AGENDA

The regular meeting of the Dallas Police and Fire Pension System Board of Trustees will be held at 8:30 a.m. on Thursday, October 13, 2016, 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. MOMENT OF SILENCE

B. CONSENT AGENDA

1. Approval of Minutes
   a. Regular meeting of September 8, 2016
   b. Special meeting of September 26, 2016

2. Approval of Refunds of Contributions for the Month of September 2016

3. Approval of Activity in the Deferred Retirement Option Plan (DROP) for October 2016
4. Approval of Estate Settlements
5. Approval of Survivor Benefits
6. Approval of Service Retirements
7. Approval of Alternate Payee Benefits
8. Approval of Payment of Military Leave Contributions
9. Approval of Payment of DROP Revocation Contributions

C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. Plan amendment election

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.

a. Further consideration of proposed Plan and DROP Policy changes, including potential proposed changes from the City of Dallas

b. Approval of proposed Plan language

c. Actuary’s letter

d. Election schedule

e. Call for election
2. **Actuary’s letter pursuant to Section 4.01(a) of the Plan**

   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.

3. **Legal issues**

   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.

   a. Police Officer and Firefighter pay lawsuits
   b. Potential claims involving fiduciaries and advisors
   c. 2014 Plan amendment election and litigation
   d. Open records lawsuit

4. **Proposed 2016 Budget adjustments**

   a. Legal
   b. Actuarial
   c. Election

5. **Presentation and discussion of the 2017 Budget**
6. CDK Multi-Family Fund

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.

7. Clarion Partners: 1210 South Lamar

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.

8. Determination of Handicap Status of Dependent Child

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.078 of the Texas Government Code.

9. Investment reports

10. Employee recognition – Third Quarter 2016

Employee of the Quarter award

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

   a. PRB Actuarial Committee Meeting
   b. Pensions Committee Hearing

12. Ad hoc committee report
D. 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. Future Education and Business Related Travel
   b. Future Investment Related Travel
   c. Associations’ newsletters
      • NCPERS Monitor (September 2016)
      • NCPERS Monitor (October 2016)
      • NCPERS PERSist (Fall 2016)
      • TEXPERS Outlook (September 2016)
      • TEXPERS Outlook (October 2016)
ITEM #A

MOMENT OF SILENCE

In memory of our Members and Pensioners who recently passed away

(September 1, 2016 – October 5, 2016)

<table>
<thead>
<tr>
<th>NAME</th>
<th>ACTIVE/RETIRED</th>
<th>DEPARTMENT</th>
<th>DATE OF DEATH</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. J. Edington</td>
<td>Retired</td>
<td>Police</td>
<td>Aug. 11, 2016</td>
</tr>
<tr>
<td>W. L. Lindsay, Jr.</td>
<td>Retired</td>
<td>Fire</td>
<td>Aug. 31, 2016</td>
</tr>
<tr>
<td>William P. Mann</td>
<td>Retired</td>
<td>Police</td>
<td>Sep. 4, 2016</td>
</tr>
<tr>
<td>James D. Wood</td>
<td>Retired</td>
<td>Police</td>
<td>Sep. 7, 2016</td>
</tr>
<tr>
<td>Jerry D. Speaks</td>
<td>Retired</td>
<td>Fire</td>
<td>Sep. 11, 2016</td>
</tr>
<tr>
<td>L. M. Crocker</td>
<td>Retired</td>
<td>Fire</td>
<td>Sep. 24, 2016</td>
</tr>
<tr>
<td>Ira J. McKee</td>
<td>Retired</td>
<td>Police</td>
<td>Sep. 24, 2016</td>
</tr>
<tr>
<td>Doyle G. Bice</td>
<td>Retired</td>
<td>Police</td>
<td>Sep. 25, 2016</td>
</tr>
<tr>
<td>Wilford R. Nunn</td>
<td>Retired</td>
<td>Police</td>
<td>Sep. 29, 2016</td>
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Dallas Police and Fire Pension System  
Thursday, September 8, 2016  
8:30 a.m.  
4100 Harry Hines Blvd., Suite 100  
Second Floor Board Room  
Dallas, TX

Regular meeting, Samuel L. Friar, Chairman, presiding:

ROLL CALL

Board Members

Present at 8:30  Samuel L. Friar, Kenneth S. Haben, Joseph P. Schutz, Brian Hass, Tho T. Ho, Gerald D. Brown, Clint Conway, John M. Mays

Present at 8:33  Erik Wilson

Present at 8:43  Scott Griggs

Present at 8:46  Jennifer S. Gates

Absent:  Philip T. Kingston

Staff

Kelly Gottschalk, Josh Mond, Summer Loveland, John Holt, Damion Hervey, Kelly Dean, Pat McGennis, Ryan Wagner, Milissa Romero, Christina Wu, Greg Irlbeck, Linda Rickley

Others

Chuck Campbell, Dr. Mike Clutter, Jon Sokol, Jon Callaghan, Bob Hagler, Jim McBride, Rhett Humphreys, Michael Yang, Rob Gauss (by telephone), Rocky Joyner, Jeff Williams, Richard Langley, Joel Lavender, David Williams, Roman Kilgore, Ed McFadden, Jerry M. Rhodes, C. J. Delapaz, B. A. Fassett, A. D. Donald, Shbrane Mims, Michael Jones, Bill Ingram, Thomas White, Alan Southard, Michael Aylward, Ken Sprecher, Jim Aulbaugh, Tom Payne, Mark Mladenka, Mark Underwood, Dan Wojcik, Joshua Groves, Robert McKlemurry, Thomas Belcher, Rebecca Oliver, Jeff Patterson, Larry William, Luther Moore, Francisco Rivera, J. S. Parney, Diana Espinoza, Ron Catlin, Michael Igo, Robert Benitez, Christopher Chumbley, Michael Chinchilla, Jeff Pursley, Mike Hoyt, Carol Berry, Jaime Castro, Gerardo Guardiola, H. Holland, Elton Garrett, Armando Rodriguez, Frank T. Duncan, Rick Salinas, George D. Payne, C. M. Barney, Kelly Swindle, Edward Scott, Tristan Hallman, John Wells

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

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A. MOMENT OF SILENCE

The Board observed a moment of silence in memory of retired police officers, William E. Chambers and Jerry G. Pollard, and retired firefighter, Ernest E. Coston.

No motion was made.

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B. CONSENT AGENDA

1. Approval of Minutes
   
   Regular meeting of August 11, 2016  
   Special meeting of August 18, 2016

2. Approval of Refunds of Contributions for the Month of August 2016

3. Approval of Activity in the Deferred Retirement Option Plan (DROP) for September 2016

4. Approval of Estate Settlements

5. Approval of Survivor Benefits

6. Approval of Service Retirements

7. Approval of Alternate Payee Benefits

8. Approval of Payment of Military Leave Contributions

9. Spouse Wed After Retirement (SWAR)

After discussion, Mr. Brown made a motion to approve the items on the Consent Agenda, subject to the final approval of the staff. Mr. Hass seconded the motion, which was unanimously approved by the Board. Messrs. Griggs and Wilson, and Ms. Gates were not present when the vote was taken.

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B. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. BTG Pactual portfolio review

Bob Hagler, Head of Investment Strategy and International Portfolio Manager, and Jim McBride, Head of Distribution, of BTG Pactual, who manages an $80 million portfolio of domestic and international timber for DPFP, presented a review of the portfolio and discussed their hold-sell recommendations on the portfolio with the Board. The target allocation for Natural Resources (Timber/Agriculture) was lowered from 10% to 5% in the recent asset allocation update. Based on this change, at staff’s direction, BTG conducted a hold-sell analysis on a property-by-property basis, with the goal of reducing the size of the portfolio and ensuring that any properties that will remain in the portfolio meet or exceed risk-adjusted return expectations for the asset class. Rhett Humphreys and Michael Yang, of NEPC, DPFP’s investment consultants, were present to discuss their recommendation.

The Board went into a closed executive session – real estate at 9:20 a.m.

The meeting was reopened at 9:57 a.m.

No motion was made.

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The meeting was recessed at 9:57 a.m.

The meeting was reconvened at 10:08 a.m.

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Mr. Mays left the meeting at 10:15 a.m.

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2. Forest Investment Associates portfolio review

Dr. Mike Clutter, Vice President and Director of U.S. Investments and Operations, Jon Sokol, Portfolio Manager, and Jon Callaghan, Senior Relationship Manager, of Forest Investment Associates (FIA), who manages a $44 million portfolio of domestic timber for DPFP, presented a review of the portfolio and discussed their hold-sell recommendations on the portfolio with the
2. **Forest Investment Associates portfolio review (continued)**

Board. The target allocation for Natural Resources (Timber/Agriculture) was lowered from 10% to 5% in the recent asset allocation update. Based on this change, at staff’s direction, FIA conducted a hold-sell analysis on a property-by-property basis, with the goal of reducing the size of the portfolio and ensuring that any properties that will remain in the portfolio meet or exceed risk-adjusted return expectations for the asset class. Messrs. Humphreys and Yang, of NEPC, discussed their recommendation.

The Board went into a closed executive session – real estate at 8:49 a.m.

The meeting was reopened at 9:14 a.m.

No motion was made.

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Messrs. Humphreys and Yang, of NEPC, presented the above reports.

No motion was made.

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4. **Ad hoc annual adjustments for pensioners and beneficiaries**

Ms. Gottschalk stated that in accordance with Plan Section 6.12 (c), active DROP participants and retirees who first became members of DPFP on or after January 1, 2007 are not eligible for the automatic annual benefit adjustment. However, the Board may determine each year whether and at what percentage to provide an ad hoc adjustment to benefit recipients in this group. Such determination requires the opinion of DPFP’s actuary that an ad hoc adjustment would not have an adverse effect on DPFP’s ability to meet all accrued benefit obligations. The actuary, Segal Consulting, provided a written recommendation stating that the Board not approve an ad hoc annual adjustment for retirees, disabled members, or beneficiaries of members who began membership on or after January 1, 2007.
4. **Ad hoc annual adjustments for pensioners and beneficiaries (continued)**

After discussion, Mr. Ho made a motion not to approve an ad hoc annual adjustment for retirees, disabled members, or beneficiaries of members who began membership on or after January 1, 2007, based on the actuary’s recommendation. Mr. Schutz seconded the motion, which was unanimously approved by the Board. Messrs. Brown, Griggs, Mays, and Wilson were not present when the vote was taken.

5. **Legal issues**

   a. Police Officer and Firefighter pay lawsuits
   b. Potential claims involving fiduciaries and advisors
   c. 2014 Plan amendment election and litigation
   d. Open records lawsuits
   e. Tax Qualification Plan Amendments

The Board went into a closed executive session – legal at 11:57 a.m.

The meeting was reopened at 1:38 p.m.

No motion was made.

6. **Investment reports**

Staff reviewed the investment performance and rebalancing reports for the period ending August 31, 2016 with the Board.

No motion was made.
7. Possible Plan amendments

a. Discussion of, and possible action on, Plan amendments
b. Tax Qualification Plan amendments
c. Discussion of next steps

Rocky Joyner and Jeff Williams, of Segal Consulting, DPFP’s actuary, reviewed the results of the additional analysis requested by the Board during the August 18, 2016 Special meeting. The Board continued discussion of possible Plan amendments.

Mr. Griggs made a motion to amend Section 6.14(d), based on the advice of legal counsel, to read as follows, effective immediately:

Section 6.14(d). A Member may not receive a distribution from his or her DROP account while the Member is still in Active Service.

Mr. Hass seconded the motion, which was unanimously approved by the Board. Mr. Mays was not present when the vote was taken.

Mr. Griggs left the meeting at 2:23 p.m.

Mr. Brown left the meeting at 3:15 p.m.

Mr. Wilson left the meeting at 3:19 p.m.
7. **Possible Plan amendments  (continued)**

The Board directed the staff to work with legal counsel and the actuary to:

- Draft the ballot and ballot explanation and proposed Plan language changes
- Meet with City officials over the next month to discuss the proposed Plan amendments and possible additional city funding
- Begin informational meetings for the members.

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The meeting was recessed at 4:11 p.m.

The meeting was reconvened at 4:22 p.m.

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8. **Ad hoc committee reports**

An update was given on the Governance ad hoc committee of the Board.

No motion was made.

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9. **2016 Board/staff workshop**

The Board and staff discussed plans for the 2016 annual workshop. The Board directed the staff to cancel the plans for a workshop in October 2016 and make plans for a workshop to be held in Spring 2017.

C. **BRIEFING ITEMS**

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

The Board heard member and pensioner comments.

No motion was made.

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2. Executive Director’s report
   
a. Future Education and Business Related Travel
b. Future Investment Related Travel

The Executive Director’s report was presented. No motion was made.

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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Haben and a second by Mr. Ho, the meeting was adjourned at 5:10 p.m.

_____________________
Samuel L. Friar
Chairman

ATTEST:

_____________________
Kelly Gottschalk
Secretary
Dallas Police and Fire Pension System  
Monday, September 26, 2016  
2:00 p.m.  
Second Floor Board Room  
4100 Harry Hines Blvd., Suite 100  
Dallas, TX

Special meeting, Samuel L. Friar, Chairman, presiding:

ROLL CALL

Board Members

Present at 2:00  

Absent:  
Joseph P. Schutz, John M. Mays

Staff  
Kelly Gottschalk, Josh Mond, Summer Loveland, John Holt, Corina Terrazas, Linda Rickley

Others  

* * * * * * *

The meeting was called to order at 2:00 p.m.

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A. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION:

Consideration of Possible Changes to DROP Policy and Procedures

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.

The Board went into a closed executive session – legal at 2:04 p.m.

The meeting was reopened at 5:38 p.m.

After discussion, Mr. Haben made a motion that no change be made which would limit or restrict withdrawals from Retirees’ DROP accounts. Mr. Conway seconded the motion, which was unanimously approved by the Board.
Consideration of Possible Changes to DROP Policy and Procedures (continued)

Mr. Friar read aloud the following statement:

September 26, 2016

To our Retirees:

The System has been good to you for many years. We are asking for your patience as we diligently work through our funding issues. The Board is working to find a solution that results in all members receiving their benefits as promised. As more people withdraw funds from the System, our long-term solvency will become much more challenging. Since August 11, 2016, when the proposed plan amendments were first discussed, approximately $220 million in DROP payments have been distributed. Requests since last Wednesday, September 21, 2016, have been an additional $82 million. We expect to process over 80 retirements for the October 13, 2016, Board meeting. The average number of retirements in a typical month is 14.

The Board is pleading that you not take actions that in total will ultimately cause further damage to the Fund and your long-term benefits. The Plan amendments are a critical part of this solution. Member meetings in the Fire Department began this Wednesday, September 28, 2016. Additional meetings will be scheduled for all members beginning in early October.

Mr. Kingston made a motion that the Board adopt the preceding statement. Mr. Haben seconded the motion, which was unanimously approved by the Board.

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B. BRIEFING ITEMS

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

The Board received comments during the open forum.

No motion was made.
ADDENDUM

DISCUSSION AND POSSIBLE ACTION REGARDING ITEM FOR INDIVIDUAL CONSIDERATION:

Release of previously discussed legal opinion regarding tax qualification amendment

After discussion, Mr. Conway made a motion to release the legal opinion previously provided to the Board by Ice Miller, LLP on September 8, 2016, regarding the tax qualification amendment to the Plan document. Mr. Hass seconded the motion, which was unanimously approved by the Board.

Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Haben and a second by Mr. Hass, the meeting was adjourned at 6:03 p.m.

_____________________
Samuel L. Friar
Chairman

ATTEST:

_____________________
Kelly Gottschalk
Secretary
ITEM #C1

Topic: Plan amendment election

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.

a. Further consideration of proposed Plan and DROP Policy changes, including potential proposed changes from the City of Dallas
b. Approval of proposed Plan language
c. Actuary’s letter
d. Election schedule
e. Call for election

Attendee: Jeff Williams, Segal

Discussion: a. The Board will consider further proposed Plan and DROP Policy changes, including potential proposed changes from the City of Dallas.

b. At the September 8, 2016 Board meeting, the Board discussed possible Plan changes. At that meeting, the Board directed staff to prepare election materials based on the Plan changes discussed, and to present such election materials at the October Board meeting.

A proposed ballot packet to be sent to each Member in the event an election is called will be provided for the Board’s review. The packet includes a cover letter, a sample ballot and the “red-lined” Plan changes. The Plan Amendment Election Procedure is attached.
ITEM #C1
(continued)

c. Section 8.01(a)(2)(A) of the Plan requires a letter from DPFP’s Qualified Actuary stating to the Board that the amendment is actuarially sound. The Actuary’s letter will be provided for the Board’s review.

d. A proposed election schedule will be provided for the Board’s review.

e. The Board is required by Section 8.01(e) of the Plan to issue a notice calling for the election.

Staff Recommendation:

b. Approve Plan language for the proposed Plan amendments and the ballot package, including the cover letter, the ballot and the red-lined Plan changes, all as revised and all subject to final approval of the Executive Director and Counsel.
c. Receive and file the Actuary’s letter.
d. Approve the Plan amendment election schedule.
e. Approve the call for the Plan amendment election.
DALLAS POLICE AND FIRE PENSION SYSTEM

COMBINED PLAN AMENDMENT ELECTION PROCEDURES

Adopted February 12, 1998
As amended through September 9, 1999

Section 1 Authority to Promulgate Rules

Pursuant to Section 7.01 of the Combined Pension Plan ("Combined Plan"), the Board of Trustees ("Board") of the Dallas Police and Fire Pension System ("System") has the authority to promulgate rules pertaining to the holding of Combined Plan amendment elections.

Section 2 Administrative Responsibilities

The Board of Trustees of the System shall serve as the “Election Judge.” The Board may delegate day to day responsibilities for the carrying out of the election to the Administrator and his administrative staff. As Election Judge, the Board of Trustees will supervise any election regarding amendments of the Combined Plan by vote of members on active service. If for any reason the Board of Trustees is unable to perform the duties of the Election Judge, as listed below, then the Administrator or an Assistant Administrator of the System shall serve as the Election Judge. If there is no Administrator or Assistant Administrator able to perform as Election Judge, the legal advisor to the System shall recommend to the Board and the Board shall select a qualified person, who may be another staff person working for the System to serve as the Election Judge.

The System’s staff shall:

(1) Place each proposed amendment on the agenda of a special or regular Board meeting for the Board's review and approval or disapproval;

(2) Obtains for the Board a letter from the System's actuary affirming whether each proposed amendment is actuarially sound;

(3) Notify the Police and Fire Departments of the City of Dallas of any pending amendment election called by the Board;

(4) Supervise the posting of notice calling for the election, together with distribution of such supplementary information as the Board deems appropriate to inform members on active service of the scope of each item being considered for approval at such election;

(5) Place the election results on the agenda of a special or regular meeting of the Board to certify the results of the amendment election to the Board;
(6) Contract with a suitable service provider for the electronic casting and tallying of secret ballots by electronic methods.

(7) In the event printed ballots are used instead of (or in addition to electronic voting, as in the case of absentee voting for persons on active military duty), oversee the issuance of ballots to all members on active service, respectively, for deposit in ballot boxes at fire stations and police stations;

(8) Conduct the election at the time designated by the Board;

(9) Assure the integrity of the election process in order to avoid irregularities;

(10) Collect the ballots for counting;

(11) Upon the completion of the election period, report in writing by secure and confidential means the results of the count of ballots to the Board.

(12) Upon the Board's certification pursuant to Section 3(e) below, notify the membership of the System of the results of the amendment election.

Section 3 Details of Amendment Election

(a) Calling the Election

The Board of Trustees shall call an election to amend the Combined Plan not less than three (3) and no more than six (6) weeks before the date the voting is to begin.

(b) Notice of Election

(1) The Administrator or an Assistant Administrator or staff person under their supervision shall send a notice of the amendment election to the Police and Fire Departments, which shall include relevant dates, items to be voted on, and rules.

(2) This notice will be posted at least two (2) weeks prior to the date of election at all police stations, fire stations, City Hall, and all other places where Police Officers, Firefighters, and Fire Inspectors assemble for duty.
(c) **Voting**

   (1) Voting on amendments shall be held either by electronic means approved by the Board or by ballot boxes, reasonably accommodating all departmental shifts or watches over at least three (3) consecutive twenty-four (24) hour periods. The Board will set the dates that voting will begin and end. Within said dates, if printed ballots and ballot boxes are used then both the Police and Fire Departments shall set the hours for voting;

   (2) The Administrative Advisory Committee of the Board shall have the authority to determine the location of ballot boxes if any are used;

   (3) Ballots may be cast electronically or in the event of use of printed ballots and ballot boxes then in the form of those that are manually tabulated or those designed for machine tabulation. If machine tabulation ballots are utilized, copies of the official ballot need to be posted in the voting area;

   (4) A complete copy of the amendment(s) being voted upon must be posted at each voting location as well as those locations identified at 3(b)(2) above;

   (5) If printed ballots and ballot boxes are used, then each member on active service who votes must sign the voter registration list provided;

   (6) If electronic ballots are cast then adequate means of controlling a secret ballot, confirmation of valid ballots cast and the tabulation thereof shall be the obligation of the service entity engaged for such purposes.

   (7) Members may only vote once and can only vote by the method, and if applicable at a location, designated;

   (8) The Election Judge will receive a written report from any service engaged to receive, tabulate and confirm electronic ballots and if ballot boxes are used will count the ballots and certify the results of the election within forty eight (48) hours of the cessation of voting.
(d) Election Re-count

(1) If a member who was eligible to vote desires a re-count of the ballots of an election, the member must file a written request within five (5) days after the results having been certified by the Board have been disseminated to the members. If the margin of difference in the announced vote total being contested is equal to or less than one per-cent (1%), then the recount will be done at the System's expense; however, if the margin is greater than one per cent (1%) then the member requesting a re-count must pay a non-refundable two hundred dollar ($200.00) fee which must accompany the written request for the re-count. This money for the re-count will be placed into the System's Fund;

(2) The Administrator shall supervise the re-count and the Board shall certify the results as provided herein.

(e) Certification of the Election

The Board shall certify the results of the election.

Section 4 Retention of Ballots and Voter Registration Lists

The ballots and voter registration list, or the electronic records thereof in the case of electronic voting, shall be kept by the Election Judge or the designee for a period of forty-five (45) days after the date the Board certifies the results of an election or longer if required under any records retention policy of the Board. If, after that time, there is no request for a re-count pending, then the ballots and voter registration lists shall be destroyed.
APPROVED on September 9, 1999 by the Board of Trustees of the Dallas Police and Fire Pension System.

[signature]

__________________________
Gerald Brown
Chairman

Attested:

[signature]

__________________________
Richard L. Tettamant
Secretary
October 12, 2016

Board of Trustees
Dallas Police & Fire Pension System
4100 Harry Hines Blvd., Suite 100
Dallas, TX 75219

Re: 2016 Plan Amendment Election

Dear Board Members:

Section 8.01(a)(2)(A) of the Dallas Police & Fire Pension System Combined Pension Plan Document states that amendments to any plan within the Pension System must be “…approved as being actuarially sound by a Qualified Actuary selected by a majority vote of the Board.”

As noted in Actuarial Standard of Practice No. 1, the phrase “actuarial soundness” has different meanings in different contexts. For purposes of this certification, Segal Consulting has relied on the Texas Pension Review Board (PRB) Guidelines for Actuarial Soundness:

1. The funding of a pension plan should reflect all plan obligations and assets.

2. The allocation of the normal cost portion of the contributions should be level or declining as a percent of payroll over all generations of taxpayers.

3. Funding of the unfunded actuarial accrued liability (UAAL) should be level or declining as a percent of payroll over the amortization period.

4. Funding should be adequate to amortize the unfunded actuarial accrued liability (UAAL) over a period not to exceed 40 years, with 15–25 years being a more preferable target. Benefit increases should not be adopted if all plan changes being considered cause a material increase in the amortization period and if the resulting amortization period exceeds 25 years.

5. The choice of assumptions should be reasonable, and should comply with applicable actuarial standards.

The current statutory contribution rates are not sufficient to avoid insolvency, and without changes the Fund is projected to become insolvent within the next 15 years based on assumptions used in the January 1, 2016 actuarial valuation. Therefore, the System does not currently comply with the PRB’s actuarial soundness guidelines, and a Funding Soundness Restoration Plan will be necessary in 2017 unless significant changes are made.
As a step toward restoring funding soundness, the System is proposing several changes to the Combined Pension Plan. A summary of the changes is listed below.

1. Change the annual adjustment from a 4.0% simple adjustment to a CPI-based compound adjustment, with a cap on the portion of the benefit that can receive an adjustment.
2. Change the annual adjustment start date from the first October 1 after retirement or entry into DROP to the first October 1 after retirement and either the attainment of age 62 or the third anniversary of retirement.
3. Increase employee contributions for all active participants, to 9.0%, 10.5%, and 12.0% effective January 1, 2017, October 1, 2017, and October 1, 2018 respectively.
4. Change interest on the DROP account for active participants to 3.0%, payable for the first seven years after entry into DROP.
5. Stop deposits into the DROP account for active participants after ten years.
6. Provide various payments options for retirees with a DROP account balance and future retirees who have a DROP account balance when they retire. The amount of interest paid is dependent upon the option chosen.
7. Revise the monthly benefit supplement for new retirees and Members in Active DROP, to be the greater of $75 or 1% of the original monthly base benefit.
8. For Tier 1 and Tier 2 active participants, base average computation pay for the calculation of benefits on 60 consecutive months of highest pay, for prospective service.
9. Increase the benefit multiplier for Tier 3 active participants to 3.0% per year of service, retroactively.
10. Change the pre-retirement death benefit for Tier 3 active participants to the greater of 50% of the accrued benefit or a benefit based on 20 years, but no less than 30% of Average Computation Pay.
11. Increases in the employee contribution rate above 9.0% (#3) and increases in the Tier 3 benefit multiplier (#9) are contingent on the City agreeing to increase City contributions to a level necessary such that the System will avoid insolvency and to a level in which the System would be projected to steadily improve its funded position based on reasonable actuarial assumptions as decided by the Board and a Qualified Actuary.

The plan changes described above are a summary and not a complete statement of each plan change. A more detailed description can be found in the plan amendment presentation posted to the System’s website.

The impact of the proposed changes was valued based on the January 1, 2016 actuarial valuation for the Dallas Police and Fire Pension System Combined Pension Plan. All plan obligations were taken into account, and the normal cost portion of the cost was calculated as a level percentage of payroll on an individual basis. There were reasonable changes in the retirement and DROP payout assumptions made in conjunction with some of the proposed plan changes.

In total, the proposed plan changes lower the liability and increase the projected years of solvency, and move the System towards actuarial soundness as defined by the PRB. Segal Consulting has determined potential City contribution rate scenarios that, in conjunction with the above plan
changes, are projected to enable the System to amortize its unfunded actuarial accrued liability over a period of 40 years or less, and therefore fully comply with all five soundness guidelines.

I am an Enrolled Actuary, a Fellow of the Conference of Consulting Actuaries, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Sincerely,

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

cc: Kelly Gottschalk
    Summer Loveland
    Joshua Mond
    Leon F. (Rocky) Joyner, Jr.
    Deborah K. Brigham
Dear Member:

Enclosed is an election packet presenting an explanation of two proposed amendments to the Pension Plan. The election is being conducted for DPFP by Election America, Inc., an independent firm that specializes in such elections. DPFP has no access to the counting of votes and receives all final reporting from Election America.

Voting on the amendments is scheduled to take place Monday, ______, beginning at 8 a.m., through ________, _________, ending at 12 p.m. An election schedule is attached.

The enclosed Ballot contains a description of each proposed amendment, including references to the amended Plan sections. A redlined version of the amended sections of the Plan Document language has been provided accompanying the Ballot. The full Plan Document is available on our website at www.dpfp.org. Election packet information has also been provided to your Department for delivery to each station.

The Ballot and any other summary material are for informational purposes to help you understand the proposed amendments. Actual benefits and Plan provisions are determined according to the Plan Document.

You may vote on the Internet or by telephone in accordance with the instructions provided in this election packet.

Election information and the amendment explanation are available via the Internet at our website at www.dpfp.org. Questions can be sent to DPFP via e-mail to info@dpfp.org.

Each Ballot item will be voted on separately, with a “yes” vote for the Plan amendment or a “no” vote against the Plan amendment.

An amendment must be approved by 65 percent of the votes cast by Members of DPFP to be passed.

Your vote counts! Please vote!
If you have any questions, please feel free to contact your Trustees or DPFP staff listed below:

<table>
<thead>
<tr>
<th>Staff</th>
<th>Role/Department</th>
<th>Email</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelly Gottschalk</td>
<td>Executive Director</td>
<td><a href="mailto:kellyg@dpfp.org">kellyg@dpfp.org</a></td>
<td>214-638-3863</td>
</tr>
<tr>
<td>Pat McGinnis</td>
<td>Benefits Manager</td>
<td><a href="mailto:patm@dpfp.org">patm@dpfp.org</a></td>
<td>214-638-3863</td>
</tr>
<tr>
<td>Retirement Counselors</td>
<td>Retirement Counselors</td>
<td><a href="mailto:info@dpfp.org">info@dpfp.org</a></td>
<td>214-638-3863</td>
</tr>
<tr>
<td>Active Trustees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sam Friar</td>
<td>Chair/Fire</td>
<td><a href="mailto:sfriar@dpfp.org">sfriar@dpfp.org</a></td>
<td>(Preferred # needed)</td>
</tr>
<tr>
<td>Ken Haben</td>
<td>Vice Chair/Police</td>
<td><a href="mailto:khaben@dpfp.org">khaben@dpfp.org</a></td>
<td>(Preferred # needed)</td>
</tr>
<tr>
<td>Joe Schutz</td>
<td>Deputy Vice Chair/Police</td>
<td><a href="mailto:jschutz@dpfp.org">jschutz@dpfp.org</a></td>
<td>(Preferred # needed)</td>
</tr>
<tr>
<td>Clint Conway</td>
<td>Fire</td>
<td><a href="mailto:clintc@dpfp.org">clintc@dpfp.org</a></td>
<td>(Preferred # needed)</td>
</tr>
<tr>
<td>Brian Hass</td>
<td>Fire</td>
<td><a href="mailto:bhass@dpfp.org">bhass@dpfp.org</a></td>
<td>(Preferred # needed)</td>
</tr>
<tr>
<td>Tho Tang Ho</td>
<td>Police</td>
<td><a href="mailto:thoh@dpfp.org">thoh@dpfp.org</a></td>
<td>(Preferred # needed)</td>
</tr>
</tbody>
</table>

Sincerely,

Sam Friar
Chairman
Topic: Actuary’s letter pursuant to Section 4.01(a) of the Plan

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.

