AGENDA

Date: December 2, 2016

The regular meeting of the Dallas Police and Fire Pension System Board of Trustees will be held at **8:30 a.m. on Thursday, December 8, 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 November 10, 2016
b. Emergency meeting of November 15, 2016

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

3. **Approval of Estate Settlements**

4. **Approval of Survivor Benefits**

5. **Approval of Service Retirements**

6. **Approval of Alternate Payee Benefits**

C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. **Committees of the Board and possible Committee appointments**

2. **Possible action on sale of private assets**

   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. Possible secondary sale
   b. Possible action on Lone Star CRA Fund

3. Possible changes to DROP Policy

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.

4. Discussion and possible action on City of Dallas pension proposals

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.

5. Possible action on legislative matters

a. Approval of contracts for HillCo Partners and Locke Lord, LLP
b. Approval of possible legislation

6. Update and possible action on 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.

7. NEPC: Third Quarter 2016 Investment Performance Analysis

8. Investment reports

9. **Approval of rebalancing and investment manager changes**

10. **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. CDK Realty Advisors LP v. Dallas Police and Fire Pension System
    e. 2016 Plan amendment litigation

11. **Ad hoc committee report**

12. **2016 Annual Benefit Statements and Deferred Retirement Option Plan (DROP) Statements for Members of the Dallas Police & Fire Pension System**

    a. Annual Statements
    b. Financial Condition Letter

13. 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.

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

Open Meetings Act, Public Information Act

15. Possible changes to Education and Travel Policy and Procedure

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.** DROP update
- **b.** Public relations firm
- **c.** Future Education and Business Related Travel
- **d.** Future Investment Related Travel
- **e.** Associations' newsletters
  - NCPERS Monitor (November 2016)
  - TEXPERS Outlook (November 2016)
  - TEXPERS Pension Observer (Fall 2016)

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

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

DALLAS POLICE & FIRE PENSION SYSTEM

ITEM #A

MOMENT OF SILENCE

In memory of our Members and Pensioners who recently passed away

(November 3, 2016 – December 1, 2016)

NAME	ACTIVE/ RETIRED	DEPARTMENT	DATE OF DEATH
W. B. Busby	Retired	Fire	Nov. 6, 2016
Foy W. Page	Retired	Police	Nov. 18, 2016
Hermon A. Inmon, Jr.	Retired	Fire	Nov. 21, 2016
Leonard E. Jez	Retired	Police	Nov. 21, 2016

Dallas Police and Fire Pension System
Thursday, November 10, 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, Kenneth Sprecher
Present at 8:38	Jennifer S. Gates, Erik Wilson
Present at 8:57	Scott Griggs
Absent:	Philip T. Kingston

Staff Kelly Gottschalk, Josh Mond, Summer Loveland, John Holt, Damion Hervey, Ryan Wagner, Milissa Romero, Christina Wu, Linda Rickley

Others Chuck Campbell, Daniel Wojcik, Steve Zuczek, Keith Stronkowsky, Michael Yang, Sen. John Whitmire, Gardner Pate, Neftali Partida, Crystal Ford, Neal T. "Buddy" Jones, Clint Smith, John M. Mays, Linda Mays, W. G. Huffman, Jerry Fuller, Alba Antrobus, Jerry M. Rhodes, George D. Payne, Tom Payer, Rick Salinas, Mitchell Smith, Michael Bell, Joel Lavender, Hoyt Hubbell, H. Holland, Keith Allen, Jim Aulbaugh, Monica Hernandez, Tomas Austley, Lori Brown, Bob Hawman, Sandy Alexander, Brendon Marus, Edward Scott, Alex Boyd, Mary Walsh, Josh Womack, Audrea Rega, Sandy Aloncada

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

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A. MOMENT OF SILENCE

The Board observed a moment of silence in memory of retired police officers Jack B. Cobb, Jack T. Hearn, Arthur P. Willis, and Warren Horton, Jr., and retired firefighters Kenneth R. Strader and J. T. Alexander.

No motion was made.

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B. CONSENT AGENDA

1. Approval of Minutes

a. Regular meeting of October 13, 2016
b. Special meeting of October 18, 2016, 1:00 p.m.
c. Special meeting of October 18, 2016, 6:00 p.m.
d. Special meeting of October 20, 2016

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

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

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

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C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. Appointment of Interim Police Pensioner Trustee

Ms. Gottschalk stated that Police Pensioner John Mays resigned from the Board, effective on October 13, 2016. The Plan requires the Board to appoint a police retiree to the open position to serve the remainder of the term, which ends on May 31, 2017. A sub-committee of the Board interviewed those who submitted a letter of interest. The Board interviewed the following candidates for the Interim Police

1. Appointment of Interim Police Pensioner Trustee (continued)

Pensioner Trustee in alphabetical order at the November 10 meeting: Kenneth Sprecher, Daniel Wojcik, and Steve Zuczek.

Ms. Gates and Mr. Wilson were present during all of the interviews. Mr. Griggs was present during the interviews of Messrs. Wojcik and Zuczek.

Mr. Friar asked the Board for nominations. Mr. Schutz made a motion to appoint Kenneth Sprecher as the Interim Police Pensioner Trustee for the remainder of the term, which ends on May 31, 2017. Mr. Griggs seconded the nomination.

Mr. Haben made a motion to appoint Dan Wojcik as the Interim Police Pensioner Trustee for the remainder of the term, which ends on May 31, 2017. The motion died for the lack of a second.

No further nominations were made.

The Board voted unanimously to approve the previous motion to appoint Kenneth Sprecher as the Interim Police Pensioner Trustee position to fill the remainder of the term, which ends on May 31, 2017.

Following the vote, Kenneth Sprecher completed the Oath of Office form and began acting in the role of Police Pensioner Trustee.

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The meeting was recessed at 9:37 a.m.

The meeting was reconvened at 9:47 a.m.

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2. Emerging managers

The Board previously requested staff and NEPC to provide additional research to the Board regarding the possible establishment of an emerging manager policy for DPFP's due diligence and investment selection process. Staff and NEPC have researched various industry-wide definitions for "emerging manager" and possible methods to implement a program for DPFP. Keith Stronkowsky, Senior Consultant, of NEPC, and staff presented their considerations for the program.

2. Emerging managers (continued)

Mr. Friar asked the Governance Committee to consider what should be the qualifications of emerging managers, report back to the Board, and then refer the matter to the Investment Advisory Committee for the review of the Investment Policy Statement in May 2017.

The Board directed staff to include at least one emerging manager in each manager search conducted in the future.

No motion was made.

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The meeting was recessed at 10:25 a.m.

The meeting was reconvened at 10:36 a.m.

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3. Monthly and quarterly investment reporting

Staff and NEPC presented the updated monthly and quarterly investment reports. As a potential cost savings measure, these updated investment reports could replace the current monthly investment oversight reports provided by Maples Fund Services. The updated monthly reports, which staff would prepare, focus on asset allocation, liquidity and monthly portfolio investment activity and would be complemented by the monthly flash performance report prepared by JP Morgan, DPFP's custody bank. NEPC's quarterly performance report, which is the source for DPFP's official investment performance calculations, has been enhanced for ease of use while providing a greater focus on return attribution and overall risk exposure.

After discussion, Ms. Gates made a motion to terminate Maples Fund Services contract with a 60-day notice. Mr. Wilson seconded the motion, which was unanimously approved by the Board.

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4. Investment reports

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

4. Investment reports (continued)

No motion was made.

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5. Quarterly financial reports

Ms. Loveland presented the third quarter 2016 financial statements.

No motion was made.

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The meeting was recessed at 2:31 p.m.

The meeting was reconvened at 2:37 p.m.

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6. Plan amendment election update

Ms. Gottschalk discussed the status of the plan amendment election and the related Member meetings.

No motion was made.

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7. Legislative update

Senator John Whitmire, Gardner Pate, Neftali Partida, and Crystal Ford, of Locke Lord, LLP, and Neal T. "Buddy" Jones and Clint Smith, of HillCo Partners, the System's legislative consultants, were present to discuss the 2016 state and federal election outcomes and 2017 legislative issues. Additionally, the Board discussed a letter from Texas State Representative Dan Flynn to Dallas Mayor Mike Rawlings.

No motion was made.

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The meeting was recessed at 11:57 a.m.

The meeting was reconvened at 12:02 p.m.

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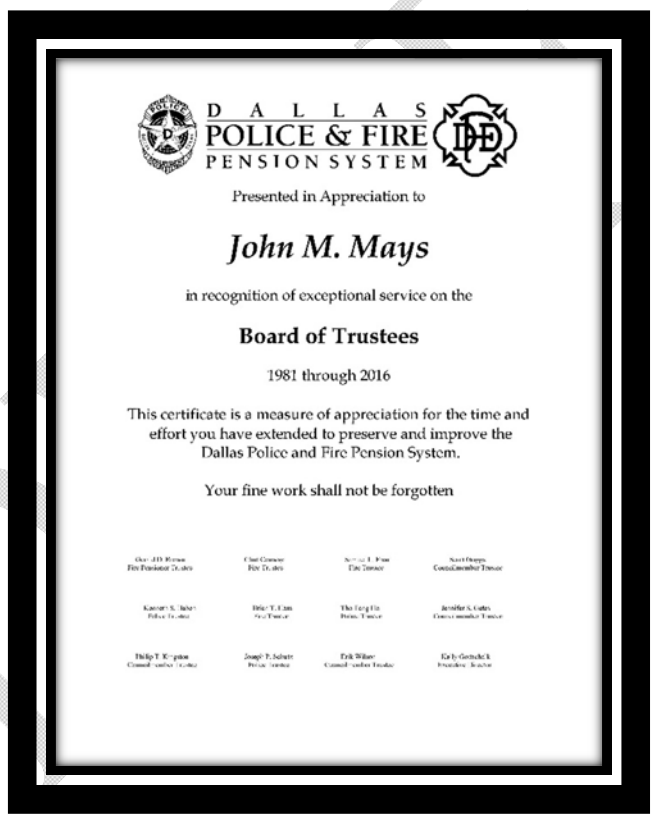
8. Recognition of Former Trustee

The Chairman and Executive Director, on behalf of the Board, presented a plaque of appreciation to John M. Mays for his dedicated service on the Board of Trustees as Trustee.

Mr. Mays served as Police Trustee from June 1981 through November 2000, and as Police Pensioner Trustee from June 2001 through October 2016.

No motion was made.



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The meeting was recessed at 12:38 p.m.

The meeting was reconvened at 1:35 p.m.

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Messrs. Griggs and Wilson were not present when the meeting was reconvened and for the remainder of the meeting.

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9. Potential Investment Policy Statement changes

Ms. Gottschalk stated that the current Investment Policy Statement (IPS), which was approved in May 2016, included asset class targets and ranges. Pursuant to the IPS, staff has authority to rebalance to the upper and lower bound of the target asset class range with the investment consultant's approval. Several asset classes are at or near the lower bound of the target range, therefore rebalancing certain asset classes below the lower bound of the range will be required.

After discussion, Mr. Brown made a motion to allow staff and the consultant, for a six month period ending with the April 13, 2017 Board meeting, to (i) rebalance outside the target ranges set forth in the Investment Policy Statement or (ii) terminate managers for rebalancing purposes, in both situations where prior approval of the Board is not possible and it is the Executive Director's determination that such rebalancing is in DPFP's best interest, provided that if such actions are taken, the Board is advised at the next regularly scheduled Board meeting. Mr. Haben seconded the motion, which was unanimously approved by the Board.

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10. Discussion and approval of the 2017 Budget

Ms. Loveland stated that the 2017 Budget has been prepared in total for both the Combined Pension Plan and the Supplemental Plan and was presented in the Regular Board meeting on October 13, 2016. Total expenses are allocated to the Supplemental Plan based on unitization as reported by JPMorgan.

At the October Board meeting, the Board directed staff to make further budget reductions to be presented to the Board in November.

The revised proposed budget, net of expenses allocated to the Supplemental Plan, totals $9.4M which is a decrease of 19.3% compared to the prior year budget and a decrease of 6.5% compared to the original 2017 budget proposal presented in October.

10. Discussion and approval of the 2017 Budget (continued)

After discussion, Mr. Brown made a motion to approve the Calendar Year 2017 budget with the changes discussed, including eliminating funding for the Marco proxy voting service. Mr. Hass seconded the motion, which was unanimously approved by the Board.

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11. 2017 Board meetings

Staff presented the proposed 2017 Board meeting calendar.

After discussion, Mr. Ho made a motion to approve the 2017 Board meeting calendar, subject to the final approval of the Executive Director. Mr. Brown seconded the motion, which was unanimously approved by the Board.

Additionally, the Board directed staff to bring an amended Education and Travel Policy and Procedure back for review at the next Board meeting, reflecting changes for prorated budgets during partial Trustee service years.

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

a. Society of Pension Professionals
b. NCPERS Accredited Fiduciary Program Modules 3 & 4
c. NCPERS Public Safety Conference
d. Texans for Secure Retirement Symposium
e. Society of Pension Professionals Annual Summit
f. TEXPERS Basic Trustee Training Class
g. PRB Meeting

Reports were given on the following meetings. Those who attended are listed.

a. Society of Pension Professionals

Mr. Brown

b. NCPERS Accredited Fiduciary Program Modules 3 & 4

Messrs. Friar, Haben

12. Board Members' reports on meetings, seminars and/or conferences attended (continued)

c. NCPERS Public Safety Conference

Messrs. Friar, Haben

d. Texans for Secure Retirement Symposium

Mr. Brown

e. Society of Pension Professionals Annual Summit

Mr. Brown

f. TEXPERS Basic Trustee Training Class

Messrs. Griggs, Kingston and Ms. Gates

g. PRB Meeting

Messrs, Friar, Mond and Ms. Gottschalk

No motion was made.

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13. Ad hoc committee report

No report was given.

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The meeting was recessed at 3:55 p.m.

The meeting was reconvened at 4:01 p.m.

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14. 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. CDK Realty Advisors LP v. Dallas Police and Fire Pension System

The Board went into a closed executive session – legal at 4:01 p.m.

The meeting was reopened at 4:31 p.m.

No motion was made.

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Mr. Ho left the meeting at 4:30 p.m.

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15. NEPC: Second Quarter 2016 Private Markets & Real Assets Review

Michael Yang, Research Consultant for NEPC, DPFP's investment consultant, presented the Second Quarter 2016 Private Markets & Real Assets reports.

No motion was made.

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D. BRIEFING ITEMS

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

No active member or pensioner requested to address the Board with concerns.

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2. Executive Director's report

a. DROP update
b. Future Education and Business Related Travel
c. Future Investment Related Travel
d. Associations' newsletters

- TEXPERS Outlook (November 2016)

The Executive Director's report was presented.

No motion was made.

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Mr. Haben left the meeting at 5:14 p.m.

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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Brown and a second by Ms. Gates, the meeting was adjourned at 5:15 p.m.

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Samuel L. Friar
Chairman

ATTEST:

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Kelly Gottschalk
Secretary

Dallas Police and Fire Pension System
Tuesday, November 15, 2016
2:30 p.m.
Second Floor Board Room
4100 Harry Hines Blvd., Suite 100
Dallas, TX

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

ROLL CALL

Board Members

Present at 2:30	Samuel L. Friar, Kenneth S. Haben, Joseph P. Schutz, Brian Hass, Jennifer S. Gates, Tho T. Ho, Gerald D. Brown, Clint Conway, Kenneth Sprecher
Present at 2:33	Philip T. Kingston
Present at 2:38	Scott Griggs
Absent:	Erik Wilson
Staff	Kelly Gottschalk, Josh Mond, Summer Loveland, John Holt Linda Rickley
Others	Chuck Campbell (by telephone), John Turner, Ben Mesches, Lori Brown, John Grann, Tristan Hallman

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The meeting was called to order at 2:30 p.m.

DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. 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.

Jones, et al. v. City of Dallas Police & Fire Pension System

The Board went into a closed executive session – legal at 2:30 p.m.

1. Legal issues (continued)

The meeting was reopened at 3:46 p.m.

Mr. Campbell left the meeting at 3:47 p.m.

No motion was made.

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2. Possible action with respect to Plan Amendment election

The Board discussed the Plan Amendment election

After discussion, Mr. Brown made a motion that if the Court denies the plaintiffs' request for a temporary injunction and the temporary restraining order currently in place either expires or is lifted, the Board authorizes that the final date of the election shall be 12:00 p.m. on the 15th day after the occurrence of both of those events. Mr. Haben seconded the motion, which was unanimously approved by the Board.

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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Haben and a second by Mr. Conway, the meeting was adjourned at 3:48 p.m.

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Samuel L. Friar
Chairman

ATTEST

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Kelly Gottschalk
Secretary

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C1

Topic: **Committees of the Board and possible Committee appointments**

Discussion: The Chairman may make Committee appointments.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C2

Topic: **Possible action on sale of private assets**

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. Possible secondary sale
b. Possible action on Lone Star CRA Fund

Attendees:
Jarrett Vitulli, Managing Director – Evercore
Dale Addeo, Vice President - Evercore
Rhett Humphreys, Partner - NEPC

Discussion:

a. Evercore was engaged by DPFP to facilitate the sale of a portion of the private asset portfolio on the secondary market. The portfolio being considered for sale is largely comprised of investments in closed-end funds across the Private Equity, Private Debt, Infrastructure and Real Estate asset classes (“Target Portfolio”). Evercore will outline the marketing process and discuss the bids received. NEPC and Staff will provide a recommendation on how to proceed with the private asset sales.
b. Staff will discuss a recent capital call for Lone Star CRA fund with the Board.

Staff Recommendation:

a. **Authorize** the sale of assets in the Target Portfolio at the pricing levels discussed with the Board, subject to final approval of the Executive Director.
b. **Authorize** the Executive Director to take any action necessary with respect to DPFP’s interest in the Lone Star CRA Fund that is deemed to be in the best interest of DPFP.

DISCUSSION SHEET

ITEM #C3

Topic: **Possible changes to DROP Policy**

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

Discussion: Staff will review with the Board possible changes to the DROP policy.

DISCUSSION SHEET

ITEM #C4

Topic: **Discussion and possible action on City of Dallas pension proposals**

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

Attendees:
Jeff Williams, Segal Consulting (by telephone)
Rocky Joyner, Segal Consulting (by telephone)
Deborah Brigham, Segal Consulting (by telephone)

Discussion: The City of Dallas is expected to present at the Council meeting on December 7 its proposals with respect to DPFP. Staff will review these proposals with the Board.

DISCUSSION SHEET

ITEM #C5

Topic: **Possible action on legislative matters**

a. Approval of contracts for HillCo Partners and Locke Lord, LLP
b. Approval of possible legislation

Attendees: Clint Smith, HillCo Partners (by telephone)
Robert Miller, Locke Lord, LLP (by telephone)

Discussion:

a. DPFP has been presented with new contracts for services by its legislative consultants HillCo Partners and Locke Lord, LLP. Staff will discuss the need for such contracts.

b. Given the pending legislative session and in anticipation of approval of the plan amendments, Staff is proposing that a potential bill reflecting the plan amendments together with a funding requirement from the City of Dallas be submitted to legislative counsel to begin the legislative process for potential filing with the Legislature in 2017.

Staff Recommendation:

a. **Approve** the contracts of HillCo Partners and Locke Lord, LLP as presented.

b. **Authorize** the Executive Director and General Counsel to prepare and cause to be submitted to legislative counsel a bill reflecting the current plan together with the proposed plan amendments including additional funding requirements for the City of Dallas as specified by the Board.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C6

Topic: **Update and possible action on 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.

Discussion: Staff will brief the Board on the status of the Plan amendment election and related litigation.

DISCUSSION SHEET

ITEM #C7

Topic: **NEPC: Third Quarter 2016 Investment Performance Analysis**

Attendees: Rhett Humphreys, Partner

Discussion: NEPC, DPFP's investment consultant, will present the above report.

NEPC, LLC

YOU DEMAND MORE. *So do we.*[SM]

Dallas Police & Fire Pension System

Investment Summary

Quarter Ending September 30, 2016

December 8, 2016

Rhett Humphreys, CFA
Partner

Keith Stronkowsky, CFA
Senior Consultant

255 State Street, Boston, MA 02109 | TEL: 617.374.1300 | FAX: 617.374.1313 | www.nepc.com

BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO

Q3 2016 Market Update

Index Performance Summary as of 09/30/2016

	2009	2010	2011	2012	2013	2014	2015	Q1	Q2	Q3	Sept	YTD
EM Local Credit	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	11.0%	2.7%	2.7%	2.0%	17.1%
EM Equity	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	5.7%	0.7%	9.0%	1.3%	16.0%
US High Yield	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	3.4%	5.5%	5.6%	0.7%	15.1%
US Long Treasuries	-12.9%	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	8.2%	6.4%	-0.4%	-1.6%	14.7%
Global Credit	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	7.1%	3.4%	0.3%	0.7%	11.1%
US Small/Mid Cap	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	0.4%	3.6%	6.6%	0.5%	10.8%
Commodities	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	0.4%	12.8%	-3.9%	3.1%	8.9%
US Large Cap	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	1.3%	2.5%	3.9%	0.0%	7.8%
US Credit	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	3.0%	2.2%	0.5%	-0.1%	5.8%
Int'l Developed Equity	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	-3.0%	-1.5%	6.4%	1.2%	1.7%

S&P 500 = US Large Cap
Russell 2500 = US Small/Mid Cap
MSCI EAFE = International Developed Equity
MSCI EM = Emerging Market Equity
Barclays Agg = US Credit

Barclays Long Treasury = US Long Treasuries
Barclays High Yield = US HY
WGBI = Global Credit
GBI-EM Global Diversified = EM Local Credit
Bloomberg Commodity = Commodities

Source: Bloomberg, Barclays, S&P, Russell, MSCI, JP Morgan, Credit Suisse

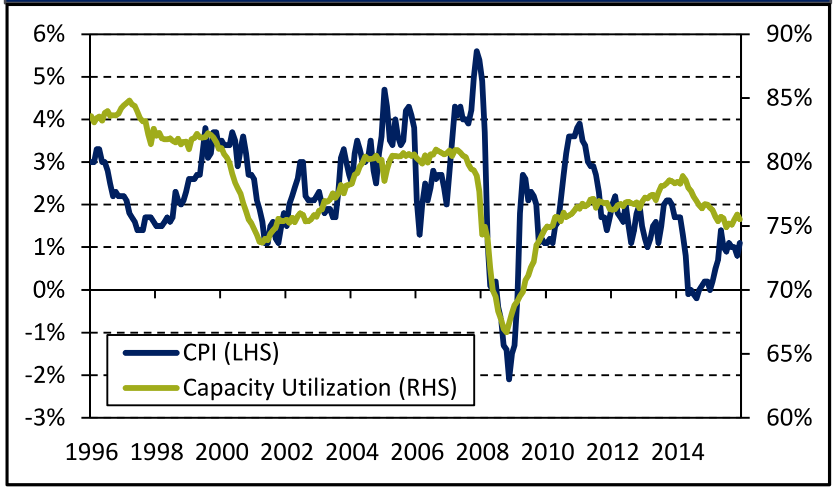
Index Performance Summary as of 09/30/2016

	2009	2010	2011	2012	2013	2014	2015	Q1	Q2	Q3	Sept	YTD
Barclays US STRIPS 20+ Yr	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	11.4%	9.6%	-0.2%	-2.8%	21.8%
JPM GBI-EM Global Div	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	11.0%	2.7%	2.7%	2.0%	17.1%
Barclays US Long Credit	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	6.8%	6.7%	2.3%	-1.1%	16.5%
MSCI EM	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	5.7%	0.7%	9.0%	1.3%	16.0%
Alerian MLP	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	-4.2%	19.7%	1.1%	1.9%	15.9%
Barclays US Govt/Credit Long	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	-3.3%	7.3%	6.5%	1.2%	-1.3%	15.7%
Barclays US Corporate HY	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	3.4%	5.5%	5.6%	0.7%	15.1%
JPM EMBI Global Diversified	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	5.0%	5.0%	4.0%	0.4%	14.8%
FTSE NAREIT Equity REITs	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	6.0%	7.0%	-1.4%	-1.8%	11.8%
Russell 2000	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	-1.5%	3.8%	9.0%	1.1%	11.5%
Citi WGBI	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	7.1%	3.4%	0.3%	0.7%	11.1%
Russell 2500	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	0.4%	3.6%	6.6%	0.5%	10.8%
Bloomberg Commodity	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	0.4%	12.8%	-3.9%	3.1%	8.9%
Russell 1000	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	1.2%	2.5%	4.0%	0.1%	7.9%
S&P 500	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	1.3%	2.5%	3.9%	0.0%	7.8%
Credit Suisse Leveraged Loan	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	1.3%	2.9%	3.1%	0.9%	7.5%
MSCI ACWI	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	0.2%	1.0%	5.3%	0.6%	6.6%
Barclays US Agg Bond	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	3.0%	2.2%	0.5%	-0.1%	5.8%
Barclays US Agg Interm	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.2%	2.3%	1.4%	0.3%	0.2%	4.1%
Barclays Municipal	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	1.7%	2.6%	-0.3%	-0.5%	4.0%
MSCI EAFE	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	-3.0%	-1.5%	6.4%	1.2%	1.7%
BC US Govt/Credit 1-3 Yr	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.7%	1.0%	0.7%	0.0%	0.1%	1.7%
Credit Suisse Hedge Fund	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	-2.2%	0.6%	1.6%	-	0.0%

Source: Bloomberg, Barclays, Alerian, Nareit, MSCI, JP Morgan, Credit Suisse

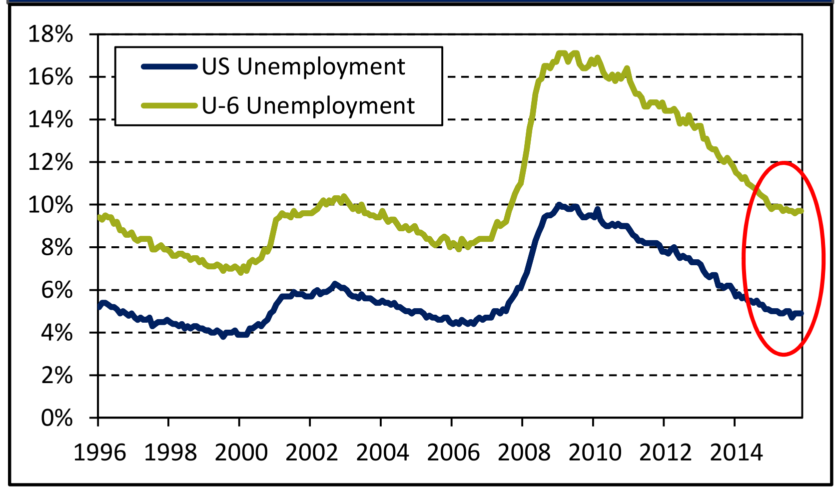
US Economic Indicators

Inflation experiences slight uptick



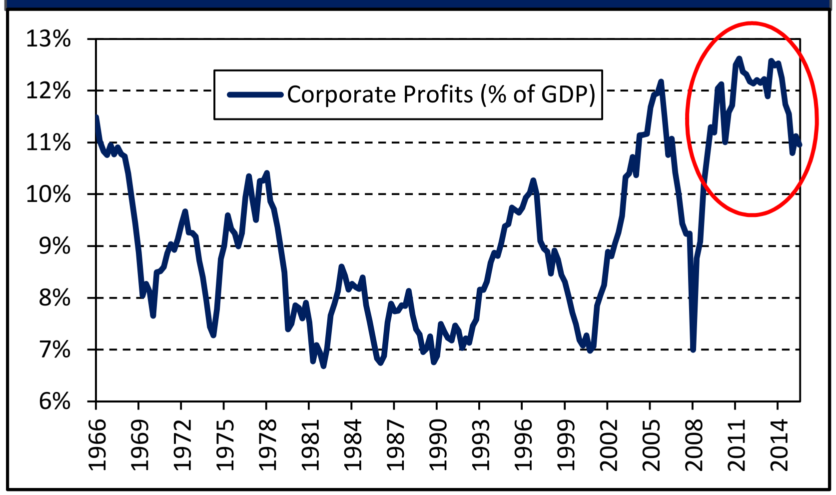
Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics

Unemployment remains steady



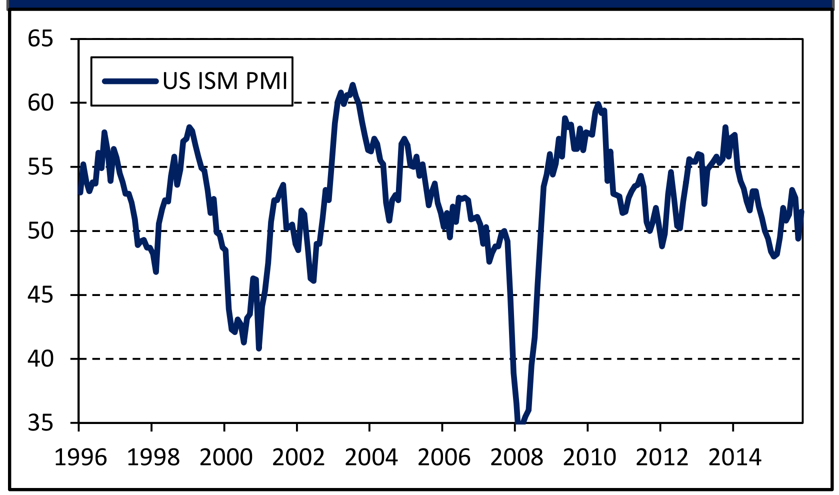
Source: Bloomberg, Bureau of Labor Statistics

Corporate profits continue to decline



Source: Bloomberg, Bureau of Economic Analysis

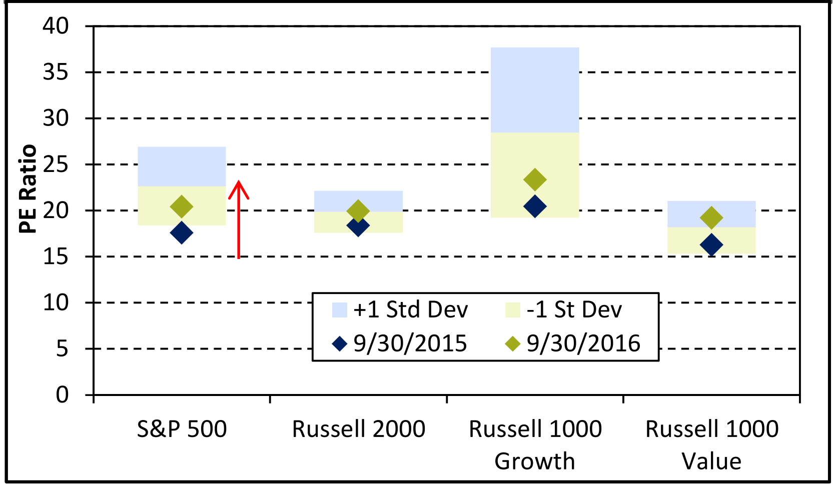
Manufacturing is relatively neutral



Source: Bloomberg, Institute for Supply Management

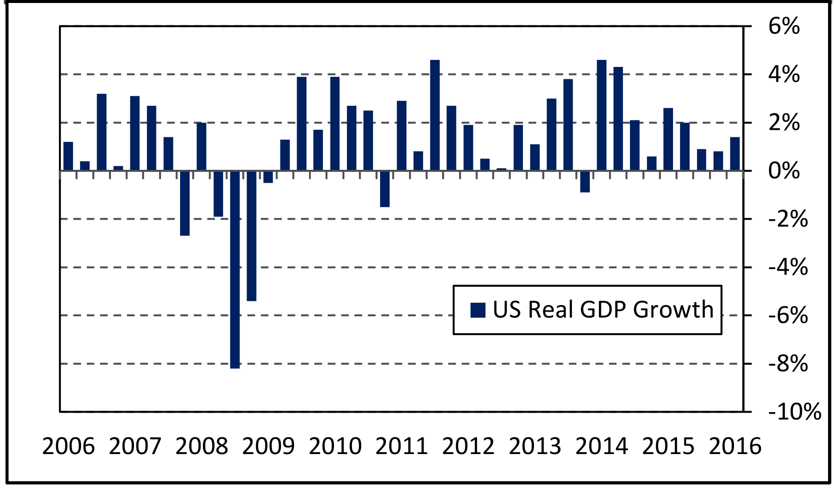
US Equity

US equity valuations have increased year over year



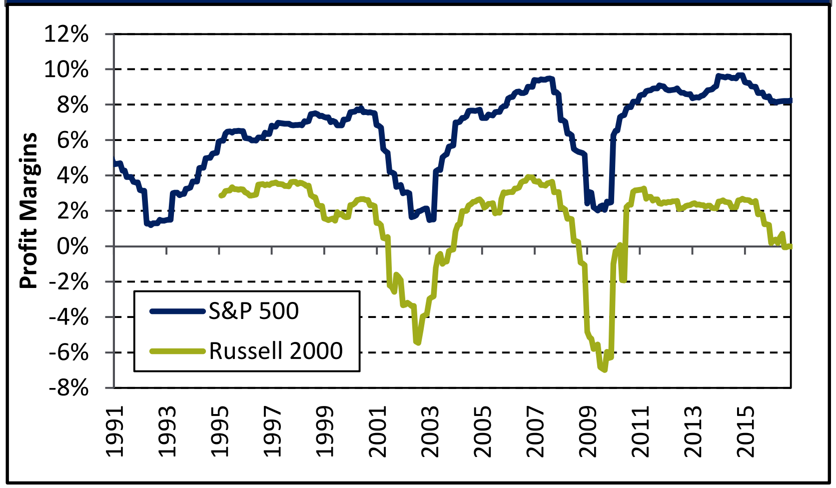
Source: Bloomberg, Standard and Poors, Russell *Russell 2000 PE is index adjusted positive*
Standard deviation calculations based on 20 years of data

GDP growth remains steady



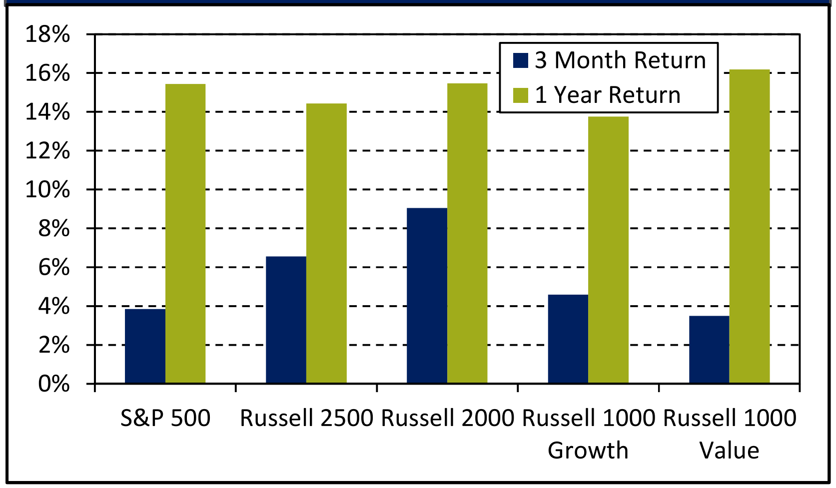
Source: Bloomberg, Bureau of Economic Analysis

Profit margins continue to decline



Source: Bloomberg, Standard and Poors, Russell

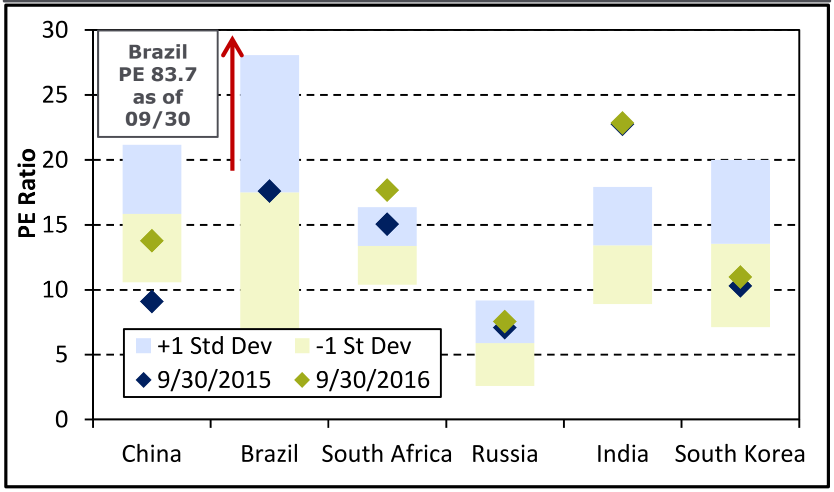
Strong short-term US equity returns



Source: Bloomberg, Standard and Poors, Russell

Emerging Markets Equity

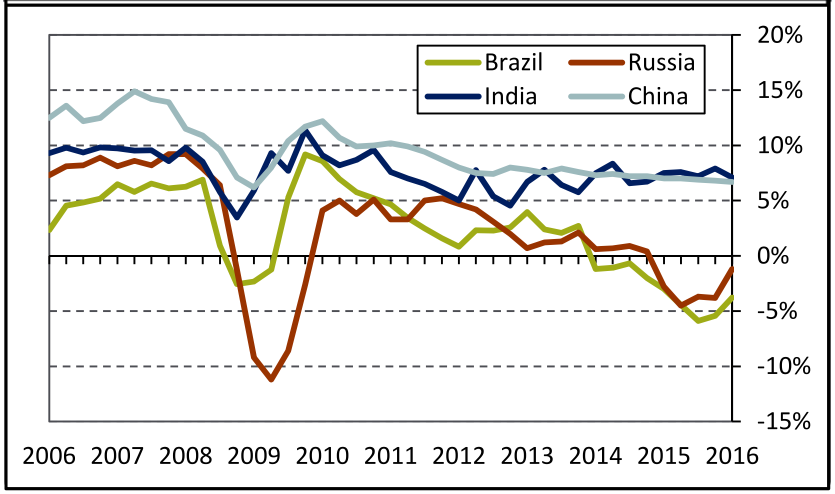
Regional valuations similar year over year with the exception of Brazil



Source: Bloomberg, MSCI

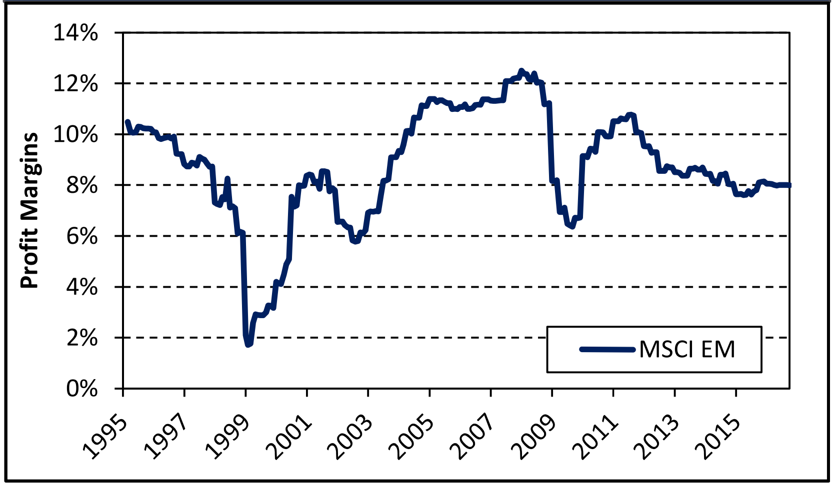
*Standard deviation calculations based on 20 years of data, with Russia since 01/1998

Russia and Brazil experience upward trends in growth



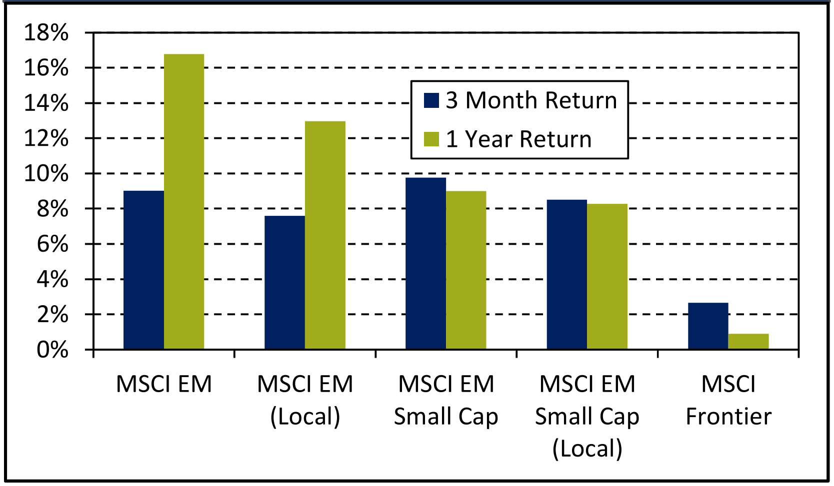
Source: Bloomberg

Profit margins in line with history



Source: Bloomberg, MSCI

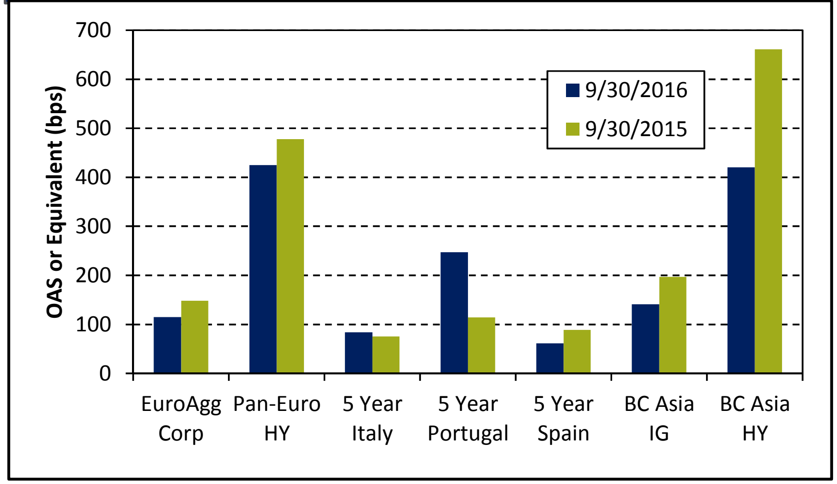
Strong short-term returns for EM



Source: Bloomberg, MSCI

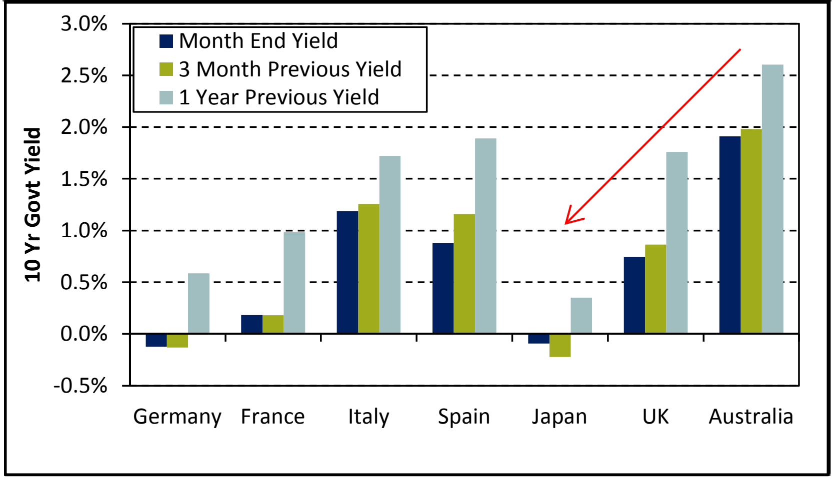
International Developed Fixed Income

European periphery yields vary relative to Germany



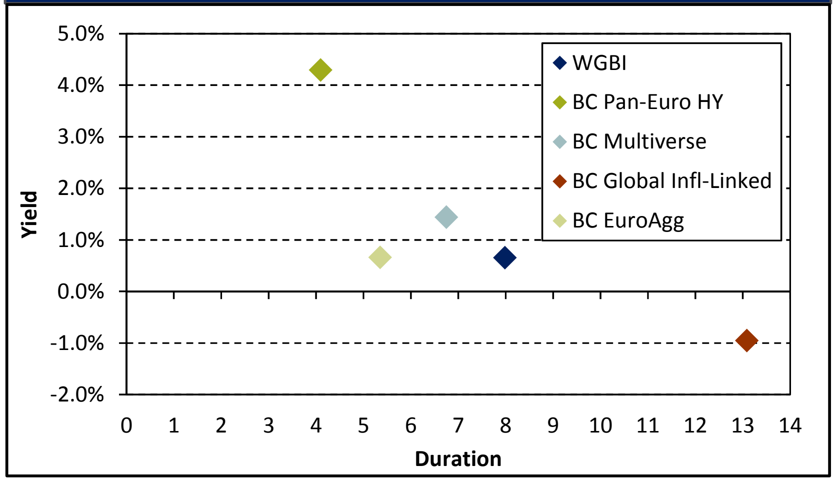
*Source: Barclays, Bloomberg, *European periphery spreads are over equivalent German Bund*

