DALLAS POLICE & FIRE PENSION SYSTEM

April 14, 2023

Anumeha
State Pension Review Board
P.O. Box 13498
Austin, TX 78711-3498

RE: PRB notification of the Art. 6243a-1. Pension System For Police Officers And Firefighters In Certain Cities

In accordance with Article 6243a-1, Section 3.01 (j-10), this letter certifies that the information provided to the Pension Review Board is accurate and based on realistic assumptions.

Sincerely,

Kelly Gottschalk
Executive Director

Attachments:
DPFP 2023 Investment Practices and Performance Report
DPFP 2023 DPFP Responses to Meketa Recommendations

Dallas Police and Fire Pension System Combined Plan

Investment Practices and Performance Evaluation Consultant Report

Disclosure Statement by Independent Firm

- → Meketa is a corporation organized in the Commonwealth of Massachusetts, which is owned entirely by its senior professionals. Meketa has no parent organization.
- → Meketa does not have any affiliations with brokerage firms, nor any broker-dealer relationships. Meketa does not receive soft dollars, finder fees, commissions, or third-party marketing fees. Meketa's line of business is providing investment consulting and advisory services. Meketa works only for its clients.
- → Effective April 16, 2018, Meketa entered into an agreement with DPFP to serve as its general investment consultant ("Agreement").
- → Under the Agreement, Meketa receives its fees for the services it provides to DPFP from DPFP directly and does not receive any fees other than those set forth in the Agreement.
- → Meketa does not (directly or indirectly) manage DPFP's investments. Meketa's role is strictly limited to non-discretionary advice.
- → As such, Meketa does not believe any conflicts of interest exists between DPFP and Meketa that could impact the analysis.
- → This report was prepared between January and March 2023.
- → Any references to current exposure, policies, or procedures were accurate or applicable at that time and may not be the same or accurate in the future.

Qualifications

→ Meketa meets the experience requirements outlined under Texas Government Code §802.109 and has prior experience completing Investment Practices and Performance Evaluations. In 2020, all eligible clients engaged Meketa's services for completion of such evaluations.

→ Meketa is a full-service independent investment-consulting firm.

→ Meketa has been providing consulting services for over four decades (since 1978) and currently consults on $1.6 trillion in client assets for over 400 funds throughout the United States.

→ Meketa has nearly 250 full-time employees and operates out of seven offices.

→ Investment consultants at Meketa average 12 years with the firm and 23 years of investment experience. Meketa currently has 48 CFA Charterholders and 30 CAIA Charterholders.

→ Meketa's mission is to provide the highest quality investment advisory services. Meketa aims to utilize, and continuously hone, the best practices that have been developed over its 45-year history. Meketa seeks to be a thought leader by evaluating investment industry information with healthy skepticism and performing value-added original research.

Scope

→ Sec. 802.109. INVESTMENT PRACTICES AND PERFORMANCE REPORTS.

→ (a) Except as provided by Subsection (e) and subject to Subsections (c) and (k), a public retirement system shall select an independent firm with substantial experience in evaluating institutional investment practices and performance to evaluate the appropriateness, adequacy, and effectiveness of the retirement system's investment practices and performance and to make recommendations for improving the retirement system's investment policies, procedures, and practices. **Each evaluation must include:**

(5) an explanation of the firm's determination regarding whether to include a recommendation for each of the following evaluated matters:

(A) an analysis of any investment policy or strategic investment plan adopted by the retirement system and the retirement system's compliance with that policy or plan;

(B) a detailed review of the retirement system's investment asset allocation, including:

(i) the process for determining target allocations;

(ii) the expected risk and expected rate of return, categorized by asset class;

(iii) the appropriateness of selection and valuation methodologies of alternative and illiquid assets; and

(iv) future cash flow and liquidity needs;

Scope (continued)

(C) a review of the appropriateness of investment fees and commissions paid by the retirement system;

(D) a review of the retirement system's governance processes related to investment activities, including investment decision-making processes, delegation of investment authority, and board investment expertise and education; and

(E) a review of the retirement system's investment manager selection and monitoring process.

Note: Meketa has evaluated each of the required sub-sections and provided observations and recommendations for all.

Section 802.109 – Subsection (5) (A)

Section 802.109 – Subsection (5) (A)

Law	Requirement
Sec. 802.109, Subsection (5) (A)	*"an analysis of any investment policy or strategic investment plan adopted by the retirement system and the retirement system's compliance with that policy or plan"*

Criteria or Topic	DPFP Status
Most Recent Significant Modifications?	→ 4Q18 → Significant modifications were implemented after hiring a new Chief Investment Officer and new investment consultant (Meketa). → During 4Q18 the Board reviewed and discussed multiple rounds of edits including red-lined versions. → The IPS was formally adopted by the Board of Trustees on January 10, 2019. → The IPS was submitted to the Texas Pension Review Board on January 14, 2019.

Section 802.109 – Subsection (5) (A)

Criteria or Topic	DPFP Status
Annual Investment Policy Statement Reviews and other Minor Modifications?	→ Over the last three years (since publication of last Investment Practices and Performance Evaluation) the Investment Policy Statement was changed 6 times. → **July 2020** - section 6 – Strategic Asset Allocation and Rebalancing – language regarding the Safety Reserve® was added to include the objective to cover 2.5 year of expected net cash flows. → **November 2020** - section 5B – Roles and Responsibilities - expanded the maximum of six Investment Advisory Committee (IAC) Members to seven. Appendix B – the Policy Benchmark for High Yield Bonds was changed from the Bloomberg Barclays Global High Yield Total Return Index to the Bloomberg Barclays US Corp HY Total Return Index. → **March 2021** – section 2 – Goals, Objectives, and Constraints – A performance objective to rank in the top half of the public fund universe on a rolling 5-year basis was removed due to DPFP's unique circumstances and the non-homogenous nature of the peer universe. → **August 2021** – section 6 – Strategic Asset Allocation and Rebalancing – moved Safety Reserve® language into its own independent section. Added Language to clarify that asset class structures only apply to global equity in the near-term. Appendix B – updated asset allocation policy targets and ranges. → **January 2022** – section 5B – Roles and Responsibilities - removed the maximum of seven Investment Advisory Committee (IAC) Members. → **February 2022** – section 8 – Risk Management – additional language added placing an issuer cap (5% of asset class) in each issuer in public equity and public fixed income, measured independently.

Section 802.109 – Subsection (5) (A) (continued)

Criteria or Topic	DPFP Status
Requirement for (at least) annual review?	→ Yes
Compliance with annual review?	→ Yes
Risk Controls	→ Risk controls are primarily outlined in *Section 8: Risk Management*. The IPS clearly breaks out key risk areas of concern and how DPFP monitors such risks, with the goal of mitigating the risk of capital loss. The four key risk focus areas are: 1. Custodial risk 2. Interest rate risk 3. Issuer concentration risk 4. Private markets concentration guidelines

Section 802.109 – Subsection (5) (A) (continued)

Criteria or Topic	DPFP Status
Current IPS Structure?	**Section 1 -** Introduction and Purpose **Section 2 -** Goals, Objectives, and Constraints **Section 3 -** Ethics, Standards of Conduct, and Fiduciary Responsibility **Section 4 -** Core Beliefs and Long-Term Acknowledgements **Section 5 -** Roles and Responsibilities **Section 6 -** Strategic Asset Allocation and Rebalancing **Section 7 -** Investment Manager Search, Selection, and Monitoring **Section 8 -** Risk Management **Section 9 -** Approval and Effective Date **Appendix A -** Asset Class Descriptions **Appendix B -** Strategic Asset Allocation and Rebalancing Ranges **Appendix B1 -** Asset Allocation Implementation Plan **Appendix C -** Investment Consultant Reporting Requirements **Appendix D -** Alternative Investments

Section 802.109 – Subsection (5) (A) (continued)

Consultant Analysis
→ A well-developed IPS thoughtfully merges client-specific goals with the realities of the capital markets. The IPS should be long term and stable in nature and should focus on core total fund-level policy issues. DPFP's IPS meets all these criteria.
→ The IPS is well thought-out and in line (or better) than industry standards.
→ It is consistent with guidance from the CFA Institute.
→ Roles and responsibilities of all key parties involved are clearly outlined (Board of Trustees, Investment Advisory Committee, Executive Director, Investment Staff, Consultants, Investment Managers, Custodian).
→ The document is written in "plain-English" and is easy for a layperson to understand, which is necessary to be an effective resource for non-investment professional stakeholders to understand the goals, objectives and constraints of DPFP.
→ There is no evidence of any known compliance violations with the IPS currently.
→ We feel the risk controls outlined in the IPS are sufficient. The four areas identified in Section 8 Risk Management, along with the constraints and monitoring requirements, help provide a degree of control by DPFP to minimize uncompensated risk (e.g. concentration limits), operational risk (e.g. custodial risk), and benchmark relative risk (e.g. duration or issuer concentration).
→ In our experience the Board of Trustees and Staff have remained committed to the guidance detailed in the IPS during prolonged, stressed market scenarios (e.g., COVID sell off, inflation).
→ Overall: The existing Investment Policy Statement appears appropriate, adequate, and effective in our opinion.

