AGENDA

Date: September 6, 2019

The regular meeting of the Dallas Police and Fire Pension System Board of Trustees will be held at **8:30 a.m. on Thursday, September 12, 2019, in the Second Floor Board Room at 4100 Harry Hines Boulevard, Dallas, Texas.** Items of the following agenda will be presented to the Board:

A. TRUSTEES

Welcome Non-member Trustees

B. MOMENT OF SILENCE

C. CONSENT AGENDA

1. Approval of Minutes

Regular meeting of August 8, 2019

2. **Approval of Refunds of Contributions for the Month of August 2019**

3. **Approval of Activity in the Deferred Retirement Option Plan (DROP) for September 2019**

4. **Approval of Estate Settlements**

5. **Approval of Survivor Benefits**

6. **Approval of Service Retirements**

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

D. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. **City Budget Overview**

2. **Treatment of Final Month Payment for DROP Participants**

   a. Possible Overpayment to DROP Participants subject to 10-year Limitation
   b. DROP Policy Amendment

3. **Portfolio Update**

4. **Rebalancing Report**

5. **Private Equity and Debt Portfolio Review**

6. **Second Quarter 2019 Investment Performance Analysis and First Quarter 2019 Private Markets & Real Assets Review**

7. **Chairman's Discussion Items**

   Recap of the meeting with the City of Dallas Mayor

8. **Audit Status**

9. **Monthly Contribution Report**

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

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

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

    TEXPERS Basic Trustee Training

12. Clarion – Possible sale of The Tribute

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.

13. Lone Star Investment Advisors 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.

14. 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, including DPFP et al. v. Alexander, consideration of legal options regarding DPFP's interests in Lone Star Funds, changes to Texas Open Meetings Act 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.

E. BRIEFING ITEMS

1. Reports and concerns of active members and pensioners of the Dallas Police and Fire Pension System

2. Executive Director's report

a. Associations' newsletters

- NCPERS Monitor (August 2019)

b. Open Records

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

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

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #A

Topic: **Welcome Non-member Trustees**

Discussion: The Non-members Trustees, Robert French, Gilbert Garcia, and Tina Hernandez Patterson, were certified and deemed elected by the Board at the August Board meeting and will serve from September 1, 2019 until August 31, 2022.

Regular Board Meeting – Thursday, September 12, 2019

Robert B. French

Robert B. French is a licensed Attorney and Financial Advisor for Cornerstone Wealth Management. Mr. French specializes in qualified and non-qualified benefit plans. Mr. French currently holds his investment licenses with Northwestern Mutual which holds $272.2 billion in assets and $28.5 billion in revenues. Its goal is to provide financial security to more than 4.5 million people who rely on it for insurance, annuities, and investment services. Mr. French specifically helps businesses implement and maintain their 401k, Cash Balance, and Executive Compensation programs to include Deferred Compensation and traditional Pension plans.

Mr. French received his bachelor’s degree from the University of North Texas and holds a Master of Business Administration, and Juris Doctorate Degree from Texas Tech University. He also holds an LL.M. in Taxation from the University of Houston’s School of Law.

Prior to Cornerstone Wealth Management, Mr. French served over a decade working with various U.S. Government Intelligence Agencies as an Anti-Money Laundering and Financial Analysis expert. This began in 2003 when Mr. French joined the U.S. Army as a Counter Intelligence Agent and was deployed in support of Operation Iraqi Freedom in 2005. During this tour, Mr. French was assigned to the U.S. Embassy in Baghdad. Mr. French’s next assignment included analytical support to the 82nd Airborne’s Counter-Narcotics and Threat Finance Cell in Bagram Afghanistan, in 2008. In 2012, Mr. French was tasked by the Defense Intelligence Agency to create a comprehensive financial audit on one of deadliest terrorist organizations in the Afghanistan-Pakistan region. This study helped change the interagency mindset on how to disrupt, destroy and dismantle this terrorist organization’s finances. Mr. French then deployed to Afghanistan in 2013 in support of the Afghanistan Threat Finance Cell’s efforts to support the now Chairman of the Joint Chiefs of Staff, Gen. Dunford’s campaign against this terrorist group.

Mr. French is married with two children. He has continued his military service as a Captain in the U.S. Air Force Reserve Judge Advocate General (JAG) Corp to this day.

DALLAS POLICE & FIRE PENSION SYSTEM

ITEM #B

MOMENT OF SILENCE

In memory of our Members and Pensioners who recently passed away

NAME	ACTIVE/ RETIRED	DEPARTMENT	DATE OF DEATH
Roy W. Williams	Retired	Fire	Jul. 26, 2019
Edgar L. Smith	Retired	Police	Aug. 1, 2019
William Bricker	Retired	Police	Aug. 3, 2019
Julian B. Allen	Retired	Police	Aug. 8, 2019
James D. Collett	Retired	Police	Aug. 12, 2019
Rodney R. Gant	Retired	Fire	Aug. 12, 2019
William B. Frazier	Retired	Police	Aug. 17, 2019
J. C. Minter	Retired	Fire	Aug. 17, 2019
Neal Hunter	Retired	Fire	Aug. 21, 2019
James R. Leavelle	Retired	Police	Aug. 29, 2019

Regular Board Meeting – Thursday, September 12, 2019

Dallas Police and Fire Pension System
Thursday, August 8, 2019
8:30 a.m.
4100 Harry Hines Blvd., Suite 100
Second Floor Board Room
Dallas, TX

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

ROLL CALL

Board Members

Present at 8:33 a.m.	William F. Quinn, Nicholas A. Merrick, Joseph P. Schutz, Blaine Dickens (by phone), Gilbert A. Garcia, Tina Hernandez Patterson, Armando Garza, Kneeland Youngblood
Absent	Ray Nixon, Susan M. Byrne, Robert C. Walters
Staff	Kelly Gottschalk, Josh Mond, Kent Custer, Brenda Barnes, John Holt, Damion Hervey, Cynthia Thomas, Aimee Crews, Trish Wiley, Ryan Wagner, Greg Irlbeck, Michael Yan, Milissa Romero
Others	Todd Rosa (by phone), Bryce Brunsting (by phone), David Elliston, Janis Elliston, Darryl Wachsman, Tom Moore, Sandy Alexander, Maura L. Pothier, Scott Freeman

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The meeting was called to order at 8:33 a.m.

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A. MOMENT OF SILENCE

The Board observed a moment of silence in memory of retired police officer Verlon R. Bryant, and retired firefighters T. D. Gibson, Jr., and John F. Reynolds.

No motion was made.

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Regular Board Meeting
Thursday, August 8, 2019

B. CONSENT AGENDA

1. **Approval of Minutes**

   Regular meeting of July 11, 2019

2. **Approval of Refunds of Contributions for the Month of July 2019**

3. **Approval of Estate Settlements**

4. **Approval of Survivor Benefits**

5. **Approval of Service Retirements**

6. **Approval of Alternate Payee Benefits**

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

After discussion, Mr. Youngblood made a motion to approve the minutes of the meeting of July 11, 2019. Mr. Garcia seconded the motion, which was unanimously approved by the Board.

After discussion, Mr. Youngblood made a motion to approve the remaining items on the Consent Agenda, subject to the final approval of the staff. Mr. Garcia 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. **Certification of Non-member Trustee Election Results**

   The terms of the three Non-member Trustees (Blaine Dickens, Gilbert Garcia and Tina Hernandez Patterson) expire on August 31, 2019.

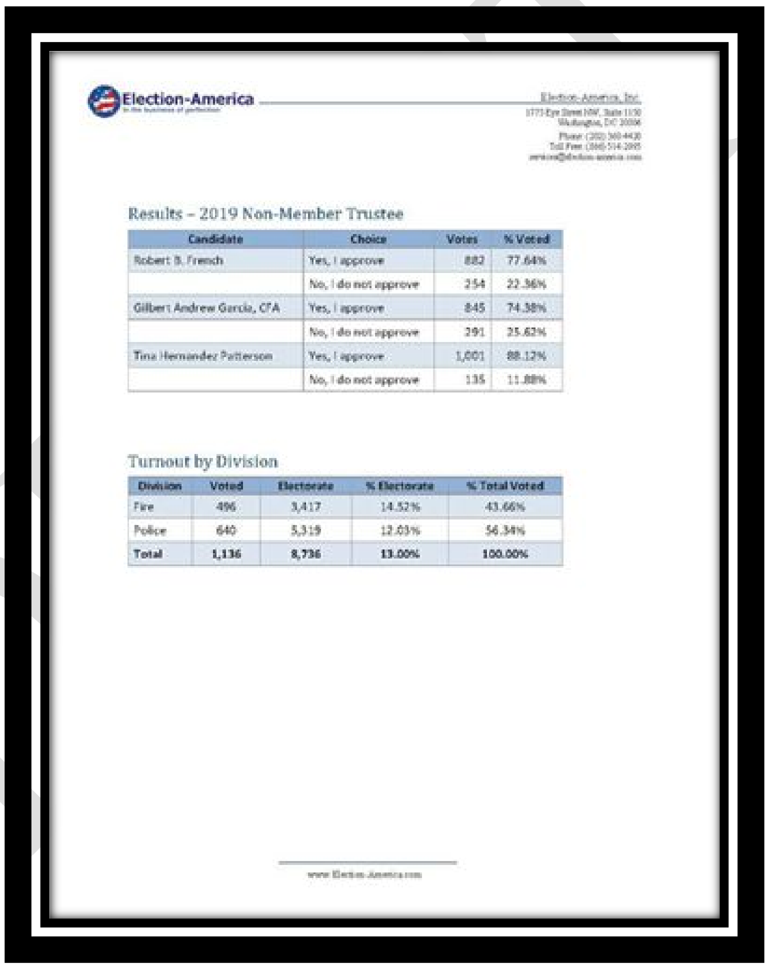
   Pursuant to the election rules adopted by the Board, Robert French, Gilbert Garcia, and Tina Hernandez Patterson have been elected by the members and pensioners from a slate of nominees selected and vetted by the nominations committee as required by Article 6243a-1 of the Texas Statutes. The terms of the three Non-member Trustees will run from September 1, 2019 to August 31, 2022.

Regular Board Meeting
Thursday, August 8, 2019

1. Certification of Non-member Trustee Election Results (continued)

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

After discussion, Mr. Youngblood made a motion to certify the election of Robert French, Gilbert Garcia and Tina Hernandez Patterson as Non-member Trustees to serve from September 1, 2019 until August 31, 2022. Mr. Garza seconded the motion, which was unanimously approved by the Board.



Election-America

Election-America, Inc.

Results – 2019 Non-Member Trustee

Candidate	Choice	Votes	% Voted
Robert B. French	Yes, I approve	882	77.64%
	No, I do not approve	254	22.36%
Gilbert Andrew Garcia, CFA	Yes, I approve	845	74.38%
	No, I do not approve	291	25.62%
Tina Hernandez Patterson	Yes, I approve	1,001	88.12%
	No, I do not approve	135	11.88%

Turnout by Division

Division	Voted	Electorate	% Electorate	% Total Voted
Fire	496	3,417	14.52%	43.66%
Police	640	5,319	12.03%	56.34%
Total	**1,136**	**8,736**	**13.00%**	**100.00%**

www.Election-America.com

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3 of 7

Regular Board Meeting
Thursday, August 8, 2019

2. Chairman's Discussion Items

Thank Outgoing Trustees

The Chairman thanked the outgoing Trustees for their service.

No motion was made.

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3. Monthly Contribution Report

Staff presented the Monthly Contribution Report.

No motion was made.

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4. Quarterly Financial Reports

The Chief Financial Officer presented the second quarter 2019 financial statements.

No motion was made.

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5. 2019 Mid-Year Budget Review

The Chief Financial Officer presented a review of the 2019 Operating Expense Budget detailing expenses for the first six months of the calendar year.

No motion was made.

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6. Audit Status

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

No motion was made.

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Regular Board Meeting
Thursday, August 8, 2019

7. Board approval of Trustee education and travel

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

No discussion was held, and no motion was made regarding Trustee education and travel. There was no future investment-related travel.

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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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9. Treatment of Final Month Payment for DROP Participants

a. Possible Overpayment to DROP Participants subject to 10-year Limitation
b. DROP Policy Amendment

Staff briefed the Board on the status of monthly annuity payments to DROP participants subject to the 10-year limitation on remaining in DROP.

No motion was made.

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10. Potential Waiver of Disability Recall Requirement

The Board went into closed session executive session –Medical at 9:37 a.m.

The meeting was reopened at 9:49 a.m.

After discussion, Mr. Garcia made a motion to waive all future disability recall evaluations for the specific members identified as P-1 through P-5 and F-1. Mr. Garza seconded the motion, which was unanimously approved by the Board.

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11. Hearthstone Sale Update

Regular Board Meeting
Thursday, August 8, 2019

Todd Rosa, Vice President and Bryce Brunsting, SVP & COO of Hearthstone (by phone) and staff provided a status update on the sale of the assets.

The Board went into closed session executive session – Real Estate at 10:27 a.m.

The meeting was reopened at 10:39 a.m.

No motion was made.

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12. Lone Star Investment Advisors Update

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

The Board went into closed session executive session – Legal at 9:55 a.m.

The meeting was reopened at 10:27 a.m.

No motion was made.

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13. 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, including collection of amounts due from the City of Dallas relating to USERRA 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 session executive session – Legal at 9:55 a.m.

The meeting was reopened at 10:27 a.m.

No motion was made.

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Regular Board Meeting
Thursday, August 8, 2019

D. BRIEFING ITEMS

1. Reports and concerns of active members and pensioners of the Dallas Police and Fire Pension System

The Board received member's comments during the open forum.

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2. Executive Director's report

a. Associations' newsletters
- NCPERS Monitor (July 2019)
- NCPERS PERSist (Summer 2019)

b. Open Records
c. Member Education Update
d. City Payroll Errors Update

The Executive Director's report was presented.

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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Youngblood and a second by Mr. Garcia, the meeting was adjourned at 10:44 a.m.

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William F. Quinn
Chairman

ATTEST:

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Kelly Gottschalk
Secretary

DISCUSSION SHEET

ITEM #D1

Topic: **City Budget Overview**

Attendees: Elizabeth Reich, City of Dallas, Chief Financial Officer

Discussion: At the Board's request, Elizabeth Reich, City of Dallas CFO, will provide an overview of the City of Dallas 2019-2020 Recommended Budget and an overview of the new Meet and Confer Agreement.

City of Dallas' Recommended Budget for FY 2019-20 and FY 2020-21

Dallas Police & Fire Pension System Board Meeting

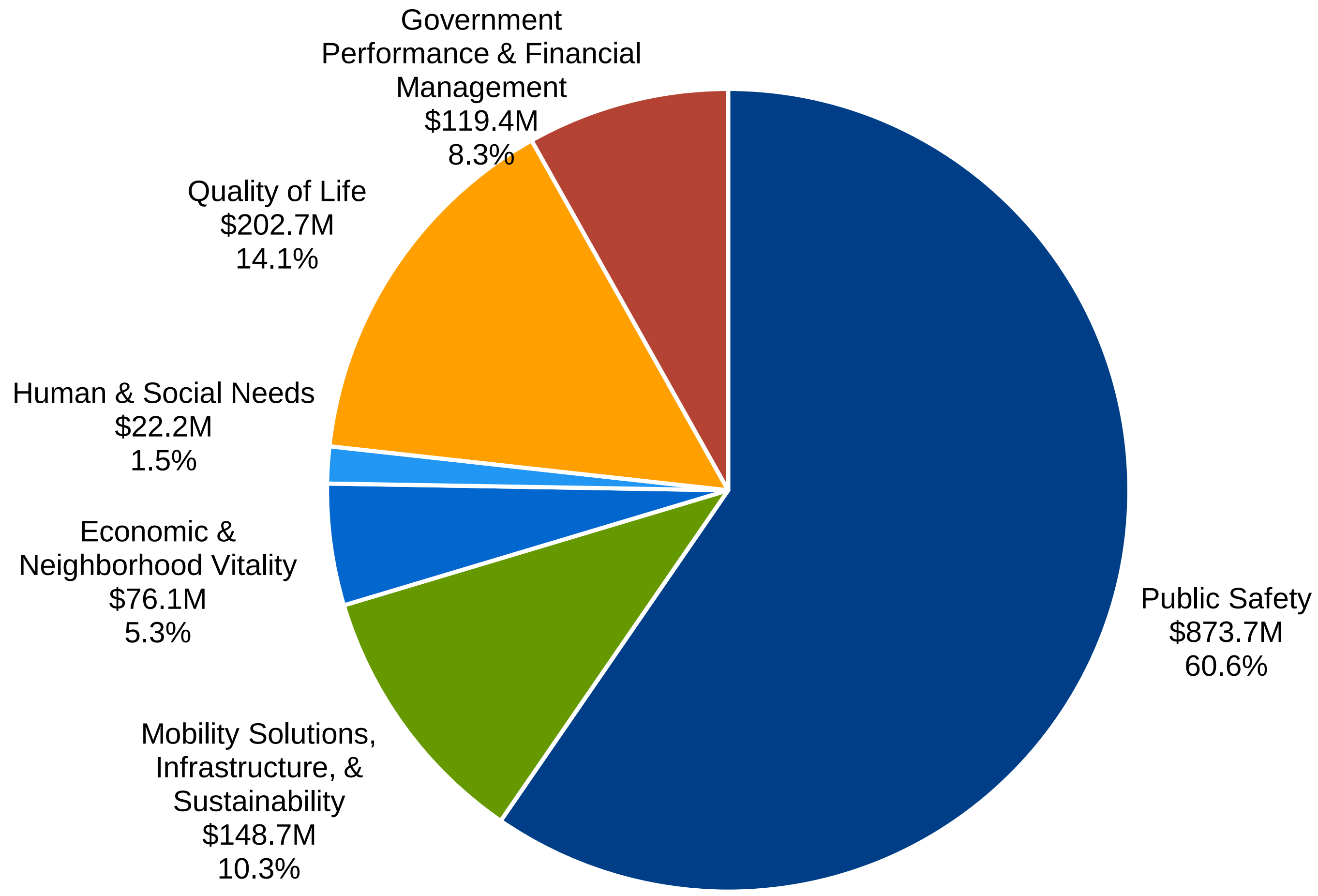
Elizabeth Reich
Chief Financial Officer

September 12, 2019

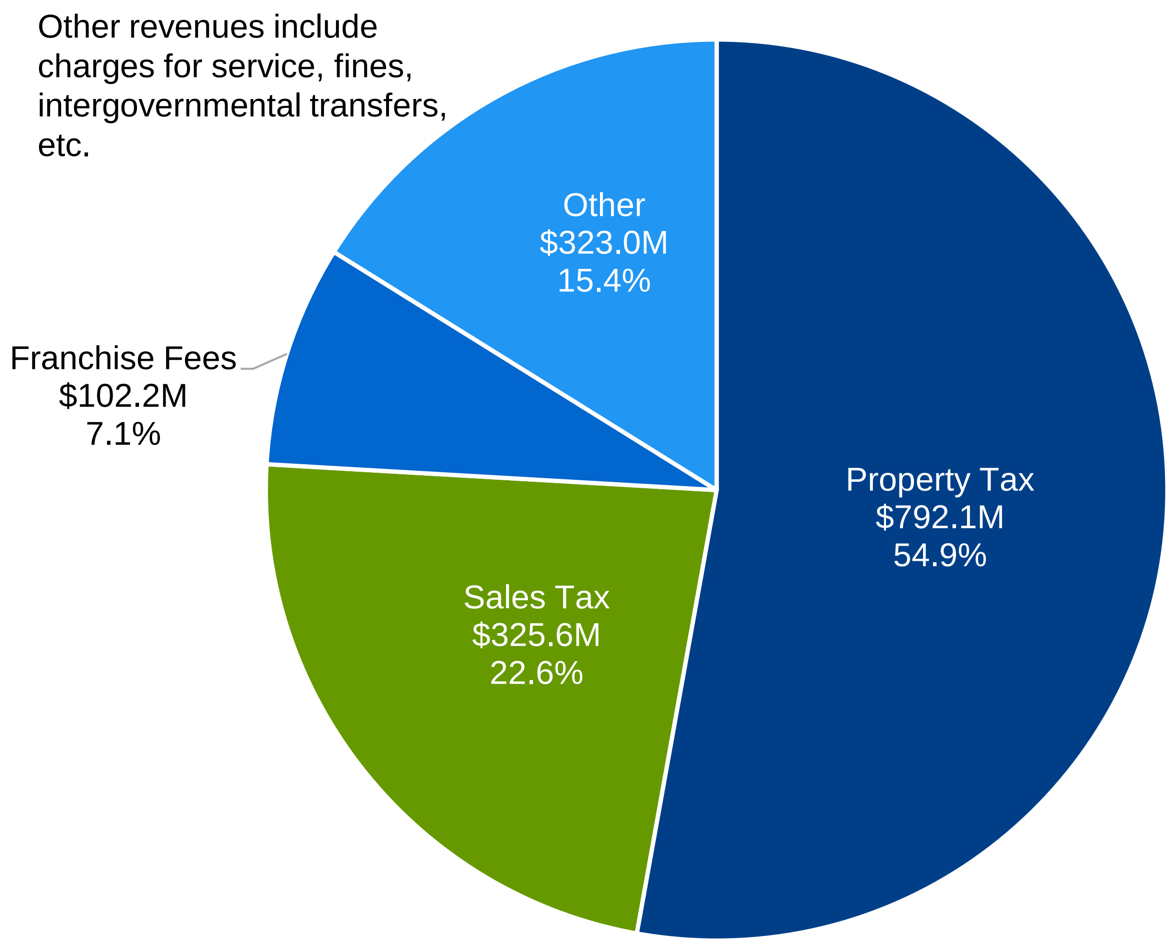
FY 2018-19 Proposed Budget

- FY 2019-20 Proposed Annual Budget $3.8 billion
  - Operating Budget (funds day-to-day operation and maintenance) $2.9 billion
    - General Fund $1.4 billion
    - Enterprise Funds $1.2 billion
    - General Obligation Debt Service $305.5 million
  - Capital Budget (funds long-term capital improvements) $872.4 million
    - General Purpose $439.7 million
    - Enterprise Capital $432.8 million

General Fund Expenses



General Fund Revenue



Sales Taxes

- Sales tax in Dallas is 8.25%, including the 2% local option that is governed and capped by state law
- State law identifies which goods and services are taxable versus non-taxable
- FY 2019-20 assumes 4.47% growth above FY 2018-19 budget and totals $325.6 million anticipated revenue
- Continued growth is forecast for future years, but at slower pace

Sales Tax Distribution	
State of Texas	6.25%
Local Option – Dallas Area Rapid Transit (DART)	1.00%
Local Option – City of Dallas	1.00%
Total	8.25%

Property Taxes

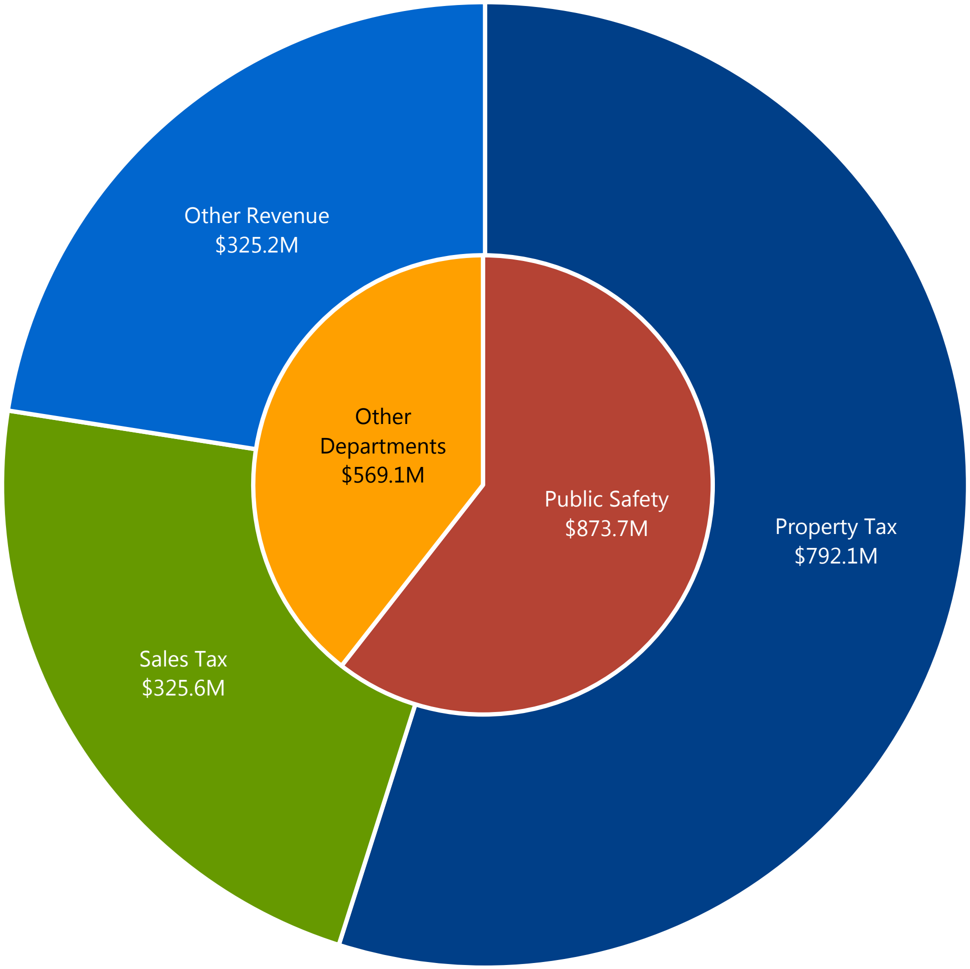
- Each property owner's tax bill differs based on the property value, applicable exemptions, and county and school district in which they reside
- Average value for single-family residential property is currently $303,301

Taxing Entity	Tax Rate/$100 Value	Tax Bill	Percent of Tax Bill
City of Dallas	$0.780000	$1,892.60	28.6%
Dallas County	$0.243100	$589.86	8.9%
Dallas Community College District	$0.124000	$300.87	4.5%
Parkland Hospital	$0.269550	$654.04	9.9%
Dallas ISD	$1.310385	$3,179.53	48.1%
Total	**$2.727035**	**$6,616.90**	**100.0%**

- Dallas overlaps four counties and 18 school districts
- Tax bill assumes residential property has 20% homestead exemption

General Fund Expense and Revenue

100% of General Fund property tax + 25.1% of sales tax is needed to fund the Public Safety strategic priority, including Police, Fire, Courts, Jail, and Judiciary



Public Safety

- Secure the future of our first responders by contributing $162 million to the Dallas Police and Fire Pension System, $5.2 million more than last year
- Establish a team of civilian crime intelligence analysts who will analyze imaging and data in real time to proactively implement crime-fighting strategies
- Protect our first responders by purchasing a second set of personal protective equipment and a complete replacement of self-contained breathing apparatus for firefighters and replacing body-worn cameras for police officers
- Strengthen relationships between the community and police department through the Office of Community Police Oversight

Public Safety

- Recruit and retain police officers and firefighters through a new pay structure based on an annual market survey of 17 comparison cities and set aside funds to hire or retain additional police officers or for recommendations from the DPD staffing analysis

Start of Fiscal Year	Sworn Police Officers	Sworn Fire-Rescue Officers
October 1, 2017 (actual)	3,070	1,810
October 1, 2018 (estimated)	3,028	1,939
October 1, 2019 (estimated)	3,034	1,961
October 1, 2020 (estimated)	3,053	1,942
October 1, 2021 (estimated)	3,064	1,942

2019 Proposed Meet and Confer Agreement - Pay Philosophy Goal

- Recognize the outstanding work and dedication of Dallas public safety professionals
- Develop pay structure to recruit **AND** retain police officers and firefighters
- Establish a pay structure based on market survey that allows movement to follow annual growth
  - Address both entry level and top pays
  - Place employees in step-year equal to their tenure in rank
- Simplify the pay structure
  - Reduce the number of pay schedules
  - Make easier to read and understand

2019 Proposed Meet and Confer Agreement - Pay Schedule Development

- Annual survey conducted by March of each year
  - Conducted by associations of the meet and confer team and city management – pay sub-committee
  - 17 Comparator Cities
    - Based on city size and competition for employment

Comparator Cities	
Allen	Houston
Arlington	Irving
Austin	Lewisville
Carrolton	McKinney
Denton	Mesquite
Ft. Worth	Plano
Frisco	Richardson
Garland	San Antonio
Grand Prairie	

2019-20 Pay Schedule

Police Officer & Fire Fighter		
Years in Rank	Salary	Percent
Start	$61,367	-
1	$63,374	3.3%
2	$65,447	3.3%
3	$67,587	3.3%
4	$69,798	3.3%
5	$72,080	3.3%
6	$74,438	3.3%
7	$76,872	3.3%
8	$79,387	3.3%
9	$81,983	3.3%

Sr. Corporal & Driver		
Years in Rank	Salary	Percent
Start	$79,387	-
1	$81,768	3.0%
2	$84,221	3.0%
3	$86,748	3.0%
4	$89,350	3.0%

2019-20 Pay Schedule (Supervisory)

Police Sergeant & Fire Lieutenant		
Years in Rank	Salary	Percent
Start	$91,584	2.5%
1	$93,874	2.5%
2	$96,221	2.5%
3	$98,626	2.5%

Police Lieutenant & Fire Captain		
Years in Rank	Salary	Percent
Start	$101,092	2.5%
1	$103,619	2.5%
2	$106,209	2.5%
3	$108,865	2.5%

Fire Battalion Chief		
Years in Rank	Salary	Percent
Start	$111,586	2.5%
1	$114,376	2.5%
2	$117,235	2.5%
3	$120,166	2.5%

Certification Pay

- The proposed agreement includes a reduction in intermediate certification pay.

	Intermediate	Advanced	Master
Survey Pay	61	106	176
Dallas Current	200	400	600
Dallas Proposed	50	400	600

Pay Schedule Summary

- Average increases by employee will vary
  - 67% of personnel will receive up to 10% increase
    - Approximately 100 above market would not receive increase
  - 20% will receive increase from 11% to 20%
  - 13% will receive increase over 20%
- Some may not receive an increase in year 1
- Some may receive a reduction in certification pay
- No employees will receive a net decrease between base salary and certification pay

Pay Schedule Summary

- 2019-20 schedule based on current market survey
- 2020-21 & 2021-22 assumes 3% growth
- Cost to implement the new pay schedules

2019-20	2020-21	2021-22	2022-23	Total
$23.2 m	$36.7 m	$25 m	$14.4	$99.4

- The total amended cost for the 2016 Meet and Confer Agreement was $105 million
- Similar pay structure will be applied to the management ranks not covered by the Meet and Confer Agreement

2019 Proposed Meet and Confer Agreement – Impacts on Pension

- Normal cost of benefit increases to 16.6% from 15.3%
- On average, for every 10% increase in pay for a non-DROP employee, the value of the pension benefit increases by 6% (10% increase in present value of pension benefit less 4% increase in present value of contributions)
  - The closer the member is to retirement, the greater the net value of the pay increase – as long as the member does not retire within 3 (or 5) years of the increase
- City contributions begin exceeding floor in FY 2022
- Funded year improved by 5 years
- If headcount continues to increase such that projected payroll is consistent with that assumed in HB 3158, the full funding year improves by another 3 years
  - City would need to reach 5,260 (rather than 5,523) active employees in 2027 and beyond

Caveats: As with all actuarial work, this is based on certain assumptions – future estimates may differ, and actual experience will almost certainly be different than assumed, and those differences may be material. The scope of this analysis was limited. We will share assumptions with the DPFP actuary.

