AGENDA

Date: July 8, 2022

The regular meeting of the Dallas Police and Fire Pension System Board of Trustees will be held at **8:30 a.m. on Thursday, July 14, 2022, 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/82614037801?pwd=OcsZNhrsscwpj0haynyLG0DjSQ3bQE.1 Passcode: 885614.** 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 June 2, 2022

2. Approval of Refunds of Contributions for the Month of June 2022

3. **Approval of Activity in the Deferred Retirement Option Plan (DROP) for July 2022**
4. **Approval of Estate Settlements**
5. **Approval of Survivor Benefits**
6. **Approval of Service Retirements**
7. **Approval of Alternate Payee Benefits**
8. **Approval of Payment of Military Leave Contributions**
9. **Approval of Payment of QDRO Buyback Contributions**

C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. **January 1, 2022 Actuarial Valuation Assumptions**
2. **Active-Duty Survivor Benefits**
3. **Certification of Non-member Trustee Election Results**
4. **Monthly Contribution Report**

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

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

6. **Financial Audit Status**

7. **Portfolio Update**

8. **Report on Investment Advisory Committee**

9. **Emerging Market Debt Manager Recommendation**

10. **Natural Resources: Hancock 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.

11. **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.

12. 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 (July 2022)

b. Open Records

c. Employee Service Awards

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
Robert D. Browning	Retired	Police	May 22, 2022
Charles T. Grady	Retired	Police	May 25, 2022
Ronald D. Barree	Retired	Fire	May 26, 2022
John E. Boaz	Retired	Fire	Jun. 3, 2022
William F. Woody	Retired	Fire	Jun. 3, 2022
Lewis A. Foster	Retired	Fire	Jun. 7, 2022
Jimmie J. Hendrix	Retired	Fire	Jun. 8, 2022
Ricardo Terrones	Retired	Police	Jun. 9, 2022
Robert W. Brashear	Retired	Police	Jun. 14, 2022
Tommy Q. Akins	Retired	Police	Jun. 21, 2022
Ronnie Brigance	Retired	Police	Jul. 6, 2022

Regular Board Meeting –Thursday, July 14, 2022

Dallas Police and Fire Pension System
Thursday, June 2, 2022
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, Michael Brown, Robert B. French (by telephone), Kenneth Haben, Tina Hernandez Patterson, Steve Idoux, Mark Malveaux (by telephone)
Present at 8:37 a.m.	Gilbert A. Garcia (by telephone)
Absent:	None
Staff	Kelly Gottschalk, Josh Mond, Brenda Barnes, Ryan Wagner, John Holt, Greg Irlbeck (by telephone), Michael Yan, Akshay Patel, Milissa Romero
Others	Aaron Lally, Richard O'Neil (by telephone), David Harper, Jason Jordan, Michael Taglienti, Tom Tull (by telephone)

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The Regular meeting was called to order and recessed 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 officer Clarence E. Jennings, Michael L. Kidd, Sr., John A. Reeves, and retired firefighters D. L. Greene, Douglas H. May, G. L. Waddleton, Sr.

No motion was made.

Regular Board Meeting
Thursday, June 2, 2022

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B. CONSENT AGENDA

1. **Approval of Minutes**

   a. Required Public meeting #1 of May 12, 2022
   b. Regular meeting of May 12, 2022

2. **Approval of Refunds of Contributions for the Month of May 2022**

3. **Approval of Activity in the Deferred Retirement Option Plan (DROP) for June 2022**

4. **Approval of Estate Settlements**

5. **Approval of Survivor Benefits**

6. **Approval of Service Retirements**

7. **Approval of Earnings Test**

8. **Spouse Wed After Retirement (SWAR)**

9. **Approval of Payment of Previously Withdrawn Contributions**

After discussion, Mr. Quinn made a motion to approve the minutes of the Required Public meeting #1 of May 12, 2022. Mr. Haben seconded the motion, which was unanimously approved by the Board.

After discussion, Mr. Quinn made a motion to approve the minutes of the Regular meeting of May 12, 2022. Mr. Haben seconded the motion, which was unanimously approved by the Board.

After discussion, Mr. Garza made a motion to approve the remaining items on the Consent Agenda, subject to the final approval of the staff. Ms. Hernandez Patterson seconded the motion, which was unanimously approved by the Board.

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Regular Board Meeting
Thursday, June 2, 2022

C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. Employee Handbook and Policies

At the May 2022 Board meeting, staff reviewed the key provisions and significant changes of the draft Employee Handbook which is intended to consolidate and update various personnel-related policies and procedures.

After discussion, Mr. Garza made a motion to approve the proposed Employee Handbook as presented and authorized the Executive Director to rescind obsolete policies. Mr. Haben seconded the motion, which was unanimously approved by the Board.

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2. Communication Plan Update

The Executive Director provided an update on the communication plan related to funding issues.

No motion was made.

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3. Monthly Contribution Report

The Executive Director reviewed the Monthly Contribution Report.

No motion was made.

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Regular Board Meeting
Thursday, June 2, 2022

4. Board approval of Trustee education and travel

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

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

No motion was made.

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5. Financial Audit Status

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

No motion was made.

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6. 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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7. Meketa Market Update & Quarterly Performance Reports

Aaron Lally, Principal, and Richard O'Neil, Managing Principal (by phone) of Meketa Investment Group gave a presentation and commentary on the current market environment and reviewed the First Quarter 2022 Investment Performance Analysis and Fourth Quarter 2021 Private Markets & Real Assets Review reports.

No motion was made.

Regular Board Meeting
Thursday, June 2, 2022

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8. 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 10:12 a.m.

The meeting was reopened at 11:19 a.m.

The Board and staff discussed legal issues.

No motion was made.

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Mr. Garza left the meeting at 11:10 a.m.

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9. Closed Session - Board serving as Medical Committee

Disability application 2022-2

The Board went into closed executive session at 10:12 a.m.

The meeting was reopened at 11:19 a.m.

The Board and staff discussed the status of disability application 2022-2.

No motion was made.

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Regular Board Meeting
Thursday, June 2, 2022

D. BRIEFING ITEMS

1. Public Comments

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

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2. Executive Director's report

a. Associations' newsletters
- NCPERS PERSist (Spring 2022)

b. Open Records

c. Non-member Trustee Election Update

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. Haben and a second by Ms. Hernandez Patterson the meeting was adjourned at 11:24 a.m.

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Nicholas A. Merrick
Chairman

ATTEST:

____
Kelly Gottschalk
Secretary

DISCUSSION SHEET

ITEM #C1

Topic: **January 1, 2022 Actuarial Valuation Assumptions**

Attendees: Jeff Williams, Vice President, Segal Consulting

Discussion: An Actuarial Valuation is performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and it is an important part of the annual financial audit. Segal Consulting is preparing the January 1, 2022 Actuarial Valuation for the Regular Plan (Combined Plan) and the Supplemental Plan. Many economic and demographic assumptions are required to prepare the valuation. Pursuant to Article 16, Section 67 (f)(3) of the Texas Constitution, the Board determines the assumptions used in the valuation.

Segal believes the assumptions used for the January 1, 2021, Actuarial Valuation remain appropriate and has recommended only minor changes to the assumptions for the January 1, 2022 Actuarial Valuation.

Staff Recommendation: **Direct** Segal to use its recommended assumptions in preparing the January 1, 2022 Actuarial Valuation for the Regular Plan (Combined Plan) and the Supplemental Plan.

Regular Board Meeting – Thursday, July 14, 2022

Dallas Police and Fire Pension System

Summary of Actuarial Assumptions and Methods

July 14, 2022

Jeffrey S. Williams
Vice President and Consulting Actuary

Caitlin Grice
Consulting Actuary

Overview: Actuarial Assumptions and Methods

Demographic

- Death in active service
- Death after retirement
  - Non-disabled
  - Disabled
  - Contingent survivor
- Withdrawal
- Disability
- Retirement
  - DROP
  - Non-DROP
- Percent Married/Spouse Age

Economic

- Inflation
- Discount rate (Investment rate of return)
- Salary increases
- Payroll growth rate
- Administrative expenses
- COLA
- DROP annuitization rate

Methods

- Cost method
- Amortization method
- Asset method

2022 Actuarial Assumptions

- Current assumptions were set during the experience study for the period January 1, 2015 through December 31, 2019
- Current assumptions first implemented in January 1, 2020 valuation
- Next experience study will be for the period January 1, 2020 through December 31, 2024
- Only assumptions updated since the January 1, 2020 valuation are:
  - Discount rate: lowered from 7.00% to 6.50% in January 1, 2021 valuation
  - Ad-hoc COLA assumption: updated each year
  - Amortization methodology: updated in 2021 valuation, consistent with funding poilcy
- **Recommendations for 2022 Changes**
  - Update administrative expense assumption after FY 2021 assets are final
  - Other assumptions will be updated as needed after the next experience study, unless the Board has a desire to address specific assumptions prior to that time
  - The ad-hoc COLA assumption is updated with each valuation

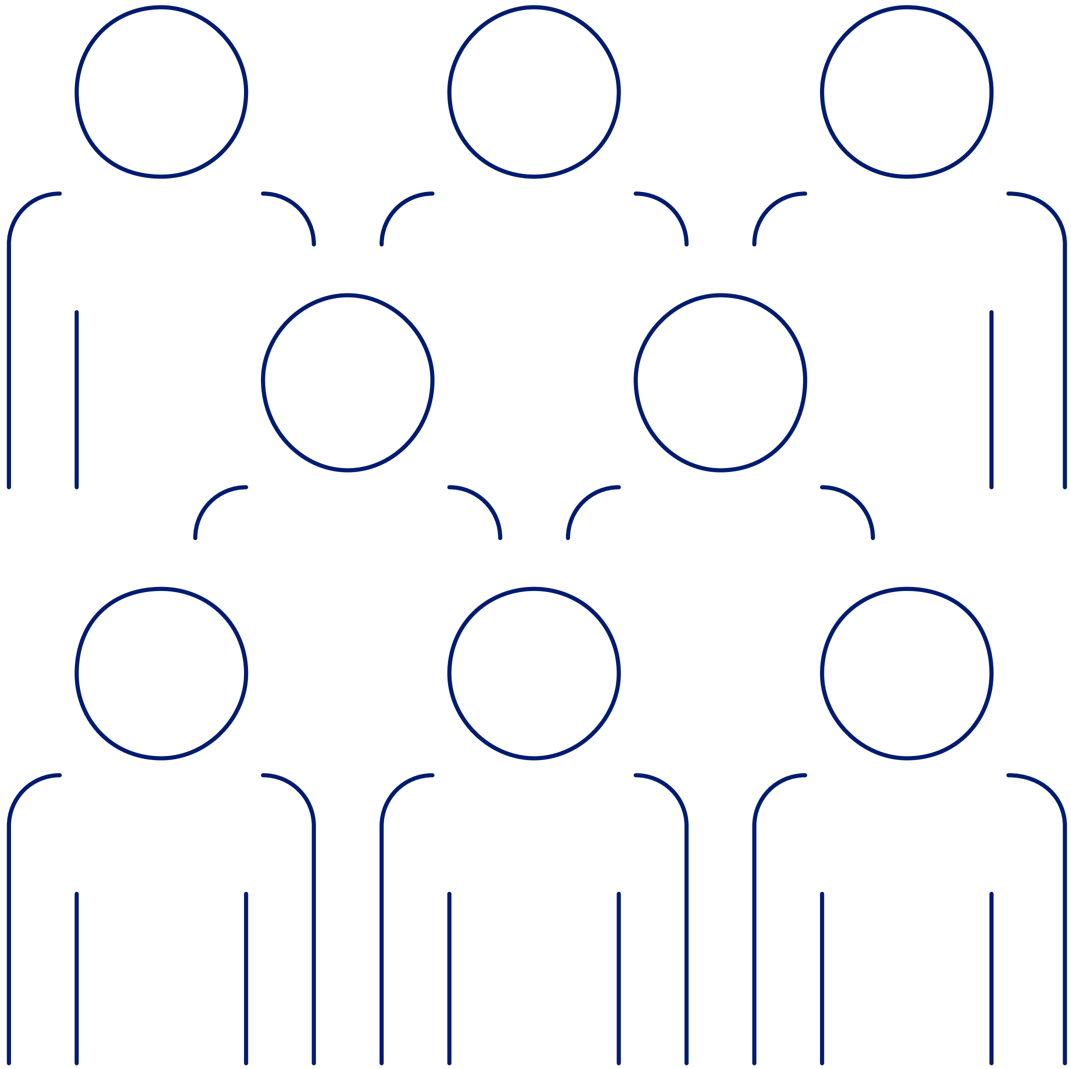
Summary of Current Assumptions

Assumption	Current Assumption
Healthy Retiree & Dependent Spouse Mortality	Pub-2010 Public Safety Retiree Amount-weighted Mortality Table, set back one year for females
Contingent Beneficiary Mortality	Pub-2010 Public Safety Contingent Survivor Amount-weighted Mortality Table, set back one year for females
Disabled Life Mortality	Pub-2010 Public Safety Disabled Retiree Amount-weighted Mortality Table, set forward four years for males and females
Pre-Retirement Mortality	Pub-2010 Public Safety Employee Amount-weighted Mortality Table, set forward five years for males
Mortality Improvement	Projected generationally with Scale M-2019
Turnover	Service-based rates for both Fire and Police; rates zero out after 24 years of service
Disability	Age-based rates; rates zero out after age 54
Service-Related Disability	100% of disabilities assumed service-related
DROP Retirement	Separate Police and Fire age-based rates, with 100% retirement at age 65 or ten years in DROP
DROP Utilization	No members are assumed to elect to enter the DROP

Summary of Current Assumptions

Assumption	Current Assumption
DROP Annuitization Interest	2.75% on account balances as of September 1, 2017, payable upon retirement
Non-DROP Retirement	Two separate age-based rates based on hire date and service, with 100% retirement at age 62 or after benefit multiplier hits 90% maximum
Terminated Vested Retirement	Age 50 if terminate pre-September 1, 2017; Age 58 if terminate on or after September 1, 2017 75% of those who terminate with a vested benefit prior to age 40 will cash out at age 40
Percent Married	75% for Males and Females
Spousal Age Difference	Females three years younger than males
Investment Return	6.50%
Payroll Growth/Inflation	2.50%
Salary Scale	Salary scales based on rank as stated in the 2019 Meet and Confer agreement with an ultimate rate of 2.50%
Administrative Expenses	Greater of $8,500,000 per year or 1% of computation pay
Cost-of-Living Adjustment (COLA)	2.00% per year beginning the year System is projected to be 70% funded on a market value basis (currently, October 1, 2069)

Demographic Assumptions



Demographic Assumptions

Mortality

- **Healthy Pre-Retirement:** Pub-2010 Public Safety Employee Amount-weighted Mortality Table, set forward five years for males
- **Healthy Post-Retirement**
  - Retiree & Dependent Spouse: Pub-2010 Public Safety Retiree Amount-weighted Mortality Table, set back one year for females
  - Contingent Beneficiary: Pub-2010 Public Safety Contingent Survivor Amount-weighted Mortality Table, set back one year for females
- **Disabled Lives:** Pub-2010 Public Safety Disabled Retiree Amount-weighted Mortality Table, set forward four years for males and females

Mortality Improvement

– MP-2019 Improvement Scale

Demographic Assumptions

Turnover Rates

- –Service-based rates with rates decreasing with longer service
- –Rates differ for Fire and Police
- –Rates for Police higher than for Fire
- –No termination assumed for active participants in DROP
- –Rates do not apply once eligible for normal retirement
- –Terminating participants are assumed to take a deferred annuity if they are eligible unless their contribution refund has greater actuarial value

Service	Current Fire Rates	Current Police Rates
0	10.00%	20.00%
1	5.50%	5.50%
2	5.50%	5.50%
3	5.50%	5.50%
4	5.50%	5.50%
5	5.50%	5.50%
6	5.50%	3.50%
7	1.00%	3.50%
8	1.00%	3.50%
9	1.00%	3.50%
10	1.00%	3.50%
11 – 14	1.00%	2.00%
15 – 24	1.00%	1.00%
25 & over	0.00%	0.00%

Demographic Assumptions

Disability Rates

– Rates are age-based
– 100% of disabilities are assumed to be service-related

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

Demographic Assumptions

Retirement Rates for DROP Participants

- Separate rates for Fire and Police
- 100% retirement assumed at age 65 or 10 years in DROP

Age	Current Fire Rates
Under 50	0.75%
50 – 51	0.75%
52 – 54	10.00%
55 – 57	15.00%
58	40.00%
59 – 62	40.00%
63 – 64	50.00%
65	100.00%

Age	Current Police Rates
Under 50	1.00%
50	10.00%
51 – 52	15.00%
53	15.00%
54	25.00%
55	25.00%
56 – 57	25.00%
58 – 62	30.00%
63	40.00%
64	50.00%
65	100.00%

Demographic Assumptions

DROP Utilization and Annuitization Interest

- **DROP Utilization**
  – No members are assumed to elect to enter the DROP
- **DROP Annuitization Interest**
  – 2.75% on account balances as of September 1, 2017, payable upon retirement

Demographic Assumptions

Retirement Rates for non-DROP Participants

– Same rates for Fire and Police
– The retirement rate is set to 100% once benefit multiplier hits 90% maximum

Members hired prior to March 1, 2011 with at least 20 years of service as of September 1, 2017

Age	Current Rates
Under 50	1.00%
50	8.00%
51	8.00%
52	10.00%
53	15.00%
54	20.00%
55	35.00%
56 – 57	40.00%
58 – 61	75.00%
62	100.00%

Members hired prior to March 1, 2011 with less than 20 years of service as of September 1, 2017 & Members hired on or after March 1, 2011

Age	Current Rates
Under 50	1.00%
50	2.00%
51 – 53	2.00%
54	2.00%
55	2.00%
56	2.00%
57	2.00%
58	25.00%
59 – 60	25.00%
61	50.00%
62	100.00%

Demographic Assumptions

Retirement Rates – Terminated Vested Participants

– Members who terminated prior to September 1, 2017 retire at age 50
– Members who terminated on or after September 1, 2017 retire at age 58

- **Lump Sum Assumption**
  – 75% of those who terminate with a vested benefit prior to age 40 take a lump sum cash out at age 40

Demographic Assumptions

Spousal Assumptions

– 75% of participants, regardless of sex, are assumed to have a spouse upon retirement or death from active status

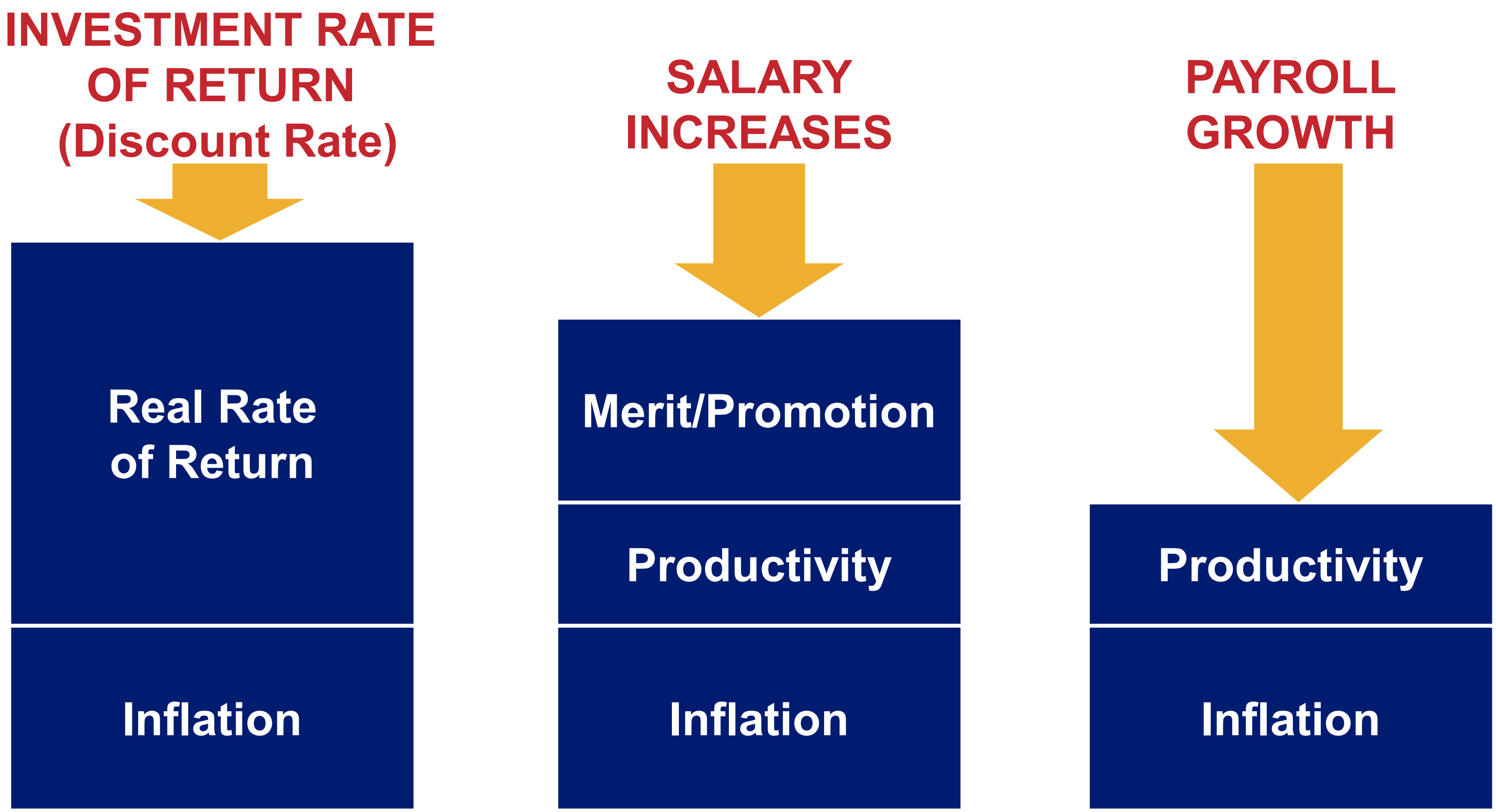
– Males are assumed to be three years older than their spouses at retirement

Economic Assumptions

Economic Assumptions

Building Blocks

These economic assumptions have two or three components (or building blocks).



Building blocks must be consistent across all economic assumptions.

Economic Assumptions

Inflation

- **Assumption:** 2.50%
- 2022 OASDI Trustees Report: 1.8% for high-cost projection and 3.0% for low-cost projection
- Historical (through December 2021):

Average Annual Change in CPI-U	
Last 5 Years	2.92%
Last 10 Years	2.14%
Last 20 Years	2.31%
Last 30 Years	2.37%
Last 100 Years	2.82%

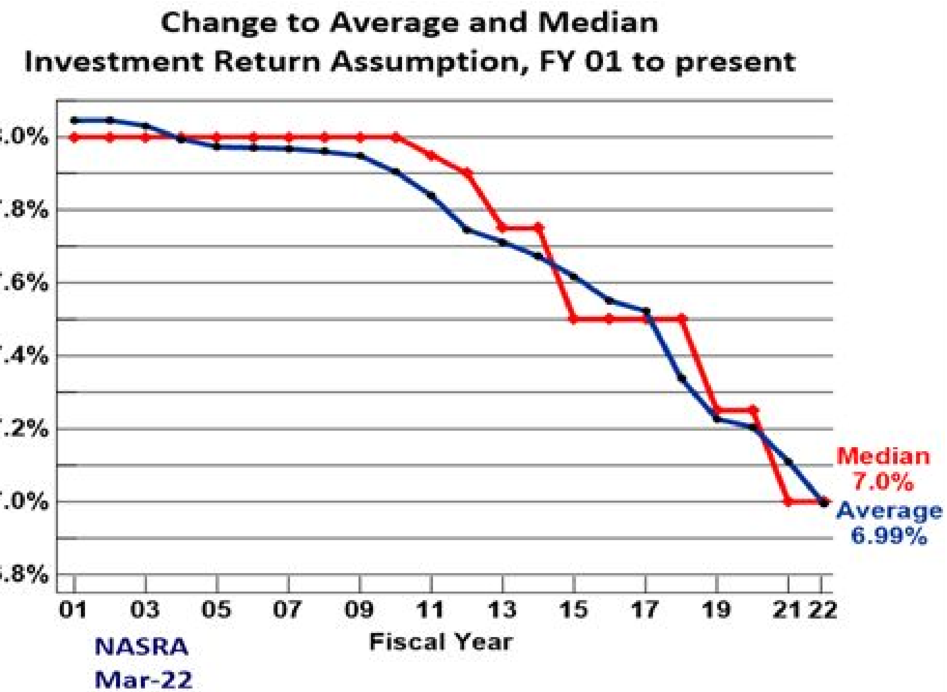
– Reasonable assumption based on OASDI Study and other public sector plans

Economic Assumptions

Investment Return

- **Assumption:** 6.50%
- NASRA Survey, March 2022
  - Median has decreased to 7.00% (was 7.50% four years ago and 8.00% in 2010)
  - Average assumption is 6.99%

NASRA Issue Brief: Public Pension Plan Investment Return Assumptions
March 2022

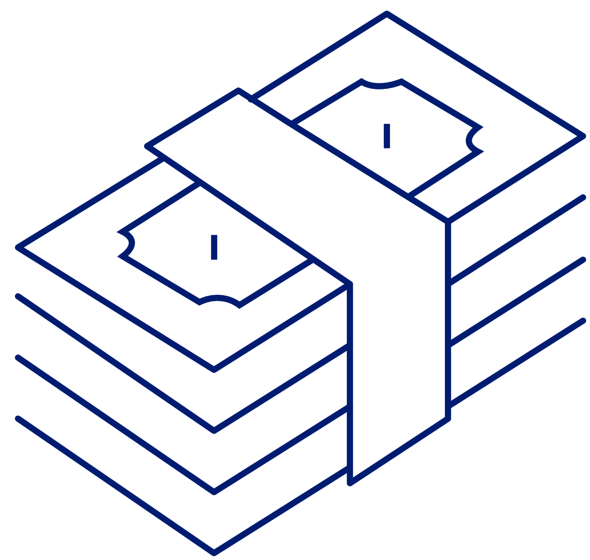


Source: Compiled by NASRA based on Public Fund Survey, March 2022

Economic Assumptions

Payroll Growth

- **Assumption:** 2.50% overall payroll growth
- **Comments**
  - Used to determine the amortization payment on the Unfunded Actuarial Accrued Liability (UAAL)
  - Payment on UAAL expected to increase at payroll growth rate
  - Usually equivalent to inflation assumption or inflation plus productivity



Economic Assumptions

Salary Scale

– Current rates based on 2019 Meet and Confer agreement

– The salary increase assumption will be reviewed upon completion of next Meet and Confer agreement

	Current Rates		
Year	**Officers**	**Corporals, Drivers, Senior Officers & Chiefs**	**Sergeants, Lieutenants, Captains, Majors, Deputy Chiefs & Assistant Chiefs**
2020 – 2022	3.25%	3.00%	2.50%
2023+	2.50%	2.50%	2.50%

Economic Assumptions

Administrative Expenses

- **Assumption:** Greater of $8,500,000 per year or 1% of computation pay
- **Comments**
  - GASB Statements 67 and 68 require an explicit assumption for accounting purposes
  - Administrative expenses have been lower than assumed over the past five years

Four-year administrative expense history

Year Ended	Administrative Expenses	Assumption
December 31, 2016	$9,492,445	$10,000,000
December 31, 2017	8,089,584	Greater of $10M or 1% comp. pay
December 31, 2018	5,861,410	Greater of $8.5M or 1% comp. pay
December 31, 2019	6,445,251	Greater of $8.5M or 1% of comp. pay
December 31, 2020	6,534,350	Greater of $8.5M or 1% of comp. pay

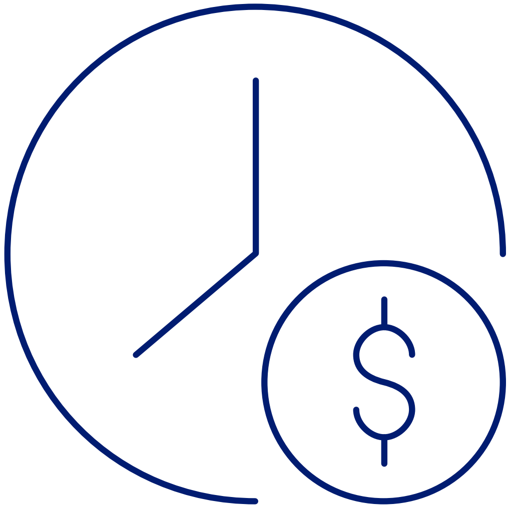
Recommendation

Update assumption after FY2021 assets are available

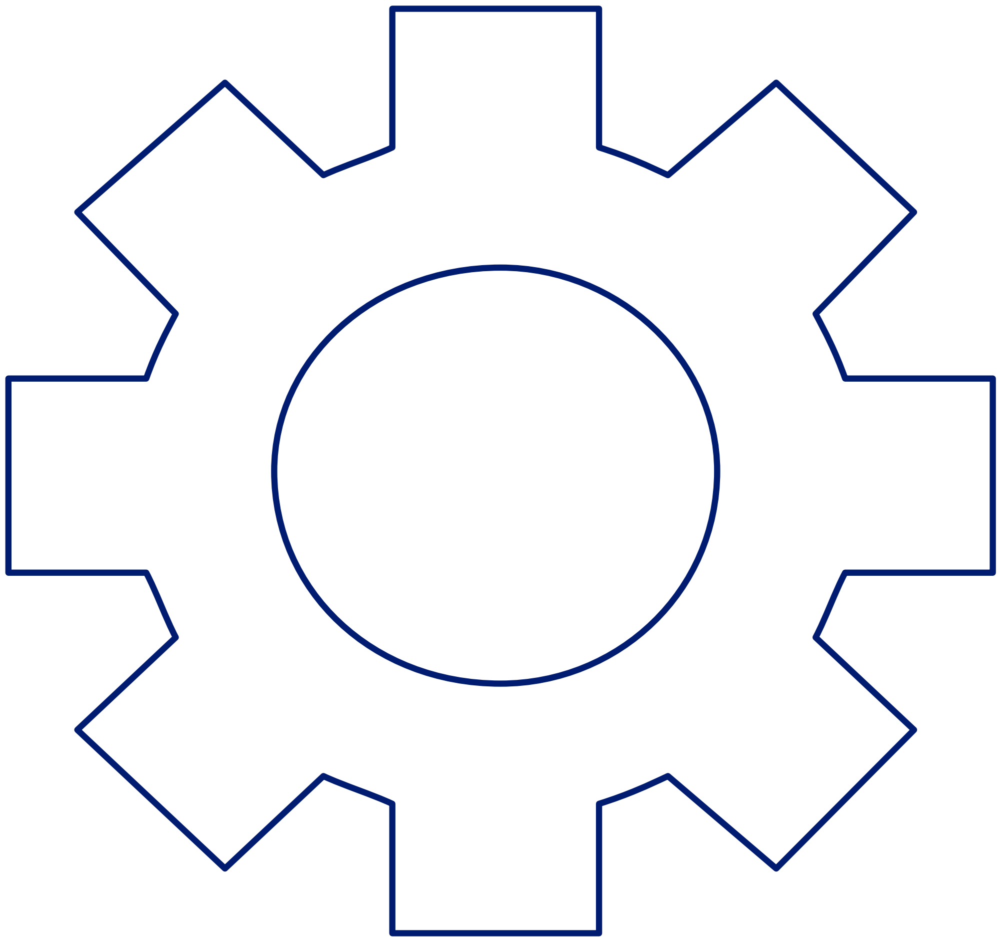
Economic Assumptions

Cost-of-Living Adjustment (COLA)

- **Assumption**
  - 2.00% increase per year beginning in the year the System is projected to be 70% funded on a market value basis after the COLA is reflected (currently, October 1, 2069)
  - Updated annually



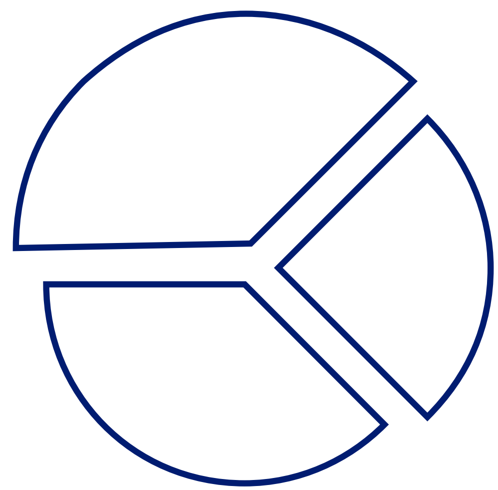
Actuarial Methods



Actuarial Methods

Funding Method

– Method is Traditional Entry Age
– Traditional Entry Age is the most common method used for public sector plans in the U.S., and is required for GASB 67 and 68 calculations



Actuarial Methods

Asset Smoothing Method

- 5-year straight-line amortization of each year's market investment gain or loss
- 20% corridor around market
- Treats realized and unrealized losses equally
  - Sale of assets does not affect actuarial value

- GFOA funding policy guidelines recommend a recognition period of five years or less with recognition occurring over fixed periods.
- A corridor is recommended by GFOA if the period is greater than five years.
- Actuarial Standard of Practice No. 44 requires the use of a method that is "rational, systematic, and produces an actuarial value of assets that is expected to converge toward market value…assuming constant asset returns in future periods."

Actuarial Methods

Amortization Method

- The Pension System is funded based on statutory contributions, rather than the results of the actuarial valuation.
- However, Texas Code Section 802.101 requires actuarial valuations of public sector retirement systems to include a recommended contribution rate based on an amortization period not to exceed 30 years.
- The actuarially determined contribution (ADC) shown in the valuations is calculated based on a closed, 24-year period using the level percent-of-payroll method for the January 1, 2020 unfunded liability, plus
- Effective with the January 1, 2021 actuarial valuation, future gains and losses, along with assumption, plan, and method changes, will be amortized over closed, 20-year periods.

Thank You!

