

Board of Trustees

Public Meeting Packet

August 10, 2023

MainePERS Board of Trustees August 10, 2023 139 Capitol Street, Augusta

AGENDA

9:00 a.m.¹		CALL TO ORDER		Brian Noyes
9:00 – 9:05 a.m.	1.	CONSIDERATION OF CONSENT CALENDAR • Minutes of July 13, 2023	ACTION	Brian Noyes
9:05 – 9:10 a.m.	2.	 <u>CEO REPORT</u> Employer Satisfaction Presentation Member Portal Presentation 		Dr. Rebecca M. Wyke
9:10 – 9:50 a.m.	3.	 PRIVATE MARKETS REVIEW Private Markets Activity Co-Investment Additional Reporting Albourne Quarterly Review Cliffwater Quarterly Review 		James Bennett Bartley Parker Jennifer Yeung, William Greenwood, Albourne Tom Lynch, George Bumeder, Cliffwater
9:50 – 10:20 a.m.	4.	 INVESTMENT REVIEW MEMORANDUM Investment Monthly Review Quarterly Rebalancing Report Investment Quarterly Review Risk Diversifiers Quarterly Review 		James Bennett Bartley Parker Stuart Cameron, Cambridge Assocs.
10:20 – 10:30 a.m.	5.	 COST OF LIVING ADJUSTMENT (COLA) COLA Update Adoption of Annual COLA Rates 	ACTION	Dr. Rebecca M. Wyke
10:30 – 10:45 a.m.		BREAK		
10:45 – 10:55 a.m.	6.	FINANCE AND AUDIT COMMITTEE UPDATE		Shirrin Blaisdell
10:55 – 11:05 a.m.	7.	MEMBER SERVICES, FINANCE AND OPERATIONS REPORT		Michael Colleran Chip Gavin Sherry Vandrell
11:05 – 11:15 a.m.	8.	LEGISLATIVE UPDATE		Kathy Morin

¹ All times are estimated based upon the anticipated length of each presentation, hearing, discussion, and action. The presiding officer may take agenda items out of order for more efficient or effective conduct of the meeting.

11:10 – 12:10 p.m.	9.	GOVERNANCE MEMORANDUM		
		Best Practices in Board Governance		Amy McDuffee,
		Board Self-Evaluation		Mosaic
		2023 Board Work Plan		
		 MainePERS Board of Trustees Charter 		
		Executive Session pursuant to 1	ACTION	Brian Noyes
		M.R.S. §405(6)(A)		
		Board moves out of executive session.		
12:10 – 12:25 p.m.	10.	PERSONNEL		
		 Executive Session pursuant to 1 M.R.S. §405(6)(A) 	ACTION	Brian Noyes
		Board moves out of executive session.		
12:25 p.m.		ADJOURNMENT		Brian Noyes

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM

Minutes

Board of Trustees Board Meeting July 13, 2023 MainePERS Augusta 9:00 a.m.

The Board of Trustees met at MainePERS, 139 Capitol Street, Augusta, ME 04332 at 9:00 a.m. on July 13, 2023. Brian Noyes, Chair, presided. Other Trustees participating were: Dick Metivier, Vice Chair; Henry Beck, State Treasurer; John Beliveau; Shirrin Blaisdell; Mark Brunton; John Kimball; and Ken Williams. Joining the Trustees were Dr. Rebecca Wyke, Chief Executive Officer; Michael Colleran, Chief Operating Officer and General Counsel; James Bennett, Chief Investment Officer; Sherry Vandrell, Chief Financial Officer; Chip Gavin, Chief Services Officer; Monica Gorman, Secretary to the Board of Trustees; and Betsy Stivers, Assistant Attorney General and Board Counsel. The Board also was joined for select portions of the meeting by Jim Ackor, Managing Director, Investments; Kathy Morin, Director of Actuarial and Legislative Affairs; Brian McDonnell, Cambridge Associates; George Bumeder, Cliffwater; William Greenwood and Jennifer Yeung, Albourne; and John O'Shea, Olivia Schubert, and Michael Cembalest, JP Morgan Asset Management.

Brian Noyes called the meeting to order at 9:00 a.m. Brian introduced Nate Burnett to the Trustees. Nate will be replacing Ken Williams as a Board member early next year.

CONSIDERATION OF THE CONSENT CALENDAR

The presiding officer called for consideration of the Consent Calendar. The action items on the Consent Calendar were:

- Minutes of June 8, 2023
- Dismissal Order Yanike-Hale Appeal
- <u>Action</u>. Henry Beck made the motion, seconded by Dick Metivier, to approve the Consent Calendar. Voted unanimously by eight Trustees (Beck, Beliveau, Blaisdell, Brunton, Kimball, Metivier, Noyes, and Williams).

CEO REPORT

Dr. Rebecca Wyke shared that Linea Solutions, Inc. will be providing assistance in the development of an RFP for the procurement of a new pension administration system.

Dr. Wyke reported the Retiree Health Insurance Post-Employment Investment Trust received initial funding on June 30, 2023 for the plan established for retired teacher health benefits.

PRIVATE MARKET REVIEW

Private Markets Activity

Jim Bennett reviewed the table of private market funds and co-investments that had closed during the past 12 months. Jim shared there are no manager meetings scheduled for July.

Board of Trustees Board Meeting – July 13, 2023 Minutes/Page | 2

INVESTMENT REVIEW

Management Fee Tracking Update

Jim Bennett reviewed a new Investments Departmental Policy on tracking investment management fees that was developed in consultation with the Chief Financial Officer. Jim answered questions from the Trustees.

Investment Monthly Review

Jim Bennett reported that as of June 30th, the MainePERS fund had a preliminary market value of \$18.6 billion, the preliminary return for the month was 1.5%, and the preliminary calendar year-to-date return was 3.9%.

QUARTERLY INVESTMENT EDUCATION

Energy & the Energy Transition

Michael Cembalest, Chairman of Market and Investment Strategy at JP Morgan Asset Management, shared a presentation and discussed with the Trustees energy markets and energy transition as it relates to investments. Michael and John O'Shea answered questions from the Trustees.

ACTUARIAL ASSUMPTIONS REVIEW

Gene Kalwarski and Bonnie Rightnour presented to the Trustees about the economic assumptions used in the valuation of the defined benefit plans, including the discount rate and inflation assumptions, and recommended maintaining the current assumptions. Gene and Bonnie answered questions from the Trustees.

<u>Action</u>. Henry Beck made a motion, seconded by Dick Metivier, to accept the recommendation of the actuary to maintain the current economic assumptions. Voted unanimously by eight Trustees (Beck, Beliveau, Blaisdell, Brunton, Kimball, Metivier, Noyes, and Williams).

PROXY VOTING REVIEW

Jim Bennett provided an overview of the FY23 Proxy Voting Summary Report, Board Policy 2.7, and Investments Practice 21.0. Jim shared that Glass Lewis continues to serve as proxy agent for the System. Jim answered questions from the Trustees.

PERSONNEL

Porting of Employee Service Credit

Michael Colleran reviewed historic practices on porting service credit from the State-Teacher Plan into the PLD Consolidated Plan for confidential employees and recommended continuing this practice subject to reasonable constraints to assist in recruiting. Michael answered questions from the Trustees. Action. Ken Williams made a motion, seconded by John Beliveau, that the Board confirm that is has delegated to the Chief Executive Officer the determination of compensation and benefits for confidential employees, including porting of credible service in a MainePERS-covered plan at a cost not to exceed \$75,000, subject to reasonable constraints to be determined by the Chief Executive Officer; and that the Board has retained authority and discretion to determine the Chief Executive Officer's compensation and benefits, including the porting of any creditable service in a MainePERS-covered plan. Voted unanimously by eight Trustees (Beck, Beliveau, Blaisdell, Brunton, Kimball, Metivier, Noyes, and Williams).

Executive Session pursuant to 1 M.R.S. §405(6)(A) and (D)

Action. Dick Metivier made a motion, seconded by Shirrin Blaisdell, that the Board enter into executive session pursuant to 1 M.R.S. §405(6)(A) to discuss compensation of an employee. Voted unanimously by eight Trustees (Beck, Beliveau, Blaisdell, Brunton, Kimball, Metivier, Noyes, and Williams).

The Board moved out of executive session.

Brian Noyes left the meeting at 12:00 p.m. Vice Chair Dick Metivier presided over the rest of the meeting.

ENTERPRISE RISK MANAGEMENT

Michael Colleran shared a presentation on the new Enterprise Risk Management Program and also introduced two proposed Board policy amendments related to the program, which is part of the strategic plan. The policy amendments will be considered for approval at a future meeting. The presentation and discussion included management's assessment of the top risks facing the organization. Michael answered questions from the Trustees.

LEGISLATIVE UPDATE

Kathy Morin updated the Trustees on the status of legislative bills. Kathy answered questions from the Trustees.

MEMBER SERVICES, FINANCE, AND OPERATIONS REPORT

Chip Gavin shared the summer surge for retirements has begun. Approximately 500 retirees, mostly teacher plan members, are expected for the July payroll. Chip stated Phase 3 testing of the member portal is complete, and Phase 4 testing for non-MainePERS staff is to be completed later in July. Chip shared the group life insurance calculator has been updated so employers can more efficiently administer their payroll as well as assist staff in reconciliation efforts. He stated Focus Fridays continue to reduce backlogs of member requests.

Sherry Vandrell reported that 96.5% of employers submitted payrolls on time in June. Sherry shared three audits were opened in June and four completed.

Michael Colleran stated that the collective bargaining wage-reopener agreements have been ratified by MSEA. Michael shared turnover is down 30% from CY 2022 but remains high. He stated the wireless upgrades in Portland and Augusta are complete.

ADJOURNMENT

<u>Action</u>. Shirrin Blaisdell made the motion, seconded by John Beliveau to adjourn the July meeting of the Board of Trustees. Unanimously voted by seven Trustees (Beck, Beliveau, Blaisdell, Brunton, Metivier, and Williams).

The meeting adjourned at approximately 12:30 p.m.

8/10/23 Date Approved by the Board

Dr. Rebecca M. Wyke, Chief Executive Officer

Date Signed

MAINEPERS

BOARD OF TRUSTEES MEMORANDUM

TO: BOARD MEMBERS

FROM: DR. REBECCA M. WYKE, CEO

SUBJECT: CEO REPORT

DATE: AUGUST 2, 2023

5-Year Strategic Plan

The August Board Meeting represents the one year anniversary of the Strategic Plan. The Plan has focused the senior management team and collectively we are gaining traction in implementing the plan and fulfilling the vision for MainePERS as a trusted and effective fiduciary focused on meeting the needs of active and retired members, beneficiaries, and employers. Likewise our staff, through their representatives on the Organizational Values Steering Committee, is leading the charge on making our values – Accountability – Respect – Collaboration – Stewardship – Agility – both visible in the workplace and integrated in our culture. In October we will bring an update on the Strategic Plan to the Board of Trustees along with the updated Key Performance and Risk Measures adopted as part of the plan.

Fiduciary Education for Key Staff

In addition to the Board of Trustees, certain MainePERS staff play key roles in fulfilling MainePERS' fiduciary duties for the pension plans and retirement related services we administer. On August 10th, following the Board Meeting, the members of the Investment Team, as well as the CIO, COO/General Counsel, CFO, Chief Services Officer and myself will participate in a fiduciary and ethics education session conducted by Amy McDuffee of Mosaic Governance Advisors.

Employer Satisfaction Survey

MainePERS conducted a survey of our employers from July 10 - 21, 2023. Registered users for all of our MainePERS-covered employers were included in the survey, which was sent to 1,233 separate email addresses. The survey was received by 1,086 individual email accounts, for which 170 individuals responded, a 16% response rate. Seeking input and measuring the satisfaction of our employers is a strategic objective under the Strategic Plan *Goal V: Development of Stakeholder Relations*.

Nearly eighty percent (79.41%) of respondents indicated they were "satisfied" or "very satisfied" with MainePERS, while 8.83% indicated they were "dissatisfied" or "very dissatisfied" and 11.76% were neutral. Over ninety percent (90.58%) said they "agree" or "strongly agree" that MainePERS acts with integrity, while less than one percent "disagree" and 8.82% were neutral or had no opinion. Seventy-seven percent (77.06%) said they "agree" or "strongly agree" that MainePERS

responds to questions in a timely manner, while 8.82% "disagree" or "strongly disagree" and 14.12% were neutral or had no opinion. Eighty-six percent (85.88%) said they "agree" or "strongly agree" that MainePERS staff are knowledgeable, while 2.35% "disagree" and 11.77% were neutral or had no opinion.

Other questions in the survey sought information about which plan the respondent participated in, their role in the organization, and their level of training. Additionally the survey sought information on what respondents desired for training and the sufficiency of MainePERS communications and information.

Open ended questions indicated some general concerns with the employer portal, responsiveness, and perceived inconsistency of information. Included in the materials for the August meeting are the results for some of the key questions in the survey.

Focus Friday Update

Starting in April MainePERS began dedicating Fridays to address chronic backlogs in member service requests. This effort, which includes being closed to the public on Fridays, has met with our expectations but more work remains. The original focus was on service retirement estimates and preliminary to final benefits. The current charts for tracking both of these queues appear in the Member Services, Finance and Operations Report for this Board meeting.

Service retirement estimates are necessary for placing a member on the payroll with a preliminary benefit upon retirement. At the end of March there were 1,011 members in the queue to receive a service retirement estimate. At that time we projected that if no action were taken that number would increase to 1,427 by the end of July with the surge in teacher retirements that occurs at the end of the school year. We also projected that if two Fridays a month were dedicated to this work the number could be reduced to 627. I am pleased to share that the number has actually been reduced to 264 members in the queue as of the end of July. Additionally, staff were able to meet the July surge placing 100% of new retirees on a preliminary benefit in time for the July payroll.

At the end of March there were 1,526 members in the queue to move from a preliminary to a final benefit. At that time we projected that if no action were taken that number would increase to 1,966 by the end of July and continue to grow for the next couple of months as members in the July surge were moved onto a preliminary benefit. We also projected that if two Fridays a month were dedicated to this work that number could be reduced to 1,806. The actual number of members in the queue as of the end of July is 1,878.

Staff not assigned to the complex work of calculating a service retirement estimate and final benefit were assigned to other backlogs. The backlog of benefit verification requests have been eliminated from over 100 to a handful of requests that are current. The backlog of beneficiary election requests, which once stood at more than 6,500, has been reduced to less than 300, almost all of which are less than 60 days old. Additionally, with the implementation of automated annual member account statements, a backlog of requests that was at one time more than 600 has been eliminated and out of sequence requests are now run on a monthly basis.

Despite these successes, more work remains. While meeting projections, real progress on addressing the chronic backlog of preliminary to final benefits is contingent on retaining staff and

training the current cohort of Pension Associate Is so the total number of staff assigned to this work can expand. The number of service credit purchase requests in the queue is also now in need of attention. This backlog has grown over the past year by over a hundred and currently stands at 344. In addition to the backlog in member requests there is other work that requires attention, including follow up work for employer audits and inactive accounts where the member is no longer in a covered position and is unlikely to ever qualify for a benefit. We therefore believe it is prudent to continue Focus Fridays for an additional six months and then report back to the Board with our assessment.

New Trustee Onboarding

Trustee-elect Nate Burnett has spent two sessions with staff orienting him to his new role prior to beginning his service with MainePERS next spring. Trustee-elect Burnett has received information introducing him to MainePERS, the Strategic Plan, the role, responsibility and duties of a Trustee, as well as the current members of the Board, senior management staff, and consultants. He has also received a copy of the book available to all Trustees via your iPads, *One of a Kind! A Practical Guide for 21at Century Public Pension Trustees*, by Funston Advisory Services LLC.

COO and General Counsel Mike Colleran delivered education on fiduciary duties, conflicts of interest and the governance framework of the Board of Trustees. Director of Legislative and Actuarial Affairs Kathy Morin provided an overview of defined benefit plans, the actuarial valuation, contribution rates, and cost-of-living increases.

We are also working to schedule additional sessions to discuss investments, finances, employer reporting, and member services.

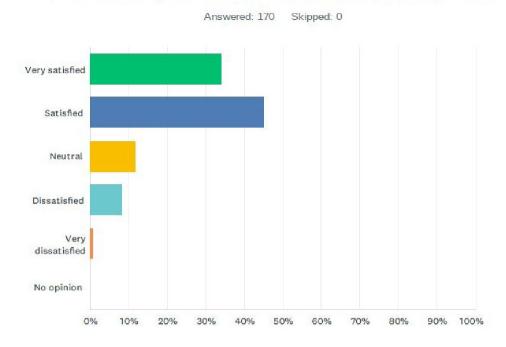
Member Portal Overview

The Member Portal is a key strategic objective under the Strategic Plan *Goal IV: Cultivation of a Member-centric Organization*. Respondents to the member survey conducted last year indicated significant support for a secure online portal with 74% of active and 67% of retired members saying they would use a member portal if available. MainePERS is currently in the process of completing the testing of the member portal, which includes internal and external testing by both staff and stakeholders, and a final round of testing the security and fraud prevention measures by third-party security experts. The portal will be rolled out starting this fall in phases over a period of months. Additional details, including how to login, will be provided as each phased grouping is invited to participate. Chief Services Officer Chip Gavin, Director of Special Projects Val Scott and Assistant Director of Member Services for Supplemental Benefits Mara McGowan will provide an overview of the member portal at the August meeting.



Employer Satisfaction Survey 2023

Dr. Rebecca M. Wyke Chief Executive Officer



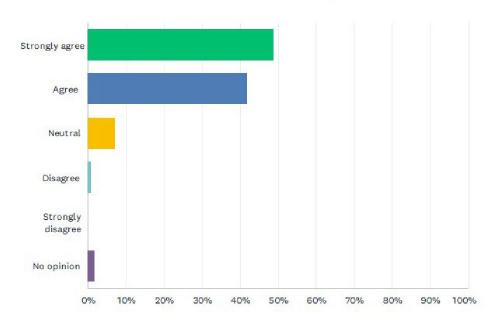
Please rate your overall satisfaction with MainePERS

ANSWER CHOICES	RESPONSES		
Very satisfied	34.12%	58	
Satisfied	45.29%	77	
Neutral	11.76%	20	
Dissatisfied	8.24%	14	
Very dissatisfied	0.59%	1	
No opinion	0.00%	0	
TOTAL		170	



MainePERS acts with integrity

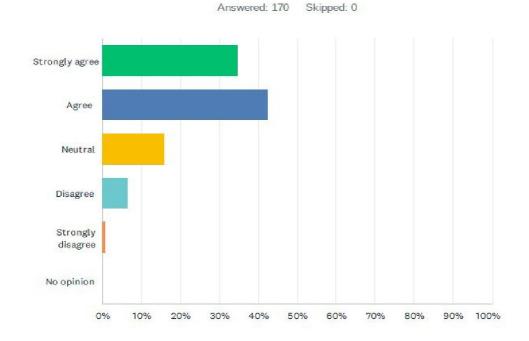
Answered: 170 Skipped: 0



ANSWER CHOICES	RESPONSES		
Strongly agree	48.82%	83	
Agree	41.76%	71	
Neutral	7.06%	12	
Disagree	0.59%	1	
Strongly disagree	0.00%	0	
No opinion	1.76%	3	
TOTAL		170	

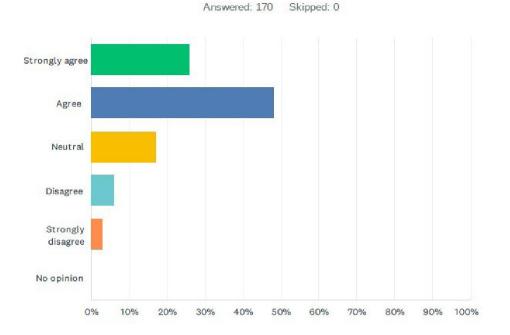


The frequency with which MainePERS communicates and provides information is sufficient



ANSWER CHOICES RESPONSES 34.71% 59 Strongly agree 42.35% 72 Agree 27 15.88% Neutral 6.47% 11 Disagree 0.59% 1 Strongly disagree 0.00% 0 No opinion TOTAL 170

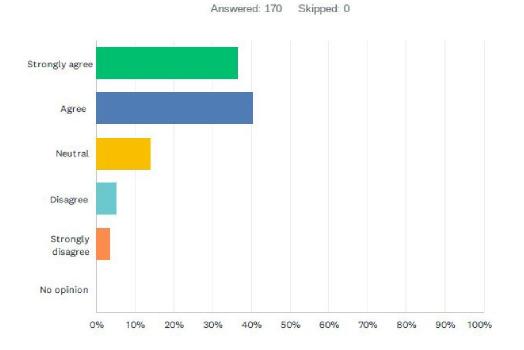




Information I receive from MainePERS is easy to understand

25.88%	44
48.24%	82
17.06%	29
5.88%	10
2.94%	5
0.00%	0
	170
	48.24% 17.06% 5.88% 2.94%

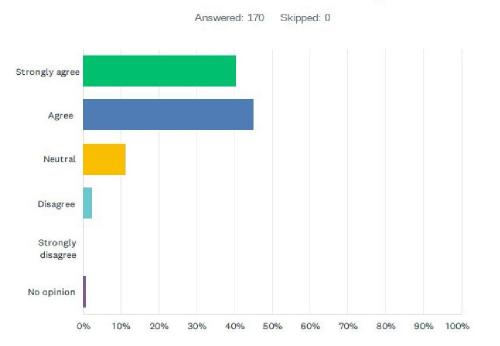




MainePERS responds to my questions in a timely manner

ANSWER CHOICES	RESPONSES	
Strongly agree	36.47%	62
Agree	40.59%	69
Neutral	14.12%	24
Disagree	5.29%	9
Strongly disagree	3.53%	6
No opinion	0.00%	0
TOTAL		170



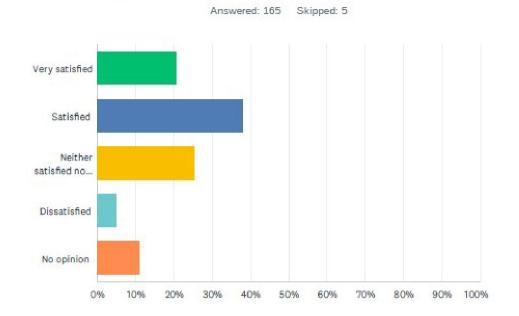


MainePERS Staff are knowledgeable

ANSWER CHOICES	RESPONSES	
Strongly agree	40.59%	69
Agree	45.29%	77
Neutral	11.18%	19
Disagree	2.35%	4
Strongly disagree	0.00%	0
No opinion	0.59%	1
TOTAL		170



How satisfied are you with the training and reference materials available on the MainePERS website?



