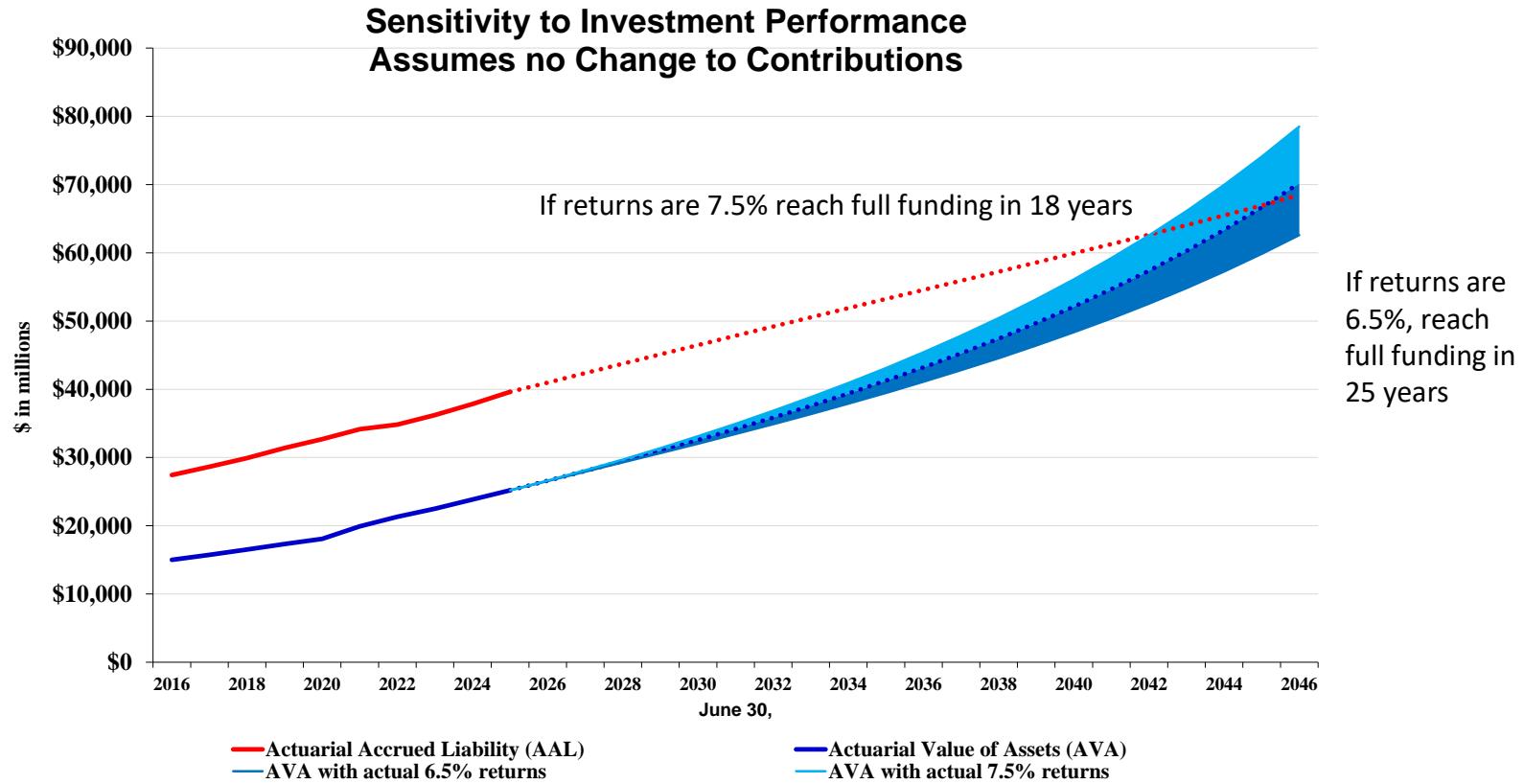


The Funded Ratio is still projected to reach full funding in 2046



Assumes all assumptions met, including 7.00% return each year on the June 30, 2024 smoothed value of assets

Actual Timeline will Depend on Actual Experience, Mainly Investment Performance



Funding Period Sensitivities

Assumes all other assumptions met

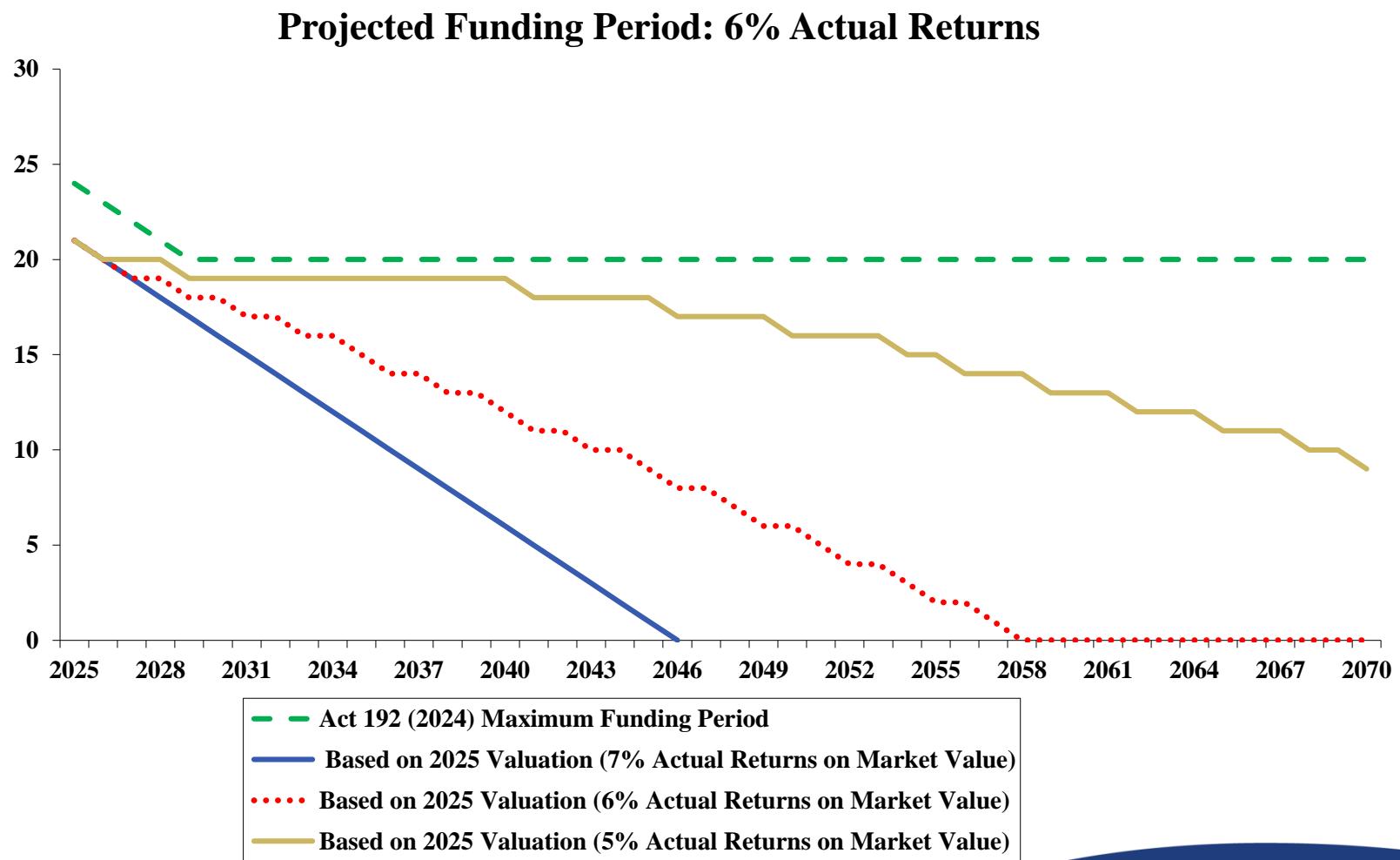
Scenario	Reach Positive Amortization	Reach Full Funding
8.0% Actual Returns	1 years	16 years
7.5% Actual Returns	1 years	18 years
7.0% Actual Returns*	1 years	21 years
6.5% Actual Returns	5 years	25 years
6.0% Actual Returns	12 years	32 years

Scenario	Reach Positive Amortization	Reach Full Funding
1% Annual Population Growth	1 years	19 years
0% Annual Population Growth**	1 years	21 years
1% Annual Population Decline	2 years	23 years

*Expected return assumption

**Expected growth assumption

The funding period under the new policy is not expected to breach the Maximum even in stressed scenarios



Probabilities of Future Outcomes

	From 2021 Valuation	From 2022 Valuation	From 2023 Valuation	From 2024 Valuation	From 2025 Valuation
Fully Funded by 2046 (Date from Act 17 (2017))	56.0%	54.6%	52.7%	53.5%	53.6%
Fully Funded Within 30 Years from Valuation Date	70.0%	69.4%	70.0%	73.9%	76.3%
Funding Period Never Breaches 30 Years	91.7%	87.9%	88.4%	90.7%	92.5%
Funding Period Never Breaches new Policy (25, 24, 23, 22, 21, 20, 20...)				65.1%	70.5%
Fully Funded Within 20 Years from Valuation Date				47.1%	50.7%

All scenarios use a 7% expected median return with an 9% annual standard deviation, projected off of smoothed assets

Valuation Summary

- The disciplined commitment to follow the contribution schedule from Act 17 (2017) continues the process of strengthening the financial outlook for ERS.
- The scheduled employer contribution rates are expected to be adequate to satisfy Hawaii Revised Statutes §88-122(e)(1). The Statutory Stress Test shows this is true even with substantial adverse experience.
- Act 192 (2024), implementing the new maximum amortization period, will better protect the System over the long term
- The reduction in the maximum funding period will be viewed favorably by bond raters and satisfies all of the new Actuarial Standards of Practice

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII

REPORT TO BOARD OF TRUSTEES ON THE ***100th***
ANNUAL ACTUARIAL VALUATION
FOR THE YEAR ENDING JUNE 30, 2025

DRAFT





December 29, 2025

Board of Trustees
Employees' Retirement System of
The State of Hawaii
City Financial Tower
201 Merchant St., Ste. 1400
Honolulu, HI 96813-2980

Dear Trustees:

SUBJECT: ACTUARIAL VALUATION AS OF JUNE 30, 2025

It is our pleasure to present the results of the **100th** annual actuarial valuation of the Employees' Retirement System of the State of Hawaii (ERS). We certify that the information contained in the 2025 actuarial valuation report is accurate and fairly presents the actuarial position of the ERS as of June 30, 2025. Except as noted about the Temporary Hazard Pay (THP), there have been no adjustments for events which occurred after this date.

All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice (ASOP) issued by the Actuarial Standards Board. In our opinion, the results presented comply with the requirements of Hawaii statutes and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries and consultants. One or more of them are an Enrolled Actuary and/or a Member of the American Academy of Actuaries. All are experienced in performing valuations for large public retirement systems.

This report was prepared at the request of the Board and is intended for use by ERS and those designated or approved by the Board. This report may be provided to parties other than ERS only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

ACTUARIAL VALUATIONS

The primary purpose of the valuation report is to determine the adequacy of the current employer contribution rate through measuring the resulting funding period, to describe the current financial condition of ERS, and to analyze changes in ERS's condition. In addition, the report provides various summaries of the data. This report may not be appropriate for other purposes. The information required by ERS in connection with Governmental Accounting Standards Board Statement Numbers 67 and 68 (GASB Nos. 67 and 68) will be provided in a separate report.

Valuations are prepared annually, as of June 30th of each year, the last day of ERS's plan year and fiscal year.

FINANCING OBJECTIVES

The employee and employer contribution rates have been set by Law and are intended to provide for the normal costs of ERS and to amortize the unfunded actuarial accrued liability (UAAL) over a reasonable amount of time, which will ensure benefit security and intergenerational equity. The funding period is the number of years until the unfunded actuarial accrued liability (UAAL) is fully amortized. Hawaii Revised Statutes §88-122(e)(1) state that the employer contribution rates are subject to adjustment when the funding period is greater than the maximum funding period. The statutes were modified by the 2024 Hawaii Legislature to decrease the maximum funding period from 30 years to 25 years in 2024. In addition, the maximum funding period will decrease by 1 each year in the future until the maximum funding period reaches 20 years, at which point it will continue to be 20 years for all future years. Based on this schedule, the maximum funding period for this 2025 actuarial valuation is 24 years.

PROGRESS TOWARD REALIZATION OF FINANCING OBJECTIVES

The actuarial accrued liability (AAL), the UAAL, and the determination of the resulting funding period illustrate the progress toward the realization of financing objectives. ERS's liabilities grew faster than expected. This was caused primarily by two sources: i) individual salary increases being more than expected by the assumptions, and ii) the recognition of THP payments in the liabilities. On the asset side, ERS experienced an actuarial loss as a result of returns in 2025 not achieving the assumed 7% in addition to continued recognition of deferred asset losses from prior years. In addition, ERS adopted new assumptions as a result of the 2025 experience study, which caused the unfunded accrued liability to increase. As a result, the UAAL increased (in dollars) based on this actuarial valuation as of June 30, 2025 and ERS's underfunded status as measured by the UAAL is now \$14.41 billion.

The 2017 Legislature passed legislation that made significant changes to the future employer contribution rates. The employer contribution rate for Police and Fire employees increased to 41% and the employer contribution rate for All Other Employees increased to 24%. The funding period assumes that these contribution rates will remain in effect throughout the funding period. Under current law, the contribution rates are expected to stay at these levels until ERS is fully funded. These increases have improved the outlook of ERS. As long as the contributions are made, ERS's funded status should improve and ERS should be able to absorb moderate adverse experience without a need to further increase the contribution rates.

The 2011 Legislature made changes to the benefits and member contribution rates for employees hired after June 30, 2012. Because these changes result in significantly higher contributions towards the unfunded liability in the future than in the current year, we believe it is more appropriate to determine the funding period using an open group projection rather than a static mathematical formula, which would instead assume that all amortization payments in the future will be the same percentage of pay as in the current year.

We have determined that the funding period for paying off the UAAL of ERS (in aggregate) is 21 years. Normally, we would expect the funding period to decrease by one each year if all assumptions are exactly



met. Since the prior year's funding period was 22 years, we are at the expected funding period from last year. Given that the System experienced actuarial losses on both its assets and its liabilities, this result may be surprising. However, since the contributions to the System are a fixed percentage of payroll, an increase in the covered payroll that is larger than assumed implies a larger contribution stream in future years, which means larger payments towards the unfunded liabilities of ERS.

Hence, even though the total unfunded liabilities increased from last year, the end period (fiscal year) over which the unfunded liabilities are to be paid off did not change and the funding period decreased to 21 years. Because this period is less than 24 years, the minimum objectives set in State statute are currently being realized. In addition, when the current contribution rates were passed by the Legislature in 2017, it was expected that the funding period would be 21 years as of the 2025 valuation, thus ERS remains on track to achieve full funding in the same timeframe as originally set by the legislation.

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded status alone is not appropriate for assessing the need for future contributions nor assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations. However, the trend (historical and projected) of the funded ratio is a strong metric to use for assessing the dependability of the current funding policy and its ability to accumulate assets to pay benefits when due. The funded ratio is currently 63.6% compared with the 63.0% funded ratio in the previous valuation. The funded ratio improved due to the sizeable contributions towards the unfunded liabilities of the system as well as the contributions related to the excess pension costs.

Given the plan's current and future contribution rates and the new tier of benefits, if all actuarial assumptions are met (including the assumption of the plan earning 7.00% on the actuarial value of assets), it is expected that:

1. The employer normal cost as a percentage of pay will decrease to the level of the newest tier as the old tier population declines and is replaced by new tier members,
2. The employer contribution will remain level throughout the amortization period,
3. Thus, the net amount available to amortize the UAAL will increase over time,
4. The UAAL will increase in nominal dollars until the net amount for amortization is large enough to cover the interest charges and then begin to decrease, which is currently expected to occur next year,
5. The UAAL will be fully amortized after 21 years, and
6. In the absence of benefit improvements and in consistent financial markets, the funded ratio should increase steadily until it reaches 100%.

The current projections expect the UAAL to begin to decline in FY 2026 with the annual amount of decline accelerating year over year thereafter. We believe one year is a reasonable amount of time as defined

under the ASOP No. 4. All other parameters and methods used in the valuation also meet the requirements of a Reasonable Actuarially Determined Contribution (RADC) under the ASOP.

Thus, the employer contribution rates of 41% of payroll for Police and Fire and 24% for All Other Employees meet the requirements of a RADC.

However, it is important to again note that these statements are based on the actual experience meeting the current assumptions. Also, these statements depend upon the employers meeting the contribution requirements established by the 2017 Legislature. Future changes to the actuarial assumptions or future changes to reduce the contribution requirements, or any increase in benefits, could significantly change the outlook of ERS and the expectation on when ERS will reach a 100% funded level.

This valuation assumed the continuing ability of the plan sponsors to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

BENEFIT PROVISIONS AND LEGISLATIVE CHANGES

This is the thirteenth valuation with members covered under the new benefit tier.

There have been no changes in the benefit provisions since the prior valuation. See Table 16 of this report for more details on the benefit provisions for members of ERS.

ASSUMPTIONS AND METHODS

The actuarial assumptions used in this valuation were adopted by the Board in September of 2025 based on the recommendations provided by an Experience Study performed by GRS. The actuarial assumptions and methods have been updated since the prior valuation to reflect these recommendations.

Further detail on the assumptions and methods may be found in Table 18 of this report and in our Experience Study Report dated August 5, 2025.

The actuarial assumptions represent estimates of future experience and are not market measures. The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. Based on the scope of this engagement, we have not performed analysis on the potential range of future measurements based on other factors. The actuarial calculations are intended to provide information for rational decision making.

In our opinion, the assumptions are internally consistent and are reasonably based on the actual experience of ERS. The assumptions are reasonable and consistent with the Actuarial Standards of Practice.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

DATA

Member data for retired, active, and inactive participants was supplied as of March 31, 2025, by ERS's staff. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data. Asset information was supplied by ERS's staff.

IMPACT OF TEMPORARY HAZARD PAY

As the reader is probably aware, many of the employees and retirees covered by ERS have or will be receiving Temporary Hazard Pay (THP) for periods worked during March 2020 to March 2022 as a result of the COVID-19 pandemic. Payments for known settlement amounts as of March 2025 have been incorporated into the pensionable earnings for impacted Tier 1 employees (the payments are not included in the pensionable earnings of Tier 2 employees).

For those employees (and retirees) who have not settled and/or received their payments yet, no adjustments have been made to their individual liabilities as of the valuation date. The impact of the THP payments will be incorporated into their liabilities in future valuations. However, because ERS has accrued the contributions for the known fiscal year 2026 THP payments in ERS's 2025 financial statements, we have incorporated an offsetting liability equal to those accrued contributions in the actuarial valuation (as a minimum impact).

RESPONSIBILITY FOR TABLES AND SCHEDULES

The actuary is responsible for the information with respect to years after 1999 in the Required Supplementary Information, and the Notes to Required Supplementary Information in the Financial Section of ERS's Annual Comprehensive Financial Report (ACFR). Information with respect to years prior to 2000 was supplied by ERS.

Tables and schedules in the Actuarial Section of the ACFR were generally prepared directly by the Actuary. However, certain of these tables were prepared by ERS utilizing information from this report. When the tables were prepared by ERS from our report, they were so noted.

Board of Trustees

December 29, 2025

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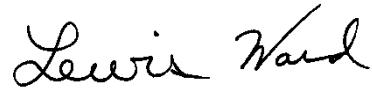
The undersigned are independent actuaries and consultants. Mr. Newton is an Enrolled Actuary and both Mr. Newton and Ms. Fehrman are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries. Finally, all of the undersigned are experienced in performing valuations for large public retirement systems.

Sincerely,

Gabriel, Roeder, Smith & Company



Joseph P. Newton, FSA, EA, MAAA
Pension Market Leader & Actuary



Lewis Ward
Consultant



Karli Fehrman, ASA, MAAA
Consultant

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SECTION A – EXECUTIVE SUMMARY

The following table summarizes the key results of the June 30, 2025 actuarial valuation of the Employees' Retirement System of the State of Hawaii (ERS).

Item	2025	2024
Membership <ul style="list-style-type: none"> Number of <ul style="list-style-type: none"> Active members Retirees and beneficiaries Inactive, vested Total Covered payroll for active members Actual benefit payments and refunds 	66,826 56,673 8,692 <hr/> 132,191 \$5,266 million \$2,002 million	65,337 55,820 8,847 <hr/> 130,004 \$4,957 million \$1,907 million
Assets <ul style="list-style-type: none"> Actuarial (smoothed) value Market value Return on actuarial value Return on market value Employer contributions during fiscal year External cash flow % 	\$25,206 million \$24,926 million 6.5% 5.9% \$1,480 million (0.7%)	\$23,841 million \$23,701 million 6.8% 6.6% \$1,396 million (0.8%)
Actuarial Information <ul style="list-style-type: none"> Total normal cost % (employee + employer) Unfunded actuarial accrued liability (UAAL) Funded ratio (based on smoothed assets) Funded ratio (based on market assets) Funding period (years)* Employer contribution rate <ul style="list-style-type: none"> % of projected payroll Police and Firefighters All Other Employees 	14.57% \$14,410 million 63.6% 62.9% 21 41.00% 24.00%	14.51% \$14,008 million 63.0% 62.6% 22 41.00% 24.00%

* Funding Period based on actuarial value of assets, scheduled employer contribution rates, and an open group projection reflecting the adopted changes in benefits and member contribution rates.

SECTION B – INTRODUCTION

The results of the June 30, 2025 actuarial valuation of ERS are presented in this report.

The primary purpose of the valuation report is to determine the adequacy of the current employer contribution rates through measuring the resulting funding period, to describe the current financial condition of ERS, and to analyze changes in ERS's condition.

In preparing this valuation, Gabriel, Roeder, Smith & Company (GRS) has relied on employee data and asset information provided by the staff of ERS. While not verifying the data at their source, GRS has performed such tests for consistency and reasonableness as has been deemed necessary to be satisfied with the appropriateness of using the data supplied.

Section C discusses the funded status of ERS. Section D analyzes the change in the UAAL. Section G discusses the disclosure requirements of GASB No. 67.

Sections E, F, H, and I discuss background information used in the preparation of this report--benefit provisions, actuarial assumptions and methods, financial information, and membership data. Section J contains a discussion about risk and plan maturity measures and a table showing current and historical risk metrics. Section K contains a final summary and some closing comments about this year's valuation and Section L contains the actuarial certification.

All the tables referenced by the other sections appear in Section M.

SECTION C – FUNDED STATUS

Table 1 shows the development of the Plan's liabilities and funded status for the current year and compares it with those of the prior year.

The calculation of the funded status involves the following steps and includes the following comments:

- The actuarial present value of future benefits is determined for the present members, including retired members, beneficiaries, inactive members, and active members. This amounts to \$46.43 billion. Table 2 shows the development of this total for the current year and the prior year.
- The individual entry age normal cost method is used to allocate the actuarial present value of future benefits between that portion due for the current year (the normal cost), prior years (the actuarial accrued liability) and future years (the present value of future normal cost). Under the individual entry age normal cost method, the current and future normal costs are determined as a level percentage of payroll. Table 3 shows an analysis of the normal cost for the current year and the prior year. The amount needed to fund the current and future normal costs is 27.72% of pay for Police and Fire employees and 12.93% for All Other Employees. It includes all of the employees' contribution (if any) and the employers' normal cost rate.
- A part of the normal cost is paid by the employee contributions of 12.88% of pay for Police and Firefighters, leaving 14.84% of pay to be funded by the employers. Thus, the current year's employer normal cost for Police and Firefighters is deemed to be 14.84% of the valuation payroll. As for the All Other Employees group, the average weighted effective employee contribution rate is 6.25% of pay, leaving 6.68% of pay to be funded by the employers. This is shown in Line 3 of Table 1.
- The UAAL is \$14.41 billion for 2025, an increase from \$14.01 billion in 2024. As indicated in Table 1, the UAAL equals the difference between the total actuarial accrued liability (Item 7) and current actuarial assets (Item 8).
- In determining the number of years that will be required to amortize the UAAL, an assumption is made concerning future growth of ERS's covered payroll. Payroll can grow from intrinsic growth in the pay of individual members and it can also grow due to active membership growth. In determining the funding period of ERS, we have assumed that the number of active members will remain constant in our open group projection.
- As shown in Item 10 of Table 1 and on Table 9c, the period to fund the UAAL is 24 years for the Police and Fire and 20 years for the All Other Employees group. When combining both groups, the aggregate funding period for ERS is 21 years (i.e. the UAAL is expected to be paid off in fiscal year 2046). Since the aggregate funding period based on the contribution rates is less than the maximum funding period (24 years), the employer contribution rates are adequate to meet the requirements of Hawaii Revised Statutes §88-122(e)(1). Please note that this statement assumes the current contribution rates will remain in effect throughout the entire funding period.

SECTION C – FUNDED STATUS (CONTINUED)

As of the valuation date, ERS has a funded ratio of 63.6%, based on the actuarial value of assets.

Due to the significant changes in the future contribution rates and benefits for employees hired after June 30, 2012, ERS's funding policy uses an open group projection for determining how many years it will take to eliminate the unfunded liabilities of ERS. ERS is expected to be fully funded in 2046 which is 21 years from now. Therefore, the funding period is equal to 21 years. The open group projection assumes that the number of active members will remain constant and that there will be no actuarial gains or losses on liabilities or investments.

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SECTION D – ANALYSIS OF CHANGES

Section C has noted that the unfunded actuarial accrued liability (UAAL) is \$14.41 billion as of June 30, 2025 compared to the \$14.01 billion UAAL for 2024.

Table 7 develops the estimated yield for the year based on two measures of asset values. Table 9b takes the information contained in Table 6 and develops the expected value of actuarial assets for this valuation, based on the prior year's investment return assumption of 7.00%.

As shown in Item 6 of Table 9b, the expected value of actuarial assets as of June 30, 2025 is \$25.33 billion. As developed in Table 6, the actual value of actuarial assets as of the valuation date is \$25.21 billion (as repeated in Item 7 of Table 9b). Thus, the loss for the year is the difference between the actual value and the expected value, or \$122.2 million (as shown in Item 8 of Table 9b). This asset loss for the year is a direct reflection of the estimated yield for the year based on the value of actuarial assets, namely 6.49% (as shown in Item B4 of Table 7) being less than the assumed rate of return.

The markets returned less than assumed in FY 2025 with a return of 5.93% on the market value of assets, which is below our benchmark of 7.00%. Therefore, the return for the year was less than our expectation. The rate of return for the actuarial value was 6.49%, which is greater than the market return due to the smoothing methodology used in the determination of the actuarial value of assets. The actuarial value of assets exceeds the market value of assets by \$280.0 million, so there are \$280.0 million in deferred investment losses still to be recognized in the actuarial value of assets.

Table 9a shows the total unanticipated change in the unfunded actuarial accrued liability was \$488.2 million (item 7), this means the UAAL increased \$488.2 million more than expected from all sources for the 2025 fiscal year. Updates made to the assumptions and methods as a result of the 2025 experience study increased the UAAL by \$170.0 million. As noted above, the actuarial investment loss was equal to \$122.2 million. This means that there was a liability experience loss during the year equal to \$196.0 million. The liability experience loss is primarily due to higher than expected salary increases for both employee groups. For Tier 1 members, the pensionable earnings include overtime, and it is possible a source of the higher salaries was an increase in overtime during the fiscal year.

Table 9c shows the current year's valuation results plus a 30-year open group projection of ERS's assets and liabilities. As discussed previously, this projection assumes no actuarial gains or losses in the actuarial liabilities or the actuarial value of assets. In addition, the projection assumes the current employer contribution rates will continue and reflects the changes to the benefits and member contribution rates of employees hired after June 30, 2012. As may be seen by examining this table, the unfunded liability of ERS (Column 7) is expected to begin to decline in 2026 and finally be eliminated in 2046.

The June 30, 2046 valuation is 21 years from this valuation. Therefore, for the purpose of satisfying Hawaii Revised Statutes §88-122(e)(1) the funding period is considered to be 21 years.

SECTION E – ERS ASSETS

Table 4 presents a summary of the market value of assets held by ERS. About 71% of the total invested assets available for benefits are held in equities (including alternative investments) and real assets compared to about 74% last year. Table 5 shows a reconciliation of the assets from the beginning of the prior year to the valuation date.

Table 6 shows the development of the Actuarial Value of Assets (AVA). An actuarial value is used in order to dampen some of the year-to-year fluctuations which would occur if the market value were used instead. The expected actuarial value of assets is calculated and compared to the actual market value of assets. This difference is then compared with the remaining deferrals from the prior years to determine this year's excess/shortfall. The current year's excess/shortfall is offset directly against any prior years' deferrals of the opposite sign (oldest bases first). Any remaining bases are then recognized over a four-year period from the date the base was established. Any remaining deferrals, after the current year's recognition, are then subtracted from the market value of assets to get the final actuarial value of assets. This method has the advantage of more quickly converging towards the market value in years when the returns go in the opposite direction of the prior years.

Table 7 shows an estimate of ERS's dollar-weighted rate of return for the year. This is shown on (i) the market value of assets (reflecting all realized and unrealized gains and losses), and (ii) the actuarial value of assets. While the dollar-weighted market return this year was 5.93%, the return on the actuarial value was 6.49%. The difference between these is due to the smoothing effect of the AVA valuation method.

Table 9b determines the asset gain or loss for the year, based on the difference between the actual fund return and the actuarial value of assets and the prior year's assumed rate of 7.00%.

Finally, Table 13 shows a history of cash flows for the trust.

SECTION F – BENEFIT AND CONTRIBUTION PROVISIONS

Table 16 summarizes the benefit provisions of ERS used in this valuation. Table 17 is a historical record of prior legislative changes starting with changes effective in 1999. There were significant changes made by the 2011 Legislature to the benefit provisions of ERS for employees hired after June 30, 2012. Because the Board has chosen to use the Individual Entry Age Normal Cost method, the normal cost and the growth of the accrued liabilities will be slowly impacted by the changes in the benefit provisions, as members under the new tier are hired to replace members who are covered under the older tier of benefits.

There have been no changes to the benefit provisions since the last valuation that had an actuarial impact on the valuation. Act 192 was enacted by the 2024 Legislature that decreased the maximum funding period from 30 years to 25 years beginning with the June 30, 2024 actuarial valuation. Additionally, the legislation states that the maximum funding period will decrease by 1 each year until the maximum funding period reaches 20 where it will remain in future years.

The 2017 Legislature enacted ACT 017 which increased the employer contribution rates over a four-year period.

The employer contribution rates for Police and Fire employees are 41% of pay in FY 2021 and beyond while the employer contribution rates for All Other Employees are 24% of pay in FY 2021 and beyond.

This valuation reflects benefits promised to members by ERS's statutes. There are no ancillary benefits - retirement type benefits not required by ERS's statutes but which might be deemed an ERS liability if continued beyond the availability of funding by the current funding source.

Act 179/2004 was adopted during FY 2003/2004 and established the new Hybrid class that became effective on July 1, 2006. Current participants had the choice to elect to move to the new class or stay in the current plan. There were 26,228 plan members who elected to transfer. The Hybrid class membership has since grown to approximately 54,200 members.

SECTION G – GASB DISCLOSURE

The Governmental Accounting Standards Board (GASB) has issued Statement No. 67 which provides the manner in which the actuarial condition of a public sector retirement plan is to be disclosed in the system's financial statements. This new standard replaces GASB No. 25, and went into effect for ERS for fiscal years ending on or after June 30, 2014.

Similar to last year, we will provide a separate accounting report with the required disclosures under this new standard.

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SECTION H – ACTUARIAL ASSUMPTIONS AND METHODS

In determining costs and liabilities, actuaries use assumptions about the future, such as rates of salary increase, probabilities of retirement, termination, death and disability, and an investment return assumption. ERS's Board adopts the assumptions used, taking into account the actuary's recommendations.

In addition to the actuarial assumptions, the actuary also makes use of an actuarial funding method to allocate costs to particular years. In common with most public sector plans, ERS uses the entry age normal method (individual normal cost). This method produces a relatively level pattern of funding for individual employees over time. We believe this method is appropriate for ERS.

ERS's Board adopted new actuarial assumptions on September 8, 2025 to be used effective with the June 30, 2025 actuarial valuation. For a complete description of the recommended assumption changes please see our experience study report dated August 5, 2025.

Please see Table 18 for a complete description of the actuarial assumptions and methods.

SECTION I – MEMBERSHIP DATA

Membership data was provided in electronic files, via a secured file transfer protocol, by the staff. Data for active members include sex, birthdate, service, pay rate as of March 2025, employer entity and accumulated employee contributions. Data for inactive, nonretired members was similar, but also includes the members' unreduced benefit. For retired members, data includes status (service retiree, disabled retiree or beneficiary), sex, birthdate, pension amount, pension COLA amount, form of payment, beneficiary sex and birthdate if applicable, and date of retirement.

While not verifying the correctness of the data at the source, we performed various tests to ensure the internal consistency of the data and its overall reasonableness. Membership statistics are summarized in Table 12a. Table 12b summarizes certain active member data, and the age/service distribution of active members is shown in Table 19. Tables 30-43 show various distributions of retirees.

Since last year, the number of active members increased by 1,489 members from 65,337 to 66,826. These 66,826 active members are distributed as follows:

Category	Number	% of Total
(1)	(2)	(3)
Police & Fire	4,831	7.2%
Contributory	391	0.6%
Noncontributory	7,392	11.1%
Hybrid	<u>54,212</u>	<u>81.1%</u>
Total	66,826	100.00%

Covered payroll (which is the annualized pay for all active members on the census date) increased by 6.2% since last year. ERS also provided the actual aggregate payroll for fiscal year 2025 on which contributions were received (this includes payroll for members who terminated and retired during the year). The lesser of the covered payroll and the aggregate payroll is adjusted by the payroll growth rate to produce the *projected FY 2026 payroll for contribution purposes*, as shown in Item 1 of Table 1.

Average age of the active members decreased from 47.9 last year to 47.7 this valuation and the average service decreased from 12.9 to 12.6 years.

SECTION J – ASSESSMENT AND DISCLOSURE OF RISK ASSOCIATED WITH MEASURING PENSION OBLIGATIONS AND DETERMINING PENSION PLAN CONTRIBUTIONS

The determination of the accrued liability and an actuarially determined contribution (or funding period) requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and an actuarially determined contribution (or funding period) that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening) increases (or decreases) in cost can be anticipated.

SECTION J – ASSESSMENT AND DISCLOSURE OF RISK ASSOCIATED WITH MEASURING PENSION OBLIGATIONS AND DETERMINING PENSION PLAN CONTRIBUTIONS (CONTINUED)

ERS SPECIFIC RELATIONSHIP TO CERTAIN RISKS

While ERS has various levels of exposure to all of the risks listed above, in our opinion the three that warrant the most observation for ERS's Board specifically are assumption change risk and affordability risk.

Assumption Change Risk is the potential for the environment to change such that future valuation assumptions are adjusted to be different than the current assumptions. For example, declines in interest rates or increases in earnings multiples over time may result in a change in the assumed rates of return used in the valuation. A healthier workforce may result in changes in employee behavior such that retirement rates are adjusted to reflect employees working longer. And the difference in changing an assumption versus the other experience related risks listed above is instead of the loss slowly building over time, there is the immediate recognition of the change. Over the past decade, the changing of assumptions has increased the liabilities of ERS more than any other source. While those changes were warranted and put ERS on a stronger path going forward, it did cause a setback in many of the actuarial measurements and at least gives the appearance of a weaker System. We do not currently anticipate any significant changes to assumptions in the future and will continue to communicate with the Board if any issues beginning to show.

Affordability Risk is the simple fact that the contributions into ERS are quite large and in order to achieve the benefit security desired by the Board and the beneficiaries of ERS, they must remain high for quite a number of years. State Law requires the actuarial contribution occur and there has been no requests or attempts to lower the amounts, but it will always be a risk a future decision maker does attempt to do so.

This is also risk in a continued contraction in the headcount of active members. As was realized in the 2022 valuation, the contributions into ERS are directly tied to the covered payroll of the active membership and the projection of that payroll is used in determining the funding period. If the headcount were to decline, it would be difficult for the amount of future revenue to meet the current expectations and thus it would likely take more than 21 years to fully amortize the UAAL.

PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Several generally accepted plan maturity measures are described below and are followed by a table showing a 10-year history of the measurements for ERS.

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher/lower or increasing/decreasing level of this maturity measure generally indicates a higher/lower or increasing/decreasing volatility in plan sponsor contributions as a percentage of payroll.

SECTION J – ASSESSMENT AND DISCLOSURE OF RISK ASSOCIATED WITH MEASURING PENSION OBLIGATIONS AND DETERMINING PENSION PLAN CONTRIBUTIONS (CONTINUED)

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll (5 to 2 ratio), a change in liability 2% other than assumed would equal 5% of payroll. A higher/lower or increasing/decreasing level of this maturity measure generally indicates a higher/lower or increasing/decreasing volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

DURATION OF ACTUARIAL ACCRUED LIABILITY

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

ADDITIONAL RISK ASSESSMENT

Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. While a robust measurement of additional risk assessment is outside the scope of the annual actuarial valuation, some scenario tests and sensitivity tests are included in the valuation summary PowerPoint presentation presented to the Board at the Board's January Board Meeting.

In addition, an annual stress test as prescribed by state law is conducted each year. Please see the stress test report dated December 12, 2025, which was conducted in conjunction with this valuation.

SECTION J – ASSESSMENT AND DISCLOSURE OF RISK ASSOCIATED WITH MEASURING PENSION OBLIGATIONS AND DETERMINING PENSION PLAN CONTRIBUTIONS (CONTINUED)

LOW-DEFAULT RISK OBLIGATION MEASURE

ASOP No. 4 was revised and reissued in December 2021 by the ASB. It includes a new calculation called a low-default-risk obligation measure (LDROM) to be prepared and issued annually for defined benefit pension plans. The transmittal memorandum for ASOP No. 4 includes the following explanation:

“The ASB believes that the calculation and disclosure of this measure provides appropriate, useful information for the intended user regarding the funded status of a pension plan. The calculation and disclosure of this additional measure is not intended to suggest that this is the “right” liability measure for a pension plan. However, the ASB does believe that this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.”

The LDROM estimates the amount of money the plan would need to invest in low risk securities to provide the benefits with greater certainty. The traditional model based on expected portfolio returns expects lower costs but with higher risk, which creates less certainty and a possibility of higher costs. The LDROM model creates higher expected costs but more predictability when compared to the traditional model. Thus, the difference between the two measures (Valuation and LDROM) is one illustration of the possible costs the sponsor could incur if there was a reduction in the investment risk in comparison to the current diversified portfolio. However, the downside risk would be limited in the scenarios where the current portfolio would fail to achieve returns in excess of the low-default-risk discount, in this case 5.46%.

The following information has been prepared in compliance with this new requirement. Unless otherwise noted, the measurement date, actuarial cost methods, and assumptions used are the same as for the funding valuation covered in this actuarial valuation report.

A.	LDROM measure of benefits earned as of the measurement date:	\$48,045 million
B.	Valuation liability at 7% on measurement date:	<u>39,616 million</u>
C.	Cost to mitigate investment risk in the System’s portfolio:	\$ 8,429 million

Disclosures: Discount rate used to calculate LDROM: 5.46% Intermediate FTSE Pension Discount Curve as of June 30, 2025. This measure may not be appropriate for assessing the need for or amount of future contributions as the current portfolio is expected to generate significantly more investment earnings than the low-default-risk portfolio. This measure is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation as this measure includes projections of salary increases and the ability for current members to continue to accrue eligibility and vesting service.

SECTION J – ASSESSMENT AND DISCLOSURE OF RISK ASSOCIATED WITH MEASURING PENSION OBLIGATIONS AND DETERMINING PENSION PLAN CONTRIBUTIONS (CONTINUED)

	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
Ratio of the market value of assets to payroll	4.61	4.66	4.67	4.74	4.59	3.75	3.81	3.79	3.68	3.30
Ratio of actuarial accrued liability to payroll	7.33	7.44	7.54	7.55	7.14	7.06	6.95	6.82	6.72	6.44
Ratio of actives to retirees and beneficiaries	1.18	1.17	1.17	1.19	1.25	1.30	1.33	1.36	1.40	1.48
Ratio of net cash flow to market value of assets	-0.7%	-0.8%	-1.1%	-1.1%	-0.5%	-1.1%	-1.8%	-2.0%	-2.0%	-1.9%
Duration of the actuarial accrued liability*	14.76	14.76	14.77	14.88	14.95	15.03	15.11	NA	NA	NA

*Duration measure not available prior to 2019

SECTION K – SUMMARY AND CLOSING COMMENTS

To summarize the results of the actuarial valuation of the Employees' Retirement System as of June 30, 2025, it is our opinion that if all assumptions are met going forward, the present assets plus future expected contributions will be sufficient to provide the benefits specified in the law.

This year's valuation shows that ERS is expected to be fully funded in 2046 (21 years from this year's valuation date), which is the same calendar year projected in last year's valuation. This is due to the increase in expected future contributions caused by the increase in the active headcount and covered payroll that occurred in FY 2025. The 21 is consistent with the original impact statement which set the current contribution pattern which projected a 21-year funding period in 2025.

Based on this year's valuation results, the statutory contribution rates are sufficient to eliminate the UAAL over a period of 24 years or less as specified by Hawaii Revised Statute 88-122(e)(1).

Our modeling continues to show that the new contribution levels should be able to absorb material adverse experience without resulting in a need for further contribution rate increases. Moderate adverse experience may result in the date ERS obtains a fully funded status being later than 2046, but it is not expected to result in a requirement for further contribution rate increases.

The results of this valuation are uneven from the financial outlook of the System. While the end date for achieving full funding for the System remained unchanged when compared with last year (2046 for both valuations), ERS saw a larger than expected increase UAAL. This follows an increase in the UAAL in three of the previous four years. In addition, ERS is still deferring \$280.0 million in investment losses. If these deferred investment losses are recognized instead of being offset, the end date for achieving full funding could be extended.

Finally, while this valuation saw the date of full funding remain the same as last year, it is important to note that these projections assume the current contribution rates will be maintained throughout the funding period and that payroll will continue to grow as assumed. Any reduction in the contribution rates or slowing of the payroll growth below the assumed rate would increase the length of time until ERS achieves a fully funded status.

SECTION L – ACTUARIAL CERTIFICATION STATEMENT

	Police and Firefighters June 30, 2025 (1)	All Other Employees June 30, 2025 (2)	All Employees June 30, 2025 (3)
1. Gross normal cost as a percentage of pay	27.72%	12.93%	14.57%
2. Present value of future benefits			
a. Active employees	\$ 4,752,227,403	\$ 18,416,856,195	\$ 23,169,083,598
b. Inactive members	71,752,373	1,198,872,140	1,270,624,513
c. Pensioners and beneficiaries	<u>4,700,105,997</u>	<u>17,285,320,443</u>	<u>21,985,426,440</u>
d. Total	<u>\$ 9,524,085,773</u>	<u>\$ 36,901,048,778</u>	<u>\$ 46,425,134,551</u>
3. Present value of future employee and employer contributions			
a. Present value of future normal costs	\$ 1,462,900,942	\$ 5,346,197,356	\$ 6,809,098,298
b. Present value of future employee contributions	758,495,647	2,921,693,806	3,680,189,453
c. Present value of future employer normal costs (Item 3a - Item 3b)	<u>\$ 704,405,295</u>	<u>\$ 2,424,503,550</u>	<u>\$ 3,128,908,845</u>
4. Actuarial accrued liability (Item 2d - Item 3a)	\$ 8,061,184,831	\$ 31,554,851,422	\$ 39,616,036,253
5. Actuarial value of assets			
a. Annuity Savings Fund	\$ 1,144,430,180	\$ 3,103,220,300	\$ 4,247,650,480
b. Pension Accumulation Fund	4,483,345,461	16,474,851,341	20,958,196,802
c. Total	<u>\$ 5,627,775,641</u>	<u>\$ 19,578,071,641</u>	<u>\$ 25,205,847,282</u>
6. Unfunded actuarial accrued liability	\$ 2,433,409,190	\$ 11,976,779,781	\$ 14,410,188,971
7. Adequacy of contribution rates			
a. Statutory Contribution Rate for Fiscal Year 2026	41.00%	24.00%	25.84%
b. Funding Period in years as of June 30, 2025*	24	20	21

* The Funding Period is calculated using an open group projection which reflects the impact of the benefits and member contribution rates for employees hired after June 30, 2012. It also assumes the current employer contribution rates will remain in place until the System is fully funded.

SECTION L – ACTUARIAL CERTIFICATION STATEMENT (CONTINUED)

The actuarial valuation as of June 30, 2025 is based on the provisions of Chapter 88 of the Hawaii Revised Statutes, as amended. The assumptions used in the cost calculations were those adopted by the Board of Trustees in September of 2025 based on the actuary's actuarial experience investigation report for the period ending June 30, 2024. The actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures.

In our opinion, the comparison of the current contribution policies to ERS's liabilities were calculated in accordance with the provisions of Chapter 88 regarding the funding of the Employees' Retirement System on an actuarial reserve basis.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned is an independent actuary and consultant. Mr. Newton is an Enrolled Actuary, a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries. Finally, he is experienced in performing valuations for large public retirement systems.



Joseph P. Newton, FSA, EA, MAAA
Pension Market Leader & Actuary

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TABLE 1
Development of Employer Cost

	Police and Firefighters	All Other Employees	All Employees
	June 30, 2025 (1)	June 30, 2025 (2)	June 30, 2025 (3)
1. Projected FY 2026 payroll for contribution purposes	\$ 586,437,392	\$ 4,817,151,331	\$ 5,403,588,723
2. Gross normal cost (Table 3)	27.72%	12.93%	14.57%
3. Employer normal cost rate (Table 3)	14.84%	6.68%	7.59%
4. Present value future benefits (Table 2)	\$ 9,524,085,773	\$ 36,901,048,778	\$ 46,425,134,551
5. Present value future employer normal cost	\$ 704,405,295	\$ 2,424,503,550	\$ 3,128,908,845
6. Present value future employee contributions	\$ 758,495,647	\$ 2,921,693,806	\$ 3,680,189,453
7. Actuarial accrued liability (Item 4 - Item 5 - Item 6)	\$ 8,061,184,831	\$ 31,554,851,422	\$ 39,616,036,253
8. Actuarial value of assets	\$ 5,627,775,641	\$ 19,578,071,641	\$ 25,205,847,282
9. Unfunded actuarial accrued liability (UAAL) (Item 7 - Item 8)	\$ 2,433,409,190	\$ 11,976,779,781	\$ 14,410,188,971
10. Funding Period*	24	20	21

	Police and Firefighters	All Other Employees	All Employees
	June 30, 2024 (1)	June 30, 2024 (2)	June 30, 2024 (3)
1. Projected FY 2025 payroll for contribution purposes	\$ 553,420,240	\$ 4,531,329,081	\$ 5,084,749,321
2. Gross normal cost (Table 3)	27.12%	12.93%	14.51%
3. Employer normal cost rate (Table 3)	14.30%	6.85%	7.68%
4. Present value future benefits (Table 2)	\$ 8,848,499,422	\$ 35,433,921,342	\$ 44,282,420,764
5. Present value future employer normal cost	\$ 641,541,725	\$ 2,382,431,246	\$ 3,023,972,971
6. Present value future employee contributions	\$ 707,209,722	\$ 2,701,720,336	\$ 3,408,930,058
7. Actuarial accrued liability (Item 4 - Item 5 - Item 6)	\$ 7,499,747,975	\$ 30,349,769,760	\$ 37,849,517,735
8. Actuarial value of assets	\$ 5,267,073,293	\$ 18,573,966,051	\$ 23,841,039,344
9. Unfunded actuarial accrued liability (UAAL) (Item 7 - Item 8)	\$ 2,232,674,682	\$ 11,775,803,709	\$ 14,008,478,391
10. Funding Period*	22	22	22

* The Funding Period is calculated using an open group projection which reflects the impact of the smaller benefits and larger member contribution rates for employees hired after June 30, 2012. Please refer to Table 9c for the full projection.

TABLE 2
Actuarial Present Value of Future Benefits

	Police and Firefighters	All Other Employees	All Employees
	June 30, 2025	June 30, 2025	June 30, 2025
	(1)	(2)	(3)
1. Active members			
a. Service retirement benefits	\$ 4,605,226,708	\$ 17,068,296,033	\$ 21,673,522,741
b. Termination Benefits	87,892,972	790,387,578	878,280,550
c. Survivor benefits	17,645,480	132,033,858	149,679,338
d. Disability retirement benefits	41,462,243	426,138,726	467,600,969
e. Total	\$ 4,752,227,403	\$ 18,416,856,195	\$ 23,169,083,598
2. Retired members			
a. Service retirement	\$ 4,404,515,465	\$ 15,885,995,728	\$ 20,290,511,193
b. Disability retirement	41,602,392	346,536,692	388,139,084
c. Beneficiaries	253,988,140	1,052,788,023	1,306,776,163
d. Total	\$ 4,700,105,997	\$ 17,285,320,443	\$ 21,985,426,440
3. Inactive members			
a. Vested terminations	\$ 59,954,891	\$ 945,635,710	\$ 1,005,590,601
b. Nonvested terminations	11,797,482	253,236,430	265,033,912
c. Total	\$ 71,752,373	\$ 1,198,872,140	\$ 1,270,624,513
4. Total actuarial present value of future benefits	\$ 9,524,085,773	\$ 36,901,048,778	\$ 46,425,134,551

	Police and Firefighters	All Other Employees	All Employees
	June 30, 2024	June 30, 2024	June 30, 2024
	(1)	(2)	(3)
1. Active members			
a. Service retirement benefits	\$ 4,204,810,942	\$ 16,226,987,525	\$ 20,431,798,467
b. Termination Benefits	82,386,038	734,647,600	817,033,638
c. Survivor benefits	16,837,855	134,534,005	151,371,860
d. Disability retirement benefits	39,105,378	401,946,310	441,051,688
e. Total	\$ 4,343,140,213	\$ 17,498,115,440	\$ 21,841,255,653
2. Retired members			
a. Service retirement	\$ 4,149,994,007	\$ 15,444,158,566	\$ 19,594,152,573
b. Disability retirement	41,679,985	335,048,849	376,728,834
c. Beneficiaries	239,170,396	1,000,671,990	1,239,842,386
d. Total	\$ 4,430,844,388	\$ 16,779,879,405	\$ 21,210,723,793
3. Inactive members			
a. Vested terminations	\$ 63,217,629	\$ 925,856,626	\$ 989,074,255
b. Nonvested terminations	11,297,192	230,069,871	241,367,063
c. Total	\$ 74,514,821	\$ 1,155,926,497	\$ 1,230,441,318
4. Total actuarial present value of future benefits	\$ 8,848,499,422	\$ 35,433,921,342	\$ 44,282,420,764

TABLE 3
Analysis of Normal Cost

	Police and Firefighters June 30, 2025 <hr/> (1)	All Other Employees June 30, 2025 <hr/> (2)	All Employees June 30, 2025 <hr/> (3)
1. Normal cost as a percent of pay			
a. Service retirement benefits	24.83%	9.82%	11.48%
b. Deferred termination benefits	0.89%	0.60%	0.63%
c. Refunds	0.93%	1.46%	1.40%
d. Disability retirement benefits	0.49%	0.54%	0.54%
e. Survivor benefits	0.18%	0.11%	0.12%
f. Administrative Expenses	0.40%	0.40%	0.40%
g. Total	<hr/> 27.72%	<hr/> 12.93%	<hr/> 14.57%
2. Employee contribution rate	12.88%	6.25%	6.98%
3. Effective employer normal cost rate (Item 1g - Item 2)	14.84%	6.68%	7.59%

	Police and Firefighters June 30, 2024 <hr/> (1)	All Other Employees June 30, 2024 <hr/> (2)	All Employees June 30, 2024 <hr/> (3)
1. Normal cost as a percent of pay			
a. Service retirement benefits	24.33%	9.87%	11.47%
b. Deferred termination benefits	0.88%	0.60%	0.63%
c. Refunds	0.84%	1.41%	1.35%
d. Disability retirement benefits	0.49%	0.53%	0.53%
e. Survivor benefits	0.18%	0.12%	0.13%
f. Administrative Expenses	0.40%	0.40%	0.40%
g. Total	<hr/> 27.12%	<hr/> 12.93%	<hr/> 14.51%
2. Employee contribution rate	12.82%	6.08%	6.83%
3. Effective employer normal cost rate (Item 1g - Item 2)	14.30%	6.85%	7.68%

TABLE 4
Statement of Net Position
(Assets at Market or Fair Value)

Item	Valuation as of	
	June 30, 2025	June 30, 2024
1. Cash and cash equivalents	\$ 1,277,828,737	\$ 816,534,332
2. Receivables:		
a. Accounts receivable and others	\$ 3,647,251	\$ 3,797,764
b. Investment sale proceeds	123,112,167	118,165,686
c. Accrued income	44,979,369	42,228,081
d. Member and employer contributions	330,227,213	146,686,334
e. Subtotal	\$ 501,966,000	\$ 310,877,865
3. Investments		
a. Equity securities	\$ 5,225,471,302	\$ 5,277,362,997
b. Fixed income securities	5,844,803,600	5,199,978,914
c. Real assets	4,786,724,544	4,261,689,706
d. Alternative investments	7,497,209,137	8,027,013,307
e. Subtotal	\$ 23,354,208,583	\$ 22,766,044,924
4. Other		
a. Invested securities lending collateral	\$ 1,018,899,592	\$ 765,590,308
b. Equipment at cost, net of depreciation	1,898,766	2,954,114
c. Other assets	-	-
d. Subtotal	\$ 1,020,798,358	\$ 768,544,422
5. Total assets	\$ 26,154,801,678	\$ 24,662,001,543
6. Liabilities		
a. Accounts payable	\$ 91,490,886	\$ 92,405,819
b. Investment commitments payable	118,605,407	103,373,060
c. Securities lending collateral	1,018,899,592	765,590,308
d. Notes payable	-	-
e. Total liabilities	\$ 1,228,995,885	\$ 961,369,187
7. Total market value of assets available for benefits (Item 5 - Item 6e)	\$ 24,925,805,793	\$ 23,700,632,356

TABLE 5
Statement of Changes in Net Position

	Year Ending	
	June 30, 2025	June 30, 2024
1. a. Value of assets at beginning of year	\$ 23,700,632,356	\$ 22,425,384,975
b. Adjustment due to post valuation changes in ACFR assets	-	-
c. Adjusted value of assets at beginning of year	<u>\$ 23,700,632,356</u>	<u>\$ 22,425,384,975</u>
2. Revenue for the year		
a. Contributions		
i. Member contributions	\$ 371,067,993	\$ 342,066,080
ii. Employer contributions	<u>1,479,559,382</u>	<u>1,396,331,977</u>
iii. Total	<u>\$ 1,850,627,375</u>	<u>\$ 1,738,398,057</u>
b. Income		
i. Interest, dividends, and other income	\$ 821,972,097	\$ 794,784,038
ii. Investment expenses	<u>(175,099,189)</u>	<u>(174,112,484)</u>
iii. Net	<u>\$ 646,872,908</u>	<u>\$ 620,671,554</u>
c. Net realized and unrealized gains/(loss)	<u>\$ 754,001,685</u>	<u>\$ 841,228,583</u>
d. Net income/(loss)	<u>\$ 1,400,874,593</u>	<u>\$ 1,461,900,137</u>
e. Total revenue	<u>\$ 3,251,501,968</u>	<u>\$ 3,200,298,194</u>
3. Expenditures for the year		
a. Refunds	\$ 24,367,929	\$ 28,548,843
b. Benefit payments	<u>1,977,937,411</u>	<u>1,878,501,292</u>
c. Administrative and miscellaneous expenses	<u>24,023,191</u>	<u>18,000,678</u>
d. Total expenditures	<u>\$ 2,026,328,531</u>	<u>\$ 1,925,050,813</u>
4. Increase/(decrease) in net assets (Item 2e - Item 3d)	<u>\$ 1,225,173,437</u>	<u>\$ 1,275,247,381</u>
5. Value of assets at end of year (Item 1c + Item 4)	<u>\$ 24,925,805,793</u>	<u>\$ 23,700,632,356</u>

TABLE 6

Development of Actuarial Value of Assets

					Year Ending June 30, 2025	
1. Actuarial value of assets, beginning of year					\$	23,841,039,344
2. Net new investments						
a. Contributions					\$	1,850,627,375
b. Benefits paid and Refunds						(2,002,305,340)
c. Administrative expenses						(24,023,191)
d. Subtotal						(175,701,156)
3. Market value of assets at end of year					\$	24,925,805,793
4. Expected return on actuarial value of assets					\$	1,662,723,214
5. Expected actuarial value of assets, end of year					\$	25,328,061,402
6. Excess/(shortfall) return (Item 3-Item 5)					\$	(402,255,609)
7. Development of amounts to be recognized as of June 30, 2025:						
Fiscal Year End	Remaining Deferrals of Excess (Shortfall) of Investment Income (1)	Offsetting of Gains/(Losses) (2)	Net Deferrals Remaining (3) = (1) + (2)	Years Remaining (4)	Recognized for this valuation (5) = (3) / (4)	Remaining after this valuation (6) = (3) - (5)
2022	\$ 0	\$ 0	\$ 0	1	\$ 0	\$ 0
2023	\$ (59,697,812)	\$ 0	\$ (59,697,812)	2	\$ (29,848,906)	\$ (29,848,906)
2024	\$ (80,709,176)	\$ 0	\$ (80,709,176)	3	\$ (26,903,059)	\$ (53,806,117)
2025	\$ (261,848,621)	\$ 0	\$ (261,848,621)	4	\$ (65,462,155)	\$ (196,386,466)
Total	\$ (402,255,609)	\$ 0	\$ (402,255,609)		\$ (122,214,120)	\$ (280,041,489)
8. Actuarial value of assets as of June 30, 2025 (Item 3 - Item 7)					\$	25,205,847,282
9. Ratio of actuarial value to market value						101.1%
10. Asset gain/(loss) for year (Item 8 - Item 5)					\$	(122,214,120)

TABLE 7
Estimation of Yields

	June 30, 2025 (1)	June 30, 2024 (2)
A. Market value yield		
1. Beginning of year market assets	\$ 23,700,632,356	\$ 22,425,384,975
2. Investment income		
a. Change in assets (Item 3 - Item 1)	\$ 1,225,173,437	\$ 1,275,247,381
b. Cash Flow	<u>(175,701,156)</u>	<u>(186,652,756)</u>
c. Total investment income based on market value (Item 2a less Item 2b)	\$ 1,400,874,593	\$ 1,461,900,137
3. End of year market assets	\$ 24,925,805,793	\$ 23,700,632,356
4. Estimated dollar weighted market value yield (net of investment and administrative expenses)	5.93%	6.55%
B. Actuarial value yield		
1. Beginning of year actuarial assets	\$ 23,841,039,344	\$ 22,514,931,693
2. Investment income (based on asset valuation method)		
a. Change in assets (Item 3 - Item 1)	\$ 1,364,807,938	\$ 1,326,107,651
b. Cash Flow	<u>(175,701,156)</u>	<u>(186,652,756)</u>
c. Total investment income based on market value (Item 2a less Item 2b)	\$ 1,540,509,094	\$ 1,512,760,407
3. End of year actuarial assets	\$ 25,205,847,282	\$ 23,841,039,344
4. Estimated actuarial value yield (net of investment and administrative expenses)	6.49%	6.75%

TABLE 8**Allocation of Cash and Investments**

	June 30, 2025 (1)	June 30, 2024 (2)
1. Cash and short-term equivalents	5.2%	3.5%
2. Fixed income securities	23.7%	22.1%
3. Equity securities	21.3%	22.3%
4. Real assets	19.4%	18.1%
5. Other	30.4%	34.0%
6. Total investments	100.0%	100.0%

TABLE 9A

Total Experience Gain or Loss

Item (1)	Police and Firefighters (2)	All Other Employees (3)	All Employees (4)
A. Calculation of total actuarial gain or loss			
1. Unfunded actuarial accrued liability (UAAL), as of June 30, 2024	\$ 2,232,674,682	\$ 11,775,803,709	\$ 14,008,478,391
2. Normal cost for the year (includes admin expense)	\$ 219,275,133	\$ 666,954,736	\$ 886,229,869
3. Less: contributions and assessments for the year	\$ (372,848,968)	\$ (1,477,778,407)	\$ (1,850,627,375)
4. Interest at 7.00%			
a. On UAAL	\$ 156,287,228	\$ 824,306,260	\$ 980,593,488
b. On normal cost	7,674,630	23,343,416	31,018,046
c. On contributions	(13,049,714)	(51,722,244)	(64,771,958)
d. Total	\$ 150,912,144	\$ 795,927,432	\$ 946,839,576
5. Expected UAAL as of June 30, 2025 (Sum of Items 1 - 4)	\$ 2,230,012,991	\$ 11,760,907,470	\$ 13,990,920,461
6. Actual UAAL as of June 30, 2025	\$ 2,433,409,190	\$ 11,976,779,781	\$ 14,410,188,971
7. Total gain/(loss) for the year (Item 5 - Item 6)	\$ (203,396,199)	\$ (215,872,311)	\$ (419,268,510)
B. Source of gains and losses			
8. Asset gain/(loss) for the year (Table 9b)	\$ (27,216,808)	\$ (94,997,312)	\$ (122,214,120)
9. Gain/(loss) due to change in actuarial assumptions	(133,093,285)	(36,902,479)	(169,995,764)
10. Other liability gain/(loss)	(43,086,106)	(83,972,520)	(127,058,626)
11. Change in benefit provisions	-	-	-
12. Total gain/(loss) for the year	\$ (203,396,199)	\$ (215,872,311)	\$ (419,268,510)

TABLE 9B**Investment Experience Gain or Loss**

Item (1)	June 30, 2025 (2)	June 30, 2024 (3)
1. Actuarial assets, beginning of year	\$ 23,841,039,344	\$ 22,514,931,693
2. Total contributions during year	\$ 1,850,627,375	\$ 1,738,398,057
3. Benefits and refunds paid	\$ (2,002,305,340)	\$ (1,907,050,135)
4. Administrative expenses paid	\$ (24,023,191)	\$ (18,000,678)
5. Assumed net investment income at 7.00%		
a. Beginning of year assets	\$ 1,668,872,755	\$ 1,576,045,219
b. Contributions	64,771,958	60,843,932
c. Benefits and refunds paid	(70,080,687)	(66,746,755)
d. Administrative expenses paid	(840,812)	(630,024)
e. Total	\$ 1,662,723,214	\$ 1,569,512,372
6. Expected actuarial assets, end of year (Sum of items 1 through 5)	\$ 25,328,061,402	\$ 23,897,791,309
7. Actual actuarial assets, end of year	\$ 25,205,847,282	\$ 23,841,039,344
8. Asset gain/(loss) for year (Item 7 - Item 6)	\$ (122,214,120)	\$ (56,751,965)
9. Asset gain/(loss) as a percent of actuarial value of assets, end of year (Item 8 / Item 7)	(0.48%)	(0.24%)

TABLE 9C

Projection Results Based on June 30, 2025 Actuarial Valuation

Valuation as of June 30,	Employer Contribution Rate for Fiscal Year Following Valuation Date	Compensation (in Millions)	Employer Contributions (in Millions)	Actuarial Accrued Liability (AAL, in Millions)	Actuarial Value of Assets (AVA, in Millions)	Unfunded Actuarial Accrued Liability (UAAL, in Millions)	Funded Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2025	25.84%	\$ 5,404	\$ 1,397	\$ 39,616	\$ 25,206	\$ 14,410	63.6%
2026	25.82%	5,532	1,429	40,980	26,582	14,399	64.9%
2027	25.80%	5,685	1,467	42,360	28,010	14,350	66.1%
2028	25.79%	5,842	1,506	43,732	29,473	14,259	67.4%
2029	25.77%	6,006	1,548	45,098	30,976	14,122	68.7%
2030	25.75%	6,176	1,591	46,459	32,526	13,933	70.0%
2031	25.74%	6,351	1,635	47,815	34,126	13,689	71.4%
2032	25.71%	6,532	1,679	49,165	35,782	13,383	72.8%
2033	25.71%	6,717	1,727	50,509	37,498	13,010	74.2%
2034	25.71%	6,909	1,776	51,846	39,282	12,565	75.8%
2035	25.71%	7,108	1,828	53,180	41,141	12,038	77.4%
2036	25.71%	7,313	1,880	54,509	43,084	11,424	79.0%
2037	25.71%	7,525	1,935	55,834	45,118	10,716	80.8%
2038	25.71%	7,746	1,992	57,159	47,255	9,904	82.7%
2039	25.71%	7,976	2,051	58,486	49,506	8,980	84.6%
2040	25.71%	8,216	2,113	59,820	51,885	7,935	86.7%
2041	25.71%	8,467	2,177	61,168	54,410	6,758	89.0%
2042	25.71%	8,726	2,243	62,532	57,093	5,439	91.3%
2043	25.71%	8,994	2,313	63,918	59,952	3,966	93.8%
2044	25.71%	9,273	2,384	65,332	63,005	2,327	96.4%
2045	25.71%	9,561	2,458	66,777	66,268	509	99.2%
2046	25.71%	9,859	2,535	68,258	69,761	(1,503)	102.2%
2047	25.71%	10,167	2,614	69,781	73,505	(3,724)	105.3%
2048	25.71%	10,486	2,696	71,353	77,523	(6,169)	108.6%
2049	25.71%	10,815	2,781	72,979	81,836	(8,857)	112.1%
2050	25.71%	11,154	2,868	74,664	86,470	(11,806)	115.8%
2051	25.71%	11,503	2,958	76,412	91,448	(15,036)	119.7%
2052	25.71%	11,861	3,050	78,225	96,794	(18,569)	123.7%
2053	25.71%	12,231	3,145	80,108	102,535	(22,428)	128.0%
2054	25.71%	12,610	3,242	82,064	108,701	(26,638)	132.5%

TABLE 10**Employer Covered Payroll**

	Police and Firefighters		All Other Employees		All Employees	
	March 31, 2025		March 31, 2024		March 31, 2025	
	(1)	(2)	(3)	(4)	(5)	(6)
State of Hawaii	\$ 24,867,317	\$ 23,876,807	\$ 3,873,923,925	\$ 3,650,856,207	\$ 3,898,791,242	\$ 3,674,733,014
City & County of Honolulu	343,007,186	323,638,244	435,796,461	402,187,451	778,803,647	725,825,695
Board of Water Supply	-	-	43,383,799	40,153,296	43,383,799	40,153,296
County of Hawaii	93,478,072	89,312,550	132,474,350	124,886,400	225,952,422	214,198,950
County of Maui	74,526,881	68,074,377	142,942,525	136,075,991	217,469,406	204,150,368
County of Kauai	30,726,720	29,803,568	71,108,763	68,044,841	101,835,483	97,848,409
Total All Employers	\$ 566,606,176	\$ 534,705,546	\$ 4,699,629,823	\$ 4,422,204,186	\$ 5,266,235,999	\$ 4,956,909,732

TABLE 11**Schedule of Funding Progress**

Valuation Date (1)	Actuarial Value of Assets (AVA) (2)	Actuarial Accrued Liability (AAL) (3)	Unfunded Actuarial		Annual Covered Payroll (6)	UAAL as % of Payroll (4)/(6) (7)
			Accrued Liability (UAAL) (3) - (2) (4)	Funded Ratio (2)/(3) (5)		
June 30, 2006 *	\$ 9,529.4	\$ 14,661.4	\$ 5,132.0	65.0%	\$ 3,238.3	158.5%
June 30, 2007 **	10,589.8	15,696.5	5,106.8	67.5%	3,507.0	145.6%
June 30, 2008	11,381.0	16,549.1	5,168.1	68.8%	3,782.1	136.6%
June 30, 2009	11,400.1	17,636.4	6,236.3	64.6%	4,030.1	154.7%
June 30, 2010	11,345.6	18,483.7	7,138.1	61.4%	3,895.7	183.2%
June 30, 2011 **	11,942.8	20,096.9	8,154.2	59.4%	3,916.0	208.2%
June 30, 2012	12,242.5	20,683.4	8,440.9	59.2%	3,890.0	217.0%
June 30, 2013	12,748.8	21,243.7	8,494.9	60.0%	3,906.7	217.4%
June 30, 2014	13,641.8	22,220.1	8,578.3	61.4%	3,991.6	214.9%
June 30, 2015**	14,463.7	23,238.4	8,774.7	62.2%	4,171.4	210.4%
June 30, 2016**	14,998.7	27,439.2	12,440.5	54.7%	4,258.9	292.1%
June 30, 2017	15,720.6	28,648.6	12,928.0	54.9%	4,265.0	303.1%
June 30, 2018	16,512.7	29,917.4	13,404.7	55.2%	4,383.7	305.8%
June 30, 2019**	17,322.2	31,396.4	14,074.3	55.2%	4,519.7	311.4%
June 30, 2020	18,084.4	32,691.8	14,607.4	55.3%	4,630.2	315.5%
June 30, 2021	19,909.8	34,139.2	14,229.4	58.3%	4,783.8	297.5%
June 30, 2022**	21,317.8	34,822.8	13,504.9	61.2%	4,614.0	292.7%
June 30, 2023	22,514.9	36,224.6	13,709.7	62.2%	4,805.3	285.3%
June 30, 2024	23,841.0	37,849.5	14,008.5	63.0%	5,084.7	275.5%
June 30, 2025**	25,205.8	39,616.0	14,410.2	63.6%	5,403.6	266.7%

Note : Dollar amounts in millions.

