AGENDA

Date: April 8, 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, April 14, 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 March 10, 2016
- **b.** Special meeting of March 24, 2016

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

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

4. **Approval of Survivor Benefits**

5. **Approval of Service Retirements**

6. **Approval of Alternate Payee Benefits**

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

8. **Approval of Payment of DROP Revocation Contributions**

C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. **Performance review of the Executive Director**

   Portions of the discussion under this topic may be closed to the public under the terms of Section 551.074 of the Texas Government Code

2. **Actuarial experience study**

3. **Investment Policy Statement**

4. **Fixed Income structure study**

5. **Income Research & Management**

6. **Industry Ventures**

7. **North Texas Opportunity Fund extension**

8. **Investment reports**

9. **2015 audit plan**

10. **Annual 2015 budget review**

11. **Employee recognition – First Quarter 2016**

    Employee of the Quarter award

12. **Disability recall process**

    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.

13. Disability recall

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. 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

15. Ad hoc committee reports

16. Business continuity update

17. Board Members' reports on due diligence meetings, seminars and/or conferences attended

a. IFEBP: Investments Institute
b. Society of Pension Professionals
c. House Pension Public Hearing
d. TEXPERS Basic Trustee Training Course
e. TEXPERS Annual Conference
f. Merit Energy Annual Meeting

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. Associations' newsletters
- NCPERS Monitor (March 2016)
- NCPERS Monitor (April 2016)
- NCPERS PERSist (Spring 2016)
- TEXPERS Outlook (April 2016)

b. Future Education and Business Related Travel

c. Future Investment Related Travel

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

(March 2, 2016 – April 6, 2016)

FIRE	ACTIVE/ RETIRED	DATE OF DEATH	POLICE	ACTIVE/ RETIRED	DATE OF DEATH
J. B. Allen	Retired	Mar. 15, 2016	Max H. Abney	Retired	Mar. 16, 2016
Marco A. Davila	Active	Mar. 23, 2016	Ronnie C. Hawthorne	Retired	Mar. 7, 2016
James T. Stewart	Retired	Mar. 26, 2016			

Dallas Police and Fire Pension System
Thursday, March 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, Lee M. Kleinman, Joseph P. Schutz, Brian Hass, Kenneth S. Haben, Tho T. Ho, Gerald D. Brown, Clint Conway, John M. Mays
Present at 8:37	Philip T. Kingston
Present at 9:18	Scott Griggs
Absent:	Erik Wilson

Staff Kelly Gottschalk, Joshua Mond, James Perry, Summer Loveland, John Holt, Corina Terrazas, Carlos Ortiz, Pat McGennis, Ryan Wagner, Milissa Romero, Christina Wu, Greg Irlbeck, Linda Rickley, Kevin Killingsworth

Others Eric Calhoun (by telephone), Michael A. Shaunessy (by telephone), Bohdy Hedgcock, Doug Bowen, Dennis Bush, Phil Nelson, Rhett Humphreys, Jeff Roberts, Christopher Abbate, Jamie Brodsky, Patrick Connell, A. D. Donald, Jimmy Davis, Lloyd D. Brown, Dan Wojcik, Juan Urreta, Ken Sprecher, Jerry M. Rhodes, Nancy Kirkpatrick, Larry Lewis, Michael Flusche, Jim Aulbaugh, Tommy R. Buggs, Steve Thompson

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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, Virgil F. Kulwicki, Darryl W. Smyers and Dan G. Whittington, and retired firefighters, William T. Babb and John W. Bass.

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B. CONSENT AGENDA

1. Approval of Minutes

- **a.** Actuarial Funding Committee meeting of February 19, 2015
- **b.** Administrative and Audit Advisory Committee meeting of September 24, 2015
- **c.** Investment Advisory Committee meeting of September 24, 2015
- **d.** Regular meeting of February 11, 2016
- **e.** Special meeting of February 22, 2016

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

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

4. Approval of Estate Settlements

5. Approval of Survivor Benefits

6. Approval of Service Retirements

7. Spouse Wed After Retirement (SWAR)

The minutes of the following meetings were removed from consideration: Actuarial Funding Committee meeting of February 19, 2015, Administrative and Audit Advisory Committee meeting of September 24, 2015, and Investment Advisory Committee meeting of September 24, 2015.

After discussion, Mr. Brown made a motion to approve the items on the Consent Agenda as amended, subject to the final review of the staff. Mr. Mays seconded the motion, which was unanimously approved by the Board.

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C. DISCUSSION AND POSSIBLE ACTION REGARDING ITEMS FOR INDIVIDUAL CONSIDERATION

1. Clarion Partners

a. Change of ownership
b. Strategic review

The Board went into a closed executive session – real estate at 9:36 a.m.

The meeting was reopened at 10:04 a.m.

After discussion, Mr. Brown made a motion to consent to the change of ownership of Clarion Partners. Mr. Ho seconded the motion, which was unanimously approved by the Board.

Mr. Haben made a motion to authorize Clarion to engage a sales broker to market the 4100 Harry Hines land parcel. Mr. Brown seconded the motion, which was unanimously approved by the Board.

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2. Hearthstone: Dry Creek update

At the January 8, 2015 meeting, the Board approved engaging Hearthstone to take over investment management of DPFP's investment in the Spring Valley, Sandstone, Nampa and Dry Creek properties. At the August 27, 2015 meeting, the Board approved several recommendations from Hearthstone, which included listing the Dry Creek property for sale. Dennis Bush, Vice President – Investment Management, of Hearthstone, discussed the marketing process to date and provided a recommended course of action.

The Board went into a closed executive session – real estate at 10:07 a.m.

The meeting was reopened at 10:20 a.m.

After discussion, Mr. Ho made a motion to authorize Hearthstone to consummate the sale of the Dry Creek property, subject to the final approval of terms by the Executive Director. Mr. Brown seconded the motion, which was unanimously approved by the Board.

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The meeting was recessed at 10:21 a.m.

The meeting was reconvened at 10:31 a.m.

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3. Legal issues

a. Police Officer and Firefighter pay lawsuits
b. Potential claims involving fiduciaries and advisors

The Board went into a closed executive session – legal at 8:33 a.m.

The meeting was reopened at 9:27 a.m.

Mr. Conway made a motion to authorize the Executive Director, with the advice of counsel, to cause to be filed in all pay lawsuits, an amended petition including an ultra vires action, and to pursue such claims with such filings and actions as advised by counsel. Mr. Haben seconded the motion, which passed by the following vote:

For: Friar, Schutz, Hass, Haben, Ho, Brown, Conway, Mays
Against: Griggs, Kingston
Abstain: Kleinman

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4. Asset allocation

Staff and Phil Nelson, Director of Asset Allocation and Rhett Humphreys, Partner, of NEPC, presented their recommended asset allocation to the Board.

Staff and NEPC introduced the foundation for this asset allocation to the Board in November of 2015. In January of this year, senior investment staff and the Executive Director conducted a full day review and examination of the proposed asset allocation with NEPC's Director of Asset Allocation as well as with NEPC research professionals in each of the asset classes included in the recommendation. Outside experts from GMO and JPMorgan were also consulted with regard to their analyses of expectations for future market returns for various asset classes. Their respective analyses were presented to the Board in educational sessions during the January and February Board meetings this year.

The presentation reviewed return assumptions and volatility expectations for the proposed asset allocation. This recommendation precedes the recommendation for changes to the Investment Policy to enable Staff to progress with due diligence in the near term and propose needed asset allocation adjustments while the Investment Policy is under review.

4. Asset allocation (continued)

After discussion, Mr. Schutz made a motion to approve the new asset allocation and ranges to be included in the forthcoming investment policy as recommended by Staff and the consultant. Mr. Kingston seconded the motion, which was unanimously approved by the Board.

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Mr. Brown left the meeting at 10:59 a.m.

Mr. Griggs left the meeting at 11:31 a.m.

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The meeting was recessed at 12:20 p.m.

The meeting was reconvened at 12:43 p.m. and Messrs. Kingston and Kleinman were not present.

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5. Investments governance

a. Investment Advisory Committee
b. Roles and responsibilities of Board, staff, and consultants
c. Policy review process

The Board and staff discussed investments governance. The Board provided direction regarding the Investment Advisory Committee.

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6. Private Asset pacing

Jeff Roberts, Senior Research Consultant – Private Markets, NEPC, reviewed the current investment programs in both Private Equity and Private Credit and provided recommendations to assist DPFP in achieving its investment goal of reaching recommended target allocations in these asset classes. The review and recommendations addressed allocation, projected cash flows, and commitment pacing.

6. Private Asset pacing (continued)

After discussion, Mr. Haben made a motion to approve the Private Equity and Private Credit pacing plans as recommended by NEPC. Mr. Mays seconded the motion, which was unanimously approved by the Board.

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The meeting was recessed at 3:02 p.m.

The meeting was reconvened at 3:10 p.m.

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7. Riverstone Credit Partners, LP

Riverstone Credit Partners, LP, a private equity firm specializing in the energy and power industry, discussed their energy-focused private credit strategy with the Board. Riverstone was represented by Christopher Abbate, Managing Director, Co-Head of Riverstone Credit, Jamie Brodsky, Managing Director, Co-Head of Riverstone Credit, and Patrick Connell, Principal, Limited Partner Relations Team.

Staff and NEPC recommended approving an allocation of $10 million to the Riverstone Credit Partner L.P. fund within DPFP's private credit allocation.

After discussion, Mr. Haben made a motion to approve a $10 million commitment to the Riverstone Credit Partners, LP fund and authorize the Executive Director to perform due diligence, execute documentation, and perform all necessary acts and exercise all appropriate discretion to facilitate this investment. Mr. Schutz seconded the motion, which was unanimously approved by the Board.

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The meeting was recessed at 2:21 p.m.

The meeting was reconvened at 2:34 p.m.

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8. NEPC: Fourth Quarter 2015 Investment Performance Analysis and Third Quarter 2015 Private Markets Review

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

No motion was made.

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9. Investment and financial reports

Mr. Perry reviewed the preliminary investment performance and rebalancing reports for the period ending February 29, 2016 with the Board.

No motion was made.

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10. Member health insurance

Ms. McGennis, Benefits Manager, updated the Board regarding efforts to reduce the amount of time staff spends dealing with issues involving Members' health insurance.

No motion was made.

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The meeting was recessed at 4:19 p.m.

The meeting was reconvened at 4:25 p.m.

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11. Continuing Education and Investment Research Expense Policy and Procedure

Ms. Loveland presented several proposed changes to the policy and procedure covering education and travel related expenses, one of which was the repositioning of policies and procedures related to investment research expenses to the Investment Policy. In addition, to encompass all travel related expenses, including those related to non-education related pension business, Staff proposed a change to the title of the policy to Education and Travel Policy and Procedure.

11. Continuing Education and Investment Research Expense Policy and Procedure (continued)

As the policy as amended removes procedures related to investment due diligence travel and the revised Investment Policy will not be presented to the Board until later in 2016, in the interim period, Staff proposed a requirement for all Trustee due diligence related travel to be pre-approved by the Board.

In conjunction with the proposed changes to the Education and Travel Policy and Procedure, Staff proposed a reduction to the 2016 budget as follows, for a total reduction of $59,320:

	Current	Proposed
Travel-Board	$233,400	$208,400
Conference registration-Board	$ 46,120	$ 21,600
Travel-Staff	$139,700	$131,700
Conference registration-Staff	$ 54,120	$ 52,320

After discussion, Mr. Mays made a motion to approve the Education and Travel Policy and Procedure as amended and approve proposed reductions in the travel and conference registration budget line items for Board and Staff for 2016. Mr. Haben seconded the motion, which was unanimously approved by the Board. Messrs. Griggs, Kingston, and Wilson were absent when the vote was taken.

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12. Ad hoc committee reports

No updates on the ad hoc committees were given.

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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 members or pensioners requested to speak to the Board during the open forum.

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2. Executive Director's report

a. Associations' newsletters
- NCPERS Monitor (February 2016)
- NCPERS PERSist (Winter 2016)
- TEXPERS Outlook (March 2016)
- TEXPERS Pension Observer (Winter 2016)

b. Future continuing education and investment research programs and conferences

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

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Ms. Gottschalk stated that there was no further business to come before the Board. On a motion by Mr. Hass and a second by Mr. Ho, the meeting was adjourned at 4:54 p.m.

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Samuel L. Friar
Chairman

ATTEST:

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Kelly Gottschalk
Secretary

Dallas Police and Fire Pension System
Thursday, March 24, 2016
8:30 a.m.
4100 Harry Hines Blvd., Suite 100
Second Floor Board Room
Dallas, TX

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

ROLL CALL

Board Members

Present at 8:30:	Samuel L. Friar, Lee M. Kleinman, Joseph P. Schutz, Brian Hass, Kenneth S. Haben, Erik Wilson, Gerald D. Brown, Clint Conway, John M. Mays
Present at 9:00:	Philip T. Kingston
Present at 9:15:	Tho T. Ho (after City business)
Present at 9:59:	Scott Griggs
Absent:	None
Staff	Kelly Gottschalk, Joshua Mond, James Perry, John Holt, Corina Terrazas, Carlos Ortiz, Damion Hervey, Ryan Wagner, Milissa Romero, Christina Wu, Greg Irlbeck, Linda Rickley
Others	Andrea Kim, Greg Taylor, Darrell Jordan, Ron Pinkston, Mike Hamilton, Rick Salinas, Tristan Hallman

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

DISCUSSION AND POSSIBLE ACTION REGARDING ITEM FOR INDIVIDUAL CONSIDERATION

1. Legal issues

a. Police Officer and Firefighter pay lawsuits
b. Potential claims involving fiduciaries and advisors

The Board went into a closed executive session – legal at 8:30 a.m.

The meeting was reopened at 10:35 a.m.

No motion was made.

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The meeting was recessed at 10:35 a.m.

The meeting was reconvened at 10:48 a.m.

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2. Real estate investment consultant

At the February 11, 2016 Board meeting, The Townsend Group was terminated as the real asset investment consultant. Staff is recommending that DPFP expand the scope of the general investment consultant, NEPC, to include the real estate and natural resource assets that were previously covered by Townsend. NEPC's real asset services would include performance reporting, investment monitoring and investment recommendations.

After discussion, Mr. Haben made a motion to authorize the Executive Director to enter into an agreement with NEPC for investment consulting services for the entire DPFP portfolio. Mr. Mays seconded the motion, but no vote was taken, due to an amendment to the motion that was proposed by Mr. Schutz.

Mr. Schutz amended the motion to authorize the Executive Director to enter into an agreement with NEPC for investment consulting services for the entire DPFP portfolio, with the fees for the entire engagement not to exceed the current base fee structure, plus $200,000 for all other services, including real estate and private equity consulting. Mr. Mays seconded the motion, which passed by the following vote:

For: Mays, Friar, Kleinman, Hass, Haben, Wilson, Ho, Brown, Conway
Against: Schutz, Griggs, Kingston

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3. Potential action relating to NTE 3a and 3b

In August 2012, the Board approved a $50 million infrastructure investment commitment to facilitate a 10% equity stake in the North Tarrant Express 3a-3b (I-35W) project. This managed lanes public-private partnership extends north just over 10 miles along I-35W from downtown Fort Worth at I-30 to IH-820 (Segment 3a), and IH-820 to US 81/287 (Segment 3b). Construction commenced in 2013 and DPFP has funded approximately $21 million of the commitment.

3. Potential action relating to NTE 3a and 3b (continued)

Texas Department of Transportation (TxDOT) has now requested the developer also construct another segment (3c) extending from US 81/287 another 7.1 miles to Eagle Parkway, north of Alliance Airport. The proposal would be a change order to add this segment as part of the original 3a-3b project, requiring additional equity contributions. Staff reviewed the options as it relates to the addition of this segment to the project.

The Board went into a closed executive session – real estate at 12:30 p.m.

The meeting was reopened at 12:50 p.m.

After discussion, Mr. Haben made a motion to authorize the Executive Director to sell DPFP's interest in the NTE 3A/3B project, execute documentation, and perform all necessary acts and exercise all appropriate discretion to complete the sale. Mr. Hass seconded the motion, which was unanimously approved by the Board.

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4. Consideration of recent public statements by Trustees

The Board went into a closed executive session – real estate at 10:48 a.m.

The meeting was reopened at 11:13 a.m.

The Board went into a closed executive session – real estate at 11:29 a.m.

The meeting was reopened at 11:52 a.m.

No motion was made.

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The meeting was recessed at 12:00 p.m.

The meeting was reconvened at 12:13 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. Haben and a second by Mr. Hass, the meeting was adjourned at 12:50 p.m.

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Samuel L. Friar
Chairman

ATTEST:

____
Kelly Gottschalk
Secretary

DISCUSSION SHEET

ITEM #C1

Topic: **Performance review of the Executive Director**

Portions of the discussion under this topic may be closed to the public under the terms of Section 551.074 of the Texas Government Code

Discussion: The Board will meet with the Executive Director to review performance over the past year and provide recommendations concerning yearly objectives, goals, and performance.

DISCUSSION SHEET

ITEM #C2

Topic: **Actuarial experience study**

Discussion: Segal has completed an actuarial experience study for DPFP as of January 1, 2016. The primary purpose of an experience study is to compare the reasonableness of the demographic and economic assumptions used in preparing the Actuarial Valuation to the actual historical experience as well as expectations for the future. Segal will present the results of their study and may recommend the Board consider modifying certain assumptions.

Staff Recommendation: Available at the meeting.

DISCUSSION SHEET

ITEM #C3

Topic: **Investment Policy Statement**

Discussion: At the March 10, 2016 Board meeting, staff updated the Board on the process for and status of drafting a new Investment Policy Statement. Staff and the Governance Committee will present the draft Investment Policy Statement, which has been reviewed by Champion Capital Research and NEPC. The Investment Policy Statement describes, in detail, the roles and responsibilities of the Board, Investment Advisory Committee, Executive Director, staff, consultants, investment managers and the custodian. The new Investment Policy Statement is intended to be a comprehensive document, and therefore would replace the current investment related policies:

Brokerage Policy & Procedure, Derivatives Investment Guidelines for External Money Managers, Investment Implementation Policy, Investment Policy, Investment Structure Policy, Manager Selection & Monitoring Policy Excluding Real Estate, New Investment Registration Process, Potential Investment Review Process, Real Estate Investment Procedures & Guidelines, Strategic Investment Policy, Supplemental Investment Policy.

Staff Recommendation: **Terminate** the investment policies listed above and **adopt** the draft Investment Policy Statement, as a comprehensive replacement for all previous investment policies.

CHAMPION
CAPITAL RESEARCH

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Houston, Texas 77057
713-974-8883
www.championcr.com

April 11, 2016

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

Dear Ms. Gottschalk,

It was my sincere pleasure to assist you and the Dallas Police and Fire Pension System with the development of this Investment Policy Statement (IPS). These policies are intended to guide the Board, Staff, Consultants and all vendors in the management of the DPFP System's portfolio of assets. This IPS is a result of the cooperation among DPFP Staff, Consultants and Board members.

It is my opinion that this version of the IPS is a substantial improvement over previous policies. Importantly, this IPS specifically identifies the fiduciary status of Investment Managers and Consultants. If this IPS is approved and implemented, investment firms that provide comprehensive and discretionary investment management services to the Board will now be held to a fiduciary standard of excellence and loyalty. It will be important to share a copy of the approved IPS with each entity expected to perform on behalf of the DPFP System, as this IPS addresses specific roles and responsibilities for those responsible for asset management decisions. Importantly, this IPS addresses specific monitoring criteria for Investment Managers so that Board level decisions can be made more effectively using quantifiable and measurable criteria and analyses.

The IPS is a working document. During the course of the year, the Board, Staff, Consultants, Investment Managers and all vendors will be allowed to satisfy the responsibilities outlined for each. To the extent specific policies are followed, they will be included in the annually updated IPS. To the extent specific policies may not be followed, an annual review can assess changes to ensure closer adherence to best practice portfolio management.

Finally, these policies are intentionally silent on ethics. It is recommended that a separate ethics policy be developed to complement this IPS. Additionally, Champion Capital Research makes no recommendation regarding the asset allocation decisions approved by the Board and referenced in Appendix A of these polices.

Thank you again for the opportunity to assist DPFP System with the design of this IPS.

Sincerely,

Mary Kathryn Campion, Ph.D., CFA, AIFA
President, Champion Capital Research
Adjunct Faculty, Center for Fiduciary Studies

DALLAS POLICE & FIRE PENSION SYSTEM

INVESTMENT POLICY STATEMENT

Adopted _______________

INVESTMENT POLICY STATEMENT

Adopted __________

TABLE OF CONTENTS

INVESTMENT POLICY STATEMENT

Adopted __________

Section 1 Introduction and Purpose

This policy statement shall guide investment of the assets of the Dallas Police and Fire Pension System (DPFP). This investment policy statement (IPS) is issued for the guidance of the Dallas Police and Fire Pension System Board of Trustees (Board), Investment Advisory Committee (IAC), Executive Director, Staff, Consultant(s), Custodian, and Investment Managers. This IPS is intended to set forth an appropriate set of goals and objectives for DPFP. It will define guidelines to assist fiduciaries and Staff in the supervision of the investments of DPFP. The investment program processes and procedures are defined in the various sections of the IPS by:

A. Stating in a written document DPFP's expectations, objectives and guidelines for the investment of assets;

B. Setting forth an investment structure for managing the portfolio. This structure includes assigning various asset classes, investment management styles, asset allocation and acceptable ranges that, in total, are expected to produce an appropriate level of overall diversification and total investment return over the investment time horizon;

C. Encouraging effective communications between the Board, IAC, Staff, Consultant(s), Investment Managers and Custodian(s);

D. Set forth policy that will consider various factors, including inflation, consumption, taxes, liquidity and administrative expenses, that will affect the portfolio's short and long term total expected returns and risk;

E. Establishing formal criteria to select, evaluate, monitor, compare, and attribute the performance of Investment Managers on a regular basis; and

F. Complying with all applicable fiduciary and due diligence requirements experienced investment professionals would utilize, and with all applicable laws, rules and regulations from various local, state, federal, and international political entities that can impact DPFP.

Section 2 Design, Goals, and Objectives

Staff and the Consultant(s) are expected to deliver excess return beyond the Policy Benchmark[1] through manager selection and asset allocation adjustments. By achieving allocation and performance objectives consistently, the long term investment goals of DPFP are expected to be achieved.

Goals

a. Ensure funds are available to meet current and future obligations of the plan when due while earning a long-term, net of fees investment return greater than the actuarial return assumption.

b. To consistently rank in the top half of the public fund universe over the rolling three-year period, net of fees.

Objectives

1. To maintain a diversified asset allocation;
2. To provide for an appropriate risk adjusted rate of return;
3. To allow for both passive and active investment management;
4. To monitor quarterly manager performance;
5. To monitor monthly asset allocation changes;
6. To outperform the Policy Benchmark over rolling three year periods;
7. To control and monitor the costs of administering and managing the investments;
8. Establish guidelines and procedures for selecting, monitoring and replacing investment vehicles; and
9. Re-evaluate annually the policies defined in this IPS.

[1] The Policy Benchmark represents the return of the investable and non-investable indices as defined in Appendix A, at the target allocation for each asset class.

Section 3 Standards of Conduct and Fiduciary Responsibility

The following are standards of conduct for the Board, Investment Advisory Committee, Staff, Investment Managers, Consultant(s) and all investment related other service providers of DPFP:[2]

1. Place the interest of DPFP above personal interests;

2. Act with integrity, competence, diligence, respect, and in an ethical manner;

3. Use reasonable care, diligence, and exercise independent professional judgment when conducting analysis, making recommendations, and taking actions;

4. Promote the integrity of and uphold the rules governing DPFP;

5. Comply with all applicable laws, rules, and regulations of any government agency, regulatory organization, licensing agency, or professional association governing their professional activities;

6. Not assist or knowingly participate in any violation of governing laws, rules, or regulations;

7. Not accept gifts, benefits, or compensation that could be expected to compromise independence and objectivity;

8. Must not knowingly make any statement that misrepresents facts relating to investment analysis, recommendations, actions, or other professional activities;

9. Not engage in conduct involving dishonesty, fraud, deceit; and

10. Make full disclosure (annually) of all matters that could reasonably be expected to impair independence and objectivity with their respective duties to DPFP.

[2] *These are informed by the CFA Institute and the Center for Fiduciary Studies.*

Section 4 Core Beliefs and Long Range Acknowledgements

This section outlines the core beliefs and long range acknowledgements for the overall governance of DPFP. These beliefs and acknowledgements will serve as guiding principles in the decision making and implementation of DPFP's investment mandate.

A. A well-defined governance structure with clearly delineated responsibilities is critical in achieving consistent, long term performance objectives.

B. The strategic asset allocation determines the risk reward profile of the portfolio and thus drives overall portfolio volatility.

C. The opportunity for active manager outperformance (alpha) is not uniformly distributed across asset classes or Investment Managers' strategies.

D. Leverage may improve a risk / return profile when structured appropriately.

E. Portfolio cash flow and income will be used to rebalance the asset allocation.

Section 5 Roles and Responsibilities

Board

The Board is made up of twelve (12) Trustees. The Board has a fiduciary role as the representative of DPFP. The Board recognizes its fiduciary duty and acknowledges its responsibility to ensure that the management of plan and DPFP's fund is in compliance with state and federal laws. Additionally, the Board:

1. Establishes investment objectives consistent with the needs of DPFP and prepares the IPS of DPFP;

2. Prudently diversifies, selects, and maintains a general investment strategy consistent with allocation ranges and investment guidelines including an agreed upon risk/return profile;

3. Approves strategic asset allocation targets and ranges;

4. Prudently hires, monitors, & terminates Consultant(s), Investment Managers and other vendors;

5. Reviews investment related expenses;

6. Approves Board travel related to investment monitoring, and in exceptional cases due diligence;

7. Approves any expansion or renewals of the DPFP leverage facility and reviews existing facility;

8. Adopts the IPS and annually reviews in the last quarter of each calendar year and revises as needed; and

9. Avoids prohibited transactions and conflicts of interest.

Investment Advisory Committee

IAC Composition, Selection and Criteria:

1. The IAC serves at the discretion of the Board of Trustees;

2. The IAC is composed of nine (9) members and represented by three constituent groups: Dallas Police Department, Dallas Fire Department, and Dallas City Council.

3. Each constituent group will nominate at least two and up to three outside investment professionals to represent their group on the IAC;

4. One of the three representatives from each group may be filled by an existing Board member;

Section 5 Roles and Responsibilities (continued)

IAC Composition, Selection and Criteria (continued):

5. The Board will vote on and approve all IAC nominations;

6. To be eligible to serve on the IAC, an individual must live or work in the city of Dallas;

7. An IAC meeting requires a quorum of at least five members, of which, at least two members must be outside investment professionals;

8. An IAC member will serve staggered terms of three years. It is contemplated that the outside investment members of the IAC will sign an agreement and be compensated as determined to be reasonable by the Board. Compensation and expenses are reimbursable under the Education and Travel Policies and Procedure. The IAC selects a chair and vice chair from its members, for a two-year term, to serve as liaison to the Board and to preside over IAC meetings;

9. Each member of the IAC will respond annually to a disclosure questionnaire, which the Board will review for any independence issues or potential conflicts of interest;

10. If the Executive Director learns that potential ground for removal of an IAC member exists, the Executive Director shall notify the Chair of the Board of the potential grounds for removal;

11. The Board of Trustees may elect to dismiss a member of IAC for any reason; and

12. The IAC will meet at least quarterly at duly noticed public meetings.

IAC Roles and Responsibilities:

1. The IAC will review all investment related items including, but not limited to, annual asset allocation updates and the hiring or termination of Investment Managers, Consultant(s), and Custodian;

2. The IAC will vote on each investment related action item;

3. The IAC chair or vice chair will update the Board with an abbreviated version of the facts and the IAC recommendation, or lack thereof, to the Board, which will accompany the Staff and Consultant recommendations;

4. The IAC shall review Staff and Consultant recommendations on asset allocation targets and ranges at least annually, and provide an IAC recommendation to the Board; and

5. Acts as fiduciaries to DPFP.

Section 5 Roles and Responsibilities (continued)

Staff

Executive Director

1. The Executive Director is authorized to administer the operations and investment activities of DPFP under policy guidance from the Board;

2. Manages the day to day operations of DPFP;

3. Reports to Board when strategic asset allocation breaches target allocation bands;

4. Oversees and reports to Board on investment and due diligence processes and procedures;

5. Approves/declines all Staff travel related to all manager pre-hire & on-site due diligence;

6. Approval of Investment Staff recommendations for presentation to the IAC and Board; and

7. Is not a fiduciary to DPFP.

Investment Staff

The Staff is responsible for manager due diligence and recommendations, portfolio implementation consistent with the Board approved asset allocation, and will assess the activities of the Consultant(s). The Staff helps the Board to oversee Investment Managers, Consultant(s), Custodian(s), and vendors. Additionally, the Staff:

1. Reports to Executive Director when portfolio asset classes exceed allowable strategic boundaries;

2. Notifies Consultant(s) in writing of rebalancing needs and recommended implementation, so as to employ periodic cash flows to asset classes within target allocation ranges;

3. Instructs Investment Managers to implement Consultant approved re-balance instructions;

4. Submits to Executive Director for review, on annual basis, recommended asset allocation targets and ranges & oversees implementation of the approved asset allocation;

5. Monitors and reports portfolio asset class balances;

6. Assists in the preparation and annual review of IPS;

7. Reviews Consultant(s)'s Investment Manager due diligence and recommendations;

8. Prepares Staff Investment Manager recommendations, submits Staff and Consultant(s) recommendations to Executive Director for review;

Section 5 Roles and Responsibilities (continued)

Staff (continued)

Investment Staff (continued)

9. After Board approval of investment, Staff approves Investment Manager Strategy guidelines which will be outlined in the Investment Manager agreements, as applicable;

10. Monitors all investments, Investment Managers and vendors;

11. Monitors adherence to quantitative due diligence criteria;

12. Accounts for and reviews annually all external management fees and investment expenses;

13. Reviews, every two years, the eligibility status of members of the IAC;

14. Ensures all fiduciaries to DPFP are aware of their fiduciary obligations annually;[3] and

15. Is not a fiduciary to DPFP.

Consultant(s)

The Consultant(s) should monitor qualitative and quantitative criteria related to Investment Managers and aggregate portfolio activity and performance. The Consultant(s), through its continuous and comprehensive responsibilities to DPFP should acknowledge in its contract, its fiduciary responsibility to DPFP. Additionally, the Consultant(s):

1. Recommends annually to IAC and Board strategic asset allocation targets, ranges, and benchmarks for asset classes;

2. Documents asset allocation recommendations with asset class performance expectations including standard deviation, expected return and correlations for each asset class used by DPFP;

3. Establishes and follows due diligence procedures for Investment Manager candidate searches;

4. Conducts screens and searches for Investment Manager candidates;

5. Assists in the selection process and monitoring of Investment Managers;[4]

6. Reviews and recommends Investment Managers and peer groups to IAC and Board;

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[3] *Verification of this may be through contract, agreement, or annual fiduciary acknowledgement letter.*
[4] *The specific screening criteria for investment managers can be found in Appendix B.*

Consultant(s) (continued)

7. Documents and delivers to Staff written recommendations on Investment Manager new hire, hold and termination reviews;

8. Any new hire recommendation from the Consultant should include a recommended benchmark and an assessment of appropriate asset class and sub-allocation;

9. Approves and verifies in writing each of Staff's rebalancing recommendations and implementation;[5]

10. Reviews whether rebalancing was done consistent with best practices;

11. Monitors the diversification, quality, duration, and risk of holdings as applicable;

12. Assists Staff in negotiation of terms of vendor contracts;

13. Prepares quarterly investment reports, which include the information outlined in Appendix C; and

14. Acts as a fiduciary to DPFP.

Investment Managers

Public Investment Managers

1. Acknowledge in writing acceptance of the objectives, guidelines, and standards of performance;

2. Invest the assets of DPFP in accordance with its objectives, guidelines and standards;

3. Exercise full discretionary authority as to all buy, hold and sell decisions for each security under management, subject to the guidelines as defined in this Statement;

4. If managing a separate account, send trade confirmations to the Custodian;

5. For separately managed accounts, deliver monthly report to Consultant(s)/Staff describing portfolio asset class weights, investment performance, security positions, and transactions;

6. For commingled assets, this statement should show unit position and unit value;

7. Adhere to best execution and valuation policies;

[5] *Evidence of approval may be in electronic format.*

Section 5 Roles and Responsibilities (continued)

Investment Managers (continued)

Public Investment Managers (continued)

8. Prices and fair market valuations will be obtained from a third party reporting service provider;

9. Communicate to Executive Director any material changes at firm;

10. Inform DPFP, as soon as practical, in writing of any breach of investment guidelines, ethic violations or violations of self-dealing;

11. Communicate significant changes in the ownership, organizational structure, financial condition, or personnel staffing; and

12. Acts as a fiduciary to DPFP.

Private Investment Managers

1. Acknowledge in writing acceptance of the objectives, strategy guidelines, and standards of performance as evidenced in investment manager, operating or partnership agreement;

2. Will ensure that financials statements undergo annual audits and that investments are reported at fair market value, as outlined in the Investment Management, Partnership or Operating Agreement(s);

3. Communicate to Executive Director any material changes in the ownership or management of the firm, and or the stability of the organization;

4. Inform DPFP, as soon as practical, in writing of any breach of investment guidelines, ethic violations or violations of self-dealing; and

5. Acts as fiduciary to DPFP, unless specified and acknowledged by Board at time of hire.

Custodian

1. Safekeep and hold all of DPFP's assets in the appropriate domestic accounts and provide highly secure storage of physical stock certificates and bonds such that there is no risk of loss due to theft, fire, or accident;[6]

2. Maintain separate accounts by legal registration;

[6] *Electronic transfer records at the Depository Trust Company ("DTC") are preferred.*

Section 5 Roles and Responsibilities (continued)

Custodian (continued)

3. Arrange for timely execution and settlement of Investment Manager securities transactions made for DPFP;

4. Provide for receipt and prompt crediting of all dividend, interest and principal payments received as a result of DPFP portfolio holdings or securities lending activities;

5. Monitor income receipts to ensure that income is received when due and institute investigative process to track and correct late or insufficient payments, including reimbursement for any interest lost due to tardiness or shortfall;

6. At the direction of the Staff, expeditiously transfer funds into and out of specified accounts.

Section 6 Authorized Asset Classes & Investments Guidelines

Asset Class Guidelines

1. Asset allocation is the primary driver of the volatility of portfolio return. To achieve the goals and objectives of DPFP, the fund's assets will be invested in the categories listed in Appendix A. The assets shall be diversified, in order to minimize the concentration risk, both by asset class and within an asset class.

2. The strategic asset allocation shall be monitored on an ongoing basis and rebalanced when the lower and upper bounds on the ranges are breached, understanding the timing of the rebalancing may be delayed depending the liquidity of the asset class and costs of rebalancing, and otherwise at the discretion of Staff with concurrence of the Consultant.

3. Securities lending is permissible for separately managed accounts and commingled vehicles.

Authorized Investments

1. Equities: Equity represents residual ownership of public and private companies after obligations to debt holders have been satisfied.

2. Fixed Income: Fixed-income instruments are securities or debt obligations issued by governments, government-related entities, structured debt facilities and public and private companies that contain contractual obligations from the issuer to make interest and/or principal repayments to investors over the duration of the negotiated term agreement.

3. Real Assets (Liquid and Illiquid): Liquid real assets are investments in tradable tangible/physical assets or related claims that may display a positive correlation to the rate of inflation. Illiquid real assets (natural resources and infrastructure) represent ownership claim to an actual, finite asset or property.

Section 6 Authorized Asset Classes & Investments Guidelines (continued)

Authorized Investments (continued)

4. Global Asset Allocation: An investment strategy that actively invests in a variety of liquid assets including cash, equity, fixed income, credit, derivatives (interest rate, currency, index) and commodities.

5. Private Equity: A non-financial asset that is relatively illiquid and non-transparent. Private equity funds make investments directly into private companies.

6. Private Debt: Private debt funds typically provide capital to private sector borrowers.

7. Real Estate: Real estate represents investment in a range of properties which provide income and/or appreciation potential. Investments in real estate can be structured as public or private debt and/or equity, and can be in the U.S. or foreign countries.

8. Other Authorized Investments: Trade finance and reinsurance based strategies;

Section 7 Investment Due Diligence & Monitoring

Investment Due Diligence

Staff and Consultant(s) are responsible for recommending external Investment Managers to the IAC and Board for review for potential hiring. The following will be implemented:

1. Investment Manager candidate due diligence will be conducted by Staff & Consultant(s).

2. Due diligence criteria are defined in Appendix B.

3. Selected candidate(s) will be presented to the IAC.

4. IAC will communicate their recommendation, or lack thereof, on the candidate(s) for consideration and final approval by the Board.

Investment Monitoring

A. Staff and Consultant(s) are responsible for monitoring external public & private Investment Managers. Public and private Investment Managers will be monitored relative to peers and benchmarks monthly and quarterly, respectively. Additionally, each current manager is expected to satisfy the due diligence criteria outlined in Appendix B. If the following criteria are not met, an Investment Manager is to be considered an underperformer:

   1. Investment Managers' 3 year rolling returns in excess of peer group average;

Section 7 Investment Due Diligence & Monitoring (continued)

Investment Monitoring (continued)

2. Investment Managers' 3 year rolling risk-adjusted returns in excess of peer group average;

3. Investment Managers' qualitative requirements must be satisfied at all time periods, as determined by Staff or Consultant;

B. Based on the criteria outlined above, the Consultant will highlight underperforming Investment Managers in their quarterly report to Board. If an Investment Manager is considered an underperformer, Staff and Consultant will provide recommendations to IAC and Board regarding whether to "hold" or "sell".

Section 8 Risk Management

The Staff will work within these policies in order to mitigate the risk of capital loss. By implementing these policies the Board has addressed:

1. Custodial Risk for both public and private holdings;[7]

2. Interest Rate Risk through fixed income duration and credit monitoring;[8]

3. Concentration and Credit Risk through asset allocation targets and ranges, rebalancing, and the monitoring of investment guidelines.

Through these policies, Staff has necessary monitoring criteria established for Custodian, Consultant(s) and Investment Managers, such that DPFP has in place policies that will mitigate interest rate, custody, concentration and credit risks.

[7] *Please review Custodian responsibilities in Section 5.*
[8] *Please review Annual Review of IPS and Investment Manager strategy guidelines reviewed and approved by Staff.*

APPROVED on ____________ the Board of Trustees of the Dallas Police and Fire Pension System.

____

Samuel L. Friar
Chairman

Attested:

____

Kelly Gottschalk
Executive Director

APPENDICES

Appendix A

STRATEGIC ASSET ALLOCATION TARGETS & RANGES

Asset Class	Policy Benchmark	Target	Range
Cash	90-day T Bills	**2.0%**	**0% – 5%**
Plan Level Leverage	(LIBOR + 300)	**0%**	**0% - 15%**
Equity		**30.0%**	**20% – 40%**
Global Equity	MSCI AC World (gross)	20.0%	10% – 23%
EM Equity	MSCI EM Equity (gross)	5.0%	0% – 8%
Private Equity	R3000 +3% (Rolling 3 Mo.)	5.0%	4% – 15%
Fixed Income		**33.0%**	**15% – 38%**
Short-Term Core Bonds	Barclays UST 1-3 Year	2.0%	0% – 5%
Global Bonds	Barclays Global Aggregate	3.0%	0% – 6%
High Yield	Barclays Global HY	5.0%	2% – 8%
Bank Loans	S&P Leveraged Loan Index	6.0%	3% – 9%
Structured Credit & Absolute Return	HFRI RV: FI (50/50-ABS/Corp)	6.0%	0% – 9%
EMD (50/50)	50% JPM EMBI/50% JPM GBI-EM	6.0%	0% – 9%
Private Debt	Barclays Global HY + 2% (Rolling 3 Mo.)	5.0%	2% – 7%
Real Assets		**25.0%**	**20% – 45%**
Natural Resources	S&P Global Nat Res (Rolling 3 Mo.)	5.0%	3% – 10%
Infrastructure	S&P Global Infra (Rolling 3 Mo.)	5.0%	3% – 10%
Real Estate	NCREIF	12.0%	10% – 25%
Liquid Real Assets	CPI + 5.00%	3.0%	0% – 6%
Asset Allocation		**10.0%**	**5% – 15%**
Risk Parity	60% MSCI ACWI/40% Barclays Global Aggregate	5.0%	2% – 8%
GTAA	60% MSCI ACWI/40% Barclays Global Aggregate	3.0%	0% – 6%
Absolute Return	HFRX Abs Ret Index	2.0%	0% – 5%
	TOTAL	100.0%	

Appendix B

The public market Investment Manager screening criteria include:

1. Lead portfolio manager tenure/experience at least 5 years.
2. Firm level assets under management: 75 million or more under management.
3. Investment style should consistently match what is approved and outlined in the Investment Manager's guidelines, and will be compared and analyzed against peers/sub-asset class category.
4. Sharpe ratio generally would exceed .3, which may not be possible following a prolonged bear market in that respective market, and must exceed 50% of its peer group over a three year rolling period.
5. Three year rolling total return, on a net of fee basis, must exceed 50% of its peer group.
6. On site due diligence meeting is recommended.
7. Fiduciary acceptance and acknowledgement.

The private Investment Manager screening will focus on the key areas of:

1. Alignment of Interests: management fees and expenses, carry/waterfall, term of fund, General Partner commitment.
2. Governance: team, investment strategy, fiduciary duty, Limited Partner Advisory Committee responsibilities and makeup, changes of the fund.
3. Transparency: risk management, financial information, disclosure related to the GP, management and other fees.
4. Track Record: the firm or lead portfolio manager should have a track record of at least 5 years.
5. Performance: a majority of previous funds should rank in the top 50% of their vintage year and strategy fund universe.

The hedge-fund Investment Manager screening criteria include:

1. Lead portfolio manager tenure/experience at least 5 years.
2. Utilization of independent third-party administrator.
3. Sharpe ratio should exceed .5 and must exceed 50% of its peer group over a three year rolling period.
4. Three year rolling total return must exceed 50% of its peer group.
5. A well-defined and documented risk management process.
6. Leverage terms should be appropriate to strategy.
7. Liquidity of assets should match liquidity of fund.
8. Redemption terms consistent with peers.
9. Expected return compensates for illiquidity.

If any of the above due diligence criteria are not met, the Staff and Consultant will disclose this in their recommendations to the IAC and Board, along with an explanation of why the investment is still appropriate.