ANSWER CHOICES RESPONSES 20.61% 34 Very satisfied 38.18% 63 Satisfied 25.45% 42 Neither satisfied nor dissatisfied 4.85% 8 Dissatisfied 10.91% 18 No opinion TOTAL 165





Member Portal Overview

Board of Trustees August 02, 2023

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Member Portal: Strategic Objective

- The Member Portal is a key strategic objective under the Strategic Plan Goal IV: Cultivation of a Member-centric Organization
- The Member Survey conducted last year indicated significant support for a secure online member portal:
 - •74% of active members
 - •67% of retired members

Member Portal:

- Members will have access to their MainePERS account information
 - When convenient to them (24/7/365)
 - From anywhere
 - Using their own computers
- Portal use is optional
- Using currently available portal platform to inform next iteration portal

Rollout & Security

- Rollout will occur in staged phases over a period of months
- Pre-rollout campaign to provide phone and email addresses (phone & email required for account registration and subsequent secure access)
- Security features include:
 - Portal infrastructure security
 - Cybersecurity monitoring
 - Multi-factor user authentication
 - Limiting certain transactions or requiring further identification for processing

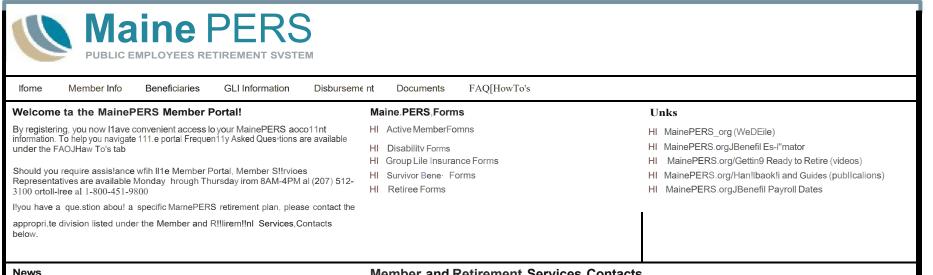
Member Portal: Access

- Ability to update:
 - Physical and email addresses, phone number and gender
- Ability to view:
 - Member Account Statements (Actives)
 - Disbursements (Retirees)
 - Beneficiary elections
 - Group Life Insurance
- Ability to access, download and print documents related to user account
- Access to forms, handbooks and the website

Log-in and Multi-Factor Authentication

	User Device Registration
User Name:	In order to protect access to your account, we require you to select an email or a phone number to receive a verification code.
	 ve******@gmail.com (***)-***-2386 Send me a Text Message
Version 10 TEST v 0.40	Call me on this number
Copyright © 2023. Vitech Systems Group, Inc.	A verification code has been sent to you. This code will be valid for 15 minutes.
	Type code here
	Resend Code Cancel Done

Member Portal Home Page





MSS Beta<Click HERE to view the full article>

06/21/2023: Welcome to tile Member Portal-BETA. This is the currenl 'Test' or BETA varsion of the Mambar ortal (MSS)

Member and Retirement Services Contacts

Maine Public Employees Retirement System

P.O. Box 349 AugUista, Maine 04332-0349 Local: (207) 512-3100 Toll-Free : (800) 451-9800 Mame Relay: 711

Participati ng Local mstrict Unit

Email: PLD@MainePERS.org

State Uni't

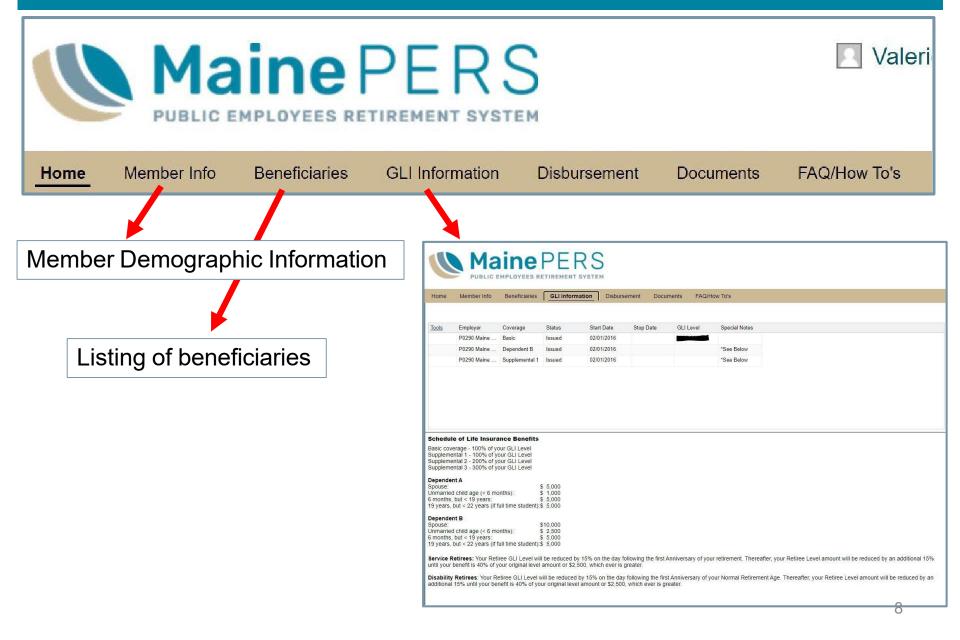
Email: State@MainePERS.org

Teacher Unit Email: Teacher@Mai ePERS.org

Disability Email: Disability@MainePERS.or

Group Lif:e ilnsuranc.e & Survi.vor Services Email Survivor.ServicHs@MainePERS.org

Information Tabs



Information Tabs: Continued

	Member Info	Beneficiaries	GLI Information	Disbursement	Documents	FAQ/How To's	
Membe	Documents				\smile		
	Name	Date	Туре	Description			
Actions	MSSTMT	08/09/2022	Doc-In	Mem Statement		Maine PERS PUBLIC EMPLOYEES BETIPEMENT SYSTEM 199 Capital Street, Augusta, ME 04332-0349 295-632-3000,000-647-000	MEMBER A
						VALERIE E. SCOTT	
						27 AMERICANE	
						ME ME	
					Yo	ou are on the path to preparing for reti	rement with your mem
					Ma	ainePERS. This statement will help y	
					and	d other benefits we administer.	
						Your Plan	
							Normal
						Plan Name Participating Local District Plan:	A Retirement Ag
						Your Acc	
						Contributions P \$0.0	
					2		Your Bene
					Per	nsion Beneficiaries - Primary	
					28/285	nsion Beneficiaries - Primary	100%
					Per	nsion Beneficiaries - Contingent	100%
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Frequently Asked Questions and 'How To

Maine PERS PUBLIC EMPLOYEES RETIREMENT SYSTEM						
Home Member Info Beneficiaries GLI In	formation Disbursement Documents FAQ/How To's					
FAQ/How To's						
Search × Expand All Collapse All	Functionality Overview					
Article	NOTE: For BETA testing demonstration purposes only					
a 🧔 Member Portal- User Guides	Click the attachment below to view the Member Portal "Eunctionality Overview version 102022					
Functionality Overview	Click the attachment below to view the Member Portal- 'Functionality Overview' version 102023.					
	This overview is intended to provide Users with an overview of the related functions available in the Member Portal related to: • Updating your demographic Information • Viewing your current beneficiary designations • Viewing your Group Life Insurance (GLI) coverage amount • Viewing your disbursement information • Viewing correspondence and forms related to your account • Navigating to MainePERS publications					
	1(

Member Portal: Status

- Completed Phase: Phase 1 4 testing completed
 - MainePERS staff
 - External stakeholders (MAR and MEA-Retired)
- Phase 5 early access review:
 - Scheduled to start ~ August 9, 2023
 - Accessing the live portal from home/personal computers
 - MainePERS staff
 - MAR and MEA-Retired
 - PLD Advisory Committee members
- Update to the Board of Trustees in September, 2023
- Expected Rollout Launch late September early October



Questions?

MAINEPERS

BOARD OF TRUSTEES INVESTMENTS MEMORANDUM

TO: BOARD MEMBERS

FROM: JAMES BENNETT, CHIEF INVESTMENT OFFICER

SUBJECT: MONTHLY INVESTMENT REVIEW

DATE: AUGUST 2, 2023

Following this memo is the Monthly Investment Review for July.

POLICY REFERENCE

Board Policy 2.1 – Investment Policy Statement

Board Policy 4.5 – Board/Staff Relations

Board Policy 4.6 - Communication and Support to the Board

MONTHLY INVESTMENT REVIEW: HIGHLIGHTS AND OBSERVATIONS

Preliminary Fund results for the month include:

- Month-end fund value of \$18.9 billion.
- Monthly return of 1.0%.
- Calendar year-to-date return of 5.7%.
- Fiscal year-to-date return of 1.0%.



Investment Review August 10, 2023

Investment Objective

MainePERS' investment objectives balance the System's twin goals of generating investment returns (to ensure growth of the trust funds) and minimizing investment risks (loss of capital and cash flow shortfalls).

The Board recognizes and accepts that these goals are in opposition, and that a trade-off exists between expected risk and return. The Board balances these goals by seeking to optimize portfolio returns consistent with an established targeted portfolio risk level.

Additionally, by optimizing investment returns on trust assets, rather than attempting to maximize them, the Board seeks to maintain contribution rate and funding level volatility at acceptable levels that have been determined from time to time during strategic asset allocation planning and asset/liability reviews.

July 2023 Performance (Preliminary)

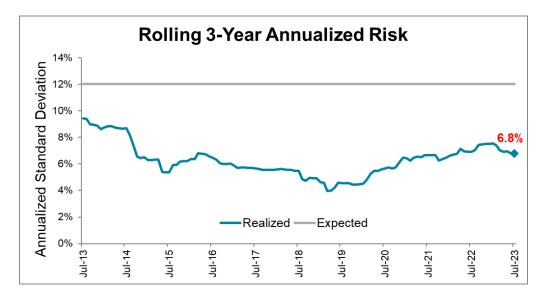
The preliminary fund value at the end of July is \$18.9 billion.



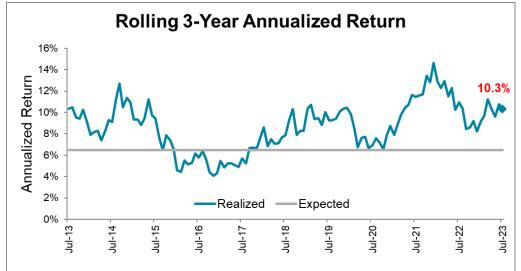
Fund and Benchmark Returns

		CYTD	FYTD
	Jul-23	2023	2024
Total Fund	1.0%	5.7%	1.0%
Russell 3000	3.6%	20.3%	3.6%
MSCI ACWI ex-USA	4.1%	13.9%	4.1%
Bloomberg US Aggregate	-0.1%	2.0%	-0.1%

Investment Objective Measurement: Risk and Return



Despite heightened volatility in 2022, observed risk at the Fund level remains below targeted risk on a rolling 3year annualized basis.



On a rolling 3-year annualized basis, investment returns have exceeded expected values and the System's discount rate.

Note: Rolling 3-year return and standard deviation are calculated at each point in time based on returns over prior 36 months. All figures are annualized.

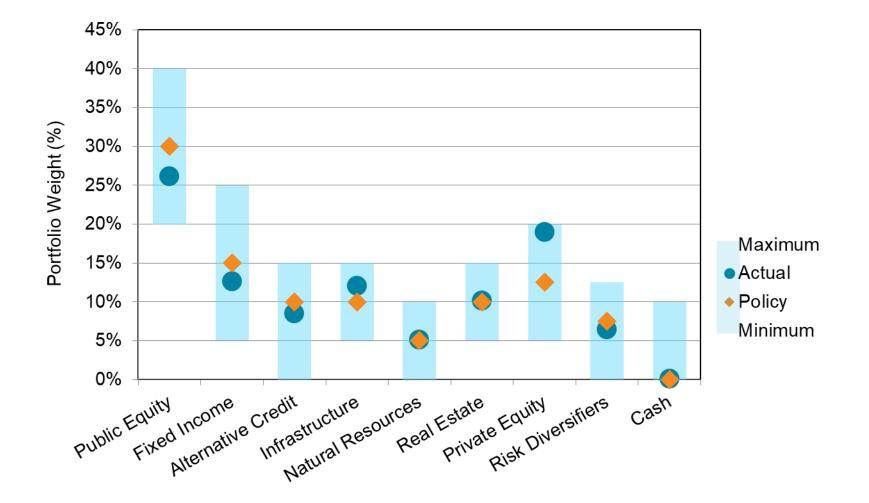
July 2023 Asset Allocation (Preliminary)

Assets (Millions)	Value	% of Fund	Policy %
MainePERS Portfolio	\$ 18,923	100.0%	100.0%
Domestic Equity	\$ 3,070	16.2%	18.6%
International Equity	\$ 1,874	9.9%	11.4%
Fixed Income	\$ 2,385	12.6%	15.0%
Alternative Credit	\$ 1,603	8.5%	10.0%
Infrastructure	\$ 2,275	12.0%	10.0%
Natural Resources	\$ 973	5.1%	5.0%
Private Equity	\$ 3,591	19.0%	12.5%
Real Estate	\$ 1,920	10.1%	10.0%
Risk Diversifiers	\$ 1,221	6.5%	7.5%
Cash	\$ 12	0.1%	0.0%

Portfolio weights for most asset classes remain near MainePERS Investment Policy asset allocation weights.

Private equity remains overweight at ~19% of Fund value, and private markets assets in aggregate comprise 54.8% of the overall portfolio, above the 47.5% policy weight.

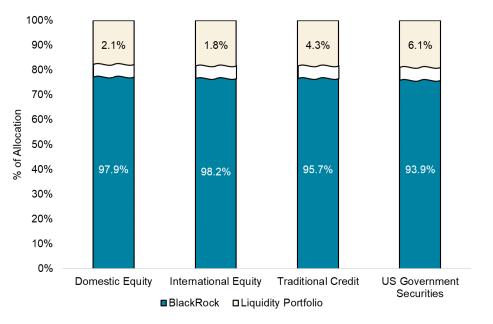
July 2023 Asset Allocation (Preliminary)



Public Securities: Liquidity Portfolio

At the end of July, 1.2% of Fund assets were invested via ETFs and futures contracts in an account managed by Parametric Associates.

The Liquidity Portfolio accounts for 3.1% of MainePERS' total exposure to public securities.



MainePERS Liquidity Portfolio	Market Value (Millions)	Exposure Type
Parametric Domestic Equity	\$64.7	Futures
Parametric International Equity	\$33.6	Futures
Parametric Traditional Credit	\$34.3	ETFs
Parametric US Government Securities	\$97.9	Futures
Total Liquidity Portfolio	\$230.4	

Derivatives and Leverage

MainePERS has **exposure to derivatives** in the following areas:

• Public Equities, Public Fixed Income, and Risk Diversifiers

MainePERS has **financial leverage** (borrowing and investing) in the following areas:

- BlackRock Financial leverage in securities lending
- JP Morgan Financial leverage in securities lending
- Alternative Credit
- Infrastructure
- Natural Resources
- Private Equity
- Real Estate

Investment Related Fees: July 2023

Description	FYTD 24	FY 23	FY 22	FY 21	FY 20
Investment Mgmt. Fees	\$11,029,806	\$132,357,668	\$130,884,088	\$120,429,567	\$122,567,451
Securities Lending Fees ¹	0	1,303,543	1,744,317	1,653,172	2,239,396
Consulting Fees	101,250	1,193,543	1,120,000	1,120,000	1,120,000
Broker Commissions ²	3,042	136,039	77,558	52,364	37,461
Placement Agent Fees	0	0	0	0	C
Total	\$11,134,098	\$134,990,793	\$133,825,963	\$123,255,103	\$125,964,308
Percentage of Fund ³	0.71%	0.72%	0.73%	0.68%	0.86%

- 1. Securities Lending Fees are through 6/30/2023
- 2. Actual paid commissions reported by JP Morgan
- 3. For FY24: Total fees projected for the full fiscal year divided by current Fund value. For prior FY: Total fees divided by FYE Fund value.

Securities Lending: June 2023

	Average Lendable Assets	Average Assets On Loan	Total Sec Lending Revenue	Revenue Split	MainePERS Net Income	MainePERS Net Income, FYTD
BlackRock					-	
Fixed Income	\$1,881,942,021	\$1,270,031,506	\$203,974	60%/40%	\$122,384	\$1,084,385
Total Equity	\$1,672,921,922	\$186,495,508	\$107,544	60%/40%	\$70,427	\$962,643
Total Blackrock	\$3,554,863,943	\$1,456,527,014	\$311,518		\$192,811	\$2,047,028
JP Morgan						
Domestic Equities	\$2,690,830,417	\$125,234,527	\$38,280	85%/15%	\$32,545	\$510,125
Total JP Morgan	\$2,690,830,417	\$125,234,527	\$38,280		\$32,545	\$510,125
Total	\$6,245,694,360	\$1,581,761,541	\$349,798		\$225,356	\$2,557,153
Total Annualized Secu	•		•	0.01%, or 1.4 b	. ,	
Total Actual Securities	Elending Income, FY	2022:	\$	63,118,726 (0.02%, or 1.7 b	ps)

Liquidity Schedule: July 2023

Term	Market Value	Percent of Portfolio
Liquid ¹	\$7,340m	38.8%
Semi-Liquid ²	\$2,507m	13.2%
llliquid ³	\$9,076m	48.0%
Total	\$18,923m	100.0%

Sources and Uses of Liquidity		
Private Markets Activity	Last 12 Months Actual	Next 12 Months Projection
Capital Contributions	-\$1,436m	-\$810m
Distributions	\$1,052m	\$1,850m
Net Private Markets Activity	-\$384m	\$1,040m
Benefit Payments	-\$380m	-\$420m
Net Cash Flows	-\$764m	\$620m

¹Liquid assets includes public equities and public fixed income

²Semi-liquid assets includes risk diversifiers, open-end real estate investments, and listed alternative credit funds

³Illiquid assets includes closed-end alternative credit, infrastructure, natural resources, private equity, and real estate funds

MainePERS Alternative Investments Summary

		# of GP
as of 07/31/2023	# of Funds	Relationships
Alternative Credit	25	13
Infrastructure	35	11
Natural Resources	16	10
Private Equity	124	34
Real Estate	33	18
Risk Diversifiers	11	10
Total*	244	87

*GP Total may not add due to overlapping relationships

Currently, MainePERS is invested in 244 funds, and has 87 distinct manager relationships.

MainePERS Alternative Investments Summary

(in \$millions)		<u>Current</u>	Market Value		Unfunded Cor	Commitment		
as of 07/31/2023	D	ollars	% of Fund	Policy %*	Dollars	% of Fund		
Alternative Credit	\$	1,603	8.5%	10.0%	\$ 760	4.0%		
Infrastructure	\$	2,275	12.0%	10.0%	\$ 574	3.0%		
Natural Resources	\$	973	5.1%	5.0%	\$ 210	1.1%		
Private Equity	\$	3,591	19.0%	12.5%	\$ 1,106	5.8%		
Real Estate	\$	1,920	10.1%	10.0%	\$ 425	2.2%		
Risk Diversifiers	\$	1,221	6.5%	7.5%	\$ 105	0.6%		
Total Alternatives	\$	11,583	61.2%	55.0%	\$ 3,181	16.8%		

For more details please see Private Markets Investment Summary at http://www.mainepers.org/Investments/

*Investment Policy weights approved by the Board of Trustees effective May 2022

Note: Market values shown above are preliminary estimates. Private market asset values are based on 3/31/2023 values, adjusted for subsequent cash flows.

(in \$millions)		Private Market Commitments by Vintage Year											
as of 07/31/2023	2	020	2021		2	2022	2023		Av	erage ¹			
Alternative Credit	\$	275	\$	410	\$	550	\$	180	\$	412			
Infrastructure	\$	235	\$	180	\$	200	\$	50	\$	205			
Natural Resources	\$	-	\$	-	\$	30	\$	40	\$	10			
Private Equity	\$	276	\$	438	\$	268	\$	80	\$	327			
Real Estate	\$	80	\$	285	\$	180	\$	15	\$	182			
Total Commitments	\$	866	\$	1,313	\$	1,228	\$	365	\$	1,136			

¹3-Year Average: 2020-2022

Asset Class Summary	Co	mmitment (A)	с	Amount ontributed (B)	D	Total istributions (C)	Cu	rrent Market Value (D)	Total Value (C+D)	Interim Net IRR
Alternative Credit	\$	2,377,474	\$	1,822,916	\$	614,344	\$	1,497,101	\$ 2,111,446	7.1%
Infrastructure	\$	3,380,645	\$	3,391,735	\$	2,718,400	\$	2,205,312	\$ 4,923,712	11.5%
Natural Resources	\$	1,020,500	\$	1,071,949	\$	434,442	\$	961,235	\$ 1,395,677	6.6%
Private Equity	\$	4,890,769	\$	4,682,319	\$	3,946,791	\$	3,646,334	\$ 7,593,125	16.1%
Real Estate	\$	2,742,523	\$	2,608,169	\$	1,884,318	\$	1,855,527	\$ 3,739,845	7.1%
Total	\$	14,411,911	\$	13,577,088	\$	9,598,295	\$	10,165,510	\$ 19,763,805	10.6%

Note: This Asset Class Summary table includes all private market investments: both fund investments and co-investments.

Co-Investment Summary	Co	Commitment # of Co (A) Investme				Total Distributions (C)			rrent Market Value (D)	٦	Fotal Value (C+D)	Interim Net IRR
Alternative Credit Co-Investments	\$	253,700	35	\$	253,930	\$	75,902	\$	208,822	\$	284,724	8.8%
Infrastructure Co-Investments	\$	208,828	10	\$	204,942	\$	248,647	\$	122,480	\$	371,127	14.8%
Natural Resources Co-Investments	\$	32,500	2	\$	31,155	\$	-	\$	48,031	\$	48,031	12.5%
Private Equity Co-Investments	\$	377,777	32	\$	364,933	\$	310,156	\$	257,288	\$	567,444	14.0%
Real Estate Co-Investments	\$	66,951	5	\$	58,551	\$	5,898	\$	45,665	\$	51,563	-5.0%
Total	\$	939,756	84	\$	913,512	\$	640,604	\$	682,286	\$	1,322,890	13.1%

Note: This table contains values for the co-investment portion of the private market portfolio.