* Assumption changes and new Hybrid class effective June 30, 2006.

** New assumption effective on valuation date.

TABLE 12A

Membership Data

	Police and Firefighters		All Other Employees		All Employees	
	June 30, 2025		June 30, 2024		June 30, 2025	
	(1)	(2)	(3)	(4)	(5)	(6)
1. Active members						
a. Number	4,831	4,791	61,995	60,546	66,826	65,337
b. Total salary	\$ 566,606,176	\$ 534,705,546	\$ 4,699,629,823	\$ 4,422,204,186	\$ 5,266,235,999	\$ 4,956,909,732
c. Average salary	\$ 117,285	\$ 111,606	\$ 75,807	\$ 73,039	\$ 78,805	\$ 75,867
d. Average age	42.4	42.5	48.1	48.3	47.7	47.9
e. Average service	13.9	14.1	12.5	12.8	12.6	12.9
2. Inactive members						
a. Number	220	235	8,472	8,612	8,692	8,847
b. Total annual deferred benefits	\$ 5,640,898	\$ 6,055,757	\$ 108,193,318	\$ 107,356,266	\$ 113,834,216	\$ 113,412,023
c. Average annual deferred benefit	\$ 25,640	\$ 25,769	\$ 12,771	\$ 12,466	\$ 13,096	\$ 12,819
3. Service retirees						
a. Number	4,290	4,207	44,997	44,413	49,287	48,620
b. Total annual benefits	\$ 323,738,086	\$ 306,722,571	\$ 1,416,625,074	\$ 1,365,908,147	\$ 1,740,363,160	\$ 1,672,630,718
c. Average annual benefit	\$ 75,463	\$ 72,908	\$ 31,483	\$ 30,755	\$ 35,311	\$ 34,402
4. Disabled retirees						
a. Number	118	124	1,662	1,645	1,780	1,769
b. Total annual benefits	\$ 3,650,700	\$ 3,692,776	\$ 28,788,038	\$ 27,749,273	\$ 32,438,738	\$ 31,442,049
c. Average annual benefit	\$ 30,938	\$ 29,780	\$ 17,321	\$ 16,869	\$ 18,224	\$ 17,774
5. Beneficiaries						
a. Number	459	429	5,147	5,002	5,606	5,431
b. Total annual benefits	\$ 22,242,957	\$ 20,511,498	\$ 103,622,233	\$ 97,877,735	\$ 125,865,190	\$ 118,389,233
c. Average annual benefit	\$ 48,460	\$ 47,812	\$ 20,133	\$ 19,568	\$ 22,452	\$ 21,799

TABLE 12B
Historical Summary of Active Member Data

Year Ending June 30,	Active Members		Total Salaries		Average Salary		Average Age	Average Service
	Number	Percent Increase	Amount in \$ Millions	Percent Increase	\$ Amount	Percent Increase		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2005	63,073	0.8%	\$ 2,924.5	6.1%	\$ 46,368	5.3%	46.3	13.0
2006	64,069	1.6%	3,113.7	6.5%	48,599	4.8%	46.4	13.0
2007	65,251	1.8%	3,340.5	7.3%	51,194	5.3%	46.5	13.0
2008	66,589	2.1%	3,601.7	7.8%	54,089	5.7%	46.6	12.9
2009	67,912	2.0%	3,838.0	6.6%	56,514	4.5%	46.8	12.9
2010	65,890	-3.0%	3,713.6	-3.2%	56,360	-0.3%	47.1	13.2
2011	65,310	-0.9%	3,731.4	0.5%	57,133	1.4%	47.4	13.4
2012	65,599	0.4%	3,706.1	-0.7%	56,497	-1.1%	47.6	13.5
2013	66,226	1.0%	3,720.8	0.4%	56,184	-0.6%	47.7	13.5
2014	67,206	1.5%	3,871.0	4.0%	57,600	2.5%	47.8	13.5
2015	67,310	0.2%	3,952.6	2.1%	58,723	1.9%	47.8	13.2
2016	67,377	0.1%	4,118.4	4.2%	61,124	4.1%	47.9	13.3
2017	65,911	-2.2%	4,134.2	0.4%	62,723	2.6%	48.0	13.3
2018	66,271	0.5%	4,257.2	3.0%	64,240	2.4%	47.9	13.2
2019	66,383	0.2%	4,393.0	3.2%	66,176	3.0%	47.9	13.1
2020	66,750	0.6%	4,523.4	3.0%	67,766	2.4%	47.9	13.1
2021	65,561	-1.8%	4,622.0	2.2%	70,499	4.0%	48.0	13.2
2022	64,234	-2.0%	4,537.2	-1.8%	70,635	0.2%	48.0	13.2
2023	64,243	0.0%	4,663.5	2.8%	72,591	2.8%	48.0	13.1
2024	65,337	1.7%	4,956.9	6.3%	75,867	4.5%	47.9	12.9
2025	66,826	2.3%	5,266.2	6.2%	78,805	3.9%	47.7	12.6

TABLE 13

History of Cash Flow

Year Ending June 30,	Contributions			Expenditures				External Cash Flow for the Year ² (9)	Market Value of Assets (10)	External Cash Flow as Percent of Market Value (11)
	Employee (1)	Employer (2)	Total (3)	Benefit Payments (5)	Refunds (6)	Administrative Expenses ¹ (7)	Total (8)			
2009	\$184.5	\$ 578.6	\$ 763.1	\$ (839.1)	\$ (3.5)	\$ (12.3)	\$ (854.9)	\$ (91.8)	\$ 8,818.0	(1.0%)
2010	360.0	547.6	907.6	(906.4)	(7.8)	(12.2)	(926.4)	(18.8)	9,821.6	(0.2%)
2011	231.0	534.9	765.9	(960.2)	(7.9)	(13.3)	(981.4)	(215.5)	11,642.3	(1.9%)
2012	178.8	548.4	727.2	(1,015.4)	(7.2)	(11.6)	(1,034.2)	(307.0)	11,285.9	(2.7%)
2013	185.8	581.4	767.2	(1,060.6)	(7.2)	(12.3)	(1,080.1)	(312.9)	12,357.8	(2.5%)
2014	206.1	653.1	859.2	(1,122.4)	(8.5)	(12.6)	(1,143.5)	(284.3)	14,203.0	(2.0%)
2015	223.5	717.8	941.3	(1,170.7)	(10.5)	(14.0)	(1,195.2)	(253.9)	14,505.5	(1.8%)
2016	236.8	756.6	993.4	(1,232.6)	(12.9)	(14.0)	(1,259.5)	(266.1)	14,070.0	(1.9%)
2017	250.7	781.2	1,031.9	(1,306.8)	(16.3)	(15.0)	(1,338.1)	(306.2)	15,698.3	(2.0%)
2018	259.4	847.6	1,107.0	(1,395.9)	(20.8)	(15.8)	(1,432.5)	(325.5)	16,598.4	(2.0%)
2019	273.2	922.6	1,195.8	(1,469.6)	(16.5)	(13.8)	(1,499.9)	(304.1)	17,227.0	(1.8%)
2020	287.4	1,098.6	1,386.0	(1,545.6)	(22.4)	(17.8)	(1,585.8)	(199.8)	17,385.5	(1.1%)
2021	300.6	1,281.6	1,582.2	(1,651.4)	(23.6)	(19.0)	(1,694.0)	(111.8)	21,935.8	(0.5%)
2022	293.0	1,242.1	1,535.1	(1,738.8)	(24.5)	(17.5)	(1,780.8)	(245.7)	21,854.8	(1.1%)
2023	309.8	1,274.2	1,584.0	(1,795.4)	(26.4)	(18.5)	(1,840.3)	(256.3)	22,425.4	(1.1%)
2024	342.1	1,396.3	1,738.4	(1,878.5)	(28.5)	(18.0)	(1,925.0)	(186.6)	23,700.6	(0.8%)
2025	371.1	1,479.6	1,850.7	(1,977.9)	(24.4)	(24.0)	(2,026.3)	(175.6)	24,925.8	(0.7%)

Amounts in \$ millions

¹ Excludes investment expenses² Column (9) = Column (4) + Column (8)

TABLE 14**Solvency Test**

	June 30, 2025 (1)	June 30, 2024 (2)
1. Actuarial accrued liability (AAL)		
a. Active member contributions	\$ 3,681,108,372	\$ 3,437,939,005
b. Retirees and beneficiaries	21,985,426,440	21,210,723,793
c. Active and inactive members	<u>13,949,501,441</u>	<u>13,200,854,937</u>
d. Total	\$ 39,616,036,253	\$ 37,849,517,735
2. Actuarial value of assets	\$ 25,205,847,282	\$ 23,841,039,344
3. Cumulative portion of AAL covered		
a. Active member contributions	100%	100%
b. Retirees and beneficiaries	98%	96%
c. Active and inactive members	0%	0%

TABLE 15

Highlights of Last Five Annual Actuarial Valuations
2021 through 2025

Item	Valuation Date: June 30				
	2021	2022	2023	2024	2025
Number of active members	65,561	64,234	64,243	65,337	66,826
Number of inactive members	9,011	9,031	8,997	8,847	8,692
Number of pensioners	47,724	48,913	49,692	50,389	51,067
Number of beneficiaries	4,894	5,077	5,281	5,431	5,606
Average monthly contributory member pension amount	\$ 3,458	\$ 3,632	\$ 3,807	\$ 3,971	\$ 4,150
Average monthly noncontributory member pension amount	\$ 1,813	\$ 1,861	\$ 1,909	\$ 1,960	\$ 2,011
Average monthly hybrid member pension amount	\$ 2,416	\$ 2,495	\$ 2,555	\$ 2,625	\$ 2,690
Average monthly beneficiary amount	\$ 1,668	\$ 1,713	\$ 1,771	\$ 1,817	\$ 1,871
Total actuarial value of assets (\$millions)	\$ 19,910	\$ 21,318	\$ 22,515	\$ 23,841	\$ 25,206
Unfunded actuarial accrued liability (\$millions)	\$ 14,229.4	\$ 13,504.9	\$ 13,709.7	\$ 14,008.5	\$ 14,410.2
Funding Period (in years) ⁽¹⁾	24	24	23	22	21
Item (Dollar amounts in millions)	Fiscal Year				
	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Employer contributions ⁽²⁾	\$ 1,281.6	\$ 1,242.1	\$ 1,274.2	\$ 1,396.3	\$ 1,479.6

⁽¹⁾ Beginning with the 2011 valuation, the funding period was determined using an open group projection. Prior valuations determined the remaining amortization based on the assumption that the amortization payment would remain constant as a percentage of pay.

⁽²⁾ Beginning July 1, 2019, the employer contribution rate was 36.0% for Police and Fire, 22.0% for All Other Employees.

Beginning July 1, 2020, the employer contribution rate was 41.0% for Police and Fire, 24.0% for All Other Employees.

TABLE 16
Summary of Benefit Provisions
(For Members Hired Prior to 7/1/2012)

	Noncontributory	Contributory	Hybrid
Employee Contributions	No employee contributions	7.8% of salary	6.0% of salary
Normal Retirement			
Eligibility	Age 62 and 10 years credited service; or Age 55 and 30 years credited service	Age 55 and 5 years credited service	Age 62 and 5 years credited service; or Age 55 and 30 years credited service
Benefit	1 ¼% of average final compensation times years of credited service (Average Final Compensation or AFC is an average of the highest salaries during any three years of credited service, excluding any salary paid in lieu of vacation or if ERS membership occurred prior to 1/1/71, AFC may be an average of the highest salaries during any five years of credited service including any salary paid in lieu of vacation.)	2% of average final compensation times years of credited service (Average Final Compensation or AFC is an average of the highest salaries during any three years of credited service, excluding any salary paid in lieu of vacation or if ERS membership occurred prior to 1/1/71, AFC may be an average of the highest salaries during any five years of credited service including any salary paid in lieu of vacation.)	2% of average final compensation times years of credited service, split formula for unconverted noncontributory service at 1 ¼% (Average Final Compensation or AFC is an average of the highest salaries during any three years of credited service, excluding any salary paid in lieu of vacation or if ERS membership occurred prior to 1/1/71, AFC may be an average of the highest salaries during any five years of credited service including any salary paid in lieu of vacation.)

TABLE 16 (CONTINUED)

	Noncontributory	Contributory	Hybrid
Early Retirement			
Eligibility	Age 55 and 20 years credited service	Any age and 25 years credited service	Age 55 with 20 years credited service
Benefit	Maximum allowance reduced 6% per year under age 62	Maximum allowance reduced 5% per year under age 55 plus 4% per year under age 50	Maximum allowance reduced 5% for each year under age 62
Deferred Vesting			
Eligibility	10 years credited service	5 years credited service and contributions left in ERS	5 years credited service and contributions left in ERS
Benefit	Accrued maximum allowance payable at age 65	Accrued maximum allowance payable at age 55	Accrued maximum allowance payable at age 62
Annuity Savings Account			
Interest	Not applicable	4.5% per annum on employee contributions and accrued interest	4.5% per annum on employee contributions and accrued interest
Eligibility	Not applicable	Requests refund and forfeits future retirement benefit	Requests refund and forfeits future retirement benefit
Benefit			
- Terminates with less than 5 years credited service	Not applicable	Return of member's contributions and accrued interest	Return of member's contributions and accrued interest
- Terminates with 5 or more years of credited service	Not applicable	Return of member's contributions and accrued interest	Return of member's Hybrid contributions and accrued interest, both times 150%. Return of non-Hybrid balance transfers and accrued interest.

TABLE 16 (CONTINUED)

	Noncontributory	Contributory	Hybrid
Ordinary Disability			
Eligibility	10 years credited service	10 years credited service	10 years credited service
Benefit	1 $\frac{1}{4}$ % of AFC times years of credited service, unreduced for age (Minimum is 12.5% of AFC)	1 $\frac{3}{4}$ % of AFC times years of credited service, unreduced for age (Minimum is 30% of AFC)	2% of AFC times years of credited service, unreduced for age, split formula for unconverted noncontributory service at 1 $\frac{1}{4}$ % (Minimum is 25% of AFC)
Service-Connected Disability			
Eligibility	Any age or credited service	Any age or credited service	Any age or credited service
Benefit	Accrued maximum allowance, but not less than 15% AFC. For accidents that occur on or after July 1, 2004, lifetime pension of 35% of AFC.	Totally disabled: lifetime pension of 66 $\frac{2}{3}$ % AFC plus annuity. Occupationally disabled: same benefit (66 $\frac{2}{3}$ % pension plus annuity) paid for 3 years and then pension is reduced to 33 $\frac{1}{3}$ % AFC if not totally disabled. For accidents on or after July 7, 1998, lifetime pension of 50% of AFC plus refund of member's contributions and accrued interest.	Lifetime pension of 35% of AFC plus refund of member's contributions and accrued interest.

TABLE 16 (CONTINUED)

	Noncontributory	Contributory	Hybrid
Ordinary Death			
Eligibility	Active employee at time of death with at least 10 years of credited service	Active employee at time of death with at least 1 year of service	Active employee at time of death with at least 5 years of service
Benefit	Surviving spouse/reciprocal beneficiary and dependent children receive a benefit equal to a percentage of member's accrued maximum allowance unreduced for age; or Option B (100% Joint and Survivor) benefit for surviving spouse if member was eligible for retirement at time of death and a percentage of member's accrued maximum allowance unreduced for age for the dependent children	Lump sum payment of member's contributions and accrued interest plus a percentage of the salary earned in the 12 months preceding death; or Option 3 (50% Joint and Survivor) benefit if member was not eligible for retirement at the time of death, credited with 10 years of service, and one beneficiary designated (benefit calculated using the ordinary disability retirement formula); or Option 2 (100% Joint and Survivor) benefit if member was eligible for retirement at the time of death and one beneficiary designated	Return of member's Hybrid contributions and accrued interest (both times 150%) plus return of non-Hybrid balance transfers and accrued interest; or Option 3 (50% Joint Survivor) lifetime benefit if credited with at least 10 years of service and one beneficiary designated; or Option 2 (100% Joint Survivor) lifetime monthly benefit if member was eligible for service retirement at time of death, and one beneficiary designated

TABLE 16 (CONTINUED)

	Noncontributory	Contributory	Hybrid
Service-Connected Death			
Eligibility	Any age or service	Any age or service	Any age or service
Benefit	<p>Surviving spouse/reciprocal beneficiary receives pension equal to 30% of AFC (until remarriage or re-entry into a new reciprocal beneficiary relationship); additional benefits payable to surviving dependent children (up to age 18)</p> <p>If there is no spouse/reciprocal beneficiary or dependent children, no benefit is payable.</p>	<p>Lump sum payment of member's contributions and accrued interest, plus pension of 50% AFC to surviving spouse/reciprocal beneficiary (until remarriage or re-entry into a new reciprocal beneficiary relationship);</p> <p>If there is no surviving spouse or reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents shall be eligible for a monthly benefit.</p> <p>If there is no spouse/reciprocal beneficiary or dependent children/parents, the ordinary death benefit shall be payable to the designated beneficiary.</p>	<p>Lump sum payment of member's contributions and accrued interest, plus pension of 50% AFC to surviving spouse/reciprocal beneficiary (until remarriage or re-entry into a new reciprocal beneficiary relationship);</p> <p>If there is no surviving spouse or reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents shall be eligible for a monthly benefit.</p> <p>If there is no spouse/reciprocal beneficiary or dependent children/parents, the ordinary death benefit shall be payable to the designated beneficiary.</p>

TABLE 16 (CONTINUED)

For members hired after June 30, 2011, the interest crediting rate on employee contributions and accrued interest is 2.0% per annum.

The plan provisions summarized above apply to teachers and most State and County employees. Special provisions applicable to other groups of employees are outlined below:

- A. Police officers, firefighters, investigators of the Department of the Prosecuting Attorney and the Attorney General, narcotic enforcement investigators, and public safety investigators contribute 12.2% of their monthly salary to ERS instead of 7.8%. These members may retire at age 55 with 5 years of credited service or at any age with 25 years of credited service and receive a retirement benefit of 2 ½% of average final compensation (AFC) for each year of such service up to a maximum of 80% AFC, provided the last 5 years of credited service in any of these occupations.
- B. Judges, elected officials, and legislative officers may retire at age 55 with at least 5 years of credited service, or at any age with at least 10 years of credited service and receive a pension of 3 ½% of AFC for each year of such service plus an annuity from their contributions allocable to the period of such service. This benefit cannot exceed 75% of the AFC. Judges hired after June 30, 1999 require 25 years of credited service in order to retire before age 55.
- C. Sewer workers in specified classifications, water safety officers, and emergency medical technicians (EMTs) may retire at any age if they are credited with 25 years of such service with the last 5 or more years in these occupations. (The 25-year feature is phased in through 7/1/2008 for EMTs.)
- D. Sewer workers in specified classifications, water safety officers, and emergency medical technicians (EMTs) that transfer to the Hybrid class contribute 9.75% of their monthly salary to ERS. These members may retire at age 62 with 5 years of credited service or at any age if they are credited with 25 years of such service with the last 5 or more years in these occupations.

TABLE 16 (CONTINUED)
Summary of Benefit Provisions
(For Members Hired After 6/30/2012)

	Contributory (for Police/Fire)	Contributory (for Judges/Elected Officers)	Hybrid
Employee Contributions	14.2% of base pay earnings	9.8% of base pay earnings	8.0% of base pay earnings
Normal Retirement Eligibility	Age 60 and 10 years credited service	Age 60 and 10 years credited service	Age 65 and 10 years credited service; or Age 60 and 30 years credited service
Benefit	2.25% of average final compensation times years of credited service. (Average final compensation or AFC is an average of the highest base pay earnings during any five years of credited service, excluding any salary paid in lieu of vacation.) Maximum is 80% of AFC.	3.0% of average final compensation times years of credited service (Average final compensation or AFC is an average of the highest base pay earnings during any five years of credited service, excluding any salary paid in lieu of vacation.) Maximum is 75% of AFC.	1.75% of average final compensation times years of credited service (Average final compensation or AFC is an average of the highest base pay earnings during any five years of credited service, excluding any salary paid in lieu of vacation.)

TABLE 16 (CONTINUED)

	Contributory (for Police/Fire)	Contributory (for Judges/Elected Officers)	Hybrid
Early Retirement			
Eligibility	Age 55 and 25 years credited service	Age 55 and 25 years credited service	Age 55 with 20 years credited service Sewer workers, water safety officers, and emergency medical technicians (EMTs) may retire with 25 years credited service.
Benefit	Maximum allowance reduced 6% per year under age 60	Any age with 10 years for elected officers Maximum allowance reduced 6% per year under age 60	Maximum allowance reduced 5% for each year under age 65
Deferred Vesting	10 years credited service and contributions left in ERS	10 years credited service and contributions left in ERS	10 years credited service and contributions left in ERS
Eligibility	Accrued maximum allowance payable at age 60	Accrued maximum allowance payable at age 60	Accrued maximum allowance payable at age 65
Annuity Savings Account			
Interest	2.0% per annum	2.0% per annum	2.0% per annum
Eligibility	Requests refund and forfeits future retirement benefit	Requests refund and forfeits future retirement benefit	Requests refund and forfeits future retirement benefit
Benefit	- Terminates with less than 10 years credited service - Terminates with 10 or more years of credited service	Return of member's contributions and accrued interest Return of member's contributions and accrued interest	Return of member's contributions and accrued interest Return of member's contributions and accrued interest, both times 120%

TABLE 16 (CONTINUED)

	Contributory (for Police/Fire)	Contributory (for Judges/Elected Officers)	Hybrid
Ordinary Disability			
Eligibility	10 years credited service	10 years credited service	10 years credited service
Benefit	1 $\frac{3}{4}$ % of AFC times years of credited service, unreduced for age (Minimum is 30% of AFC)	3.0% of AFC times years of credited service, unreduced for age (Minimum is 30% of AFC)	1 $\frac{3}{4}$ % of AFC times years of credited service, unreduced for age (Minimum is 25% of AFC)
Service-Connected Disability			
Eligibility	Any age or credited service	Any age or credited service	Any age or credited service
Benefit	Lifetime pension of 50% of AFC plus refund of member's contributions and accrued interest.	Lifetime pension of 50% of AFC plus refund of member's contributions and accrued interest.	Lifetime pension of 35% of AFC plus refund of member's contributions and accrued interest.

TABLE 16 (CONTINUED)

	Contributory (for Police/Fire)	Contributory (for Judges/Elected Officers)	Hybrid
Ordinary Death			
Eligibility	Active employee at time of death with at least 1 years of credited service	Active employee at time of death with at least 1 years of credited service	Active employee at time of death with at least 10 years of service
Benefit	<p>Lump sum payment of member's contributions and accrued interest plus a percentage of the salary earned in the 12 months preceding death; or</p> <p>Option 3 (50% Joint Survivor) lifetime benefit if credited with at least 10 years of service and one beneficiary designated; or</p> <p>Option 2 (100% Joint Survivor) lifetime monthly benefit if member was eligible for service retirement at time of death, and one beneficiary designated</p>	<p>Lump sum payment of member's contributions and accrued interest plus a percentage of the salary earned in the 12 months preceding death; or</p> <p>Option 3 (50% Joint Survivor) lifetime benefit if credited with at least 10 years of service and one beneficiary designated; or</p> <p>Option 2 (100% Joint Survivor) lifetime monthly benefit if member was eligible for service retirement at time of death, and one beneficiary designated</p>	<p>Return of member's Hybrid contributions and interest; or</p> <p>Option 3 (50% Joint Survivor) lifetime benefit if credited with at least 10 years of service and one beneficiary designated; or</p> <p>Option 2 (100% Joint Survivor) lifetime monthly benefit if member was eligible for service retirement at time of death, and one beneficiary designated</p>

TABLE 16 (CONTINUED)

	Contributory (for Police/Fire)	Contributory (for Judges/Elected Officers)	Hybrid
Service-Connected Death			
Eligibility	Any age or service	Any age or service	Any age or service
Benefit	Same for all members.	<p>Lump sum payment of member's contributions and interest, plus pension of 50% AFC to surviving spouse/reciprocal beneficiary (until remarriage or re-entry into a new reciprocal beneficiary relationship);</p> <p>If there is no surviving spouse or reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents shall be eligible for a monthly benefit.</p> <p>If there is no spouse/reciprocal beneficiary or dependent children/parents, the ordinary death benefit shall be payable to the designated beneficiary.</p>	

TABLE 16 (CONTINUED)

Post Retirement Benefit

Each retiree's original retirement allowance is increased by 1 ½% (if their membership date is after June 30, 2012) or 2 ½% (if their membership date is before July 1, 2012) on each July 1 beginning the calendar year after retirement. This cumulative benefit is not compounded.

Retirement Options

Contributory or Hybrid Member

Maximum Allowance: The member receives a lifetime maximum allowance and at death the difference between the value of the member's contributions at the time of retirement and the retirement allowance paid prior to death is paid to the designated beneficiary(ies) or estate.

Option One: The member receives a reduced lifetime allowance based on age and at death, the difference between the initial insurance reserve and the retirement allowance paid prior to death is paid to the designated beneficiary(ies) or estate.

Option Two (100% Joint and Survivor with Pop-Up): The member receives a reduced lifetime allowance based on ages of both the member and the sole beneficiary and at death of the member; the same allowance is paid to the designated beneficiary for life. Should the designated beneficiary predecease the retiree, another beneficiary cannot be named, the benefit will revert back to the Maximum Allowance, and all payments will cease at the retiree's death.

Option Three (50% Joint and Survivor with Pop-Up): This allowance is similar to Option Two. The member receives a reduced lifetime allowance which is higher than Option Two and is based on ages of both the member and the sole beneficiary; however, at death of the member one-half of the allowance is paid to the designated beneficiary for life. Like Option Two, should the designated beneficiary predecease the retiree, another beneficiary cannot be named, the benefit will revert back to the Maximum Allowance, and all payments will cease at the retiree's death.

Option Four: This option allows the member to devise an allowance that will provide a benefit according to the member's specifications. It requires certification by the Actuary and approval of the Board of Trustees. The following Option Four allowances have been approved:

Combination of Options Five and Maximum Allowance: The member receives a reduced lifetime allowance and is allowed to withdraw the pre-1987 nontaxable contribution, 50% of accumulated contributions, or 75% of accumulated contributions (Hybrid class members are not allowed the 75% option); at death, the difference between the value of the member's contributions at the time of retirement and the retirement allowance paid prior to death is paid to the designated beneficiary(ies) or estate.

Combination of Options Five and One: The member receives a reduced lifetime allowance and is allowed to withdraw the pre-1987 nontaxable contributions, 50% of accumulated contributions, or 75% of accumulated contributions (Hybrid class members are not allowed the 75% option); at death, the difference between the initial insurance reserve and the retirement allowance paid prior to death is paid to the designated beneficiary(ies) or estate.

TABLE 16 (CONTINUED)

Combination of Options Five and Two: The member receives a reduced lifetime allowance based on ages of both member and the sole beneficiary, and is allowed to withdraw the pre-1987 nontaxable contributions, 50% of accumulated contributions, or 75% of accumulated contributions (Hybrid class members are not allowed the 75% option); at death of the member, the same allowance is paid to the designated beneficiary for life. As in the case of Option Two, should the designated beneficiary predecease the retiree, another beneficiary cannot be named, the benefit will revert back to the Maximum Allowance (as adjusted for the contribution withdrawal), and all payments will cease at the retiree's death.

Combination of Options Five and Three: The member receives a reduced lifetime allowance based on ages of both member and the sole beneficiary, and is allowed to withdraw the pre-1987 nontaxable contributions, 50% of accumulated contributions, or 75% of accumulated contributions (Hybrid class members are not allowed the 75% option); at death of the member, one-half of the allowance is paid to the designated beneficiary for life. As in the case of Option Three, should the designated beneficiary predecease the retiree, another beneficiary cannot be named, the benefit will revert back to the Maximum Allowance (as adjusted for the contribution withdrawal), and all payments will cease at the retiree's death.

Option Five: The member receives a reduced lifetime allowance and is allowed to withdraw all accumulated contributions; at death, the retitant is entitled to the pension for the entire month that death occurs.

Option Four and Option Five are restricted to those members with at least ten years of credited service excluding unused sick leave credit.

Regardless of the option selected, should death occur during the first year of retirement, the designated beneficiary may elect to receive benefits as if death had occurred immediately prior to retirement in lieu of the death benefits described above.

Noncontributory Member

Maximum Allowance: The member receives a lifetime pension and at death, the retitant is entitled to the pension for the entire month that death occurs.

Option A (50% Joint and Survivor with Pop-Up): The member receives a reduced lifetime pension and at death of the member, one-half of the pension is paid to the sole designated beneficiary for life. Should the designated beneficiary predecease the retiree, another beneficiary cannot be named, the benefit will revert back to the Maximum Allowance, and all payments will cease at the retiree's death.

Option B (100% Joint and Survivor with Pop-up): The member receives a reduced lifetime pension and at death of the member, the same pension is paid to the sole designated beneficiary for life. Like Option A, should the designated beneficiary predecease the retiree, another beneficiary cannot be named, the benefit will revert back to the Maximum Allowance, and all payments will cease at the retiree's death.

Option C (Ten-Year Guarantee): The member receives a reduced lifetime pension. Should death occur within ten years of retirement, the same pension will be paid to the designated beneficiary for the balance of the ten-year period. Should the designated beneficiary predecease the retiree, another beneficiary can be named.

Regardless of the option selected, should death occur during the first year of retirement, the designated beneficiary may elect to receive benefits as if death had occurred immediately prior to retirement in lieu of the death benefits described above.

TABLE 17

Summary of Plan Changes

Act 65, effective July 1, 1999

Requires judges who enter or re-enter service after June 30, 1999 to be at least 55 years old and five years of service or have 25 years of service to retire.

Act 100, effective June 30, 1999

Uses actuarial investment earnings in excess of a ten percent (10%) actuarial investment yield rate to reduce the employer's contribution requirements by \$147.0 million and \$50.6 million for fiscal years ending June 30, 2000 and 2001, respectively.

Act 284, effective June 30, 2001

Provide an increase in pension benefits for current retirees with military service who retired prior to July 2, 1989. A retireant who rendered honorable active military service could be granted up to 4 years of military service credits based upon his/her years of credited service under ERS, not to exceed his/her actual years of military service. The years of military service credits granted are based on the following schedule:

- 0 years for retirants with less than 8 years of credited service
- Up to 2 years of retirants with 8 years or more of credited service
- Up to 3 years of retirants with 20 years or more of credited service
- Up to 4 years of retirants with 25 years or more of credited service

For each year of military service credits granted on the schedule above, the retireant will be provided a \$36.00 increase in his/her monthly pension or retirement allowance.

Act 199, effective June 30, 2003

Emergency Medical Technicians (EMTs) are allowed to retire with an unreduced benefit after 25 years of service regardless of age, of which the last five or more years prior to retirement must be in that capacity. This feature is phased in one year at a time, July 1, 2003 through June 30, 2008.

Act 177, effective July 1, 2004

This Act allows police officers with a permanent service-connected disability to retain the 2-1/2% benefit multiplier for each year of service as a police officer.

Act 181, effective July 1, 2004

This Act establishes fixed employer contribution rates as a percentage of compensation effective July 1, 2005. Employers will contribute 15.75% for their police officers and firefighters and 13.75% for other employees.

TABLE 17 (CONTINUED)

Act 183, effective July 1, 2004

This Act amends ERS's statutes to comply with the federal tax limits on compensation retroactive to July 1, 1996.

Act 56, effective December 1, 2004

This Act amends ERS's statutes to allow the automatic cost-of-living-adjustment to be reflected when determining actuarial equivalent optional forms of payment.

Act 256, effective July 5, 2007

Legislation was enacted to remove the statutory salary increase assumption from the statutes and to grant ERS's Board of Trustees the authority to set the salary increase assumption. As a result of this legislation, the Board has adopted effective with this valuation the salary increase assumption recommended by GRS as a result of the Experience Study performed in 2006.

Legislation was also enacted to increase the employer contribution rates to ERS. Effective July 1, 2008, the employer contribution rate for Police and Fire employees will increase from 15.75% to 19.70% and the rate for All Other employees will increase from 13.75% to 15.00%.

Act 163, effective June 23, 2011

Legislation was enacted that increased the future employer contribution rates to ERS. Employers of Police and Fire employees will contribute 22% of pay in FY 2013, 23% in FY 2014, 24% in FY 2015, and 25% in FY 2016 and beyond. Employers of All Other Employees will contribute 15.5% of pay in FY 2013, 16.0% in FY 2014, 16.5% in FY 2015, and 17.0% in FY 2016 and beyond.

TABLE 17 (CONTINUED)

Legislation was enacted that made numerous changes to the benefits and member contribution rates for employees hired after June 30, 2012. Key changes are shown below:

Benefit Provision	Police & Fire Employees	All Other Employees
Benefit Multiplier	2.25%	1.75%
Normal Retirement	Age 55 with 25 years of service, or age 60 with 10 years of service	Age 60 with 30 years of service, or age 65 with 10 years of service
Post-Retirement Increase	1.5%	1.5%
Hybrid Match	N/A	120%
Average Final Compensation	Highest 5 annual base salaries	Highest 5 annual base salaries
Eligibility for Deferred Benefit	10 years of service	10 years of service
Member Contribution Rate	14.20%	8.00%

Similar changes were also made to the benefits of Judges, Legislative Officers, etc.

Similar changes were also made to those employees in the All Other Employees group who are eligible to retire at 25 years of service including the addition of a minimum age requirement (55).

Finally, legislation was enacted that set the investment return assumption for the June 30, 2011 valuation at 7.75% (the rate recommended in the Experience Study presented to the Board in December of 2010). In addition, the legislation granted ERS's Board the authority to set this assumption for valuations after 2011.

Act 152, effective June 26, 2012

Legislation was enacted to eliminate most types of non-base pay from the definition of compensation for employees hired after June 30, 2012. For the impacted employees, non-base pay compensation will be excluded in determining both the contributions made by and on behalf of these employees and the benefits they will earn in the System.

Act 153, effective June 26, 2012

Legislation was enacted to require employers to pay additional contributions if a retiring employee, who was first employed prior to July 1, 2012 and who was last employed by the employer, has significant non-base pay increases included in their average final compensation. The additional contribution is equal to the actuarial present value of the additional benefits earned due to the "excessive" non-base pay increases.

TABLE 17 (CONTINUED)

Act 017, effective July 1, 2017

Legislation was enacted that increased the future employer contribution rates to ERS. Employers of Police and Fire employees will contribute 28% of pay in FY 2018, 31% in FY 2019, 36% in FY 2020, and 41% in FY 2021 and beyond. Employers of All Other Employees will contribute 18% of pay in FY 2018, 19% in FY 2019, 22% in FY 2020, and 24% in FY 2021 and beyond.

Act 192, effective June 30, 2024

Legislation was enacted by the 2024 Legislature that set the maximum funding period to 25 years for the June 30, 2024 valuation. Furthermore, the funding period will decrease by one year each year in the future until the maximum funding period is 20 years where it will remain for future years. If the maximum funding period is exceeded then the contribution rates may be increased to bring the funding period down to the maximum funding period.

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TABLE 18

Summary of Actuarial Methods and Assumptions

Basis for assumption setting: The actuarial assumptions were adopted by the Board on September 8, 2025. Rationale for the recommendations are in the most recent experience study dated August 5, 2025.

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The normal cost and actuarial accrued liability are determined using the Entry Age Actuarial Cost Method. The actuarial accrued liability is assigned to years prior to the valuation, and the normal cost is assigned to the year following the valuation. The remaining costs are assigned to future years. The normal cost and accrued liability are determined on an individual basis.

The normal cost is the level percentage of payroll contribution required to accumulate the needed funds to pay all expected benefits. This percentage of payroll is then applied to the total compensation for the prior year for all active members, and is then adjusted for the payroll growth assumption.

The actuarial accrued liability is the difference between the total present value of future benefits and the actuarial present value of future normal costs. The unfunded actuarial accrued liability (UAAL) is the excess of the actuarial accrued liability over the actuarial value of assets.

III. Funding of Unfunded Actuarial Accrued Liability

Since the State statutes governing the System establish the employee and employer contribution rates, the actuarial valuation determines the number of years required to amortize (or fund) the UAAL. The new tier of benefits for employees hired after June 30, 2012, results in a pattern of decreasing average normal costs for the plan for many years into the future. Since the contribution rates are fixed, the available contribution rate to amortize the UAAL increases over time as the NC% decreases. Hence, an open group projection of liabilities and assets is used to determine the length of time until the UAAL is eliminated. The open group projection assumed that the number of active members would remain static (i.e. each active employee who leaves employment due to termination, retirement, death or disability, would be replaced by exactly one new employee).

Because of this methodology for determining the funding period, any change in the unfunded actuarial accrued liability due to (i) actuarial gains and losses, (ii) changes in actuarial assumptions, or (iii) amendments, affects the funding period.

Please see Section V of this table for a description of the new entrant profile used in the open group projection.

TABLE 18 (CONTINUED)

IV. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a four-year phase-in of actual investment return in excess of/(less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original timeframe. The expected actuarial value of assets is calculated net of investment expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's actuarial value of assets, adjusted for contributions, benefits paid, and refunds.

V. New Entrant Profile

For the purposes of determining the funding period, an open group projection is used which replaces on a one-to-one basis each active member who leaves employment with an average new hire. The average new hire is determined based on a new entrant profile, which is created from the valuation data by determining the entry age and entry pay for anyone with seven or less years of service as of the valuation date. Each group of new hires' salaries is assumed to grow at the General Wage Inflation over the salaries of the previous year's group.

The new entrant profile for members assumed to be hired during the year following the valuation date for the Police and Fire Employees and the All Other Employees are shown in the table below.

New Entrant Profile for Police & Fire Employees		
Entry Age	# of Employees	Average Salary
15-19	4	\$63,590
20-24	311	73,109
25-29	410	71,658
30-34	288	71,234
35-39	126	73,111
40-44	45	71,782
45-49	20	72,607
50-54	7	98,965
55-59	10	84,513
60+	0	0
Total	1,221	72,333

It is assumed that 90% of new hires will be male.

TABLE 18 (CONTINUED)

New Entrant Profile for All Other Employees		
Entry Age	# of Employees	Average Salary
15-19	29	\$45,599
20-24	1,899	54,645
25-29	3,564	57,420
30-34	3,089	59,921
35-39	2,644	61,384
40-44	2,377	61,928
45-49	1,948	60,178
50-54	1,618	61,936
55-59	1,308	60,788
60-64	686	62,895
65+	101	62,361
Total	19,263	59,738

It is assumed that 40% of new hires will be male and Teachers replace Teachers and Non-Teachers replace Non-Teachers

VI. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 7.00% per year, compounded annually, composed of an assumed 2.50% inflation rate and a 4.50% net real rate of return (net of investment expenses).
2. General Wage Inflation: (used to index each year's group of new entrants in the open group projection) 3.50% per annum for Police and Fire Employees and 3.00% per annum for General Employees and Teachers.

TABLE 18 (CONTINUED)

3. Salary increase rates: As shown below

Years of Service	General Employees		Teachers	
	Service-Related Component	Total Rate Including 2.50% Inflation Component and 1.25% Productivity Component	Service-Related Component	Total Rate Including 2.50% Inflation Component and 1.35% Productivity Component
1	3.00%	6.75%	3.00%	6.85%
2	3.00%	6.75%	3.00%	6.85%
3	2.00%	5.75%	2.00%	5.85%
4	1.50%	5.25%	1.50%	5.35%
5	1.50%	5.25%	1.50%	5.35%
6	1.25%	5.00%	1.25%	5.10%
7	1.25%	5.00%	1.25%	5.10%
8	1.00%	4.75%	1.00%	4.85%
9	1.00%	4.75%	1.00%	4.85%
10	1.00%	4.75%	1.00%	4.85%
11	0.75%	4.50%	0.75%	4.60%
12	0.75%	4.50%	0.75%	4.60%
13	0.50%	4.25%	0.50%	4.35%
14	0.50%	4.25%	0.50%	4.35%
15	0.50%	4.25%	0.50%	4.35%
16	0.50%	4.25%	0.50%	4.35%
17	0.50%	4.25%	0.50%	4.35%
18	0.50%	4.25%	0.50%	4.35%
19	0.50%	4.25%	0.50%	4.35%
20	0.25%	4.00%	0.25%	4.10%
21	0.25%	4.00%	0.25%	4.10%
22	0.25%	4.00%	0.25%	4.10%
23	0.25%	4.00%	0.25%	4.10%
24	0.25%	4.00%	0.25%	4.10%
25 or more	0.00%	3.75%	0.00%	3.85%

TABLE 18 (CONTINUED)

3. Salary increase rates (continued):

Years of Service	Service-Related Component	Police & Fire	
		Total Annual Rate of Increase Including 2.50% Inflation	Component and 2.50% General Increase Rate
1-10	0.85%		5.85%
11-20	0.85%		5.85%
21-30	0.85%		5.85%
31 or more	0.00%		5.00%

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period between the valuation date and the first anniversary of the valuation date is equal to the reported pay for the prior year, annualized if necessary, and then increased by the salary increase assumption. To adjust the pays received as of March 31st to the June 30th valuation date, the reported pay for each member is increased by 1%.

TABLE 18 (CONTINUED)

B. Demographic Assumptions

1. Mortality rates:

Active Members: Multiples of the Pub-2016, Employee Tables for active employees based on the occupation of the member as follows:

Type	General Employees		Teachers		Police & Fire	
	Male & Female		Male & Female		Male & Female	
Ordinary	95%		95%		80%	
% of Ordinary	41%		52%		24%	
Choosing Annuity						
Duty Related	5%		5%		20%	

Healthy Retirees: The 2022 Public Retirees of Hawaii mortality tables. The rates are projected on a fully generational basis by Scale MP from the year 2022 (with immediate convergence) and with multiplier and setbacks based on plan and group experience. The following are sample rates of the base table with the corresponding multipliers:

Healthy Annuitant Mortality Rates Before Projection (Multiplier Added)

Age	General Employees		Teachers		Police & Fire	
	Male	Female	Male	Female	Male	Female
50	0.2094%	0.1276%	0.1698%	0.0951%	0.2344%	0.1130%
55	0.3215%	0.1687%	0.2883%	0.1596%	0.3391%	0.1633%
60	0.5570%	0.3095%	0.4672%	0.2467%	0.6090%	0.2799%
65	0.8041%	0.4488%	0.7256%	0.4063%	0.8386%	0.4283%
70	1.2621%	0.7066%	1.0762%	0.6015%	1.3768%	0.6565%
75	2.0700%	1.0964%	1.7879%	0.9358%	2.2442%	1.0121%
80	3.5996%	2.1275%	3.0429%	1.6565%	3.9844%	1.8863%
85	6.5891%	4.1569%	5.5564%	3.2698%	7.2903%	3.6977%
90	11.9340%	8.3647%	10.1056%	6.5007%	13.1174%	7.3991%
Multiplier	102%	98%	97%	101%	100%	100%
Setback	0	-1	1	1	-1	0

TABLE 18 (CONTINUED)

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection:

Gender	Year of Retirement				
	2025	2030	2035	2040	2045
	General Retirees				
Male	22.8	23.2	23.5	23.9	24.2
Female	26.3	26.6	26.9	27.2	27.5
Teachers					
Male	24.1	24.5	24.9	25.2	25.5
Female	28.0	28.3	28.6	28.9	29.2
Police & Fire					
Male	21.8	22.1	22.4	22.8	23.1
Female	27.1	27.4	27.7	28.0	28.3

Disabled retirees: Base Table for healthy retiree's occupation, set forward 3 years, generational projection using the MP projection table from the year 2022 with immediate convergence. Minimum mortality rate of 3.5% for males and 2.5% for females.

- Disability rates – The assumed total disability rates at select ages are multiples of the client specific table that follows:

Age	Male & Female
25	0.000%
30	0.001%
35	0.008%
40	0.026%
45	0.064%
50	0.146%
55	0.198%
60	0.212%

Note: The disability rates project the percentage of employees at each age that is assumed to become disabled before retiring. Multiples of the rates above are assumed to be ordinary disability or accidental disability, and varies by employee group as follows:

Type	General Employees	Teachers	Police & Fire
	Male & Female	Male & Female	Male & Female
Ordinary	190%	90%	50%
Accidental	65%	15%	120%

TABLE 18 (CONTINUED)

3. Termination Rates - Same male and female rates, based solely on the member's service. Rates reflect terminations for causes other than death, disability or retirement. Employees eligible for retirement are assumed to have no probability of termination. Sample rates are shown below:

Expected Terminations per 1000 Lives (Male & Female)

Years of Service	General Employees	Teachers	Police & Fire
0	180.7	0.0	154.0
1	145.0	199.9	57.6
2	116.5	166.9	45.4
3	93.8	136.1	38.3
4	76.3	109.3	33.2
5	62.9	87.2	29.3
6	52.9	70.1	26.1
7	45.6	57.9	23.4
8	40.4	49.9	21.0
9	36.5	44.9	18.9
10	33.5	41.4	17.2
11	30.9	36.2	11.7
12	28.5	32.7	11.0
13	23.1	29.4	10.3
14	20.2	26.4	9.7
15	18.1	23.4	8.2
16	16.4	20.8	7.6
17	15.1	18.3	7.0
18	14.0	16.0	6.4
19	13.1	13.7	5.8
20	11.9	11.7	5.2
21	11.1	10.0	4.6
22	10.2	8.4	4.0
23	9.3	7.0	3.4
24	8.3	5.8	2.8
25	7.1	4.8	0.0
26	6.0	4.0	0.0
27	4.7	3.3	0.0
28	3.5	2.8	0.0
29	2.4	2.6	0.0
30 and more	0.0	0.0	0.0

TABLE 18 (CONTINUED)

4. Retirement Rates – separate male and female rates, based on age. Sample rates are shown below:

Contributory Members

Expected Retirements per 100 Lives										
Age	General Employees				Teachers				Police & Fire	
	Unreduced		Reduced		Unreduced		Reduced		Unreduced	Male & Female
	Age	Male	Female	Male	Female	Male	Female	Male	Female	Male & Female
45		0	0	0	0	0	0	0	0	17.5
46		0	0	0	0	0	0	0	0	17.5
47		0	0	0	0	0	0	0	0	17.5
48		0	0	0	0	0	0	0	0	17.5
49		0	0	0	0	0	0	0	0	17.5
50		0	0	0	0	0	0	1	0	20.0
51		0	0	2	1	0	0	1	1	20.0
52		0	0	2	1	0	0	1	1	20.0
53		0	0	2	1	0	0	2	2	20.0
54		0	0	3	2	0	0	3	3	20.0
55		25	20			20	18			22.0
56		25	20			15	16			22.0
57		16	13			15	16			22.0
58		16	13			15	16			24.0
59		13	13			15	16			27.0
60		13	15			14	18			30.0
61		13	15			14	18			30.0
62		28	25			14	25			30.0
63		20	20			14	20			30.0
64		20	20			14	15			30.0
65		20	20			20	25			100.0
66		18	20			15	25			100.0
67		18	20			15	20			100.0
68		18	20			15	20			100.0
69		18	20			15	20			100.0
70		20	20			15	20			100.0
71		20	20			15	20			100.0
72		20	20			15	20			100.0
73		20	20			15	20			100.0
74		20	20			15	20			100.0
75		100	100			100	100			100.0

For members hired after June 30, 2012 the retirement rates for members once they reach unreduced retirement eligibility are increased 10% (multiplicative) for each year the member is beyond the age the member would have been eligible under the provisions for members hired prior to June 30, 2012.

TABLE 18 (CONTINUED)

Noncontributory Members

Expected Retirements per 100 Lives											
Age	General Employees								Teachers		
	Unreduced		25 & Out		Reduced		Unreduced		Reduced		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
55	20	12	15	11	2	2	12	13	1	2	
56	18	12	23	11	2	2	12	7	1	2	
57	13	12	18	11	2	2	12	8	1	2	
58	10	12	15	11	2	2	12	10	2	2	
59	10	12	15	11	2	2	12	20	3	3	
60	10	14	15	14	4	4	12	11	5	5	
61	11	18	16	18	4	4	12	16	7	5	
62	20	20	25	20			16	25			
63	20	20	25	20			12	20			
64	12	20	17	20			10	15			
65	14	20	19	20			20	25			
66	20	20	25	20			15	25			
67	20	20	25	20			15	25			
68	20	20	25	20			15	25			
69	20	20	25	20			15	25			
70	20	20	25	20			15	25			
71	20	20	25	20			15	25			
72	20	20	25	20			15	25			
73	20	20	25	20			15	25			
74	20	20	25	20			15	25			
75	100	100	100	100			100	100			

Note: Retirement rates for the 25&out group prior to age 55 are 15% for male and 11% for female.

TABLE 18 (CONTINUED)

Hybrid Members

Expected Retirements per 100 Lives

Age	General Employees				Teachers			
	Unreduced		Reduced		Unreduced		Reduced	
	Male	Female	Male	Female	Male	Female	Male	Female
55	20	18	3	3	20	18	2	2
56	15	13	3	3	15	12	2	2
57	15	13	3	3	15	12	2	2
58	15	13	3	3	15	14	2	2
59	18	13	3	3	15	14	3	3
60	20	13	5	5	15	14	3	5
61	16	15	5	5	15	18	3	10
62	20	20			15	25		
63	16	20			15	20		
64	16	20			15	20		
65	20	20			20	25		
66	20	20			15	25		
67	20	20			15	25		
68	20	20			15	25		
69	20	20			15	25		
70	20	20			15	25		
71	20	20			15	25		
72	20	20			15	25		
73	20	20			15	25		
74	20	20			15	25		
75	100	100			100	100		

Note: For the 25&out group with membership dates before July 1, 2012, the retirement rates prior to age 55 are 10% for both male and female.

For members hired after June 30, 2012 the retirement rates for members once they reach unreduced retirement eligibility are increased 10% (multiplicative) for each year the member is beyond the age the member would have been eligible under the Hybrid provisions for members hired prior to June 30, 2012.

TABLE 18 (CONTINUED)

C. Other Assumptions

1. Projected payroll for contributions: The aggregate projected payroll for the fiscal year following the valuation date is calculated taking the lesser of the actual payroll paid during the previous fiscal year and the current annualized pay on the valuation date and increasing this number by the payroll growth rate.
2. Age difference: Male members are assumed to be four years older than their spouses, and female members are assumed to be four years younger than their spouses.
3. Marriage Assumption: While not implicitly used in the valuation, 100% of active members are assumed to be married when setting other benefit election and eligibility assumptions.
4. Percent electing annuity on death for contributory participants (when eligible): All of the spouses of married participants who die after becoming eligible for a retirement benefit are assumed to elect an annuity or a refund, whichever is more valuable at time of participant's death.
5. Payment Option: Future healthy retirees are assumed to choose the life only payment option. 50% of future disabled retirees are assumed to choose the 100% Joint and Survivor option.
6. Percent electing deferred termination benefit: vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
7. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt when eligible for early retirement.
8. Administrative expenses: Administrative expenses are assumed to be 0.40% of active member payroll.
9. Reemployment, purchase of service, transfers: No recognition is made of (i) future member reimbursements upon reemployment, (ii) future purchase of additional service, or (iii) special transfer provisions.
10. Sick Leave: It is assumed that all members will have their benefit service increased by sick leave and the following loads will be applied by group:

General Employees	3.25%
Teachers	3.85%
Police and Fire	5.10%

TABLE 18 (CONTINUED)

11. COLA delay: It is assumed that the first COLA will be received 9 months after retirement. Teachers are assumed to receive COLA 12 months after retirement,
12. There will be no recoveries once disabled.
13. No surviving spouse will remarry and there will be no children's benefit.
14. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
15. Decrement timing: Retirements and terminations of Teachers are assumed to occur at the beginning of the year. All other decrements are assumed to occur mid-year.
16. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
17. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
18. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
19. Benefit Service: All members are assumed to accrue 1 year of service each year. Exact fractional service is used to determine the amount of benefit payable.
20. Police officers, firefighters, investigators of the Department of the Prosecuting Attorney and the Attorney General, narcotic enforcement investigators, and public safety investigators hired prior to June 30, 2012 are not assumed to retire at age 55 unless they have 10 years of service.

VII. Participant Data

Participant data was supplied in electronic files for (i) active members, (ii) inactive vested members, who are entitled to a future deferred benefit, (iii) members and beneficiaries receiving benefits.

Salary supplied for the current year was based on the actual pensionable earnings for the 12-month period ending the March preceding the valuation date. This pay was increased by 1% to reflect the three-month difference from March to June. For members with less than one year of service, the base pay rate provided in the data was used

TABLE 18 (CONTINUED)

VIII. Dates of Adoption of Assumptions and Methods

The actuarial assumptions and methods were adopted by the Board of Trustees on September 8, 2025 as recommended by Gabriel, Roeder, Smith & Company (GRS).

IX. Changes in Assumptions and Methods since Prior Valuation

The actuarial assumptions have been revised since the prior valuation to reflect the most recent experience study. Please see our Experience Study report dated August 5, 2025 for a more extensive discussion of the actuarial assumptions and the rationale for the current assumptions.

X. Temporary Hazard Pay (THP)

The census data included THP for those members who received at least one THP payment in the 12-month period ending March 31, 2025. A separate data file was received that identified the amount of the THP by individual. Since the THP payments are attributable to pay for fiscal years 2020-2022, we estimated the impact on the current final average earnings for these individuals and incorporated that into the actuarial valuation. For projecting future contributory payroll, the THP payments were excluded.

THP payments were made to many individuals after the end of the fiscal year (June 30, 2025). Since the contributions associated with these payments were included as accrued contributions in the financial statements of the System, we included an offsetting liability for these accrued contributions. The actual impact on the liabilities will be reflected when the census data reflects the payments. Note, this also includes the impact on current retirees who received THP payments. The impact on the retirees' liabilities will be included when the benefits are adjusted for the payments.