Global yields continue to fall with the exception of Japan



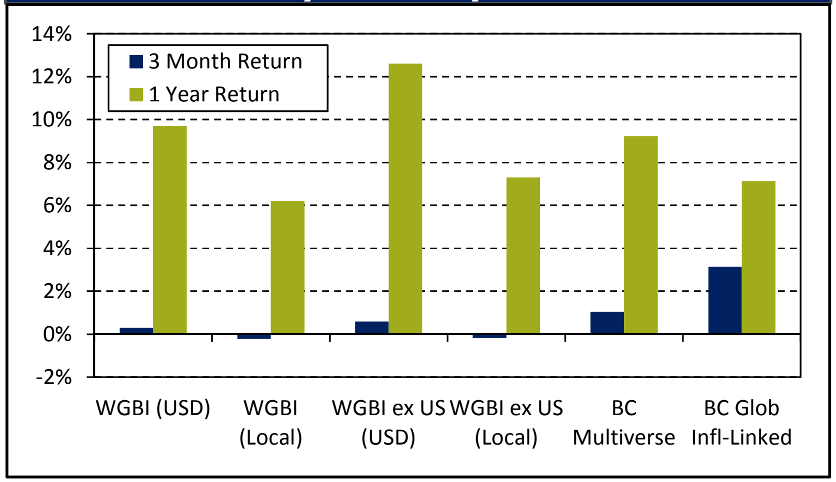
Source: Bloomberg

Low global yields relative to duration



Source: Bloomberg, Citigroup, Barclays

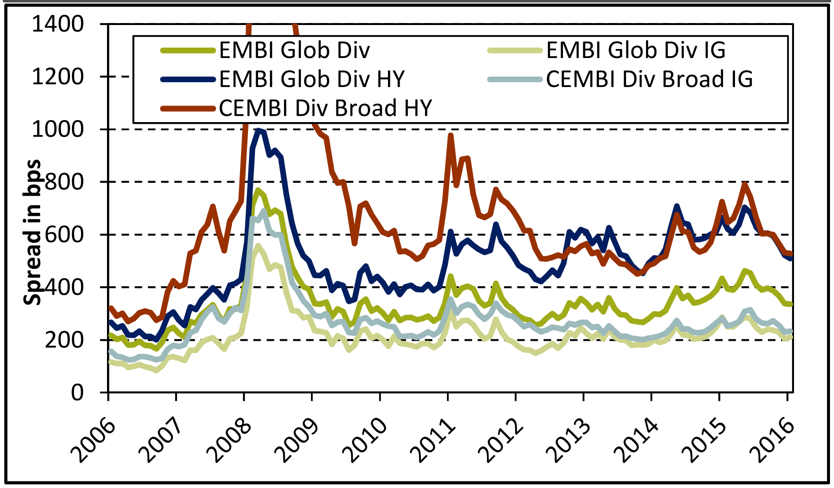
Global bond returns are heavily influenced by currency returns



Source: Bloomberg, Citigroup, Barclays

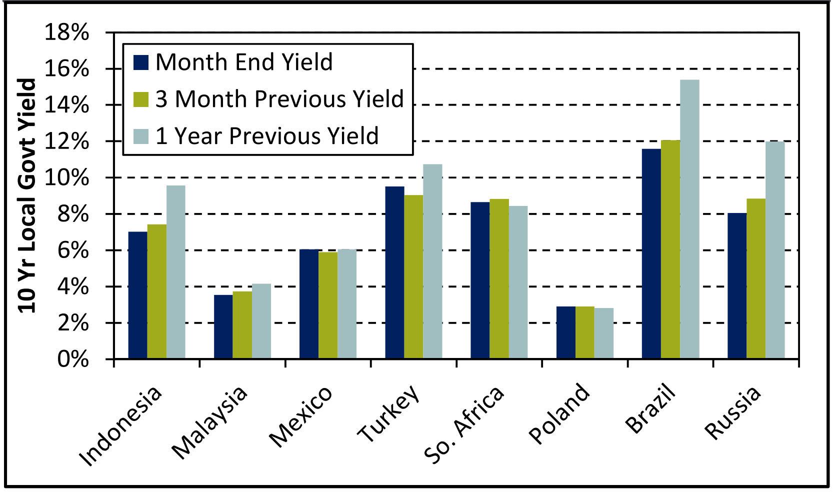
NEPC, LLC

Spreads continue to decline



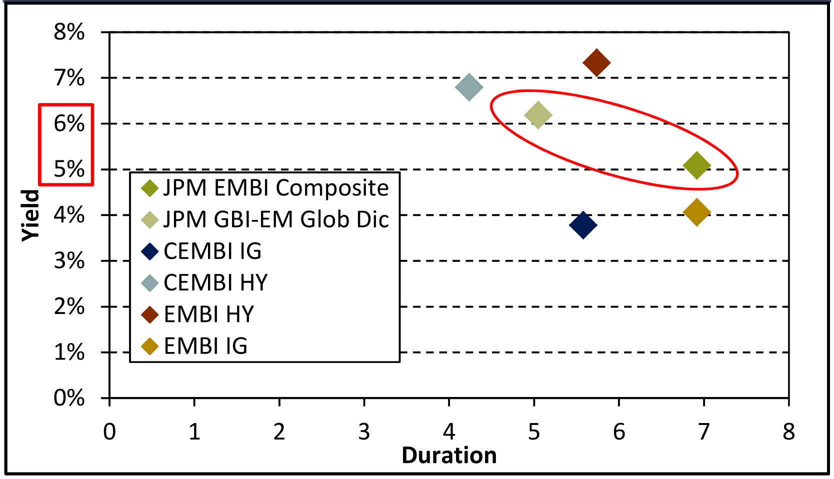
Source: Bloomberg, JP Morgan

EM local bond yields have declined for more volatile markets



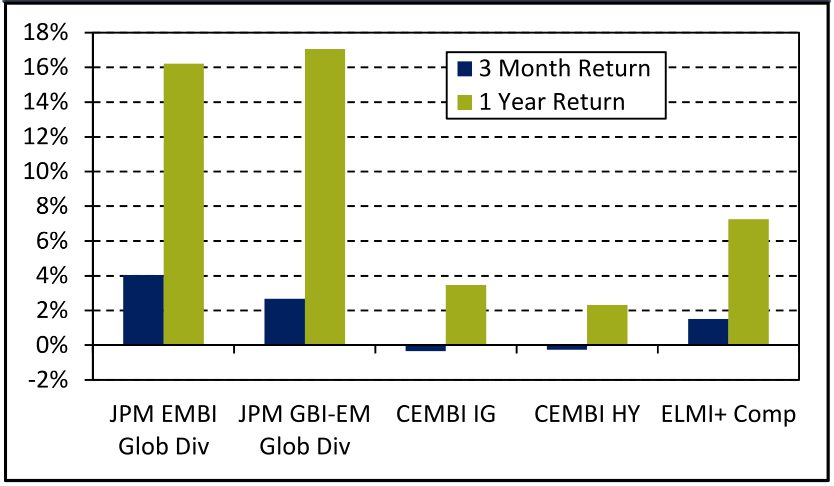
Source: Bloomberg

EM yields remain attractive versus global counterparts



Source: Bloomberg, JP Morgan

EM debt continues to perform well



Source: Bloomberg, JP Morgan

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- **Past performance is no guarantee of future results.**
- **The goal of this report is to provide a basis for monitoring financial markets. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**
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Q3 2016 Performance & Asset Allocation

Asset Allocation: Broad Composites

	Market Value $	% of Portfolio	Policy %
Total Equity	729,925,600	30.5%	30%
Total Fixed Income	397,065,230	16.6%	33%
Total GAA	199,256,560	8.3%	10%
Total Real Assets	1,031,202,742	43.1%	25%
Cash	175,759,697	7.3%	2%
DPFP Debt	(140,000,000)	-5.8%	---
Total DPFP	**2,393,209,829**	**100%**	**100%**

Asset Allocation: By Asset Class

	Current Allocation $	Current Allocation %	Policy %
Global Equity	296,161,826	12.4%	20%
Emerging Market Equity	--	0.0%	5%
Private Equity	433,763,775	18.1%	5%
Total Equity	729,925,600	30.5%	30%
Short-Term Core Bonds	--	0.0%	2%
High Yield	124,708,703	5.2%	5%
Bank Loans	54,958,518	2.3%	6%
Emerging Market Debt	60,038,342	2.5%	6%
Global Bonds	63,920,796	2.7%	3%
Structured & AR Credit	--	0.0%	6%
Private Debt	93,438,871	3.9%	5%
Total Fixed Income	397,065,230	16.6%	33%
GTAA	60,434,649	2.5%	3%
Risk Parity	107,445,803	4.5%	5%
Absolute Return	31,376,108	1.3%	2%
Total GAA	199,256,560	8.3%	10%
Real Estate	590,398,985	24.7%	12%
Real Assets – Liquid	--	0.0%	3%
Natural Resources	263,909,838	11.0%	5%
Infrastructure	176,893,918	7.4%	5%
Total Real Assets	1,031,202,742	43.1%	25%
Cash	175,759,697	7.3%	2%
DPFP Debt	(140,000,000)	-5.8%	--
Total	**2,393,209,829**	**100%**	**100%**

Asset Allocation: Portfolio Lookthrough

	Lookthrough %	Actual %	Policy %
US Equity	5.8%	--	--
Large Cap Equity	0.5%	--	--
Small/Mid Cap Equity	1.2%	1.6%	--
International Equity	5.2%	--	--
Emerging Markets Eq	0.8%	--	5%
Global Equity	0.0%	12.4%	20%
Private Equity	18.1%	18.1%	5%
Total Equity	31.6%		30%
Short-Term Core Bonds	0.0%	--	2%
High Yield	5.2%	5.2%	5%
Bank Loans	2.3%	2.3%	6%
Emerging Market Debt	2.9%	2.5%	6%
Global Bonds	5.4%	2.7%	3%
Structured & AR Credit	0.0%	--	6%
Private Debt	3.9%	3.9%	5%
Total Fixed Income	19.7%		33%

	Lookthrough %	Actual %	Policy %
GTAA	0.0%	2.5%	3%
Risk Parity	0.0%	4.5%	5%
Absolute Return	0.0%	1.3%	2%
Hedge Funds	2.6%	--	--
Total GAA	2.6%		10%
Real Estate	25.3%	24.7%	12%
Real Assets – Liquid	0.0%	--	3%
Natural Resources	11.0%	11.0%	5%
Infrastructure	7.4%	7.4%	5%
Total Real Assets	43.7%		25%
Cash	8.3%	7.3%	2%
DPFP Debt	-5.8%	-5.8%	--

Trailing Returns: By Broad Composite

	Market Value ($)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
DPFP	**2,393,209,829**	**100.0**	**2.4**	**91**	**3.3**	**99**	**-1.3**	**99**	**-2.3**	**99**	**1.8**	**99**	**3.1**	**99**	**2.0**	**99**	**6.2**	**Jun-96**
Policy Index			*4.0*	*22*	*9.2*	*1*	*12.3*	*1*	*8.3*	*1*	*10.4*	*8*	*9.0*	*8*	*6.2*	*9*	*--*	*Jun-96*
Total Equity	**729,925,600**	**30.5**	**3.6**	**--**	**5.8**	**--**	**10.8**	**--**	**5.6**	**--**	**10.9**	**--**	**--**	**--**	**--**	**--**	**7.3**	**Dec-10**
Total Equity Policy Index			*6.0*	*--*	*9.2*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*Dec-10*
Total Fixed Income	**397,065,230**	**16.6**	**2.7**	**40**	**10.7**	**29**	**7.4**	**63**	**2.7**	**59**	**6.2**	**21**	**7.8**	**8**	**5.9**	**28**	**5.9**	**Jul-06**
Total Fixed Income Policy Index			*3.5*	*27*	*10.4*	*33*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*Jul-06*
Total GAA	199,256,560	8.3	**3.5**	**53**	**9.1**	**28**	**9.3**	**30**	**4.0**	**63**	**5.1**	**90**	**6.1**	**69**	**--**	**--**	**3.4**	**Jul-07**
Total Asset Allocation Policy Index			*3.0*	*72*	*6.6*	*40*	*8.0*	*64*	*6.6*	*31*	*6.6*	*73*	*6.9*	*48*	*--*	*--*	*6.9*	*Jul-07*
Total Real Assets	**1,031,202,742**	**43.1**	**1.0**	**--**	**-3.1**	**--**	**-13.7**	**--**	**-9.3**	**--**	**-6.2**	**--**	**--**	**--**	**--**	**--**	**-5.4**	**Dec-10**
Total Real Assets Policy Index			*2.8*	*--*	*11.7*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*Dec-10*
Cash Equivalents	**175,759,697**	**7.3**	**0.2**	**--**	**1.1**	**--**	**1.3**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1.3**	**Apr-15**
91 Day T-Bills			*0.1*	*--*	*0.2*	*--*	*0.2*	*--*	*0.1*	*--*	*0.1*	*--*	*0.1*	*--*	*0.8*	*--*	*0.2*	*Apr-15*

Policy Indexes are calculated using policy benchmarks and weights of the underlying sub composites.

Net of fees returns shown on report are time weighted.

Dallas Police & Fire Pension

Trailing Returns: By Asset Class

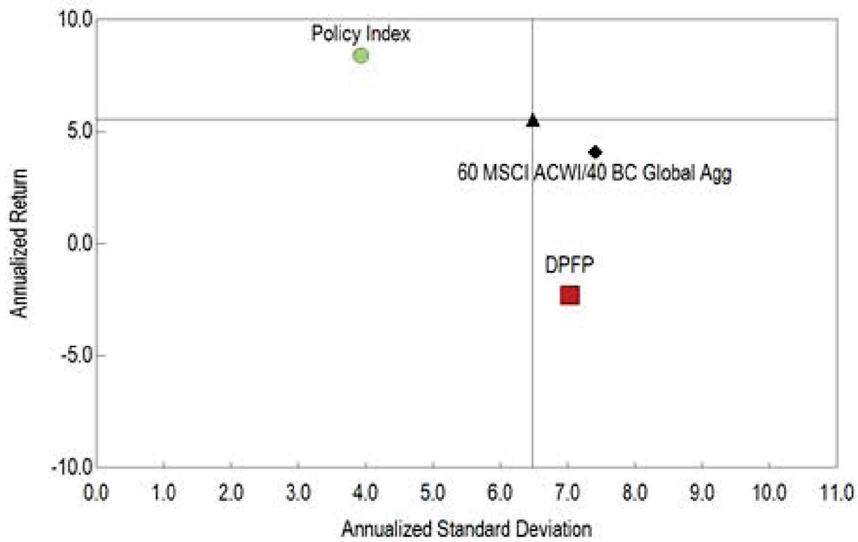
	Market Value ($)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	7 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
DPFP	**2,393,209,829**	**100.0**	**2.4**	**91**	**3.3**	**99**	**-1.3**	**99**	**-2.3**	**99**	**1.8**	**99**	**3.1**	**99**	**2.0**	**99**	**6.2**	**Jun-96**
Policy Index			*4.0*	*22*	*9.2*	*1*	*12.3*	*1*	*8.3*	*1*	*10.4*	*8*	*9.0*	*8*	*6.2*	*9*	*--*	*Jun-96*
Global Equity	**296,161,826**	**12.4**	**6.0**	**33**	**7.1**	**42**	**12.2**	**44**	**6.1**	**49**	**10.9**	**64**	**8.9**	**53**	**4.8**	**51**	**5.1**	**Jul-06**
MSCI ACWI Gross			*5.4*	*43*	*7.1*	*43*	*12.6*	*40*	*5.7*	*54*	*11.2*	*59*	*8.3*	*62*	*4.9*	*48*	*5.2*	*Jul-06*
Private Equity	**433,763,775**	**18.1**	**1.3**	**--**	**3.9**	**--**	**3.4**	**--**	**-7.4**	**--**	**-1.7**	**--**	**1.1**	**--**	**1.8**	**--**	**2.6**	**Oct-05**
Russell 3000 + 3%			*5.2*	*--*	*10.6*	*--*	*18.4*	*--*	*13.7*	*--*	*19.8*	*--*	*16.5*	*--*	*10.6*	*--*	*10.8*	*Oct-05*
Global Bonds	**63,920,796**	**2.7**	**0.9**	**83**	**9.5**	**44**	**8.6**	**44**	**2.2**	**67**	**2.4**	**71**	**--**	**--**	**--**	**--**	**3.0**	**Dec-10**
Barclays Global Aggregate			*0.8*	*88*	*9.9*	*40*	*8.8*	*42*	*2.1*	*68*	*1.7*	*80*	*2.7*	*80*	*4.3*	*78*	*2.4*	*Dec-10*
High Yield	**124,708,703**	**5.2**	**6.1**	**11**	**16.6**	**8**	**9.6**	**86**	**2.2**	**83**	**6.8**	**74**	**--**	**--**	**--**	**--**	**6.2**	**Dec-10**
Barclays Global High Yield			*5.3*	*29*	*14.5*	*25*	*13.5*	*8*	*5.0*	*29*	*8.6*	*24*	*8.6*	*7*	*7.9*	*1*	*7.0*	*Dec-10*
Bank Loans	**54,958,518**	**2.3**	**4.0**	**22**	**9.4**	**45**	**5.7**	**78**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**3.4**	**Jan-14**
S&P/LSTA U.S. Leveraged Loan			*3.1*	*33*	*7.7*	*66*	*5.5*	*80*	*3.4*	*45*	*5.2*	*32*	*5.5*	*35*	*4.6*	*63*	*3.1*	*Jan-14*
Emerging Markets Debt	**60,038,342**	**2.5**	**4.5**	**20**	**17.3**	**19**	**17.5**	**26**	**2.7**	**60**	**3.9**	**61**	**--**	**--**	**--**	**--**	**3.3**	**Dec-10**
50% JPM EMBI/50% JPM GBI-EM			*3.1*	*63*	*12.9*	*78*	*13.7*	*76*	*1.4*	*66*	*3.2*	*67*	*--*	*--*	*--*	*--*	*2.8*	*Dec-10*
Private Debt	**93,438,871**	**3.9**	**-2.9**	**--**	**-1.3**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**-1.3**	**Jan-16**
Barclays Global High Yield +2%			*5.8*	*--*	*16.2*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*16.2*	*Jan-16*
Risk Parity	**107,445,803**	**4.5**	**3.3**	**58**	**13.4**	**1**	**11.8**	**27**	**4.6**	**54**	**6.2**	**84**	**--**	**--**	**--**	**--**	**6.9**	**Dec-10**
60% MSCI ACWI/40% Barclays Global Agg			*3.5*	*53*	*8.0*	*31*	*10.9*	*28*	*4.1*	*61*	*7.2*	*64*	*5.9*	*73*	*4.6*	*62*	*5.0*	*Dec-10*
GTAA	**60,434,649**	**2.5**	**3.9**	**25**	**6.1**	**49**	**8.6**	**44**	**3.0**	**53**	**5.7**	**46**	**--**	**--**	**--**	**--**	**5.3**	**Dec-10**
60% MSCI ACWI/40% Barclays Global Agg			*3.5*	*35*	*8.0*	*28*	*10.9*	*17*	*4.1*	*31*	*7.2*	*32*	*5.9*	*37*	*4.6*	*68*	*5.0*	*Dec-10*
Absolute Return	**31,376,108**	**1.3**	**3.1**	**40**	**-7.5**	**99**	**-2.9**	**96**	**3.7**	**37**	**4.9**	**59**	**--**	**--**	**--**	**--**	**4.5**	**Aug-11**
HFRX Absolute Return Index			*0.9*	*78*	*0.7*	*86*	*0.9*	*80*	*2.0*	*69*	*1.8*	*95*	*0.7*	*96*	*-0.4*	*99*	*1.4*	*Aug-11*
Natural Resources	**263,909,838**	**11.0**	**1.9**	**--**	**2.8**	**--**	**3.3**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**4.7**	**Apr-15**
Natural Resources Benchmark			*5.9*	*--*	*23.3*	*--*	*25.9*	*--*	*16.0*	*--*	*15.6*	*--*	*--*	*--*	*--*	*--*	*19.5*	*Apr-15*
Infrastructure	**176,893,918**	**7.4**	**-1.7**	**--**	**-4.9**	**--**	**-6.1**	**--**	**-1.1**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**0.6**	**Jul-12**
Infrastructure Benchmark			*2.7*	*--*	*17.2*	*--*	*18.8*	*--*	*10.0*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*9.1*	*Jul-12*
Real Estate	**590,398,985**	**24.7**	**1.4**	**--**	**-5.1**	**--**	**-21.4**	**--**	**-13.9**	**--**	**-9.1**	**--**	**-6.7**	**--**	**-4.3**	**--**	**3.6**	**Mar-85**
NCREIF Property Index			*1.8*	*--*	*6.1*	*--*	*9.2*	*--*	*11.3*	*--*	*11.2*	*--*	*11.1*	*--*	*7.2*	*--*	*8.1*	*Mar-85*
Cash Equivalents	**175,759,697**	**7.3**	**0.2**	**--**	**1.1**	**--**	**1.3**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1.3**	**Apr-15**
91 Day T-Bills			*0.1*	*--*	*0.2*	*--*	*0.2*	*--*	*0.1*	*--*	*0.1*	*--*	*0.1*	*--*	*0.8*	*--*	*0.2*	*Apr-15*

Total Fund Risk/Return

3 Years Ending September 30, 2016

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
DPFP	-2.3%	99	7.0%	74
Policy Index	8.4%	1	3.9%	2
60 MSCI ACWI/40 BC Global Agg	4.1%	91	7.4%	82
InvestorForce Public DB Net Median	5.6%	--	6.5%	--

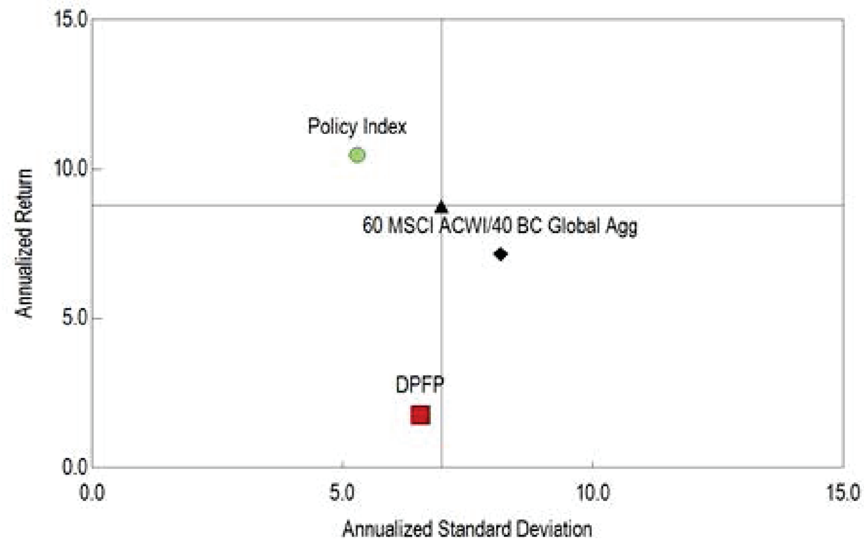
	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
DPFP	-0.34	99	-0.30	99
Policy Index	2.12	1	4.41	1
60 MSCI ACWI/40 BC Global Agg	0.54	95	1.04	83
InvestorForce Public DB Net Median	0.85	--	1.40	--



5 Years Ending September 30, 2016

	Anlzd Ret	Rank	Anlzd Std Dev	Rank
DPFP	1.8%	99	6.6%	36
Policy Index	10.5%	7	5.3%	5
60 MSCI ACWI/40 BC Global Agg	7.2%	91	8.2%	88
InvestorForce Public DB Net Median	8.8%	--	7.0%	--

	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
DPFP	0.26	99	0.26	99
Policy Index	1.96	2	2.77	5
60 MSCI ACWI/40 BC Global Agg	0.87	99	1.50	97
InvestorForce Public DB Net Median	1.27	--	2.08	--



Attribution Analysis: By Asset Class – 3 Months Ending September 30, 2016

	Portfolio Weights		Returns		Attribution Effects By			
	DPFP	Policy	DPFP	Index	Selection	Allocation	Interaction	Total
Global Equity	12.4%	20.0%	6.044%	5.429%	0.119%	-0.063%	-0.023%	**0.033%**
Emerging Markets Equity	0.0%	5.0%	0.000%	9.154%	-0.454%	-0.255%	0.454%	**-0.255%**
Private Equity	18.1%	5.0%	1.268%	5.161%	-0.195%	0.136%	-0.443%	**-0.502%**
Short Term Core Bonds	0.0%	2.0%	0.000%	-0.112%	0.002%	0.082%	-0.002%	**0.082%**
Global Bonds	2.7%	3.0%	0.940%	0.816%	0.004%	-0.013%	0.003%	**-0.007%**
High Yield	5.2%	5.0%	6.149%	5.302%	0.041%	0.017%	0.009%	**0.067%**
Bank Loans	2.3%	6.0%	3.998%	3.075%	0.055%	0.035%	-0.037%	**0.054%**
Structured & A/R Credit	0.0%	6.0%	0.000%	3.614%	-0.218%	0.021%	0.218%	**0.021%**
Emerging Markets Debt	2.5%	6.0%	4.547%	3.080%	0.087%	0.034%	-0.055%	**0.066%**
Private Debt	3.9%	5.0%	-2.889%	5.816%	-0.437%	-0.026%	0.117%	**-0.347%**
GTAA	2.5%	3.0%	3.936%	3.500%	0.013%	0.000%	-0.001%	**0.012%**
Risk Parity	4.5%	5.0%	3.343%	3.500%	-0.008%	0.003%	-0.009%	**-0.014%**
Absolute Return	1.3%	2.0%	3.091%	0.892%	0.045%	0.026%	-0.020%	**0.051%**
Real Estate	24.7%	12.0%	1.426%	1.770%	-0.043%	-0.258%	-0.040%	**-0.341%**
Liquid Real Assets	0.0%	3.0%	0.000%	1.687%	-0.051%	0.068%	0.051%	**0.068%**
Natural Resources	11.0%	5.0%	1.859%	5.876%	-0.201%	0.111%	-0.230%	**-0.320%**
Infrastructure	7.4%	5.0%	-1.720%	2.714%	-0.227%	-0.018%	-0.092%	**-0.337%**
Cash Equivalents	7.3%	2.0%	0.187%	0.070%	0.002%	-0.086%	0.002%	**-0.081%**
DPFP Debt	0.0%	0.0%	-0.786%	0.875%	0.000%	0.183%	0.099%	**0.283%**
Total	**105.8%**	**100.0%**	**2.489%**	**3.957%**	**-1.466%**	**-0.002%**	**0.001%**	**-1.468%**

*Total column may not add up due to rounding.

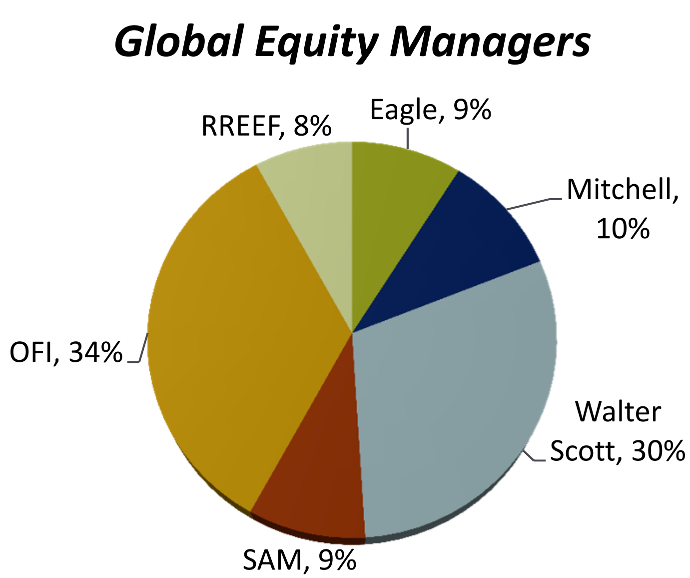
Attribution Analysis: By Asset Class – 9 Months Ending September 30, 2016

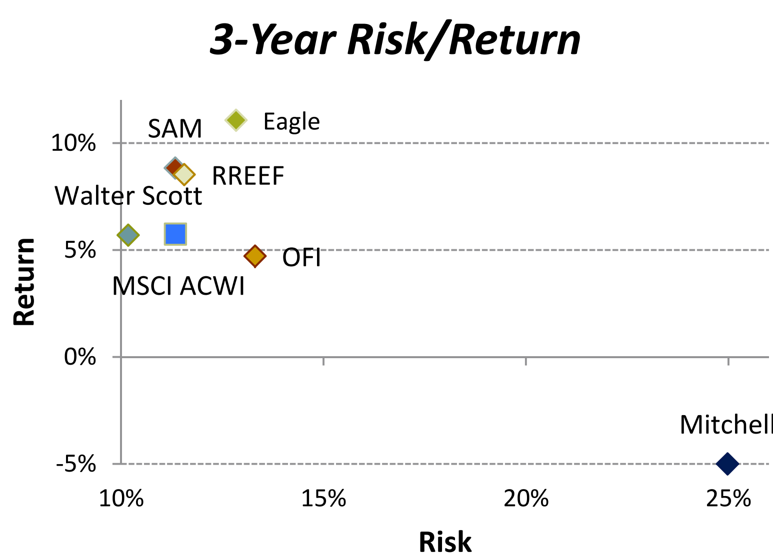
	Portfolio Weights		Returns		Attribution Effects By			
	DPFP	Policy	DPFP	Index	Selection	Allocation	Interaction	Total
Global Equity	12.4%	20.0%	7.139%	7.090%	0.038%	-0.103%	-0.018%	**-0.084%**
Emerging Markets Equity	0.0%	5.0%	0.000%	16.356%	-0.857%	-0.349%	0.857%	**-0.349%**
Private Equity	18.1%	5.0%	3.937%	10.586%	-0.284%	0.090%	-0.662%	**-0.855%**
Short Term Core Bonds	0.0%	2.0%	0.000%	1.324%	-0.028%	0.175%	0.028%	**0.175%**
Global Bonds	2.7%	3.0%	9.457%	9.850%	-0.009%	0.015%	0.009%	**0.015%**
High Yield	5.2%	5.0%	16.621%	14.494%	0.102%	0.040%	0.029%	**0.171%**
Bank Loans	2.3%	6.0%	9.408%	7.722%	0.168%	0.185%	-0.113%	**0.240%**
Structured & A/R Credit	0.0%	6.0%	0.000%	5.817%	-0.360%	0.250%	0.360%	**0.250%**
Emerging Markets Debt	2.5%	6.0%	17.344%	16.115%	0.066%	-0.239%	-0.037%	**-0.210%**
Private Debt	3.9%	5.0%	-1.252%	16.182%	-0.864%	-0.094%	0.244%	**-0.714%**
GTAA	2.5%	3.0%	6.141%	8.023%	-0.058%	-0.020%	-0.038%	**-0.116%**
Risk Parity	4.5%	5.0%	13.440%	8.023%	0.257%	-0.038%	0.158%	**0.378%**
Absolute Return	1.3%	2.0%	-7.512%	0.659%	-0.166%	0.078%	0.064%	**-0.024%**
Real Estate	24.7%	12.0%	-5.058%	6.131%	-1.361%	-0.578%	-1.555%	**-3.494%**
Liquid Real Assets	0.0%	3.0%	0.000%	5.012%	-0.155%	0.150%	0.155%	**0.150%**
Natural Resources	11.0%	5.0%	2.797%	23.336%	-0.664%	1.026%	-1.591%	**-1.230%**
Infrastructure	7.4%	5.0%	-4.861%	17.189%	-1.074%	0.089%	-0.605%	**-1.591%**
Cash Equivalents	7.3%	2.0%	1.143%	0.199%	0.020%	-0.176%	0.007%	**-0.150%**
DPFP Debt	0.0%	0.0%	-0.919%	2.584%	0.000%	0.792%	0.222%	**1.014%**
Total	**105.8%**	**100.0%**	**3.375%**	**9.967%**	**-5.230%**	**1.293%**	**-2.485%**	**-6.423%**

*Total column may not add up due to rounding.

Global Public Equity: Composite Overview

Manager	Benchmark	Descriptions
Eagle	Russell 2000	US Small Cap
Mitchell	DJ Oil & Gas (EW)	Concentrated energy
OFI	MSCI ACWI	Growth
Pyramis	MSCI ACWI	Core
RREEF	FTSE EPRA/NAREIT Gbl.	Global REITS
SAM	MSCI ACWI	Sustainability theme
Walter Scott	MSCI ACWI	Growth





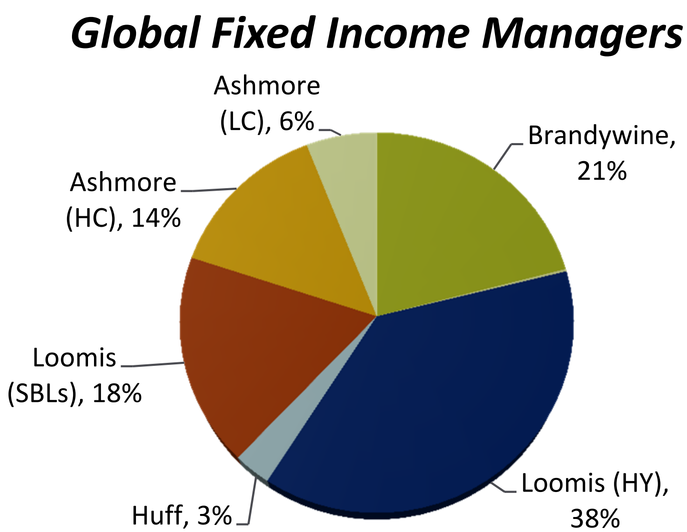
*May not add to 100% due to rounding.

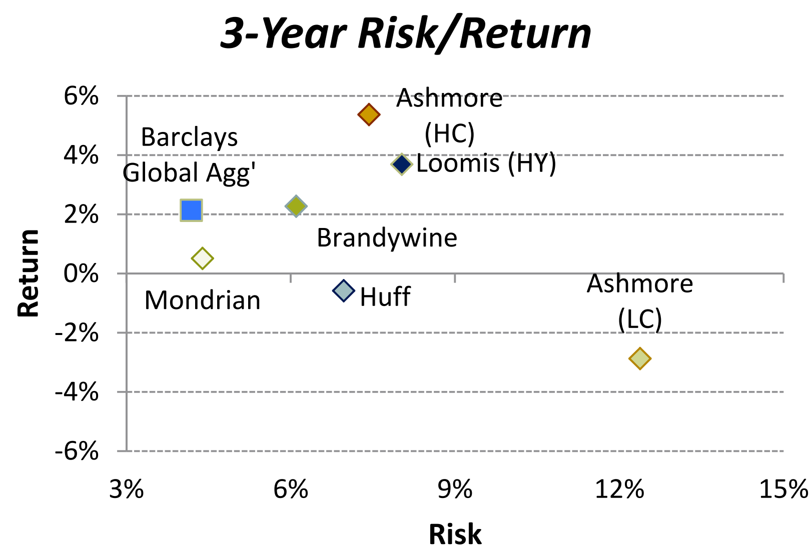
DPFP

	Market Value ($)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Return (%)	Since
DPFP	**2,393,209,829**	**100.0**	**2.4**	**3.3**	**-1.3**	**-2.3**	**1.8**	**3.1**	**2.0**	**6.2**	**Jun-96**
Policy Index			*4.0*	*9.2*	*12.3*	*8.3*	*10.4*	*9.0*	*6.2*	*--*	*Jun-96*
InvestorForce Public DB Net Rank			*91*	*99*	*99*	*99*	*99*	*99*	*99*	*74*	*Jun-96*
Global Equity	**296,161,826**	**12.4**	**6.0**	**7.1**	**12.2**	**6.1**	**10.9**	**8.9**	**4.8**	**5.1**	**Jul-06**
MSCI ACWI Gross			*5.4*	*7.1*	*12.6*	*5.7*	*11.2*	*8.3*	*4.9*	*5.2*	*Jul-06*
eA All Global Equity Net Rank			*33*	*42*	*44*	*49*	*64*	*53*	*51*	*51*	*Jul-06*
Eagle Asset	25,877,602	1.1	10.7	16.2	20.8	11.1	16.7	13.9	9.1	9.7	Feb-05
Russell 2000			*9.0*	*11.5*	*15.5*	*6.7*	*15.8*	*12.5*	*7.1*	*7.6*	*Feb-05*
eA US Small Cap Equity Net Rank			*15*	*10*	*9*	*3*	*30*	*28*	*17*	*12*	*Feb-05*
Pyramis	294,953	0.0	4.0	3.7	9.0	5.3	11.2	7.7	4.4	7.9	Mar-02
MSCI ACWI Gross			*5.4*	*7.1*	*12.6*	*5.7*	*11.2*	*8.3*	*4.9*	*6.8*	*Mar-02*
eA All Global Equity Net Rank			*63*	*72*	*69*	*60*	*58*	*71*	*63*	*46*	*Mar-02*
Walter Scott	89,417,755	3.7	3.1	7.8	13.6	5.7	11.2	--	--	8.2	Dec-09
MSCI ACWI Gross			*5.4*	*7.1*	*12.6*	*5.7*	*11.2*	*8.3*	*4.9*	*8.2*	*Dec-09*
eA All Global Equity Net Rank			*75*	*36*	*32*	*55*	*59*	*--*	*--*	*61*	*Dec-09*
OFI	100,296,991	4.2	9.3	0.3	6.3	4.7	12.1	9.2	--	3.9	Oct-07
MSCI ACWI Gross			*5.4*	*7.1*	*12.6*	*5.7*	*11.2*	*8.3*	*4.9*	*2.9*	*Oct-07*
eA All Global Equity Net Rank			*10*	*94*	*89*	*66*	*43*	*49*	*--*	*40*	*Oct-07*
RREEF Global REIT	23,752,399	1.0	0.9	9.8	15.4	8.5	9.1	13.9	3.1	12.8	Feb-99
FTSE EPRA/NAREIT Global			*1.3*	*10.2*	*14.9*	*7.8*	*12.7*	*10.4*	*3.9*	*9.8*	*Feb-99*
eA Global REIT Net Rank			*76*	*27*	*22*	*66*	*99*	*1*	*99*	*--*	*Feb-99*
Mitchell Group	30,750,907	1.3	5.6	28.2	21.9	-5.0	4.2	4.0	6.1	10.1	Oct-01
Dow Jones Equal Wtd. Oil & Gas			*4.9*	*17.7*	*10.2*	*-13.6*	*-1.0*	*-3.4*	*-3.9*	*4.3*	*Oct-01*
eA All Global Equity Net Rank			*41*	*2*	*6*	*98*	*96*	*93*	*30*	*24*	*Oct-01*
Sustainable Asset Management	25,771,219	1.1	5.8	14.4	21.8	8.8	14.1	9.5	--	11.4	Nov-08
MSCI ACWI Gross			*5.4*	*7.1*	*12.6*	*5.7*	*11.2*	*8.3*	*4.9*	*10.4*	*Nov-08*
eA All Global Equity Net Rank			*36*	*8*	*6*	*16*	*16*	*46*	*--*	*40*	*Nov-08*

Global Fixed Income: Composite Overview

Manager	Benchmark	Asset Class	Descriptions
Brandywine	Barclays Global Aggregate	Global Bonds	Aggressive, but diversified
Mondrian	Barclays Global Aggregate	Global Bonds	Sovereign Debt w/ some Credit
Loomis (HY)	70% MLHY/30% JPM EMBI+	High Yield	Aggressive
Huff	Citi HY Market	High Yield	Diversified
Loomis (BLs)	S&P/LSTA US Levered	Bank Loans	Bank Loans (min 65% of portfolio)
Ashmore (Hard Currency)	JPM EMBI Global Diversified	Emerging Market Debt	Diversified, Hard Currency
Ashmore (Local Currency)	JPM EMBI Global Diversified	Emerging Market Debt	Diversified, Local Currency





*May not add to 100% due to rounding.

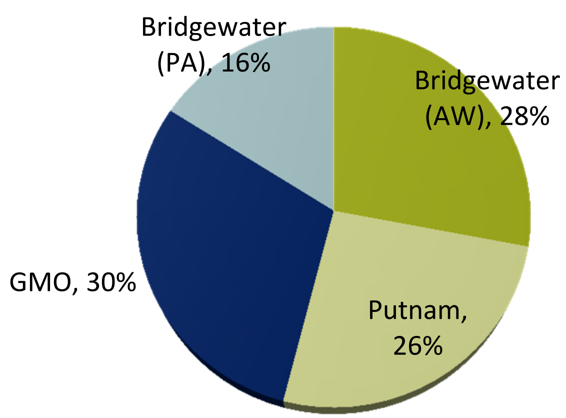
DPFP

	Market Value ($)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Return (%)	Since
DPFP	**2,393,209,829**	**100.0**	**2.4**	**3.3**	**-1.3**	**-2.3**	**1.8**	**3.1**	**2.0**	**6.2**	**Jun-96**
Policy Index			*4.0*	*9.2*	*12.3*	*8.3*	*10.4*	*9.0*	*6.2*	*--*	*Jun-96*
InvestorForce Public DB Net Rank			*91*	*99*	*99*	*99*	*99*	*99*	*99*	*74*	*Jun-96*
Public Fixed Income	**303,626,359**	**12.7**	**4.3**	**14.0**	**10.6**	**2.8**	**6.0**	**--**	**--**	**5.5**	**Dec-10**
Barclays Global Aggregate			*0.8*	*9.9*	*8.8*	*2.1*	*1.7*	*2.7*	*4.3*	*2.4*	*Dec-10*
Brandywine	63,918,993	2.7	0.9	10.4	10.0	2.3	3.4	5.5	6.1	5.2	Oct-04
Barclays Global Aggregate			*0.8*	*9.9*	*8.8*	*2.1*	*1.7*	*2.7*	*4.3*	*4.1*	*Oct-04*
eA All Global Fixed Inc Net Rank			*83*	*33*	*29*	*66*	*59*	*35*	*26*	*48*	*Oct-04*
Mondrian	1,803	0.0	-0.9	3.2	1.9	0.5	0.5	2.1	4.4	3.3	Oct-03
Barclays Global Aggregate			*0.8*	*9.9*	*8.8*	*2.1*	*1.7*	*2.7*	*4.3*	*4.3*	*Oct-03*
eA All Global Fixed Inc Net Rank			*99*	*92*	*98*	*90*	*96*	*97*	*77*	*99*	*Oct-03*
Loomis Sayles	114,533,075	4.8	7.1	17.6	10.2	3.7	7.9	9.1	7.9	9.7	Oct-98
70% ML High Yield/30% JPM EMBI Plus			*4.8*	*15.5*	*14.3*	*6.1*	*8.0*	*8.4*	*7.6*	*8.3*	*Oct-98*
eA Global High Yield Fixed Inc Net Rank			*1*	*4*	*84*	*63*	*35*	*1*	*1*	*1*	*Oct-98*
W.R. Huff High Yield	10,175,628	0.4	3.4	13.6	7.6	-0.6	4.8	8.9	6.8	6.5	Jun-96
Citi High Yield Market Index			*5.5*	*15.6*	*12.7*	*4.8*	*7.9*	*8.4*	*7.3*	*7.2*	*Jun-96*
eA US High Yield Fixed Inc Net Rank			*86*	*22*	*88*	*99*	*95*	*16*	*58*	*87*	*Jun-96*
Loomis Sayles Senior Rate and Fixed Income	54,958,518	2.3	4.0	9.4	5.7	--	--	--	--	3.4	Jan-14
S&P/LSTA U.S. Leveraged Loan			*3.1*	*7.7*	*5.5*	*3.4*	*5.2*	*5.5*	*4.6*	*3.1*	*Jan-14*
eA All Global Fixed Inc Net Rank			*22*	*45*	*78*	*--*	*--*	*--*	*--*	*40*	*Jan-14*
Ashmore AEMDF	41,655,569	1.7	5.4	16.8	17.4	5.4	5.7	7.0	7.3	8.5	Feb-05
JP Morgan EMBI Global Diversified			*4.0*	*14.8*	*16.2*	*8.2*	*7.8*	*7.9*	*7.7*	*7.9*	*Feb-05*
eA All Emg Mkts Fixed Inc Net Rank			*7*	*29*	*28*	*44*	*51*	*34*	*43*	*27*	*Feb-05*
Ashmore AEMLCB	18,382,773	0.8	2.8	18.7	17.8	-2.9	0.0	--	--	-0.8	Mar-11
JP Morgan GBI EM Global Diversified TR USD			*2.7*	*17.1*	*17.1*	*-2.6*	*0.1*	*2.2*	*5.5*	*-0.3*	*Mar-11*
eA All Emg Mkts Fixed Inc Net Rank			*72*	*6*	*23*	*91*	*83*	*--*	*--*	*84*	*Mar-11*

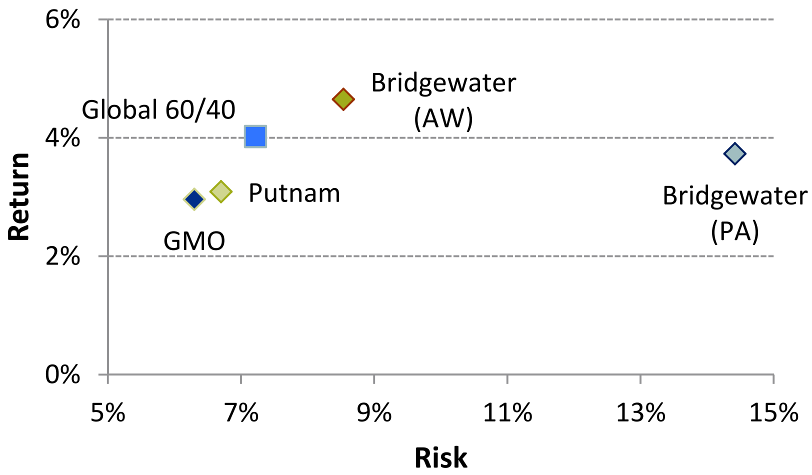
Global Asset Allocation: Composite Overview

Manager	Benchmark	Asset Class	Descriptions
Bridgewater (All Weather)	Global 60/40	Risk Parity	Passive approach
Bridgewater (Pure Alpha)	HFRX Absolute Return	Absolute Return	Global Macro Hedge Fund
GMO	Global 60/40	GTAA	Unconstrained
Putnam	Global 60/40	Risk Parity	Active approach

GAA Managers



3-Year Risk/Return



*May not add to 100% due to rounding.