Alternative Credit

				ļ	Amount		Total	Current Market			
	Со	mmitment		Со	ntributed	Dis	stributions		Value	Total Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)		(D)	(C+D)	IRR
Angelo Gordon Direct Lending Fund II	\$	25,000	3/31/2020	\$	23,749	\$	20,605	\$	12,370	\$ 32,975	19.0%
Angelo Gordon Direct Lending Fund III	\$	100,000	7/20/2018	\$	101,649	\$	66,896	\$	70,704	\$ 137,601	10.7%
Participation Agreement #1	\$	7,500	10/11/2019	\$	7,484	\$	2,054	\$	7,045	\$ 9,099	8.1%
Participation Agreement #2	\$	5,000	10/11/2019	\$	4,994	\$	5,422	\$	-	\$ 5,422	8.8%
Participation Agreement #3	\$	5,000	10/11/2019	\$	5,000	\$	5,700	\$	-	\$ 5,700	7.3%
Participation Agreement #4	\$	10,000	10/18/2019	\$	9,915	\$	2,082	\$	9,591	\$ 11,674	8.3%
Participation Agreement #5	\$	5,000	12/6/2019	\$	5,000	\$	2,213	\$	4,147	\$ 6,360	9.3%
Participation Agreement #6	\$	10,000	12/6/2019	\$	9,991	\$	1,940	\$	9,768	\$ 11,708	8.7%
Participation Agreement #7	\$	5,000	12/11/2019	\$	5,000	\$	1,573	\$	4,730	\$ 6,302	8.3%
Participation Agreement #8	\$	5,000	8/13/2020	\$	4,914	\$	1,153	\$	4,827	\$ 5,980	8.5%
Participation Agreement #9	\$	7,500	4/9/2021	\$	7,425	\$	1,241	\$	7,347	\$ 8,588	NM
Participation Agreement #10	\$	5,000	4/20/2021	\$	5,007	\$	1,235	\$	4,557	\$ 5,791	NM
Participation Agreement #11	\$	5,000	5/5/2021	\$	5,000	\$	855	\$	4,743	\$ 5,598	NM
Angelo Gordon Direct Lending Fund IV	\$	100,000	1/24/2020	\$	90,000	\$	10,288	\$	99,758	\$ 110,046	12.3%
Participation Agreement #1	\$	5,000	10/23/2020	\$	4,913	\$	1,421	\$	4,380	\$ 5,801	8.2%
Participation Agreement #2	\$	12,500	8/17/2021	\$	12,295	\$	1,462	\$	12,261	\$ 13,723	NM
Participation Agreement #3	\$	7,500	10/5/2021	\$	7,500	\$	7,913	\$	-	\$ 7,913	NM
Participation Agreement #4	\$	5,000	12/21/2021	\$	4,925	\$	599	\$	4,888	\$ 5,487	NM
Participation Agreement #5	\$	5,000	12/21/2021	\$	4,925	\$	762	\$	4,705	\$ 5,467	NM
Participation Agreement #6	\$	5,000	1/12/2022	\$	4,925	\$	591	\$	4,878	\$ 5,469	NM
Participation Agreement #7	\$	7,500	1/12/2022	\$	7,388	\$	663	\$	7,297	\$ 7,960	NM
Participation Agreement #8	\$	12,500	6/16/2022	\$	12,406	\$	1,038	\$	12,276	\$ 13,313	NM
Angelo Gordon Direct Lending Fund IV Annex	\$	50,000	11/18/2021	\$	47,500	\$	2,198	\$	49,767	\$ 51,965	NM
Angelo Gordon Direct Lending Fund V	\$	125,000	8/3/2022	\$	53,125	\$	-	\$	57,195	\$ 57,195	NM
Participation Agreement #1	\$	7,500	9/1/2022	\$	7,388	\$	456	\$	7,339	\$ 7,796	NM
Participation Agreement #2	\$	12,500	10/7/2022	\$	12,263	\$	275	\$	12,297	\$ 12,572	NM
Participation Agreement #3	\$	10,000	10/19/2022	\$	9,850	\$	518	\$	9,787	\$ 10,305	NM
Participation Agreement #4	\$	10,000	10/27/2022	\$	9,800	\$	499	\$	9,733	\$ 10,232	NM
Participation Agreement #5	\$	10,000	2/27/2023	\$	9,821	\$	125	\$	9,800	\$ 9,925	NM
Ares Capital Europe IV	\$	122,000	4/30/2018	\$	96,890	\$	23,187	\$	88,538	\$ 111,724	4.7%
Ares Capital Europe V	\$	122,000	9/4/2020	\$	89,007	\$	3,430	\$	91,610	\$ 95,041	6.8%
Ares Capital Europe VI	\$	82,500	3/17/2023	\$	-	\$	-	\$	-	\$ -	NM
Ares Senior Direct Lending Fund II	\$	100,000	12/10/2021	\$	45,930	\$	3,921	\$	46,315	\$ 50,236	NM
Audax Senior Debt (MP), LLC	\$	100,000	6/30/2017	\$	100,000	\$	20,800	\$	107,363	\$ 128,163	4.8%

Alternative Credit

					irrent Market						
Co	mmitment		Со	ntributed	Dis	stributions		Value		Total Value	Interim Net
	(A)	Date of Commitment		(B)		(C)		(D)		(C+D)	IRR
\$	100,000	7/15/2022	\$	33,938	\$	4,045	\$	30,275	\$	34,319	NM
\$	125,000	5/20/2022	\$	50,000	\$	-	\$	51,106	\$	51,106	NM
\$	75,000	9/30/2021	\$	54,590	\$	4,527	\$	55,583	\$	60,110	NM
\$	100,000	2/20/2019	\$	72,619	\$	27,581	\$	50,762	\$	78,343	7.3%
\$	100,000	6/18/2013	\$	125,399	\$	59,841	\$	115,726	\$	175,567	5.7%
\$	100,000	3/10/2017	\$	116,571	\$	47,065	\$	97,115	\$	144,180	5.8%
\$	5,000	5/7/2018	\$	4,851	\$	5,499	\$	-	\$	5,499	12.7%
\$	6,185	7/31/2018	\$	6,196	\$	7,745	\$	-	\$	7,745	9.9%
\$	5,000	8/7/2018	\$	4,938	\$	5,634	\$	-	\$	5,634	7.9%
\$	5,000	8/20/2018	\$	4,566	\$	5,835	\$	-	\$	5,835	8.1%
\$	5,000	12/21/2018	\$	4,826	\$	1,714	\$	4,476	\$	6,191	7.1%
\$	7,500	8/7/2020	\$	8,905	\$	3,280	\$	7,316	\$	10,596	9.2%
\$	7,500	7/26/2021	\$	6 <i>,</i> 560	\$	1,026	\$	6,452	\$	7,478	NM
\$	12,500	6/17/2022	\$	12,778	\$	1,171	\$	12,415	\$	13,586	NM
\$	7,500	9/26/2022	\$	7,388	\$	450	\$	7,369	\$	7,819	NM
\$	100,000	6/19/2020	\$	114,983	\$	14,983	\$	117,916	\$	132,899	9.5%
\$	75,000	4/22/2021	\$	104,980	\$	49,120	\$	64,117	\$	113,238	NM
\$	7,500	4/1/2022	\$	7,368	\$	1,106	\$	7,001	\$	8,107	NM
\$	7,500	4/1/2022	\$	7,429	\$	653	\$	7,397	\$	8,050	NM
\$	75,000	6/24/2022	\$	40,736	\$	8,438	\$	29,845	\$	38,283	NM
\$	50,000	6/26/2019	\$	40,188	\$	5,718	\$	41,860	\$	47,578	11.4%
\$	50,000	6/26/2019	\$	25,000	\$	1,395	\$	26,385	\$	27,780	12.2%
\$	125,000	12/23/2022	\$	-	\$	-	\$	-	\$	-	NM
\$	50,000	1/31/2020	\$	57,821	\$	24,957	\$	39,554	\$	64,511	9.6%
\$	100,000	11/30/2017	\$	100,883	\$	80,962	\$	41,529	\$	122,490	6.2%
	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 100,000 \$ 125,000 \$ 75,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 100,000 \$ 5,000 \$ 6,185 \$ 5,000 \$ 5,000 \$ 5,000 \$ 7,500 \$ 7,500 \$ 75,000 \$ 75,000 \$ 7,500 \$ 7,500 \$ 7,500 \$ 7,500 \$ 7,500 \$ 7,500 \$ 7,500 \$ 7,500 \$ 7,500 \$ 75,000 \$ 50,000 \$ 50,000 \$ 50,000	(A)Date of Commitment\$100,0007/15/2022\$125,0005/20/2022\$75,0009/30/2021\$100,0002/20/2019\$100,0006/18/2013\$100,0003/10/2017\$5,0005/7/2018\$6,1857/31/2018\$5,0008/7/2018\$5,0008/7/2018\$5,0008/7/2018\$7,5008/20/2018\$7,5008/7/2020\$7,5006/17/2022\$7,5006/17/2022\$7,5004/12022\$7,5004/12022\$7,5006/24/2022\$50,0006/26/2019\$50,0006/26/2019\$50,0006/26/2019\$50,00012/23/2022\$50,0001/31/2020	CommitmentDate of Commitment(A)Date of Commitment\$100,000 $7/15/2022$ \$125,000 $5/20/2021$ \$125,000 $9/30/2021$ \$100,000 $2/20/20101$ \$100,000 $6/18/2013$ \$100,000 $3/10/2017$ \$100,000 $3/10/2017$ \$5,000 $3/10/2018$ \$5,000 $8/7/2018$ \$5,000 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6/18/2013 \$ 125,399 \$ \$ 100,000 3/10/2017 \$ 116,571 \$ \$ 5,000 5/7/2018 4,851 \$ \$ 5,185 7/31/2018 6,1966 \$ \$ 5,000 8/7/2018 4,938 \$ \$ 5,000 8/20/2018 4,938 \$ \$ 5,000 8/7/2018 4,826 \$ \$ 5,000 6/17/2022 \$,7388 \$ \$ 7,500 9/26/2022 7,388 \$ \$ <td>CommitmentDate of CommitmentContributedDistributions(A)Date of Commitment(B)(C)\$100,0007/15/2022\$33,938\$4,045\$125,0005/20/2022\$50,000\$-\$75,0009/30/2021\$54,590\$4,527\$100,0002/20/2019\$72,619\$27,581\$100,0006/18/2013\$125,399\$59,841\$100,0003/10/2017\$116,571\$47,065\$5,0005/7/2018\$4,851\$5,499\$5,0008/7/2018\$4,938\$5,634\$5,0008/7/2018\$4,938\$5,634\$5,0008/7/2018\$4,856\$5,835\$5,0008/7/2018\$4,826\$1,714\$7,5008/7/2020\$8,905\$3,280\$12,5006/17/2022\$7,388\$14,983\$12,5006/17/2022\$7,388\$14,983\$75,0006/24/2022\$7,388\$14,983\$75,0006/24/2022\$7,429\$6563\$75,0006/24/2022\$40,736\$8,4388\$75,0006/26/2019\$40,188\$5,718\$50,0006/26/2019\$40</td> <td>CommitmentComtributedDistributions(A)Date of Commitment(B)(C)\$100,0007/15/2022\$33,938\$4,045\$\$125,0005/20/2022\$50,000\$-\$\$75,0009/30/2021\$54,590\$4,527\$\$100,0002/20/2019\$72,619\$27,581\$\$100,0006/18/2013\$125,399\$59,841\$\$100,0003/10/2017\$116,571\$47,065\$\$5,0003/10/2017\$116,571\$47,065\$\$5,0003/10/2017\$4,851\$5,499\$\$5,0008/7/2018\$4,938\$5,634\$\$5,0008/20/2018\$4,938\$5,634\$\$5,0008/7/2020\$8,905\$3,280\$\$7,5009/26/2022\$7,388\$4,506\$\$100,0006/19/2020\$114,983\$14,983\$\$7,5004/12022\$7,368\$1,016\$\$7,5006/24/2022\$7,429\$653\$\$7,5006/24/2022\$7,429\$653\$\$7,5006/24/2022\$7,429\$653\$\$7,500<td>CommitmentContributedDistributionsValue(A)Date of Commitment(B)(C)(D)\$100,000$7/15/2022$\$$33,938$\$$4,045$\$\$125,000$5/20/2022$\$$50,000$\$-\$$51,106$\$75,000$9/30/2021$\$$54,590$\$$4,527$\$$55,583$\$100,000$2/20/2019$\$$72,619$\$$27,581$\$$50,762$\$100,000$6/18/2013$\$$125,399$\$$59,841$\$$115,726$\$100,000$3/10/2017$\$$116,571$\$$47,065$\$$97,115$\$5,000$5/7/2018$\$$4,851$\$$5,499$\$-\$6,185$7/31/2018$\$$4,938$\$$5,634$\$-\$5,000$8/20/2018$\$$4,826$\$$1,714$\$$4,476$\$$7,500$$8/7/2020$\$$8,905$\$$3,280$\$$7,316$\$$7,500$$6/17/2022$\$$7,388$\$$4506$\$$7,397$\$$7,500$$6/26/2022$\$$7,388$\$$14,983$\$$117,916$\$$7,500$$4/1/2022$\$$7,368$\$$14,983$\$$7,307$\$$7,500$$6/24/2022$\$$7,368$\$$14,983$\$$20,9945$\$$7,500$<td>CommitmentContributedDistributionsValue(A)Date of 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Infrastructure

					Amount		Total		Current			
	Cor	nmitment		Co	ntributed	Dis	tributions	Ma	rket Value	То	otal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)		(D)		(C+D)	IRR
Alinda Infrastructure Fund II	\$	50,000	9/17/2009	\$	68,297	\$	74,099	\$	216	\$	74,315	1.9%
ArcLight Energy V	\$	75,000	10/28/2011	\$	76,031	\$	103,624	\$	-	\$	103,624	8.0%
Shore Co-Investment Holdings II	\$	20,000	1/30/2014	\$	17,709	\$	19,737	\$	-	\$	19,737	8.4%
ArcLight Energy VI	\$	150,000	11/25/2014	\$	159,687	\$	127,354	\$	61,914	\$	189,269	4.2%
Great River Hydro Partners	\$	12,000	6/17/2017	\$	10,718	\$	44,535	\$	36,079	\$	80,614	40.2%
Brookfield Infrastructure Fund II	\$	100,000	6/28/2013	\$	116,690	\$	103,388	\$	90,532	\$	193,920	9.7%
Brookfield Infrastructure Fund III	\$	100,000	4/15/2016	\$	108,389	\$	52,139	\$	106,343	\$	158,482	12.0%
Co-Investment #1	\$	20,000	3/31/2017	\$	15,947	\$	19,216	\$	18,201	\$	37,418	28.1%
Carlyle Global Infrastructure Opportunity Fund	\$	100,000	5/1/2019	\$	85,007	\$	16,111	\$	83,893	\$	100,004	11.1%
Carlyle Infrastructure Partners	\$	50,000	11/2/2007	\$	57,366	\$	64,289	\$	370	\$	64,659	2.5%
Carlyle Power Partners II	\$	50,000	11/19/2015	\$	62,562	\$	31,374	\$	57,493	\$	88,867	10.7%
Cube Infrastructure	\$	45,000	4/16/2010	\$	60,063	\$	96,665	\$	422	\$	97,087	8.0%
Cube Infrastructure II	\$	90,000	9/11/2018	\$	73,467	\$	5,744	\$	67,110	\$	72,854	-0.3%
Cube Infrastructure III	\$	90,000	8/16/2021	\$	40,821	\$	-	\$	40,451	\$	40,451	NM
EQT Infrastructure III	\$	68,000	12/3/2016	\$	97,262	\$	129,417	\$	42,038	\$	171,455	20.8%
EQT Infrastructure IV	\$	100,000	12/17/2018	\$	93,463	\$	17,140	\$	103,126	\$	120,266	11.3%
EQT Infrastructure V	\$	75,000	12/8/2020	\$	54,818	\$	6,451	\$	52,429	\$	58,880	8.1%
First Reserve Energy Infrastructure Fund	\$	50,000	6/30/2010	\$	59,778	\$	52,172	\$	4,822	\$	56,994	-1.3%
First Reserve Energy Infrastructure Fund II	\$	100,000	10/21/2013	\$	127,939	\$	127,177	\$	33,451	\$	160,628	13.9%
Global Infrastructure Partners Sonic	\$	30,000	7/31/2020	\$	32,521	\$	-	\$	20,769	\$	20,769	-16.4%
Global Infrastructure Partners	\$	75,000	3/31/2008	\$	101,173	\$	205,062	\$	718	\$	205,780	17.2%
Global Infrastructure Partners II	\$	75,000	12/3/2011	\$	104,944	\$	143,984	\$	37,810	\$	181,793	15.9%
Global Infrastructure Partners III	\$	150,000	4/15/2016	\$	183,878	\$	103,211	\$	155,781	\$	258,991	10.6%
Co-Investment #1	\$	29,000	2/28/2017	\$	27,677	\$	16,251	\$	36,248	\$	52,499	14.9%
Co-Investment #2	\$	25,000	8/16/2018	\$	26,816	\$	2,888	\$	18,782	\$	21,671	-5.1%
Global Infrastructure Partners IV	\$	150,000	12/21/2018	\$	129,010	\$	12,845	\$	122,312	\$	135,158	4.4%
IFM Global Infrastructure (US), L.P.	\$	100,000	12/20/2012	\$	144,550	\$	208,040	\$	-	\$	208,040	9.8%
KKR Diversified Core Infrastructure Fund	\$	100,000	4/29/2022	\$	100,000	\$	-	\$	-	\$	-	NM
KKR Global Infrastructure Investors	\$	75,000	9/29/2010	\$	87,917	\$	154,328	\$	89	\$	154,418	13.1%
KKR Global Infrastructure Investors II	\$	150,000	10/24/2014	\$	184,651	\$	241,656	\$	77,385	\$	319,041	17.2%

Infrastructure

	-				Amount		Total		Current	_		
	Cor	nmitment		Co	ntributed	Dis	tributions	Ma	rket Value	То	tal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)	_	(D)		(C+D)	IRR
KKR Atlanta Co-Invest	\$	24,000	9/26/2014	\$	21,428	\$	28,551	\$	-	\$	28,551	5.7%
KKR Taurus Co-Invest II	\$	25,000	8/15/2017	\$	25,000	\$	56,779	\$	818	\$	57,597	21.4%
KKR Byzantium Infrastructure Aggregator	\$	15,000	10/17/2017	\$	15,000	\$	7,013	\$	10,912	\$	17,925	4.7%
KKR Global Infrastructure Investors III	\$	100,000	3/29/2018	\$	89,817	\$	22,722	\$	87,693	\$	110,414	10.2%
Meridiam Infrastructure (SCA)	\$	11,000	9/23/2015	\$	21,938	\$	10,415	\$	26,063	\$	36,478	8.4%
Meridiam Infrastructure (SCA) B Shares	\$	1,000	9/23/2015	\$	305	\$	55	\$	23,913	\$	23,968	80.2%
Meridiam Infrastructure Europe II (SCA)	\$	22,500	9/23/2015	\$	27,420	\$	15,590	\$	36,181	\$	51,770	12.0%
Meridiam Infrastructure Europe III SLP	\$	95,000	4/27/2016	\$	69,465	\$	16,804	\$	56,727	\$	73,531	2.1%
Meridiam Sustainable Infrastructure Europe IV	\$	90,000	4/16/2021	\$	12,422	\$	4	\$	10,573	\$	10,576	NM
Meridiam Infrastructure N.A. II	\$	75,000	9/28/2012	\$	88,232	\$	31,084	\$	175,999	\$	207,082	17.2%
MINA II CIP	\$	175	6/30/2015	\$	169	\$	29	\$	19,773	\$	19,802	118.9%
Meridiam Infrastructure N.A. II	\$	20,000	6/30/2015	\$	18,870	\$	4,342	\$	45,092	\$	49,434	23.8%
Meridiam Infrastructure N.A. III	\$	50,000	7/12/2017	\$	30,987	\$	1	\$	37,823	\$	37,823	16.7%
Stonepeak Infrastructure Partners II	\$	140,000	11/12/2015	\$	188,950	\$	231,036	\$	40,937	\$	271,973	13.4%
Stonepeak Claremont Co-Invest	\$	25,000	5/30/2017	\$	25,000	\$	51,959	\$	-	\$	51,959	17.8%
Stonepeak Spear (Co-Invest) Holdings	\$	25,000	1/8/2018	\$	19,648	\$	1,717	\$	37,333	\$	39,051	14.8%
Stonepeak Infrastructure Partners III	\$	150,000	10/13/2017	\$	162,617	\$	51,776	\$	193,534	\$	245,311	17.3%
Stonepeak Infrastructure Partners IV	\$	125,000	5/8/2020	\$	65,141	\$	9,568	\$	60,301	\$	69,869	8.2%

Natural Resources

					Amount		Total	Current Market			
	Cor	nmitment		Со	ontributed	Dis	tributions	Value	Тс	otal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)	(D)		(C+D)	IRR
ACM Permanent Crops	\$	35,000	10/24/2014	\$	39,100	\$	10,375	\$ 60,692	\$	71,067	9.8%
ACM Permanent Crops II	\$	35,000	5/12/2016	\$	41,556	\$	8,885	\$ 20,054	\$	28,939	-10.7%
AMERRA Agri Fund III	\$	50,000	2/11/2016	\$	98,634	\$	77,009	\$ 26,052	\$	103,061	1.8%
Denham Mining Fund	\$	35,000	6/29/2018	\$	30,031	\$	659	\$ 38,257	\$	38,916	9.9%
Homestead Capital Farmland II	\$	50,000	8/8/2016	\$	54,683	\$	10,029	\$ 55 <i>,</i> 678	\$	65,707	5.1%
Homestead Capital Farmland III	\$	30,000	10/26/2018	\$	26,148	\$	2,326	\$ 26,195	\$	28,521	6.3%
Orion Mine Finance Fund II	\$	50,000	5/25/2016	\$	101,653	\$	75,965	\$ 50,289	\$	126,254	9.8%
Orion Mine Finance Co-Fund II	\$	20,000	8/13/2018	\$	20,098	\$	-	\$ 34,085	\$	34,085	12.6%
Silver Creek Aggregate Reserves Fund	\$	100,000	11/6/2018	\$	15,296	\$	2,378	\$ 18,053	\$	20,431	NM
Sprott Private Resource Lending Fund III	\$	30,000	8/31/2022	\$	2,453	\$	1	\$ 2,153	\$	2,153	NM
Taurus Mining Fund	\$	50,000	3/27/2015	\$	41,459	\$	46,116	\$ 4,060	\$	50,176	7.6%
Taurus Mining Fund Annex	\$	23,000	12/1/2016	\$	18,366	\$	23,384	\$ 938	\$	24,322	17.9%
Taurus Mining Fund No. 2	\$	75,000	4/18/2019	\$	63,125	\$	43,153	\$ 32,457	\$	75,609	19.6%
Teays River Integrated Agriculture	\$	200,000	7/1/2015	\$	198,974	\$	28,770	\$ 315,333	\$	344,103	7.9%
Twin Creeks Timber	\$	200,000	1/7/2016	\$	199,297	\$	93,827	\$ 123,098	\$	216,926	2.3%
U.S. Farming Realty Trust III	\$	100,000	7/7/2015	\$	110,017	\$	11,565	\$ 139,895	\$	151,460	6.7%
Canally Coinvest Holdings	\$	12,500	12/9/2019	\$	11,057	\$	-	\$ 13,946	\$	13,946	11.6%

				Amount		Total		Current Market				
	Con	nmitment		Со	ntributed	Dis	tributions		Value	Тс	otal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)		(D)		(C+D)	IRR
ABRY Advanced Securities Fund II	\$	20,000	5/4/2011	\$	20,530	\$	29,628	\$	345	\$	29,973	13.1%
ABRY Advanced Securities Fund III	\$	30,000	4/30/2014	\$	44,799	\$	23,884	\$	20,031	\$	43,915	-0.6%
ABRY Heritage Partners	\$	10,000	5/31/2016	\$	10,774	\$	10,979	\$	7,988	\$	18,966	27.0%
ABRY Partners VII	\$	10,000	4/29/2011	\$	12,939	\$	17,340	\$	2,122	\$	19,462	12.2%
ABRY Partners VIII	\$	20,000	8/8/2014	\$	23,864	\$	29,732	\$	3,997	\$	33,729	10.3%
ABRY Senior Equity IV	\$	10,000	12/7/2012	\$	10,834	\$	16,694	\$	1,585	\$	18,279	14.9%
ABRY Senior Equity V	\$	12,050	1/19/2017	\$	12,795	\$	5,370	\$	13,288	\$	18,658	15.7%
Advent International GPE VII	\$	30,000	6/29/2012	\$	34,811	\$	52,335	\$	6,161	\$	58 <i>,</i> 496	13.5%
Advent International GPE VIII	\$	50,000	2/5/2016	\$	55,594	\$	42,125	\$	64,241	\$	106,366	18.6%
Advent International GPE IX	\$	50,000	5/9/2019	\$	45,503	\$	4,998	\$	62,838	\$	67,836	24.4%
GPE IX TKE Co-Investment	\$	24,000	3/30/2020	\$	21,243	\$	-	\$	29,834	\$	29,834	13.5%
Advent International GPE X	\$	45,000	4/28/2022	\$	3,375	\$	-	\$	2,758	\$	2,758	NM
AI Co-Investment I-A	\$	7,500	3/2/2023	\$	-	\$	-	\$	-	\$	-	NM
Advent Latin America PE Fund VI	\$	20,000	10/17/2014	\$	19,516	\$	12,350	\$	18,629	\$	30,979	13.5%
Affinity Asia Pacific Fund IV	\$	60,000	2/28/2013	\$	64,783	\$	74,402	\$	28,830	\$	103,232	14.7%
Affinity Asia Pacific Fund V	\$	40,000	12/11/2017	\$	22,419	\$	4,771	\$	22,431	\$	27,202	10.5%
Bain Capital Ventures 2021	\$	25,000	10/28/2020	\$	17,750	\$	1	\$	18,580	\$	18,581	3.4%
Bain Capital Ventures 2022	\$	25,000	6/10/2022	\$	438	\$	-	\$	227	\$	227	NM
Bain Capital Venture Coinvestment Fund III	\$	15,000	4/1/2021	\$	11,775	\$	-	\$	13,044	\$	13,044	NM
Bain Capital Venture Coinvestment Fund IV	\$	15,000	6/10/2022	\$	-	\$	-	\$	-	\$	-	NM
Berkshire Fund VIII	\$	15,000	7/20/2011	\$	16,846	\$	27,586	\$	9,475	\$	37,062	17.1%
Berkshire Fund IX	\$	50,000	3/18/2016	\$	56,849	\$	35,932	\$	54,791	\$	90,723	16.8%
Blackstone Capital Partners VI	\$	30,000	6/30/2010	\$	37,729	\$	51,078	\$	12,235	\$	63,313	12.4%
Blackstone Capital Partners VII	\$	54,000	3/27/2015	\$	61,027	\$	38,218	\$	54,099	\$	92,317	13.7%
Carlyle Asia Partners III	\$	15,000	12/31/2009	\$	20,752	\$	31,105	\$	177	\$	31,282	12.6%
Carlyle Asia Partners IV	\$	60,000	6/3/2014	\$	79,646	\$	98,620	\$	26,722	\$	125,342	12.6%
Carlyle Asia Partners V	\$	45,000	10/30/2017	\$	35,482	\$	10,769	\$	29,305	\$	40,074	8.3%
Centerbridge Capital Partners III	\$	30,000	10/24/2014	\$	47,767	\$	45,744	\$	29,207	\$	74,951	18.6%
CB Blizzard Co-Invest	\$	10,000	9/11/2019	\$	15,684	\$	10,053	\$	2,740	\$	12,793	-17.9%
Charterhouse Capital Partners VIII	\$	13,500	1/6/2011	\$	11,188	\$	14,160	\$	-	\$	14,160	7.9%
Charterhouse Capital Partners IX	\$	4,500	1/6/2011	\$	5,390	\$	7,175	\$	119	\$	7,294	12.0%