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TABLE 19**Distribution of Active Members by Age and by Years of Service****All Employees****As of 06/30/2025**

Attained Age	Years of Credited Service													Total Count & Avg. Comp.											
	0		1		2		3		4		5-9		10-14		15-19		20-24		25-29		30-34		35 & Over		
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.			
Under 25	626	425	132	40	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,231		
	\$52,705	\$54,161	\$55,802	\$55,212	\$53,684	\$56,604	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$53,632		
25-29	964	1,066	887	557	317	461	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,254		
	\$56,766	\$54,954	\$59,302	\$61,193	\$63,792	\$65,018	\$75,020	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,847		
30-34	748	851	685	583	457	2,217	298	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,839		
	\$60,067	\$58,160	\$59,622	\$60,763	\$64,968	\$68,096	\$73,638	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$63,931		
35-39	614	700	594	456	336	2,509	1,835	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,276		
	\$61,293	\$58,946	\$62,019	\$64,144	\$69,533	\$70,055	\$82,187	\$97,636	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$71,136		
40-44	526	603	488	425	298	2,055	1,949	1,705	255	0	0	0	0	0	0	0	0	0	0	0	0	0	8,304		
	\$61,365	\$61,368	\$62,109	\$66,188	\$64,338	\$70,437	\$83,928	\$97,236	\$103,121	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$77,951		
45-49	490	487	433	356	262	1,732	1,564	1,869	1,793	193	0	0	0	0	0	0	0	0	0	0	0	0	9,179		
	\$61,353	\$59,591	\$63,233	\$65,354	\$64,412	\$69,220	\$82,613	\$95,923	\$105,942	\$113,043	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$83,533		
50-54	358	394	374	278	209	1,413	1,231	1,442	1,847	1,497	210	1	0	0	0	0	0	0	0	0	0	0	9,254		
	\$63,863	\$63,660	\$63,738	\$67,590	\$63,470	\$68,786	\$79,627	\$92,525	\$103,195	\$113,096	\$98,896	\$74,693	\$87,878	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
55-59	248	317	301	241	157	1,110	1,033	1,200	1,448	1,383	1,269	158	8,865												
	\$62,545	\$64,068	\$64,707	\$60,784	\$65,453	\$66,919	\$76,150	\$86,649	\$95,948	\$107,765	\$105,102	\$95,121	\$87,255	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
60-64	142	217	204	185	110	965	868	1,087	1,070	761	831	648	7,088												
	\$64,616	\$65,681	\$64,951	\$60,363	\$68,030	\$66,898	\$75,020	\$78,586	\$84,684	\$95,327	\$99,317	\$102,596	\$82,195	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
65 & Over	93	124	101	102	86	812	717	722	799	538	554	888	5,536												
	\$70,788	\$69,459	\$68,154	\$64,122	\$80,095	\$69,939	\$75,819	\$80,632	\$84,847	\$90,035	\$100,832	\$111,087	\$85,913	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total	4,809	5,184	4,199	3,223	2,238	13,276	9,497	8,257	7,212	4,372	2,864	1,695	66,826												
	\$59,629	\$59,151	\$61,630	\$63,143	\$65,933	\$68,867	\$80,220	\$90,681	\$97,641	\$105,477	\$102,143	\$106,331	\$78,805	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

TABLE 20**Distribution of Active Members by Age and by Years of Service****Noncontributory Members, All****As of 06/30/2025**

Attained Age	Years of Credited Service													Total Count & Avg. Comp.											
	0		1		2		3		4		5-9		10-14		15-19		20-24		25-29		30-34		35 & Over		
	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.			
Under 25	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0		
25-29	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0		
30-34	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0		
35-39	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2		
40-44	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$77,959	\$0	\$0	0	\$0	0	\$0	0	\$0	\$0	\$77,959	212		
45-49	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	5	191	661	67	0	0	0	0	\$0	\$0	\$0	\$0	924		
50-54	0	\$0	0	\$0	0	\$0	0	\$0	1	\$46,650	\$86,064	\$94,501	\$85,844	\$0	0	0	0	\$0	\$0	\$0	\$0	\$91,870			
55-59	0	\$0	0	\$0	0	\$0	0	\$0	\$59,329	\$0	\$85,680	\$91,331	\$98,808	\$90,722	89	0	0	0	0	0	\$0	\$93,534			
60-64	0	\$0	0	\$0	0	\$0	0	\$0	0	\$41,199	\$80,729	\$86,881	\$97,183	\$96,798	\$90,552	\$80	0	0	0	0	0	\$92,353			
65 & Over	0	\$0	0	\$0	0	\$0	0	\$0	0	\$72,582	\$67,119	\$80,725	\$89,495	\$94,841	\$95,807	\$87,746	276	1,635	378	382	382	1,382			
Total	0	\$0	0	\$0	0	\$0	1	13	725	\$59,329	\$59,790	\$81,631	\$87,246	\$93,541	\$94,853	\$100,865	7,392	\$0	\$0	\$0	\$0	\$90,805			

TABLE 21

Distribution of Active Members by Age and by Years of Service
Noncontributory Members, General Employees
As of 06/30/2025

Attained Age	Years of Credited Service													Total Count & Avg. Comp.
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over		
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.		
Under 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25-29	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30-34	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35-39	0	0	0	0	0	0	0	2	0	0	0	0	0	2
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$77,959	\$0	\$0	\$0	\$0	\$0	\$77,959
40-44	0	0	0	0	0	0	0	53	68	0	0	0	0	121
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$83,917	\$74,215	\$0	\$0	\$0	\$0	\$78,464
45-49	0	0	0	0	0	0	5	103	328	46	0	0	0	482
	\$0	\$0	\$0	\$0	\$0	\$0	\$46,650	\$79,832	\$87,564	\$79,452	\$0	\$0	\$0	\$84,713
50-54	0	0	0	0	0	1	0	94	419	251	73	0	0	838
	\$0	\$0	\$0	\$0	\$0	\$0	\$59,329	\$0	\$80,441	\$83,925	\$89,323	\$85,618	\$0	\$85,269
55-59	0	0	0	0	0	0	2	98	442	346	296	69	1,253	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$41,199	\$73,157	\$80,558	\$93,157	\$90,103	\$88,573	\$86,092
60-64	0	0	0	0	0	0	3	83	404	282	266	203	1,241	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$72,582	\$64,414	\$72,608	\$81,971	\$88,359	\$91,781	\$80,700
65 & Over	0	0	0	0	0	0	2	72	282	221	215	288	1,080	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$83,531	\$67,508	\$69,300	\$75,499	\$83,752	\$98,963	\$81,263
Total	0	0	0	0	0	1	12	505	1,943	1,146	850	560	5,017	
	\$0	\$0	\$0	\$0	\$0	\$59,329	\$58,371	\$74,780	\$78,958	\$85,609	\$87,566	\$95,079	\$83,261	

TABLE 22

Distribution of Active Members by Age and by Years of Service
Noncontributory Members, Teachers
As of 06/30/2025

Attained Age	Years of Credited Service													Total Count & Avg. Comp.											
	0		1		2		3		4		5-9		10-14		15-19		20-24		25-29		30-34		35 & Over		
	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	
Under 25	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
25-29	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
30-34	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
35-39	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
40-44	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$97,452	\$99,906	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$98,342	
45-49	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$93,359	\$101,333	\$99,844	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$99,675
50-54	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$101,568	\$103,221	\$107,529	\$114,007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$105,454
55-59	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$119,786	\$106,425	\$103,978	\$107,396	\$102,965	\$102,965	\$106,240	\$106,240	\$106,240	\$106,240	\$106,240	\$106,240
60-64	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$85,834	\$112,564	\$112,065	\$110,234	\$107,004	\$107,004	\$109,938	\$109,938	\$109,938	\$109,938	\$109,938	\$109,938
65 & Over	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	1	12	66	61	68	94	112	73	394	302	\$0	\$0	\$0	\$0	
Total	0	\$0	0	\$0	0	\$0	0	\$0	0	\$76,814	\$91,375	\$109,614	\$114,165	\$121,614	\$130,321	\$111,026	\$119,068	\$106,740	\$2,375	\$0	\$0	\$0	\$0	\$0	

TABLE 23**Distribution of Active Members by Age and by Years of Service****Contributory Members, All****As of 06/30/2025**

Attained Age	Years of Credited Service													Total Count & Avg. Comp.											
	0		1		2		3		4		5-9		10-14		15-19		20-24		25-29		30-34		35 & Over		
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.			
Under 25	35	46	20	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108		
	\$72,415	\$74,113	\$74,242	\$72,015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73,450		
25-29	45	87	68	75	57	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	434		
	\$72,811	\$72,201	\$73,796	\$75,289	\$77,974	\$78,749	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75,346		
30-34	36	50	47	50	70	297	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	605		
	\$70,037	\$70,494	\$72,258	\$73,354	\$76,496	\$79,892	\$88,588	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$77,794		
35-39	18	25	25	32	31	324	303	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	819		
	\$71,051	\$68,420	\$72,519	\$72,037	\$76,007	\$80,209	\$102,494	\$138,444	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$91,517		
40-44	10	15	16	16	11	149	248	278	65	0	0	0	0	0	0	0	0	0	0	0	0	0	808		
	\$72,032	\$83,439	\$73,130	\$73,784	\$76,612	\$80,042	\$105,263	\$139,116	\$152,373	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$113,583		
45-49	2	7	7	7	7	56	152	274	298	50	0	0	0	0	0	0	0	0	0	0	0	0	860		
	\$79,827	\$87,867	\$75,355	\$112,230	\$74,748	\$84,859	\$105,727	\$140,964	\$157,847	\$173,305	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$136,933		
50-54	3	3	3	3	5	22	64	144	306	248	15	0	0	0	0	0	0	0	0	0	0	0	816		
	\$76,033	\$59,170	\$123,082	\$118,311	\$106,927	\$108,475	\$108,961	\$142,278	\$153,298	\$175,091	\$200,765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$153,009		
55-59	2	4	3	0	2	7	25	52	159	163	55	4	4	4	4	4	4	4	4	4	4	4	476		
	\$74,247	\$95,430	\$81,063	\$0	\$166,401	\$91,414	\$102,648	\$155,236	\$154,534	\$174,151	\$178,867	\$174,392	\$174,392	\$174,392	\$174,392	\$174,392	\$174,392	\$174,392	\$174,392	\$174,392	\$174,392	\$174,392	\$159,406		
60-64	0	1	2	2	3	8	12	12	20	32	26	22	22	22	22	22	22	22	22	22	22	22	140		
	\$0	\$241,495	\$148,567	\$137,678	\$112,673	\$136,404	\$128,131	\$145,110	\$154,840	\$171,024	\$172,326	\$149,815	\$149,815	\$149,815	\$149,815	\$149,815	\$149,815	\$149,815	\$149,815	\$149,815	\$149,815	\$149,815	\$156,200		
65 & Over	1	0	0	1	1	13	9	10	10	14	14	83	83	83	83	83	83	83	83	83	83	83	156		
	\$74,902	\$0	\$0	\$81,102	\$353,500	\$130,062	\$125,478	\$170,909	\$150,339	\$142,043	\$142,756	\$120,741	\$120,741	\$120,741	\$120,741	\$120,741	\$120,741	\$120,741	\$120,741	\$120,741	\$120,741	\$120,741	\$131,736		
Total	152	238	191	193	187	978	868	831	858	507	110	109	109	109	109	109	109	109	109	109	109	5,222			
	\$71,992	\$73,921	\$74,970	\$76,690	\$80,643	\$82,040	\$104,044	\$141,702	\$155,039	\$173,443	\$175,711	\$128,578	\$128,578	\$128,578	\$128,578	\$128,578	\$128,578	\$128,578	\$128,578	\$128,578	\$128,578	\$128,578	\$117,835		

TABLE 24

Distribution of Active Members by Age and by Years of Service
Contributory Members, General Employees
As of 06/30/2025

Attained Age	Years of Credited Service													Total Count & Avg. Comp.											
	0		1		2		3		4		5-9		10-14		15-19		20-24		25-29		30-34		35 & Over		
	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	
Under 25	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	\$0	\$54,738	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$54,738		
25-29	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
	\$0	\$0	\$0	\$0	\$0	\$74,902	\$70,137	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$71,328		
30-34	0	0	2	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10		
	\$0	\$0	\$74,902	\$0	\$68,491	\$62,852	\$77,549	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$68,423		
35-39	0	0	3	3	1	4	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19		
	\$0	\$0	\$78,120	\$72,192	\$74,902	\$88,520	\$94,019	\$82,887	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$85,313		
40-44	5	1	1	1	0	11	6	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	30		
	\$70,764	\$218,685	\$74,902	\$74,902	\$0	\$93,934	\$81,651	\$106,692	\$98,270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$92,351		
45-49	1	2	1	2	0	7	6	9	10	0	0	0	0	0	0	0	0	0	0	0	0	0	38		
	\$74,902	\$141,126	\$74,902	\$206,759	\$0	\$116,586	\$143,845	\$117,643	\$127,141	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$127,762		
50-54	1	0	1	0	3	5	4	5	18	9	1	0	0	0	0	0	0	0	0	0	0	0	47		
	\$67,436	\$0	\$206,759	\$0	\$127,891	\$185,581	\$109,243	\$127,110	\$123,209	\$120,993	\$171,622	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130,566	
55-59	0	2	2	0	2	2	5	8	24	12	4	1	0	0	0	0	0	0	0	0	0	0	62		
	\$0	\$116,998	\$82,371	\$0	\$166,401	\$76,919	\$102,348	\$184,740	\$132,346	\$173,697	\$138,455	\$105,084	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$141,849	
60-64	0	1	1	1	1	5	7	5	4	4	4	7	10	7	10	7	10	10	10	10	10	10	46		
	\$0	\$241,495	\$218,685	\$206,759	\$59,146	\$169,681	\$154,951	\$126,718	\$230,090	\$181,848	\$117,311	\$89,052	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$144,613	
65 & Over	1	0	0	1	1	11	8	7	6	8	5	5	5	4	4	4	5	5	5	5	5	5	58		
	\$74,902	\$0	\$0	\$81,102	\$353,500	\$144,366	\$131,935	\$195,302	\$164,543	\$132,575	\$138,709	\$105,587	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$126,279	
Total	8	7	11	8	12	52	44	39	63	33	17	17	17	17	17	17	17	17	17	17	17	17	363		
	\$71,382	\$147,309	\$102,196	\$124,107	\$123,700	\$118,912	\$117,671	\$145,708	\$137,641	\$150,342	\$131,774	\$103,184	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$124,627	

TABLE 25

Distribution of Active Members by Age and by Years of Service
Contributory Members, Teachers
As of 06/30/2025

Attained Age	Years of Credited Service													Total											
	0		1		2		3		4		5-9		10-14		15-19		20-24		25-29		30-34		35 & Over		
	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	
Under 25	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
25-29	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
30-34	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
35-39	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
40-44	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
45-49	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	1	2	0	0	0	0	0	0	0	3	
50-54	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$83,632	\$114,522	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$104,226	
55-59	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	\$0	\$0	0	1	3	0	0	0	\$0	\$0	\$0	\$105,880	
60-64	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	\$0	\$0	0	0	0	0	0	0	0	0	0	\$117,351	
65 & Over	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$12,985	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130,201
Total	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$12,985	\$0	\$83,632	\$114,522	\$151,453	\$113,318	\$135,470	\$124,713						

TABLE 26

Distribution of Active Members by Age and by Years of Service
Contributory Members, Police and Firefighters
As of 06/30/2025

Attained Age	Years of Credited Service													Total							
	0		1		2		3		4		5-9		10-14								
	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.							
Under 25	35	\$72,415	45	\$74,544	20	\$74,242	7	\$72,015	0	#DIV/0!	0	\$0	0	\$0	0	0	0	0	107		
25-29	45	\$72,811	87	\$72,201	68	\$73,796	75	\$75,289	56	99	0	\$0	0	\$0	0	0	0	0	430		
30-34	36	\$70,037	50	\$70,494	45	\$72,141	50	\$73,354	67	293	54	\$0	0	\$0	0	0	0	0	595		
35-39	18	\$71,051	25	\$68,420	22	\$71,755	29	\$72,021	30	320	296	\$80,125	\$88,792	\$0	\$0	\$0	\$0	\$0	800		
40-44	5	\$73,301	14	\$73,779	15	\$73,012	15	\$73,709	11	138	242	\$76,612	\$78,935	\$102,694	\$139,370	\$0	\$0	\$0	778		
45-49	1	\$84,751	5	\$66,564	6	\$75,431	5	\$74,418	7	49	146	\$74,748	\$80,327	\$104,161	\$141,976	\$159,224	\$173,305	\$0	\$0	\$114,402	
50-54	2	\$80,331	3	\$59,170	2	\$81,244	3	\$118,311	2	17	60	\$75,481	\$85,796	\$108,942	\$142,824	\$155,179	\$177,427	\$202,847	\$0	\$0	\$154,444
55-59	2	\$74,247	2	\$73,862	1	\$78,448	0	\$0	0	5	20	\$0	\$97,212	\$102,723	\$149,871	\$158,479	\$174,503	\$186,276	\$197,495	\$162,471	
60-64	0	\$0	0	\$0	1	\$78,448	1	\$68,597	1	2	3	\$0	\$80,941	\$90,582	\$158,247	\$136,028	\$169,478	\$192,594	\$200,451	\$161,871	
65 & Over	0	\$0	0	\$0	0	\$0	0	\$0	0	1	1	\$0	\$89,803	\$73,821	\$113,991	\$129,034	\$141,262	\$161,291	\$186,540	\$152,040	
Total	144	\$72,026	231	\$71,697	180	\$73,306	185	\$74,640	175	925	824	\$80,042	\$103,316	\$141,578	\$156,523	\$175,202	\$188,599	\$194,532	\$117,285	4,831	

TABLE 27

Distribution of Active Members by Age and by Years of Service
Hybrid Members, All
As of 06/30/2025

Attained Age	Years of Credited Service													Total											
	0		1		2		3		4		5-9		10-14		15-19		20-24		25-29		30-34		35 & Over		
	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	
Under 25	591	\$51,538	379	\$51,740	112	\$52,509	33	\$51,648	6	\$53,684	2	\$56,604	0	\$0	0	\$0	0	\$0	0	\$0	0	0	0	1,123	
																								\$51,726	
25-29	919	\$55,980	979	\$53,421	819	\$58,099	482	\$58,999	260	\$60,683	359	\$61,117	2	\$75,020	0	\$0	0	\$0	0	\$0	0	0	0	3,820	
																								\$56,972	
30-34	712	\$59,563	801	\$57,390	638	\$58,691	533	\$59,582	387	\$62,883	1,920	\$66,271	243	\$70,255	0	\$0	0	\$0	0	\$0	0	0	0	5,234	
																								\$62,329	
35-39	596	\$60,998	675	\$58,595	569	\$61,558	424	\$63,549	305	\$68,875	2,185	\$68,549	1,532	\$78,171	\$83,139	\$0	0	\$0	\$0	0	\$0	0	0	6,455	
																								\$68,548	
40-44	516	\$61,158	588	\$60,805	472	\$61,735	409	\$65,890	287	\$63,868	1,906	\$69,686	1,701	\$80,818	\$88,915	\$90,430	\$0	\$0	\$0	\$0	0	0	0	7,284	
																								\$73,735	
45-49	488	\$61,277	480	\$59,178	426	\$63,034	349	\$64,414	255	\$64,128	1,676	\$68,697	1,407	\$80,244	\$88,474	\$96,464	\$97,375	\$0	\$0	0	0	0	0	0	7,395
																								\$76,281	
50-54	355	\$63,760	391	\$63,694	371	\$63,259	275	\$67,037	204	\$62,405	1,390	\$68,164	1,167	\$78,018	\$87,146	\$94,759	\$102,217	\$91,344	\$74,693	\$0	\$0	1	7,019		
																								\$79,163	
55-59	246	\$62,450	313	\$63,667	298	\$64,542	241	\$60,784	155	\$64,150	1,103	\$66,763	1,006	\$75,561	\$83,861	\$90,250	\$100,305	\$105,039	\$105,776	\$0	\$0	74	6,571		
																								\$80,618	
60-64	142	\$64,616	216	\$64,867	202	\$64,123	183	\$59,518	107	\$66,778	957	\$66,317	853	\$74,282	\$78,884	\$85,796	\$94,676	\$98,834	\$104,981	\$0	\$0	423	5,313		
																								\$78,536	
65 & Over	92	\$70,744	124	\$69,459	101	\$68,154	101	\$63,954	85	\$76,878	799	\$68,961	705	\$75,162	\$80,493	\$89,597	\$94,218	\$107,338	\$113,172	\$0	\$0	423	3,998		
																								\$82,894	
Total	4,657	\$59,225	4,946	\$58,440	4,008	\$60,994	3,030	\$62,280	2,051	\$64,592	12,297	\$67,820	8,616	\$77,851	\$85,333	\$92,086	\$99,193	\$102,732	\$108,228	\$0	\$0	848	54,212		
																								\$73,409	

TABLE 28

Distribution of Active Members by Age and by Years of Service
Hybrid Members, General Employees
As of 06/30/2025

Attained Age	Years of Credited Service													Total											
	0		1		2		3		4		5-9		10-14		15-19		20-24		25-29		30-34		35 & Over		
	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	
Under 25	396	\$49,527	288	\$50,858	105	\$51,943	33	\$51,648	6	\$53,684	\$56,604	\$0	0	\$0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	830	
25-29	633	\$55,607	701	\$52,789	522	\$57,966	292	\$58,924	141	\$58,978	\$57,608	\$75,020	2	\$0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2,524	
30-34	511	\$56,879	609	\$56,082	501	\$57,413	393	\$59,582	236	\$61,592	\$63,859	\$66,087	1,201	160	0	0	0	0	0	0	0	0	0	3,611	
35-39	413	\$58,735	516	\$57,391	442	\$60,436	329	\$62,267	213	\$69,473	\$66,081	\$75,808	1,549	891	101	0	0	0	0	0	0	0	0	4,454	
40-44	367	\$59,845	454	\$58,688	357	\$59,933	318	\$65,806	208	\$61,694	\$66,605	\$78,629	1,420	1,082	684	60	0	0	0	0	0	0	\$0	4,950	
45-49	363	\$59,460	355	\$56,673	318	\$59,668	265	\$61,935	199	\$60,939	\$65,167	\$76,568	1,275	994	903	390	49	0	0	0	0	\$0	\$0	5,111	
50-54	271	\$63,042	323	\$63,366	298	\$62,135	214	\$66,410	159	\$61,237	\$64,498	\$73,581	1,080	870	806	536	317	76	1	0	0	\$0	\$0	4,951	
55-59	199	\$61,759	261	\$62,381	255	\$63,255	210	\$60,912	125	\$63,400	\$63,816	\$71,024	888	784	784	511	406	403	61	0	0	\$0	\$0	4,887	
60-64	123	\$61,759	188	\$62,381	182	\$63,255	161	\$60,912	90	\$63,400	\$63,816	\$71,024	810	691	791	413	245	319	232	0	0	0	0	4,245	
65 & Over	74	\$63,357	100	\$64,803	84	\$63,332	74	\$57,439	65,017	\$62,525	\$76,647	\$63,285	670	585	490	344	175	185	285	3,142	0	0	0	0	
Total	3,350	\$71,925	3,795	\$67,405	3,064	\$68,434	2,289	\$62,525	1,453	\$76,647	\$66,443	\$71,679	9,128	810	72,656	6,059	4,559	579	1,192	983	579	\$101,205	\$105,130	\$77,039	
		\$57,962		\$57,406		\$59,882		\$61,611		\$63,503		\$64,895		\$74,169		\$79,917		\$85,136		\$91,348		\$98,282		\$101,754	\$69,531

TABLE 29

Distribution of Active Members by Age and by Years of Service
Hybrid Members, Teachers
As of 06/30/2025

Attained Age	Years of Credited Service													Total											
	0		1		2		3		4		5-9		10-14		15-19		20-24		25-29		30-34		35 & Over		
	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	Count &	Avg. Comp.	
Under 25	195	\$55,621	91	\$54,531	7	\$61,003	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	0	0	293	
																								\$55,411	
25-29	286	\$56,806	278	\$55,016	297	\$58,333	190	\$59,116	119	\$62,703	126	\$67,605	0	\$0	0	\$0	0	\$0	0	\$0	0	0	0	1,296	
																								\$58,702	
30-34	201	\$66,385	192	\$61,542	137	\$63,365	140	\$59,580	151	\$64,900	719	\$70,300	83	\$78,289	0	\$0	0	\$0	0	\$0	0	0	0	1,623	
																								\$67,175	
35-39	183	\$66,106	159	\$62,503	127	\$65,462	95	\$67,988	92	\$67,491	636	\$74,561	641	\$81,455	\$91,095	\$0	\$0	\$0	\$0	\$0	\$0	0	0	2,001	
																								\$74,386	
40-44	149	\$64,392	134	\$67,979	115	\$67,331	91	\$66,187	79	\$69,591	486	\$78,689	619	\$84,644	\$92,365	\$97,901	\$0	\$0	\$0	\$0	\$0	\$0	0	0	2,334
																								\$81,328	
45-49	125	\$66,554	125	\$66,292	108	\$72,946	84	\$72,233	56	\$75,462	401	\$79,920	413	\$89,090	\$95,129	\$102,018	\$103,799	\$0	\$0	\$0	\$0	\$0	\$0	0	2,284
																								\$87,293	
50-54	84	\$66,075	68	\$65,252	73	\$67,847	61	\$69,235	45	\$66,530	310	\$80,937	297	\$91,014	\$98,702	\$105,075	\$107,971	\$107,971	\$109,821	\$0	\$0	0	0	2,068	
																								\$92,843	
55-59	47	\$65,372	52	\$70,125	43	\$72,178	31	\$59,919	30	\$67,277	215	\$78,937	222	\$91,585	\$101,103	\$107,389	\$110,627	\$108,752	\$111,932	\$114,381	\$114,381	\$114,381	\$114,381	\$96,746	
																								\$98,138	
60-64	19	\$72,768	28	\$65,296	20	\$71,328	22	\$74,732	17	\$76,104	147	\$83,026	162	\$92,951	\$101,081	\$105,709	\$109,395	\$109,401	\$109,401	\$109,401	\$109,401	\$109,401	\$109,401	856	
																								\$104,383	
65 & Over	18	\$65,889	24	\$78,018	17	\$66,769	27	\$67,868	9	\$78,831	129	\$82,035	120	\$92,142	\$108,321	\$114,155	\$122,130	\$123,096	\$129,780	\$129,780	\$129,780	\$129,780	\$129,780	\$104,383	
																								\$15,507	
Total	1,307	\$62,463	1,151	\$61,852	944	\$64,604	741	\$64,345	598	\$76,240	3,169	\$76,246	2,557	\$86,577	\$96,861	\$104,947	\$109,905	\$110,862	\$122,162	\$122,162	\$122,162	\$122,162	\$83,089		

TABLE 30
Summary of Pensions in Force by Type of Retirement

Employee Group	Contributory		Noncontributory		Hybrid	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
All Employees	15,473	\$ 4,150	18,241	\$ 2,011	17,353	\$ 2,690
	Service		Service		Service	
Total	15,191	\$ 4,189	17,351	\$ 2,053	16,745	\$ 2,725
General Employees - male	2,640	3,594	5,601	2,084	4,962	2,805
General Employees - female	4,180	2,621	7,057	1,607	7,438	2,343
Teachers - male	874	4,225	1,435	2,848	1,253	3,628
Teachers - female	3,207	3,907	3,258	2,615	3,092	3,149
Police and Firefighters	4,290	6,285	-	-	-	-
	Ordinary Disability		Ordinary Disability		Ordinary Disability	
Total	99	\$ 1,298	662	\$ 1,195	417	\$ 1,768
General Employees - male	29	1,182	297	1,212	177	1,606
General Employees - female	27	971	281	1,029	153	1,663
Teachers - male	4	1,844	32	1,832	20	2,592
Teachers - female	13	1,774	52	1,597	67	2,189
Police and Firefighters	26	1,446	-	-	-	-
	Accidental Disability		Accidental Disability		Accidental Disability	
Total	183	\$ 2,454	228	\$ 1,235	191	\$ 1,620
General Employees - male	56	2,027	120	1,304	91	1,623
General Employees - female	31	1,754	101	1,128	86	1,549
Teachers - male	-	-	1	1,358	2	1,802
Teachers - female	4	4,234	6	1,643	12	2,082
Police and Firefighters	92	2,873	-	-	-	-

TABLE 31
Summary of Pensions in Force by Age and Type

General Employees

Age	Type of Pension			
	Total	Service	Ordinary	Accidental
			Disability	Disability
Total	33,327	31,878	964	485
Contributory				
Total	6,963	6,820	56	87
30-39	-	-	-	-
40-44	2	2	-	-
45-49	4	4	-	-
50-54	11	9	-	2
55-59	25	24	1	-
60-64	145	136	1	8
65-69	470	454	6	10
70-74	942	921	12	9
75-79	1,211	1,191	7	13
80-84	1,305	1,278	8	19
85-89	1,179	1,157	10	12
90-94	1,052	1,036	6	10
95-99	506	498	5	3
100 & over	111	110	-	1
Noncontributory				
Total	13,457	12,658	578	221
30-39	-	-	-	-
40-44	-	-	-	-
45-49	3	1	1	1
50-54	31	8	15	8
55-59	310	252	45	13
60-64	933	822	86	25
65-69	2,352	2,177	114	61
70-74	3,015	2,825	136	54
75-79	3,042	2,918	99	25
80-84	2,355	2,261	68	26
85-89	1,029	1,010	13	6
90-94	313	312	1	-
95-99	69	67	-	2
100 & over	5	5	-	-
Hybrid				
Total	12,907	12,400	330	177
30-39	5	-	-	5
40-44	4	-	2	2
45-49	17	1	10	6
50-54	23	2	14	7
55-59	384	328	42	14
60-64	1,639	1,511	90	38
65-69	3,516	3,396	82	38
70-74	4,014	3,909	62	43
75-79	2,487	2,451	22	14
80-84	688	675	4	9
85-89	117	114	2	1
90-94	11	11	-	-
95-99	2	2	-	-
100 & over	-	-	-	-

TABLE 32**Summary of Pensions in Force by Age and Type****Teachers**

Age	Type of Pension			
	Total	Service	Ordinary	Accidental
			Disability	Disability
Total	13,332	13,119	188	25
Contributory				
Total	4,102	4,081	17	4
30-39	-	-	-	-
40-44	-	-	-	-
45-49	-	-	-	-
50-54	-	-	-	-
55-59	1	1	-	-
60-64	14	14	-	-
65-69	120	119	1	-
70-74	311	310	1	-
75-79	881	873	7	1
80-84	1,019	1,015	3	1
85-89	861	857	4	-
90-94	653	652	-	1
95-99	207	205	1	1
100 & over	35	35	-	-
Noncontributory				
Total	4,784	4,693	84	7
30-39	-	-	-	-
40-44	-	-	-	-
45-49	-	-	-	-
50-54	2	-	2	-
55-59	87	74	13	-
60-64	276	262	13	1
65-69	509	493	15	1
70-74	833	814	15	4
75-79	1,403	1,387	16	-
80-84	1,123	1,113	9	1
85-89	439	438	1	-
90-94	92	92	-	-
95-99	19	19	-	-
100 & over	1	1	-	-
Hybrid				
Total	4,446	4,345	87	14
30-39	-	-	-	-
40-44	1	-	1	-
45-49	3	-	3	-
50-54	11	-	10	1
55-59	159	141	17	1
60-64	607	588	14	5
65-69	980	956	19	5
70-74	1,326	1,308	17	1
75-79	1,004	997	6	1
80-84	292	292	-	-
85-89	52	52	-	-
90-94	11	11	-	-
95-99	-	-	-	-
100 & over	-	-	-	-

TABLE 33**Summary of Pensions in Force by Age and Type****Police and Firefighters**

Age	Type of Pension			
	Total	Service	Ordinary Disability	Accidental Disability
Total	4,408	4,290	26	92
30-39	-	-	-	-
40-44	3	-	-	3
45-49	33	29	2	2
50-54	250	243	1	6
55-59	681	666	6	9
60-64	776	759	4	13
65-69	716	704	1	11
70-74	660	643	4	13
75-79	658	639	2	17
80-84	400	382	4	14
85-89	170	166	1	3
90-94	50	49	1	-
95-99	9	8	-	1
100 & over	2	2	-	-

TABLE 34
Noncontributory Service Pensions in Force
by Years of Service

Years of Service	Total		General Employees		Teachers	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	17,351	\$ 2,053	12,658	\$ 1,818	4,693	\$ 2,686
Less than 5	1	1,548	1	1,548	-	-
5-9	10	775	7	806	3	703
10-14	2,891	642	2,299	610	592	769
15-19	2,411	1,084	1,861	1,010	550	1,333
20-24	2,687	1,449	2,093	1,336	594	1,847
25-29	2,434	2,056	1,869	1,892	565	2,599
30-34	4,298	2,864	2,786	2,636	1,512	3,285
35 and over	2,619	3,792	1,742	3,470	877	4,430

TABLE 35

Noncontributory Service Pensions in Force
by Years Since Retirement

Years Since Retirement	Total		General Employees		Teachers	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	17,351	\$ 2,053	12,658	\$ 1,818	4,693	\$ 2,686
Less than 5	3,641	2,073	2,868	1,900	773	2,716
5-9	3,786	1,870	2,950	1,738	836	2,335
10-14	3,097	1,851	2,274	1,657	823	2,387
15-19	3,000	2,140	2,182	1,864	818	2,873
20-24	2,486	2,294	1,559	1,902	927	2,954
25-29	782	2,162	504	1,757	278	2,898
30-34	537	2,614	309	2,368	228	2,948
35 and over	22	1,811	12	1,242	10	2,494

TABLE 36-1
Contributory Service Pensions in Force
by Years of Service

Years of Service	Total		General Employees		Teachers		Police and Firefighters	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	15,191	\$ 4,189	6,820	\$ 2,998	4,081	\$ 3,975	4,290	\$ 6,285
Less than 5	6	1,200	3	774	2	839	1	3,200
5-9	322	556	232	643	76	270	14	658
10-14	664	1,154	503	1,160	91	864	70	1,491
15-19	913	1,859	689	1,750	124	1,578	100	2,961
20-24	1,418	2,451	953	2,078	272	2,424	193	4,329
25-29	5,187	4,515	1,634	2,877	1,012	3,379	2,541	6,022
30-34	4,637	4,976	1,630	3,842	1,786	4,266	1,221	7,529
35 and over	2,044	5,386	1,176	4,729	718	5,889	150	8,125

TABLE 36-2
Hybrid Service Pensions in Force
by Years of Service

Years of Service	Total		General Employees		Teachers	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	16,745	\$ 2,725	12,400	\$ 2,528	4,345	\$ 3,287
Less than 5	2	2,769	-	-	2	2,769
5-9	1,256	792	989	789	267	801
10-14	2,502	1,149	2,046	1,100	456	1,370
15-19	2,450	1,705	1,910	1,636	540	1,949
20-24	2,232	2,127	1,618	1,981	614	2,511
25-29	2,163	2,926	1,555	2,730	608	3,427
30-34	3,882	3,886	2,709	3,760	1,173	4,177
35 and over	2,258	5,056	1,573	4,804	685	5,634

TABLE 37-1
Contributory Service Pensions in Force
by Years Since Retirement

Years Since Retirement	Total		General Employees		Teachers		Police and Firefighters	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	15,191	\$ 4,189	6,820	\$ 2,998	4,081	\$ 3,975	4,290	\$ 6,285
Less than 5	1,159	6,997	229	5,015	49	6,212	881	7,556
5-9	1,451	6,653	422	4,968	137	5,674	892	7,601
10-14	1,590	5,238	690	3,858	254	5,474	646	6,619
15-19	2,171	4,400	1,119	3,398	517	4,802	535	6,108
20-24	2,684	3,820	1,253	2,998	897	4,336	534	4,879
25-29	1,760	3,011	941	2,296	513	3,459	306	4,459
30-34	2,857	3,218	1,359	2,554	1,127	3,641	371	4,362
35-39	1,140	2,242	573	1,744	469	2,644	98	3,223
40-44	327	1,898	204	1,570	101	2,323	22	2,989
45 and over	52	1,226	30	910	17	1,503	5	2,188

TABLE 37-2
Hybrid Service Pensions in Force
by Years Since Retirement

Years Since Retirement	Total		General Employees		Teachers	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	16,745	\$ 2,725	12,400	\$ 2,528	4,345	\$ 3,287
Less than 5	5,839	2,799	4,496	2,594	1,343	3,486
5-9	5,565	2,681	4,180	2,467	1,385	3,325
10-14	3,741	2,634	2,593	2,455	1,148	3,037
15-19	1,600	2,823	1,131	2,661	469	3,216

TABLE 38**Pensions in Force by Payment Option****General Employees**

Type of Option	Total		Service		Ordinary Disability		Accidental Disability		Other	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	33,327	\$ 2,304	31,878	\$ 2,347	964	\$ 1,295	485	\$ 1,483	-	\$ -
Contributory										
Total	6,963	\$ 2,969	6,820	\$ 2,998	56	\$ 1,080	87	\$ 1,930	-	\$ -
Maximum	1,069	3,176	1,052	3,200	8	1,558	9	1,787	-	-
Option 1	352	2,425	333	2,490	11	1,182	8	1,416	-	-
Option 2	581	3,692	562	3,747	4	2,091	15	2,064	-	-
Option 3	306	4,136	303	4,160	2	1,243	1	2,796	-	-
Option 4	3,108	3,114	3,055	3,139	20	949	33	2,065	-	-
Option 5	1,547	2,157	1,515	2,174	11	471	21	1,837	-	-
Noncontributory										
Total	13,457	\$ 1,778	12,658	\$ 1,818	578	\$ 1,123	221	\$ 1,223	-	\$ -
Maximum	6,753	1,753	6,431	1,783	225	1,103	97	1,240	-	-
Option A	2,833	1,880	2,708	1,910	82	1,251	43	1,195	-	-
Option B	3,136	1,753	2,826	1,822	241	1,093	69	1,230	-	-
Option C	735	1,729	693	1,763	30	1,167	12	1,152	-	-
Hybrid										
Total	12,907	\$ 2,492	12,400	\$ 2,528	330	\$ 1,632	177	\$ 1,587	-	\$ -
Maximum	4,615	2,459	4,471	2,486	81	1,676	63	1,540	-	-
Option 1	856	2,304	831	2,319	18	1,705	7	1,961	-	-
Option 2	2,816	2,584	2,642	2,649	109	1,623	65	1,556	-	-
Option 3	1,722	2,994	1,673	3,033	30	1,678	19	1,634	-	-
Option 4	1,742	2,425	1,675	2,457	57	1,569	10	1,893	-	-
Option 5	1,156	1,896	1,108	1,911	35	1,585	13	1,471	-	-

TABLE 39**Pensions in Force by Payment Option****Teachers**

Type of Option	Total		Service		Ordinary Disability		Accidental Disability		Other	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	13,332	\$ 3,266	13,119	\$ 3,286	188	\$ 1,971	25	\$ 2,270	-	\$ -
Contributory										
Total	4,102	\$ 3,966	4,081	\$ 3,975	17	\$ 1,791	4	\$ 4,234	-	\$ -
Maximum	670	4,347	663	4,367	6	2,048	1	5,164	-	-
Option 1	163	3,630	162	3,641	1	1,786	-	-	-	-
Option 2	152	4,047	152	4,047	-	-	-	-	-	-
Option 3	135	4,899	134	4,908	1	3,671	-	-	-	-
Option 4	1,783	4,313	1,775	4,322	6	1,804	2	3,227	-	-
Option 5	1,199	3,169	1,195	3,174	3	624	1	5,320	-	-
Noncontributory										
Total	4,784	\$ 2,667	4,693	\$ 2,686	84	\$ 1,687	7	\$ 1,602	-	\$ -
Maximum	2,917	2,718	2,871	2,734	40	1,707	6	1,643	-	-
Option A	841	2,798	831	2,809	9	1,920	1	1,358	-	-
Option B	792	2,382	759	2,418	33	1,553	-	-	-	-
Option C	234	2,531	232	2,532	2	2,429	-	-	-	-
Hybrid										
Total	4,446	\$ 3,263	4,345	\$ 3,287	87	\$ 2,282	14	\$ 2,042	-	\$ -
Maximum	1,774	3,169	1,732	3,192	35	2,264	7	1,958	-	-
Option 1	231	3,129	225	3,146	6	2,487	-	-	-	-
Option 2	915	3,262	888	3,283	21	2,710	6	2,080	-	-
Option 3	615	3,700	606	3,722	8	2,177	1	2,399	-	-
Option 4	498	3,377	485	3,419	13	1,805	-	-	-	-
Option 5	413	2,961	409	2,974	4	1,640	-	-	-	-

TABLE 40**Pensions in Force by Payment Option****Police and Firefighters**

Type of Option	Total		Service		Ordinary Disability		Accidental Disability		Other	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	4,408	\$ 6,185	4,290	\$ 6,285	26	\$ 1,446	92	\$ 2,873	-	\$ -
Maximum	237	6,920	223	7,182	-	-	14	2,752	-	-
Option 1	59	5,910	50	6,263	1	2,958	8	4,077	-	-
Option 2	387	6,794	367	7,007	8	1,993	12	3,493	-	-
Option 3	183	7,742	178	7,876	2	1,487	3	3,917	-	-
Option 4	2,666	6,504	2,638	6,546	7	1,305	21	2,988	-	-
Option 5	876	4,439	834	4,563	8	824	34	2,258	-	-

TABLE 41**Pensions in Force by Payment Option****General Employees - New Retirees**

Type of Option	Total		Service		Ordinary Disability		Accidental Disability		Other	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	1,532	\$ 2,253	1,475	\$ 2,286	33	\$ 1,484	24	\$ 1,283	-	\$ -
Contributory										
Total	28	\$ 4,163	28	\$ 4,163	-	\$ -	-	\$ -	-	\$ -
Maximum	4	3,078	4	3,078	-	-	-	-	-	-
Option 1	-	-	-	-	-	-	-	-	-	-
Option 2	7	4,830	7	4,830	-	-	-	-	-	-
Option 3	2	4,901	2	4,901	-	-	-	-	-	-
Option 4	13	4,138	13	4,138	-	-	-	-	-	-
Option 5	2	3,426	2	3,426	-	-	-	-	-	-
Noncontributory										
Total	555	\$ 1,888	536	\$ 1,903	9	\$ 1,351	10	\$ 1,548	-	\$ -
Maximum	256	1,786	252	1,795	1	1,286	3	1,241	-	-
Option A	119	2,052	113	2,073	2	1,698	4	1,641	-	-
Option B	147	1,950	139	1,988	6	1,247	2	1,457	-	-
Option C	33	1,808	32	1,793	-	-	1	2,287	-	-
Hybrid										
Total	949	\$ 2,410	911	\$ 2,453	24	\$ 1,534	14	\$ 1,094	-	\$ -
Maximum	337	2,494	326	2,543	6	982	5	1,146	-	-
Option 1	58	2,219	55	2,262	3	1,412	-	-	-	-
Option 2	185	2,495	171	2,552	8	2,098	6	1,397	-	-
Option 3	101	2,968	99	3,007	1	869	1	1,205	-	-
Option 4	147	2,333	143	2,356	2	1,916	2	1,120	-	-
Option 5	121	1,779	117	1,796	4	1,301	-	-	-	-

TABLE 42**Pensions in Force by Payment Option****Teachers - New Retirees**

Type of Option	Total		Service		Ordinary Disability		Accidental Disability		Other	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	465	\$ 3,215	456	\$ 3,228	9	\$ 2,534	-	\$ -	-	\$ -
Contributory										
Total	6	\$ 6,625	6	\$ 6,625	-	\$ -	-	\$ -	-	\$ -
Maximum	1	6,298	1	6,298	-	-	-	-	-	-
Option 1	-	-	-	-	-	-	-	-	-	-
Option 2	1	5,818	1	5,818	-	-	-	-	-	-
Option 3	-	-	-	-	-	-	-	-	-	-
Option 4	2	9,934	2	9,934	-	-	-	-	-	-
Option 5	2	3,881	2	3,881	-	-	-	-	-	-
Noncontributory										
Total	162	\$ 2,597	159	\$ 2,614	3	\$ 1,723	-	\$ -	-	\$ -
Maximum	81	2,538	81	2,538	-	-	-	-	-	-
Option A	32	2,821	31	2,864	1	1,502	-	-	-	-
Option B	40	2,566	38	2,605	2	1,833	-	-	-	-
Option C	9	2,469	9	2,469	-	-	-	-	-	-
Hybrid										
Total	297	\$ 3,483	291	\$ 3,494	6	\$ 2,939	-	\$ -	-	\$ -
Maximum	101	3,346	98	3,357	3	2,967	-	-	-	-
Option 1	22	3,178	21	3,135	1	4,069	-	-	-	-
Option 2	63	3,808	61	3,856	2	2,332	-	-	-	-
Option 3	31	3,819	31	3,819	-	-	-	-	-	-
Option 4	44	3,393	44	3,393	-	-	-	-	-	-
Option 5	36	3,306	36	3,306	-	-	-	-	-	-

TABLE 43**Pensions in Force by Payment Option****Police and Firefighters - New Retirees**

Type of Option	Total		Service		Ordinary Disability		Accidental Disability		Other	
	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension	Number	Average Monthly Pension
Total	189	\$ 6,892	187	\$ 6,922	-	\$ -	2	\$ 4,080	-	\$ -
Maximum	12	7,719	12	7,719	-	-	-	-	-	-
Option 1	3	6,010	3	6,010	-	-	-	-	-	-
Option 2	27	7,183	27	7,183	-	-	-	-	-	-
Option 3	15	6,782	14	6,911	-	-	1	4,977	-	-
Option 4	103	6,991	102	7,028	-	-	1	3,183	-	-
Option 5	29	6,079	29	6,079	-	-	-	-	-	-

SECTION O – DEFINITION OF ACTUARIAL TERMS

1. *Actuarial Accrued Liability* – for benefits payable in the future to present members, it will equal the present value of benefits payable in the future to them less the present value of future normal costs.
2. *Actuarial Assumptions* – assumptions as to future experience under ERS. Current actuarial assumptions are detailed in Table 18 of the current annual valuation report. Assumptions include future fund earnings rate, rates of future salary increases, and rates of death (both before and after retirement), disability, retirement, and withdrawal.
3. *Actuarial Gain or Actuarial Loss* - a measure of the difference between actual experience and assumed experience of ERS. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, actuarial liabilities emerge which may be the same as forecasted, or they may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., ERS's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.
4. *Actuarial Liabilities* - the actuarially determined present value of future benefits to be provided by ERS. There are separate actuarially determined present values for retired members and non-retired members (either active or inactive). When applied to active members, it takes into account benefits which will be earned through future service and future salary increases.
5. *Actuarial Value of Present Assets* - the value of present ERS assets for valuation purposes. This value is calculated under a four-year phase-in of the excess (shortfall) between expected and actual income return.
6. *Actuarially Determined* - values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.
7. *Decrements* - those types of activities by members of ERS which cause them no longer to be members, i.e., death, retirement, disability, and withdrawal. It is a general term referring to any or all of these membership-terminating events.
8. *Defined Benefits* - in a retirement plan, benefits which are defined by a specific formula applied to specific member compensation and/or specific years of service. The amount of the benefit is not a function of contributions or actual earnings on those contributions.
9. *Defined Contributions* - in a retirement plan, periodic contributions to the plan which are defined as a specific percent of compensation.

10. *Experience Study* - a periodic review and analysis of the actual experience of ERS which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.
11. *Funding Period* - the number of years in the future that will be required to fund (i.e., pay off or eliminate) the unfunded actuarial accrued liability, based on the actuarial assumptions and assuming no future actuarial gains or losses.
12. *Future Benefits* - benefits specified in the law which will become payable at some time in the future when the member satisfies the requirement to receive such benefits.
13. *Future Contributions* - contributions to be made by the member or the employers in the future.
14. *Normal Cost* - the actuarial cost to fund the benefits provided by ERS were the funding to begin at date of hire.
15. *Present Value* - the actuarially determined lump sum value as of the valuation date of a series of payments to be made in the future, where the lump sum value is equal to the sum of the discounted value of each future payment. The discounted value of each payment is the product of (a) the amount of the payment, (b) the probability that the payment will be made (based on the current actuarial assumptions as to future experience), and (c) the time value of money (based on the current assumed interest rate).
16. *Unfunded Actuarial Accrued Liability* - that portion of the actuarial accrued liability (including the present value of benefits presently being paid to retired members) that exceeds the value of current assets.
17. *Covered Payroll* - the total annualized payroll of active members as of the valuation date. Used to project individual members pay and benefits.
18. *Projected Payroll for Contributions Purposes* - The aggregate projected payroll for the fiscal year following the valuation date is calculated by increasing the actual payroll paid during the previous fiscal year by the payroll growth rate and multiplying by the ratio of current active members to the average number of active members during the previous fiscal year.



Employees' Retirement System of the State of Hawaii

December 3, 2025

2025 Q3 Performance Report

Agenda

- 1. Introduction**
- 2. ERS Portfolio Review**
- 3. Plan Sponsor Peer Group Analysis**
- 4. Appendix**

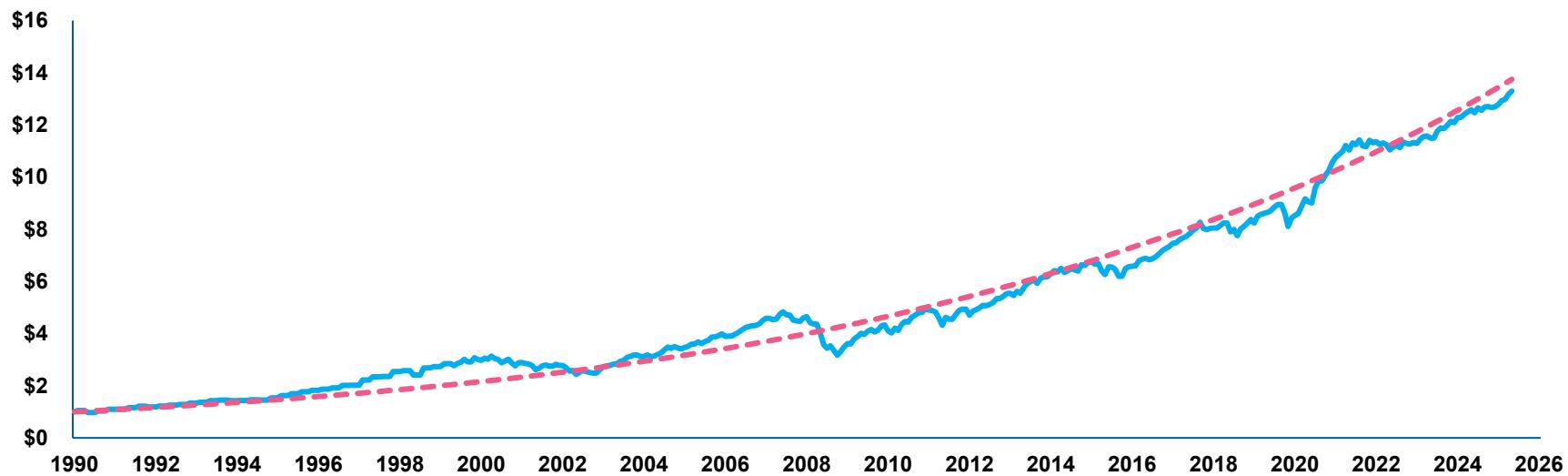
Introduction

Executive Summary

- The ERS Board has constructed the investment portfolio to produce steady, compounding returns over time.
- Risk mitigation is critical in order to ensure the long-term sustainability and growth of the ERS.
- Within the ERS's Investment Policy Statement, success is defined as achieving the long-term return that is needed in conjunction with actuarially defined contributions to fund the plan over time.
- As detailed below, ERS has consistently generated steady, compounded growth since its performance inception.¹

Since Inception Growth of \$1

— Total Fund (Net) - - - Return Benchmark



¹ Return Benchmark represents the ERS's actuarial assumption rate, which is 7.0% since July 2016, 7.65% from July 2015 to July 2016, 7.75% July 2011 to July 2015, 8.00% prior to July 2011.

Executive Summary (Continued)

- When considering risk assumed per unit of return received, ERS steadily outpaces its national peer set.

Risk-Adjusted Performance¹ of Hawaii ERS vs. Median Public Fund

	Since Inception	30 Yrs	20 Yrs	10 Yrs	5 Yrs	3 Yrs	1 Yr	CYTD	QTD
Total Fund	7.6	7.1	6.6	7.8	8.0	6.4	5.7	5.8	2.8
<i>Risk-Adjusted Peer Median²</i>	<i>8.0</i>	<i>7.3</i>	<i>6.0</i>	<i>6.0</i>	<i>5.1</i>	<i>5.1</i>	<i>5.0</i>	<i>5.0</i>	<i>3.1</i>
Excess Return	(0.4)	(0.2)	0.6	1.8	2.9	1.3	0.8	0.8	(0.3)

¹ Performance shown is net of fees since October 1, 2014, and a mix of net and gross of fees prior to October 1, 2014. Fiscal Year begins on July 1. Inception date is June 1, 1990.

² The risk-adjusted median normalizes the median fund to the ERS's exhibited volatility. Calculated as: risk-adjusted median return = unadjusted median return × (ERS volatility ÷ median fund volatility), where volatility is measured as standard deviation. Figures for periods greater than one year are annualized.

Total Fund | As of September 30, 2025

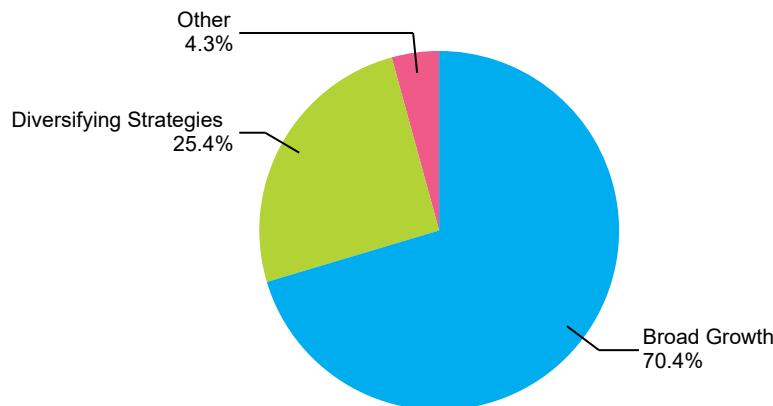
	Portfolio Valuation		
	Quarter-to-Date	Calendar Year-to-Date	One Year
Total Fund			
Beginning Market Value	24,425,334,635	23,758,118,053	23,897,164,286
Net Cash Flows	41,037,578	-170,882,612	-272,628,338
Gain/Loss	697,106,517	1,576,243,290	1,538,942,782
Ending Market Value	25,163,478,730	25,163,478,730	25,163,478,730

	ERS Total Fund Relative Performance									
	Inception	30 Yrs	20 Yrs	10 Yrs	5 Yrs	3 Yrs	1 Yr	YTD	FYTD	QTD
Total Fund	7.6	7.1	6.6	7.8	8.0	6.4	5.7	5.8	2.8	2.8
Return Benchmark	7.7	7.6	7.5	7.0	7.0	7.0	7.0	5.2	1.7	1.7
Excess Return	-0.1	-0.5	-0.8	0.8	1.0	-0.6	-1.3	0.6	1.1	1.1
Total Fund	7.6	7.1	6.6	7.8	8.0	6.4	5.7	5.8	2.8	2.8
Market Benchmark	8.0	7.5	7.0	8.3	9.2	12.0	10.9	7.3	5.5	5.5
Excess Return	-0.4	-0.4	-0.4	-0.4	-1.2	-5.6	-5.2	-1.4	-2.7	-2.7
Total Fund	7.6	7.1	6.6	7.8	8.0	6.4	5.7	5.8	2.8	2.8
Peer Benchmark	8.0	7.6	6.8	8.2	8.9	12.4	9.9	10.9	4.3	4.3
Excess Return	-0.4	-0.5	-0.2	-0.4	-0.9	-6.0	-4.2	-5.1	-1.5	-1.5
Total Fund Rank	82	83	59	75	84	100	100	99	97	97

Total Fund performance consists of net of fees returns. Fiscal year begins on July 1. Inception date is June 1, 1990. Current Market Benchmark composition (effective January 1, 2024) is 70% Broad Growth Benchmark and 30% Diversifying Strategies Benchmark. Please see the Appendix for current and historical custom benchmark compositions. Return Benchmark represents the ERS's actuarial assumption rate, which is 7.0% since July 2016, 7.65% from July 2015 to July 2016, 7.75% July 2011 to July 2015, 8.00% prior to July 2011. Peer Benchmark represents the plan sponsor peer group InvMetrics Public DB >\$1B Net universe and includes BNY Mellon Total Public Fund >\$1B universe and Investment Metrics client data.

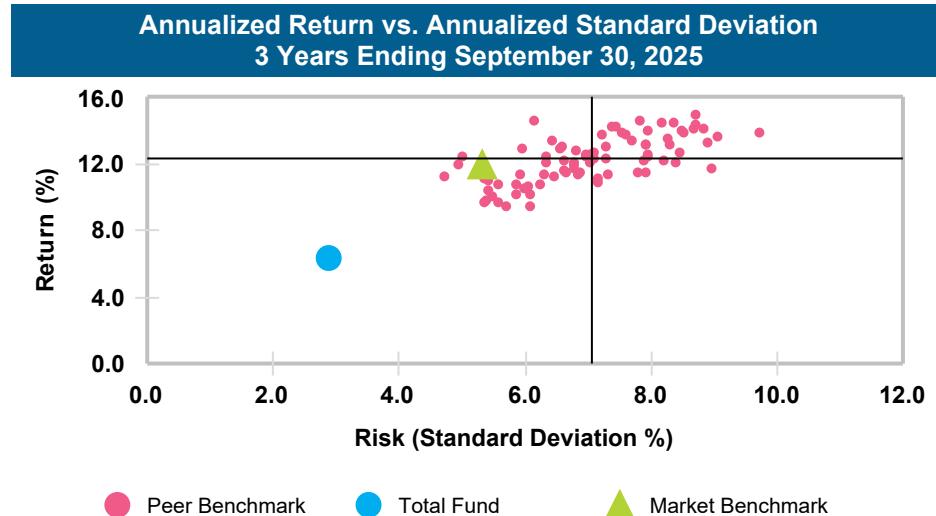
Total Fund | As of September 30, 2025

Asset Allocation vs. Target As of September 30, 2025					
	Balance (\$)	Current Allocation (%)	Policy (%)	Difference (%)	Policy Range (%)
Broad Growth	17,708,166,293	70.4	70.0	0.4	60.0 - 80.0
Global Equity	9,990,609,318	39.7	39.0	0.7	19.0 - 59.0
Global Credit	2,982,727,378	11.9	12.0	-0.1	6.0 - 18.0
Real Assets	4,734,829,598	18.8	19.0	-0.2	9.0 - 29.0
Diversifying Strategies	6,385,130,686	25.4	30.0	-4.6	20.0 - 40.0
Liquid Defensive/Diversifying	5,513,153,621	21.9	26.0	-4.1	15.0 - 30.0
Illiquid Diversifying	871,977,065	3.5	4.0	-0.5	0.0 - 9.0
Other	1,070,181,752	4.3	0.0	4.3	0.0 - 0.0
Other	1,070,181,752	4.3	0.0	4.3	0.0 - 0.0
Total	25,163,478,730	100.0	100.0	0.0	

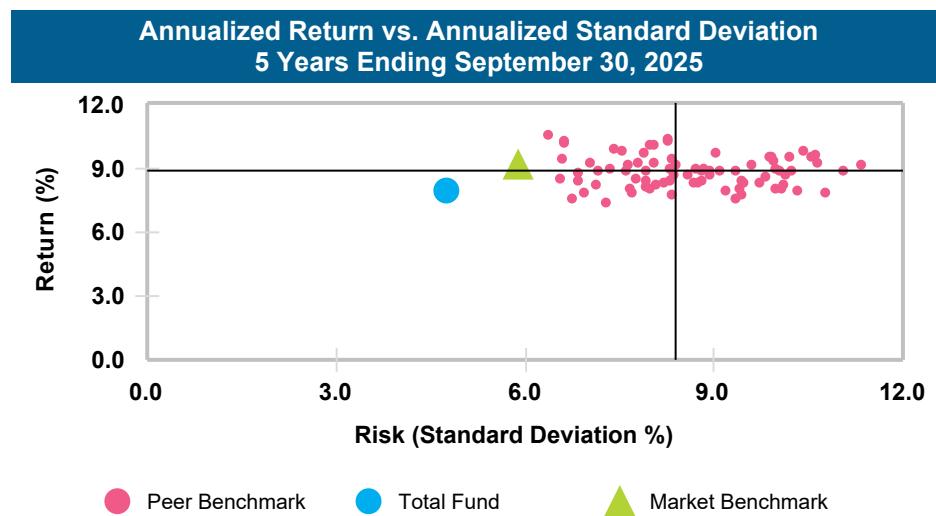


Policy targets effective January 1, 2024. "Other" includes ERS Operating Account and transitional or residual proceeds from liquidating or terminated accounts.

Total Fund | As of September 30, 2025



	Annualized Risk-Return	3 Years Return	3 Years Standard Deviation	3 Years Sharpe Ratio
Total Fund		6.4	2.9	0.5
Market Benchmark		12.0	5.3	1.3
Peer Benchmark Median		12.4	7.1	1.0

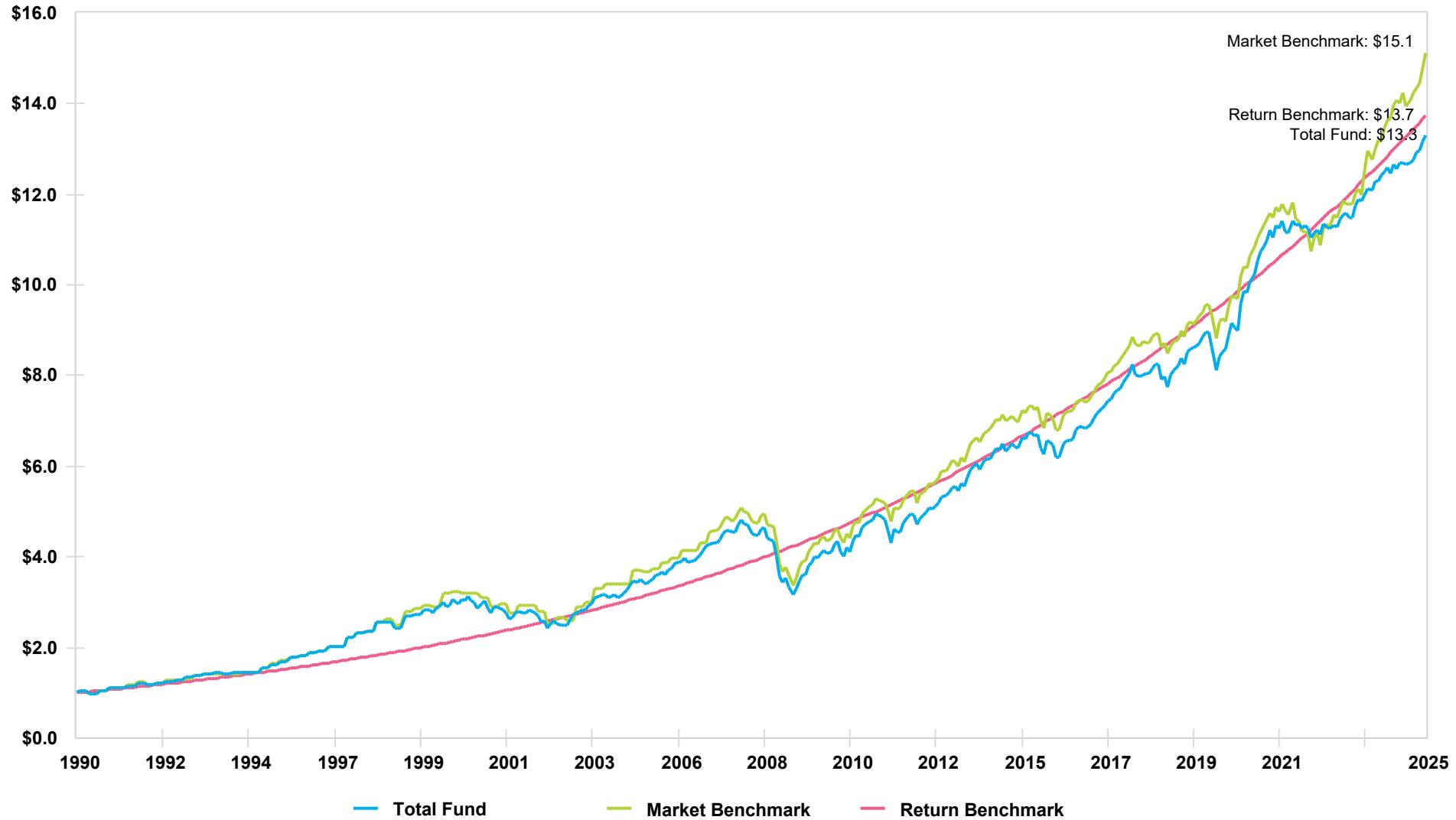


	Annualized Risk-Return	5 Years Return	5 Years Standard Deviation	5 Years Sharpe Ratio
Total Fund		8.0	4.8	1.0
Market Benchmark		9.2	5.9	1.0
Peer Benchmark Median		8.9	8.4	0.7

Peer Benchmark represents the plan sponsor peer group InvMetrics Public DB >\$1B Net universe and includes BNY Mellon Total Public Fund >\$1B universe and Investment Metrics client data.

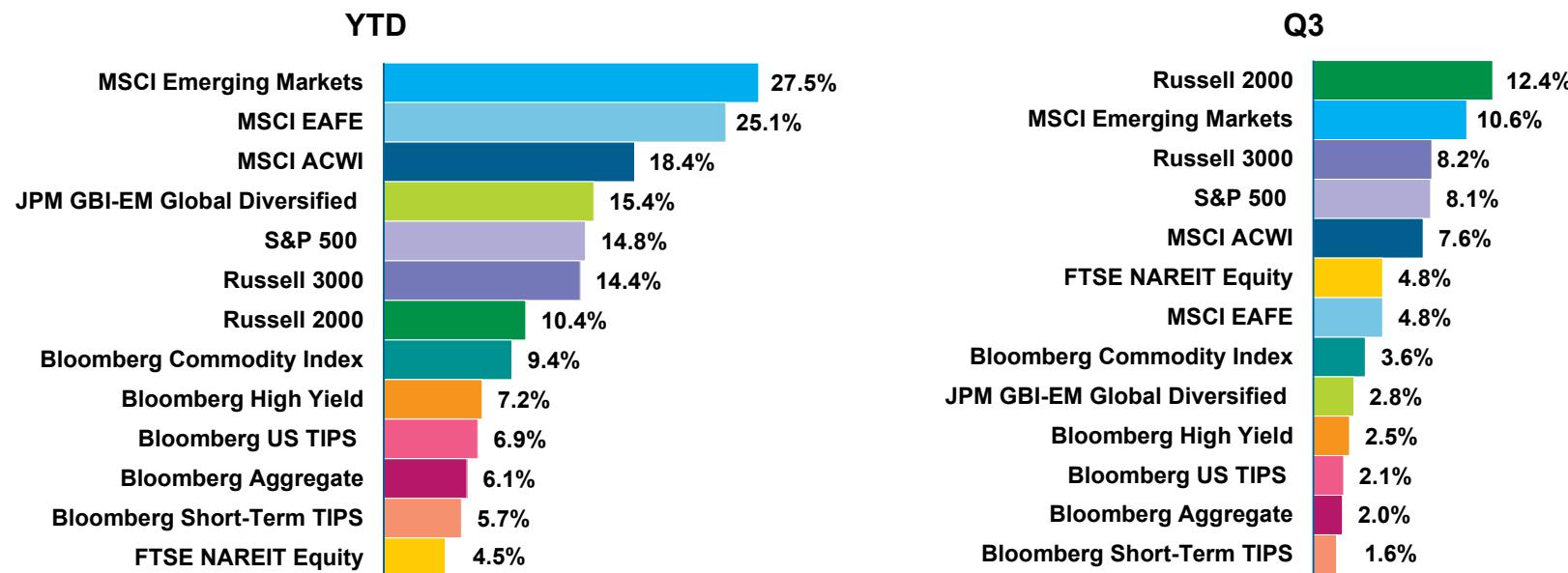
Total Fund | As of September 30, 2025

Since Inception Growth of \$1



Inception date is June 1, 1990. Return Benchmark represents the ERS's actuarial assumption rate, which is 7.0% since July 2016, 7.65% from July 2015 to July 2016, 7.75% July 2011 to July 2015, 8.00% prior to July 2011.

Index Returns¹



- There were broad gains across asset classes in the third quarter given the Fed's rate cut in September with more expected, resilient corporate earnings, and ongoing AI enthusiasm. Small cap US stocks led the way particularly benefiting from lower rate expectations as well as a resilient US economy and lower valuations relative to large cap technology companies.
- For the year-to-date through September, international markets experienced the best results with +40% gains in China helping emerging market stocks and a weakening US dollar particularly benefiting developed international stocks (MSCI EAFE).

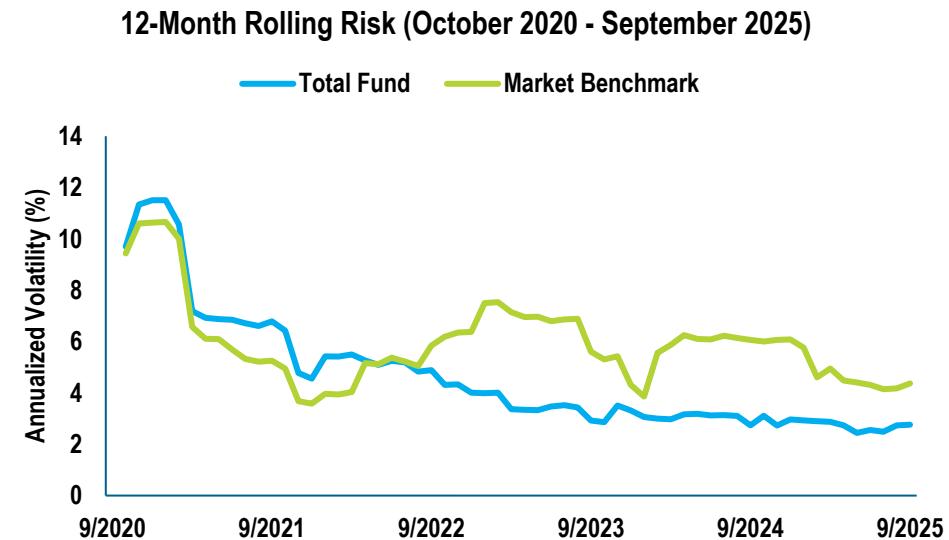
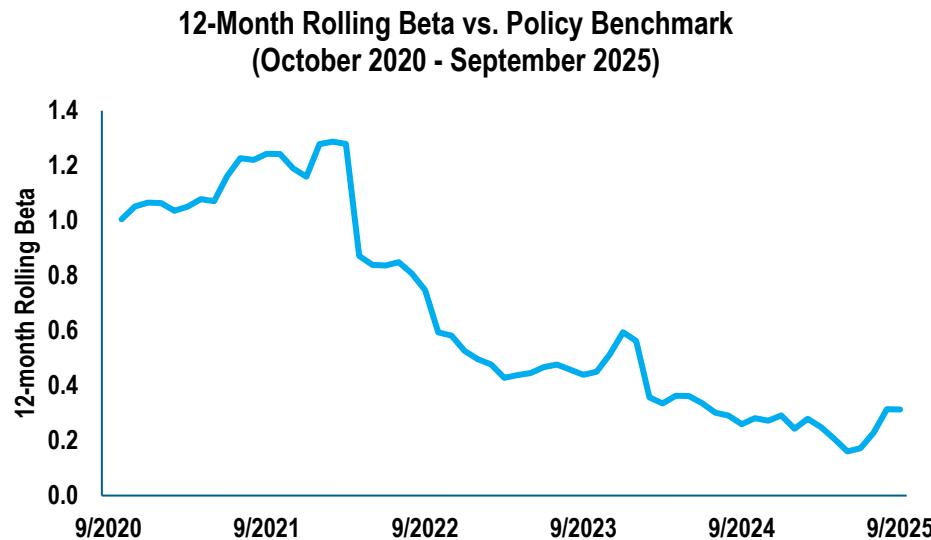
¹ Source: Bloomberg. Data is as of September 30, 2025.

