AGENDA

Date: April 5, 2023

The regular meeting of the Dallas Police and Fire Pension System Board of Trustees will be held at **8:30 a.m. on Thursday, April 13, 2023, 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** **https://us02web.zoom.us/j/81738602673?pwd=K3FtWVRMVi8wdkRwZFVsWHJDcExudz09** **Passcode: 338072** Items of the following agenda will be presented to the Board:

A. MOMENT OF SILENCE

B. CONSENT AGENDA

1. Approval of Minutes

Regular meeting of March 9, 2023

2. Approval of Refunds of Contributions for the Month of March 2023

3. **Approval of Activity in the Deferred Retirement Option Plan (DROP) for April 2023**

4. **Approval of Estate Settlements**

5. **Approval of Survivor Benefits**

6. **Approval of Service Retirements**

7. **Approval of Payment of Military Leave Contributions**

C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. **Real Estate: AEW Presentation**

   Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

2. **Monthly Contribution Report**

3. **Board approval of Trustee education and travel**

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

4. **Board Members' reports on meetings, seminars and/or conferences attended**

5. **Portfolio Update**

6. **Report on the Investment Advisory Committee Meeting**

7. **Investment Practices and Performance Report**

8. **Private Asset Cash Flow Projection Update**

   Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

9. **Staff 457 Plan**

10. **Legislative Update**

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.**

D. BRIEFING ITEMS

1. Public Comment

2. Executive Director's report

a. Associations' newsletters

- NCPERS Monitor (April 2023)
- NCPERS PERSist (Spring 2023)

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, disapproval, 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, and Section 551.078 for review of medical records.

DALLAS POLICE & FIRE PENSION SYSTEM

MOMENT OF SILENCE

In memory of our Members and Pensioners who recently passed away

NAME	ACTIVE/ RETIRED	DEPARTMENT	DATE OF DEATH
Allen J. Richards	Retired	Fire	Mar. 2, 2023
Clinton L. Metcalf	Retired	Police	Mar. 11, 2023
Johnnie M. Wilson	Retired	Police	Mar. 15, 2023
William W. Simpson	Retired	Police	Mar. 18, 2023
Robert E. Melton	Retired	Fire	Mar. 20, 2023
John H. Cheung	Retired	Police	Mar. 30, 2023
John N. Feinglas	Retired	Police	Mar. 31, 2023
Richard F. Moore	Retired	Police	Apr. 2, 2023
Craig G. Anderson	Retired	Fire	Apr. 3, 2023
Gerald R. Sellers	Retired	Fire	Apr. 5, 2023

Regular Board Meeting –Thursday, April 13, 2023

Dallas Police and Fire Pension System
Thursday, March 9, 2023
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 8:31 a.m.	Nicholas A. Merrick, William F. Quinn, Armando Garza (by telephone), Michael Brown, Kenneth Haben, Steve Idoux (by telephone), Mark Malveaux (by telephone), Tina Hernandez Patterson, Anthony Scavuzzo (by telephone), Marcus Smith
Absent:	Nancy Rocha
Staff	Kelly Gottschalk, Josh Mond, Ryan Wagner, Michael Yan, Akshay Patel, John Holt, Nien Nguyen, Milissa Romero
Others	Steve Kosoris (by telephone), Travis Bagley (by telephone), Marc Larson (by telephone), Leandro Festino, Colin Kowalski, Bohdy Hedgcock, Kevin McCabe, Tom Tull, Kristi Walters, Jim McDade, Sheri Kowalski, Tennell Atkins

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The Regular meeting was called to order at 8:31 a.m.

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A. MOMENT OF SILENCE

The Board observed a moment of silence in memory of retired police officers James F. Decker, Kirk T. Thomas, Charles R. Galyon, Joel D. Curtis, and retired firefighters Benny B. Howard, Mark L. Dawson, Joe A. Hogan, Jack H. Hickey, Kalon T. Cohen, William E. McCarter.

No motion was made.

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Regular Board Meeting
Thursday, March 9, 2023

B. CONSENT AGENDA

1. Approval of Minutes

Regular meeting of February 9, 2023

2. Approval of Refunds of Contributions for the Month of February 2023

3. Approval of Estate Settlements

4. Approval of Survivor Benefits

5. Approval of Service Retirements

6. Approval of Alternate Payee Benefits

After discussion, Mr. Quinn made a motion to approve the minutes of the Regular meeting of February 9, 2023. Mr. Brown seconded the motion, which was unanimously approved by the Board.

After discussion, Mr. Haben made a motion to approve the remaining items on the Consent Agenda, subject to the final approval of the staff. Mr. Brown 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. Trustee Terms and Draft Election Schedule

As required by the Trustee Election Procedures, staff presented the draft election schedule and notified the Board that the terms of the following Trustees expire on August 31, 2023:

Nicholas A. Merrick, Mayoral Appointee
William Quinn, Mayoral Appointee
Armando Garza, Fire Fighter Trustee
Kenneth Haben, Police Officer Trustee

Regular Board Meeting
Thursday, March 9, 2023

1. Trustee Terms and Draft Election Schedule (continued)

After discussion, Mr. Brown made a motion to adopt the draft 2023 Police Officer and Fire Fighter Trustee Election schedule. Mr. Smith seconded the motion, which was unanimously approved by the Board.

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2. Monthly Contribution Report

The Executive Director reviewed the Monthly Contribution Report.

No motion was made.

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3. 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 investment-related travel scheduled.

No motion was made.

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4. Employee Retirement Plan Transition and 457 Plan Update

The Executive Director provided an update on the transition to TMRS, the closure of the 401(a) plan, and an update on the employee voluntary 457 plan.

No motion was made.

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5. 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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Regular Board Meeting
Thursday, March 9, 2023

6. Invesco Global Equity Allocation

Staff and Meketa discussed concerns with the Invesco Global Equity portfolio.

Steve Kosoris, Travis Bagley, and Marc Larson (by telephone) with Russell Investments provided an overview of the transition management strategy.

After discussion, Mr. Smith made a motion to approve the staff's recommendation to terminate Invesco and use Russell Investments as a transition manager until a new active manager is selected. Mr. Quinn seconded the motion, which was unanimously approved by the Board.

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7. Fourth Quarter 2022 Investment Performance Analysis and Third Quarter 2022 Private Markets & Real Assets Review

Leandro Festino, Managing Principal; Colin Kowalski, Investment Analyst of the Meketa Investment Group and the Investment staff presented the fourth quarter 2022 Investment Performance Analysis and third quarter 2022 Private Markets & Real Assets reports.

No motion was made.

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8. Real Estate: Clarion Presentation

The Board went into closed executive session at 10:39 a.m.

The meeting reopened at 11:20 a.m.

Bohdy Hedgcock and Kevin McCabe of Clarion updated the Board on the status and plans for DPFP's investment in CCH Lamar.

No motion was made.

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Regular Board Meeting
Thursday, March 9, 2023

9. **Legislative Update**

Staff briefed the Board on pension bills that have been filed which may bear on DPFP, including the bill DPFP was sponsoring to increase the benefit for line of duty death. Staff indicated that there would be an increased actuarial cost to amend the bill to provide for increasing previously granted benefits to surviving spouses and children.

Dallas City Council Member Atkins, who serves as the Chair of the City's Legislative Committee, participated in the discussion on HB 4034, the Line of Duty Survivor bill, and did not express opposition to the bill even given the increased actuarial cost. After discussion, Mr. Quinn made a motion to amend the pending legislation to provide the same benefits for all surviving spouses and children of members who have previously died in the line of duty as those provided for in the currently filed bill for surviving spouses and children of members who may in the future die in the line of duty. Ms. Hernandez Patterson seconded the motion, which was unanimously approved by the Board.

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10. **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 at 10:39 a.m.

The meeting reopened at 11:20 a.m.

The Board and staff discussed legal issues.

No motion was made.

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Regular Board Meeting
Thursday, March 9, 2023

11. Closed Session – Board serving as Medical Committee

a. Application for death benefits for disabled child 2023-1c
b. Application for death benefits for disabled child 2023-2c

The Board went into closed executive session at 10:39 a.m.

The meeting reopened at 11:20 a.m.

The Executive Director reviewed two applications of death benefits for disabled child and materials with the Board.

a. After discussion, Mr. Haben made a motion to grant survivor benefits to applicant 2023-1c under the provisions of Article 6243a-1, Section 6.06(o-2). Mr. Quinn seconded the motion, which was unanimously approved by the Board.

b. After discussion, Mr. Haben made a motion to grant survivor benefits to applicant 2023-2c under the provisions of Article 6243a-1, Section 6.06(o-2). Mr. Smith seconded the motion, which was unanimously approved by the Board.

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12. Hardship Request

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.

The Board went into closed executive session at 10:39 a.m.

The meeting reopened at 11:20 a.m.

The Executive Director reviewed the hardship request with the Board.

After discussion, Mr. Haben made a motion to support the Executive Director's recommendation and deny a portion of the hardship request. Mr. Smith seconded the motion, which was approved by the following vote:
For: Mr. Merrick, Mr. Garza, Mr. Brown, Mr. Haben, Ms. Hernandez Patterson, Mr. Idoux, Mr. Malveaux, Mr. Scavuzzo, Mr. Smith
Opposed: Mr. Quinn

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Regular Board Meeting
Thursday, March 9, 2023

D. BRIEFING ITEMS

1. Public Comments

Prior to commencing items for Board discussion and deliberation, the Board received public comments during the open forum.

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2. Executive Director's report

a. Associations' newsletters
- NCPERS Monitor (March 2023)
- TEXPERS Pension Observer (Vol. 1 2023)
  TEXPERS Pension Observer Vol 1, 2023 (anyflip.com)

b. Open Records
c. Fiduciary Insurance Update
d. Employee Service Award

The Executive Director's report was presented.

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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Quinn and a second by Mr. Smith, the meeting was adjourned at 11:21 a.m.

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Nicholas A. Merrick
Chairman

ATTEST:

____
Kelly Gottschalk
Secretary

DISCUSSION SHEET

ITEM #C1

Topic: **Real Estate: AEW Presentation**

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

Attendees: Ron Pastore - Senior Portfolio Manager, AEW Capital Management

Discussion: Representatives of AEW Capital Management ("AEW") will update the Board on the status and plans for DPFP's investments in RED Consolidated Holdings ("RCH") and Camel Square, an office development in Phoenix. AEW took over management of these investments in February of 2015. AEW last presented to the Board in April 2022.

Executive Summary

- AEW took over the management of 3 assets from CDK in 2015. Red Consolidated Holdings (RCH) and Camel Square remain.
- **RCH:**
  - 50/50 real estate operating company based in Phoenix, AZ. Holdings consist of operating retail and mixed-use properties with a concentration in Southwest.
  - Complex operating company with numerous underlying operating properties and partnerships with different partners, developmental properties and land holdings.
  - $44.2M of distributions received in 2022-23, driven by land sales.
- **Camel Square:**
  - 15.5-acre site located in Phoenix, AZ which was wholly owned by DPFP outside of RCH. Rezoning approved in late 2019. DPFP Board approved redevelopment & investment in 2021.
  - Office, hotel, multifamily, Suns practice facility, self storage tracts and Banner Health office sales have closed, leading to ~$60M in distributions to DPFP since 2019.
  - One small development parcel remains.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

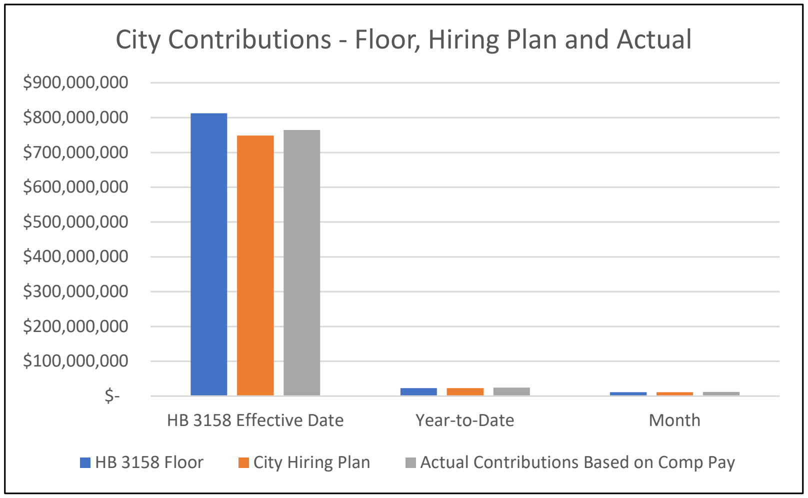
ITEM #C2

Topic: **Monthly Contribution Report**

Discussion: Staff will review the Monthly Contribution Report.

Regular Board Meeting – Thursday, April 13, 2023

Contribution Tracking Summary - April 2023 (February 2023 Data)

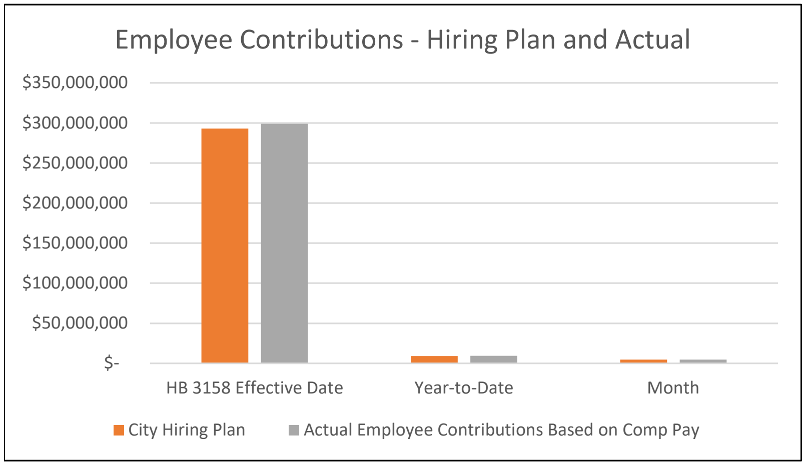


Actual Comp Pay was 102% of the Hiring Plan estimate since the effective date of HB 3158.

The Floor decreased for 2023 to equal the Hiring Plan, this was a decreased by 3.82% in 2023 for the Floor. The Hiring Plan increased by 3.79% in 2023. 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.

With the new year the City's Hiring Plan added 50 Police Officers to the estimates which now increases the shortfall of employees. The combined actual employees was 118 less than the Hiring Plan for the pay period ending February 28, 2023. Fire was over the estimate by 82 Fire Fighters and Police under by 200 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

City Contributions

Feb-23	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	2	$ 11,624,000	$ 11,623,846	$ 12,193,757	$ -	105%	105%
Year-to-Date		$ 23,248,000	$ 23,247,692	$ 24,402,330	$ -	105%	105%
HB 3158 Effective Date		$ 812,469,000	$ 748,358,077	$ 764,706,221	$ 48,990,866	94%	102%

Due to the Floor through 2024, there is no cumulative shortfall in City Contributions
Does not include the flat $13 million annual City Contribution payable through 2024.
Does not include Supplemental Plan Contributions.

Employee Contributions

Feb-23	Number of Pay Periods Beginning in the Month	City Hiring Plan	Actual Employee Contributions Based on Comp Pay	Actual Contribution Shortfall Compared to Hiring Plan	Actuarial Valuation Contribution Assumption	Actual Contributions as a % of Hiring Plan Contributions	Actual Contributions as a % of Actuarial Val Assumption
Month	2	$ 4,548,462	$ 4,771,299	$ 222,837	$ 4,236,924	105%	113%
Year-to-Date		$ 9,096,923	$ 9,555,282	$ 458,358	$ 8,473,848	105%	113%
HB 3158 Effective Date		$ 292,835,769	$ 299,045,494	$ 6,209,724	$ 285,213,514	102%	105%

Potential Earnings Loss from the Shortfall based on Assumed Rate of Return $ (54,843)

Does not include Supplemental Plan Contributions.

Reference Information

City Contributions: HB 3158 Bi-weekly Floor and the City Hiring Plan Converted to Bi-weekly Contributions						
	HB 3158 Bi-weekly Floor	**City Hiring Plan-Bi-weekly**	**HB 3158 Floor Compared to the 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	$ 236,846	95%		
2018	$ 5,344,000	$ 4,830,000	$ 514,000	90%	3.31%	-2.15%
2019	$ 5,571,000	$ 5,082,115	$ 488,885	91%	4.25%	5.22%
2020	$ 5,724,000	$ 5,254,615	$ 469,385	92%	2.75%	3.39%
2021	$ 5,882,000	$ 5,413,846	$ 468,154	92%	2.76%	3.03%
2022	$ 6,043,000	$ 5,599,615	$ 443,385	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	$ (231)	100%	3.65%	3.65%
The HB 3158 Bi-weekly Floor ends after 2024						

Employee Contributions: City Hiring Plan and Actuarial Val. Converted to Bi-weekly Contributions				
		City Hiring Plan Converted to Bi-weekly Employee Contributions	**Actuarial Valuation Assumption Converted to Bi-weekly Employee contributions**	**Actuarial Valuation as a % of Hiring Plan**
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			5,163		
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 - 2023	Annual Divided by 26 Pay Periods	Actual	Difference	2022 Cumulative Difference	Number of Employees - EOM	Difference
January	$ 33,692,308	$ 35,387,168	$ 1,694,860	$ 1,694,860	4922	(241)
February	$ 33,692,308	$ 35,344,223	$ 1,651,915	$ 3,346,776	5045	(118)
March	$ 50,538,462					
April	$ 33,692,308					
May	$ 33,692,308					
June	$ 33,692,308					
July	$ 33,692,308					
August	$ 50,538,462					
September	$ 33,692,308					
October	$ 33,692,308					
November	$ 33,692,308					
December	$ 33,692,308					

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C3

Topic: **Board approval of Trustee education and travel**

a. Future Education and Business-related Travel
b. 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 & Webinars
Regular Board Meeting – April 13, 2023

ATTENDING **APPROVED**

1. **Conference:** **NCPERS Accredited Fiduciary (NAF) Program**
   Dates: May 20-21, 2023
   Location: New Orleans, LA
   Est Cost: $1,923 **Attending NAF only*

2. **Conference:** **NCPERS Trustee Educational Seminar (TEDS)**
   Dates: May 20-21, 2023
   Location: New Orleans, LA
   Est Cost: $1,553 **Attending TEDS only*

3. **Conference:** **NCPERS Annual Conference & Exhibition (ACE)**
   Dates: May 20-21, 2023
   Location: New Orleans, LA
   Est Cost: $2,690

4. **Conference:** **TEXPERS Summer Forum**
   Dates: August 13-15, 2023
   Location: The Woodlands, TX
   Est Cost: TBD

Future Education and Business Related Travel & Webinars
Regular Board Meeting – March 9, 2023

ATTENDING APPROVED

5. **Conference:** **TEXPERS Advance Trustee Training**
   Dates: August 13, 2023
   Location: The Woodlands, TX
   Est Cost: TBD

6. **Conference:** **TEXPERS Summer Education Forum**
   Dates: August 14-15, 2023
   Location: The Woodlands, TX
   Est Cost: TBD

7. **Conference:** **NCPERS Public Pension Funding Forum**
   Dates: August 20-23, 2023
   Location: Chicago, IL
   Est Cost: TBD

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C4

Topic:	**Board Members' reports on meetings, seminars and/or conferences attended**		
Discussion:	**Conference:**	**TEXPERS Annual Conference**	**KH, THP**
	Dates:	April 2-5, 2023	
	Location:	Austin, TX	

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C5

Topic: **Portfolio Update**

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

Regular Board Meeting – Thursday, April 13, 2023

DALLAS POLICE & FIRE PENSION SYSTEM

Portfolio Update

April 13, 2023

Board Meeting

Executive Summary

- Liquidation of private market assets remains the top focus.
  - $34M in distributions received YTD, with vast majority coming from AEW Camel Square and JPM Maritime fund.
- At the March 2022 Board meeting, staff notified the Board that the Safety Reserve would be drawn down to fund net benefit outflows.
- Consultant Search: RFP issued on February 15th; all 9 RFP responses received in mid-March. Staff is in the process of evaluating responses and interviewing firms.
- Global Growth Equity: The securities in the Invesco account were transferred to a transition account managed by Russell Investments on 3/15. The IAC approved a Global Growth search process at the March 2023 IAC meeting.
- **Rebalancing actions:**
  - In mid-March, $15M was redeployed into the NT Passive ACWI IMI fund and $15M was held back in Cash within the Safety Reserve.
  - An additional $60M in proceeds have been received. Staff expects to redeploy half into Public Equity (likely Small Cap and NT Passive) and hold half back within the Safety Reserve.
- Estimated Year-to-Date Return (as of 3/31/23): 4.0% for DPFP portfolio; 5.8% for Public Markets (ex-Cash) which accounts for 66% of the assets.

Investment Initiatives – 2023 Quarterly Plan

Q2 2023

- Consultant RFP Review & Interviews
- Update Public Equity Structure – review passive allocation and manager weights
- Global Growth Equity Screening

Q3 2023

- Finalize Consultant decision
- Approve updated Public Equity Structure
- Issue Global Growth Equity RFPs

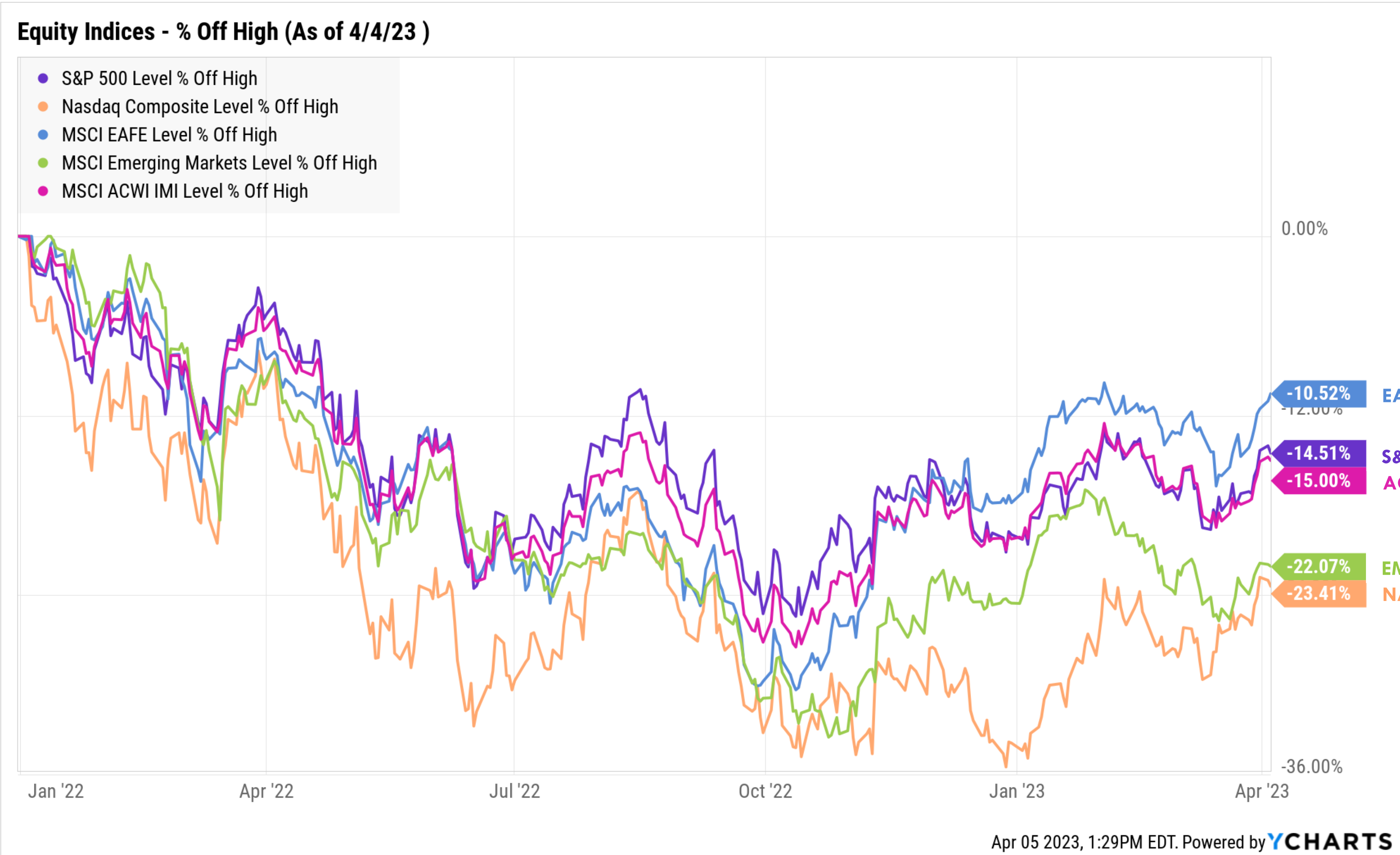
Q4 2023 & Beyond

- Global Growth Selection & Funding
- Private Market Planning – Update IPS provision, pacing studies, etc.

