COLORADO PERA

Colorado PERA Board of Trustees

Investment Committee Meeting Materials

November 19, 2026

Agenda

Investment Committee Meeting

Raymond “Doc” Heath Memorial Boardroom
1301 Pennsylvania Street
Denver, CO

Thursday November 19, 2026
Time: 10:15 a.m.

All times are approximate and for reference only. Items designated for Information are appropriate for Action if the Board wishes to take action.

1. **Approval of Consent Agenda**

   (Governance Item) Action

   Presented by: Marcus Pennell, Chair, Investment Committee

   a. **November 19, 2026, Investment Committee Meeting Agenda**
   b. **June 24, 2026, Investment Committee Meeting Minutes**
   c. **Capital Accumulation Plans (CAP) Q3 2026 Performance**
   d. **Combined Investment Fund (CIF) Q3 2026 Performance**

2. **Biennial Combined Investment Fund (CIF) Statement of Investment Policy (SIP) Review**

   (Governance Item) Action

   Presented by: Joshua Neugebauer, PERA Assistant Director of Investment Administration; Katie Comstock, Aon, Partner – Public Sector Solutions Leader

   a. **Biennial Combined Investment Fund Statement of Investment Policy - Redline**
   b. **Biennial Combined Investment Fund Statement of Investment Policy - Clean**

3. **Investment Committee Charter 5-year Review**

   (Governance Item) Action

   Presented by: Joshua Neugebauer, PERA Assistant Director of Investment Administration

   a. **Investment Committee Charter – Redline**
   b. **Investment Committee Charter – Clean**

4. **Division Overview – Investment Operations**

   (Education Item) Information

   Presented by: Rebecca Shelton, PERA Investment Operating Officer; James McLoughlin, PERA Investment Operations Manager; Kory Stansbury, PERA Senior Investment Business Analyst

   a. **Investment Operations Presentation**

5. Capital Accumulation Plans (CAP) Investment Management Fee Evaluation

(Governance Item) Information

Presented by: Greg Ungerman, Senior Vice President, Defined Contribution Leader, Callan; Alex Ford, Senior Vice President, Callan

a. CAP Investment Management Fee Evaluation Presentation

6. Investment Department Costs

(Governance Item) Information

Presented by: Joshua Neugebauer, PERA Assistant Director of Investment Administration; Tyler Barondeau, PERA Investment Compliance and Performance Analyst; Katie Comstock, Aon, Partner – Public Sector Solutions Leader

a. Investment Department Costs Presentation

7. Private Market Fees (Closed Executive Session)

(Governance Item) Information

Presented by: Gary Ratliff, PERA Deputy Chief Investment Officer; Aaron Houlihan, PERA Senior Portfolio Manager, Alternatives; Dan Chilton, PERA Senior Private Equity Portfolio Manager; Maya Gutierrez, PERA Real Estate Analyst I

a. Private Market Fees Presentation
b. Fee Analysis Write Up
c. 2025 Alternatives Board Fee Report
d. 2025 Private Equity Board Fee Report
e. 2025 Real Estate Board Fee Report

8. Committee Announcements

(Governance Item) Information

Presented by: Marcus Pennell, Chair, Investment Committee

9. 2027 Investment Committee Meeting Dates

(Governance Item) Information

Presented by: Marcus Pennell, Chair, Investment Committee

- March 25, 2027
- June 24, 2027
- November 18, 2027

Exhibit A – March 25, 2027, Investment Committee Meeting Agenda Draft
Exhibit B – Investment Committee 2026 Workplan
Exhibit C – Draft 2027 Investment Committee Workplan

The Board may convene in Closed Executive Session pursuant to, but not limited to, the following:

A. Colorado Open Meetings Law, Section § 24-6-402(4)(a): Purchase, acquisition, lease, transfer, or sale of any real, personal, or other property interest;
B. Colorado Open Meetings Law, Section § 24-6-402(4)(b): Conferences with an attorney for the local public body for the purposes of receiving legal advice on specific legal questions;
C. Colorado Open Meetings Law, Section § 24-6-402(4)(c): Matters required to be kept confidential by federal or state law or rules and regulations.
D. Colorado Open Meetings Law, Section § 24-6-402(4)(d): Specialized details of security arrangements or investigations, including defenses against terrorism, both domestic and foreign, and including where disclosure of the matters discussed might reveal information that could be used for the purpose of committing, or avoiding prosecution for, a violation of the law;
E. Colorado Open Meetings Law, Section § 24-6-402(4)(e)(I): Determining positions relative to matters that may be subject to negotiations; developing strategy for negotiations; and instructing negotiators;
F. Colorado Open Meetings Law, Section § 24-6-402(4)(f)(I): Personnel matters except if the employee who is the subject of the session has requested an open meeting, or if the personnel matter involves more than one employee, all of the employees have requested an open meeting.
G. Colorado Open Meetings Law, Section § 24-6-402(4)(g): Consideration of any documents protected by the mandatory nondisclosure provisions of the “Colorado Open Records Act”, part 2 of article 72

Minutes

Colorado PERA Investment Committee Meeting

Raymond “Doc” Heath Memorial Boardroom
1301 Pennsylvania Street
Denver, Colorado

Wednesday, June 24, 2026
11:15 a.m. MST

Committee Members Present:	Marcus Pennell (Committee Chair), Cynthia Loh, Maruti Moré, Jennifer Pasquino, Andrew Schremp (via Zoom), Scott Simon, Dave Young, Timothy O’Brien
Non-Committee Members Present:	Rebecca Freyre, Trina Ruhland, Nathan Geroche, Tina Mueh, Tonya Thompson
PERA Staff Present:	Andrew Roth, Sarah Wager, Jesse Bertoli, Ryan Ericson, Kevin Gallaway, Jeremy Hill, Patrick Lane, Robin Maniglia, Amy C. McGarrity, Cheryl Pattelli, Alex Dowgiert, Michael Flowers, Jeremy Frenkel, Ben Garfield, Jared Goodman, Maya Gutierrez, Koren Holden, Rachel Kelley, Patrick von Keyserling, Steve Komon, Joshua Neugebauer, Megan Peitzmeier, Ian Rowe, Rebecca Shelton, Tara Stacy
Others in Attendance:	Greg T. Ungerman and Alex Ford of Callan, Katie Comstock, Richard Parker and Daniel VanBreene of Aon, and Suzanne Dugan of Cohen Milstein Sellers & Toll PLLC

Marcus Pennell, Investment Committee Chair, called the meeting to order at 11:28 a.m.

Approval of Consent Agenda

MOTION: A motion was made by Cynthia Loh and seconded by Jennifer Pasqunio to approve the Consent Agenda as published with the following items:

a. June 24, 2026, Investment Committee Meeting Agenda
b. March 19, 2026, Investment Committee Meeting Minutes

The motion was unanimously approved.

Capital Accumulation Plans Q1 2026 Performance/Updates

Greg Ungerman, Senior Vice President and Defined Contribution Practice Leader with Callan, introduced himself and Alex Ford, Senior Vice President, who serve as PERA's primary contacts for defined contribution plan consulting services following recent staffing changes. He highlighted Callan's team-based service approach and the experience of its consulting staff. Greg Ungerman reported that DC plan assets totaled approximately $7.3 billion as of March 31, 2026, and noted that the plans remain well diversified and generally aligned with industry asset-allocation trends, with a somewhat higher allocation to large-cap equities and a lower allocation to target-date funds than peers.

The Investment Committee received a review of investment performance for both the standalone investment options and target-date funds. Despite market volatility during the quarter, particularly in March, investment options generally demonstrated strong absolute and relative performance. He reported that the target-date fund series continued to deliver strong long-term results, with many funds achieving top-decile rankings over extended periods. While certain near-retirement vintages (2030, 2035, and 2040) ranked lower relative to peers, he indicated there were no concerns regarding performance, noting that short-term results were influenced by industry-wide fair-value pricing adjustments affecting international equities.

The Investment Committee also received an overview of modest changes to BlackRock's target-date fund glide path, which increased equity exposure for participants nearing and throughout retirement to better reflect workforce trends and industry practices. In response to a question from Trustee O'Brien regarding the applicability of the glide path to PERA participants who also receive defined benefit plan benefits, Greg Ungerman explained that the glide path reflects BlackRock's standard target-date fund design and does not specifically account for participants' defined benefit plan coverage. In summary, Amy C. McGarrity, PERA Chief Investment Officer, stated that staff are confident in the new Callan service team and will continue to monitor service levels and report any concerns to the Committee.

Evaluating Performance

Katie Comstock, Partner and Public Sector Solutions Leader, and Daniel Van Breene, Senior Investment Consultant with Aon, provided an educational presentation on investment performance evaluation and benchmarking. Committee Chair Pennell highlighted the Board's fiduciary responsibility to establish and monitor investment benchmarks and encouraged trustee engagement in understanding how benchmarks are developed and applied.

The team from Aon reviewed best practices for performance evaluation, emphasizing that investment results should be assessed within the broader context of PERA's asset-liability studies, asset allocation framework, investment strategy reviews, and Statement of Investment Policy (SIP). The presenters discussed key principles of performance monitoring, including the use of appropriate benchmarks, risk measures, and evaluation periods aligned with each asset class's objectives and time horizon. They noted that the policy benchmark, derived from PERA's strategic

asset allocation, serves as the primary measure of total fund performance, while peer comparisons and other reference measures provide supplemental context.

Trustee Simon inquired about the treatment of internal investment management costs in performance reporting. Katie Comstock explained that reported returns are currently net of external management and custody fees and that incorporating internal management costs into time-weighted return calculations presents methodological and operational challenges. Amy C. McGarrity noted that staff are evaluating industry standards, including GIPS, and exploring potential reporting enhancements. Trustee Simon commented that including internal investment management costs could provide useful data and comparisons when reporting. Trustee Pasquino asked whether PERA's private equity allocation should be reconsidered in light of the higher interest rate environment. Katie Comstock responded that private equity assumptions and allocation targets are regularly evaluated through the asset-liability study process and may be reviewed between studies if warranted. Amy C. McGarrity acknowledged current headwinds related to interest rates and slower exit activity but expressed continued confidence in private equity's long-term return potential and diversification benefits. In response to a question from Trustee Moré, Aon noted that the majority of PERA's long-term investment performance has been driven by strategic asset allocation decisions reflected in the policy benchmark, while active management and implementation decisions have contributed approximately 40 basis points of excess return over the past 15 years. Treasurer Young asked about the Total Portfolio Approach (TPA) and how it differs from traditional asset allocation. Katie Comstock explained that TPA exists along a spectrum, ranging from highly flexible portfolio management to more traditional strategic asset allocation frameworks. She noted that PERA's investment program incorporates elements of active management while remaining primarily grounded in a strategic asset allocation approach. Amy C. McGarrity indicated that a future Board education session will provide additional discussion of TPA and its potential applications.

Katie Comstock reviewed private equity benchmarking and performance evaluation, emphasizing that no single benchmark provides a complete assessment and that a multifaceted approach incorporating public market benchmarks, peer comparisons, absolute return expectations, and IRR analysis is most effective. She noted that recent relative underperformance versus public equity benchmarks has been driven largely by exceptionally strong public market returns rather than weakness in private equity fundamentals. While short-term performance has faced pressure, PERA's private equity portfolio has generally performed in line with peers and has outperformed public markets over longer time horizons. She emphasized the importance of evaluating private equity with a long-term perspective and considering additional measures, such as distribution and capital-return metrics, when assessing portfolio performance.

The Investment Committee broke for lunch at 12:24 p.m.

The Investment Committee reconvened from lunch at 1:00 p.m.

Katie Comstock presented PERA's performance relative to a peer universe of large U.S. public pension plans, noting that PERA's modest overweight to public equities and lower allocation to alternatives have contributed to strong long-term results. She reported that PERA's total fund performance ranks favorably across all measured periods and remains in the top quartile of peers over the long term. While the portfolio has exhibited somewhat higher volatility due to its asset allocation, its risk-adjusted returns have also ranked favorably over extended periods. Katie Comstock concluded that PERA's long-term asset allocation strategy and implementation have generated strong returns and favorable results relative to both its policy benchmark and peer group over an approximately 20-year evaluation period.

Asset Class Overview – Equities Division

Steve Komon, PERA Director or Equities; Jared Goodman, PERA Senior Equity Portfolio Manager; Jeremy Frenkel, PERA Equity Analyst III; and Alex Dowgiert, PERA Equity Analyst II provided an educational overview of PERA's public equities program, including its portfolio structure, investment philosophy, and stock selection process. After showing a brief video that introduced the entire equities team, the presenters reported that public equity is targeted to be 51% of the Combined Investment Fund's strategic asset allocation and serve as the primary source of long-term capital appreciation, dividend income, and liquidity. PERA manages approximately $45 billion in public equity assets across 17 portfolios benchmarked to the MSCI ACWI IMI Index, providing broad global market exposure. The Investment Committee was informed that approximately 73% of PERA public equity assets are managed internally through a combination of active and passive strategies designed to achieve benchmark exposure while seeking excess returns.

The equities team reviewed its investment philosophy, emphasizing long-term investing, low-cost implementation, and a focus on high-quality companies with strong fundamentals. Staff explained that the program seeks to capitalize on market inefficiencies through disciplined security selection while maintaining close alignment with the Board-approved benchmark. The Investment Committee received an overview of the overall portfolio construction framework, which combines active and passive strategies and includes ongoing monitoring of performance, investment style, organizational stability, and benchmark alignment. In addition, the team reviewed its research and stock selection process, highlighting a disciplined approach that includes idea generation, fundamental research, management engagement, financial modeling, valuation analysis, investment committee review, and ongoing monitoring. Using Lamar Advertising as a case study, the equities team demonstrated how investment opportunities are identified, evaluated, and incorporated into the portfolio.

Trustee Pasquino commented that having an internal equites division helps alleviate risk through the process of having more of a high-quality bias versus an outside entity, resulting in a lower-risk portfolio. Steve Komon commented that as a long-term investor, PERA's investment approach emphasizes high-quality companies with stronger fundamentals and lower risk characteristics. While this approach can lag during periods when markets favor higher-risk or more speculative investments, staff remain confident that focusing on high-quality, growth-oriented businesses is the most prudent strategy for achieving sustainable long-term investment results and will not alter the portfolio to pursue short-term market trends. Trustee Loh asked about the use of AI in their process

and if it has increased their productivity. The equites team noted that AI and advanced research tools have improved the efficiency of the investment process by helping analysts quickly synthesize large amounts of information, develop foundational company knowledge, and monitor key performance metrics. This allows the team to spend less time gathering information and more time on higher-value analysis, due diligence, and investment decision-making.

Trustee Moré asked how many companies are on the focus list and how the team defines quality. The equities team explained that the small- and mid-cap portfolios hold approximately 200 stocks from a universe of roughly 1,900 securities, requiring a selective investment approach. The team maintains and continuously monitors watch lists of potential investments, supported by AI tools, to identify attractive opportunities. Company quality is evaluated using several factors, with return on invested capital serving as a key measure of management effectiveness and long-term value creation. Trustee Simon asked whether PERA maintains watch lists for internal and external managers, including criteria beyond investment performance that could lead to heightened monitoring or termination. He also inquired about the factors used to evaluate managers and whether any current managers or strategies are being monitored under such a process. Steve Komon outlined the team's ongoing monitoring framework for both internal and external managers, including regular meetings, on-site due diligence, performance reviews, style consistency assessments, and evaluation of organizational stability. Staff reported that no external managers are currently subject to heightened concern or removal consideration.

Committee Announcements

Committee Chair Pennell asked if there were any other additional announcements. Amy C. McGarrity commended the public equities team for its long-term performance record and consistent value creation for members, noting that the team has delivered strong excess returns over time despite recent short-term relative underperformance. No additional announcements were made by the Investment Committee

2026 Investment Committee Meeting Dates

Committee Chair Pennell noted the upcoming committee meeting dates.

November 19, 2026

With no further business to discuss, Committee Chair Pennell adjourned the meeting at 1:45 p.m.

Respectfully submitted by,

Rachel Kelley

Board Liaison

Approved:

Callan

November 2026

Colorado PERA
Capital Accumulation Plans

Performance Review

Greg Ungerman, CFA
Senior Vice President

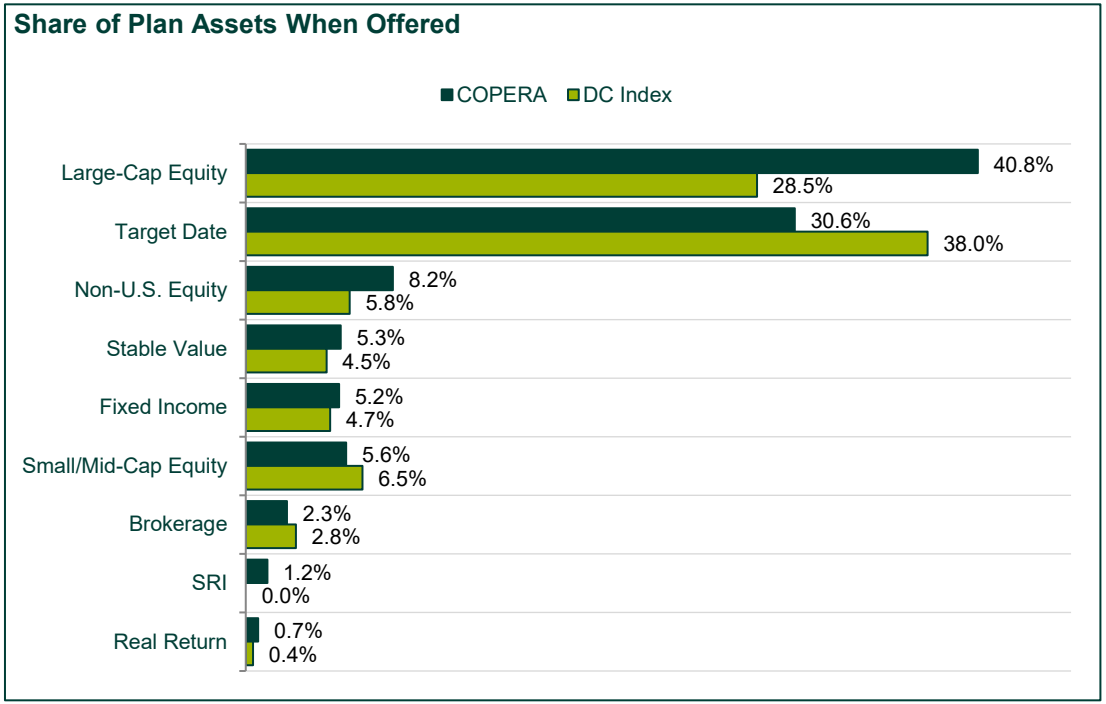
Alex Ford
Senior Vice President

Asset Distribution

	September 30, 2026		June 30, 2026	
	Market Value	Weight	Market Value	Weight
PERAdvantage Target Ret. Date Funds	**$2,504,671,454**	**30.62%**	**$2,512,486,883**	**30.71%**
PERAdvantage Income Fund	476,003,835	5.82%	492,099,779	6.01%
PERAdvantage 2030 Fund	320,447,583	3.92%	327,576,590	4.00%
PERAdvantage 2035 Fund	382,478,498	4.68%	386,930,806	4.73%
PERAdvantage 2040 Fund	355,729,023	4.35%	353,944,779	4.33%
PERAdvantage 2045 Fund	337,366,322	4.12%	332,414,545	4.06%
PERAdvantage 2050 Fund	276,297,004	3.38%	274,194,996	3.35%
PERAdvantage 2055 Fund	193,821,574	2.37%	189,389,865	2.31%
PERAdvantage 2060 Fund	101,305,352	1.24%	98,427,267	1.20%
PERAdvantage 2065 Fund	50,519,541	0.62%	48,227,115	0.59%
PERAdvantage 2070 Fund	10,702,722	0.13%	9,281,141	0.11%
PERAdvantage U.S. Large Cap Stock Fund	**$3,333,487,580**	**40.76%**	**$3,283,168,554**	**40.13%**
PERA Large Cap Index	1,999,143,697	24.44%	1,955,402,409	23.90%
PERA Large Cap Core	1,334,343,883	16.31%	1,327,766,144	16.23%
PERAdvantage U.S. SMID Cap Stock Fund	**$461,513,229**	**5.64%**	**$491,708,506**	**6.01%**
DFA Mid Cap Core	241,729,901	2.96%	252,952,644	3.09%
PERA Small Cap Core	219,783,328	2.69%	238,755,861	2.92%
PERAdvantage International Stock Fund	**$673,963,938**	**8.24%**	**$680,867,659**	**8.32%**
PERA International Multi-Factor	275,532,075	3.37%	276,163,922	3.38%
Schroders International Alpha	398,431,863	4.87%	404,703,737	4.95%
PERAdvantage Fixed Income Fund	**$423,541,022**	**5.18%**	**$439,994,561**	**5.38%**
BlackRock Core Alpha Bond	203,265,141	2.49%	211,190,794	2.58%
PERA Fixed Income	220,275,881	2.69%	228,803,767	2.80%
PERAdvantage Real Return Fund	**$59,133,704**	**0.72%**	**$56,806,372**	**0.69%**
State Street Real Assets Strategy	41,313,854	0.51%	39,729,279	0.49%
State Street U.S. TIPS Index	17,819,850	0.22%	17,077,093	0.21%
PERAdvantage SRI Fund	**$97,323,754**	**1.19%**	**$93,249,075**	**1.14%**
BlackRock ACWI ESG Focus	58,339,544	0.71%	55,839,421	0.68%
Nuveen Core Impact Bond	38,984,211	0.48%	37,409,654	0.46%
PERAdvantage Capital Preservation Fund	**$436,141,343**	**5.33%**	**$437,227,610**	**5.34%**
Empower Stable Value Fund	436,141,343	5.33%	437,227,610	5.34%
Self Directed Brokerage	**$189,442,457**	**2.32%**	**$185,857,334**	**2.27%**
Total Fund	**$8,179,218,481**	**100.0%**	**$8,181,366,553**	**100.0%**

COPERA Comparison to Industry Averages

Asset Allocation in DC Plans



- **Large-Cap Equity overweight:** COPERA allocates 40.8% vs. 28.5% for the Callan DC Index.
- **Target Date underweight:** 30.6% vs. the DC Index average of 38.0%.
- **Modest overweights:** Non-U.S. Equity (8.2% vs. 5.8%), Stable Value (5.3% vs. 4.5%), Fixed Income (5.2% vs. 4.7%) and Real Return (0.7% vs. 0.4%); SRI (1.2%) is not offered in the DC Index.
- **Slight underweights:** Small/Mid-Cap Equity (5.6% vs. 6.5%) and Brokerage (2.3% vs. 2.8%).

Source: Callan DC Index, which tracks the performance, asset allocation, and cash flows of more than 100 large defined contribution plans representing approximately $400 billion in assets.
COPERA allocation as of 09/30/2026; DC Index allocation as of 06/30/2026.

PERAdvantage – White Label Fund Net Performance

September 30, 2026

Investment Manager	Last Quarter Return	3/4 Year Return	Last Year Return	3 Year Return	5 Year Return	5 Year Risk	5 Year Sharpe Ratio	Expense Ratio
PERAdvantage Fund Performance								
PERAdvantage U.S. Large Cap Stock Fund	**3.1** 32	**13.3** 22	**16.2** 26	**24.1** 11	**14.1** 14	**16.6** 42	**0.6** 25	**0.05** 100
Callan Lg Cap Broad MF								
MSCI USA Large Cap Index	3.2 26	13.1 24	16.1 26	23.6 18	13.9 15	16.0 47	0.6 23	
PERAdvantage U.S. SMID Cap Stock Fund	**-5.4** 24	**11.9** 34	**13.8** 35	**14.0** 29	**7.2** 21	**14.9** 78	**0.2** 21	**0.15** 99
Callan SMID Broad MFs								
MSCI USA SMID Cap Index	-5.9 27	9.8 46	11.0 53	15.7 21	6.6 30	15.9 63	0.2 28	
PERAdvantage International Stock Fund	**0.1** 44	**11.3** 35	**15.3** 44	**20.5** 26	**9.6** 38	**16.5** 61	**0.4** 39	**0.26** 96
Callan Non US Equity MFs								
MSCI ACWI ex USA Index	0.5 41	14.2 14	20.0 20	20.5 26	9.6 38	15.6 87	0.4 37	
PERAdvantage Fixed Income Fund	**-3.7** 48	**-3.0** 42	**-2.0** 44	**4.3** 39	**-0.6** 57	**6.9** 39	**-0.6** 42	**0.13** 90
Callan Core Bond MFs								
Bloomberg U.S. Agg Bond Index	-3.5 17	-2.9 36	-1.8 30	4.1 76	-0.6 64	6.7 59	-0.6 76	
PERAdvantage Real Return Fund	**2.0** 39	**10.6** 41	**13.3** 45	**11.4** 68	**6.8** 44	**8.8** 78	**0.4** 37	**0.17** 93
Callan Real Assets								
Real Return Custom Index	2.0 40	10.2 59	12.9 47	11.2 69	6.7 45	8.8 78	0.3 41	
PERAdvantage SRI Fund	**-0.1** 27	**7.8** 52	**10.5** 51	**15.1** 55	**6.8** 61	**11.1** 61	**0.3** 59	**0.18** 72
Total Dom Balanced DB								
SRI Custom Index	-0.1 27	7.5 55	10.3 54	14.7 57	6.6 62	11.2 61	0.3 63	
PERAdvantage Capital Preservation Fund	**0.8** 10	**2.4** 14	**3.2** 14	**2.8** 19	**2.4** 25	**0.3** 22	**-4.1** 21	**0.21** 95
Callan Stable Value CT								
ICE BofAML U.S. 3-Month TBill Index	0.9 7	2.6 11	3.6 11	4.5 1	3.7 1	0.9 1	0.0 1	

Returns:
- above median
- third quartile
- fourth quartile

Risk:
- below median
- second quartile
- first quartile

Sharpe Ratio:
- above median
- third quartile
- fourth quartile

Expense Ratio:
- below median
- second quartile
- first quartile

(i) - Indexed scoring method used. Green: manager & index ranking differ by <= +/- 10%tile. Yellow: manager & index ranking differ by <= +/- 20%tile. Red: manager & index ranking differ by > +/- 20%tile.

Percentile rank beside each value duplicates the color shading.

