

AGENDA

Date: September 6, 2024

The regular meeting of the Dallas Police and Fire Pension System Board of Trustees will be held at 8:30 a.m. on Thursday, September 12, 2024, in the Second Floor Board Room at 4100 Harry Hines Boulevard, Dallas, Texas and via telephone conference for audio at 214-271-5080 access code 588694 or Toll-Free (US & CAN): 1-800-201-5203 and Zoom meeting for visual <u>https://us02web.zoom.us/j/83364156526?pwd=OG5CbEFhajN5V0hWaUFJMlhYcHQ2Zz09</u> Passcode: 923237. Items of the following agenda will be presented to the Board:

A. MOMENT OF SILENCE

B. APPROVAL OF MINUTES

Regular meeting of August 8, 2024

C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

- 1. Texas Government Code Section 802.1012 Actuarial Valuation Audit
- 2. Section 2.025 Funding Process Update

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.071 of the Texas Government Code.

- 3. Financial Audit Status
- 4. Executive Director Approved Pension Ministerial Actions
- 5. Monthly Contribution Report
- 6. Board approval of Trustee education and travel
 - **a.** Future Education and Business-related Travel**b.** Future Investment-related Travel
- 7. Report on Professional Services Committee Meeting
- 8. Board Members' Reports on Meetings, Seminars and/or Conferences Attended
- 9. Portfolio Update

10. Report on Investment Advisory Committee Meeting

11. Asset Allocation Update

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.071 of the Texas Government Code.

12. Second Quarter 2024 Investment Performance Analysis and First Quarter 2024 Private Markets & Real Assets Review

13. Hardship Request

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.078 of the Texas Government Code.

14. Closed Session - Board serving as Medical Committee

Discussion of the following will be closed to the public under the terms of Section 551.078 of the Texas Government Code:

Disability application 2024-2D

15. Lone Star Investment Advisors

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.071 of the Texas Government Code.

16. Legal issues - In accordance with Section 551.071 of the Texas Government Code, the Board will meet in executive session to seek and receive the advice of its attorneys about pending or contemplated litigation or any other legal matter in which the duty of the attorneys to DPFP and the Board under the Texas Disciplinary Rules of Professional Conduct clearly conflicts with Texas Open Meeting laws.

D. BRIEFING ITEMS

- 1. Public Comment
- 2. Executive Director's Report
 - a. Associations' newsletters
 - NCPERS Monitor (September 2024)
 - **b.** Open Records

The term "possible action" in the wording of any Agenda item contained herein serves as notice that the Board may, as permitted by the Texas Government Code, Section 551, in its discretion, dispose of any item by any action in the following non-exclusive list: approval, deferral, table, take no action, and receive and file. At the discretion of the Board, items on this agenda may be considered at times other than in the order indicated in this agenda.

At any point during the consideration of the above items, the Board may go into Closed Executive Session as per Texas Government Code, Section 551.071 for consultation with attorneys, Section 551.072 for real estate matters, Section 551.074 for personnel matters, Section 551.076 for deliberation regarding security devices or security audits, and Section 551.078 for review of medical records.



MOMENT OF SILENCE

In memory of our Members and Pensioners who recently passed away

NAME	ACTIVE/ RETIRED	DEPARTMENT	DATE OF DEATH
Stephen A. Pitz	Retired	Police	07/22/2024
Ray B. Russell	Retired	Fire	08/07/2024
Edward D. Everitt	Retired	Fire	08/14/2024
Eddie Geter Jr.	Retired	Fire	08/18/2024
C. E. Patzig	Retired	Fire	08/19/2024
Reba E. Allison	Retired	Police	08/19/2024
Jimmy Small	Active	Fire	08/28/2024
O. B. Jerry Howard	Retired	Fire	08/29/2024
Darron L. Burks	Active	Police	08/29/2024

Regular Board Meeting – Thursday, September 12, 2024

Dallas Police and Fire Pension System Thursday, August 8, 2024 8:30 a.m. 4100 Harry Hines Blvd., Suite 100 Second Floor Board Room Dallas, TX

Regular meeting, Nicholas A. Merrick, Chairman, presiding:

ROLL CALL

Board Members

Present at 8:30 a.m.	Nicholas Merrick, Tina Hernandez Patterson, Michael Taglienti, Tom Tull, Matthew Shomer, Marcus Smith
By telephone at 8:30 a.m.	Michael Brown, Anthony Scavuzzo, Steve Idoux
By telephone at 10:41 a.m.	Nancy Rocha
Absent	Mark Malveaux
<u>Staff</u>	Kelly Gottschalk, Josh Mond, Brenda Barnes, Ryan Wagner, Christina Wu, Akshay Patel, Kyle Schmit, John Holt, Nien Nguyen, Milissa Romero, Bill Scoggins (by phone), Chelsea Abbott, Aubrey Rosalez
Others	David Harper, Ben Mesches, Gay Donnell Willis, Chad Anderson, Farrah Ali, Aaron Bruce, Charles W. Hyles, Brian Elliot, John Hankins
By telephone	Eric Solis, Buddy Jones, Jeff Williams, Caitlin Grice, Ken Haben
	* * * * * * * *

The meeting was called to order at 8:30 a.m.

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A. MOMENT OF SILENCE

The Board observed a moment of silence in memory of retired police officers Clyde Dickerson, William L. Johnson, Craig A. Reynerson, Albert L. Hay, David L. Goelden, and retired firefighters Thomas S. Swing, Richard E. Beebe, Eugene M. Walther, Jimmy A. Bollman, Robert W. Foster.

No motion was made.

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B. APPROVAL OF MINUTES

Regular meeting of July 11, 2024

After discussion, Mr. Tull made a motion to approve the minutes of the Regular meeting of July 11, 2024. Mr. Shomer seconded the motion, which was unanimously approved by the Board.

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C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. Independent Actuarial Analysis and Recommendations and Section 2.025 Update

The Board went into closed executive session – Legal at 8:32 a.m.

The meeting reopened at 10:10 a.m.

The Board went into closed executive session – Legal at 11:26 a.m.

The meeting reopened at 11:51 a.m.

- **a.** After discussion, Mr. Taglienti made a motion to approve, in the form presented by staff, the rule effecting changes to the DPFP plan, pursuant to the requirements of Section 2.025. Mr. Tull seconded the motion, which was unanimously approved by the Board.
- After discussion, Mr. Shomer made a motion to accept the final report of Cheiron and direct staff to transmit the report to the Pension Review Board.
 Mr. Taglienti seconded the motion, which was unanimously approved by the Board.
- **c.** After discussion, Mr. Shomer made a motion to authorize the filing of a declaratory judgment action in Travis County to clarify the requirements of Section 2.025 and Section 802 of the Texas Government Code. Mr. Tull seconded the motion, which was by the following vote:

For:	Mr. Merrick, Mr. Taglienti, Mr. Scavuzzo, Mr. Tull
	Mr. Shomer, Mr. Smith, Ms. Rocha, Mr. Idoux
Opposed:	None
Abstained:	Ms. Hernandez Patterson, Mr. Brown

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2. Quarterly Financial Reports

The Chief Financial Officer presented the second quarter 2024 financial statements.

No motion was made.

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3. 2024 Mid-Year Budget Review

The Chief Financial Officer presented a review of the 2024 Operating Expense Budget detailing expenses for the first six months of the calendar year.

No motion was made.

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4. Financial Audit Status

The Chief Financial Officer provided a status update on the annual financial audit.

No motion was made.

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5. Executive Director Approved Pension Ministerial Actions

The Executive Director reported on the July pension ministerial actions.

No motion was made.

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6. Monthly Contribution Report

The Executive Director reviewed the Monthly Contribution Report.

No motion was made.

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7. Board approval of Trustee education and travel

- **a.** Future Education and Business-related Travel
- **b.** Future Investment-related Travel

The Board and staff discussed future Trustee education. There was no future Trustee business-related travel or investment-related travel scheduled.

No motion was made.

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8. Actuarial Review Required by Texas Government Code 802.1012

The Executive Director provided an overview of the process and timeline for the actuarial review required by Section 802.1012 of the Texas Government Code that requires the City of Dallas hire an independent actuary to audit the most recently prepared actuarial valuation every five years.

No motion was made.

9. Portfolio Update

Investment staff briefed the Board on recent events and current developments with respect to the investment portfolio.

No motion was made.

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10. Lone Star Investment Advisors

The Board went into closed executive session – Legal at 11:26 a.m.

The meeting reopened at 11:51 a.m.

Investment staff updated the Board on investments managed by Lone Star Investment Advisors.

No motion was made.

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11. Legal issues - In accordance with Section 551.071 of the Texas Government Code, the Board will meet in executive session to seek and receive the advice of its attorneys about pending or contemplated litigation or any other legal matter in which the duty of the attorneys to DPFP and the Board under the Texas Disciplinary Rules of Professional Conduct clearly conflicts with Texas Open Meeting laws.

The Board went into closed executive session – Legal at 11:26 a.m.

The meeting reopened at 11:51 a.m.

The Board and staff discussed legal issues.

No motion was made.

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12. Closed Session - Board serving as Medical Committee

- a. Application for death benefits for disabled child 2024-1c
- **b.** Disability application 2024-2d

The Board went into closed executive session – Medical at 11:26 a.m.

The meeting reopened at 11:51 a.m.

- After discussion, Mr. Taglienti made a motion to grant survivor benefits to applicant 2024-1c under the provisions of Article 6243a-1, Section 6.06(o-2). Mr. Smith seconded the motion, which was unanimously approved by the Board.
- **b.** No discussion was held, and no motion was made regarding the disability application.

D. BRIEFING ITEMS

1. Public Comments

Prior to commencing items for Board discussion and deliberation, the Chairman extended an opportunity for public comment. No one requested to speak to the Board.

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2. Executive Director's Report

- **a.** Associations' newsletters
 - NCPERS Monitor (August 2024)
 - NCPERS PERSist (Summer 2024)
- **b.** Open Records

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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Taglienti and a second by Mr. Tull, the meeting was adjourned at 11:55 a.m.

Nicholas A. Merrick, Chairman

ATTEST:

Kelly Gottschalk, Secretary



DISCUSSION SHEET

ITEM #C1

Торіс:	Texas Government Code Section 802.1012 Actuarial Valuation Audit
Attendees:	Jeannie Chen, Specialist Leader, Deloitte Consulting LLP Joe Kropiewnicki, Manager, Deloitte Consulting LLP Jeff Williams, Vice President, Segal Consulting (on phone)
Discussion:	Texas Government Code Section 802.1012 requires plan sponsors to engage an independent actuary to conduct an actuarial audit of pension systems every five years. The City of Dallas contracted with Deloitte Consulting LLP (Deloitte), the City's regular retained actuary, to conduct the audit. Deloitte reviewed both the 1-1-2023 actuarial valuation and the 12-31-2019 Experience Study for the Regular Plan (Combined Plan). The Supplemental Plan does not meet the size requirements to mandate a review.
Staff Recommendation:	Deloitte will discuss their findings, conclusions and recommendations. Representatives from Segal Consulting will be available by phone to respond to recommendations and address any questions. Direct staff to consult with Segal and provide responses as staff deems appropriate to accompany the final report that Deloitte will submit to the City of Dallas.

Regular Board Meeting – Thursday, September 12, 2024

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Dallas Police and Fire Pension System (DPFP)

Texas Government Code Section 802.1012 Review

Deloitte Consulting LLP September 12, 2024



Requirements of Texas Government Code Section 802.1012

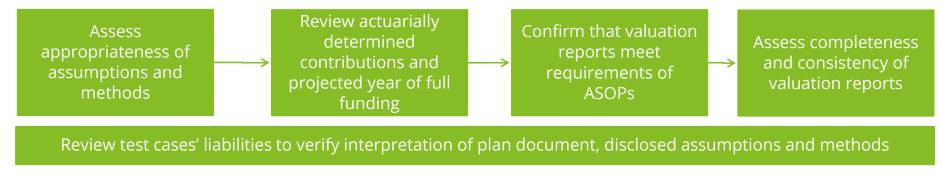
- Applies only to a public retirement system with total assets the book value of which, as of the last day of the preceding fiscal year, is at least \$100 million.
- Every five years, the actuarial valuations, studies, and reports of a public retirement system most recently prepared for the retirement system... must be audited by an independent actuary

Prior to Commencing Audit	 Agree in writing with the City to maintain the confidentiality of any non-public information provided by the pension funds for the audits Meet with manager of the pension funds to discuss appropriate assumptions to use in conducting audits
No later than 30 th Day After Completion	 Submit draft report to pension funds for discussion and clarification Discuss draft report with pension funds' Boards Request in writing that the pension funds submit any response to accompany the final report within 30 days of receiving draft report
31 st to 60 th Day After Submitting Draft Report	 Submit final audit report to the City At first regularly scheduled open meeting after receiving final report, City Council will: Include presentation of audit report on the agenda Present final audit report and any response from the retirement system Provide printed copies of final audit report and response from retirement system to individuals attending meeting
City's responsibility – No later than 30 th day After Receiving Final Report	 Submit a copy of the final report to the pension funds and the State Pension Review Board Maintain a copy of the final report at main office for public inspection

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Deloitte's Process

Our approach to the requested scope is to perform a level two actuarial review, where Deloitte does not replicate the retained actuary's valuation



Items received from the Plan for Deloitte's Process



Results and Findings

Results

- It is our opinion that the January 1, 2023 actuarial valuation and the December 31, 2019 experience study were performed in compliance with the applicable Actuarial Standards of Practice issued by the Actuarial Standards Board.
- The assumptions used in the January 1, 2023 actuarial valuation were updated as recommended in the experience study, with the exception of several assumptions that were updated between January 1, 2020 and January 1, 2023 to reflect recent pertinent changes.
- Plan provisions, methods, and assumptions disclosed in the January 1, 2023 actuarial valuation report were appropriately valued based on our review of the sample life outputs.

Findings

• We have noted findings that could provide additional detail and improve the understanding of the actuarial work performed, including clarifications for certain assumptions and plan provisions being valued. The full list of findings is shown in the appendix.

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Valuation Report Report Content

Below are examples of findings from the review of the valuation report. A full list of findings related to the Valuation Report is shown in the Appendix.

- Consider disclosing the history of the projected fully funded year in the valuation report. This may enhance understanding of the plan's projected full funding history.
- Consider including a description of how closely current actual and target asset allocations align with the target asset allocation used to select the investment return assumption during the experience study. This may improve ability to validate the investment return assumption.

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Experience Study Investment Return Assumption

Below are examples of findings from the review of the experience study. A full list of findings related to the Experience Study is shown in the Appendix.

While the 6.50% Investment Return assumption is reasonable, the DPFP should revisit the assumption considering:

- It was at the low end of the reasonable range in the retained actuary's December 31, 2019 experience study and; 1)
- The long-term return expectations have increased since the time of the experience study. 2)

The retained actuary's projected real rates of return are based on the Segal Marco Advisors. To provide another source of data, Deloitte corroborated this assumption using the plan's target asset allocation and the publicly available *PMorgan* Asset Management Long-Term Capital Market Assumptions for 2024 (published 9/30/2023). The results are summarized in the table below:

		Segal Ma	arco Advisors	JPMorgan		
Asset Class	Target Allocation	Long-Term Expected Real Rate of Return	Long-Term Expected Nominal Rate of Return ¹	Long-Term Expected Nominal Rate of Return - Arithmetic	Average Expected Risk (Standard Deviation)	
Global Equity	55.00%	7.01%	9.51%	9.05%	16.68%	
Emerging Markets Equity	5.00%	8.71%	11.21%	10.77%	21.20%	
Private Equity	5.00%	9.96%	12.46%	11.46%	20.06%	
Short-Term Investment Grade Bonds	6.00%	0.96%	3.46%	3.91%	1.58%	
Investment Grade Bonds	4.00%	1.61%	4.11%	6.04%	7.14%	
High Yield Bonds	4.00%	3.71%	6.21%	6.83%	8.36%	
Bank Loans ³	4.00%	3.21%	5.71%	6.79%	7.89%	
Emerging Market Debt	4.00%	3.71%	6.21%	7.23%	9.64%	
Real Estate	5.00%	3.61%	6.11%	8.02%	10.60%	
Natural Resources	5.00%	4.86%	7.36%	5.31%	18.00%	
Cash	3.00%	0.71%	3.21%	2.90%	0.59%	
Expected Portfolio Arithmetic Return 8.28% Expected Portfolio Standard Deviation Expected Portfolio Geometric Return (JPMorgan's Inflation Assumption)				8.15%	12.62% 7.36%	
Expected Portfolio Geometric Return (Adjusted for Plan's Inflation Assumption) ²					7.36%	

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¹Ajusted for the DPFP's inflation assumption of 2.50%. ²Ajusted for Plan's Inflation Assumption of 2.50% compared to JPMorgan's Inflation Assumption of 2.50%.

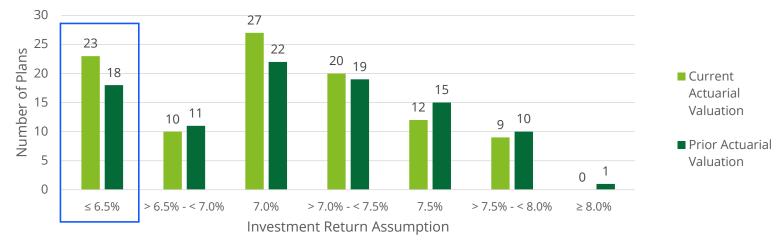
Experience Study Investment Return Assumption (cont.)

Additionally, considering the short-term volatility of the expectations contrasted with the long-term nature of this assumption, the JPMorgan Asset Management Long-Term Capital Market Assumptions for 2020-2024 was also considered, based on the same target asset allocation and methodology as above. The 2020-2024 historical range of expected portfolio geometric return is **5.18%-7.56%**.

JPMorgan Year	2024	2023	2022	2021	2020
Expected Target Asset Allocation Geometric Return (Adjusted for Plan's Inflation Assumption)	7.36%	7.56%	5.18%	5.54%	6.59%

The below chart¹ summarizes the Investment Return assumptions used in Texas public pensions.

Texas Public Pensions - Investment Return Assumption



7

¹From the Texas Pension Review Board; <u>https://data.prb.texas.gov/aggregate.html</u> Copyright © 2024 Deloitte Development LLC. All rights reserved.

Experience Study Salary Increase Assumption

For 2024+, the Salary Increase Assumption aligns to the ultimate rate in the 2023 Meet and Confer Agreement.

Year	Officers	Corporals, Drivers, Senior Officers	Sergeants, Lieutenants, Captains, Majors, Deputy Chiefs, Assistant Chiefs, Chiefs
2023	7.25%	6.75%	6.25%
2024+	3.00%	3.00%	2.50%

The next study should include supporting detail for the assumption for years after the Meet and Confer agreement is in effect, such as considering a combination of:

- a) historical experience and;
- b) long-term expectations of market-based pay philosophy as outlined in the latest Meet and Confer agreement

Article 7, Section 1: Subject to the terms of this Article and Agreement, it is the intent of the City to have a "market-based" pay philosophy to strive to maintain the average pay of the comparable cities identified below for Police Officers and Firefighters while at the same time meeting other financial needs of the City.

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Timeline and Next Steps

Time Frame	Activities
August 28, 2024	Deloitte submitted draft Section 802 Report to DPFP
September 12, 2024	Deloitte discusses draft Section 802 Report with DPFP Board
By September 27, 2024	Deadline for DPFP to submit response (30 days after submitting draft report)
September 28 – October 27, 2024	Deloitte to submit final Section 802 Report to the City (between 31 and 60 days after submitting draft report)
November 7, 2024	Present final report to City's Government Performance & Financial Management Committee

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Appendix

Full Summary of Findings

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Summary of Key Findings Valuation Report

Below are the findings from the review of the valuation report to be considered for future modifications.

Area	Findings	Purpose
Plan Provisions	Add a description that a member on active service who has 10 years or more of participation in DROP shall no longer have the amount of the member's retirement pension credited to the member's DROP account while the member is on active service .	Provide additional detail on plan design
Report Content	Disclose the history of the projected fully funded year in the valuation report	Enhance understanding of the plan's projected full funding history
Report Content	Include a description of how closely current actual and target asset allocations align with the target asset allocation used to select the investment return assumption during the experience study	Improve ability to validate investment return assumption
Report Content	Disclose 10-20 years of undiscounted cash flows	Enhance understanding of the plan's financial obligation
Report Content	In <i>Exhibit A: Table of plan demographics</i> , add a line for retirees that shows Average monthly DROP annuity	Enhance understanding of data
Report Content	In <i>Exhibit A: Table of plan demographics</i> , add a footnote that average age for beneficiaries excludes child beneficiaries	Enhance understanding of data

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Summary of Key Findings Experience Study

Below are the findings from the review of the experience study to be considered for future modifications.