DPFP: SVB & US Regional Bank Exposure

- After the collapse of Silicon Valley Bank (SVB), staff reached out to all our investment managers to understand any SVB, Signature Bank and other regional bank exposure.
- Riverstone (Private Debt) had deposits under $1M at SVB. They have directed all capital activity away from these accounts.
- Industry Ventures (Private Equity) utilized First Republic Bank as their primary bank but has set up redundant accounts at BofA. Several of their portfolio companies have banking relationships with SVB.
- In mid-March, DPFP had $5.6M exposed to US regional banks across public markets, which accounted for 0.37% of the public market allocation.
- US Regional bank exposure is mostly concentrated in DPFP's US Small Cap Manager (Eastern Shore). Other managers with exposure to US regional banks include Boston Partners, IR+M, and Longfellow.
- Staff is closely monitoring banking exposure in the portfolio.
- The DPFP operating account is with Texas Capital Bank. This constitutes primarily administrative payables as well as monthly pension payments which are deposited two days before being paid out. Staff has been in touch with TCB and examined their financial statements. Staff does not believe there is a material risk of failure for TCB but is nevertheless looking to mitigate the risk of loss as well as look at possible back up avenues to disburse pension payments in the unlikely event of a failure.

Equity Market Drawdown (1/1/22 to 4/4/23)

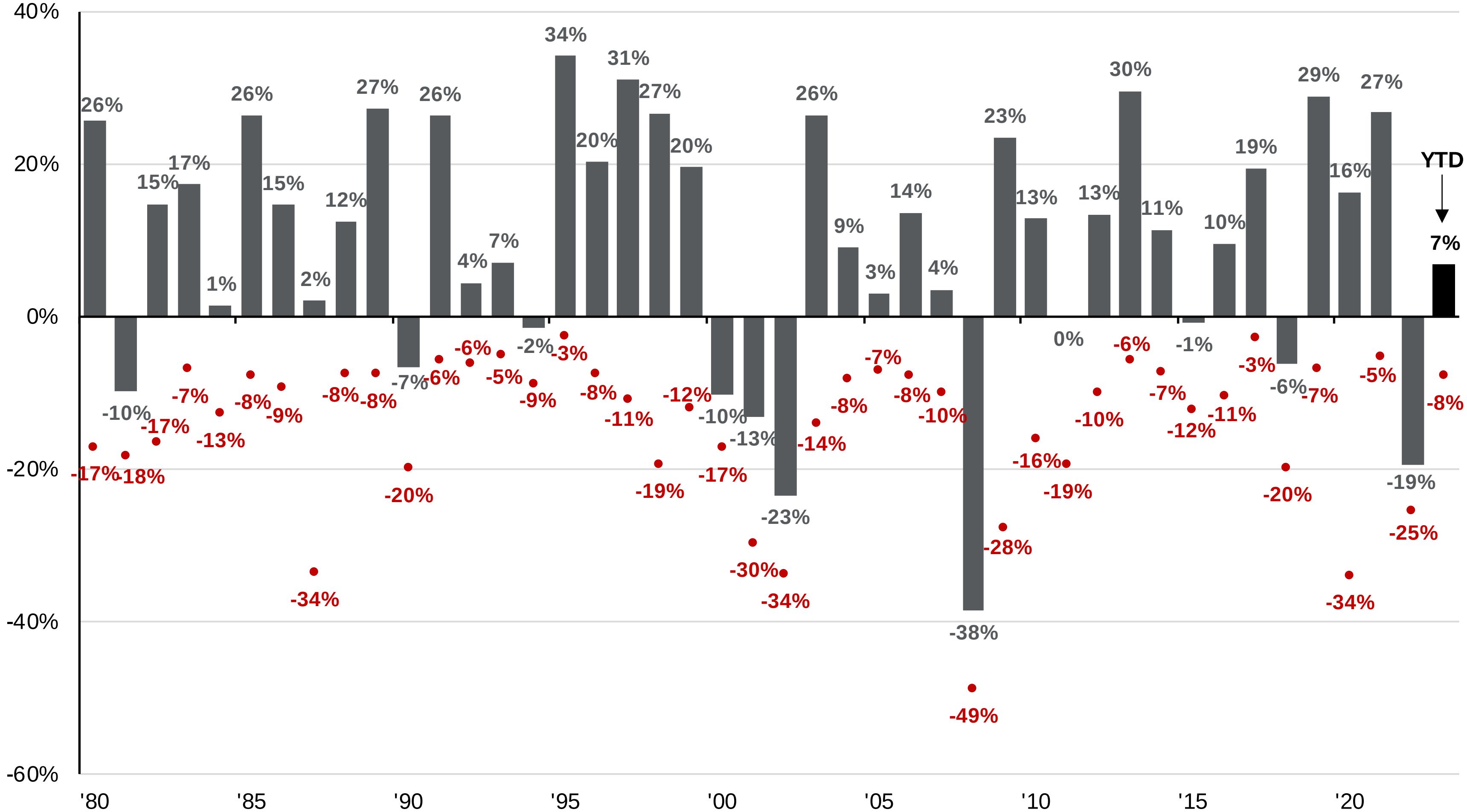


DALLAS POLICE & FIRE PENSION SYSTEM

S&P Intra-Year Declines

S&P intra-year declines vs. calendar year returns

Despite average intra-year drops of 14.3%, annual returns were positive in 32 of 43 years

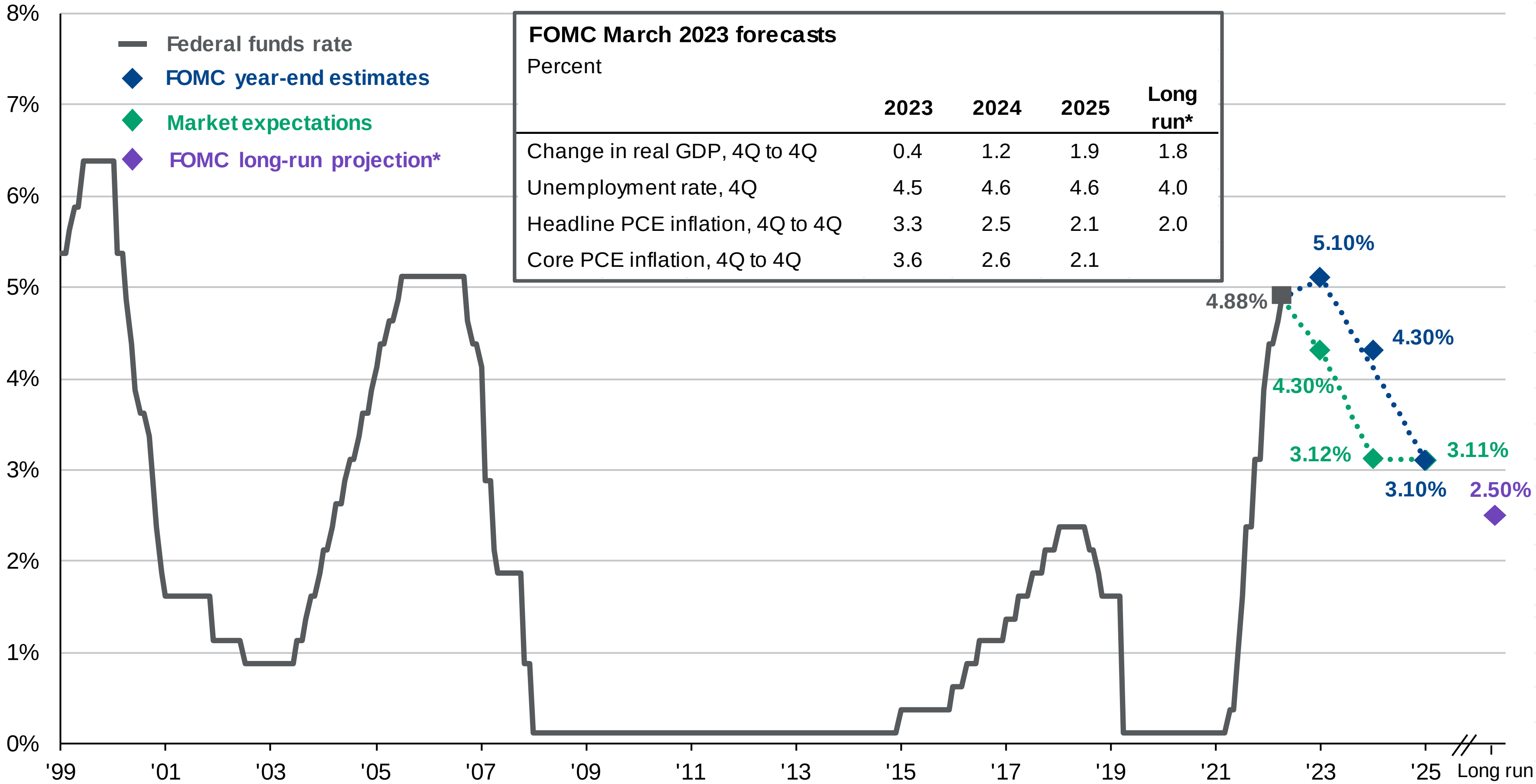


Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2022, over which time period the average annual return was 8.7%.
Guide to the Markets – U.S. Data are as of April 4, 2023.

The Fed and Interest Rates

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



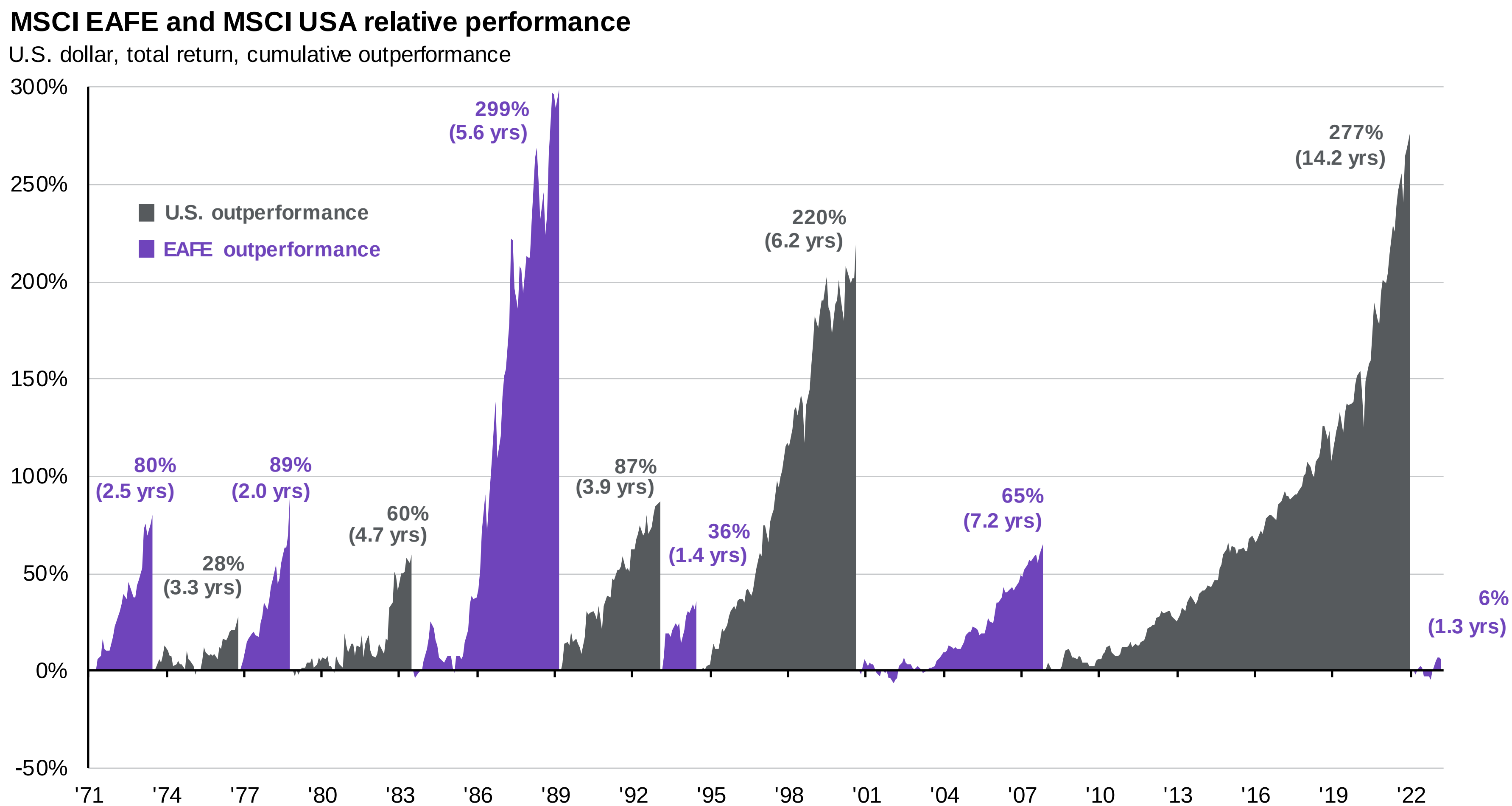
FOMC March 2023 forecasts

Percent

	2023	2024	2025	Long run*
Change in real GDP, 4Q to 4Q	0.4	1.2	1.9	1.8
Unemployment rate, 4Q	4.5	4.6	4.6	4.0
Headline PCE inflation, 4Q to 4Q	3.3	2.5	2.1	2.0
Core PCE inflation, 4Q to 4Q	3.6	2.6	2.1	

Source: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management.
Market expectations are based off of the respective Federal Funds Futures contracts for December expiry. *Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.
Guide to the Markets – U.S. Data are as of April 4, 2023.

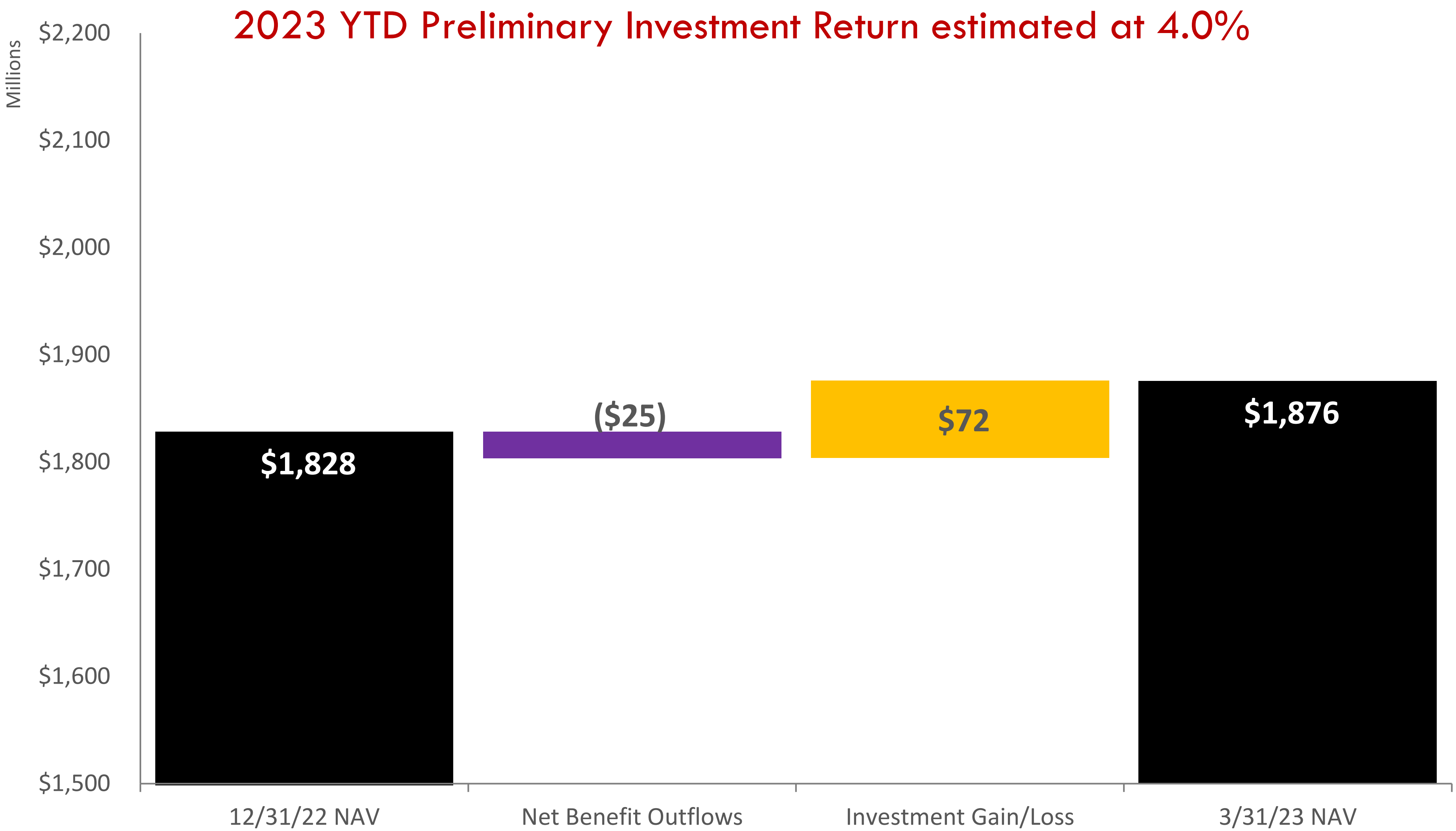
Cycles of US Outperformance



Source: FactSet, MSCI, J.P. Morgan Asset Management.
Regime change determined when cumulative outperformance peaks and is not reached again in the subsequent 12-month period.
Guide to the Markets – U.S. Data are as of April 4, 2023.

2023 - Change in Market Value Bridge Chart

In Millions



The beginning 12/31/22 value is from the Q4 2022 Meketa Performance Report and includes a one-quarter lag on private assets.
Numbers may not foot due to rounding.

Public Markets Performance Snapshot - Estimates

Public Markets (ex-Cash) currently make up 66.4% of DPFP Investment Portfolio.

Net of fees	Index	3/31/2023 NAV ($M)	MTD as of 3/31/2023 Manager	MTD Index	MTD Excess	YTD as of 3/31/2023 Manager	YTD Index	YTD Excess	3 Year Trailing as of 3/31/2023 Manager	3 Year Index	3 Year Excess
Total Public Portfolio (ex-Cash)	**60% ACWI IMI 40% Global AGG**	**$1,245.4**	**1.7%**	**2.7%**	**-1.0%**	**5.8%**	**5.4%**	**0.5%**	**9.3%**	**8.0%**	**1.3%**
Global Equity	**MSCI ACWI IMI**	**$826.7**	**1.9%**	**2.5%**	**-0.6%**	**7.1%**	**7.0%**	**0.1%**	**14.0%**	**15.6%**	**-1.6%**
Boston Partners	MSCI World	$130.2	-1.6%	3.1%	-4.7%	3.7%	7.7%	-4.0%	22.2%	16.4%	5.9%
Manulife	MSCI ACWI	$129.0	2.2%	3.1%	-0.8%	5.3%	7.3%	-2.0%	13.6%	15.3%	-1.7%
Invesco (OFI)[3]	MSCI ACWI	$0.4	-2.6%	-2.6%	0.0%	3.7%	1.4%	2.3%	9.7%	13.2%	-3.5%
Russell Transition ACWI Growth[3]	MSCI ACWI Growth	$131.3	7.7%	6.9%	0.8%	--	--	--	--	--	--
Walter Scott	MSCI ACWI	$138.9	6.0%	3.1%	2.9%	10.6%	7.3%	3.3%	14.8%	15.3%	-0.5%
Northern Trust ACWI IMI Index[1]	MSCI ACWI IMI	$192.4	2.2%	2.5%	-0.2%	6.6%	7.0%	-0.4%	15.9%	15.6%	0.3%
Eastern Shore US Small Cap[1]	Russell 2000	$49.8	-4.1%	-4.8%	0.7%	3.2%	2.7%	0.5%	10.4%	17.5%	-7.1%
Global Alpha[1]	MSCI EAFE Small Cap	$54.7	0.9%	-0.2%	1.1%	9.0%	4.9%	4.1%	14.9%	12.1%	2.9%
EM Equity - RBC	**MSCI EM IMI**	**$88.5**	**3.2%**	**2.8%**	**0.5%**	**6.1%**	**3.9%**	**2.2%**	**9.9%**	**9.2%**	**0.8%**
Public Fixed Income (ex-Cash)	**BBG Multiverse TR**	**$330.2**	**0.9%**	**2.4%**	**-1.5%**	**2.8%**	**2.4%**	**0.5%**	**1.1%**	**-4.4%**	**5.5%**
S/T IG Bonds - IR+M	BBG 1-3YR AGG	$55.1	1.2%	1.5%	-0.3%	1.8%	1.5%	0.3%	0.7%	-0.4%	1.1%
IG Bonds - Longfellow[1]	BBG US AGG	$68.5	2.2%	2.2%	0.0%	3.5%	2.6%	0.9%	-2.3%	-2.9%	0.6%
Bank Loans - Pacific Asset Mgmt.[2]	CS Leveraged Loan	$74.1	0.3%	-0.1%	0.4%	2.5%	3.1%	-0.6%	6.9%	8.3%	-1.5%
High Yield - Loomis Sayles[1]	BBG USHY 2% Cap	$70.1	0.7%	0.8%	-0.1%	3.0%	3.3%	-0.3%	6.0%	6.7%	-0.7%
EM Debt - Metlife[1]	35% EMBI / 35% CEMBI / 30% GBI-EM	$62.4	0.3%	1.9%	-1.5%	1.8%	3.0%	-1.2%	2.6%	0.7%	1.9%

Source: JPM Morgan custody data, manager reports, Investment Staff estimates and calculations. Numbers may not foot due to rounding.