PERAdvantage – Target Retirement Date Fund Net Performance

September 30, 2026

Investment Manager	Last Quarter Return	3/4 Year Return	Last Year Return	3 Year Return	5 Year Return	5 Year Risk	5 Year Sharpe Ratio	Expense Ratio
PERAdvantage Fund Performance								
PERAdvantage Income Fund (i)	**-1.3** 48	**4.1** 40	**6.0** 37	**10.7** 24	**4.1** 46	**8.8** 15	**0.0** 47	**0.06** 82
Callan Tgt Date Ret Inc								
BlackRock Retirement Index	-1.2 44	4.0 42	5.9 37	10.7 24	4.1 46	8.8 14	0.0 47	
PERAdvantage 2030 Fund (i)	**-1.1** 49	**5.4** 68	**7.5** 68	**12.9** 68	**5.6** 74	**10.4** 67	**0.2** 79	**0.06** 84
Callan Target Date 2030								
BlackRock 2030 Index	-1.0 45	5.3 71	7.5 68	12.8 68	5.6 74	10.5 65	0.2 79	
PERAdvantage 2035 Fund (i)	**-0.9** 58	**6.9** 64	**9.3** 66	**14.8** 66	**6.9** 70	**11.6** 63	**0.3** 66	**0.06** 84
Callan Target Date 2035								
BlackRock 2035 Index	-0.7 47	6.8 68	9.3 66	14.8 67	6.9 72	11.6 63	0.3 70	
PERAdvantage 2040 Fund (i)	**-0.6** 58	**8.6** 62	**11.2** 67	**16.8** 66	**8.2** 63	**12.7** 57	**0.4** 63	**0.06** 83
Callan Target Date 2040								
BlackRock 2040 Index	-0.4 40	8.5 65	11.2 67	16.7 70	8.2 66	12.7 50	0.4 68	
PERAdvantage 2045 Fund (i)	**-0.2** 50	**10.4** 50	**13.3** 54	**18.7** 38	**9.5** 41	**13.7** 30	**0.4** 49	**0.06** 84
Callan Target Date 2045								
BlackRock 2045 Index	0.0 28	10.3 52	13.3 52	18.7 40	9.4 46	13.8 27	0.4 55	
PERAdvantage 2050 Fund (i)	**0.2** 25	**11.9** 29	**15.1** 32	**20.3** 12	**10.5** 14	**14.4** 17	**0.5** 28	**0.06** 79
Callan Target Date 2050								
BlackRock 2050 Index	0.4 15	11.8 37	15.1 30	20.3 16	10.4 19	14.5 13	0.5 35	
PERAdvantage 2055 Fund (i)	**0.5** 16	**12.7** 12	**16.2** 15	**21.1** 8	**11.0** 8	**14.7** 9	**0.5** 13	**0.06** 86
Callan Target Date 2055								
BlackRock 2055 Index	0.8 8	12.7 13	16.3 13	21.1 10	11.0 9	14.8 5	0.5 18	
PERAdvantage 2060 Fund (i)	**0.6** 12	**12.9** 11	**16.4** 11	**21.3** 7	**11.1** 7	**14.7** 12	**0.5** 12	**0.06** 81
Callan Target Date 2060								
BlackRock 2060 Index	0.9 6	12.9 12	16.5 9	21.2 8	11.0 9	14.8 5	0.5 22	

Returns:
- above median
- third quartile
- fourth quartile

Risk:
- below median
- second quartile
- first quartile

Sharpe Ratio:
- above median
- third quartile
- fourth quartile

Expense Ratio:
- below median
- second quartile
- first quartile

(i) - Indexed scoring method used. Green: manager & index ranking differ by <= +/- 10%tile. Yellow: manager & index ranking differ by <= +/- 20%tile. Red: manager & index ranking differ by > +/- 20%tile.

Percentile rank beside each value duplicates the color shading.

PERAdvantage – Target Retirement Date Fund Net Performance (Continued)

September 30, 2026

Investment Manager	Last Quarter Return	3/4 Year Return	Last Year Return	3 Year Return	5 Year Return	5 Year Risk	5 Year Sharpe Ratio	Expense Ratio
PERAdvantage 2065 Fund (i)	**0.6** 17	**12.9** 10	**16.4** 16	**21.3** 8	**11.1** 10	**14.7** 14	**0.5** 17	**0.06** 85
Callan Target Date 2065								
BlackRock 2065 Index	0.9 9	12.9 12	16.5 11	21.2 10	11.0 12	14.8 8	0.5 21	
PERAdvantage 2070 Fund (i)	**0.6** 13	**12.9** 22	**16.4** 34					**0.06** 93
Callan Target Date 2070								
BlackRock LifePath 2070 Index	0.9 4	12.9 24	16.5 24					

Returns:
- above median
- third quartile
- fourth quartile

Risk:
- below median
- second quartile
- first quartile

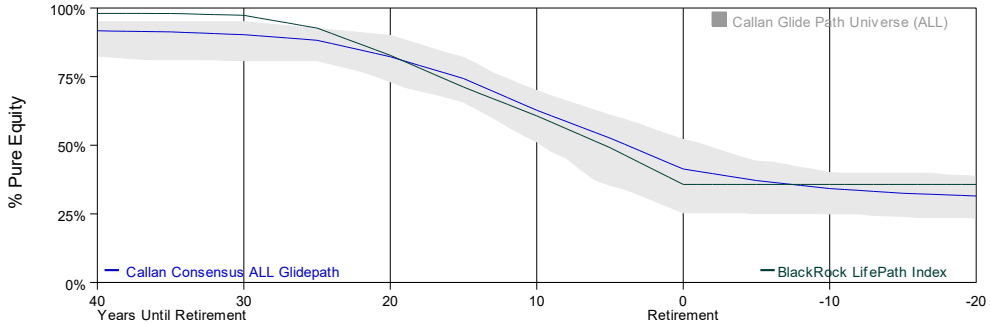
Sharpe Ratio:
- above median
- third quartile
- fourth quartile

Expense Ratio:
- below median
- second quartile
- first quartile

Target Date Funds

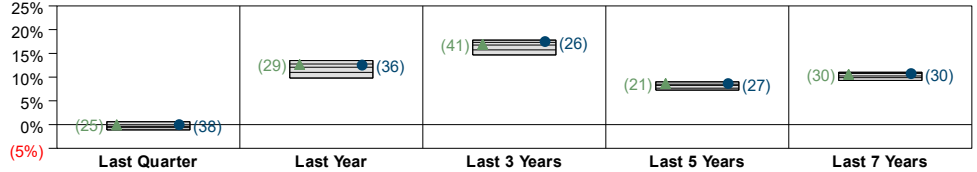
September 30, 2026

Equity Rolldown Analysis



The glidepath of the target date funds begins with more equity, has a steeper roll down with less equity at retirement and then ends with slightly more equity than the industry average.

Target Date Family Performance vs Peer Families



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
10th Percentile	0.61	13.49	17.80	9.00	11.02
25th Percentile	(0.03)	12.75	17.31	8.50	10.78
Median	(0.37)	12.09	16.76	8.25	10.25
75th Percentile	(0.64)	11.00	15.74	7.67	9.88
90th Percentile	(1.13)	9.80	14.69	7.25	9.30
BlackRock LifePath Index ●	(0.21)	12.35	17.29	8.45	10.55
Callan Consensus ALL Glidepath ▲	(0.04)	12.64	16.92	8.67	10.58

Target Date Family Performance is an equally weighted return of the underlying target date fund vintages.

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Important Disclosures (Continued)

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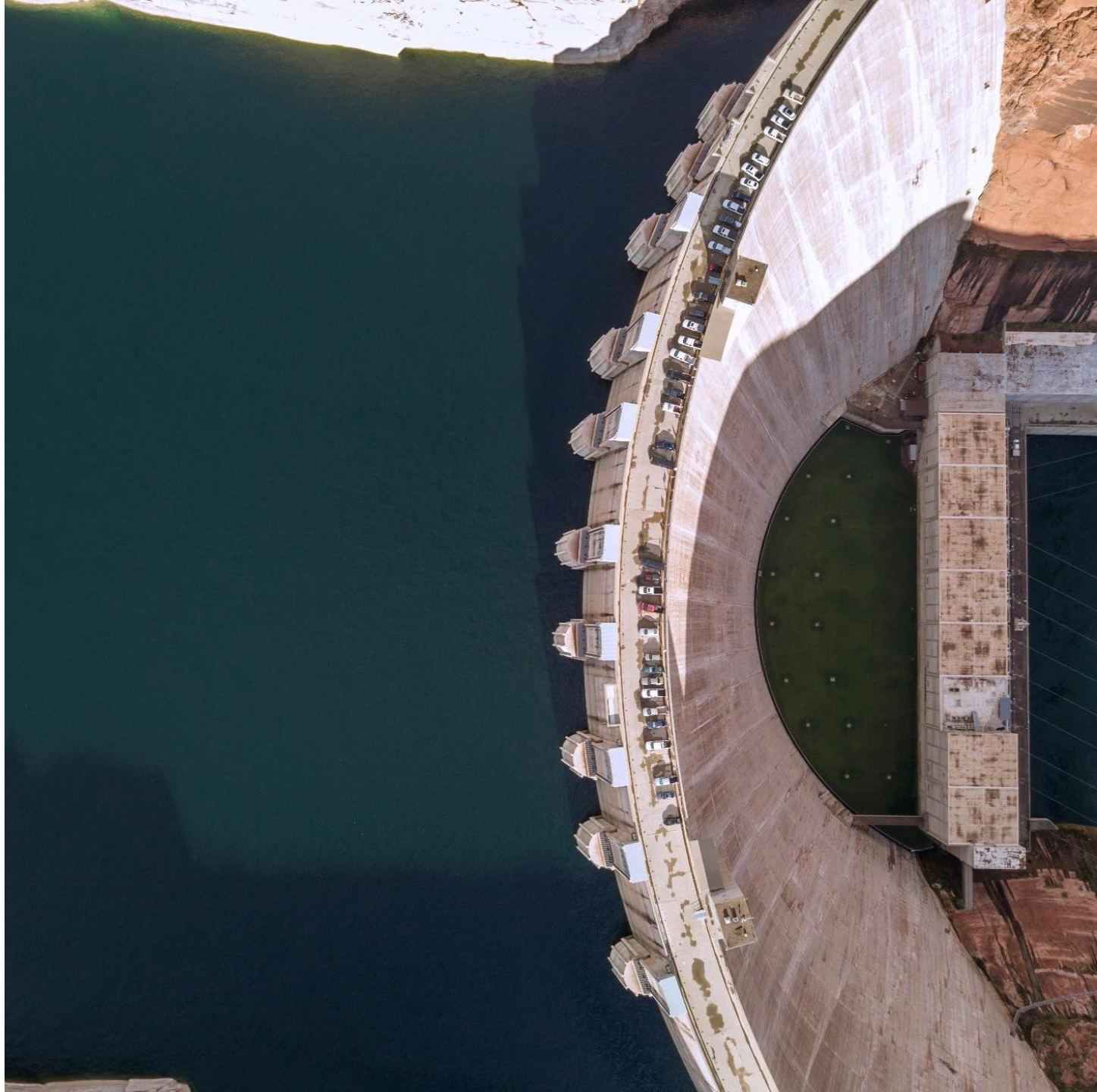
Callan undertakes no obligation to update the information contained herein except as specifically requested by the client.

Past performance is no guarantee of future results. Investing involves risk, including possible loss of principal.

Third Quarter 2026 Performance Review

Colorado PERA

November 20, 2026



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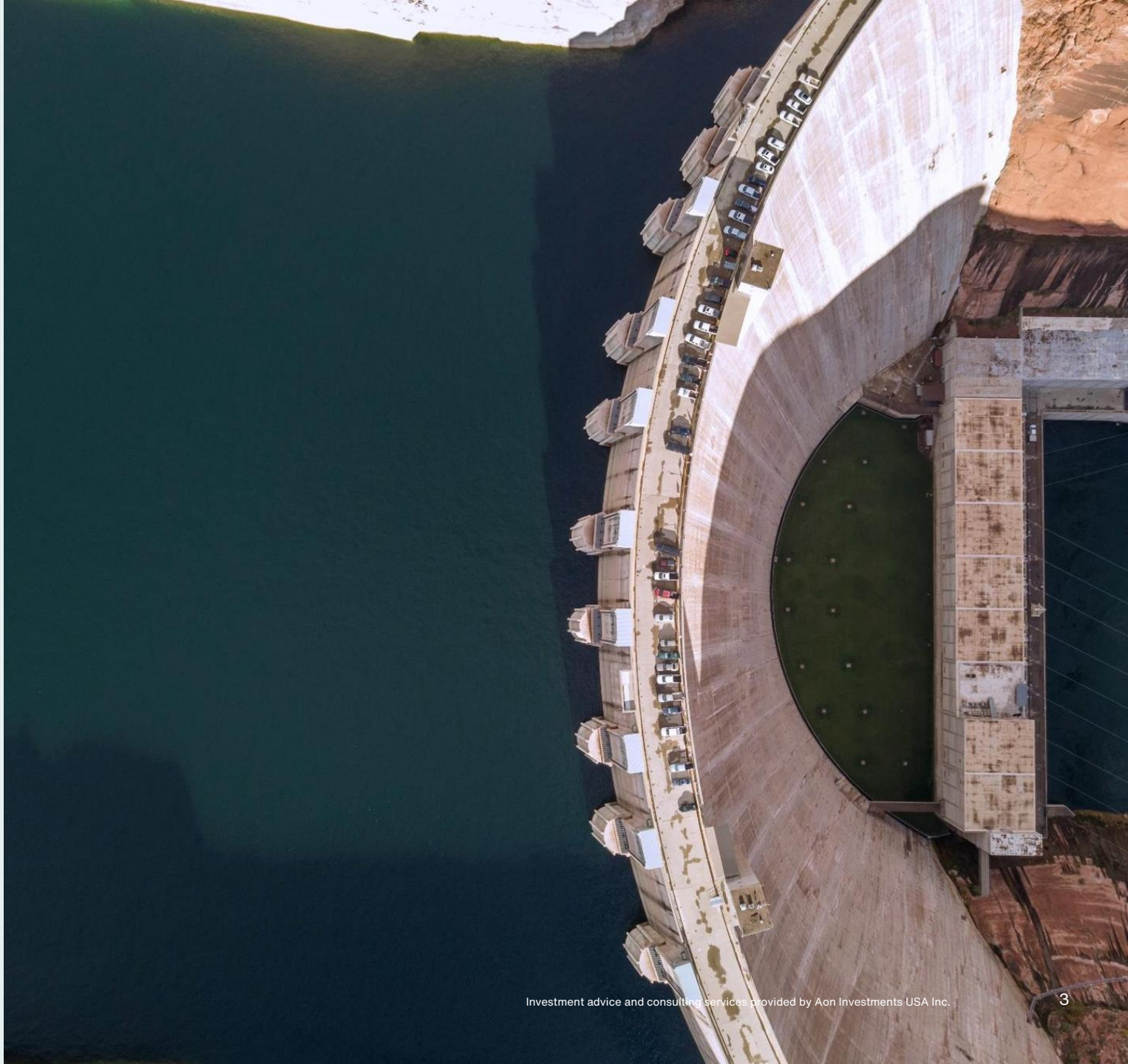
1 Capital Markets

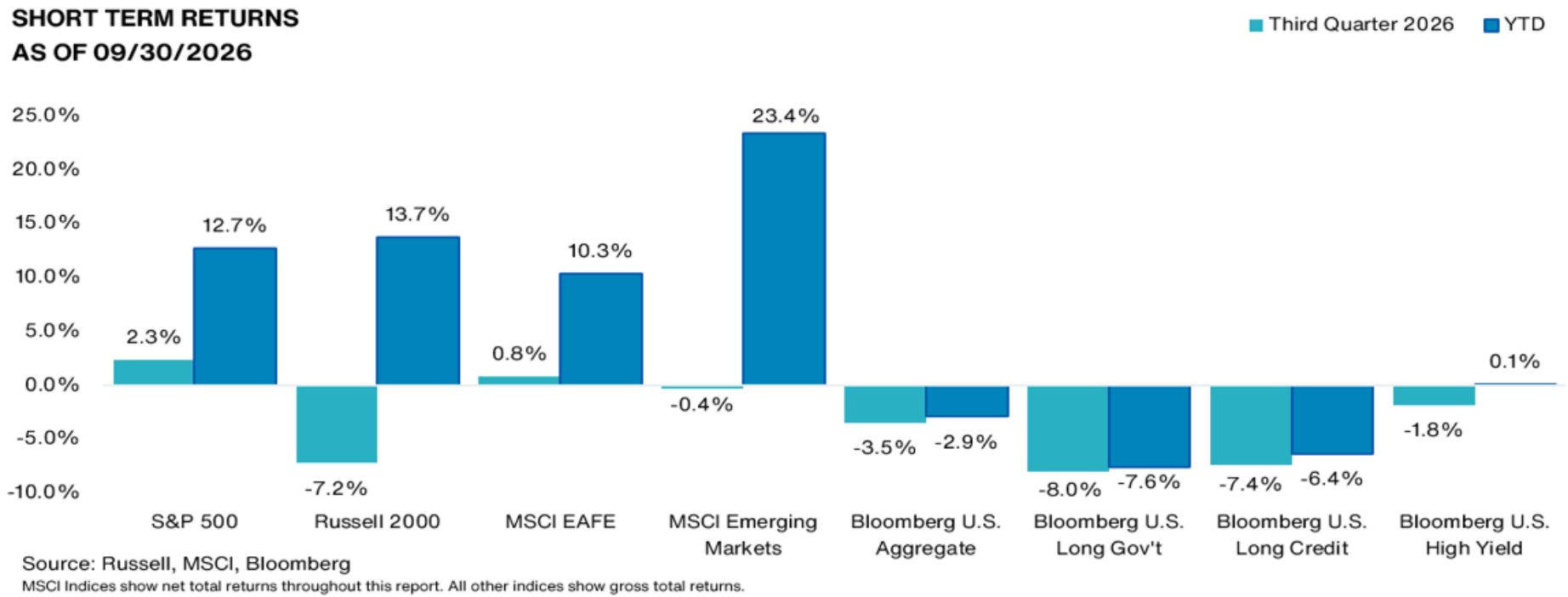
2 Third Quarter Performance Review

1

Capital Markets



Market Highlights – Short Term Returns

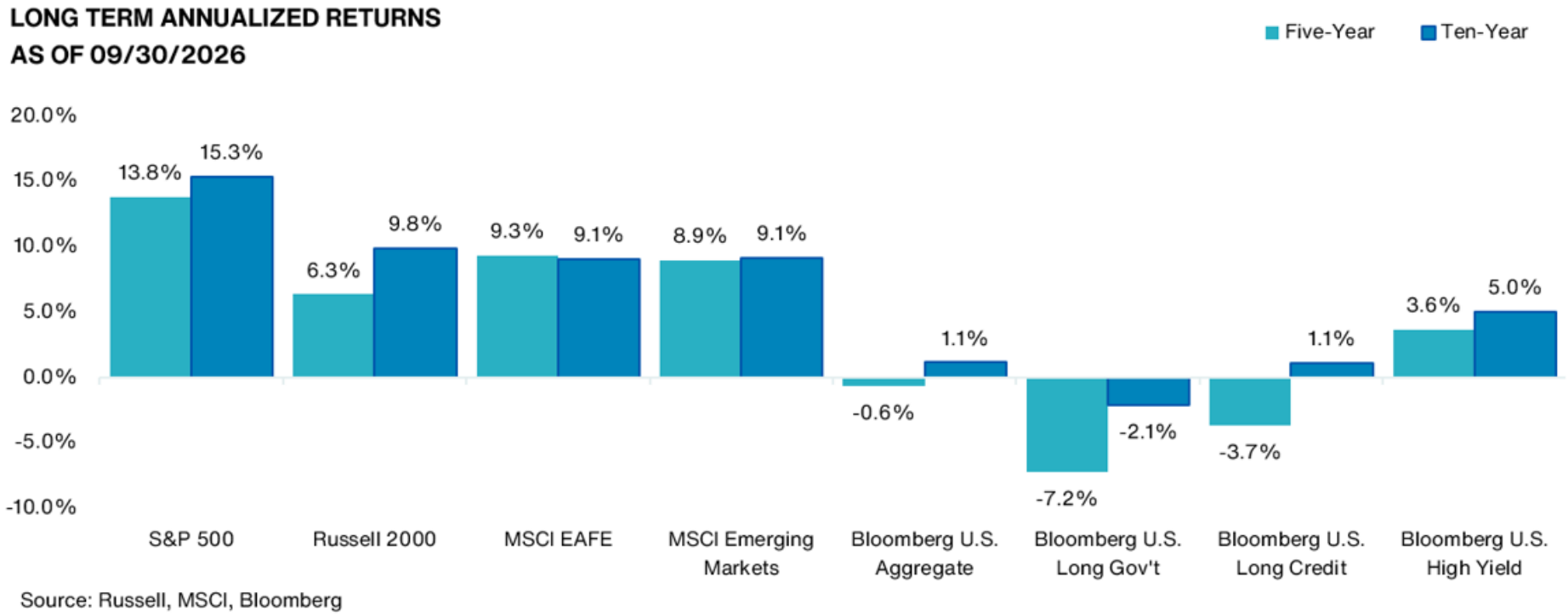


Source: Russell, MSCI, Bloomberg

MSCI Indices show net total returns throughout this report. All other indices show gross total returns.

Past performance is no guarantee of future results. Indices cannot be invested in directly. Unmanaged index returns assume reinvestment of any and all distributions and do not reflect fees and expenses. Please see appendix for index definitions and other general disclosures.

Market Highlights – Long Term Returns

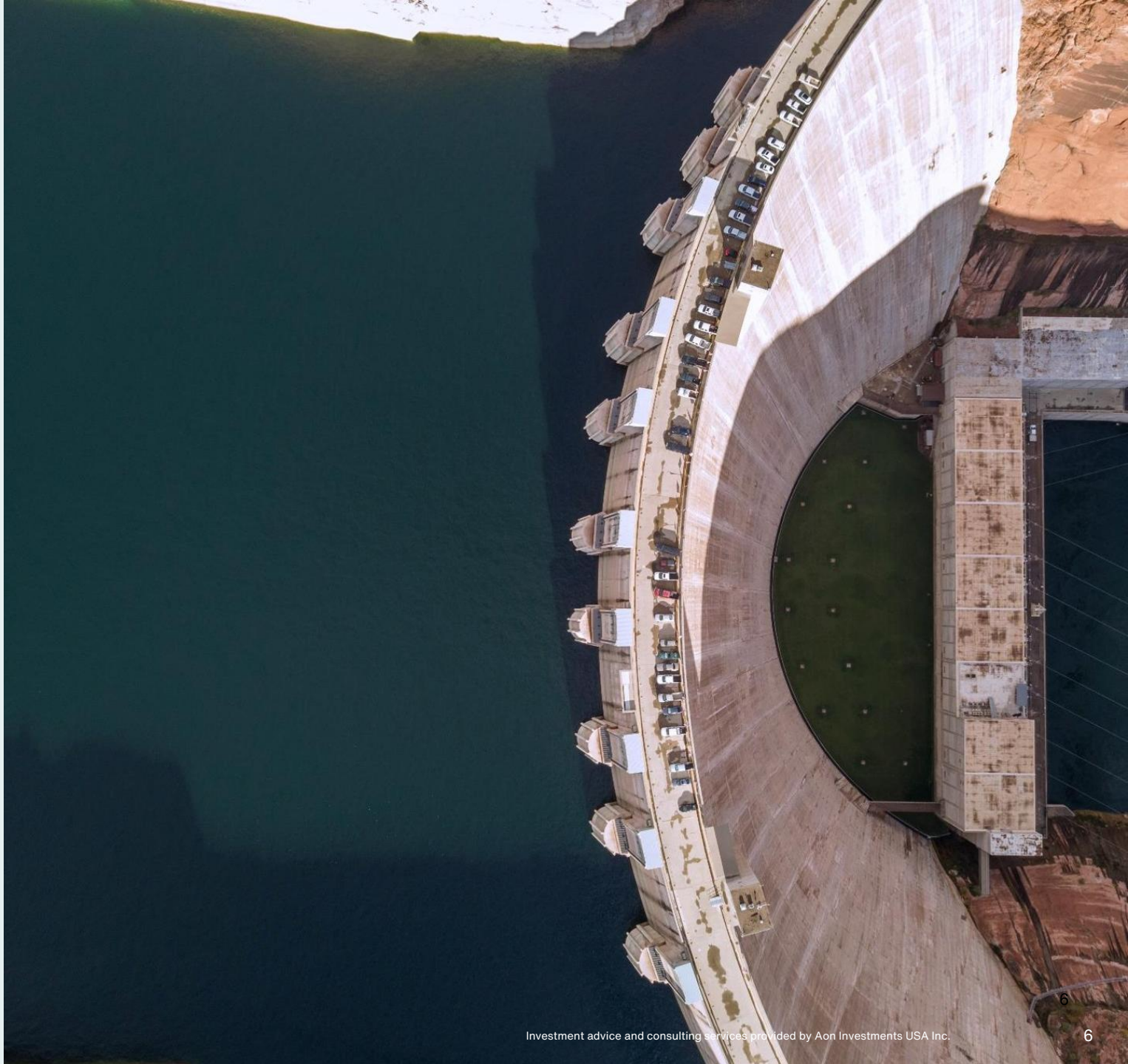


Source: Russell, MSCI, Bloomberg

Past performance is no guarantee of future results. Indices cannot be invested in directly. Unmanaged index returns assume reinvestment of any and all distributions and do not reflect fees and expenses. Please see appendix for index definitions and other general disclosures.

2

Third Quarter 2026 Performance



Investment advice and consulting services provided by Aon Investments USA Inc.