				Amount			Total		rrent Market			
	Con	nmitment		Со	ntributed	Dis	tributions		Value	Тс	otal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)		(D)		(C+D)	IRR
Charterhouse Capital Partners X	\$	67,000	5/13/2015	\$	57,291	\$	60,602	\$	43,723	\$	104,325	21.0%
Charterhouse Acrostone	\$	12,000	8/24/2018	\$	13,254	\$	21,268	\$	0	\$	21,268	16.9%
Charterhouse Capital Partners XI	\$	45,000	4/23/2021	\$	5,341	\$	-	\$	6,785	\$	6,785	NM
CVC Capital Partners VI	\$	67,000	7/12/2013	\$	97,841	\$	105,628	\$	69,394	\$	175,022	17.1%
CVC Capital Partners VII	\$	48,000	5/9/2017	\$	72,466	\$	38,259	\$	67,610	\$	105,869	23.1%
CVC Capital Partners VIII	\$	44,000	6/11/2020	\$	46,157	\$	21,412	\$	26,704	\$	48,116	10.4%
EnCap Energy Capital VIII	\$	30,000	1/31/2011	\$	34,181	\$	23,023	\$	12,236	\$	35,259	0.7%
EnCap Energy Capital Fund VIII Co-Investors, L.P.	\$	16,238	12/8/2011	\$	16,506	\$	5,997	\$	6,338	\$	12,335	-4.1%
EnCap Energy Capital Fund IX	\$	30,000	12/19/2012	\$	34,541	\$	36,668	\$	13,312	\$	49,981	10.4%
EnCap Energy Capital Fund X	\$	40,000	3/5/2015	\$	41,867	\$	37,832	\$	38,591	\$	76,423	15.4%
EnCap Energy Capital Fund XI	\$	40,000	5/31/2017	\$	38,684	\$	9,958	\$	46,240	\$	56,198	19.2%
EnCap Flatrock Midstream Fund III	\$	20,000	4/9/2014	\$	25,178	\$	18,432	\$	16,009	\$	34,441	10.7%
EnCap Flatrock Midstream Fund IV	\$	22,000	11/17/2017	\$	19,604	\$	7,454	\$	15,328	\$	22,782	8.0%
General Catalyst X - Early Venture	\$	19,565	3/26/2020	\$	18,880	\$	-	\$	34,125	\$	34,125	33.1%
General Catalyst X - Endurance	\$	22,826	3/26/2020	\$	22,859	\$	-	\$	23,520	\$	23,520	1.4%
General Catalyst X - Growth Venture	\$	32,609	3/26/2020	\$	31,467	\$	-	\$	38,420	\$	38,420	9.7%
General Catalyst XI - Creation	\$	8,823	10/29/2021	\$	2,143	\$	-	\$	2,381	\$	2,381	NM
General Catalyst XI - Endurance	\$	29,412	10/29/2021	\$	20,731	\$	-	\$	20,168	\$	20,168	NM
General Catalyst XI - Ignition	\$	11,765	10/29/2021	\$	6,910	\$	-	\$	6,403	\$	6,403	NM
GTCR Fund X	\$	30,000	1/28/2011	\$	31,766	\$	64,445	\$	198	\$	64,643	21.4%
GTCR Fund XI	\$	35,000	11/15/2013	\$	34,961	\$	70,749	\$	44,619	\$	115,369	33.9%
GTCR Fund XII	\$	50,000	9/29/2017	\$	51,223	\$	31,746	\$	53,386	\$	85,131	25.4%
Co-Investment #1	\$	5,238	4/26/2019	\$	4,556	\$	-	\$	8,957	\$	8,957	19.0%
Co-Investment #2	\$	5 <i>,</i> 997	11/1/2019	\$	5,806	\$	10,935	\$	2,881	\$	13,816	47.7%
GTCR XIII	\$	50,000	10/27/2020	\$	25,573	\$	5,447	\$	24,255	\$	29,702	21.1%
GTCR XIV	\$	50,000	12/16/2022	\$	-	\$	-	\$	-	\$	-	NM
H.I.G. Bayside Loan Fund II	\$	25,000	5/28/2010	\$	24,020	\$	32,189	\$	262	\$	32,451	7.1%
H.I.G. Bayside Loan Ops Fund III (Europe)	\$	30,000	7/27/2012	\$	26,707	\$	31,070	\$	3,933	\$	35,003	7.6%
H.I.G. Brazil & Latin America Partners	\$	60,000	7/1/2015	\$	67,684	\$	19,264	\$	78,474	\$	97,739	13.3%
H.I.G. Capital Partners V	\$	15,000	2/28/2013	\$	20,352		28,359	\$	11,086	\$	39,445	23.4%
H.I.G. Europe Capital Partners II	\$	22,500	7/1/2013	\$	25,240	\$	20,667	\$	14,678	\$	35,345	11.6%

				ļ	Amount		Total	Cui	rrent Market			
	Con	nmitment		Со	ntributed	Dis	tributions		Value	Тс	otal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)		(D)		(C+D)	IRR
H.I.G. Growth Buyouts & Equity Fund II	\$	17,500	6/30/2011	\$	23,547	\$	26,958	\$	14,955	\$	41,913	14.9%
H.I.G. Growth Buyouts & Equity Fund III	\$	35,000	9/13/2018	\$	13 <i>,</i> 398	\$	-	\$	13,223	\$	13,223	NM
H.I.G Middle Market LBO Fund II	\$	40,000	2/7/2014	\$	47,963	\$	63,274	\$	28,616	\$	91,889	28.2%
Co-Investment #1	\$	9,000	10/12/2017	\$	9,000	\$	-	\$	(28)	\$	(28)	-100.0%
Co-Investment #2	\$	686	6/19/2020	\$	686	\$	-	\$	896	\$	896	10.1%
Co-Investment #3	\$	1,000	6/1/2021	\$	1,079	\$	-	\$	15	\$	15	NM
H.I.G. Middle Market LBO Fund III	\$	40,000	7/23/2019	\$	31,544	\$	1,694	\$	37,376	\$	39,070	21.6%
Hellman & Friedman Capital Partners VII	\$	30,000	6/19/2009	\$	44,347	\$	105,630	\$	6,322	\$	111,952	24.7%
Hellman & Friedman Capital Partners VIII	\$	45,000	9/24/2014	\$	48,585	\$	26,839	\$	54,926	\$	81,765	14.0%
Hellman & Friedman Capital Partners IX	\$	45,000	9/28/2018	\$	44,605	\$	1,069	\$	59,680	\$	60,749	15.1%
Hellman & Friedman Capital Partners X	\$	45,000	5/10/2021	\$	32,383	\$	-	\$	33,030	\$	33,030	NM
Inflexion Buyout Fund IV	\$	27,000	9/30/2014	\$	33 <i>,</i> 986	\$	38,539	\$	22,023	\$	60,562	15.9%
Inflexion Partnership Capital Fund I	\$	17,000	9/30/2014	\$	25,728	\$	39,627	\$	7,261	\$	46,887	22.5%
Inflexion Supplemental Fund IV	\$	10,000	5/31/2016	\$	14,860	\$	20,923	\$	8,137	\$	29,060	24.5%
Kelso Investment Associates VIII	\$	3,000	1/6/2011	\$	3,022	\$	4,263	\$	136	\$	4,399	8.1%
Kelso Investment Associates IX	\$	60,000	11/5/2014	\$	70,103	\$	86,523	\$	33,395	\$	119,918	20.0%
KIA IX (Hammer) Investor	\$	25,000	8/12/2016	\$	25,426	\$	69,298	\$	312	\$	69,609	21.4%
Kelso Investment Associates X	\$	45,000	3/16/2018	\$	46,561	\$	13,311	\$	70,582	\$	83,892	35.6%
Kelso Investment Associates XI	\$	45,000	12/22/2021	\$	7,810	\$	652	\$	10,365	\$	11,018	NM
Kelso XI Heights Co-Investment	\$	12,000	8/19/2022	\$	10,013	\$	-	\$	10,839	\$	10,839	NM
KKR North American Fund XI	\$	60,000	2/7/2012	\$	100,095	\$	164,760	\$	23,071	\$	187,831	19.5%
KKR North America Fund XI (Platinum)	\$	8,003	2/26/2016	\$	8,040	\$	2,313	\$	6,053	\$	8,366	0.8%
KKR Element Co-Invest	\$	10,000	8/29/2016	\$	10,050	\$	24,030	\$	-	\$	24,030	23.5%
KKR Americas XII	\$	60,000	3/3/2016	\$	61,403	\$	26,301	\$	72,690	\$	98,991	18.5%
KKR Sigma Aggregator	\$	15,000	6/22/2018	\$	15,000	\$	-	\$	23,205	\$	23,205	9.6%
KKR Enterprise Co-Invest	\$	15,000	10/11/2018	\$	15,000	\$	-	\$	-	\$	-	-100.0%
KKR Enterprise Co-Invest AIV A	\$	8,936	11/8/2019	\$	8,936	\$	7,243	\$	1,237	\$	8,480	-6.0%
KKR North America XIII	\$	40,000	6/25/2021	\$	13,403	\$	-	\$	13,602	\$	13,602	NM
KKR Special Situations Fund	\$	60,000	12/19/2012	\$	118,957	\$	99 <i>,</i> 658	\$	12,376	\$	112,034	-2.1%
KKR Special Situations Fund II	\$	60,000	12/19/2014	\$	98,215	\$	77,308	\$	24,192	\$	101,500	1.4%
Metwest Enhanced TALF Strategy Fund L. P.	\$	75,000	7/31/2009	\$	53,350	\$	67,405	\$	-	\$	67,405	10.2%

				A	Amount		Total	Cur	rent Market			
	Cor	nmitment		Со	ntributed	Dis	tributions		Value	Тс	tal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)		(D)		(C+D)	IRR
Oaktree Opportunities VIII	\$	30,000	12/9/2009	\$	30,000	\$	43,920	\$	94	\$	44,013	9.1%
ONCAP IV	\$	15,000	11/8/2016	\$	13,085	\$	3,296	\$	17,561	\$	20,857	14.7%
Onex Partners III	\$	10,000	1/6/2011	\$	11,202	\$	17,022	\$	1,770	\$	18,792	13.2%
Onex Partners IV	\$	60,000	11/22/2013	\$	62,871	\$	50 <i>,</i> 953	\$	38,527	\$	89,481	8.2%
Co-Investment #1	\$	10,000	2/27/2017	\$	10,471	\$	1,235	\$	8,928	\$	10,164	-0.6%
Onex Partners V	\$	45,000	7/11/2017	\$	39,000	\$	5,911	\$	41,686	\$	47,597	12.4%
Paine & Partners Capital Fund IV	\$	60,000	12/18/2014	\$	56,456	\$	29,070	\$	48,054	\$	77,124	7.8%
Wawona Co-Investment Fund I	\$	15,000	3/31/2017	\$	15,023	\$	-	\$	4	\$	4	-99.0%
Lyons Magnus Co-Investment Fund I	\$	15,000	11/8/2017	\$	15,016	\$	-	\$	24,246	\$	24,246	9.3%
PSP Maverick Co-Invest	\$	7,238	9/12/2019	\$	7,264	\$	-	\$	517	\$	517	-52.9%
PSP AH&N Co-Investment Fund	\$	19,724	11/27/2019	\$	17,539	\$	-	\$	31,722	\$	31,722	20.8%
Paine Schwartz Food Chain Fund V	\$	45,000	8/3/2018	\$	45,366	\$	13,083	\$	49,166	\$	62,249	27.0%
SNFL Co-Investment Fund	\$	5,000	10/11/2019	\$	5,024	\$	265	\$	9,906	\$	10,171	22.8%
Rhone Partners V	\$	56,000	3/12/2015	\$	71,494	\$	34,616	\$	79,931	\$	114,547	15.4%
Riverside Capital Appreciation Fund VI	\$	60,000	7/3/2013	\$	61,710	\$	79 <i>,</i> 808	\$	18,122	\$	97,930	12.1%
RCAF VI CIV XXXII	\$	12,399	10/21/2015	\$	12,687	\$	35,260	\$	-	\$	35,260	19.9%
Riverside Micro-Cap Fund III	\$	35,000	6/30/2014	\$	49,448	\$	183,115	\$	54,310	\$	237,424	36.7%
Riverside Micro-Cap Fund IV	\$	60,000	10/23/2015	\$	55,659	\$	-	\$	88,831	\$	88,831	9.2%
Riverside Micro-Cap Fund IV-B	\$	20,000	8/9/2019	\$	24,292	\$	5 <i>,</i> 583	\$	36,910	\$	42,493	27.5%
Riverside Micro-Cap Fund V	\$	40,000	8/21/2018	\$	33,265	\$	-	\$	49,765	\$	49,765	19.4%
Riverside Micro-Cap Fund VI	\$	45,000	8/26/2021	\$	12,766	\$	263	\$	12,453	\$	12,717	NM
Shoreview Capital Partners III	\$	24,000	7/24/2013	\$	25,657	\$	28,779	\$	24,112	\$	52,891	18.5%
Shoreview Capital Partners IV	\$	30,000	6/3/2019	\$	13,403	\$	5 <i>,</i> 975	\$	12,554	\$	18,529	NM
Sovereign Capital IV	\$	46,500	7/7/2014	\$	40,344	\$	26,905	\$	32,927	\$	59 <i>,</i> 833	10.8%
Summit Partners Credit II	\$	60,000	10/25/2013	\$	90,752	\$	87,328	\$	20,221	\$	107,550	6.5%
Summit Europe Growth Equity III	\$	22,000	3/18/2020	\$	13,688	\$	-	\$	12,618	\$	12,618	-6.5%
Summit Europe Growth Equity IV	\$	22,000	2/10/2023	\$	-	\$	-	\$	-	\$	-	NM
Summit Growth Equity VIII	\$	25,000	5/27/2011	\$	33,445	\$	63,535	\$	12,182	\$	75,717	26.4%
Co-Investment #1	\$	16,000	6/3/2015	\$	16,000	\$	38,735	\$	21,304	\$	60,039	32.5%
Summit Growth Equity IX	\$	60,000	8/26/2015	\$	83,322		88,968	\$	90,187	\$	179,155	32.7%
Co-Investment #1	\$	15,000	11/29/2016	\$	14,895	\$	41,743	\$	-	\$	41,743	159.6%

				Amount		Total		Current Market				
	Con	nmitment		Со	ntributed	Dis	tributions		Value	То	otal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)		(D)		(C+D)	IRR
Summit Partners Co-Invest (Ironman)	\$	15,530	4/20/2018	\$	15,004	\$	-	\$	14,979	\$	14,979	0.0%
Summit Partners Co-Invest (Giants-B)	\$	15,000	10/22/2019	\$	15,000	\$	41,780	\$	5,433	\$	47,213	82.0%
Summit Growth Equity X	\$	60,000	2/26/2019	\$	59 <i>,</i> 804	\$	18,176	\$	60,791	\$	78,967	20.6%
Summit Partners Co-Invest (Lions)	\$	7,534	10/14/2020	\$	7,534	\$	-	\$	14,454	\$	14,454	31.9%
Summit Partners Co-Invest (Indigo)	\$	10,000	12/11/2020	\$	11,436	\$	-	\$	11,426	\$	11,426	0.0%
Summit Growth Equity XI	\$	45,000	10/1/2021	\$	8,194	\$	-	\$	8,611	\$	8,611	NM
Summit Venture Capital III	\$	13,150	5/27/2011	\$	18,044	\$	32,899	\$	2,949	\$	35,849	17.6%
Summit Venture Capital IV	\$	40,000	8/26/2015	\$	50,591	\$	48,377	\$	60,160	\$	108,537	39.4%
Summit Venture Capital V	\$	45,000	6/16/2020	\$	24,906	\$	773	\$	23,666	\$	24,438	-1.8%
Summit Partners Co-Invest (CS)	\$	13,753	10/22/2021	\$	13,760	\$	-	\$	11,689	\$	11,689	NM
Technology Crossover Ventures VIII	\$	60,000	5/8/2013	\$	52,307	\$	39,509	\$	71,658	\$	111,167	12.1%
Technology Crossover Ventures IX	\$	60,000	2/19/2016	\$	48,428	\$	46,154	\$	52,786	\$	98,940	20.7%
TCV Sports	\$	8,000	9/25/2018	\$	8,000	\$	-	\$	10,095	\$	10,095	5.3%
Technology Crossover Ventures X	\$	45,000	8/31/2018	\$	36,448	\$	6,801	\$	60,098	\$	66,899	24.0%
Technology Crossover Ventures XI	\$	45,000	10/2/2020	\$	23,033	\$	-	\$	20,923	\$	20,923	-6.7%
Technology Impact Fund	\$	40,000	12/18/2017	\$	36,926	\$	23,243	\$	85,098	\$	108,341	49.5%
Technology Impact Fund II	\$	40,000	4/13/2021	\$	11,553	\$	325	\$	11,789	\$	12,114	NM
Technology Impact Growth Fund	\$	40,000	11/26/2018	\$	47,885	\$	26,676	\$	28,895	\$	55,571	7.7%
Technology Impact Growth Fund II	\$	40,000	8/6/2021	\$	8,786	\$	-	\$	7,352	\$	7,352	NM
Thoma Bravo Fund XI	\$	50,000	5/1/2014	\$	72,220	\$	135,521	\$	60,578	\$	196,099	26.8%
Thoma Bravo Fund XII	\$	60,000	4/27/2016	\$	78,447	\$	80,943	\$	62,873	\$	143,816	16.4%
Thoma Bravo Fund XIII	\$	45,000	12/7/2018	\$	59,671	\$	31,856	\$	67,698	\$	99,554	29.6%
Thoma Bravo Special Opportunities Fund II	\$	15,000	3/27/2015	\$	18,113	\$	21,091	\$	16,074	\$	37,165	16.6%
Thoma Bravo Discover Fund IV	\$	45,000	7/1/2022	\$	14,963	\$	-	\$	15,445	\$	15,445	NM
Tillridge Global Agribusiness Partners II	\$	50,000	10/21/2016	\$	28,819	\$	2,900	\$	24,917	\$	27,817	-1.3%
Water Street Healthcare Partners III	\$	25,000	7/25/2012	\$	29,890	\$	78,657	\$	8,193	\$	86,850	35.5%
Water Street Healthcare Partners IV	\$	33,000	9/15/2017	\$	34,342	\$	10,624	\$	36,813	\$	47,436	14.4%
Water Street Healthcare Partners V	\$	43,000	4/15/2022	\$	5,719	\$	-	\$	4,962	\$	4,962	NM
Wayzata Opportunities Fund III	\$	30,000	9/11/2012	\$	14,718	\$	10,875	\$	4,419	\$	15,294	0.9%
Wynnchurch Capital Partners IV	\$	40,000	10/23/2014	\$	38,209	\$	39,897	\$	57,702	\$	97,599	27.6%
Wynnchurch Capital Partners V	\$	40,000	1/15/2020	\$	25,435	\$	271	\$	31,589	\$	31,860	19.7%

Real Estate

					Amount	Total		tal Current Market				
	Cor	nmitment		С	ontributed	C	listributions		Value	То	tal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)		(D)		(C+D)	IRR
Angelo Gordon Net Lease IV	\$	50,000	2/17/2020	\$	40,452	\$	2,365	\$	42,103	\$	44,467	6.3%
Angelo Gordon Realty Fund XI	\$	50,000	3/31/2022	\$	5,000	\$	-	\$	4,312	\$	4,312	NM
Bain Capital Real Estate II	\$	50,000	3/5/2021	\$	23,277	\$	2,365	\$	23,999	\$	26,364	NM
Blackrock Granite Property Fund	\$	63,791	9/30/2006	\$	68,771	\$	53,312	\$	-	\$	53,312	-4.9%
Blackstone Property Partners	\$	350,000	6/29/2017	\$	350,000	\$	39,612	\$	403,939	\$	443,550	5.6%
Blackstone Real Estate Partners VII	\$	75,000	2/26/2012	\$	104,255	\$	155,587	\$	14,229	\$	169,816	15.0%
Blackstone Real Estate Partners VIII	\$	50,000	3/27/2015	\$	63,567	\$	64,827	\$	38,252	\$	103,079	16.1%
Blackstone Real Estate Partners IX	\$	40,000	12/21/2018	\$	43,253	\$	14,974	\$	46,939	\$	61,913	26.4%
Barings Asia Real Estate II	\$	50,000	7/31/2018	\$	21,041	\$	-	\$	18,887	\$	18,887	NM
EQT Real Estate II	\$	55,000	4/26/2019	\$	31,496	\$	5,268	\$	30,185	\$	35,453	8.4%
EQT Real Estate Rock Co-Investment	\$	11,000	8/10/2020	\$	9,090	\$	-	\$	10,842	\$	10,842	9.3%
H/2 Credit Partners, L.P.	\$	75,000	6/21/2011	\$	75,000	\$	112,177	\$	-	\$	112,177	5.9%
Harrison Street Core Property Fund, L.P.	\$	75,000	4/30/2012	\$	95,499	\$	51,616	\$	133,387	\$	185,003	8.7%
HSRE-Coyote Maine PERS Core Co-Investment	\$	20,000	12/4/2020	\$	14,168	\$	471	\$	13,370	\$	13,841	-1.0%
High Street Real Estate Fund IV, L.P.	\$	25,000	8/23/2013	\$	24,717	\$	34,157	\$	-	\$	34,157	14.7%
High Street Real Estate Fund V	\$	25,000	7/24/2015	\$	24,925	\$	36,176	\$	-	\$	36,176	13.2%
High Street Real Estate Fund VI	\$	25,000	3/22/2019	\$	25,000	\$	3,916	\$	35,714	\$	39,630	21.8%
HSREF VI Elgin Co-Invest	\$	10,000	4/9/2021	\$	10,000	\$	1,268	\$	13,197	\$	14,465	NM
High Street Real Estate Fund VII	\$	35,000	8/16/2021	\$	33,151	\$	-	\$	35,282	\$	35,282	NM
High Street Real Estate VII Venture	\$	15,000	3/17/2023	\$	-	\$	-	\$	-	\$	-	NM
Hines US Property Partners	\$	200,000	9/9/2021	\$	98,195	\$	10,637	\$	92,031	\$	102,669	NM
Invesco Real Estate Asia IV	\$	30,000	3/25/2020	\$	22,494	\$	12,597	\$	11,597	\$	24,193	11.6%
Invesco US Income Fund	\$	195,000	7/17/2014	\$	223,678	\$	64,955	\$	320,348	\$	385,303	11.0%
IPI Data Center Partners I	\$	30,000	12/15/2017	\$	34,569	\$	18,635	\$	35,978	\$	54,614	18.0%
IPI Data Center Partners II	\$	25,000	12/20/2019	\$	17,608	\$	1,619	\$	15,801	\$	17,420	-1.1%
JPMCB Strategic Property Fund	\$	130,000	11/15/2005	\$	186,941	\$	297,519	\$	-	\$	297,519	5.8%
KKR Real Estate Partners Europe I	\$	50,000	12/2/2015	\$	52,648	\$	51,074	\$	17,506	\$	68,580	9.9%
KKR Real Estate Partners Europe II	\$	25,000	12/23/2019	\$	18,469	\$	5,644	\$	13,799	\$	19,443	4.8%
KKR Real Estate Partners Americas I	\$	50,000	12/20/2013	\$	50,019	\$	59,390	\$	2,314	\$	61,704	10.9%
KKR Real Estate Partners Americas II	\$	50,000	6/2/2016	\$	59,370	\$	67,659	\$	14,976	\$	82,635	21.1%
Northbridge-Strategic Fund II	\$	30,000	2/8/2019	\$	30,000	\$	3,748	\$	44,338	\$	48,086	12.7%
Prima Mortgage Investment Trust, LLC	\$	75,000	7/29/2011	\$	97,490	\$	131,918	\$	-	\$	131,918	3.8%
Principal Life Insurance Company U.S. Property	\$	60,000	5/20/2005	\$	60,000	\$	125,410	\$	-	\$	125,410	6.2%