Area	Findings	Purpose
Payroll Growth	Revisit the 2.50% payroll growth assumption in light of the Meet and Confer Agreement and other national data.	Improve appropriateness of Assumption Selection
Investment Return	 Include these details to support the assumption: the target asset allocation used in the analysis expected returns by asset class used in the forecast description of whether the arithmetic or geometric return was considered when developing the reasonable range of investment returns 	Support assumption selection
Investment Return	Revisit the assumption considering recent capital market assumptions	Improve Appropriateness of Assumption Selection
Salary Increase Assumption	Include supporting detail for the assumption for years after the Meet and Confer agreement	Support assumption selection
Cost-of-Living Adjustment Assumption	Provide the rationale for the selection of the 1.5% COLA assumption	Support assumption selection
Cost-of-Living Adjustment Assumption	Consider performing stochastic analysis on the COLA Assumption due to the presence of both an upper limit on the annual COLA (4% maximum COLA) and a lower limit of 0%	Improve appropriateness of assumption selection
Mortality	Discuss the basis for the selection of the set back/forward period, including a credibility analysis	Support assumption selection

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Summary of Key Findings Experience Study (Cont.)

Below are the findings from the review of the experience study to be considered for future modifications.

Area	Findings	Purpose
Retirement	Include detail to support the assumption selection, such as the number of exposures at each age, and a description for any adjustments made to anomalies in the plan experience (such as 2016-2017), and experience for DROP Actives.	Support assumption selection
Retirement for non- DROP Active Members	Consider whether members who may become eligible for the 20 & Out provision warrant a separate assumption	Align assumption selection with expected behavior based on plan provisions
Retirement for non- DROP Active Members	Consider supplementing the experience study analysis with qualitative considerations, such as an analysis of the plan provisions or an assessment of peer retirement systems with similar provisions	Align assumption selection with expected behavior based on plan provisions
Withdrawal	Include detail to support the assumption selection, such as the number of exposures at each age, and a description for any adjustments made to anomalies in the plan experience (such as 2016-2017)	Support assumption selection
Withdrawal	Consider adding a separate withdrawal assumption for members hired after March 1, 2011	Align assumption selection with expected behavior based on plan provisions
Disability	The next experience study should include an analysis on the incidence of service versus non-service related disabilities	Improve appropriateness of assumption selection

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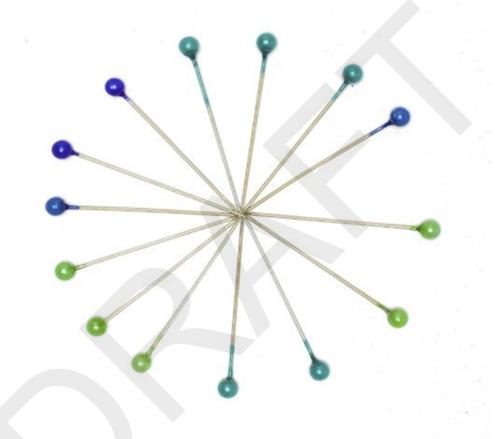
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Dallas Police and Fire Pension System

Review under Texas Government Code Section 802.1012

Prepared by Deloitte Consulting LLP

September 2024

Contents

Actuarial Opinion	3
Executive Summary	4
Summary of Key Findings	5
Review of Plan Provisions	8
Review of Census Data	9
Review of Actuarial Methods	10
Review of Report Content	12
Review of Economic Assumptions	
Review of Demographic Assumptions	20
Validation of Results	26
Review of Sample Lives	28

Actuarial Opinion

This report presents the results of the actuarial review of the January 1, 2023 actuarial valuation and experience study for the Dallas Police and Fire Pension System ("DPFP", or "System", or "plan"), a plan sponsored by the City of Dallas ("City"), to satisfy the requirements of Texas Government Code Section 802.1012 ("Section 802").

Our review was based on participant data and financial information provided by the DPFP and their retained actuary, Segal Consulting ("Segal" or "actuary"), and our interpretation of the applicable Actuarial Standards of Practice issued by the Actuarial Standards Board.

In our opinion, the January 1, 2023 actuarial valuation (actuarial valuation) and the December 31, 2019 actuarial experience study (experience study) for the DPFP were performed in compliance with the applicable Actuarial Standards of Practice issued by the Actuarial Standards Board.

Future measurements of the financial metrics associated with the actuarial valuation may differ significantly from the measurements presented in this report due to factors such as actual plan experience not evolving as anticipated due to the selection of economic and demographic assumptions; changes in economic or demographic assumptions; changes in certain valuation parameters, perhaps triggered by the plan financial condition, such as a different amortization period, or additional cost or contribution requirements based on the plan's funding status; and changes in plan provisions or applicable law. The scope of our work does not include an analysis of the impacts of these and similar contingencies.

The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

This report was prepared solely for the benefit and internal use of the City. This report is not intended for the benefit of any other party and may not be relied upon by any third party for any purpose, and Deloitte Consulting accepts no responsibility or liability with respect to any party other than the City.

To the best of our knowledge, no employee of the Deloitte U.S. Firms is an officer or director of the employer. In addition, we are not aware of any relationship between the Deloitte U.S. Firms and the employer that may impair or appear to impair the objectivity of the work included in this analysis.

DELOITTE CONSULTING LLP

Michael de Leon, ASA, EA, FCA, MAAA Managing Director Jeannie Chen, ASA, EA, FCA, MAAA Specialist Leader

Joe Kropiewnicki, FSA, EA, MAAA, CERA Manager

Executive Summary

Intent

The intent of this report is to review the January 1, 2023 actuarial valuation and the December 31, 2019 actuarial experience study reports prepared by the retained actuary for compliance with the applicable Actuarial Standards of Practice issued by the Actuarial Standards Board, and to satisfy the requirements of Texas Government Code Section 802.1012.

Process

To achieve the above-stated goals, the following were reviewed: DPFP-provided and actuaryprovided census data, sample life output from the actuary's valuation software, the January 1, 2023 actuarial valuation report, and the December 31, 2019 experience study report. The DPFP-provided data was used by the retained actuary to develop the census data that was the basis for the actuarial valuation.

Results and Findings

As stated in the previous section, it is our opinion that the January 1, 2023 actuarial valuation and the December 31, 2019 actuarial experience study for the DPFP were performed in compliance with the applicable Actuarial Standards of Practice issued by the Actuarial Standards Board.

The assumptions used in actuarial valuation were updated as recommended in the experience study, with the exception of several assumptions that were updated between January 1, 2020 and January 1, 2023 to reflect recent pertinent changes (as discussed later in this report). Plan provisions, methods, and assumptions disclosed in the January 1, 2023 actuarial valuation report were appropriately valued based on our review of the sample life outputs.

Findings in this report could provide additional detail and improve the understanding of the actuarial work performed, including clarifications for certain assumptions and plan provisions being valued.

These comments are discussed in the Summary of Key Findings section as well as the detailed sections that follow.

Summary of Key Findings

The tables below summarize findings from the review of the valuation report and the experience study to be considered for future modifications. These findings are discussed in the following sections.

Valuation Report

Area	Findings	Purpose
Plan Provisions	Add a description that a member on active service who has 10 years or more of participation in DROP shall no longer have the amount of the member's retirement pension credited to the member's DROP account while the member is on active service.	Provide additional detail on plan design
Report Content	Disclose the history of the projected fully funded year in the valuation report	Enhance understanding of the plan's projected full funding history
Report Content	Include a description of how closely current actual and target asset allocations align with the target asset allocation used to select the investment return assumption during the experience study	Improve ability to validate investment return assumption
Report Content	Disclose 10-20 years of undiscounted cash flows	Enhance understanding of the plan's financial obligation
Report Content	In <i>Exhibit A: Table of plan demographics</i> , add a line for retirees that shows Average monthly DROP annuity	Enhance understanding of data
Report Content	In <i>Exhibit A: Table of plan demographics</i> , add a footnote that average age for beneficiaries excludes child beneficiaries	Enhance understanding of data

Summary of Key Findings

Experience Study

Area	Findings	Purpose
Payroll Growth	Revisit the 2.50% payroll growth assumption in light of the Meet and Confer Agreement and other national data.	Improve appropriateness of Assumption Selection
Investment Return	 Include these details to support the assumption: the target asset allocation used in the analysis expected returns by asset class used in the forecast description of whether the arithmetic or geometric return was considered when developing the reasonable range of investment returns 	Support assumption selection
Investment Return	Revisit the assumption considering recent capital market assumptions	Improve Appropriateness of Assumption Selection
Salary Increase Assumption	Include supporting detail for the assumption for years after the Meet and Confer agreement	Support assumption selection
Cost-of-Living Adjustment Assumption	Provide the rationale for the selection of the 1.5% COLA assumption	Support assumption selection
Cost-of-Living Adjustment Assumption	Consider performing stochastic analysis on the COLA Assumption due to the presence of both an upper limit on the annual COLA (4% maximum COLA) and a lower limit of 0%	Improve appropriateness of assumption selection
Mortality	Discuss the basis for the selection of the set back/forward period, including a credibility analysis	Support assumption selection
Retirement	Include detail to support the assumption selection, such as the number of exposures at each age, and a description for any adjustments made to anomalies in the plan experience (such as 2016-2017), and experience for DROP Actives.	Support assumption selection
Retirement for non-	Consider whether members who may become	Align assumption selection
DROP Active	eligible for the 20 & Out provision warrant a	with expected behavior
Members	separate assumption	based on plan provisions
Retirement for non- DROP Active Members	Consider supplementing the experience study analysis with qualitative considerations, such as an analysis of the plan provisions or an assessment of peer retirement systems with similar provisions	Align assumption selection with expected behavior based on plan provisions

Summary of Key Findings

Area	Findings	Purpose
Withdrawal	Include detail to support the assumption selection, such as the number of exposures at each age, and a description for any adjustments made to anomalies in the plan experience (such as 2016-2017)	Support assumption selection
Withdrawal	Consider adding a separate withdrawal assumption for members hired after March 1, 2011	Align assumption selection with expected behavior based on plan provisions
Disability	The next experience study should include an analysis on the incidence of service versus non- service related disabilities	Improve appropriateness of assumption selection

Review of Plan Provisions

The plan provisions and some actuarial assumptions and methods are prescribed in Article 6243a-1 of the Texas Statutes (as amended as of September 1, 2021 by HB3375) ("Plan Document"). This review compares the key plan provisions in the Plan Document against the provisions disclosed in the report prepared by the retained actuary.

Comments and Findings

Pages 54-60 of the valuation report outline the summary of plan provisions. The provisions in the summary of benefits do not conflict with the provisions in the Plan Document, nor do they omit plan provisions that could have a significant impact on plan benefits. The finding below is a way to improve transparency and completeness of the valuation report's summary of plan provisions.

Provision	Findings	
DROP Account	Add a description that a member on active service who has 10 years or more of participation in DROP shall no longer have the amount of the member's retirement pension credited to the member's DROP account while the member is on active service.	

Review of Census Data

Actuarial valuations require certain adjustments to the census data. This section assesses the reasonableness of data adjustments and reconciliation performed by the retained actuary, as well as the completeness of the documentation in the valuation report. The analysis is based on data files supplied by DPFP, valuation data files created by the retained actuary, and sample life output from the actuary's valuation software. The retained actuary utilized DPFP data to build appropriate census data for the actuarial valuation.

Comments and Findings

Documentation of data review procedures performed by the actuary

Page 13 of the DPFP valuation report states the following:

An actuarial valuation for a plan is based on data provided to the actuary by the System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.

This statement appropriately addresses the requirements of Section 3.5 of ASOP 23.

Data reconciliation and adjustment process performed by the actuary

The actuary's valuation file is generally consistent with the data supplied by DPFP based on a review of information in key fields. Additionally, the actuary's valuation file is consistent with the summary statistics in the valuation report.

Page 52 of the DPFP valuation report mentions that for unknown data for participants:

Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

This statement appropriately addresses Section 3.4c of ASOP 23.

Verification of Sample Life Data

The data used in the sample life calculation is consistent with the actuary's valuation data and the data provided by the DPFP. Details of the sample life review are in the *Review of Sample Lives* section below.

Review of Actuarial Methods

This section determines if the actuarial cost method, actuarial value of asset method, and funding method are reasonable and consistent with generally accepted actuarial practice, relevant ASOPs, and the Pension Review Board Guidelines for Developing a Funding Policy¹ ("PRB Guidelines"), in particular the component on selecting Actuarial Methods.

Cost Method

The actuarial cost method used is Entry Age Normal (EAN) as a level percentage of pay. Under this method, the present value of future benefits (PVFB) is determined for each employee and is then spread evenly as a level percentage of pay over each employee's career. This method therefore produces employer contributions that are level as a percentage of payroll.

The actuarial cost method is consistent with the requirements of ASOP 4 and PRB Guidelines.

Actuarial Value of Asset Method

The actuarial valuation report describes the actuarial value of asset method as follows:

Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.

Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The actuarial value of asset method is consistent with the requirements of ASOP 44 and PRB Guidelines.

Funding Method

The actuarial valuation report describes the amortization method used to calculate the Actuarially Determined Contribution (ADC) as follows:

The unfunded actuarial accrued liability as of January 1, 2020 is amortized on a closed, 25-year period. Beginning January 1, 2021, each year's gains and losses are amortized over a closed, 20-year period.

¹ <u>https://www.prb.texas.gov/wp-content/uploads/2024/07/Funding-Policy-Guidance-Adopted-07.25.2024.pdf</u>

The amortization method is consistent with the requirements of ASOP 4 and PRB Guidelines.

While the ADC amortization method meets PRB Guidelines, the HB 3158 prescribed statutory contribution rate of 34.50% raises the period to full funding to 82 years. As stated in the January 1, 2023 valuation report:

The Board's funding policy meets the standard of targeting 100% funding of the actuarial accrued liability if the ADC is contributed.

[...]

The effective amortization period of 82 years based on current funding methodology is not a reasonable period for paying off the UAL.

Review of Report Content

Review of Report Content

This section reviews the content of the actuarial report for required disclosures.

Comments and Findings

The actuarial report meets applicable actuarial standards of practice as outlined in Actuarial Standards of Practice No. 41, *Actuarial Communications*, and appears to accurately represent the funded status of the plan. However, Deloitte presents the following considerations for the retained actuary:

- The retained actuary should disclose the history of the projected fully funded year in the valuation report.
- Include a description of how closely current actual and target asset allocations align with the target asset allocation used to select the investment return assumption during the experience study.
- Disclose the undiscounted cash flows, a beneficial tool for understanding the plan's financial obligation. This could be for a 10 to 20 year period, showing current and future retirees separately.
- In *Exhibit A: Table of plan demographics*, add a line for retirees that shows Average monthly DROP annuity. Currently, "Average monthly benefit" does not include any DROP annuities.
- In *Exhibit A: Table of plan demographics*, add a footnote that average age for beneficiaries excludes child beneficiaries.

Review of Economic Assumptions

Review of Economic Assumptions

Actuarial calculations inherently make predictions about future events to estimate financial costs on a present value basis and to quantify and/or qualify the risks and volatility associated with the financial costs. To do so, actuaries must make best-estimate assumptions about these possible future events and establish methods for performing the calculations. Actuarial assumptions are needed to determine the value of plan obligations to its participants, and actuarial methods create a schedule for allocating costs over a participant's career. The assumptions and methods are established by adhering to best practices for determination, studying historical experience, utilizing relevant external data, and considering internal and reputable external opinions on expected future experience. Comprehensive reporting of the assumptions and methods is required under ASOPs 27, 35, and 41.

This section considers assumptions categorized as economic, which include assumptions dependent on economic factors, such as the inflation rate, payroll growth rate, investment return, and salary increase rate. **Actuarial Standards of Practice No. 27**, *Selection of Economic Assumptions for Measuring Pension Obligations*, provides guidance to actuaries in selecting economic assumptions, and this ASOP is relied upon for the review below.

Inflation

The inflation assumption is not directly used to measure the liabilities of the plan; rather it is a component of all economic assumptions, including payroll growth, investment return, and salary increase.

Retained Actuary's Assumption

The inflation assumption is 2.50%.

Comments and Findings

The experience study considered inflationary data from several sources, including the 2019 OASDI Trustee Report and historical CPI-U. The inflation assumption is consistent with general trends in public sector plans; the average inflation assumption for public sector plans has decreased steadily from 3.84% in 2002 to 2.47% in 2022 per the March 2024² NASRA Survey.

The long-range inflation forecasts from the Office of the Chief Actuary of the Social Security Administration provided in the 2024 OASDI Trustees Report³ is as follows:

Scenario	CPI
Low Cost	3.0%
Intermediate Cost	2.4%
High Cost	1.8%

² https://www.nasra.org/files/Issue%20Briefs/NASRAInvReturnAssumptBrief.pdf

³ https://www.ssa.gov/OACT/TR/2024/tr2024.pdf

Note that while the experience study was performed as of December 31, 2019, the inflation assumption of 2.50% remains reasonable as of January 1, 2023 based on the information above.

Payroll Growth and Wage Inflation

The assumed aggregate payroll growth is used in the amortization of the unfunded actuarial accrued liability. Payroll growth is chosen using a building block approach in which the inflation assumption is added to the assumed real wage growth. Real wage growth includes wage growth due to productivity, but excludes individual compensation increases above wage growth, also called "merit" increases.

Retained Actuary's Assumption

The payroll growth assumption is 2.50%. While the wage inflation assumption is not explicitly disclosed, the inflation rate is 2.50%, implying that the real wage growth assumption is 0.0%.

Comments and Findings

National real wages can be studied by reviewing increases in the historical Average Wage Index, or AWI, published by the Social Security Administration. The AWI from 1982 to 2022, is shown below. Real Payroll Growth is the AWI less the CPI-U.

Period	Years	AWI	CPI-U (US)	Real Payroll Growth
2017-2022	5	4.12%	3.11%	1.00%
2012-2022	10	3.58%	2.31%	1.27%
2002-2022	20	3.19%	2.35%	0.84%
1992-2022	30	3.44%	2.38%	1.06%
1982-2022	40	3.64%	2.73%	0.91%

Additionally, the long-range real payroll growth forecasts from the Office of the Chief Actuary of the Social Security Administration provided in the 2024 OASDI Trustees Report is as follows:

Scenario	Payroll Differential
Low Cost	1.74%
Intermediate Cost	1.14%
High Cost	0.53%

The DPFP's salary increases are governed by the 2023 Meet and Confer Agreement, which prescribes salary increases through 2025. The ultimate salary increase in the agreement is 3.00% for Officers, Corporals, Drivers, Senior Officers, and Chiefs, and 2.50% for Sergeants, Lieutenants, Captains, Majors, Deputy Chiefs, and Assistant Chiefs.

Based on the national data above, as well as the 3.00% ultimate salary increase for a majority of positions in the 2023 Meet and Confer Agreement, the DPFP should revisit the 2.50% payroll growth assumption (and implied 0.0% real wage growth assumption).

Investment Return

The investment return assumption reflects anticipated returns on the plan's current and future assets. It is also used to calculate the present value of all plan liabilities and generally has the greatest impact of all assumptions reviewed in this report. The investment return assumption is chosen using a building block approach in which the inflation assumption is added to the assumed real rate of return.

Retained Actuary's Assumption

The rate of investment return assumption is 6.50%. This consists of a 2.50% inflation assumption and a 4.00% real rate of return assumption.

Comments and Findings

The experience study considered the assumption for peer plans from the Public Fund Survey published by NASRA, DPFP's historical returns, and a high-level description of the reasonable range based on DPFP's inflation assumption and target asset allocation. A reasonable range of 6.50% to 7.25% was determined.

The following details could be included in the next study to support the assumption:

- the target asset allocation used in the analysis
- expected returns by asset class used in the forecast
- description of whether the arithmetic or geometric return was considered when developing the reasonable range of investment returns.

The validity of the 2.50% inflation assumption is detailed in the prior section. This section assesses the validity of the 4.00% real rate of return assumption based on the target asset allocation and the anticipated risk premiums of each of the portfolio's asset classes disclosed in the January 1, 2023 valuation report. The retained actuary's projected real rates of return are based on the Segal Marco Advisors.