Jeffrey S. Williams, FCA, ASA, MAAA, EA
Vice President and Consulting Actuary
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T 678.306.3147

Caitlin Grice, FCA, ASA, MAAA
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DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C2

Topic: **Active-Duty Survivor Benefits**

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

Attendees: Jeff Williams, Vice President, Segal Consulting

Discussion: The Chairman established a committee at the January 2022 Board meeting to review and consider enhancements to DPFP benefits provided to the surviving spouse of a member who dies while on active service with the City of Dallas. The Committee's considerations and proposed next steps were discussed at the May 2022 Board meeting.

Staff Recommendation: **Available** at the meeting.

Regular Board Meeting – Thursday, July 14, 2022

Segal

2727 Paces Ferry Road SE
Building One, Suite 1400
Atlanta, GA 30339-4053
T 678.306.3100
F 678.669.1887
segalco.com

April 7, 2022

Ms. Kelly Gottschalk
Executive Director
Dallas Police & Fire Pension System
4100 Harry Hines Blvd., Suite 100
Dallas, TX 75219

Re: Actuarial Analysis of Proposed Changes to Pre-retirement Death Benefit for Members in Active Service

Dear Kelly:

We have completed our analysis for the proposed change in the pre-retirement death benefit for members in Active Service.

Background

The Dallas Police and Fire System currently provides members a pre-retirement death benefit, as follows:

- *Death while in active service:* The greater of 50% of the Member's accrued benefit or a benefit based on 20 years of service. The benefit may not exceed 45% of Average Computation Pay.
- *Special Survivor Benefit:* Member is eligible upon leaving active service or joining DROP if: a) the Member was at least 55 years old with at least 20 years of pension service, or b) the sum of the Member's age plus Pension Service was at least 78; and Has no Qualified Surviving Children or disabled children currently eligible for survivor benefits; and Whose Qualified Surviving Spouse is at least 55 years old. The Qualified Surviving Spouse does not have to be 55 years old at the time of the Member's death.

  Upon meeting this eligibility, the amount the Qualified Surviving Spouse will receive increase from 50% of the Member's pension benefit to a percentage of the Member's pension benefit based on the Member's applicable benefit multiplier times the number of years of Pension Service the Member worked.

Proposed changes to the System

The proposed plan change would provide 100% of the member's accrued benefit at the time of a member's death to the surviving spouse. There are two potential scenarios for this change: 1) increase the benefit for all deaths while an active member, and 2) increase the benefit if the member passes away while in the line of duty. Results for the first scenario are shown on the following page.

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Ms. Kelly Gottschalk
April 7, 2022
Page 2

Actuarial impact of the proposed changes

Based on the benefit provisions, data, actuarial assumptions and actuarial funded methods included in the January 1, 2021 actuarial valuation, the proposed pre-retirement death benefit change for all members who die while active, whether or not in the line of duty, would not significantly decrease the projected funding levels over the next 30 years, but delays the projected year of full funding by two years.

The charts below details our estimated impact on the System as of January 1, 2022 and the projected year of 100% funding, based on the plan changes detailed above, but assuming that all actives who pass away receive this benefit, not just line of duty deaths. Since only approximately 30% of active deaths have historically been line-of-duty related, the actual impact of this change would be even more minimal than the impact shown below if the change is made for only line-of-duty deaths.

	Estimated as of January 1, 2022 ($ Millions)	Current Plan	Death Benefit Provision Change
1.	Total normal cost, before administrative expenses	$73	$74
2.	Total normal cost as a % of pay[1]	17.2%	17.4%
3.	Actuarial accrued liability	$5,175	$5,182
4.	Actuarial value of assets	2,054	2,054
5.	Unfunded liability: (3) - (4)	3,121	3,128
6.	Actuarial value of assets funded ratio: (4) / (3)	39.7%	39.6%
7.	Market value of assets	$1,916	$1,916
8.	Market value of assets funded ratio: (7) / (3)	37.0%	37.0%
9.	Projected year of 100% funding	2084	2086

Assumptions and methods

The assumptions and methods used in valuing this proposed plan provision change are the same as those used in the January 1, 2021 actuarial valuation report.

Since 100% of active deaths are assumed to receive an unreduced 100% joint and survivor benefit the special survivor benefit was not valued for this scenario.

* * * * *

The actuarial calculations were completed under my supervision. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render this actuarial opinion.

[1] Based on estimated computation pay of $422 million for Current Plan

Projections, by their nature, are not a guarantee of future results. These projections are intended to serve as estimates of future outcomes, based on the information available to us at the time the modeling is undertaken and completed, and the assumptions described herein. Actual experience may differ due to such factors as demographic experience, the economy, stock market performance and the regulatory environment. Additional scenarios would demonstrate sensitivity to risk from investment return, employment and other factors.

Please let us know of any questions or if any additional analysis is needed.

Sincerely,

Jeffrey S. Williams, FCA, ASA, MAAA, EA
Vice President and Actuary

cc: Caitlin Grice, Segal

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C3

Topic: **Certification of Non-member Trustee Election Results**

Discussion: The terms of the three Non-member Trustees (Gilbert Garcia, Tina Hernandez Patterson, and Robert French) expire on August 31, 2022.

Pursuant to the election rules adopted by the Board, three trustees have been elected by the members and pensioners from a slate of nominees selected and vetted by the nominations committee as required by Article 6243a-1 of the Texas Statutes. The terms of the three Non-member Trustees will run from September 1, 2022 to August 31, 2025.

The election process was conducted in accordance with the Board's election policy by an independent third-party election company. The election company, YesElections, provided a report of the results of the election, a copy of which is in the agenda materials.

Staff Recommendation: **Certify** the election of Nancy Rocha, Anthony R. Scavuzzo, and Marcus Smith as Non-member Trustees to serve from September 1, 2022 until August 31, 2025.

Election-America
In the business of perfection

Election-America, Inc.
1775 Eye Street NW, Suite 1150
Washington, DC 20006
Phone: (202) 360-4420
Toll Free: (866) 514-2995
services@election-america.com

July 7, 2022

Dallas Police and Fire Pension System
4100 Harry Hines Boulevard, Ste. 100
Dallas, TX 75219

Dear Kelly Gottschalk:

The attached report contains the results from the 2022 Non-Member Trustee election for the Dallas Police and Fire Pension System.

Thank you. It has been a pleasure working with you.

Sincerely yours,

Chris Backert
CEO
Election-America, Inc.

Election-America
In the business of perfection

Election-America, Inc.
1775 Eye Street NW, Suite 1150
Washington, DC 20006
Phone: (202) 360-4420
Toll Free: (866) 514-2995
services@election-america.com

Results – 2022 Non-Member Trustee

Candidate	Choice	Votes	% Voted
Nancy Rocha	Yes, I approve	646	83.14%
	No, I do not approve	131	16.86%
Anthony R. Scavuzzo	Yes, I approve	577	74.26%
	No, I do not approve	200	25.74%
Marcus Smith	Yes, I approve	551	70.91%
	No, I do not approve	226	29.09%

Turnout by Member Type

Member Type	Internet	Phone	Total	Electorate	Total %
Active	157	46	203	5058	4.01
Retiree	425	149	574	3917	14.65
Total	**582**	**195**	**777**	**8975**	**8.66%**

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

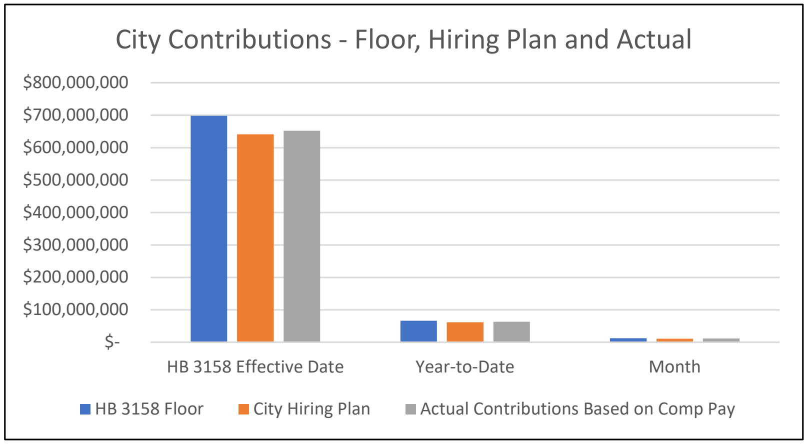
ITEM #C4

Topic: **Monthly Contribution Report**

Discussion: Staff will review the Monthly Contribution Report.

Regular Board Meeting – Thursday, July 14, 2022

Contribution Tracking Summary - July 2022 (May 2022 Data)



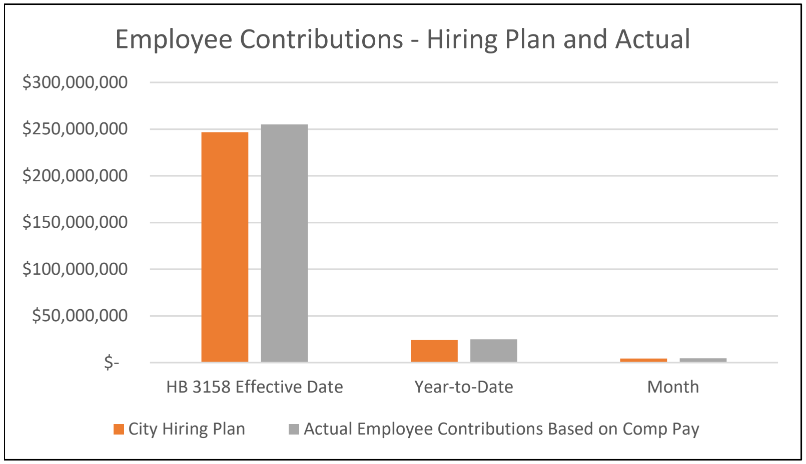
Actual Comp Pay was 102% of the Hiring Plan estimate since the effective date of HB 3158.

In the most recent month Actual Comp Pay was 103% of the Hiring Plan estimate and 96% of the Floor amount.

The Hiring Plan Comp Pay estimate increased by 3.43% in 2022. The Floor increased by 2.74%.

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

The combined actual employees was 195 less than the Hiring Plan for the pay period ending June 7, 2022. Fire was over the estimate by 43 fire fighters and Police under by 238 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

May-22	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	$ 12,086,000	$ 11,199,231	$ 11,582,855	$ 503,195	96%	103%
Year-to-Date		$ 66,473,000	$ 61,595,769	$ 63,474,243	$ 2,998,807	95%	103%
HB 3158 Effective Date		$ 698,576,000	$ 641,116,154	$ 652,287,067	$ 46,362,689	93%	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

May-22	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	$ 4,382,308	$ 4,531,006	$ 148,699	$ 4,236,924	103%	107%
Year-to-Date		$ 24,102,692	$ 24,835,351	$ 732,659	$ 23,303,082	103%	107%
HB 3158 Effective Date		$ 246,489,231	$ 255,084,263	$ 4,212,725	$ 244,962,736	103%	104%

Potential Earnings Loss from the Shortfall based on Assumed Rate of Return $ (276,492)

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			5,113		
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 - 2022	Annual Divided by 26 Pay Periods	Actual	Difference	2022 Cumulative Difference	Number of Employees - EOM	Difference
January	$ 32,461,538	$ 33,363,143	$ 901,604	$ 901,604	4946	(167)
February	$ 32,461,538	$ 33,314,230	$ 852,692	$ 852,692	4943	(170)
March	$ 48,692,308	$ 50,179,220	$ 1,486,912	$ 1,486,912	4937	(176)
April	$ 32,461,538	$ 33,555,403	$ 1,093,864	$ 1,093,864	4930	(183)
May	$ 32,461,538	$ 33,573,492	$ 1,111,953	$ 1,111,953	4918	(195)
June	$ 32,461,538					
July	$ 32,461,538					
August	$ 48,692,308					
September	$ 32,461,538					
October	$ 32,461,538					
November	$ 32,461,538					
December	$ 32,461,538					

DISCUSSION SHEET

ITEM #C5

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 – July 14, 2022

			ATTENDING	APPROVED
1.	**Conference:**	**TEXPERS Summer Education Forum**		
	Dates:	August 21-23, 2022		
	Location:	El Paso, TX		
	Est Cost:	$1,325		
2.	**Conference:**	**NCPERS Public Pension Funding Forum**		
	Dates:	August 21-23, 2022		
	Location:	Los Angeles, CA		
	Est Cost:	$2,000		
3.	**Conference:**	**NCPERS Public Safety Conference**	**KH**	
	Dates:	October 25-28, 2022		
	Location:	Nashville, TN		
	Est Cost:	$2,500		

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C6

Topic: **Financial Audit Status**

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

Regular Board Meeting – Thursday, July 14, 2022

DISCUSSION SHEET

ITEM #C7

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, July 14, 2022

DALLAS POLICE & FIRE PENSION SYSTEM

Portfolio Update

July 14th, 2022

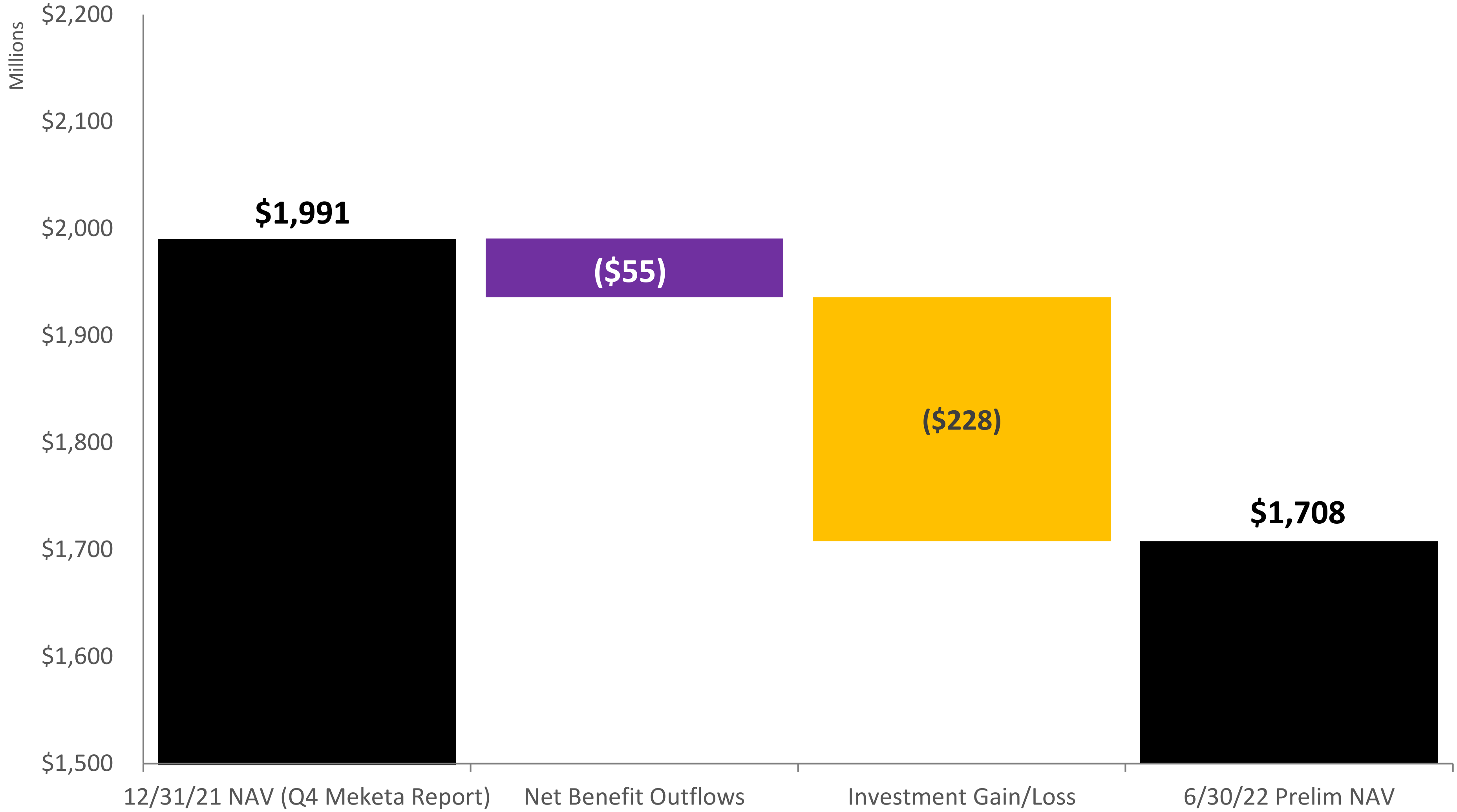
Executive Summary

- Liquidation of private market assets remains the top focus.
  - $44.9M in distributions received YTD as of 7/11/22. $15M+ in distributions expected over next few months.
- At the March Board meeting, staff notified the Board that the Safety Reserve would be drawn down to fund net benefit outflows.
- EMD Search: Two finalists - MetLife and TCW interviewed at the July 13th IAC meeting.
- **Rebalancing Actions (May/June):**
  1. Fund **$40M to Global Alpha,** new International Small Cap manager, from the Northern Trust ACWI IMI passive index fund.
  2. Redeem **$5M from Pacific Asset Management,** the Bank Loans manager, to be redeployed into Global Equity.
  3. Rebalance to equal weight **4 active Global Equity Managers** (+$21M to Invesco, +$7M to Walter Scott, -$5M from Manulife, -$18M from Boston Partners).
- Estimated Year-to-Date Return (as of 6/30/22): -11.6% for DPFP portfolio; -17.3% for Public Markets (ex-Cash) which accounts for 66% of the assets.

2022 as of 6/30/22 YTD - Change in Market Value Bridge Chart

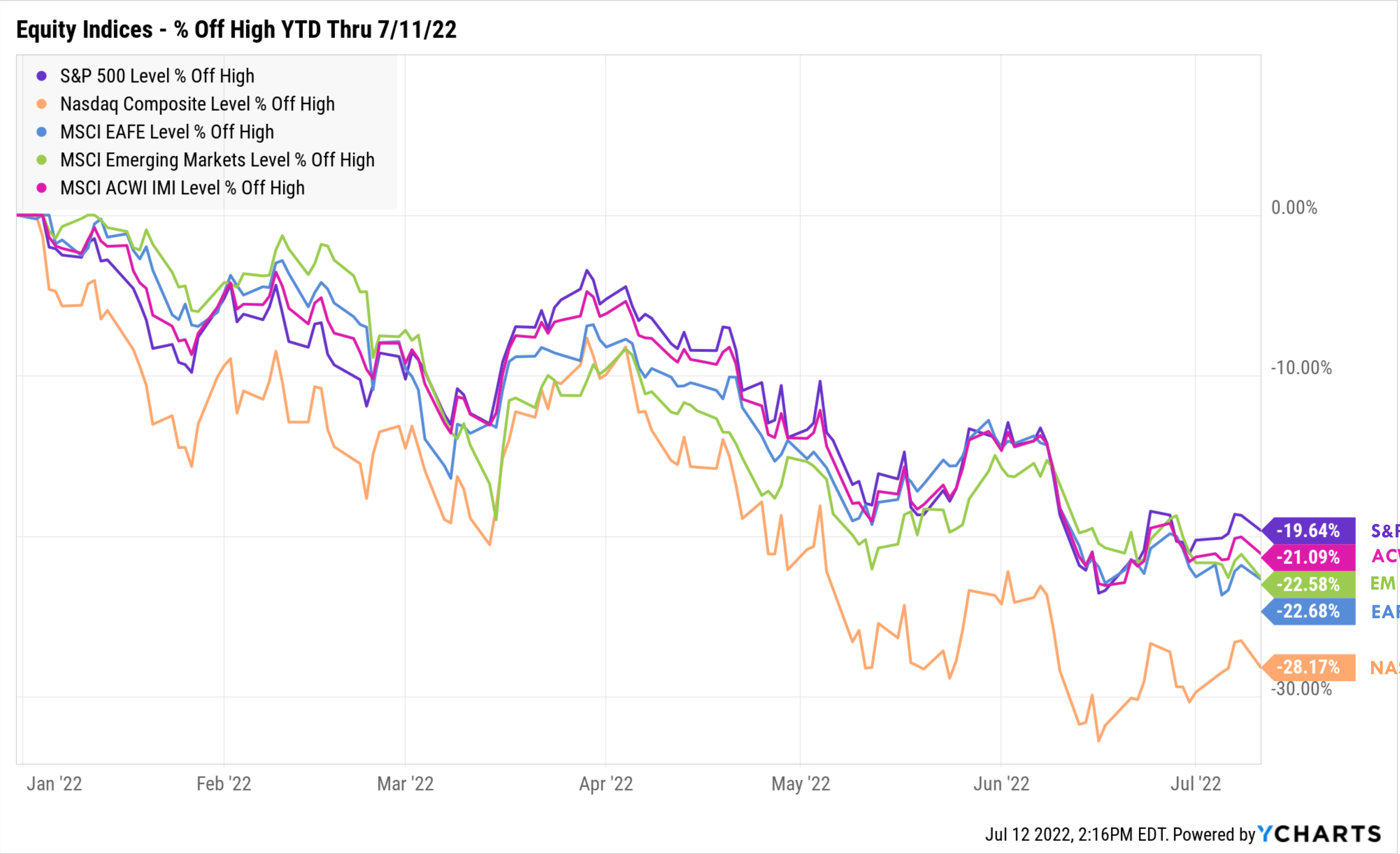
In Millions

2022 YTD Investment Return estimated at -11.6%

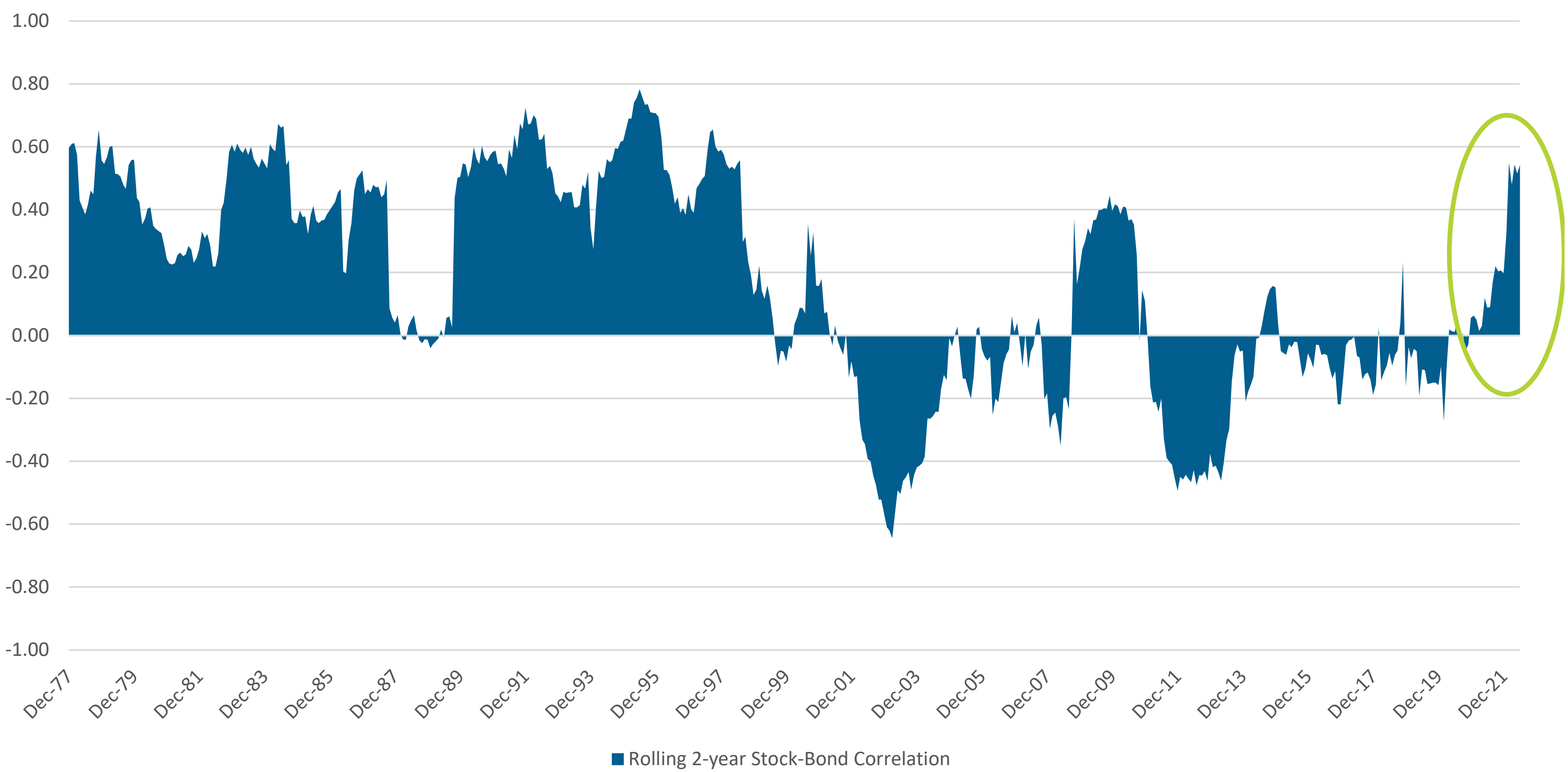


Numbers may not foot due to rounding.

Equity Market Drawdown



US Stock to Bond Correlations



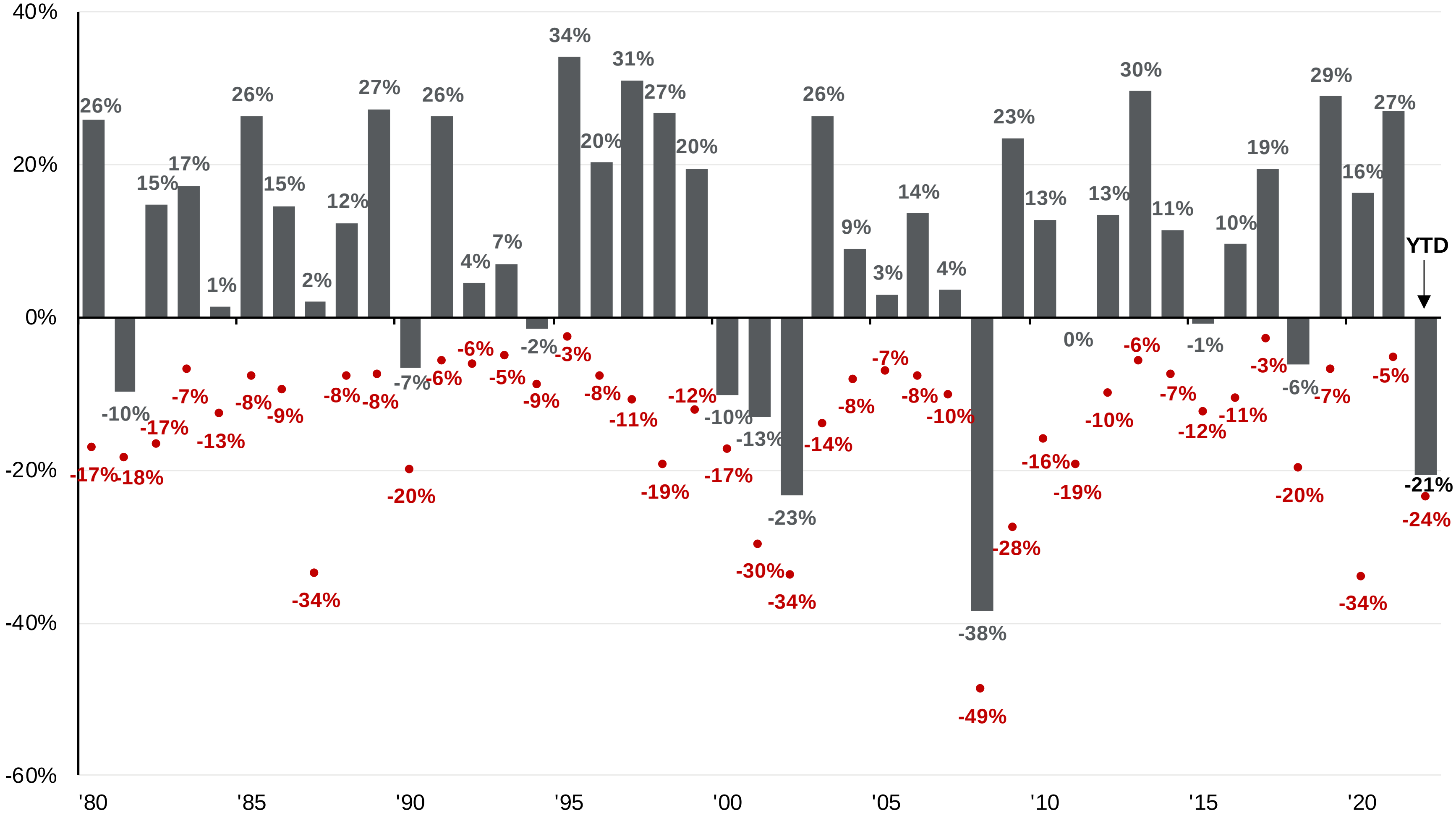
Source: Meketa, S&P 500 Index and Barclays Aggregate index rolling two year correlations since inception of Aggregate Index

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 14.0%, annual returns were positive in 32 of 42 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 2021, over which time period the average annual return was 9.4%.
Guide to the Markets – U.S. Data are as of June 30, 2022.

Go Forward Returns After Worst S&P Quarterly Drawdowns

Q2 2022 was the 16th worst quarterly return for the S&P 500 since 1926.

The Worst S&P 500 Quarterly Returns: 1926-2022

Quarter Ending	Performance	+1 Year	+3 Year	+5 Years
6/30/1932	-37.7%	162.9%	39.3%	34.8%
9/30/1931	-33.6%	-9.6%	4.2%	16.9%
12/31/1929	-27.8%	-24.9%	-26.9%	-9.9%
9/30/1974	-25.2%	38.1%	20.0%	16.8%
12/31/1987	-22.6%	16.8%	14.2%	15.9%
12/31/2008	-21.9%	26.5%	14.1%	17.9%
12/31/1937	-21.4%	31.1%	5.6%	4.6%
6/30/1962	-20.6%	31.2%	19.2%	14.3%
3/31/2020	-19.6%	56.4%	-	-
3/31/1938	-18.6%	35.2%	11.4%	13.0%
9/30/1946	-18.0%	6.4%	7.6%	16.6%
6/30/1970	-18.0%	41.9%	16.3%	9.3%
6/30/1930	-17.7%	-23.4%	-13.2%	-7.6%
9/30/2002	-17.3%	24.4%	16.7%	15.4%
6/30/1940	-16.9%	5.7%	14.8%	15.1%
6/30/2022	-16.1%	-	-	-
3/31/1939	-16.1%	17.6%	-4.0%	8.3%
12/31/1930	-15.8%	-43.3%	-7.1%	3.1%
9/30/2001	-14.7%	-20.5%	4.0%	7.0%
3/31/1933	-14.1%	92.0%	42.9%	13.1%
Average		**18.6%**	**11.8%**	**10.5%**

Source: A Wealth of Common Sense https://awealthofcommonsense.com/2022/07/on-the-inevitability-of-bear-markets/

Public Markets Performance Snapshot - Estimates

Public Markets (ex-Cash) currently make up 66% of DPFP Investment Portfolio.