Appendix C

Investment Consultant Reporting Requirements
The investment consultant is required to provide the Board with quarterly investment information for portfolio monitoring purposes. Generally these are as follows:

Quarterly (due in advance of the meeting)
1. A review of the current investment market environment.
2. DPFP's actual asset allocation relative to its target asset allocation as defined in Appendix A.
3. DPFP's return relative to its Policy Benchmark return and other public pension funds.
4. DPFP's risk adjusted returns relative to the policy and other public pension funds.
5. Asset class performance relative to the benchmarks as defined in Appendix A.
6. Individual Investment Manager returns relative to their stated benchmark.
7. Report will specifically acknowledge any underperforming Investment Managers based on the criteria outlined in Section 7 of the IPS.
8. Any reportable events affecting any of DPFP's Investment Managers.
9. Private Markets reports which covers Private Debt, Private Equity, Infrastructure, Real Assets and Real Estate.

DISCUSSION SHEET

ITEM #C4

Topic: **Fixed Income structure study**

Attendees: Rhett Humphreys, Partner
Keith Stronkowsky, Senior Consultant

Discussion: The liquid Fixed Income portfolio's target allocation increased from 15% to 28% when the asset allocation was approved at the March 10, 2016 Board meeting. NEPC and Staff will present the structure study which will explain the build out of the liquid portion of the Fixed Income portfolio discussing each of the sub-asset classes in detail, such as which managers to retain/eliminate, reasonable number of managers in each sub-asset class and the expected timeline to complete the build out.

Staff Recommendation: In accordance with the Fixed Income structure study, Staff recommends terminating the position in Mondrian to fund a short duration core bond manager.

NEPC, LLC

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

DALLAS POLICE & FIRE PENSION SYSTEM

Dallas Police & Fire Pension System

Fixed Income Structure Study

April 14, 2016

Rhett Humphreys, CFA
Partner

Keith Stronkowsky, CFA
Senior Consultant

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

- **DPFP recently adopted a new long-term strategic Asset Allocation at the March 10th, 2016 meeting**

- **Within the liquid Fixed Income portfolio the new Asset Allocation includes:**
  - Changes to existing asset classes and their target weights
  - Introduction of targets for new asset classes

- **Objectives include increased diversification, yield, and plan liquidity**

Asset Class	New Target	Current Weight*	~Current $*	~Target $*
Core Bonds	2.0%	0.0%	$0	$54m
Global Bonds	3.0%	4.8%	$128m	$81m
High Yield	5.0%	5.5%	$149m	$134m
Bank Loans	6.0%	1.8%	$49m	$161m
EMD (50/50)	6.0%	2.0%	$55m	$161m
Absolute Return & Structured Credit	6.0%	0.0%	$0	$161m
Total Fixed Income	**28.0%**	**14.1%**	**$382m**	**$752m**

*Estimated values as of 2/29/16 provided by DPFP staff. Current weight and target $ based on NAV of DPFP.
Target $ will depend on market movements and timing of implementation.
Ranges established around new target weights (e.g., range for Core Bonds is 0% - 5%.

- **Description**
  - Managers primarily invest in investment grade securities such as Treasuries, Agency debentures, corporate bonds, Agency mortgage-backed securities and commercial mortgage-backed securities
  - May invest in out-of-benchmark securities to enhance return, but generally investments are risk controlled

- **Why include in a portfolio**
  - Stabilize portfolio returns
  - Low(er) correlations to equities
  - Liquidity

- **Current State**
  - Target of 2%, or ~$54m of Plan assets
  - No assets currently invested

- **Implementation**
  - Recommend hiring one manager – IR&M
  - Harvest assets from the overweight to Global Bonds (Mondrian) to fund this mandate

- **NEPC's assumed return:** 1.75%
- **NEPC's assumed risk:** 2.50%

*Based on NEPC 's 2016 Capital Market outlook and assumptions. Risk and return assumptions are 5-7 year annualized forecasts.

DPFP: Global Bonds

- **Description**
  - Managers invest in U.S., and non- U.S. sovereign debt, currencies, investment grade corporate bonds, etc.
  - In addition to interest rate and credit risk, the global nature of the portfolios also introduce country and currency risk
- **Why include in a portfolio**
  - Stabilize portfolio returns
  - Low(er) correlations to equities
  - Broad diversification across markets and sectors
- **Current State**
  - Target of 3%, or ~$81m of Plan assets
  - Current weight of 4.4% and ~$128m
- **Implementation**
  - Currently overweight relative to target allocation
  - Harvest assets from Mondrian to fund Core Bond (short duration) allocation
  - Retain Brandywine
- **NEPC's assumed return:** 1.00%
- **NEPC's assumed risk:** 8.50%

*Based on NEPC 's 2016 Capital Market outlook and assumptions. Risk and return assumptions are 5-7 year annualized forecasts.

- **Description**
  - Managers invest in corporate bonds with below investment grade credit ratings
  - Relative to investment grade bonds, high yield issues have higher yields, higher default risk, lower financial stability and/or more leverage
  - Portfolios are diversified to limit default risk of a single issuer

- **Why include in a portfolio**
  - Attractive coupon yields
  - Good risk-adjusted returns

- **Current State**
  - Target of 5%, or ~$134m of Plan assets
  - Current weight of 5.1% and ~$150m

- **Implementation**
  - Currently within range of target allocation
  - Maintain current exposures while NEPC and Staff research for potential additions and changes to the space

- **NEPC's assumed return:** 5.25%
- **NEPC's assumed risk:** 13.00%

*Based on NEPC 's 2016 Capital Market outlook and assumptions. Risk and return assumptions are 5-7 year annualized forecasts.

DPFP: Bank Loans

- **Description**
  - Managers invest in secured commercial loans made by a group of banks to companies that are then sold ("syndicated") to other banks and institutional investors
  - Loans are primarily to non-investment grade companies, carry floating rate coupons (Libor + spread) that reset every 30-90 days, secured (collateral), and senior in the capital structure

- **Why include in a portfolio**
  - Low(er) correlation to other asset classes
  - Reduced interest rate risk
  - Attractive yields relative to other areas of the bond market
  - Relative to High Yield bonds, Bank Loans historically have had lower price volatility and default risk, and higher recovery rates

- **Current State**
  - Target of 6%, or ~$161m of Plan assets
  - Current weight of 1.7% and ~$49m

- **Implementation**
  - Currently underweight relative to target allocation
  - Maintain exposure to Loomis Sayles Floating Rate & Fixed Income Fund
  - Look for 1-2 additional Bank Loan managers to complement Loomis Sayles Floating Rate & Fixed Income Fund
  - Utilize funds from Illiquid assets (e.g., Private Equity, Real Estate) as a funding source as they become available
- **NEPC's assumed return:** 5.50%
- **NEPC's assumed risk:** 9.00%

*Based on NEPC 's 2016 Capital Market outlook and assumptions. Risk and return assumptions are 5-7 year annualized forecasts.

DPFP: Emerging Market Debt (external and local currency)

- **Description**
  - Managers invest in bonds of emerging countries and corporate bonds of companies domiciled in emerging countries
  - Securities can be external (typically issued in USD or Euros) or local (issued in currency of issuing country or corporation)
  - In addition to interest rate and credit risk, the global nature of the portfolios also introduce country and currency risk

- **Why include in a portfolio**
  - Attractive yields relative to developed markets
  - Potential to add incremental return
  - Diversification

- **Current State**
  - Target of 6%, or ~$161m of Plan assets
  - Current weight of 1.9% and ~$55m

- **Implementation**
  - Currently underweight relative to target allocation
  - In the near term maintain Ashmore exposures across both external and local currencies
  - Look to hire 1-2 additional managers
  - Utilize funds from Illiquid assets (e.g., Private Equity, Real Estate) as a funding source as they become available

- **NEPC's assumed return:** 4.75% (external), 6.50% (local)
- **NEPC's assumed risk:** 13.00% (external), 15.00% (local)

*Based on NEPC 's 2016 Capital Market outlook and assumptions. Risk and return assumptions are 5-7 year annualized forecasts.

- **Description**
  - Managers invest in securities across multiple sectors of the credit markets (e.g., investment grade credit, high yield, bank loans) as well as in structured (e.g., asset backed securities) and inflation linked securities
  - Investment vehicles and structures are less liquid than traditional vehicles
- **Why include in a portfolio**
  - Potential for increased yield and cash flows
  - Can serve to reduce risk and/or increase return, or both
  - Diversification
- **Current State**
  - Target of 6%, or ~$161m of Plan assets
  - No assets currently invested
- **Implementation**
  - Look to hire 3-5 managers to fill out this asset class
  - Utilize funds from Illiquid assets (e.g., Private Equity, Real Estate) as a funding source as they become available
- **NEPC's assumed return:** 5.25%
- **NEPC's assumed risk:** 8.00%

*Based on NEPC 's 2016 Capital Market outlook and assumptions. Risk and return assumptions are 5-7 year annualized forecasts.

DPFP: Summary

- **Implementation of the new liquid Fixed Income target allocations will take time (0-2 plus years) given the current structure of the Plan's investments**

- **Observations & recommendations in this study represent the initial steps and action items with regards to the new targeted allocation of the Fixed Income portfolio**
  - Hiring of IR&M to fill the void in the Core Bond space
  - Rebalancing of the Global Bond allocation
  - High Yield, Bank Loans, EMD, Absolute Return & Structured Credit research and due diligence in process

- **NEPC and Staff will bring forth additional action items & recommendations as due diligence is complete, and assets become available from the illiquid portion of the portfolio**

DALLAS POLICE & FIRE PENSION SYSTEM

INVESTMENT RECOMMENDATION

Date: April 14, 2016

To: DPFP Board

From: DPFP Investments Staff

Subject: Fixed Income structure study

Recommendation

In accordance with the Fixed Income structure study, Staff recommends terminating the position in Mondrian to fund a short duration core bond manager.

Executive Summary

At the March 10, 2016 Board meeting the Board approved an increase to the liquid fixed income target allocation from 15% to 28%. This change is expected to increase liquidity, produce moderate consistent returns and provide diversification. The structure study will explain the build out of the sub-asset classes within the Fixed Income broader asset class such as which managers to retain/eliminate, reasonable number of managers in each sub-asset class and the expected timeline to complete the build out. As of 02/29/16 the fixed income holdings relative to target allocations are as follows:

	Actual		Target	Target Range		
	$	Net %	$	Low	%	High
LIQUID FIXED INCOME						
SHORT DURATION CORE BONDS	0.00	0.00%	53.78	0%	2%	5%
Brandywine	87.07					
Mondrian Investment Partners	41.27					
GLOBAL BONDS	128.34	4.77%	80.67	0%	3%	6%
Loomis Sayles	106.54					
W.R. Huff High Yield	42.28					
HIGH YIELD	148.83	5.53%	134.45	2%	5%	8%
Loomis Sayles Sr. Floating Rate	48.96					
BANK LOANS	48.96	1.82%	161.34	3%	6%	9%
Ashmore Emerging Markets Debt Fund	38.74					
Ashmore Emerging Markets Local Currency	16.15					
EMERGING MARKET DEBT	54.89	2.04%	161.34	0%	6%	9%
ABSOLUTE RETURN & STRUCTURED CREDIT	0.00	0.00%	161.34	0%	6%	9%
Liquid Fixed Income	381.01	14.17%	752.94	20%	28%	38%

Short Duration Core Bonds

Core Bonds are generally well diversified across the US Investment grade bond market which includes US Treasuries and government related debt, investment grade corporate debt, agency backed mortgage securities and other asset backed securities. This sub-asset class will serve as the anchor of the fixed income portfolio supplemented by other fixed income sub-asset classes to diversify and drive returns.

Exposure in short duration core bonds provides important downside protection with today's uncertainties in the market such as the timing of the Federal Reserve's rate hikes, weak oil and commodity prices, and the trajectory of China's growth and policy. Short duration core bonds are less sensitive to interest rate changes than securities with longer durations. This short duration core bond allocation will provide liquidity and safety but will not be a return driver for the portfolio in the current market environment. The asset class is however expected to deliver slightly higher returns than a money market investment.

DPFP currently does not have any capital currently dedicated to US core bonds and the target allocation is 2%. There is an immediate need to fill this space as staff restructures the portfolio and transitions to new managers. This sub-asset class would be used as an alternative to holding cash when assets are liquidated, while decisions are to be made where to redeploy funds and for rebalancing. Income Research + Management (IR+M) will present at the April 14, 2016 Board meeting and would be placed in this sub-asset class if hired and would complete the build out of the short duration core bond sub-allocation. See separate memo for staff's recommendation on IR+M.

Global Bonds

Global bonds are bonds issued from any country and denominated in any currency. This sub-asset class will invest primarily in investment grade bonds from developed markets including the US, but can also invest in emerging market corporate and sovereign bonds.

DPFP's current investment managers, Brandywine and Mondrian would be placed in this sub-asset class. However, the target allocation to global bonds is 3% and the current allocation is overweight by 1.77%. DPFP investment staff anticipates maintaining the position in Brandywine and liquidating the position in Mondrian to reduce the current allocation to target. In comparison, Brandywine has a broader more flexible strategy than Mondrian which allows Brandywine to take on incremental risk and produce better risk adjusted returns over the long term. For example, Brandywine's more opportunistic mandate can fully utilize their risk budget by investing in longer duration securities which can generate higher yield as demonstrated in Brandywine's longer performance. Brandywine's duration range is 1-10 years vs. Mondrian's +/-1.5 years of the Barclay's Global Aggregate Index and Brandywine's average yield 3.9% compared to 2.3% for Mondrian as of December 31, 2015. Staff recommends redeeming the assets in Mondrian and redeploying the capital to fill the short duration core bond allocation, while reducing the global bond allocation to the 3% target.

High Yield

High yield bonds are typically fixed rate, subordinated debt of companies with below investment grade credit ratings, (below BBB/Baa). The risk of default is greater in securities with lower credit ratings, so these types of bonds pay higher coupons to investors to compensate them for the risk. As subordinated debt instruments, these bonds often also have lower recoveries when they default than other debt securities that are senior to them in the capital structure.

Current positions in Loomis Sayles Global Opportunistic and WR Huff High Yield total 5.53% of DPFP's portfolio and the target allocation to high yield is 5%. DPFP investment staff recommends maintaining the position in Loomis Sayles Global Opportunistic and will look to transition the WR Huff high yield assets to a new manager mid-2016 (est), due to consistent underperformance. Staff does not want to reduce DPFP's exposure to the high yield space at this time, as the assets are attractively priced and offer a significant cash yield. Adding 1-2 managers in addition to Loomis Sayles in the high yield sub-allocation is ideal and staff expects this build out to be complete between mid to late 2016. High yield and bank loan spreads are at their widest since 2012 creating attractive entry points.

Bank Loans

Bank loans, also known as leveraged loans are senior secured, floating rate debt of below investment grade companies. These loans are often syndicated or issued by a group of lenders such as banks and institutional investors. They are used for buyout type transactions, recapitalizations or to refinance existing debt. These types of loans will have a higher interest rate than other types of higher rated floating rate debt to compensate for the credit risk of the loan. Bank loans may also have covenants to help protect the lender against default risk and typically see significantly higher recoveries in the event of default than high yield bonds.

DPFP's investment in Loomis Sayles Senior Floating Rate & Fixed Income fund represents 1.82% of the portfolio and the target allocation is 6%. Staff will propose hiring 1-2 additional bank loan managers to fulfill this allocation over the course of 2016 and early 2017 (est.) as capital becomes available. Staff has begun meeting with various bank loan managers to build out this allocation. One potential strategy might be a high quality loan portfolio with a turn of leverage which could serve as a complement to the more opportunistic Loomis Senior Floating Rate & Fixed Income fund which includes high yield in the portfolio. Bank loan valuations are fairly attractive now and their seniority in the capital structure is beneficial. Investing in bank loans can increase return while taking on less risk compared to some other fixed income assets. Floating rate loans will also be positively impacted by Fed rate hikes and will reduce duration risk in the fixed income portfolio.

Emerging Market Debt

Emerging market debt includes sovereign, municipal, corporate and structured debt of emerging market economies. It is divided into emerging market local currency and external debt which is denominated in a developed country's currency.

DPFP's current exposure to emerging market debt is through two Ashmore funds; Emerging Market Debt Fund and Emerging Market Local Currency Fund. Our current allocation is 2.04% with a 6% target. For now, staff recommends retaining these positions and will explore other opportunities in the 4th quarter of 2016 and over the course of 2017 (est.) to reach the target allocation. We anticipate 2-3 managers in this space. While emerging market debt can provide excess returns, it is appropriate to remain cautious due to uncertainty in the global economy. Emerging market currency valuations are the cheapest they have been in the last 10 years and real interest rates remain attractive in emerging markets relative to developed markets.

Absolute Return & Structured Credit

Absolute return strategies, commonly referred to as hedge funds, seek to generate positive returns versus a relative return approach which seeks to beat a specific benchmark. Absolute return managers may utilize multiple traditional and non-traditional investment techniques to meet their objectives of low correlation and more constant absolute returns. They may invest in untraditional assets and will likely utilize futures, options and other derivatives in their portfolio. Typical strategies may include arbitrage, leverage and shorting for alpha or hedging purposes.

Structure credit strategies my include any of the above techniques, but focus on investments in debt securities of a pool of securities (bonds, loans, etc) packaged into a structure designed to provide leverage for a type of lending activity. These securities and structures are categorized by the type of underlying debt instruments that they hold and include asset backed securities (ABS), mortgage backed securities (MBS) and collateralized loan obligations (CLO) as well as other types of structures.

Currently, DPFP has zero exposure to absolute return and structured credit and the target allocation is 6%. Although, absolute return strategies and structured credit are less liquid, they will be return drivers for the portfolio and help reduce overall portfolio risk due to their low correlations and more stable return profiles. Staff anticipates having 2-3 managers in this space and is likely to recommend a manager for absolute return at the May or June Board meeting. Staff plans to complete this sub-asset class build out by early 2017. Staff has begun meetings with managers and will continue its search and review of the space throughout the remainder of the year.

DISCUSSION SHEET

ITEM #C5

Topic: **Income Research & Management**

Attendees: Ed Ingalls, Senior Portfolio Manager, Principal
Matt Drasser, Senior Vice President

Discussion: As part of the Fixed Income structure study, the first step was to build out the short duration core bonds sub-allocation. NEPC and Staff conducted a search for a high quality short duration core bond manager and selected Income Research + Management (IR+M) to present their 1-3 Year Strategy to the Board. NEPC and Staff have provided memos outlining the process and support for this selection.

IR+M is a US fixed income manager that employs a credit-intensive value-oriented approach. IR+M was founded in 1987 by brothers John and Jack Sommers and is exclusively a fixed income boutique firm that is 85% employee owned and 15% family owned. Current assets under management are $54.9 billion with $2.1 billion in the 1-3 Year Strategy.

Staff Recommendation: Staff recommends approving an initial investment of $50,000,000 to the Income Research + Management (IR+M) 1-3 year strategy within DPFP's short duration core fixed income sub-asset allocation.

INCOME RESEARCH + MANAGEMENT

DALLAS POLICE & FIRE PENSION SYSTEM

April 14, 2016

Presented by: Matt Drasser
Ed Ingalls, CFA

100 Federal Street, 30th Floor, Boston, MA 02110 (617) 330-9333 www.incomeresearch.com

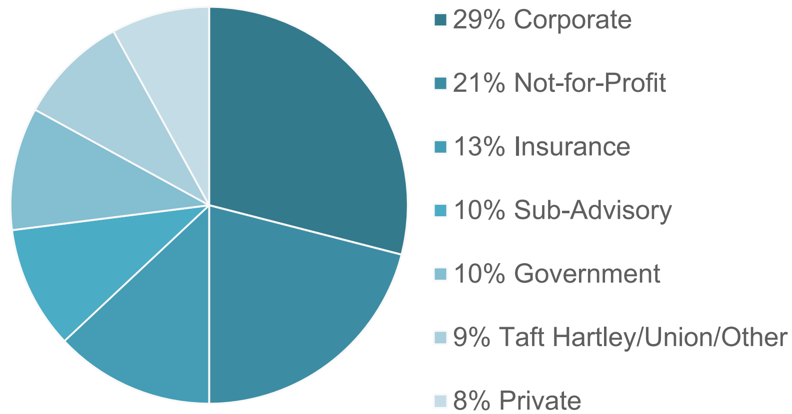
IR+M OVERVIEW

IR+M OVERVIEW KEY FACTS

FIRM FACTS

- 28+ year history, privately owned
- 43 employee shareholders
- $56.5 billion in assets under management
- Exclusively US dollar-denominated fixed income
- Consistent management team since inception
- 10+ year average tenure for portfolio management team

ASSETS BY CLIENT TYPE



KEY DIFFERENTIATORS

+ INDEPENDENT FIRM

+ VALUE-ORIENTED APPROACH

+ COLLABORATIVE CULTURE

+ CLIENT FOCUS

IR+M
INCOME RESEARCH + MANAGEMENT

As of 2/29/16

IR+M OVERVIEW DIVERSITY OF CLIENTS

CORPORATE: 67

AMETEK, Inc.
Belk, Inc.
Blue Hills Bank
Cisco Systems
Cummins Inc.
HARSCO
Jones Day
Kaman Corporation
LyondellBasell Industries, Inc.
MBTA Retirement Fund
Merck & Co., Inc.
Neiman Marcus Group, Inc.
Northrop Grumman, Inc.
Pitcairn Financial Group
SBC Holdings, Inc.
Textron, Inc.

GOVERNMENT: 36

City of Anniston, AL Police & Fire Retirement System
Bristol County, MA Retirement System
Cambridge, MA Retirement System
City of Detroit, MI Police & Fire Retirement System
Government of Guam Retirement Fund
Illinois Student Assistance Commission
City of Knoxville, TN Pension Board
Metropolitan St. Louis Sewer District
New Castle County Employees' Pension Program
New Hampshire Retirement System
City of Orlando, FL
Plymouth County, MA Retirement Association
City of Springfield, MO Police & Fire Retirement System
Commonwealth of Virginia
City of Warwick, RI
Washington Suburban Sanitary Commission

SUB-ADVISORY: 9

Commonfund
EACM Advisors LLC
SEI Investments Management Corporation
Summit Strategic Solutions, LLC

HEALTHCARE: 38

Adventist Health System
Allina Health System
Boston Medical Center Corporation
Carolinas HealthCare Foundation, Inc.
CT Children's Medical Center
DeKalb Regional Health System, Inc.
Henry Ford Health System
Hoag Memorial Hospital Presbyterian
Maine Medical Center
Massachusetts Medical Society
Memorial Sloan-Kettering Cancer Center
MetroWest Community Health Care Foundation
Moses Cone Health System
NewYork-Presbyterian Hospital
Regenstrief Foundation, Inc.
Rochester General Hospital
Southcoast Hospital Group
Sturdy Memorial Hospital
Trinitas Regional Medical Center
Tufts Medical Center
UMass Memorial Health Care

EDUCATION: 43

Arizona State University
Claremont McKenna College
Colby College
Ithaca College
Kingswood Oxford School
Norwich University
The Rockefeller University
St. Lawrence University
Syracuse University
Temple University
Texas Tech University
Trinity University
University of Illinois Foundation
University of Maine System
University of Massachusetts
University of San Diego
West Virginia University Foundation

INSURANCE: 40

American Bankers Mutual Insurance
American Physicians Assurance Corporation
Anthem Insurance Companies, Inc
Anthem Health Plans of Kentucky, Inc
Attorneys' Liability Assurance Society
AvMed Health Plans
BETA Healthcare Group
Blue Cross Blue Shield of Kansas
Blue Cross Blue Shield of Massachusetts
Blue Cross Blue Shield of Tennessee
Capital Insurance Group
CareMore Health Plan
CCC Investment Trust
Cidel Bank & Trust Inc.
Cidel Fund Management Inc.
Commonwealth Professional Assurance Co.
Excellus Health Plan, Inc.
Fallon Community Health Plan
MAG Mutual Insurance Co.
MedAmerica Insurance Company
MedAmerica Insurance Company of Florida
MedAmerica Insurance Company of New York
MIG Assurance (Cayman) Ltd.
Mountain States Healthcare
MVP Health Plan, Inc.
Neighborhood Health Plan of Rhode Island
New Life Insurance Company
Tufts Associated Health Plans
Volunteer State Health Plan, Inc.

UNION AND TAFT HARTLEY: 22

Laborers' International Union of North America
New England Health Care Employees' Pension Fund
Pipefitters Benefit Fund
Teamsters Joint Council Pension Fund
Sheet Metal Workers Pension Fund
Social Service Employees Union Annuity Fund
Union Individual Account Retirement Fund
United Food and Commercial Workers
United Scenic Artists

ENDOWMENT, FOUNDATION, & OTHER: 51

American Insurance Association
The Boston Foundation
Bill and Melinda Gates Foundation
Central New York Community Foundation
The Charles Hayden Foundation
The Community Foundation for Greater New Haven, Inc.
Fund for New Jersey
Hartford Foundation for Public Giving
IEEE, Inc.
The McConnell Foundation
MSPCA
The Oregon Community Foundation
Queen Lili`uokalani Trust
The Rhode Island Community Foundation
The Samuel Roberts Noble Foundation
The Trustees of Reservations
Yawkey Foundation

FAITH-BASED: 26

American Bible Society
Archdiocese of Cincinnati
Campus Crusade for Christ Inc.
Catholic Relief Services
Church of the Brethren Benefit Trust
Diocese of Buffalo
Diocese of Rockville Centre
The First Church of Christ, Scientist
Knights of Columbus
Northern California Conference of Seventh-Day Adventists
The Salvation Army, Illinois
Sisters of the Precious Blood

This is a partial list of IR+M's clients as of 2/29/16. The list excludes confidential clients, private clients, and investors in private placements. It is not known whether the clients listed here approve or disapprove of IR+M or of the investment advisory services provided.

IR+M OVERVIEW INVESTMENT PROFESSIONALS

MANAGING PRINCIPALS

Jack Sommers, CFA
Managing Principal
Senior Portfolio Manager
31 years experience

Bill O'Malley, CFA
Managing Principal
Senior Portfolio Manager
28 years experience

John Sommers
Managing Principal
Senior Portfolio Manager
51 years experience

PORTFOLIO MANAGEMENT / DIRECTORS

Ed Ingalls, CFA
Senior Portfolio Manager, Principal
37 years experience

Bill O'Neill, CFA
Senior Portfolio Manager, Principal
16 years experience

Mike Sheldon, CFA
Senior Portfolio Manager, Principal
25 years experience

Paul Clifford, CFA
Senior Portfolio Manager, Principal
30 years experience

Jake Remley, CFA
Senior Portfolio Manager, Principal
15 years experience

Jim Gubitosi, CFA
Senior Portfolio Manager, Principal
12 years experience

Matt Walker, CFA
Portfolio Manager
13 years experience

Scott Pike, CFA
Portfolio Manager
19 years experience

Sarah Kilpatrick
Senior Portfolio Manager, Principal
14 years experience

Kara Maloy, CFA
Director of Credit Research
10 years experience

Allysen Mattison, CFA
Director of Investment Risk
11 years experience

ANALYSTS (23)

Analysts working on: Credit: **13** Securitized/Government: **4** Portfolio Risk: **6**

CLIENT TEAM

Molly Manning
Director of Client Service

Brooke Anderson, CFA
Senior Vice President

Jamie Gordon, CFA
Senior Vice President

Angela Meringoff, CFA
Senior Vice President

Eric Mueller, CFA
Senior Vice President

Rob Lund, CFA
Senior Vice President

Matt Drasser
Senior Vice President

Tim Boomer, FSA
Senior Vice President

Nils Hegstad, CFA
Vice President

Allison Walsh
Vice President

Katy Galford
Assistant Vice President

IR+M INCOME RESEARCH + MANAGEMENT

As of 2/29/16

INVESTMENT STRATEGY + PROCESS

IR+M INVESTMENT PHILOSOPHY

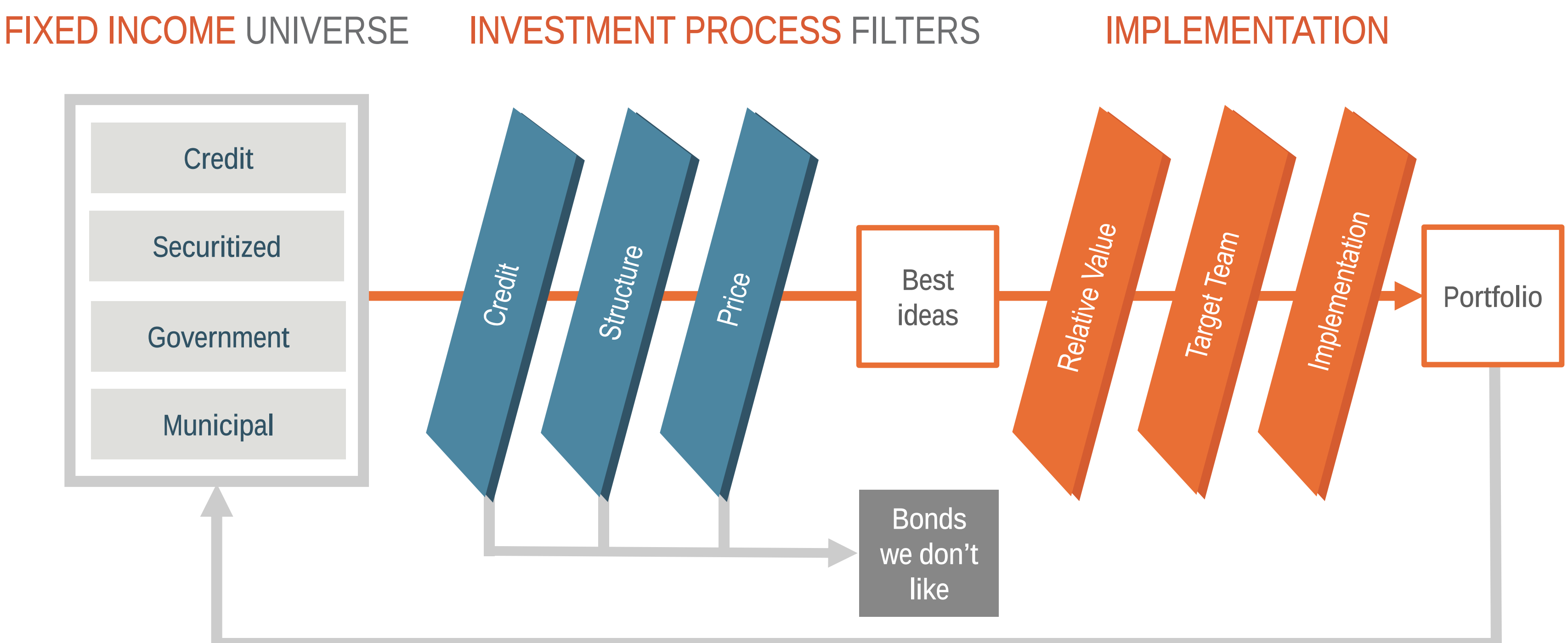
VALUE-ORIENTED APPROACH

+ Relative-value oriented, duration-neutral approach
+ Emphasize bottom-up security selection to drive sector rotation
    - Benchmark aware, not beholden
    - Take what the market gives you
+ Introduce incremental risk to portfolios when compensation is attractive

INVESTMENT PHILOSOPHY

+ Believe careful security selection and risk management provide superior results over the long term

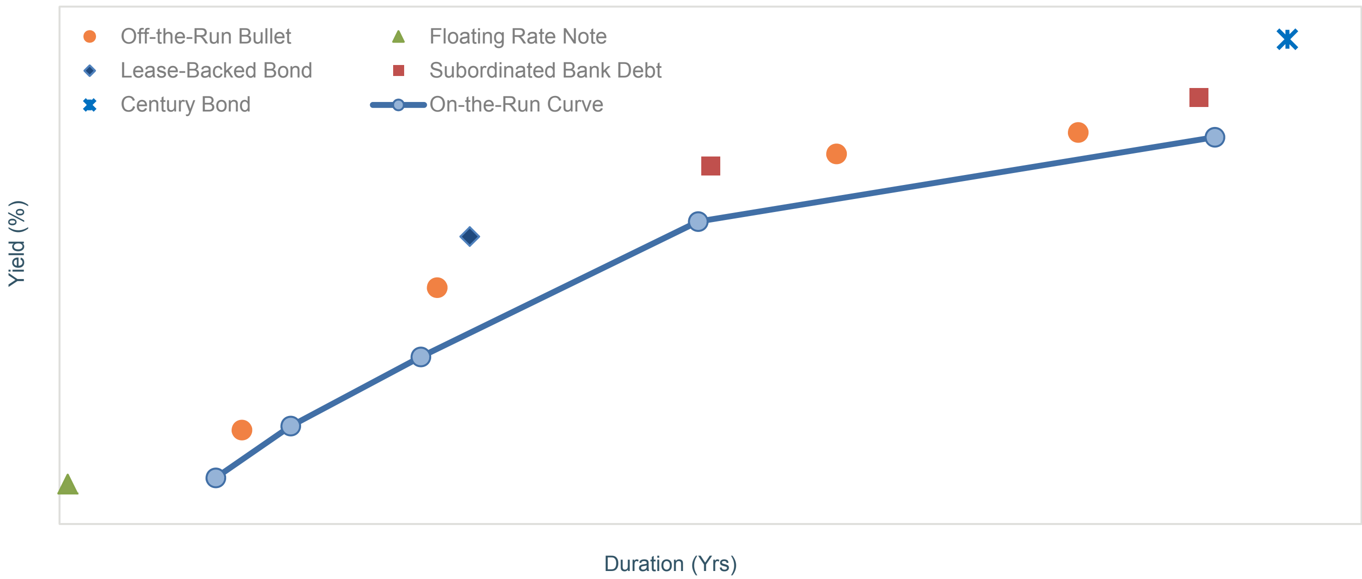
IR+M INVESTMENT PROCESS BOTTOM-UP APPROACH



VALUE-ORIENTED APPROACH

- Market complexities create overlooked bond structures/issues with attractive return profiles and favorable characteristics
- Unique structures and off-the-run points on the yield curve have potential for yield, OAS, and convexity advantages

Large Financial Company Yield Curve[1]



[1]Issuer offers 40+ index-eligible bonds and 300+ out-of-index bonds. Spread example is for illustrative purposes only. This is not a recommendation to purchase or sell any specific security. Actual results may differ.

VALUE-ORIENTED APPROACH

Agency Hybrid ARMS
- Primarily floating-rate securities
- Capture large portion of OAS
- $40bn universe provides opportunity for security selection

Agency Fixed-Rate MBS
- Specified pass-through pools, CMOs
- Provide better cash flow characteristics vs. generic TBA pools
- Strong liquidity profile

Agency Multi-Family MBS
- Agency guaranteed multi-family program
- Loan level and structural features help provide cash flow stability
- $303bn universe

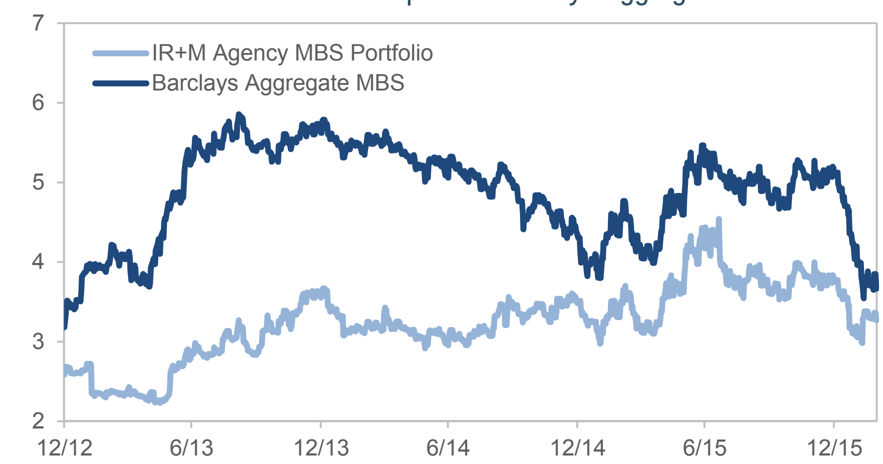
CMBS
- Preference for Super Senior securities
- Primarily seasoned holdings with attractive cash flow characteristics
- Well diversified collateral pools

ABS
- Senior cards, autos, and equipment deals
- Liquid
- Front-end yield pick-up

SBA
- 504 Loan Program
- Full faith and credit of the US Treasury
- Embedded prepayment protection

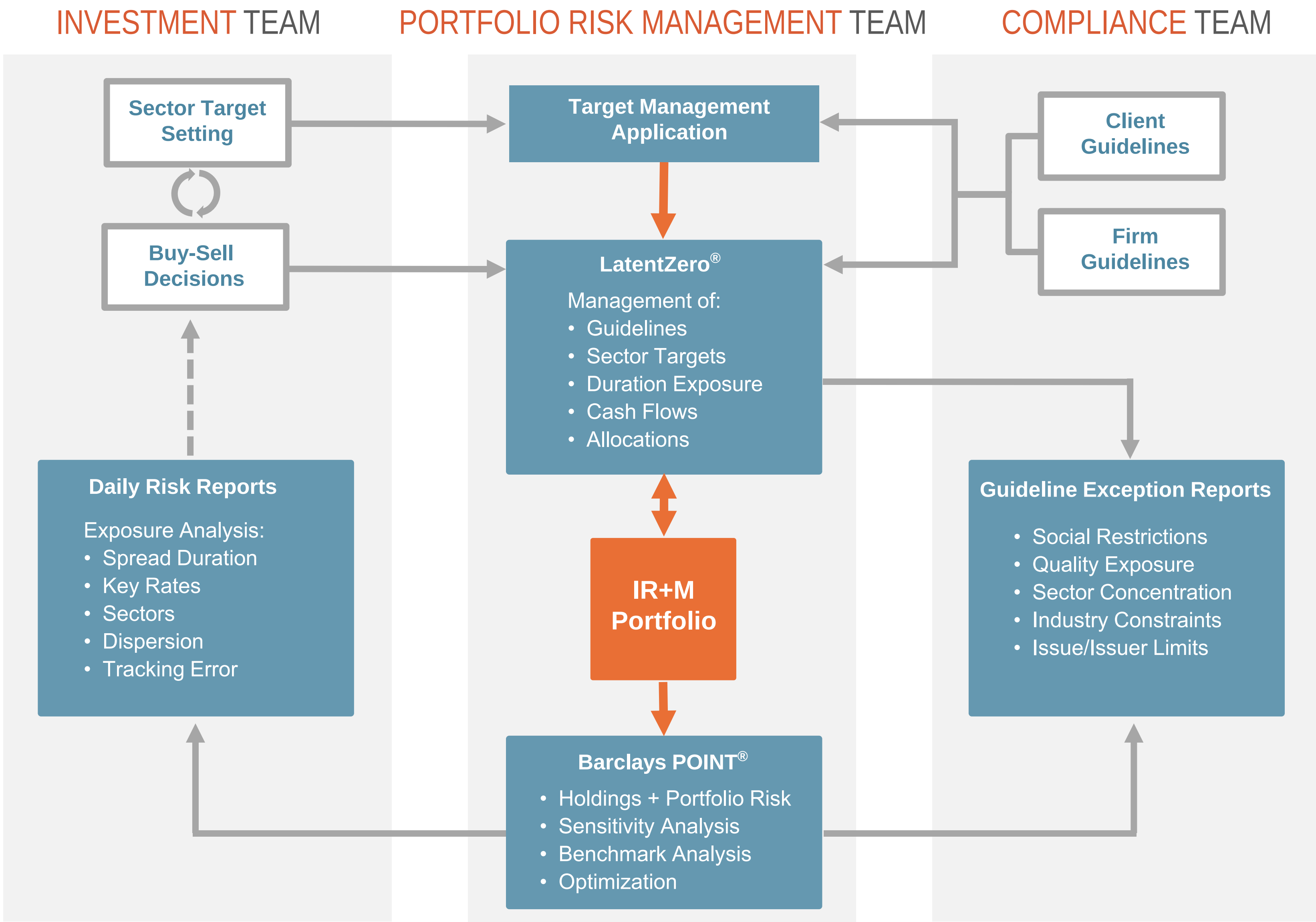
2/29/16 Characteristics	IR+M Securitized Portfolio[1]	Barclays Securitized Index
OAS (bp)	95	29
Effective Duration (yrs)	2.61	3.17
Convexity	(0.41)	(2.01)
12/31/15		
OAS (bp)	99	31
Effective Duration (yrs)	2.79	4.47
Convexity	(0.49)	(1.41)

MBS Durations: IR+M Sample[2] vs. Barclays Aggregate MBS Index



[1]Sample IR+M Securitized Portfolio as of 2/29/16. Includes Small Business Administration Bonds (SBAs).
[2]Sample IR+M Agency MBS Portfolio as of 2/29/16. Data after 1/21/15 includes an adjustment factor to account for Barclays MBS prepayment model change.
There are limitations in sample results, including the fact that such results neither represent trading nor reflect the impact that economic market factors might have had on the management of the account if the adviser had been managing an actual clients money. Actual results may differ. A similar analysis can be provided of any portfolio we manage.
Sources: Bloomberg and Barclays

IR+M INVESTMENT PROCESS PORTFOLIO RISK MANAGEMENT



INCOME RESEARCH + MANAGEMENT

STRATEGY OVERVIEW

IR+M 1-3 YEAR

IR+M 1-3 YEAR STRATEGY CHARACTERISTICS

2/29/16 Characteristics	IR+M 1-3 Yr Portfolio[1]	Barclays 1-3 Yr Tsy Index	Barclays 1-3 Yr G/C Index
Yield (%)[2]	1.70	0.80	1.20
Spread to Tsy (bp)	92	0	37
Effective Duration (yrs)	1.80	1.91	1.89
Convexity	0.05	0.05	0.01
Average Quality (M/S&P)	Aa3/AA-	Aaa/AA+	Aa1/AA

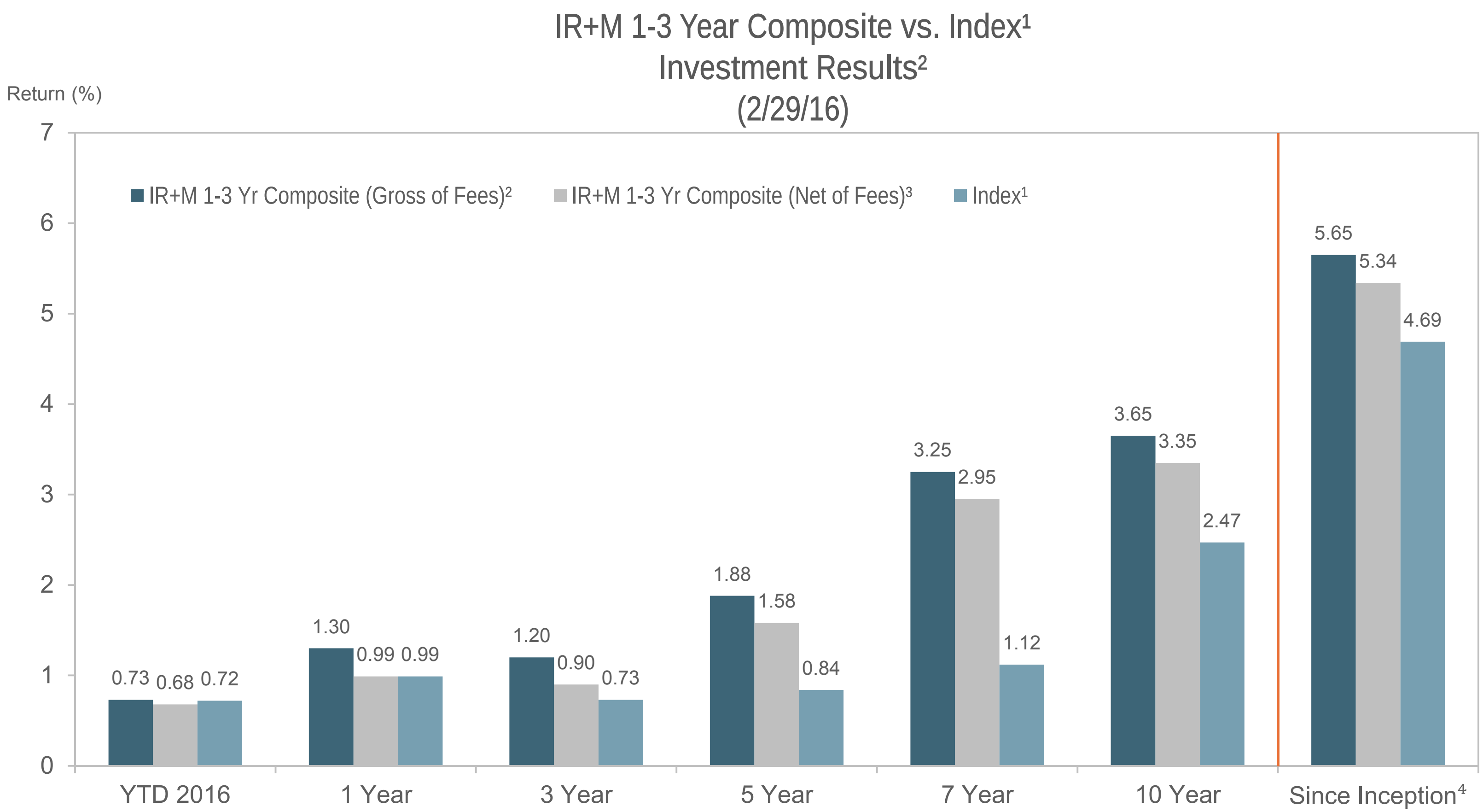
Rating Distribution (%)			
Aaa	50.1	100.0	70.8
Aa	3.4	0.0	7.0
A	24.7	0.0	11.8
Baa	21.2	0.0	10.4
Cash	0.6	0.0	0.0
Total	*100.0*	*100.0*	*100.0*

Sector Distribution (%)	IR+M 1-3 Yr Portfolio[1]	Barclays 1-3 Yr Tsy Index	Barclays 1-3 Yr G/C Index
Government	**24.0**	**100.0**	**67.8**
Treasury	22.9	100.0	60.3
Agency	0.0	0.0	7.2
Govt Guaranteed	1.1	0.0	0.3
Credit	**41.2**	**0.0**	**32.1**
Finance	19.2	0.0	10.5
Industrial	19.5	0.0	13.3
Utility	2.5	0.0	1.4
Non-Corporate	0.0	0.0	6.9
Securitized	**28.9**	**0.0**	**0.0**
RMBS	1.2	0.0	0.0
ABS	16.1	0.0	0.0
CMBS	10.8	0.0	0.0
Agency CMBS	0.8	0.0	0.0
Municipals	**5.3**	**0.0**	**0.1**
Pre-Refund	1.1	0.0	0.0
GO	0.0	0.0	0.1
Revenue	4.2	0.0	0.0
Cash	**0.6**	**0.0**	**0.0**
Total	*100.0*	*100.0*	*100.0*

[1]Representative portfolio characteristics. Some statistics require assumptions for calculations which can be disclosed upon request. A similar analysis can be provided for any portfolio we manage. The representative portfolio information is supplemental to the IR+M Composite Disclosures at the end of the presentation.
[2]Yields are represented as of the above date and are subject to change.
Source: Barclays

INCOME RESEARCH + MANAGEMENT

IR+M 1-3 YEAR STRATEGY PERFORMANCE



[1]Index is Barclays 1-3 Year Treasury Index. Prior to 1/1/13, Index was BofA Merrill Lynch 1-3 Year Treasury Index.