Mobility Solutions, Infrastructure, & Sustainability

- Conserve resources and maintain infrastructure by devoting $140.8 million for installation and rehabilitation of about 80 miles of water and wastewater mains
- Prevent flooding in local streets through the neighborhood drainage program, focusing on erosion control and channel repairs
- Ensure City facilities stay safe and functional through major maintenance of roofs, HVAC, and other building systems and reduce future costs through an enhanced preventive maintenance program
- Improve the pavement condition of 710 lane miles of streets and alleys by investing more than $32.8 million in bonds and $52.7 million in cash
- Promote safety and enhance traffic flow by replacing broken vehicle detectors at 40 critical intersections, retiming 250 traffic signals, and installing 21 LED Dynamic Message Signs around Fair Park

Economic & Neighborhood Vitality

- Further affordable housing throughout the city as prescribed in the Comprehensive Housing Policy through the 2020 Notice of Funding Availability
- Update the City's Comprehensive Plan to incorporate more recent policy initiatives and encourage strategic land development while promoting equity, sustainability, and neighborhood revitalization
- Stimulate small businesses and startups in high-opportunity areas through training and other workforce development services
- Broaden investment in minority- and women-owned businesses based in Dallas through capacity-building resources and training
- Spur new development in the 19 Tax Increment Financing (TIF) districts throughout the city by reinvesting $85 million in property tax revenue

Human & Social Needs

- Provide tax relief to residents over 65 or with a disability by increasing the property tax exemption to $100,000 from $90,000
- Advance equity and inclusion in City government and across Dallas by understanding historical and deeply ingrained policies and practices and engaging the community to address present-day challenges
- Partner with nonprofit and other community agencies to deliver services designed to address the nine drivers of poverty, including eliminating barriers to work
- Offer temporary shelter to individuals experiencing homelessness during extreme hot and cold weather or for up to 90 days through a pay-to-stay initiative
- Develop a neighborhood grant program to maximize resources for reclaiming and repurposing chronic homeless encampments

Quality of Life

- Boost recreational programming for teenage residents with a focus on arts and culture, community service, health and wellness, leadership and life skills, and technology
- Engage residents in the Community Clean! initiative to reduce illegal dumping, litter, and high weeds in focus neighborhoods through regular community-led cleanups
- Expand Internet access, a basic 21st-century need for education and employment, to more residents by making mobile hot spots available for checkout at high-need libraries
- Augment overnight animal service response by scheduling officers to be on duty seven nights a week instead of four
- Create pop-up cultural centers to bring cultural activities to areas of the city without easy access to arts programming

Government Performance & Financial Management

- Cultivate the use of data analytics and evidence-based decision making throughout the City under the leadership of the Office of Innovation
- Take a big-picture approach to technology projects by prioritizing proposals through the IT Governance Committee
- Drive operational efficiency, reduce overall costs, and improve delivery of City services through timely replacement and preventive maintenance of fleet vehicles
- Centralize monitoring of vendor performance to ensure contracts are completed on time, within budget, and fulfill the terms of the agreement
- Foster an ethical organizational culture by continuing biennial ethics training and expanding the Values Ambassador program

City of Dallas' Recommended Budget for FY 2019-20 and FY 2020-21

Dallas Police & Fire Pension System Board Meeting

Elizabeth Reich
Chief Financial Officer

September 12, 2019

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D2

Topic: **Treatment of Final Month Payment for DROP Participants**

a. Possible Overpayment to DROP Participants subject to 10-year Limitation
b. DROP Policy Amendment

Discussion:

a. In the month DROP participants retire, staff has been paying a full monthly benefit to all DROP members. Staff believes the payment in the retirement month for members who have reached the 10-year limitation in DROP should be pro-rated to include only those days in which the member was retired.

At the August Board meeting staff introduced this item and recommended that the Board authorize staff to collect these overpayments. The Board directed staff to contact those members impacted by the overpayment and discuss the overpayment issue and recovery of the overpayment. Staff is proposing collections over a period of months (3-12 months) depending on the percentage of overpayment compared to the monthly benefit payment (excluding DROP annuity) and that the first collection begin on October 31, 2019.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D2
(continued)

b. Staff is presenting an amendment to the DROP Policy to provide for clarity of the treatment of the payment of the monthly benefit in the month of retirement for DROP participants.

Staff Recommendation:

a. **Authorize** the Executive Director to collect, commencing October 31, 2019, all overpayments to retirees having reached the 10-year limitation in DROP who were overpaid in their first month of retirement with a collection period over 3 to 12 months with such collection policy to be implemented in the Executive Director's discretion.

b. **Approve** the DROP Policy as amended.

Illustration of Two Members going from Active DROP to Retirement. This Illustration reflects the Benefit Accrual to DROP and the Retirement Payment Only. The DROP Annuity is not illustrated.

Member 1 has less than 10 years in DROP at Retirement - the illustration below shows the correct treatment for members with less than 10 years in DROP

Member 2 reached 10 years in DROP on March 31st - the illustrations below shows the incorrect and correct treatment of the retirement payment at retirement.

Facts for Both Member Examples:

Member leaves active service (LAS) June 14th

Retirement effective June 15th

Board approves retirement July 11th

First retirement payment July 31st

The monthly amount of the Benefit Accrual to DROP and Retirement Payment are each $5,000

General Rules:

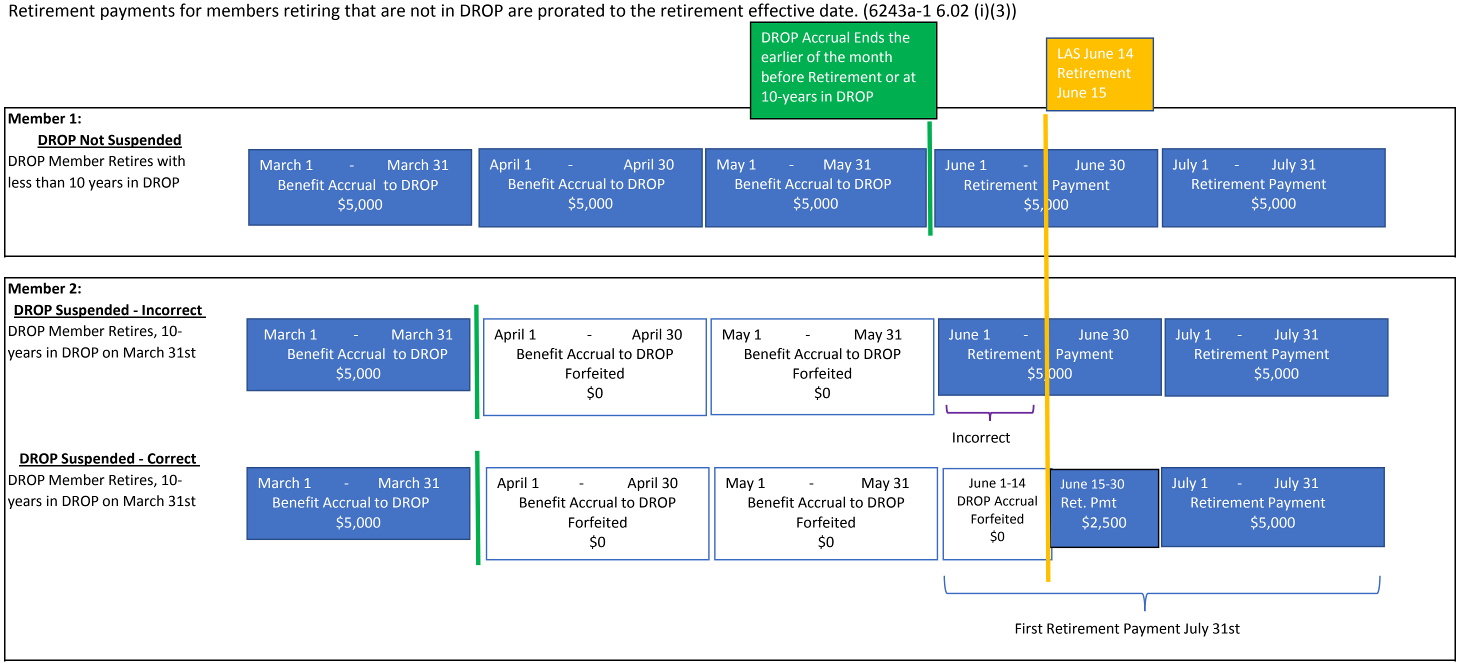
DROP begins the first day of the month the member makes the election to join DROP. (6243a-1 6.14 (b))

The Benefit Accrual to the DROP balance continues through the month before the member leaves active service. (6243a-1 6.14 (c))

A member who has 10 or more years in DROP shall no longer have amounts credited to their DROP accounts while in active service. (6243a-1 6.14 (c))

Retirement pensions for active members in DROP are effective the first of the month of retirement so there is no gap or loss between DROP & Retirement (long standing practice)

Retirement payments for members retiring that are not in DROP are prorated to the retirement effective date. (6243a-1 6.02 (i)(3))



NOTE: This information relates only to the monthly Retirement Benefit not the DROP annuity payment. The DROP annuity payment is effective the beginning of the month the member leaves active service.

DALLAS POLICE & FIRE PENSION SYSTEM

DEFERRED RETIREMENT OPTION PLAN POLICY

As Amended Through September 12, 2019 ~~August 8, 2019~~~~December 13, 2018~~

DEFERRED RETIREMENT OPTION PLAN POLICY

Table of Contents

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DEFERRED RETIREMENT OPTION PLAN POLICY

Adopted December 10, 1992
Amended through ~~December 13, 2018~~ ~~August 8, 2019~~ September 12, 2019

A. PURPOSE

1. This policy provides rules governing the Deferred Retirement Option Plan of the Dallas Police and Fire Pension System ("DPFP"), as contemplated by Section 6.14 of Article 6243a-1 of Revised Statutes (the "Plan") and the Supplemental Pension Plan for the Police and Fire Departments of the City of Dallas, Texas (the "Supplemental Plan") where applicable. It is intended that DROP and the terms of this policy allow for the continued qualification of the Plan under Section 401 of the Internal Revenue Code ("Code").

2. Any reference in this policy to a provision of the Plan shall also be considered a reference to the comparable provision of the Supplemental Plan if the applicant is a member of the Supplemental Plan.

3. The Executive Director may, if necessary, develop written procedures to implement this policy.

4. This policy may be amended at any time by the Board of Trustees ("Board"), consistent with the terms of the Plan.

5. Any capitalized terms not defined in this policy shall have the meaning ascribed to them in the Plan.

B. DEFINITIONS

1. **DROP -** The program whereby a Member while still in Active Service may elect to have an amount equal to the pension benefit that the Member would otherwise be eligible to receive be credited to a notional account on the Member's behalf. A Member, as of his or her intended date of participation in DROP, must be eligible to retire and receive an immediate pension benefit. An election to enter DROP is irrevocable except for the one-time revocation window for certain Members that is described in Section D.

2. **DROP Account** - The notional account of a Member, retiree, beneficiary or Alternate Payee created pursuant to Section 6.14 of the Plan which existed or exists prior to any annuitization required under the Plan and in conformity with this policy.

B. DEFINITIONS (continued)

3. **DROP Annuitant** – The holder of a DROP Annuity.

4. **DROP Annuity** – The series of equal payments created when a DROP Account is annuitized as required under the Plan and in conformity with this policy.

C. ENTRY INTO DROP

1. The application of any Member applying for DROP participation will be placed on the agenda for a Board meeting as soon as administratively practicable following the date the application is received for consideration and approval.

2. If the Board approves a DROP application, the application will become effective on the first day of the month in which the Board approves the application.

3. At the time of entry into DROP, the Member must irrevocably select the Plan benefit he or she will receive at the time his or her pension benefit will commence upon retirement with the Member's pension benefit calculated as of the effective date of entering DROP. While on Active Service, these benefit amounts that the Member would have otherwise received if he or she would have retired on his or her effective date of DROP participation will be credited to the DROP Account.

4. Once a Member has elected to participate in DROP, that election is irrevocable except as further described in Section D.

5. A Group B Member who obtains a rank that is higher than the highest Civil Service Rank for the City of Dallas after the effective date of his or her participation in DROP will not participate in the Supplemental Plan.

6. As of the effective date of his or her participation in DROP, the Member will no longer be entitled to obtain additional Pension Service by repaying previously withdrawn contributions or paying for any Pension Service that could have been purchased under the Plan prior to DROP entry. However, a Member who is entitled, under Section 5.08 of the Plan, to purchase credit for Pension Service for any period he or she was on a military leave of absence may still purchase that Pension Service after entering DROP so long as the required contributions are made no later than the time provided by the Uniformed Services Employment and Reemployment Rights Act ("USERRA").

7. The Board shall interpret the Plan and this policy to ensure that Members' rights are fully protected as required by USERRA.

D. DROP REVOCATION

1. A Member who was a DROP participant on or before June 1, 2017, has a one-time opportunity to revoke his or her DROP election. The revocation must be made before the earlier of February 28, 2018, or the date that the Member terminates Active Service. The revocation must be made by filing with the Executive Director a completed DROP revocation election form that has been approved by the Executive Director.

2. A DROP revocation eliminates the balance in a Member's DROP Account. The Member's benefit will then be established at the earlier of when the Member either (a) reenters DROP or (b) retires with DPFP, and will be calculated at that time under the Plan based upon the Member's total Pension Service and historic Computation Pay (highest 36 consecutive months for Pension Service prior to September 1, 2017 and highest 60 consecutive months for Pension Service on or after September 1, 2017.)

3. Any revocation of DROP participation described in this Section shall be for the entire period that the Member participated in DROP. No partial revocation of DROP participation shall be accepted.

4. No Member shall be entitled to revoke his or her DROP participation if any amount has been transferred out of such Member's DROP Account, except for any transfers related to corrections to DROP Accounts.

5. A Member will be credited with Pension Service for all or a portion (one-half) of the period relating to the revoked DROP participation if the Member who revoked the DROP participation purchases such Pension Service in an amount equal to the sum of: (a) the Member contributions that would have been made if the Member had not been a DROP participant during such period of DROP participation and (b) interest on such Member contributions, calculated on the contributions for the period from the dates the contributions would have been made if the Member had not been a DROP participant through the date of purchase. Interest will be calculated (a) through February 28, 2018 at the monthly rate of change of the U.S. City Average All Items Consumer Price Index (unadjusted) for All Urban Wage Earners and Clerical Workers for the applicable periods and (b) after February 28, 2018 at the interest rate used from time to time in DPFP's actuarial rate of return assumptions, compounded annually. Periods where the monthly rate of change was negative shall be computed as zero interest for such periods. DPFP staff shall be authorized to establish procedures for implementing the interest calculation required in this Section.

D. DROP REVOCATION (continued)

6. A Member may purchase Pension Service relating to the period of revoked DROP participation in increments of one-half of his or her total Pension Service during DROP participation. If a Member elects to purchase one-half of his or her total Pension Service available to be purchased following the DROP revocation, (a) a Member may not elect to purchase Pension Service relating to specific time periods during his or her DROP participation and (b) the amount of the Member contributions for purposes of such purchase will be one-half of the total amount required to be paid pursuant to Section D.5. above.

7. If a Member elects to purchase one-half of his or her Pension Service available to be purchased following the DROP revocation, the Member may subsequently purchase the remaining one-half of the Pension Service available, but must complete such purchase prior to any election to reenter DROP or terminating Active Service. The amount to be paid for the remaining Pension Service to be purchased will be calculated pursuant to subsections 4 and 5 above, with interest continuing to accrue on the portion that has not yet been paid at the rate used from time to time in DPFP's actuarial rate of return assumptions, compounded annually, calculated from the date of the original Pension Service purchase through the date of the purchase of the remaining Pension Service.

8. Only full payment will be accepted for the amount of any Pension Service elected to be purchased under this Section. No partial payment will be accepted. Direct rollovers from other tax-qualified plans or similar employer plans, including governmental Section 401(k) (including the City of Dallas 401(k) Retirement Savings Plan) and 457(b) deferred compensation plans and Section 403(b) annuity arrangements will be accepted for payment to the extent such plans permit such rollovers. Payment is not permitted from the Member's DROP account.

9. For the purposes of calculating a Member's pension benefit in the case where a Member purchases only one-half of the total Pension Service available for the period relating to a DROP revocation, the purchased Pension Service attributable to time prior to September 1, 2017 shall be equal to the product of: (a) the amount of Pension Service purchased, multiplied by (b) a fraction of which the numerator equals the Pension Service available for purchase representing periods prior to September 1, 2017, and the denominator equals the total Pension Service available for purchase in connection with the DROP revocation.

10. All DROP revocation election forms must be received by DPFP in proper order by February 28, 2018 and will be considered effective as of September 6, 2017 after approval by DPFP staff that the form is in proper order. Approval of the Board shall not be required for a DROP revocation to become effective.

DALLAS POLICE & FIRE PENSION SYSTEM

E. ANNUITIZATION OF DROP ACCOUNTS

1. **Methodology.**

   DPFP staff, with the assistance of DPFP's Qualified Actuary, shall determine the annuitization of all DROP Accounts as required by the Plan and consistent with this policy.

2. **Interest Rates.**

   To reflect the accrual of interest over the annuitization period of a DROP Annuity as required under the Plan, the accrual of interest for all DROP Annuities shall be calculated utilizing an interest rate based on the published United States Department of Commerce Daily Treasury Yield Curve Rates ("Treasury Rates") for durations between 5 and 30 years, rounded to two decimal places. If an annuitization period for a DROP Annuity is between the years for which Treasury Rates are established, then a straight-line linear interpolation shall be used to determine the interest rate. The interest rates for purposes of this subsection E.2. will be set on the first business day of each quarter (January, April, July and October) and will based upon the average of the Treasury Rates as published on the 15th day of the three prior months, or the next business day after the 15th day of a month if the 15th day falls upon a day when rates are not published. Based upon advice from DPFP's Qualified Actuary upon implementation of this policy, interest rates to be used in calculating DROP Annuities with an annuitization period that exceeds thirty years will be the Treasury Rate published for the 30-year duration as Treasury Rates beyond thirty years do not exist. The initial interest rates effective as of October 1, 2017, are attached to this policy as Exhibit 1.

3. **Mortality Table.**

   The Board shall, based upon the recommendation of DPFP's Qualified Actuary, adopt a mortality table to be utilized in determining life expectancy for purposes of calculating DROP Annuities. The mortality table shall be based on the healthy annuitant mortality tables used in the most current actuarial valuation and blended in a manner to approximate the male/female ratio of holders of DROP accounts and DROP annuities. The Board will review this table and male/female blended ratio upon the earlier of (i) the conclusion of any actuarial experience study performed by DPFP's Qualified Actuary or (ii) any change to mortality assumptions in DPFP's annual actuarial valuation. Actual ages used in calculating life expectancy will be rounded to two decimals. The life expectancy will be rounded to the nearest whole year. Life expectancy in whole years based on a 2017 annuitization date and the mortality table recommended by DPFP's Qualified Actuary is shown in Exhibit 2.

E. ANNUITIZATION OF DROP ACCOUNTS (continued)

4. **Initial Annuitization of Non-Member's DROP Accounts.**

a. The first payment of DROP Annuities after annuitization of all DROP Accounts in existence on or after September 1, 2017, except those DROP Accounts of Members, shall commence the last business day of the month in which this policy is adopted, or as soon as practicable thereafter.

b. The initial annuitization of all non-Member DROP Accounts existing on September 1, 2017 will be calculated and implemented on the basis of a monthly annuity. DPFP staff will send notices to the holders of such DROP Annuities to inform them that they have sixty (60) days from the date of such notice to make a one-time election to have the monthly DROP Annuity converted to an annual annuity. If a DROP Annuitant makes such an election, the monthly DROP Annuity payments will cease as soon as administratively practicable, and the first payment of the annual DROP Annuity will begin 12 months after the last monthly payment made to the DROP Annuitant.

c. For purposes of the initial annuitization described in this subsection E.4., any DROP Account which is held by a non-Member at any time on or after September 1, 2017, but prior to the initial annuitization pursuant to subsection E.4.a. above, shall (i) be adjusted to reflect any distributions to such non-Member after September 1, 2017, but prior to the initial annuitization and (ii) accrue interest for the period from September 1, 2017 through the date of initial annuitization at the same rate as the interest rate applicable pursuant to subsection E.2. in the calculation of the initial DROP Annuity.

d. Annuitization of any non-Member DROP Account under this subsection E.4. will be based on the age of the holder of such DROP Account as of the first day of the month when the annuitization of DROP Accounts under this subsection E.4. occurs. In the case of a DROP Account which is held by a trust, such DROP Account will be annuitized using the age of the oldest beneficiary of the trust.

5. **Annuitization of Member DROP Accounts**

a. The DROP Annuity for a Member shall be calculated based upon the Member's age and DROP Account balance on the effective date of the Member's retirement. The interest rate applicable to the calculation of the Member's DROP Annuity will be the interest rate in effect under subsection E.2. during the month the Member terminates Active Service. Payment of the DROP Annuity shall commence effective as of the first day of the month in which the Member's retirement commences.

E. ANNUITIZATION OF DROP ACCOUNTS (continued)

5. Annuitization of Member DROP Accounts (continued)

b. Each Member as part of the retirement process shall be given the opportunity to elect either a monthly or annual DROP Annuity. If no election is made, the Member will be deemed to have elected a monthly DROP Annuity.

6. Annuitization of Alternate Payee's Account

The DROP Annuity for any Alternate Payee receiving a portion of a Member's DROP Account through a Qualified Domestic Relations Order after the date of this policy shall commence on the earlier of (i) the date the Member's DROP Annuity commences or (ii) the first day of the month the Alternate Payee reaches age 58. Calculation of the DROP Annuity of an Alternate Payee will be based on the age of the Alternate Payee and the interest rate in effect under subsection E.2 upon commencement of the DROP Annuity.

7. Annuitization and Payments to Beneficiaries

a. Upon the death of a Member, the DROP Account of such Member shall be transferred to the Member's beneficiary(ies) pursuant to Section F of this policy. Such transferred account shall be annuitized as promptly as administratively practicable utilizing the interest rate in effect under subsection E.2. and the age of the beneficiary at the time of the Member's death in calculating the beneficiary's DROP Annuity.

b. Upon the death of a DROP Annuitant, the remaining DROP Annuity shall be paid to the beneficiary designated by such DROP Annuitant and shall be divided if there are multiple beneficiaries as designated by the DROP Annuitant pursuant to Section F of this policy. DPFP shall only be responsible for payments to beneficiaries after DPFP has actual knowledge of the death of a DROP annuitant.

8. Revised Annuity in the Event of an Unforeseeable Financial Hardship Distribution

If any DROP Annuitant shall receive a distribution pursuant to Section G hereof, the DROP Annuity of such DROP Annuitant shall be re-annuitized through a calculation using (a) the interest rate utilized in the calculation of the original DROP Annuity, (b) the present value of the DROP Annuity on the date of the unforeseeable financial hardship distribution as calculated by DPFP's Qualified Actuary, and (c) the remaining number of months in the life expectancy utilized in the calculation of the original DROP Annuity.

F. DESIGNATION OF BENEFICIARIES

1. A DROP participant will have the opportunity to designate a primary beneficiary (or primary beneficiaries) and a contingent beneficiary (or contingent beneficiaries) of his or her DROP Account either when filing the application for DROP participation, or thereafter, on a beneficiary form provided by DPFP for this purpose. The named beneficiary must be a living person at the time of the filing of the beneficiary form. No trusts may be named as a beneficiary, except for a trust established for a child who is entitled to benefits pursuant to Section 6.06 (n)(1) of the Plan ("Special Needs Trust"). Existing trusts which have a DROP Account as of the date of this policy will be permitted and will be annuitized pursuant to Section E.4. and the age of the oldest beneficiary of the trust will be utilized for purposes of the annuitization. Special Needs Trusts will be annuitized based upon the age of the child.

2. In the case of a holder of DROP Annuity who dies where no living person is named as a beneficiary, the remaining DROP Annuity will be paid to the deceased DROP Annuitant's estate. In the case of a Member who dies with a DROP Account where no living person is named as a beneficiary, the DROP Account will be annuitized based upon the life of the youngest heir to the deceased Member's estate and the resulting DROP Annuity will be paid to the estate.

3. Beneficiaries of a Member's DROP Account or a DROP Annuitant's DROP Annuity are not limited to the Qualified Survivors. Upon request, DPFP will divide a deceased participant's DROP Account or DROP Annuity among the designated beneficiaries at the time of the DROP participant's death.

4. Upon the death of a DROP participant, the DROP participant's DROP Account or DROP Annuity shall become the property of the surviving spouse unless either (i) the surviving spouse has specifically waived his or her right to such funds or (ii) the surviving spouse's marriage to the DROP participant occurred after January 14, 2016 and the participant had already joined DROP and named a beneficiary other than the surviving spouse who was not the participant's spouse at the time of the beneficiary election, and will be transferred to the name of the surviving spouse or such other named beneficiary or beneficiaries. DROP Annuities shall be paid to the designated beneficiaries in accordance with the last beneficiary form on file in the DPFP administrative office upon that office's receipt of sufficient evidence of the DROP participant's death.

G. HARDSHIPS

1. Pursuant to the Plan, a DROP Annuitant who was a former Member of the Plan (a "Retiree Annuitant") may apply for a lump sum distribution relating to his or her DROP Annuity in the event that the Retiree Annuitant experiences a financial hardship that was not reasonably foreseeable. To qualify for an unforeseeable financial hardship distribution, a Retiree Annuitant (or the estate of a Retiree Annuitant in the case of subsection G.2.e.) must demonstrate that:

   a. a severe financial hardship exists at the time of the application (i.e., not one that may occur sometime in the future);

   b. the hardship cannot be relieved through any other financial means (i.e., compensation from insurance or other sources, monthly annuity benefits, or liquidation of personal assets) unless using those other sources would also cause a financial hardship; and

   c. the amount requested in the application is reasonably related to and no greater than necessary to relieve the financial hardship.

2. The Board shall only recognize the following circumstances as an unforeseeable financial hardship that is eligible for a lump sum distribution:

   a. the need to repair damage to a Retiree Annuitant's primary residence not covered by insurance as the result of a natural disaster or significant event (i.e., fire, flood, hurricane, earthquake, etc.);

   b. the need to make significant changes to a Retiree Annuitant's primary residence not covered by insurance because of medical necessity;

   c. the need to pay for medical expenses of the Retiree Annuitant, a Retiree Annuitant's spouse, or a dependent child or relative of the Retiree Annuitant as described under Code section 152(c) and (d), including non-refundable deductibles, as well as for the cost of prescription drug medication;

   d. the need to pay for the funeral expenses of a parent, child, grandchild or spouse of the Retiree Annuitant, including reasonable travel and housing costs for the Retiree Annuitant, their spouse, parent, child or grandchild;

   e. the need of the estate of a Retiree Annuitant to pay for the medical expenses or the funeral expenses of the Retiree Annuitant; or

   f. other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Retiree Annuitant.

G. HARDSHIPS (continued)

3. DPFP staff will develop procedures relating to the application for an unforeseeable financial hardship distribution, which will include, at a minimum, a notarized statement by the applicant relating to the requirements for eligibility and documentation sufficient to demonstrate such eligibility. Following submission of the required financial hardship distribution application, the notarized statement, and other required documentation as stated in the application form, DPFP staff shall review the materials and inform the Retiree Annuitant within thirty (30) days whether any additional information or documentation is required or requested. Once all required and/or requested documentation has been submitted, the Retiree Annuitant shall be informed within thirty (30) days if (i) the Retiree Annuitant is eligible for an unforeseeable financial hardship distribution or (ii) the matter has been referred to the Board for consideration at the next regular meeting. After an unforeseeable financial hardship distribution has been made to a Retiree Annuitant, a Retiree Annuitant may not request an additional unforeseeable financial hardship distribution for ninety (90) days from the date of distribution of any amount under this Section.

4. The Executive Director shall have the authority to approve an application for an unforeseeable financial hardship distribution. The Executive Director shall submit to the Board for final action by the Board any recommended denial, in whole or in part, of any request for an unforeseeable financial hardship distribution. Determinations of the Board and the Executive Director on applications for unforeseeable financial hardship distributions are final and binding. Once an unforeseeable financial hardship distribution has been approved by either the Executive Director or the Board, payment of the distribution shall be made to the Retiree Annuitant as soon as administratively practicable.

5. For the purposes of this Section G, the term "dependent" shall mean any person who is claimed by a Retiree Annuitant as a dependent on the Retiree Annuitant's federal income tax return in any year for which a distribution is sought under this Section G.

6. Distributions under this Section G shall only be available for persons who (a) entered DROP prior to June 1, 2017 and (b) who have not revoked a DROP election under Section D. of this policy.

7. No claims for hardship distributions will be accepted for any circumstances which give rise to the hardship where such circumstances occurred more than six months (nine months in the case of a filing by the estate of a Retiree Annuitant pursuant to subsection G.2.e.) prior to the date of filing of the application pursuant to subsection G.3.

H. 100% Joint and Survivor Benefit

1. Coterminous with entry into DROP, a Member shall have the right to make the election provided for under Section 6.063(a)(1) of the Plan and such an election will not be subject to the requirement set forth in Section 6.063(e) of the Plan.

2. Subsequent to a Member's entry into DROP, if the Member has not made the election provided for in Section H.1., the Member shall have the right to make the election provided for under Section 6.063(a)(1) and such an election will be subject to the requirement set forth in Section 6.063(e). If a Member shall die while on Active Service within one year after making the election under this Section H.2., then the Member's DROP Account shall be increased by the reduced benefit amount which is contemplated by Section 6.063(e) to be paid to the surviving spouse.

3. If a Member makes an election under either Section H.1. or H.2., the amount credited to the Member's DROP balance will be adjusted accordingly.

4. If a Member should remarry while on Active Service after making an election under Section H.1 or H.2, then the Member's benefit shall be recalculated and adjusted based upon the age of the new spouse, effective as of the date of marriage as if the Member had made a new election under Section 6.063(a)(1); provided however, that (i) if the Member had made the election pursuant to Section H.1., the Member shall not be subject to the requirement set forth in Section 6.063(e) for such remarriage and recalculation and (ii) if the Member had the election pursuant to Section H.2., the one year requirement under Section 6.063(e) shall be deemed to have commenced upon the original election.

5. Members who are in DROP as of the effective date of this Policy shall be afforded the opportunity through the first to occur of (i) their retirement date or (ii) October 31, 2018 to make the election provided for in Section H.1 and after October 31, 2018, such Members shall be entitled to make the election provided for in Section H.2.

6. Nothing in this DROP Policy shall affect or impair the right of a Member to make the election provided for in Section 6.063(a) upon or after the Member's retirement if the Member shall not make the election provided for in this Section H, provided, however, that any election made by a Member of Pensioner after their entry into DROP, notwithstanding any other provision of Section 6.063, shall be subject to the provisions of Section 6.063(e).

DALLAS POLICE & FIRE PENSION SYSTEM

I. COMMENCEMENT OF RETIREMENT BENEFIT

For any Member retiring and commencing receipt of their monthly retirement benefit, other than Members who have participated in DROP for ten years or more and are subject to the limitation set forth in the last sentence of Section 6.14(c) (a "10 Year Limitation DROP participant"), such Member's retirement benefit shall commence on the first day of the month such Member's retirement becomes effective. For any 10 Year Limitation DROP participant, such Member's monthly retirement benefit shall commence on the effective date of such Member's retirement.

J~~I~~. EFFECTIVE DATE

APPROVED on ~~December 13, 2018~~ September 12, 2019 by the Board of Trustees of the Dallas Police and Fire Pension System.

