AGENDA

DALLAS POLICE & FIRE PENSION SYSTEM

Date: May 7, 2021

The regular meeting of the Dallas Police and Fire Pension System Board of Trustees will be held at **8:30 a.m. on Thursday, May 13, 2021, 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/88627001471?pwd=L0ZVNnJkeVBVUGVERG9yVSs5NnFkZz09 Passcode: 479945.** Items of the following agenda will be presented to the Board:

A. MOMENT OF SILENCE

B. CONSENT AGENDA

1. Approval of Minutes

a. Regular meeting of April 8, 2021
b. Special meeting of April 20, 2021

2. Approval of Refunds of Contributions for the Month of April 2021

3. **Approval of Activity in the Deferred Retirement Option Plan (DROP) for May 2021**

4. **Approval of Estate Settlements**

5. **Approval of Survivor Benefits**

6. **Approval of Service Retirements**

7. **Approval of Alternate Payee Benefits**

C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. **Quarterly Financial Reports**

2. **Monthly Contribution Report**

3. **Chairman's Discussion Items**

   In-person Board Meetings

4. **Report on Audit Committee**

5. **Legislative Update**

6. Board approval of Trustee education and travel

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

7. Report on Investment Advisory Committee

8. Portfolio Update

9. Asset Allocation

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. Lone Star Investment Advisors and Huff Energy Update

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

12. 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 (May 2021)
- TEXPERS Pension Observer
  https://anyflip.com/mxfu/sddx/

b. Open Records

c. Office Reopening Status

d. CIO Recruitment

e. GFOA Award

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

ITEM A

MOMENT OF SILENCE

In memory of our Members and Pensioners who recently passed away

NAME	ACTIVE/ RETIRED	DEPARTMENT	DATE OF DEATH
Kenneth P. Wolford	Retired	Police	Apr. 2, 2021
Michael D. Hyles	Retired	Fire	Apr. 3, 2021
Reginald Williams	Active	Fire	Apr. 5, 2021
James A. Rollins	Retired	Police	Apr. 10, 2021
Donald A. Watts	Retired	Police	Apr. 10, 2021
Samuel G. Breitling	Retired	Police	Apr. 15, 2021
James W. Foster	Retired	Police	Apr. 22, 2021

Dallas Police and Fire Pension System
Thursday, April 8, 2021
8:30 a.m.
Via telephone conference

Regular meeting, William F. Quinn, Chairman, presiding:

ROLL CALL

Board Members

Present at 8:30 a.m.	William F. Quinn, Nicholas A. Merrick, Armando Garza, Michael Brown, Robert B. French, Gilbert A. Garcia, Kenneth Haben, Tina Hernandez Patterson, Steve Idoux, Mark Malveaux, Allen R. Vaught
Absent:	None
Staff	Kelly Gottschalk, Josh Mond, Kent Custer, Brenda Barnes, John Holt, Cynthia Thomas, Ryan Wagner, Greg Irlbeck, Milissa Romero
Others	Sidney Kawanguzi, Ron Pastore, Mark Morrison

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

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A. MOMENT OF SILENCE

The Board observed a moment of silence in memory of active police officer David C. Clark, retired police officers Brooks S. Lovejoy, David A. Jenkins, Michael A. Logan, and retired firefighters Thurman E. Jett, Robert B. Blackshear.

No motion was made.

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Regular Board Meeting
Thursday, April 8, 2021

B. CONSENT AGENDA

1. Approval of Minutes

Regular meeting of March 11, 2021

2. Approval of Refunds of Contributions for the Month of March 2021

3. Approval of Activity in the Deferred Retirement Option Plan (DROP) for April 2021

4. Approval of Estate Settlements

5. Approval of Survivor Benefits

6. Approval of Service Retirements

7. Approval of Payment of Military Leave Contributions

After discussion, Mr. Garcia made a motion to approve the minutes of the meeting of March 11, 2021. Mr. Merrick seconded the motion, which was unanimously approved by the Board.

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

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C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. Chairman's Discussion Item

Reopening Status

The Chairman discussed reopening the Board meetings and requested the Trustees inform the Executive Director of their position on conducting the Board meetings in person.

No motion was made.

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Regular Board Meeting
Thursday, April 8, 2021

2. Trustee Terms Expiring

As required by the Trustee Election Procedures, staff notified the Board that the terms of the following Trustees expire on August 31, 2021:

Steve Idoux, Mayoral Appointee
Mark Malveaux, Mayoral Appointee
Allen Vaught, Mayoral Appointee

No Trustee election is required in 2021 since all Trustees whose terms are expiring are Mayoral Appointees.

No motion was made.

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3. Legislative Update

Staff briefed the Board on pension bills that have been filed which may bear on DPFP.

No motion was made.

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4. Monthly Contribution Report

The Executive Director reviewed the Monthly Contribution Report.

No motion was made.

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5. 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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Regular Board Meeting
Thursday, April 8, 2021

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

Mr. Haben reported on the following seminar that he attended:

TEXPERS Legislative Workshop

No motion was made.

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7. Communication Plan Phase 1 Budget Increase

At the February Board Meeting the Board authorized a not-to-exceed amount of $20,000 to complete the assessment phase of the development of a communication plan framework. FleishmanHillard notified staff that the estimated cost for the assessment phase is $25,000.

After discussion, Mr. Malveaux made a motion to increase the not-to-exceed amount by $5,000 for the first phase of the communication plan to $25,000. Mr. Garcia seconded the motion, which was unanimously approved by the Board.

Mr. French was not present for the vote.

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8. Portfolio Update

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

No motion was made.

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Regular Board Meeting
Thursday, April 8, 2021

9. Private Asset Cash Flow Projection Update

Staff provided the quarterly update on the private asset cash flow projection model. 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.

No motion was made.

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10. Real Estate Overview – AEW

Ron Pastore, Senior Portfolio Manager and Mark Morrison, Portfolio Manager, of AEW Capital Management updated the Board on the status and plans for DPFP's investments related to RED Consolidated Holdings ("RCH") and Camel Square, an office development in Phoenix.

The Board went into closed executive session at 9:38 a.m.

The meeting was reopened at 11:26 a.m.

After discussion, Mr. French made a motion to approve the contribution of existing land at Camel Square into the redevelopment project, subject to final approval of the Executive Director. Ms. Hernandez Patterson seconded the motion, which was unanimously approved by the Board.

Mr. Merrick and Mr. Garcia were not present for the vote.

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11. Lone Star Investment Advisors Update

Investment Staff updated the Board on recent developments with respect to DPFP investments in funds managed by Lone Star Investment Advisors.

The Board went into closed executive session at 9:38 a.m.

The meeting was reopened at 11:26 a.m.

No motion was made.

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Regular Board Meeting
Thursday, April 8, 2021

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.

The Board went into closed executive session at 9:38 a.m.

The meeting was reopened at 11:26 a.m.

No motion was made.

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13. Personnel - Investment Staff

Kent Custer, CIO, has resigned from DPFP effective April 30, 2021. The Executive Director discussed staffing issues related to the investment function in closed session.

The Board went into closed executive session at 9:38 a.m.

The meeting was reopened at 11:26 a.m.

After discussion, Mr. Quinn made a motion to appoint Ryan Wagner as interim Chief Investment Officer. Mr. Vaught seconded the motion, which was unanimously approved by the Board.

Mr. Merrick and Mr. Garcia were not present for the vote.

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D. BRIEFING ITEMS

1. Public Comments

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

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Regular Board Meeting
Thursday, April 8, 2021

2. Executive Director's report

a. Associations' newsletters
- NCPERS Monitor (April 2021)

b. Open Records

The Executive Director's report was presented, however the NCPERS Monitor (April 2021) was not available.

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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Quinn and a second by Mr. Haben, the meeting was adjourned at 11:28 a.m.

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William F. Quinn
Chairman

ATTEST:

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Kelly Gottschalk
Secretary

Dallas Police and Fire Pension System
Tuesday, April 20, 2021
4:00 p.m.
Via telephone conference

Special meeting, William G. Quinn, Chairman, presiding:

ROLL CALL

Board Members

Present at 4:01 p.m.	William F. Quinn, Nicholas A. Merrick, Armando Garza, Michael Brown, Gilbert A. Garcia, Kenneth Haben, Tina Hernandez Patterson, Steve Idoux, Allen R. Vaught
Present at 4:03 p.m.	Mark Malveaux
Absent:	Robert B. French
Staff	Kelly Gottschalk, Josh Mond, Kent Custer, Brenda Barnes, John Holt, Milissa Romero
Others	None

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The meeting was called to order at 4:01 p.m.

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A. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

House Bill 3375

Staff reviewed proposed revised language to HB 3375 filed by Representative Davis, a bill that the Board voted to oppose at the March meeting.

Special Meeting
Tuesday, April 20, 2021

House Bill 3375 (continued)

After discussion, Mr. Haben made a motion to authorize the Executive Director to express Board approval solely for legislative changes to Section 6.14(e-3) which allow all recipients of DROP annuity payments to apply for a hardship distribution, subject to approval by the General Counsel of any proposed legislation. Mr. Vaught seconded the motion, which was approved by the following vote:

For: Mr. Quinn, Mr. Merrick, Mr. Brown, Mr. Garcia, Mr. Haben, Ms. Hernandez Patterson, Mr. Idoux, Mr. Malveaux, Mr. Vaught
Opposed: Mr. Garza

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B. BRIEFING ITEMS

Public Comment

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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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Garcia and a second by Mr. Garza, the meeting was adjourned at 4:36 p.m.

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William F. Quinn
Chairman

ATTEST:

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Kelly Gottschalk
Secretary

DISCUSSION SHEET

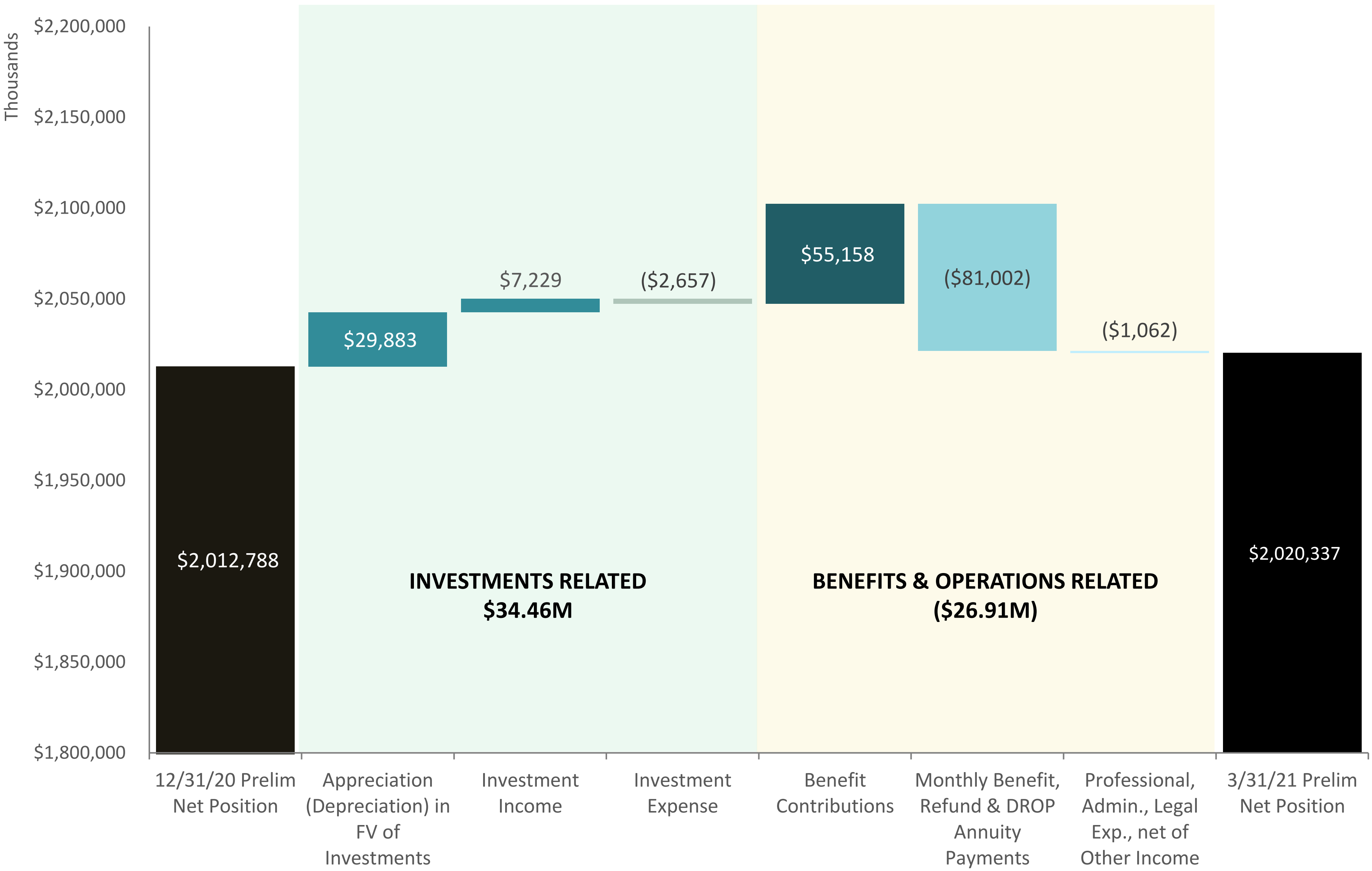
ITEM #C1

Topic: **Quarterly Financial Reports**

Discussion: The Chief Financial Officer will present the first quarter 2021 financial statements.

Change in Net Fiduciary Position

PRELIMINARY - December 31, 2020 – March 31, 2021



Components may not sum exactly due to rounding.

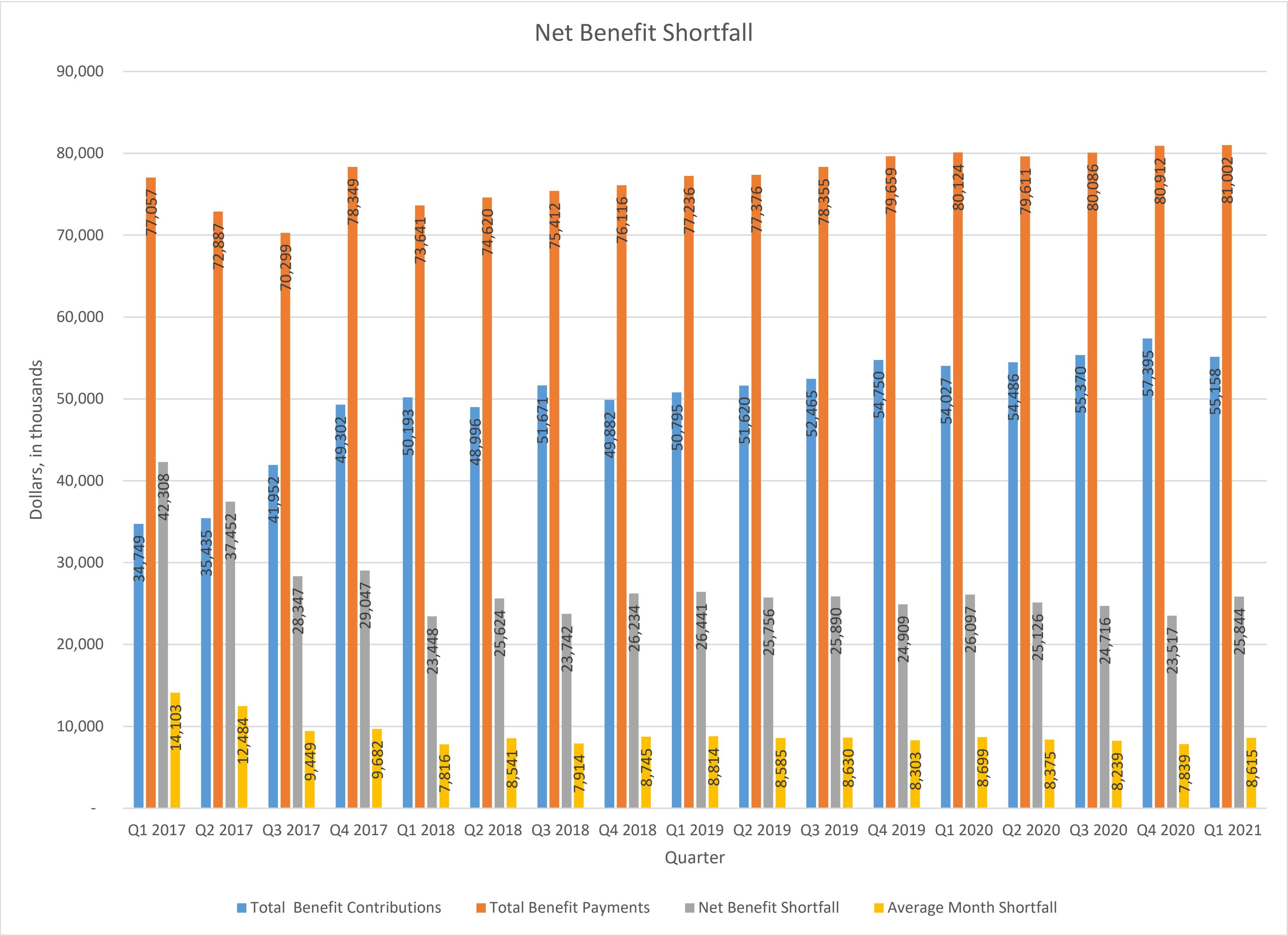
DALLAS POLICE & FIRE PENSION SYSTEM
Combined Statements of Fiduciary Net Position

	March 31, 2021	PRELIMINARY December 31, 2020 (unaudited)	$ Change	% Change
Assets				
Investments, at fair value (NOTE)				
Short-term investments	$ 17,209,556	$ 20,430,187	$ (3,220,631)	-16%
Fixed income securities	471,132,951	472,487,992	(1,355,041)	0%
Equity securities	756,005,704	700,767,440	55,238,264	8%
Real assets	479,964,128	518,797,567	(38,833,439)	-7%
Private equity	197,111,899	197,572,780	(460,881)	0%
Forward currency contracts	13,003	(296,918)	309,921	-104%
Total investments (NOTE)	1,921,437,241	1,909,759,048	11,678,193	1%
Receivables				
City	6,833,049	4,032,755	2,800,294	69%
Members	2,391,179	1,445,883	945,296	65%
Interest and dividends	4,360,878	3,782,403	578,475	15%
Investment sales proceeds	13,828,417	9,296,619	4,531,798	49%
Other receivables	166,452	193,111	(26,659)	-14%
Total receivables	27,579,975	18,750,771	8,829,204	47%
Cash and cash equivalents	93,291,667	88,491,051	4,800,616	5%
Prepaid expenses	809,213	544,957	264,256	48%
Capital assets, net	12,027,589	12,087,827	(60,238)	0%
Total assets	$ 2,055,145,685	$ 2,029,633,654	$ 25,512,031	1%
Liabilities				
Payables				
Securities purchased	30,509,817	11,783,719	18,726,098	159%
Accounts payable and other accrued liabilities	4,298,994	5,062,394	(763,400)	-15%
Total liabilities	34,808,811	16,846,113	17,962,698	107%
Net position				
Net investment in capital assets	12,027,589	12,087,827	(60,238)	0%
Unrestricted	2,008,309,284	2,000,699,714	7,609,570	0%
Net position held in trust - restricted for pension benefits	$ 2,020,336,873	$ 2,012,787,541	$ 7,549,332	0%

(NOTE) Private asset values have not yet been reported for Q4 20. Values will be updated as final reporting is received.

DALLAS POLICE & FIRE PENSION SYSTEM
Combined Statements of Changes in Fiduciary Net Position

	3 Months Ended 3/31/2021	3 Months Ended 3/31/2020	$ Change	% Change
Contributions				
City	$ 40,781,537	$ 40,201,428	$ 580,109	1%
Members	14,376,663	13,825,495	551,168	4%
Total Contributions	55,158,200	54,026,923	1,131,277	2%
Investment income				
Net appreciation (depreciation) in fair value of investments	29,882,560	(160,907,926)	190,790,486	-119%
Interest and dividends	7,229,477	8,335,128	(1,105,651)	-13%
Total gross investment income	37,112,037	(152,572,798)	189,684,835	-124%
less: investment expense	(2,656,604)	(1,576,521)	(1,080,083)	-69%
Net investment income	34,455,433	(154,149,319)	188,604,752	-122%
Securities lending income				
Securities lending income	-	53,028	(53,028)	-100%
Securities lending expense	-	(43,440)	43,440	-100%
Net securities lending income	-	9,588	(9,588)	-100%
Other income	87,068	88,503	(1,435)	-2%
Total additions	89,700,701	(100,024,305)	189,725,006	-190%
Deductions				
Benefits paid to members	80,254,243	79,471,578	782,665	1%
Refunds to members	747,572	652,639	94,933	15%
Legal expense	(462,798)	85,806	(548,604)	-639%
Legal expense reimbursement	469,248	-	469,248	0%
Legal expense, net of reimbursement	6,450	85,806	(79,356)	-92%
Staff Salaries and Benefits	976,394	936,628	39,766	4%
Professional and administrative expenses	635,958	568,909	67,049	12%
Total deductions	82,151,369	81,715,560	435,809	1%
Net increase (decrease) in net position	7,549,332	(181,739,865)		
Beginning of period	2,012,787,541	2,075,164,750		
End of period	$ 2,020,336,873	$ 1,893,424,885		


Net Benefit Shortfall
Dollars, in thousands
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
Q1 2017
Q2 2017
Q3 2017
Q4 2017
Q1 2018
Q2 2018
Q3 2018
Q4 2018
Q1 2019
Q2 2019
Q3 2019
Q4 2019
Q1 2020
Q2 2020
Q3 2020
Q4 2020
Q1 2021
Quarter
34,749
77,057
42,308
14,103
35,435
72,887
37,452
12,484
41,952
70,299
28,347
9,449
49,302
78,349
29,047
9,682
50,193
73,641
23,448
7,816
48,996
74,620
25,624
8,541
51,671
75,412
23,742
7,914
49,882
76,116
26,234
8,745
50,795
77,236
26,441
8,814
51,620
77,376
25,756
8,585
52,465
78,355
25,890
8,630
54,750
79,659
24,909
8,303
54,027
80,124
26,097
8,699
54,486
79,611
25,126
8,375
55,370
80,086
24,716
8,239
57,395
80,912
23,517
7,839
55,158
81,002
25,844
8,615
Total Benefit Contributions
Total Benefit Payments
Net Benefit Shortfall
Average Month Shortfall

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

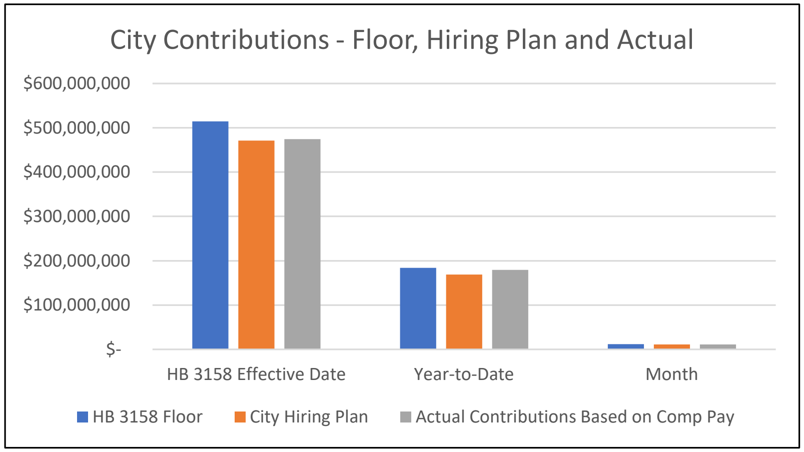
ITEM #C2

Topic: **Monthly Contribution Report**

Discussion: Staff will review the Monthly Contribution Report.