DPFP

	Market Value ($)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Return (%)	Since
DPFP	**2,393,209,829**	**100.0**	**2.4**	**3.3**	**-1.3**	**-2.3**	**1.8**	**3.1**	**2.0**	**6.2**	**Jun-96**
Policy Index			*4.0*	*9.2*	*12.3*	*8.3*	*10.4*	*9.0*	*6.2*	*--*	*Jun-96*
InvestorForce Public DB Net Rank			*91*	*99*	*99*	*99*	*99*	*99*	*99*	*74*	*Jun-96*
Total GAA	**199,256,560**	**8.3**	**3.5**	**9.1**	**9.3**	**4.0**	**5.1**	**6.1**	**--**	**3.4**	**Jul-07**
Total Asset Allocation Policy Index			*3.0*	*6.6*	*8.0*	*6.6*	*6.6*	*6.9*	*--*	*6.9*	*Jul-07*
eA Global Balanced Net Rank			*53*	*28*	*30*	*63*	*90*	*69*	*--*	*68*	*Jul-07*
Bridgewater All Weather	56,575,562	2.4	3.8	14.1	12.7	4.7	5.9	9.3	--	5.8	Sep-07
Global 60/40			*3.5*	*8.0*	*9.6*	*7.2*	*6.8*	*6.6*	*--*	*6.7*	*Sep-07*
eA Global TAA Net Rank			*27*	*1*	*8*	*23*	*45*	*1*	*--*	*6*	*Sep-07*
Putnam	50,870,241	2.1	2.5	9.3	8.1	3.1	5.5	--	--	5.8	Dec-09
Global 60/40			*3.5*	*8.0*	*9.5*	*7.0*	*6.9*	*--*	*--*	*7.0*	*Dec-09*
eA Global Balanced Net Rank			*74*	*28*	*61*	*77*	*89*	*--*	*--*	*69*	*Dec-09*
GMO	60,434,649	2.5	3.9	6.1	8.6	3.0	5.7	5.6	--	4.3	Sep-07
Global 60/40			*3.5*	*8.0*	*9.5*	*7.0*	*6.9*	*7.1*	*--*	*7.1*	*Sep-07*
eA Global TAA Net Rank			*25*	*49*	*44*	*53*	*46*	*40*	*--*	*48*	*Sep-07*
Bridgewater Pure Alpha	31,376,108	1.3	3.1	-7.5	-2.9	3.7	4.9	--	--	4.5	Aug-11
HFRX Absolute Return			*0.9*	*0.7*	*2.2*	*4.7*	*5.3*	*--*	*--*	*5.3*	*Aug-11*
eA Global TAA Net Rank			*40*	*99*	*96*	*37*	*59*	*--*	*--*	*31*	*Aug-11*

Footnotes

1. **Mitchell Group** was included in the Global Natural Resources composite from 10/1/2001 to 3/31/2015 and included in the Global Equity composite from 4/1/2015 to present.
2. **Sustainable Asset Management** was included in the Global Natural Resources composite from 11/1/2008 to 3/31/2015 and included in the Global Equity composite from 4/1/2015 to present.
3. **Hudson Clean Energy** was included in the Global Natural Resources composite from 1/1/2010 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and the Private Equity composite from 1/1/2016 to present.
4. **RREEF** was included in the Real Estate composite from 2/1/1999 to 12/31/2009 and included in the Global Equity composite from 1/1/2010 to present.
5. **Highland Crusader** was included in the Global Fixed Income composite from 7/1/2003 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
6. **Highland Capital Management** was included in the Global Fixed Income composite from 1/1/2007 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
7. **Lone Star Fund VII, LP** was included in the Global Fixed Income composite from 10/1/2011 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
8. **Lone Star Fund VIII, LP** was included in the Global Fixed Income composite from 10/1/2013 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
9. **Lone Star Fund IX, LP** was included in the Global Fixed Income composite from 10/1/2014 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
10. **Oaktree Fund IV & 2x Loan Fund** was included in the Global Fixed Income composite from 1/1/2002 to 3/31/2015 and included in the Private Markets composite from 4/1/2015 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
11. **Ashmore Capital GSSF IV** was included in the Private Markets composite from 10/1/2007 to 12/31/2015 and included in the Private Credit composite from 1/1/2016 to present.
12. **Global Infrastructure composite** was included in the Private Markets composite history until 6/30/2012.
13. **Private Equity composite** includes Private Credit managers until 12/31/2015. From 01/01/2016 to present the Private Equity and Credit managers are now in separate composites.
14. **Policy index** changed on 4/1/2016 from 20% MSCI ACWI, 15% S&P 500+2%, 10% Global Natural Resources Benchmark, 15% Barclays Global Agg, 20% CPI+5%, 10% CPI +5%, 15% NCREIF PI to 20% MSCI ACWI (gross), 5% MSCI EM Equity (gross), 5% Russell 3000 +3%, 2% Barclays UST 1-3 Yr, 3% Barclays Global Agg, 5% Barclays Global HY, 6% S&P Leveraged Loan Index, 6% HFRI RV: FI (50/50- Abs/Corp), 6%50% JPM EMBI/50% JPM GBI-EM, 5% Barclays Global HY +2%, 5% S&P Global Nat Res, 5% S&P Global Infra, 12% NCREIF, 3% CPI +5%, 5% 60% MSCI ACWI/40% Barclays Global Agg, 3% 60% MSCI ACWI/40% Barclays Global Agg, 2% HFRX Abs Ret Index, 2% 90 Day T-Bill.
15. **Natural Resources** benchmark changed from the Global Natural Resources benchmark from 12/1/2010 to 12/31/2015 to the S&P Global Natural Resources benchmark 1/1/2016 to present.
16. **Infrastructure** benchmark changed from CPI +5% from 7/1/2012 to 12/31/2015 to S&P Global Infrastructure benchmark 1/1/2016 to present.
17. **Total Asset Allocation** benchmark changed from CPI+ 5% from 7/1/2007 to 12/31/2015 to 80% 60/40 MSCI ACWI & Barclays Global Agg and 20% HFRX Absolute Return Index 1/1/2016 to present.
18. **Bridgewater All Weather** benchmark changed from 91 Day T Bills +6% from 9/1/2007 to 12/31/2015 to 60/40 MSCI ACWI & Barclays Global Agg 1/1/2016 to present.
19. **GMO** benchmark changed from CPI +5% from 9/1/2007 to 12/31/2015 to 60/40 MSCI ACWI & Barclays Global Agg 1/1/2016 to present.
20. **Putnam** benchmark changed from CPI +5% from 12/1/2009 to 12/31/2016 to 60/40 MSCI ACWI & Barclays Global Agg 1/1/2016 to present.
21. **Bridgewater Pure Alpha** benchmark changed from 91 Day T Bills +6% from 8/1/2011 to 12/31/2015 to HFRX Absolute Return Index 1/1/2016 to present.

Policy Compliance Test: Traditional Managers

3 Year Rolling Excess Return Violations:

Manager	Return Rank	NEPC Recommendation
Global Equity		
Pyramis	60	N/A
OFI	66	HOLD
RREEF Gbl REIT	66	PENDING
Mitchell Group	98	PENDING
Walter Scott	55	HOLD
Public Fixed Income		
Brandywine	66	HOLD
Mondrian	90	N/A
Loomis Sayles	63	HOLD
W.R. Huff High Yield	99	N/A
Ashmore AEMLCB	91	PENDING
GAA		
Putnam	77	PENDING
GMO	53	PENDING

3 Year Rolling Risk-Adjusted Excess Return Violations:

Manager	Sharpe Ratio Rank	NEPC Recommendation
Global Equity		
Pyramis	60	N/A
OFI	74	HOLD
RREEF Gbl REIT	60	PENDING
Mitchell Group	96	PENDING
Public Fixed Income		
Brandywine	77	HOLD
Mondrian	90	N/A
Loomis Sayles HY	76	HOLD
W.R. Huff HY	99	N/A
Ashmore AEMDF	48	PENDING
Ashmore AEMLCB	86	PENDING
GAA		
Putnam	66	PENDING
GMO	54	PENDING
Bridgewater Pure Alpha	77	HOLD

Qualitative Concerns:

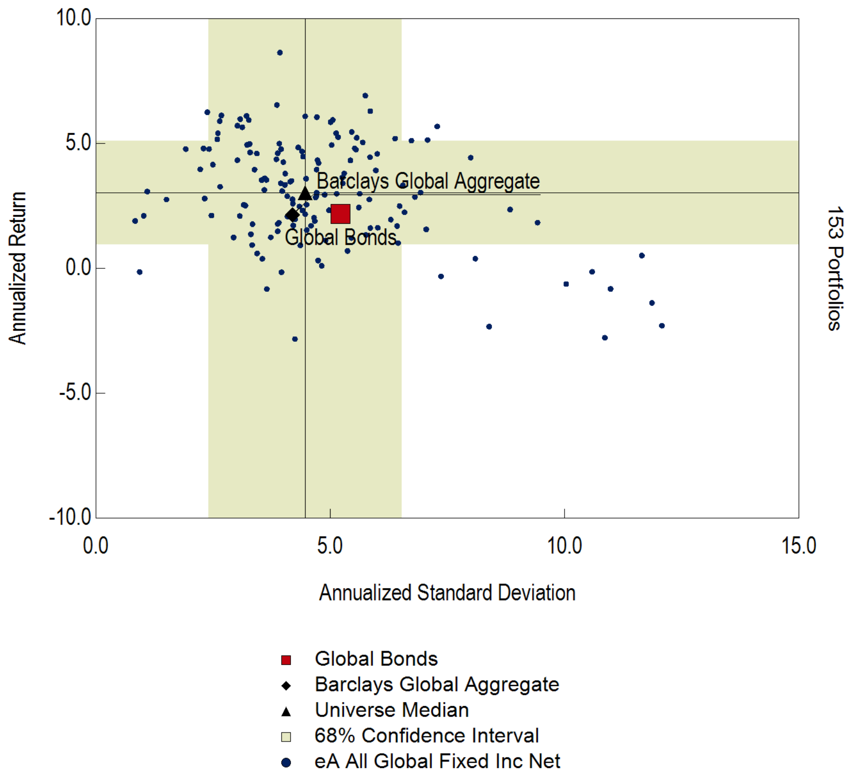
Manager	NEPC Status
N/A	N/A

Pending denotes that the recommendation to terminate will be discussed at the 12/8/16 Board meeting.

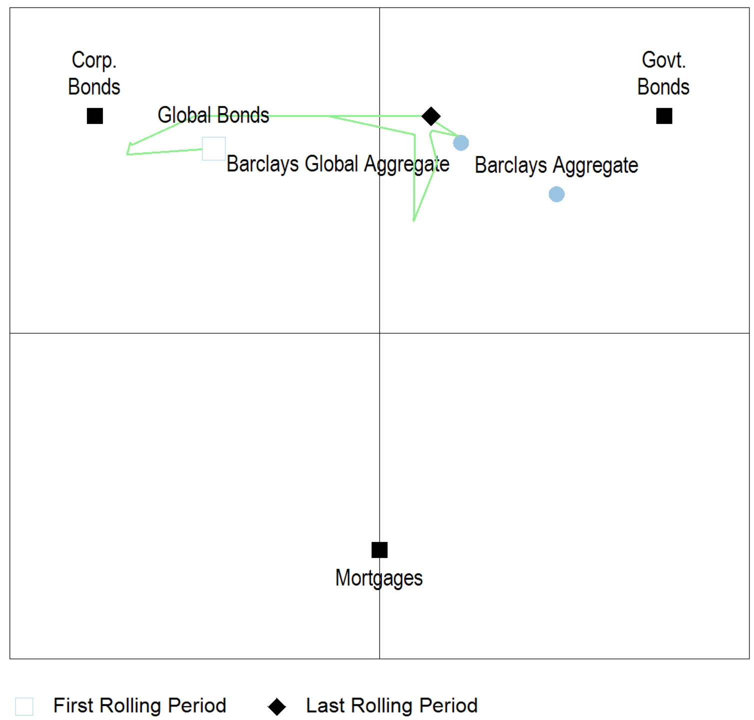
Portfolio Review: Global Fixed Income

Global Bonds

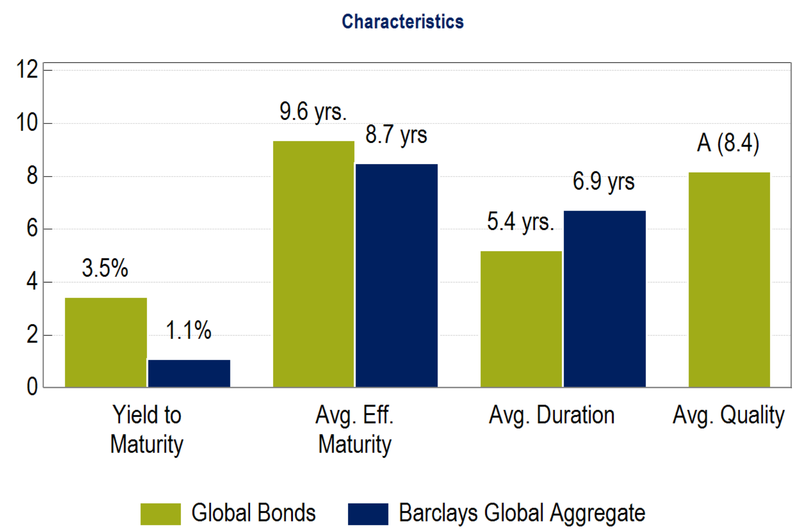
3 Year Risk Return

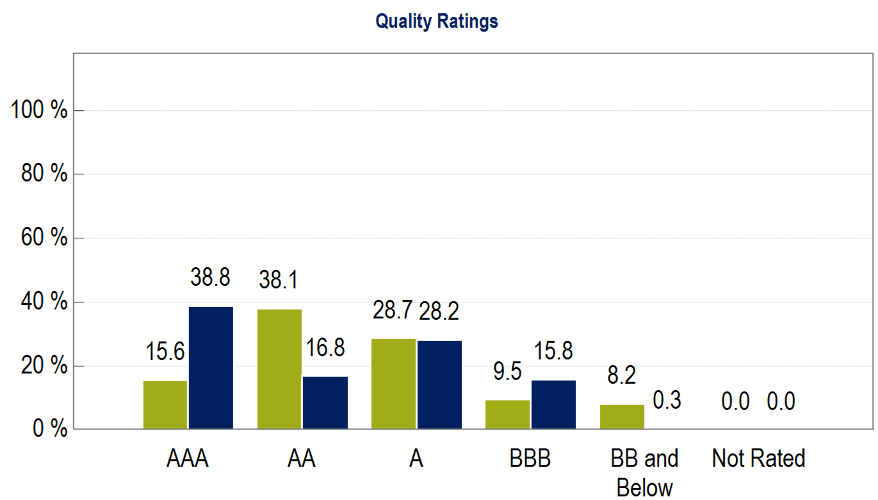


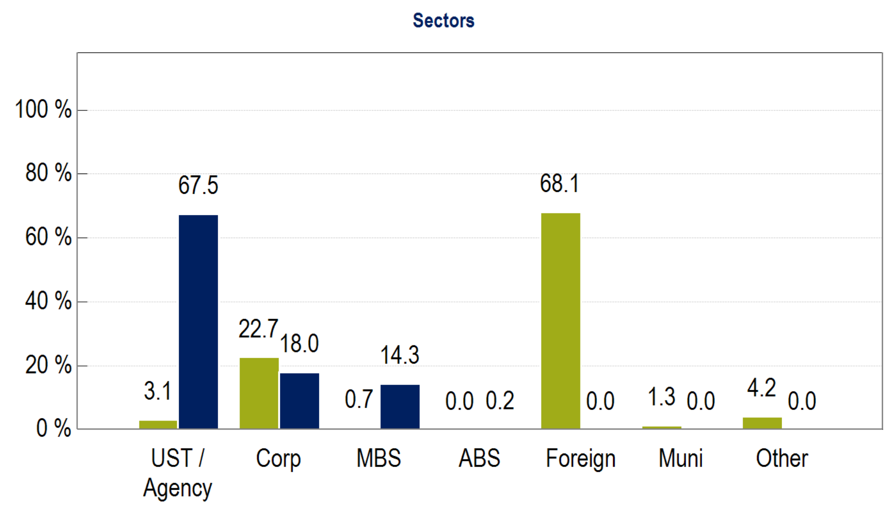
3 Year Style Analysis



Global Bonds







Brandywine

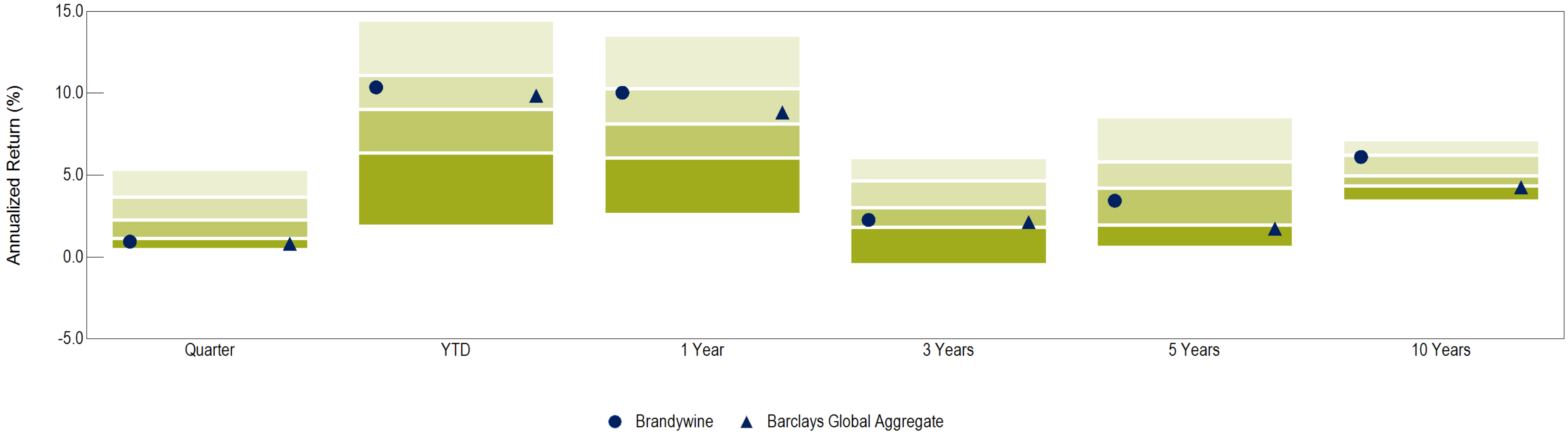
- **Manager Role in Portfolio**
  - One of two global fixed income managers

- **Organizational Profile**
  - Brandywine Asset Management, LLC is a wholly-owned, independent subsidiary of Legg Mason, Inc. Prior to October 2001, they were Brandywine Asset Management, Inc. Of note, their senior investment professionals have non-competes with Legg Mason, Inc. for up to 6 years.

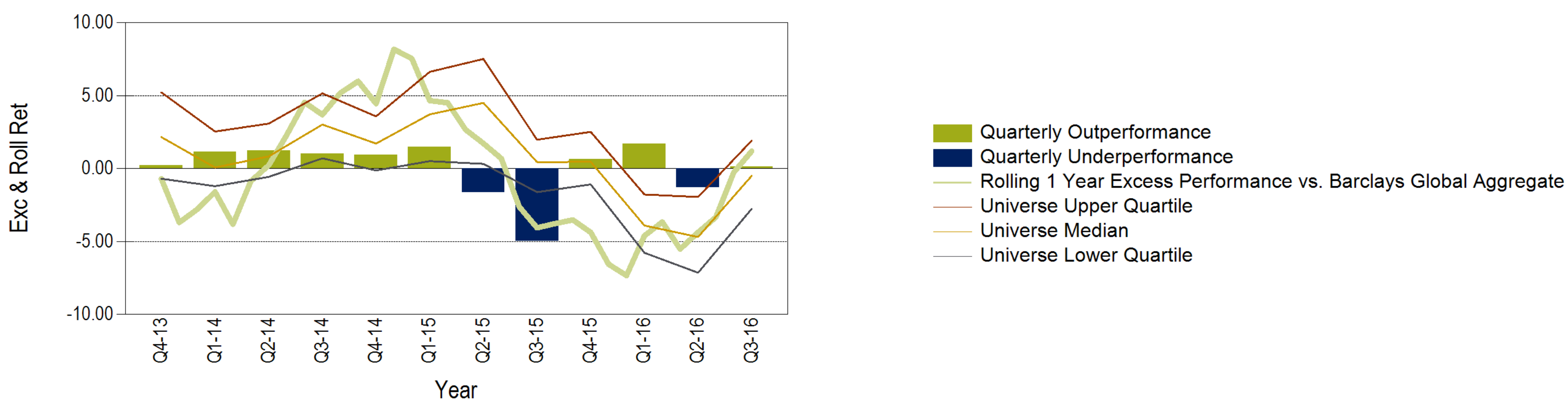
- **Investment Strategy Commentary**
  - Brandywine attempts to invest in bonds with the highest real yield, manage currencies to protect principle and increase returns, avoid index-like weights, limit risk and patiently rotate countries
  - Secular trends drive bond markets and opportunities exist to add value by identifying trends which capitalize on the dynamics of liquidity cycles and business cycles in each country
  - Currency valuations that Brandywine considers extreme are hedged

Brandywine

eA All Global Fixed Inc Net Accounts



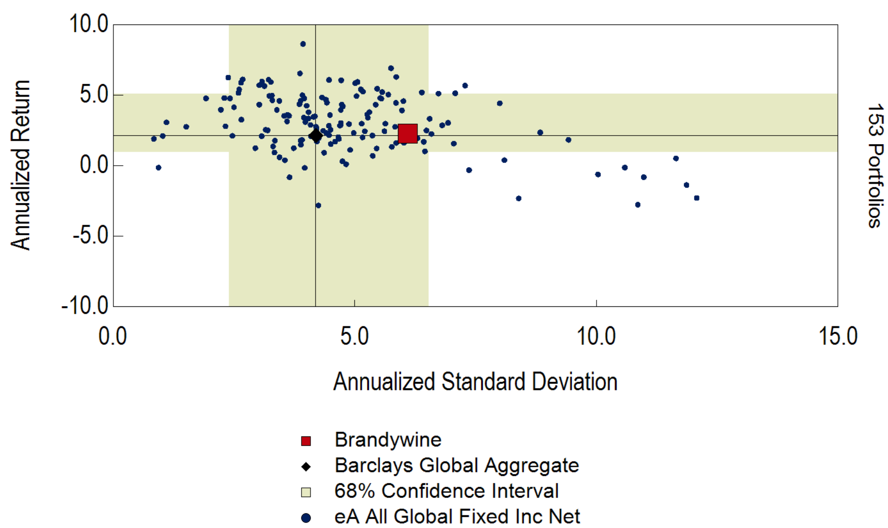
Annualized Excess Performance



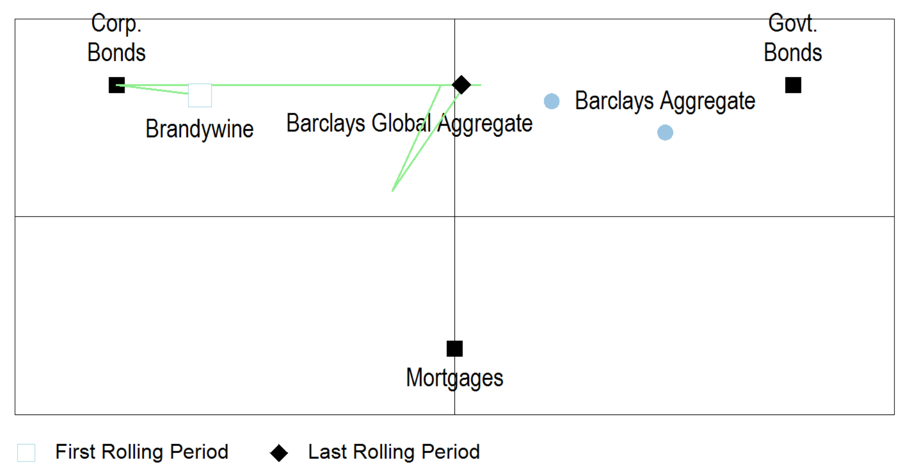
Returns are net of fees

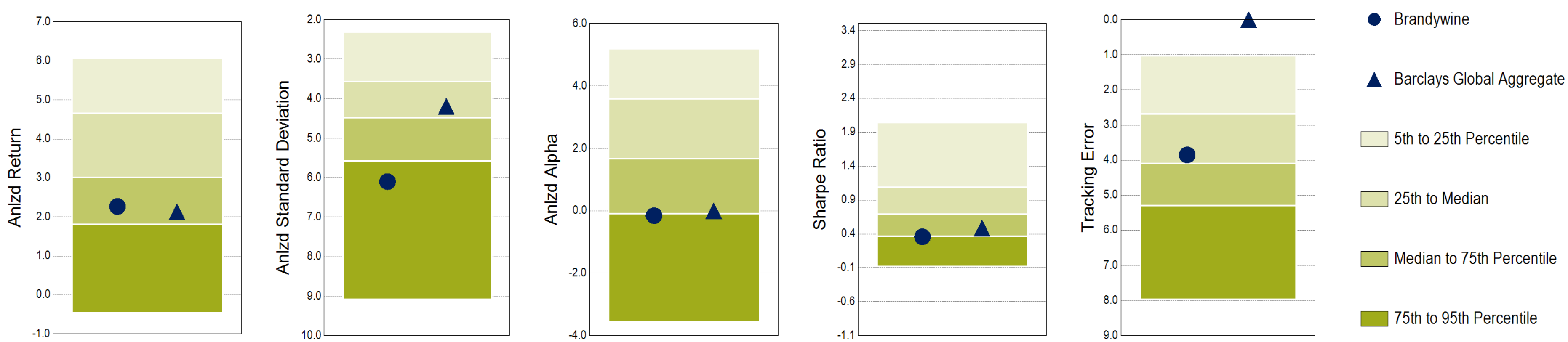
Brandywine

3 Year Risk Return



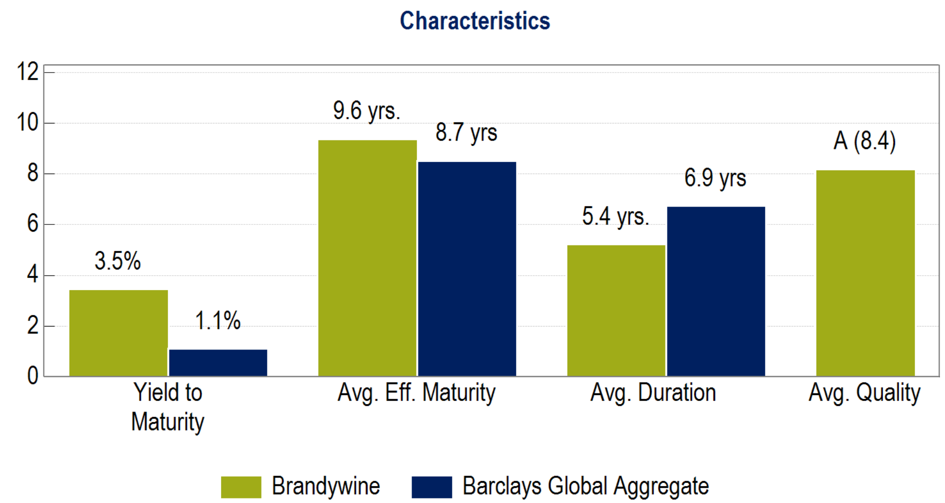
3 Year Style Map

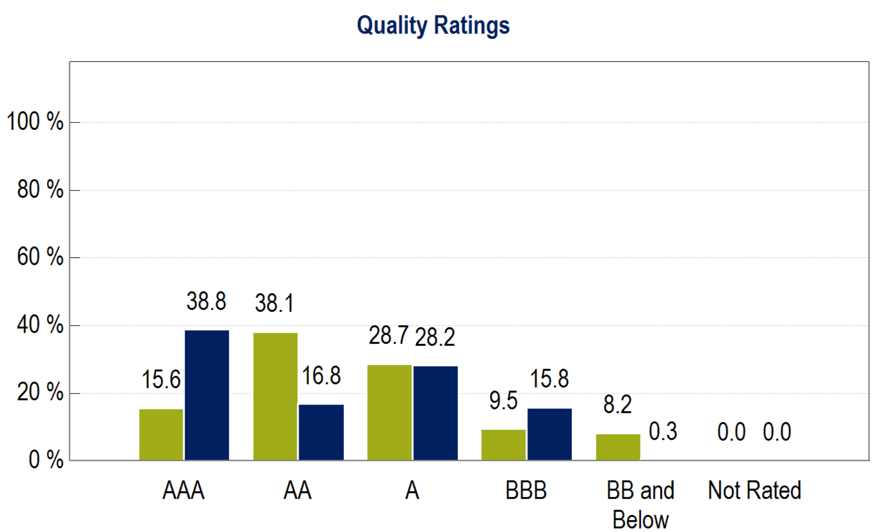


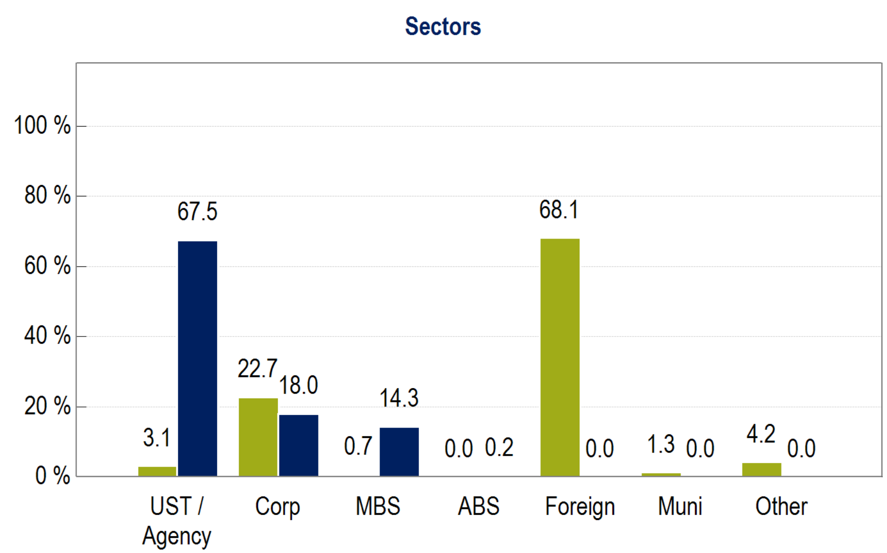


Returns are net of fees

Brandywine


Characteristics
12
10
8
6
4
2
0
3.5%
1.1%
9.6 yrs.
8.7 yrs
5.4 yrs.
6.9 yrs
A (8.4)
Yield to Maturity
Avg. Eff. Maturity
Avg. Duration
Avg. Quality
Brandywine
Barclays Global Aggregate

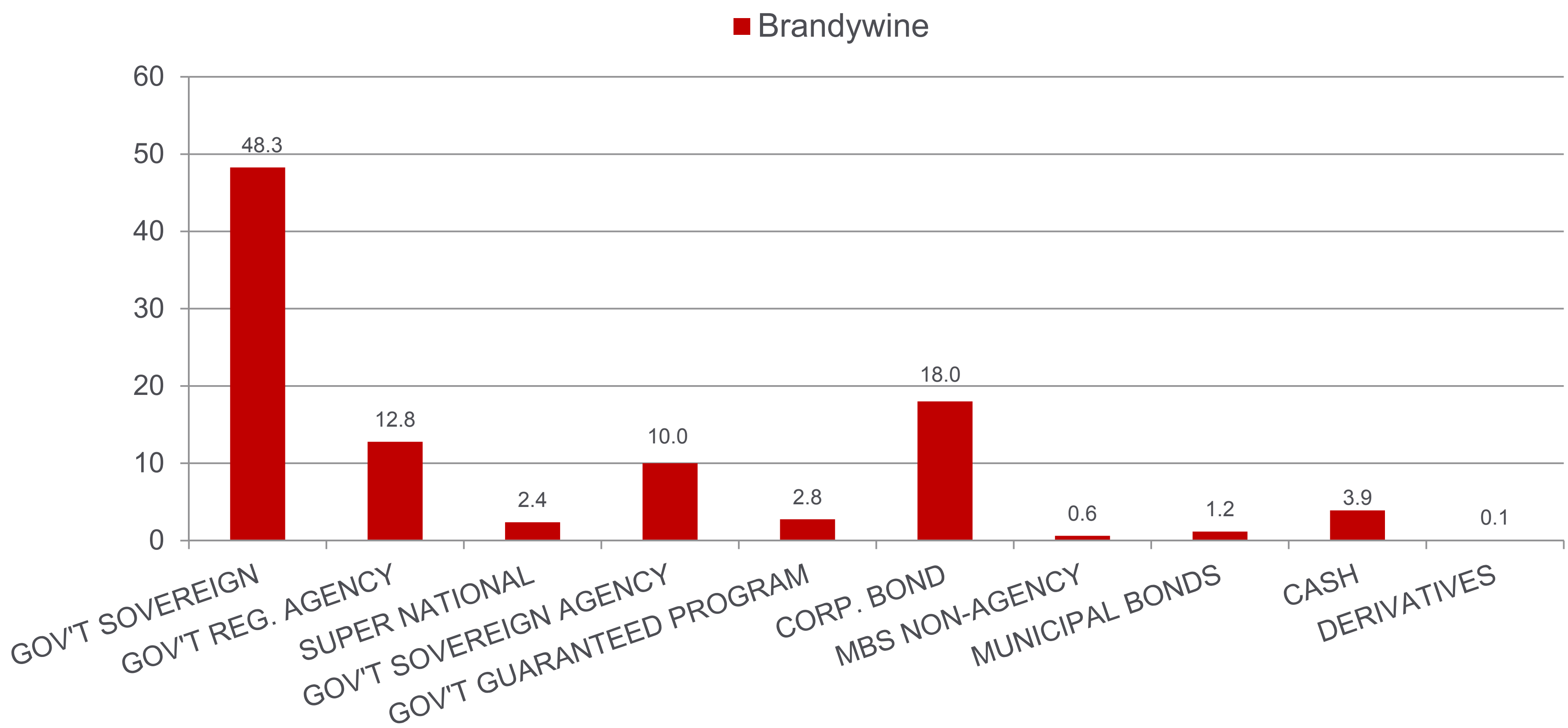

Quality Ratings
100 %
80 %
60 %
40 %
20 %
0 %
15.6
38.8
38.1
16.8
28.7
28.2
9.5
15.8
8.2
0.3
0.0
0.0
AAA
AA
A
BBB
BB and Below
Not Rated


Sectors
100 %
80 %
60 %
40 %
20 %
0 %
3.1
67.5
22.7
18.0
0.7
14.3
0.0
0.2
68.1
0.0
1.3
0.0
4.2
0.0
UST / Agency
Corp
MBS
ABS
Foreign
Muni
Other

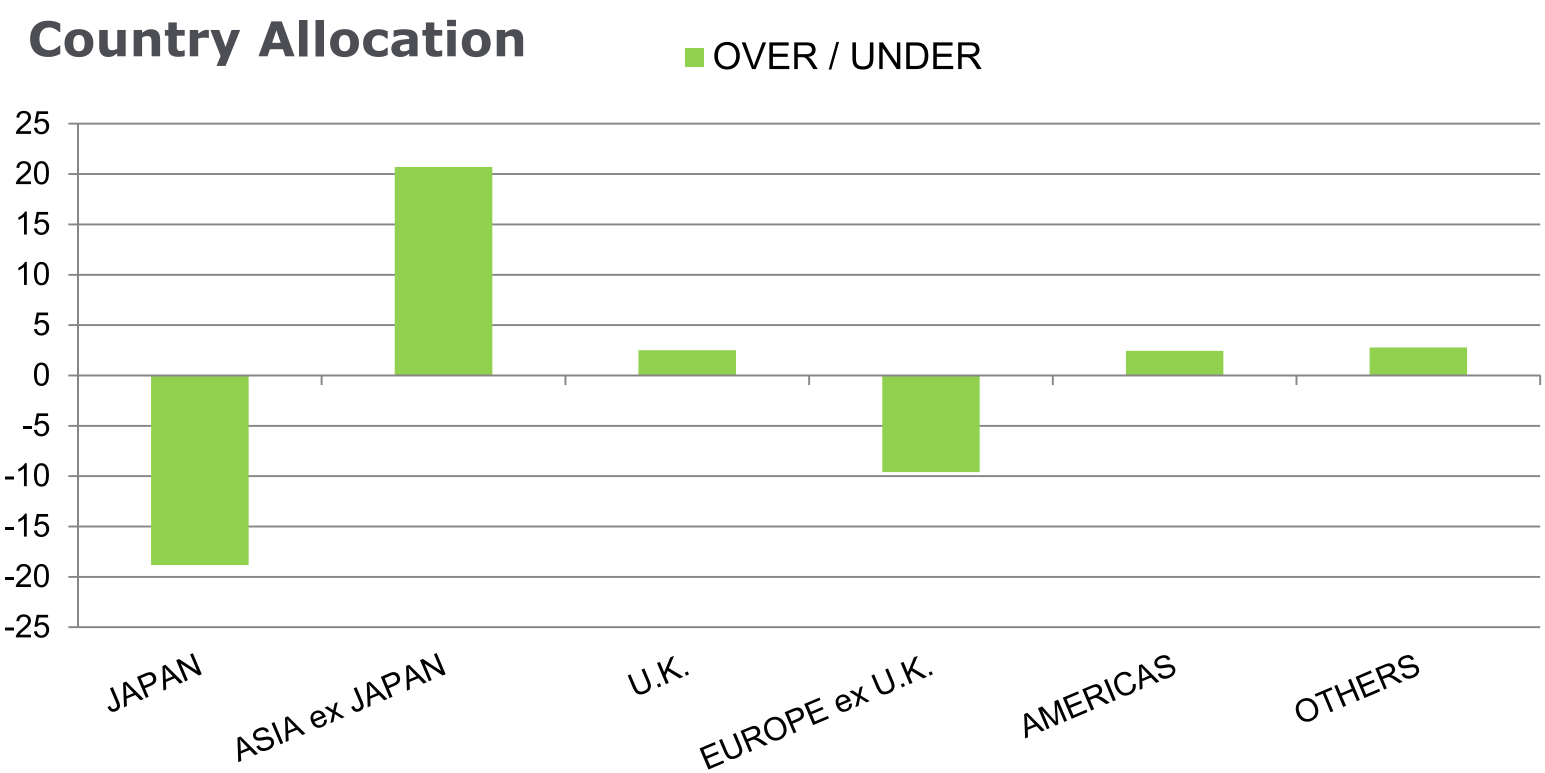
Characteristics	Brandywine
Average Coupon	4.2
Average Maturity	10.0
Modified Duration	5.2
Number of Issues	49
Yield to Maturity	3.4

Source: Brandywine, September 2016

Sector Allocation



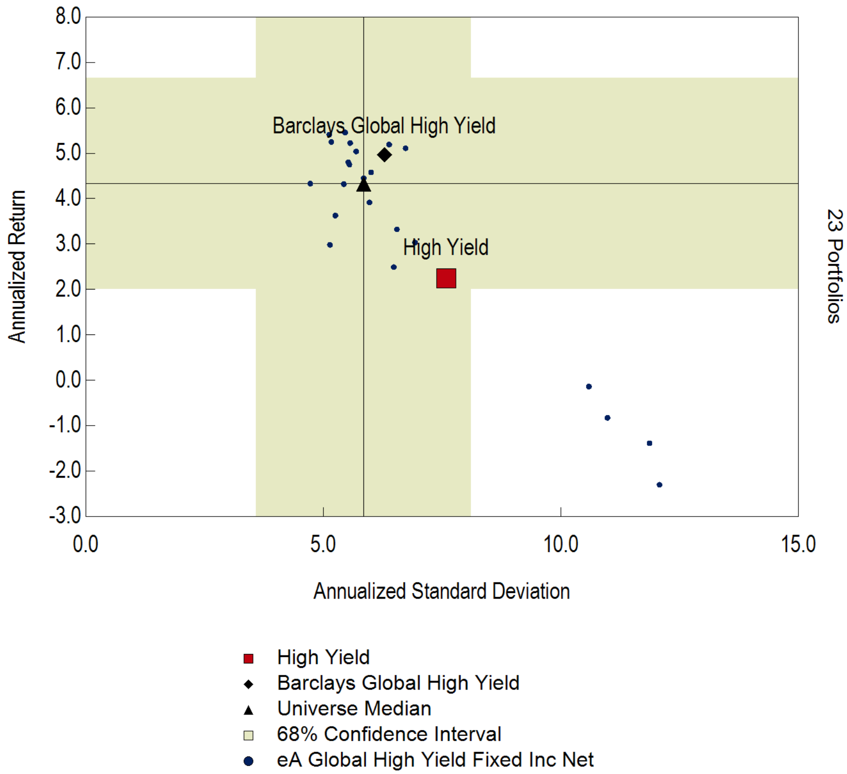
Source: Brandywine, Septmber 2016



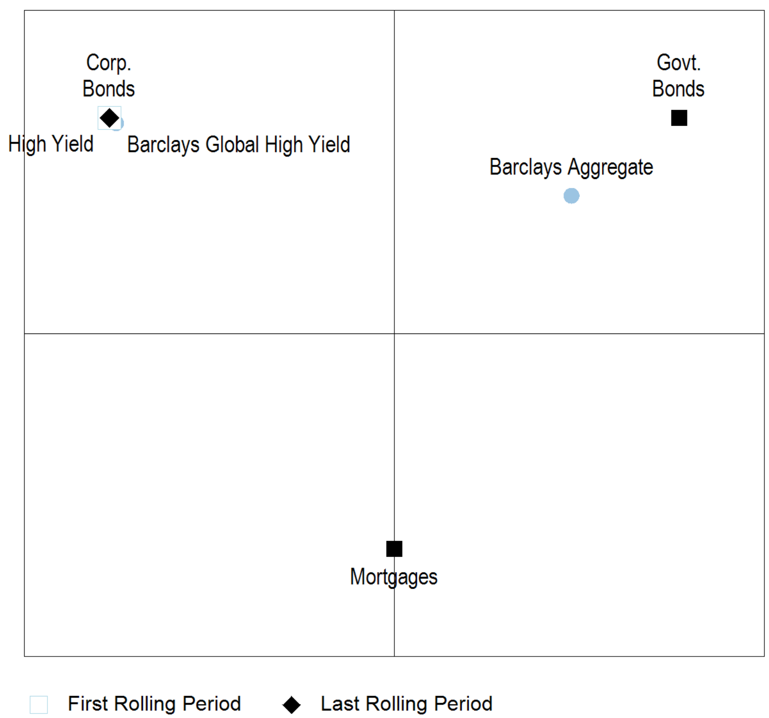
Source: Brandywine, September 2016

High Yield

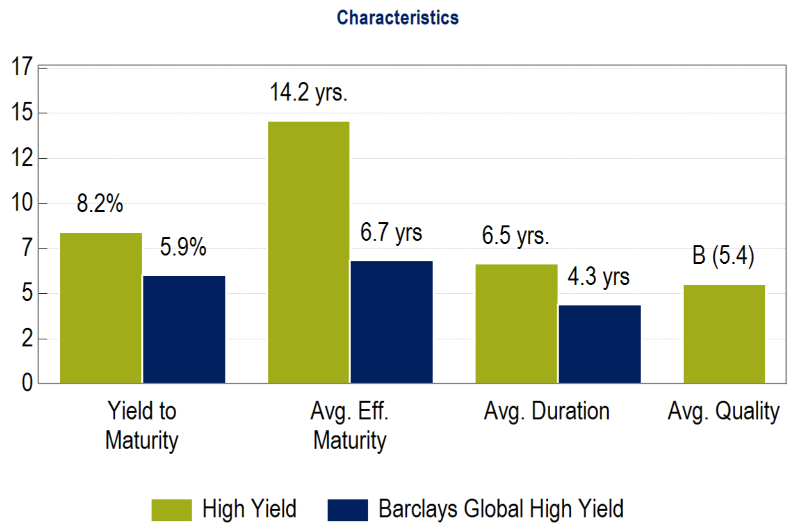
3 Year Risk Return

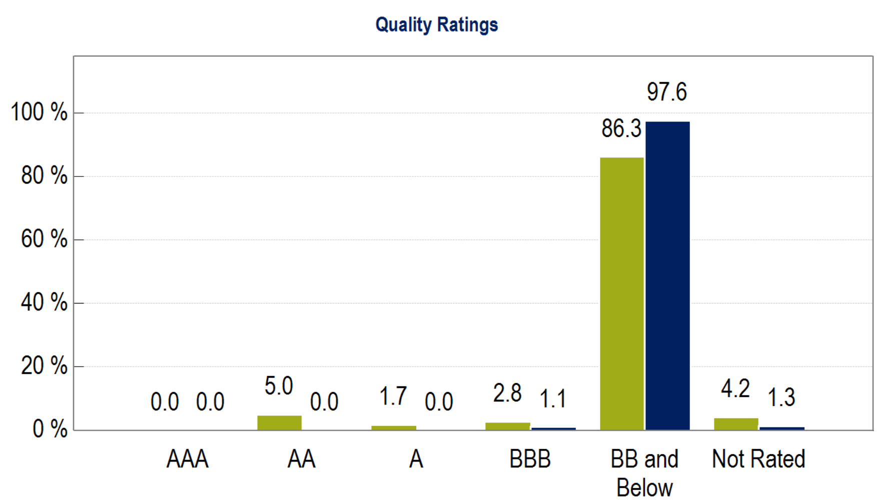


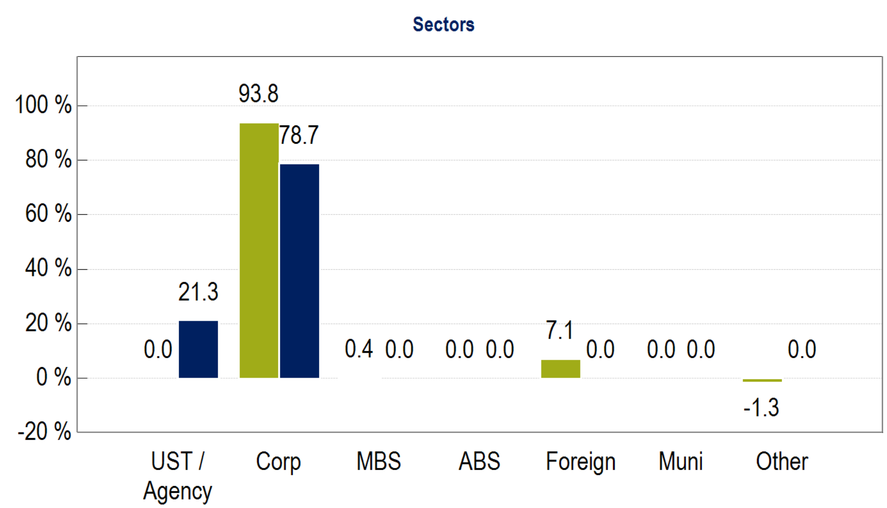
3 Year Style Analysis



High Yield


Characteristics
17
15
12
10
7
5
2
0
8.2%
5.9%
14.2 yrs.
6.7 yrs
6.5 yrs.
4.3 yrs
B (5.4)
Yield to Maturity
Avg. Eff. Maturity
Avg. Duration
Avg. Quality
High Yield
Barclays Global High Yield