____
William F. Quinn
Chairman

ATTEST:

____
Kelly Gottschalk
Secretary

Exhibit 1- Interest Rates

Published Rate	5 Yr	7 Yr	10 Yr	20 Yr	30 Yr
7/17/2017	1.86	2.12	2.31	2.65	2.89
8/15/2017	1.83	2.09	2.27	2.60	2.84
9/15/2017	1.81	2.04	2.20	2.52	2.77
Average	**1.83**	**2.08**	**2.26**	**2.59**	**2.83**

Exhibit 2 – Life Expectancies Based on a November 2017 DROP Annuity Commencement Date

Expected Lifetime in Years Based on a November 2017 Commencement of Annuitization

Age	Expected Lifetime (Years)	Age	Expected Lifetime (Years)
21	62	56	29
22	61	57	28
23	60	58	27
24	59	59	26
25	58	60	25
26	57	61	24
27	56	62	23
28	56	63	22
29	55	64	22
30	54	65	21
31	53	66	20
32	52	67	19
33	51	68	18
34	50	69	17
35	49	70	17
36	48	71	16
37	47	72	15
38	46	73	14
39	45	74	14
40	44	75	13
41	43	76	12
42	42	77	12
43	41	78	11
44	40	79	10
45	39	80	10
46	38	81	9
47	37	82	9
48	36	83	8
49	36	84	7
50	35	85	7
51	34	86	7
52	33	87	6
53	32	88	6
54	31	89	5
55	30	90	5

Note: The above factors are based on the sex-distinct RP-2014 Blue Collar Healthy Annuitant Mortality Tables, with the female table set forward two years, projected generationally using Scale MP-2015. The sex-distinct tables are blended 85% male and 15% female.

DALLAS POLICE & FIRE PENSION SYSTEM

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D3

Topic: **Portfolio Update**

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

DALLAS POLICE & FIRE PENSION SYSTEM

Portfolio Update

September 12, 2019

Asset Allocation

DPFP Asset Allocation	% weight				$ millions		
	9/5/19	Target	Variance		9/5/19	Target	Variance
Equity	**37.9%**	**55.0%**	**-17.1%**		**752**	**1,091**	**-339**
Global Equity	23.8%	40.0%	-16.2%		472	794	-321
Emerging Markets	2.5%	10.0%	-7.5%		50	198	-148
Private Equity*	11.6%	5.0%	6.6%		229	99	130
Fixed Income	**31.9%**	**35.0%**	**-3.1%**		**632**	**694**	**-62**
Safety Reserve - Cash	3.6%	3.0%	0.6%		71	60	12
Safety Reserve - ST IG Bonds	13.2%	12.0%	1.2%		262	238	23
Investment Grade Bonds	1.9%	4.0%	-2.1%		37	79	-42
Global Bonds	3.4%	4.0%	-0.6%		68	79	-12
High Yield Bonds	4.2%	4.0%	0.2%		84	79	5
Bank Loans	4.0%	4.0%	0.0%		80	79	0
Emerging Mkt Debt	1.1%	4.0%	-2.9%		21	79	-58
Private Debt*	0.5%	0.0%	0.5%		10	0	10
Real Assets*	**30.3%**	**10.0%**	**20.3%**		**600**	**198**	**402**
Real Estate*	20.7%	5.0%	15.7%		410	99	311
Natural Resources*	6.8%	5.0%	1.8%		135	99	35
Infrastructure*	2.8%	0.0%	2.8%		55	0	55
Total	**100.0%**	**100.0%**	**0.0%**		**1,984**	**1,984**	**0**
Safety Reserve	16.8%	15.0%	1.8%		333	298	35
*Private Market Assets	42.3%	15.0%	27.3%		840	298	542

Source: JP Morgan Custodial Data, Staff Calculations

Preliminary data

DALLAS POLICE & FIRE PENSION SYSTEM

Loomis Sayles High Yield Portfolio

- Section 7.B of the Investment Policy establishes guidelines and requirements for monitoring investment managers. Section 7.B.4 requires Staff and the Consultant to highlight Investment Manager concerns and recommend an appropriate course of action.
- Staff has previously commented that underperformance of the Loomis Sayles High Yield Bond portfolio was disappointing. Modest underperformance during the 4Q18 market drawdown was expected due to a historically high Beta profile, but poor allocation and selection exacerbated underperformance, which has continued in 1H19.
- Follow-up interaction with Loomis and Consultant, Meketa, has been helpful in understanding key performance drivers, but Staff conviction remains tepid.
- However, we do note similar prior periods of relative drawdown followed by material outperformance.
- Staff recommends maintaining the current allocation to the Loomis Sayles High Yield Fund. Staff will continue to monitor this manager closely and seek ongoing perspective from the Investment Advisory Committee and the Consultant.

2019 Investment Review Calendar*

1Q19 ✓	• Real Estate Reviews: Vista 7, King's Harbor, & Museum Tower • Real Estate Presentations: Clarion, AEW • Global Equity Structure Review (Staff/Meketa)
2Q19 ✓	• Staff Timber Portfolio Review (FIA & BTG) • Natural Resources: Hancock Presentation • Real Estate: Hearthstone Presentation
July ✓	• Infrastructure: Staff review of AIRRO and JPM Maritime
Sept.	• Private Equity: Staff review of Private Equity and Debt
October	• Global Equity Manager Reviews
November	• Fixed Income Manager Reviews

*Future presentation schedule is subject to change.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D4

Topic: **Rebalancing Report**

Discussion: In accordance with Investment Policy section 6.C.7, staff will report on recent rebalancing recommendations and activity.

Regular Board Meeting – Thursday, September 12, 2019

DALLAS POLICE & FIRE PENSION SYSTEM

INVESTMENT REBALANCING REPORT

Date: September 5, 2019

To: DPFP Board of Trustees and Investment Advisory Committee

From: DPFP Investments Staff

Subject: Rebalancing Report

Executive Summary

During August and early September $37 million was rebalanced from the Bank Loan Portfolio to make the initial funding of the Investment Grade Bond allocation. Also, the Global Equity managers were rebalanced to approximately equal weight. An initial recommendation to only rebalance two global equity managers was later updated to include all four managers.

Background

Section 6.C of the Investment Policy Statement addresses rebalancing requirements and guidelines as follows.

C. Rebalancing

1. In general, cash flows will be allocated to move asset classes toward target weights and shall be prioritized according to the Asset Allocation Implementation Plan detailed in Appendix B1.
2. Staff shall submit a rebalancing recommendation to the Consultant at least annually based on consideration of the entire portfolio, and additionally as soon as practicable when an asset class breaches an established rebalancing range or when deemed prudent by Staff or Consultant.
3. The allocations to Cash and Short-Term Investment Grade bonds are designed to provide liquidity during periods of investment market stress and are not required to be rebalanced to target if deemed prudent by Staff and Consultant.
4. Rebalancing recommendations should consider expected future cash flows, investment liquidity, market volatility, and costs.
5. Transition management shall be used when prudent to minimize transition costs.
6. Staff is responsible for implementing the rebalancing plan following Consultant approval.
7. Rebalancing recommendations and activity shall be reported to the Board and the IAC.

August 9 Staff Recommendation

Staff submitted the following rebalancing recommendation to Meketa on August 9, 2019, which was approved by Meketa on the same day.

1. Liquidate $37 million from bank loan strategies to rebalance the asset class from the current 5.8% allocation back to the 4% target

    a. Liquidate $23 million from Loomis Sayles senior loan and fixed income strategy to rebalance from 3.1% to 2.0%
    b. Liquidate $14 million from Pacific Asset Management to rebalance from 2.7% to 2.0%
2. Redeploy the $37 million from bank loans into the Vanguard Total Bond Market Index Fund (VBTIX).
    a. This would be our first contribution to investment grade bonds and would bring the allocation to 1.8% vs. the 4% target.
3. Rebalance Global Equity with a $13 million transfer from Walter Scott to Boston Partners

Considerations

1. No large distributions from private market assets are anticipated before early 2020.
2. We currently have $75 million in cash and $260 million in short-term bonds with a combined overweight of $32 million.
3. Net cash outflow is forecast to be $9 million per month equating to $45 million for August through December.
4. The transfer from bank loans to Investment Grade bonds is expected to reduce exposure to credit spread risk with an increase in duration risk. Although we are not timing the market, we believe this is prudent given the recent environment of heightened volatility.
5. Bank loan proceeds would be expected by the end of August and perhaps sooner.
6. We expect it to take 2-3 weeks to open the new investment grade bond account at the custodian.
7. We are not recommending rebalancing Manulife and OFI/Invesco due to relatively small variances and a desire to minimize transition costs and complexity.
8. We anticipate using Russell transition services in the Global Equity rebalancing to minimize explicit and implicit transition costs.

August 20 Staff Recommendation

Staff submitted an updated global equity rebalancing recommendation to Meketa on August 20, 2019, which was approved by Meketa on August 21. Staff noted that the transition manager declined to participate in the Global Equity transition noting that $50 million is about the minimum transition for them.

Staff believes we can manually transition assets effectively at relatively low cost and risk. Since Russell is not going to be involved, we are shifting our recommendation to include all four global equity managers.

Proposed Transition

- Redeem $12 million from Walter Scott
- Redeem $5 million from Manulife
- Contribute $13 million to Boston Partners
- Contribute $4 million to OFI

Considerations

1. The total transfer amount of $17 million represents 3.67% of the global equity portfolio
2. Managers will be coordinated to conduct most trading at the same time to avoid variation in overall market exposure.
3. Currently we are targeting Tuesday, August 27 for the trade date

4. Cash will be transferred from the control account to Boston Partners and OFI on the day prior to the trade date. The control account will be replenished by the same amount from Walter Scott and Manulife when the redemption trades settle.
5. We previously evaluated the crossing potential of a $13 million transfer from Walter Scott to Boston Partners and determined that the modest potential cost savings was not worth the additional operational risk and complexity. The pre-trade consultation with Russell supported this view.
6. Russell estimated the explicit costs at 13.4 basis points, equating to $45,560. Market impact is expected to be modest at 0.5 bps.

Fixed Income Rebalancing Activity

- Redemptions notices were sent to Loomis Sayles and Pacific Asset Management following transition approval by Meketa. Both managers confirmed.
- $23 million was received from Loomis Sayles on August 29.
- $14 million was received from Pacific Asset Management on September 3.
- $37 million was transferred to the Vanguard Total Bond Market Index Fund (VBTIX) on September 4.

Global Equity Rebalancing Activity

- The four global equity managers were advised regarding transition amounts and directed to conduct all transition trading on August 27.
- On August 27 $13 million was transferred to the Boston Partners Account and $4 million was transferred to the Invesco (FKA OFI) account from the control cash account.
- On August 27 $12 million was transferred from the Walter Scott account and $5 million was transferred from the Manulife account to the control cash account.
- Based on staff calculations from custodian trading reports, we estimate transition explicit costs (commissions and fees) at 14.0 basis points, which is slightly higher than the 13.4 basis point pre-trade estimate. Post trade analysis indicates the variance was driven by high volumes in GBP trades with associated higher fees.
- The transition summary below provides a simple indication that the transition was not detrimental to overall portfolio performance.

Global Equity Manager Transition				Transition return 8/27-8/29		Transition
Managers	Mon 8/26/19	Cash Flow	Thu 8/29/19	Managers	ACWI net	gain/loss
Boston Partners	101,344,784	13,000,000	115,923,955	1.38%	1.30%	0.08%
Manulife	119,711,015	(5,000,000)	116,352,448	1.43%	1.30%	0.13%
OFI	109,251,548	4,000,000	114,637,382	1.22%	1.30%	-0.08%
Walter Scott	126,051,334	(12,000,000)	115,971,736	1.68%	1.30%	0.38%
Total	456,358,681	-	462,885,521	1.43%	1.30%	0.13%

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D5

Topic: **Private Equity and Debt Portfolio Review**

Discussion: Staff will provide an overview of DPFP investments in private equity and private debt.

Regular Board Meeting – Thursday, September 12, 2019

DALLAS POLICE & FIRE PENSION SYSTEM

Private Equity and Private Debt Review

Sep 12, 2019

Private Equity and Private Debt Overview

as of 03/31/2019

Investment	Asset Class	NAV
Huff Energy Fund	Private Equity	$98,024,233
Lone Star CRA	Private Equity	$59,026,786
Huff Alternative Fund	Private Equity	$31,421,890
Lone Star Opportunities V	Private Equity	$19,291,765
Lone Star Growth Capital	Private Equity	$13,266,322
Hudson Clean Energy	Private Equity	$3,423,121
Industry Ventures	Private Equity	$2,739,986
North Texas Opportunity Fund	Private Equity	$1,595,316
Yellowstone Capital	Private Equity	$0
Riverstone Credit Partners	Private Debt	$8,569,859
Highland Crusader Fund	Private Debt	$2,351,251

Current Unfunded Commitments

as of 03/31/2019

Private Equity	Commitment	Unfunded Commitment
Hudson Clean Energy Partners	25,000,000	-
Huff Alternative Fund	100,000,000	-
Huff Energy Fund	100,000,000	**119,979**
Industry Ventures Partnership Holdings IV	5,000,000	**2,787,302**
Lone Star CRA Fund	50,000,000	-
Lone Star Growth Capital	16,000,000	**2,240,000**
Lone Star Opportunities Fund V	75,000,000	-
North Texas Opportunity Fund	10,000,000	-
Yellowstone Energy Ventures II	5,283,254	**170,947**
Total Private Equity	***386,283,254***	***5,318,228***

Private Debt	Commitment	Unfunded Commitment
Riverstone Credit Partners	10,000,000	**1,444,678**
Highland Crusader	51,000,000	-
Total Private Debt	***10,000,000***	***1,444,678***

Private Equity and Private Debt Performance

as of 03/31/2019

Dollar in millions	Vintage	Com-mitment	Paid In	Dist-ributions	Current Value	Total Value	Unrealized Gain/Loss	DPI	TVPI	IRR
Lone Star Investment Advisors										
North Texas Op. Fund	2000	10.00	10.00	9.02	1.59	10.61	0.61	0.90	1.06	0.68%
Lone Star Growth	2006	16.00	26.56	12.80	13.27	26.07	-0.49	0.48	0.98	-0.61%
Lone Star CRA	2008	50.00	57.79	12.93	59.03	71.96	14.17	0.22	1.25	8.59%
Lone Star Op. Fund V	2012	75.00	75.00	0.53	19.29	19.82	-55.18	0.01	0.26	-45.82%
Huff										
Huff Alternative Fund	2000	66.80	78.82	57.39	31.42	88.81	9.99	0.73	1.13	1.52%
Huff Energy	2006	100.00	98.93	4.48	98.02	102.50	3.57	0.05	1.04	0.40%
Other Private Equity										
Hudson Clean Energy	2009	25.00	24.99	4.69	3.42	8.11	-16.88	0.19	0.32	-17.00%
Yellowstone Capital	2008	5.28	5.11	1.46	0.00	1.46	-3.65	0.29	0.29	-32.45%
Industry Ventures IV	2016	5.00	2.21	0.04	2.74	2.78	0.57	0.02	1.26	15.59%
Private Debt										
Highland Crusader	2003	50.96	50.96	62.26	2.53	64.79	13.84	1.22	1.27	4.21%
Riverstone Credit Ptrs	2016	10.00	12.24	5.42	8.57	13.99	1.75	0.44	1.14	10.21%

DPI - Ratio of Distributions to Paid in Cpaital

TVPI - Ration of Total Value (distributions and unrealized) to Paid in Capital

IRR - Internal Rate of Return

Huff Energy Fund

The Huff Energy Fund, L.P.

Asset Class:	Private Equity	Vintage Year:	2006
Investment Period / Fund Term End Dates:	Feb 2014 / Feb 2020 (extended 2yrs) , 1 GP extension remaining	Total Fund Size:	$493m
Management Fee:	1% of appraised asset values	DPFP Commitment:	$100m
Performance Fee/Carry:	80/20 split with 8% hurdle	DPFP % of Fund:	20.28%

Investment Performance (In Millions)

* - As of 03/31/2019

Paid In Capital	Unfunded Commitment	DPFP Distributions	NAV	Inception IRR*	TVPI*	DPI*
$98.9	$0.1	$4.5	**$98.0**	0.40	1.04	0.05

Fund Strategy / Portfolio

- The Huff Energy Fund made oil and gas exploration and production investments based on the thesis that high energy prices and advanced technology supported the development of previously uneconomic projects. The fund acquired properties and drilled exploratory wells.
- DPFP has received only $4.5M in net distributions from the fund since inception, most of which was in 2009 from investments in publicly traded energy securities. The remaining portfolio is invested in illiquid oil and gas acreage and partnerships, primarily located in South Texas Eagle Ford (oil) and Northern Louisiana (gas).

Strategic Plan / Timeline

- The GP recently exercised an election to extend the fund for another year.
- The Eagle Ford properties, which comprise the bulk of the fund, are currently being marketed for sale.

Huff Alternative Fund

Asset Class:	Private Equity	Vintage Year:	2000
Investment Period / Fund Term End Dates:	Oct 2007 / Oct 2016	Total Fund Size:	$749m
Management Fee:	0% - since 2015 fund extension	DPFP Commitment:	$100m
Performance Fee/Carry:	90/10 with 8% hurdle	DPFP % of Fund:	13.35%

Investment Performance (In Millions)

* - As of 03/31/19

Paid In Capital	Unfunded Commitment	DPFP Distributions	NAV	Inception IRR*	TVPI*	DPI*
$78.8	-	$57.4	**$31.4**	1.52%	1.13	0.73

Fund Strategy / Portfolio

- Private equity fund invested in a diverse range of industries, companies, and types of investments.
- The fund term has expired and the fund is now in liquidation, which is being managed by the GP.
- Remaining fund investments: Hispanic food company, property on the Las Vegas strip, and interest in oil and gas partnership that is also owned in the Huff Energy fund.

Strategic Plan / Timeline

- The Hispanic food companies investment is being marketed.
- Portions of the Vegas property were recently sold, with proceeds paying down debt. Remaining portion is being marketed.
- The oil and gas holdings are being marketed, but the gas holdings are considered illiquid until gas is $5/MCF.

Lone Star Investment Advisors

LONESTAR INVESTMENT ADVISORS

Investment Performance (In Millions)							* - As of 03/31/19
Fund	**Paid In Capital**	**Unfunded Commitment**	**DPFP Distributions**	**NAV**	**Inception IRR***	**TVPI***	**DPI***
Growth Capital	$25.56	$2.24	$12.80	**$13.27**	-0.61%	0.98	0.48
CRA	$57.79	-	$12.93	**$59.03**	8.59%	1.25	0.22
Opportunity V	$75.00	-	$0.53	**$19.29**	-45.82%	0.26	0.01
Combined	$158.35	$2.24	$26.26	**$91.59**		0.74	0.17

Funds Strategy / Portfolio

- DPFP has limited partner interests in the above 3 funds ("LSIA Portfolio") managed by Lone Star Investment Advisors.
- LSIA Portfolio focuses on lower-middle market investments located in Texas and is heavily concentrated in oil& gas services.
- 12 portfolio companies remain in the LSIA Portfolio.

Strategic Plan / Timeline

- Staff is working closely with Board and Board sub-committee to consider monetization options.

Hudson Clean Energy

Asset Class:	Private Equity	Vintage Year:	2009
Investment Period / Fund Term End Dates:	Oct 2012 / Dec 2021 (extended 3yrs)	Total Fund Size:	$1.02 billion
Management Fee:	0%, $50k quarterly administration fee	DPFP Commitment:	$25m
Performance Fee/Carry:	Tiered structure based on timing of asset sales	DPFP % of Fund:	2.44%

Investment Performance (In Millions)

* - As of 03/31/19

Paid In Capital	Unfunded Commitment	DPFP Distributions	NAV	Inception IRR*	TVPI*	DPI*
$25.0	-	$4.7	**$3.4**	-17.00%	0.32	0.19

Fund Strategy / Portfolio

- Sector-focused growth capital investment in alternative energy companies.
- With two investments written off at year-end 2018, the fund has 3 remaining investments involved in solar power, wind power, and wireless charging
- The remaining portfolio companies are at various stages, including production trials, wind-down, and capital raising

Strategic Plan / Timeline

- A restructuring was finalized in March 2019, resulting in a Co-GP/Co-Manager structure
- The fund term was extended from 2018 to 2021 according to the terms of the restructuring
- Progress is being made on asset monetization, with asset sales occurring in late 2018 and Q1 2019

Industry Ventures Partnership Holdings IV

INDUSTRY VENTURES

Asset Class:	Private Equity	Vintage Year:	2016
Investment Period / Fund Term End Dates:	July 2020 / July 2026	Total Fund Size:	$209m
Management Fee:	1% committed capital	DPFP Commitment:	$5m
Performance Fee/Carry:	5% primaries, 10% secondaries, 20% direct/co-invests to GP; over 6% pref	DPFP % of Fund:	2.4%

Investment Performance (In Millions)

*** - As of 03/31/19**

Paid In Capital	Unfunded Commitment	DPFP Distributions	NAV	Inception IRR*	TVPI*	DPI*
$2.2	$2.8	0.04	**$2.7**	15.59%	1.26	0.02

Fund Strategy / Portfolio

- Venture capital fund that makes primary fund, secondary fund, and direct investments in early and mid-stage venture backed companies primarily in the information technology sector.
- The fund targets a 40% allocation to early secondary opportunities, 40% to primary fund commitments and 20% to direct co-investments.
- The fund has exposure to 885 active companies through underlying fund interests, and there have been 60 realizations in underlying portfolio companies since inception.

Strategic Plan / Timeline

- It is still early in the fund life: The first capital call was made in July 2016 and the commitment period is 4 years. Fund term is 10 years, with GP option to extend an additional 4 years.

North Texas Opportunity Fund

LONESTAR INVESTMENT ADVISORS

Asset Class:	Private Equity	Vintage Year:	2000
Investment Period / Fund Term End Dates:	May 2010 / May 2019 (extended 9yrs)	Total Fund Size:	$26.6m
Management Fee:	0% - fund in liquidation	DPFP Commitment:	$10m
Performance Fee/Carry:	80/20 split with 8% pref	DPFP % of Fund:	37.57%

Investment Performance (In Millions)

* - As of 03/31/19

Paid In Capital	Unfunded Commitment	DPFP Distributions	NAV	Inception IRR*	TVPI*	DPI*
$10.0	-	$9.0	**$1.6**	0.68%	1.06	0.90

Fund Strategy / Portfolio

- North Texas Opportunity Fund has one remaining investment, a minority interest in Dallas Yellow Checker Cab.
- The company's performance and valuation has dropped in recent years based on the emergence and competition of ride sharing services. A strategic focus on medical transportation has stabilized earnings and recent sole-source contract awards will increase earnings in 4Q19, setting up the company for 2020 monetization.

Strategic Plan / Timeline

- In order to save costs in a fund with only one asset, the fund level audit was waived in 2017, with company-level audited financial statements being provided.
- The fund GP has recently been seeking an extension of the fund term.

Yellowstone Energy Ventures

YELLOWSTONE

Asset Class:	Private Equity	Vintage Year:	2008
Investment Period / Fund Term End Dates:	May 2011 / Aug 2020 (extended 2yrs at GP discretion)	Total Fund Size:	$21.8m
Management Fee:	0%	DPFP Commitment:	$10m
Performance Fee/Carry:	80/20 split after LP gets 100% capital contributed	DPFP % of Fund:	45.89%

Investment Performance (In Millions)

* - As of 03/31/19

Paid In Capital	Unfunded Commitment	DPFP Distributions	NAV	Inception IRR*	TVPI*	DPI*
$5.1	$0.2	$1.5	**$0.0**	-32.45%	0.29	0.29

Fund Strategy / Portfolio

- Sector focused fund investing in clean energy technology and renewable energy.
- The investment program was terminated in 2011, releasing DPFP from $4.7 million of its $10 million commitment.
- No management fee is being charged.

Strategic Plan / Timeline

- Considering the low value of the remaining holding and to save fund costs, an amendment was executed in 2017 and 2018 to waive the fund level audit. The requirement for an audit will be re-evaluated on an annual basis
- The remaining holding, a UV lighting technology company, continues to develop new business prospects, but profitability is likely years away.

Riverstone Credit Partners

Asset Class:	Private Debt	Vintage Year:	2016
Investment Period / Fund Term End Dates:	April 2019 (extended 1yr) / April 2020	Total Fund Size:	$470m
Management Fee:	1.5% of invested capital during investment period, 1% thereafter	DPFP Commitment:	$10m
Performance Fee/Carry:	85/15 split over 6% Pref	DPFP % of Fund:	2.13%

Investment Performance (In Millions) * - As of 03/31/19

Paid In Capital	Unfunded Commitment	DPFP Distributions	NAV	Inception IRR*	TVPI*	DPI*
$12.2	$1.4	$5.4	**$8.6**	10.21%	1.14	0.44

Fund Strategy / Portfolio

- Closed-end distressed energy fund that invests opportunistically in loans and bonds of energy companies both directly originated and purchased in the secondary market, with target gross returns of 15%.
- With the tightening in high yield energy spreads in early and mid-2018, Riverstone focused on its direct lending strategy resulting in 98% of the fund invested in direct lending. The remainder of the fund is invested in market-based opportunities (non-originated deals in private and public companies).

Strategic Plan / Timeline

- Riverstone extended the investment period to April 2019 to correspond with the end of fundraising for Fund II. This enabled Fund I to continue to benefit from deal flow and invest on a pro-rata basis with Fund II.
- Fund I will be able to continue to make follow-on and follow-up investments with remaining undrawn commitments

Highland Crusader Fund

HIGHLAND CAPITAL Management, L.P.

Asset Class:	Private Debt	Vintage Year:	2003
Investment Period / Fund Term End Dates:	Oct 2008 / Aug 2011	Remaining Fund Size:	$22m
Management Fee:	1.75% on distributed cash, hourly billing of Investment Manager	DPFP Commitment:	$51m
Performance Fee/Carry:	5% on amounts distributed up to $175m, 15% over $175m	DPFP % of Fund:	11%

Investment Performance (In Millions)

* - As of 03/31/19

Paid In Capital	Unfunded Commitment	DPFP Distributions	NAV	Inception IRR*	TVPI*	DPI*
$51	-	$62.3	**$2.5**	4.21%	1.27	1.22

Fund Strategy / Portfolio

- Invested primarily in undervalued senior secured loans and other securities of financially troubled firms.
- During 2008, in deteriorating market conditions, the fund began wind-down and investor interests were redeemed. In August 2011, a joint plan of distribution was agreed between Highland and investors.
- In July 2016, the Redeemer Committee replaced Highland as investment manager with Alvarez and Marsal.

Strategic Plan / Timeline

- Since 2016, the Investment Manager has made progress liquidating assets, and the fund has approximately 70% of assets in cash awaiting expiration of reps and warranty periods and resolution of lawsuits.
- DPFP received a distribution of $905,732 in July 2019.
- Remaining investments include common stock and rights in a healthcare company.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D6

Topic: **Second Quarter 2019 Investment Performance Analysis and First Quarter 2019 Private Markets & Real Assets Review**

Attendees: Leandro Festino, Managing Principal - Meketa Investment Group

Discussion: Meketa and Investment Staff will review investment performance.

Regular Board Meeting – Thursday, September 12, 2019

FUND EVALUATION REPORT

Dallas Police & Fire Pension System

Quarterly Review
As of June 30, 2019

MEKETA INVESTMENT GROUP

Boston Massachusetts | Chicago Illinois | Miami Florida | New York New York | Portland Oregon | San Diego California | London United Kingdom

www.meketagroup.com

Agenda

Executive Summary

DPFP 2Q19 Flash Summary

Category	Result	Notes
Total Fund Performance Return	**Flat**	0.0%
Performance vs. Policy Index	**Trailed**	0.0% vs. 2.7%
DPFP Public Markets vs. 60/40[1]	**Trailed**	2.9% vs. 3.4%
Asset Allocation vs. Targets	**Detracted**	Underweight global equity, overweight RE and underweight EMD all detracted
Safety Reserve Exposure	**Sufficient**	$323 million (approximately 16%)
Performance vs. Peers	**Underperformed**	99th percentile in peer group in 2Q19[2]
Active Management	**Hurt**	All Private Markets asset classes and High Yield Bonds
Compliance with Targets	**No**	Under minimums in Investment Grade Bond and EM Debt[3]

1 Performance of Total Fund excluding private market investments relative to a 60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index.
2 InvestorForce Public DB $1-$5 billion net accounts.
3 Investment Grade Bonds and Emerging Market Debt are below target minimums in accordance with following the implementation plan approved by the Trustees.

DPFP Trailing One-Year Flash Summary

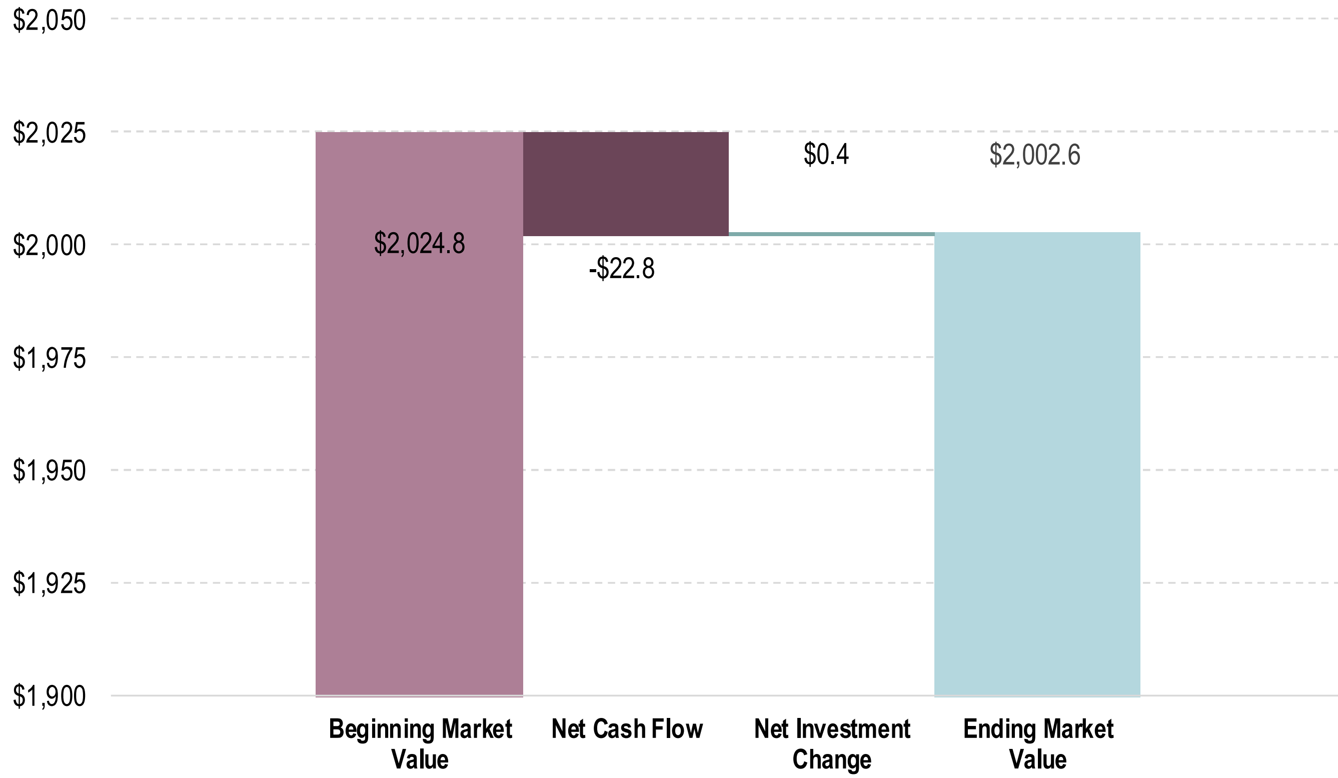
Category	Trailing 1 YR Result	1 YR Notes
Total Fund Performance Return	Positive	2.6%
Performance vs. Policy Index	Trailed	2.6% vs. 3.9%
DPFP Public Markets vs. 60/40[1]	Outperformed	6.4% vs. 5.4%
Asset Allocation vs. Targets	Detracted	Underweight public equities
Performance vs. Peers	Underperformed	99th percentile in peer group[2]
Active Management	Detracted	All Private Markets - Negative Selection

DPFP Trailing Three-Year Flash Summary

Category	Trailing 3 YR Result	3 YR Notes
Total Fund Performance Return	Positive	3.5%
Performance vs. Policy Index	Trailed	3.5% vs. 7.7%
DPFP Public Markets vs. 60/40[1]	Outperformed	9.0% vs. 7.6%
Performance vs. Peers	Trailed	99th percentile in peer group[1]
Active Management	Detracted	PE, NR, RE and PD Negative Selection

[1] Performance of Total Fund excluding private market investments relative to a 60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index.
[2] InvestorForce Public DB $1-$5 billion net accounts.