Attendee: Jeff Williams, Segal Consulting

Discussion: Pursuant to Section 4.01(a) of the Combined Pension Plan, the annual costs of administration of the Plan are to be reviewed by the Plan’s actuary in order to determine whether the payments of such costs will have an adverse effect on the payment of benefits from any of the plans within DPFP.

Segal will present their conclusions regarding the impact of the payment of the 2017 proposed budgeted costs, plus anticipated investment management expenses, on the Plan’s ability to pay benefits. A letter stating their conclusions will be provided.
October 11, 2016

Board of Trustees
Dallas Police & Fire Pension System
4100 Harry Hines Blvd., Suite 100
Dallas, TX 75219

Re: Payment of Pension System Expenses

Members of the Board:

Section 4.01(a) of the Combined Pension Plan requires an annual actuarial determination as to whether future anticipated expenses will have an adverse effect on the System’s ability to pay benefits.

**Anticipated Expenses**

For 2017, the total anticipated expenses are $36.3 million. This includes budgeted administrative and professional service expenses of approximately $10.1 million, and estimated investment-related and interest expenses of $26.2 million. The majority of the investment-related expenses are tied to the market value of assets, and for purposes of this analysis are anticipated to be 0.9% of the average market value of assets each year. The portion not directly related to asset value is expected to amount to $1.0 million in 2017. Both the $10.1 million in administrative and professional service expenses and the $1.0 million in investment-related expenses are projected to grow with the System’s inflation assumption in the future. The System’s interest expense, equal to $3.5 million for 2017, is expected to decline to $2.5 million in 2018 and to $0.5 million in 2019.

It is our understanding that, in the Board’s judgment, all of these costs are necessary.

**Funding Impact**

Based on the results of the January 1, 2016 actuarial valuation, including 7.25% assumed annual investment returns and updated demographic assumptions based on recent experience, the System is projected to become insolvent in 2030. This projection presumes that all expenses continue to be paid out of System resources. The projected insolvency date may shift somewhat based on actual investment experience and retirement patterns, but will not be eliminated unless significant actions are taken to restore the System’s long-term viability.

The Fund is intended to pay benefits to members. In its current situation, with declining assets, the continued payment of expense costs from Fund income does, in my opinion, have an adverse impact on the payment of benefits. If the City allocates additional resources to fully fund anticipated System expenses in 2017 and future years, this action would enable the System to pay out more than half a billion dollars in additional benefits to retirees than it would otherwise be able to pay.
Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of such future differences is beyond the scope of this assignment.

I am an Enrolled Actuary, a Fellow of the Conference of Consulting Actuaries, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Sincerely,

Deborah K. Brigham, FCA, ASA, MAAA, EA
Vice President and Actuary

cc: Kelly Gottschalk
Summer Loveland
Josh Mond
Rocky Joyner
Jeff Williams
DISCUSSION SHEET

ITEM #C3

Topic: Legal issues

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.

a. Police Officer and Firefighter pay lawsuits
b. Potential claims involving fiduciaries and advisors
c. 2014 Plan amendment election and litigation
d. Open records lawsuit

Discussion: Counsel will brief the Board on these issues.
DISCUSSION SHEET

ITEM #C4

Topic: Proposed 2016 Budget adjustments

a. Legal
b. Actuarial
c. Election

Discussion: Staff will brief the Board on actual expenses year-to-date for legal, actuarial and election budget items, as well as anticipated expenses for the remainder of the year as compared to budgeted amounts.

<table>
<thead>
<tr>
<th></th>
<th>Budget</th>
<th>Incurred YTD</th>
<th>Projected Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal</td>
<td>$2,000,000*</td>
<td>$1,715,120</td>
<td>$2,500,000</td>
</tr>
<tr>
<td>Actuarial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valuation &amp; GASB reporting</td>
<td>$75,000</td>
<td>$73,500</td>
<td>$86,000</td>
</tr>
<tr>
<td>Experience study</td>
<td>70,000</td>
<td>70,000</td>
<td>70,000</td>
</tr>
<tr>
<td>Plan amendment</td>
<td>90,000</td>
<td>210,500</td>
<td>376,000</td>
</tr>
<tr>
<td>Other consulting</td>
<td>15,000</td>
<td>28,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Buck (transition to Segal)</td>
<td>-</td>
<td>33,000</td>
<td>33,000</td>
</tr>
<tr>
<td>Total Actuarial</td>
<td>$250,000</td>
<td>$415,000</td>
<td>$600,000</td>
</tr>
<tr>
<td>Election</td>
<td>$-</td>
<td>$10,860</td>
<td>$40,000</td>
</tr>
</tbody>
</table>

*The original Legal expense budget for 2016 was $750,000 and was adjusted to $2M in June ’16.

Staff Recommendation: Approve proposed increases in the legal, actuarial and election budget categories for 2016.
Item #C5

Topic: Presentation and discussion of the 2017 Budget

Discussion: Attached is the budget proposal for Calendar Year 2017.

The budget has been prepared in total for both the Combined Pension Plan and the Supplemental Plan. Total expenses are then allocated to the Supplemental Plan based on unitization as reported by JPMorgan.

The proposed budget, net of expenses allocated to the Supplemental Plan, totals $10.2M which is a decrease of 6.6% compared to the prior year budget.

Proposed expense items which are projected to exceed the prior year budget by more than 5% and $10,000 are explained in the comments accompanying the proposed budget. Material proposed decreases in individual line items will be discussed at the meeting.

Staff Recommendation: Direct staff to address any proposed amendments, present the amended budget to the Board at the November 10, 2016 Board meeting, and authorize the posting of the amended budget to www.dpfp.org for member review prior to the November meeting.
## BUDGET
### CALENDAR YEAR 2017

<table>
<thead>
<tr>
<th>Description</th>
<th>2016 Budget***</th>
<th>2016 Projected Actual**</th>
<th>2017 Proposed Budget</th>
<th>$ Change vs Prior Yr Budget</th>
<th>% Change vs Prior Yr Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Salaries and benefits</td>
<td>4,248,074</td>
<td>3,954,000</td>
<td>3,857,513</td>
<td>(390,561)</td>
<td>-9.2%</td>
</tr>
<tr>
<td>2 Employment expenses</td>
<td>3,585</td>
<td>8,275</td>
<td>3,009</td>
<td>(576)</td>
<td>-16.1%</td>
</tr>
<tr>
<td>3 Memberships and dues</td>
<td>19,107</td>
<td>17,000</td>
<td>17,600</td>
<td>(1,507)</td>
<td>-7.9%</td>
</tr>
<tr>
<td>4 Staff meetings</td>
<td>1,400</td>
<td>762</td>
<td>1,000</td>
<td>(400)</td>
<td>-28.6%</td>
</tr>
<tr>
<td>5 Employee service recognition</td>
<td>2,210</td>
<td>2,890</td>
<td>3,010</td>
<td>800</td>
<td>36.2%</td>
</tr>
<tr>
<td>6 Member educational programs</td>
<td>19,450</td>
<td>10,649</td>
<td>9,600</td>
<td>(9,850)</td>
<td>-50.6%</td>
</tr>
<tr>
<td>7 Member outreach programs</td>
<td>750</td>
<td>540</td>
<td>720</td>
<td>(30)</td>
<td>-4.0%</td>
</tr>
<tr>
<td>8 Disability medical evaluations</td>
<td>15,000</td>
<td>11,880</td>
<td>12,500</td>
<td>(2,500)</td>
<td>-16.7%</td>
</tr>
<tr>
<td>9 Elections</td>
<td>-</td>
<td>40,000</td>
<td>10,000</td>
<td>10,000</td>
<td>n/a</td>
</tr>
<tr>
<td>10 Board meetings</td>
<td>30,580</td>
<td>25,589</td>
<td>22,960</td>
<td>(7,620)</td>
<td>-24.9%</td>
</tr>
<tr>
<td>11 Conference registration/materials - Board</td>
<td>21,600</td>
<td>37,000</td>
<td>51,615</td>
<td>30,015</td>
<td>139.0%</td>
</tr>
<tr>
<td>12 Travel - Board</td>
<td>208,400</td>
<td>50,000</td>
<td>217,835</td>
<td>9,435</td>
<td>4.5%</td>
</tr>
<tr>
<td>13 Conference/training registration/materials - Staff</td>
<td>52,320</td>
<td>20,000</td>
<td>43,700</td>
<td>(8,620)</td>
<td>-16.5%</td>
</tr>
<tr>
<td>14 Travel - Staff</td>
<td>131,700</td>
<td>40,000</td>
<td>74,050</td>
<td>(57,650)</td>
<td>-43.8%</td>
</tr>
<tr>
<td>15 Building expenses, incl capitalizable fixed assets</td>
<td>700,967</td>
<td>590,000</td>
<td>610,966</td>
<td>(90,001)</td>
<td>-12.8%</td>
</tr>
<tr>
<td>16 Office supplies</td>
<td>34,850</td>
<td>30,624</td>
<td>31,800</td>
<td>(3,050)</td>
<td>-8.8%</td>
</tr>
<tr>
<td>17 Leased equipment</td>
<td>25,000</td>
<td>25,999</td>
<td>20,500</td>
<td>(4,500)</td>
<td>-18.0%</td>
</tr>
<tr>
<td>18 Postage</td>
<td>30,400</td>
<td>26,000</td>
<td>27,700</td>
<td>(2,700)</td>
<td>-8.9%</td>
</tr>
<tr>
<td>19 Printing</td>
<td>47,825</td>
<td>7,000</td>
<td>6,435</td>
<td>(41,390)</td>
<td>-86.5%</td>
</tr>
<tr>
<td>20 Repairs and maintenance</td>
<td>60,450</td>
<td>70,000</td>
<td>97,508</td>
<td>37,058</td>
<td>61.3%</td>
</tr>
<tr>
<td>21 Subscriptions</td>
<td>1,726</td>
<td>2,430</td>
<td>2,800</td>
<td>1,074</td>
<td>52.2%</td>
</tr>
<tr>
<td>22 Records storage</td>
<td>960</td>
<td>1,080</td>
<td>1,200</td>
<td>240</td>
<td>25.0%</td>
</tr>
<tr>
<td>23 Liability insurance</td>
<td>326,378</td>
<td>356,000</td>
<td>372,000</td>
<td>45,622</td>
<td>14.0%</td>
</tr>
<tr>
<td>24 Bank/security custodian services</td>
<td>415,040</td>
<td>317,500</td>
<td>328,600</td>
<td>(86,440)</td>
<td>-20.8%</td>
</tr>
<tr>
<td>25 Actuarial services</td>
<td>250,000</td>
<td>650,000</td>
<td>275,000</td>
<td>25,000</td>
<td>10.0%</td>
</tr>
<tr>
<td>26 Accounting services</td>
<td>59,000</td>
<td>59,000</td>
<td>59,000</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>27 Independent audit</td>
<td>165,000</td>
<td>142,500</td>
<td>142,500</td>
<td>(22,500)</td>
<td>-13.6%</td>
</tr>
<tr>
<td>28 Investment consultant and reporting</td>
<td>675,000</td>
<td>675,000</td>
<td>700,000</td>
<td>25,000</td>
<td>3.7%</td>
</tr>
<tr>
<td>29 Real estate consultant</td>
<td>200,000</td>
<td>40,110</td>
<td>-</td>
<td>(200,000)</td>
<td>-100.0%</td>
</tr>
<tr>
<td>30 Legal fees</td>
<td>2,000,000</td>
<td>2,500,000</td>
<td>2,014,800</td>
<td>14,800</td>
<td>0.7%</td>
</tr>
<tr>
<td>31 Legislative consultants</td>
<td>260,000</td>
<td>247,000</td>
<td>248,000</td>
<td>(12,000)</td>
<td>-4.6%</td>
</tr>
<tr>
<td>32 Public relations</td>
<td>100,000</td>
<td>-</td>
<td>100,000</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>33 Miscellaneous professional services</td>
<td>52,250</td>
<td>59,200</td>
<td>143,350</td>
<td>91,100</td>
<td>174.4%</td>
</tr>
<tr>
<td>34 Communications (phone/internet)</td>
<td>76,800</td>
<td>68,906</td>
<td>64,312</td>
<td>(12,488)</td>
<td>-16.3%</td>
</tr>
<tr>
<td>35 Business continuity</td>
<td>48,700</td>
<td>31,500</td>
<td>20,000</td>
<td>(28,700)</td>
<td>-58.9%</td>
</tr>
<tr>
<td>36 Network security</td>
<td>50,000</td>
<td>50,000</td>
<td>37,000</td>
<td>(13,000)</td>
<td>-26.0%</td>
</tr>
<tr>
<td>37 Pension administration software &amp; WMS</td>
<td>306,000</td>
<td>300,000</td>
<td>281,000</td>
<td>(19,000)</td>
<td>-6.3%</td>
</tr>
<tr>
<td>38 Information technology projects</td>
<td>145,000</td>
<td>145,000</td>
<td>140,000</td>
<td>(5,000)</td>
<td>-3.4%</td>
</tr>
<tr>
<td>39 IT subscriptions/services/licenses</td>
<td>59,125</td>
<td>19,359</td>
<td>77,950</td>
<td>18,825</td>
<td>31.8%</td>
</tr>
<tr>
<td>40 IT software/hardware</td>
<td>43,400</td>
<td>39,000</td>
<td>39,800</td>
<td>(3,600)</td>
<td>-8.3%</td>
</tr>
<tr>
<td>41 Contingency reserve</td>
<td>-</td>
<td>370</td>
<td>-</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10,888,047</strong></td>
<td><strong>10,672,161</strong></td>
<td><strong>10,167,333</strong></td>
<td><strong>(720,714)</strong></td>
<td><strong>-6.6%</strong></td>
</tr>
</tbody>
</table>

*Unitization split to Supplemental is based on unitization as of 8/31/16 of .67%*

**Projected based on 8/31/16 YTD annualized**

***2016 Budget was amended March 10, 2016 related to Travel and Conference expenses and June 9, 2016 related to Legal expenses*
## Budget Changes (>5% and $10K)

<table>
<thead>
<tr>
<th>Item</th>
<th>2016 Budget</th>
<th>2016 Projected Actual**</th>
<th>2017 Proposed Budget</th>
<th>$ Change vs Prior Yr Budget</th>
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<th>Explanation</th>
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<tbody>
<tr>
<td><strong>INCREASES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
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<td>37,508</td>
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<tr>
<td>4</td>
<td>Conference registration/materials - Board</td>
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<td>5</td>
<td>Actuarial services</td>
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<td>275,000</td>
<td>25,000</td>
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<td>31.8%</td>
</tr>
<tr>
<td>7</td>
<td>Elections</td>
<td>-</td>
<td>40,000</td>
<td>10,000</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>REDUCTIONS:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Salaries and benefits</td>
<td>4,248,074</td>
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<td>Real estate consultant</td>
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<td>-</td>
<td>(200,000)</td>
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<td>10</td>
<td>Building expenses, incl capitalizable fixed assets</td>
<td>700,967</td>
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<tr>
<td>13</td>
<td>Printing</td>
<td>47,825</td>
<td>7,000</td>
<td>6,435</td>
<td>(41,390)</td>
<td>-86.5%</td>
</tr>
<tr>
<td>14</td>
<td>Business continuity</td>
<td>48,700</td>
<td>31,500</td>
<td>20,000</td>
<td>(28,700)</td>
<td>-58.9%</td>
</tr>
<tr>
<td>15</td>
<td>Pension administration software &amp; WMS</td>
<td>306,000</td>
<td>300,000</td>
<td>281,000</td>
<td>(25,000)</td>
<td>-8.2%</td>
</tr>
<tr>
<td>16</td>
<td>Independent audit</td>
<td>165,000</td>
<td>142,500</td>
<td>142,500</td>
<td>(20,000)</td>
<td>-13.6%</td>
</tr>
<tr>
<td>17</td>
<td>Network security</td>
<td>50,000</td>
<td>50,000</td>
<td>37,000</td>
<td>(13,000)</td>
<td>-26.0%</td>
</tr>
<tr>
<td>18</td>
<td>Communications (phone/internet)</td>
<td>76,800</td>
<td>68,906</td>
<td>64,312</td>
<td>(12,488)</td>
<td>-16.3%</td>
</tr>
</tbody>
</table>

** Projected based on 8/31/16 YTD annualized
The fiscal year shall be January 1 through December 31 of each year. Each fiscal year, staff shall present a proposed budget to the Board of Trustees (Board) according to the following schedule:

1. At the October Board Meeting, the staff shall present to the Board the proposed budget for the following fiscal year. The Board shall approve a budget to be presented to the membership for review via the DPFP website.

2. At the November Board Meeting, members will be given the opportunity to comment on the proposed budget. The Board or staff may propose changes to the budget in response to member comments. The Board shall either approve the final budget or direct staff to make adjustments based on member comments and bring a revised budget to be presented to the December Board meeting for final approval.

In all cases, the final budget shall be approved by December 31 each fiscal year.

Included with the budget will be a letter from DPFP’s actuary stating whether or not the budget will have an adverse effect on the payment of benefits per Section 4.01(a) of the Combined Pension Plan.

In accordance with Sec. 4.01 (d) of the Combined Pension Plan Document, the approved budget will be submitted to the City of Dallas for comment. The City’s budget office may request the Board to reconsider the appropriation for any expenditure at a Board meeting, but the Board shall make the final determination concerning any appropriation.

At any time during the year the staff may recommend to the Board changes to the budget necessary for the efficient and effective operations of DPFP. Any such changes to the budget must be approved by the Board.
Board approval of the budget and any changes to the budget, if applicable, is authorization for staff to pay expenditures up to the total amount budgeted.

Each August, staff will present to the Board a detailed, mid-year analysis of actual expenditures versus the budget.

APPROVED on **August 18, 2016** the Board of Trustees of the Dallas Police and Fire Pension System.

________________________________________
Samuel L. Friar  
Chairman

Attested:

________________________________________
Kelly Gottschalk  
Secretary
DISCUSSION SHEET

ITEM #C6

Topic: CDK Multi-Family Fund

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

Discussion: DPFP has received an offer to purchase DPFP’s interest in the CDK Multi-Family Fund. This will be discussed with the Board.

Staff Recommendation: Authorize the Executive Director to enter into an agreement to sell DPFP’s interest in the CDK Multi-Family Fund.
Topic: Clarion Partners: 1210 South Lamar

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 Partners will discuss a potential sale of the 1210 South Lamar multifamily investment. At the September 10, 2015 Board meeting, the Board engaged Clarion Partners to take over the investment management of DPFP’s interest in several Dallas area real estate assets, including this project. DPFP’s interest in the property was previously managed by CDK Realty Advisors. Development of the apartments began in May of 2014 and was completed in August of 2016. Clarion will discuss the sales process and provide a recommended course of action.

Staff Recommendation: Authorize Clarion to consummate the sale of DPFP’s interest in the 1210 South Lamar, subject to the final approval of terms by the Executive Director.
ITEM #C8

Determination of Handicap Status of Dependent Child

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.078 of the Texas Government Code.

Retired Member died on April 20, 2015, leaving a surviving child, who is over the age of 18. The brother of the individual has applied for survivor benefits under the provisions of Plan Section 6.06(p). The brother is the trustee of the Arc of Texas Master Pooled Trust.

Definition 42 (B) of the Plan defines the term “Qualified Survivor” eligible to receive survivor pension benefits after the death of a Member to include:

“(B) all surviving unmarried children who are either under age 19 or handicapped, as determined by the Board under Section 6.06 (p)…”

Section 6.06 (p) provides for establishing eligibility of a handicapped child for participation in the division of death benefits upon the Board’s finding that the child is “so physically or mentally handicapped either congenitally or through injury suffered or disease contracted, as to be unable to be self-supporting or to secure and hold gainful employment or pursue an occupation.”
Attached is medical documentation regarding the condition supporting the permanent disability.

Additional conditions of Section 6.06(p) are as follows:

1. The condition was diagnosed prior to age 23;
2. Child is not married;
3. The handicap was not the result of an occupational injury;
4. The handicap was not the result of an intentional self-inflicted injury or a chronic illness resulting from an addiction through a protracted course of non-coerced indulgence to alcohol, narcotics or other substance abuse; and
5. The handicap did not occur as a result of participation in a commission of a felony.

Staff
Recommendation: Grant survivor benefits under the provisions of Plan Section 6.06(p).
ITEM #C9

Topic: Investment reports

Discussion: Review of investment reports.
Investment Oversight
As at 31st August 2016
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**Investment Oversight**

Dallas Police & Fire Pension System

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### Data as at August 2016

**Asset Class Performance: Actual vs. Policy**

#### One Month Performance as at August 2016

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>DPFP Return</th>
<th>Policy Return (Beta)</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Equity</td>
<td>0.70%</td>
<td>0.34%</td>
<td>0.37%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>6.37%</td>
<td>0.00%</td>
<td>6.37%</td>
</tr>
<tr>
<td>Global Bonds</td>
<td>-0.20%</td>
<td>-0.49%</td>
<td>0.29%</td>
</tr>
<tr>
<td>High Yield</td>
<td>2.15%</td>
<td>1.89%</td>
<td>0.26%</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>1.00%</td>
<td>0.70%</td>
<td>0.30%</td>
</tr>
<tr>
<td>EM Debt</td>
<td>1.42%</td>
<td>0.91%</td>
<td>0.51%</td>
</tr>
<tr>
<td>Private Debt</td>
<td>-1.86%</td>
<td>0.00%</td>
<td>-1.86%</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>0.56%</td>
<td>0.00%</td>
<td>0.56%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>-1.89%</td>
<td>0.00%</td>
<td>-1.89%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>0.69%</td>
<td>0.00%</td>
<td>0.69%</td>
</tr>
<tr>
<td>Risk Parity</td>
<td>0.41%</td>
<td>0.01%</td>
<td>0.40%</td>
</tr>
<tr>
<td>GTAA</td>
<td>2.83%</td>
<td>0.01%</td>
<td>2.83%</td>
</tr>
<tr>
<td>Absolute Return</td>
<td>3.56%</td>
<td>-0.06%</td>
<td>3.62%</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>0.06%</td>
<td>0.03%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Total</td>
<td>1.51%</td>
<td>0.45%</td>
<td>1.06%</td>
</tr>
<tr>
<td>Total ex Real Estate</td>
<td>1.64%</td>
<td>0.45%</td>
<td>1.19%</td>
</tr>
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</table>

#### Quarter-to-Date Performance as at August 2016

<table>
<thead>
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<th>DPFP Return</th>
<th>Policy Return (Beta)</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Equity</td>
<td>4.96%</td>
<td>4.66%</td>
<td>0.30%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>7.83%</td>
<td>0.00%</td>
<td>7.83%</td>
</tr>
<tr>
<td>Global Bonds</td>
<td>1.07%</td>
<td>0.26%</td>
<td>0.82%</td>
</tr>
<tr>
<td>High Yield</td>
<td>4.80%</td>
<td>4.49%</td>
<td>0.31%</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>2.98%</td>
<td>2.36%</td>
<td>0.62%</td>
</tr>
<tr>
<td>EM Debt</td>
<td>4.22%</td>
<td>2.00%</td>
<td>2.22%</td>
</tr>
<tr>
<td>Private Debt</td>
<td>-1.55%</td>
<td>0.00%</td>
<td>-1.55%</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>0.54%</td>
<td>0.00%</td>
<td>0.54%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>-1.89%</td>
<td>0.00%</td>
<td>-1.89%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>0.50%</td>
<td>0.00%</td>
<td>0.50%</td>
</tr>
<tr>
<td>Risk Parity</td>
<td>3.10%</td>
<td>2.89%</td>
<td>0.21%</td>
</tr>
<tr>
<td>GTAA</td>
<td>3.48%</td>
<td>2.89%</td>
<td>0.59%</td>
</tr>
<tr>
<td>Absolute Return</td>
<td>3.69%</td>
<td>0.56%</td>
<td>3.13%</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>0.14%</td>
<td>0.05%</td>
<td>0.09%</td>
</tr>
<tr>
<td>Total</td>
<td>2.88%</td>
<td>2.24%</td>
<td>0.65%</td>
</tr>
<tr>
<td>Total ex Real Estate</td>
<td>3.38%</td>
<td>2.24%</td>
<td>1.14%</td>
</tr>
</tbody>
</table>

---

*Please see Appendix I (page 36) for details on the policy indexes.

**Returns presented are calculated using custodian bank month-end source data and values. The returns shown here will differ from actuary calculated returns and returns presented by NEPC.
### One Year Performance as at August 2016

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>DPFP Return</th>
<th>Policy Return (Beta)</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Equity</td>
<td>6.37%</td>
<td>7.24%</td>
<td>-0.87%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>3.51%</td>
<td>3.04%</td>
<td>0.46%</td>
</tr>
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<td>Global Bonds</td>
<td>8.78%</td>
<td>8.78%</td>
<td>0.00%</td>
</tr>
<tr>
<td>High Yield</td>
<td>6.19%</td>
<td>10.13%</td>
<td>-3.94%</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>3.57%</td>
<td>4.40%</td>
<td>-0.83%</td>
</tr>
<tr>
<td>EM Debt</td>
<td>9.44%</td>
<td>12.75%</td>
<td>-3.31%</td>
</tr>
<tr>
<td>Private Debt</td>
<td>3.51%</td>
<td>5.83%</td>
<td>-2.32%</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>2.00%</td>
<td>-9.47%</td>
<td>11.47%</td>
</tr>
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<td>Infrastructure</td>
<td>-5.74%</td>
<td>3.71%</td>
<td>-9.45%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>-20.57%</td>
<td>10.64%</td>
<td>-31.21%</td>
</tr>
<tr>
<td>Risk Parity</td>
<td>3.49%</td>
<td>8.09%</td>
<td>-4.61%</td>
</tr>
<tr>
<td>GTAA</td>
<td>1.15%</td>
<td>8.09%</td>
<td>-6.94%</td>
</tr>
<tr>
<td>Absolute Return</td>
<td>-11.39%</td>
<td>0.79%</td>
<td>-12.19%</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>1.06%</td>
<td>0.22%</td>
<td>0.83%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>-3.25%</strong></td>
<td><strong>11.89%</strong></td>
<td><strong>-15.14%</strong></td>
</tr>
<tr>
<td><strong>Total ex Real Estate</strong></td>
<td><strong>3.16%</strong></td>
<td><strong>10.34%</strong></td>
<td><strong>-7.18%</strong></td>
</tr>
</tbody>
</table>

### Three Year Performance as at August 2016

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<th>DPFP Return</th>
<th>Policy Return (Beta)</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Equity</td>
<td>6.24%</td>
<td>6.74%</td>
<td>-0.49%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>-5.64%</td>
<td>12.21%</td>
<td>-17.85%</td>
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<tr>
<td>Global Bonds</td>
<td>2.95%</td>
<td>2.64%</td>
<td>0.31%</td>
</tr>
<tr>
<td>High Yield</td>
<td>3.24%</td>
<td>5.31%</td>
<td>-2.07%</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>n/a</td>
<td>2.61%</td>
<td>n/a</td>
</tr>
<tr>
<td>EM Debt</td>
<td>2.30%</td>
<td>3.48%</td>
<td>-1.18%</td>
</tr>
<tr>
<td>Private Debt</td>
<td>2.87%</td>
<td>6.43%</td>
<td>-3.56%</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>7.98%</td>
<td>-3.54%</td>
<td>11.52%</td>
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<td>Infrastructure</td>
<td>-0.82%</td>
<td>8.66%</td>
<td>-9.48%</td>
</tr>
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<td>Real Estate</td>
<td>-15.17%</td>
<td>11.60%</td>
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<td>Risk Parity</td>
<td>4.31%</td>
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<td>-0.92%</td>
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<td>2.55%</td>
<td>5.23%</td>
<td>-2.68%</td>
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<td>Absolute Return</td>
<td>5.21%</td>
<td>1.97%</td>
<td>3.24%</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>0.38%</td>
<td>0.10%</td>
<td>0.28%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>-2.47%</strong></td>
<td><strong>9.16%</strong></td>
<td><strong>-11.63%</strong></td>
</tr>
<tr>
<td><strong>Total ex Real Estate</strong></td>
<td><strong>2.40%</strong></td>
<td><strong>7.41%</strong></td>
<td><strong>-5.01%</strong></td>
</tr>
</tbody>
</table>

* Please see Appendix I (page 36) for details on the policy indexes.
** Returns presented are calculated using custodian bank month-end source data and values. The returns shown here will differ from actuary calculated returns and returns presented by NEPC.
Attribution Metrics

• Allocation refers to the proportion of the active return that can be attributed to tactical asset allocation decisions.

• Selection refers to the proportion of the active return that can be attributed to manager selection and subsequent performance of the selected managers.

• Interaction refers to the proportion of the active return that cannot be attributed solely to tactical asset allocation decisions or manager selection.

* Please see Appendix II (page 37) for details on the attribution calculation and methodology.
### Data as at August 2016
**Portfolio Attribution (cont.)**

*Please see Appendix II (page 37) for details on the attribution calculation and methodology.*

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Weights</th>
<th>Returns</th>
<th>Attribution</th>
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</thead>
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<td>DPFP Policy</td>
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<td>16.44%</td>
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</tr>
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<td>EM Equity</td>
<td>0.00%</td>
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<td>0.00%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>15.63%</td>
<td>5.00%</td>
<td>6.37%</td>
</tr>
<tr>
<td>Short Term Core Bonds</td>
<td>0.00%</td>
<td>2.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Global Bonds</td>
<td>3.51%</td>
<td>3.00%</td>
<td>-0.20%</td>
</tr>
<tr>
<td>High Yield</td>
<td>6.51%</td>
<td>5.00%</td>
<td>2.15%</td>
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<td>Bank Loans</td>
<td>2.02%</td>
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<td>1.00%</td>
</tr>
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<td>Struc. Cred. &amp; Abs. Ret.</td>
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<td>6.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>EM Debt</td>
<td>2.16%</td>
<td>6.00%</td>
<td>1.42%</td>
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<tr>
<td>Private Debt</td>
<td>3.57%</td>
<td>5.00%</td>
<td>-1.86%</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>10.76%</td>
<td>5.00%</td>
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<td>Infrastructure</td>
<td>6.72%</td>
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<td>-1.89%</td>
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<td>Liquid Real Assets</td>
<td>0.00%</td>
<td>3.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Risk Parity</td>
<td>6.38%</td>
<td>5.00%</td>
<td>0.41%</td>
</tr>
<tr>
<td>GTAA</td>
<td>4.00%</td>
<td>3.00%</td>
<td>2.83%</td>
</tr>
<tr>
<td>Absolute Return</td>
<td>1.14%</td>
<td>2.00%</td>
<td>3.56%</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>3.12%</td>
<td>2.00%</td>
<td>0.06%</td>
</tr>
<tr>
<td>Plan Leverage Facility</td>
<td>-5.61%</td>
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<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>100.00%</td>
<td>100.00%</td>
<td>1.51%</td>
</tr>
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</table>
Investment Oversight
Dallas Police & Fire Pension System

Data as at August 2016
Portfolio Attribution (cont.)