Section 802.109 – Subsection (5) (A) (continued)

Recommendations
→ The "Core Beliefs and Long-Term Acknowledgments" is thoughtful and should be reviewed any time significant investment changes are considered. It offers good guidance without being overly prescriptive or prohibitive.
→ DPFP Staff, the Board, and the Consultant should continue to review the IPS annually.

Section 802.109 – Subsection (5) (B)

Section 802.109 – Subsection (5) (B)

Law	Requirement
Sec. 802.109, Subsection (5) (B)	*"a detailed review of the retirement system's investment asset allocation, including:* *(i) the process for determining target allocations;* *(ii) the expected risk and expected rate of return, categorized by asset class;* *(iii) the appropriateness of selection and valuation methodologies of alternative and illiquid assets; and* *(iv) future cash flow and liquidity needs"*

Section 802.109 – Subsection (5) (B) (i)

Criteria or Topic	DPFP Status
Written policy for asset allocation development?	→ Yes, outlined in the IPS
Who has formal approval authority of the strategic policy asset allocation?	→ Board of Trustees
Frequency of review?	→ According to the IPS, "a formal asset allocation study will be conducted as directed by the Board, but at least every three years. Asset allocation targets will be reviewed annually for reasonableness in relation to significant economic and market changes or to changes in the investment objectives" (Section 6 Strategic Asset Allocation and Rebalancing, Subsection A.2-3)
Tactical vs. Strategic?	→ Minimal tactical decisions have been implemented (mostly expressed through rebalancing decisions) → According to the IPS "the Strategic asset allocation determines the risk reward profile of the portfolio and thus drives overall portfolio performance and volatility"

Timeline of Most Recent Asset Allocation Review and Adoption

→ DPFP's approach to asset allocation is detailed in Section 6 of its IPS.

→ DPFP conducted a nearly year-long asset allocation and liability review in 2018 when DPFP last switched consultants.

→ Annually Meketa and Staff conduct an asset study review evaluating the expected impact of updated capital market expectations.

→ Following 2018, the last significant asset allocation review that resulted a change to policy targets occurred in 2021. A detailed review of the timeline and process is listed below:

→ **March 2021** – Meketa and Staff started asset allocation discussion with the IAC. Meketa presented a preliminary asst allocation review which included the following:

- Recap of the 2018 asset allocation review and development
- Current market environment
- Overview of the Asset Study development
- DPFP comparison: 2021 projections vs. 2018 projections

The analysis showed that return expectations had decreased given high equity valuations and low bond yields. Meketa advised the IAC to keep the long term in mind, trust the long-term allocation, rebalance when possible, and increase risk assets when expectations are higher.

→ **March 2021** – In the same month, Staff briefed the Board about the preliminary discussions with the IAC. Meketa presented the same report to the full Board. The combined feedback from the Board and IAC was:

(1) Re-underwrite the size/need of the Safety Reserve
(2) Eliminate global bonds target given low global interest rates
(3) Perceived risks with emerging market equities
(4) Review allocation size to bonds given the low yield environment

Timeline of Most Recent Asset Allocation Review and Adoption

→ **April 2021** – Meketa and Staff met with the IAC again. Meketa provided a presentation which included the following:

- Introduction: Basics of asset allocation
- Section 1: DPFP Asset Liability Stress Testing
- Section 2: Prior Feedback from IAC and Board Members
- Section 3: Potential New Asset Allocation Target Policy
- Section 4: Stress Testing and Historical Scenario Analysis

→ Staff and Meketa reviewed four asset allocation mixes to shift the allocation from Short-term Bonds and Global Bonds to Global Equity and TIPS.

→ Investment Advisory Committee members favored a larger reduction of the Safety Reserve, down to a 9% target, and reallocating incrementally to Global Equity, up to a 50% target.

→ The IAC did not recommend adding an allocation to TIPS.

→ The Investment Advisory Committee members recommended an implementation plan that completes the Safety Reserve reduction by the end of the year.

→ **May 2021** – Meketa and Staff held additional discussions following the IAC feedback.

→ At the May Board meeting, Staff provided its formal recommendation to adopt one of the mixes previously discussed ("Mix B") from the Meketa materials. Staff provided proforma allocation estimates and an implementation plan. Potential risks (of reducing the Safety Reserve and adding to public equities) were also discussed and highlighted for the Board's consideration. Meketa's materials from the IAC meeting were also presented.

→ The Board found the proposed reduction to the Safety Reserve acceptable. Before considering a long-term Asset Allocation Mix for approval, the Board requested education on Emerging Markets ("EM") Equities at the June Board meeting and to review additional mixes with closer to a market weight in EM Equity.

→ Meketa agreed to provide an EM education presentation, then discuss additional long-term asset allocation mixes for consideration.

Timeline of Most Recent Asset Allocation Review and Adoption

→ **June 2021** – Meketa presented (1) EM education at the June Board Meeting, along with (2) a presentation titled "2021 Asset Allocation – Additional Analysis." Included in this analysis were two new asset mixes for consideration that both had lower weights to emerging market equities and higher weights to global equity. Return probabilities of each asset mix were detailed and discussed.

→ **June 2021** – Details of the May and June Board meeting materials and discussion were shared with the IAC at the June 30, 2021 IAC meeting.

→ **July 2021** – The Board approved the long-term asset allocation target (with the lowest weight to EM equity) and directed Staff to bring back amendments to the Investment Policy Statement reflecting the changes for Board review and approval.

→ **August 2021** – The Board approved the updated Investment Policy Statement inclusive of the updated asset allocation policy.

Section 802.109 – Subsection (5) (B) (ii)

Criteria or Topic	DPFP Status
Active vs. Passive – Policy	→ According to the IPS (Section 4 Core Beliefs and Long-Term Acknowledgements, Subsection C): *"1. The opportunity for active manager risk-adjusted outperformance (alpha) is not uniformly distributed across asset classes or Investment Managers' strategies* *2. Active strategies are preferred when there is strong conviction that they can be expected to add alpha, net of fees* *3. Passive strategies should be considered if alpha expectations are unattractive."*
Active vs. Passive -Implementation	→ For many years DPFP was 100% active. → Over the last three years, DPFP has been increasing its passive exposure through the use of a core global equity index fund • December 31, 2020: 0% passive • December 31, 2021: 12% passive • December 31, 2022: 9 % passive • Target exposure: 15% passive

Section 802.109 – Subsection (5) (B) (ii) (continued)

Criteria or Topic	DPFP Status
Asset Class Return and Standard Deviation Expectations Development	→ DPFP uses capital markets assumptions developed by its Consultant. → A summary of Meketa's process is listed below. → Meketa recommends its client use the 20-year projections. • Each year Meketa Investment Group conducts an Asset Study to attempt to forecast future expected returns, future expected risk and correlation measures for over 100 asset classes and sub-asset classes. • The process relies on both quantitative and qualitative methodologies. • First, a large set of quantitative models are used to arrive at a set of baseline expected ten-year annualized returns for major asset classes. • These models attempt to forecast a gross "beta" return for each public market asset class; that is, it does not model "alpha," nor does it apply an estimate for management fees or other operational expenses[1]. • The models are fundamentally based (based on theoretically defined return relationship with current observable factors). • Some of the models are more predictive than others. For this reason, a qualitative overlay is required, which takes the form of a data-driven deliberation among the research team at Meketa and the Investment Policy Committee at Meketa. • Return assumptions for hard-to-predict asset classes as well as those with limited data are influenced more heavily by the qualitative analysis. • As a result of this process, ten-year annualized return expectations are calculated, which serve as the foundation of the longer-term, twenty-year expectations.

[1] Our expectations are net of fees where passive management is not available (e.g., private markets and hedge funds).

Section 802.109 – Subsection (5) (B) (ii) (continued)

Criteria or Topic	DPFP Status
Asset Class Return and Standard Deviation Expectations Development (continued)	• The twenty-year annualized return expectations are formed by systematically considering historical returns on an asset class by asset class level. Qualitative assessments are made on the value of the historical data and the confidence we have (or lack thereof) that the historical average return is representative of future returns. • Specifically, a weighted average of the ten-year expectations and average historical returns in each asset class is calculated. • The weights are determined by a qualitative assessment of the value of the historical data. Generally, if there is little confidence that the historical average return is representative of what an investor can expect,[1] the weight of the ten-year forecast will be greater. Therefore, the weight on the ten-year forecasts ranges from 0.5 to 0.9. • Volatility and correlation expectations are developed differently. These assumptions rely primarily on historical averages, with an emphasis given to the experience of the trailing ten years. • Qualitative adjustments, when applied, usually serve to increase the correlations and volatility over and above the historical estimates (e.g., using the higher correlations usually observed during a volatile market). • Adjustments to volatility are made based on the historical skewness of each asset class (e.g., increasing the volatility for an asset class that has been negatively skewed). • In the case of private markets and other illiquid asset classes where historical volatility and correlations have been artificially dampened, public market equivalents are used as a base for estimates before applying any qualitative adjustments. These volatility and correlation expectations are then combined with our twenty-year return expectations to assist us in subsequent asset allocation work, including mean-variance optimization and scenario analyses.

[1] For example, Meketa has less confidence in historical data that do not capture many possible market scenarios or that are overly polluted by survivorship bias.