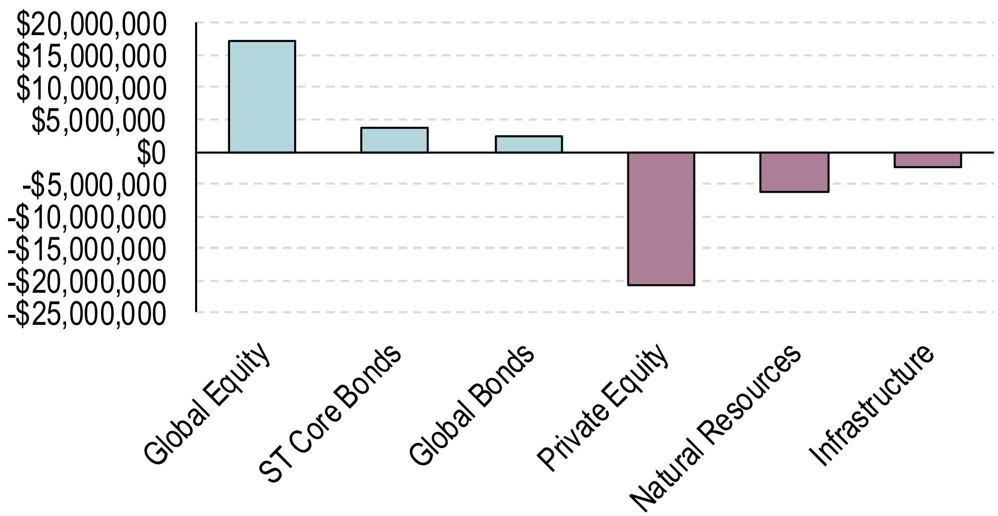
Quarterly Change in Market Value



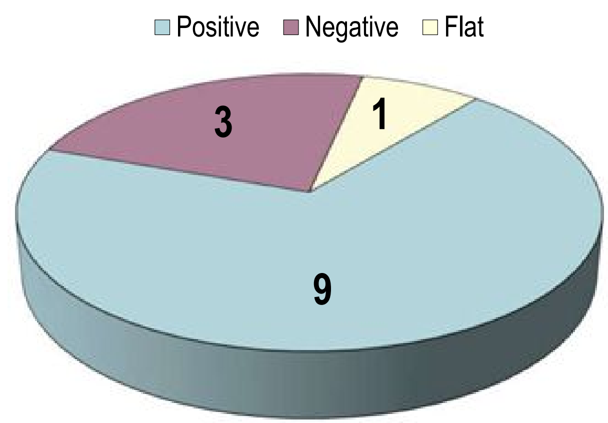
- Total market value decreased due to negative cash flows.

Quarterly Absolute Performance

Asset Classes Dollar[1] Gain/Loss
Top Three and Bottom Three



Asset Class Absolute Performance

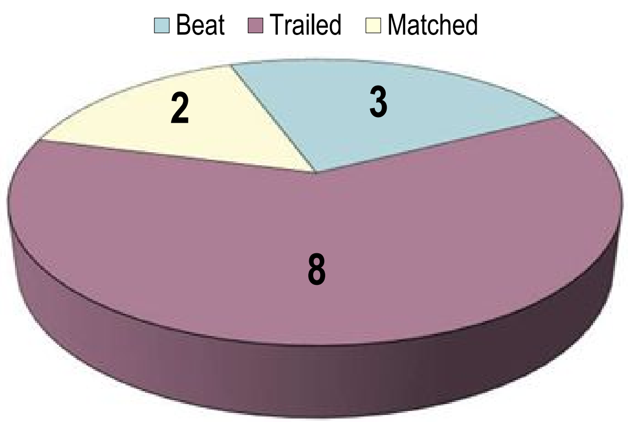


- Asset class performance was mixed during the quarter, but most generated positive absolute performance.
- In absolute terms, global equity appreciated the most, gaining $17.2 million in market value.
- Private equity depreciated the most, losing $20.7 million in market value.

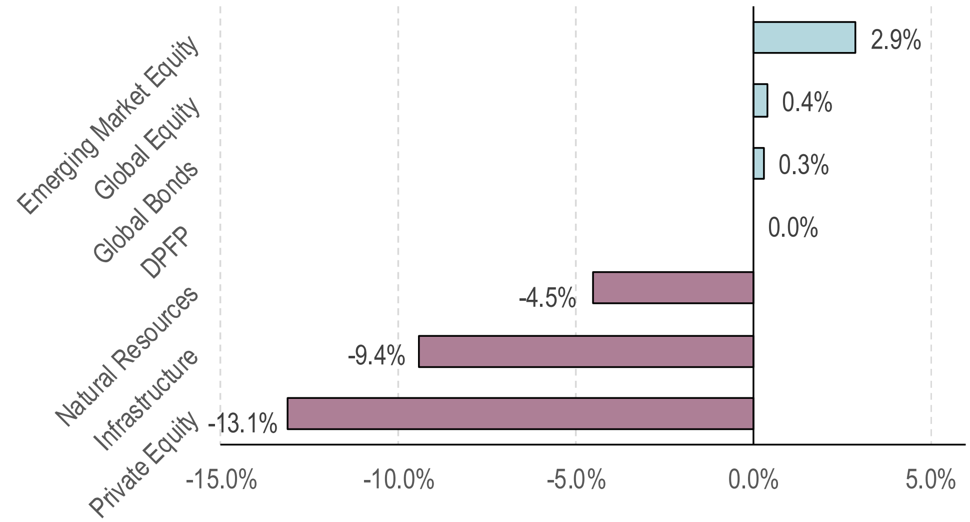
[1] Estimated gain/loss calculated by multiplying beginning market value by quarterly performance.

Quarterly Relative Performance

Asset Classes vs. Benchmarks



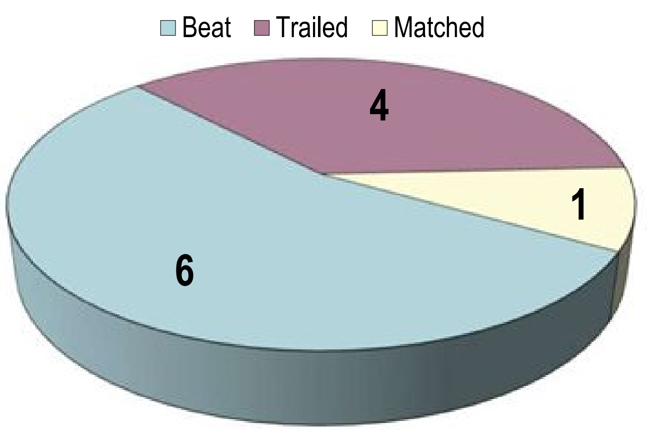
Top Three and Bottom Three Asset Classes vs. Benchmarks



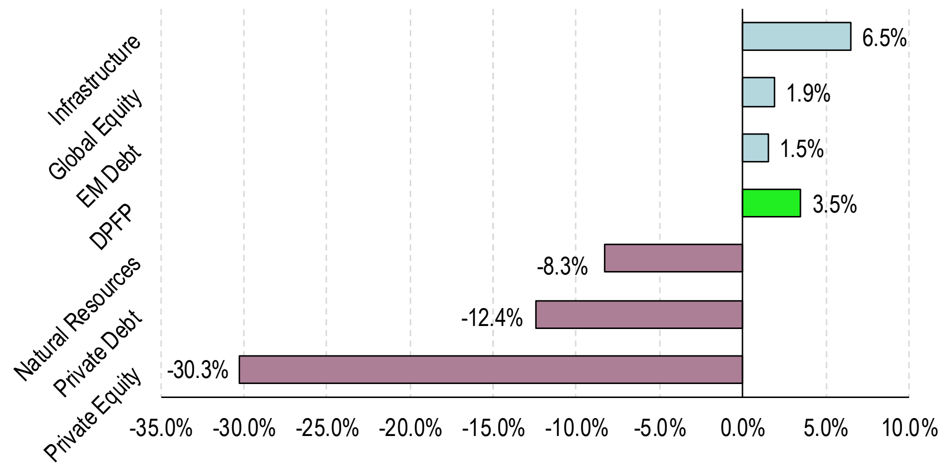
- In the quarter, emerging market equity, global equity and global bonds had the best relative performance.
- Private equity, infrastructure and natural resources had the worst relative performance in the quarter.
- Three of the thirteen asset classes delivered positive relative performance versus respective benchmarks.

Trailing Three-Year Relative Performance

Asset Classes vs. Benchmarks



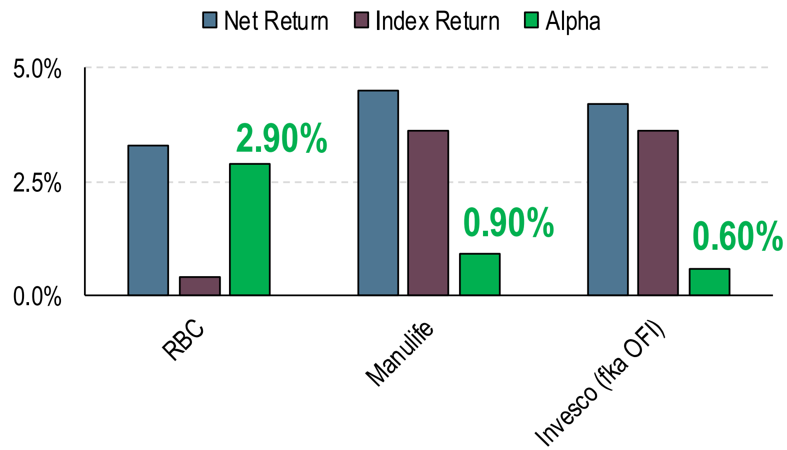
Top Three and Bottom Three Asset Classes vs. Benchmarks



- Six of the eleven asset classes with trailing three-year return history have delivered positive relative performance versus respective benchmarks.
- Over the trailing three-year period, the best relative performance came from infrastructure, global equity and emerging market debt asset classes.
- Private equity, private debt and natural resources had the worst relative performance over the three-year trailing period.

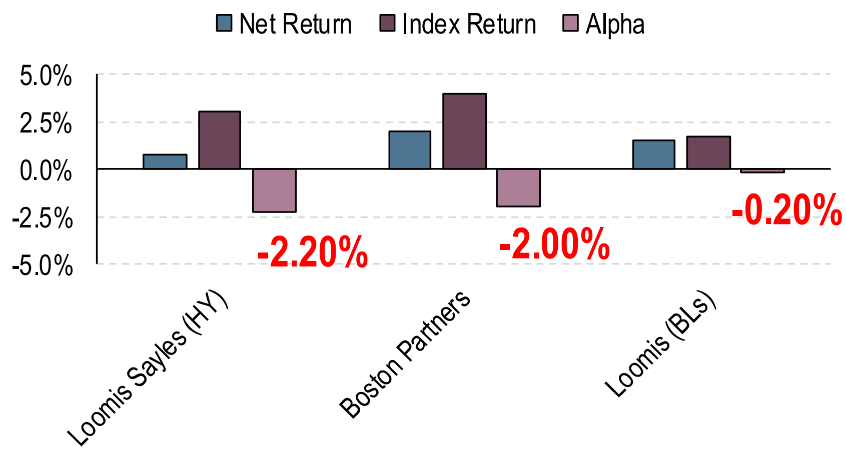
Public Manager Alpha

Top Three Outperformers in Quarter



$290 million
combined exposure

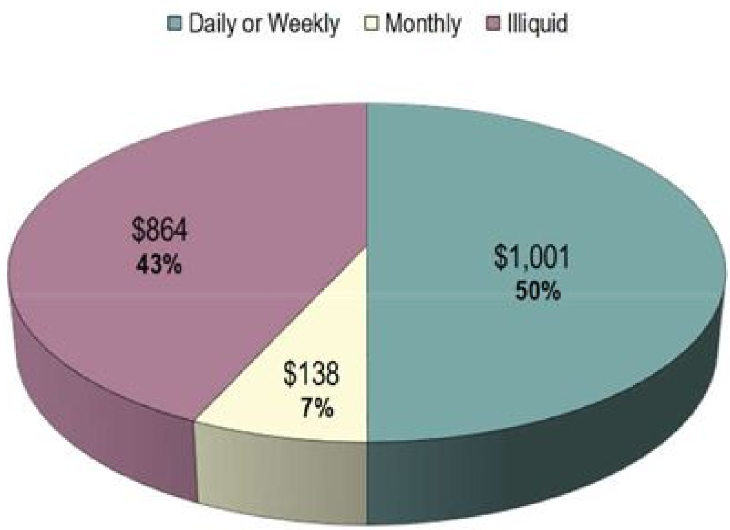
Bottom Three Underperformers in Quarter



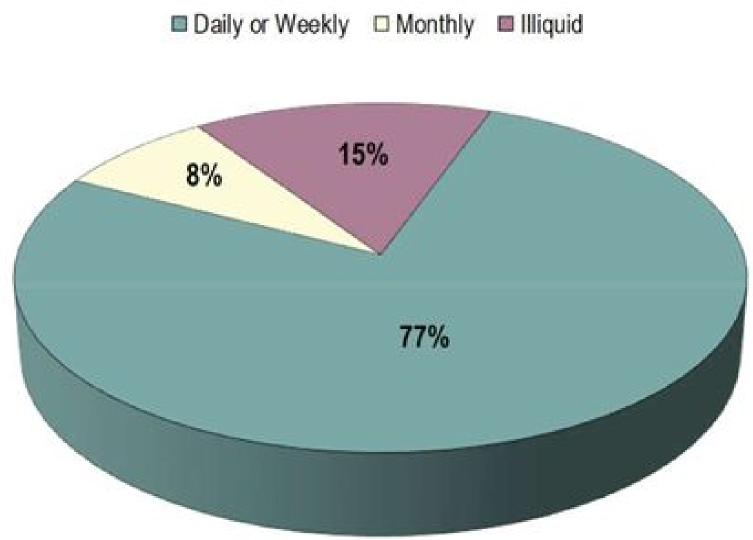
$252 million
combined exposure

Liquidity Exposure
as of June 30, 2019

Exposure ($mm)



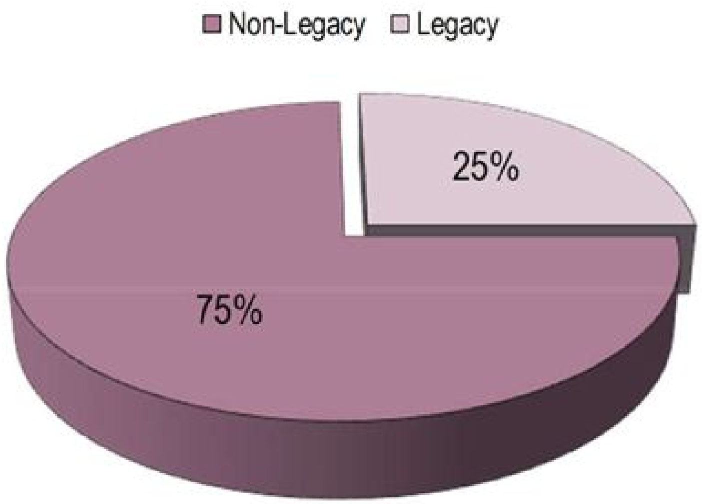
Targets



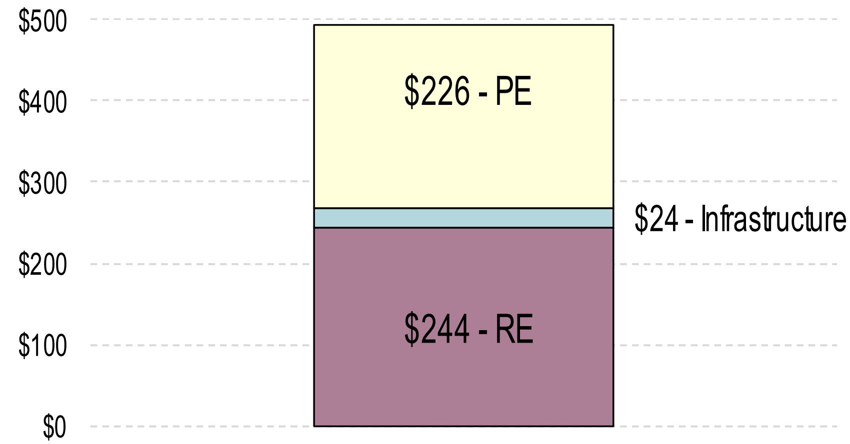
- Approximately 43% of the System's assets are illiquid versus 15% of the target allocation.

* Assets can be redeemed between monthly and annual basis often with gating, lock-ups or notice of more than 30 days required.

Legacy Assets



Exposure ($ mm)



$494 million

Net Asset Value of Legacy Assets

2Q19 Review

Dallas Police & Fire Pension System

DPFP

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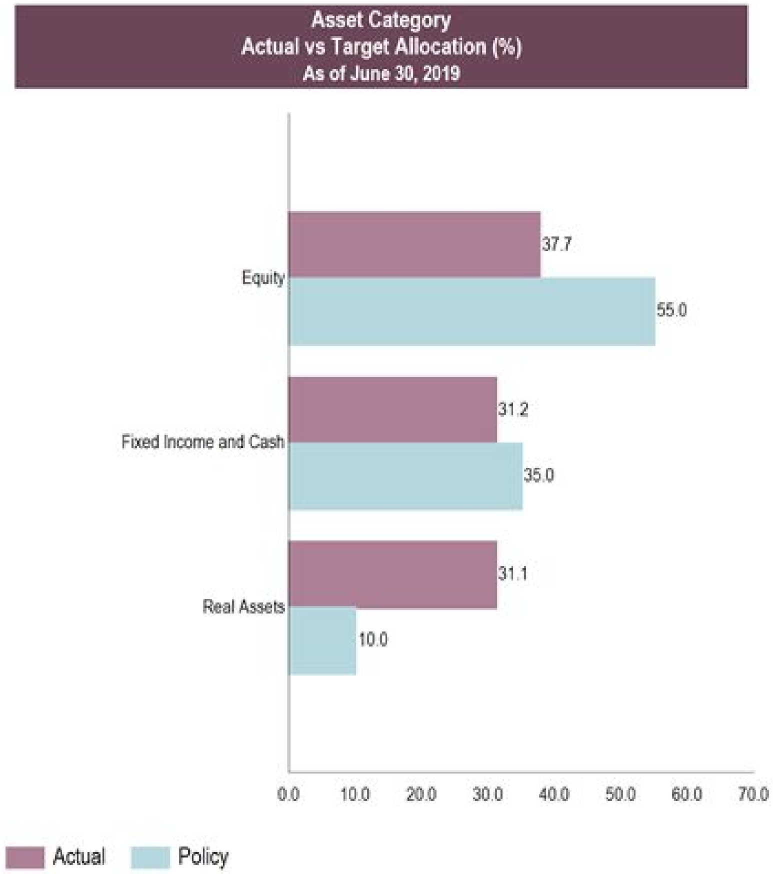
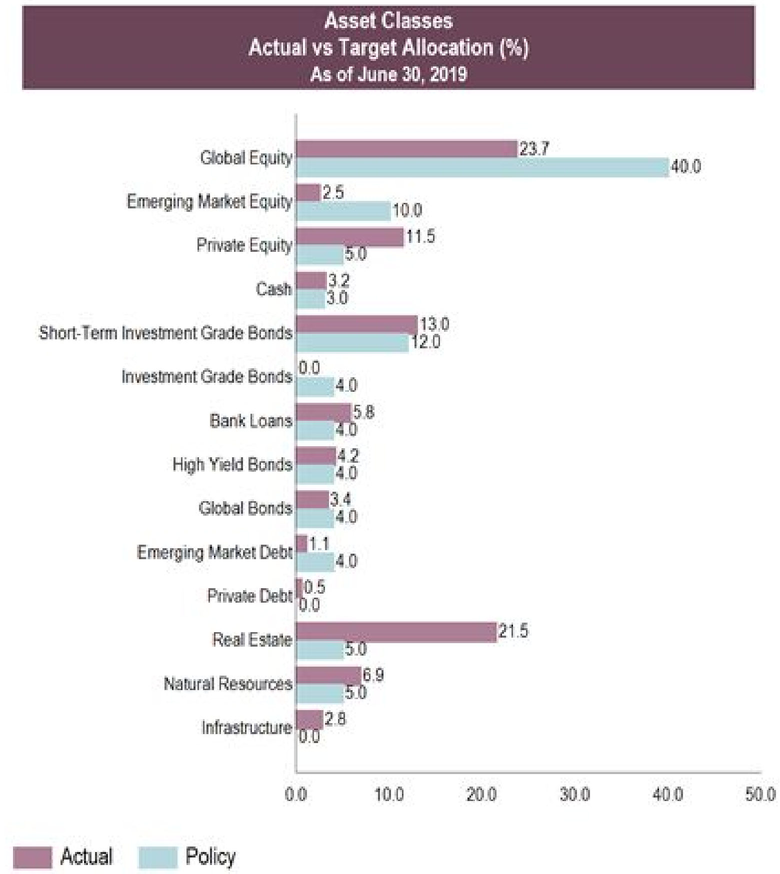




Dallas Police & Fire Pension System

DPFP

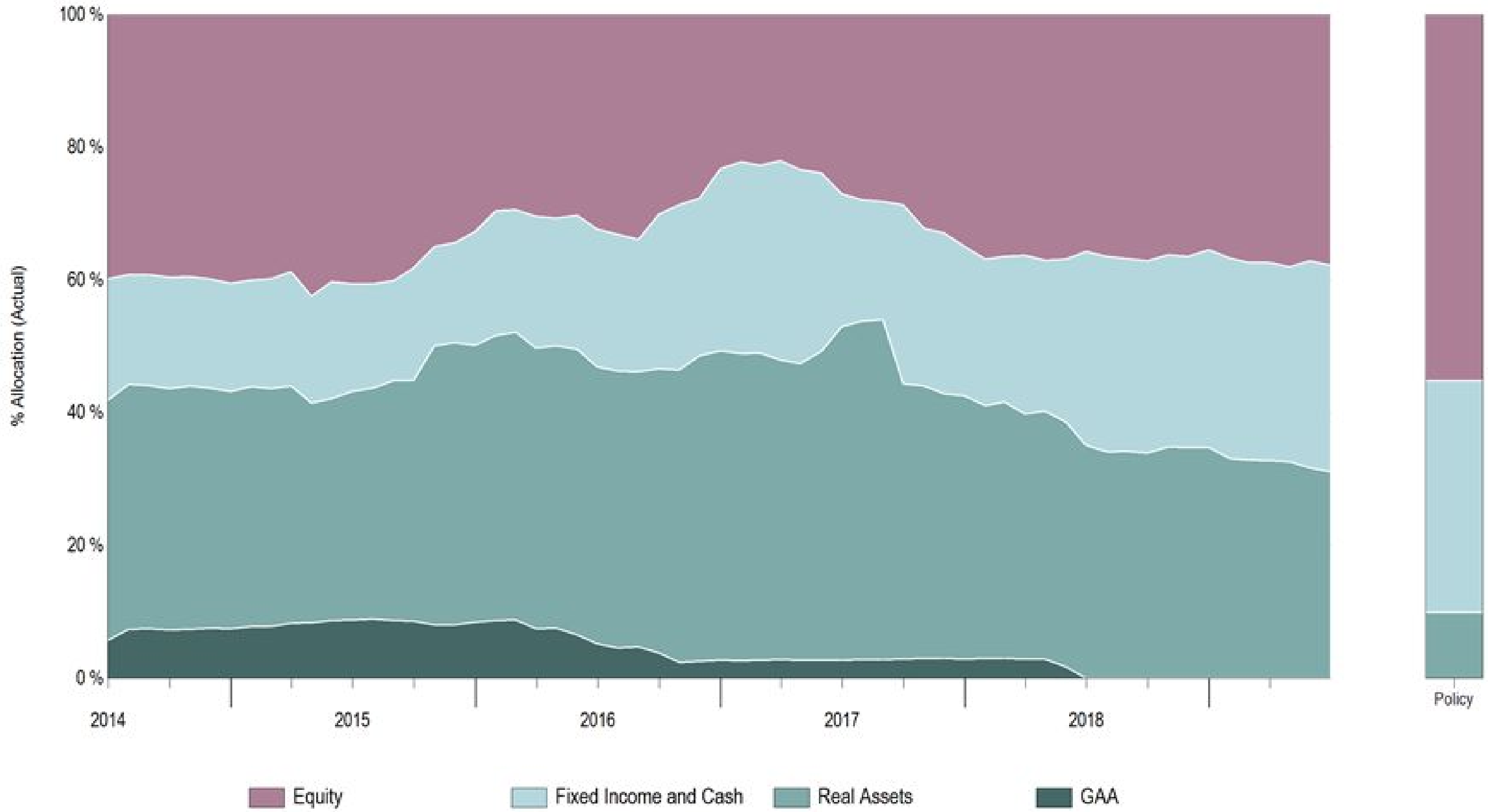
As of June 30, 2019

Allocation vs. Targets and Policy

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Equity	**$755,110,074**	**38%**	**55%**		
Global Equity	$474,745,746	24%	40%	18% - 48%	Yes
Emerging Market Equity	$50,891,986	3%	10%	0% - 12%	Yes
Private Equity	$229,472,342	11%	5%		
Fixed Income and Cash	**$623,869,773**	**31%**	**35%**		
Cash	$63,499,721	3%	3%	0% - 5%	Yes
Short-Term Investment Grade Bonds	$259,589,918	13%	12%	5% - 15%	Yes
Investment Grade Bonds	$0	0%	4%	2% - 6%	No
Bank Loans	$116,621,176	6%	4%	2% - 6%	Yes
High Yield Bonds	$84,239,552	4%	4%	2% - 6%	Yes
Global Bonds	$67,989,320	3%	4%	2% - 6%	Yes
Emerging Market Debt	$21,117,378	1%	4%	2% - 6%	No
Private Debt	$10,812,707	1%	0%		
Real Assets	**$623,658,120**	**31%**	**10%**		
Real Estate	$429,924,240	21%	5%		
Natural Resources	$138,171,185	7%	5%		
Infrastructure	$55,562,696	3%	0%		
Total	**$2,002,637,967**	**100%**	**100%**		

As of 6/30/2019, the Safety Reserve exposure was approximately $323.1 million (16.2%).
Rebalancing ranges are not established for illiquid assets (Private Equity, Private Debt, Natural Resources, Infrastructure and Real Estate)