Real Estate

					Amount		Total	Cu	rrent Market			
	Con	nmitment		С	ontributed	D	oistributions		Value	Тс	tal Value	Interim Net
Fund Name		(A)	Date of Commitment		(B)		(C)		(D)		(C+D)	IRR
PRISA	\$	90,000	6/30/2005	\$	139,622	\$	222,450	\$	-	\$	222,450	5.3%
Rubenstein Properties Fund III	\$	30,000	10/23/2015	\$	30,606	\$	627	\$	19,808	\$	20,435	-9.2%
LCC Co-Investor B	\$	15,000	10/18/2019	\$	15,000	\$	-	\$	8,255	\$	8,255	-18.2%
Rubenstein Properties Fund IV	\$	25,000	4/16/2019	\$	8,232	\$	2	\$	5,165	\$	5,166	NM
Prudential Senior Housing Fund V	\$	50,000	3/17/2015	\$	41,333	\$	5,453	\$	50,386	\$	55,839	5.9%
Smart Markets Fund, L.P.	\$	195,000	6/17/2013	\$	174,933	\$	67,075	\$	270,486	\$	337,561	9.8%
Stonelake Opportunity Partners VII	\$	40,000	6/30/2022	\$	0	\$	-	\$	(596)	\$	(596)	NM
Walton Street Real Estate Fund VII	\$	50,000	5/9/2012	\$	43,990	\$	49,882	\$	11,188	\$	61,070	9.3%
Walton Street Real Estate Fund VIII	\$	50,000	10/23/2015	\$	42,685	\$	35,113	\$	22,730	\$	57,842	9.8%
Co-Investment #1	\$	10,000	9/27/2017	\$	10,293	\$	4,160	\$	-	\$	4,160	-60.0%
Westbrook Real Estate Fund IX	\$	15,000	6/30/2014	\$	17,409	\$	17,500	\$	2,918	\$	20,418	5.8%
Westbrook Real Estate Fund X	\$	50,000	1/15/2015	\$	48,632	\$	42,649	\$	17,351	\$	60,000	9.5%
Westbrook Real Estate Fund XI	\$	40,000	1/31/2019	\$	21,291	\$	10,513	\$	14,640	\$	25,153	20.5%

Notes: NM = Not Meaningful. MainePERS only reports IRRs for funds with more than 24 months of history and for which Amount Contributed is greater than 50% of Commitments. "Date of Commitment" is not the date of first capital draw. The "IRR" presented uses interim estimates and may not be indicative of ultimate performance of partnership investments due to a number of factors including lags in valuation, maturity of fund, and differences in investment pace and strategy of various funds. Performance figures should not be used to compare returns among multiple funds or different limited partners. Private market investments are long-term investments which are expected to generate returns over the course of their entire life cycle of 10 or more years. Common industry practice dictates that any performance analysis on these funds while they are still in the early years of their investment cycle would not generate meaningful results. The Interim Net IRR figures presented in this table are based on cash flow information provided by the general partner. The above information was not prepared, reviewed, or approved by any of the partnerships, general partners, or their affiliates and may differ from those generated by the general partner or other limited partners due to differences in timing of investments, disposal of in-kind distributions, and accounting and valuation policies.

MAINEPERS

BOARD OF TRUSTEES INVESTMENTS MEMORANDUM

TO: BOARD MEMBERS

FROM: JAMES BENNETT, CHIEF INVESTMENT OFFICER

SUBJECT: REBALANCING ACTIVITY REPORT

DATE: AUGUST 2, 2023

This memo summarizes rebalancing activity undertaken during the first six months of calendar year 2023.

POLICY REFERENCE

Board Policy 2.1 – Investment Policy Statement

Board Policy 4.5 – Board/Staff Relations

Board Policy 4.6 – Communication and Support to the Board

PUBLIC MARKETS REBALANCING

The below table shows rebalancing activity within the public markets portfolio during the first six months of calendar year 2023.

		Asset	Class		
	Public	Traditional	US Gov.	US Gov.	
Month	Equity	Credit	Nominal	TIPS	Note
January	-	-	\$75 million	-\$75 million	Rebalance
February	-\$200 million	-	\$50 million	-	Raise Cash & Rebalance
March	-\$120 million	-\$55 million	-	-\$25 million	Raising Cash
April	-\$190 million	-	-	-	Raising Cash
May	-	-	-	-	No Activity
June	-\$135 million	-	-	-\$60 million	Raising Cash
Net Activity	-\$645 million	-\$55 million	\$125 million	-\$160 million	

OTHER ACTIVITY

During the first six months of calendar year 2023, the System submitted requests for redemptions from two of the System's open-end investments:

January 2023: Blackstone Property Partners – Partial Redemption Request

May 2023: Mesa West Core Lending – Full Redemption Request

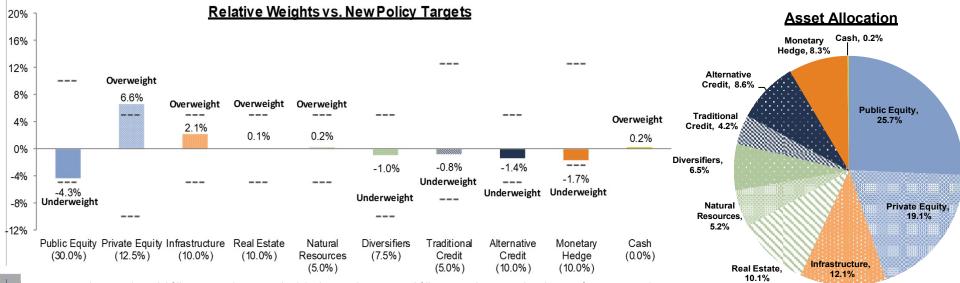
Each of these requests remain pending at this time.

MainePERS Dashboard as of June 30, 2023

Summary Portfolio Observations

The MainePERS total portfolio market value at the end of Q2 2023 was \$18,788.0 million. The portfolio returned 2.3% in the quarter ended June 30, 2023, with underperformance mostly driven from less direct sensitivity to public markets which generally had a strong quarter. Over the past five years, the portfolio has generated annualized returns of 8.4%.

	Total Fund Performance (6/30/2023)											
	Q2 2023	Tr. 1 Year	Tr. 3 Year	Tr. 5 Year								
Total Fund Composite	2.3	4.7	11.0	8.4								
MainePERS Policy Index	3.2	5.7	10.8	7.9								
Value Add	-0.9	-1.1	0.2	0.5								



Note: Asset classes with a solid fill are passively managed, while those with a patterned fill are actively managed. Risk Diversifiers NAV is preliminary.



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MAINEPERS SECOND QUARTER 2023 PERFORMANCE REVIEW



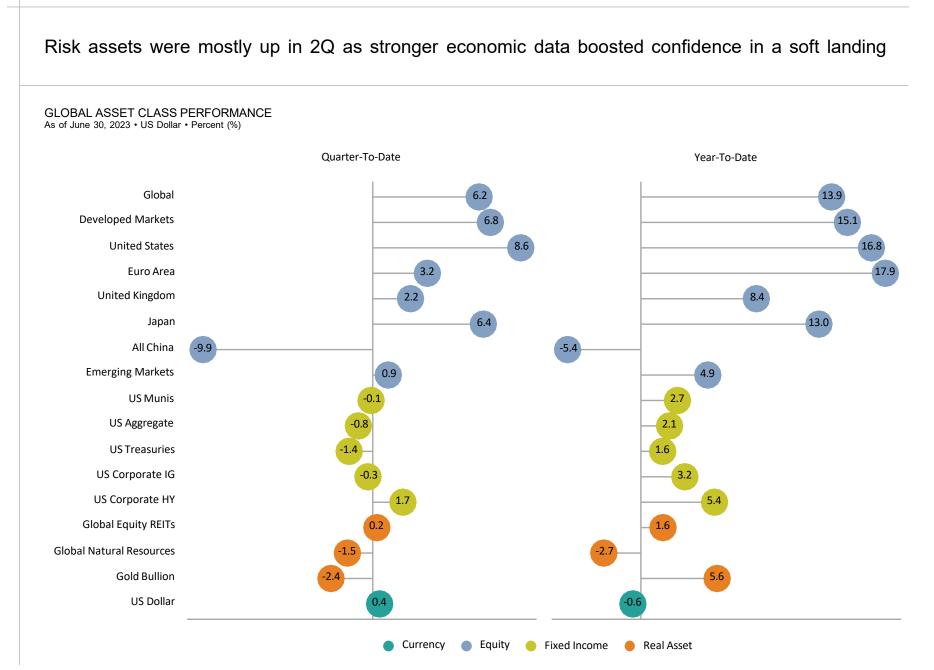


AUGUST 2023

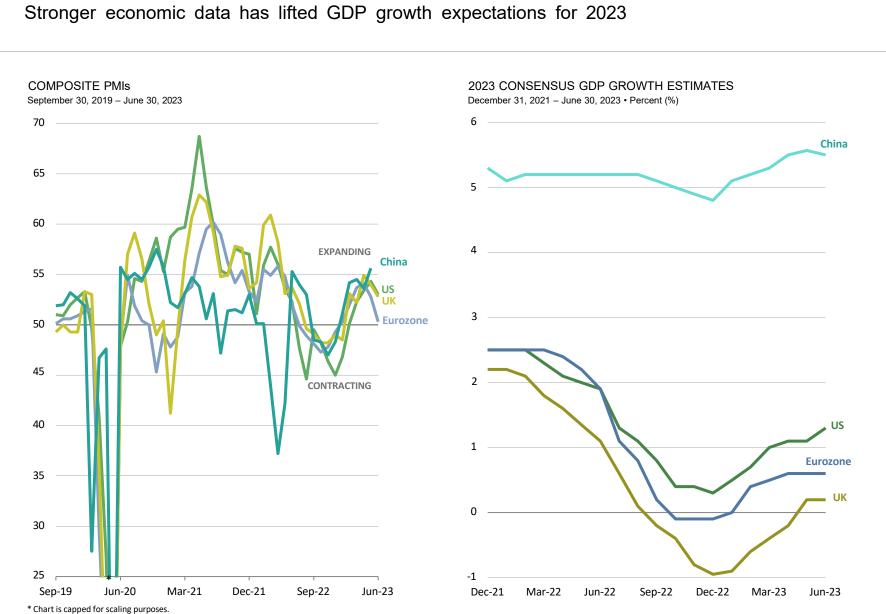
MARKET UPDATE







Sources: Bloomberg Index Services Limited., ICE Benchmark Administration Ltd., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Notes: All data are in US dollar terms. The equity data are total returns net of dividend taxes of MSCI indexes. The fixed income data are total returns of Bloomberg indexes. The MSCI Global Equity REIT Index, the MSCI ACWI Commodity Producers Index, and front-month gold contracts as traded on the New York Mercantile Exchange are used to calculate real asset performances. The US Dollar Index (DXY) is used to calculate US Dollar performance.

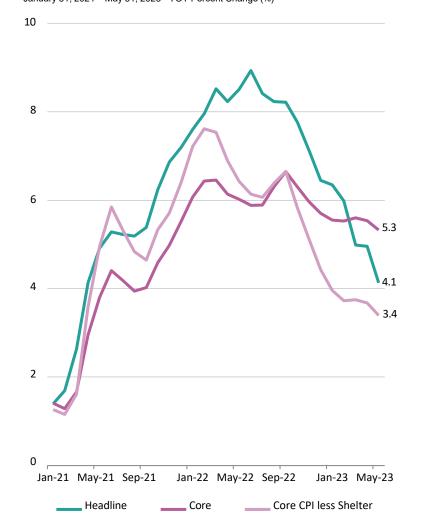


Sources: Bloomberg L.P., S&P Global, and Thomson Reuters Datastream.

Notes: Composite PMI data are flash estimates and China data are as of May 31. GDP growth estimates are based on median forecasts. MMHC

Elevated shelter prices are propping up US inflation

US HEADLINE, CORE, AND CORE LESS SHELTER INFLATION January 31, 2021 – May 31, 2023 • YOY Percent Change (%)



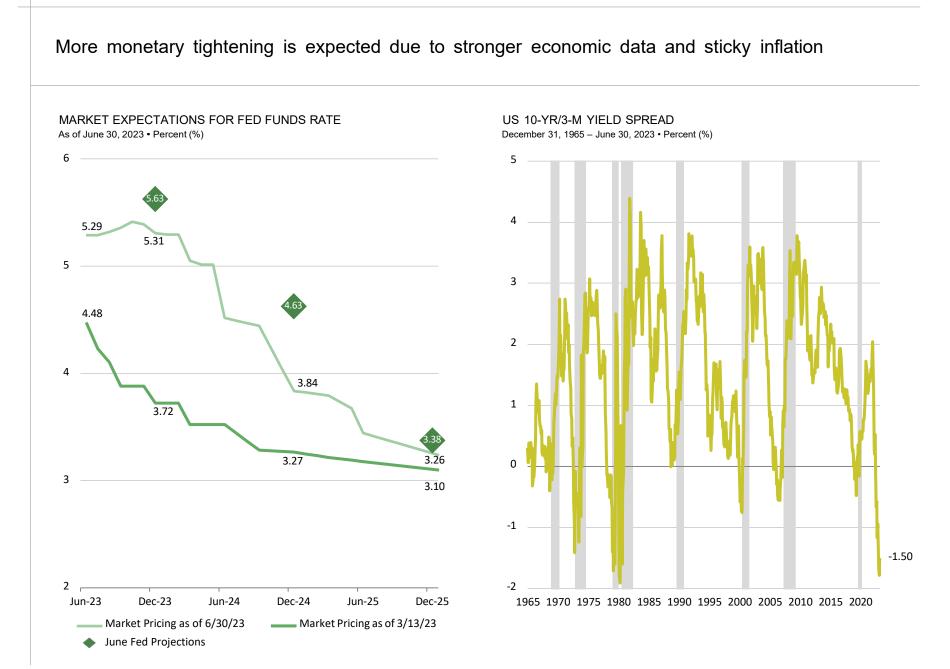
US HOME PRICES VERSUS US CPI SHELTER

January 31, 2000 - May 31, 2023 • YOY Percent Change (%)

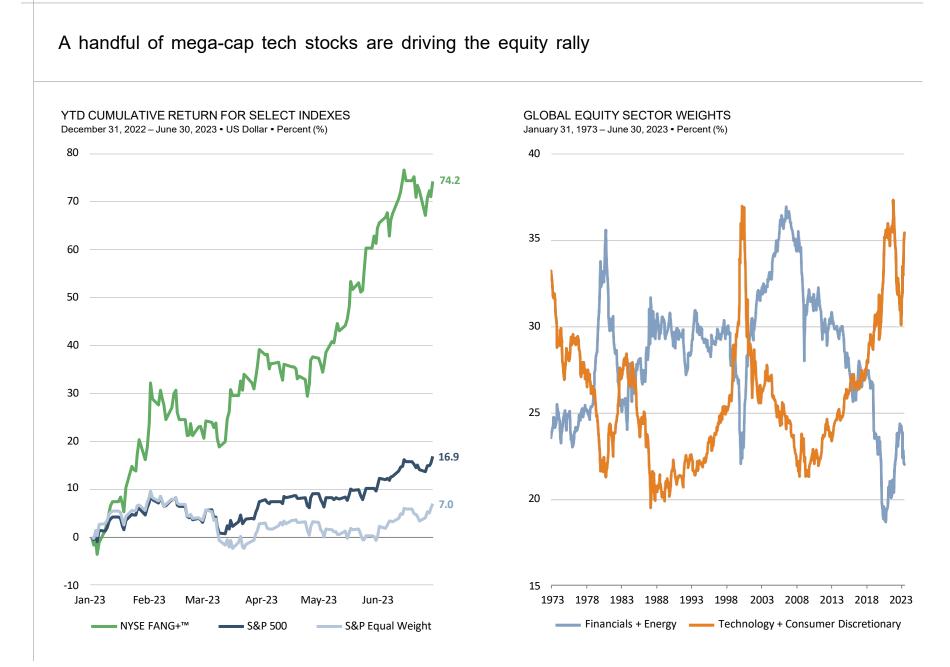


Sources: Standard & Poor's, Thomson Reuters Datastream, and US Department of Labor - Bureau of Labor Statistics.

Notes: Data are monthly. The S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index tracks the value of single-family housing in the United States and is through April 30, 2023. MMHC

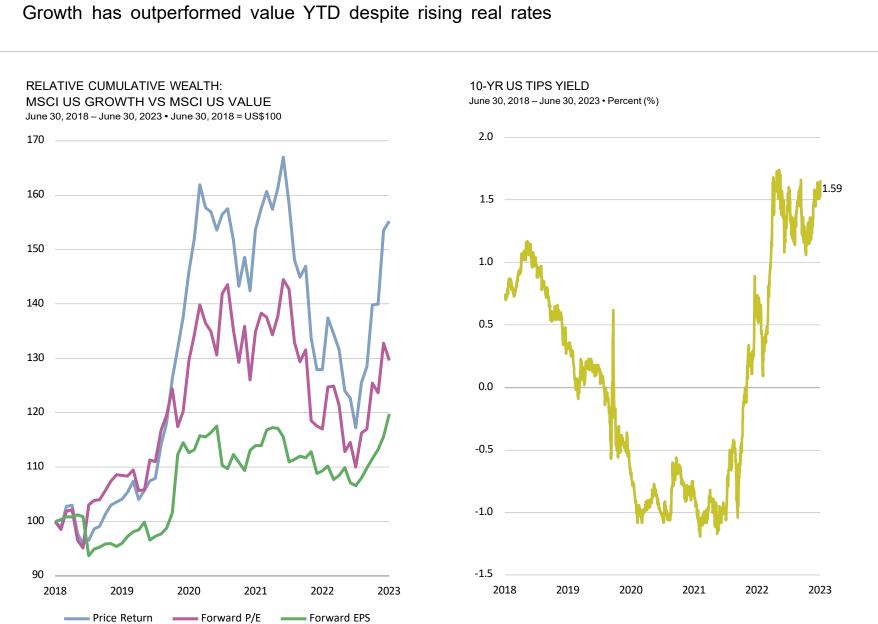


Sources: Bloomberg L.P., Federal Reserve, National Bureau of Economic Research (NBER), and Thomson Reuters Datastream. Notes: Data are monthly. Gray bars represent NBER-defined US recessions.

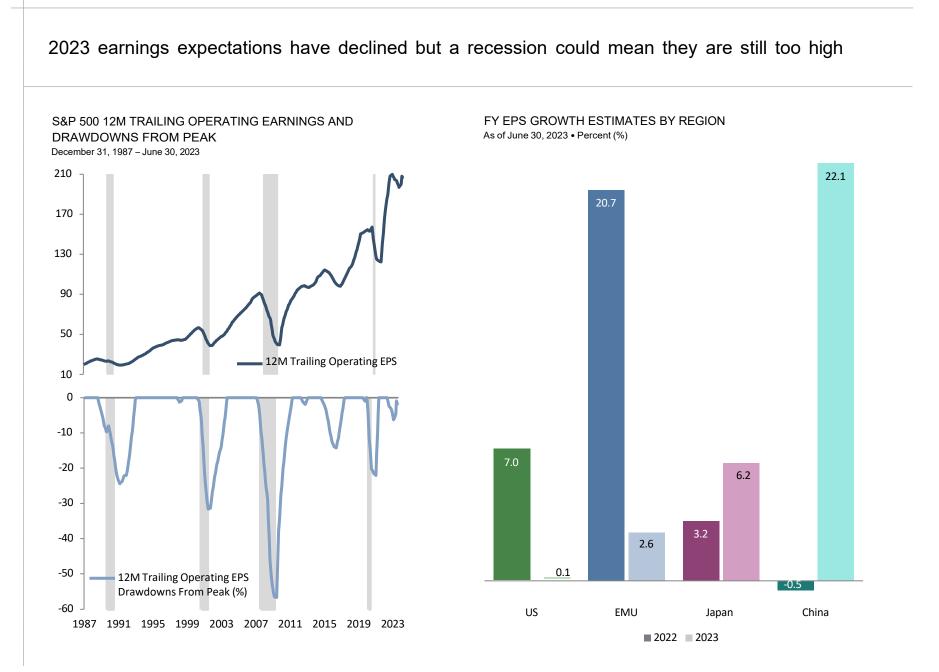


Sources: New York Stock Exchange, Standard & Poor's, and Thomson Reuters Datastream.

Notes: Cumulative return data are daily total returns gross of dividend taxes. NYSE FANG+[™] is an equal-weighted index that provides exposure to a select group of highly traded growth stocks of next generation technology and tech-enabled companies that include Advanced Micro Devices, Amazon, Apple, Google, Meta, Microsoft, Netflix, NVIDIA, Snowflake, and Tesla. RHS chart represents sector weightings in the Datastream World Equity Index. RHS data are monthly.



Sources: Federal Reserve, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Note: Relative cumulative wealth data are in US Dollars.