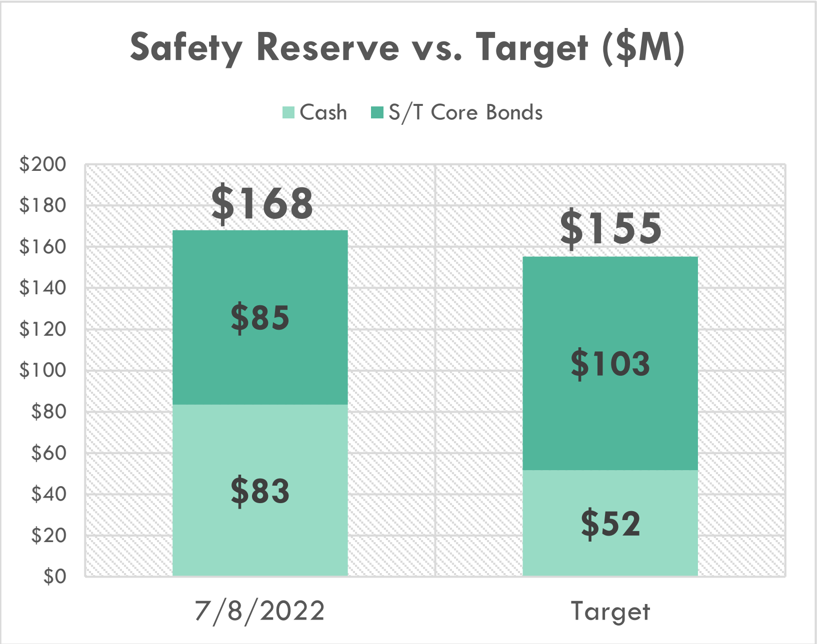
		MTD as of 6/30/22			YTD as of 6/30/2022			3 Year Trailing as of 6/30/2022		
Net of fees	Index	Manager	Index	Excess	Manager	Index	Excess	Manager	Index	Excess
Total Public Portfolio (ex-Cash)	**60% ACWI IMI/40% Global AGG**	**-6.7%**	**-6.5%**	**-0.3%**	**-17.3%**	**-17.8%**	**0.5%**	**2.8%**	**2.3%**	**0.5%**
Global Equity	**MSCI ACWI IMI**	**-8.2%**	**-8.6%**	**0.4%**	**-20.7%**	**-20.5%**	**-0.2%**	**5.8%**	**6.0%**	**-0.2%**
Boston Partners	MSCI World	-10.2%	-8.7%	-1.5%	-11.4%	-20.5%	9.1%	7.1%	7.0%	0.1%
Manulife	MSCI ACWI	-6.9%	-8.4%	1.5%	-16.6%	-20.2%	3.6%	6.7%	6.2%	0.5%
Invesco (OFI)	MSCI ACWI	-6.8%	-8.4%	1.6%	-30.8%	-20.2%	-10.6%	2.5%	6.2%	-3.7%
Walter Scott	MSCI ACWI	-7.6%	-8.4%	0.9%	-23.4%	-20.2%	-3.2%	5.6%	6.2%	-0.6%
Northern Trust ACWI IMI Index*	MSCI ACWI IMI	-8.5%	-8.6%	0.1%	-20.2%	-20.5%	0.3%	6.4%	6.0%	0.4%
Eastern Shore US Small Cap*	Russell 2000	-9.5%	-8.2%	-1.3%	-27.2%	-23.4%	-3.8%	1.7%	4.2%	-2.5%
Global Alpha	MSCI EAFE Small Cap	-10.1%	-11.0%	0.9%						
EM Equity - RBC	**MSCI EM IMI**	**-5.1%**	**-7.2%**	**2.0%**	**-14.8%**	**-17.7%**	**3.0%**	**1.5%**	**1.2%**	**0.3%**
Public Fixed Income (ex-Cash)	**BBG Multiverse TR**	**-3.9%**	**-3.4%**	**-0.5%**	**-10.7%**	**-14.0%**	**3.3%**	**-1.2%**	**-3.2%**	**2.0%**
S/T IG Bonds - IR+M	BBG 1-3YR AGG	-0.6%	-0.7%	0.1%	-3.1%	-3.1%	0.0%	0.8%	0.2%	0.5%
IG Bonds - Longfellow*	BBG US AGG	-1.5%	-1.6%	0.1%	-10.6%	-10.3%	-0.3%	-0.6%	-0.9%	0.4%
Bank Loans - Pacific Asset Mgmt.	CS Leveraged Loan	-3.0%	-2.8%	-0.2%	-5.1%	-5.0%	-0.1%	1.8%	1.8%	0.0%
High Yield - Loomis Sayles*	BBG USHY 2% Cap	-7.0%	-6.7%	-0.3%	-14.9%	-14.2%	-0.8%	-0.8%	-0.2%	-0.6%
EM Debt - Ashmore	50% EMBI / 25% ELMI / 25% GBI-EM	-8.6%	-8.6%	0.0%	-22.5%	-20.9%	-1.6%	-10.8%	-7.2%	-3.6%

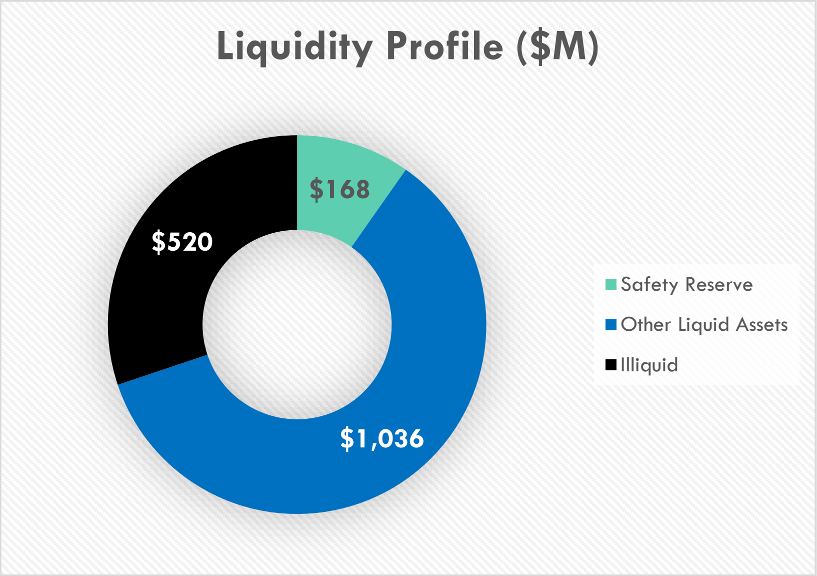
Source: JPM Morgan custody data, manager reports, Investment Staff estimates and calculations. Numbers may not foot due to rounding.

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

DALLAS POLICE & FIRE PENSION SYSTEM

Safety Reserve Dashboard – As of 7/8/22





Projected Net Monthly outflows of **$9.3M** per month. Safety Reserve of **$168M** would cover net monthly outflows for next **18 months** or through **December 2023.**

Expected Cash Activity	Date	Amount ($M)	Projected Cash Balance ($M)	Projected Cash (%)
	6/30/22		**$54.3**	3.2%
L&B Kings Harbor Dist	7/5/22	$10.8	$65.1	**3.8%**
City Contribution	7/8/22	$8.8	$74.0	**4.3%**
LSCRA Dist	7/8/22	$5.2	$79.1	**4.6%**
LSGC Dist	7/8/22	$4.3	$83.4	4.8%
Current Balance	**7/11/22**		**$83.4**	4.8%
City Contribution	7/22/22	$8.7	$92.1	**5.3%**
Pension Payroll	7/27/22	($27.5)	$64.6	**3.7%**
City Contribution	8/5/22	$8.7	$73.3	**4.3%**
City Contribution	8/19/22	$8.7	$82.0	**4.8%**
Pension Payroll	8/29/22	($27.5)	$54.5	**3.2%**
City Contribution	9/2/22	$8.7	$63.2	**3.7%**
City Contribution	9/16/22	$8.7	$71.9	**4.2%**
Pension Payroll	9/28/22	($27.5)	$44.4	**2.6%**
City Contribution	9/30/22	$8.7	$53.1	**3.1%**

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

Numbers may not foot due to rounding

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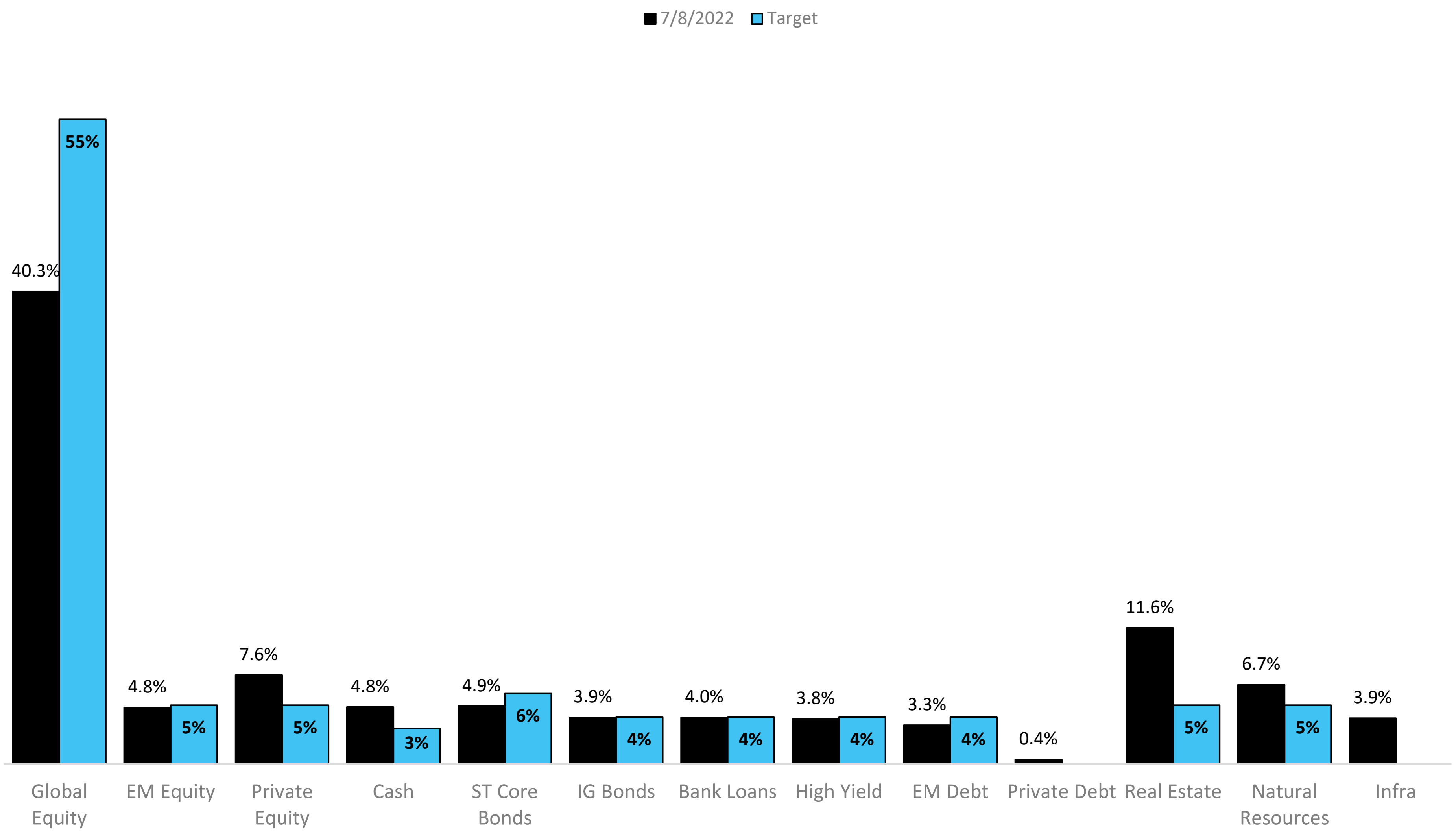
Asset Allocation – Actual vs Target



DALLAS POLICE & FIRE PENSION SYSTEM

Asset Allocation & Global Equity Detail (as of 7/8/22)

DPFP Asset Allocation	7/8/2022 NAV	7/8/2022 %	Target $ mil.	Target %	Variance $ mil.	Variance %
Equity	**908**	**52.7%**	**1,121**	**65%**	**-213**	**-12.3%**
Global Equity	695	40.3%	948	55%	-253	-14.7%
Boston Partners	*114*	*6.6%*	*138*	*8%*	*-24*	*-1.4%*
Manulife	*120*	*6.9%*	*138*	*8%*	*-18*	*-1.1%*
Invesco (OFI)	*118*	*6.8%*	*138*	*8%*	*-20*	*-1.2%*
Walter Scott	*120*	*6.9%*	*138*	*8%*	*-18*	*-1.1%*
Northern Trust ACWI IMI Index	*158*	*9.2%*	*259*	*15%*	*-101*	*-5.8%*
Eastern Shore US Small Cap	*30*	*1.7%*	*69*	*4%*	*-39*	*-2.3%*
Global Alpha Intl Small Cap	*36*	*2.1%*	*69*	*4%*	*-33*	*-1.9%*
Russell Transition	*0*	*0.0%*	*0*	*0%*	*0*	*0.0%*
Emerging Markets Equity - RBC	83	4.8%	86	5%	-4	-0.2%
Private Equity*	130	7.6%	86	5%	44	2.6%
Fixed Income	**433**	**25.1%**	**431**	**25%**	**2**	**0.1%**
Cash	83	4.8%	52	3%	32	1.8%
S/T Investment Grade Bonds - IR+M	85	4.9%	103	6%	-19	-1.1%
Investment Grade Bonds - Longfellow	68	3.9%	69	4%	-1	-0.1%
Bank Loans - Pacific Asset Management	68	4.0%	69	4%	-1	0.0%
High Yield Bonds - Loomis Sayles	66	3.8%	69	4%	-3	-0.2%
Emerging Markets Debt - Ashmore	57	3.3%	69	4%	-12	-0.7%
Private Debt*	6	0.4%	0	0%	6	0.4%
Real Assets*	**383**	**22.2%**	**172**	**10%**	**211**	**12.2%**
Real Estate*	200	11.6%	86	5%	114	6.6%
Natural Resources*	116	6.7%	86	5%	30	1.7%
Infrastructure*	67	3.9%	0	0%	67	3.9%
Total	**1,724**	**100.0%**	**1,724**	**100%**	**0**	**0.0%**
Safety Reserve ~$162M=18 mo net CF	168	9.7%	155	9%	13	0.7%
*Private Market Assets	520	30.2%	259	15%	261	15.2%

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

Numbers may not foot due to rounding

Asset Class Returns – JPM Guide to the Markets

																2007 - 2021	
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD	Ann.	Vol.
EM Equity 39.8%	Fixed Income 5.2%	EM Equity 79.0%	REITs 27.9%	REITs 8.3%	REITs 19.7%	Small Cap 38.8%	REITs 28.0%	REITs 2.8%	Small Cap 21.3%	EM Equity 37.8%	Cash 1.8%	Large Cap 31.5%	Small Cap 20.0%	REITs 41.3%	Comdty. 18.4%	Large Cap 10.6%	REITs 23.2%
Comdty. 16.2%	Cash 1.8%	High Yield 59.4%	Small Cap 26.9%	Fixed Income 7.8%	High Yield 19.6%	Large Cap 32.4%	Large Cap 13.7%	Large Cap 1.4%	High Yield 14.3%	DM Equity 25.6%	Fixed Income 0.0%	REITs 28.7%	EM Equity 18.7%	Large Cap 28.7%	Cash 0.2%	Small Cap 8.7%	EM Equity 22.9%
DM Equity 11.6%	Asset Alloc. -25.4%	DM Equity 32.5%	EM Equity 19.2%	High Yield 3.1%	EM Equity 18.6%	DM Equity 23.3%	Fixed Income 6.0%	Fixed Income 0.5%	Large Cap 12.0%	Large Cap 21.8%	REITs -4.0%	Small Cap 25.5%	Large Cap 18.4%	Comdty. 27.1%	Fixed Income -10.3%	REITs 7.5%	Small Cap 22.5%
Asset Alloc. 7.1%	High Yield -26.9%	REITs 28.0%	Comdty. 16.8%	Large Cap 2.1%	DM Equity 17.9%	Asset Alloc. 14.9%	Asset Alloc. 5.2%	Cash 0.0%	Comdty. 11.8%	Small Cap 14.6%	High Yield -4.1%	DM Equity 22.7%	Asset Alloc. 10.6%	Small Cap 14.8%	Asset Alloc. -14.6%	High Yield 6.6%	Comdty. 19.1%
Fixed Income 7.0%	Small Cap -33.8%	Small Cap 27.2%	Large Cap 15.1%	Cash 0.1%	Small Cap 16.3%	High Yield 7.3%	Small Cap 4.9%	DM Equity -0.4%	EM Equity 11.6%	Asset Alloc. 14.6%	Large Cap -4.4%	Asset Alloc. 19.5%	DM Equity 8.3%	Asset Alloc. 13.5%	High Yield -16.9%	Asset Alloc. 6.1%	DM Equity 18.9%
Large Cap 5.5%	Comdty. -35.6%	Large Cap 26.5%	High Yield 14.8%	Asset Alloc. -0.7%	Large Cap 16.0%	REITs 2.9%	Cash 0.0%	Asset Alloc. -2.0%	REITs 8.6%	High Yield 10.4%	Asset Alloc. -5.8%	EM Equity 18.9%	Fixed Income 7.5%	DM Equity 11.8%	EM Equity -17.5%	EM Equity 4.8%	Large Cap 16.9%
Cash 4.8%	Large Cap -37.0%	Asset Alloc. 25.0%	Asset Alloc. 13.3%	Small Cap -4.2%	Asset Alloc. 12.2%	Cash 0.0%	High Yield 0.0%	High Yield -2.7%	Asset Alloc. 8.3%	REITs 8.7%	Small Cap -11.0%	High Yield 12.6%	High Yield 7.0%	High Yield 1.0%	REITs -19.2%	DM Equity 4.1%	High Yield 12.2%
High Yield 3.2%	REITs -37.7%	Comdty. 18.9%	DM Equity 8.2%	DM Equity -11.7%	Fixed Income 4.2%	Fixed Income -2.0%	EM Equity -1.8%	Small Cap -4.4%	Fixed Income 2.6%	Fixed Income 3.5%	Comdty. -11.2%	Fixed Income 8.7%	Cash 0.5%	Cash 0.0%	DM Equity -19.3%	Fixed Income 4.1%	Asset Alloc. 11.7%
Small Cap -1.6%	DM Equity -43.1%	Fixed Income 5.9%	Fixed Income 6.5%	Comdty. -13.3%	Cash 0.1%	EM Equity -2.3%	DM Equity -4.5%	EM Equity -14.6%	DM Equity 1.5%	Comdty. 1.7%	DM Equity -13.4%	Comdty. 7.7%	Comdty. -3.1%	Fixed Income -1.5%	Large Cap -20.0%	Cash 0.8%	Fixed Income 3.3%
REITs -15.7%	EM Equity -53.2%	Cash 0.1%	Cash 0.1%	EM Equity -18.2%	Comdty. -1.1%	Comdty. -9.5%	Comdty. -17.0%	Comdty. -24.7%	Cash 0.3%	Cash 0.8%	EM Equity -14.2%	Cash 2.2%	REITs -5.1%	EM Equity -2.2%	Small Cap -23.4%	Comdty. -2.6%	Cash 0.7%

Source: Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management.
Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Bloomberg Global HY Index, Fixed Income: Bloomberg US Aggregate, REITs: NAREIT Equity REIT Index, Cash: Bloomberg 1-3m Treasury. The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Bloomberg US Aggregate, 5% in the Bloomberg 1-3m Treasury, 5% in the Bloomberg Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period from 12/31/2006 to 12/31/2021. Please see disclosure page at end for index definitions. All data represents total return for stated period. The "Asset Allocation" portfolio is for illustrative purposes only. Past performance is not indicative of future returns.
Guide to the Markets – U.S. Data are as of June 30, 2022.

2022 Board Investment Review Plan*

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

July	• Natural Resources: Hancock Presentation
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 #C8

Topic: **Report on Investment Advisory Committee**

Discussion: The Investment Advisory Committee met on July 13, 2022. The Committee Chair and Investment Staff will comment on Committee observations and advice.

Regular Board Meeting – Thursday, July 14, 2022

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DISCUSSION SHEET

ITEM #C9

Topic: **Emerging Markets Debt Manager Recommendation**

Attendees: Leandro Festino – Managing Principal, Consultant, Meketa

Discussion: Working with Meketa, staff has conducted a search for an Emerging Markets Debt manager. The Investment Advisory Committee provided advice regarding the search and interviewed two finalists. Staff and Meketa will discuss the search process and the recommendation.

Staff Recommendation: **Available** at the meeting.

MetLife Investment Management Emerging Market Debt Blend

Updated as of 7/7/22

PROPOSED NEW INVESTMENT		
1)	Name of investment and manager	MetLife Investment Management Emerging Market Debt Blend
2a)	DPFP Asset Class	Fixed Income
2b)	Asset class allocation / target	23.7% current / 25% target
3a)	DPFP Sub-Asset Class	Emerging Markets Debt
3b)	Sub-Asset class allocation / target	3.3% current / 4% target
4)	Proposed investment size	~$70M - 4% of DPFP
5)	Projected funding date and schedule	Q3 2022
INVESTMENT STRATEGY/STRUCTURE		
1)	Investment strategy	Emerging Markets Debt Blended Currency (33% Hard, 33% Local, 33% Corporates)
2)	Investment Vehicle size	$576M
3)	Total fund or strategy size	$2.6B
4)	Firm assets under management	$639B
5)	Investment Legal Structure	Collective Investment Trust (CIT)
6)	Liquidity	Daily (5 Days Notice for Flows >20% of Plan Assets)
7)	Proposed Benchmark	35% JPM EMBI GI, 35% JPM CEMBI, 30% JPM GBI-EM
8)	Peer Group	Global Emerging Markets Fixed Income - Blended Currency
DUE DILIGENCE INFO		
1)	Staff meetings with manager	Staff interview 6/21/22, IAC interview 7/13/22
2)	Consultant Recommendation	Attached
3)	Staff Recommendation	Attached
4)	IAC Interview & Recommendation Date	7/13/2022
5)	Expected Board Approval Date	7/14/2022

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EMERGING MARKETS DEBT SEARCH

Date: July 14, 2022

To: DPFP Board of Trustees

From: DPFP Investments Staff

Subject: Emerging Markets Debt Manager Recommendation

Executive Summary & Recommendation

The Investment Advisory Committee ("IAC") approved initiating an Emerging Markets Debt ("EMD") search and approved the search process at the March IAC meeting. Staff, with the assistance of Meketa, initiated the search process for an EMD manager and narrowed down the shortlist to seven firms who completed Requests for Proposals (RFPs). After reviewing the RFP responses, staff interviewed four semi-finalists and has selected two finalist managers to interview with the IAC. Staff and the IAC recommend MetLife for the EMD allocation due to their strong and stable investment team, true EMD blended portfolio allocation, in depth credit research, and outperformance in their trailing returns. Staff expects to fund the 4.0% target allocation from the current EMD manager (Ashmore) in 3Q22. Meketa concurs with the recommendation.

Search Process:

DPFP has a 4% allocation to EMD within the Fixed Income bucket. DPFP has been invested in the Ashmore Blended EMD strategy since 2017. At the March 24th, 2022 IAC meeting, staff reviewed Ashmore EMD Blended Strategy, discussed their recent underperformance, and proposed an EMD search process, which maintained exposure to Ashmore and allowed them to submit an RFP as the incumbent.

Staff began the search through a download from eVestment of all 441 open strategies in the EMD Blended Currency Universe. Based on the search process document, the eVestment universe was screened down based on the following minimum requirements and evaluation criteria:

1. The firm be GIPS compliant.
2. The product has available capacity.
3. The product has a 5-year product track record.
4. The product has a core or intermediate duration profile.
5. The product has a blended currency strategy.
6. The product has a commingled fund option.

The initial screen narrowed the list down to 52 products. Staff then used the following quantitative and qualitive parameters to narrow the list down further:

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1. The product does not have a regional focus and invests across all Global EM.
2. The product is not allocated more than 20% to developed markets.
3. The product commingled fund AUM is greater than $300 million.
4. The firm AUM is greater than $1 billion.
5. The product has not seen significant AUM and client loss over the past 5 years.
6. The product has at least 50% of its AUM from institutional investors.
7. The organization and investment team have not had significant turnover or turmoil over the past 5 years.

Staff ended up with a list of 13 products, which was compared to the 11 products recommended by Meketa. There were six crossover names between the lists. Staff held a call with Meketa's research group on April 18th to review each of the remaining products. The Meketa research team reviewed their coverage of each of the strategies, noting cases where they may not be familiar or have coverage of the strategy. After speaking with Meketa and conducting additional research, the RFP shortlist was narrowed down to seven managers. On May 18th, staff provided a memo to the IAC outlining the search process to date to arrive at the RFP shortlist of seven firms. With the support of the IAC, staff sent RFPs to the managers on May 23rd with a submission deadline of June 6th.

Request for Proposal Candidates:

1. Ashmore Emerging Markets Blended Debt (Incumbent)
2. MetLife Investment Management Emerging Market Debt Blend
3. Neuberger Berman Group Emerging Markets Debt Blend
4. Payden & Rygel Emerging Markets USD Currency Blend
5. PGIM Fixed Income Emerging Markets Debt – Hard/Local Currency Blend
6. TCW Emerging Markets Fixed Income Total Return
7. Wellington Management Company Blended Opportunistic Emerging Markets Debt

All seven RFPs were submitted by the managers. Staff independently evaluated the RFP responses based on the criteria laid out in the search document. After completion of the internal review, staff held a call with Meketa on June 17th to discuss views of each of the firms, areas of concern and next steps to move forward.

Managers Selected for Interview: Staff and Meketa agreed to narrow the list down to four semi-finalists.

1. MetLife Investment Management Emerging Market Debt Blend
2. Payden & Rygel Emerging Markets USD Currency Blend
3. PGIM Fixed Income Emerging Markets Debt – Hard/Local Currency Blend
4. TCW Emerging Markets Fixed Income Total Return

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Staff held calls with the four managers in mid-June. Three investment staff members ranked the four firms that were interviewed. The below scoring summary provides the combined ranking based on each staff member's individual rankings. Staff used a 1 through 4 ranking system, with 1 being the best score.

	Organization	Investment Team	Philosophy Process	Performance	Fees (w/ OpEx)	Overall	
	20%	20%	25%	25%	10%	Score	Rank
MetLife	2	1	1	1	4	1.50	1
Payden & Rygel	1	3	3	2	3	2.35	2
PGIM	4	4	4	4	1	3.70	4
TCW	3	2	2	3	2	2.45	3

Meketa and staff held a call on June 24th to discuss our review of the four managers under consideration, address any concerns, and selected MetLife Investment Management EMD Blend and TCW Emerging Markets Fixed Income Total Return as finalists to present to the IAC. At the July 13th IAC meeting, staff recommended hiring MetLife primarily due to their stable investment team, strategy being the truest blended product, and having the best overall trailing performance out of the semi-finalists. The IAC concurred with staff's recommendation.

MetLife Summary: Information required by section 7.A.6 of the Investment Policy.

The following is a summary of information required by section 7.A.6 of the Investment Policy.

a. A description of the organization and key people:

MetLife is based in New Jersey and was founded in 1864. MetLife is 100% owned by its parent which is a publicly traded. The board of MetLife is 38% female and 15% minority. MetLife acquired the EMD team from Logan Circle in 2019. The EMD team is made up of nine total investment professionals. The two portfolio managers of this strategy, Scott Moses and Todd Howard, have been together for 13 years. The team also leverages fundamental sovereign research from regional analysts around the world.

b. A description of the investment process and philosophy;

MetLife believes the key to realizing value in EMD revolves around understanding asset quality and valuation across all asset types. The blended strategy is opportunistic and invests with roughly equal allocations to hard currency, local currency, and corporate bonds. The team believes they generate most of their alpha from credit research and have a larger allocation to corporate bonds. Their investment objective is to produce predictable and consistent excess returns. The strategy has 231 bond issues and relatively high turnover. The only derivates used are forwards for hedging purposes.

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c. A description of historical performance and future expectations;

The investment portfolio has had a historical equal weight to hard currency, local currency, and corporate bonds. Performance as of March 31st, 2022, has been positive relative to the benchmark (35% JPM EMBI GI, 35% JPM CEMBI, 30% JPM GBI-EM) over all trailing time periods. The net trailing returns relative to the benchmark are +0.59% (3-year), +1.68% (5-year), and +2.60% (7-year). MetLife has also outperformed during this current drawdown beginning in 3Q21, with the strategy down (9.3%) and the benchmark down (12.4%) through 1Q22. MetLife expects the strategy to outperform when volatility is low and capital markets are open or when volatility is shorter in duration and provides opportunities for their security selection abilities to shine. The strategy is expected to underperform in market environments where correlations move towards one or if global events cause a massive divergence in asset prices. These environments often cause indiscriminate selling and their value bias and focus on security selection can underperform.

d. The risks inherent in the investment and the manager's approach;

The MetLife EMD Blend has a higher allocation to corporate bonds than the peer group due to their confidence in their credit research. Given corporate bonds tend to be riskier than sovereign bonds, staff notes this as a risk. However, staff feels comfortable with MetLife's credit research team, philosophy, and process. Staff also notes that trailing returns could be benefiting from end-point bias as the strategy has had a very favorable drawdown relative to peers this year.

e. The proper time horizon for evaluation of results;

Staff views trailing 3-year and 5-year perspectives as the appropriate time horizon for evaluation.

f. Identification of relevant comparative measures such as benchmarks and/or peer samples;

The benchmark is blended with 35% JP Morgan EMBI Global Index, 35% JP Morgan CEMBI Broad Diversified Index, and 30% JP Morgan GBI-EM Global Diversified Index. MetLife will be compared to the EMD Blended Currency peer universe.

g. The suitability of the investment within the relevant asset class; and

MetLife is suitable for the EMD sleeve of the Fixed Income allocation.

h. The expected cost of the investment.

Staff expects the annual fees, including fund operating expenses, to be $440,000.

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EMERGING MARKETS DEBT SEARCH

Date: July 13th, 2022

To: Investments Advisory Committee (IAC)

From: DPFP Investments Staff

Subject: Emerging Markets Debt Search Process and Finalists

Executive Summary:

The Investment Advisory Committee ("IAC") approved initiating an Emerging Markets Debt ("EMD") search and approved the search process at the March IAC meeting. Staff, with the assistance of Meketa, initiated the search process for an EMD manager and narrowed down the shortlist to seven firms who completed Requests for Proposals ("RFPs"). After reviewing the RFP responses, staff interviewed four semi-finalists and has selected two finalist managers to interview with the IAC. Staff prefers MetLife due to their strong and stable investment team, true EMD blended portfolio allocation, in depth credit research, and outperformance in their trailing returns. TCW is also a viable candidate if the IAC is comfortable with the tilt towards Hard Currency and succession concerns.

Search Process:

DPFP has a 4% target allocation to EMD within the Fixed Income bucket. DPFP has been invested in the Ashmore Blended EMD strategy since 2017. At the March 24th, 2022, IAC meeting, staff reviewed Ashmore Blended EMD Strategy, discussed their recent underperformance, and proposed an EMD search process, which maintained exposure to Ashmore and allowed them to submit an RFP as the incumbent.

Staff began the search through a download from eVestment of all 441 open strategies in the EMD Blended Currency Universe. Based on the search process document, the eVestment universe was screened down based on the following minimum requirements and evaluation criteria:

1. The firm be GIPS compliant.
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3. The product has a 5-year product track record.
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5. The product has a blended currency strategy.
6. The product has a commingled fund option.

The initial screen narrowed the list down to 52 products. Staff then used the following quantitative and qualitive parameters to narrow the list down further:

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2. The product is not allocated more than 20% to developed markets.
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5. The product has not seen significant AUM and client loss over the past 5 years.
6. The product has at least 50% of its AUM from institutional investors.
7. The organization and investment team have not had significant turnover or turmoil over the past 5 years.

Staff ended up with a list of 13 products, which was compared to the 11 products recommended by Meketa. There were six crossover names between the lists. Staff held a call with Meketa's research group on April 18th to review each of the remaining products. The Meketa research team reviewed their coverage of each of the strategies, noting cases where they may not be familiar or have coverage of the strategy. After speaking with Meketa and conducting additional research, the RFP shortlist was narrowed down to seven managers. On May 18th, staff provided a memo to the IAC outlining the search process to date to arrive at the RFP shortlist of seven firms. With the support of the IAC, staff sent RFPs to the managers on May 23rd with a submission deadline of June 6th.

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4. Payden & Rygel Emerging Markets USD Currency Blend
5. PGIM Fixed Income Emerging Markets Debt – Hard/Local Currency Blend
6. TCW Emerging Markets Fixed Income Total Return
7. Wellington Management Company Blended Opportunistic Emerging Markets Debt

All seven RFPs were submitted by the managers. Staff independently evaluated the RFP responses based on the criteria laid out in the search document. After completion of the internal review, staff held a call with Meketa on June 17th to discuss views of each of the firms, areas of concern and next steps to move forward.

Managers Selected for Interview: Staff and Meketa agreed to narrow the list down to four semi-finalists.

1. MetLife Investment Management Emerging Market Debt Blend
2. Payden & Rygel Emerging Markets USD Currency Blend

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3. PGIM Fixed Income Emerging Markets Debt – Hard/Local Currency Blend
4. TCW Emerging Markets Fixed Income Total Return

Staff held calls with the four managers in mid-June. Three investment staff members ranked the four firms that were interviewed. The below scoring summary provides the combined ranking based on each staff members individual rankings. Staff used a 1 through 4 ranking system, with 1 being the best score.

	Organization	Investment Team	Philosophy Process	Performance	Fees (w/ OpEx)	Overall	
	20%	20%	25%	25%	10%	Score	Rank
MetLife	2	1	1	1	4	1.50	1
Payden & Rygel	1	3	3	2	3	2.35	2
PGIM	4	4	4	4	1	3.70	4
TCW	3	2	2	3	2	2.45	3

Meketa and staff held a call on June 24th to discuss our review of the four managers under consideration, address any concerns, and decide on selecting MetLife Investment Management EMD Blend and TCW Emerging Markets Fixed Income Total Return as finalists to present to the IAC. Staff prefers hiring MetLife as shown in the scoring summary, primarily due to their stable investment team, strategy being the truest blended product, and having the best overall trailing performance out of the semi-finalists. TCW is also a viable candidate if the IAC is comfortable with the lower structural allocation to local currency bonds and succession concerns on the investment team. The IAC selected manager would be considered by the Board for approval at the July 2022 meeting.

Manager Summaries: The following section provides an overview of the two finalists as well as the other five firms that responded to the RFP and rationale on why they were eliminated.

Finalists

MetLife Investment Management Emerging Market Debt Blend

Firm AUM: $639B | Product AUM: $2.6B | Collective Investment Trust AUM: $576M

Staff is recommending MetLife as a finalist because they have an experienced and stable investment team, true EMD blended portfolio allocation, in depth credit research, and best overall trailing return performance of the semi-finalists. Staff notes potential concerns regarding

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a higher allocation to corporates, and a possible end point bias on performance as the strategy has the smallest drawdown of the semi-finalists in Q1 2022.

MetLife Investment Management was founded in 1864 and is headquartered in New Jersey. MetLife is 100% owned by its parent which is a publicly traded. The board of MetLife is 38% female and 15% minority. MetLife acquired the EMD team from Logan Circle in 2019. This strategy was started in 2006. The EMD team is made up of nine total investment professionals. The two portfolio managers of this strategy, Scott Moses and Todd Howard, have been together for 13 years. The team also leverages fundamental sovereign research from regional analysts around the world. The strategy is a true blended product with roughly equal allocations to hard currency, local currency, and corporate bonds. The strategy has relatively high turnover. The team believes they generate most of their alpha from credit research and has a larger allocation to corporate bonds. The only derivates used are forwards for hedging purposes. Their trailing returns are the best overall out of the semi-finalists and their drawdown has been the smallest in Q1 2022. The strategy is in Meketa's bullpen.

TCW Emerging Markets Fixed Income Total Return

Firm AUM: $263B | Product AUM: $7.2B | Collective Investment Trust AUM: $370M

Staff is recommending TCW as a finalist because the investment team is deep and very knowledgeable, the strategy has a value orientated approach with good position sizing that captures opportunities while being mindful of risk, and good long-term trailing returns. Staff notes possible concerns regarding the strategy's higher tilt towards Hard Currency and succession issues as the lead portfolio manager, Penny Foley, is expected to retire in the coming years.