Asset Allocation History vs. Policy
5 Years Ending June 30, 2019

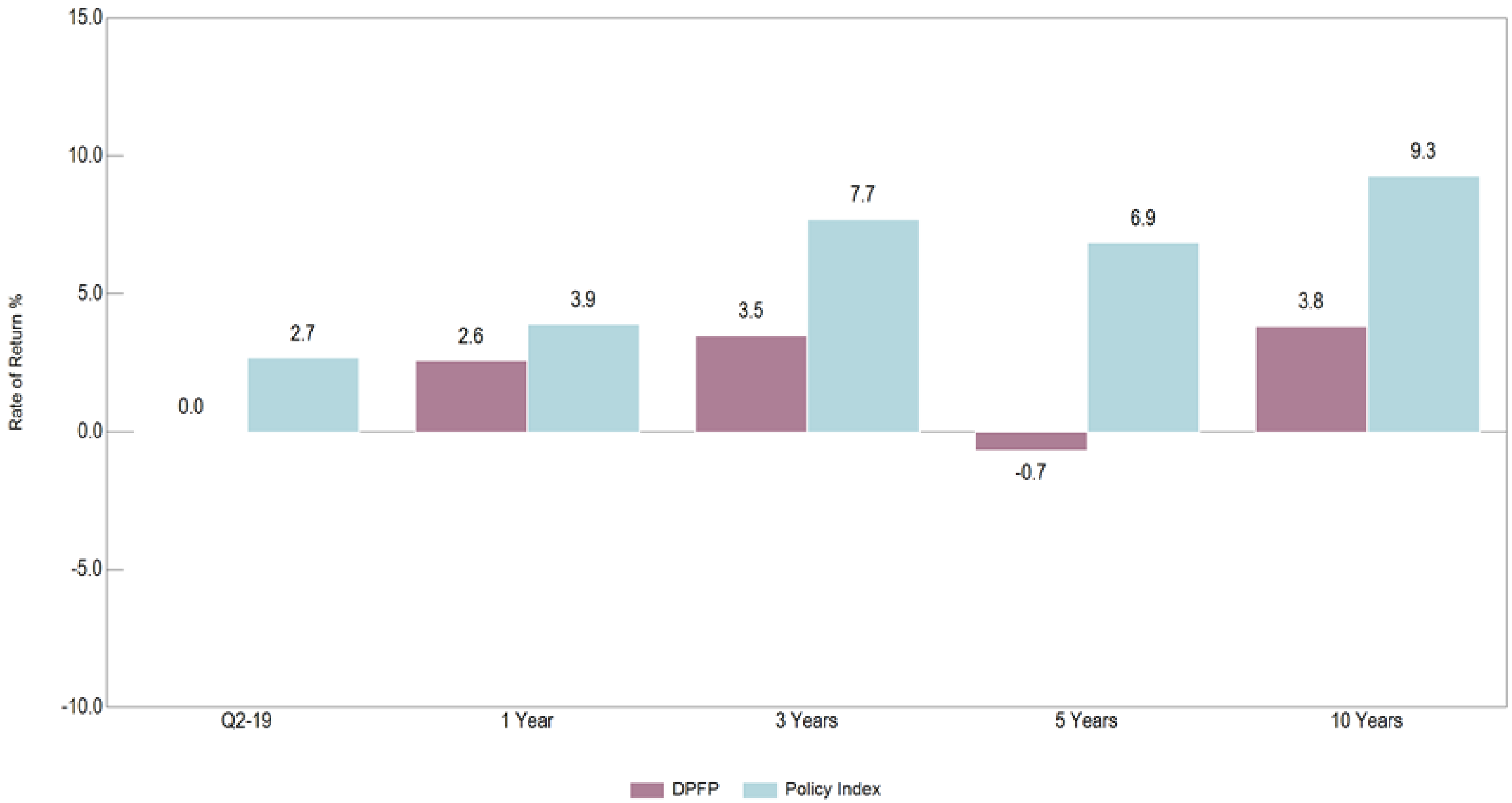


Dallas Police & Fire Pension System

DPFP

As of June 30, 2019

Net Return Summary
Ending June 30, 2019

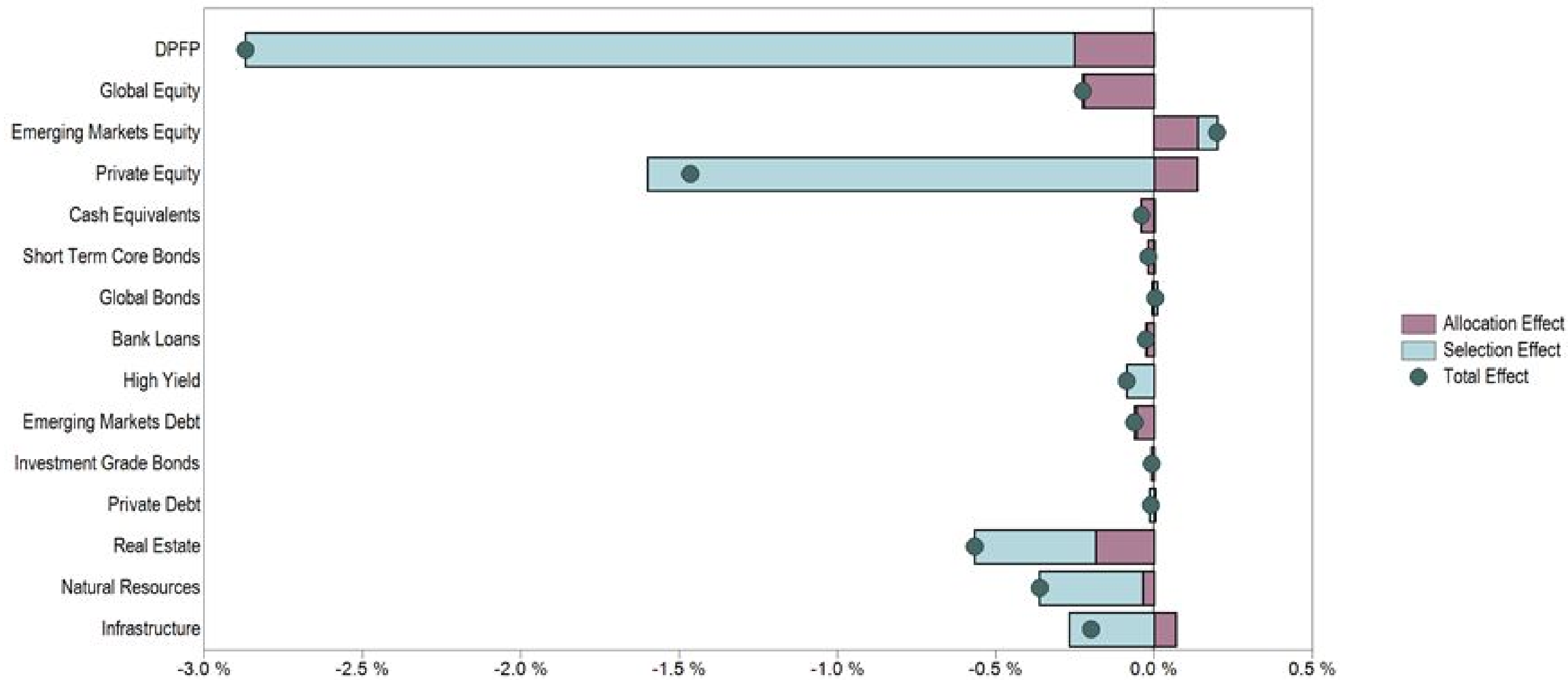


Dallas Police & Fire Pension System

DPFP

As of June 30, 2019

Attribution Effects vs. Policy Benchmark
3 Months Ending June 30, 2019



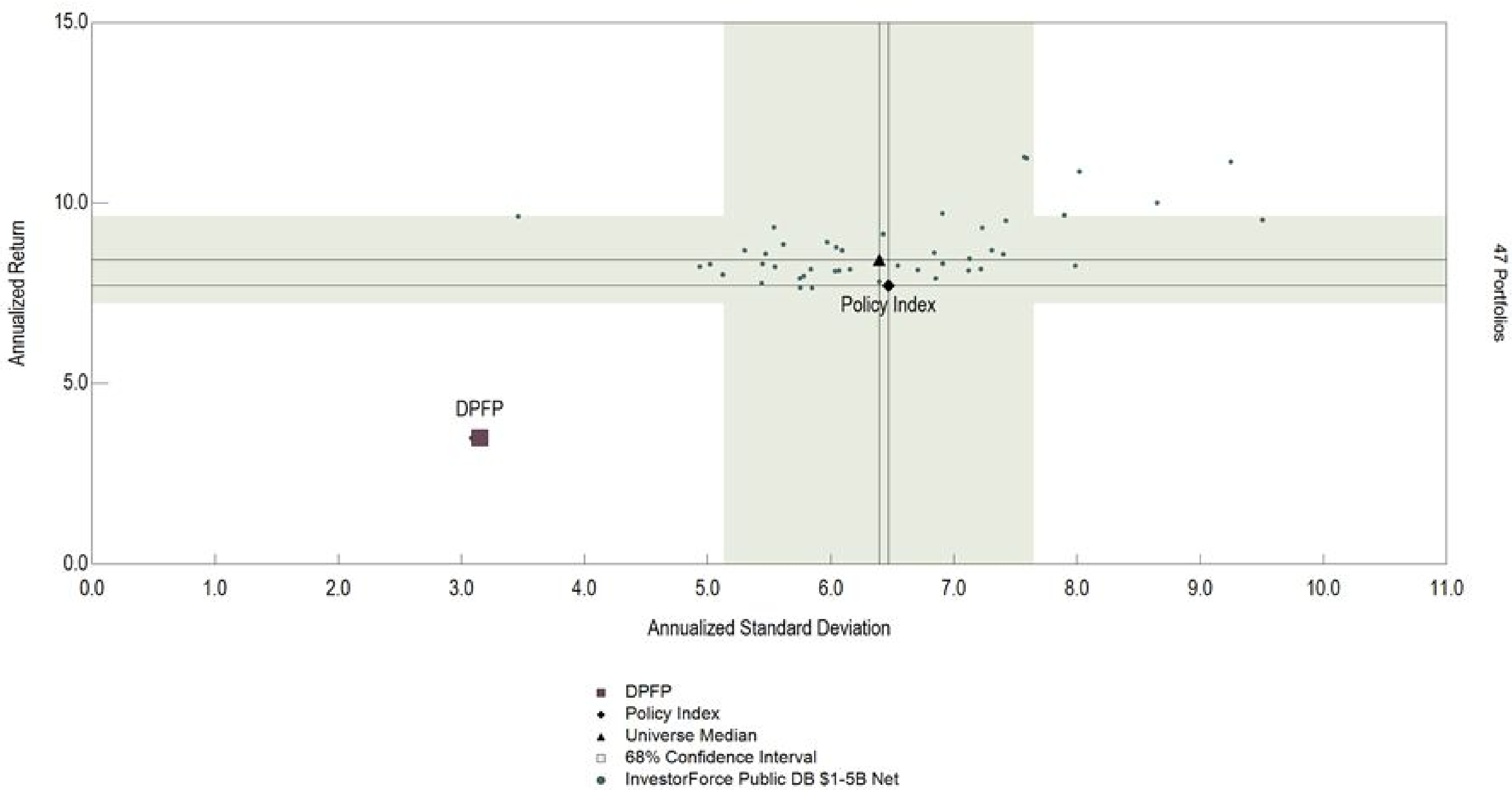
Attribution Summary
3 Months Ending June 30, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total	**0.0%**	**2.9%**	**-2.9%**	**-2.6%**	**-0.3%**	**-2.9%**

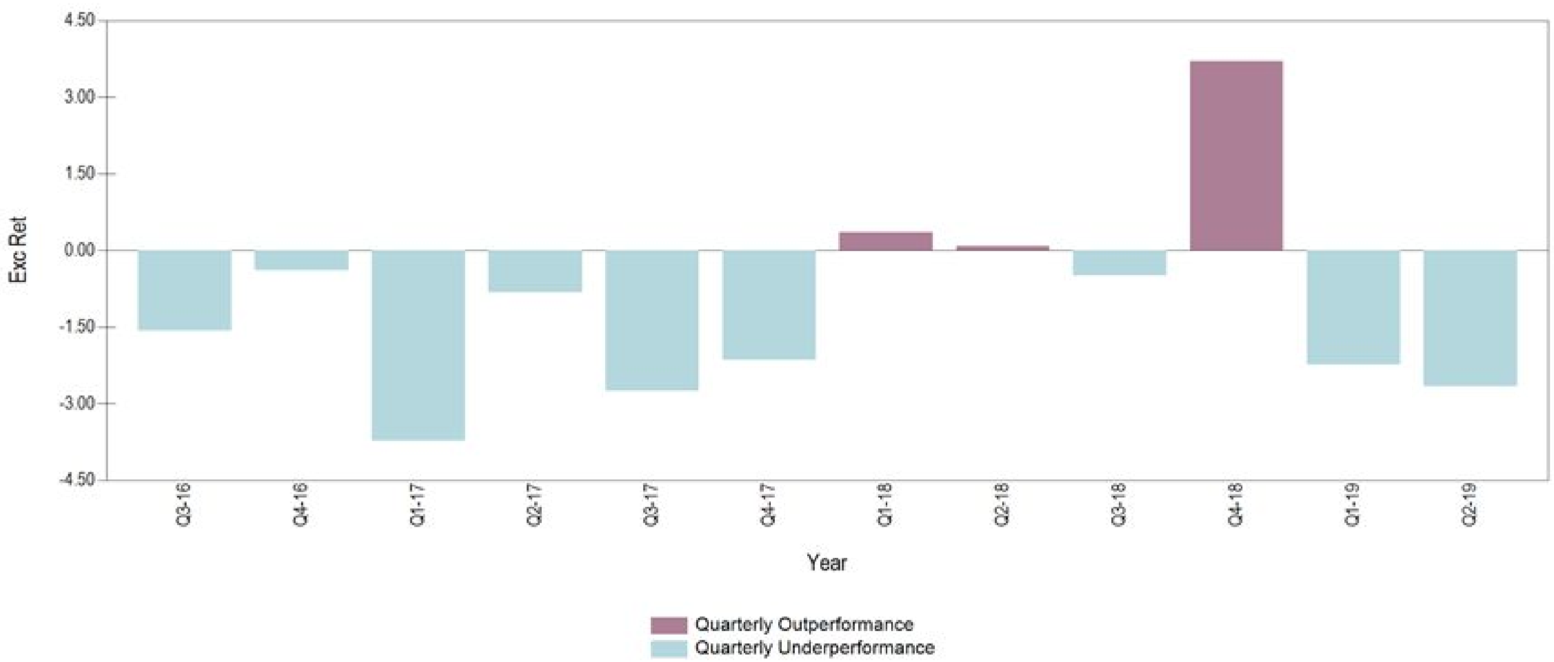
The performance claculation methodology in attribution tables is different from the standard time weighted returns (geometric linkage of monthly returns) found throughout the rest of the report. In attribution tables, the average weight of each asset class (over the specified time period) is multiplied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

Prepared by Meketa Investment Group

Net Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2019



Quarterly Excess Performance vs. Policy Benchmark



Total Fund Correlation Matrix
1 Year Ending June 30, 2019

	DPFP	Policy Index	60% MSCI ACWI/40% Barclays Global Agg
DPFP	1.00	--	--
Policy Index	0.92	1.00	--
60% MSCI ACWI/40% Barclays Global Agg	0.90	0.99	1.00

Total Fund Correlation Matrix
3 Years Ending June 30, 2019

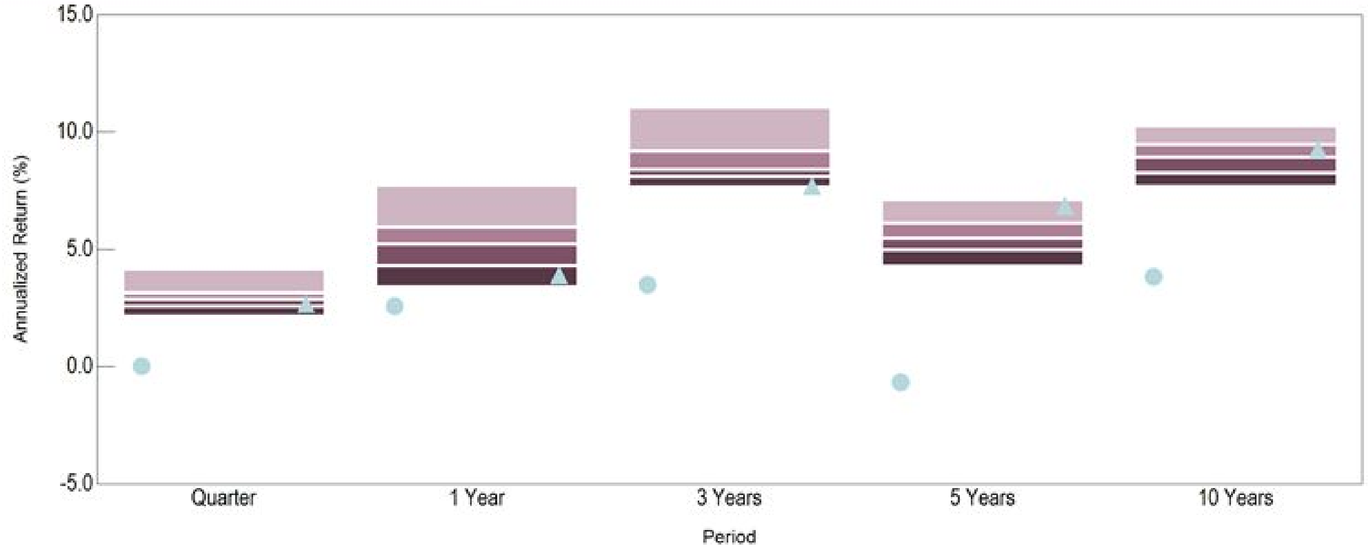
	DPFP	Policy Index	60% MSCI ACWI/40% Barclays Global Agg
DPFP	1.00	--	--
Policy Index	0.85	1.00	--
60% MSCI ACWI/40% Barclays Global Agg	0.83	0.98	1.00

Dallas Police & Fire Pension System

DPFP

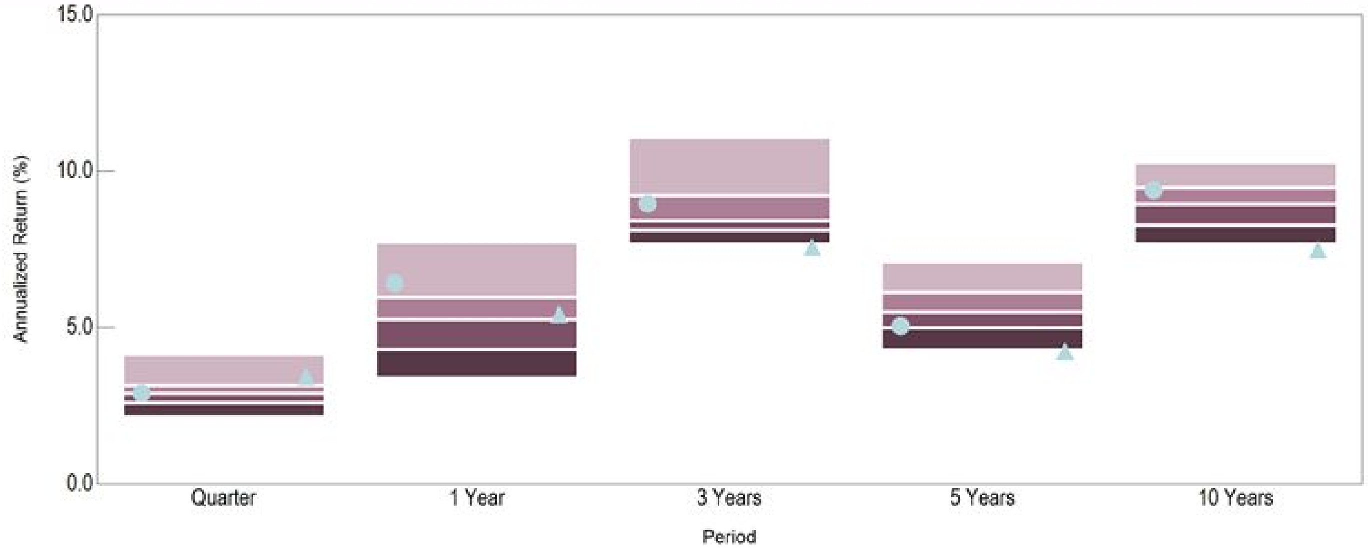
As of June 30, 2019

Total Plan vs. InvestorForce Public DB $1-5B Net Accounts
Ending June 30, 2019



Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years	
5th Percentile	4.1		7.7		11.1		7.1		10.3	
25th Percentile	3.2		6.0		9.2		6.1		9.5	
Median	2.9		5.3		8.4		5.5		8.9	
75th Percentile	2.6		4.3		8.1		5.0		8.3	
95th Percentile	2.2		3.4		7.7		4.3		7.7	
# of Portfolios	47		47		47		46		40	
DPFP	0.0	(99)	2.6	(99)	3.5	(99)	-0.7	(99)	3.8	(99)
Policy Index	2.7	(69)	3.9	(86)	7.7	(95)	6.9	(11)	9.3	(32)

Total Plan ex Privates vs. InvestorForce Public DB $1-5B Net Accounts
As of June 30, 2019



Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years	
5th Percentile	4.1		7.7		11.1		7.1		10.3	
25th Percentile	3.2		6.0		9.2		6.1		9.5	
Median	2.9		5.3		8.4		5.5		8.9	
75th Percentile	2.6		4.3		8.1		5.0		8.3	
95th Percentile	2.2		3.4		7.7		4.3		7.7	
# of Portfolios	47		47		47		46		40	
Total Fund ex Privates	2.9	(48)	6.4	(19)	9.0	(28)	5.0	(73)	9.4	(29)
60% MSCI ACWI IMI Net/40% Barclays Global	3.4	(13)	5.4	(41)	7.6	(98)	4.2	(96)	7.5	(96)

Dallas Police & Fire Pension System

As of June 30, 2019

Asset Class Performance Summary (Net)

	Market Value ($)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
DPFP	**2,002,637,967**	**100.0**	**0.0**	**4.8**	**2.6**	**3.5**	**-0.7**	**3.8**	**5.8**	**Jun-96**
Policy Index			*2.7*	*9.9*	*3.9*	*7.7*	*6.9*	*9.3*	*--*	*Jun-96*
Allocation Index			*2.5*	*7.1*	*4.7*	*7.6*	*6.9*	*8.6*	*7.3*	*Jun-96*
Total Fund Ex Private Markets			*2.9*	*11.0*	*6.4*	*9.0*	*5.0*	*9.4*	*5.7*	*Jun-96*
60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index			*3.4*	*11.9*	*5.4*	*7.6*	*4.2*	*7.5*	*6.1*	*Jun-96*
Global Equity	**474,745,746**	**23.7**	**3.8**	**18.3**	**7.2**	**13.3**	**7.8**	**11.4**	**6.5**	**Jul-06**
MSCI ACWI IMI Net USD			*3.4*	*16.1*	*4.6*	*11.4*	*6.0*	*10.3*	*6.0*	*Jul-06*
Emerging Markets Equity	**50,891,986**	**2.5**	**3.3**	**12.9**	**9.3**	**--**	**--**	**--**	**0.9**	**Jan-18**
MSCI Emerging Market IMI Net			*0.4*	*10.2*	*0.5*	*10.0*	*2.3*	*5.8*	*-4.3*	*Jan-18*
Private Equity	**229,472,342**	**11.5**	**-8.3**	**-8.3**	**-6.3**	**-14.0**	**-11.5**	**-3.5**	**-1.3**	**Oct-05**
Cambridge Associates US All PE (1 Qtr Lag)			*4.8*	*4.4*	*15.4*	*16.3*	*12.4*	*14.9*	*13.0*	*Oct-05*
Cash Equivalents	**63,499,721**	**3.2**	**0.6**	**1.2**	**2.4**	**1.4**	**--**	**--**	**1.4**	**Apr-15**
91 Day T-Bills			*0.6*	*1.2*	*2.3*	*1.4*	*0.9*	*0.5*	*1.0*	*Apr-15*
Short Term Core Bonds	**259,589,918**	**13.0**	**1.5**	**2.9**	**4.4**	**--**	**--**	**--**	**2.4**	**Jun-17**
BBgBarc US Treasury 1-3 Yr TR			*1.5*	*2.5*	*4.0*	*1.3*	*1.2*	*1.2*	*2.0*	*Jun-17*
Global Bonds	**67,989,320**	**3.4**	**3.6**	**6.7**	**5.0**	**2.8**	**1.7**	**--**	**2.9**	**Dec-10**
BBgBarc Global Aggregate TR			*3.3*	*5.6*	*5.8*	*1.6*	*1.2*	*2.9*	*2.1*	*Dec-10*
Bank Loans	**116,621,176**	**5.8**	**1.6**	**5.0**	**3.5**	**5.8**	**3.9**	**--**	**4.1**	**Jan-14**
S&P/LSTA Leveraged Loan			*1.7*	*5.7*	*4.0*	*5.2*	*3.7*	*--*	*3.8*	*Jan-14*
High Yield	**84,239,552**	**4.2**	**0.8**	**6.3**	**1.9**	**7.8**	**2.8**	**--**	**6.2**	**Dec-10**
BBgBarc Global High Yield TR			*3.0*	*9.5*	*7.8*	*6.8*	*4.0*	*9.1*	*6.5*	*Dec-10*
Emerging Markets Debt	**21,117,378**	**1.1**	**4.3**	**10.1**	**11.0**	**6.4**	**3.1**	**--**	**4.0**	**Dec-10**
50% JPM EMBI/50% JPM GBI-EM			*4.9*	*10.0*	*10.8*	*4.9*	*2.3*	*--*	*3.6*	*Dec-10*
Private Debt	**10,812,707**	**0.5**	**0.9**	**1.5**	**3.2**	**-3.4**	**--**	**--**	**-2.4**	**Jan-16**
Barclays Global High Yield +2%			*3.5*	*10.6*	*9.9*	*9.0*	*--*	*--*	*10.5*	*Jan-16*
Real Estate	**429,924,240**	**21.5**	**0.0**	**1.2**	**3.6**	**5.0**	**-6.1**	**-3.5**	**3.7**	**Mar-85**
NCREIF Property (1-quarter lagged)			*1.8*	*3.2*	*6.8*	*7.1*	*9.1*	*8.5*	*8.1*	*Mar-85*
Natural Resources	**138,171,185**	**6.9**	**-3.8**	**3.7**	**-1.3**	**-1.9**	**1.3**	**--**	**4.0**	**Dec-10**
NCREIF Farmland Total Return Index 1Q Lag			*0.7*	*3.6*	*6.1*	*6.4*	*8.2*	*11.1*	*12.2*	*Dec-10*
Infrastructure	**55,562,696**	**2.8**	**-4.1**	**-3.2**	**-10.7**	**15.3**	**7.3**	**--**	**6.9**	**Jul-12**
S&P Global Infrastructure TR USD			*5.3*	*20.2*	*12.2*	*8.8*	*4.8*	*9.3*	*8.9*	*Jul-12*

[1] Please see the Appendix for composition of the Custom Benchmarks. [2] As of 6/30/2019, the Safety Reserve exposure was approximately $323.1 million (16.2%).[3] All private market data is one quarter lagged, unless otherwise noted.

Dallas Police & Fire Pension System

DPFP

As of June 30, 2019

Trailing Net Performance

	Market Value ($)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
DPFP	**2,002,637,967**	**100.0**	**--**	**0.0**	**4.8**	**2.6**	**3.5**	**-0.7**	**3.8**	**5.8**	**Jun-96**
Policy Index				*2.7*	*9.9*	*3.9*	*7.7*	*6.9*	*9.3*	*--*	*Jun-96*
Allocation Index				*2.5*	*7.1*	*4.7*	*7.6*	*6.9*	*8.6*	*7.3*	*Jun-96*
Total Fund Ex Private Markets				*2.9*	*11.0*	*6.4*	*9.0*	*5.0*	*9.4*	*5.7*	*Jun-96*
60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index				*3.4*	*11.9*	*5.4*	*7.6*	*4.2*	*7.5*	*6.1*	*Jun-96*
InvestorForce Public DB $1-5B Net Rank				*99*	*99*	*99*	*99*	*99*	*99*	*85*	*Jun-96*
Total Equity	**755,110,074**	**37.7**	**37.7**	**-0.2**	**8.4**	**2.9**	**-1.2**	**-0.4**	**--**	**4.0**	**Dec-10**
MSCI ACWI IMI Net USD				*3.4*	*16.1*	*4.6*	*11.4*	*6.0*	*10.3*	*7.7*	*Dec-10*
Public Equity	**525,637,732**	**26.2**	**69.6**	**3.7**	**17.8**	**7.4**	**13.0**	**7.7**	**11.3**	**6.5**	**Jul-06**
MSCI ACWI IMI Net USD				*3.4*	*16.1*	*4.6*	*11.4*	*6.0*	*10.3*	*6.0*	*Jul-06*
eV All Global Equity Net Rank				*46*	*38*	*35*	*25*	*27*	*38*	*40*	*Jul-06*
Global Equity	**474,745,746**	**23.7**	**90.3**	**3.8**	**18.3**	**7.2**	**13.3**	**7.8**	**11.4**	**6.5**	**Jul-06**
MSCI ACWI IMI Net USD				*3.4*	*16.1*	*4.6*	*11.4*	*6.0*	*10.3*	*6.0*	*Jul-06*
eV All Global Equity Net Rank				*44*	*34*	*37*	*25*	*26*	*37*	*40*	*Jul-06*
Boston Partners Global Equity Fund	105,610,084	5.3	22.2	2.0	11.3	-0.9	--	--	--	3.2	Jul-17
MSCI World Net				*4.0*	*17.0*	*6.3*	*11.8*	*6.6*	*10.7*	*8.7*	*Jul-17*
eV Global Large Cap Value Eq Net Rank				*47*	*70*	*75*	*--*	*--*	*--*	*71*	*Jul-17*
Manulife Global Equity Strategy	123,964,112	6.2	26.1	4.5	19.8	12.0	--	--	--	7.0	Jul-17
MSCI ACWI Net				*3.6*	*16.2*	*5.7*	*11.6*	*6.2*	*10.1*	*8.2*	*Jul-17*
eV Global Large Cap Value Eq Net Rank				*24*	*1*	*3*	*--*	*--*	*--*	*13*	*Jul-17*
Invesco (fka OFI) Global Equity	115,475,442	5.8	24.3	4.2	21.7	3.6	16.8	8.4	12.4	6.3	Oct-07
MSCI ACWI Net				*3.6*	*16.2*	*5.7*	*11.6*	*6.2*	*10.1*	*4.2*	*Oct-07*
eV Global Large Cap Growth Eq Net Rank				*72*	*66*	*85*	*26*	*83*	*73*	*66*	*Oct-07*
Walter Scott Global Equity Fund	129,696,107	6.5	27.3	4.1	20.2	13.8	14.6	9.6	--	10.1	Dec-09
MSCI ACWI Net				*3.6*	*16.2*	*5.7*	*11.6*	*6.2*	*10.1*	*8.4*	*Dec-09*
eV Global Large Cap Growth Eq Net Rank				*73*	*91*	*22*	*77*	*43*	*--*	*80*	*Dec-09*

[1] 60% MSCI ACWI IMI Net/40% Barclays Global Aggregate Index composed of 60% MSCI ACWI (Net)/ 40% Barclays Global Aggregate in periods before 2/1/1997.

Dallas Police & Fire Pension System

DPFP

As of June 30, 2019

	Market Value ($)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Emerging Markets Equity	**50,891,986**	**2.5**	**9.7**	**3.3**	**12.9**	**9.3**	**--**	**--**	**--**	**0.9**	**Jan-18**
MSCI Emerging Market IMI Net				*0.4*	*10.2*	*0.5*	*10.0*	*2.3*	*5.8*	*-4.3*	*Jan-18*
eV Emg Mkts Equity Net Rank				*12*	*40*	*3*	*--*	*--*	*--*	*7*	*Jan-18*
RBC Emerging Markets Equity	50,891,986	2.5	100.0	3.3	12.9	9.3	--	--	--	0.9	Jan-18
MSCI Emerging Market IMI Net				*0.4*	*10.2*	*0.5*	*10.0*	*2.3*	*5.8*	*-4.3*	*Jan-18*
eV Emg Mkts Equity Net Rank				*12*	*40*	*3*	*--*	*--*	*--*	*7*	*Jan-18*
Private Equity	**229,472,342**	**11.5**	**30.4**	**-8.3**	**-8.3**	**-6.3**	**-14.0**	**-11.5**	**-3.5**	**-1.3**	**Oct-05**
Cambridge Associates US All PE (1 Qtr Lag)				*4.8*	*4.4*	*15.4*	*16.3*	*12.4*	*14.9*	*13.0*	*Oct-05*
Total Fixed Income	**623,869,773**	**31.2**	**31.2**	**1.6**	**4.1**	**3.9**	**3.9**	**1.6**	**7.8**	**5.3**	**Jul-06**
BBgBarc Multiverse TR				*3.3*	*5.8*	*6.0*	*1.9*	*1.3*	*3.1*	*3.9*	*Jul-06*
eV All Global Fixed Inc Net Rank				*86*	*89*	*82*	*52*	*67*	*14*	*35*	*Jul-06*
Cash Equivalents	**63,499,721**	**3.2**	**10.2**	**0.6**	**1.2**	**2.4**	**1.4**	**--**	**--**	**1.4**	**Apr-15**
91 Day T-Bills				*0.6*	*1.2*	*2.3*	*1.4*	*0.9*	*0.5*	*1.0*	*Apr-15*
Public Fixed Income	**549,557,344**	**27.4**	**88.1**	**1.8**	**4.6**	**4.1**	**6.0**	**2.8**	**--**	**5.3**	**Dec-10**
BBgBarc Multiverse TR				*3.3*	*5.8*	*6.0*	*1.9*	*1.3*	*3.1*	*2.3*	*Dec-10*
eV All Global Fixed Inc Net Rank				*84*	*86*	*78*	*21*	*49*	*--*	*20*	*Dec-10*
Short Term Core Bonds	**259,589,918**	**13.0**	**47.2**	**1.5**	**2.9**	**4.4**	**--**	**--**	**--**	**2.4**	**Jun-17**
BBgBarc US Treasury 1-3 Yr TR				*1.5*	*2.5*	*4.0*	*1.3*	*1.2*	*1.2*	*2.0*	*Jun-17*
IR&M 1-3 Year Strategy	259,589,918	13.0	100.0	1.5	2.9	4.4	--	--	--	2.4	Jul-17
BBgBarc US Treasury 1-3 Yr TR				*1.5*	*2.5*	*4.0*	*1.3*	*1.2*	*1.2*	*2.0*	*Jul-17*
eV US Short Duration Fixed Inc Net Rank				*52*	*55*	*45*	*--*	*--*	*--*	*43*	*Jul-17*

[1] All Private Equity market values are one quarter lagged unless otherwise noted. Huff, Barings and Lone Star valuations are more than a quarter lagged because updated valuations were not released at the time of report production.