[2]The investment results shown do not reflect the deduction of investment advisory fees. The investment advisory fees charged by Income Research & Management are described in Part 2A of IR+M's Form ADV, which is available upon request. Actual returns will be reduced by advisory fees and any other expenses (custodial, etc.) that may be incurred in the management of an investment account. Investment management fees do have an effect on the investment results achieved by a client. For instance, on a $50 million short portfolio, an example IR+M fee might be 0.28%. A gross hypothetical return of 10.00% in a given year would be reduced to 9.72% if the client's annual investment management fee were 0.28%. Over a 5-year period of annual 10% returns, a gross return of 61.05% would be reduced to 59.01% after the deduction of investment management fees. Other strategies may have different standard fees. Total returns including realized and unrealized gains plus interest and dividends are used to calculate investment performance. Cash is included in performance calculation. All returns are expressed in US$ terms. Trade date accounting and valuation are used. Past performance is not indicative of future results. Please see additional disclosures for important composite performance information. Periods over one year are annualized.

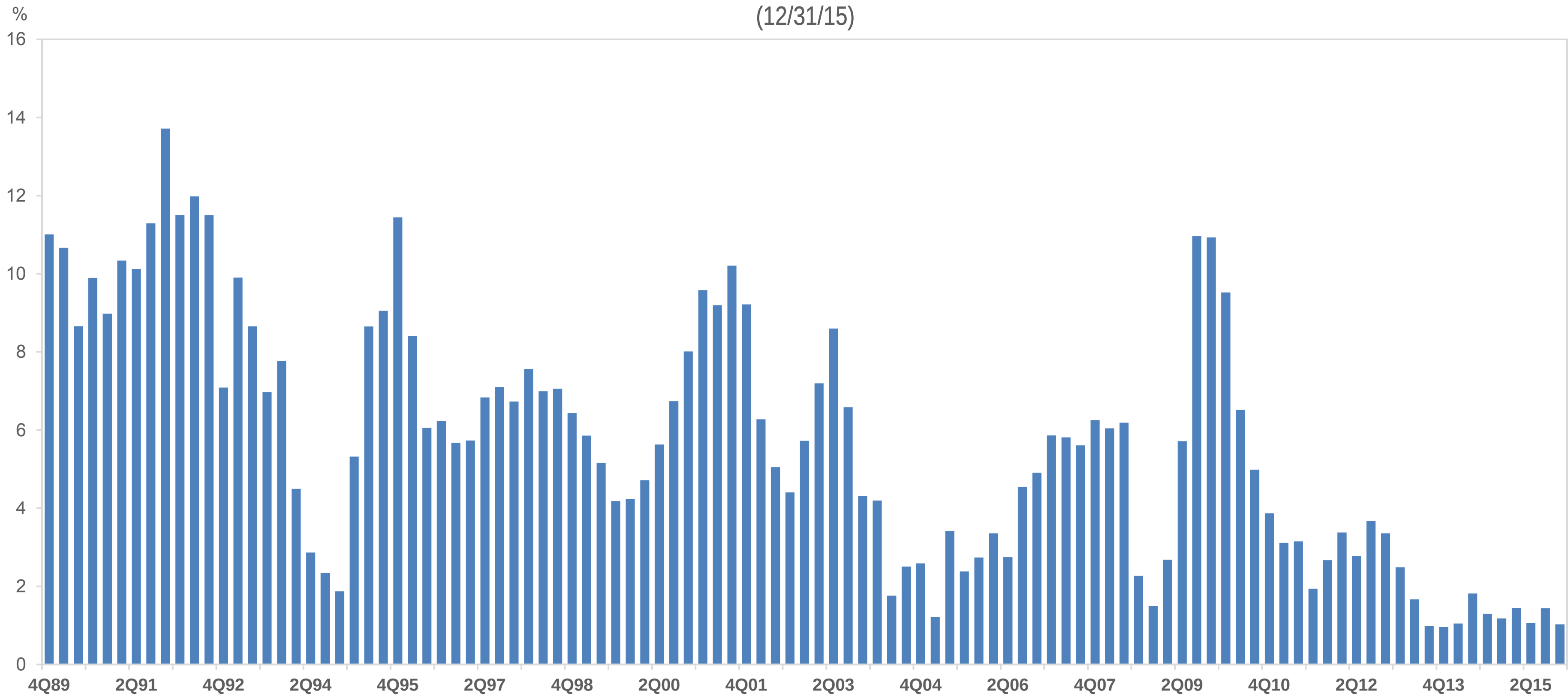
[3]IR+M's net of fee calculation is not an actual composite net of fee return and is for illustrative purposes only. Actual fees may differ. IR+M's net of fee calculation is based off of the highest breakpoint of our standard fee for this product.

[4]Inception: 12/31/88 – 2/29/16. Annualized. A similar analysis can be provided for any time period since inception.

IR+M 1-3 YEAR STRATEGY QUARTERLY RETURNS

- Since inception, during periods of rising and falling rates as well as spread movement in both directions, there have been no negative quarterly trailing 1-year returns[1]

Quarterly Trailing 1-Year Returns for the IR+M 1-3 Year Composite[2]
(12/31/15)



[1]Inception Date: 12/31/88
[2]The investment results shown do not reflect the deduction of investment advisory fees. The investment advisory fees charged by Income Research & Management are described in Part 2A of IR+M's Form ADV, which is available upon request. Actual returns will be reduced by advisory fees and any other expenses (custodial, etc.) that may be incurred in the management of an investment account. Investment management fees do have an effect on the investment results achieved by a client. For instance, on a $50 million short portfolio, an example IR+M fee might be 0.28%. A gross hypothetical return of 10.00% in a given year would be reduced to 9.72% if the client's annual investment management fee were 0.28%. Over a 5-year period of annual 10% returns, a gross return of 61.05% would be reduced to 59.01% after the deduction of investment management fees. Other strategies may have different standard fees. Total returns including realized and unrealized gains plus interest and dividends are used to calculate investment performance. Cash is included in performance calculation. All returns are expressed in US$ terms. Trade date accounting and valuation are used. Past performance is not indicative of future results. Please see additional disclosures for important composite performance information.

INCOME RESEARCH + MANAGEMENT

IR+M OVERVIEW SUMMARY

+ Unique investment strategy that leverages our size advantage
+ History of being consistent in our organization, team and process
+ Availability of senior team to partner with clients

APPENDIX

IR+M INTERMEDIATE GOVERNMENT CREDIT STRATEGY CHARACTERISTICS

2/29/16 Characteristics	IR+M Intermediate G/C Portfolio[1]	Barclays Intermediate G/C Index
Yield (%)[2]	2.52	1.76
Spread to Tsy (bp)	132	59
Effective Duration (yrs)	3.87	4.02
Convexity	0.24	0.21
Average Quality (M/S&P)	Aa3/AA-	Aa2/AA-

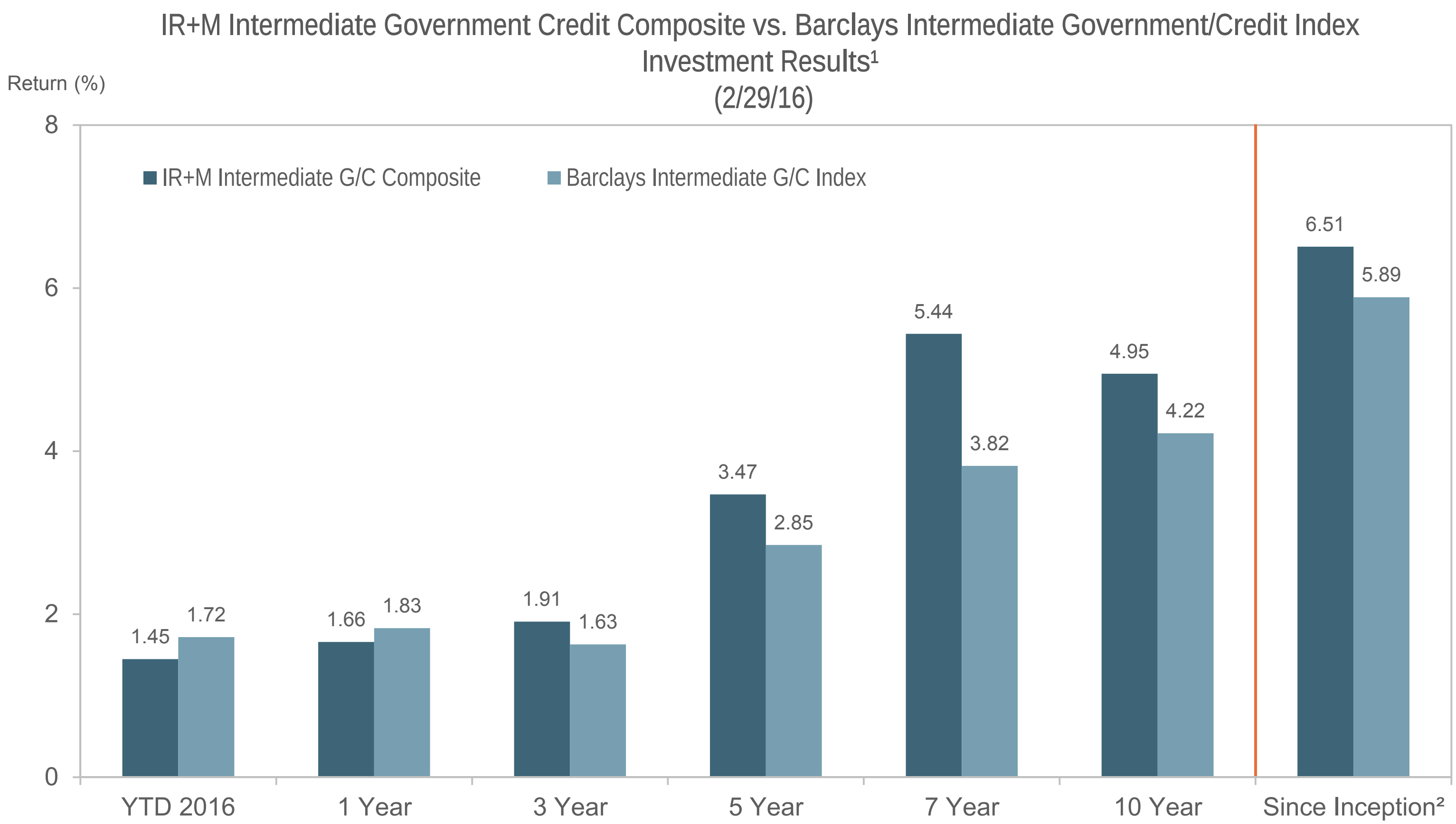
Rating Distribution (%)		
Aaa	45.4	64.7
Aa	6.2	5.7
A	22.0	13.7
Baa	25.8	15.9
Less than Baa	0.3	0.0
Cash	0.3	0.0
Total	*100.0*	*100.0*

Sector Distribution (%)	IR+M Intermediate G/C Portfolio[1]	Barclays Intermediate G/C Index
Government	**27.8**	**61.7**
Treasury	20.6	57.2
Agency	0.0	4.1
Govt Guaranteed	7.2	0.4
Credit	**48.0**	**38.1**
Finance	16.2	11.3
Industrial	27.8	18.2
Utility	1.9	1.7
Non-Corporate	2.1	6.9
Securitized	**20.3**	**0.0**
RMBS	1.1	0.0
ABS	8.7	0.0
CMBS	10.5	0.0
Municipals	**3.6**	**0.2**
GO	0.0	0.1
Revenue	3.6	0.1
Cash	**0.3**	**0.0**
Total	*100.0*	*100.0*

[1]Representative portfolio characteristics. Some statistics require assumptions for calculations which can be disclosed upon request. A similar analysis can be provided for any portfolio we manage. The representative portfolio information is supplemental to the IR+M Composite Disclosures at the end of the presentation.
[2]Yields are represented as of the above date and are subject to change.
Source: Barclays

IR+M INCOME RESEARCH + MANAGEMENT

IR+M INTERMEDIATE GOVERNMENT CREDIT STRATEGY PERFORMANCE



[1]The investment results shown do not reflect the deduction of investment advisory fees. The investment advisory fees charged by Income Research & Management are described in Part 2A of IR+M's Form ADV, which is available upon request. Actual returns will be reduced by advisory fees and any other expenses (custodial, etc.) that may be incurred in the management of an investment account. Investment management fees do have an effect on the investment results achieved by a client. For instance, on a $100 million portfolio, an example IR+M fee might be 0.28%. A gross hypothetical return of 10.00% in a given year would be reduced to 9.72% if the client's annual investment management fee were 0.28%. Over a 5-year period of annual 10% returns, a gross return of 61.05% would be reduced to 59.01% after the deduction of investment management fees. Other strategies may have different standard fees. Total returns including realized and unrealized gains plus interest and dividends are used to calculate investment performance. Cash is included in performance calculation. All returns are expressed in US$ terms. Trade date accounting and valuation are used. Past performance is not indicative of future results. Please see additional disclosures for important composite performance information. Periods over one year are annualized.

[2]Inception: 9/30/89 – 2/29/16. Annualized. A similar analysis can be provided for any time period since inception.

VALUE-ORIENTED APPROACH

Complexity and universe sizes create overlooked opportunities that can produce attractive return profiles[1]

- Diversified combination of attractive investment grade structures
- Potential for yield, OAS, and convexity advantages

	CORPORATE				SECURITIZED + AGENCIES					MUNICIPAL
	Put Bonds	Century Bonds	Step-up Coupons	Enhanced Credit Protection Bonds	Super Sr. CMBS	Seasoned Agency Pass-Throughs[2]	Agency Hybrid ARMs[3]	Agency Multi-Family MBS	Small Business Admin. Debentures (SBA)	BABs / Taxable Munis
Universe Size	$7bn	$19bn	$30bn	$200bn	$79bn	$59bn	$40bn	$303bn	$27bn	$330bn
Appeal	Cheap convexity	Extra yield and convexity	Coupon increase upon downgrade	Extra layer of credit enhancement	Yield and 30% credit enhancement	Agency credit with attractive yield and comparable liquidity to Treasuries	Agency credit with extension protection and cheap optionality	Agency credit with attractive yield and potential kicker	Full faith and credit with embedded call protection	Attractive yield with strong credit
Typical Yield Spread	+50 to +100 to bullets	+80 to +110 to 30 year bullets	Flat to bullets	+50 to +150 to similar corporates	+40 to +150 to Treasuries	+30 to +50 to Treasuries	+10 to +60 to Treasuries	+15 to +75 to Treasuries	+40 to +85 to Treasuries	Flat to +40 to similar corporates

[1]All statistics are IR+M approximations as of 2/29/16. Yield spreads are levels we target to add exposure; yields may change.
[2]Fannie and Freddie 2005 and earlier, 5% coupon 30-year maturity, Barclays Aggregate Index-eligible
[3]Barclays Aggregate Index-eligible

IR+M OVERVIEW ANALYST TEAM

CREDIT (CORPORATE)

Research

Kara Maloy, CFA
Director of Credit Research
10 years experience

Kristoff Nelson, CFA
SVP, Senior Research Analyst
8 years experience

Rob Nuccio, CFA
Senior Research Analyst
8 years experience

Luke Ferriter, CFA
Senior Research Analyst
12 years experience

Isha Chanana, CFA
Research Analyst
10 years experience

Ginny Wood, CFA
Research Analyst
6 years experience

Rachel Chong
Research Associate
5 years experience

Portfolio Risk

Nate Hollingsworth, CFA
SVP, Senior Portfolio Risk Analyst
10 years experience

Annemarie Bortey
Portfolio Risk Associate
5 years experience

Trading

Lucas Murray
SVP, Senior Trader
12 years experience

Preston Raymond, CFA
Senior Trader
11 years experience

Samantha Quinn
Trader
4 years experience

SECURITIZED/GOVERNMENT

Research

Rachel Campbell
Senior Research Analyst
10 years experience

Ralph Saturné
Research Analyst
9 years experience

Portfolio Risk

Jim Loftus
Senior Portfolio Risk Analyst
8 years experience

Mark Riordan
Portfolio Risk Associate
7 years experience

Trading

Andy Tenczar
Senior Trader
18 years experience

Mark Paulson
Senior Trader
10 years experience

CREDIT (MUNICIPAL)

Research

Wesly Pate, CFA
SVP, Senior Research Analyst
10 years experience

John Costello
Senior Research Analyst
4 years experience

Michael Bronson
Research Associate
3 years experience

Portfolio Risk

Tucker Lannon
Senior Investment Risk Analyst
11 years experience

Jeremy Holtz, CFA
Senior Portfolio Risk Analyst
10 years experience

Trading

Justin Quattrini, CFA
SVP, Senior Trader
13 years experience

As of 2/29/16

IR+M COMPOSITE DISCLOSURES – 12/31/15

1 to 3 Year Composite

January 1, 1989 through December 31, 2015

Year	Returns (%)			Number of Portfolios	Dispersion	Assets (USD, mm)	
	Gross	Net	Benchmark		(%)	Composite	Firm
1989	11.01	10.68	10.87	≤ 5	N/A	16	246
1990	8.98	8.66	9.72	≤ 5	N/A	18	286
1991	13.72	13.39	11.67	≤ 5	N/A	26	418
1992	7.09	6.77	6.30	≤ 5	N/A	40	538
1993	7.77	7.45	5.41	≤ 5	N/A	49	803
1994	1.88	1.57	0.57	≤ 5	N/A	49	957
1995	11.44	11.12	11.00	≤ 5	N/A	87	1,700
1996	5.67	5.36	4.98	≤ 5	N/A	68	1,964
1997	6.73	6.41	6.66	≤ 5	N/A	24	2,420
1998	6.44	6.12	7.00	≤ 5	N/A	21	3,041
1999	4.24	3.93	3.06	≤ 5	N/A	22	3,374
2000	8.01	7.69	8.00	≤ 5	N/A	215	3,620
2001	9.22	8.90	8.30	≤ 5	N/A	203	3,705
2002	5.73	5.41	5.76	≤ 5	N/A	291	3,847

Year	Returns (%)			Number of Portfolios	Dispersion	Assets (USD, mm)	
	Gross	Net	Benchmark		(%)	Composite	Firm
2003	4.31	4.00	1.90	≤ 5	N/A	453	5,108
2004	2.59	2.28	0.91	≤ 5	N/A	558	6,636
2005	2.74	2.43	1.67	9	0.15	524	7,480
2006	4.91	4.60	3.96	10	0.07	460	9,238
2007	6.26	5.94	7.32	13	0.10	557	11,507
2008	1.50	1.19	6.61	14	0.89	333	13,718
2009	10.96	10.62	0.79	20	1.00	661	21,252
2010	3.89	3.58	2.35	26	0.16	1,087	26,295
2011	2.66	2.36	1.55	30	0.13	1,003	30,676
2012	3.37	3.06	0.43	37	0.14	1,309	35,466
2013	0.96	0.66	0.36	33	0.33	1,406	37,224
2014	1.18	0.89	0.63	32	0.05	1,760	48,414
2015	1.03	0.73	0.56	31	0.05	1,905	54,887

IR+M's net of fee calculation is not an actual composite net of fee return and is for illustrative purposes only. Actual fees may differ.

In 2011, one portfolio with a bundled fee entered the composite. The fee paid by the client also includes custody and administration charges. The following table shows the total percentage of composite assets composed of the bundled-fee portfolio:

Year	MV of bundled fee portfolio	% of Composite Assets
2011	69,631,775	7%
2012	127,488,895	10%
2013	229,808,734	16%
2014	433,317,616	25%
2015	471,593,591	33%

The three-year annualized ex-post standard deviation of the composite and benchmark as of year end is as follows:

Year	Composite 3-Yr St Dev (%)	Benchmark 3-Yr St Dev (%)
2011	1.85	1.02
2012	0.99	0.73
2013	0.86	0.51
2014	0.76	0.44
2015	0.66	0.57

IR+M
INCOME RESEARCH + MANAGEMENT

IR+M COMPOSITE DISCLOSURES – 12/31/15 (continued)

1 to 3 Year Composite Continued

Income Research & Management ("IR+M") is an independent investment management firm with approximately $54.9 billion in assets under management. IR+M has no subsidiaries or divisions, all business is done at IR+M and all assets are managed by IR+M. A complete list of composite descriptions is available upon request. IR+M claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. IR+M has been independently verified for the period January 1, 2000 through December 31, 2014 by ACA Performance Services. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's processes and procedures are designed to calculate and present performance in compliance with the GIPS standards. Benchmark returns are not covered by the report of independent verifiers. The 1-3 Year Composite has been examined for the period January 1, 2000 through December 31, 2014. The verification and performance examination reports are available upon request.

Valuations are computed, performance is reported, and fees are based on U.S. dollars. Gross-of-fee performance returns are presented before management and custodial fees but after all trading expenses. Net-of-fees performance returns are calculated by deducting the highest fee rate from the current associated fee schedule; the fees are deducted quarterly, using one-fourth of the annual fee rate. Fees disclosed are the standard management fee for that strategy. Actual management fees may be different than those illustrated in this disclosure. Additional information regarding valuing portfolios, calculating performance and preparing compliant presentations are available upon request.

Dispersion is calculated using the equal-weighted standard deviation of all portfolios that were included in the composite for the entire year. Dispersion is not calculated for years with five or fewer portfolios in the composite for the entire year.

This composite utilizes a Significant Cash Flow Policy, which is described as follows. Prior to 1/1/10, if cash flows exceeded 5%, IR+M removed the portfolio from the composite, effective as of the last full month of management prior to the cash flow, if the impact to the performance of the composite was greater than the absolute value of 0.02%. For periods beginning 1/1/10 or later, IR+M will remove a portfolio from a composite if an external contribution or withdrawal (flow) is significant. The portfolio will be removed as of the last full month of management prior to the flow. IR+M defines a flow (either cash or securities) as significant by mandate according to the following criteria: Government mandates: No level – all portfolios left in regardless of size of flow; Corporate/Broad market/TIPS: 25% of beginning portfolio value; Convertibles/Municipals: 10% of beginning portfolio value. Portfolios will re-enter the composite according to the Entering Composites criteria detailed in the IR+M GIPS Policy Manual. Additional information regarding the treatment of significant cash flows is available on request.

Derivatives, if used in those accounts whose guidelines permit their use, are primarily engaged as hedging instruments. Interest Rate Swaps and Treasury-bond futures may be used to manage a portfolio's duration, and Credit Default Swaps may be used in strategies to isolate a particular issuer's credit risk.

The 1 to 3 Year Composite is comprised of separately managed institutional portfolios mainly invested in a diversified range of domestic, investment grade, fixed income securities. The objective of the mandate is to outperform the benchmark on a total return basis while staying within the boundaries of individual client guidelines. The securities' typical maturity range is between 1-3 years. The benchmark is the Barclays 1-3 Year Treasury Index. Prior to 1/1/13 the benchmark was the BofA Merrill Lynch 1-3 Year Treasury Index. The index was changed due to better representation of how the composite is managed. The standard management fee schedule is 0.30% on the initial $10mm, 0.25% on the next $90mm and 0.20% on amounts over $100mm. The composite was created on 12/31/88.

IR+M COMPOSITE DISCLOSURES – 12/31/15 (continued)

Intermediate Government Credit Composite

October 1, 1989 through December 31, 2015

Year	Returns (%)			Number of Portfolios	Dispersion	Assets (USD, mm)	
	Gross	Net	Benchmark		(%)	Composite	Firm
1989[1]	3.14	3.05	3.37	≤ 5	N/A	31	246
1990	8.42	8.05	9.17	≤ 5	N/A	34	286
1991	16.00	15.61	14.63	≤ 5	N/A	40	418
1992	7.90	7.53	7.17	≤ 5	N/A	57	538
1993	10.87	10.49	8.79	≤ 5	N/A	94	803
1994	(0.62)	(0.96)	(1.93)	≤ 5	N/A	144	957
1995	15.87	15.48	15.33	12	0.28	220	1,700
1996	4.84	4.48	4.05	13	0.16	259	1,964
1997	8.11	7.73	7.87	14	0.14	382	2,420
1998	7.51	7.14	8.44	15	0.13	458	3,041
1999	2.01	1.66	0.39	15	0.15	473	3,374
2000	8.44	8.07	10.12	13	0.40	431	3,620
2001	10.54	10.16	8.96	12	0.28	464	3,705
2002	8.05	7.68	9.86	9	0.40	406	3,847
2003	5.81	5.45	4.31	9	0.34	390	5,108
2004	3.96	3.60	3.04	8	0.23	647	6,636
2005	2.69	2.34	1.58	11	0.16	776	7,480
2006	4.69	4.33	4.08	11	0.14	963	9,238
2007	7.03	6.66	7.39	16	0.23	1,219	11,507
2008	0.64	0.29	5.08	23	1.37	1,299	13,718
2009	13.36	12.97	5.24	29	1.15	1,564	21,252
2010	6.64	6.27	5.89	34	0.20	1,722	26,295
2011	5.87	5.50	5.80	37	0.18	2,023	30,676
2012	6.16	5.79	3.89	42	0.36	2,509	35,466
2013	(0.57)	(0.91)	(0.86)	46	0.16	2,832	37,224
2014	3.87	3.51	3.13	50	0.12	3,427	48,414
2015	1.30	0.95	1.07	41	0.10	3,643	54,887

[1]1989 performance represents a partial year covering 10/1 through 12/31.

IR+M's net of fee calculation is not an actual composite net of fee return and is for illustrative purposes only. Actual fees may differ.

In 2010, one portfolio with a bundled fee entered the composite. The fee paid by the client also includes custody and administration charges. The following table shows the total percentage of composite assets composed of the bundled fee portfolio:

Year	MV of bundled fee portfolio	% of Composite Assets
2010	33,152,702	2%
2011	77,692,118	4%
2012	81,031,185	3%
2013	160,960,083	6%
2014	307,888,011	9%
2015	598,360,035	20%

The three-year annualized ex-post standard deviation of the composite and benchmark as of year end is as follows:

Year	Composite 3-Yr St Dev (%)	Benchmark 3-Yr St Dev (%)
2011	3.26	2.55
2012	2.10	2.16
2013	2.16	2.11
2014	2.02	1.94
2015	2.07	2.10

INCOME RESEARCH + MANAGEMENT

IR+M COMPOSITE DISCLOSURES – 12/31/15 (continued)

Intermediate Government Credit Composite Continued

Income Research & Management ("IR+M") is an independent investment management firm with approximately $54.9 billion in assets under management. IR+M has no subsidiaries or divisions, all business is done at IR+M and all assets are managed by IR+M. A complete list of composite descriptions is available upon request. IR+M claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. IR+M has been independently verified for the period January 1, 2000 through December 31, 2014 by ACA Performance Services. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's processes and procedures are designed to calculate and present performance in compliance with the GIPS standards. Benchmark returns are not covered by the report of independent verifiers. The Intermediate Government Credit Composite has been examined for the period January 1, 2000 through December 31, 2014. The verification and performance examination reports are available upon request.

Valuations are computed, performance is reported, and fees are based on U.S. dollars. Gross-of-fee performance returns are presented before management and custodial fees but after all trading expenses. Net-of-fees performance returns are calculated by deducting the highest fee rate from the current associated fee schedule; the fees are deducted quarterly, using one-fourth of the annual fee rate. Fees disclosed are the standard management fee for that strategy. Actual management fees may be different than those illustrated in this disclosure. Additional information regarding valuing portfolios, calculating performance and preparing compliant presentations are available upon request.

Dispersion is calculated using the equal-weighted standard deviation of all portfolios that were included in the composite for the entire year. Dispersion is not calculated for years with five or fewer portfolios in the composite for the entire year.

This composite utilizes a Significant Cash Flow Policy, which is described as follows. Prior to 1/1/10, if cash flows exceeded 5%, IR+M removed the portfolio from the composite, effective as of the last full month of management prior to the cash flow, if the impact to the performance of the composite was greater than the absolute value of 0.02%. For periods beginning 1/1/10 or later, IR+M will remove a portfolio from a composite if an external contribution or withdrawal (flow) is significant. The portfolio will be removed as of the last full month of management prior to the flow. IR+M defines a flow (either cash or securities) as significant by mandate according to the following criteria: Government mandates: No level – all portfolios left in regardless of size of flow; Corporate/Broad market/TIPS: 25% of beginning portfolio value; Convertibles/Municipals: 10% of beginning portfolio value. Portfolios will re-enter the composite according to the Entering Composites criteria detailed in the IR+M GIPS Policy Manual. Additional information regarding the treatment of significant cash flows is available on request.

Derivatives, if used in those accounts whose guidelines permit their use, are primarily engaged as hedging instruments. Interest Rate Swaps and Treasury-bond futures may be used to manage a portfolio's duration, and Credit Default Swaps may be used in strategies to isolate a particular issuer's credit risk.

The Intermediate Government Credit Composite is comprised of separately managed institutional portfolios mainly invested in a diversified range of domestic, investment grade, fixed income securities, with a higher allocation to Governments and Credits than our Aggregate composites. The objective of the mandate is to outperform the benchmark on a total return basis while staying within the boundaries of individual client guidelines. The securities' typical maturity range is between 3-7 years. The benchmark is the Barclays Intermediate Government/Credit Index. The standard management fee schedule is 0.35% on the initial $25mm, 0.30% on the next $25mm, 0.25% on the next $25mm, and 0.20% on amounts over $75mm. The composite was created on 9/30/89.

IR+M DISCLOSURE STATEMENT

Disclosure Statement:

The views contained in this report are those of Income Research & Management (“IR+M”) and are based on information obtained by IR+M from sources that are believed to be reliable. This report is for informational purposes only and is not intended to provide specific advice, recommendations for, or projected returns for any particular IR+M product.

Securities listed in this presentation are for illustrative purposes only and should not be considered as a recommendation to purchase or sell any of the securities listed. It should not be assumed that recommendations made in the future will be profitable or will equal the performance of the securities listed. Forward looking analyses are based on assumptions and may change anytime. Some statistics require assumptions for calculations which can be disclosed upon request.

Past performance is no guarantee of future results and current and future portfolio holdings are subject to risk. Investing in the bond market is subject to certain risks, including market, interest rate, issuer, credit, and inflation risk. It should not be assumed that the yields presented exist today or will in the future.

Ratings information from Standard & Poor's ("S&P") may not be reproduced. S&P credit ratings are statements of opinion and are not statements of fact or recommendations to purchase, hold, or sell securities, nor do they address the suitability of securities for investment purposes, and should not be relied on as investment advice. S&P does not guarantee the accuracy, completeness, timeliness or availability of any information, including ratings, and is not responsible for errors or omissions (negligent or otherwise). S&P gives no express or implied warranties, including but not limited to any warranties of merchantability or fitness for a particular purpose or use. S&P shall not be liable for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including lost income or profits and opportunity costs) in connection with any use of ratings.

NEPC, LLC

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

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

Date: April 14, 2016

Subject: Short Duration Core Bond Allocation

BACKGROUND:
On March 10th, 2016, DPFP approved a new long-term strategic Asset Allocation plan which calls for a 2% target allocation to Short Duration Core Bonds within the liquid portion of the Fixed Income portfolio. An allocation to Short Duration Core Bonds will help to stabilize portfolio returns and provide additional liquidity to the Plan. Investments in the space will primarily be investment grade securities (treasuries, agency mortgage-backed securities, etc.) but out-of benchmark securities may be added to enhance return.

Over the past month(s) NEPC and Staff have been conducting research and due diligence on potential managers to fill this mandate, including:

- The review of NEPC's Short Duration Fixed Income Focused Placement List (FPL) of preferred strategies (strategies that we expect will provide superior investment performance over time) as well as additional manager(s) that fall outside of the FPL
- Onsite, in person, or additional due diligence meetings with potential candidates

RECOMMENDATION:
After completion of the research and due diligence process, NEPC recommends that DPFP hire Income Research & Management (IR&M) to fill the 2% target allocation to Short Duration Core Bonds.

Disclosures: NEPC relationships with managers profiled in the Short Duration Fixed Income Focused Placement List (FPL) search book (separate handout from this memo)

- NEPC provides investment consulting advice to the AMG 401(k) Plan. Chicago Equity Partners is an investment manager in this plan.
- Mr. Michael Manning's wife is the Director of Client Service at Income Research & Management. Mr. Timothy O'Connell's brother is in client relations at Income Research & Management.
- T. Rowe Price Retirement Plan Services provides 401(k) record-keeping services to NEPC for a fee.

NEPC, LLC

YOU DEMAND MORE. So do we.℠

Dallas Police & Fire Pension System

Short Duration Fixed Income Manager Search

March 2016

Rhett Humphreys, CFA
Partner

Keith Stronkowsky, CFA
Senior Consultant

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Table Of Contents

Introduction and Disclosures

Short Duration Fixed Income managers primarily invest in investment grade debt securities such as Treasuries, Agency debentures, corporate bonds, Agency mortgage-backed securities, asset-backed securities and commercial mortgage-backed securities. Managers may seek to enhance returns through duration management and yield curve positioning. Managers may also invest in out-of-benchmark securities, but generally investments are risk-controlled.

Alpha is constrained in the fixed income space. Expected alpha from Short Duration Fixed Income strategies is in the area of 0.0% to 0.5%, net of fees. The expected benchmarks for this mandate would include the Barclays Capital 1-3 Year Government/Credit Index, Barclays Capital 1-3 Year Government Index, or the Barclays Capital 1-3 Year Credit Index.

NEPC's investment manager research process identifies a Focused Placement List of preferred strategies representing the strategies that we expect will provide superior investment performance over time. Our four step process used for identifying our Focused Placement List includes:

1. Universe Screening – Minimum inclusion criteria and screening are used to focus our analysis;

2. Quantitative Scoring – Proprietary quantitative analysis measuring the consistency and quality of alpha-only, net of fees returns;

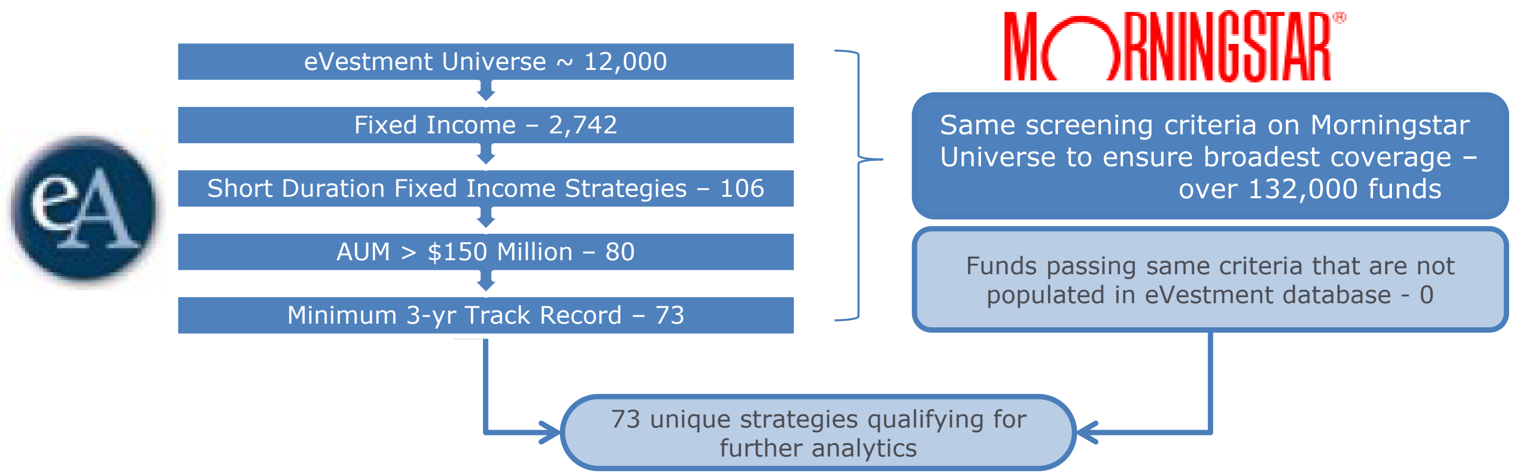
3. Qualitative Research – Rigorous qualitative analysis of a strategy's key characteristics, focusing on identification of a clear and differentiating investment thesis to develop forward-looking conviction in future performance; and

4. Peer Review – Confirmation through careful peer review of each strategy by senior investment professionals to challenge each investment thesis and raise critical business issues.

We believe that this exhaustive process leads to identification of strategies with a reasonable probability of delivering consistent, high quality investment results.

1. Universe Screening

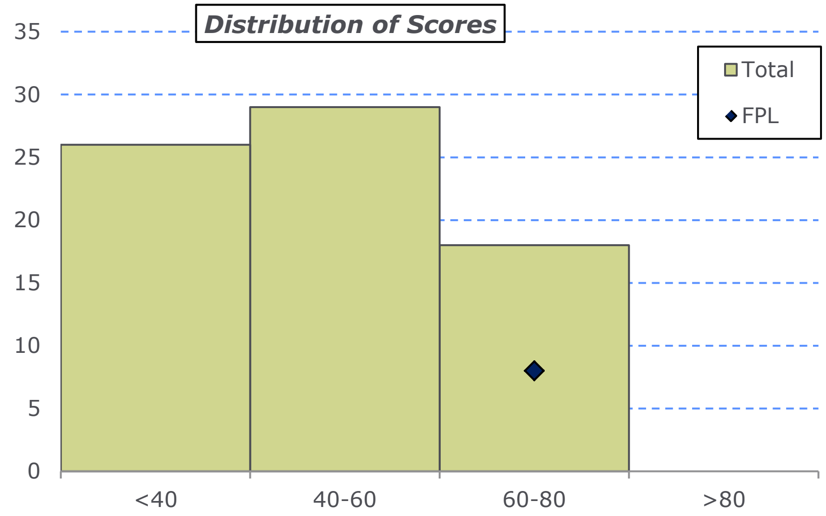
– The construction of the Focused Placement List begins with initial universe screening to identify candidates that meet acceptable criteria for further analysis.