Regular Board Meeting – Thursday, May 13, 2021

Contribution Tracking Summary - May 2021 (March 2021 Data)



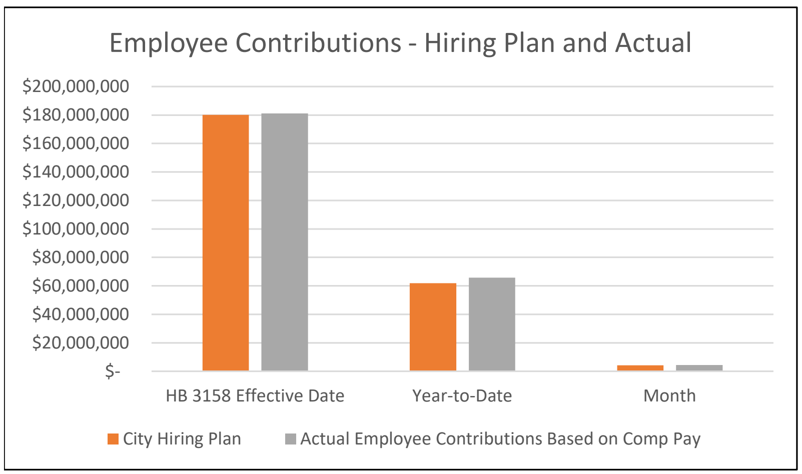
Actual Comp Pay was 101% of the Hiring Plan estimate since the effective date of HB 3158.

In the most recent month Actual Comp Pay was 105% of the Hiring Plan estimate and 97% of the Floor amount.

The Hiring Plan Comp Pay estimate increased by 3.03% in 2021. The Floor increased by 2.76%.

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

The combined actual employees was 159 less than the Hiring Plan for the pay period ending March 30, 2021. Fire was over the estimate by 20 fire fighters and Police under by 179 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

Mar-21	Number of Pay Periods Beginning in the Month	HB 3158 Floor	City Hiring Plan	Actual Contributions Based on Comp Pay	Additional Contributions to Meet Floor Minimum	Comp Pay Contributions as a % of Floor Contributions	Comp Pay Contributions as a % of Hiring Plan Contributions
Month	2	$ 11,764,000	$ 10,827,692	$ 11,371,275	$ 392,725	97%	105%
Year-to-Date		$ 184,116,000	$ 169,103,077	$ 179,600,847	$ 4,588,859	98%	106%
HB 3158 Effective Date		$ 514,463,000	$ 471,243,462	$ 474,658,056	$ 39,878,651	92%	101%

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

Mar-21	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	$ 4,236,923	$ 4,457,132	$ 220,209	$ 4,236,924	105%	105%
Year-to-Date		$ 61,933,846	$ 65,678,612	$ 3,744,766	$ 61,933,852	106%	106%
HB 3158 Effective Date		$ 180,162,692	$ 181,147,692	$ 985,000	$ 175,053,490	101%	103%
Potential Earnings Loss from the Shortfall based on Assumed Rate of Return				$ (588,489)			

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			5,088		
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 - 2021	Annual Divided by 26 Pay Periods	Actual	Difference	2020 Cumulative Difference	Number of Employees - EOM	Difference
January	$ 30,461,538	$ 31,291,360	$ 829,821	$ 829,821	4960	(128)
February	$ 30,461,538	$ 31,355,435	$ 893,897	$ 1,723,718	4926	(162)
March	$ 30,461,538	$ 31,414,646	$ 953,108	$ 2,676,826	4929	(159)
April				$ 2,676,826		
May				$ 2,676,826		
June				$ 2,676,826		
July				$ 2,676,826		
August				$ 2,676,826		
September				$ 2,676,826		
October				$ 2,676,826		
November				$ 2,676,826		
December				$ 2,676,826		

DISCUSSION SHEET

ITEM #C3

Topic: **Chairman's Discussion Item**

In-person Board Meetings

Discussion: The Chairman will brief the Board on this item.

Regular Board Meeting – Thursday, May 13, 2021

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C4

Topic: **Report on Audit Committee**

Discussion: The Audit Committee met with representatives of BDO on April 28, 2021 to review the Audit Plan for the 2020 audit. The Committee Chair will comment on the meeting.

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DISCUSSION SHEET

ITEM #C5

Topic: **Legislative Update**

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

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C6

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 – May 13, 2021

			ATTENDING	APPROVED
1.	**Conference:**	**TEXPERS Annual Conference**	KH	12/10/2020
	Dates:	May 21-26, 2021		
	Location:	Austin, TX		
	Cost:	TBD		
2.	**Conference:**	**TEXPERS Summer Conference**		
	Dates:	August 29-31, 2021		
	Location:	San Antonio, TX		
	Cost:	TBD		

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DISCUSSION SHEET

ITEM #C7

Topic: **Report on Investment Advisory Committee**

Discussion: The Investment Advisory Committee met on April 20, 2021. The Committee Chair and Investment Staff will comment on Committee observations and advice.

Regular Board Meeting – Thursday, May 13, 2021

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C8

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, May 13, 2021

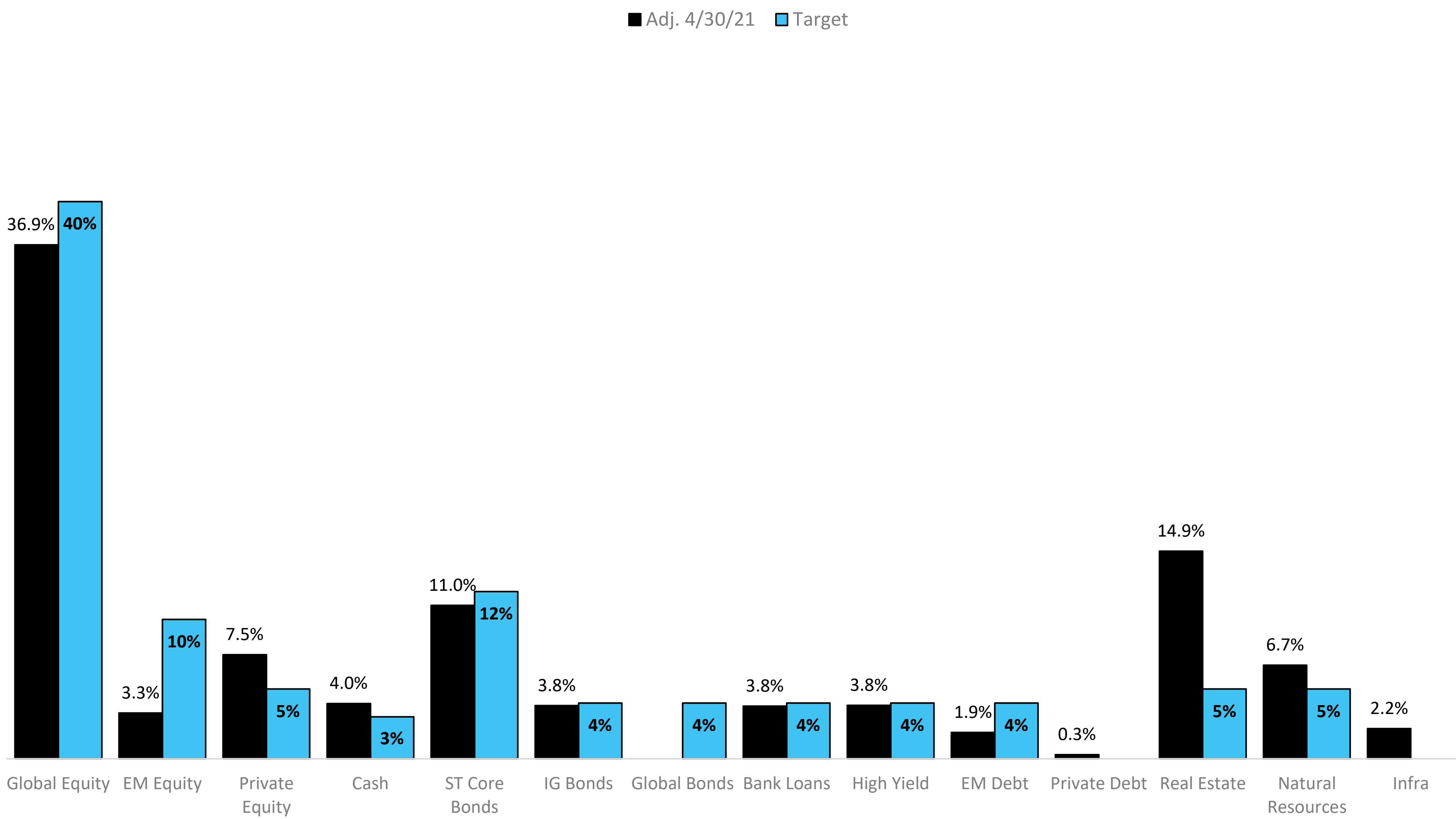
DALLAS POLICE & FIRE PENSION SYSTEM

Portfolio Update

May 13, 2021

Adjusted Asset Allocation – Actual vs Target

In this view staff adjusts reported private market values to roughly estimate the impact of events that have not yet been recognized.



Adjusted Asset Allocation & Global Equity Detail

In this view staff adjusts reported private market values to roughly estimate the impact of events that have not yet been recognized.

DPFP Asset Allocation Using Stressed Private Market Values	4/30/2021 NAV	Adjustments $ mil.	Adjustments % of NAV	Adj. NAV 4/30/2021 $ mil.	Adj. NAV 4/30/2021 %	Target $ mil.	Target %	Variance $ mil.	Variance %
Equity	**988**	**-48**	**-4.9%**	**940**	**47.6%**	**1,085**	**55.0%**	**-145**	**-7.4%**
Global Equity	728	0	0.0%	728	36.9%	789	40.0%	-61	-3.1%
Boston Partners	*140*	*0*	*0.0%*	*140*	*7.1%*	*138*	*7.0%*	*2*	*0.1%*
Manulife	*139*	*0*	*0.0%*	*139*	*7.1%*	*138*	*7.0%*	*1*	*0.1%*
Invesco (OFI)	*130*	*0*	*0.0%*	*130*	*6.6%*	*138*	*7.0%*	*-8*	*-0.4%*
Walter Scott	*135*	*0*	*0.0%*	*135*	*6.9%*	*138*	*7.0%*	*-3*	*-0.1%*
Northern Trust ACWI IMI Index	*183*	*0*	*0.0%*	*183*	*9.3%*	*118*	*6.0%*	*65*	*3.3%*
Future US Small Cap Mandate	*0*	*0*	*0.0%*	*0*	*0.0%*	*59*	*3.0%*	*-59*	*-3.0%*
Future International Small Cap Mandate	*0*	*0*	*0.0%*	*0*	*0.0%*	*59*	*3.0%*	*-59*	*-3.0%*
Russell Transition	*0*	*0*	*0.0%*	*0*	*0.0%*	*0*	*0.0%*	*0*	*0.0%*
Emerging Markets Equity	65	0	0.0%	65	3.3%	197	10.0%	-133	-6.7%
Private Equity*	195	-48	-24.5%	147	7.5%	99	5.0%	49	2.5%
Fixed Income	**564**	**0**	**0.0%**	**564**	**28.6%**	**690**	**35.0%**	**-127**	**-6.4%**
Cash	78	0	0.0%	78	4.0%	59	3.0%	19	1.0%
ST Investment Grade Bonds	217	0	0.0%	217	11.0%	237	12.0%	-19	-1.0%
Investment Grade Bonds	75	0	0.0%	75	3.8%	79	4.0%	-4	-0.2%
Global Bonds	0	0	0.0%	0	0.0%	79	4.0%	-79	-4.0%
Bank Loans	75	0	0.0%	75	3.8%	79	4.0%	-4	-0.2%
High Yield Bonds	76	0	0.0%	76	3.8%	79	4.0%	-3	-0.2%
Emerging Markets Debt	37	0	0.0%	37	1.9%	79	4.0%	-42	-2.1%
Private Debt*	6	0	0.0%	6	0.3%	0	0.0%	6	0.3%
Real Assets*	**480**	**-11**	**-2.3%**	**469**	**23.8%**	**197**	**10.0%**	**272**	**13.8%**
Real Estate*	305	-11	-3.6%	294	14.9%	99	5.0%	195	9.9%
Natural Resources*	132	0	0.0%	132	6.7%	99	5.0%	34	1.7%
Infrastructure*	43	0	0.0%	43	2.2%	0	0.0%	43	2.2%
Total	**2,032**	**-59**	**-2.9%**	**1,973**	**100.0%**	**1,973**	**100.0%**	**0**	**0.0%**
Safety Reserve ~$270M=30 mo net CF	295	0	0.0%	295	15.0%	296	15.0%	0	0.0%
*Private Mkt. Assets w/NAV Discount	681	-59	-8.7%	622	31.5%	296	15.0%	326	16.5%

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

Individual target percentages for Global Equity managers based on Global Equity Structure Review approved by Board.

Numbers may not foot due to rounding

Investment Activity

- Liquidation of private market assets remains the top focus.
  - Received $49 million in distributions year to date.
  - $25+ million from in process sales expected by mid-July.
- Staff continuing evaluation of and engagement with end-of-life private equity funds.
- US Small Cap RFP responses received on May 7th. Plan to bring finalists to IAC in June.

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Investment Initiatives – 2021 Quarterly Plan

Q2 2021

- Asset Allocation Recommendation – May
- Investment Policy Statement Update for Asset Allocation Targets, Ranges and Implementation – June

Q3 2021

- US Small Cap Manager Recommendation to Board
- Launch International Small Cap Search/RFP
- EM Equity Structure Review
- Global Equity Structure Review

Q4 2021

- International Small Cap Manager Recommendation to Board
- Possible Launch of EM Equity Manager Search

2021 Board Investment Review Plan*

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

January ✓	• Real Estate Reviews: Vista 7, King's Harbor, & Museum Twr.
February ✓	• Real Estate: Clarion Presentation
March ✓	• Natural Resources: Staff Portfolio Review - Forest Investment Associates and BTG Pactual
April ✓	• Real Estate: AEW Presentation
May	• Natural Resources: Hancock Presentation
July	• Infrastructure: Staff review of AIRRO and JPM Maritime
August	• Staff review of Private Equity and Debt
Sept.	• Staff review of Public Equity managers
October	• Staff review of Fixed Income managers

*Presentation schedule is subject to change.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C9

Topic: **Asset Allocation**

Attendees: Leandro Festino, Managing Principal - Meketa Investment Group
Aaron Lally, Executive Vice President - Meketa Investment Group

Discussion: Meketa and DPFP investment staff will discuss the 2021 asset allocation study process, analysis, the recommended long-term asset allocation, and implementation considerations.

Staff Recommendation: **Approve** the recommended long-term asset allocation and **direct** staff to bring amendments reflecting the updated asset allocation to the Investment Policy Statement back to the Board for its review and approval.

Regular Board Meeting – Thursday, May 13, 2021

DALLAS POLICE & FIRE PENSION SYSTEM

Long-Term Asset Allocation Recommendation & Implementation

May 13, 2021

Long-Term Asset Allocation Considerations

1. High magnitude of net cash outflows for benefit payments: ~$108M annually or 6% of plan assets. Actuarial projections show gradually increasing over a near-term basis.
2. Given cash outflow situation, path of investment returns matter.
3. The Safety Reserve mitigates downside risk and is needed given the high level of cash outflows, but the potential drag on investment returns is a concern and may warrant a reduction in the allocation.
4. DPFP has high allocation (30%) to illiquid Private Market assets, including riskier legacy assets. DPFP will not be able to fully allocate to Public Equity until Private Markets allocation reduced to 15% - expected to take 2+ years.

2021 Asset Allocation Study Timeline

February

Staff and Meketa start Asset Allocation (AA) discussions based on Meketa 2021 Return Study

March

Meketa presents Preliminary AA Review at DPFP Board Meeting

April

AA discussion with IAC. Feedback on 4 possible mixes

May

Recommendation of new AA to DPFP Board for approval

June

Discuss any follow-up on AA Implementation and approve Investment Policy changes based on new AA

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Recommendation

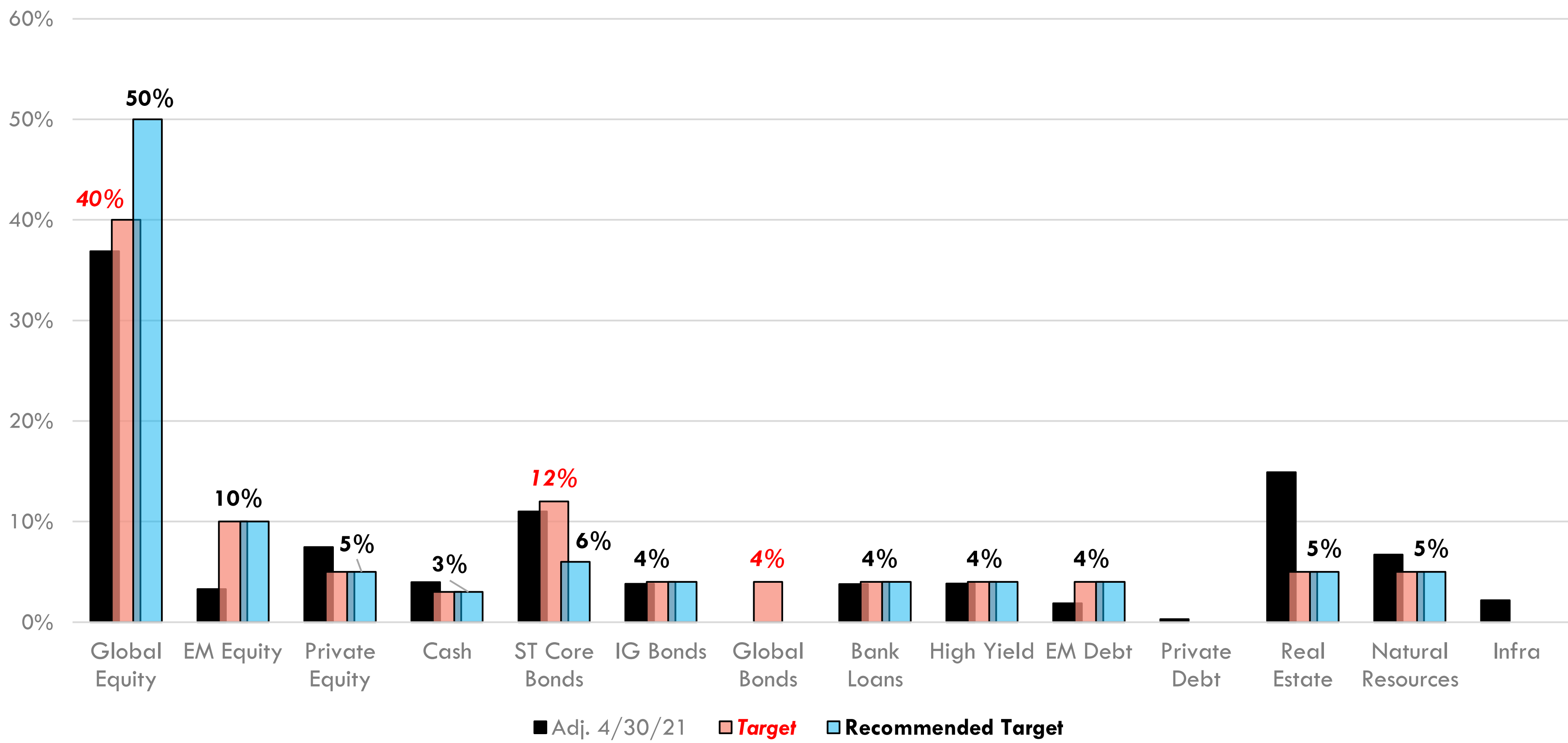
Recommended Long Term Asset Allocation

Staff **recommends** the below Long-Term Asset Allocation targets (Mix B from Page 40 of Meketa Presentation.)

	Current Target %	Recommended Target %
Equity	**55%**	**65%**
Global Equity	40%	50%
Emerging Markets Equity	10%	10%
Private Equity	5%	5%
Fixed Income	**35%**	**25%**
Cash	3%	3%
ST Investment Grade Bonds	12%	6%
Investment Grade Bonds	4%	4%
Global Bonds	4%	0%
Bank Loans	4%	4%
High Yield Bonds	4%	4%
Emerging Markets Debt	4%	4%
Private Debt	0%	0%
Real Assets	**10%**	**10%**
Real Estate	5%	5%
Natural Resources	5%	5%
Infrastructure	0%	0%
Total	**100%**	**100%**
Safety Reserve	15%	9%
Private Markets	15%	15%

Asset Allocation – Current Target vs. Recommended Target

Summary of Changes: 10% increase to Global Equity target. Elimination of 4% Global Bonds allocation and 6% reduction to Short Term Core Bonds (in the Safety Reserve).



4/30/21 based on Adjusted NAV.
Source: JPM Custodial Data and staff estimates.

Recommended Asset Allocation – Risk Considerations

Risks:

- New target Asset Allocation increases DPFP exposure to Public Equity after prolonged period of strong equity market performance, while the plan still has significant legacy asset exposure (17% of DPFP).
- Actuarial projections show net benefit outflows increasing over the next 5 years (up to $147M annually). In a low or negative return environment, net cash outflows as a percentage of NAV could reach 11%.
  - Staff will continue to closely monitor actual experience in monthly net cash outflows as compared to actuarial projections.
- While the recommended Asset Allocation has higher expected return, that comes with higher expected volatility and is more sensitive to equity market shocks given the higher public equity target. See comparison of expected return, volatility and select scenarios from the Meketa presentation on the following slide.

Asset Allocation Mixes – Expected Returns and Scenario Analysis

Expected Return/Risk	Current AA	Mix A	Mix B
10-year Expected Return	5.8%	6.1%	6.3%
20-year Expected Return	6.5%	6.8%	7.0%
Expected Standard Deviation	12.6%	13.7%	14.2%
Selected Scenario Analysis	**Current AA**	**Mix A**	**Mix B**
Global Fiancial Crisis	-26.5%	-30.3%	-32.0%
COVID-19 Market Shock	-19.5%	-21.7%	-22.7%
Taper Tantrum	-1.4%	-1.3%	-1.3%
10-yr Treasuries rise 200 bps	0.3%	0.9%	1.1%

Recommended Asset Allocation – Safety Reserve Reduction

- Rationale for Safety Reserve reduction from 30-months of net cash outflows (15% allocation) to 18-months (9%):
  - DPFP allocation to private markets was ~50% when Safety Reserve implemented in 2018, as compared to ~30% now.
  - 4% allocation to Investment Grade bonds was not part of Asset Allocation when the Safety Reserve implemented. This is potential source to rebalance or fund benefit outflows in prolonged equity market downturn.
  - Yield on Short Term Core bonds has dropped from ~2.8% in 2018 when Safety Reserve was implemented to current levels near ~0.7%.
- When making rebalancing and cash redeployment decisions, the size of the Safety Reserve will be evaluated based on both (i) the 9% allocation and (ii) total dollars required for 18-month of projected net benefit outflows.

Asset Allocation Implementation

Implementation Considerations

Pace of Safety Reserve Reduction: How quickly should we move to implement 6% reduction in Safety Reserve target?

Quarterly cash outflows expected to be ~1.5%. It would take about a year to reduce Safety Reserve by 6% to new target by simply funding cash outflows from this portfolio.