[1] *- 3 yr trailing performance is based on composite data due to inception date with DPFP being less than 3 years.*

[2] *- Benchmark for Bank Loans is proxied to S&P Leveraged Loans for current month performance.*

[3] *- Invesco was replaced by Russell (Transition Account) on 3/15/2023; Performance as of 3/15/2023*

DALLAS POLICE & FIRE PENSION SYSTEM

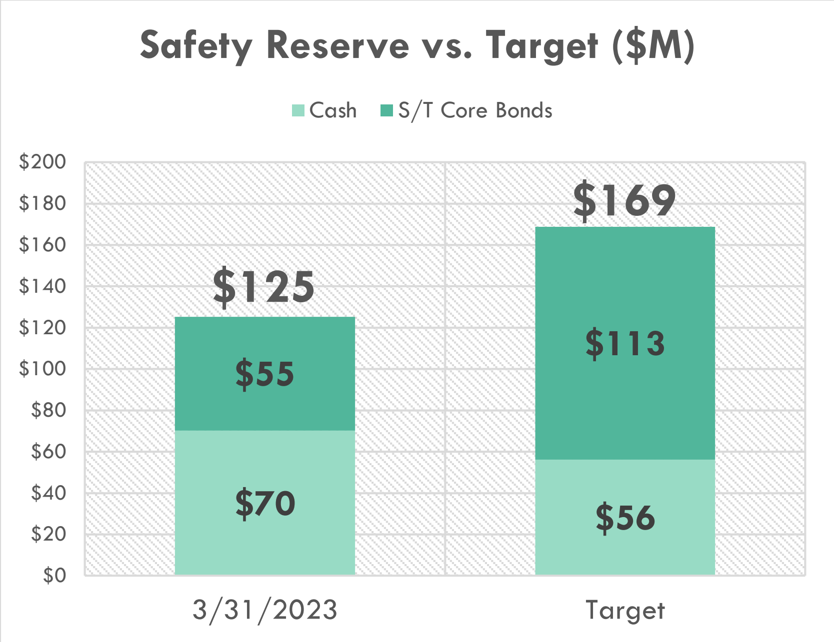
Asset Allocation Detail

DPFP Asset Allocation	3/31/2023 NAV	3/31/2023 %	Target $ mil.	Target %	% of Target	Variance $ mil.	Variance %
Equity	**1,154**	**61.5%**	**1,219**	**65%**	**95%**	**-66**	**-3.5%**
Global Equity	826	44.0%	1,032	55%	80%	-205	-11.0%
Boston Partners	*130*	*6.9%*	*150*	*8%*	*87%*	*-20*	*-1.1%*
Manulife	*129*	*6.9%*	*150*	*8%*	*86%*	*-21*	*-1.1%*
Russell Transition - ACWI Growth	*131*	*7.0%*	*150*	*8%*	*88%*	*-19*	*-1.0%*
Walter Scott	*138*	*7.4%*	*150*	*8%*	*92%*	*-12*	*-0.6%*
Northern Trust ACWI IMI Index	*192*	*10.3%*	*281*	*15%*	*68%*	*-89*	*-4.7%*
Eastern Shore US Small Cap	*50*	*2.7%*	*75*	*4%*	*66%*	*-25*	*-1.3%*
Global Alpha Intl Small Cap	*55*	*2.9%*	*75*	*4%*	*73%*	*-20*	*-1.1%*
Emerging Markets Equity - RBC	89	4.7%	94	5%	95%	-5	-0.3%
Private Equity*	239	12.7%	94	5%	254%	145	7.7%
Fixed Income	**405**	**21.6%**	**469**	**25%**	**86%**	**-64**	**-3.4%**
Cash	70	3.7%	56	3%	125%	14	0.7%
S/T Investment Grade Bonds - IR+M	55	2.9%	113	6%	49%	-57	-3.1%
Investment Grade Bonds - Longfellow	68	3.7%	75	4%	91%	-7	-0.3%
Bank Loans - Pacific Asset Management	74	4.0%	75	4%	99%	-1	0.0%
High Yield Bonds - Loomis Sayles	70	3.7%	75	4%	93%	-5	-0.3%
Emerging Markets Debt - MetLife	62	3.3%	75	4%	83%	-13	-0.7%
Private Debt*	5	0.3%	0	0%		5	0.3%
Real Assets*	**317**	**16.9%**	**188**	**10%**	**169%**	**129**	**6.9%**
Real Estate*	169	9.0%	94	5%	180%	75	4.0%
Natural Resources*	107	5.7%	94	5%	114%	13	0.7%
Infrastructure*	41	2.2%	0	0%		41	2.2%
Total	**1,876**	**100.0%**	**1,876**	**100%**		**0**	**0.0%**
Safety Reserve ~$162M=18 mo net CF	125	6.7%	169	9%	74%	-44	-2.3%
*Private Market Assets	560	29.9%	281	15%		279	14.9%

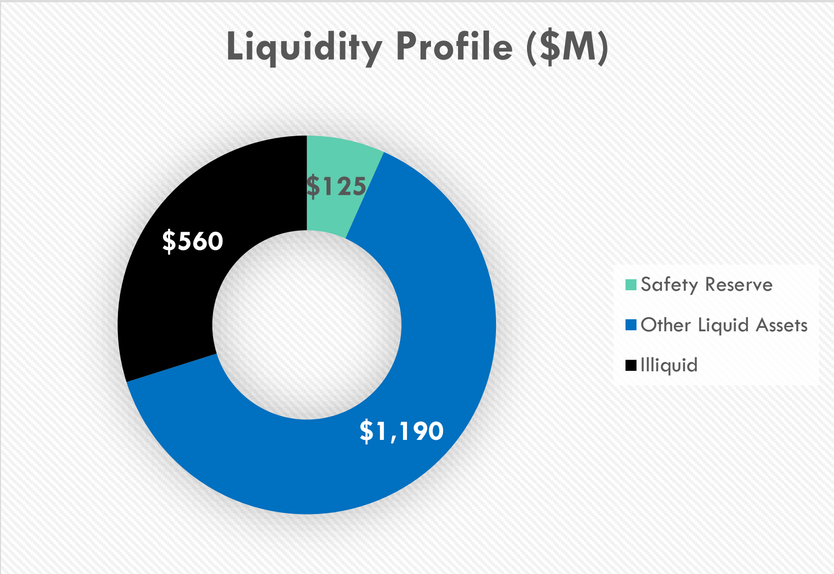
Source: Preliminary JP Morgan Custodial Data, Staff Estimates and Calculations.
Numbers may not foot due to rounding

DALLAS POLICE & FIRE PENSION SYSTEM

Safety Reserve Dashboard



Projected Net Monthly outflows of **$9.5M** per month. Safety Reserve of **$125M** would cover net monthly outflows for next **13 months** or through **May 2024.**

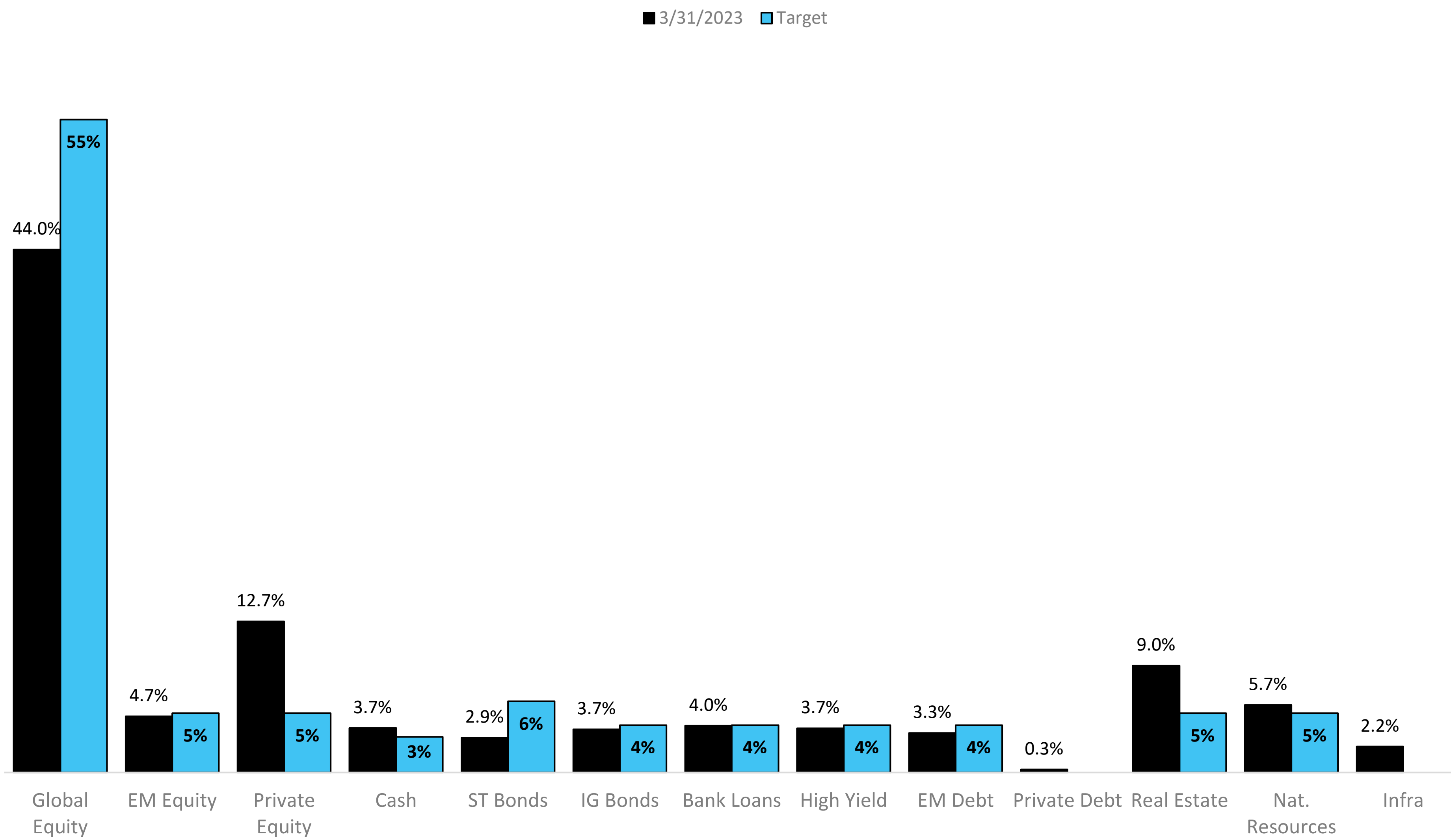


Expected Cash Activity	Date	Amount ($M)	Projected Cash Balance ($M)	Projected Cash (%)
	4/5/23		**$70.2**	**3.7%**
City Contribution	4/14/23	$8.9	$79.1	**4.2%**
City Contribution	4/28/23	$8.9	$88.0	**4.7%**
Pension Payroll	4/28/23	($28.1)	$59.9	**3.2%**
City Contribution	5/12/23	$8.9	$68.8	**3.7%**
City Contribution	5/26/23	$8.9	$77.7	**4.1%**
Pension Payroll	5/31/23	($28.1)	$49.6	**2.6%**
City Contribution	6/9/23	$8.9	$58.5	**3.1%**
City Contribution	6/23/23	$8.9	$67.4	**3.6%**
Pension Payroll	6/30/23	($28.1)	$39.3	**2.1%**

Projected Cash activity includes expected benefit contributions, payments, and material expected capital calls or expenses.

Numbers may not foot due to rounding

Asset Allocation – Actual vs Target



2023 Board Investment Review Plan*

Staff presentations targeted for 15 minutes, Manager presentations 30 – 60 minutes.

April	• Real Estate: AEW Presentation
May	• Natural Resources: Hancock Presentation
June	• Natural Resources: Staff review of BTG Pactual (Timber)
August	• Infrastructure: Staff review of AIRRO and JPM Maritime
September	• Staff review of Public Fixed Income managers
October	• Staff review of Public Equity managers
November	• Staff review of Private Equity and Debt

*Presentation schedule is subject to change.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C6

Topic: **Report on the Investment Advisory Committee**

Discussion: The Investment Advisory Committee met on March 23, 2023. The Committee Chair and Investment Staff will comment on Committee observations and advice.

Regular Board Meeting – Thursday, April 13, 2023

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C7

Topic: **Investment Practices and Performance Report**

Attendees: Aaron Lally, Principal - Meketa Investment Group

Discussion: Section 802.109 of the Texas Government Code requires that a public retirement system shall select an independent firm 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. Meketa was hired to conduct the initial report which was submitted to the Board in March 2020.

Section 802.109 requires systems with assets of at least $100 million to complete an evaluation once every 3 years. Meketa was re-engaged in 2023 and has completed their evaluation and their report is attached. Meketa will discuss their evaluation and recommendations. Section 802.109 calls for any written responses from the system to accompany the evaluation report. Staff responses to the Meketa recommendation are also attached.

Staff Recommendation: **Approve** the DPFP responses to the report submitted by Meketa and **authorize** submission of the Meketa report and DPFP responses to the Texas Pension Review Board.

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Dallas Police and Fire Pension System Combined Plan

Investment Practices and Performance Evaluation Consultant Report

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Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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)

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Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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

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Investment Practices and Performance Evaluation

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

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Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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)

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Investment Practices and Performance Evaluation

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"*

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Investment Practices and Performance Evaluation

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"

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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

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Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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).

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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.

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Investment Practices and Performance Evaluation

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.

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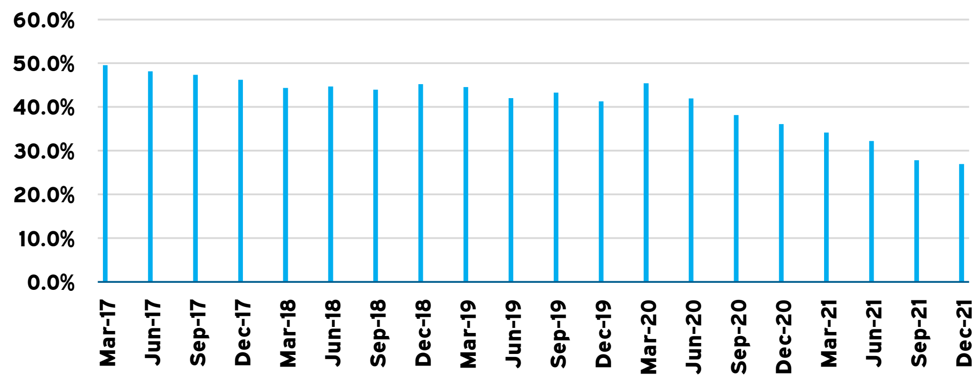
Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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).

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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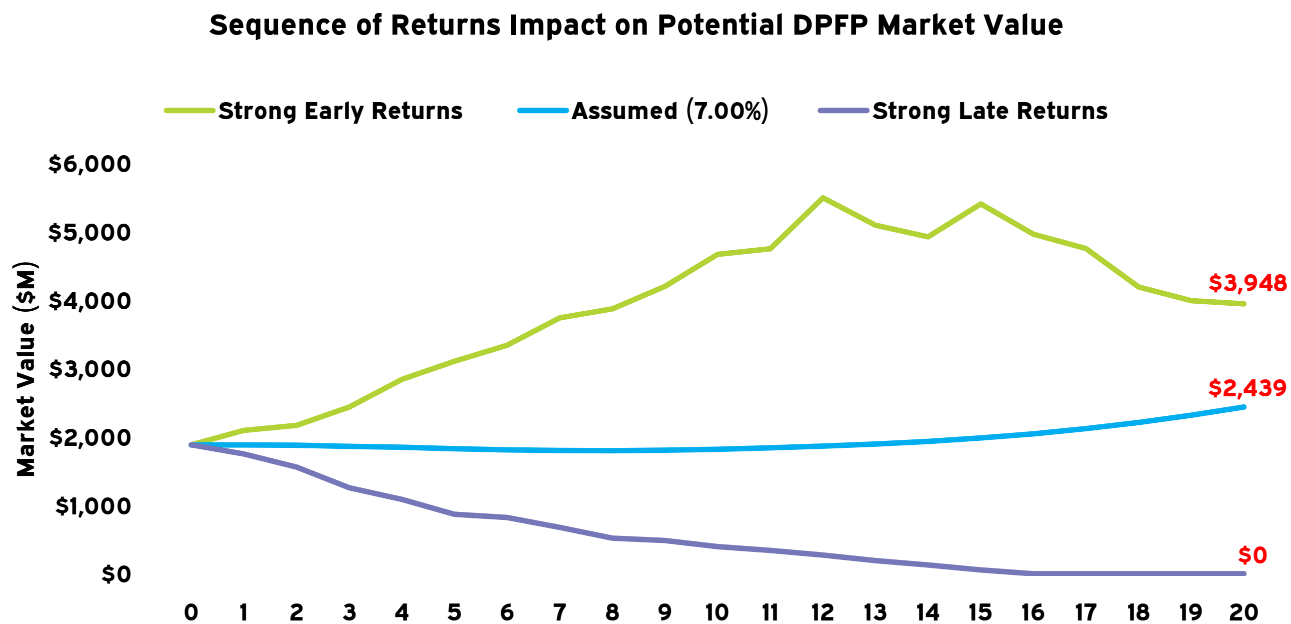
Investment Practices and Performance Evaluation

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).

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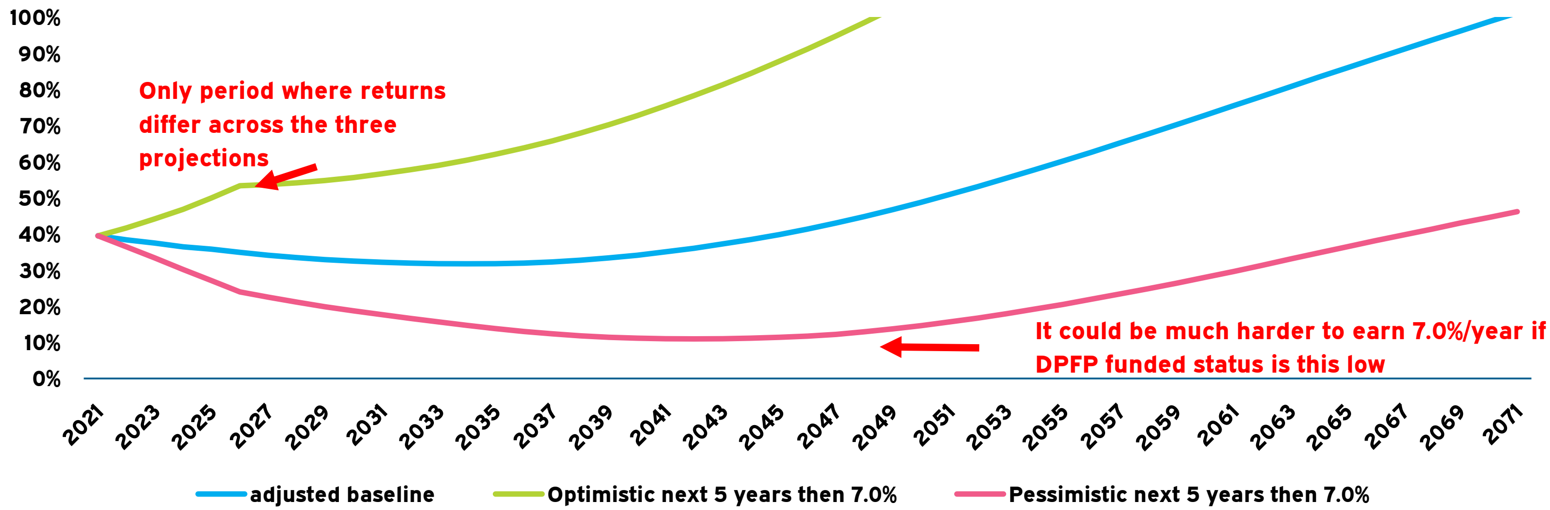
Investment Practices and Performance Evaluation

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.

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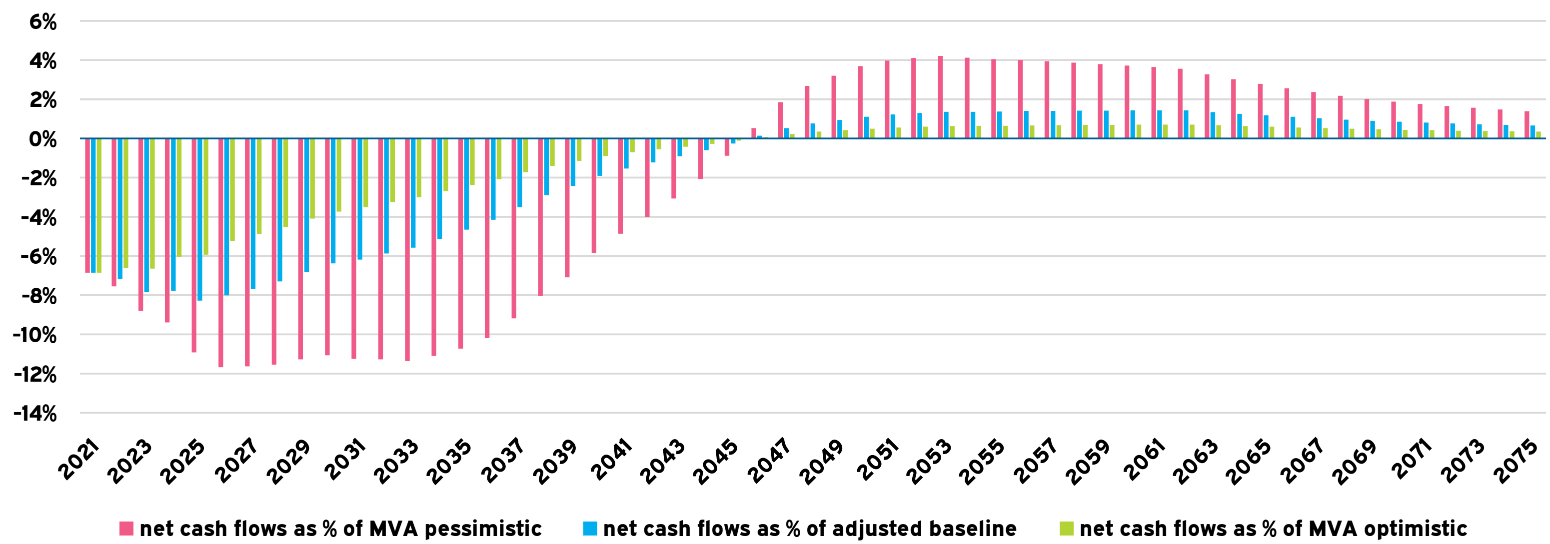
Investment Practices and Performance Evaluation

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).

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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)

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Investment Practices and Performance Evaluation

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)

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Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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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)

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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).

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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)

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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).

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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)

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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:

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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).

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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.

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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).

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Dallas Police and Fire Pension System

Investment Practices and Performance Evaluation

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	

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

DISCUSSION SHEET

ITEM #C8

Topic: **Private Asset Cash Flow Projection Update**

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.072 of the Texas Government Code.