2. Quantitative Scoring

– Strategies are scored using our proprietary Performance Analytics Statistical Software (PASS) on metrics that we believe identify investment processes expected to consistently outperform the benchmark over the long term. All analysis is based on excess manager returns, net of all fees. For Short Duration Fixed Income, strategies are scored 0-100. Scoring is weighted 80% quantitative and 20% qualitative, including the following factors:

- % of Rolling 3 Year Returns > 0%
- % of Rolling 3 Year Returns > 0.50%
- Rolling 3 Year Information Ratio
- Contrarian Indicator
- Long Term Alpha Confidence (Statistical Significance)
- Length of Track Record
- Qualitative NEPC Opinion – Firm & Team Stability, Quality of Investment Thesis



3. Qualitative Research

- Deep, qualitative research is conducted on a focused set of strategies identified through scoring and supplemented by our research teams' knowledge of strategies that appear compelling for further research.

- Our research efforts are focused on developing a deep understanding of each strategy's people, philosophy, & process, synthesizing those aspects into our interpretation of each strategy's investment thesis – the identification of a particular set of market inefficiencies and the conviction in a portfolio management team's ability to exploit those inefficiencies over the long-term, thereby, adding value over the benchmark.

- By focusing on investment thesis, our research remains forward-looking, supporting this investment view with critical knowledge of each organization, investment team, research support, investment process, performance expectations, and fees/available investment vehicles to identify strategies that we believe will provide quality excess returns above the relevant benchmark.

4. Peer Review

- The research process culminates in exhaustive peer review. The Fixed Income Advisory Group provides feedback and insight to the research team prior to vetting preferred strategies in front of senior research and consulting professionals on NEPC's Due Diligence Committee. The research team presents each Focused Placement List candidate to the Due Diligence Committee. The committee challenges both the soundness of the investment thesis (NEPC's articulation of why the strategy is expected to outperform over the long-term) and all relevant factors that might effect the long-term stability of the strategy, including business factors at the firm level. Candidates approved by the Due Diligence Committee are placed on the Focused Placement List and included in searches conducted for that asset class.

Search Candidates

The following is a list of managers under consideration for this search. The table below summarizes the products proposed for each manager.

Firm	Strategy	Comments
Short Duration Fixed Income		
Chicago Equity Partners	Short Term Fixed Income	Composite Track Record Shown
Income Research & Management	IR+M 1-3 Year	Composite Track Record Shown
Longfellow Investment Management Co.	Short Duration	Composite Track Record Shown
Merganser Capital Management, LLC	Short Term Bond	Composite Track Record Shown
PIMCO	Low Duration - Core	Composite Track Record Shown
Reams Asset Management, a Division of Scout Investments	Low Duration Fixed Income	Composite Track Record Shown
T. Rowe Price Group, Inc.	US Short-Term Bond Strategy	Composite Track Record Shown

Details regarding securities lending are available from the manager upon request.

Data Disclosure:

- The results profiled herein reflect the deduction of management fees and other expenses, except where specifically noted.
- Investment fees can have a significant effect on total returns.

NEPC Relationships:

- NEPC provides investment consulting advice to the AMG 401(k) Plan. Chicago Equity Partners is an investment manager in this plan.
- Mr. Michael Manning's wife is the Director of Client Service at Income Research & Management.
  Mr. Timothy O’Connell’s brother is in client relations at Income Research & Management.
- T. Rowe Price Retirement Plan Services provides 401(k) record-keeping services to NEPC for a fee.

Footnotes:

- Due Diligence Status:
  - NEPC has given PIMCO a *Watch* level due diligence rating due to recent organizational changes at senior management levels of the organization. Note: A *Watch* rating is given to investment managers when issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
  - Income Research & Management is 15% family-owned.

- Characteristic:
  - PIMCO does not provide the Yield To Worst characteristic.

- Proposed Vehicle:
  - T. Rowe is willing to create a daily-priced commingled trust fund for this client at or below the I-Class expense ratio.

- Firm Ownership:
  - “PIMCO is a limited liability company that is a majority owned subsidiary of Allianz Asset Management (“AAM”), which is a subsidiary of Allianz SE (“Allianz”). The allocations to the 'Equity Ownership' section have not been populated because PIMCO does not report this information.”

Firm and Product Summary

The following pages address portfolio-specific characteristics.

- **Firm and Product Summaries:**
  - On these pages, several portfolio characteristics are listed. The data here should match what you may already know about the manager: do they have the staff to research this many ideas? How large is their trading staff if portfolio turnover is significant? How do they define their universe?

Firm and Product Summary

Firm/Product	Firm/Team Comments	Investment Style/Strategy	Performance Expectations	Portfolio Positioning	Other Comments
Short Duration Fixed Income					
Chicago Equity - Short Fixed Income	Team was formed by three professionals from Loomis Sayles' former Chicago based FI team	Strategy is averse to security specific risk, but may be aggressive in sector positions. Overall very high quality, conservative strategy	Should outperform during periods of volatility and high systemic risk	Short-term liquidity	A sizeable Taft-Hartley client base
Income Research - IR+M 1-3 Year	IR&M is a boutique firm specializing only in investment grade fixed income	Portfolios will focus on income maximization and positive convexity characteristics with a focus on securitized and corporate bond subsectors	Expect good performance in most market environments, with potential to lag slightly during credit bear markets	Short-term liquidity	
Longfellow - Short Duration	Firm is 100% employee owned with ownership split amongst eight Principals	Asset-Backed Securities are key to this strategy. Particularly more esoteric sectors such as Tax Liens and equipment receivables	Expect the strategy to lag during periods of spread widening	Short-term liquidity	
Merganser - Short Term Bond	In 2013, Merganser was purchased by Providence Equity Partners	Merganser’s strategy is focused on asset-backed segments of the bond market, including esoteric sectors such as equipment leases, and receivables	Strategy will likely lag during periods of spread widening	Short-term liquidity	
PIMCO - Low Duration - Core	PIMCO has an impressive team of professionals, and a sophisticated approach to risk controls	PIMCO's approach is mostly top-down oriented, with capital efficiency achieved through the use of derivatives	Expected return to be generated through PIMCO's interest rate strategies, curve strategies and less from corporate bonds	Short-term liquidity	A good compliment for a credit-oriented manager
Reams - Low Duration	Firm was acquired by Scout Investment Advisors in 2010 and was previously employee owned	Strategy focuses on overweighting spread sectors through most market cycles, but also has flexibility in setting duration and yield curve positions	CMBS has contributed to the recent high tracking error of the strategy, but also to the impressive returns	Short-term liquidity	Probably the most aggressive manager on the list in terms of spread sector investments

Firm and Product Summary

Firm/Product	Firm/Team Comments	Investment Style/Strategy	Performance Expectations	Portfolio Positioning	Other Comments
Short Duration Fixed Income					
T. Rowe - Short Term Bond	T. Rowe Price is a publicly listed corporation, with 15% of firm equity held by employees	T. Rowe Price’s strategy typically overweights corporate credit, earning a higher yield than the index over time	Due to credit bias, strategy will likely lag during spread widening	Short-term liquidity	

NEPC Investment Thesis

Firm/Product	NEPC Investment Thesis
Short Duration Fixed Income	
Chicago Equity - Short Fixed Income	Chicago Equity Partners structures portfolios to profit from high probability events such as fundamentals improving/worsening in corporate bonds, extreme shifts in the yield curve, and by generally avoiding lower-yielding segments of the market such as Treasuries. Portfolios will not take a lot of security-specific risk, but rather will try to identify securities that will perform predictably given the macro-economic views that drive sector returns.
Income Research - IR+M 1-3 Year	IR+M is a bottom-up value manager with a skill set in the credit and securitized bond sectors of the market. IR+M exploits overlooked opportunities in complex and often overlooked sub-sectors, leading to portfolios that benefit from an income bias and positive convexity relative to the index. Their expected alpha is sourced in their understanding and ability to identify mispricings in bond markets as well as their expertise in the analysis of esoteric securities, such as put bonds, pre-payable CMBS bonds, hybrid ARMS, municipals, century bonds and convertible bonds.
Longfellow - Short Duration	LIM views the fixed income markets as highly segmented in terms of the types of buyers and objectives of participants. Individual securities ideas, trading ideas, and relative value ideas are often generated from the team trading with restricted buyers, insurance, regulated, or other participants that may not be economically, but rather rule driven in their transactions. LIM's relatively small size and focus on esoteric ABS sectors of the market also provides a source of excess return and over time has contributed to alpha.
Merganser - Short Term Bond	Merganser adds value to client portfolios by investing in under-researched, or under-covered segments of the bond market, particularly in ABS sectors. The firm's small size is an advantage in purchasing smaller-issue securities and an advantage in pricing. The strategy will overweight spread sectors of the bond market, capturing the higher yield provided.
PIMCO - Low Duration - Core	PIMCO gathers and analyzes information on economic and market trends, develops a long-term secular view and applies this to their portfolios. Input from internal talent as well as prominent figures in academia and the government factor into their investment process. The source of their expected alpha is their well-informed long-term secular outlook, the periodic refinements of short-term views, their ability to capture the benefits associated with the size and depth of their organization, and their global reach and influence within the fixed income markets.
Reams - Low Duration	We expect Reams to add value to client portfolios through their disciplined rotation into and out of spread sectors of the marketplace, the conviction level in which they implement active positions, and by avoiding unproven securities and structures. A key part of their investment process that guides sector allocation is the analysis of price volatility in fixed income securities, the macro-economic environment and long term valuations. The utilization of scenario analysis, stressing securities for different interest rate and credit environments, is also a key part of their investment process that has distinguished the approach from competitors.

Firm/Product	NEPC Investment Thesis
Short Duration Fixed Income	
T. Rowe - Short Term Bond	We expect T. Rowe Price to outperform the index through security selection and expertise in the corporate bond segment of the market. T. Rowe Price's corporate credit team has historically contributed positively to excess return. The strategy will overweight corporate bonds, and even overweight BBB rated issues through most cycles, capturing the higher yield available in such securities.

Firm Comparison Summary

Firm Name	Location	Year Firm Founded	Total Assets Under Mgmt ($MM)	% Employee Owned	% Parent Owned	Parent Company Name	% Publicly Held	% Other Ownership
Short Duration Fixed Income								
Chicago Equity Partners	Chicago, Illinois	1989	9,777	41	59	Affiliated Managers Group	0	0
Income Research & Management	Boston, Massachusetts	1987	54,890	85	0	NA	0	15
Longfellow Investment Management Co.	Boston, Massachusetts	1986	7,747	100	0	NA	0	0
Merganser Capital Management, LLC	Boston, Massachusetts	1984	9,672	0	100	Providence Equity Partners, LLC.	0	0
PIMCO	Newport Beach, California	1971	1,435,042	0	0	NA	0	0
Reams Asset Management, a Division of Scout Investments	Columbus, Indiana	1981	27,185	0	100	UMB Financial Corporation	0	0
T. Rowe Price Group, Inc.	Baltimore, Maryland	1937	763,100	16	0	NA	84	0

Firm Comparison Summary

Firm Name	Registered Investment Advisor	GIPS Compliant	Past or Pending Litigation	Firm uses Placement Agent
Short Duration Fixed Income				
Chicago Equity Partners	Yes	Yes	No	No
Income Research & Management	Yes	Yes	Yes	No
Longfellow Investment Management Co.	Yes	Yes	No	No
Merganser Capital Management, LLC	Yes	Yes	No	No
PIMCO	Yes	Yes	Yes	No
Reams Asset Management, a Division of Scout Investments	Yes	Yes	No	No
T. Rowe Price Group, Inc.	Yes	Yes	Yes	No

Product Comparison

Firm/Product	Inception Date	AUM ($MM)	# of Portfolio Managers	# of Research Analysts	# of Traders
Short Duration Fixed Income					
Chicago Equity - Short Fixed Income	1997	553	4	10	1
Income Research - IR+M 1-3 Year	1988	2,122	14	19	6
Longfellow - Short Duration	1986	1,622	6	8	1
Merganser - Short Term Bond	1987	5,652	4	6	1
PIMCO - Low Duration - Core	1989	14,617	251	125	0
Reams - Low Duration	2002	3,992	5	6	0
T. Rowe - Short Term Bond	1990	10,323	2	81	37

Product Comparison

Firm/Product	Vehicle Proposed	Liquidity In	Liquidity Out	Reported Fee for $50.00 mm	Reported Fee in (bps)
Short Duration Fixed Income					
Chicago Equity - Short Fixed Income	Separate Account	Daily	Daily	87,500.00	18
Income Research - IR+M 1-3 Year	Separate Account	Daily	Daily	125,000.00	25
Longfellow - Short Duration	Separate Account	Daily	Daily	125,000.00	25
Merganser - Short Term Bond	Separate Account Commingled Fund	Daily Daily	Daily Daily	100,000.00 100,000.00	20 20
PIMCO - Low Duration - Core	Mutual Fund	Daily	Daily	250,000.00	50
Reams - Low Duration	Separate Account Mutual Fund	Daily Daily	Daily Daily	100,000.00 200,000.00	20 40
T. Rowe - Short Term Bond	*Commingled Fund Mutual Fund	Daily Daily	Daily Daily	205,000.00 260,000.00	41 52

*Unfunded: See Disclosures

Product Comparison

Firm/Product	PRI Signatory (Y/N)	Strategy is Managed with ESG Considerations (Y/N)
Short Duration Fixed Income		
Chicago Equity - Short Fixed Income	No	NA
Income Research - IR+M 1-3 Year	Yes	No
Longfellow - Short Duration	Yes	Yes
Merganser - Short Term Bond	No	Yes
PIMCO - Low Duration - Core	Yes	No
Reams - Low Duration	No	No
T. Rowe - Short Term Bond	Yes	No

Product Comparison

Firm/Product	Internal ESG Research Utilized (Y/N)	Third Party ESG Research Utilized (Y/N)	Manager Explanation of Research Methodologies Used
Short Duration Fixed Income			
Chicago Equity - Short Fixed Income	No	No	NA
Income Research - IR+M 1-3 Year	No	No	NA
Longfellow - Short Duration	Yes	Yes	LIM uses a combination of internal research as well as external information available through sustainability reports and Bloomberg.
Merganser - Short Term Bond	Yes	Yes	Merganser evaluates corporates through Credit Research.
PIMCO - Low Duration - Core	Yes	Yes	PIMCO relies on clients' lists of prohibited issuers, and on research that identifies additional investments that might not be suitable. Issuers of restricted securities are coded into our in-house compliance system, and portfolio managers, account managers and our compliance team closely monitor accounts to ensure compliance.
Reams - Low Duration	No	Yes	Screening lists provided by clients and/or the Bloomberg Compliance Module
T. Rowe - Short Term Bond	No	No	NA

Fixed Income Comparison

Firm/Product	Duration Emphasis	Weighted Average Coupon (%)	Yield to Maturity (%)	Average Maturity (Years)	Duration (Years)	Average Quality	Minimum Quality
Short Duration Fixed Income							
Chicago Equity - Short Fixed Income	Short	1.0	1.1	1.86	1.84	AAA	BBB
Income Research - IR+M 1-3 Year	Short	2.6	1.9	1.88	1.81	AA	BBB
Longfellow - Short Duration	Short	2.9	1.8	1.72	1.57	AA	BBB
Merganser - Short Term Bond	Short	2.5	1.9	1.95	1.65	AA	BBB
PIMCO - Low Duration - Core	Short	2.2	2.7	2.12	NA	AA	B
Reams - Low Duration	Short	2.1	1.9	1.98	1.80	AA	B
T. Rowe - Short Term Bond	Short	2.4	2.2	2.33	NA	AA	BBB

Fixed Income Comparison

Firm/Product	# of Issues	Current Cash (%)	Annual Turnover (%)	Yield to Worst (%)
Short Duration Fixed Income				
Chicago Equity - Short Fixed Income	40	0.8	71.7	1.1
Income Research - IR+M 1-3 Year	121	0.4	68.5	1.9
Longfellow - Short Duration	140	3.5	31.0	1.8
Merganser - Short Term Bond	213	0.9	40.7	1.9
PIMCO - Low Duration - Core	100	15.0	45.0	NA
Reams - Low Duration	155	1.8	29.4	1.9
T. Rowe - Short Term Bond	757	1.9	40.7	2.2

Current Quality Allocations

Firm/Product	AAA/Aaa (%)	AA/Aa (%)	A (%)	BBB/Baa (%)	BB/Ba (%)	B (%)	CCC/Caa and Below (%)	Other (%)
Short Duration Fixed Income								
Chicago Equity - Short Fixed Income	91.0	1.9	6.6	0.5	0.0	0.0	0.0	0.0
Income Research - IR+M 1-3 Year	51.3	4.5	22.4	21.9	0.0	0.0	0.0	0.0
Longfellow - Short Duration	59.9	10.9	18.7	10.4	0.1	0.0	0.0	0.0
Merganser - Short Term Bond	58.3	9.6	18.2	13.8	0.0	0.0	0.0	0.0
PIMCO - Low Duration - Core	37.0	19.0	42.0	1.0	1.0	0.0	0.0	0.0
Reams - Low Duration	56.3	2.3	19.6	19.0	2.4	0.2	0.0	0.0
T. Rowe - Short Term Bond	48.8	5.8	15.0	27.5	2.7	0.0	0.0	0.0

Benchmark								
Barclays US 1-3 Yr Govt/Credit	71.5	6.9	11.4	10.2	0.0	0.0	0.0	0.0

Current Duration

Firm/Product	Duration <1 Yr (%)	Duration 1-3 Yrs (%)	Duration 3-5 Yrs (%)	Duration 5-7 Yrs (%)	Duration 7-10 Yrs (%)	Duration 10-20 Yrs (%)	Duration >20 Yrs (%)
Short Duration Fixed Income							
Chicago Equity - Short Fixed Income	4.7	95.3	0.0	0.0	0.0	0.0	0.0
Income Research - IR+M 1-3 Year	21.5	75.9	2.7	0.0	0.0	0.0	0.0
Longfellow - Short Duration	30.3	65.1	4.6	0.0	0.0	0.0	0.0
Merganser - Short Term Bond	27.4	63.7	8.9	0.0	0.0	0.0	0.0
PIMCO - Low Duration - Core	-11.0	89.0	35.0	2.0	-19.0	4.0	0.0
Reams - Low Duration	22.7	65.0	11.9	0.4	0.0	0.0	0.0
T. Rowe - Short Term Bond	25.1	58.4	15.0	1.5	0.0	0.0	0.0
Benchmark							
Barclays US 1-3 Yr Govt/Credit	0.5	99.5	0.0	0.0	0.0	0.0	0.0

Fixed Income Sector Allocations

Firm/Product	US Govts/ Agencies (%)	US Inv. Grade Corps (%)	US High Yield (%)	Municipals (%)	Convertibles (%)	US Agency Securitized (%)	US Non-Agency Securitized (%)	Other Sec (%)
Short Duration Fixed Income								
Chicago Equity - Short Fixed Income	89.7	9.6	0.0	0.0	0.0	0.0	0.0	0.7
Income Research - IR+M 1-3 Year	36.8	44.8	0.0	4.8	0.0	0.0	13.5	0.0
Longfellow - Short Duration	29.3	30.0	0.0	4.5	0.0	3.9	27.8	4.6
Merganser - Short Term Bond	13.2	34.9	0.0	0.0	0.0	6.9	45.0	0.0
PIMCO - Low Duration - Core	5.5	45.8	0.0	2.1	0.0	22.1	9.6	15.0
Reams - Low Duration	17.0	42.3	2.0	0.0	0.0	25.6	13.1	0.0

Benchmark								
Barclays US 1-3 Yr Govt/Credit	75.6	24.4	0.0	0.0	0.0	0.0	0.0	0.0

Fixed Income Sector Allocations

Firm/Product	US Govts/ Agencies (%)	US Inv. Grade Corps (%)	US High Yield (%)	Municipals (%)	Convertibles (%)	US Agency Securitized (%)	US Non-Agency Securitized (%)	Other Sec (%)
Short Duration Fixed Income								
T. Rowe - Short Term Bond	9.7	43.4	2.7	0.4	0.0	11.2	31.7	0.9

Benchmark								
Barclays US 1-3 Yr Govt/Credit	75.6	24.4	0.0	0.0	0.0	0.0	0.0	0.0

Performance

The following performance charts show the historical record for the strategies under consideration. To manage client portfolios, each manager has a range of offerings (separate accounts, commingled funds or mutual funds) that allow all types of clients access to the strategy at reasonable prices.

Trailing Period Returns and Calendar Year Returns:

These pages highlight a manager's performance for quarter, year to date, 1, 3, 5, 7 & 10 year periods as well as calendar year returns.

Performance Summary:

These pages highlight a manager's excess performance over various periods. All managers are also shown from the inception of the shortest record referred to as LCD or Least Common Denominator.

Return Histogram:

These charts display the frequency of a manager's monthly excess performance data.

Rolling One Year and Three Year Excess Returns:

These charts demonstrate the manager's demonstrated relative performance versus the benchmark over time. Using each manager's one year return and subtracting the one year benchmark return shows how each manager has performed relative to the relevant benchmark. The same method is used for the three year charts.

Rolling One Year and Three Year Excess Return Versus Benchmark:

These charts demonstrate the manager's demonstrated relative performance behavior over up and down equity markets. The charts are displayed in order of benchmark performance along the X-Axis rather than chronological order. By looking at the Y-Coordinate you can determine whether or not the manager added or detracted value versus the benchmark over that one year period. Each dot represents the one year excess return versus the relevant benchmark. The same method is used for the three year charts.

Risk/Return Performance Charts:

These charts show the risk and return of the candidates and indicies for 3, 5, 7 & 10 year periods.

Trailing Period Returns - (Net of Fees)

	Benchmark	Qtr	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
Short Duration Fixed Income								
Chicago Equity - Short Fixed Income	1	-0.5%	0.4%	0.4%	0.3%	0.7%	1.6%	2.9%
Income Research - IR+M 1-3 Year	1	-0.3%	0.8%	0.8%	0.8%	1.6%	3.1%	3.4%
Longfellow - Short Duration	1	-0.2%	0.8%	0.8%	0.8%	1.3%	2.3%	3.1%
Merganser - Short Term Bond	1	-0.3%	0.8%	0.8%	0.8%	1.4%	2.7%	3.2%
PIMCO - Low Duration - Core	1	0.3%	0.4%	0.4%	0.4%	1.7%	3.1%	3.3%
Reams - Low Duration	1	-0.4%	0.7%	0.7%	1.0%	2.1%	4.1%	4.2%
T. Rowe - Short Term Bond	1	-0.3%	0.7%	0.7%	0.8%	1.5%	2.8%	3.2%

Actual Index Return

	Qtr	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
1 Barclays US 1-3 Yr Govt/Credit	-0.4%	0.7%	0.7%	0.7%	1.0%	1.6%	2.7%
2 Barclays US Aggregate	-0.6%	0.6%	0.6%	1.4%	3.2%	4.1%	4.5%

Calendar Year Returns - (Net of Fees)

	Benchmark	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Short Duration Fixed Income											
Chicago Equity - Short Fixed Income	1	0.4%	0.4%	0.0%	0.8%	1.9%	2.9%	4.6%	6.6%	7.0%	4.4%
Income Research - IR+M 1-3 Year	1	0.8%	0.9%	0.7%	3.1%	2.4%	3.6%	10.6%	1.3%	6.0%	4.7%
Longfellow - Short Duration	1	0.8%	1.0%	0.6%	2.0%	2.1%	3.4%	6.5%	3.5%	6.8%	4.9%
Merganser - Short Term Bond	1	0.8%	1.0%	0.6%	2.6%	2.1%	3.9%	8.4%	2.5%	5.6%	4.6%
PIMCO - Low Duration - Core	1	0.4%	0.7%	0.1%	4.3%	3.2%	3.7%	9.6%	0.1%	7.5%	3.6%
Reams - Low Duration	1	0.7%	1.2%	1.2%	5.0%	2.5%	5.0%	13.9%	1.4%	7.0%	4.7%
T. Rowe - Short Term Bond	1	0.7%	1.0%	0.6%	3.2%	1.8%	3.5%	9.3%	1.6%	5.8%	4.7%

Actual Index Return

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
1 Barclays US 1-3 Yr Govt/Credit	0.7%	0.8%	0.6%	1.3%	1.6%	2.8%	3.8%	5.0%	6.8%	4.3%
2 Barclays US Aggregate	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%	4.3%

Calendar Year Excess Returns - (Net of Fees)

	Benchmark	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Short Duration Fixed Income											
Chicago Equity - Short Fixed Income	1	-0.2%	-0.3%	-0.7%	-0.5%	0.3%	0.1%	0.8%	1.7%	0.1%	0.2%
Income Research - IR+M 1-3 Year	1	0.1%	0.2%	0.1%	1.8%	0.8%	0.8%	6.8%	-3.7%	-0.8%	0.4%
Longfellow - Short Duration	1	0.1%	0.2%	-0.1%	0.8%	0.5%	0.6%	2.7%	-1.5%	0.0%	0.7%
Merganser - Short Term Bond	1	0.2%	0.2%	-0.1%	1.3%	0.6%	1.1%	4.6%	-2.5%	-1.2%	0.4%
PIMCO - Low Duration - Core	1	-0.2%	0.0%	-0.6%	3.0%	1.6%	0.9%	5.8%	-4.9%	0.6%	-0.6%
Reams - Low Duration	1	0.1%	0.4%	0.5%	3.7%	0.9%	2.2%	10.0%	-3.5%	0.2%	0.4%
T. Rowe - Short Term Bond	1	0.1%	0.2%	0.0%	1.9%	0.2%	0.7%	5.5%	-3.4%	-1.0%	0.4%

Actual Index Return

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
1 Barclays US 1-3 Yr Govt/Credit	0.7%	0.8%	0.6%	1.3%	1.6%	2.8%	3.8%	5.0%	6.8%	4.3%
2 Barclays US Aggregate	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%	4.3%

Manager Excess Return: > 3%, between 0% and 3%, between -0% and -3%, < -3%

Excess Returns Performance Summary - (Net of Fees)

	Primary Benchmark	# of Months (Track Record)	% Positive (Mo.)	High (Mo.)	Low (Mo.)	Average (Mo.)	% > 0.5%	Rolling 1 Yr. Rtr.		Rolling 3 Yr. Rtr.	
								> 0%	> 3%	> 0%	> 3%
Short Duration Fixed Income											
Chicago Equity - Short Fixed Income	Barclays US 1-3 Yr Govt/Credit	224	44%	0.8%	(0.3%)	0.0%	0%	58%	0%	59%	0%
Income Research - IR+M 1-3 Year	Barclays US 1-3 Yr Govt/Credit	183	69%	1.5%	(1.8%)	0.0%	5%	78%	5%	89%	0%
Longfellow - Short Duration	Barclays US 1-3 Yr Govt/Credit	240	58%	0.4%	(1.2%)	0.0%	0%	73%	0%	78%	0%
Merganser - Short Term Bond	Barclays US 1-3 Yr Govt/Credit	240	65%	0.9%	(0.8%)	0.0%	2%	72%	3%	83%	0%
PIMCO - Low Duration - Core	Barclays US 1-3 Yr Govt/Credit	240	61%	1.5%	(3.2%)	0.0%	6%	56%	7%	61%	1%
Reams - Low Duration	Barclays US 1-3 Yr Govt/Credit	162	67%	2.0%	(1.7%)	0.1%	7%	87%	13%	93%	13%
T. Rowe - Short Term Bond	Barclays US 1-3 Yr Govt/Credit	192	64%	1.0%	(2.2%)	0.0%	3%	73%	4%	87%	0%

Excess Returns Performance Summary - (Net of Fees)

	# of Months (Track Record)	Excess Return					Tracking Error				Information Ratio				Beta vs. Primary Benchmark
		1 Yr.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	
Short Duration Fixed Income															
Chicago Equity - Short Fixed Income	224	(0.2%)	(0.4%)	(0.3%)	(0.1%)	0.1%	0.1%	0.2%	0.3%	0.4%	(2.75)	(1.41)	(0.25)	0.34	1.08
Income Research - IR+M 1-3 Year	183	0.1%	0.1%	0.6%	1.5%	0.6%	0.2%	0.4%	0.9%	1.3%	0.52	1.53	1.61	0.50	0.85
Longfellow - Short Duration	240	0.1%	0.1%	0.3%	0.7%	0.4%	0.2%	0.2%	0.3%	0.6%	0.50	1.41	2.03	0.67	0.91
Merganser - Short Term Bond	240	0.2%	0.1%	0.4%	1.1%	0.4%	0.3%	0.3%	0.6%	0.9%	0.43	1.29	1.75	0.50	0.94
PIMCO - Low Duration - Core	240	(0.2%)	(0.3%)	0.7%	1.4%	0.5%	1.1%	1.0%	1.3%	1.9%	(0.25)	0.71	1.07	0.27	1.21
Reams - Low Duration	162	0.1%	0.3%	1.1%	2.5%	1.4%	0.4%	0.8%	1.5%	1.6%	0.83	1.49	1.71	0.92	1.21
T. Rowe - Short Term Bond	192	0.1%	0.1%	0.5%	1.2%	0.4%	0.4%	0.5%	0.7%	1.1%	0.26	1.00	1.64	0.42	0.97

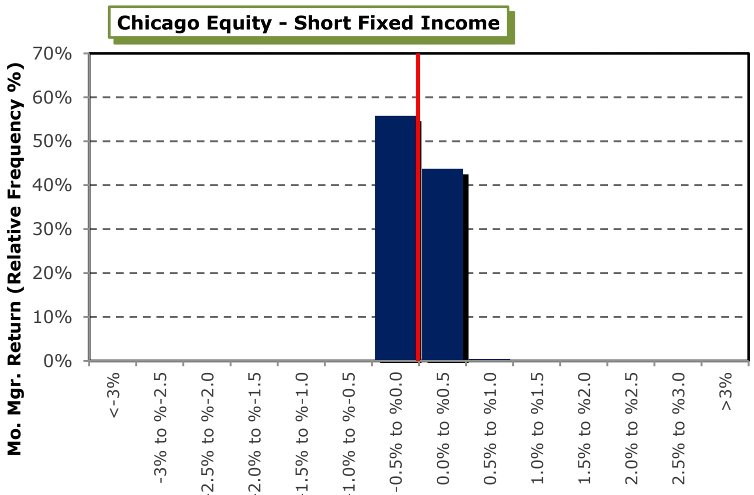
Excess Returns Performance Summary - (Net of Fees) (Least Common Denominator)

	Primary Benchmark	# of Months (Track Record)	% Positive (Mo.)	High (Mo.)	Low (Mo.)	Average (Mo.)	% > 0.5%	Rolling 1 Yr. Rtr.		Rolling 3 Yr. Rtr.	
								> 0%	> 3%	> 0%	> 3%
Short Duration Fixed Income											
Chicago Equity - Short Fixed Income	Barclays US 1-3 Yr Govt/Credit	162	44%	0.8%	(0.2%)	0.0%	1%	54%	0%	57%	0%
Income Research - IR+M 1-3 Year	Barclays US 1-3 Yr Govt/Credit	162	71%	1.5%	(1.8%)	0.1%	6%	83%	5%	87%	0%
Longfellow - Short Duration	Barclays US 1-3 Yr Govt/Credit	162	65%	0.4%	(1.0%)	0.0%	0%	81%	0%	96%	0%
Merganser - Short Term Bond	Barclays US 1-3 Yr Govt/Credit	162	65%	0.9%	(0.8%)	0.0%	4%	73%	5%	84%	0%
PIMCO - Low Duration - Core	Barclays US 1-3 Yr Govt/Credit	162	64%	1.5%	(3.2%)	0.0%	7%	52%	11%	65%	2%
Reams - Low Duration	Barclays US 1-3 Yr Govt/Credit	162	67%	2.0%	(1.7%)	0.1%	7%	87%	13%	93%	13%
T. Rowe - Short Term Bond	Barclays US 1-3 Yr Govt/Credit	162	64%	1.0%	(2.2%)	0.0%	3%	77%	5%	85%	0%

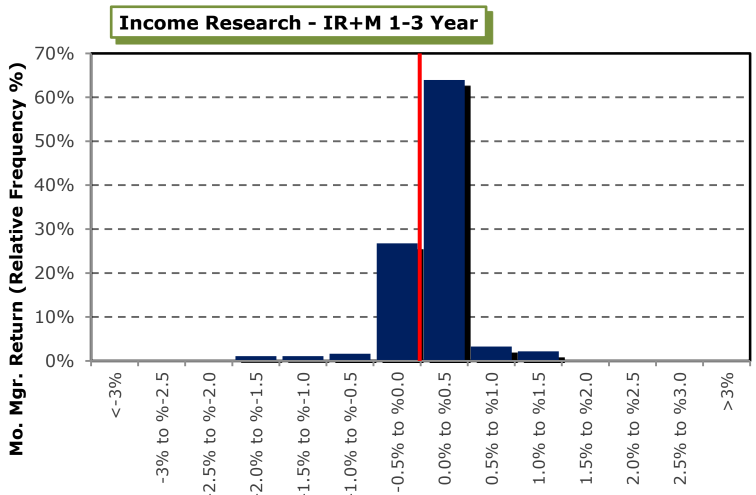
Excess Returns Performance Summary - (Net of Fees) (Least Common Denominator)

	# of Months (Track Record)	Excess Return					Tracking Error				Information Ratio				Beta vs. Primary Benchmark
		1 Yr.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	
Short Duration Fixed Income															
Chicago Equity - Short Fixed Income	162	(0.2%)	(0.4%)	(0.3%)	(0.1%)	0.1%	0.1%	0.2%	0.3%	0.4%	(2.75)	(1.41)	(0.25)	0.34	1.04
Income Research - IR+M 1-3 Year	162	0.1%	0.1%	0.6%	1.5%	0.6%	0.2%	0.4%	0.9%	1.3%	0.52	1.53	1.61	0.50	0.93
Longfellow - Short Duration	162	0.1%	0.1%	0.3%	0.7%	0.4%	0.2%	0.2%	0.3%	0.6%	0.50	1.41	2.03	0.67	0.85
Merganser - Short Term Bond	162	0.2%	0.1%	0.4%	1.1%	0.4%	0.3%	0.3%	0.6%	0.9%	0.43	1.29	1.75	0.50	0.92
PIMCO - Low Duration - Core	162	(0.2%)	(0.3%)	0.7%	1.4%	0.5%	1.1%	1.0%	1.3%	1.9%	(0.25)	0.71	1.07	0.27	1.26
Reams - Low Duration	162	0.1%	0.3%	1.1%	2.5%	1.4%	0.4%	0.8%	1.5%	1.6%	0.83	1.49	1.71	0.92	1.21
T. Rowe - Short Term Bond	162	0.1%	0.1%	0.5%	1.2%	0.4%	0.4%	0.5%	0.7%	1.1%	0.26	1.00	1.64	0.42	0.97

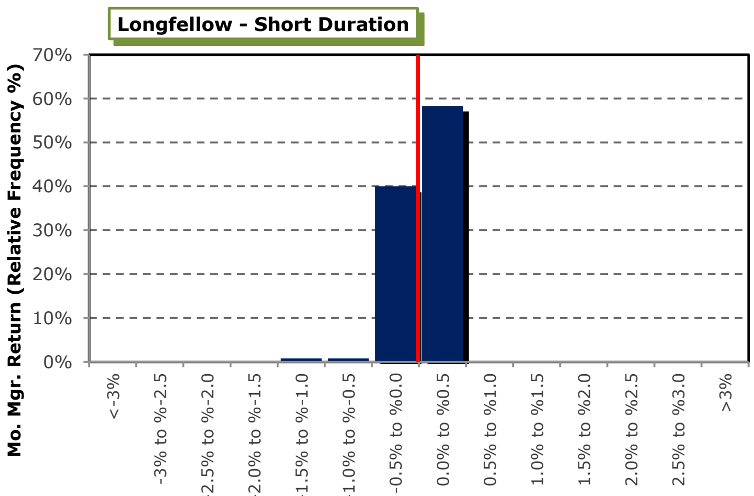
Excess Monthly Returns Histogram - (Net of Fees)



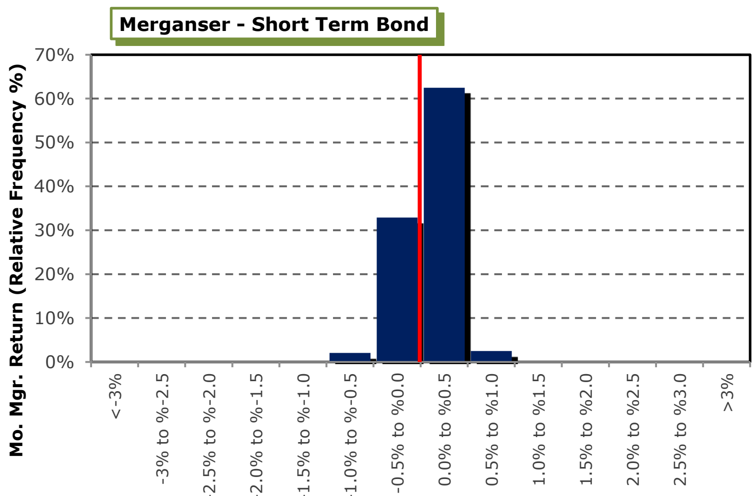
N=224 Monthly Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)



N=183 Monthly Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)



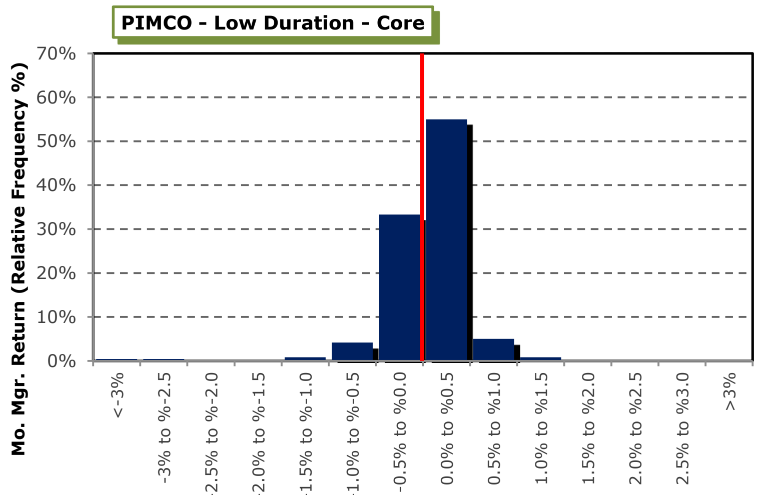
N=240 Monthly Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)



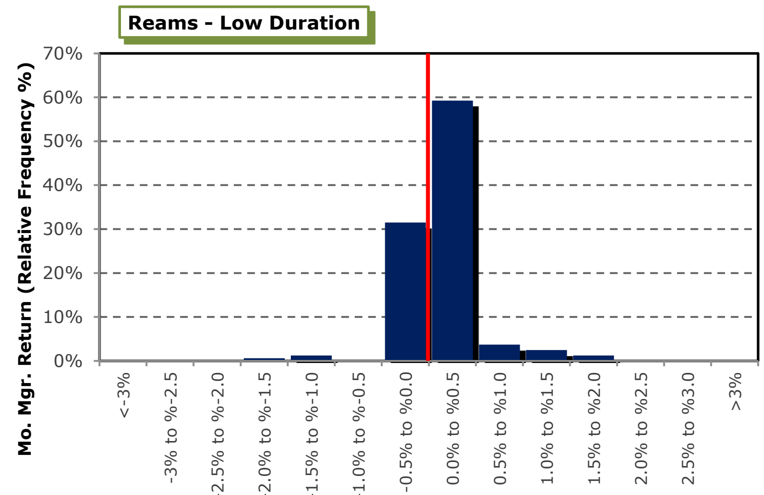
N=240 Monthly Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)

Short Duration Fixed Income

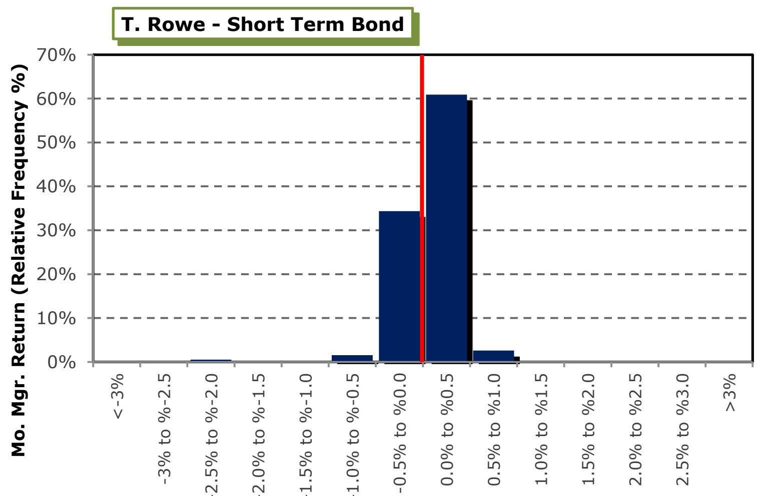
Excess Monthly Returns Histogram - (Net of Fees)



N=240 **Monthly Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)**



N=162 **Monthly Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)**

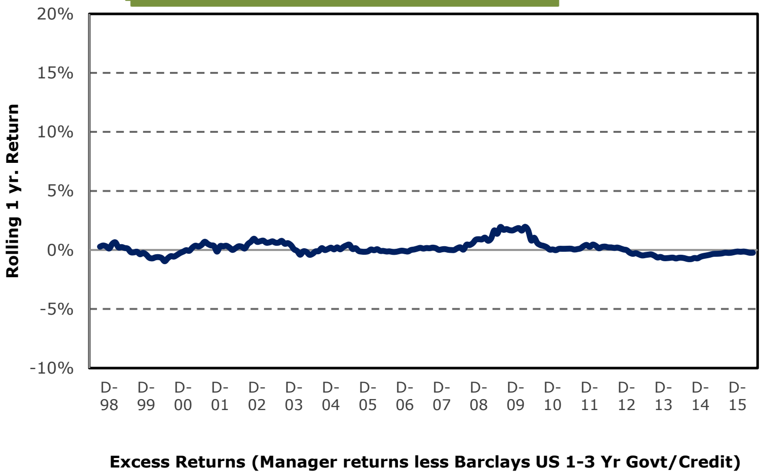


N=192 **Monthly Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)**

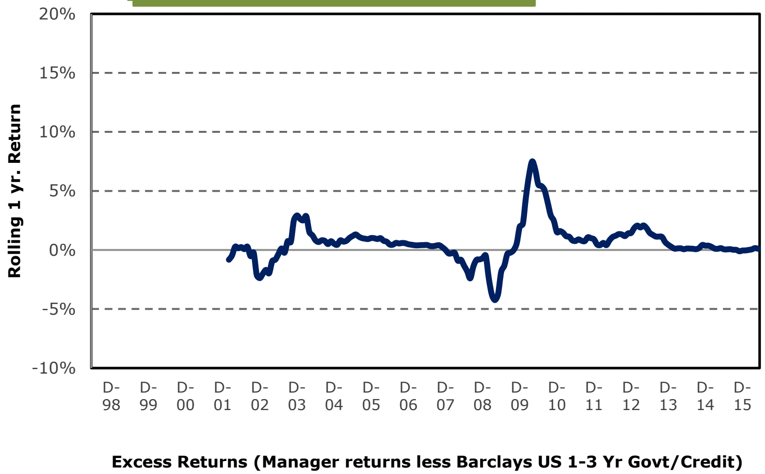
Short Duration Fixed Income

Rolling 1 Year Excess Returns - (Net of Fees)