The TCW Group was founded in 1971 and is based out of Los Angeles, California. The firm is 44% employee owned with the remainder owned by a private equity firm and a Japanese insurer. The team has three portfolio managers, Penny Foley, David Robbins, and Alex Stanojevic. They are all long tenured and diverse in age. There is a succession plan for Penny Foley that has been clearly communicated as the firm plans to promote from within. This strategy utilizes a value-seeking investment approach. The strategy invests across hard currency, local currency, and corporate bonds. This strategy will have lower exposure to local currency bonds with the upper allocation limit at 30%. Currently, the strategy has a tactical call of 0% local exposure, which has positively benefitted the portfolio. The strategy also has high turnover. The team uses derivatives and credit default swaps to minimize downside risk. Their recent trailing returns rank in the middle of the pack of semi-finalists. However, longer-term trailing returns (7yr) are the highest of the group. While this strategy is not in Meketa's bullpen, Meketa participated in staff's interview of TCW and are comfortable with DPFP investing in TCW's EM Fixed Income Total Return Strategy.

DALLAS POLICE & FIRE PENSION SYSTEM

Semi-Finalists

Payden & Rygel Emerging Markets USD Currency Blend

Firm AUM: $147.0B | Product AUM: $3.4B | Collective Investment Trust AUM: $430M

Staff does not recommend Payden & Rygel as a finalist. Staff interviewed Payden & Rygel as a semi-finalist and while the firm is majority women owned, with an impressive investment team, diversified portfolio holdings, and a solid track record, the strategy has a much higher allocation to frontier markets than the other semi-finalists. The higher allocation to frontier markets creates extra risks that DPFP is not comfortable taking. There are also concerns regarding the firm's majority female owned status as Joan Payden, a majority owner, could retire soon.

PGIM Fixed Income Emerging Markets Debt – Hard/Local Currency Blend

Firm AUM: $890.0B | Product AUM: $15.7B | Collective Investment Trust AUM: $1.9B

Staff does not recommend PGIM as a finalist. Staff interviewed PGIM as a semi-finalist and while the strategy has an impressive investment team, very diversified portfolio holdings, and the lowest fees, staff has concerns regarding the portfolio composition and usage of derivatives. The strategy is the largest out of the semi-finalists at $15.7B, which leads it to have the greatest number of holdings (788) and the greatest number of countries invested in (73). This creates concerns that the strategy might be losing their edge and ability to be nimble across all markets. In addition, as the strategy AUM has grown, the fund has started to use forwards and swaps to create synthetic positions in local currency markets when cash bonds have become less liquid given their AUM.

Managers Eliminated After RFP Review

Ashmore Emerging Markets Blended Debt (Incumbent)

Firm AUM: $78.0B | Product AUM: $18.0B | Commingled Fund AUM: $1.2B

Staff eliminated Ashmore from consideration after review of their RFP response and discussion with Meketa. While Ashmore was the incumbent EM Debt manager, recent underperformance, high volatility, and loss of AUM along with clients gave both Meketa and staff concern regarding fit for DPFP's EMD allocation. The trailing 3- and 5- year returns are in the 4th quartile of the blended EMD universe. This strategy is also not in Meketa's bullpen.

Neuberger Berman Group Emerging Markets Debt Blend

Firm AUM: $447.0B | Product AUM: $2.9B | Collective Investment Trust AUM: $300M

Staff eliminated Neuberger Berman from consideration after review of their RFP response and discussion with Meketa. While Neuberger Berman was on both Meketa and staff shortlists, further due diligence discovered a lack of limitations and guidelines on the product which gave both Meketa and staff concern. The strategy had a lack of guidelines on the amount of risk that can be taken with respect to allocation limitation in certain asset classes. While the product had no recent extreme deviations in allocation, the lack of guidelines does not fit with the strategy DPFP is looking for.

Wellington Management Company Blended Opportunistic Emerging Markets Debt

Firm AUM: $1.3T | Product AUM: $7.4B | Collective Investment Trust AUM: $1.4B

Staff eliminated Wellington from consideration after review of their RFP response and discussion with Meketa. While Wellington was on Meketa's shortlist, further due diligence discovered capacity issues. The product has $7.4B in AUM which is closing in on its $9B to $9.5B strategy capacity. In addition, the product has ~40% allocated in local market bonds with a lack of guidelines on the amount of risk that can be taken with respect to allocation limitation in certain asset classes.

Eliminating Staff On-Site Due Diligence

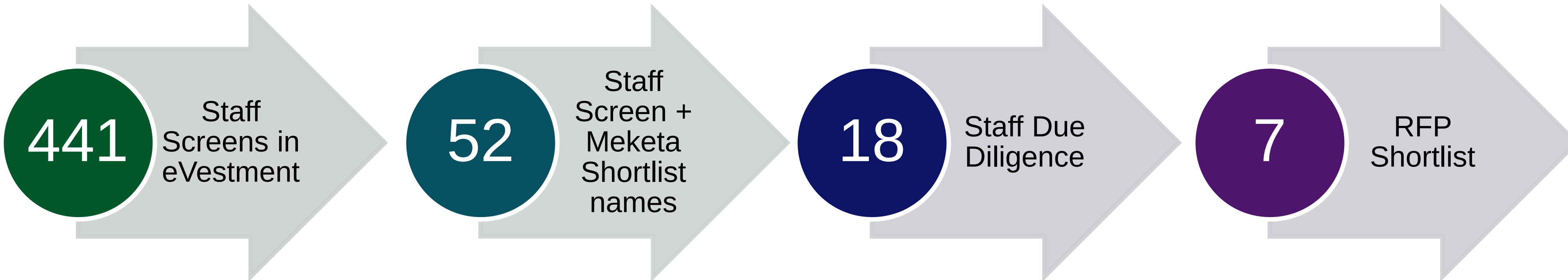
Section 3.g of the Emerging Markets Debt Search Process document stated that "staff and Meketa will evaluate the need for on-site or virtual due diligence and advise the IAC." In light of COVID-19, staff believes that on-site due diligence is no longer prudent and funding without on-site due diligence is recommended. We note that both finalists are well-established firms with broad and diverse client bases and covered by Meketa.

DALLAS POLICE & FIRE PENSION SYSTEM

Emerging Markets Debt Search Process & Finalist Recommendation

July 13th, 2022

Emerging Markets Debt Search Process



RFPs were sent to the following managers and all were received by the deadline of June 6th, 2022.

1. Ashmore Emerging Markets Blended Debt (Incumbent)
2. MetLife Investment Management Emerging Market Debt Blend
3. Neuberger Berman Group Emerging Markets Debt Blend
4. Payden & Rygel Emerging Markets USD Currency Blend
5. PGIM Fixed Income Emerging Markets Debt – Hard/Local Currency Blend
6. TCW Emerging Markets Fixed Income Total Return
7. Wellington Management Company Blended Opportunistic Emerging Markets Debt

Emerging Markets Debt Search Interview Process

After reviewing the RFPs, the following managers were interviewed for one hour each between June 21st and June 24th

1. MetLife Investment Management Emerging Market Debt Blend
2. Payden & Rygel Emerging Markets USD Currency Blend
3. PGIM Fixed Income Emerging Markets Debt – Hard/Local Currency Blend
4. TCW Emerging Markets Fixed Income Total Return

After the interviews, the following managers were selected as finalist candidates

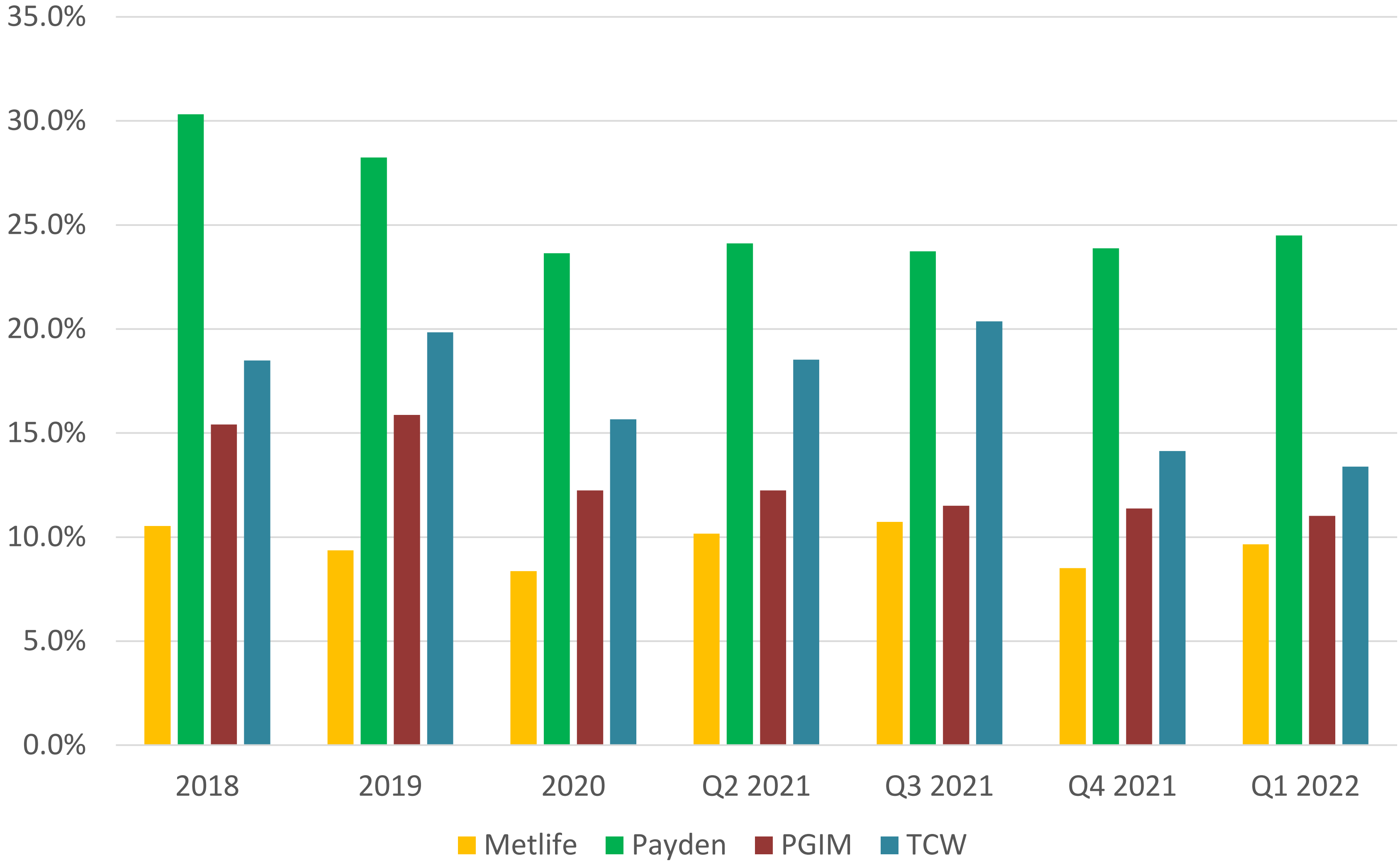
1. MetLife Investment Management Emerging Market Debt Blend
2. TCW Emerging Markets Fixed Income Total Return

Staff Scoring Summary

Managers ranked 1 thru 4 in each category, with 1 being best.
Ranks by category below based on average ranking of Ryan, Mike and Akshay.

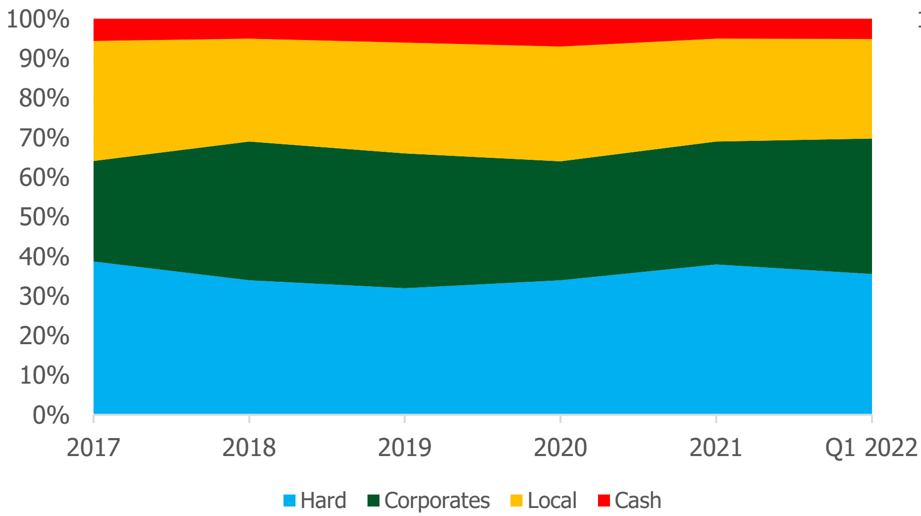
	Organization 20%	Investment Team 20%	Philosophy Process 25%	Performance 25%	Fees 10%	Overall Avg (Rank)
MetLife	2	1	1	1	4	1.5 (1)
	• Publicly traded parent company • Former Logan Circle Team • High concentration of Meketa clients in strategy	• Long-tenured Co-PMs (Todd/Scott) w/ no foreseeable continuation issues • Rely heavily on regional offices	• True blended product w/ highest allocation to corporates • Not overly concentrated • Forwards are only derivatives	• Best trailing risk adjusted returns in the group • Possible end point bias • YTD returns have smallest drawdown	• 55 bps • Anti-dilution fee (>10% of fund)	**Top overall score and staff preference. Stable team and true blended exposure.**
Payden & Rygel	1	3	3	2	3	2.35 (2)
	• 100% employee-owned & over 50% woman owned • Key Person Risk - Joan Payden (CEO) & majority owner	• Kristen Ceva is Lead PM with two additional Co-PMs • Explained a clear succession plan	• More country diversification • Highest Frontier Exposure • Higher allocation to Hard Currency	• 2nd best LT Performance • 2nd best drawdown protection	• 53 bps • Anti-dilution fee (>10% of fund)	**High conviction but eliminated due to high frontier market exposure.**
PGIM	4	4	4	4	1	3.7 (4)
	• Publicly traded parent company Prudential • Loss of AUM in 21 • 79% institution investor base	• Key person risk with lead PM - Succession plan in place • Recent Principal/MD turnover • Team works on EMD Blended & Hard strategies	• Largest # of holdings (788) & Countries (73) • Largest local allocation • Concern around high strategy AUM and use of synthetic exposure	• Lowest trailing returns • Largest Drawdown in the past year • Tends to outperform in up markets	• 45 bps • Performance Fee Option	**Largest strategy under consideration. Concern around size and use of synthetic exposures.**
TCW	3	2	2	3	2	2.45 (3)
	• 44% employee-owned w/ Carlyle and Nippon holding minority stakes • Higher mutual fund and retail AUM	• Penny Foley is a board member & lead PM. • 3 PMs long tenured and spaced-out age-wise • Expect Penny to depart w/in 5 years - succession plan in place	• Historically overweight to hard currency with ability to go up to 30% in Local • Smallest of the CIT vehicles at $370M	• Highest 7-yr trailing • Lower recent trailing returns • Higher recent drawdown • Middle of pack risk adjusted returns	• 52 bps • Performance Fee Option	**High conviction option if IAC/Board is comfortable with likely lead PM turnover and higher Hard currency exposure.**

Frontier Market Exposure

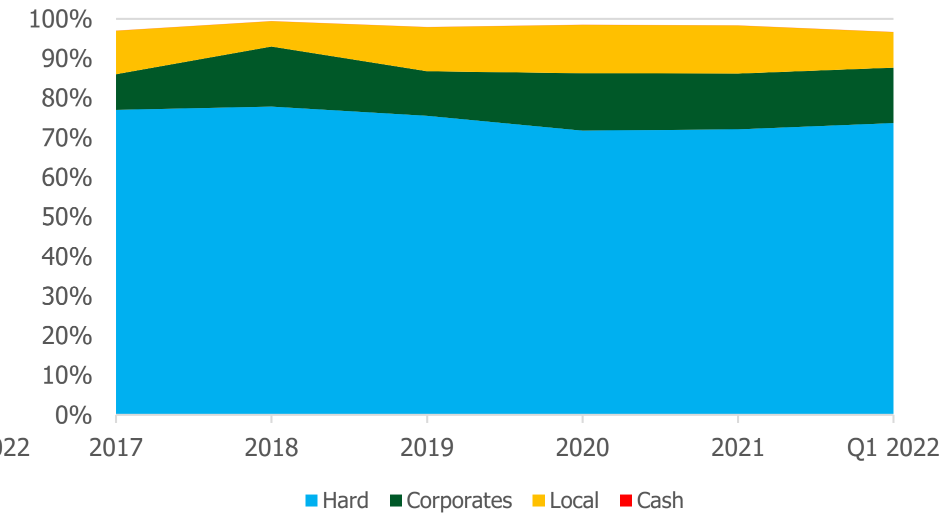


Blended Allocation Over Time

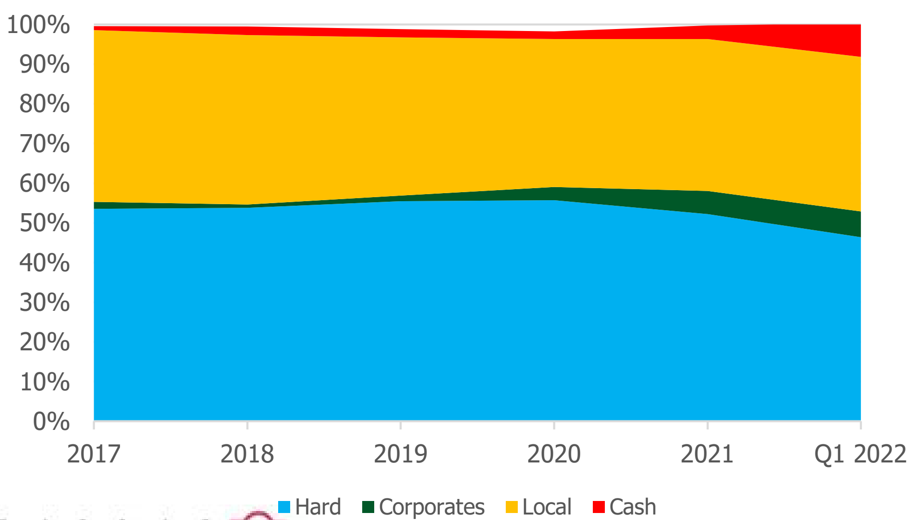
Metlife



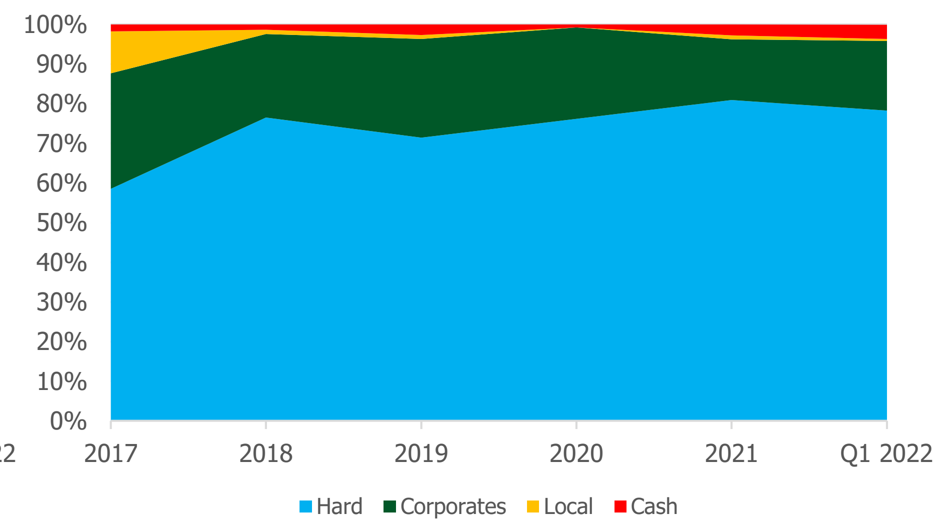
Payden & Rygel



PGIM



TCW



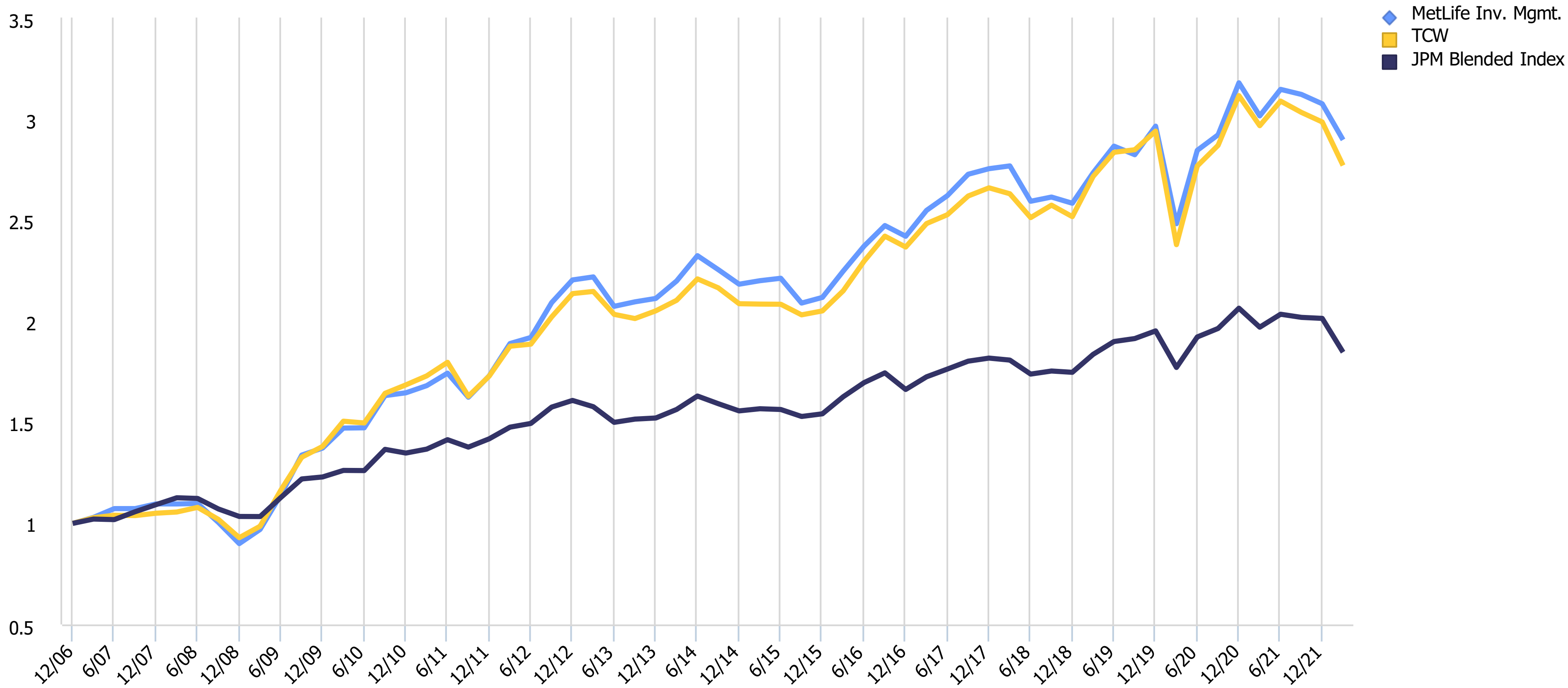
DALLAS POLICE & FIRE PENSION SYSTEM

FINALISTS OVERVIEW AND PERFORMANCE COMPARISON

Finalist Comparison

	MetLife Investment Management Emerging Market Debt Blend	TCW Emerging Markets Fixed Income Total Return
Firm AUM:	$639B	$263B
Product AUM:	$2.6B	$7.2B
Commingled Fund Size:	$576M	$370M
Capacity:	$6B to $7B for EMD Blend AUM	$30B for all EMD AUM
Strategy Inception:	2006	1994
Employee Ownership:	0%	44%
Investment Team:	2 PMs, 7 Sovereign Analysts (64 support analysts shared across Public Fixed Income)	3 PMs, 9 Analysts, 3 Strategists, 3 Traders
Philosophy/Process:	Not concentrated; Generates alpha primarily from corporate research	Value driven with top-down and bottom-up approach / Max 30% local
# of Holdings:	231	181
Annual Turnover (LTM):	141%	139%
Proposed Fee:	55 bps (all inclusive) Performance Fee Option	52 bps (all inclusive) Performance Fee Option
Meketa Bullpen:	Yes	No

Finalists - Growth of $1 (Since 2006)



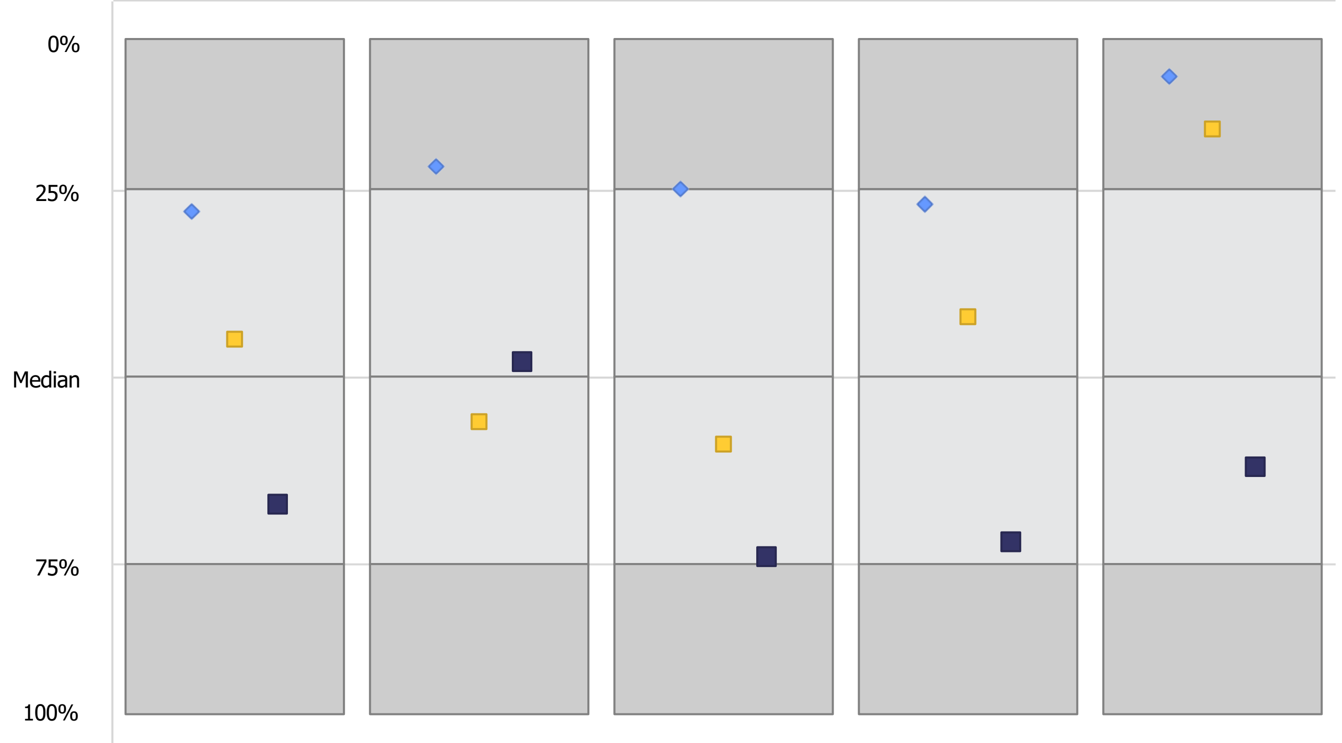
Source: eVestment

Firm Name	Cumulative Returns	Best Period	Worst Period	# of Positive Periods	# of Negative Periods	# of Consecutive Positive Periods	# of Consecutive Negative Periods	% Profitable Periods
MetLife Investment	189.57	17.71	-16.27	44	17	10	3	72.13
The TCW Group	176.87	18.17	-19.1	40	21	6	5	65.57
JPM Blended Index	84.58	9.16	-9.26	38	23	5	4	62.3

Over the long run, both outperformed the JPM Blended Index (50% EMBI / 25% GBI / 25% ELMI+)

DALLAS POLICE & FIRE PENSION SYSTEM

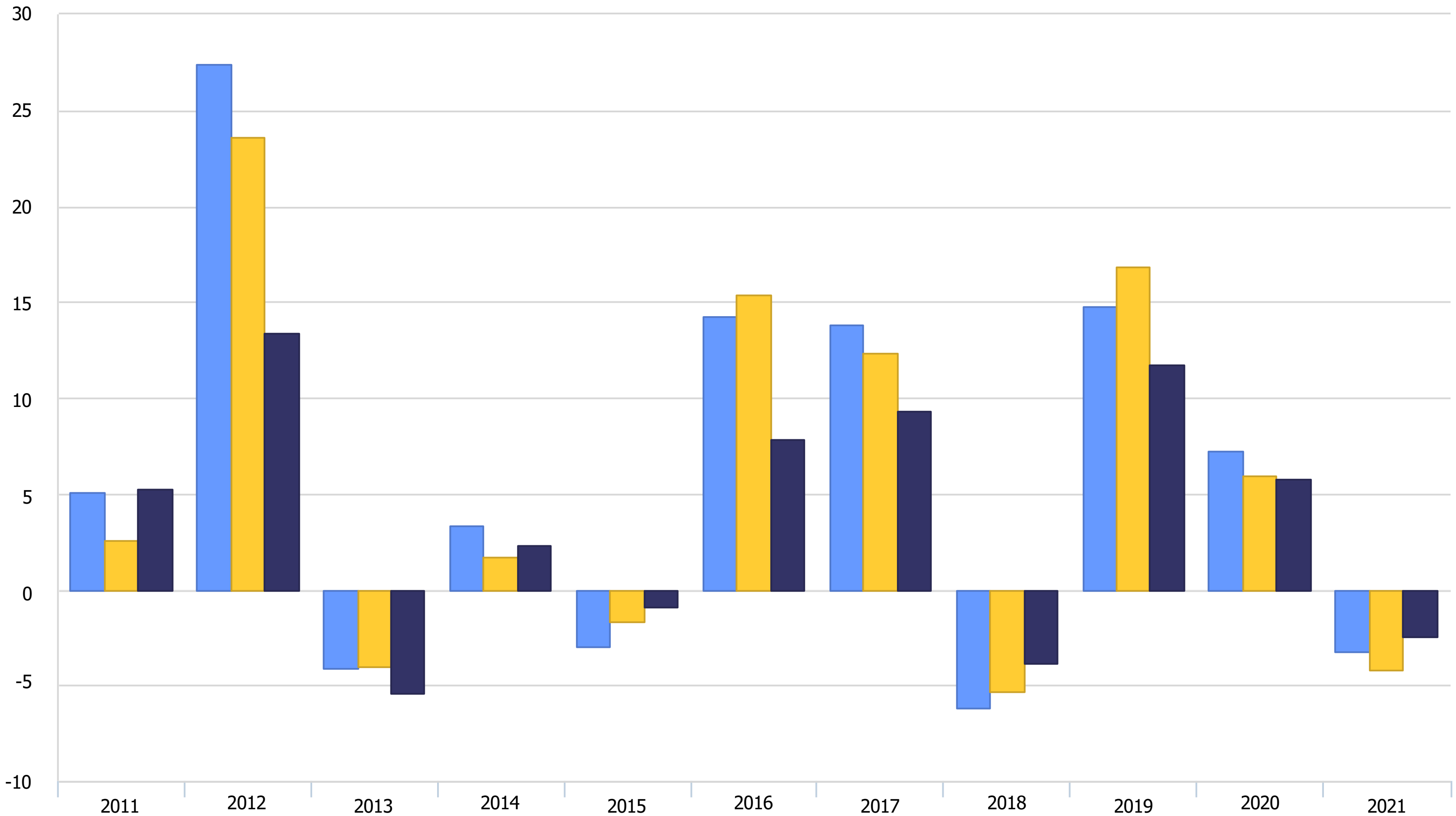
Finalists – Performance Annualized Returns (as of 3/31/22)



Source: eVestment

	MRQ	Rk	1 Year	Rk	3 Years	Rk	5 Years	Rk	10 Years	Rk
5th percentile	-2.08		-1.36		4.38		4.89		4.74	
25th percentile	-5.59		-4.35		1.95		2.69		3.62	
Median	-7.29		-6.37		1.00		2.08		2.67	
75th percentile	-8.82		-7.54		0.15		1.25		1.65	
95th percentile	-10.59		-11.01		-2.09		-0.48		0.84	
# of Observations	103		103		95		86		42	
MetLife Investment Management: EM Debt Blend	-5.80	28	-3.94	22	1.94	25	2.60	27	4.36	10
The TCW Group: TCW EM Fixed Income Total Return	-7.21	45	-6.63	56	0.66	59	2.21	42	3.97	17
JPM Blended Index: 50% EMBI / 25% GBI / 25% ELMI+	-8.31	67	-6.28	48	0.19	74	1.37	72	2.26	62

Finalists – Performance Calendar Year (Gross)