Calendar YTD as at August 2016

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Weights</th>
<th>Returns</th>
<th>Attribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DPFP</td>
<td>Policy</td>
<td>DPFP</td>
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<td>Global Equity</td>
<td>15.99%</td>
<td>20.00%</td>
<td>5.88%</td>
</tr>
<tr>
<td>EM Equity</td>
<td>0.00%</td>
<td>5.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>15.02%</td>
<td>5.00%</td>
<td>3.77%</td>
</tr>
<tr>
<td>Short Term Core Bonds</td>
<td>0.00%</td>
<td>2.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Global Bonds</td>
<td>4.27%</td>
<td>3.00%</td>
<td>10.11%</td>
</tr>
<tr>
<td>High Yield</td>
<td>6.04%</td>
<td>5.00%</td>
<td>16.20%</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>1.89%</td>
<td>6.00%</td>
<td>8.34%</td>
</tr>
<tr>
<td>Struc. Cred. &amp; Abs. Ret.</td>
<td>0.00%</td>
<td>6.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>EM Debt</td>
<td>2.11%</td>
<td>6.00%</td>
<td>11.36%</td>
</tr>
<tr>
<td>Private Debt</td>
<td>3.33%</td>
<td>5.00%</td>
<td>1.09%</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>10.59%</td>
<td>5.00%</td>
<td>1.47%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>7.33%</td>
<td>5.00%</td>
<td>-4.35%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>25.21%</td>
<td>12.00%</td>
<td>-5.96%</td>
</tr>
<tr>
<td>Liquid Real Assets</td>
<td>0.00%</td>
<td>3.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Risk Parity</td>
<td>7.59%</td>
<td>5.00%</td>
<td>8.45%</td>
</tr>
<tr>
<td>GTAA</td>
<td>4.41%</td>
<td>3.00%</td>
<td>3.68%</td>
</tr>
<tr>
<td>Absolute Return</td>
<td>1.16%</td>
<td>2.00%</td>
<td>-10.38%</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>2.47%</td>
<td>2.00%</td>
<td>1.02%</td>
</tr>
<tr>
<td>Plan Leverage Facility</td>
<td>-7.40%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>100.00%</td>
<td>100.00%</td>
<td>2.19%</td>
</tr>
</tbody>
</table>

* Please see Appendix II (page 37) for details on the attribution calculation and methodology.
## One Year as at August 2016

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Weights</th>
<th>Returns</th>
<th>Attribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DPFP</td>
<td>Policy</td>
<td>DPFP</td>
</tr>
<tr>
<td>Global Equity</td>
<td>17.57%</td>
<td>20.00%</td>
<td>6.37%</td>
</tr>
<tr>
<td>EM Equity</td>
<td>0.00%</td>
<td>5.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>14.45%</td>
<td>5.00%</td>
<td>3.51%</td>
</tr>
<tr>
<td>Short Term Core Bonds</td>
<td>0.00%</td>
<td>2.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Global Bonds</td>
<td>3.92%</td>
<td>3.00%</td>
<td>8.78%</td>
</tr>
<tr>
<td>High Yield</td>
<td>6.03%</td>
<td>5.00%</td>
<td>6.19%</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>1.84%</td>
<td>6.00%</td>
<td>3.57%</td>
</tr>
<tr>
<td>Struc. Cred. &amp; Abs. Ret.</td>
<td>0.00%</td>
<td>6.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>EM Debt</td>
<td>2.04%</td>
<td>6.00%</td>
<td>9.44%</td>
</tr>
<tr>
<td>Private Debt</td>
<td>3.28%</td>
<td>5.00%</td>
<td>3.51%</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>10.31%</td>
<td>5.00%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>7.12%</td>
<td>5.00%</td>
<td>-5.74%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>25.94%</td>
<td>12.00%</td>
<td>-20.57%</td>
</tr>
<tr>
<td>Liquid Real Assets</td>
<td>0.00%</td>
<td>3.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Risk Parity</td>
<td>7.87%</td>
<td>5.00%</td>
<td>3.49%</td>
</tr>
<tr>
<td>GTAA</td>
<td>4.34%</td>
<td>3.00%</td>
<td>1.15%</td>
</tr>
<tr>
<td>Absolute Return</td>
<td>1.15%</td>
<td>2.00%</td>
<td>-11.39%</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>2.36%</td>
<td>2.00%</td>
<td>1.06%</td>
</tr>
<tr>
<td>Plan Leverage Facility</td>
<td>-8.23%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>100.00%</td>
<td>100.00%</td>
<td>-3.25%</td>
</tr>
</tbody>
</table>

* Please see Appendix II (page 37) for details on the attribution calculation and methodology.
Data as at August 2016
Asset Allocations: Monthly Changes

The total NAV of the portfolio at August 31st 2016 is **2,610,878,828**

- P&L of the portfolio increased by $40 million.
- $11 million was added in contributions, $111 million paid in benefits.
- No new managers were added during the month.
- No managers were liquidated during the month.
- Strategy with the largest cash net inflow in August: Natural Resources
- Strategy with the largest cash net outflow in August: Real Estate
- Over the past 12 months, the largest increase in allocation was in Private Equity
- Over the past 12 months, the largest decrease in allocation was in Risk Parity

### Top Performing Asset Classes

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Performance (August)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Equity</td>
<td>$26,606,069</td>
</tr>
<tr>
<td>Real Estate</td>
<td>$4,380,671</td>
</tr>
<tr>
<td>High Yield</td>
<td>$3,732,831</td>
</tr>
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</table>

### Top Performing Holdings

<table>
<thead>
<tr>
<th>Holding</th>
<th>Performance (August)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huff Energy Fund LP</td>
<td>$25,446,348</td>
</tr>
<tr>
<td>RE Separate Accounts</td>
<td>$3,124,570</td>
</tr>
<tr>
<td>GMO</td>
<td>$3,026,748</td>
</tr>
</tbody>
</table>

### Bottom Performing Asset Classes

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Performance (August)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>($3,386,199)</td>
</tr>
<tr>
<td>Private Debt</td>
<td>($1,772,420)</td>
</tr>
<tr>
<td>Global Bonds</td>
<td>($189,000)</td>
</tr>
</tbody>
</table>

### Bottom Performing Holdings

<table>
<thead>
<tr>
<th>Holding</th>
<th>Performance (August)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huff Alternative Fund</td>
<td>($2,466,381)</td>
</tr>
<tr>
<td>JP Morgan Global Maritime</td>
<td>($2,021,266)</td>
</tr>
<tr>
<td>Levine Leichtman Deep Value</td>
<td>($1,801,656)</td>
</tr>
</tbody>
</table>

### Twelve Month Performance by Asset Class

- Global Equity
- Private Equity
- EM Debt
- Bank Loans
- Global Bonds
- High Yield
- Private Debt
- Natural Resources
- Infrastructure
- Real Estate
- Risk Parity
- GTAA
- Absolute Return
- Cash & Cash Equivalents
Data as at August 2016
Asset Allocations: Notable Cashflows

<table>
<thead>
<tr>
<th>Inflow/(Outflow)</th>
<th>Holding</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>16,490,832</td>
<td>GMO Benchmark-Free Fund-III</td>
<td>Redemption</td>
</tr>
<tr>
<td>3,509,168</td>
<td>GMO Multi-Strategy Fund</td>
<td>Redemption</td>
</tr>
</tbody>
</table>
Investment Oversight
Dallas Police & Fire Pension System

Data as at August 2016
Asset Allocations: Over Time (Quarterly)

Cash & Cash Equivalents
Asset Allocation
Real Assets
Fixed Income
Equity

Target
Data as at August 2016
Asset Allocations: Sub-Assets Over Time (Quarterly)
Data as at August 2016
Liquidity Over Time (Quarterly)

Liquidity Over Time (% of NAV)


Liquid less Loans Monthly Restricted Illiquid
Investment Oversight

Data as at August 2016
Liquidity Over Time (Quarterly) (cont.)

Liquidity Over Time ($ Value)

<table>
<thead>
<tr>
<th>Period</th>
<th>Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2-2013</td>
<td>3,800</td>
</tr>
<tr>
<td>Q3-2013</td>
<td>3,700</td>
</tr>
<tr>
<td>Q4-2013</td>
<td>3,600</td>
</tr>
<tr>
<td>Q1-2014</td>
<td>3,500</td>
</tr>
<tr>
<td>Q2-2014</td>
<td>3,400</td>
</tr>
<tr>
<td>Q3-2014</td>
<td>3,300</td>
</tr>
<tr>
<td>Q4-2014</td>
<td>3,200</td>
</tr>
<tr>
<td>Q1-2015</td>
<td>3,100</td>
</tr>
<tr>
<td>Q2-2015</td>
<td>3,000</td>
</tr>
<tr>
<td>Q3-2015</td>
<td>2,900</td>
</tr>
<tr>
<td>Q4-2015</td>
<td>2,800</td>
</tr>
<tr>
<td>Q1-2016</td>
<td>2,700</td>
</tr>
<tr>
<td>Q2-2016</td>
<td>2,600</td>
</tr>
</tbody>
</table>

Legend:
- Liquid
- Monthly
- Restricted
- Illiquid
- Loans
Data as at August 2016
Trailing 12 Month Funding Gap

Data as at August 2016
Trailing 12 Month Funding Gap

$274
10.49% of NAV

Millions

Contributions
Benefit Payments
Benefits in Excess of Contributions


- 300
- 250
- 200
- 150
- 100
- 50
- 0

$274
10.49% of NAV

Investment Oversight
Dallas Police & Fire Pension System
**Trend Commentary**

- The DPFP portfolio is less volatile than the 60/40 portfolio across all time horizons.
- The DPFP portfolio is less volatile than the Policy benchmark across the 5 year time horizon.

*Note: Higher allocations to illiquid assets tend to deemphasize volatility due to the infrequency of marks received. This may be particularly acute in the case of the DPFP plan portfolio.*

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**Data as at August 2016**

**Long Term Plan Risk/Return vs Policy and 60/40**

---

*Please see Appendix I (page 36) for details on the composition of the 60/40 and Policy benchmarks.*
Investment Oversight

Dallas Police & Fire Pension System

Data as at August 2016
Risk Profile

Five Year Value at Risk (95% Confidence Level) as at August 2016

Sub-Asset Class Risk vs Return (Sharpe) as at August 2016

Portfolio Stress Testing as at August 2016

Scenario | P&L ($) | P&L (%)
--- | --- | ---
Equity Rebound (2009) | 26,667,244 | 24.50%
Equities Up 10% | 6,140,849 | 5.64%
EUR up 10% vs USD | 264,053 | 0.24%
EUR down 10% vs USD | (264,053) | -0.24%
Libya Oil Shock (2011) | (765,684) | -0.70%
Japan Earthquake (2011) | (989,074) | -0.91%
Greece (2015) | (2,568,436) | -2.36%
Equities Down 10% | (6,134,534) | -5.64%
Oil Prices Drop (2010) | (6,964,340) | -6.40%
Debt Ceiling (2011) | (9,988,698) | -9.18%
Russian Financial Crisis (2008) | (10,916,633) | -10.03%
Lehman Default (2008) | (11,861,289) | -10.90%

* Stress Test Scenarios and the proxy instruments used are detailed in Appendix I (page 36).
** Value at Risk on the DPFP portfolio is significantly higher than the policy, as realized losses and volatility are significant within the DPFP portfolio. This is particularly true in the case of the Real Estate Portfolio, which also contains leverage.
Commentary

- US equities struggled to make progress over the month as market expectations increased that the Federal Reserve (Fed) would raise rates again before the end of 2016 – the S&P 500 rose 0.1%. The index gave up its gains of early August after Fed chair Janet Yellen told the Jackson Hole annual symposium of central bankers that the case for a further increase had strengthened, as she delivered an upbeat assessment of the US economy.

- Eurozone equities advanced in August. Eurozone economic growth was confirmed at +0.3% quarter-on-quarter in Q2. The flash composite purchasing managers’ index for August edged up to 53.3, a seven-month high, although trends in manufacturing orders and hiring disappointed. Annual inflation was estimated at 0.2% for August, the same level as in July, raising expectations that there could be further stimulus to come from the European Central Bank at its September meeting.

- After July’s sharp rise, the Japanese stock market was more subdued in August but still managed to record a positive total return of 0.6%. The currency was generally stronger in the first half of August before reversing this to end marginally weaker for the month. Although sector leadership changed frequently, August as a whole saw a continuation of the rebound in oversold sectors and the underperformance of defensive stocks, which began in July.

Source – Schroders
Commentary

- Valuations have been a growing concern among fund managers in recent years: of those surveyed by Preqin, nearly half (48%) cited deal pricing as the biggest challenge facing the private equity asset class in the next 12 months. Macroeconomic conditions are a concern for 38% of respondents, with events such as the UK’s recent decision to leave the EU and China’s economic slowdown creating volatility and uncertainty in global markets. Other notable concerns for fund managers involve fundraising (33%), complying with and adapting to regulatory regimes (28%) and the exit environment (27%).
**Commentary**

- The market remains awash in liquidity with global central banks at the ready to do more if necessary. We believe the rally in risk assets is likely to continue through the third quarter of 2016, although not without intermittent volatility. Given these views, we intend to continue to use periods of market weakness to add to high-quality structured credit and secured bank loans.

- Most credit classes experienced a positive turnaround after a rocky performance in the second half of 2015 and early 2016. While we expect continued volatility, our asset allocations are designed to perform in a wide range of environments and can excel in periods of uncertainty. We continue to find compelling investment opportunities in fixed income asset classes that typically are not included in the Barclays Agg.

---

**Twelve Month Compounded Performance as at August 2016**

- **Top Performer:** Highland Crusader
- **Bottom Performer:** Levine Leichtman Deep Value
- **Most Volatile:** Highland Capital
- **Least Volatile:** Levine Leichtman Deep Value

---

**Manager Risk vs Return (Sharpe) as at August 2016**

- **High Return, Low Risk:** Highland Crusader, Ashmore Debt, Highland Capital
- **High Risk, Low Return:** Riverstone, W.R. Huff, Highland Capital

---

**Exposure by Manager as at August 2016**

- **Top Manager:** Ashmore, Loomis Sayles, Highland Capital
- **Low Manager:** Riverstone, W.R. Huff, Highland Capital

---

**Data as at August 2016**

**Fixed Income Overview**

- **Source:** Guggenheim Data as at August 2016
Commentary

- Following returns of 1.97% in 2015, the Preqin All-Strategies Hedge Fund benchmark returned 1.09% in the first six months of 2016. With industry returns considerably below the double-digit figures experienced in 2009, 2010, 2012 and 2013, investors have become increasingly concerned about the impact of hedge fund performance on their portfolios: 79% of investors surveyed for the upcoming Preqin Investor Outlook: Alternative Assets, H2 2016 felt that their hedge fund investments had fallen short of expectations over the past 12 months, up from 33% in December 2015.
Commentary

- Although commodities as a whole were little changed in the month, sizable moves occurred among certain individual commodities. Brent crude oil (6.6% total return in the index) and West Texas Intermediate (5.2%) enjoyed their biggest monthly gains since April, 2016. The moves came on renewed expectations of coordinated efforts between OPEC and non-OPEC exporters to support prices, with both Saudi Arabia and Russia saying they were open to a joint production freeze. Those hopes were diminished somewhat, however, as Iran insisted that it would continue ramping up production to pre-sanction levels.
- Natural gas (~3.6%) slipped despite storage injections coming in below expectations, driven by strong power demand from electric utilities amid warmer-than-normal weather conditions across the U.S. According to the Chicago Mercantile Exchange, aggregate open interest in natural gas rose 12% from July, to the highest August monthly level in three years.
- Precious metals paused following more hawkish comments from U.S. Fed Chair Yellen and other central bank officials that opened the door for additional rate hikes this year. Gold (~3.4%) held up better than silver (~8.6%), with the latter having enjoyed stronger gains earlier in the year.
- Among the industrial metals, zinc (2.9%) continued to rally and is now up more than 40% for the year on continued signs the market is tightening due to a lack of new supply, mine closures and declining output from the sector's largest mines. Nickel (~8.3%) saw profit taking following a strong run on potential supply curtailments resulting from the Philippines' recently concluded audit of the mining industry's environmental practices (the results of which have yet to be announced). Copper (~7.0%) is now down for the year amid ample supply and soft demand from China.

Source – Cohen & Steers
Investment Oversight
Dallas Police & Fire Pension System

Data as at August 2016
Infrastructure Overview

Commentary

- Preqin’s Infrastructure Online currently details 84 fund managers that have raised at least $1bn in capital over the past 10 years. This ‘$1bn Club’ represents an outsized proportion (85%) of aggregate capital raised for unlisted infrastructure funds since 2006, despite only accounting for just over a quarter of unlisted infrastructure fund managers in terms of number.
- Indicative of the difference in sophistication between the $1bn Club and all other investors, the majority (69%) of $1bn Club investors invest in the asset class as part of a separate infrastructure allocation, compared with 34% of all other investors. Conversely, larger proportions of other investors invest in the asset class through other buckets such as their real assets, private equity or general alternatives allocations.

Exposure by Manager as at August 2016

- JP Morgan: 51%
- NTE: 24%
- LBJ: 25%

Manager Risk vs Return (Sharpe) as at August 2016

- JPM Infra IIF
- S&P Global Infra (Rolling 3mo)
- LBJ/NTE Mobility
- JPM Asian Infra
- JPM Maritime

Twelve Month Compounded Performance as at August 2016

- Top Performer
- Bottom Performer
- Most Volatile
- Least Volatile
As institutional investors have grown and become more sophisticated, real estate fund managers have created products that can more effectively balance the needs of the institution and provide greater diversification within their real estate portfolios. Private real estate debt vehicles are one such product that have risen in prominence in recent years; in 2010, real estate debt vehicles represented just 9% of all private real estate funds that reached a final close and only 7% of aggregate capital raised, with these figures approximately doubling in 2016 so far. Furthermore, the $8.6bn in aggregate capital secured by debt funds in 2016 YTD is the third highest amount of any strategy, ahead of both core and core-plus vehicles.
Investment Oversight

Dallas Police & Fire Pension System

Data as at August 2016
One Month Performance Heat Map

-5.00% -4.00% -3.00% -2.00% -1.00% -0.50% 0.00% 0.50% 1.00% 2.00% 3.00% 4.00% 5.00%

Millions

*Private assets only report on a quarterly basis therefore the one month return is often unchanged.

*Data as at August 2016
Investment Oversight

Dallas Police & Fire Pension System

Data as at August 2016
Twelve Month Performance Heat Map

Equity
- Eagle
- Hudson
- Huff Alt.

Huff Energy
- Kainos
- Levine Leicht, IV
- Levine Leicht, V
- Lone Star CRA

Lone Star Opp V
- Merit Energy
- Mitchell

Fixed Income
- Ashmore Debt
- Ashmore Local

- Brandywine
- Levine Leicht, PCS II
- Lone Star IX

- Loomis
- Loomis Snr Fl
- WR Huff

Real Assets
- BTG
- Hancock

- JPM Asian Infra
- JPM Maritime
- JPM Infra. IIF
- LBJ
- Lone Star RE III
- M&G RE II
- NTE Mobility

Asset Allocation
- Bridgewater AW
- Bridgewater PA
- GMO
- Putnam

Millions
-40% -20% -10% -5% -2% -1% 0.00% 1% 2% 5% 10% 20% 40%

Twelve Month Performance Heat Map

Data as at August 2016

Heat Map

-40% -20% -10% -5% -2% -1% 0.00% 1% 2% 5% 10% 20% 40%

-40% -20% -10% -5% -2% -1% 0.00% 1% 2% 5% 10% 20% 40%

-40% -20% -10% -5% -2% -1% 0.00% 1% 2% 5% 10% 20% 40%

-40% -20% -10% -5% -2% -1% 0.00% 1% 2% 5% 10% 20% 40%

-40% -20% -10% -5% -2% -1% 0.00% 1% 2% 5% 10% 20% 40%
Data as at August 2016
Twelve Month Contribution to Performance

* Returns presented are calculated using custodian bank month-end source data and values. The returns shown here will differ from actuary calculated returns and returns presented by NEPC.
Data as at August 2016
Twelve Month Contribution to Performance
excluding Real Estate

* Returns presented are calculated using custodian bank month-end source data and values. The returns shown here will differ from actuary calculated returns and returns presented by NEPC.
Data as at August 2016
Five Year Contribution to Risk

*VaR is expressed, on a position basis, as a percentage of the total portfolio VaR.
Data as at August 2016
Five Year Contribution to Risk excluding Real Estate

* VaR is expressed, on a position basis, as a percentage of the total portfolio VaR.
Data as at August 2016
Monthly NAV & Drop Balances

*On a rolling five year basis.*
Data as at August 2016
DROP as % of NAV

Millions

$3,121 ($937) 30.0%
$3,014 ($1,055) 35.0%
$3,190 ($1,172) 36.8%
$3,442 ($1,300) 37.8%
$3,349 ($1,425) 42.5%
$2,782 ($2,782) 54.5%
$2,611 ($1,516) 56.1%
$3,121 ($1,464)
## Investment Overview

### Data as at August 2016

#### Manager Overview

<table>
<thead>
<tr>
<th>Fund</th>
<th>Inception Date</th>
<th>Current Exposure</th>
<th>Net Allocation (%)</th>
<th>1M</th>
<th>3M</th>
<th>YTD</th>
<th>1yr</th>
<th>2yr</th>
<th>3yr</th>
<th>5yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Investment Assets</td>
<td>Jun 1996</td>
<td>$2,610,878,828</td>
<td>1.51%</td>
<td>0.92%</td>
<td>2.19%</td>
<td>-3.25%</td>
<td>-6.67%</td>
<td>-2.47%</td>
<td>1.06%</td>
<td></td>
</tr>
<tr>
<td>Plan Leverage Facility</td>
<td>Mar 2014</td>
<td>$(150,000,000)</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.88%</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>equity</td>
<td></td>
<td>$866,556,450</td>
<td>33.96%</td>
<td>3.47%</td>
<td>3.41%</td>
<td>4.84%</td>
<td>4.97%</td>
<td>-1.71%</td>
<td>1.21%</td>
<td>5.17%</td>
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<tr>
<td>MSCI ACWI</td>
<td>Jul 2006</td>
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<td>16.94%</td>
<td>0.70%</td>
<td>4.16%</td>
<td>5.88%</td>
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<td>Eagle Asset Management</td>
<td>Feb 2005</td>
<td>$47,192,877</td>
<td>1.81%</td>
<td>2.27%</td>
<td>9.15%</td>
<td>13.08%</td>
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<td>7.82%</td>
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<td>Mitchell Group</td>
<td>Oct 2001</td>
<td>$29,832,523</td>
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<td>4.97%</td>
<td>24.42%</td>
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<td>OFI Global Institutional</td>
<td>Oct 2007</td>
<td>$124,292,597</td>
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<td>9.76%</td>
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<td>Pyramis (Fidelity)</td>
<td>Mar 2002</td>
<td>$99,159,942</td>
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<td>2.93%</td>
<td>3.62%</td>
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<td>RREEF</td>
<td>Feb 1999</td>
<td>$23,994,739</td>
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<td>16.46%</td>
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<td>Sustainable Asset Management</td>
<td>Nov 2008</td>
<td>$28,681,945</td>
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<td>Walter Scott</td>
<td>Dec 2009</td>
<td>$89,258,227</td>
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<td>3.97%</td>
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<td>3.37%</td>
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<td>Private Equity</td>
<td>Oct 2005</td>
<td>$444,143,600</td>
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<td>3.77%</td>
<td>3.51%</td>
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<td>Russell 3000 + 3% (Rolling 3mo)</td>
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<td>BankCap Opportunity Fund</td>
<td>Aug 2013</td>
<td>$14,643,325</td>
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<td>-0.05%</td>
<td>-0.05%</td>
<td>12.46%</td>
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<td>2.42%</td>
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<td>Hudson Clean Energy</td>
<td>Aug 2009</td>
<td>$16,214,498</td>
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<td>-9.95%</td>
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<td>Huff Alternative Fund</td>
<td>Jun 2001</td>
<td>$31,068,922</td>
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<td>Huff Energy Fund LP</td>
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<td>$137,907,480</td>
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<td>Industry Ventures Partnership Holdings IV, LP</td>
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<td>Kainos Capital Partners</td>
<td>Jan 2014</td>
<td>$33,952,088</td>
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<td>7.62%</td>
<td>7.62%</td>
<td>24.57%</td>
<td>35.09%</td>
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<td>Levine Leichtman Capital Partners IV</td>
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<td>$22,441,945</td>
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<td>4.73%</td>
<td>5.19%</td>
<td>18.95%</td>
<td>30.29%</td>
<td>13.44%</td>
<td>13.67%</td>
<td>18.87%</td>
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<tr>
<td>Levine Leichtman Capital Partners V</td>
<td>Aug 2013</td>
<td>$19,419,367</td>
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<td>2.03%</td>
<td>2.64%</td>
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<td>11.69%</td>
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<tr>
<td>Lone Star CRA</td>
<td>Jul 2008</td>
<td>$17,318,371</td>
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<td>1.72%</td>
<td>-38.38%</td>
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<td>Lone Star Growth Capital</td>
<td>Dec 2006</td>
<td>$10,146,152</td>
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<td>-20.16%</td>
<td>-20.16%</td>
<td>-18.15%</td>
<td>-0.45%</td>
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<td>Lone Star Opportunities V</td>
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<td>$27,177,237</td>
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<td>2.09%</td>
<td>-37.79%</td>
<td>-37.58%</td>
<td>-36.85%</td>
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<td>Merit Energy E, F, G, H</td>
<td>Oct 2004</td>
<td>$38,659,167</td>
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<td>-0.42%</td>
<td>-10.66%</td>
<td>-15.10%</td>
<td>-17.57%</td>
<td>-5.00%</td>
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<td>North Texas Opportunity Fund</td>
<td>Aug 2000</td>
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<td>-1.76%</td>
<td>-8.60%</td>
<td>-8.60%</td>
<td>-8.60%</td>
<td>-30.49%</td>
<td>-14.81%</td>
<td>-13.71%</td>
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<td>Oaktree Power Opportunities Fund III</td>
<td>Apr 2011</td>
<td>$11,899,312</td>
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<td>0.00%</td>
<td>0.23%</td>
<td>12.12%</td>
<td>28.72%</td>
<td>14.19%</td>
<td>12.23%</td>
<td>8.16%</td>
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<td>Pharos IIA</td>
<td>Aug 2005</td>
<td>$17,758,660</td>
<td>0.68%</td>
<td>-2.83%</td>
<td>-2.83%</td>
<td>-8.98%</td>
<td>-19.21%</td>
<td>-10.97%</td>
<td>-6.61%</td>
<td>0.71%</td>
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<td>Pharos III</td>
<td>Dec 2012</td>
<td>$25,216,227</td>
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<td>2.35%</td>
<td>3.61%</td>
<td>5.28%</td>
<td>5.57%</td>
<td>2.72%</td>
<td>-5.33%</td>
<td>n/a</td>
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<tr>
<td>Yellowstone Capital</td>
<td>Sep 2008</td>
<td>$511,079</td>
<td>0.02%</td>
<td>0.00%</td>
<td>-0.05%</td>
<td>-15.90%</td>
<td>-45.20%</td>
<td>-47.37%</td>
<td>-45.61%</td>
<td>-34.66%</td>
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<tr>
<td><strong>Cash &amp; Cash Equivalents</strong></td>
<td></td>
<td>$60,835,841</td>
<td>2.33%</td>
<td>0.06%</td>
<td>0.20%</td>
<td>1.02%</td>
<td>1.06%</td>
<td>0.60%</td>
<td>0.38%</td>
<td>-0.68%</td>
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### Data as at August 2016
Manager Overview (cont.)