Dallas Police & Fire Pension System

DPFP

As of June 30, 2019

	Market Value ($)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Global Bonds	**67,989,320**	**3.4**	**12.4**	**3.6**	**6.7**	**5.0**	**2.8**	**1.7**	**--**	**2.9**	**Dec-10**
BBgBarc Global Aggregate TR				*3.3*	*5.6*	*5.8*	*1.6*	*1.2*	*2.9*	*2.1*	*Dec-10*
eV All Global Fixed Inc Net Rank				*28*	*53*	*69*	*68*	*66*	*--*	*64*	*Dec-10*
Brandywine Global Fixed Income	67,989,320	3.4	100.0	3.6	6.7	5.0	2.8	1.4	5.5	4.7	Oct-04
BBgBarc Global Aggregate TR				*3.3*	*5.6*	*5.8*	*1.6*	*1.2*	*2.9*	*3.6*	*Oct-04*
eV All Global Fixed Inc Net Rank				*28*	*53*	*69*	*68*	*72*	*38*	*42*	*Oct-04*
Bank Loans	**116,621,176**	**5.8**	**21.2**	**1.6**	**5.0**	**3.5**	**5.8**	**3.9**	**--**	**4.1**	**Jan-14**
S&P/LSTA Leveraged Loan				*1.7*	*5.7*	*4.0*	*5.2*	*3.7*	*--*	*3.8*	*Jan-14*
eV US Float-Rate Bank Loan Fixed Inc Net Rank				*42*	*68*	*64*	*8*	*18*	*--*	*11*	*Jan-14*
Loomis Sayles Senior Rate and Fixed Income	62,457,487	3.1	53.6	1.5	4.4	2.9	5.7	3.8	--	4.1	Jan-14
S&P/LSTA Leveraged Loan				*1.7*	*5.7*	*4.0*	*5.2*	*3.7*	*--*	*3.8*	*Jan-14*
eV US Float-Rate Bank Loan Fixed Inc Net Rank				*58*	*86*	*85*	*8*	*21*	*--*	*12*	*Jan-14*
Pacific Asset Management Corporate (Bank) Loan Strategy	54,163,689	2.7	46.4	1.8	5.7	4.2	--	--	--	4.3	Aug-17
Credit Suisse Leveraged Loan				*1.6*	*5.4*	*4.1*	*5.4*	*3.9*	*--*	*4.2*	*Aug-17*
eV US Float-Rate Bank Loan Fixed Inc Net Rank				*8*	*24*	*19*	*--*	*--*	*--*	*6*	*Aug-17*
High Yield	**84,239,552**	**4.2**	**15.3**	**0.8**	**6.3**	**1.9**	**7.8**	**2.8**	**--**	**6.2**	**Dec-10**
BBgBarc Global High Yield TR				*3.0*	*9.5*	*7.8*	*6.8*	*4.0*	*9.1*	*6.5*	*Dec-10*
eV Global High Yield Fixed Inc Net Rank				*99*	*99*	*99*	*8*	*86*	*--*	*44*	*Dec-10*
Loomis Sayles High Yield Fund	84,239,552	4.2	100.0	0.8	6.3	1.9	8.2	3.3	9.9	9.1	Oct-98
BBgBarc Global High Yield TR				*3.0*	*9.5*	*7.8*	*6.8*	*4.0*	*9.1*	*8.3*	*Oct-98*
eV Global High Yield Fixed Inc Net Rank				*99*	*99*	*99*	*1*	*82*	*1*	*1*	*Oct-98*

Dallas Police & Fire Pension System

DPFP

As of June 30, 2019

	Market Value ($)	% of Portfolio	% of Sector	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Emerging Markets Debt	**21,117,378**	**1.1**	**3.8**	**4.3**	**10.1**	**11.0**	**6.4**	**3.1**	**--**	**4.0**	**Dec-10**
50% JPM EMBI/50% JPM GBI-EM				*4.9*	*10.0*	*10.8*	*4.9*	*2.3*	*--*	*3.6*	*Dec-10*
eV All Emg Mkts Fixed Inc Net Rank				*48*	*47*	*31*	*18*	*51*	*--*	*56*	*Dec-10*
Ashmore EM Blended Debt	21,117,378	1.1	100.0	4.3	10.1	11.0	--	--	--	3.4	Dec-17
Ashmore Blended Debt Benchmark				*4.0*	*8.7*	*9.4*	*4.6*	*2.4*	*5.0*	*3.1*	*Dec-17*
eV All Emg Mkts Fixed Inc Net Rank				*48*	*47*	*31*	*--*	*--*	*--*	*43*	*Dec-17*
Private Debt	**10,812,707**	**0.5**	**1.7**	**0.9**	**1.5**	**3.2**	**-3.4**	**--**	**--**	**-2.4**	**Jan-16**
Barclays Global High Yield +2%				*3.5*	*10.6*	*9.9*	*9.0*	*--*	*--*	*10.5*	*Jan-16*
Total Real Assets	**623,658,120**	**31.1**	**31.1**	**-1.2**	**1.5**	**1.2**	**5.8**	**-2.8**	**--**	**-1.9**	**Dec-10**
Total Real Assets Policy Index				*1.3*	*3.4*	*6.5*	*6.8*	*8.7*	*--*	*11.4*	*Dec-10*
Real Estate	**429,924,240**	**21.5**	**68.9**	**0.0**	**1.2**	**3.6**	**5.0**	**-6.1**	**-3.5**	**3.7**	**Mar-85**
NCREIF Property (1-quarter lagged)				*1.8*	*3.2*	*6.8*	*7.1*	*9.1*	*8.5*	*8.1*	*Mar-85*
Natural Resources	**138,171,185**	**6.9**	**22.2**	**-3.8**	**3.7**	**-1.3**	**-1.9**	**1.3**	**--**	**4.0**	**Dec-10**
NCREIF Farmland Total Return Index 1Q Lag				*0.7*	*3.6*	*6.1*	*6.4*	*8.2*	*11.1*	*12.2*	*Dec-10*
Infrastructure	**55,562,696**	**2.8**	**8.9**	**-4.1**	**-3.2**	**-10.7**	**15.3**	**7.3**	**--**	**6.9**	**Jul-12**
S&P Global Infrastructure TR USD				*5.3*	*20.2*	*12.2*	*8.8*	*4.8*	*9.3*	*8.9*	*Jul-12*

[1] All Private Market market values are one quarter lagged unless otherwise noted. Huff NAV as of 9/30/2018. Barings and Lone Star NAV as of 12/31/2018.

Benchmark History
As of June 30, 2019

DPFP		
1/1/2019	Present	40% MSCI ACWI IMI Net USD / 10% MSCI Emerging Market IMI Net / 5% Cambridge Associates US All PE (1 Qtr Lag) / 12% BBgBarc US Treasury 1-3 Yr TR / 4% BBgBarc Global Aggregate TR / 4% BBgBarc Global High Yield TR / 4% BBgBarc US Aggregate TR / 4% S&P/LSTA Leveraged Loan / 4% 50% JPM EMBI/50% JPM GBI-EM / 5% NCREIF Farmland Total Return Index 1Q Lag / 5% NCREIF Property (1-quarter lagged) / 3% 91 Day T-Bills
10/1/2018	12/31/2018	40% MSCI ACWI Gross / 10% MSCI Emerging Markets Gross / 5% Private Equity Custom Benchmark / 12% BBgBarc US Treasury 1-3 Yr TR / 4% BBgBarc Global Aggregate TR / 4% BBgBarc Global High Yield TR / 4% S&P/LSTA Leveraged Loan / 4% BBgBarc US Aggregate TR / 4% 50% JPM EMBI/50% JPM GBI-EM / 5% Natural Resources Benchmark (Linked) / 5% NCREIF Property Index / 3% 91 Day T-Bills
4/1/2016	9/30/2018	20% MSCI ACWI Gross / 5% MSCI Emerging Markets Gross / 5% Private Equity Custom Benchmark / 2% BBgBarc US Treasury 1-3 Yr TR / 3% BBgBarc Global Aggregate TR / 5% BBgBarc Global High Yield TR / 6% S&P/LSTA Leveraged Loan / 6% HFRI RV: FI (50/50-ABS/Corp) / 6% 50% JPM EMBI/50% JPM GBI-EM / 5% Barclays Global High Yield +2% / 5% 60% MSCI ACWI/40% Barclays Global Agg / 3% 60% MSCI ACWI/40% Barclays Global Agg / 2% HFRX Absolute Return Index / 5% Natural Resources Benchmark (Linked) / 5% S&P Global Infrastructure TR USD / 12% NCREIF Property Index / 3% CPI + 5% (Seasonally Adjusted) / 2% 91 Day T-Bills
4/1/2014	3/31/2016	15% MSCI ACWI / 15% S&P 500 + 2% / 10% Total Global Natural Resources Custom Benchmark / 15% BBgBarc Global Aggregate TR / 20% CPI + 5% (Seasonally Adjusted) / 10% CPI + 5% (Seasonally Adjusted) / 15% NCREIF Property Index
1/1/2014	3/31/2014	15% MSCI ACWI / 15% Private Markets / 10% Total Global Natural Resources Custom Benchmark / 15% BBgBarc Global Aggregate TR / 20% CPI + 5% (Seasonally Adjusted) / 10% Infrastructure / 15% Real Estate
Ashmore EM Blended Debt		
12/1/2017	Present	50% JP Morgan EMBI Global Diversified / 25% JPM ELMI+ TR USD / 25% JP Morgan GBI EM Global Diversified TR USD
Total Real Assets		
12/31/2010	Present	50% NCREIF Property (1-quarter lagged) / 50% NCREIF Farmland Total Return Index 1Q Lag

Disclaimer, Glossary, and Notes

Disclaimer

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CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM", "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.
The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991.

Notes

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

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

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

FUND EVALUATION REPORT

Dallas Police & Fire Pension System

Private Markets Review
As of March 31, 2019

MEKETA INVESTMENT GROUP

BOSTON MASSACHUSETTS | CHICAGO ILLINOIS | MIAMI FLORIDA | NEW YORK NEW YORK | PORTLAND OREGON | SAN DIEGO CALIFORNIA | LONDON UNITED KINGDOM

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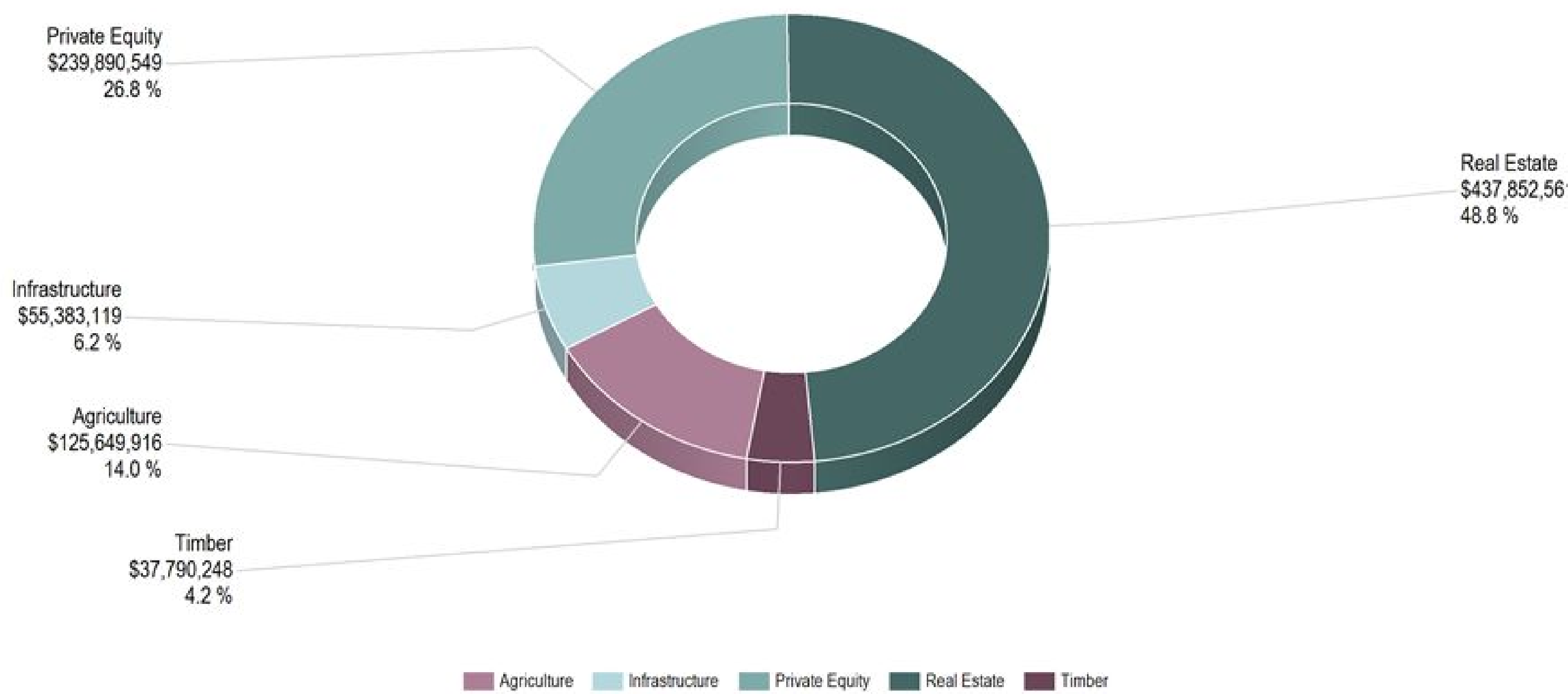
Dallas Police & Fire Pension System

Private Markets Review

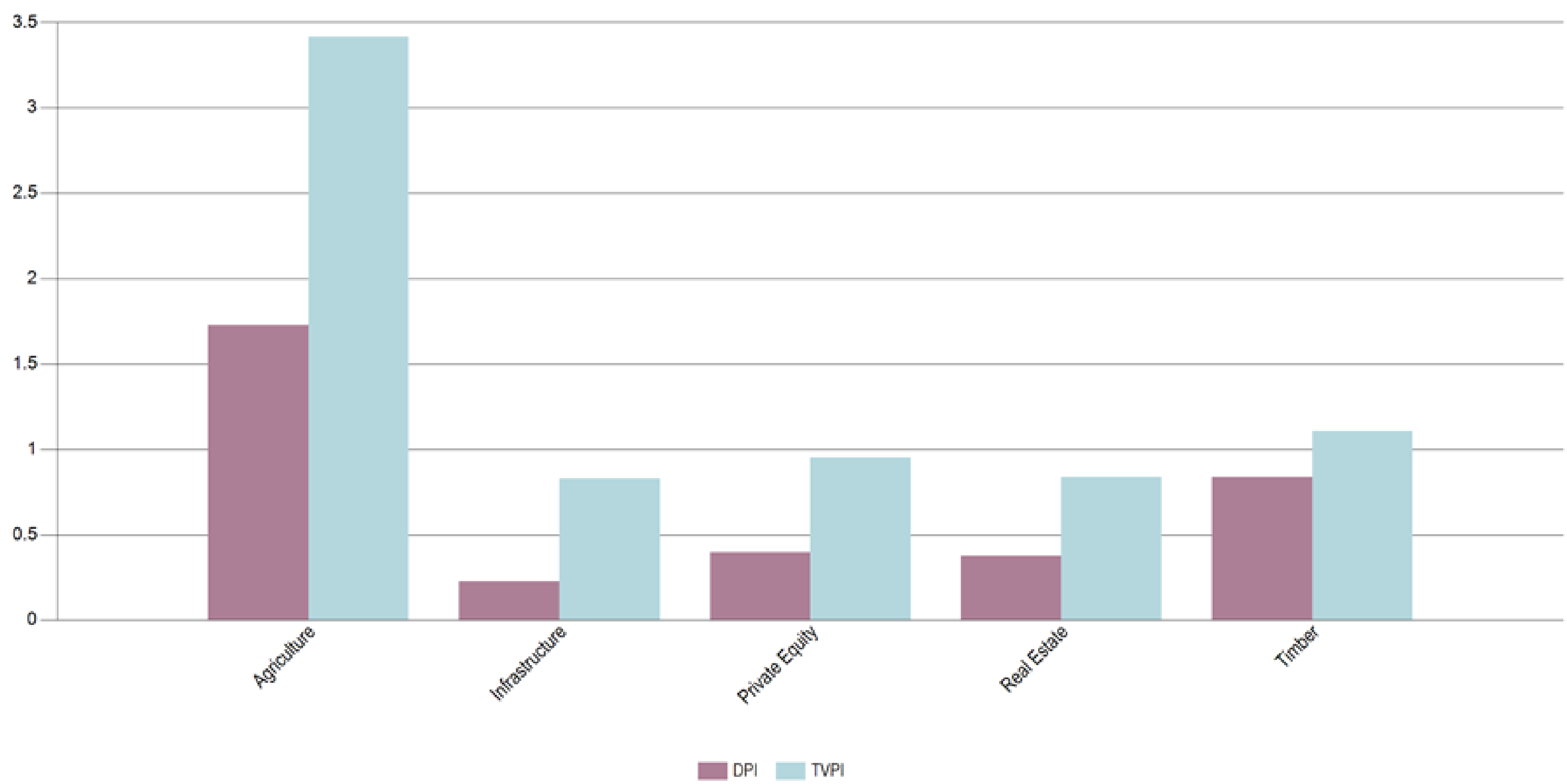
As of March 31, 2019

Private Market Investments as of March 31, 2019
Market Value Allocation by Asset Class



1. Private Equity is composed of Private Equity and Private Debt

Private Market Investments as of March 31, 2019
DPI and TVPI by Asset Class



1. Private Equity is composed of Private Equity and Private Debt
2. Private markets performance reflected is composed of active investments only

Dallas Police & Fire Pension System

Private Markets Review

As of March 31, 2019

Private Market Investments Overview

Active Funds	Commitments		Distributions & Valuations				Performance			
Asset Class	Commitment ($)	Paid In Capital ($)	Distributions ($)	Valuation ($)	Total Value ($)	Gain/Loss ($)	Call Ratio	DPI	TVPI	IRR (%)
Total Agriculture	74,420,001	74,420,001	128,634,349	125,649,916	254,284,265	179,864,264	1.00	1.73	3.42	15.16
Total Infrastructure	97,000,000	92,353,631	21,348,653	55,383,119	76,731,771	-15,621,860	0.95	0.23	0.83	-3.73
Total Private Equity	414,034,369	442,813,885	171,022,164	239,890,549	410,912,713	-31,901,172	1.07	0.39	0.93	-1.42
Total Real Estate	962,954,680	952,305,159	360,033,282	437,852,561	797,885,843	-154,419,317	0.99	0.38	0.84	-2.65
Total Timber	141,700,472	141,700,472	118,930,209	37,790,248	156,720,457	15,019,984	1.00	0.84	1.11	1.89
Total	1,690,109,522	1,703,593,149	799,968,656	896,566,392	1,696,535,049	-7,058,100	1.01	0.47	1.00	-0.06

1. Private Equity is composed of Private Equity and Private Debt
2. Private markets performance reflected is composed of active investments only
3. Commitment value is equal to paid in capital for direct investments made outside of a traditional limited partnership fund structure.

Dallas Police & Fire Pension System

Active Funds with Unfunded Commitments Overview

As of March 31, 2019

Active Funds with Unfunded Commitments

Active Funds		Commitments		
Investment Name	**Vintage Year**	**Commitment ($)**	**Paid In Capital ($)**	**Unfunded Commitment ($)**
Infrastructure				
TRG AIRRO	2008	37,000,000	36,691,798	3,682,745
TRG AIRRO II	2013	10,000,000	7,048,417	2,539,271
JPM Maritime Fund, LP	2009	50,000,000	48,613,416	1,365,941
Total Infrastructure		**97,000,000**	**92,353,631**	**7,587,958**
Private Equity				
Huff Energy Fund LP	2006	100,000,000	98,932,684	119,979
Industry Ventures Partnership IV	2016	5,000,000	2,212,698	2,787,302
Lone Star Growth Capital	2006	16,000,000	26,560,000	2,240,000
Riverstone Credit Partners LP	2016	10,000,000	12,242,390	1,444,678
Yellowstone Capital	2008	5,283,254	5,112,307	170,947
Total Private Equity		**136,283,254**	**145,060,079**	**6,762,906**
Real Estate				
Hearthstone MS II Homebuilding Investors	1999	10,000,000	7,973,058	1,008,131
Hearthstone MS III Homebuilding Investors	2003	10,000,000	1,221,446	1,278,554
Total Real Estate		**20,000,000**	**9,194,504**	**2,286,685**
Total		**253,283,254**	**246,608,214**	**16,637,549**

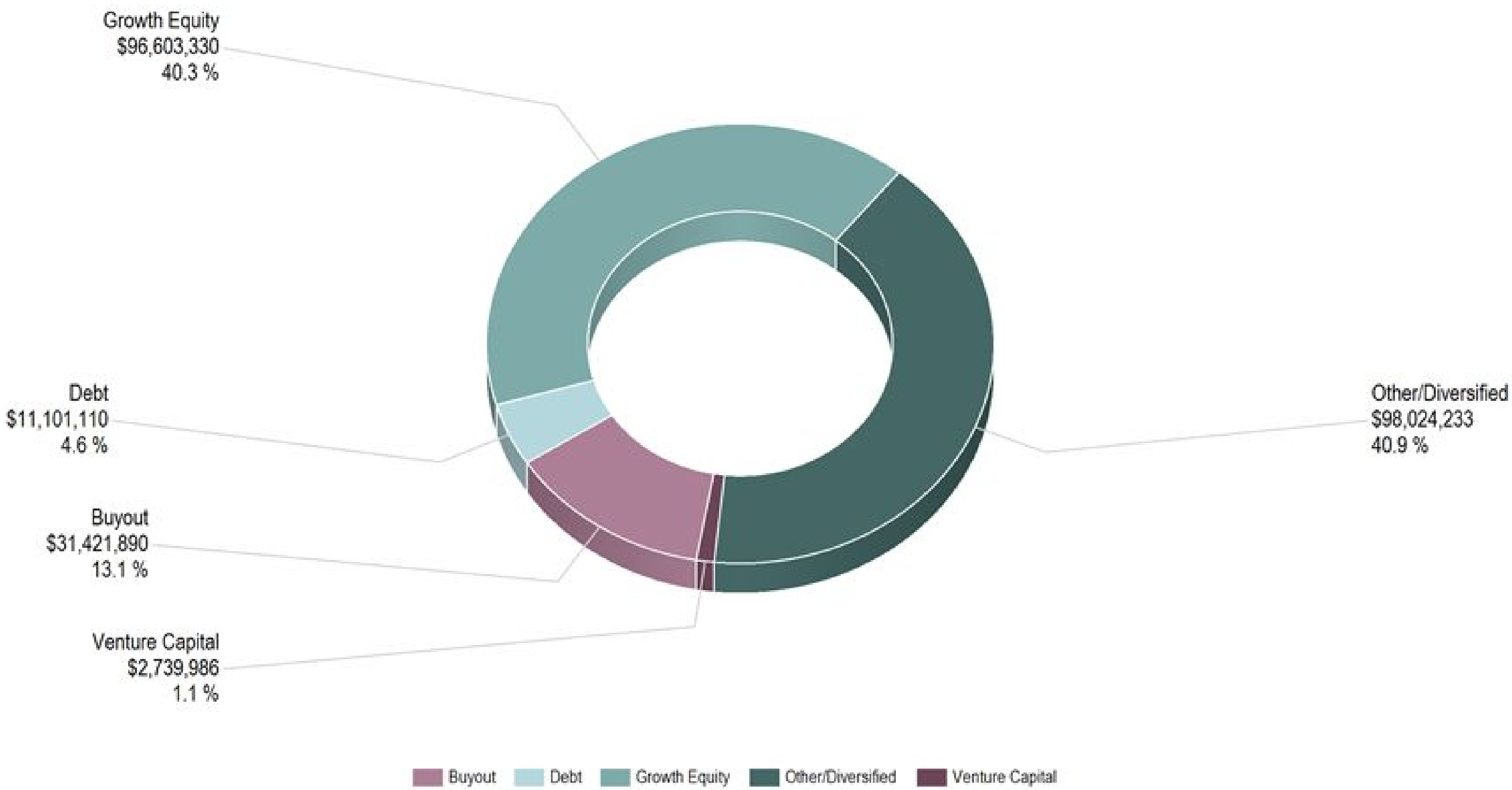
1. Private markets performance reflected is composed of active investments only
2. The funds and figures above represent investments with unfunded capital commitments
3. Lone Star valuations as directed by Dallas Police and Fire investment staff
4. The current quarter valuations for Huff is not yet available. That valuations will be reflected in the next quarterly report

Dallas Police & Fire Pension System

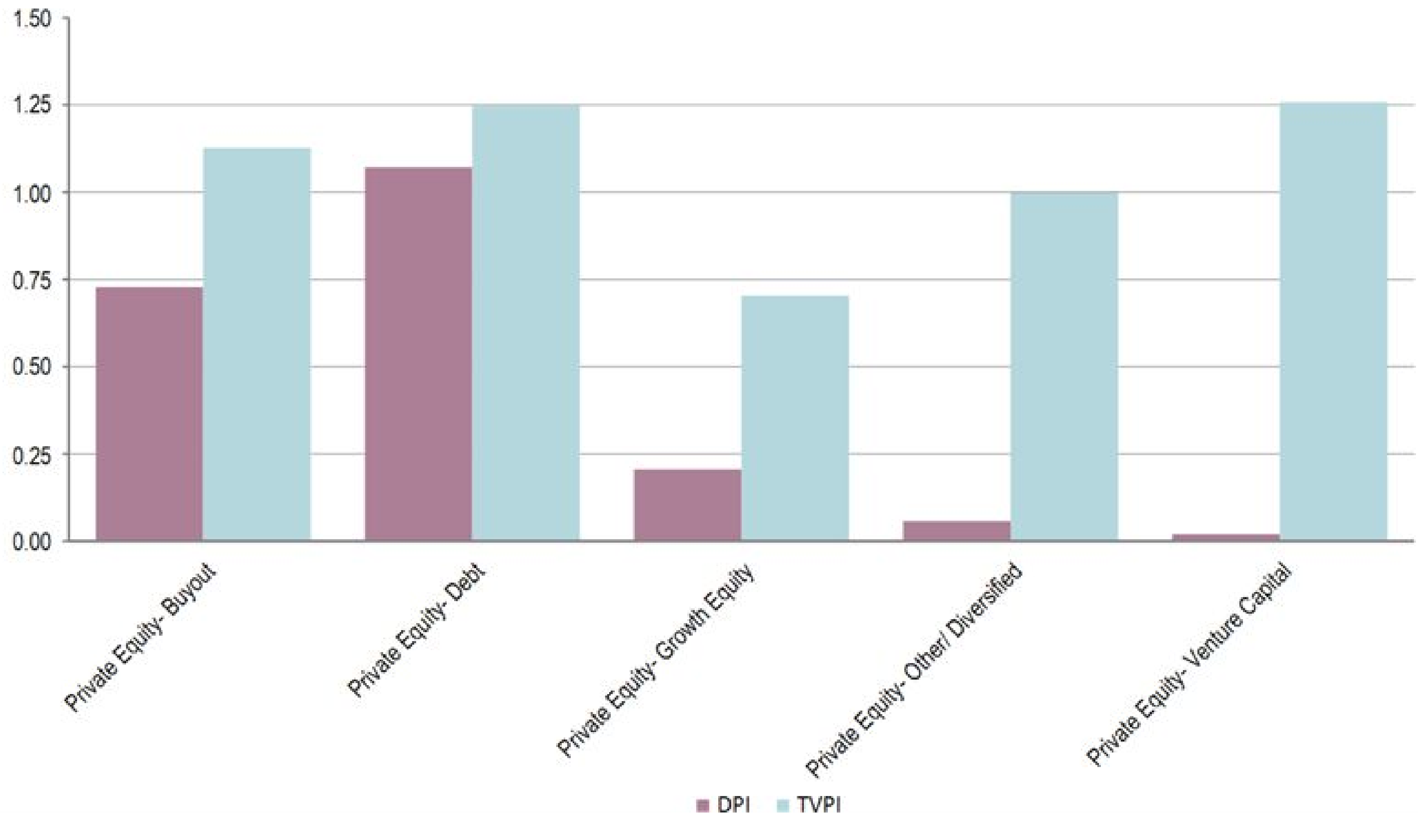
Private Equity and Debt

As of March 31, 2019

Private Equity and Debt Investments as of March 31, 2019
Market Value Allocation by Strategy



Private Equity and Debt Investments as of March 31, 2019
DPI and TVPI by Strategy



1. Private markets performance reflected is composed of active investments only

Dallas Police & Fire Pension System

Private Equity and Debt

As of March 31, 2019

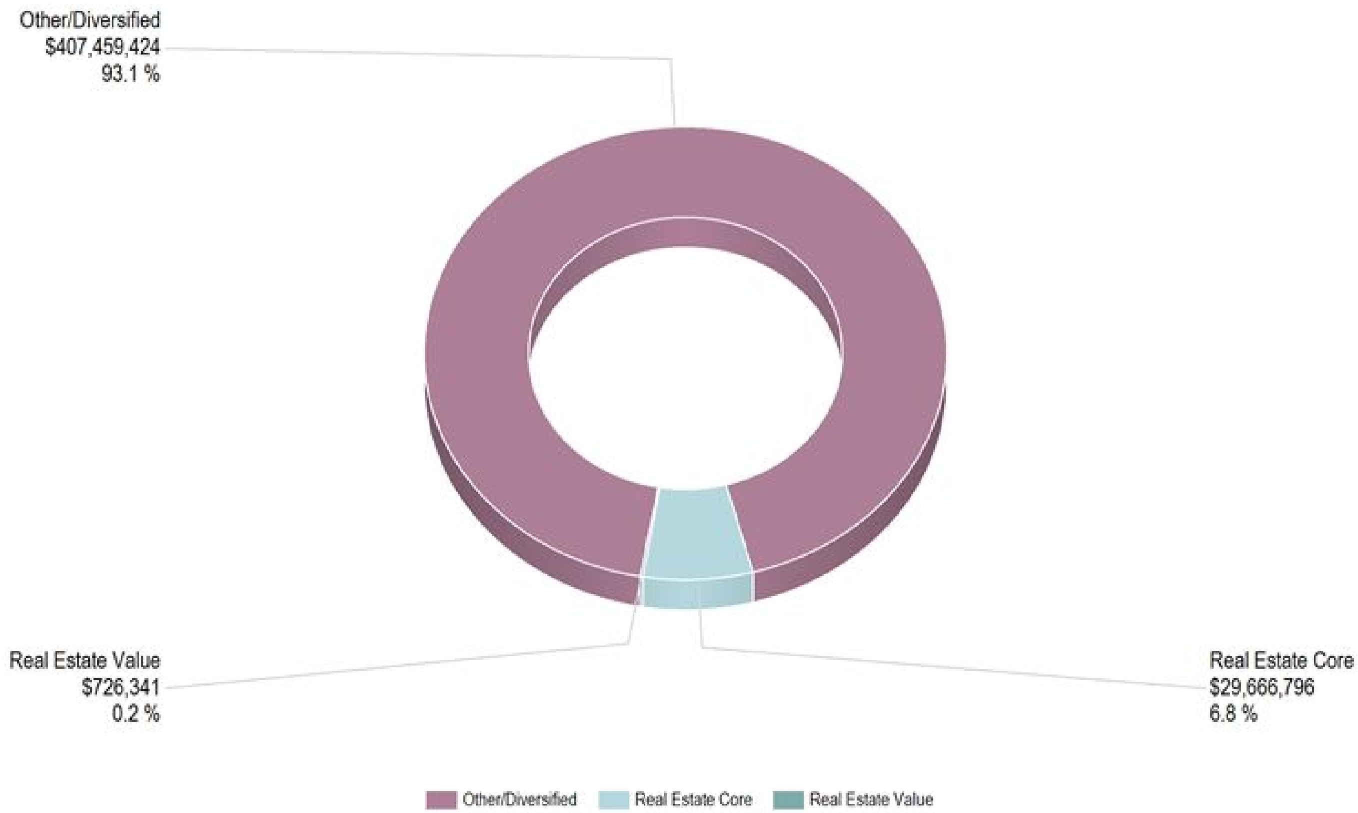
Private Equity and Debt Investments Overview

Active Funds		Commitments		Distributions & Valuations				Performance			
Investment Name	Vintage Year	Commitment ($)	Paid In Capital ($)	Distributions ($)	Valuation ($)	Total Value ($)	Gain/Loss ($)	Call Ratio	DPI	TVPI	IRR (%)
Buyout											
Huff Alternative Fund	2000	66,795,718	78,818,394	57,386,716	31,421,890	88,808,606	9,990,212	1.18	0.73	1.13	1.52
Total Buyout		**66,795,718**	**78,818,394**	**57,386,716**	**31,421,890**	**88,808,606**	**9,990,212**	**1.18**	**0.73**	**1.13**	**1.52**
Debt											
Highland Crusader Fund	2003	50,955,397	50,955,397	62,263,032	2,531,251	64,794,283	13,838,886	1.00	1.22	1.27	4.21
Riverstone Credit Partners LP	2016	10,000,000	12,242,390	5,419,589	8,569,859	13,989,448	1,747,058	1.22	0.44	1.14	10.21
Total Debt		**60,955,397**	**63,197,787**	**67,682,621**	**11,101,110**	**78,783,731**	**15,585,944**	**1.04**	**1.07**	**1.25**	**4.44**
Growth Equity											
Hudson Clean Energy	2009	25,000,000	24,994,470	4,688,958	3,423,141	8,112,099	-16,882,371	1.00	0.19	0.32	-17.00
Lone Star CRA	2008	50,000,000	57,787,983	12,928,698	59,026,786	71,955,484	14,167,501	1.16	0.22	1.25	8.59
Lone Star Growth Capital	2006	16,000,000	26,560,000	12,800,000	13,266,322	26,066,322	-493,678	1.66	0.48	0.98	-0.61
Lone Star Opportunities V	2012	75,000,000	75,000,000	531,444	19,291,765	19,823,209	-55,176,791	1.00	0.01	0.26	-45.82
North Texas Opportunity Fund	2000	10,000,000	10,000,000	9,023,910	1,595,316	10,619,226	619,226	1.00	0.90	1.06	0.68
Total Growth Equity		**176,000,000**	**194,342,453**	**39,973,010**	**96,603,330**	**136,576,340**	**-57,766,113**	**1.10**	**0.21**	**0.70**	**-13.27**
Other/Diversified											
Huff Energy Fund LP	2006	100,000,000	98,932,684	4,477,394	98,024,233	102,501,627	3,568,943	0.99	0.05	1.04	0.40
Yellowstone Capital	2008	5,283,254	5,112,307	1,458,572	0	1,458,572	-3,653,735	0.97	0.29	0.29	-32.45
Total Other/Diversified		**105,283,254**	**104,044,991**	**5,935,966**	**98,024,233**	**103,960,199**	**-84,792**	**0.99**	**0.06**	**1.00**	**-0.01**
Venture Capital											
Industry Ventures Partnership IV	2016	5,000,000	2,212,698	43,851	2,739,986	2,783,837	571,139	0.44	0.02	1.26	15.59
Total Venture Capital		**5,000,000**	**2,212,698**	**43,851**	**2,739,986**	**2,783,837**	**571,139**	**0.44**	**0.02**	**1.26**	**15.59**
Unclassified											
Miscellaneous Private Equity Expenses	2016		197,562								
Total Unclassified			**197,562**								
Total		**414,034,369**	**442,813,885**	**171,022,164**	**239,890,549**	**410,912,713**	**-31,901,172**	**1.07**	**0.39**	**0.93**	**-1.42**

1. Private Markets performance reflected is composed of active investments only.
2. Current quarter valuations for Huff and Lone Star are not yet available. These valuations will be reflected in the next quarterly report. Lone Star valuations directed by Dallas Police and Fire investment staff.