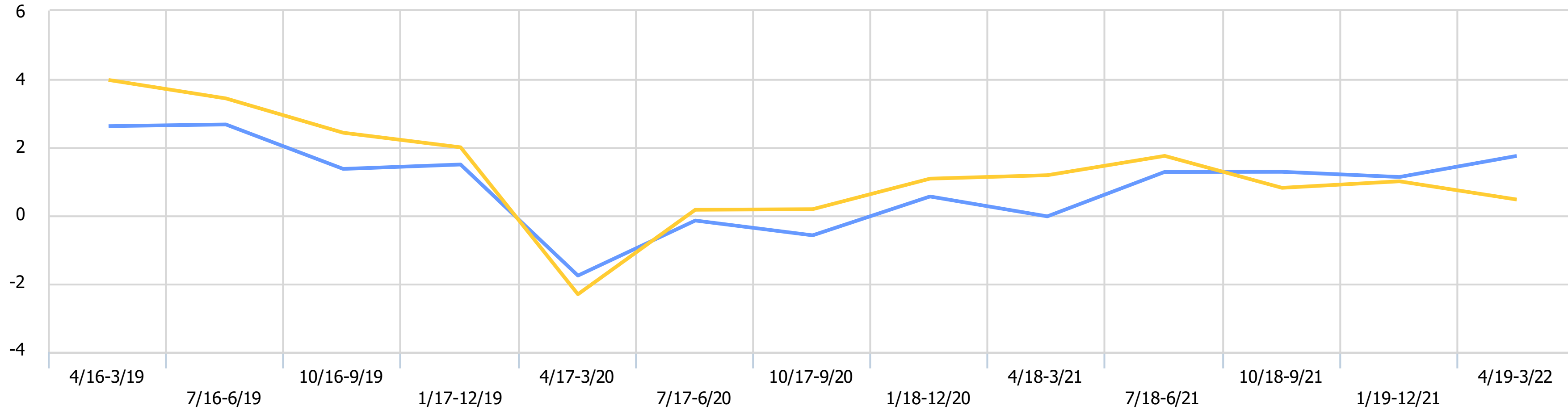


Firm Name	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
MetLife Investment Management	5.09	27.43	-4.15	3.33	-2.99	14.28	13.81	-6.20	14.76	7.23	-3.27
The TCW Group, Inc.	2.58	23.59	-3.99	1.72	-1.71	15.40	12.37	-5.36	16.80	5.96	-4.18
JPM Blended Index	5.22	13.38	-5.40	2.31	-0.93	7.80	9.33	-3.86	11.72	5.74	-2.44

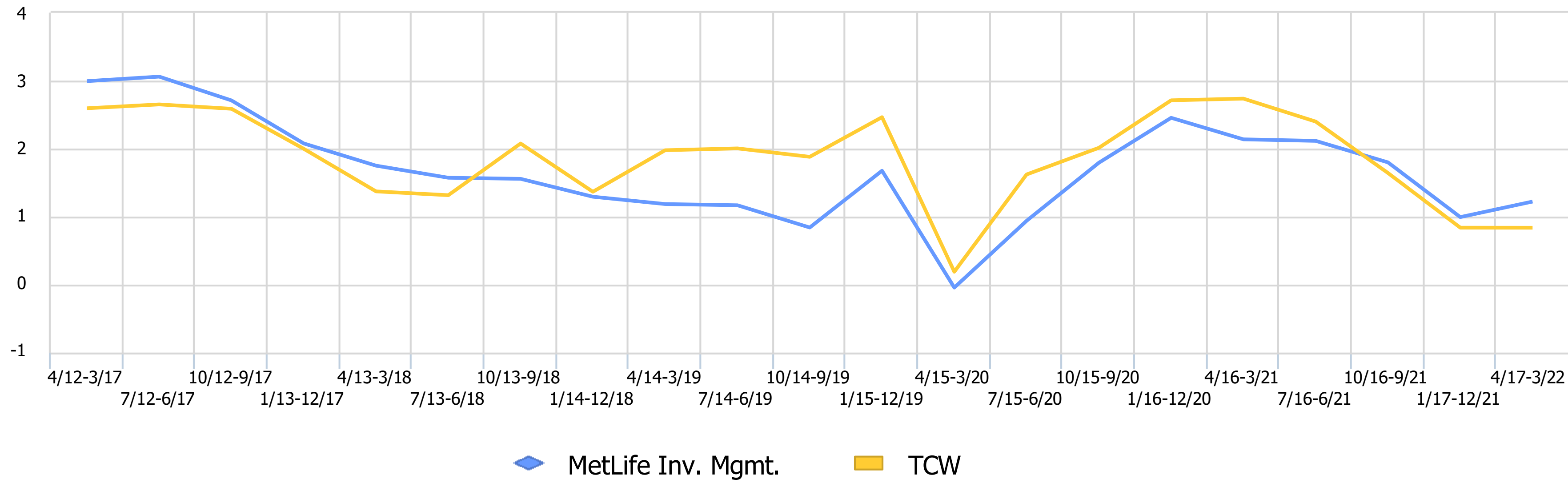
Source: eVestment

Finalists – Rolling Excess Returns

Rolling 3 Yrs.
Excess Returns

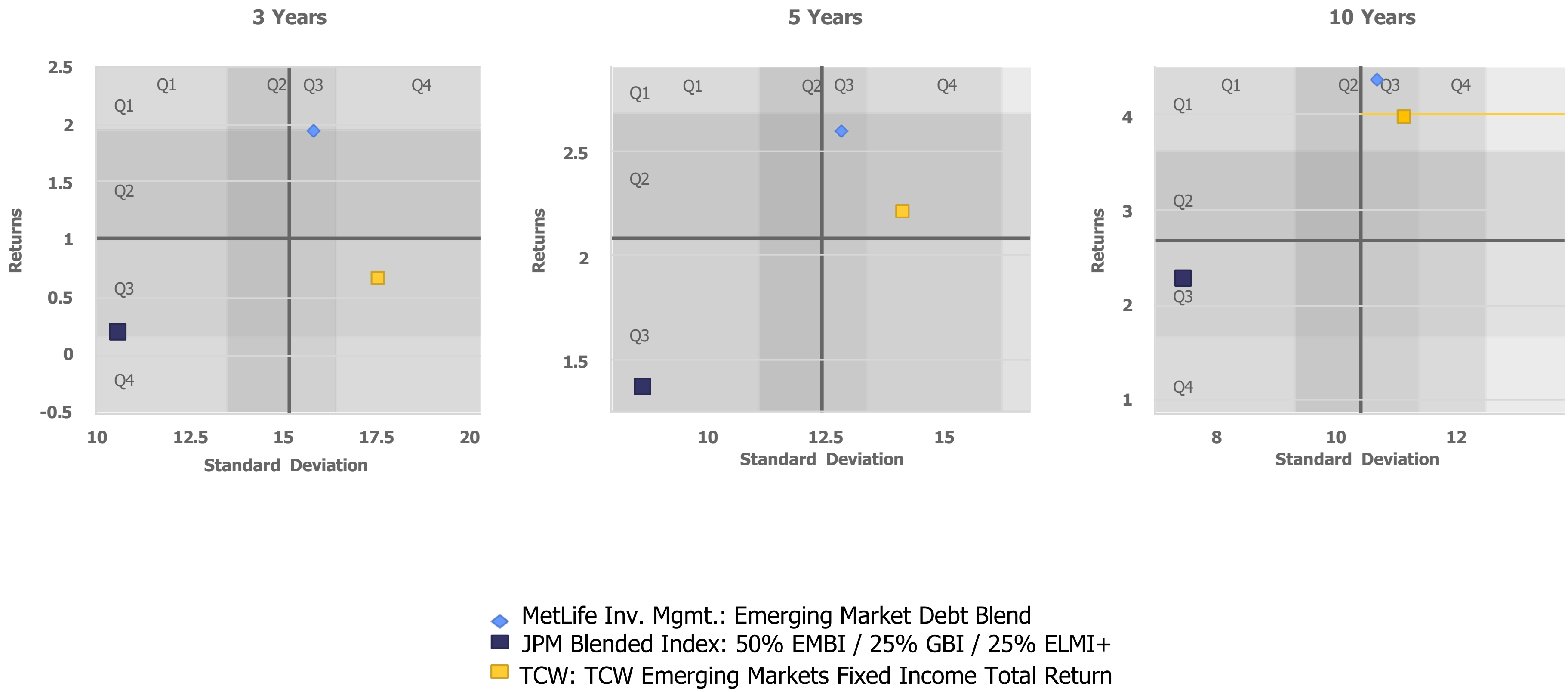


Rolling 5 Yrs.
Excess Returns

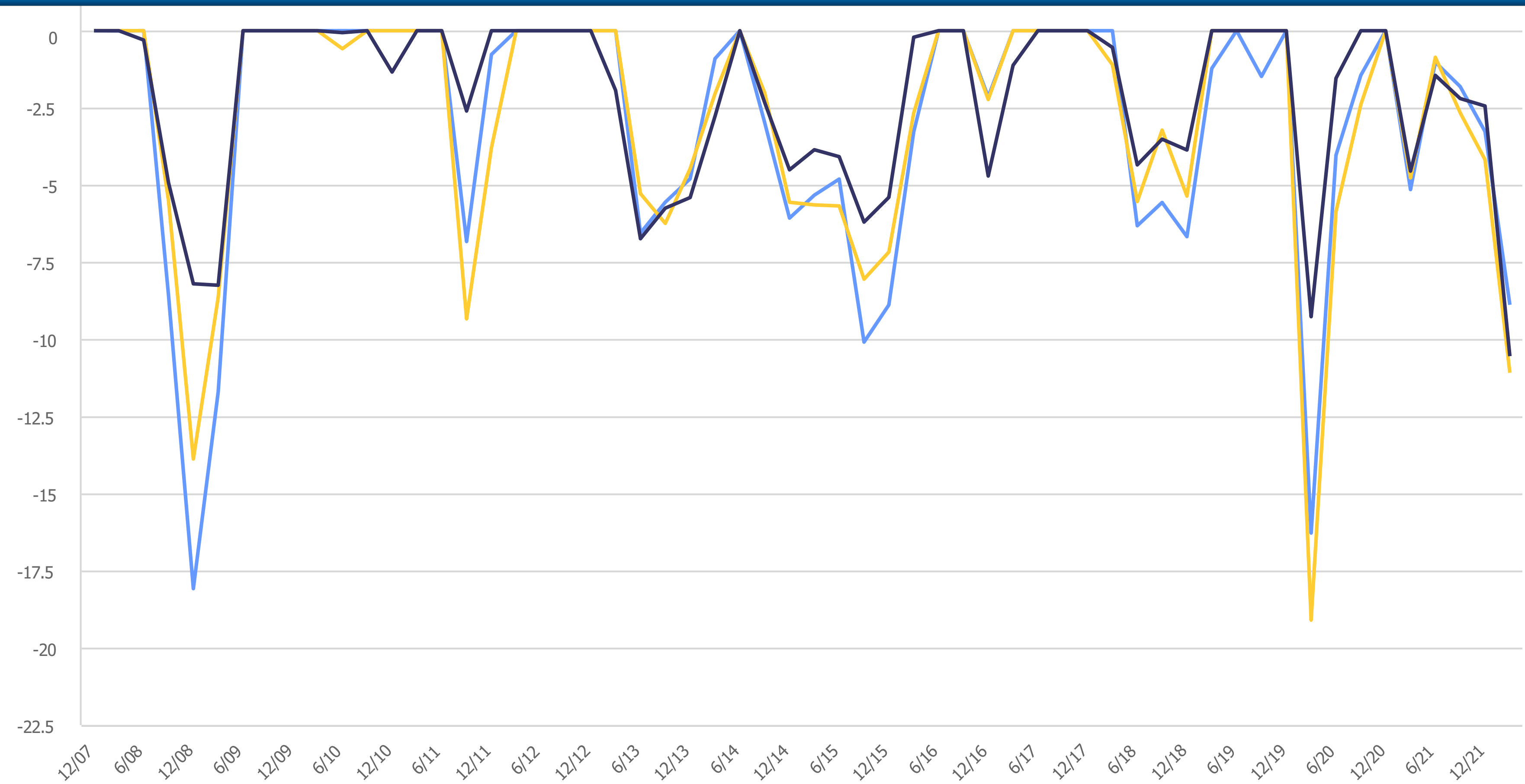


DALLAS POLICE & FIRE PENSION SYSTEM

Finalists – Return vs. Risk (as of 3/31/22)



Finalists – Drawdown Insights



	MetLife Investment Management Emerging Market Debt Blend	TCW Emerging Markets Fixed Income Total Return
Max Drawdown:	-18.1%	-19.1%
Peak Date:	Jun 2008	Dec 2020
Valley Date:	Dec 2008	Mar 2022

DALLAS POLICE & FIRE PENSION SYSTEM

Finalists – Proposed Fee

	MetLife Investment Management Emerging Market Debt Blend	TCW Emerging Markets Fixed Income Total Return
Simple Fee:	55 bps all inclusive	52 bps all inclusive
Fee at $80M:	$440,000	$416,000

	MetLife Investment Management Emerging Market Debt Blend	TCW Emerging Markets Fixed Income Total Return
Base Fee ($80M):	20 bps ($160,000)	20 bps ($160,000)
Performance Fee:	20% of outperformance	20% of outperformance
Time Period:	Rolling 12 months	Rolling 12 months
Total Fee Cap:	80 bps	65 bps
Operating Exp:	None	7 bps Cap
Breakeven:	1.75% of outperformance	1.25% of outperformance
Max Fee ($80M):	80 bps ($640,000)	72 bps ($576,000)

RFP SHORTLIST MANAGER SUMMARIES AND RATIONALE

MetLife Investment Management EM Debt Blend – **Finalist**

Founded:	1864 (MetLife) / 2006 (EM Debt Blend Team)
Ownership:	Publicly Traded
AUM (as of 3/31/22):	$639B / $2.6B EMD Blended / $576M CIT Vehicle
Investment Team:	2 PMs, 7 Sovereign Analysts (64 shared analysts across Fixed Income)
Philosophy/Process:	Not concentrated; Generates alpha primarily from corporate research
Proposed Fee (w/ Op Ex):	55 bps (all inclusive)
Performance Fee:	20bps + 20% of outperformance (Total cap of 80bps)

Rationale:

- Meketa bullpen manager and Meketa has 10 clients with $1.1B invested.
- Experienced and stable investment team led by PMs, Scott Moses and Todd Howard
- True EMD blended portfolio allocation with equal allocation to hard, local, and corporate bonds
- In-depth credit research that generates most of their alpha
- Excess returns for the trailing 1-, 3-, 5- and 7- year periods and best overall trailing return performance of the semi-finalists
- Concerns regarding higher allocation to corporates, and a possible performance end-point bias as the strategy has the smallest 2022 drawdown of the semi-finalists.

TCW Emerging Markets Fixed Income Total Return – **Finalist**

Founded:	1971
Ownership:	44% Employee Owned / 56% Private Equity and Insurance Co. owned
AUM (as of 3/31/22):	$263B Firm / $7.2B EM Total Return Strategy / $370M CIT Vehicle
Investment Team:	3 PMs, 9 Analysts, 3 Strategists, 3 Traders; 1 portfolio specialist
Philosophy/Process:	Value driven with top-down and bottom-up approach / Max 30% local
Proposed Fee (w/ Op Ex):	52 bps (all inclusive)
Performance Fee:	20bps + 20% of outperformance (Total cap of 65bps) + 7bps OpEx

Rationale:

- Despite not being in their bullpen, Meketa is comfortable with this strategy.
- Deep and knowledgeable investment team led by three PMs. Staff expects lead PM, Penny Foley, will retire within 5 years. Staff is comfortable with the succession plan in place.
- Value orientated approach with good position sizing that captures opportunities while being mindful of risk.
- Excess returns for the trailing 3-, 5- and 7- year periods.
- Concerns regarding a higher hard currency allocation (local currency is currently 0%), succession issues, and commingled fund AUM is $370M (DPFP would make up ~17% of the fund with $80M).

*Payden & Rygel EM USD Currency Blend – **Semi Finalist***

Founded:	1983
Ownership:	100% Employee Owned / 75% Women Owned
AUM (as of 3/31/22):	$147B Firm / $3.4B EMD Blended / $430M CIT Vehicle
Investment Team:	11 senior investment professionals
Philosophy/Process:	Key alpha driver is country selection; higher quality & lower volatility

Rationale:

- Meketa bullpen manager and Meketa has 42 clients with $1.3B invested.
- Excess returns for the trailing 1-, 3-, 5- and 7- year periods.
- Minority/female owned firm, but concerns that Joan Payden (majority owner) will retire soon.
- Concerns that the strategy has a much higher allocation to frontier markets than the other semi-finalists.

*PGIM Fixed Income EM Debt – Hard/Local Currency Blend – **Semi-Finalist***

Founded:	1875
Ownership:	Publicly traded (PGIM is wholly-owned subsidiary of PFI)
AUM (as of 3/31/22):	$890B / $15.7B EMD Blended / $1.9B CIT Vehicle
Investment Team:	14 PMs supported by many traders/analysts
Philosophy/Process:	Seeks widest universe of securities; shorter duration in High Yield and longer in Investment Grade

Rationale for Elimination:

- The strategy has grown over time to $15.7B in AUM.
- During their AUM growth, the strategy changed from solely investing in cash bonds to incorporating synthetic positions using interest rate swaps and currency forwards to maintain market liquidity.
- The strategy is also allocated in the most countries and has the most positions by far out of the group.
- Concerns around strategy size and use of synthetic exposures.

*Ashmore Emerging Markets Blended Debt – **Not Interviewed***

Founded:	1992
Ownership:	39% employee owned / 61% publicly traded
AUM (as of 3/31/22):	$78B Firm / $18B EMD Blended / $1.2B Commingled Fund Vehicle
Investment Team:	33 members for Global Fixed Income & Asset Allocation Teams
Philosophy/Process:	Higher Octane; macro & value driven & opportunistic in distressed names

Rationale for Elimination:

- Recent underperformance with trailing 3- and 5- year returns in the 4th quartile of the blended EMD universe.
- High octane strategy with high volatility unsuitable for DPFP allocation.
- Recent loss of AUM and clients.
- The strategy is not in Meketa's bullpen.

Neuberger Berman Group Emerging Markets Debt Blend – ***Not Interviewed***

Founded:	1939
Ownership:	100% employee owned
AUM (as of 3/31/22):	$447B Firm / $2.9B EMD Blended / $300M CIT Vehicle
Investment Team:	37 members for all EMD strategies (12 PMs, 12 analysts, 5 traders)
Philosophy/Process:	Top-down and ESG fundamental bottom-up approach to exploit EM inefficiencies

Rationale for Elimination:

- Lack of product limitations and guidelines. The fund documents had a lack of guidelines on the amount of risk that can be taken with respect to allocation limitation in certain asset classes.

*Wellington Management Blended Opportunistic EM Debt – **Not Interviewed***

Founded:	1928
Ownership:	100% Employee Owned
AUM (as of 3/31/22):	$1.3T Firm / $7.4B EMD Blended / $1.4B CIT Vehicle
Investment Team:	7 PMs and 27 EM Specialists
Philosophy/Process:	Quantitative and Fundamental Global Perspective

Rationale for Elimination:

- Capacity concerns: The strategy has $7.4B in AUM which is closing in on its $9B strategy capacity.
- Lack of product limitations and guidelines. The strategy has ~40% allocated to local currency bonds and a lack of guidelines on the amount of risk that can be taken with respect to allocation limitation in certain asset classes.

MEKETA
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Meketa.com

MEMORANDUM

TO: Investment Staff, Dallas Police & Fire Pension System
FROM: Leandro Festino, Aaron Lally, Mark McKeown, Colin Kowalski, Meketa Investment Group
DATE: July 5, 2022
RE: DPFP Emerging Markets Debt Manager Search Process

Background

At the March 2022 meeting, the DPFP Investment Advisory Committee (IAC) approved an Emerging Market Debt manager search, based on the recommendation from Staff, and supported by Meketa. In this document we provide a high-level review of the process followed by Staff in conjunction with Meketa under the guidance of the Investment Advisory Committee.

Manager Search Process

→ September 2021:

- Meketa and DPFP Staff ("Staff") initiated discussions on the underperformance of EMD manager Ashmore Emerging Markets Blended Debt Fund.

→ January 2022:

- Board of Trustees requested full review of Ashmore given underperformance.

→ February 2022:

- Initial discussions began between Staff and Meketa regarding the available high conviction EMD managers with blended currency core strategies.

→ March 2022:

- Staff prepared EMD Search Process criteria. Meketa reviewed and agreed with the process and search criteria outlined in the memo.
- Meketa provided DPFP Staff with a list of 10 qualified EMD products that had desirable core-oriented blended currency EMD strategies.
- Staff presented its review memo on incumbent manager Ashmore to the IAC
- The IAC formally approved the initiation of an RFP search process inclusive of Ashmore.
- DPFP Staff drafted the RFP questions and Meketa reviewed, suggesting a few minor edits.

July 5, 2022

→ April 2022:

- Staff and Meketa cross referenced each independently created "short-list" of strategies. Staff's list contained 13 products and Meketa's list contained 11 products (inclusive of Ashmore). Six strategies were crossover names, contained on each list
- Staff and Meketa held a zoom meeting with Meketa's fixed income research staff to discuss all the strategies under consideration.

→ May 2022:

- Based on Staff's research, in consultation with Meketa's comments and information provided during conference calls and data requests, Staff narrowed down the list to seven candidates.
- Staff and Meketa reconvened to discuss the managers on the shortlist in greater detail.
- The RFP was issued by Staff, with all seven shortlisted firms responding.

→ June 2022:

- Staff and Meketa reviewed the managers' responses and held a video call. Three firms were eliminated from further consideration. Staff arranged video interviews with four firms.
- Staff narrowed down the list to two finalists, Metlife and TCW (see rationale in IAC meeting materials). Meketa concurred with Staff.

Summary

DPFP Investment Staff has carried out a thoughtful, comprehensive, robust and well documented process to identify qualified firms to manage the Emerging Markets Debt mandate. The process was transparent and carried out under the guidance of the IAC, with extensive collaboration with Meketa. We believe that Staff, the IAC and Meketa's efforts on this search are in line with guidance provided in the Investment Policy Statement (IPS) and consistent with industry best practices.

Meketa supports either of the selected two finalists. We would be pleased to elaborate on this topic when we attend the July 2022 IAC and Board of Trustees meetings.

In the meantime, if we can be of assistance, please don't hesitate to contact us at (760) 795-3450.

LF/AL/HT/CK/sf

M

July 5, 2022

Appendix

Minimum Requirements:

1. Five-year product track record
2. Compliance with Global Investment Performance Standards (GIPS)
3. Clean legal and regulatory track record for past five years

Evaluation Criteria focused on:

1. Commingled fund preferred.
2. Blended currency products preferred.
3. Core or intermediate duration preferred.
4. Product invests across all Global Emerging Markets and does not have a regional focus.
5. Clearly defined investment philosophy and process that engenders DPFP staff conviction.
6. Product AUM > $300 million preferred.
7. Firm AUM > $1 billion preferred.
8. Available product capacity.
9. Capacity controls and limits.
10. Appropriate fit as DPFP's sole EM Debt Manager.
11. Organization strength and stability.
12. Investment Team, Philosophy and Process.
13. Risk measures including portfolio characteristics as compared to benchmark including credit quality and allocation, volatility, tracking error, absolute drawdown, and relative drawdown vs. benchmark index.
14. Risk and Performance evaluation shall include rolling 3- and 5-year analysis.
15. Investment reporting appropriately explains positioning and key drivers of performance (absolute and relative).
16. Fees will be evaluated relative to the reporting universe and candidates under consideration.

MEKETA
INVESTMENT GROUP

Dallas Police & Fire Pension System

June 24, 2022

Emerging Markets Debt Manager Search

MEKETA

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Introduction

Selecting strong and appropriate investment managers is a key determinant of the overall success of the Fund. Investment managers are expected to operate within a client's investment guidelines and are given a large degree of latitude to achieve the investment objectives.

Manager selection is a nuanced process and requires extensive due diligence. When selecting prospective active managers, Meketa Investment Group evaluates the following areas:

→ Organization

→ Investment team

→ Investment philosophy

→ Investment process

→ Investment performance

→ Management fees

In addition, all managers are evaluated within the context of the Fund's overall investment policy.

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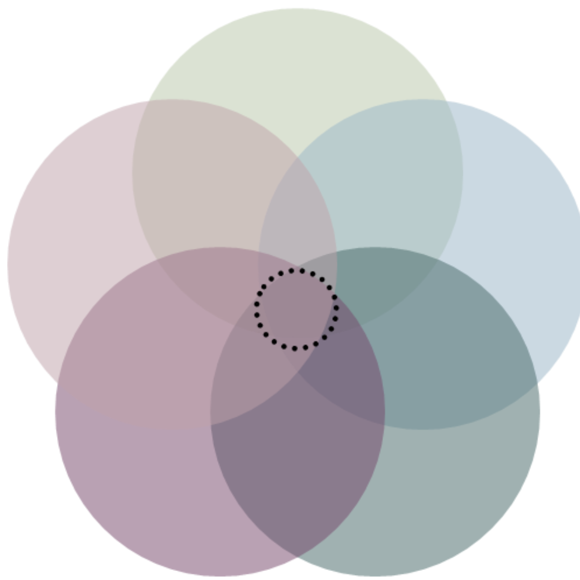
The Five Key Areas of the Meketa Investment Manager Evaluation Process

Organization
- Stability
- Focus
- Employee ownership
- Investment driven culture
- Operationally sound

Performance & Fees
- Validates process
- Long-term record
- Risk-adjusted returns
- Reasonable fees

Investment Process & Risk Management
- Straightforward
- Level of due diligence
- Thought process assessment
- Communication
- Decision-making and portfolio construction
- Self-evaluation / lessons learned
- Risk controls



Investment Team
- Experience
- Depth of resources
- Team-oriented, performance driven
- Security selection ability
- Investment intuition

Investment Philosophy
- Set of beliefs
- Security price determinants
- Reasons for mispricing
- How to add value
- Competitive edge

RFP Respondents

Manager	Headquarters	Strategy	Overall Rating
Ashmore Investment Management	London, United Kingdom	EM Blended Debt Total Return	Not Advantageous
MetLife Investment Management	Whippany, New Jersey	Emerging Market Debt Blend	Highly Advantageous
Neuberger Berman	New York, New York	Emerging Markets Debt Blend	Advantageous
Payden & Rygel	Los Angeles, California	Emerging Market Blended	Highly Advantageous
PGIM	Newark, New Jersey	Emerging Markets Debt Blend	Advantageous
TCW	Los Angeles, California	Emerging Markets Fixed Income	Highly Advantageous
Wellington	Boston, Massachusetts	Blended Opportunistic Emerging Markets Debt	Highly Advantageous

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Ashmore Investment Advisors Limited

Rating Criteria	Rating	Rationale
Overall	Not Advantageous	
Organization	Advantageous	• Ashmore Investment Advisors Limited is a London-based firm owned by Ashmore Group plc, a public company listed in the London Stock exchange. • Ashmore was founded in 1992 and manages roughly $78.3 billion in assets across all strategies as of 3/31/2022. There are approximately $17.7 billion total strategy assets in the Ashmore Emerging Markets Blended Debt, whose track record dates to 2003.
Team	Advantageous	• Ashmore has a team driven approach when managing emerging markets debt portfolios. Investment decisions need to go through the Investment Committee, which includes Mark Coombs, Ricardo Xavier, Herbert Saller, Robin Forrest and Fernando Assad. Jan Dehn retired at the end of 2021. • Portfolio managers are responsible for conducting research, portfolio monitoring, and trade execution. Most of their time is spent on research, as they have primary and secondary product and geographical responsibilities.
Investment Philosophy	Advantageous	• Ashmore thinks about emerging markets through a macroeconomic top-down lens. They place strong emphasis on a value driven approach to find diverging market prices and credit risk. Liquidity management also plays a central role as it is embedded into the security selection and portfolio construction methodologies.
Investment Process	Not Advantageous	• The Investment process begins with the weekly Investment Committee meeting, where members discuss the macroeconomic environment and review individual countries. These meetings determine the theme allocations across all emerging markets fixed income funds in addition to the broader macroeconomic positioning. Then the Investment Committee breaks down into sub-Investment Committees where investment professionals discuss/act on trade ideas for their respective areas of expertise. • The Investment Committee is the ultimate decision-making body, however the Heads of External, Corporate and Local Currency teams are given a limited amount of autonomy to make trading decisions, which need to be ratified at the following Investment Committee meeting.
Performance	Not Advantageous	• Ashmore underperformed the 50% JPM EMBI GD / 25% JPM ELMI+ / 25% JPM GBI-EM GD index over the one-, three-, and five-year trailing periods, with excess returns of -5.5%, -3.3% and -1.6%, per year, on average, gross of fees.
Fees	Not Advantageous	• Collective Investment Trust: effective fee of 0.6625% with an estimated 0.10% other expenses.

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Metlife Investment Management

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	• MetLife Investment Management is a wholly owned affiliate of MetLife, Inc, a publicly traded company listed in the New York Stock Exchange. On July 1, 2019 Logan Circle Partners, L.P. merged with and into its affiliate MetLife Investment Advisors, LLC and was renamed MetLife Investment Management, LLC. • MetLife Investment Management was established as an investment advisor in 2006 and manages $74.0 billion in Public Fixed Income assets for third parties. The EMD Blend strategy has an inception date of November 2006, and it now has $2.6 billion in assets under management.
Team	Highly Advantageous	• Scott Moses and Todd Howard have been managing the strategy since inception. They both have worked at the firm 13 years. • The Emerging Markets Debt Team is comprised of nine investment professionals, including four portfolio managers, two portfolio management support, two traders and one sovereign research analyst. The team also leverages regional based sovereign analysts for fundamental sovereign research. The additional resources include seven sovereign analysts based in the US, Latin America, Europe, and Asia.
Investment Philosophy	Highly Advantageous	• MetLife believes that fixed income markets regularly misprice securities that are exposed to credit, country, and currency risk. In seeking to exploit inefficiencies and provide clients with consistent returns, the team uses proprietary, in-depth fundamental research, and focuses on relative value across the credit spectrum. • The objective is to produce predictable and consistent excess returns. The strategy is opportunistic and can invest in both US dollar and local currency sovereign debt, as well as global credits across the ratings spectrum.
Investment Process	Highly Advantageous	• MetLife's investment process blends bottom-up credit selection with top-down macroeconomic research. The team's analysts assess credits with a focus on asset quality, management, and capital structure. This fundamental work is paired with top-down research, which focuses on country and currency relative value. The team also monitors currency valuation with in-house regression models and tracks currency volatility as a leading indicator of risk. • Portfolio construction is driven by the team's blended top-down/bottom-up global relative value process, with a focus on maintaining geographic diversity. Todd Howard focuses on the non-dollar side of the portfolio and on macro-based idea generation and workflow. While Scott Moses focuses his time on the higher risk hard currency exposures and overall risk positioning. Scott Moses has final say on portfolio construction.
Performance	Highly Advantageous	• MetLife outperformed the blended 35% JPM EMBI G / 35% JPM CEMBI BD / 30% JPM GBI-EM GD over all one-, three-, five-, and ten-year trailing periods, with average annualized excess returns of 3.3%, 1.3%, 0.9%, and 1.6% respectively gross of fees.
Fees	Highly Advantageous	• Collective Investment Trust: stated fee of 0.55%.

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Neuberger Berman

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• Neuberger Berman (NB) was founded in 1939 by Roy Neuberger and Robert Berman. Neuberger Berman is structured with the Neuberger Berman Group LLC as a holding company for which its subsidiaries provide a broad range of global investment solutions across equities, fixed income, and alternatives. Today, NB is a private, independent, employee—owned investment manager with approximately 675 employee owners as of March 31, 2022. • Although the firm has gone through a complicated history of mergers, acquisitions, and restructuring, we believe that the current structure and independence as an employee-owned firm is what we look for in an investment manager. • Total global AUM at NB was $447 billion, as of March 31, 2022. Total fixed income AUM was $180 billion, and EMD strategy AUM was $28.1 billion. The proposed Blended Strategy AUM was $2.9 billion.
Team	Highly Advantageous	• In 2013, seven senior investment professionals joined the firm from ING Investment Management to lead a dedicated emerging markets debt team, including an additional 13 colleagues joining to support the EMD platform. There are now 37 members on the EMD strategy team. • The emerging markets debt strategy is led by Rob Drijkoningen, (The Hague), and Gorky Urquieta, (Atlanta), with 32 and 28 years of industry experience, respectively. Bart van der Made (The Hague), Raoul Luttik (The Hague), and Prashant Singh (Singapore), who are lead portfolio managers for hard currency, local bond currency, and Asia local bond portfolios, respectively. Jennifer Gorgoll (Atlanta) and Nish Popat (The Hague) are co-lead portfolio managers for corporate bonds.
Investment Philosophy	Advantageous	• NB believes that EMD is an improving asset class that is less efficient than developed debt markets while also seeing stronger growth potential in emerging economies than in developed markets allowing for greater alpha generating opportunities. They feel that inefficiencies exist largely due to a market that is under-researched, leading to a greater number and larger average size of mispricing opportunities to exploit, which is well suited to their fundamentally driven investment process.
Investment Process	Highly Advantageous	• Each sub-strategy is managed by the respective Hard Currency, Local Currency and EM Corporates lead managers, concentrating on selecting best ideas in their investment universe against their respective individual benchmarks. The construction of the blended portfolio is the responsibility of the TAA team, who is composed of the lead portfolio managers on the blend strategy. In deciding the risk allocation and tactical shifts across the sub-strategies, the TAA team relies on top-down views and expected returns, incorporating investment regimes, as well as thematic views. • The Blend strategy tends to take more concentrated positioning in each of the three sub-categories than the pure strategies themselves as a result of diversification benefits received at the aggregate level.
Performance	Advantageous	• Neuberger outperformed the blended 50% JPM GBI-EM GD / 25% JPM EMBI GD / 25% JPM CEMBI D over the one-, three-, and five-year trailing periods, with average annualized excess returns of 0.9%, 0.2%, and 0.3% respectively gross of fees.
Fees	Advantageous	• Collective Investment Trust: Discounted rate for Meketa clients of 0.64% (5 bps discount).