#### Asset Allocation

<table>
<thead>
<tr>
<th>Fund</th>
<th>Inception Date</th>
<th>Current Exposure</th>
<th>Net Allocation (%)</th>
<th>1M</th>
<th>3M</th>
<th>YTD</th>
<th>1yr</th>
<th>2yr</th>
<th>3yr</th>
<th>5yr</th>
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<td>Bank Loans</td>
<td>Jul 2006</td>
<td>$466,596,602</td>
<td>17.87%</td>
<td>0.66%</td>
<td>3.20%</td>
<td>10.23%</td>
<td>6.13%</td>
<td>0.45%</td>
<td>2.94%</td>
<td>3.61%</td>
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<tr>
<td>S&amp;P Leverage Loan Index</td>
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<tr>
<td>Loomis Sayles Sr. Floating Rate</td>
<td>Jan 2014</td>
<td>$54,418,747</td>
<td>2.08%</td>
<td>1.00%</td>
<td>3.56%</td>
<td>8.34%</td>
<td>3.57%</td>
<td>2.36%</td>
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<td>n/a</td>
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<tr>
<td>EM Debt</td>
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<td>JPM EMBI + JPM GBI-EM</td>
<td>Feb 2005</td>
<td>$58,372,068</td>
<td>2.24%</td>
<td>1.42%</td>
<td>-1.11%</td>
<td>11.36%</td>
<td>9.44%</td>
<td>-0.66%</td>
<td>2.30%</td>
<td>1.28%</td>
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<td>Ashmore EM Debt Fund</td>
<td>Mar 2011</td>
<td>$50,691,913</td>
<td>1.55%</td>
<td>2.16%</td>
<td>-4.43%</td>
<td>9.16%</td>
<td>8.58%</td>
<td>2.27%</td>
<td>4.30%</td>
<td>3.46%</td>
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<td>Ashmore EM Local CCY</td>
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<td>Global Bonds</td>
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<td>Barclays Global Aggregate</td>
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<td>Brandywine</td>
<td>Oct 2004</td>
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<td>2.08%</td>
<td>1.00%</td>
<td>3.56%</td>
<td>8.34%</td>
<td>3.57%</td>
<td>2.36%</td>
<td>n/a</td>
<td>n/a</td>
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<td>Mondriam Investment Partners</td>
<td>Oct 2003</td>
<td>$59,029,714</td>
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<td>0.20%</td>
<td>3.05%</td>
<td>10.27%</td>
<td>8.58%</td>
<td>-0.85%</td>
<td>2.73%</td>
<td>2.55%</td>
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<td>Barclays Global HY</td>
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<td>Loomis Sayles</td>
<td>Oct 1998</td>
<td>$29,626,068</td>
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<td>2.12%</td>
<td>7.81%</td>
<td>17.55%</td>
<td>6.36%</td>
<td>-0.70%</td>
<td>4.53%</td>
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<td>W.R. Huff High Yield</td>
<td>Jun 1996</td>
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<td>4.51%</td>
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<td>0.79%</td>
<td>3.46%</td>
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<tr>
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<tr>
<td>Barclays Global HY + 2% (Rolling 3mo)</td>
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<td>6.84%</td>
<td>-1.72%</td>
<td>-8.14%</td>
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<td>Highland Capital Management</td>
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<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>3.04%</td>
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<td>3.17%</td>
<td>7.83%</td>
</tr>
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<td>Highland Crusader Fund</td>
<td>Jul 2003</td>
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<td>0.00%</td>
<td>0.12%</td>
<td>30.27%</td>
<td>24.78%</td>
<td>7.02%</td>
<td>2.95%</td>
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<td>Levine Leichtman Capital Partners Deep Value</td>
<td>Oct 2006</td>
<td>$9,922,767</td>
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<td>-15.23%</td>
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<td>-4.10%</td>
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<td>Levine Leichtman Capital Partners PCS II</td>
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<td>$18,805,988</td>
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<td>-1.26%</td>
<td>4.54%</td>
<td>5.11%</td>
<td>-0.87%</td>
<td>2.58%</td>
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<td>2.16%</td>
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<td>-4.03%</td>
<td>-13.03%</td>
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<td>-3.58%</td>
<td>-12.07%</td>
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<td>14.26%</td>
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<td>Oaktree Fund IV &amp; 2x Loan Fund</td>
<td>Jan 2002</td>
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<td>Riverstone Credit Partners LP</td>
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<td>13.54%</td>
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<td>GTAA</td>
<td>Jul 2007</td>
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<td>1.56%</td>
<td>4.66%</td>
<td>5.21%</td>
<td>1.38%</td>
<td>0.79%</td>
<td>3.64%</td>
<td>3.89%</td>
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<tr>
<td>60% NDUEACWF / 40% Barc Global Agg</td>
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<td>$39,368,157</td>
<td>3.42%</td>
<td>2.83%</td>
<td>4.84%</td>
<td>3.68%</td>
<td>1.15%</td>
<td>-0.24%</td>
<td>2.55%</td>
<td>3.01%</td>
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</tr>
<tr>
<td>Risk Parity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>60% NDUEACWF / 40% Barc Global Agg</td>
<td>Oct 2013</td>
<td>$927,465</td>
<td>0.04%</td>
<td>-0.04%</td>
<td>7.28%</td>
<td>7.04%</td>
<td>1.55%</td>
<td>-0.20%</td>
<td>0.40%</td>
<td>4.82%</td>
</tr>
<tr>
<td>Bridgewater All Weather</td>
<td>Sep 2007</td>
<td>$86,067,310</td>
<td>3.30%</td>
<td>-0.04%</td>
<td>7.28%</td>
<td>7.04%</td>
<td>1.55%</td>
<td>-0.20%</td>
<td>0.40%</td>
<td>4.82%</td>
</tr>
<tr>
<td>Putnam</td>
<td>Dec 2009</td>
<td>$64,049,997</td>
<td>2.45%</td>
<td>1.17%</td>
<td>3.40%</td>
<td>4.76%</td>
<td>1.21%</td>
<td>0.46%</td>
<td>2.99%</td>
<td>3.56%</td>
</tr>
<tr>
<td>Absolute Return</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bridgewater Pure Alpha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Source:** Dallas Police & Fire Pension System
Data as at August 2016
Manager Overview (cont.)

<table>
<thead>
<tr>
<th>Fund</th>
<th>Inception Date</th>
<th>Current Exposure</th>
<th>Net Allocation (%)</th>
<th>1M</th>
<th>3M</th>
<th>YTD</th>
<th>1yr</th>
<th>2yr</th>
<th>3yr</th>
<th>5yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>REAL ASSETS</td>
<td>Mar 2015</td>
<td>$1,074,918,307</td>
<td>41.17%</td>
<td>-2.98%</td>
<td>-3.84%</td>
<td>-13.18%</td>
<td>-13.57%</td>
<td>-8.49%</td>
<td>-4.04%</td>
<td></td>
</tr>
<tr>
<td>Natural Resources</td>
<td>Apr 2015</td>
<td>$291,648,131</td>
<td>11.17%</td>
<td>0.56%</td>
<td>0.73%</td>
<td>1.47%</td>
<td>2.00%</td>
<td>6.03%</td>
<td>7.98%</td>
<td>7.06%</td>
</tr>
<tr>
<td>S&amp;P Global Nat. Res. (Rolling 3mo)</td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
<td>6.76%</td>
<td>16.69%</td>
<td>-9.47%</td>
<td>-13.89%</td>
<td>-3.54%</td>
<td>-6.70%</td>
</tr>
<tr>
<td>BTG Pactual Asset Management</td>
<td>Oct 2006</td>
<td>$81,076,473</td>
<td>3.11%</td>
<td>0.21%</td>
<td>0.21%</td>
<td>-1.44%</td>
<td>-8.61%</td>
<td>-7.68%</td>
<td>-5.68%</td>
<td>-6.48%</td>
</tr>
<tr>
<td>Forest Investment Associates</td>
<td>Jan 1992</td>
<td>$44,261,286</td>
<td>1.70%</td>
<td>0.00%</td>
<td>1.13%</td>
<td>1.32%</td>
<td>2.47%</td>
<td>4.56%</td>
<td>5.27%</td>
<td>3.56%</td>
</tr>
<tr>
<td>Hancock Agricultural</td>
<td>Dec 2002</td>
<td>$166,310,372</td>
<td>6.37%</td>
<td>0.88%</td>
<td>2.98%</td>
<td>7.82%</td>
<td>15.96%</td>
<td>18.22%</td>
<td>18.12%</td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Jul 2012</td>
<td>$176,157,326</td>
<td>6.75%</td>
<td>-1.89%</td>
<td>-1.87%</td>
<td>-4.35%</td>
<td>-5.74%</td>
<td>-4.46%</td>
<td>-0.82%</td>
<td>0.13%</td>
</tr>
<tr>
<td>S&amp;P Global Infra (Rolling 3mo)</td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
<td>4.99%</td>
<td>14.09%</td>
<td>3.71%</td>
<td>-0.82%</td>
<td>8.66%</td>
<td>6.16%</td>
</tr>
<tr>
<td>JP Morgan Asian Infrastructure</td>
<td>Aug 2008</td>
<td>$30,118,708</td>
<td>1.15%</td>
<td>-0.50%</td>
<td>-0.50%</td>
<td>-3.44%</td>
<td>-7.11%</td>
<td>-5.92%</td>
<td>-2.89%</td>
<td>1.28%</td>
</tr>
<tr>
<td>JP Morgan Asian Infrastructure II</td>
<td>Mar 2014</td>
<td>$4,154,324</td>
<td>0.16%</td>
<td>-6.55%</td>
<td>-6.55%</td>
<td>-14.49%</td>
<td>-20.45%</td>
<td>-7.77%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>JP Morgan Global Maritime</td>
<td>Jun 2010</td>
<td>$23,609,549</td>
<td>0.90%</td>
<td>-7.89%</td>
<td>-21.93%</td>
<td>-33.44%</td>
<td>-37.33%</td>
<td>-25.92%</td>
<td>-0.10%</td>
<td>-79.80%</td>
</tr>
<tr>
<td>JP Morgan Infrastructure IIIF</td>
<td>Oct 2007</td>
<td>$31,303,165</td>
<td>1.20%</td>
<td>-2.86%</td>
<td>-1.12%</td>
<td>1.84%</td>
<td>0.97%</td>
<td>-0.38%</td>
<td>2.90%</td>
<td>4.28%</td>
</tr>
<tr>
<td>LBJ Infrastructure Group Holdings</td>
<td>Jun 2010</td>
<td>$44,346,035</td>
<td>1.70%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>NTE Mobility Partners</td>
<td>Dec 2009</td>
<td>$42,625,545</td>
<td>1.63%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Real Estate</td>
<td></td>
<td></td>
<td></td>
<td>0.00%</td>
<td>4.99%</td>
<td>14.09%</td>
<td>3.71%</td>
<td>-0.82%</td>
<td>8.66%</td>
<td>6.16%</td>
</tr>
<tr>
<td>NCREIF Property Index</td>
<td>Mar 1985</td>
<td>$607,112,850</td>
<td>23.25%</td>
<td>0.69%</td>
<td>-4.95%</td>
<td>-5.96%</td>
<td>-20.57%</td>
<td>-21.32%</td>
<td>-15.17%</td>
<td>-8.48%</td>
</tr>
<tr>
<td>Lone Star RE II</td>
<td>Sep 2011</td>
<td>$4,629,193</td>
<td>0.18%</td>
<td>5.77%</td>
<td>5.77%</td>
<td>12.67%</td>
<td>18.76%</td>
<td>46.05%</td>
<td>40.51%</td>
<td>26.34%</td>
</tr>
<tr>
<td>Lone Star RE III</td>
<td>May 2014</td>
<td>$19,661,144</td>
<td>0.75%</td>
<td>4.10%</td>
<td>4.10%</td>
<td>12.28%</td>
<td>15.89%</td>
<td>17.04%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>M&amp;G Real Estate Debt Fund II, LP</td>
<td>Dec 2013</td>
<td>$16,194,169</td>
<td>0.62%</td>
<td>1.07%</td>
<td>-7.82%</td>
<td>-4.66%</td>
<td>-6.39%</td>
<td>-1.42%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>RE Separate Accounts</td>
<td></td>
<td></td>
<td></td>
<td>0.54%</td>
<td>-5.38%</td>
<td>-7.02%</td>
<td>-22.63%</td>
<td>-23.80%</td>
<td>-17.07%</td>
<td>-10.40%</td>
</tr>
<tr>
<td>Real Estate Funds</td>
<td>Jan 1999</td>
<td>$14,908,545</td>
<td>0.57%</td>
<td>0.31%</td>
<td>0.33%</td>
<td>8.60%</td>
<td>14.48%</td>
<td>7.68%</td>
<td>6.97%</td>
<td>6.20%</td>
</tr>
</tbody>
</table>

* "Real Estate Funds" includes LSF III – VI, LSREF, Hearthstone and Olympus funds.
### Stress Test Scenarios

<table>
<thead>
<tr>
<th>Scenario/Stress</th>
<th>Calculation Period</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt Ceiling Crisis &amp; Downgrade (2011)</td>
<td>07/22/2011 - 08/08/2011</td>
<td>Debt ceiling crisis that led to USA credit downgrade. This stress scenario describes a 17-day period starting from 7/22/2011 when the market began to react to debt ceiling impasse. 8/8/2011 is the first business day after the downgrade announcement.</td>
</tr>
<tr>
<td>Equities Down 10%</td>
<td>Stress Test</td>
<td>Global market factors down 10%.</td>
</tr>
<tr>
<td>Equities Up 10%</td>
<td>Stress Test</td>
<td>Global market factors up 10%.</td>
</tr>
<tr>
<td>EUR down 10% vs. USD</td>
<td>Stress Test</td>
<td>FX rate shift. EUR weakens 10% to USD.</td>
</tr>
<tr>
<td>EUR up 10% vs. USD</td>
<td>Stress Test</td>
<td>FX rate shift. EUR strengthens 10% to USD.</td>
</tr>
<tr>
<td>Greek Financial Crisis (2015)</td>
<td>06/22/2015 - 07/08/2015</td>
<td>Athens resistance via referendum and ultimately agreement to rush through long-resisted economic reforms, imposed by its creditors, in a bid to stay in the Eurozone.</td>
</tr>
<tr>
<td>Libya Oil Shock (2011)</td>
<td>02/14/2011 - 02/23/2011</td>
<td>Civil war in Libya breaks out on 02/15/2011, causing oil prices to surge.</td>
</tr>
<tr>
<td>Oil Prices Drop (2010)</td>
<td>05/03/2010 - 05/20/2010</td>
<td>The price of oil drops 20% due to concerns over how European countries would reduce budget deficits in the wake of the European economic crisis.</td>
</tr>
<tr>
<td>Russian Financial Crisis (2008)</td>
<td>08/07/2008 - 10/06/2008</td>
<td>War with Georgia and rapidly declining oil prices raise fears of an economic recession within the region.</td>
</tr>
</tbody>
</table>

### Stress Test Proxies

<table>
<thead>
<tr>
<th>Sub-Asset Class</th>
<th>Proxy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Equity</td>
<td>iShares MSCI ACWI ETF</td>
</tr>
<tr>
<td>Private Equity</td>
<td>PowerShares Senior Loan Portfolio ETF</td>
</tr>
<tr>
<td>Global Bonds</td>
<td>SPDR Barclays Capital High Yield Bond ETF</td>
</tr>
<tr>
<td>High Yield</td>
<td>SPDR Barclays Capital High Yield Bond ETF</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>SPDR Blackstone GSO Senior Loan ETF</td>
</tr>
<tr>
<td>EM Debt</td>
<td>WisdomTree Emerging Markets Local Debt Fund</td>
</tr>
<tr>
<td>Private Debt</td>
<td>iShares Floating Rate Bond ETF</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>SPDR Barclays 1-3 Month T-Bill ETF</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>SPDR Barclays 1-3 Month T-Bill ETF</td>
</tr>
<tr>
<td>Real Estate</td>
<td>iShares Mortgage Real Estate Capped ETF</td>
</tr>
<tr>
<td>Risk Parity</td>
<td>iShares Russell 2000 ETF</td>
</tr>
<tr>
<td>GTAA</td>
<td>iShares Russell 2000 ETF</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>iShares 20+ Year Treasury Bond ETF</td>
</tr>
</tbody>
</table>

*Proxies for stress tests are chosen based on correlation analysis of portfolio returns to tradeable ETFs.*

### Policy Composition

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Benchmark</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Equity</td>
<td>MSCI ACWI</td>
<td>20%</td>
</tr>
<tr>
<td>EM Equity</td>
<td>MSCI EM Equity</td>
<td>5%</td>
</tr>
<tr>
<td>Private Equity</td>
<td>Russell 3000 + 3% (Rolling 3mo)</td>
<td>5%</td>
</tr>
<tr>
<td>Short-Term Core Bonds</td>
<td>Barclays UST 1-3 Year</td>
<td>2%</td>
</tr>
<tr>
<td>Global Bonds</td>
<td>Barclays Global Aggregate</td>
<td>3%</td>
</tr>
<tr>
<td>High Yield</td>
<td>Barclays Global HY</td>
<td>5%</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>S&amp;P Leveraged Loan Index</td>
<td>6%</td>
</tr>
<tr>
<td>Struc. Cred. &amp; Abs. Ret.</td>
<td>50% HFRI FV FI ABS/50% HFRI FV FI Corp</td>
<td>6%</td>
</tr>
<tr>
<td>EM Debt</td>
<td>JPM EMBI + JPM GBI-EM</td>
<td>6%</td>
</tr>
<tr>
<td>Private Debt</td>
<td>Barclays Global HY + 2% (Rolling 3mo)</td>
<td>5%</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>S&amp;P Global Nat. Res. (Rolling 3mo)</td>
<td>5%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>S&amp;P Global Infra (Rolling 3mo)</td>
<td>5%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>NCREIF Property Index</td>
<td>12%</td>
</tr>
<tr>
<td>Liquid Real Assets</td>
<td>CPI + 5%</td>
<td>3%</td>
</tr>
<tr>
<td>Risk Parity</td>
<td>60% NDUEACWF / 40% Barc Global Agg</td>
<td>5%</td>
</tr>
<tr>
<td>GTAA</td>
<td>60% NDUEACWF / 40% Barc Global Agg</td>
<td>3%</td>
</tr>
<tr>
<td>Absolute Return</td>
<td>HFRX Abs Ret</td>
<td>2%</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>90 Day T-Bill</td>
<td>2%</td>
</tr>
</tbody>
</table>

*60/40 Portfolio is defined as 60% MSCI ACWI, 40% Barclays Global Aggregate.*
Attribution details

Single period attribution uses arithmetic attribution per the Brinson Model

\[
\text{Asset Allocation} = \sum_j (w_j^P - w_j^B) \times (r_j^P - r_j^B)
\]

\[
\text{Stock Selection} = \sum_j w_j^P \times (r_j^P - r_j^B)
\]

\[
\text{Interaction} = \sum_j (w_j^P - w_j^B) \times (r_j^P - r_j^B)
\]

\[
\text{Total Value Added} = (r_{total}^P - r_{total}^B)
\]

where

\[ w_j^P = \text{Weight of Portfolio component} \ j \]
\[ w_j^B = \text{Weight of Benchmark component} \ j \]
\[ r_j^P = \text{Return of Portfolio component} \ j \]
\[ r_j^B = \text{Return of Benchmark component} \ j \]
\[ r_{total}^P = \text{Total Return of Portfolio} \]
\[ r_{total}^B = \text{Total Return of Benchmark} \]

Multi period attribution is calculated using the Frongello model to produce the cumulative effects of attribution across multiple periods.

\[
F_{itb} = G_{itb} \left( \prod_{j=1}^{t-1} (1 + R_j) \right) + \bar{R}_t \sum_{j=1}^{t-1} F_{ijb}
\]

In the Frongello method, each original attribute \((G_{itb})\) is scaled by the portfolio total return through the prior period \((1+R_j)\) and the current period return of the benchmark \((\bar{R}_t)\) compounds with the total return due to that attribute through the prior period \((F_{ijb})\)

* For the one month attribution, the weights displayed on page 13 are the beginning weights for the period. For the Calendar YTD and One Year weights, they are the average of the beginning weights over the period
Active Premium: A measure of the investment’s annualized return minus the benchmark’s annualized return

Alpha: Return generated by the manager that is not explained by the returns of the benchmark. A measure of a fund’s performance beyond what its benchmark would predict

Annual Return: The annual rate at which an investment would have grown, if it had grown at a steady rate. Also called “Compound Annual Growth Rate” (CAGR), or the “Compound Rate of Return Annualized” (Compound RoR)

Annual Volatility: A statistical measure of the dispersion of returns around the average (mean) return. Often used as a measure of investment risk with a higher value indicating higher risk

Arbitrage: The simultaneous purchase and sale of an asset in order to profit from a difference in the price

Beta: A measure of the risk of the fund relative to the benchmark. Beta describes the sensitivity of the investment to benchmark movements where the benchmark is always assigned a beta of 1.0

Calmar Ratio: A return/risk ratio calculated over the last three years as [annual compounded return / (Maximum Drawdown)]

Capital Commitment: Every investor in a private equity fund commits to investing a specified sum of money in the fund partnership over a specified period of time.

Capital Distribution: The returns that an investor in a private equity fund receives; the income and capital realized from investments less expenses and liabilities

Carried Interest: The share of profits that the fund manager is due once it has returned the cost of investment to investors

Catch up: A clause that allows the general partner to take, for a limited period of time, a greater share of the carried interest than would normally be allowed. This continues until the time when the carried interest allocation, as agreed in the limited partnership, has been reached.

Clawback: Ensures that a general partner does not receive more than its agreed percentage of carried interest over the life of the fund

Correlation: A measure between +1 and -1 that explains the degree to which the returns of the fund and a benchmark are related

Down Capture: Measures how much of the benchmark’s return the fund captures when the benchmark is negative

Down Number: The percentage of the time the fund was down when the benchmark was down

Drawdown: When a private equity firm has decided where it would like to invest, it will approach its own investors in order to draw down the money. The money will already have been pledged to the fund but this is the actual act of transferring the money so that it reaches the investment target

Excess Kurtosis: Measures the distribution of observed data around the mean with an emphasis on “outlier” data, both positive and negative

Exit: The means by which a fund is able to realize its investment in a company – by an initial public offering, a trade sale, selling to another private equity firm or a company buy-back

Fundraising: The process by which a private equity firm solicits financial commitments from limited partners for a fund
General Partner: This can refer to the top-ranking partner(s) at a private equity firm as well as the firm managing the private equity fund.

Gross Exposure: Aggregate of long and short investment positions in relation to the Net Asset Value (NAV).

Holding Period: The length of time that an investment is held.

Information Ratio: The Active Premium divided by the Tracking Error. This measure explicitly relates the degree by which an investment has beaten the benchmark to the consistency by which the investment has beaten the benchmark.

Internal Rate of Return: A time-weighted return expressed as a percentage that uses the present sum of cash drawdowns (money invested), the present value of distributions (money returned from investments) and the current value of unrealized investments and applies a discount.

Leverage: Increasing exposure to markets (both long and short) by borrowing or the use of derivatives.

Limited Partnership: The standard vehicle for investment in private equity funds.

Long Position: Owning a security.

Management Fee: The annual fee paid to the general partner.

Max Drawdown: The largest percentage loss of Net Asset Value (NAV) as measured from peak-to-trough.

Net Exposure: Difference between the long and short positions, representing the exposure to market fluctuations.

Preferred Return: This is the minimum amount of return that is distributed to the limited partners until the time when the general partner is eligible to deduct carried interest.

Omega Ratio: The weighted gain/loss ratio relative to the average monthly historical return; captures the effects of extreme returns and conveys the preference for positive volatility versus negative volatility.

Sharpe Ratio: A return/risk ratio calculated as: [(annual compounded return - risk-free rate) / (annual volatility of returns)]

Skewness: A measure of the symmetry of return distribution, as compared with a normal (bell-shaped) distribution.

Sortino Ratio: A return/risk ratio calculated as such: [(annual compounded return – minimum acceptable return (MAR) / (downside deviation of returns below MAR)]. This ratio was developed to differentiate between good (upside) and bad (downside) volatility.

Standard Deviation: Measures the dispersal or uncertainty in a random variable (in this case, investment returns). It measures the degree of variation of returns around the mean (average) return.

Short Position: Selling a security.

Tracking Error: A measure of the unexplained portion of an investments performance relative to a benchmark.
**Up Capture:** Measures the percentage of the benchmark’s return the fund captures when the benchmark is positive

**Up Number:** The percentage of the time the fund was up when the benchmark was up

**Value at Risk (VAR):** The maximum loss that can be expected within a specified holding period with a specified confidence level
# Investment Oversight

## Dallas Police & Fire Pension System

### Appendix IV – Investment IRRs

#### Data as at August 2016

<table>
<thead>
<tr>
<th>Holding</th>
<th>Inception</th>
<th>IRR</th>
<th>End NAV</th>
<th>Subscriptions</th>
<th>Redemptions</th>
<th>Net Cashflows</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eagle Asset Management</td>
<td>02/01/2005</td>
<td>8.01%</td>
<td>$47,192,877</td>
<td>$125,347,734</td>
<td>$184,800,000</td>
<td>$59,452,266</td>
</tr>
<tr>
<td>Mitchell Group</td>
<td>10/01/2001</td>
<td>12.91%</td>
<td>$29,832,523</td>
<td>$21,277,945</td>
<td>$38,450,000</td>
<td>$17,172,055</td>
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<tr>
<td>OFI Global Institutional</td>
<td>10/01/2007</td>
<td>4.91%</td>
<td>$124,292,597</td>
<td>$126,463,387</td>
<td>$50,500,000</td>
<td>(75,963,387)</td>
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<tr>
<td>Pyramis (Fidelity)</td>
<td>03/01/2002</td>
<td>9.13%</td>
<td>$98,931,553</td>
<td>$313,821,030</td>
<td>$435,200,000</td>
<td>121,378,970</td>
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<tr>
<td>RREEF</td>
<td>02/01/1999</td>
<td>8.71%</td>
<td>$23,994,739</td>
<td>$28,277,404</td>
<td>$59,917,403</td>
<td>31,639,999</td>
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<tr>
<td>Sustainable Asset Management</td>
<td>11/01/2008</td>
<td>11.30%</td>
<td>$28,681,945</td>
<td>$25,000,000</td>
<td>$24,500,000</td>
<td>(500,000)</td>
</tr>
<tr>
<td>Walter Scott</td>
<td>12/01/2009</td>
<td>11.70%</td>
<td>$89,258,227</td>
<td>$101,587,415</td>
<td>$91,500,000</td>
<td>(10,087,415)</td>
</tr>
<tr>
<td><strong>Fixed Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashmore EM Debt Fund</td>
<td>02/01/2005</td>
<td>9.50%</td>
<td>$40,390,913</td>
<td>$50,000,000</td>
<td>$65,443,439</td>
<td>15,443,439</td>
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<td>Ashmore EM Local CCY</td>
<td>03/01/2011</td>
<td>-1.10%</td>
<td>$17,981,155</td>
<td>$25,000,000</td>
<td>$5,732,178</td>
<td>(19,267,822)</td>
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<tr>
<td>Brandywine</td>
<td>10/01/2004</td>
<td>5.04%</td>
<td>$93,708,571</td>
<td>$212,613,712</td>
<td>$172,282,935</td>
<td>(40,330,777)</td>
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<tr>
<td>Loomis Sayles</td>
<td>10/01/1998</td>
<td>8.90%</td>
<td>$129,626,068</td>
<td>$194,861,505</td>
<td>$321,499,146</td>
<td>117,017,062</td>
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<tr>
<td>Loomis Sayles Sr. Floating Rate</td>
<td>01/01/2014</td>
<td>3.11%</td>
<td>$54,418,747</td>
<td>$50,000,000</td>
<td>$849</td>
<td>(49,999,151)</td>
</tr>
<tr>
<td>W.R. Huff High Yield</td>
<td>06/01/1996</td>
<td>4.93%</td>
<td>$37,832,292</td>
<td>$101,585,758</td>
<td>$155,783,939</td>
<td>54,198,181</td>
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<tr>
<td><strong>Asset Allocation</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridgewater</td>
<td>09/01/2007</td>
<td>5.55%</td>
<td>$117,626,099</td>
<td>$94,175,000</td>
<td>$20,000,100</td>
<td>(74,174,900)</td>
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<tr>
<td>GMO</td>
<td>09/01/2007</td>
<td>3.71%</td>
<td>$89,368,157</td>
<td>$100,000,000</td>
<td>$40,000,915</td>
<td>(59,999,085)</td>
</tr>
<tr>
<td>Putnam</td>
<td>12/01/2009</td>
<td>4.84%</td>
<td>$64,049,997</td>
<td>$50,000,000</td>
<td>-</td>
<td>(50,000,000)</td>
</tr>
</tbody>
</table>
DISCUSSION SHEET

ITEM #C10

Topic: Employee recognition – Third Quarter 2016

Employee of the Quarter award

Discussion: The Chairman will present a performance award for Employee of the Quarter, Third Quarter 2016.
## DISCUSSION SHEET

### ITEM #C11

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

<table>
<thead>
<tr>
<th>a. Conference:</th>
<th>PRB Actuarial Committee Meeting</th>
<th>KG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates:</td>
<td>September 15, 2016</td>
<td></td>
</tr>
<tr>
<td>Location:</td>
<td>Austin, TX</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>b. Conference:</th>
<th>Pensions Committee Hearing</th>
<th>SF, KH, KG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates:</td>
<td>September 29, 2016</td>
<td></td>
</tr>
<tr>
<td>Location:</td>
<td>Arlington, TX</td>
<td></td>
</tr>
</tbody>
</table>
DISCUSSION SHEET

ITEM #C12

Topic: Ad hoc committee report

Discussion: An update will be provided.
ITEM #D1

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.
ITEM #D2

Topic: Executive Director’s report

a. Future Education and Business Related Travel
b. Future Investment Related Travel
c. Associations’ newsletters
   • NCPERS Monitor (September 2016)
   • NCPERS Monitor (October 2016)
   • NCPERS PERSist (Fall 2016)
   • TEXPERS Outlook (September 2016)
   • TEXPERS Outlook (October 2016)

Discussion: The Executive Director will brief the Board regarding the attached information.
<table>
<thead>
<tr>
<th></th>
<th>Conference:</th>
<th>Dates:</th>
<th>Location:</th>
<th>Est. Cost:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Society of Pension Professionals</td>
<td>October 18, 2016</td>
<td>Dallas, TX</td>
<td>$250.00 Per Person Annually</td>
</tr>
<tr>
<td>2</td>
<td>NCPERS Accredited Fiduciary Program Modules 3 &amp; 4 (PRB rules for MET)</td>
<td>October 22-23, 2016</td>
<td>Las Vegas, NV</td>
<td>$700</td>
</tr>
<tr>
<td>3</td>
<td>NCPERS Public Safety Conference</td>
<td>October 23-26, 2016</td>
<td>Las Vegas, NV</td>
<td>$1,700</td>
</tr>
<tr>
<td>4</td>
<td>Society of Pension Professional Annual Summit</td>
<td>October 31, 2016</td>
<td>Irving, TX</td>
<td>$0.00</td>
</tr>
<tr>
<td>5</td>
<td>TEXPERS Basic Trustee Training Class (PRB rules for MET)</td>
<td>November 1, 2016</td>
<td>Irving, TX</td>
<td>$100</td>
</tr>
</tbody>
</table>
Regular Board Meeting November 10, 2016

Regular Board Meeting December 8, 2016

6. Conference: Society of Pension Professionals
   Dates: December 20, 2016
   Location: Dallas, TX
   Est. Cost: $250.00 Per Person Annually

7. Conference: PRB: MET Online Core Training: Benefits Administration
   Dates: Anytime on line
   Location: http://www.prb.state.tx.us/

   Dates: Anytime on line
   Location: http://www.prb.state.tx.us/

   Dates: Anytime on line
   Location: http://www.prb.state.tx.us/

10. Conference: PRB: MET Online Core Training: Governance
    Dates: Anytime on line
    Location: http://www.prb.state.tx.us/
### 2017

11. **Conference:** Opal: Public Funds Summit  
   **Dates:** January 9-11, 2017  
   **Location:** Scottsdale, AZ  
   **Est. Cost:** TBD

12. **Conference:** NCPERS Legislative Conference  
   **Dates:** January 29-31, 2017  
   **Location:** Washington, DC  
   **Est. Cost:** TBD

13. **Conference:** NAPO Annual Pension & Benefits Seminar  
   **Dates:** February 26-28, 2017  
   **Location:** Orlando, FL  
   **Est. Cost:** TBD

14. **Conference:** TEXPERS 28th Annual Conference  
   **Dates:** April 9 – 12, 2017  
   **Location:** Austin, TX  
   **Est. Cost:** TBD

15. **Conference:** Wharton: Portfolio Concepts and Management  
   **Dates:** May 1-4, 2017  
   **Location:** Philadelphia, PA  
   **Est. Cost:** $6,500

* New/No one has signed up
16. Conference: NCPERS Accredited Fiduciary Program (Modules 1&2 and 3&4)
   Dates: May 20 – 21, 2017
   Location: Hollywood, FL
   Est. Cost: TBD

17. Conference: NCPERS Trustee Educational Seminar (TEDS)
   Dates: May 20 – 21, 2017
   Location: Hollywood, FL
   Est. Cost: TBD

18. Conference: NCPERS 2017 Annual Conference & Exhibition
   Dates: May 21 – 24, 2017
   Location: Hollywood, FL
   Est. Cost: TBD

   Dates: August 13 – 16, 2017
   Location: San Antonio, TX
   Est. Cost: TBD

    Dates: September 24, 2017
    Location: Philadelphia, PA
    Est. Cost: $1,000
   Dates: September 25-28, 2017
   Location: Philadelphia, PA
   Est. Cost: $6,000

22. Conference: NCPERS Public Safety Employees’ Pension & Benefits Conference
   Dates: October 29 – November 1, 2017
   Location: San Antonio, TX
   Est. Cost: TBD
NONE
While we have witnessed many different state proposals attacking public pension in 2016, the positive note is that virtually all of these have been defeated. For example, in both Indiana and New Hampshire, defined-contribution bills were defeated. This article provides detailed overview of the most significant state legislative threats to public pensions in 2016.