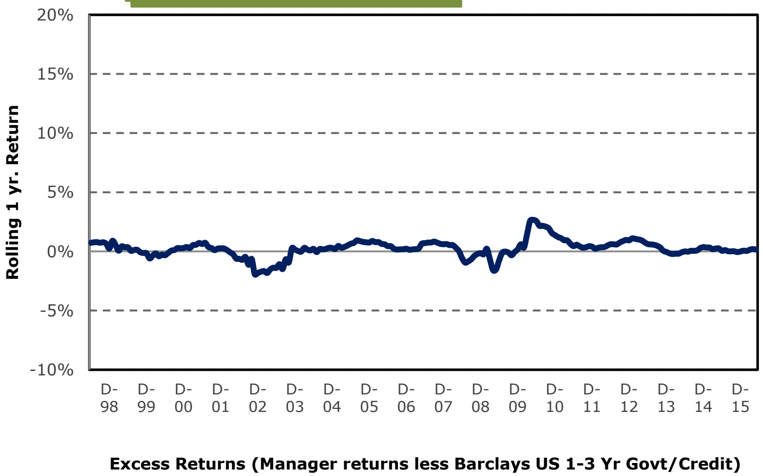
Chicago Equity - Short Fixed Income



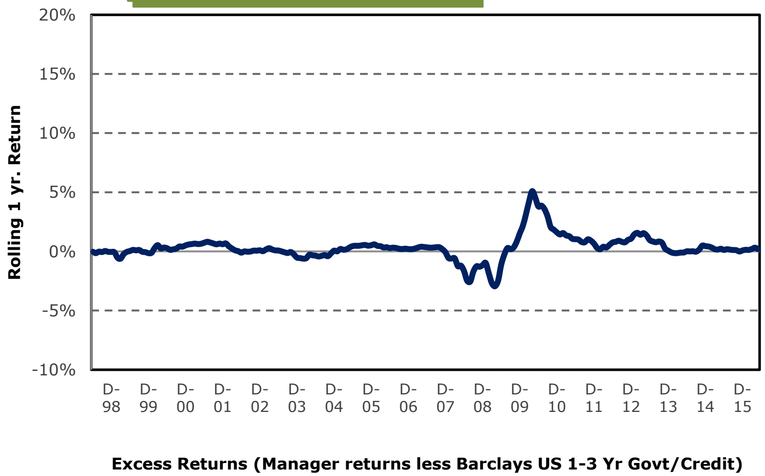
Income Research - IR+M 1-3 Year



Longfellow - Short Duration

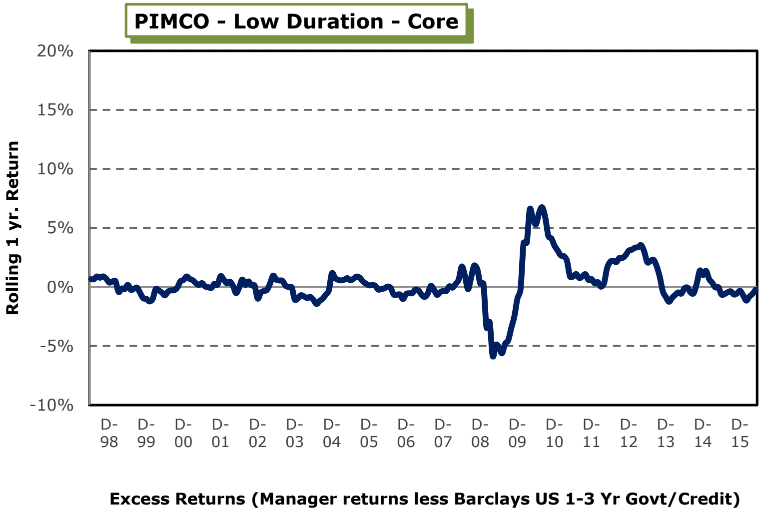


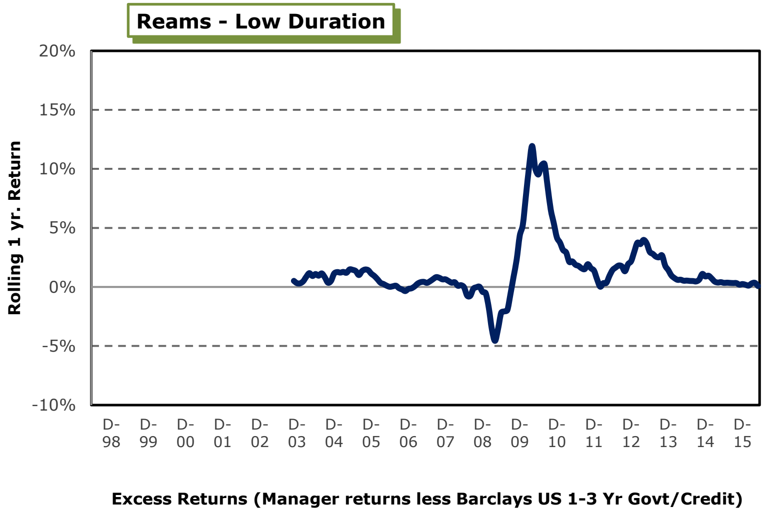
Merganser - Short Term Bond

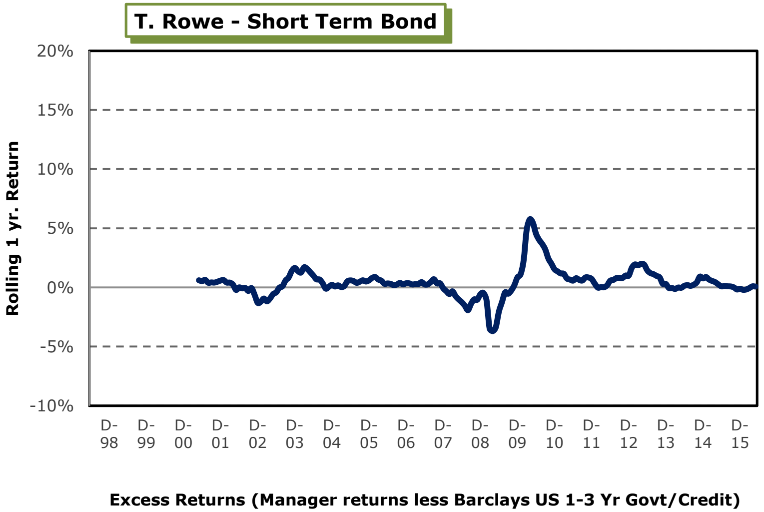


Short Duration Fixed Income

Rolling 1 Year Excess Returns - (Net of Fees)

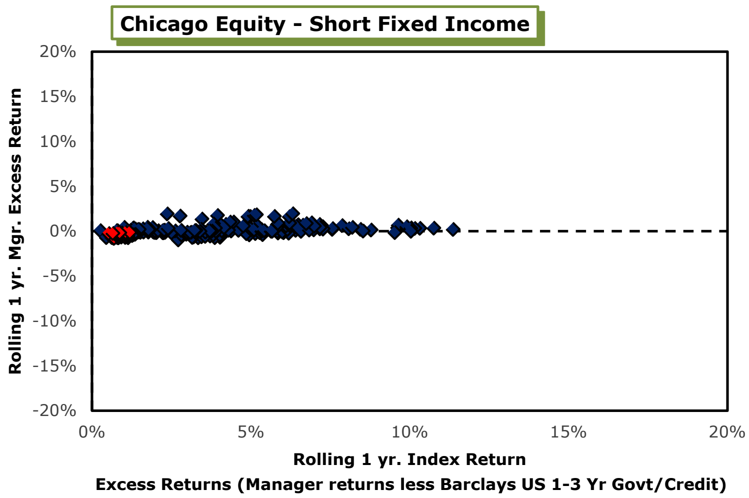


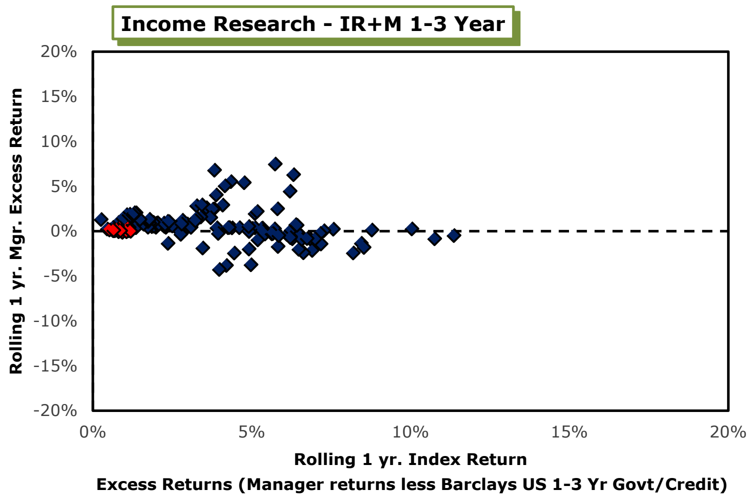


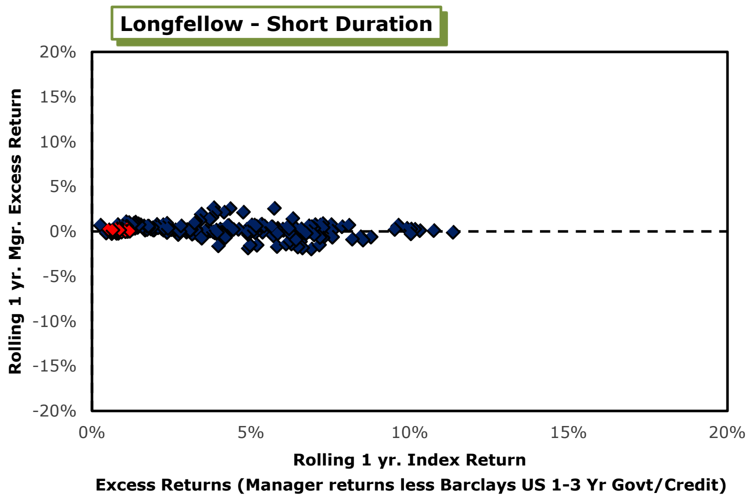


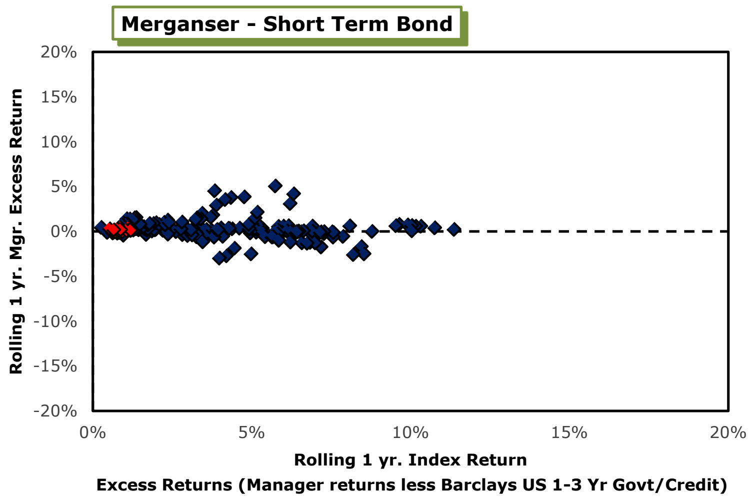
Short Duration Fixed Income

Rolling 1 Year Excess Returns - (Net of Fees)





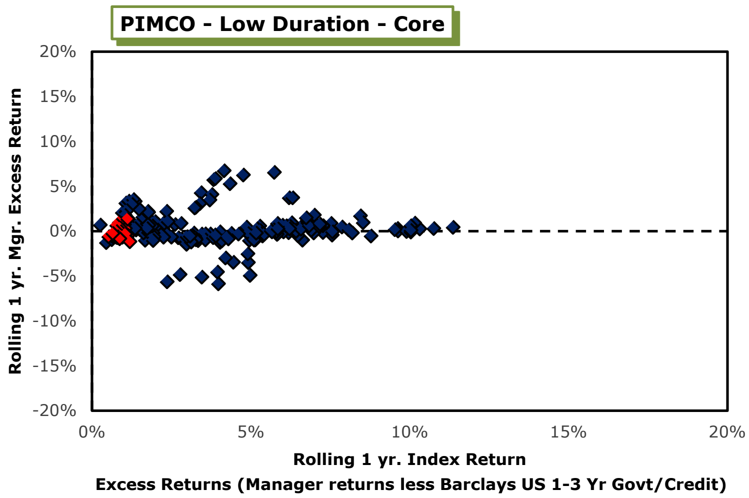


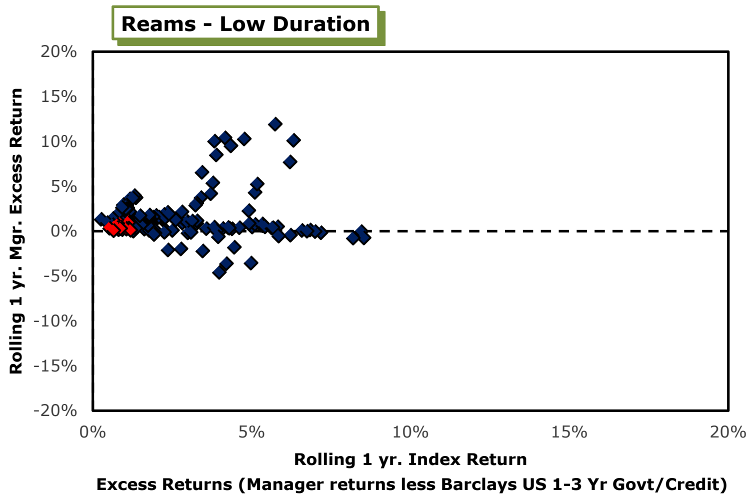


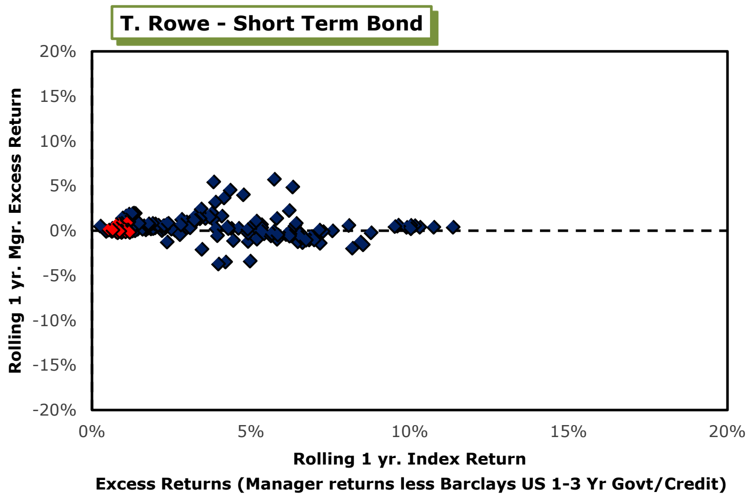
◆ = Rolling 1 year periods; ◆ = Last 24 rolling 1 year periods

Short Duration Fixed Income

Rolling 1 Year Excess Returns - (Net of Fees)



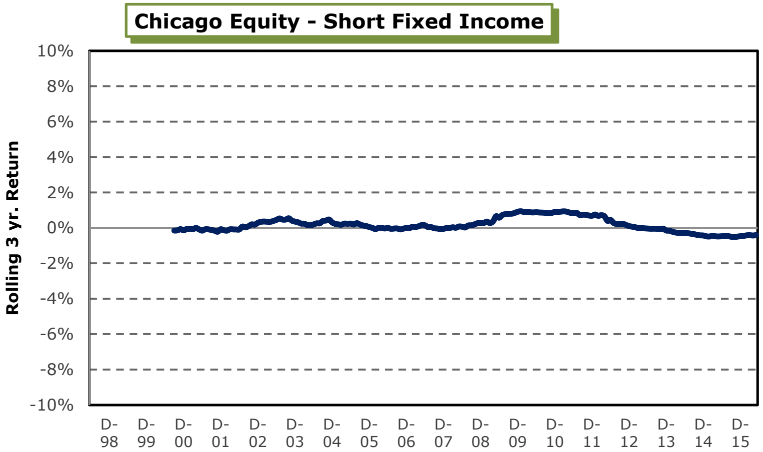




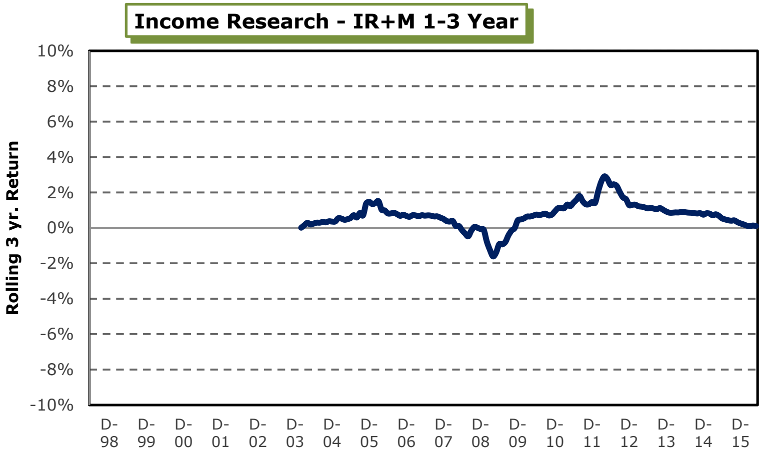
◆ = Rolling 1 year periods; ◆ = Last 24 rolling 1 year periods

Short Duration Fixed Income

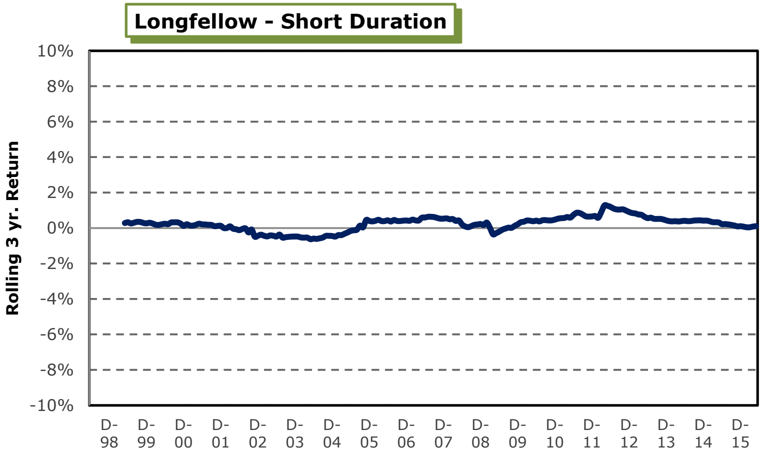
Rolling 3 Year Excess Returns - (Net of Fees)



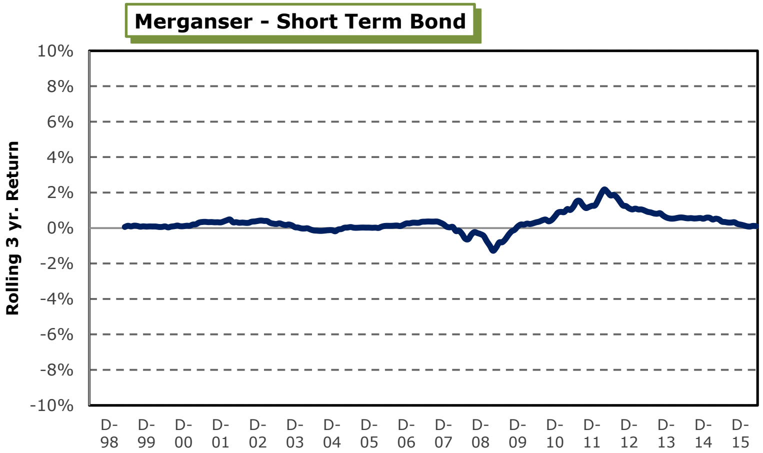
Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)



Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)



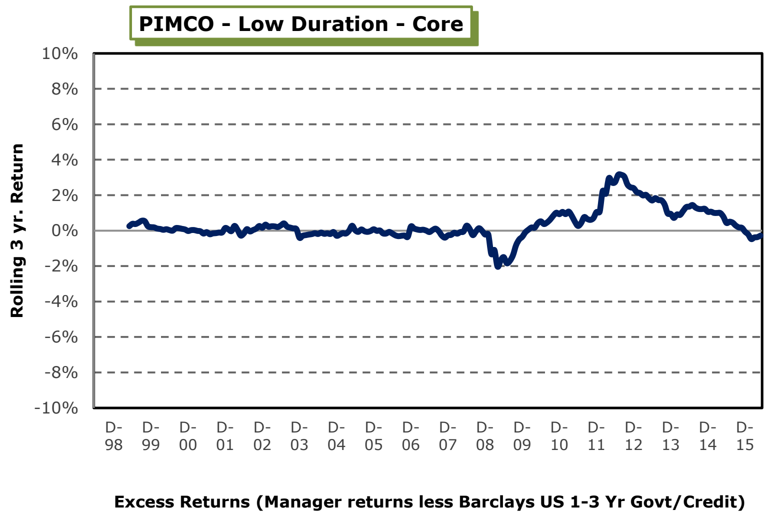
Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)

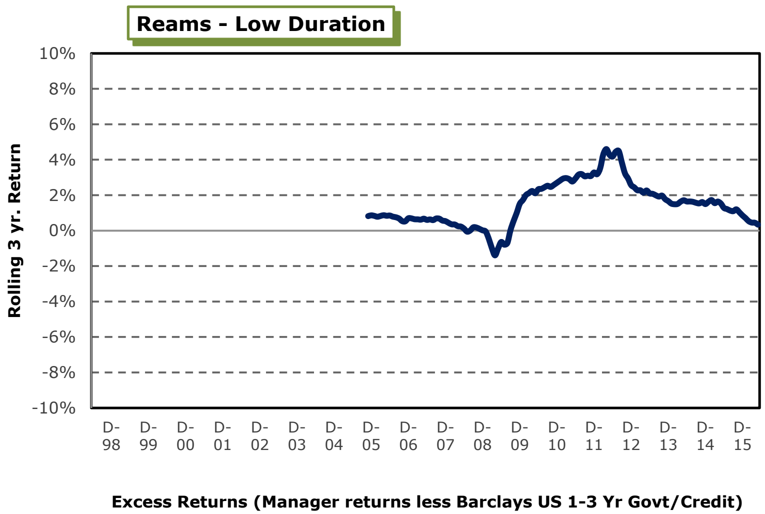


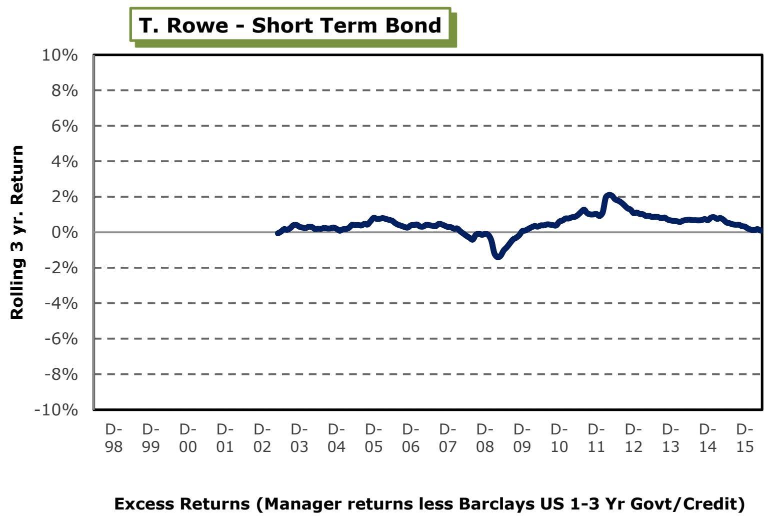
Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)

Short Duration Fixed Income

Rolling 3 Year Excess Returns - (Net of Fees)

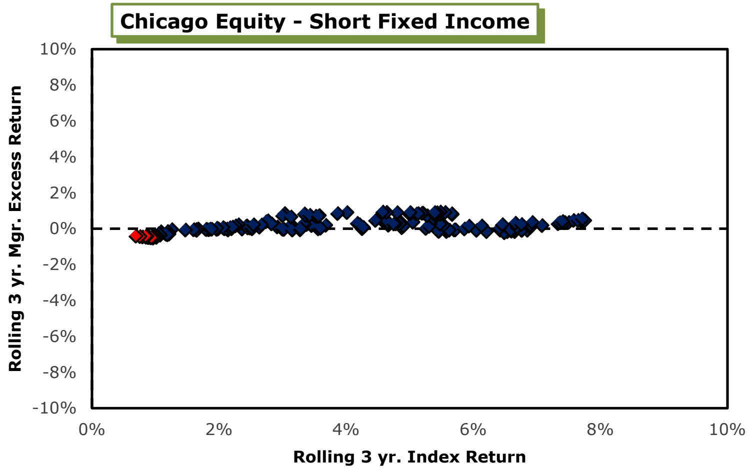




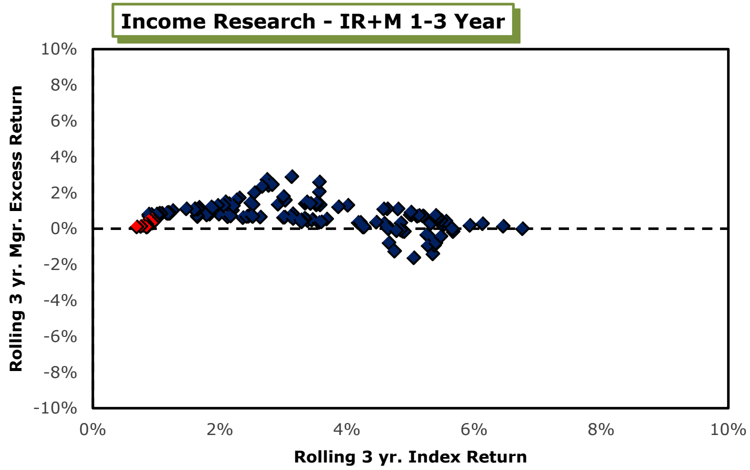


Short Duration Fixed Income

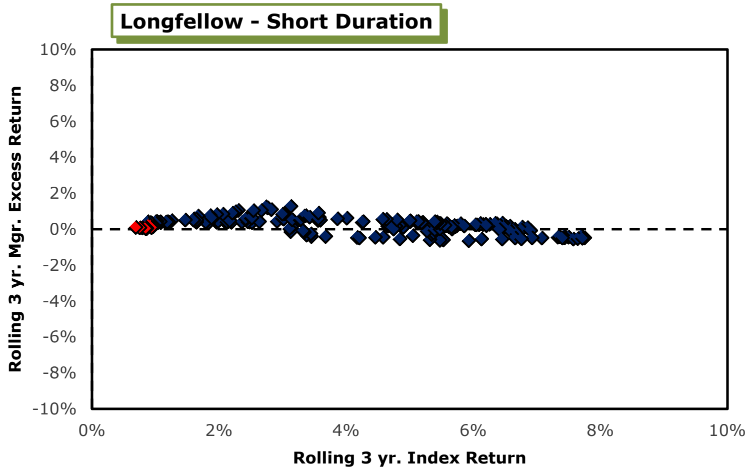
Rolling 3 Year Excess Returns - (Net of Fees)



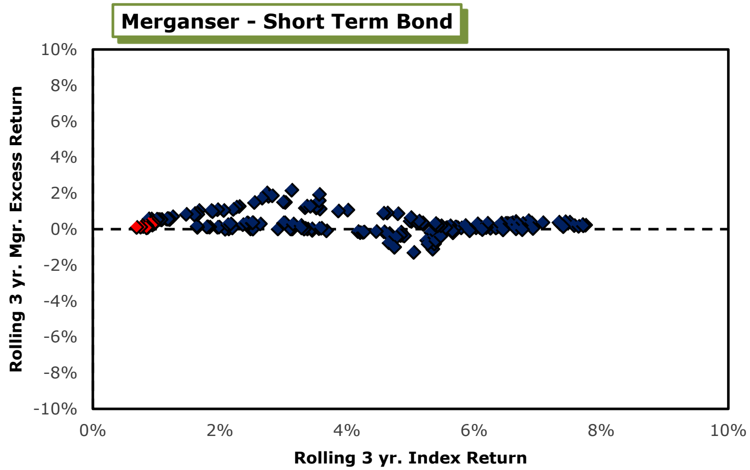
Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)



Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)



Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)

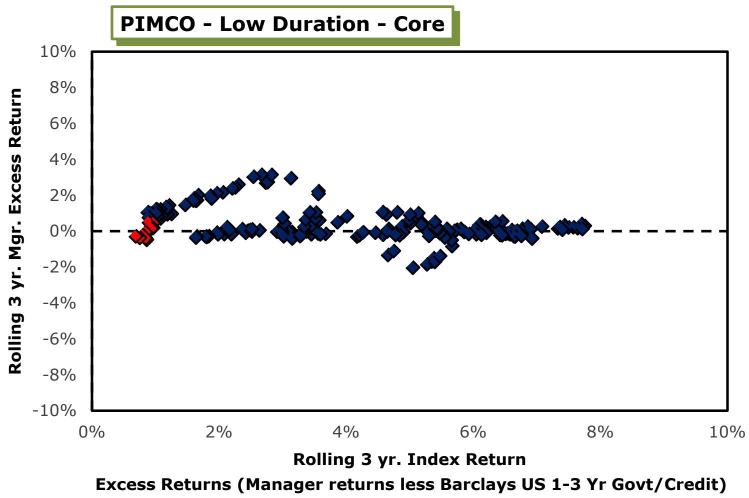


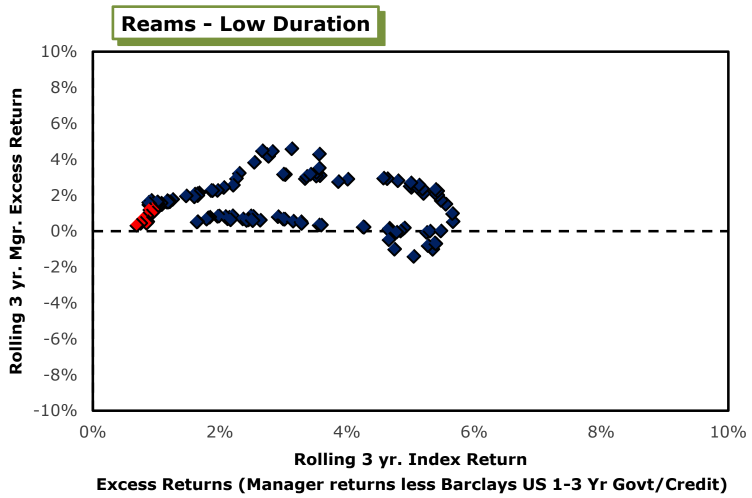
Excess Returns (Manager returns less Barclays US 1-3 Yr Govt/Credit)

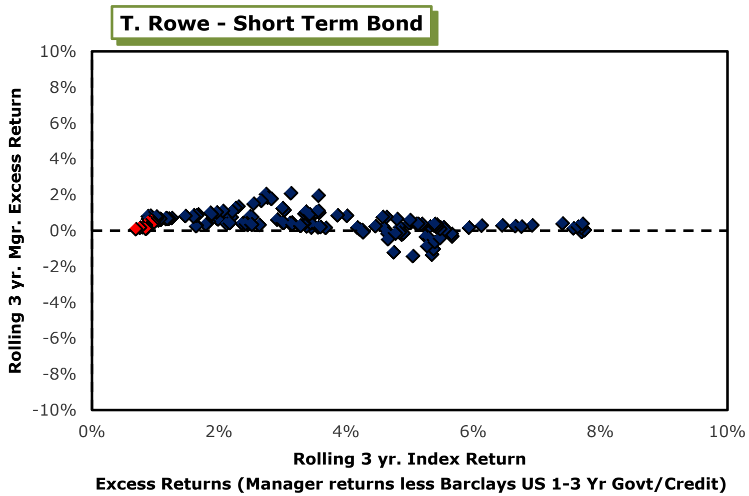
◆ = Rolling 3 year periods; ◆ = Last 12 rolling 3 year periods

Short Duration Fixed Income

Rolling 3 Year Excess Returns - (Net of Fees)



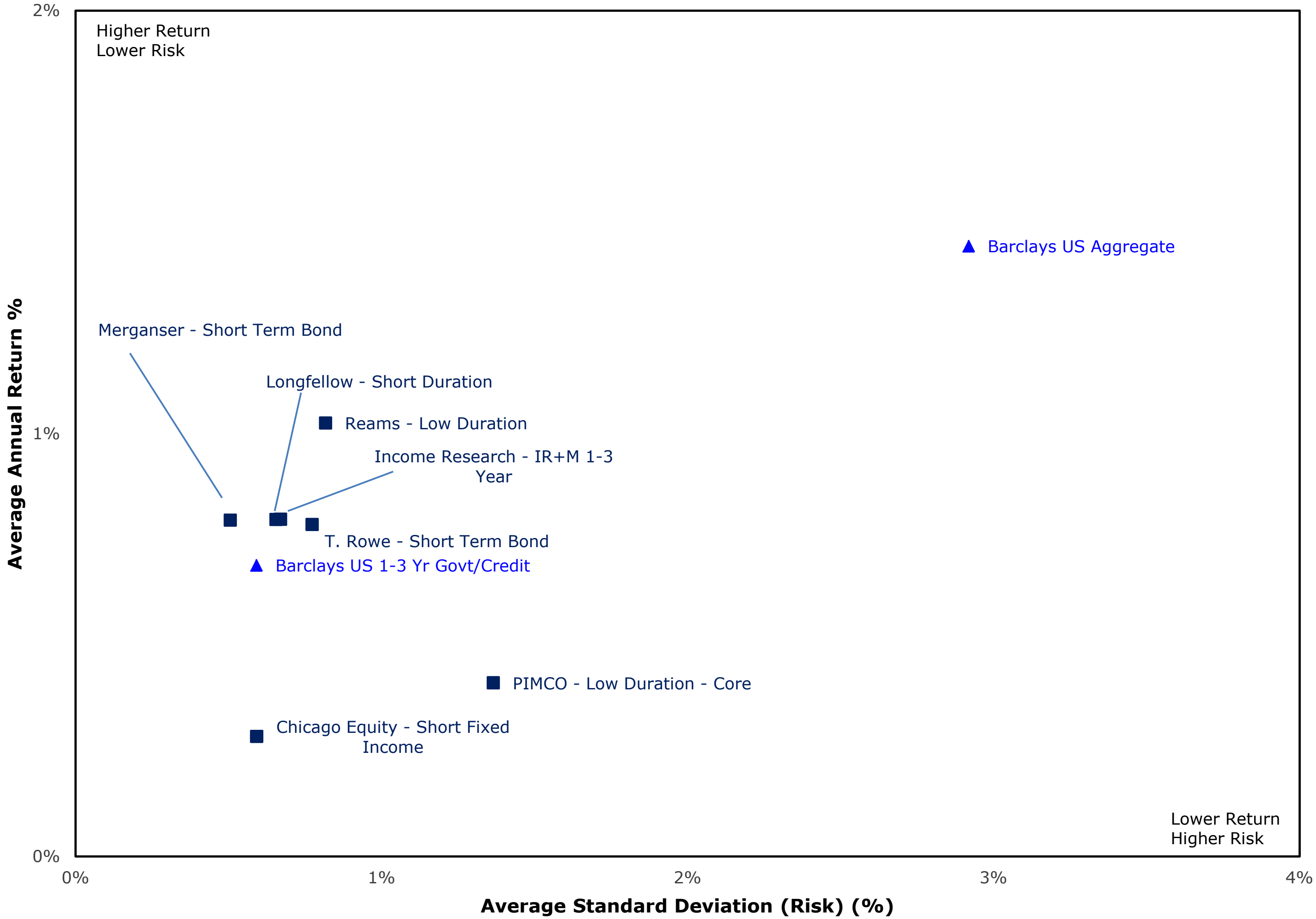




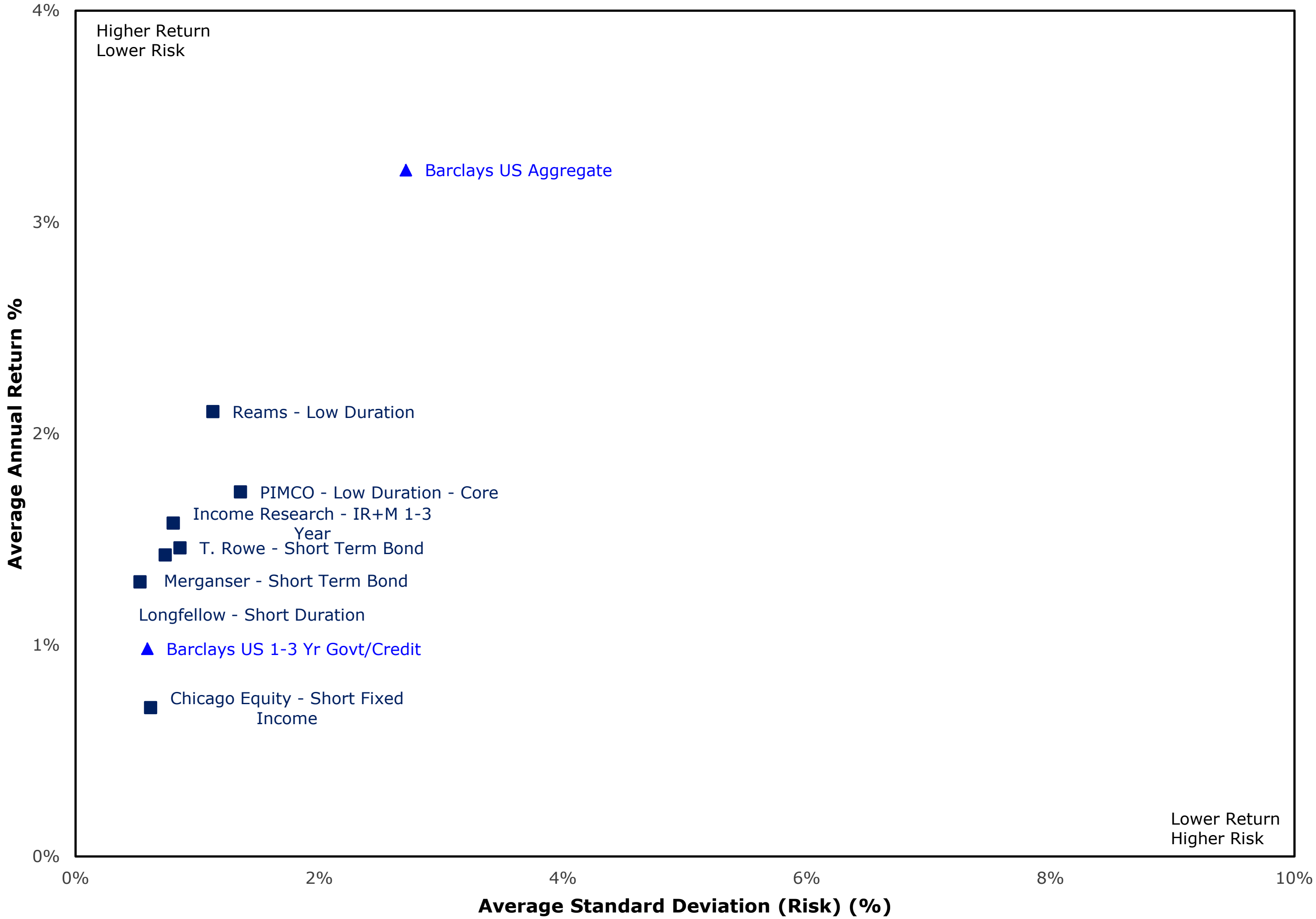
◆ = Rolling 3 year periods; ◆ = Last 12 rolling 3 year periods