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Third Quarter 2026 Performance Summary Highlights

Assets

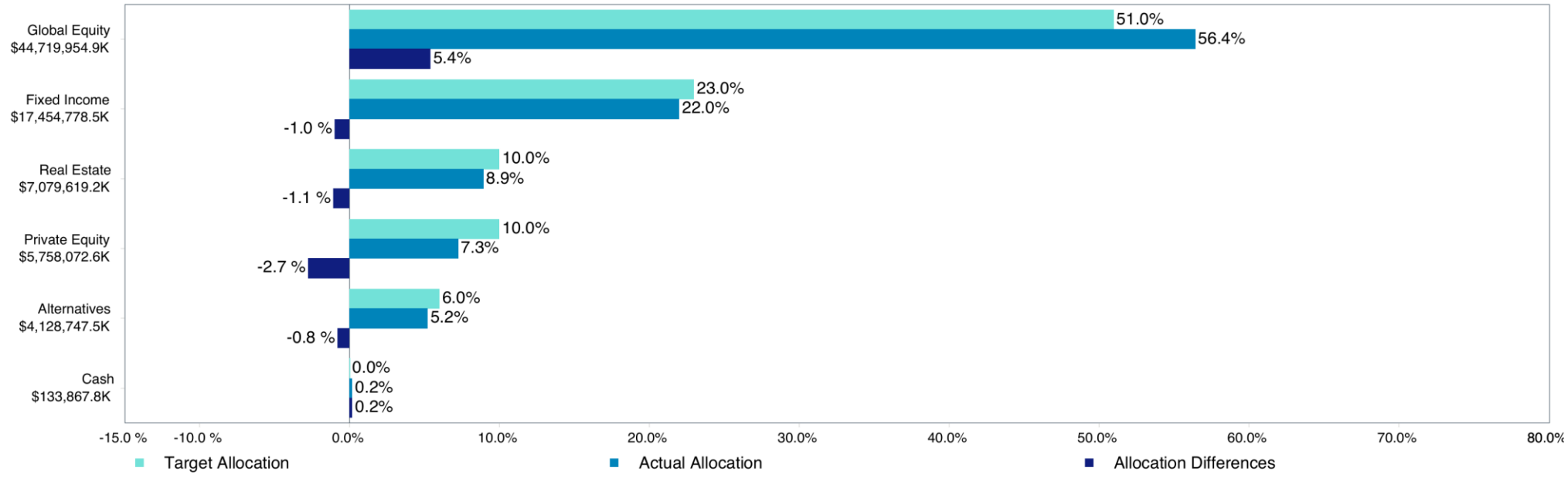
- The PERA Total Fund ended the third quarter at $79.3B; a decrease of approx. $0.3B over the quarter
- During the third quarter of 2026, global equity markets delivered modest gains despite rising geopolitical tensions, higher energy prices and renewed concerns about inflation and interest rates.
- U.S. Treasury yields rose sharply across the curve as higher energy prices, renewed inflation concerns and expectations of tighter monetary policy prompted investors to reassess the interest-rate outlook

Investment Results – Third Quarter 2026

- The PERA Total Fund returned -0.2% for the third quarter
- On a relative basis, the Total Fund underperformed its Policy Benchmark by 0.1% over the quarter
- Relative to peers, the PERA portfolio continues to outperform the mean plan return over longer time periods with top-decile performance over the trailing 10-years.
- Long-term performance remains strong, as the Total Fund earned an annualized 9.6% over the trailing 10-year period, outperforming its Policy Benchmark

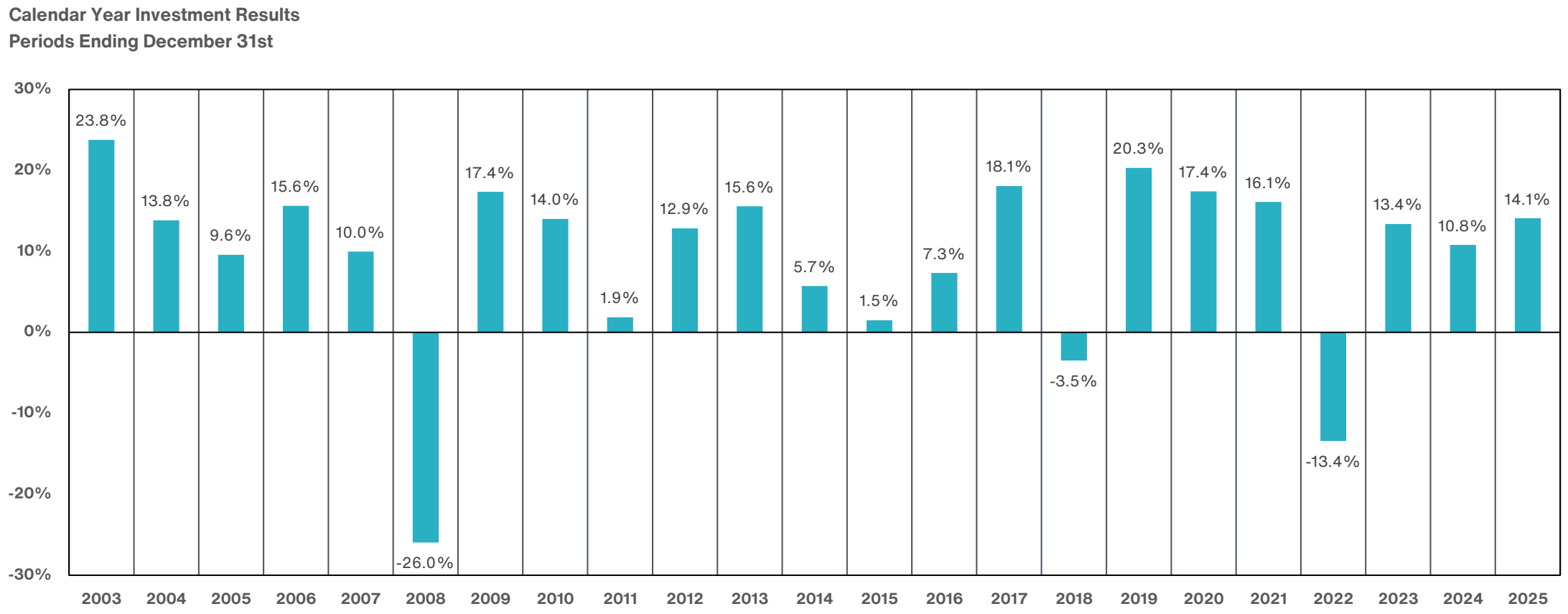
Total Fund – Asset Allocation
As of September 30, 2026

	Market Value* $000	Current Allocation %	Target Allocation %
Total Fund	**79,275,040.5**	**100.0**	**100.0**
Global Equity	44,719,954.9	56.4	51.0
Fixed Income	17,454,778.5	22.0	23.0
Real Estate	7,079,619.2	8.9	10.0
Private Equity	5,758,072.6	7.3	10.0
Alternatives	4,128,747.5	5.2	6.0
Cash	133,867.8	0.2	0.0



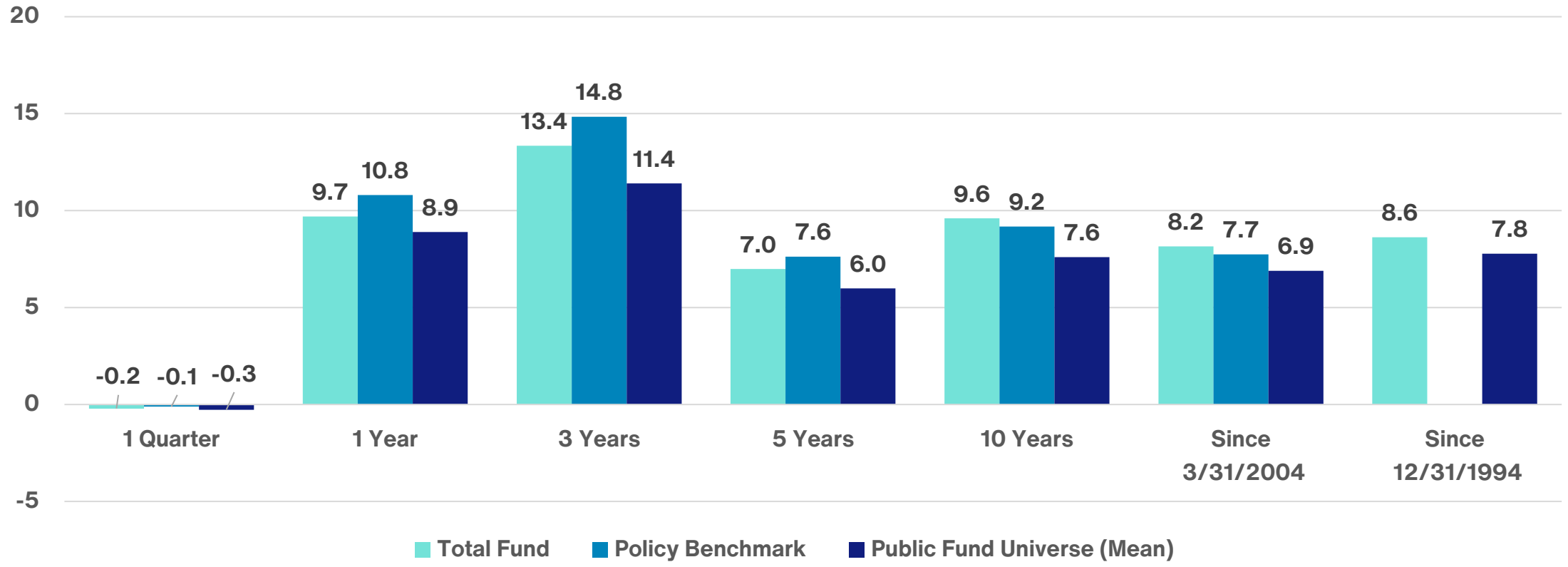
* Does not include cash overlay exposure.

Total Fund Performance – Calendar Year Periods
December 31, 2025



Returns shown are net of external management and custody fees.

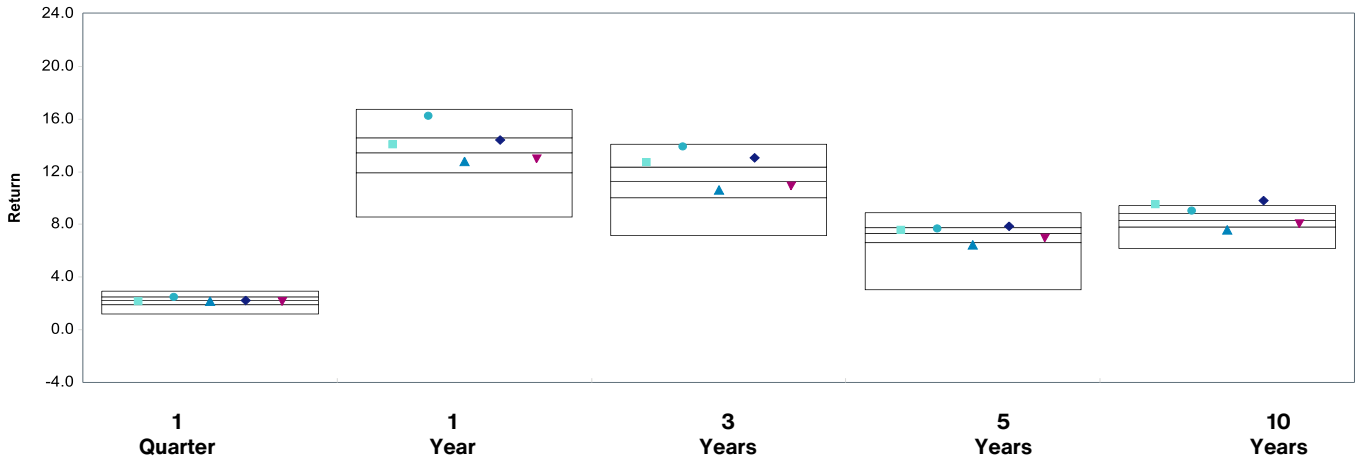
Total Fund Performance – Trailing Periods
As of September 30, 2026



Returns shown are net of external management and custody fees.

** March 31, 2004, represents the inception of the Policy Benchmark as the primary performance objective for PERA.*

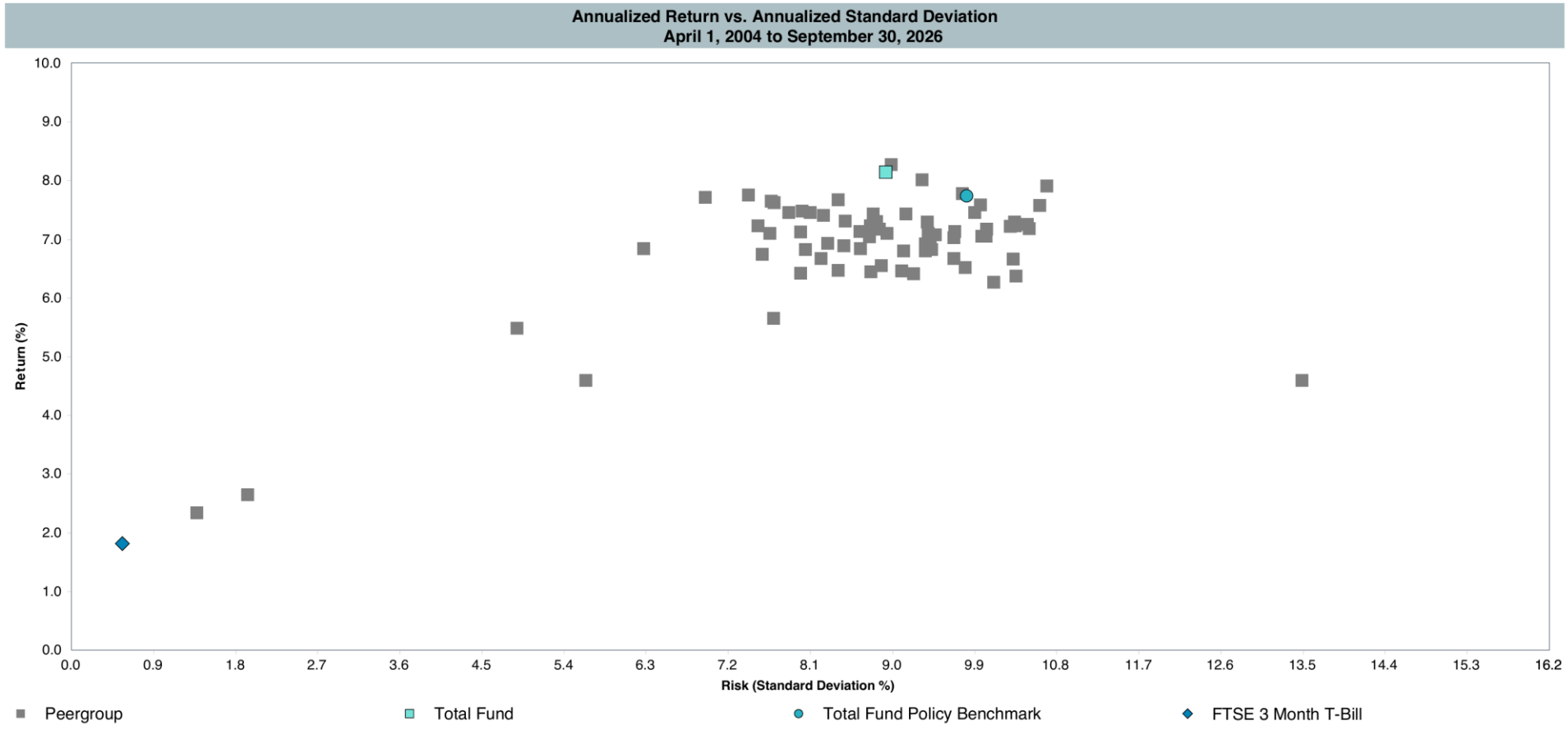
Peer Rankings
As of September 30, 2026



	1 Quarter	1 Year	3 Years	5 Years	10 Years
Total Fund	-0.2 (49)	9.7 (40)	13.4 (26)	7.0 (36)	9.6 (7)
Policy Benchmark	-0.1 (44)	10.8 (19)	14.8 (7)	7.6 (12)	9.2 (13)
Public Fund Universe (Mean)	-0.3 (50)	8.9 (58)	11.4 (64)	6.0 (76)	7.6 (80)
Total Fund (GOF)	-0.2 (48)	10.0 (32)	13.7 (16)	7.3 (22)	9.9 (2)
Public Fund Universe (Mean) (GOF)	0.0 (40)	9.0 (56)	11.7 (59)	6.3 (52)	8.1 (60)
5th Percentile	1.7	12.4	15.1	8.1	9.6
1st Quartile	0.5	10.5	13.4	7.2	8.7
Median	-0.3	9.4	12.3	6.4	8.3
3rd Quartile	-1.0	8.1	11.0	6.0	7.8
95th Percentile	-2.0	2.7	6.6	2.7	4.0

The rankings are based on a universe of 116 public pension funds over $1 billion compiled by BNY Mellon Performance & Risk Analytics in conjunction with Investment Metrics as of 9/30/2026.
Returns shown are net of external management and custody fees.

Risk-Adjusted Return
As of September 30, 2026



The rankings are based on a universe of 71 public pension funds over $1 billion compiled by BNY Mellon Performance & Risk Analytics in conjunction with Investment Metrics as of 9/30/2026.

Returns for the Total Fund shown are net of external management and custody fees.

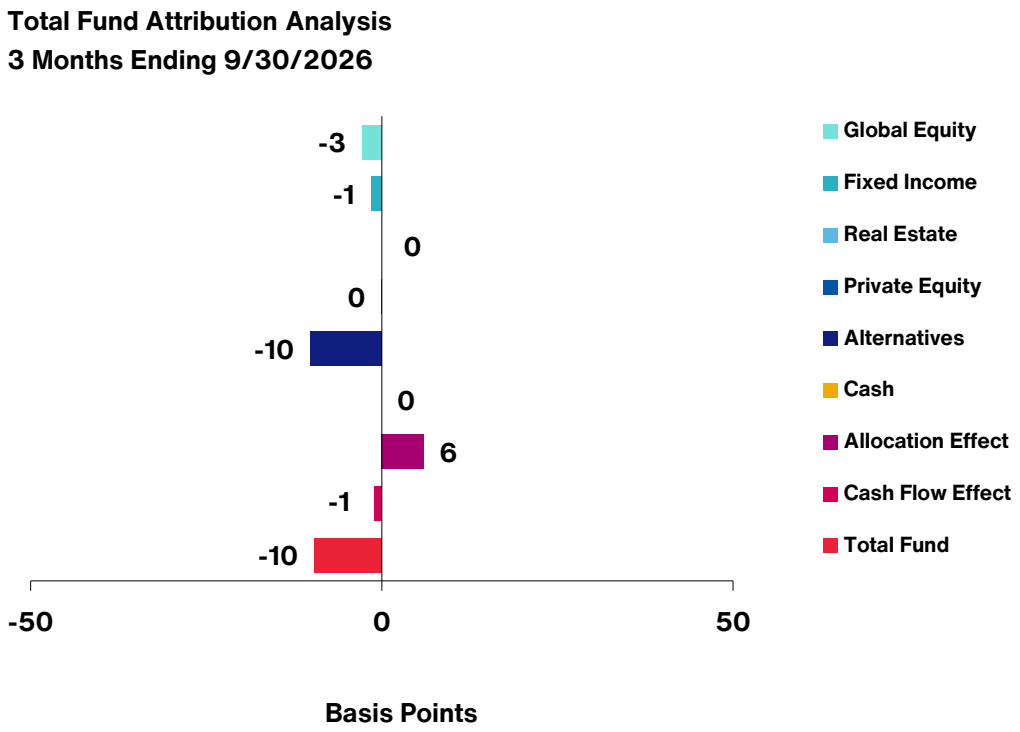
Asset Class Performance
As of September 30, 2026

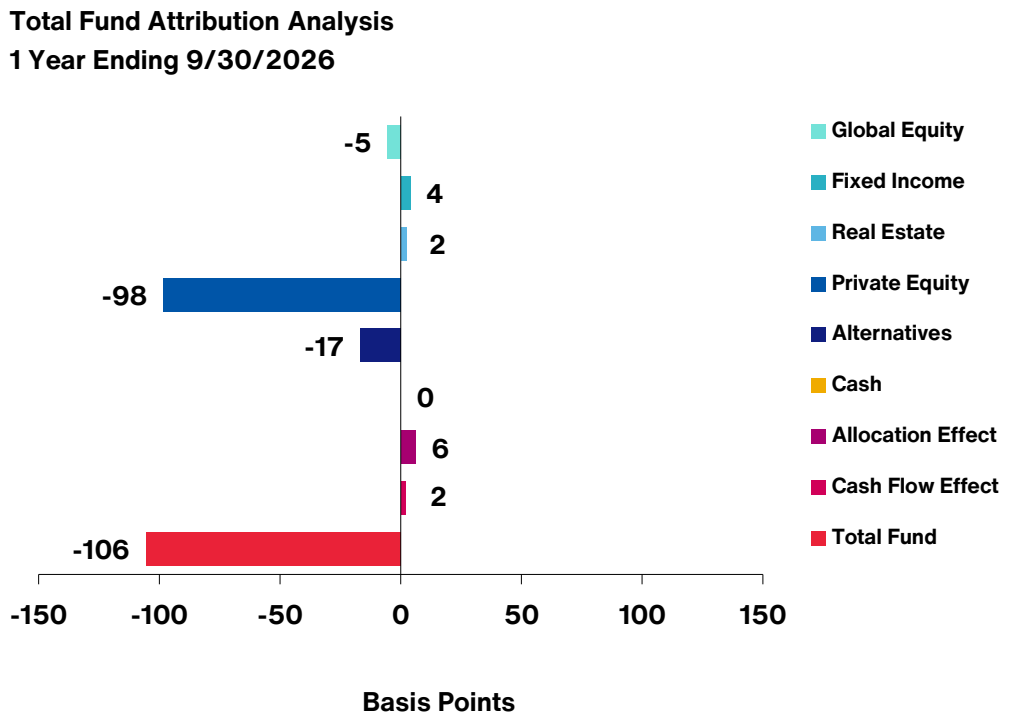
	Allocation		Performance (%)							
	Market Value ($000)	%	1 Quarter	Year to Date	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Total Fund	79,275,040.5	100.0	-0.2	7.4	9.7	13.4	7.0	9.6	8.6	01/01/95
Policy Benchmark			*-0.1*	*8.1*	*10.8*	*14.8*	*7.6*	*9.2*	-	
Public Fund Universe (Mean)			*-0.3*	*6.6*	*8.9*	*11.4*	*6.0*	*7.6*	*7.8*	
Total Fund (GOF)			*-0.2*	*7.6*	*10.0*	*13.7*	*7.3*	*9.9*	*8.8*	
Public Fund Universe (Mean) (GOF)			*0.0*	*6.7*	*9.0*	*11.7*	*6.3*	*8.1*	*8.3*	
Global Equity	44,719,954.9	56.4	1.1	13.5	16.8	21.2	10.7	13.0	9.7	01/01/95
Global Equity Custom Benchmark			*1.1*	*13.2*	*16.9*	*21.6*	*11.3*	*12.3*	-	
Global Equity (GOF)			*1.1*	*13.5*	*16.9*	*21.3*	*10.8*	*13.1*	*9.8*	
Fixed Income	17,454,778.5	22.0	-3.6	-2.8	-1.7	4.4	-0.3	1.5	4.6	01/01/95
Fixed Income Custom Benchmark			*-3.5*	*-2.9*	*-1.8*	*4.1*	*-0.6*	*1.2*	*4.6*	
Fixed Income (GOF)			*-3.6*	*-2.8*	*-1.7*	*4.4*	*-0.3*	*1.5*	-	
Real Estate*	7,079,619.2	8.9	2.4	3.1	1.8	-1.2	4.8	7.0	9.0	01/01/95
Real Estate Custom Benchmark			*1.4*	*2.6*	*4.1*	*-1.0*	*2.4*	*4.2*	*7.3*	
Real Estate (GOF)			*2.6*	*3.4*	*2.5*	*-0.6*	*5.5*	*7.9*	*10.2*	
Private Equity*	5,758,072.6	7.3	2.4	2.0	6.5	6.2	5.3	11.7	12.1	01/01/95
Private Equity Custom Benchmark			*15.5*	*12.9*	*26.9*	*21.8*	*12.6*	*15.7*	-	
Burgiss Pooled Average			*5.2*	*6.3*	*12.9*	*9.1*	*6.8*	*12.6*	*14.6*	
Alternatives	4,128,747.5	5.2	0.1	3.8	5.4	8.1	7.8	7.5	5.3	01/01/08
Alternatives Custom Benchmark			*2.0*	*6.2*	*8.3*	*9.0*	*6.8*	*7.4*	*4.9*	
Total Fund ex- Alts Benchmark			*-0.3*	*8.2*	*11.0*	*15.2*	*7.7*	*9.3*	*7.3*	
Cash	133,867.8	0.2	0.9	2.7	3.8	4.6	3.9	2.5	2.8	04/01/95
ICE BofAML U.S. 3 Month T-Bill Index			*0.9*	*2.6*	*3.6*	*4.5*	*3.7*	*2.4*	*2.5*	

Note: Real Estate, Private Equity, and certain Alternative Investments market values and returns are reported on a quarter lag. The performance numbers shown * represent June 30, 2026, values. Real Estate, Private Equity, and certain Alternative assets are generally revalued once a year in the fourth quarter. As such, performance for time periods less than one year as reported in the first, second, or third quarter may show large outperformance or underperformance for these asset classes that is not representative of performance over longer time periods. Returns shown are net of external management and custody fees.