Alaska

Representative Sam Kito (D) introduced House Bill (HB) 280, which will move new members of the Alaska Public Employees’ Retirement System and the Alaska Teachers’ Retirement System back into a defined-benefit retirement system. As a reminder, in 2005, Senate Bill (SB) 141 created a mandatory defined-contribution retirement plan for all state employees hired after July 1, 2006 as a way to address its unfunded liabilities. In 2006, underfunding increased by 20 percent, and has since doubled. As of March 25, HB 280 was referred to the Labor and Commerce Committee.

Florida

The previously reported on, HB 87, which would have defaulted stated employees into a 401 (k) style retirement plan, died in the Government Operations Subcommittee. The bill was sponsored by Rep. Anthony Hill, Sr. (D) and Walter Bryan Hill (R).

Indiana

As previously reported, HB 1004, sponsored by Rep. Jim Banks, would have allowed teachers to negotiate extra pay and allow school districts the option to offer a defined-contribution pension. Fortunately, the bill was killed in the Senate.

Kansas

On May 18, Governor Sam Brownback (R) signed into law HB 2365. The bill allows Gov. Brownback to delay payments to the Kansas Public Employees Retirement System (KPERS) this fiscal year, freeing up $100 million. The bill also requires the governor to pay back the delayed money by September 30th, 2017 with 8 percent interest.

Kentucky

The U.S. 6th Circuit Court of Appeals ruled in mid-August, that the Lexington-Fayette Urban County Government can reduce cost-of-living adjustments (COLAs) in pensions of retired police officers and firefighters. The county was sued by the city by retired police officer Tommy Puckett and retired firefighter Roger Vance, after Lexington Mayor Jim Gray announced in 2013, a deal to address the city’s unfunded liability. One part of the deal reduced the annual COLAs when the fund has less than 85 percent of the money it’s expected to need for future obligations. The retirees argued that the changes for an unconstitutional violation of the terms of their pension contracts. However, the three judge panel ruled that they failed to prove they are legally entitled to keep the same pension benefits for the rest of their lives.

Louisiana

On April 21, HB 65, a bill that would move the Teachers’ Retirement System of
Louisiana’s new hires to a combination plan, was deferred in House Committee. The bill, sponsored by Rep. Barry Ivey (R), would also raise the minimum retirement age from 62 to 65 and make an automatic COLA to the pension every other year.

**Michigan**

SB 102, introduced by Senator Phil Pavlov (R), will convert the new hires of the Michigan Public School Employees Retirement System to defined-contribution retirement plans. The bill has been referred to the Appropriations Committee. The companion bill, HB 5218, was introduced by Rep. Tim Kelly (R), and was also referred to the Appropriations Committee.

**New Hampshire**

HB 1673, sponsored by Rep. David Hess (R), which would have created a cash balance retirement plan for the New Hampshire State Retirement System, died on the table on July 27.

**Oklahoma**

HB 1538, also known as the Pension Improvement Act, was sponsored by Rep. Don Barrington (R) and Rep. Todd Thomsen (R). The bill would set up a revolving fund to pay down liabilities for all Oklahoma state retirement systems. The bill was passed by the House in March and has had its second reading in the Senate and referred to the Pensions Committee. Separately, SB 1187, sponsored by Sen. Josh Brecheen (R), which would have allowed school districts to opt out of the Oklahoma Teachers’ Retirement System, died in the Appropriations and Budget Committee.

**Pennsylvania**

Rep. Mike Tobash (R) sponsored HB 1499, a bill that would convert future hires for the State and Public School Employees’ Retirement System into a combination retirement plan, was removed from the table on June 27. The bill was passed in the House on May 17.

**Virginia**

House Speaker William Howell’s (R) bill, HB 665 was signed by Gov. Terry McAuliffe (D) on April 1. The bill has created the Commission on Employee Retirement Security and Pension Reform; the commission will study the soundness of the defined-benefit retirement plans, the impact of and strategies for addressing anticipating state employees’ retirement in the next 10 years, and the benefit packages of state employees.

Stay tuned and visit [www.NCPERS.org](http://www.NCPERS.org) for more information on upcoming state pension reform battles. You can visit [www.NCPERS.org/legislation%20maps](http://www.NCPERS.org/legislation%20maps) to view our new membership feature. As always, if your state is facing pension reform efforts and you would like NCPERS’ help, please let us know.

**Educational Programs on Deck at NCPERS**

NCPERS has three compelling educational opportunities on deck for members during the next two months.

On September 13, all members are encouraged to participate in a free webinar focusing on a new NCPERS Research Series report, “A Different Way to Look at Total Compensation: Cost Basis vs. Relative-Value Basis”. This latest Research Series is a joint research with Segal Consulting that takes a fresh look at compensation in the public sector. The one-hour session will begin at 1 p.m. eastern time. The research examines ways to measure and compare the competitiveness of a public employer’s total compensation package.

Las Vegas will be the venue for two educational programs in October: The [NCPERS Accredited Fiduciary (NAF) program](https://www.ncpers.org/education/naf) and the [Public Safety Employees Pension & Benefits Conference](https://www.ncpers.org/education/pspbc).

NCPERS is presenting the second half of its innovative professional accreditation program, known as NAF, on Oct 22-23 at Las Vegas’s...
Planet Hollywood Hotel. Organized into four modules, NAF debuted in May at the NCPERS Annual Conference. Participants who successfully complete all four modules of the NAF program may sit for a professional exam to earn the designation of Accredited Fiduciary.

Modules one and two, covering governance and the board’s role and investments, finance and accounting, were presented in May. NAF participants can now take modules three and four.

Module three covers legal, risk management, and communication. Topics of study include the legal and risk oversight duties of boards and individual trustees, the role of the audit committee, dealing with the news media, managing corporate reputation, and communicating with stakeholders. Module four focuses on human capital. Topics include compensation and performance management strategies and succession planning. The early-bird fee for the upcoming session is $550 until Sept. 22. Thereafter, the standard fee of $750 will apply.

Also held in October is the Public Safety Employees conference runs Oct. 23-26. This one-of-a-kind conference focuses on the unique challenges facing public safety plans. Public safety workers hold some of the highest-risk jobs around, and their compensation and benefits generally reflect these risks. The program will address Broad issues affecting public pensions, such as funding and investment performance, as well as topics specific to public safety employees, such as trends in disability benefits, deferred retirement, and stress management. Through Sept. 22, the registration fee is $650 for fund members and $850 for corporate members. After that date, the fees rise to $800 and $1,000 respectively.

To help us serve you best, registration is required for all NCPERS educational program. Please contact registration@ncpers.org.

The Future of the IRS Determination Letter Program

On June 29, 2016, the Internal Revenue Service (IRS) released Rev. Proc. 2016-37, which elaborates on previous guidance regarding the new process for determination letters. Beginning in 2015, the IRS made clear its intention to eliminate the current five-year, cycle-based, determination letter program that it established in 2007. This, of course, is very same program that provides many state and local governmental pension plans with great comfort – in a regulatory sense. An IRS-approved determination letter confirms that the plan is a qualified plan under Internal Revenue Code section 401(a).

In guidance released in 2015, the IRS said that, due “…to the need…to more efficiently direct its limited resources…”, effective January 1, 2017, the five-year determination letter program for individually designed plans (IDPs) would be eliminated and the scope of the program going forward would be limited to initial plan qualification and qualification upon plan termination. In addition, Announcement 2015-19 said that, “…a sponsor will be permitted to submit a determination letter application in certain other limited circumstances that will be determined by Treasury and the IRS.” Emphasis added.

Rev. Proc. 2016-37, which generally takes effect on January 1, 2017, sets forth the requirements for when an IDP must be amended for statutory or regulatory changes and outlines the situations in which an IDP may request a determination letter.

Regarding the first point, it is important to note that Rev. Proc. 2016-37 does not relieve a plan from its mandate to operate in compliance with changes to qualification requirements, beginning with the effective date of the statutory or regulatory change. In order to assist plans the IRS intends to publish annually an Operational Compliance list that will identify changes to qualification requirements.

Further, after October 1 of each year, the IRS intends to publish a Required Amendments (RA) List, which will include all amendments for which an IDP must be amended to retain its federal tax qualification. In general, plans must adopt these items by the end of the second calendar year following the year in which the RA List is
published. For example, items on the 2016 RA List will have to be adopted by the close of calendar year 2018.

However, for governmental plans the deadline is extended. The remedial amendment period for disqualifying provisions is the later of (1) the rule stated in the paragraph above or (2) 90 days after the close of the third regular legislative session of the legislative body with the authority to amend the plan that begins on or after the date of issuance of the RA List in which the qualification requirements appear. The extended deadline for governmental plans is generally consistent with the approach taken with regard to the effective date in the proposed regulations on normal retirement age. The approach reflects a recognition that, in most cases, governmental plan documents must be amended by legislative bodies.

On the second point, the new rules on when an IDP may request a determination letter are found in section 4.03 of Rev. Proc. 2016-37. Specifically:

Initial Plan Qualification: A sponsor may request a determination letter for initial plan qualification, provided a favorable determination letter has never been issued for the plan.

Plan Termination: Such an application is deemed as filed for plan termination if it is filed no later than the later of (1) one year from the effective date of the termination or (2) one year from the date on which the action terminating the plan is taken. However, applications may not be filed later than 12 months from the date of distribution of substantially all plan assets in connection with plan termination.

Other Circumstances: At the outset, please know that the IRS has already stated that it will not expand its determination letter program beyond initial plan qualification and plan termination for calendar year 2017. Second, be aware that beginning in 2018 the IRS will make a decision each year as to whether to accept determination

Don’t Miss NCPERS’ Social Media
2016
Public Safety Employees Pension & Benefits Conference

OCTOBER 23 – 26
Planet Hollywood Hotel
Las Vegas, NV

REGISTRATION NOW OPEN
A year has passed since NCPERS unveiled a key component of the public pension industry’s Code of Conduct for service providers: The list of anti-public-pension organizations known as Schedule A. It’s time to update the list again, and we need your help. Watch your email for details on how to participate in this important review.

Schedule A currently lists 24 foundations, think tanks, and other non-profit organizations that have advocated for the diminishment of public defined benefit plans. Under our Code of Conduct, we ask providers of services to public pension systems to disclose contributions to these Schedule A organizations. This is important information for public pension leaders to know because trustees have a fiduciary responsibility to act in the interests of plan participants and beneficiaries. A conflict of interest may arise if pension systems spend administrative funds to support service providers who are actively working against the interests of public sector employees.

While there are no automatic consequences for organizations included on Schedule A, the information is extremely helpful in opening dialogue between pension systems and their service providers.

Many of the most active anti-public-pension groups are well known to us. For example, the Laura and John Arnold Foundation and the Manhattan Institute would be at the top of any public pension leader’s list, because they have relentlessly pursued an ideologically driven agenda to undermine public pensions. But we need your observations on other organizations that are just emerging or less well known for advancing anti-public-pension positions. We also want your careful analysis of whether all of the organizations currently on Schedule A should remain there. We would be very happy to see this list growing shorter, not longer!

NCPERS used an objective process to determine which organizations belong on Schedule A. Our process is to evaluate organizations based on the following criteria:

- Do they advocate for or advance the claim that public defined benefit plans are unsustainable?
- Do they advocate for a defined contribution plan to replace the public defined benefit plan?
- Do they advocate for a poorly designed cash-balance plan to replace the public defined benefit plan?
- Do they advocate for a poorly designed combination plan to replace the defined benefit plan?
- Do they link school performance evaluations to whether a school system sponsors a defined benefit plan for teachers and employees?

We cannot overstate the importance of member participation in this annual review of Schedule A. We are eager for your input, and we welcome any questions you may have about the Code of Conduct, Schedule A, and how to assist in the review.
letter applications for circumstances other than initial plan qualification and plan termination. The IRS’s case load and available resources will be significant factors in reaching this decision. The IRS and Treasury also intend to request comments from stakeholders on this question. Finally, the Revenue Procedure sheds some light on what other circumstances might rise to the level of warranting a determination letter. By way of example the following circumstances are listed: significant law changes, new approaches to plan design, and the inability of certain types of plans to convert to pre-approved (master, prototype and volume submitter) plan documents.

On August 11, the IRS held a live webinar to discuss Rev. Proc. 2016-37. During the webinar, the IRS elaborated on issues related to the reliance on existing determination letters. Essentially, the rule is that a plan may rely on an existing determination letter with respect to plan provisions that are not amended or affected by a change in the law. Of course, the corollary is true as well. Plans may not rely on existing determination letters with respect to plan provisions that are subsequently amended or affected by a change in the law.\(^1\) To effectuate this rule expiration dates contained in existing determination letters are no longer operative and determination letters issued to IDPs on or after January 4, 2016 no longer contain effective dates.

During the webinar, the IRS also took the opportunity to announce that the plan community should expect two additional pieces of guidance in the near-term – (1) Modifications to the Employee Plan Compliance Resolution System (EPCRS) to align it with the changes to the determination letter program; and (2) Request for Comments on issues related to the changes to the determination letter program.

Please be aware that NCPERS will closely follow and report to its members any key developments on the determination letter program.

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\(^1\)In particular, see IRS Announcement 2015-19 and Notice 2016-03.
\(^2\)Cycles C and E are applicable to governmental plans.
\(^3\)Rev. Proc. 2007-44.
\(^4\)Rev. Proc. 2016-37, §§ 5.06, 8.02(2), 11 (Example 6) and 15.06(1)(a),(b).
\(^5\)Ibid., §13.

Tony Roda is a partner at the Washington, D.C., law and lobbying firm Williams & Jensen, where he specializes in legislative and regulatory issues affecting state and local pension plans. He represents NCPERS and individual pension plans in California, Ohio, Tennessee, and Texas.
Spend by retirees and beneficiaries with traditional pensions reverberated through the economy, generating more than $1.2 trillion in total output in 2014, according to a benchmark study on the economic impact of defined benefit plans.

"Defined benefit expenditures provide a significant economic footprint," said Jennifer Brown, the study’s author and director of research at NIRS. She noted that pension plans can support economic activity through several channels, including benefits and investments. The NIRS report focuses on benefits or the way retirees’ expenditures create incomes for others in the economy.

Each taxpayer dollar contributed to state and local pensions supported $9.19 in total output nationally, Brown noted. That striking figure reflects the financial value of long-term investment returns and the shared funding responsibility by employers and employees, according to the study. NIRS conducted the study by examining data for all defined-benefit plans – state and local as well as federal and the private sector. The 2016 study is based on 2014 figures because that is the latest full year for which data are available.

Other key findings include:

- Nationwide, defined benefit plans paid nearly $520 billion to 24.7 million Americans during 2014. Some 9.6 million state and local retirees and their beneficiaries received pension payments equaling $253 billion (49%) of the total.
- Defined benefit expenditures supported 7.1 million American jobs, with 3.4 million (48%) attributable to state and local plans.
- These jobs paid $355 billion in income in that year; $173 billion (49%) stemmed from state and local plans.
- Benefits paid by defined benefit pensions supported $190 billion in tax revenue at the local, state, and federal levels, with $92 billion (48%) derived from state and local plans.
- The average annual pension was $21,413, making it “a modest benefit,” according to Brown.
Pension Spending continued from page 1

State and local defined benefit plans paid an average of $26,455 in 2014, versus $30,302 for federal retirees and $15,520 for private-sector retirees.

The study underscores the important role defined-benefit pensions play as an economic stabilizer, Diane Oakley, executive director of NIRS, said during a press conference on Sept. 14. “Retirees with reliable pensions can maintain their spending throughout their retirement years regardless of the ups and downs of the economy,” she explained. Since consumer spending generated about $12 trillion in economic activity, the $1.2 trillion in spending by retirees accounted for about 10% of consumer-driven spending, Oakley noted.

Pensionomics 2016 is available on the NIRS website at www.nirsonline.org. The study includes a state-by-state analysis supported by extensive tables.

PROMESA and Public Plans

State and local governmental pension plans breathed a sigh of relief upon the enactment of the Puerto Rico Oversight, Management and Economic Stability Act of 2016 (PROMESA). The final product did not contain either of the two problematic provisions included in earlier legislation, S. 2381, the Puerto Rico Assistance Act, which was introduced by Senate Finance Committee Chairman Orrin Hatch (R-UT) in December 2015.

Those provisions – a version of the Public Employee Pension Transparency Act (PEPTA) and the annuity accumulation retirement plan – have been consistently opposed by NCPERS and many in the public pension plan community. Both provisions would have affected not just the public plans in Puerto Rico, but public plans throughout the 50 states.

To be clear, all of the pension-related provisions in PROMESA now relate only to Puerto Rico’s public plans. However, two appointments to the Puerto Rico Financial Oversight and Management Board are likely to ensure that the macro issues related to state and local plans will be kept alive in this forum.

On August 31, President Obama announced the seven appointees to the Oversight Board. Be aware that Andrew Biggs of the American Enterprise Institute has been a vocal and consistent critic of public pension plans and David Skeel, a professor of corporate law at the University of Pennsylvania, has advocated allowing states to use bankruptcy protection to modify their pension obligations.

What follows is a listing of the provisions in PROMESA that relate to pension plans in Puerto Rico. These provisions offer our opponents an opening for general discussions of state and local plans and, more importantly, could offer a roadmap for continued on page 3

You Read It Here First...

A year ago, The Monitor reported on the retirement policies and reviews of the candidates seeking the Republican nomination. This one is worth revisiting as the presidential election campaign enters the home stretch:

- “Republican frontrunner Donald Trump has consistently thrown up roadblocks to a secure retirement for employees at his companies. He is known for offering the stingiest 401(k) plans allowed by law, including making employees wait six years before they are fully vested in any matching contributions. Trump’s plans also embrace such antiquated practices as making employees work a year before they are even eligible to participate. His plans also include catches such as paying matching contributions at year-end only, penalizing any employees who depart before the year is out. He even suspended matching contributions from 2009 to 2012.”
future federal legislative proposals impacting state and local plans.

Section 201 requires that the Oversight Board deliver a notice to the Governor of Puerto Rico providing a schedule for the development, submission, approval and certification of a fiscal plan. Such a plan must provide adequate funding for public pension systems; it must also provide access to capital markets. Therefore, the tension between pensioners and bondholders will be on full display during development of the fiscal plan.

Section 205 allows the Oversight Board at any time to submit recommendations to the Governor or the legislature on actions the territorial government may take to ensure compliance with the fiscal plan, or to otherwise promote the financial stability, economic growth, management responsibility and service delivery efficiency of the territorial government, including recommendations related to the establishment of alternatives for meeting obligations to pay for the pensions of territorial governments.

Section 211 is the main provision directing the analysis of pensions. I’ve restated this section in its entirety.

**DETERMINATION** – If the Oversight Board determines, in its sole discretion, that a pension system of the territorial government is materially underfunded, the Oversight Board shall conduct an analysis prepared by an independent actuary of such pension system to assist the Oversight Board in evaluating the fiscal and economic impact of the pension cash flows.

**PROVISIONS OF ANALYSIS** – An analysis conducted under subsection (a) shall include –

- an actuarial study of the pension liabilities and funding strategy that includes a forward looking projection of payments of at least 30 years of benefit payments and funding strategy to cover such payments;
- sources of funding to cover such payments;
- a review of the existing benefits and their sustainability; and
- a review of the system’s legal
structure and operational arrangements, and any other studies of the pension system the Oversight Board shall deem necessary.

- **Supplementary Information** – In any case, the analysis conducted under subsection (a) shall include information regarding the fair market value and liabilities using an appropriate discount rate as determined by the Oversight Board.

Finally, Sections 409, 410 and 411 require reports that are broad enough in scope to cover the funding and structure of public pensions.

- Section 409 establishes the Congressional Task Force on Economic Growth in Puerto Rico.

- Section 410 requires a report by the Comptroller General (Director of the Government Accountability Office; commonly known as GAO) describing the conditions which led to the level of debt and how actions of the territorial government improved or impaired the territory’s financial conditions.

- Section 411 requires an on-going series of reports by GAO on the public debt of each territory, including the drivers and composition of each territory’s public debt.

As you can see, there are many opportunities for discussions related to Puerto Rico’s public pension plans and these discussions can easily drift into generalizations about state and local plans. Please be aware that over the coming months NCPERS will closely monitor the actions of the Oversight Board and the implementation of PROMESA.  

1 Public Law 114-187.

Tony Roda is a partner at the Washington, D.C., law and lobbying firm Williams & Jensen, where he specializes in legislative and regulatory issues affecting state and local pension plans. He represents NCPERS and individual pension plans in California, Ohio, Tennessee, and Texas.
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When you belong to NCPERS, you are part of a robust and thriving community that believes in the vital role public pensions can play in securing Americans’ financial future.

Our unique organization gives pension officials numerous opportunities to connect, participate, and learn. We have strength in numbers, as we harness our collective power to have a positive effect on legislation and regulation at the state and federal levels.

We don’t use the word “Conference” in our name by accident – NCPERS is the organization where every member can be part of a larger dialogue about the role of public pensions in our society. The word itself connotes qualities we value – discussion, fact-finding, problem-solving, and consultation.

We need every single one of our members to renew and be part of the conversation about retirement security. Membership renewal notices are being emailed to your organization’s primary contact during October, with payment due by January 31, 2017. Please help us plan for our future by renewing promptly.

At our members’ direction, we run a lean team here in Washington, with just five professional staff members to serve a vast network of trustees, administrators, public officials, and investment professionals. We pride ourselves on being member-driven. We are always looking for fresh ways to deliver value.

For example, check out the newest section of our website. Under the “Government Affairs” tab, you will now find a new resource, “Legislative Maps.” This will lead you to two interactive maps – one on state pension reform legislation, the other on the Secure Choice Pension. The maps provide a detailed picture of one of our most important duties – helping our members stay abreast of federal and state legislative initiatives that impact them.

That’s not all. So far this year, NCPERS has presented nine educational webinars under our Center for Online Learning banner, with additional webinars scheduled for the final three months of 2016. We know it’s harder than ever to leave work and travel to meetings, and we are committed to delivering valuable information to you in the form of bite-sized, online meetings.

Our in-person meetings are also more robust than ever. The Annual Conference and Exhibition (ACE) drew more than 1,000 participants to San Diego. And the Public Pension Funding Forum was organized to help members analyze and respond to the drumbeat of criticism and misinformation over the “pension funding gap.” Approximately 130 people traveled to Yale University to participate.

2016 was also the year we initiated the NCPERS Accredited Fiduciary program (NAF) – a comprehensive four-part educational program that enables successful participants to sit for an exam and earn certification as Accredited Fiduciaries.

These and other programs strengthen our community and fortify us to take on the battles we must wage in the local, state, and federal arenas. As we head into a new year, with a new president and administration, and the very real possibility of sweeping changes in Congress and state legislatures, we need every member’s engagement in NCPERS. We look forward to a great membership renewal season, and hope you will share your enthusiasm for our organization with your colleagues.
I am excited to announce two new webinars from NCPERS Center of Online Learning coming up in October.

The first webinar, from our latest research, Pension Policy at a Crossroads, will be held on October 4, 2016, at 1:00 pm to 2:00 pm ET. The lifetime guarantee of a pension that American workers once enjoyed is being replaced by do-it-yourself retirement savings schemes such as 401(k)s. The public policy questions on retirement and income security that our nation will face in the coming years will be critical. As we prepare for the national election on Tuesday November 8, it is important to examine how Donald Trump and Hillary Clinton plan to address the retirement challenges we all face. Join us as we discuss the candidates’ positions on the critical issues of public pensions, Social Security, and retirement security.

The second webinar, will be held on Wednesday, October 19, 2016, at 1:00 pm to 2:00 pm ET. David Morse from K & L Gates will be presenting on the DOL final rules on state sponsored retirement savings programs. In November 2015, DOL issued proposed regulations to amend ERISA to provide a safe harbor for state sponsored retirement schemes. After a 60 day comment period and review of comments, DOL issued its final rules in August of this year with the effective date in October. This webinar will provide an overview of the new final rules and their implication for states interested in establishing a retirement plan for its citizens.

You can register for the webinar on Pension Policy at a Crossroads here. You can register for the webinar on DOL final rules here. We look forward to ‘seeing you’ in our Center for Online Learning events!
Global Industry Classification Standard (GICS) to add real estate as 11th global sector

By Joe Rodriguez

2016 figures to be a momentous year for the real estate investment trust (REIT) industry, which will soon become a class unto itself. Literally. But first, a little background.

In 1999, MSCI Inc. and S&P Dow Jones Indices established the Global Industry Classification Standard (GICS) — a hierarchical industry classification system consisting of 10 sectors, 67 industries and 156 sub-industries. Currently, REITs are classified as a sub-industry of the real estate industry, which, in turn, falls under the financials sector.

That is about to change.

REAL ESTATE WILL SOON BE A GICS SECTOR

Beginning after market close on Aug. 31, 2016, real estate will get a much-anticipated promotion to global sector status — the first such addition since the establishment of GICS. As part of this move, REITs will be divided into two categories:

- Mortgage REITs, which purchase or originate mortgages and tend to be sensitive to interest rates, will remain a sub-industry of the financials sector.
- All other REITs will be classified as equity REITs, which will form a separate industry under the real estate sector. Equity REITs are companies that own and invest in properties that produce cash flow streams from rents.

CLASSIFICATION CHANGE UNDERSCORES REAL ESTATE’S UNIQUE CHARACTERISTICS

While it is impossible to know the ultimate effects of this landmark change, there could be many potential benefits. We at Invesco Real Estate believe the new, dedicated real estate sector will showcase fundamental differences between real estate and other businesses, and make it easier to see how investment managers are allocated to this area.

Segregating real estate into a class by itself highlights the sector’s potential diversification benefits, yield potential and historical total returns. This change may also shine a light on diversified managers who have been underweight real estate stocks for years.

GICS CHANGE COULD HAVE RAMIFICATIONS FOR PORTFOLIO MANAGERS

Index providers have suggested that differentiating real estate into its own sector “reflects the position of real estate as a distinct asset class and a foundational building block of a modern portfolio” and may serve to increase the visibility of the sector to generalist investors.¹

We believe there is also potential for a reduction in long-term volatility, as the independent classification may help to decouple real estate from other financials, like banks and insurance companies, and increase real estate’s investor base. This is because GICS is accepted as the primary framework for investment research, portfolio management and asset allocation. As such, it has helped to drive product development — including the rapidly growing exchange-traded-fund market.

continued on page 14
Former FBI Head Has Identity Stolen

If there’s one thing that has become clear in this era of increasing identity theft, it’s that anyone can be targeted at any time. Yes, even the top government official tasked with tracking and apprehending criminals can find himself on the receiving end of a sophisticated hack.

NJ.com reports that Peter Locsin, a 35-year-old man from Palisay City, Philippines, is charged with attempting to steal personal information from a number of high-profile targets. One of those individuals was former FBI Director Robert Mueller, who served under both Presidents George W. Bush and Barack Obama.

Locsin reportedly acquired dates of birth, addresses, social security numbers and information about his victims’ work histories. He then allegedly gained access to their bank accounts, successfully making wire transfers, ordering additional cards, adding new cardholders and buying various goods with the money.

In one instance, NJ.com reported that Locsin allegedly stole $11,000 from a single bank account, after resetting the password so the owner could not access it. Reports also suggest that he attempted to steal $15,000 from Mueller in 2013.

Unprepared for identity theft

Far too many people are completely unprepared for the possibility of identity theft. For instance, in most cases the only things preventing a thief from accessing your email, social media accounts and financial information are simple passwords. A significant amount of research has shown, time and time again, that most internet users are still relying on passwords that are fairly easy to guess – such as “password,” or “123456.” One study by SplashData found that most popular passwords, even longer ones, are still based on simple patterns that significantly undermine security.

At the greatest risk are those who don’t know how to prepare themselves for identity theft in the first place. Children are frequently targeted by thieves because of their clean credit reports – and because few parents think to check before their children turn 18. This can lead to situations where children are unknowingly targeted for theft for years, and are left with damaged credit just when they reach the age where their credit score becomes important.