Discussion: Staff will provide the quarterly update on the private asset cash flow projection model first discussed at the February 2018 Board meeting. The cash flow model projects estimated contributions to, and distributions from, private assets through the end of 2024. These estimates are intended to assist the Board in evaluating the expected time frame to reduce DPFP's exposure to these assets and the implications for the public asset redeployment, overall asset allocation, and expected portfolio risk and return.

DALLAS POLICE & FIRE PENSION SYSTEM

Quarterly Private Asset Cash Flow Projection Update

April 13, 2023

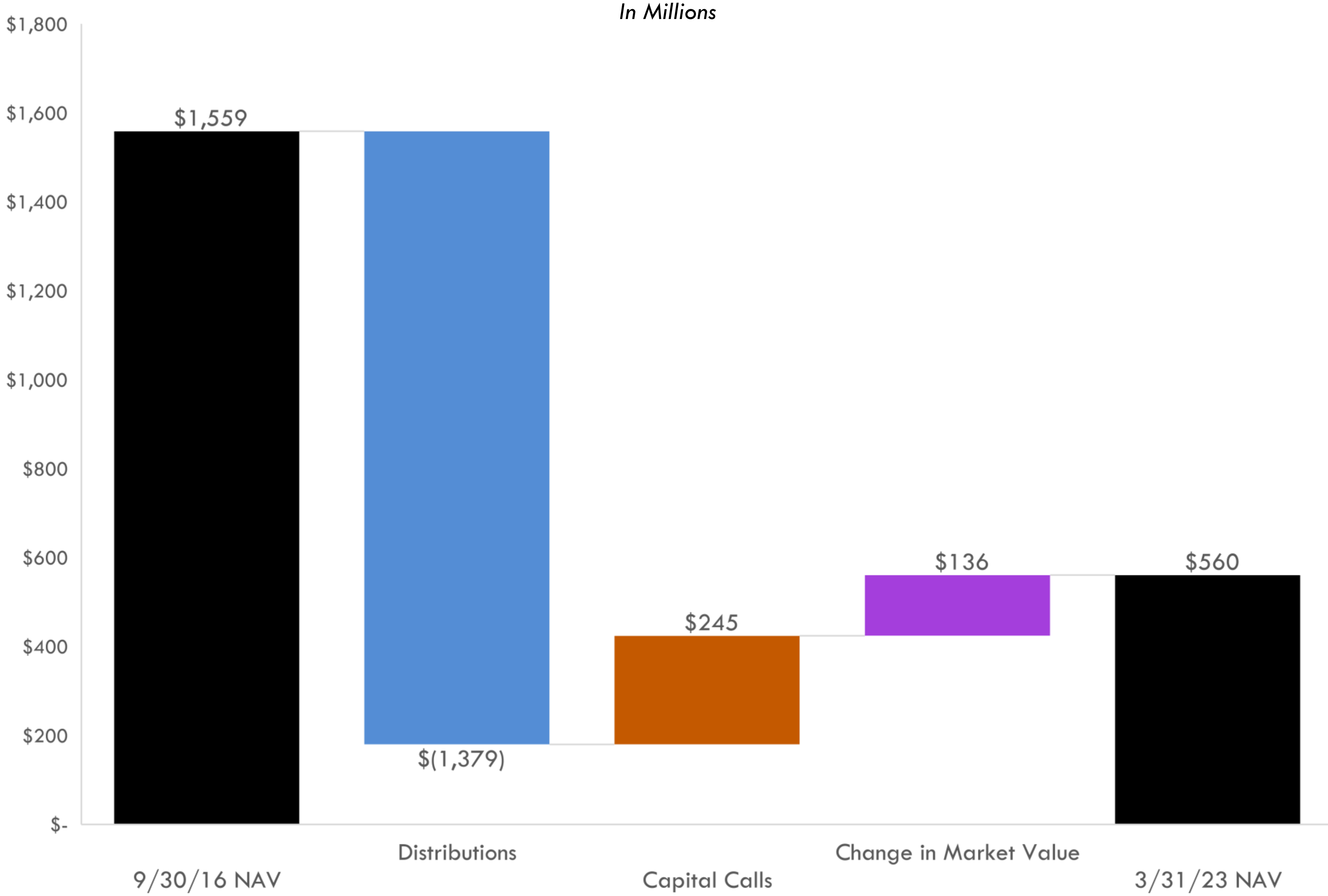
Private Asset Cash Flow Projections

Methodology Review

- Staff estimates capital calls and cash distributions from the Private Asset portfolio, built up by individual asset.
- DPFP has more control over direct investments in Real Estate and Natural Resources, therefore should have more accuracy in forecasting cash flows based on planned sales. Private Equity fund investments are controlled by GP's, therefore DPFP has little or no control over outcome – Staff incorporates GP insights but often uses an even distribution schedule over 2 years with these investments.
- **Cash flow estimates are inherently imprecise as they are often subject to events & forces outside of the manager's control.**

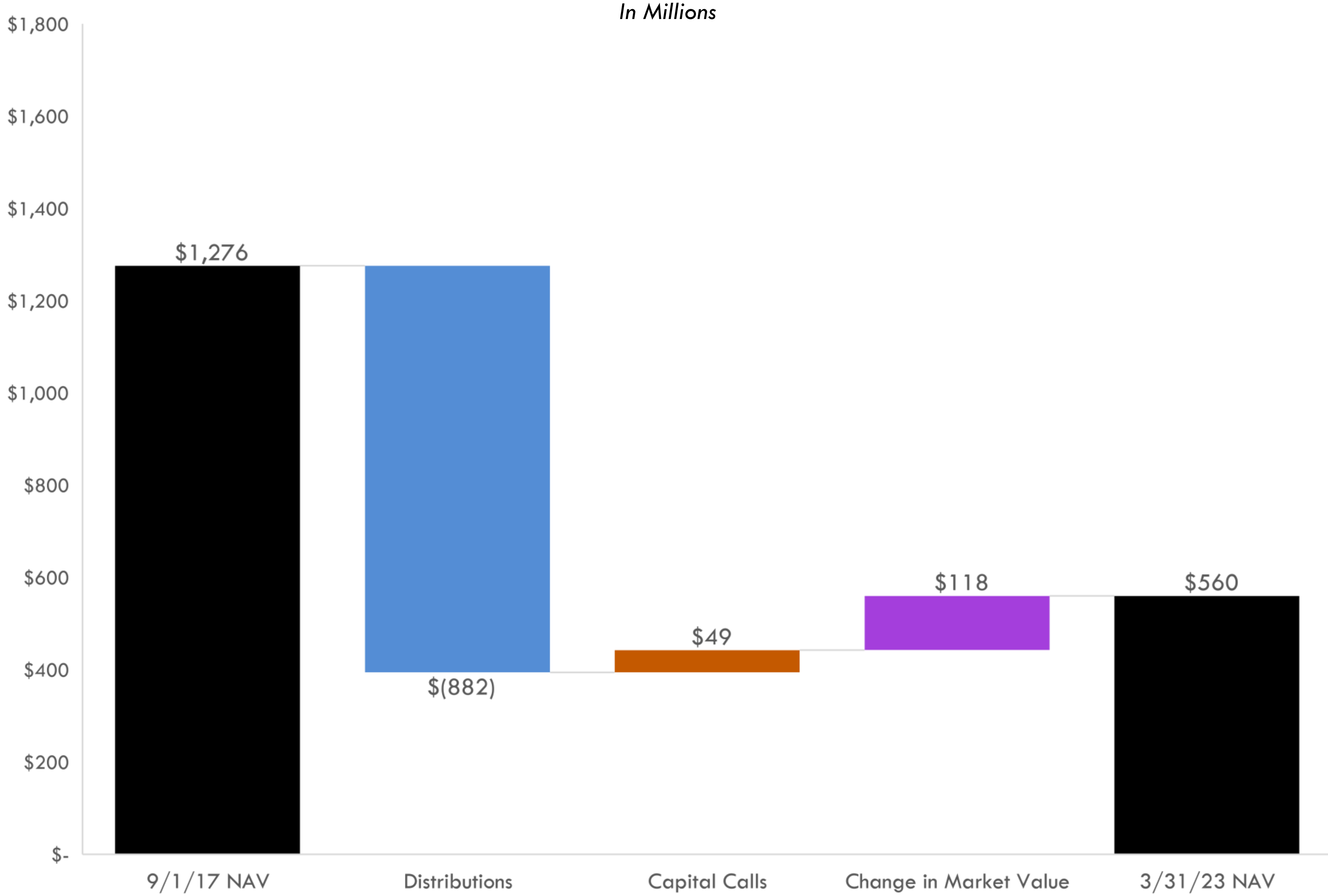
Private Asset Bridge Chart – Since 9/30/16

In Millions



Numbers may not foot due to rounding.

Private Asset Bridge Chart – Since 9/1/17 (New Board Formation)



Numbers may not foot due to rounding.

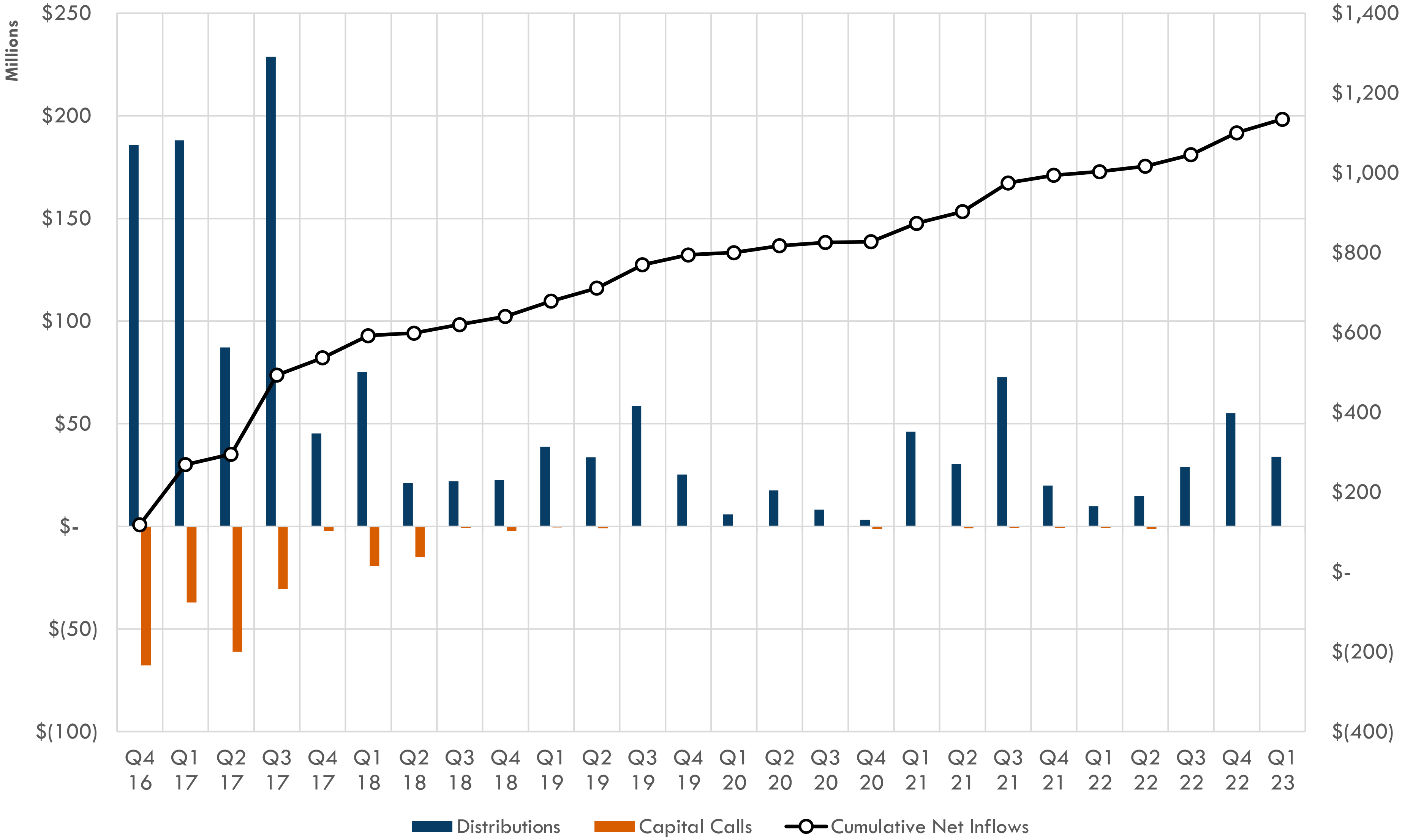
Private Asset Quarterly Cash Flows – Q1 2023

TOTAL CAPITAL CALLS & CONTRIBUTIONS		**$111,789**
TRG AIRRO	Capital Call	$69,124
TRG AIRRO II	Capital Call	$42,664

TOTAL DISTRIBUTIONS		**$33,958,644**
Distributions above $100K		
JPM Maritime	Vessel Sales	$16,080,908
AEW	Camel Square Office Sale	$15,814,673
Clarion	CCH Lamar Dist	$668,100
AEW	RCH Pad Sale	$545,000
Highland Crusader	Distribution	$523,875
AEW	Camel Square Excess Cash	$310,000

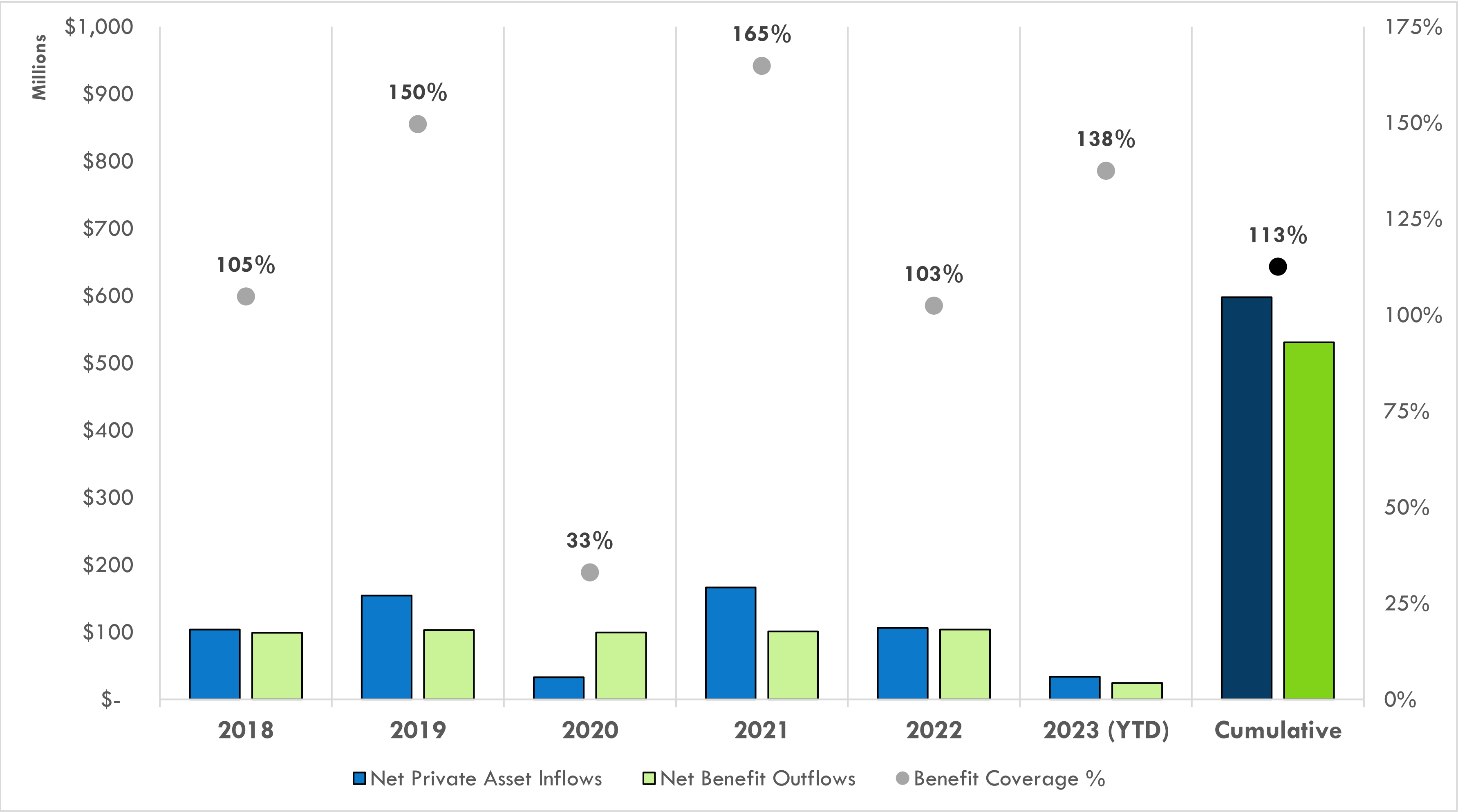
Numbers may not foot due to rounding.

Private Asset Quarterly Cash Flows – Since 9/30/16



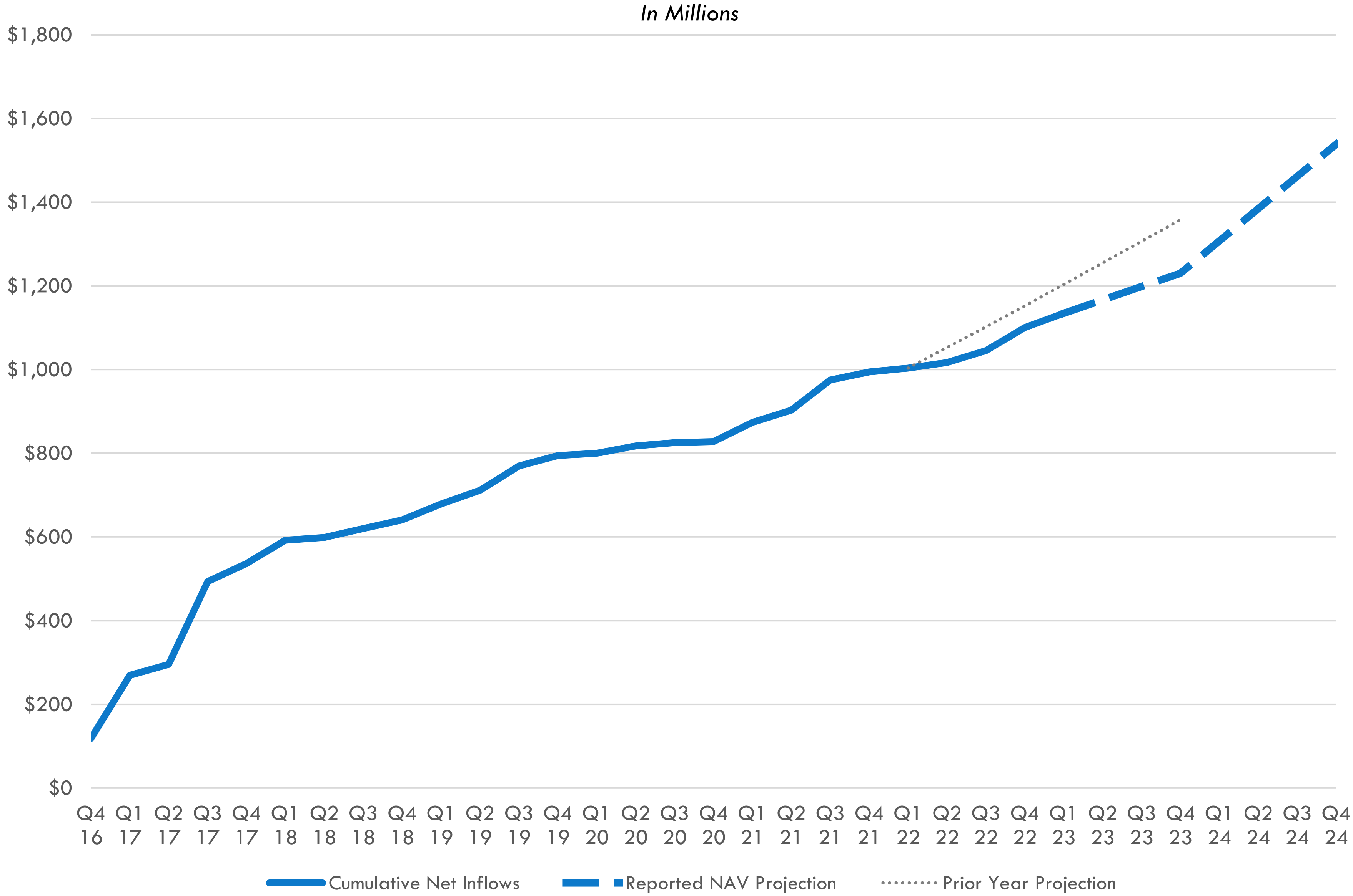
Benefit Outflow Coverage

Since 2018, net Private Asset inflows have covered 113% of net benefit outflows.



Cumulative Actual and Projected Private Asset Net Inflows

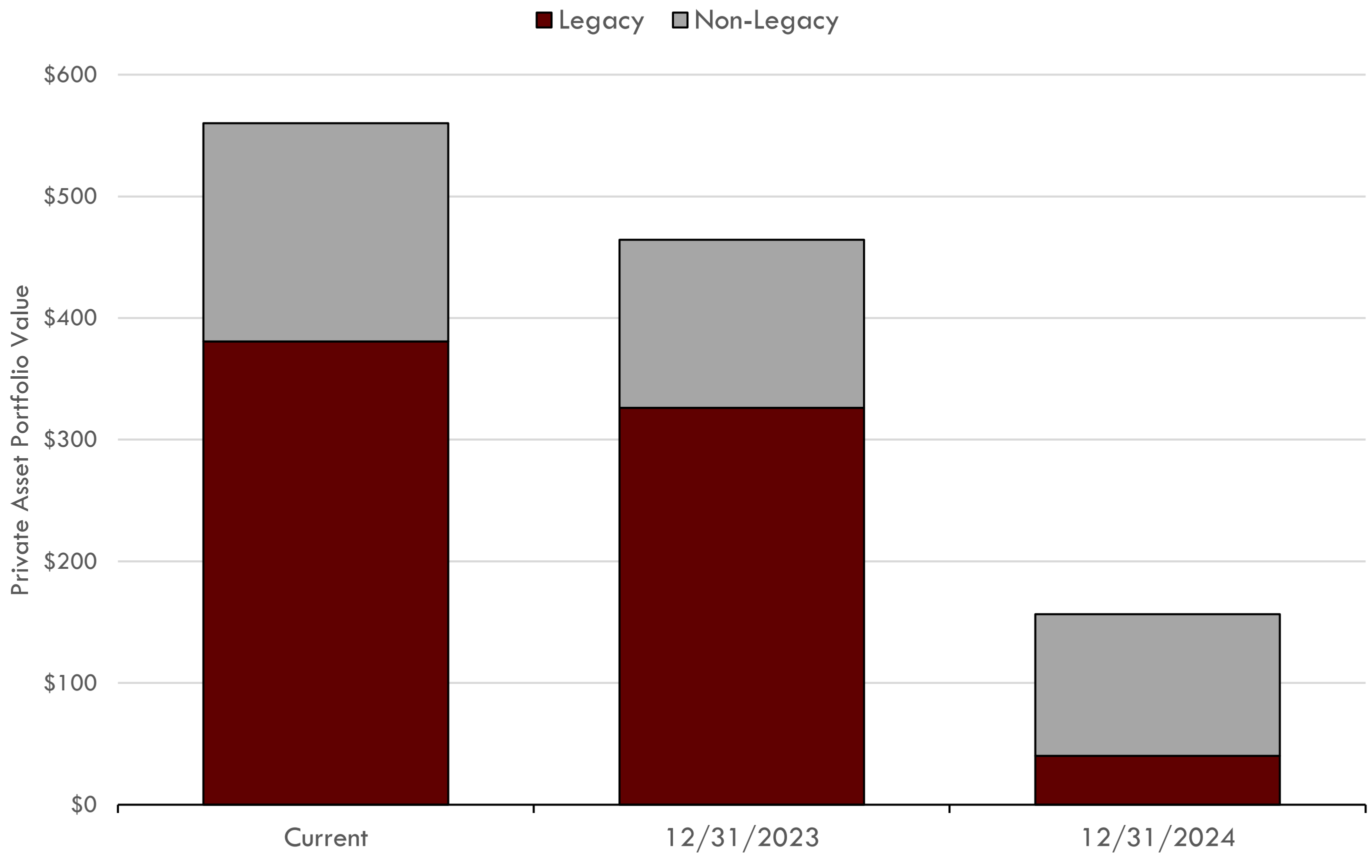
Private asset cash flow projections are based on either in-process/planned sales, if available, or a gradual disposition through 2024.