Performance Attribution: Quarter and 1-year

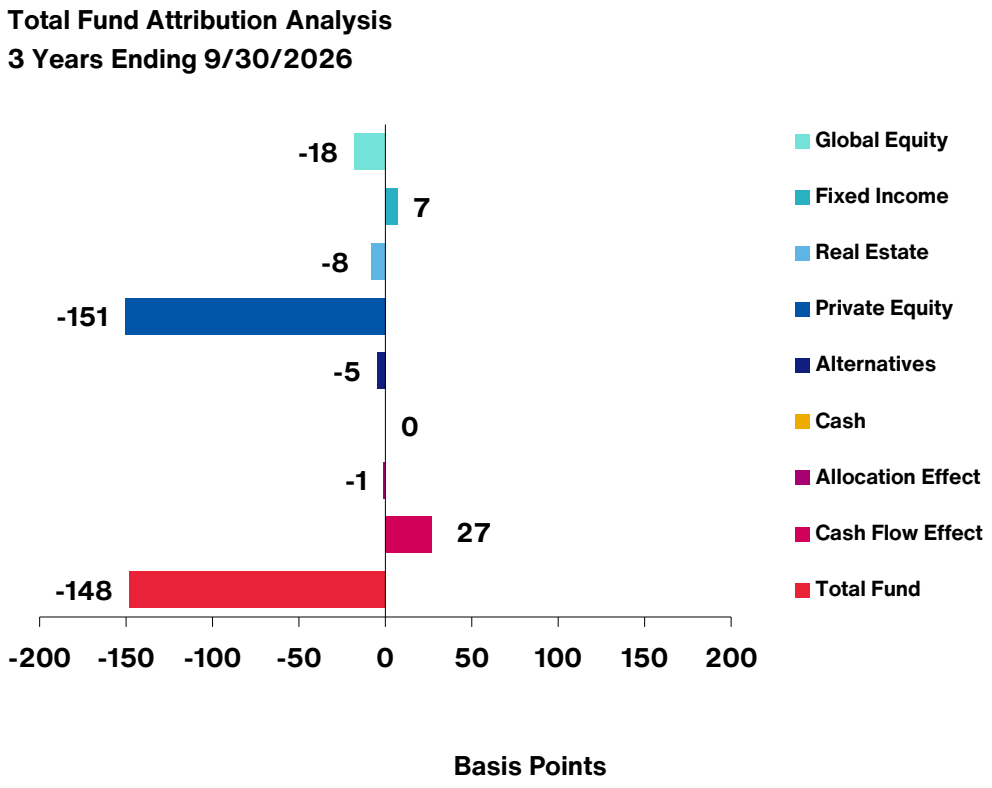
As of September 30, 2026

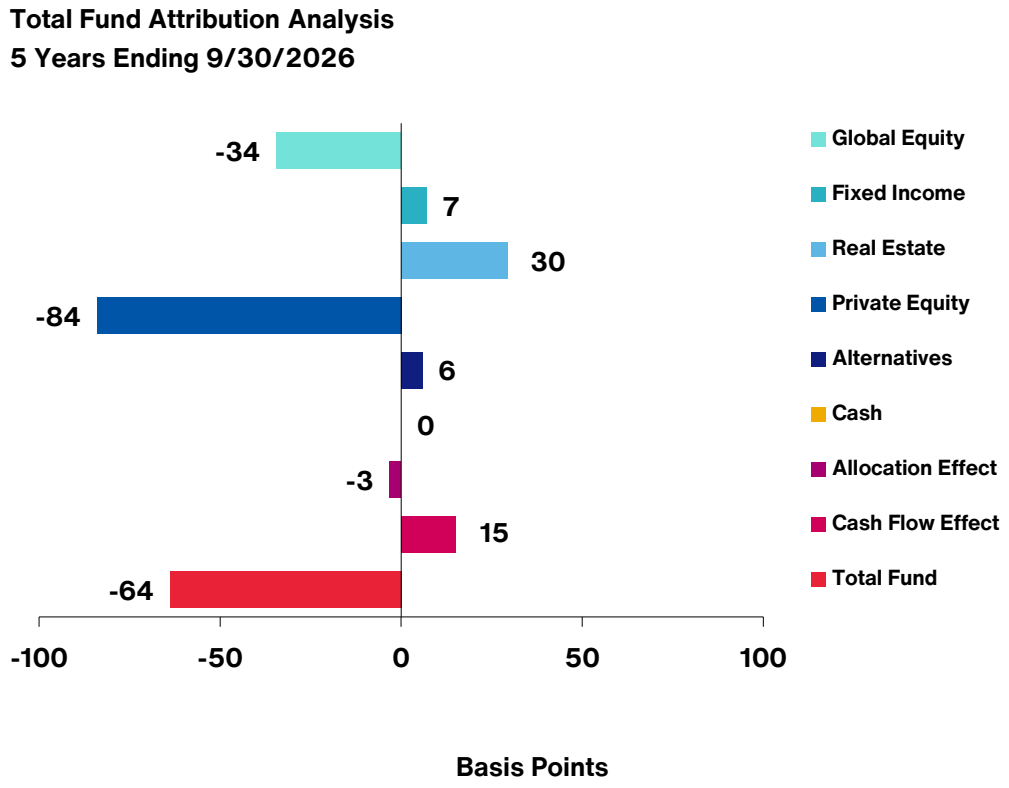




Performance Attribution: 3- and 5-years

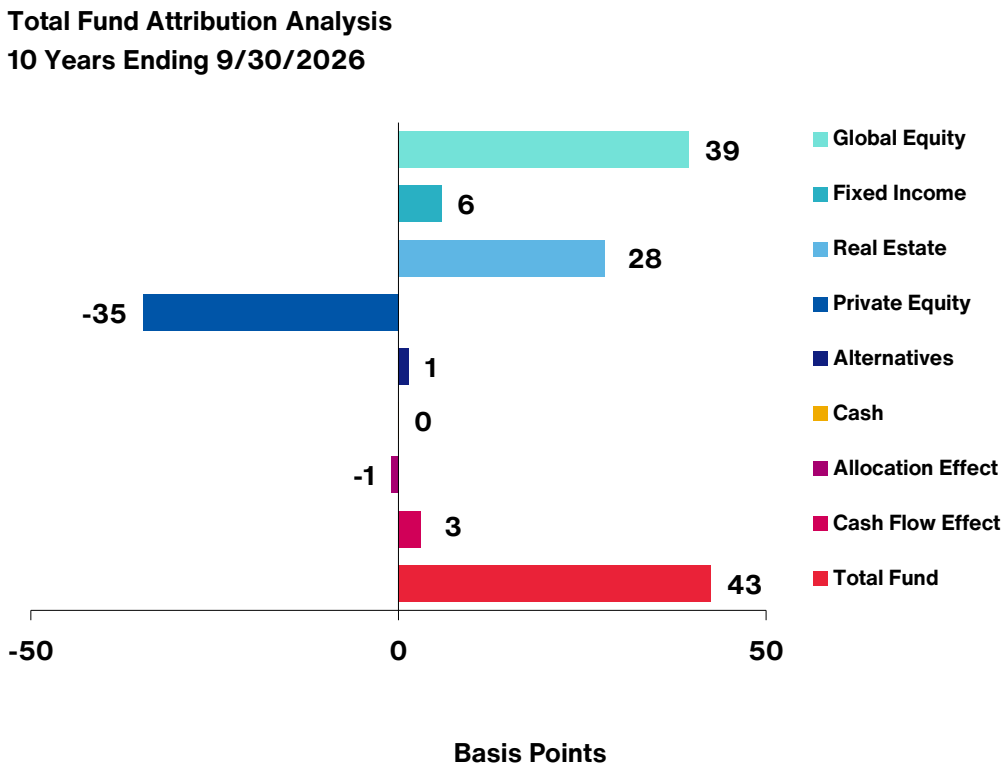
As of September 30, 2026





Performance Attribution: 10-year

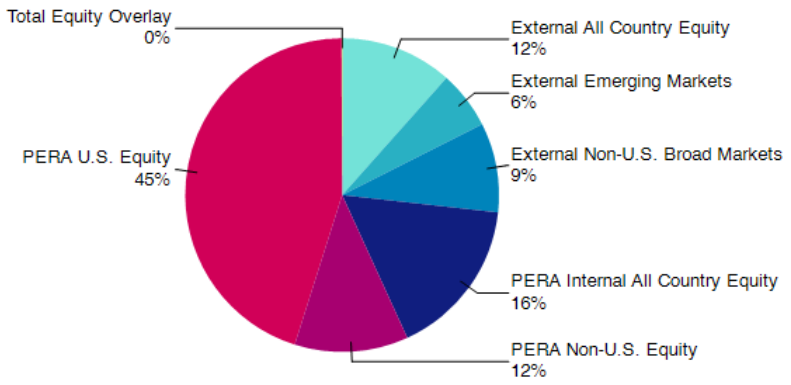
As of September 30, 2026



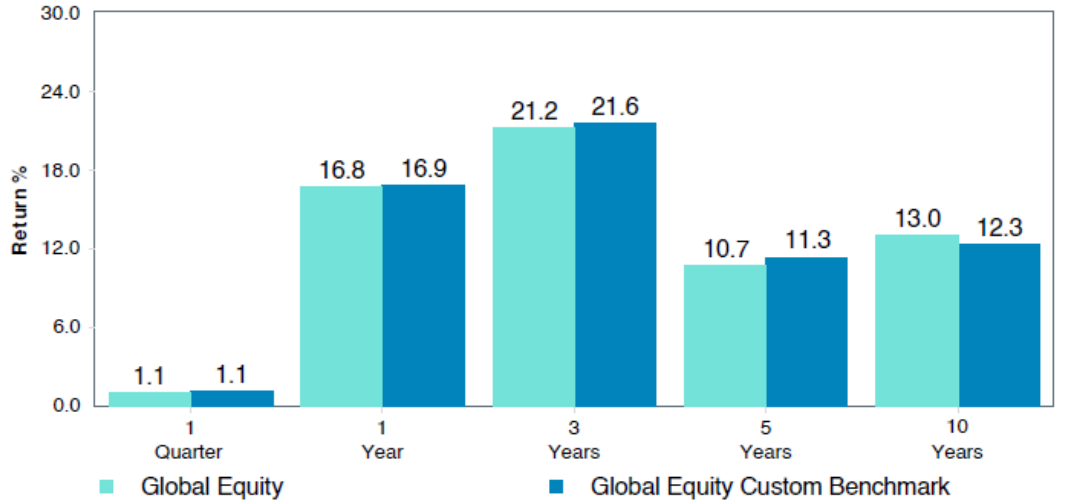
Global Equity
As of September 30, 2026

Current Allocation

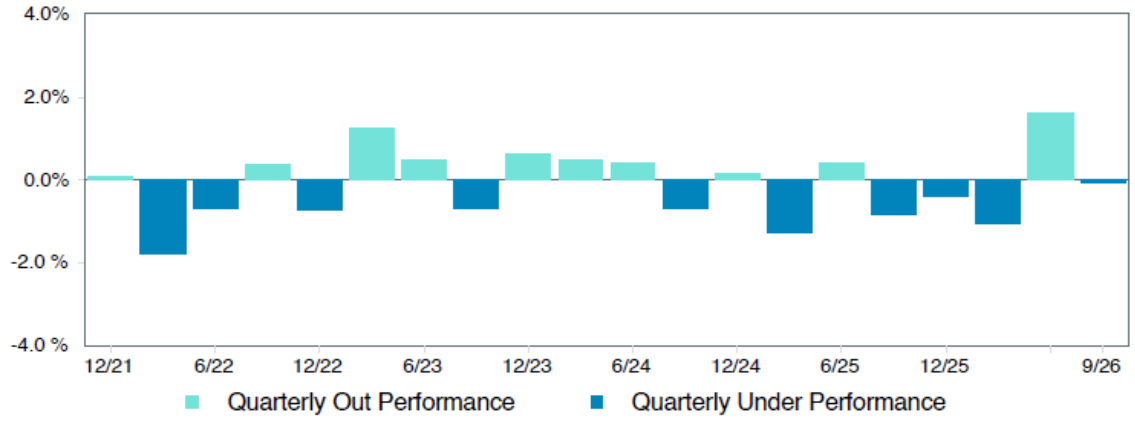
September 30, 2026 : $44,719,954,895



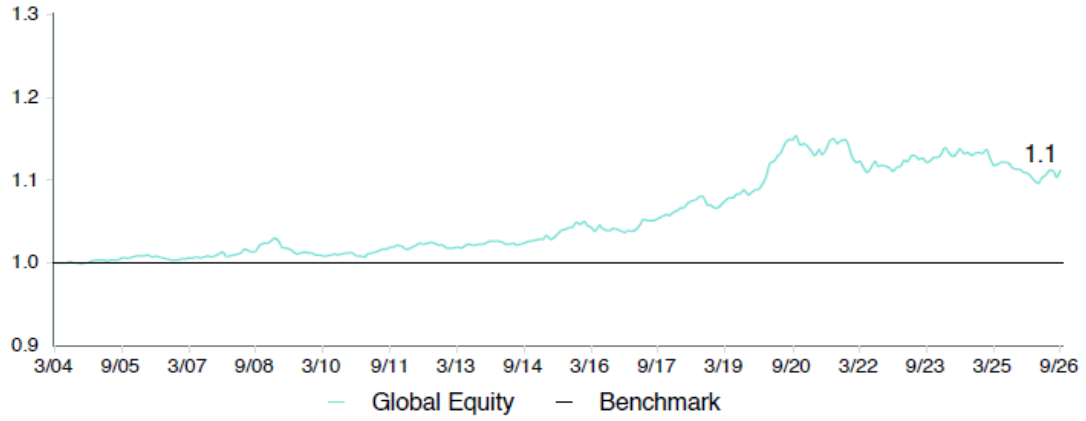
Return Summary



Quarterly Excess Performance



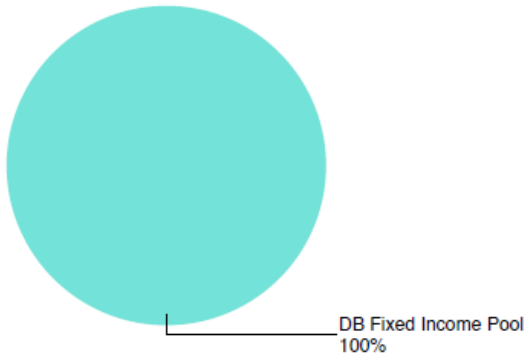
Ratio of Cumulative Wealth - April 1, 2004 To September 30, 2026



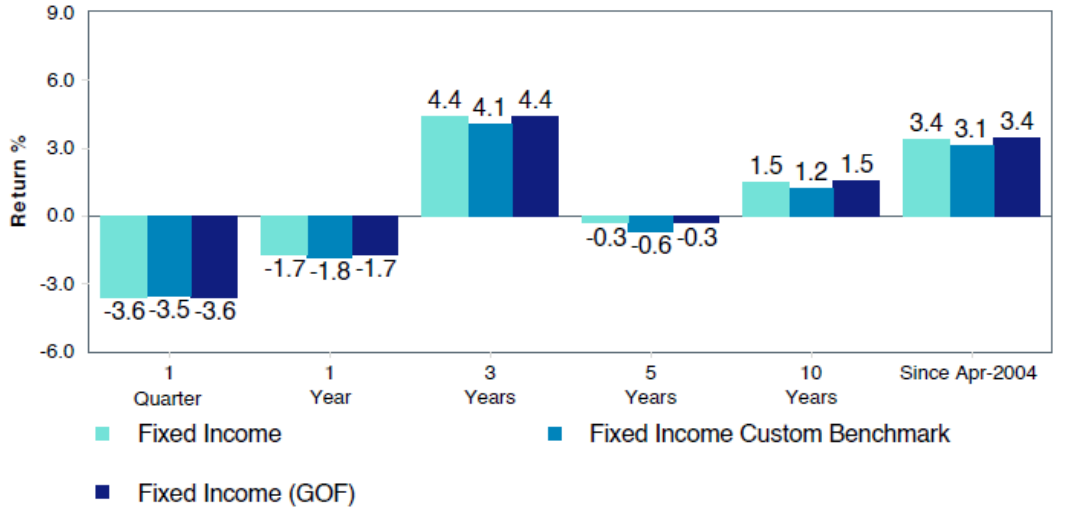
Fixed Income
As of September 30, 2026

Current Allocation

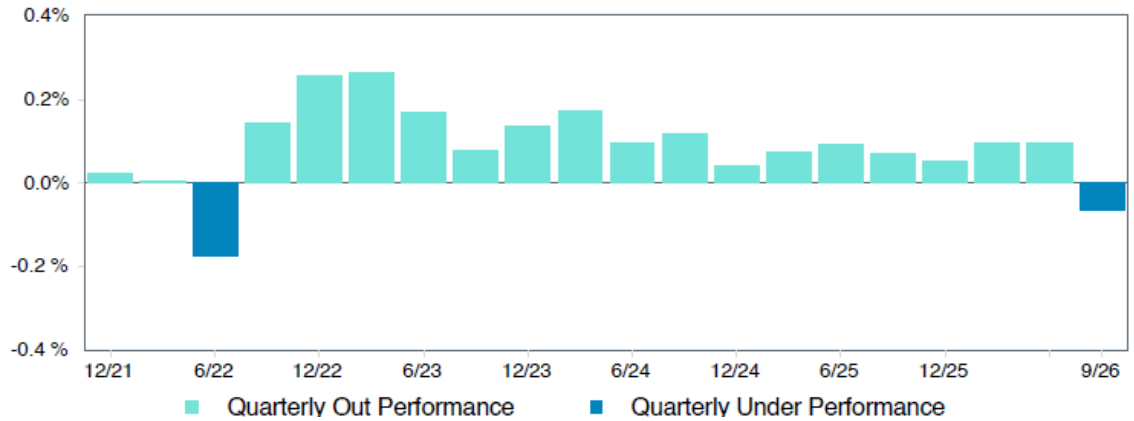
September 30, 2026 : $17,454,778,466



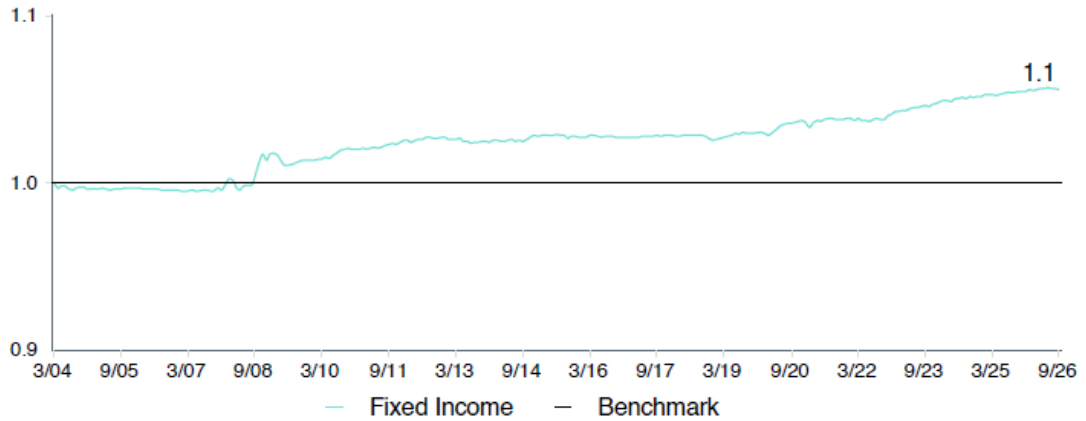
Return Summary



Quarterly Excess Performance



Ratio of Cumulative Wealth - April 1, 2004 To September 30, 2026

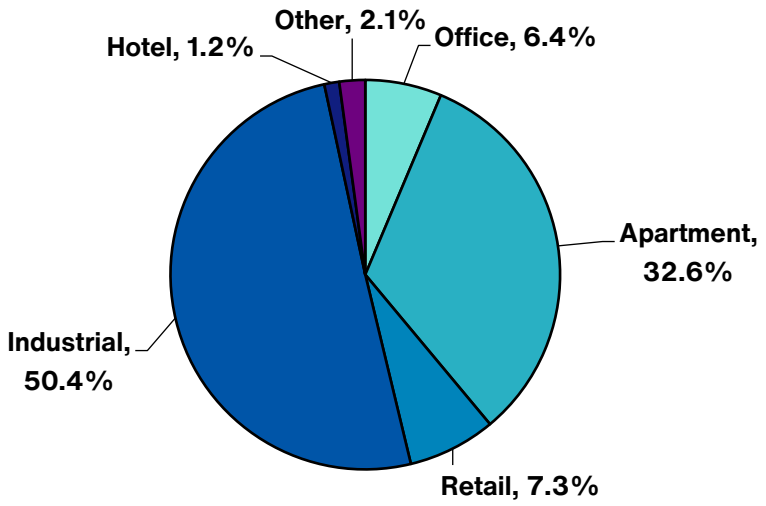


Real Estate

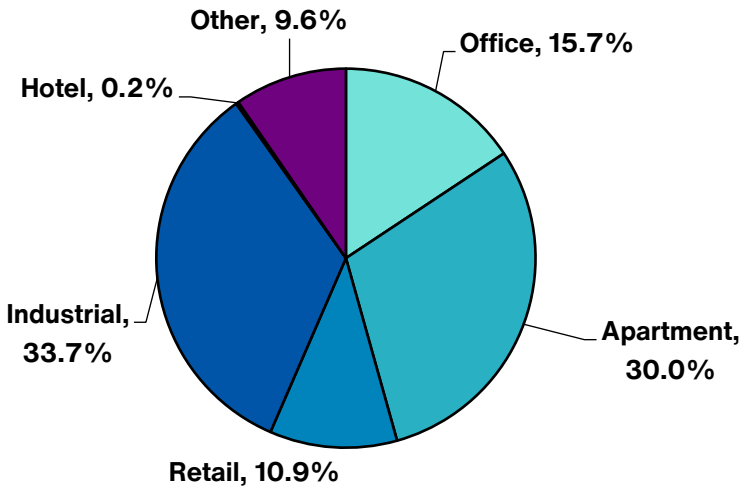
As of September 30, 2026

	Allocation		Performance (%)							
	Market Value ($000)	%	1 Quarter	Year to Date	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Real Estate	7,079,619.2	8.9	2.4	3.1	1.8	-1.2	4.8	7.0	9.0	01/01/95
Real Estate Custom Benchmark			*1.4*	*2.6*	*4.1*	*-1.0*	*2.4*	*4.2*	*7.3*	
Real Estate (GOF)			*2.6*	*3.4*	*2.5*	*-0.6*	*5.5*	*7.9*	*10.2*	

Real Estate Actual Property Type Allocation



NCREIF-ODCE Actual Property Type Allocation



Note: Returns are reported on a quarter lag; the performance numbers shown represent June 30, 2026, values.
Property type allocation data is as of June 30, 2026. Other category consists of healthcare properties, land for development, and mixed use/other.

Private Equity – Performance Overview

As of September 30, 2026

Market Value	**$5.8B**
% of Total Fund	**7.3%**

Long-Term Internal Rate of Return (IRR) Performance (%)

	10 Year	20 Year	30 Year	Since Inception	Inception Date[3]
PERA Private Equity IRRs	13.0	11.9	8.7	10.6	12/31/1982
Benchmark IRR[1]	15.8	11.7	7.2	N/A	

Time-Weighted Return (TWR) Performance (%)

	Quarter	Year to Date	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date[4]
PERA Private Equity TWRs	2.4	2.0	6.5	6.2	5.3	11.7	12.1	01/01/95
Private Equity Custom Benchmark[2]	*15.5*	*12.9*	*26.9*	*21.8*	*12.6*	*15.7*	-	
MSCI AC World IMI with USA Gross	*15.0*	*11.4*	*23.9*	*20.0*	*11.3*	*13.1*	-	
Burgiss / MSCI Pooled Average	*5.2*	*6.3*	*12.9*	*9.1*	*6.8*	*12.6*	*14.6*	

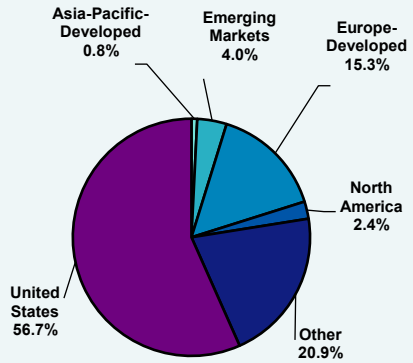
Internal Rate of Return (IRR) includes the impact of the timing and magnitude of cash flows. Therefore, it is more appropriate for evaluating private market manager skill.

The objective of the PE asset class is to outperform the PME on an IRR basis.

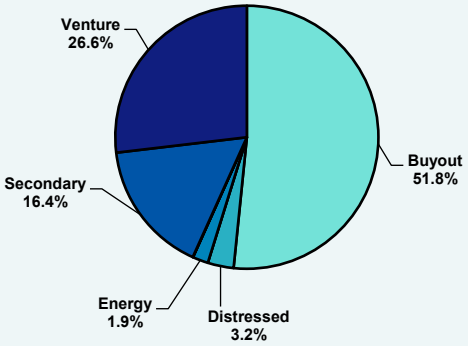
Time-Weighted Return (TWR) measures investment performance independent of the timing and size of cash flows.

It is necessary for Total Fund analyses, including:
- Performance reporting and evaluation
- Supports risk and return analysis by providing cash-flow-neutral returns

Regional Exposure



Investment Type



[1]Calculated as a public market equivalent (PME), representing an opportunity cost benchmark reflecting the return that would have been achieved had the cash been invested in the MSCI ACWI IMI (Net) with USA Gross plus 200 basis points annually. Please see appendix for full history.
[2]MSCI ACWI IMI with USA Gross plus 200 basis points (bps). Prior to January 2025, the MSCI ACWI IMI with USA Gross plus 150 basis points (bps). Prior to January 2019, Burgiss / MSCI time weighted rate of return.
[3]Inception date of December 31, 1982. This date reflects the program's first cash flow
[4]Reflects the inception of Aon's performance reporting relationship

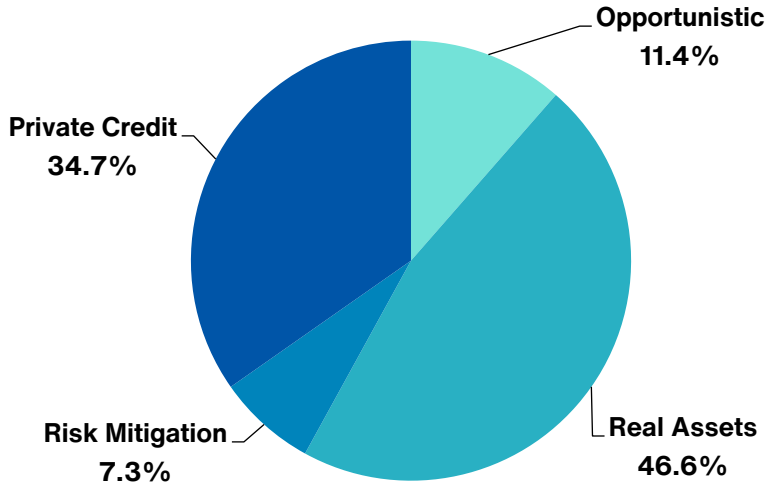
Note: Trailing performance, IRR data, and Investment Type is as of June 30, 2026. Regional Exposure data is as of March 31, 2026. IRR return period returns refer to vintage years in that period.