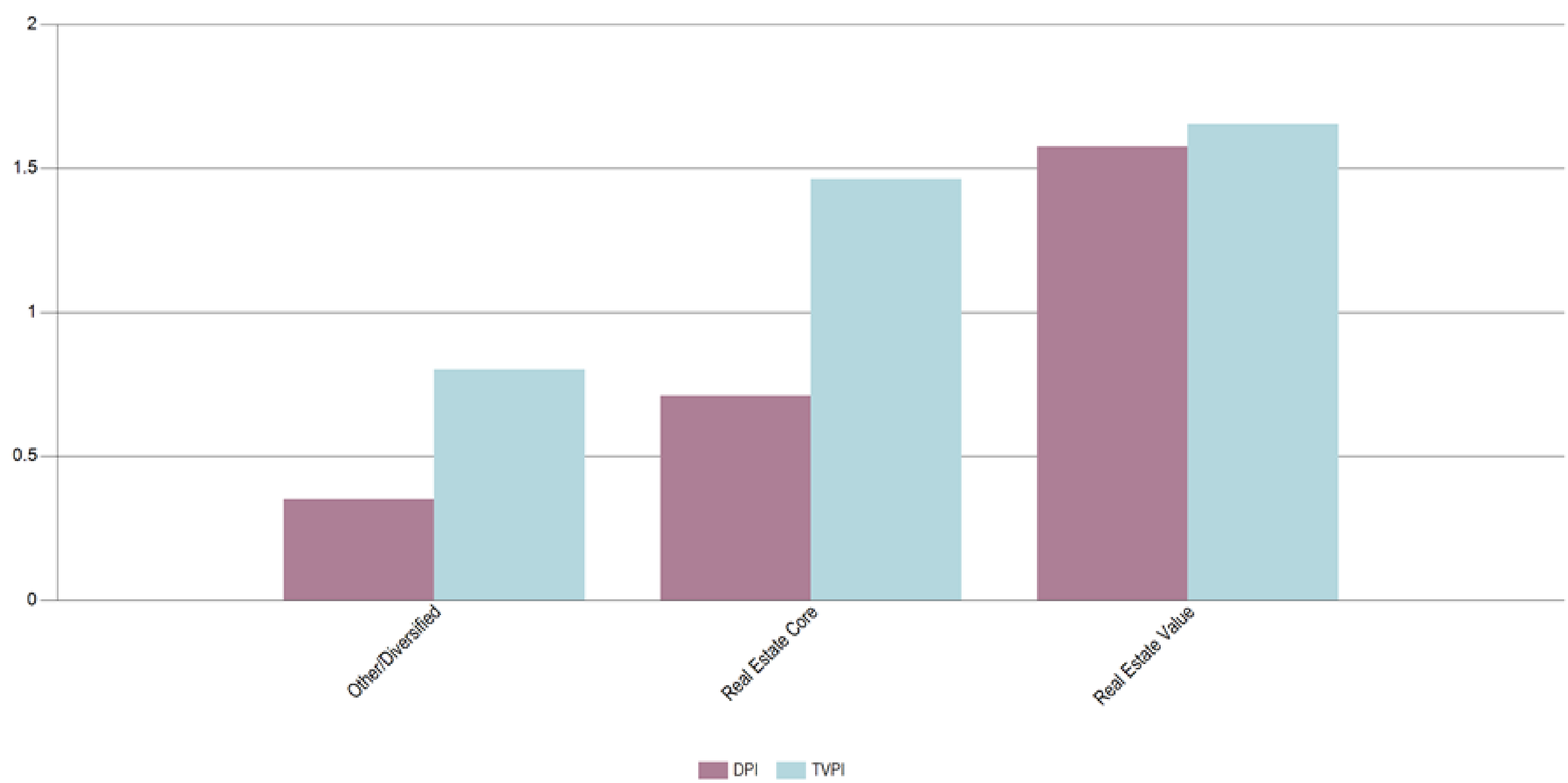
Prepared by Meketa Investment Group

Real Estate Investments as of March 31, 2019
Market Value Allocation by Strategy



1. Other/Diversified is composed of direct real estate investments made by the fund

Real Estate Investments as of March 31, 2019
DPI and TVPI Call Ratio by Strategy



1. Other/Diversified is composed of direct real estate investments made by the fund
2. Private markets performance reflected is composed of active investments only

Dallas Police & Fire Pension System

Real Estate

As of March 31, 2019

Real Estate Investments Overview

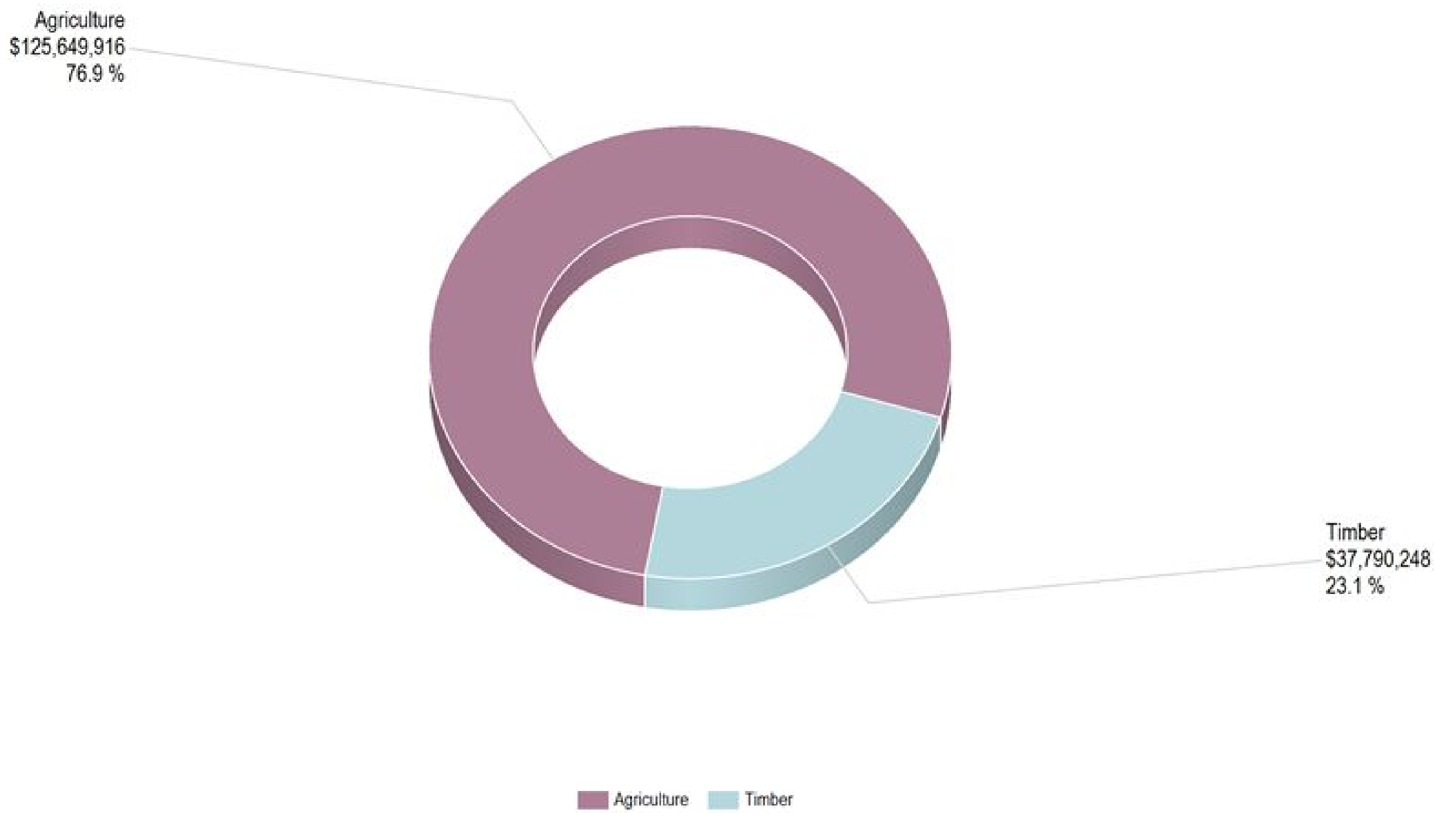
Active Funds	Commitments		Valuations				Performance			
Investment Name	Commitment ($)	Paid In Capital ($)	Distributions ($)	Valuation ($)	Total Value ($)	Gain/Loss ($)	Call Ratio	DPI	TVPI	IRR (%)
Total Other/Diversified	903,614,172	903,614,172	316,997,809	407,459,424	724,457,233	-179,156,939	1.00	0.35	0.80	-3.21
Real Estate Core										
Total Real Estate Core	39,340,508	39,340,508	27,881,265	29,666,796	57,548,061	18,207,553	1.00	0.71	1.46	5.80
Real Estate Value										
Total Real Estate Value	20,000,000	9,194,504	14,487,455	726,341	15,213,796	6,019,292	0.46	1.58	1.65	25.93
Total	962,954,680	952,305,159	360,033,282	437,852,561	797,885,843	-154,419,317	0.99	0.38	0.84	-2.65

1. Private markets performance reflected is composed of active investments only
2. Commitment value is equal to paid in capital for direct investments made outside of a traditional Limited Partnership fund structure

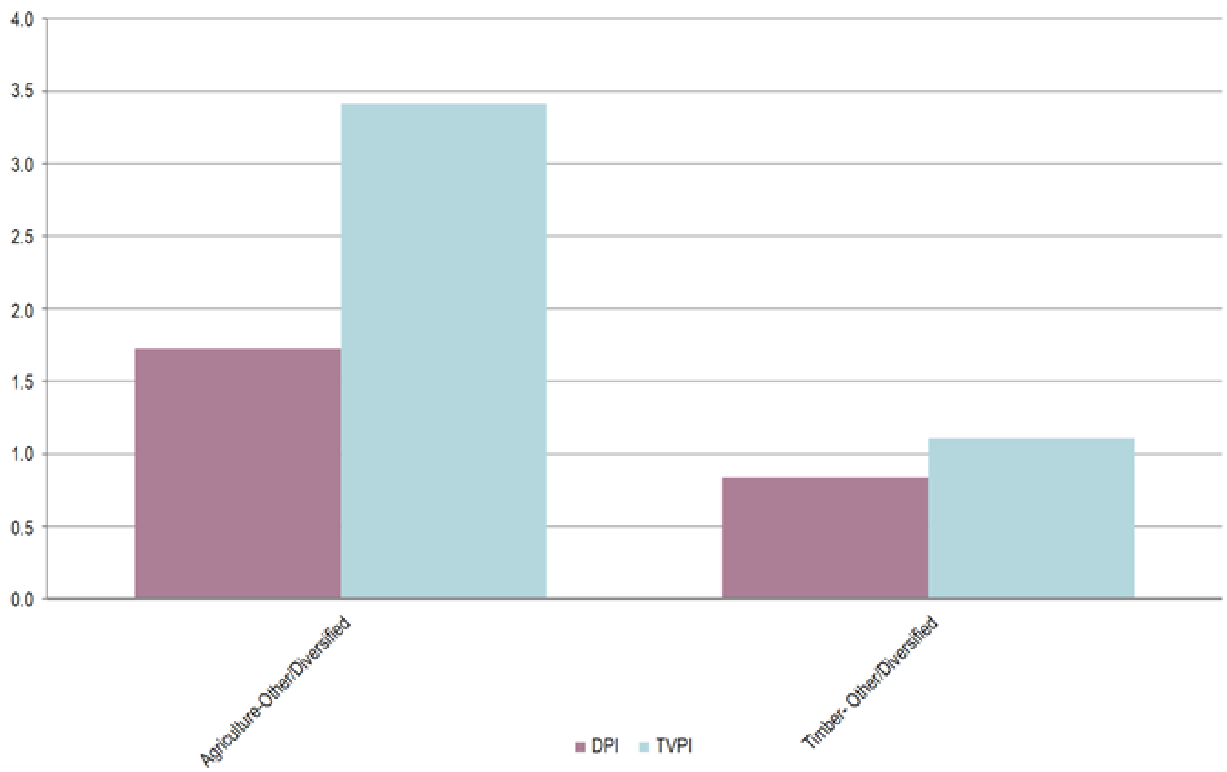
Natural Resources

As of March 31, 2019

Natural Resources Investments as of March 31, 2019
Market Value Allocation by Asset Class



Natural Resource Investments as of March 31, 2019
DPI and TVPI by Strategy



1. Agriculture 'Other/Diversified' is composed of permanent and row crops exposure.
2.Timber 'Other/Diversified' is composed of domestic and global timber exposure.
3. Private markets performance reflected is composed of active investments only

Dallas Police & Fire Pension System

Natural Resources

As of March 31, 2019

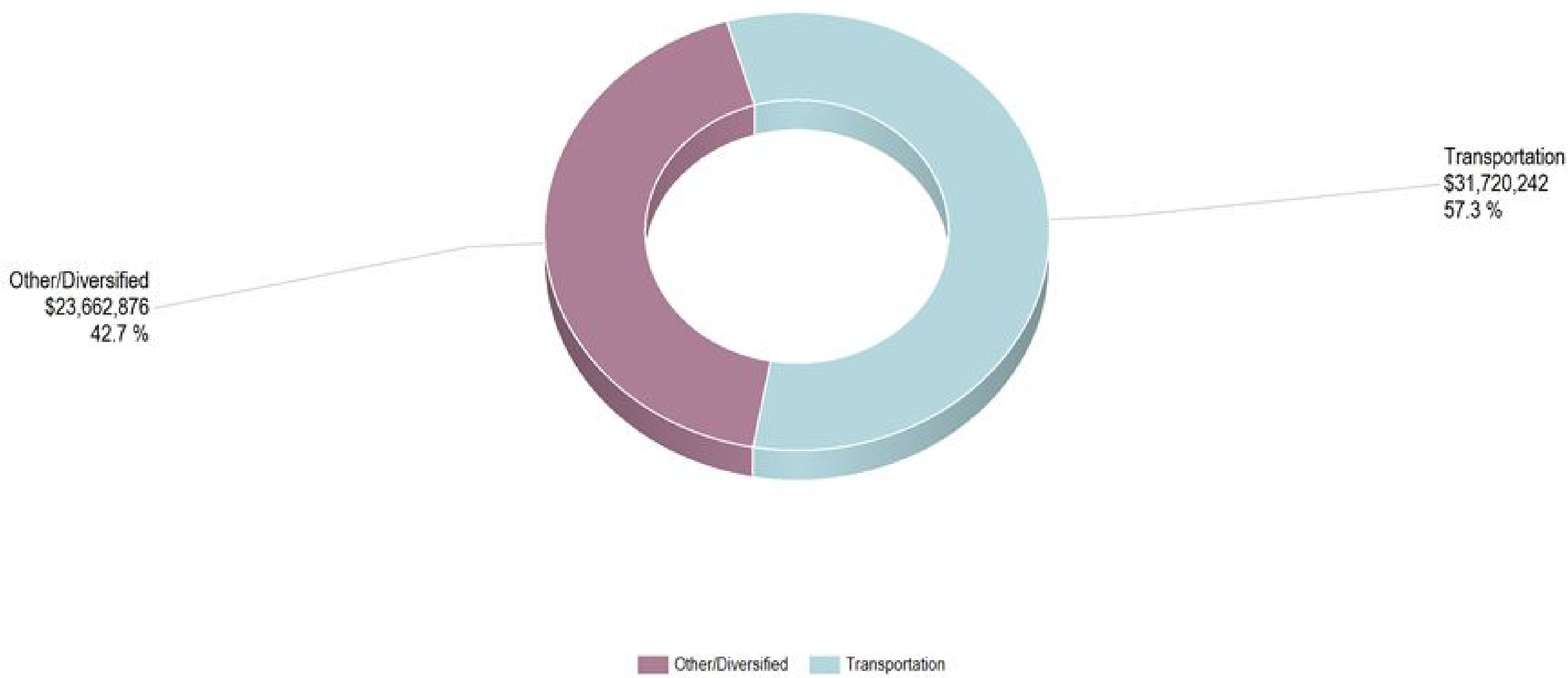
Natural Resource Investments Overview

Active Funds		Commitments		Valuations				Performance			
Investment Name	Vintage Year	Commitment ($)	Paid In Capital ($)	Distributions ($)	Valuation ($)	Total Value ($)	Gain/Loss ($)	Call Ratio	DPI	TVPI	IRR (%)
Agriculture											
Hancock Agricultural	1998	74,420,001	74,420,001	128,634,349	125,649,916	254,284,265	179,864,264	1.00	1.73	3.42	15.16
Total Agriculture		**74,420,001**	**74,420,001**	**128,634,349**	**125,649,916**	**254,284,265**	**179,864,264**	**1.00**	**1.73**	**3.42**	**15.16**
Timber											
BTG Pactual	2006	82,050,776	82,050,776	18,300,000	29,144,165	47,444,165	-34,606,611	1.00	0.22	0.58	-8.20
Forest Investment Associates	1992	59,649,696	59,649,696	100,630,209	8,646,083	109,276,292	49,626,596	1.00	1.69	1.83	7.72
Total Timber		**141,700,742**	**141,700,472**	**118,930,209**	**37,790,248**	**156,720,457**	**15,019,984**	**1.01**	**0.84**	**1.11**	**1.89**
Total		**216,120,473**	**216,120,473**	**247,564,558**	**163,440,164**	**411,004,722**	**194,884,248**	**1.00**	**1.15**	**1.90**	**9.04**

1. Private markets performance reflected is composed of active investments only
2. Commitment value is equal to paid in capital for direct investments made outside of a traditional limited partnership fund structure.

Prepared by Meketa Investment Group

Infrastructure Investments as of March 31, 2019
Market Value Allocation by Strategy



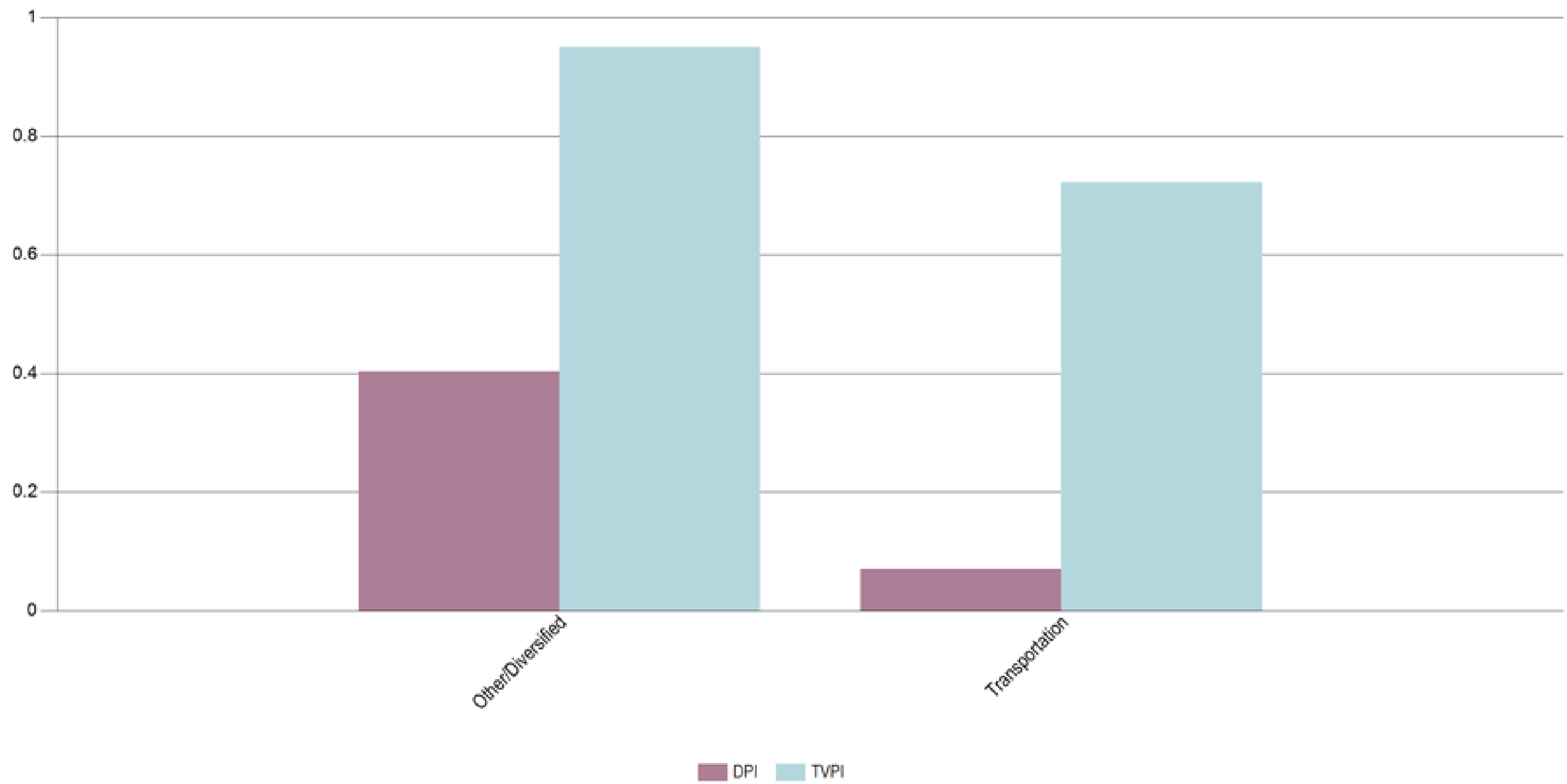
1.'Other/Diversified' is composed of various operating and developing infrastructure project exposure

Dallas Police & Fire Pension System

Infrastructure

As of March 31, 2019

Infrastructure Investments as of March 31, 2019
DPI and TVPI by Strategy



1. Other/Diversified' is composed of various operating and developing infrastructure project exposure
2. Private markets performance reflected is composed of active investments only

Dallas Police & Fire Pension System

Infrastructure

As of March 31, 2019

Infrastructure Investments Overview

Active Funds		Commitments		Distributions & Valuations				Performance			
Investment Name	Vintage Year	Commitment ($)	Paid In Capital ($)	Distributions ($)	Valuation ($)	Total Value ($)	Gain/Loss ($)	Call Ratio	DPI	TVPI	IRR (%)
Infrastructure											
TRG AIRRO	2008	37,000,000	36,691,798	17,873,234	19,239,843	37,113,077	421,279	0.99	0.49	1.01	0.18
TRG AIRRO II	2013	10,000,000	7,048,417	58,731	4,423,034	4,481,765	-2,566,652	0.70	0.01	0.64	-8.28
JPM Maritime Fund, LP	2009	50,000,000	48,613,416	3,416,688	31,720,242	35,136,930	-13,476,486	0.97	0.07	0.72	-7.64
Total Infrastructure		**97,000,000**	**92,353,631**	**21,348,653**	**55,383,119**	**76,731,771**	**-15,621,860**	**0.95**	**0.23**	**0.83**	**-3.73**

1. Private markets performance reflected is composed of active investments only

Private Markets Review

List of Completed Funds

Dallas Police & Fire Pension System

Private Markets Review

As of March 31, 2019

Total Real Assets Program

Completed Funds	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Addtnl Fees	Cummulative Distributions	Valuation	Total Value	Gain/Loss	DPI Ratio	TVPI Ratio	IRR
AEW Creative Holdings	2007	13,035,849	13,035,849	0	0	0	0	0	-13,035,849	0.00	0.00	N/A
BTG U.S. Timberland	2007	22,230,000	22,230,000	0	0	33,065,920	0	33,065,920	10,835,920	1.49	1.49	4.82%
CDK Multifamily I	2014	10,559,876	10,617,376	0	0	10,025,434	0	10,025,434	-591,942	0.94	0.94	-1.99%
Clarion 1210 South Lamar	2014	10,500,000	10,201,489	0	0	13,214,065	0	13,214,065	3,012,576	1.30	1.30	12.85%
Clarion 4100 Harry Hines Land	2006	3,088,810	3,092,788	0	0	3,641,946	0	3,641,946	549,158	1.18	1.18	1.69%
Clarion Beat Lofts	2005	8,729,783	8,730,183	0	0	1,137,817	0	1,137,817	-7,592,366	0.13	0.13	-30.76%
Clarion Bryan Street Lofts	2005	5,112,048	5,112,048	0	0	4,163,659	0	4,163,659	-948,389	0.81	0.81	-2.23%
Clarion Four Leaf	2005	16,892,767	16,892,767	0	0	3,733,148	0	3,733,148	-13,159,619	0.22	0.22	-39.69%
Hearthstone Dry Creek	2005	52,303,043	52,303,043	0	0	8,973,059	0	8,973,059	-43,329,984	0.17	0.17	-38.78%
Hearthstone Nampa	2006	11,666,284	11,666,284	0	0	2,562,654	0	2,562,654	-9,103,630	0.22	0.22	-31.90%
JP Morgan Infrastructure Investments Fund	2007	37,000,000	37,000,000	0	-5,658	44,302,131	0	44,302,131	7,307,789	1.20	1.20	2.48%
L&B Realty Advsiors Beach Walk	2006	33,013,796	33,013,796	0	0	36,752,690	0	36,752,690	3,738,894	1.11	1.11	2.19%
L&B Realty Advisors KO Olina	2008	28,609,658	28,609,658	0	0	30,529,136	0	30,529,136	1,919,478	1.07	1.07	1.11%
L&B Realty Advisors West Bay Villas	2007	8,712,411	8,712,411	0	0	3,785,480	0	3,785,480	-4,926,931	0.43	0.43	-8.29%
LBJ Infrastructure Group Holdings, LLC (LBJ)	2009	50,000,000	44,346,229	0	0	77,892,000	0	77,892,000	33,545,771	1.76	1.76	12.77%
Lone Star Fund III (U.S.), L.P.	2000	20,000,000	19,827,576	0	0	40,701,250	0	40,701,250	20,873,674	2.05	2.05	31.88%
Lone Star Fund IV (U.S.), L.P.	2001	20,000,000	19,045,866	0	0	43,898,442	0	43,898,442	24,852,576	2.30	2.30	30.15%
Lone Star Fund V (U.S.), L.P.	2005	22,500,000	22,275,229	0	0	20,605,895	0	20,605,895	-1,669,334	0.93	0.93	-1.41%
Lone Star Fund VI (U.S.), L.P.	2008	25,000,000	20,034,018	0	0	31,712,968	0	31,712,968	11,678,950	1.58	1.58	21.76%
Lone Star Real Estate Fund (U.S.), L.P.	2008	25,000,000	20,743,769	0	0	25,403,707	0	25,403,707	4,659,938	1.22	1.22	5.15%
Lone Star Real Estate Fund II	2011	25,000,000	22,169,907	0	0	32,789,371	0	32,789,371	10,619,464	1.48	1.48	24.73%
Lone Star Real Estate Fund III	2014	25,000,000	23,490,784	0	0	26,638,028	0	26,638,028	3,147,244	1.13	1.13	8.20%
M&G Real Estate Debt Fund II	2013	29,808,841	21,523,663	0	0	17,088,107	0	17,088,107	-4,435,556	0.79	0.79	-15.04%
NTE 3a-3b	2012	50,000,000	23,794,565	0	0	28,186,978	0	28,186,978	4,392,413	1.18	1.18	16.03%
NTE Mobility Partners Holding, LLC (NTE)	2009	50,000,000	43,397,054	0	0	105,890,000	0	105,890,000	62,492,946	2.44	2.44	19.33%
Olympus II-Hyphen Solutions	2007	836,511	836,511	0	0	1,418,149	0	1,418,149	581,638	1.70	1.70	5.96%
P&F Housing IV	2006	134,015,889	134,015,889	0	0	83,179,802	0	83,179,802	-50,836,087	0.62	0.62	-8.44%
RREEF North American Infrastructure Fund	2007	50,000,000	50,000,000	0	846,289	55,238,755	0	55,238,755	4,392,466	1.09	1.09	12.59%
Sungate	2005	6,481,568	6,481,568	0	0	308,624	0	308,624	-6,172,944	0.05	0.05	-22.30%
Tucson Loan	2014	4,500,000	4,500,000	0	0	5,082,785	0	5,082,785	582,785	1.13	1.13	5.75%
Total Completed Funds		**799,597,134**	**737,700,320**	**0**	**840,631**	**791,922,000**	**0**	**791,922,000**	**53,381,049**	**1.07**	**1.07**	