Key Trends

- According to the International Monetary Fund's (IMF) October's World Economic Outlook, the global economy will decelerate from 3.2% in 2025 to 3.1% in 2026. The US is expected to modestly accelerate economic growth in 2026 to 2.1% from 2.0% in 2025. The euro area will slow slightly from 1.2% in 2025 to 1.1% in 2026. China's economy is expected to slow from 4.8% in 2025 to just 4.2% in 2026.
- Despite the recent pause in negotiations related to tariffs, many questions remain including how they will ultimately impact inflation. Overall, higher tariff levels and continued uncertainty could weigh on growth while increasing prices. Inflation levels and potential developments with tariffs combined with a weakening labor market will complicate the Fed's rate cutting path. A lengthy government shutdown and a lack of official economic reports could create further complications for the Fed and others to assess the health of the economy.
- Some signs of stress have started to emerge on the US consumer, with growing weakness in the jobs market and sentiment weakening since the start of the year. Consumers are particularly concerned about losing their jobs and the potential for higher prices. Overall, risk to economic growth and to inflation from tariffs, as well as elevated borrowing costs, could put further pressure on consumers and lead to an even weaker job market. The recent resumption of collecting and reporting delinquent student loans could be a further headwind to consumption.
- US equities have fully recovered from substantial losses experienced during the first week of April and have reached new highs. A relatively strong second quarter earnings season, renewed AI optimism, and prospects of future rate cuts from the Fed all helped drive stocks higher. How earnings track from here, particularly for the large AI related companies that make up a significant portion of indexes, will be key going forward.
- Trade tensions between the US and China will remain an important focus as well as the overall health of China's economy. With the recent flare up in rhetoric, China has deepened its restrictions on exporting rare earth and critical minerals required in the manufacturing of many high-tech items. In response the US threatened across the board tariffs up to 100 % on Chinese goods. Upcoming negotiations between the two sides will be important to watch. How China manages its slowing economy, and deflationary pressures will also be important.

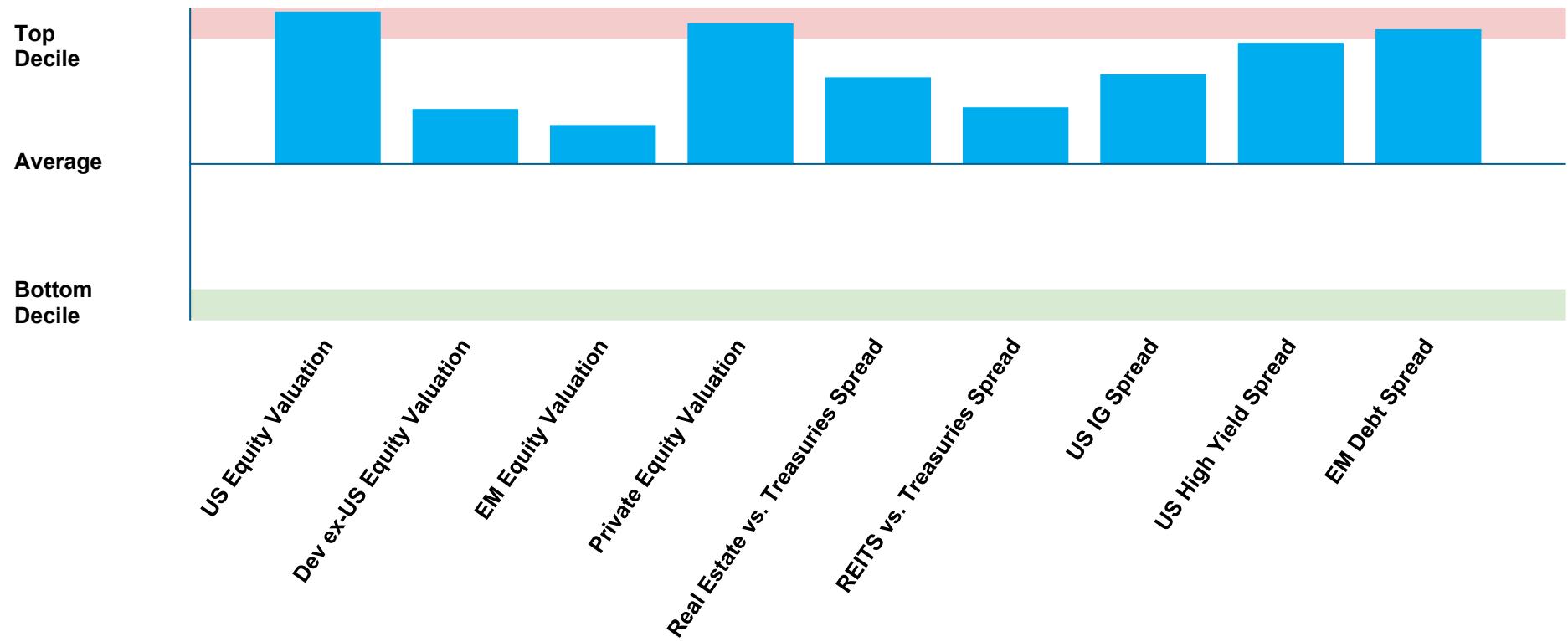
Macro Risk Analytics – Key Takeaways

- Though the Federal Reserve cut the Fed Funds Rate in September, inflation levels, potential developments with tariffs combined with a weakening labor market will complicate the Fed's rate cutting path. A lengthy government shutdown and a lack of official economic reports could create further complications for the Fed and others to assess the health of the economy. The US consumers are concerned about losing their jobs and the potential for higher prices. Overall risk to economic growth, inflation from tariffs, elevated borrowing costs, and the recent resumption of student loan collections could put further pressure on consumers.
- Meketa's Market Sentiment Indicator remained **green** (i.e., positive) during Q3.
- The Actual Portfolio's beta (on a 12-month basis relative to the Policy Portfolio) increased in Q3 after reaching extremely low levels in Q2. Related, trailing 12-month volatility for the Actual Portfolio and Policy Portfolio remain at a relatively widespread. Of note, a new policy benchmark was implemented on 1/1/2024.



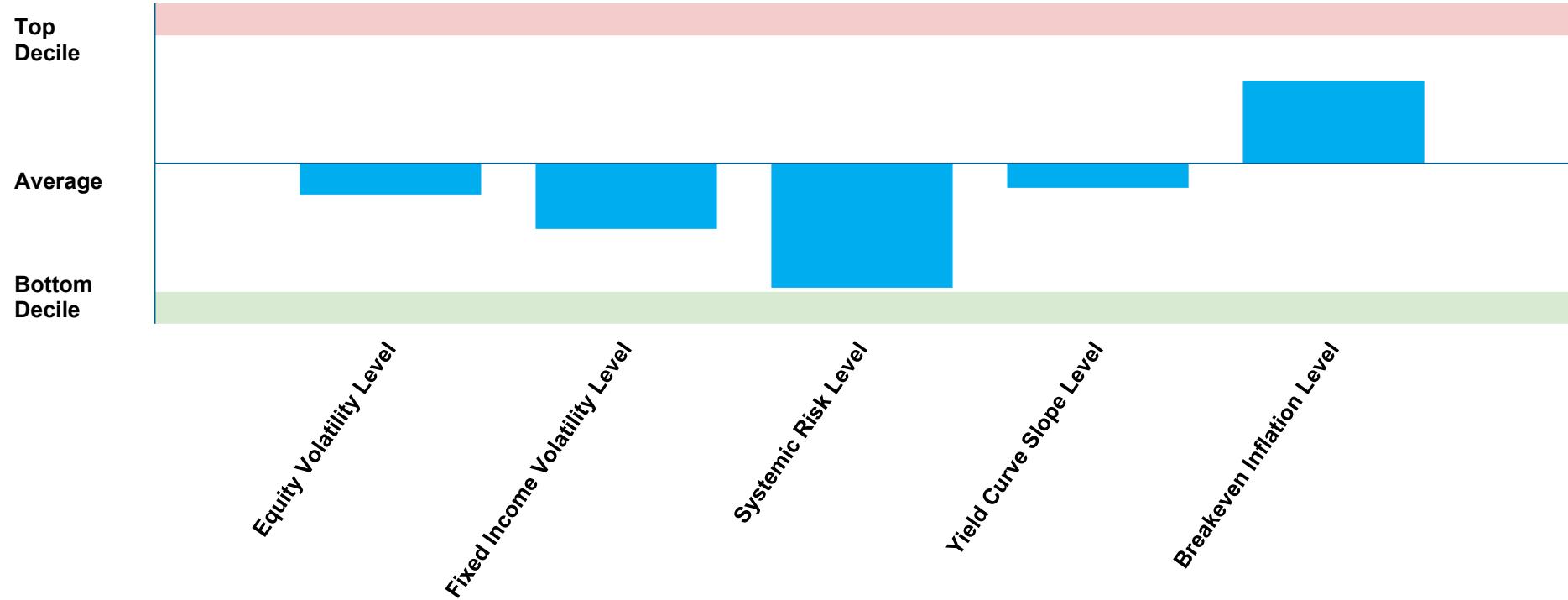
Valuation Metrics Dashboard

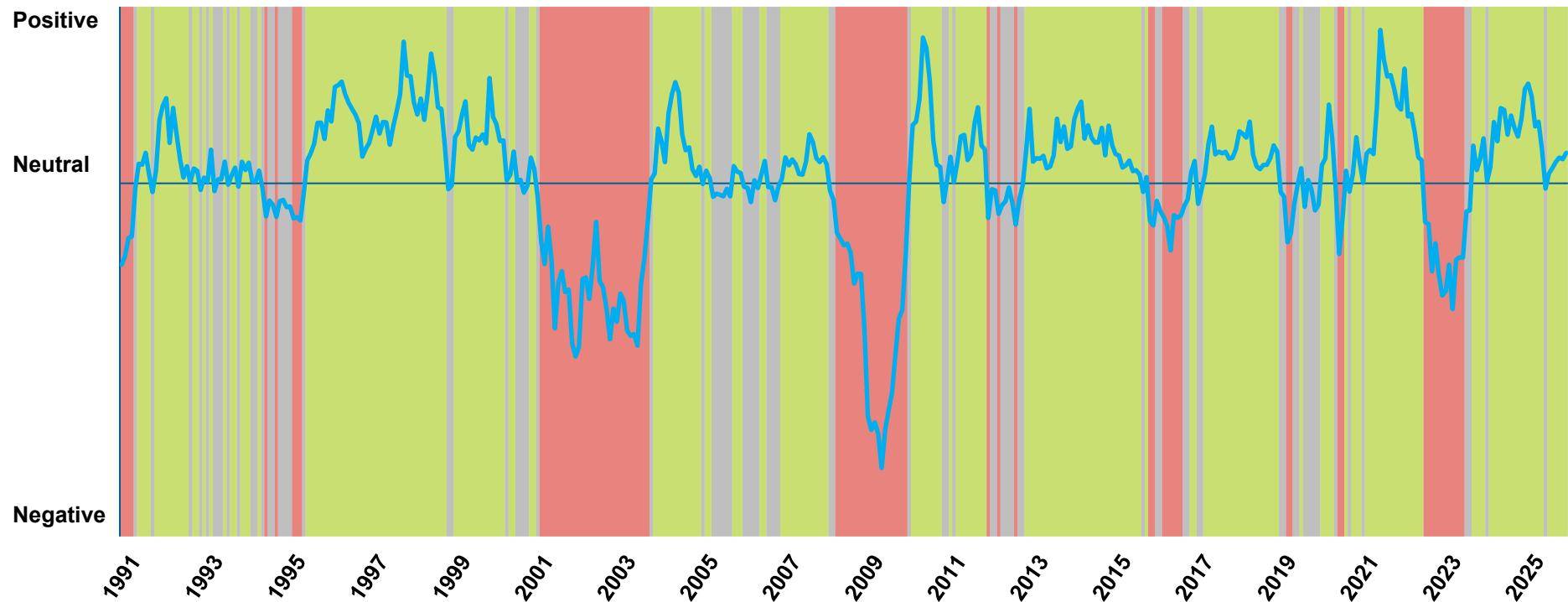
(current measures relative to history)



Other Market Metrics Dashboard

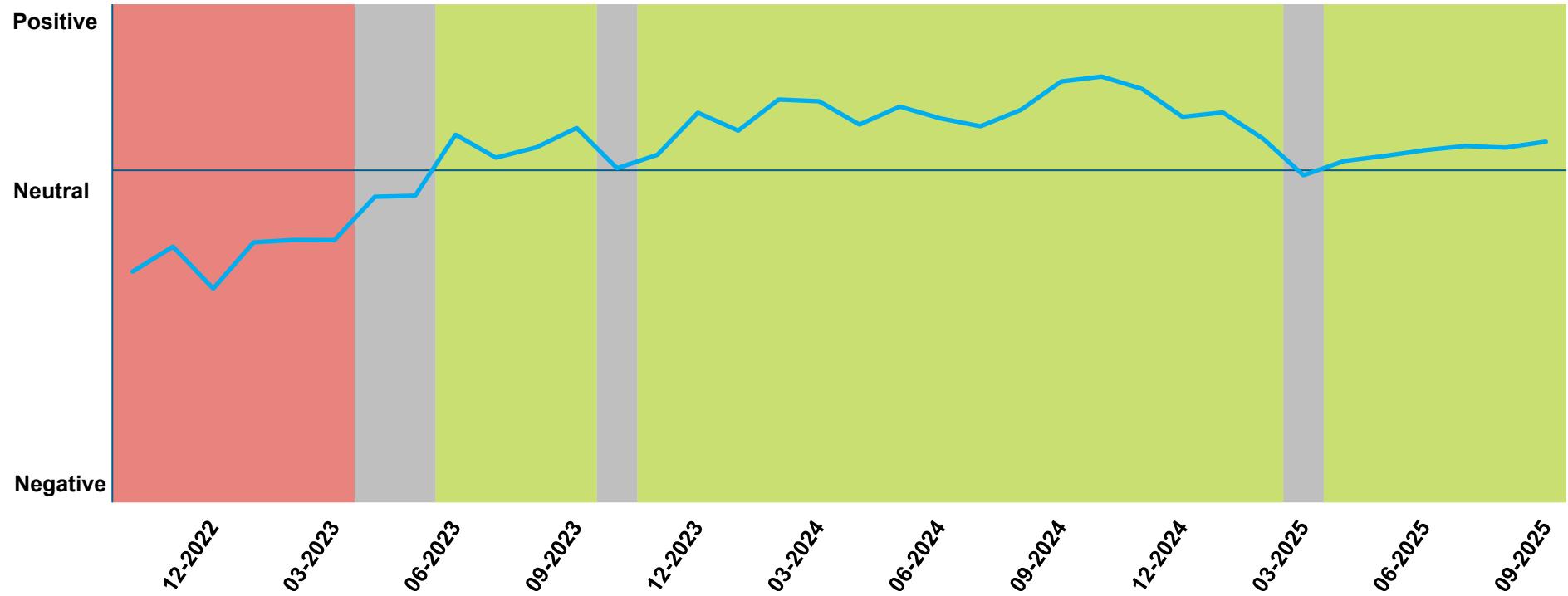
(current measures relative to history)



Market Sentiment Indicator (All History)

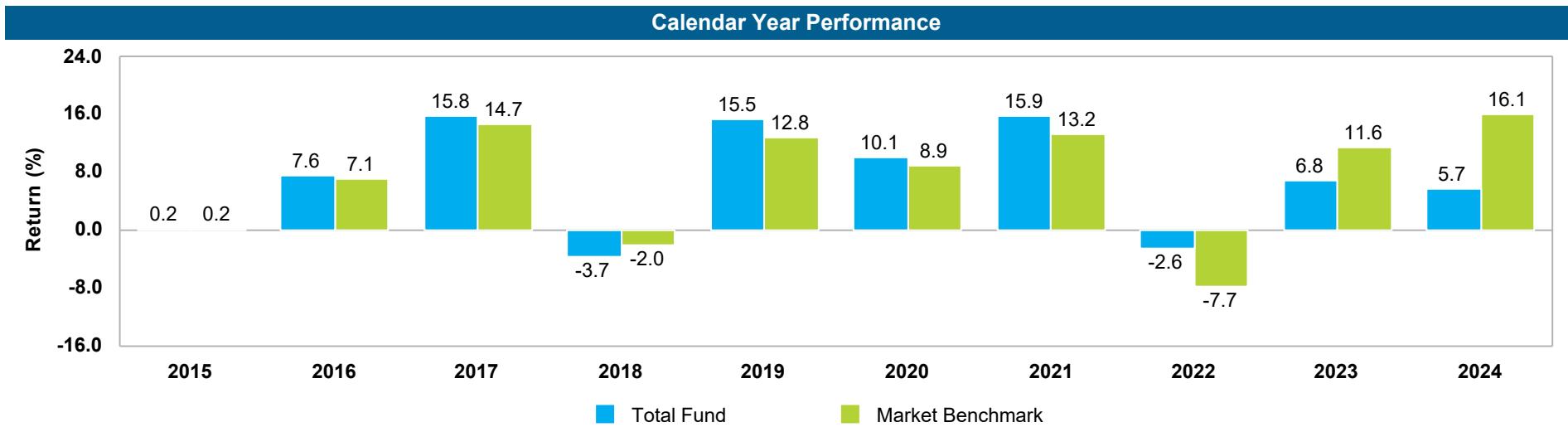
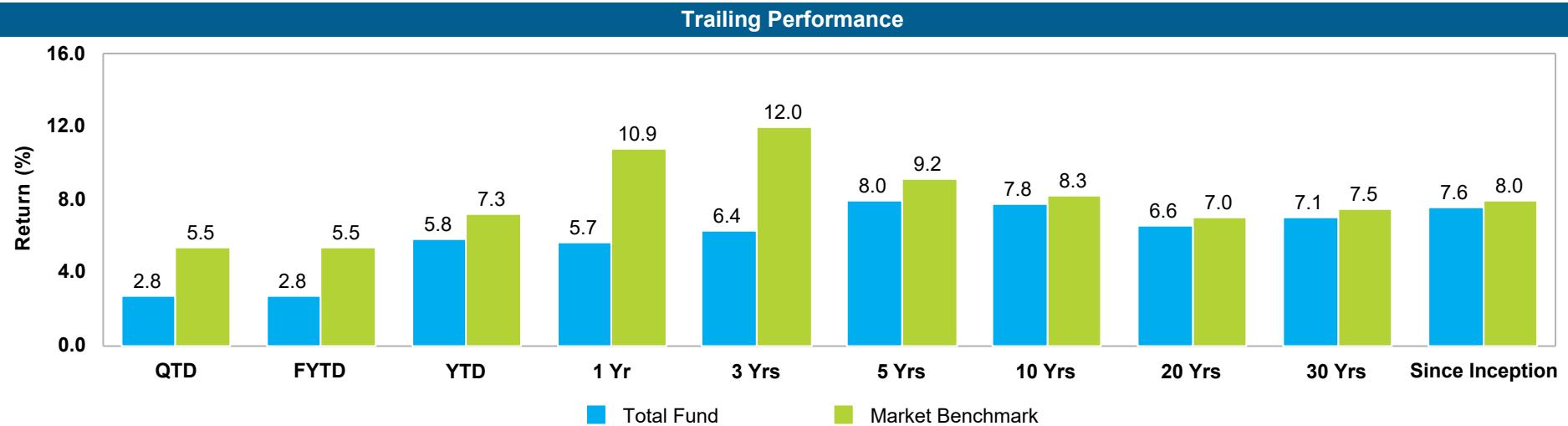
Market Sentiment Indicator (Last Three Years)

(As of September 30, 2025)



ERS Portfolio Review

Total Fund | As of September 30, 2025



Performance shown is net of fees. Inception date is 6/1/1990. Please see the Appendix for the Market Benchmark's composition history.

Performance Attribution¹ vs. Policy Benchmark
Quarter ending September 30, 2025

	Policy ²		Portfolio ³		Impact on Return		
	Allocation (%)	Return	Allocation (%)	Return	Weighting	Implementation	Total ⁴
Broad Growth	70.0	6.5	71.0	3.1	0.0	(2.4)	(2.4)
Global Equity	39.2	9.6	40.3	4.2	0.0	(2.2)	(2.1)
Global Credit	11.9	2.9	11.7	2.4	0.0	0.0	0.0
Real Assets	18.9	2.5	19.0	1.2	0.0	(0.2)	(0.3)
Diversifying Strategies	30.0	2.8	24.2	2.1	0.2	(0.2)	0.0
Liquid Defensive/Diversifying	26.1	2.3	20.7	2.3	0.2	0.0	0.2
Illiquid Diversifying	3.9	5.9	3.6	1.3	0.0	(0.2)	(0.2)
Other Assets	0.0	1.1	4.8	1.2	(0.2)	0.0	(0.2)
Total⁵	100.0	5.5	100.0	2.8	0.0	(2.6)	(2.6)

¹ The underlying data points (asset values and net-of-fees returns) for performance attribution calculation are from BNY Mellon. Performance attribution is calculated using average allocation over the period measure and the period's annualized trailing return. Total impacts may not match period excess return (difference between Portfolio Return and Policy Return) due to rounding, rebalancing, and measurement frequencies. Please see "Performance Attribution Glossary" page in the Appendix for the definition and formula of the Impact on Return factors.

² Policy Allocation and Return columns represent those of each component's corresponding primary benchmarks ("Historical Benchmarks") as shown in the other parts of this report and are used in the attribution calculations. For Other Assets, ICE BofA 3-Month US T-Bills Index is used as benchmark.

³ Portfolio Allocation column illustrates the average beginning-of-month allocation of each component over the period measured.

⁴ Total impacts may not sum to excess return due to rounding, rebalancing, and measurement frequencies.

⁵ Policy Return and Portfolio Return values for the "Total" row are those of the Market Benchmark (policy benchmark of the total portfolio) and the Total Fund respectively. Values in the Impact on Return columns for "Total" row are the sums of calculated Impact on Return values in each column for Broad Growth, Diversifying Strategies, and Other Assets components. The sum of sub-composites (Global Equity, Global Credit, Real Assets, Liquid Defensive/Diversifying, and Illiquid Diversifying) along with Other Assets may not yield the same figure as obsolete sub-composites are excluded and the recalculated composite asset values may not contain the terminated accounts.

Performance Attribution | As of September 30, 2025

Performance Attribution¹ vs. Policy Benchmarks
Calendar Year-to-Date ending September 30, 2025

	Policy ²		Portfolio ³		Impact on Return		
	Allocation (%)	Return	Allocation (%)	Return	Weighting	Implementation	Total
Broad Growth	70.0	6.5	71.0	3.1	0.0	(2.4)	(2.4)
Global Equity	39.2	9.6	40.3	4.2	0.0	(2.2)	(2.1)
Global Credit	11.9	2.9	11.7	2.4	0.0	0.0	0.0
Real Assets	18.9	2.5	19.0	1.2	0.0	(0.2)	(0.3)
Diversifying Strategies	30.0	2.8	24.2	2.1	0.2	(0.2)	0.0
Liquid Defensive/Diversifying	26.1	2.3	20.7	2.3	0.2	0.0	0.2
Illiquid Diversifying	3.9	5.9	3.6	1.3	0.0	(0.2)	(0.2)
Other Assets	0.0	1.1	4.8	1.2	(0.2)	0.0	(0.2)
Total⁴	100.0	7.3	100.0	5.8	(0.0)	(1.1)	(1.2)

¹ The underlying data points (asset values and net-of-fees returns) for performance attribution calculation are from BNY Mellon. Performance attribution is calculated using average allocation over the period measure and the period's annualized trailing return. Total impacts may not match period excess return (difference between Portfolio Return and Policy Return) due to rounding, rebalancing, and measurement frequencies. Please see "Performance Attribution Glossary" page in the Appendix for the definition and formula of the Impact on Return factors.

² Policy Allocation and Return columns represent those of each component's corresponding primary benchmarks ("Historical Benchmarks") as shown in the other parts of this report and are used in the attribution calculations. For Other Assets, ICE BofA 3-Month US T-Bills Index is used as benchmark. Policy Allocation column illustrates the average beginning-of-month target allocation of each component over the period measured; thus, the values may not match any particular set of targets.

³ Portfolio Allocation column illustrates the average beginning-of-month allocation of each component over the period measured.

⁴ Policy Return and Portfolio Return values for the "Total" row are those of the Market Benchmark (policy benchmark of the total portfolio) and the Total Fund respectively. Values in the Impact on Return columns for "Total" row are the sums of calculated Impact on Return values in each column for Broad Growth, Diversifying Strategies, and Other Assets components. The sum of sub-composites (Global Equity, Global Credit, Real Assets, Liquid Defensive/Diversifying, and Illiquid Diversifying) along with Other Assets may not yield the same figure as obsolete sub-composites are excluded and the recalculated composite asset values may not contain the terminated accounts.

Performance Attribution | As of September 30, 2025

Performance Attribution¹ vs. Policy Benchmarks

1-Year ending September 30, 2025

	Policy ²		Portfolio ³		Impact on Return		
	Allocation (%)	Return	Allocation (%)	Return	Weighting	Implementation	Total
Broad Growth	70.0	14.6	70.9	8.2	0.0	(4.5)	(4.5)
Global Equity	39.2	16.7	40.2	9.8	0.1	(2.7)	(2.7)
Global Credit	11.9	9.2	11.5	8.9	0.0	0.0	0.0
Real Assets	18.9	13.3	19.3	4.3	0.0	(1.7)	(1.7)
Diversifying Strategies	30.0	2.1	28.3	(0.3)	0.2	(0.7)	(0.5)
Liquid Defensive/Diversifying	26.1	0.5	24.3	(0.6)	0.2	(0.3)	(0.1)
Illiquid Diversifying	3.9	12.9	4.0	2.1	0.0	(0.4)	(0.4)
Other Assets	0.0	4.4	0.8	4.6	(0.1)	0.0	0.0
Total⁴	100.0	10.9	100.0	5.7	0.1	(5.2)	(5.1)

¹The underlying data points (asset values and net-of-fees returns) for performance attribution calculation are from BNY Mellon. Performance attribution is calculated using average allocation over the period measure and the period's annualized trailing return. Total impacts may not match period excess return (difference between Portfolio Return and Policy Return) due to rounding, rebalancing, and measurement frequencies. Please see "Performance Attribution Glossary" page in the Appendix for the definition and formula of the Impact on Return factors.

²Policy Allocation and Return columns represent those of each component's corresponding primary benchmarks ("Historical Benchmarks") as shown in the other parts of this report and are used in the attribution calculations. For Other Assets, ICE BofA 3-Month US T-Bills Index is used as benchmark. Policy Allocation column illustrates the average beginning-of-month target allocation of each component over the period measured; thus, the values may not match any particular set of targets.

³Portfolio Allocation column illustrates the average beginning-of-month allocation of each component over the period measured.

⁴Policy Return and Portfolio Return values for the "Total" row are those of the Market Benchmark (policy benchmark of the total portfolio) and the Total Fund respectively. Values in the Impact on Return columns for "Total" row are the sums of calculated Impact on Return values in each column for Broad Growth, Diversifying Strategies, and Other Assets components. The sum of sub-composites (Global Equity, Global Credit, Real Assets, Liquid Defensive/Diversifying, and Illiquid Diversifying) along with Other Assets may not yield the same figure as obsolete sub-composites are excluded and the recalculated composite asset values may not contain the terminated accounts.

Performance Attribution¹ vs. Policy Benchmarks

3-Year ending September 30, 2025

	Policy ²		Portfolio ³		Impact on Return		
	Allocation (%)	Return	Allocation (%)	Return	Weighting	Implementation	Total
Broad Growth	66.9	15.8	67.5	9.3	0.0	(4.4)	(4.4)
Global Equity	39.6	20.9	39.6	12.5	0.0	(3.3)	(3.3)
Global Credit	8.5	11.6	9.2	8.5	0.0	(0.3)	(0.3)
Real Assets	16.0	5.6	16.8	2.4	0.0	(0.5)	(0.6)
Diversifying Strategies	33.1	3.8	29.8	0.0	0.3	(1.1)	(0.9)
Liquid Defensive/Diversifying	28.4	0.6	25.4	(0.9)	0.3	(0.4)	0.0
Illiquid Diversifying	4.8	14.0	4.4	5.6	0.0	(0.4)	(0.4)
Other Assets	0.0	4.8	2.7	9.3	(0.2)	0.1	(0.1)
Total⁴	100.0	12.0	100.0	6.4	0.1	(5.4)	(5.3)

¹ The underlying data points (asset values and net-of-fees returns) for performance attribution calculation are from BNY Mellon. Performance attribution is calculated using average allocation over the period measure and the period's annualized trailing return. Total impacts may not match period excess return (difference between Portfolio Return and Policy Return) due to rounding, rebalancing, and measurement frequencies. Please see "Performance Attribution Glossary" page in the Appendix for the definition and formula of the Impact on Return factors.

The current plan structure became effective 01/01/2024. Global Equity, Global Credit, and Liquid Defensive/Diversifying composites were not used in the current form prior to 2024. To calculate performance attribution for the prior periods, reconstructed or approximated information is used; this may include but not limited to policy allocation targets reflected in the reconstructed historical benchmarks, the reconstructed historical benchmark returns, and composite asset values as reconstituted and recalculated by BNY Mellon. This reconstituted portfolio structure and asset values (and therefore Portfolio Allocation values) may not include all the underlying historical accounts such as those previously terminated.

² Policy Allocation and Return columns represent those of each component's corresponding primary benchmarks ("Historical Benchmarks") as shown in the other parts of this report and are used in the attribution calculations. For Other Assets, ICE BofA 3-Month US T-Bills Index is used as benchmark. Policy Allocation column illustrates the average beginning-of-month target allocation of each component over the period measured; thus, the values may not match any particular set of targets.

³ Portfolio Allocation column illustrates the average beginning-of-month allocation of each component over the period measured.

⁴ Policy Return and Portfolio Return values for the "Total" row are those of the Market Benchmark (policy benchmark of the total portfolio) and the Total Fund respectively. Values in the Impact on Return columns for "Total" row are the sums of calculated Impact on Return values in each column for Broad Growth, Diversifying Strategies, and Other Assets components. The sum of sub-composites (Global Equity, Global Credit, Real Assets, Liquid Defensive/Diversifying, and Illiquid Diversifying) along with Other Assets may not yield the same figure as obsolete sub-composites are excluded and the recalculated composite asset values may not contain the terminated accounts.

Performance Attribution¹ vs. Policy Benchmarks

5-Year ending September 30, 2025

	Policy ²		Portfolio ³		Impact on Return		
	Allocation (%)	Return	Allocation (%)	Return	Weighting	Implementation	Total
Broad Growth	69.0	11.4	71.6	9.7	0.1	(1.2)	(1.2)
Global Equity	44.5	13.8	49.1	12.7	0.2	(0.6)	(0.4)
Global Credit	8.2	6.6	6.3	7.7	0.1	0.1	0.1
Real Assets	11.8	9.2	11.2	7.0	0.0	(0.2)	(0.2)
Diversifying Strategies	31.0	3.6	25.6	2.9	0.3	(0.2)	0.1
Liquid Defensive/Diversifying	31.7	1.9	27.1	2.8	0.3	0.2	0.6
Illiquid Diversifying	3.8	9.0	2.9	3.3	0.0	(0.2)	(0.2)
Other Assets	0.0	3.0	2.8	4.5	(0.2)	0.0	(0.1)
Total⁴	100.0	9.2	100.0	8.0	0.2	(1.4)	(1.2)

¹ The underlying data points (asset values and net-of-fees returns) for performance attribution calculation are from BNY Mellon. Performance attribution is calculated using average allocation over the period measure and the period's annualized trailing return. Total impacts may not match period excess return (difference between Portfolio Return and Policy Return) due to rounding, rebalancing, and measurement frequencies. Please see "Performance Attribution Glossary" page in the Appendix for the definition and formula of the Impact on Return factors.

The current plan structure became effective 01/01/2024. Global Equity, Global Credit, and Liquid Defensive/Diversifying composites were not used in the current form prior to 2024. To calculate performance attribution for the prior periods, reconstructed or approximated information is used; this may include but not limited to policy allocation targets reflected in the reconstructed historical benchmarks, the reconstructed historical benchmark returns, and composite asset values as reconstituted and recalculated by BNY Mellon. This reconstituted portfolio structure and asset values (and therefore Portfolio Allocation values) may not include all the underlying historical accounts such as those previously terminated.

² Policy Allocation and Return columns represent those of each component's corresponding primary benchmarks ("Historical Benchmarks") as shown in the other parts of this report and are used in the attribution calculations. For Other Assets, ICE BofA 3-Month US T-Bills Index is used as benchmark. Policy Allocation column illustrates the average beginning-of-month target allocation of each component over the period measured; thus, the values may not match any particular set of targets. The major functional allocation categories of Broad Growth and Diversifying Strategies were adopted starting 07/2020; sum of their corresponding predecessors' policy allocations are assigned to for this calculation (i.e., Broad Growth [2019] and Real Returns as Broad Growth; Crisis Risk Offset and Principal Protection as Diversifying Strategies).

³ Portfolio Allocation column illustrates the average beginning-of-month allocation of each component over the period measured.

⁴ Policy Return and Portfolio Return values for the "Total" row are those of the Market Benchmark (policy benchmark of the total portfolio) and the Total Fund respectively. Values in the Impact on Return columns for "Total" row are the sums of calculated Impact on Return values in each column for Broad Growth, Diversifying Strategies, and Other Assets components. The sum of sub-composites (Global Equity, Global Credit, Real Assets, Liquid Defensive/Diversifying, and Illiquid Diversifying) along with Other Assets may not yield the same figure as obsolete sub-composites are excluded and the recalculated composite asset values may not contain the terminated accounts.

Total Fund | As of September 30, 2025

		Asset Class Performance Summary				
		QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)
Total Fund		2.8	5.7	6.4	8.0	7.1
<i>Market Benchmark</i>		<i>5.5</i>	<i>10.9</i>	<i>12.0</i>	<i>9.2</i>	<i>7.8</i>
Broad Growth		3.1	8.2	9.3	9.7	8.2
<i>Broad Growth Historical Benchmark</i>		<i>6.5</i>	<i>14.6</i>	<i>15.8</i>	<i>11.4</i>	<i>9.2</i>
Global Equity		4.2	9.8	12.5	12.7	10.7
<i>Global Equity Historical Benchmark</i>		<i>9.6</i>	<i>16.7</i>	<i>20.9</i>	<i>13.8</i>	<i>11.4</i>
Global Credit		2.4	8.9	8.5	7.7	7.3
<i>Global Credit Historical Benchmark</i>		<i>2.9</i>	<i>9.2</i>	<i>11.6</i>	<i>6.6</i>	<i>6.7</i>
Real Assets		1.2	4.3	2.4	7.0	6.4
<i>Real Assets Historical Benchmark</i>		<i>2.5</i>	<i>13.3</i>	<i>5.6</i>	<i>9.2</i>	<i>7.1</i>
Diversifying Strategies		2.1	-0.3	0.0	2.9	3.9
<i>Diversifying Strategies Historical Benchmark</i>		<i>2.8</i>	<i>2.1</i>	<i>3.8</i>	<i>3.6</i>	<i>4.1</i>
Liquid Defensive/Diversifying		2.3	-0.6	-0.9	2.8	3.7
<i>Liquid Defensive Historical Benchmark</i>		<i>2.3</i>	<i>0.5</i>	<i>0.6</i>	<i>1.9</i>	<i>3.0</i>
Illiquid Diversifying		1.3	2.1	5.6	3.3	--
<i>Illiquid Diversifying Historical Benchmark</i>		<i>5.9</i>	<i>12.9</i>	<i>14.0</i>	<i>9.0</i>	<i>--</i>

Total Fund performance shown is net of fees.

Relevant valuations may not have been available for all underlying Global Equity, Real Assets, and Diversifying Strategies managers at the time this report was produced; in such cases, most recent available data is used.

Benchmarks for Broad Growth and its underlying components contain lagged index returns. Please see the Appendix for current and historical custom benchmark compositions.

Global Equity | As of September 30, 2025

Asset Class Performance Summary						
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Global Equity	9,990,609,318	100.0	4.2	9.8	12.5	12.7
<i>Global Equity Historical Benchmark</i>			9.6	16.7	20.9	13.8
Public Equity	5,021,013,665	50.3	4.5	10.9	19.4	11.7
<i>MSCI AC World IMI Index (Net)</i>			7.7	16.8	22.5	13.3
Active Public Equity	3,591,519,165	35.9	3.3	8.3	17.6	10.8
Alliance Bernstein	513,382,741	5.1	1.9	9.0	19.6	10.6
BlackRock Alpha Tilt	812,285,787	8.1	8.4	18.4	24.6	14.6
Longview	553,036,971	5.5	0.9	-0.2	15.7	11.6
Wellington (Mid-Large Cap)	595,164,415	6.0	3.8	18.1	23.6	11.6
<i>MSCI AC World Index (Net)</i>			7.6	17.3	23.1	13.5
Wasatch	516,195,444	5.2	-6.0	-5.9	12.3	6.8
Wellington (Small Cap)	591,667,825	5.9	4.0	8.5	15.8	13.3
<i>MSCI ACWI Small Cap (Net)</i>			8.1	12.8	17.4	11.4
Hillhouse China A Shares	9,785,982	0.1	18.5	27.0	4.9	--
<i>MSCI China A Onshore Index (Net)</i>			22.8	20.6	9.1	2.2
Passive Public Equity	1,429,494,500	14.3	7.9	17.8	23.9	14.2
Legal & General	1,288,772,500	12.9	7.7	17.7	23.5	13.9
Parametric Equity Overlay	140,722,000	1.4	--	--	--	--
<i>MSCI AC World Index (Net)</i>			7.6	17.3	23.1	13.5
Private Equity	4,969,595,652	49.7	3.9	9.0	5.6	15.6
Hamilton Lane	4,512,489,111	45.2	4.1	9.4	5.9	15.9
HITIP I Stafford	7,328,106	0.1	31.8	29.9	11.6	6.0
HITIP II Stafford	41,484,467	0.4	0.5	1.9	-5.2	10.8
HITIP III Stafford	57,780,110	0.6	-0.1	7.8	-1.6	-6.8
Other Equity	350,513,858	3.5	1.1	4.7	0.0	11.5
<i>Private Equity Historical Benchmark</i>			11.6	15.9	17.7	14.8

Performance shown is net of fees. Please see the Appendix for current and historical custom benchmark compositions.

Global Credit | As of September 30, 2025

Asset Class Performance Summary						
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Global Credit	2,982,727,378	100.0	2.4	8.9	8.5	7.7
<i>Global Credit Historical Benchmark</i>			2.9	9.2	11.6	6.6
Private Credit	1,738,061,726	58.3	2.4	9.2	7.9	8.7
<i>Private Credit Historical Benchmark</i>			3.1	9.6	11.1	6.7
Public Credit	1,244,665,652	41.7	2.3	8.4	10.1	7.6
HPS Credit	1,061,891,556	35.6	2.3	8.6	9.5	7.8
Parametric Credit Overlay	182,774,096	6.1	--	--	--	--
<i>Public Credit Historical Benchmark</i>			2.4	8.3	11.6	6.3

Performance shown is net of fees. Please see the Appendix for current and historical custom benchmark compositions.

Real Assets | As of September 30, 2025

		Asset Class Performance Summary					
		Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Real Assets		4,734,829,598	100.0	1.2	4.3	2.4	7.0
	<i>Real Assets Historical Benchmark</i>			<i>2.5</i>	<i>13.3</i>	<i>5.6</i>	<i>9.2</i>
Real Estate		2,165,891,620	45.7	1.0	2.4	-2.4	5.6
	<i>Real Estate Historical Benchmark</i>			<i>3.0</i>	<i>10.8</i>	<i>3.0</i>	<i>8.7</i>
Core Real Estate		1,102,251,844	23.3	1.0	3.3	-1.2	7.1
	<i>Core Real Estate Historical Benchmark</i>			<i>3.0</i>	<i>10.8</i>	<i>2.8</i>	<i>8.4</i>
Non-Core Real Estate		1,063,639,776	22.5	0.9	1.4	-3.8	4.0
	<i>Non-Core Real Estate Historical Benchmark</i>			<i>3.0</i>	<i>10.8</i>	<i>3.3</i>	<i>9.1</i>
Agriculture		422,828,004	8.9	0.7	2.5	2.2	--
	<i>Agriculture Historical Benchmark</i>			<i>-5.3</i>	<i>-1.4</i>	<i>0.2</i>	<i>--</i>
Timber		224,345,952	4.7	0.0	1.7	10.6	7.9
	<i>Timber Historical Benchmark</i>			<i>-1.9</i>	<i>-5.7</i>	<i>4.5</i>	<i>5.7</i>
Infrastructure		1,921,764,022	40.6	1.7	7.2	9.8	11.7
	<i>Infrastructure Historical Benchmark</i>			<i>4.4</i>	<i>24.3</i>	<i>14.8</i>	<i>13.3</i>
Private Infrastructure		882,918,406	18.6	1.3	10.8	8.9	11.1
	<i>Infrastructure Historical Benchmark</i>			<i>4.4</i>	<i>24.3</i>	<i>14.8</i>	<i>13.3</i>
Public Infrastructure		370,414,506	7.8	1.8	11.1	--	--
Morgan Stanley Infrastructure		370,414,506	7.8	1.8	11.1	--	--
	<i>Dow Jones Brookfield Global Infrastructure</i>			<i>1.7</i>	<i>10.5</i>	<i>--</i>	<i>--</i>
Other Real Assets		668,431,109	14.1	2.3	2.2	5.7	--
Morgan Stanley Olomana		666,721,842	14.1	2.3	5.5	6.2	--
Parametric Real Assets Overlay		1,709,267	0.0	--	--	--	--
	<i>Infrastructure Historical Benchmark</i>			<i>4.4</i>	<i>24.3</i>	<i>14.8</i>	<i>--</i>

Performance shown is net of fees. Both performance and benchmark data for Real Assets component are sourced from BNY Mellon's time-weighted data. Please see the Appendix for current and historical custom benchmark compositions.

Liquid Defensive/Diversifying | As of September 30, 2025

Asset Class Performance Summary						
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Liquid Defensive/Diversifying	5,513,153,621	100.0	2.3	-0.6	-0.9	2.8
<i>Liquid Defensive Historical Benchmark</i>			2.3	0.5	0.6	1.9
Defensive Return Capture	356,472,055	6.5	-2.0	-0.7	-8.3	-6.0
Saba	168,074,839	3.0	-6.5	-7.5	-11.9	--
36 South	188,397,216	3.4	2.5	-2.3	-7.6	--
<i>Defensive Return Capture Benchmark</i>			1.3	3.5	5.6	4.5
Discretionary Alpha	742,389,253	13.5	3.1	5.7	5.7	5.0
Aequim Relative Value Arbitrage	263,086,556	4.8	1.1	10.5	10.6	--
Aristea Relative Value Arbitrage	243,408,887	4.4	2.1	8.4	5.6	--
Melqart Relative Value Arbitrage	235,893,810	4.3	6.5	10.5	13.5	--
<i>Discretionary Alpha Benchmark</i>			1.3	3.5	5.6	4.5
Intermediate Duration Treasury	2,130,588,527	38.6	1.3	3.4	--	--
Bank of Hawai'i Intermediate Duration	298,113,661	5.4	1.6	3.8	4.9	0.5
First Hawaiian Intermediate Duration	182,420,198	3.3	1.3	3.4	4.6	0.3
SLC Intermediate Duration	1,648,830,642	29.9	1.3	3.7	--	--
Parametric Intermediate Duration Overlay	1,224,026	0.0	--	--	--	--
<i>Bloomberg U.S. Treasury: Intermediate</i>			1.3	3.5	4.3	0.3
Long Duration Treasury	846,405,914	15.4	2.5	-3.1	0.7	-3.9
SLC Long Treasury	846,405,914	15.4	2.5	-3.1	0.5	-6.4
<i>Long Treasury Historical Benchmark</i>			2.5	-3.5	0.4	-6.6
Systematic Trend Following	1,437,297,872	26.1	4.6	-7.5	-8.6	7.0
Aspect	224,196,456	4.1	6.8	-10.2	-3.3	10.2
Brevan Howard Disc Global Macro	260,823,173	4.7	0.4	-0.2	-1.5	--
Broad Reach	178,775,815	3.2	4.4	-9.2	-3.5	--
Crabel Advanced Trend	208,879,689	3.8	8.6	-7.2	-8.8	3.8
Mount Lucas	310,697,822	5.6	3.9	-5.0	-10.3	4.7
Parametric Trend Overlay	253,924,916	4.6	--	--	--	--
<i>MLM Global Index EV Blend 15V</i>			4.2	-3.0	-6.1	5.3

Performance shown is net of fees. Please see the Appendix for current and historical custom benchmark compositions.

Illiquid Diversifying | As of September 30, 2025

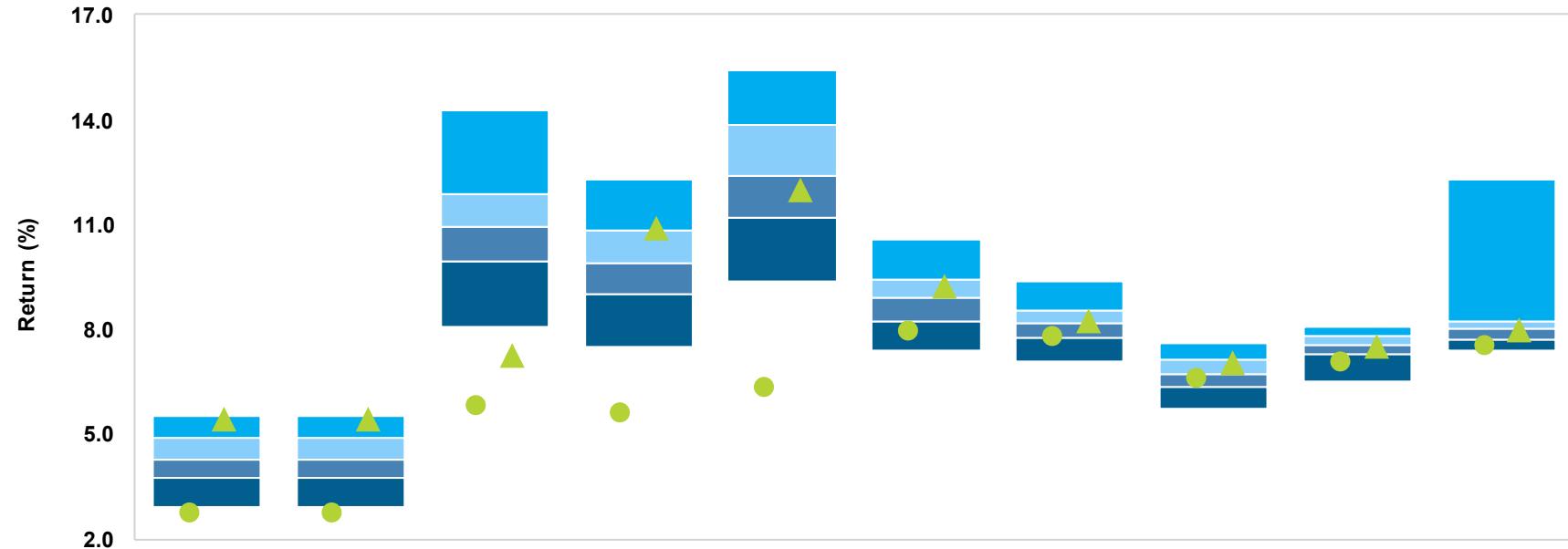
	Asset Class Performance Summary					
	Market Value (\$)	% of Portfolio	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Illiquid Diversifying	871,977,065	100.0	1.3	2.1	5.6	3.3
<i>Illiquid Diversifying Historical Benchmark</i>			5.9	12.9	14.0	9.0
Idiosyncratic Return Capture	573,701,877	65.8	1.2	0.3	3.5	3.5
<i>Idiosyncratic Return Capture Historical Benchmark</i>			5.9	12.9	12.2	8.8
Insurance Linked	298,275,188	34.2	1.6	5.5	8.7	3.5
<i>Swiss Re Global Catastrophe Bond Index (Hedged)</i>			5.9	12.9	17.4	9.5

Performance shown is net of fees. Please see the Appendix for current and historical custom benchmark compositions.

Plan Sponsor Peer Group Analysis

Plan Sponsor Peer Group Analysis | As of September 30, 2025

Peer Group Performance Comparison Trailing Periods Ending September 30, 2025

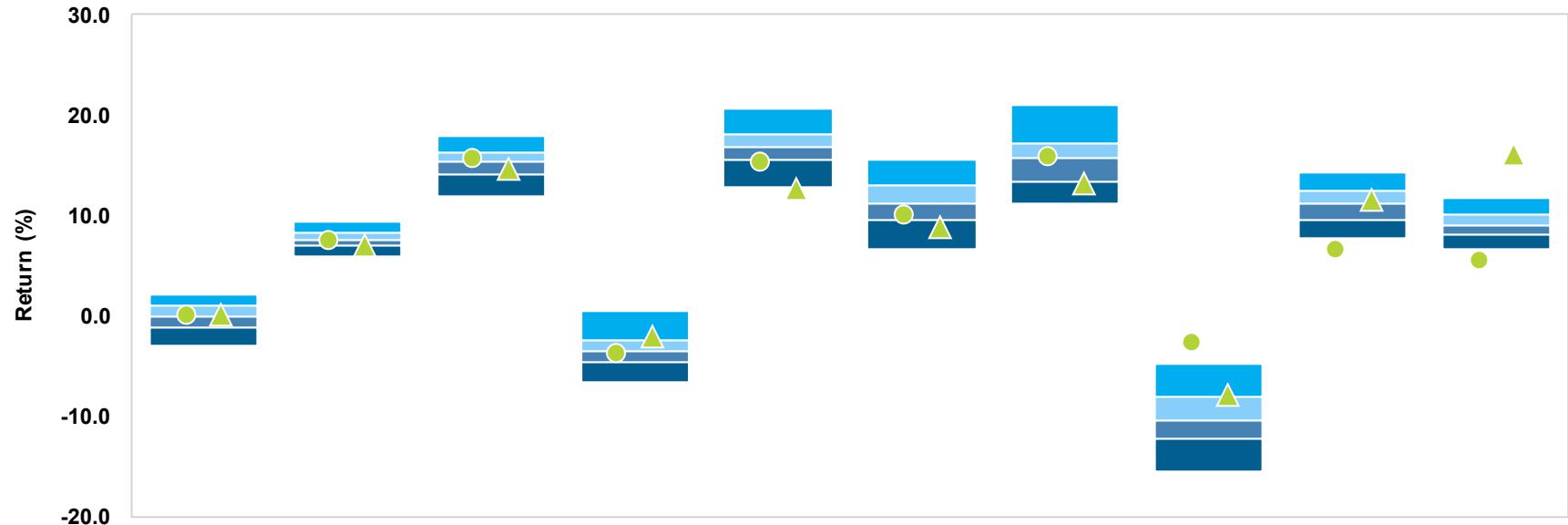


	QTD	FYTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	20 Yrs	30 Yrs	Since Inception
Total Fund	2.8 (97)	2.8 (97)	5.8 (99)	5.7 (100)	6.4 (100)	8.0 (84)	7.8 (75)	6.6 (59)	7.1 (83)	7.6 (82)
Market Benchmark	5.5 (6)	5.5 (6)	7.3 (98)	10.9 (25)	12.0 (60)	9.2 (32)	8.3 (48)	7.0 (34)	7.5 (53)	8.0 (58)
5th Percentile	5.5	5.5	14.3	12.3	15.4	10.6	9.4	7.6	8.1	12.3
1st Quartile	4.9	4.9	11.9	10.9	13.9	9.4	8.6	7.2	7.9	8.2
Median	4.3	4.3	10.9	9.9	12.4	8.9	8.2	6.8	7.6	8.0
3rd Quartile	3.8	3.8	10.0	9.0	11.2	8.2	7.8	6.4	7.3	7.7
95th Percentile	2.9	2.9	8.1	7.5	9.4	7.4	7.1	5.7	6.5	7.4
Population	108	108	104	103	102	99	94	71	25	12

Calculation based on monthly periodicity. Fiscal year begins on July 1. The plan sponsor peer group, InvMetrics Public DB >\$1B Net universe, includes BNY Mellon Total Public Fund >\$1B universe and Investment Metrics client data. Parenthesized numbers represent peer group percentile ranking.

Plan Sponsor Peer Group Analysis | As of September 30, 2025

Peer Group Performance Comparison Calendar Year Returns



	2015 (%)	2016 (%)	2017 (%)	2018 (%)	2019 (%)	2020 (%)	2021 (%)	2022 (%)	2023 (%)	2024 (%)
● Total Fund	0.2 (41)	7.6 (50)	15.8 (44)	-3.7 (55)	15.5 (78)	10.1 (72)	15.9 (48)	-2.6 (3)	6.8 (98)	5.7 (98)
▲ Market Benchmark	0.2 (43)	7.1 (70)	14.7 (63)	-2.0 (23)	12.8 (96)	8.9 (83)	13.2 (76)	-7.7 (21)	11.6 (41)	16.1 (1)
5th Percentile	2.2	9.5	18.0	0.5	20.8	15.7	21.0	-4.7	14.4	11.7
1st Quartile	1.0	8.3	16.4	-2.3	18.1	13.1	17.2	-8.0	12.6	10.1
Median	-0.1	7.6	15.5	-3.5	17.0	11.3	15.7	-10.3	11.3	9.1
3rd Quartile	-1.0	7.0	14.1	-4.5	15.6	9.6	13.5	-12.2	9.7	8.2
95th Percentile	-2.9	6.0	12.0	-6.6	13.0	6.8	11.2	-15.4	7.9	6.7
Population	174	180	185	174	197	221	212	181	189	179

Calculation based on monthly periodicity. The plan sponsor peer group, InvMetrics Public DB >\$1B Net universe, includes BNY Mellon Total Public Fund >\$1B universe and Investment Metrics client data. Parenthesized numbers represent peer group percentile ranking.

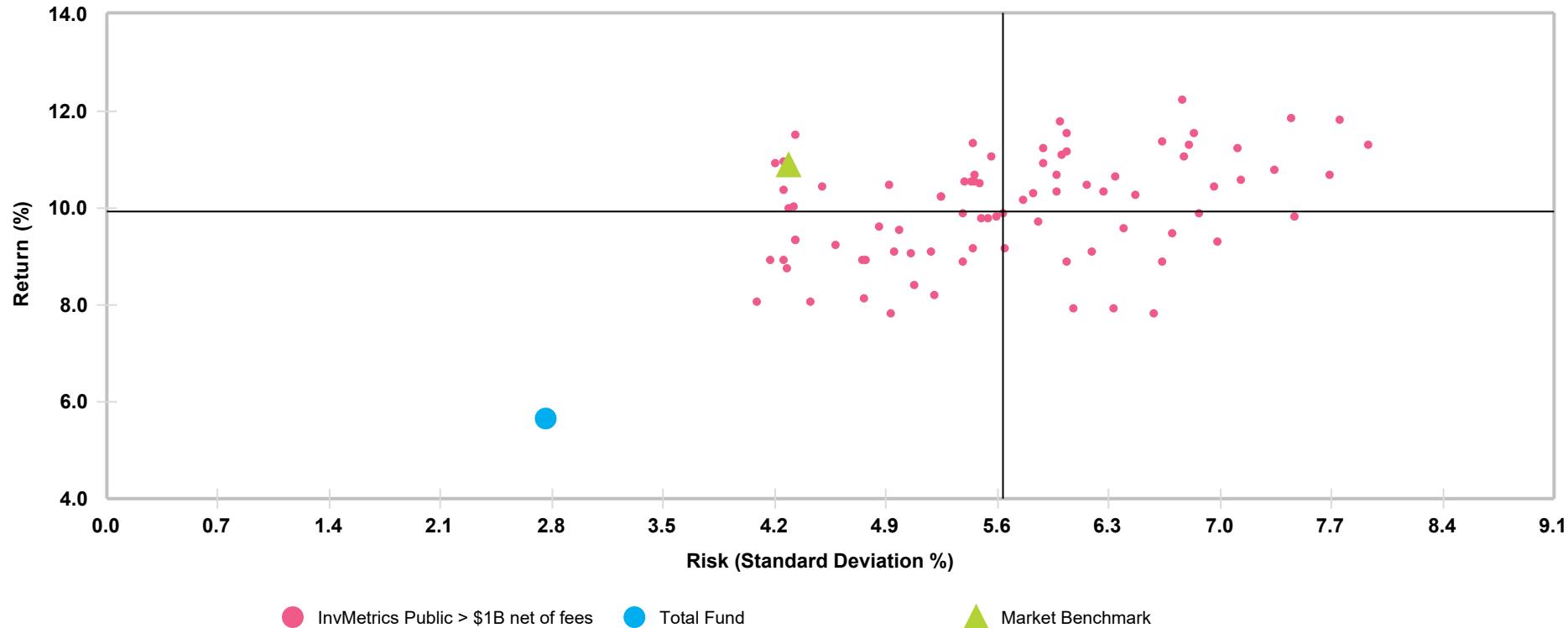
Risk/Return Statistics | As of September 30, 2025

	Risk/Return Statistics									
	1 Yr		3 Yrs		5 Yrs		7 Yrs		10 Yrs	
	Total Fund	Benchmark	Total Fund	Benchmark	Total Fund	Benchmark	Total Fund	Benchmark	Total Fund	Benchmark
RETURN SUMMARY STATISTICS										
Return	5.7	10.9	6.4	12.0	8.0	9.2	7.1	7.8	7.8	8.3
Excess Performance	-5.2	0.0	-5.6	0.0	-1.2	0.0	-0.7	0.0	-0.4	0.0
RISK SUMMARY STATISTICS										
Standard Deviation	2.8	4.3	2.9	5.3	4.8	5.9	6.2	6.5	6.0	6.2
Beta	0.3	1.0	0.4	1.0	0.6	1.0	0.8	1.0	0.9	1.0
RISK/RETURN SUMMARY STATISTICS										
Information Ratio	-1.3	-	-1.3	-	-0.3	-	-0.2	-	-0.1	-
Sharpe Ratio	0.5	1.4	0.5	1.3	1.0	1.0	0.7	0.8	0.9	1.0
Tracking Error	3.8	0.0	4.0	0.0	3.8	0.0	3.5	0.0	3.0	0.0

Net of fees performance is shown or used in calculating the statistics on this page.

Plan Sponsor Peer Group Analysis | As of September 30, 2025

Annualized Return vs. Annualized Standard Deviation
1 Year ending September 30, 2025

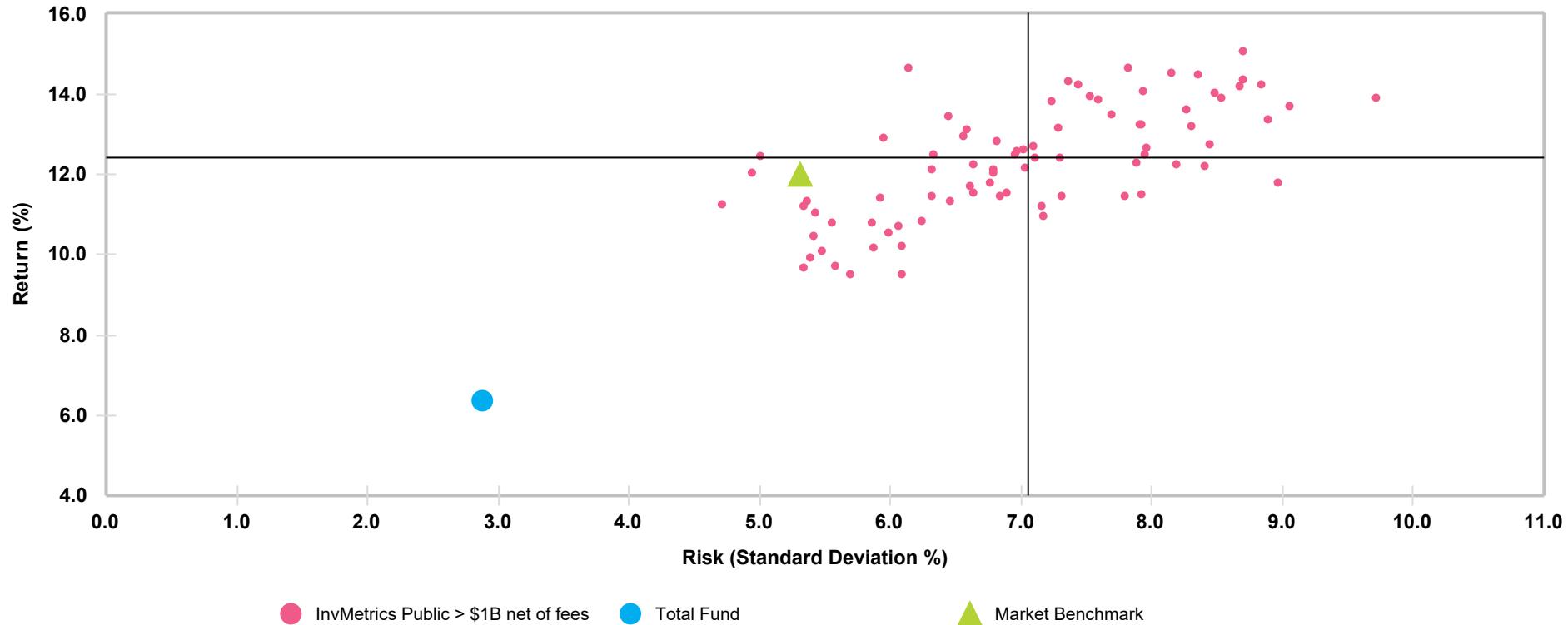


	Return	Standard Deviation	Sharpe Ratio	Information Ratio
Total Fund	5.7 (100)	2.8 (1)	0.5 (100)	-1.3 (100)
Market Benchmark	10.9 (25)	4.3 (12)	1.4 (5)	-
Peer Benchmark Median	9.9	5.6	1.0	-0.1

Peer Benchmark represents the plan sponsor peer group Peer Benchmark Net universe. Includes BNY Mellon Total Public Fund >\$1B universe and Investment Metrics client data. Parenthesized numbers represent peer group percentile rank.

Plan Sponsor Peer Group Analysis | As of September 30, 2025

Annualized Return vs. Annualized Standard Deviation
3 Years ending September 30, 2025

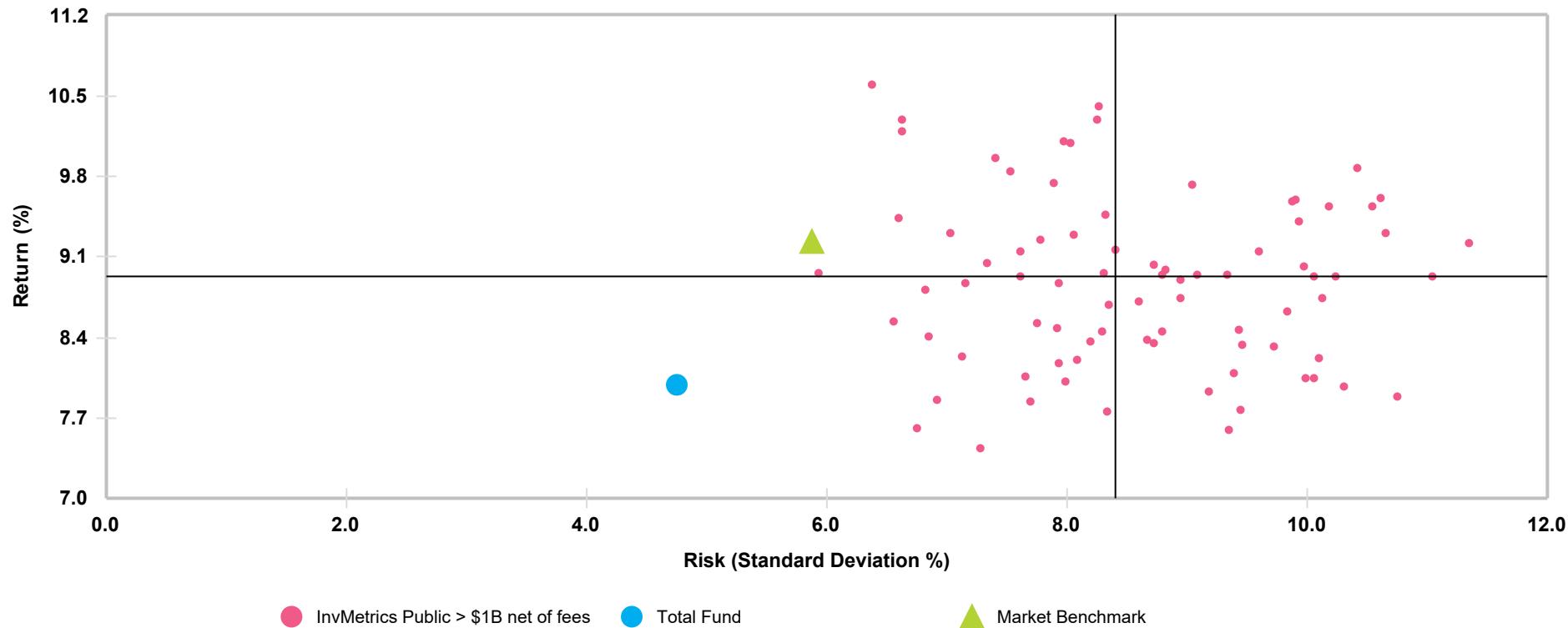


	Return	Standard Deviation	Sharpe Ratio	Information Ratio
Total Fund	6.4 (100)	2.9 (1)	0.5 (100)	-1.3 (100)
Market Benchmark	12.0 (60)	5.3 (8)	1.3 (6)	-
Peer Benchmark Median	12.4	7.1	1.0	0.1

Peer Benchmark represents the plan sponsor peer group Peer Benchmark Net universe. Includes BNY Mellon Total Public Fund >\$1B universe and Investment Metrics client data. Parenthesized numbers represent peer group percentile rank.