Private Asset Disposition Timeline & Composition

Private asset cash flow projections are based on either in-process/planned sales, if available, or a gradual disposition through 2024.

In Millions

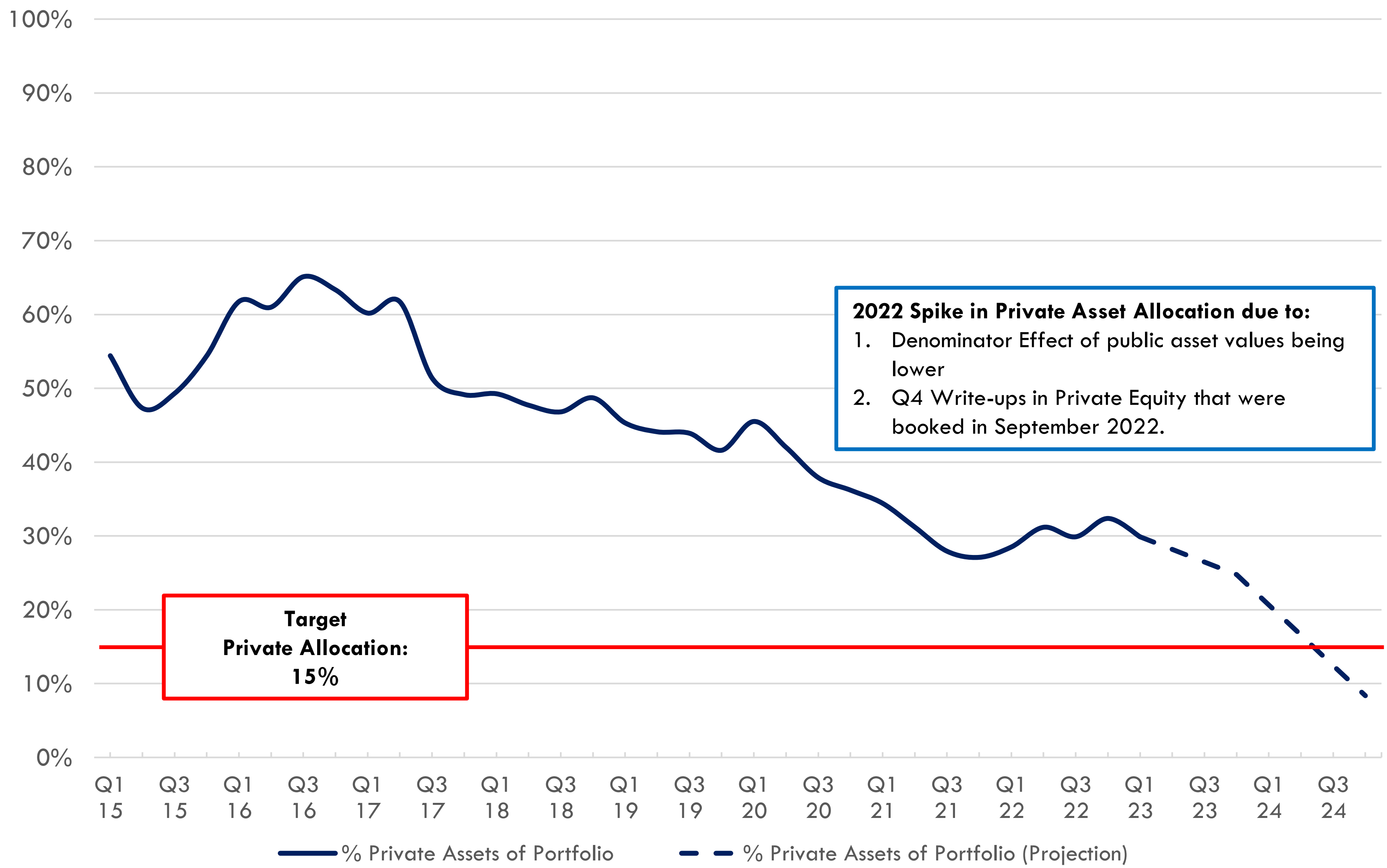


	Current	12/31/2023	12/31/2024
Legacy NAV (M)	$381	$326	$40
% of Private Portfolio	68%	70%	26%
% of DPFP Portfolio	20%	17%	2%

Private Asset Allocation Over Time

Private asset cash flow projections are based on either in-process/planned sales, if available, or a gradual disposition through 2024.

Assumes 100% of private asset proceeds are reinvested into liquid investments and flat fund NAV



DISCUSSION SHEET

ITEM #C9

Topic: **Staff 457 Plan**

Discussion: At the March Board meeting staff briefed the Board on changing the investment selections for the staff 457(b) plan. During the process of implementing these changes, staff discovered that the original 457(b) plan from 2005 was implemented without Board approval. Staff is seeking Board approval of the 457(b) plan as well as ratification of the prior plan.

Staff Recommendation: **Authorize** the Executive Director to execute an Amended and Restated 457(b) Deferred Compensation Plan and **ratify** the prior 457(b) plan.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C10

Topic: **Legislative Update**

Discussion: Staff will brief the Board on pension bills that have been filed which may bear on DPFP.

Regular Board Meeting – Thursday, April 13, 2023

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C11

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.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D1

Topic: **Public Comment**

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

Regular Board Meeting – Thursday, April 13, 2023

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D2

Topic: **Executive Director's report**

a. Associations' newsletters
- NCPERS Monitor (April 2023)
- NCPERS PERSist (Spring 2023)

b. Open Records

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

THE NCPERS
MONITOR
The Latest in Legislative News
April 2023

ASOP 4: What Pensions Should Know About the Newly Required LDROM Disclosure

By Lizzy Lees, Director of Communications, NCPERS

Photo Illustration © 2023, istock.com

As part of the 2023 revisions to ASOP 4, the Actuarial Standards Board will require a new disclosure, Low-Default-Risk Obligation Measure (LDROM), that will affect future actuarial valuations. This liability measure assumes the pension plan is invested solely in high quality bonds.

It is highly unlikely that a public pension plan would adopt an all-bond investment strategy, and there is no indication that any plans intend to do so. For that reason, the new disclosure has limited practical application for public sector plans. However, understanding this new measure is critically important to ensure the new disclosure is not used to mischaracterize the financial health of a pension plan.

Last year, NASRA, NCPERS, NCTR, and NIRS formed a workgroup to develop the ASOP 4 Toolkit: Measuring Pension Obligations and LDROM to help pension funds communicate the new requirements of ASOP 4, avoid misunderstanding and misuse of the new disclosure, and communicate the benefits of a well-diversified investment portfolio. Over 30 public pension directors, senior staff, actuaries, and communications experts participated in the workgroup and their work shaped the ultimate outcome. The toolkit, which has been endorsed by GFOA, includes three products:

- The first product is a Fact Sheet that presents a clear and simple overview of LDROM—what it is and what it isn't—and provides appropriate context to frame the correct use of the disclosure for stakeholders of the pension plan, including policymakers, system participants and the general public.

- The second product is a set of suggested language for public pension actuarial valuations. Following these guidelines will ensure that valuations conform to ASOP 4 and provide context for the measure. Accurate and reliable valuations will maximize stakeholder understanding and the impact on taxpayers' contributions of various liability measures.

- The third product is a set of frequently asked questions on investment diversification and other important topics. These will help pension fund stakeholders with guidance on special considerations for Risk Sharing Plans.

Overall, the ASOP 4 Toolkit: Measuring Pension Obligations and LDROM is an essential resource for pension funds to educate policymakers and others on the best use of this new disclosure to help avoid misunderstandings concerning pension funding.

Later this month, NCPERS will host a webinar, ASOP 4: What Pensions Should Know About the Newly Required LDROM Disclosure, to provide members the opportunity to ask questions about the toolkit and learn more about LDROM. Panelists include Paul Angelo, Senior Vice President & Actuary, Segal; Emily Brock, Director, Federal Liaison Center, GFOA; Debby Cherney, CEO, SBCERA; Dan Doonan, Executive Director, NIRS; and Hank Kim, Executive Director & Counsel, NCPERS.

The webinar will be held on April 13 at 1:00pm ET. Register here to learn more about LDROM and to find out how to provide the appropriate context to frame the correct use of the disclosure. ◆

NCPERS **Executive Director's Corner**

The Importance of Ongoing Education

By Hank Kim, Executive Director and Counsel, NCPERS

The days are getting longer, the flowers are beginning to bloom, and—like many parents across the country—I've been anxiously awaiting news about my two children's college admissions (Genevieve got into University of Colorado and Cameron got into University of Vermont, if you were wondering).

After nearly 13 years in school, they're diligently preparing to continue the next steps in their education. But, after graduation, it can be hard to figure out where to learn new skills or how to stay on top of the latest developments in your field. Ongoing education, however, is so important for success—no matter your profession (even for professional hockey players, like my son aspires to be).

As the leader in providing education and training to public pension professionals, NCPERS aims to make ongoing education as easy as possible for our members. While each of our conferences is unique, attendees know they will find quality programming that will equip them to succeed. Our networking receptions and events are where long-term industry relationships are built. These are the contacts you can reach out to with questions, vendor recommendations, or just to grab lunch when you're in town. With so many repeat attendees, NCPERS post-pandemic networking receptions have sometimes felt like a family reunion!

Our Annual Conference & Exhibition (ACE) is our most comprehensive educational event, featuring fast-paced general sessions, highly focused breakout sessions, and networking opportunities. We take special care to welcome first-time attendees with a meet and greet on the first day to help facilitate networking. We've just released the agenda, which features a fantastic lineup of speakers.

The opening general session will cover responsible investment in private equity, as Jennifer O'Dell of LiUNA and Dan Pedrotty of NABTU discuss how funds can implement responsible contractor policies for investments in real estate and infrastructure.

Day two opens with a general session on the macro outlook for 2023 and ends with a breakout session on how to effectively engage with your actuary. During the breakout session, “Risk Management: A Key Reason for the Wisconsin Retirement System’s Success,” Brian Murphy of Gabriel, Roeder, Smith & Company and Matt Stohr of WRS will discuss how the retirement system has found success with stress testing every two years in collaboration with the State of Wisconsin Investment Board.

Day three features sessions on cybersecurity, ESG, legislative and regulatory updates, and more. Tom Vicente and Jim Ritchie of Bolton will explore the challenges that changing demographics pose to pension plans and their sponsors during their session, “The US Workforce is Changing – Evolving Pension Offerings to Serve the Future Membership.”

On the final day, attendees will learn about investing with diverse and emerging managers, what the new actuarial standards mean for your plan, and more. The program closes with a general session on crisis communications, where Michelle Holleman of the Chicago Teachers’ Pension Fund will discuss how to prepare your team for a crisis and share strategies for engaging with the media and stakeholders.

Less than a month after our Annual Conference, NCPERS will host public pension executives in Denver for the Chief Officers Summit. This event is designed to prepare pension CEOs and CIOs to drive their organizations forward in the face of constantly evolving opportunities and challenges. The agenda is created by an advisory faculty of c-suite pension leaders, covering vital skills such as risk management, governance, technology, and more.

Be sure to check our calendar to see all of our upcoming conferences and visit our Center for Online Learning to take advantage of the many opportunities NCPERS offers to continue your education and stay up to date on the latest developments in the public pension industry. ◆

NCPERS Feature

Are Pensions the Answer to the Public-Sector Worker Shortage?

By Bridget Early, Director of Membership and Strategic Alliances, NCPERS

Photo Illustration © 2023, istock.com

It's widely known that state and local governments are struggling to recruit and retain workers. In Maryland, there are about 6,000 job postings available. And in Wayne County, Michigan, another approximately 1,000 jobs are available. These mounting vacancies can threaten the continuity of vital public services in public safety, education and transportation.

But as the number of layoff announcements in the private sector increase and a record number of Americans withdraw funds from their 401(k)s as a result of financial distress, the public sector may be uniquely positioned to reverse its worker shortage with a highly attractive benefit that gives it an edge over the private sector: a pension.

A 2021 brief from the Congressional Research Service shows how participation in defined benefit plans dropped from 30% in the late 1970s through the 1980s to just above 10% in 2020. As employers have shifted toward 401(k)-style plans, retirement security is much harder to attain for the average American. And it shows: a staggering 40% of Americans fear they won't be able to retire at all.

Pensions are Long-Term Solutions for Worker Retention

Recently, state and local governments have offered more incentives like sign-on bonuses and other benefits in the hiring phase to get more applicants in the door. But these are short-term fixes that may temporarily help with attracting applicants but not with retention. Given the high costs associated with employee turnover, a long-term solution is needed.

Research shows that defined benefit pensions already play an important role in worker retention in the public sector. That same study found that 84% of millennials working in state and local governments said their pension benefit was the reason they're staying in the public sector. That's despite the majority (80%) believing they could earn more in the private sector.

These robust retirement benefits are also leading to significant job loyalty: 85% of millennials said they plan to stay in their public sector jobs until they retire. However, 71% said that cutting their pension benefits would make them more likely to leave their state or local government job.

Pensions Can Help Attract Job Applications—If Positioned Correctly

While public-sector employers typically can't compete with the private sector on salary, they may have an edge when it comes to total compensation packages. It's clear that workers find their pension benefits to be extremely valuable, but it's crucial that the value of these benefits is demonstrated to applicants and new hires. Recent research from MissionSquare Research Institute suggests that by quantifying benefits—such as pensions, life insurance or paid leave—as part of a total compensation package, governments will have greater success in filling vacancies.

With the decline in participation of defined benefit plans in the private sector, many workers do not understand how pensions work or comprehend the value of reliable monthly checks during their retirement. Employers must clearly illustrate the total compensation packages being offered and incentivize retention through continued education on these benefits. Many public employee retirement systems are offering online portals or apps, retirement benefit calculators and educational events or webinars to help members easily understand their benefits.

Cutting Benefits Can Increase Costs in the Long Run

Given the widespread misunderstandings around pension funds, some lawmakers are considering legislation to eliminate these benefits, putting their workforce recruitment and retention efforts in jeopardy. Looking at municipalities that have closed their defined benefit plans, it's clear that eliminating pensions costs public employers both money and quality employees.

Since closing its defined benefit plans in 2005, Alaska has struggled to recruit and retain public employees. Without the incentive of vesting in the plan, "teacher tourism"—where educators gain experience and then move to another jurisdiction, mostly likely with a pension benefit—has become the norm. As a result, the state is spending $20 million per year trying to staff its education system. Recognizing the need to retain public servants, lawmakers are considering reopening the pension plan. On February 2, the Alaska House Committee on Community and Regional Affairs approved a bill that would create a state pension program for police.

Similarly, the Palm Beach Town Council voted in 2012 to close its pension for all employees, including public-safety professionals. Chronic turnover in public safety roles became common as individuals trained in Palm Beach but then accepted jobs in a neighboring district with a pension. Estimates put the cost of this high turnover at nearly $20 million. Lawmakers recognized the negative impacts of closing the town's pension on recruitment and retention, and the council reopened the plan in 2016.

As U.S. workers are increasingly anxious about retirement security and the private sector continues to experience layoffs, the public sector may become more attractive. Through deliberate messaging and ongoing education about total compensation and benefits packages, public sector employers can take advantage of their highly desirable pension benefits to help bring in applicants and retain their skilled employees. ◆

NCPERS **Feature**

Developments on ESG

By Tony Roda, Partner, Williams & Jensen

Photo Illustration © 2023, istock.com

Saying it diplomatically, it's been a lively start to the year on the subject of Environmental, Social, and Governance (ESG) investing. Try as you might, you can't get away from the topic in the U.S. Congress, or in most state capitals, or at the winter conference of the National Association of Public Pension Attorneys, where ESG was the subject of many formal and informal discussions, or in two federal district courts, where the latest federal regulation is being legally challenged.

To recap, in late November 2022, the U.S. Department of Labor (DOL) released a final regulation entitled, *Prudence and Loyalty in Selecting Plan Investments and Exercising Shareholder Rights.* The regulation is commonly referred to as the ESG rule.

It is important to note that the regulation was promulgated under the authority of the Employee Retirement Income Security Act (ERISA), which does not govern state and local governmental retirement plans. However, state and local officials, public pension boards, investment committees, and in-house and outside counsel often take DOL's regulatory pronouncements into consideration as they develop fiduciary standards and guidelines for investment-related decisions by public plan fiduciaries.

It's difficult to read any investment or financial media without seeing articles devoted to ESG investing. It has become a topic of heated debate. The bottom line, however, still remains that pension plan trustees and other fiduciaries must adhere to their basic fiduciary responsibilities of loyalty and prudence (including the duties of care, skill, and diligence) when making investment decisions.

The final regulation released by the Biden Administration makes clear at the outset that a fiduciary shall discharge their duties "…for the exclusive purpose of providing benefits to participants and their beneficiaries…" Furthermore, the regulation states that, "A fiduciary may not subordinate the interests of the participants and beneficiaries…and may not sacrifice investment return or take on additional investment risk to promote benefits or goals unrelated to interests of the participants and beneficiaries in their retirement income or financial benefits under the plans."

The final regulation also moves away from the standard included in the Biden Administration's proposed regulation, which was "(t)he projected return of the portfolio relative to the funding objectives of the plan…may often require an evaluation of the economic effects of climate change and other environmental, social, or governance factors on the particular investment or investment course of action." (Emphasis added.) While the proposed standard was still discretionary because of the use of the word "may," it would have taken us right to the brink of a regulatory requirement that in order to meet the fiduciary duty of prudence a fiduciary must consider ESG factors in all investment decisions.

Instead, the final regulation, in response to commenters who said the proposed language was a de facto mandate to analyze all investments through the ESG lens, replaced that standard with the following:

- Fiduciary's determination…must be based on factors…relevant to a risk and return analysis; risk and return factors may include the economic effects of climate change and other ESG factors; whether any particular consideration is a risk-return factor depends on individual facts and circumstances.

During the week of February 27, H.J. Res. 30 was approved by both houses of Congress. The resolution would overturn the Biden Administration's ESG rule. However, President Biden vetoed the resolution on March 20. Congress will not have two-thirds in either body to override the veto, so the Biden regulation will remain in place.

As we attempt to cut through the noise on this issue, we should recognize that there are substantive arguments being advanced. In general, Republicans are saying that then-President Trump's 2020 regulation (now superseded by President Biden's 2022 regulation) provided greater protection to plan participants. Specifically, a summary of their arguments follows:

- In the case of investments that fiduciaries are not able to distinguish based on pecuniary factors alone, the Trump rule allowed fiduciaries to use non-pecuniary factors as a tiebreaker, but only if accompanied by significant recordkeeping. Biden's regulation removed the recordkeeping requirement, arguing that it was onerous and would have a chilling effect on the use of non-pecuniary factors in a tiebreaker situation.

- The Trump rule disallowed the inclusion of any investment as a qualified default investment alternative (QDIA) if its objectives or goals or principal investment strategies include, consider, or indicate the use of one or more non-pecuniary factors. Biden removed this prohibition.

- Biden's regulation provides that fiduciaries of participant-directed individual accounts would not violate their duty of loyalty solely because they consider participants' preferences when assembling a menu of investment options, provided that fiduciaries conclude that accommodating these preferences will lead to greater participation and higher deferral rates.

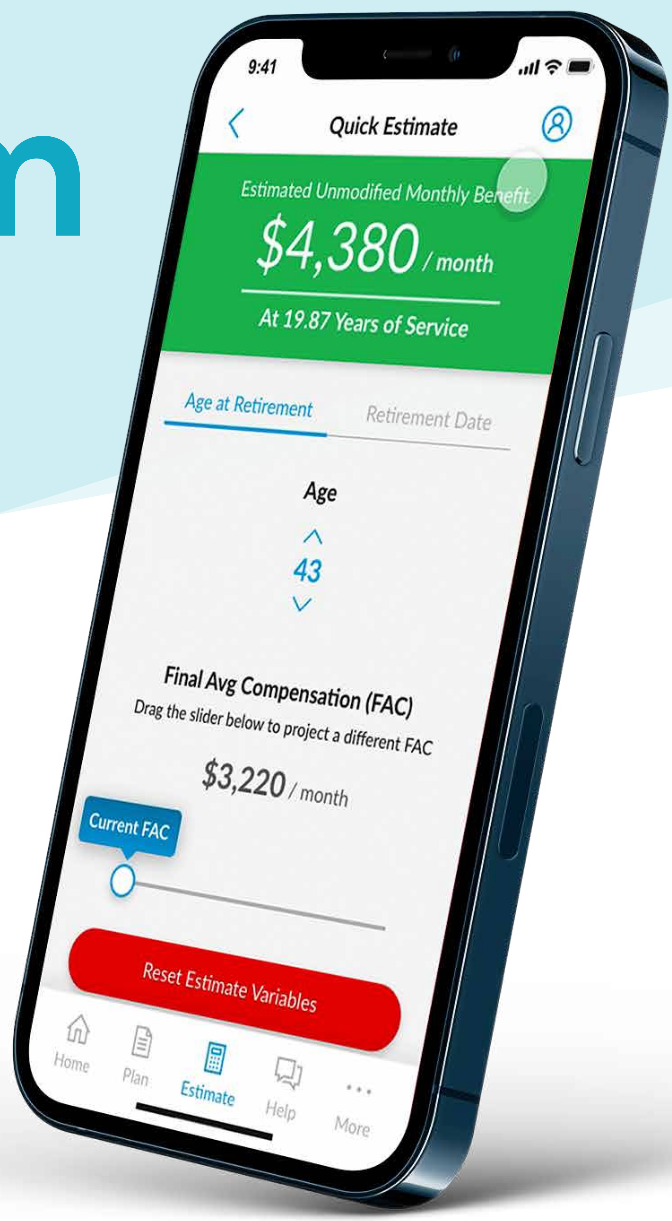
Republicans obviously want to go back to the Trump rule. Legislative efforts will continue in Congress and the lawsuits will work their way through the federal court system and, possibly, find an audience before the U.S. Supreme Court. The issue will also remain a hot button throughout this presidential election cycle.