To provide another source of data, Deloitte corroborated this assumption using the plan's target asset allocation and the publicly available JPMorgan Asset Management Long-Term Capital Market Assumptions for 2024 (published 9/30/2023)⁴. The results are summarized in the table below:

⁴ JPMorgan Asset Management provides a publicly available summary of long-term investment yield forecasts by asset class. JPMorgan Chase is a well-known and recognizable source for this type of information. Accordingly, we believe this information is an appropriate source to corroborate the information provided in support of the Long-Term Rate of Return. https://am.jpmorgan.com/us/en/assetmanagement/institutional/insights/portfolio-insights/ltcma/archive/

Review of Economic Assumptions

	Segal Marco Advisors		JPN	JPMorgan		
Asset Class	Target Allocation	Long-Term Expected Real Rate of Return	Long-Term Expected Nominal Rate of Return ¹	Long-Term Expected Nominal Rate of Return - Arithmetic	Average Expected Risk (Standard Deviation)	
Global Equity	55.00%	7.01%	9.51%	9.05%	16.68%	
Emerging Markets Equity	5.00%	8.71%	11.21%	10.77%	21.20%	
Private Equity	5.00%	9.96%	12.46%	11.46%	20.06%	
Short-Term Investment Grade Bonds	6.00%	0.96%	3.46%	3.91%	1.58%	
Investment Grade Bonds	4.00%	1.61%	4.11%	6.04%	7.14%	
High Yield Bonds	4.00%	3.71%	6.21%	6.83%	8.36%	
Bank Loans ³	4.00%	3.21%	5.71%	6.79%	7.89%	
Emerging Market Debt	4.00%	3.71%	6.21%	7.23%	9.64%	
Real Estate	5.00%	3.61%	6.11%	8.02%	10.60%	
Natural Resources	5.00%	4.86%	7.36%	5.31%	18.00%	
Cash	3.00%	0.71%	3.21%	2.90%	0.59%	
Expected Portfolio Arithm	etic Return		8.28%	8.15%	•	
Expected Portfolio Standa	rd Deviation				12.62%	
Expected Portfolio Geometric Return (JPMorgan's Inflation Assumption)				7.36%		
Expected Portfolio Geometric Return (Adjusted for Plan's Inflation Assumption) ²					7.36%	

¹Adjusted for the DPFP's inflation assumption of 2.50%.

²Adjusted for Plan's Inflation Assumption of 2.50% compared to JPMorgan's Inflation Assumption of 2.50%.

Additionally, considering the short-term volatility of the expectations contrasted with the long-term nature of this assumption, the JPMorgan Asset Management Long-Term Capital Market Assumptions for 2020-2024 was also considered, based on the same target asset allocation and methodology as above. The 2020-2024 historical range of expected portfolio geometric return is 5.18%-7.56%.

JPMorgan Year	2024	2023	2022	2021	2020
Expected Portfolio Geometric Return (Adjusted for Plan's Inflation Assumption)	7.36%	7.56%	5.18%	5.54%	6.59%

Based on the above analysis, while the 6.50% Investment Return assumption is reasonable, the DPFP should revisit this assumption considering 1) it was at the low end of the reasonable range in the retained actuary's December 31, 2019 experience study and 2) long-term return expectations have increased since the time of the experience study.

Salary Increase

The salary increase assumption is used to project an employee's salary from the valuation date to the assumed termination date(s). It is comprised of inflation, real wage growth, and a merit scale. Inflation and real wage growth were already discussed above. This section focuses on the merit scale.

Retained Actuary's Assumption

The actuarial valuation report describes the salary scale assumption as follows:

The salary scale assumption is based on the City's pay plan, along with analysis completed in conjunction with an Experience Study Report for the five-year period ended December 31, 2019 and the 2019 and 2023 Meet and Confer Agreements.

Year	Officers	Corporals, Drivers, Senior Officers	Sergeants, Lieutenants, Captains, Majors, Deputy Chiefs, Assistant Chiefs, Chiefs
2023	7.25%	6.75%	6.25%
2024+	3.00%	3.00%	2.50%

Comments and Findings

The experience study noted that salary increases are constructed using a "building block" approach as the sum of inflation, productivity, and merit/promotion. Since the 2019 experience study, the assumption has been updated to align with the schedules in the 2023 Meet and Confer Agreement. As discussed in the *Payroll Growth* section, the ultimate salary growth of 3.00% implies a productivity and/or merit/promotion increase of 0.50%, while the payroll growth of 2.50% implies no productivity and/or merit/promotion increases (the 2019 experience study recommended an ultimate salary growth of 2.50% which was used for the 2020 through 2022 valuations. This was updated to 3.00% for Officers, Corporals, Drivers, and Senior Officers in the 2023 valuation).

While the assumption is reasonable, the next study should include supporting detail for the assumption for years after the Meet and Confer agreement is in effect, such as considering a combination of a) historical experience and b) long-term expectations of market-based pay philosophy as outlined in the latest Meet and Confer agreement.

Cost-of-Living Adjustment

The cost-of-living-adjustment (COLA) assumption is used to estimate the plan's future COLA adjustments for retirees, which are often based on an inflation index.

COLA Plan Provision

As described in Section 6.12 of the Plan Document, the Board may grant an ad hoc COLA based on the actual market return over the prior five years less 5%, not to exceed 4% of the base benefit, if, after granting a COLA, the funded ratio on a market value of assets basis is no less than 70%.

Retained Actuary's Assumption

Prior to October 1, 2073, the assumed COLA is 0.00%, and beginning October 1, 2073, the assumed COLA is 1.50% on the original benefit. The assumption for the year the COLA begins will be updated on an annual basis and set equal to the year the DPFP is projected to be 70% funded on a market

value basis after the COLA is reflected. The COLA assumption will automatically be updated as needed to remain five percentage points less than the net investment return assumption.

Comments and Findings

The DPFP's COLA assumption ties to actual market returns less 5%, with the added complexity of a 4% maximum. Section 3.5.1 of ASOP 27 provides guidance on assumptions for plan provisions that are difficult to measure, such as a COLA with a maximum:

Depending on the purpose of the measurement, the actuary may determine that it is appropriate to adjust the economic assumptions to provide for considerations such as adverse deviation or plan provisions that are difficult to measure, as discussed in ASOP No. 4. Any such adjustment made should be disclosed in accordance with section 4.1.1.

The 1.5% assumption aligns with the 6.50% net investment return assumption less five percentage points. While the assumption of 1.5% is reasonable, the retained actuary should provide the rationale for the selection of the 1.5% COLA assumption. The retained actuary could also consider performing stochastic analysis on this assumption due to the presence of both an upper limit on the annual COLA (4% maximum COLA) and a lower limit of 0%. Because of these bounds, the expected COLA could be different from simply taking the expected net investment return less five percentage points.

Overall, the COLA assumption is reasonable and appropriately reflects the plan provisions and the updated year in which the DPFP is projected to be 70% funded.

Administrative Expense

The administrative expense assumption is used to estimate the plan's future costs for administering the pension plan.

Retained Actuary's Assumption

The actuarial valuation report describes the administrative expense assumption as follows:

\$7,000,000 per year, payable monthly (equivalent to \$6,783,022 at the beginning of the year), or 1% of computation pay, if greater.

Comments and Findings

The retained actuary discloses the following in the 2022 actuarial valuation report:

Because it is expected that expenses will continue at a lower level, we have lowered the assumption to \$7,000,000 for the current year.

The table below shows the administrative expenses for the DPFP for the past five years.

DPFP Administrative Expense History		
2022	\$6,361,999	
2021	\$6,390,829	
2020	\$6,534,350	
2019	\$6,445,251	
2018	\$5,861,410	
5-Year Average	\$6,318,768	

Review of Economic Assumptions

Given the recent experience of the DPFP and the explanation from the retained actuary, the assumption is reasonable.

Review of Demographic Assumptions

This section considers assumptions categorized as demographic, which include any non-economic assumption and generally include assumptions regarding how the workforce will behave. **Actuarial Standard of Practice No. 35**, *Selection of Demographic and other Noneconomic Assumptions for Measuring Pension Obligations*, provides guidance to actuaries in selecting demographic and other assumptions not covered by ASOP No. 27, and this ASOP is relied upon for the review below.

Mortality

The mortality assumption is used to determine when an active employee or retired employee will become deceased.

Retained Actuary's Assumption

The following table shows the current mortality assumptions for each group of participants:

Participant Group	Assumption	
	Pub-2010 Public Safety Employee Amount-Weighted	
Healthy pre-retirement	Mortality Table, set forward five years for males, projected	
	generationally using Scale MP-2019	
Healthy annuitants and	Pub-2010 Public Safety Retiree Amount-Weighted Mortality	
dependent spouses	Table, set back one year for females, projected	
dependent spouses	generationally using Scale MP-2019	
Healthy contingent	Pub-2010 Public Safety Contingent Survivor Amount-	
beneficiaries	Weighted Mortality Table, set back one year for females,	
beneficialies	projected generationally using Scale MP-2019	
	Pub-2010 Public Safety Disabled Retiree Amount-Weighted	
Disabled annuitants	Mortality Table, set forward four years for males and	
	females, projected generationally using Scale MP-2019	

Comments and Findings

The experience study does not provide sufficient discussion for the selection of these adjustments or if credible experience exists by cohort. The high-level description of the development of the assumption is reasonable, as it takes the most current published tables into account and considers plan experience. In accordance with ASOP 35 Section 3.5.3, the retained actuary considered the mortality for participants in post-retirement status (for both retirees and beneficiaries), disabled retirement status, and pre-retirement (active) status.

While the assumption is reasonable, the next study should include a discussion of the basis for the selection of the set back/forward period including a credibility analysis to enhance support for the assumption.

Retirement

The retirement assumption is used to determine when an employee is expected to commence benefits.

Retained Actuary's Assumption

For DROP active members, the assumption is based on age, with separate rates for Police and Fire. Additionally, 75% retirement is assumed after ten years in DROP.

For non-DROP actives, the assumption is based on age, with separate rates based on hire date and attainment of 20 years of service as of September 1, 2017. Additionally, 100% retirement is assumed once the benefit multiplier hits 90% maximum.

DROP Active Members

	Rate (%)		
Age	Police	Fire	
Under 50	1.00%	0.75%	
50	10.00%	0.75%	
51	15.00%	0.75%	
52-53	15.00%	10.00%	
54	25.00%	10.00%	
55-57	25.00%	15.00%	
58-62	30.00%	40.00%	
63	40.00%	50.00%	
64	50.00%	50.00%	
65 & Over	100.00%	100.00%	

Non-DROP Active Members

	Rate (%)		
Age	Members hired prior to March 1, 2011 with at least 20 years of service as of September 1, 2017	Members hired prior to March 1, 2011 with less than 20 years of service as of September 1, 2017 & Members hired on or after March 1, 2011	
Under 50	1.00%	1.00%	
50-51	8.00%	2.00%	
52	10.00%	2.00%	
53	15.00%	2.00%	
54	20.00%	2.00%	
55	35.00%	2.00%	
56-57	40.00%	2.00%	
58-60	75.00%	25.00%	
61	75.00%	50.00%	
62	100.00%	100.00%	

75% retirement rate after ten years in DROP

100% retirement rate once benefit multiplier hits 90% maximum

Additionally, assumptions with respect to deferred vested members are as follows:

- members who terminated prior to September 1, 2017 are assumed to retire at age 50.
- members who terminated on or after September 1, 2017 are assumed to retire at age 58.

Comments and Findings

For DROP actives, the assumption generally aligns to plan experience and has a large number of exposures. While the experience study recommended assuming 100% retirement after ten years in DROP, as of 1/1/2023 this assumption was changed from 100% to 75% but did not provide details supporting this assumption change. Note that after ten years in DROP, a member shall no longer have the amount of the member's retirement pension credited to the member's DROP account while the member is on active service.

For non-DROP actives, it is appropriate to separate the analysis for actives based on hire date and attainment of 20 years of service as of September 1, 2017 to align to the benefit provisions applicable to each cohort.

Based on the information provided, the assumptions are reasonable.

While the assumptions are reasonable, the following should be considered in the next study to enhance support for the assumption:

- include supporting detail for the assumption selection, such as the number of exposures at each age, and a description for any adjustments made to anomalies in the plan experience (such as 2016-2017).
- consider whether non-DROP actives who may become eligible for the 20 & Out provision warrant a separate assumption given that the benefit reduction is lower post HB-3158 and the plan assumes higher retirement rates for those who have attained 20 years of service.
- consider supplementing the experience study analysis with qualitative considerations, such as an analysis of the plan provisions or an assessment of peer retirement systems with similar provisions for non-DROP active members hired prior to March 1, 2011 with less than 20 years of service as of September 1, 2017 and Members hired on or after March 1, 2011, given that there are very few retirement exposures during the study period.

Withdrawal

The withdrawal assumption is used to determine when an employee who is not eligible for retirement will terminate employment.

Retained Actuary's Assumption

Years of Service	Rate (Police)	Rate (Fire)
0	20.00%	10.00%
1	5.50%	5.50%
2	5.50%	5.50%
3	5.50%	5.50%
4	5.50%	5.50%
5	5.50%	5.50%
6	3.50%	5.50%
7	3.50%	1.00%
8	3.50%	1.00%
9	3.50%	1.00%
10	3.50%	1.00%
11-14	2.00%	1.00%
15-24	1.00%	1.00%
25 and over	0.00%	0.00%

The withdrawal assumption is based on years of service, with separate rates for Police and Fire:

There is 0% assumption of termination for members eligible for retirement.

Comments and Findings

This is a robust basis for the assumption because it reflects the general tendency of shorter-tenured employees to incur higher rates of turnover. The assumed rates reflect higher expected turnover within the first several years of service, which is not uncommon. Based on the information provided, the withdrawal assumption appears reasonable.

While the assumption is reasonable, the following should be considered in the next study to enhance support for the assumption:

- include supporting detail for the assumption selection, such as the number of exposures at each age, and a description for any adjustments made to anomalies in the plan experience (such as 2016-2017).
- consider adding a separate withdrawal assumption for members hired after March 1, 2011. As benefits for employees hired after March 1, 2011 are less valuable, withdrawals may be higher for later years of service than for employees hired before March 1, 2011.

Disability

The disability assumption is used to determine when an employee becomes disabled and qualifies for disability benefits.

Retained Actuary's Assumption

The disability assumption is based on age, with sample rates as follows:

Age	Rate
20	0.010%
25	0.015%
30	0.020%
35	0.025%
40	0.030%
45	0.035%
50	0.040%

100% of disabilities are assumed to be service related.

Comments and Findings

The current disability rates appear reasonable and consistent with the experience reviewed, and in line with rates for other Texas public safety plans. Using a single table for Police and Fire groups is an appropriate simplification due to the small sample size and inability to infer significant information about each group separately.

While the assumption is reasonable, the next study should consider including an analysis on the incidence of service versus non-service related disabilities, as service-related disabilities are calculated with a 20-year minimum on benefit service. While there is a high likelihood of disabilities

Review of Demographic Assumptions

being service-related for Police and Fire, the assumption that 100% of disabilities are service-related should be addressed in the next experience study.

Marital Status

It is common for actuaries to make an assumption regarding the marital status of plan participants for use in assuming future benefit eligibility and election. Like the inflation assumption, the marital status assumption is often a component of several other assumptions.

Retained Actuary's Assumption

75% of participants are assumed to be married.

Comments and Findings

The observed data in the experience study supports the assumption of 75%. Based on the information provided, the assumption is reasonable.

Age of Survivor

Future Joint & Survivor annuity payment amounts are based in part on the age of the survivor. Because valuation mortality and interest rates are not equal to those used to calculate optional forms of payment, the age of survivors impacts liability amounts.

Retained Actuary's Assumption

The female spouse is assumed to be 3 years younger than the male spouse.

Comments and Findings

Based on the information provided, the assumption is reasonable.

Form of Payment and Refund of Contributions Assumptions

In cases where participants receive no subsidy among payment forms and valuation actuarial equivalence matches that of optional payment forms, this assumption is not necessary. However, because valuation mortality and interest rates are not equal to those used to calculate optional forms of payment, this assumption impacts liabilities.

Retained Actuary's Assumption

Married participants are assumed to elect the Joint and Survivor annuity form of payment and nonmarried participants are assumed to elect a Life Only annuity.

Additionally, assumptions with respect to refunds of contributions are as follows:

- members elect an annuity or refund based on which has the greater actuarial value.
- 75% of members who terminated prior to age 40 are assumed to take a lump sum cash out at age 40.

Review of Demographic Assumptions

Actuarial equivalence for optional forms are based on an 85% male/15% female blend of the current healthy annuitant mortality tables at an interest rate of 6.50%,

Comments and Findings

Considering the actuarial equivalence for optional forms of benefit payments is the same as the valuation assumptions except for the blending of male/female mortality rates, there will be minimal gain or loss when an active transitions to a retiree regardless of the payment form selected (Life, 50% or 100% Joint and Survivor annuity). Therefore, it is reasonable that the retained actuary did not study or further breakdown the optional form election assumption.

Based on the plan provisions, the deferred vested members assumptions are reasonable.

Validation of Results

This section will validate the retained actuary's calculation of several key items in the valuation report, including Actuarial Accrued Liability (AAL), Normal Cost, ADC, and AVA.

Actuarial Accrued Liability and Normal Cost

Representative sample lives have been selected and reviewed as summarized in the *Review of Sample Lives* section below. By confirming decrement rates, benefit amounts, and select Present Value of Benefit calculations, Deloitte determined the reasonableness of liabilities and normal cost for sample participants.

Actuarially Determined Contribution

The DPFP's contribution policy was discussed in the *Review of Actuarial Methods* section above. The purpose of this section is to verify the retained actuary's calculation of the ADC. Note that the DPFP's actual employer contribution is a fixed percentage of payroll and is not dependent on the ADC.

The table below shows Deloitte's verification of the ADC, based on the information provided.

D	PFP Plan	Retained Actuary	Deloitte
		1/1/2023	1/1/2023
1	UAAL	3,195,626,728	
2	Payment to Amortize UAAL over 30 Years	215,845,468	215,845,468
3	Employer Normal Cost ¹	27,961,953	
4	Adjustment for Timing ²	<u>7,799,003</u>	<u>7,799,002</u>
5	ADC	251,606,424	251,606,423

¹ Includes Administrative Expenses

² Actuarially determined contributions are assumed to be paid at the middle of every year.

The results confirm that the actuary's calculation of the ADC is consistent with the method described in the valuation report.

Actuarial Value of Assets

The components of DPFP's Actuarial Value of Assets (AVA) are the Market Value of Assets (MVA) as of the Valuation Date, as well as the excess (shortfall) between expected investment return and actual investment income for each of the five previous years.

The table below shows Deloitte's verification of the AVA calculation.

Validation of Results

(In \$	<i>'</i> s)	Retain	ed Actuary	De	loitte
			12/31/2022		12/31/2022
1	MVA		1,806,567,341		1,806,567,341
2	Avg. Bal. Calc.				
	a Total assets, BOY		2,157,840,430		2,157,840,430
	b Total assets, EOY		1,806,567,341		1,806,567,341
	c Net Investment Income		-240,891,386		-240,891,386
	d Avg. Balance (a+b-c)/2		2,102,649,579		2,102,649,579
3	Expected Return (6.5% * 2.d.)		136,672,223		136,672,223
4	Actual Return		-240,891,386		-240,891,386
5	Current Year G/(L) (4-3)		-377,563,609		-377,563,609
6	Unrecognized asset returns	Unreco	gnized AMT	Unreco	gnized AMT
	a FYE 2022	80%	-302,050,887	80%	-302,050,887
	b FYE 2021	60%	118,918,410	60%	118,918,410
	c FYE 2020	40%	-59,717,728	40%	-59,717,728
	d FYE 2019	20%	-3,970,539	20%	-3,970,539
		_	-246,820,744		-246,820,744
7	AVA at EOY		2,053,388,085		2,053,388,085
8	AVA / MVA =		1.137		1.137

The results confirm that the actuary's calculation of the AVA is consistent with the method described in the valuation report.

Review of Sample Lives

Summary of Reviewed Sample Lives

Sample life output is used by actuaries to confirm the actuarial assumptions, plan provisions, and actuarial methods used in actuarial valuations.

The retained actuary provided sample life data for active and inactive participants. For inactive sample lives, the present value of benefits was provided. For active sample lives, the present value of benefits, accrued liability, and normal cost were provided. The tables below summarize the sample lives that Deloitte reviewed.

Status	DPFP
Active	4
Terminated Vested	2
Retiree	1
Disabled	1
Beneficiary	1

Deloitte's examination involved the following:

- Reviewed the data provided for the sample participants to confirm its consistency with the valuation data. All data was consistent with the valuation data.
- Reviewed sample life results for compliance with the plan provisions, assumptions, and methods disclosed in the actuarial valuation report using Deloitte's actuarial valuation software. Results were within a reasonable threshold.



ITEM #C2

Topic:Section 2.025 Funding Process Update

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.071 of the Texas Government Code.

Discussion: Staff will provide an update on the Section 2.025 funding process.