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Payden & Rygel

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Highly Advantageous	• Payden & Rygel was founded in 1983 and is based in Los Angeles, CA. Other office locations are in Boston, London, and Milan. There are over 220 employees across all offices. The 100% employee-owned firm has over 30 employee shareholders, with most outstanding shares (just under 70%) owned by Joan Payden, the firm's founder, president, and CEO. The firm is also majority (75%) female owned. Payden also has a joint venture with the firm Metzler, which serves non-US clients. • As of March 31, 2022, Payden manages $147.4 billion in assets under management. Total fixed income comprises the majority of the firms AUM at $145.2 billion. Emerging Markets Debt strategy AUM was $11.9 billion, with the proposed Blended Strategy AUM at $3.4 billion.
Team	Highly Advantageous	• The emerging market strategy was established over 20 years ago, in 1998. • Payden and Rygel's operates at the direction of its' Management Committee, which is comprised of eleven senior professionals, all of whom are active in day-to-day management of the firm. Committee members are key-area leaders which include investment strategy, research, client service, operations, technology, and risk, all of whom coordinate closely with every functional area at Payden.. • Kristin J. Ceva has spearheaded the EMD effort since the 1998 inception; she and Arthur Hovsepian, CFA, Director have worked together since 2004, with no leadership turnover. They remain the portfolio managers and ultimate decision makers. Vladimir Milev, CFA, Senior Vice President has also been part of the team for well over a decade.
Investment Philosophy	Advantageous	• Payden's emerging markets philosophy is based on the premise that country selection is the key alpha driver. The investment team focuses on countries implementing structural reforms, improving country fundamentals and smaller "next generation" sovereigns, which are often out of benchmark countries.
Investment Process	Highly Advantageous	• The team generates risk-adjusted return forecasts used in the asset allocation process. Sovereign credit investment decisions are based on fair value estimates and yield spread relationships within and between countries. Corporate credits are selected based on relative spread analysis, an assessment of comparable firms globally, and the team's country-specific economic outlook. • The team has tight risk controls and aims to have a higher quality and lower volatility portfolio than peers. Corporate exposure is limited to 35%, local currency exposure is limited to 40%, and the team rarely invests in securities rated CCC or below. The team emphasizes liquidity and quality, and will not invest in distressed corporates, equities, structured products, or credit derivatives.
Performance	Advantageous	• Payden outperformed JPM EMBI GD over the one-, three-, five-, and ten-year trailing periods, with annualized average excess returns of 1.4%, 1.5%, 1.1% and 0.5% respectively gross of fees.
Fees	Advantageous	• Collective Investment Trust: stated fee of 0.53%.

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PGIM

Rating Criteria	Rating	Rationale
Overall	Advantageous	
Organization	Advantageous	• PGIM Fixed Income is a wholly owned subsidiary of Prudential Financial Inc. (PFI). Prudential became a publicly held company in December 2001. PGIM is the largest investment advisor within Prudential. They have been managing proprietary fixed income portfolios since 1875 and accounts for institutional clients since 1928. • As of 3/31/22, the firm has $890 billion of AUM with $39 billion being managed by the EMD team. • The headquarters is in Newark, New Jersey with additional offices in London, Amsterdam, Germany, Singapore, Tokyo and Hong Kong.
Team	Advantageous	• The team is stable and experienced with senior management averaging 23 years with PFI. Michael Lillard is the head of PGIM Fixed Income, while Cathy Hepworth leads Emerging Markets and FX. Cathy Hepworth has managed the flagship strategy since its inception. She leads a team of PMs and analysts who are dedicated to specific regions and sectors of the EMD universe. They are supported by sovereign and local rates strategists, regional sovereign PMs, global rates and currency specialists, and dedicated emerging markets corporate bond analysts.
Investment Philosophy	Advantageous	• PGIM's investment philosophy is based upon four beliefs: 1) Country allocation is a main determinant of portfolio returns. 2) Security selection is primary source of alpha. 3) The ever-changing risk appetite of investors contributes to both market opportunity and volatility. 4) Risk budgeting provides a framework for decision making and risk management.
Investment Process	Advantageous	• Implement a four-step decision making process to construct and manage EMD portfolios. Step 1: Top-Down Global Risk Assessment. On a weekly basis, the EM team and global macro research and investment strategy groups produce a global backdrop assessment. This involves global macroeconomic analysis, interest rate views and risk appetite of investors. Step 2: Perform Country Analysis. This is a comprehensive fundamental analysis of each of the countries by their economics group. The analysis includes a proprietary sovereign rating and key economic parameters found. Step 3: Implement Country Allocations. Once they have formulated the amount of risk to be taken in each country, they attempt to determine the most effective way to implement the risk. Security selection decisions are then discussed. Step 4: Manage Portfolio Risk. Risk is managed daily by the Senior PM working alongside the Risk Manager. PGIM uses proprietary risk analytics to ensure the portfolio stays within prescribed risk thresholds.
Performance	Advantageous	• PGIM outperformed the blended 50% JPM GBI-EM GD / 50% JPM EMBI GD over the one-, three-, five-, and ten-year trailing periods, with annualized average excess returns of 1.2%, 0.9%, 0.7% and 1.2% respectively gross of fees.
Fees	Highly Advantageous	• Collective Investment Trust: stated fee of 0.42% with other operating expenses capped at 0.03%.

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TCW Investment Management Company

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	• TCW Investment Management Company, located in Los Angeles, California, is a subsidiary of TCW Group, Inc. ("TCW"). TCW is 44% employee owned, 31% owned by Carlyle Global Partners via a private equity fund, and 24.75% owned by Nippon Life, a large Japanese insurance company. • The firm was founded in 1971 and manages $242.6 billion in assets across strategies as of March 2022. The TCW Emerging Markets Fixed Income Total Return strategy inception date goes back to 1994 and has $7.2 billion in assets under management.
Team	Highly Advantageous	• Penny Foley, David Robbins and Alex Stanojevic are the portfolio managers for the strategy. Investment decisions are made collectively by all three portfolio managers, with input from the entire team. • Sovereign analysts are organized by region and corporate analysts are organized by sector. • As of March 2022, there were 3 portfolio managers, 5 Sovereign Research Analysts, 4 Corporate Research Analysts, 3 Strategists, 3 Traders and 1 portfolio specialist.
Investment Philosophy	Advantageous	• The strategy employs a value driven approach, integrating both top-down and bottom-up factors to find the best reward-risk opportunities in the space. • The strategy is benchmark aware, but it is not tied to the benchmark, as the team will make significant overweight or underweight decisions based on evaluation of risk and reward.
Investment Process	Highly Advantageous	• In the first phase of the investment process, the team evaluates all sovereign and corporate credits with the intention to analyze credit strengths, weaknesses, momentum and to develop a standardized way of looking across the universe. The team also conducts scenario analysis before making investment decisions. Currency and local rates forecasting are also a crucial step in the investment process. Strategy constrains local currency to maximum of 30%. • The Emerging Markets Fixed Income Team does not imply an investment committee for decision making purposes. Instead, final decision making on specific investments is made by portfolio managers in conjunction with sovereign analysts, corporate credit analysts, strategists, and traders. • The team relies heavily on primary research with 60-70% of their work usually coming from internal analysts' coverage. All their analysts are in Los Angeles and would usually be travelling 2-3 times a quarter. Their philosophy on having their team all be in Los Angeles is to provide them with a perspective of what the team is doing as a whole, instead of having individuals scattered throughout the globe.
Performance	Advantageous	• TCW outperformed JPM EMBI GD over the one-, three-, five-, and ten-year trailing periods, with annualized average excess returns of 0.8%, 0.7%, 0.5% and 0.3% respectively gross of fees.
Fees	Advantageous	• Collective Investment Trust: Effective fee of stated fee of 0.52% OR 0.20% base fee with 0.20% performance capped at 0.65%.

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Wellington Trust Company

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	
Organization	Advantageous	• Wellington Trust Company was established in 1928 and headquarters are in Boston, Massachusetts. Wellington Management Group, LLP, is owned by 195 partners, all active in the business of the firm. • As of March 2022, total firm AUM was $1.3 trillion, of which $7.4 billion are in the Blended Opportunistic Emerging Markets Debt strategy, with an inception in 2009. • Wellington has a long track record of investing in emerging markets debt (EMD) since 1990 within multiple strategies and began managing dedicated EMD portfolios on an advisory basis in 1998.
Team	Highly Advantageous	• Kevin Murphy joined the team in 2016 and became co-Portfolio Manager in 2019 and lead Portfolio Manager in 2022. Former lead Portfolio Manager, Jim Valone, managed the approach since the inception. He retired and withdrew from Wellington Management's partnership on 31 December 2021. Kevin Murphy has assumed leadership of the product and the long-only Emerging Markets Debt platform. Murphy works on macro country/sector decisions while Evan Ouellette, Portfolio Manager, focuses primarily on portfolio construction and security selection. • The team has 5 additional portfolio managers who support actively in broad strategy discussions and are supported by a team of 27 dedicated Emerging Markets professionals in addition to over 100 other shared firm investment professionals.
Investment Philosophy	Highly Advantageous	• The team believes that emerging markets must be approached from a global perspective, recognizing that global market conditions will impact the attractiveness of emerging markets. They take both a quantitative and fundamental approach to assessing rates and currencies in a large universe of emerging markets countries.
Investment Process	Highly Advantageous	• The investment process begins with an assessment of global economic, liquidity, and market conditions. The portfolio managers have final responsibility for setting the total portfolio risk level. Country research assesses both the ability and willingness of emerging countries to service their external debt and summarizes this in a country score to quantify the team's sovereign credit outlook and rank countries according to credit strength from high to low. • Portfolios are constructed with the goal of generating attractive total returns while minimizing systemic risk. Mr. Murphy has final decision-making power and all decisions are made under his guidance and approval.
Performance	Advantageous	• PGIM outperformed the blended 50% JPM GBI-EM GD / 50% JPM EMBI GD over the one-, three-, five-, and ten-year trailing periods, with annualized average excess returns of 0.4%, 1.4%, 1.2% and 1.6% respectively gross of fees.
Fees	Advantageous	• Collective Investment Trust: Effective fee of stated fee of 0.55% with operating expenses capped at 0.10% per annum of the net assets of the Portfolio.

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EMD Portfolio Characteristics
(As of March 31, 2022)

	Ashmore	*50/25/25 JPM EMBI GD / GBI-EM GD / ELMI+*	Metlife	*35/35/30 JPM EMBI Global / CEMBI BD / GBI-EM GD*	Neuberger	*50/25/25 JPM GBI-EMD / EMBI GD / CEMBI Diversified*
Portfolio Profile:						
Number of Issues	461	*1239*	231	*3258*	1143	*2004*
Number of Countries	56	*76*	57	*91*	80	*85*
Average Effective Duration	6.7	*5.0*	6.5	*5.9*	5.5	*5.7*
Yield to Maturity (%)	10.1	*5.1*	7.4	*5.9*	6.9	*6.2*
Average Credit Quality	BB	*BBB*	BBB-	*BBB*	BBB-	*BBB-*
Credit Quality Breakdown: (%)						
AAA	-	-	-	-	1	-
AA	3	*7*	4	*6*	4	*5*
A	11	*22*	9	*23*	19	*23*
BBB	32	*33*	33	*34*	31	*37*
BB & below	54	*38*	49	*37*	40	*35*
Cash	-	-	5	-	5	-
Region Exposure:						
Asia	36	*34*	18	*34*	30	*35*
Europe	15	*16*	9	*12*	13	*15*
Latin America	42	*29*	42	*29*	29	*29*
Middle East & Africa	19	*21*	27	*24*	18	*21*
North America	-	-	4	*1*	9[1]	-
Cash and Equivalents	-12	-	-	-	1	-

[1] Also includes Australasia.

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EMD Portfolio Characteristics (continued)
(As of March 31, 2022)

	Ashmore	*50/25/25 JPM EMBI GD / GBI-EM GD / ELMI+*	Metlife	*35/35/30 JPM EMBI Global / CEMBI BD / GBI-EM GD*	Neuberger	*50/25/25 JPM GBI-EMD / EMBI GD / CEMBI Diversified*
Sector Exposure:						
Sovereign (Local Currency)	47	*50*	23	*30*	47	*50*
Sovereign (Hard Currency)	54	*50*	24	*26*	19	*20*
Quasi-Sovereign	-	-	13	*17*	9	*5*
Corporate	11	-	35	*27*	25	*25*
Cash and Equivalents	-12	-	5	-	0[1]	-

[1] Cash is embedded in the sectors listed above. Cash and Equivalents represents 5.20% of the total portfolio for Neuberger.

EMD Portfolio Characteristics (continued)
(As of March 31, 2022)

	Payden	TCW	*JPM EMBI GD*	PGIM	Wellington	*50/50 JPM EMBI GD / GBI-EM GD*
Portfolio Profile:						
Number of Issues	286	179	*928*	788	464	*1216*
Number of Countries	52	44	*71*	73	64	*72*
Average Effective Duration	7.6	7.1	*7.5*	6.2	6.1	*6.3*
Yield to Maturity (%)	8.1	6.5	*6.4*	7.1	6.7	*6.3*
Average Credit Quality	BB	BB+	*BB+*	BBB-	BBB	*BBB-*
Credit Quality Breakdown: (%)						
AAA	-	-	-	-	-	-
AA	4	8	*7*	3	7	*6*
A	4	9	*15*	16	17	*22*
BBB	26	23	*28*	31	22	*36*
BB & below	64	56	*50*	45	40	*36*
Non-Rated	-	-	-	-	-1	-
Cash	2	4	-	5	5	-
Region Exposure:						
Africa	18	13	*10*	17	14	*12*
Asia	15	10	*19*	28	16	*29*
Europe	6	8	*14*	12	10	*17*
Latin America	33	40	*33*	28	34	*31*
Middle East	19	25	*24*	9	13	*10*
Other	9	4	-	6[1]	5[2]	-

[1] Includes US, Oceania, FX Hedges, Cash & Equivalents.
[2] Includes North America, Cash, CDX Emerging.

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EMD Portfolio Characteristics (continued)
(As of March 31, 2022)

	Payden	TCW	JPM EMBI GD	PGIM	Wellington	50/50 JPM EMBI GD / GBI-EM GD
Sector Exposure:						
Sovereign (Local Currency)	11	-	-	*39*	*40*	*50*
Sovereign (Hard Currency)	59	61	80	*33*	*33*	*40*
Quasi-Sovereign	14	17	20	*13*	*11*	*10*
Corporate	14	18	-	*7*	*8*	-
Cash and Equivalents	2	4	-	*8*	-	-
Other	-	-	-	-	8[1]	-

[1]Includes US, FX Hedges, Cash & Equivalents.

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Trailing and Calendar Year Performance (gross of fees)
As of March 31, 2022

	Ashmore	Metlife	Neuberger	Payden	PGIM	TCW	Wellington	*50/50 JPM EMBI GD / GBI-EM GD*
Trailing Period Returns (%):								
YTD	-9.5	-5.8	-7.1	-8.7	-8.1	-7.2	-8.4	*-8.2*
1 Year	-12.4	-3.9	-7.2	-6.0	-6.8	-6.6	-7.6	*-8.0*
3 Years	-3.6	1.9	0.1	1.5	0.4	0.7	0.9	*-0.5*
5 Years	-0.5	2.6	1.5	2.8	1.7	2.2	2.2	*1.0*
10 Years	1.7	4.4	---	4.2	2.7	4.0	3.1	*1.5*
Calendar Year Returns (%):								
2021	-9.3	-3.3	-5.1	-1.6	-4.6	-4.2	-5.1	*-5.3*
2020	3.3	7.2	4.2	7.2	4.5	6.0	6.5	*4.0*
2019	11.5	14.8	14.6	17.5	16.8	16.8	17.3	*14.3*
2018	-4.5	-6.2	-6.2	-6.4	-6.5	-5.4	-5.3	*-5.2*
2017	14.2	13.8	15.1	12.9	15.8	12.4	14.6	*12.7*
2016	18.4	14.3	10.3	12.2	11.8	15.4	12.5	*10.2*
2015	-4.4	-3.0	-7.5	0.0	-5.6	-1.7	-6.7	*-7.1*

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Historical Risk-Adjusted Returns vs 50/50 Blend (gross of fees)

October 2013 to March 2022[1,2]

	Ashmore	Metlife	Neuberger	Payden	PGIM	TCW	Wellington	*50/50 JPM EMBI GD / GBI-EM GD*
Common Period Performance:								
Common Period Performance (%)	1.4	3.9	2.0	4.4	2.7	3.8	2.8	*1.5*
Up Period Percent (%)	62	62	69	41	86	50	67	*N/A*
Down Period Percent (%)	39	70	48	80	43	77	57	*N/A*
Risk Measures:								
Standard Deviation (%)	11.4	9.7	9.8	9.0	11.1	10.0	9.5	*9.1*
Tracking Error (%)	3.6	2.5	1.5	3.3	2.5	3.9	1.2	*N/A*
Beta	1.21	1.04	1.07	0.93	1.21	1.01	1.04	*1.0*
Correlation to Benchmark	0.96	0.97	0.99	0.93	0.99	0.92	0.99	*1.00*
Downside Deviation (%)	12.8	11.1	11.2	10.8	12.9	11.8	10.7	*10.0*
Upside Capture (%)	115	108	109	96	123	99	109	*N/A*
Downside Capture (%)	114	89	105	73	111	81	98	*N/A*
Risk-Adjusted Performance:								
Jensen's Alpha (%)	-0.12	2.34	0.43	2.95	1.08	2.36	1.28	*N/A*
Sharpe Ratio	0.06	0.33	0.13	0.41	0.18	0.31	0.23	*0.09*
Information Ratio	-0.03	0.93	0.29	0.88	0.45	0.59	1.09	*N/A*

[1] Common period is from October 2013 given the inception date of Neuberger Berman's Emerging Markets Debt Blend strategy.
[2] All risk statistics calculated utilizing the policy benchmark: 50% EMBI Global Diversified / 50% GBI-EM Global Diversified.

MEKETA

Dallas Police & Fire Pension System

RFP Respondent Review

Historical Risk-Adjusted Returns vs. Manager Preferred Benchmark (gross of fees)

October 2013 to March 2022[1]

	Ashmore	Metlife	Neuberger	Payden	PGIM	TCW	Wellington
Manager Preferred Benchmark	50/25/25 JPM EMBI GD / GBI-EM GD / ELMI+	35/35/30 JPM EMBI Global / CEMBI BD / GBI-EM GD	50/25/25 JPM GBI-EMD / EMBI GD / CEMBI Diversified	JPM EMBI GD	50/50 JPM EMBI GD / GBI-EM GD	JPM EMBI GD	50/50 JPM EMBI GD / GBI-EM GD
Common Period Performance (%)	1.4	3.9	2.0	4.4	2.7	3.8	2.8
Up Period Percent (%)	67	76	76	69	86	65	67
Down Period Percent (%)	24	26	36	38	43	38	57
Risk Measures:							
Standard Deviation (%)	11.4	9.7	9.8	9.0	11.1	10.0	9.5
Tracking Error (%)	4.3	2.8	1.7	1.7	2.5	2.8	1.2
Beta	1.41	1.23	1.13	1.10	1.21	1.20	1.04
Correlation to Benchmark	0.97	0.97	0.99	0.99	0.99	0.97	0.99
Downside Deviation (%)	12.8	11.1	11.2	10.8	12.9	11.8	10.7
Upside Capture (%)	137	128	115	113	123	112	109
Downside Capture (%)	134	117	111	108	111	113	98
Risk-Adjusted Performance:							
Jensen's Alpha (%)	-0.34	0.79	0.28	0.36	1.08	-0.46	1.28
Sharpe Ratio	0.06	0.33	0.13	0.41	0.18	0.31	0.23
Information Ratio	-0.05	0.42	0.20	0.36	0.45	0.01	1.09

[1] Common period is from October 2013 given the inception date of Neuberger Berman's Emerging Markets Debt Blend strategy.

MEKETA

Dallas Police & Fire Pension System

RFP Respondent Review

Proposed Fees

Manager	Proposed Vehicle	Stated Fee (%)[1]	Operating Expenses (Y/N)	Other Expenses	Minimum Investment
Ashmore Investment Advisors Limited	Limited Partnership	0.6625	Y	0.10%	$10 million
MetLife Investment Management	Collective Investment Trust (CIT)	0.55	N	-	None
Neuberger Berman	Collective Investment Trust (CIT)	0.64	N	-	$10 million
Payden & Rygel	Collective Investment Trust (CIT)	0.53	N	-	$1 million
PGIM	Collective Investment Trust (CIT)	0.42	Y	0.03% operating fee	$5 million
TCW	Collective Investment Trust (CIT)	0.52	N	-	$5 million
	Collective Investment Trust (CIT)	0.20	Y	0.20% performance fee capped at 0.65%	$5 million
Wellington	Commingled Trust Fund	0.55	Y	0.10% capped operating fee	$1 million

[1] Assumes a mandate size of $80 million. In certain cases, operating expenses for commingled fund/collective investment trust vehicles were included in the stated fee. Otherwise, the other operating expenses are listed separately and not included in the "Stated Fee".

DISCUSSION SHEET

ITEM #C10

Topic: **Natural Resources: Hancock 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: Stuart Pattillo – Director, Senior Agriculture Portfolio Manager
Mitchell Zaniboni – Agriculture Portfolio Analyst

Discussion: Representatives of Hancock Natural Resource Group will update the Board on the status and plans for DPFP's agricultural portfolio, as well as provide a market update on the major crops in the DPFP portfolio. Hancock has managed DPFP's direct farmland investments since 1998.

Hancock Introduction

- Hancock manages a portfolio of wholly-owned agricultural investments ("TMPC") for DPFP valued at $94 million, representing 81% of the Natural Resources portfolio and 5% of the total fund. (as of 6/30/22)
  - Hancock has been a discretionary agriculture manager for DPFP since 1998. The portfolio has an inception IRR of 15% with a total value to paid-in capital multiple of 3.7x.
  - Since developing a hold-sell plan with DPFP staff in 2016, Hancock has sold 16 properties resulting in $71 million in proceeds to DPFP.
  - Go-forward target portfolio:
    - *Concentrated in 7 almond and pistachio properties located in California, along with 1 apple property in Washington.*
    - *Exploring repositioning options in 2 properties due to water issues*
    - *Expected high single digit returns with a high-income component*

Texas Municipal Plans Consortium, LLC

Prepared for Dallas Police and Fire Pension System

July 2022

Stuart Pattillo, MBA, Director, Senior Agriculture Portfolio Manager

Mitchell Zaniboni, CAIA, Agriculture Portfolio Analyst

Manulife Investment Management

Agenda

Manulife Investment Management

I. Manulife Investment Management Timberland and Agriculture Overview

II. Ag Economy Updates

III. Portfolio Overview

IV. California Water

V. Portfolio Performance

Manulife Investment Management Timberland and Agriculture

Manulife Investment Management Timberland and Agriculture

Global, Integrated, Sustainable Timberland & Agriculture Investments

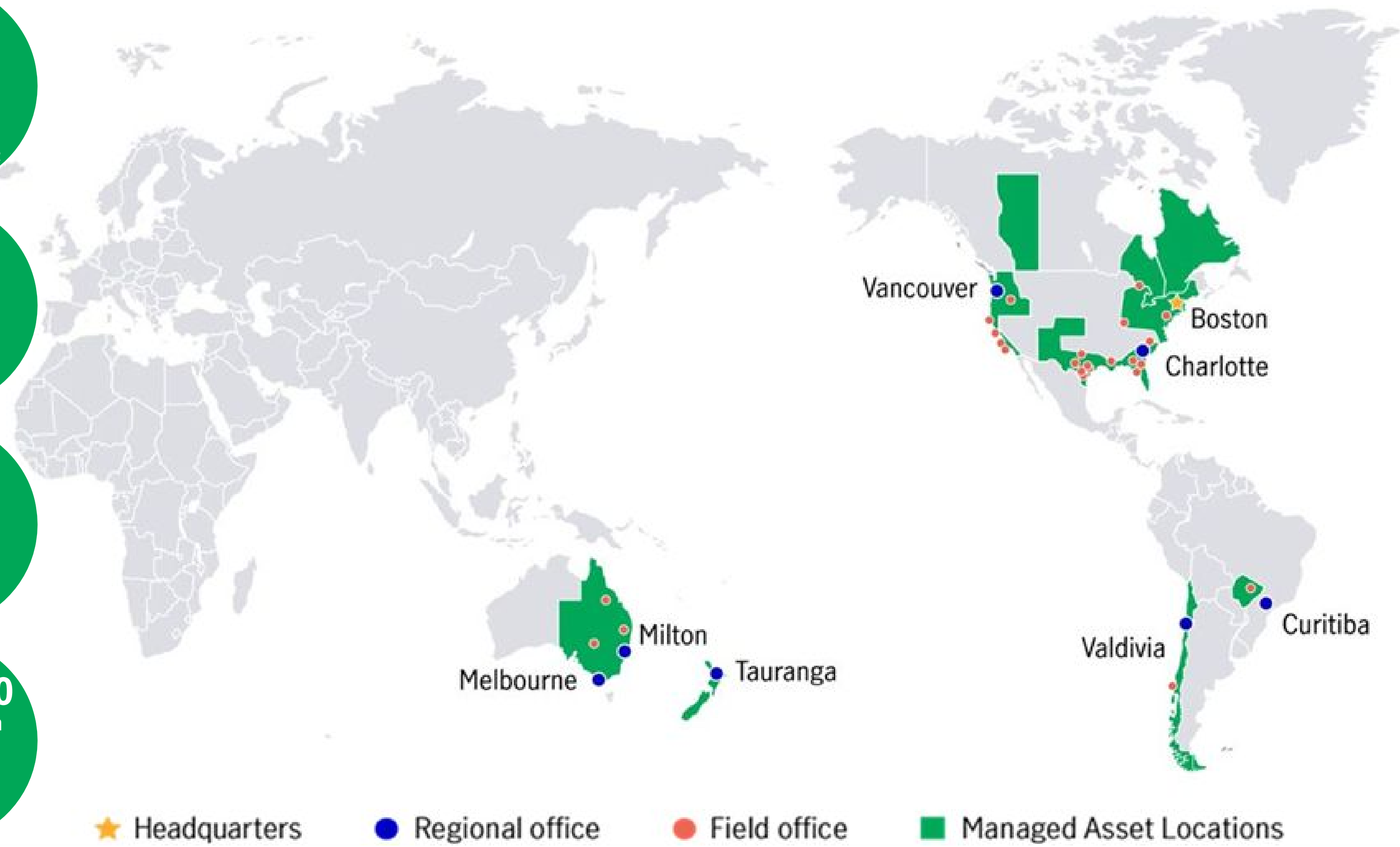
Manulife Investment Management is the world's largest timberland[1] investment manager and a leading agriculture investment manager.

USD 15.4B Total assets under management[2]

6.3M Total acres under management

668 Employees across the globe

Over 200 Investors from **13** different countries



As of December 31, 2021

[1]Source: 2021 Fastmarkets RISI Timberland Ownership Report. Manulife Investment Management is the largest global TIMO by AUM. [2]Total AUM is managed on a discretionary and non-discretionary basis for the General Account, its affiliates and third party clients. Regional office locations include offices associated with client owned operating companies.

Manulife Investment Management

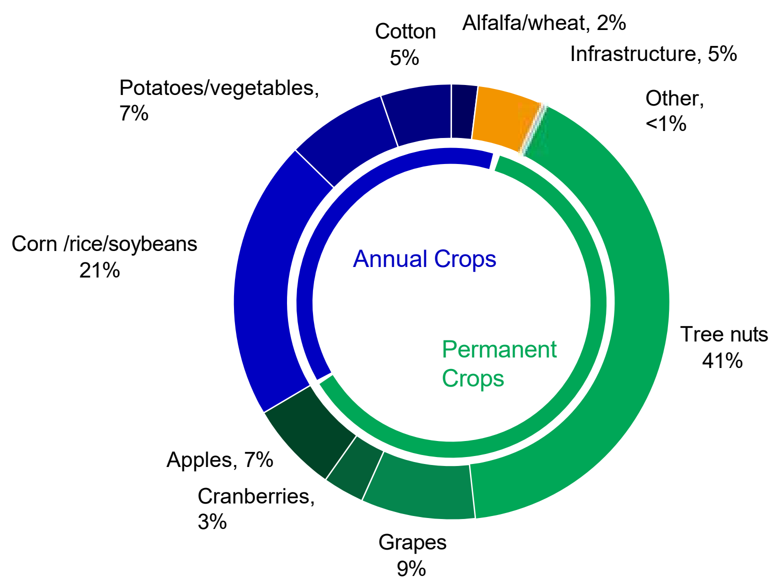
Manulife Investment Management Agriculture

Decades of experience in global agricultural investment.

- Total Assets Under Management (AUM): USD 4.3 billion[1]
- Total Acres Under Management: 445,280 gross acres[2]
- Geographic diversity: U.S., Australia, Chile and Canada[2]
  - U.S. holdings: 79% of AUM
- Second largest global farmland manager (by AUM)
- Integrated farm management services
  - Manulife Investment Management Agriculture Services U.S. and Australia
  - Specialize in direct operation of permanent crop farmland
- 100% of our U.S. farmland certified to Leading Harvest

Strong since inception returns (gross of fees):

Total Fund-Level Portfolio[3]:	Total U.S. Portfolio[4]:	U.S. Permanent Crops[4]:	U.S. Row Crops[4]:
9.9%	**11.2%**	**12.3%**	**9.7%**



Sources: Manulife Investment Management, Global AgInvesting Rankings & Trends Report 2019. For illustrative purposes only. Data as of December 31, 2021 (unaudited and subject to change).
[1]Aggregate fund-level market value as of December 31, 2021. [2]As of December 31, 2021. [3]Fund-Level time-weighted global composite return of all investor accounts managed by Manulife Investment Management's agriculture team since October 1995 before management fees through December 31, 2021. [4]Property-Level Total U.S., U.S. Permanent, and U.S. Row Portfolio returns consists of all Manulife Investment Management mature and development U.S. domiciled farmland properties, including properties eligible and ineligible for NCREIF, excluding ex-U.S. domiciled farmland properties since January 1991. Gross returns are gross of standard fees as of December 31, 2021. Please refer to the Investment Management Fees for further detail. Supplemental Performance Information, supplements the Total Farmland Composite presentation. Pie chart "Other" contains olives and solar. Wheat also includes Conola and forage seed. Pie chart data based on real estate market value as of December 31, 2021.

Ag Economy Updates

Economic Backdrop

Supply-chain disruptions create crop specific delays.

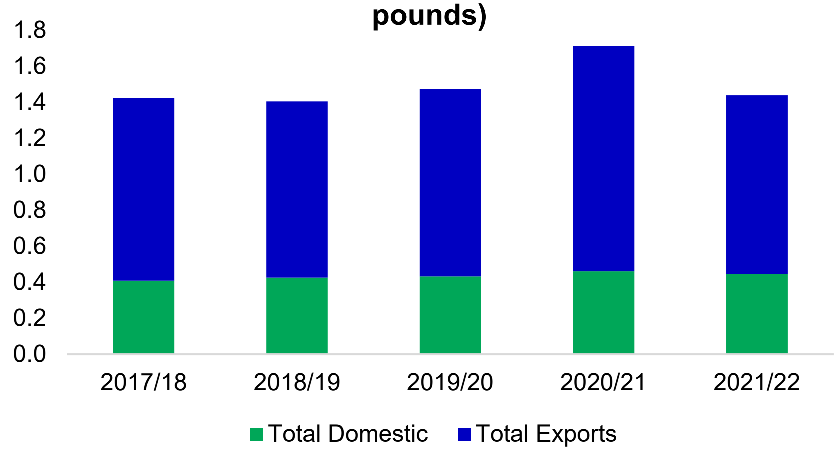
Almond demand implicated by supply chain issues

- California almonds posted second highest crop size in 2021 at 2.8 billion pounds, after reaching historical high of 3.1 billion pounds in 2020, while supply remained high due to large carry-in stocks and expansive acreage.
- 2021-22 marketing year shipment pace slower than expected due to supply-chain dislocations.
- Rising uncertainties surrounding future water and weather in CA triggering retirement of less productive orchards.

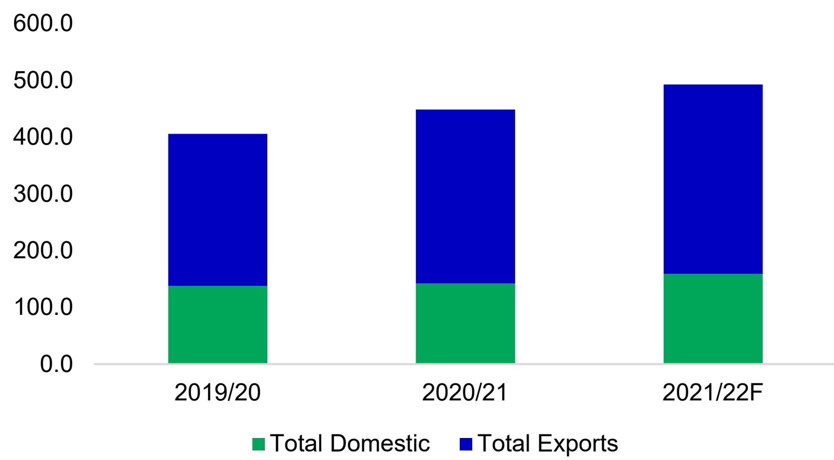
Pistachio shipments posted consecutive gains

- U.S. production reached historical high in 2021-22.
- Although, 2021-22 crop yield was “off” due to alternative bearing patterns.
- Year-to-date shipments were higher in 2021-22 supported by growth in both domestic and export markets.
- Significant growth in major export markets, such as Asia and Middle East, continues to drive overall growth in demand for U.S. pistachios.

U.S. Almond Shipments (August – February, billion pounds)



U.S. Pistachio Shipments (March YTD, million pounds)



Sources: Years are marketing years. Almond Board of California, as of March 2022. ITC Trade Map, as of March 2022. Administrative Committee for Pistachios Inventory/Shipment Reports. March 2022.