- **Staff recommends implementing the Safety Reserve reduction by end of 2021**. This is a reasonable amount of time to transition out of Safety Reserve through combination of natural depletion from net benefit outflows and liquid asset reinvestment. Target 3% reduction to 12% level by end of Q3 and additional 3% reduction to 9% by end of year.
- Safety Reserve would be reduced from current level to new 9% target by
  - Benefit outflows thru year-end **AND** phased approach to reallocate ~$53M from Safety Reserve into other liquid asset classes over the course of 2021.

How to Reallocate Safety Reserve and Private Market Distributions into Liquid Asset Classes:

- Fund roughly equal amounts in Global Equity, EM Equity and EM Debt until:
  - EM Equity reaches 5% (Proposed concentration cap/target to RBC), and
  - EM Debt reaches 4% target, then
  - Any excess flows into Global Equity, until EM Structure approved and manager selection for remaining 5% allocation is completed.

Safety Reserve Reduction / Reallocation thru Year End

Asset Allocation	4/30/2021 Adj. NAV		A	B	C	D	12/31/2021		New Target
	$ (M)	%	Net Benefit Outflows	Additional Safety Reserve Liquidation	Projected Private Market Distributions	Cash Redeployment	$ (M)	%	%
Equity	**$940**	**47.6%**				**$89**	**$1,029**	**54.1%**	**65%**
Global Equity	$728	36.9%				$59	$787	41.4%	50%
Emerging Markets Equity	$65	3.3%				$30	$95	5.0%	10%
Private Equity*	$147	7.5%					$147	7.8%	5%
Fixed Income	**$564**	**28.6%**	**($72)**	**($53)**	**($3)**	**$39**	**$475**	**25.0%**	**25%**
Cash	$78	4.0%	($22)				$56	3.0%	3%
ST Investment Grade Bonds	$217	11.0%	($50)	($53)			$114	6.0%	6%
Investment Grade Bonds	$75	3.8%					$75	4.0%	4%
Bank Loans	$75	3.8%					$75	3.9%	4%
High Yield Bonds	$76	3.8%					$76	4.0%	4%
Emerging Markets Debt	$37	1.9%				$39	$76	4.0%	4%
Private Debt*	$6	0.3%			($3)		$3	0.1%	0%
Real Assets*	**$469**	**23.8%**			**($72)**		**$397**	**20.9%**	**10%**
Real Estate*	$294	14.9%			($69)		$225	11.8%	5%
Natural Resources*	$132	6.7%			($3)		$129	6.8%	5%
Infrastructure*	$43	2.2%					$43	2.2%	0%
NET ASSET VALUE	**$1,973**	**100.0%**	**($72)**	**($53)**	**($75)**	**$128**	**$1,901**	**100.0%**	**100%**
Safety Reserve	$295	15.0%	($72)	($53)			$170	9.0%	9%
Private Markets*	$622	31.5%			($75)		$547	28.8%	15%

A) $72M liquidation in Safety Reserve to pay net benefit outflows thru year-end
B) $53M liquidation from Safety Reserve to over course of year to fund Equity and EM Debt reinvestment
C) $75M in estimated private market distributions thru year-end to be redeployed
D) $128M ($53M + $75M) redeployed into Global Equity, EM Equity (up to 5%) and EM Debt up to 4% target

DALLAS POLICE & FIRE PENSION SYSTEM

Asset Allocation Next Steps

- Update Investment Policy Statement to reflect new Asset Allocation targets, ranges, implementation - June Board
- Assumed Rate of Return discussion - June Board
- EM Equity Structure: Review RBC concentration, how to allocate remaining 5% - Q3 2021
- Update Global Equity Structure Study based on increased target - Q3 2021
- International Small Cap Search - Q3/Q4 2021
- EM Equity Manager Search – Late 2021 or early 2022

Appendix - Glide Path Model Summary

DPFP Asset Allocation $	Adj. NAV 4/30/2021	Q2 21 6/30/2021	Q3 21 9/30/2021	Q4 21 12/30/2021	Q1 22 3/30/2022	Q2 22 6/30/2022	Q3 22 9/30/2022	Q4 22 12/30/2022
Equity	**940**	**950**	**983**	**1,029**	**1,030**	**1,033**	**1,033**	**1,042**
Global Equity	728	733	750	787	798	822	822	834
Emerging Markets Equity	65	70	86	95	107	131	131	143
Private Equity*	147	147	147	147	125	80	80	65
Fixed Income	**564**	**551**	**521**	**475**	**472**	**472**	**455**	**449**
Cash	78	60	60	56	56	56	54	54
ST Investment Grade Bonds	217	217	171	114	114	114	111	107
Investment Grade Bonds	75	75	75	75	75	75	72	72
Bank Loans	75	75	75	75	75	75	72	72
High Yield Bonds	76	76	76	76	76	76	73	72
Emerging Markets Debt	37	42	58	76	76	76	73	72
Private Debt*	6	6	6	3	(0)	(0)	(0)	(0)
Real Assets*	**469**	**454**	**424**	**397**	**372**	**342**	**332**	**302**
Real Estate*	294	279	252	225	215	200	190	175
Natural Resources*	132	132	129	129	124	109	109	104
Infrastructure*	43	43	43	43	33	33	33	23
Total	**1,973**	**1,955**	**1,928**	**1,901**	**1,874**	**1,847**	**1,820**	**1,793**

DPFP Asset Allocation %	Adj. NAV 4/30/2021	Q2 21 6/30/2021	Q3 21 9/30/2021	Q4 21 12/30/2021	Q1 22 3/30/2022	Q2 22 6/30/2022	Q3 22 9/30/2022	Q4 22 12/30/2022
Equity	**47.6%**	**48.6%**	**51.0%**	**54.1%**	**55.0%**	**55.9%**	**56.8%**	**58.1%**
Global Equity	36.9%	37.5%	38.9%	41.4%	42.6%	44.5%	45.2%	46.5%
Emerging Markets Equity	3.3%	3.6%	4.4%	5.0%	5.7%	7.1%	7.2%	8.0%
Private Equity*	7.5%	7.5%	7.6%	7.8%	6.7%	4.4%	4.4%	3.6%
Fixed Income	**28.6%**	**28.2%**	**27.0%**	**25.0%**	**25.2%**	**25.5%**	**25.0%**	**25.0%**
Cash	4.0%	3.1%	3.1%	3.0%	3.0%	3.0%	3.0%	3.0%
ST Investment Grade Bonds	11.0%	11.1%	8.9%	6.0%	6.1%	6.2%	6.1%	6.0%
Investment Grade Bonds	3.8%	3.8%	3.9%	4.0%	4.0%	4.1%	4.0%	4.0%
Bank Loans	3.8%	3.8%	3.9%	3.9%	4.0%	4.0%	3.9%	4.0%
High Yield Bonds	3.8%	3.9%	3.9%	4.0%	4.0%	4.1%	4.0%	4.0%
Emerging Markets Debt	1.9%	2.2%	3.0%	4.0%	4.1%	4.1%	4.0%	4.0%
Private Debt*	0.3%	0.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%
Real Assets*	**23.8%**	**23.2%**	**22.0%**	**20.9%**	**19.9%**	**18.5%**	**18.2%**	**16.8%**
Real Estate*	14.9%	14.3%	13.1%	11.8%	11.5%	10.8%	10.4%	9.8%
Natural Resources*	6.7%	6.8%	6.7%	6.8%	6.6%	5.9%	6.0%	5.8%
Infrastructure*	2.2%	2.2%	2.2%	2.2%	1.7%	1.8%	1.8%	1.3%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Safety Reserve	**15.0%**	**14.2%**	**12.0%**	**9.0%**	**9.1%**	**9.2%**	**9.1%**	**9.0%**
***Private Market Assets**	**31.5%**	**31.1%**	**29.9%**	**28.8%**	**26.5%**	**22.9%**	**22.7%**	**20.5%**

Source: JP Morgan Custodial Data, Staff Calculations. Assumes zero investment returns.

MEKETA
INVESTMENT GROUP

Dallas Police and Fire Pension System

May 2021

2021 Asset Allocation and Liability Review

MEKETA

Dallas Police and Fire Pension System

2021 Asset Allocation and Liability Review

Executive Summary

- There is no single "right" or "wrong" asset allocation.
- There are a number of trade-offs and considerations that must be evaluated when conducting this exercise.
- Meketa, Staff and the Investment Advisory Committee have analyzed DPFP's expected future net cash flow requirements, the size of the Safety Reserve, capital market expectations, liquidity and other DPFP specific constraints.
- Robust discussion occurred at the April 20th special Investment Advisory Committee where a similar report was presented by Meketa and Staff to the IAC members.
- Meketa presented four possible asset mixes for consideration.
- The IAC favored the asset mix with the largest reduction in the Safety Reserve and the largest increase in target to public global equity.

MEKETA

Dallas Police and Fire Pension System

2021 Asset Allocation and Liability Review

Presentation Outline

Introduction: Basics of Asset Allocation

Asset Allocation

- Asset allocation refers to the distribution of assets across a number of asset classes that exhibit different correlations with each other. Each asset class exhibits a unique combination of risk and reward. The expected and realized long-term returns vary by asset class, as does the interim volatility of those returns. Some asset classes, like equities, exhibit high degrees of volatility, but also offer high returns over time. Other asset classes, like cash, experience very little volatility, but offer limited return potential.

Why is Asset Allocation important?

- The distribution of assets across various asset classes exerts a major influence on the return behavior of the aggregate pool over short and long time periods.

How does Asset Allocation affect aggregate performance?

- In addition to exhibiting unique characteristics, each asset class interacts differently with other asset classes. Because of low correlations, the likelihood that any two asset classes will move together in the same direction is limited, with the movement of one asset class often offsetting another's. Combining asset classes allows investors to more fully control the aggregate risk and return of their portfolios, and to benefit from the reduction in volatility that stems from diversification.

Asset Allocation

What is Asset Allocation?

- Asset allocation refers to the distribution of assets across a number of asset classes that exhibit different correlations with each other. Each asset class exhibits a unique combination of risk and reward. The expected and realized long-term returns vary by asset class, as does the interim volatility of those returns. Some asset classes, like equities, exhibit high degrees of volatility, but also offer high returns over time. Other asset classes, like cash, experience very little volatility, but offer limited return potential.

Why is Asset Allocation important?

- The distribution of assets across various asset classes exerts a major influence on the return behavior of the aggregate pool over short and long time periods.

How does Asset Allocation affect aggregate performance?

- In addition to exhibiting unique characteristics, each asset class interacts differently with other asset classes. Because of low correlations, the likelihood that any two asset classes will move together in the same direction is limited, with the movement of one asset class often offsetting another's. Combining asset classes allows investors to more fully control the aggregate risk and return of their portfolios, and to benefit from the reduction in volatility that stems from diversification.

Mean Variance Optimization

- MVO is the traditional starting point for determining asset allocation, but has its flaws.
- MVO mathematically determines an "efficient frontier" of policy portfolios with the highest risk-adjusted returns.
- All asset classes exhibit only three characteristics, which serve as inputs to the model:
  - Expected return
  - Expected volatility
  - Expected covariance with all other assets
- The model assumes:
  - Normal return distribution
  - Stable volatility and covariances over time
  - Returns are not serially correlated
- The MVO model tends to underestimate the risks of large negative events.

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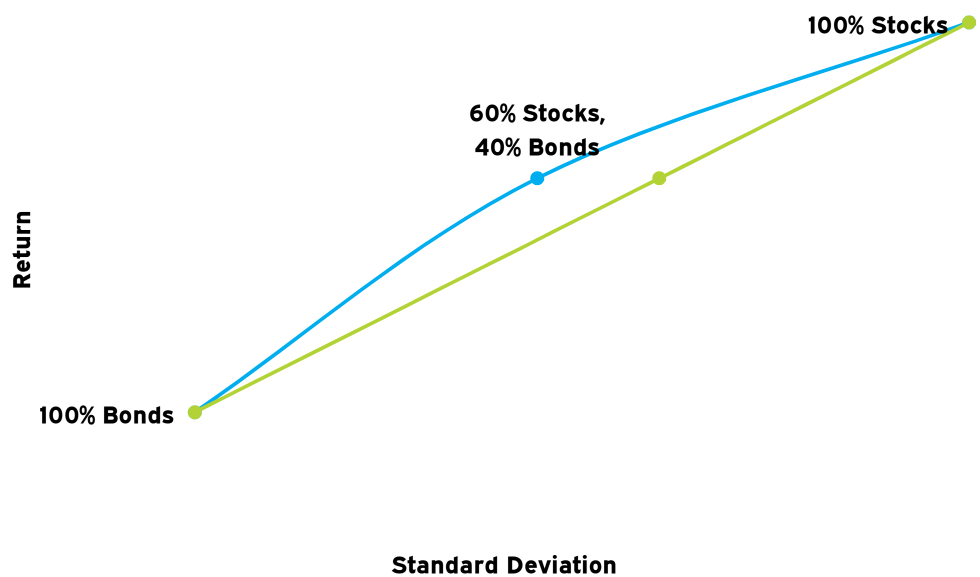
The Efficient Frontier



- Combining uncorrelated assets produces an "efficient frontier." Different combinations of assets (e.g., 60% stocks & 40% bonds) will lie along this efficient frontier.
- By combining assets that are not highly correlated with each other, the Fund can produce a higher return for a given level of standard deviation than it could by investing in perfectly correlated assets. Alternatively, it can experience lower standard deviation for a given level of return.

Section 1: DPFP Asset Liability Stress Testing

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Asset Liability Analysis

- Meketa and DPFP Staff included liability analysis in the asset allocation review in 2018.
- Meketa highlighted that the path of returns was extremely impactful.
- Strong returns in early years, followed by weak returns in later years, would have a profoundly different impact on future funding status, than vice-versa.
- Much of the same risks still exist today.
- We conducted hypothetical return modeling with a focus on different optimistic and pessimistic outcomes over the next five years, and how the different paths of returns impact funded status and annual net cash outflows (as a percentage of DPFP assets).

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Starting Point

- We started this analysis with the latest projected funded status model built by the actuary. This serves as a baseline.
- We adjusted the model's predicted December 31, 2020 market value with DPFP Staff's estimated "adjusted NAV" of $1.886 billion, which seeks to estimate the potential eventual NAV discount on private market assets with "stale" valuations.
- This serves as the "adjusted baseline" that we make reference to throughout this analysis.

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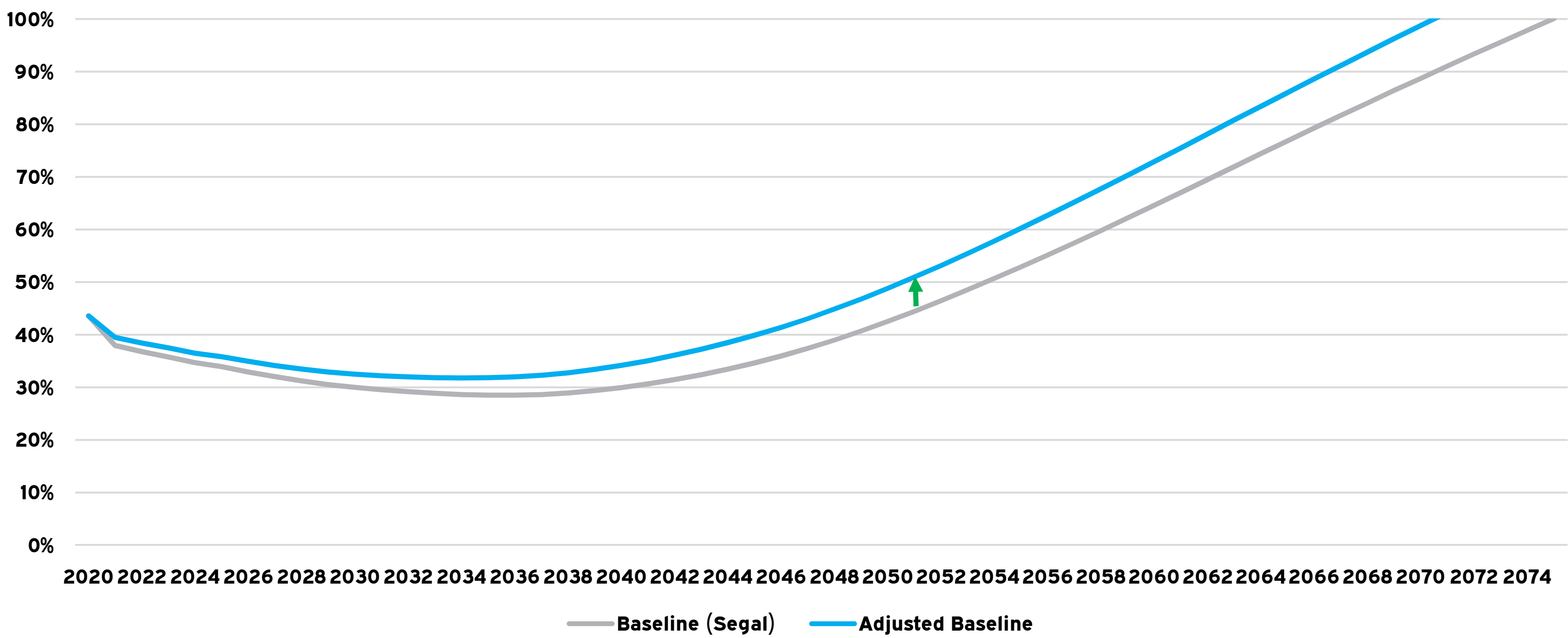
"Adjusted Baseline" – Projected DPFP Funded Status



- Throughout this exercise the blue line serves as the "adjusted baseline" to which we compare different stress tests.

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Setting the Stage: Education on Sequence of Returns

- For investors with no cash flows, the sequence of returns does not matter.
- For mature pension systems like DPFP, the sequence of returns is extremely significant.
- The graph on the following page shows three scenarios that achieve the same twenty-year annualized return of 7.0% but take very different (opposite) paths to arrive at this destination.
- In this first example, we start with DPFP's "adjusted NAV" but hypothetically assume there are no cash flows (i.e. contributions fully match benefit payments and expenses).
- The "Strong Early Returns" and "Strong Late Returns" scenarios produce the same annualized average return (7%), but with distinct paths (the sequence of returns is reversed, or the opposite, in these two scenarios, each still yielding 7% compound annual average returns over 20 years).
- The third scenario assumes 7.0% is earned every year.
- If net cash flows are $0, the ending value is the same for all three scenarios.

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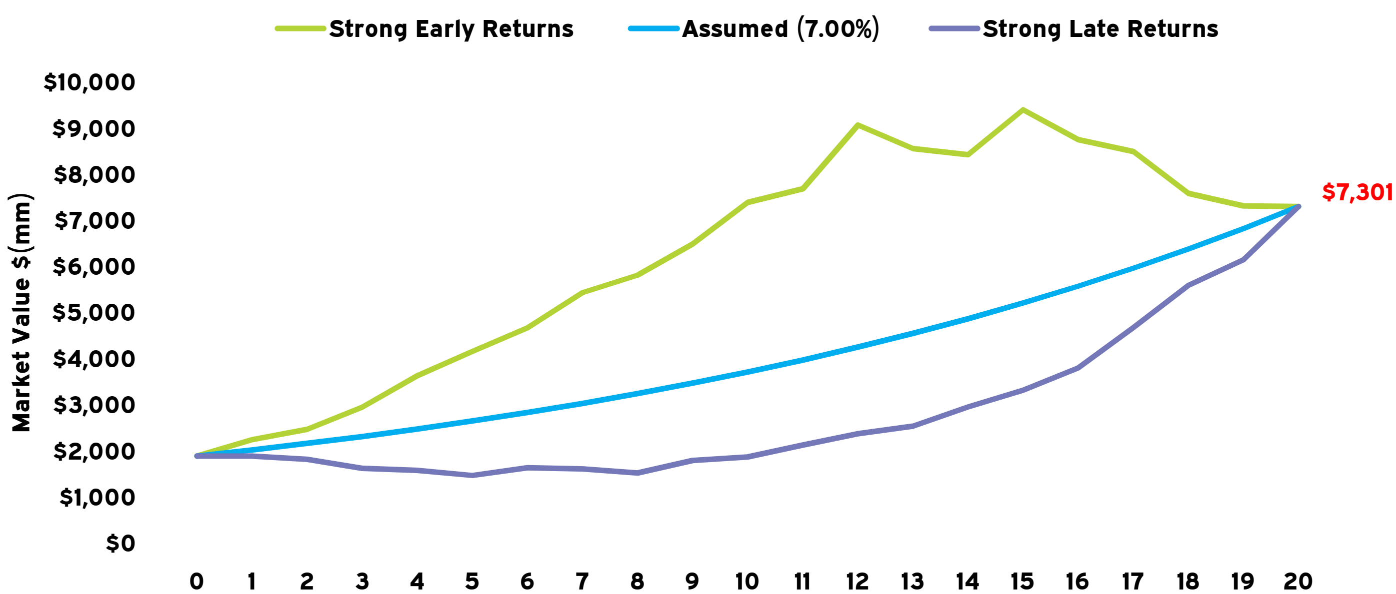
Hypothetical Market Value in 20 Years – If DPFP Had Zero Cash Flows



- All three lines have a twenty year annualized return of 7.0%. With no cash flows, the Fund's market value would end up at the same amount under each return scenario.

Sequence of Returns – Significant Impact with Negative Cash Flows

- Negative cash flows make it much harder for DPFP to recover after a market downturn.
- The larger the net negative cash out flows are in a given negative year, the more severe the impact as the cash flows chip away at the corpus of the fund's assets.
- In the following graph, we incorporate DPFP's expected net cash out flows[1] for the next twenty years.

[1] Source: Segal.

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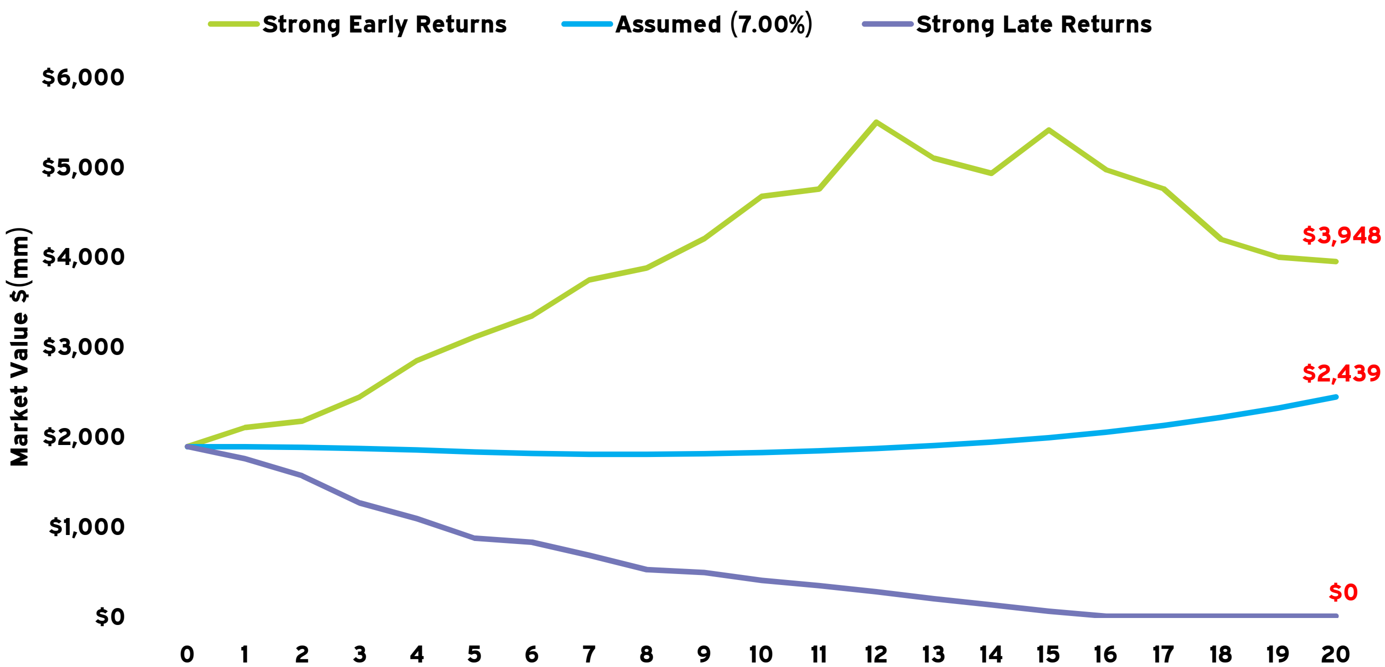
Hypothetical Market Value in 20 Years – with projected DPFP Cash Flows



- Just like before, all three lines have a twenty year annualized return of 7.0%. However if DPFP experiences multiple years of poor/negative returns in the first 10 years, it could conceivably run out of money (*all else equal*) before earning the strong returns in years 11-20. Note also the much lower ending values compared to the prior chart, where the ending value was $7.3 billion.