Section 802.109 – Subsection (5) (B) (ii) (continued)

Criteria or Topic	DPFP Status
Asset Class Return and Standard Deviation Expectations Development (continued)	• The weights are determined by a qualitative assessment of the value of the historical data. Generally, if there is little confidence that the historical average return is representative of what an investor can expect[1], the weight of the ten-year forecast will be greater. Therefore, the weight on the ten-year forecasts ranges from 0.5 to 0.9. • Volatility and correlation expectations are developed differently. These assumptions rely primarily on historical averages, with an emphasis given to the experience of the trailing ten years. • Qualitative adjustments, when applied, usually serve to increase the correlations and volatility over and above the historical estimates (e.g., using the higher correlations usually observed during a volatile market). • Adjustments to volatility are made based on the historical skewness of each asset class (e.g., increasing the volatility for an asset class that has been negatively skewed). • In the case of private markets and other illiquid asset classes where historical volatility and correlations have been artificially dampened, public market equivalents are used as a base for estimates before applying any qualitative adjustments. • These volatility and correlation expectations are then combined with our twenty-year return expectations to assist us in subsequent asset allocation work, including mean-variance optimization and scenario analyses.

[1] For example, Meketa has less confidence in historical data that do not capture many possible market scenarios or that are overly polluted by survivorship bias.

Exhibit #1 – Target Asset Allocation and Minimum/Maximum Weights

Strategic Target Asset Allocation[1]	Target Weight (%)	Minimum Weight (%)	Maximum Weight (%)
Equities	**65**		
Global Equity	55	36	60
Emerging Market Equity	5	3	7
Private Equity	5	N/A[2]	N/A[2]
Safety Reserve and Fixed Income	**25**		
Cash Equivalents	3	0	6
Short-term Investment Grade Bonds	6	0	9
Investment Grade Bonds	4	2	6
High Yield Bonds	4	2	6
Bank Loans	4	2	6
Emerging Market Bonds (50/50)	4	2	6
Real Assets	**10**		
Private Real Estate	5	N/A[2]	N/A[2]
Private Natural Resources	5	N/A[2]	N/A[2]
Expected Return (20 years)	*8.4*		
Expected Standard Deviation (20 years)	*13.7*		

[1] Expected return and standard deviation are based upon Meketa Investment Group's 2023 Annual Asset Study. Throughout this document, returns for periods longer than one year are annualized. "Private" is defined by all asset classes not traded on public exchange or broker to broker. Specifically: private equity, private debt, private real estate, private natural resources and private infrastructure.

[2] Rebalancing Ranges are not established for illiquid asset classes.

Exhibit #2 – Capital Market Assumptions

Asset Classes	20 Year Return Expectations[1] (%)	20 Year Standard Deviation Expectations[1] (%)
Global Equity	9.2	18.0
Emerging Market Equity	10.0	23.0
Private Equity	11.0	27.0
Cash Equivalents	2.9	1.0
Short-term Investment Grade Bonds	3.5	1.0
Investment Grade Bonds	4.7	4.0
High Yield Bonds	7.3	11.0
Bank Loans	7.0	10.0
Global Bonds	2.4	8.0
Emerging Market Bonds	6.4	12.0
Real Estate	7.8	16.0
Natural Resources (Private)	9.8	24.0

[1] Expected return and standard deviation are based upon Meketa Investment Group's 2023 Annual Asset Study. Throughout this document, returns for periods longer than one year are annualized. "Private" is defined by all asset classes not traded on public exchange or broker to broker. Specifically: private equity, private debt, private real estate, private natural resources and private infrastructure.

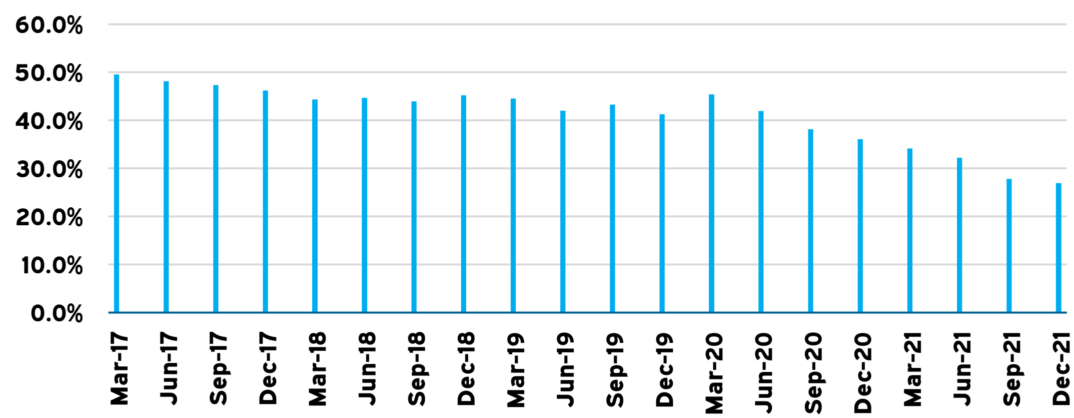
Section 802.109 – Subsection (5) (B) (iii)

Criteria or Topic	DPFP Status
Private Markets Selection process	→ DPFP has not made a new alternative investment since July 2016. → The most recent private market investment was a private equity fund of funds (Industry Ventures, $5M commitment, July 2016). → Section 7 of the IPS states that the affirmative vote of eight trustees is required to approve any new Alternative Investment. → In 1Q23 DPFP was evaluating the proper controls and resources needed to initiate a new private markets program as progress continues to be made on liquidation of legacy illiquid investments. → DPFP is considering adding/hiring private markets consulting services focused on fund due diligence and selection, portfolio construction, and commitment pacing.
Valuation approach	→ In nearly all cases, DPFP values its alternative investments based on fair value determinations provided by audited financial statements and appraisals provided to DPFP from its alternative investment managers. → DPFP Staff has/will question managers' valuations if they feel it is warranted. → For one private equity relationship, DPFP has engaged its own valuation firm to conduct annual evaluations of DPFP's interests in the private equity funds because DPFP felt the manager (and manager's independent auditor) were overstating the investment value.

Section 802.109 – Subsection (5) (B) (iii)

Criteria or Topic	DPFP Status
Exposure to Alternative Investments (continued)	→ DPFP has made strong progress reducing (liquidating) its private markets exposure over the past five years as its works towards its target weights.

Private Assets as a Percentage of Total Fund



→ The Board has engaged specialists (where appropriate) to work out of many private markets investments at best possible exit price available.

→ The IPS outlines target weights to alternatives but does not put rebalancing ranges on illiquid assets because such assets cannot be easily traded.

Section 802.109 – Subsection (5) (B) (iv)

Criteria or Topic	DPFP Status
Annual Expected Contributions	→ Annual contributions into the plan (both employee and City) are expected to average $228 million per year over the next five years (2022-2026), according to the floor established by HB 3158 and the City Hiring Plan[1]. → City contributions have a minimum floor through the end of 2024. → Employees contribute 13.5% of pay.[2] → The Employer (City) contributes 34.5% of pay (excluding overtime pay) plus an additional $13 million per year into DPFP through the end of 2024.
Tracking Actual Contributions vs. Hiring Plan	→ To be proactive DPFP has been tracking the computation pay relative to the city's hiring plan because if hiring and pensionable compensation do not keep pace with projections, lower contributions will go into DPFP starting in 2025 after the contribution floor is lifted. → DPFP Staff monitors progress and reports to the Board at each meeting. → Contributions based on pensionable compensation[3] have been 102% of the Hiring Plan contributions estimate since the effective date of HB 3158.
Annual Expected Benefit Payments	→ Annual benefit payments are expected to average approximately $360 million per year[4] over the next five years (2022-2026).
Annual Expected Administration Expenses	→ According to the actuary, annual expected administration expenses for DPFP are projected to be the greater of $7.0 million per year[1], or 1% of computation pay. This projection includes investment personal salaries, but excludes investment management fees, consulting fees, etc.

[1] According to actuary Segal Consulting.
[2] According to Article 6243a-1 of the Texas Statutes.
[3] As reported at the December 2022 Board meeting.
[4] According to actuary Segal Consulting.

Section 802.109 – Subsection (5) (B) (iv) (continued)

Criteria or Topic	DPFP Status
Annual Expected Net Cash Flows	→ Net expected cash flows are expected to average approximately -$139 million per year over the next five years (based on the contributions, benefit payments and administrative expenses in the actuarial valuation report). → On an average plan size of approximately $1.8 billion, net expected cash outflows per year are approximately -7.7%. (-$139 / $1,800 ≈ -7.7%).
Asset Liability Analysis	→ The most recent actuarial valuation report was published in November 2022, with data as of January 1, 2022. → Meketa included liability analysis during an asset allocation review in 2018. → In April 2021, Meketa included additional liability analysis as part of an asset allocation review.
Actuarial Assumed Rate(s) of Return	→ The current long term assumed rate of return is 6.5%. It was lowered twice in recent years: first from 7.25% as part of the 2020 actuarial experience study, and then from 7.0% to 6.5% for the 2021 actuarial valuation. → The Board of Trustees adopted a laddered assumed rate of return over the past few years as it transitions its portfolio out of the legacy illiquid assets. → 2022 was previously approved at 5.75% (during the 2020 actuarial valuation) but revised to -13.0% in 2022 to better reflect the realities of the 2022 capital markets at the time the funding projections were being evaluated.
Actuarial Highlights	→ Funded status for the Combined Pension Plan is 41% based on the actuarial value of assets.[1] → Funding level is expected to drop for roughly the next 20 years even if all assumptions are met (as it will take time for the impact of plan design changes to be fully felt). → According to the actuary, the projected year of full funding is 2090.