Alternatives Asset Allocation & Performance

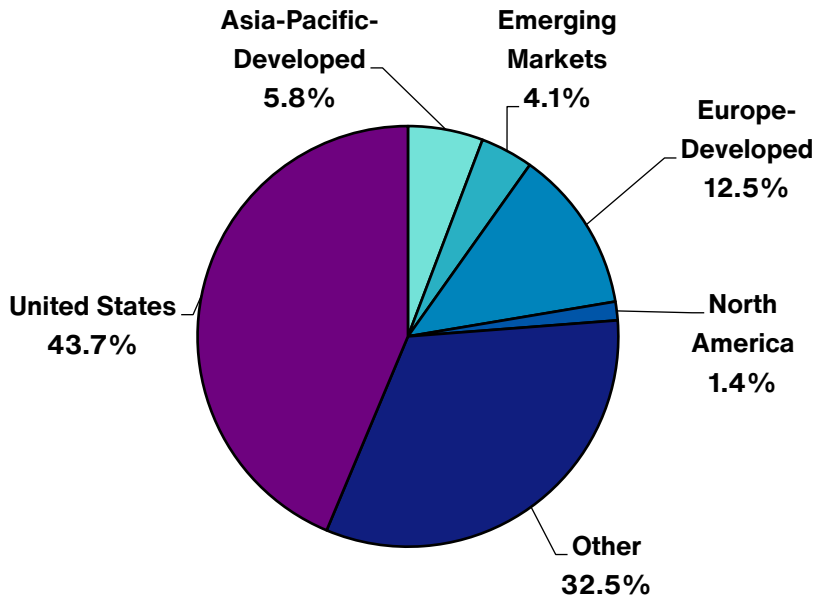
As of September 30, 2026

	Allocation		Performance (%)							
	Market Value ($000)	%	1 Quarter	Year to Date	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Alternatives	4,128,747.5	5.2	0.1	3.8	5.4	8.1	7.8	7.5	5.3	01/01/08
Alternatives Custom Benchmark			*2.0*	*6.2*	*8.3*	*9.0*	*6.8*	*7.4*	*4.9*	
Total Fund ex- Alts Benchmark			*-0.3*	*8.2*	*11.0*	*15.2*	*7.7*	*9.3*	*7.3*	

Alternatives Allocation

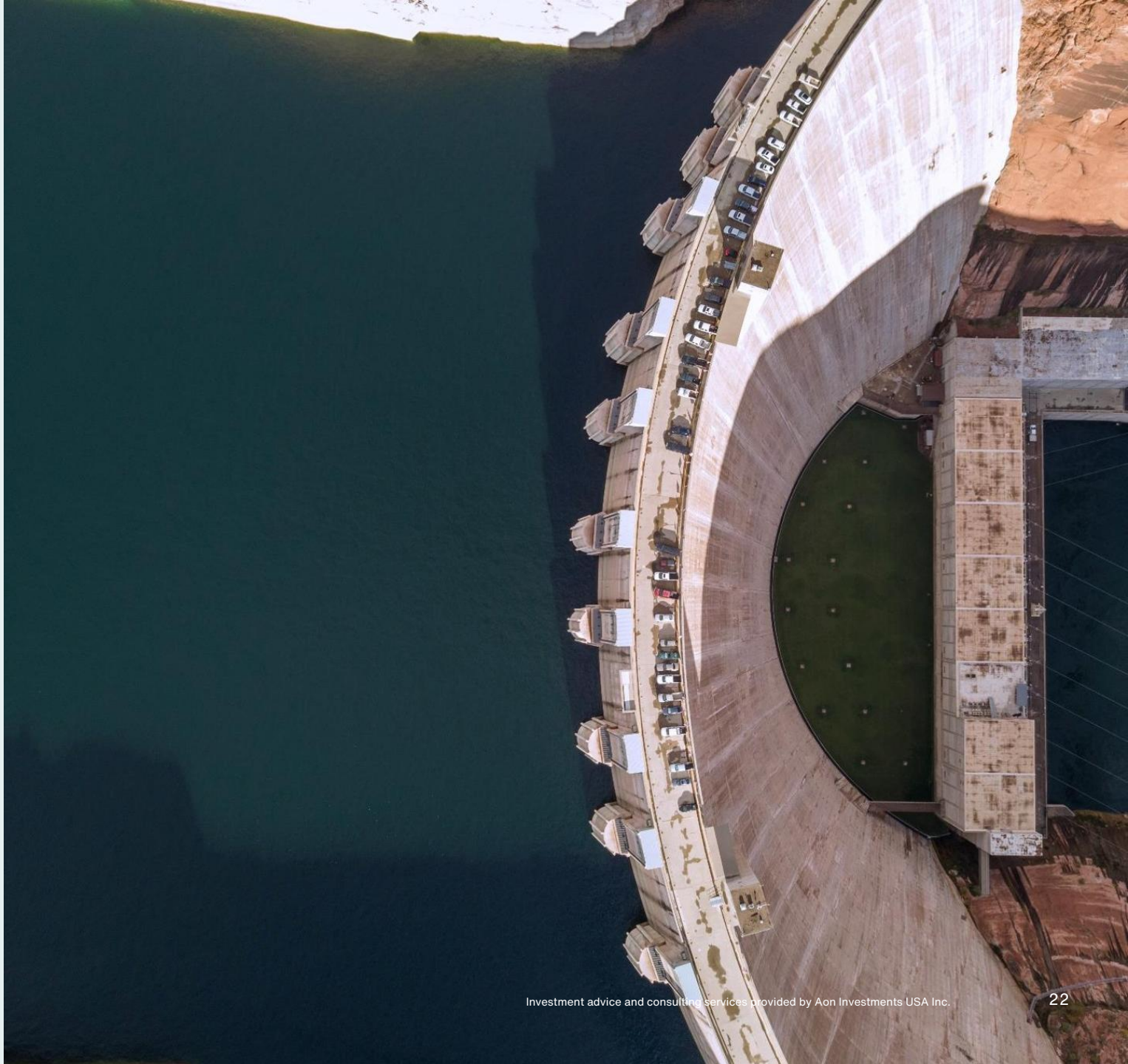


Regional Exposure



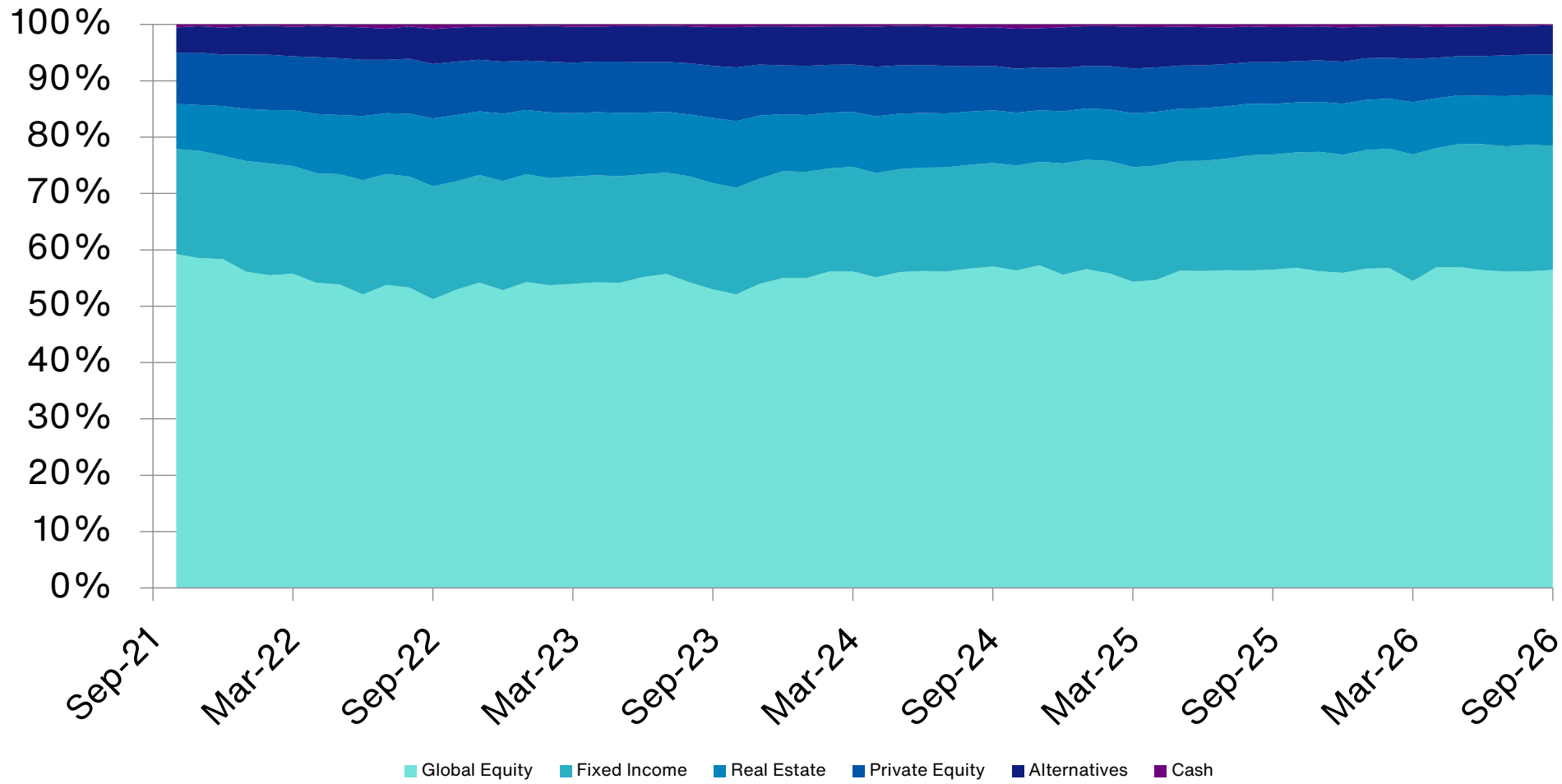
Note: Regions Data is as of June 30, 2026.

Appendix



Total Fund Asset Growth

September 2021 – September 2026



Appendix Definitions*

Net of Fee Return Definition - Investment performance is reported using time weighted rates of return and is calculated net of external investment management and custody fees, unless otherwise indicated. Returns do not include internal investment management costs or PERA administrative expenses. Other instances use: Annualized, time-weighted, net of external management and custody fees.

Policy Benchmark – A combination of 51.0% of the Global Equity Custom Benchmark, 23.0% of the Fixed Income Custom Benchmark, 10.0% of the Real Estate Custom Benchmark, 10.0% of the Private Equity Custom Benchmark, and 6.0% of the Alternatives Custom Benchmark.

Global Equity Custom Benchmark – The MSCI All Country World Investable Markets Index (Net) with USA (Gross).

Fixed Income Custom Benchmark – The Bloomberg Barclays U.S. Aggregate Bond Index.

Real Estate Custom Benchmark – The NCREIF Fund Index – Open End Diversified Core Equity plus a performance hurdle of 50 basis points annually.

Private Equity Custom Benchmark – The MSCI ACWI IMI (Net) with USA Gross plus 200 basis points annually.

Alternatives Custom Benchmark – Weighted average of beginning of year market values for each of the four objectives (Risk Mitigation: HFRI FOF Market Defensive Index, Real Assets: CPI plus 400 basis points, Opportunistic: PERA Public Markets plus 150 basis points, Private Credit: Morningstar LSTA Leveraged Loan Index plus 150 basis points).

Total Fund ex-Alts Fund Benchmark – A combination of 54.3% Global Equity Custom Benchmark, 24.5% Fixed Income Custom Benchmark, 10.6% Real Estate Custom Benchmark, and 10.6% Private Equity Custom Benchmark.

Cash Performance Benchmark – The ICE BofAML U.S. 3-Month Treasury Bill Index.

Public Fund Universe – A universe of public pension funds with assets over $1 billion compiled by BNY Mellon Performance & Risk Analytics in conjunction with Investment Metrics.

Private Equity Investment IRR Benchmark – An opportunity cost benchmark that shows the return that would have been achieved had the cash invested in a private equity portfolio been invested in the MSCI ACWI IMI (Net) with USA Gross plus 200 basis points annually. Under this methodology, hypothetical shares in a public market index are purchased on the same dates and in the same amounts as contributions made to the private equity fund, and hypothetical shares are sold on the same dates and in the same amounts as distributions received from the fund. The Benchmark IRR is calculated using the cash flows and residual value of the hypothetical public index shares.

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STATEMENT OF INVESTMENT POLICY

Combined Investment Fund (The Defined Benefit Trust Funds, The Life Insurance Reserve Fund, ~~and~~ The Health Care Trust Funds, and The Direct Distribution Reserve)

Revised January ~~17~~29, ~~2025~~2027

PURPOSE

The Public Employees' Retirement Association of Colorado (Colorado PERA or PERA) is a defined benefit plan, created by Colorado Statute 24-51-201:

> There is hereby created the public employees' retirement association, for the purpose of providing the benefits and programs specified in this article, which shall be a body corporate with the right to sue and be sued and the right to hold property for its use and purposes.
>
> Notwithstanding the applicability of sections 2-3-103, 24-4-103, 24-6-202, and 24-6-402, C.R.S., as provided for in this article, the association shall not be subject to administrative direction by any department, commission, board, bureau, or agency of the state. The association is an instrumentality of the state.

The Statement of Investment Policy (SIP) sets forth the investment policies by which the Combined Investment Fund (the defined benefit trust funds, the life insurance reserve fund, ~~and~~ the health care trust funds, and the direct distribution reserve) will be managed. This SIP is consistent with, and complements, related Colorado Statutes and is intended to be binding upon all persons with authority over PERA's investments. Deviation from the SIP is not permitted without explicit written permission, in advance, from the Board of Trustees (Board). This SIP was adopted on November 19, 2004, and most recently amended on January ~~17~~29, ~~2025~~2027.

INVESTMENT PHILOSOPHY

The investment philosophy for PERA has been determined with careful consideration of its primary fund purpose, fiduciary obligations, statutory requirements, liquidity needs, income sources, benefit obligations, and other general business conditions. The investment philosophy embraces the following:

- Strategic asset allocation is the most significant factor influencing long-term investment performance and asset volatility and should be set in the context of projected actuarial liabilities, expected contributions, capital market assumptions, liquidity profile and acknowledged risk tolerance. The asset allocation targets, determined by the Board, will be adhered to through a clearly defined rebalancing program.
- The fund's liabilities are long term and the investment strategy will therefore be long term in nature. Strategic decisions will prevail in determining asset allocation rather than tactical or short-term market timing decisions.
- The Board recognizes that the strategic asset allocation is expected to achieve its objective over long time periods (e.g., 30 years) and that in shorter periods, the range of expected returns is wide. Given the perpetual nature of PERA's investment time horizon, the Board believes the long-term focus of the strategic asset allocation is vital when reviewing success of the investment program.

» The asset allocation policy and its resulting diversification benefits will be periodically reexamined to ensure its appropriateness to the then prevailing liability considerations.

» PERA believes diversification is a fundamental risk management tool and seeks to diversify across investments with different risk and return characteristics to reduce the impact of any single investment, asset class, or risk factor on the overall portfolio

» PERA seeks returns from both strategic market exposures and active investment decisions. Strategic asset allocation is expected to be the primary driver of long-term returns, while active management may provide additional value through the prudent exploitation of market inefficiencies.

~~» Market-related risk and non-market related risk investments will be utilized. (Market-related risk refers to risk systematic to a market or risk embedded in the strategic asset allocation policy. Non-market related risk refers to risk derived from active management or tactical decisions.) Market-related risks are expected to produce returns proportional to the level of those risks over long periods of time as a natural feature of reasonably efficient capital markets. Non-market related risks may produce additional returns when capitalized upon through skilled active management in the presence of some degree of market inefficiency. As a long-term investor, PERA will invest across a wide spectrum of market-related risk investments, categorized in asset classes, in a prudent manner consistent with the strategic asset allocation policy referred to above. Passive investing can be a desirable way of obtaining market-related risk exposure to asset classes.~~

» ~~Non-market related risks, also known as a~~Active management risk~~,~~ may be expected to add value over passive investing with comparable benchmarks, under appropriate conditions, and can be employed by the fund with controls in place that are appropriate to the particular investment.

~~»~~ Illiquid and long-lived investments are expected to provide a return premium over more liquid alternatives. As a long-term investor, PERA will take on illiquid investments when it believes those will provide more favorable returns on an absolute and a risk-adjusted basis compared to liquid markets, and only to a degree where the fund's ability to meet benefit payments and other cash outflows is not compromised.

»

~~»~~ Consistent with its fiduciary duty, PERA seeks to manage investment-related costs prudently, recognizing that costs are a meaningful determinant of long-term investment performance. ~~Costs of an investment program matter. PERA will seek to manage all investment-related costs closely.~~

»

» PERA serves as a prudent steward of plan assets under its fiduciary obligation to strengthen the long-term financial standing of the fund for the benefit of the PERA membership. PERA's approach to investment stewardship is to support the goals and objectives in this SIP through various initiatives described in PERA's Investment Stewardship publications.

INVESTMENT GOALS AND OBJECTIVES

The function of PERA is to provide present and future retirement or survivor benefits for its members. This objective requires the prudent assumption of investment risk in seeking to maximize long-term investment returns while incorporating the fund's liability requirements.

The future investment performance of the fund directly affects its future financial strength. However, the greater the expected return of the strategic asset allocation policy, the higher the risk, and thus the greater the volatility of expected returns. With this greater volatility, the volatility of the surplus (deficit) of the plan may also be greater. The optimal balancing of these return and risk considerations will be considered in the context of the fund's short-term and long-term benefit obligations.

ROLES AND RESPONSIBILITIES

Although not specifically required by Statute, the *Governance Manual*, adopted November 2001, and subsequently updated and revised, identifies the roles and responsibilities of the various parties that oversee the investment and management of the Combined Investment Fund.

BOARD OF TRUSTEES

In accordance with PERA Law, the Board has complete control and authority to invest the funds of PERA. As fiduciaries, Trustees shall carry out their functions solely in the interest of PERA members and for the exclusive purpose of providing benefits and defraying reasonable expenses incurred in performing such duties. The Board shall diversify the investments of PERA to pursue the most attractive returns relative to risk across multiple asset classes, a broad investible universe, and a long-term horizon. The Board shall minimize the risk of losses unless, in light of the circumstances, it is not prudent to do so. The Trustees shall act with the care, skill, prudence, and diligence considering the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use.

Specific responsibilities, as defined in the *Governance Manual*, include:

- Approve Statements of Investment Policy and Philosophy and review the statements at least biennially
- Approve the strategic asset allocation and associated benchmarks
- Ensure that an asset/liability study for the defined benefit trust funds is performed at least every three to five years, or more frequently if it so determines, and review the results
- Appoint, evaluate, and terminate the investment consultant

INVESTMENT COMMITTEE

Commented [JN1]: These will match the final Investment Committee Charter.

The Investment Committee is responsible for assisting the Board in overseeing the PERA Investment Program. Specific responsibilities, as defined in the *Governance Manual*, include:

- Recommend to the Board Statements of Investment Policy and Philosophy, and review the statements at least biennially
- Recommend to the Board the strategic asset allocation and associated benchmarks
- If requested by the Board Chair, perform an asset/ liability study of the defined benefit trust funds at least every three to five years, or more frequently if so directed by the Board
- Review, at least annually, PERA's compliance with the Statement of Investment Policy
- Review costs of the investment program
- Review total fund, asset class, and investment manager performance and risk
- If requested by the Board Chair, recommend to the Board the investment consultant
- Advise the Board on any other investment matters and make recommendations for Board action when necessary

Additional monitoring and reporting requirements are specified in the *Governance Manual*.

STAFF

The overriding role of the staff is to assist the Board in managing the PERA Investment Program. In this regard, as defined in the *Governance Manual*, staff is expected to:

- Recommend to the Investment Committee Statements of Investment Policy and Philosophy, and review the statements with the Investment Committee at least biennially
- Coordinate an asset/liability study of the defined benefit trust funds at least every three to five years, or more frequently if so directed by the Board
- Develop, within policy parameters approved by the Board, investment manager structures for each asset category in which PERA invests
- Negotiate and approve guidelines and contracts for each investment manager
- Execute portfolio rebalancing in accordance with the policies of the Board
- Advise the Board and the Investment Committee on any other investment matters
- Recommend to the Investment Committee the investment consultant

Additional monitoring and reporting requirements are specified in the *Governance Manual.*

INVESTMENT MANAGERS

Internal or external investment managers will invest plan assets according to the investment

style for which they were hired and their judgments concerning relative value of securities. In particular, investment managers are accorded full discretion, within policy and guideline limits, to:

- Select individual securities and other investment exposures as defined in their mandates
- Diversify portfolio assets

Staff will monitor and review all investment portfolios, managers, and fees paid by the fund. The Investment Department's Policies and Procedures, adopted by staff in January 2006, and subsequently updated and revised, describes the process by which managers will be selected, criteria for evaluation, as well as reasons for termination or removal.

CONSULTANTS

Consultants are fiduciaries and shall discharge their duties with respect to this fund solely in the interest of the members and benefit recipients with the care, skill, prudence, and diligence under the circumstances then prevailing.

Qualified Consultants include those professionals with the background, expertise, and demonstrated success as institutional investment consultants, and with research/ database access to assist in providing investment program advice.

CUSTODIAN

The Custodian(s) holds directly, through its agents, its sub-custodians, or designated clearing systems, assets as designated by the Board. The Custodian is accountable for registration of those designated assets in good delivery form, collection of income generated by those assets, and any corporate action notification. The Custodian(s) is responsible for delivery and receipt of securities of the aforementioned transactions. The Custodian(s) is required to provide records and reports, performance reporting, accounting reports and other services included by contract. The Board may opt to designate other duties to the Custodian(s).

ASSET ALLOCATION POLICY

PERA's Policy Benchmark weights and ranges are specified below.

Asset Class	Policy Benchmark Weight	Permissible Ranges
Global Equity	51.0%	45.0% to 57.0%
Fixed Income	23.0%	18.0% to 28.0%
Private Equity	10.0%	5.0% to 15.0%
Real Estate	10.0%	5.0% to 15.0%
Alternatives	6.0%	1.0% to 11.0%

Cash	0.0%	0.0% to 3.0%
Total Fund	100.0%	—

The strategic asset allocation policy will be periodically reviewed, as described under "Investment Philosophy" and "Roles and Responsibilities."

REBALANCING POLICY

The purpose of the rebalancing policy is to ensure the adherence to the strategic allocation plan.

Unexpected changes in market values may, on occasion, cause the actual asset allocation to fall outside of the allowable ranges. This policy applies to all asset classes in which PERA invests and requires staff to implement rebalancing trades if, as of any quarter end, the allocation to any asset class is outside the allowable ranges. The Board recognizes, however, the inherent difficulty in managing the allocations to the illiquid (private) asset classes. While the Board expects there to be a process in place that attempts to estimate capital calls and distributions in the private asset classes, it recognizes the difficulty in buying and selling partnership interests or real estate to manage the Fund's allocation to these asset classes.

As such, with respect to PERA's private asset classes, the Board expects the allocations to these areas to be managed as close as practical to the policy targets. As of any quarter-end, the Board expects staff to report private asset class allocations that fall outside the prescribed ranges. In addition, the Board expects staff to provide an implementation recommendation, if any, to bring the fund's allocation to these areas back within the allowable ranges. The Board acknowledges this implementation plan may be to do nothing, if it is expected that this is in the best fiduciary interest of the plan.

Managing the allocations to the public asset classes involves a risk reduction trade-off with increased transaction costs. As such, the Board expects staff to implement this policy in a manner which seeks to minimize the impact of transaction costs. The Board also expects staff to use cash contributions and cash needs to move the Total Fund's asset allocation as close as practical to the policy targets.

When markets move such that the Fund's normal cash flows are insufficient to maintain the Fund's actual asset allocation within the permissible ranges as of any quarter end, the Board expects staff to implement the necessary transactions to bring the Fund's allocation back to within the allowable ranges. Before a rebalancing transaction is implemented, the Board expects staff to identify those portfolios that are likely to have the lowest cost of trading. Absent any asset class structure considerations, the Board expects these low trading cost portfolios to be utilized more frequently to implement required Total Fund rebalancing.

ELIGIBLE ASSET CATEGORIES

The Board is responsible for identifying asset categories in which the fund will invest. The following are the asset categories in which PERA currently invests along with a discussion of market efficiency in each category.

The efficiency of markets is relevant to expected return opportunities. Highly efficient markets provide less opportunity to add value above market returns. Highly inefficient markets provide more opportunity to add return above what is available by the market. This above market return expectation can be referred to as alpha.

Market return can be referred to as beta.

GLOBAL EQUITY

PERA's Global Equity asset class includes a combination of public U.S. and non-U.S. equity markets. The asset class is a primary driver of total fund return in the long run, while also providing liquidity to the total fund.

Capital market theory suggests that PERA should be fully diversified globally, not just locally. The role of the Global Equity asset class is to provide capital appreciation and income for the Total Fund. While equities provide an opportunity for long-term growth, it is a volatile asset class, which must be balanced with a diversified portfolio.

The U.S. equity market is one of the most efficient capital markets in the world because of the availability of public information regarding the future prospects of individual companies, combined with the numerous market participants rendering assessments of this information. In structuring portfolios, financial theory and empirical evidence suggest that a broad-market index, that encompasses the entirety of the U.S. equity market, will provide the most efficient portfolio structure.

Non-U.S. equity markets encompass those of developed and emerging economies. Individual country markets exhibit varying degrees of market efficiency. One requirement of market efficiency is the ability of capital to flow freely among markets. Capital flows in non-U.S. equity markets are sometimes hampered by capital controls and less liquidity relative to that available in the U.S. Therefore, it is expected that the PERA non-

U.S. equity exposure will be structured to attempt to capitalize on the perceived inefficiencies of these markets.

While equity markets are very efficient, they are not perfectly efficient. When appropriate skill is available, it may be possible to successfully use active management techniques to make modest improvements over benchmark returns, with acceptable levels of risk.

FIXED INCOME

The role of Fixed Income is to provide diversification and liquidity, while reducing total fund

volatility. Fixed income can provide a significant source of diversification relative to an equity-oriented portfolio. The volatility (investment risk) of fixed income securities is generally substantially lower than the volatility of equities. In addition, there usually are significant differences in the pattern of returns between equity and fixed income investments.

This suggests that, in most market environments, when combined with equity securities and other assets, a fixed income allocation can serve to reduce the overall risk of the portfolio without materially sacrificing return potential over the long term.

The fixed income asset class is a diverse capital market. Common public securities include government, mortgage-backed, asset-backed, and high-quality corporate bonds of U.S. and non-U.S. issuers. While fixed income markets are relatively efficient, they are not perfectly efficient. Fixed income can experience less efficiency at times and in certain segments. The Fixed Income portfolio may make use of both active and passive investment mandates and will include allocations to all major segments of the core fixed income market, with a primary focus on higher quality fixed income. When appropriate, the portfolio may also include a small allocation to non-core assets.

PRIVATE EQUITY

The role of Private Equity is to provide enhanced returns beyond what is available in public equity. The private equity asset class can encompass many different and distinct asset categories. Currently, the PERA portfolio is comprised of various private equity investments—largely buyout, ~~growth~~ secondary and venture capital partnerships, and special situations. These types of investments exhibit high levels of risk, with an expectation for high rates of investment returns. These investments can exhibit a high level of correlation with the publicly-traded equity markets, but the correlation levels are not perfect and therefore Private Equity also offers potential diversification benefits.

The private equity asset class is considered highly inefficient, providing opportunities for the adept active management in this asset class to capitalize. The primary benefit afforded investors in this asset class is the expectation of generating high levels of investment returns, although manager selection is a critical determinant of success.

REAL ESTATE

The role of Real Estate is to be a source of alternative income and diversification. While the factors that influence real estate returns may also influence the returns of equity and fixed income portfolios, these factors impact real estate in a different manner than the other asset classes. This suggests that the return patterns of real estate have a low correlation to other asset classes, providing a diversification benefit when combined with equities and bonds.

The nature of real estate investing indicates that each individual property has unique characteristics, and as such, investing in real estate requires a substantial amount of

information regarding local economic factors and demographic profiles, among others.

It is expected that the real estate portfolio will be invested according to this information intensive investment approach, will primarily include exposure to private real estate, and be broadly diversified by geography and property type.

ALTERNATIVES

The role of Alternatives is to provide enhanced returns and diversification over the long term. The purpose of Alternatives is to provide a framework for investing in private market asset classes that do not fit within the traditional portfolio structure or in allocations that are too small to warrant their own stand-alone asset class. These illiquid investments are expected to provide greater exposure to market inefficiencies. Currently, PERA's Alternatives asset class is comprised of Private Credit and Real Assets.

Private Credit covers most types of lending that are not included in the traditional fixed income category. As a broad asset class, there are several categories of investments within the private credit markets. Each sector has unique features based on cash yields, collateral types, and correlations with public markets. Fundamental advantages of private credit include a mix of yield enhancement relative to publicly-traded fixed income, protection against interest rate risk, and diversification through access to non-publicly traded debt.

Real Assets cover a broad range of categories, including "hard assets" such as infrastructure, natural resources, and other intangible assets with intrinsic value. These sectors offer different risk and reward profiles based on their underlying assets and stage of development. Real Assets typically exhibit stable and predictable cash flows, modest correlations to traditional asset classes, and long-term inflation protection potential driven by contracted or regulated revenues with embedded inflation adjustments.

INVESTMENT RESTRICTIONS

Colorado Statute 24-51-206 establishes what investments are permissible as well as certain limitations:

24-51-206 INVESTMENTS

(1) The board shall have complete control and authority to invest the funds of the association. Preference shall be given to Colorado investments consistent with sound investment policy.

(2) Investments may be made without limitation in the following:

  (a) Obligations of the United States government;

  (b) Obligations fully guaranteed as to principal and interest by the United States government;

(c) State and municipal bonds;

(d) Corporate notes, bonds, and debentures whether or not convertible;

(e) Railroad equipment trust certificates;

(f) Real property;

(g) Loans secured by first or second mortgages or deeds of trust on real property; except that the origination of mortgages or deeds of trust on residential real property is prohibited. For the purposes of this paragraph (g) “residential real property” means any real property upon which there is or will be placed a structure designed principally for the occupancy of from one to four families, a mobile home, or a condominium unit or cooperative unit designed principally for the occupancy of from one to four families.

(g.5) Investments in stock or beneficial interests in entities formed for the ownership of real property by tax-exempt organizations pursuant to section 501 (c) (25) of the federal “Internal Revenue Code of 1986”, as amended; except that the percentage of any entity’s outstanding stock or bonds owned by the association shall not be limited by the provisions of paragraph (b) of subsection (3) of this section;

(h) Participation agreements with life insurance companies; and

(i) Any other type of investment agreements.

(3) Investments may also be made in either common or preferred stock with the following limitations:

(a) The aggregate amount of moneys invested in corporate stocks or corporate bonds, notes, or debentures which are convertible into corporate stock or in investment trust shares shall not exceed sixty-five percent of the then book value of the fund.