Quality Ratings
100 %
80 %
60 %
40 %
20 %
0 %
0.0 0.0
5.0 0.0
1.7 0.0
2.8 1.1
86.3 97.6
4.2 1.3
AAA
AA
A
BBB
BB and Below
Not Rated


Sectors
100 %
80 %
60 %
40 %
20 %
0 %
-20 %
0.0 21.3
93.8 78.7
0.4 0.0
0.0 0.0
7.1 0.0
0.0 0.0
-1.3 0.0
UST / Agency
Corp
MBS
ABS
Foreign
Muni
Other

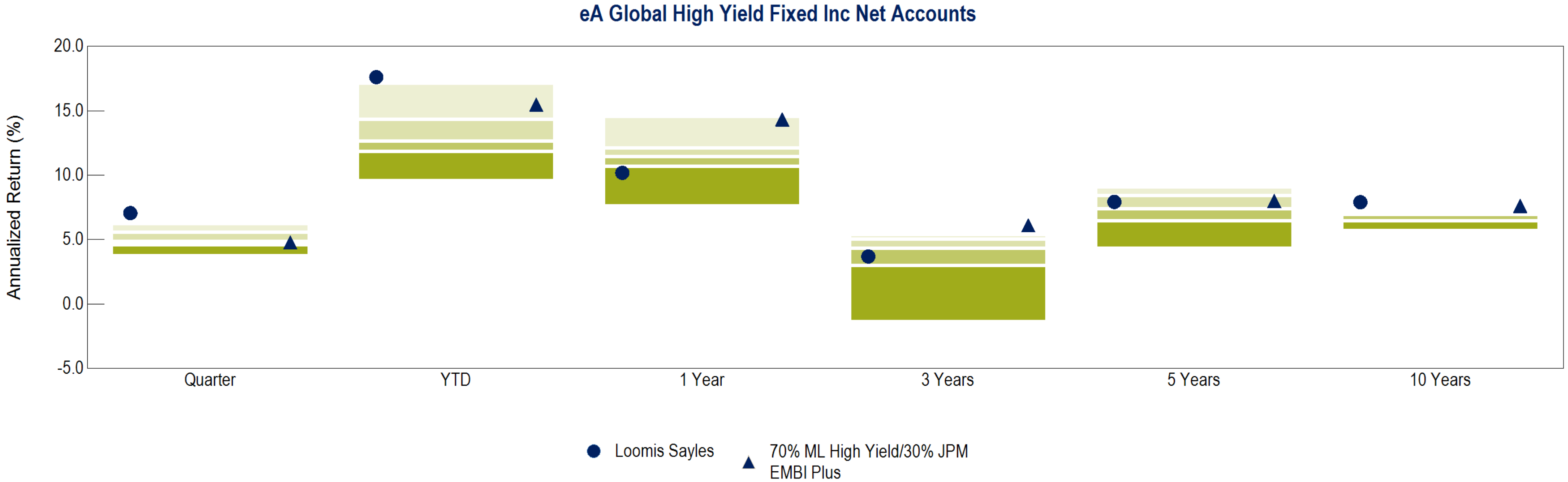
Loomis Sayles

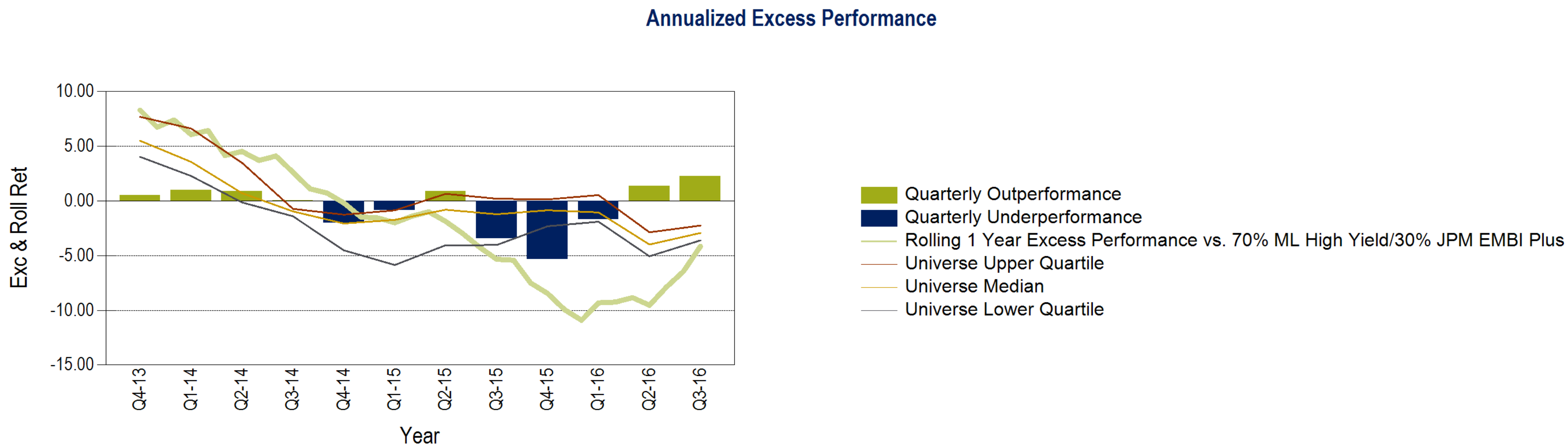
- **Manager Role in Portfolio**
  - Global opportunistic fixed income manager operating in public securities markets

- **Organizational Profile**
  - Originally founded in 1926, Loomis Sayles is now a wholly-owned subsidiary of CDC IXIS Asset Management
  - Loomis is highly regarded for its credit research skills

- **Investment Strategy Commentary**
  - Bottom-up selection with top-down "awareness"
  - Bond Policy Committee provides top-down, macro view of market conditions
  - Investment professionals from research, portfolio management and trading collaborate for bottom-up selection in eleven specific sectors

Loomis Sayles

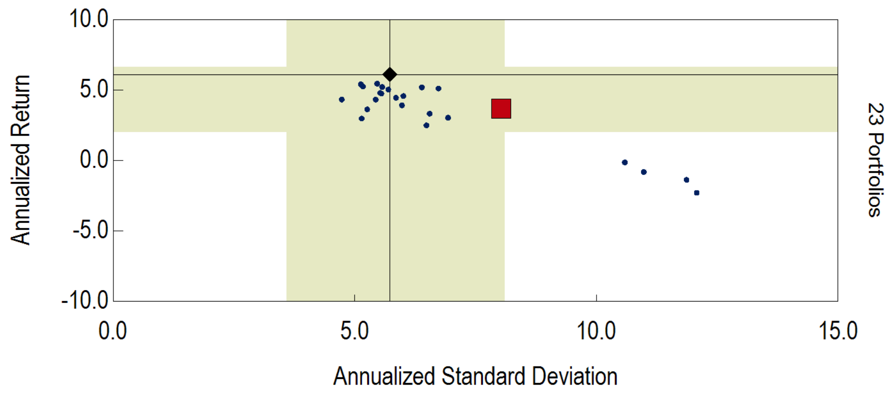




Returns are net of fees

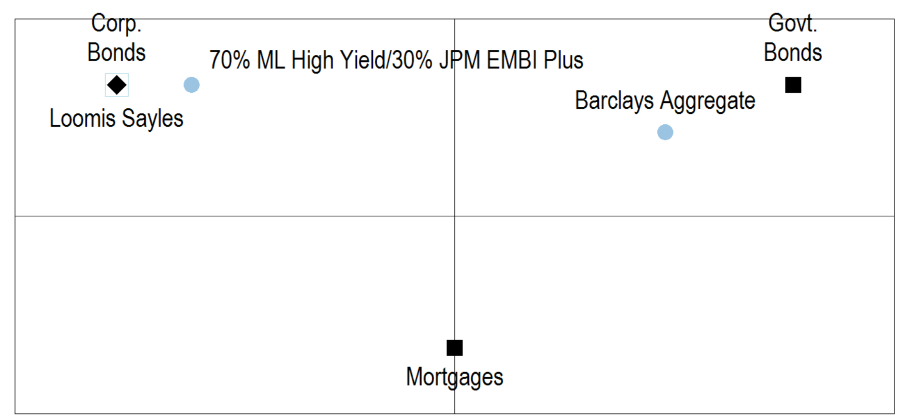
Loomis Sayles

3 Year Risk Return

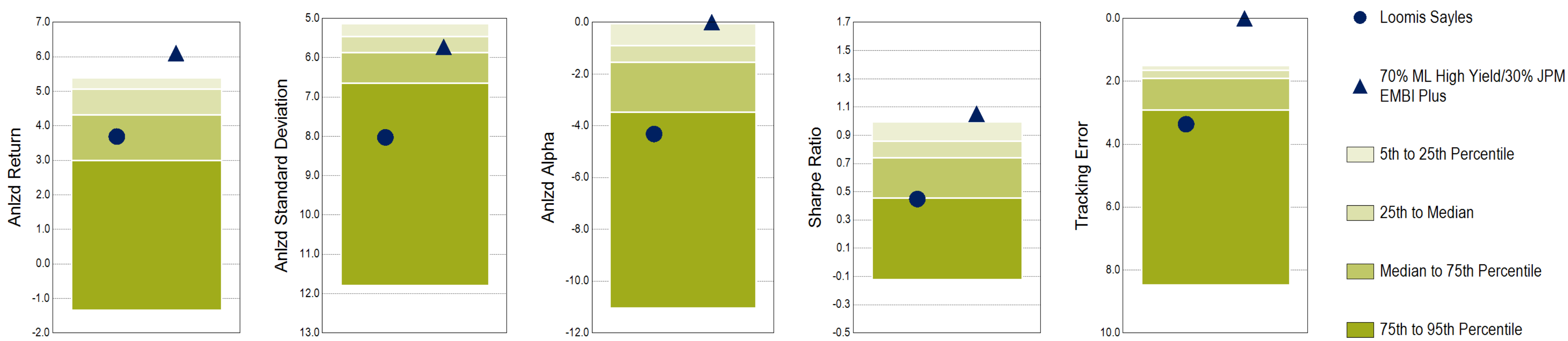


- Loomis Sayles
- 70% ML High Yield/30% JPM EMBI Plus
- 68% Confidence Interval
- eA Global High Yield Fixed Inc Net

3 Year Style Map



First Rolling Period   Last Rolling Period

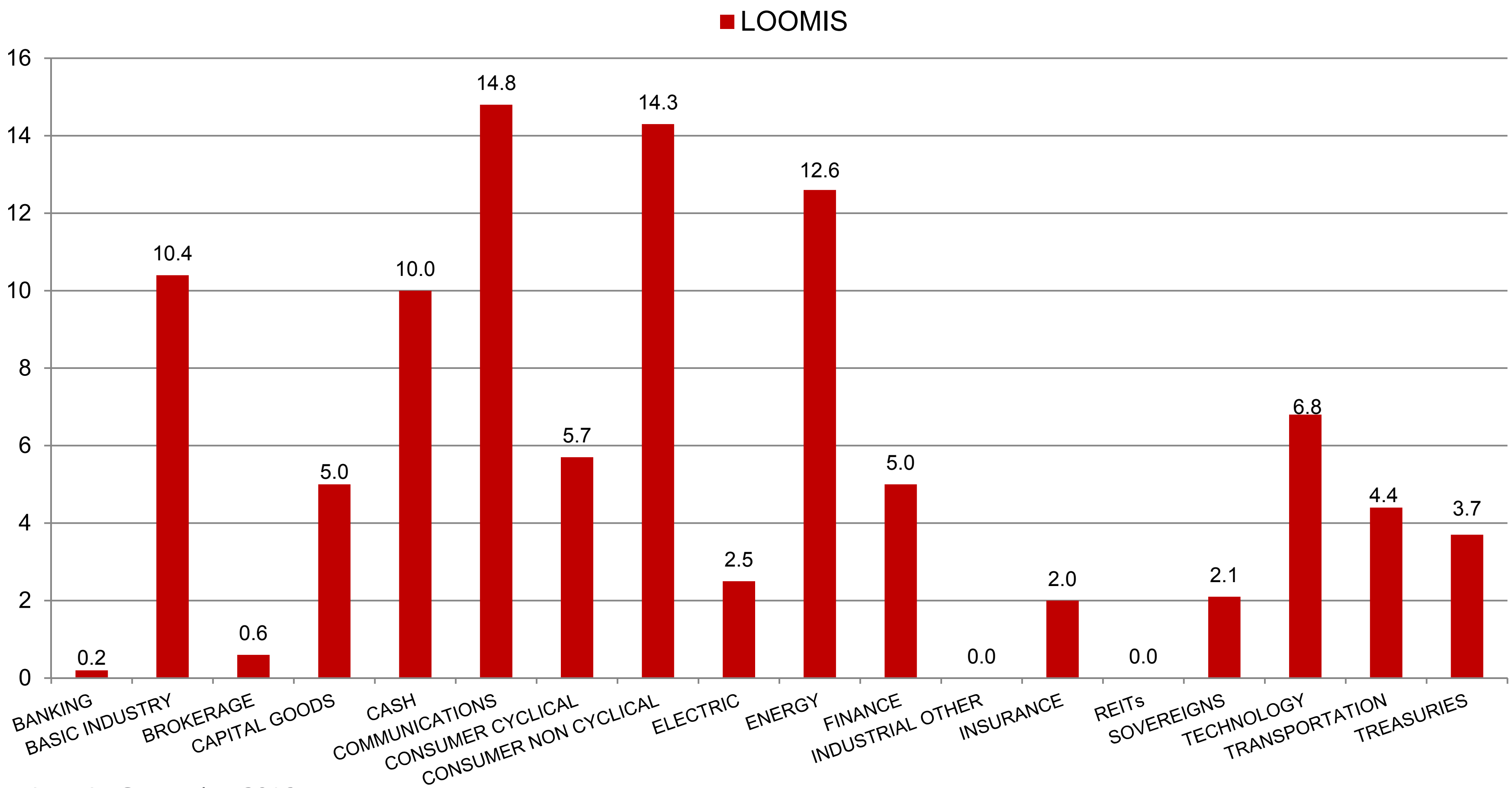


Returns are net of fees

Characteristics	Loomis
Average Maturity (Yrs)	7.0
Duration(Yrs)	4.4
Average Quality	B1
Yield(%)	7.0

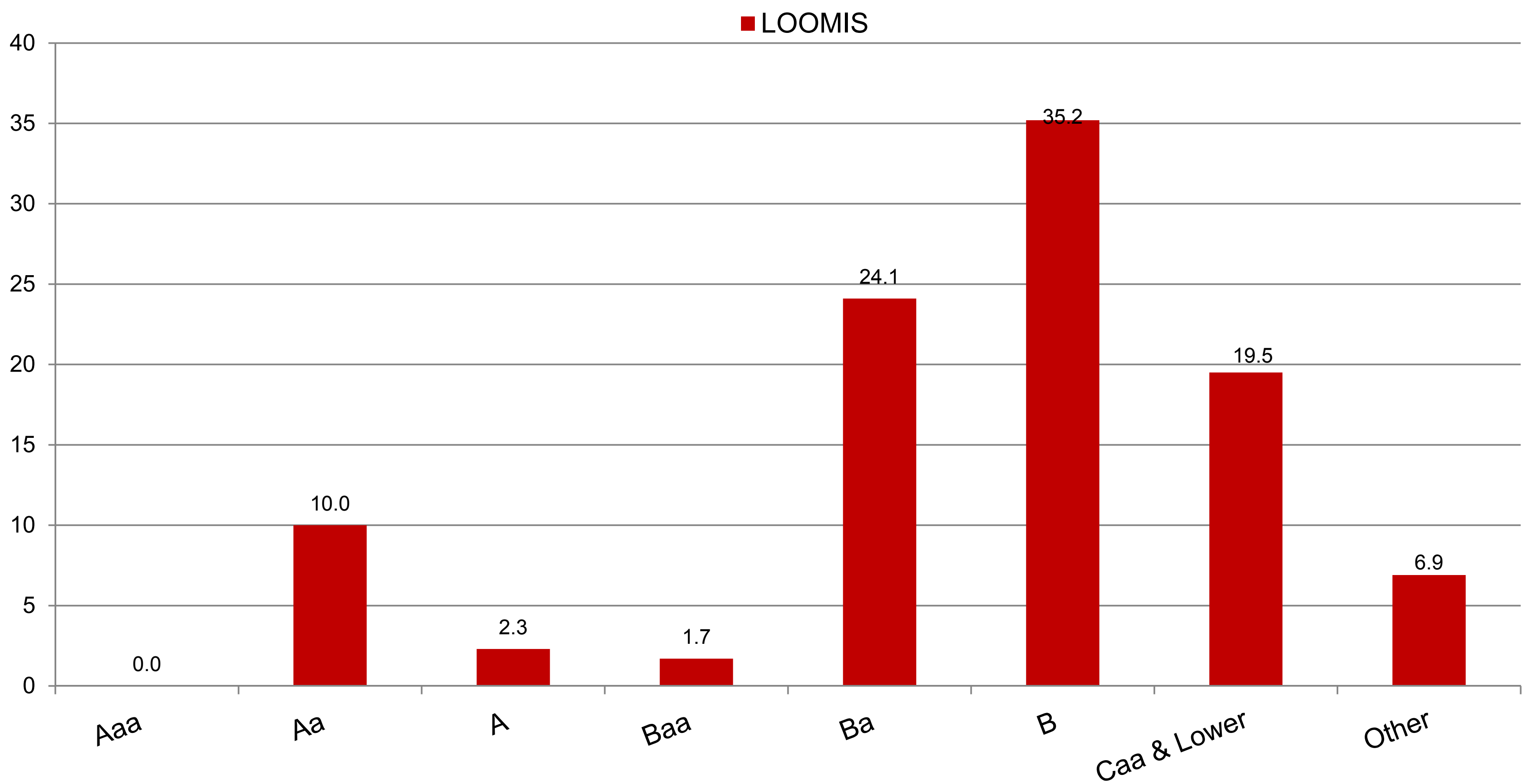
Source: Loomis September 2016

Sector Allocation



Source: Loomis, September 2016

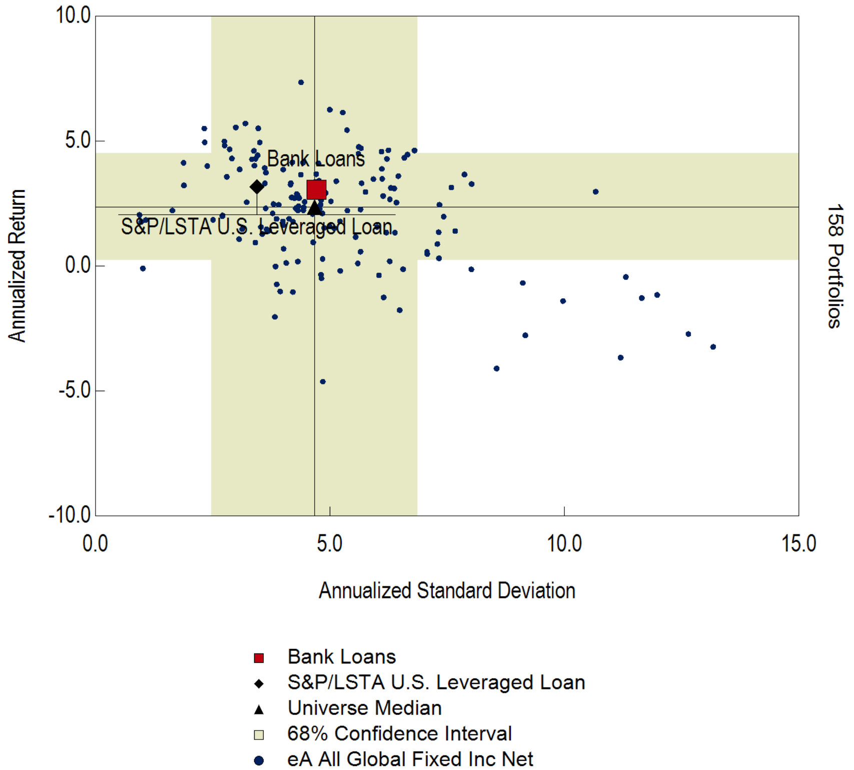
Quality Allocation



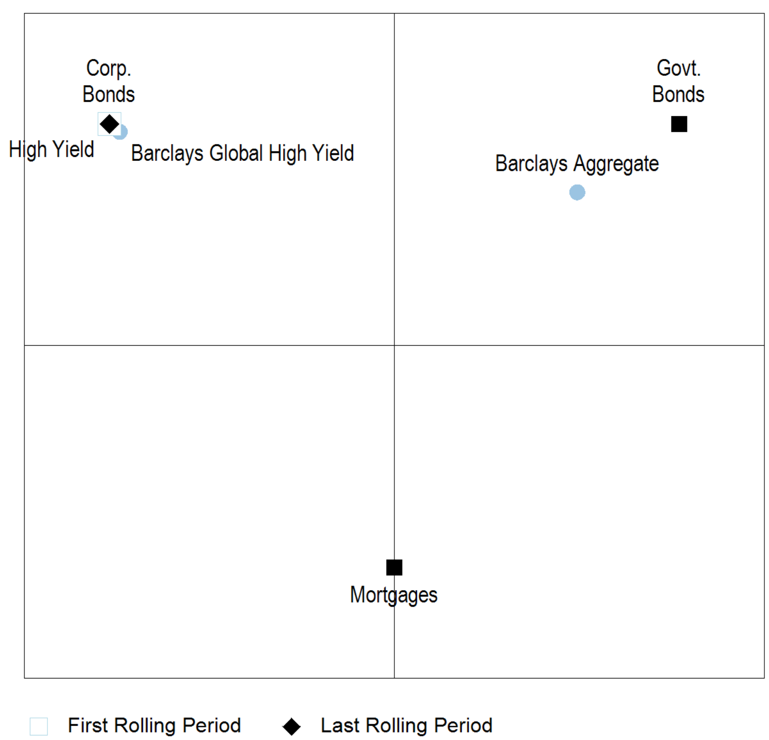
Source: Loomis, September 2016

Bank Loans

2 Year Risk Return



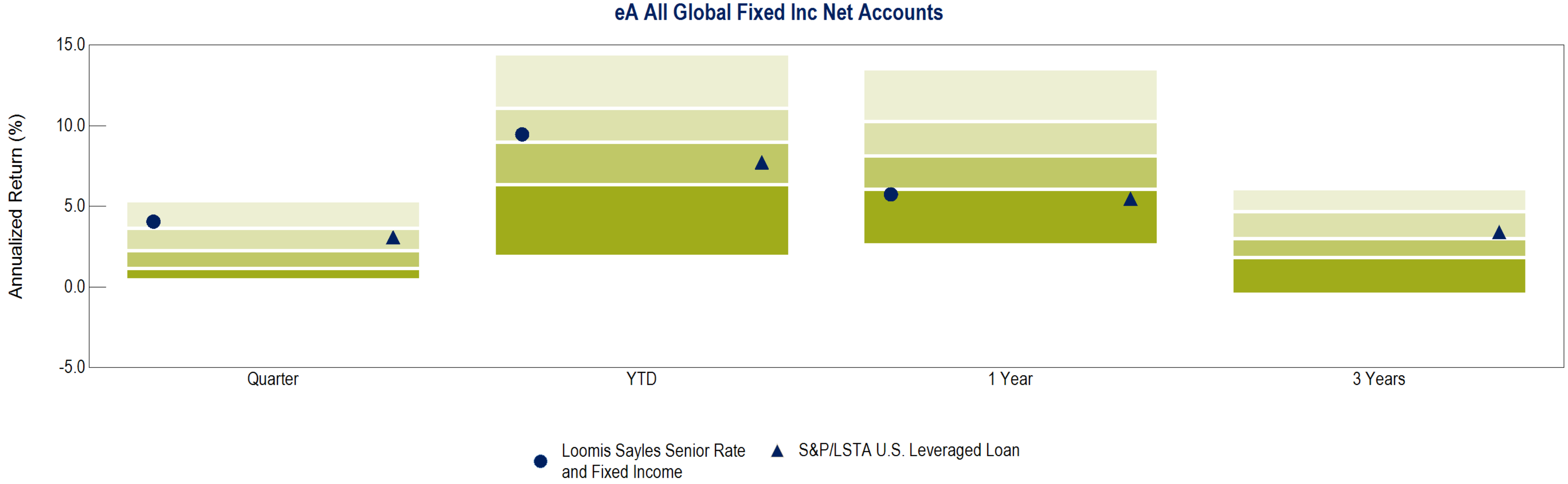
3 Year Style Analysis

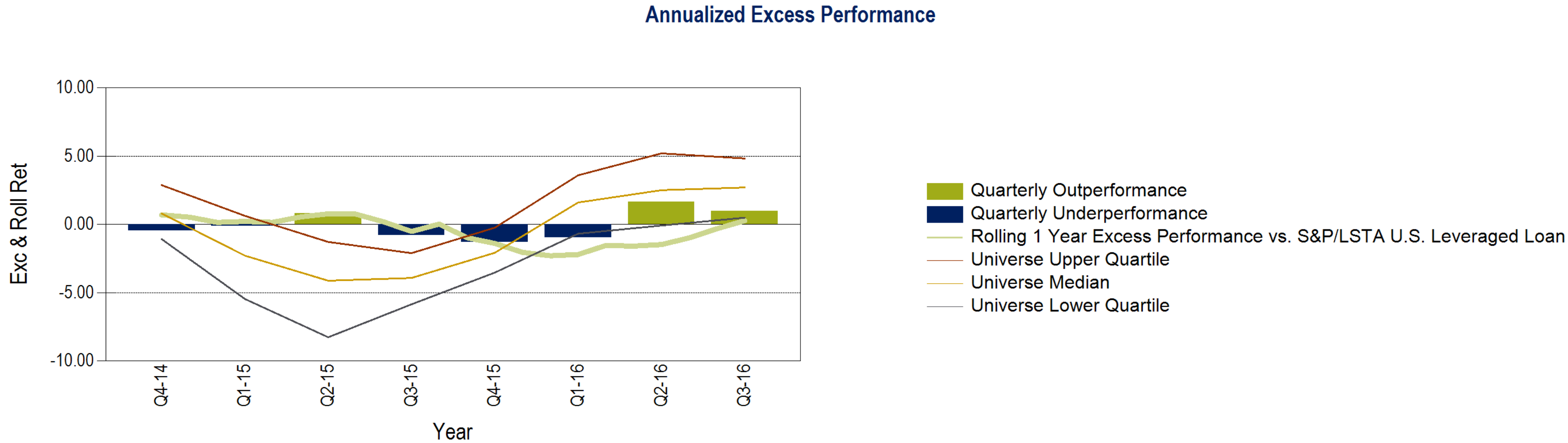


Loomis Sayles Senior Floating Rate and Fixed Income

- **Manager Role in Portfolio**
  - Seeks to provide a high level of current income by using a value driven, opportunistic approach and macro-guided portfolio construction
  - Provides some protection in a rising rate environment
- **Organizational Profile**
  - Originally founded in 1926, Loomis Sayles is now a wholly-owned subsidiary of Natixis Global Asset Management.
  - Loomis is highly regarded for its credit research skills
- **Investment Strategy Commentary**
  - Allocations to out of benchmark securities for offensive and defensive purposes
  - Must invest at least 65% in floating rate loans
  - May invest up to 35% of assets in other fixed income securities
  - May invest up to 20% of assets in non-US issuers, including 10% in emerging market debt securities
  - May use leverage through borrowing up to 33.33% of the Fund’s total assets after such borrowing

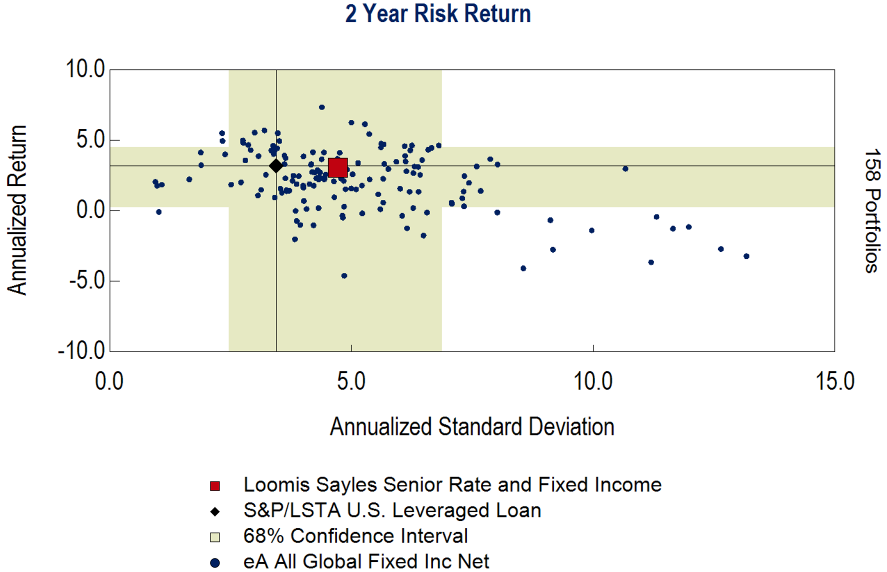
Loomis Sayles Senior Rate and Fixed Income

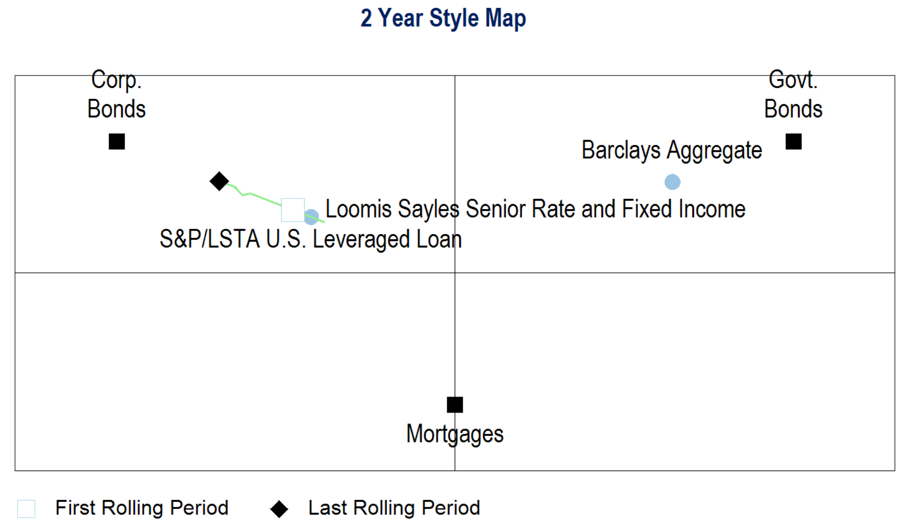


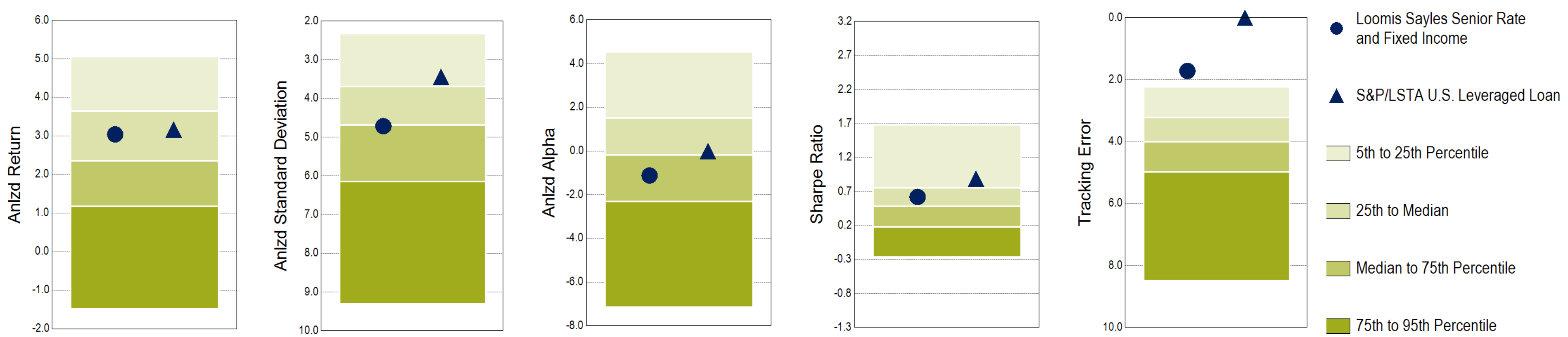


Returns are net of fees

Loomis Sayles Senior Rate and Fixed Income





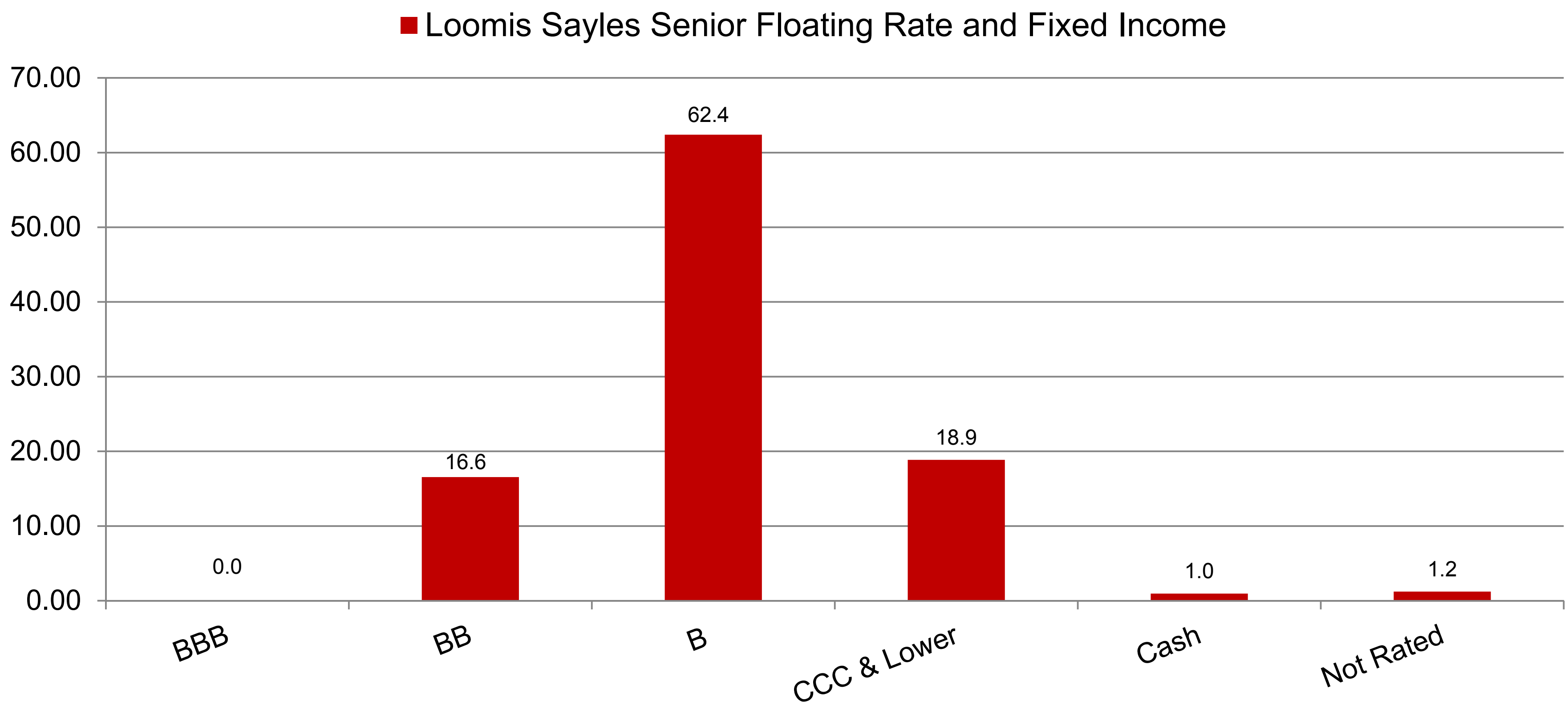


Returns are net of fees

Characteristics	Loomis Sayles
Current Yield	6.6
Stated Maturity	4.9
Duration	0.3
Number of Issues	227
Average Quality	B

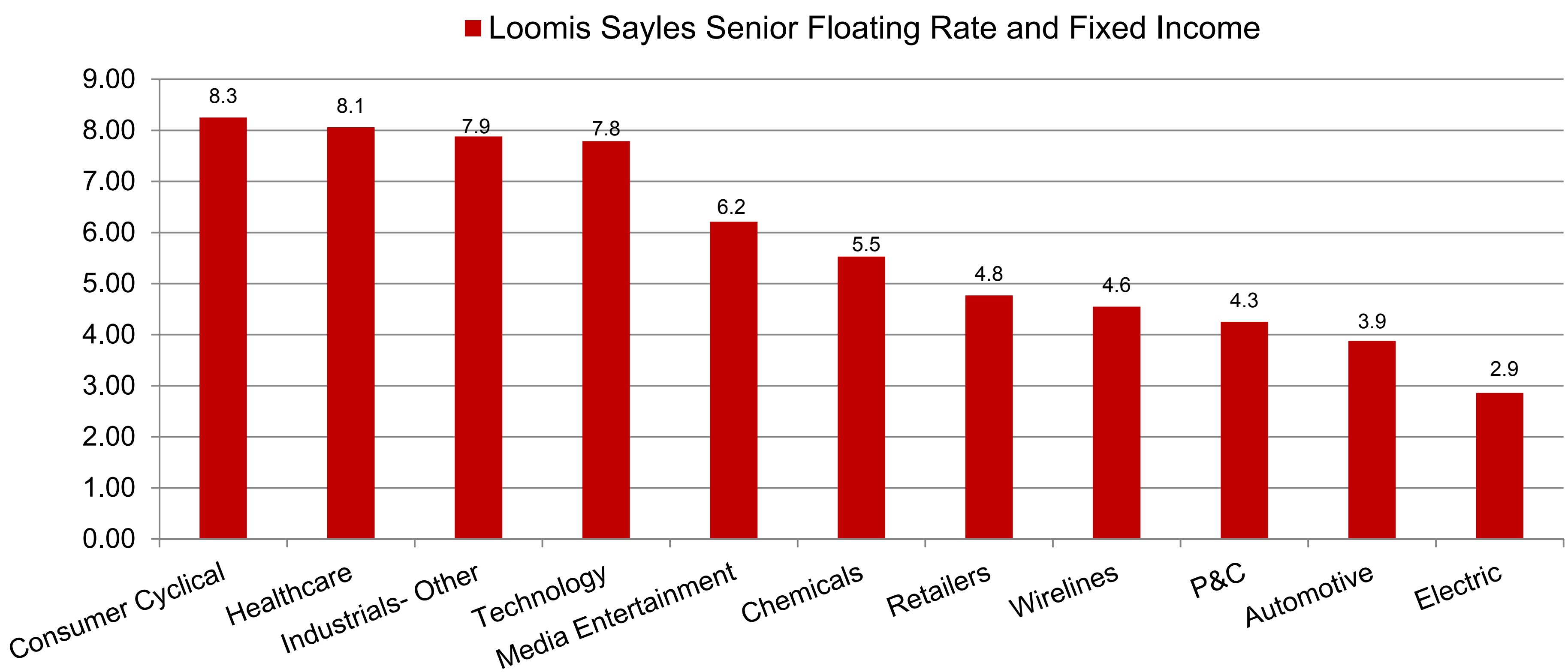
Source: Loomis Sayles, September 2016

Credit Distribution



Source: Loomis Sayles, September 2016

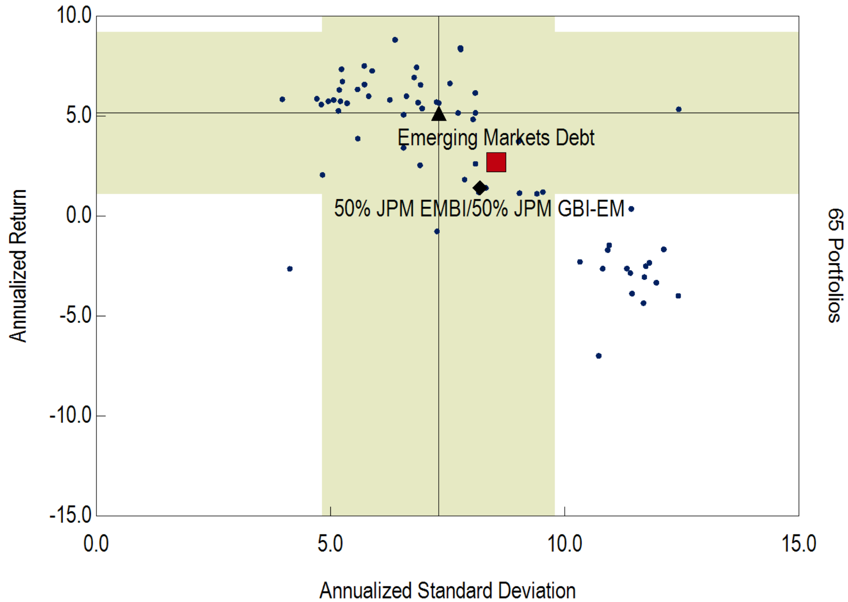
Sector Distribution



Source: Loomis Sayles, September 2016

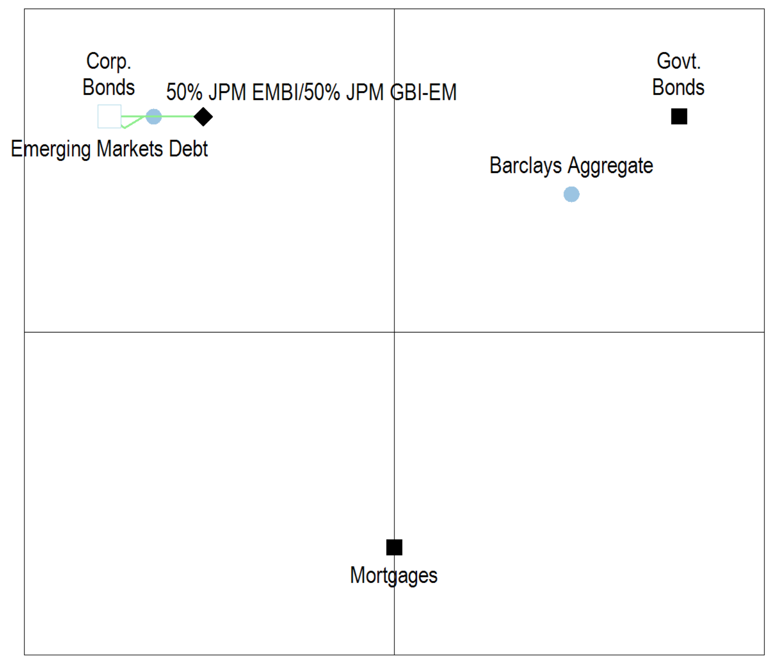
Emerging Markets Debt

3 Year Risk Return



■ Emerging Markets Debt
◆ 50% JPM EMBI/50% JPM GBI-EM
▲ Universe Median
□ 68% Confidence Interval
● eA All Emg Mkts Fixed Inc Net