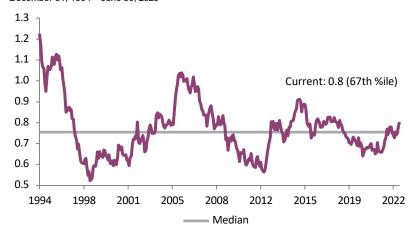


Sources: I/B/E/S, MSCI Inc., National Bureau of Economic Research, Standard & Poor's, and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Notes: Gray bars on LHS represent NBER-defined US recessions. Monthly earnings are interpolated from actual quarterly operating EPS and are through June 22, 2023. Japan FY EPS data represents earnings growth from March through the next 12-month period. Regions are represented by the following indexes: S&P 500 (US), MSCI EMU (EMU), MSCI Japan (Japan), and MSCI China (China). MMHC

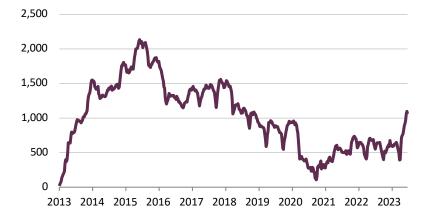
Japan stocks have been on a tear (measured in Yen), but valuation support is waning



MSCI JAPAN CAPCE RELATIVE TO GLOBAL EQUITIES December 31, 1994 – June 30, 2023

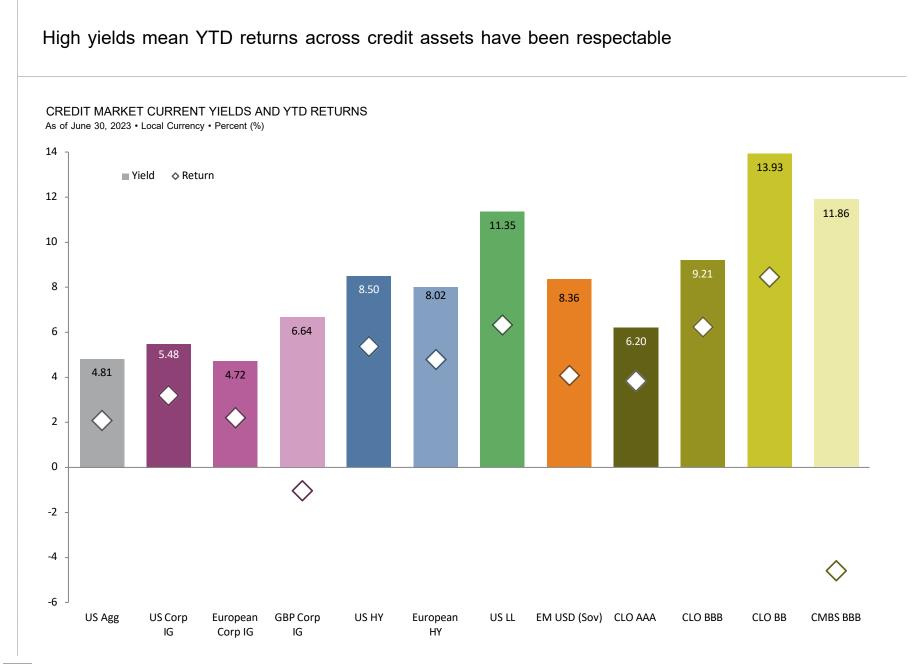


ABENOMICS IMPACT: NET JAPANESE INFLOWS BY FOREIGNERS January 1, 2013 – June 23, 2023 • USD (Billions)



Sources: Bloomberg L.P., MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties.

Notes: The cyclically adjusted price-to-cash earnings (CAPCE) ratio is calculated by dividing the inflation-adjusted index price by trailing ten-year average inflation-adjusted cash earnings. Cash earnings are defined as net income from continuing operations plus depreciation and amortization expense. MSCI does not publish cash earnings for banks and insurance companies and therefore excludes these two industry groups from index-level cash earnings. Global equities CAPCE is calculated based on the MSCI World Index until August 31, 2005, and MSCI ACWI Index thereafter.

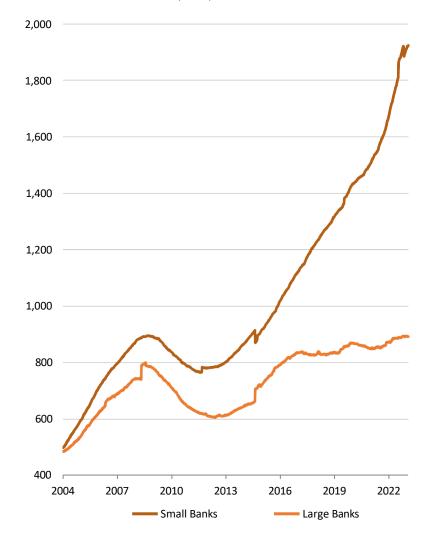


Sources: Bloomberg Index Services Limited, Credit Suisse, and J.P. Morgan Securities, Inc.

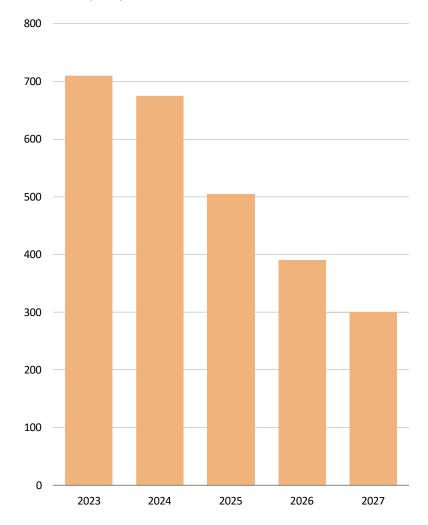
Notes: Asset classes represented by: Bloomberg US Aggregate Index (US Agg), Bloomberg US Corporate Investment Grade Index (US Corp IG), Bloomberg Pan-European Aggregate Corporate Index (European Corp IG), Bloomberg Sterling Aggregate Corporate Index (GBP Corp IG), Bloomberg US Corporate High Yield Index (US HY), Bloomberg Pan-European High Yield Index (European HY), Credit Suisse Leveraged Loan Index (US L), J.P. Morgan EMBI Global Diversified Index (EM USD Sov), J.P. Morgan CLOIE AAA Index (CLO AAA), J.P. Morgan CLOIE BBB Index (CLO BBB), J.P. Morgan CLOIE BB Index (CLO BB), and Bloomberg US CMBS Baa Index (CMBS BBB). MMHC

Looming maturity wall for CRE debt could be especially difficult for property owners and small banks

COMMERCIAL REAL ESTATE LOANS: SMALL & LARGE BANKS June 1, 2004 – June 21, 2023 • USD (Billions)

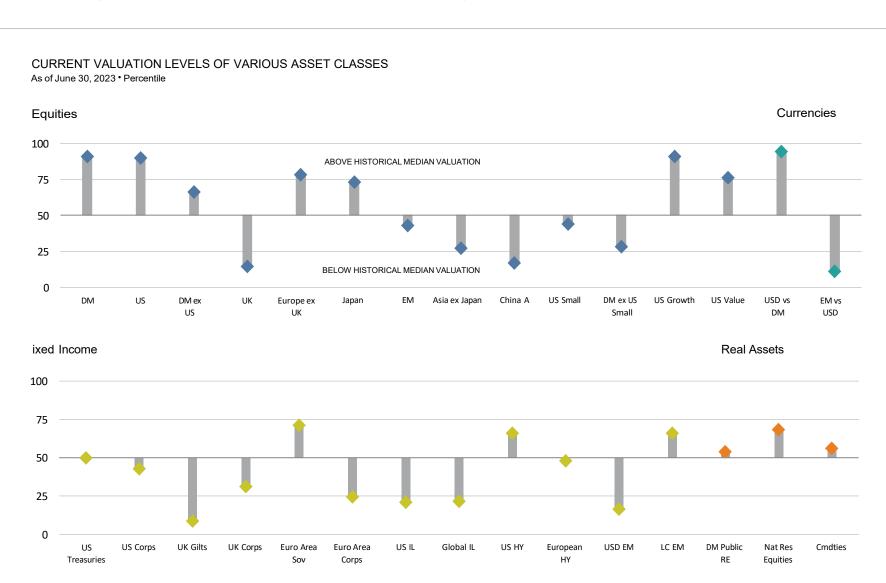


ESTIMATED MATURITY OF COMMERCIAL REAL ESTATE DEBT 2023–27 • USD (Billions)



Sources: Federal Reserve, Goldman Sachs Global Investment Research, and Mortgage Bankers Association. Note: Bank commercial real estate loan data are seasonally adjusted. MMHC

Cambridge Associates Current Valuations Summary



Source: Cambridge Associates LLC.

Notes: This exhibit compares current valuation levels to historical levels across a variety of asset classes. A percentile rank of 50 indicates that an asset class's current valuation level is consistent with its long-term median, while a percentile rank of 75 indicates that level is higher than 75% of historical data. The valuation level for each asset class is determined by a metric or composite of metrics relevant to that asset class.

PERFORMANCE REVIEW



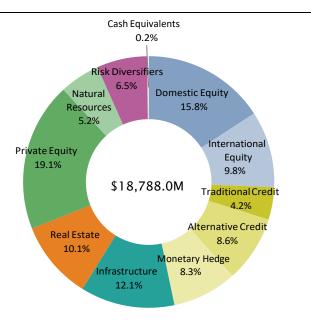


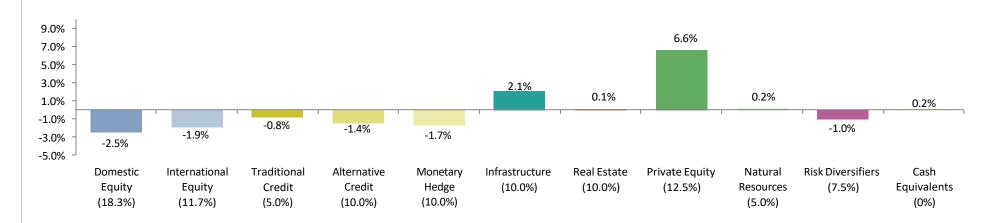
MainePERS Allocation Snapshot

As of June 30, 2023

Asset Allocation (\$ Millions)

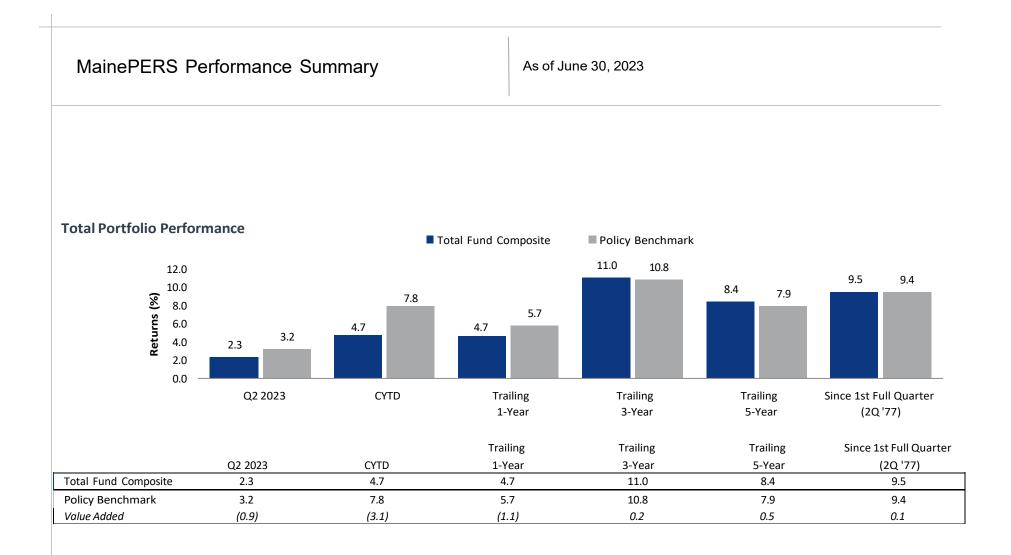
Asset Class	\$(M)	%
Domestic Equity	2,973.4	15.8%
International Equity	1,848.8	9.8%
Traditional Credit	782.2	4.2%
Alternative Credit	1,609.9	8.6%
Monetary Hedge	1,561.3	8.3%
Infrastructure	2,279.5	12.1%
Real Estate	1,903.8	10.1%
Private Equity	3,596.1	19.1%
Natural Resources	975.3	5.2%
Risk Diversifiers	1,220.9	6.5%
Cash Equivalents	36.9	0.2%
Total	\$18,788.0	100.0%

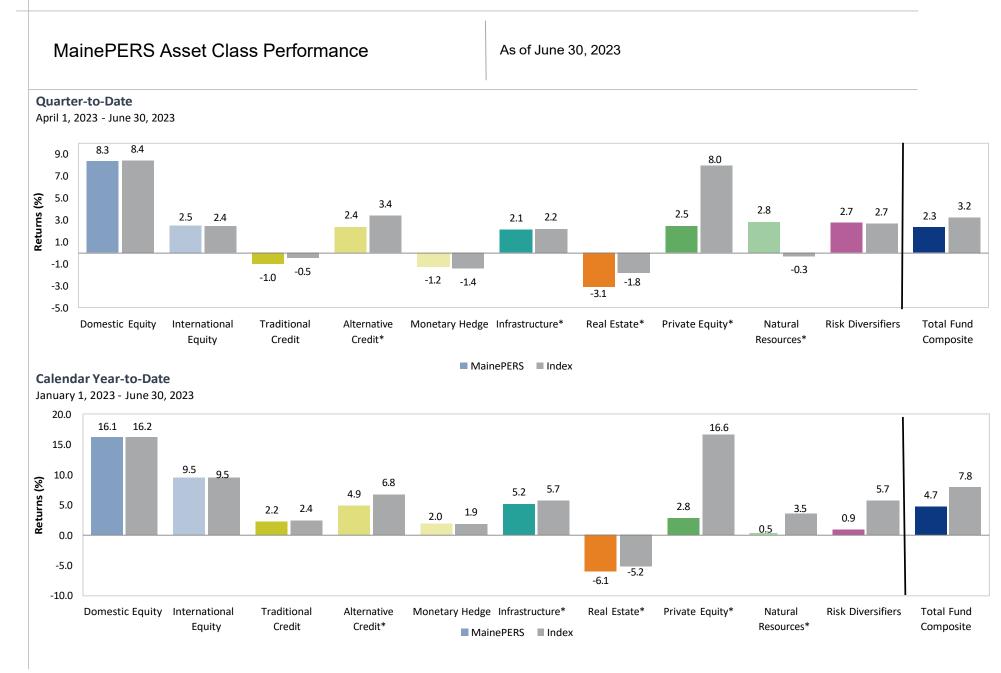




CA

Note: Interim Policy Target allocation in parentheses. Asset class, composite breakout, and performance is based on JP Morgan performance data. Risk Diversifiers NAV is preliminary.





Notes: Asset class benchmarks (from left to right): Index returns for Infrastructure, Real Estate, and Natural Resources are reported on a quarterly basis. Returns reported by J.P. Morgan, except for Infrastructure and Real Estate indices, which are reported by Cambridge Associates on a quarter lag. Returns for CA Real Estate and Infrastructure indices are preliminary, and subject to adjustment. Performance for Risk Diversifiers is preliminary.

*Performance is reported on a quarter lag, as March 31, 2023.

Asset Class Benchmarks

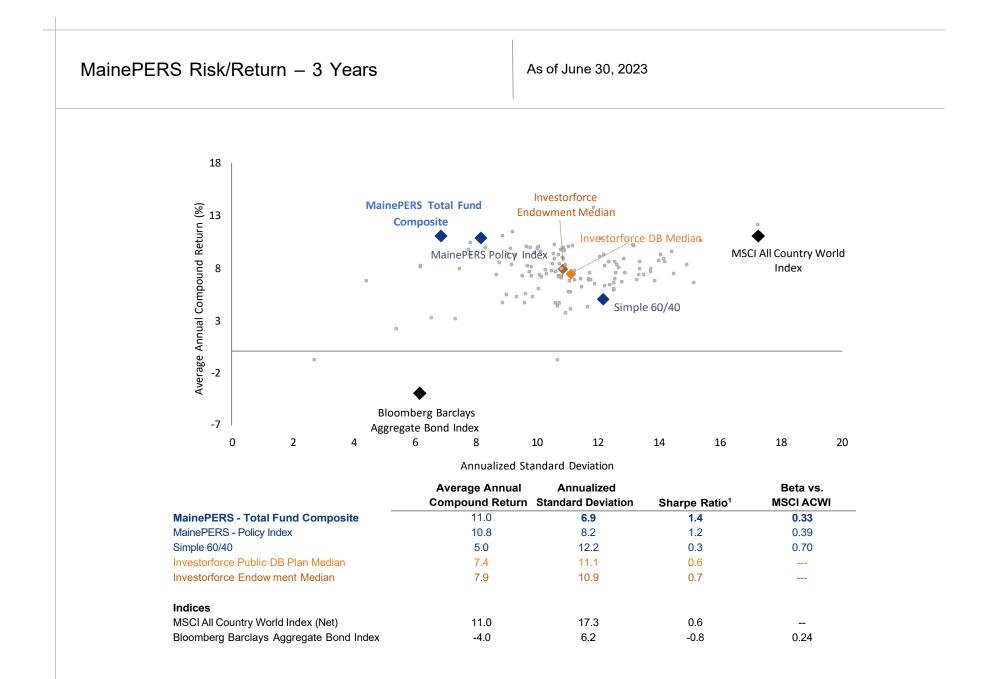
		Long-Term
Asset Class	Benchmark	Target
	Russell 3000 ¹	18.3%
	MSCI ACWI ex US ²	11.7%
Public Equity	Total Public Equity	30.0%
Private Equity	Russell 3000 + 3% per annum (1 qtr lag)	12.5%
Risk Diversifiers	0.3 Beta MSCI ACWI ³	7.5%
Real Estate	NCREIF Property (1 qtr lag)	10.0%
Infrastructure	Cambridge Associates Infrastructure Median (1 qtr lag)	10.0%
Natural Resources	Cambridge Associates Natural Resources Median (1 qtr lag)	5.0%
Traditional Credit	Barclays US Agg ex Treasury	5.0%
Alternative Credit	50% BAML US HY II + 50% S&P/LSTA US Leveraged Loan Index (1 qtr lag) ⁴	10.0%
US Govt Treasuries	Custom Fixed Income ⁵	10.0%

Russell 3000 weight is based upon the MSCI ACWI weighting for US
 MSCI ACWI ex US weight is based upon the MSCI ACWI weighting for International

3. 91-day T-bill + 0.3(MSCI ACWI Return – 91-day T-bill)

4. 50% Bank of America US High Yield II + 50% S&P/Loan Syndications & Trading Association US Leveraged Loan Index

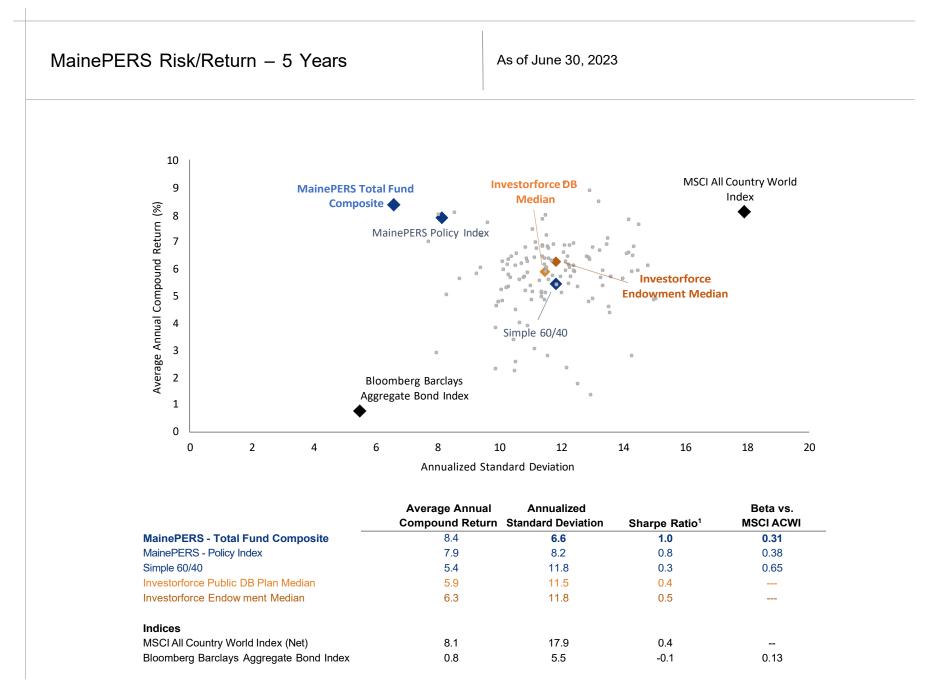
5. 65% 0-5 Year TIPS / 35% US TIPS Fund



Note: Calculations are based on monthly data, net of fees.

1The Sharpe Ratio represents the excess return generated for each unit of risk. To calculate this number, subtract the average T-Bill return (risk-free return) from the manager's average return, then divide by the manager's standard deviation. The Investor Force data uses the median return and standard deviations are based on monthly data, net of fees. ² Simple 60/40 is 60% MSCI ACWI and 40% BBG Aggregate US Bond Index.

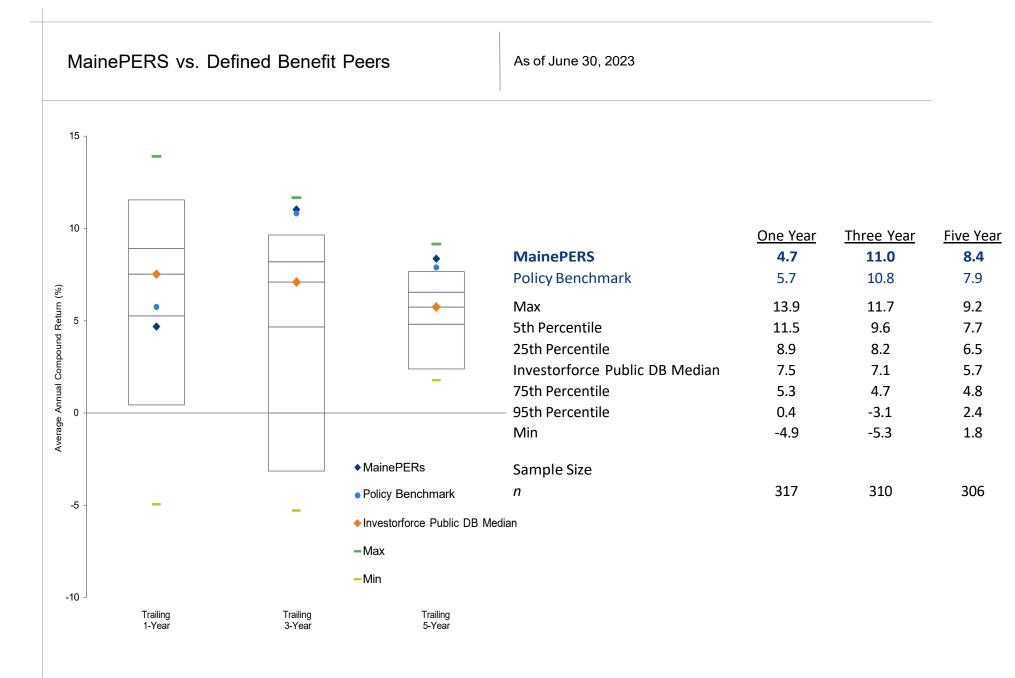
³ Net Investor Force Median data reflects median of 3-year returns and the standard deviations as reported by institutions with over \$100m in assets to Investor Force.



Note: Calculations are based on monthly data, net of fees.

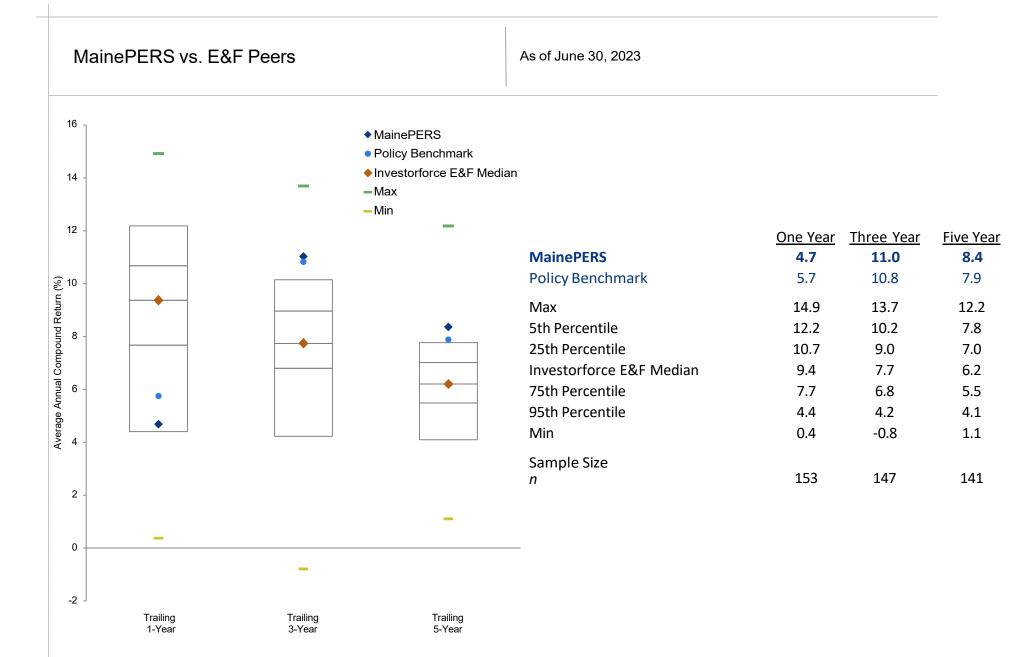
1The Sharpe Ratio represents the excess return generated for each unit of risk. To calculate this number, subtract the average T-Bill return (risk-free return) from the manager's average return, then divide by the manager's standard deviation. The Investor Force data uses the median return and standard deviations are based on monthly data, net of fees. ² Simple 60/40 is 60% MSCI ACWI and 40% BBG Aggregate US Bond Index.