Short Duration Fixed Income

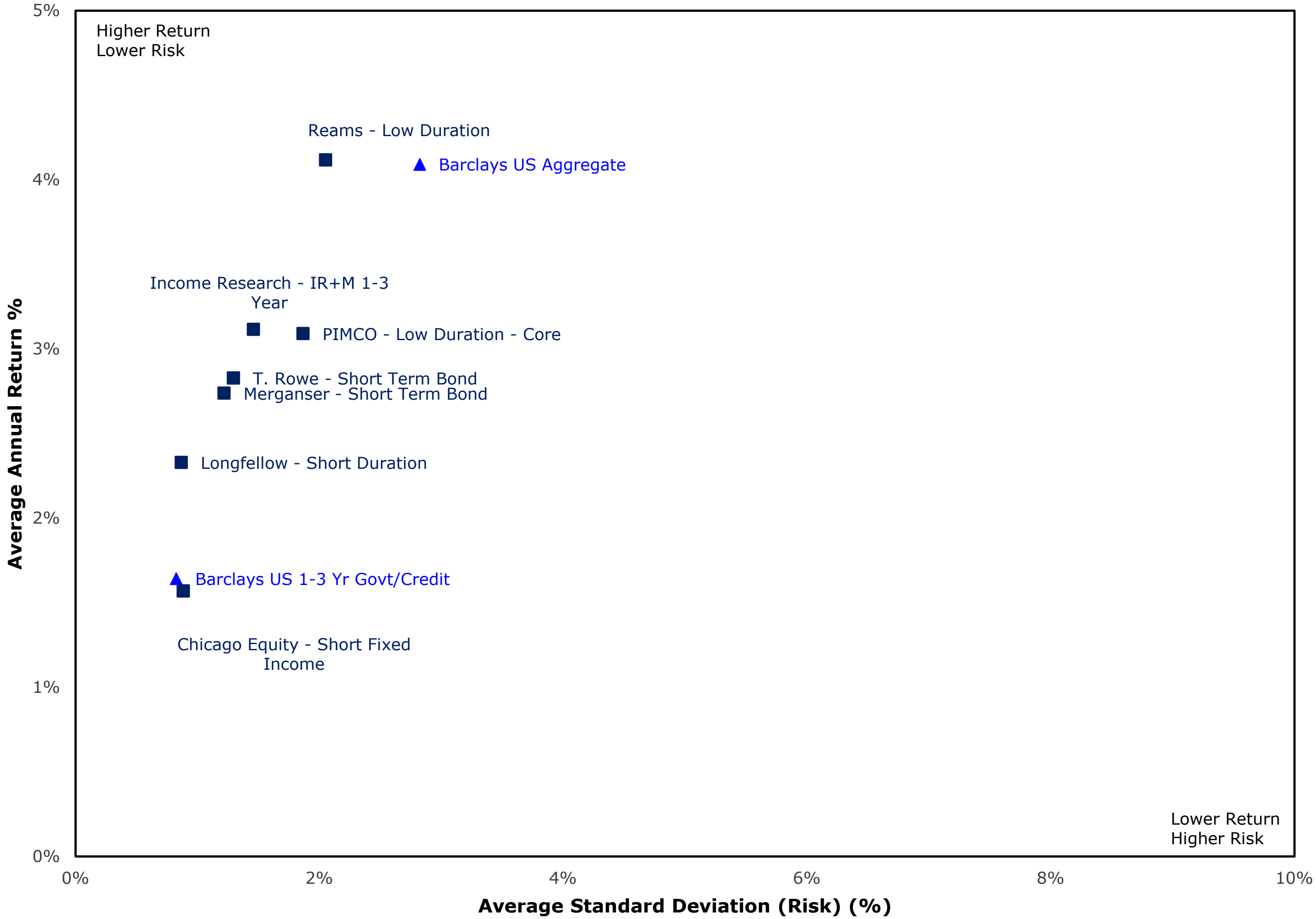
3 Year Total Risk/Returns Comparison - (Net of Fees)



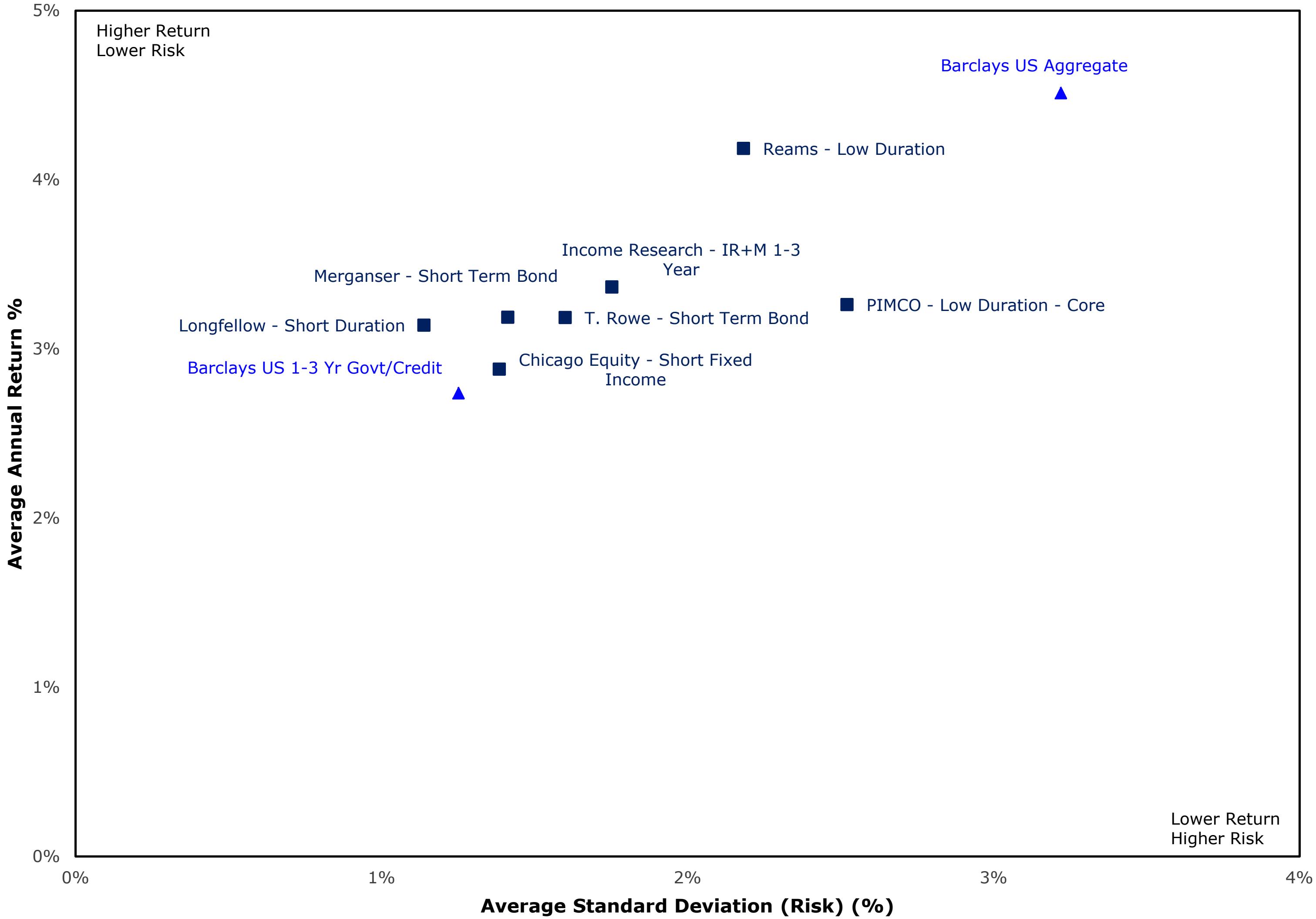
5 Year Total Risk/Returns Comparison - (Net of Fees)



7 Year Total Risk/Returns Comparison - (Net of Fees)



10 Year Total Risk/Returns Comparison - (Net of Fees)



Profiles

The following pages contain profile descriptions regarding each Manager Firm and Investment Product including:

- **Firm Description**
- **NEPC Investment Thesis**
- **People**
- **Philosophy**
- **Investment Strategy**
- **Portfolio Structure**
- **Performance Expectations**
- **Biographies**

Short Duration Fixed Income

Chicago Equity Partners
Short Term Fixed Income

Matt Brady, Research Associate
Source: NEPC and eVestment
March 2015

Firm Description

Chicago Equity Partners' (CEP) principal business, as evidenced by its name, is domestic equity investing. The firm has a small fixed income group of eleven professionals covering portfolio management and fundamental research, and is also supported by a quantitative research team of four professionals that is shared with the equity investment team. The fixed income group was founded in 1989, but it was in 2004 when three professionals including Curt Mitchell, CIO of Fixed Income, Tina Krauskopf, Trader, and Mike Millihouse, now retired, joined the firm from Loomis Sayles forming the existing team and investment process. Fixed income investment management has grown to be the firm's largest business in the past few years. The firm is 59% owned by Affiliated Managers Group (AMG), which is a publicly traded corporation that invests in small to mid-sized asset management companies. The remaining 41% stake is held by employees at Chicago Equity Partners.

NEPC Investment Thesis

Chicago Equity Partners structures portfolios to profit from high probability events such as fundamentals improving/worsening in corporate bonds, extreme shifts in the yield curve, and by generally avoiding lower-yielding segments of the market such as Treasuries. Portfolios will not take a lot of security-specific risk, but rather will try to identify securities that will perform predictably given the macro-economic views that drive sector returns.

People

Chicago Equity Partner's team consists of three portfolio managers, Curt Mitchell, Michael Budd, and Feng Zhao. Curt Mitchell is also the CIO of fixed income and is an important person in determining portfolio strategy for the firm's fixed income products. It is a relatively small team, however, the investment process utilizes some quantitative tools, and the overall process is designed to add value from top down views as well. Within the credit space, a team of quantitative analysts screens the universe of corporate credit issues using fundamental factors. A team of fundamental analysts cover issuer specific credit research. The team is supported by designated traders.

Chicago Equity Partners
Short Term Fixed Income

Philosophy

Chicago Equity Partners believes that excess returns are available in the non-Treasury sectors of the investment grade bond market. Portfolios are structured to gain an income advantage over the index. Thus their research efforts will focus on spread sectors such as investment grade credit and securitized bonds. They are likely to overweight spread sectors in most market environments, however, sector allocation and quality biases will change along with the outlook for improving fundamentals or worsening fundamentals. Resulting portfolios are high quality and tend to avoid unproven security structures. Portfolios will be duration neutral, but will utilize yield curve strategies to benefit from interest rate cycles.

Investment Strategy

Determining the current state of the credit cycle is an important part of synthesizing the portfolio’s biases and risk appetite, and serves as a starting point for the investment process. Indications that the economy is growing, views on inflation and interest rates, and that the stock market is advancing are conducive to adding risk in corporate bonds, lower quality bonds (BBB and A rated) and in cyclical industries. Leading indicators of a slowing economy and bear market prompts a defensive portfolio positioning. General market conditions, yield curve forecasts and historical analysis of return patterns are also inputs into the top-down process.

With regards to corporate credit, CEP applies quantitative screens developed by a team of four research professionals that also develop screens for equities. Nine factors including downward earnings revisions, earnings momentum, asset turnover, leverage, earnings quality and free cash flow are applied to over 750 credit issuers in order to screen out weak credits and to identify stable to improving issuers. In-depth fundamental research including examining the legal/regulatory environment, competition, management and acquisitions/divestitures is performed on credits that are highly ranked by the screen, with ideal purchase candidates exhibiting stable and strong fundamentals at an attractive yield. A quantitatively driven, relative value model is used to evaluate opportunities in agency mortgage-backed securities. Model inputs include the level of rates, the composition of the mortgage index, the slope of the yield curve, and interest rate volatility. This process is applied exclusively to agency issued mortgage-backed securities because of their standardized underwriting platform, structural transparency, limited credit risk, and superior liquidity.

Chicago Equity Partners
Short Term Fixed Income

Portfolio

Risk management is an important part of the investment process. A risk budget is established that measures interest rate, yield curve, sector, industry, quality and specific issuer risks both independently and in total. By maintaining specific guidelines for each type of risk as well as a target level for overall portfolio risk, CEP is able to pursue return enhancing strategies with full knowledge of the impact on the risk characteristics of the portfolio. Diversification rules and position limits also help maintain discipline throughout the portfolio construction process.

Duration exposure is limited to +/- 10% of the index. Lower quality credits (BBB rated) are used opportunistically to enhance yield.

Performance Expectations

Historically, the strategy has performed well in both up and down credit markets. Short Duration’s strong risk controls related to sector over/under and security positions reduce the overall tracking error to the index. The strategy tends to emphasize corporate credit as the primary value add. ABS and CMBS sectors have been a component to the strategy, but are not a large source of return.

Chicago Equity Partners
Short Term Fixed Income

Curt Mitchell, Director, Portfolio Manager
Mr. Mitchell is a fixed income portfolio manager focusing on the corporate bond sector. He joined Chicago Equity Partners in 2003, in conjunction with the launch of our fixed income business. Prior to joining, he served as vice president and senior portfolio manager at Loomis Sayles & Company. Mr. Mitchell earned a bachelor's degree in accounting from Illinois Wesleyan University and an MBA from the University of Illinois. He holds the Chartered Financial Analyst (CFA) designation, and is a member of the CFA Institute and the CFA Society of Chicago.

Michael Budd, Director and Portfolio Manager
Mr. Budd is a fixed income portfolio manager focusing on mortgage, asset-backed and agency sectors. Prior to joining Chicago Equity Partners, he held positions at Bear Stearns and at St. Paul Federal Bank. Mr. Budd earned a bachelor's degree in finance from the University of Notre Dame and an MBA from Loyola University. He is a trustee on the investment board of Benedictine Sisters of the Sacred Heart.

Income Research & Management
IR+M 1-3 Year

Matt Brady, Research Associate
Source: NEPC and eVestment
March 2015

Firm Description

Income Research and Management (IR+M) is a boutique investment manager focused on delivering fixed income products and solutions to clients. Domestic investment grade fixed income investments are its sole line of business. The firm was founded in 1987 by John and Jack Sommers and is 85% employee owned. One of the strengths of IR+M is their strong organizational culture and entrepreneurial work environment. Idea generation and creative solutions to portfolio management are a large part of IR+M's work ethic and management style.

NEPC Investment Thesis

IR+M is a bottom-up value manager with a skill set in the credit and securitized bond sectors of the market. IR+M exploits overlooked opportunities in complex and often overlooked sub-sectors, leading to portfolios that benefit from an income bias and positive convexity relative to the index. Their expected alpha is sourced in their understanding and ability to identify mispricings in bond markets as well as their expertise in the analysis of esoteric securities, such as put bonds, pre-payable CMBS bonds, hybrid ARMS, municipals, century bonds and convertible bonds.

People

The investment grade fixed income team consists of more than 10 portfolio managers and more than 15 research analysts. The team has experienced a very low level of historical turnover at the portfolio manager level. IR+M strives to reduce turnover of professionals by strengthening the team through equity ownership and by utilizing a rigorous interview process that searches for professionals that would be a good fit for the team. Portfolio managers are organized as specialists within the various bond sectors and manage a team of researchers.

Philosophy

IR+M believes that security selection and income are important sources of returns and can lead to superior results over time. IR+M's process is bottom-up and value-focused, with the aim to uncover value in complex issues or overlooked sectors of the market. Often times these issues are structured with better characteristics (convexity and yield) compared to straight government or corporate bonds.The strategy is not solely focused on yield, but rather strives to increase portfolio yield and to increase the positive convexity of the portfolio so that capital is preserved in volatile interest rate environments.

Income Research & Management
IR+M 1-3 Year

Investment Strategy
IR+M's investment process expects to generate above-benchmark returns by employing rigorous bottom-up security selection and by constructing portfolios to provide yield and convexity advantages. This is achieved by emphasizing selection in investment grade corporate bonds and mortgage-backed securities. The strategies do not employ any active macro-economic decisions duration and yield curve posture are held neutral to the benchmark. IR&M believes that building a portfolio from the bottom-up is the most efficient way to earn incremental excess returns and that macro-economic decisions in the portfolio do not add value over time and instead contribute to higher tracking error.

Portfolios are built strictly on a bottom-up basis, rather than on a sector allocation basis. Overweight positions in certain bond sectors will be the result of capitalizing on market inefficiencies in various spread sectors, including corporate bonds and mortgage backed securities. IR&M seeks to purchase bonds for portfolios that meet credit standards, have attractive structure, and that are attractively priced. Oftentimes, the use of esoteric securities such as century bonds, put bonds, hybrid ARMs and occasionally convertible bonds offer attractive alternatives to plain corporate bonds or mortgage-backed securities as they have favorable structure and enhance the portfolio's yield and convexity advantage.

The IR+M credit process begins with eliminating issuers with less than $2 billion in debt outstanding from the universe of investment grade corporate issuers. Next, companies that exhibit political, quality or liquidity risks that are too high are also eliminated. From this universe of around 182 credits, credits that exhibit deteriorating fundamentals, management issues or issues with transparency are eliminated. Credits that are deemed attractive for the portfolio have convexity benefits and favorable structure. Finally after favorable fundamental analysis, attractive valuation reveals the best credits for the portfolio. The final favorite list of credits is approximately 100 issuers in size.

Income Research & Management
IR+M 1-3 Year

Within structured product, the universe of MBS, ABS and CMBS totals near 6, 000 issues. IR+M eliminates from this list poorly structured bonds, bonds with unproven collateral and subordinated bonds. From the refined list, research focuses on bonds with limited negative convexity and strong collateral/structure. The best ideas list is examined for attractively valued securities. Within the structured product sector, IR+M has been buying CMBS securities that receive prepayment penalties. All structured product bears prepayment risk, however, IR+M buys CMBS securities that bear penalties for prepayment, and earns a little extra income on top of the coupon.

Portfolio managers and senior decision makers are heavily involved in research and idea generation. The firm's research, trading and portfolio management functions are fully integrated - portfolio managers perform their own trading and research, bringing experience to bear on execution and analytics. Analysts are also actively involved in idea generation and portfolio strategy. There are not any formal investment committees as portfolio managers and research analysts are encouraged to share ideas and strategies.

Portfolio
Duration and yield curve exposures are kept within 10% of the benchmark. A typical portfolio will contain between 50 and 100 securities. Positions in any non-government issue will not exceed 5% of the portfolio.

Performance Expectations
IR+M is typically underweight Treasury or Agency securities in favor of corporate or securitized sectors. The strategy will tend to lag during episodes of spread-widening, but will do better when spreads tighten. Because IR+M focuses on building positive convexity in their portfolio’s, the strategy aims to outperform in volatile interest rate environments, which should help dampen some portfolio volatility.

Income Research & Management
IR+M 1-3 Year

Edmund Ingalls, CFA, Principal
Mr. Ingalls joined the firm in February of 2000, and is a Senior Portfolio Manager/Analyst with over 29 years of experience in the investment services industry. Prior to IR&M, he was a Portfolio Manager and Associate Partner at INVESCO. Previously, he was an Assistant Investment Officer at Sun Life of Canada. Mr. Ingalls has a BA from Tufts University and his MBA from Boston University.

William O'Malley, CFA, Principal
Mr. O’Malley joined the firm in September of 1994, and is a Senior Portfolio Manager/Analyst with over 20 years of experience in the investment services industry. Prior to IR&M, he was a Vice President at Wellington. Before joining Wellington in 1989, Mr. O’Malley worked at The Vanguard Group and in Morgan Stanley's Fixed Income Division. Mr. O’Malley has a BA from Amherst College and an MBA from The Wharton School at the University of Pennsylvania.

John Sommers, President
Mr. Sommers co-founded IR&M in March 1987, and brings over 35 years of investment experience to the firm. Prior to IR&M, he was Director of Fixed Income at the Putnam Companies and was responsible for over $20 billion in fixed income assets. Mr. Sommers joined Putnam in 1976 and actively managed fixed income portfolios until 1985 when he was named President and CEO of Putnam Advisory. Prior to Putnam, Mr. Sommers was Director of Fixed Income Sales and Trading at Loeb, Rhodes & Co. and at F.S. Smithers. Mr. Sommers has a BA from Bucknell University and an MBA from NYU.

Jack Sommers, Principal
Mr. Sommers is a Senior Portfolio Manager/Analyst and co-founded Income Research & Management in March 1987. Prior to IR&M, he worked for Morgan Stanley in their Fixed Income Division until 1986. Mr. Sommers has a BA from Amherst College and an MBA from Harvard Business School.

Longfellow Investment Management Co.
Short Duration

Matt Brady, Research Associate
Source: NEPC and eVestment
May 2014

Firm Description

Longfellow Investment Management Co. (LIM) is a boutique investment firm solely focused investment grade fixed income. The firm is 100% employee owned. The firm was founded in 1986 and was spun out from the Polaroid Corporation, where founder David Seeley managed short duration fixed income assets for the firm. Ownership is spread amongst eight Principals. The business is a majority woman owned.

NEPC Investment Thesis

LIM views the fixed income markets as highly segmented in terms of the types of buyers and objectives of participants. Individual securities ideas, trading ideas, and relative value ideas are often generated from the team trading with restricted buyers, insurance, regulated, or other participants that may not be economically, but rather rule driven in their transactions. LIM's relatively small size and focus on esoteric ABS sectors of the market also provides a source of excess return and over time has contributed to alpha.

People

There are eight principals at Longfellow, five of which are on the investment team. The founder of Longfellow, David Seeley, retired from the firm and fully divested his ownership at the end of 2013. John Villela, Barbara Mckenna, Dave Steuhr, and Akshay Anand are the key investment professionals on the short duration strategy. The team is supported by seven additional analysts. John Villela and Akshay Anand together cover the asset-backed securitiy sector that was previously covered by David Seeley.

Philosophy

LIM's philosophy to fixed income investing is to avoid losses due to downgrade or default by focusing on stable to improving credits, and to utilize a top-down framework for risk management coupled with bottom-up security selection. The objective of Short Duration Fixed Income is to preserve capital and minimize volatility, while providing an attractive risk-adjusted return. Historically, the short section of the yield curve has provided good risk adjusted returns for investors, and the strategy is managed to optimize the 1-2 year segment of the curve through issue selection and sector selection.

Longfellow Investment Management Co.
Short Duration

Investment Strategy
LIM's investment process begins with a review of client objectives and guidelines to determine a suitable structure, liquidity profile and gain/loss tolerance. Broad macro-economic themes are identified such as market sentiment, risk appetite, Fed policy and technicals to determine a portfolio investment framework. Individual sector and security analysis will drive most of the active positions in the portfolio as top-down analysis is only used to determine very broad themes.

In evaluating a candidate security, LIM weighs its credit risk, call risk, event risk, and liquidity against the yield spread it offers. To determine option adjusted spreads, various specialized yield calculators are employed. In considering credit risk, LIM reviews Moody's, Standard & Poor's and research from several securities dealers. LIM also carefully reads the original prospectus on new issues or types of securities. LIM focuses a lot of their research efforts on the ABS sector of the market, as their size is an advantage in this market, and unique structures and collateral types offer attractive yield opportunities.

Portfolio
Short Duration Fixed Income is limited to a 1-2 year portfolio duration range. Risk is significantly limited by constraining duration within these relatively narrow bands. Within the ranges, portfolio duration is set primarily to maintain the same level of risk (i.e., chance of a negative quarter) over time and secondly, to take advantage of the relative value of various market sectors. LIM does not utilize market timing, interest rate anticipation, trend following, Fed watching, or other forms of maturity management. Historically, performance of traditional fixed income management has suffered because of investors' inability to successfully predict interest rate movements.

The defensive nature of LIM's fixed income products is based also upon other conservative investment policies. LIM believes in maintaining high credit quality. All securities purchased must have an investment grade rating by one of the major credit rating companies. Furthermore, the average rating of the portfolio will always be at least AA. A high level of diversification is achieved by limiting sector exposure to a maximum of 30% and each issuer or issue to 5%.

Longfellow Investment Management Co.
Short Duration

Performance Expectations

Because the strategy will tend to overweight spread sectors of the market, performance will tend to lag when spreads widen. The strategy should perform well during periods in which credit spreads tighten.

Longfellow Investment Management Co.
Short Duration

John Villela, Portfolio Manager

Mr. Villela is a Principal, Portfolio Manager and Sr. Analyst with over 15 years of investment industry experience. Prior to joining Longfellow in 2005, John worked at State Street Research (SSR) from 2003-2005, as a Portfolio Analyst on the Fixed Income Team and was a member of the Market Based Group, focusing on $4 billion in credit assets along with Short/Intermediate Duration accounts. Prior to joining SSR, John was a Trader at Standish Mellon. Johns trading experience includes credit, ABS, governments and fixed income derivatives. He brings additional investment, sales and relationship experience from prior roles at Lehman Brothers and HSBC. John has an MBA and BA in Mathematics from Boston College. John is a CFA charterholder, a member of the CFA Institute and a member of the Boston Security Analysts Society. He has held NASD Series 7 & 63 registrations.

Barbara McKenna, CFA, Senior Investment Officer

Ms. McKenna is a Portfolio Manager with 25 years of fixed income investment experience. Prior to joining Longfellow in 2005, Barbara was a Director and Senior Portfolio Manager at State Street Research (SSR) from 2001-2005. She was responsible for managing $14 billion of institutional fixed income accounts. As Director of Corporate Bond Strategy, she was responsible for developing and leading the implementation of corporate bond strategy across all mandates. Prior to joining SSR, Barbara was a Director at Standish, Ayer & Wood, where she was responsible for $3 billion in assets as the head of the Short Duration Team. She has also held portfolio management and investment banking positions at BayBank and Massachusetts Capital Resource Company, a venture capital firm. Barbara holds a MS and BS in Finance from Boston College. Barbara is a CFA charterholder, a member of the CFA Institute and a member of the Boston Security Analysts Society. She has held NASD Series 7 & 63 registrations. Barbara is an Associate of The Council for Women of Boston College.

Longfellow Investment Management Co.
Short Duration

Dave Stuehr, CFA, Portfolio Manager
Mr. Stuehr is a Portfolio Manager and Senior Analyst with over 25 years of investment experience. From 2005-2009, David was a portfolio manager and analyst at Hanover Strategic Management. Prior to that, he served as a Portfolio Manager at Seneca Capital Management. At Seneca Capital, David was responsible for the firms high yield investment portfolio and served as the lead manager on the Pacific View Fund, LLC a corporate bond-oriented hedge fund from its inception in 2002 through 2004. David also has significant experience in managing fixed income portfolios for an array of clients including high net worth individuals and insurance companies. Prior to joining Seneca, David was a Partner with Standish, Ayer & Wood. During his 12 years at the firm, he served as a Portfolio Manager and Director of Corporate Bond Research leading a 10 member analyst team. Mr. Stuehr received his MS in Finance from Boston College and MA in Economics from Bowling Green University. He also received his BS in Business Administration from Bowling Green University. David is a CFA charterholder, a member of the Boston Securities Analysts Society, and a member of the CFA Institute.

Akshay Anand, Senior Analyst
Mr. Anand joined Longfellow in 2008 as an Analyst focusing on structured securities. Prior to Longfellow, Akshay worked at Babson Capital as an associate director on the Core and High Yield Teams and was responsible for fixed income portfolio analytics. He spent three years working at The Mentor Network as a Senior Treasury Analyst responsible for debt and liquidity management. He also has two years of public accounting experience. Akshay holds an MBA from Rochester Institute of Technology and a B. Com (H) in Accounting from the University of Delhi. Akshay is a CFA charterholder, a member of the CFA Institute and a member of the Boston Security Analysts Society.

Merganser Capital Management, LLC
Short Term Bond

Matt Brady, Research Associate
Source: NEPC and eVestment
March 2014

Firm Description
Merganser Capital Management, Inc. is a boutique investment manager focused solely on investment grade fixed income. The firm was founded in 1984 by the Treasurer of Polaroid Corporation who managed the fixed income portfolios for the firm's corporate and retirement trust funds. Merganser was spun-out of Polaroid and began managing money as an investment advisor in 1987. The firm remained 100% employee owned until 2008, when Mr. Edward Bedrosian sold the firm's equity to Annaly Capital Management. In 2013, Providence Equity Partners along with Merganser Management acquired all assets and business of Merganser from Annaly.

NEPC Investment Thesis
Merganser adds value to client portfolios by investing in under-researched, or under-covered segments of the bond market, particularly in ABS sectors. The firm's small size is an advantage in purchasing smaller-issue securities and an advantage in pricing. The strategy will overweight spread sectors of the bond market, capturing the higher yield provided.

People
Merganser is a firm that has been managing money for a long time, and recently went through a transition of ownership three years ago. That being said, the firm did not lose any key professionals since the transition and has been relatively stable. There are four key portfolio managers that run Merganser's strategies: Peter Kaplan, Doug Kelly, Jennifer Wynn and Andrew Smock, all of whom joined the firm in 1986, 1986, 2000, and 2003, respectively. Andrew Smock, CIO of the firm, is the key person forming investment views for Short Term Bond. Portfolio managers are supported by a team of more than five research analysts.

Philosophy
Merganser believes that fixed income markets are inherently inefficient due to the fact that bonds trade over-the-counter, and that this creates certain trading opportunities. Their relatively small size and focus on certain parts of the market including asset-backed securities and potentially overlooked segments of the corporate bond market and securitized bond market support's the value-add thesis. The firm uses both top-down and bottom-up strategies to add value.

Merganser Capital Management, LLC
Short Term Bond

Investment Strategy
The investment process has essentially two parts: first the team forms a strategic outlook that guides such important themes as duration/curve posture and sector allocations. Secondly, fundamental security research is performed to identify certain bottom-up security ideas and to populate portfolios.

Merganser’s investment team meets formally each week to discuss the world economy and develop macro, top-down themes to help guide the decision making process. During these meetings, the investment team surveys the landscape of all asset classes and works as a team to develop macro themes that will persist for the foreseeable future. All investment team members have a voice and debate is encouraged in order to reach a consensus. After developing the macro themes, the team discusses sectors and sub-sectors that will do well or poorly in these environments. These sub-sectors will be the focus of the investment energy once the team returns to the trading desk.

At the trading desk, each sector specialist develops ideas that fit within the themes determined at the investment strategy meeting. These themes are not strict parameters, but instead serve as a guide for team members. They also provide a common language with which the investment team can debate cross sector value. This part of the process represents the first stage of the bottom-up focus. The sector specialists will evaluate each name that is considered with the analysis to the security type. After a security passes all of an analyst’s tests, it will be brought up with the broader team for a discussion of relative value and potential portfolio inclusion.

Merganser Capital Management, LLC
Short Term Bond

Within corporate bonds, Merganser manages a preferred list of issuers and regularly scans the market for preferred pricing. Because of the short nature of the portfolio, the firm does not look for home run trades , meaning they are not searching for upgrades or discounted issuers, but rather, they invest in stable credits with attractive yields and are instead focused on trying to eke out gains through favorable pricing. Asset-backed securities have traditionally been a significant component of the portfolio and to excess returns. Collateral types will vary from bank credit cards, and autos to more esoteric areas such as equipment receivables, equipment leases, dealer floor plans, and retailer credit cards. Research of such issues includes in depth analysis of collateral, stress-tests of collateral based on macro-economic indicators, and research on security structure, payment waterfalls and technicals.

Portfolio

A typical portfolio has approximately 75 to 125 securities. The potential opportunity set of permissible investments includes all investment grade fixed income issues. The essential portfolio construction process is informal and dynamic which occurs in the trading room each day. Making tactical yield curve bets versus the benchmark is not a significant part of the investment strategy. Portfolios typically have an effective duration of +/- 10% of the benchmark. The firm purchases primarily US dollar denominated, investment grade securities including Yankee issues. In a normal market, Merganser is a buy and hold investor, and intends to hold securities to maturity. However, in times of significant volatility, Merganser will make more rapid allocation decisions to protect capital and capture value for clients. At all times, portfolios will have a minimum of three sectors represented, and more likely five or six sectors. Average maturity and average yield to maturity are driven by sector weightings, credit curve decisions and general market conditions.

Performance Expectations

Merganser is usually overweight spread sectors through most market environments, and will likely trail the index during periods of spread widening, and earn most of their excess returns when spreads compress.

Merganser Capital Management, LLC
Short Term Bond

Andrew Smock, CFA, CIO
Mr. Smock joined the firm in 2003 and serves as Chief Investment Officer. Mr. Smock is also the team leader for the mortgage backed securities (MBS) sector team and serves as the product team leader for longer duration strategies. He is a member of Merganser's Management Committee. Prior to joining Merganser, Mr. Smock was a management consultant with the boutique consulting firm Sibson Consulting Group. His primary clients were Fortune 500 companies in both the financial services and telecommunication industries. Mr. Smock also worked on the Chicago Board of Trade for LIT First Options. Mr. Smock holds the Chartered Financial Analyst designation and is a member of the CFA Institute and the Boston Security Analysts Society.

Douglas Kelly, CFA, CPA, President,
Mr. Kelly joined the firm in 1986 and is Merganser's President. He also serves as the co-product team leader for shorter duration strategies and is a member of Merganser's Management Committee. Before joining Merganser, Mr. Kelly's experience included positions with American Can and Exxon Corporation. At American Can, Mr. Kelly's primary role was Director, Pension Investments where he had responsibility for determining investment objectives, setting asset mix guidelines, reviewing actuarial assumptions and monitoring and controlling the investment program to ensure achievement of objectives. This involved the oversight of over $1 billion in pension and profit sharing plan assets, including in-house management of a $250 million fixed income portfolio.Mr. Kelly is a Certified Public Accountant, holds the Chartered Financial Analyst designation and is a member of the CFA Institute, the Boston Security Analysts Society and the Boston Bond Analysts Society. He has previously served as a member of the Investment Issues Committee of the Association of Private Pension and Welfare Plans and was a member of Pension Group East.

Merganser Capital Management, LLC
Short Term Bond

Jennifer Wynn, CFA, Portfolio Manager
Ms. Wynn joined the firm in 2000 and is the team leader for the credit sector, as well as a portfolio manager for shorter duration strategies. She also serves as the co-team leader for the Short Term Bond product and is a member of Merganser's Management Committee. Before joining Merganser, Ms. Wynn worked at Camp Dresser & McKee as a Water Resources Engineer. She began her career with American National Bank and Trust Company where she served as portfolio manager on Lehman Aggregate-indexed funds. In this role she was also responsible for trading government, corporate, mortgage backed, and asset backed securities. Ms. Wynn holds the Chartered Financial Analyst designation and is a member of the CFA Institute and the Boston Security Analysts Society.

Peter Kaplan, CFA, Portfolio Manager
Mr. Kaplan joined Merganser in 1986 and is the team leader for the asset backed securities (ABS) sector. He is a portfolio manager for shorter duration strategies and also serves as the co-team leader for Cash Enhancement. Prior to joining Merganser, Mr. Kaplan worked for SEI Corporation and managed the design, development and implementation of investment accounting systems. Prior to SEI Corporation, Mr. Kaplan worked at Interactive Data Corporation, where he developed investment applications for institutional investment managers.Mr. Kaplan holds the Chartered Financial Analyst designation and is a member of the CFA Institute and the Boston Security Analysts Society.

PIMCO
Low Duration - Core

Matt Brady, Research Associate
Source: NEPC and eVestment
April 2015

Firm Description

Pacific Investment Management Company (PIMCO) is an investment manager focused on delivering fixed income products and solutions to clients. The firm was founded in 1971 by Mr. William Gross, and as of December 2012, had approximately 1, 671 employees, of which approximately 337 were investment professionals. In 2000, PIMCO was acquired by Allianz SE, a large global financial services company based in Germany. PIMCO operates as a separate and autonomous subsidiary of Allianz, and the acquisition allowed for PIMCO's key professionals to purchase an equity stake in the firm. Allianz will repurchase these equity interests over time, but the equity program will run through at least 2013. PIMCO also has a profit sharing plan, where 30% of profits are distributed to eligible employees. PIMCO has investment management offices around the world, in such locations as Newport Beach, CA, New York, Singapore, Tokyo, London, Sydney, Munich, Toronto and Hong Kong.

NEPC Investment Thesis

PIMCO gathers and analyzes information on economic and market trends, develops a long-term secular view and applies this to their portfolios. Input from internal talent as well as prominent figures in academia and the government factor into their investment process. The source of their expected alpha is their well-informed long-term secular outlook, the periodic refinements of short-term views, their ability to capture the benefits associated with the size and depth of their organization, and their global reach and influence within the fixed income markets.

People

PIMCO's Investment Committee is responsible for setting the top-down macro-economic views for all of the firm's fixed income strategies. PIMCO is a large organization, with more than 200 portfolio managers and over 100 research analysts firm-wide. Specific sector teams related to short duration are covered by the firm's centralized research platform.

PIMCO
Low Duration - Core

Philosophy

PIMCO's philosophy seeks to build diversified portfolios where no single risk should dominate returns. PIMCO's investment process expects to generate above-benchmark returns by building diversified, risk-averse portfolios based upon their long-term secular outlook. This is achieved by analyzing fundamental global trends in such areas as political factors, inflation, volatility, growth, fiscal balances, and currency, amongst others. The three to five-year secular outlook is the core element of their decision-making process, and serves as a framework for portfolio implementation. In applying the secular outlook to the portfolio, such tools as duration position, yield curve posture and country allocation are expressed to best represent the firm's view on the macro-economic environment. Bottom-up analysis of specific securities is also an important part of the firm's philosophy. Bonds are evaluated on a rich/cheap basis and fundamental research determines strong portfolio candidates.

Investment Strategy

The process begins with PIMCO's annual Secular Forum. The task of the forum is to determine where to invest client's money - domestically or internationally, long duration or short duration, high quality or high yield, etc. The top-down framework is determined at this forum, and a long-term focus is emphasized. PIMCO is looking at secular trends over a three to five-year time period - the idea being to ignore short term pricing factors and emotions. All investment professionals at PIMCO attend the forum - portfolio managers, generalists and analysts. In addition to the experts employed at PIMCO, prominent figures from academia, government and other outside organizations speak at the forum to offer their expertise on various economic/market conditions.

Ben Bernanke, who is a consultant employed by PIMCO, regularly attends PIMCO's internal meetings and offers his input and opinions on the economy. By holding this forum, PIMCO is able to gain insight into global markets from outside sources which enriches the investment process.

PIMCO
Low Duration - Core

Emerging from the Secular Forum, the Investment Strategy Group, determines the portfolio framework. A three to five-year outlook is determined for interest rate trajectory, volatilities, yield curve, credit health and country outlooks. Duration targets, yield curve posture, sector biases, quality biases and country biases are determined by the Investment Strategy Group. After the parameters have been determined by the committee, the respective generalist portfolio managers and specialist teams construct portfolios using their specialized skill sets. Short-term and cyclical trends are discussed quarterly so that PIMCO can refine their forecasts and update them to identify trends and take advantage of temporary market inefficiencies. Average duration around the index is +/- 10%years.

Portfolio
PIMCO will often execute portfolio positions either in cash securities, or in derivatives markets. Part of the success PIMCO's investment strategies is over time is attributable to their expertise in derivatives. Treasury futures, interest rate swaps, forwards and credit default swaps are some of the types of derivatives that may be utilized in portfolios. In recent time periods, PIMCO has had positions in Eurodollar futures contracts, reflecting their views on the US Treasury curve, and general unattractiveness of holding US Treasury securities in order to express their views on interest rates.

Performance Expectations
PIMCO has sophisticated risk control processes and systems in place to monitor portfolio performance. Generally, tracking error is held close to the index, with the intent to eliminate large, or potentially uncorrelated positions with the index. The goal is to earn incremental return over the index over time. PIMCO's strategy should perform well in most market environments, although the strategy will likely lag during periods of strong credit markets as PIMCO tends to be underweight corporate credit in their fixed income strategies.

PIMCO
Low Duration - Core

Scott Mather, Managing Director, Portfolio Manager
Mr. Mather is CIO U.S. Core Strategies and a managing director in the Newport Beach office. Previously he was Deputy CIO and head of global portfolio management. Before that, he led portfolio management in Europe, managed euro and pan-European portfolios and worked closely with many Allianz-related companies. He also served as a managing director of Allianz Global Investors KAG. Prior to these roles, Mr. Mather co-headed PIMCO's mortgage- and asset-backed securities team. Prior to joining PIMCO in 1998, he was a fixed income trader specializing in mortgage-backed securities at Goldman Sachs in New York. He has 20 years of investment experience and holds a master's degree in engineering, as well as undergraduate degrees, from the University of Pennsylvania.

Reams Asset Management, a Division of Scout Investments
Low Duration Fixed Income

Matt Brady, Research Associate
Source: NEPC and eVestment
April 2015

Firm Description
Reams is a division of Scout Investments, which in turn is owned by UMB Financial Corp . Reams currently manages assets for a diverse group of institutional clients, focusing exclusively on the management of U.S. fixed income portfolios. All senior professionals participate as principals of the firm and Reams has no parent organization, subsidiaries, affiliates, or joint ventures. Reams has a broad product offering in fixed income including core, core plus, multi-sector fixed income, real return strategies, long duration and absolute return fixed income.

NEPC Investment Thesis
We expect Reams to add value to client portfolios through their disciplined rotation into and out of spread sectors of the marketplace, the conviction level in which they implement active positions, and by avoiding unproven securities and structures. A key part of their investment process that guides sector allocation is the analysis of price volatility in fixed income securities, the macro-economic environment and long term valuations. The utilization of scenario analysis, stressing securities for different interest rate and credit environments, is also a key part of their investment process that has distinguished the approach from competitors.

People
Reams is a small boutique fixed income manager with five portfolio managers and seven research analysts. The group of portfolio managers are experienced, and have all been working together since 2001 (the most recent portfolio manager addition). Low Duration Fixed Income is managed as a team, with all of the portfolio managers and sector specialists weighing in on macro-economic decisions and security selection recommendations.

Philosophy
Reams believes that volatility is a key driver of performance in fixed income markets, and that it is often mispriced or misunderstood by market participants. As such, the strategy for Low Duration seeks to add value by focusing on longer-term investment horizons, and by reacting opportunistically to volatility and valuation mismatches in the marketplace. Strategy will utilize both top-down and bottom-up elements.

Reams Asset Management, a Division of Scout Investments
Low Duration Fixed Income

Investment Strategy

Reams manages fixed income portfolios using three steps. The first step is the duration decision. With this step, the portfolio's overall duration and yield curve characteristics are established. Reams approaches the duration decision as it relates to valuation, utilizing below-benchmark or short-duration portfolios when the market is unattractive or overvalued and above-benchmark or long-duration portfolios when the market is attractive or undervalued. The main tool used to establish value is the "real" or inflation-adjusted Treasury bond rate. Reams calculates the real rate by subtracting a proprietary estimate of underlying inflation, derived from an analysis of monetary policy, from the available nominal Treasury rate. The resulting real rate is then compared to historical norms to determine value. When the current real rate is above 2.5%, it is considered to be attractive and portfolio duration is scaled upwards above the benchmark. When the current real rate is below 2.5%, it is considered to be unattractive and scaled below the benchmark. Portfolios generally have a duration range of plus or minus 25% of the benchmark at the extremes. Depending on Reams' assessment of relative values along the yield curve, portfolios may be barbelled, bulleted, or laddered.

Once top-down strategy is in place, the second step of the investment process is to consider sector exposures. Sector decisions generally involve exposures to the mortgage, credit, ABS, and Government sectors. Sector exposure decisions are made on both a top-down and bottom-up basis. A bottom-up issue selection process is the major determinant of sector exposure, as the availability of attractive securities in each sector determines their underweighting or overweighting in the portfolio subject to sector exposure constraints. However, for the more generic parts of the portfolio, such as agency notes and mortgage pass-throughs, top-down considerations will drive the sector allocation process on the basis of overall measurements of sector value such as yield spreads or price levels.

Reams Asset Management, a Division of Scout Investments
Low Duration Fixed Income

Finally, the third step in the investment process is individual security selection. Reams approaches security selection on a total return basis assuming that the market will exhibit a considerable degree of both interest rate and credit volatility. Therefore, the firm's focus is generally on securities that will benefit from dynamic interest rate and credit environments. Pockets of the market that exhibit good dynamic and structural characteristics, such as putable bonds or secured debt, may be used, allowing Reams to take advantage of its relatively moderate size. They generally like to avoid callable securities due to the negative convexity associated with such instruments.