Farmland and Inflation

Correlation varied with time as various market factors evolved

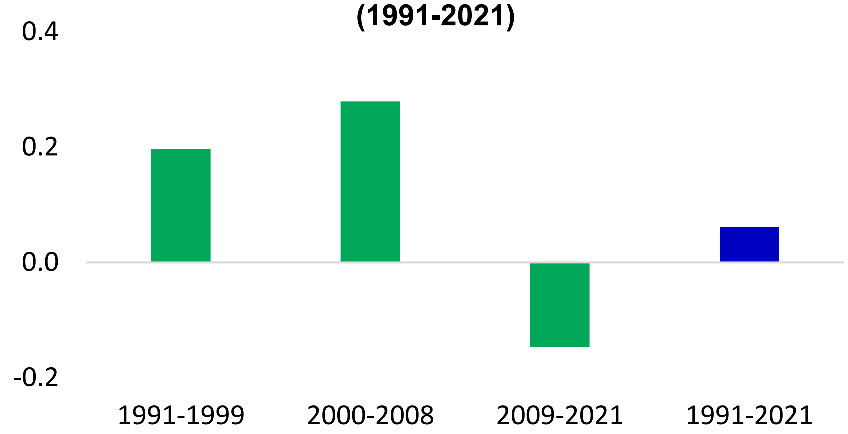
Farmland returns positively correlate to CPI inflation [1, 2, 3]

- Average correlation between farmland and inflation is a mild 6%.
- Farmland correlation to inflation stayed near or above 20% during 1991-1999 and 2000-2008, before the GFC.
- Correlations broke pattern during 2009-2021, as inflation remained low for a protracted underwhelming recovery post the GFC, while farmland delivered healthy returns.

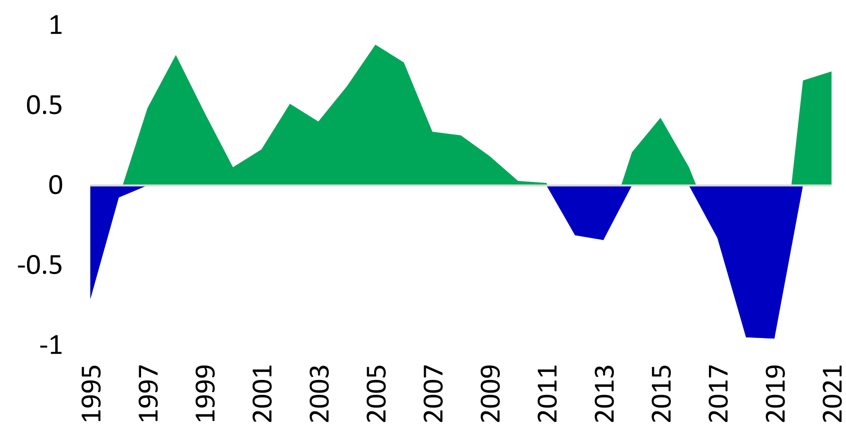
Correlation patterns between farmland and inflation change with time [1, 2, 3]

- Correlation patterns have seen constant evolution during the past three decades indicated by 5-year rolling correlations.
- Negative correlation had occurred in the past, especially when farmland returns were higher than average while inflation rates were slowing or flattened during the post-GFC recovery period.

NCREIF Farmland Index and inflation correlation by period (1991-2021)



Rolling 5-year correlation between NCREIF Farmland Index returns and CPI inflation (1991-2021)



Source: [1]NCREIF Farmland Index, as of Q4 2021. [2]U.S. Department of Labor Bureau of Labor Statistics, as of Feb 2022. [3]Manulife Investment Management research

Farmland and Interest Rates

Correlation patterns are mixed between farmland returns and interest rates

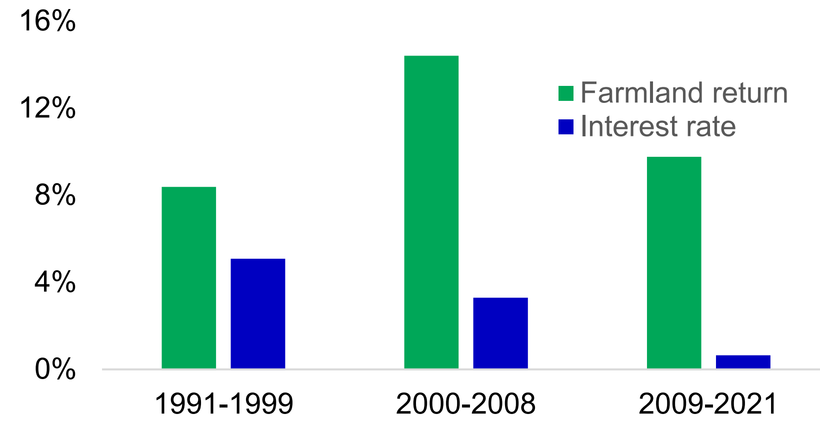
Non-monotonic relationship between farmland returns and interest rates [1, 2, 3]

- 1991-1999: pre- “dot-com” bubble, to 2000-2008, average interest rates down from 5.1% to 3.3% while farmland returns increased from 8% to 14%.
- Average interest rates declined to 0.7% post-GFC, as average farmland returns retreated despite lower interest rates.
- Movements in interest rates have not resulted in the same directional changes in farmland returns.

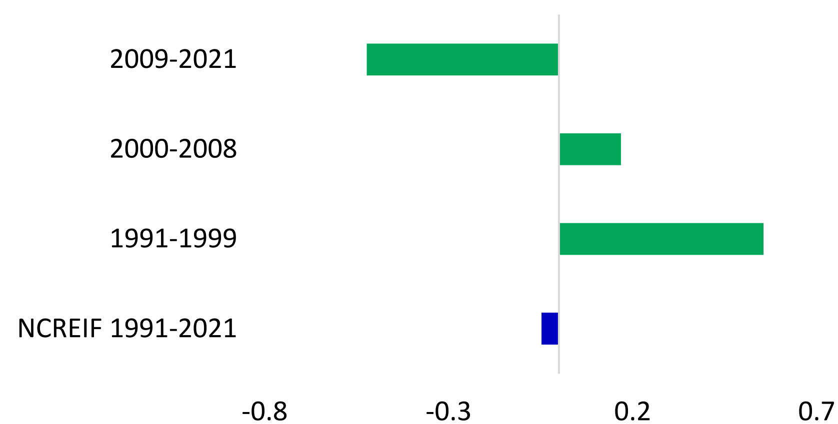
Farmland returns correlations to interest rates vary with time [1, 2, 3]

- Overall correlation between farmland returns and interest rates remains mildly negative since 1991.
- The correlations were mainly positive through 1991-2008.
- Correlation turned negative after the GFC, as interest rates neared zero while farmland returns were robust.

Periodic average interest rates and farmland returns (%/year)



Correlation between interest rates and NCREIF Farmland returns by period



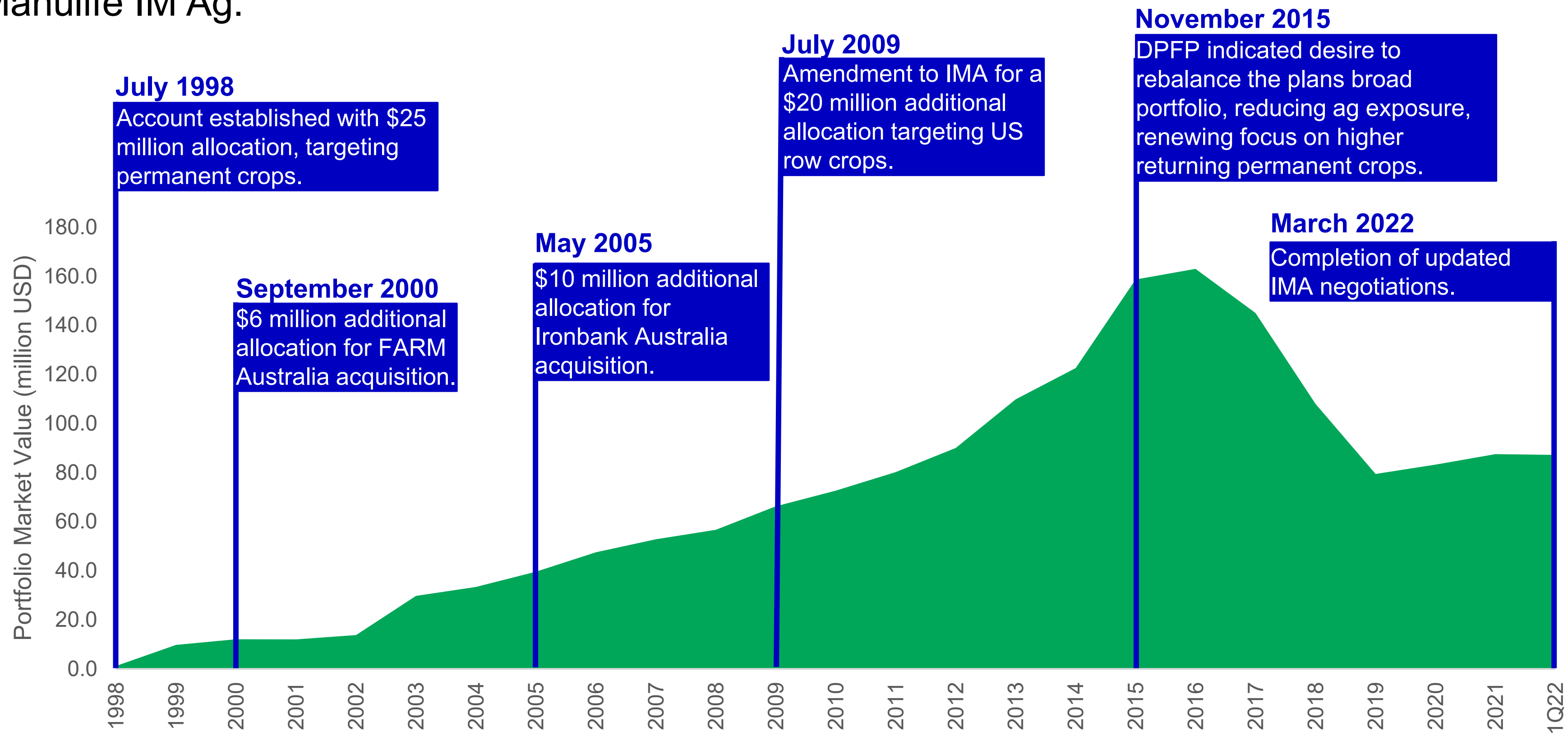
Source: [1]NCREIF Farmland Index, as of Q4 2021. [2]Interest rates, Yield on 1-Year Treasury with Constant Maturity, FRED, Federal Reserve Bank of St. Louis on March 10, 2022. [3]Manulife Investment Management research

Portfolio Overview

Manulife Investment Management

Texas Municipal Plans Consortium, LLC

In 1998, Texas Municipal Plans Consortium, LLC (TMPC), was established as the investment vehicle for Dallas Police and Fire System's separately managed agriculture investments with Manulife IM Ag.



2015 Rebalancing Process:

2016
- 1 Property
- $1.7 million

→

2017
- 3 Properties
- $5.4 million

→

2018
- 7 Properties
- $33.7 million

→

2019
- 4 Properties
- $36.2 million

→

2020
- 1 Property
- $1.9 million

→

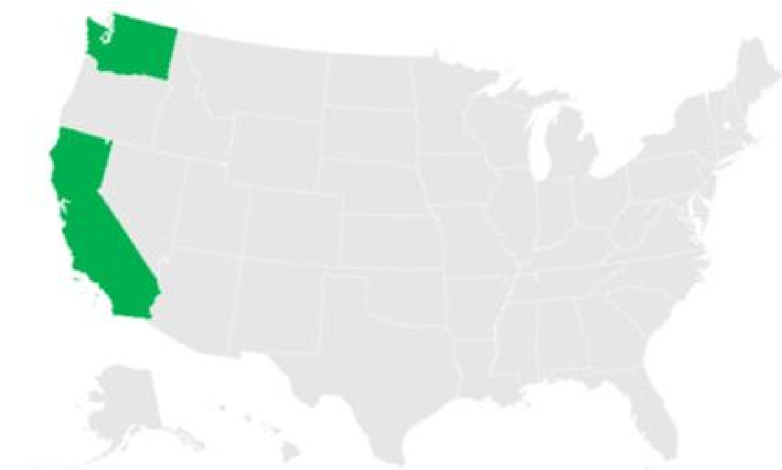
Disposition Program Complete

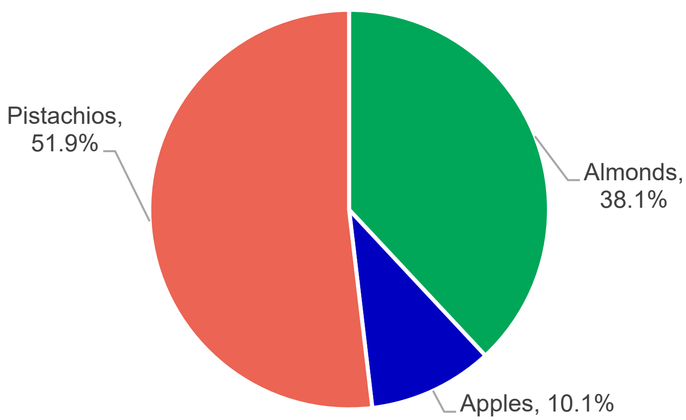
→

2021
- Begin Redeveloping Necessary Properties

Portfolio Overview[1]

NCREIF Region	Farms	Acres	Market Value	% Market Value
Pacific West	7	2,585	$ 78,451,976.00	89.9%
Pacific Northwest	1	269	$ 8,800,772.00	10.1%
TMPC Total	**8**	**2,854**	**$ 87,252,748.00**	





- Current IMA targets 100% permanent crop exposure within the US.
- The TMPC Portfolio is highly concentrated with 100% exposure to permanent crops located in the Pacific West and Pacific Northwest.
- With 100% permanent crops, the portfolio is projected to maintain a high cash-flowing profile.
- We seek to rebalance the portfolio, starting with trimming exposure to South Central California.

[1]As of 03/31/2022 market value

Portfolio Overview

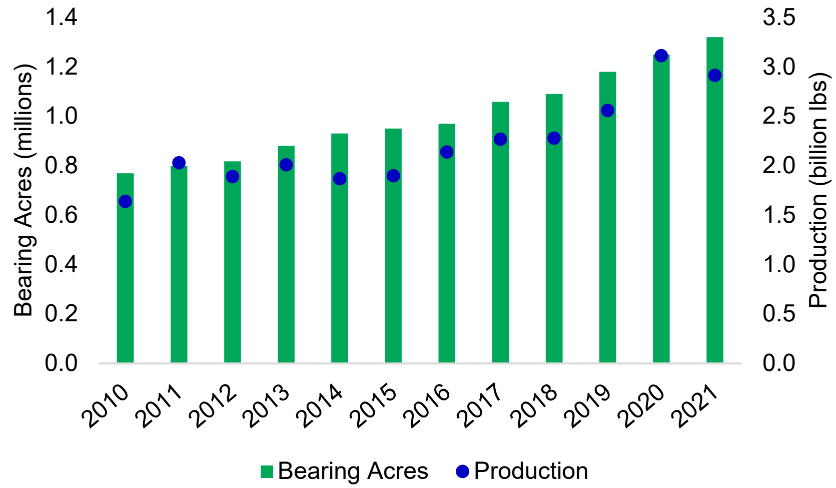
Portfolio Tailwinds and Headwinds:

- Water constraints in the Pacific West have muted recent appreciation.
- Back-to-back record almond and pistachio crops and supply chain bottlenecks have softened pricing.
- Supply chain disruptions and inflationary pressures have led to higher farm input prices.
- California tree nut acreage has seen slowing growth, which we expect to provide support for crop pricing and land values.

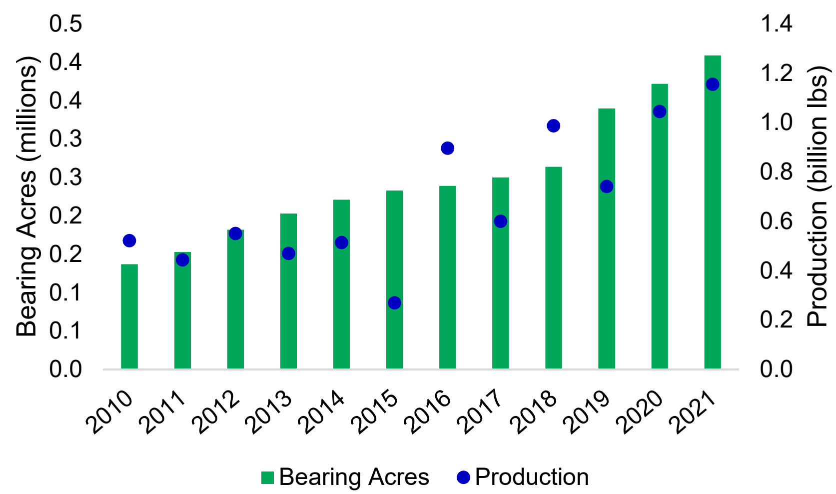
Looking Forward:

- Mitigating frost damage from late spring cold weather in the Pacific West and Pacific Northwest.
- Progressing redevelopment on Grant 46/51.
- Rebalancing portfolio to provide additional crop and region diversification.

California Almond Bearing Acres and Production[1]



California Pistachio Bearing Acres and Production[1]

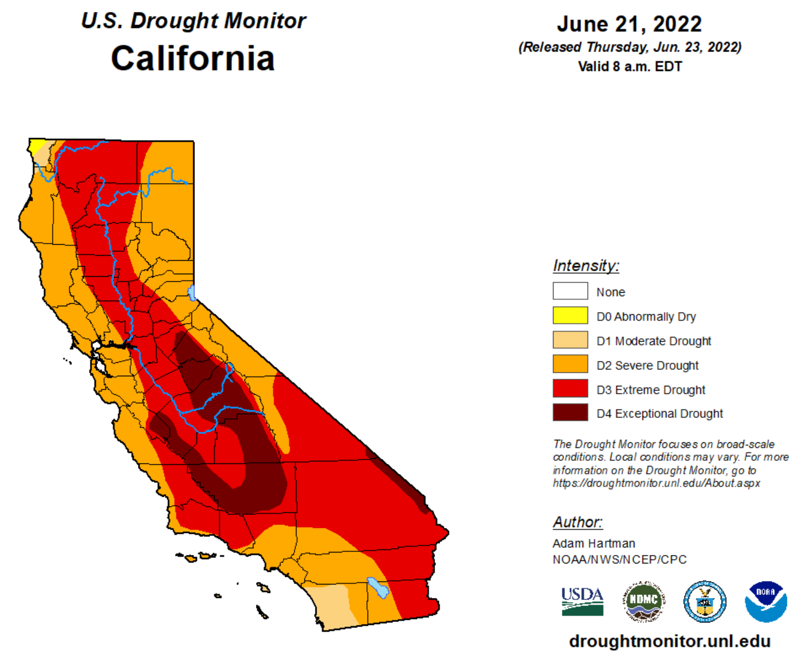


[1]Source: USDA National Agriculture Statistics Service

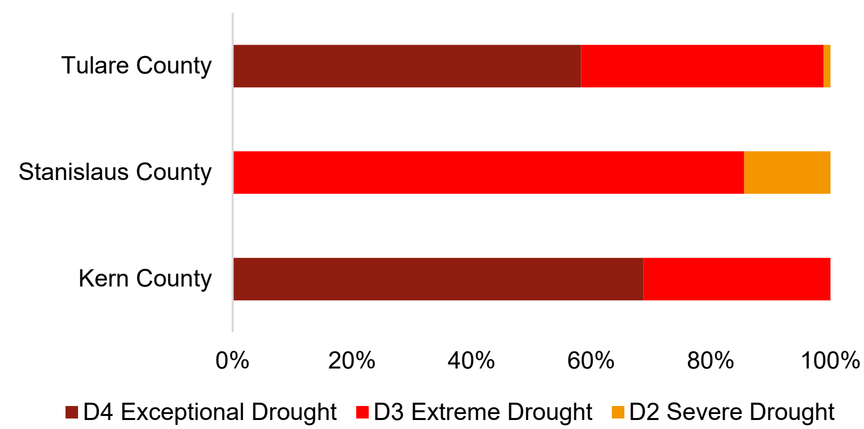
California Water

California Water Update

- In 2022, the State Water Project is currently allocating 5% of contracted amounts.
- The 2022 Federal water allocation for ag contractors is 0%.
- TMPC properties are not solely reliant on surface supplies for annual irrigation, so operations expects to continue farming based on budget, however, several regions in the Central Valley are re-evaluating minimum thresholds and measurable objectives (i.e., acceptable minimum groundwater levels) and this is expected to create pressure on the amount of groundwater we can pump in the respective areas moving forward.
- Groundwater Sustainability Plans (GSPs) submitted January 2020 covering critically over drafted subbasins received comment from the Department of Water Resources (DWR).
  - The majority of GSPs were deemed inadequate and were given 180 days to make appropriate corrections. Most corrections deal with coordination with neighboring GSAs and ensuring water for disadvantaged communities. Revised plans addressing comments are due July 2022.



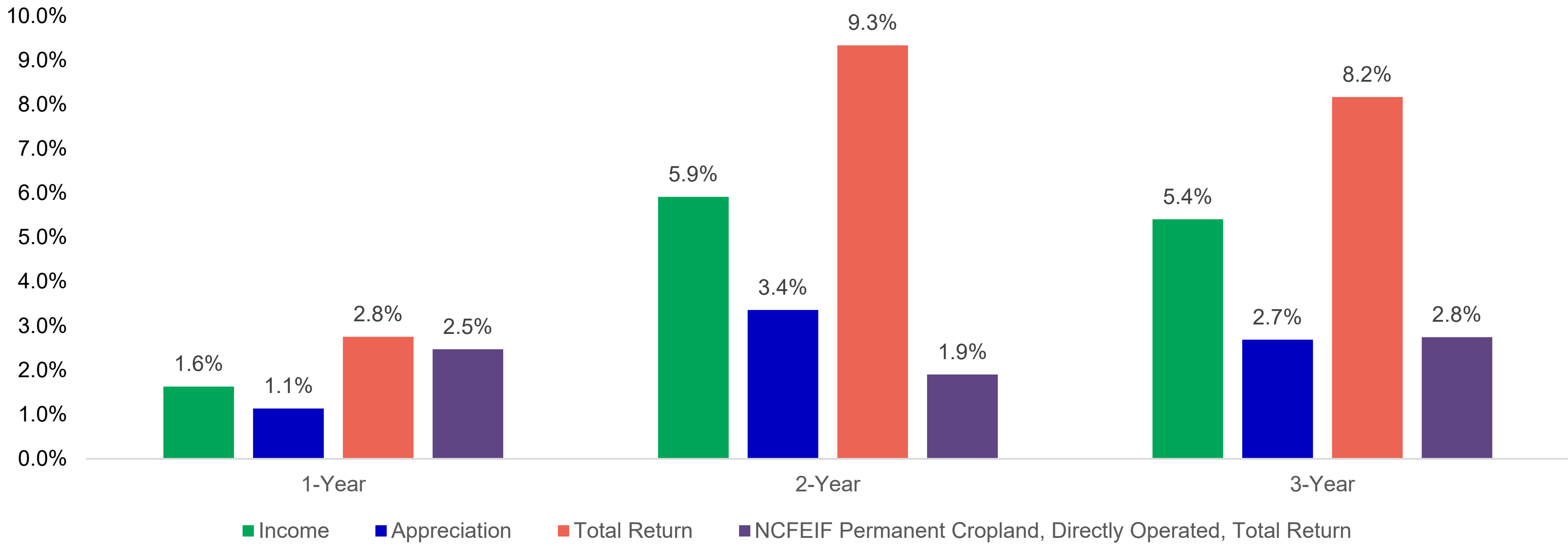
% of County by Drought Severity[1]



[1]*Source: National Drought Mitigation Center, as of 06/21/2022*

Portfolio Performance

2022 YTD Returns Relative to NCREIF Perm Crop Direct Operate[1]



- When compared to directly operated permanent crop returns within the NCREIF, the TMPC Portfolio is performing in line.
- On the one-year mark, the portfolio has outperformed directly operated permanent cropland by 30bps.
- Since the portfolio was reconstructed 3-years ago, performance has exceeded directly operated permanent cropland by 540bps.

[1]All returns stated before fees as of 03/31/2022. Source: NCREIF Farmland Management Type Report.

DISCUSSION SHEET

ITEM #C11

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 2023. 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

July 14th, 2022

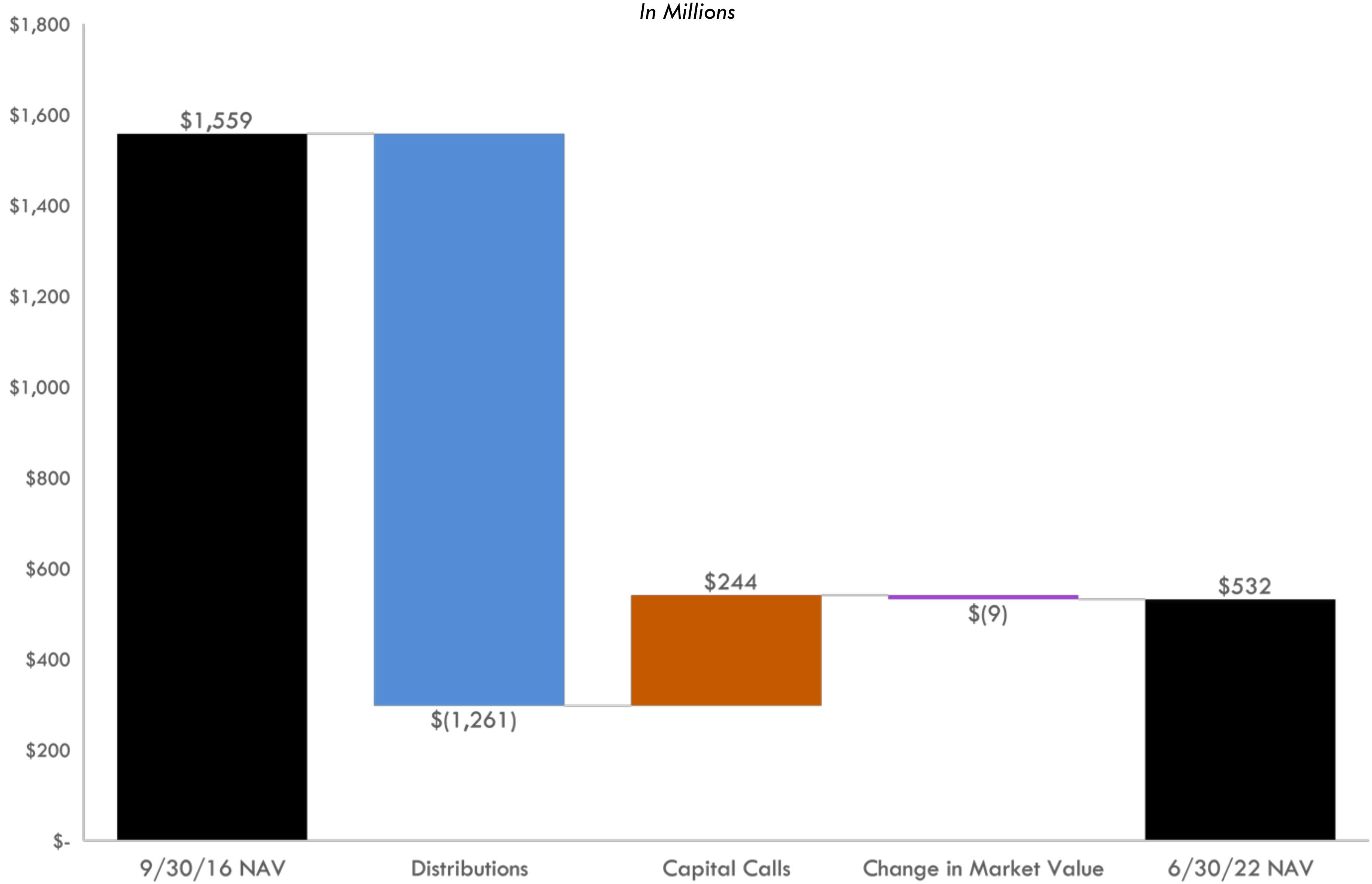
Private Asset Cash Flow Projections

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.**

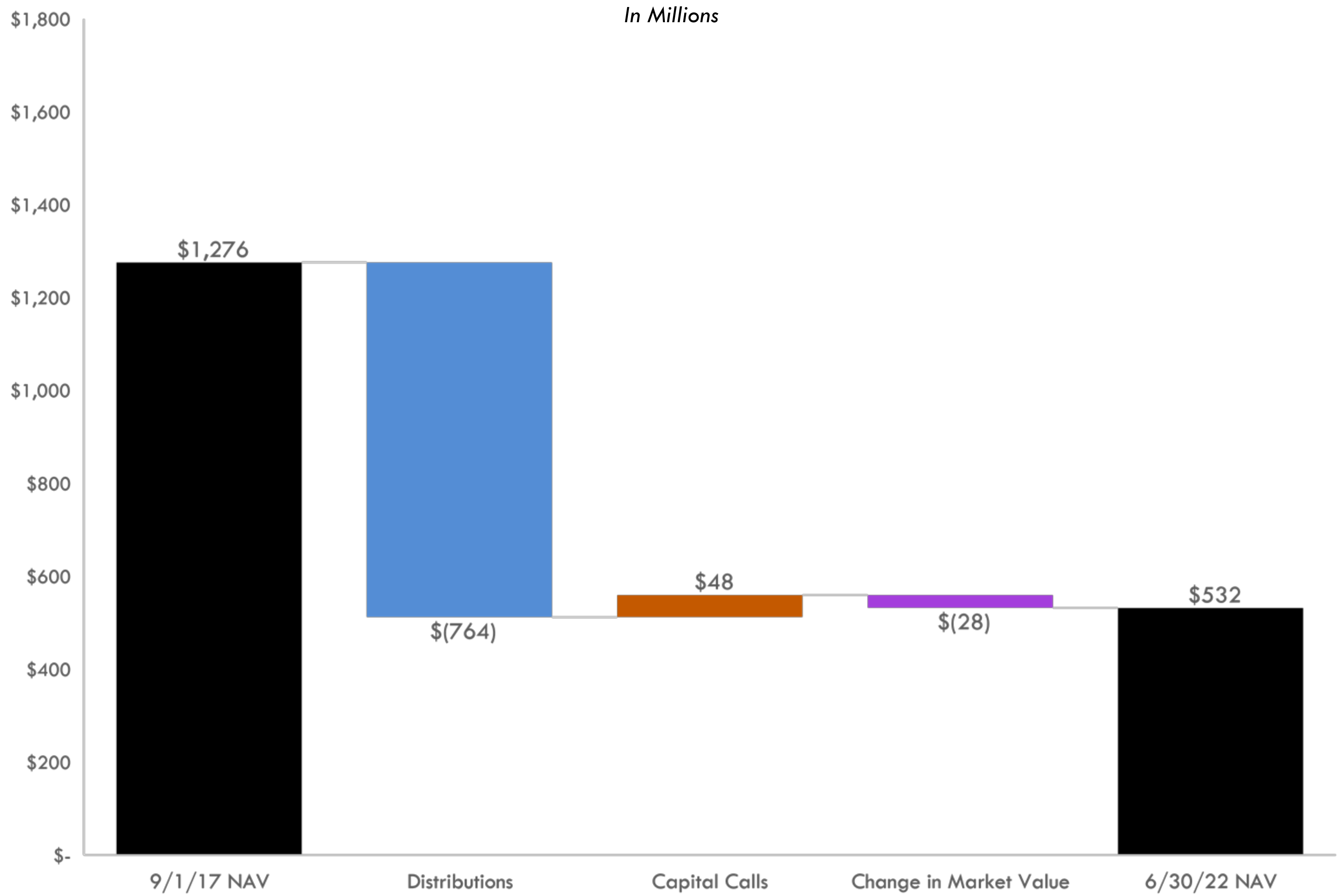
Private Asset Bridge Chart – Since 9/30/16

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.