(b) No investment of the fund in common or preferred stock, or both, of any single corporation shall be of an amount which exceeds five percent of the then book value of the fund, nor shall the fund acquire more than twelve percent of the outstanding stock or bonds of any single corporation.

(c) (I) Each investment firm offering for sale to the board corporate stocks, bonds, notes, debentures, or a mutual fund that contains corporate securities, shall disclose, in any research or other disclosure documents provided in support of the securities being offered, to the board whether the investment firm has an agreement with a for-profit corporation that is not a government-sponsored enterprise, whose securities are being offered for sale to the board and because of such agreement the investment firm:

(A) Had received compensation for investment banking services within the most recent twelve months; or

(B) May receive compensation for investment banking services within the next three consecutive months

(II) For the purposes of this paragraph (c), “investment firm” means a bank, brokerage

firm, or other financial services firm conducting business within this state, or any agent thereof.

24-54.8-201 DIVESTMENT FROM COMPANIES WITH PROHIBITIONS AGAINST ISRAEL

Colorado Statute 24-54.8-201 *et seq.* titled Divestment From Companies With Prohibitions Against Israel was signed into law on March 18, 2016.

The statute:

- Requires PERA to create a Restricted Company list comprised of non-United States based companies that maintain economic prohibitions against Israel
- Prohibits PERA from acquiring direct holdings in securities of non-United States based companies that maintain economic prohibitions against Israel
- Requires PERA to engage companies on the Restricted Company list
- Requires PERA to divest of certain securities as specified in the statute
- Requires PERA to provide divestment information on its website at least annually

Additional information as well as the Board-adopted methodology for the creation of the Restricted Company list required by statute can be found on the PERA website at: www.copera.org/investments/divestment.

RISK CONTROLS

The Board requires:

- The Total Fund is to be broadly diversified across and within asset classes to limit the volatility of the Total Fund investment returns and to limit the impact of large losses on individual investments of the Total Fund
- Individual portfolios will be managed according to written investment guidelines that are approved by PERA staff. These guidelines are intended to ensure that the portfolio meets its objective and operates within acceptable risk parameters
- A process be established by which compliance with all elements of the investment policy and portfolio guidelines are measured and monitored, with compliance exceptions being reported to the Board

ACTIVE RISK

This policy applies to the public asset classes (Global Equity and Fixed Income) and requires staff to measure and monitor the active risk incurred within each relevant portfolio. While the Board recognizes that its risk tolerance is captured, to a significant extent, through the asset

allocation policy, it also recognizes that active risk needs to be measured, monitored and controlled. As such, it is the Board's policy to incur no more active risk within the public asset classes according to the following limits (to be measured as annualized over a trailing five-year period):

Portfolio	Active Risk Maximum
Global Equity	225 basis points
Fixed Income	100 basis points

These limits are intended to be maximums, with the specific levels of active risk to be determined by staff's outlook for investment opportunities. Active risk measures (and above maximums) are annualized figures and will be calculated using a monthly returns-based methodology.

The Board expects staff to monitor the active risk of the various portfolios to ensure compliance with the above limits. As of any quarter-end, the Board expects staff to report any active risk that is above the maximum limit. In addition, the Board expects staff to provide an implementation plan, if any, to bring the amount back below the maximum limit. The Board acknowledges this implementation plan may be to do nothing, if it is expected that this is in the best fiduciary interest of the plan.

The active risk policy is reviewed periodically, generally after an asset/liability study.

PERFORMANCE MEASUREMENT

The investment objective of the PERA Total Fund is to earn the net-of-fees rate of return of the Policy Benchmark (as defined below), plus an excess appropriate to the level of active management risk taken by the Total Fund, over reasonable measurement periods. A Policy Benchmark is a passive representation of the asset allocation policy approved by the Board and is the most objective performance evaluation metric. Currently, the Policy Benchmark is comprised of the following asset classes, weights, and benchmarks:

Asset Class	Policy Benchmark Weight	Benchmark
Global Equity	51.0%	Global Equity Custom Benchmark
Fixed Income	23.0%	Fixed Income Custom Benchmark
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Real Estate	10.0%	Real Estate Custom Benchmark
Alternatives	6.0%	Alternatives Custom Benchmark

- Global Equity Custom Benchmark: MSCI ACWI IMI (Net) with USA Gross
- Fixed Income Custom Benchmark: Bloomberg U.S. Aggregate Bond Index
- Private Equity Custom Benchmark: MSCI ACWI IMI (Net) with USA Gross plus 200 basis points
- Real Estate Custom Benchmark: NCREIF Open End Diversified Core Equity Index (NFI-ODCE) plus 50 basis points, annually
- Alternatives Custom Benchmark: Weighted average of the underlying objectives: Real Assets: CPI plus 400 basis points; Private Credit: Morningstar LSTA Leveraged Loan Index plus 150 basis points; Risk Mitigation*: HFRI FOF Market Defensive Index; Opportunistic*: PERA Public Markets plus 150 basis points (*wind-down portfolios)

PROXY VOTING

Refer to Colorado PERA Proxy Voting Policy for further information.

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January 17, 2025

January 29, 2027

STATEMENT OF INVESTMENT POLICY

Combined Investment Fund (The Defined Benefit Trust Funds, The Life Insurance Reserve Fund, The Health Care Trust Funds, and The Direct Distribution Reserve)

Revised January 29, 2027

PURPOSE

The Public Employees' Retirement Association of Colorado (Colorado PERA or PERA) is a defined benefit plan, created by Colorado Statute 24-51-201:

> There is hereby created the public employees' retirement association, for the purpose of providing the benefits and programs specified in this article, which shall be a body corporate with the right to sue and be sued and the right to hold property for its use and purposes.
>
> Notwithstanding the applicability of sections 2-3-103, 24-4-103, 24-6-202, and 24-6-402, C.R.S., as provided for in this article, the association shall not be subject to administrative direction by any department, commission, board, bureau, or agency of the state. The association is an instrumentality of the state.

The Statement of Investment Policy (SIP) sets forth the investment policies by which the Combined Investment Fund (the defined benefit trust funds, the life insurance reserve fund, the health care trust funds, and the direct distribution reserve) will be managed. This SIP is consistent with, and complements, related Colorado Statutes and is intended to be binding upon all persons with authority over PERA's investments. Deviation from the SIP is not permitted without explicit written permission, in advance, from the Board of Trustees (Board). This SIP was adopted on November 19, 2004, and most recently amended on January 29, 2027.

INVESTMENT PHILOSOPHY

The investment philosophy for PERA has been determined with careful consideration of its primary fund purpose, fiduciary obligations, statutory requirements, liquidity needs, income sources, benefit obligations, and other general business conditions. The investment philosophy embraces the following:

- Strategic asset allocation is the most significant factor influencing long-term investment performance and asset volatility and should be set in the context of projected actuarial liabilities, expected contributions, capital market assumptions, liquidity profile and acknowledged risk tolerance. The asset allocation targets, determined by the Board, will be adhered to through a clearly defined rebalancing program.
- The fund's liabilities are long term and the investment strategy will therefore be long term in nature. Strategic decisions will prevail in determining asset allocation rather than tactical or short-term market timing decisions.
- The Board recognizes that the strategic asset allocation is expected to achieve its objective over long time periods (e.g., 30 years) and that in shorter periods, the range of expected returns is wide. Given the perpetual nature of PERA's investment time horizon, the Board believes the long-term focus of the strategic asset allocation is vital when reviewing success of the investment program. The asset allocation policy and its resulting diversification

benefits will be periodically reexamined to ensure its appropriateness to the then prevailing liability considerations.

- PERA believes diversification is a fundamental risk management tool and seeks to diversify across investments with different risk and return characteristics to reduce the impact of any single investment, asset class, or risk factor on the overall portfolio
- PERA seeks returns from both strategic market exposures and active investment decisions. Strategic asset allocation is expected to be the primary driver of long-term returns, while active management may provide additional value through the prudent exploitation of market inefficiencies.
- Active management risk may be expected to add value over passive investing with comparable benchmarks, under appropriate conditions, and can be employed by the fund with controls in place that are appropriate to the particular investment.
- Illiquid and long-lived investments are expected to provide a return premium over more liquid alternatives. As a long-term investor, PERA will take on illiquid investments when it believes those will provide more favorable returns on an absolute and a risk-adjusted basis compared to liquid markets, and only to a degree where the fund's ability to meet benefit payments and other cash outflows is not compromised.
- Consistent with its fiduciary duty, PERA seeks to manage investment-related costs prudently, recognizing that costs are a meaningful determinant of long-term investment performance.
- PERA serves as a prudent steward of plan assets under its fiduciary obligation to strengthen the long-term financial standing of the fund for the benefit of the PERA membership. PERA's approach to investment stewardship is to support the goals and objectives in this SIP through various initiatives described in PERA's Investment Stewardship publications.

INVESTMENT GOALS AND OBJECTIVES

The function of PERA is to provide present and future retirement or survivor benefits for its members. This objective requires the prudent assumption of investment risk in seeking to maximize long-term investment returns while incorporating the fund's liability requirements.

The future investment performance of the fund directly affects its future financial strength. However, the greater the expected return of the strategic asset allocation policy, the higher the risk, and thus the greater the volatility of expected returns. With this greater volatility, the volatility of the surplus (deficit) of the plan may also be greater. The optimal balancing of these return and risk considerations will be considered in the context of the fund's short-term and long-term benefit obligations.

ROLES AND RESPONSIBILITIES

Although not specifically required by Statute, the *Governance Manual*, adopted November 2001, and subsequently updated and revised, identifies the roles and responsibilities of the various parties that oversee the investment and management of the Combined Investment Fund.

BOARD OF TRUSTEES

In accordance with PERA Law, the Board has complete control and authority to invest the funds of PERA. As fiduciaries, Trustees shall carry out their functions solely in the interest of PERA members and for the exclusive purpose of providing benefits and defraying reasonable expenses incurred in performing such duties. The Board shall diversify the investments of PERA to pursue the most attractive returns relative to risk across multiple asset classes, a broad investible universe, and a long-term horizon. The Board shall minimize the risk of losses unless, in light of the circumstances, it is not prudent to do so. The Trustees shall act with the care, skill, prudence, and diligence considering the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use.

Specific responsibilities, as defined in the *Governance Manual*, include:

- Approve Statements of Investment Policy and Philosophy and review the statements at least biennially
- Approve the strategic asset allocation and associated benchmarks
- Ensure that an asset/liability study for the defined benefit trust funds is performed at least every three to five years, or more frequently if it so determines, and review the results
- Appoint, evaluate, and terminate the investment consultant

INVESTMENT COMMITTEE

The Investment Committee is responsible for assisting the Board in overseeing the PERA Investment Program. Specific responsibilities, as defined in the *Governance Manual*, include:

- Recommend to the Board Statements of Investment Policy and Philosophy, and review the statements at least biennially
- Recommend to the Board the strategic asset allocation and associated benchmarks
- If requested by the Board Chair, perform an asset/ liability study of the defined benefit trust funds at least every three to five years, or more frequently if so directed by the Board
- Review, at least annually, PERA's compliance with the Statement of Investment Policy
- Review costs of the investment program
- Review total fund, asset class, and investment manager performance and risk
- If requested by the Board Chair, recommend to the Board the investment consultant

» Advise the Board on any other investment matters and make recommendations for Board action when necessary

Additional monitoring and reporting requirements are specified in the *Governance Manual*.

STAFF

The overriding role of the staff is to assist the Board in managing the PERA Investment Program. In this regard, as defined in the *Governance Manual*, staff is expected to:

» Recommend to the Investment Committee Statements of Investment Policy and Philosophy, and review the statements with the Investment Committee at least biennially

» Coordinate an asset/liability study of the defined benefit trust funds at least every three to five years, or more frequently if so directed by the Board

» Develop, within policy parameters approved by the Board, investment manager structures for each asset category in which PERA invests

» Negotiate and approve guidelines and contracts for each investment manager

» Execute portfolio rebalancing in accordance with the policies of the Board

» Advise the Board and the Investment Committee on any other investment matters

» Recommend to the Investment Committee the investment consultant

Additional monitoring and reporting requirements are specified in the *Governance Manual.*

INVESTMENT MANAGERS

Internal or external investment managers will invest plan assets according to the investment style for which they were hired and their judgments concerning relative value of securities. In particular, investment managers are accorded full discretion, within policy and guideline limits, to:

» Select individual securities and other investment exposures as defined in their mandates

» Diversify portfolio assets

Staff will monitor and review all investment portfolios, managers, and fees paid by the fund. The Investment Department's Policies and Procedures, adopted by staff in January 2006, and subsequently updated and revised, describes the process by which managers will be selected, criteria for evaluation, as well as reasons for termination or removal.

CONSULTANTS

Consultants are fiduciaries and shall discharge their duties with respect to this fund solely in the interest of the members and benefit recipients with the care, skill, prudence, and diligence under

the circumstances then prevailing.

Qualified Consultants include those professionals with the background, expertise, and demonstrated success as institutional investment consultants, and with research/ database access to assist in providing investment program advice.

CUSTODIAN

The Custodian(s) holds directly, through its agents, its sub-custodians, or designated clearing systems, assets as designated by the Board. The Custodian is accountable for registration of those designated assets in good delivery form, collection of income generated by those assets, and any corporate action notification. The Custodian(s) is responsible for delivery and receipt of securities of the aforementioned transactions. The Custodian(s) is required to provide records and reports, performance reporting, accounting reports and other services included by contract. The Board may opt to designate other duties to the Custodian(s).

ASSET ALLOCATION POLICY

PERA's Policy Benchmark weights and ranges are specified below.

Asset Class	Policy Benchmark Weight	Permissible Ranges
Global Equity	51.0%	45.0% to 57.0%
Fixed Income	23.0%	18.0% to 28.0%
Private Equity	10.0%	5.0% to 15.0%
Real Estate	10.0%	5.0% to 15.0%
Alternatives	6.0%	1.0% to 11.0%
Cash	0.0%	0.0% to 3.0%
Total Fund	100.0%	—

The strategic asset allocation policy will be periodically reviewed, as described under "Investment Philosophy" and "Roles and Responsibilities."

REBALANCING POLICY

The purpose of the rebalancing policy is to ensure the adherence to the strategic allocation plan.

Unexpected changes in market values may, on occasion, cause the actual asset allocation to fall outside of the allowable ranges. This policy applies to all asset classes in which PERA invests and requires staff to implement rebalancing trades if, as of any quarter end, the allocation to any asset class is outside the allowable ranges. The Board recognizes, however, the inherent difficulty in managing the allocations to the illiquid (private) asset classes. While the

Board expects there to be a process in place that attempts to estimate capital calls and distributions in the private asset classes, it recognizes the difficulty in buying and selling partnership interests or real estate to manage the Fund's allocation to these asset classes.

As such, with respect to PERA's private asset classes, the Board expects the allocations to these areas to be managed as close as practical to the policy targets. As of any quarter-end, the Board expects staff to report private asset class allocations that fall outside the prescribed ranges. In addition, the Board expects staff to provide an implementation recommendation, if any, to bring the fund's allocation to these areas back within the allowable ranges. The Board acknowledges this implementation plan may be to do nothing, if it is expected that this is in the best fiduciary interest of the plan.

Managing the allocations to the public asset classes involves a risk reduction trade-off with increased transaction costs. As such, the Board expects staff to implement this policy in a manner which seeks to minimize the impact of transaction costs. The Board also expects staff to use cash contributions and cash needs to move the Total Fund's asset allocation as close as practical to the policy targets.

When markets move such that the Fund's normal cash flows are insufficient to maintain the Fund's actual asset allocation within the permissible ranges as of any quarter end, the Board expects staff to implement the necessary transactions to bring the Fund's allocation back to within the allowable ranges. Before a rebalancing transaction is implemented, the Board expects staff to identify those portfolios that are likely to have the lowest cost of trading. Absent any asset class structure considerations, the Board expects these low trading cost portfolios to be utilized more frequently to implement required Total Fund rebalancing.

ELIGIBLE ASSET CATEGORIES

The Board is responsible for identifying asset categories in which the fund will invest. The following are the asset categories in which PERA currently invests along with a discussion of market efficiency in each category.

The efficiency of markets is relevant to expected return opportunities. Highly efficient markets provide less opportunity to add value above market returns. Highly inefficient markets provide more opportunity to add return above what is available by the market. This above market return expectation can be referred to as alpha.

Market return can be referred to as beta.

GLOBAL EQUITY

PERA's Global Equity asset class includes a combination of public U.S. and non-U.S. equity

markets. The asset class is a primary driver of total fund return in the long run, while also providing liquidity to the total fund.

Capital market theory suggests that PERA should be fully diversified globally, not just locally. The role of the Global Equity asset class is to provide capital appreciation and income for the Total Fund. While equities provide an opportunity for long-term growth, it is a volatile asset class, which must be balanced with a diversified portfolio.

The U.S. equity market is one of the most efficient capital markets in the world because of the availability of public information regarding the future prospects of individual companies, combined with the numerous market participants rendering assessments of this information. In structuring portfolios, financial theory and empirical evidence suggest that a broad-market index, that encompasses the entirety of the U.S. equity market, will provide the most efficient portfolio structure.

Non-U.S. equity markets encompass those of developed and emerging economies. Individual country markets exhibit varying degrees of market efficiency. One requirement of market efficiency is the ability of capital to flow freely among markets. Capital flows in non-U.S. equity markets are sometimes hampered by capital controls and less liquidity relative to that available in the U.S. Therefore, it is expected that the PERA non -

U.S. equity exposure will be structured to attempt to capitalize on the perceived inefficiencies of these markets.

While equity markets are very efficient, they are not perfectly efficient. When appropriate skill is available, it may be possible to successfully use active management techniques to make modest improvements over benchmark returns, with acceptable levels of risk.

FIXED INCOME

The role of Fixed Income is to provide diversification and liquidity, while reducing total fund volatility. Fixed income can provide a significant source of diversification relative to an equity-oriented portfolio. The volatility (investment risk) of fixed income securities is generally substantially lower than the volatility of equities. In addition, there usually are significant differences in the pattern of returns between equity and fixed income investments.

This suggests that, in most market environments, when combined with equity securities and other assets, a fixed income allocation can serve to reduce the overall risk of the portfolio without materially sacrificing return potential over the long term.

The fixed income asset class is a diverse capital market. Common public securities include government, mortgage-backed, asset-backed, and high-quality corporate bonds of U.S. and non-U.S. issuers. While fixed income markets are relatively efficient, they are not perfectly efficient. Fixed income can experience less efficiency at times and in certain segments. The Fixed Income portfolio may make use of both active and passive investment mandates and will

include allocations to all major segments of the core fixed income market, with a primary focus on higher quality fixed income. When appropriate, the portfolio may also include a small allocation to non-core assets.

PRIVATE EQUITY

The role of Private Equity is to provide enhanced returns beyond what is available in public equity. The private equity asset class can encompass many different and distinct asset categories. Currently, the PERA portfolio is comprised of various private equity investments—largely buyout, secondary and venture capital partnerships, and special situations. These types of investments exhibit high levels of risk, with an expectation for high rates of investment returns. These investments can exhibit a high level of correlation with the publicly-traded equity markets, but the correlation levels are not perfect and therefore Private Equity also offers potential diversification benefits.

The private equity asset class is considered highly inefficient, providing opportunities for the adept active management in this asset class to capitalize. The primary benefit afforded investors in this asset class is the expectation of generating high levels of investment returns, although manager selection is a critical determinant of success.

REAL ESTATE

The role of Real Estate is to be a source of alternative income and diversification. While the factors that influence real estate returns may also influence the returns of equity and fixed income portfolios, these factors impact real estate in a different manner than the other asset classes. This suggests that the return patterns of real estate have a low correlation to other asset classes, providing a diversification benefit when combined with equities and bonds.

The nature of real estate investing indicates that each individual property has unique characteristics, and as such, investing in real estate requires a substantial amount of information regarding local economic factors and demographic profiles, among others.

It is expected that the real estate portfolio will be invested according to this information intensive investment approach, will primarily include exposure to private real estate, and be broadly diversified by geography and property type.

ALTERNATIVES

The role of Alternatives is to provide enhanced returns and diversification over the long term. The purpose of Alternatives is to provide a framework for investing in private market asset classes that do not fit within the traditional portfolio structure or in allocations that are too small to warrant their own stand-alone asset class. These illiquid investments are expected to provide greater exposure to market inefficiencies. Currently, PERA's Alternatives asset class is comprised of Private Credit and Real Assets.

Private Credit covers most types of lending that are not included in the traditional fixed income category. As a broad asset class, there are several categories of investments within the private credit markets. Each sector has unique features based on cash yields, collateral types, and correlations with public markets. Fundamental advantages of private credit include a mix of yield enhancement relative to publicly-traded fixed income, protection against interest rate risk, and diversification through access to non-publicly traded debt.

Real Assets cover a broad range of categories, including “hard assets” such as infrastructure, natural resources, and other intangible assets with intrinsic value. These sectors offer different risk and reward profiles based on their underlying assets and stage of development. Real Assets typically exhibit stable and predictable cash flows, modest correlations to traditional asset classes, and long-term inflation protection potential driven by contracted or regulated revenues with embedded inflation adjustments.

INVESTMENT RESTRICTIONS

Colorado Statute 24-51-206 establishes what investments are permissible as well as certain limitations:

24-51-206 INVESTMENTS

(1) The board shall have complete control and authority to invest the funds of the association. Preference shall be given to Colorado investments consistent with sound investment policy.

(2) Investments may be made without limitation in the following:

(a) Obligations of the United States government;

(b) Obligations fully guaranteed as to principal and interest by the United States government;

(c) State and municipal bonds;

(d) Corporate notes, bonds, and debentures whether or not convertible;

(e) Railroad equipment trust certificates;

(f) Real property;

(g) Loans secured by first or second mortgages or deeds of trust on real property; except that the origination of mortgages or deeds of trust on residential real property is prohibited. For the purposes of this paragraph (g) “residential real property” means any real property upon which there is or will be placed a structure designed principally for the occupancy of from one to four families, a mobile home, or a condominium unit or cooperative unit designed principally for the occupancy of from one to four families.

(g.5) Investments in stock or beneficial interests in entities formed for the ownership of real property by tax-exempt organizations pursuant to section 501 (c) (25) of the federal “Internal Revenue Code of 1986”, as amended; except that the percentage of any entity’s

outstanding stock or bonds owned by the association shall not be limited by the provisions of paragraph (b) of subsection (3) of this section;

(h) Participation agreements with life insurance companies; and

(i) Any other type of investment agreements.

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(a) The aggregate amount of moneys invested in corporate stocks or corporate bonds, notes, or debentures which are convertible into corporate stock or in investment trust shares shall not exceed sixty-five percent of the then book value of the fund.

(b) No investment of the fund in common or preferred stock, or both, of any single corporation shall be of an amount which exceeds five percent of the then book value of the fund, nor shall the fund acquire more than twelve percent of the outstanding stock or bonds of any single corporation.

(c) (I) Each investment firm offering for sale to the board corporate stocks, bonds, notes, debentures, or a mutual fund that contains corporate securities, shall disclose, in any research or other disclosure documents provided in support of the securities being offered, to the board whether the investment firm has an agreement with a for-profit corporation that is not a government-sponsored enterprise, whose securities are being offered for sale to the board and because of such agreement the investment firm:

(A) Had received compensation for investment banking services within the most recent twelve months; or

(B) May receive compensation for investment banking services within the next three consecutive months

(II) For the purposes of this paragraph (c), “investment firm” means a bank, brokerage firm, or other financial services firm conducting business within this state, or any agent thereof.

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Portfolio	Active Risk Maximum
Global Equity	225 basis points
Fixed Income	100 basis points

These limits are intended to be maximums, with the specific levels of active risk to be determined by staff's outlook for investment opportunities. Active risk measures (and above maximums) are annualized figures and will be calculated using a monthly returns-based methodology.

The Board expects staff to monitor the active risk of the various portfolios to ensure compliance with the above limits. As of any quarter-end, the Board expects staff to report any active risk that

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January 1, 2022

January 20, 2023

June 16, 2023

January 17, 2025

January 29, 2027

Charter for the Investment Committee

Introduction

1. The Investment Committee is a standing committee of the Board comprised of not fewer than six members. The Investment Committee is responsible for assisting the Board in setting direction for and overseeing the PERA Investment Program. The Committee will have the duties and responsibilities set out herein.

Authority

2. To engage external consultants or advisors as needed to fulfill its responsibilities, consistent with the Charter for the Board of Trustees, subject to approval by the Board.

Duties and Responsibilities

~~2.~~3. With respect to the Combined Investment Fund, the Investment Committee will:

- **a.** Recommend to the Board ~~statements of~~ the Statement of ~~investment policy and philosophy;~~Investment Policy and review the statement~~s~~ at least biennially;
- **b.** Recommend to the Board the strategic asset allocation and associated benchmarks ~~if~~ as needed;
- **c.** At least annually, review PERA's compliance with the ~~statements of investment policy;~~Statement of Investment Policy;
- **d.** Review costs of the investment programs;
- **e.** Review total fund, asset class, and investment manager performance and risk;
- **f.** ~~If requested by the Board Chair, r~~Recommend to the Board the custodian banks and the investment consultants retained to advise the Board~~-~~; and
- **g.** Advise the Board on any other investment matters and make recommendations for Board action when necessary.

~~3.~~4. ~~If requested by the Board Chair, perform~~ Perform an asset/~~-~~liability study of the defined benefit trust funds at least every three to five years, or more frequently if so directed by the Board. The Board will determine if the study will be conducted by the Board or Investment Committee.

~~4.~~5. With respect to the CAPs, the Investment Committee will:

- **a.** Recommend to the Board ~~a~~the ~~statement of investment policy~~Statement of Investment Policy and review it at least biennially;
- **b.** Recommend to the Board changes in the lineup of investment options (i.e.,

Commented [JN1]: After discussions with Aon, we think it is appropriate to remove "Philosophy" and formalize what everyone always calls this, the "Statement of Investment Policy". The SIP will still contain the Philosophy section, that is not being removed.

PERAdvantage Funds) offered including the default investment option;

c. ~~If requested by the Board Chair, r~~Recommend to the Board the custodian banks and the investment consultants retained to advise the Board ; and

d. Review investment performance of each investment option offered in the CAPs quarterly.

~~5.~~6. With respect to shareholder responsibility in the stewardship ~~in~~ of the PERA Investment Program, the Investment Committee will:

a. Recommend ~~any~~ the ~~corporate governance and proxy voting~~Proxy Voting ~~policies~~ Policy to the Board for approval and review it at least every 5 years;

b. Recommend ~~a~~the ~~securities litigation policy~~Securities Litigation Policy to the Board for approval and review it at least every 5 years;

c. Recommend to the Board any corporate governance or shareholder initiatives or policies with respect to any corporation or entity of which PERA is a shareholder; and

~~d. Interact with the Chief Executive Officer/Executive Director, General Counsel, and the Chief Investment Officer or their designees on shareholder responsibility matters;~~

~~e. Review current policies, and practices in the areas of corporate governance, shareholder responsibility, and securities litigation at least every five years; and~~

~~f.~~d. Review reports on proxy votes cast annually.

~~6.~~7. The Investment Committee will:

a. Review and approve meeting minutes; and

b. Report to the Board on its activities after each meeting.

Charter Review and History

~~7.~~8. This charter will be reviewed at least every five years.