Reams relies primarily on internal research in the bond selection process. A great deal of emphasis is placed on using scenario analysis as an analytical tool, allowing Reams to determine how each security will perform in a variety of potential interest rate and credit environments. Value is determined based on the distribution of potential returns. The firm's outlook for interest rates, fundamental credit analysis, and option-adjusted spread analysis are the primary tools used when constructing these scenarios. This process identifies which bonds should perform the best under the most likely scenarios. Importantly, this process will also point out those bonds that, while attractive on the surface, are most vulnerable to risks in the bond market, and inappropriate for the portfolio. Ultimately, investment opportunities are compared, and the bonds with the highest risk-adjusted return are selected.

Portfolio

Portfolios are constructed on the basis of Reams' three-step investment process, building in top-down duration and yield curve strategies while putting in place bottom-up sector and security strategies. The duration and curve framework is immediately laid into place for a new portfolio using government and mortgage securities with instant liquidity in order to establish the desired macro portfolio structure. Security strategies and other sector strategies are then put in place as market conditions allow. Duration, convexity, and diversification limits by issuer, credit, and sector are monitored consistently in real time. Contribution to duration by yield curve position, sector, credit, and MBS are monitored daily through proprietary reports. Contribution to tracking error volatility is monitored through a third-party system. With regard to diversification limits, under normal market conditions, no single issuer (excluding government and agency securities) will exceed 1% of the total market value of the account, or 1.5 times the index percentage weight of the issuer, whichever is greater.

Reams Asset Management, a Division of Scout Investments
Low Duration Fixed Income

Performance Expectations

Ream's strategy tends to overweight spread sectors through most market environments, thus they will tend to lag when spreads widen.

Reams Asset Management, a Division of Scout Investments
Low Duration Fixed Income

Robert Crider, CFA, Managing Director
Mr. Robert A. Crider, CFA, Managing Director, brings nearly thirty years of investment experience to the firm, and is one of the founding members. Prior to founding Reams, Mr. Crider was employed at the State Teachers Retirement System of Ohio. Mr. Crider graduated from Ohio State University with a BA and MA.

Mark Egan, CFA, Managing Director
Mr. Egan, CFA, Managing Director, joined Reams in 1990. Prior to joining Reams, Mr. Egan was employed at National Investment Services. Mr. Egan holds a BS from Marquette University and an MBA from the University of Wisconsin.

Thomas Fink, CFA, Managing Director
Mr. Fink joined Reams in 2000, with prior work experience at Brandes Fixed Income Partners, Hilltop Capital Management, and Zurich Investment Management. Mr. Fink holds a BS from Marquette University and an MBA from the University of Wisconsin.

T. Rowe Price Group, Inc.
US Short-Term Bond Strategy

Matt Brady, Research Associate
Source: NEPC and eVestment
April 2015

Firm Description

T. Rowe Price was established in 1937 by Thomas Rowe Price as an independent investment advisory firm, and was incorporated in the state of Maryland in 1947. The firm began as an advisor for individual investors. In 1950, T. Rowe Price established its first retail mutual fund, the Growth Stock Fund, and in 1951 they accepted their first institutional separate account client. T. Rowe Price's fixed income group was founded in 1971 and includes high yield bonds along with investment grade and global bonds. In 1986, the firm became a publicly traded corporation, listed on the NASDAQ exchange. Approximately 15% of the firm is employee owned outright, or through vested but unexercised stock options. It is the long-term goal of T. Rowe Price to grow in three major lines of business: institutional separate account management, defined contribution retirement plan management, and retail investment management.

NEPC Investment Thesis

We expect T. Rowe Price to outperform the index through security selection and expertise in the corporate bond segment of the market. T. Rowe Price's corporate credit team has historically contributed positively to excess return. The strategy will overweight corporate bonds, and even overweight BBB rated issues through most cycles, capturing the higher yield available in such securities.

People

Edward Wiese is the Lead Portfolio manager for the Short Term Bond strategy. Mr. Wiese has spent his entire investment career at T. Rowe Price, and has managed the short term strategy through the majority of those years. Investment strategy is determined by a five person team of senior level professionals, of which Mr. Wiese is a member. In addition to the strategy team, an advisory committee made of individuals with varied sector backgrounds also weighs in to formulate investment views and ideas. T. Rowe Price also has a large team of analysts dedicated to fundamental research, and a team of quantitative analysts working on performance attribution, risk analysis and quantitative investment techniques.

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Philosophy

T. Rowe Price believes that in short term bond portfolios, yield plays a greater role than price appreciation in generating excess returns. Additional yield can be added to portfolios through incremental sector rotation and individual security selection. The strategy will use both top-down and bottom-up inputs to structure short term bond portfolios

Investment Strategy

Corporate bonds are the most important part of T. Rowe Price's short term bond strategy, and are a central part of the investment process. Credit research includes two elements: credit analysis and credit relative value assessment. The firm's dedicated team of corporate fixed income research analysts make security specific and sector specific recommendations to the strategy team. Over time, the strategy will overweight corporate bonds and underweight lower yielding government securities. There are three key steps to the corporate bond research process:

1) Financial analysis. The core of the investment-grade fixed income research is the analysis of financial and economic data relevant to each debt security being considered for purchase or sale. The analysts evaluate the data under a variety of potential scenarios. Credits are assessed on a comparative basis versus their peers, including the use of ratio analysis to determine relative strengths and weaknesses.

2) Technical and legal analysis. The research approach also includes extensive legal, technical, and structural analysis. Project financings, collateralized borrowings, and asset-backed transactions are subjected to extensive document review and analysis. Also, issues that feature credit or liquidity undergo a careful review of third-party arrangements. Variable rate instruments undergo an analysis of rate-setting mechanics and tender provisions.

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3) Qualitative factors. The investment-grade fixed income analysts also carefully consider qualitative factors, which takes the review process beyond the financial statements and legal documents. Such issues as management's abilities and reputations, a company's historical approach to balance-sheet management, overall industry and economic dynamics, rating agency prejudices, and underwriters' capabilities are taken into consideration.

The output of the credit research process is a single T. Rowe Price credit rating, which is assigned to each issue based on the fundamentals of the issuer and the characteristics of the issue. This rating provides the trading and portfolio management staff with a clear and concise indication of the research group's evaluation of the credit quality of the issue, and its suitability for a particular portfolio. The in-house rating is the starting point for an assessment of relative value.

Portfolio
The portfolio is constructed relative to a benchmark using absolute market value weights, but duration contribution weighs heavily in the management decision. Duration is limited to +/- 20% of the index. Relative sector weightings are determined on the basis of sector preferences. Teams devoted to particular bond market sectors, such as mortgages or high yield bonds, develop outlooks for their particular sectors based on their research. Citigroup Yieldbook is used to assist in portfolio construction. Up to 10% non-dollar exposure is allowed.

Performance Expectations
Since the strategy usually overweights spread sectors, especially corporate credit, the strategy will likely lag the benchmark when spreads widen. Within the corporate sector, the strategy may also allocate aggressively to BBB rated issues, adding incremental yield, but also more sensitivity to the credit cycle.

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Edward Wiese, CFA, Portfolio Manager
Edward Wiese is head of the Fixed Income Division for T. Rowe Price, overseeing fixed income investment management. He is chairman of the Fixed Income Steering Committee and is a member of the firm's Management Committee. Mr. Wiese also is a portfolio manager in the Fixed Income Division and serves as president and chairman of the Investment Advisory Committees of the Short-Term Bond Fund and the Limited-Term Bond Portfolio. He is on the Board of the T. Rowe Price Trust Company and is a member of the firm's Valuation and Counterparty Risk Committees. Mr. Wiese joined T. Rowe Price in 1984. He earned a B.A. in geology from Yale University, an M.S. in biotechnology from The John Hopkins University, and an M.B.A. in finance from the Tuck School of Business at Dartmouth. Ted also has earned the Chartered Financial Analyst designation.

Brian Brenna, CFA, Portfolio Manager
Mr. Brennan is a vice president of T. Rowe Price Group, Inc., and T. Rowe Price Associates, Inc. He is a portfolio manager in the Fixed Income Division involved with the management of investment-grade, global aggregate, and stable value portfolios. Mr. Brennan is chairman of the Investment Advisory Committee for the U.S. Treasury Long-Term Fund, as well as the Institutional Core Plus Fund. He is also a member of the Investment Advisory Committees for the New Income, U.S. Treasury Intermediate, Inflation Protected, GNMA, and International Bond Funds. Prior to joining the firm in 2000, he was a fixed-income manager at Howard Hughes Medical Institute. Mr. Brennan earned a B.S. in economics and computer science and an M.A. in economics from Trinity College in Hartford, Connecticut. He has also earned his Chartered Financial Analyst accreditation.

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Daniel Shackelford, CFA, Portfolio Manager
Mr. Shackelford is a vice president of T. Rowe Price Group, Inc., and T. Rowe Price Associates, Inc., and is a portfolio manager in the Fixed Income Division. He manages mutual fund and institutional fixed-income portfolios, including investment-grade, global aggregate, and stable value portfolios. Mr. Shackelford chairs the Fixed Income Strategy Committee, as well as the Fixed Income Derivatives Committee. Mr. Shackelford is chairman of the Investment Advisory Committee and president of both the New Income and the Inflation Protected Bond Funds. Prior to joining the firm in 1999, he was the principal and head of fixed income for Investment Counselors of Maryland. He earned a B.S. in business administration from the University of North Carolina, Chapel Hill, and an M.B.A. in finance from Duke University, The Fuqua School of Business, where he was a Fuqua Scholar. Mr. Shackelford has also earned his Chartered Financial Analyst accreditation.

Appendix

Total Firm Assets

Firm	YTD		2014		2013		2012	
	$MM	# of accounts	$MM	# of accounts	$MM	# of accounts	$MM	# of accounts
Short Duration Fixed Income								
Chicago Equity Partners	9,777	190	10,243	196	9,986	209	9,558	199
Income Research & Management	54,890	910	48,412	968	37,224	967	35,479	955
Longfellow Investment Management Co.	7,747	115	6,458	104	6,581	88	5,290	75
Merganser Capital Management, LLC	9,672	105	8,485	108	7,098	93	7,303	92
PIMCO	1,435,042	2,073	1,680,389	2,208	1,919,589	2,368	2,003,818	2,317
Reams Asset Management, a Division of Scout Investments	27,185	204	31,187	201	31,171	175	23,571	169
T. Rowe Price Group, Inc.	763,100	1,850	746,800	1,806	692,400	1,709	576,800	1,652

Total Product Assets

Firm/Product	YTD		2014		2013		2012	
	$MM	# of accounts	$MM	# of accounts	$MM	# of accounts	$MM	# of accounts
Short Duration Fixed Income								
Chicago Equity - Short Fixed Income	553	13	749	17	832	20	321	9
Income Research - IR+M 1-3 Year	2,122	34	2,164	36	1,952	38	1,436	50
Longfellow - Short Duration	1,622	25	1,241	21	1,010	19	1,386	22
Merganser - Short Term Bond	5,652	61	4,793	60	4,164	52	3,661	45
PIMCO - Low Duration - Core	14,617	26	19,435	27	26,184	33	29,874	31
Reams - Low Duration	3,992	46	3,817	42	3,280	33	2,973	24
T. Rowe - Short Term Bond	10,323	10	12,157	10	11,707	9	11,215	8

Product Assets By Vehicle Type

Firm/Product	Separate Account		Commingled Fund		Inst. Mutual Fund	Retail Mutual Fund
	$MM	# of accounts	$MM	# of accounts	$MM	$MM
Short Duration Fixed Income						
Chicago Equity - Short Fixed Income	553	13	0	0	0	0
Income Research - IR+M 1-3 Year	1,651	33	472	1	0	0
Longfellow - Short Duration	1,622	25	0	0	0	0
Merganser - Short Term Bond	5,460	60	192	1	0	0
PIMCO - Low Duration - Core	14,140	24	0	0	389	89
Reams - Low Duration	3,939	45	0	0	53	0
T. Rowe - Short Term Bond	4,212	7	*0	*0	431	5,680

*Unfunded: See Disclosures

Account Minimums and Fee Schedules

Firm/Product	Separate Account Min. ($MM)	Commingled Fund Min. ($MM)	Mutual Fund Min. ($MM)	Separate Account Fee Schedule	Commingled Fund Fee Schedule	Mutual Fund Ticker and Fee
Short Duration Fixed Income						
Chicago Equity - Short Fixed Income	10	NA	NA	First $25 million - 0.20% Next $75 million - 0.15% Balance - 0.10%	Not Available	Not Available
Income Research - IR+M 1-3 Year	50	5	NA	First $50 million - 0.25% Next $50 million - 0.15% Balance - 0.10%	All Assets at 0.25%	Not Available
Longfellow - Short Duration	10	NA	NA	First $50 million - 0.25% Next $50 million - 0.15% Balance - 0.13%	Not Available	Not Available
Merganser - Short Term Bond	20	5	NA	All Assets at 0.20%	All Assets at 0.20%	Not Available
PIMCO - Low Duration - Core	75	NA	1	First $50 million - 0.38% Balance - 0.25%	Not Available	PLDTX - 0.50%
Reams - Low Duration	25	NA	0	First $50 million - 0.20% Balance - 0.15%	Not Available	SCLDX - 0.40%
T. Rowe - Short Term Bond	50	*0	0 1	First $50 million - 0.23% Next $50 million - 0.18% Next $150 million - 0.15%	All Assets at 0.41%	PRWBX - 0.52% TBSIX - 0.41%

*Unfunded: See Disclosures

Litigation

Firm	Manager's explanation of Prior or Pending Litigation
Short Duration Fixed Income	
Chicago Equity Partners	There is no prior or pending litigation.
Income Research & Management	In 2011, IR+M and its Managing Principals were named as defendants in a civil action in Suffolk Superior Court (located in Boston, Massachusetts), brought by a former IR+M employee alleging claims relating to certain terms of his employment while at IR+M. We successfully defended all claims, receiving a favorable jury verdict on June 5, 2014. On November 24, 2014, the former IR+M employee filed a notice of appeal of the final judgment of the Superior Court action; IR+M intends to defend the appeal to the fullest extent possible. In a related matter initiated by the same former employee, IR+M and its Managing Principals were named as respondents in an administrative proceeding before the Massachusetts Commission Against Discrimination (MCAD). On December 3, 2014, MCAD dismissed the administrative proceeding in favor of IR+M and its Managing Principals due to lack of probable cause. On December 11, 2014, the former IR+M employee filed a notice of appeal with MCAD. On April 16, 2015, MCAD affirmed its previous decision in dismissing the claims due to lack of probable cause, effectively closing the MCAD proceeding; however, all employment complaints where applicable are dual filed with the U.S. Equal Employment Opportunity Commission (EEOC). On September 10, 2015, the EEOC issued a Dismissal and Notice of Rights adopting the findings of MCAD, and, as is standard practice, allows the former employee to bring suit in Federal Court within 90 days of the dismissal.
Longfellow Investment Management Co.	There is no prior or pending litigation.
Merganser Capital Management, LLC	There is no prior or pending litigation.

Litigation

Firm	Manager's explanation of Prior or Pending Litigation
Short Duration Fixed Income	
PIMCO	PIMCO is not the subject of any lawsuit which could reasonably be expected to have a material adverse effect on PIMCO's ability to provide investment management services. Although PIMCO does not expect the below matters will have a material adverse effect on its ability to provide subadvisory services, PIMCO notes the following: On December 31, 2014, a lawsuit was filed in the United States District Court for the Western District of Washington by Robert Kenny, an investor in the PIMCO Total Return Fund, against PIMCO and PIMCO Investments LLC (collectively, the ''36(b) Parties''). The complaint purports to be brought derivatively on behalf of the PIMCO Total Return Fund, a registered management investment company advised and administered by PIMCO and distributed by PIMCO Investments, and alleges that the 36(b) Parties violated Section 36(b) of the Investment Company Act of 1940 by receiving excessive compensation from the PIMCO Total Return Fund. The 36(b) Parties believe the claims are without merit and intend to vigorously defend the action. On January 28, 2015, a putative class action lawsuit was filed in the United States District Court for the Central District of California by William Hampton, an investor in the PIMCO Total Return Fund, against PIMCO, PIMCO Investments LLC and the PIMCO Total Return Fund, alleging that the named defendants violated Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder due to alleged misrepresentations in connection with the management of the PIMCO Total Return Fund. On July 6, 2015, an amended complaint was filed by the plaintiff. The amended complaint, which supersedes the original filing, advances a new theory, that the PIMCO Total Return Fund improperly invested in emerging markets in excess of the guidelines described in the fund's Prospectus, and adds as additional parties the PIMCO Funds Trust and those persons who served as Trustees to the fund during the relevant period. PIMCO Investments and the PIMCO Total Return Fund were not named as defendants in the amended complaint. On November 2, 2015, the lawsuit was dismissed in its entirety with prejudice. Plaintiff filed an appeal of this judgment on November 30, 2015. On October 7, 2015, a putative class action lawsuit was filed in United States District Court for the Central District of California by two participants in the Allianz Asset Management 401(k) Plan (the Plan), in which employees of PIMCO and other Allianz entities participate, against PIMCO, AAM, and various other Allianz entities and an executive at AAM (together, the PIMCO and Allianz Parties). The lawsuit alleges that the Allianz defendants breached their fiduciary duty to the Plan in the selection of investment options in the Plan. The lawsuit further alleges that the Plan's assets improperly inured to the benefit of PIMCO and other Allianz entities whose employees participated in the Plan due to the retention by these entities of the investment management fees charged to Plan participants. The PIMCO and Allianz parties believe that this lawsuit is without merit and intend to vigorously defend against it. On October 8, 2015, a lawsuit was filed in California state court by William H. Gross, a former employee of PIMCO, against PIMCO and Allianz Asset Management of America L.P., PIMCO's direct parent company (AAM). Mr. Gross's complaint alleges that PIMCO wrongfully terminated him, breached a contractual duty, and breached an implied covenant of good faith and fair dealing in connection with compensation allegedly owed to him. PIMCO and AAM filed a motion to dismiss the complaint on November 9, 2015. PIMCO and AAM believe that this lawsuit is without merit and intend to vigorously defend against it.

Litigation

Firm	Manager's explanation of Prior or Pending Litigation
Short Duration Fixed Income	
Reams Asset Management, a Division of Scout Investments	There is no prior or pending litigation.
T. Rowe Price Group, Inc.	From time to time in the normal course of business, T. Rowe Price Associates, Inc., its subsidiaries, affiliates, officers, and employees (collectively the ''Company'') are named as parties to minor litigation matters involving the accounts of Price mutual fund shareholders, retirement plan participants, or of retail customers in the Company's brokerage unit. Often, the Company is named as a stakeholder and, therefore, these minor litigation matters are not disclosed herein. Further, the Company has not been involved in any notable litigation matter relating to any business practice or relating to services rendered to the firm's clients during the past five years, with the following exceptions: Pending Case: Tribune Company Bankruptcy Proceeding We have received notice that several of the T. Rowe Price Funds, sub advised clients, and institutional clients may be included in a class of defendants in connection with a lawsuit that the Unsecured Creditors Committee (the Committee) of the Tribune Company filed in Delaware bankruptcy court. We have not been formally served with that lawsuit. However, various T. Rowe Price entities and certain of the T. Rowe Price Funds, institutional clients, and sub advised clients have been sued in a number of federal and state courts in various states in connection with receipt of proceeds from a leveraged buyout (LBO) through which Tribune converted to a privately owned company in 2007. These lawsuits allege constructive fraudulent transfer claims in an attempt to recover payments made to shareholders at the time of the LBO. There are similar cases naming hundreds of defendants in many states, and these cases appear to be coordinated, in that plaintiffs, who are serving in a representative capacity, are Deutsche Bank Trust Co. Americas, Law Debenture Trust Co., and Wilmington Trust Company, each in its capacity as successor indenture trustee for certain debt instruments. The lawsuits do not allege that any of the T. Rowe Price defendants engaged in wrongful conduct. Closed Case: T.K. Parthasarathy, et al. (incl. Woodbury) v. T. Rowe Price International Funds, Inc., et al. On September 16, 2003, a purported class action (Woodbury v. T. Rowe Price International Funds, Inc.) was filed in the Circuit Court, Third Judicial Circuit, Madison County, Illinois, against T. Rowe Price International, Inc. and the T. Rowe Price International Funds, Inc. Two unrelated fund groups were also named as defendants. The basic allegations in the complaint were that the T. Rowe Price defendants did not make appropriate value adjustments to the foreign securities of the T. Rowe Price International Stock Fund prior to calculating the Fund's daily share prices, thereby allegedly enabling market timing traders to trade the Fund at the expense of long-term shareholders. The case against the T. Rowe Price defendants was resolved, and it was dismissed with prejudice on February 15, 2008. Updated 7/28/2011

Contact Information

Manager	Location	U.S. Client Contact	Phone	Email
Short Duration Fixed Income				
Chicago Equity Partners	Chicago, Illinois	Marty Dorow	(312) 629-4504	mdorow@chicagoequity.com
Income Research & Management	Boston, Massachusetts	Matthew Drasser	(617) 391-6706	mdrasser@incomeresearch.com
Longfellow Investment Management Co.	Boston, Massachusetts	Tom Burleigh	(617) 695-3504	TDB@LongfellowInvestment.com
Merganser Capital Management, LLC	Boston, Massachusetts	John Clavin	(617) 528-4863	jclavin@merganser.com
PIMCO	Newport Beach, California	Marta Bezoari, CAIA, CFA	(212) 739-4685	marta.bezoari@pimco.com
Reams Asset Management, a Division of Scout Investments	Columbus, Indiana	Thomas Fink, CFA	(812) 372-6606	tfink@reamsasset.com
T. Rowe Price Group, Inc.	Baltimore, Maryland	William Wendler	(410) 345-2239	chip_wendler@troweprice.com

Beta: A measure of volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta can be thought of as the tendency of a security's returns to respond to swings in the market. A beta of 1 indicates that the security's price will move with the market. A beta of less than 1 indicates that the security's price will be less volatile than the market.

Correlation: A statistical measure of how two securities move in relation to each other. Correlation is computed into a correlation coefficient which ranges between -1 to +1. A perfect positive correlation (+1) implies that as one security moves either up or down, the other security will move in the same direction. Alternatively, a perfect negative correlation (-1) means that if one security moves in either direction the security that is perfectly negatively correlated will move by an equal amount in the opposite direction.

Information Ratio: A measure of portfolio management's performance against risk and return relative to a benchmark or alternative measure.

Kurtosis: A statistical measure used to describe the distribution of observed data around the mean. Kurtosis describes trends in charts. A high kurtosis portrays a chart with fat tails and a low, even distribution, whereas a low kurtosis portrays a chart with skinny tails and a distribution concentrated toward the mean.

Skewness: A statistical term used to describe a situation's asymmetry in relation to a normal distribution. A positive skew describes a distribution favoring the right tail, whereas a negative skew describes a distribution favoring the left tail.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark. Tracking errors are reported as a "standard deviation percentage" difference. It tells you the difference between the return you received and that of the benchmark you were trying to copy.

- **This report contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, policies or portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.**

- **Past performance is no guarantee of future results.**

- **Information on market indices was provided by sources external to NEPC, and other data used to prepare this report was obtained directly from the investment manager(s). While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**

- **This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.**

DALLAS POLICE & FIRE PENSION SYSTEM

INVESTMENT RECOMMENDATION

Date:	April 14, 2016
To:	DPFP Board
From:	DPFP Investments Staff
Subject:	Income Research + Management (IR+M) 1-3 Year Strategy

Recommendation

The DPFP Investment Staff recommends approving an initial investment of $50,000,000 to the Income Research + Management (IR+M) 1-3 year strategy within DPFP's short duration core bond sub-asset allocation.

Executive Summary

On March 10, 2016 the Board approved the new asset allocation which expanded the Fixed Income asset class from 15% to 33% (28% liquid fixed income and 5% private credit). Within the Fixed Income asset class, it is divided into 7 sub-asset classes with various allocations. The first priority was to build out the 2% short-term core bond allocation with a focus on short duration as the portfolio transitions throughout the next few years. This allocation will serve as an alternative to holding funds in cash to generate slightly higher returns. DPFP is underweight to US bonds compared to the current global bonds mandate. The objective for this search was to seek a high quality US core bond manager with low duration, daily liquidity, reasonable fees, and a focus on preservation of capital. Smaller/Mid-sized firms are known to be more nimble and to be alpha generators although alpha is constrained in the fixed income space. Expected alpha from short duration core bond managers is between 0.0%-0.5% net of fees.

Process

First, Staff requested a manager search book from NEPC consisting of their preferred managers. NEPC constructed a list of qualified managers starting with the 2,700 managers in the eVestment Fixed Income universe and filtered that by Short Duration Fixed Income Strategies, assets under management greater than $150 million, and who also have at least a 3 year track record. From the refined list of 73 potential managers, NEPC narrowed it down further by quantitatively and qualitatively scoring each manager as well as utilizing peer review to create a recommended list of 7 short duration core bond managers suitable for all their clients.

DPFP Investment Staff analyzed the condensed list of preferred managers, referencing NEPC's manager search book and all other information provided by NEPC and the candidates, had discussions with NEPC and the candidates, to arrive at a final recommendation. Staff reviewed performance, investment structure, minimum investment, fee structure, and whether this investment would be a good fit for DPFP and meet the stated objectives. Staff considered all managers on NEPC's focus placement list (FPL) and ruled out managers based on performance compared to the other FPL managers and benchmark, high minimum account requirements, high fee structures, holdings, strategy, etc. Staff analyzed each manager's risks vs. return, performance, credit quality, yield to maturity, yield to worst, duration, holdings, tracking error, excess return, and other statistics.

After completing this analysis, the Investment Staff recommends an allocation to IR+M's 1-3 Year Strategy based on the following considerations:

Portfolio

IR+M is a US fixed income manager that employs a credit-intensive value-oriented approach. IR+M was founded in 1987 by brothers John and Jack Sommers and is exclusively a fixed income boutique firm that is 85% employee owned and 15% family owned. Current assets under management are $54.9 billion with $2.1 billion in the 1-3 Year Strategy.

IR+M's key strength is their security selection, uncovering value in complex securities, identifying mispricings and overlooked sectors in the market. The bottom up security selection starts with the fixed income universe divided into sector specialty teams: corporate, securitized, government and municipal. Then all investments undergo a bottom up fundamental credit analysis, a detailed review of the underlying structural features, and discussions of appropriate valuation. The best ideas then move forward to the relative value target team and in meaningful position sizes implemented into the portfolio. Their investment strategy is designed to capture several market inefficiencies, including valuation and liquidity anomalies, unusual market conventions, non-economic investor trading, and new-issue concessions. Portfolios are constructed to provide yield and convexity with a goal to outperform in volatile interest rate environments. They exhibit stability with their repeatable investment strategy and utilize a process which has been the same since inception.

Portfolio holdings range between 75-180 securities, with the recommended strategy currently holding around 120. IR+M primarily invests in corporate and securitized sectors and will likely underweight Treasuries and Agency securities. Their expected alpha is sourced from their expertise and knowledge in securitized holdings such as put bonds, pre-payable CMBS bonds, hybrid ARMS, municipals, century bonds and convertible bonds. The portfolio is comprised of very high quality bonds. Half of the portfolio is composed of AAA's and the minimum rating is BBB. Portfolio is restricted to no more than 5% in any non-governmental issue and they hold duration and yield curve exposures within 10% of the Barclay's 1-3 Year Government/Credit benchmark (benchmark). Below are the current quality allocations relative to benchmark exposures as of December 31, 2015.

Investment	AAA/Aaa	AA/Aa	A	BBB/Baa	BB/Ba	B	CCC/Caa & Below	Other
IR+M 1-3 Year Strategy	51.3%	4.5%	22.4%	21.9%	0.0%	0.0%	0.0%	0.0%
Barclays US 1-3 Yr Govt/Credit	71.5%	6.9%	11.4%	10.2%	0.0%	0.0%	0.0%	0.0%

IR+M has the potential to lag during credit bear markets compared to the benchmark because the strategy has an emphasis on corporate and securitized sectors and is underweight US Government/Agencies. The benchmark's allocation to US Government/Agencies is 75.6% while IR+M's is 36.8% as of December 31, 2015. See below for the sector allocation table for IR+M vs. the benchmark. Due largely to this underweight, IR+M also has a smaller allocation (51.3%) to AAA rated securities compared to the benchmark (71.5%). This factor will also lead to IR+M's spreads widening more in a risk off environment and may cause it to lag compared to the index. Conversely the strategy is likely to outperform the index during flat markets due to its higher coupon and during periods of spread tightening.

Investment	US Govts/ Agencies	US Inv. Grade Corps	US High Yield	Municipals	Convertibles	US Agency Securitized	US Non-Agency Securitized	Other
IR+M 1-3 Year Strategy	36.8%	44.8%	0.0%	4.8%	0.0%	0.0%	13.5%	0.0%
Barclays US 1-3 Yr Govt/Credit	75.6%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Within short duration, the strategy is designed to have maturities of less than 3 years resulting in a natural turnover of 33% every year as the securities mature. IR+M's 2015 annual turnover was 68.5% driven by buying and selling treasuries for duration management. Their turnover is in line with their historical annual turnover rates.

Personnel

IR+M does have the ability as a firm and team to carry out their stated investment process. Consistent management team since inception. Out of the three managing principals, two are the founders of IR+M. The 14 portfolio managers have an average tenure of 10 years and are broken out into sector specialty teams. Supporting the portfolio managers are 23 research analysts. The company also offers equity ownership in the firm to essential team members for employee retention. As an added benefit, IR+M produces regular research communication and resources for their clients with their perspective on key developments in the US fixed income market. They also produce materials which explain their investment philosophy, processes, and strategies.

For complete transparency, NEPC has disclosed that 2 NEPC employees have a relationship with employees at IR+M. Michael Manning's wife is the Director of Client Service and Timothy O'Connell's brother is also in client relations.

Performance

IR+M has delivered solid, consistent performance over many market cycles for portfolios in domestic investment grade fixed income investments. IR+M expects their 1-3 Year Strategy to generate approximately 50-75 basis points above the benchmark's return in a typical market cycle. Since 2000, the 1-3 Year strategy's percentage of positive months where it generated excess return over the benchmark was 71% which demonstrates their ability to deliver stable and consistent returns. IR+M has a low tracking error to the benchmark, yet consistently generates alpha. Their lowest month for performance was down 1.8%. Refer to manager search book for tracking error and excess performance comparison.

Pricing

This investment with IR+M would be structured as either a commingled fund or a separately managed account. With a $50 million minimum investment, they can offer a discounted flat fee rate of 18 basis points per annum, reduced from their standard 25 basis points even if the balance is more or less than the $50 million. Their fee offering is the one of the lowest out of the 7 FPL managers, which range from 18-52 basis points. IR+M provides daily liquidity with no lock up periods.

Fit for DPFP

DPFP Investment Staff believes the IR+M 1-3 year strategy will be a good fit for DPFP because it's a high quality, short duration core bond investment strategy with low risk and will generate better returns than cash. DPFP Investment Staff plans to utilize the IR+M investment portfolio as an alternative to holding cash in a money market fund for reserves that will be used for rebalancing purposes or to create a liquidity resource for funding a new investment. This utilization will generate better returns than cash while preserving capital. Having daily liquidity to get in or out of the IR+M 1-3 year strategy is essential. Staff performed an on-site due diligence in January 2016 and can attest that IR+M's expertise and knowledge about all assets across the yield curve, their security selection and ability to understand complex securities are their competitive advantage. If approved, IR+M will be placed into the short–term core bond allocation providing diversification, liquidity and low risk, while completing the build out of the short duration core bond allocation.

DISCUSSION SHEET

ITEM #C6

Topic: **Industry Ventures**

Attendees: Ken Wallace, Managing Director
Justin Burden, Managing Director

Discussion: NEPC recommended a $10 million allocation to venture/secondaries as part of the Private Markets Review and 2016 Strategic Investment Plan presented at the March 10, 2016 Board meeting. NEPC and Staff reviewed a pipeline of several private equity funds involved with venture capital and secondaries and selected Industry Ventures to present their Secondary Fund VIII and Partnership Holdings IV offerings.

Industry Ventures was founded in 2000 to make venture capital investments in early stage information technology companies. Founder Hans Swildens recognized an opportunity for a specialized secondary strategy focused on venture-backed companies and began to pursue this strategy. The firm now manages over $2 billion from offices in San Francisco and Washington D.C. with a team of 18 investment professionals.

Staff Recommendation: **Approve** a commitment of $5 million each to Industry Ventures Secondary Fund VIII and Industry Ventures Partnership Holdings IV within the Private Equity asset class, and **authorize** the Executive Director to negotiate and execute documentation, and perform all necessary acts and exercise all appropriate discretion to facilitate these investments.

DALLAS POLICE & FIRE PENSION SYSTEM

INVESTMENT RECOMMENDATION

Date:	April 14, 2016
To:	DPFP Board
From:	Investment Staff
Subject:	Industry Ventures Partnership Holdings IV and Secondary Fund VIII

Recommendation

The investment staff recommends approving a commitment of $5 million each to Industry Ventures Partnership Holdings IV and Industry Ventures Secondary Fund VIII within DPFP's private equity allocation.

Executive Summary

Industry Ventures Secondary Fund VIII is a closed end fund that will make investments in secondary direct and secondary fund investments in late stage venture backed companies. Secondary direct investments are direct purchases of company shares that provide liquidity for employees, founders, angels, and other investors. The fund will focus on obtaining a high IRR. The fund is targeting a net multiple of 1.8x-2.2x invested capital and a net 20-25% IRR. The fund will have a final close on June 30, 2016.

Industry Ventures Partnership Holdings IV is a closed end fund that will make fund and direct investments in early and mid-stage venture backed companies. The focus is on obtaining a high multiple by buying secondary interests that are less than 50% funded (early in the fund life) and making primary commitments to small, high performing funds. Direct investments will be made in operating companies that are outperforming. The fund is targeting a net multiple of 2.5x invested capital and a net 20-25% IRR. The fund has a hard close on June 30, 2016.

Process

Staff sourced these investments with the assistance of NEPC. Staff also independently meets with dozens of potential private equity managers during the course of the year to consider strategies, evaluate performance, and generate ideas. Considering analysis of the current Private Equity portfolio composition and the pacing plan, Staff and NEPC together reviewed several private equity offerings from the consultant's Focused Placement List (FPL) and Diligence Pipeline Report to review what funds were in the market, what opportunities were available, and when fund closings were anticipated in order to determine the best selection. Starting with over 20 funds across private equity strategies with target IRRs ranging from 15-25%, many were eliminated in the Buyouts, Credit, and various other strategies to avoid duplication of existing strategies in the DPFP portfolio. NEPC recommended exposure to venture capital and secondaries in the Private Equity pacing plan, and the list included over 8 funds in the Venture and Growth Equity space. Some funds in the Growth Equity space were considered as well. This list was further narrowed to funds that have been through the NEPC Alternative Assets Committee process and are on the Focused Placement List (FPL). These FPL funds were then evaluated based on strategy focus and suitability for the DPFP private equity portfolio. For example, a fund was eliminated based on concentration risk due to a narrow focus on North American healthcare and only late stage venture investments. The prospective funds were also evaluated based on performance of prior funds, including but not limited to quartile rankings on metrics such as IRR, Distributions to Paid In Capital (DPI), and Total Value to Paid In Capital (TVPI). Both Industry Ventures funds are on the NEPC Focused Placement List and rank in the upper quartiles of these metrics (see Performance section for rankings). Staff has had several communications by phone and email with Industry Ventures to address questions or concerns, and has reviewed relevant fund materials including the Private Placement Memorandum, Limited Partnership Agreement, firm presentations, and the NEPC analysis of the funds. Staff also contacted a reference at another pension plan currently invested with Industry Ventures to discuss their experience and any concerns. Based on this analysis, Staff believes the Industry Ventures platform is most appropriate due to management team strength and track record, diversified approach to venture capital, and portfolio fit of fulfilling missing exposure to venture capital and secondaries.

Personnel

Industry Ventures, L.L.C. is an SEC registered investment adviser and specialist investment firm with over $2 billion under management, focusing exclusively on the venture capital asset class. The Firm was founded in 2000 by Hans Swildens and is headquartered in San Francisco, CA with an additional office in the Washington, DC area. The experienced team of 17 professionals has built a broad portfolio of investments and maintains strong relationships with venture capital firms, company management teams and technology entrepreneurs. The firm manages over 175 direct company investments and 215 venture capital limited partnership investments. In 2014 and 2015 Preqin named Industry Ventures as a top US "Consistent Performing Manager for Secondary Funds and Funds of Funds."

The executives managing the funds consist of Founder and CEO Hans Swildens, and Managing Directors Justin Burden and Victor Hwang (Secondary Team), Roland Reynolds and Ken Wallace (Partnership Holdings Team). The Managing Directors have participated in more than $1 billion secondary venture capital transactions across more than 200 deals. They have an average of more than 20 years of experience investing in and leading venture backed companies, and have raised almost $2 billion in committed capital across 13 prior funds. Hans Swildens was a co-founder and President of Microline Software and advisor to the founders of Speedera Networks. Justin Burden previously worked at GE Equity, the $4 billion venture capital arm of General Electric. Victor Hwang was a founder and Managing Partner of Agile Capital Partners. Ken Wallace previously worked at Bessemer Trust.

Opportunity

The venture capital secondary market is a multi-billion dollar market that is expected to expand further as venture backed companies stay private longer, founders and employees more proactively pursue liquidity alternatives prior to an IPO or M&A exit, and as older venture capital funds reach the end of their terms. The current market imbalance between the number of companies funded and those that achieve exit through IPO or M&A creates the opportunity to purchase employee vested shares at attractive valuations. On the fund side, the market imbalance between funded and exited investments creates an opportunity to purchase secondary interests from end of life venture capital funds that have a need and investor demand for liquidity. Additionally, the diversified nature of Industry Ventures portfolio construction helps to shorten the J-curve and mitigate the capital loss risk of traditional venture funds. For example, a traditional venture capital fund has capital loss risk by having direct investments in only a small portfolio of companies, so one bad investment may have a large impact on the total fund return. Traditional venture funds also have a longer J-curve since it takes many years to invest in a young company, then operate and grow it to a mature exit. Lastly, Industry Ventures network and process allows access to smaller, better performing funds in which large institutional investors are rarely able to invest.

Risks

Market Environment – venture capital company valuations across various life cycles have been increasing over the past several years. A high valuation environment may challenge the team's ability to produce the high returns similar to prior funds. However, as equity markets have declined, so have venture company valuations, and the funds may be deploying capital at an opportune time.

Inherent Risk in Venture Capital – venture companies face many risks, including execution, technology, competition and obsolescence, resulting in high failure rates. The Industry Ventures funds' broad diversification across life stages and companies helps to mitigate the possibility of individual portfolio company failures significantly impacting the fund.

No Full Fund Liquidation – none of the prior Partnership Holdings funds have completed a full fund liquidation at this time, but all are still within the terms of their fund lives without extensions. This poses the risk that timing and amounts of eventual monetization could impact those fund investors' final returns. This is a common risk in all private equity funds that have unrealized portfolio holdings.

<u>Portfolio and Investment Strategy</u>

The Industry Ventures platform has a sourcing advantage through its proprietary database of quarterly reports from over 215 funds and over 2,000 underlying companies, professional network of GP's, LP's, and bankers, and strong brand equity. The platform systematically reviews an opportunity set of over $6 billion in deals sourced each year, utilizes investment criteria filter the opportunities, conducts comprehensive due diligence, and closes on $100 - $200million secondary investments annually. Additionally, the team's track record and experience has helped them build an extensive network of contacts and banks throughout Silicon Valley.

Industry Ventures Secondary Fund VIII

The fund will assemble a portfolio of investments in later stage venture companies and funds, focusing on the small end of the secondary market where there is less competition and more attractive risk-adjusted returns.

- Targets transactions that are $25 million or smaller
- Growth business that are on a clear path to exit
- Structural flexibility to capture more opportunities

Target Structure:

- 50% Secondary Direct – direct purchases of company shares, 20-40 companies
- 25% LP Interests – interests in a venture fund, 10-20 transactions
- 25% Special Situations – unique deal structuring opportunities (ex: employee shares)

Industry Ventures Partnership Holdings IV

The fund will construct a portfolio of investments in early and mid-stage venture companies and funds, seeking to provide a diversified, systematic, multi-year investment program focused on small funds.