[1] According to the January 1, 2022 Actuarial Valuation report by actuary Segal Consulting.

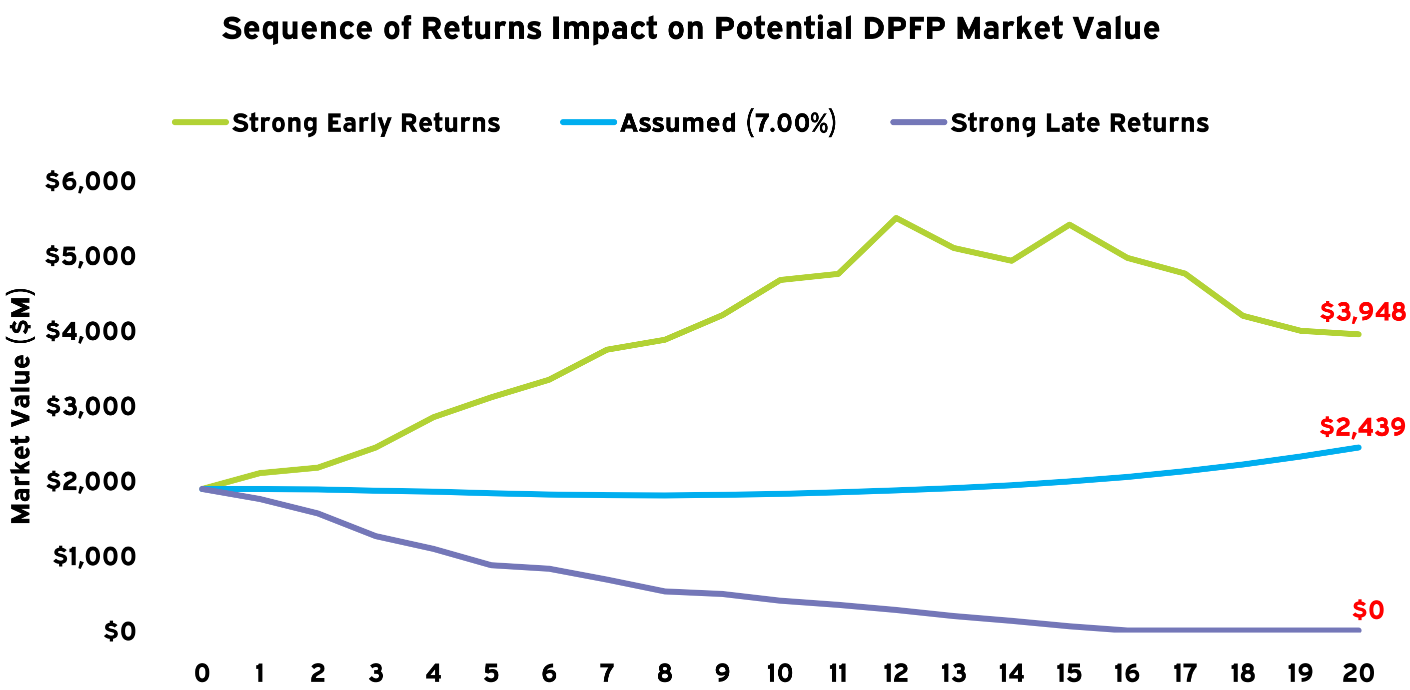
Section 802.109 – Subsection (5) (B) (iv) (continued)

Criteria or Topic	DPFP Status
Actuarial Highlights (continued)	→ Article 6243a-1 requires an analysis in 2024 to gauge whether the funding plan is on track. "In 2024, an independent actuarial analysis shall be conducted with the actuary making recommendations to the Board for changes to bring the plan in line with funding guidelines set by the Texas Pension Review Board if needed." → HB 3158 added a requirement to Article 6243a-1 that mandates the Board adopt changes if DPFP is not on track to meet the Texas Pension Review Board funding guidelines in 2024. → As detailed in the 2021 DPFP Annual Comprehensive Financial Report: "the Board believes it's certain that additional changes will be required. The member contributions are approximately equal to the normal cost of their benefit; therefore, the most appropriate option is additional funding from the City. The Board also believes that it is prudent to explore options, including pension obligation bonds, for additional City funding as soon as possible and not wait until 2024."
Funding Policy	→ The Board of Trustees adopted a funding policy in December 2019, as required by SB 2224, which was passed by the Texas Legislature in 2019. The Policy was amended in July 2020. → In the Board's amended policy, the amortization period was changed from 30 years to a closed 25-year period for the January 1, 2020 valuation. Beginning in 2021, future gains or losses each year are amortized over separate, closed 20-year periods. → Under the funding policy, if the City's contributions are 2% below the actuarial determined contribution for two years in a row, the Trustees will recommend an increase in the city contribution. Such an increase would require two-thirds approval of the Board. → According to the 2021 Actuarial Report, the 2021 city contributions fell short of the actuarial determined contribution by 25.2% (or $55.7 million).

Section 802.109 – Subsection (5) (B) (iv) (continued)

Criteria or Topic	DPFP Status
Funding Policy (continued)	→ 2021 marked the second consecutive year city contributions fell short of the actuarial determined contribution by more than 2%. At the December 2022 board meeting, the Trustees authorized the Executive Director on behalf of the Board to (i) send the required notice under the Funding Policy to the City of Dallas and (ii) recommend an increase in City contribution rates.
Stress Testing	→ As noted previously, the Consultant conducted stress testing as part of the 2021 asset allocation and liability analysis. → A sample of the analysis conducted in 2021 is included in Exhibits #3 - 5 on the following pages.

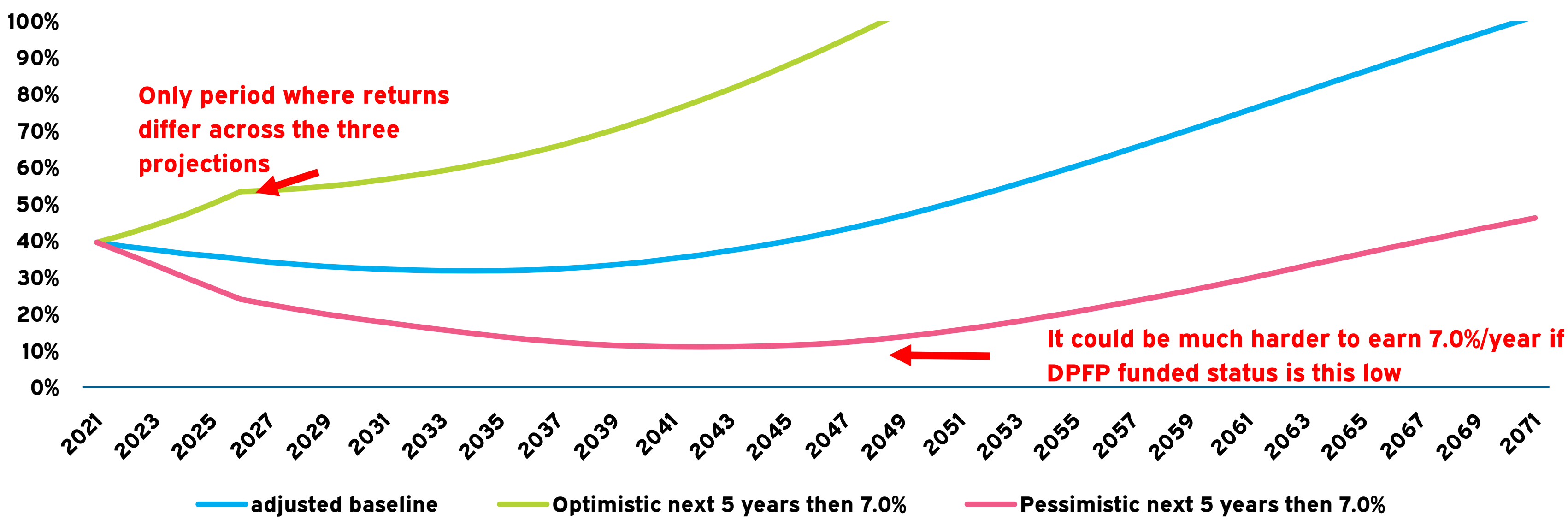
Exhibit #3 - Example of Stress Testing Conducted in 2021



→ This analysis showed the importance of the sequence of returns given the large negative cash outflow each year. Each line above earns an annualized 7.0% return over twenty years. The analysis showed that if DPFP experiences multiple years of poor/negative returns in the first 10 years, it could conceivably run out of money (all else equal) before earning the strong returns in years 11-20 (because the corpus of the System decreases too significantly before the "strong" returns come).