Section 2.025 Funding Process Update

September 12, 2024 Board Meeting

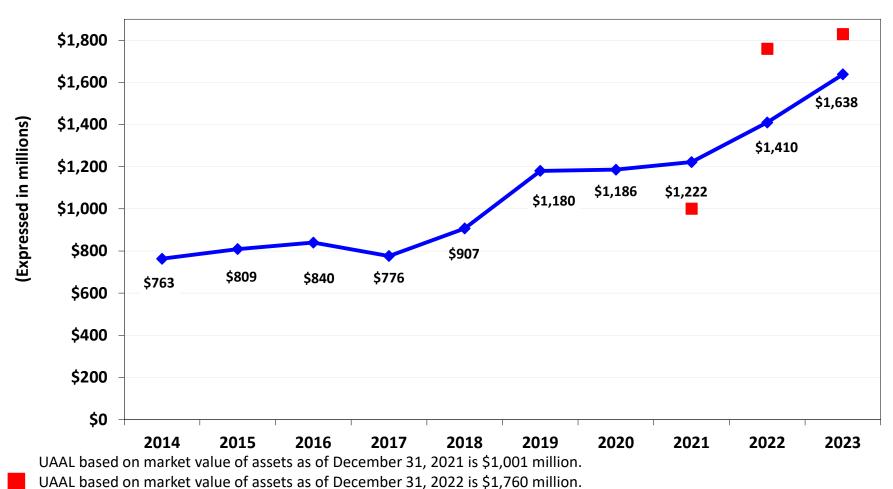
Update Since August Board Meeting

The Council adopted the ballot question and ordinance for the ERF plan on August 14th.

The ERF ballot question does the following:

- Removes the current cap on City contributions to the ERF Plan. The contribution percentage is limited during a five-year step-up period to hard contribution percentages, and then after five years, there is no limit.
- Removes the requirement for employees to pay 37% of the total ADC for the ERF plan and caps the contributions for the ERF employees.
- Makes <u>no</u> changes to benefits, including the annual automatic COLAs granted to ERF employees up to 5% for everyone hired before 1-1-2017 and up to 3% for everyone hired since 1-1-2017 and all future employees.
- ERF employees have never had their existing benefits reduced.

Unfunded Actuarial Accrued Liability (UAAL)



UAAL based on market value of assets as of December 31, 2023 is \$1,829 million.



Update Since August Board Meeting

- Ad Hoc Pension Committee meeting was held on August 22nd to review the final report from Commerce Street.
- Mr. Wiley, President & CEO of Commerce Street, provided a briefing on the final Commerce Street report on September 4th to the full council.
- A briefing of the City Recommended DPFP funding plan was given to the full council on September 4th.
- The City plans to adopt a plan on September 11th. It may be different than the plan presented at the September 4th meeting. The City said they will send their plan to the PRB in September.



ITEM #C3

Discussion: The Chief Financial Officer will provide a status update on the annual financial audit.



ITEM #C4

Topic:Executive Director Approved Pension Ministerial Actions

Discussion: The Executive Director approved ministerial membership actions according to the Retirement and Payments Approval Policy. Membership actions approved are summarized in the provided report.

Membership Actions -2024

	January	February	March	April	May	June	July	August	September	October	November	December	YTD Totals
Refunds	23	22	21	26	16	21	13	19	37				198
DROP - Join	1	1	2	0	5	1	1	1	0				12
Estate Payments	2	1	3	5	3	1	4	5	10				34
Survivor Benefits	4	6	3	8	5	4	6	5	3				44
Retirements	10	10	16	9	13	10	9	11	7				95
Alternate Payees	2	0	2	1	1	1	0	0	0				7
Spouse Wed After Retirement	0	0	0	0	0	0	0	0	1				1
Service Purchases	0	2	0	1	7	2	1	2	1				16
Earnings Test*	0	0	0	0	0	0	10	0	0				10

Membership Actions -2023

	January	February	March	April	May	June	July	August	September	October	November	December	YTD Totals
Refunds	26	19	12	13	17	14	23	13	57	53	18	21	286
DROP - Join	3	3	0	2	2	2	0	0	3	0	3	0	18
Estate Payments	0	5	7	5	1	2	4	92	5	3	5	9	138
Survivor Benefits	1	6	8	6	4	3	5	6	6	2	3	6	56
Retirements	12	16	11	14	11	12	10	13	10	17	6	12	144
Alternate Payees	0	2	1	0	2	3	1	3	2	0	0	1	15
Spouse Wed After Retirement	1	0	0	0	0	0	0	0	1	1	1	0	4
Service Purchases	2	0	0	1	0	2	0	1	0	0	2	0	8
Earnings Test	0	0	0	0	0	9	0	0	0	0	0	0	9

Data is based on Agenda/Executive Approval Date

Service purchases include Military, DROP Revocation, and Previously Withdrawn Contributions

The increase in Refunds in September 2023 and October 2023 is due to the Refund Project

87 of the Estate Payments in August 2023 are approvals for the Pending Death Project

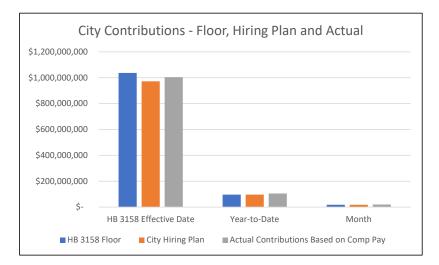
*In 2024, 9 of 10 of the Earnings Tests did not require an benefit reduction. A piece of information is still needed to determine if the last member will require a reduciton.



ITEM #C5

Discussion: Staff will review the Monthly Contribution Report.

Contribution Tracking Summary - September 2024 (July 2024 Data)

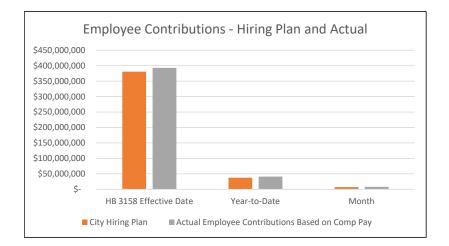


Actual Comp Pay was 103% of the Hiring Plan estimate since the effective date of HB 3158.

The Floor for 2024 is equal to the Hiring Plan estimate of \$6,024,000 per pay period. The Hiring Plan increased by 3.65% in 2024. It is expected that actual contributions will exceed the Floor through 2024.

Through 2024 the HB 3158 Floor is in place so there is no City Contribution shortfall.

The combined actual employees were 75 **more** than the Hiring Plan for the pay period ending August 13, 2024. Fire was over the estimate by 308 Fire Fighters and Police was under by 233 Police Officers.



Employee contributions exceeded the Hiring Plan estimate for the month, the year and since inception.

There is no Floor on employee contributions.

Contribution Summary Data

Jul-24	Number of Pay Periods Beginning in the Month	HB 3158 Floor	City Hiring Plan	Actual Contributions Based on Comp Pay	Additional Contributions to Meet Floor Minimum	Comp Pay Contributions as a % of Floor Contributions	Comp Pay Contributions as a % of Hiring Plan Contributions
Month	3	\$ 18,072,000	\$ 18,072,692	\$ 19,758,193	\$ -	109%	109%
Year-to-Date		\$ 96,384,000	\$ 96,387,692	\$ 104,981,392	\$-	109%	109%
HB 3158 Effective Date		\$ 1,036,717,000	\$ 972,608,077	\$ 1,004,337,803	\$ 48,990,866	97%	103%
HB 3158 Effective Date Due to the Floor through 2 Does not include the flat \$	•	\$ 1,036,717,000	\$ 972,608,077 y Contributions		\$ 48,990,866		

Jul-24	Number of Pay Periods Beginning in the Month	City Hiring Plan	Co	al Employee ntributions on Comp Pay	Exc	ual Contribution ess Compared to Hiring Plan		Actual Contributions as a % of Hiring Plan Contributions	Actual Contributions as a % of Actuarial Val Assumption
Month	3	\$ 7,071,923	\$	7,764,027	\$	692,104	\$ 6,355,386	110%	122%
Year-to-Date		\$ 37,716,923	\$	41,009,880	\$	3,292,957	\$ 33,895,392	109%	121%
HB 3158 Effective Date		\$ 380,585,769	\$	392,749,203	\$	12,163,434	\$ 365,715,070	103%	107%
Potential Earnings Loss fro	m the Shortfall based o	\$	769,643						

Reference Information

	НВ 3	158 Bi-weekly Floor	 y Hiring Plan- Bi-weekly	HB 3158 Floo Compared to t Hiring Plan	-	Hiring Plan as a % of the Floor	% Increase/ (decrease) in the Floor	% Increase/ (decrease) in the Hiring Plan
2017	\$	5,173,000	\$ 4,936,154	\$ 236,8	346	95%		
2018	\$	5,344,000	\$ 4,830,000	\$ 514,0	000	90%	3.31%	-2.15%
2019	\$	5,571,000	\$ 5,082,115	\$ 488,8	885	91%	4.25%	5.22%
2020	\$	5,724,000	\$ 5,254,615	\$ 469,3	85	92%	2.75%	3.39%
2021	\$	5,882,000	\$ 5,413,846	\$ 468,1	.54	92%	2.76%	3.03%
2022	\$	6,043,000	\$ 5,599,615	\$ 443,3	85	93%	2.74%	3.43%
2023	\$	5,812,000	\$ 5,811,923	\$	77	100%	-3.82%	3.79%
2024	\$	6,024,000	\$ 6,024,231	\$ (2	231)	100%	3.65%	3.65%

Employee Contributions: Cit	y Hiring Plan and AC	City Con weel	r Hiring Plan verted to Bi- kly Employee ntributions	Actu / Cor wee	arial Valuation Assumption nverted to Bi- ekly Employee ontributions	
2017		\$	1,931,538	\$	1,931,538	100%
2018		\$	1,890,000	\$	1,796,729	95%
2019		\$	1,988,654	\$	1,885,417	95%
2020		\$	2,056,154	\$	2,056,154	100%
2021		\$	2,118,462	\$	2,118,462	100%
2022		\$	2,191,154	\$	2,191,154	100%
2023		\$	2,274,231	\$	2,274,231	100%
2024		\$	2,357,308	\$	2,357,308	100%

The information on this page is for reference. The only numbers on this page that may change before 2025 are the Actuarial Valuation Employee Contributions Assumptions for the years 2020-2024 and the associated percentage.

Reference Information - Actuarial Valuation and GASB 67/68 Contribution Assumptions

Actuarial Assumptions Used in the Most Recent Actuarial Valuation - These assumptions will be reevaluated annually & may change.

City Contributions are based on the Floor through 2024, the Hiring Plan from 2025 to 2037, after 2037 an annual growth rate of 2.75% is assumed Employee Contributions for 2018 are based on the 2017 actual employee contributions inflated by the growth rate of 2.75% and the Hiring Plan for subsequent years until 2038, when the 2037 Hiring Plan is increased by the 2.75 growth rate for the next 10 years

Actuarial/GASB Contribution Assumption Changes Since the Passage of HB 3158

	Actuarial Valuation	GASB 67/68					
YE 2017 (1/1/2018 Valuation)							
2018 Employee Contributions Assumption - based on 2017 actual plus growth rate not the Hiring Plan Payroll	\$ (2,425,047)	*					
2019 Estimate (1/1/2019 Valuation)							
2019 Employee Contribution Assumption	\$ 9,278	*					
*90% of Hiring Plan was used for the Cash Flow Projection for future years in the 12/31/2017 GASB 67/68 calculation. At 12-31-17, 12-31-18 and 12-31-2019 this did not impact the pension liability or the funded percentage.							

The information on this page is for reference. It is intended to document contribution related assumptions used to prepare the Actuarial Valuation and changes to those assumptions over time, including the dollar impact of the changes. Contribution changes impacting the GASB 67/68 liability will also be included.

City Hiring Plan - Annual Computation Pay and Numbers of Employees							
		Computation Pay	,	Number of Employees			
Year	Hiring Plan	Actual	Difference	Hiring Plan	Actual EOY	Difference	
2017	\$ 372,000,000	Not Available	Not Available	5,240	4,935	(305)	
2018	\$ 364,000,000	\$ 349,885,528	\$ (14,114,472)	4,988	4,983	(5)	
2019	\$ 383,000,000	\$ 386,017,378	\$ 3,017,378	5,038	5,104	66	
2020	\$ 396,000,000	\$ 421,529,994	\$ 25,529,994	5,063	4,988	(75)	
2021	\$ 408,000,000	\$ 429,967,675	\$ 21,967,675	5,088	4,958	(130)	
2022	\$ 422,000,000	\$ 439,104,541	\$ 17,104,541	5,113	5,074	(39)	
2023	\$ 438,000,000	\$ 460,982,051	\$ 22,982,051	5,163	5,136	(27)	
2024	\$ 454,000,000			5,213			
2025	\$ 471,000,000			5,263			
2026	\$ 488,000,000			5,313			
2027	\$ 507,000,000			5,363			
2028	\$ 525,000,000			5,413			
2029	\$ 545,000,000			5,463			
2030	\$ 565,000,000			5,513			
2031	\$ 581,000,000			5,523			
2032	\$ 597,000,000			5,523			
2033	\$ 614,000,000			5,523			
2034	\$ 631,000,000			5,523			
2035	\$ 648,000,000			5,523			
2036	\$ 666,000,000			5,523			
2037	\$ 684,000,000			5,523			

Comp Pay by Month - 2024	Ann	ual Divided by 26 Pay Periods	Actual	Difference	2024 Cumulative Difference	Number of Employees - EOM	Difference
January	\$	52,384,615	\$ 56,848,897	\$ 4,464,281	\$ 4,464,281	5,183	(30)
February	\$	34,923,077	\$ 37,710,735	\$ 2,787,658	\$ 7,251,939	5,166	(47)
March	\$	34,923,077	\$ 38,150,554	\$ 3,227,478	\$ 10,479,417	5,230	17
April	\$	34,923,077	\$ 38,086,745	\$ 3,163,668	\$ 13,643,085	5,216	3
May	\$	34,923,077	\$ 38,136,499	\$ 3,213,422	\$ 16,856,507	5,244	31
June	\$	34,923,077	\$ 38,090,336	\$ 3,167,259	\$ 20,023,766	5,223	10
July	\$	52,384,615	\$ 57,270,124	\$ 4,885,509	\$ 24,909,275	5,288	75
August	\$	34,923,077					
September	\$	34,923,077					
October	\$	34,923,077					
November	\$	34,923,077					
December	\$	34,923,077					



ITEM #C6

Торіс:	Board Approval of Trustee Education and Travel
	a. Future Education and Business-related Travelb. Future Investment-related Travel
Discussion:	a. Per the Education and Travel Policy and Procedure, planned Trustee education and business-related travel and education which does not involve travel requires Board approval prior to attendance.
	Attached is a listing of requested future education and travel noting approval status.
	b. Per the Investment Policy Statement, planned Trustee travel related to investment monitoring, and in exceptional cases due diligence, requires Board approval prior to attendance.
	There is no future investment-related travel for Trustees at this time.

		Future Education and Business Related Travel & Webinar Regular Board Meeting – September 12, 2024	ſS
			ATTENDING APPROVED
1.	Conference Dates: Location: Est Cost:	NCPERS Public Pension HR Summit September 24-26, 2024 Denver, CO \$950	
2.	Conference Dates: Location: Est Cost:	NCPERS Accredited Fiduciary (NAF) October 26-27, 2024 Palm Springs, CA \$900	
3.	Conference: Dates: Location: Est Cost:	NCPERS Program for Advanced Trustee Studies (PATS) October 26-27, 2024 Palm Springs, CA \$900	
4.	Conference: Dates: Location: Est Cost:	NCPERS Public Safety Conference October 27-30, 2024 Palm Springs, CA \$775	

Page 1 of 1



ITEM #C7

Topic:	Report on Professional Services Committee Meeting				
Discussion:	According to the Committee Policy and Procedure, the Professional Services Committee is responsible for meeting privately with the external service providers, without DPFP staff present, at a minimum on an annual basis. The purpose of such a meeting is to provide a forum for the service provider to provide candid comments to the Professional Services Committee.				
Staff	The Professional Service Committee met separately with Leandro Festino and Colin Kowalski of Meketa on September 12, 2024.				
Stan Recommendation:	The Professional Services Committee shall report to the Board any material comments and recommend to the Board any appropriate actions needed as a result of the meetings with Meketa.				



ITEM #C8

Торіс:	Board Memb Attended	ers' Reports on Meetings, Seminars and/or	• Conferences
Discussion:	Conference: Dates: Location:	TEXPERS Summer Educational Forum August 18-20, 2024 San Antonio, TX	MT



DISCUSSION SHEET

ITEM #C9

Discussion: Investment Staff will brief the Board on recent events and current developments with respect to the investment portfolio.

Regular Board Meeting – Thursday, September 12, 2024



Portfolio Update

September 12th, 2024 Board Meeting

Executive Summary

- Estimated YTD Return (As of 8/31/24): 7.8% for DPFP Portfolio; 11.8% for Public Portfolio (ex-Cash) which makes up 73% of the assets.
- Liquidation of private market assets remains a top focus.
 - ~\$55M of distributions received YTD with ~\$36M coming from Lone Star CRA in early September.
- Custodian Search: Board approved hiring BNY for custodian services on July 11th, 2024.
- **Rebalancing Actions:** At the end of July 2024, the staff rebalanced \$17M from active Public Equity managers to restore the Safety Reserve back to the 9% target.



Investment Initiatives – 2024 Plan

Q3 2024

- Recommended Asset Allocation mix presented to IAC
- Albourne Private Credit Overview to IAC
- Huff Reclassification Discussion with Board
- Albourne On-Boarding

Q4 2024

- Asset Allocation Study to Board
- Investment Policy Statement review and updates
- Discussion of when to initiate new private market investments
- Private Market Planning Update IPS provision, pacing studies, etc.

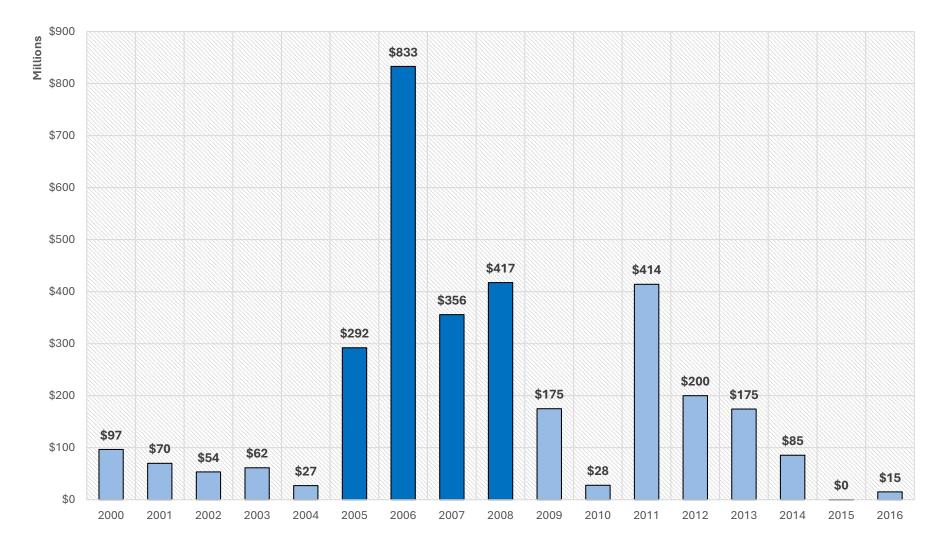
2025 & Beyond

Initial New Private Market Investments



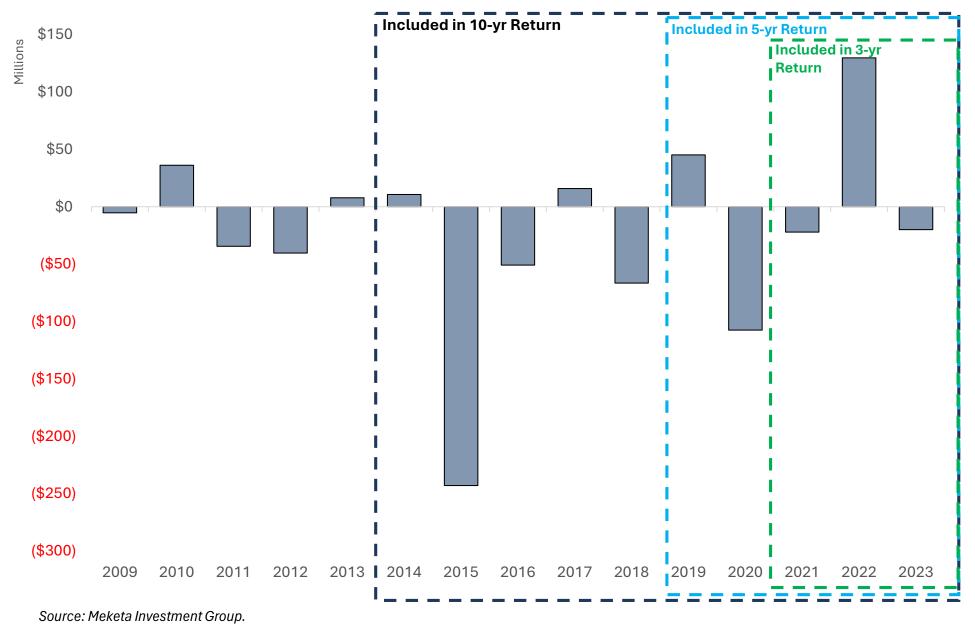
Private Market Commitments by Vintage Year