3 Year Style Analysis

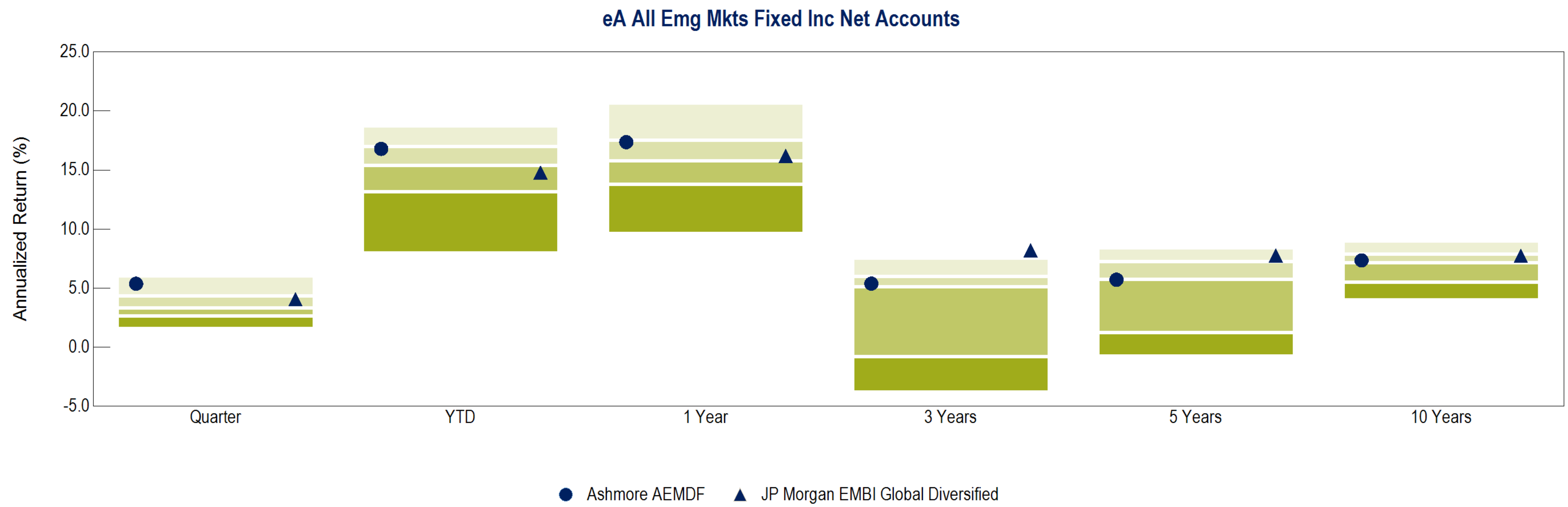


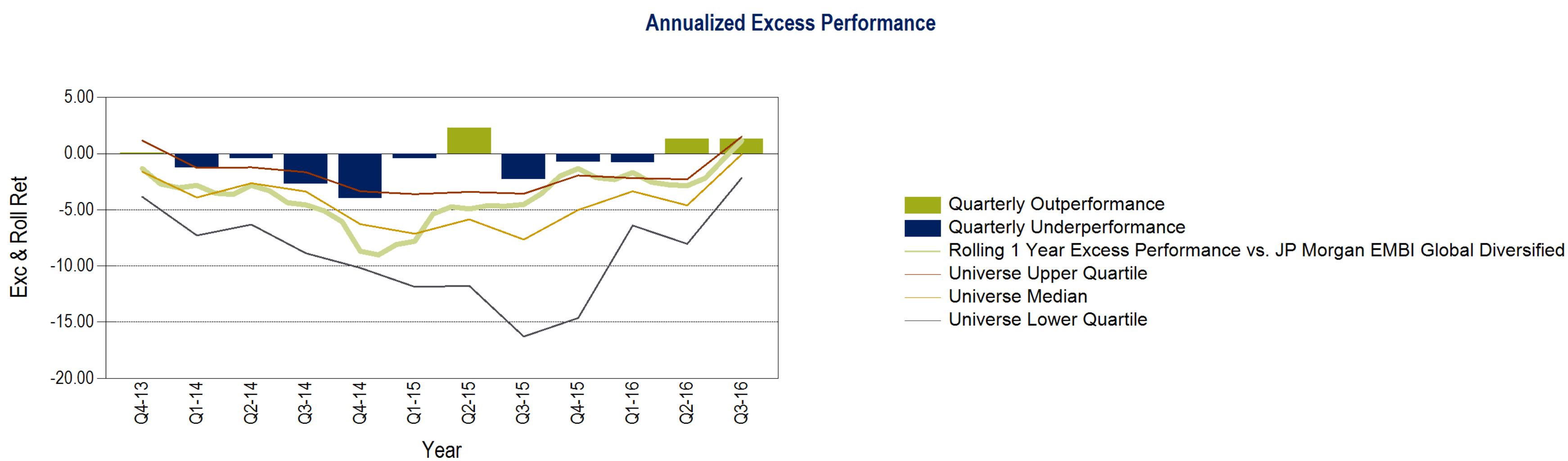
□ First Rolling Period ◆ Last Rolling Period

Ashmore AEMDF

- **Manager Role in Portfolio**
  - Represents the external emerging market debt portion of the global fixed income allocation
- **Organizational Profile**
  - Established in 1992 with a management buyout in 1998/1999
  - Ashmore Group plc, the parent company of Ashmore Investment Management Limited ("AIML" or "Ashmore"), was listed on the London Stock Exchange in October 2006.
  - Specialist in emerging market investing
- **Investment Strategy Commentary**
  - Ashmore combines top down thematic approaches with issue-by-issue security selection.
  - Process is overseen by an investment committee which meets weekly to approve all strategies and transactions.
  - Strong emphasis on risk management in portfolio construction and ongoing monitoring.

Ashmore AEMDF



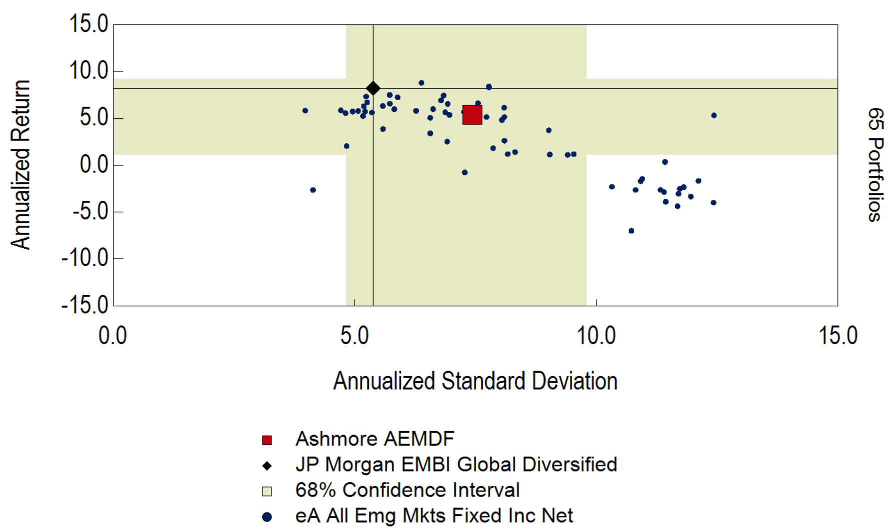


Returns are net of fees

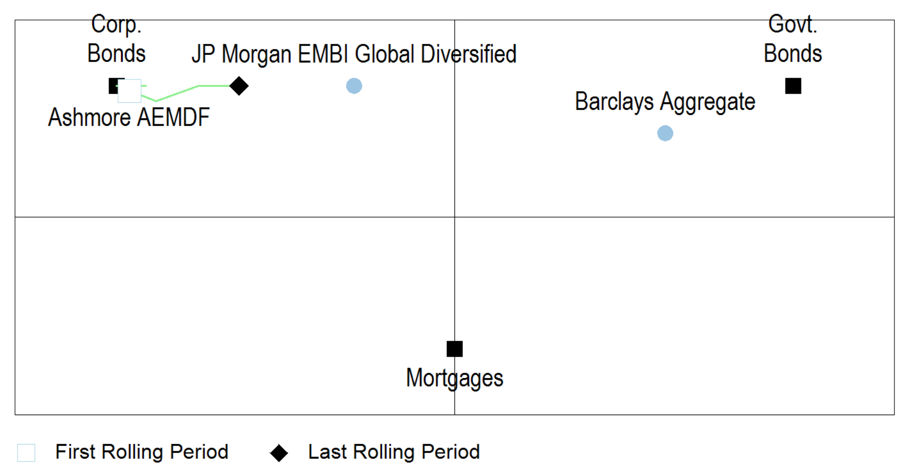
Dallas Police & Fire Pension

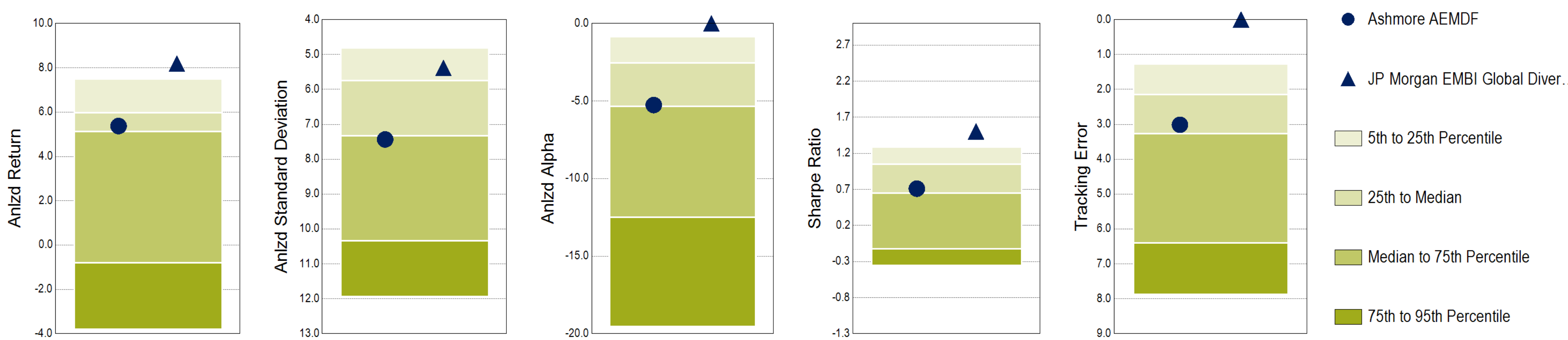
Ashmore AEMDF

3 Year Risk Return



3 Year Style Map



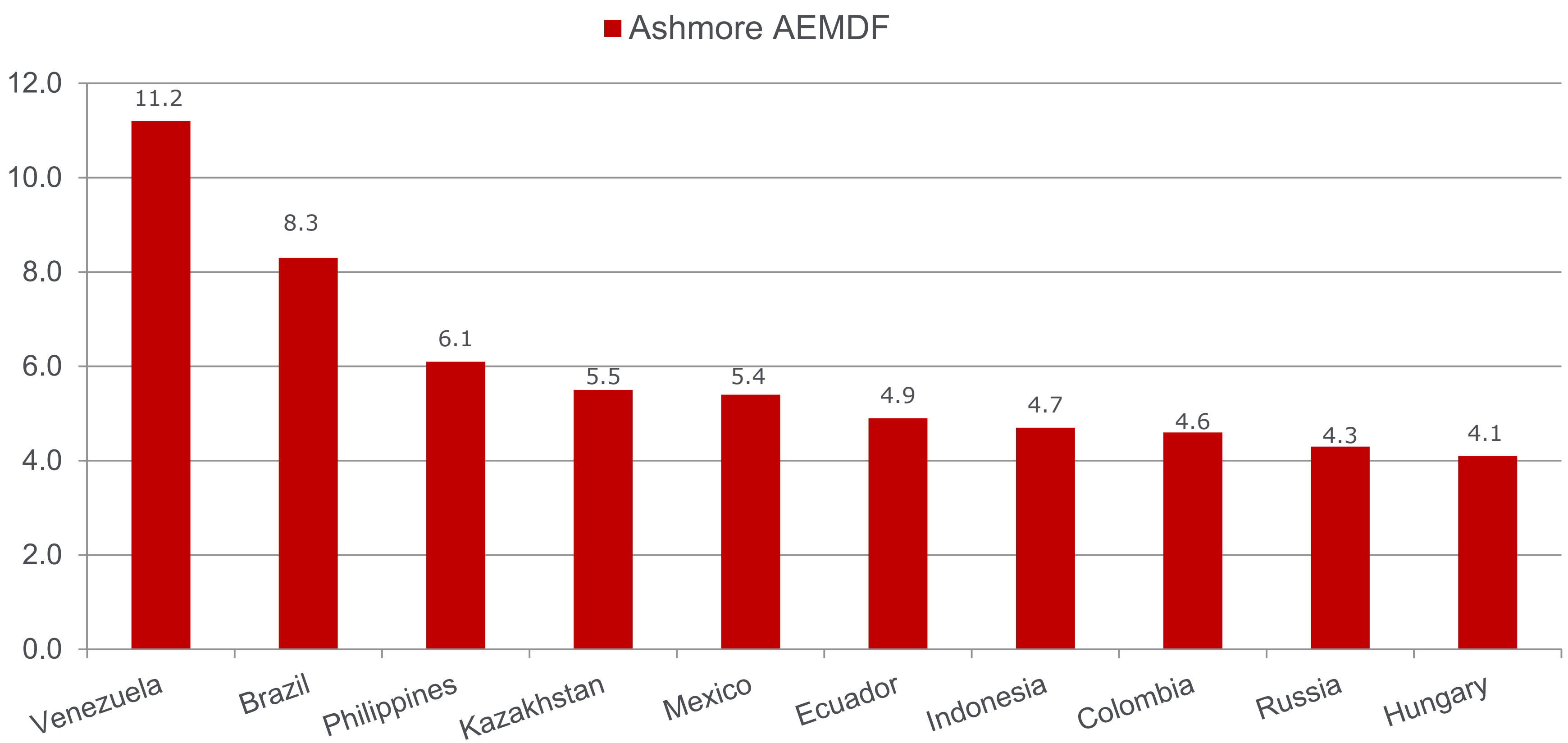


Returns are net of fees

Characteristics	Ashmore AEMDF
Average Modified Duration	7.7
Average Life (years)	12.8
Yield	8.0
Sharpe Ratio	0.6
Information Ratio	-0.4
Beta	1.4

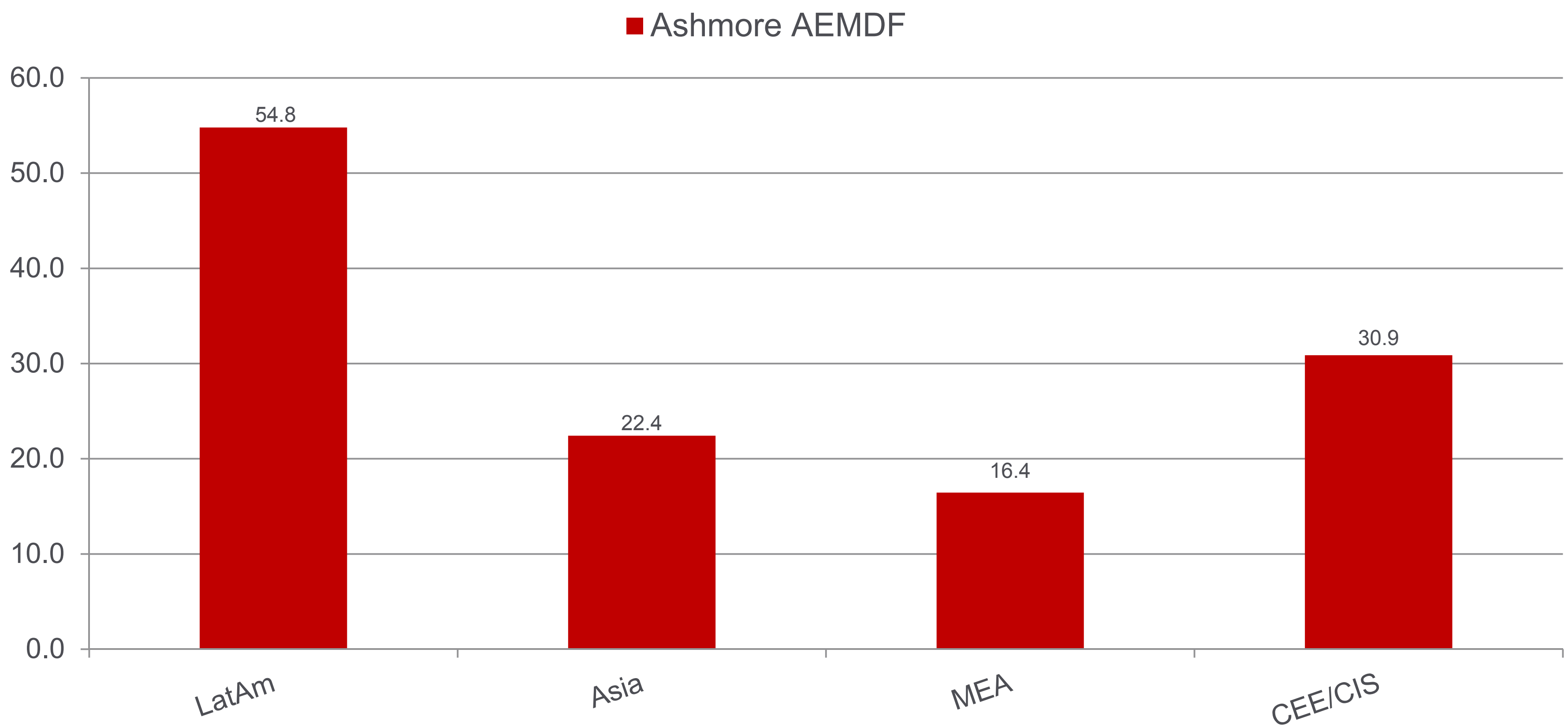
Source: Ashmore, September 2016

Largest Country Positions

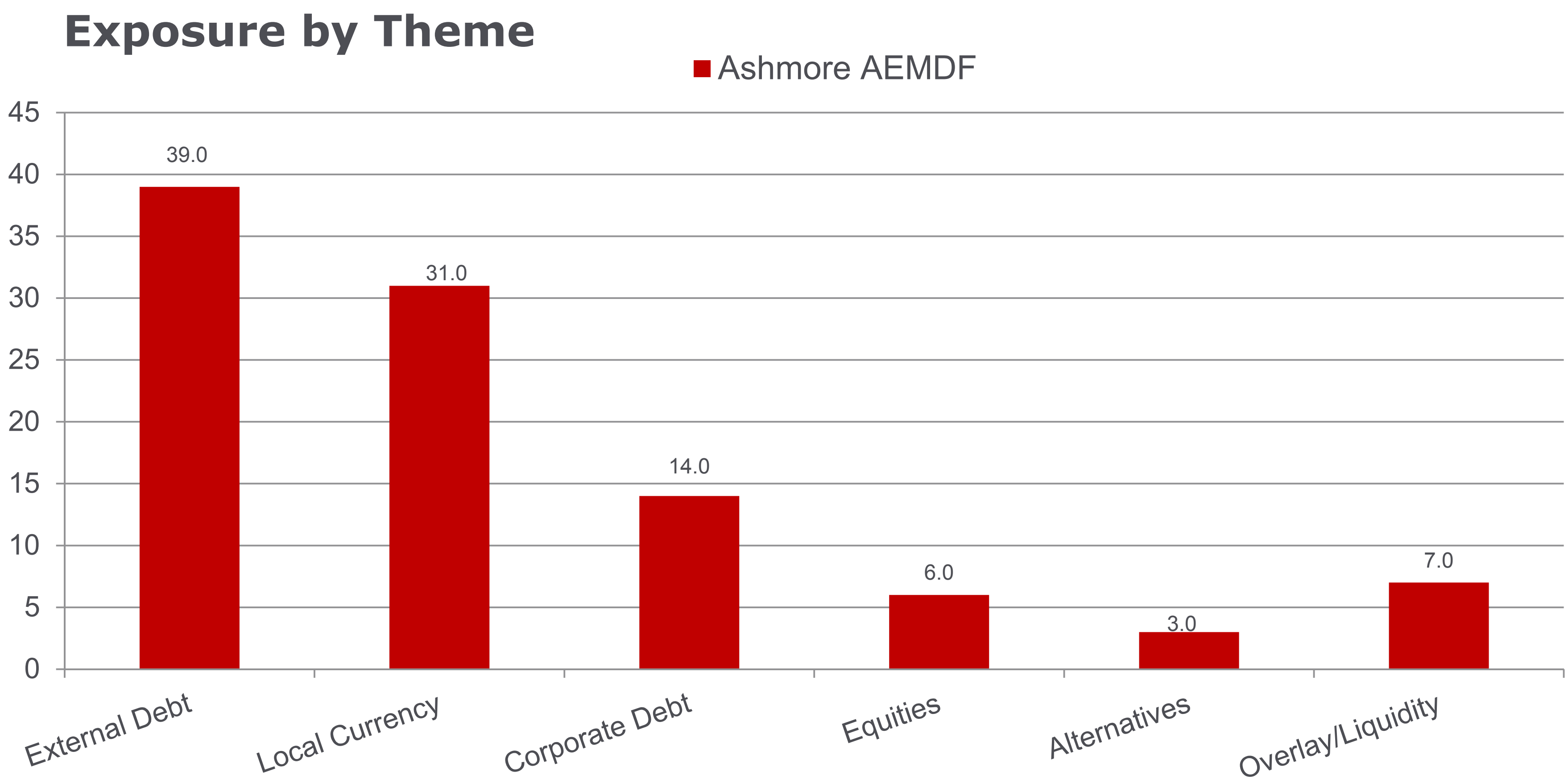


Source: Ashmore, September 2016

Exposure by Region



Source: Ashmore, September 2016



Source: Ashmore, September 2016

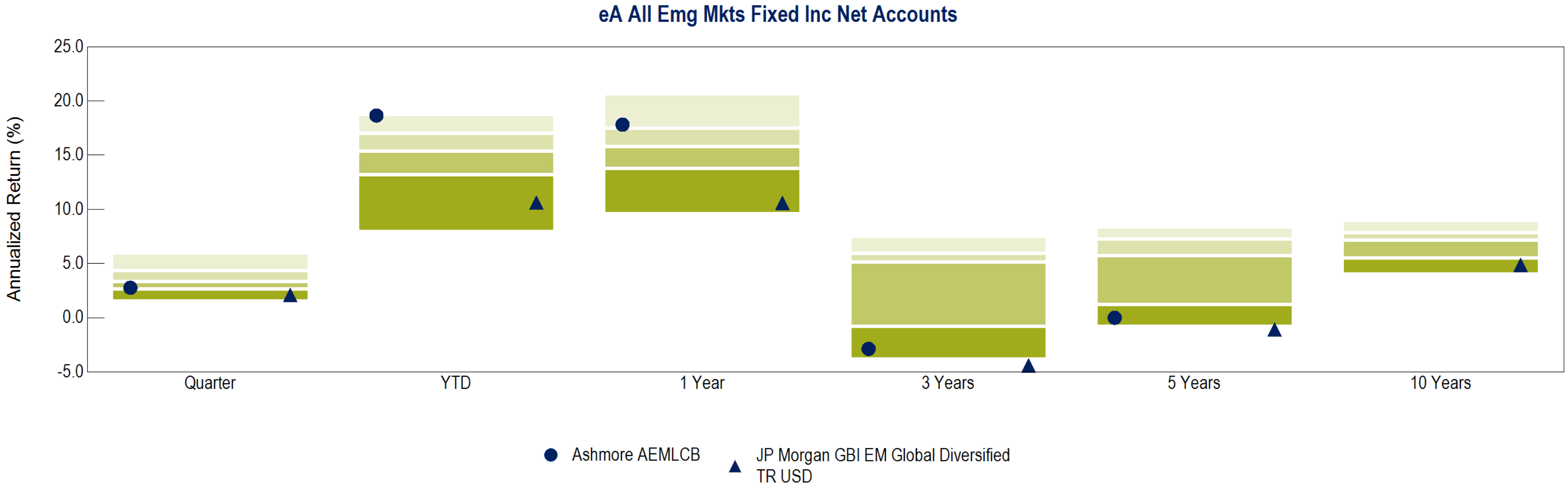
Ashmore AEMLCB

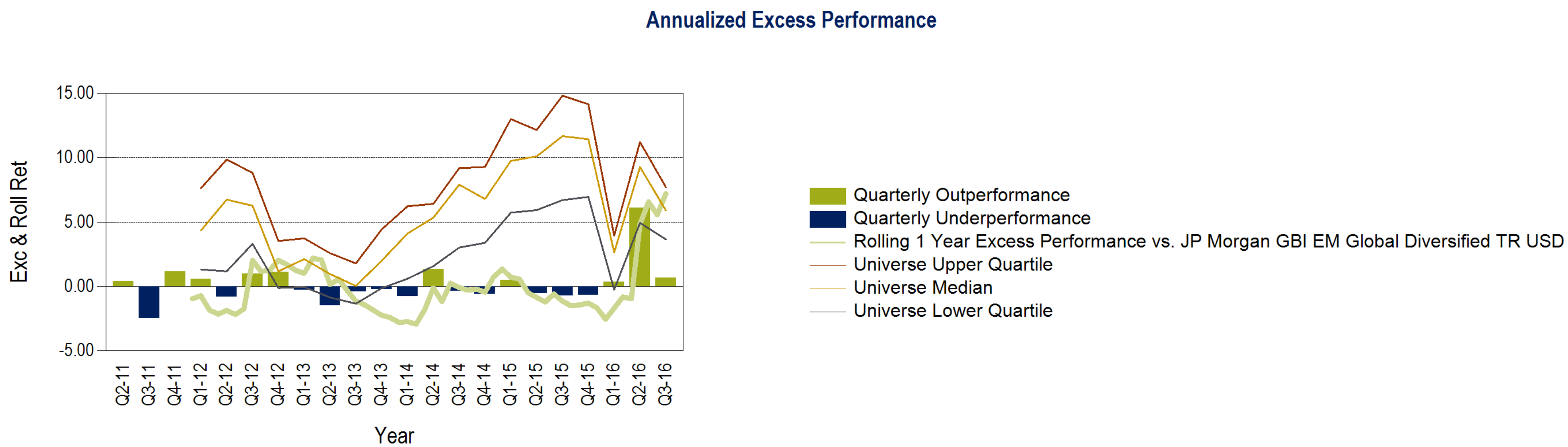
- **Manager Role in Portfolio**
  - Represents the local emerging market debt portion of the global fixed income allocation

- **Organizational Profile**
  - Established in 1992 with a management buyout in 1998/1999
  - Ashmore Group plc, the parent company of Ashmore Investment Management Limited ("AIML" or "Ashmore"), was listed on the London Stock Exchange in October 2006.
  - Specialist in emerging market investing

- **Investment Strategy Commentary**
  - Ashmore combines top down thematic approaches with issue-by-issue security selection.
  - Process is overseen by an investment committee which meets weekly to approve all strategies and transactions.
  - Strong emphasis on risk management in portfolio construction and ongoing monitoring.

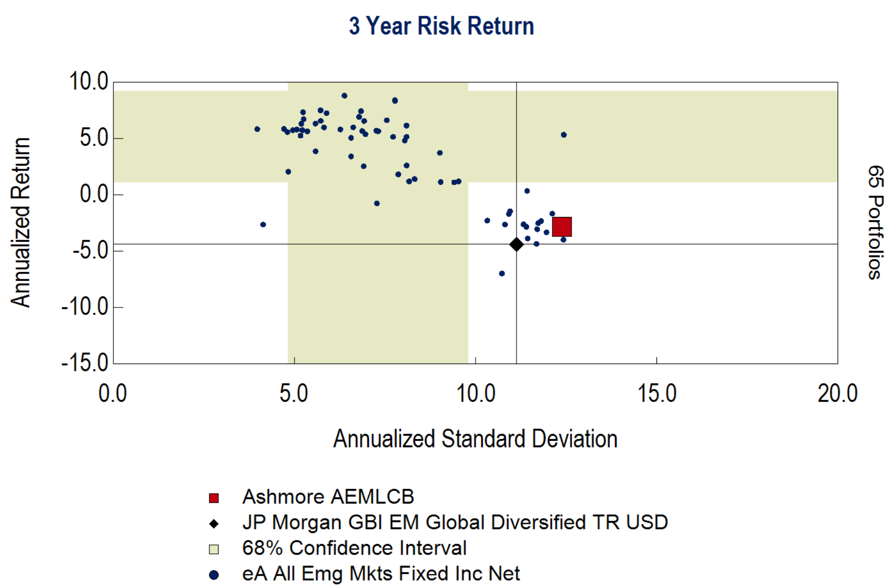
Ashmore AEMLCB

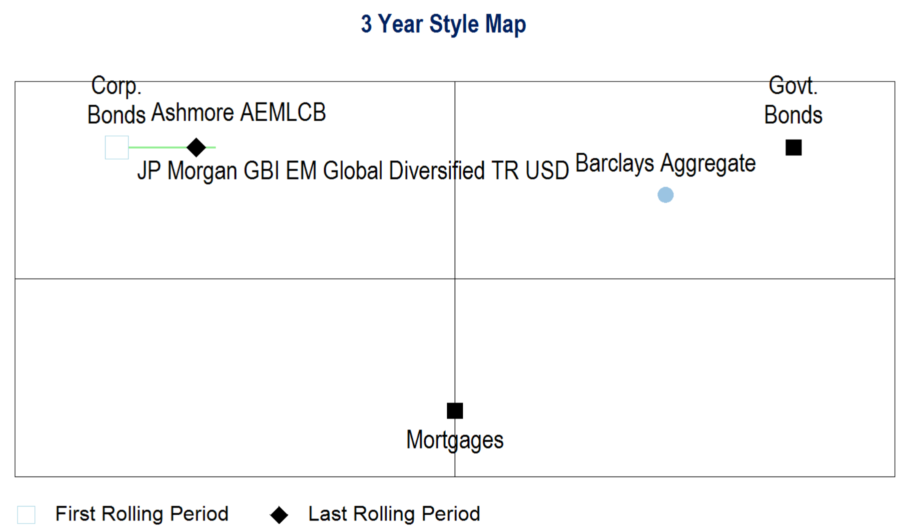


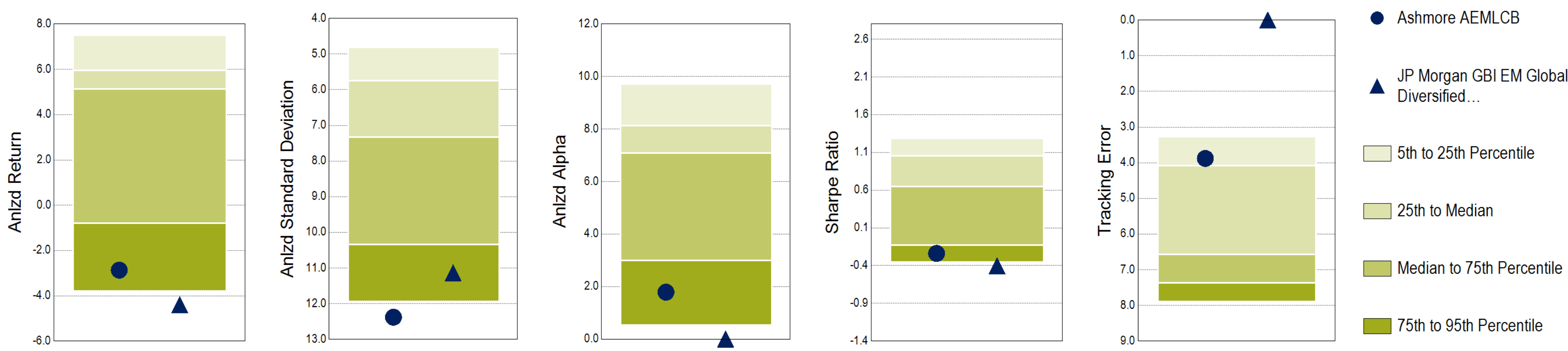


Returns are net of fees

Ashmore AEMLCB





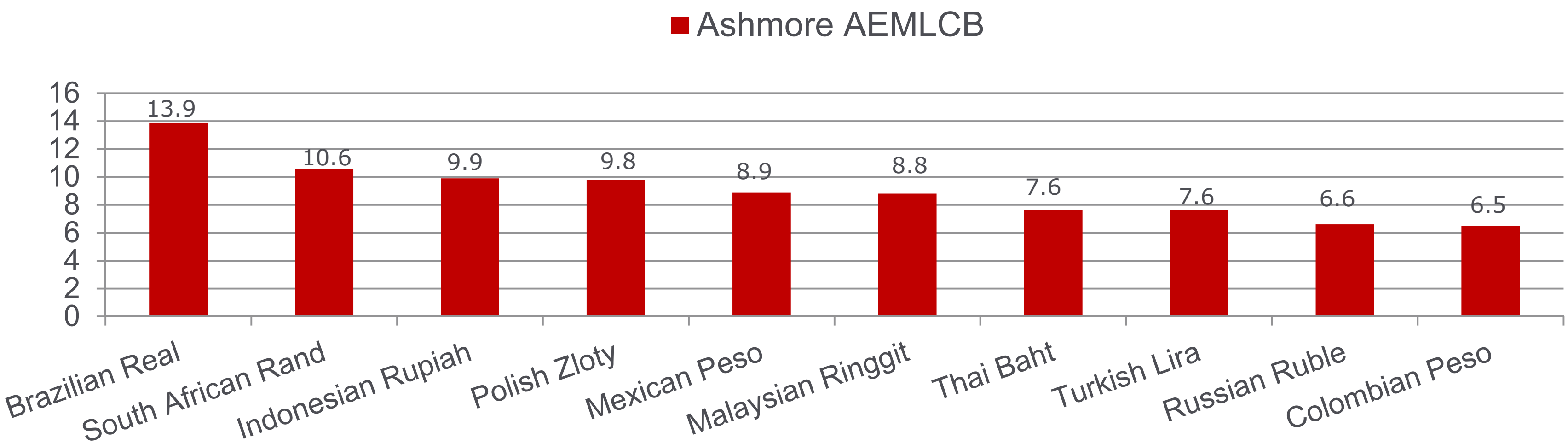


Returns are net of fees

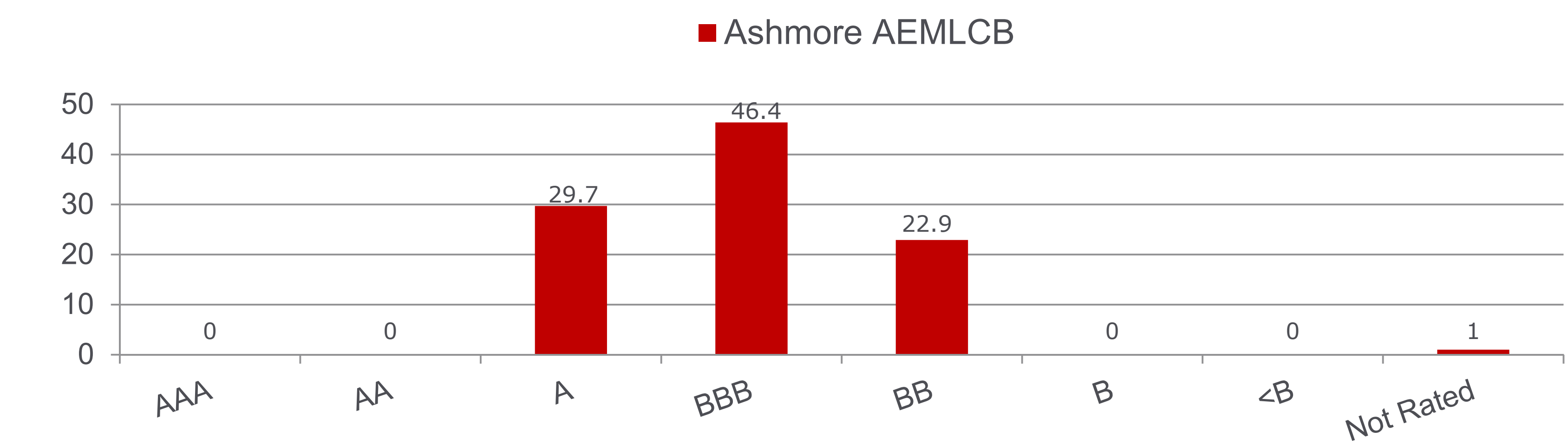
Characteristics	Ashmore AEMLCB
Average Modified Duration	5.5
Average Life (years)	7.4
Yield to Maturity	6.5

Source: Ashmore, September 2016

Top 10 Currency Exposures (% of NAV)

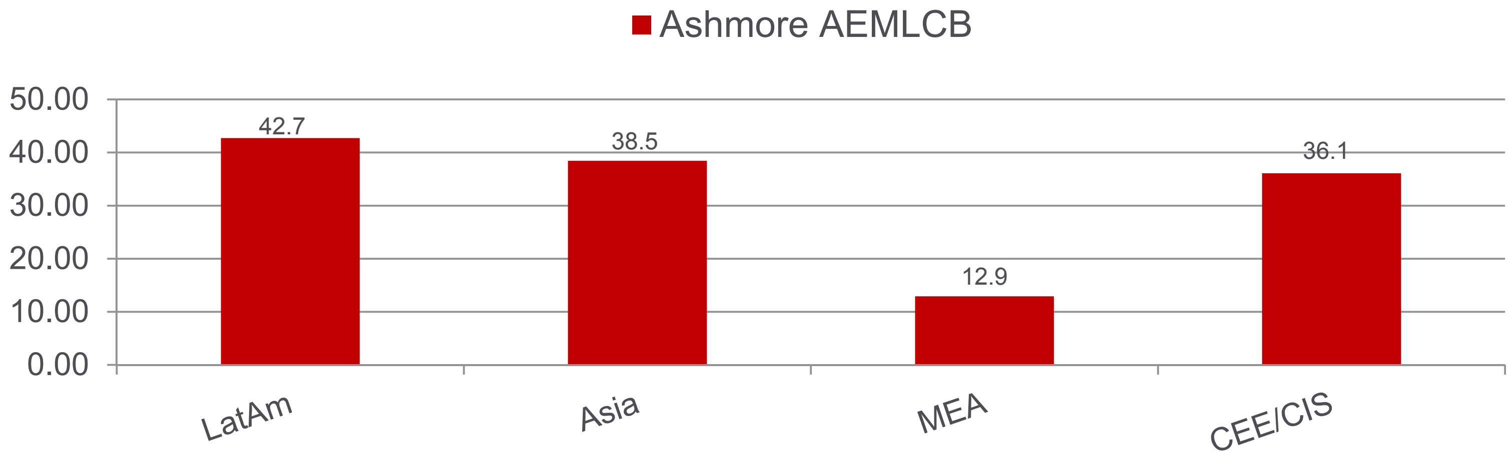


Credit Rating of Debt Instruments (% of NAV)

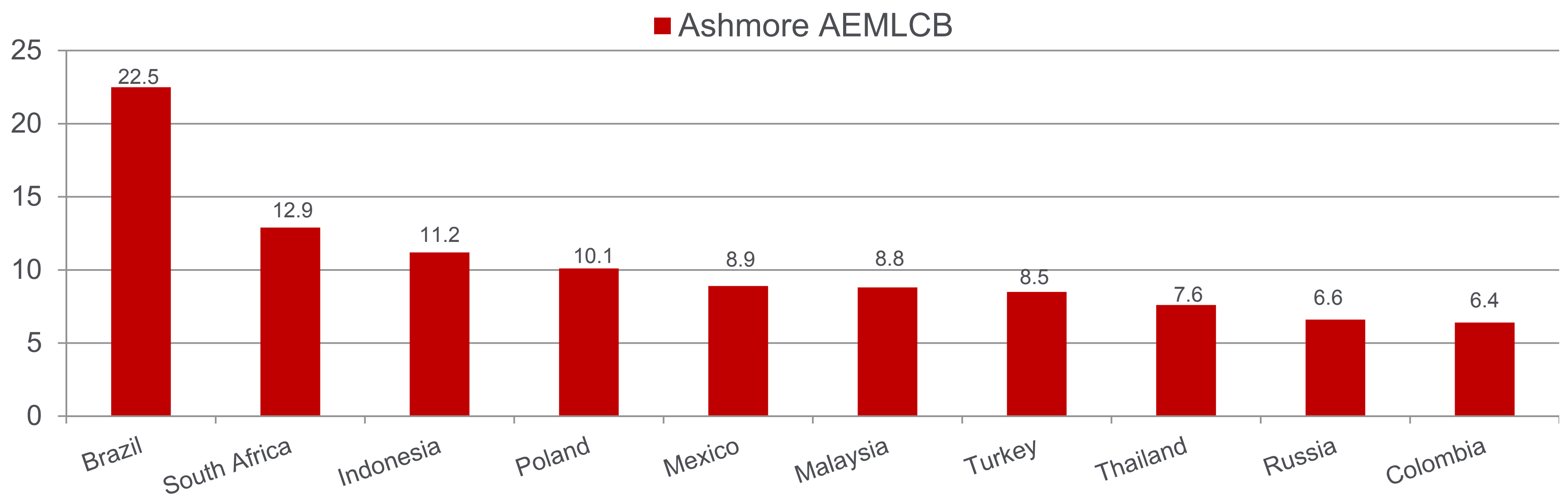


Source: Ashmore, September 2016

Exposure by Region



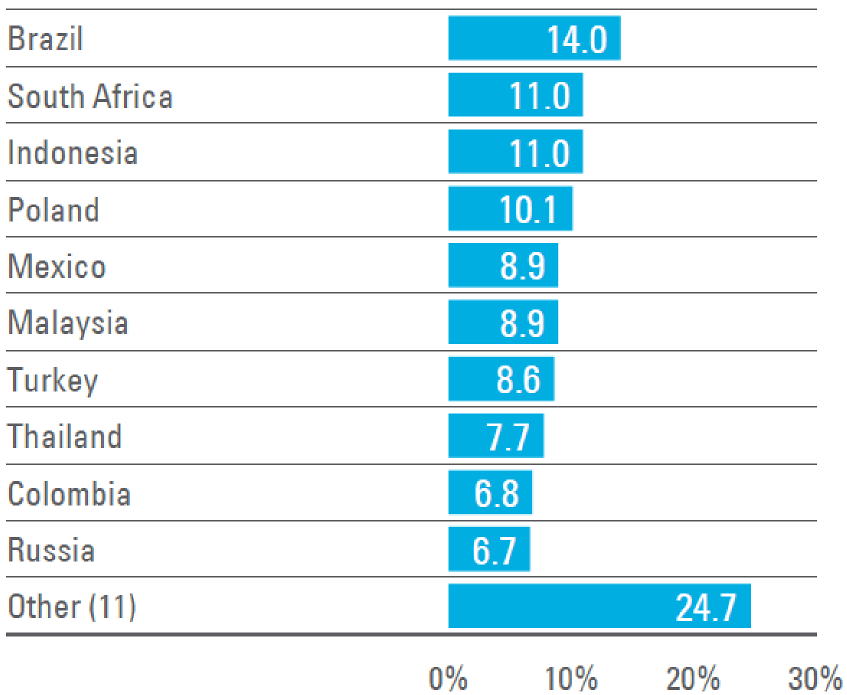
Top 10 Country Exposures (% of NAV)



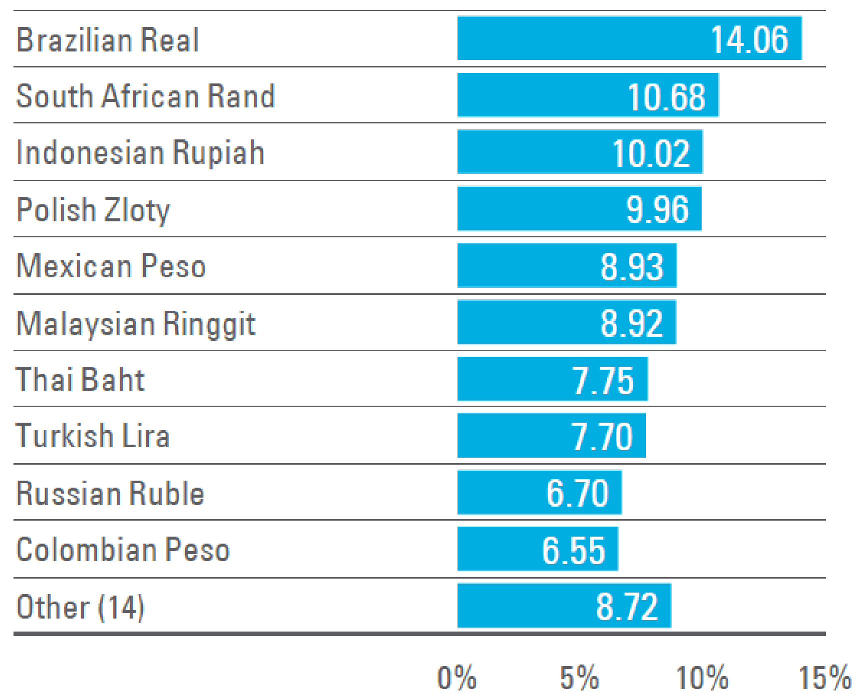
Source: Ashmore, September 2016

Ashmore AEMLCB

Top 10 exposures by country



Top 10 exposures by currency



Source: Ashmore, September 2016

Ashmore AEMLCB

Credit rating of debt instruments	Fund
AAA	0.0%
AA	0.0%
A	22.3%
BBB	62.3%
BB	14.3%
B	0.0%
<B	0.0%
Not rated	1.1%

Top 10 holdings	Fund
Brazil Bltn 0% 01/01/2019	5.4%
Colombia Tes 7% 04/05/2022	4.2%
Mexican Udibonos Cpi 4% 13/06/2019	3.8%
India Government Bond 7.59% 11/01/2026	3.1%
Brazil Ntnf 10% 01/01/2021 - Lc	2.4%
Rep Of South Africa 7% 28/02/2031 R213	2.2%
Indonesia Govt 9% 15/03/2029 Fr71	1.7%
Thailand Govt 3.4% 17/06/2036	1.6%
Rep Of South Africa 7.75% 28/02/2023	1.6%
Rep Of South Africa 10.5% 21/12/2026 R186	1.6%
Total	27.7%
Total number of holdings	116

Source: Ashmore, September 2016

Highland Crusader Fund

- **Manager Role in Portfolio**
  - Invests in financially stressed and distressed companies. Part of the Private Debt strategy.