³ Net Investor Force Median data reflects median of 5-year returns and the standard deviations as reported by institutions with over \$100m in assets to Investor Force.



Source: InvestorForce – All Public DB Plans Q2 2023

Note: Net InvestorForce median data reflects medians of 1-, 3-, and 5-year returns as reported by plans with AUM exceeding \$100 million.



Note: Net InvestorForce median data reflects medians of 1-, 3-, and 5-year returns as reported by plans with AUM exceeding \$100 million.



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MAINEPERS

BOARD OF TRUSTEES MEMORANDUM

TO:	BOARD MEMBERS
FROM:	DR. REBECCA M. WYKE, CHIEF EXECUTIVE OFFICER
SUBJECT:	2023 COST OF LIVING ADJUSTMENTS
DATE:	AUGUST 2, 2023

The Board of Trustees is mandated by law to award a cost of living adjustment (COLA) on retirement benefits each September based on the increase in the Consumer Price Index (CPI-U) as of June 30th. The CPI-U for the year ending June 30, 2023 was 3.0%.

There are different legal requirements on setting this increase for the State-funded plans, the PLD Consolidated Plan, and the non-consolidated PLD plans.

For the State-sponsored plans, the increase this year is on the first \$24,911.84 of benefits and capped at 3%. This means the maximum COLA awarded will be \$747.36. This base is indexed for inflation, so the maximum benefit eligible for a COLA will increase to \$25,659.20 in 2024.

The increase for the PLD Consolidated Plan is paid on the total benefit and capped at 2.5%. This means the 2023 COLA will be 2.5% of the total benefit. The cap for withdrawn PLDs is 4%, which means the COLA to be awarded is 3% of the total benefit.

RECOMMENDATION

That the Board adopt cost-of-living adjustments of 3% of the COLA base for the Statesponsored plans, 2.5% for the PLD Consolidated Plan, and 3% for withdrawn PLDs, effective September of 2023.

MAINEPERS

BOARD OF TRUSTEES MEMORANDUM

TO: BOARD MEMBERS

FROM: MICHAEL J. COLLERAN, CHIEF OPERATING OFFICER & GENERAL COUNSEL CHIP GAVIN, CHIEF SERVICES OFFICER SHERRY VANDRELL, CHIEF FINANCIAL OFFICER

SUBJECT: MEMBER SERVICES, FINANCE, AND OPERATIONS REPORT

DATE: AUGUST 2, 2023

Content in the following paragraphs was selected to provide noteworthy information regarding the System's member services, finance, and operations.

POLICY REFERENCE

Board Policy 4.5 – Board/Staff Relations

Board Policy 4.6 – Communications and Support to the Board

MEMBER SERVICES

- 1. <u>CUSTOMARY SERVICES DATA</u>: The customary data about routine member services are attached to this report.
- 2. <u>SUMMER SURGE</u>: MainePERS succeeded in getting all new retirees on payroll in July. The anticipated cyclical summer surge saw 500+ retirees start receiving benefits rather than the more typical monthly volume of approximately 100 such payments.
- 3. <u>MEMBER PORTAL</u>: The member portal continues to advance through various testing and quality control phases and remains on track for launch in fall 2023. Phase 4 testing has been completed and Phase 5 review is scheduled for August. The Phase 5 review (of a total of seven currently scheduled review steps) will involve reviewers accessing the system for the first time from home (outside of the MainePERS system technical environment). Additionally, a series of physical mailings (letters) have started to active members and retirees with missing contact information asking them to update their information with MainePERS to facilitate their portal account registration when that time comes. The portal effort is part of Goal IV, Strategic Objectives (E) and (B) and other related components of the Strategic Plan, and the related contact information data project also supports efforts to communicate with active and retired members.
- 4. <u>PENSION ADMINISTRATION SOFTWARE</u>: MainePERS has contracted with and begun working with Linea Solutions, who emerged as the top-rated vendor in a recent competitive solicitation process, to begin preparing a request for proposal to refresh or replace MainePERS current core pension administration software. Meetings, dialogue and

document exchanges have begun. The project involves the full spectrum of MainePERS work units. This effort is part of Goal III, Strategic Objective (B) and other related components of the Strategic Plan.

- 5. <u>FOCUS FRIDAYS</u>: The special effort to tackle backlogs of various pending member requests continues to have an impact in reducing pending queues of work and improving the timeliness of service delivery. The effort is meeting and exceeding projections to date, though work remains. While substantial progress has been made to reduce backlogs in many areas, significant backlogs, such as calculating final benefits and service credit purchase requests, remain unresolved at this time. MainePERS in consultation with Trustees is seeking to continue this special effort through March 2024. Regular updates to Trustees will continue throughout the intervening months. This effort is part of Goal IV, Strategic Objective (B) and other related components of the Strategic Plan.
- 6. <u>COLA</u>: An organization-wide team is preparing to implement several cost-of-living adjustments in the coming months: a) a standard annual COLA for the state-sponsored plans with the September payroll; b) a standard annual COLA for the PLD plan in September; and, c) a special one-time COLA payment for state-sponsored plans for the period ending August 31, 2022 to be implemented by MainePERS in November 2023, as authorized by the recently adjourned session of the Legislature. Communication for members and retirees already is posted to the MainePERS website <u>www.mainepers.org</u> and other communication efforts are scheduled.

FINANCE

- <u>EMPLOYER REPORTING</u>. Employers submitted defined benefit payrolls on time at a 98.7% rate in July, bringing the fiscal year to date monthly average to 91.1%. This compares to a rate of 96.2% in June of last year. In addition to maintaining fully reconciled accounts to keep them current, the Employer Reporting unit reconciled an additional 5 employer accounts this past month, bringing the total number of fully-reconciled accounts to 471, an increase of 1.1% over last month's report. Progress on reconciling accounts has slowed and will continue at a slower pace as we move to more complex accounts.
- 2. <u>EMPLOYER AUDITING</u>. Five audits were opened in July and one was completed. There were no contribution errors detected in the one completed audit. Ninety-four percent of all findings to date have been resolved satisfactorily, which is the same rate reported last month.
- 3. <u>ACCOUNTING AND FINANCE.</u> The annual year-end close and audit are currently underway and the work is on schedule with no significant obstacles or delays anticipated.

OPERATIONS

- 1. <u>ANNUAL COOKOUT</u>: We held our second annual summer staff cookout on August 2, with the Senior Management Team once again handling preparation, cooking, and clean-up duties with an assist from our Facilities manager, Jay Dunn.
- 2. <u>HUMAN RESOURCES</u>: We filled four positions in July and have four additional new employees starting in August. These gains were offset by five departures, so recruiting remains a focus. We implemented the position reallocations that resulted from the Korn Ferry compensation study and the collectively-bargained compensation increases.

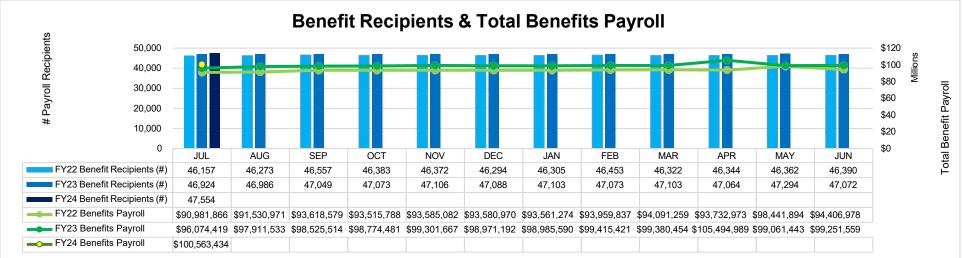
- 3. <u>INFORMATION TECHNOLOGY STAFF</u>: Our new Information Security Analyst joined us in July, and our first IT Business Analyst will start in early August. Long-time Senior Benefits System Analyst Becky Lane retired at the end of July after 28 years with MainePERS. We are recruiting for a replacement Benefits System Analyst, and IT otherwise is fully-staffed.
- 4. <u>MEMBER PORTAL</u>: Information Technology has engaged with our vendor partner Vitech in building the member portal and server infrastructure. Release to our production V3 environment is planned for early August in anticipation of the portal rollout this fall.

RECOMMENDATION

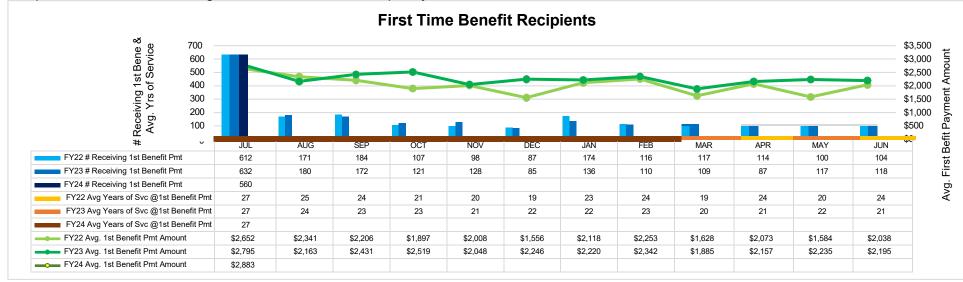
No Board action is recommended at this time.

AUGUST 2023 BOARD OF TRUSTEES OPERATIONS – MEMBER SERVICES SUPPLEMENTAL NUMBERS RETIREMENT SERVICES

BENEFITS PAYROLL. Regular monthly pension benefit payments were made to 47,554 recipients in July, totaling \$100,563,434. *Note: Special payments paid outside of the regular payroll run are not reflected in the "Benefits Payroll" total.*

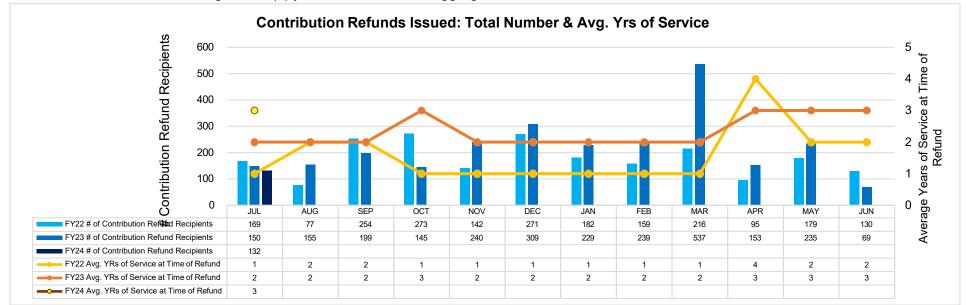


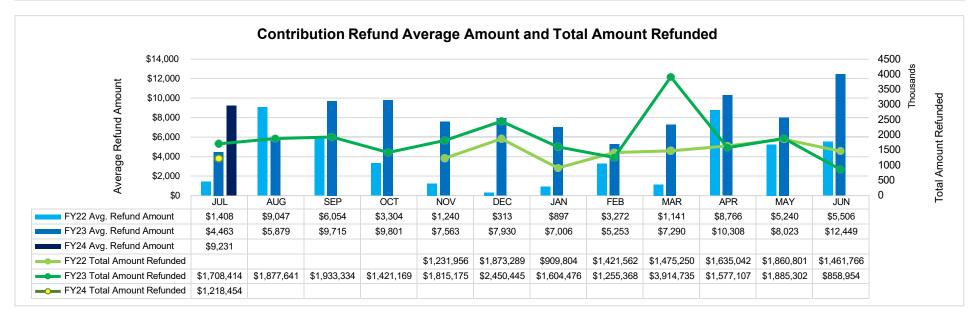
FIRST TIME BENEFIT RECIPIENTS. Five-hundred-sixty (560) individuals received their first benefit payment in July. The average benefit amount was \$2,883. First time recipients averaged twenty-seven (27) years of service. The count of new recipients, payment amount, and service are comparable to data seen during the same month in recent prior years.



RETIREMENT SERVICES: Continued

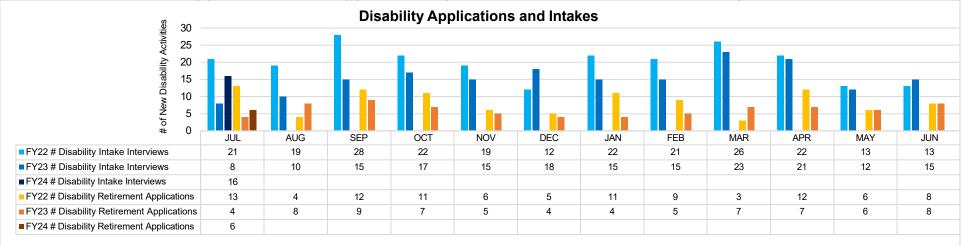
CONTRIBUTION REFUNDS: One hundred thirty-two (132) former members received a refund of their contributions in July. The average refund was \$9,231 as the result of an average three (3) years of service. The aggregate amount refunded was \$1,218,454.





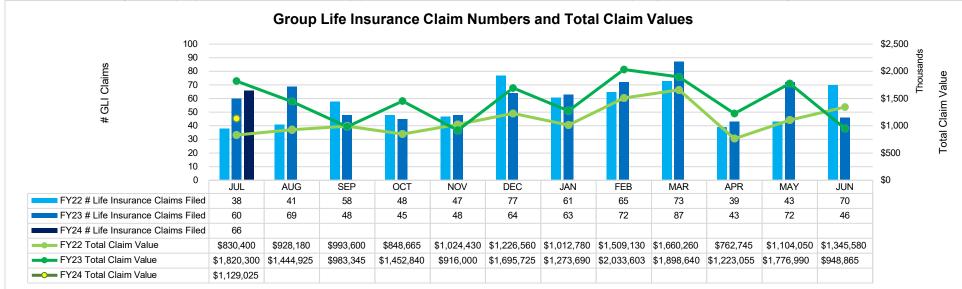
DISABILITY SERVICES

Sixteen (16) intake interviews were completed in July with varying levels of detail and duration. Intakes included six (6) State members, three (3) Teacher members and seven (7) PLD members. Six (6) new disability retirement applications were received in July.

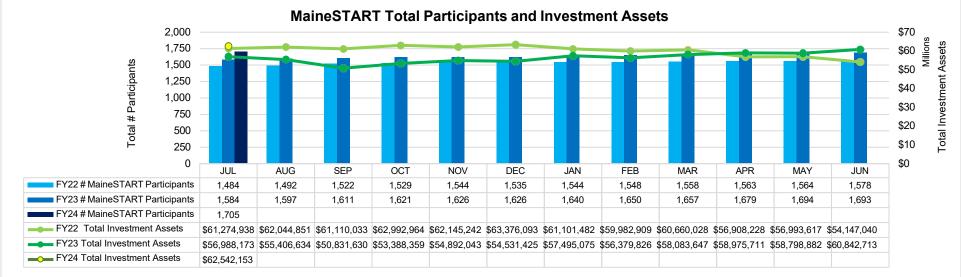


SURVIVOR SERVICES

Sixty-six (66) life insurance claims were sent to our carrier (The Hartford) in July with a total value of \$1,129,025 in payments due to beneficiaries. Of the claims, Sixty-three (63) were retirees and two (2) were active members. There was one (1) dependent claim in July.



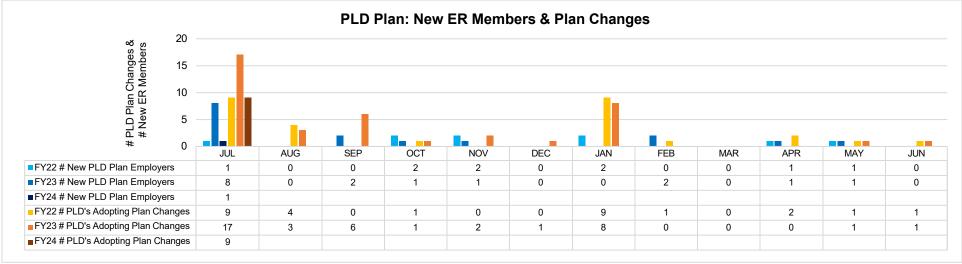
DEFINED CONTRIBUTION PLAN SERVICES



MaineSTART had one thousand seven hundred five (1,705) participants at the end of July, with \$62,542,153 of investment assets in the program.

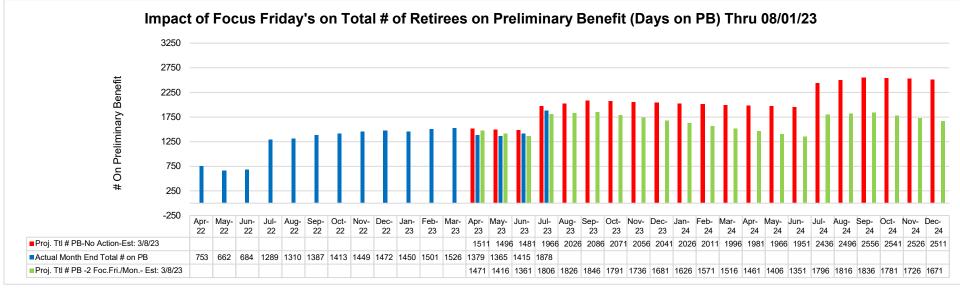
PLD PLAN ADMINISTRATION

One (1) new employer joined the PLD Retirement Program effective July 01, 2023. There were nine (9) employer plan changes effective in July 01, 2023. <u>Note:</u> This metric reflects PLD employer changes (joining, returning, adopting plan changes) in the month of their implementation. This format is consistent with MainePERS activity reporting to our actuary.

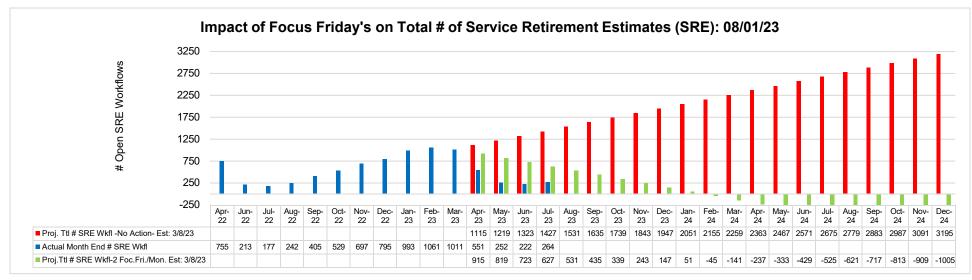


FOCUS FRIDAY IMPACT ON BACKLOG REDUCTION

Preliminary to Final Benefit (PB to Final) Backlog thru 08/01/23: The backlog projections and reporting below are based on a data point that counts days since an initial Preliminary Benefit disbursement date (Days on PB) occurred.



SERVICE RETIREMENT BACKLOG THRU 08/01/23: The backlog projections and reporting below are based on data that count the total number of open Service Retirement workflows. The Service Retirement workflow backlog has been reduced to the level projected for Nov-23.



MAINEPERS

BOARD OF TRUSTEES LEGISLATIVE MEMORANDUM

TO: BOARD MEMBERS

FROM: KATHY MORIN, DIRECTOR, ACTUARIAL AND LEGISLATIVE AFFAIRS

SUBJECT: LEGISLATIVE UPDATE

DATE: AUGUST 2, 2023

The First Regular Session of the 131st Legislature convened on December 7, 2022 and adjourned on March 30, 2023. The First Special Session of the 131st Legislature convened on April 5, 2023 and adjourned on July 26, 2023. This report provides the final disposition of the bills on which we have reported throughout the sessions. Non-emergency laws are effective October 25, 2023. Effective dates for emergency laws are specified below.

POLICY REFERENCE

Board Policy 3.1 - Reporting

Board Policy 3.2 – Legislation

Board Policy 4.5 – Board/Staff Relations

Board Policy 4.6 - Communications and Support to the Board

BILLS ENACTED INTO LAW

CHAPTERS 3 (L.D. 206), 17 (L.D. 424) and 412 (L.D. 258) - STATE BUDGET

These are the State budget bills for FYs 2023, 2024 and 2025.

Part J of **Chapter 3** provided a one-time, non-cumulative 1% cost-of-living adjustment for eligible retirees from the State-sponsored plans. This law was effective February 2, 2023.

Chapter 17 included required funding for normal cost and unfunded liability costs for the State-sponsored plans. It also included required funding for retired teacher group life insurance and the pay-as-you-go Governor's Retirement Plan. This law was effective March 31, 2023.

Chapter 412 includes three provisions relevant to MainePERS members or retirees. **Part DD** requires a recalculation of retirement benefits based on a decreased early retirement reduction for certain state employee and teacher retirees, effective October 1, 2023. This was originally proposed in L.D. 1499. **Part IIII** moves certain employees in the Department of Public Safety, Computer Crime Laboratory or computer crimes unit from the 1998 Special Plan to the 25 year, regardless of age, special plan effective August 1, 2024. This was originally proposed in L.D. 197. **Part HHHHH** provides a one-time, non-cumulative 3% cost-of-living adjustment for eligible retirees from the State-sponsored plans.

CHAPTER 167 (L.D. 1082) - MAINE RETIREMENT SAVINGS PROGRAM

This law makes several changes to the Maine Retirement Savings Program. Section 15 of the bill is the only section relevant to MainePERS. That section makes employees of the Maine Retirement Savings Board eligible for participation in the MaineSTART plans offered by MainePERS

CHAPTER 185 (L.D. 1425) – RECORDING OF PUBLIC MEETINGS

This law requires public bodies to allow for remote recording of public meetings on the same platform that is used to conduct the meeting as long as additional costs are not incurred by the public body.

CHAPTER 208 (L.D. 106) - SERVICE CREDIT

This law permits a member who meets eligibility requirements to retire from plans with different normal retirement ages to elect to defer the receipt of benefits that would otherwise be subject to an early retirement reduction until reaching the normal retirement age for that portion of benefits.

CHAPTER 246 (L.D. 313) – SPECIAL PLANS FOR LAW ENFORCEMENT

This law permits an employee or employer to elect to pay the cost to transfer service from one special plan to another special plan. The law also addresses a service purchase issue for specific PLD members.

CHAPTER 436 (L.D. 483) – RETROACTIVE SPECIAL PLAN COVERAGE

This law provides retroactive special plan coverage for certain employees of Department of Corrections. This law is effective July 1, 2024.

RESOLVE CHAPTER 23 (L.D. 1230) – WEP/GPO INTERSTATE COMPACT

This law directs the System to study the creation and adoption of an interstate compact with other states affected by the WEP and GPO.

BILLS CARRIED OVER – LABOR AND HOUSING COMMITTEE

L.D. 550 – CORRECTIONAL OFFICER BENEFITS

This concept draft proposes to increase benefits for correctional officers, including changing the special plan by which they are covered.

L.D. 926 – MAINEPERS REPRESENTATION

The stated intent of this concept draft is to improve MainePERS representation.

L.D. 1152 – LONG-TERM DISABILITY INSURANCE

This bill requires the Board to offer long-term disability insurance coverage to participating employers, and requires employers to pay the full cost of that coverage. This bill is the version of the proposed legislation included in the November 2022 Long-Term Disability Insurance Implementation Plan that was favored by the labor members of the stakeholder group.

L.D. 1424 – DEPARTMENT OF CORRECTIONS SPECIAL PLAN

This bill provides retroactive 1998 Special Plan coverage for all Department of Corrections employees whose positions are covered by that plan.