Plan Sponsor Peer Group Analysis | As of September 30, 2025

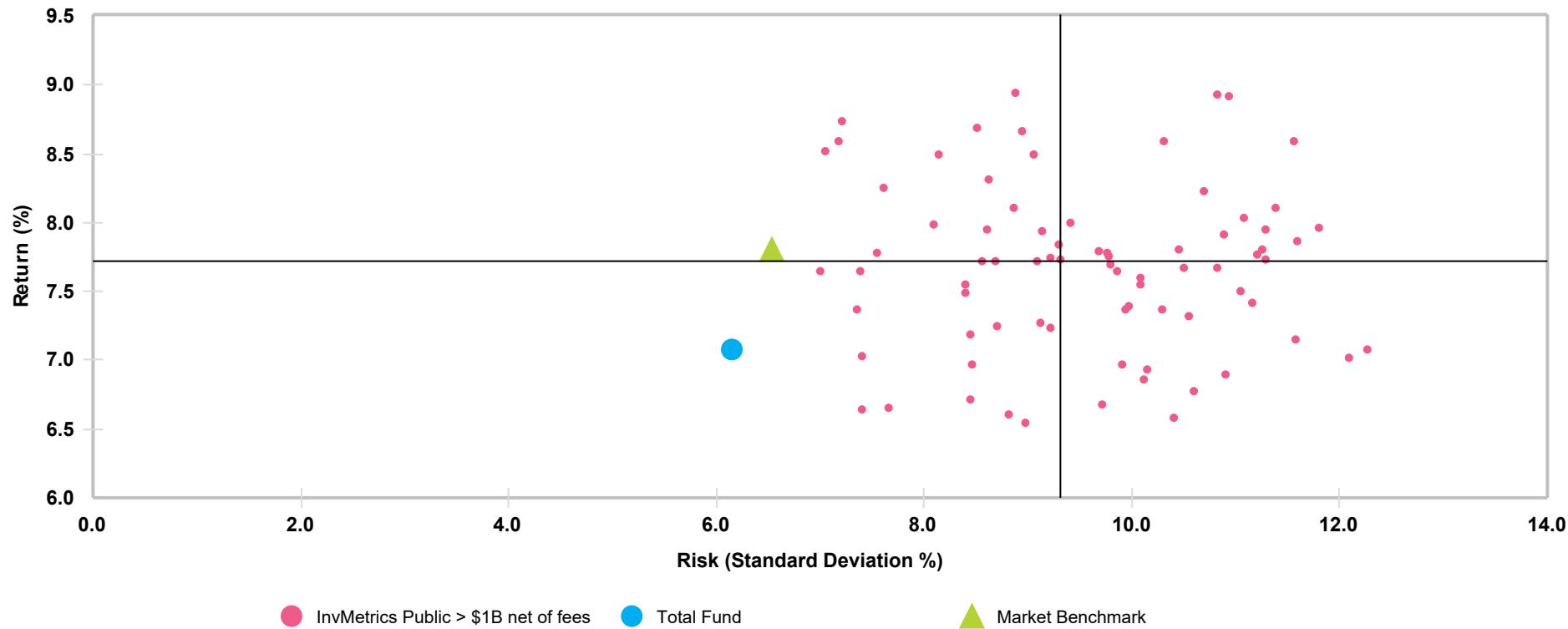
Annualized Return vs. Annualized Standard Deviation
5 Years ending September 30, 2025



Peer Benchmark represents the plan sponsor peer group Peer Benchmark Net universe. Includes BNY Mellon Total Public Fund >\$1B universe and Investment Metrics client data. Parenthesized numbers represent peer group percentile rank.

Plan Sponsor Peer Group Analysis | As of September 30, 2025

Annualized Return vs. Annualized Standard Deviation
7 Years ending September 30, 2025

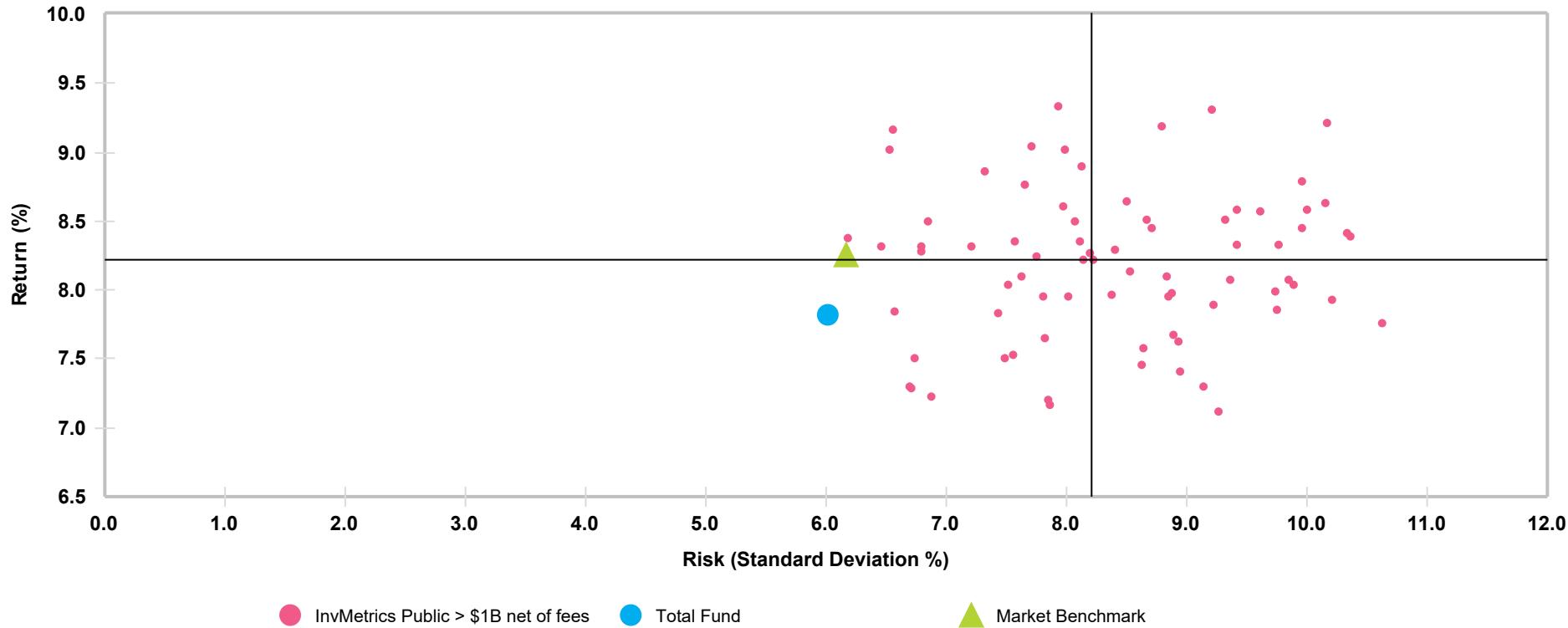


	Return	Standard Deviation	Sharpe Ratio	Information Ratio
Total Fund	7.1 (79)	6.2 (2)	0.7 (15)	-0.2 (94)
Market Benchmark	7.8 (39)	6.5 (3)	0.8 (6)	-
Peer Benchmark Median	7.7	9.3	0.5	0.0

Peer Benchmark represents the plan sponsor peer group Peer Benchmark Net universe. Includes BNY Mellon Total Public Fund >\$1B universe and Investment Metrics client data. Parenthesized numbers represent peer group percentile rank.

Plan Sponsor Peer Group Analysis | As of September 30, 2025

Annualized Return vs. Annualized Standard Deviation
10 Years ending September 30, 2025



	Return	Standard Deviation	Sharpe Ratio	Information Ratio
Total Fund	7.8 (75)	6.0 (4)	0.9 (11)	-0.1 (85)
Market Benchmark	8.3 (48)	6.2 (5)	1.0 (6)	-
Peer Benchmark Median	8.2	8.2	0.7	0.0

Peer Benchmark represents the plan sponsor peer group Peer Benchmark Net universe. Includes BNY Mellon Total Public Fund >\$1B universe and Investment Metrics client data. Parenthesized numbers represent peer group percentile rank.

Appendix

Definition of Benchmarks

Bloomberg Aggregate is an index comprised of approximately 6,000 publicly traded investment-grade bonds including US Government, mortgage-backed, corporate, and yankee bonds with an approximate average maturity of 10 years.

Bloomberg Global High Yield is a multi-currency measure of the global high yield debt market. The Index is comprised of the US High Yield, the Pan-European High Yield, and Emerging Markets Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive.

Bloomberg High Yield covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures, 144-As and pay-in-kind bonds (PIKs, as of October 1, 2009) are also included. Must be rated high yield (Ba1/BB+ or lower) by at least two of the following ratings agencies: Moody's, S&P, Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. All issues must have at least one year to final maturity regardless of call features and have at least \$150 million par amount outstanding.

Bloomberg Multiverse Non-US Hedged provides a broad-based measure of the international fixed-income bond market. The index represents the union of the BC Global Aggregate Index and the BC Global High Yield Index. In this sense, the term "Multiverse" refers to the concept of multiple universes in a single macro index.

Bloomberg US Credit includes publicly issued US corporate and foreign debentures and secured notes that which are rated investment grade or higher by Moody's Investor Services, Standard and Poor's Corporation, or Fitch Investors Service, with all issues having at least one year to maturity and an outstanding par value of at least \$250 million. Issues must be publicly issued, dollar-denominated and non-convertible.

Bloomberg Universal includes market coverage by the Aggregate Bond Index fixed rate debt issues, which are rated investment grade or higher by Moody's Investor Services, Standard and Poor's Corporation, or Fitch Investors Service, with all issues having at least one year to maturity and an outstanding par value of at least \$100 million) and includes exposures to high yield CMBS securities. All returns are market value weighted inclusive of accrued interest.

Bloomberg World Govt Inflation-Linked Bond (WGILB) measures the performance of the major government inflation-linked bond markets. The index is designed to include only those markets in which a global government linker fund is likely and able to invest. To be included a market must have aggregate issuance of \$4 billion or more and have minimum rating of A3/A- for G7 and euro-zone issuers, Aa3/AA- otherwise, using the middle rating from Moody's, S&P and Fitch ("two out of three" rule). The index is available in local currency and in most major currencies hedged or un-hedged.

CBOE S&P 500 Buy Write Index (BXM) is a benchmark index designed to track the performance of a hypothetical buy-write strategy on the S&P 500 Index. Announced in April 2002, the BXM Index was developed by the CBOE in cooperation with Standard & Poor's. To help in the development of the BXM Index, the CBOE commissioned Professor Robert Whaley to compile and analyze relevant data from the time period from June 1988 through December 2001. Data on daily BXM prices now is available from June 30, 1986, to the present time (see below). The BXM is a passive total return index based on (1) buying an S&P 500 stock index portfolio, and (2) "writing" (or selling) the near-term S&P 500 Index (SPXSM) "covered" call option, generally on the third Friday of each month. The SPX call written will have about one month remaining to expiration, with an exercise price just above the prevailing index level (i.e., slightly out of the money). The SPX call is held until expiration and cash settled, at which time a new one-month, near-the-money call is written. Please visit the BXM FAQ for more information about the construction of the index.

CBOE S&P 500 Put Write Index (PUT) is a benchmark index designed to track the performance of a hypothetical cash-secured put-write strategy on the S&P 500 Index. Announced in June 2007, the PUT strategy is designed to sell a sequence of one-month, at-the-money, S&P 500 Index puts and invest cash at one- and three-month Treasury Bill rates. The number of puts sold varies from month to month, but is limited so that the amount held in Treasury Bills can finance the maximum possible loss from final settlement of the S&P 500 Index puts.

ICE BofA 3-Month US Treasury Bills (90-Day T-bills) tracks the performance of US Treasury bills with 3-month maturity.

Definition of Benchmarks (continued)

MLM Global Index is the first passive index of returns to futures investing. The objective of the Index strategy is to provide pure systematic trending following exposure in a consistent, efficient, and cost effective manner which captures the price risk premium offered by those who seek price certainty.

MSCI ACWI is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The Index captures large and mid-cap representation across 47 country indices comprising 23 developed and 24 emerging market country indices. The developed market country indices included are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging market country indices included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey, and the United Arab Emirates.

MSCI ACWI ex US ND comprises both developed and emerging markets less the United States. The index consisted of 22 countries classified as developed markets and 24 classified as emerging markets. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

MSCI ACWI IMI captures large, mid, and small cap representation across 23 developed markets and 24 emerging markets countries. The Index is comprehensive, covering approximately 99% of the global equity investment opportunity set.

MSCI ACWI Minimum Volatility is a global equity (developed and emerging markets) index constructed by MSCI that utilizes an estimated security co-variance matrix to produce an index that has the lowest absolute volatility for a given set of constraints. The estimated security co-variance matrix is based on the relevant Barra multi-factor equity model.

MSCI ACWI Small Cap is a free float-adjusted market capitalization weighted index captures the small cap representation across 23 developed markets and 24 emerging markets countries.

MSCI EAFE Free (Europe, Australasia, Far East) ND is a free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US & Canada. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI Barra uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

MSCI EM (Emerging Markets) GD is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. This series approximates the maximum possible dividend reinvestment. The amount reinvested is the entire dividend distributed to individuals resident in the country of the company, but does not include tax credits.

MSCI Europe is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe. As of June 2007, this index consisted of the following 16 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

MSCI Pacific is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in the Pacific region. As of June 2007, this index consisted of the following 5 Developed Market countries: Australia, Hong Kong, Japan, New Zealand, and Singapore.

MSCI USA is a free float adjusted market capitalization index that is designed to measure large- and mid-cap US equity market performance. The MSCI USA Index is member of the MSCI Global Equity Indices and represents the US equity portion of the global benchmark MSCI ACWI Index.

MSCI World ex US ND is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. The MSCI World Index consists of the following 22 developed market country indices: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

Definition of Benchmarks (continued)

Morningstar Leveraged Loan (formerly **S&P Leveraged Loan**) is a capitalization-weighted syndicated loan index based upon market weightings, spreads, and interest payments. The Index covers the US market back to 1997.

NAREIT Index consists of all tax-qualified REITs listed on the New York Stock Exchange, American Stock Exchange, and the NASDAQ National Market System. The data is market weighted.

NCREIF Property Index (NPI) the NPI contains investment-grade, non-agricultural, income-producing properties which may be financed in excess of 5% gross market value; were acquired on behalf of tax exempt institutions; and are held in a fiduciary environment. Returns are gross of fees; including income, realized gains/losses, and appreciation/depreciation; and are market value weighted.

NCREIF Timberland Index is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only. All properties in the Timberland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment.

Russell 1000 measures the performance of the 1,000 largest securities in the Russell 3000 Index. Russell 1000 is highly correlated with the S&P 500 Index and capitalization weighted.

Russell 1000 Growth measures the performance of those Russell 1000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values than the Value universe.

Russell 1000 Value measures the performance of those Russell 1000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values than the Growth universe.

Russell 2000 measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index.

Russell 2000 Growth measures the performance of those Russell 2000 securities with a greater-than-average growth orientation. Securities in this index tend to exhibit higher price-to-book and price-to-earnings ratios.

Russell 2000 Value measures the performance of those Russell 2000 securities with a less-than-average growth orientation. Securities in this index tend to exhibit lower price-to-book and price-to-earnings ratios.

Russell 3000 represents the largest 3,000 US companies based on total market capitalization, representing approximately 98% of the investable US equity market.

S&P 500 is an index of 500 stocks chosen for market size, liquidity and industry grouping, among other factors. The S&P 500 is designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large cap universe.

Plan Structure Evolution

Prior to 10/2014, Employees' Retirement System of the State of Hawaii ("ERS" or "Plan") had an allocation policy based asset classes (such as US Large Cap Equity, Developed International Equity, Real Estate). Since 10/2014, the ERS has adopted a risk-based, functional framework which uses strategic/functional classes designed to achieve a certain goal and/or be exposed to a specific set of macroeconomic risks through various underlying asset classes and strategies. Since then, the plan structure and the nomenclature of its components have evolved over time to fit the ERS's needs. This page summarizes this evolution since 10/2014 on a high level.

10/2014-06/2016	07/2016-03/2017	04/2017-06/2020	07/2020-12/2023	01/2024-Current
Total Fund → Broad Growth → Principal Protection → Real Return → Real Estate	Total Fund → Broad Growth → Principal Protection → Real Return	Total Fund → Broad Growth → Principal Protection → Real Return → Crisis Risk Offset (CRO)	Total Fund → Broad Growth → Diversifying Strategies	
Broad Growth → Growth-Oriented → Private Growth → Stabilized Growth	Broad Growth → Traditional Growth → Private Growth → Stabilized Growth		Broad Growth → Public Growth • Traditional Growth • Stabilized Growth → Private Growth → Real Assets	Broad Growth → Global Equity → Global Credit → Real Assets
Real Estate				
Real Return → Public Inflation-Linked → Private Inflation-Linked				
Principal Protection		Crisis Risk Offset (CRO) → Treasury Duration Capture → Systematic Trend Following → Alternative Return Capture	Diversifying Strategies → Liquid Defensive • Treasury / Agency Duration • Systematic Trend • Defensive Return → Liquid Diversifying • Alternative Return • Relative Value → Illiquid Diversifying • Insurance-Linked • Idiosyncratic Return	Diversifying Strategies → Liquid Defensive / Diversifying • Systematic Trend • Defensive Return • Intermediate Duration • Long Duration • Discretionary Alpha → Illiquid Diversifying • Insurance-Linked • Idiosyncratic Return

Custom Benchmarks

This section includes the compositions of custom benchmarks currently in use. Policy Benchmarks for Total Fund, Broad Growth, and Diversifying Strategies are presented first, followed by the benchmarks of their lower-level composites sorted according to the Plan structure. Discontinued custom benchmarks are listed separately afterward and are noted as such when they appear in this section.

Market Benchmark (Total Fund Policy Benchmark)

From	To	Market Benchmark (Total Fund Policy Benchmark)
01/01/2024	Current	70% Broad Growth Historical Benchmark, 30% Diversifying Strategies Historical Benchmark
07/01/2022	12/31/2023	65% Broad Growth Benchmark, 35% Diversifying Strategies Benchmark
07/01/2021	06/30/2022	67.5% Broad Growth Benchmark, 32.5% Diversifying Strategies Benchmark
07/01/2020	06/30/2021	72% Broad Growth Benchmark, 28% Diversifying Strategies Benchmark
01/01/2019	06/30/2020	68% Broad Growth Benchmark, 16% Crisis Risk Offset Benchmark, 8% Principal Protection Benchmark, 8% Real Return Benchmark
01/01/2018	12/31/2018	72% Broad Growth Benchmark, 13% Crisis Risk Offset Benchmark, 8% Principal Protection Benchmark, 7% Real Return Benchmark
04/01/2017	12/31/2017	76% Broad Growth Benchmark, 10% Crisis Risk Offset Benchmark, 9% Principal Protection Benchmark, 5% Real Return Benchmark
07/01/2016	03/31/2017	83% Broad Growth Benchmark, 12% Principal Protection Benchmark, 5% Real Return Benchmark
10/01/2014	06/30/2016	76% Broad Growth Benchmark, 12% Principal Protection Benchmark, 5% Real Return Benchmark, 7% NCREIF Property Index (Qtr Lagged)

From	To	Total Fund Asset-Based Policy Benchmarks (prior to the Functional Allocation Framework)
07/01/2013	09/30/2014	30% Russell 3000, 26% MSCI AC World ex US (Net), 15% Bloomberg Universal, 5% Bloomberg Multiverse ex US (Hedged), 7% NCREIF Property Index (Qtr Lagged), 7% ERS Private Equity Performance, 5% ERS Real Return Performance, 5% CBOE S&P 500 BuyWrite (BXM)
07/01/2012	06/30/2013	30% Russell 3000, 26% MSCI AC World ex US (Net), 15.75% Bloomberg Universal, 5.25% Bloomberg Multiverse ex US (Hedged), 7% NCREIF Property Index (Qtr Lagged), 6% ERS Private Equity Performance, 5% ERS Real Return Performance, 5% CBOE S&P 500 BuyWrite (BXM)
10/01/2011	06/30/2012	35% Russell 3000, 18% MSCI World ex US, 3% MSCI Emerging Markets, 18% Bloomberg Universal, 6% Bloomberg Multiverse ex US (Hedged), 7% NCREIF Property Index (Qtr Lagged), 5% ERS Private Equity Performance, 5% ERS Real Return Performance, 3% CBOE S&P 500 BuyWrite (BXM)
07/01/2011	09/30/2011	41% Russell 3000, 14.5% MSCI World ex US, 2.5% MSCI Emerging Markets (Net), 21% Bloomberg Universal, 7% Bloomberg Multiverse ex US (Hedged), 9% NCREIF Property Index (Qtr Lagged), 5% ERS Alternative Investments Performance
01/01/2009	06/30/2011	41% Russell 3000, 14.5% MSCI EAFE Free, 2.5% MSCI Emerging Markets (Net), 21% Bloomberg Universal, 7% Bloomberg Multiverse ex US (Hedged), 9% NCREIF Property Index (Qtr Lagged), 5% ERS Alternative Investments Performance
06/01/1990	12/31/2008	34.9% S&P 500, 4.5% S&P 400 MidCap, 4.5% Russell 2000, 14.5% MSCI EAFE Free, 2.5% MSCI Emerging Markets, 21% Bloomberg Aggregate, 7% Bloomberg Multiverse ex US (Hedged), 7.5% NCREIF Property Index (Qtr Lagged), 3.6% ERS Alternative Investments Performance

Custom Benchmarks: Immediate Sub-Composites of Total Fund

Broad Growth Historical Benchmark

From	To	Broad Growth Historical Benchmark
01/01/2024	Current	56% Global Equity Historical Benchmark, 17% Global Credit Historical Benchmark, 27% Real Assets Historical Benchmark
07/01/2022	12/31/2023	50% Public Growth Benchmark, 28% Private Growth Benchmark, 22% Real Assets Historical Benchmark
07/01/2021	06/30/2022	66% Public Growth Benchmark, 20% Private Growth Benchmark, 14% Real Assets Historical Benchmark
07/01/2020	06/30/2021	70% Public Growth Benchmark, 16% Private Growth Benchmark, 14% Real Assets Historical Benchmark
01/01/2019	06/30/2020	41% Traditional Growth Benchmark, 41% Stabilized Growth Benchmark, 18% Private Growth Benchmark
01/01/2018	12/31/2018	43% Traditional Growth Benchmark, 43% Stabilized Growth Benchmark, 14% Private Growth Benchmark
07/01/2016	12/31/2017	45% Traditional Growth Benchmark, 45% Stabilized Growth Benchmark, 10% Private Growth Benchmark
01/01/2016	06/30/2016	77% Traditional Growth Benchmark, 17% Stabilized Growth Benchmark, 6% Private Growth Benchmark
10/01/2014	12/31/2015	78% Traditional Growth Benchmark, 17% Stabilized Growth Benchmark, 5% Private Growth Benchmark

For the historical components Traditional Growth Benchmark and Private Growth Benchmark please refer to Public Equity Benchmark and Private Equity Benchmark, respectively. Public Growth Benchmark and Stabilized Growth Benchmark are no longer in use. Please see their historical compositions in the "Discontinued Custom Benchmarks" section.

Diversifying Strategies Benchmark

From	To	Diversifying Strategies Benchmark
01/01/2024	Current	86.7% Liquid Defensive Historical Benchmark, 13.3% Illiquid Diversifying Historical Benchmark
07/01/2022	12/31/2023	45% Liquid Defensive Historical Benchmark, 40% Liquid Diversifying Benchmark, 15% Illiquid Diversifying Historical Benchmark
04/01/2017	06/30/2022	50% Liquid Defensive Historical Benchmark, 40% Liquid Diversifying Benchmark, 10% Illiquid Diversifying Historical Benchmark

Liquid Diversifying Benchmark is no longer in use. Please see its historical compositions in the "Discontinued Custom Benchmarks" section.

Custom Benchmarks: Global Equity Composite

Global Equity Historical Benchmark

Global Equity composite was created effective on 01/01/2024 to aggregate the Public and Private Equity components which had previously existed within separate higher-level composites. Accordingly, the Global Equity Policy Benchmark was retroactively reconstructed for periods prior to 01/01/2024 reflecting the historical policy targets for the underlying Public and Private Equity components.

From	To	Global Equity Historical Benchmark
01/01/2024	Current	51.3% Public Equity Historical Benchmark, 48.7% Private Equity Historical Benchmark
07/01/2022	12/31/2023	54.3% Public Equity Historical Benchmark, 45.7% Private Equity Historical Benchmark
07/01/2021	06/30/2022	64.7% Public Equity Historical Benchmark, 35.3% Private Equity Historical Benchmark
07/01/2020	06/30/2021	70.8% Public Equity Historical Benchmark, 29.2% Private Equity Historical Benchmark
01/01/2019	06/30/2020	69.5% Public Equity Historical Benchmark, 30.5% Private Equity Historical Benchmark
01/01/2018	12/31/2018	75.4% Public Equity Historical Benchmark, 24.6% Private Equity Historical Benchmark
07/01/2016	12/31/2017	81.8% Public Equity Historical Benchmark, 18.2% Private Equity Historical Benchmark
01/01/2016	06/30/2016	92.8% Public Equity Historical Benchmark, 7.2% Private Equity Historical Benchmark
10/01/2014	12/31/2015	94.0% Public Equity Historical Benchmark, 6.0% Private Equity Historical Benchmark
07/01/2013	09/30/2014	88.9% Public Equity Historical Benchmark, 11.1% Private Equity Historical Benchmark

Public Equity Historical Benchmark

From 10/2014 through 12/2023, public equity assets have resided within the Broad Growth strategic class with names such as "Traditional Growth" or "Traditional Equity". Thus, Public Equity Benchmark may be considered the successor of Traditional Growth and Traditional Equity Benchmarks. Please note that Public Equity Benchmark is different from the discontinued Public Growth Benchmark; its historical benchmark composition is included in the "Discontinued Custom Benchmarks" section.

From	To	Public Equity Historical Benchmark
10/01/2014	Current	100% MSCI All Country World Investable Market Index (Net)
07/01/2012	09/30/2014	53.6% Russell 3000, 46.4% MSCI All Country World ex US (Net)
10/01/2011	06/30/2014	62.5% Russell 3000, 32.1% MSCI World ex US (Net), 5.4% MSCI Emerging Markets (Net)
07/01/2011	09/30/2011	70.7% Russell 3000, 25.0% MSCI World ex US (Net), 4.3% MSCI Emerging Markets (Net)
01/01/2009	06/30/2011	70.7% Russell 3000, 25.0% MSCI EAFE (Net), 4.3% MSCI Emerging Markets (Net)
03/01/2008	12/31/2008	57.3% S&P 500, 7.4% S&P Mid Cap 400, 7.4% Russell 2000, 23.8% MSCI EAFE (Net), 4.1% MSCI Emerging Markets (Net)

Custom Benchmarks: Global Equity Composite (Continued)**Private Equity Historical Benchmark**

From 10/2014 through 12/2023, private equity assets have resided within the Broad Growth strategic class as "Private Growth". Thus, Private Equity Benchmark may be considered the successor of Private Growth Benchmark.

From	To	Private Equity Historical Benchmark
01/01/2024	Current	100% MSCI ACWI IMI (Net) (Quarter Lagged)
10/01/2014	12/31/2023	100% MSCI ACWI IMI (Net) +2% (Quarter Lagged)
10/01/2011	09/30/2014	Private Equity Actual Performance

Custom Benchmarks: Global Credit Composite

Global Credit Historical Benchmark

From	To	Global Credit Historical Benchmark
01/01/2024	Current	33.3% Public Credit Historical Benchmark, 66.7% Private Credit Historical Benchmark
07/01/2021	12/31/2023	50% Public Credit Historical Benchmark, 50% Private Credit Historical Benchmark
07/01/2020	06/30/2021	25% Public Credit Historical Benchmark, 75% Private Credit Historical Benchmark
10/01/2014	06/30/2020	100% Public Credit Historical Benchmark

Public Credit Historical Benchmark

From	To	Public Credit Historical Benchmark
07/01/2021	Current	50% Bloomberg Global High Yield (Hedged), 50% Morningstar LSTA US Leveraged Loan 100 Index
07/01/2020	06/30/2021	50% Bloomberg Global High Yield (Hedged), 50% Morningstar LSTA US Leveraged Loan 100 Index*
10/01/2014	06/30/2020	50% Bloomberg Global Credit (Hedged) 33.3% Bloomberg Global High Yield (Hedged), 16.7% Morningstar LSTA US Leveraged Loan 100 Index*

Private Credit Historical Benchmark

From	To	Private Credit Historical Benchmark
01/01/2024	Current	50% Bloomberg Global High Yield (Hedged) (Quarter Lagged), 50% Morningstar LSTA US Leveraged Loan 100 Index (Quarter Lagged)
07/01/2021	12/31/2023	25% Bloomberg Global High Yield (Hedged) +1% (Month Lagged), 25% Morningstar LSTA US Leveraged Loan 100 Index +1% (Month Lagged), 25% Bloomberg Global High Yield (Hedged) +1% (Quarter Lagged), 25% Morningstar LSTA US Leveraged Loan 100 Index +1% (Quarter Lagged)
07/01/2020	06/30/2021	50% Bloomberg Global High Yield (Hedged) +1% (Month Lagged), 50% Morningstar LSTA US Leveraged Loan 100 Index +1% (Month Lagged)*
11/01/2019	06/30/2020	100% Public Credit Historical Benchmark

From 11/2019 to 06/2020, Private Credit Benchmark is the same as Public Credit Benchmark.

Notes on Component Indices

Historically, prior to 07/01/2021, Morningstar LSTA US Leveraged Loan Index (formerly known as "S&P LSTA US Leveraged Loan Index") was used in the places where Morningstar LSTA US Leveraged Loan 100 Index occurs on this page. Due to licensing issues, Morningstar LSTA US Leveraged Loan 100 Index is applied retroactively to periods prior to 07/2021. Compositions which historically used Morningstar LSTA US Leveraged Loan Index are marked on this page with an asterisk (*).

Custom Benchmarks: Real Assets Composite

Real Assets Historical Benchmark

Real Assets composite contains the following asset classes: Real Estate (Core and Non-Core), Agriculture (or Farmland), Timberland, Infrastructure (Private and Public), and Other Real Assets. They existed separately under various higher level composites at different points in the Plan's history prior to the Real Asset composite's inception in 07/2020.

Prior to 07/2016, **Real Estate** was an immediate sub-composite of Total Fund. From 07/2016 through 06/2020, Core Real Estate and Non-Core Real Estate were separately subsumed into Stabilized Growth and Private Growth categories respectively (which were both contained within Broad Growth). From 10/2014 to 07/2020, **Agriculture, Timber, and Infrastructure** constituted the Private Inflation-Linked component within Real Return, an immediate subordinate of Total Fund.

The Real Assets Policy Benchmark for periods prior to 07/2020 were retroactively reconstructed using the historical policy allocation targets for the underlying components.

From	To	Real Assets Historical Benchmark
01/01/2024	Current	47% Real Estate Historical Benchmark, 7% Agriculture Historical Benchmark, 9% Timber Historical Benchmark, 37% Infrastructure Historical Benchmark
07/01/2022	12/31/2023	70% Real Estate Historical Benchmark, 10% Agriculture Historical Benchmark, 10% Timber Historical Benchmark, 10% Infrastructure Historical Benchmark
07/01/2021	06/30/2022	70% Real Estate Historical Benchmark, 8% Agriculture Historical Benchmark, 12% Timber Historical Benchmark, 10% Infrastructure Historical Benchmark
07/01/2020	06/30/2021	75% Real Estate Historical Benchmark, 5% Agriculture Historical Benchmark, 12.5% Timber Historical Benchmark, 7.5% Infrastructure Historical Benchmark
01/01/2019	06/30/2020	52% Real Estate Historical Benchmark, 48% Real Return Benchmark
01/01/2018	12/31/2018	57% Real Estate Historical Benchmark, 43% Real Return Benchmark
04/01/2017	12/31/2017	70% Real Estate Historical Benchmark, 30% Real Return Benchmark
07/01/2016	06/30/2017	75% Real Estate Historical Benchmark, 25% Real Return Benchmark
01/01/2016	06/30/2016	80% Real Estate Historical Benchmark, 20% Real Return Benchmark
10/01/2014	12/31/2015	83% Real Estate Historical Benchmark, 17% Real Return Benchmark

Custom Benchmarks: Real Assets Composite (Continued)

Real Estate Historical Benchmark

Real Estate composite became effective in 01/2024 as an aggregate of the Core and Non-Core Real Estate components. The Real Estate Policy Benchmark was retroactively reconstructed for periods prior to 01/2024 reflecting the historical policy allocation targets for the underlying Core and Non-Core components.

From	To	Real Estate Historical Benchmark
01/01/2024	Current	100% FTSE EPRA NAREIT Global REITs Index (Gross) (Quarter Lagged)
07/01/2022	12/31/2023	57.1% Core Real Estate Historical Benchmark, 42.9% Non-Core Real Estate Historical Benchmark
07/01/2021	06/30/2022	55.7% Core Real Estate Historical Benchmark, 44.3% Non-Core Real Estate Historical Benchmark
07/01/2020	06/30/2021	53.3% Core Real Estate Historical Benchmark, 46.7% Non-Core Real Estate Historical Benchmark
07/01/2019	06/30/2020	60% Core Real Estate Historical Benchmark, 40% Non-Core Real Estate Historical Benchmark
07/01/2018	06/30/2019	66% Core Real Estate Historical Benchmark, 34% Non-Core Real Estate Historical Benchmark
07/01/2017	06/30/2018	73% Core Real Estate Historical Benchmark, 27% Non-Core Real Estate Historical Benchmark
07/01/2016	06/30/2017	80% Core Real Estate Historical Benchmark, 20% Non-Core Real Estate Historical Benchmark
07/01/2013	06/30/2016	100% Core Real Estate Historical Benchmark

Core Real Estate Historical Benchmark

From	To	Core Real Estate Historical Benchmark
01/01/2024	Current	100% FTSE EPRA NAREIT Global REITs Index (Gross) (Quarter Lagged)
01/01/2018	12/31/2023	100% NCREIF ODCE (Net) (Quarter Lagged)
07/01/2013	12/31/2017	100% NCREIF Property Index (Net) (Quarter Lagged)

Non-Core Real Estate Historical Benchmark

From 07/2016-06/2020, this composite sat within Private Growth segment and was benchmarked against Private Equity Benchmark (formerly, "Private Growth Benchmark").

From	To	Non-Core Real Estate Historical Benchmark
01/01/2024	Current	100% FTSE EPRA NAREIT Global REITs Index (Gross) (Quarter Lagged)
07/01/2020	12/31/2023	100% NCREIF ODCE (Net) +1% (Quarter Lagged)
07/01/2016	06/30/2020	100% Private Equity Historical Benchmark
07/01/2013	06/30/2016	100% NCREIF Property Index (Net) (Quarter Lagged)

Custom Benchmarks: Real Assets Composite (Continued)**Agriculture Historical Benchmark**

From	To	Agriculture Historical Benchmark
01/01/2024	Current	100% S&P GCSI Agriculture Index (Quarter Lagged)
10/01/2021	12/31/2023	100% NCREIF Farmland Index (Quarter Lagged)

Timber Historical Benchmark

From	To	Timber Historical Benchmark
01/01/2024	Current	100% S&P Global Timber & Forestry Index (Net) (Quarter Lagged)
09/01/1999	12/31/2023	100% NCREIF Timberland Index (Quarter Lagged)

Infrastructure Historical Benchmark

From	To	Infrastructure Historical Benchmark
01/01/2024	Current	100% Dow Jones Brookfield Global Infrastructure Index (Net) (Quarter Lagged)
12/01/2014	12/31/2023	100% Consumer Price Index (Seasonally Adjusted) +4%

Custom Benchmarks: Diversifying Strategies Composite

Liquid Defensive Historical Benchmark

From	To	Liquid Defensive Historical Benchmark
01/01/2024	Current	30.8% MLM Global Index EV (Blend), 15.4% Bloomberg US Treasury: Long Index, 53.8% Bloomberg US Treasury: Intermediate Index
07/01/2022	12/31/2023	40% MLM Global Index EV (Blend), 40% 90-Day T-Bill +2.5%, 15% Bloomberg US Treasury: Long Index, 5% Bloomberg US Intermediate Aggregate ex Credit
07/01/2021	06/30/2022	35% MLM Global Index EV (Blend), 20% 90-Day T-Bill +2.5%, 15% Bloomberg US Treasury: Long Index, 15% Bloomberg US Intermediate Aggregate ex Credit, 15% Bloomberg US TIPS 5+ Year Index
07/01/2016	06/30/2021	40% MLM Global Index EV (Blend), 30% Bloomberg US Treasury: Long Index, 30% Bloomberg US Intermediate Aggregate ex Credit Index

Defensive Return Capture Historical Benchmark

Defensive Return Capture and Discretionary Alpha Benchmarks have the same underlying components since 07/01/2020.

From	To	Defensive Return Capture Historical Benchmark
01/01/2024	Current	100% Bloomberg US Treasury: Intermediate Index
07/01/2020	12/31/2023	100% 90-Day T-Bill +2.5%

Discretionary Alpha Benchmark

Defensive Return Capture and Discretionary Alpha Benchmarks have the same underlying components since 07/01/2020.

From	To	Discretionary Alpha Benchmark
01/01/2024	Current	100% Bloomberg US Treasury: Intermediate Index
07/01/2020	12/31/2023	100% 90-Day T-Bill +2.5%

Intermediate Duration Treasury Benchmark

From	To	Intermediate Duration Treasury Benchmark
01/01/2024	Current	100% Bloomberg US Treasury: Intermediate Index
04/01/2017	12/31/2023	100% Bloomberg US Intermediate Aggregate ex Credit

Custom Benchmarks: Diversifying Strategies Composite (Continued)
Long Duration Treasury Historical Benchmark

From	To	Long Duration Treasury Historical Benchmark
04/01/2022	Current	100% Bloomberg US Treasury: Long Index
02/01/2021	03/31/2022	50% Bloomberg US Treasury: Long Index, 50% Bloomberg TIPS 5+ Year Index
04/01/2017	01/31/2021	100% Bloomberg US Treasury: Long Index

MLM Global Index EV (Blend)

MLM Global Index EV (Blend) is used as the benchmark for the Systematic Trend Following composite and as a component of other custom benchmarks.

From	To	MLM Global Index EV (Blend)
04/01/2019	Current	100% MLM Global Index EV (15V)
04/01/2017	03/31/2019	100% MLM Global Index LT 15V

Illiquid Diversifying Historical Benchmark

From	To	Illiquid Diversifying Historical Benchmark
01/01/2024	Current	100% Swiss RE Global Catastrophe Bond Hedged Index
07/01/2022	12/31/2023	65% 90-Day T-Bills +3.5%, 35% Swiss RE Global Catastrophe Bond Hedged Index
07/01/2021	06/30/2022	50% 90-Day T-Bills +3.5%, 50% Swiss RE Global Catastrophe Bond Hedged Index
04/01/2014	06/30/2021	65% 90-Day T-Bills +3.5%, 35% Swiss RE Global Catastrophe Bond Hedged Index

Idiosyncratic Return Capture Historical Benchmark

From	To	Idiosyncratic Return Capture Historical Benchmark
01/01/2024	Current	100% Swiss RE Global Catastrophe Bond Hedged Index
07/01/2020	12/31/2023	100% 90-Day T-Bills +3.5%

Discontinued Custom Benchmarks

This section includes only the discontinued custom benchmarks which have been a component of current custom benchmarks' history and does not include all the discontinued historical custom benchmarks. The items in this section are ordered alphabetically.

Crisis Risk Offset (CRO) Benchmark

Crisis Risk Offset (CRO) Benchmark was a component of Total Fund Policy Benchmark from 2017 to 2020. The composite consisted of Systematic Trend Following, Alternative Return Capture, and Treasury Duration Capture (in the form of long duration treasuries) components.

From	To	Crisis Risk Offset (CRO) Benchmark
04/01/2019	06/30/2020	35% MLM Global Index EV (Blend), 40% 90-day T-Bills +2.5%, 25% Bloomberg US Treasury: Long Index
04/01/2017	03/31/2019	45% MLM Global Index EV (Blend), 30% 90-day T-Bills +5%, 25% Bloomberg US Treasury: Long Index

Liquid Diversifying Benchmark

Liquid Diversifying Benchmark was a component of Diversifying Strategies Benchmark from 2017 through 2023.

From	To	Liquid Diversifying Benchmark
04/01/2017	12/31/2023	100% 90-Day T-Bills +2.5%

Options-Based Equity Benchmark

Options-Based Equity Benchmark was a component of Public Growth Benchmark from 2020 to 2022.

From	To	Options-Based Equity Benchmark
07/01/2020	06/30/2022	50% CBOE S&P 500 PutWrite (PUT), 35% CBOE MSCI EAFE PutWrite (PSEA), 15% CBOE MSCI Emerging Markets PutWrite (PXEY)

Principal Protection Benchmark

Principal Protection Benchmark was a component of Total Fund Policy Benchmark from 2014 to 2020. The composite primarily consisted of intermediate duration bonds.

From	To	Principal Protection Benchmark
01/01/2018	06/30/2020	55% Bloomberg US Intermediate ex Credit Index, 45% Bloomberg Global Intermediate ex Credit Index (Hedged)
10/01/2014	12/31/2017	100% Bloomberg Global Intermediate ex Credit Index (Hedged)

Discontinued Custom Benchmarks (Continued)

Public Growth Benchmark

Public Growth Benchmark was a component of Broad Growth Benchmark from 2020 through 2023. Please see Global Credit Benchmark and Traditional Growth Benchmark in the Current Custom Benchmarks section under Global Credit Benchmark and Public Equity Benchmark respectively.

From	To	Public Growth Benchmark
07/01/2022	12/31/2023	66.5% Traditional Growth Benchmark, 20% Global Credit Benchmark, 8% MSCI ACWI Minimum Volatility (Net), 5.5% ICE BofA All US Convertibles All Qualities (VXA0)
07/01/2021	06/30/2022	55.5% Traditional Growth Benchmark, 16% Options-Based Equity Benchmark, 15.5% Global Credit Benchmark, 9% MSCI ACWI Minimum Volatility (Net), 4% ICE BofA All US Convertibles All Qualities (VXA0)
07/01/2020	06/30/2021	55.5% Traditional Growth Benchmark, 20% Options-Based Equity Benchmark, 15.5% Global Credit Benchmark, 9% MSCI ACWI Minimum Volatility (Net)

Real Return Benchmark

Real Return Benchmark was a component of Total Fund Policy Benchmark from 2014 to 2020.

From	To	Real Return Benchmark
10/01/2014	06/30/2020	100% Consumer Price Index (Seasonally Adjusted) +3%

Stabilized Growth Benchmark

Stabilized Growth Benchmark was a component of Broad Growth Benchmark from 2014 to 2020.

From	To	Stabilized Growth Benchmark
01/01/2018	06/30/2020	8.5% Bloomberg Global Credit (Hedged), 5.67% Bloomberg Global High Yield (Hedged), 17% CBOE S&P 500 BuyWrite (BXM), 17% CBOE S&P 500 PutWrite (PUT), 2.83% Morningstar LSTA Leveraged Loan, 8.5% MSCI ACWI ex US (Net), 8.5% 90-day T-Bills, 17% MSCI ACWI Minimum Volatility (Net), 15% NCREIF ODCE Index (Net) (Quarter Lagged)
07/01/2016	12/31/2017	8.5% Bloomberg Global Credit (Hedged), 5.67% Bloomberg Global High Yield (Hedged), 17% CBOE S&P 500 BuyWrite (BXM), 17% CBOE S&P 500 PutWrite (PUT), 2.83% Morningstar LSTA Leveraged Loan, 8.5% MSCI ACWI ex US (Net), 8.5% 90-day T-Bills, 17% MSCI ACWI Minimum Volatility (Net), 15% NCREIF Property Index (Net) (Quarter Lagged)
10/01/2014	06/30/2016	30% Bloomberg Global Credit (Hedged), 20% Bloomberg Global High Yield (Hedged), 40% CBOE S&P 500 BuyWrite (BXM), 10% Morningstar LSTA Leveraged Loan Index

Performance Attribution Glossary

Performance Attribution is the process of comparing a portfolio's performance with its benchmark identifying and quantifying the sources of differential returns (also called active returns).

Differential Returns / Active Returns / Value Added are the difference between the return on a portfolio and the return on the benchmark.

Impact on Return

Attribution Segment	Definition	Formula	Where:
Weighting (also called allocation, sector allocation, or pure sector allocation)	The effects of portfolio manager decisions to over/underweight each sector	$(w_i - W_i) \times (b_i - b)$	w_i = portfolio segment weight W_i = benchmark segment weight b_i = benchmark segment return b = total benchmark return
Selection (also called within-sector selection)	The effects of portfolio manager decision to buy specific securities	$(r_i - b_i) \times W_i$	r_i = portfolio segment return b_i = benchmark segment return W_i = benchmark segment weight
Interaction (also called allocation/selection interaction)	The effects of portfolio managers decisions to security selection can inadvertently cause sector over/underweighting	$(r_i - b_i) \times (w_i - W_i)$	r_i = portfolio segment return b_i = benchmark segment return w_i = portfolio segment weight W_i = benchmark segment weight

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Real Assets Strategic Summary

June 30, 2025

Market Value

\$4.38b
June 30, 2024

\$4.72b
June 30, 2025

 \$340 million net capital appreciation over the 1-year period

Asset Allocation

PORTFOLIO COMPOSITION TO TARGETS (%) (As of June 30, 2025)^{*,**}

	Target (Range)	Total Fund	Actual Funded Total Fund
Strategic Asset Allocation			
Real Estate	9.00	8.67	
Core	--	4.48	
Non-Core	--	4.20	
Timber/Agriculture	3.00	2.63	
Timber	--	0.90	
Agriculture	--	1.73	
Infrastructure	7.00	8.00	
Total Real Asset	19.00 (9.00-29.00)	19.31	

 Allocations in line with strategic targets

^{*}Olomana: entire NAV (liquid & illiquid investments) is included in Infrastructure.

^{**}Real Assets Overlay: entire NAV (liquid & illiquid investments) is included in Infrastructure.

^{***}As of 07/01/2023, certain real estate debt funds with ~100% debt (or mostly debt) were reclassified/moved from the Real Assets Composite to the Global Credit Composite. For performance reporting purposes, these were included in the Real Assets composite historically, up to the 07/01/2023 transfer date.

^{****}Effective in First Quarter 2024, ERS changed its real assets benchmark to a blend of public indices. Because ERS' private investments are being compared against a blended benchmark of public indices, a significant amount of "tracking error" is expected. This can lead to periods of out-performance or under-performance over the short or medium term. Focus is on longer-term performance.

^{*****}The Total Real Assets Benchmark begins in the third quarter of 2013 and is not able to be calculated through the Portfolio's inception date.

Long-Term Performance***

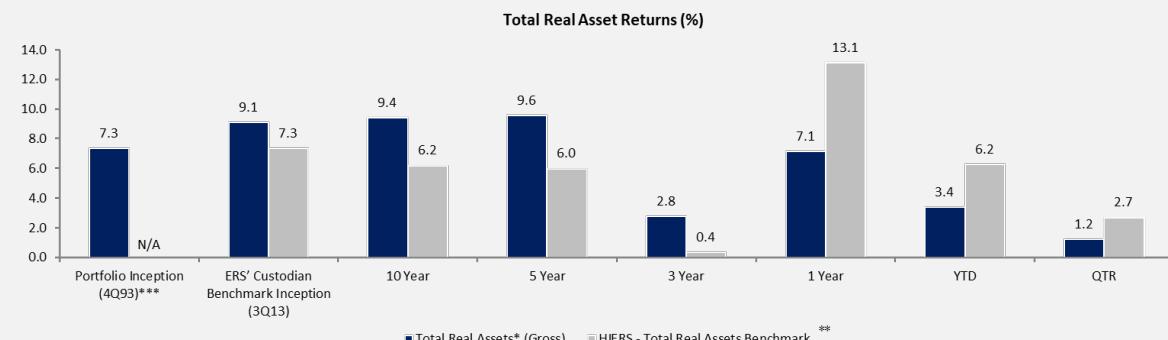
7.3%
ITD

9.4%
10-Yrs

9.6%
5-Yrs

 Consistent delivery of long-term returns

Absolute Returns vs. Benchmarks



 Long-term returns exceeding benchmarks

Liquidity Management

	2Q 2025	1Q 2025	4Q 2024	3Q 2024	Total
Pd In	(84.8)	(234.9)	(287.2)	(119.2)	(726.1)
Cap. Dist	134.0	300.1	196.2	33.7	664.0
Net	49.2	65.2	(91.0)	(85.5)	(62.1)



Contributions exceeding distributions



Real Assets Performance Review

Employees' Retirement System of the State of Hawai'i

Second Quarter 2025

November 2025

HIERS Client Team Biographies:

Jeff Leighton, Kathryn Finneran, & D'metrius Grier



- Partner in Townsend's real estate investment consulting group
- Leads consulting assignments for a select number of real estate retainer and project clients
- Has over 20 years of professional experience, including 12 years of institutional real estate experience
- Previously Jeff worked in structured finance for the Debt Capital Markets group at Banc of America Securities
- BBA in Finance from Radford University

Jeff Leighton



- Associate in Townsend's real estate investment consulting group
- Supports consulting assignments for a select number of real estate retainer and project clients
- Has over 7 years of professional experience, including 5 years of institutional real estate experience
- Previously Kathryn worked for SITE Centers (formerly known as DDR Corp.) with the Corporate and Transactions Legal team
- BA in Political Science from John Carroll University

Kathryn Finneran



- Analyst in Townsend's real estate investment consulting group
- Supports consulting assignments for a select number of real estate retainer and project clients
- Has over 4 years of professional experience, including 2 years of institutional real estate experience
- Previously, D'metrius worked for Rocket Mortgage as a Mortgage Loan Originator
- MSM in Finance from the Weatherhead School of Management of Case Western Reserve University

D'metrius Grier

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A. Executive Summary

Real Assets Markets Performance and Overview



Current HIERS' Benchmarks		Quarter (%)		1 Year (%)		3 Year (%)		5 Year (%)		10 Year (%)	
Portfolio Benchmark		TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET	TGRS	TNET
Total Real Assets Benchmark*		2.7		13.1		0.4		6.0		6.2	
Public Market Benchmarks											
FTSE EPRA/NAREIT Global REITS Index		3.0		10.8		4.4		6.9		4.5	
Dow Jones Brookfield Global Infrastructure Index			4.4		24.3		7.9		8.7		6.3
S&P Global Timber & Forestry Index			-1.7		-5.0		1.7		8.2		5.8
S&P GSCI Agriculture Index		-2.9		-4.0		-7.3		9.4		-0.8	
Private Market Benchmarks											
NFI-ODCE Value Weight	1.0	0.8		3.5	2.7	-5.4	-6.2	3.4	2.5	5.3	4.4
NCREIF Property Index "NPI"		1.2		4.2		-2.8		3.7		5.2	
NCREIF Farmland Property Index "NFI"		0.3		-1.2		3.2		4.8		5.6	
NCREIF Timberland Property Index "NTI"		1.4		5.3		8.7		8.2		5.5	

- Effective in First Quarter 2024, ERS changed its real assets benchmark to a blend of public indices. Because ERS' private investments are being compared against a blended benchmark of public indices, a significant amount of "tracking error" is expected. This can lead to periods of out-performance or under-performance over the short or medium term. Focus is on longer-term performance.
- The Total Real Assets Benchmark generated a 2.7% gross return during the quarter.
- Across the private real asset benchmarks, performance trended flat to slightly positive during the current quarter. The private real estate benchmark, NFI-ODCE, generated a 1.0% gross return with positive performance driven by industrial, retail, and residential assets. NFI generated a 0.3% gross return, with row crops outperforming permanent crops. NTI continued to generate positive performance with a one-quarter return of 1.4%.

Total Real Asset Portfolio Funding Status and Composition

Portfolio Overview As of June 30, 2025 (\$ in Millions)	
Number of Investments	90
Active Investments	73
Liquidated Investments	17
Number of Active GP Relationships	35
Total Commitments	7,037.2
Unfunded Commitments	1,776.6
Total Paid-In Capital	7,306.6
Total Distributions	4,794.7
Net Asset Value	4,715.8
Gross Asset Value	6,910.4
Total Exposure	6,492.5
DPI	0.7x
TVPI	1.3x
Since Inception IRR ¹	7.5%
<i>Active and Liquidated</i>	

- Recent infrastructure, agriculture, and real estate commitments should help the portfolio continue to move towards its target allocation irrespective of liquidating investments.
- In general, the portfolio is in compliance with its Investment Policy Statement.

PORTFOLIO COMPOSITION TO TARGETS (%) (As of June 30, 2025) ^{2,3}			
	Target (Range)	Total Fund	Actual Funded Total Fund
Strategic Asset Allocation			
Real Estate	9.00	8.67	
Core	--	4.48	
Non-Core	--	4.20	
Timber/Agriculture	3.00	2.63	
Timber	--	0.90	
Agriculture	--	1.73	
Infrastructure	7.00	8.00	
Total Real Asset	19.00 (9.00 - 29.00)	19.31	

PORTFOLIO COMPOSITION TO TARGETS (%) Olomana Disaggregated into Various Components (As of June 30, 2025) ^{3,4}			
	Target (Range)	Total Fund	Actual Funded Total Fund
Strategic Asset Allocation			
Real Estate	9.00	8.77	
Core	--	4.48	
Non-Core	--	4.29	
Timber/Agriculture	3.00	2.91	
Timber	--	0.90	
Agriculture	--	2.01	
Infrastructure	7.00	7.63	
Total Real Assets	19.00 (9.00 - 29.00)	19.31	

¹Return calculations throughout this presentation exclude the Real Assets Overlay Portfolio.

²Olomana: entire NAV (liquid & illiquid investments) is included in Infrastructure.

³Real Assets Overlay: entire NAV (liquid & illiquid investments) is included in Infrastructure.

⁴Olomana: liquid markets NAV is included in Infrastructure, illiquid markets NAV is included in their respective components of Core Real Estate, Non-Core Real Estate, Timber, Agriculture, Infrastructure. Illiquid investments that don't fall under one of these components is in Infrastructure.

Private Performance vs. Public Benchmark

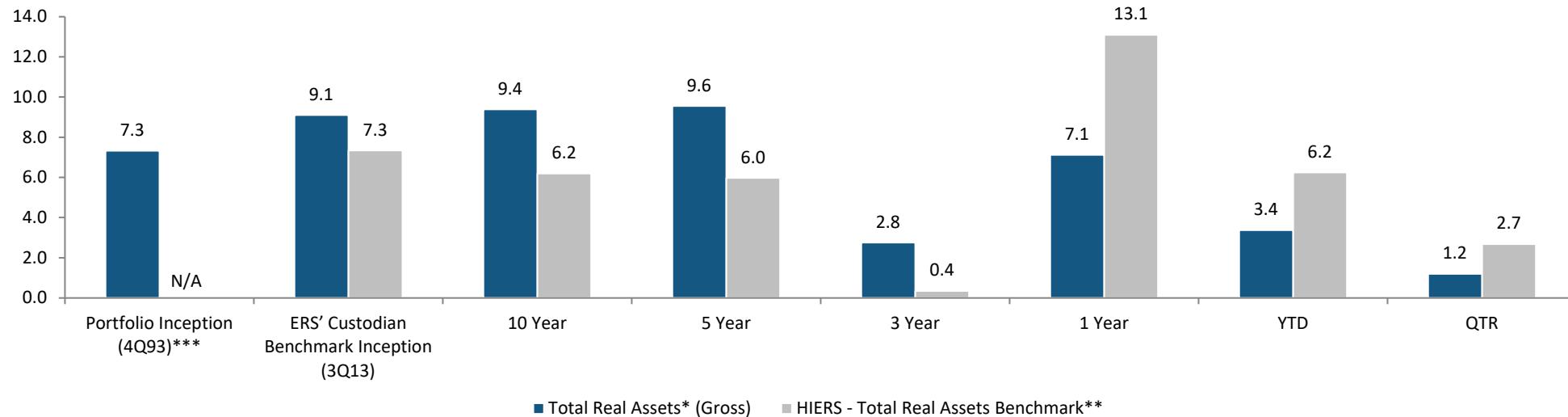


- Effective in First Quarter 2024, ERS changed its real assets benchmark to a blend of public indices. Because ERS' private investments are being compared against a blended benchmark of public indices, a significant amount of "tracking error" is expected. This can lead to periods of out-performance or under-performance over the short or medium term. Focus is on longer-term performance.

Total Real Assets Portfolio Performance Summary

Time Weighted Returns (%)	Portfolio Inception (4Q93)***				ERS' Custodian Benchmark Inception (3Q13)				10 Year				5 Year				3 Year				1 Year				YTD				Quarter				
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	
	Real Assets																																
Total Real Assets*	5.8	1.5	7.3	6.1	2.4	6.6	9.1	7.7	4.2	5.1	9.4	7.6	3.2	6.2	9.6	7.8	2.1	0.6	2.8	2.0	1.8	5.3	7.1	6.0	0.6	2.8	3.4	2.8	0.2	1.0	1.2	0.9	
Total Real Assets Benchmark**			N/A				7.3				6.2				6.0				0.4						13.1						6.2		2.7

Total Real Asset Returns (%)



- The Total Real Assets Portfolio outperformed the benchmark over all longer-term standard measurement periods.
- The Total Real Assets Portfolio has generated a 7.5% net IRR and 1.3x net equity multiple since inception.

Data excludes Real Assets Overlay Portfolio.

*As of 07/01/2023, certain real estate debt funds with ~100% debt (or mostly debt) were reclassified/moved from the Real Assets Composite to the Global Credit Composite. For performance reporting purposes, these were included in the Real Assets composite historically, up to the 07/01/2023 transfer date.

**The Total Real Assets benchmark is defined within the Appendix.

***The Total Real Assets Benchmark, as defined within the Appendix, begins in the third quarter of 2013 and is not able to be calculated through the Portfolio's inception date.

HIERS Real Estate Performance Summary

Time Weighted Returns (%)	Inception (4Q93)**				ERS' Custodian Benchmark Inception (3Q13)				10 Year				5 Year				3 Year				1 Year				YTD				Quarter			
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET
Real Estate																																
Total Real Estate	6.6	0.5	7.1	5.8	5.1	4.4	9.7	7.9	4.7	3.8	8.6	6.8	3.5	3.8	7.4	5.7	2.4	-4.9	-2.6	-3.1	1.9	0.1	1.9	1.0	0.9	0.7	1.6	1.3	0.4	0.5	1.0	0.7
Total Real Estate Benchmark*			8.2				6.5				5.4																					3.0



- The Real Estate Portfolio outperformed the benchmark over all longer-term standard measurement periods, excluding the since inception period. Short- to medium-term performance relative to the Total Real Estate Benchmark can show meaningful tracking error due to the comparison of a private portfolio against a public benchmark.
- The Real Estate Portfolio has generated a 7.3% net IRR and 1.3x net equity multiple since inception.

Data excludes Olomana and Real Assets Overlay Portfolio.

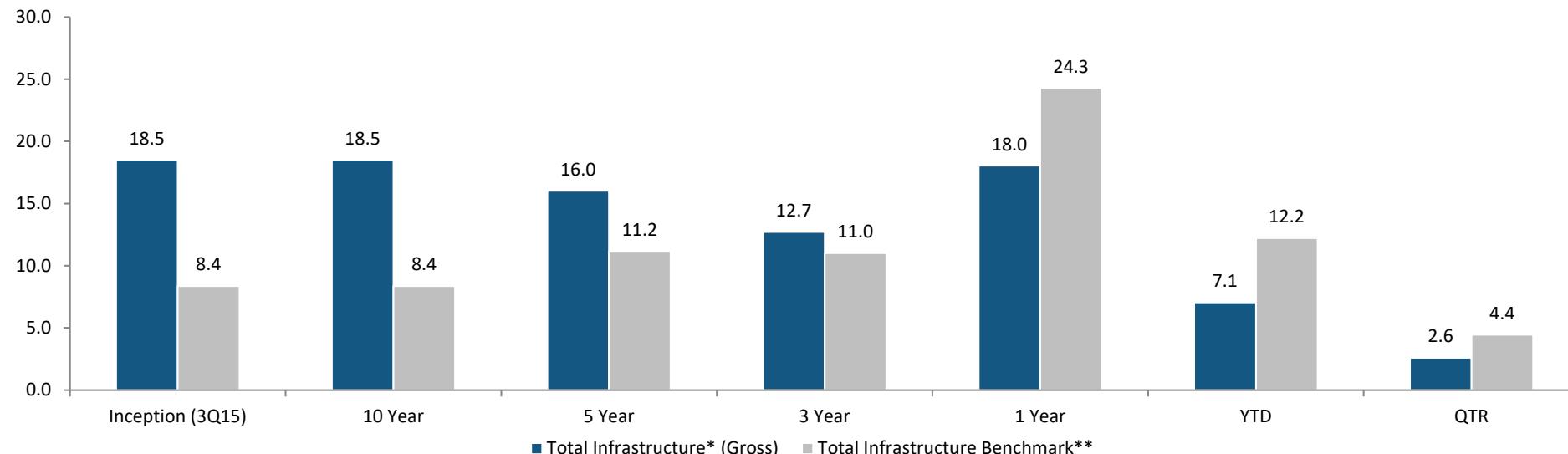
*The Total Real Estate benchmark is defined within the Appendix.

**The inception period for Real Estate benchmarks within BNY's (ERS' Custodian) reporting dates back to 7/1/2013. The inception period of the Real Estate benchmarks have been extended to include the Portfolio inception period, beginning 10/01/1993.

HIERS Infrastructure Performance Summary

Time Weighted Returns (%)	Inception (3Q15)				10 Year				5 Year				3 Year				1 Year				YTD				Quarter			
	INC	APP	TGR	TNET	INC	APP	TGR	TNET	INC	APP	TGR	TNET	INC	APP	TGR	TNET	INC	APP	TGR	TNET	INC	APP	TGR	TNET	INC	APP	TGR	TNET
Infrastructure																												
Total Infrastructure*	4.2	13.5	18.5	14.1	4.2	13.5	18.5	14.1	5.1	10.4	16.0	13.1	3.1	9.3	12.7	10.9	2.5	15.2	18.0	16.0	0.3	6.8	7.1	6.0	0.0	2.6	2.6	2.3
Total Infrastructure Benchmark**			8.4				8.4					11.2				11.0				24.3			12.2				4.4	

Total Infrastructure Returns (%)



- The Infrastructure Portfolio has outperformed its benchmark over all longer-term standard measurement periods. Short- to medium-term performance relative to the Total Infrastructure Benchmark can show meaningful tracking error due to the comparison of a private portfolio against a public benchmark.
- The Infrastructure Portfolio has generated an 12.7% net IRR and 1.3x net equity multiple since inception.

Data excludes Olomana and Real Assets Overlay Portfolio.

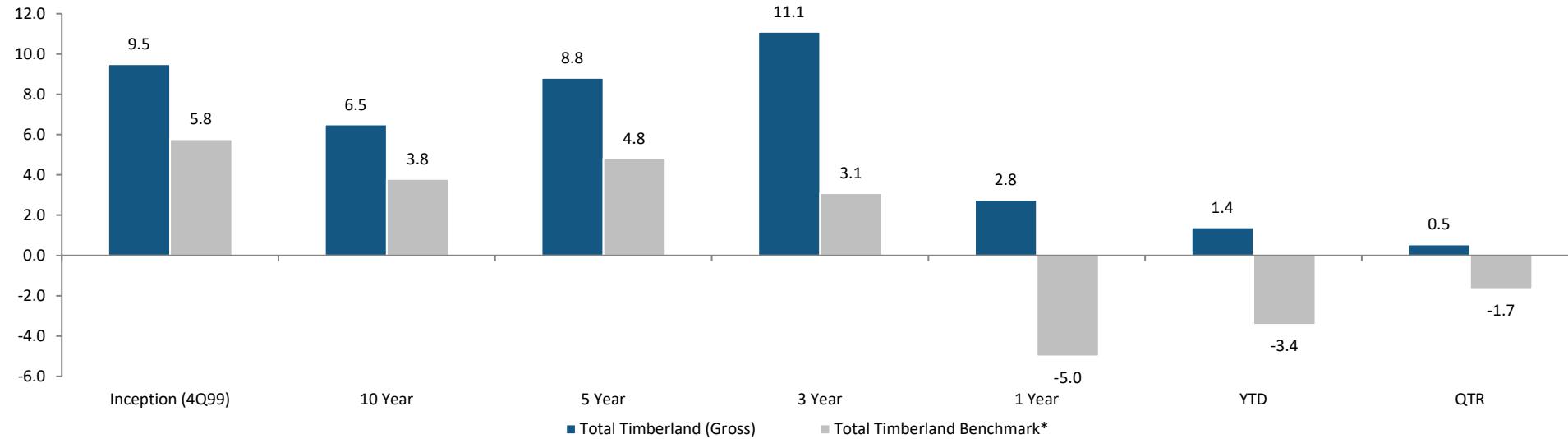
*The Listed Infrastructure Portfolio TWRs may differ from external reporting for ERS. Actual inception for the portfolio was intra-quarter (February 2024) and February/March 2024 performance was not captured in the TWR calculation (starting 2Q24).