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Expected Net Cash Outflows as % of DPFP[1]

- A significant hurdle for DPFP (and one of the primary drivers for the creation of the Safety Reserve®), is the magnitude of expected net benefit payments, as a percentage of fund market value of assets.

Expected Cash Flows Next Ten Years

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Expected Market Value of Assets[2]	$1,886	$1,853	$1,823	$1,789	$1,771	$1,743	$1,720	$1,704	$1,695	$1,694
Expected City and Employee Contributions	$221	$227	$223	$231	$226	$234	$243	$252	$262	$271
Expected Benefit Payments and Admin. Exp.	-$350	-$360	-$366	-$370	-$373	-$374	-$375	-$376	-$377	-$379
Expected Net Cash Flow/Year	-$129	-$133	-$143	-$139	-$147	-$140	-$132	-$124	-$115	-$108
Expected Net Cash Flow/Year as % of MVA	-6.8%	-7.2%	-7.8%	-7.8%	-8.3%	-8.0%	-7.7%	-7.3%	-6.8%	-6.4%

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Expected Actuarial Return	*5.25%*	*5.75%*	*6.25%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*

- Net cash flow per year is expected to be larger than the actuarial return for much of the next decade.

[1] On "adjusted baseline." Data source: Segal. Calculations: Meketa. Expected market value assumes the expected actuarial return is earned each year and all expected contributions are received and expected benefit payments and administrative expenses are paid. Numbers are in millions.

[2] Start of year: January 1.

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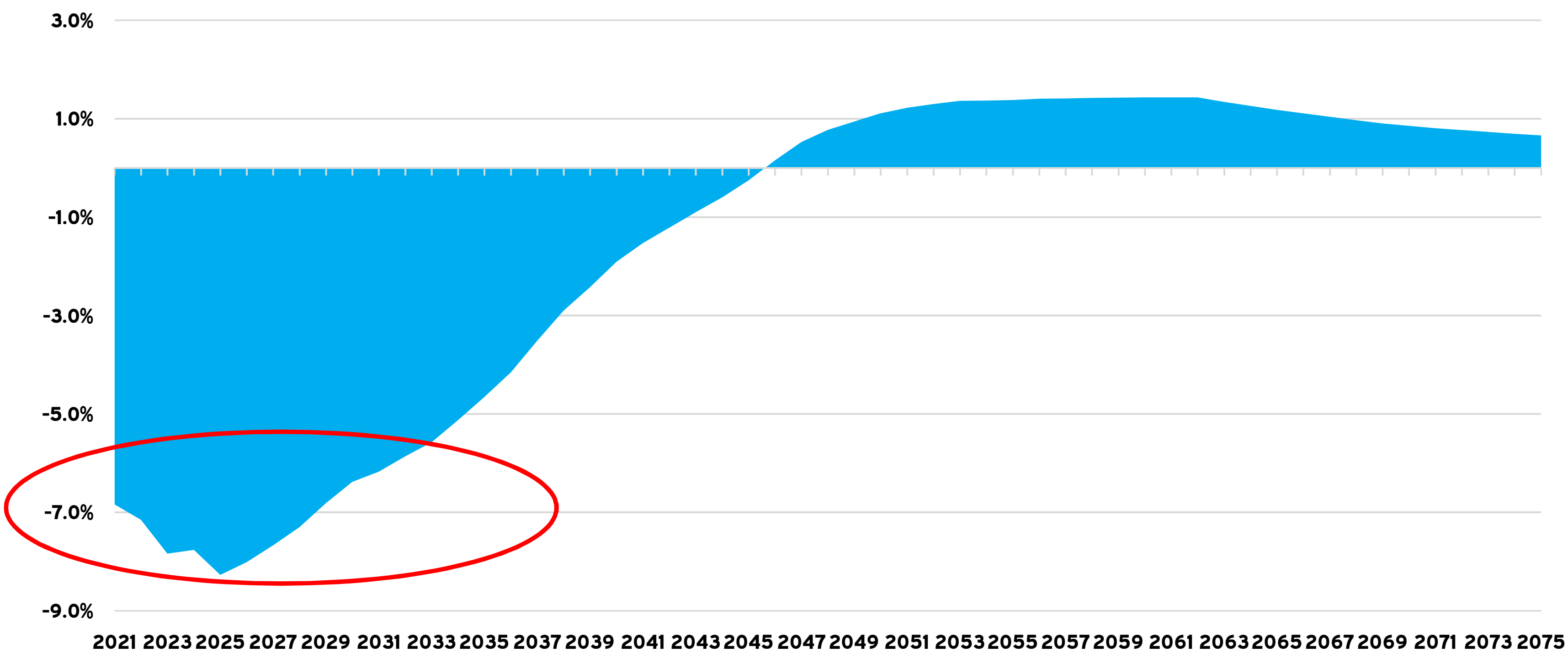
Expected Net Cash Outflows as % of DPFP[1]



- Based on the assumptions from the actuary, DPFP could become "cash flow positive" in 2046 when contributions (from city and employees) are larger than expected benefit payments and operating admin expenses.

[1] On "adjusted baseline."

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Expected Net Cash Flow Details[1]

- Based on the assumptions from the actuary, net cash flows are projected to worsen (as a percentage outflow of DPFP) until 2025.
- Starting in 2026, the next twenty years should improve the situation as the expected net benefit payment growth slowly decreases.
- The expected improved situation is primarily due to forecasted contribution rates growth in excess of the expected annual benefit payment growth.

Contribution and Benefit Expected YoY Growth

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
city contribution growth	2.5%	2.5%	-3.5%	3.4%	-4.2%	3.6%	3.9%	3.6%	3.8%	3.7%	2.8%
employee contribution growth	2.8%	3.4%	3.8%	3.7%	3.7%	3.6%	3.9%	3.6%	3.8%	3.7%	2.8%
expected benefit growth	2.5%	2.8%	1.9%	1.0%	0.7%	0.4%	0.4%	0.3%	0.2%	0.6%	1.2%

- In 2023 and 2025 the actuary predicts a decrease in the city contribution because of a change in the minimum city contribution formula.

[1] Net benefit payments calculated by Meketa from actuary data. Net benefit payment is expected annual city contribution + expected annual city contribution – admin expenses – benefit payments.

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Scenario Analysis

- In this scenario analysis, we modeled out an "optimistic" next five years and a "pessimistic" next five years to highlight the significance the near-term results can have on the long-term projections of DPFP.
- We evaluated the reasonableness of the optimistic and pessimistic scenarios by looking back at the last 50 years of market returns[1].
- In each return path we assumed a 7.0% per year return in years 2026 and beyond.
- In the "adjusted baseline" return path we used the same hypothetical returns as the actuary (with the ramp up over the next three years, then 7.0% per year in perpetuity).

Hypothetical DPFP Annual Returns

	2021	2022	2023	2024	2025	Next 50 Years
Optimistic Next 5 Years	14%	14%	14%	14%	14%	7.0% per year
Pessimistic Next 5 Years	0%	0%	0%	0%	0%	7.0% per year
Adjusted Baseline	5.25%	5.75%	6.25%	7.0%	7.0%	7.0% per year

[1] The worst 5 year period for a 60/40 portfolio was -2.3% annualized rolling five year return (February 2009). The best 5 year period for a 60/40 portfolio was 24.2% annualized rolling five year return (July 1987).

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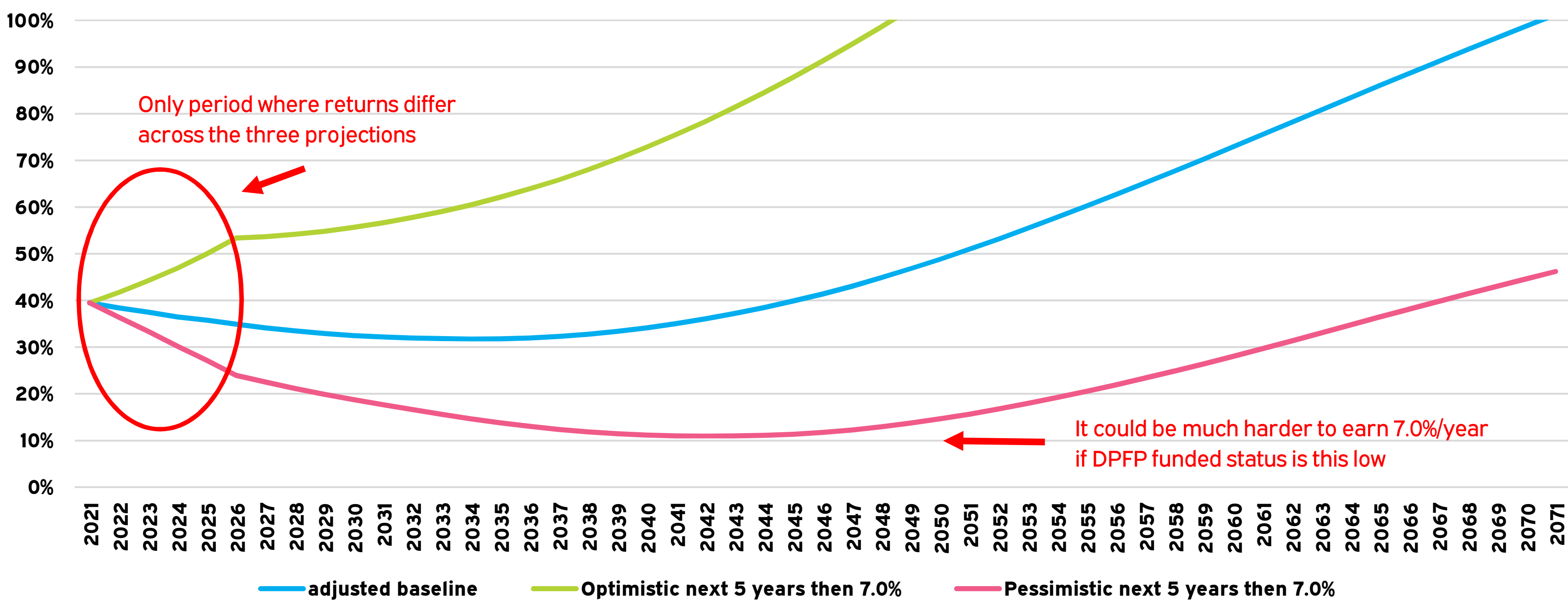
Scenario Analysis – Projected DPFP Funded Status



- A very strong next five years could put DPFP in an improved position, as future annual returns (of 7.0%) would be on a larger corpus of assets, reaching fully funded by 2049 (if all other assumptions are met).
- A weak next five years (modeled as zero return per year) could significantly delay the time to reach fully funded status. The Fund could become insolvent.

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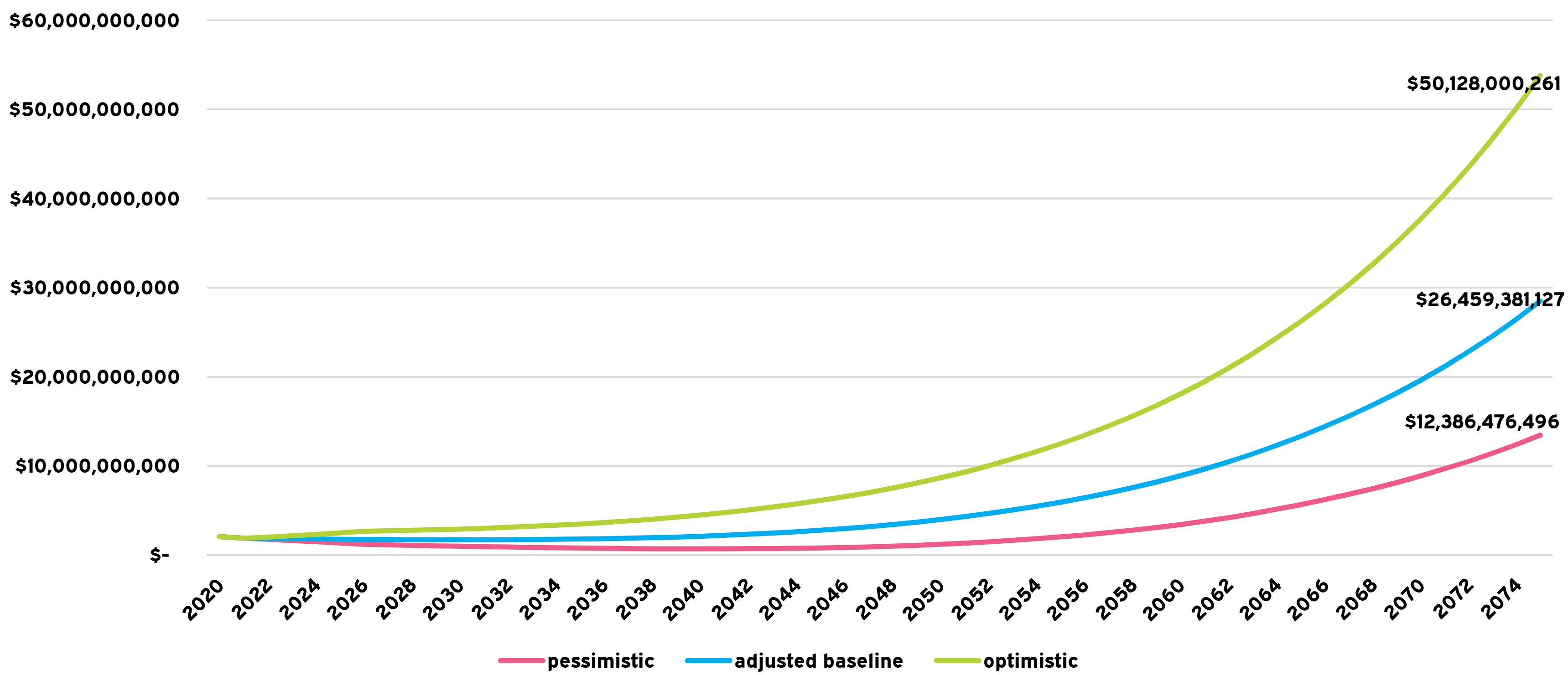
Scenario Analysis – Projected DPFP Market Value (Long Horizon)



- Returns in 50 of the 55 years are the exact same (7.0%) for each of the three return paths. The impact of strong or weak returns in the next five years is magnified due to the expected net benefit payments.

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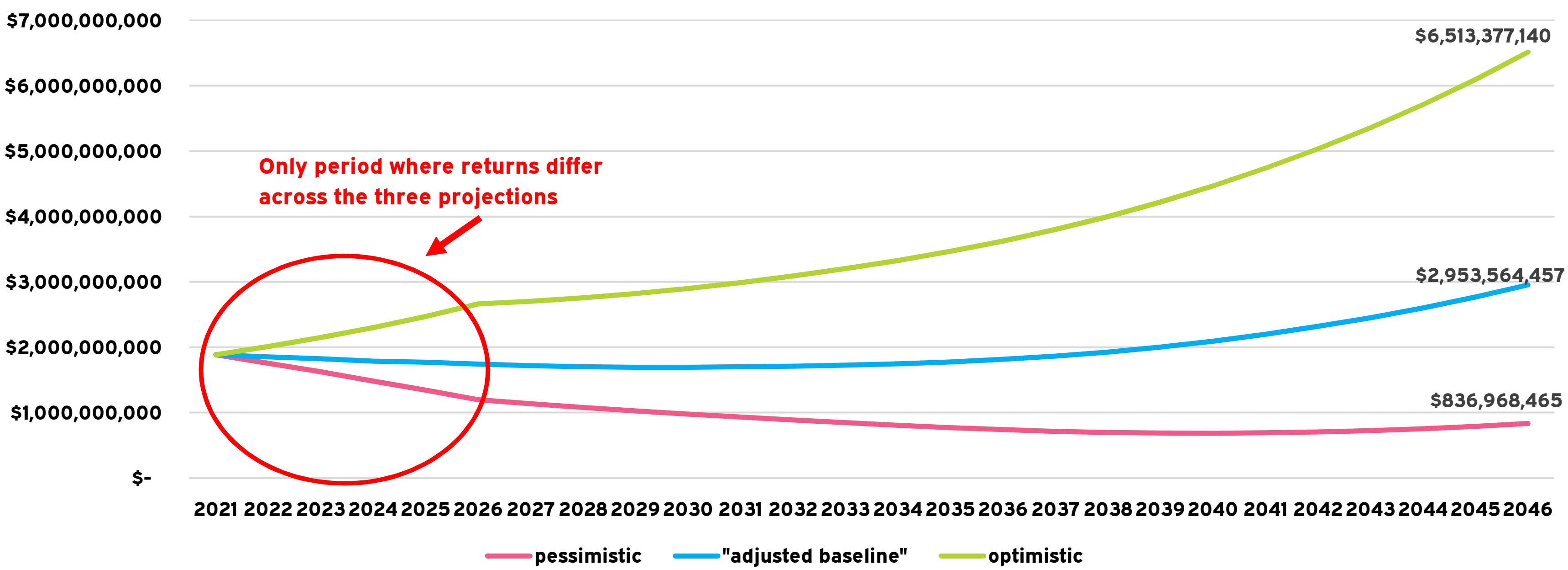
Scenario Analysis – Projected DPFP Market Value (Focus on Short Horizon)



- With returns of zero over the next five years (and no other changes to assumptions) the fund could dip below $700 million in market value of assets before recovering.

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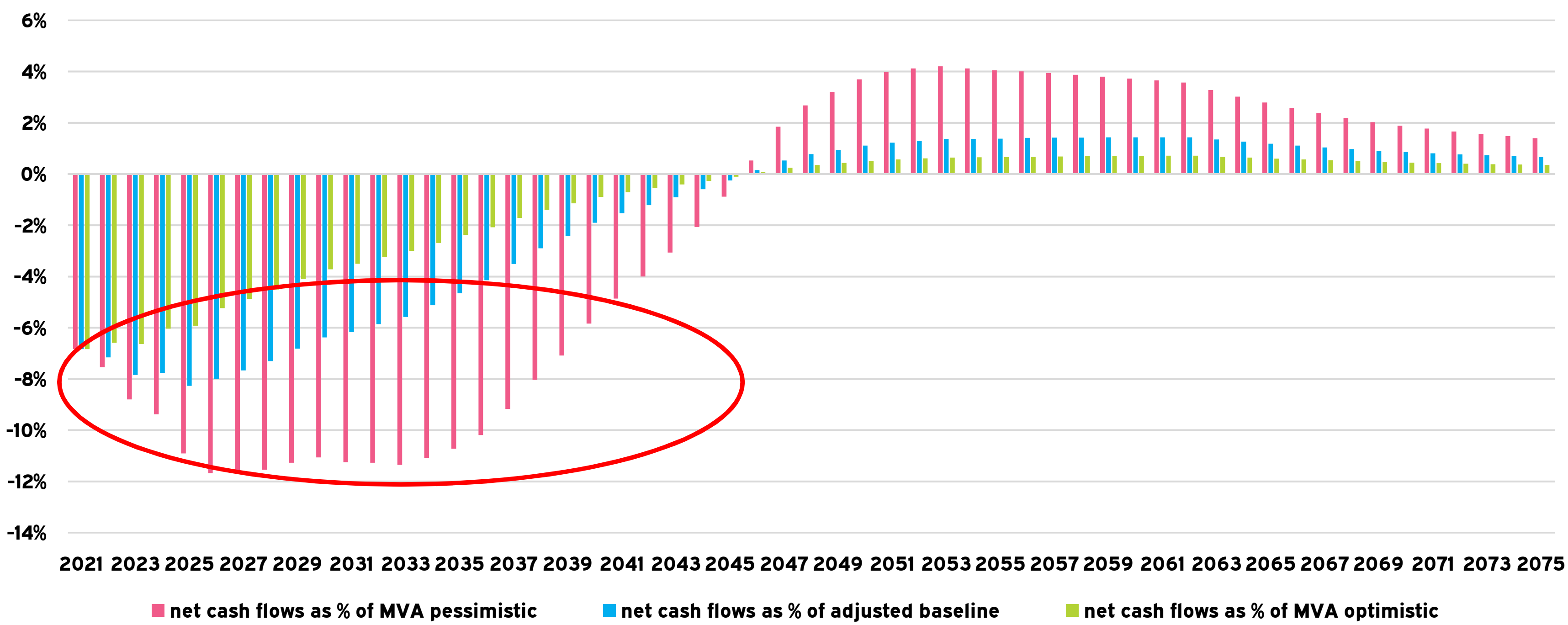
Scenario Analysis – Expected Net Cash Flows (Long Horizon)



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

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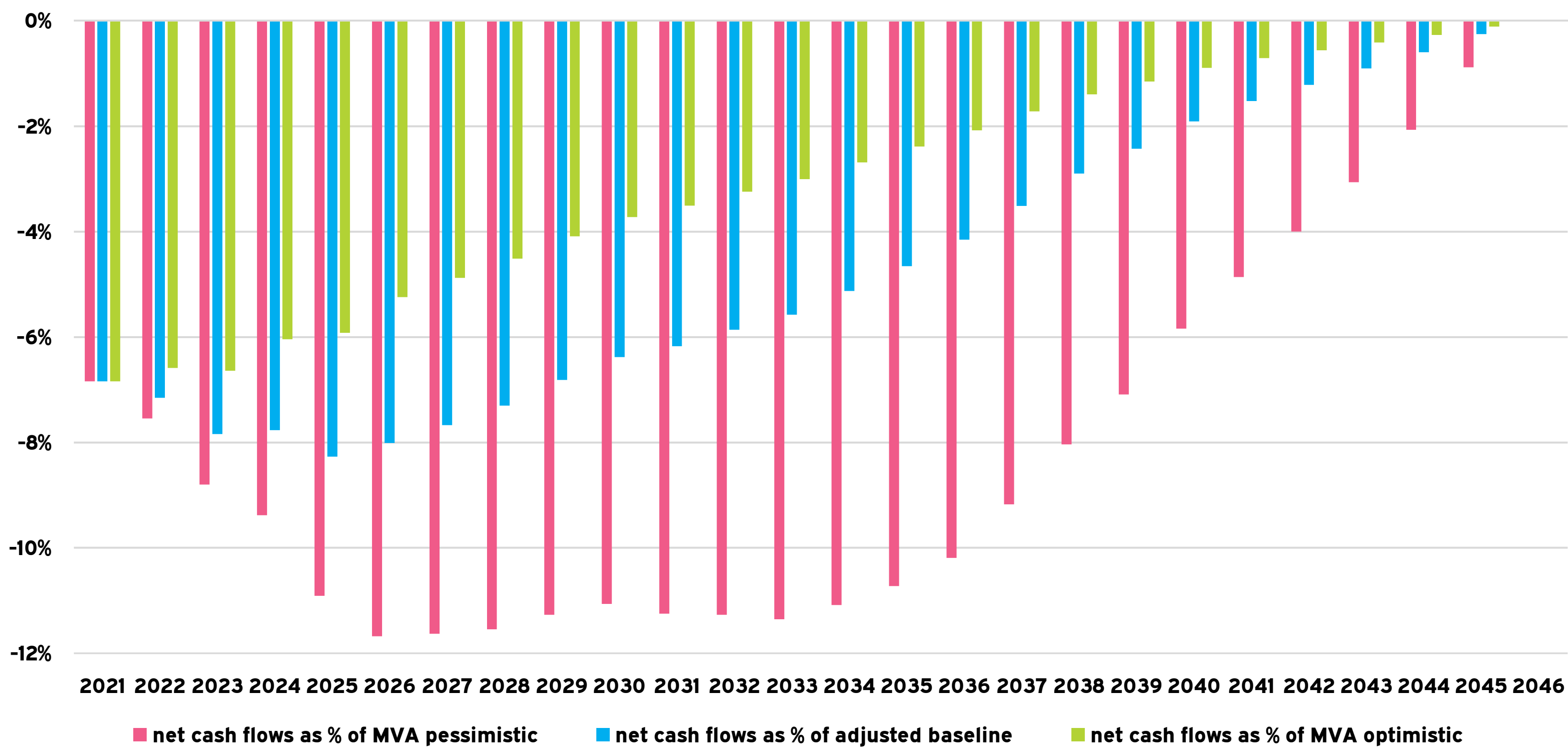
Scenario Analysis – Expected Net Cash Flows (Focus on Short Horizon)



- Focusing on just the next projected 25 years highlights the degree of difference for the pessimistic and optimistic return paths versus the baseline. In each case, it still takes multiple years for the net cash outflow to reach a more manageable annual figure (as a percentage of market value of assets).