Plan trustees and other fiduciaries have to pay close attention to the regulatory framework in their specific states and localities surrounding the use of ESG factors in investment decisions. There already has been considerable activity in state capitals and it is likely to continue.

Please be assured that NCPERS will keep you apprised of significant developments in the area of ESG investing. ◆

__Tony Roda__ is a partner at the Washington, D.C. law and lobbying firm __Williams & Jensen__, where he specializes in federal legislative and regulatory issues affecting state and local governmental pension plans. He represents NCPERS and statewide, county, and municipal pension plans in California, Colorado, Georgia, Kentucky, Ohio, Tennessee, and Texas. He has an undergraduate degree in government and politics from the University of Maryland, J.D. from Catholic University of America, and LL.M (tax law) from Georgetown University.

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.

NCPERS 1941 | pensionX

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

NCPERS Around the Regions

How Organized Labor in Michigan is Driving Historic Change

Last month, Michigan Governor Gretchen Whitmer signed two key bills into law. One law will phase out the tax levied by the state on retirement income, and the second repeals the state's "right-to-work" law. Both bills originated at a time when working men and women, especially those in labor unions, were under constant attack by Lansing lawmakers.

READ MORE *Source: NCPERS*

Kansas Pension Says New Anti-ESG Bill Could Cost $3.6 Billion in Returns

The $25 billion Kansas Public Employees Retirement System has determined that complying with Republican state legislators' latest anti-ESG bills would cost it $1.14 billion in forced divestitures and end up lowering returns by about $3.6 billion over the next decade. KPERS Executive Director Alan Conroy asked lawmakers to reject the bill as written.

READ MORE *Source: Institutional Investor*

Connecticut Municipal Pension Plan Debt Rises Dramatically, Putting Pressure on Towns

The Connecticut Municipal Employees' Retirement System (CMERS), which was established as a state-run employee pension option for towns and cities, has long been overlooked when it comes to Connecticut's pension debt. Aside from the working group of municipal and labor leaders, the Comptroller's office is also pursuing a regulatory change to update how and when a retired CMERS employee can receive a pension while working for another CMERS municipality.

READ MORE *Source: Inside Investigator*

Generous Benefits Keep Oregon Government Worker Pay Competitive, Study Finds

The state of Oregon continues to pay its workers competitive compensation despite pandemic fluctuations in the labor market, thanks largely to highly subsidized health insurance and generous retirement benefits, a new analysis by the state's human resources office has found.

READ MORE *Source: The Seattle Times*

DeSantis' Targeting of ESG Could Cost Taxpayers, Pension Fund Millions of Dollars

One analyst, Econsult Solutions Inc., calculated that if Florida were to enact anti-ESG banking restrictions similar to what Texas approved in 2021, it would cost taxpayers as much as $361 million in higher interest rates for municipal bonds because of the limited options the state would have in choosing bond brokers. Financial analysts also said it could affect millions of retired state employees invested in the state's $180 billion retirement fund because ESG issues do impact investment returns.

READ MORE *Source: Orlando Sentinel*

Illinois Bill Would Give Treasurer Proxy-Voting Power for State Public Pension Funds

If Senate Bill 2152 is passed by the Illinois legislature, the responsibility for proxy voting by the state's public pension funds will shift to Michael W. Frerichs, the state's treasurer. If passed, the bill would affect the Illinois Teachers Retirement System, the Illinois State Board of Investment, and the Illinois State Universities Retirement System.

READ MORE *Source: Pensions & Investments*

NCPERS Public Pension Profiles

NCPERS Public Pension Profiles series highlights the great work public pension staff are doing, showcases unique career paths, and gives visibility to NCPERS' member funds. Click the links below to read the most recent profiles. If you or a colleague is interested in being profiled, please contact communications@ncpers.org to schedule an interview.

El Paso Firemen and Policemen's Pension Fund Trustees

In honor of Women's History Month, NCPERS spoke with current trustees Lee Ellen Banks, Susanna Visconti, and Leila Melendez about why they serve the El Paso Firemen and Policemen's Pension Fund's members and the importance of diverse representation at the board level.

READ MORE

Educational Employees' Supplementary Retirement System (ERFC) Executive Director & CIO, Eli Martinez

"I was initially drawn to the public pension space because it gave me the ability to make a difference in my community while also doing something that I love," said Martinez.

READ MORE

Seattle City Employees' Retirement System (SCERS) CIO, Jason Malinowski

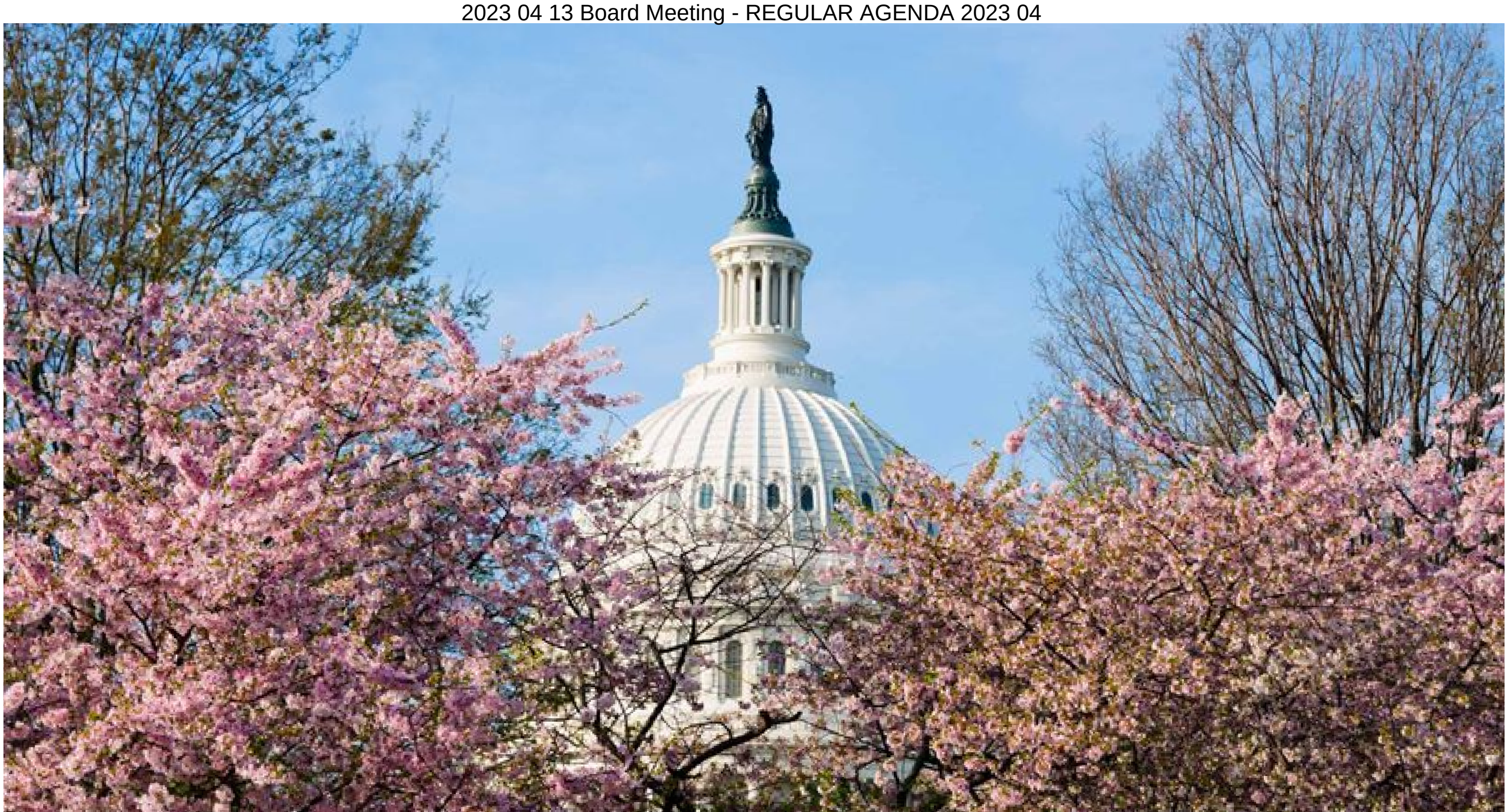
"From more of a macro perspective, we've thought a lot about how our liabilities should impact our investment strategy," said Malinowski.

READ MORE

Jacksonville Police and Fire Pension Fund (JPFPF) Executive Director, Timothy Johnson

"Pension administration technology is something to watch in 2023 and beyond," Johnson said.

READ MORE



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Calendar of Events 2023

May

NCPERS Accredited Fiduciary (NAF) Program

May 20–21
New Orleans, LA

Trustee Educational Seminar (TEDS)

May 20–21
New Orleans, LA

Annual Conference & Exhibition (ACE)

May 21–24
New Orleans, LA

June

Chief Officers Summit

June 19-21
Denver, CO

August

Public Pension Funding Forum

August 20-22
Chicago, IL

October

NCPERS Accredited Fiduciary (NAF) Program

October 21-22
Las Vegas, NV

Financial, Actuarial, Legislative, and Legal Conference (FALL)

October 22-25
Las Vegas, NV

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

The Voice for Public Pensions

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The Voice for Public Pensions

Spring 2023 | Volume 36 | Number 2

NCPERS Message

Public Pension Funding Ratios Increased in 2022, NCPERS Study Finds

Public pension funds' average funding ratio increased to 77.8 percent in 2022, with nearly 70 percent of pensions' revenue coming from investment returns, according to an annual study conducted by NCPERS.

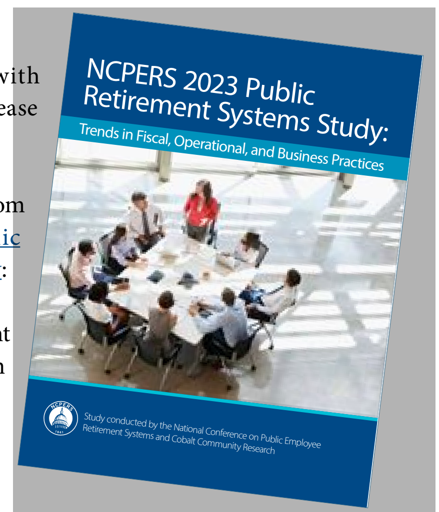
Now in its 12th year, NCPERS 2023 Public Retirement Systems Study: Trends in Fiscal, Operational, and Business Practices provides a benchmark for public retirement systems while tracking funds' fiscal conditions. A record 195 state and local government pension funds responded to the survey, which was conducted in the fall. These funds represent more than 19.6 million active and retired members with combined assets exceeding $3 trillion.

Public pension funds saw, on average, one-year returns of around 11.4 percent, down from 14 percent the year prior. Looking at asset allocations, real estate and private equity saw the largest average returns, at 19.2 and 33.7 percent respectively. There was not a significant shift in asset allocations year over year.

The study's findings highlight public pensions' resiliency in the face of volatile markets, rising interest rates, and disruption in the workforce during the COVID-19 pandemic. Despite the many unprecedented challenges that public pensions have faced in recent years, fund confidence remains high. Surveyed funds were asked, "How satisfied are you with your readiness to address retirement trends and issues over the next two years?" The average rating was 7.8 on a 10-point scale, down only slightly from the year before.

In addition to the report, an interactive dashboard (login required) is available exclusively to NCPERS members. Pension funds can use this tool to filter survey data in a number of ways to compare their performance, assumptions, and expenses to peer groups. Watch a tutorial here to take full advantage of the dashboard's features.

If you need assistance with your login credentials, please contact info@ncpers.org.



Among the key findings from the NCPERS 2023 Public Retirement Systems Study:

- The average investment assumed rate of return for pension funds was 6.86 percent.
- Both administrative and investment expenses were higher than the year before, with the average expense for all respondents increasing to 64 basis points.
- While investment returns are by far the most significant source of pension fund revenue at 68 percent, the average member and employer contributions each rose by one percentage point to 9 percent and 24 percent respectively.
- The aggregated average cost-of-living adjustments (COLAs) offered to members was 2.0 percent, which was slightly above the 1.7 percent COLA offered the year before.
- About 54 percent of the funds that participated in the survey said that environment, social, and governance (ESG) factors are somewhat or very important in their investment decisions.

Last month, NCPERS hosted a webinar to review the key findings. Watch on demand for additional insights from the study's lead researcher, William SaintAmour, Executive Director of Cobalt Community Research. ◆

In This Issue

Ready or Not – Revised ASOP No. 4 Is Here

By: Piotr Krekora, ASA, EA, FCA, MAAA, PhD, GRS Consulting

The Actuarial Standards Board (ASB) provides guidance regarding appropriate actuarial practice for a broad range of actuarial services through a series of Actuarial Standards of Practice (ASOPs), including actuarial services related to pension and retiree group benefit obligations. In December 2021, the ASB adopted revisions to ASOP No. 4 entitled *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised standard is effective for any actuarial report with a measurement on or after February 15, 2023 that is issued on or after that date.

Actuarial practice is constantly evolving with changing needs of users of actuarial services and changing environments in which those services are performed, which is particularly evident in the area of retirement practice. This evolution has been reflected through multiple revisions to ASOP No. 4, first adopted in 1990 under the title "Recommendations for Measuring Pension Obligations".

For public plans, the most recent ASOP revisions can be placed in two categories: (1) Low-Default-Risk Obligation Measure (LDROM) calculation and disclosure, and (2) other revisions.

LDROM had already garnered considerable attention both within and outside the pension actuarial community. It can be thought of as the value of the plan's liabilities using an interest rate, or rates, derived from low-default-risk fixed income securities. In terms of the current practice, this would be a liability determined for a plan investing all its assets in such securities. This disclosure needs to be accompanied by commentary to help the intended user understand the significance of LDROM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. The rationale for the LDROM disclosure was included in the ASB's transmittal memorandum to the revised ASOP No. 4:

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

Other ASOP revisions of significance and interest to public plans are the calculation and disclosure of a reasonable actuarially determined contribution, additional considerations regarding amortization policy, and additional assessments of the implications of the plan's funding policy. These new requirements are generally intended to promote good actuarial practices and as such should not affect many public plans significantly as their reports may already comply with many of the other ASOP No. 4 revisions.

LDROM had already garnered considerable attention both within and outside the pension actuarial community.

While it is difficult to determine if the new requirements were shaped or influenced by comments from parties outside the actuarial profession, many revisions were inspired by a desire within the actuarial community to better address various types of risks affecting retirement systems (although ASOP No. 4 does not directly require risk assessment disclosures). As actuaries begin implementing the new requirements during the upcoming valuation season, many trustees and stakeholders will scrutinize the new information in their reports. Careful communication and commentary will be critical to meeting the goal of helping the intended users better assess long-range health of their retirement systems. ◆

Note: The views expressed in this article are those of the author.

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Piotr is a member of the GRS Office of the Chief Actuary. In this capacity, he provides strategic thought leadership to public sector clients as well as ensuring that service is being provided at the highest level by all GRS employees.

Piotr's actuarial expertise covers all aspects of public sector pension and retiree health plan design and operation, including pension and OPEB valuations, asset simulation and cash flow studies, pension and retiree health care studies, cost analyses of proposed plan changes, liability and contribution projections, and designing and implementing cash balance plans as well as other alternative designs.

NCPERS Asset Manager

Navigating a Paradigm Shift

By: Bryant VanCronkhite, CFA, CPA, Allspring Global Investments

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What is the biggest risk that equity investors face today?

In my view, the most underappreciated development for equity markets today is the paradigm shift that has taken place in monetary policy following the pandemic. The Federal Reserve has a dual mandate of supporting price stability and full employment. Other central banks have similar competing objectives. The fundamental challenge today is that pursuing both goals will require increasingly different policy prescriptions going forward. Something will have to give, and I think this fact is still dawning on markets.

What changed? In the decades leading up to the pandemic, inflationary pressures created by massive liquidity injections and ultra-low interest rates were offset by deflationary megatrends, such as the offshoring of production to low-cost centers. Today, some of the deflationary trends related to globalization have been reversed, and markets are now coming to terms with structurally higher prices and a growing recognition that central banks may be unwilling or unable to step in and spur growth as they had in the past. Everyone is talking about this now, but I think few have fully comprehended the end game.

In my view, the most underappreciated development for equity markets today is the paradigm shift that has taken place in monetary policy following the pandemic.

So how does this shake out?

There are many zombies masquerading as viable businesses that will soon be exposed as growth inevitably slows in 2023. To see why, consider that the prescription for survival in this environment is the ability to relocate supply chains, secure scarce energy supplies, and invest in further automation and efficiency solutions that can sustain production. These are all costly investments that only companies with financial strength can make. Second, companies will need to raise prices to protect margins and sustain free cash flows, and only companies that hold a strong competitive position will have the ability to do so. The upshot is that, sooner rather than later, you will likely see a growing stratification of markets into winners and losers.

There are many zombies masquerading as viable businesses that will soon be exposed as growth inevitably slows in 2023.

How should equity investors respond?

Active approaches will likely present a much stronger value proposition to investors going forward. Many of the factors that allowed weak companies to keep pace with better-run companies in the years leading up to the pandemic also allowed broad index-tracking strategies to flourish. Everyone won in that environment, which diminished the importance of individual stock selection. Today, that dynamic has flipped. As fundamentals take the leading role in driving return dispersion, I think investors can respond by allocating to investment strategies that actively exploit divergence in fundamentals.

As for our brand of active management, we have long discussed how balance sheet strength foretells the level of flexibility a company has to react to change—to make accretive acquisitions and capital expenditures, invest in research and development, or generate yield by returning cash to shareholders. We use our process to gain confidence in a company's competitive advantage; to ensure it has the willingness and ability to raise prices to offset increased investment needs; and to determine it is making the right investments that will allow success and separation from the pack over the next one, three, or five years. This focus has served us well in prior market cycles, and I think it will do so again in the face of the structural challenges I described. ◆

Disclosures:

Bryant VanCronkhite *is a managing director, co-team leader, and senior portfolio manager for the Special Global Equity team at Allspring Global Investments. Prior to this, Bryant was a senior research analyst on the team, which he joined in 2004 before the acquisition of Strong Capital Management. He began his investment industry career in 2003. He earned a bachelor's degree and a master's degree in professional accountancy from the University of Wisconsin, Whitewater.*

How to Prepare for Your New Pension Administration Solution

By: Laurie Mitchell, Tegrit Software Ventures, Inc.

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Replacing or reinventing your pension administration solution (PAS) is a significant undertaking for any sized pension plan. It is both a financial burden and a source of stress for staff that typically lasts several years. Being fully prepared before you begin can reduce stress, cost, and delivery time. Here are a few pre-RFP activities that will help your staff and your vendor be successful sooner:

Being fully prepared before you begin can reduce stress, cost, and delivery time.

1. Evaluate the condition of your data – is it accurate? Current? Do you have multiple, fugitive data sets that need to be combined? Depending on what your evaluation shows, you may want to hire a data management vendor to cleanse your data before starting the project. Your data vendor will need about six months effort before your PAS vendor can start.

2. Decide which subject matter experts (SMEs) will support what types of functionality (e.g., wages, service, payroll, member statements, etc.). Ensure that your SMEs fully understand their current processes, are aligned with the leadership in terms of how much change to the current processes you are willing to tolerate, and are authorized to provide candid feedback during requirements review. When SMEs are empowered to make decisions, the requirements process moves faster.

3. If current processes are not documented, write them down. This doesn't need to be extensive; it just needs to be articulated clearly so everyone understands your 'As Is' process. This avoids the need for your vendor to affirm the As Is with your SMEs before starting on the 'To Be' process.

4. Collect, review and update the forms and letters that you send to your members regularly, including your Member Statement. Think about what you like and don't like about these letters before you enter requirements gathering.

5. Consider budgeting for temporary staff who can step in behind your permanent staff and keep the wheels on the current bus while your permanent staff builds the new

bus. This is most helpful during requirements gathering. Knowing their customers are being served gives your staff relief and allows them to focus on the new work without being overwhelmed. Your staff will be grateful that you considered their wellbeing and will be able to focus better on your new solution.

6. Ensure that there is time and space reserved for collaboration. This would be a room/area (physical or virtual) that is set aside for team members to gather as needed to look at a design, discuss a requirement or document an issue.

7. Plan for milestone celebrations. For example, when a major release is deployed, take time to celebrate all the hard work with the project team (your internal staff, your consultants and your vendor). That brief pause before starting the next phase lets the team recognize their collective accomplishments. Celebrating together supports healthy team dynamics and fuels collaborative energy.

8. Change management is critical for success. Help your team adapt to new processes and the new system by scheduling frequent hands-on opportunities to view and play with the new system. Your staff – even those who aren't involved in the new development – will feel more engaged and more enthused about the project when they can touch it regularly. It would be ideal to plan for this time at the start of your project and announce it to your staff so they know their concerns were considered from the beginning.

9. COVID and other viral illnesses will remain a challenge for on-premise activities for you and your vendor. Ensuring that you have the equipment necessary for your team members to conduct project work remotely is ideal and could avoid a project delay while equipment/training is established. ◆

__Laurie Mitchell__ has worked in the pension industry since 2003 when she joined the Michigan Office of Retirement Services. There she served in many roles, including leading portions of their pension replacement project, and served eight years as their Customer Service Director. After retiring, she joined Tegrit where she brings an agency perspective to their RFP responses and project implementations.

Five-Year Market Outlook: How Slow Growth Transitions and Inflation Recalibration Impact Pension Plans

By: Bob Parise, Northern Trust Asset Management

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With below-average returns expected over the next five years, getting asset allocation right will be paramount in maintaining funded status. We expect slower economic growth and higher interest rates to result in below-average five-year returns for most asset classes used by pension plans (**Exhibit 1**). Equity returns are challenged by a lower valuation ceiling and profit margin compression because of higher interest rates. Below-average returns would create hurdles for pension funds looking to build cost-efficient, lower-risk portfolios with adequate performance over the next five years.

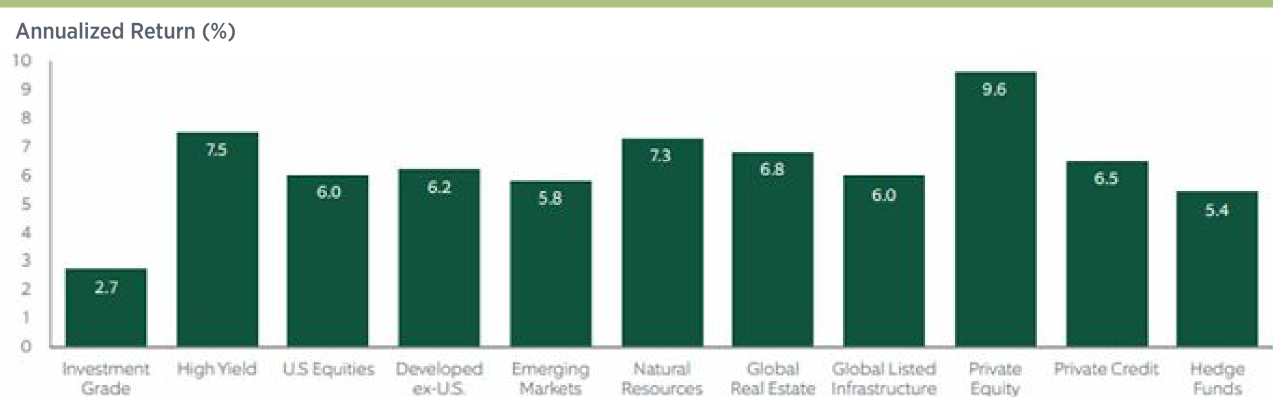
Slow Growth Transitions

The shifts from pandemic to endemic, globalization regionalization and fossil fuels to renewable energy represent economic challenges for a global economy already facing high debt and changing demographics.