- **Organizational Profile**
  - Established in 1990 as a standalone investment division of Protective Life Insurance Company. In 1997, the founders purchased Protective's interest.
  - Specialists in leveraged loans and high yield

- **Investment Strategy Commentary**
  - Seeks to maximize value through influence or control of the corporate workout and restructuring process.
  - Investment positions are generally monetized within 12 to 24 months of initial investment.

- **Notable Occurrences**
  - The fund unwound on November 15, 2008
  - A working group has been formulated and will work with a mediator to come to a final conclusion.

Appendix

Glossary of Investment Terminology – Risk Statistics

Alpha - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

Alpha Jensen - The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return.

Annualized Excess Return over Benchmark - Annualized fund return minus the annualized benchmark return for the calculated return.

Annualized Return - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

Beta - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

Information Ratio - A measure of the risk adjusted return of a financial security, asset, or portfolio.

Formula:
(Annualized Return of Portfolio - Annualized Return of Benchmark)/Annualized Standard Deviation(Period Portfolio Return – Period Benchmark Return). To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.

R-Squared – Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100. An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

Sharpe Ratio - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

Sortino Ratio - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

Formula:
*Calculation Average (X-Y)/Downside Deviation (X-Y) * 2*
Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills)

Standard Deviation - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula:
(Annualized Return of Portfolio – Annualized Return of Risk Free) / Annualized Standard Deviation (Portfolio Returns)

Tracking Error - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

Formula:
*Tracking Error = Standard Deviation (X-Y) * √(# of periods per year)*
Where X = periods portfolio return and Y = the period's benchmark return
For monthly returns, the periods per year = 12
For quarterly returns, the periods per year = 4

Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula:
(Portfolio Average Return - Average Return of Risk-Free Rate)/Portfolio Beta

Up/Down Capture Ratio - A measure of what percentage of a market's returns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Period Benchmark Return is > = 0

DownsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Benchmark <0

Source: Investor Force

Glossary of Investment Terminology

 # Of Portfolios/Observations[1] – The total number of data points that make up a specified universe

Allocation Index[3] - The allocation index measures the value added (or subtracted) to each portfolio by active management. It is calculated monthly: The portfolio asset allocation to each category from the prior month-end is multiplied by a specified market index.

Asset Allocation Effect[2] - Measures an investment manager's ability to effectively allocate their portfolio's assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark and underweighted in a sector that underperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and under weighted in a sector that outperforms the benchmark.

Agency Bonds (Agencies)[3] - The full faith and credit of the United States government is normally not pledged to payment of principal and interest on the majority of government agencies issuing these bonds, with maturities of up to ten years. Their yields, therefore, are normally higher than government and their marketability is good, thereby qualifying them as a low risk-high liquidity type of investment. They are eligible as security for advances to the member banks by the Federal Reserve, which attests to their standing.

Asset Backed Securities (ABS)[3] - Bonds which are similar to mortgage-backed securities but are collateralized by assets other than mortgages; commonly backed by credit card receivables, auto loans, or other types of consumer financing.

Attribution[3] - Attribution is an analytical technique that allows us to evaluate the performance of the portfolio relative to the benchmark. A proper attribution tells us where value was added or subtracted as a result of the manager's decisions.

Average Effective Maturity[4] - For a single bond, it is a measure of maturity that takes into account the possibility that a bond might be called back to the issuer.

For a portfolio of bonds, average effective maturity is the weighted average of the maturities of the underlying bonds. The measure is computed by weighing each bond's maturity by its market value with respect to the portfolio and the likelihood of any of the bonds being called. In a pool of mortgages, this would also account for the likelihood of prepayments on the mortgages.

Batting Average[1] - A measurement representing an investment manager's ability to meet or beat an index.

Formula: Divide the number of days (or months, quarters, etc.) in which the manager beats or matches the index by the total number of days (or months, quarters, etc.) in the period of question and multiply that factor by 100.

Brinson Fachler (BF) Attribution[1] - The BF methodology is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance. The main advantage of the BF methodology is that rather than using the overall return of the benchmark, it goes a level deeper than BHB and measures whether the benchmark sector, country, etc. outperformed/or underperformed the overall benchmark.

Brinson Hood Beebower (BHB) Attribution[1] - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.

Corporate Bond (Corp)[4] - A debt security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds.

Correlation[1] - A range of statistical relationships between two or more random variables or observed data values. A correlation is a single number that describes the degree of relationship between variables.

Data Source: [1]InvestorForce, [2]Interaction Effect Performance Attribution, [3]NEPC, LLC, [4]Investopedia, [5]Hedgeco.net

Coupon[4] – The interest rate stated on a bond when it is issued. The coupon is typically paid semiannually. This is also referred to as the "coupon rate" or "coupon percent rate."

Currency Effect[1] - Is the effect that changes in currency exchange rates over time affect excess performance.

Derivative Instrument[3] - A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.

Downside Deviation[1] - Equals the standard deviation of negative return or the measure of downside risk focusing on the standard deviation of negative returns.

Formula:
Annualized Standard Deviation (Fund Return - Average Fund Return) where average fund return is greater than individual fund returns, monthly or quarterly.

Duration[3] - Duration is a measure of interest rate risk. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates. A bond's duration is inversely related to interest rates and directly related to time to maturity.

Equity/Debt/Cash Ratio[1] – The percentage of an investment or portfolio that is in Equity, Debt, and/or Cash (i.e. A 7/89/4 ratio represents an investment that is made up of 7% Equity, 89% Debt, and 4% Cash).

Foreign Bond[3] - A bond that is issued in a domestic market by a foreign entity, in the domestic market's currency. A foreign bond is most often issued by a foreign firm to raise capital in a domestic market that would be most interested in purchasing the firm's debt. For foreign firms doing a large amount of business in the domestic market, issuing foreign bonds is a common practice.

Hard Hurdle[5] – is a hurdle rate that once beaten allows a fund manager to charge a performance fee on only the funds above the specified hurdle rate.

High-Water Mark[4] - The highest peak in value that an investment fund/ account has reached. This term is often used in the context of fund manager compensation, which is performance based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.

Hurdle Rate[4] - The minimum rate of return on an investment required, in order for a manager to collect incentive fees from the investor, which is usually tied to a benchmark.

Interaction Effects[2] - The interaction effect measures the combined impact of an investment manager's selection and allocation decisions within a sector. For example, if an investment manager had superior selection and over weighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with the either effect.

Median[3] - The value (rate of return, market sensitivity, etc.) that exceeds one-half of the values in the population and that is exceeded by one-half of the values. The median has a percentile rank of 50.

Modified Duration[3] - The percentage change in the price of a fixed income security that results from a change in yield.

Mortgage Backed Securities (MBS)[3] - Bonds which are a general obligation of the issuing institution but are also collateralized by a pool of mortgages.

Municipal Bond (Muni) [4] - A debt security issued by a state, municipality or county to finance its capital expenditures.

Net Investment Change[1] – Is the change in an investment after accounting for all Net Cash Flows.

Performance Fee[4] - A payment made to a fund manager for generating positive returns. The performance fee is generally calculated as a percentage of investment profits, often both realized and unrealized.

Data Source: [1]InvestorForce, [2]Interaction Effect Performance Attribution, [3]NEPC, LLC, [4]Investopedia, [5]Hedgeco.net

Policy Index[3] - A custom benchmark designed to indicate the returns that a passive investor would earn by consistently following the asset allocation targets set forth in this investment policy statement.

Price to Book (P/B)[4] - A ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share, also known as the "price-equity ratio".

Price to Earnings (P/E)[3] - The weighted equity P/E is based on current price and trailing 12 months earnings per share (EPS).

Price to Sales (P/S)[4] - A ratio for valuing a stock relative to its own past performance, other companies, or the market itself. Price to sales is calculated by dividing a stock's current price by its revenue per share for the trailing 12 months.

Return on Equity (ROE)[4] - The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Selection (or Manager) Effect[2] - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the sector in the portfolio determines the size of the effect—the larger the sector, the larger the effect is, positive or negative.

Soft Hurdle rate[5] – is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

Tiered Fee[1] – A fee structure that is paid to fund managers based on the size of the investment (i.e. 1.00% fee on the first $10M invested, 0.90% on the next $10M, and 0.80% on the remaining balance).

Total Effects[2] - The active management (total) effect is the sum of the selection, allocation, and interaction effects. It is also the difference between the total portfolio return and the total benchmark return. You can use the active management effect to determine the amount the investment manager has added to a portfolio's return.

Total Return[1] - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over a defined time period.

Universe[3] - The list of all assets eligible for inclusion in a portfolio.

Upside Deviation[1] – Standard Deviation of Positive Returns

Weighted Avg. Market Cap.[4] - A stock market index weighted by the market capitalization of each stock in the index. In such a weighting scheme, larger companies account for a greater portion of the index. Most indexes are constructed in this manner, with the best example being the S&P 500.

Yield (%)[3] - The current yield of a security is the current indicated annual dividend rate divided by current price.
Yield to Maturity[3] -The discount rate that equates the present value of cash flows, both principal and interest, to market price.

Data Source: [1]InvestorForce, [2]Interaction Effect Performance Attribution, [3]NEPC, LLC, [4]Investopedia, [5]Hedgeco.net

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- **Past performance is no guarantee of future results.**
- **NEPC uses, as its data source, the plan's custodian bank or fund service company, and NEPC relies on those sources for security pricing, calculation of accruals, and all transactions, including income payments, splits, and distributions. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **The Investment Performance Analysis (IPA) is provided as a management aid for the client's internal use only. Portfolio performance reported in the IPA does not constitute a recommendation by NEPC.**
- **Information in this report on market indices and security characteristics is received from sources external to NEPC. While efforts are made to ensure that this external data is accurate, NEPC cannot accept responsibility for errors that may occur.**
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DISCUSSION SHEET

ITEM #C8

Topic: **Investment reports**

Discussion: Review of investment reports.

J.P.Morgan

Dallas Police and Fire Pension System - Net of Fees

Returns By Category
As of October 2016

Name	Market Value	Allocation	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Inception Date
Dallas Police And Fire Group Trust	2,290,512,214	100.00	(0.23)	(0.23)	2.44	(3.03)	(2.87)	1.18		01-Jan-1995
Equity	669,740,584	29.24	(1.10)	(1.10)	4.00					01-Jan-2016
MSCI AC 66.7%/EM 16.7%/R3000+3 16.7%			(1.55)	(1.55)	6.85					
Global Equity	223,869,237	9.77	(3.03)	(3.03)	3.47	0.38	3.79	8.40		01-Jul-2009
MSCI ACWI			(1.67)	(1.67)	5.30	2.64	3.77	8.62		
Private Equity	445,871,346	19.47	0.01	0.01	3.55					01-Jan-2016
Russell 3000 +3%			(1.92)	(1.92)	8.49					
Fixed Income	376,967,579	16.46	(0.01)	(0.01)	10.61					01-Jan-2016
Fixed Income Blended			0.03	0.03	10.37					
Global Bonds	62,214,861	2.72	(1.24)	(1.24)	8.29					01-Jan-2016
Barclays Global Aggregate			(2.78)	(2.78)	6.80					
High Yield	105,547,116	4.61	0.02	0.02	17.41					01-Jan-2016
Barclays Global High Yield			(0.33)	(0.33)	14.12					
Bank Loans	55,352,435	2.42	0.72	0.72	10.20					01-Jan-2016
S&P Leveraged Loan Index			2.16	2.16	6.48					
EM Debt	59,928,436	2.62	0.61	0.61	14.32					01-Jan-2016
EM Debt Blended			(1.04)	(1.04)	14.95					
Private Debt	93,924,732	4.10	(0.01)	(0.01)	(1.38)					01-Jan-2016
Barclays Global High Yield +2%			(0.16)	(0.16)	16.02					

Performance shown is net of manager fees

J.P.Morgan

Dallas Police and Fire Pension System - Net of Fees

Returns By Category
As of October 2016

Name	Market Value	Allocation	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Inception Date
Global Asset Allocation (GAA)	**187,206,763**	**8.17**	**2.31**	**2.31**	**8.10**	**11.15**	**4.78**	**5.24**		**01-Jul-2007**
GAA Blended			(1.77)	(1.77)	4.90	3.16	2.57	4.84		
Absolute Return	**35,181,530**	**1.54**	**12.13**	**12.13**						**01-Jun-2016**
HFRX Absolute Return Index			(0.39)	(0.39)						
Risk Parity	**91,590,098**	**4.00**	**(0.04)**	**(0.04)**	**7.47**					**01-Jan-2016**
MSCI ACWI 60%/Barclays Global Aggregate 40%			(2.11)	(2.11)	6.03					
GTAA	**60,435,136**	**2.64**	**0.94**	**0.94**	**5.22**					**01-Jan-2016**
MSCI ACWI 60%/Barclays Global Aggregate 40%			(2.11)	(2.11)	6.03					
Real Assets	**1,021,723,831**	**44.61**	**(0.20)**	**(0.20)**	**(3.35)**					**01-Jan-2016**
Natural Resources	**263,431,718**	**11.50**	**(0.18)**	**(0.18)**	**2.57**	**3.00**	**5.27**	**6.63**		**01-Jul-2009**
Infrastructure	**177,077,422**	**7.73**	**0.00**	**0.00**	**(4.82)**	**(6.28)**	**(1.30)**			**01-Jul-2012**
S&P Global Infrastructure Index			(2.80)	(2.80)	13.91	6.27	4.68			
Real Estate	**581,214,691**	**25.37**	**(0.27)**	**(0.27)**	**(5.42)**					**01-Jan-2016**
NCREIF Property			0.00	0.00	6.13					
Control/Holding Account	**174,873,456**	**7.63**	**0.05**	**0.05**	**0.28**	**0.30**	**0.14**	**0.16**		**01-Jan-1994**
Merrill Lynch 3 Month US T-BILL			0.03	0.03	0.27	0.31	0.12	0.11	0.88	
Master Loans	**(140,000,000)**	**(6.11)**								**01-Mar-2014**

Performance shown is net of manager fees

J.P.Morgan

Dallas Police and Fire Pension System - Net of Fees

Equity

As of October 2016

Name	Market Value	Allocation	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Inception Date
Dallas Police And Fire Group Trust	**2,290,512,214**	**100.00**	**(0.23)**	**(0.23)**	**2.44**	**(3.03)**	**(2.87)**	**1.18**		**01-Jan-1995**
Equity	**669,740,584**	**29.24**	**(1.10)**	**(1.10)**	**4.00**					**01-Jan-2016**
MSCI AC 66.7%/EM 16.7%/R3000+3 16.7%			(1.55)	(1.55)	6.85					
Global Equity	**223,869,237**	**9.77**	**(3.03)**	**(3.03)**	**3.47**	**0.38**	**3.79**	**8.40**		**01-Jul-2009**
MSCI ACWI			(1.67)	(1.67)	5.30	2.64	3.77	8.62		
Eagle Asset Management	24,858,034	1.09	(3.94)	(3.94)	10.58	8.19	7.91	12.50		28-Feb-2005
Russell 2000 Index			(4.75)	(4.75)	6.16	4.11	4.12	11.51	5.96	
Mitchell Group	23,760,668	1.04	(7.59)	(7.59)	18.52	0.49	(8.77)	(1.27)		01-Nov-2001
Dow Jones Equal Weighted U.S. Oil & Gas Index			(6.81)	(6.81)	9.67	(8.77)	(16.88)	(6.40)	(4.62)	
OFI	74,392,335	3.25	(1.41)	(1.41)	(1.95)	(4.19)	3.28	9.35		01-Sep-2007
MSCI ACWI			(1.67)	(1.67)	5.30	2.64	3.77	8.62		
Pyramis Global Advisors (Fidelity)	294,923	0.01	(0.01)	(0.01)	3.54	0.96	3.99	9.06		01-Apr-2002
MSCI ACWI			(1.67)	(1.67)	5.30	2.64	3.77	8.62	3.78	
RREEF REIT	22,488,597	0.98	(5.51)	(5.51)	3.93	1.96	4.99	8.85		01-Jan-1999
FTSE EPRA/NAREIT Global Index			(5.65)	(5.65)	4.70	3.38	5.53	9.23	1.41	
Sustainable Asset Management	3,090,333	0.13	(3.83)	(3.83)	10.06	8.80	6.06	11.38		30-Nov-2008
MSCI ACWI			(1.67)	(1.67)	5.30	2.64	3.77	8.62		
Walter Scott and Partners	74,984,348	3.27	(1.85)	(1.85)	5.77	2.79	3.77	8.83		01-Dec-2009
MSCI ACWI			(1.67)	(1.67)	5.30	2.64	3.77	8.62		
Private Equity	**445,871,346**	**19.47**	**0.01**	**0.01**	**3.55**					**01-Jan-2016**
Russell 3000 +3%			(1.92)	(1.92)	8.49					

Performance shown is net of manager fees

J.P.Morgan

Dallas Police and Fire Pension System - Net of Fees

Equity

As of October 2016

Name	Market Value	Allocation	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Inception Date
BankCap Opportunity Fund	14,643,325	0.64	0.00	0.00	12.46	10.45	(19.81)			01-Aug-2013
Bankcap Partners	14,996,936	0.65	0.00	0.00	(4.32)	(4.98)	(0.46)	(0.67)		01-Feb-2007
Hudson Clean Energy Partners LP	16,214,498	0.71	0.00	0.00	(9.81)	(9.95)	(4.85)	(8.13)		01-Aug-2009
Huff Alternative Fund LP	31,068,922	1.36	0.00	0.00	2.23	(6.17)	(0.60)	1.40		01-Jun-2001
Huff Energy Fd	137,907,480	6.02	0.00	0.00	25.23	25.12	(12.06)	(4.93)		31-Dec-2006
Industry Ventures Partnership Holdings IV LP	425,000	0.02	0.00	0.00						15-Jul-2016
Kainos Capital Partners	30,650,534	1.34	0.00	0.00	24.57	35.09				01-Jan-2014
Levine Leichtman Capital Partner IV LP	14,105,092	0.62	0.18	0.18	19.38	30.06	12.63	16.87		01-Apr-2008
Levine Leichtman Capital Partners V LP	20,875,850	0.91	2.17	2.17	10.17	12.36	11.82			06-Aug-2013
Lone Star CRA Fund LP	17,318,371	0.76	0.00	0.00	(38.38)	(37.47)	(21.06)	(5.00)		01-Jul-2008
Lone Star Growth Capital	10,146,152	0.44	0.00	0.00	(20.16)	(18.15)	(13.55)	1.45		31-Dec-2006
Lone Star Opportunities Fund V LP	38,427,237	1.68	0.00	0.00	(37.58)	(37.03)	(9.11)			01-Jan-2012
Merit Energy	38,659,167	1.69	0.00	0.00	(10.66)	(15.10)	(5.00)	(0.46)		31-Oct-2004
North Texas Opportunity Fund LP	4,612,834	0.20	0.00	0.00	(8.60)	(8.66)	(14.81)	(13.68)		01-Aug-2000
Oaktree Power Opportunities Fund III LP	11,480,358	0.50	(3.52)	(3.52)	8.17	24.19	10.89	7.38		01-Apr-2011

Performance shown is net of manager fees

J.P.Morgan

Dallas Police and Fire Pension System - Net of Fees

Equity

As of October 2016

Name	Market Value	Allocation	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Inception Date
Pharos Capital	17,758,668	0.78	0.00	0.00	(8.98)	(15.29)	2.44	5.04		30-Aug-2005
Pharos Capital Partners III LP	26,466,227	1.16	0.00	0.00	6.55	6.84	(0.53)			01-Dec-2012
Yellowstone Energy Ventures II LP	114,697	0.01	4.59	4.59	(12.04)	(42.69)	(42.16)	(33.24)		01-Sep-2008

Performance shown is net of manager fees

J.P.Morgan

Dallas Police and Fire Pension System - Net of Fees

Fixed Income
As of October 2016

Name	Market Value	Allocation	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Inception Date
Dallas Police And Fire Group Trust	**2,290,512,214**	**100.00**	**(0.23)**	**(0.23)**	**2.44**	**(3.03)**	**(2.87)**	**1.18**		**01-Jan-1995**
Fixed Income	**376,967,579**	**16.46**	**(0.01)**	**(0.01)**	**10.61**					**01-Jan-2016**
Fixed Income Blended			0.03	0.03	10.37					
Global Bonds	**62,214,861**	**2.72**	**(1.24)**	**(1.24)**	**8.29**					**01-Jan-2016**
Barclays Global Aggregate			(2.78)	(2.78)	6.80					
Brandywine Investment Management	62,214,861	2.72	(1.24)	(1.24)	9.19	6.98	1.39	2.41		01-Jan-2005
Barclays Global Aggregate Index			(2.78)	(2.78)	6.80	5.59	0.85	0.90	3.87	
High Yield	**105,547,116**	**4.61**	**0.02**	**0.02**	**17.41**					**01-Jan-2016**
Barclays Global High Yield			(0.33)	(0.33)	14.12					
Loomis Sayles Global Opportunity	104,669,613	4.57	0.01	0.01	19.03	8.49	3.15	7.00		01-Nov-1998
70% Merrill High Yield / 30% JPM Emerging Markets			(0.23)	(0.23)	14.91	10.58	4.96	6.79	7.37	
W.R. Huff High Yield	877,503	0.04	0.43	0.43	12.80	7.10	0.37	3.04		01-Jan-1995
Citigroup High Yield Composite Index			(0.08)	(0.08)	16.47	10.39	5.62	7.75	7.34	
Bank Loans	**55,352,435**	**2.42**	**0.72**	**0.72**	**10.20**					**01-Jan-2016**
S&P Leveraged Loan Index			2.16	2.16	6.48					
Loomis Sayles Senior Floating Rate and Fixed Income Trust	55,352,435	2.42	0.72	0.72	10.20	6.24	3.45			01-Nov-2013
S&P/LSTA Leveraged Loan Index			2.16	2.16	6.48	3.77	(0.24)			
EM Debt	**59,928,436**	**2.62**	**0.61**	**0.61**	**14.32**					**01-Jan-2016**
EM Debt Blended			(1.04)	(1.04)	14.95					
Ashmore Emerging Markets Debt Fund	41,655,569	1.82	1.15	1.15	12.58	16.71	5.66	5.85		01-Jan-2005
JP Morgan EMBI Global Diversified			(1.24)	(1.24)	13.34	11.70	6.77	6.56		

Performance shown is net of manager fees

J.P.Morgan

Dallas Police and Fire Pension System - Net of Fees

Fixed Income
As of October 2016

Name	Market Value	Allocation	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Inception Date
Ashmore Emerging Markets Local Currency Bond Fund	18,272,867	0.80	(0.60)	(0.60)	17.94	12.67	(3.94)	(1.40)		01-Mar-2011
JP Morgan GBI-EM Global Diversified			(0.85)	(0.85)	16.37	11.32	(3.64)	(1.14)		
Private Debt	**93,924,732**	**4.10**	**(0.01)**	**(0.01)**	**(1.38)**					**01-Jan-2016**
Barclays Global High Yield +2%			(0.16)	(0.16)	16.02					
Ashmore Global Special Situtations Fd 4 LP	5,277,763	0.23	(2.13)	(2.13)	22.27	22.34	(3.20)	(5.96)		01-Oct-2007
Highland Capital Management Note Due 12-31-2017	12,431,871	0.54	0.00	0.00	0.00	3.04	3.03	19.32		01-Dec-2006
Highland Crusader Fund LP	2,769,514	0.12	(2.76)	(2.76)	(2.60)	(4.19)	(5.99)	0.11		01-Aug-2003
Levine Leichtman Capital	9,922,767	0.43	0.00	0.00	(16.88)	(16.67)	(5.18)	(4.65)		01-Oct-2006
Levine Leichtman Capital Partners PCS II	18,763,148	0.82	0.26	0.26	5.12	4.85	2.70			01-Feb-2012
Lone Star Partners VII LP	3,274,945	0.14	0.00	0.00	(13.03)	(2.76)	24.37	38.88		01-Jul-2011
Lone Star Fund VIII LP	12,521,382	0.55	0.00	0.00	(12.07)	(6.85)	14.19			01-Jun-2013
Lone Star Fund IX	21,351,631	0.93	0.01	0.01	3.90	16.37				01-Apr-2015
Oaktree Fund IV & 2x Loan Fund	2,027,263	0.09	(4.04)	(4.04)	(6.05)	(6.05)	(5.20)	0.31		01-Jan-2002
Riverstone Credit Partners LP	5,584,448	0.24	4.35	4.35						01-Jun-2016

Performance shown is net of manager fees

J.P.Morgan

Dallas Police and Fire Pension System - Net of Fees

Asset Allocation

As of October 2016

Name	Market Value	Allocation	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Inception Date
Dallas Police And Fire Group Trust	**2,290,512,214**	**100.00**	**(0.23)**	**(0.23)**	**2.44**	**(3.03)**	**(2.87)**	**1.18**		**01-Jan-1995**
Global Asset Allocation (GAA)	**187,206,763**	**8.17**	**2.31**	**2.31**	**8.10**	**11.15**	**4.78**	**5.24**		**01-Jul-2007**
GAA Blended			(1.77)	(1.77)	4.90	3.16	2.57	4.84		
Absolute Return	**35,181,530**	**1.54**	**12.13**	**12.13**						**01-Jun-2016**
HFRX Absolute Return Index			(0.39)	(0.39)						
Bridgewater-Pure Alpha Major Markets	35,181,530	1.54	12.13	12.13						01-Jul-2016
Risk Parity	**91,590,098**	**4.00**	**(0.04)**	**(0.04)**	**7.47**					**01-Jan-2016**
MSCI ACWI 60%/Barclays Global Aggregate 40%			(2.11)	(2.11)	6.03					
AQR Capital Management	927,465	0.04	0.00	0.00	72.17	71.79	19.81			30-Sep-2013
Bridgewater	39,791,907	1.74	(1.82)	(1.82)	4.17	8.53	4.45	5.48		01-May-2007
Putnam Total Return	50,870,726	2.22	1.49	1.49	6.44	8.57	4.12	5.71		01-Dec-2009
GTAA	**60,435,136**	**2.64**	**0.94**	**0.94**	**5.22**					**01-Jan-2016**
MSCI ACWI 60%/Barclays Global Aggregate 40%			(2.11)	(2.11)	6.03					
GMO	60,435,136	2.64	0.94	0.94	5.22	8.67	3.45	5.28		01-May-2007

Performance shown is net of manager fees

J.P.Morgan

Dallas Police and Fire Pension System - Net of Fees

Real Assets

As of October 2016

Name	Market Value	Allocation	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year	Inception Date
Dallas Police And Fire Group Trust	**2,290,512,214**	**100.00**	**(0.23)**	**(0.23)**	**2.44**	**(3.03)**	**(2.87)**	**1.18**		**01-Jan-1995**
Real Assets	**1,021,723,831**	**44.61**	**(0.20)**	**(0.20)**	**(3.35)**					**01-Jan-2016**
Natural Resources	**263,431,718**	**11.50**	**(0.18)**	**(0.18)**	**2.57**	**3.00**	**5.27**	**6.63**		**01-Jul-2009**
Infrastructure	**177,077,422**	**7.73**	**0.00**	**0.00**	**(4.82)**	**(6.28)**	**(1.30)**			**01-Jul-2012**
S&P Global Infrastructure Index			(2.80)	(2.80)	13.91	6.27	4.68			
J.P. Morgan AIRRO II	4,154,324	0.18	0.00	0.00	(14.49)	(20.45)				01-Mar-2014
JP Morgan Global Maritime Investment Fund	24,983,971	1.09	0.00	0.00	(33.44)	(37.33)	(0.15)	(43.08)		01-Jun-2010
JP Morgan IIF Tax-Exempt LP	30,665,336	1.34	0.00	0.00	1.84	0.97	2.89	3.71		01-Oct-2007
JPM Asian Infras And Related Resources Oppor Fd	30,302,213	1.32	0.00	0.00	(3.44)	(7.11)	(2.90)	1.36		01-Aug-2008
LBJ Infrastructure Group Holdings LLC	44,346,035	1.94	0.00	0.00	0.00	0.00	0.00	0.00		01-Jun-2010
NTE Mobility Partners	42,625,545	1.86	0.00	0.00	0.00	0.00	0.00	0.00		01-Dec-2009
Real Estate	**581,214,691**	**25.37**	**(0.27)**	**(0.27)**	**(5.42)**					**01-Jan-2016**
NCREIF Property			0.00	0.00	6.13					

Performance shown is net of manager fees

J.P.Morgan

Disclaimer

Disclaimer

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DISCUSSION SHEET

ITEM #C9

Topic: **Approval of rebalancing and investment manager changes**

Attendees: Rhett Humphreys, Partner

Discussion: The Investment Policy Statement requires approval of the Board to terminate a manager. Additionally, the Investment Policy Statement provides target ranges for asset classes, beyond which rebalancing may not occur. Staff believes further rebalancing of the portfolio needs to occur which will cause more asset classes to fall below the lower bound of the target ranges and several managers will need to be liquidated. Staff and NEPC will review the recommended changes with the Board.

Staff Recommendation: **Approve** liquidating Eagle Asset Management, Mitchell Group, RREEF, Ashmore Emerging Markets Debt Fund, Ashmore Emerging Markets Local Currency Bond Fund, GMO, Putnam and JPMorgan Infrastructure Investments Fund in the next portfolio rebalancing which will cause certain allocations to further breach the lower bound of the target ranges.

DALLAS POLICE & FIRE PENSION SYSTEM

MEMORANDUM

Date: December 8, 2016

To: DPFP Board

From: DPFP Investments Staff

Subject: Approval of rebalancing and investment manager changes

Staff Recommendation

Approve liquidating Eagle Asset Management, Mitchell Group, RREEF, Ashmore Emerging Markets Debt Fund, Ashmore Emerging Markets Local Currency Bond Fund, GMO, Putnam and JPMorgan Infrastructure Investments Fund in the next portfolio rebalancing which will cause certain allocations to further breach the lower bound of the target ranges.

Background

In November, $90 million was raised from the equity, fixed income and GAA managers. In reviewing additional cash flow needs subsequent to the November rebalancing, staff and NEPC reevaluated the entire portfolio. Several managers' market value has decreased significantly and certain asset classes' target ranges have already fallen below the lower bounds of the target ranges. Staff and NEPC believe it is not reasonable or necessary to retain managers with only minor account balances as it is more efficient to maintain larger core relationships. Staff, in conjunction with NEPC, recommend liquidating Eagle Asset Management, Mitchell Group, RREEF, Ashmore Emerging Markets Debt Fund, Ashmore Emerging Markets Local Currency Bond Fund, GMO and Putnam as each are under $35 million. These liquidations will further reduce the public equity, fixed income and GAA allocations below the lower bound of the target ranges.

For the equity portfolio, this plan focuses on eliminating the public equity satellite managers (Eagle, Mitchell Group, RREEF) in order to retain the public equity core managers (OFI and Walter Scott). Staff plans to build out the other two public equity core managers, Boston Partners and Manulife as well as Income Research & Management in the core bonds fixed income portfolio when assets become available.

Staff and NEPC also recommend liquidating JPMorgan Infrastructure Fund to reduce the over allocation to infrastructure and real assets. The JPMorgan Infrastructure Investment Fund is the only private asset that can be redeemed semi-annually because it is an open ended fund.

Please see the attached summary chart of these rebalancing and investment manager changes.

DALLAS POLICE & FIRE GROUP TRUST

ASSET ALLOCATION AS OF 11/29/16

P - Account		Actual $	Actual Net %	Proposed Change $	Post Change $	Post Change %	Target $	Target Range Low	Target Range %	Target Range High
EQUITY										
P 59681	Eagle Asset Management	11.72		(11.72)	0.00					
P 56940	Mitchell Group	10.01		(10.01)	0.00					
P 87903	OFI Global Institutional	75.87			75.87					
P 56936	RREEF	8.60		(8.60)	0.00					
P 06078	Walter Scott	74.44			74.44					
	PUBLIC EQUITY	**181.08**	*8.27%*	**(30.33)**	**150.75**	*6.88%*	**438.17**	*10%*	**20%**	*23%*
	EMERGING MARKET EQUITY	**0.00**	*0.00%*		**0.00**	*0.00%*	**109.54**	*0%*	**5%**	*8%*
	PRIVATE EQUITY	**445.45**	*20.33%*		**445.45**	*20.33%*	**109.54**	*4%*	**5%**	*15%*
	EQUITY	**626.53**	*28.60%*	**(30.33)**	**596.19**	*27.21%*	**657.25**	*20%*	**30%**	*40%*
FIXED INCOME										
	SHORT TERM CORE BONDS	**0.00**	*0.00%*	**0.00**	**0.00**	*0.00%*	**43.82**	*0%*	**2%**	*5%*
P 86753	Brandywine	59.27			59.27					
	GLOBAL BONDS	**59.27**	*2.71%*	**0.00**	**59.27**	*2.71%*	**65.73**	*0%*	**3%**	*6%*
P 84551	Loomis Sayles	73.30			73.30					
P 56929	W.R. Huff High Yield	1.19			1.19					
	HIGH YIELD	**74.49**	*3.40%*	**0.00**	**74.49**	*3.40%*	**109.54**	*2%*	**5%**	*8%*
P 26866	Loomis Sayles Sr. Floating Rate	55.50			55.50					
	BANK LOANS	**55.50**	*2.53%*	**0.00**	**55.50**	*2.53%*	**131.45**	*3%*	**6%**	*9%*
P 86789	Ashmore Emerging Markets Debt Fund	21.66		(21.66)	0.00					
P 15566	Ashmore Emerging Markets Local Currency	17.03		(17.03)	0.00					
	EMERGING MARKET DEBT	**38.69**	*1.77%*	**(38.69)**	**0.00**	*0.00%*	**131.45**	*0%*	**6%**	*9%*
	ABSOLUTE RETURN & STRUCTURED CREDIT	**0.00**	*0.00%*	**0.00**	**0.00**	*0.00%*	**109.54**	*0%*	**5%**	*5%*
	PRIVATE CREDIT	**93.92**	*4.29%*	**0.00**	**93.92**	*4.29%*	**109.54**	*2%*	**5%**	*7%*
	Total Fixed Income	**321.87**	*14.69%*	**(38.69)**	**283.18**	*12.93%*	**722.98**	*15%*	**33%**	*38%*
ASSET ALLOCATION										
P 64486	Bridgewater All Weather	39.79			39.79					
P 06762	Putnam	35.87		(35.87)	0.00					
	RISK PARITY	**76.59**	*3.50%*	**(35.87)**	**40.72**	*1.86%*	**109.54**	*2%*	**5%**	*8%*
P 64531	GMO	20.44		(20.44)	0.00					
	GTAA	**20.44**	*0.93%*	**(20.44)**	**0.00**	*0.00%*	**65.73**	*0%*	**3%**	*6%*
P 68219	Bridgewater Pure Alpha	35.18			35.18					
	ABSOLUTE RETURN	**35.18**	*1.61%*	**0.00**	**35.18**	*1.61%*	**43.82**	*0%*	**2%**	*5%*
	Total Asset Allocation	**132.21**	*6.03%*	**(56.31)**	**75.90**	*3.46%*	**219.08**	*5%*	**10%**	*15%*
REAL ASSETS										
	LIQUID REAL ASSETS	**0.00**	*0.00%*		**0.00**	*0.00%*	**65.73**	*0%*	**3%**	*6%*
	NATURAL RESOURCES	**263.49**	*12.03%*		**263.49**	*12.03%*	**109.54**	*3%*	**5%**	*10%*
P 00195	JP Morgan Asian Infrastructure	30.30			30.30					
P 75297	JP Morgan Asian Infrastructure II	4.15			4.15					
P 08886	JP Morgan Global Maritime	24.98			24.98					
P 64487	JP Morgan Infrastructure IIF	30.67		(30.67)	0.00					
P 05486	LBJ Infrastructure Group Holdings	44.35			44.35					
P 05941	NTE Mobility Partners	42.63			42.63					
	INFRASTRUCTURE	**177.08**	*8.08%*		**146.41**	*6.68%*	**109.54**	*3%*	**5%**	*10%*
	REAL ESTATE	**582.29**	*26.58%*		**582.29**	*26.58%*	**262.90**	*10%*	**12%**	*25%*
	Total Real Assets	**1,022.86**	*46.69%*	**0.00**	**992.19**	*45.29%*	**547.71**	*20%*	**25%**	*45%*
CASH & LEVERAGE										
P 56925	CASH & EQUIVALENTS	**227.38**	*10.38%*	**155.99**	**383.37**	*17.50%*	**43.82**	*0%*	**2%**	*5%*
	Gross Investment Assets	**2,330.84**	**106%**		**2,330.84**	**106%**	**2,190.84**		**100%**	
P 90855	**Debt Program**	(140.00)	*-6.39%*		(140.00)	*-6.39%*		*0%*	0%	*15%*
	Net Asset Value	**2,190.84**	***100%***		**2,190.84**	***100%***			**100%**	

NEPC, LLC

To: Trustees & Staff
Dallas Police & Fire Pension System (DPFP)

From: Rhett Humphreys, CFA, Partner
Keith Stronkowsky, CFA, Sr. Consultant

Date: December 8, 2016

Subject: December 2016 – Rebalancing Plan

Per the Roles & Responsibilites section of the DPFP Investment Policy Statement, the Consultant will approve and verify in writing each of Staff's rebalancing recommendations.

In conjunction with this policy, NEPC has reviewed the latest asset allocation, market values, and rebalancing recommendations provided by staff (as of 11/29/16), and approves of this rebalancing plan, including liquidation of the remaining assets from:

- Eagle Asset Management
- Mitchell Group
- RREEF
- Ashmore External and Local EMD
- Putnam Total Return
- GMO
- JP Morgan Infrastructure Investments Fund

255 State Street | Boston, MA 02109 | TEL: 617.374.1300 | www.nepc.com
BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO

DISCUSSION SHEET

ITEM #C10

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. CDK Realty Advisors LP v. Dallas Police and Fire Pension System
e. 2016 Plan amendment litigation

Discussion: Counsel will brief the Board on these issues.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C11

Topic: **Ad hoc committee report**

Discussion: An update may be provided.

DISCUSSION SHEET

ITEM #C12

Topic: **2016 Annual Benefit Statements and Deferred Retirement Option Plan (DROP) Statements for Members of the Dallas Police & Fire Pension System**

a. Annual Statements
b. Financial Condition Letter

Discussion: **a. Annual Statements**

Staff will present the draft 2016 Benefit Statement and the draft 2016 DROP Statement for Members and Pensioners. Both statements include a brief message from the Chairman and the Executive Director and a referral to Web Member Services. The Benefit Statement will include a summary of contributions and an estimate of future benefits for the Member. The DROP statement will include a history of DROP activity for the prior year and reports total Member contributions.

b. Financial Condition Letter

Staff will present the Financial Condition Letter that is accompanying Annual Statements. Included in the letter is an explanation of why the letter is being sent, the primary causes for the change in funding period and a summary of the actuarial conditions.

Annual Benefit Statement

For the year ended 12/31/2016

DALLAS POLICE & FIRE PENSION SYSTEM

Test Member
1234 Main St
Dallas, TX 75201

From the Chairman and Executive Director

Dear Member,

The Board and Staff are pleased to present your annual Benefit Statement. This statement provides estimates of your pension benefits and other information to help you plan for your retirement. Also included is the amount you have contributed to your pension plan.

Your pension benefit is based on your years of Pension Service and your average Computation Pay at the time you enter DROP or leave active service. The estimates included in this statement are based on your Pension Service and Average Computation Pay as of December 30, 2016 (i.e. final pay period in 2016).

For more information about your pension benefits, see the Member Handbook at our website (www.dpfp.org) under the "Publications" tab.

Lastly, we encourage Members to take advantage of our online services through Web Member Services (WMS) and e-correspondence. WMS gives you secure online access to your account information at any time, while e-correspondence allows you to receive correspondence from us via email, saving paper and allowing for more timely information. If you have not yet taken advantage of these services, we encourage you to sign up at www.dpfp.org (see instructions on reverse).

Best regards,

Sam Friar
Chairman

Kelly Gottschalk
Executive Director

Board of Trustees

Use our convenient online services to save time and resources

Web Member Services available 24 hours a day, seven days a week!

Web Member Services gives Members the opportunity to view a summary of their account information and personal demographic information online. Vested Active Members can get an estimate of their future benefits under various retirement scenarios. DROP Members and Payees can view year to date information, and can do projections of their future DROP balances.

Security of your personal information is of prime importance to us. Our use encryption technology ensures your privacy as you access and navigate this site.

To establish an account on web member services, go to our website at www.dpfp.org.

Visit our Facebook page at https://www.facebook.com/DallasPoliceFirePension/.

Follow us on Twitter at @DPFP_Info.

To go "paperless" in your communications from DPFP, choose e-correspondence:

Once you are signed in to Web Member Services, you may choose e-correspondence to stop paper mailings and sign up for correspondence via email. This will allow you to receive news alerts, direct deposit notifications, annual statements, and election information online.

While logged into Web Member Services, on the left side of the screen, go to "my account" and when the window opens, go to the left and click on "Change e-correspondence options" then click "yes."

We respect your privacy. Your email address will not be sold or used for purposes other than this information.

Name: Test Member SSN: XXX-XX-1234

Date of Birth: June 01, 1966 Pension Service: **23.9235 years**

Avg. Computation Pay: $ 6,442.97 (as of December 27, 2016)

If you leave Active Service or join DROP now, your estimated monthly benefit would be:

$ 4,470.01

If you leave Active Service now, and wait until age 50 to begin your retirement, your estimated monthly benefit will be:

$ 4,624.15

If you do not enter DROP or leave Active Service now, your benefit will continue to grow as you accrue additional Pension Service and your Average Computation Pay increases. If you want an estimate of what your benefit will be if you continue to work, please sign in to Web Member Services.