~~8.~~9. The Board adopted this charter on November 16, 2001. The Board approved changes to this Charter on February 18, 2005, February 10, 2006, February 16, 2007, July 1, 2012, January 15, 2016, January 1, 2020, ~~and on~~ January 1, 2022, and on January 29, 2027.

Charter for the Investment Committee

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Duties and Responsibilities

3. With respect to the Combined Investment Fund, the Investment Committee will:
   - **a.** Recommend to the Board the Statement of Investment Policy and review the statement at least biennially;
   - **b.** Recommend to the Board the strategic asset allocation and associated benchmarks as needed;
   - **c.** At least annually, review PERA's compliance with the Statement of Investment Policy;
   - **d.** Review costs of the investment programs;
   - **e.** Review total fund, asset class, and investment manager performance and risk;
   - **f.** Recommend to the Board the custodian banks and the investment consultants retained to advise the Board; and
   - **g.** Advise the Board on any other investment matters and make recommendations for Board action when necessary.
4. Perform an asset/liability study of the defined benefit trust funds at least every three to five years, or more frequently if so directed by the Board. The Board will determine if the study will be conducted by the Board or Investment Committee.
5. With respect to the CAPs, the Investment Committee will:
   - **a.** Recommend to the Board the Statement of Investment Policy and review it at least biennially;
   - **b.** Recommend to the Board changes in the lineup of investment options (i.e., PERAdvantage Funds) offered including the default investment option;

   c. Recommend to the Board the custodian banks and the investment consultants retained to advise the Board ; and
   d. Review investment performance of each investment option offered in the CAPs quarterly.

6. With respect to shareholder responsibility in the stewardship of the PERA Investment Program, the Investment Committee will:
   a. Recommend the Proxy Voting Policy to the Board for approval and review it at least every 5 years;
   b. Recommend the Securities Litigation Policy to the Board for approval and review it at least every 5 years;
   c. Recommend to the Board any corporate governance or shareholder initiatives or policies with respect to any corporation or entity of which PERA is a shareholder; and
   d. Review reports on proxy votes cast annually.
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PERA Investment Operations Overview

Rebecca Shelton – Investment Operating Officer

Jimmy McLoughlin – Investment Operations Manager

Kory Stansbury – Senior Investment Business Analyst

November 19, 2026

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Investment Business Management



Amy C. McGarrity
Chief Investment Officer

Rebecca Shelton
Investment Operating Officer

- **Investment Administration**
- **Investment Operations**
- **Investment Stewardship**



What is Investment Operations?

5	asset classes supported
50,000+	trades processed
40+	countries traded in
20+	applications supported
One	team

Why Investment Operations Matters

Investment Operations is the backbone of PERA's Investment Department

- Cash forecasting and movements
- Position and transaction reconciliation
- Trade lifecycle and production support
- Investment data governance and analytics
- Modernization initiatives
- Internal, legal, and regulatory reporting



Our Business Partners

Investment Operations interacts with a variety of internal and external partners

Investment Teams	Internal Departments	Market Partners
Trading Desks	Accounting	Brokers
Private Asset Classes	Information Technology	Data Providers
Investment Administration	Legal	Northern Trust (Custodian)
Investment Stewardship	Internal Audit	Vendors





Team Composition

Investment Operations is a dynamic team with a significant amount of experience and expertise across a variety of different roles.

- Manager, Investment Data and Business Analysts
  - Investment Operations and Data Analysts
  - Investment Application Support Analyst
  - Senior Investment Business Analysts
- Investment Operations Manager
  - Investment Operations Analysts
  - Senior Investment Operations Analysts

Investment Data and Business Analysis



Manager, Investment Data and Business Analysis



Jessica Brooks
Investment Operations and Data Analyst



Elisia Freimark
Investment Application Support Analyst



Sean Lavey
Investment Operations and Data Analyst



Patty Martinez
Senior Investment Business Analyst



Kory Stansbury
Senior Investment Business Analyst

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Business Analyst / Data Steward

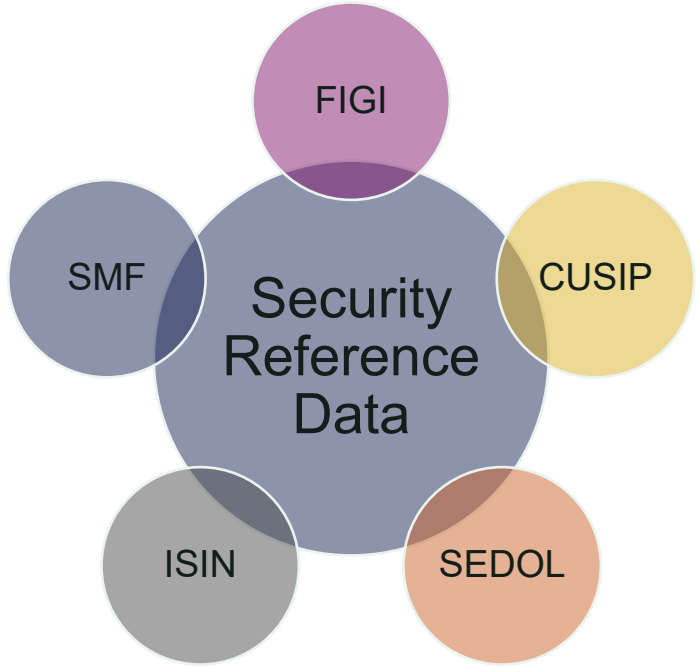
- Business Analysis
  - System enhancement
  - Functional subject matter expertise (SME)
  - Requirement gathering
  - Process improvement
- Investment Data Stewardship
  - Verify data requirements and integrity
  - Provide data governance and analytics
  - Oversee holdings and transaction processes
  - Monitor data loads
  - Support trading and production workflows



Investment Data Management

Manage investment data to ensure accurate holdings, efficiency of transactions, and timely reporting

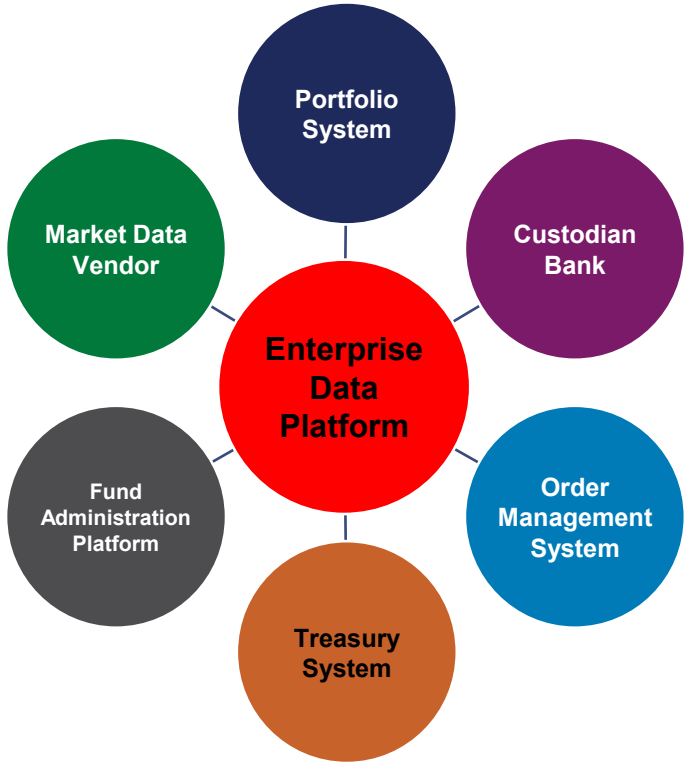






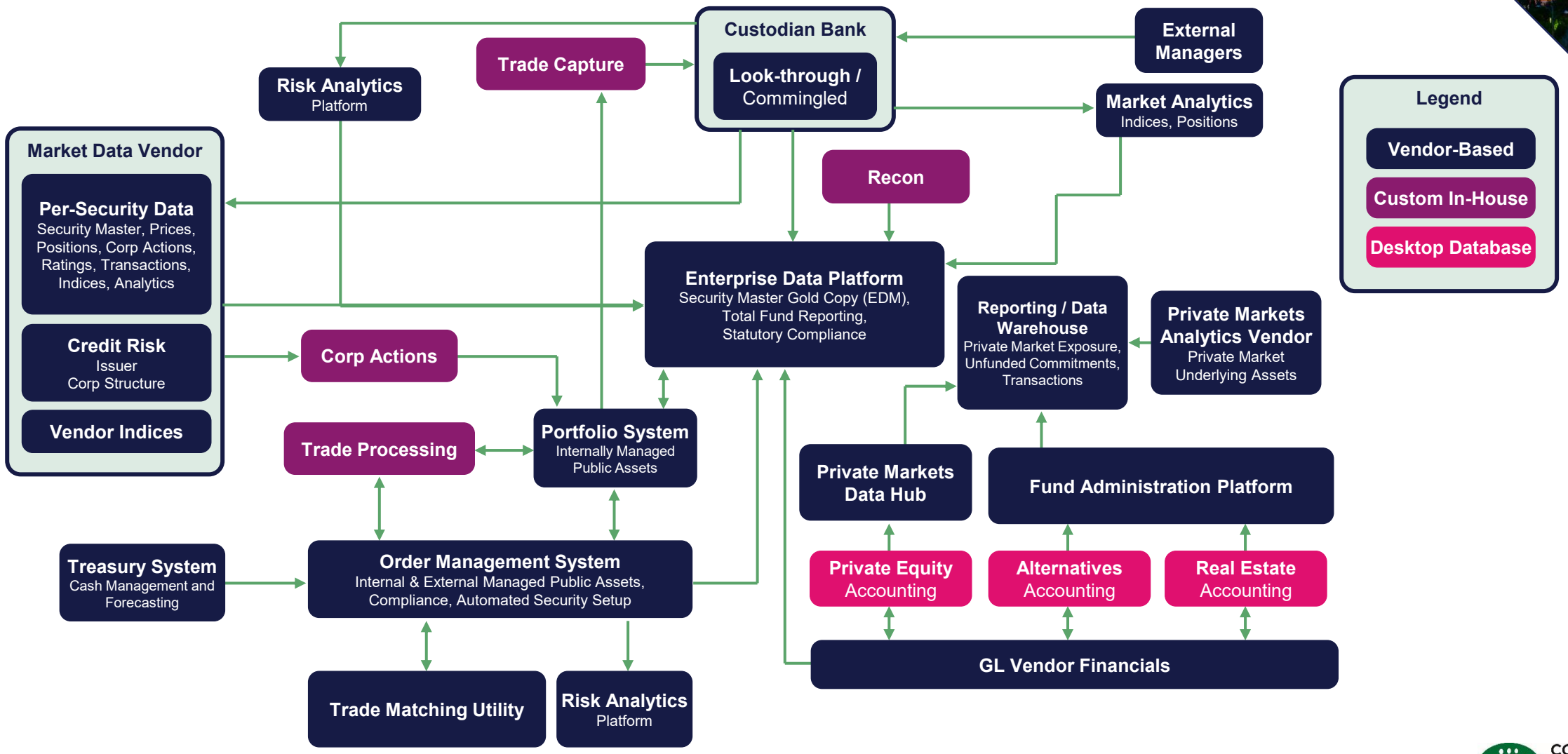
Investment Software Support

Operations, in conjunction with Information Technology, aids in the design and support of the investment systems' infrastructure including functionality, integration, data requirements, and data flows.



Investments' Technology Stack





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Contributions to Modernization Efforts

Partner with the Investment teams, Accounting, IT, Project Management, and Change Management to:

1. Define

Gather and document business requirements; design operational processes and reporting workflows for the new systems.

2. Build and Integrate

Reconcile data and integrate vendor data sources so reporting is accurate and complete.

3. Adopt

Run user acceptance testing and create job aids so teams are ready before go-live.

4. Support

Participate in the Investment Systems Modernization Roadmap RFP process.

Investment Operations Analysts



Jimmy McLoughlin
Investment Operations Manager



Keri Fischer
Investment
Operations Analyst



Lauren Friesen
Sr. Investment
Operations Analyst



Jacob Kambesis
Investment
Operations Analyst



Chang Lee
Sr. Investment
Operations Analyst



Myk Pleet
Sr. Investment
Operations Analyst

Investment Operations Analysts

- **Portfolio Management Support**
  - Equity, fixed income, and futures trade processing
  - Cash flow management for private asset classes
  - Corporate Action research and bookings
  - Cash projections, cash movements, and oversight
  - Reconciliation (cash, transactions, and holdings)

- **Safeguard Assets**
  - Relationship management
  - Legal, regulatory, and compliance support
  - Asset verification, controls, and procedures
  - Oversee securities lending activity: monitoring loans, settlements, and related activity





Cash Management

Project, move, and safeguard cash across portfolios and external managers

- 10-day and 2-month cash projections
- Process cash flows for private asset classes
- Vendor invoices and collateral movements



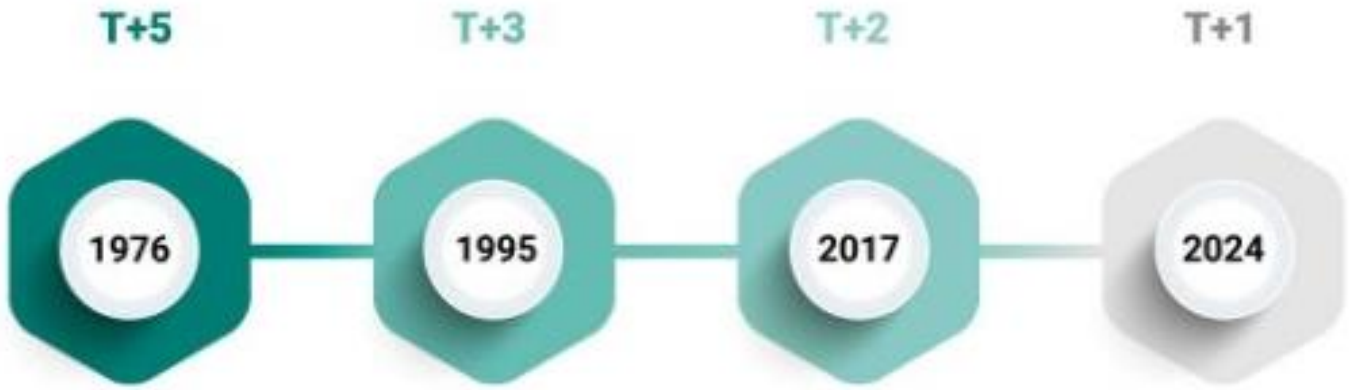
We adhere to strict guidelines, review protocols, and well-documented procedures to ensure accuracy and eliminate the risk of fraud.



Trade Settlement History

- Technology continues to condense the settlement cycle
- Benefits of shorter settlement
  - Counterparty risk reduction
  - Reduced margin requirements
  - Improved liquidity

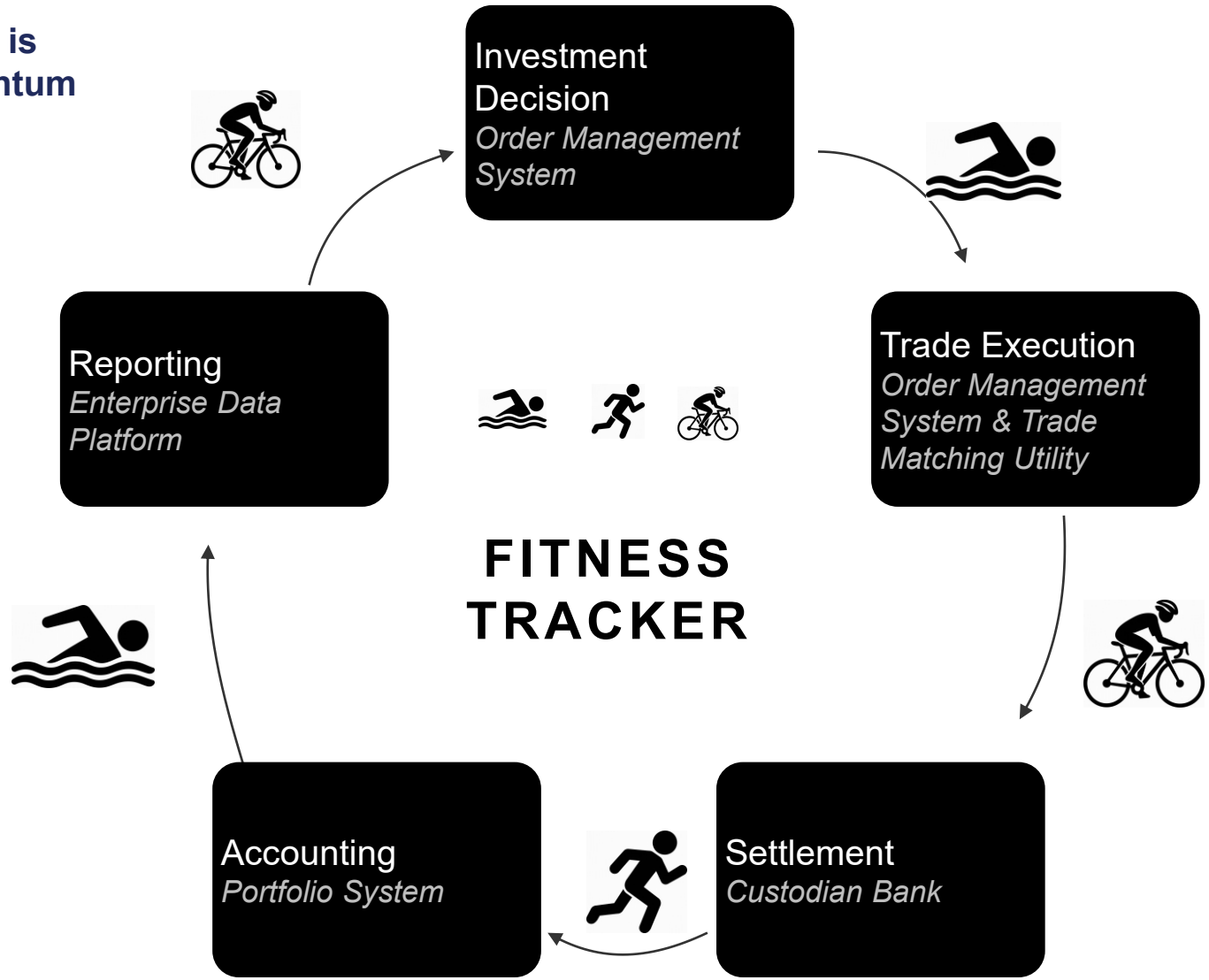
T+5 to T+1 Transaction Settlement History



While some broker-dealers offer limited or early T+0 capabilities, a universal regulatory shift to mandatory T+0 has no official timeline

A Day in the Life of a Trade

The trade flow process is one of constant momentum





2025 Trade Statistics

27,093 **Global Equity Trades**
- 40+ countries

FX Trades **1,386**

11,611 **Fixed Income Trades**

Futures Trades **10,552**



What's Next for Investment Operations?

Investment Systems Modernization Roadmap	Partnering with consultant to set platform direction and sequencing
Self-Service Analytics	Enabling investment teams to access and explore their own data
Increased Use of AI	Applying AI to reconciliation, exception handling, and reporting
24-Hour Trading	Evaluating coverage requirements and controls for a continuous trading day



Questions?



Callan

November 19, 2026

Colorado PERA
Capital Accumulation Plans
Investment Management Fee Evaluation

Greg Ungerman, CFA
Senior Vice President

Alex Ford
Senior Vice President

Important disclosures regarding the use of this document are included at the end of this document. These disclosures are an integral part of this document and should be considered by the user.

Capital Accumulation Plans Fee Evaluation

Summary

The purpose of this study is to evaluate and document the investment management fees of the portfolios in the Capital Accumulation Plans (CAPs).

The investment management fees of the PERAdvantage funds and underlying portfolios are compared to Callan's mutual fund peer groups where available. The mutual fund fee peer groups are curated to only include lower cost institutional share classes and reflect what a typical defined contribution plan would pay. The peer groups are robust and cover several asset categories.

All CAP portfolios have investment management fees that are well below median in their respective peer group. The 10th – 90th percentile range of fees is also shown. In many cases, the CAP portfolios are an outlier and extremely low cost versus peers.

Internal management and eligibility for separate account and CIT vehicles has resulted in low investment management fees versus the broader, mutual fund dominated defined contribution industry.

Callan's 2025 Investment Management Fee Study, a biennial study, is another source for comparing fees and is especially useful for larger investors. The study includes data from hundreds of investment firms and institutional investors.

Capital Accumulation Plans Fee Evaluation

White Label Funds

Investment Manager	Assets as of 06/30/2026	Annual Investment Management Fee (bps)	Callan Fee Peer Group	Peer Median (bps)	Peer Range 10th-90th Percentile (bps)
PERAdvantage 2030 Fund	$327,576,590	6	Target Date 2030	31	7 - 62
PERAdvantage 2035 Fund	$386,930,806	6	Target Date 2035	29	6 - 56
PERAdvantage 2040 Fund	$353,944,779	6	Target Date 2040	34	6 - 61
PERAdvantage 2045 Fund	$332,414,545	6	Target Date 2045	29	6 - 57
PERAdvantage 2050 Fund	$274,194,996	6	Target Date 2050	33	6 - 62
PERAdvantage 2055 Fund	$189,389,865	6	Target Date 2055	29	7 - 57
PERAdvantage 2060 Fund	$98,427,267	6	Target Date 2060	29	6 - 61
PERAdvantage 2065 Fund	$48,227,115	6	Target Date 2065	30	6 - 60
PERAdvantage 2070 Fund	$9,281,141	6	Target Date 2070	31	6 - 59
PERAdvantage Income Fund	$492,099,779	6	Target Date Ret Inc	27	5 - 56
PERAdvantage U.S. Large Cap Stock Fund	$3,283,168,554	5	Lg Cap Broad MFs	62	39 - 91
PERAdvantage U.S. SMID Cap Stock Fund	$491,708,506	15	SMID Broad MFs	90	68 - 110
PERAdvantage International Stock Fund	$680,867,659	26	Non-US Equity MFs	83	58 - 102
PERAdvantage Fixed Income Fund	$439,994,561	13	Core Bond MFs	42	16 - 59
PERAdvantage Real Return Fund	$56,806,373	17	Real Assets MFs	91	64 - 177
PERAdvantage SRI Fund	$93,249,075	18	Dom Balanced DB	27	7 - 57
PERAdvantage Capital Preservation Fund	$437,227,610	21	Stable Value CT	38	26 - 51

Fee Peer Group Sources: Callan Style Groups

Capital Accumulation Plans Fee Evaluation

Underlying Investments

Investment Manager	Vehicle	Assets as of 06/30/2026	Annual Investment Management Fee (bps)	Callan Fee Peer Group	Peer Median (bps)	Peer Range 10th-90th Percentile (bps)
U.S. Large Cap Fund 1	Separate Acct	$1,955,402,409	1	Large Cap Passive*	2	1 - 5
U.S. Large Cap Fund 2	Separate Acct	$1,327,766,144	10	Lg Cap Broad MFs	62	39 - 91
U.S. Mid Cap Fund	Separate Acct	$252,952,644	17	Mid Cap Core MFs	84	46 - 120
U.S. Small Cap Fund	Separate Acct	$238,755,861	13	Small Cap Core MFs	90	43 - 122
International Equity Fund 1	Separate Acct	$276,163,922	4	Non-US Equity MFs	83	58 - 102
International Equity Fund 2	Separate Acct	$404,703,737	40	Non-US Equity MFs	83	58 - 102
U.S. Fixed Income Fund 1	CIT	$211,190,794	19	Core Bond MFs	42	16 - 59
U.S. Fixed Income Fund 2	Separate Acct	$228,803,767	6	Core Bond MFs	42	16 - 59
Real Assets Fund	CIT	$39,729,279	22	Real Assets MFs	91	64 - 177
Real Assets TIPS Fund	CIT	$17,077,093	6	TIPS MFs	39	9 - 109
SRI Global Equity Fund	CIT	$55,839,421	6	Glbl All-Cap Core MFs	86	35 - 137
SRI Core Fixed Income Fund	***Mutual Fund***	***$37,409,654***	***35***	***Core Bond MFs***	***42***	***16 - 59***
Stable Value Fund	Separate Acct	$437,227,610	21	Stable Value CT	38	26 - 51

Fee Peer Group Sources: Callan Style Groups

*Fee information for passive strategies was gathered from Callan's 2025 Investment Manager Fee Survey

†Fund had a fee change from 2025 (also shown in bold italics) from 36bps down to 35bps.

Important Disclosures

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Callan's performance measurement service reports estimated returns for a portfolio and compares them against relevant benchmarks and peer groups, as appropriate; such service may also report on historical portfolio holdings, comparing them to holdings of relevant benchmarks and peer groups, as appropriate ("portfolio holdings analysis"). To the extent that Callan's reports include a portfolio holdings analysis, Callan relies entirely on holdings, pricing, characteristics, and risk data provided by third parties including custodian banks, record keepers, pricing services, index providers, and investment managers. Callan reports the performance and holdings data as received and does not attempt to audit or verify the holdings data. Callan is not responsible for the accuracy or completeness of the performance or holdings data received from third parties and such data may not have been verified for accuracy or completeness.

Callan does not provide holdings-level monitoring for client portfolios and does not evaluate the appropriateness, risk or characteristics of individual holdings in client portfolios.

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Past performance is no guarantee of future results. Investing involves risk, including possible loss of principal.