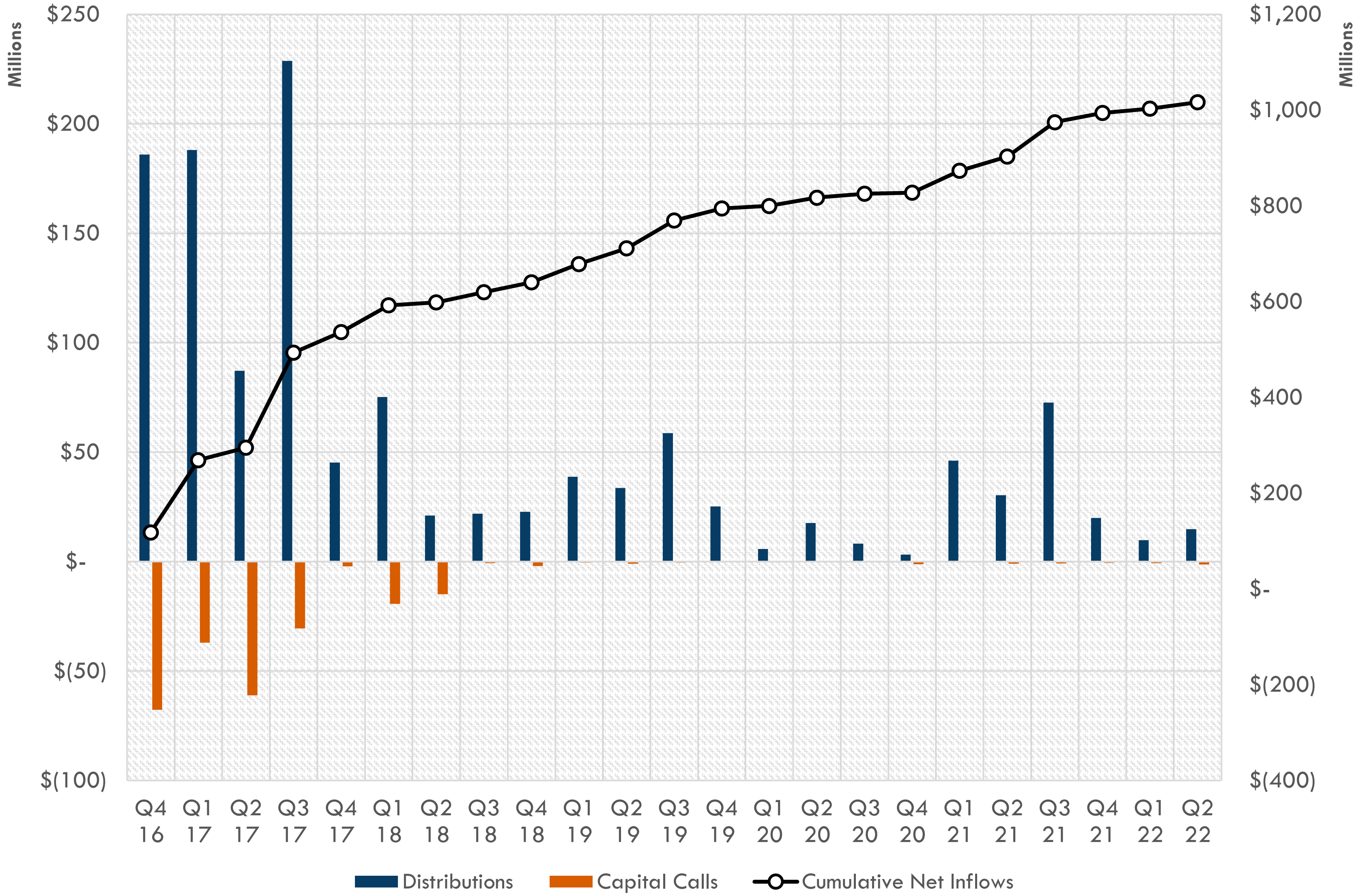
Private Asset Quarterly Cash Flows – Q2 2022

TOTAL CAPITAL CALLS & CONTRIBUTIONS		**$1,295,174**
Lone Star CRA Bridge	Interim Bridge Draw	$670,000
BTG	Capital Call	$372,000
TRG AIRRO	Capital Calls	$253,174

TOTAL DISTRIBUTIONS		**$14,865,751**
Distributions above $100K		
AEW	Note Distribution	$10,021,327
JPM Maritime	Distribution	$3,844,537
Huff Alternative	Distribution - Sale Holdback	$644,489
Riverstone	Distribution	$233,282
North Texas Opp	Distribution	$122,116

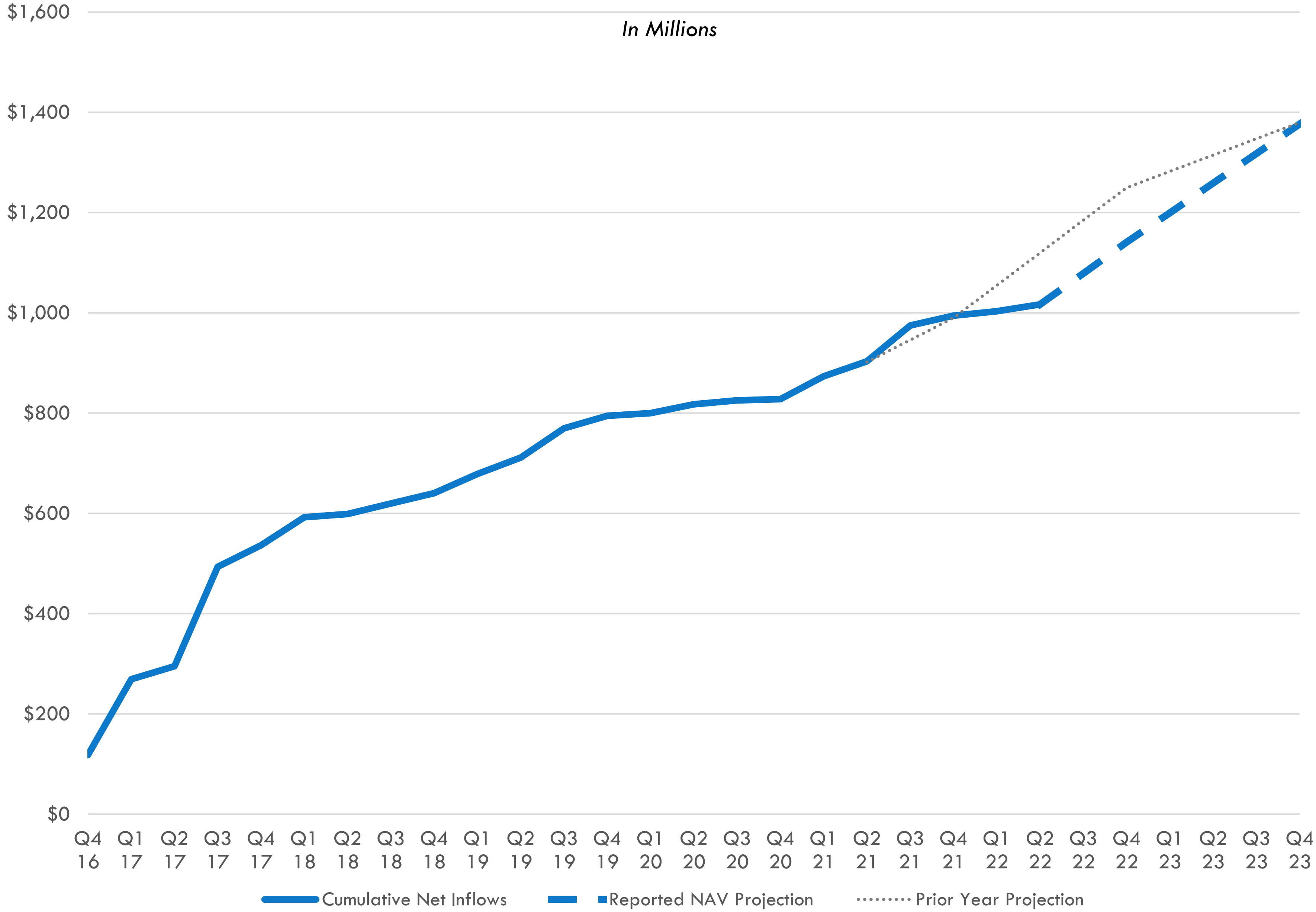
Numbers may not foot due to rounding.

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



Cumulative Actual and Projected Private Asset Net Inflows

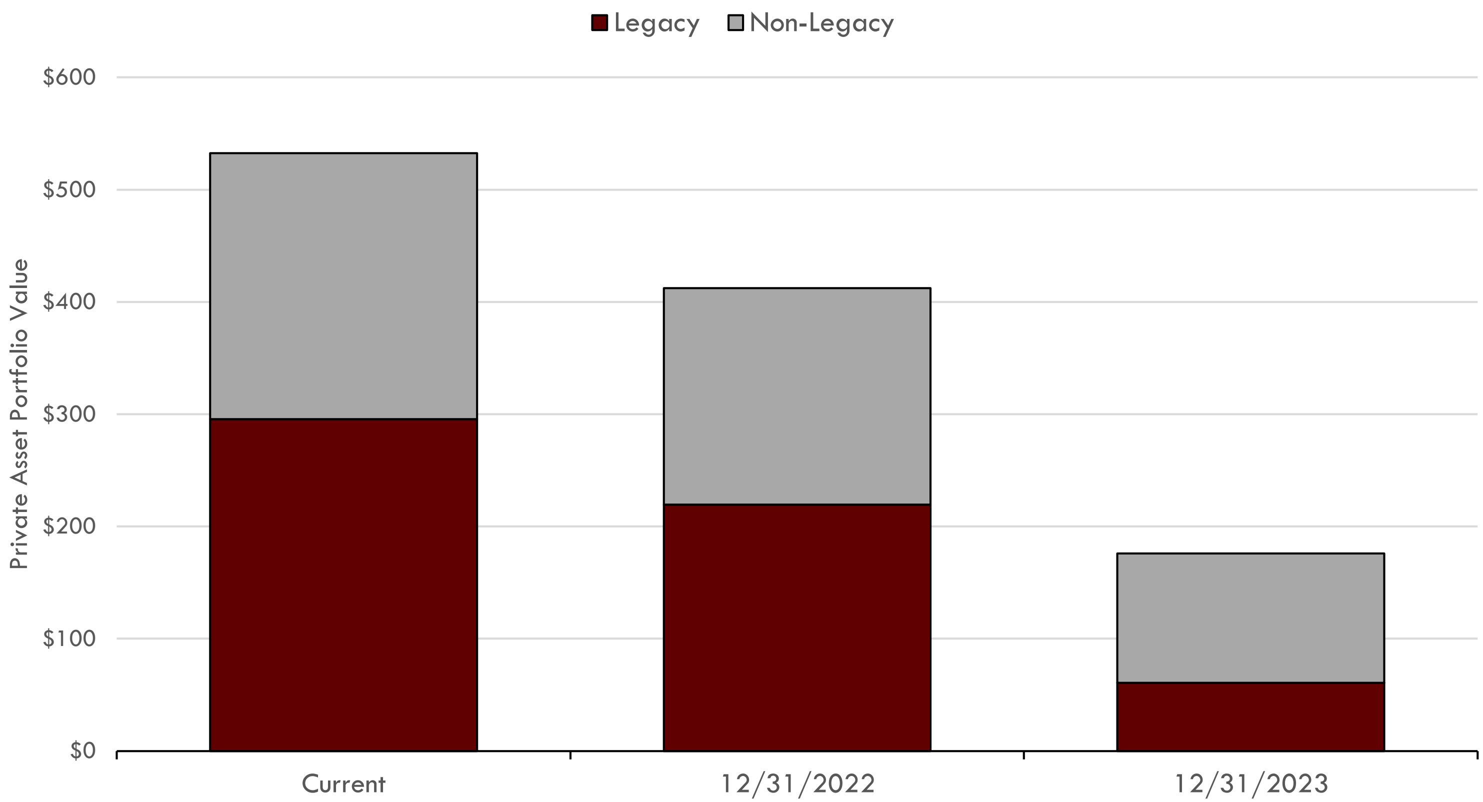
Private asset cash flow projections are based on either in-process/planned sales, if available, or a gradual disposition through 2023.



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 2023.

In Millions

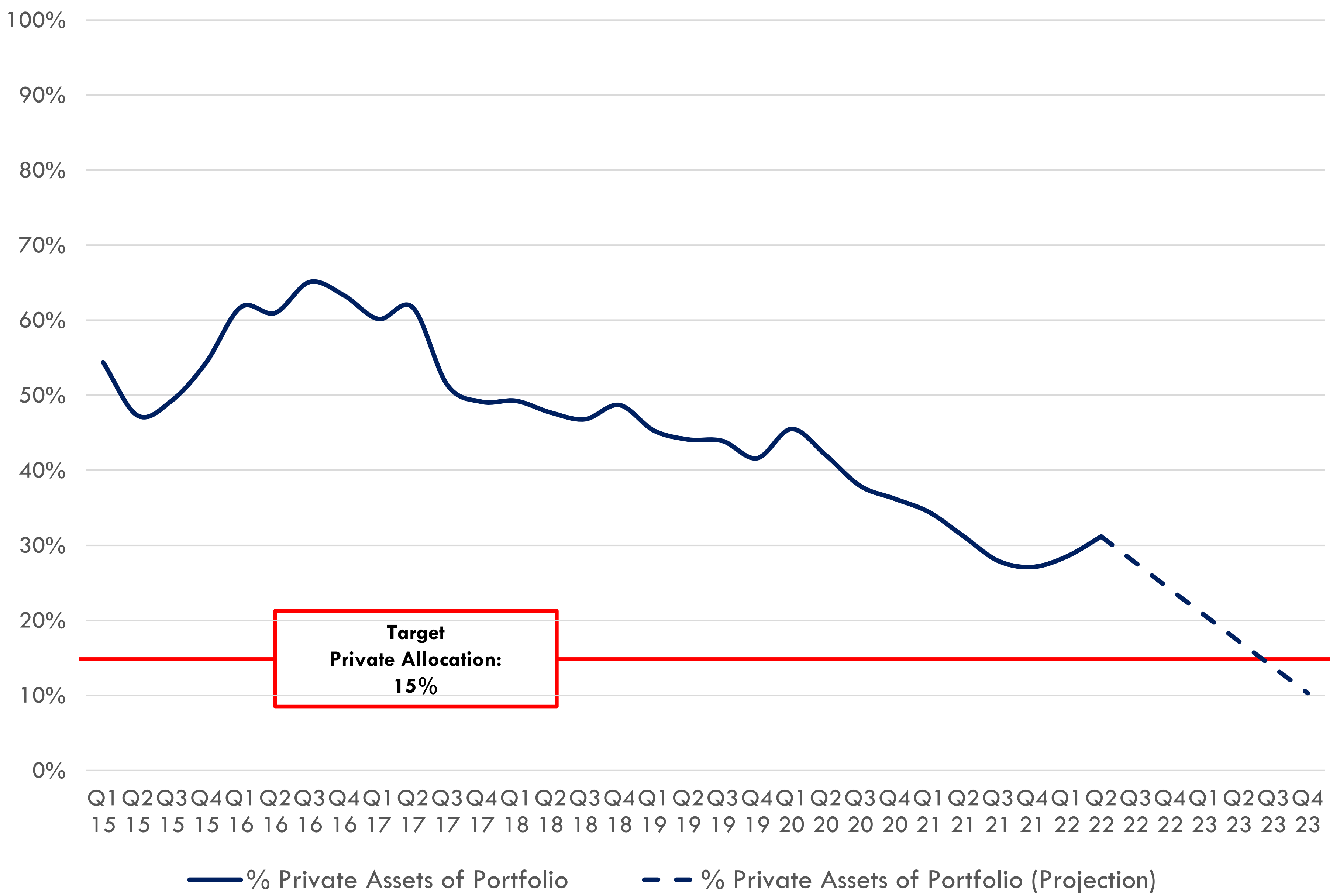


	Current	12/31/2022	12/31/2023
Legacy NAV (M)	$296	$220	$61
% of Private Portfolio	56%	53%	35%
% of DPFP Portfolio	17%	13%	4%

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 2023.

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



DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C12

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, July 14, 2022

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D2

Topic: **Executive Director's report**

a. Associations' newsletters
- NCPERS Monitor (July 2022)

b. Open Records

c. Employee Service Awards

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

Regular Board Meeting – Thursday, July 14, 2022

THE NCPERS

MONITOR

The Latest in Legislative News

July 2022

In This Issue

2 The SECURE Act 2.0

Photo Illustration © 2022, shutterstock.com

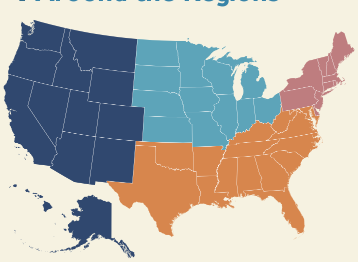
On June 22, the Senate Finance Committee approved major legislation to revise our nation's tax laws affecting retirement plans and their participants. This bill is commonly known as the SECURE Act 2.0.

3 Executive Directors Corner

Photo Illustration © 2022, shutterstock.com

We've all explained it ad nauseam: Public pensions aren't a monolith, and broad generalizations about their condition and overall health are a poor basis for policy-making.

4 Around the Regions



This month, we will highlight Connecticut, Virginia, Missouri, Colorado and New Mexico.

Retirement Tax Breaks Disproportionately Favor the Wealthy, NIRS Finds

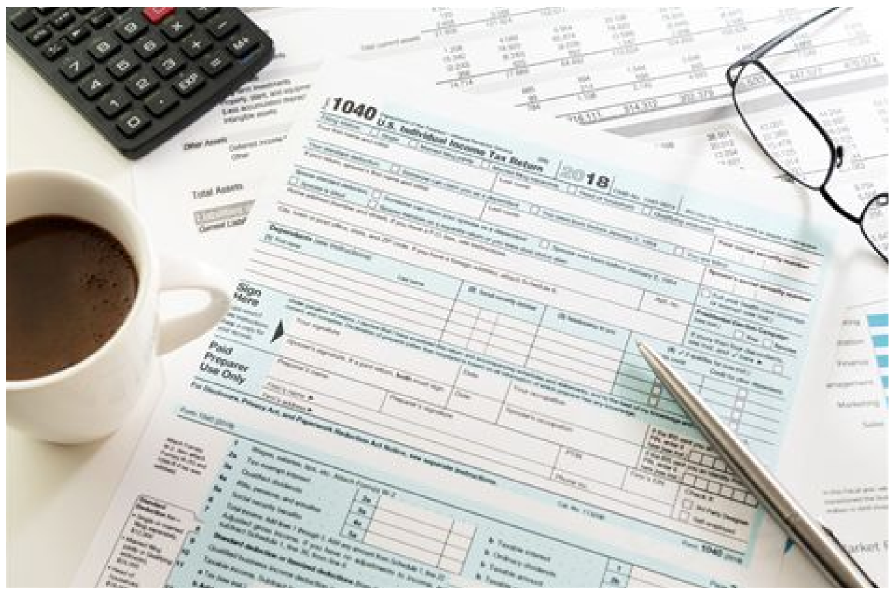


Photo Illustration © 2022, shutterstock.com

Tax breaks intended to increase retirement savings are doing little to help middle class families, according to new research from the National Institute on Retirement Security (NIRS).

Fully 90% of the tax benefits for defined contribution plans and individual retirement accounts (IRAs) go to families in the top 30% by income, and more than half the tax breaks go to the top 10%, NIRS found.

Middle class families are missing out because the structure of the tax code, uneven levels of retirement plan participation, and the growth of income inequality ensure that many of the benefits of tax incentives accrue to high-income earners, NIRS said in "The Missing Middle: How Tax Incentives for Retirement Savings Leave Middle-Class Families Behind."

The "missing middle" consists of working Americans for whom the tax code offers meager benefits to save for retirement, NIRS found. Yet middle class workers — who make up more than half of the workforce — face significant hurdles. These include rising costs in

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The SECURE Act 2.0

By Tony Roda

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On June 22, the Senate Finance Committee approved major legislation to revise our nation's tax laws affecting retirement plans and their participants. This bill is commonly known as the SECURE Act 2.0. The original SECURE Act was enacted at the end of 2019. The action by the Finance Committee comes on the heels of approval of a narrower, ERISA-focused bill by the Senate Committee on Health, Education, Labor, and Pensions. Earlier this year, the full House approved H.R. 2954, which is that chamber's version of the SECURE Act 2.0.

Many of the provisions of the Senate Finance Committee bill would affect retirement plans sponsored by state and local governments, including the following:

- Increase the age trigger for Required Minimum Distributions from defined benefit and defined contribution plans to age 75 for calendar years after 2031;
- Provide additional flexibility for plan fiduciaries when seeking to recoup inadvertent retirement plan overpayments;
- Allow employer matching contributions on account of student loan payments for 457(b), 403(b), and 401(k) plans;
- Eliminate the first day-of-the-month rule for 457(b) plans to provide more flexibility for participants to make changes in elective deferral amounts;
- Exclude from tax certain disability payments for first responders;
- Increase the annual limits on catch-up contributions to $10,000 for those age 60-63 for 457(b), 403(b), and 401(k) plans; and
- Require the Roth method for catch-up contributions, i.e., those contributions must be made with after-tax dollars.

In addition, NCPERS and many of its members have collaborated on an effort to improve the Healthcare Enhancement for Local Public Safety Act, known as HELPS. This part of the existing tax law, which is found at Internal Revenue Code Section 402(l), allows eligible retired public safety officers to exclude from gross income up to $3,000 in annual distributions from a governmental retirement plan to pay qualified health care insurance or long-term care premiums, provided the payment of premiums is made directly by the retirement plan to the provider of the health or long-term care plan. HELPS was enacted as part of the Pension Protection Act of 2006.

To comply with the direct payment requirement, state and local retirement systems must directly pay often numerous health and long-term care providers and keep track of changes to premium amounts and payment deadlines for thousands and sometimes tens of thousands of retirees. This already challenging task is made even more difficult because providers often are allowed to communicate only with the retiree policyholder and not with the retirement system. Information does not flow seamlessly, and

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NCPERS **Executive Directors Corner**

Working Group Offers New Roadmap for Gauging Public Pension Health

Photo Illustration © 2022, shutterstock.com

We've all explained it ad nauseam: Public pensions aren't a monolith, and broad generalizations about their condition and overall health are a poor basis for policy-making. A maniacal focus on achieving full funding levels elevates a simplistic, checkbook mentality over a sophisticated grasp of the actual working needs of public pensions. Pensions have withstood their key test: They pay out benefits consistently and without fail.

But what if there was a new way to assess the health of public pension systems? What if nuanced and meaningful information could be grasped at a glance? Those questions gave birth to the Pension Accounting Working Group in February 2021, and its bold findings are now in.

The Working Group was led by Brown University researcher Tom Sgouros under the auspices of NCPERS and the Policy Lab at Brown University, with financial support from Arnold Ventures. Its mission was to discuss existing accounting rules, suggest new metrics for evaluating pension systems' health, and consider new ways to think about old metrics.

Sgouros authored the report, "Measuring Public Pension Health: New Metrics and New Approaches," and presented it at the NCPERS Chief Officers Summit in San Francisco on June 28.

Pensions have withstood their key test: They pay out benefits consistently and without fail.

As the Working Group's facilitator, I am proud of the work performed by a distinguished group of public pension experts. Sgouros, as co-chair, has worked tirelessly to bring a fresh perspective to public pensions by challenging assumptions that give the appearance of having hardened into facts. His fellow cochair, Scott McCarty of

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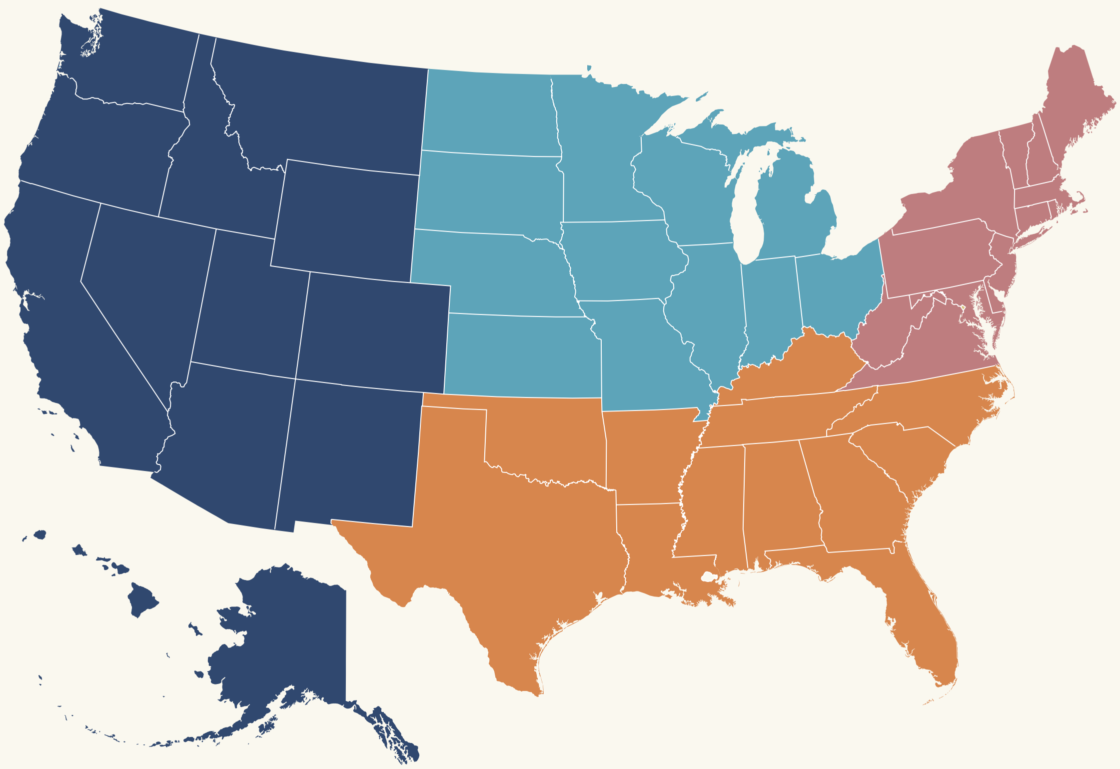
NCPERS Around the Regions

This month, we will highlight Connecticut, Virginia, Missouri, Colorado and New Mexico.



NORTHEAST: Connecticut

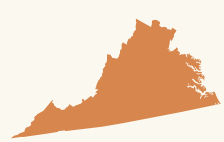
Connecticut Comptroller Natalie Braswell said the state budget enacted in May should provide $3.6 billion to pay down pension debt and other liabilities "if current projections hold."

In her June 1 fiscal and economic update, Braswell said a $956.4 million budget surplus has enabled the state to amass reserves and use the additional funding to pay down debt.

Of that total, $2.7 billion will be contributed to the $22.5 billion State Employees Retirement Fund and $903 million to the $16.9 billion Teachers' Retirement Fund, *Pensions & Investments* reported, citing a May 20 letter to Braswell from the state Office of Policy and Management.

The state's Rainy Day Fund has reached its statutory maximum of 15% of general appropriations, freeing up other excess funds for the two retirement systems.

SOUTH: Virginia



Virginia announced it has has hired Vestwell Holdings Inc. as third-party administrator and BlackRock as the primary investment manager of RetirePath Virginia, the state's new auto-IRA program.

The program is unique in that will operate under the auspices of Virginia529, the college savings program. "The program is a logical expansion of the Virginia529 mission, boosting access

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RETIREMENT TAX BREAKS CONTINUED FROM PAGE 1

retirement, lack of access to retirement plans at their jobs, and the need for more than Social Security income in retirement to maintain their standard of living.

The private sector's decades-long shift away from defined benefit pensions and the widespread dominance of 401(k) plans and their equivalents have also had an impact. "This trend not only shifted the responsibility and risks of retirement onto individuals, but also a significant portion (and often all) of the costs," NIRS noted.

This leaves a "missing middle" because the tax code offers meager benefits for these working Americans to save for retirement. At the same time, these middle class workers face rising costs in retirement, often lack retirement plans at their jobs, and need more than just Social Security income in retirement to maintain their standard of living.

As policy makers examine the nation's retirement savings shortfall, special focus is needed to understand how to make a difference for the millions of middle class Americans who are not accumulating adequate retirement savings, the report said.

The report identifies policy options, such as strengthening Social Security, increasing access and participation in retirement plans, reforming the deduction-based tax system, and ensuring the tax breaks are directed at generating retirement income.

Other solutions could focus on increasing access and participation in savings plans, which some states are doing for workers who lack workplace plans, thereby making it easier to participate. Additionally, curbing abuses of the existing system would ensure that the significant sums of federal tax revenue that are dedicated to retirement security are directed at generating retirement income, NIRS said.

In key findings, the reported noted:

- The progressive nature of the Social Security benefit helps to prevent old-age poverty, but income replacement from Social Security levels off more quickly than private savings accumulate.
- Tax expenditures for various retirement programs are heavily skewed toward high-income earners. Some of this reflects the design of the tax breaks themselves. Participation in employer retirement plans and having the financial resources to save for retirement also play a role,
- The value of tax incentives for saving is much greater for those at higher income levels who have higher marginal tax rates, but it is weak for much of the middle class. Those who are able to invest more and sooner reap greater advantage from the deferral of taxation on investment gains.
- The tax expenditures for retirement saving, oriented around the defined contribution system, give rise to inequities beyond income and wealth. Geographic and racial inequities related to retirement are both exacerbated by the tax incentives for saving. ◆

THE SECURE ACT 2.0 CONTINUED FROM PAGE 2

inadvertent errors are made. In addition, due to this complexity, some retirement systems have made the decision to not implement HELPS, thereby resulting in retired public safety officers covered by these pension plans being ineligible for the tax benefit.

Senators Sherrod Brown (D-OH), John Thune (R-SD), Mark Warner (D-VA), and Chuck Grassley (R-IA), all of whom serve on the Finance Committee, previously introduced S. 4312, which would change the direct payment requirement under HELPS from mandatory to optional and create an alternative to the current method, namely allowing the retirement system to make the distribution to the retired public safety officer. The retiree could then make the premium payment to the provider and remain eligible for the tax exclusion. The legislation also provided that, in cases where the distribution is made to the retiree, the retiree must include with their tax return an attestation that the amount sought to be excluded from the pension distribution does not exceed the amount paid by the employee for qualified health insurance premiums for the taxable year.

We are pleased to report that this legislation was included in the version of the SECURE Act 2.0 approved by the Finance Committee. At the Committee markup, Senator Grassley, said "I am also pleased to see the inclusions of two other bills that I am a co-author of that relate to police officers, firefighters, and first responders. This includes the Police and Fire Health Care Protection Act, introduced by Senators Brown and Thune, which will eliminate an administrative barrier that prevents many first responders from accessing the tax benefit that permits them to pay health care premiums on a pre-tax basis out of pension distributions."

NCPERS has been active on the HELPS issue and has met with senior pension counsels of the Senate Committee on Finance, the Committee on Health, Education, Labor, and Pensions, and the Senate Select Committee on Aging. NCPERS will work to ensure that the change to the direct payment requirement under HELPS is retained in the final text of the SECURE Act 2.0, which will be negotiated by the Senate and House later this year.

NCPERS also supports increasing the annual exclusion amount cap under HELPS, which is currently set at $3,000 and has not been increased since 2006 despite significant increases in premiums for health care and long-term care insurance over that 15-year period and indexing the annual cap for inflation for future years. These additional changes are not in either the House or Senate version of the SECURE Act 2.0 and their consideration may have to wait until the 118th Congress, which will convene in January.

All of the potential changes to HELPS discussed in this article have the strong support of the International Association of Fire Fighters, the Fraternal Order of Police, the National Association of Police Organizations, and the public pension community at large. ◆

Tony Roda is a partner at the Washington, D.C. law and lobbying firm Williams & Jensen, where he specializes in federal legislative, regulatory, and fiduciary matters 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 the Catholic University of America, and LL.M (tax law) from the Georgetown University Law Center.

EXECUTIVE DIRECTORS CORNER CONTINUED FROM PAGE 3

the Arizona Public Safety Personnel Retirement System, ensured that a practitioner's point of view was front and center in the discussions. Twelve more committee members brought energy and ideas to the table.

The resulting report's centerpiece is a Pension Funding Scorecard that succinctly presents key metrics that reflect not only financial condition, but policies in place and management actions — all of which impact a system's health.

Stepping back for a moment, it's important to note that the Working Group was an outgrowth of Sgouros' 2019 report for NCPERS, "The Case for New Pension Accounting Standards." That report asked a provocative question: Do existing accounting rules and standards, with their emphasis on achieving full funding of public pensions, accurately reflect the risks pensions face?

The answer, in a nutshell, was "not precisely." For example, public pension plans don't have to worry about the disappearance of a sponsoring employee the way a private plan must. Full funding is therefore more of a goal than a necessity. Similarly, there are a number of ways in which other risks are somewhat veiled to the non-expert, such as the use of present value, the valuation of assets, and the casual equivalence between a pension liability and a debt.

The new report is important because it provides a roadmap for broadening the perspective of managers and policy makers as to what constitutes health. It presents three new metrics that can be integrated into scorecards:

- **Scaled Liability** measures pension liability against the size of the economy that supports it.
- **UAL Stabilization Payment (USP)** builds upon a widely used balance sheet metric (UAL) to create an objective measurement of cash flow against which a plan can be measured.
- A **Risk-Weighted Asset Value** measures asset value against a plan's capacity to withstand a bear market, given its current cash flow and asset allocation.

The report also discusses the use of computer simulation methods, such as stress testing and sensitivity testing and projections, to gain insights into the health of pension plans.

In coming weeks, you'll be hearing more about the Working Group's important findings as we distribute the report, conduct a webinar to discuss the findings, and publicize the recommendations. I believe the Working Group's ideas can influence debate over the health and condition of public pensions, and I urge you to take time to immerse yourself in its key messages and findings. ◆

NCPERS Around the Regions

AROUND THE REGIONS CONTINUED FROM PAGE 4

and promoting financial wellness to even more Virginians," said Mary Morris, CEO of Virginia529.

RetirePath Virginia, which was authorized by legislation in 2021, is slated to begin with a pilot program in early 2023 and then launch with phased enrollment starting July 1, 2023.

Under state legislation, private sector Virginia businesses will be required to enroll in RetirePath if they have operated for more than two years, have 25 or more eligible employees, and do not offer a retirement savings plan.

MIDWEST: Missouri

Trustees of the Missouri State Employees' Retirement System stripped investment managers of their proxy voting powers. The action was part of a rising battle over investment policies involving fossil fuels, climate change, and clean energy.

Asset managers that hold stock in public companies on MOSERS' behalf were previously allowed to vote the shares. MOSERS expected them to use their votes to maximize the value for the retirement system, according to a report in the *News Tribune*, a daily newspaper in the capital of Jefferson City.

The state treasurer, Scott Fitzpatrick, who serves on the MOSERS board, pointed to BlackRock Inc.'s recent use of proxy votes to back three climate activists on the board of Exxon Mobil. BlackRock holds a majority of MOSERS' U.S. equity exposure. Such actions, Fitzpatrick maintained, are economically harmful and respond to a "political agenda using other people's money."

The board of trustees plans to develop a proxy voting policy to articulate how votes may be cast.

WEST: Colorado and New Mexico

Colorado is taking steps toward the planned October launch of the SecureSavings auto-IRA program — and helping lay the groundwork for a 2024 program launch by its neighbor, New Mexico.

The state's Treasurer's Office is seeking investment managers for the Colorado program and potentially for the New Mexico Work and Save program, according to a request for proposal.

Under a memorandum of cooperation agreement, the two states have already chosen a program administrator — Vestwell Holdings Inc. The selection is a culmination of the first cross-state partnership in the creation of auto-IRA plans. It is intended help manage costs through economies of scale as well as enhance the benefit's portability between the states.

The memorandum of cooperation expires September 30 and is expected to be replaced by a formal interstate agreement by that time.

Colorado plans to launch a pilot program in October, followed by an official start to employer registration in early 2023.

The Colorado Treasurer's Office is seeking managers for global equity, fixed income, money market and target-date fund investment options for the auto-IRA programs.

Colorado and New Mexico both enacted legislation in 2020 to authorize the auto-IRA programs. They have 900,000 and 400,000 eligible workers, respectively. ◆

Calendar of Events 2022

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August

Public Pension Funding Forum
August 21 – 23
Los Angeles, CA

October

NCPERS Accredited Fiduciary (NAF) Program
October 22 – 23
Nashville, TN

Public Safety Conference
October 23 – 26
Nashville, TN

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