Your total Member Contributions reported by the City of Dallas as of December 27, 2016:

$ 106,927.58

Annual DROP Statement

For the year ended 12/31/2016

DALLAS POLICE & FIRE PENSION SYSTEM

John Doe
1234 Main St
Dallas, TX 75201

From the Chairman and Executive Director

Dear Member,

The Board and Staff are pleased to present your annual DROP Statement. This statement provides a recap of the activity in your DROP account for the past year, and for Active Members, the amount you have contributed to your pension plan is provided.

In addition, your DROP balance as of December 31, 2016 is reflected in this statement.

For more information about your pension benefits, see the Member Handbook at our website (www.dpfp.org).

Lastly, we encourage Members to take advantage of our online services through Web Member Services (WMS) and e-correspondence. WMS gives you secure online access to your account information at any time, while e-correspondence allows you to receive correspondence from us via email, saving paper and allowing for more timely information. If you have not yet taken advantage of these services, we encourage you to sign up at www.dpfp.org (see instructions on reverse).

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Sam Friar
Chairman

Kelly Gottschalk
Executive Director

Board of Trustees

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We respect your privacy. Your email address will not be sold or used for purposes other than this information.

John Doe
xxx-xx-1234

Date	Amount In	Amount Out	Interest Rate	Interest Paid	Balance
01/31/2016	$ 0.00	$ 0.00	7.0000%	$ 953.38	$ 166,841.34
02/29/2016	$ 0.00	$ 0.00	7.0000%	$ 896.83	$ 167,738.17
03/31/2016	$ 0.00	$ 0.00	7.0000%	$ 964.01	$ 168,702.18
04/30/2016	$ 0.00	$ 0.00	7.0000%	$ 938.19	$ 169,640.37
05/31/2016	$ 0.00	$ 0.00	7.0000%	$ 974.94	$ 170,615.31
06/30/2016	$ 0.00	$ 0.00	7.0000%	$ 948.83	$ 171,564.14
07/31/2016	$ 0.00	-$ 30,000.00	7.0000%	$ 897.13	$ 142,461.27
08/31/2016	$ 0.00	$ 0.00	7.0000%	$ 818.74	$ 143,280.01
09/30/2016	$ 0.00	$ 0.00	7.0000%	$ 796.81	$ 144,076.82
10/31/2016	$ 0.00	$ 0.00	6.0000%	$ 712.83	$ 144,789.65
11/30/2016	$ 0.00	$ 0.00	6.0000%	$ 0.00	$ 144,789.65
12/31/2016	$ 0.00	$ 0.00	6.0000%	$ 0.00	$ 144,789.65

Your DROP Balance as of December 31, 2016:

$ 144,789.65

For DROP projections, please sign in to Web Member Services (see instructions for signing in to WMS in the column to the left).

January __, 2017

Dear Members:

The Texas Government Code requires that upon receipt of a report from the actuary that the financing arrangement of the system is inadequate, this actuarial determination must be disclosed to members and beneficiaries accompanying the next annual statement. The January 1, 2016 actuarial valuation performed by Segal Consulting, DPFP's external actuarial firm, indicates that current contribution rates are not sufficient to fund the Plan over a finite time period. This analysis was based on the current membership data, financial data, benefit provisions, and actuarial assumptions and methods used to determine the liabilities and costs of the Plan. The funding period of the Plan was first determined to be an infinite period in the actuarial valuation performed as of January 1, 2014. This infinite funding period is primarily due to returns on the actuarial value of assets in recent years that were below the long-term expectations, as well as the accumulation of DROP balances.

Below is a summary of DPFP's financial condition which is an excerpt from the January 1, 2016 actuarial valuation report.

	January 1, 2016	January 1, 2015
Membership		
Active	5,415	5,487
Terminated with refunds due	126	99
Terminated with deferred benefits	200	157
Retired members and beneficiaries	4,230	4,069

	January 1, 2016	January 1, 2015
Compensation		
Total	$ 365,210,426	$ 383,006,330
Average	$ 67,444	$ 69,803
Assets		
Market value	$ 2,680,124,303	$ 3,079,394,897
Actuarial value	$ 2,680,124,303	$ 3,695,273,876
Valuation Results		
Actuarial accrued liability (AAL)	$ 5,947,173,998	$ 5,792,216,025
Funded Ratio	45.07%	63.80%
Unfunded AAL	$ 3,267,049,695	$ 2,096,942,149
Funding period	Infinite	Infinite

The Board has been working diligently to address the funding issues since the first infinite funding period was reported in mid-2015. [PENDING DISCUSSION OF ELECTION RESULTS]

Please review the DPFP 2015 Comprehensive Annual Financial Report which provides more detailed financial and actuarial information regarding DPFP's financial condition. The report is available on our website (www.dpfp.org) under the "Publications" tab. And as always, we urge you to attend our monthly Board meetings to hear the Board's discussions on this topic.

Sincerely,

[signature]

Kelly Gottschalk
Executive Director

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C13

Topic: **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.

Discussion: 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."

DISCUSSION SHEET

ITEM #C13
(continued)

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).

DISCUSSION SHEET

ITEM #C14

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

Video Training:	**Open Meetings Act, Public Information Act**	KS
Dates:	November 17, 2016	
Location:	Dallas, TX	

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C15

Topic: **Possible changes to Education and Travel Policy and Procedure**

Discussion: Staff is proposing a change to the policy and procedures covering education and travel related expenses to address the proration of individual Trustee budgets in the year a Trustee's term begins or ends. This change is based upon discussion in the November 10 Board meeting.

For the year in which a Trustee's term ends, the Trustee's allocated budget for that year would be prorated from the beginning of the year through the scheduled end of the Trustee's term. If the Trustee is subsequently reelected in that year, the Trustee's budget would be increased to the full amount for the year. For the year in which any new Trustee begins to serve, the Trustee's allocated budget would be prorated from the Trustee's start date through the end of the year.

Staff Recommendation: **Approve** the Education and Travel Policy and Procedure as amended.

EDUCATION AND TRAVEL POLICY AND PROCEDURE

As Amended Through March 10, 2016

DALLAS POLICE AND FIRE PENSION SYSTEM

EDUCATION AND TRAVEL POLICY AND PROCEDURE
Adopted March 9, 1989
As amended through March 10, 2016

A. POLICY

The policy of the Dallas Police and Fire Pension System (DPFP) is to:

1. Provide for a Board Education Plan which outlines the Board's educational goals and addresses compliance with the Texas Pension Review Board's (PRB) Minimum Educational Training (MET) Program for trustees and system administrators of Texas defined benefit public retirement systems.

2. Reimburse Board Trustees and staff members, as approved by the Board, for the cost of meals, accommodations, transportation and other expenses associated with travel activities relating to the operation of DPFP. Costs incurred by Trustees in the conduct of City of Dallas business unrelated to pension business, as opposed to expenses reimbursable under this policy, will be reimbursed in accordance with the appropriate City of Dallas policy and are not to be reimbursed by DPFP.

3. Arrange travel using the most economical means reasonably available.

4. Monitor travel expenses to adhere to budgeted amounts as approved by the Board.

B. PURPOSE

The purpose of this policy is to:

1. Outline a Board Education Plan that addresses the Board's educational goals, identifies topics that Trustees and staff should be educated on, and provides for compliance with the requirements of the PRB's MET Program.

2. Define the procedure for travel and conference/training registration approvals, arrangements, documentation, and reimbursement.

3. Establish general policies and guidelines for determining allowable expenses and processing travel expenses.

B. **PURPOSE** (continued)

This policy does not address the approval of Trustee travel related to the monitoring of investment consultants and investment managers associated with DPFP's investment portfolio. Such approval is addressed in the Investment Policy Statement.

C. **BOARD EDUCATION PLAN**

1. At minimum, Trustees and the Executive Director are to comply with the training requirements of the PRB's MET Program. The objective of such training is to cover the fundamental competencies necessary for the Trustees and Executive Director to successfully discharge their duties, as well as allow them to gain expertise in additional areas related to their duties. The number of hours and frequency of training should follow the requirements as set forth by the PRB and the content should be aligned with the required content areas of the PRB, including but not limited to the following: fiduciary matters, governance, ethics, investments, actuarial matters, benefits administration, risk management, compliance, legal and regulatory matters, pension accounting, custodial issues, plan administration, Texas Open Meetings Act, and the Texas Public Information Act.

2. A designated staff member shall maintain records of attendance for educational activities for each Trustee and the Executive Director, notating which activities qualify as a PRB approved source for the MET Program. These records are to be utilized to meet the compliance reporting requirements of the MET Program.

3. Trustee and staff attendance of educational activities beyond those sponsored by PRB approved sources should be related to core topics which support the role of a public fund trustee and/or staff person, as applicable (e.g. finance, defined benefit plans, legislative issues, retirement counseling, financial reporting, or any of the areas noted in paragraph C.1. above).

D. PROCEDURE

1. Travel arrangements shall be made by a designated staff member, upon the request of the individual Trustee or staff member attending a conference, training, or meeting. The designated staff member will assist with all necessary arrangements, including registration, airline reservations, car rental, hotel and any other arrangements requiring reservation. In order for staff to assist with such arrangements, a Travel Profile form should be completed by any individual requesting travel reservations.

2. A Trustee or staff member may request the method of transportation that best meets his/her needs and the requirements of the education or business purpose, however the request will be subject to consideration of economic feasibility based on all available options. The staff member designated to assist in arranging travel shall perform a search of all reasonably available options for transportation and lodging prior to booking in order to best manage expenditures.

3. Charges for registration and travel reserved in advance of the travel date shall be made by a designated staff person using the DPFP credit card unless otherwise pre-approved by the Executive Director.

4. All expenses associated with any travel shall be documented on the Expense Report form (see Appendix A).

   An explanation of the form is as follows:

   a. Dates

   A separate column on the Expense Report is to be utilized for each day of the expense period.

   b. Registration Fees

   (1) DPFP will reimburse actual expenses incurred in registering for a conference/training or meeting. If the attendee pays the registration fee, an original or electronic (email) receipt must be furnished for reimbursement purposes.

D. PROCEDURE (continued)

(2) Registration costs are authorized only to the extent necessary for the purpose of the conference/training or meeting; expenses for golf tournaments or other extracurricular activities offered in connection with a conference/training or meeting are the responsibility of the individual.

c. Airfare

(1) If a reduced airfare may be obtained by traveling a day earlier or later than required for event attendance (i.e. staying an additional night), *and* the cost of all additional travel expenses (hotel, meals, rental car, local transportation, etc) is offset by the savings in airfare, DPFP will reimburse additional lodging, local transportation, rental car, and meal expenses incurred. The reimbursement for travel expense for the additional day will be limited to the savings in airfare (i.e. the difference between 1) the airfare that would have been incurred based on travel dates required for event attendance and 2) the actual rate paid for the airfare). Support for the amount of cost differential shall be obtained by the staff person assisting with booking travel and shall be included with the Expense Report for record keeping purposes.

(2) For all flights, DPFP will reimburse a coach or economy class airfare. First-class or business-class seats may be allowed only if coach seats are not available and no other flight can be substituted.

(3) Expenses incurred to change or cancel a flight will be reimbursed by DPFP.

(4) Upon completion of air travel, a copy of the boarding pass and/or itinerary must be submitted with the Expense Report.

d. Mileage

(1) Expenses relating to the use of personal vehicles for business travel shall be reimbursed at the current standard mileage rate as released by the Internal Revenue Service for use in computing the deductible costs of operating an automobile for business purposes.

D. PROCEDURE (continued)

d. Mileage (continued)

(2) If multiple individuals are traveling together by car, DPFP will reimburse mileage to the person who owns the vehicle.

(3) Mapquest.com, Map.com, or some equivalent online map service should be used to calculate mileage for reimbursement purposes.

(4) Mileage to and from DPFP's office when the origin or end point is the Trustee's home will not be reimbursed for days when a Trustee is compensated by the City. If a Trustee is not compensated by the City in the form of pay or time on the day of commuting to or from the DPFP office for a meeting, such mileage may be submitted for reimbursement. Any mileage which is being reimbursed by the City is not reimbursable by DPFP.

(5) The total reimbursement for vehicular transportation shall in no case exceed the amount that would be incurred using air transportation. Documentation of airfare used for cost comparison shall be attached to the Education/Travel Request Form.

e. Local transportation

Actual expenses incurred for taxis or other local transportation service will be reimbursed. The original or electronic (email) receipt must be provided for reimbursement.

f. Car Rental

DPFP will reimburse for rental cars under the following guidelines:

(1) Whenever possible, the least expensive mode of transportation to and from the airport will be used, including shuttles, taxis, or other forms of local transportation.

D. **PROCEDURE (continued)**

f. Car Rental (continued)

(2) Rental car expenses will not be reimbursed if an individual opts to rent a car rather than use less expensive, reasonably available modes of transportation to and from the airport. Reimbursement of the amount that would have been expended on a shuttle or taxi will be made with documentation of established rates.

(3) Fuel and mileage costs incurred shall be reimbursed. An original or electronic (email) receipt must be provided for reimbursement. Whenever possible, the individual will return the rental car with a full tank of gas to avoid paying inflated prices for fill-up by the rental agency.

(4) DPFP will not reimburse for the cost of any collision waiver or liability policy purchased in conjunction with the rental of a car. DPFP is self-insured and additional insurance is unnecessary.

(5) If a car is rented for personal use beyond the required period for business usage, reimbursement will be made on a pro-rata basis for the period required to attend the conference/training or meeting.

g. Lodging

(1) Reimbursement shall be made for actual expenses incurred for the period required to attend the conference/training or meeting, to include any additional lodging in accordance with paragraph C.4.c.(1).

(2) Original hotel receipts must be furnished for reimbursement.

(3) If one or more other persons accompany the individual and the hotel rate is higher than that charged for single occupancy, the lodging receipt shall indicate both the amount charged and the single occupancy rate. The person authorized to incur expenses shall pay the difference.

(4) Any personal expenses, such as in-room movies, fitness room access, dry cleaning, etc. are the responsibility of the individual.

D. <u>PROCEDURE (continued)</u>

h. <u>Business Services</u>

(1) All actual internet access expenses pursuant to DPFP business will be reimbursed. The Trustee or staff member incurring the expense shall annotate any receipts listing such expenses to indicate which expenses were incurred related to DPFP business.

(2) Miscellaneous business expenses such as facsimile transmissions, courier service and overnight delivery service will be reimbursed. Original or electronic (email) receipts will be required for reimbursement.

i. <u>Tips</u>

All tips must be itemized daily.

j. <u>Meals</u>

(1) DPFP shall reimburse for meals based on actual expenses supported by receipts.

(2) If receipts are not available from the provider, but the individual confirms the cost, DPFP will reimburse actual costs not to exceed $25 for a meal.

(3) DPFP will not reimburse expenses for alcoholic beverages.

(4) DPFP will not reimburse expenses for meals purchased in lieu of meals provided by a conference sponsor.

(5) A meal purchased for a non-DPFP Trustee or staff person with the express purpose of conducting business may be reimbursed.

(6) Notation of all attendees of meals is required to be made on the receipt provided. If an attendee is a non-DPFP Trustee or staff, their business relationship to DPFP must be noted.

(7) Itemized, original or electronic (email) receipts will be required for reimbursement.

D. PROCEDURE (continued)

k. Baggage Fees

Fees charged to check baggage on flights will be reimbursed

l. Parking

Parking expenses are eligible for reimbursement. Original or electronic (email) receipts are to be furnished, if available. Terminal (short-term) parking at Dallas Fort Worth International Airport will not be reimbursed for a period exceeding two nights. Long-term parking is to be used in instances of travel exceeding a two-night stay.

m. Tolls

Fees charged for tolls will be reimbursed. Original or electronic (email) receipts are to be furnished, if available.

n. Other Expenses

(1) Taxes

Sales and other taxes paid are reimbursable.

(2) Insurance

Flight insurance and fees for traveler's checks will not be reimbursed.

(3) Educational Materials

Expenditures for books or other materials required to be purchased for an educational course will be reimbursed. Original or electronic (email) receipt is required for reimbursement.

(4) Incidentals

Items other than those mentioned above will not be reimbursed.

D. **PROCEDURE (continued)**

5. Insurance Coverage

a. While a Trustee or staff member is driving their privately owned vehicle on DPFP business, their auto insurance is primary. Any DPFP insurance will be secondary and will come into use only after the primary policy has paid out to its limits.

b. DPFP will provide legal defense and pay all settlements or judgments of claims or suits arising from an accident involving the use of a privately owned vehicle while conducting DPFP business, subject to the following conditions:

(1) DPFP coverage will be in excess of any other automobile liability insurance that provides coverage for a staff's or Trustee's vehicle while being used to conduct DPFP business.

(2) The staff must be in the scope of DPFP employment at the time of the accident, or the Board member must be a current Trustee at the time of the accident.

(3) The individual must notify their supervisor or the Executive Director, as applicable, of any automobile accident while conducting DPFP business as soon as possible.

(4) The individual must notify his/her insurance carrier of the accident as soon as possible.

(5) The individual must cooperate in the DPFP investigation and defense of any claim or suit related to their accident.

(6) DPFP will reimburse the staff or Trustee for the physical damage deductible under comprehensive and collision coverage due to damage to a staff person's or Trustee's vehicle arising out of the use of the vehicle while in the scope of DPFP business. The maximum reimbursement will be $1,000 whether or not the individual has physical damage insurance coverage on the vehicle. All claims for the reimbursement of the deductible must include supporting documentation.

D. PROCEDURE (continued)

6. Filing for Reimbursements

a. An Expense Report, along with applicable receipts, shall be submitted to the staff person designated to assist with travel, preferably within ten working days, but in no case later than sixty days after completion of a trip.

b. Only original or electronic (email) receipts shall be submitted. Copies are not acceptable. Receipts should be legible and reflect the reimbursement dollar amount.

c. All Expense Reports will be reviewed and approved by the Executive Director and Chief Financial Officer, or their designee.

d. DPFP staff will maintain all records and reports pursuant to this policy.

e. Reimbursement payments will typically be issued within 10 business days of receipt of a completed Expense Report and all supporting documentation, but never prior to completion of review and approval by executive staff.

7. Approval of Travel and Reimbursements

a. Travel will only be approved if the purpose of the trip is to transact official DPFP business or attend educational conferences or training sessions necessary to promote the efficient conduct of DPFP's business.

b. For any Trustee travel, including day-trip travel (i.e. travel outside of Dallas County which allows an individual to depart and return on the same day), Chairperson and Executive Director approval is required to be obtained prior to travel. Planned travel must be reported on an Education/Travel Request form and provided to the staff person designated to maintain travel/education records. Trustees on unapproved travel may not be covered by DPFP's liability insurance.

c. A listing of all upcoming Trustee education and business related travel shall be included as a component of the Executive Director's Report in the Board meeting agenda, noting planned attendance of individual Trustees. The inclusion of this report in Board meeting materials evidences the Chairperson and Executive Director's approval of such travel. In order for

D. PROCEDURE (continued)

a training, meeting, or conference to be placed on the list, it must be approved by the Chairperson and Executive Director. A Trustee may request pre-approval from the Chairperson and Executive Director to attend a training, meeting, or conference which is not on the approved list. Any such request must be supported by a program or other evidence of the opening and closing dates, times, location and general content/purpose. Written approval of the Chairperson and Executive Director is to be maintained with the Education/Travel Request form if such travel is requested and the date of the travel occurs prior to the next Board meeting.

d. Staff members must schedule authorized travel and conference/training registration with the staff person designated to assist with travel coordination.

e. A staff member's supervisor shall approve, in writing, the travel, including day-trip travel, in advance of any registration or travel being booked. Such request must be supported by a program or other evidence of the opening and closing dates, times, location and general content. Supervisor approval is subject to available funds in accordance with the annual budget as approved by the Board. Any costs which exceed the annual budget for staff travel and education must be approved by the Executive Director before expenses are incurred. Such approval is subject to available funds based on upon the overall operating budget as approved by the Board. Staff on unapproved travel may not be covered by DPFP's liability insurance.

f. As a component of the annual budget, an allocation shall be made to each individual Trustee for education related travel and conference/event registration/materials. Expenditures will be monitored for each Trustee's budget throughout the year, with available balances provided to the Trustees quarterly, at minimum. For the year in which a Trustee's term ends, the Trustee's allocated budget for that year will be prorated from the beginning of the year through the scheduled end of the Trustee's term. If the Trustee is subsequently reelected during that year, the Trustee's budget will be increased to the full amount for the year. For the year in which any new Trustee begins to serve, the Trustee's allocated budget will be prorated from the Trustee's start date through the end of the year.

g. Staff shall allocate a separate travel and registration amount in the budget for expenditures in connection with specified professional education programs approved by the Board (i.e. Wharton and Harvard investments related workshops or similar, approved courses). Each Trustee and the Executive Director may attend one such program in any two year period to the extent that budgeted amounts are available. A Trustee may attend additional programs to the extent budgeted amounts are available, with written pre-approval from the Chairperson and Executive Director. If more than six Trustees request to attend such a program in any one year, attendance will be approved according to order of request, with preference given to 1) Trustees who have not yet attended the initial "basic" course, and 2) Trustees who did not attend such a program the prior year.

APPROVED on **March 10, 2016** the Board of Trustees of the Dallas Police and Fire Pension System.

[signature]

____

Samuel L. Friar
Chairman

Attested:

[signature]

____

Kelly Gottschalk
Secretary

DISCUSSION SHEET

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.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #D2

Topic: **Executive Director's report**

a. DROP update
b. Public relations firm
c. Future Education and Business Related Travel
d. Future Investment Related Travel
e. Associations' newsletters

- NCPERS Monitor (November 2016)
- TEXPERS Outlook (November 2016)
- TEXPERS Pension Observer (Fall 2016)

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

Future Education and Business Related Travel
Regular Board Meeting – December 8, 2016

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

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

3. **Conference:** **PRB: MET Online Core Training: Risk Management**
   Dates: Anytime on line
   Location: http://www.prb.state.tx.us/

4. **Conference:** **PRB: MET Online Core Training: Ethics**
   Dates: Anytime on line
   Location: http://www.prb.state.tx.us/

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

* New/No one has signed up

6. **Conference:** **PRB: MET Online Core Training:** **<u>Actuarial Matters</u>**
Dates: Anytime on line
Location: http://www.prb.state.tx.us/

7. **Conference:** **PRB: MET Online Core Training:** **<u>Fiduciary Matters</u>**
Dates: Anytime on line
Location: http://www.prb.state.tx.us/

<u>2017</u>

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

9. **Conference:** **NEPC Annual Public Funds Workshop**
Dates: January 23-24, 2017
Location: Tempe, AZ
Est. Cost: TBD

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

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

12. **Conference:** **TEXPERS Basic Trustee Training Class**
Dates: April 8, 2017
Location: Austin, TX
Est. Cost: TBD

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

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

15. **Conference:** **NCPERS Accredited Fiduciary Program (Modules 1&2 and 3&4)**
Dates: May 20 – 21, 2017
Location: Hollywood, FL
Est. Cost: TBD

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

* New/No one has signed up

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

18. Conference: **TEXPERS 2017 Summer Educational Forum**
Dates: August 13 – 16, 2017
Location: San Antonio, TX
Est. Cost: TBD

19. Conference: **Wharton: Refresher Workshop in Core Investment Concepts**
Dates: September 24, 2017
Location: Philadelphia, PA
Est. Cost: $1,000

20. Conference: **Wharton: Advanced Investments Management**
Dates: September 25-28, 2017
Location: Philadelphia, PA
Est. Cost: $6,000

21. Conference: **NCPERS Public Safety Employees' Pension & Benefits Conference**
Dates: October 29 – November 1, 2017
Location: San Antonio, TX
Est. Cost: TBD

* New/No one has signed up

Future Investment Related Travel
Regular Board Meeting – December 8, 2016

NONE

* New/No one has signed up

THE MONITOR
The Voice for Public Pensions
November 2016

City Initiatives Pick Up Speed as Secure Choice Pensions Gain Traction

Large U.S. cities are emerging as the new frontier for private-sector retirement savings programs inspired by NCPERS' Secure Choice Pension proposal.

New York City Comptroller Scott Stringer on October 6 unveiled the New York Nest Egg proposal, which would provide three distinct city-sponsored automatic retirement savings options to be offered to private businesses. Approximately 3.9 million of New York City workers lack access to a workplace retirement program, according to an analysis by NCPERS.

New York Mayor Bill DiBlasio and Public Advocate Letitia James have previously endorsed similar concepts, and the cities of Philadelphia and Seattle are weighing their own approaches to address the burgeoning private-sector retirement savings crisis.

All of these municipal initiatives are in their early stages, occurring as interest by states is accelerating rapidly. Governor Jerry Brown made national headlines September 29 by signing into law California Secure Choice, which will require private-sector companies that lack retirement plans and have five or more workers to automatically deduct individual retirement account contributions from workers' paychecks.

California thus became the eighth state – and the largest – to adopt what is coming to be known as an "Auto-IRA" program. Connecticut, Illinois, Maryland, Massachusetts, New Jersey, Oregon, and Washington State have passed laws that require some small businesses to either set up retirement savings plans or create state-run marketplaces to help small businesses shop establish plans. Although none of the programs have gone live yet, some are expected to begin operations in 2017, with Oregon likely to be first, said David Morse, a partner in the New York office of the law firm K&L Gates.

The Department of Labor in August provided the catalyst for an uptick in Auto-IRA interest at the state and municipal level. At that time, the department issued final rules carving out ways states can structure and operate Auto-IRAs to avoid running afoul of the Employee Retirement Income Security Act. The department simultaneously issued a proposal to provide a similar safe harbor for municipalities.

Automatic enrollment of private-sector worker is the cornerstone of the approach, though all programs would have to provide opt-out options for employees who want to change their contribution or not contribute at all. The American Association of Retirement Persons, hailing the department's final rules in August, noted that employees are 15 times more likely to participate in a retirement savings plan when contributions are automatically deducted.

The still-pending municipal proposal stipulates two important conditions that would apply to cities and counties that choose to offer an auto-IRA, said Morse, who spoke at NCPERS's October 19 webinar on Auto-IRAs. Morse noted that municipalities can offer programs provided there is no statewide retirement plan in that particular state. "That language is actually a bit troubling, because it's not clear what it means," Morse said. "For example, would it count if a state simply had an electronic retirement plan marketplace?" This question is likely to be clarified in a final rule, which is expected to come out before the new Administration takes office in January 2017.

continued on page 2

City Initiatives continued from page 1

The other proposed requirement, Morse noted, is that programs could be launched only by cities or counties that are at least as large as the U.S. state with the lowest population. (Currently, the benchmark would be Wyoming, which has fewer than 600,000 residents.) The Department of Labor has asked for comments to make sure cities have the necessary heft to operate an Auto-IRA program.

Congressional Lame-Duck Session

In an atmosphere of growing uncertainty over whether Republicans will maintain their majority in the U.S. Senate in the next Congress, GOP Leadership there is considering how best to use the upcoming lame-duck session to further its policy goals. While the situation in the House is less tenuous with regard to maintaining a Republican majority, Speaker Paul Ryan (R-WI) and his chief lieutenants must also consider a possible near-term future without a Senate run by their allies.

Given the enormity of the unfinished business that this Congress has piled up since January 2015, the decisions on what legislation moves and how it is processed are numerous. The only must-pass legislation would fund federal agencies and programs. A stop-gap funding measure, which is known as a continuing resolution, is in place until December 9. That deadline is likely to be extended until Congress and President Obama can coalesce around a package of programmatic funding levels and policy riders that can take the federal government through the end of fiscal year 2017. Of course, there is a chance that an agreement will not be reached in the constricted time period of a lame-duck session. In that case, the continuing resolution could be extended into early 2017. The new President and Congress will then have to resolve the funding issues as one of their first priorities.

Regarding public pension plans, we have worked throughout this Congress to ensure that problematic provisions aimed at state and local governmental pension plans are not

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FEDERAL *news*

Lame-Duck Session continued from page 2

enacted into law. Senate Finance Committee Chairman Orrin Hatch (R-UT) included both the Public Employee Pension Transparency Act (PEPTA) and the annuity accumulation plan in his version of Puerto Rico assistance legislation at the end of 2015. We're pleased that neither PEPTA nor the annuity accumulation plan was included in the legislation as it was enacted – the Puerto Rico Oversight Management and Economic Stability Act of 2016.

Now Chairman Hatch is eyeing the lame-duck session to finalize legislation related to the pension and retiree health benefits of coal miners and separate legislation to enhance defined contribution plans, namely IRAs and 401k plans. Both pieces of legislation have been approved by the Finance Committee. It is likely that they will be moved as part of a larger spending-and-tax bill at the end of this Congress. Neither bill contains PEPTA or the annuity accumulation plan.

The wild card for this end-of-year legislation will be the House. The Ways and Means Committee has not considered either the coal miners or the defined contribution plan legislation and it is unclear whether they will do so. Another course of action would be for the top House tax writers to agree to the Senate legislation, perhaps with some minor changes, but then request that some proposals of their own be included. Again, in this scenario, we will have to ensure that legislative add-ons do not include PEPTA or the annuity accumulation plan.

On November 8, voters will finally put to rest this acrimonious election season. The lame-duck Congress and President Obama will then be able to more clearly evaluate the future political dynamics and make decisions on what can be accomplished in the lame-duck session.

Please be assured that NCPERS will monitor these developments closely and report any significant matters to its members. ■

__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.

Executive Director's Corner

Hank H. Kim, Esq.
Executive Director
& Counsel

Survey Will Help NCPERS Map Our Future with Strategic Plan

NCPERS marks its 75th anniversary this year, and naturally it is a time that inspires pride and unity. Since our inception in 1941, our organization has helped to shape modern public pension systems into a powerful voice for retirement security.

But anniversaries are not just a time to celebrate. They are a time to consider why our work is important and how we can most effectively continue to perform it. NCPERS is in the process of mapping out its future by developing a strategic plan. The goal is to ensure that we have the best ideas to serve members for decades to come. We can't create this roadmap to the future without you.

Since the second week of August, we have conducted focus groups with about a dozen pension plans to discuss the value of NCPERS. We have received thoughtful input as to how staff can best support members in the areas of education, research, communications and social media. We are learning how members think our dues structure and affinity programs should be configured. In short, we are getting your feedback on everything we do to make sure that the services we provide are of the highest value to you, our members.

Every NCPERS member organization will be receiving a survey from us in the beginning of November to explore these questions more fully. We urgently need your candid responses.

In all likelihood, you have just completed our annual survey of members, and you may well be wondering why another survey is necessary. The answer lies in the fact that the annual member survey, which we've conducted for the past six years, gauges the attitudes, concerns, and outlook of NCPERS members. It isn't about NCPERS as an organization, but about the pension plans themselves.

The strategic-plan survey is different. In it, we are asking members to reflect on how NCPERS delivers value and leadership to the public plan community, and how we could do it better. We want input about our value to plan administrators, investment staff, benefits staff, and trustees. We want to know what education and networking opportunities you need, what research you value, and how you communicate with your plan participants.

As we look to the future, we must also take pains to draw lessons from the past. NCPERS has a proud history. We were there in the aftermath of the New Deal, when the government upped the ante on retirement security with the creation of the Social Security system. We came into being because part of the response to Social Security was a boom in public pension plans. Our role, then as now, was to provide advocacy, research, and education opportunities for public pension plans leadership.

For 75 years, we have consistently and successfully made the case that defined-benefit pensions are an irreplaceable feature of the employment bargain for public servants. During war and peace, during stable and turbulent times, our message has been consistent: We strive to promote and protect pensions by focusing on advocacy, research and education for the benefit of public sector pension stakeholders.

What will our next 75 years look like? The answer is up to you. ■

THE

MONITOR The Latest in Legislative News

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

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The Voice for Public Pensions

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Texas Association of Public Employee Retirement Systems

TEXPERS OUTLOOK

November 2016

ISSUES IMPACTING PUBLIC PENSION FUNDS

1225 North Loop West, Ste. 909
Houston, Texas 77008
Phone: (713) 622-8018
texpers@texpers.org
www.texpers.org

Houston Pension Funds Agree to Mayor's Proposal to Cut Benefits, Issue Bonds

Houston's three pension systems for city employees are backing a reform plan proposed by Mayor Sylvester Turner to reduce benefits and issue pension obligation bonds in an attempt to reduce total liabilities by an estimated $3.5 billion.

The plan, which the mayor hopes to present to the Texas Legislature next year where it faces an uncertain outcome, aims to fully fund the city's pension for police officers, firefighters and municipal workers.

The plan calls for the adoption of a 30-year closed amortization schedule to pay off by 2046 the $7.7 billion in unfunded liabilities across the pension funds, which include the $3.8 billion Houston Firefighters' Relief and Retirement Fund, the $4.6 billion Houston Police Officers' Pension System and the $2.5 billion Houston Municipal Employees Pension System.

By a 7-2 vote on Oct. 24, the Houston Firefighters' Relief and Retirement Fund's board joined the police and municipal pension boards in agreeing to a complex deal that requires beneficiaries to give up some benefits in exchange for long-term certainty in their retirement funds.

The mayor's proposal includes benefit reductions in the three pension funds that would reduce total liabilities by $2.5 billion, and the city would also issue $1 billion in pension obligation bonds, $750 million of which would be contributed to the police officers' pension system and $250 million of which would be issued to the municipal employees' pension plan.

Even though they agreed to it, fire fund officials sounded wary of the agreement. A statement released by the fire fund after the vote characterized the agreement as a "non-binding framework," and several media outlets reported that no trustees elected by active

Continued on p. 2

In this issue:

Houston Fire continued from p. 1

or retired firefighters were in attendance at Turner's press conference about the deal.

The city's firefighters had never before agreed to benefit cuts, according to The Houston Chronicle, whereas the police and municipal boards did so in 2004 and 2007, after benefit increases approved in 2001 led pension costs to spike.

The 2001 changes created a crisis that has burdened the city budget and has only worsened since, in large part because the city has failed to keep up with its annual contributions to the funds.

The benefits changes from the pension systems will immediately reduce the funds' unfunded liability to $5.2 billion, a 33% reduction, Turner said in a statement posted on his website.

"We will couple this with $1 billion in pension obligation bonds (POB) to further reduce the unfunded liability," Turner added. "Yes, we are trading one form of debt for another, but at a lower interest rate."

Also, in keeping with a national trend, the funds are lowering the assumed rate of return on their investments to 7%, which Turner characterized as "more realistic."

The agreement also calls for limiting the amount to be spent each year for pension benefits. If anticipated costs rise above this limit, the city and the pension systems must return to the table to make adjustments to bring costs back in line.

On the Web at: http://www.houstonchronicle.com/news/politics/houston/article/Firefighters-OK-pension-plan-but-still-wary-10201608.php, https://www.hfrrf.org/default.aspx, http://www.houstontx.gov/pensions/letter-from-mayor.html, http://www.pionline.com/article/20161020/ONLINE/161029982/houston-mayor-announces-plan-to-cut-pension-benefits-issue-bonds, http://www.pionline.com/article/20161024/ONLINE/161029947/houston-firefighters-pension-fund-board-oks-mayors-plan-to-cut-benefits-issue-bonds.

GASB Proposes Implementation Guide for OPEB Standards

The Governmental Accounting Standards Board (GASB) has released a proposed implementation guide for its Statement No. 74, which sets standards for "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans."

The 129-page proposed guide, which applies to the financial statements of all state and local governments, is presented in a question and answer format and is intended to clarify, explain or elaborate on the requirements of GASB 74.

In June 2015, GASB approved the standards, which cover Other Postemployment Benefits (OPEB) plans that administer benefits on behalf of governments through trusts that meet the GASB's specified criteria.

GASB 74 replaces GASB 43 and requires more extensive note disclosures and required supplementary information (RSI) for both defined benefit (DB) and defined contribution (DC) OPEB plans. The provisions of GASB 74 became effective for plan fiscal years beginning after June 15, 2016.

Comments on the proposed implementation guide are due by Dec. 19.

On the Web at: http://www.gasb.org/jsp/GASB/Document_C/GASBDocumentPage?cid=1176168530441&acceptedDisclaimer=true.

Summary of Federal Tax Laws Applicable to Public Retirement Systems Updated

Attorney Carol V. Calhoun of Venable LLP (formerly of the Calhoun Law Group) has updated her checklist of federal tax laws that are applicable to public retirement systems.

While the checklist is beneficial to public plan sponsors, Calhoun cautions that it should be viewed as a general summary and should not be a substitute for research on specific issues.

The checklist covers the Internal Revenue Code (IRC) qualification requirements applicable to governmental plans, other than plans described in IRC § 403(b) and 457(b). It also includes selected IRC requirements not related to retirement plan qualification.

Links are provided to each of the applicable IRC sections and other considerations are included related to recent legislative and administrative developments.

On the Web at: http://benefitsattorney.com/charts/appfa/.

Contrary to Alarmists, State Pension and OPEB Costs Are Manageable for Most Governments

The total costs for long-term state and local government commitments – including pensions, other post-employment benefits (OPEBs) and debt service – appear to be under control in many jurisdictions.

However, for a handful of states, counties and cities, these costs are an extraordinarily high percentage of their own-source revenue. These jurisdictions have only unpalatable options.

The findings come from a report by the Center for Retirement Research at Boston College that provides a comprehensive accounting of state and local government liabilities for pensions and OPEBs and the fiscal burden that they pose on states, counties and cities.

"The costs of state pension plans are much in the news," the researchers state. "Generally, people lump together these unfunded liabilities and make alarming claims that all state plans are about to go bankrupt. The evidence, though, suggests otherwise. On the other hand, looking just at pension plans and just at states doesn't give the full picture of costs facing states and localities."

The paper attempts to describe what the worst-off states, counties and cities can do to improve their financial situations. Four options exist:

1. One is to pray for higher returns. Unfortunately returns would have to be consistently in the 10%-15% range over the next 30 years to solve the problem – an unlikely outcome given today's financial markets.
2. A second option is to raise taxes to meet the required commitments. Unfortunately, many of the states with the greatest burden already have relatively high taxes.
3. A third option is to cut other spending by 10% to 20%.
4. A final option is to raise employee contributions even beyond what they are already contributing to their plans.

"Clearly, those governments in the worst shape face an enormous challenge," stated the report, "Will Pensions and OPEBs Break State and Local Budgets?" It is available for download at: http://crr.bc.edu/briefs/will-pensions-and-opebs-break-state-and-local-budgets/.

Meanwhile, the Center for Retirement Research issued a separate report providing a comprehensive accounting of pension and OPEB liabilities for state and local governments and the fiscal burden that they pose.

The analysis included plans serving more than 800 entities: 50 states, 178 counties, 173 major cities, and 415 school districts related to the sample of cities and counties.

The cost analysis separately calculates pension and OPEB costs as a percentage of own-source revenue for states, cities and counties. It then combines pension and OPEB costs to obtain the overall burden of these programs.

On the Web: http://crr.bc.edu/working-papers/an-overview-of-the-pensionopeb-landscape/.

Save the Date!

28th Annual Conference

April 9 - April 12, 2017

Hilton Austin, Austin, Texas

Registration Opening in November

Visit the conference website at www.texpers.org for a preliminary schedule

TEXPERS Keynote Speaker

Matthew Dowd, Chief Political Analyst, ABC News

America and Texas at a Time of Great Disruption

Annual Required Contributions Key to Public Pension Funds' Success

An examination of three of the most successful public pension systems in the country offers a roadmap to success for other pension systems looking to provide a secure retirement for their public employees, according to new research.

Adequately funding pensions each year is the single most important thing governments can do to properly manage their pensions and ensure a secure retirement for public employees, according to "Public Pensions Work – And These Three Systems Prove It," by Tyler Bond of the National Public Pension Coalition. No investments in alternative assets or cuts in benefits can make up for poor funding practices.

While each pension fund studied is unique, their common commitment to sound funding practices and responsible management ensures that the retirees of these systems can enjoy the dignified retirement they deserve.

Even though detractors of public pension funds are making headlines, the fact is that most public pension systems are reasonably well-funded and provide an adequate retirement benefit to teachers, firefighters, nurses, and other public employees, according to the report.

The report focuses on three exemplary systems:

- The District of Columbia Retirement Board manages the District of Columbia Police Officers and Firefighters' Retirement Plan, a well-funded pension system with a current funding ratio of 107.3%. The DC government pays its full annual required contribution to the pension fund each year.
- The Illinois Municipal Retirement Fund (IMRF) is a statewide public pension system serving 2,976 employers across the state. Many of Illinois' public pensions are notoriously underfunded but the IMRF is an exception because counties, cities and other municipalities are required by law to make their annual contributions. In 2015, IMRF paid out $1.49 billion in benefits to 112,762 recipients. The average annual benefit was $21,492.
- The state of North Carolina has a robust public pension system for its teachers, firefighters, police officers, and other state employees. The state government has historically made its required contributions each year and this has allowed North Carolina to avoid making benefit cuts for pensioners during the recession. North Carolina also uses a very short 12-year amortization period to pay off its unfunded liability for its pensions, when many states use 25-30 year amortization periods. An amortization period is the amount of time granted to pay off debt. Using this shorter period requires a commitment from the state government to paying off the debt quickly and making the annual required contributions, but it also keeps the unfunded liability low and the pensions well-funded.

Another key ingredient to the success of public pension funds has to do with economic efficiency and economies of scale, the report found. Pension systems like IMRF and the North Carolina Local Plan are successful in part because they utilize one system for the entire state.

"All of the counties, cities, and towns pay into one system, with one management structure, one investment team, etc." the report stated. "In these states, one small town with only a few hundred public employees does not have to manage an entire pension system all on its own."

On the Web at: https://protectpensions.org/public-pensions-work-three-systems-prove/.

Assets of Largest Public Pension System Surpass $3.3 Trillion

The total holdings and investments for the 100 largest state and local government retirement systems increased slightly from $3.26 trillion at the end of the first quarter of 2016 to $3.31 trillion at the end of the second quarter of 2016, according to the U.S. Census Bureau.

Cash and short-term investments were $113.2 billion, up from $104.4 billion in the first quarter of 2016. Employee contributions were $11.7 billion, up from $11.2 billion in the first quarter of 2016. The ratio of government contributions to employee contributions was 2.6 to 1, with government contributions comprising 72.2% of the total contributions, according to the bureau's Quarterly Survey of Public Pensions.

During the second quarter, holdings and investments in corporate stocks increased 2% to $1,231 billion, corporate bonds increased 0.7% to $430 billion, international securities decreased 1.1% to $619 billion, and federal government securities increased 3.1% to $256 billion.

More information for the 100 largest U.S. public employee retirement systems is available at: http://www.census.gov/content/dam/Census/library/publications/2016/econ/g16-qspp2.pdf.

Public Funds Should Familiarize Themselves with a Third Liability Calculation: 'Solvency Liability'

GRS Consulting, an arm of Gabriel, Roeder, Smith & Co., has published a paper about a third liability calculation for public pension funds known as "solvency liability" and encourages plan sponsors to familiarize themselves with it.

In recent years, public employee retirement systems have adjusted to having two separate liability calculations: the actuarial accrued liability for funding purposes and the total pension liability for the new Governmental Accounting Standards Board (GASB) accounting disclosures.

The third type of disclosure – solvency liability – was suggested by the Pension Task Force of the Actuarial Standards Board (ASB) in its June 2016 report. GRS Consulting published an article aiming to provide an understanding of the purpose of the solvency measure as well as its uses and limitations, regardless of whether solvency liability becomes a new disclosure requirement.

The article, "Potential Solvency Liability Disclosure May Have Significant Implications for Public Employee Retirement Systems," by David T. Kausch, GRS' chief actuary and senior consultant, states: "The purpose of a solvency liability for a pension plan is to estimate the cost, as of the valuation date, to sell all liabilities accrued under the plan in the marketplace – analogous to the plan sponsor 'selling' the pension plan in the open market and having no future obligation."

In the current low interest rate environment, a pension plan's solvency liability would likely be significantly higher than its actuarial accrued liability or total pension liability.

The article explains the new measure and discusses how can solvency liability be useful to trustees and other stakeholders. It also aims to help trustees know enough about solvency liability to help them effectively communicate what it means and what it does not mean.

On the Web at: http://www.grsconsulting.com/wp-content/uploads/2016/10/GRS-Perspectives-Solvency-Liability-Final.pdf.

SEC Announces Record Number of Enforcement Actions in 2016

In 2016, the Securities and Exchange Commission (SEC) filed 868 enforcement actions exposing financial reporting-related misconduct by companies and their executives, and misconduct by registrants and gatekeepers, a new single year high for SEC enforcement actions.

The agency continued to enhance its use of data to detect illegal conduct and expedite investigations. For the fiscal year that ended Sept. 30, the enforcement actions included the most ever cases involving investment advisers or investment companies (160) and the most ever independent or standalone cases involving investment advisers or investment companies (98). The agency also reached new highs for Foreign Corrupt Practices Act-related enforcement actions (21) and money distributed to whistleblowers ($57 million) in a single year.