\$1.9B of Capital Commitments occurred between 2005-2008



Delice & Fire

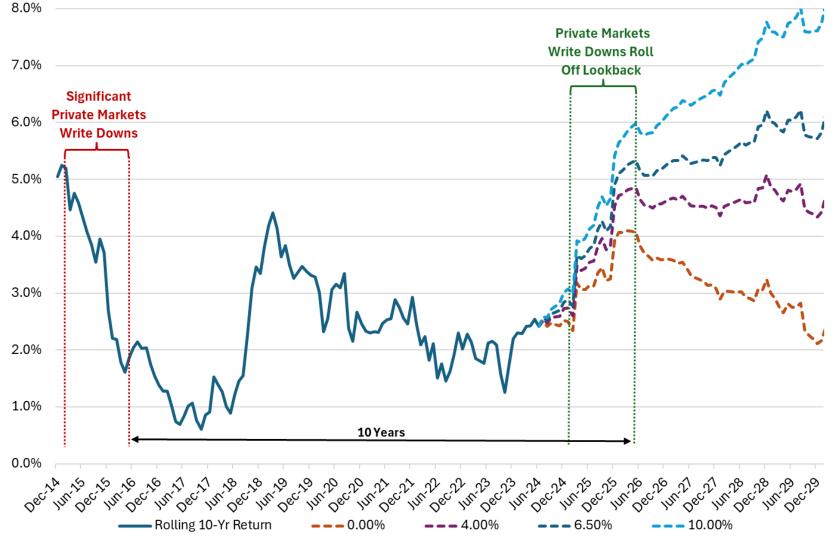
DPFP Private Market Gain/Loss by Year





Potential Paths of DPFP 10-Yr Rolling Return

Potential Paths of DPFP 10-Year Rolling Return

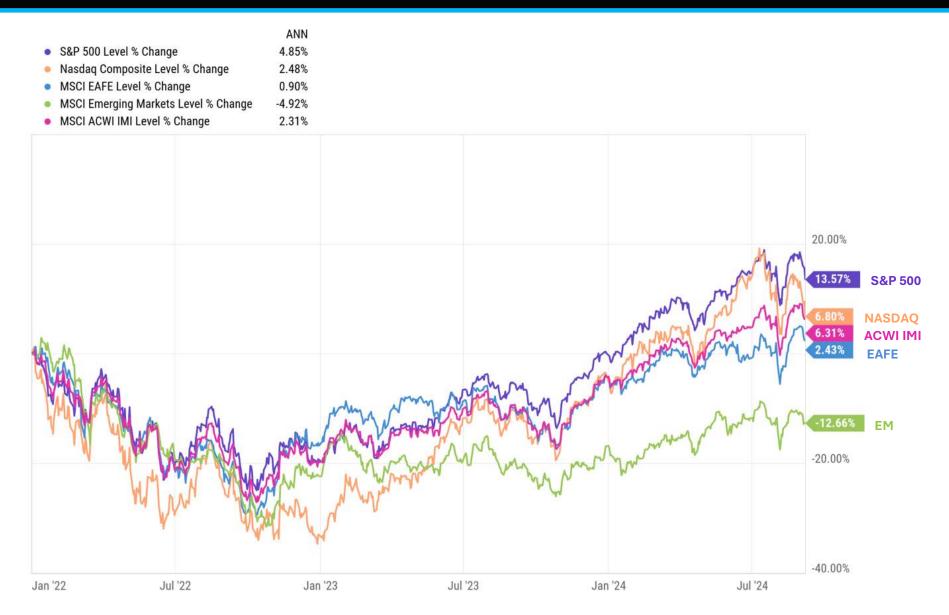


Source: Total Fund net monthly returns through 6/30/2024, DPFP Staff analysis. Dotted lines represent hypothetical path of the ten year net return if a given annual return were to be consistently achieved moving forward.



6

Equity Market Returns (1/1/22 to 9/5/24)



Sep 6, 2024, 2:10 PM EDT Powered by YCHARTS



Public Markets Performance Snapshot

Public Markets (ex-Cash) currently make up 73% of DPFP Investment Portfolio.

	Asset Allocation & Performance			As of August 31, 2024	
	rformance Summary Iding August 31, 2024				
	Market Value (\$)	1 Mo (%)	YTD (%)	3 Yrs (%)	5 Yrs (%)
Total Public Portfolio (ex-Cash)	1,488,380,477	2.0	11.8	3.7	8.0
60% MSCI ACWI IMI Net/40% Bloomberg Global Aggregate Index		2.3	9.7	1.5	6.6
Public Equity	1,103,082,718	2.3	14.3	4.6	11.4
MSCI AC World IMI Index (Net)		2.3	15.2	5.2	11.8
Global Equity	1,001,732,106	2.4	14.8	5.1	11.9
MSCI AC World IMI Index (Net)		2.3	15.2	5.2	11.8
Boston Partners Global Equity Fund	123,302,112	2.3	14.0	9.3	12.8
MSCI World Net		2.6	16.7	6.9	13.1
Manulife Global Equity Strategy	122,246,001	1.4	14.6	7.4	11.5
MSCI ACWI Net		2.5	16.0	<i>5.8</i>	12.1
Walter Scott Global Equity Fund	124,827,268	3.4	12.2	4.2	11.4
MSCI ACWI Net		2.5	16.0	<i>5.8</i>	12.1
WCM Global Equity	126,092,530	4.2	21.8		
MSCI AC World Index Growth (Net)		2.4	18.0	4.4	14.3
NT ACWI Index IMI	385,167,900	2.4	15.3	5.7	
MSCI AC World IMI Index (Net)		2.3	15.2	5.2	11.8
Eastern Shore US Small Cap	61,216,776	-0.1	13.5		
Russell 2000 Index		-1.5	10.4	0.6	9.7
Global Alpha International Small Cap	58,785,513	1.1	6.5		
MSCI EAFE Small Cap (Net)		2.0	8.3	-2.4	6.4

Source: Meketa



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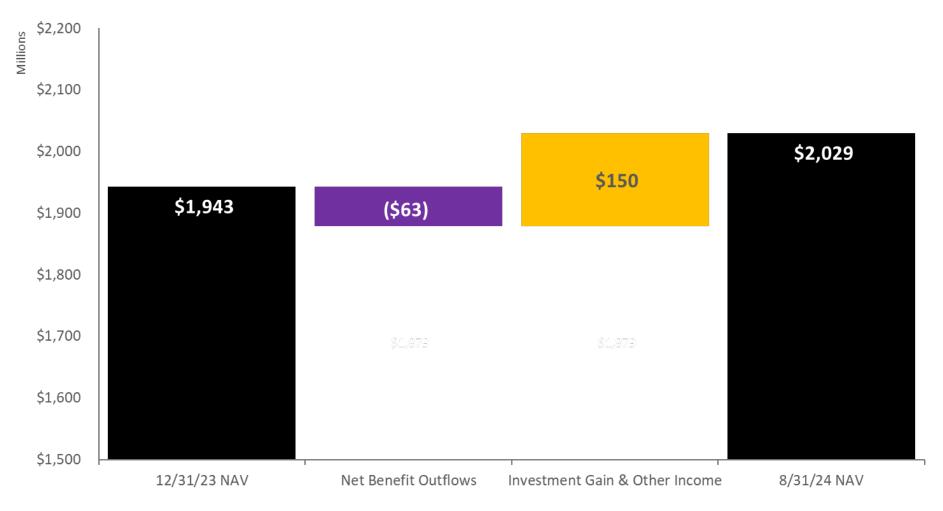
Public Markets Performance Snapshot

	Asset Allocation & Performance		As of Aug	ust 31, 20	
	Market Value (\$)	1 Mo (%)	YTD (%)	3 Yrs (%)	5 Yrs (%)
Emerging Markets Equity	101,350,612	1.4	9.3	0.1	5.1
MSCI Emerging Markets IMI (Net)		1.6	9.4	-2.3	5.6
RBC Emerging Markets Equity	101,350,612	1.4	9.3	0.1	5.1
MSCI Emerging Markets IMI (Net)		1.6	9.4	-2.3	5.6
Public Fixed Income	385,297,760	1.2	4.9	-0.3	2.1
Bloomberg Global Multiverse Index		2.4	2.0	-3.9	-1.2
IR&M 1-3 Year Strategy	119,204,204	0.9	4.0	1.6	2.0
Blmbg. U.S. Aggregate 1-3 Yrs		0.9	3.5	1.2	1.5
Longfellow Core Fixed Income	66,278,765	1.4	3.9	-1.7	
Blmbg. U.S. Aggregate Index		1.4	3.1	-2.1	0.0
Aristotle Pacific Capital Bank Loan	64,485,914	0.4	5.8	6.8	5.7
Credit Suisse Leveraged Loan		0.6	5.8	6.3	5.5
Loomis US High Yield Fund	66,662,947	1.6	5.8	1.3	
Blmbg. U.S. High Yield - 2% Issuer Cap		1.6	6.3	2.5	4.4
Metlife Emerging Markets Debt Blend	68,665,930	2.1	5.7		
35% JPMEMBI Glbl/35% JPM CEMBI Broad Div/30% JPMGBI-EM Di		2.3	5.1		

2024 - Change in Market Value Bridge Chart

In Millions

2024 Preliminary Investment Return estimated at 7.8%

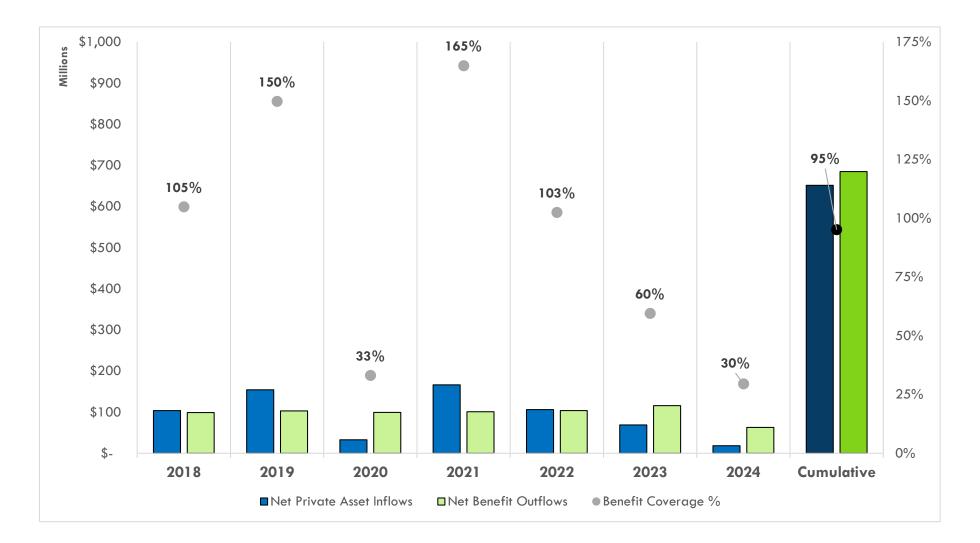


The beginning 12/31/23 value is from the Q4 2023 Meketa Performance Report and includes a one-quarter lag on private assets. Numbers may not foot due to rounding.



Benefit Outflow Coverage

Since 2018, net Private Asset inflows have covered 95% of net benefit outflows.





Safety Reserve Dashboard



Projected Net Monthly outflows of **\$8.6M** per month. Safety Reserve of **\$180M** would cover net monthly outflows for next **21** months or through June **2026.**

Projected

Cash (%)

3.0%

3.5%

2.1%

2.5%

3.0%

1.6%

2.1%

2.6%

3.0%

1.6%

2.1%

Projected Cash

Balance (\$M)

\$60.7

\$70.4

\$41.7

\$51.4

\$61.2

\$32.4

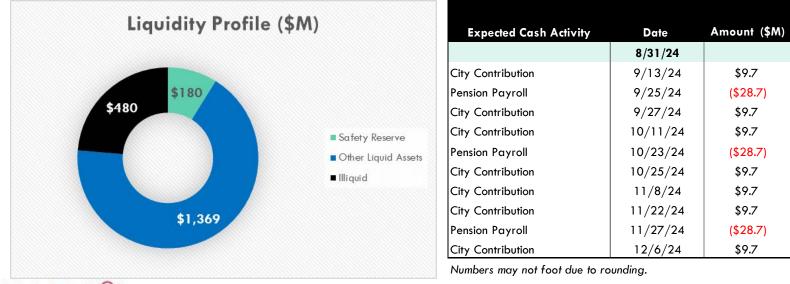
\$42.1

\$51.9

\$61.6

\$32.8

\$42.6





85

Asset Allocation Detail

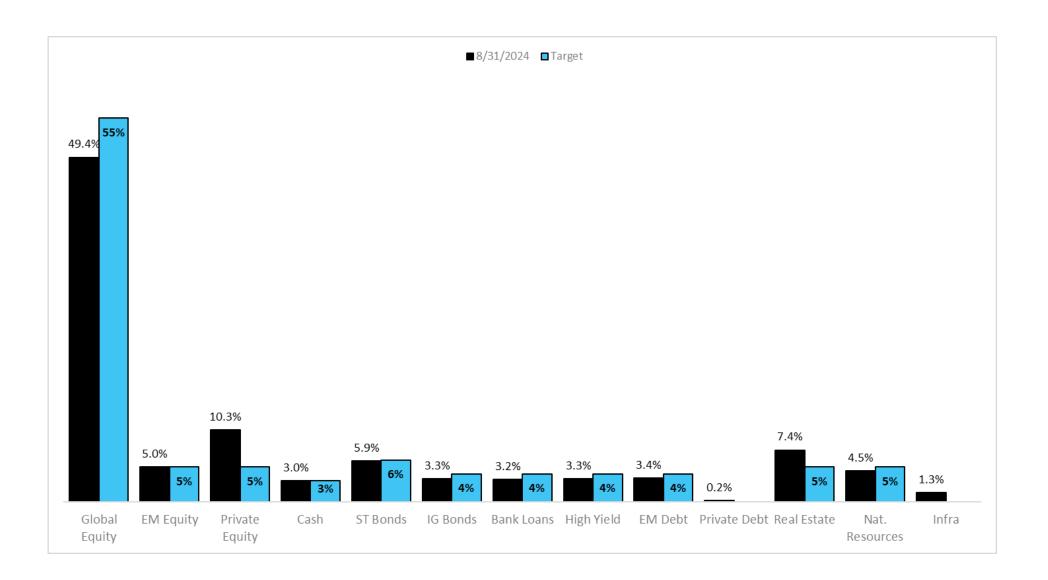
DPFP Asset Allocation	8/31/2	2024	Targe	ets	Variance		
	NAV	%	\$ mil.	%	% of Target	\$ mil.	%
Equity	1,313	64.7%	1,319	65%	100%	-6	-0.3%
Global Equity	1,002	49.4%	1,116	55%	90%	-114	-5.6%
Boston Partners	123	6.1%	122	6%	101%	2	0.1%
Manulife	122	6.0%	122	6%	100%	0	0.0%
Walter Scott	125	6.2%	122	6%	103%	3	0.2%
WCM	126	6.2%	122	6%	104%	4	0.2%
Northern Trust ACWI IMI Index	385	19.0%	507	25%	76%	-122	-6.0%
Eastern Shore US Small Cap	61	3.0%	61	3%	101%	0	0.0%
Global Alpha Intl Small Cap	59	2.9%	61	3%	97%	-2	-0.1%
Emerging Markets Equity - RBC	101	5.0%	101	5%	100%	0	0.0%
Private Equity*	210	10.3%	101	5%	207%	108	5.3%
Fixed Income	449	22.1%	507	25%	89%	-58	-2.9%
Cash	61	3.0%	61	3%	100%	0	0.0%
S/T Investment Grade Bonds - IR+M	119	5.9%	122	6%	98%	-3	-0.1%
Investment Grade Bonds - Longfellow	66	3.3%	81	4%	82%	-15	-0.7%
Bank Loans - Aristotle Pacific	64	3.2%	81	4%	79%	-17	-0.8%
High Yield Bonds - Loomis Sayles	67	3.3%	81	4%	82%	-15	-0.7%
Emerging Markets Debt - MetLife	69	3.4%	81	4%	85%	-13	-0.6%
Private Debt*	3	0.2%	0	0%		3	0.2%
Real Assets*	267	13.2%	203	10%	132%	64	3.2%
Real Estate*	150	7.4%	101	5%	148%	49	2.4%
Natural Resources*	90	4.5%	101	5%	89%	-11	-0.5%
Infrastructure*	26	1.3%	0	0%		26	1.3%
Total	2,029	100.0%	2,029	100%		0	0.0%
Safety Reserve ~\$162M=18 mo net CF	180	8.9%	183	9%	99%	-3	-0.1%
*Private Market Assets	480	23.7%	304	15%		176	8.7%

Source: Preliminary JP Morgan Custodial Data, Staff Estimates and Calculations.

Numbers may not foot due to rounding



Asset Allocation – Actual vs Target







DISCUSSION SHEET

ITEM #C10

Topic:Report on Investment Advisory Committee Meeting

Discussion: The Investment Advisory Committee met on August 15, 2024. The Committee Chair and Investment Staff will comment on Committee observations and advice.

Regular Board Meeting – Thursday, September 12, 2024



DISCUSSION SHEET

ITEM #C11

Торіс:	Asset Allocation Update
	Portions of the discussion under this topic may be closed to the public under the terms of Section 551.071 of the Texas Government Code.
Discussion:	Staff will update the Board on the status of the Asset Allocation Study, including discussions with the IAC, recommended mixes for consideration and implementation considerations. Staff will also seek Board feedback on moving the Huff Energy fund out of the Private Equity allocation based on staff's view that the fund's holdings are now almost exclusively direct energy exposure. This reclassification, which staff believes more accurately reflects the nature of the investment, would allow DPFP to begin making new private equity investments in the near term.

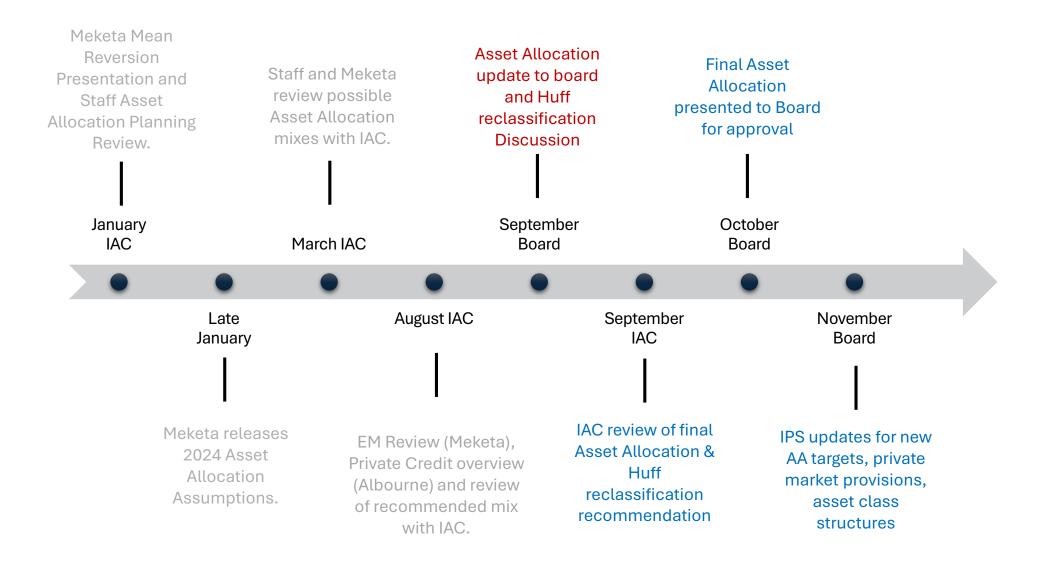
Regular Board Meeting – Thursday, September 12, 2024



Asset Allocation Update

September 12th, 2024 Board Meeting

2024 Asset Allocation Study Timeline





91

Asset Allocation Under Review by IAC

Key Changes from Current Allocation:

- Addition of a 4% allocation to Private Credit
- A 1% increase to the Private Equity target allocation
- High Yield, Bank Loans and EM Debt combined into a single Public Credit asset class
- Global Equity and EM Equity Combined into a single Public Equity asset class.