**The Total Infrastructure benchmark is defined within the Appendix.

HIERS Timber Performance Summary

Time Weighted Returns (%)	Inception (4Q99)				10 Year				5 Year				3 Year				1 Year				YTD				Quarter			
	INC	APP	TGRSTNET	INC	APP	TGRSTNET	INC	APP	TGRSTNET	INC	APP	TGRSTNET	INC	APP	TGRSTNET	INC	APP	TGRSTNET	INC	APP	TGRSTNET	INC	APP	TGRSTNET	INC	APP	TGRSTNET	
Timberland																												
Total Timberland	1.2	8.2	9.5	8.5	2.0	4.5	6.5	5.5	2.6	6.1	8.8	7.6	2.7	8.2	11.1	9.7	2.8	0.0	2.8	0.6	1.4	0.0	1.4	-0.1	0.5	0.0	0.5	-0.3
Total Timberland Benchmark*			5.8			3.8																						-1.7

Total Timberland Returns (%)



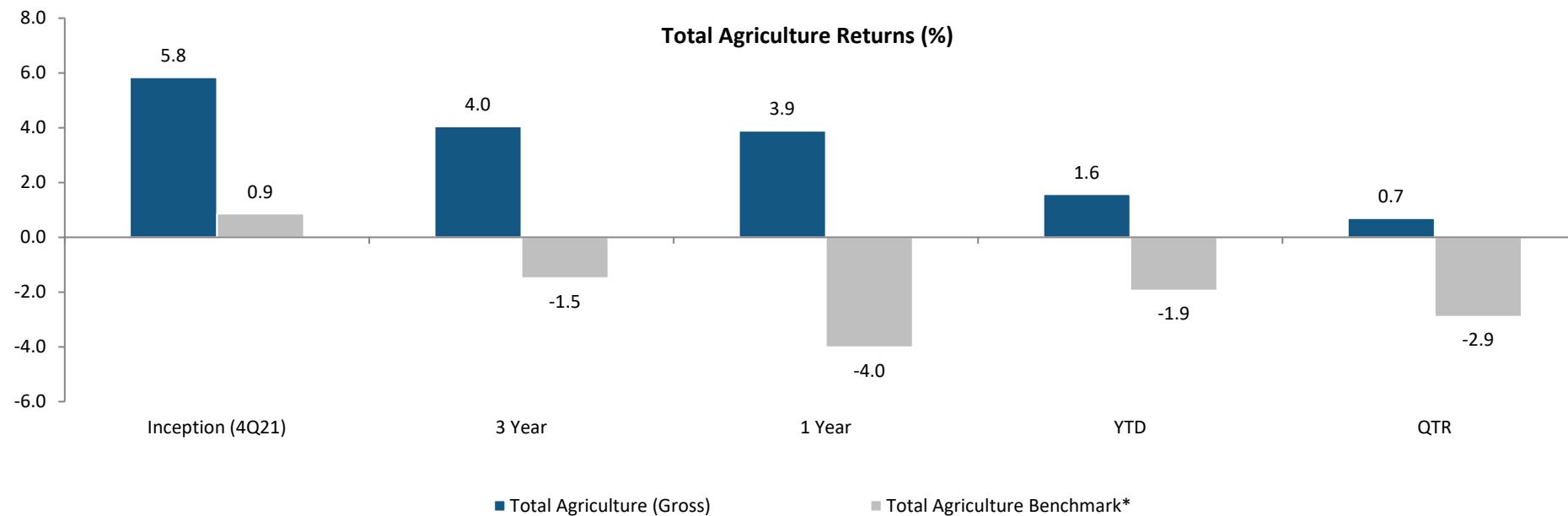
- The portfolio has outperformed the benchmark over all standard measurement periods. Short- to medium-term performance relative to the Total Timber Benchmark can show meaningful tracking error due to the comparison of a private portfolio against a public benchmark.
- The Timber Portfolio has generated an 8.2% net IRR and 3.1x net equity multiple since inception.

Data excludes Olomana and Real Assets Overlay Portfolio.

*The Total Timberland benchmark is defined within the Appendix.

HIERS Agriculture Performance Summary

Time Weighted Returns (%)	Inception (4Q21)				3 Year				1 Year				YTD				Quarter			
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET
Agriculture																				
Total Agriculture	2.3	3.5	5.8	4.6	2.1	2.0	4.0	2.8	1.8	2.1	3.9	2.5	0.8	0.8	1.6	1.1	0.5	0.2	0.7	0.7
Total Agriculture Benchmark*			0.9				-1.5				-4.0									-2.9



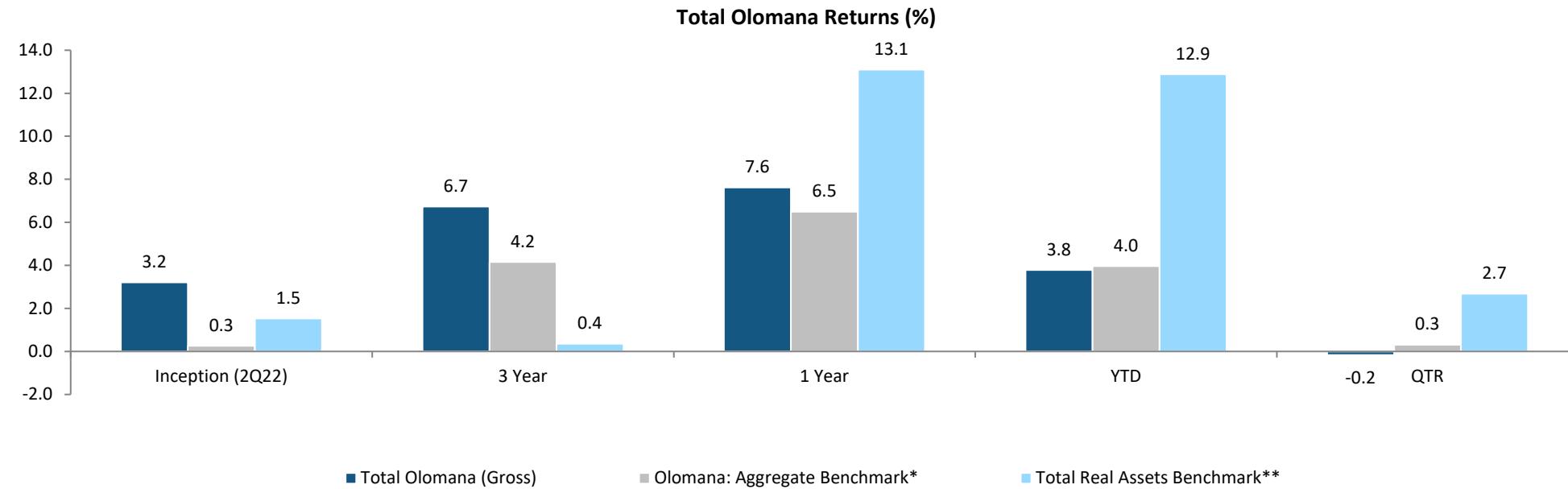
- The portfolio has tracked or outperformed its benchmark over all standard measurement periods. Short- to medium-term performance relative to the Total Timber Benchmark can show meaningful tracking error due to the comparison of a private portfolio against a public benchmark.
- The Agriculture Portfolio has generated a 2.7% net IRR and 1.1x net equity multiple since inception.

Data excludes Olomana and Real Assets Overlay Portfolio.

*The Total Agriculture benchmark is defined within the Appendix.

HIERS Olomana Performance Summary

Time Weighted Returns (%)	Inception (2Q22)				3 Year				1 Year				YTD				Quarter				
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	
Olomana																					
Total Olomana	0.0	3.2	3.2	3.1	0.0	6.7	6.7	6.6	0.0	7.6	7.6	7.9	0.0	3.8	3.8	3.8	0.0	-0.2	-0.2	-0.2	
Olomana: Aggregate Benchmark*		0.3				4.2				6.5				4.0				0.3			
Total Real Assets Benchmark**		1.5				0.4				13.1				12.9				2.7			



- The Olomana Portfolio outperformed the Olomana Aggregate Benchmark over the since inception period. Short- to medium-term performance relative to the Total Real Assets Benchmark can show meaningful tracking error due to the comparison of a private portfolio against a public benchmark.
- The Olomana Portfolio has generated a 3.1% net IRR and 1.1x net equity multiple since inception.

*Olomana Aggregate Benchmark (as of 06/30/25) is used by Olomana Manager for reporting purposes. The components/weights are dynamic to match the evolution of actual Olomana construct. The Olomana Aggregate Benchmark consists of 11.7% (MSCI World Defensive), 5.9% (DJ Brookfield North America Infrastructure), 5.9% (FTSE EPRA/NAREIT Developed Real Estate), 23.5% (Bloomberg 1-5Y TIPS), 11.8% (Bloomberg Commodity), 29.7% (NCREIF Property Index), 5.5% (NCREIF Property Index), 6.2% (50% NCREIF Farmland / 50% NCREIF Timberland).

**The Total Real Assets benchmark is defined within the Appendix.

B. Market Overview

Global Economic Conditions

Growth Outlook Remains Positive

GDP Growth Remains Positive

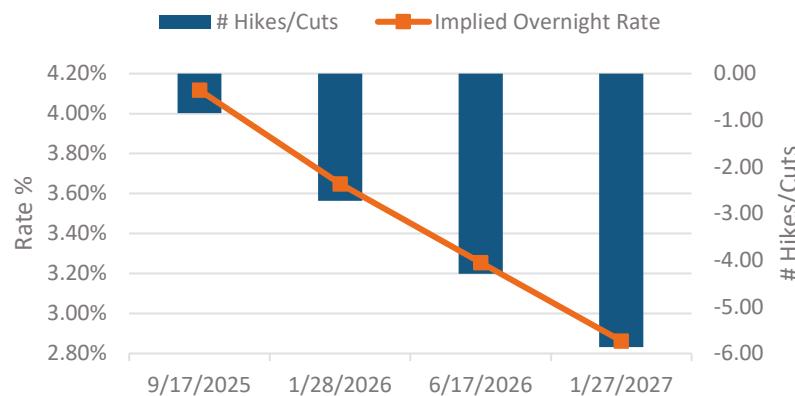
Real GDP Forecasts

Major Regions	Real GDP Forecasts (YoY%)			
	2024	2025	2026	2027
North America	2.6	1.5	1.7	2.0
European Union	1.0	1.3	1.4	1.7
Asia Pacific	4.5	3.8	3.8	3.8

Selected Markets	Real GDP Forecasts (YoY%)			
	2024	2025	2026	2027
United States	1.6	1.4	1.3	1.9
United Kingdom	1.1	1.2	1.1	1.5
Germany	-0.5	0.3	1.0	1.6
China	5.0	4.8	4.2	4.0
Japan	0.1	1.0	0.8	0.8
Australia	1.1	1.6	2.2	2.5

Fed Forecasts Indicating Decline in Rates

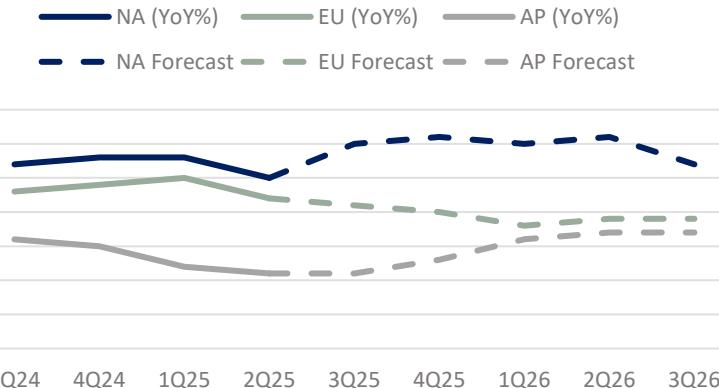
U.S. Fed Funds Futures



Source: Bloomberg (August 2025).

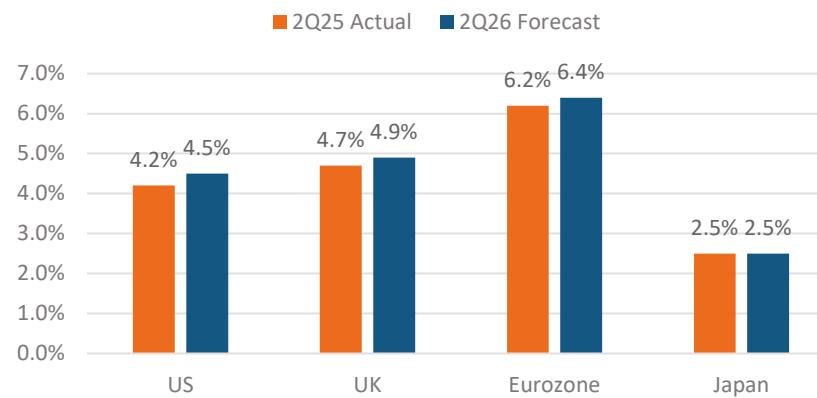
Inflation Forecasted to Slightly Increase in U.S. Due to Tariff Impact

Consumer Price Index



Unemployment Rates Remain Low

Regional Unemployment Rate

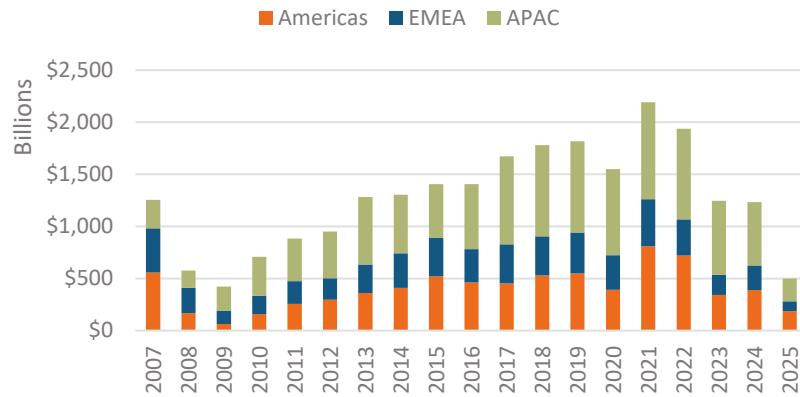


Global Real Estate Market Conditions

Valuations Nearing Bottom

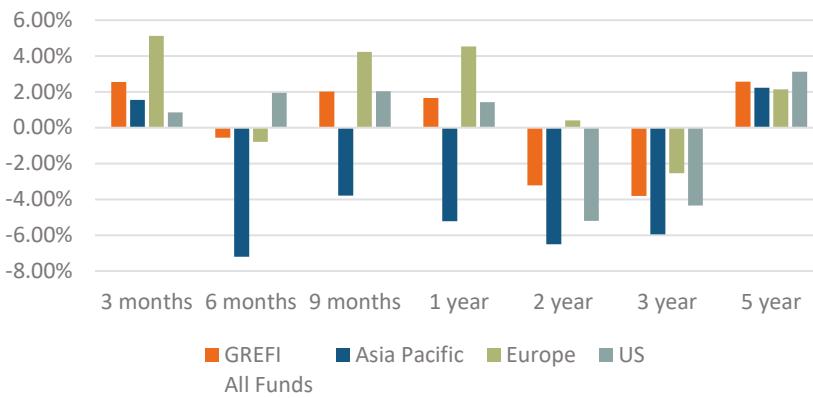
Transaction Volume Remains Low Due to Higher Interest Rates

Global Real Estate Transaction Volume



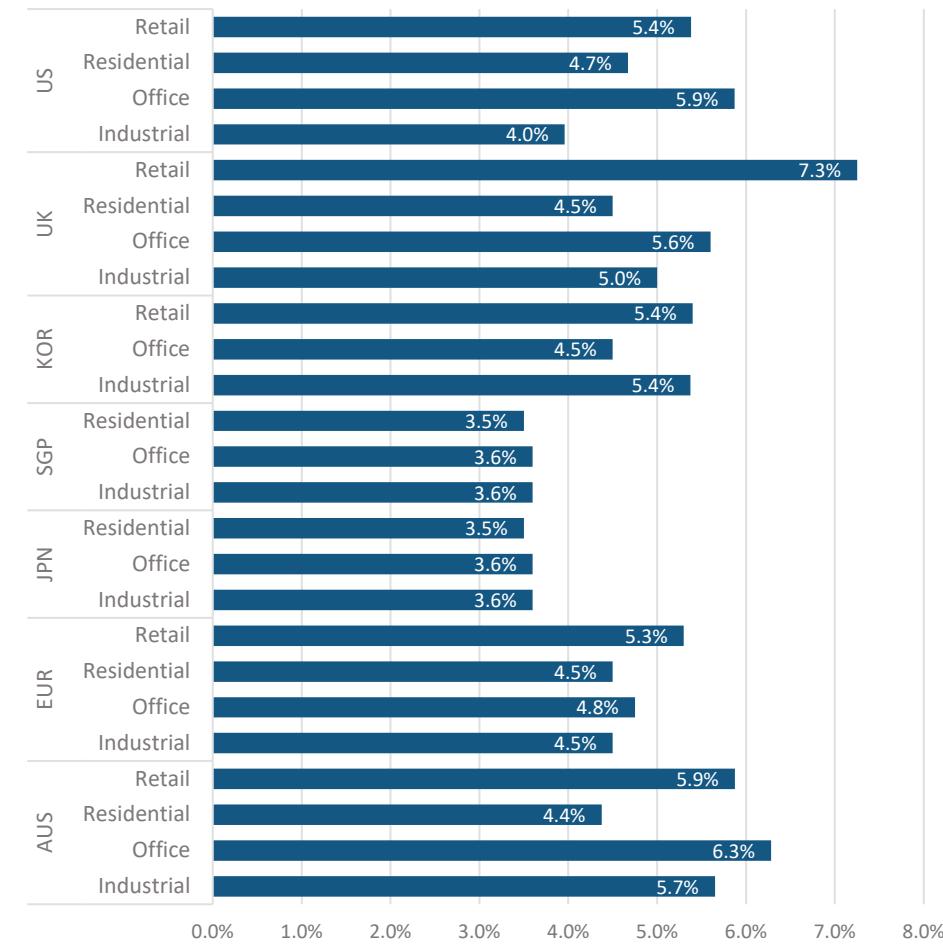
Minimal Cap Rate Expansion Driving Positive YTD Performance

Global Return Performance



Real Estate Valuations

Regional/Sector Going-In Yields



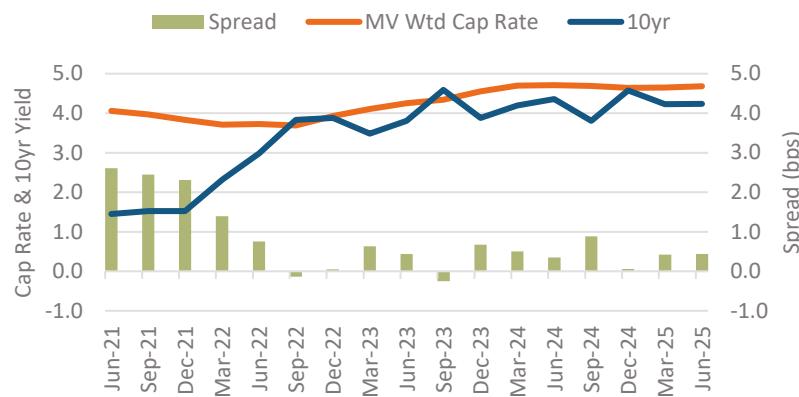
Source: MSCI Real Assets (August 2025). NCREIF, INREV Global Real Estate Fund Index (GREFI) (First Quarter 2025), Townsend Group (August 2025).

US Real Estate Market Conditions

Supply Declining and Growth Forecasts Improving

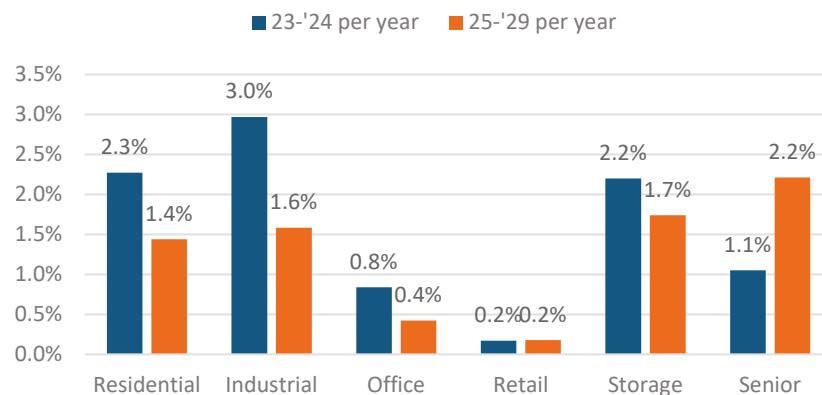
Spreads Remain Narrow Between Private Real Estate Valuations & 10yr Treasury

NPI Current Value Cap Rate Versus 10yr Treasury



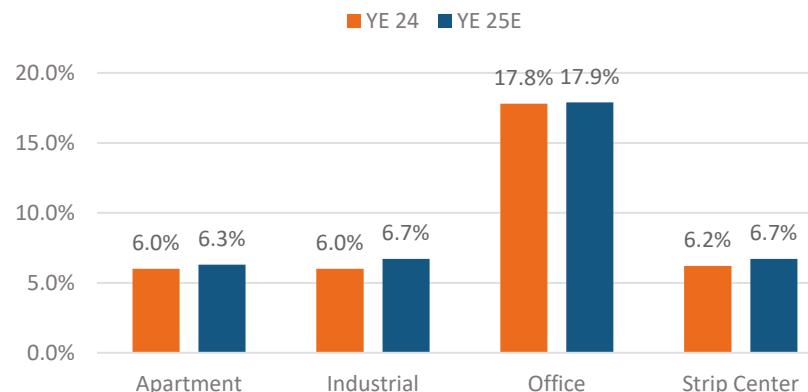
Supply Growth Forecasted to Moderate Across Most Property Types

Annual Completions as % of Existing Stock



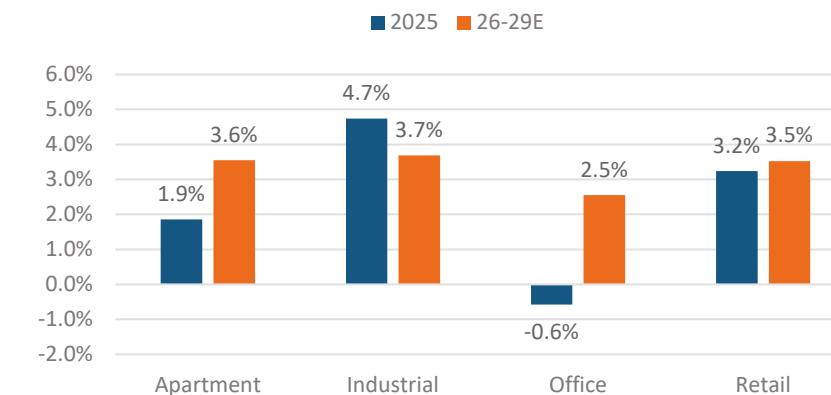
Vacancy Remains Elevated In Office Sector Vacancy Rates

Sector Vacancy Rates



NOI Growth Improving For Apartment With Supply Decline

Sector NOI Growth Forecasts



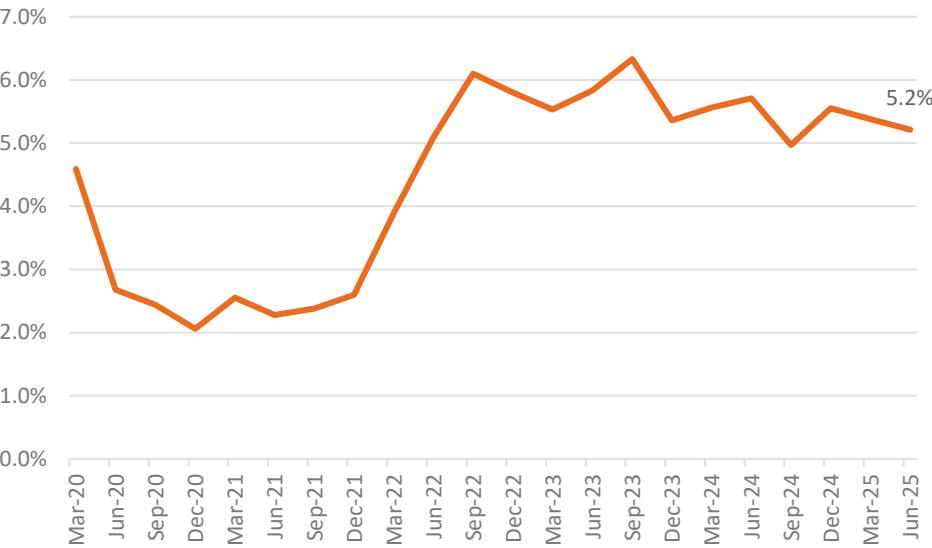
Source: NCREIF, Federal Reserve Bank of St. Louis (June 2025), Green Street (August 2025).

US Debt Financing

Current State of Real Estate Financing Costs

BBB Corporate Bond Yields Peaked in Late 2023

ICE BofA BBB US Corporate Index Effective Yield



Spreads Have Declined But Remain High for Office

Sector Fixed- & Floating-Rate Spreads

Sector	Fixed Spread	Floating Spread
Industrial	1.65%	1.70%
Multifamily	1.50%	1.70%
Office	3.05%	3.00%
Retail	2.50%	2.50%
Hotel	2.85%	2.95%
Self Storage	1.60%	2.00%
10-Year Treasury	4.26%	-
Term SOFR	-	4.31%

Source: Federal Reserve Bank of St. Louis (June 2025), Chatham Financial (Second Quarter 2025).

Infrastructure – Second Quarter 2025 Market Update

General

- In 2Q 2025, Infrastructure managers completed 397 deals for an aggregate deal value of \$77.7 billion (\$563.3M/deal) compared to 453 deals totaling \$72.8 billion (\$431.0M/deal) in 2Q 2024. Europe and North America led the industry in deal volume, accounting for 38.0% and 28.6% of total deals, respectively, followed by APAC which accounted for 18.4% of total deals completed in 2Q.

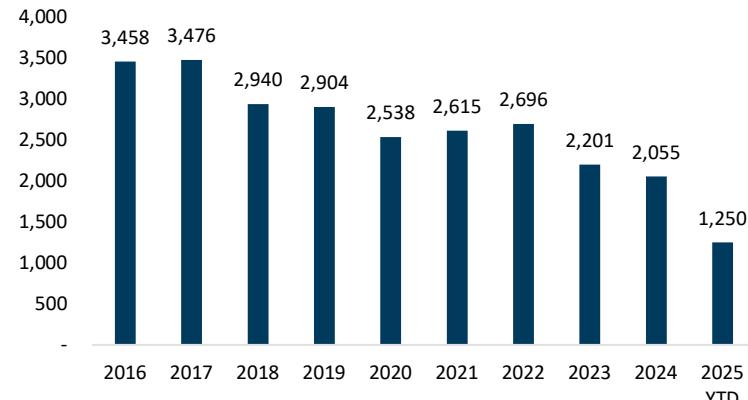
Opportunities

- Mid-market core+ and value-add infrastructure strategies continue to offer good value relative to large cap; platform investing is attractive as well.
- Investors should focus on sectors benefitting from strong macro tailwinds, including:
 - Developing or re-positioning power generation assets to support load growth driven by data center build-out and electrification, and
 - Developing new data centers and providing fiber connectivity to homes and businesses as data consumption and storage continues to grow at high rates.
- Build-to-core greenfield strategies particularly in the social / PPP infrastructure space offer a premium for investors willing to take on construction / development risk.

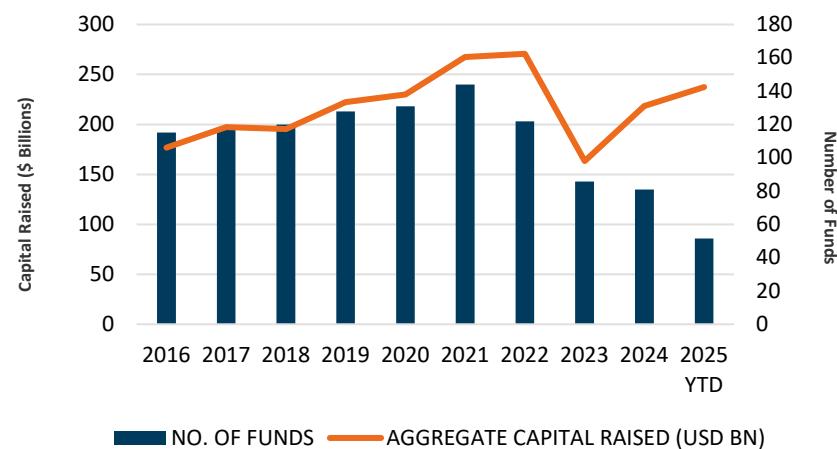
Fundraising

- Year to date, approximately \$142.3 billion of capital was raised by 86 funds compared to \$131.2 billion of capital raised by 135 funds in 2024. Previously, 2023 realized the lowest capital raised since 2015. Infrastructure funds are staying in market longer. Funds in market are reporting the longest timelines to conclude fundraising in the past two decades, averaging 2.6 years to reach final close.
 - Global Infrastructure Partners V was the largest fund closed in 2025, closing on \$25.2 billion.
- To date, there are an estimated 676 funds in the market seeking roughly \$561.0 billion.
 - The largest funds in market, AI Infrastructure Partnership and ANREN Fund, each had target fund sizes of \$30.0 billion and \$100.0 billion, respectively.
 - The ten largest funds are each seeking \$7.5 billion or more of LP commitments, amounting to \$224.4 billion in capital.
- Continuing concerns surrounding the relative availability and pricing of assets remain. Despite slowdowns, fundraising remains competitive given the number of funds and aggregate target fundraising level sought in the market. Investor appetite for the asset class remains strong despite high levels of dry powder and increased investment activity from strategic and corporate buyers as well as institutional investors.

Number of Infrastructure Deals Completed



Global Infrastructure Fundraising



Farmland – Second Quarter 2025 Market Update

FARMLAND MARKETS

Farmland markets remained in a recalibration phase, with values generally flat to slightly lower in core U.S. row-crop regions, while select specialty and citrus markets showed resilience.

Net farm income is forecast to rebound sharply in 2025 driven by livestock strength, citrus recovery, and cost normalization, supporting buyer sentiment even as capital values tread water.

Row crops continued to provide stability with in-place cash leases, while permanent crops—particularly almonds and wine grapes—faced ongoing headwinds from large inventories and shifting consumption trends.

Citrus markets were mixed: Florida benefited from insurance indemnities, while California mandarins and premium varieties achieved strong yields and brand-driven pricing power.

Institutional transaction activity was selective, with a focus on row crops and specialty citrus, while permanent crop trading remained muted due to valuation uncertainty.

Tariff pressures persisted, with China maintaining retaliatory tariffs on U.S. nuts and select row crops; however, significant impacts yet to materialize despite declines in soybean/pistachio export volumes.

Looking ahead, farmland markets face a balance of risks and supports: tighter credit and tariff/trade uncertainty weigh on near-term values, while strong net farm income, selective specialty crop performance, and growing investor focus on natural capital overlays provide medium-term tailwinds.

Second Quarter 2025

FIG 1: Year-to-Date Commodity Indices 2Q 2025 Indices

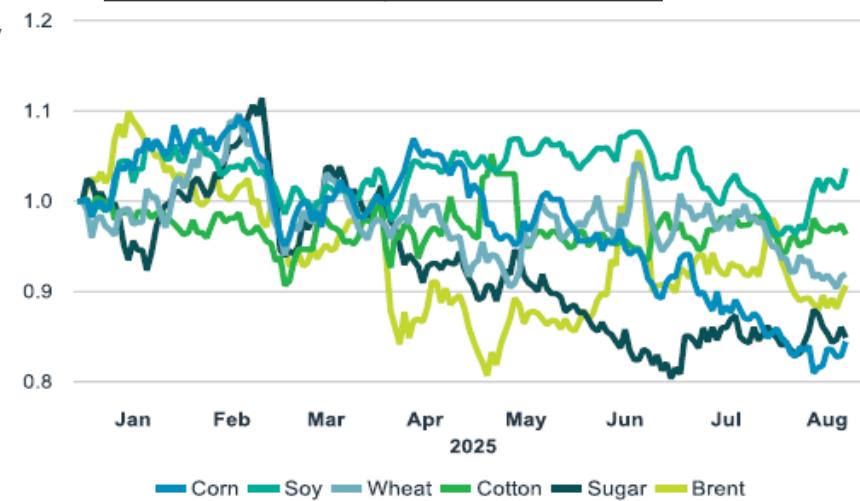
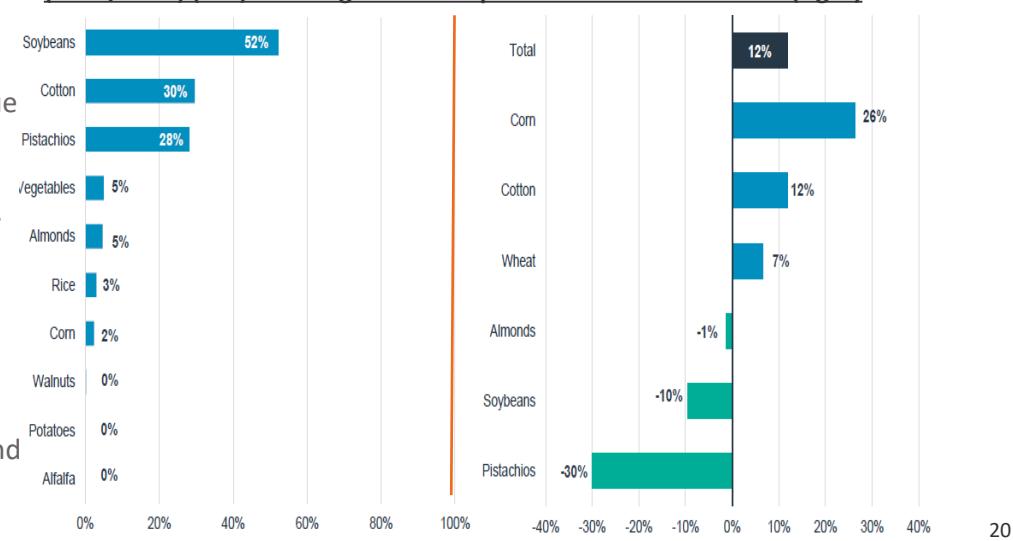


FIG 2: Tariff Impacts – Share of U.S. Commodity Exports to China (2023/2024) (left) & Change YTD of Export Volume vs. Prior Year (right)



Farmland – Second Quarter 2025 Performance Update

NCREIF FARMLAND INDEX COMMENTARY 2Q25

Performance for 2Q25 reflected farmland's continued reliance on income to offset valuation weakness. According to the NCREIF Farmland Property Index ("NFI"), total return was 0.3%, comprised of +0.6% income and -0.3% appreciation.

Row crops delivered a 1.0% return for the quarter, with 0.7% income and 0.3% appreciation. On a trailing one-year basis, row crops returned 3.7%, though momentum is slowing amid commodity and cost pressures.

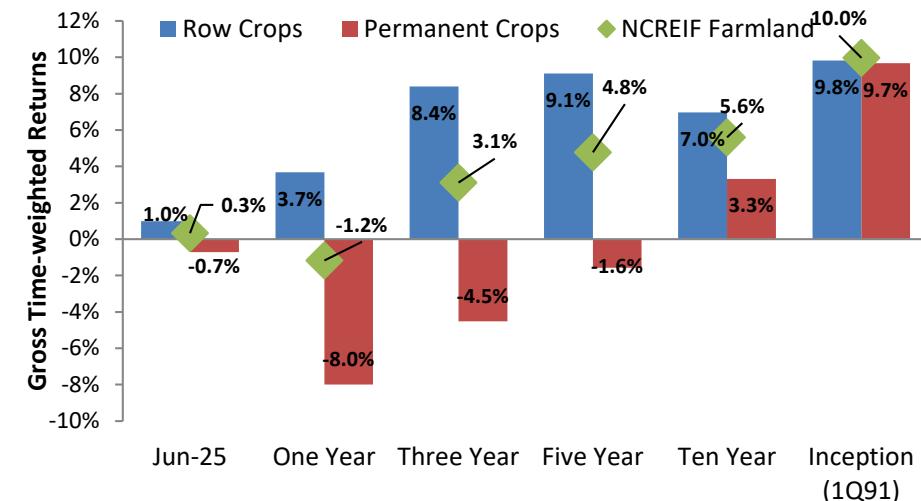
Permanent crops declined -0.7% in 2Q25, as -1.1% appreciation outweighed modest 0.4% income. For the trailing year, returns remained deeply negative at -8.0%, driven by weak pricing, elevated operating costs, and structural risks such as water.

The divergence between crop types persisted.

- Tree nuts (-1.3% in 2Q25; -11.0% TTM) and grapes (-1.3% in 2Q25; -9.4% TTM) continue to anchor permanent cropland underperformance.
- Row crop staples such as corn/soybeans (+0.8% in 2Q25; +1.8% TTM) and wheat (+2.7% in 2Q25; +12.2% TTM) provided relative stability and upside.
- Select specialty permanent crops resisted the trend, as blueberries (+6.4% in 2Q25), oranges (+6.4%), and berries (+4.9%) highlighted the importance of crop-specific exposure along with diversification.

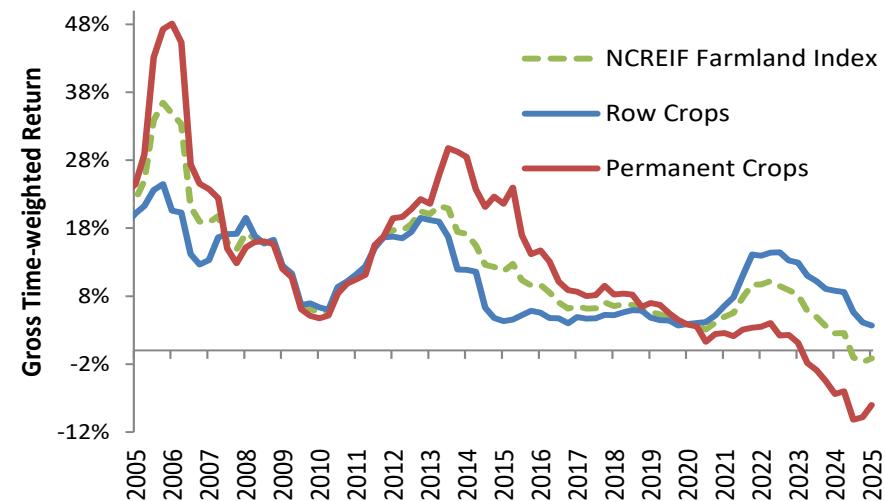
Regional performance was mixed. The Southeast (+4.1%) and Lake States (+2.2%) led results on strong appreciation, while the Pacific West (-0.7%), Pacific NW (-0.7%), and Corn Belt (+0.3%) lagged as valuation softness persisted.

NCREIF Farmland Index Performance June 2025



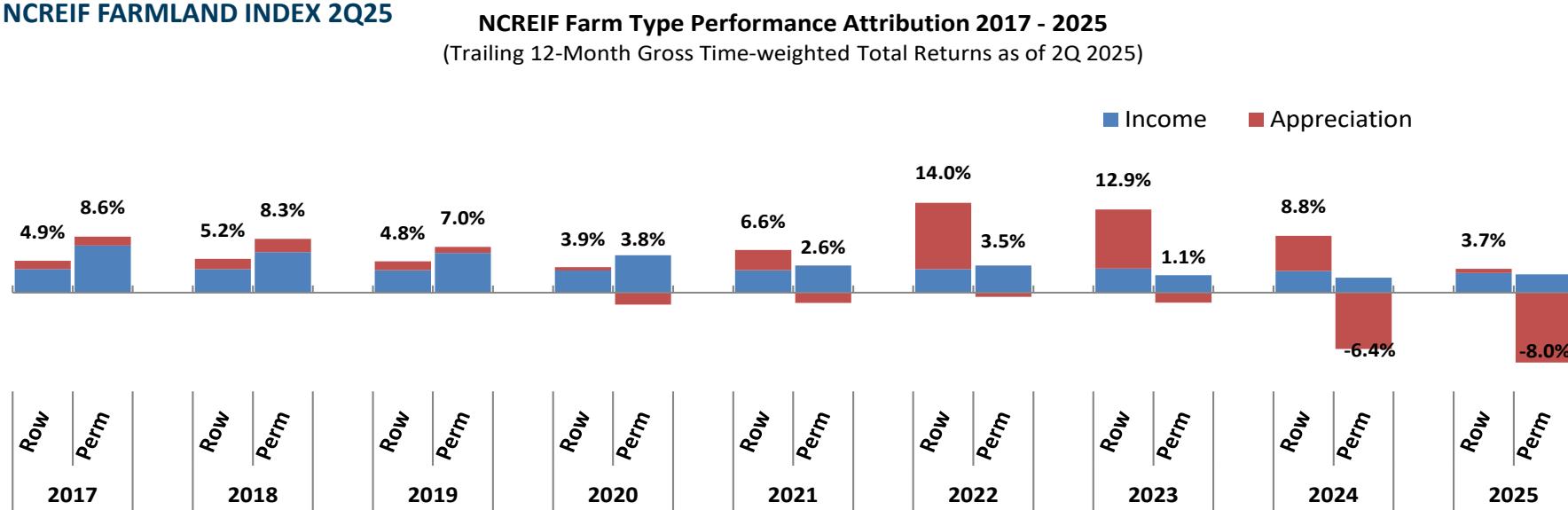
NCREIF Farmland Index Farm Type Performance

(Rolling 1-year total returns through 2Q 2025)



Farmland – Second Quarter 2025 Performance Update

NCREIF FARMLAND INDEX 2Q25



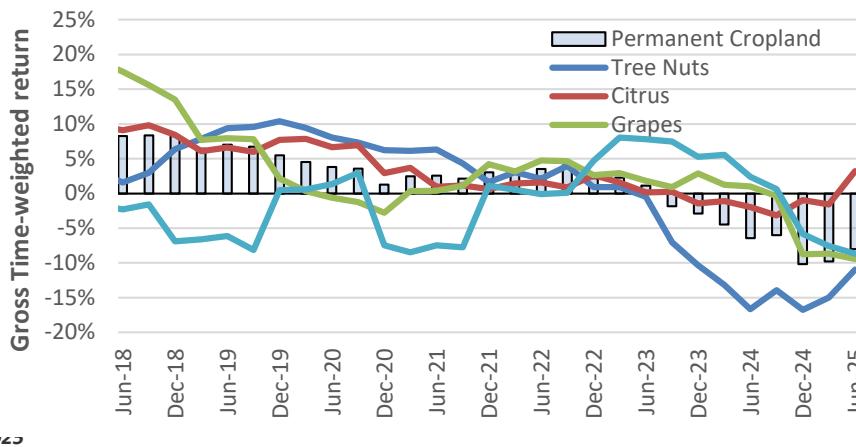
NCREIF Farm Type Performance Attribution 2017 - 2025

(Trailing 12-Month Gross Time-weighted Total Returns as of 2Q 2025)

■ Income ■ Appreciation

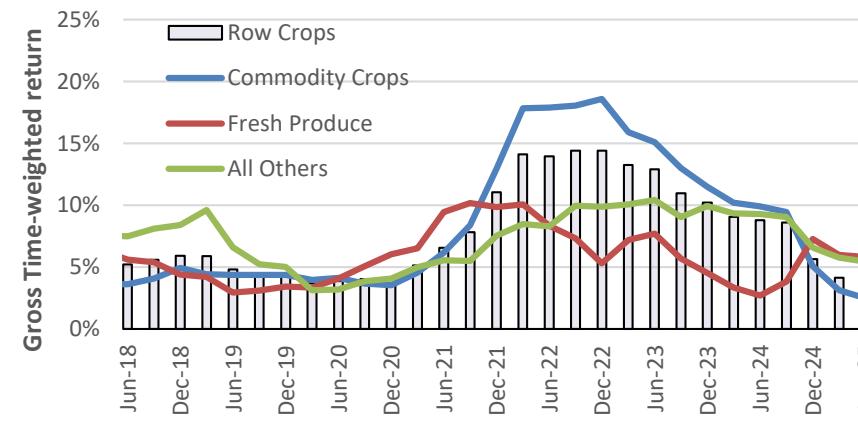
NCREIF Permanent Crop Performance by Crop Category

(Rolling 1-year total returns through 2Q 2025)



NCREIF Row Crop Performance by Crop Category

(Rolling 1-year total returns through 2Q 2025)



Second Quarter, 2025

Timberland – Second Quarter 2025 Market Update

TIMBERLAND MARKETS

Global market conditions stayed uneven in 2Q25: pulp prices softened with elevated inventories, and solid wood markets were weighed down by weaker housing demand and ongoing tariff and trade policy uncertainty.

In the U.S. South, pine sawtimber (+4.2% QoQ) and chip-n-saw (+5.9%) gained; pine pulpwood (-12.5%) and hardwood pulpwood (-1.6%) declined, reflecting mill closures and high inventories.

In the PNW, Doug-fir fell -6.7% (+11.9% YoY) and Whitewoods were flat QoQ (+6.6% YoY). Domestic mill demand provided stability, but Chinese log imports dropped 11% YoY, leaving export markets under pressure.

Hardwood regions remained soft, with pulp markets challenged and species pricing mixed: red oak down but maple holding gains; mill closures added pressure.

Latin America delivered mixed results: Brazil eucalyptus stumpage surged (+10%) while charcoal fell; Chile's pulpwood rose (+5.7%) but Uruguay markets slipped modestly.

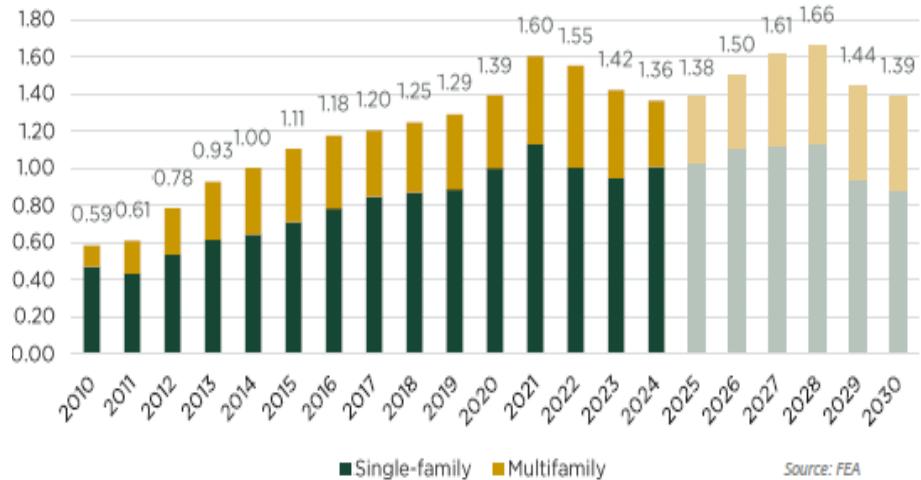
Transaction activity was subdued across managers, with selective buyers emphasizing harvest optionality, carbon and ESG overlays, and resilience to tariffs and housing cycles.

Tariff negotiations and trade frictions remained a headwind, particularly for hardwood exports and PNW softwood logs, where uncertainty over U.S.-China duties has limited volumes and pressured delivered log pricing.

Second Quarter 2025

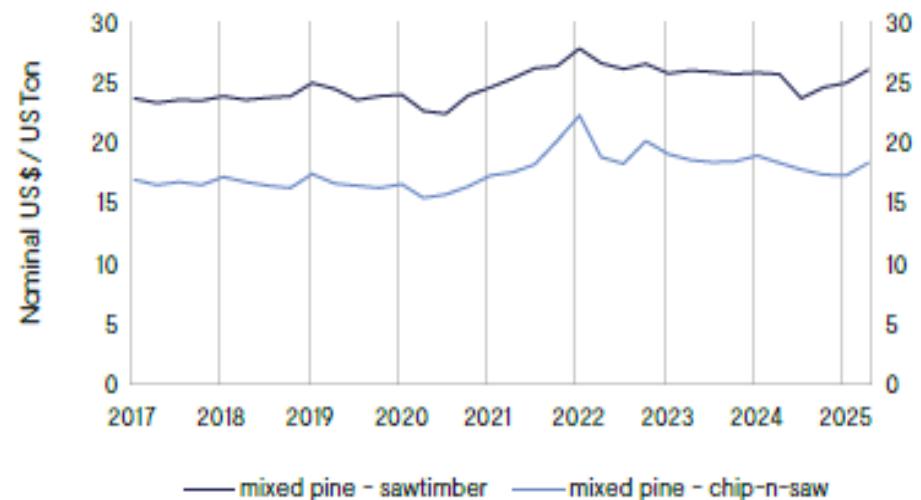
Sources by Figure: (1) Forest Economic Advisors 2Q 2025, RMS; (2) TimberMart South 2Q 2025; BTG

FIGURE 1: U.S. Housing Starts, SAAR (millions)



Source: FEA

FIGURE 2: U.S. South Pine Chip-n-Saw and Sawtimber Prices



Timberland – Second Quarter 2025 Performance Update

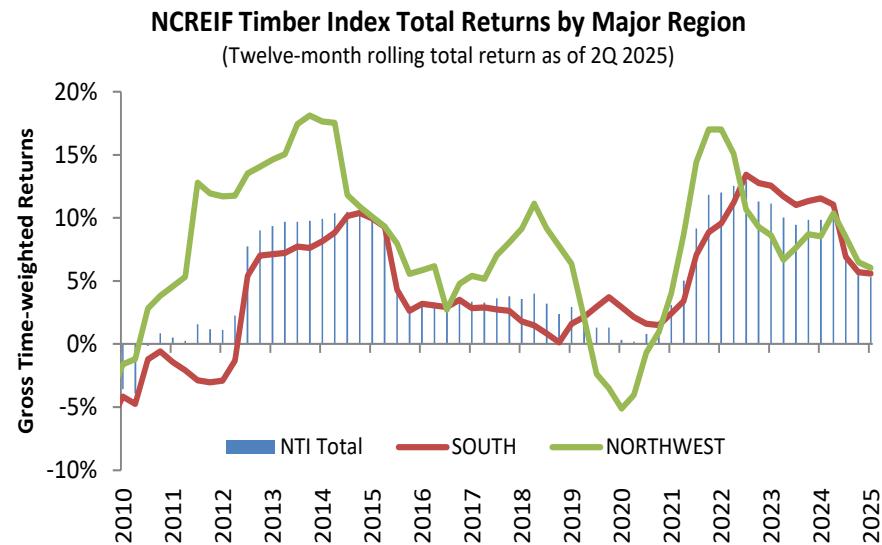
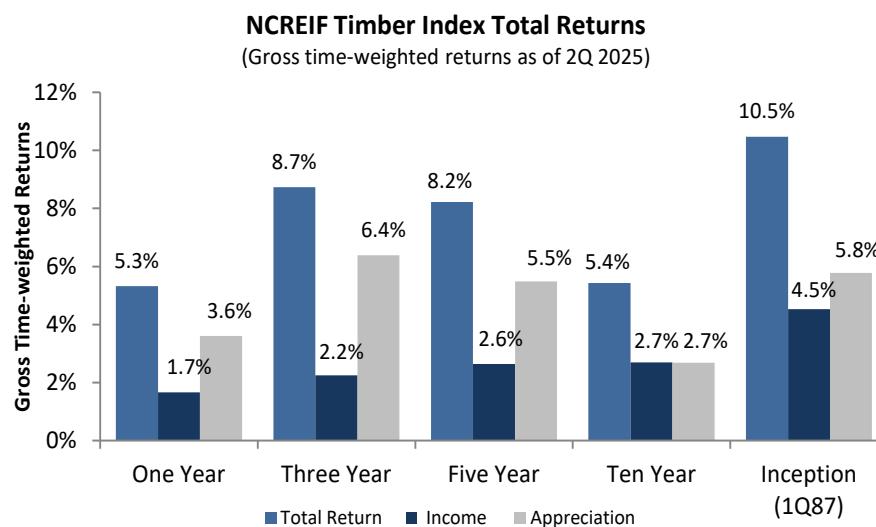
NCREIF TIMBERLAND INDEX COMMENTARY 2Q25

Performance for 2Q25 reflected continued positive momentum, led by capital appreciation. According to the NCREIF Timberland Property Index (NTI), total return for the quarter was 1.44%, comprised of 0.39% income return and 1.04% appreciation. This marks the fourth consecutive positive quarter, with appreciation doing most of the lifting. On a trailing one-year basis, total return for the index stood at 5.3%, including ~1.7% income and ~3.6% appreciation, broadly in line with long-term averages.

The South posted a 0.9% return for the quarter, with modest income and appreciation gains. On a trailing one-year basis, the South delivered a 5.7% return, supported by resilient mill demand and consistent biological growth, though recent pine pulpwood weakness remains a headwind.

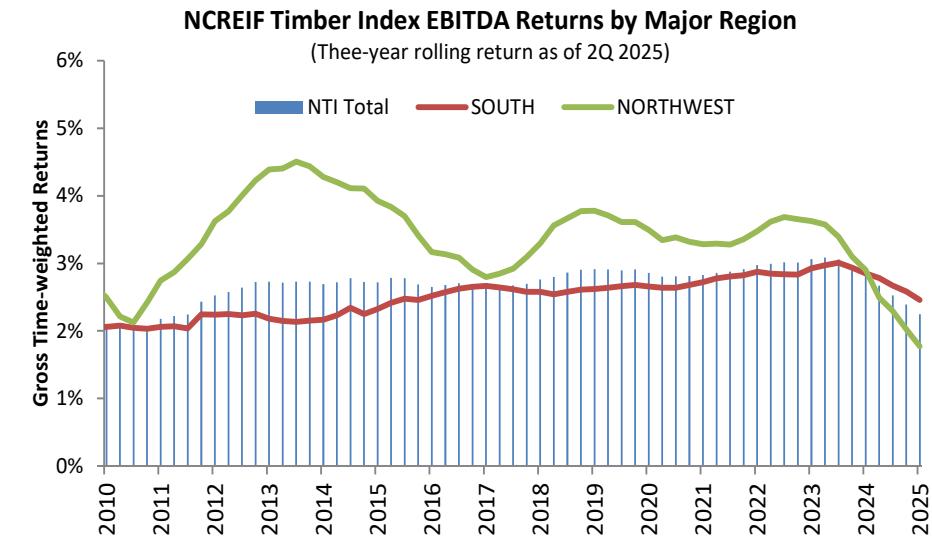
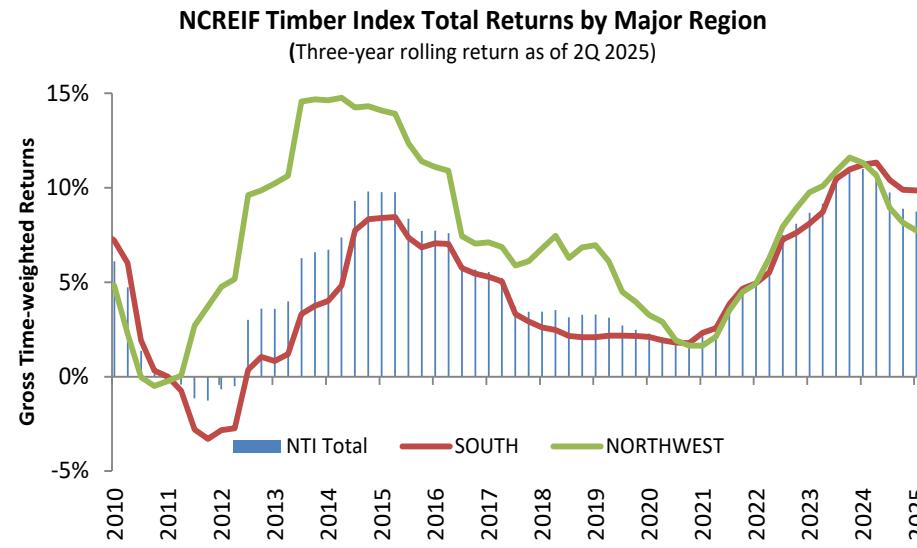
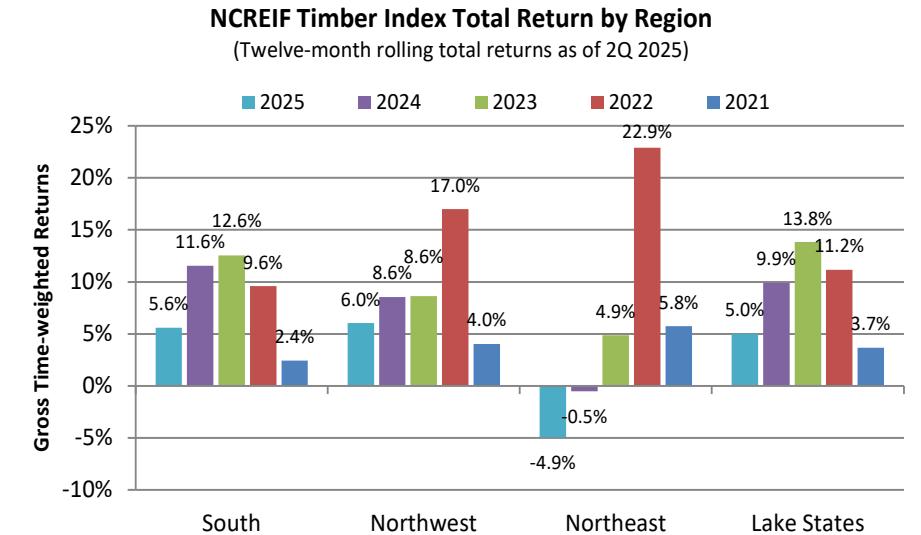
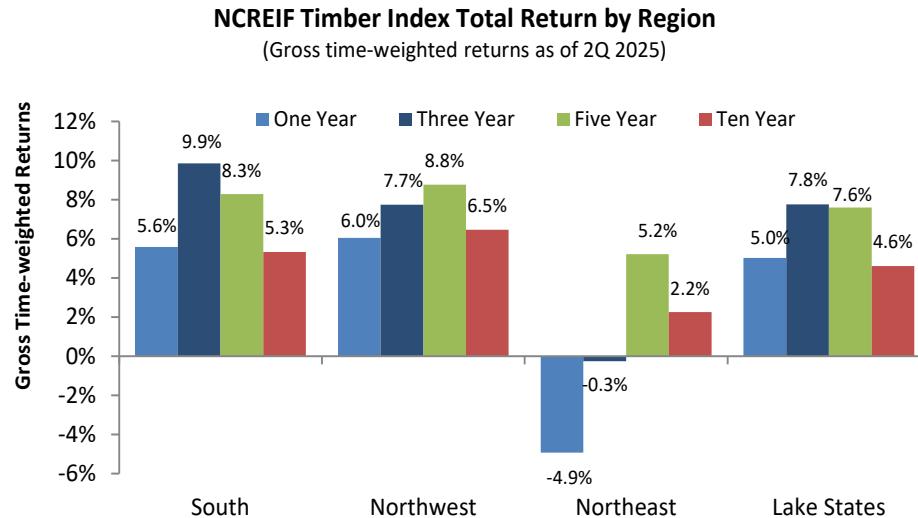
The Pacific Northwest generated a 0.8% quarterly return, and 6.5% return over the trailing year, driven primarily by appreciation linked to modest domestic log price gains. However, export market weakness—notably soft demand from China—continues to cap upside potential.

The Northeast underperformed once again, with returns pressured by weak low-grade hardwood and pulpwood markets, consistent with the trend observed in prior quarters, while the Lake States recorded a 2.4% return during the quarter, and a 5.2% return over the trailing year, benefiting from stable income, biological growth, and limited pricing volatility relative to coastal regions.



Timberland – Second Quarter 2025 Performance Update

NCREIF TIMBERLAND INDEX 2Q25



Second Quarter 2025

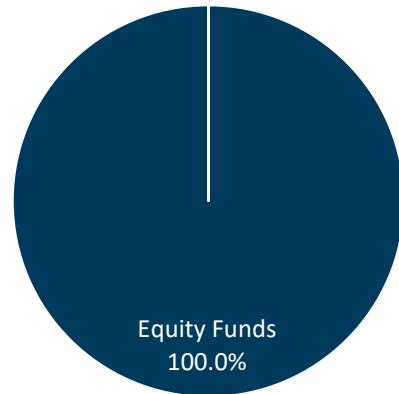
C. Real Estate Portfolio

Real Estate Portfolio Funding Status and Composition

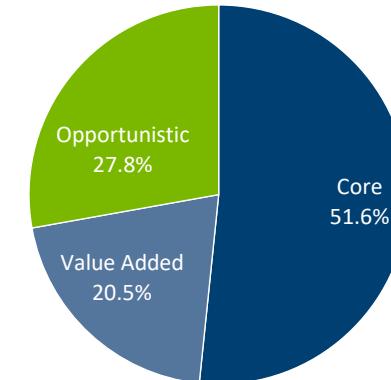
Portfolio Overview As of June 30, 2025 (\$ in Millions)	
Number of Investments	69
Active Investments	52
Liquidated Investments	17
Number of Active GP Relationships	23
Total Commitments	4,379.7
Unfunded Commitments	1,100.4
Total Paid-In Capital	4,314.5
Total Distributions	3,703.3
Net Asset Value	2,118.7
Gross Asset Value	3,816.3
Total Exposure	3,219.1
DPI	0.6x
TVPI	1.3x
Since Inception IRR	7.3%

Portfolio Composition To Targets As of June 30, 2025			
	Target	Unfunded Commitments + Funded (NAV)	Funded (NAV)
Core	N/A	4.6	4.5
Non-Core	N/A	8.6	4.2
Total Real Estate	9.0	13.2	8.7
Leverage	50.0	N/A	44.5

Structure Diversification
(As of June 30, 2025)



Style Diversification by Net Asset Value
(As of June 30, 2025)



Core Real Estate Portfolio Funding Status & Returns



Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)	LTV (%)
Core									
Core	1993	1,039,310,283	1,560,359,161	19,691,571	1,100,217,823	1,093,962,140	51.6	34.6	32.3

Time Weighted Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception TGRS	TWR Calculation Inception	Net IRR	DPI	Equity Multiple		
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET							
Core																											
Core	1.2	-0.3	0.8	0.7	4.8	-1.2	3.5	2.9	4.8	-6.9	-2.3	-2.2	5.1	2.9	8.1	7.3	5.3	2.5	7.9	7.2	6.6	5.8	4Q93	7.2	0.7	1.4	
Total Core Real Estate Benchmark*			3.0				10.8				-3.7											8.1		4Q93			
FTSE EPRA/NAREIT Global REITS Index			3.0				10.8				4.4											6.9		4.5			
NFI-ODCE Value Weight	1.0	0.0	1.0	0.8	4.1	-0.6	3.5	2.7	3.8	-9.0	-5.4	-6.2	3.8	-0.4	3.4	2.5	4.1	1.2	5.3	4.4	7.8	6.8	4Q93				

Notes

Traditional performance measurement time weighted returns are depicted for the core portfolio as core real estate portfolios use of time weighted returns is a commonly accepted practice.

*The Total Core Real Estate benchmark is defined within the Appendix.