Even those who take basic precautions can still suddenly become victims. The fact is that even the best protection systems are not perfect, as the Locsin so successfully demonstrated. But we’ve seen similar problems on an even larger scale. The fact that a former FBI Director had his identity compromised is not an outlier in the government. Entire departments have also been hacked, such as the Office for Personnel Management in 2014.

Be proactive, be prepared

You may not be able to stop every attempt at identity theft that comes your way, but you can take steps to ensure that you are aware of the state of your credit and your personal information.

An identity theft protection service like Identity Guard, available to NCPERS members, can help by monitoring your credit files, social security number and public records. Quality programs such as Identity Guard monitor a wide variety of sources, and then alert you to certain activity that could be indicative of fraud, allowing you to take action. Further, once the identity theft has occurred, such well-designed programs also provide support and resources to mitigate any adverse consequences and reimburse you both for expenses you incur, as well as cash losses resulting from unauthorized electronic funds transfer from your banking or retirement accounts.

For additional information on the Identity Guard program, please contact Kathy Vance at Identity Guard (kvance@identityguard.com) or Don Heilman, Gallagher Benefit Services, Inc. (don_heilman@aig.com).
Confession from a Software Provider

By John R. Reidy

There is often a need to hire consultants to assist Retirement Boards and Staff with the administration of their fiduciary duties and responsibilities. However, as consultants may provide a valuable role within a pension fund, giving one too much responsibility may lead to a situation that is not in the best interest of the pension fund.

Today, rules surrounding the investment of pension fund assets is highly regulated in order to eliminate potential conflict of interests. Consequently, policies and procedures are in place to limit the roles of investment consultants in order to protect the fiduciary obligations of the pension fund. For example, it could be considered a conflict of interest if a consultant were to recommend a change in asset allocations if they were to realize a financial benefit from this recommendation. This scenario would call into question whether the consultant is using a position of influence to serve the needs of the pension fund or to appease their own financial goals. Over the years, there have been many safeguards put in place to prohibit this type of practice from occurring within the investment community.

Unfortunately, these type of checks and balances do not exist within the public pension software industry. Currently, a technology consultant can assume a number of overlapping roles during an engagement with a pension fund. Quite often, the same technology consultant is hired to evaluate and make process improvement recommendations, draft pension software RFPs, set project duration and cost expectations, participate in the evaluation and vendor selection process, and then become the oversight Project Manager throughout the duration of the software project. When all of these tasks are managed by one consultant company, software providers find it difficult to know who is really the potential client.

As a software provider trying to secure business through this process, I confess that we are often compelled to tailor our RFP responses in order to meet the expectations of the consultant instead of focusing on the best interest of the pension fund. We understand that the consultant financially benefits from a longer, more complex project and therefore, we will often artificially extend our proposed project schedules and associated fees in order to better align our response to the consultant’s business objectives. In all honesty, our responses should be drafted in a way that delivers the greatest value for the pension fund.

Why the confession? Because this topic needs to be brought to the forefront. Historically, the accountability for administration software projects has fallen somewhere between the Staff and the Trustees. Since these projects end up in this “no man’s land”, too much responsibility is given to the consultant. If the consultant did not have so many overlapping duties during these projects, the costs would decrease significantly. It is not too late to change the “old way” of doing things within this industry.


John R. Reidy is one of the Principle Founders of the Pension Technology Group (PTG). Founded in 2006, PTG is a technology company that provides web based pension administration software solutions to public employee pension funds. John has direct involvement and help oversee nearly 150 pension administration software projects at public employee pension funds throughout the United States. John lives with his family in South Boston, MA and is very active within the community.
Recent California decision may cast doubt on protection of constitutional rights in California pensions

By Robert D. Klausner, NCPERS General Counsel

In an effort to respond to the rise of “pension spiking,” the California Legislature enacted the California Public Employees’ Pension Reform Act of 2013. The act made critical changes to how pension benefits would be calculated. Three weeks after the act was passed, five labor unions together with a number of individuals currently employed by Marin County instituted an action against the Marin County Employees’ Retirement Association (MCERA). On August 17, 2016, a state appellate court in San Francisco unanimously ruled in Marin Association of Public Employees v. Marin County Employees’ Retirement Association, ___Cal. Rptr. 3d___, 2106 WL 4379316 (Cal. App. 1 Dist. 8/17/2016) that the Pension Reform Act was not unconstitutional as it applied to the plaintiffs’ rights. While the main issue of the case was to prevent employees from boosting their benefits, the court went beyond the issue of spiking and addressed the broad constitutional protection provided by the California Rule, which prohibits virtually any changes from being made to pension benefits once they are given.

The appeals court’s decision had the effect of upholding the Legislature’s authority in passing of the Reform Act as applied to the facts of the case, but the scope of the decision in the Marin County case went beyond those facts and may ultimately be used as justification for benefit changes that weren’t previously allowed.

In 1983, The Supreme Court of California stated, in Allen v. Board of Administration, “Any modification of vested pension rights must be reasonable, must bear a material relation to the theory and successful operation of a pension system, and when resulting in disadvantages to employees, must be accompanied by comparable new advantages.” In addressing this case, the appellate court determined that the court’s meaning of “must” in Allen was not the literal meaning but rather that the court intended it be read as merely a “recommendation.”

According to the Marin court, prior to retirement, the legislature may alter the calculation formula thereby reducing the anticipated benefits as long as the modifications don’t deprive an individual of a “reasonable pension.” This is substantially different from the Allen decision’s requirement that any disadvantages created by legislation must be offset by “comparable new advantages.”

As a result of the Marin decision, the lines determining what are the constitutional parameters for pension legislation in California have been blurred. This could lead employers to arbitrarily determine what is “reasonable,” potentially opening the door to a surge of litigation.

NCPERS Files Amicus Briefs in Important Investor Rights Cases

In its continuing role as The Voice of Public Pensions, NCPERS has been active in providing friend of the court (amicus curiae) briefs in a investor rights cases of interest to its membership. In Waggoner v. Barclays PLC, Case Number 16-1912-CV, NCPERS has asked the U.S. Second Circuit Court of Appeals to uphold the continued use of the inflation -maintenance theory in securities fraud cases. Under this theory, investors may apply the fraud-on-the-market presumption when corporations maintain stock prices at artificially high levels.

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This article is a regular feature of PERSIST. Robert D. Klausner, a well-known lawyer specializing in public pension law throughout the United States, is General Counsel of NCPERS as well as a lecturer and law professor. While all efforts have been made to insure the accuracy of this section, the materials presented here are for the education of NCPERS members and are not intended as specific legal advice. For more information go to www.robertdklausner.com.
Living longer has been a boon to all recent generations and the expectation remains that succeeding generations will continue to outlive the previous ones. As shown in the following table, life expectancy has improved remarkably over the last half century.

<table>
<thead>
<tr>
<th>People Born in the Period</th>
<th>Life Expectancy at Birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950-1955</td>
<td>68.6 Years</td>
</tr>
<tr>
<td>1980-1985</td>
<td>74.3 Years</td>
</tr>
<tr>
<td>2005-2010</td>
<td>78.1 Years</td>
</tr>
</tbody>
</table>

Source: GAI SOA Longevity Webcast Richard Jackson, President, February 3, 2016; UN Population Division (2013).

Sustainable Yet Not Adequate Is as Unappealing as Adequate Yet Not Sustainable

Looking forward, over a 20-30 year period, pension policies may need to change to respond to the future economic and demographic environment. While no one can forecast the future with 100% certainty, the time is now to begin making changes that will ease the strain associated with these changing conditions. The changes will be a true optimization challenge that balances potential increasing costs and the related budget pressures, while helping employees accrue retirement income that maintains a standard of living and is sustainable to last a lifetime.

Addressing the Retirement Needs of the Public Sector Workforce

The following suggestions represent long-term strategies for the protection of the economic needs for both retirement system members and employers:

- Use the appropriate plan structure for the appropriate need
  - Defined benefit (DB) plans provide a secure lifetime income, protecting retirees from investment and longevity risk; and
  - Defined contribution (DC) plans provide a savings vehicle and provide variable income throughout the course of a member’s retirement.

- Create a clear focus on the protection of the base annuity benefit and use DC plans for variable income
  - DC plans can fund for variable cost-of-living adjustment (COLA) income, retiree medical subsidies and/or early retirement; and
  - May also be available to fund retirees’ economic shocks in retirement.

- Keep the mortality tables updated and include the liabilities associated with future improvements in mortality
  - Use fully generational mortality tables; and
  - Ensure that margin exists for mortality improvements so that future generations will not have to suddenly pay for improvements in life expectancy.

- Link the period of a member’s contribution to the period of retirement by lengthening the time until an unreduced retirement benefit is earned
  - For example, to offset increases in life expectancy, increase the retirement age by three years; and

Leslie L. Thompson, FSA, FCA, EA, MAAA is a Senior Consultant for GRS. She has nearly 40 years of actuarial and benefits consulting experience, including 25 years of public sector consulting experience. She is one of the leading public sector actuaries in the country and serves as the lead actuary for several statewide and municipal retirement systems and OPEB plans.

Leslie recently co-authored A Comprehensive Study Comparing the Cost and Effectiveness to Alternative Plan Designs [...] for the Colorado State Auditor. She also led a workshop at Berkeley’s Haas School of Business and spoke at Missouri MAPERS on the topic. In 2015, Leslie presented at the National Association of State Auditors Comptrollers and Treasurers (NAS- ACT) Conference on setting a rate of return assumption for pension funding and participated as an instructor for NIRS on defined benefit plan efficiencies. She has also authored articles on a variety of public pension issues.
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- Insured by The Prudential Life Insurance Company
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- Designed as a pension supplement benefit exclusively for NCPERS members
- Decreasing term life insurance with benefits of up to $325,000
- Includes spouse and dependent child benefits
- Guaranteed issue (no medical underwriting)
- No minimum number to participate
- First offering includes existing retirees. Active participates can continue into retirement
- No employer/retirement plan contributions required
- Minimal employer/retirement system involvement to implement and maintain
- Implementation allowance available to offset any indirect costs
- Simple online enrollment available.
- Allows retirement systems to offer valuable added benefit for actives and retirees at no direct cost.

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Fiduciary Liability Insurance protects the personal assets of trustees. The NCPERS program is specifically designed with the public employers and pension funds in mind. On average the program has been offering 20% savings. All levels of funding are considered.

Key Policy Highlights
- Broad definition of “insured”
- Broad definition of “Wrongful Act”
- Coverage for Improper advice or disclosure
- Coverage for Inappropriate selection of advisors or service providers
- Imprudent investments coverage
- Breach of responsibilities, obligations or duties imposed upon fiduciaries of a plan coverage
- Coverage for Conflict of interest with regard to investments
- Lack of investment diversity coverage
- Negligence in the administration of a plan coverage
- Voluntary compliance program
- HIPAA and PPACA penalty coverage

Other Key Policy Features
- Duty to defend with choice of counsel
- Guaranteed renewal endorsement available
- Policy is non-cancellable during policy term except for non-payment of premium
- Full prior acts coverage available
- Waiver of recourse included in policy form
- Notice of circumstances of potential claims is allowed
- Coverage is determined separately for each individual (severability)
- Insured plan can elect an extended reporting period
- Spousal and domestic partner liability coverage is provided
- Ability to offer up to a $25 million tower of insurance on a primary or excess basis

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Challenges to Executive Compensation Finally Gain Traction

By Scott M. Tucker, Esq. and Vera G. Belger, Esq.

In recent years the issue of insider director and executive compensation has become the target of courts, governmental agencies and stockholders. Following the financial crisis of 2008, director and officer compensation at the S&P 500 companies soared. From 2009 to 2013, the 300 CEOs who were at S&P 500 companies for the entire five-year period earned about $22 billion, an average of $73 million each. Often the companies that paid their executives the most performed below their industry competitors. For example, according to CNN, in 2014, the CEO of Discovery Communications was awarded $156 million (up from $33 million the year before) in total compensation despite the fact the company’s stock was down 24% for the same year. Similarly, The Wall Street Journal reported the CEO of Viacom made $44.3 million in 2014, an almost 20% increase from the year before, although Viacom’s stock was down 6.6% for the year. Indeed, a study reported on by Forbes and The Wall Street Journal demonstrated the more CEOs get paid, the worse their companies do over the next three years.

The Securities and Exchange Commission has taken note of these dramatic increases in compensation, bringing numerous actions challenging director compensation arrangements, including clawbacks and severance agreements. Shareholders are also paying attention to skyrocketing compensation figures and, during the first six-months of 2016, have rejected 36 companies’ “say on pay” shareholder votes. Notably, the Marco Consulting Group provided NCPERS with a list of the Key Proxy Votes to Watch in 2016 and, of the fifteen Proxy Votes identified, seven relate to executive compensation.

With the increased focus on outsized director and officer compensation, fund fiduciaries should be aware that courts, specifically the Delaware Court of Chancery, are turning a critical eye to compensation practices. In a recent string of cases, the Delaware Court of Chancery validated shareholder challenges to the legality of certain insider director and officer compensation arrangements. For example, the Court of Chancery upheld a shareholder challenge to Citrix’s omnibus equity incentive plan, despite the fact it had been approved by shareholders, because the plan lacked specific performance metrics for director compensation. In another case, the Court of Chancery rejected a decision by the directors of Facebook to raise their own pay because the increase was not formally approved by the company’s shareholders but was informally ratified by the controlling stockholder. Similarly, the Court of Chancery expressed concerns when Yahoo!’s CEO made changes to a departing officer’s compensation package without gaining the approval of the Board’s compensation committee. Finally, the Court of Chancery has signaled challenges to compensation plans may potentially be brought as breach of contract claims, possibly lessening the burden for shareholders to successfully challenge outsized or improper compensation awards.

Protecting a public pension fund’s investment requires a trustee to monitor and understand the compensation arrangements in the companies the fund is invested in and in considering fund investments generally. The information above can serve as a guide for discussing these concerns with monitoring securities counsel and financial advisors.

Scott M. Tucker is a partner in the Wilmington, Delaware office of Chimpléces & Tikellis LLP. Mr. Tucker’s practice is devoted to litigation, with an emphasis on mergers and acquisitions and corporate mismanagement and shareholder derivative actions.

Vera G. Belger is an associate in the Wilmington, Delaware office of Chimpléces & Tikellis LLP. Ms. Belger’s entire practice is devoted to litigation, with an emphasis on mergers and acquisitions and corporate mismanagement shareholder actions.
**Diversification’s Diminishing Ability to Manage Risk**

By Thomas Zimmerer

**PENSION PLANS NEED TO ADOPT A MORE DYNAMIC APPROACH**

In the aftermath of the global financial crisis, risk, and how best to manage it, have become critical concerns for pension plans. Much of the focus has been on diversification strategy, which has been key to pension plan risk management ever since the 1950s, when economist Harry Markowitz published his seminal work on Modern Portfolio Theory (MPT). MPT showed that investors could increase their return potential and simultaneously lower their risk profile by investing in a diversified range of assets. This revolutionized the way that investors invest, especially pension plans, many of which built their portfolios on the tenets of diversification over the course of decades.

**MODERN PORTFOLIO THEORY AS RELIC OF THE PAST**

Like so many other ideas that got swept up in the financial crisis, diversification hasn’t fared as well in the post-crisis world. Asset classes once thought to be complementary have shown remarkable correlation as bonds, stocks, emerging markets and even many alternatives become bunched closer together on the efficient frontier. As the recovery from the financial crisis continues apace, asset classes continue to show much closer correlations than in the past.

For a closer look into how diversification has failed to live up to its promise, consider two particularly volatile months in global markets as shown below. October 2008 was the height of the financial crisis, leading to steep

*continued on page 15*

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**The Limits of Diversification: It fails when you need it most**