	Current	Allocation		Staff/Meketa	
	8/30	0/2024	Current Target	Rec.	Change
	\$ (M)	%	%	%	%
Equity	1,277	62.9 %	65%	64 %	
Public Equity	1,103	54.4%	60%	58%	(2%)
Private Equity	174	8.6%	5%	6%	+ 1%
Fixed Income & Cash	282	13.9%	13%	13%	
Cash	97	4.8%	3%	3%	
ST Investment Grade Bonds	119	5.9%	6%	6%	
Investment Grade Bonds	66	3.3%	4%	4%	
Credit	203	10.0 %	12%	15%	
Public Credit	200	9.8%	12%	11%	(1%)
Private Credit	3	0.2%	0%	4%	+ 4%
Real Assets	267	13.2%	10%	8%	
Real Estate	150	7.4%	5%	5%	
Natural Resources	90	4.5%	5%	3%	(2%)
Infrastructure	26	1.3%	0%	0%	
Total	2,029	100.0%	100%	100%	
Safety Reserve	216	10.6%	9%	9%	
Private Markets	444	21.9%	15%	18%	+ 3%



Private Equity Allocation Issue

In \$ Millions	Vintage Year	Est. NAV 8/31/2024	Exposure %
Private Equity		\$ 209.8	10.3%
Huff Energy	2006	119.6	5.9%
Lone Star CRA	2008	69.2	3.4%
Lone Star Opportunity Fund V	2012	11.4	0.6%
Industry Ventures	2016	8.2	0.4%
Lone Star North TX Op. Fund	2000	1.1	0.1%
Huff Alternative	2000	0.2	0.0%
Lone Star Growth Capital	2008	0.0	0.0%

- The current allocation to Private Equity is \$210M or 10.3% of the DPFP portfolio, compared to a proposed target of 6%. DPFP has not made a new private equity commitment since 2016.
- Huff Energy is a 2006 vintage investment with only one remaining asset (~18,000 acres in the Eagle Ford Shale). Most of the value resides in Proven, Undeveloped Reserves. Staff doesn't believe this is true "Private Equity" exposure, nor will it be correlated with more traditional Private Equity.
- Staff has little transparency from the Huff Energy GP and a low level of confidence when the asset will eventually sell.
- Based on internal discussions and conversations with the IAC and Albourne, staff does not feel it is prudent to wait until Huff sells/resolves to start making new private equity investments.



Reclassifying Huff Energy Exposure

- Staff and Meketa reviewed several options when considering reclassifying Huff Energy, with a focus on impacts on asset allocation, reporting, rebalancing and ease of explanation.
- Staff narrowed down the options for consideration to:
 - 1. Moving Huff to its Own Asset Class with a 0% Target
 - 2. Moving Huff Out of Asset Allocation Completely
 - 3. Increase Private Equity Target to Account for Huff
 - 4. Move Huff to its Own Asset Class with 6% Target



Recommendation – Move Huff to own Asset Class w/ 0% Target

CURRENT PRESENTATION

HUFF RECLASSIFICATION

	0		Durana	
		llocation		
		/2024	Target	Variance
	\$ (M)	%	%	%
Equity	1,277	62.9 %	64 %	-1.1%
Public Equity	1,103	54.4%	58%	-3.6%
Private Equity	174	8.6%	6%	2.6%
Fixed Income & Cash	282	13.9 %	13%	0.9 %
Cash	97	4.8%	3%	1.8%
ST Investment Grade Bonds	119	5.9%	6%	-0.1%
Investment Grade Bonds	66	3.3%	4%	-0.7%
Credit	203	10.0%	15%	-5.0 %
Public Credit	200	9.8%	11%	-1.2%
Private Credit	3	0.2%	4%	-3.8%
Real Assets	267	13.2%	8%	5.2 %
Real Estate	150	7.4%	5%	2.4%
Natural Resources	90	4.5%	3%	1.5%
Infrastructure	26	1.3%	0%	1.3%
Total	2,029	100.0%	100%	
Safety Reserve	216	10.6%	9%	1.6%
Private Markets	444	21.9%	18%	3.9%

	Current Allocation		Proposed	
	8/31/	8/31/2024		Variance
	\$ (M)	%	%	%
Equity	1,277	62.9 %	64 %	-1.1%
Public Equity	1,103	54.4%	58%	-3.6%
Private Equity	54	2.7%	6%	-3.3%
Huff Energy Fund	120	5.9%	0%	5.9%
Fixed Income & Cash	282	13.9%	13%	0.9%
Cash	97	4.8%	3%	1.8%
ST Investment Grade Bonds	119	5.9%	6%	-0.1%
Investment Grade Bonds	66	3.3%	4%	-0.7%
Credit	203	10.0%	15%	-5.0%
Public Credit	200	9.8%	11%	-1.2%
Private Credit	3	0.2%	4%	-3.8%
Real Assets	267	13.2%	8%	5.2%
Real Estate	150	7.4%	5%	2.4%
Natural Resources	90	4.5%	3%	1.5%
Infrastructure	26	1.3%	0%	1.3%
Total	2,029	100.0%	100%	
Safety Reserve	216	10.6%	9%	1.6%
Private Markets	444	21.9%	18%	3.9%



Hypothetical Asset Allocation When Privates Fully Funded

	Current 8/31/2024	to P	llocated E/PC	Proposed Target	Variance
Equity	\$ (M) 1,313	\$ (M) 1,245	% 61.3%	% 64.0%	% -2.7%
Public Equity	1,103	1,003	49.4%	58.0%	-8.6%
Private Equity	90	1,003	49.4% 6.0%	6.0%	0.0%
Huff Energy Fund	120	122	5.9%	0.0%	5.9%
Fixed Income & Cash	246	264	13.0%	13.0%	0.0%
Cash	: 61	61	3.0%	3.0%	0.0%
ST Investment Grade Bonds	119	122	6.0%	6.0%	0.0%
Investment Grade Bonds	66	81	4.0%	4.0%	0.0%
Credit	203	254	12.5%	15.0%	-2.5%
Public Credit	200	172	8.5%	11.0%	-2.5%
Private Credit	3	81	4.0%	4.0%	0.0%
Real Assets	267	267	13.2%	8.0%	5.2%
Real Estate	150	150	7.4%	5.0%	2.4%
Natural Resources	90	90	4.5%	3.0%	1.5%
Infrastructure	26	26	1.3%	0.0%	1.3%
Total	2,029	2,029	100.0%	100.0%	
Safety Reserve	180	183	9.0%	9.0%	0.0%
Private Markets	480	590	29.1%	18.0%	11.1%

Key Assumptions:

- Private Equity and Private Credit are fully funded at 6% and 4%, respectively
- No further liquidations or change in value to Huff and Private Real Assets
- ~80% of underweight is sourced from public equities and ~20% of underweight from public credit



Huff Reclassification Rationale

- At a high level: breaking Huff into its own allocation, with a target of 0%, is a rational and simple way to address the Huff issue.
- Reclassifying Huff Energy:
 - More appropriately describes Huff, which is not expected to behave like a typical private equity fund moving forward.
 - Creates room in the Private Equity asset class for DPFP to make new Private Equity commitments.
 - Has a minimal impact to reporting and can be easily implemented by Meketa.
 - Increases the illiquidity of the total portfolio as new Private Equity and Credit are funded, however staff is comfortable with the higher level given the future cash flow projections for the fund.





DISCUSSION SHEET

ITEM #C12

Торіс:	Second Quarter 2024 Investment Performance Analysis and First Quarter 2024 Private Markets & Real Assets Review
Attendees:	Leandro Festino, Managing Principal – Meketa Investment Group Colin Kowalski, Investment Analyst – Meketa Investment Group
Discussion:	Meketa and investment staff will review investment performance.

Regular Board Meeting – Thursday, September 12, 2024



Dallas Police & Fire Pension System

June 30, 2024

Fund Evaluation Report

BOSTON CHICAGO LONDON MIAMI NEW YORK PORTLAND SAN DIEGO

MEKETA.COM



Dallas Police & Fire Pension System

Agenda

Agenda

- **1.** Executive Summary
- 2. Performance Update As of June 30, 2024
- 3. Disclaimer, Glossary and Notes

Executive Summary As of June 30, 2024



Dallas Police & Fire Pension System

Executive Summary

DPFP Trailing One-Year Flash Summary

Category	Results	Notes
Total Fund Performance Return	Positive	7.9%
Performance vs. Policy Index	Underperformed	7.9% vs. 13.8%
Performance vs. Peers ¹	Underperformed	7.9% vs. 9.5% median (77th percentile)
Asset Allocation vs. Targets	Negative	Underweight global equity and overweight real estate hurt
Public Active Management	Underperformed	5 of 11 active public managers beat benchmarks
DPFP Public Markets vs. 60/40 ²	Outperformed	13.5% vs. 11.2%
DPFP Public Markets vs. Peer Plans	Outperformed	13.5% vs. 9.5%
Safety Reserve Exposure	Near Target	\$162.1 million (approximately 8.2%)
Compliance with Targets	Yes	All asset classes in compliance

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Page 4 of 30

¹ InvestorForce Public DB \$1-5 billion net.

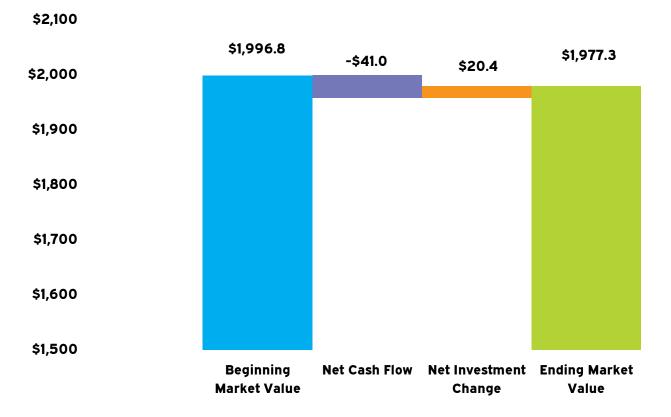
² Performance of Total Fund excluding private market investments relative to a 60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index.

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Dallas Police & Fire Pension System

Executive Summary





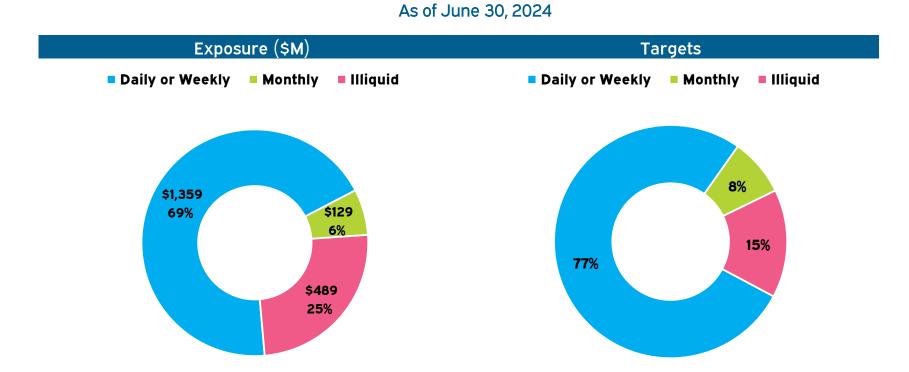
 \rightarrow Total market value decreased due to negative net cash flow despite positive investment change.

Liquidity Exposure

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Dallas Police & Fire Pension System

Executive Summary



 \rightarrow Approximately 25% of the DPFP's assets are illiquid versus 15% of the target allocation.



Dallas Police & Fire Pension System

Executive Summary

Quarterly Manager Scorecard

	1-Year Outperformance vs. Benchmark	3-Year Outperformance vs. Benchmark	5-Year Outperformance vs. Benchmark		
Boston Partners Global Equity Fund	No	Yes	No		
Manulife Global Equity Strategy	No	Yes	No		
Walter Scott Global Equity Fund	No	No	No		
WCM Global Equity	NA	NA	NA		
Eastern Shore US Small Cap	Yes	NA	NA		
Global Alpha Int'i Small Cap	No	NA	NA		
RBC Emerging Markets Equity	No	Yes	No		
IR&M 1-3 Year Strategy	Yes	Yes	Yes		
Longfellow Core Fixed Income	Yes	Yes	NA		
Aristotle Pacific Capital Bank Loan	Yes	Yes	Yes		
Loomis High Yield Fund	No	No	NA		
Metlife Emerging Markets Debt	Yes	NA	NA		

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Dallas Police & Fire Pension System

EM

Manulife

Executive Summary

	Market Value (\$)	% of DPFP Public Equity	US (%)	Developed Non-US (%)	EM (%)
NT MSCI ACWI IMI	368,820,246	35	63	27	11
Boston Partners	116,717,858	11	32	64	4
Manulife	119,110,439	11	58	38	4
Walter Scott	120,872,271	11	58	38	5
WCM	124,142,025	12	65	29	7
RBC	99,560,069	9	-	16	84
Eastern Shore	63,745,635	6	98	2	-
Global Alpha	55,638,265	5	4	96	-
DPFP Public Equity	1,085,775,756	100	52	35	14
MSCI ACWI IMI			62	28	11
100.0%		_			
80.0%				_	

Equity Regional Exposure¹

¹ Percentages may not always sum to 100% due to rounding. Given the multinational nature of many of the underlying holdings in these strategies, country allocation is not always clear and can vary between different data sources.

RBC

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60.0% 40.0% 20.0%

WCM

US

DPFP Public Equity NT MSCI ACWI IMI Boston Partners

Global Alpha

Developed Non-US

Walter Scott

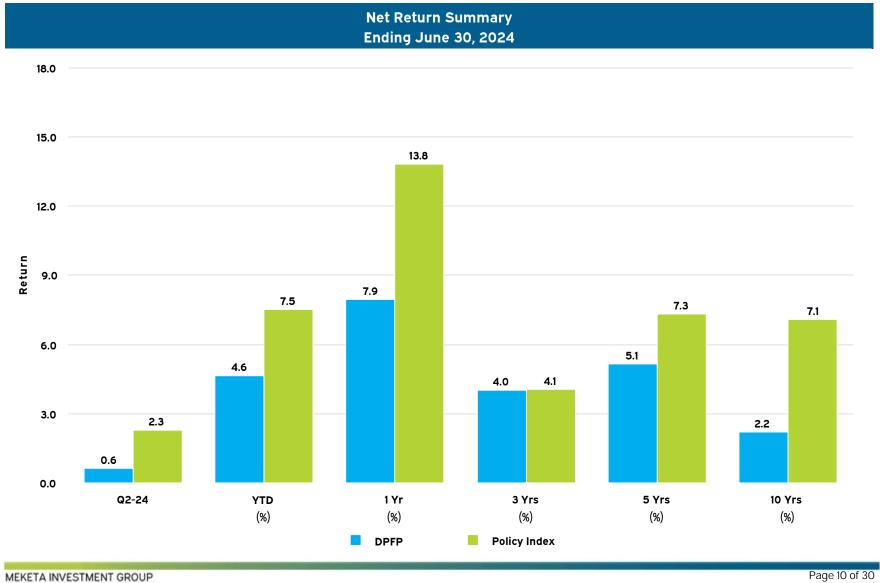
Eastern Shore

Performance Update As of June 30, 2024

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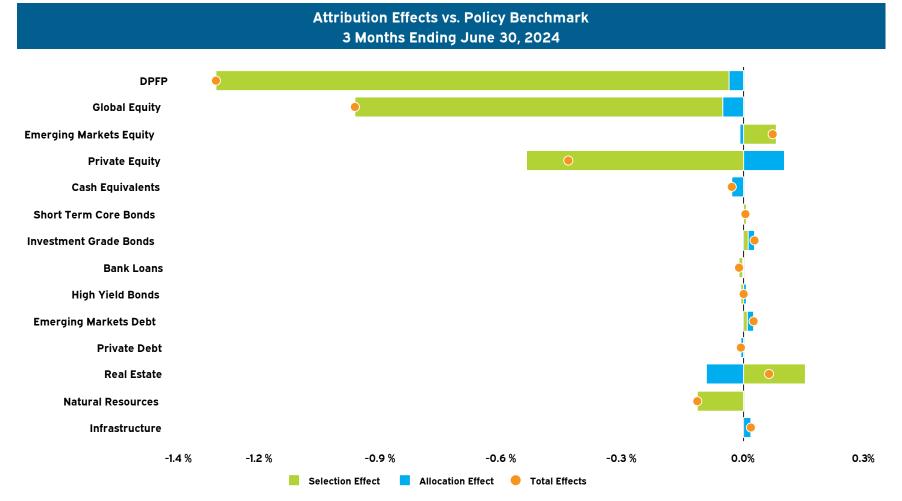
Dallas Police & Fire System

DPFP | As of June 30, 2024



Dallas Police & Fire System

Total Plan Attribution | As of June 30, 2024



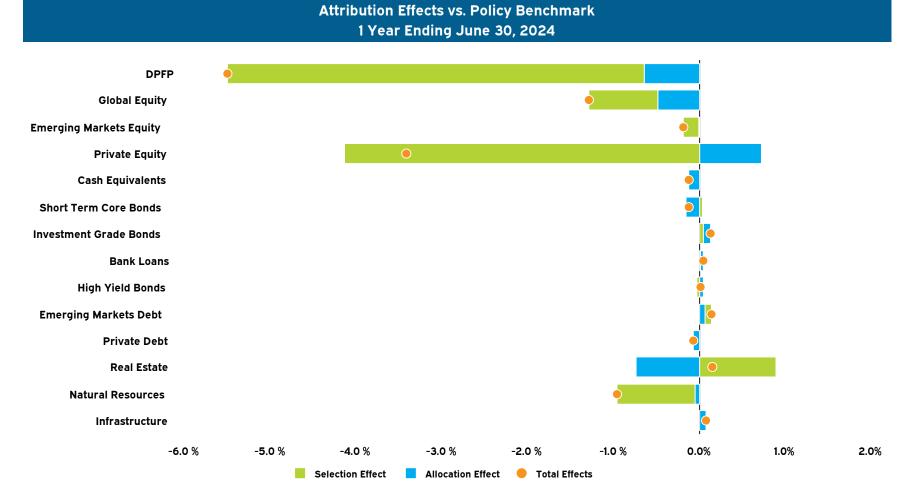
The performance calculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied by the time period performance of that asset class and summed. Values may not sum due to rounding.

MEKETA INVESTMENT GROUP

Page 11 of 30

Dallas Police & Fire System

Total Plan Attribution | As of June 30, 2024



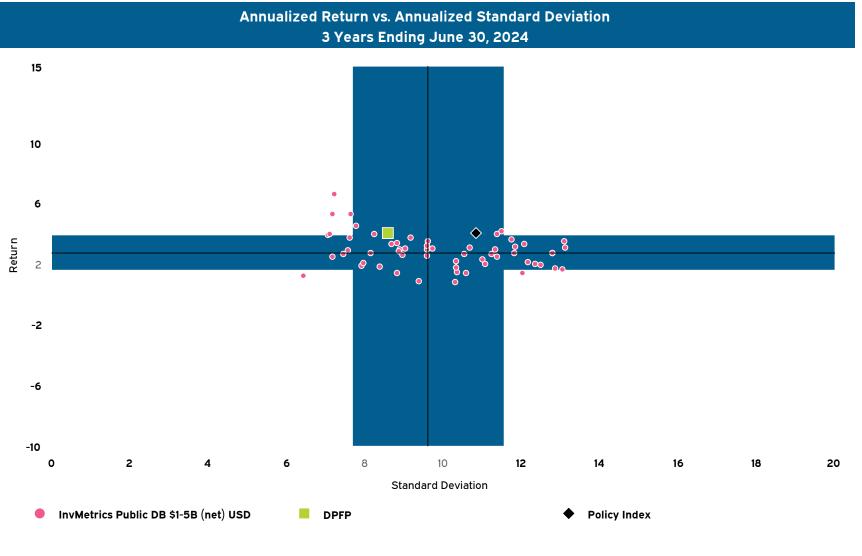
The performance calculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied by the time period performance of that asset class and summed. Values may not sum due to rounding.