Exhibit #4 - Example of Stress Testing Conducted in 2021

Example Funded Status and the Significance of the Near-Term Returns[1]



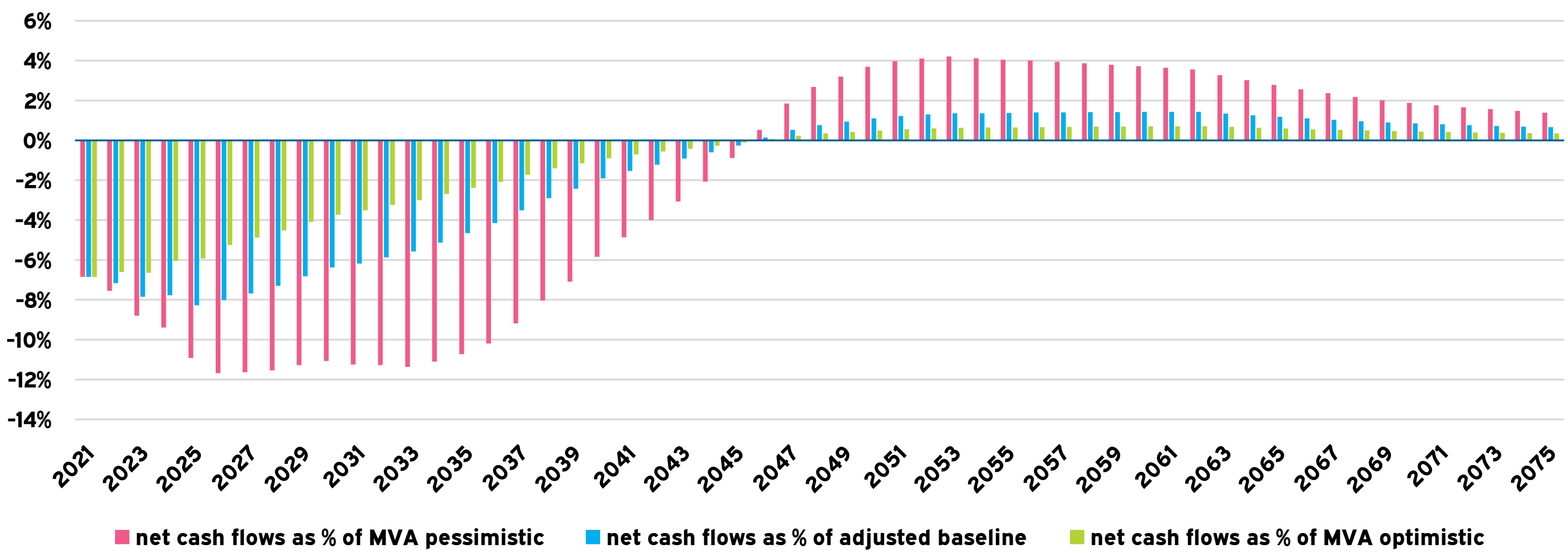
→ This analysis showed that the next five years have a significant impact on the trajectory of DPFP funded status. In this stress test the returns are the same in each line with the exception of years 1-5.

→ A weak next five years (modeled as zero return per year) could significantly delay the time to reach fully funded status. The Fund could become insolvent.

[1] Returns for all lines in the 50 years following 2025 are modeled at 7.0% per year. In the pessimistic line, we modeled 0% for the first 5 years. In the adjusted baseline we modeled 5.25% - 7.0% in the first 5 years. In the optimist line, we modeled 14% in the first 5 years.

Exhibit #5- Example of Stress Testing Conducted in 2021

Example Analysis Detailing Expected Cash Outflow % in Stressed Environment



→ This model assumed the same dollar value of contributions, benefits, expenses under each scenario (based off the actuary data). Expected net cash flows could reach almost -12% of market value of assets (per year) under the pessimistic return path, where the largest reversal occurs (as a percentage of market value of assets) because the market value of DPFP would be the smallest (of the three paths).

Section 802.109 – Subsection (5) (B)

Consultant Analysis
→ Despite strong progress over the past three years, DPFP staff and Board recognize the current exposure is still different from policy weights (due to legacy private equity and private real estate investments), and the public market declines in 2022.
→ DPFP's current approach to asset allocation (2021) is thorough and robust.
→ It is on par (or better) than industry standards. The inclusion of the IAC in the 2021 asset allocation review was additive, relative to 2018, prior to the IAC formation.
→ In our opinion, the approach DPFP takes to formulate asset allocation is sound, consistent with best practices, and leads to a well-diversified portfolio.
→ We agree with the decision to evaluate the asset allocation targets for reasonability on an annual basis (as updated capital market assumptions are released), while only requiring a formal exhaustive asset allocation review once (at least) every three years. In our opinion, overly frequent changes to the strategic asset allocation targets are not additive.
→ Current DPFP Staff is doing a commendable job with a very challenging situation, as it works to liquidate private market investments at the best possible price.
→ The Board and IAC are kept informed on all progress, challenges, and general developments.

Section 802.109 – Subsection (5) (B) (continued)

Consultant Analysis (continued)
→ The current asset allocation targets are consistent with peer systems of similar size.
→ DPFP's Board of Trustees acknowledgement and understanding of the plan's funded status and cash flow situation were crucial data points that helped guide the overriding theme of the most recent asset allocation decision-making process.
→ The Board is mindful of adopting a return expectation that is realistic given capital market return expectations.
→ The target asset allocation is well diversified and built with a global perspective in mind given the globally investable universe.
→ DPFP's approach to passive management makes it an outlier among other public pension plans.
→ DPFP has 9% total passive exposure (in a global equity index)

Section 802.109 – Subsection (5) (B) (continued)

Recommendations
→ We recommend the Board consider increasing passive exposure in efficient asset classes where the likelihood of risk-adjusted outperformance, net of fees, is lowest. Based on our experience, DPFP has below average passive exposure.
→ We recommend DPFP Staff continue its process of working with the Board of Trustees and external advisors to prudently exit illiquid investments to the extent possible.
→ We recommend the Board remains patient with asset allocation as the portfolio is transitioned and doesn't feel obligated to conduct comprehensive asset allocation overhaul every year. (Surveys have shown many large state plans are moving towards once every three - five years).
→ We recommend the Board and Staff closely monitor contribution levels and maintain constructive and open dialogue with the City. We commend the Board for acting in accordance with the Funding Policy and authorizing the Executive Director to send the required notice to the City requesting an increase in contribution rates.
→ If (based on the actuary's advice) it becomes likely that DPFP is not on track to meet targets by 2024, we encourage the Board to act as soon as reasonably possible to discuss and implement additional plan design changes to avoid delaying and compounding any known shortfalls.

Section 802.109 – Subsection (5) (C)

Section 802.109 – Subsection (5) (C)

Law	Requirement
Sec. 802.109, Subsection (5) (C)	*"a review of the appropriateness of investment fees and commissions paid by the retirement system"*

Criteria or Topic	DPFP Status
Policy Language	→ According to the IPS, "*Investment costs will be monitored and minimized with the context of maximizing net return.*" (Section 4 Core Beliefs and Long-Term Acknowledgements, Subsection B.2).
Internal process for paying and monitoring fees	→ Fees that are paid via invoice are reviewed by the appropriate DPFP analyst based on the assigned asset class coverage. → According to conversations with Staff, the analyst will typically calculate the expected quarterly fee via an excel spreadsheet and reconcile with what is billed by the investment manager. → Any external wire to pay fees requires a three-person authorization process. → DPFP Staff keeps an excel sheet with all investment related fees paid (direct investment management fees, incentive fees, commissions, custodian fees, investment consultant fees, legal related investment fees). → DPFP publishes summary fee information in its annual financial report in a clear and understandable way.

Section 802.109 – Subsection (5) (C) (continued)

Criteria or Topic	DPFP Status
Public Markets Fees	→ DPFP Staff and Consultant monitor investment manager fees and evaluate appropriateness relative to similar investment strategies. → The Consultant provided a fee review as part of its Initial Fund Review of DPFP in the summer of 2018. → Each public markets manager fee was calculated (in annual terms, in dollars) and compared relative to peer percentiles (Source: eVestment). → The Consultant provided updated relative peer percentile rankings in February 2023. → On all new mandates, Staff has been diligent about requesting possible performance-based fees and Meketa has provided fee benchmarking.
Private Markets Fees	→ As is expected, private market strategies represent a larger proportion of fees than their pro-rata market value exposure. → DPFP has little to no control on the fee arrangements of private market strategies that were committed to many years ago with contractually required fees detailed in previously executed Limited Partnership Agreements or other governing documents. → Where possible, DPFP Staff and the Board of Trustees have been able to receive discounted fee (or no fees) on extension periods for select private markets strategies. → DPFP has incurred additional legal costs the past few years related to litigation and/or disposition of private market investments. → These costs are communicated by DPFP staff to the Board and are included in annual budgets.