**October 2008**

```
<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Return</th>
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<tbody>
<tr>
<td>US Equities Large Cap</td>
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</tr>
<tr>
<td>Intl Equities</td>
<td>-20.8%</td>
</tr>
<tr>
<td>US Govt Bonds</td>
<td>-20.8%</td>
</tr>
<tr>
<td>US Corporate Bonds</td>
<td>-27.4%</td>
</tr>
<tr>
<td>US Equities Small Cap</td>
<td>-17.3%</td>
</tr>
<tr>
<td>EM Equities</td>
<td>-16.8%</td>
</tr>
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<td>US High Yield</td>
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**August 2015**

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<table>
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<tr>
<th>Asset Class</th>
<th>Return</th>
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<td>US Equities Large Cap</td>
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<tr>
<td>Intl Equities</td>
<td>-7.3%</td>
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<tr>
<td>US Govt Bonds</td>
<td>-6.3%</td>
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<td>US Corporate Bonds</td>
<td>-9.0%</td>
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<tr>
<td>US Equities Small Cap</td>
<td>-6.3%</td>
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<tr>
<td>EM Equities</td>
<td>0.0%</td>
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<tr>
<td>US High Yield</td>
<td>-0.5%</td>
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Source: Bloomberg. Past performance is not a reliable indicator of future results. US Equities Large Cap are represented by the S&P 500 Total Return Index, International Equities are represented by MSCI Daily TR Gross World Ex US Index, US Government Bonds are represented by J.P. Morgan GBI US Unhedged LOC Index, Corporate Bonds are represented by BofA Merrill Lynch Corporate US Bond Index, US Equities Small Cap are represented by the Russell 2000 Index, Emerging Market Equities are represented by MSCI Daily TR Gross EM USD Index, US High Yield is represented by the iBoxx USD Liquid High Yield Index.
Pay to Play Ban Trumps Pence Fundraising: Application of the SEC Rule to the 2016 Presidential Election

By Suzanne M. Dugan

After presidential candidate Donald Trump announced the selection of Indiana Governor Mike Pence as his running mate, the New York Times noted that Mr. Pence’s addition to the ticket could make it harder for Mr. Trump to raise money from the business community because of an “obscure” Securities and Exchange Commission (“SEC”) provision meant to prevent pay to play efforts for public pension plans.

It is unlikely that readers of PERSist would call the rule “obscure”, as most public pension plan trustees and administrators are familiar with SEC Rule 206(4)-5, widely known as the “pay to play” rule. The rule prohibits an investment adviser from receiving compensation for advisory services to a government entity for two years after the adviser or its covered associates makes a political contribution to a public official or candidate who is or would be in a position to influence the award of advisory business. What was “obscure” now is timely – the application of the rule to the 2016 Presidential campaign.

SEC Pay to Play Rule

In adopting the rule in 2010, the SEC noted that public pension plans are particularly vulnerable to pay to play practice, and that “[i]nvestment advisers that seek to influence the award of advisory contracts by public pension plans, by making political contributions to, or soliciting them for, those officials who are in a position to influence the awards, compromise their fiduciary obligations to the public pension plans they advise and defraud prospective clients”.

The SEC pay to play rule is now well established: it has survived a court challenge seeking to invalidate it, and the SEC has brought both an enforcement action under the rule and granted a waiver from the rule.

Application of Rule to the Presidential Election

A sitting Governor who can appoint members of a state pension board, as Governor Pence can, is considered a covered government official under the SEC rule. This means that direct or indirect contributions to the Trump-Pence ticket could trigger the rule’s two year period prohibiting an investment adviser from collecting fees for advisory services rendered to the Indiana systems over which Pence has authority.

In fact, the SEC specifically considered the present scenario and declined to offer an exemption for sitting state or local officials running for federal office, stating: “we are not persuaded that an incumbent state or local official should be excluded from the definition solely because he or she is running for federal office”. The rationale - as long as an official has influence over the hiring of investment advisers as a function of his or her current office, contributions by an adviser could have the same effect, regardless to which of the official’s campaigns the adviser contributes.

Goldman Sachs Takes Action

Effective September 1, 2016, Goldman Sachs took action designed to prevent inadvertent violation of the SEC pay to play rule. The firm named all its partners as “restricted persons” under the rule and instituted a policy prohibiting them from making any contribution or solicitation in connection with a federal candidate who is a sitting state or local official, such as the Trump/Pence ticket, noting that the penalties for failing to comply with the SEC rules can be severe and may include fines as well as a two year ban on doing business with certain government clients.

Suzanne M. Dugan leads the Ethics and Fiduciary Counseling practice at Cohen Milstein Sellers & Toll PLLC, a practice she helped found within the Securities Litigation & Investor Protection group. Ms. Dugan joined Cohen Milstein following more than 20 years of government service, including as Special Counsel for Ethics for the Office of the New York State Comptroller and Counsel to the New York State Ethics Commission. With service in government and experience as an in-house counsel, she offers the broad perspective of a regulator and the comprehensive understanding of an in-house counsel. From this unique vantage, Ms. Dugan counsels pension funds on fiduciary responsibility, ethical duties, governance, compliance issues, and investigatory matters.

continued on page 16
Commercial real estate and farmland are compatible diversifiers
By Heather Davis & Bruce J. Sherrick

As alternative investments, U.S. commercial property and farmland are known for their ability to diversify traditional stock-bond portfolios. Although both are real assets, the factors driving their returns are different—making them good diversifiers for each other when combined in portfolios. Property is largely driven by domestic forces while farmland is influenced by global commodity markets.

Commonalities between commercial real estate and farmland
Commercial real estate and farmland can potentially improve the diversification of stock-bond portfolios. They have low—or negative—correlations with stocks and bonds (Exhibit 1). Their risk-adjusted returns — measured by Sharpe ratios— are attractive compared with stocks.

However, the 0.40 correlation between commercial real estate and farmland makes some wonder if they differ enough to justify including both in a portfolio. After all, both depend partly on the cash flows that land and location can produce. Hence, our research examined whether real estate and farmland respond to the same drivers of investment performance.

Drivers of commercial real estate returns
The strongest drivers of commercial real estate returns are employment growth and commercial mortgage availability. Together, these two indicators explain 41% of the variation in NCREIF total return with a four-quarter lead, as they support demand for properties. The strength of investor appetite for commercial real estate, which reflects a higher appetite for risk, is next in importance. The remaining variation in total return is due to differences across sectors (apartment, industrial, office, hotel and retail) and locations.

Does farmland respond to any of these factors? Yes and no. Employment growth and changes in commercial mortgage debt availability and risk


<table>
<thead>
<tr>
<th></th>
<th>Return</th>
<th>Std Dev</th>
<th>Sharpe Ratio</th>
<th>Stocks</th>
<th>Bonds</th>
<th>Real Estate</th>
<th>Farmland</th>
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<tr>
<td>Russell 3000® Stocks</td>
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<td>Stocks</td>
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<td>6.32%</td>
<td>4.40%</td>
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<td>-0.03</td>
<td>1.00</td>
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<tr>
<td>NCREIF Real Estate</td>
<td>8.44%</td>
<td>8.67%</td>
<td>0.63</td>
<td>Real Estate</td>
<td>0.23</td>
<td>-0.26</td>
<td>1.00</td>
</tr>
<tr>
<td>NCREIF Farmland</td>
<td>12.10%</td>
<td>7.01%</td>
<td>1.30</td>
<td>Farmland</td>
<td>0.02</td>
<td>-0.43</td>
<td>0.40</td>
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</tbody>
</table>

Source: TIAA Global Asset Management.

Heather Davis is responsible for strategy, investment originations, and portfolio management for TIAA’s investments in real assets and alternatives sectors including real estate, agriculture, timber, infrastructure and energy, private equity and private debt. With 32 years of investment industry experience, Ms. Davis has been an investor in many private asset class sectors since joining TIAA in 1995. She holds a B.A. in economics from Cornell University and an M.B.A. in finance from Cornell University, Johnson School of Management. In 2014, Ms. Davis received the Athena International award for Corporate Leadership. She serves on the boards of Westchester Global Investment Management, Radar Propriedades Agrícolas, S.A., Churchill Asset Management, the John M. Belk Endowment, and the Carolinas Chapter of Autism Speaks.

Bruce Sherrick is Professor of Farmland Economics and Director of the TIAA Center for Farmland Research at the University of Illinois. The Center’s mission is to support informed policy decisions affecting the financing of farm and rural businesses. His academic research is concentrated in risk analysis, asset valuation, crop insurance evaluation, modeling of financial institutions, and investment analysis. Sherrick earned a Ph.D., in finance and marketing at The Ohio State University. He is managing partner of integrated Financial Analytics and Research (iFAR), a consulting firm in credit risk assessment and modeling of agricultural finance institutions. Sherrick is also an author/coauthor of the FAST (Financial Analysis and Solution Tools) suite of decision tools targeting agricultural producers and lenders.
For the last several years, global markets have experienced a “New Normal” of low economic growth and persistently low inflation. The tepid economic recovery from the global financial crisis of 2008-2009 is one factor driving the New Normal. Low long-term bond yields and a flat yield curve bears evidence that the markets believe in the New Normal as the base case scenario.

Demographics lend further support to the case for tepid long-term growth. Global working-age population growth from 1980 to 2008 was around 1.75% annually, but is expected to trend down to around 0.71% annually over the next 50 years, according to figures from the World Bank. All else being equal, this translates to a roughly 1% loss in potential gross domestic product (GDP) growth. If this outlook proves correct, investors will continue to seek out investment themes that are not overly dependent on global economic growth.

The UBS Emerging Markets Equities investment team analyzed a spectrum of emerging market (EM) and developed market (DM) countries to conclude that EM countries offer several strong equity investment opportunities. The team identified the most investable EM countries from a macro perspective, and the most promising investment themes and business sectors over the next five years.

Several EM countries seem poised to outperform on economic growth, but GDP growth alone often does not translate into improved equity market returns. Corporate performance and secular investment themes that are attractive in a low global-growth environment must also be present. The investment team has identified key EM growth themes for the next five years, including consumer spending, healthcare, real estate, financials and information technology.

Countries that possess inherent growth drivers will likely have an edge as profitable investments. To help us identify these countries, we drew on academic research
d in economic growth themes, applied to the current environment.

Using these and other sources, we ranked 57 developed- and emerging-market countries across six key factors identified by the research: Working-age population growth during 2015-2020, average education (years), ease of doing business, per capita GDP in 2014 and purchasing power parity (PPP) in 2011 USD, investment as a percentage of GDP and finally, government consumption expressed as a percentage of GDP.

Our findings show that EM countries will likely produce 4.2% working-age population growth in the next five years, while DM countries may shrink by 0.2%. EM countries also have an advantage in catch-up potential, with lower per-capita GDP to begin with, greater investment as a percentage of GDP, and lower government consump-

2 Antonio Fatas and Ilian Mihov, “The 4 I’s of Economic Growth,” INSEAD.
The US Department of Labor finalized its safe harbor regulation allowing states to create “Auto IRA” programs for private sector employees. These programs would require specified employers, generally those without any form of workplace retirement plan, to allow their employees to contribute through payroll withholding to a state-managed Roth IRA. With economies of scale, low costs and professional management, Auto IRAs are intended to assist workers in accumulating meaningful amounts of retirement savings. The DOL issued the final rule on August 25th.

Importantly, employees will be automatically enrolled at a set contribution rate (e.g., 3% of pay) unless they opt out or choose a different rate. And, most programs are expected to increase the automatic savings rate annually, up to a specified percentage such as 10%. Behavioral economists have shown that auto enrollment/escalation significantly increases saving rates, especially among low-income employees. Although no Auto IRA has gone “live,” California, Oregon, Illinois, Connecticut and Maryland are in the process of establishing programs and a number of other states are engaged in feasibility studies. Programs that follow the DOL’s safe harbor will be exempt from ERISA regulation which, many legal experts believe, could otherwise preempt a state’s ability to require employer participation.

The conditions for an Auto IRA Program to qualify for the safe harbor include:
- Established by a state under state law;
- Administered by state/instrumentality “responsible for investing employee contributions or for selecting investment alternatives;”
- State “assumes responsibility for security of payroll deductions and employee savings;”
- Mechanism for employee, representative and state to enforce employee’s rights;
- Voluntary for employees (auto enrolment with an opt-out is considered voluntary);
- Employer involvement limited to ministerial acts such as payroll processing, keeping records and distributing info;
- No employer contributions, no employer kick-backs or other incentives;
- Auto-enrollment and escalation are allowed only if:
  - Required by state law;
  - Adequate notice is given to employees; and
  - The employer is required to join program and auto-enrollment/escalation only applies to employees affected by mandate.

The safe harbor allows states a fair amount of flexibility in crafting its program. We expect that states will outsource most administrative, recordkeeping, investment and trustee/custodial duties to private-sector vendors.

The DOL also has proposed allowing certain cities, counties and other political subdivisions to establish Auto IRA programs. Under the proposal, the locality must have a population at least equal to the least populous state (currently Wyoming with just under 600,000). However, if and when a state establishes its own program, localities would be prevented from continuing/establishing new programs.

The DOL expects that the final regulations will fine tune the eligibility standards, perhaps to limit the safe harbor to financially sophisticated units with an established benefit administration infrastructure, and provide guidance on how an existing local Auto IRA would be affected by the adoption of a subsequent state program.

While the final regulation is a further improvement of the already beneficial proposed regulations, many commentators would have preferred that the DOL allowed auto enrollment even without an employer mandate. NCPERS was active in convincing the DOL to originally propose the safe harbor for states and issuing the final regulation.

To dive further into this topic, please join David Morse & NCPERS at the Center for Online Learning, for our webinar on Wednesday, October 19th. You can register here (https://attendee.gotowebinar.com/register/8386015145043460100)
GICS continued from page 2

Market cap of equity REITs has grown more than sixfold

REIT Magazine notes that the GICS change is “reminiscent of the decision in 2001 to include REITs in the S&P Indices.” Following that decision, the market capitalization of US equity REITs ballooned from $147 billion to $886 billion from 2001 through 2015.1

Important information

Real estate companies, including REITs or similar structures, tend to be small; mid-cap companies and their shares may be more volatile and less liquid.

The Global Industry Classification Standard was developed by and is the exclusive property and a service mark of MSCI Inc. and Standard & Poor’s.

In addition to portfolio management, Mr. Rodriguez is a managing director and the head of real estate securities for Invesco Real Estate, where he oversees all phases of the unit, including securities research and administration.

Mr. Rodriguez began his investment career in 1983 and joined Invesco Real Estate, the Dallas-based investment management affiliate of Invesco Institutional (N.A.), Inc., in 1990. He has served on the editorial board for the Financial Times Stock Exchange National Association of Real Estate Investment Trusts (FTSE NAREIT), as well as the editorial board of the Institutional Real Estate Securities newsletter. He is a member of the National Association of Business Economists, American Real Estate Society and the Institute of Certified Financial Planners. He has also served as adjunct professor of economics at The University of Texas at Dallas.

In addition, Mr. Rodriguez was a contributing author to Real Estate Investment Trusts: Structure Analysis and Strategy, published by McGraw-Hill. He made contributions as editor and author to several industry publications, and has been featured as a real estate expert by both financial industry print and television media such as CNBC and Bloomberg News.

Mr. Rodriguez earned a Bachelor of Business Administration degree in economics and finance as well as an MBA in finance from Baylor University.

Legal Report continued from page 5

inflated levels that would have fallen if the truth about alleged corporate misconduct was revealed. This is consistent with a long standing U.S. Supreme Court decision which held that it is presumed investors reasonably rely on market information in making their investment decisions. This theory has been supported by three other federal appeals courts. NCPERS, also filed a friend of the court brief in the Second Circuit Court of Appeals in a related case, Arkansas Teachers’ Retirement System v. Goldman Sachs Group, Case Number 16-250. Most recently, NCPERS filed a friend of the court brief in Universities Superannuation Scheme Ltd. v. Petrobras, Case Number 16-1914 asking the Second Circuit Court of Appeals to preserve the method of ascertaining damages in class action cases.

All of these cases, in which many NCPERS members are between the named plaintiffs and class members, represent a concerted effort to undermine the protections afforded public pension plan investors by federal securities laws. As NCPERS Executive Director Hank Kim recently observed: “For decades investors have been able to rely on securities class actions to protect and preserve our members’ claims for damages under federal securities laws.” Recognizing the vital role that investment income plays in the financing of public pensions and NCPERS’ members as holders of more than $3 trillion in securities, NCPERS leadership has adopted a policy of vigorous support for the preservation of investor rights.

Pension Policy continued from page 6

• To offset increases in the ratio of actives to retirees, increase by seven years.

• Reduce benefit multipliers
  • Use a formula that would expect a longer career service period so a similar lifetime benefit is earned.

• Review the funding policy to eliminate inter-generational transfers
  • Annually review the principle pay-off; and
  • Use multi-year projections to monitor the effects of amendments and gains/losses on the anticipated date for full funding.

Importantly, demographic challenges place pressure on the economic system as a whole. Retirement systems are faced with the prospect of lowering costs while providing meaningful and sustainable retirement income.
Diversification continued from page 9

decreases across most asset classes. It’s been estimated that 401(k) and IRA investors lost approximately $2.4 trillion in aggregate value during the final two quarters of 2008. Fast forward to August 2015—while not as dire as the financial crisis, the month nonetheless featured pronounced fears of a China economic slowdown and worsening Greek debt woes. And just like in October 2008, most asset classes fell in unison and showed the shortcomings of diversification.

DYNAMIC RISK MITIGATION DELIVERS

In light of diversification’s diminishing potential, plan sponsors are realizing that a dynamic approach can exploit the cyclicality of asset-class returns and achieve a meaningful, positive impact on a plan’s risk/return profile. The big idea behind a dynamic approach is that asset classes exhibit both “trend-ing” and “mean-reverting” return patterns, the cyclicality of which can be identified and exploited. The resulting allocation seeks to balance as many return-seeking assets as possible with as many safe assets as necessary.

At the core of dynamic risk mitigation is a rules-based, repeatable process that can “up-risk” or “de-risk” according to changing market conditions. The dynamic process also drives decisions about when to take profits and when to re-enter markets. If the rules are effective, and a dynamic risk-mitigation strategy is successfully implemented, a pension plan can participate more fully in rising markets and preserve capital to a greater degree in declining ones. In the current low-growth, low-rate environment in which pension plans must contend, a dynamic approach could make all the difference in better aligning assets with liabilities.

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**Diversification continued from page 15**

**DISCLOSURE:**

The material contains the current opinions of the author, which are subject to change without notice. Statements concerning financial market trends are based on current market conditions, which will fluctuate. References to specific securities and issuers are for illustrative purposes only and are not intended to be and should not be interpreted as recommendations to purchase or sell such securities. Forecasts and estimates have certain inherent limitations and are not intended to be relied upon as advice or interpreted as a recommendation.  

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Mr. Zimmerer is a senior product specialist and a director with Allianz Global Investors, which he joined in 2014. As a member of the Multi Asset US team, he is responsible for articulating the philosophy and process of the firm’s dynamic multi-asset strategies to clients and external audiences; he also provides insights to the advisor and consultant community on the impact of market conditions on portfolio decisions. Earlier with the firm, Mr. Zimmerer was a portfolio manager with Allianz in Munich and Frankfurt, where he developed quantitative investment strategies and managed bond and CPPI portfolios. He has 18 years of investment-industry experience. Before, Mr. Zimmerer was a professor of finance and investments at the University of Applied Science in Ansbach, Germany, and served as senior consultant for a German-based consulting firm, advising institutional investors. He has an M.B.A. in economics and finance and a Ph.D. in econometrics from the University of Regensburg, Germany.

**Pay to Play continued from page 10**

**CONCLUSION**

While the SEC pay to play rule may be “obscure” to some commentators, it now is front and center in this year’s Presidential campaign. Public pension plans are undoubtedly familiar with this rule and its fiduciary implications in ways that others from more “obscure” perspectives may not.

5A private equity firm, TL Ventures, paid nearly $300,000 in disgorgement and fines for political contributions made an associate in the amount of $2,500 to a candidate for Mayor of Philadelphia and $2,000 to the Governor of Pennsylvania. https://www.sec.gov/litigation/admin/2014/ia-3859.pdf
6The SEC granted an exemption from Rule 206(4)-5 to Starwood Capital Group Management, LLC, after their chief operating officer tripped the wire when he made a $1,000 contribution to an exploratory committee for an Illinois gubernatorial candidate that was clawed back 9 days later. https://www.sec.gov/rules/ia/2015/ia-4203.pdf
7Contributions to the Clinton-Kaine campaign are not subject to the SEC rule since neither candidate holds state or local office.

**Diversifiers continued from page 11**

appetite are all significant in explaining farmland total returns in the NCREIF index. But, their significance points to more complex underlying structural linkages rather than any straightforward effects. In total, these factors only explain 12% of the variation in farmland return versus 48% for commercial real estate return. Nor are farmland returns driven by the ten-year Treasury yield, a commonly offered explanation of farmland returns. Although returns for farmland and commercial real estate might be somewhat correlated, there is more to the story than that metric (Exhibit 2).

**DRIVERS OF FARMLAND RETURNS**

So, what does drive farmland returns? In contrast with commercial real estate, which is used in localized domestic activities, farmland yields products that are consumed and traded globally. Foreign exchange rates for the dollar account for 13% of farmland’s total return versus an inconsequential effect for commercial property. The productivity of the land and farm operations, combined with foreign exchange rates, accounts for over 33% of farmland’s variation in total return. That percentage rises to 43% with the inclusion of U.S. inflation.

Another consideration is the low turnover and limited availability of U.S. farmland, with a market value of only $6.7 billion vs. $472 billion for commercial real estate, as measured by NCREIF data as of Dec. 31, 2015. This limited availability offers a buffer to the value of farmland.

**DIVERSIFICATION IMPLICATIONS**

Commercial real estate and farmland offer different flavors of diversification, due to the differences in their performance drivers. This makes them good diversifiers for each other, as well as for stocks and bonds.

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Calendar of Events 2016

National Accredited Fiduciary (NAF) Program
October 22-23, 2016
Planet Hollywood
Las Vegas, NV

Public Safety Employees Pension & Benefits Conference
October 23 – 26, 2016
Planet Hollywood
Las Vegas, NV

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TEXPERS: Financial Health of State and Local Pension Funds Highest in Six Years

TEXPERS has published a report showing that 93 state and local pension funds combined in 2015-2016 to achieve the best trend performance improvement in financial health in six years, breaking last year’s record.

The report bases its conclusions on the Texas Pension Review Board’s (PRB) year-over-year comparisons of pension funds’ amortization periods, which experts agree are the single most appropriate measure of public retirement systems’ health.

The most substantial improvement in the 2015-16 period occurred among three pension systems moving out of the “infinite” amortization period, from seven to four. This followed an improvement of eight fewer pensions in this “infinite” category in the prior year. An “infinite” amortization period means that there will never be enough funds to pay future benefits.

In addition, five more pension systems attained the PRB’s recommended status of amortization periods of 25 years or less, setting another six-year record of 39 pension funds achieving this feat.

Kinder Institute Report Criticized for Flawed Plan to Fix Houston Pension

Bill Elkin, executive director of the Houston Police Retired Officers Association, and Max Patterson, executive director of TEXPERS and Texans for Secure Retirement, are rebutting a report by Rice University’s Kinder Institute for Urban Research that attempts to offer solutions to the unfunded liability faced by the City of Houston’s pension system, which reached $3.9 billion dollars in 2015.

In an Aug. 24 letter to the editor published in The Houston Chronicle, Elkin and Patterson said the recommendations in the Kinder Institute’s “The Houston Pension Question” report should not be heeded. The report advocates increasing the city’s contribution to the pension systems, requiring larger contributions from city workers, reducing benefits for current employees, and moving city employees to a 401(k)-style defined contribution (DC) retirement plan.

Houston’s John Arnold of the John Arnold Foundation has been promoting similar measures across the country as a way to diminish the use of traditional defined benefit (DB) pension plans, and defenders of traditional DB plans have been fighting him every step of the way.

All one needs to do, according to Elkin and Patterson, is look at the experience of other cities that have made the switch from DB to DC plans to see if a similar move would work in Houston.

As an example, after making the switch, Palm Beach recently moved back to a traditional DB pension system because the new DC system had turned it into a “training ground” for police officers who used it to get trained and then leave the city for jobs in other cities with better benefits, Elkin and Patterson wrote. “This certainly isn’t a problem we want in Houston.”

They added that “sticking with traditional defined benefit pension plans is the smartest solution for taxpayers and our public employees.”


GASB 73, New Accounting Rules for Public Postretirement Benefit Plans, Set to Take Effect

The actuarial and consulting firm Milliman has published guidance on GASB 73, regulations that set new accounting rules for public postretirement benefit plans in the United States.

GASB Statement 73, set to take effect soon, is a standard for accounting and financial reporting for pensions that is not within the scope of GASB Statement 68.

Successful implementation of the new rules will require an understanding of a variety of technical concepts regarding various newly required calculations. These concepts include determining the plan type, the timing and frequency of actuarial valuations, measuring total pension liability, measuring pension expenses, types of disclosures and more.


Most City Pension Funding Ratios Bounced Back in 2015

City pension funding ratios showed a marked improvement in FY 2015 compared to the previous year, according to the audited results from 701 cities received by Merritt Research Services.

As of July 15, 2016, the median city pension funding ratio for FY 2015 stood at 76.6% compared to 72.7% in 2014. That was the best pension median funding ratio for cities since 2008, the first year of the financial crisis and Great Recession.

These improved 2015 funding numbers were particularly significant because they were based on accounting figures that used the new GASB 67 and 68 pension rules, implemented for the first time by most cities. For many public plans, these new rules resulted in worse funding ratios.

Under the new pension accounting rules, the concept of smoothing asset valuations was eliminated by most governments so that better overall market returns from 2013 to 2015 were reflected in the numbers.

The GASB rule change that had the most potential to negatively impact funding ratios was the requirement that a lower discount rate at a 20 year tax exempt rate (under 4%) would be required for the portion of any government’s liability that exceeded the expected assets available to pay benefits.

However, relatively few cities projected results that placed them in that position, according to an article by Richard A Ciccarone, president of Merritt Research Services.

Proposed Changes to Social Security’s WEP Provision for Public Employees Is Put on Hold

The latest efforts in Congress to replace the Windfall Elimination Provision (WEP) with a formula that more equitably calculates Social Security benefits for public employees has been tabled for the time being.

U.S. Rep. Kevin Brady (R-Texas), chairman of the House Ways and Means Committee, has led the charge in Congress to pass legislation that would replace the WEP with a simple, more proportional and fairer adjustment to benefits for public employees.

Brady and Rep. Richard Neal (D-Mass.) introduced the Equal Treatment of Public Servants Act of 2015 (H.R. 711) in February, saying the WEP has arbitrarily reduced the monthly benefits of some teachers, firefighters, police officers, and other public servants for 30 years.

More than 1.7 million people are subject to the WEP’s “flawed” benefit calculation formula, which can reduce their Social Security benefits by over $400 a month, Brady said.

“It never seemed fair to me that public servants who earn a pension at work and also in Social Security – whether it was a second job, summer job, or a second career – that they should be docked Social Security benefits,” he added. “These are those who teach our child, those who keep us safe, those who race to our rescue when in need.”

But when he opened a hearing to mark up the legislation on July 13, Brady said H.R. 711 would not be moving forward.

“This bill is about getting equal treatment for public servants,” he said. “However, it has become clear over the past several days that public servants are not in agreement about this legislation. We need the community to come together on what they can all support or the consequence, unfortunately, is to see the current WEP harm people on a daily basis that frankly don’t deserve being harmed. Meanwhile, we will postpone consideration of H.R. 711 until that agreement is found.”

The National Council on Teacher Retirement, in its “NCTR FYI,” reported that a disagreement over advancing the legislation began to surface the day before the markup, when Brady and Neal modified provisions of the legislation.

As originally proposed, the bill would have repealed the current WEP and established in its place a new “Public Servant Fairness Formula” (PSF), which would provide for a Social Security benefit computed using all past earnings (including earnings in employment that was not covered under Social Security), which would then be multiplied by the ratio of the average indexed monthly earnings computed without non-covered earnings to modified average indexed monthly earnings that includes both covered and non-covered earnings.

This new formula would then be applied for all retired-worker and disabled-worker beneficiaries, and a rebate, in the form of a percentage reduction in the amount of the WEP offset, would be provided, according to a post on the website of the State Teachers Retirement System (STRS) of Ohio.

However, the amount of this reduction would be based on increased revenues that would result from another provision in the legislation that would have required that each employer who paid a current retiree any non-covered wages since 1978 must certify that the worker was exempt from the WEP because they did not receive a public pension; for current Social Security beneficiaries who were not certified to be exempt from the WEP, a portion of Social Security benefits already received by them could be considered overpayments, which would then be collected, or withheld, from future benefits, STRS said.

With this “enforcement” mechanism in place, the Chief Actuary for Social Security estimated that this rebate percentage would likely amount to 50% – the maximum permissible rebate percentage allowed. In other words, the impact of the WEP could be cut in half.

However, concerns were raised about the impact of the so-called enforcement provision on elderly retirees who might not be able to obtain a certification from a former employer as to their exemption from the WEP.

The National Education Association (NEA) expressed concern with the potential impact of what it called the “fiscal challenges associated with enforcement of offset provisions for existing Social Security beneficiaries identified as having received overpayments,” and urged that the bill “remain silent on the issue of enforcement,” STRS reported.

In response to these concerns and others, Brady reportedly removed this provision from the version of H.R. 711 that was to be marked up. As a result, however, the Social Security Chief Actuary reduced the amount of the legislation’s likely percentage reduction to the WEP from 50% to 14.7%.

This, in turn, caused the National Active and Retired Federal Employees Association (NARFE), which was previously strongly in favor of the bill, to withdraw its support, noting that removing “this so-called ‘enforcement’ provision” so as “not to unfairly burden current retirees who may have been affected by the burden of the certification process as Continued on p. 6
Actuaries Hide, Then Disclose, Their Split over How to Value Public Pension Plan Liabilities

A controversial research paper that is critical of the way pension plans estimate the future value of their assets now will be published, after the Society of Actuaries (SOA) agreed to publish it as part of its Pension Forum series.

The move is a reversal from the joint position taken by the SOA and the American Academy of Actuaries (AAA) on Aug. 1 when they abruptly disbanded their joint Pension Finance Task Force in disagreement over the paper that was written by four of the task force members.

By breaking up the task force and banning the paper’s publication, the groups signaled a significant split in the profession over how to measure public pension debt.

The paper calls for measuring public pension plan liabilities using risk-free rates, instead of the prevailing standard of using the long-term assumed rates of return. The change would raise pension liabilities and required contributions, while decreasing funding levels.

Pension plans currently set a level of expected long-term returns on investments and use that to help calculate how much needs to be contributed each year to meet future payments. The paper argues that this is the wrong approach. Instead, liabilities should be discounted using default-free rates, such as those offered by Treasurys.

The decision not to publish the paper – and also to forbid the authors from publishing it under their own names – had unleashed a storm of criticism. Two of the paper’s authors contend that the unfunded liabilities of public pension plans are about $6 trillion, rather than $1.5 trillion.

In a letter published on the SOA website, SOA President Craig Reynolds said the paper now will be published in the SOA’s Pension Forum publication, likely by the end of October “and will be accompanied by discussant debate from a range of perspectives.”

The Pension Forum is described on the SOA website as a setting in which papers on pension-related topics can be published and discussed.

“In the interim, the SOA has agreed to the authors’ request to allow them more time to edit the paper. We expect to post an updated draft on the SOA website the week of Sept. 5,” Reynolds wrote.

In a separate letter published nearly three weeks ago, AAA President Thomas F. Wildsmith IV said the paper hadn’t completed the review and editing process necessary to meet the group’s standards. In an update on Aug. 22, he added: “Nonetheless, we support a robust discussion of these concepts and ideas so that both actuaries and the public may have access to them. We will shortly be publishing a paper on public pension plans that will include concepts from financial economics.”

The debate over how to value pension plans comes as investment returns have plunged. On Aug. 26, the Illinois Teachers’ Retirement System cut its expected long-term rate of return from 7.5% to 7% for the 2018 fiscal year that begins next July 1. Had that move been effective this year, it would have cost the state more than $400 million in additional pension contributions.


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Public Pension Funding Challenges
Can Be Directly Traced to the Great Recession

The numerous changes states have made to public pension plans over the past several years – unprecedented in number, scope and magnitude – can be directly traced to the global stock market crash of 2009 and the ensuing Great Recession, according to new research.

State and local pension fund asset values fell from $3.2 trillion at the end of 2007 to $2.1 trillion in March 2009, according to “Significant Reforms to State Retirement Systems,” a paper by Keith Brainard and Alex Brown of the National Association of State Retirement Administrators (NASRA).

Due to these losses, pension costs increased, and these higher costs hit state and local governments just as the economic recession began to severely lower their revenues, they found.

Since then, nearly every state has passed a reform measure of one form or another to one or more of its pension plans. There was no single reform solution that states agreed to adopt. Instead, each state met its challenges with tailored changes specific to its unique circumstances, the authors wrote.

The paper examined the similarities and differences in public pension plan changes across the U.S. and found that the reforms generally attempted to keep the core features of traditional defined benefit (DB) pension plans intact, including retirement security, workforce management and economic efficiency.

For example, the Texas legislature enacted a series of pension reforms affecting current active and newly hired state employees. Generally, new hires now receive reduced benefits and must work longer to qualify for their retirement. In addition, public employees must contribute a higher percentage of their salary toward their pensions.

The changes to the Employees Retirement System of Texas (ERS) reduced the plan’s immediate cost of benefits earned each year from 13.37% of payroll in 2008 to 12.27% in 2015, the research found. The increase in contribution rates reduced the period in which the ERS is expected to pay off its unfunded liabilities from “infinite” to 33 years, the research found.

Meanwhile, in a blog for the National Public Pension Coalition (NPPC), Tyler Bond reached many of the same conclusions about the effects of the Great Recession on public pension plans.

“Clearly, the Great Recession had a profound impact on the funded status of pension plans throughout the country,” Bond wrote. “And for many pensions, it has been challenging in the years following the financial crisis to recover their losses. The economic recovery has been slow. This means many pension plans still have a lower funded ratio than they did pre-recession.”

The good news is that many individual pension plans are recovering more quickly than the national average, and over time public pensions will regain sustainable funding levels, he wrote.


California Approves Secure Choice Pension Plan

A bill to create a state-run retirement plan for roughly 7 million private workers in California advanced through the state Assembly on Aug. 25 in a victory for legislators concerned that a lack of savings leads to poverty for many retirees.

The bill would launch the California Secure Choice Retirement Plan, a program to cover California workers who do not receive a company-sponsored retirement, such as a pension or 401(k) plan.

Workers employed at companies with five or more employees would be automatically enrolled, but they can opt out if they choose not to participate.

The bill, which passed by a vote of 47-23, now moves back to the state Senate for a concurrence vote before heading to Gov. Jerry Brown for final approval.

originally envisioned” has nevertheless “reduced the amount of revenue that the bill had been envisioned to raise, which in turn will reduce the amount of the so-called “rebate” for those currently impacted by the current WEP,” STRS reported.

NARFE President Richard G. Thissen said in a statement on July 13 that his group was “strongly opposed to the last-minute changes in the bill,” noting that the original bill “would have provided current WEP-affected individuals with a rebate of 50% of the WEP penalty” while the substitute “reduces that amount to a mere 14%, for an average of $40 month, through 2026.” Thissen said that this was “better than nothing, but it’s a big step backward that NARFE cannot support.”

In addition, Rep. Bill Pascrell, Jr. (D-N.J.) intended to offer an amendment, supported by the NEA and, reportedly, the International Association of Fire Fighters (IAFF), that would have exempted people who work in a Social-Security covered job for 30 or more years from the legislation’s new WEP formula, STRS reported.

As introduced, H.R. 711 would result in workers who have between 30 and 35 years of Social Security earnings – who are currently exempt from the WEP – losing that exemption. Opponents of the Pascrell amendment informally estimated that the impact of this change would be to further reduce the expected rebate to only about 4%, but Brady was reportedly nonetheless concerned that the amendment would have been approved.

STRS reported that an email from Tom Lussier on behalf of Tim Lee, executive director of the Texas Retired Teachers Association, and Shawn Duhamel, legislative director of the Retired State, County And Municipal Employees Association Of Massachusetts – two of the organizations that originally worked to develop H.R. 711 – indicated that the reason for the postponement of action on the legislation was a “result of activity by certain public employee unions to challenge the legislation either by questioning key provisions of the bill or by initiating and supporting amendments that would undermine its financial structure.”

Referencing the Pascrell amendment, the email stated that “if the Committee had adopted an IAFF supported amendment, funding for the retiree rebate would have been virtually eliminated,” STRS reported.

“Although we respect the right of various public employee organizations … to challenge our efforts to pass H.R. 711, we are disappointed by the lack of specific alternatives,” the email stated, according to STRS. “More importantly, we oppose any effort that would further reduce the value of H.R. 711 for current retirees.”

The unions and other interested groups said they planned to meet over the next few weeks to try to craft a compromise that would work best for the majority of active and retired public employees.


IRS Publishes New Determination Letter Program for Individually Designed Retirement Plans

The Internal Revenue Service (IRS) has published guidance on the determination letter program for individually designed qualified retirement plans. The guidance sets out a framework for the pared-down program, establishes a new remedial amendment period, and explains how required amendments should be handled by plan sponsors going forward.

These changes to the determination letter program are generally effective Jan. 1, 2017. Many large employers maintain individually designed defined benefit (DB) and/or defined contribution (DC) retirement plans. After the IRS announced its plan to curtail the determination letter program in 2015, industry groups and other stakeholders urged the agency to rethink its decision, but the IRS held firm.

The staggered five-year remedial amendment cycle ends as of Jan. 1, 2017. After that, individually designed retirement plans generally may not submit restated plans to the IRS for a determination of whether the plan meets the qualification requirements in the tax code and IRS regulations every five years.

In 2017 and beyond, the IRS will accept determination letter applications for individually designed plans in only a limited number of circumstances.