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Page 12 of 30

Dallas Police & Fire System

DPFP | As of June 30, 2024



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Page 13 of 30

Dallas Police & Fire System

Asset Allocation & Performance | As of June 30, 2024

Ass	et Class Perfor	mance S	umma	ary (No	et)					
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inceptior Date
DPFP	1,977,278,885	100.0	0.6	4.6	7.9	4.0	5.1	2.2	5.7	Jun-96
Policy Index			2.3	7.5	13.8	4.1	7.3	7.1		
Allocation Index			1.8	5.5	10.4	3.6	6.5	б.7	7.1	
Total Fund Ex Private Markets			1.1	7.2	13.5	3.3	6.9	5.5	5.8	
60% MSCI ACWI IMI Net/40% Bloomberg Global Aggregate Index			1.0	4.8	11.2	0.7	5.5	4.9	6.0	
Global Equity	969,136,939	49.0	0.5	9.2	16.6	4.6	10.2	9.1	7.6	Jul-06
MSCI AC World IMI Index (Net)			2.4	10.3	18.4	4.7	10.4	8.2	7.2	
Emerging Markets Equity	99,560,069	5.0	6.9	7.4	9.6	-1.7	3.6		3.0	Jan-18
MSCI Emerging Markets IMI (Net)			5.1	7.4	13.6	-4.1	3.9	3.1	2.0	
Private Equity	207,184,674	10.5	-1.3	-2.2	-9.5	10.5	4.0	-4.0	0.1	Oct-05
Russell 3000 + 2% Lagged			3.7	14.7	25.5	10.3	16.9	15.2	13.3	
Cash Equivalents	45,449,568	2.3	1.3	2.6	5.4	3.2	2.3		1.9	Apr-15
ICE BofA 3 Month U.S. T-Bill			1.3	2.6	5.4	3.0	2.2	1.5	1.6	
Short Term Core Bonds	116,628,873	5.9	1.1	1.7	5.4	0.9	1.8		2.0	Jul-17
Blmbg. U.S. Aggregate 1-3 Yrs			0.9	1.4	4.9	0.6	1.2	1.3	1.5	
Investment Grade Bonds	63,898,483	3.2	0.4	0.2	3.9	-2.7			-0.1	Oct-19
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	-0.7	
Bank Loans	63,710,823	3.2	1.6	4.5	11.3	6.6	5.9	4.9	5.0	Jan-14
Credit Suisse Leveraged Loan			1.9	4.4	11.0	6.0	5.4	4.6	4.7	
High Yield Bonds	64,342,199	3.3	0.9	2.1	9.5	0.4	3.0	2.9	5.0	Jan-11
Blmbg. U.S. Corp: High Yield Index			1.1	2.6	10.4	1.6	3.9	4.3	5.6	
Emerging Markets Debt	65,773,751	3.3	-0.4	1.2	7.1	-7.1	-4.1	-0.5	0.9	Jan-11
50% JPM EMBI/50% JPM GBI-EM			-0.7	-0.7	4.9	-2.9	-0.6	0.8	2.0	

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Page 14 of 30

Dallas Police & Fire System

Asset Allocation & Performance | As of June 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Private Debt	3,115,764	0.2	-2.7	-12.5	-19.0	10.1	7.6		3.3	Jan-16
Bloomberg US High Yield+2%			1.6	3.6	12.6	<i>3</i> .7	6.0	6.4	8.1	
Real Estate	158,994,174	8.0	0.9	-0.3	2.4	6.2	3.4	-1.4	3.7	Mar-85
NCREIF Property (Q Lag)			-1.0	-4.0	-7.2	3.6	3.8	6.4	7.5	
Natural Resources	93,137,607	4.7	-1.6	-5.2	-12.1	-6.6	-3.0	-0.9	1.3	Jan-11
NCREIF Farmland (Q Lag)			0.7	3.0	3.6	7.4	6.0	7.1	9.8	
Infrastructure	26,345,962	1.3	3.3	4.2	13.6	18.9	8.6	7.9	7.6	Jul-12
S&P Global Infrastructure TR USD			2.7	4.0	7.0	5.6	4.3	4.6	6.9	

Dallas Police & Fire System

Asset Allocation & Performance | As of June 30, 2024

	Trail	ing Net	Perforn	nance						
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
DPFP	1,977,278,885	100.0	0.6	4.6	7.9	4.0	5.1	2.2	5.7	Jun-96
Policy Index			2.3	7.5	13.8	4.1	7.3	7.1		
Allocation Index			1.8	5.5	10.4	3.6	6.5	6.7	7.1	
Total Fund Ex Private Markets			1.1	7.2	13.5	3.3	6.9	5.5	5.8	
60% MSCI ACWI IMI Net/40% Bloomberg Global Aggregate Index			1.0	4.8	11.2	0.7	5.5	4.9	6.0	
InvMetrics Public DB \$1-5B (net) USD Rank			67	62	76	9	100	100	100	
Total Equity	1,275,881,682	64.5	0.7	7.0	10.9	5.0	8.3	3.9	5.6	Jan-11
MSCI AC World IMI Index (Net)			2.4	10.3	18.4	4.7	10.4	8.2	8.7	
Public Equity	1,068,697,008	54.0	1.1	9.0	16.0	4.0	9.8	8.8	7.4	Jul-06
MSCI AC World IMI Index (Net)			2.4	10.3	18.4	4.7	10.4	8.2	7.2	
eV All Global Equity Rank			48	42	44	48	48	37	43	
Global Equity	969,136,939	49.0	0.5	9.2	16.6	4.6	10.2	9.1	7.6	Jul-06
MSCI AC World IMI Index (Net)			2.4	10.3	18.4	4.7	10.4	8.2	7.2	
eV All Global Equity Rank			54	41	41	43	43	32	40	
NT ACWI Index IMI	368,820,246	18.7	2.5	10.4	18.8	5.1			7.1	Apr-21
MSCI AC World IMI Index (Net)			2.4	10.3	18.4	4.7	10.4	8.2	6.6	
eV Global All Cap Equity Rank			29	34	30	35			33	
Walter Scott Global Equity Fund	120,872,271	6.1	-0.1	7.6	12.5	5.0	10.3	10.0	10.2	Dec-09
MSCI ACWI Net			2.9	11.3	19.4	5.4	10.8	8.4	9.2	
eV Global Large Cap Growth Eq Rank			72	61	71	18	53	52	60	
WCM Global Equity	124,142,025	6.3	2.4	17.0					21.3	Dec-23
MSCI AC World Index Growth (Net)			6.2	16.3	24.7	5.5	13.8	11.1	17.9	
eV Global Large Cap Growth Eq Rank			37	17					21	
Boston Partners Global Equity Fund	116,717,858	5.9	-1.9	6.1	14.4	7.0	10.7		8.5	Jul-17
MSCI World Net			2.6	11.7	20.2	6.9	11.8	9.2	10.9	
eV Global All Cap Value Eq Rank			75	49	44	20	16		20	

Page 16 of 30

Dallas Police & Fire System

Asset Allocation & Performance | As of June 30, 2024

				7.55000			ior many			
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Manulife Global Equity Strategy	119,110,439	6.0	-0.8	8.9	16.8	6.5	10.0		9.2	Jul-17
MSCI ACWI Net			2.9	11.3	19.4	5.4	10.8	8.4	10.0	
eV Global Large Cap Value Eq Rank			45	9	13	20	23		13	
Eastern Shore US Small Cap	63,745,635	3.2	-2.9	4.3	12.0				-2.1	Oct-21
Russell 2000 Index			-3.3	1.7	10.1	-2.6	6.9	7.0	-1.2	
eV US Small Cap Equity Rank			47	33	39				78	
Global Alpha International Small Cap	55,638,265	2.8	-3.1	0.8	1.5				-1.1	May-22
MSCI EAFE Small Cap (Net)			-1.8	0.5	7.8	-3.4	4.2	4.3	2.3	
eV Global Small Cap Equity Rank			64	70	95				96	
Emerging Markets Equity	99,560,069	5.0	6.9	7.4	9.6	-1.7	3.6		3.0	Jan-18
MSCI Emerging Markets IMI (Net)			5.1	7.4	13.6	-4.1	3.9	3.1	2.0	
eV Emg Mkts Equity Rank			11	49	69	37	58		37	
RBC Emerging Markets Equity	99,560,069	5.0	6.9	7.4	9.6	-1.7	3.6		3.0	Jan-18
MSCI Emerging Markets IMI (Net)			5.1	7.4	13.6	-4.1	3.9	3.1	2.0	
eV Emg Mkts Equity Rank			11	49	69	37	58		37	
Private Equity	207,184,674	10.5	-1.3	-2.2	-9.5	10.5	4.0	-4.0	0.1	Oct-05
Russell 3000 + 2% Lagged			3.7	14.7	25.5	10.3	16.9	15.2	13.3	
Total Fixed Income and Cash	422,919,460	21.4	0.8	1.9	8.0	0.9	2.0	1.8	4.4	Jul-06
Bloomberg Global Multiverse Index			-1.0	-3.0	1.3	-5.3	-1.8	-0.3	2.3	
eV All Global Fixed Inc Rank			35	32	30	23	39	54	25	
Cash Equivalents	45,449,568	2.3	1.3	2.6	5.4	3.2	2.3		1.9	Apr-15
ICE BofA 3 Month U.S. T-Bill			1.3	2.6	5.4	3.0	2.2	1.5	1.6	
Public Fixed Income	374,354,128	18.9	0.8	1.9	7.6	-1.1	1.5	2.1	3.9	Jan-11
Bloomberg Global Multiverse Index			-1.O	-3.0	1.3	<i>-5.3</i>	-1.8	-0.3	0.8	
eV All Global Fixed Inc Rank			37	33	33	42	46	48	26	

Dallas Police & Fire System

Asset Allocation & Performance | As of June 30, 2024

	Market Value	% of	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Since	Inception
	(\$)	Portfolio	(%)	(%)	(%)	(%)	(%)	(%)	Inception	Date
Short Term Core Bonds	116,628,873	5.9	1.1	1.7	5.4	0.9	1.8		2.0	Jul-17
Blmbg. U.S. Aggregate 1-3 Yrs			0.9	1.4	4.9	0.6	1.2	1.3	1.5	
IR&M 1-3 Year Strategy	116,628,873	5.9	1.1	1.7	5.4	0.9	1.8		2.0	Jul-17
Blmbg. U.S. Aggregate 1-3 Yrs			0.9	1.4	4.9	0.6	1.2	1.3	1.5	
eV US Short Duration Fixed Inc Rank			36	48	47	46	36		32	
Investment Grade Bonds	63,898,483	3.2	0.4	0.2	3.9	-2.7			-0.1	Oct-19
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	-0.7	
eV US Core Fixed Inc Rank			14	17	19	37			33	
Longfellow Core Fixed Income	63,898,483	3.2	0.4	0.2	3.9	-2.7			-1.7	Jul-20
Blmbg. U.S. Aggregate Index			0.1	-0.7	2.6	-3.0	-0.2	1.3	-2.4	
eV US Core Fixed Inc Rank			14	17	19	30			35	
Bank Loans	63,710,823	3.2	1.6	4.5	11.3	6.6	5.9	4.9	5.0	Jan-14
Credit Suisse Leveraged Loan			1.9	4.4	11.0	6.0	5.4	4.6	4.7	
eV US Float-Rate Bank Loan Fixed Inc Rank			67	32	24	8	6	7	6	
Aristotle Pacific Capital Bank Loan	63,710,823	3.2	1.6	4.5	11.3	6.6	5.7		5.3	Aug-17
Credit Suisse Leveraged Loan			1.9	4.4	11.0	6.0	5.4	4.6	5.0	
eV US Float-Rate Bank Loan Fixed Inc Rank			67	32	24	8	9		8	
High Yield Bonds	64,342,199	3.3	0.9	2.1	9.5	0.4	3.0	2.9	5.0	Jan-11
Blmbg. U.S. Corp: High Yield Index			1.1	2.6	10.4	1.6	3.9	4.3	5.6	
eV US High Yield Fixed Inc Rank			79	85	68	92	90	97	68	
Loomis US High Yield Fund	64,342,199	3.3	0.9	2.1	9.5	0.3			1.1	Dec-20
Blmbg. U.S. High Yield - 2% Issuer Cap			1.1	2.6	10.4	1.6	3.9	4.3	2.9	
eV US High Yield Fixed Inc Rank			79	85	68	94			99	
Emerging Markets Debt	65,773,751	3.3	-0.4	1.2	7.1	-7.1	-4.1	-0.5	0.9	Jan-11
50% JPM EMBI/50% JPM GBI-EM			-0.7	-0.7	4.9	-2.9	-0.6	0.8	2.0	
eV All Emg Mkts Fixed Inc Rank			67	62	56	100	100	88	82	

Page 18 of 30

Dallas Police & Fire System

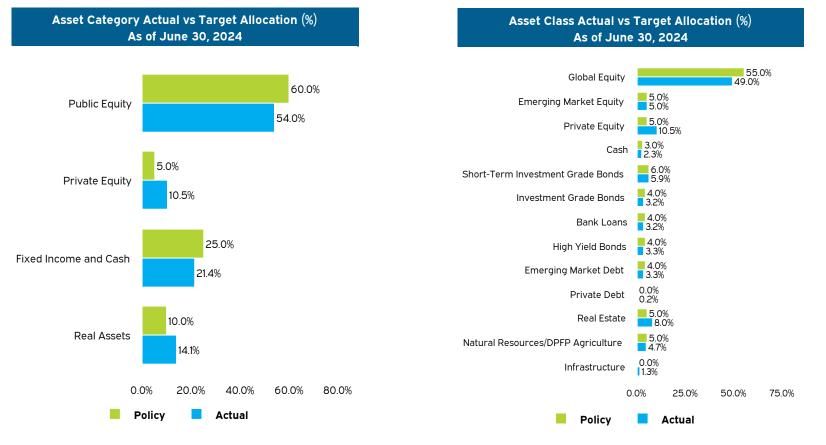
Asset Allocation & Performance | As of June 30, 2024

								-		•
	Market Value (\$)	% of Portfolio	QTD (%)	ҮТD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Metlife Emerging Markets Debt Blend	65,773,751	3.3	-0.4	1.2	7.1				12.3	Oct-22
35% JPMEMBI Glbl/35% JPM CEMBI Broad Div/30% JPMGBI-EM Di			0.2	0.8	6.3				10.6	
eV All Emg Mkts Fixed Inc Rank			67	62	56				40	
Private Debt	3,115,764	0.2	-2.7	-12.5	-19.0	10.1	7.6		3.3	Jan-16
Bloomberg US High Yield+2%			1.6	3.6	12.6	3.7	6.0	6.4	8.1	
Total Real Assets	278,477,743	14.1	0.3	-1.6	-1.5	3.3	1.9	-0.5	-0.5	Jan-11
Total Real Assets Policy Index			-0.1	-0.5	-1.9	5.5	4.9	6.8	8.9	
Real Estate	158,994,174	8.0	0.9	-0.3	2.4	6.2	3.4	-1.4	3.7	Mar-85
NCREIF Property (Q Lag)			-1.0	-4.0	-7.2	3.6	3.8	6.4	7.5	
Natural Resources	93,137,607	4.7	-1.6	-5.2	-12.1	-6.6	-3.0	-0.9	1.3	Jan-11
NCREIF Farmland (Q Lag)			0.7	3.0	3.6	7.4	6.0	7.1	9.8	
Infrastructure	26,345,962	1.3	3.3	4.2	13.6	18.9	8.6	7.9	7.6	Jul-12
S&P Global Infrastructure TR USD			2.7	4.0	7.0	5.6	4.3	4.6	6.9	

All Private Markets market values are one quarter lagged unless otherwise noted.

Dallas Police & Fire System

DPFP | As of June 30, 2024



MEKETA INVESTMENT GROUP

Page 20 of 30

Dallas Police & Fire System

Asset Allocation Compliance | As of June 30, 2024

				• •	•
	Current Balance (\$)	Current Allocation (%)	Policy (%)	Policy Range (%)	Within IPS Range?
Public Equity	1,068,697,008	54	60	20 - 70	Yes
Global Equity	969,136,939	49	55	36 - 60	Yes
Emerging Market Equity	99,560,069	5	5	3 - 7	Yes
Private Equity	207,184,674	10	5		
Private Equity	207,184,674	10	5		
Fixed Income and Cash	422,919,460	21	25	5 - 40	Yes
Cash	45,449,568	2	3	0 - 6	Yes
Short-Term Investment Grade Bonds	116,628,873	6	6	0 - 9	Yes
Investment Grade Bonds	63,898,483	3	4	2 - 6	Yes
Bank Loans	63,710,823	3	4	2 - 6	Yes
High Yield Bonds	64,342,199	3	4	2 - 6	Yes
Emerging Market Debt	65,773,751	3	4	2 - 6	Yes
Private Debt	3,115,764	0	0		
Real Assets	278,477,743	14	10		
Real Estate	158,994,174	8	5		
Natural Resources/DPFP Agriculture	93,137,607	5	5		
Infrastructure	26,345,962	1	0		
Total	1,977,278,885	100	100		

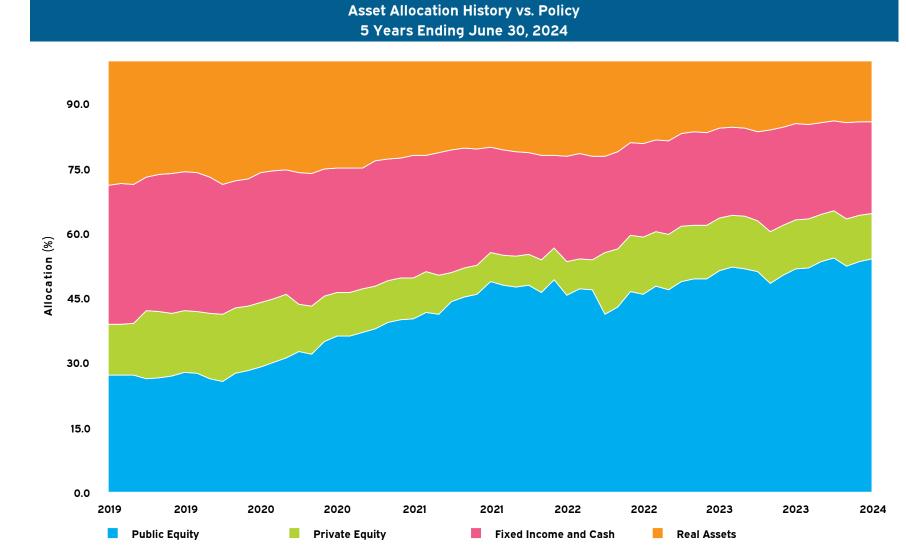
As of 6/30/2024, the Safety Reserve Exposure was approximately \$162.0 million (8.2%). Rebalancing ranges are not established for illiquid assets (Private Equity, Private Debt, Natural Resources, Infrastructure, and Real Estate).

MEKETA INVESTMENT GROUP

Page 21 of 30

Dallas Police & Fire System

Historical Asset Allocation | As of June 30, 2024



MEKETA INVESTMENT GROUP

Page 22 of 30

Dallas Police & Fire System

Multi Time Period Statistics | As of June 30, 2024

	5	Statistics Sur Years Ending Ju				
	Return	Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
)PFP	5.1	8.3	-0.4	0.6	0.4	6.2
Policy Index	7.3	10.7	-	1.0	0.5	0.0
Public Equity	9.8	17.2	-0.3	1.0	0.5	2.2
MSCI AC World IMI Index (Net)	10.4	17.6	-	1.0	0.5	0.0
Blobal Equity	10.2	17.7	0.0	1.0	0.5	2.2
MSCI AC World IMI Index (Net)	10.4	17.6	-	1.0	0.5	0.0
Emerging Markets Equity	3.6	17.8	-0.1	0.9	0.2	4.4
MSCI Emerging Markets IMI (Net)	3.9	18.4	-	1.0	0.2	0.0
		540	01	0.4	0.0	
Private Equity	4.0	54.0	-0.1	-0.4	0.2	59.7
Russell 3000 + 2% Lagged	16.9	18.5	-	1.0	0.8	0.0
Short Term Core Bonds	1.8	2.1	0.6	1.0	-0.2	1.0
Blmbg. U.S. Aggregate 1-3 Yrs	1.2	1.9	-	1.0	-0.5	0.0
Bank Loans	5.9	5.0	0.1	0.7	0.7	2.8
Credit Suisse Leveraged Loan	5.4	7.0	-	1.0	0.5	0.0
ligh Yield Bonds	3.0	10.1	-0.6	1.1	0.1	1.5
Blmbg. U.S. Corp: High Yield Index	3.9	9.2	-	1.0	0.2	0.0
merging Markets Debt	-4.1	14.5	-0.7	1.3	-0.4	4.6
50% JPM EMBI/50% JPM GBI-EM	-0.6	11.0	-	1.0	-0.2	0.0
Real Estate	3.4	4.5	-0.1	0.0	0.3	7.0
NCREIF Property (Q Lag)	3.8	5.6	-	1.0	0.3	0.0

MEKETA INVESTMENT GROUP

Page 23 of 30

Dallas Police & Fire System

Multi Time Period Statistics | As of June 30, 2024

	Return	Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Natural Resources	-3.0	6.4	-1.3	0.1	-0.8	6.9
NCREIF Farmland (Q Lag)	6.0	3.1	-	1.0	1.2	0.0
Infrastructure	8.6	15.5	0.1	0.0	0.5	23.9
S&P Global Infrastructure TR USD	4.3	19.0	-	1.0	0.2	0.0