Subsection 802.109 – Subsection (5) (C) (continued)

Criteria or Topic	DPFP Status
Total Fees Paid	→ DPFP paid a blended average fee of 0.54% in calendar year 2021. This is on par with the industry average of 0.54% (according to the latest available NCPERS survey conducted)[1]. → Fees have come down significantly over the past three years. → DPFP paid a blended average fee of 0.74% in calendar year 2018. → The biggest source of fees was in private real estate and private equity. → Total fees paid for calendar year 2021 are detailed in Exhibit #6 (sourced from 2021 Annual Comprehensive Financial Report).
Communication to the Board	→ Total fees paid are detailed to the Board of Trustees as part of the annual budget as well as the Annual Comprehensive Financial Report. → The Board of Trustees has access to a summary fee grid that lists each investment strategy's fee schedule.
Brokerage Fees and Commissions	→ The public market equity managers pay explicit commission costs and implicit opportunity costs inherent in bid-ask spread differentials (equity and fixed income strategies). → These costs are shared by all investors in a commingled trust or specific to DPFP in the investments that are structured as separately managed accounts. → Commission costs are tracked by Staff (from data provided by the custodian JP Morgan). → Total commissions paid are listed in DPFP's Annual Comprehensive Financial Report. → 2021's brokerage fees and commissions are detailed below in Exhibit #7.
Legal Review	→ Internal DPFP legal counsel reviews all legal contracts and fee arrangements for new investments.

[1] The 2021 NCPERS Public Retirement Systems Study includes responses from 156 state and local government pension funds with more than 17.7 million active and retired members and total assets of $2.6 trillion. Roughly 60% of the survey participants were Police/Fire pension plans.

Exhibit #6 – Investment Management Fees Paid in 2021

Asset Class	Total Investment Management Fee Paid ($000's)[1]	2021 Average Market Value ($000's)	Total Management Fee Paid as a Percent of Average Market Value (%)
Equity (Public and Private)	5,685	1,001,412	0.57
Fixed Income and Cash	1,345	553,374	0.24
Real Assets	3,902	453,119	0.86
Total	**10,932**	**2,007,905**	**0.54**

[1] All dollar are expressed in thousands, sourced from DPFP 2021 CAFR. According to the Annual Financial Report, investment management fees includes incentive, performance and/or disposition fees.

Exhibit #7 – Brokerage and Commissions Paid in 2021

Brokerage Firm	Number of Shares Traded (000's)[1]	Total Fees and Commissions (000's)	Fees and Commissions Per Share ($)
J.P. Morgan Securities Inc., NY	2,452	51	0.021
J.P. Morgan Securities Ltd.	279	30	0.106
Sanford C Bernstein Ltd.	580	27	0.047
Credit Suisse Securities (USA) LLC	576	22	0.038
Merill Lynch International	199	19	0.097
Citigroup Global Markets Ltd.	191	17	0.091
Goldman Sachs	1,160	17	0.015
Goldman Sachs International	750	17	0.022
Goldman Sachs New York	249	7	0.028
Jefferies International	983	14	0.014
Morgan Stanley	402	13	0.033
All other firms	15,139	287	0.019
Total	**22,711**	**514**	**0.023**

[1] All dollar are expressed in thousands, sourced from DPFP 2021 Annual Financial Report.

Subsection 802.109 – Subsection (5) (C) (continued)

Consultant Analysis

→ DPFP has done a good job of identifying public market's managers with competitive fees.

→ DPFP's process for reconciling and paying fees appears in-line with industry standards.

→ DPFP's tracking and monitoring of fees appears in-line with industry standards.

→ The private markets related fees are expensive but not surprising.

→ Private market fees will increase if/when new commitments begin.

→ The commissions paid appear reasonable and in-line with industry norms.

→ The transparency and disclosure of fees in the annual financial report are clear and unambiguous.

Recommendations

→ We still believe passive strategies could reduce overall investment related fees for DPFP.

→ We recommend that Staff, the Board, and the Consultant all remain diligent in monitoring fees.

→ We recommend continued efforts on seeking no fee or discounted fee arrangements on private market investments that enter extension periods.

Section 802.109 - Subsection (5) (D)

Section 802.109 - Subsection (5) (D)

Law	Requirement
Sec. 802.109, Subsection (5)(D)	*"a review of the retirement system's governance processes related to investment activities, including investment decision-making processes, delegation of investment authority, and board investment expertise and education"*

Criteria or Topic	DPFP Status
Website and Transparency	→ The website is easy to navigate and user friendly. → DPFP is as transparent, if not more, than most similar sized pension public plans. → The website includes (non-exhaustive list): • Board meeting calendar • Board meeting agendas • Board meeting materials • Board meeting minutes • Trustee biographies • Investment Advisory Committee ("IAC") biographies • Investment Advisory Committee meetings • DPFP Staff information • Actuarial valuation reports • Annual Comprehensive Financial Reports • Investment Policy Statement • Contractor's Statement of Ethics

Section 802.109 - Subsection (5) (D) (continued)

Criteria or Topic	DPFP Status
Website and Transparency (continued)	• DROP Policy • Uniformed Services Leave and Payback Policy • Governance and Board Conduct Policy • Trustee Election Procedures • Annual budgets • Plan documents • Description of 2017 plan design changes and ancillary documents • Frequently Asked Questions links • Recent events and news • Notification of trustee elections
Delegation of Investment Authority?	→ The Board of Trustees has investment authority. → Any action by the Board, except those where the Plan specifically requires approval by 2/3 (eight affirmative votes) of all the Trustees of the Board (e.g. benefit or contribution changes, new commitments to alternative investments), is required to be approved by a majority of all the Trustees of the Board, i.e. at least six Trustees must approve any Board action regardless of the number Trustees present. → DPFP Staff is authorized to rebalance the portfolio. → DPFP staff is responsible for submitting a rebalancing recommendation to the Consultant and must receive signoff from the Consultant before implementing. → All rebalancing recommendations and activity shall be reported to the Board and IAC.

Section 802.109 - Subsection (5) (D) (continued)

Criteria or Topic	DPFP Status
Investment Decision Making Process	→ Most investment decisions are based on the recommendation of DPFP Staff and/or Consultant upon the guidance of the Investment Advisory Committee. → The Investment Advisory Committee frequently debates the pros-and-cons of each investment decision in open public meetings. IAC meetings become open public meetings in 2021 to increase general access and transparency. → Investment Advisory Committee recommendations are delivered to the Board of Trustees for formal approval. → All investments are managed by external investment managers.
Investment Consultant	→ DPFP hired Meketa Investment Group in May 2018 after conducting a national RFP process. → Prior to the hire of Meketa, the most recent investment consultant search occurred in 2006. → Currently, there is requirement for the Board to conduct a competitive selection process for each Advisor to the board at least once every five years (on a rotational basis). However, the Board has the authority to postpone or waive the five-year requirement. → In January 2023, the Board approved a timeline for a consultant RFP given the relationship with Meketa was about to hit five years. → Meketa Investment Group receives a hard dollar fee (specified in advance) from DPFP and does not receive any additional fees (unless pre-approved by the Board of Trustees for projects beyond the scope of the investment advisory agreement). → Meketa's fee is included in the annual budget disclosure to the Trustees and reported in the Annual Comprehensive Financial Report. → Meketa Investment Group is an independent employee-owned organization with no affiliation to investment managers or brokerage firms.

Section 802.109 - Subsection (5) (D) (continued)

Criteria or Topic	DPFP Status
Board Composition	→ 11-member Board of Trustees. → Six are appointed by the Mayor, one police representative is elected by active members, one fire representative is elected by active members, three non-members are selected by a nominations committee representing various associations in the city and elected by active members and pensioners. → Term limits of 6 consecutive years apply to non-police and firefighter trustees. → Election notices (and the Trustee election procedures) are posted on the DPFP website. → A new Board of Trustees was appointed following House Bill 3158 in September 2017, with the exception of one police trustee and one fire trustee from the prior Board of Trustees. → Only two of the Trustees appointed in 2017 remain on the Board. Since September 2017, 22 different individuals have served as Trustees on the Board. There has been a delay in appointing and reappointing Mayoral Trustees. Statutorily imposed term limits may compound the turnover issue in the future.
Board Leadership and IAC Appointment	→ Board leadership appointments (Chairman, Vice Chairman and Deputy Chairman) are conducted in an open and transparent manner during board meetings upon the vote of fellow Trustees. → Investment Advisory Committee members are appointed by the board of Trustees. (Additional information to follow on role of the IAC).

Section 802.109 - Subsection (5) (D) (continued)

Criteria or Topic	DPFP Status
Board Investment Expertise	→ Numerous board members have significant investment expertise across asset classes. → Some board members sit on other pension trustee boards. → Board member specialties include: equities, fixed income, private equity, and hedge funds. → A few trustees have legal experience. → According to Article 6243a-1, Trustees must have demonstrated financial, accounting, business, investment, real estate or actuarial experience.
Board Education	→ The Board is expected to be educated on investment matters applicable to overseeing a pension fund such as DPFP. → DPFP Staff typically meets with new trustees and provides a primer on DPFP history and recent activity.
Governance and Conduct Policy	→ The Board is expected to abide by the Board of Trustees Governance and Conduct Policy. → The policy was last amended February 2018. → It summarizes the expected conduct and procedures Trustees are expected to follow in their role as Trustees to DPFP both during Board meetings and communication outside of meetings. → It states that Trustees should refrain from communicating directly with DPFP staff other than through the Executive Director, the Chief Investment Officer, the Chief Financial Officer, the General Counsel or another designee of the Executive Director. → It also provides guidance on communication with external parties and plan participants. → Trustees are entitled to information necessary to make informed decisions relating to their role and responsibilities as Trustees to DPFP.