Non-Core Real Estate Portfolio Funding Status & Returns



Funding Status (\$)		Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)	LTV (%)
Non-Core										
Value Added		2007	835,000,000	652,003,685	223,283,392	284,035,559	435,347,430	20.7	20.6	53.9
Opportunistic		2010	1,595,466,821	826,937,931	857,457,917	431,700,530	589,374,510	27.8	44.9	53.1
Non-Core		2007	2,430,466,821	1,478,941,616	1,080,741,309	715,736,089	1,024,721,940	48.4	65.4	53.4
Total Private Real Estate (Ex-Olomana)		2015	3,400,466,821	3,039,300,777	1,100,432,880	1,815,953,912	2,118,684,080	100.0	100.0	44.5

Time Weighted Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception		TWR Calculation Inception	Net IRR	DPI	Equity Multiple	
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET					
Non-Core																											
Value Added	0.1	1.8	1.9	1.6	0.1	-0.5	-0.4	-1.3	0.3	-5.7	-5.4	-6.5	2.4	2.4	4.8	2.5	4.4	3.2	7.7	5.3	9.1	6.3	4Q07	7.0	0.4	1.2	
Opportunistic	-0.8	1.2	0.4	-0.1	-2.3	3.0	0.7	-0.8	-0.8	-0.1	-0.9	-1.9	1.1	6.8	8.0	5.3	5.6	8.1	14.0	9.1	22.1	15.3	3Q10	9.4	0.5	1.2	
Non-Core	-0.4	1.5	1.1	0.6	-1.3	1.4	0.2	-1.0	-0.3	-2.6	-2.9	-4.0	1.7	4.9	6.5	4.0	4.6	5.6	10.4	7.1	11.7	8.1	4Q07	8.1	0.5	1.2	
Total Non-Core Real Estate Benchmark*			3.0				10.8				-3.2				4.9				6.0			5.8		4Q07			
Total Private Real Estate (Ex-Olomana)	0.4	0.5	1.0	0.7	1.9	0.1	2.0	1.1	2.4	-4.9	-2.6	-3.1	3.5	3.8	7.4	5.7	4.7	3.8	8.6	6.8	7.1	5.8	4Q93	7.3	0.6	1.3	
Total Real Estate Benchmark*			3.0				10.8				-3.5				4.5				5.4			8.2		4Q93			
FTSE EPRA/NAREIT Global REITS Index			3.0				10.8				4.4				6.9				4.5								
NFI-ODCE Value Weight +100 BPS			1.3	1.1			4.6	3.7			-4.5	-5.3			4.5	3.6			6.4	5.5		8.9	7.9	4Q93			

Notes

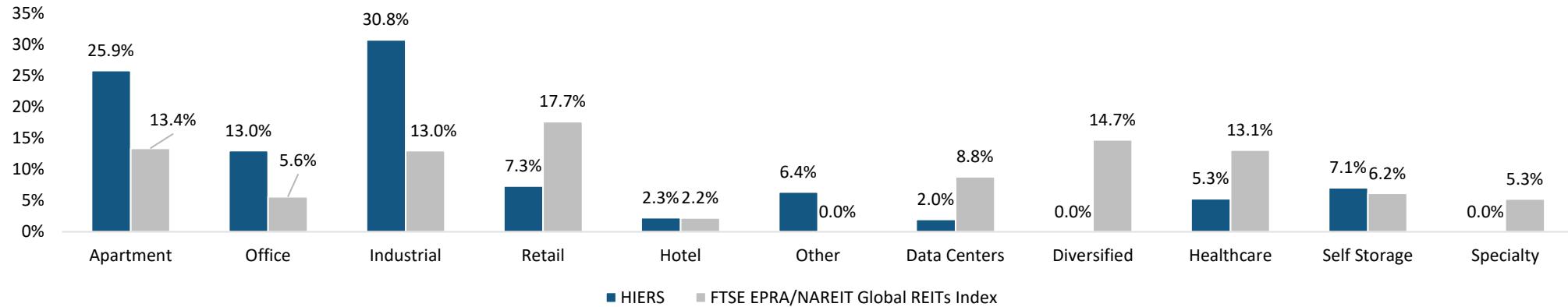
While time-weighted returns are commonly used as a standard measure of performance in traditional asset classes and core real estate portfolios, time-weighted returns ignores both the timing and magnitude of cash flows into and out of the portfolio. Hence, the Internal Rate of Return ("IRR") is a better and more common measure of Non-Core real estate performance.

*The Total Non-Core Real Estate benchmark and Total Real Estate benchmark are defined within the Appendix.

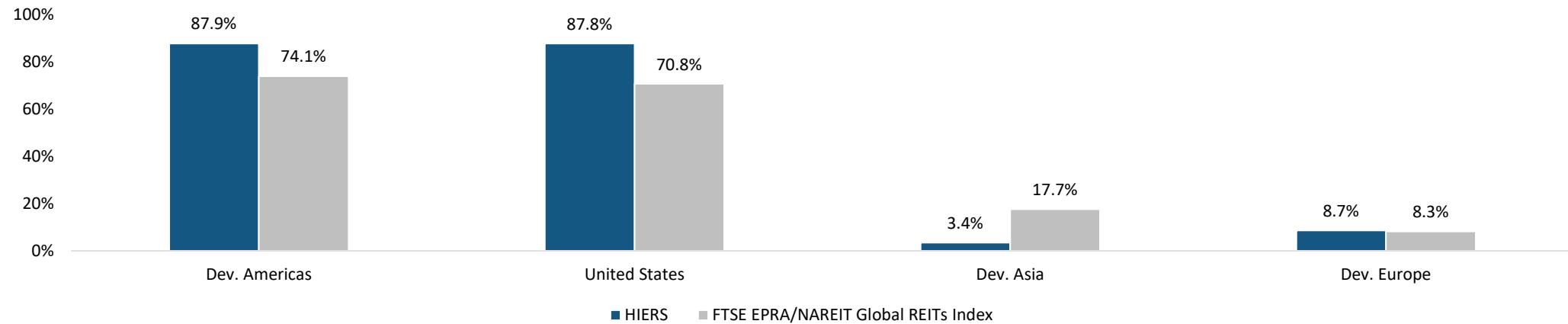
Real Estate Diversification vs. FTSE EPRA/NAREIT Global REITs Index



Property Diversification v FTSE EPRA/NAREIT Global REITs Index
(As of June 30, 2025)



Geographic Diversification v FTSE EPRA/NAREIT Global REITs Index
(As of June 30, 2025)

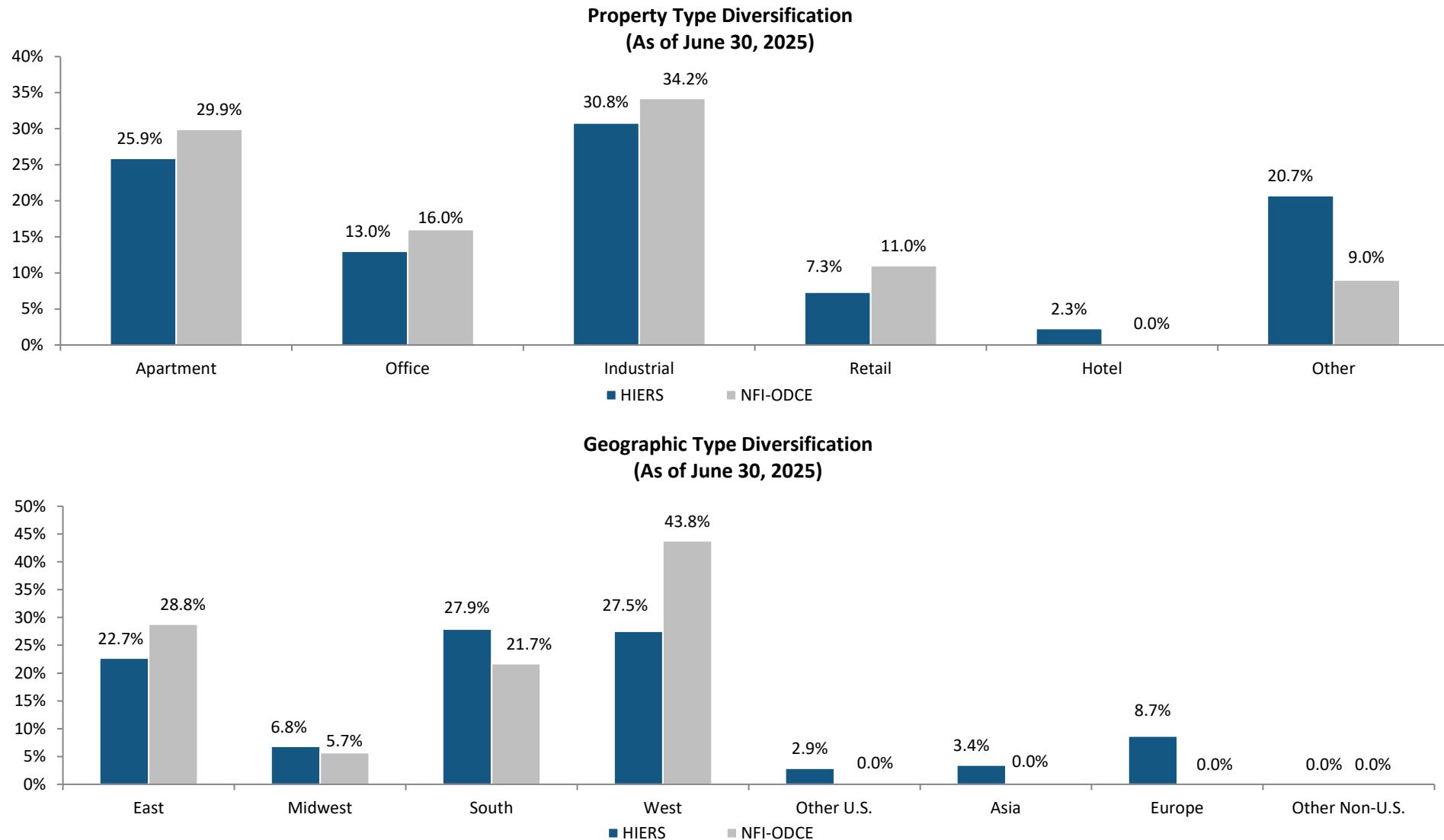


*For HIERs' portfolio, Healthcare includes Healthcare, Medical Office, Life Science, and Senior Housing. As industry standards for property type classifications are changing, some managers have classified Life Science assets in Other as opposed to Healthcare.

**The FTSE EPRA/NAREIT Global REITs Index classifies Apartments as a part of a broader "Residential" property type. Additionally, Health Care includes Health Care, Life Science, and Senior Housing. As industry standards for property type classifications are changing, some managers have classified Life Science assets in Other as opposed to Healthcare.

***Geographic exposures less than 1% have been excluded for formatting purposes.

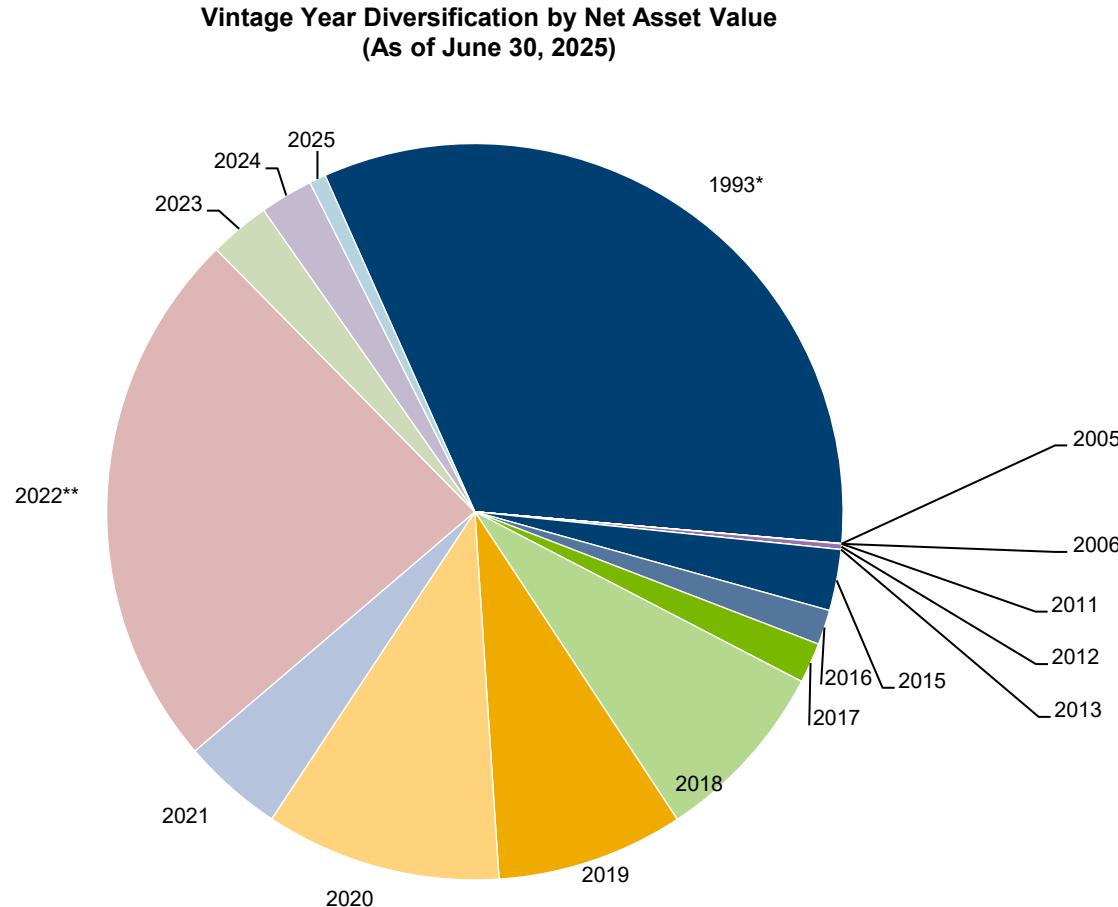
Real Estate Diversification vs. NFI-ODCE



Effective in early 2020, NCREIF changed its methodology in reporting diversification from net real estate assets to gross real estate assets for the NFI-ODCE.

Other Property Types are comprised of self storage (7.3%), student housing (2.4%), senior housing (3.9%), data centers (1.9%), health care (0.8%), entertainment (0.1%), for sale residential (0.2%), parking (0.0%), and land (0.5%), along with non-traditional property types (3.8%).

Real Estate Portfolio Diversification



*The 1993 vintage year is composed solely of a Separate Account Portfolio which includes investments that span other vintage years. The 1993 labeling indicates the start of the partnership.

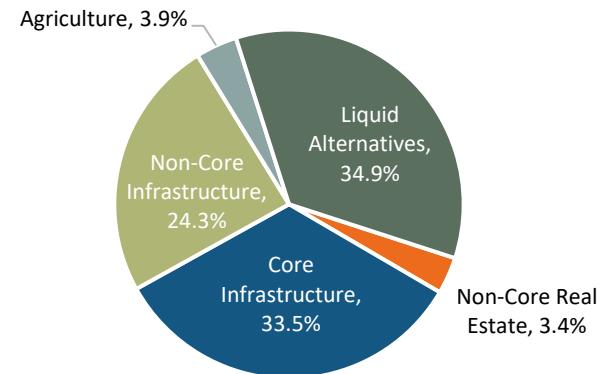
**The 2022 vintage year's relative size can be attributed to anchor commitments in two open-end vehicles, aimed at establishing Core commingled fund exposure within the portfolio. These commitments will have sustained exposure over time.

D. Infrastructure Portfolio

Total Infrastructure Portfolio - Funding Status and Composition

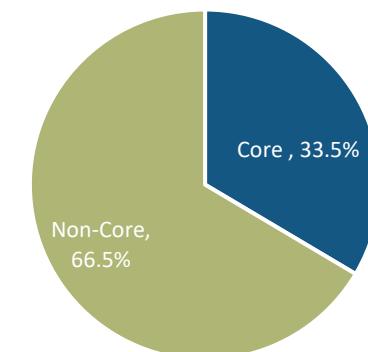
Portfolio Overview As of June 30, 2025 \$ in Millions	
Number of Investments	17
Active Investments	17
Liquidated Investments	0
Number of Active GP Relationships	12
Total Commitments	2,127.4
Unfunded Commitments	676.2
Total Paid-In Capital	2,453.6
Total Distributions	902.1
Net Asset Value	1,954.2
Total Exposure	2,630.4
DPI	0.4x
TVPI	1.2x
Since Inception IRR ¹	8.6%

Infrastructure Portfolio Sector Diversification
(As of June 30, 2025)



PORTFOLIO COMPOSITION TO TARGETS (%) As of June 30, 2025		
	Unfunded Commitments + Funded (NAV)	Funded (NAV)
Infrastructure	10.8	8.0
Leverage	N/A	17.4

Structure Diversification
(As of June 30, 2025)



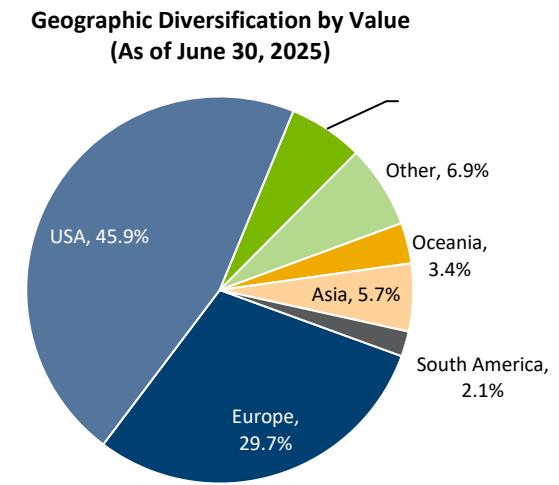
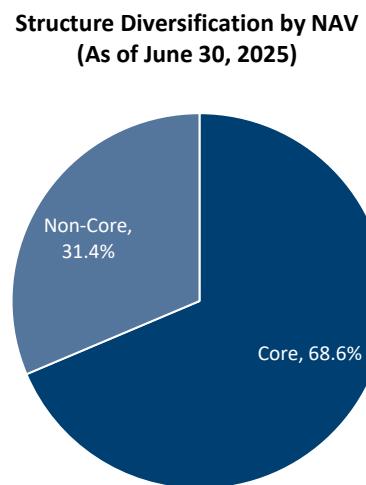
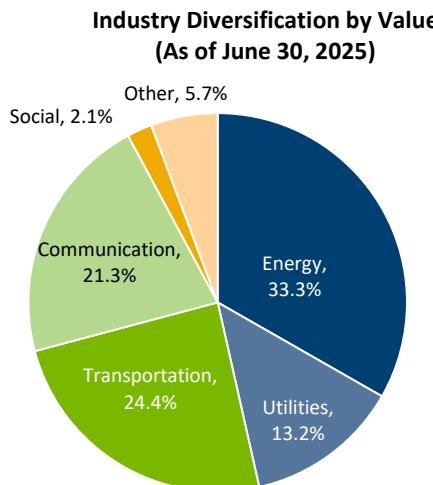
Calculations include the Private Infrastructure Portfolio, Olomana, Real Assets Overlay Portfolio, and Passive Listed Infrastructure Portfolio.

¹Excludes Real Assets Overlay Portfolio.

Private Infrastructure Portfolio (ex-Olomana) - Funding Status and Composition

Portfolio Overview As of June 30, 2025 \$ in Millions	
Number of Investments	14
Active Investments	14
Liquidated Investments	0
Number of Active GP Relationships	9
Total Commitments	1,311.7
Unfunded Commitments	518.4
Total Paid-In Capital	865.3
Total Distributions	180.3
Net Asset Value	912.7
Gross Asset Value	1,409.6
Total Exposure	1,431.1
DPI	0.2x
TVPI	1.3x
Since Inception IRR	11.1%

PORTFOLIO COMPOSITION TO TARGETS (%) As of June 30, 2025		
	Unfunded Commitments + Funded (NAV)	Funded (NAV)
Infrastructure	5.9	3.7
Leverage	N/A	35.3

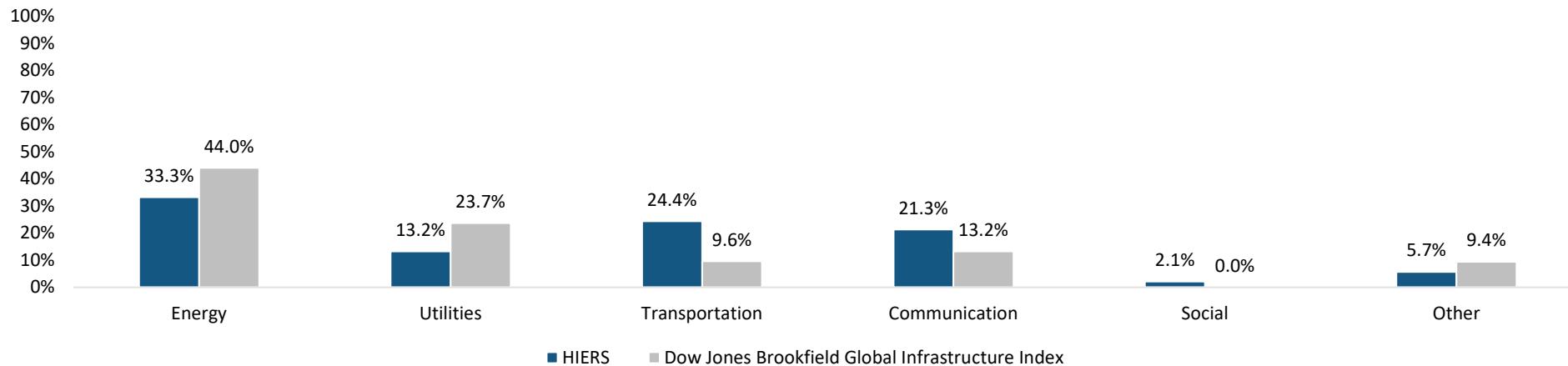


Excludes Olomana, Passive Listed Infrastructure Portfolio, and Real Assets Overlay Portfolio.

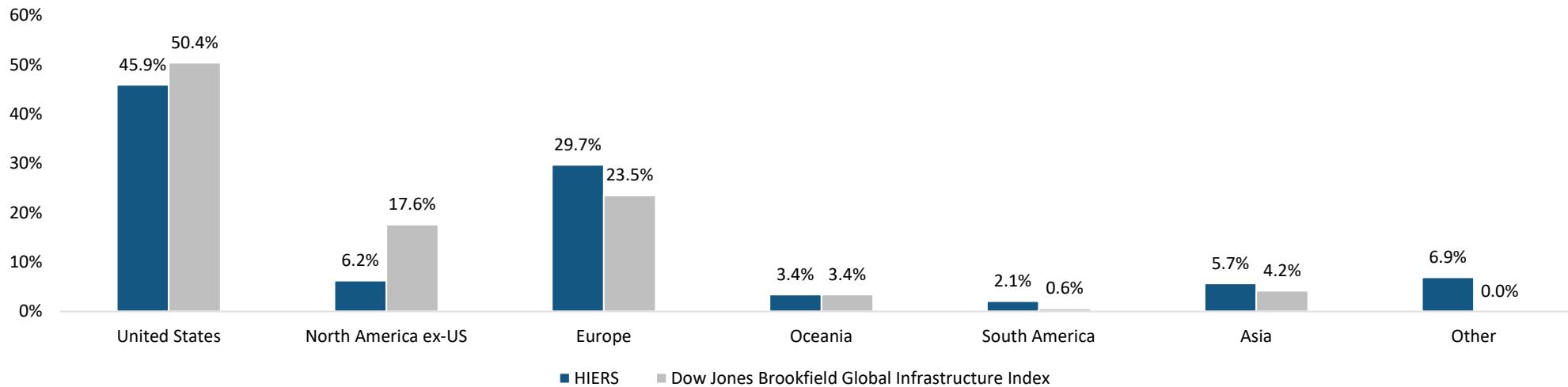
Private Infrastructure (ex-Olomana) Diversification vs. Public Benchmark



Sector Diversification vs. Dow Jones Brookfield Global Infrastructure Index
(As of June 30, 2025)



Geographic Diversification v. Dow Jones Brookfield Global Infrastructure Index
(As of June 30, 2025)



Excludes Olomana, Passive Listed Infrastructure Portfolio, and Real Assets Overlay Portfolio.

Private Infrastructure (ex-Olomana) Funding Status

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)	LTV (%)
Private Infrastructure									
Core Infrastructure	2022	550,000,000	533,554,598	45,000,000	30,894,365	626,403,343	68.6	46.9	34.2
Non-Core Infrastructure	2015	761,650,000	331,726,983	473,433,113	149,388,695	286,264,294	31.4	53.1	37.3
Total Private Infrastructure	2015	1,311,650,000	865,281,581	518,433,113	180,283,060	912,667,637	100.0	100.0	35.3

Time Weighted Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception	TWR Calculation Inception	Net IRR	DPI	Equity Multiple	
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET				
Private Infrastructure																										
Core Infrastructure	-0.2	2.1	1.9	1.6	5.5	10.1	16.0	14.1	4.0	6.7	10.9	9.7									10.7	9.5	2Q22	9.8	0.1	1.2
Non-Core Infrastructure	0.4	1.3	1.7	1.0	1.7	12.4	14.2	8.4	3.4	10.2	13.9	8.8	5.2	11.1	16.8	11.8	4.3	13.8	18.9	13.5	18.9	13.5	3Q15	12.6	0.5	1.3
Total Private Infrastructure	0.0	1.8	1.8	1.4	4.3	10.8	15.4	12.3	3.8	7.7	11.8	9.4	5.5	9.4	15.4	12.2	4.4	13.0	18.2	13.7	18.2	13.7	3Q15	11.1	0.2	1.3
Total Infrastructure Blended Benchmark*					4.4				24.3				11.0				11.2				8.4				3Q15	
Dow Jones Brookfield Global Infrastructure Index					4.4				24.3				7.9				8.7				6.3				3Q15	
CPI + 400 BPS					1.6				6.8				7.0				8.8				7.2				3Q15	

Excludes Olomana, Passive Listed Infrastructure Portfolio, and Real Assets Overlay Portfolio.

*The Total Infrastructure benchmark is defined within the Appendix.

Olomana Infrastructure Portfolio - Funding Status and Composition



Portfolio Overview As of June 30, 2025 \$ in Millions	
Number of Investments	1
Active Investments	1
Liquidated Investments	0
Number of Active GP Relationships*	1
Total Initially Funded to Olomana**	600.1
Total Private Commitments**	600.1
Unfunded Commitments	157.8
Total Paid-In Capital	922.6
Total Distributions	310.1
Net Asset Value	676.1
Gross Asset Value	676.1
Total Exposure	833.9
DPI	0.3x
TVPI	1.1x
Since Inception IRR	3.1%

PORTFOLIO COMPOSITION TO TARGETS (%) As of June 30, 2025			
	Target	Unfunded Commitments + Funded (NAV)	Funded (NAV)
Core Real Estate	N/A	0.0	0.0
Non-Core Real Estate	N/A	5.4	3.5
Core Timber	N/A	0.0	0.0
Non-Core Timber	N/A	0.0	0.0
Core Infrastructure	N/A	6.5	8.0
Non-Core Infrastructure	N/A	38.1	27.3
Core Agriculture	N/A	0.0	0.0
Non-Core Agriculture	N/A	8.6	10.0
Liquid Alternatives	N/A	41.4	51.1
Other Real Assets	N/A	0.0	0.0

*Represented by the GP responsible for the management of Olomana.

**Total Private Commitments represent private market commitments made by Olomana. A total of \$600.1 million was funded to Olomana between ERS and MSIM. ERS funded Olomana with \$598.6 million (\$433.6 million in TIPS and \$165.0 million in cash), and MSIM funded \$1.5 million in cash. The MSIM share of the investment is included in the committed value, as the accrued incentive for the manager.

Olomana Performance



Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)	LTV (%)
Olomana									
Olomana	2022	600,100,000	922,603,650	157,783,023	310,053,283	676,140,529	100.0	100.0	0.0

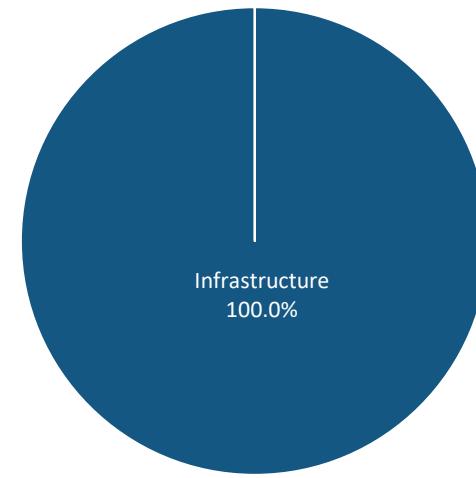
Time Weighted Returns (%)	Quarter				1 Year				3 Year				Inception	TWR Calculation Inception	Net IRR	DPI	Equity Multiple	
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET				
Olomana																		
Olomana	0.0	-0.2	-0.2	-0.2	0.0	7.6	7.6	7.9	0.0	6.7	6.7	6.6	3.2	3.1	2Q22	3.1	0.3	1.1
Olomana: Aggregate Benchmark					0.3		6.5				4.2		0.3		2Q22			

*ERS funded a total, approximate amount of \$589.6 million to Olomana through liquid alternatives. As private investment opportunities arise, capital will be re-allocated from liquid alternatives to those private market investments. The total commitment figure for Olomana represents the full amount funded by ERS to Olomana. As capital is moved to private market investments, the commitment amount for liquid alternatives will shift to private market investments. Total commitment and liquid alternatives commitment figures are approximations until full data is available.

Listed Infrastructure Portfolio - Funding Status and Composition

Portfolio Overview As of June 30, 2025 \$ in Millions	
Number of Investments	1
Active Investments	1
Liquidated Investments	0
Number of Active GP Relationships	1
Total Commitments	450.0
Unfunded Commitments	0.0
Total Paid-In Capital	450.0
Total Distributions	200.0
Net Asset Value	363.7
Leverage	0.0%
DPI	0.4x
TVPI	1.3x
Since Inception IRR	19.5%

**Sector Diversification
(As of June 30, 2025)**



Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)	LTV (%)
Listed Infrastructure									
Passive Listed Infrastructure Portfolio	2024	450,000,000	450,000,000	0	200,000,000	363,749,166	100.0	100.0	0.0

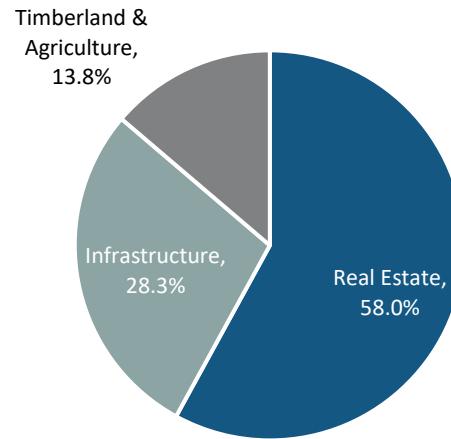
Time Weighted Returns (%)	Quarter				1 Year				Inception		TWR Calculation Inception	Net IRR	DPI	Equity Multiple
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	TGRS	TNET				
Listed Infrastructure														
Passive Listed Infrastructure Portfolio*	0.0	4.6	4.6	4.6	0.0	22.6	22.6	22.6	17.6	17.6	2Q24	19.5	0.4	1.3
Dow Jones Brookfield Global Infrastructure Index				4.4				24.3		18.6	2Q24			

*The Listed Infrastructure Portfolio TWRs may differ from external reporting for ERS. Actual inception for the portfolio was intra-quarter (February 2024) and February/March 2024 performance was not captured in the TWR calculation (starting 2Q24).

Real Assets Overlay Portfolio - Funding Status and Composition

Portfolio Overview As of June 30, 2025 \$ in Millions	
Number of Investments	1
Active Investments	1
Liquidated Investments	N/A
Number of Active GP Relationships	1
Total Commitments	215.7
Unfunded Commitments	0.0
Total Paid-In Capital	215.7
Total Distributions	211.7
Net Asset Value	1.7
Leverage	0.0%
DPI	N/A
TVPI	N/A
Since Inception IRR	N/A

**Investment Diversification
(As of June 30, 2025)**



Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)	LTV (%)
Real Assets Overlay									
Real Assets Overlay Portfolio	2024	215,690,000	215,690,000	0	211,734,263	1,675,371	100.0	100.0	0.0

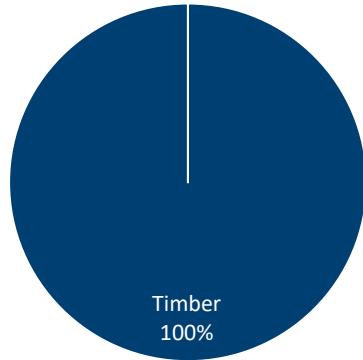
E. Timber Portfolio

Timber Separate Account

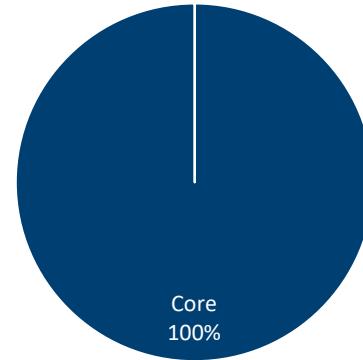
Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)	Market Value + Unfunded Commitments (%)	LTV (%)
Timber										
Timberland Separate Account	1999	130,000,000	129,259,500	0	180,065,680	220,650,144	100.0	100.0	100.0	0.0

Time Weighted Returns (%)	Quarter				1 Year				3 Year				5 Year				10 Year				Inception	TWR Calculation	Net IRR	DPI	Equity Multiple		
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	Inception	TWR Calculation					
Timber																											
Timberland Separate Account	0.5	0.0	0.5	-0.3	2.8	0.0	2.8	0.6	2.7	8.2	11.1	9.7	2.6	6.1	8.8	7.6	2.0	4.5	6.5	5.5	9.5	8.5	4Q99	8.2	1.4	3.1	
Net Real TWR																											
Total Timber Benchmark*																											
S&P Global Timber & Forestry Index																											
NCREIF Timberland Property Index "NTI"	0.4	1.0	1.4		1.7	3.6	5.3		2.2	6.4	8.7		2.6	5.5	8.2		2.7	2.7	5.5		6.4	4Q99					

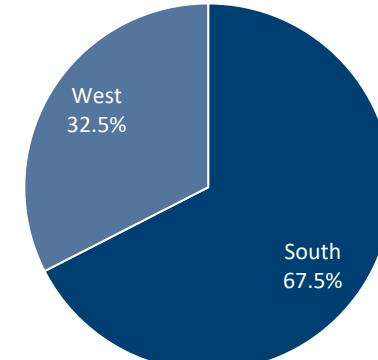
Property Type Diversification
(As of June 30, 2025)



Style Diversification
(As of June 30, 2025)



Geographic Type Diversification
(As of June 30, 2025)

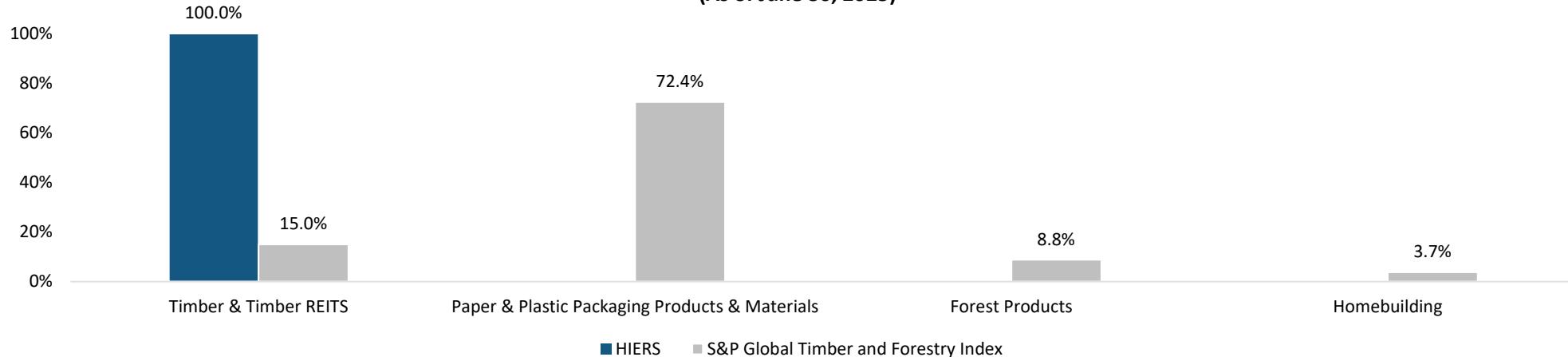


*The Total Timberland benchmark is defined within the Appendix.

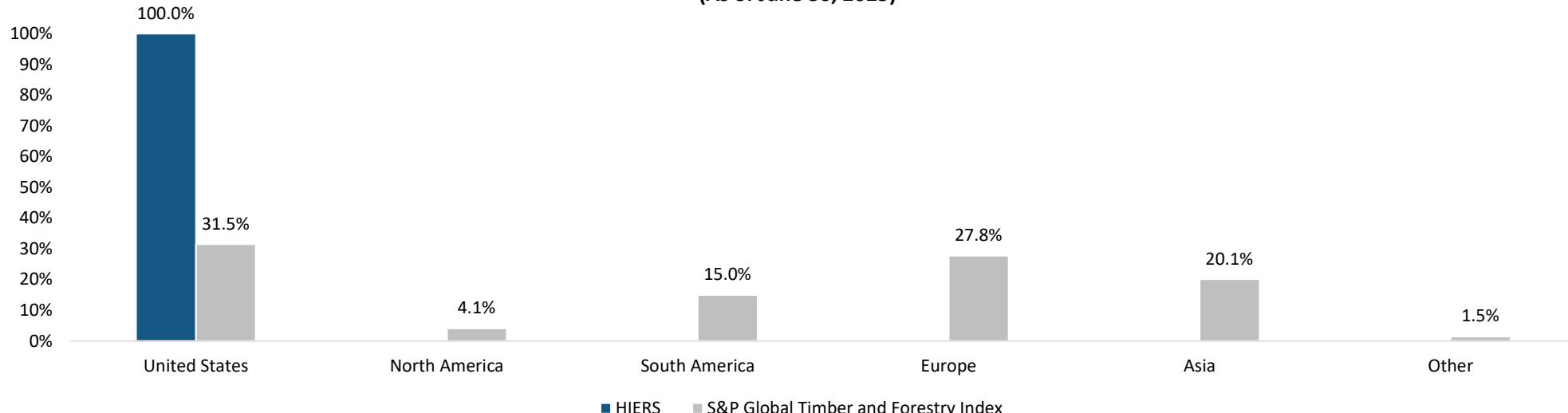
Timber Diversification vs. S&P Global Timber & Forestry Index



Property Type Diversification vs. S&P Global Timber and Forestry Index
(As of June 30, 2025)



Geographic Diversification vs. S&P Global Timber and Forestry Index
(As of June 30, 2025)

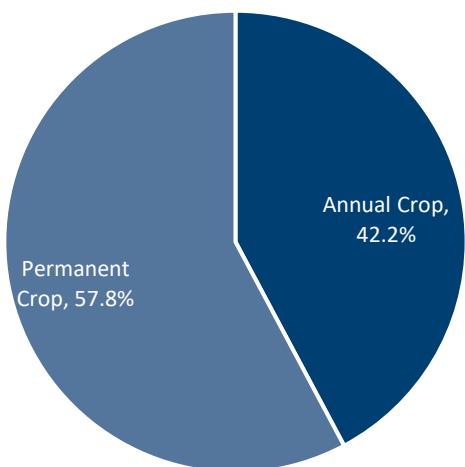


F. Agriculture Portfolio

Agriculture Portfolio Funding Status and Composition

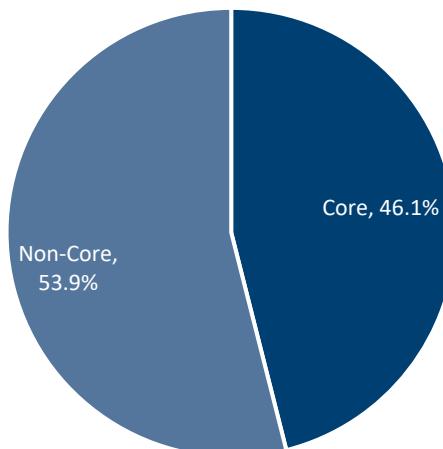
Portfolio Overview As of June 30, 2025 \$ in Millions	
Number of Investments	3
Active Investments	3
Liquidated Investments	0
Number of Active GP Relationships	3
Total Commitments	400.0
Unfunded Commitments	0.0
Total Paid-In Capital	409.2
Total Distributions	9.3
Net Asset Value	422.3
Gross Asset Value	422.3
Total Exposure	422.3
DPI	0.0x
TVPI	1.1x
Since Inception IRR	2.7%

**Crop Type Diversification
(As of June 30, 2025)**

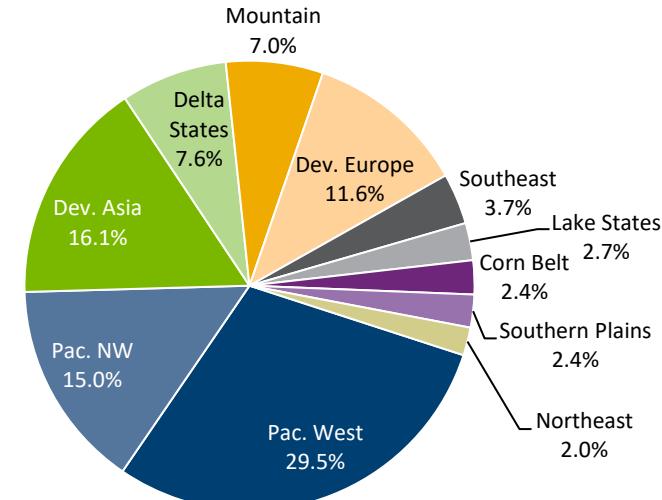


PORTFOLIO COMPOSITION TO TARGETS (%) As of June 30, 2025			
	Target	Unfunded Commitments + Funded (NAV)	Funded (NAV)
Agriculture	N/A	1.7	1.7
Leverage	N/A	N/A	0.0

**Style Diversification
(As of June 30, 2025)**



**Geographic Type Diversification
(As of June 30, 2025)**



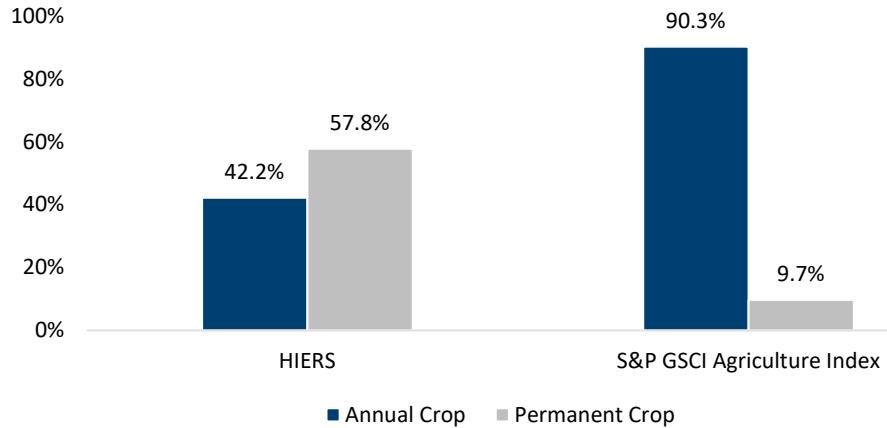
Agriculture Performance

Funding Status (\$)	Investment Vintage Year	Commitment Amount	Funded Amount	Unfunded Commitments	Capital Returned	Market Value	Market Value (%)	Market Value + Unfunded Commitments (%)	LTV (%)
Core Agriculture									
Core Agriculture	2021	200,000,000	205,086,698	0	5,374,561	204,325,437	48.4	48.4	0.0
Non-Core Agriculture									
Non-Core Agriculture	2022	200,000,000	204,157,133	0	3,905,831	217,938,487	51.6	51.6	0.0
Total Agriculture (ex-Olomana)	2021	400,000,000	409,243,831	0	9,280,392	422,263,924	100.0	100.0	0.0

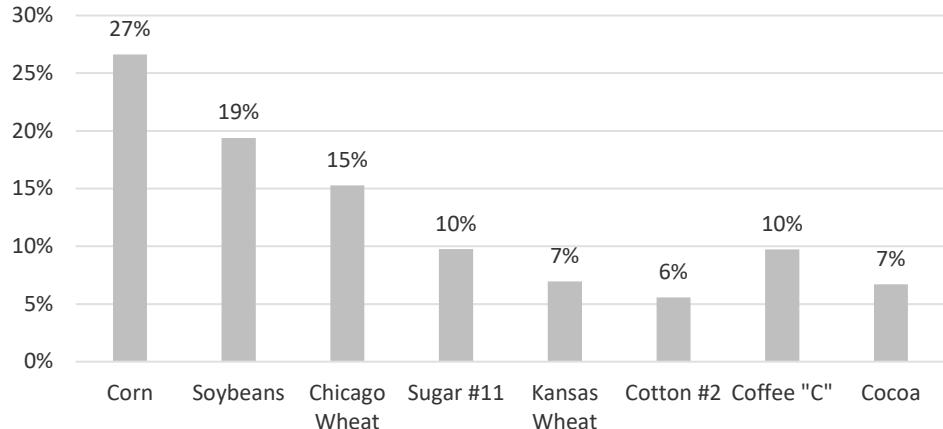
Time Weighted Returns (%)	Quarter				1 Year				3 Year				Inception TGRS	Inception TNET	TWR Calculation Inception	Net IRR	DPI	Equity Multiple	
	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET	INC	APP	TGRS	TNET							
Core Agriculture																			
Core Agriculture	0.8	-0.4	0.4	0.1	2.8	-2.4	0.4	-0.6	2.5	-0.3	2.2	1.1	4.3	3.2	4Q21	0.9	0.0	1.0	
Non-Core Agriculture																			
Non-Core Agriculture	0.2	0.9	1.0	1.2	0.7	7.1	7.8	6.1					8.4	6.5	1Q23	6.2	0.0	1.1	
Total Agriculture (ex-Olomana)	0.5	0.2	0.7	0.7	1.8	2.1	3.9	2.5	2.1	2.0	4.0	2.8	5.8	4.6	4Q21	2.7	0.0	1.1	
Total Agriculture Benchmark*	-2.9				-4.0				-1.5				0.9		4Q21				
S&P GSCI Agriculture Index	-2.9				-4.0				-7.3				-1.0		4Q21				
NCREIF Farmland Property Index "NFI"	0.6	-0.3	0.3		2.9	-4.0	-1.2		3.0	0.1	3.2		4.7	3.9	4Q21				

Agriculture Crop Diversification vs. S&P GSCI Agriculture Index

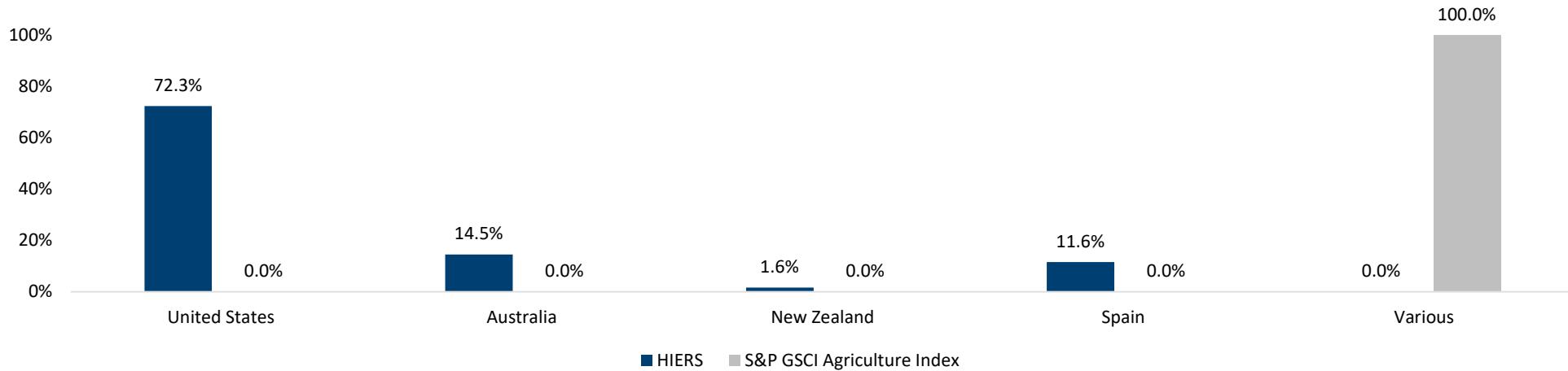
Crop Type Diversification vs. S&P GSCI Agriculture Index
(As of June 30, 2025)



S&P GSCI Agriculture Index Crop Diversification
(As of June 30, 2025)



Geographic Diversification vs. S&P GSCI Agriculture Index
(As of June 30, 2025)



G. Glossary

Glossary of Terms

- Catch-up – The provision that dictates how cash flows from the fund will be allocated between the investors and the manager in order for the manager to receive their performance fee. This allocation of cash flows occurs once the investors have collected their capital and preferred return
- Core – The most conservative institutional real estate investing style
- Core-Plus – A style whereby investments have a slightly higher level of risk and expected return than Core, primarily through use of leverage
- Custom Public Index – Currently the FTSE EPRA/NAREIT Global Developed REIT Index. Prior to July 2008, the benchmark was the Dow Jones U.S. Select REIT Index
- Development – The construction of buildings from breaking the ground through building completion. This may also include entitlement of the land and the pursuit of permits prior to construction
- DPI – Distributions to Paid In; the ratio of distributions from investments to total invested capital
- First Closing – The point at which a manager receives and executes the subscription documents and can begin drawing capital from investors
- Final Closing – The final date at which new investors can subscribe to a fund
- Internal Rate of Return (IRR) - A method of measuring the performance of a portfolio from inception through a particular point in time. This method weights returns according to the dollars invested at each point in time. Hence, this is known as dollar-weighted return. This is a better measure when the manager controls when dollars must be invested and is the most commonly used method of real estate performance evaluation; Gross IRR is gross of fee and Net IRR is net of fee
- NFI-ODCE – NCREIF Fund Index Open-end Diversified Core Equity Index is an index of investment returns reporting on both a historical and current basis the results of 24 open-end commingled funds pursuing a core investment strategy; underlying funds are leveraged with gross and net returns available
- NPI – NCREIF Property Index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only; it is reported unlevered and gross of fee
- FTSE-NAREIT Equity REIT – An unmanaged capitalization-weighted index of all equity real estate investment trusts
- FTSE EPRA/NAREIT Global REIT – An unmanaged market-weighted total return index, which consists of many companies from Global markets whose floats are larger than \$100 million and derive more than half of their revenue from property-related activities

Glossary of Terms Cont.

- Opportunistic – A style that is the riskiest form of real estate investing. The name derives from when such funds were formed after the early 1990s real estate market crash to take advantage of opportunities in unwanted properties. Such investments include ground-up development, highly-leveraged purchases, or transactions involving highly complicated legal or environmental situations
- Private Market Equivalent (PME) Analysis – The private market equivalent (“PME”) analysis seeks to answer the question of whether a portfolio’s non-Core investments are providing alpha over the lower-risk Core alternatives. Non-Core performance is best measured through dollar weighted performance metrics (i.e. IRR) while Core indices have traditionally been provided in time-weighted return (“TWR”) methodologies. The PME analysis converts the Core indices from TWRs to IRRs by taking the cash flows from the non-Core portfolio and making hypothetical investments into the Core indices. This exercise allows for a like-kind comparison on performance
- Policy Benchmark – Blended benchmark reflecting private and public nature of portfolio where private real estate benchmark is weighted 90% and public real estate benchmark is weighted 10%; private real estate benchmark is NFI-ODCE + 50bps, public real estate benchmark is Wilshire REIT 1Q1997 through 2Q08 and EPRA/NAREIT Global Developed Index from 3Q08 to present
- Pre-Specified Deals – Investments that are purchased for a fund before its final close. The assets are typically warehoused on a line of credit
- Promote (Carried Interest) – The performance fee a manager receives once the investors have received their return of capital and the preferred return (return promised by the manager)
- RVPI – Residual Value to Paid In; the ratio of the residual value of an investment to total invested capital
- Time-Weighted Return - A method of measuring the performance of a portfolio over a particular period of time. Effectively, it is the return of one dollar invested in the portfolio at the beginning of the measurement period. This is a better return measure when the manager does not control when the dollars must be invested
- TVPI – Total value to paid-in ratio; the ratio of total value from an investment, including distributions, to total invested capital
- Value-Added – A style that represents moderate-risk real estate. A manager typically increases the future value of the investment by undertaking activities such as leasing, improving an existing building, or taking some risk through operating intensive assets, such as hotels or self-storage
- Vintage Year – The year in which a fund has its final closing. Typically coincides with the year a fund begins making investments

I. Appendix

Real Assets Historical Benchmark



From To Real Assets Historical Benchmark

01/01/2024	Current	47% Real Estate Historical Benchmark, 7% Agriculture Historical Benchmark, 9% Timber Historical Benchmark, 37% Infrastructure Historical Benchmark
07/01/2022	12/31/2023	70% Real Estate Historical Benchmark, 10% Agriculture Historical Benchmark, 10% Timber Historical Benchmark, 10% Infrastructure Historical Benchmark
07/01/2021	06/30/2022	70% Real Estate Historical Benchmark, 8% Agriculture Historical Benchmark, 12% Timber Historical Benchmark, 10% Infrastructure Historical Benchmark
07/01/2020	06/30/2021	75% Real Estate Historical Benchmark, 5% Agriculture Historical Benchmark, 12.5% Timber Historical Benchmark, 7.5% Infrastructure Historical Benchmark
01/01/2019	06/30/2020	52% Real Estate Historical Benchmark, 48% Real Return Benchmark (100% Consumer Price Index (Seasonally Adjusted) +3%)
01/01/2018	12/31/2018	57% Real Estate Historical Benchmark, 43% Real Return Benchmark (100% Consumer Price Index (Seasonally Adjusted) +3%)
04/01/2017	12/31/2017	70% Real Estate Historical Benchmark, 30% Real Return Benchmark (100% Consumer Price Index (Seasonally Adjusted) +3%)
07/01/2016	06/30/2017	75% Real Estate Historical Benchmark, 25% Real Return Benchmark (100% Consumer Price Index (Seasonally Adjusted) +3%)
01/01/2016	06/30/2016	80% Real Estate Historical Benchmark, 20% Real Return Benchmark (100% Consumer Price Index (Seasonally Adjusted) +3%)
07/01/2013	12/31/2015	83% Real Estate Historical Benchmark, 17% Real Return Benchmark (100% Consumer Price Index (Seasonally Adjusted) +3%)

Real Estate Historical Benchmarks



From	To	Real Estate Historical Benchmark
01/01/2024	Current	100% FTSE EPRA NAREIT Global REITs Index (Gross)
07/01/2022	12/31/2023	57.1% Core Real Estate Historical Benchmark, 42.9% Non-Core Real Estate Historical Benchmark
07/01/2021	06/30/2022	55.7% Core Real Estate Historical Benchmark, 44.3% Non-Core Real Estate Historical Benchmark
07/01/2020	06/30/2021	53.3% Core Real Estate Historical Benchmark, 46.7% Non-Core Real Estate Historical Benchmark
07/01/2019	06/30/2020	60% Core Real Estate Historical Benchmark, 40% Non-Core Real Estate Historical Benchmark
07/01/2018	06/30/2019	66% Core Real Estate Historical Benchmark, 34% Non-Core Real Estate Historical Benchmark
07/01/2017	06/30/2018	73% Core Real Estate Historical Benchmark, 27% Non-Core Real Estate Historical Benchmark
07/01/2016	06/30/2017	80% Core Real Estate Historical Benchmark, 20% Non-Core Real Estate Historical Benchmark
07/01/2013	06/30/2016	100% Core Real Estate Historical Benchmark
10/01/1993	06/30/2013	100% Core Real Estate Historical Benchmark

From	To	Core Real Estate Historical Benchmark
01/01/2024	Current	100% FTSE EPRA NAREIT Global REITs Index (Gross)
01/01/2018	12/31/2023	100% NCREIF ODCE (Net)
07/01/2013	12/31/2017	100% NCREIF Property Index (Net)
10/01/1993	06/30/2013	100% NCREIF Property Index (Net)

From	To	Non-Core Real Estate Historical Benchmark
01/01/2024	Current	100% FTSE EPRA NAREIT Global REITs Index (Gross)
07/01/2020	12/31/2023	100% NCREIF ODCE (Net) + 1%
07/01/2016	06/30/2020	100% Private Equity Historical Benchmark (100% MSCI ACWI IMI (Net) +2%)
07/01/2013	06/30/2016	100% NCREIF Property Index (Net)
10/01/2007	06/30/2013	100% NCREIF Property Index (Net)

*The inception period for Real Estate benchmarks within BNY's (ERS' Custodian) reporting dates back to 7/1/2013. The inception period of the Real Estate benchmarks have been extended to include the Portfolio inception period, beginning 10/01/1993.

Other Real Assets Historical Benchmarks

From To Agriculture Historical Benchmark

01/01/2024	Current	100% S&P GCSI Agriculture Index
10/01/2021	12/31/2023	100% NCREIF Farmland Index

From To Timber Historical Benchmark

01/01/2024	Current	100% S&P Global Timber & Forestry Index
09/01/1999	12/31/2023	100% NCREIF Timberland Index

From To Infrastructure Historical Benchmark

01/01/2024	Current	100% Dow Jones Brookfield Global Infrastructure Index (Net)
12/01/2014	12/31/2023	100% Consumer Price Index (Seasonally Adjusted) +4%

Disclosures



About Townsend Group

Founded in 1983, The Townsend Group ("Townsend") provides a core set of investment skills exclusively focused on global real estate and real asset classes. The firm offers these capabilities to institutional investors as an investment advisor and consultant.

Townsend has been advising and managing real estate portfolios for over four decades and across multiple market cycles. As of September 30, 2024, Townsend had assets under management of approximately \$19.3 billion. As of September 30, 2024, Townsend provided advisory services to clients who had real estate/real asset allocations exceeding \$233.6 billion. We believe, through our global investment platform, fiduciary culture, asset class expertise and client capital scale, we are able to deliver clients unique information, while providing a sourcing and execution advantage.

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MEMORANDUM

Original: November 26, 2025

Revised: January 5, 2026

TO: The Investment Committee of the Board of Trustees
Employees' Retirement System of the State of Hawai'i

THROUGH: Thomas Williams, Executive Director ("ED")
Employees' Retirement System of the State of Hawai'i

FROM: Kristin Varela, Chief Investment Officer ("CIO")
Employees' Retirement System of the State of Hawai'i

SUBJECT: Revisions and Updates to the ERS Investment Policy Statement (IPS)
Sections E (HiTIP PROGRAM)

This memorandum is provided as part of the annual IPS review and outlines proposed revisions to Section E of the Investment Policy Statement. The attached redline reflects a comprehensive rewrite intended to modernize the Hawai'i Targeted Investment Program (HiTIP), support the evolution of Hawai'i-linked private market opportunities, and position the program for long-term scalability under a clear and durable governance framework.

SUMMARY OF RECOMMENDED REVISIONS

I. Broader, more flexible program structure

The redline updates Section E to reflect HiTIP as a multi-risk, multi-strategy component of the Total Fund. This replaces the prior venture-centric framing with a structure that allows the program to evaluate opportunities across private equity, private credit, real assets, infrastructure, agriculture and aquaculture, and other private market strategies that demonstrate meaningful Hawai'i linkage.

II. Expanded allowance for investment structures

The revised section explicitly permits the use of funds, co-investments, direct investments, joint ventures, and other negotiated structures. This aligns the IPS with the types of transactions that have already proven practical and efficient in recent years and allows future flexibility as the local opportunity set continues to develop.

III. Clearer articulation of roles, delegation, and oversight

The redline clarifies the Board's strategic oversight role, defines the managing fund advisor's delegated authority, and outlines staff's responsibilities for monitoring and reporting. Operational steps and implementation details were removed or streamlined to keep the section squarely focused on governance and strategy.

IV. Updated objectives, performance expectations, and KPIs

The revised language defines the program's performance objectives relative to the Total Fund benchmark, adds a more structured diversification framework, and introduces key performance indicators that clearly separate financial performance, Hawai'i linkage, and broader community impact (without elevating non-financial objectives above fiduciary requirements).

V. Refined alignment with statutory requirements and expectations

The rewrite continues to meet the obligations of Act 206 by maintaining the requirement for a Hawai'i connection and clarifying the Board's responsibility to evaluate the prudent level of program investment in accordance with Total Fund risk and return objectives.

SUMMARY OF ACTIONS TAKEN

I. Comprehensive review and redline of Section E

Staff conducted a full review of the current IPS language and prepared the attached redline. The revisions reorganize the section around purpose, objectives, allowable strategies and structures, delegation, and oversight to better reflect the current governance model.

II. Evaluation of the evolving Hawai'i-linked opportunity set

The local private markets landscape has broadened materially over time. Staff considered the characteristics, return expectations, and risk features of opportunities observed across private markets and real assets, as well as the increasing presence of Hawai'i-linked transactions beyond traditional venture structures. This evaluation informed the diversification language and the expanded guidance on allowable strategies.

III. Review of governance and IPS drafting standards

Staff drew from current industry practice to reorient Section E toward strategic guidance and remove embedded operational procedures. The updated structure is

intended to improve clarity, reduce ambiguity, and provide a durable policy foundation.

ACTION FOLLOWING 12.2.25 INVESTMENT COMMITTEE

At its December 2, 2025, meeting, the Investment Committee reviewed the proposed revisions to Section E of the Investment Policy Statement and approved the draft for recommended adoption by the Board of Trustees. *This approval was provided subject to a final legal review by the Deputy Attorney General to confirm that the revised policy language remained consistent with legislative requirements and the original intent of Act 260.*

Following the Investment Committee meeting, the Deputy Attorney General completed a review of the proposed revisions. Based on that review, the Deputy Attorney General confirmed that the revised Section E, as drafted, remains in compliance with Act 260 and does not alter or conflict with the statute's legislative intent.

The edits resulting from the legal review fall into the following categories:

1. Codifying language to remain consistent with legislative terminology

Minor revisions were made to align policy language more closely with statutory phrasing and concepts reflected in Act 260, without changing the substance or direction of the proposed revisions.

2. Grammatical and drafting edits

Additional edits were made for clarity, consistency, and readability, including grammatical corrections and minor drafting refinements. These edits were technical in nature and did not alter the policy's intent, structure, or governance framework.



HiTIP PROGRAM

SECTION: E

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E.2. POLICY	3
E.3. PROCEDURES	9

DRAFT

E.1. INTRODUCTION

The Hawaii Targeted Investment Program (HiTIP) was created by the Employees' Retirement System of the State of Hawaii ("ERS") to fulfill the mandate of Act 260, "A Bill For An Act Relating To The Innovation Economy" ("Act 260") passed by the Legislature and signed by the Governor in July 2007.

~~The purpose of Act 260 is "to encourage the employees' retirement system to invest in Hawai'i venture capital..." Part of the intent of Act 260 is to support private placement investment activity connected to Hawai'i by encouraging ERS to develop criteria and in effect evaluate opportunities across private markets that align with the ERS's fiduciary duty and risk-adjusted return objectives.~~

Commented [KV1]: DAGS Edits - 12.30.25

Commented [KV2]: DAGS Edits - 12.30.25

Commented [KV3]: DAGS edit 12.30.25

The HiTIP should be viewed as a distinct component of the broader ERS private equity program for two distinct reasons. First, Act 260 stipulates that the ERS provide specific updates to the State of Hawai'i ("State") with respect to the HiTIP. Second, the investment directives that apply to the HiTIP are different than those that apply to the broader ERS private equity investment portfolio. Act 260 stipulates that the ERS require that the HiTIP earn returns for the ERS investment portfolio by making investments in emerging growth and growth oriented businesses in traded sector industries in Hawai'i. HiTIP shall be treated as a dedicated component of the Total Fund, intended to identify and evaluate private placement opportunities linked to Hawai'i across multiple risk types and investment structures. In accordance with HRS chapter 88, the Board of Trustees of the ERS (the "Board") determines the investment policies and procedures for all ERS investment activities, including the HiTIP. ERS employees will act as staff overseeing HiTIP and its managing fund of funds advisor and report HiTIP activities to the Board, in conjunction with the managing fund of funds advisor. In this capacity, ERS investment staff ("Investment Staff") and/or the managing fund of funds advisor may periodically recommend new or updated HiTIP investment policies and procedures to the Board for review and comment. HiTIP investment policies and procedures, which are attached, reflect the following principles:

1. The purpose of the HiTIP is to produce competitive risk-adjusted investment returns for the ERS by making investments in emerging growth and growth oriented businesses in traded sector industries, with specific emphasis on Hawai'i. The HiTIP's mission is not economic development, but economic development may be one significant byproduct of the investment program, investing in opportunities connected to Hawai'i. While the program may support emerging and growth-oriented businesses in Hawai'i, its focus is on identifying investments that meet ERS's fiduciary standards. Broader economic benefits may occur, but they are not the mission of the program.
2. HiTIP funds will be invested only through external general partners/managers or co-investments a managing fund advisor that has primary responsibility for sourcing and underwriting opportunities for the program. Investments may be made through a range of private market structures, including funds, co-investments, direct opportunities, or joint ventures, so long as they meet ERS's fiduciary and risk-adjusted return objectives.
3. General partners/managers will be fully discretionary, i.e., after funds are allocated to the limited partnership or limited liability company ("LLC"), they are totally responsible for the investment of these funds within the partnership's or LLC's investment guidelines. External managers will exercise discretion within their respective governing agreements, and the managing fund advisor will oversee all such managers under its delegated authority.

Commented [KV4]: DAGS edit 12.30.25

Commented [KV5]: DAGS edit 12.30.25

The Board and Investment Staff will delegate the selection, retention and monitoring of investment opportunities external partnerships or LLCs to a dedicated managing fund of funds advisor (or manager of manager) and will not entertain individual investment proposals from individual businesses or for particular projects, except as a result of in kind distributions of assets to the HiTIP by external partnerships/LLCs. Except as described in the preceding sentence, individual investment decisions will be left to the general partnership or LLC managers. ERS employees and the Board will not review or approve individual portfolio-level investment proposals. The managing fund advisor will exercise discretion within its delegated authority.