Section 2: Prior Feedback from IAC and Board Members

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Summary of Prior Feedback

- Re-underwrite the size/need of the Safety Reserve®.
- Eliminate global bonds target given low global interest rates.
- Perceived risks with emerging market equities.
- Revisit allocation to bonds given the current low yield environment.

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Safety Reserve®

- History –Established to meet ongoing expenses and net benefit payments (for 2.5 years), ensuring that no other assets would need to be sold at a potentially inopportune time/price during a market correction. It was adopted by DPFP because of a combination of the following that limit DPFP's ability to rebound from a significant market correction: weak funded status, significant negative net benefit payments per year, and illiquid legacy assets comprising approximately 25% of the Fund, with potentially binary outcomes.
- Original Considerations – Designed to meet ongoing expenses and net benefit obligations for 2.5 years. Based on DPFP size at the time, this resulted in 15% allocation. 2.5 years was based on the Global Financial Crisis duration (~1.5 years) plus one additional year.
- Updated Considerations – Over the last three years, capital markets had two significant corrections (4Q18: S&P 500 -13.5% and 1Q20: S&P 500 -19.6%). In both environments equity markets rebounded quickly. Perhaps the likelihood of a prolonged equity market downturn (duration in excess of the GFC) is less likely today (or in the future[1]) given the role of central banks now from the lessons learned during the GFC and COVID-19. Specific to DPFP, there has been increased clarity and positive developments with some of DPFP's unknowns (contribution rates, employment figures, distributions from some of the legacy assets).
- Potential Adjustment – We evaluated decreasing the exposure to an estimated 1.5 years or 2.0 years of net cash outflows.

[1] No guarantee this is the case. Next equity correction could be prolonged with slower recovery

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Safety Reserve® (continued)

- Proposal A decreases the Safety Reserve® to 24 months of expected net cash outflows.
- Proposal B decreases the Safety Reserve® to 18 months of expected net cash outflows.

Safety Reserve® Sizing

	Original Target	Proposal A	Proposal B
Total amount	\$300 mm	\$216 mm	\$162 mm
Months	30	24	18
\$ per month[1]	\$10 mm	\$9 mm	\$9 mm
Adjusted 12/31/2020 DPFP NAV[2]	\$1,870 mm	\$1,870 mm	\$1,870 mm
Implied % of DPFP	~15%	~12%	~9%

- We recognize there is a trade-off to investing a portion of the Fund in short-duration securities or cash equivalents (that both yield very little).
- The benefit of the security of these assets must be weighed against the opportunity cost of potential foregone return elsewhere.

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[1] In recent history, the actual net cash flows has been closer to \$9 million per month. The actuary's model predicts slightly higher net cash out flows per year into the future (~\$10 mm to ~ \$12 mm per month depending on the year and contribution rates). Every \$1 mm per month increase in net cash outflows would increase Proposal A by 1.3% (\$24mm /\$1870 mm = 1.3%) and Proposal B by 1.0% (\$18 mm/\$1870 mm = 1.0%).

[2] As of 12/31/2020 from the DPFP Board Meeting materials January 14, 2021.

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Safety Reserve® (continued)

- The flipside of the "cost," is the double benefit that the Safety Reserve® can provide due to its defensive nature.

    (1) Since the Safety Reserve® exists to meet near term cash flow needs, the rest of the portfolio can be invested more aggressively to offset the drag, given the reassurances the Safety Reserve® offers.

    (2) Additionally, with the proper controls in place, the Safety Reserve® can be used as a source of capital to rebalance into equity weakness. This is what DPFP Staff did in March 2020 after equity markets sold off while the Safety Reserve® was above target.

        - Staff does not believe it would be prudent to utilize the Safety Reserve for rebalancing purposes if levels are at or below the recommended lower target of 9%.

- Proper policy language and controls are crucial so that the Safety Reserve® is not materially depleted (to execute opportunistic rebalancing) at precisely the time it may be needed the most (i.e. during a prolonged equity market correction).
- Staff and Meketa are re-evaluating the existing policy language.

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Global Bonds

- History –Originally incorporated into the target DPFP asset allocation policy as a means of ensuring DPFP had full market exposure to the majority of the investable bond universe.
- Elimination – Staff and Meketa conducted a thorough review of the asset class in the Fall of 2020 and discussed findings with the IAC. Collective agreement was reached to liquidate the existing exposure and seek reallocation options (for the 4% target weight) during this asset allocation exercise in the Spring of 2021.
- Likely Replacement – Feedback from IAC was aligned with consultant and Staff's position: reallocate to global equities.

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Emerging Market Equities

- **Role in the Portfolio** – Originally a 10% Fund weight was approved as part of the 2018 asset allocation process. With a total public equity weight of 50%, this implied emerging market equity would represent at least 20% of public market exposure (10%/50%) and possibly more if the global equity managers have emerging market exposure. The current weight in the broadest equity market benchmark (MSCI ACWI IMI Index) is roughly 12%. The overweight was deliberate given the long-term higher return potential in emerging market equities (relative to US and non-US developed markets). DPFP is not presently in a position to increase exposure to potentially higher returning private markets assets.
- **Implementation** – In 2018, an implementation plan was approved to fund underweight asset classes based on the volatility of each asset class. Emerging market equities is last on the implementation plan (excluding private markets). Consequently, exposure has been persistently under target weight. Exposure has hovered around 3% or less (with a target of 10%).
- **Feedback** – Some Board members previously acknowledged some reservations with emerging market equities with a preference for more exposure in the US. An EM Equity target overweight may be a prudent (and diversifying) growth allocation in lieu of private equity.

Meketa Capital Market Expectations (20 Year Horizon)

	US Equity	Non-US Dev. Equity	EM Equity	Private Equity
Expected Return	6.8%	7.1%	8.1%	9.1%
Expected Standard Deviation	18.0%	19.0%	24.0%	28.0%

Bonds

- **History** – IAC members have expressed concern with low bond yields and had a preference to maintain the lowest possible allocation necessary while still maintaining appropriate diversification and risk mitigation.
- **Current Environment** – We recognize bond yields have increased materially thus far in 2021 (particularly in intermediate and long duration securities) primarily due to inflation fears.
- **Considerations** – We evaluated both current market dynamics and potential short-term and long-term implications when looking at different allocation sizes to bonds in DPFP's portfolio.

Section 3: April 20th IAC Meeting

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April 20th Investment Advisory Committee Meeting

- Staff and Meketa reviewed four asset allocation mixes to shift the allocation from Short-term Bonds and Global Bonds to Global Equity and TIPS.
- Investment Advisory Committee members favored a larger reduction of the Safety Reserve, down to a 9% target, and reallocating incrementally to Global Equity, up to a 50% target.
- The committee did not recommend adding an allocation to TIPS.
- The Investment Advisory Committee members recommended an implementation plan that completes the Safety Reserve reduction by the end of the year.

Section 4: Potential New Asset Allocation Target Policy

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Current Target Asset Allocation

	Existing Target (%)
Global Equity	40
Emerging Market Equity	10
Private Equity	5
Cash	3
Short Term Investment Grade Bonds	12
Investment Grade Bonds	4
Bank Loans	4
High Yield	4
Global Bonds	4
Emerging Markets Debt	4
Real Estate	5
DPFP Agriculture[1]	5
Expected Return[2]	6.5%
Expected Standard Deviation[2]	12.6%

55% Equities

35% Bonds

10% Real Assets

[1] Custom DPFP Agriculture input has expected return of 10% and expected standard deviation of 18.2%. Expected return assumption provided by Staff (based on 30 year history with the strategy). Standard deviation of custom DPFP Agriculture based on Meketa's assumed standard deviation of Farmland, but scaled up by the ratio of 1.5 to account for the same degree of increase on the return assumption relative to Meketa's Farmland return assumption. Correlation of Farmland used.

[2] Twenty year annualized assumptions, based off of 2021 Asset Study.

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Asset Classes' Functional Role

(includes Assets not currently in DPFP's Target Policy Mix[1])

Growth	Income
Global Equity	Global Bonds
Emerging Market Equity	Bank Loans
Private Equity	High Yield
	Emerging Markets Debt
	Private Debt
Risk Mitigation	**Inflation Protection**
Cash	Real Estate
Short Term Investment Grade Bonds	Natural Resources
Investment Grade Bonds	*TIPS*
LT Treasuries	*Commodities*
Global Macro Hedge Funds	*Infrastructure*

[1] While none of the asset classes in italics are in the existing target policy, some are currently in DPFP portfolio but with a target of zero (i.e. seeking liquidation).

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Evaluation: Consideration for Inclusion of New Asset Classes, and DPFP Constraints

Asset Class	Typical Role in Portfolio	Considerations and DPFP Constraint
LT Treasuries	Safety/Risk Mitigation	Significant duration risk and low yields (despite recent increase in yields). Meketa and Staff evaluated different asset mixes with the addition of LT Treasuries. Ultimately, we agreed it may not be a good fit for DPFP's Safety Reserve (given the duration risk and volatility) and not a good fit for the remainder of the portfolio (which could be viewed as the growth portion).
Global Macro Hedge Funds	Diversifier/ Risk Mitigation	Expensive and limited liquidity (quarterly or annual).
TIPS	Protection against increase in expected inflation	No DPFP specific constraints
Commodities	Protection against realized inflation	High volatility and DPFP has significant energy exposure embedded in its private markets portfolio
Private Debt	Income and protection against rising rates	DPFP may not be presently in a position to sacrifice additional liquidity
Infrastructure	Diversifier and inflation protection	DPFP may not be presently in a position to sacrifice additional liquidity

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Evaluation: Possible New Target Asset Allocation Policies

	Existing Target (%)	Mix A (%)	Mix B (%)
Global Equity	40	47	50
Emerging Market Equity	10	10	10
Private Equity	5	5	5
Cash	3	3	3
Short Term Investment Grade Bonds	12	9	6
Investment Grade Bonds	4	4	4
Bank Loans	4	4	4
High Yield	4	4	4
Global Bonds	4	0	0
Emerging Markets Debt	4	4	4
Real Estate	5	5	5
DPFP Agriculture[1]	5	5	5
20 Year Expected Return	6.5%	6.8%	7.0%
10 Year Expected Return	5.8%	6.1%	6.3%
Expected Standard Deviation	12.6%	13.7%	14.2%
Sharpe Ratio (20 YR)	0.42	0.42	0.41

[1] Custom DPFP Agriculture input has expected return of 10% and expected standard deviation of 18.2%. Expected return assumption provided by Staff (based on 30 year history with the strategy). Standard deviation of custom DPFP Agriculture based on Meketa's assumed standard deviation of Farmland, but scaled up by the ratio of 1.5 to account for the same degree of increase on the return assumption relative to Meketa's Farmland return assumption. Correlation of Farmland used.

Commentary

- Both new asset mixes participate more in the equity markets with the rotation of global bonds into global equities.
- Mix A reduces the Safety Reserve® by 3% (roughly six months of predicted net cash outflows).
- Mix B reduces the Safety Reserve® by 6% (roughly twelve months of predicted net cash outflows).

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"Traditional" Asset Mixes[1] (For Context)

	60/40 (%)	70/30 (%)	80/20 (%)	90/10 (%)
Global Equity[2]	60	70	80	90
Investment Grade Bonds	40	30	20	10
20 YR Expected Return	5.4%	6.0%	6.4%	6.9%
20 YR Standard Deviation	11.0%	12.8%	14.5%	16.2%

- Lower return expectations make it increasingly more difficult for Trustees to adopt an asset allocation policy that models to a long-term return in the 7.0% range.
- Modeled mixes project returns similar to 90/10, with volatility between the 70/30 and 80/20 portfolios, highlighting the benefits of diversification.

[1] Twenty year annualized assumptions.
[2] Global equity consists of 50% US equity, 35% developed international equity, and 15% emerging market equity.

Section 5: Stress Testing and Historical Scenario Analysis

Types of Risk Analysis Addressed

- MVO-based risk analytics.
  - Includes worst-case return expectations and probabilities of achieving 7.0%.
  - Relies on assumptions underlying MVO.
- Scenario analysis.
  - Stress tests policy portfolios using actual historical examples.
  - Stress tests policy portfolios under specific hypothetical scenarios.
- Liquidity profile.
  - Comparison of liquidity profile across different asset mixes.

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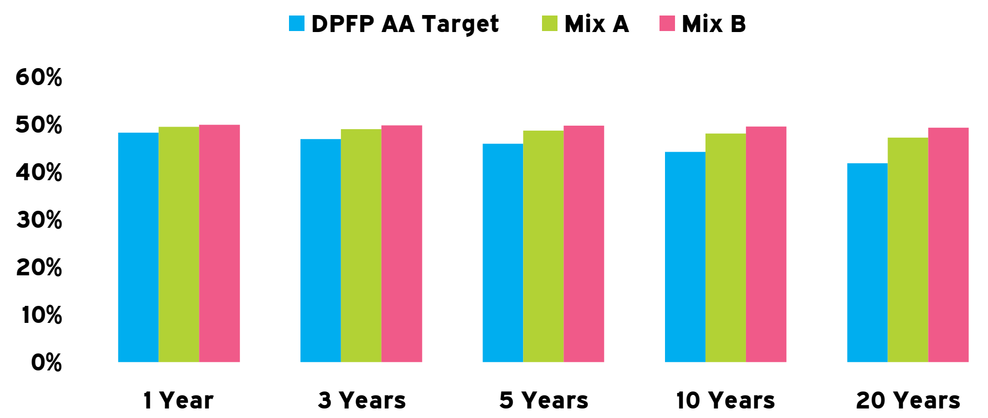
2021 Asset Allocation and Liability Review

Probability of Achieving Target Return[1] (7.0%) – w/ 20 year assumptions



	DPFP AA Target (%)	Mix A (%)	Mix B (%)
1 Year	48.1	49.3	49.8
3 Years	46.8	48.9	49.7
5 Years	45.8	48.5	49.6
10 Years	44.1	47.9	49.4
20 Years	41.7	47.1	49.2

- Mix B has the highest likelihood of achieving the target return (based on MVO) over a twenty-year period, as it is the most aggressive. There is roughly 50% probability over twenty-years.

[1] Twenty year assumptions used

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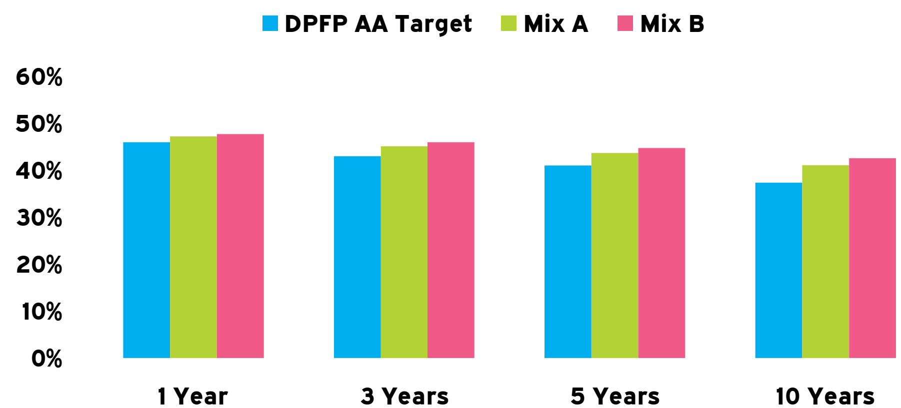
2021 Asset Allocation and Liability Review

Probability of Achieving Target Return[1] (7.0%) – w/ 10 year assumptions



	DPFP AA Target (%)	Mix A (%)	Mix B (%)
1 Year	45.9	47.1	47.6
3 Years	43.0	45.0	45.9
5 Years	40.9	43.6	44.7
10 Years	37.3	41.0	42.5

- The probability of achieving 7.0% over the next ten years (using the ten-year assumptions) is well below 50% for all the mixes.

[1] Ten year assumptions used

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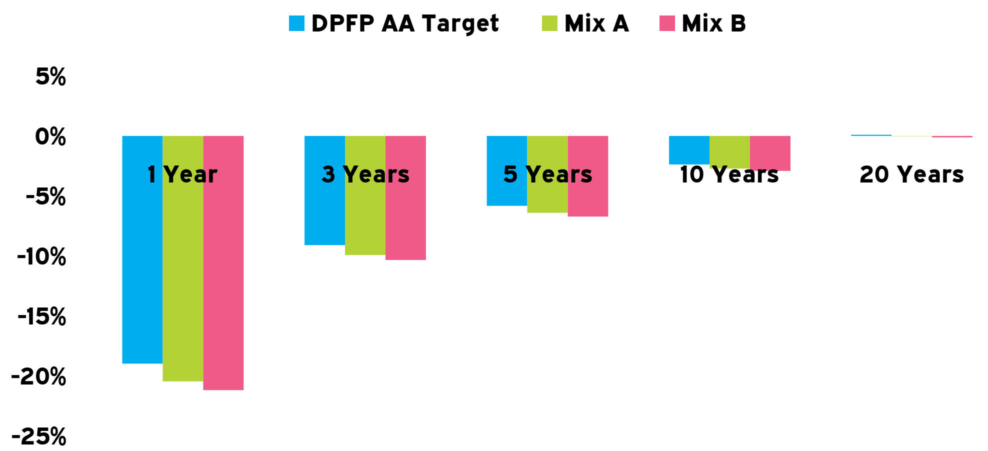
2021 Asset Allocation and Liability Review

"Worst Case" Return Projections[1]



	DPFP AA Target (%)	Mix A (%)	Mix B (%)
1 Year	-19.0	-20.5	-21.2
3 Years	-9.1	-9.9	-10.4
5 Years	-5.8	-6.4	-6.7
10 Years	-2.4	-2.7	-2.9
20 Years	0.1	0.0	-0.1

- The current target portfolio best defends the portfolio in a "worst case" scenario, as defined by MVO model assumptions.

[1] "Worst Case" Return Projections assume a negative three standard deviation event (i.e., it encompasses >99% of possible outcomes).

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2021 Asset Allocation and Liability Review

Historical Negative Scenario Analysis[1] (*Cumulative* Return)

Scenario	DPFP AA Target (%)	Mix A (%)	Mix B (%)
Taper Tantrum (May - Aug 2013)	-1.4	-1.3	-1.3
Global Financial Crisis (Oct 2007 - Mar 2009)	-26.5	-30.3	-32.0
Popping of the TMT Bubble (Apr 2000 - Sep 2002)	-15.7	-20.0	-22.0
LTCM (Jul - Aug 1998)	-9.3	-10.4	-10.9
Rate spike (1994 Calendar Year)	2.8	3.0	3.1
Crash of 1987 (Sep - Nov 1987)	-10.9	-12.5	-13.2
Strong dollar (Jan 1981 - Sep 1982)	3.6	0.6	-0.7
Volcker Recession (Jan - Mar 1980)	-4.1	-4.1	-4.2
Stagflation (Jan 1973 - Sep 1974)	-21.9	-24.7	-26.0
COVID-19 Market Shock (Feb 2020-Mar 2020)	-19.5	-21.7	-22.7

- All mixes would likely have performed similarly in recent rising-rate environments (Taper Tantrum and 1994 Rate Spike).
- In an equity market correction like the GFC, Technology Bubble, or COVID-19 market shock, performance is highly correlated with the amount of public equity exposure.

[1] See the Appendix for our scenario inputs. In periods where the ideal benchmark was not yet available we used the next closest benchmark(s) as a proxy.

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2021 Asset Allocation and Liability Review

Stress Testing: Impact of Market Movements (Expected Return under Stressed Conditions)[1]

Scenario	DPFP AA Target (%)	Mix A (%)	Mix B (%)
10-year Treasury Bond rates rise 100 bps	3.9	4.6	4.8
10-year Treasury Bond rates rise 200 bps	0.3	0.9	1.1
10-year Treasury Bond rates rise 300 bps	-2.7	-2.0	-1.9
Baa Spreads widen by 50 bps, High Yield by 200 bps	0.6	0.2	0.1
Baa Spreads widen by 300 bps, High Yield by 1000 bps	-21.0	-23.3	-24.3
Trade Weighted Dollar gains 10%	-4.8	-5.3	-5.6
Trade Weighted Dollar gains 20%	-3.6	-3.7	-3.9
U.S. Equities decline 10%	-5.6	-6.3	-6.7
U.S. Equities decline 25%	-16.1	-17.6	-18.4
U.S. Equities decline 40%	-25.1	-27.6	-28.8

- Mix B has the least amount of interest rate sensitive bonds (as it has the smallest Safety Reserve) and would likely perform the best in a market where interest rates rose significantly.
- Mix B is also the most sensitive to an equity market correction (as it has the highest allocation to global equities).

[1] Assumes that assets not directly exposed to the factor are affected nonetheless. See the Appendix for further details.

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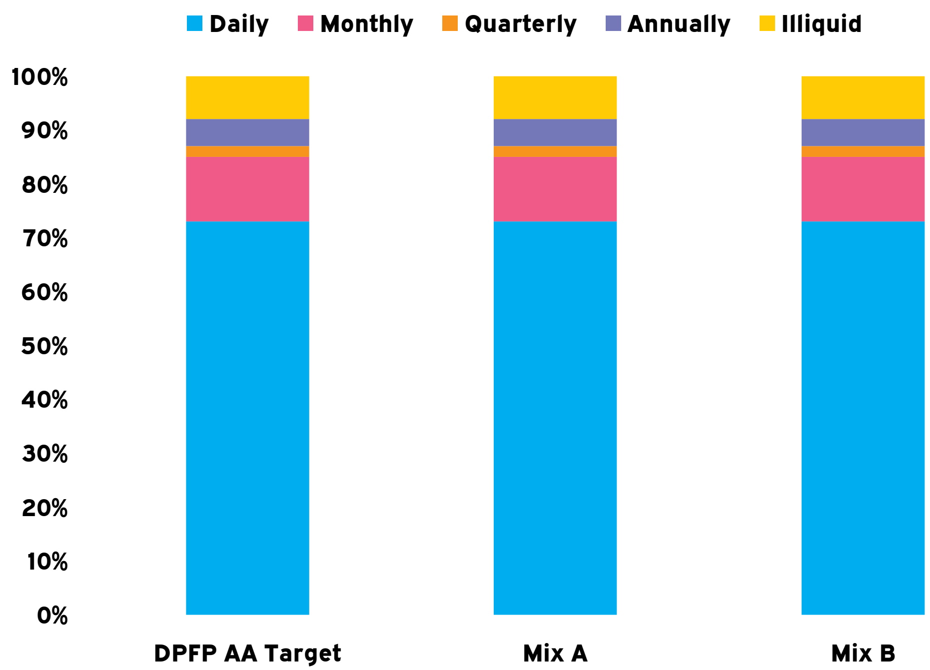
2021 Asset Allocation and Liability Review

Liquidity Profile[1]



- Both Mix A and Mix B have the same liquidity profile as the current target asset mix.
- Analysis looks at selected targeted mixes, not DPFP's existing current assets.