Key Considerations for Pension Plans

As slow economic transitions unfold over the next five years, market volatility and uncertainty will likely remain high, due to slower growth expectations. Various economic factors, including weakened economic growth and lingering supply chain issues, are new to investors and add to the potential for negative market surprises given this combination of market concerns is historically

EXHIBIT 1: FIVE-YEAR FORECASTS FOR KEY ASSET CLASSES



Northern Trust Asset Management, Bloomberg. Annualized return data in local currency from 6/30/2017 to 6/30/2022. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Past performance is not indicative of future results.

unprecedented, especially given the push towards economic globalization in recent decades. Lower volatility equities have historically demonstrated asymmetric returns, meaning they tend to capture more upside when equities gain than downside when equities fall, as shown in **Exhibit 2**. This has increased the chance of outperformance amid turbulent markets.

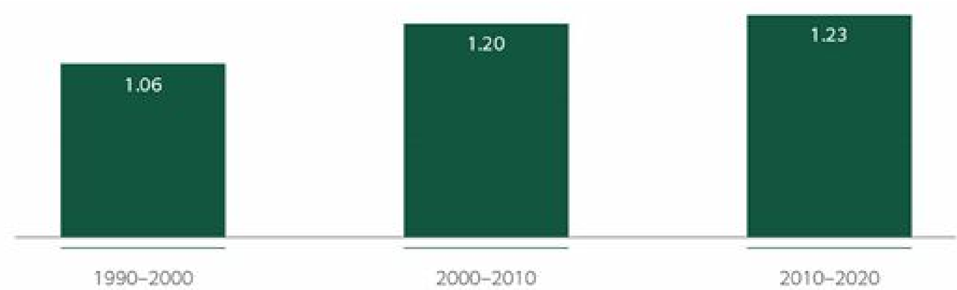
Inflation Recalibration

Post pandemic global supply chain complications and worker shortages left a bigger mark than expected on inflation. Still, many investors and policymakers believed inflation was "transitory" and would eventually revert to normal levels. This all changed with the

EXHIBIT 2: THE ASYMMETRIC RETURN PROFILE OF LOW VOLATILITY STOCKS

Over the past three decades, the ratio of upside capture to downside capture in the Russell 1000 Index has increased, a return profile that makes outperformance more likely during turbulent markets.

Up/Down Capture Ratio of Low Volatility Equities[1]



	1990–2000	2000–2010	2010–2020
Up Market Capture Ratio	82%	66%	84%
Down Market Capture Ratio	78%	55%	68%
Up/Down Capture Ratio	**1.06**	**1.20**	**1.23**

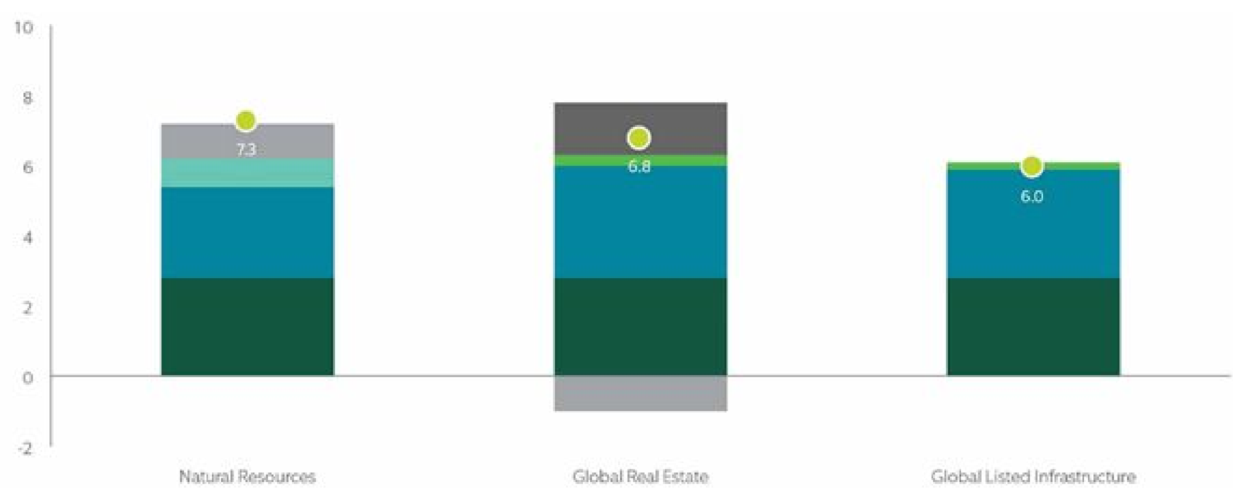
[1]Low Volatility research portfolios are formed by selecting the bottom 30% of securities ranked by trailing 1-year daily volatility. Research portfolios are capitalization weighted and rebalanced quarterly.

Source: Northern Trust Asset Management, FactSet, Russell 1000 Universe, 12/31/1989 through 12/31/2019. For illustrative purposes only. Past performance is no guarantee of future results. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index.

EXHIBIT 3: DIVERSIFICATION ON DISPLAY

Real assets should shine in a more uncertain and higher inflationary risk regime.

Northern Trust Five-Year Annualized Real Assets Return Forecast (%)



Source: Northern Trust Asset Management, Bloomberg.

war in Ukraine, which triggered soaring food and energy prices. The inflation genie escaped the bottle and putting the genie back will take some time. Still, we believe the worst has passed and we expect inflation to moderate gradually.

Key Considerations for Pension Plans

With likely elevated inflation for a while, plans need to reassess the risks inflation creates in their portfolios. Real assets can provide protection against unexpected inflation, while real estate and listed infrastructure offer additional risk exposures for portfolio diversification and higher yields than traditional equities.

__Bob Parise__ is managing director, head of sales and relationship management, and practice lead for public funds and Taft-Hartley plans for the institutional client group at Northern Trust Asset Management. He is a member of the Business Leadership Council. Bob collaborates across sales and client relationship management to establish business strategy and lead the delivery of investment solutions in the equity, fixed income and alternative asset classes. Bob has more than 25 years of industry experience. He holds a bachelor's degree in business with an emphasis in finance from Western Illinois University and an MBA from DePaul University.

Final Thought: Be Creative With Risk

We anticipate some deterioration in the challenging equity environment ahead with developed market corporate profit margins at historically high levels. Plans will need to be nimble and dynamic with their risk budgets in order to hit their short- and long-term return targets. Given slow growth and elevated inflation, plans can look to private markets or low volatility strategies to close the forecasted return gap from their equity allocations over the next five years.

To learn more about how to position your portfolio to achieve your plan's objectives over the next five years, contact Bob Parise. ◆

Disclosures:

For more information about disclosures, please view page 7 of *the full paper*.

Pension Industry Careers: Job Listings, Hiring, and Retirement Announcements

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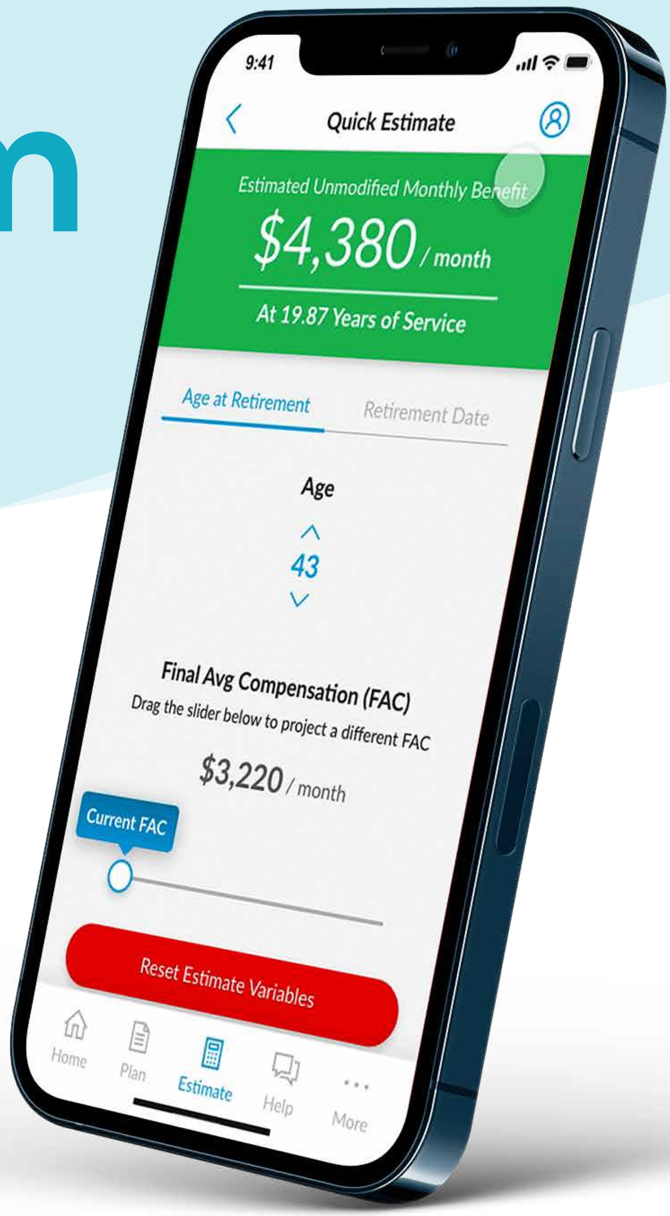

NCPERS has partnered with Digital Deployment to offer its members a **10% DISCOUNT** on PensionX, the premier digital platform that securely enables pensions to engage with active and retired participants via a mobile self-service app and portal.

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Balancing Costs of Retiree Healthcare with the Retiree Experience

By: Trevis Parson, WTW

Plan sponsors and participants are both under increasing financial pressure.

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Costs are on the rise. As the nation experiences the effects of inflation on fuel, food and housing, retired Americans on fixed incomes especially feel the pinch.

While these increases may feel modest, larger cost increases on other major budget items leave little room for healthcare expenses and may force seniors to forgo necessary healthcare. For many retirees fortunate enough to have coverage from their former employer, especially those in plans with fixed-dollar benefit caps, the costs have become so great that retirees are waiving former employer coverage altogether.

In 2023, healthcare costs are projected to increase

4.8% Up from 3.6% in 2022 for Pre-Medicare retirees

2.7% Up from 2.1% in 2022 for Medicare-eligible retirees

Sponsors are looking for ways in which they can balance economic pressures with the need to best attract and retain talent, while honoring commitments to healthcare retirees value.

Retiree medical plan sponsors feel the pressure, too. Not only from rising fuel prices driving up input costs, but also from rising interest rates that squeeze investment opportunities and tight labor markets that pressure the workforce balance. Sponsors are looking for ways in which they can balance economic pressures with the need to best attract and retain talent, while honoring commitments to healthcare retirees value.

Unfortunately, many sponsors struggle to find the balance and offer that value as the retiree healthcare landscape continues to respond to economic and legislative change.

49% say that benefits are too expensive to maintain,

33% feel the need to reduce the burden of benefit administration, and

36% seek to reduce financial risks.

63% of sponsors recently surveyed plan to make changes to their retiree healthcare benefits over the next three years, even as 37% have already implemented some degree of changes in the past three years.

Opportunities exist for plan sponsors to improve the value of retiree healthcare benefits.

For Medicare-eligible retirees, Medicare Advantage plans can provide incremental financial value above and beyond traditional Medicare. This has driven Medicare Advantage enrollment to nearly half of all Medicare members. The great majority of these Medicare Advantage enrollees are in individual products — many purchased with the help of a private marketplace. Others enroll through group Medicare Advantage plans sponsored by their former employer. With respect to prescription drug benefits, the Inflation Reduction Act is improving Medicare Part D by eliminating catastrophic cost sharing and implementing a maximum out-of-pocket limit of $2,000 per person per year beginning in 2025.

For Medicare-eligible retirees, Medicare Advantage plans can provide incremental financial value above and beyond traditional Medicare.

In the absence of Medicare, costs for health plans for retirees not yet 65 are much greater to many of those retirees and their employers. Some employers couple their Pre-Medicare retirees with their active employee populations to spread the higher retiree cost and risk over a larger population. However, in a tight labor market and with affordability a key concern, employers need more effective solutions.

Fortunately, recent legislation has provided cost-effective alternatives. Recent legislation established federal premium tax credits to reduce premiums for individual health insurance. These premium tax credits have fueled enrollment growth in individual plans, which is driving increased carrier participation and premium stability in the individual health insurance market. As a result, employers are looking to shift scarce financial resources away from their current group plan for retirees and toward the purchase of health insurance through an individual marketplace.

1 in 5

plan sponsors (22%) have moved or are considering moving away from their Pre-Medicare group plan.

The current economic environment is challenging to both plan sponsors and participants to find new value in retiree healthcare benefits. Today's market offers many new opportunities to both provide retirees more benefit security and provide sponsors the flexibility to more affordably offer retirees the benefits they value.

Trevis Parson, FSA, MAAA, FCA *is an expert on exchange-based healthcare offerings and has worked with many employers to redesign their retiree medical plans to reduce benefit and administrative costs while providing retirees enhanced choice and value. He currently serves as Chief Actuary of the Individual Marketplace for Via Benefits by WTW.*

High Yield: A Compelling Risk-Reward Picture for Long-term Investors

By: Chris Sawyer, Adrienne Butler, and Scott Roth, Barings

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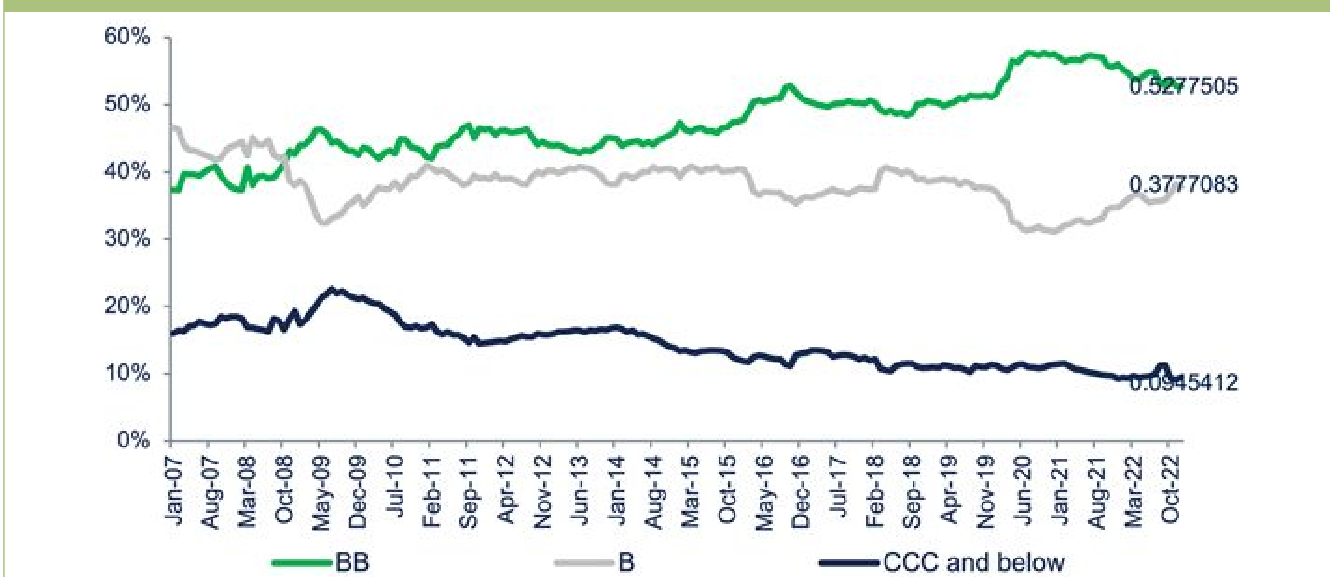
The list of factors driving uncertainty across financial markets is long. But for longer-term investors, high yield bonds and loans continue to present compelling total return opportunities.

Earnings in Focus

If 2022 was the year of interest rate volatility, corporate earnings will likely take center stage in 2023. As inflation climbed last year, many companies maintained enough pricing power to pass higher costs through to their customers; earnings, as a result, remained more durable than some market participants were expecting. Looking across the high yield universe today, the fundamental picture seems to be darkening. For one, the lagging effect of 2022's rate hikes has started to stress parts of the economy and is beginning to impact aggregate demand. Compounded by still-elevated labor costs, the ability of companies to pass through higher prices is starting to deteriorate, which will likely lead to some contraction in earnings going forward.

A HIGHER-QUALITY HIGH YIELD MARKET



The technical picture has also remained challenging for high yield, particularly loans, against a backdrop of more challenging liquidity and retail outflows in the U.S. Compounding this, there has been a continued lack of new collateralized loan obligation (CLO) issuance, which has historically accounted for a large portion of loan demand.

On the positive side, most high yield issuers still have the flexibility to continue to service their debt through a period of economic weakness and remain in a stronger financial position today than they would have been before the pandemic. At the same time, the credit quality of the high yield market has improved considerably over the past 15 years—BB issuers comprise 53% of the market, while single-B companies make up 38%.

While the difficult macroeconomic environment is unlikely to fade anytime soon, mild recessions have not necessarily been bad environments for high yield markets in the past.

Attractive Total Return Potential

While the difficult macroeconomic environment is unlikely to fade anytime soon, mild recessions have not necessarily been bad environments for high yield markets in the past. Investors who stayed invested in high yield through periods of volatility, and even economic decline, have historically been rewarded with attractive, long-term returns. This is partly because high yield, unlike equities, does not require strong economic growth to perform well. Rather, what matters more is an issuer's ability to continue to meet the interest payments on its outstanding debt obligations. Slow GDP growth, or even a short period of mildly negative growth, is unlikely to drive significant increase in defaults—particularly across a higher-quality market with solid underlying fundamentals.

In the event of a recession, the potential downside in credit is also likely to be more limited given how challenging 2022 was for most financial markets. While spreads would likely experience some widening from current levels, we do not expect material widening to the extent that total returns would turn negative—particularly given the higher quality of the market and solid fundamental backdrop.

Focusing on the Long Term

In the current environment, investors do not need to take on excessive risk to earn potentially attractive returns. In higher-rated parts of the bond and loan universe, the risk-reward picture remains compelling. However, a credit-intensive approach is crucial—to not only avoiding additional downside, but also identifying issuers that can withstand today's headwinds. ◆

Adrienne Butler *is Co-Head of Barings' U.S. High Yield Investments Group and Head of U.S. CLO Funds. She is also a member of the U.S. High Yield Investment Committee. She is responsible for new CLO marketing and formation as well as existing CLO portfolio management. Adrienne has worked in the industry since 1990 and her experience has encompassed sell-side relationship banking, media and telecom specialty lending, and CLO portfolio management. Prior to joining the firm in 2002, she was part of the acquisition of First Union Institutional Debt Management ("IDM"), where she was a senior analyst in IDM's Loan Research Group. Before IDM, she was a vice president/relationship manager at First Union Corporation and worked in corporate banking at First Union National Bank of South Carolina. She also served as a loan officer at NationsBank. Adrienne holds a B.A. from Furman University and an M.B.A. from University of Notre Dame's Mendoza College of Business.*

Scott Roth *is Co-Head of Barings' U.S. High Yield Investments Group, Chair of the U.S. High Yield Investment Committee and a member of the Global High Yield Allocation Committee. His responsibilities include portfolio management for various high yield bond total return strategies. Scott has worked in the industry since 1993 and his experience has encompassed fund management, underwriting, leveraged loans and high yield. Prior to joining the firm in 2002, he was a vice president at Webster Bank and was a high yield analyst at Times Square Capital Management. He also served as an underwriter at Chubb Insurance Company. Scott holds a B.B.A. from Western Michigan University, an M.B.A. from the Ross School of Business at University of Michigan and is a member of the CFA Institute.*

Chris Sawyer *is Head of Barings' European High Yield Investments Group as well as a member of the firm's European High Yield Investment and Global High Yield Allocation Committees. Chris is responsible for the portfolio management of several loan, high yield bond and multi-credit strategies. Chris has worked in the industry since 2005. Prior to joining the trading team in 2008, he was a member of the portfolio monitoring team where he was responsible for the ongoing credit analysis of individual portfolio assets. Chris holds a B.Sc. in Economics and Business Finance from Brunel University.*

Turning Points for 2023

By: Olga Bitel and Hugo Scott-Gall, William Blair

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Hugo: We've walked together through a tumultuous 2022, and now we're ready to peer into 2023. As you consider all the variables, what looks different to you this year in terms of where we might find growth?

Olga: The first trend reversal we need to talk about is the fed funds rate. The U.S. central bank is likely to stop tightening in 2023. The second likely big reversal is the depreciation of the U.S. dollar vis-à-vis other major currencies. Interacting with both of these potential shifts is China's reopening. As a result, we are likely to get not only a boost in production but perhaps also a short-term boost in consumption and growth in and outside of China.

Hugo: What's your model for how to think about investing around a weaker dollar?

Olga: The period that we look to be entering in the 2020s is most reminiscent of the last what I would call "normal" expansion that we experienced, which was 2003 to 2007. A lot of the changes that we're highlighting today are exactly the same macroeconomic setup as we experienced then. That period of economic expansion was extremely fruitful for equities. We saw equities markets returning around 15% on average during that entire time period, and virtually all of that performance was driven by earnings growth. Obviously, the types of companies that lead the charge this decade are likely to be different. But the broad macroeconomic environment may very well end up being similar.

Hugo: It was put to me that the next bull market will begin when the following conditions are met. The first is that the darlings of the previous bull market—big tech, high growth—are derated sufficiently, such that investors no longer view them as outperformers. The second is that there's some kind of credit event caused by this steep slope of Fed tightening. The third is that the dollar breaks.

Olga: We already have at least two of the three conditions, and possibly all three. In terms of a major credit event, these are devilishly difficult to forecast. Obviously, the more the Fed raises

The period that we look to be entering in the 2020s is most reminiscent of the last what I would call "normal" expansion that we experienced, which was 2003 to 2007.

rates from here, the greater the probability of such an event. We've had a series of smaller credit events in 2022, so some of the weaker sovereigns have already defaulted and have asked for IMF help. We've also had the crypto explosion; the value of the bitcoin trade is roughly a third of what it was at the beginning of 2022.

None of these feels like a whale. But I don't know if we need a credit event of the magnitude that people evoke when they talk about the 2008 global financial crisis.

The shakeout in the consumer-facing technology platforms that have been dominant in the past decade is definitely giving way to something. Now, what is that something? Are we on the cusp of another commodity supercycle? Maybe we need a lot more lithium and nickel, if we're all to be driving electric vehicles by the end of the decade. U.S. scientists recently announced a major breakthrough in nuclear fusion. COVID has exposed all sorts of vulnerabilities in the superefficient supply chains; we may see more duplication and production for the domestic markets that are closest to you. What underpins growth in virtually every sector today is semiconductor chips. The example that I've been thinking about a lot recently is 5G buildout. For now, I see no obvious candidates to lead the next bull market, but it almost certainly won't be the winners of the past decade.