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Dallas Police & Fire System

Benchmark History | As of June 30, 2024

		Benchmark History
From Date	To Date	Benchmark
DPFP		
10/01/2021	Present	4.0% Blmbg. U.S. Aggregate Index, 4.0% Blmbg. U.S. Corp: High Yield Index, 6.0% Blmbg. U.S. Aggregate 1-3 Yrs, 5.0% MSCI Emerging Markets IMI (Net), 55.0% MSCI AC World IMI Index (Net), 3.0% ICE BofA 3 Month U.S. T-Bill, 5.0% Russell 3000 +2% 1Q Lag, 5.0% NCREIF Property (Q Lag), 5.0% NCREIF Farmland (Q Lag), 4.0% 50% JPM EMBI/50% JPM GBI-EM, 4.0% S&P/LSTA Leveraged Loan
08/01/2021	10/01/2021	4.0% Blmbg. U.S. Aggregate Index, 4.0% Blmbg. U.S. Corp: High Yield Index, 6.0% Blmbg. U.S. Aggregate 1-3 Yrs, 5.0% MSCI Emerging Markets IMI (Net), 55.0% MSCI AC World IMI Index (Net), 3.0% ICE BofA 3 Month U.S. T-Bill, 5.0% NCREIF Property (Q Lag), 5.0% NCREIF Farmland (Q Lag), 4.0% 50% JPM EMBI/50% JPM GBI-EM, 4.0% S&P/LSTA Leveraged Loan, 5.0% Cambridge Associates UE PE and VC (1 Qtr Lag)
01/01/2019	08/01/2021	4.0% Blmbg. U.S. Aggregate Index, 4.0% Blmbg. U.S. Corp: High Yield Index, 12.0% Blmbg. U.S. Aggregate 1-3 Yrs, 10.0% MSCI Emerging Markets IMI (Net), 40.0% MSCI AC World IMI Index (Net), 4.0% Blmbg. Global Aggregate Index, 3.0% ICE BofA 3 Month U.S. T-Bill, 5.0% NCREIF Property (Q Lag), 5.0% NCREIF Farmland (Q Lag), 4.0% 50% JPM EMBI/50% JPM GBI-EM, 4.0% S&P/LSTA Leveraged Loan, 5.0% Cambridge Associates UE PE and VC (1 Qtr Lag)
10/01/2018	01/01/2019	4.0% Blmbg. U.S. Aggregate Index, 10.0% MSCI Emerging Markets Index, 40.0% MSCI AC World Index, 5.0% NCREIF Property Index 4.0% Blmbg. U.S. High Yield - 2% Issuer Cap, 12.0% Blmbg. U.S. Aggregate 1-3 Yrs, 4.0% Blmbg. Global Aggregate Index, 3.0% ICE BofA 3 Month U.S. T-Bill, 5.0% Russell 3000 +2% Lagged, 4.0% 50% JPM EMBI/50% JPM GBI-EM, 4.0% S&P/LSTA Leveraged Loan, 5.0% Natural Resources Benchmark (Linked)
04/01/2016	10/01/2018	5.0% MSCI Emerging Markets Index, 20.0% MSCI AC World Index, 2.0% HFRX Absolute Return Index, 12.0% NCREIF Property Index, 2.0% Blmbg. U.S. Aggregate 1-3 Yrs, 3.0% Blmbg. Global Aggregate Index, 5.0% Blmbg. Global High Yield Index, 2.0% ICE BofA 3 Month U.S. T-Bill, 3.0% CPI +5% (Seasonally Adjusted), 5.0% Russell 3000 +2% Lagged, 6.0% 50% JPM EMBI/50% JPM GBI-EM, 6.0% HFRI RV: FI (50/50-ABS/Corp), 5.0% Barclays Global High Yield +2%, 8.0% 60% MSCI ACWI/40% Barclays Global Agg, 5.0% S&P Global Infrastructure TR USD, 6.0% S&P/LSTA Leveraged Loan, 5.0% Natural Resources Benchmark (Linked)
Total Real As	sets	
01/11/2010	Present	50.0% NCREIF Property (Q Lag), 50.0% NCREIF Farmland (Q Lag)

Disclaimer, Glossary, and Notes

Page 26 of 30



Disclaimer, Glossary, and Notes

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

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Disclaimer, Glossary, and Notes

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security).

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. Portfolio Return- [Risk Free Rate+Beta*(market return-Risk Free Rate)].

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Disclaimer, Glossary, and Notes

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about is future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.



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Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

 $\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = \frac{1\% \text{ pro rata, plus}}{5.26\% \text{ (current yield)}} = 6.26\% \text{ (yield to maturity)}$

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.

The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.



ITEM #C13

Торіс:	Hardship Request
	Portions of the discussion under this topic may be closed to the public under the terms of Section 551.078 of the Texas Government Code.
Discussion:	Article 6243a-1 Section 6.14(e-3)(2) allows a lump-sum distribution from the DROP account in the event of a financial hardship that is not reasonably foreseeable. Section 6.14(e-4) required the Board to adopt rules related to hardship distributions. The Board's rules are contained in Section G of the DROP Policy.A DROP Annuitant submitted an application for a lump sum distribution from the DROP balance in accordance with the DROP policy. The DROP Policy
	requires that:
	a. severe financial hardship exists at the time of the application (i.e., not one that may occur sometime in the future);
	b. the hardship cannot be relieved through any other financial means (i.e., compensation from insurance or other sources, monthly annuity benefits, or liquidation of personal assets) unless using those other sources would also cause a financial hardship; and

ITEM #C13 (continued)

- **c.** the amount requested in the application is reasonably related to and no greater than necessary to relieve the financial hardship.
- **d.** the hardship must relate to a circumstance authorized by the Board Policy or other similar extraordinary circumstances.

Staff

Recommendation: To be **provided** at the meeting.



ITEM #C14

Topic:Closed Session - Board serving as Medical Committee

Discussion of the following will be closed to the public under the terms of Section 551.078 of the Texas Government Code:

Disability application 2024-2D

Discussion: Staff will present an application for a disability retirement in accordance with Section 6.03 of Article 6243a-1 for consideration by the Board if the information is available.



ITEM #C15

Topic: Lone Star Investment Advisors Portions of the discussion under this topic may be closed to the public under the terms of Section 551.071 of the Texas Government Code. Discussion: Investment staff will update the Board on investments with this manager.



ITEM #C16

Topic:Legal issues - In accordance with Section 551.071 of the Texas Government
Code, the Board will meet in executive session to seek and receive the
advice of its attorneys about pending or contemplated litigation or any
other legal matter in which the duty of the attorneys to DPFP and the
Board under the Texas Disciplinary Rules of Professional Conduct clearly
conflicts with Texas Open Meeting laws.

Discussion: Counsel will brief the Board on these issues.



Topic:

DISCUSSION SHEET

ITEM #D1

Public Comment

Discussion: Comments from the public will be received by the Board.



ITEM #D2

Торіс:	Executive Director's Report
	 a. Associations' newsletters NCPERS Monitor (September 2024) b. Open Records
Discussion	The Executive Director will brief the Deend recording

Discussion: The Executive Director will brief the Board regarding the above information.



The Latest in Legislative News

September 2024

NCPERS Executive Director's Corner

What Does the Future of Retirement Look Like?



By Hank Kim, Executive Director and Counsel, NCPERS



here's nothing quite like back pain and a milestone birthday to make us acutely aware that we are, in fact, aging and getting closer and closer to retirement each day. Having worked on issues surrounding retirement security for more than 20 years, the topic of retirement is often on my mind. But as I approach my 55th birthday, I can finally see my own retirement looming on the (distant) horizon.

It's got me thinking: What does the future of retirement look like?

For many, it's not a linear path—nor does it always go as planned. Although many plan to work until the age of 65, seven in 10 retirees now report <u>leaving the workforce</u> at a significantly lower age than anticipated. Of those, 70% left the workforce for reasons beyond their control, according to EBRI's 2024 Retirement Confidence Survey.

At last month's <u>Public Pension Funding Forum</u>, one speaker raised the idea of retirement evolving into more of a 'state of mind' rather than permanent status. Some may meet the definition of retired while continuing to work on a part-time or seasonal basis, for example.

NATIONAL CONFERENCE ON PUBLIC EMPLOYEE RETIREMENT SYSTEMS

Regardless of exact retirement age or definition, the outlook is bleak for far too many. <u>New data</u> from Morningstar finds that approximately 45% of Americans will run of out of funds if they retire at 65. Compared to the private sector, however, public sector workers are much better financially prepared for their retirement years—largely due to their access to defined benefit plans.

As it becomes increasingly clear that the shift towards defined contribution plans is leaving millions of Americans in the lurch, it only adds to the urgency of the work that NCPERS and its members do each day to protect and expand access to pensions. We're proud to say that our members currently oversee a collective \$5 trillion in retirement funds on behalf of approximately 22 million active and retired public servants.

Outside of our core mission to promote and protect pensions through advocacy, education, and research, NCPERS continues to do extensive work on issues impacting retirement security more broadly. Since 2010, we've been closely involved in the fight to make <u>state-sponsored Secure Choice retirement savings programs</u> a reality. We also helped establish (and continue to support) Georgetown's Center on Retirement Initiatives, which helps track the success of these programs. Per their <u>tracker</u>, as of 2020 there were 57.3 million private sector employees without access to an employer-sponsored plan. Today, there are 17 state-facilitated retirement programs with more than \$1.64 billion in assets, bringing much-needed access for millions.

While it's hard to predict what the future of retirement will look like, it's clear that both policymakers and industry advocates will play a key role. And in a high-stakes election year, it's especially important to stay engaged and informed about the policy developments that may impact the retirement security of your plan participants.

In addition to keeping our members informed of policy-related developments through our communications, we encourage you to join us at <u>NCPERS Legislative Conference & Policy Day</u>. Held January 27-29 in Washington, DC (immediately after the <u>Pension Communications Summit</u>), this unique event combines learning and advocacy. First, attendees hear directly from lawmakers about the latest policy-related developments impacting pensions. Then, attendees have the opportunity to have their voices heard on Capitol Hill during coordinated meetings with congressional representatives.

The stakes are high. I hope you'll join us this January as we once again meet with policymakers to advocate on behalf of public pensions and help shape the future of retirement. •

2024 NAF PROGRAM

OCTOBER 26-27

PALM SPRINGS, CA



NCPERS Feature

Fall Forecast for Congress

By: Tony Roda, Williams & Jensen



In order to talk about the near-term Congressional agenda, it is important first to discuss the November elections. Much of what the House Republican and Senate Democratic majorities choose to do over the next few weeks will reflect the broader national political picture.

You've seen the pendulum swings before in election seasons and this year is no exception. Donald Trump was poised to have some degree of momentum and a honeymoon period following the Republican National Convention, except all of that was snuffed out by President Biden's withdrawal from the race and the rapid coalescing of the Democratic Party around Vice President Kamala Harris. Biden's announcement came on the Sunday afternoon following the Thursday night close of the GOP Convention. Excellent timing from the Democrats' perspective, resulting in a complete change in the political narrative.

Attempting to return the favor on the day after the close of the Democratic National Convention, Donald Trump made a joint campaign appearance with Robert Kennedy, Jr., who announced the suspension of his campaign and his endorsement of Trump earlier that day. Will this snuff out Vice President Harris's post-Convention honeymoon and momentum? Only time will tell. One thing is clear, however, the pendulum swings are likely to continue.

From Congress's vantage point, the legislative maneuvering in September and October leading up to Election Day will need to be calibrated to give their party the best chance of holding the majority. We expect the House Republicans to largely continue on the path they've charted, which is to vigorously attack the perceived political vulnerabilities of the Biden-Harris Administration. Border security, crime, and the economy will take center stage. In addition, leading up to the August recess the House Judiciary Committee issued 130 letters to financial-related entities, including several public pension plans, asking for information on environmental, social, and governance (ESG) investing. The letters also request that relevant documents be preserved. The argument that the House Judiciary Committee Republicans make is that violations of antitrust law have occurred. I expect anti-ESG-related actions by the House to continue this fall.

Meanwhile, Senate Democrats, hoping to retain their majority, will attack Donald Trump on reproductive health, tax cuts for the wealthy, the January 6th assault on the Capitol, and being soft on Russia and too cozy with other authoritarian leaders. This list of issues and the items expected to be raised by House Republicans can be categorized under the umbrella of political messaging, and none of them will lead to new laws being enacted.

The one issue that the disparate Congressional voices must address is how to extend funding for the federal government's cabinet agencies and programs. Thus far not a single appropriations bill for fiscal year 2025, which begins on October 1, has been signed into law. Prospects are that none of the 12 individual appropriations bills will be finalized by the deadline, making a short-term extension (Continuing Resolution) necessary. The current thinking is that a Continuing Resolution running into November can be achieved, but political mischief could make this difficult. In the recent past, reluctance by many House Republicans to support a funding extension has been overcome by votes from House Democrats. In a few short weeks, we'll see if this trend continues.

Following the election, Congress will return for an undefined period of time for a lame-duck session. Depending on the outcome of the elections, the lame-duck session could be of considerable length or simply a one- or two-day session to further extend the Continuing Resolution. However, we do not expect that the lame-duck Congress will make serious strides to tackle any significant legislative items, thus leaving the public policy playing field a blank canvass for the new president and next Congress.

Bear in mind that post-presidential-election Congresses typically tend to be frenetic and productive. For our purposes, the expiration of the 2017 tax act (most provisions expire by the end of 2025) will spur a great deal of activity on the federal tax front. Depending on the outcome of the November elections, that means public pension plans could have an opportunity to advance significant legislation or may have to hunker down and play defense. Even though the 2017 tax act was not geared toward retirement policy, its reconsideration by the next Congress could include tax-related retirement issues. These are certain to be topics discussed at <u>NCPERS 2025 Legislative</u> <u>Conference & Policy Day</u>.

Please be aware that NCPERS will pay close attention to developments in the September-October timeframe, lame-duck session, and the next Congress. We will apprise our members of significant items that they may wish to weigh in on.

Tony Roda is a partner at the Washington, D.C. law and lobbying firm **Williams & Jensen**, where he specializes in legislative, regulatory, and fiduciary matters affecting state and local pension plans. He represents the National Conference on Public Employee Retirement Systems and state-wide, county, and municipal pension plans in California, Colorado, Georgia, Kentucky, Ohio, Tennessee, and Texas. Tony has an undergraduate degree in government and politics from the University of Maryland, J.D. from the Catholic University of America, and LL.M (tax law) from the Georgetown University Law Center.

NCPERS Feature

Understanding DROPs: Essential Strategies and Insights for Public Safety Retirement

By: Lizzy Lees, Director of Communications, NCPERS



esearch shows that pensions play an essential role in <u>strengthening the public safety workforce</u>, but public safety retirement systems often face unique challenges. On September 19th, NCPERS will host a webinar, <u>Understanding DROPs: Essential Strategies and Insights for Public Safety Retirement</u>, to explore why Deferred Retirement Options Programs (DROPs) are so popular with public safety members, especially as some advocate for their use to mitigate staffing shortages in the post-COVID environment.

We spoke with webinar panelists Aaron Chochon, senior actuary at <u>CavMac</u>, and Ryan Gundersen, senior consultant at CavMac about the actuarial trends they're seeing with public safety retirement systems and what public pension leaders should know about DROPs.

Q: What is a Deferred Retirement Options Program?

A: A Deferred Retirement Option Program is a benefit provision which can be used by members to effectively commence their retirement benefit without actually leaving their job. The number of years a member can participate in the DROP can vary, but a lot of sponsors put the cap at five years. ③

Now, DROP participants don't actually receive their retirement checks until they exit the DROP. Instead, a portion or, more often, all of their monthly benefit is credited to a nominal account, and accrues with interest credits. When the member exits the DROP and retires, they will receive the accumulated value of their nominal account as a lump sum and their monthly retirement checks. It's important to note that their retirement benefit is going to be based on the pay and service earned as of the date they entered the DROP, and not when they retire.

Q: Are there different types of DROPs?

A: There are two main types of DROPs: (i) a Standard DROP (i.e., a Forward DROP) and (ii) and a Back DROP. Standard DROPs behave just how we explained above: An eligible member decides to participate in the DROP, they continue to work while their nominal account builds, and then they retire. When they retire, they'll receive the accumulated balance of their nominal DROP account and begin to receive their retirement checks which, again, are based on the member's pay and service as of the date they began participating in the DROP.

A Back DROP allows a member to retire today and receive benefits as if they had elected to participate in the DROP however many years ago they elect. In effect, they are retroactively participating in a Standard DROP.

Q: What factors should be considered before implementing a Deferred Retirement Options Program?

A: The first thing we would recommend considering is the question, what is the plan sponsor hoping to achieve with their DROP? For example, if the plan sponsor is looking to retain late career employees, a DROP can be an effective retention tool. There are many elements to a DROP, and there is no single design that can accomplish every potential goal for every stakeholder. Each design element creates a decision point, and having an overarching purpose helps to guide these decisions so that legislators and plan sponsors can create a coherent, purpose-driven program.

As with all benefit changes, it is important to consider the potential cost impact of a new DROP. There are essentially two elements which contribute to the cost impact: (i) the DROP design itself and (ii) how the design impacts member behavior. While the provisions themselves are relatively easy to model, it is always difficult to accurately predict how member behavior will change when a new program is introduced to a pension system. Because of this uncertainty, it's best to consider a range of possible scenarios. This is particularly true with Back DROPs because they allow members to retroactively participate in the DROP, which increases the risk of anti-selection.



Q: Why are DROPs especially popular with public safety members?

A: There are several potential reasons for this. One thing we know is that employees like having access to some kind of lump sum benefit upon retirement. Unlike other potential offerings, a DROP allows the member to receive a lump sum without taking a benefit reduction. Also, public safety employees are encouraged to retire earlier than other public employees due to the physical requirements of their work. As a result, many public safety plans have subsidized early retirement or a cap on their benefit service. With a DROP, members can continue to work without giving up the value of the subsidy, or they could continue to work while effectively commencing their benefits once they reach their benefit service cap.

From an employer's perspective, DROPs help retain experienced personnel who might otherwise retire early. Other groups of employees also show interest in DROPS, but because they're usually not eligible to retire until later in life it's not as attractive.

Q: What actuarial trends has CavMac observed with public safety retirement plans in recent years?

A: For public safety members who don't already have a DROP, we have seen continued interest in establishing one, as well as expanding the eligible group. Recently, employers and plan sponsors have become more receptive to the idea as a way to alleviate current staffing shortages.

Still have questions about DROPs? <u>Register here</u> for NCPERS' September 19th webinar.

To learn more about the key issues impacting public safety retirement plans, don't miss <u>NCPERS Public Safety</u> <u>Conference</u>. <u>Register here</u> to join nearly 400 public safety pension professionals on October 27-30 in Palm Springs.

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Quick Estimate

380 / month

Retirement Date

Estimated Unmodified Monthly Benefi

At 19.87 Years of Service

Age

43

Final Avg Compensation (FAC)

Drag the slider below to project a different FAC

\$3,220 / month

Reset Estimate Variables

Estima

Current FAC

6

Age at Retirement

NCPERS PensionX Digital Platform

NCPERS has partnered with Digital Deployment to offer its members a 10% DISCOUNT on PensionX, the premier digital platform that securely enables pensions to engage with active and retired participants via a mobile self-service app and portal.



Learn more about this new NCPERS member benefit at ncpers.org/pensionx

NCPERS Around the Regions

Dallas, Texas Police and Fire Pension System Asks State Court to Weigh in on Funding Plan

The Dallas Police and Fire Pension System says it filed a case asking a state court to clarify who gets the final say on a plan to shore up the pension fund for first responders, which is facing about a \$3 billion shortfall. The city and the pension system for first responders have until Nov. 1 to adopt a plan for solvency that meets state requirements.

READ MORE Source: WFAA

New Jersey Lottery Sales Give \$1B Boost to Public-worker Pension Fund

New Jersey Lottery sales topped \$3.5 billion during the last fiscal year, helping again to provide more than \$1 billion for public-worker pensions, according to the latest preliminary figures. Unaudited financial results released by Lottery officials last month also showed players won more than \$2 billion in New Jersey during the 2024 fiscal year, which ended June 30.

READ MORE Source: NJ Spotlight News

District Court Strikes Down Missouri Anti-ESG Rules, Grants Statewide Injunction

A federal court in Missouri ruled in a favor of the Securities Industry and Financial Markets Association's lawsuit against two regulations enacted by the state that require additional recordkeeping for advisers and brokers recommending or selecting investments with a "nonfinancial objective."

READ MORE Source: PlanSponsor

CalSTRS Votes Against Record Number of Boards in 2024

The California State Teachers' Retirement System announced it voted against a record 2,258 boards of directors among its portfolio companies during the 2024 proxy season, mainly due to insufficient climate risk disclosure. The tally breaks the former high of 2,035 companies, set last year.

<u>READ MORE</u> Source: Chief Investment Officer

Legal Battle Brewing Between New Orleans, Louisiana and State Officials Over Police Pension Funds

The \$38.5 million fine levied against Mayor LaToya Cantrell's administration has the city and the Municipal Police Employees' Retirement System headed to court due to dwindling numbers of the New Orleans Police Department.

READ MORE Source: 4WWL



September 2024

Public Pension HR Summit September 24-26 Denver, CO

October 2024

NCPERS Accredited Fiduciary (NAF) Program

October 26–27 Palm Springs, CA

Program for Advanced Trustee Studies (PATS)

October 26–27 Palm Springs, CA

Public Safety Conference

October 27-30 Palm Springs, CA

January 2025

Pension Communications Summit

January 26-27 Washington, DC

Legislative Conference

January 27-29 Washington, DC

View all upcoming NCPERS conferences at <u>www.ncpers.org/future-conferences</u>.



The Voice for Public Pensions

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