[1] For this analysis, we assume that emerging market debt, high yield and bank loans provide monthly liquidity; a portion of real estate (2%) provides quarterly liquidity, DPFP agriculture provides annual liquidity, private equity and the remainder of real estate are illiquid. Remainder of asset classes are assumed to have daily liquidity.

Appendix

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Appendix

Notes and Disclaimers

[1] The returns shown in the Policy Options and Risk Analysis sections rely on estimates of expected return, standard deviation, and correlation developed by Meketa Investment Group. To the extent that actual return patterns to the asset classes differ from our expectations, the results in the table will be incorrect. However, our inputs represent our best unbiased estimates of these simple parameters.

[2] The returns shown in the Policy Options and Risk Analysis sections use a lognormal distribution, which may or may not be an accurate representation of each asset classes' future return distribution. To the extent that it is not accurate in whole or in part, the probabilities listed in the table will be incorrect. As an example, if some asset classes' actual distributions are even more right-skewed than the lognormal distribution (i.e., more frequent low returns and less frequent high returns), then the probability of the portfolio hitting a given annual return will be lower than that stated in the table.

[3] The standard deviation bars in the chart in the Risk Analysis section do not indicate the likelihood of a 1, 2, or 3 standard deviation event—they simply indicate the return we expect if such an event occurs. Since the likelihood of such an event is the same across allocations regardless of the underlying distribution, a relative comparison across policy choices remains valid.

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Appendix

Negative Historical Scenario Returns - Sample Inputs

	Taper Tantrum (May - Aug 2013)	Global Financial Crisis (Oct 2007 - Mar 2009)	2008 Calenda r Year	Popping of the TMT Bubble (Apr 2000 - Sep 2002)	LTCM (Jul - Aug 1998)	Asian Financial Crisis (Aug 1997 - Jan 1998)	Rate spike (1994 Calendar Year)	Crash of 1987 (Sep - Nov 1987)	Strong dollar (Jan 1981 - Sep 1982)	Stagflation (Jan - Mar 1980)	Stagflation (Jan 1973 - Sep 1974)
Cash Equivalents	0.0	3.1	1.7	9.9	0.8	2.4	3.9	1.4	24.4	2.9	13.5
Short-term Investment Grade Bonds	-0.1	8.7	5.0	21.9	1.6	3.5	0.5	2.3	29.9	-2.6	4.3
Investment Grade Bonds	-3.7	9.3	5.2	28.6	1.8	4.9	-2.9	2.2	29.9	-8.7	7.9
Long-term Corporate Bonds	-9.3	-9.4	-5.2	26.9	-0.6	5.4	-5.8	1.5	29.6	-14.1	-12.0
Long-term Government Bonds	-11.6	24.5	24.0	35.5	4.1	8.6	-7.6	2.6	28.4	-13.6	-1.8
TIPS	-8.5	9.6	-2.4	37.4	0.7	2.0	-7.5	2.8	15.6	-7.8	4.3
Global ILBs	-7.4	-1.5	-7.7	39.7	0.7	2.2	-7.9	2.9	16.5	-8.3	4.5
High Yield Bonds	-2.0	-20.7	-26.2	-6.3	-5.0	5.6	-1.0	-3.6	6.9	-2.3	-15.5
Bank Loans	0.8	-22.5	-28.8	6.3	0.7	3.3	10.3	-1.7	3.3	-1.1	-7.5
Direct Lending - First Lien	3.4	-2.1	-5.8	-0.7	-0.7	1.7	0.7	-0.2	2.0	-0.6	-4.4
Direct Lending - Second Lien	4.6	-2.9	-7.8	-1.0	-0.9	2.3	1.0	-0.3	2.6	-0.8	-5.9
Foreign Bonds	-3.2	5.3	4.4	8.5	3.5	3.3	5.3	-0.3	34.8	-6.5	-1.4
Mezzanine Debt	4.6	-25.5	-25.9	-2.0	-2.6	10.3	7.6	0.4	3.2	-1.0	-7.2
Distressed Debt	4.6	-25.5	-25.9	-2.0	-2.6	10.3	7.6	0.4	3.2	-1.0	-7.2
Emerging Market Bonds (major)	-11.5	-2.7	-9.7	6.3	-28.2	-1.8	-18.9	-9.2	-1.6	-2.6	-20.2
Emerging Market Bonds (local)	-14.3	-2.3	-5.2	7.2	-34.1	-2.4	-22.8	-11.0	-2.0	-3.2	-23.9
US Equity	3.0	-43.8	-37.0	-43.8	-15.4	3.6	1.3	-29.5	-2.3	-4.1	-42.6
Developed Market Equity (non-US)	-2.2	-49.6	-43.4	-46.7	-11.5	-5.8	7.8	-14.5	-18.0	-7.0	-36.3
Emerging Market Equity	-9.4	-45.8	-53.3	-43.9	-26.7	-31.8	-7.3	-25.3	-12.1	-6.6	-44.2
Global Equity	-0.7	-46.6	-42.2	-46.7	-14.0	-3.2	5.0	-21.5	-11.2	-5.8	-39.3
Private Equity/Debt	5.7	-25.6	-27.2	-23.4	-3.2	15.7	13.2	0.6	-2.7	-2.5	-18.2
Private Equity	5.8	-25.8	-27.6	-26.0	-3.3	16.7	14.2	0.6	-3.9	-2.7	-20.1
Private Debt Composite	4.6	-21.3	-22.5	-1.7	-2.3	8.7	6.2	0.2	3.0	-1.0	-6.9
REITs	-13.3	-61.3	-37.7	45.4	-15.3	9.8	-3.5	-19.5	2.5	-3.6	-33.9
Core Private Real Estate	3.6	-7.3	-6.5	23.6	2.3	8.5	6.4	0.7	23.9	5.5	-4.4
Value-Added Real Estate	3.8	-18.0	-13.4	177.0	1.8	11.4	11.2	1.2	44.2	9.6	-7.6
Opportunistic Real Estate	4.0	-24.7	-21.8	21.4	1.5	20.0	18.8	0.9	30.7	7.0	-5.6
Natural Resources (Private)	2.5	-26.2	-34.1	-3.9	-16.9	-7.8	12.6	-10.8	-9.4	-9.2	19.3
Timberland	1.3	25.4	9.5	-1.5	0.5	12.0	15.4	3.8	23.6	-7.4	5.5
Farmland	3.3	30.2	15.8	11.4	0.8	3.9	9.4	2.2	13.3	-4.2	3.1
Commodities (naïve)	-2.4	-31.8	-35.6	18.5	-12.0	-6.2	16.6	1.8	-16.0	-9.6	139.5
Core Infrastructure	3.7	0.2	-0.6	24.8	-0.3	6.1	-11.5	0.0	-0.2	-0.1	-0.5
Hedge Funds	-0.4	-15.6	-19.0	-2.1	-9.4	1.7	4.1	-7.8	-3.8	-1.9	-15.7
Long-Short	1.0	-24.0	-26.6	-8.8	-8.3	7.9	2.6	-10.0	-4.9	-2.5	-19.8

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Appendix

Stress Test Return Assumptions - Sample Inputs[1]

	10-year Treasury Bond rates rise 100 bps	10-year Treasury Bond rates rise 200 bps	10-year Treasury Bond rates rise 300 bps	Baa Spreads widen by 50 bps, High Yield by 200 bps	Baa Spreads widen by 300 bps, High Yield by 1000 bps	Trade Weighted Dollar gains 10%	Trade Weighted Dollar gains 20%	US Equities decline 10%	US Equities decline 25%	US Equities decline 40%
Cash Equivalents	1.1	0.9	0.6	2.5	1.0	4.2	0.9	2.6	1.9	0.3
Short-term Investment Grade Bonds	-0.1	-2.0	-3.9	2.5	1.8	2.7	1.2	1.5	1.0	0.7
Investment Grade Bonds	-3.5	-9.6	-15.6	3.8	-0.4	3.3	3.7	2.3	1.0	-0.3
Long-term Corporate Bonds	-10.0	-24.0	-37.9	2.2	-12.6	2.3	5.8	0.4	-7.1	-12.3
Long-term Government Bonds	-14.9	-32.4	-49.9	7.0	7.5	5.4	12.7	4.0	6.4	12.0
TIPS	-4.4	-10.9	-17.5	2.7	-1.5	-0.5	-1.0	2.3	-1.4	-8.8
Global ILBs	-1.8	-6.6	-12.0	2.2	-11.2	-1.6	-5.4	2.3	-4.2	-15.7
High Yield Bonds	2.0	-3.0	-4.4	-2.0	-23.0	-2.3	-2.3	-4.3	-13.8	-21.0
Bank Loans	3.8	3.4	3.1	-2.2	-19.8	-2.2	-1.0	-3.1	-10.7	-15.9
Direct Lending - First Lien	3.1	2.7	2.7	-1.0	-7.8	-2.3	1.2	-3.1	-6.1	-5.1
Direct Lending - Second Lien	4.1	3.4	3.7	-0.7	-10.5	-2.3	1.7	-3.6	-7.9	-6.9
Foreign Bonds	-5.8	-12.3	-19.1	5.5	-2.9	-4.8	-11.1	1.6	-3.8	-8.9
Mezzanine Debt	4.4	1.7	-1.5	-1.4	-19.5	-2.1	-4.4	-4.5	-13.9	-18.9
Distressed Debt	4.3	1.5	-1.0	-1.6	-21.5	-2.8	-6.4	-5.1	-15.6	-20.5
Emerging Market Bonds (major)	0.9	-3.7	-3.5	0.3	-14.0	0.2	-4.3	-3.0	-11.1	-15.6
Emerging Market Bonds (local)	0.7	-4.1	-3.3	0.0	-13.1	-4.1	-14.7	-3.0	-13.0	-21.7
US Equity	6.7	2.7	4.3	-1.3	-30.6	-1.5	2.0	-10.0	-25.0	-40.0
Developed Market Equity (non-US)	8.0	4.9	-1.8	-1.5	-34.6	-10.9	-9.3	-8.9	-23.5	-42.1
Emerging Market Equity	8.9	7.3	2.3	-3.1	-42.0	-12.6	-16.6	-11.7	-30.5	-48.0
Global Equity	7.1	4.0	1.9	-1.7	-33.1	-6.7	-5.9	-9.7	-25.0	-41.5
Private Equity/Debt	6.5	2.6	-2.4	0.4	-22.3	-3.0	-4.9	-8.8	-20.1	-23.6
Private Equity	6.9	2.7	-2.5	0.7	-22.6	-2.8	-4.6	-9.5	-20.9	-24.1
Private Debt Composite	3.5	1.0	-1.3	-1.3	-16.7	-2.5	-2.8	-4.4	-12.0	-14.9
REITs	3.7	-0.9	2.5	-4.0	-37.9	-0.9	8.3	-7.4	-30.8	-55.8
Core Private Real Estate	3.9	4.4	6.2	2.4	-7.0	3.0	8.6	0.0	-6.2	-13.7
Value-Added Real Estate	5.6	8.5	12.5	6.7	-13.1	7.5	8.8	0.9	-10.0	-22.1
Opportunistic Real Estate	5.1	8.0	9.7	2.5	-20.3	1.8	15.8	-1.4	-13.2	-25.2
Natural Resources (Private)	13.3	7.6	-0.2	-1.2	-25.0	-5.6	-19.1	-4.9	-18.2	-32.7
Timberland	3.3	2.9	-0.8	5.1	6.7	2.7	8.9	0.7	2.7	3.2
Farmland	3.8	1.1	-1.3	4.6	10.4	1.5	9.1	1.1	4.4	9.0
Commodities (naïve)	10.0	6.7	0.3	-4.0	-24.3	-6.1	-25.7	3.5	-9.1	-34.5
Core Infrastructure	3.9	1.0	0.5	2.4	-0.1	-0.7	3.0	-0.8	-4.3	-8.4

[1] Assumptions are based on performance for each asset class during historical periods that resembled these situations.

DALLAS POLICE & FIRE PENSION SYSTEM

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 – Portfolio Manager
Carl Evers, III – Vice President, Water Resources NA
Dan Serna – Associate Director & Senior Agricultural Economist
Skeet Ponder – 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 $100 million, representing 76% of the Natural Resources portfolio and 5% of the total fund. (as of 4/30/21)
  - 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 3.5x.
  - 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.*
    - *Expected returns of ~ 9.2% with a high income component*

Hancock
Natural
Resource
Group®

A Manulife Investment Management Company

Texas Municipal Plans Consortium - Public

Prepared for Dallas Police and Fire Pension System Board Meeting

May 13, 2021

May 2021

Presenters

Stuart Pattillo

Portfolio Manager

Stuart is responsible for the management of institutional client portfolios including portfolio analytics, evaluating investment opportunities, performance, realizations and implementation of client strategies within the broader agricultural portfolio management group. Prior to joining HAIG in 2020, Stuart was Director, Private Investments at Bonnefield Financial, Canada's largest farmland investment manager. At Bonnefield, Stuart was responsible for business development and the active management of a portfolio of Canadian farmland on behalf of private investors. Prior to Bonnefield, Stuart was in Agriculture Equity Research at AltaCorp Capital (now ATB Capital Markets) and a natural gas trader with TD Securities in Calgary, Alberta. He holds a Bachelor of Arts (History) from University of King's College and Dalhousie University in Halifax, Nova Scotia and an MBA from HEC Montréal – Université de Montréal in Montreal, Quebec.

Skeet Ponder

Portfolio Analyst

Skeet is responsible for supporting portfolio managers in all aspects of the management of client portfolios for both timberland and farmland. This includes monitoring global markets, hold/sell analyses, reviewing property budgets, and construction of long-term management plans. Prior to joining HNRG, Skeet worked as a fiber supply analyst with WestRock, as well as an analyst for a family office investment firm that specialized in timber and farmland properties. He holds an M.F.R. in Forest Business from the University of Georgia, a B.A. in Natural Resources from Sewanee: The University of the South, and is pursuing an MBA with a concentration in Finance from Wake Forest University.

Carl Evers, III

Vice President, Water Resources North America

Carl is responsible for the management of water resources as it pertains to HNRG's Agriculture investments in the western United States. In this role, Carl is responsible for coordination and engagement of state and national-level water policy activities while providing support to direct farm operations, acquisitions, dispositions, and client reporting as it pertains to water-related policy strategies, decision-making, and stakeholder engagement for over 100,000 acres of farmland across the western United States. Prior to his Vice President of Water Policy position, Carl was a Regional Manager with Farmland Management Services where he oversaw the farming operations for 38,000 acres of HNRG's directly farmed Permanent Crop Properties, and project manager for Farmland Management Services Australia, where he oversaw several large permanent crop developments in NSW, VIC, and SA. Carl holds a Bachelor's Degree in Agribusiness from California Polytechnic University, San Luis Obispo, along with a minor degree in Sustainable Agriculture.

Dan Serna

Associate Director & Senior Agricultural Economist

Dan is responsible for leading global economic market research for the farmland investment business. In addition, he is directly involved with investment strategy and communicating farmland investment characteristics to current and prospective investors. In this role, he produces market outlooks and price forecasts for major crops produced on client properties. Prior to his current position, Daniel was an Associate Director with MetLife Agricultural Finance, where he originated farm and ranch real estate loans, including business development, credit analysis and farmland valuations. Before joining MetLife and attending business school, Daniel was a Business Analyst with Agri-Mark/Cabot, a vertically integrated dairy farmer cooperative, where he was directly involved in commodities futures and options. Daniel holds a BA in Economics from Yale University and an MBA from Harvard Business School.

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HNRG has Over 30 Years of Experience Investing in Natural Resources

Building and sustainably managing globally diversified timber and agriculture portfolios for the benefit of our investors, while contributing to the environment and local communities

A Leader in Stewardship of Timber and Agriculture
Since 1985, our commitment to sustainability and responsible investing (SRI) has been a core guiding principle

HNRG's Investment Approach has Delivered Strong Performance
Since inception, HNRG's timberland and farmland managed investments have provided competitive performance vs. benchmarks

Integrated Property Management
Aims to reduce cost, enhance alignment of interests and ensure that commitment to sustainability carries through from investment strategy development to on-the-ground strategy execution

Capitalize on our Global Size and Scale
Scale may provide enhanced acquisition access, production efficiencies, cost savings and revenue enhancement opportunities

Strong In-house Global Economic Research Capability
Informs our investable universe, underpins our investment strategy and supports portfolio management decisions

Hancock Natural Resource Group®
A Manulife Investment Management Company

Diversification does not guarantee a profit nor protect against loss in any market. Past performance does not guarantee future results.

Source: HNRG as of December 31, 2020

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Global, Integrated, Sustainable Timber & Agriculture Investments

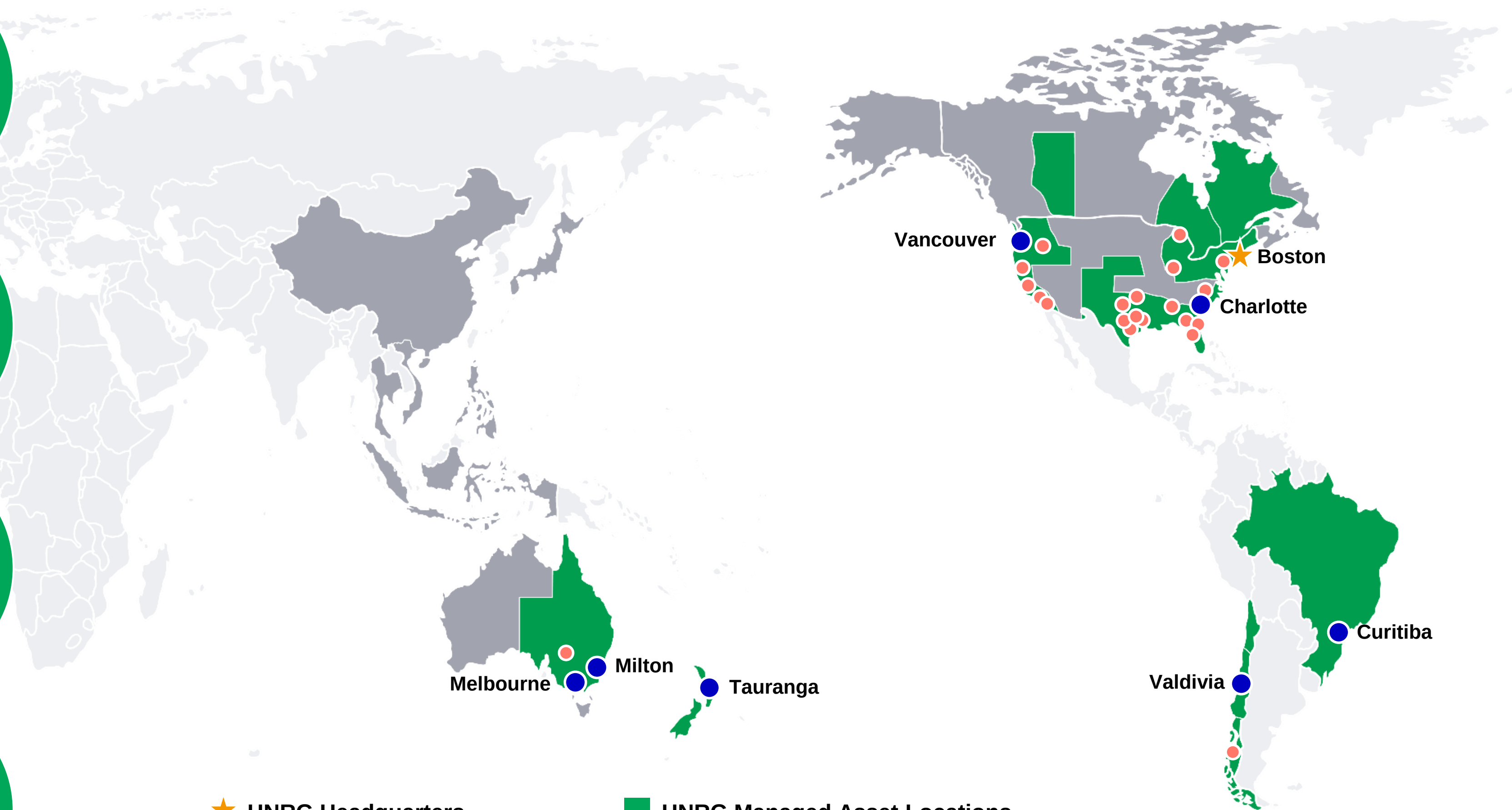
Hancock Natural Resource Group, a Manulife Investment Management company, is the world's largest timberland[1] and leading agriculture investment manager

USD 14.3B
Total Assets Under Management

5.9M
Total Acres Under Management

653
Employees across the globe

Over 200
Investors from
13
Different countries



★ **HNRG Headquarters**
● **HNRG Regional Office***
● **HNRG Field Office**
■ **HNRG Managed Asset Locations**
■ **Additional Manulife Investment Management Presence**

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As of December 31, 2020
* Includes offices associated with client owned operating companies
[1] Source: Fastmarkets RISI Global Timberland Ownership and Investment Database as of June 30, 2020

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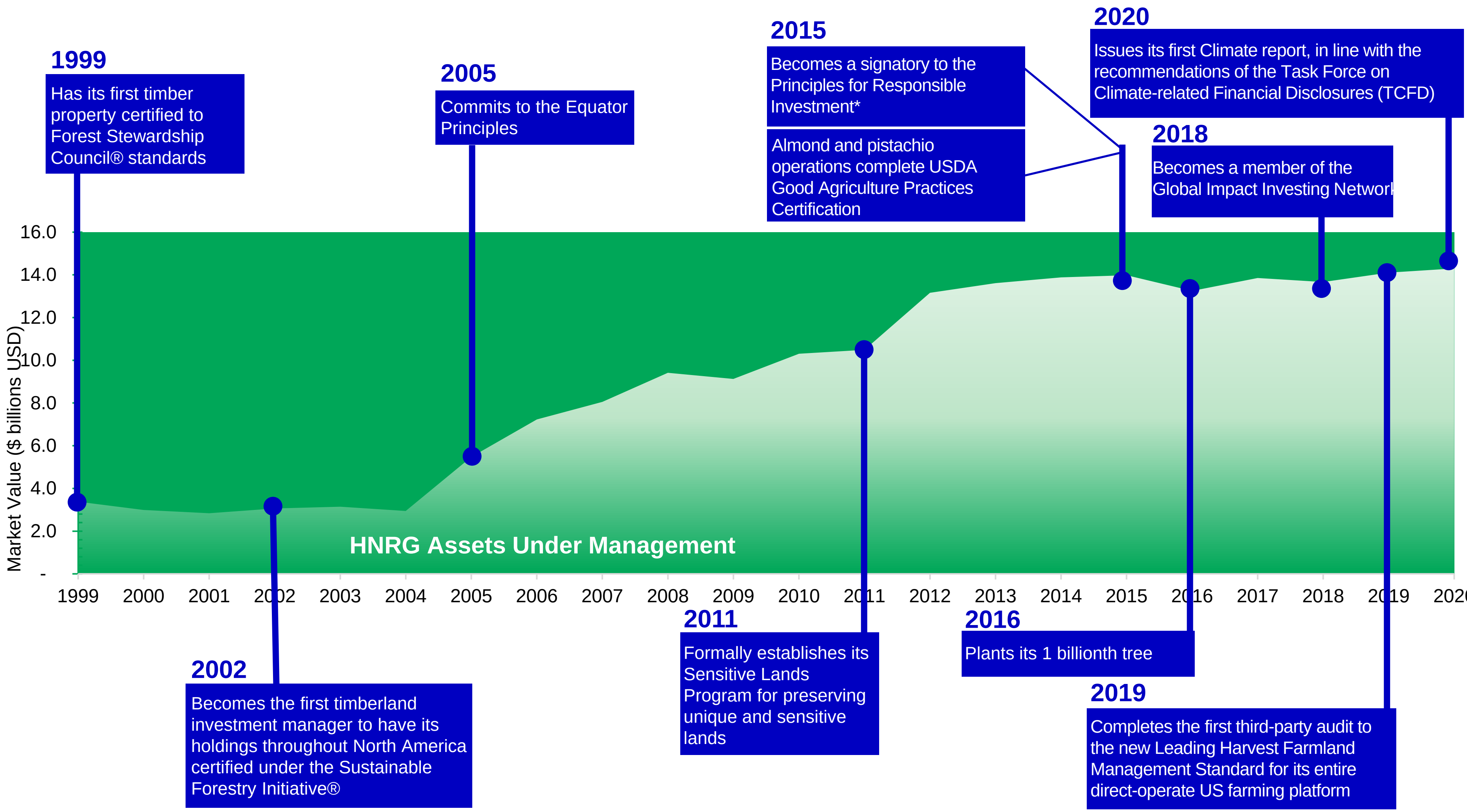
HNRG Has a Long History of Stewardship, Sustainability & Responsible Investing

Sustainability and stewardship have been essential strategies to maximize value since inception



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As of December 31, 2020
*Manulife Investment Management, the global asset management business of Manulife, is the signatory to the UNPRI which includes HNRG

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Texas Municipal Plans Consortium (TMPC)

Investment Policy and Guidelines

- Account established with allocation of $25 million in July 1998 for permanent crops
  - $6 million added for FARM Australia in September 2000 & $10 million added for Ironbark Australia in May 2005
  - Investment strategy: Higher risk/higher return approach for investment and management of the portfolio, where leverage, developmental strategies, and other opportunistic arrangements will be considered
- $20 million added for US row crops in July 2009
  - Investment strategy: 100% leased US row crop investment portfolio with target return of 7-10%
  - Construction completed October 2014
- In November of 2015 DPFP stated their desire to reduce exposure to farmland as part of the broader asset allocation strategy with a renewed focus on higher returning permanent crop assets.
  - Target exposure of +/- $80 million of farmland assets with 8%+ nominal income return
  - No diversification objective going forward but avoid large capital outlays if possible
- HAIG has sold 16 properties and the Australian portfolio to date since sale process was initiated, generated approximately $70.3 million of net proceeds

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

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Market Outlook

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Farmland Snapshot

U.S. farm cash receipts expected to reach $391 billion in 2021, up 6% from 2020

Surging row crop prices likely to induce supply response

China exports jump

China increased imports of U.S. crops, the highest since 2013.