The shakeout in the consumer-facing technology platforms that have been dominant in the past decade is definitely giving way to something. Now, what is that something?

This article is excerpted from our blog, which you can [read in full here]. ◆

Olga Bitel, *partner, is a global strategist on William Blair's global equity team.*

Hugo Scott-Gall, *partner, is a portfolio manager and co-director of research on William Blair's global equity team.*

The Cost of Corporate Fraud

By: Domenico Minerva and Michelle Cooper, Labaton Sucharow LLP

Photo Illustration © 2023 shutterstock.com

Researchers from the University of Toronto, the University of California at Berkeley, and the University of Chicago recently published a study using statistical analyses to determine the prevalence of corporate fraud.[1]

The researchers attempted to answer an important question: "is the fraud we observe the whole iceberg or just its visible tip?" Their study endeavored to answer this question by estimating the ratio of the "exposed tip to the submerged portion" to determine the "hidden prevalence of fraud."

To calculate that ratio, the study uses a few approaches previously employed by other academics. However, it also introduced a novel approach based on a natural experiment made possible by the demise of auditing firm Arthur Andersen (AA) in the wake of the Enron scandal in the early 2000s.

As background, the Enron accounting scandal came to light in 2001. Later that year, The New York Times ran an article with the headline "From Sunbeam to Enron: Andersen's Reputation Suffers," reporting that former AA clients were under enhanced scrutiny for fraud.

The researchers described their methodology, stating, "the simple idea is that after the AA demise, former AA clients were subject to vastly increased scrutiny" from new auditors and other fraud detectors—including "the media, investment intermediaries, short-sellers, and their internal gatekeepers"—with strong incentives to uncover any fraud committed by former AA clients.

The researchers attempted to answer an important question: "is the fraud we observe the whole iceberg or just its visible tip?"

Based on statistical analyses of former AA clients before, during and after this period of enhanced scrutiny, the researchers concluded that "fraud is indeed like an iceberg with significant undetected fraud beneath the surface." Indeed, they determined that:

- ***Two out of three*** corporate frauds go undetected,
- ***10 percent*** of large corporations commit securities fraud each year, and
- The costs borne by equity holders in companies involved in fraud totaled approximately ***$830 billion*** in 2021 alone. ◆

Footnotes:

[1] Alexander Dyck, et al., *How pervasive is corporate fraud?*, Rev. Acct. Stud., Jan 5, 2023.

Domenico "Nico" Minerva *is a Partner in the New York office of Labaton Sucharow LLP. A former financial advisor, his work focuses on securities and consumer class actions and shareholder derivative litigation, representing Taft-Hartley and public pension funds across the country. Nico advises leading pension funds and other institutional investors on issues related to corporate fraud in the U.S. securities markets.*

Michelle V. Cooper *is an Associate in the New York office of Labaton Sucharow LLP. Michelle focuses on litigating securities fraud class actions on behalf of institutional investors.*

Are Higher Interest Rates a Silver Lining for Public Pension Funds?

By: Bill Hallmark, ASA, EA, MAAA, FCA, Cheiron

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The Federal Reserve is aggressively raising interest rates to tame high inflation.

The federal funds rate, set by the Federal Reserve, has risen from near zero in March 2022 to almost 5% in February 2023, and is expected to continue rising and remain above 5% into 2024.

As a result, mortgage and other borrowing rates have increased dramatically, slowing demand, and raising the possibility of a recession. But, there may be a silver lining for public pension plan sponsors. Higher interest rates make public pension plans less expensive because they increase the investment returns plans can expect.

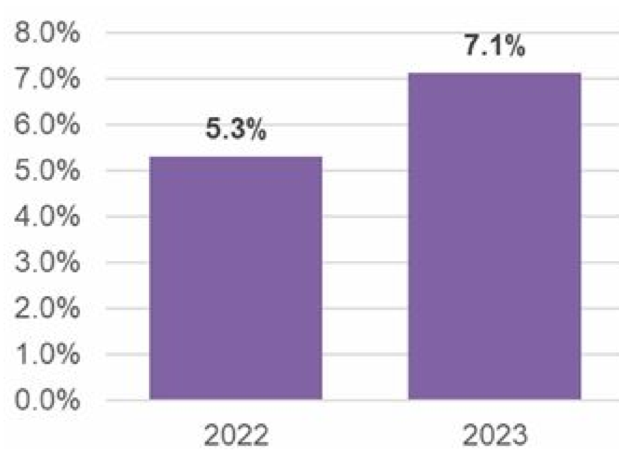
Impact of Higher Interest Rates on Public Pension Plans

Capital market assumptions for 2023 are significantly higher than 2022, reflecting the change in interest rates and their impact on asset valuations. If high interest rates persist, public pension plans will have the opportunity over the next few years to consider increasing margins for conservatism in assumed investment returns, reducing investment return volatility, and increasing their discount rates.

It isn't clear yet whether the higher interest rates will be temporary or represent a longer-term change. Plans are likely to take a cautious approach to any changes, as they did when interest rates dropped during the Great Recession.

10-Year Capital Market Expectations

75% Equity / 25% Bond Portfolio



Author's calculations based on average capital market assumptions for BlackRock, Callan, and JP Morgan

For 2023, there should be considerably less pressure to reduce discount rates than in the last several years, and some plans may even consider increasing their discount rate. Most plans, however, will likely wait to make sure the change in return expectations is not temporary before making any adjustment to their discount rates. If higher interest rates prove to be temporary, plans will have been prudent in waiting and avoiding the need to reverse course when interest rates come back down.

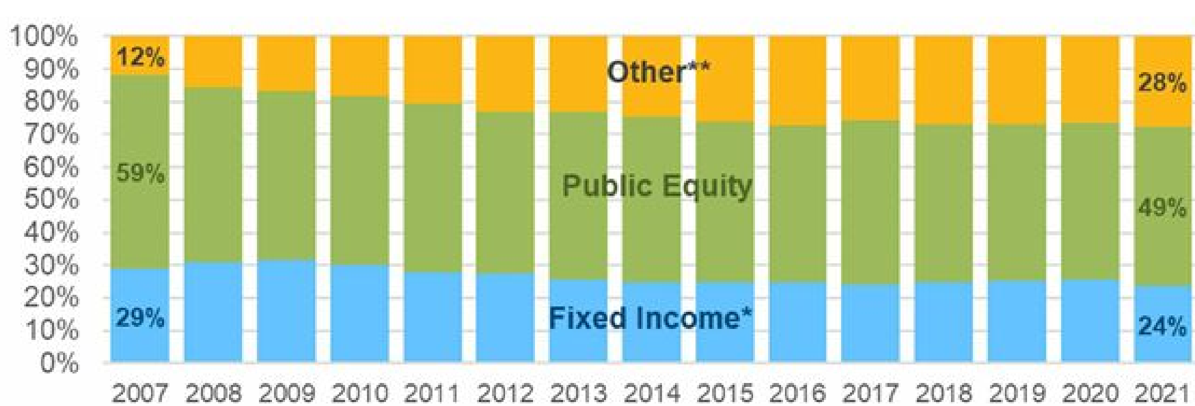
Historical Impact of Declining Interest Rates on Public Pension Plans

The situation today appears to be the reverse of what pension plans experienced over the last 15 years of declining interest rates. In 2007, the yield on the 10-year Treasury was higher than 5% but following the Great Recession it dropped to between 1.5% and 3% and with the onset of the pandemic it dropped to below 1%. While public plan discount rates are not tied directly to these interest rates, the median discount rate for public pension plans dropped during this period to 7% from 8%, increasing the measure of plan liability for a typical public plan by 12% to 15%.

Median Public Plan Discount Rate

Chart from ***Cheiron Public Plan Data Tool*** *using data from the Federal Reserve and PublicPlansData.org*

Average Public Plan Asset Allocation



* Fixed Income includes cash

** Other includes hedge funds, private equity, real estate, alternatives and commodities

Chart from ***Cheiron Public Plan Data Tool*** *using data from PublicPlansData.org*

At the same time, public plans adjusted their investment strategies to improve the chance of achieving their expected returns in the low interest rate environment, boosting their holdings of hedge funds, private equity, real estate, and alternatives while reducing fixed income and public equity holdings. These changes raised investment return expectations but also increased the volatility of public plan investment returns.

In short, higher interest rates provide some welcome relief to public pension plan sponsors, immediately reducing the pressure to take additional investment risks or further lower the discount rate. If higher rates persist, some of the difficult trends of the last 15 years may start to unwind. ◆

__Bill Hallmark__ is a consulting actuary at Cheiron Inc. He is a nationally respected retirement consultant with more than three decades of experience advising pension plans. He often speaks about public pension plans at industry conferences. Hallmark has held various positions with professional organizations, including vice president of pensions for the American Academy of Actuaries. He is an Associate of the Society of Actuaries, an Enrolled Actuary under the Employee Retirement Income Security Act (ERISA), a member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries.

Global Securities Class Action Landscape: 2023 Outlook & Trends

By: Mike Lange, Esq., Emily Fortin, Esq., and Colin Holmes, Esq., Financial Recovery Technologies

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Now that 2022 has closed and 2023 is in full-swing, our in-house legal experts shared their insights into what impacted the global recovery landscape last year and trends expected in 2023 for U.S. Settled Securities and Antitrust, and Non-U.S. Litigation.

U.S. Settled Securities

In 2022, core U.S. securities class action filings were flat year-over-year (201 versus 200), while settlements were up 18% by number (144 vs 122). There were 103 matters disbursed. Among the 10 largest (shown below) were the Wells Fargo Fair Fund and a second FOREX antitrust payout.

Settlement	Disbursement Amount
(FX OR FOREX) FOREIGN EXCHANGE BENCHMARK RATES	$706,065,555
WELLS FARGO SEC FAIR FUND	$500,000,000
FIRST SOLAR, INC. SECURITIES LITIGATION (12CV00555DGC)	$350,000,000
SIGNET JEWELERS LIMITED, SECURITIES LITIGATION (16CV06728)	$240,000,000
SNAP, INC., SECURITIES LITIGATION (17CV03679) (FEDERAL CASE)	$154,687,500
DAVITA INC., SECURITIES LITIGATION	$135,000,000
TABLEAU SOFTWARE, INC., SECURITIES LITIGATION	$95,000,000
METLIFE, INC. SECURITIES LITIGATION	$84,000,000
WILLIS TOWERS WATSON PLC, SECURITIES LITIGATION (FEDERAL CASE)	$75,000,000
SYMANTEC CORPORATION, SECURITIES LITIGATION (18CV02902)	$70,000,000

SEC Fair Funds proved the most challenging matters for institutional investors last year. Those administrations run faster than for securities class actions, with shorter deadlines and stricter requirements including 100% remittance and 100% documentation. The latter requirement can be particularly difficult when claim periods go back further than the time that custodians and nominees must keep records.

While hard to predict, for 2023, case filings are expected to be comparable or slightly higher than last year and settlements to also be comparable to last year, with the top ten accounting for roughly half of the total dollars recovered and the majority in number to be less than $100M.

Antitrust

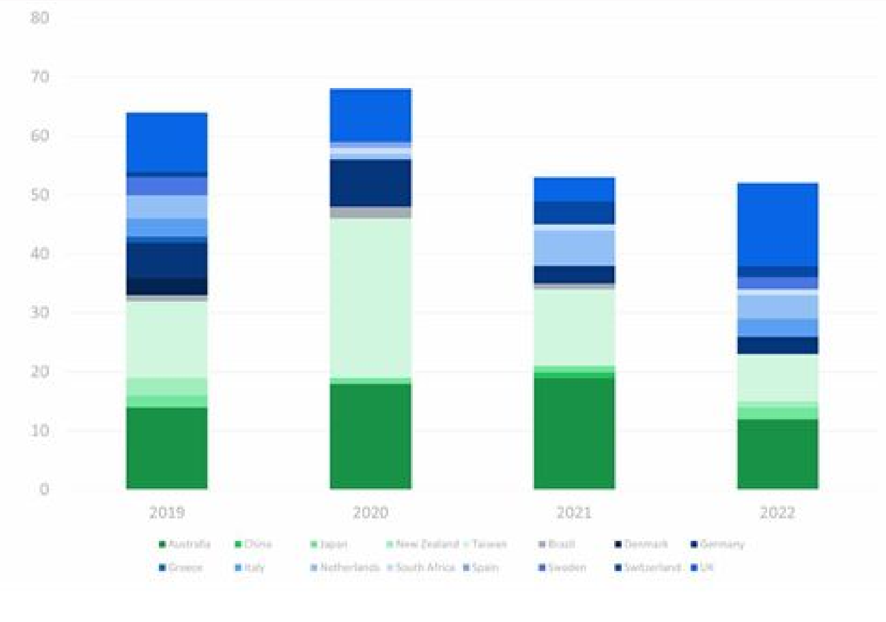
In 2022, U.S. Antitrust settlements (including DOJ recoveries) involving investments continued at a steady pace, ranging in size from $500K to $300M. Most were partial or wrap-up settlements in cases with earlier partial settlements, like LIBOR, Euribor and Euroyen. Last year was another strong one for antitrust disbursements, with more than $700 million paid out, primarily from the $2.3B FOREX settlement.

Already in 2023, we've seen partial settlements including Wheat Futures and European Government Bonds., With $4 billion still in administration, including $1B more of the FOREX settlement, 2023 could be a very big year for antitrust payouts.

Non- U.S. Litigation

Last year there were 52 non-U.S. matters in 11 jurisdictions (counted by case organizers). Broken down by country, filings were down in Brazil and Germany, and up in the Netherlands and the UK.
In 2023, the number of matters are expected to be similar to last year (about 52-58), and it is expected that filings will increase in Australia the Netherlands, and the UK and decrease in Brazil, Germany, and Japan. Across all countries active in the securities litigation space, greater and more stringent demands from courts for claimant identification, authorization, and custodial confirmation documents, are expected to continue. ◆

Case	Type	Settlement	Claims Filing Deadline
In re JPMorgan Precious Metals Futures	ANTITRUST	$60,000,000.00	08-08-2022
In re JPMorgan Treasury Futures Spoofing Litig.	ANTITRUST	$15,700,000.00	06-30-2022
(GOLD Fixing) Barclays Bank PLC, the Bank of Nova Scotia, Société Générale, and the London Gold Market Fixing Limited	ANTITRUST	$50,000,000.00	04-19-2022
(EURIBOR) Credit Agricole	ANTITRUST	$55,000,000.00	12-15-2022
(LIBOR Bondholders) Gelboim et ano. v. Credit Suisse Group, et al.,	ANTITRUST	$1,749,000.00	02-27-2023
(EUROYEN) Laydon v. Mizuho Bank, Ltd. et al	ANTITRUST	$22,500,000.00	04-28-2023
(SIBOR) Fund Liquidation Holdings LLC v. Citibank N.A. et al.	ANTITRUST	$155,458,000.00	01-20-2023
BBSW Rate Manipulation Settlement	ANTITRUST	$185,875,000.00	01-16-2023
The Bank of Nova Scotia Metal Spoofing DOJ Deferred Prosecution Agreement (DPA)	DOJ	$6,622,190.00	08-19-2023
JPMorgan Chase & Co. Metal Spoofing DOJ Deferred Prosecution Agreement (DPA)	DOJ	$311,740,000.00	09-24-2023
Tower Research Capital LLC E-Mini DOJ Deferred Prosecution Agreement (DPA)	DOJ	$32,600,000.00	10-24-2022
Deutsche Bank Metal Spoofing DOJ Deferred Prosecution Agreement (DPA)	DOJ	$1,223,738.00	01-06-2022
United States v. NatWest Markets Plc	DOJ	$6,761,967.00	02-21-2022
United States v. Credit Suisse Securities (Europe) Limited	DOJ	$0.00	02-28-2022
Propex Derivatives Pty Ltd E-Mini DOJ Deferred Prosecution Agreement (DPA)	DOJ	$464,300.00	01-21-2023



In 2022, U.S. Antitrust settlements (including DOJ recoveries) involving investments continued at a steady pace, ranging in size from $500K to $300M.

Financial Recovery Technologies, LLC *helps institutional investors navigate the increasingly complex global recovery landscape, with cutting edge technological solutions and thought leadership. This article summarizes some of the topics covered in greater depth during the live webinar hosted in February by Mike Lange, Esq., SVP of Worldwide Litigation; Emily Fortin, Esq., Director of Legal Operations & Counsel; and Colin Holmes, Esq., Associate Counsel. For more information and to access on-demand the full webinar, please visit FRT at: https://pages.frtservices.com/2023ClassActionOutlook*

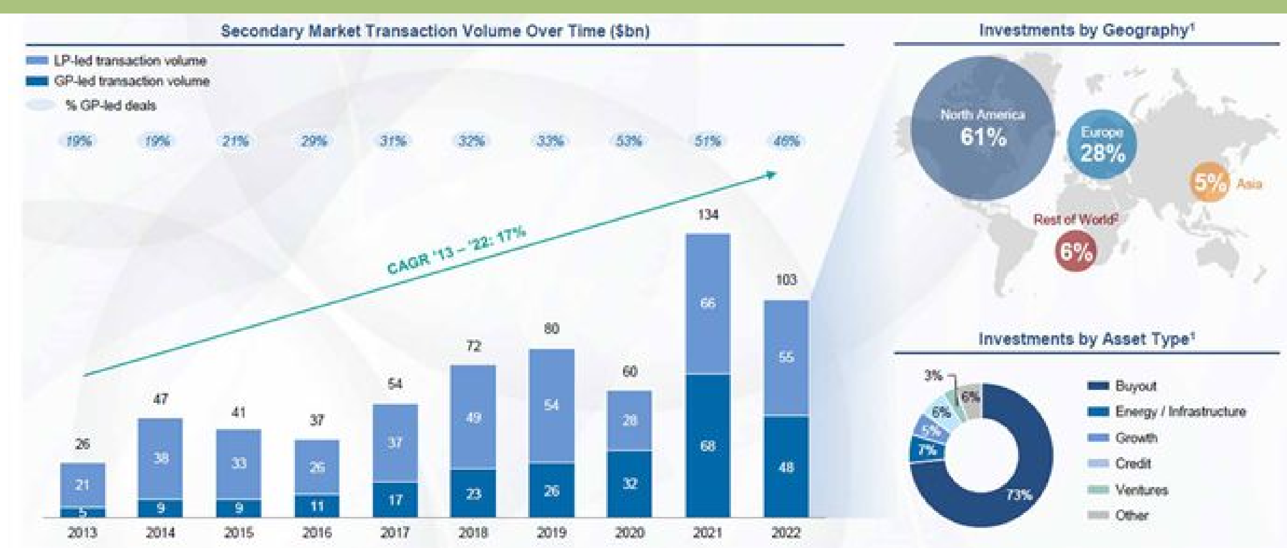
NCPERS Asset Manager

The Growing Prominence of Continuation Vehicles

By: Mina Pacheco Nazemi, Barings Diversified Alternative Equity Group

In the last 24 months, the market has seen an increase in the number of continuation funds, which allow GPs to roll an asset (or assets) from an existing fund or multiple funds into a new investment vehicle with fresh or re-start capital, rather than selling the asset to an outside buyer. Historically, these vehicles served as a way to give these companies more time to deliver on expected returns. More recently, however, GPs are recapitalizing their higher-performing investments—the so-called "crown jewels" of their portfolios—as a way to maintain exposure while providing additional capital for growth initiatives.

While there are certainly risks involved in these deals, namely around potential conflicts of interest and GP alignment, there can be benefits as well. GPs have the ability to continue managing a high-performing asset, and this comes with the benefit of a larger fee base and the resetting of the deal carry pool, which can re-incentivize the team for continued value creation. For LPs, assuming that the asset has been fairly priced and that the GP's motivations are properly aligned, these vehicles can provide an attractive opportunity to maintain exposure to a successful company at a lower fee/carry basis. In addition, some LPs have the ability to invest secondary capital into what may be perceived as a less risky opportunity (when compared to buying a new unknown asset). Over time, there is the potential for LPs to realize strong risk-adjusted returns, particularly with GPs and management teams that have worked together successfully in the past.



Source: Evercore 2022 Secondary Market Synopsis, January 2023.

Many LPs are currently not set up to participate in continuation vehicles, while others choose not to participate given structural constraints or the need for liquidity. Arguably, continuation vehicle transactions can force traditional fund LPs to be more involved co-investors, requiring them to undertake additional underwriting and monitoring processes. These dynamics ultimately cause most LPs to sell their positions instead of rolling their exposure into attractive continuation vehicle opportunities.

The decision to participate in a continuation vehicle involves a complex set of issues that are critical for an LP to understand. High-quality GPs typically have a strong value creation plan outlined on a particular asset or set of assets and will often commit a considerable amount of time and capital to each deal. A reasonable proxy to measure GP alignment is the amount of carried interest that the GP has created via the platform exit and any subsequent portion they may roll into the new vehicle. Additionally, it is critical for LPs to understand the business motivations and alignment of other LPs/LPAC members who may have to provide approvals to waive conflicts or approve the actions of the GP. There may be questions, for instance, around whether a given asset manager—with both primary and secondary businesses—would be more likely to approve a deal that benefits its secondary arm, even if that deal is potentially less advantageous for its primary fund investors that may not be in a position to participate due to structural and/or timing limitations.

With appropriate alignment, transparency, and governance in place, continuation vehicles are a very attractive investment option for LPs. ◆

Mina Pacheco Nazemi *is the Head of the Diversified Alternative Equity team and serves on both the investment committee and valuation committee. She is also responsible for originating, underwriting and monitoring primary fund, direct/co-investments, and secondary fund opportunities for private equity and real assets. Mina has worked in the industry since 1998 with experience as a General Partner and Limited Partner investor in private markets and focused on underwriting direct/co-investment opportunities. Prior to joining the firm in 2017, Mina held several leadership and investment positions including Co-Founder and Partner at Aldea Capital Partners and Partner and Investment Committee Member at GCM Grosvenor Customized Fund Investment Group (formerly Credit Suisse CFIG). She is an alumna of Sponsors for Education Opportunity (SEO) and Robert Toigo Foundation. She also is a board member of the Pan American Development Fund and serves on the investment committee for the City of Hope. Additionally, Mina is a current Finance Fellow for The Aspen Institute. Mina holds a Bachelor of Arts with honors in Economics and Political Science from Stanford University and her Master of Business Administration from Harvard Business School.*

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The Voice for Public Pensions

Calendar of Events 2023

May

NCPERS Accredited Fiduciary (NAF) Program

May 20–21
New Orleans, LA

Trustee Educational Seminar (TEDS)

May 20–21
New Orleans, LA

Annual Conference & Exhibition (ACE)

May 21–24
New Orleans, LA

June

Chief Officers Summit

June 19-21
Denver, CO

August

Public Pension Funding Forum

August 20-22
Chicago, IL

October

NCPERS Accredited Fiduciary (NAF) Program

October 21-22
Las Vegas, NV

Financial, Actuarial, Legislative, and Legal Conference (FALL)

October 22-25
Las Vegas, NV

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

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