Switch from DB to DC Plans Forces Employees to Work Longer Before Retiring

As senior partner and leader of Mercer’s Investment business for Canada, Jaqui Parchment has seen firsthand the effects that the shift from defined benefit (DB) pension plans to defined contribution (DC) plans has had on employees and employers.

Parchment provides consulting services to Mercer’s largest clients on investment issues. Retirement readiness, she says, is a major concern for her clients.

The switch from DB to DC has had major “ramifications,” Parchment told The Globe and Mail. “The most obvious one is the risk in terms of providing retirement is shifting more towards the employee from the employer. “Whereas before, with the defined benefit plan, employees would know that they had certainty around their level of income in retirement. Now, the employee faces the uncertainty of not knowing what that income is and having to plan around it.”

That uncertainty has had tangible consequences. Employees with DC plans can expect to be working longer into their retirement years, leading to concerns about workplace efficiency and retirement readiness, a recent survey by Willis Towers Watson showed.

A maturing work force in which people don’t retire when the employer would like them to poses other difficulties. Employees can see a decline in health, productivity and engagement. Meanwhile, employers are faced with the choice of whether to keep employees who have declined in productivity or to pay out a severance that comes with terminating a long-term employee.


Federal Lawmakers Need to Again Tackle Retirement Security

Former Sen. Kent Conrad (D-N.D.) and James B. Lockhart III, vice chairman of WL Ross & Co., say it’s time to update the Pension Protection Act of 2006 (PPA).

Conrad and Lockhart co-chaired the Bipartisan Policy Center’s Commission on Retirement Security and Personal Savings that helped develop the PPA 10 years ago, the last major piece of retirement security legislation enacted in the United States.

In a joint editorial in The Hill, the two wrote that only about half of private-sector employees are contributing to workplace retirement savings plan today. Even those who do manage to build up savings lack the options to make those funds last for the rest of their lives.

“It is crucial that policymakers revisit how to improve Americans’ retirement security, otherwise they risk inviting the retirement ‘crisis’ that some argue is already upon us,” they wrote.


Corporate CFOs Actively Seek to End to Defined Benefit Pensions

Defined benefit (DB) pension plans are disappearing from corporate America, but it’s not happening quickly enough for some finance chiefs, according to Tatyana Shumsky in a blog for The Wall Street Journal.

She quoted Allegheny Technologies’ CFO Patrick DeCourcy, who said it is one of his main goals “to get us out of this business” of DB pensions. Allegheny makes specialty materials and jet engine components, and DeCourcy has been working for more than three years to reduce its retirement benefit liabilities.

For Boeing CFO Greg Smith, pension and labor cost instability were two key risk considerations when the company began planning its proposed 777 jet. He has been working to reduce them, in part by getting workers to switch to defined contribution plans, Shumsky wrote. “Is there more to go? Absolutely,” he said.


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DOL Rules Help States Provide Retirement Plans to Workers

The U.S. Department of Labor (DOL) has finalized a rule that helps states facilitate the creation of automatic enrollment retirement savings plans for use by small businesses that don’t offer their employees a plan.

States and large cities can now more easily establish their own retirement plans for private-sector workers under the new rules, which aim to expand the number of Americans with access to tax-advantaged savings accounts.

Eight states have already passed laws to establish state-run retirement plans for private-sector workers. Experts said the rules also could apply new pressure on financial advisers to lower their fees.

These public-private partnerships have the potential to help more than 55 million workers who lack access to a way to save for retirement automatically out of their paycheck, DOL said.

One-third of U.S. workers currently have no access to an employer-run retirement savings plan, including half of those at firms with fewer than 50 employees and more than 60% of part-time workers as of March 2016, according to DOL data.

Some state governments have suggested creating savings programs that combine the best features of 401(k)s and pensions to lower costs, provide retirees steadier income and reach workers whose employers don’t offer benefits.

The Labor Department’s new rules aim to clarify the regulatory rules that would govern state-run plans. State governments had requested regulatory clarification before taking action to institute their own programs.

In order to qualify as a non-ERISA plan, a state-run program would have to be established and administered by the state; provide a limited role for employers; and be voluntary for employees.

The state-run plans are likely to put downward pressure on the fees that financial-services firms charge for managing employee retirement savings. Lawmakers in some states have prioritized lower fees and the scale of a statewide program creates more leverage to demand lower costs. That in turn would put competitive pressure on private-industry plans.


Secure Retirement Income and Portability Are Key Features of Public Pension Plans

Many public pension plans have adopted features that allow individuals who change jobs to retain and even increase their benefits, according to new research by the National Institute on Retirement Security (NIRS).

NIRs analyzed 89 public pension systems throughout the country to assess the portability features of public pension systems and the ability for their members to build a secure retirement.

The study found that 71% of the plans surveyed credited their members with interest on their contributions if they left and requested a refund. Most plans allowed their members to later rejoin the system and repay their refund with interest. Most plans allowed departed members the option of leaving their account balances with the plan so they could continue to earn interest.

The findings were published in “Preserving Retirement Income Security for Public Sector Employees,” by Diane Oakley, NIRS executive director, and Jennifer Erin Brown, NIRS manager of research.

Nearly all public retirement systems studied allowed members to purchase additional service credits to increase their pension benefits. For example, all public defined benefit (DB) plans allowed for the purchase of service credits for prior military service, and more than half of them allowed for the purchase of credits for prior out-of-state government service.

A number of plans had features designed to increase benefits for short- or moderate-term employees. These included increasing the value of the deferred annuity benefits paid to former employees, rewarding employees who chose to keep their member accounts in the plan with interest, and providing higher matching amounts.

These features can encourage workers who leave before retirement to preserve the retirement income benefits they have earned, rather than spend their refunds, the authors wrote.

Shift from DB Pensions to DC Plans Exacerbates Economic Inequality

The shift from traditional defined benefit (DB) pensions to defined contribution (DC) pensions like 401(k)s is making retirement inequality much worse, according to a new study.

This shift has increased the influence of socioeconomic factors, such as education and income levels, on retirement fund accumulation, according to the study released Aug. 23.

In recent decades, traditional pensions have all but vanished, replaced by 401(k)-style plans. In 1980, 38% of private-sector workers had a pension and 19% a 401(k). By last year, according to the U.S. Department of Labor, the numbers had more or less reversed — just 15% had a pension and 43% had a 401(k).

That shift is creating “double disadvantages for the less educated,” wrote University of Kansas sociology professor ChangHwan Kim and U.S. Social Security Administration researcher Christopher Tamborini in a paper presented at the American Sociological Association’s annual conference.

The authors analyzed surveys linked to W-2 tax data to figure out how much Americans with varying levels of education were saving in their retirement accounts.

Among workers who hold similar jobs with the same pay and who both contribute to 401(k) plans, a college graduate tends to save 26% more saved than a worker with just a high school diploma, the study concluded.

“The findings suggest the importance of Social Security benefits moving forward, particularly for low earners,” Kim said.


Employer-Sponsored Pensions Are Providing Less Today Than in the Past

With increases in the Social Security full retirement age, increases in Medicare premiums and out-of-pocket health care costs, and increased longevity, households will require ever larger private pension replacement rates if they are to maintain their standard of living in retirement, according to new research.

To see whether tomorrow’s retirees will enjoy increases in replacement rates, a new paper by researchers at the Center for Retirement Research at Boston College used data from the 1992, 1998, 2004, and 2010 Health and Retirement Study (HRS) by the Institute for Social Research at the University of Michigan to compare for households ages 51-56 the participation, pension wealth, projected retirement income, and replacement rates attributable to past service, by pension type.

The findings show that although retirees will need more from employer-sponsored plans, they will receive less. Consistent with data from the Current Population Survey and other government surveys, overall participation in employer-sponsored plans has declined.

The percentage of households 51-56 with a participant in either a DB or DC plan dropped from 68% in 1992 to 63% in 2010, the study found.

Overall pension wealth can at best be characterized as “flat” from 1992 to 2010. Mean and median retirement wealth in 2010 was larger than in 1992, but lower than in 1998 and 2004.

In terms of pension income, the shift from DB to DC plans, with “actuarially unfair annuities and declining interest rates,” has resulted in a decline in the income-to-wealth ratio, the study found. The bottom line is that employer-sponsored plans are providing less today than in the past.


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Low Interest Rates Play a Role in Depleting Social Security

Record-low yields on U.S. Treasuries endanger the long-run solvency of Social Security and the future retirement benefits for younger generations of Americans, economists tell MarketWatch.

Newer Treasury bonds held by the trust fund have been earning less for years, the consequence of sluggish economic growth and persistently low interest rates.

The Federal Reserve has kept its benchmark short-term rate at or near zero for more than seven years in an effort to stimulate the economy. Even with the Fed’s extended easy-money approach, the U.S. economy has not grown fast enough to generate the necessary tax income to help fund all its responsibilities, including Social Security for current and future retirees, the article in MarketWatch found.

Low interest rates are not the only issue. There are fewer and fewer workers earning enough money and paying enough in taxes to support a higher number of retirees.

By 2034, Social Security’s $2.9 trillion reserves could be depleted. One big problem is shrinking investment income. New investments purchased by the trust funds have been earning less than 3% annually since 2009.

Yields have fallen every year from 5.3% in 2007 to 3.4% in 2015. What’s more, the trust fund only invests in U.S. Treasuries, whose yields have been suppressed by tepid economic growth and unusually strong demand by Americans and foreigners alike looking for safe investments.


California Court Rules Legislature Can Trim Public Employee Retirement Benefits

The state Court of Appeal has ruled that the California Legislature can trim public employee retirement benefits for workers who are still on the job, a potential game-changer for pension reform advocates.

The unanimous decision by a three-judge panel rejected widely held assumptions that benefits cannot be reduced once employees start working. That constraint has hindered attempts statewide, and in other cities such as in San Jose, to meaningfully stem soaring taxpayer costs for pensions.

The court said, “So long as the Legislature’s modifications do not deprive the employee of a ‘reasonable’ pension, there is no constitutional violation” of public workers’ rights.

If union lawyers appeal, it could set up a state Supreme Court fight over whether future public employee pension accruals across California can be altered.

The decision came in a Marin County case pertaining to pension “spiking” – the inflation of workers’ final salaries on which the retirement payment calculations are based.

The appellate court decision affects similar spiking lawsuits in Contra Costa, Alameda and Merced counties. But, more significantly, the decision might allow alteration of underlying pension formulas statewide.

California’s debate over public employee pensions has always revolved around the so-called “California rule” – a series of court decisions that seemingly prohibit any changes in pension benefits once they are granted.

The rule, first enunciated in a 1955 state Supreme Court case out of Long Beach, has often been cited by public employee unions and others as they resist efforts at state and local levels to overhaul pension programs and reduce their heavy costs.

It is based on clauses in the federal and state constitutions prohibiting the “impairment” of contracts and the assumption that pension benefits are, in fact, protected contracts.

The ruling, if upheld by the state Supreme Court, would greatly dilute the California rule, possibly allowing some substantial changes in state and local pension promises to future retirees if politicians or voters are willing to make them.


Top Universities Sued Over High Fees, Poor Quality of 401(k)-Style Plans

The Massachusetts Institute of Technology (MIT), Yale University and New York University are being sued because their 401(k)-style retirement plans allegedly charge excessive fees and have provided employees with a bewildering array of often-low-quality investment options.

The lawsuit makes the claim that the universities have in effect allowed the transfer of a significant portion of their employees’ potential retirement benefits to Wall Street investment firms. It provides fodder for detractors of 401(k)s who claim these types of retirement plans are a lousy deal for workers.

Quite a bit of evidence exists that 401(k)-style plans do have higher fees and lower returns than pooled defined benefit (DB) plans. According to the National Institute on Retirement Security (NIRS), achieving the same retirement benefit with a 401(k)-style plan can take nearly twice as much in contributions.

The high fees and low returns of 401(k)-style retirement plans mean that when states decide to switch all or part of their public employees’ retirement plans to 401(k)-style savings, they in fact increase, rather than decrease, taxpayer costs for public-employee compensation.

For example, if contributions to retirement remain unchanged, but some of the money goes into 401(k)-style savings, future employees’ retirement benefits will fall. With a lower retirement benefit, schools and the state would likely have to increase salaries to keep the overall compensation package competitive.


SEC Uncovers 71 Violations in Municipal Bond Offerings

The Securities and Exchange Commission (SEC) has taken enforcement actions against 71 municipal issuers and other obligated persons for violations in municipal bond offerings.

The actions were brought under the Municipalities Continuing Disclosure Cooperation (MCDC) Initiative, a voluntary self-reporting program targeting material misstatements and omissions in municipal bond offering documents that was recently launched by the SEC.

The initiative offered favorable settlement terms to municipal bond underwriters, issuers and “obligated persons” that self-reported certain violations of the federal securities laws. Obligated persons are typically nonprofit entities such as hospitals and colleges that borrow the proceeds of bond issuances and are obligated to pay principal and interest on the bonds.

The SEC found that from 2011 to 2014, the 71 issuers and obligated persons sold municipal bonds using offering documents that contained materially false statements or omissions about their compliance with continuing disclosure obligations.

The SEC said one of the issuers charged was Pecos County, Texas, which made material misstatements during the sale of municipal securities.


New Regulations Seek to Enhance Information Reported by Investment Advisers

The Securities and Exchange Commission (SEC) has adopted amendments to several Investment Advisers Act rules and the investment adviser registration and reporting form to enhance the reporting and disclosure of information by investment advisers.

The amendments are aimed at improving the quality of information that investment advisers provide to investors and the SEC.

The amendments will require investment advisers to provide additional information regarding their separately managed account business, including aggregate data related to the use of borrowings and derivatives, and information about other aspects of their advisory business, including branch office operations and the use of social media.

In addition, the amendments will facilitate streamlined registration and reporting for groups of private fund adviser entities operating a single advisory business.

DB Pensions Contribute Billions of Dollars to Local Economies

The economic impact of defined benefit (DB) pension expenditures measures in the billions of dollars and have immense multiplier effects, according to “Pensionomics 2016,” an annual study published by the National Institute on Retirement Security (NIRS).

Nearly $520 billion in pension benefits were paid to 24.3 million retired Americans in 2014, including $253 billion paid to about 9.6 million retired employees of state and local governments and their beneficiaries. The total also included $78.8 billion paid to about 2.6 million federal government retirees and beneficiaries, and $187.9 billion paid to about 12.1 million private-sector retirees and beneficiaries.

Expenditures from these payments collectively supported 7.1 million American jobs that paid $354.8 billion in labor income, according to the report. The expenditures also supported $1.2 trillion in total economic output nationwide, $627.4 billion in value added (GDP); and $189.7 billion in federal, state, and local tax revenue.

At the same time, DB pension expenditures have large multiplier effects. Each dollar paid out in pension benefits supported $2.21 in total economic output nationally, the report found. Each taxpayer dollar contributed to state and local pensions supported $9.19 in total output nationally. This represents the financial value of long-term investment returns and the shared funding responsibility by employers and employees.

The study analyzed data on DB pension plans in both the public and private sectors to assess the overall national economic impact of benefits paid by these plans to retirees.

For state and local government pension plans, the study analyzed these impacts at the state level for each of the 50 states and the District of Columbia.

Texas Court Rules Statute that Established Houston Firefighters Pension System Is Constitutional

The Houston Firefighters’ Relief and Retirement Fund (HFRRF) won another major victory in a lawsuit brought by the City of Houston that sought power to oversee the pension fund to save the city money.

Houston sued the HFRRF in January 2014 seeking to overturn a state law that prohibits the city from making financial decisions related to the pension fund – including setting benefit levels and employer contributions.

In May 2014, a Texas district court sided with the pension fund. The city appealed. On Sept. 8, the Texas Fourteenth Court of Appeals rejected the city’s petition to have the statute declared unconstitutional.

Texas appeals court Judge John Donovan rejected Houston’s claims, specifically saying that the “city’s contributions are set by [state law] and not arbitrarily decided by the board” and are “related to member salaries and contributions.” Donovan ruled that the district court’s opinion in the fund’s favor was correct on all grounds.

The statute governing the $3.8 billion pension fund has been changed or updated over the years by the legislature, but has operated constitutionally for 79 years to provide retirement and disability benefits to Houston firefighters and their survivors.

“It appears that the lawsuit was without any basis to begin with and the City has wasted both City and Fund resources in a meritless lawsuit, which has been senselessly continued on appeal,” David Keller, the fund’s chairman, said in a statement.

In the wake of the ruling, Houston Mayor Sylvester Turner unveiled a pension reform plan that he said would slash the city’s pension liability by $2.5 billion, helping to eliminate a debt that threatens to cripple public services.

But there is one major caveat: any changes to the city’s municipal worker, police and firefighter pension funds must be approved by the Texas Legislature, as state law governs how much the city pays into the funds each year.

The legislature established the firefighters’ relief and retirement fund and set a requirement that it apply only to a city with a population of 1.6 million or more with a fully paid fire department. In his opinion, Donovan wrote that the act indisputably applies to Houston under that parameter.

Continued p. 3
The city argued that there was no basis for separate pension laws, and that doing so treated Houston differently than other major cities in the state. But the court wrote that Houston is larger than the other cities, and is “much more industrial,” because of the port, chemical plants and refineries.

“These factors would translate to more service calls for firefighters and greater risk of injury or death and thus a reason to treat the firefighters in Houston differently than those in the other cities with respect to benefits, including disability and survivor benefits, and encourage employment as a firefighter in Houston,” the court wrote.

The case is City of Houston v. Houston Firefighters’ Relief and Retirement Fund, case number 14-14-00437-cv, in the Fourteenth Court of Appeals of Texas.


Texas Not Liable for Financial Obligations of Municipal Retirement Systems, Attorney General Rules

Texas most likely would not be required to assume any liability if a municipal retirement system becomes unable to meet its financial obligations, according to an opinion by Attorney General Ken Paxton.

Paxton’s opinion, published Sept. 6, was in response to a March 8 letter from State Rep. Jim Murphy (R-Houston), who requested Paxton’s opinion on the matter.

In the letter, Murphy said he was concerned about rising pension and health care costs, unpredictable revenues, aging infrastructure, high debt loads and increasing costs of city services, saying that municipalities’ ability to balance budgets and maintain strong credit ratings is threatened.

“Should one of these specific municipal retirement systems fail to meet its obligations, is the State responsible for ensuring that agreed upon payments are made?” Murphy inquired.

Paxton replied that the state’s constitution prohibits the creation of debt, except in “limited circumstances not present here.”

“In no instance does the constitution or the Legislature make the State liable for any shortfalls of a municipal retirement system regarding the system’s financial obligations under title 109 [of the Texas Civil Statutes],” Paxton wrote.

“The Texas Constitution would in fact prohibit the State from assuming such liability without express authorization,” he added.

Texas had 13 local retirement systems operating in 2015.


Market Realities Make It Difficult for Public Pensions to Return to Pre-Recession Funding Levels

Most U.S. state pension plans have not recovered from the Great Recession of 2008-09, and investment returns over this year and last are not going to make it any easier to reach pre-recession funding levels, according to S&P Global Ratings.

“Continued trends of slow revenue growth, growing liabilities, and higher future pension contribution costs could amplify an already constrained budget environment for many states,” according to the study, which was based on valuation data compiled by S&P through 2014 for all state-sponsored plans in the 50 states as reported in their 2015 comprehensive annual financial reports (CAFRs).

In its pension analysis, S&P measured the states’ pension funded ratios; compared net pension liability per capita in 2015 under the new Governmental Accounting Standards Board (GASB) reporting standards with unfunded actuarial accrued liability (UAAL) per capita in 2013 under the previous GASB accounting; and compared total annual plan contributions to accounting measures for plan funding progress.

Most plans reported a decline in funded ratios between fiscal years 2014 and 2015 due to relatively weak market performance and higher reported liabilities.

The report concluded that states might seek more pension reforms as a way to manage rising pension liabilities.

Study of State Pension Performance Finds Most Funds Are Successful Stewards of Pension Assets

The role of investments in helping solve pension underfunding will largely be determined by the future health of the capital markets, particularly for equity securities, according to new research by Cliffwater LLC, which provides alternative investment strategies and investment consulting services.

Overall, state pensions continue to take advantage of what the capital markets offer in returns, and the importance of individual state policy and manager decisions that can significantly contribute to return outcomes.

The report, which examined state pension performance from 2006-2015, focused on the management of state pension assets, an important but not well understood aspect of pension funding.

While capital markets largely drive returns for state pensions, the research found a wide range of 10-year return outcomes among state pensions. Most of these differences were attributable to implementation, i.e., fund/manager selection, rather than differences in asset allocation.

The report also found:

• State pensions collectively earned a 6.8% median annualized return over the 10 years ended June 30, 2015, but underperformed their 8% median actuarial interest rate assumption for the same period.
• Two-thirds of state pension returns exceeded a 6.5% return for a passive 65/35 mix of stock and bond index funds.
• The 6.8% median state pension return fell within a wide 4.8% to 8.4% range of individual state returns, with the top performing state plan outperforming the bottom performing state plan by a cumulative 63.8% over 10 years, demonstrating the potential for significant financial consequences underlying investment policy and implementation decisions.
• State pension returns were volatile year to year, with a median standard deviation of return equal to 12.7%.

“States overall have been successful stewards of pension assets over our 10 year study period, achieving returns that captured the opportunities presented by global markets, and then some,” the study’s authors wrote. “However, we find significant differences among individual state pension 10-year returns, mostly unexplained by simple differences in asset allocation or risk-taking. Some state pensions just appear more effective in implementing asset allocation compared to others.

“We recommend that fiduciaries overseeing state pensions continue to allocate resources towards maximizing the return potential from its asset classes, paying particular attention to differences in how state pensions implement within asset classes. Unfortunately, the anonymity underlying universe comparisons has made it challenging for fiduciaries to understand why some plans are more successful than others.”


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TEXPERS Keynote Speaker
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America and Texas at a Time of Great Disruption
Social Security Fails to Properly Explain Effects of Taking Benefits Early

The Social Security Administration (SSA) is coming under attack for failing to inform people about the pros and cons of claiming benefits early.

A study by the Government Accountability Office (GAO) found that SSA often fails to give out key details to retirees in face-to-face meetings and online that could result in huge swings in the amount of retirement benefits they receive.

The report’s main finding was that the SSA should do a better job of informing people that they could receive higher monthly payments if they delayed claiming retirement benefits. The longer retirees wait to claim Social Security, the higher their monthly benefit is.

The report, based on GAO’s review of surveys, academic studies and interviews with Social Security experts, found:

- SSA claims specialists did not discuss the advantages of waiting until a later age to claim benefits in eight of 26 in-person interviews that the GAO observed where people could have received a higher monthly benefit if they had waited to claim. SSA requires all of its staff to talk to people about the pros and cons of their filing decisions.

- In 10 observed interviews, claims specialists offered the opportunity for people to claim up to six months of retroactive benefits as a lump sum. While a lump sum may be attractive to retirees, taking it means a permanent reduction in monthly benefits. Specialists explained this trade-off only in one interview that the GAO watched.

The study’s findings prompted U.S. Sens. Susan Collins (R-Maine) and Claire McCaskill (D-Mo.), the chairman and ranking member, of the Senate Special Committee on Aging, to hold a hearing on Sept. 14, which highlighted the importance of individuals choosing the right time to begin receiving benefits. This decision can affect a recipient’s retirement income by tens of thousands of dollars.


More Tools Needed to Boost Retirement Savings for the Masses

The most promising current initiative to increase retirement savings might be the state government programs set up to auto-enroll private workers not covered by an employer plan into an IRA, according to a new brief published by the Center for Retirement Research at Boston College.

Failing to save for retirement assures a sharp drop in living standards when the paychecks stop, and ample evidence indicates that many Americans are not saving enough, according to the brief, “Can We Increase Retirement Saving?” by Steven Sass.

To encourage workers to save, the federal government provides tax incentives that particularly benefit higher-income workers. Although the government foregoes a substantial amount of revenue to provide these incentives, the latest research suggests that increasing the generosity of these incentives would not significantly increase retirement saving.

Research has shown that behavioral interventions can significantly increase retirement saving, and the federal government has encouraged their use in employer plans. Employers have used these tools to substantially boost participation in 401(k) plans.

But these tools are also often associated with a reduction in employee contributions and employer match rates, which dampens the overall rise in retirement saving. Auto-IRA programs would default a substantial portion of today’s uncovered workers into a payroll-deduction plan.

If retirement saving is primarily responsive to behavioral incentives, the Auto-IRA could be the initiative that offers the greatest promise for increasing retirement saving, the brief concludes.

Independent Study Documents More Bad News for 401(k) Pensions

The shift from traditional defined benefit (DB) pension plans to defined contribution (DC) plans, such as 401(k) plans, has led to an income and education gap in pension savings that could exacerbate future economic inequality, according to a study that was presented at the 111th Annual Meeting of the American Sociological Association (ASA).

“The movement towards voluntary, contributory employer pensions has increased the influence of socioeconomic factors, such as education and income levels, on retirement fund accumulation,” said study co-author ChangHwan Kim, an associate professor of sociology at the University of Kansas.

Unlike DB plans, which promise a fixed, pre-established monthly benefit for employees upon retirement, DC plans entail monthly contributions from employees, and sometimes employers, which are then invested on the employee’s behalf. The final amount an employee receives upon retirement depends on total lifetime contribution to his or her account, plus investment gains or losses.

A key difference between DC plans, which have been growing in popularity since 1980, and DB plans is that workers may choose to opt out of participating in DC plans.

When DC plans are offered in workplaces, people with a bachelor’s degree or higher are 1.2 times more likely to enroll in them than high school graduates even after controlling for the effect of annual earnings, occupation, industry, firm size, and other characteristics, the study found.

Furthermore, people with a bachelor’s degree or higher save an average of 26 percent more annually to their DC retirement accounts than participating high school graduates even if both groups earn the same amount of annual income.

“These enrollment and savings decisions may not only be influenced by job factors such as a worker’s earnings level, but also by non-labor market mechanisms that may include a person’s amount of financial knowledge and his or her concern with planning for the future, of which less educated people may have lower levels,” said Kim, who co-authored the study with Christopher Tamborini, a senior researcher for the U.S. Social Security Administration.


Funding Ratios Dropped in 2015 for City and County Retirement Systems

The funding ratio for the city and county pension plans was 70% in fiscal year 2015, down from 74% in fiscal year 2014, according to a new study by Wilshire Consulting.

Despite relatively strong performance from U.S. stocks, both an increase in interest rates in the second quarter of 2015 and a stronger U.S. dollar weakened the performance of fixed income and non-U.S. dollar investments during the year, allowing pension liabilities to outpace pension assets in 2015, the report stated.

The Wilshire 2016 Report on City & County Retirement Systems: Funding Levels and Asset Allocation is based upon data gathered by Wilshire from the most recent financial and actuarial reports available and includes 109 city and county retirement systems. Of these 109 systems, 99 systems reported actuarial values on or after June 30, 2015 and the remaining 10 systems last reported before that date.

Out of the 99 city and county retirement systems that reported actuarial data for 2015, 93% were underfunded with market value of assets less than pension liabilities.

On average, city and county pension portfolios had a 63.9% average allocation to equities, including real estate and private equity, and a 36.1% allocation to fixed income and other non-equity assets. This equity allocation is slightly lower than the 67% equity allocation a decade prior in 2005.

Asset allocation varied by retirement system. Thirty-three of the 109 retirement systems had allocations to equity that equal or exceed 75%, and nine systems had an equity allocation below 50%.

Wilshire forecast a median return on city and county pension assets equal to 6% per annum. This 6% estimate was 1.5% below the median actuarial interest rate assumption of 7.5%. It’s important to note that Wilshire’s standard asset class assumptions range over a conservative 10+-year time horizon, while pension plan interest rate assumptions typically project over 20 to 30 years. Using Wilshire’s 30-year long-term asset class assumptions, the median estimated return would be 7.3%.

Teacher Pay Gap Is Wider Today than Previously Thought

While it has been a long held axiom that nobody goes into teaching to get rich, it is now apparent that the penalty teachers pay in the form of a reduced salary is worse than many thought.

According to a new white paper by the Economic Policy Institute, the so-called the “teacher pay penalty” – the difference between teachers’ and comparable public workers’ pay – is bigger than ever.

In 2015, the weekly wages of public school teachers in the United States were 17 percent lower than comparable college-educated professionals – and those most hurt were experienced teachers and male teachers, according to the study.

Average weekly wages (adjusted for inflation) of public-sector teachers decreased $30 per week from 1996 to 2015, from $1,122 to $1,092 (in 2015 dollars), the study found. In contrast, weekly wages of all college graduates rose from $1,292 to $1,416 over this period.

For all public-sector teachers, the relative wage gap (regression adjusted for education, experience, and other factors) has grown substantially since the mid-1990s: It was -1.8 percent in 1994 and grew to a record -17 percent in 2015, the study found.

The relative wage gap for female teachers went from a premium in 1960 to a large and growing wage penalty in the 2000s. Female teachers earned 14.7 percent more in weekly wages than comparable female workers in 1960. In 2015, the study estimated a -13.9 percent wage gap for female teachers.

The wage penalty for male teachers was much larger, the study found. The male teacher wage gap was -22.1 percent in 1979 and improved to -15.0 percent in the mid-1990s, but worsened in the late 1990s into the early 2000s. It stood at -24.5 percent in 2015.

While relative teacher wage gaps have widened, some of the difference may be attributed to a tradeoff between pay and benefits. Non-wage benefits as a share of total compensation in 2015 were more important for teachers (26.6 percent) than for other professionals (21.6 percent). The total teacher compensation penalty was a record-high 11.1 percent in 2015 (composed of a 17 percent wage penalty plus a 5.9 percent benefit advantage). The bottom line is that the teacher compensation penalty grew by 11 percentage points from 1994 to 2015.

The erosion of relative teacher wages has fallen more heavily on experienced teachers than on entry-level teachers, the study found. The relative wage of the most experienced teachers has steadily deteriorated – from a 1.9 percent advantage in 1996 to a 17.8 percent penalty in 2015.

Collective bargaining helps to abate the teacher wage gap. In 2015, teachers not represented by a union had a -25.5 percent wage gap – and the gap was 6 percentage points smaller for unionized teachers.

“An effective teacher is the most important school-based determinant of education outcomes,” the report stated. “It is therefore crucial that school districts recruit and retain high-quality teachers.”


SEC Seeks Public Comments on Proposed Disclosure Requirements

The U.S. Securities and Exchange Commission (SEC) is seeking public comment on proposed disclosure requirements, including those relating to management, certain security holders, and corporate governance matters.

The request for comment is part of the Disclosure Effectiveness Initiative, which is a broad-based staff review of the disclosure requirements in Subpart 400 of Regulation S-K and the presentation and delivery of the disclosures.

The request for comment also will inform the SEC’s study on Regulation S-K, which is required by the Fixing America’s Surface Transportation (FAST) Act.

The public comment period will remain open for 60 days following publication of the comment request in the Federal Register.


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GAO Study Faults 401(k) Plans for Not Providing Lifetime Income Stream

Many 401(k) plan sponsors do not offer options to help participants with the complex task of making their savings last for their entire lifespan, according to a new report by the Government Accountability Office (GAO).

The debate around how to turn 401(k) assets into a lifetime income stream has been a major focus for regulators and 401(k) industry stakeholders of late.

The GAO study, based on interviews and surveys of stakeholders, found that most plans studied had not adopted products and services that could help participants turn their savings into a retirement income stream (referred to as lifetime income options).

Responses to a questionnaire represented more than 40 percent of all 401(k) assets and about a quarter of plans at the end of 2014. GAO, the investigative arm of Congress, found that of the plans covered by the questionnaire, about two-thirds did not offer a withdrawal option – payments from accounts, sometimes designed to last a lifetime – and about three-quarters did not offer an annuity, which are arrangements that can guarantee set payments for life.

GAO made seven recommendations to the Department of Labor (DOL), including that it clarify the criteria to be used by plan sponsors to select an annuity provider, consider providing limited liability relief for offering an appropriate mix of lifetime income options, issue guidance to encourage plan sponsors to select a record-keeper that offers annuities from other providers, and more.


DB Plan Sponsors Focused on Governance Have Better Outcomes

Plan sponsors who are committed to improved governance standards tend to produce better long-term outcomes for their members, according to new research by State Street.

The study surveyed defined benefit (DB) pension funds and identified a group of “governance leaders” among plan sponsors. Improving governance was a top priority for all pension funds in the study. More than nine-in-10 (92%) said they will upgrade at least one aspect of their governance approach this year.

The research indicated that public funds may be able to enhance long-term outcomes for their members by upgrading their risk-management capabilities and governance frameworks to support value-added investment opportunities, including allocations to more complex assets.

The study attempted to identify the qualities plan sponsors need to be “governance leaders.” Governance leaders focus on pursuing new investment strategies, prioritizing risk management capabilities, hiring more risk talent and expanding internal investment capabilities, enhancing their board’s effectiveness, and improving funding levels, the report said.

Governance leaders expect to eliminate their plan deficits more quickly than other pension funds in the survey. They also adapted their investment strategies to help manage any funding shortfalls and to balance assets and liabilities. According to the survey, governance leaders’ governing fiduciaries have above-average general investment literacy, and better understanding of the risks facing their fund.

By adopting an advanced approach to governance, Governance Leaders are better prepared to fully realize their objectives while minimizing risk exposure compared with other pension funds in our survey,” the report stated.

When Given the Chance, Lawmakers Lean toward Hybrid Pensions over DB or DC Only Plans

Members of Congress apparently cannot decide what kind of pension structure they favor: either traditional defined benefit (DB) pension plans like those in place across the country for public employees or defined contribution (DC) plans such as 401(k)s that have been preferred for private-sector employees.

In proposing legislation to revamp the private multiemployer pension plan system, members of Congress are not backing either DB or DC plan structures and instead are indicating a preference for a hybrid approach as the best way to fix pension plan underfunding.

The U.S. House Education and the Workforce Committee on Sept. 9 released draft language of a proposed bill that aims to bolster multiemployer pension plans by combining the features of DB and DC plans into a “composite” option that aims to restore pension plan solvency.

Multiemployer plans are created by collective bargaining agreements between unions and several employer-sponsors and therefore are different in structure from traditional public employee DB pension plans. But when faced with the question of how to address pension solvency issues, the actions that members of Congress take can be instructional as to how they would improve retirement security for all Americans.

The legislation, proposed by committee chairman Rep. John Kline (R-Minn.), would create a new “composite” of DB and DC plans that would pay retirees a regular annuity based on calculations that consider years worked and final salary.

Composite plans are designed for plan sponsors who are seriously exploring a move away from DB plans to DC plans. They would offer workers several options of how much to contribute, which would determine how big their annuity would be upon retirement.

A stand-alone DC plan limits the contributions sponsors would be required to make, but also would transfer much risk to plan participants.

Composite plans are designed to be superior to stand-alone DC plans and retain components of DB plans. They would eliminate individual accounts used in 401(k) plans, pool longevity risk and require benefits to be paid in a life annuity.

In addition, composite plans would have their investment assets professionally managed at presumably low negotiated fees, prohibit account leakage and install a funding mechanism that both limits employer obligations and seeks to protect participants from investment market risk.

But many stakeholders indicated they strongly oppose the composite plan idea.

In a letter to lawmakers, groups including AARP, the Pension Rights Center, the International Brotherhood of Teamsters and the International Association of Machinists and Aerospace Workers urged Congress not to take up such “flawed legislative proposals.”

The groups expressed concern that the bill would “permit employers and plans to adopt new plans while putting at greater risk the funding of already unfunded pension promises in existing plans.”

On Sept. 22, the House Education and the Workforce Subcommittee on Health, Employment, Labor, and Pensions, chaired by Rep. Phil Roe (R-Tenn.), held a hearing to receive public feedback on Kline’s proposal for composite multiemployer pension plans. Most of the witnesses who testified had a favorable take on the proposed legislation.

The committee said it will continue to solicit feedback from the broader public while working on a final legislative proposal to revamp the multiemployer pension system.

New Law in California Mandates Disclosure of Fees Charged to Public Funds

California Gov. Jerry Brown on Sept. 14 signed legislation (AB 2833) imposing the nation’s most robust transparency requirements on the fees paid by public pension funds.

Under the legislation, private equity and hedge funds must disclose the fees they charge to California’s public pension funds. The law requires investment cost disclosure for statewide funds such as the California Public Employees’ Retirement System and California State Teachers Retirement System, but also applies to city and county retirement systems, the University of California Retirement System and other independent public retirement systems.

The bill was sponsored by State Treasurer John Chiang and the American Federation of State, County and Municipal Employees and authored by assembly member Ken Cooley (D-Rancho Cordova).

Under the law, investment vehicles must tell the pension systems the fees and expenses they charge directly to the systems, other fees the vehicles pay to fund managers such as carried interest, and the gross net rate of return since a vehicle’s inception.

The pension funds must disclose the information in a report presented at a public meeting at least once a year. The disclosure requirements will be included in all new contracts between the public systems and investment vehicles, and in existing contracts through which the systems make new capital commitments starting Jan. 1, 2017.

According to Chiang’s office, CalPERS disclosed in 2015 that it had paid $3.4 billion in performance fees to equity managers since 1990. The fund has $26.4 billion, or 8.9 percent, of its portfolio invested in private equity. As state treasurer, Chiang serves on the board of directors for CalPERS and CalSTRS.

A.B. 2833 won unanimous votes in the Senate and Assembly to reach Brown’s desk Sept. 2.


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