Strong Government Support in 2020 - $46 billion

Potential downscaling of Federal support in 2021 to $25 billion

Negative COVID-19 Impacts may ease

Reduced ethanol demand,
Shift from restaurant to home,
Reduced apparel demand

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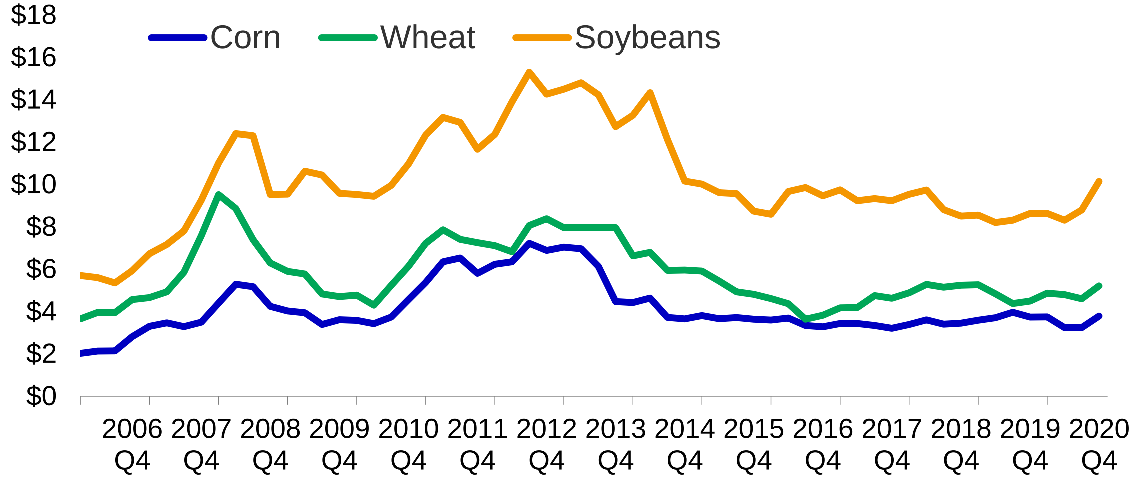
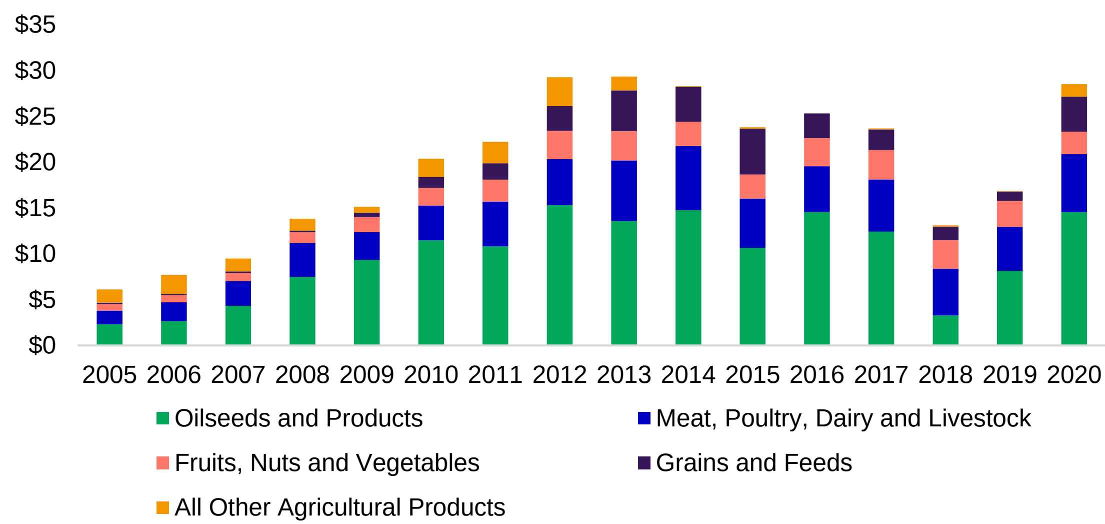
U.S. On-Farm Prices (USD per Bushel)



U.S. Agricultural Exports to China (Billion USD)



Sources: USDA NASS March 2021, USDA Foreign Agricultural Service March 2021

Economic Backdrop

Moving beyond COVID-19 – Strong economic recovery accompanied by rising price expectations

U.S. and China on track for robust 2021

- GDP growth estimated in range of 6-8% for 2021
- Significant success in roll-out of vaccine and containment of COVID-19
- Strongly supportive Biden policy initiatives

Inflationary concerns cited as #1 tail-risk in Bank of America survey of fund managers:

- Energy demand recovers with loosening of COVID-19 restrictions
- Supply chains adjust to COVID-19 dislocations
- Consumer demand boosted by COVID-19 stimulus, low interest rates, rising home equity and increased saving rates
- Atlanta Fed's survey of Business Inflation Expectations for next year increases to 2.4%

Market dynamics should contain spiraling global inflation, but U.S. may experience notable bump in inflation in 2021-2022

Inflationary expectations resurface after pandemic

Source: Federal Reserve Bank of Atlanta as of March 5, 2021

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Grain and Oilseed Markets Tighten in Late 2020 and Early 2021

Commodity prices adjust to a spectrum of demand, supply and trade dynamics

Corn

- U.S. and global production expected higher for 2021 as prices surge
- Record corn shipments to China lift exports, offsetting reduced ethanol demand, leading to falling inventories

Soybeans

- Phase 1 trade deal with China and recovering Chinese pig herd stabilize soybean outlook
- Q4 2020 exports to China highest since 2013
- Inventories reach the lowest level since 2013

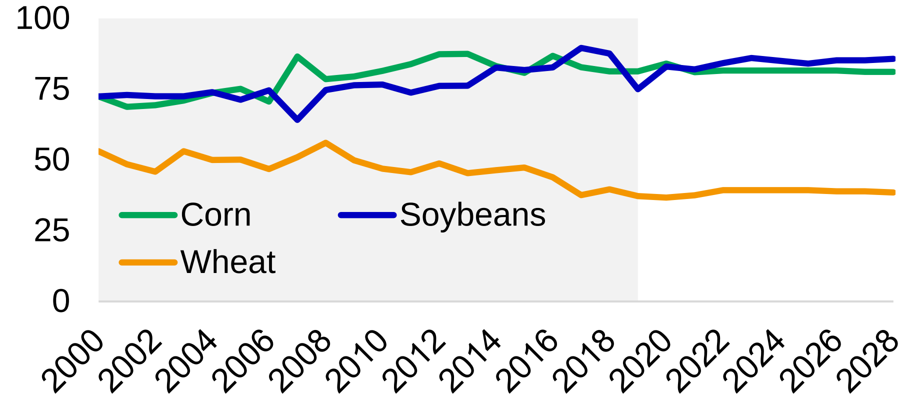
Wheat

- Second lowest U.S. winter wheat acres since 1909
- Demand less impacted by COVID-19

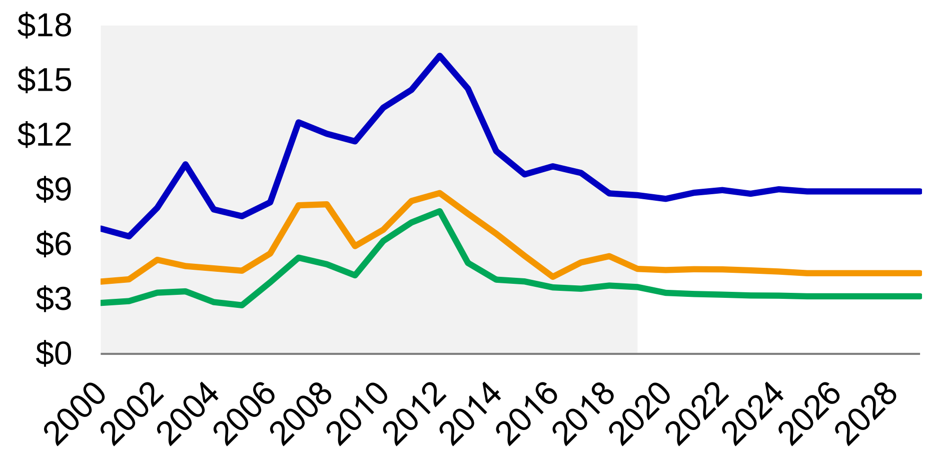
U.S. Row Crop Farmland Values

- Federal Reserve banker surveys indicate increases in farmland values in Q4 2020, supported by low interest rates

Major U.S. Row Crop Acreage (Million Acres)



U.S. Grain & Oilseed On Farm Prices (2020 $/bushel)



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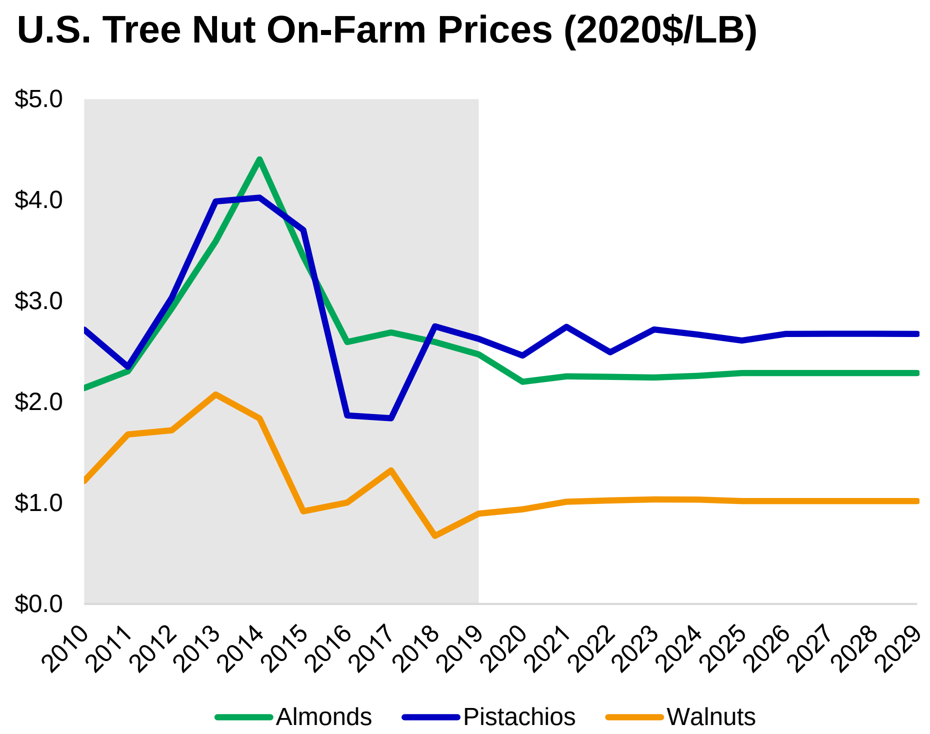
Sources: Years are marketing years. USDA NASS as of October 2020, 2020/21 marketing year price projected as of October 2020 by USDA, HNRG forecast as of August 2020.

Tree Nut Demand and Supply Back in Balance

Prices stabilize after extended decline 2013-2018

- **Inflation adjusted prices for tree nuts have returned to historically sustainable levels**
  - Record 2020 almond crop pressures prices, partially offset by growth in exports up 20% for new crop Aug 2020-Jan 2021
  - Pistachio prices rose in 2020 despite supply increases with "on-year" production, as U.S. exports up 11% YOY for new crop sales Aug 2020-Jan 2021
  - Walnut prices will face headwinds due to 2020 bumper crop (+19% YoY)
- **Looking ahead, growing demand absorbs higher production, and prices should keep pace with overall inflation**
  - Rising water costs and groundwater pumping restrictions in California could motivate marginal producers to exit. Tighter markets and higher cost water would support real price gains.



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Sources: Years are marketing years. USDA NASS as of August 2020, HNRG Analysis, HNRG forecast as of August 2020.

Leading Harvest

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Leading Harvest

Industry leader in sustainability, created by and for all stakeholders across the agricultural value chain

WHAT IS LEADING HARVEST

- A nonprofit organization formed in early 2020
- Spearheaded by a coalition of farming companies and two environmental organizations, The Conservation Fund and Manomet, that set out to create a universal agricultural sustainability standard.[1]
- Governed by a Board of representatives from the social, environmental, and economic sectors. By representing diverse viewpoints across the agricultural landscape, the Board reflects the multiple interests that make up the agriculture community from farmers to food retailers, environmental NGOs to labor organizations, and investors to consumers.
- Created the Leading Harvest Farmland Management Standard 2020 that is designed to be flexible and adaptable enough to scale across all geographies, crop types, and management systems. It is a third-party audited certification standard that serves to provide assurance for the sustainability of farmland management.
- For more information, visit: www.leadingharvest.org

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1 HNRG is a founding member of Leading Harvest and is committed to certifying all eligible farmland to the Leading Harvest Farmland Management Standard. In addition, Oliver Williams, Global Head of Agriculture, is current Chairperson of the Board of Directors for Leading Harvest

Leading Harvest Farmland Management Standard, 2020

Sustainability standard for farmland management and investment

KEY FEATURES

- Applicable to all crops, geographies, scales, and management systems
- Outcomes-based and non-prescriptive
- Certifies farmland managers and owners, and land under their management
- Credible assurance through third-party, independent audit
- Continuous improvement through periodic revision and annual auditing
- Input during development from four-dozen sources including farmers, environmental leaders, academics, government agencies, and investment managers

GUIDED BY 13 PRINCIPLES

1. Sustainable Agriculture Management
2. Soil Health and Conservation
3. Protection of Water Resources
4. Protection of Crops
5. Energy Use, Air Quality, and Climate Change
6. Waste and Material Management
7. Conservation of Biodiversity
8. Protection of Special Sites
9. Local Communities
10. Employees and Farm Labor
11. Legal and Regulatory Compliance
12. Management Review and Continuous Improvement
13. Tenant-operated Operations

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1 Source: www.leadingharvest.org.

Applying Leading Harvest to Managed Properties

The objectives of Leading Harvest are met through practices that are already integrated into how we do business

IMPLEMENTATION ON THE GROUND THROUGH HNRG'S:

- Farming practices and tenant management,
- Programs implemented by the safety and risk teams,
- Policy and process of the Acquisitions, Human Resources, and Accounting departments,
- Products and services of the Value Added Services, Resource Support, and Environment and Policy Support teams

VERIFYING CONFORMANCE TO THE STANDARD

- Conformance evidence, made up of qualitative and quantitative data, is assessed by third-party auditors to determine whether farm operations have met an Indicator (the most granular element in the hierarchal structure of the Standard).
- Evidence is evaluated within the environmental, social, and economic realities of each unique farm site, informed by regional best management practices.
- Evidence may include a combination of practices, policies and documents, and data-driven KPIs.

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Leading Harvest Certification Costs

CERTIFICATION PROGRAM DUES

- Annual membership dues are to be apportioned 10% to HNRG and 90% to HNRG clients. The client portion to be divided among clients based upon their pro-rata portion of acres owned. A cost per acre is applied depending on whether the property is in row or permanent crops.

CERTIFICATION AUDIT COSTS

- Annual third-party certification audit direct costs, i.e., costs charged by the auditor, are to be apportioned 10% to HNRG's property management entity and 90% to HNRG clients. The client portion will be divided among clients based upon their pro-rata portion of acres owned within the appropriate certified area. A cost per acre is applied depending on whether the property is in row or permanent crops.

- Pro-rated allocation by acreage recognizes that auditing, while a sample, reflects performance of all management activities in a certified area and not only that of the client property being audited in any given year.

FARMLAND CERTIFICATION COSTS (2020)

Client Costs

Crop Type	Audit Costs ($/ac)	LH Fee ($/ac)	Total ($/ac)
Permanent	$ 0.76	$ 2.02	$ 2.78
Row	$ 0.32	$ 0.47	$ 0.79
Blended	**$ 0.43**	**$ 0.88**	**$ 1.31**

as of 01/21/2021

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Water Management

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California Water Management is Evolving

While SGMA is expected to have a substantial impact on farming in California, the potential impact varies widely and has a 20-year glidepath

- The California Sustainable Groundwater Management Act (SGMA) was passed into law in California in 2014 to sustainably manage the groundwater of CA. Sustainable management is defined as the absence of undesirable results, such as groundwater depletion, water quality degradation, and land subsidence.
- Terms:
  - Groundwater Sustainability Agency (GSA) – public agency formed to develop and manage the GSP
  - Groundwater Sustainability Plan (GSP) – The plan as to how a basin will achieve sustainability overtime
- Each sub-basin has a specific level of sustainable pumping based on hydrologic and geopolitical conditions. Each GSA within a sub-basin manages its unique hydrology to meet the overall sustainable yield of the sub-basin, with some GSA's already in balance
- The "How" to reach sustainability was left to the GSA to decide – employing tools such as groundwater recharge, sourcing additional surface water for their management area use, buying land to fallow or enforcing groundwater pumping restrictions.
- Each GSA in a critically over-drafted basin submitted their draft GSP to the Department of Water Resources in January 2020 with medium priority basin plans slated for 2022

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HNRG Takes a Proactive Approach to Management

HNRG has extensive experience managing water resources, adapting over time to new policies and technologies

- Retained New Current Land and Water LLC in 2016 – consultants experienced in California water policy
- Developed a robust internal water team with globally aligned leadership/strategy, and property-level focus/expertise
- Attend regular GSA and district meetings to engage in policy discussions

Groundwater banking facility in Rosedale Rio Bravo Water Storage District (Kern Martin)

- Actively engaged in developing and employing water management tools on farm
    - Groundwater recharge
    - Groundwater credit trading systems
    - Surface water development
    - Alternative land uses to offset fallow cost

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TMPC's Portfolio is Positioned to Weather SGMA

Minor impact is expected on majority of TMPC properties given the districts they are located within and access to surface water

- Looking at TMPC's portfolio, it is expected to be insulated from negative impacts of groundwater curtailment as the majority of TMPC properties have access to surface water projects and the GSA's do not call for significant groundwater restrictions in their plan
- **Risk** may be that water cost becomes more expensive
- **Upside** that there may be crop price benefits as SGMA rolls out and less water secure lands are fallowed, properties with more secure water supplies may realize increased appreciation
- Two properties, Tulare 20 and 24 are in a higher risk GSA:
  - There are fewer options to supplement groundwater, so fallowing land is more likely to be required in the long term. However, the current transitional pumping plan does not require pumping reductions until 2041
  - In the worst case - Cash flows alone pay for Tulare 20 to fallow land, with a go-forward projected IRR in the low double digits
  - Tulare 24 HNRG is considering other options:
    - Sell the property
    - Options to secure additional water supplies, or obtain a lease from the GSA to fallow
    - Combination of water management with Tulare 20 to reduce the fallowing required to enhance expected returns of both properties
- HNRG is continuing to monitor SGMA as policy and options continue to evolve to manage for the best outcome for TMPC

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Summary

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The TMPC Farmland Portfolio

While concentrated, the portfolio is poised to continue to provide strong cash flows and meet the portfolio objectives

- Already to-date the TMPC portfolio returned just under 2x DPFP contributions
- Looking towards the next 15 years, the portfolio is projected to continue to provide cash back to DPFP, with projected distributable cash averaging over $5.0 million a year and projecting an IRR of 9.2%
- No performance is guaranteed and with the concentrated portfolio, there is more potential volatility from pistachio yield variation, US trade relationships, as well as California water policies
- HNRG will continue to actively manage the account, looking for opportunities to maximize the total return and mitigate risks

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Benchmark Definition

The NCREIF Farmland benchmark is the National Council of Real Estate Investment Fiduciaries' Farmland Property Index which is published quarterly at www.ncreif.org. The NCREIF Farmland Property Index is comprised of US domestic farmland investments held in a fiduciary investment environment. Returns are reported on a non-leveraged basis. The Index is set at 100 starting fourth quarter of 1990. Calculations are based on quarterly returns of individual properties before the deduction of portfolio-level asset or investment management fees, but inclusive of property level management fees. Each property's return is weighted by its market value (value-weighted). Index values are calculated for income, appreciation and total. Observed changes in market conditions as so determined by the manager to recognize any changes during the quarter in rental rates, capitalization rates, interest rates, a partial sale, unexpected capital expenditures, or changes in discount rates. A property value may be adjusted only for capital expenditures made during the quarter -effectively, an accounting adjustment to reflect the amount of the capital expenditure. The value submitted can be the previous quarter's value because, in the judgment of the manager/owner, the property's value did not change during the period. All properties owned by the underlying investment vehicles of the Hancock Agriculture Investment Group Total Farmland Composite that meet the eligibility requirements of the NCREIF Farmland Property Index are included in the overall results of the NCREIF Farmland Property Index. The Index represents investment returns from a single class of investor. As such, the Farmland Index may not be representative of the agricultural investment market as a whole.