Section 802.109 - Subsection (5) (D) (continued)

Criteria or Topic	DPFP Status
Contractor's Statement of Ethics	→ The Board of Trustees has a policy that provides guidance on the dealings between Trustees and all contractors who provide, or actively seek to provide, goods or services to DPFP. It was last updated December 2017. → Contractor must be honest in their dealings with DPFP, comply with applicable laws, and maintain proper ethical standards of behavior. → Trustees and Staff are prohibited from receiving any gifts or anything of substantial/material value where the clear purpose of such expense is to affect the determination of the selection of a new contractor or continuation, or additional business to an existing contractor. → It is expected that all contracts with Contractors will have the Statement of Ethics as an exhibit to said contract. → While Meketa has not independently verified all contracts DPFP has on file, we confirm that the contract with Meketa does include this Statement of Ethics as an exhibit.
Frequency of board meetings	→ Monthly meetings are required.

Section 802.109 - Subsection (5) (D) (continued)

Criteria or Topic	DPFP Status
Board meeting dynamics	→ Most Board meetings contain a mix of investment and non-investment related agenda items. → Most investment related decisions are accompanied by spirited debate between Trustees, Staff and Consultant. → There is very little (to no) "rubber stamping." → The agenda for each Board meeting is set by the Executive Director. → The Executive Director is required to consult with the Chairman on the agenda. → Any Trustee may file a written request with the Chairman asking that a particular item be placed on the agenda for a future meeting.
Role of the IAC	→ The IAC's role has grown in the past three years. → IAC members are highly qualified external investment professionals. → The IAC generally meets quarterly. → The IAC discusses and opines (non-exhaustive list) on all the following: portfolio positioning, asset allocation, the need for manager searches/replacements, evaluation of potential replacement manager strategies, evaluation of new investment strategies, rebalancing, macroeconomic risks/opportunities.
Frequency of IAC Meetings	→ Quarterly
Transparency of Board Activities	→ Board meeting agendas (with open session meeting materials) are posted to the DPFP website at least 72 hours prior to board meetings. → Materials include minutes from prior meetings. The minutes are sufficiently detailed.
House Bill 3158	→ Effective September 2017, resulted in numerous plan design changes.

Section 802.109 - Subsection (5) (D)

Consultant Analysis
→ Monthly meetings are common for public pension plans.
→ DPFP's website and transparency are better than most similar sized public pension plans.
→ The meeting minutes (posted to the website) are sufficiently detailed to get a good sense of the discussion and decisions conducted at a meeting.
→ They are also published in a reasonable amount of time following each meeting (typically within 30 days).
→ Not granting investment authority to staff is common for a public pension of this size with investment staff of three people.
→ DPFP's Staff is appropriately following the rebalancing protocol and does a great job of conveying all rebalance recommendations with appropriate supporting data and rationale.
→ DPFP's board members are more sophisticated and knowledgeable than most similar sized public pension plans.
→ The IAC members are more sophisticated and knowledgeable than most Board Trustees serving on similar sized public pension plans. Most similar sized public pension plans do not have a separate IAC with outside non-board members.
→ The Board composition appears sufficiently diversified in terms of subject matter expertise.
→ DPFP's meeting frequency is standard for public pension meetings. We have conducted surveys of large public pension plans and found that many are moving towards less frequent meetings but more in depth (lengthy) meetings.

Section 802.109 - Subsection (5) (D)

Recommendations

→ To the extent possible, we would like to see increased continuity of Trustees on the Board.

Section 802.109 - Subsection (5) (E)

Section 802.109 - Subsection (5) (E)

Law	Requirement
Sec. 802.109, Subsection (5)	*"A review of the retirement system's investment manager selection and monitoring process"*

Criteria or Topic	DPFP Status
Responsibility for selecting investment managers?	→ Board of Trustees, with the advice and recommendation of the Investment Advisory Committee, Staff, and investment consultant. → According to the IPS, "The Board...prudently hires, monitors, and terminates key investment service providers including: Consultant(s), Investment Managers and Custodian" (IPS Section 5, A. Board of Trustees, subsection 3). → "The IAC will advise regarding the search and selection process for investment managers" (IPS Section 5, B. Investment Advisory Committee (IAC), subsection 2.b).

Section 802.109 - Subsection (5) (E) (continued)

Criteria or Topic	DPFP Status			
Last Five Manager Hires	**Date[1]**	**Strategy**	**Funding Amount ($ M)**	**Asset Class**
	10/2022	MetLife EMD	57	Fixed income- EMD
	05/2022	Global Alpha International SC	55	Global Equity
	10/2021	Eastern Shore US Small Cap	59	Global Equity
	04/2021	NT ACWI IMI Index	178	Global Equity
	01/2021	Loomis US High Yield	74	Fixed Income – High Yield
Evaluation process	→ Investment manager search and selection criteria is detailed in Section 7 of the IPS. → According to the IPS, "Staff and Consultant shall define and document the search process, including evaluation criteria, prior to initiating the search process." → The Consultant "Assists in the selection process and monitoring of Investment Managers" (IPS Section 5, E. Consultant(s), subsection 7).			

[1] Dates in the table above are inception/ funding dates. Each strategy was funded intra-month so performance start dates are the first of the next month.

Section 802.109 - Subsection (5) (E) (continued)

Criteria or Topic	DPFP Status
Evaluation Process (Continued)	→ In addition, the Consultant "documents and delivers to Staff written recommendations on Investment Manager new hire, hold and termination reviews" (IPS Section 5, E. Consultant(s), subsection 8). → Meketa has a process where it continuously monitors and reviews investment managers in the industry. From this work, Meketa creates a "bullpen" of high conviction products that have been thoroughly vetted through Meketa's multi-phase process. → According to the IPS, each hiring recommendation will include information on Investment Manager's organization, key people, investment process, philosophy, past performance, future expectations, risks, proper time horizon for evaluation, comparative measures such as benchmarks and peer groups, role within the relevant asset class and expected costs. → Generally, investment searches over the past three years have followed a similar process, outlined below.
Manager Search Process	→ When it is determined a search is required, DPFP staff has started with search criteria (e.g., AUM requirements, track record length, scope, etc.). → Staff next uses industry databases (e.g., eVestment) to determine how many eligible strategies fit the criteria (typically 100s). → Staff then generally begins cursory review of all eligible strategies to arrive at a smaller focus list (typically 20-30). → Meketa generally provides a list of "high conviction" or "bullpen" managers (typically up to 10) that it believes fit the search criteria and would be appropriate for the search. → Next, DPFP generally cross references the Staff list with the Meketa list. → Once a combined focus list is determined, generally Staff, the Meketa client team, and Meketa manager research team will conduct a lengthy virtual meeting to provide verbal comments/thoughts on the combined list → Typically, at this point DPFP Staff will eliminate many strategies and identify some for further due diligence → In most searches, DPFP Staff arrives at 6-8 strategies that proceed to the RFP stage → Staff provides Meketa with a copy of the RFP for review and suggestions, then Staff sends out to the identified firms/strategies → Usually at this stage Meketa will prepare a one-page summary on each RFP firm (including key information on firm, team, philosophy, process, performance, and fees)

Section 802.109 - Subsection (5) (E) (continued)

Criteria or Topic	DPFP Status
Manager Search Process (continued)	→ Staff is responsible for reviewing and grading the manager RFPs → Staff has typically advanced roughly half of the RFP list to a virtual due diligence phase → Typically, Staff (with consultation with Meketa) will agree on 2-3 strategies to progress to the final stage – in person interview with the IAC → Staff documents its summary of each RFP strategy in a memo, outlining the reason a firm advanced or did not advance to the final stage → Prior to the final round in-person interview, Meketa will generally provide a more in-depth analysis of each finalist strategy (5-8 pages per strategy) → Staff conducts its own independent analysis comparing the finalist firms → Finalist firms typically interview in person with the Investment Advisory Committee → Typically, the IAC will select its preferred strategy after the interview phase and recommend it for Board level ratification.
Benchmarking	→ Policy benchmarks for each asset class and the total DPFP are included in the IPS. → The Consultant identified recommended benchmarks, per asset class, which were presented and discussed with DPFP Staff in 4Q18 → The Consultant recommended a change to the private equity benchmark in 2022. → Periodically, Staff or Meketa will evaluate the need for any manager strategy level benchmark change. → Individual manager benchmarks are determined based on each investment strategy's mandate and will generally, but not always, match the recommended benchmark identified by the investment manager → In 2019 Meketa surveyed all the global equity benchmarks regarding the most appropriate benchmark per strategy. Meketa presented its findings to the board along with additional analysis evaluating historical; regional and market cap exposure. → At the December 2020 IAC meeting the committee recommended that DPFP Staff review each investment managers benchmark and ensure each is being evaluated against the benchmark identified in each respective Investment Management Agreement → Staff presented its findings to the IAC in March. The summary of findings is listed below:

Section 802.109 - Subsection (5) (E) (continued)

Criteria or Topic	DPFP Status
Benchmarking (continued)	