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E.2. POLICY

1. BackgroundGeneral Policy

~~The Hawaii Targeted Investment Program (HiTIP) is a distinct component of the ERS private equity portfolio. The ERS has established the HiTIP to participate in attractive long term alternative investment opportunities in emerging growth and growth oriented businesses in traded sector industries, emphasizing the greater Hawai'i geographic region. Investment of moneys in the HiTIP will generally be implemented through participation in limited partnerships or LLCs that make private equity and debt investments, including investments in emerging growth and growth oriented businesses, although other management and investment arrangements may be considered under appropriate circumstances. For the purposes of this policy:~~

Commented [KV7]: DAGS edit 12.30.25

~~"Emerging growth business" means a new or small company that has the capacity, upon obtaining appropriate capital, to generate significant high skill, high wage employment within one or more traded sector industries.~~

~~"Growth oriented business" means an existing company with the potential to generate significant revenue and/or profit growth within one or more traded sector industries, resulting in a commensurate increase in high skill/wage employment in the pertinent sectors.~~

~~"Traded sector" means industries in which member firms sell their goods or services into markets for which national or international competition exists.~~

~~Chapter 88, Hawai'i Revised Statutes ("HRS"), which governs ERS investment activities, and this ERS Investment Policies, Guidelines and Procedures manual ("Manual") will govern investment the activity of the HiTIP.~~

General Policy

~~Private equity investments, such as those encompassed by the HiTIP, should contribute favorably to the risk adjusted investment returns of the total ERS investment portfolio, and are compatible with the general objectives of the ERS investment portfolio.~~

~~Private equity investments possess a higher degree of risk with a higher return potential than traditional investments. Accordingly, total rates of return are expected to be greater than those that may be obtained from conventional public equity or debt investments. They have a lower correlation relative to other investment classes and should therefore contribute to an effective management of risk and the enhancement of returns on a total ERS portfolio basis.~~

~~Similar to other portfolio segments under its authority, ERS should endeavor to retain appropriate fiduciary expertise to manage all or a portion of the private equity portfolio, including the HiTIP, shall operate as a multi-risk private markets vehicle that supports diversification and the long-term risk-adjusted return objectives of the Total Fund. HiTIP may evaluate opportunities across private equity, private credit, real assets, infrastructure, agriculture and aquaculture, and other alternative strategies where there is a meaningful connection to Hawai'i and a clear alignment with ERS's fiduciary standards. HiTIP is intended to function as a broad, total-fund program that can pursue multiple types of risk and return drivers across the Hawai'i-linked market landscape.~~

For the purposes of this policy, investment strategies shall be defined as follows:

- a) Private Equity

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII - INVESTMENT POLICY

Investments in privately negotiated ownership positions where returns are driven by operational improvement, strategic growth, and long-term value creation rather than short-term market pricing.

b) Private Credit

Privately originated debt or credit exposures where returns are primarily driven by contractual income, credit underwriting, and the ability to manage borrower-level risk through negotiated protections.

c) Real Assets

Investments backed by tangible, productive assets where returns are driven by cash yield, inflation sensitivity, and the intrinsic value of the underlying asset base.

d) Infrastructure

Long-duration investments in essential systems where returns are shaped by stable cash flows, regulated or contracted revenue, and resilience across economic cycles.

e) Agriculture and Aquaculture

Investments tied to biological or resource-based production systems where returns are influenced by yield, resource productivity, and long-term supply-and-demand fundamentals.

f) Other Alternative Strategies

Private market exposures that provide differentiated sources of return, driven by structural inefficiencies, specialized capabilities, or uncorrelated value creation that enhances Total Fund diversification.

Investments may be made through various legal structures, to support long-term growth, while remaining in compliance with Total Fund strategic objectives. HTIP may evaluate opportunities in funds, co-investments, direct investments, joint ventures, or other structures appropriate for the opportunity.

For the purposes of this policy, investment structures shall be defined as follows:

i. Fund Investment

Pooled vehicles managed by an external general partner with full discretionary authority, with the managing fund advisor providing oversight on behalf of ERS.

ii. Co-Investment

Minority positions made alongside a lead manager, where the managing fund advisor exercises all investment discretion and oversight.

iii. Direct Investment

Ownership or credit interests sourced, negotiated, and managed by the managing fund advisor, transacting directly with the underlying company or asset sponsor.

iv. Joint Venture

Shared-ownership arrangements in which governance and decision rights are negotiated by the managing fund advisor with aligned partners who share operational and financial responsibilities.

v. Other Structure

Bespoke arrangements with negotiated ownership, manager roles, and oversight rights, executed and monitored by the managing fund advisor under ERS's delegation framework.

2.—

3.2. Objectives

a. Portfolio Investment Performance Objective

The performance objective for HiTIP investments is to meet or exceed the ERS Total Fund Return Benchmark over the long term for similar or lower levels of risk. HiTIP investments should contribute positively to the Total Fund's risk-adjusted return profile and operate within its broader diversification and risk parameters. Investment Staff, in consultation with the managing fund advisor, will periodically review benchmark alignment to ensure the program remains consistent with Total Fund objectives. Given the nature of private markets, meaningful performance attribution typically requires an extended time horizon, defined for this program as five years or longer. significant long term net returns to the ERS investment portfolio, (e.g., after management fees and general partner's carried interest) above a benchmark reflecting public market alternatives or counterparts plus an appropriate premium to compensate for illiquidity, risk, and expense. The return expectation should be tempered, however, given the potential concentration of investments within Hawai'i. The performance objective for private equity investments is a net internal rate of return (i.e., dollar weighted rate of return) of: the MSCI ACWI IMI ND Index plus 200 basis points, measured over the life of the partnership or LLC. Staff will periodically evaluate the performance benchmark and associated premium.⁺ In any case, results of such investments may not be meaningful for several years.

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b. Diversification of HiTIP Investment Risks

Diversification supports prudent risk management within HiTIP. The program will consider the following dimensions, as appropriate to the opportunity set

- i. Strategy: Exposure across multiple private market strategies to balance differing sources of return and risk.
- ii. Structure: Use of varied investment structures to diversify governance, liquidity, and cash-flow characteristics.
- iii. Economic Exposures: Diversification across differing drivers of value creation, while recognizing the program's inherent Hawai'i linkage.
- iv. Scale: Appropriate variation in investment size determined by opportunity quality, risk profile, and Total Fund alignment.
- iv. Time: Consistent pacing of commitments to reduce vintage concentration and avoid market timing.

Diversification helps to minimize risk in the HiTIP's investments and the following types of diversification should be considered, including, but not limited to:

i.—Stage

⁺ERS changed the private equity benchmark from the Russell 3000 Index plus 350 basis points effective 10/1/2014.

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Diversify investments throughout the various stages from early stage through later stage financing.

ii. Industry Sectors

Investments will be diversified across industries, subject to the investment opportunities and the discretion, within the parameters of the partnership/LLC agreements, of the general partners/managers retained.

iii. Size of Investments

Investments will be diversified among a range of partnerships/LLCs of varying sizes, generally with a minimum commitment size of \$1 million but with an ERS ownership percentage usually at or below one third of the total fund.

iv. Geographical

The HiTIP, by statute, will be biased toward Hawaiian companies and/or concentrated within the State; this risk cannot be diversified away and may be significant. While such a geographic bias is likely to exist, there is a reasonable likelihood that the business mix of the underlying companies could be global in nature, offsetting the above referenced lack of geographic diversification.

v. Time

The HiTIP will endeavor to invest in a consistent manner over time and shall not seek to "time the market."

b. Total Private Equity Portfolio Diversification

Correlation of the HiTIP's investment return to other private equity segments is expected to be relatively low, and the inclusion of this component should, therefore, provide an added measure of diversification to the broader ERS private equity program.

c. HiTIP Program Size—Prudent Level of Investment

Act 260, requires ERS to "develop criteria to determine the amount of funds that may be prudently invested in Hawai'i private placement investments." Consistent with this requirement, the Board will set an overall program size for HiTIP based on its fiduciary duty, the Total Fund's risk and return parameters, and the opportunity set available across private markets. Investment Staff, in consultation with the managing fund advisor, will periodically evaluate market conditions in Hawai'i and recommend adjustments to the program's scale as needed. This approach ensures that HiTIP remains aligned with statutory intent while maintaining flexibility to adapt to evolving economic conditions and the broader objectives of the Total Fund. To meet this requirement, the ERS relied upon an independent third party analysis of Hawai'i private equity investment trends, published in January 2008 by the Hawai'i Institute for Public Affairs (HIPA), a nonpartisan research institute focusing on key Hawaiian economic trends. The analysis, entitled *Venture Capital in Hawai'i – An assessment of Market Opportunities*, proved to be a foundational study on private equity capital formation within the State. Over the years, other reports have generally confirmed the findings of the HIPA report.²

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d. Key Performance Indicators

² See, for example, Hawaii Innovation Assets Report, 2015-2015, commissioned by the Hawaii Business Roundtable; #STARTUPPARADISE, Stafford Capital Partners, June 2016.

To support the strategic direction of HiTIP, the program will be evaluated against a defined set of key performance indicators. These indicators clarify the program's contribution to the Total Fund, reflect its Hawai'i linkage, and provide a consistent framework for Board and Investment Staff oversight at the appropriate fiduciary level. For purposes of this policy, key performance indicators will be defined as follow, in order of priority:

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- (i) Financial Returns: Achievement of competitive, long-term net returns that meet or exceed the ERS Total Fund Return Benchmark for similar or lower levels of risk. Returns remain the primary measure of success across strategies and structures.
- (ii) Hawai'i Economic Contribution: Evidence of meaningful Hawai'i linkage, including the degree to which investments support local economic activity, expand private capital availability in the state, or contribute to business formation and growth across islands.
- (iii) Sustainability and Social Impact: Alignment with environmental resilience, food and energy security, community well-being, or other long-term social benefits that complement financial and economic objectives without superseding them.

e. Standards

vi. Types of Allowable Investments

The applicable State statute (Section 88-119, HRS) allows for a wide array of investment vehicles. ERS private equity investment policies allow investments in limited partnership LLC vehicles without prior Board approval.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII - INVESTMENT POLICY

vii. Prudent Investor Standard

The selection of HiTIP investment vehicles will be guided by the care, skill and diligence that a prudent investor acting in a similar capacity and familiar with such investments would use in managing and investing a similar account. Investments should be expected to enhance the expected risk-adjusted investment returns of the broader ERS investment portfolio.

viii. Negotiated Terms

Terms, such as preferred returns, lower fee structures, and profit splits should be negotiated where prudent, adhering to best practices within the institutional investment community. All agreements are subject to the satisfactory negotiation of terms by the managing fund-of-funds advisor.

f. Review and Modification of Investment Policy Statement

The Board may review this policy statement and procedures from time to time to determine if the Board deems modifications to be necessary or desirable.

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~~One important condition for any private equity program to deliver its expected return objective is that the market(s) it serve(s) have an imbalance of supply and demand for private equity capital. Specifically, if the expected amount of capital available for investment is less than the expected amount of capital required, then a “funding gap” is said to exist. Such a funding gap can cause investor capital to be marginally more attractive, allowing investors to seek incrementally higher returns. The larger the funding gap, the broader the investment choices and the lower the competition among investors placing capital in the marketplace.~~

~~The HIPA report found that a modest private equity funding gap exists in Hawai‘i. Based on a review of the report’s figures by the ERS’s general investment consultant, the annual expected funding gap falls in a range of \$5 million to \$45 million. In order to increase the probability of the HiTIP’s successfully meeting its objectives, ERS’s general investment consultant recommended that the HiTIP fund only a fraction of the expected funding gap, to a maximum of 50%, to bring more flexibility and higher returns to the program, and a minimum of 25%, to attract a sufficient number of vendors to compete for the opportunity to manage a Hawai‘i-oriented private equity program with a focus on venture capital and other growth-oriented opportunities.~~

E.3. PROCEDURES

1. Procedures and Standards

1. General Procedures

- i. The ERS, with assistance from consultants, as requested, will seek, identify, and screen appropriate managing fund-of-funds advisors that exhibit (i) expertise in structuring successful long-term targeted investment programs, (ii) sufficient resources to screen, analyze, and conduct due diligence on a wide array of private market opportunities~~and/or LLCs~~, and (iii) a willingness to commit significant resources to Hawai‘i-focused private market equity investment.
- ii. The ERS, with assistance from consultants, as requested, will select an appropriate managing fund advisor to execute the HiTIP investment program. ~~The advisor will be responsible for developing and implementing a long-term investment strategy that aligns with the Total Fund’s risk-adjusted return objectives and incorporates opportunities with meaningful Hawai‘i linkage. In carrying out this mandate, the managing fund advisor will be expected to maintain a disciplined sourcing approach, assess private market opportunities across multiple risk and strategy types, and build relationships that enhance access to high-quality Hawai‘i-connected investments. Key aspects of the program are (i) identifying partnerships or partnership groups (or LLCs) that are focused on, emphasize, or have made material investment allocations to the greater Hawai‘i economy, (ii) developing a long term investment strategy and/or business plan that places high priority on committing material amounts of capital to Hawai‘i businesses, and (iii) establishing and fostering a growing private-equity network within Hawai‘i.~~

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII - INVESTMENT POLICY

- iii. The ~~managing fund-of funds~~ advisor will ~~source and evaluate prospective investment vehicles and conduct full due diligence (including investment, legal, and operational due diligence) on prospective investments. Following its analysis, the managing fund advisor will determine whether an investment should be pursued in accordance with its delegated authority and the parameters of this policy. Upon satisfactory due diligence and legal reviews, the managing fund advisor will authorize commitments in accordance with its delegated authority. Commitments will be made to investments where ERS holds an economic interest in a vehicle that is managed by an external general partner, lead manager, or managing member. identify promising investment vehicles and conduct full due diligence (including legal due diligence) on prospective investments. Upon completion of its due diligence, the fund of funds advisor will evaluate the investment vehicle and determine whether the investment should be pursued.~~
- iv. Direct investments into portfolio company co-investments are not allowed without first making the appropriate changes to this policy.
- iv. Upon satisfactory due diligence and legal reviews, the ~~managing fund-of funds~~ advisor will, ~~on behalf of the Board~~, authorize ~~commitments~~, in accordance with its delegated authority. Commitments will be made to investments to a specific partnership, LLC, where ERS holds an economic interest in a vehicle that is managed by a general partner, ~~the managing fund advisor or other managing partners~~~~member~~.
- v. ~~the managing fund advisor or other managing partners~~~~member~~.

v. At least annually, the fund of funds advisor will provide a written report to the Board containing a summary of the approved investment vehicles since the last report. The summary may include: a description of the general partner's/manager's background, historical performance, and organization; the proposed investment strategy; the terms of the investment; the expected rate of return; the merits of the investment; issues and concerns surrounding the investment and how they were resolved; and issues and provisions that were subject to negotiation. The managing fund advisor will provide ERS Staff with written reports on HiTIP activity at a frequency no less than quarterly, for ongoing internal analysis.

vi. Investment Staff will review these materials and present an annual update to the Board summarizing program activity, commitments made, portfolio positioning, performance, and any material developments since the prior review.

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d. Selection Criteria - External General Partners/Managers

i. The HiTIP's fund of funds advisor will generally invest with partnership (or LLC) groups with prior investment management experience. Primary emphasis will be on the quality and experience of the individuals who manage the investments. It is expected that the fund of funds advisor will conduct sufficient due diligence to address and examine the criteria for selection outlined in this section. The fund of funds advisor will provide a summary due diligence report to Investment Staff for each partnership commitment.

ii. Additional criteria to be considered shall include:

1. A well developed investment focus that meets the HiTIP's objectives, and a favorable assessment of the proposed investment's strategy and market conditions;
2. Relevant investment experience of partners/managers and key staff, individually and as a team, as well as their stability;
3. Organizational depth and significant time commitment to the investment vehicle;
4. Well structured decision making and transaction execution processes, including:
 - deal flow and initial analysis of portfolio investments;
 - pricing, selection and negotiation of portfolio investments;
 - financial structuring of portfolio investments;
 - management or oversight of portfolio companies;
 - development of exit strategies;
5. Consideration of relevant issues, such as conflicts of interest and alignment of interests, among others;
6. Experience in, and a demonstrated record of, successful prior investments;
7. Appropriate proposed terms and structure for the investment.
8. Meaningful capital commitments by the partners/managers.

e. Standards

i. Types of Allowable Investments

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII - INVESTMENT POLICY

~~The applicable State statute (Section 88-119, HRS) allows for a wide array of investment vehicles. ERS private equity investment policies allow investments in limited partnership LLC vehicles without prior Board approval.~~

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ii. Prudent Investor Standard

~~The selection of HiTIP investment vehicles will be guided by the care, skill and diligence that a prudent investor acting in a similar capacity and familiar with such investments would use in managing and investing a similar account. Investments should be expected to enhance the expected risk-adjusted investment returns of the broader ERS investment portfolio.~~

iii. Negotiated Terms

~~Terms, such as preferred returns, lower fee structures, and profit splits should be negotiated where prudent, adhering to best practices within the institutional investment community. All agreements are subject to the satisfactory negotiation of terms by the fund of funds advisor.~~

2. Strategy

a. Allocation

~~The HiTIP will be selective and more focused than the current private equity program, and invest such assets prudently, and as opportunities become available. Diversification within the HiTIP is a consideration, but is extremely limited given the intent of Act 260, which is the primary impetus for HiTIP.~~

i. Allocation by Fund Type

~~An important component of the HiTIP investment strategy is to seek out and invest in Hawai'i-based opportunities. Access to such opportunities may occur through (i) partnerships/LLCs that are headquartered in Hawai'i or (ii) partnerships/LLCs that are not located in Hawai'i, but make or consider investments in Hawai'i. One framework to categorize partnerships is as follows:~~

- ~~1. Partnerships/LLCs that are Hawai'i focused~~ Those partnerships/LLCs that invest a significant percentage of their capital locally or have a permanent physical and staff presence in Hawai'i.
- ~~2. Partnerships/LLCs that have a Hawai'i presence~~ Those partnerships/LLCs that spend or make a commitment to spend significant time and resources in Hawai'i.
- ~~3. Partnerships/LLCs that are occasional investors~~ Those partnerships/LLCs that commit to actively seek Hawai'i investments.

~~Longer term, the HiTIP seeks to achieve reasonable and prudent weightings among the above fund types, with a clear emphasis on Hawaii-based investments. More specifically, the fund of funds advisor has agreed to make commitments so that 15-50% of investments will be directed toward Hawai'i-focused partnerships depending on the availability of attractive opportunities and the remaining 50-85% of investments will reside with partnerships/LLCs that fall under the latter two above categories. Significant concentration toward any of the above segments can occur over time as a result of how and when opportunities become available and because each HiTIP investment will likely not be fungible and/or exhibit low levels of liquidity.~~

ii. Method of Participation

The HiTIP will consider well-established investment vehicles as well as new and smaller investment vehicles. To the extent possible, partnerships and/or LLCs shall be structured to create an alignment of interest between the limited partners/pассивные инвесторы and the general partners/Managing members.

iii. Investment Funding

Partners/managers retained by the HiTIP shall make capital calls during agreed upon investment periods in accordance with negotiated agreements. Such requests must be in compliance with both fund of funds advisor and ERS internal control procedures.

iv. Investment Liquidations

Partners/managers shall return capital to the HiTIP through cash distributions, whenever possible. Partners/managers shall liquidate any marketable securities before making distributions to the HiTIP. In instances where liquidation is not in the best interest of the HiTIP, partners/managers may distribute securities with sufficient advance notice to the fund of funds and Staff. ERS may utilize the fund of funds advisor or retain a third party manager to liquidate such securities as deemed appropriate by the third party manager, generally, within a six month period.

Implementation

Staff Requirements

Appropriate Investment Staff will be assigned as the workload necessitates. It is expected that the retained fund of funds advisor will be responsible for much of the day to day operations of the HiTIP. To gain further insights into the overall due diligence process (particularly within the State), Investment Staff may conduct due diligence visits in conjunction with, or separate from, the fund of funds advisor on specific investment opportunities. Such visitations should not impact the advisor's recommendations and implementation activities.

Legal Counsel

The fund of funds advisor is responsible for obtaining all relevant legal advice for the HiTIP investments.

Contract Execution

The Board will approve an overall multi year commitment level to the fund of funds advisor. The Board will give discretion to the fund of funds advisor, acting as a fiduciary on behalf of the ERS, to conduct business, financial, and legal due diligence on, and then approve commitments to, underlying partnerships/LLCs.

The fund of funds advisor, as general partner or manager of the limited partnership or LLC described in D.1, below, is authorized to execute contracts for specific HiTIP investments, up to the total commitment level authorized by the Board.

Fund of Funds Advisor Contract

The fund of funds advisor contract shall be structured as a general partner/limited partner agreement with a termination date not to exceed twelve years, including extension periods.

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII - INVESTMENT POLICY

~~The fund of funds agreement shall include a "no cause" fund of funds advisor/general partner replacement clause with a maximum 90 day notice period.~~

~~It is the policy of the Board to continuously review all contracts.~~

~~Upon the expiration of the Fund of Funds Advisor's contract, or whenever directed by the Board, ERS, with assistance from consultants, as requested, shall undertake and complete a search process which shall include the following:~~

~~Identification of those potential fund of funds advisor candidates who may reasonably be believed to perform those services under examination;~~

~~Directing of proposals which shall include all relevant factors;~~

~~Monitoring~~

~~Reports~~

~~Reports prepared by the HiTIP fund of funds advisor will be furnished to the Board and Investment Staff, quarterly, on HiTIP activity and performance, and annually in an expanded format.~~

~~Underlying general partners/managers shall provide semi annual reports to the fund of funds advisor and Investment Staff on investment activity and performance. In addition, audited financial statements shall be provided on an annual basis.~~

~~Section 88-119(11), HRS, requires that ERS report annually to the legislature on HiTIP investment activity, as well as on any other ERS investments that are located in Hawai'i. As part of the reporting process, ERS is required to report rationale for not investing in Hawai'i venture capital investments.~~

~~Adherence to Strategy~~

~~The actual strategy employed by underlying general partners/managers will be judged relative to stated objectives and strategies. Investment Staff and the fund of funds advisor will interact with the general partners/managers periodically as necessary. It is also expected that the fund of funds advisor and/or Investment Staff will also attend advisory meetings, board meetings, and/or annual investor meetings of the underlying partnerships or LLCs, as required (particularly with respect to Hawai'i based investments), as part of the monitoring process. Given the illiquid nature of these investments, however, it is not anticipated that these investments can be exited once a commitment is made.~~

~~Review and Modification of Investment Policy Statement~~

~~The Board may review this policy statement and procedures from time to time to determine if the Board deems modifications to be necessary or desirable.~~



HITIP PROGRAM

SECTION: E

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E.1. INTRODUCTION

The Hawaii Targeted Investment Program (HiTIP) was created by the Employees' Retirement System of the State of Hawaii ("ERS") to fulfill the mandate of Act 260, "A Bill For An Act Relating To The Innovation Economy" ("Act 260") passed by the Legislature and signed by the Governor in July 2007. Part of the intent of Act 260 is to support private placement investment activity connected to Hawai'i by encouraging ERS to develop criteria and in effect evaluate opportunities across private markets that align with the ERS's fiduciary duty and risk-adjusted return objectives.

HiTIP shall be treated as a dedicated component of the Total Fund, intended to identify and evaluate private placement opportunities linked to Hawai'i across multiple risk types and investment structures. In accordance with HRS chapter 88, the Board of Trustees of the ERS (the "Board") determines the investment policies and procedures for all ERS investment activities, including HiTIP. ERS employees will act as staff overseeing HiTIP and its managing fund advisor and report HiTIP activities to the Board, in conjunction with the managing fund advisor. In this capacity, ERS investment staff ("Investment Staff") and/or the managing fund advisor may periodically recommend new or updated HiTIP investment policies and procedures to the Board for review and comment. HiTIP investment policies and procedures, which are attached, reflect the following principles:

1. The purpose of HiTIP is to produce competitive risk-adjusted investment returns for the ERS by investing in opportunities connected to Hawai'i. While the program may support emerging and growth-oriented businesses in Hawai'i, its focus is on identifying investments that meet ERS's fiduciary standards. Broader economic benefits may occur, but they are not the mission of the program.
2. HiTIP funds will be invested only through a managing fund advisor that has primary responsibility for sourcing and underwriting opportunities for the program. Investments may be made through a range of private market structures, including funds, co-investments, direct opportunities, or joint ventures, so long as they meet ERS's fiduciary and risk-adjusted return objectives.

External managers will exercise discretion within their respective governing agreements, and the managing fund advisor will oversee all such managers under its delegated authority. The Board and Investment Staff will delegate the selection, retention and monitoring of investment opportunities to a dedicated managing fund advisor. ERS employees and the Board will not review or approve individual portfolio-level investment proposals. The managing fund advisor will exercise discretion within its delegated authority.

E.2. POLICY

1. General Policy

HiTIP D shall operate as a multi-risk private markets vehicle that supports diversification and the long-term risk-adjusted return objectives of the Total Fund. HiTIP may evaluate opportunities across private equity, private credit, real assets, infrastructure, agriculture and aquaculture, and other alternative strategies where there is a meaningful connection to Hawai‘i and a clear alignment with ERS’s fiduciary standards. HiTIP is intended to function as a broad, total-fund program that can pursue multiple types of risk and return drivers across the Hawai‘i-linked market landscape.

For the purposes of this policy, investment strategies shall be defined as follows:

- a) Private Equity
Investments in privately negotiated ownership positions where returns are driven by operational improvement, strategic growth, and long-term value creation rather than short-term market pricing.
- b) Private Credit
Privately originated debt or credit exposures where returns are primarily driven by contractual income, credit underwriting, and the ability to manage borrower-level risk through negotiated protections.
- c) Real Assets
Investments backed by tangible, productive assets where returns are driven by cash yield, inflation sensitivity, and the intrinsic value of the underlying asset base.
- d) Infrastructure
Long-duration investments in essential systems where returns are shaped by stable cash flows, regulated or contracted revenue, and resilience across economic cycles.
- e) Agriculture and Aquaculture
Investments tied to biological or resource-based production systems where returns are influenced by yield, resource productivity, and long-term supply-and-demand fundamentals.
- f) Other Alternative Strategies
Private market exposures that provide differentiated sources of return, driven by structural inefficiencies, specialized capabilities, or uncorrelated value creation that enhances Total Fund diversification.

Investments may be made through various legal structures, to support long-term growth, while remaining in compliance with Total Fund strategic objectives. HiTIP may evaluate opportunities in funds, co-investments, direct investments, joint ventures, or other structures appropriate for the opportunity.

For the purposes of this policy, investment structures shall be defined as follows:

- i. Fund Investment
Pooled vehicles managed by an external general partner with full discretionary authority, with the managing fund advisor providing oversight on behalf of ERS.

- ii. Co-Investment
Minority positions made alongside a lead manager, where the managing fund advisor exercises all investment discretion and oversight.
- iii. Direct Investment
Ownership or credit interests sourced, negotiated, and managed by the managing fund advisor, transacting directly with the underlying company or asset sponsor.
- iv. Joint Venture
Shared-ownership arrangements in which governance and decision rights are negotiated by the managing fund advisor with aligned partners who share operational and financial responsibilities.
- v. Other Structure
Bespoke arrangements with negotiated ownership, manager roles, and oversight rights, executed and monitored by the managing fund advisor under ERS's delegation framework.

2. Objectives

a. Portfolio Investment Performance Objective

The performance objective for HiTIP investments is to meet or exceed the ERS Total Fund Return Benchmark over the long term for similar or lower levels of risk. HiTIP investments should contribute positively to the Total Fund's risk-adjusted return profile and operate within its broader diversification and risk parameters. Investment Staff, in consultation with the managing fund advisor, will periodically review benchmark alignment to ensure the program remains consistent with Total Fund objectives. Given the nature of private markets, meaningful performance attribution typically requires an extended time horizon, defined for this program as five years or longer.

b. Diversification of HiTIP Investment Risks

Diversification supports prudent risk management within HiTIP. The program will consider the following dimensions, as appropriate to the opportunity set

- i. Strategy: Exposure across multiple private market strategies to balance differing sources of return and risk.
- ii. Structure: Use of varied investment structures to diversify governance, liquidity, and cash-flow characteristics.
- iii. Economic Exposures: Diversification across differing drivers of value creation, while recognizing the program's inherent Hawai'i linkage.
- iv. Scale: Appropriate variation in investment size determined by opportunity quality, risk profile, and Total Fund alignment.
- v. Time: Consistent pacing of commitments to reduce vintage concentration and avoid market timing.

c. Prudent Level of Investment

Act 260, requires ERS to "develop criteria to determine the amount of funds that may be prudently invested in Hawai'i private placement investments." Consistent with this requirement, the Board will set an overall program size for HiTIP based on its fiduciary duty, the Total Fund's risk and return parameters, and the opportunity set available across private markets. Investment

Staff, in consultation with the managing fund advisor, will periodically evaluate market conditions in Hawai‘i and recommend adjustments to the program’s scale as needed. This approach ensures that HiTIP remains aligned with statutory intent while maintaining flexibility to adapt to evolving economic conditions and the broader objectives of the Total Fund.

d. Key Performance Indicators

To support the strategic direction of HiTIP, the program will be evaluated against a defined set of key performance indicators. These indicators clarify the program’s contribution to the Total Fund, reflect its Hawai‘i linkage, and provide a consistent framework for Board and Investment Staff oversight at the appropriate fiduciary level. For purposes of this policy, key performance indicators will be defined as follow, in order of priority:

- (i) Financial Returns: Achievement of competitive, long-term net returns that meet or exceed the ERS Total Fund Return Benchmark for similar or lower levels of risk. Returns remain the primary measure of success across strategies and structures.
- (ii) Hawai‘i Economic Contribution: Evidence of meaningful Hawai‘i linkage, including the degree to which investments support local economic activity, expand private capital availability in the state, or contribute to business formation and growth across islands.
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vi. Types of Allowable Investments

The applicable State statute (Section 88-119, HRS) allows for a wide array of investment vehicles.

vii. Prudent Investor Standard

The selection of HiTIP investment vehicles will be guided by the care, skill and diligence that a prudent investor acting in a similar capacity and familiar with such investments would use in managing and investing a similar account. Investments should be expected to enhance the expected risk-adjusted investment returns of the broader ERS investment portfolio.

viii. Negotiated Terms

Terms, such as preferred returns, lower fee structures, and profit splits should be negotiated where prudent, adhering to best practices within the institutional investment community. All agreements are subject to the satisfactory negotiation of terms by the managing fund advisor.

f. Review and Modification of Investment Policy Statement

The Board may review this policy statement and procedures from time to time to determine if the Board deems modifications to be necessary or desirable.

E.3. PROCEDURES

1. General Procedures

- i. The ERS, with assistance from consultants, as requested, will seek, identify, and screen appropriate managing fund advisor that exhibit (i) expertise in structuring successful long-term targeted investment programs, (ii) sufficient resources to screen, analyze, and conduct due diligence on a wide array of private market opportunities, and (iii) a willingness to commit significant resources to Hawai'i-focused private market investment.
- ii. The ERS, with assistance from consultants, as requested, will select an appropriate managing fund advisor to execute the HiTIP investment program. The advisor will be responsible for developing and implementing a long-term investment strategy that aligns with the Total Fund's risk-adjusted return objectives and incorporates opportunities with meaningful Hawai'i linkage. In carrying out this mandate, the managing fund advisor will be expected to maintain a disciplined sourcing approach, assess private market opportunities across multiple risk and strategy types, and build relationships that enhance access to high-quality Hawai'i-connected investments.
- iii. The managing fund advisor will source and evaluate prospective investment vehicles and conduct full due diligence (including investment, legal, and operational due diligence) on prospective investments. Following its analysis, the managing fund advisor will determine whether an investment should be pursued in accordance with its delegated authority and the parameters of this policy. Upon satisfactory due diligence and legal reviews, the managing fund advisor will authorize commitments in accordance with its delegated authority. Commitments will be made to investments where ERS holds an economic interest in a vehicle that is managed by an external general partner, lead manager, or managing member.
- iv. Upon satisfactory due diligence and legal reviews, the managing fund advisor will authorize commitments, in accordance with its delegated authority. Commitments will be made to investments where ERS holds an economic interest in a vehicle that is managed by a general partner, the managing fund advisor or other managing partners.
- v. The managing fund advisor will provide ERS Staff with written reports on HiTIP activity at a frequency no less than quarterly, for ongoing internal analysis.
- vi. Investment Staff will review these materials and present an annual update to the Board summarizing program activity, commitments made, portfolio positioning, performance, and any material developments since the prior review.



INVESTMENT GROUP

Employees' Retirement System of the State of Hawaii

December 3, 2025

Total Portfolio Liquidity –
Annual Review



Employees' Retirement System of the State of Hawaii

Introduction

Introduction

- In November 2023, the ERS received education on "Total Portfolio Liquidity" and approved a minimum allocation for liquidity purposes – defined as 5% of the Total Portfolio in *Tier 1* assets.
 - The list/definitions of tiers is provided later in this presentation.
- In November 2024, the first annual review was presented that included liquidity detail for Jan 2024 – Sept 2024. Additionally, the 5% minimum for calendar year 2025 was reaffirmed.
- This presentation seeks to quickly review the process that was used to determine the liquidity minimum as well as the historical amounts of *Tier 1* assets held by the ERS in 2025 YTD (as of 10/31).
- Additionally, this presentation concludes with liquidity guidance for calendar year 2026.



Employees' Retirement System of the State of Hawaii

Liquidity Needs

Liquidity for Public Pensions

- The liquidity needs of public pensions are different than other investors:
 - Consistent benefit payment outflows.
 - For the average public pension of similar size as the ERS, benefit payment outflows exceed contribution inflows (average peer is roughly -2.5%* for net cash flow as a percent of the total portfolio).
 - Private markets capital calls.
 - For certain closed systems, the portfolio may not have any contributions and will eventually be entirely liquidated.
- Additionally, liquidity is important from an investment perspective in order to rebalance and take advantage of investment opportunities.

*Source: Boston College Center for Retirement Research



Employees' Retirement System of the State of Hawaii

Liquidity Tiers

Liquidity Tiers

→ Investments can often be classified into liquidity tiers/categories.

Tier 1

- Assets with either low-to-moderate volatility or a negative equity beta.
- Must be accessible within days.
- Ex: cash, short-to-intermediate Treasuries, long volatility strategies, etc.

Tier 2

- Assets that are expected to be uncorrelated to public equity but exhibit one or more of the following characteristics:
 - High volatility (i.e., 10% or more annual standard deviation).
 - Liquidity that isn't accessible for one month or more.
- Ex: systematic trend following, liquidity restricted commingled funds, etc.

Tier 3

- Assets that are liquid (days-to-weeks) but with high correlations to public equity.
- Ex: public equity, public credit, public real assets, etc.

Tier 4

- Illiquid assets/private markets.
- Ex: private equity, private credit, private real assets, etc.



Employees' Retirement System of the State of Hawaii

Methodology

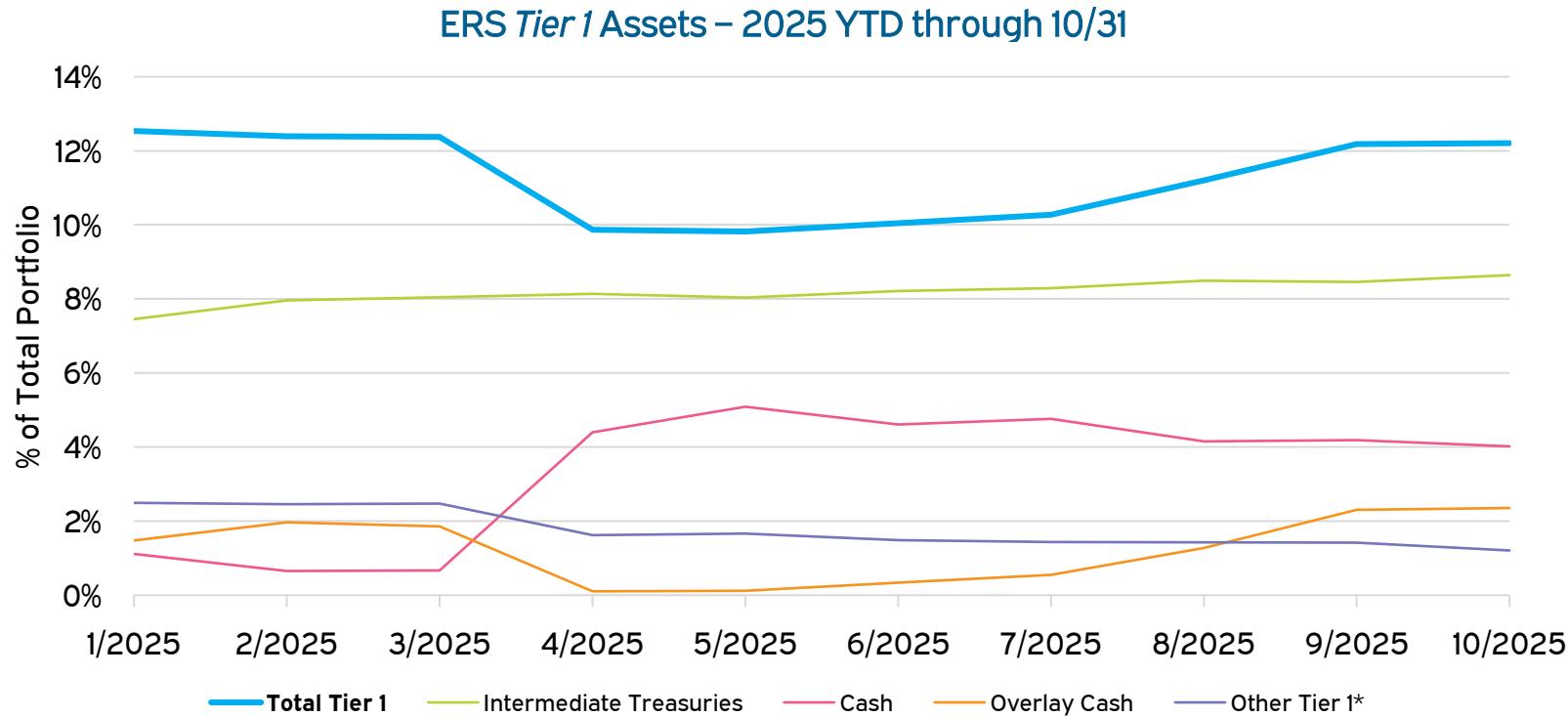
Methodology for Determining *Tier 1* Minimum

- The ERS conducts a comprehensive evaluation of the total portfolio's ability to meet liquidity requirements over long-horizons during asset-liability studies (conducted every 3-5 years).
 - Liquidity requirements typically include projected benefit payments over a ~20-year horizon and private markets commitments/distributions over the first five years (with cash flow neutrality assumed thereafter).
- Moreover, portfolios are examined under severe liquidity stress tests in order to evaluate the ERS's ability to meet liquidity requirements.
- As it relates to methods for determining a *Tier 1* minimum, there is no industry standard.
- Meketa and ERS Staff examined expectations for portfolio drawdown lengths and determined the amount of *Tier 1* assets required to meet liquidity needs during such drawdowns.
 - This is where the 5% minimum (i.e., ~2.5 years of net cash outflows) came from.
 - Moreover, Meketa and ERS Staff have examined updated actuarial projections and private markets pacing plans.



Employees' Retirement System of the State of Hawaii

ERS – 2025 YTD Experience



- ERS has maintained sufficient exposure in *Tier 1* assets throughout 2025 – well above the 5% minimum (i.e., ~10-12% of Total Portfolio throughout the year).
- During the volatile Q2 period, the overall allocation to Cash was increased (as previously discussed with the Board/IC).
 - The Cash allocation is currently declining as ERS Staff deploys for mandates and capital calls.

*Other Tier 1 assets are long volatility strategies.



Employees' Retirement System of the State of Hawaii

Conclusion

Conclusion

- Mature public pension systems require an explicit consideration of liquidity.
- Liquidity is a multifaceted attribute, and it is important to examine each asset class's liquidity under periods of market stress.
- During periods of market stress, liquidity should primarily be accessed from asset classes exhibiting stable/improving values and low transaction costs.
- The primary reason why it is not advisable to obtain liquidity from assets experiencing drawdowns is because that is the exact time that their forward-looking returns are the most attractive.

- Throughout 2025 YTD, ERS has maintained a high level of exposure in *Tier 1* assets that well exceeded the 5% minimum.
- Based on current market values and actuarial projections, Meketa and ERS Staff recommend that the 5% minimum remain unchanged for calendar year 2026.



Employees' Retirement System of the State of Hawaii

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INVESTMENT GROUP

Employees' Retirement System of the State of Hawaii

December 3, 2025

Annual Benchmark Review



Employees' Retirement System of the State of Hawaii

Introduction

Executive Summary

- This presentation seeks to accomplish three items:
 1. Brief recap of current Total Fund benchmark history
 2. Review of current Total Fund benchmark construction
 3. Discussion/confirmation of benchmark suitability going forward

- Conclusion: Meketa and ERS Staff believe the asset class and Total Fund benchmarks are well-designed and do not recommend any changes at this time.



Employees' Retirement System of the State of Hawaii

Long-term Policy Portfolio

Asset-Liability Results and Corresponding Benchmarks

- In June 2023, the ERS Board adopted a new long-term policy portfolio.
- In August 2023, the ERS Board approved the new asset class and Total Fund benchmarks.
- On January 1, 2024, the new policy structure and associated benchmarks went into effect.

		Long-term Asset Class Policy Weight	Corresponding Benchmark
Global Equity	Public Equity	20%	MSCI ACWI IMI
	Private Equity	19%	MSCI ACWI IMI (qtr lag)
Global Credit	Liquid Credit	4%	Bloomberg Global High Yield Index (hedged) S&P LSTA Leveraged Loan 100 Index
	Private Credit	8%	Bloomberg Global High Yield Index (qtr lag) (hedged) S&P LSTA Leveraged Loan 100 Index (qtr lag)
Real Assets	Real Estate	9%	FTSE EPRA NAREIT Global REITS Index GD (qtr lag)
	Infrastructure	7%	Dow Jones Brookfield Global Infrastructure Index (qtr lag)
	Timberland and Agriculture	3%	S&P Global Timber & Forestry Index (qtr lag) S&P GSCI Agriculture Index (qtr lag)
Liquid Defensive	Systematic Trend Following	8%	Mount Lucas Global Index EV 15 Vol
	Long US Treasuries	4%	Bloomberg US Treasury: Long Index
	Intermediate Duration Government Bonds	14%	Bloomberg US Treasury: Intermediate Index
	Diversifying	---	---
Illiquid Diversifying	Reinsurance/similar	4%	Swiss Re Global Catastrophe Bonds Index (hedged)



Employees' Retirement System of the State of Hawaii

Benchmark Changes

Overview of 1/1/24 Benchmark Changes

→ Policy benchmark now reflects the following:

- Better alignment between benchmarks and betas/market risks of corresponding asset classes
- Improved investability (i.e., opportunity cost and/or alternative implementation)
- Elimination of artificial illiquidity premiums (e.g., + 2%)
- Elimination of “riskless” indices (e.g., 90-day T-Bill)

→ Reasoning :

- Better reflection of Board-directed market risk (as an outcome of A/L study)
- Improved ability to measure/attribute performance between policy and implementation
- More streamlined structure reduces complexity
- Stronger fulfillment of “ideal” benchmark characteristics



Employees' Retirement System of the State of Hawaii

Overview of Benchmarking

Benchmark Characteristics

→ Bailey Criteria¹:

- Unambiguous – well-defined identities and weights;
- Investable – one can own the benchmark's constituents;
- Measurable – can calculate performance at reasonable intervals;
- Appropriate – consistent with the investment approach/style;
- Reflective of current investment options – representative of the segment; and
- Specified in advance – constructed before evaluation period.

→ Other example characteristics

- Accessible - difficult-to-produce benchmarks should be avoided;
- Transparent – understandable constituency of the benchmark;
- Independent – a manager's performance should not impact the benchmark return; and
- Relevant – correlation between a portfolio and a benchmark influences its relevance but is not sufficient due to potential spurious relationships.

¹ The Bailey Criteria: Financial Analysts Journal, CFA Institute, 1992.



Employees' Retirement System of the State of Hawaii

Future Changes

Future Changes and Conclusion

- Meketa and ERS Staff continually review the ERS's effective benchmarks, the broader universe of potential benchmarks, as well as industry trends/practices.
- Future benchmark modifications may occur for several reasons: 1) Board-directed asset allocation changes, 2) Changes to existing benchmark constructs (including data issues/costs) and/or new benchmark availability, and 3) Alterations in benchmarking philosophy by the ERS or in accordance with changes in industry best practices.
- Meketa and ERS Staff believe that the ERS's current benchmarks remain appropriate for the ERS Total Portfolio and corresponding asset classes, and thus no changes are proposed.

- Benchmark reviews will continue to occur on a recurring basis with potential changes proposed to the ERS Board/IC when appropriate.
- ERS will be conducting an asset-liability study in 2026 which may result in recommendations for benchmark modifications upon the conclusion of the study.



Employees' Retirement System of the State of Hawaii

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MINUTES OF THE REGULAR MEETING OF THE
BOARD OF TRUSTEES OF THE EMPLOYEES' RETIREMENT SYSTEM
OF THE STATE OF HAWAII

NOVEMBER 10, 2025

CITY FINANCIAL TOWER
201 MERCHANT STREET, SUITE 1200
HONOLULU, HAWAII 96813

Trustees present:
(City Financial Tower
by teleconference)

Mr. Emmit Kane, Chair (in person)*
Mr. Lance Mizumoto, Vice Chair*
Mr. Vincent Barfield (in person)*
Dr. Catherine Chan (in person)*
Dr. Genevieve Ley (in person)*

Trustees absent:

Mr. David Louie
Ms. Sabrina Nasir for Mr. Luis Salaveria
Mr. Bennett Yap

Staff present:
(City Financial Tower
by teleconference)

Mr. Thomas Williams, Executive Director*
Mr. Kona Mann, Chief Compliance Officer*
Mr. James Greubel, Program Specialist*
Ms. Shanna Sakagawa, Program Specialist*
Mr. Keith Miyamoto, Information Services Branch Manager*
Ms. Lori Kobayashi, Retirement Benefits Branch Manager*
Ms. Kristin Varela, Chief Investment Officer*
Mr. Anthony Goo, Deputy Chief Investment Officer
Mr. Aaron Au, Investment Officer – Private Equity
Ms. Christine Chang, Investment Officer – Diversifying Strategies
Mr. Andrew Chen, Investment Officer – Credit Markets
Ms. Lynn Kamimoto, Investment Officer – Risk
Mr. Ian Wetzel, Investment Officer – Real Assets
Ms. Gerri Konishi, Member Home Loan Assistant
Ms. Masayo Zabinski, Accountant
Ms. Dale Kehau Kanae, Recording Secretary/Administrative Assistant*
Ms. Lori Kim, Administrative Assistant*
Ms. Andrea Gasper, Administrative Assistant*

Attorneys present:
(by teleconference)

Ms. Jenny Nakamoto, Deputy Attorney General*
Ms. Lori Tanigawa, Deputy Attorney General*
Ms. Nietzsche Tolan, Deputy Attorney General*
Ms. Diane Wong, Deputy Attorney General*

Guests present:
(by teleconference)

Mr. Joe Newton, Gabriel Roeder Smith & Co.
Mr. Lewis Ward, Gabriel Roeder Smith & Co.
Mr. Peter Hanashiro, KMH LLP*
Mr. Tyson Suehiro, KMH LLP*

Public present:
(by teleconference)

Ben (Unverified)
Joe Ebisa – WithIntelligence (Unverified)
Ms. Karen Da vera
Phyllis Ida

*Attended Executive Session.

QUORUM/CALL TO ORDER

A quorum being present (Chair Kane, Vice Chair Mizumoto, Trustees Barfield, Chan, and Ley), Chair Kane called the regular meeting of the Board of Trustees (Board) of the Employees' Retirement System of the State of Hawaii (ERS) to

PUBLIC COMMENT

order at 9:00 a.m. and identified the Trustees attending in person and requested Trustees attending remotely confirm that they are the only ones present at their remote location while attending the meeting. Trustee attending remotely confirmed same. Trustees attending the meeting in person and remotely are noted on these minutes.

BOARD RESOLUTION REGARDING ERS EXECUTIVE DIRECTOR THOMAS WILLIAMS' SERVICE

EXECUTIVE DIRECTOR'S REPORT ON THE ADMINISTRATION OF THE SYSTEM WITH RESPECT TO SIGNIFICANT DEVELOPMENTS IN INVESTMENTS, POLICY, POTENTIAL LEGISLATION, AND REGULATORY MATTERS

DEPUTY EXECUTIVE DIRECTOR'S REPORT ON THE OPERATIONS OF THE SYSTEM WITH RESPECT TO ISSUES AFFECTING MEMBER SERVICES, ACCOUNTING, AND INFORMATION SYSTEMS

PROGRAM SUPPORT STAFF REPORT ON GENERAL DUTIES INCLUDING SIGNIFICANT CURRENT AND FUTURE PROJECTS

COMPLIANCE OFFICE STAFF REPORT ON GENERAL DUTIES INCLUDING SIGNIFICANT CURRENT AND FUTURE PROJECTS

PUBLIC COMMENT

Chair Kane called for public comment. There was no public present in person, however, four (4) members of the public attended by teleconference and had no comment.

Chair Kane, on behalf of the ERS Board of Trustees, presented a Resolution to Executive Director (ED) Thomas Williams and thanked him for his dedicated service of 10 years to the ERS. Mr. Williams shared heartfelt parting words of thanks to the Board and ERS staff attending the meeting.

ED Williams gave an oral report to the Board on the Administration of the System with Respect to Significant Developments in Investments, Policy, Potential Legislation, and Regulatory Matters as follows:

- Thanked the Board for their attendance and ERS Investment and Administrative staff for their hard work at the ERS Investment Summit held in September.
- Thanked the Board and ERS Staff Leadership for their contributions and guidance towards the ERS.
- Shared comments on the enterprise condition of the ERS within Administration, Program Specialists, Compliance Office, Investments, Branches: Retirement Benefits, Accounting, Information Services.

ED Williams, in absence of Deputy Executive Director Gail Strohl, reported to the Board that the Operations report was included in the Board packet for the Board's information and requested deferral of any questions to the next Board meeting.

There was no action required of the Board for this agenda item.

Program Specialist James Greubel presented an oral and written report to the Board on the Program Support Staff Report on General Duties Including Significant Current and Future Projects as submitted.

There was no action required of the Board for this agenda item.

Chief Compliance Officer Kona Mann presented an oral and written report to the Board on the Compliance Office Staff Report on General Duties Including Significant Current and Future Projects as submitted.

The Board has requested, while awaiting the implementation of the AuditBoard, a dashboard to be included as a part of this report, a snapshot highlighting where compliance and risks are for the ERS.

There was no action required of the Board for this agenda item.

Chair Kane called for public comment. There were no public comments from public members attending.

DISCUSS THE 2026 BOARD
OF TRUSTEES ELECTION
OF OFFICERS AND
COMMITTEE
ASSIGNMENTS AND
APPROVE THE 2026
SCHEDULE OF MEETINGS

Chair Kane discussed with the Board the present Officers and Committee Assignments and requested Board members submit their preferences of Committees they would like to serve on. Election of Officers and Committee Assignments will be determined and approved by the Board at the next meeting in January.

Chair Kane also discussed and presented to the Board a proposed 2026 Schedule of Meetings for approval.

On a motion made by Trustee Ley, seconded by Trustee Chan, and unanimously carried, the Board approved the Employees' Retirement System's Board of Trustees 2026 Schedule of Meetings as presented.

Chair Kane noted that there were no reports by the Governance Policy, Investments, or Legislative Committees.

Administrative & Audit Committee (Committee) Chair Chan, reported to the Board that the Committee last met on October 20, 2025, and discussed and took any necessary action on the following:

Gabriel Roeder Smith & Company's Joe Newton and Lewis Ward attended the meeting by teleconference and presented an oral and written report to the Board on an Employees' Retirement System's Draft Funding Policy.

On a motion made by Committee Vice Chair Barfield, seconded by Committee Chair Chan, and unanimously carried, the Board approved the Employees' Retirement System's Draft Funding Policy as accepted and recommended by the Committee, with the inclusion of reviewing the Policy annually as a part of the evaluation process.

KMH LLP's Peter Hanashiro and Tyson Suehiro, attended the meeting by teleconference and presented an oral and written report to the Board of KMH LLP's Internal Audit Update Report on the Current Status of Activities Completed During Q3, 2025, and an Update on the Completion Status of Management Action Plans for Past Internal Audit Observations and Recommendations and discussed in summary:

**INTERNAL AUDIT UPDATE REPORT
EXECUTIVE SUMMARY**

*Administrative and Other Matters
Status on Current Projects*

- Contracting & Procurement Review
- Enterprise Risk Management (ERM) Capability Roadmap and Training
- Business Continuity Plan – Tabletop Exercise
- Virtual Information Security Officer (vISO) Initiative – Roadmap Implementation
- Proposed Changes to 2025 Internal Audit Plan
 - To further support the progress made by the vISO and support updates needed to ERS' Business Continuity and Crisis Communication Plans, Internal Auditor is proposing the following changes:
 - Extending the vISO Initiative – Roadmap Implementation Project through the end of 2025.
 - Adding Business Continuity and Crisis Communications Plans – Revisions and Updates Project.

INTERNAL AUDIT
UPDATE REPORT BY
KMH LLP ON THE
CURRENT STATUS OF
ACTIVITIES
COMPLETED DURING
Q3, 2025, AND AN
UPDATE ON THE
COMPLETION STATUS
OF MANAGEMENT
ACTION PLANS FOR
PAST INTERNAL
AUDIT OBSERVATIONS
AND
RECOMMENDATIONS
(CONT'D)

- Deferral of Continuous Monitoring Tool Development – Part 2 Project to 2026.

KMH LLP requested approval from the Board of the proposed changes and updates to the 2025 Internal Audit Report as presented.

Committee Vice Chair Barfield shared with the Board, that the Committee had a robust focused discussion on the Internal Audit citations and its reporting. Although there were recent changes to the reporting format, the Committee emphasized that if time was taken within meetings to go through the dated citations resolutions, the managers responsible for the aged citations need to speak to it and take ownership of the problem. There was also some confusion by ERS staff of target dates and the Committee emphasized that accurate target dates need to be identified so that the Board has a really good estimate as to when the item will be resolved, particularly since there are a number of serious citations that have been extended multiple times. Again, Committee Vice Chair Barfield emphasized that the Committee had an intense discussion and that it was made clear to ERS staff of the Committee's position. The Committee wants the Board to know that this is a hot topic recognizing the Board's concerns on this matter.

On a motion made by Trustee Ley, seconded by Committee Vice Chair Barfield, and unanimously carried, the Board approved, as accepted and recommended by the Committee, the proposed changes and updates to the 2025 Internal Audit Update Report as presented.

KMH LLP'S Tyson Suehiro presented a written report and gave a brief background of the Investment Manager Selection and Evaluation Review Report noting that it was accepted by the Committee at its meeting of August 21, 2025, and was presented to the Board for approval.

On a motion made by Trustee Ley, seconded by Committee Vice Chair Barfield, and unanimously carried, the Board approved, as accepted and recommended by the Committee, the Investment Manager Selection and Evaluation Report as presented.

Chief Compliance Officer (CCO) Kona Mann presented an oral and written report to the Board on the Compliance Support Staff Update on Implementation of ERS' Compliance Program on Risk Assessment, Policies & Procedures, and Third-Party Risk Management and discussed in summary:

EXECUTIVE SUMMARY

Key Highlights

Next Steps

ERS COMPLIANCE & RISK MANAGEMENT PROGRAM

IT Policy Development & Road Mapping

AuditBoard Implementation Project

RFP Development

Migration Project Management

This report was provided for the Board's information, and no action was required.

Information Services (IS) Branch Chief Keith Miyamoto provided an oral report to the Board on the Launch of V3locity Pension Administration System Upgrade and discussed in summary:

ADMINISTRTRION SYSTEM UPGRADE

OVERVIEW

V3LOCITY MIGRATION KEY FEATURES

PROJECT COST

PROJECTED V3LOCITY MIGRATION SCHEDULE

This report was provided for the Board's information, and no action was required.

Before moving on, Chair Kane noted that the next two agenda items for the Human Resources Committee will be discussed in detail in Executive Session.

REPORT OF ACTIVITY BY THE HUMAN RESOURCES COMMITTEE

DISCUSS THE LEADERSHIP SUCCESSION PLAN PROCESS OF THE EMPLOYEES' RETIREMENT SYSTEM

DISCUSS THE RELOCATION EXPENSE REIMBURSEMENT POLICY OF THE EMPLOYEES' RETIREMENT SYSTEM

APPROVAL OF MINUTES

- SEPTEMBER 8, 2025
- SEPTEMBER 23-26, 2025

Human Resources Committee (Committee) Chair Barfield reported to the Board that the Committee last met on October 27, 2025, and reviewed the Committee activities for the year, including approval of minutes, and an end-of-the-year Committee self-evaluation, assessment with a rating of excellent. Committee Chair Barfield also reported that for 2026, the Committee will continue the yearly exempt staff performance evaluations and potential compensation recommendations and will also focus on the Leadership Succession Plan.

Committee Chair Barfield gave a brief overview of the Leadership Succession Plan noting that it would be discussed in detail in Executive Session.

Committee Chair Barfield further discussed with the Board that the Relocation Expense Reimbursement Policy of the ERS was reviewed by the Committee and is being presented for approval by the Board. ED Williams and Chief Investment Officer (CIO) Kristin Varela presented an oral and written report on the Exempt Employee Relocation Reimbursement Policy to the Board. It was suggested that a periodic review of the Policy be done at the same time as the review of compensation. The Department of Accounting and General Services is currently reviewing the Policy.

On a motion made by Committee Chair Barfield, seconded by Committee Vice Chair Ley, and unanimously carried, the Board approved the Relocation Expense Reimbursement Policy of the Employees' Retirement System, as presented subject to staff researching existing language with other state agencies such as the Department of Accounting and General Services, Department of Human Resources Development, or the University of Hawaii at Manoa, and further modifications.

On a motion made by Trustee Barfield, seconded by Trustee Ley, and unanimously carried, the Board approved the Minutes of September 8, 2025, and September 23-26, 2025, meetings as presented.

Chair Kane identified all the participants in Executive Session, the Board, staff members, Deputy Attorneys general, and Guests are identified with an asterisk on these minutes and listed on the Executive Session Minutes.

Chair Kane provided the reason to enter into Executive Session:

Executive Session, pursuant to HRS §92-5(a)(2), (4), (6), and (8), to consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities: to consider sensitive matters related to Cyber Security Updates and Enterprise Risk Management Updates; to consider the hire, evaluation, dismissal, or discipline of employees, where consideration of matters affecting privacy will be involved with respect to Leadership Succession Plans of the ERS and Relocation Reimbursement for an Investment Officer – Operations

Applicant; to deliberate or make a decision with respect to Ongoing Litigation, and a Compromise and Settlement Pursuant to HRS §88-106.5 which requires the consideration of information that must be kept confidential pursuant to State law; and to discuss and to make a decision on the approval of Executive Session and Confidential Executive Session Minutes of September 8, 2025, and Executive Session Minutes of September 23-26, 2025, which are confidential under State law.

ENTER EXECUTIVE SESSION

On a motion made by Trustee Barfield, seconded by Trustee Ley, and unanimously carried, the Board entered into Executive Session at 10:39 a.m.

(Public participation was paused as Executive Session was conducted in a separate virtual room.)

All Executive Session attendees participating by teleconference affirmed that no other persons were in their rooms or able to listen in on their audio or audiovisual connection. Recording Secretary Dale Kehau Kanae confirmed that no unauthorized persons were in the conference room or able to listen in via audio or audiovisual connection while on the teleconference.

EXECUTIVE SESSION

- Pursuant to HRS §92-5(a)(4) and (6), to consider and consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities, and to consider sensitive matters related to Cyber Security Updates.
- Pursuant to HRS §92-5(a)(4) and (6), to consider and consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities, and to consider sensitive matters related to Enterprise Risk Management Updates.
- Pursuant to HRS §92-5(a)(2) and (4), to Discuss and Review Leadership Succession Plans of the Employees' Retirement System and to consider the hire, evaluation, dismissal, or discipline of employees, where consideration of matters affecting privacy will be involved, and to consider and consult with the Board's attorneys on questions and issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities.
- Pursuant to HRS §92-5(a)(2), and (4), to Discuss and Approve Relocation Expense Reimbursement for Investment Officer – Operations Applicant.
- Pursuant to HRS §92-5(a)(4) and (8), to consider information that must be kept confidential pursuant to State law, and to consult with the Board's attorney on questions and issues pertaining to the Board's powers, duties, and privileges, immunities, and liabilities with respect to an Update on Ongoing Litigation for Linda S. Martell, CAAP-22-0000534 and CAAP-22-0000545.
- Pursuant to HRS §92-5(a)(4) and (8), to consult with the Board's attorney on questions and issues pertaining to the Board's powers, duties, and privileges, immunities, and liabilities with respect to a compromise and settlement pursuant to HRS §88-106.5; and to consider information that must be kept confidential pursuant to HRS §92F-13(1) and (4), §92F-14(b)(6), and Hawaii State Constitution, Article 1, Section 6.
- Pursuant to HRS §92-5(a)(8), to Review and Approve Executive Session Minutes of September 8, 2025, and September 23-26, 2025.
- Pursuant to HRS §92-5(a)(8), to Review and Approve the Confidential Executive Session Minutes of September 8, 2025.

EXECUTIVE SESSION,
PURSUANT TO HRS § 92-5(a)(4)
AND (6), TO CONSIDER AND
CONSULT WITH THE BOARD'S
ATTORNEYS ON QUESTIONS
AND ISSUES PERTAINING TO
THE BOARD'S POWERS, DUTIES,
PRIVILEGES, IMMUNITIES, AND
LIABILITIES, AND TO CONSIDER
SENSITIVE MATTERS RELATED
TO CYBER SECURITY UPDATES

EXECUTIVE SESSION,
PURSUANT TO HRS§ 92-5(a)(4),
AND (6), TO CONSIDER AND
CONSULT WITH THE BOARD'S
POWERS, DUTIES, PRIVILEGES,
IMMUNITIES, AND LIABILITIES,
AND TO CONSIDER SENSITIVE
MATTERS RELATED TO
ENTERPRISE RISK
MANAGEMENT UPDATES

EXECUTIVE SESSION,
PURSUANT TO HRS §92-5(a)(2)
AND (4), TO DISCUSS AND
REVIEW LEADERSHIP
SUCCESSION PLANS OF THE
EMPLOYEES' RETIREMENT
SYSTEM AND TO CONSIDER THE
HIRE, EVALUATION, DISMISSAL,
OR DISCIPLINE OF EMPLOYEES,
WHERE CONSIDERATION OF
MATTERS AFFECTING PRIVACY
WILL BE INVOLVED, AND TO
CONSIDER AND CONSULT WITH
THE BOARD'S ATTORNEYS ON
QUESTIONS AND ISSUES
PERTAINING TO THE BOARD'S
POWERS, DUTIES, PRIVILEGES,
IMMUNITIES, AND LIABILITIES

EXECUTIVE SESSION,
PURSUANT TO HRS §92-5(a)(2)
AND (4), TO DISCUSS AND
APPROVE RELOCATION
EXPENSE REIMBURSEMENT FOR
INVESTMENT OFFICER –
OPERATIONS APPLICANT

EXECUTIVE SESSION,
PURSUANT TO HRS §92-5(a)(4)
AND (8), TO CONSIDER
INFORMATION THAT MUST BE
KEPT CONFIDENTIAL
PURSUANT TO STATE LAW,
AND TO CONSULT WITH THE
BOARD'S ATTORNEY ON
QUESTIONS AND ISSUES
PERTAINING TO THE BOARD'S
POWERS, DUTIES, AND
PRIVILEGES, IMMUNITIES, AND
LIABILITIES WITH RESPECT TO
AN UPDATE ON ONGOING
LITIGATION FOR LINDA S.
MARTELL, CAAP-22-0000534
AND CAAP-22-0000545

EXECUTIVE SESSION,
PURSUANT TO HRS §92-5(a)(4)
AND (8), TO CONSULT WITH THE
BOARD'S ATTORNEY ON
QUESTIONS AND ISSUES
PERTAINING TO THE BOARD'S
POWERS, DUTIES, AND
PRIVILEGES, IMMUNITIES, AND
LIABILITIES WITH RESPECT TO
A COMPROMISE AND
SETTLEMENT PURSUANT TO

HRS §88-106.5; AND TO
CONSIDER INFORMATION THAT
MUST BE KEPT CONFIDENTIAL
PURSUANT TO HRS §92F-13(1)
AND (4), §92F-14(b)(6), AND
HAWAII STATE CONSTITUTION,
ARTICLE 1, SECTION 6

EXECUTIVE SESSION,
PURSUANT TO HRS §92-5(a)(8),
TO REVIEW AND APPROVE
EXECUTIVE SESSION MINUTES
OF SEPTEMBER 8, 2025, AND
SEPTEMBER 23-26, 2025

EXECUTIVE SESSION,
PURSUANT TO HRS §92-5(a)(8),
TO REVIEW AND APPROVE THE
CONFIDENTIAL EXECUTIVE
SESSION MINUTES OF
SEPTEMBER 8, 2025

EXIT EXECUTIVE SESSION

On a motion made by Trustee Ley, seconded by Trustee Barfield, and unanimously carried, the Board exited Executive Session at 12:01 p.m.

Chair Kane announced that while in Executive Session, the Board was updated on matters related to Cyber Security; Enterprise Risk Management; discussed and reviewed Leadership Succession Plans of the ERS; ongoing litigation for Linda S. Martell CAAP-22-0000534 and CAAP-22-0000545; and consulted on a Compromise and Settlement pursuant to HRS §88-106.5; and no action was required by the Board of those updates, discussion, or consultation; discussed and approved Relocation Expense Reimbursement for Investment Officer – Operations Applicant; and the Board approved the Executive Session minutes of September 8, 2025, and September 23-26, 2025, as well as Confidential Executive Session Minutes of September 8, 2025.

ADJOURNMENT

On a motion made by Trustee Barfield, seconded by Trustee Ley, and unanimously carried, Chair Kane adjourned the meeting at 12:02 p.m.

REDACTED SIGNATURE

Thomas Williams
Executive Director

TW:dkik