Dallas Police & Fire Pension System

Private Markets Review

As of March 31, 2019

Private Equity & Debt Funds

Completed Funds	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Addtnl Fees	Cummulative Distributions	Valuation	Total Value	Gain/Loss	DPI Ratio	TVPI Ratio	IRR
Ashmore Global Special Situations Fund IV	2007	70,000,000	70,012,300	0	0	39,652,711	0	39,652,711	-30,359,589	0.57	0.57	-10.12%
BankCap Partners Fund I	2007	20,000,000	20,000,000	0	0	24,960,986	0	24,960,986	4,960,986	1.25	1.25	2.58%
BankCap Partners Opportunity Fund, LP	2013	20,000,000	19,587,052	0	0	18,266,454	0	18,266,454	-1,320,598	0.93	0.93	-5.69%
CDK Southern Cross	2008	1,535,316	1,535,316	0	0	0	0	0	-1,535,316	0.00	0.00	-20.08%
Highland Credit Ops	2006	35,348,165	35,348,165	0	0	29,994,190	0	29,994,190	-5,353,975	0.85	0.85	-2.06%
HM Capital Sector Performance Fund	2008	47,300,000	44,354,248	0	1,933,378	39,792,545	0	39,792,545	-6,495,081	0.86	0.86	-4.01%
Huff Alternative Income Fund	1994	40,000,000	40,000,000	0	2,018,676	66,940,198	0	66,940,198	24,921,522	1.59	1.59	17.82%
Kainos Capital Partners, L.P.	2013	35,000,000	30,316,015	0	0	43,263,688	0	43,263,688	12,947,673	1.43	1.43	24.76%
Levine Leichtman Capital Partners IV	2008	50,000,000	38,009,085	0	0	78,916,788	0	78,916,788	40,907,703	2.08	2.08	20.12%
Levine Leichtman Capital Partners V, L.P.	2013	25,000,000	19,181,272	0	-4,405	24,506,336	0	24,506,336	5,329,469	1.28	1.28	15.26%
Levine Leichtman Deep Value Fund	2006	75,000,000	75,000,000	0	11,025,662	88,688,224	0	88,688,224	2,662,562	1.03	1.03	0.73%
Levin Leichtman Private Capital Solutions II, L.F	2012	25,000,000	17,961,807	0	-175	18,691,764	0	18,691,764	730,132	1.04	1.04	1.30%
Lone Star Fund IX (U.S.), L.P.	2014	35,000,000	24,241,467	0	0	23,459,730	0	23,459,730	-781,737	0.97	0.97	-3.28%
Lone Star Fund VII (U.S.), L.P.	2011	25,000,000	23,469,024	0	0	41,624,566	0	41,624,566	18,155,542	1.77	1.77	47.54%
Lone Star Fund VIII (U.S.), L.P.	2013	25,000,000	22,564,537	0	0	28,017,551	0	28,017,551	5,453,014	1.24	1.24	16.26%
Merit Energy Partners E-I	2004	7,018,930	7,031,052	0	-1,741	14,975,776	0	14,975,776	7,946,465	2.13	2.13	14.48%
Merit Energy Partners F-I	2005	8,748,346	8,749,275	0	0	3,801,206	0	3,801,206	-4,948,069	0.43	0.43	-17.19%
Merit Energy Partners G, LP	2008	39,200,000	39,320,050	0	0	26,756,651	0	26,756,651	-12,563,399	0.68	0.68	-9.96%
Merit Energy Partners H, LP	2010	10,000,000	10,033,415	0	0	6,870,451	0	6,870,451	-3,162,964	0.68	0.68	-13.78%
Oaktree Fund IV	2001	50,000,000	50,000,000	0	0	82,516,590	0	82,516,590	32,516,590	1.65	1.65	28.36%
Oaktree Loan Fund 2X	2007	60,000,000	60,004,628	0	0	65,066,951	0	65,066,951	5,062,323	1.08	1.08	2.24%
Oaktree Power Fund III	2011	30,000,000	16,167,147	0	0	23,839,959	0	23,839,959	7,672,812	1.47	1.47	12.35%
Pharos Capital Co-Investment, LLC	2007	20,000,000	20,000,000	0	0	10,019,157	0	10,019,157	-9,980,843	0.50	0.50	-9.92%
Pharos Capital Co-Investment, LP	2008	40,000,000	40,000,000	0	0	67,459,271	0	67,459,271	27,459,271	1.69	1.69	8.42%
Pharos Capital Partners IIA, L.P.	2005	20,000,000	20,080,306	0	0	17,715,199	0	17,715,199	-2,365,107	0.88	0.88	-2.39%
Pharos Capital Partners III, LP	2012	50,000,000	28,397,038	0	-54,286	20,196,932	0	20,196,932	-8,145,820	0.71	0.71	-19.95%
Total Completed Funds		**864,150,757**	**781,363,199**	**0**	**14,917,109**	**905,993,874**	**0**	**905,993,874**	**109,713,566**	**1.14**	**1.14**	

Disclaimer

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

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DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D7

Topic: **Chairman's Discussion Items**

Recap of the meeting with the City of Dallas Mayor

Discussion: The Chairman will brief the Board on the status of these items.

Regular Board Meeting – Thursday, September 12, 2019

DISCUSSION SHEET

ITEM #D8

Topic: **Audit Status**

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

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

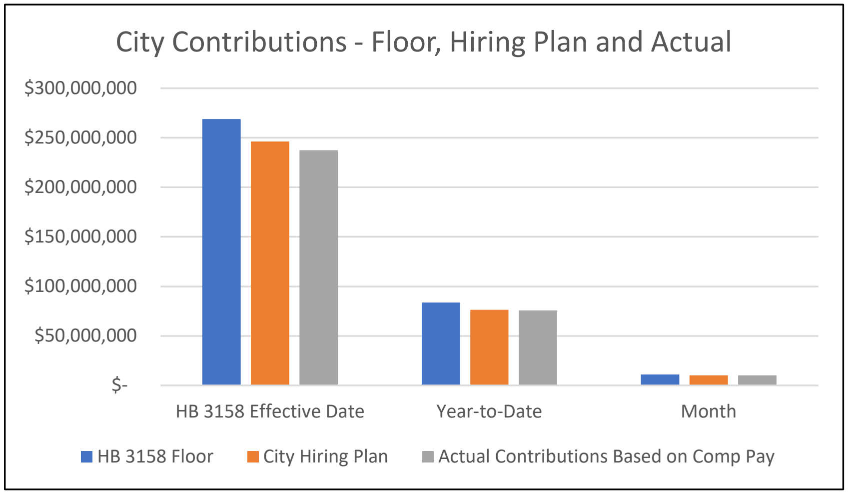
ITEM #D9

Topic: **Monthly Contribution Report**

Discussion: Staff will review the Monthly Contribution Report.

Regular Board Meeting – Thursday, September 12, 2019

Contribution Tracking Summary - September 2019 (July 2019 Data)



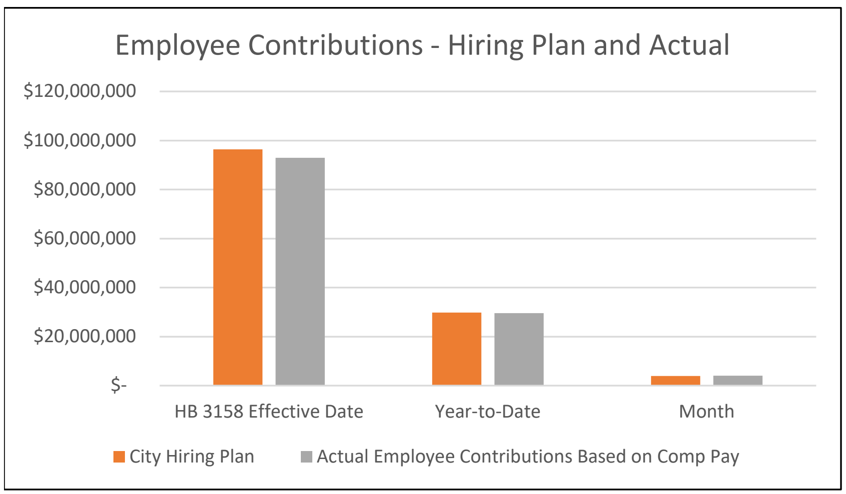
Actual Comp Pay was 96% of the Hiring Plan estimate since the effective date of HB 3158.

In the most recent month Actual Comp Pay was 101% of the Hiring Plan estimate and 92% of the floor amount.

The Hiring Plan Comp Pay estimate increased by 5.22% in 2019.

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

Combined actual hiring is below the Hiring Plan estimate by 11 people. Fire is over the estimate by 89 people and Police is under by 100 officers.



Since the effective date of HB 3158 actual employee contributions have been $3.4 million less than the Hiring Plan estimate. Potential earnings loss due to the contribution shortfall is $325k at the Assumed Rate of Return.

July is the first month since HB 3158 was effective that the employee contributions exceeded the Hiring Plan estimate.

There is no Floor on employee contributions.

Contribution Summary Data

City Contributions

Jul-19	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	$ 11,142,000	$ 10,164,231	$ 10,229,939	$ 912,061	92%	101%
Year-to-Date		$ 83,565,000	$ 76,231,731	$ 75,617,437	$ 7,947,563	90%	99%
HB 3158 Effective Date		$ 269,066,000	$ 246,237,115	$ 237,498,650	$ 31,567,350	88%	96%

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

Jul-19	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	$ 3,977,308	$ 3,996,722	$ 19,414	$ 3,692,278	100%	108%
Year-to-Date		$ 29,829,808	$ 29,579,713	$ (250,094)	$ 27,692,085	99%	107%
HB 3158 Effective Date		$ 96,353,654	$ 92,933,773	$ (3,419,881)	$ 91,790,881	96%	101%

Potential Earnings Loss from the Shortfall based on Assumed Rate of Return $ (325,697)

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	$ 1,846,139	93%
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 2019-2024 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)	*
**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 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			5,038		
2020	$ 396,000,000			5,063		
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 - 2019	**Annual Divided by 26 Pay Periods**	**Actual**	**Difference**	**2019 Cumulative Difference**	**Number of Employees - EOM**	**Difference**
January	$ 29,461,538	$ 29,084,185	$ (377,354)	$ (377,354)	4963	(75)
February	$ 29,461,538	$ 29,067,129	$ (394,410)	$ (771,763)	4974	(64)
March	$ 29,461,538	$ 29,092,504	$ (369,035)	$ (1,140,798)	4962	(76)
April	$ 29,461,538	$ 28,974,912	$ (486,626)	$ (1,627,424)	4955	(83)
May	$ 44,192,308	$ 43,987,516	$ (204,791)	$ (1,832,216)	4955	(83)
June	$ 29,461,538	$ 29,322,734	$ (138,804)	$ (1,971,020)	4938	(100)
July	$ 29,461,538	$ 29,651,997	$ 190,458	$ (1,780,561)	5027	(11)
August	$ 29,461,538	$ -		$ (1,780,561)		
September	$ 29,461,538	$ -		$ (1,780,561)		
October	$ 44,192,308	$ -		$ (1,780,561)		
November	$ 29,461,538	$ -		$ (1,780,561)		
December	$ 29,461,538	$ -		$ (1,780,561)		

DISCUSSION SHEET

ITEM #D10

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
Regular Board Meeting – September 12, 2019

ATTENDING APPROVED

Conference: **NCPERS Public Safety Conference**
Dates: October 27-30, 2019
Location: New Orleans, LA
Est. Cost: $1,300

DISCUSSION SHEET

ITEM #D11

Topic: **Board Members' reports on meetings, seminars and/or conferences attended**

Discussion:

Conference: **TEXPERS Basic Trustee Training** **AG**
Dates: August 17, 2019
Location: Frisco, TX

Regular Board Meeting – Thursday, September 12, 2019

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D12

Topic: **Clarion – Possible sale of the Tribute**

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: Bohdy Hedgcock, Senior Vice President

Discussion: Clarion will discuss the proposed sale of DPFP's interest in The Tribute, a master planned community development in The Colony, TX. Clarion was engaged in October 2015 to take over the investment management of DPFP's interest in several Dallas area real estate assets, including the two remaining investments: The Tribute and CCH Lamar.

Staff Recommendation: **Approve** the sale of DPFP's interest in The Tribute, subject to the final approval of the Executive Director.

Regular Board Meeting – Thursday, September 12, 2019

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D13

Topic: **Lone Star Investment Advisors 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: The Lone Star Growth Capital fund and the Lone Star CRA fund terms expire in October 2019. Investment Staff will update the Board on recent performance, operational, and administrative developments with respect to DPFP investments in funds managed by Lone Star Investment Advisors.

DISCUSSION SHEET

ITEM #D14

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, including DPFP et al. v. Alexander, consideration of legal options regarding DPFP's interests in Lone Star Funds, changes to Texas Open Meetings Act or any other legal matter in which the duty of the attorneys to DPFP and the Board under the Texas Disciplinary Rules of Professional Conduct clearly conflicts with Texas Open Meeting laws.**

Discussion: Counsel will brief the Board on these issues.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #E1

Topic: **Reports and concerns of active members and pensioners of the Dallas Police and Fire Pension System**

Discussion: This is a Board-approved open forum for active members and pensioners to address their concerns to the Board and staff.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #E2

Topic: **Executive Director's report**

a. Associations' newsletters
- NCPERS (August 2019)

b. Open Records

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

Regular Board Meeting – Thursday, September 12, 2019

THE NCPERS
MONITOR
The Latest in Legislative News
August 2019

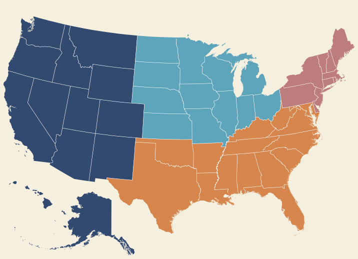
In This Issue

Photo Illustration © 2019, Shutterstock

One of the most important roles of accounting is to understand the past in order to prepare for the future. But like any pursuit that involves peering into a crystal ball, accounting is imperfect.

Photo Illustration © 2019, istock.com

There are three broad themes driving policy decisions in the U.S. Congress on retirement and pension issues.



This month, we will highlight Puerto Rico, New Jersey, Illinois, and Hawaii.

Well-Funded Pension Plans in Eight States Offer Roadmap for Strong Systems

Photo Illustration © 2019, Shutterstock

Eight states with well-funded pension plans offer a valuable roadmap for how to sustainably fund retirement benefits, a new study from the Pew Charitable Trusts has found.

Each of the eight states—Idaho, Nebraska, New York, North Carolina, South Dakota, Tennessee, Utah and Wisconsin—had funding levels of at least 90 percent, versus a nationwide average of 69 percent during 2017, Pew said. The report, "The State Pension Funding Gap: 2017," found that these states had successfully coped with the adverse effects of the Great Recession of 2007 to 2009.

These states "consistently made their actuarially determined contributions and had policies in place to manage risk and costs," the report found. South Dakota, Tennessee, and Wisconsin, the states with the best-funded pension plans in 2017, each paid 100 percent of the contributions that actuaries recommended. They also had policies to automatically lower benefits or increase contributions in response to market downturns. They were able to maintain stable contribution rates equaling less than a quarter of the rates paid by the three worst-funded states.

CONTINUED ON PAGE 6

NCPERS **Executive Directors Corner**

Pension Accounting Study Highlights Problems with GASB

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One of the most important roles of accounting is to understand the past in order to prepare for the future. But like any pursuit that involves peering into a crystal ball, accounting is imperfect. Public pension funds must do their best to evaluate likely future developments and anticipate how governments are likely to respond to them.

Accounting becomes problematic when it drives rather than reflects reality. Many facets of the public pension accounting standards established by the Governmental Accounting Standards Board (GASB) have the unfortunate effect of forcing poor decisions and producing flawed results, and should be reconsidered. A study conducted independently by Brown University researcher Tom Sgouros, "The Case for New Pension Accounting Standards," and published recently by NCPERS, lays out numerous concerns.

"When things go awry for some pension plans, it is often not because the accounting rules are ignored but because they are followed."

As Sgouros noted in the study, "When things go awry for some pension plans, it is often not because the accounting rules are ignored but because they are followed." This topsy-turvy state of affairs is unacceptable. The study recommends developing different rules that will address shortcomings, provide a better way to evaluate pension system health and give better guidance to decision makers.

One of the biggest oddities in pension accounting rules is that they value the promise of future contributions at zero, a situation that is unique in government accounting. It does not reflect reality to assume that the stream of payments into pension plans is worth exactly nothing from an accounting perspective. Yet this preposterous assumption is what the GASB rules stipulate, and it is a grave disservice to pension plan participants. This matters immensely because there is no way to appeal when GASB gets a rule's underlying concepts wrong.

The treatment of future payments is not the only problem with GASB rules. For example, the study noted GASB is also inconsistent in the way it regards pension "debt," downplays the collective nature of pension investments, and downplays or masks risk in a variety of ways, such as treating all asset categories as equal. For example, the accounting rules imply that closing a fully funded pension plan is nothing more than applying pension assets to extinguish the debt, while in reality it is quite risky and many closed plans wind up costing plan sponsors millions of dollars.

CONTINUED ON PAGE 8

Key Themes in Retirement Policy

By Tony Roda

There are three broad themes driving policy decisions in the U.S. Congress on retirement and pension issues.

Photo Illustration © 2019, istock.com

First and foremost is the goal of making it easier for Americans to put more money aside for retirement in defined contribution plans, which have become the principal retirement savings tool for private sector workers through 401(k) plans and Individual Retirement Accounts (IRA). Public sector workers also have a stake in defined contribution plans through 457(b), 403(b), and grandfathered 401(k) plans.

Next is the recognition that we are all living longer and generally healthier lives. This not only requires an increase in retirement savings, but also the financial tools and knowledge to withdraw those dollars over your lifetime without either running out of money or unnecessarily living in an impoverished fashion.

Finally, regarding defined benefit plans, arguments continue to be raised that assumed rates of investment return are set too high by multiemployer pension plans and by state and local governmental plans, thereby allowing contribution rates to be kept too low. The result of inappropriately high rates of return and low contribution rates is that plans are being underfunded.

- The first and second themes can be illustrated by the specific provisions described below that are contained in the leading House retirement bill, the SECURE Act (H.R. 1994), which was passed by the House in May on a near unanimous vote.

- Required Minimum Distributions (RMD) – Qualified retirement plans, section 457(b) plans, section 403(b) plans,[1] section 401(k) plans, and IRAs are subject to the RMD rules. The general rule under current law is that RMDs must begin by April 1 of the calendar year following the calendar year in which the individual reaches age 70 ½. In recognition of the increasing longevity of our population the SECURE Act would increase the trigger for RMDs to age 72.[2]

- IRA Contributions – Current law provides that individuals who have reached age 70 ½ may no longer contribute to a traditional IRA. The legislation would repeal that prohibition. The Committee states in its summary of the bill, "As Americans live longer, an increasing number continue employment beyond traditional retirement age."

- Multiple Employer Plans (MEP) – The SECURE Act would make it easier for unrelated employers to create pooled provider pension plans. These plans are alternatively known as "Open-MEPs" and are clearly a response to state-run plans for private sector workers, such as CalSavers and OregonSaves.

- Lifetime Income Illustration – The bill would require defined contribution plans to provide participants with an analysis of what their accumulated assets would translate into as a stream of lifetime income. This information is critical to providing workers with information on what their current retirement savings rate would mean in annual and monthly retirement income dollars.

The third theme is playing out only rhetorically for now. Of considerable interest to public pension plans are the ongoing discussions among actuaries, economists, trustees, and policymakers on what is an appropriate assumed rate of investment return. This topic was raised during the Ways and Means Committee's markup

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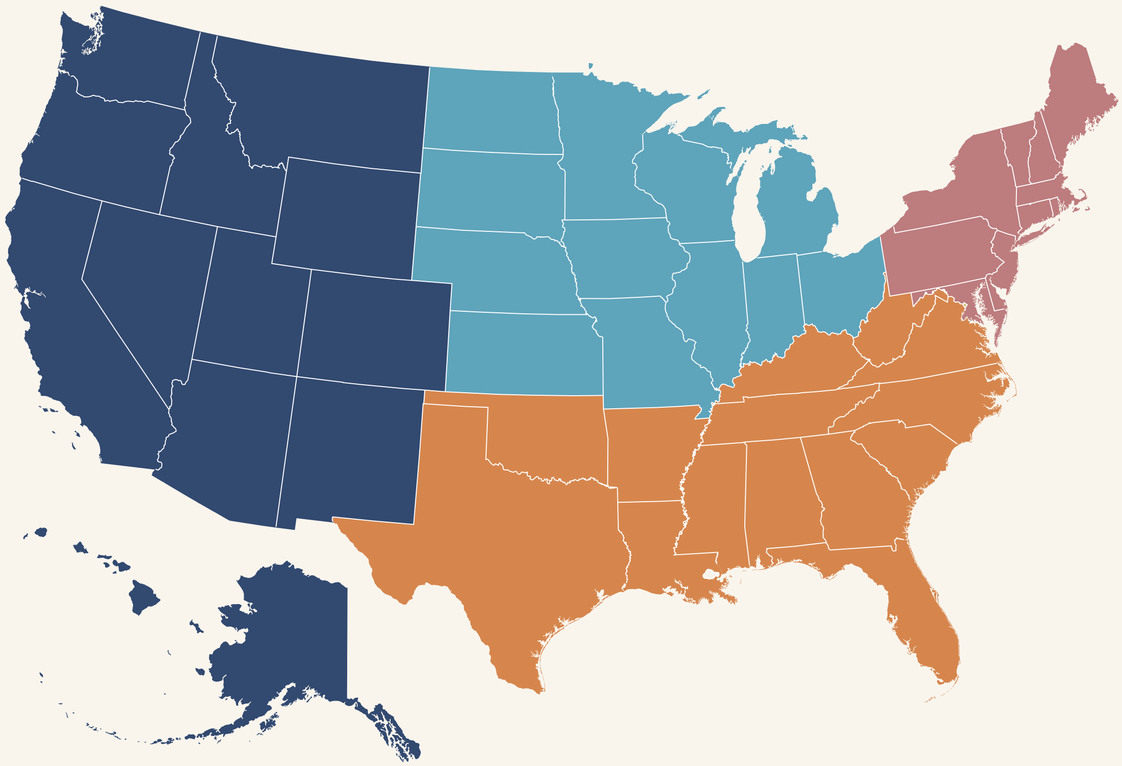
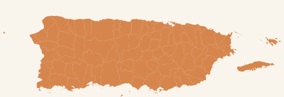
NCPERS Around the Regions

This month, we will highlight Puerto Rico, New Jersey, Illinois, and Hawaii.



SOUTH: Puerto Rico



Ongoing public pension revenues were declared off limits to bondholders in one of the latest developments in Puerto Rico's complex debt crisis. The federal judge overseeing the biggest governmental bankruptcy in U.S. history has ruled that the bondholders' claim on the assets of Puerto Rico's public employee pension system ended when the system filed for bankruptcy in May 2017.

The bondholders had argued that they were entitled to some assets that existed when they bought the bonds as well as future pension contributions, which are now coming from general revenues.

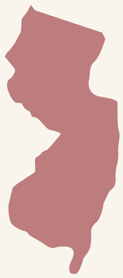
However, federal bankruptcy Judge Laura Taylor Swain ruled that holders of Employees Retirement System (ERS) bonds were not entitled to continued payment in bankruptcy. Among other things, she concluded that the bonds' revenues weren't protected "special revenues." The ruling affects $3.2 billion of ERS bonds that have been in default since July 2017. The bondholders have the right to appeal the decision to the U.S. Court of Appeals for the First Circuit, and have done so in previous cases involving the Puerto Rico debt crisis.

Earlier in June, the island's federally created Financial Oversight and Management Board obtained reductions in certain pension payments from more than 167,000 retirees. Under the deal, there would be no pension reductions for 61% of the retirees or more than 102,000 people, while cuts to monthly pensions totaling more than $1,200 would be capped at 8.5%, according to the retirees committee, Reuters reported.

CONTINUED ON PAGE 5

AROUND THE REGIONS CONTINUED FROM PAGE 4

NORTHEAST: New Jersey



New Jersey Governor Phil Murphy signed a $38.7 billion budget that provides a historic payment to its chronically underfunded pension system.

The Democratic governor provided $3.8 billion for the pension system in fiscal year 2020, an 18 percent increase over the fiscal 2019 contribution and the largest payment in New Jersey history. The governor reiterated his intention to ramp up pension payments until the state reaches its full actuarially determined contribution in fiscal year 2023.

The Murphy administration is reversing years of neglect by New Jersey politicians. New Jersey has not made its full pension payment since 1996, and in many years it paid nothing at all into the pension, even as state employees have faithfully made their full contributions.

In his budget-signing address, Murphy emphasized his commitment to putting the public pension system on firm footing.

“I will negotiate with everyone willing to come to the able with ideas for lessening the property tax burden. But I will not negotiate away the retirement security or the health care of hundreds of thousands of middle class New Jersey families, period,” Murphy said.

He continued, “Our public workers are not the enemy. They are our neighbors. They are also our taxpayers. They are the heart of our middle class. It is not pandering to stand with them; it is doing our job. Those who attacked them did not get their way this year.” Governor Murphy noted that the budget also includes “real sustainable savings innovative public employee health care savings that our administration negotiated in good faith with our union brothers and sisters.

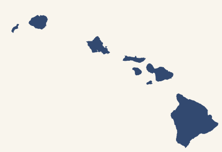
MIDWEST: Illinois

The Illinois Secure Choice Retirement Savings Program expanded during July to include employers with more than 100 workers. Their deadline for compliance was July 31. The Illinois Secure Choice program began in May 2018 with a pilot and as expanded in November 2018 to include employers with 500 or more workers.

The next wave of employers required to comply with the program – employers with more than 25 employees – will be required to sign up for the program or offer an equivalent retirement savings program by November 30, 2019.

Illinois Secure Choice is expected eventually to provide 1.2 million workers with access to employer-based retirement savings plans. Participants are enrolled in a default target date Roth IRA with a default 5 percent payroll deduction, but may change their contribution level, fund option or opt out altogether.

WEST: Hawaii



The Employee Retirement System (ERS) of the State of Hawaii has negotiated a cumulative $70 million in fee discounts between fiscal years 2015 and 2019, according to a report by the chief investment officer, Elizabeth T. Burton. These negotiated costs savings add about five basis points to returns annually, or $8.2 million per year, she wrote in an article in the summer 2019 edition of Holomua, a newsletter for retirees and active members.

In the article, Burton also discussed the impact excess returns can have on achieving ERS’s progress toward full funding, currently expected to be achieved in 2043. “We target 7.0 percent over a full market cycle on average, but in any given time period we aim to exceed our policy benchmark,” she wrote. “Said another way, the policy benchmark mimics the performance of the broader markets like our actual portfolio, while the target return is a static long-term return target.”

She noted that every basis point (0.01 percent) of excess return above the 7.0 percent target return adds $1.65 million of savings annually. As of March 31, the ERS’s gross return as 2.5 percent, with a 1.7 percent excess return, which added about $280 million of return above the policy.

WELL-FUNDED PENSION PLANS CONTINUED FROM PAGE 1

The 26-page report is based on data on 230 plans covering state and local public employees. These funds reported a $1.28 trillion funding gap, and improvement from $1.35 trillion in 2016, aided by investment returns that averaged 13 percent for the median plan. Based on investment returns posted since 2017, Pew said it estimates a deficit of approximately $1.5 trillion as of December 2018.

One trend noted by the report was that the weak got weaker while the strong got stronger. That is, the states with the worst-funded plans continued to report declining financial positions. On the other hand, states that were 90 percent funded saw their funded levels improve an average of five percentage points between 2012 and 2017.

The healthy funding ratios in South Dakota, Tennessee, and Wisconsin haven't required significant increases in employer pension contributions, which averaged 8 percent of payroll in 2017 in the three states and have consistently held between 5 and 12 percent of payroll throughout the past decade.

The report raised concerns about the readiness of public pension plans to weather future economic recessions. "A continued operating cash flow ratio below minus 5 percent … represents an early warning sign of potential fiscal distress and a substantial risk of insolvency over time if policies are not enacted to mitigate it," the report found.

Only five states—Colorado, Connecticut, Illinois, Kentucky and New Jersey—were less than 50 percent funded.

Almost every state has made some change to pension policy since the recession, the report found. Examples include "strengthening funding policies, adopting more conservative assumptions, increasing employee contributions, changing the benefit design for new hires, reducing benefits for current employees and retirees, strengthening governance, and improving transparency," the report found.

"Adopting some of these changes could potentially turn around distressed state pension plans in states such as Connecticut if policymakers maintain fiscal discipline as well," Pew concluded. ◆

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EXECUTIVE DIRECTOR'S CORNER CONTINUED FROM PAGE 2

The result of GASB's approach is analyzing the health of public pensions becomes an exercise in debating their funding status—one of the most subjective measures possible.

The report outlines nine specific proposals to change accounting methodology and the way accounting is used to inform policy, with the goal of providing more realistic assessments of pension systems' financial position. For example, the study made the case for abandoning the funding ratio as a key indicator of pension systems' health. Instead, pension plans should shift to a depletion date estimate using risk-weighted assets as a key indicator.

Taking on the accounting rule-makers can feel like an uphill battle, but it is worth pursuing. The banking industry has been fighting for several years against Financial Accounting Standards Boards rules that require banks to forecast and book current expected credit losses (CECL) over the life of loans with no offsetting credit for expected interest income. The situation is analogous to the GASB's pension plan treatment, because FASB's CECL would also ignore future income. In a partial victory, FASB voted in mid-July to delay implementation of the CECL standard until January 2023 for many companies, including small companies that are required to report to the SEC.

In other words, change is possible, even with the accounting standard-setters. The Sgouros study is our first shot across the bow, and we have no plans to back down. ◆

KEY THEMES CONTINUED FROM PAGE 3

of the SECURE Act by four Republican members: Reps. Drew Ferguson (GA), Tom Rice (SC), David Schweikert (AZ), and Jodey Arrington (TX).

In taking aim at a provision to give pension funding relief to certain ERISA-covered, privately-held, community newspapers, they argued that by allowing the plans to use a higher interest rate and a longer amortization period, the newspapers would be allowed to systematically underfund their pension plans. Rep. Schweikert added that one aspect of the provision was positive – the requirement that any pension plan taking advantage of the funding relief would have to calculate the funding targets and normal cost of any new benefit accruals by using the U.S. Treasury obligation yield curve. Schweikert said that this concept, once put into statute, should be applied to multiemployer and governmental pension plans.

As our community knows, the reporting requirements of the proposed Public Employee Pension Transparency Act (PEPTA) mandate the use of the Treasury yield curve to calculate the funded status of public pension plans. We have opposed this legislation since it was first introduced in 2010 because it will cause unnecessary alarm among plan participants about funding levels and will not provide any useful economic data with which to analyze the sustainability of public plans.

As the 116th Congress takes further action on retirement and pension legislation, we will closely monitor how each of these themes plays out in practical legislative terms. Please know that NCPERS will continue to be actively engaged on these issues on behalf of state and local governmental pension plans. ◆

[1] This would include features of state or local governmental defined benefit plans, such as Deferred Retirement Option Plans.

[2] In what is being called the next generation of retirement legislation, S. 1431, which was introduced by Senators Rob Portman (R-OH) and Ben Cardin (D-MD), would increase the age trigger for RMDs to 75 in year 2030.

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October 27 – 30
New Orleans, LA

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