The agency also brought a record 548 standalone or independent enforcement actions and obtained judgments and orders totaling more than $4 billion in disgorgement and penalties.

SEC Chair Mary Jo White characterized the enforcement program as "a resounding success."

On the Web at: https://www.sec.gov/news/pressrelease/2016-212.html.

Information on State and Local Government COLAs Updated

The National Association of State Retirement Administrators (NASRA) has issued an update to its "Cost-of-Living Adjustments" report, which discusses the purpose of COLAs, the different types of COLAs provided by government pension plans, and an overview of recent state changes to COLA provisions.

The report summarizes COLA provisions by state-level plans, including any recent legislative changes. Of the 100 select state-level plans that provide COLAs, 73 provide them on an automatic basis and 27 provide them on an ad hoc basis, according to the report.

Since 2009, 15 states have changed their COLAs for current retirees, eight states have changed COLAs for current employees' future benefits, and seven have changed COLAs for future employees only.

Since 2015, only four states have enacted COLA reductions that affect one or more major employee groups. However, in several states, the legality of these changes has been challenged. In addition, some states are including provisions that would allow COLAs to increase if the plan's funding status or fiscal conditions improve or if inflation rises.

Most state and local governments provide a COLA to offset or reduce the effects of inflation, which erodes the purchasing power of retirement income. In addition, COLAs are important for state and local government employees who do not participate in Social Security to supplement their income during disability or normal retirement. Typically, governments prefund the cost of a COLA over an employee's working career.

The Governmental Accounting Standards Board (GASB) requires public pension plans to disclose assumptions regarding COLAs, including whether the COLA is automatic or ad hoc, and to include the cost of COLAs in projections of pension benefit payments.

On the Web at: http://www.nasra.org/files/Issue%20Briefs/NASRACOLA%20Brief.pdf.

Funded Ratios of Public Funds Dropped a Few Points from 2015, but Was Higher than 2013-2014

As of June 30, 2016, the aggregate funded ratio for the 100 largest U.S. public pension funds was estimated to be 69.8%, as markets took back some of the gains from 2012-2014 and discount rates declined, the annual Milliman Public Pension Funding Study found.

In addition, plan sponsors continued to reduce interest rate assumptions in the expectation that returns over the coming decades will be lower.

The difference between the average sponsor-reported assumption of 7.5% and Milliman's independently determined assumption of 6.99% was the highest seen so far, according to the study's authors, indicating that pressure to reduce interest rate assumptions is unlikely to abate.

For this year's report, the authors shifted their focus away from the accrued liability figures that had been used to determine a plan's funding requirements to focus more on the Total Pension Liability figures used for financial reporting under the Governmental Accounting Standards Board Statements No. 67 and 68. Milliman claims Total Pension Liability figures are more directly comparable from plan to plan.

Basing its conclusions on the information plan sponsors reported at their last fiscal year-ends, Milliman projected that the plans experienced a median annualized return on assets of just 1.31% in the period between their fiscal year-ends and June 30, 2016. Total plan assets were estimated to have declined from \$3.24 trillion to \$3.20 trillion, while the aggregate total Pension Liability measured using the plan sponsor's discount rates was estimated to have increased from \$4.43 trillion to \$4.58 trillion.

The aggregate funded ratio was estimated at 69.8% as of June 30, with an aggregate underfunding of \$1.38 trillion. That was lower than the funded ratio of 71.7% calculated in 2015 but higher than the funded ratio of 68.2% calculated for 2015 and 66.8% in 2013.

On the Web at: http://us.milliman.com/uploadedFiles/insight/Periodicals/ppfs/2016-public-pension-funding-study.pdf.

Proposed Retirement Plan for NYC Private-Sector Workers Has a Public Component

Since the U.S. Department of Labor (DOL) issued a final rule in August allowing states to propose and manage payroll-deduction retirement savings programs with automatic enrollment for private-sector workers, a number of states have taken advantage of the opportunity. The DOL rule allows states to operate these types of plans without establishing a pension plan under ERISA.

The latest to take advantage of the rule is New York, which launched the "NYC Nest Egg" plan in October. New York City Comptroller Scott M. Stringer announced the three-pronged approach to expand opportunities for private-sector employees in the city to improve their retirement savings. Stringer's proposal includes:

- The Empire City 401(k), which would enable employers to join a single, publicly sponsored 401(k) plan based on the new federal law allowing multiple employers that are unaffiliated to join a single plan.
- The NYC 401(k) Marketplace, a voluntary exchange overseen by an independent board that would offer employers a choice of "screened, competing 401(k) and other retirement plans from private and public providers," according to a news release.
- The NYC Roth IRA, an automatic default designed for eligible private-sector employers that do not select a plan on their own or through the NYC 401(k) Marketplace. Their employees would be automatically enrolled in a payroll-deduction IRA, which is not subject to ERISA. Employees could opt out at any time.

Employers who already offer established plans are encouraged to continue doing so.

A publicly enabled independent governance board will supervise the Nest Egg, and be responsible for sponsoring the Empire City 401(k) MEP. Additionally, the board will select and oversee private providers acting as fiduciaries, handling investments and executing administrative duties.

The proposed program still needs approval by the City Council and possibly by the New York state Legislature.

On the Web at: http://comptroller.nyc.gov/newsroom/comptroller-stringer-releases-new-retirement-savings-plan-for-nycs-private-sector-workers/ and http://comptroller.nyc.gov/reports/the-new-york-city-nest-egg-a-plan-for-addressing-retirement-security-in-new-york-city/.

Meanwhile, California Gov. Edmund G. Brown Jr. signed legislation to implement a state-run Secure Choice retirement savings program for 7 million private-sector employees who lack access to a workplace plan.

With the signing, California became the eighth state to implement a state-sponsored retirement plan for private-sector employees. The plan is expected to be put into effect by 2018.

On the Web at: http://www.pionline.com/article/20160929/ONLINE/160929818/california-governor-signs-secure-choice-bill-into-law.

Kentucky Becomes Latest State Retirement System to Get Out of Hedge Funds

Following the lead of public pension systems in California, New York and elsewhere, the $14.9 billion Kentucky Retirement Systems (KRS) announced plans to end its controversial investments in hedge funds.

KRS has invested about $1.5 billion in hedge funds over the last six years ($1.1 billion from its pension funds and $435 million from its health insurance funds). A "general agreement" reached by the KRS board's investment committee calls for divesting from hedge funds over a three-year period, although a formal plan to do so is still under development.

The KRS board, with new members appointed by Gov. Matt Bevin (R), wants to focus on more simplified assets with lower fees and greater liquidity, David Eager, KRS executive director, told The Lexington Herald-Leader. With the largest pension fund for state employees only 17% funded to meet its future liabilities, there will be a greater need for cash flow in coming years, Eager said.

KRS has been criticized by state legislators, local government officials and others for putting large sums into hedge funds despite their high fees, lack of transparency and lackluster returns. But news of the divestment won rare praise from some of KRS' most vocal critics.

On the Web: http://www.kentucky.com/news/politics-government/article108291592.html.

Social Security COLA Set at 0.3% for 2017

Monthly Social Security and Supplemental Security Income (SSI) benefits will receive a slight cost-of-living increase of 0.3% next year, the Social Security Administration announced.

The cost-of-living adjustment (COLA) will begin with benefits payable to more than 60 million Social Security beneficiaries in January 2017. Increased payments to more than 8 million SSI beneficiaries will begin on Dec. 30, 2016.

The Social Security Act ties the annual COLA to the increase in the Consumer Price Index as determined by the Department of Labor's Bureau of Labor Statistics.

Some other adjustments that take effect in January of each year are based on the increase in average wages. Based on that increase, the maximum amount of earnings subject to the Social Security tax (taxable maximum) will increase to $127,200 from $118,500.

Of the estimated 173 million workers who will pay Social Security taxes in 2017, about 12 million will pay more because of the increase in the taxable maximum.

On the Web at: www.socialsecurity.gov/cola and www.socialsecurity.gov/OACT/COLA/AWI.

New SEC Rules Modernize Information Reported by Funds, Require Liquidity Risk Management Programs

The Securities and Exchange Commission (SEC) in October agreed to modernize and enhance the reporting and disclosure of information by registered investment companies. The new rules will enhance the quality of information available to investors, and will allow the commission to more effectively collect and use data reported by funds.

The commission also agreed to enhance liquidity risk management by open-end funds, including mutual funds and exchange-traded funds (ETFs). This will help promote effective liquidity risk management across the open-end fund industry and will enhance disclosure regarding fund liquidity and redemption practices.

The new rules are part of the commission's initiative to enhance its monitoring and regulation of the asset management industry to boost transparency and investor protections.

With these rules, registered funds will be required to file a new monthly portfolio reporting form (Form N-PORT) and a new annual reporting form (Form N-CEN) that will require census-type information.

The information will be reported in a structured data format, which will allow the commission and the public to better analyze the information. The rules also will require enhanced and standardized disclosures in financial statements and will add new disclosures in fund registration statements relating to a fund's securities lending activities.

On the Web at: https://www.sec.gov/news/pressrelease/2016-215.html.

FALL 2016

THE TEXPERS®

PENSION OBSERVER

THE OFFICIAL PUBLICATION OF THE TEXAS ASSOCIATION OF PUBLIC EMPLOYEE RETIREMENT SYSTEMS

Hedge Funds: Are They Worth It?

By Koray Yesildag, CFA

Average hedge fund performance has been disappointing since the financial crisis. Returns have been obviously lower, both compared with those seen before 2008 and compared with equity markets.

This has led many an investor to question the merits of having an allocation to hedge funds in their portfolio at all. Are they still worth it especially given high fees typically paid? We think they are but with some important qualifiers.

Some of the drags to hedge fund returns appear permanent in nature, but others are temporary and should lift. In the former group are two key changes over the past decade: first, the number of hedge funds has ballooned in recent years, making competition for profitable investment opportunities much higher. Secondly, their client base has shifted from private wealthy individuals who want high returns at high risk to institutions that prioritize diversification and consistency even if it means forgoing strong returns. This means that hedge funds are not necessarily going all out to get returns but to get a steadier path of return.

However, other drags to returns appear more transitory or cyclical. A key characteristic of market conditions in recent

(Continued on page 12)

Beyond Fear and Greed: Enhancing Objectivity in the Investment Process

By Thomas J. Digenan, CFA, CPA

Behavioral finance research has identified many ways investors allow emotion to get in the way of rational decisions to their financial disadvantage. But studies usually focus on the individual investor. Many professional investors believe that a formal investment process renders them immune from behavioral biases. That mistaken belief almost certainly detracts from performance.

Quantifying the effect of behavioral biases

In 2012, the US Intrinsic Value Equity team of UBS Asset Management (Americas) began a behavioral examination of investment decisions made in its flagship US Large Cap Equity portfolio in the last 17 years. An outside consultant helped us analyze the decision-making process in three categories: buying, selling and sizing. The goal was to find quantitative evidence of behavioral biases and develop ways to minimize or eliminate them. The team's core philosophy is to identify and capitalize on market mispricings caused by the unchecked emotions of other investors. The goal was to see whether human emotion affected the portfolio's performance.

Sell decisions provided solid proof that emotion influenced the investment process, and offered clear opportunities to improve performance.

Long term, the team outperformed by about 1.5%. When separating performance attribution into three areas, buy, sell and sizing, the picture became much more focused. Buy decisions looked consistently strong in the analysis.

A winning buy is one initiating a position that ultimately outperforms its sector: A losing buy underperforms.

Sell decisions provided solid proof that emotion influenced the investment process, and offered clear opportunities to improve performance. Sell performance was analyzed over two holding periods — those shorter than the average 22-month holding period and those held longer.

(Continued on page 8)

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STATE CAPITAL REPORT

By Joe Gimenez

Self-Correction is the norm for Texas State and Local Pension Plans

As the Legislature begins work in January, they may hear siren calls advocating for "local control" of 13 public employee retirement systems enrolled in Texas statutes. They should ignore such radical proposals, which really mean the complete control of pension funds by city councils. Local control, in the broadest sense of the word, already exists.

The best examples of how local control manifests itself now can clearly be seen in developments this year in Houston and Dallas where concerns compelled House Pensions Committee Chairman Dan Flynn (R-Canton) to hold hearings in those cities. The committee in June and September invited testimony from all pension systems for police, firefighters, and municipal employees.

Of course, the specifics varied for each, but the larger picture was this: all the systems were actively working with their mayors, city councils, city staff, actuaries, unions, and retiree groups to come up with tweaks or overhauls that would ensure the long-term sustainability of all the systems. And, most importantly, the systems were taking responsibility for miscalculations, overly optimistic assumptions, and bad investments. They were all going to their members and asking them to shoulder the burdens in the form of increased contributions or reduced future benefits.

The key to remember is that defined benefit plans are long-term financial instruments. Tweaks and changes can take years to manifest. As long as the leaders of cities and pension funds are working toward common solutions, they can make progress. The proof is there for all to see.

In Houston, new Mayor Sylvester Turner delivered on his campaign promises to keep defined benefit plans for public employees, even while asking them to adjust their benefits. He and city staff held countless meetings with the Houston Police Officers Pension System, the Houston Municipal Employees Pension System, and the Houston Firefighters' Relief and Retirement Fund. In September, Mayor Turner provided a public, positive update on fruitful discussions in anticipation of bringing collaborated changes to the Legislature.

In Dallas, the focus has been on the Dallas Police and Fire Pension System, which suffered from overly aggressive investment choices and a panicked run on system assets. Nonetheless, pension fund staff and trustees have worked diligently with city officials to come up with a multi-phased, multi-part plan which strengthens the future prospects of the system.

All the systems may come to the Legislature with details of their plans. When they do, their proposals will have been tweaked and adjusted by so many local different constituent groups as to truly earn the description of coming from the grassroots. All the plans and city sponsors will have communicated their changes to their employees and retirees. All will have sought numerous projections and opinions from their actuaries and investment consultants. All will have tried to gain support from their city councils.

The key to remember is that defined benefit plans are long-term financial instruments. Tweaks and changes can take years to manifest. As long as the leaders of cities and pension funds are working toward common solutions, they can make progress. The proof is there for all to see.

(Continued on page 15)

PRESIDENT'S CORNER

By Paul R. Brown

This fall has brought about an onslaught of fundraising in Texas. Many TEXPERS members have been busy attending events in support of various elected officials throughout the state. Then, along with the election in November, comes the filing of early bills for the upcoming January 2017 legislative session.

For some, the year is coming to a slow close. While others are still attending conferences along with quarterly and year end meetings and reviewing budgets for next year. Many will be meeting with their legislative committees to establish their legislative agendas and programs. Whatever is going on in your local jurisdictions, I encourage you to stay involved in your local politics and prepare for the upcoming legislative session in Austin.

TEXPERS will be meeting in Austin for its 2017 spring conference and I anticipate a busy business meeting.

I want to take this opportunity to reprint an article I found enlightening that addresses what is being done in some states and may or may not be an item of interest in Texas. My thanks to Liz Farmer with *Governing Magazine*.

Pension Crisis: Could Buyouts Be a Solution?

By Liz Farmer

State and local governments are trying unconventional ways to fund their pension liabilities, such as offering lump-sum cash payments to employees.

When it comes to chipping away at pension liabilities, there aren't a lot of options. In some places, lawmakers can freeze cost-of-living increases to pension payments or move back retirement dates for existing employees. But that's not legal everywhere. So the majority of pension reforms in the past decade have targeted new employees and focused on controlling the growth of future liabilities.

But some places are getting more creative.

In exchange for taking an upfront cash payment based on their estimated lifetime benefits, the employee or retiree would accept a reduced level of pension benefits going forward. The benefits would be equivalent to what newer public employees are receiving now.

In exchange for taking an upfront cash payment based on their estimated lifetime benefits, the employee or retiree would accept a reduced level of pension benefits going forward. The benefits would be equivalent to what newer public employees are receiving now.

In Illinois, where courts have ruled against any changes to retirees' payments, lawmakers have contemplated lump-sum payouts to reduce their unfunded pension liability. The state's public employees plan is currently 34 percent funded.

In Connecticut, the governor is pushing a plan that would split its troubled state employees' pension fund into two, as a way of isolating the unfunded liability.

Experts say the main difficulty with these approaches is that they tend to be more complicated than they are effective. The proposal in Connecticut doesn't reduce the actual amount the government owes its retirees -- it merely pays for the more expensive pension benefits directly out of the state's annual budget so the liabilities are not on the pension fund's balance sheets.

"The split is a helpful accounting exercise, but it really comes down to: Are you really putting in today what you need for the future?"

Pension buyouts have worked in the corporate sector where employees have taken a lump-sum payment at a slight haircut. But they haven't been done in the public sector, thanks to the different accounting rules for public pensions that make their liabilities appear lower than comparable corporate-sector plans, said Josh B. McGee, senior fellow at the Manhattan Institute and vice president of public accountability at the Laura and John Arnold Foundation.

The optics are also a challenge, said McGee. "Politically, you're saying you're going to cash out and give someone a lump sum. The public perception of that is not that great."

This article is reprinted from Governing Magazine courtesy of author Liz Farmer with comments by Josh McGhee of the Laura and John Arnold Foundation.

www.texpers.org

"The $250 Econ 101 Textbook" and Other Soft-Dollar Concerns for Asset Owners

By Stephen Glass, J.D.

On January 13, 2015 the *Wall Street Journal* published an opinion piece by economics Professor Craig Richardson titled, "The $250 Econ 101 Textbook". In the article, Professor Richardson noted an economic factoid: since 1985 the aggregate cost of consumer goods has only doubled, while the price of basic college textbooks rose 600%! The primary reason for this stunning anomaly? Professors, who order textbooks for their students, don't have to pay for them.

Professor Richardson concludes by observing, "[T]he cardinal lesson is that prices rise unchecked if the people who order the goods aren't paying the prices." And if one changes the focus of Professor Richardson's article from college text books to equity commissions, you have the crux of a fierce debate currently embroiling asset managers, investment banks, and regulators, regarding the use of soft-dollars.

At its core, the use of client assets (whether in the form of soft-dollar commissions, or a dedicated "Research Payment Account") to purchase research and brokerage services, has fiduciary implications for both the manager and asset owner.

For those unfamiliar with the term, "soft-dollars" refers to the practice of asset managers paying for research and brokerage services with their client's commission dollars. By bundling the fee for such services into the commission already being paid to a broker (for executing a trade), the manager does not have to pay an explicit hard dollar fee for the research. While this certainly facilitates the acquisition of those services, it raises concerns that managers may use client commissions to purchase unnecessary research. Indeed in this respect, the analogy to textbooks is slightly off, since professors don't receive pecuniary gain from having their students pay exorbitant prices. They simply lack incentive to conduct a thorough cost:benefit assessment of each book's relative value.

To be clear, arguments surrounding the use of client commissions to purchase soft-dollar research for asset managers have been around for almost 50 years.[1] However, UK and European regulators are now revisiting their positions on soft-dollars, and entering the final stages of adopting potentially dramatically revised standards of practice.

If enacted in their current form, global investment managers running non-US strategies may face major changes in their operations, policies and practices for purchasing research.

This may, in turn, create new fiduciary responsibilities for their asset owner clients. Specifically, the proposed new standards require asset managers to present specific "Research Payment Accounts" for approval from their clients. The asset owner, as the plan fiduciary, would need to specifically approve and authorize such expenditures in writing. Depending on the final regulatory language adopted, once approved, these research budgets may then have to be paid for, as a separate line-item, from the client's fund (or via higher commissions linked to the approved expenditure amount).

To this end, fund fiduciaries should be prepared for the not so distant future when their managers may approach them with requests to formally approve "Research Payment Accounts." Moreover, even if a global manager does not request its U.S. clients to approve a research budget (since U.S. clients can continue to pay for soft-dollar research the traditional way), prudent fiduciaries should take care that their fund is not being disadvantaged in some fashion relative to that manager's UK/EU clients (since the process by which their research is obtained will be governed by the above discussed regulations).

At its core, the use of client assets (whether in the form of soft-dollar commissions, or a dedicated "Research Payment Account") to purchase research and brokerage services, has fiduciary implications for both the manager and asset owner. An investment manager has a fiduciary duty to invest their client's assets prudently and seek best execution when executing trades. At the same time, asset owners have a fiduciary obligation to monitor their managers for compliance with these standards and safeguard the assets of their funds.

This fiduciary responsibility may well be heightened should the asset owner formally have to "sign off" on a request by their managers to allocate Fund assets for the managers' "research budgets". To best meet these obligations, we recommend both a quantitative assessment of the execution quality achieved by the manager on their soft-dollar trades, and a qualitative evaluation of the manager's practices and policies.

Acceptance of a manager's proposed "Research Payment Account" should be predicated on a systematic assessment that the proposed amount is reasonable. Systematically making this assessment (through the collection and analysis of quantitative and qualitative information), on a periodic basis, may increasingly be viewed as a fiduciary "best practice."

Stephen Glass, J.D. is President and CEO at Zeno Consulting Group, LLC in Bethesda, MD.

[1] In 1975 the SEC and Congress passed SEC Rule 19b-3, and Section 28 (e) of the Securities Exchange Act of 1934. Collectively, these enactments abolished fixed commission rates and established the concept of purchasing brokerage and research services with "soft-dollar" commission fees over and above the rate for just execution services.

Note: Since this article was authored, many of the projections have come to pass. In our winter edition, a follow up article details the final regulations, what they require of your managers, and the fiduciary implications and risks to your fund

What You Need to Know About Real Estate Debt

By Ryan Krauch

Following the financial crisis, many investors shifted away from a risk-tolerant, total-return mentality and instead looked to maximize current income and overall return for the lowest unit of risk available by investing in real estate debt.

Many have found this trade-off in the debt space because it provides access to the same high quality real assets they otherwise would seek in their equity portfolio. Given current cap rates on high-quality assets, institutional investors can achieve better going-in yield and average cash-on-cash returns by lending on high quality assets than they can by buying those same assets, even in this low interest rate environment. Not only have investors learned that the debt approach can generate outsized current returns relative to core equity today — which in many cases are generating low single-digit real return — but the investor's capital is in the safest part of the capital stack rather than the riskiest. This creates compelling risk-adjusted returns and typically meets the actuarial yield requirements of most plans.

This more conservative lending strategy has been a part of the long-term allocation for banks and life insurance companies for decades. Pension plans can benefit from this same long-term strategic debt allocation to further diversify their portfolio and achieve high current income and capital preservation regardless of market cycles.

Even the more conservative debt fund strategies can generate in excess of a 7% gross current return to investors — a very healthy spread to the risk-free rate without taking much risk in the debt position. And by adding incrementally more risk, investors can see yields in the 9-12% range, which compares favorably to the returns being generated from the subordinated equity.

All investors should have a home for investments that generate immediate income and have lower volatility, but it is important for investors to understand what role they want debt to play in their portfolio. Many of the private funds entering the market are focused on higher portions of the capital stack. B-Notes and mezzanine investments are indeed attractive to many as they can deliver returns in the mid teens, in some instances. In general, they should be used tactically in an investment portfolio.

Clearly, strategies that focus on distressed and opportunistic debt are cyclical by definition and there are probably fewer opportunities in today's market for that approach. Rather than distressed or opportunistic debt, first mortgages on high quality assets can be a longer-term strategic investment where capital can be appropriated and deployed in any part of the market cycle.

This more conservative lending strategy has been a part of the long-term allocation for banks and life insurance companies for decades. Pension plans can benefit from this same long-term strategic debt allocation to further diversify their portfolio and achieve high current income and capital preservation regardless of market cycles.

In an environment where assets seem fully priced, the first mortgage position is not only the safest part of the capital stack, but importantly it also benefits from the recorded lien which provides important and powerful tools for risk mitigation.

One of the most challenging elements for an investor is how to benchmark returns on real estate debt. Real estate investment officers for retirement funds are often compensated against certain benchmarks such as NCREIF or ODCE. However, these benchmarks are not appropriate because they generally do not contain similar debt investments, and therefore do not adequately compare the risk element to the return component. As real estate debt is becoming a more common part of investment portfolios, the more savvy investors either benchmark against fixed income indices, or create risk adjusted formulas that equalize NCREIF based on the safer position in the capital stack of debt investments.

Real estate debt is not the 'sexiest' private equity strategy, but it provides a high current income component to counterbalance the more typical "j-curve" return profile of higher risk investments. For those investors concerned with the recent market volatility and high historical prices for real assets, real estate debt may be the right defensive solution for the portfolio.

Ryan Krauch, is Principal at Mesa West Capital in Los Angeles, CA.

Chicken or the Egg: Do Stock Market Patterns Influence the Real Economy?

By Dennis Aust

While it goes against conventional wisdom, it can be argued that the market very much helps shape the economic environment.

There's nothing quite like a market rout to give observers pause about the state of the economy, even when the actual data offers little to no justification for concern. The question on investors' minds today, however, is whether or not the weakness and volatility reflected in the stock market is a leading indicator that portends or even triggers economic struggles down the road.

This has been a focus area of UCLA economist Roger Farmer, whose research proposes that the 2008 stock market crash actually caused the Great Recession. While this would represent an unconventional view that places market unrest sequentially ahead of economic decay, the idea seems to be picking up support as the vacillating market continues to give investors white knuckles. To the question of whether stock market patterns could actually be influencing the real economy, a succinct and unequivocal answer is: "What took you so long?!" Some have been making that case for more than 30 years.

...when the cost of capital rises and the net present value (NPV) of these borderline projects become negative, they are likely to get rejected, which ultimately results in a substantial decline in corporate growth. Aggregate every U.S. firm and the result is a dramatically weakening economy.

Of course, stock prices are the mathematical result of expected cash flows discounted at the Cost of Capital (CoC). But that CoC isn't some static metric determined by long-term averages and fixed formulas. CoC changes continuously, reflecting investor assessments of expected inflation, taxes, risk, global capital flows and other tangible and intangible factors. It's not the perfect inverse of stock price, since cash flow and earnings expectations keep changing as well, but for any given level of expected earnings, a strong market reflects a low CoC and a weakening market reflects a rising CoC.

So how does this relate to the real economy? Most publicly traded companies are effectively a bundle of projects and initiatives, some expected to earn high returns, others driving more modest ROIs. When prices are strong and the CoC is low, present value arithmetic often provides the incentive for firms to take on more and more of these borderline projects, since they can create shareholder value. However, when the cost of capital rises and the net present value (NPV) of these borderline projects become negative, they are likely to get rejected, which ultimately results in a substantial decline in corporate growth. Aggregate every U.S. firm and the result is a dramatically weakening economy.

Consider, for example, Starbucks' decision in January to abandon its Teavana tea bar concept or its move in the second half of last year to shutter all 23 La Boulange bakeries acquired just three years earlier.

This doesn't happen instantaneously, of course. Companies can't and shouldn't adjust their long-term investment plans with every gyration in the stock market, which is why short-term blips most often get shrugged off by the market. Moreover, many firms don't have a clear understanding of the relationship between stock price and CoC, relying on static

models like the Capital Asset Pricing Model (CAPM) that incorporate very long-term averages as inputs. So it's no surprise that they respond more slowly to equity market signals than they would to a jump in interest rates. But even these firms ratchet back their investment programs once their stock price has fallen enough, particularly if the markets and large investors start to lose confidence.

While there may be at least a few points of contention, a case can be made that Farmer's assessment is generally on target: Falling stock prices do affect the real economy, particularly when such a trend is sustained. Even though analysis has primarily focused on the investment side of the equation, Farmer's conclusion around consumption decisions is plausible. Farmer proposes a number of market interventions. Tax policy, particularly taxes on investments, has a substantial impact on CoC.

There's no question that today's global economy faces risks on multiple fronts, so of course the markets are going to respond. At the same time, it's only prudent to monitor cost-of-capital trends and to at least consider when and where policy changes or other interventions are warranted.

Dennis Aust, is Director of Research and Deputy CIO at Ativo Capital Management, LLC in Chicago, IL.

Long Term Economic Changes and Commercial Real Estate Investment Portfolios

By William B. Brueggeman, Ph.D.

Since recovery from the Great Recession, commercial real estate (CRE) investment performance has been impressive.[1] Going forward, there are several major economic and demographic trends underway that should be considered by pension fund investment managers. Whether separate accounts, funds, or other vehicles are being considered, these trends should be an integral part of the CRE investment decision process. What follows is a discussion of some important, long term factors that will affect the performance of major property types.

Multifamily Properties

High on the list of property types now being affected by changes are apartments. Demand is being partially driven by millennials who are maintaining flexibility in both employment choices and lifestyles. They are delaying marriage, family formation, home buying and are reluctant to take on major financial commitments involving debt (mortgages). They are also showing clear preferences for certain services and amenities including: low maintenance, security and access to entertainment and outdoor activities ranging from hiking paths to pet-friendly spaces.

On the other end of the spectrum, multifamily demand is being dramatically affected by seniors. Age restricted (55+) apartment developments, assisted living, and memory-care communities are examples of market segments that will continue to grow and evolve as life expectancy increases.

The combined impact from millennials and seniors can already be seen in the homeownership rate. It has declined from almost 70% as recently as 2004, to its current rate of about 63%. A rate this low has not been observed in over three decades. New apartment construction locations are also changing. In previous years, most construction occurred in suburban markets. Currently, construction is occurring in central business districts (CBDs) and in-town locations as well.

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Retail Properties

Another important component of CRE investment portfolios under-going change is the retail sector. Forces driving this change include: growth in "e-retailing" and the concentration of income and wealth in fewer demographic groups. The former is affecting consumer electronics, office supplies, books, pharmaceuticals and many other categories. Current investment strategies should include those forms of retail that cannot be replicated via the internet. Examples would include properties leased to retailers providing fresh produce, organic and health-related goods, fitness activities (sometimes also referred to as life-style retail centers). Properties including specialty retail which is focused on higher

income households also are desirable. Examples of this type of retail would include designer clothing, jewelry, eyewear and other luxury goods as well as personal services. Many specialty retail goods and services are usually found in upscale malls where parking is convenient and many cross-shopping opportunities are possible.

Warehouse/Distribution Properties

The internet revolution is having an opposite effect on the warehouse property sector. This is particularly true when space has been leased to tenants engaged in order fulfillment and distribution. These activities are currently being pushed upstream, or closer to the source of goods, and away from downstream retailers.

Generally, larger properties with dock-high loading, 20' or more clear heights, and in major "break point" market locations should be considered. Because average cost per square foot tends to be low, a number of warehouse properties may have to be acquired to attain a "critical mass" in CRE portfolios.

Office Properties

This sector is the last major property type to recover from "the great recession." While it now appears to be poised for growth, it also is subject to a number of influences. These include advances in digital technology which has greatly reduced office space per employee from about 250 to about 200 square feet.

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Beyond Fear and Greed: Enhancing Objectivity in the Investment Process

By Thomas J. Digenan, CFA, CPA

(Continued from page 1)

Sales of younger positions (trims and complete sells) are considered effective if after the sale the stock underperforms the portfolio. A stock that outperforms after it is sold suggests that the position was trimmed or liquidated too soon. Holding on to an older position is considered effective if it outperforms the portfolio from the day it becomes 'seasoned' at 23 months until it is sold. Underperformance suggests that these positions are being held beyond the information advantage of the buy ideas.

A primary opportunity for improvement was our pattern of selling seasoned losers, especially those that displayed higher-than-average volatility.

> *Unhelpful biases and thought habits have a weed-like tendency to creep into even the most process- and fact-driven investment decisions. Part of the answer is to accept that fact and develop a plan to minimize their impact.*

It was a textbook case of loss aversion, the innate tendency to allow one's dislike of a loss to cloud judgment.

Practically all investors can identify with the urge to hang on to losing stocks in the irrational hope that the price will recover if they just wait a while. Similarly, an urge to sell winners in order to lock in success is sometimes referred to as the disposition effect, and it was present in the portfolio as well.

Both the tendency to sell younger winners too soon and older, volatile losers too late also reduced portfolio performance. To capitalize on this insight, any name displaying particular characteristics — a holding period greater than 23 months, high volatility and an unrealized loss position — would be flagged for a specially designed stop-look review. A stock marked for stop-look review must be repitched by the responsible analyst as if it were a new idea in order to evaluate the security's attractiveness as if it were not already owned. The goal is to maintain consistent sell rules while giving analysts an opportunity to override the rule, provided they can present a strong case confirming their original thesis. While the stop-look review was important, the quickest and most simple opportunity for improvement was in sizing. The team tended to initiate positions at a "starter" or smaller weight, a hesitation sometimes called 'regret aversion.' Ironically, initiation is often the time of greatest insight into an investment idea; yet, the team didn't always take full advantage of its conviction.

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Beyond Fear and Greed: Enhancing Objectivity in the Investment Process

By Thomas J. Digenan, CFA, CPA

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To capitalize on this insight, we instituted an equal active weight as our default portfolio position size, essentially eliminating the sizing impact. This meant initiating new positions at full weight. Taking larger positions earlier helped capture additional alpha.

The cost of unchecked emotion

Over the 17 years analyzed, reaching full position weight in a timely manner could have added about 75 basis points of alpha annually. Establishing a better process for evaluating younger winners and older losers could have added approximately 250 basis points of alpha annually to performance on average.

Eliminating bias is part of the quality-control process

Unhelpful biases and thought habits have a weed-like tendency to creep into even the most process- and fact-driven investment decisions. Part of the answer is to accept that fact and develop a plan to minimize their impact.

The study and the exercises underscore the UBS US Intrinsic Value Equity team's focus on continuous learning and improvement. Better sizing and sell processes have improved portfolio performance. The team continues to monitor and measure its decision-making process as a means of delivering continuous improvement to a strong investment foundation.

An important side effect of gaining clarity around behavioral issues is that it also gives greater insight into the processes that are working well. Buy decisions were exceptionally strong, but that wasn't apparent until the behavioral analysis uncovered relative underperformance in selling volatile older holdings and in sizing decisions. Behavioral issues in some parts of the investment process masked outperformance in others.

The research is clear: Behavioral biases affect professional and nonprofessional investors. Those who want to reduce emotionally driven investment decisions should start by looking for evidence in their results.

Managers should perform detailed data-driven analyses to determine their overall strengths and weaknesses. It is an essential step in the process of continuous improvement that should be our common goal.

Thomas J. Digenan, CFA, CPA, is Head of US Intrinsic Value Equity team at UBS Asset Management (Americas) in Chicago, Ill.

Defined Benefit Plans Truly Benefit Public Employees

By Jennifer Pafiti

As I visit institutional investor clients across America, a frequent topic of discussion is a cost/benefit analysis of defined benefit vs. defined contribution plans. As I will more fully explain below, research and experience have demonstrated that public pension funds and the employees they serve likely do best contributing to a defined benefit plan coupled with a portfolio monitoring service.

Most state, municipal, and county workers, including Texas public employees, are covered by a traditional defined benefit plan.

The financial crisis of 2008 and the aftermath led some public pension funds to consider shifting some or all of their pension systems from a defined benefit to a defined contribution plan. In fact, six states have replaced their traditional defined benefit plan with a mandatory hybrid plan (which requires participation in both a defined benefit and a defined contribution plan): Georgia, Michigan, Rhode Island, Utah, Tennessee, and Virginia.

Prior to the financial crisis, while feeling the glow of the stock market's stellar performance of the 1990's, Michigan and Alaska introduced plans requiring all new-hires to participate solely in a defined contribution plan. Meanwhile, California, Indiana, and Oregon adopted hybrid plans. Colorado and Ohio have introduced optional defined contribution plans; enrollment has been modest, with most workers choosing to continue to maintain the protection against investment risk and the promise of an annuity that defined benefit plans offer. In Alaska, however, despite the fact that nearly three quarters of its public employees are not covered by Social Security, all new hires are required to join a defined contribution plan. This means that Alaskan state workers and teachers hired since July 2006 do not have any form of defined benefit protection.

> *Apart from the rewards of defined benefit plans... a significant benefit available to these plans—that is not available to defined contribution plans -- is that their investment portfolios may be monitored by professionals who are expert in identifying and evaluating losses attributable to financial misconduct, and providing advice to institutional investors on how best to maximize their potential recoveries worldwide.*

According to a 2014 study by the Center for Retirement Research of Boston College, what motivated states to introduce a defined contribution plan differed before and after the financial crisis. Before 2008, it was seen as a way to offer employees an opportunity to manage their own money and participate directly in a rapidly rising stock market. After the financial crisis, it was cost and risk factors that motivated some states to make the shift.

A 2016 study by the University of California, Berkeley, modeled how retirement income would pan out for teachers on three types of pension: the current defined benefit offering from the $186 billion California State Teachers Retirement System ("CalSTRS") for hires since 2013; an idealized

409(k) plan (similar to defined contribution); and a cash balance plan with guaranteed 7% interest on contribution. The result, in a nutshell: for the vast majority of California teachers (six out of seven), the CalSTRS defined benefit pension provides greater, more secure retirement income compared to a 401(k)-style plan.

Apart from the rewards of defined benefit plans touted by numerous studies, a significant benefit available to these plans—that is not available to defined contribution plans -- is that their investment portfolios may be monitored by professionals who are expert in identifying and evaluating losses attributable to financial misconduct, and providing advice to institutional investors on how best to maximize their potential recoveries worldwide. The United States sees hundreds of new securities fraud class actions filed each year, as well as approximately 100 class action settlements. Institutional investors that do not engage a portfolio monitoring service run the risk of leaving money on the table by not participating in settlement recoveries.

Public pension funds that offer a defined benefit plan with a portfolio monitoring service get top marks for ensuring that their employees will enjoy a secure and amply funded retirement.

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Hedge Funds: Are They Worth It?

By Koray Yesildag, CFA

(Continued from page 1)

years is the way that volatility has been artificially dampened and stocks and even asset classes have been moving together in unison ("correlations" in technical jargon). This has not played to hedge funds' strengths. This has arisen as a result of extraordinary monetary policy by the major central banks. We think that these drags are not a permanent feature of markets and will gradually lift, helping to bolster returns and we are already seeing tentative signs of this.

It's true that we are expecting a little less from hedge funds than earlier, reflecting the changing nature of the hedge fund universe but this does not undermine the strength of the case for hedge funds. The crucial reason is that the returns expected from hedge funds, when weighed against their risk to investors, still leave them looking attractive. Since conventional asset classes are already likely to have moved into a mediocre return environment (at best) amidst a rise in volatility, hedge funds will retain their considerable appeal. They may bring a steadier path of return and cushion portfolios against a rising risk that equities and bonds disappoint. A key attribute to look for here is that they don't rely on rising markets to deliver returns. Our view is that hedge fund approaches can indeed deliver this portfolio enhancement.

Since conventional asset classes are already likely to have moved into a mediocre return environment (at best) amidst a rise in volatility, hedge funds will retain their considerable appeal. A key attribute to look for here is that they don't rely on rising markets to deliver returns.

Supporting this view is that, even with disappointing hedge fund returns for a considerable part of recent years, portfolios with hedge funds represented generally did better in 'return for risk taken' terms versus almost any combination of equities and bonds over the last decade. (see chart below)

The all-important caveat to getting this benefit from hedge funds is that investors need to be successful in choosing the right funds. Unlike some other asset classes, the hedge fund arena includes many, highly diverse strategies with extremely varied return and risk aims. Since a key part of hedge funds' appeal is to be able to deliver returns from specialized, manager skills, finding the right hedge funds is vital to making them "worth it".

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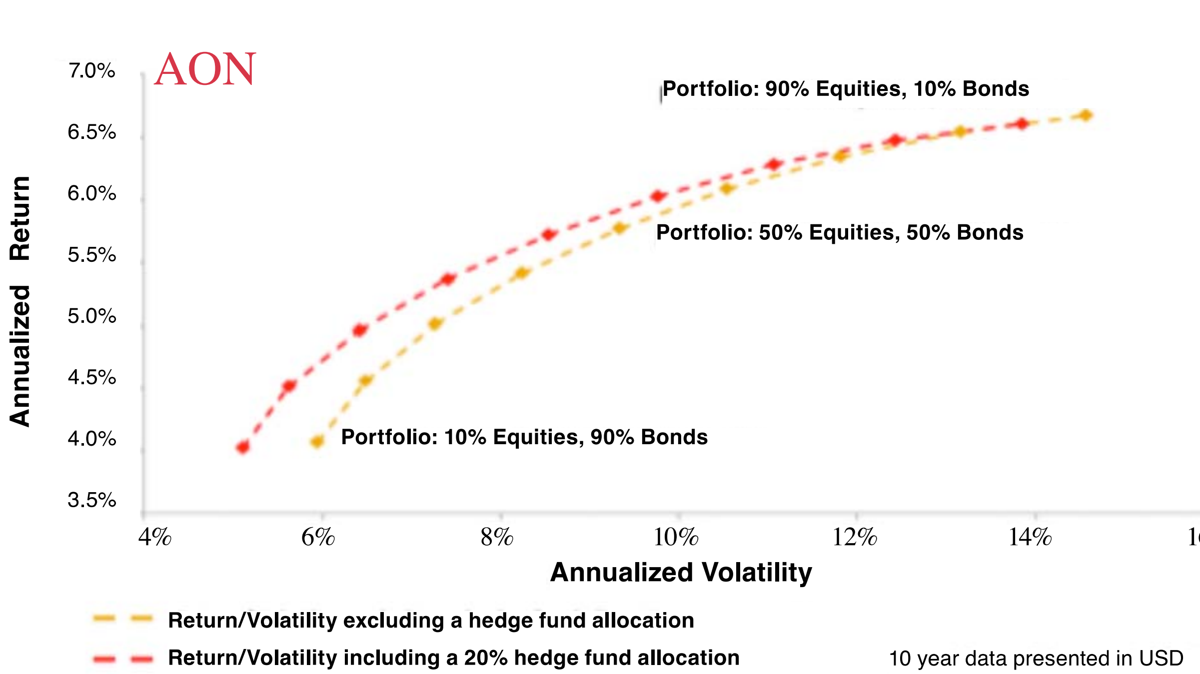
Risk and Return Characteristics of Portfolios with Varying Equity Bond Splits

Risk and return characteristics of portfolios with varying equity bond splits including and excluding a 20% hedge fund allocation (using the HFRI Fund Weighted Index)



Source: DataStream and Aon

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Note: The 20% hedge fund allocation is introduced at each point of the red line such that the relative positioning of equities and bonds is kept the same. For example, the 50% equity, 50% bond portfolio becomes 40% equity, 40% bonds and 20% hedge funds.

10 year data presented in USD
Annual rebalancing to target weights

Hedge Funds: Are They Worth It?

By Koray Yesildag, CFA
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Alongside this search for manager skill must be a set of robust views which guide the choice and mix of hedge fund strategies. This should be adapted to fit the market environment. Views of low returns from global equities and bonds, alongside higher volatility across markets suggest a focus on macro discretionary and systematic strategies. These strategies generate returns by taking views on macro variables, such as interest rates and currencies, and are especially good at providing downside protection in times of equity market stress. Above all, they aim to generate returns that are not driven by wider market movements.

In sum, hedge funds are a useful contributor in portfolios but you have to pick the right ones for the environment and market expectations. Indeed, identifying the most skilled managers and putting together the right mix of hedge fund strategies is a must in making hedge funds "worth it."

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These strategies generate returns by taking views on macro variables, such as interest rates and currencies, and are especially good at providing downside protection in times of equity market stress.

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Long Term Economic Changes and Commercial Real Estate Investment Portfolios

By William B. Brueggeman, Ph.D.

(Continued from page 7)

This is partially the result of offsite data centers and a trend toward open work-flow floor plans. Finally, since the recovery began, over 50 percent of total employment has occurred in the healthcare sector of the economy. Because of this growth, the health care sector should be considered as part of a CRE portfolio strategy. Indeed, medical office buildings (MOBs) and related treatment facilities should be carefully considered.

In summary, portfolio strategies for the CRE asset class should be viewed in the context of long term demographics, social and economic influences. Whether considering direct investment, funds or other structures, pension investment managers would be well-served to consider these factors when evaluating and analyzing their CRE investment portfolios.

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[1]See: NCREIF Real Estate Performance Report –– 4th Quarter , 2015. www.ncreif.org

State Capital Report

By Joe Gimenez

(Continued from page 2)

Consider the TEXPERS review of 93 systems monitored by the Texas Pension Review Board. The PRB recommends close focus on amortization periods as the best indicators of financial health. Amortization periods are like a home mortgage amortization calculation: they are complex calculations that estimate how long it would take a system to generate all the assets to match its expected benefit outlays. The PRB recommends that pension funds work to attain a 25-year amortization period.

The PRB data shows that, as whole, the 93 Texas pension funds have significantly improved in comparisons of the six years ending August. There are 39 Texas state and local pension funds in the PRB's recommended range. Only four pension funds are in the least-desired "infinite" amortization range. These numbers reflect six-year trend highs, and demonstrate that pension funds are doing a great job managing difficult market environments, pension benefit promises, and city and employee contributions. The pension funds in Houston and Dallas will make the adjustments needed now so as to attract and retain world-class caliber people to their employment ranks. They have that goal in mind for their citizens. They will succeed.

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