BILLS CARRIED OVER – ON SPECIAL APPROPRIATIONS TABLE

L.D. 70 – COLA BASE

This bill, as amended, would change the COLA Base, which is the level of benefit that is subject to a cost-of-living adjustment (COLA), to \$40,000. This applies to retirees from the State-sponsored plans.

L.D. 185 – TEACHER EARLY RETIREMENT

This bill would change the early retirement reduction that applies to teachers with at least thirty-five years of service credit. The amended bill reduces the early retirement reduction from the current reduction of 6% per year to 5% per year versus the 2% originally proposed in the bill.

L.D. 426 – MILITARY SERVICE PURCHASE

This bill expands the periods of military service that eligible members may purchase at a subsidized rate. The bill was amended to add a requirement that the System report back on the experience under the new law.

L.D. 610 - EXPAND 1998 SPECIAL PLAN - MEDICAL EXAMINER EMPLOYEES

This bill would allow certain employees in the Office of the Chief Medical Examiner who are currently included in the regular plan to be covered instead by the 1998 Special Plan. The bill was amended to change the effective date of special plan coverage to October 1, 2023.

L.D. 1096 – COLA CAP

This bill, as amended, would provide an additional 2% cumulative COLA effective September 2022.

L.D. 1760 - EXPAND 1998 SPECIAL PLAN - CRISIS WORKERS

This bill would allow certain employees in the Department of Health and Human Services who are currently included in the regular plan to be covered instead by the 1998 Special Plan. The bill was amended to remove a member election that is not permissible under federal law.

L.D. 1761 - EXPAND 1998 SPECIAL PLAN - MENTAL HEALTH WORKERS

This bill would allow certain employees in the Department of Health and Human Services who are currently included in the regular plan to be covered instead by the 1998 Special Plan. The bill was amended to remove a member election that is not permissible under federal law.

BILLS NOT ENACTED

L.D. 635 – RETIRE-REHIRE FOR LAW ENFORCEMENT OFFICERS

This bill would have allowed retired law enforcement officers to be hired as a school resource officer without any impact to their current retirement benefits. Current law already provides this option to most retirees who return to work.

L.D. 733 – ANNUAL STATEMENTS

This bill would have required employers and MainePERS to provide an annual benefits statement to members and retirees.

L.D. 742 – DIVESTMENT

This bill would have required MainePERS to no longer invest in companies that are boycotting Maine lobster and to divest of current holdings, in accordance with sound investment criteria and consistent with the Board's fiduciary obligations.

L.D. 882 – LOCAL DISTRICT DEFINITION EXPANSION

This bill would have allowed certain non-municipal emergency medical service providers to participate in the Participating Local District Consolidated Retirement Plan.

L.D. 1023 - IRREVOCABLE BUDGET TRUST FUND

This bill would have established an Irrevocable Budget Trust Fund and required that a portion of the trust funds be invested through MainePERS.

L.D. 1562 – FIDUCIARY RESPONSIBILITY STANDARDS

This bill would have established certain standards of care for fiduciaries of the Maine Public Employees Retirement System.

L.D. 1607 – STABILIZE PENSION FUNDS

This bill would have established the Retirement Improvement Fund and required that a portion of any surplus General Fund revenue be transferred to the fund to pay for retirement benefit improvements.

L.D. 1759 – DISABILITY PROGRAM

This bill would have made several changes to the disability retirement program.

REPORTS

The following required reports were submitted to the Legislature.

BOARD AND PLD ADVISORY COMMITTEE ACTIVITY

The System is required to report annually to the Secretary of State on activities of the Board of Trustees and the PLD Advisory Committee. These reports were submitted on December 20, 2022, and copies were previously provided to the Board.

ESG POLICY

The System is required to report information annually to the Legislature regarding its environmental, social and governance investment policy. This report must disclose commonly available environmental performance metrics on the environmental effects of the board's investment. This report was filed on December 15, 2022, and a copy was previously provided to the Board.

DIVESTMENT

The System is required to report information to the Legislature regarding the progress of divestment from fossil fuels and the implementation of the divestment law enacted in 2021 (PL c. 231). This report must be submitted annually by January 1, 2023, 2024 and 2025. We requested an extension for the filing of this report until January 17, 2023 in order for the Board to have an opportunity to review the final report before it was submitted. The report was submitted on January 17, and a copy was previously provided to the Board.

LONG-TERM DISABILITY INSURANCE

The System is required to submit a report to the Legislature regarding an implementation plan for mandatory long-term disability insurance. This report was filed on December 20, 2022, and a copy was previously provided to the Board.

DISABILITY RETIREMENT

The System is required to submit a report to the Legislature regarding the experience of the system and its members after the implementation of the new disability program provisions. This report was filed on January 31, 2023, and a copy was previously provided to the Board.

PROCUREMENT

The System is required to report information annually to the Legislature regarding procurement, contributions, and changes to certain policies and procedures. This report was filed on January 23, and a copy was previously provided to the Board.

MILITARY SUBSIDY REPORT

The System is required to report information annually to the Legislature regarding military service credit purchase requests received from certain categories of members. This report was filed on February 7, and a copy was previously provided to the Board.

ANNUAL REPORT TO THE LEGISLATURE

The System is required to submit an annual report to the Legislature, including specific information set out in statute. This report was filed on February 27, and a copy was previously provided to the Board.

PRESENTATIONS

The System presented an orientation briefing to the Committee on Appropriations and Financial Affairs (AFA) on January 30, and to the Committee on Labor and Housing (LBHS) on January 31. Both presentations were well received.

The System presented the Disability Program Experience Report to the LBHS Committee on February 2. The presentation was well received.

MAINEPERS

BOARD OF TRUSTEES MEMORANDUM

TO: BOARD MEMBERS

FROM: MICHAEL COLLERAN, CHIEF OPERATING OFFICER AND GENERAL COUNSEL

SUBJECT: GOVERNANCE

DATE: AUGUST 2, 2023

The Board's governance consultant, Amy McDuffee of Mosaic Governance Advisors, will attend the August Board meeting to discuss best practices and the Board's annual self-evaluation. Amy's presentation and report follow this memo, along with the Board's charter and 2023 work plan.

POLICY REFERENCE

Board Policy 1.2 – Trustee Fiduciary Responsibility

Board Policy 4.5 – Board/Staff Relations

Board Policy 4.6 - Communication and Support to the Board

RECOMMENDATION

No Board action is required.



Best Practices in Board Governance

An Educational Presentation to the MainePERS Board | August 10, 2023

Topics for Discussion

2



What is Good Governance?



Effectiveness in Public Pension Board Governance



Trends in Board Governance

MainePERS Board Self-Evaluation

(FY 22/23)



Good Governance Matters



The "Good Governance" Performance Premium

Rotman International Journal Volume 1 + Issue 1 of Permion Management Fail 2008

The Pension Governance Deficit: Still With Us

Keith Ambachtsheer, Ronald Capelle, and Hubert Lum

Keith Amhachtsheer A 1997 Investigation into the quality of pension fund governance uncovered a is Director of the wide-spread board competency problem. This follow-on study analyzes the findings Rotman International of a new survey on pension fund governance, to which an international group of Centre for Pension Management, and Adjunct Professor 88 senior pension fund executives responded. Survey responses indicate that the board competency problem has not disappeared. As was the case in 1997, we found of Finance at the Rotman School of a positive correlation between governance quality and fund performance. The new results also suggest that selection processes for members of the board of governors Management, University of Toronto. Dr. Ronald Capelle is President of Capelle continue to often be haphazard. Self-evaluation of board effectiveness continues to be the exception rather than the rule. Weak oversight functions continue to lead to difficulties in sorting out the competing financial interests of differing stakeholder Associates, Toronto, groups, and result in organization dysfunction. Examples are lack of delegation Hubert Lum was Director of Research clarity between board and management responsibilities, board micro-management, and non-competitive compensation policies in pension funds. We recommend a at CEM Benchmarking in Toronto at the number of specific actions to address the governance challenges that continue time this study was to face pension funds. We also recommend that regulators regulie pension funds to regularly report on the actions they are taking to strengthen their governance processes.

Spotlight on Pension Governance

The well-publicized misadventures of major coporations like Adophia, Abdu Lieno, HauthKouh, Panulat, Quest, Tyoo, and WeidCon have niggered insportate we expirate all none conceptate accession definits in the field of corporate govername.² To data, pension fund govername has not yet generated be same kind reasch effects with such an empirical dimension. For complexit

 Antropologia O'Bara and Conley caused a site with their 1920 book Foruma and Forling. The Would & Power of Institutional Investigat, Alter observing behavior at an item major pension (muchs in the United States over a two year period, they concluded that the aim of pension find governamous appeared to be focused more on sequenability deflection and hume management, ruliner than good governamoe and creating values for finst stakeholdens.

14 Volume 1 + Issue 1 + Fall 2008 + 10.313Wijpm.1.1.14

survey called, *Excellence in Pension Fund Management: What Is Mit Amage asymptoxim belief in Docember 2020*. Respondents were asked to estimate the excellence shortfall in their organizations, which resulted in a median response of 66 hoats points by the fifty senior pension fund executives who participated in the survey. When asked to identify the sources, inadequate resources and a lack of force or clarity in mission.
3. Anthacktahere, Capelle, and Scheihelnst conducted

2. Ambachtsheer, Boice, Ezra, and McLaughlin designed a

 Ambachtsheer, Capelle, and Scheihelhnt conducted a predecessor study in 1997 (noted alrow) to the one detailed in this article. They found a positive correlation between pension fund governance quality and organizational performance, and identified a samule of appedic fund oversight and management factors that are important performance drivers. The researchers about networred governance difficulties similar to those documented in this article.

By Ambachtsheer, Capelle, and Lum. Published Fall 2008, Rotman International Journal of Pension Management.



Governance Matters: Improving Pension Plan Board Effectiveness

28 benefits magazine january 2018

By Chris Merker, PhD. Published January 2018 in *Benefits Magazine*.



MainePERS | Board Governance and Self-Evaluation | August 2023

Key Factors Associated With Good



Selection of governing board members with relevant skills and knowledge

Development of a board selfimprovement culture Clear understanding of the board's mission and its investment beliefs

Sufficient size to allow cost effective management of assets

Competitive staff compensation to permit acquisition of internal expertise Clarity of board and staff roles about delegation of management responsibilities

Insulation from conflicting political or third-party agendas

SOURCE: Johnson, Keith L. and Frank Jan de Graf., "Modernizing Pension Fund Legal Standards for the 21st Century," Network for Sustainable Financial Markets: Consultation Paper No.

2, February 2009.

Unlocking Success: Six Areas of Competence That Set **Effective Boards** Apart from the Rest

Understanding and valuing the institutional history and context

Educational

Contextual

Building the capacity for board learning

Interpersonal

Nurturing the development of the board as a cohesive group

Analytic

Recognizing the complexities and nuances of issues

Political

Respecting and guarding the integrity of the governance process

Strategic

Envisioning and shaping future institutional directions.

SOURCE: "Competency-based Governance: A Foundation for Board and Organizational Effectiveness," Center for Healthcare Governance.



Effectiveness in Public Pension Board Governance



7



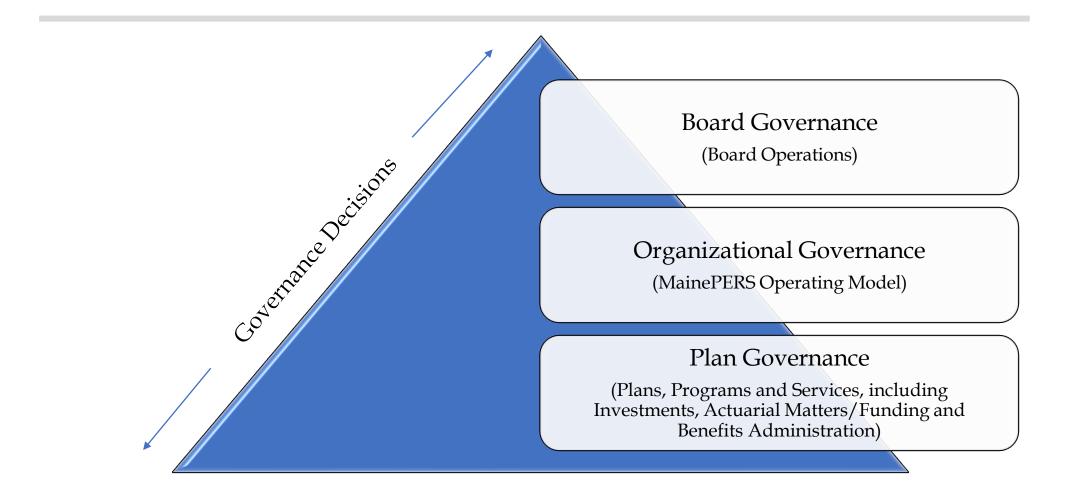
Type and Degree of Board Authority Varies



8



Span of Governance for MainePERS



9

Trends in Board Governance





Key Focus AreasAudit committee effectiveness

- Cybersecurity and data governance
- Diversity, equity and inclusion
- Enterprise risk management
- Environmental, social and governance
- Shareholder activism and engagement
- Strategic workforce issues
- Strategy and innovation

Source: How to Accelerate Board Effectiveness Through Insight and Ongoing Education (harvard.edu)

Board

Education is

Center Stage

High-Performing Teams Are Emphasized



- 1. Unity of purpose is evident.
- 2. Team functions intentionally and explicitly.
- 3. Clear and demanding performance goals are set.
- 4. Informal, comfortable, and relaxed working environment.
- 5. Active participation from everyone in discussions.
- 6. Free expression of ideas and feelings by members.
- 7. Constructive disagreement is encouraged.
- 8. Decision-making time when general agreement is reached.
- 9. Members carry their own weight.
- 10. Frequent and focused constructive comments address problems, not individuals.
- 11. Balance of leadership shifts periodically.

Source: Characteristics of Effective Teams," Stanford.edu, Characteristics of Effective Teams (stanford.edu)

MainePERS | Board Governance and Self-Evaluation | August 2023

MainePERS Board Self-Evaluation FY 2022/2023



Discussion



- 1) Which of the areas for improvement should be prioritized during FY 23/24?
- 2) What is the board's preferred role in:
 - a. consultant onboarding?
 - b. overseeing new trustee onboarding?
- 3) The board has consistently functioned at a high level for many years.
 - a. What are the top three factors contributing to this success?
 - b. What can be done to increase the likelihood of having continued excellence in governance moving forward?
- 4) Other comments or questions?



Thank you for your time!

Mosaic Governance Advisors, LLC | www.MosaicGovernance.com

<u>January</u>

Disability Retirement Program (PL2021, c. 277)

- Experience Report
- LTDI Report
- Proxy Voting Report

February

Finance & Audit Committee

- Annual selection of Chair
- Quarterly Internal Audit Report

Investment Policy Review

Quarterly Investment Reports*

<u>March</u>

Quarterly Investment Education MaineStart Quarterly Review

<u>April</u>

Finance & Audit Committee

Annual Budget – Review

Fiduciary Education

<u>May</u>

Finance & Audit Committee

- Annual Budget Vote
- Quarterly Internal Audit Report

Annual Budget Quarterly Investment Reports*

<u>June</u>

Enterprise-wide Risk Assessment Quarterly Investment Education MaineStart Quarterly Review

<u>July</u> Strategic Plan Update Proxy Voting Report Actuarial Economics Assumption Review

<u>August</u>

Finance & Audit Committee

Quarterly Internal Audit Report
 Annual COLA Approval
 Quarterly Investment Reports*
 Board Self-Evaluation Survey

<u>September</u>

Board Self-Assessment Survey Results/Discussion Quarterly Investment Education MaineStart Quarterly Review CEO Annual Self-Assessment Due

<u>October</u>

Annual Actuarial Valuation Annual Audited Financial Statements Member Satisfaction Survey Results Key Performance and Risk Measures CEO Annual Review

November

Finance & Audit Committee Quarterly Internal Audit Report Board Officer Elections Board Policy Review Quarterly Investment Reports*

December

Annual Board Calendar Annual Board Work Plan Finance & Audit Committee Appointments ESG Report & Policy Review Divestment Report Quarterly Investment Education MaineStart Quarterly Review Annual Conflict of Interest Statement

Quarterly

Finance & Audit Committee Meetings (1.6)

Internal Audit Reports (1.6)

Quarterly Investment Reports*:

- Rebalancing Report (2.1)
 - GLI Current Asset Allocation (2.1-A)
 - RHIT Current Asset Allocation (2.1-B)
- Investment Quarterly Review
- Risk Diversifiers Quarterly Review
- Cliffwater Quarterly Review
- Real Estate Quarterly Review
 MaineStart Quarterly Report (2.1-C)
 Proxy Voting Report (2.7) semi-annually

Annually

Board Calendar (1.10) Board Work Plan # Board Policy Reviews (review 1/3 each year) Board Self-Assessment (1.7) & Continuing Education Needs # Fiduciary Education # Conflict of Interest Statement (1.3) Budget (1.6) Audited Financial Statements (1.6) Actuarial Economic Assumptions Review (2.2) Actuarial Valuation (2.2) Investment Policy Review # ESG Report (2.6; PL2021, c. 277) COLA Approval (5 M.R.S. sec. 17806; Rule 803) Enterprise-wide Risk Assessment # Strategic Plan Update # Key Performance and Risk Measures # Divestment Report (PL2021, c. 231)

Every 2 Years

Rate Setting (Biennial Budget; July of even-numbered years) Finance and Audit Committee Appointments (1.6; November of even-numbered years) Collective Bargaining Contract Approval (November of odd-numbered years)

Every 5 years

Custodian Review/RFP – April 2023 (2.1) Proxy Advisor Review/RFP – April 2025 (2.1) Actuarial Experience Study - June 2026 (2.2) Actuarial Audit - Sep 2026 (2.2) Actuarial Consultant Review/RFP - Jan 2027 (2.2) Asset/Liability Study – Mar 2027 [#] Strategic Plan - Jul/Aug 2027 [#] Board Consultants Review/RFP - October 2027 (2.1) External Auditor Bid Process (1.6) – March 2026

MainePERS Board of Trustees Charter

Adopted: March 9, 2023

Every Trustee is a fiduciary for the System's members and beneficiaries. As such, Trustees are expected to participate fully in all Board business and in their assigned roles on the Board. Trustees are expected to maintain current knowledge on issues facing the system. Trustees must be able to devote the time necessary to fulfill the commitments of good stewardship, fiduciary duty, and others delineated by Maine law. (1.4) Accordingly, the Board of Trustees has adopted this charter which sets out the Board's principles, duties, and oversight responsibilities for the governance of MainePERS and its programs.

Board Principles

The Board will govern with an emphasis on outward and future vision, strategic leadership, encouraging diverse viewpoints and collective decision-making. The Board will maintain a clear distinction between Board and management roles.

In order to govern under these principles, the Board commits to:

- Promoting group responsibility while using the individual experience of members to enhance the proficiency of the Board as a body;
- Directing, controlling and inspiring the organization through broad written governance policies focused on long-term outcomes that reflect the Board's values and perspectives;
- Governing itself with excellence, allowing no individual Trustee to hinder or be an excuse for not making collective decisions or fulfilling its commitments;
- Continuing Board development including orientation of new Trustees in the Board's governance process and periodic Board discussion of governance improvements; and
- Monitoring and discussing the Board's process and performance through annual self-evaluations. (1.1)

Board Duties

The Trustees of the System, both collectively as the Board and individually, have a fiduciary duty imposed by the Constitution of Maine, statutes, and common law. The members of the Board of Trustees are trustees of the funds of the System and have a fiduciary obligation to administer the System and the funds under the System's control solely in the best interests of the members as beneficiaries of pension and related benefits.

It is the obligation of every Trustee to conduct themselves in a manner that promotes public confidence in the integrity, impartiality, professionalism and ethical behavior of the system in its relations with retirees, beneficiaries, members, employers, the public, staff and outside providers of goods and services.

Nothing shall excuse any Trustee from any other restrictions or requirements of State or federal law concerning conflicts of interest and fiduciary duties. (1.2, 1.3)

The duties of the Board include, but are not limited to:

- 1. Setting policy for the Chief Executive Officer (CEO) to implement;
- 2. Monitoring compliance with applicable law, regulations, rules and policies;
- 3. Adopting, monitoring and periodically updating a strategic plan and key performance and risk measures;
- 4. Considering recommendations from staff and Board consultants before making decisions;
- 5. Adopting an annual budget to support operations and monitoring expenses;
- 6. Adopting rules governing the administration of benefits;
- 7. Submitting reports and making recommendations to the Legislature regarding the plan's fiscal health and changes to the law; and
- 8. Reviewing and discussing major issues impacting MainePERS.

Board Oversight Responsibilities

The Board's oversight responsibilities are outlined as follows:

- 1. Governance. The Board shall:
 - a. Elect Board officers annually (1.5)
 - b. Adopt a Board calendar and work plan annually
 - c. Review the strategic plan annually and update periodically
 - d. Monitor key performance and risk measures annually
 - e. Participate in a Board self-assessment annually (1.7)
 - f. Review the Board education plan annually (1.8)
 - g. Review Board policies on a three-year cycle and update as needed
 - h. Delegate responsibilities to the CEO, as appropriate (4.1)
- 2. Finance and Audit. The Board shall:
 - a. Approve the administration and investment operating budgets annually (1.6)
 - b. Adopt an internal audit plan and update periodically (1.6)
 - c. Accept the audited financial statements of the Plan annually (1.6)
 - d. Review the Board's independent financial auditor every five years and competitively bid as needed (1.6, 4.4)
 - e. Monitor the administration and investment operating budgets quarterly through the Finance and Audit Committee (1.6)
 - f. Monitor internal audit activity quarterly through the Finance and Audit Committee (1.6)
- 3. Investments. The Board shall:
 - a. Review investment performance monthly (2.1)
 - b. Participate in investment education quarterly (1.8)
 - c. Review rebalancing activity quarterly (2.1)
 - d. Review proxy voting reports semi-annually (2.7)
 - e. Review capital market expectations and existing asset class allocations annually (2.1)
 - f. Review the investment policy statement annually
 - g. Review the ESG report and policy annually (2.6; PL2021, c. 231)
 - h. Conduct an asset/liability study every five years and adjust asset allocation as needed

- i. Review the Board's custodian, proxy advisor, and consultants every five years and competitively bid as needed (2.1, 4.4)
- j. Consider recommendations of investment staff and consultants on investment manager selection and MaineSTART plan investment options (2.1, 2.1-C)
- 4. Funding and Actuarial. The Board shall:
 - a. Participate in actuarial practices education annually (1.8)
 - b. Review actuarial economic assumptions annually (2.2)
 - c. Conduct an actuarial valuation of each plan annually (2.2)
 - d. Set contribution rates for the state-sponsored plans biennially (2.2)
 - e. Conduct a Group Life Insurance Premium Study every four years and set premiums for all participant groups (2.1-A)
 - f. Conduct an actuarial experience study every five years (2.2)
 - g. Conduct an actuarial audit every five years (2.2)
 - h. Review the Board's actuary every five years and competitively bid as needed (2.2, 4.4)
- 5. Operations. The Board shall:
 - a. Participate in education about the System's lines of business (1.8)
 - b. Consider appeals of administrative determinations as needed (2.4)
 - c. Monitor member services data monthly
 - d. Review the enterprise-wide risk assessment annually
 - e. Approve cost-of-living-adjustments for retired members and beneficiaries annually (5 M.R.S. §§ 17806 & 18407)
 - f. Monitor cybersecurity and business continuity preparedness
- 6. Personnel. The Board shall:
 - a. Appoint the CEO
 - b. Review the performance and set the compensation of the CEO annually (4.3)
 - c. Ensure there is an appropriate succession plan for the CEO and other key positions
 - d. Approve collective bargaining agreements
- 7. Legal Matters. The Board shall:
 - a. Ensure compliance with applicable laws and regulations
 - b. Adopt agency rules when required or otherwise appropriate (2.3)
 - c. Review outstanding litigation monthly
 - d. Comply with open meeting requirements (1.10, 5.6)