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Investment Considerations

A widespread health crisis such as a global pandemic could cause substantial market volatility, exchange trading suspensions and closures, and affect portfolio performance. For example, the novel coronavirus disease (COVID-19) has resulted in significant disruptions to global business activity. The impact of a health crisis and other epidemics and pandemics that may arise in the future, could affect the global economy in ways that cannot necessarily be foreseen at the present time. A health crisis may exacerbate other pre-existing political, social and economic risks. Any such impact could adversely affect the portfolio's performance, resulting in losses to your investment.

Any performance information shown is the investment strategy composite gross of fees, including advisory and investment management fees and other expenses an investor would incur, but net of transaction costs, unless otherwise noted; deduction of such expenses would reduce returns. Past performance is not indicative of future results. Net performance results reflect the application of the highest incremental rate of the standard investment advisory or management fee schedule to gross performance results, unless otherwise indicated. Changes in exchange rates may have an adverse effect. Actual fees may vary depending on, among other things, the applicable fee schedule, portfolio size and/or investment management agreement. For example, if $100,000 were invested and experienced a 10% annual return compounded monthly for 10 years, its ending value, without giving effect to the deduction of advisory or investment management fees, would be $270,704 with annualized compounded return of 10.47%. If an advisory or investment management fee of 0.95% of the average market value of the account were deducted monthly for the 10-year period, the annualized compounded return would be 9.43% and the ending dollar value would be $246,355. Unless otherwise noted, returns greater than one year are annualized; calendar year returns for each one year period end in December. Discrepancies may occur due to rounding.

No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Diversification or asset allocation does not guarantee a profit nor protect against loss in any market. The indices referenced herein are broad-based securities market indices and used for illustrative purposes only. The indices cited are widely accepted benchmarks for investment performance within their relevant regions, sectors or asset classes, and represent non-managed investment portfolios.

If derivatives are employed, note that investing in derivative instruments involves risks different from, or possibly greater than, the risks associated with investing directly in securities and other traditional investments and, in a down market, could become harder to value or sell at a fair price.

Source for information shown is Manulife Investment Management, unless otherwise noted.

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Important Information

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Manulife Investment Management is the global wealth and asset management segment of Manulife Financial Corporation. We draw on more than 150 years of financial stewardship to partner with clients across our institutional, retail, and retirement businesses globally. Our specialist approach to money management includes the highly differentiated strategies of our fixed-income, specialized equity, multi-asset solutions, and private markets teams—along with access to specialized, unaffiliated asset managers from around the world through our multimanager model.

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DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C11

Topic: **Lone Star Investment Advisors and Huff Energy Update**

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

Discussion: Investment Staff will update the Board on recent performance, operational, and administrative developments with respect to DPFP investments in the Huff Energy fund as well as funds managed by Lone Star Investment Advisors.

Regular Board Meeting – Thursday, May 13, 2021

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.

DISCUSSION SHEET

ITEM #D1

Topic: **Public Comment**

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

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D2

Topic: **Executive Director's report**

a. Associations' newsletters
- NCPERS Monitor (May 2021)
- TEXPERS Pension Observer
  https://anyflip.com/mxfu/sddx/

b. Open Records
c. Office Reopening Status
d. CIO Recruitment
e. GFOA Award

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

THE NCPERS

MONITOR

The Latest in Legislative News

May 2021

In This Issue

OregonSaves Breaks $100M Asset Threshold, Setting Pace for Other States

Photo Illustration © 2021, iStock.com

Three years ago, Oregon became the first state in the nation to start a retirement program designed to help private-sector workers save for their future via payroll deduction. On April 2, the OregonSaves auto-IRA program reached a milestone by amassing $100 million in net account assets.

OregonSaves reached the threshold at a time when several states are getting similar programs off the ground, and others are considering establishing a program, and its experience is informative. Oregon is the largest program today, followed by Illinois and California, with assets totaling $55.7 million and $54.8 million, respectively, as of March 31.

Other states are expected to come on line with programs. For example, MarylandSaves, formally known as the Maryland Small Business Retirement Savings Program, is expected to being operations this year, five years after it was created under state law, and Connecticut has plans on the drawing board. Two newest jurisdictions to join the trend are the state of Virginia and New York City. Virginia passed legislation to establish VirginiaSaves in mid-April and NYC passed its legislation on April 30.

Most of these plans are based on the Secure Choice model championed by NCPERS. Two states thus far have followed different models. Massachusetts in 2017 create a state-sponsored multiple employer plan for private sector workers, and Washington in 2018 launched a state-facilitated retirement marketplace program.

CONTINUED ON PAGE 6

Near-Term Legislative Agenda

By Tony Roda


Photo Illustration © 2021, iStock.com

On April 20, NCPERS held its annual Legislative Conference to provide members with an overview of the legislative and regulatory priorities of the House, Senate, and Biden Administration. Speakers from the Administration and Congress presented a detailed picture of the issues they are championing and hope to see addressed this year. This article breaks down those key policy areas and highlights the issues of particular importance to the public pension community.

At the end of 2019, the SECURE Act increased the age trigger for Required Minimum Distributions (RMDs) to 72 from the previous age of 70 ½. The RMD rules apply to Internal Revenue Code Section 401(a) plans, 401(k) plans, governmental 457(b) plans, 403(b) plans, and IRAs. RMDs do not apply to Roth accounts.

We should expect a further increase in the age trigger to be included in the legislation currently being developed at the House Ways and Means Committee. The bill is colloquially referred to as the SECURE Act 2.0. This legislation could be marked up by the Ways and Means Committee in early May and by the Senate Finance Committee by the end of May. We anticipate the age trigger will be increased to 75 but phased in over a 10-year period. Also be aware that last Congress's House version of the SECURE Act 2.0 included an exception from the RMD rules for holders of small accounts, which was defined as aggregate defined contribution account holdings of less than $100,000.

In addition, Ways and Means Chairman Richard Neal (D-MA) remains committed to repealing the Social Security penalty known as the Windfall Elimination Provision (WEP). The penalty reduces your Social Security benefit if you earn a retirement benefit from non-Social Security covered employment (i.e., no FICA tax). Twenty five percent of public employees are not covered by Social Security and may be impacted by WEP, which could result in receiving almost $6,000 less each year in your Social Security benefit.

Chairman Neal's bill, H.R. 2337, would provide a rebate from the WEP penalty of $150 per month for those beneficiaries currently affected by WEP and those who will turn age 62 before 2023. Those who are not in the rebate category and all future hires would receive the higher benefit of current Social Security law, which includes the substantial earnings exemption, or the new proportional formula. The proportional formula would be based on each worker's actual work history.

Finally, there are a number of additional priorities for Chairman Neal, including making the current savers credit refundable, creating lifelong child savings accounts, as well as legislation commonly referred to as Auto-IRA. This proposal would require all employers with more than 10 employees to maintain an automatic contribution plan, which may be a tax-qualified plan, 403(b) plan, IRA, or SIMPLE IRA. This requirement may also be satisfied with

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NCPERS Executive Directors Corner

Virtual Learning Programs Continue as Preparations Begin to Resume Face-to-Face Conferences in August

Photo illustration © 2021, iStock.com

Education has never taken a back seat at NCPERS—not even during a global pandemic. Along with advocacy and research, education has always been central to our mission.

When we had to shift from in-person to virtual conferences at the beginning of the Covid-19 outbreak in March 2020, we did so as smoothly as possible. We threw ourselves into making sure that high-caliber programming would remain available to our members. We also fought off the inevitable Zoom fatigue by adjusting the pace of our events and finding creative ways to engage participants.

Now, with widespread Covid vaccination becoming a reality, NCPERS is very pleased to announce that we will resume in-person conferences beginning in August 2021, with appropriate safety practices being carefully observed.

Now, with widespread Covid vaccination becoming a reality, NCPERS is very pleased to announce that we will resume in-person conferences beginning in August 2021, with appropriate safety practices being carefully observed. We will also continue to offer a mix of compelling online learning opportunities.

One of the things we've all learned is that there are benefits in both virtual and physical conferences. Both types of meetings have proved popular with members. Virtual programming, such as webinars, are valued for being highly focused and efficient. The ability to hone your professional skills from the comfort of your home or office has a lot of appeal. Webinars enable people to keep sharpening their credentials in small increments.

But in-person meetings are extremely valuable. They take us out of our everyday routine, freeing mind and space to really think about our strategic challenges. They provide a broad perspective as well as opportunities for networking. Live meetings also instill the camaraderie that is so vital to our advocacy efforts. Getting to know one another and building trust is simply easier when you're in the same room, face to face.

Of course, we deliberated carefully before making the decision to

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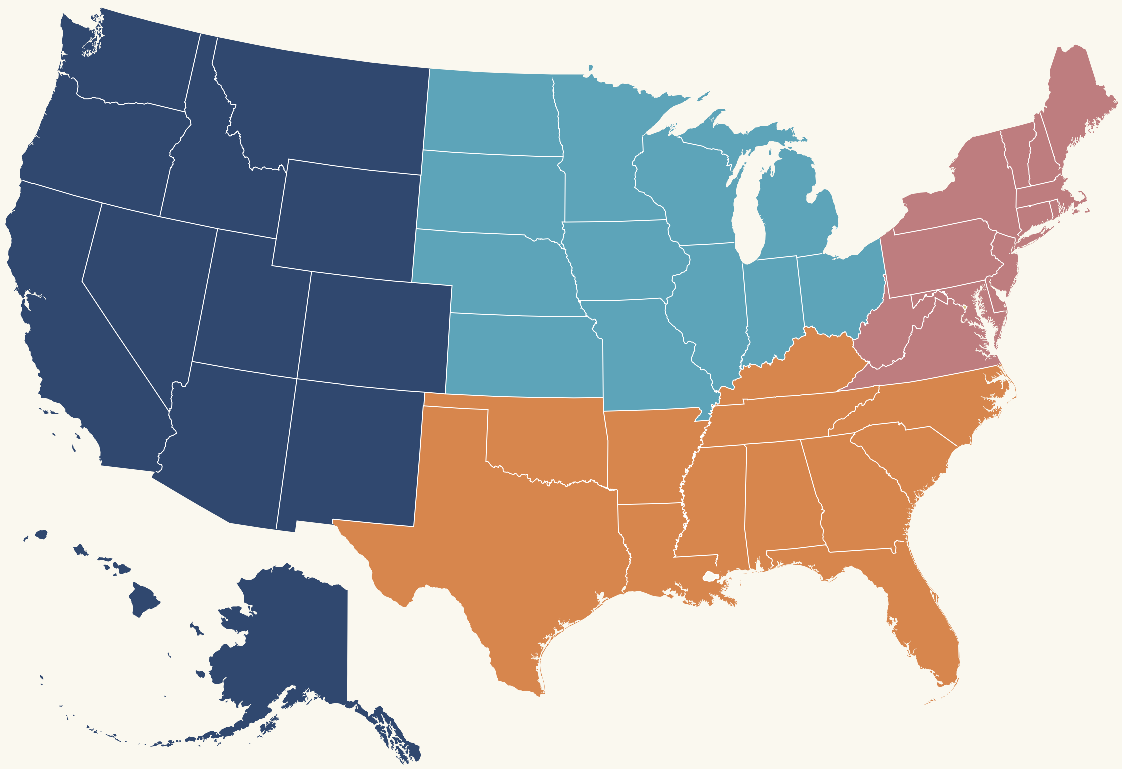
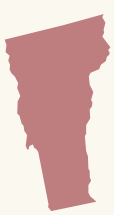
NCPERS Around the Regions

This month, we will highlight Vermont, Missouri, Kentucky and Alaska.



NORTHEAST: Vermont



The Vermont House of Representatives is putting a public pension overhaul plan on hold and will instead create a task force to study ways to address a growing unfunded liability, House Speaker Jill Krowinski announced.

"We want to save our public pension systems and give teachers and state employees confidence that the money won't run out," Krowinski, a Democrat, announced at an April 2 news conference. She noted that the unfunded pension liability has risen to $5.6 billion. But, she added, "It's clear that people are struggling with how to find real systemic change to resolve this crisis right now."

Krowinski had convened House lawmakers to develop a plan to address funding shortfalls in the state pension system. Earlier in the year, State Treasurer Beth Pearce projected those shortfalls at $3 billion. But the proposal unveiled in March by the House Government Operations Committee attracted criticism from educators and state workers, and prompted a number of demonstrations, the *Rutland Herald* reported.

The proposal would have increased base employee contribution rates, raising the retirement age to the Social Security eligibility age, requiring employees to work 10 years to qualify for benefits instead of five, and applying the cost-of-living adjustment to only the first $24,000 of a retirement benefit. In addition, it would have calculated average final compensation using the seven highest consecutive years of salary as opposed to the current three years, resulting in a reduction of the average benefit. Current retirees and those within 5 years of retirement eligibility would not have been affected.

Krowinski said the focus will now shift to areas of consensus, including making changes to the governance structure of the Vermont Pension Investment Committee to "make it more

CONTINUED ON PAGE 8

NCPERS University

Trustee Educational Seminar (TEDS)

June 8 – 9, 2021
Virtual Event

Earn 8 HOURS of CE!

REGISTRATION OPEN

Visit www.NCPERS.org or call 202-601-2445 for more information

OREGONSAVES CONTINUED FROM PAGE 1

A closer look at Oregon's data provides insights into how these new initiatives are working. Except for the April 2 asset balance, all data are as of March 31, 2021. The state's deadlines have already passed for employers with five or more full-time-equivalent workers to facilitate employee access to OregonSaves if they do not already offer a retirement savings plan. Employers with four or fewer employees are expected to be required to enroll during 2022, a spokeswoman for the Oregon Treasury Savings Network said.

Employers. The total number of employers registered totaled 16,940, of which 7,291 (43 percent) had submitted payroll deductions. This indicates that 9,649 employers were in the process of taking steps that they must complete after registering employees in order to initiate payroll deductions. Also, payroll deductions do not occur during the 30-day period when employees has the choice to opt-out of the program.

Nearly as many employers—a total of 16,461—were exempted from the program because they already offer a workplace retirement savings plan.

Savers. Savers have funded 104,709 accounts, with contributions totaling $114.4 million before withdrawals. The average monthly contribution was $139, and the average contribution rate was 5.6 percent. The average funded account balance reached $947. In the six months from September 30 to March 31, average monthly contributions jumped 76 percent, to $7.1 million.

Nearly one-third of eligible employees—32.6 percent—opted out of the program.

Approximately one in five accounts—22,219 had experienced a withdrawal. Net withdrawals totaled $22.7 million, or 21.6 percent of assets. The rate of withdrawals was up from 20.6 percent six months earlier, possibly reflecting the economic hardships imposed by the Covid-19 pandemic.

"Getting people to save is the hard part, and it is a critical first step to help more Americans prepare for retirement," said Hank Kim, executive director and counsel of NCPERS.

"The next step for participants will be getting them to leave their savings in place instead of tapping them for emergencies or less compelling reasons," Kim said. "Unfortunately, 401(k) plans have the same problem of frequent raids on the piggy bank. One of the great pluses of defined benefit pensions is that there's no way to tamper with your principal." ◆

NEAR-TERM LEGISLATIVE AGENDA CONTINUED FROM PAGE 2

a new, employee contribution-only 401(k) plan, with an $8,000 annual contribution limit. While this plan would apply only to private employers, NCPERS has had a longstanding interest in retirement security for all, specifically through its development and advocacy work on Secure Choice. NCPERS has provided input and testimony to a number of state legislatures as bills are developed to establish these state-run, retirement plans for private sector workers. A federal Auto-IRA law would be a tremendous boost for retirement security for all Americans.

Please be assured that NCPERS will closely monitor the issues outlined in this article. We will keep our members informed of significant developments. ◆

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

EXECUTIVE DIRECTORS CORNER CONTINUED FROM PAGE 3

resume in-person conferences. We took note of continued positive developments in the inoculation rates and management of Covid-19. The widespread availability of the vaccine was decisive. With vaccines now available nationwide, to all adults, we anticipate the percentages of fully vaccinated adults will increase dramatically by the time we gather in August. And when we do gather, it will be in accordance with all Centers for Disease Control & Prevention (CDC) COVID-19 safety practices and guidelines, as well as any requirements of the cities and states where we host the meetings. The requirements are likely to include the wearing of masks, temperature checks, social distancing, the use of hand sanitizer and any other measures that are deemed necessary.

Going forward, we will continue to offer a robust mix of virtual and in-person educational opportunities. Webinars will continue at the rate of approximately one per month, although more may be offered when circumstances warrant an increase.

For example, on May 4 we will present a one-hour webinar titled "Preparing for the Pandemic's Impact on Your Pension Plan: Year 2." Executives from Cheiron will join us to discuss the varying impacts of Covid-19 on pension plans including some of the non-asset events, such as surges in retirement applications, layoffs and furloughs, mortality experience and early retirement windows.

Our popular annual Trustees Educational Seminar (TEDS) will be back in virtual form June 8-9. This cornerstone seminar gives novice trustees deeper understanding of their role and responsibilities, and serves as a refresher for experienced trustees.

We host another webinar on June 15, when Will Kinlaw of State Street Associates will discuss asset allocation and some persistent misconceptions about what does and doesn't work.

We return to our traditional conference format with the Public Pension Funding Forum, which is scheduled for August 22-24 in New York. This popular program is focused on injecting new thinking into funding challenges in order to ensure a bright future for public pensions and beneficiaries.

Fittingly, our last in-person conference of 2021 is scheduled to be the FALL Conference, which will take place in Scottsdale, Arizona, September 26-28. It's fitting because this fast-paced conference was organized last year in direct response to Covid-19. Structured along three tracks, it provides participants with valuable insights on Financial, Actuarial, Legislative & Legal matters impacting public pensions.

The return to in-person conferences in 2021 is a milestone. Our Legislative Conference in January 2020 was the last time we were all together in person. We hope members will place their trust in the steps we will be taking to safeguard their health and safety as we meet face to face. We may not be back to business as usual, but it is a step in the right direction. And we will continue to complement in-person events with the virtual learning that has become such an important part of continuing education for public pension professionals. ◆

NCPERS Around the Regions

AROUND THE REGIONS CONTINUED FROM PAGE 4

transparent, independent and get more expertise at the table. This is no small lift, but I know we can do this."

The VPIC is a seven-member board consisting of the state treasurer or a designee, representatives of the three state pension systems, and appointees of the governor. The board makes and manages investments for the state's three pension systems—for teachers, state employees and municipal employees, respectively—and is overseen by three separate boards of trustees, representing those each systems.

Krowinski announced she had asked the Government Operations Committee to create a pension task force that brings together all stakeholders to consider long-term solutions. She also said a one-time allocation of $150 million that was part of the House proposal will be held in reserve while the task force does its work, and that the Legislature already has $300 million in the current budget to pay for pensions and other post-employment benefits.

MIDWEST: Missouri

A county court dealt a [procedural] setback to a bid by the Missouri State Employees Retirement System to halt a disputed capital call by a Toronto-based private equity firm.

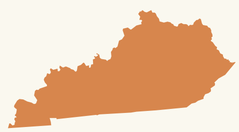
Judge Jon Beetem of the Circuit Court for Cole County denied MOSERS' request for a preliminary injunction to prevent Catalyst Capital Group Inc. from declaring MOSERS in default on an investment. MOSERS has invested $60 million in a Catalyst fund, $40 million short of a commitment it made.

MOSERS earlier sued Catalyst and its founder, financier Newton Glassman, claiming gross negligence and breach of contract related to the firm's dealings with a struggling lender it controlled. MOSERS alleged Glassman and Catalyst failed to exercise their duty to protect its interests and breached a limited partnership agreement as they repeatedly extended financial lifelines to Callidus Capital Corp., *The Globe and Mail* reported. The pension fund, in its complaint, pointed to a "web of entanglements" between Catalyst and Callidus.

MOSERS asked the court to block Catalyst from issuing future capital calls, which are contractual demands on an investor to pay funds that have agreed to commit. MOSERS also sought to prevent Catalyst from declaring MOSERS in default if it didn't meet a capital call.

MOSERS provides benefits to 51,000 Missouri government retirees. MOSERS has argued that Catalyst steered some of the pension's early investments into a risky and ultimately unsuccessful distressed debt company based in Canada, *The Globe and Mail* reported.

SOUTH: Kentucky



The Republican-dominated Kentucky state legislature overrode Governor Andy Beshear's veto of pension legislation, clearing the way to put future teachers into a hybrid pension plan.

The House voted 63-31 and the Senate voted 25-13 to reverse the Democratic governor's veto. It was one of two dozen vetoes handed down by the legislature in a single day.

As a result, new Kentucky teachers, starting in 2022, will be enrolled in a pension plan that combines elements of defined contribution and defined benefit plans. Their retirement eligibility will also come later that it does for current teachers.

The new law also requires future teachers to contribute more to their retirement plans than current teachers do, and they will have to work for 30 years instead of 27 to earn their maximum benefits. The new rules will become effective at the beginning of 2022.

Beshear vetoed the bill on grounds that cuts in retirement benefits would undermine the state's ability to attract and retain teachers. In his veto statement, he criticized lawmakers for not giving educators raises and for removing $70 million from his budget proposal. "At a time when we should be investing in the teaching profession to attract the very best teachers, salaries remain stagnant while their importance to their communities only increase," Beshear said.

CONTINUED ON PAGE 9

AROUND THE REGIONS CONTINUED FROM PAGE 7

WEST: Alaska

Alaska's legislature violated the state constitution when it limited when certain former public employees could return to state jobs and resume making retirement contributions, the Alaska Supreme Court ruled.

The right to reinstatement "was an accrued benefit of the retirement system protected against diminishment or impairment," the court ruled in a class action that affects as many as 78,000 state workers.

The lawsuit was brought by Peter Metcalfe, who left state employment in 2001 and cashed out his retirement. The class action tested whether he and others would be eligible for reinstatement in the state's most generous plan, known as Tier I.

The Alaska Legislature made changes to the defined-benefit systems in 2005, including closing the existing tiers to new members and creating a defined contribution plan. Former members were granted a five-year period to return to eligible employment and repay their refunded contributions if they intended to take advantage of reinstatement. Failure to act during this five-year period resulted in permanent forfeiture of their credited service.

The deadline was the focus of the constitutional claim. Metcalfe noted in court documents that under the Alaska Constitution specifically states that employees' rights, once gained, cannot be removed. Justices ruled in his favor on a 3-2 vote.

Metcalfe said he didn't plan to return to work for the state, noting that he would have to buy his way back into the Tier 1 benefit program by reinstating the funds he withdrew. But, he emphasized, that wasn't the point, he said in an interview with KTOO.org, a public service news organization.

"It is a principle," Metcalfe told KTOO. "I don't think the legislature or the governor should be willy-nilly trying to limit benefits, or freedom of speech or anything else that is protected in the Constitution." ◆

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Calendar of Events 2021

June

[2021 Trustee Educational Seminar]

June 8–9, 2021

June

[WEBINAR: The Fallacies of Asset Allocation]

June 15, 2021

The Voice for Public Pensions

The Monitor is published by the National Conference on Public Employee Retirement Systems.
Website: www.NCPERS.org • E-mail: amanda@ncpers.org