Investment Department Costs

Joshua Neugebauer, PERA Assistant Director of Investment Administration
Tyler Barondeau, PERA Investment Compliance and Performance Analyst
Katie Comstock, Aon Partner – Public Sector Solutions Leader
November 19, 2026

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Introduction

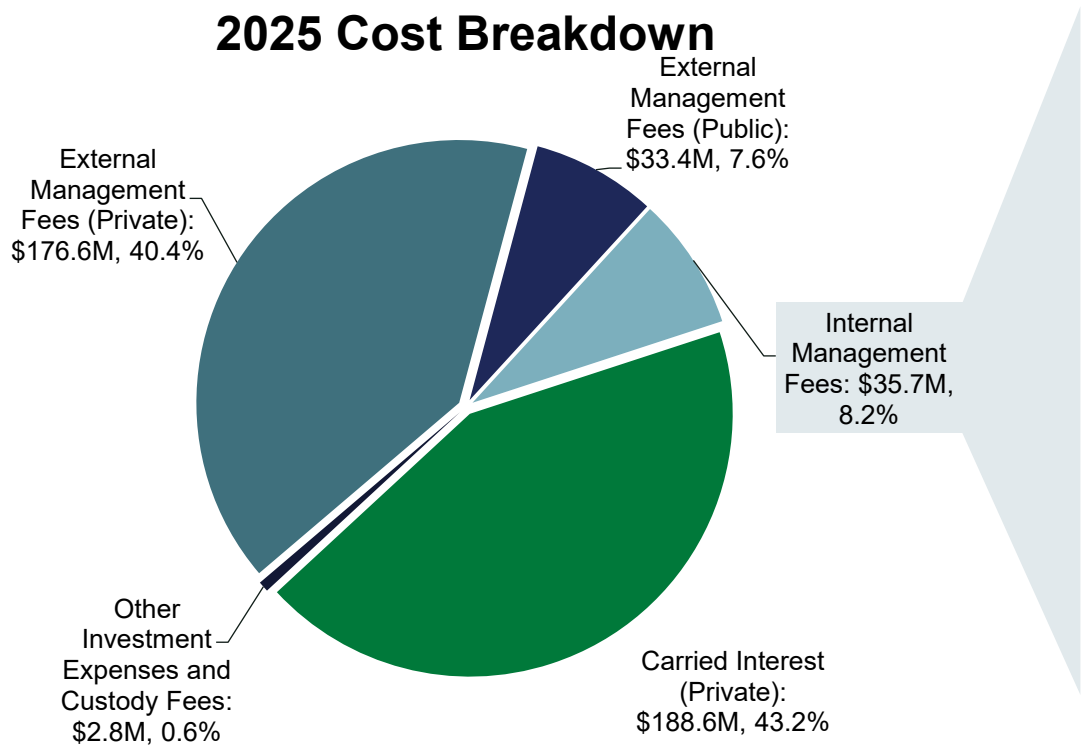
- Our goal is to manage PERA's investment portfolio to earn risk-adjusted returns in an efficient, cost-effective manner
- We acknowledge there are inherent monetary and opportunity costs to investing, and those costs must be balanced by returns generated with appropriate risk awareness and transparency
- We advocate for, and attempt to provide, increased transparency of investment management fees and costs
- We emphasize low-cost internal management and selective external management in our search for the best net-of-fees risk-adjusted returns

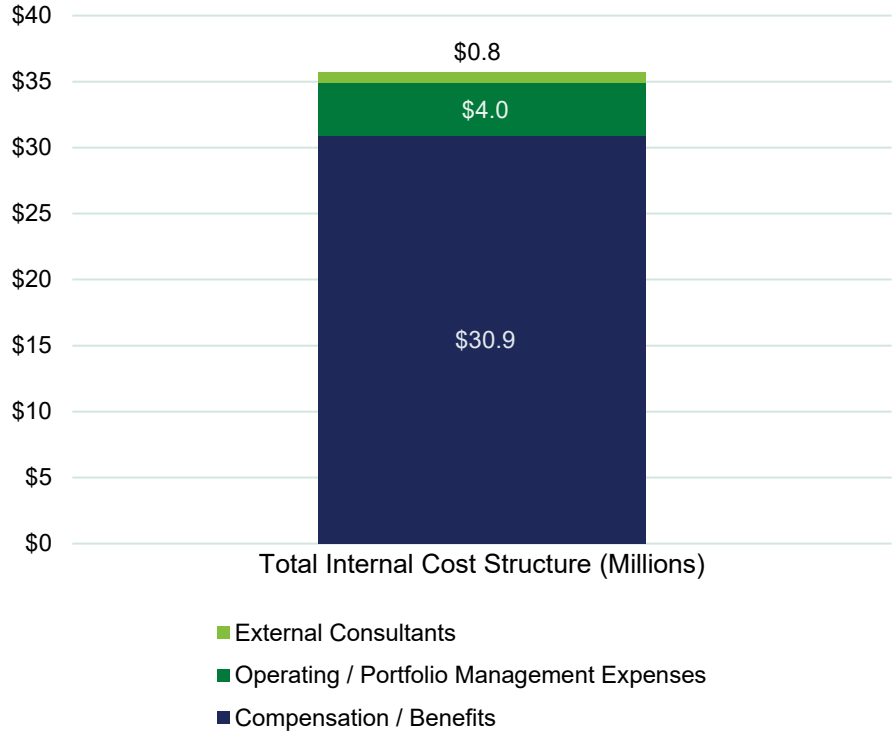


Investment Cost Breakdown

2025

Carried interest and management fees comprise the majority of investment costs





Source: 2025 PERA *ACFR* p. 129 and 130.

Public asset classes: Global Equity and Fixed Income. Private asset classes: Private Equity, Real Estate, Alternatives.

Carried Interest is the share of profits paid to external entities due to investment returns surpassing agreed-upon thresholds, and may vary, potentially significantly, from year to year depending on the timing of sales of the underlying investments and the magnitude of gains.

Other Investment Expenses and Custody Fees includes domestic, global, and international sub-custodial fees, and global tax and tax consulting.

Internal Management Fees includes Investment department compensation/benefits and other investment department budget items but does not include PERA overhead expenses.

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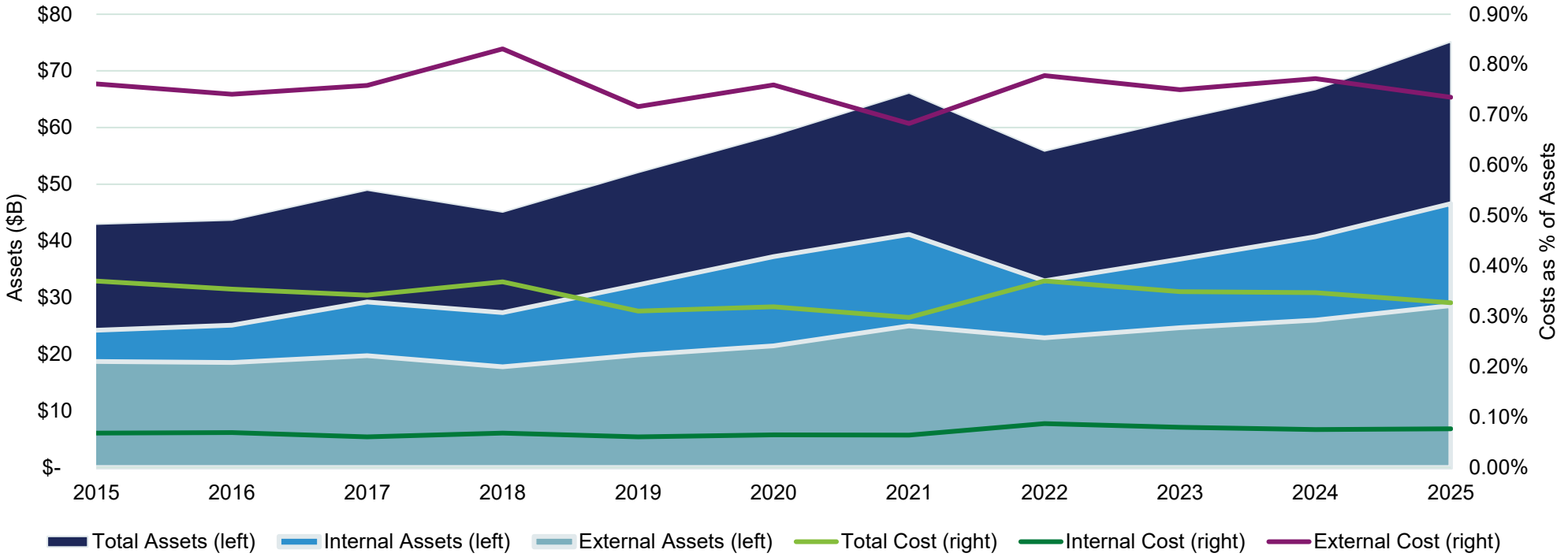
Management Fees

- Management fees for private investments are higher than those for public investments due to the specialized expertise and resources required to transform underlying investments and generate expected returns higher than those of public investments
- Low internal management costs for public investments (6.5 bps for Global Equity and 6.2 bps for Fixed Income) combined with competitive external and private management fees results in overall cost savings



Internal vs. External Cost and Allocation
2015–2025

As total assets have grown, internal management costs have remained consistently low



Notes:
Does not include carried interest.
Internal cost uses the entire Investment department budget versus the assets managed internally. Does not allocate out to specific portfolios and/or asset classes.

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Investment Cost Trends
2021–2025

Schedule of Investment Expenses for the Year Ended December 31 ($000's)					
	2021	2022	2023	2024	2025
Internal Management Fees[1]	26,426	28,697	29,399	30,667	35,701
Internal Assets Under Management	41,131,741	32,957,385	36,785,209	40,719,103	46,561,589
Internal BPS	**6.4**	**8.7**	**8.0**	**7.5**	**7.7**
External Management Fees	170,438	178,225	185,196	200,748	209,992
External Assets Under Management	24,941,100	22,904,077	24,686,823	25,990,456	28,571,026
External BPS	**68.3**	**77.8**	**75.0**	**77.2**	**73.5**
Total Management Fees	196,865	206,921	214,596	231,415	245,693
Custody & Other Expenses	6,138	5,202	3,855	8,190	2,830
Total Investment Expense	203,003	212,124	218,450	239,605	248,523
Total Assets Under Management	66,072,841	55,861,462	61,472,033	66,709,559	75,132,615
Total BPS	**30.7**	**38.0**	**35.5**	**35.9**	**33.1**
Carried Interest	192,856	117,087	125,292	152,238	188,638
Total BPS with Carried Interest	**59.9**	**58.9**	**55.9**	**58.7**	**58.2**

[1] Includes investment department compensation/benefits and other investment department budget items but does not include PERA overhead expenses. Internal cost uses the entire investment department budget versus the assets managed internally. Does not allocate out to specific portfolios and/or asset classes.



Asset Class Investment Costs (in bps)

2025

	Global Equity	Fixed Income	Private Equity	Real Estate	Alternatives	Total Portfolio
% of Total Assets	**56%**	**21%**	**7%**	**9%**	**6%**	**100%**
Asset Class Cost[1]	2.9	4.2	9.1	3.5	4.7	3.8
Investment Overhead[2]	1.0	1.0	1.0	1.0	1.0	1.0
PERA Overhead[3]	1.1	1.1	1.1	1.1	1.1	1.1
External Mgmt & Custody	8.2	0.4	136.0	59.4	133.5	28.3
Total Costs w/o Carried Interest	**13.3**	**6.6**	**147.2**	**65.0**	**140.2**	**34.2**
Carried Interest			111.4	103.3	123.4	25.1
Total Costs w/ Carried Interest	**13.3**	**6.6**	**258.6**	**168.2**	**263.7**	**59.3**

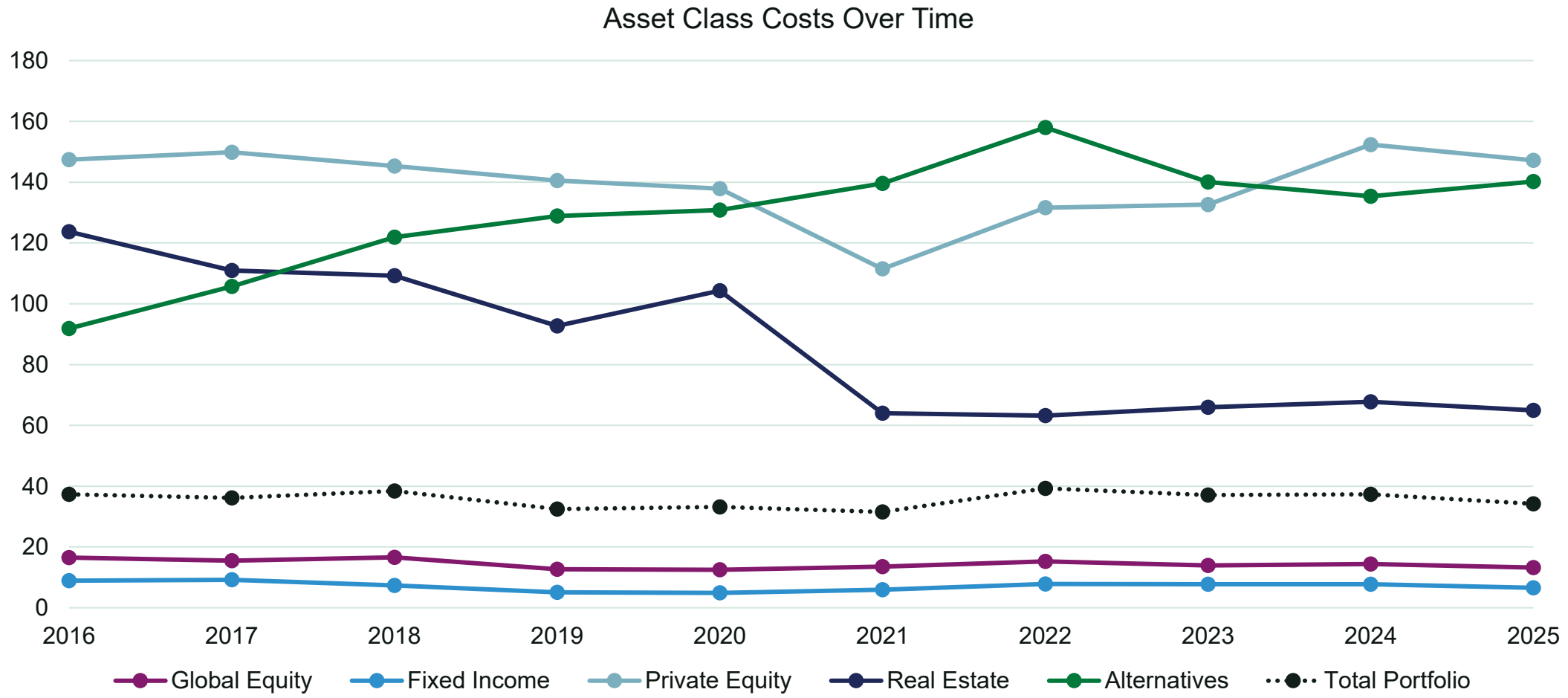
1) Asset class compensation/benefits and other asset class department budget items
2) Investment Administration, Operations, and Stewardship compensation/benefits, and other budget items
3) Other PERA expenses (Information Technology, Legal, etc.) attributable back to Investments
Includes additional items not included in the ACFR Schedule of Investment Expense
Total Portfolio column includes Cash and is the cost for the entire investment portfolio as of 12/31/2025

COLORADO PERA



Asset Class Investment Cost Trends

2016–2025



Notes:
Does not include carried interest.

COLORADO PERA



Internal Management Cost Savings

It would cost an estimated $124.0 million (26.6 bps) to externally manage the assets PERA manages internally for $29.7 million (6.4 bps)

Account	Assets (12/31/25)	Estimated Total Internal Cost	Estimated Total Internal BPS	Estimated Outsourcing Cost*	Estimated Outsourcing BPS*
PERA Large Cap Core	$ 9,900,367,801	$ 8,378,579	8.5	$ 39,601,471	40.0
PERA US Equity Index	$ 6,138,930,265	$ 519,531	0.8	$ 2,455,572	4.0
PERA Mid Cap Core	$ 1,223,644,003	$ 1,294,447	10.6	$ 6,118,220	50.0
PERA Small Cap Core	$ 1,312,222,783	$ 1,804,596	13.8	$ 8,529,448	65.0
PERA Intl Passive	$ 4,660,367,858	$ 887,405	1.9	$ 4,194,331	9.0
PERA Intl Small Cap Passive	$ 284,956,170	$ 54,260	1.9	$ 256,461	9.0
PERA All Country	$ 6,167,933,463	$ 5,872,341	9.5	$ 27,755,701	45.0
PERA Global Focus	$ 1,107,312,704	$ 1,077,673	9.7	$ 5,093,638	46.0
Other Equity Accounts	$ 6,563,065	$ -	0.0	$ -	0.0
Total Internal Equity	**$ 30,802,298,113**	**$ 19,888,832**	**6.5**	**$ 94,004,842**	**30.5**
CPERA - ABS	$ 75,628,868	$ 98,878	13.1	$ 302,515	40.0
CPERA - CMBS	$ 232,729,219	$ 167,350	7.2	$ 512,004	22.0
CPERA - Corporate Bond	$ 3,754,551,693	$ 2,208,936	5.9	$ 6,758,193	18.0
CPERA - Government Related	$ 682,058,745	$ 312,106	4.6	$ 954,882	14.0
CPERA - Mortgage Backed	$ 3,907,642,391	$ 2,554,450	6.5	$ 7,815,285	20.0
CPERA - Treasury	$ 5,620,459,037	$ 2,388,183	4.2	$ 7,306,597	13.0
CPERA - FI Alpha	$ 1,481,776,086	$ 2,082,589	14.1	$ 6,371,637	43.0
Other Fixed Income Accounts	$ 4,444,698	$ -	0.0	$ -	0.0
Total Internal Fixed Income	**$ 15,759,290,737**	**$ 9,812,492**	**6.2**	**$ 30,021,114**	**19.0**
Total Internal Assets	**$ 46,561,588,850**	**$ 29,701,325**	**6.4**	**$ 124,025,956**	**26.6**

* eVestment median fee analysis provided by Aon

Includes Investment department compensation/benefits, other Investment department budget items, and PERA overhead, so will not tie out to the figures in the ACFR

COLORADO PERA



PERA Public External Manager Fee Analysis

PERA's public external manager fee lineup is also very competitive when compared to the eVestment median

External Manager	Assets as of 12/31/25 ($000's)	PERA Fees (bps)	PERA Fees Percentile Rank	Standard Median Manager Fee (bps)	Standard Median Manager Fee Difference (bps)
Global Equity Manager 1	$336,728	33.9	1	80	-46.1
Global Equity Manager 2	$2,658,483	36.0	22	50	-14.0
Global Equity Manager 3	$895,079	34.7	18	50	-15.3
Global Equity Manager 4	$484,265	54.0	22	74	-20.0
Global Equity Manager 5	$886,827	60.0	37	65	-5.0
Global Equity Manager 6	$526,673	7.0	1	12	-5.0
Global Equity Manager 7	$456,007	54.0	25	68	-14.0
Global Equity Manager 8	$3,975,265	20.0	6	45	-25.0
Global Equity Manager 9	$878,261	42.6	37	47	-4.4

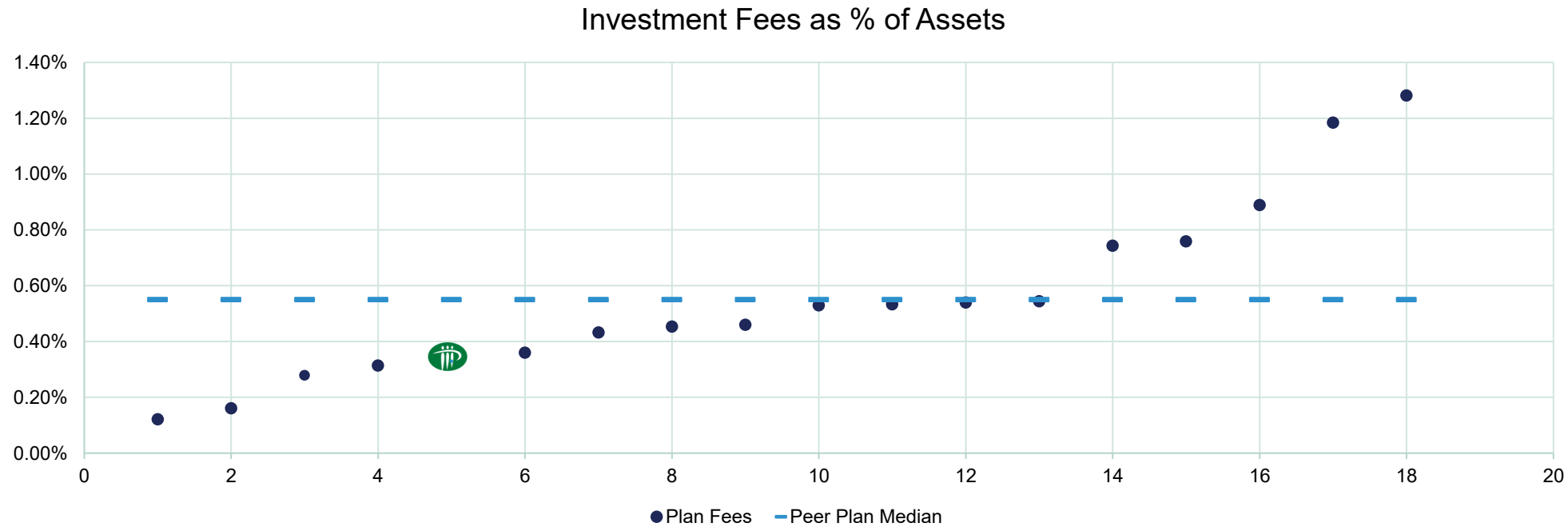
Based on Aon's analysis, this negotiated fee structure saved PERA just over $19.3 million in 2025 as compared to the median manager peer group

Notes:
Colorado PERA Fees are based on Plan assets as of 12/31/2025.
Analysis provided by Aon.



PERA vs. Peer Plans

The cost to manage PERA's plan is 33 bps, which is less than the average peer plan cost of 55 bps



Notes:

- Investment fees are from the 2025 ACFRs of various peer plans and include external and internal investment management, custody, and other investment expenses specifically assigned to investment management.
- Carried interest and profit sharing are excluded.
- Administrative fees not specifically assigned to investment management are excluded.
- Asset allocation reflects PERA's actual allocation with universe median fees provided by eVestment (hedge fund fees are the midpoint of the range provided by Aon's IMR and private equity fees are for buyout funds with assets >$3B and provided by Preqin).

COLORADO PERA



Questions

Exhibit A – Draft Agenda

Investment Committee Meeting

Raymond “Doc” Heath Memorial Boardroom
1301 Pennsylvania Street
Denver, CO

Thursday March 25, 2027
Time: TBD

All times are approximate and for reference only. Items designated for Information are appropriate for Action if the Board wishes to take action.

1. **Approval of Consent Agenda**
   (Governance Item) Action
   Presented by: Marcus Pennell, Chair, Investment Committee
   a. **March 25, 2027, Investment Committee Meeting Agenda**
   b. **November 19, 2026, Investment Committee Meeting Minutes**

2. **Policy Compliance Review Combined Investment Fund (CIF) Statement of Investment Policy (SIP)**
   (Governance Item) Information
   Presented by: Katie Comstock, Aon, Partner – Public Sector Solutions Leader
   a. **Policy Compliance Review – CIF/SIP Presentation**

3. **Investment Program Compliance**
   (Governance Item) Information
   Presented by: Joshua Neugebauer, PERA Assistant Director of Investment Administration; Tyler Barondeau, PERA Investment Compliance and Performance Analyst
   a. **Investment Program Compliance Presentation**

4. **Proxy Voting Report**
   (Governance Item) Information
   Presented by: Rebecca Shelton, PERA Investment Operating Officer; Tara Stacy, PERA Director of Investment Stewardship
   a. **Proxy Voting Presentation**

5. **Capital Accumulation Plans (CAP) Q4 2026 Performance**
   (Governance Item) Information
   Presented by: Greg Ungerman, Senior Vice President, Defined Contribution Leader, Callan; Alex Ford, Senior Vice President, Callan
   a. **CAP Q4 2026 Performance Presentation**

6. Asset Class Overview

(Educational Item) Information

Presented by: TBD

a. Asset Class Overview Presentation

7. Committee Announcements

(Governance Item) Information

Presented by: Marcus Pennell, Chair, Investment Committee

8. 2027 Investment Committee Meeting Dates

(Governance Item) Information

Presented by: Marcus Pennell, Chair, Investment Committee

- June 24, 2027
- November 18, 2027

Exhibit A – June 24, 2027, Investment Committee Meeting Agenda Draft
Exhibit B – Investment Committee 2027 Workplan

The Board may convene in Closed Executive Session pursuant to, but not limited to, the following:

A. Colorado Open Meetings Law, Section § 24-6-402(4)(a): Purchase, acquisition, lease, transfer, or sale of any real, personal, or other property interest;
B. Colorado Open Meetings Law, Section § 24-6-402(4)(b): Conferences with an attorney for the local public body for the purposes of receiving legal advice on specific legal questions;
C. Colorado Open Meetings Law, Section § 24-6-402(4)(c): Matters required to be kept confidential by federal or state law or rules and regulations.
D. Colorado Open Meetings Law, Section § 24-6-402(4)(d): Specialized details of security arrangements or investigations, including defenses against terrorism, both domestic and foreign, and including where disclosure of the matters discussed might reveal information that could be used for the purpose of committing, or avoiding prosecution for, a violation of the law;
E. Colorado Open Meetings Law, Section § 24-6-402(4)(e)(I): Determining positions relative to matters that may be subject to negotiations; developing strategy for negotiations; and instructing negotiators;
F. Colorado Open Meetings Law, Section § 24-6-402(4)(f)(I): Personnel matters except if the employee who is the subject of the session has requested an open meeting, or if the personnel matter involves more than one employee, all of the employees have requested an open meeting.
G. Colorado Open Meetings Law, Section § 24-6-402(4)(g): Consideration of any documents protected by the mandatory nondisclosure provisions of the “Colorado Open Records Act”, part 2 of article 72

PERA Investment Committee

2026 Workplan

A: Action - Action item. Seeking action from the committee so that the item can move to the full board for subsequent approval, as required.
I: Information - Information item. Seeking direction and discussion, no action required.
C: Consent - Routine item. No committee discussion required

	March 19th	June 24th	November 19th
Performance Evaluation/Oversight	CIF/SIP Policy Compliance Review (I) Investment Program Compliance (I) Proxy Voting Report (I) CAP Qtr 4 Performance (I)	CAP Qtr 1 Performance (I)	CAP Investment Management Fee Evaluation (I) Investment Department Costs (I) Private Market Fees (I) CAP Qtr 3 Performance (I)
Policy Review/Development			Biennial CIF SIP Review (A)
Strategic Plan/Board Education	Real Estate Asset Class Overview (I)	Asset Class Overview (I)	Asset Class Overview or Other Educational Session (I)
Routine Governance Items		Anti-BDS 50bps calculation	*Annual Committee Charter Review (C/A) Annual Committee Workplan Development (I)

Activities related to periodic significant events will appear on the appropriate year's workplan. For example:

- Biennial CAP and CIF SIP review (alternate every other year).
- If requested by the Board Chair, perform an asset/liability study of the defined benefit trust funds at least every three to five years, or more frequently if so directed by the Board.
- If requested by the Board Chair, recommend to the Board the CIF and CAP investment consultants.
- Recommend any corporate governance, proxy voting, and litigation policies to the Board for approval.
- Review current policies, and practices in the areas of corporate governance, shareholder responsibility, and securities litigation at least every five years.
- CAP Qtr 2 performance is provided to IC via trustee portal.
- Comprehensive Committee Charter Review to be conducted every five years.

PERA Investment Committee
2027 Workplan (Draft)

A: Action - Action item. Seeking action from the committee so that the item can move to the full board for subsequent approval, as required.
I: Information - Information item. Seeking direction and discussion, no action required.
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	March 25th	June 24th	November 18th
Performance Evaluation/Oversight	CIF/SIP Policy Compliance Review (I) Investment Program Compliance (I) Proxy Voting Report (I) CAP Qtr 4 Performance (I)	CAP Qtr 1 Performance (I)	CAP Investment Management Fee Evaluation (I) Investment Department Costs (I) Private Market Fees (I) CAP Qtr 3 Performance (C/I) CIF Qtr 3 Performance (C/I)
Policy Review/Development			Biennial CAP SIP Review (A)
Strategic Plan/Board Education	Asset Class Overview or Other Educational Session (I)	Asset Class Overview or Other Educational Session (I)	Asset Class Overview or Other Educational Session (I)
Routine Governance Items		Anti-BDS 50bps calculation	*Annual Committee Charter Review (I/A) Annual Committee Workplan Development (I)

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- Review current policies, and practices in the areas of corporate governance, shareholder responsibility, and securities litigation at least every five years.
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- Comprehensive Committee Charter Review to be conducted at a minimum of every five years.