Investment Manager	IMA Benchmark Index	Comment
Income Research	Bloomberg Barclays 1-3 YR US TSY	Recommending change to BB 1-3 YR aggregate for IRM and short-term bond asset class.
Longfellow	Bloomberg Barclays Aggregate	Need to update IMA to clarify U.S. Aggregate
Pacific Asset Mgt.	Credit Suisse Leveraged Loan	
Loomis	Bloomberg Barclays US Corporate High Yield 2% Issuer Capped	
Ashmore	50% JPM EMBI GD, 25% JPM ELMI+, 25% JPM GBI EM GD	
Boston Partners	MSCI World (gross)	Need to update IMA to net (of dividend tax) vs. gross
Manulife	MSCI ACWI (net)	
Invesco	MSCI World (net)	Need to change IMA to ACWI (net) from World.
Walter Scott	MSCI ACWI (net)	
RBC	MSCI EM (net)	Need to change JPM and Meketa reporting to reflect standard index vs. IMI

Section 802.109 - Subsection (5) (E) (continued)

Criteria or Topic	DPFP Status
Performance measurement	→ DPFP's total fund performance and individual manager performance is monitored by Staff, Consultant, IAC and the Board of Trustees. → The Consultant produces a quarterly performance report that is shared with Staff, Board of Trustees, and IAC. → Among other things, the report includes: • Net of fees performance • Executive Summary with a one page green/red flash summary for the trailing one-year • Quarterly cash flow summary • Total fund performance relative to peer pension plans (InvestorForce Public Pension net performance for plans between $1B- $5B) as well as multiple fund level benchmarks (Policy Index, Allocation Index, Total Fund Ex- Private Markets, and a 60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index) • Total exposure vs. target weights • Asset allocation history over trailing five years • Trailing time weighted returns for investment managers, and asset classes, over recent trailing time periods (QTD, FYTD, 1 YR, 3 YR, 5 YR, 10 YR and Since Inception) relative to benchmarks and peer groups • Attribution effects for the quarter vs. policy benchmarks • Risk statistics over trailing five-year period including annualized standard deviation, information ratio, share ratio, beta and tracking error

Section 802.109 - Subsection (5) (E) (continued)

Criteria or Topic	DPFP Status
Performance monitoring	→ DPFP Staff and investment consultant are primarily responsible for monitoring the performance of the investment managers and reporting to the Board of Trustees and IAC. → Over the course of calendar year 2022, DPFP staff presented an overview and deep dive into each asset class (and investment managers) at many of the Board of Trustees meetings. → The Consultant conducts periodic meetings, conference calls and constant oversight of the investment managers → Staff seeks to hold quarterly review calls with each investment manager.
Investment Manager Termination/Replacement	→ DPFP staff and investment consultant discuss individual strategies in more depth, as warranted. → Discussions are also held with the IAC. → In the past three years there have been two terminations (Ashmore and Brandywine) → In such situations, DPFP Staff clearly memorialized (in Board/IAC materials) the rationale (and due diligence) that led to those decisions.

Section 802.109 - Subsection (5) (E)

Consultant Analysis

- → The evaluation process for new investment manager hires is comprehensive, thorough, transparent and conducted in an inclusive manner.
- → DPFP Staff is very knowledgeable and informed on the investment activities of its individual investments and investment managers.
- → Performance monitoring and benchmarking is in-line with industry best practices.
- → Evaluation (and thoughtful discussion) by DPFP Staff on performance drivers and considerations for need for any portfolio adjustments is measured, well thought out, and more complete than typical for similar sized pension plans.

Recommendations

- → We recommend Staff continue to prepare deep dive reviews into each asset class with the goal of covering the entire portfolio in each calendar year.
- → We recommend staff continues to document the rationale for all hiring and firing decisions.
- → We recommend Staff and Consultant conduct a formal benchmark review for each public investment manager on set frequency (perhaps once every three years).

Conclusions

Subsection	Overall Status	Adhering to established policies?
A. Investment Policy Statement analysis	Meets Industry Best Practices	Yes
B. Asset allocation (and liability) process review and execution	Meets Industry Best Practices	Yes
C. Fees review and procedures	Meets Industry Best Practices	Yes
D. Governance processes	Meets Industry Best Practices	Yes
E. Investment manager selection and monitoring	Meets Industry Best Practices	Yes

Summary of Recommendations

Subsection (5) (A)

→ The "Core Beliefs and Long-Term Acknowledgments" is thoughtful and should be reviewed any time significant investment changes are considered. It offers good guidance without being overly prescriptive or prohibitive.

→ DPFP Staff, the Board, and the Consultant should continue to review the IPS annually.

Subsection (5) (B)

→ We recommend the Board consider increasing passive exposure in efficient asset classes where the likelihood of risk-adjusted outperformance, net of fees, is lowest. Based on our experience, DPFP has below average passive exposure.

→ We recommend DPFP Staff continue its process of working with the Board of Trustees and external advisors to prudently exit illiquid investments to the extent possible.

→ We recommend the Board remains patient with asset allocation as the portfolio is transitioned and doesn't feel obligated to conduct comprehensive asset allocation overhaul every year. (Surveys have shown many large state plans are moving towards once every three - five years).

→ We recommend the Board and Staff closely monitor contribution levels and maintain constructive and open dialogue with the City. We commend the Board for acting in accordance with the Funding Policy and authorizing the Executive Director to send the required notice to the City requesting an increase in contribution rates.

→ If (based on the actuary's advice) it becomes likely that DPFP is not on track to meet targets by 2024, we encourage the Board to act as soon as reasonably possible to discuss and implement additional plan design changes to avoid delaying and compounding any known shortfalls.

Summary of Recommendations (continued)

Subsection (5) (C)

→ We still believe passive strategies could reduce overall investment related fees for DPFP.

→ We recommend that Staff, the Board, and the Consultant all remain diligent in monitoring fees.

→ We recommend continued efforts on seeking no fee or discounted fee arrangements on private market investments that enter extension periods.

Subsection (5) (D)

→ To the extent possible, we would like to see increased continuity of Trustees on the Board.

Subsection (5) (E)

→ We recommend staff continues to prepare deep dive reviews into each asset class with the goal of covering the entire portfolio in each calendar year.

→ We recommend staff continues to document the rationale for all hiring and firing decisions.

→ We recommend Staff and Consultant conduct a formal benchmark review for each public investment manager on set frequency (perhaps once every three years).

Sources Reviewed in Creation of the Report

Files	Files
Investment Policy Statement	Texas PRB Guidance for Inv. Practices and Perf. Evaluations
Annual Financial Report	Conversations with Staff
Board Meeting minutes	Segal Actuarial Valuation Report
IAC Meeting Minutes	DROP policy
DPFP website	Board of Trustees Governance and Conduct Policy
Meketa performance reports	Trustee Election Procedures
Meketa attendance at Board meetings	Contractors Statement of Ethics
Meketa attendance at IAC meetings	Funding Policy
Statute Article 6243a-1	
HB 3158 Pension Changes presentation	

DALLAS POLICE & FIRE PENSION SYSTEM

04/13/2023

Meketa Recommendation	DPFP Response
Subsection (5) (A)	
The "Core Beliefs and Long-Term Acknowledgments" is thoughtful and should be reviewed any time significant investment changes are considered. It offers good guidance without being overly prescriptive or prohibitive.	Agree
DPFP Staff, the Board, and the Consultant should continue to review the IPS annually.	Agree
Subsection (5) (B)	
We recommend the Board consider increasing passive exposure in efficient asset classes where the likelihood of risk-adjusted outperformance, net of fees, is lowest. Based on our experience, DPFP has below average passive exposure.	Agree that the Board should consider opportunities, when appropriate, to add passive exposure.
We recommend DPFP Staff continue its process of working with the Board of Trustees and external advisors to prudently exit illiquid investments to the extent possible.	Agree
We recommend the Board remains patient with asset allocation as the portfolio is transitioned and doesn't feel obligated to conduct comprehensive asset allocation overhaul every year. (Surveys have shown many large state plans are moving towards once every three - five years).	Believe the IPS requirement of yearly review of the asset allocation is appropriate.
We recommend the Board and Staff closely monitor contribution levels and maintain constructive and open dialogue with the City. We commend the Board for acting in accordance with the Funding Policy and authorizing the Executive Director to send the required notice to the City requesting an increase in contribution rates.	Agree
If (based on the actuary's advice) it becomes likely that DPFP is not on track to meet targets by 2024, we encourage the Board to act as soon as reasonably possible to discuss and implement additional plan design changes to avoid delaying and compounding any known shortfalls.	Agree
Subsection (5) (C)	
We still believe passive strategies could reduce overall investment related fees for DPFP.	Agree
We recommend that Staff, the Board, and the Consultant all remain diligent in monitoring fees.	Agree

We recommend continued efforts on seeking no fee or discounted fee arrangements on private market investments that enter extension periods.	Agree
Subsection (5) (D)	
To the extent possible, we would like to see increased continuity of Trustees on the Board.	This is a determination to be made by the Texas Legislature.
Subsection (5) (E)	
We recommend staff continues to prepare deep dive reviews into each asset class with the goal of covering the entire portfolio in each calendar year.	Agree
We recommend staff continues to document the rationale for all hiring and firing decisions.	Agree
We recommend Staff and Consultant conduct a formal benchmark review for each public investment manager on set frequency (perhaps once every three years).	Agree