- Primary commitments to smaller venture funds that are approximately $25 million to $250 million in size
- Secondary LP interests in venture funds that are less than 50% funded
- Special purpose funds that capitalize on excess pro-rata rights
- Direct investment in portfolio companies

Target Structure:

- 40% Early Secondary and Special Purpose Funds – interests in venture funds and excess pro rata rights vehicles, 5-10 transactions
- 40% Primary Commitments – commitments to small venture funds, 12-15 managers
- 20% Direct Investments – direct purchases of company shares, 15-20 companies

Pricing and Terms

Industry Ventures Secondary Fund VIII

- *Management Fee:* 1.5% on committed capital through year 5, 1.5% net invested capital thereafter
- *Preferred Return: 1) Priority Return: 6% preferred return prior to GP receiving carried interest. GP carried interest is 17.5%*

  2) Non-Priority Return: no preferred, GP carried interest is 15%

  **note: NEPC modelled various outcomes and scenarios and recommends the Non-Priority option.*
- *European Waterfall:*
  1. *100% to LP's until they receive a full return of capital and preferred if applicable*
  2. *100% to GP as carried interest catch up for applicable carried interest*
  3. *82.5%/17.5% LP/GP for Priority partners, 85.0%/15.5% for non-Priority*
- *Term: 10 years, with two one year extensions upon consent of Advisory Committee*
- *Commitment period 5 years*
- *Fund Size: $425 million*

Industry Ventures Partnership Holdings IV

- *Management Fee: 1% of committed capital years 1-7, thereafter 95% of prior year's rate on contributed capital*
- *Preferred Return: 6%*
- *European Waterfall:*
  1. *100% to LP's until they receive a full return of contributed capital*
  2. *100% to LP's until they receive a preferred return of 6% on contributed capital*
  3. *100% to GP as carried interest catch up for applicable carried interest (5% primaries, 10% secondaries, and 20% for directs/co-investments*
  4. *Respective carry split based on type of investment*
- *Term: 10 years, with GP option to extend additional 4 years, LP vote for additional 1year extension beyond that*
- *Commitment Period 4 years*
- *Fund size: $200 million*

Performance

Industry Ventures is a leading investment manager in the venture capital secondaries space, and a preferred provider of liquidity solutions. The Partnership Holdings and Secondary funds consistently rank in the top quartiles in IRR, DPI, and TVPI when compared to the Thomson One/Cambridge Associates US Venture Universe. Rankings and prior fund performance information is shown below:

Secondary Funds

Thomson One/Cambridge Associates - IRR Comparison

Net IRR	Industry Ventures			Vintage Year Benchmark Net IRR Comparison			
Vintage Year	Fund	Current Net IRR	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2003	Secondary I-III	36.6%	1	40	9.2%	3.5%	-5.5%
2006	Secondary IV	5.6%	3	85	12.4%	5.9%	-2.5%
2008	Secondary V	35.0%	1	66	20.4%	10.5%	-0.5%
2011	Secondary VI	13.8%	3	47	33.7%	18.2%	7.9%
2013	Secondary VII	23.5%	2	49	28.5%	11.6%	0.4%
2006	Secondary IV Side Funds	10.3%	2	85	12.4%	5.9%	-2.5%
2008	Secondary V Side Funds	69.0%	1	66	20.4%	10.5%	-0.5%
2011	Secondary VI Side Funds	14.2%	3	47	33.7%	18.2%	7.9%
2013	Secondary VII Side Funds	N/A	N/A	49	28.5%	11.6%	0.4%

Thomson One/Cambridge Associates - DPI Multiple Comparison

DPI Multiple	Industry Ventures			Vintage Year Benchmark DPI Multiple Comparison			
Vintage Year	Fund	DPI Multiple	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2003	Secondary I-III	3.27x	1	40	1.43x	0.80x	0.44x
2006	Secondary IV	0.91x	2	85	0.98x	0.61x	0.30x
2008	Secondary V	1.92x	1	66	0.76x	0.38x	0.13x
2011	Secondary VI	0.54x	1	47	0.21x	0.05x	0.00x
2013	Secondary VII	0.10x	1	49	0.05x	0.00x	0.00x
2006	Secondary IV Side Funds	1.28x	1	85	0.98x	0.61x	0.30x
2008	Secondary V Side Funds	2.48x	1	66	0.76x	0.38x	0.13x
2011	Secondary VI Side Funds	0.74x	1	47	0.21x	0.05x	0.00x
2013	Secondary VII Side Funds	N/A	N/A	49	0.05x	0.00x	0.00x

Note: GREEN shaded cells indicate that the fund outperformed the benchmark; RED shaded cells indicate that the fund underperformed the benchmark. Amounts are net of fees, carried interest and expenses. Performance is as of 9/30/2015. Thomson One/Cambridge Associates data is as of 9/30/2015.

Thomson One/Cambridge Associates - TVPI Multiple Comparison

TVPI Multiple	Industry Ventures			Vintage Year Benchmark TVPI Multiple Comparison			
Vintage Year	Fund	TVPI Multiple	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2003	Secondary I-III	3.27x	1	40	1.66x	1.21x	0.73x
2006	Secondary IV	1.33x	3	85	1.78x	1.39x	0.88x
2008	Secondary V	3.07x	1	66	1.86x	1.44x	0.99x
2011	Secondary VI	1.32x	3	47	1.89x	1.51x	1.19x
2013	Secondary VII	1.17x	2	49	1.39x	1.14x	1.00x
2006	Secondary IV Side Funds	1.28x	3	85	1.78x	1.39x	0.88x
2008	Secondary V Side Funds	2.48x	1	66	1.86x	1.44x	0.99x
2011	Secondary VI Side Funds	1.38x	3	47	1.89x	1.51x	1.19x
2013	Secondary VII Side Funds	N/A	N/A	49	1.39x	1.14x	1.00x

Note: GREEN shaded cells indicate that the fund outperformed the benchmark; RED shaded cells indicate that the fund underperformed the benchmark. Amounts are net of fees, carried interest and expenses. Performance is as of 9/30/2015. Thomson One/Cambridge Associates data is as of 9/30/2015.

Partnership Holdings Funds

Thomson One/Cambridge Associates - IRR Comparison

Vintage Year	Fund	Current Net IRR	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2007	Partnership Holdings I	14.0%	2	75	17.6%	12.6%	5.9%
2011	Partnership Holdings II	46.7%	1	46	36.1%	19.9%	3.1%
2011	Partnership Holdings II-A	54.1%	1	46	36.1%	19.9%	3.1%
2013	Partnership Holdings III	63.4%	1	44	11.2%	(0.1%)	(16.0%)
2014	Partnership Holdings III-A	62.4%	1	42	(2.8%)	(9.0%)	(19.2%)
2014	Partnership Holdings III-B	51.6%	1	42	(2.8%)	(9.0%)	(19.2%)

Thomson One/Cambridge Associates - DPI Multiple Comparison

Vintage Year	Fund	DPI Multiple	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2007	Partnership Holdings I	0.42x	3	75	0.99x	0.58x	0.19x
2011	Partnership Holdings II	0.11x	2	46	0.15x	0.03x	0.00x
2011	Partnership Holdings II-A	0.41x	1	46	0.15x	0.03x	0.00x
2013	Partnership Holdings III	0.06x	1	44	0.00x	0.00x	0.00x
2014	Partnership Holdings III-A	0.35x	1	42	0.00x	0.00x	0.00x
2014	Partnership Holdings III-B	0.22x	1	42	0.00x	0.00x	0.00x

Thomson One/Cambridge Associates - TVPI Multiple Comparison

Vintage Year	Fund	TVPI Multiple	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2007	Partnership Holdings I	1.8x	2	75	2.0x	1.6x	1.3x
2011	Partnership Holdings II	2.0x	1	46	1.7x	1.3x	1.1x
2011	Partnership Holdings II-A	3.1x	1	46	1.7x	1.3x	1.1x
2013	Partnership Holdings III	1.2x	1	44	1.1x	1.0x	0.9x
2014	Partnership Holdings III-A	1.3x	1	42	1.0x	0.9x	0.9x
2014	Partnership Holdings III-B	1.1x	1	42	1.0x	0.9x	0.9x

Note: GREEN shaded cells indicate that the fund outperformed the benchmark; RED shaded cells indicate that the fund underperformed the benchmark. Amounts are net of fees, carried interest and expenses. Performance is as of 12/31/2014. Thomson One/Cambridge Associates data is as of 12/31/2014, the most recent date for which the data is available.

Track Record

September 30, 2015

($ in 000's) SECONDARY FUNDS	Vintage	Committed Capital	Total Cost	Realized Value	Current NAV	Total Value	Gross Multiple	Gross IRR	Net Multiple[3]	Net DPI[3]	Net IRR[3]
Secondary Funds I-III[1]	2002-04	$10,100	$7,684	$27,315	$0	$27,315	3.6x	44.2%	3.3x	327.3%	36.6%
Secondary Side Funds[2]	2006-12	$27,566	$25,917	$48,809	$0	$48,809	1.9x	23.9%	1.7x	167.3%	18.5%
Secondary Fund IV	2006	$107,566	$104,590	$123,203	$28,456	$151,660	1.5x	9.1%	1.3x	91.4%	5.6%
Secondary Fund V	2008	$266,601	$236,106	$553,907	$348,039	$901,946	3.8x	43.6%	3.1x	191.5%	35.0%
Secondary Fund VI	2011	$404,819	$328,903	$207,008	$288,523	$495,531	1.5x	20.4%	1.3x	54.1%	13.8%
Special Opportunities Fund	2011	$156,550	$88,444	$72,637	$54,614	$127,251	1.4x	16.5%	1.4x	73.8%	14.2%
Secondary Fund VII	2013	$430,088	$233,972	$23,672	$270,469	$294,141	1.3x	34.4%	1.2x	10.3%	23.5%
Special Opportunities Fund II-A & B*	NA	$201,960	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Secondary Funds		**$1,605,250**	**$1,025,618**	**$1,056,551**	**$990,101**	**$2,046,652**	**2.0x**	**28.8%**	**1.7x**	**88.1%**	**21.3%**

($ in 000's) PARTNERSHIP HOLDINGS	Vintage	Committed Capital	Total Cost	Realized Value	Current NAV	Total Value	Gross Multiple	Gross IRR	Net Multiple[3]	Net DPI[3]	Net IRR[3]
Partnership Holdings I	2007	$30,130	$30,374	$21,618	$50,984	$72,602	2.4x	21.2%	2.3x	48.2%	17.5%
Partnership Holdings II	2011	$54,770	$40,034	$7,468	$88,551	$96,019	2.4x	47.2%	2.1x	16.9%	40.5%
Partnership Holdings II-A	2011	$12,323	$10,435	$6,840	$30,977	$37,816	3.6x	56.2%	3.3x	56.0%	47.6%
Partnership Holdings III	2013	$170,250	$84,932	$5,355	$96,477	$101,832	1.2x	28.0%	1.1x	6.1%	19.6%
Partnership Holdings III-A, B & C*	2014/2015	$48,104	$16,213	$3,029	$15,459	$18,488	1.1x	24.2%	1.1x	17.2%	18.9%
Total Partnership Holdings		**$315,577**	**$181,988**	**$44,309**	**$282,448**	**$326,757**	**1.8x**	**30.6%**	**1.7x**	**19.1%**	**25.7%**
TOTAL INDUSTRY VENTURES		**$1,920,827**	**$1,207,606**	**$1,100,860**	**$1,272,549**	**$2,373,410**	**2.0x**	**29.0%**	**1.7x**	**78.0%**	**21.7%**

Over 21% Net IRR across all Secondary and Partnership Holdings funds to investors since inception

Note: Values are unaudited and estimated as of 9/30/15. Values of unrealized investments contained herein are estimates made by Industry Ventures that Industry Ventures believes to be reasonable. Actual realized proceeds on unrealized investments will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs and the timing and manner of sale, all of which may differ from the assumptions on which the valuations reflected in the historical investment performance data contained herein are based. Accordingly, the actual realized proceeds on these unrealized investments may differ materially from the returns indicated herein. Past performance is not a guarantee of future results.

1. Fund I returns include only secondary investments made after 10/1/02 when the fund changed its investment strategy. Fund I inclusive of all direct angel investments was 3.02% net IRR and 1.3x net multiple.
2. Secondary side funds include the following side vehicles: Fund V-A, Fund IV Acquisition, and Fund IV Aperture.
3. Net Multiple and Net IRR calculations represent returns to investors after reducing for fees, expenses and carried interest; DPI is calculated as total distributions to investors divided by total contributions (including fees) paid-in. Management fees and carried interest differ from fund to fund and comparable results may not be achieved in Fund VIII.

* Overage funds

Fit for DPFP Portfolio

The Board approved the Private Equity pacing plan as presented by NEPC at the March 10, 2016 meeting. This plan includes $20 million in annual commitments to private equity funds in order to maintain vintage year diversification, remain an active investor in the asset class, and diversify across fund types and strategies. NEPC has suggested DPFP add a secondaries strategy to the private equity portfolio since 2014, and reiterated this suggestion as part of the Private Equity pacing plan in order to invest in strategies that provide a combination of long term capital appreciation and J-curve mitigation. DPFP currently has practically no exposure to venture capital or secondaries in its current private equity allocation. The recommended investments would enhance diversification by type of investment and continue diversification by vintage year. The unique structure of Industry Venture funds make them a better alternative to traditional venture capital funds, because they help to mitigate the capital loss risk via diversification, shorten the J-curve duration, and in combination provide exposure across early, mid, and late stage venture companies. For these reasons, Staff recommends approving an allocation of $5 million each to Industry Ventures Partnership Holdings IV and Industry Ventures Secondary Fund VIII within DPFP's private equity allocation.

NEPC, LLC

To: Dallas Police & Fire Pension System Trustees

From: Rhett Humphreys, CFA, Partner; Keith Stronkowsky, CFA, Senior Consultant; Jeff Roberts, Senior Consultant

Date: April 14, 2016

Subject: Industry Ventures Secondary Fund VIII & Industry Ventures Partnership Holdings IV

Executive Summary

Industry Ventures is concurrently raising two complimentary funds: Industry Ventures Secondary Fund VIII ("IVSF VIII") and Industry Ventures Partnership Holdings IV ("IVPH IV"). IVSF VIII will make investments in secondary interests in venture capital LP interests, special purpose vehicles and direct equity in venture capital backed companies with an emphasis on investing in high quality growth stage companies that are through the J-curve and possess significantly less technology risk and business risk than a typical venture capital investment. IVPH IV will be a hybrid fund structure, consisting of direct and indirect investments in early and mid-stage venture-backed companies primarily in the information technology sector. The Fund will purchase early secondary limited partnership interests (i.e., interests less than 50% funded) while also targeting primary commitments in high performing small funds that are typically between $25 million and $150 million in size.

Client Suitability Recommendation

Currently, the Dallas Police & Fire Private Equity program lacks exposure to the secondary and venture capital strategies. Additionally, when considering the industries in which the current DPF private equity managers are investing, Information Technology/Tech-Enabled Services is not an area of focus of any of the incumbent managers. Commitments to IVSF VIII and IVPH IV will provide for additional strategy diversification as well as industry diversification within the Private Equity program in what has been, and continues to be, a high growth sector.

As evidence of demand for its products, Industry Ventures has carved out a niche by providing investors with an attractive risk adjusted exposure to venture capital. Venture-backed companies experience a high failure rate. Through its strategy of late stage investing and typically acquiring investments at discounts to fair value from sellers seeking early liquidity, IVSF VIII's secondary strategy has been able to achieve positive returns on nearly 70% of its investments to date and provide for earlier distributions than a standard primary venture capital fund.

IVPH IV will focus on investing in small venture capital funds and high growth companies as the team believes these are attractive opportunities within the venture industry relative to the current high valuations of later stage companies. The Fund will also include investments into mid-stage companies acquired through early secondary purchases, special purpose funds and direct investments. This portfolio construction strategy is differentiated from traditional venture investing and should provide investors early liquidity and thus a mitigated J-curve.

Conclusion/Recommendation:

NEPC recommends Dallas Police & Fire commit $5 million each to Industry Ventures Secondary Fund VIII & Industry Ventures Partnership Holdings IV. These commitments are in line with the 2016 Private Markets Strategic Plan approved by the Trustees on March 10, 2016 and would serve as compliments to the current Private Equity program. Additionally, both of these funds have been given a "Preferred" rating by NEPC.

DPFP 2016 Private Markets Strategic Investment Plan

- $10 million to venture/secondaries
  - *Current action item*
- $10 million to buyout/special situations
- $30 million to private credit strategies
  - *$10 million commitment to Riverstone Credit (March 2016)*

NEPC, LLC

YOU DEMAND MORE. So do we.SM

NEPC Private Markets
Investment Due Diligence Research Report

Industry Ventures
Industry Ventures Secondary Fund VIII

Report written by the NEPC Private Markets Team as of March 7, 2016.

Product Rating: Preferred

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Executive Summary

Industry Ventures (the "Firm") was founded by Hans Swildens in 2000 to make venture capital investments in early stage information technology companies. Mr. Swildens soon recognized an investment opportunity existed for a specialized secondary strategy that focused on venture-backed companies and assembled a team to focus on these efforts. In 2009, the Firm acquired Little Hawk Capital ("Little Hawk"), a Washington D.C. based fund-of-funds platform founded by Roland Reynolds focused on making commitments to small, top-performing venture capital funds. Little Hawk committed to an Industry Ventures Secondaries fund, and the two firms soon recognized the merits of combining the Little Hawk fund-of-funds program with a secondary component. Subsequently, the two firms merged. The merging of the two firms broadened the knowledge base of Industry Ventures and has been additive for both strategies. Today, the Firm has 17 employees operating out of offices in San Francisco, CA and Washington D.C.

Industry Ventures is raising Industry Ventures Secondary Fund VIII (the "Fund" or "Fund VIII") and is seeking $425 million in commitments. The Fund will make investments in secondary interests in venture capital LP interests, special purpose vehicles and direct equity in venture capital backed companies with an emphasis on investing in high quality growth stage companies that are through the J-curve and possess significantly less technology risk and business risk than a typical venture capital investment. The Fund will target investments of $25 million or smaller to create a portfolio of approximately 60 investments. The Fund has a return target to generate a net multiple of 1.8x-2.2x on invested capital and a net IRR of 20%-25% for its investors.

Investors in Industry Ventures Secondary Fund VIII should benefit from the following positives:

- **Attractive Risk Adjusted Exposure to Venture Capital** – Venture-backed companies experience a high failure rate. Through its strategy of late state investing and typically acquiring investments at discounts to fair value from sellers seeking early liquidity, the Fund's secondary strategy has been able to achieve positive returns on nearly 70% of its investments to date.

- **Experienced Senior Team –** The three Managing Directors of Fund VIII have participated in more than $1.0 billion secondary venture capital transactions across more than 200 deals. Combined, they have an average of more than 20 years of experience investing in, leading and working in venture-capital backed companies. This experience serves them well in identifying industry trends, assessing the strength of management teams and negotiating/structuring successful transactions.

- **Sourcing Network** – The Industry Ventures platform provides a key advantage in sourcing, evaluating and selecting fund managers and direct investments. Across both secondary and primary investment platforms, the previous Industry Ventures funds have committed to approximately 215 venture capital limited partnerships. The Firm has cultivated relationships with the managers of these funds and others over the past 15 years. The strength and depth of the network of its team provides the Firm with a key sourcing advantage over other potential buyers of secondary interests.

- **Flexible Distribution Waterfall** – Investors in Fund VIII will have the option of investing either as Priority Return Partners whose investments are subject to a 6% preferred return and a 17.5% GP carry rate or as Non-Priority Return Partners, whose investments are not subject to a preferred return but have a lower 15.0% GP carry rate. Based on NEPC's assessment of a relatively low break-even between these two options, NEPC believes that the Non-Priority Return option is most attractive for investors seeking to maximize the capital returns from investment in Fund VIII.

Investors in Industry Ventures Secondary Fund VIII should be aware of the following negatives:

- **Relatively New Investment Team below Managing Director –** Industry Ventures has historically relied heavily on its Managing Directors throughout its deal sourcing and evaluation. Over the past four years, the Firm has added three Vice Presidents (to replace two departed Managing Directors) and added two associates to replace the three who departed for business school, making for a team that has worked together or a relatively short period of time.

- **High Valuation Market Environment –** Venture capital pre-money valuations across the various stages have increased dramatically over the past 5-7 years, particularly in late stage technology companies. Navigating a rich valuation environment could pose a near-term challenge to the Fund's ability to source investments at attractive valuations. However, should there be a significant valuation correction in the venture capital sector, Fund VIII will be well positioned to capitalize on liquidity needs of potential sellers at attractive valuations.

- **Inherent Risk in Venture-Backed Technology Companies** – While Fund VIII's investment strategy seeks to mitigate risk by investing in late-stage businesses and purchasing assets at discounted valuations, venture capital-backed technology businesses have a higher risk of failure than established businesses in other, slower growth industries. As Fund VIII will concentrate its investments into this single segment, the Fund may exhibit greater investment risk than a fund that invests across a broader set of less risky industries.

- **Increased Competition for Deals -** The success of Industry Ventures' venture capital focused secondary investment strategy has been attracting more competition from other fund of funds that have developed investment products with similar investment strategies. In addition, private trading platforms have emerged to help facilitate liquidity in certain well known private companies. While the Fund may benefit from a general increased awareness of liquidity options leading to more potential sellers, new VC-focused secondary funds and trading platforms could lead to increased competition for deals and higher purchase prices.

Fund Characteristics

Investment Vehicle	Delaware LLC
Investment Manager	Industry Ventures
Target Size/Max Size	$425 million/$500 million
Amount Raised	$125 million
Minimum Investment Size	$5 million, subject to waiver by the General Partner ("GP")
Target Final Close Date	June 30, 2016
Investment Period	Five years from the initial closing date
Fund Term	10 years from the initial closing, with two one-year extensions at Advisory Board discretion.
Sponsor's Investment	2% (up to half through management fee waiver)
Assets Under Management	$2.1 billion in commitments ($1.6 billion in secondary funds)
Investment Focus	Secondary purchases of VC fund interests and secondary direct purchases of privately held venture capital-backed companies.
Geographic Focus	US focused
Projected Number of Investments	Estimated total of 60 investments: 20 LP interests, 30 direct investments and 10 special purpose vehicle investments
Deal Size	Transactions that are less than $25 million
Target Fund Return	20%-25% net IRR and 1.8x-2.2x net multiple on invested capital
Leverage	The Fund will not utilize fund-level leverage. The Firm has a working capital line of credit used for capital calls.
Annual Management Fee	1.5% of commitments during the investment period; 1.5% of net invested capital thereafter
Other Fees	The GP does not charge transaction or monitoring fees, but should any fees be received by the GP from an investment, they would be 100% offset against the management fee. The Fund will pay all legal, accounting, financial reporting, banking, custodial, audit and other professional fees, advisory board costs and fees associated with registration and compliance with regulatory agencies
Organizational Costs	The Fund will bear up to of $750,000 of organizational expenses.
Carried Interest	Priority Return Partners: 17.5%; Non-Priority Return Partners: 15.0%
Preferred Return	Priority Return Partners: 6.0% (annual, simple); Non-Priority Return Partners: 0.0%
Distribution Waterfall	• First, 100% to LPs until they have received a full return of capital and (for Priority Return Partners only) a 6% preferred return on all unreturned investments in the Fund; • Then, 100% to the GP as carried interest catch up until the GP has received 17.5% of all distributions made to Priority Return Partners and 15.0% of all distributions made to Non-Priority Return Partners; • Thereafter, for Priority Return Partners a 82.5%/17.5% LP/GP split and for Non-Priority Return Partners a 85.0%/15.5% LP/GP split on all additional distributions
ERISA Fiduciary	Industry Ventures does not operate as an ERISA fiduciary. Industry Ventures has ERISA investors in prior funds and plans to keep ERISA commitments below 25% in Fund VIII
Fund Auditor	Ernst & Young
Fund Legal Counsel	Cooley LLP
Placement Agents	None
Website	www.industryventures.com

Firm Description

Firm Overview

Industry Ventures was founded by Hans Swildens in 2000 to make venture capital investments in early stage information technology companies. In 2002, Industry Ventures purchased an interest in Speedera Networks from a public corporation. With this transaction, Mr. Swildens recognized an investment opportunity existed for a specialized secondary strategy that focused on venture-backed companies. To implement the investment strategy, Mr. Swildens assembled a team with venture capital investment experience to establish the Firm's secondary investment efforts. In 2009, the Firm acquired Little Hawk Capital ("Little Hawk"), a Washington D.C. based fund-of-funds platform founded by Roland Reynolds that focused on making commitments to small, top-performing venture capital funds. Little Hawk committed to an Industry Ventures secondaries fund and the two firms soon recognized the merits of combining the Little Hawk fund-of-funds program with a secondary component. Subsequently, the two firms merged.

Today, the Firm has 17 employees operating out of offices in San Francisco and Washington D.C. that are focused on two venture capital fund offerings: Industry Ventures Secondary Funds and Industry Ventures Partnership Holdings. With investments in over 215 venture capital limited partnerships and 110 direct company investments, the Firm maintains one of the most comprehensive databases of venture capital limited partnership data and portfolio company performance data. Industry Ventures now manages approximately $2.1 billion in commitments between the two strategies.

Team Overview

The Industry Ventures Secondary Team consists of eight investment professionals comprised of three Managing Directors, Hans Swildens, Justin Burden and Victor Hwang, three Vice Presidents, Lindsay Sharma, Ira Simkhovitch and Amir Malayery and two analysts. They are supported by COO Robert May, in addition to a five-person back office team. The Secondary Team investment professionals also have the ability to leverage the network and knowledge of the three Partnership Holdings Team professionals for sourcing and investment analysis.

Recent Turnover/ Key Departures

There have been two departures at the senior level in the past five years. In 2015, Will Quist, Managing Director, left the Firm to so he could focus on primary investing opportunities in start-up companies. Mike Gridley, Managing Director, left the firm in January 2013 to pursue other opportunities. These two departed professionals accounted for the sourcing of less than 10% of the 200+ secondary deals that the Firm has completed over the past fourteen years. The Firm does not plan to hire an additional Managing Director to replace Mr. Quist, but rather view this departure as an amicable one that will create opportunity for the Firm's Vice Presidents to increase their responsibilities which may provide a future promotion opportunity for one of them to Managing Director. Additionally, since the start of raising Fund VII in 2013, the Firm has seen its three associates depart for business school.

To mitigate the impact of these departures, over the past three years the Firm has hired three Vice Presidents and two associates. All three of the Vice Presidents came to Industry Ventures with prior private equity, venture capital and/or secondary investment experience in technology businesses and have MBAs from either Harvard or Columbia Business Schools. Their biographies are included near the end of this report. To support the Firm's growing assets under management, the Firm plans to hire additional associates during the course of investing Fund VIII.

Succession Planning

The Industry Ventures organization is composed entirely of professionals that work on a team basis and are in their 30s and 40s, so a formal succession plan is not currently in place. However, were Mr. Swildens unexpectedly not be available to run the Firm, responsibilities would likely shift to Justin Burden. None of the current Managing Directors expect to retire any time soon. The management company is owned by a Trust which has a process for succession in the event of the death of one of the Trustees.

Fund Investment Strategy

Investment Strategy

Industry Ventures Fund VIII will build on Fund VII's strategy of investing in later-stage companies with substantial revenue and near term profitability, seeking to avoid the high mortality rate of early-stage venture investments. Central to the strategy is that when assembled in a diversified portfolio, secondary direct investments, limited partnership interests, and other special situation investments can offer the upside of venture capital, without the same risk of capital loss as traditional venture funds. By anchoring investments in high quality, later stage companies, the Firm's secondary funds seek to provide capital preservation and achieve earlier liquidity, resulting in a Fund return profile with a shorter "J-curve" than primary venture capital investing and attractive long term potential.

The Firm seeks generate attractive risk adjusted returns for investors by applying a unique sourcing, underwriting and structuring approach to exploit inefficiencies in a fragmented and underserved market. Key elements of the Firm's investment strategy include:

- Target sector leading venture-backed businesses in transactions that are $25 million or smaller;
- Mitigate the typical "J-Curve" of venture capital by investing in growth businesses that are on a clear path to exit;
- Maintain structural flexibility to invest through secondary direct purchases, LP interests or special purpose vehicles to capture compelling proprietary investment opportunities;
- Focus on the inefficiencies of the small end of the secondary market where competition is less and risk-adjusted returns are most attractive;
- Build a diversified portfolio of leading, proven, successful later stage businesses that can generate returns in conservative exit scenarios and potentially outperform on the upside; and
- Leverage the Firm's key relationships through Silicon Valley's investors, lawyers, accountants, entrepreneurs and tech industry professionals to identify transactions that are not readily accessible to other potential buyers.

Target Return

The team is targeting net annualized net returns of 20-25% and a 1.8x-2.2x net multiple on invested capital.

Target Fund Size

The Firm is targeting $425 million in commitments for Fund VIII, with a hard cap of $500 million, which is likely to be reached. Secondary Fund VII had $430 million of commitments.

Target Investment Type

Industry Ventures' secondary strategy targets three types of venture capital investments: LP interests in venture capital funds, direct interest in privately held stock of venture backed companies and in special purpose vehicles ("SPVs"), which can be used to acquire exposure to either LP interests or direct companies through a structured financial contract (such as in a GP restructuring). The Firm's strategy is to be flexible; investing in whichever of these three types of deals provides the most attractive relative risk adjusted returns. Over Funds VI and VII to date, the Fund's deals have been 15% in LP interests, 15% in SPVs and 70% in directs.

Target Geographic Focus

Fund VIII will focus on venture capital opportunities that are mainly domiciled in the United States. The team expects that 80%-100% of investments made will be in North American companies or venture capital funds.

Target Deal Size

The team anticipates the typical deal size to be $25 million or less. Within the deals, the average investment size has historically been approximately $5.0 million.

Use of Leverage

The Fund does not have a formal leverage exposure policy and to date has not utilized leverage as part of the investment strategy. The Firm has a line of credit that is used for bridging capital calls and was recently renewed with First Republic Bank.

Recycling of Capital

Fund VIII may recycle capital previous distributions up to 25% of the Limited Partners' capital commitments. After three years from the time of each distribution, a capital distribution is not subject to further potential recall.

Manager's View of Current Market Conditions

The Firm estimates that the venture capital secondary market is a multi-billion dollar opportunity on an annual basis and anticipates that it will continue to expand as venture-backed companies stay private longer, founders and employees more proactively pursue liquidity alternatives prior to an IPO or M&A exit and older venture capital funds reach the end of their terms. In recent years, the Firm has sourced and evaluated over $6 billion in potential secondary venture capital transactions. Within this large market, the Firm focuses on sub $25 million transactions as this portion of the market remains highly fragmented and inefficient. Consistent with this focus on small transactions, the majority of the Firm's historical pipeline of transactions has been sourced outside of an auction or brokered sale.

Industry Ventures believes that the venture capital market faces an imbalance between the number of companies funded (over 3,000 per year) and those companies that achieve an exit through IPO or M&A (generally 500-600 per year). Meanwhile, the time to IPO or M&A for a venture-backed company has extended from approximately three years throughout the 1990s to currently five years for M&A and over seven years for an IPO. The extension of the time to exit has led to a growing backlog of "unicorns" – VC-backed private companies with $1B+ valuations. The GP recognizes that venture capital valuations have risen significantly over the past few years, in some eyes exceeding "bubble" levels. While not turning a blind eye to industry trends, the Industry Ventures team continues to cautiously evaluate opportunities with an eye for identifying companies with outlier potential. With uncertainty building throughout Silicon Valley, Industry Ventures is seeing an extremely high level of interest of unicorn employees seeking partially liquidity for their vested interests (with the support of their Boards) to harvest some gains and diversify their personal holdings. The Industry Ventures team is carefully monitoring more than 100 "unicorns" to assess which ones have the highest probability of success while patiently awaiting any near-term valuation adjustments that may spook shareholders into selling and providing Fund VIII with an opportunity to buy unicorn and other VC shares at more attractive valuations. The GP notes that while valuations are important, the largest, most outsized returns on past investments have been less driven by purchase discount and more driven by successfully acquiring interests in break-out businesses. The GP expects to construct a portfolio that will be a blend of investments with 2-4x potential (those where the discount is a more meaningful part of the return) with some high conviction, break-out potential investments.

Despite the increasing amount of venture activity (with 2015 U.S. Venture Capital investment on track to be at the highest level since 2000) the M&A and IPO exit markets for venture-backed companies have remained relatively flat for the past few years. The Firm believes that this imbalance between venture capital investments and exits has persisted through macroeconomic cycles and has created a strain for all types of equity holders — from general partners to limited partners to founding management teams. The GP also believes that Fund VIII is timed well to capture end of fund investments from VC funds that are 15+ years old and at the end of their extended terms. Many of these are funds that were raised during 1996-2000 Internet boom when VC fundraising was at record high levels. The unsatisfied demand for liquidity, coupled with a dramatic increase in the number of prominent venture funded companies, presents a unique investment opportunity for secondary managers capable of identifying the most compelling opportunities.

Expected Fund Investor Base

Fund VIII is expected to have a similar breakdown of investors by type as those seen in the Firm's prior secondary funds, as follows (approximate amounts):

- Public pension funds (~50%)
- Asset managers & insurance companies (~25%)
- Endowment/Foundations (~10%)
- Corporate investments (pensions & balance sheet) (~10%)
- Individuals and others (~5%)

Current Fund Investments

The Fund has not closed on any investments to date.

Example of a Prior Investment

Prior to 2010, Industry Venture identified Alibaba Group, a leading Chinese mall, marketplace and online retailer, as a potential acquisition target due to its rapid growth and near-term IPO potential. During 18 months from June 2010 through December 2011, Industry Ventures acquired $13.2 million of shares in Alibaba Group that were primarily purchased from hedge funds who were seeking liquidity to help fund redemptions from their own investors. In September, 2014, Alibaba Group completed its IPO on the New York Stock Exchange (NYSE: BABA), marking at that time the largest IPO ever, at $25 billion. Through a series of IPO and secondary sales, Industry Ventures realized $132.2 million on its $13.2 million investment, for a 10x return & 66% gross IRR.

Fund Investment Process

Deal Sourcing

The investment strategy is focused on smaller secondary purchases where there has historically been little competition. Sourcing is a critical part of the strategy which can be defined as a combination of top down initiatives aimed at exploiting macro themes that may impact the secondary market, and bottom up sourcing processes which focus on identifying attractive companies and potentially motivated sellers.

Thematic initiatives are researched and developed to identify themes that may impact secondaries and develop sourcing initiatives. According to Industry Ventures, more than half of their deal flow has resulted from these initiatives which have included recognizing financial institutions as an important source of deal flow and setting out to make contact with all of those institutions. This resulted in the purchase of the Washington Mutual private equity portfolio out of bankruptcy.

The team utilizes their investments in LP interests to deeply understand all of the companies held in the Fund and identify high quality companies that they may target for additional investment. Sourcing focuses on high quality companies and utilizes the Firm's extensive database on venture backed companies, sponsors and investors which allows them to identify and target holders of a particular company.

Investment Process

The Firm uses a systematic investment process with multiple checkpoints to leverage the investment team's experience and judgement. Throughout the process, the Firm's investment professionals are trained to focus on identifying risks and risk mitigants for each investment before ascribing value to growth projections. The Industry Venture secondary investment process includes six key steps:

1. ***Sourcing:*** Opportunities are sourced through a multi-pronged approach of thematic research, single asset targeting and seller outreach.

2. ***Opportunity Analysis:*** Opportunities that meet the Firm's investment criteria are summarized by the Deal Team in an Early Read Memo Memorandum in order to present the investment thesis and flag potential risks, and to introduce the opportunity to the team and identify potential concerns. The memo will typically include analysis of the seller's motivation, market overviews, historical financials, and existing investors. In the analysis of portfolios, companies are classified as value drivers, good potential and no value.

3. ***Formal Due Diligence:*** The Firm follows a disciplined process designed to identify the value drivers with a portfolio which typically includes:

   - Gathering all company details including financials and cap tables;
   - Contacting venture fund managers that know the market segments well;
   - Reviewing reports to LPs to determine value;
   - Modeling company valuations, capitalization, liquidation options and timing and risk to projected return;
   - Segmenting portfolios to identify the value drivers;
   - Contacting select bankers regarding sector dynamics and sector values;
   - Understanding any restrictions on transfer and information rights; and
   - Confirming assumptions with L.P. diligence, fund manager calls.

   The formal due diligence will lead to a Letter of Intent Memorandum for formal review by the Fund's Investment Committee to reach an initial recommended value and structure before continued conversations with the seller. The Fund VIII Investment Committee is comprised of Hans Swildens, Justin Burden & Victor Hwang. Decisions are made in a consensus style, although Mr. Swildens does have the ability to veto recommendations of the other two to stop an investment recommendation from proceeding.

4. ***Investment Committee Review and Structuring and Closing:*** The Investment Committee will review and determine the final structure and terms which are reduced to a formal Letter of Intent. Once a Letter of Intent is issued and executed, a deal moves into the closing phase. Over this period of 15 to 30 days, the deal team is responsible for confirming earlier due diligence as well as drafting and negotiating the transaction. Once again the aggregate findings are presented to the investment committee for final approval.

5. ***Monitoring and Follow-On Investments:*** Positions are actively monitored by the Deal Teams for opportunistic and protective follow on investment opportunities. Follow-on investments pursued by a Deal Team follows the same investment due diligence and approval process as an initial acquisition.

6. ***Investment Exit:*** When possible, Deal Teams actively manage investments to generate liquidity in an attempt to maximize returns. While most exits are achieved through an event at the underlying investment level that is out of the Firm's control, the Firm may pursue proactive sales of its own positions in order to maximize investment returns or reduce the Firm's risk to valuation volatility. All sale decisions are approved by the Firm's Investment Committee.

Value Creation
Value creation for the strategy takes place in the sourcing and due diligence phase where the Firm seeks to invest in the most promising venture capital backed companies on a secondary basis. The Firm utilizes its network and reputation as a credible, reliable buyer to proactively and proprietarily source potential investments. Sourcing efforts can be general networking in nature or can be conducted to pursue specific targeted funds or companies. With more than ten years of secondary transactions, Industry Ventures is experienced in the negotiating, structuring and transacting process to guide sellers through efficient processes. The Firm utilizes its investment team, who are experienced both in high growth technologies and in investments, to evaluate and assess the potential growth opportunities for investments under consideration. The strategy invests in minority positions and does not take an active role in the management or Board oversight of any of its investments.

Risk Mitigation
The Firm is expected to opportunistically construct a portfolio for Fund VIII that is concentrated in technology investments but likely to be diversified in number and size. However, as this is an opportunity driven strategy, the number of investments in prior secondary funds has varied. Fund V contained 90 investments, Fund VI contained 48 investments and Fund VII contains 44 investments to date. Due to the inherent riskiness of venture capital investments, Industry Ventures will not use bank debt as a means to enhance financial returns, aside from using a line of credit for working capital purposes. The Fund VIII strategy seeks to provide an element of downside protection by targeting companies with high probabilities of realizations within 2-3 years and through the purchase of secondary interests at discounts to their reported fair value. The Fund will further seek to mitigate risk through the use of special purpose vehicles, where the additional structuring can provide an element of protection or priority of return for the Fund's investments.

Fund Economics

Management Fee

The investors will pay an annual management fee of 1.5% on committed capital until the fifth anniversary of the initial close. After the fifth anniversary, investors will pay management fees 1.5% of the net invested capital of the remaining portfolio.

Distribution Waterfall

Fund VIII provides investors with two distribution waterfall options from which to elect at the time of commitment:

1. ***Priority Return Partners:*** Priority Return Partners will receive a 6% priority return on their investment prior to the General Partner receiving carried interest distributions. The priority return is calculated on a simple but annualized interest basis on the unrealized amount of invested capital at the time of each distribution. The Fund VIII GP will have a 17.5% carried interest rate in regards to Priority Return Partner distributions.

2. ***Non-Priority Return Partners:*** Non-Priority Return Partners do not receive a priority or preferred return on their investments prior to the General Partner receiving carried interest distributions. The Fund VIII GP will have a 15.0% carried interest rate in regards to Non-Priority Return Partner Distributions.

The Fund will employ a European waterfall methodology that provides LPs a full return of invested capital prior to the GP receiving profit distributions. Specifically, the distribution waterfall for Fund VIII will be as follows:

- First, 100% to LPs until they have received a full return of capital and (for Priority Return Partners only) a 6% preferred return on all unreturned investments in the Fund;

- Then, 100% to the GP as carried interest catch up until the GP has received 17.5% of all distributions made to Priority Return Partners and 15.0% of all distributions made to Non-Priority Return Partners;

- Thereafter, for Priority Return Partners an 82.5%/17.5% LP/GP split and for Non-Priority Partners an 85.0%/15.5% LP/GP split for all additional distributions.

NEPC modeled the potential impact of the Priority and Non-Priority Return options under multiple investment return scenarios. Under most scenarios, the break-even returns on invested capital to LPs was in the range of a gross 1.1x-1.3x return on investments. Gross investment returns below the break-even range resulted in a higher multiple on invested capital for Priority Return Partners while gross investment returns above the break-even range resulted in higher multiple on invested capital returns for Non-Priority Return Partners. Given this relatively low break-even range of outcomes, NEPC believes that investors should elect the Non-Priority Return Partner option.

In the event that the GP has received excess distributions of carried interest, at the time of the liquidation of the Fund, the GP will repay to the LPs any excess distributions, net of Federal, State and Local income taxes.

Allocation of Carried Interest

The majority of the carried interest will be distributed across the three Managing Directors that oversee the Fund: Hans Swildens, Justin Burden and Victor Hwang. While allocations for Fund VIII have not yet been finalized, the GP indicated that they are expected to be similar to Fund VII, but adjusted for departed employees. For Fund VII, GP carry was allocated as follows:

Name	Title	Carry Percentage
Hans Swildens	Managing Director & CEO	41%
Justin Burden	Managing Director	24%
Victor Hwang	Managing Director	19%
Robert May	COO/CCO	4%
Other Investment Professionals	Managing Directors and Vice Presidents	11%
Others	Various	1%

Other Fees and Expenses

The GP does not charge transaction or monitoring fees, but should any fees be received by the GP from an investment, they would be 100% offset against the management fee. The Fund will pay all legal, accounting, financial reporting, banking, custodial, audit and other professional fees, advisory board costs and fees associated with registration and compliance with regulatory agencies The Fund will bear up to of $750,000 of organization and syndication costs.

Fund Administration, Structure and Policies

Fund Structure
The partnership is structured as a Delaware limited liability corporation.

ERISA Provisions
Industry Ventures does not operate as an ERISA fiduciary. Industry Ventures has ERISA investors in prior funds and may have ERISA investors in the Fund but under all circumstances they will be limited to less than 25% of fund commitments.

UBTI Considerations
The GP does not expect that significant UBTI will be generated from its investments. However, as some of the Fund's investments are in LP interests, Industry Ventures will have limited ability in these cases to impact whether or not UBTI is generated. However, since the Fund targets venture capital investments where leverage is rarely used (and will not be directly used by Industry Ventures), a significant amount of UBTI is not anticipated.

Environmental, Social & Governance Disclosures
Industry Ventures recognizes that as venture capital fund manager, the Firm has the fiduciary duty to act in the best interest of its LPs over the long-term. In this fiduciary role, Industry Ventures believes that environmental, social and corporate governance (ESG) issues can affect the performance of the portfolio companies (to varying degrees across companies, industry sectors, regions, and investment stages and through time). Industry Ventures also recognizes that applying these principles may better align the investments with broader objectives of society and thus may lead to better returns over the longer term.

Therefore, where consistent with the Firm's fiduciary responsibilities, and where appropriate without causing material undue burden on Industry Ventures' mission to act in the best long-term interest of its investors, it will be Industry Ventures' policy to work towards the following principles:

- Industry Ventures should promote and support the incorporation of ESG issues into investment analysis and decision making processes;
- Industry Ventures should incorporate ESG issues into its ownership policies and practices;
- Industry Ventures should seek appropriate disclosure on ESG issues by the entities in which its funds invest;
- Industry Ventures should promote acceptance and implementation of these (or similar) principles within the private equity investment industry;
- The members and employees of Industry Ventures should work together to enhance effectiveness in implementing these principles; and
- Industry Ventures should report on its activities and progress towards implementing these principles.

Industry Ventures plans to evaluate the effectiveness and improve the content of these principles over time.

Labor Policy
Industry Ventures does not have a formal policy with regards to unionized labor.

Key Person Provision

In the event that either Hans Swildens or both Justin Burden and Victor Hwang cease to be substantially involved the management of the Fund a Key Person Event will have occurred. When a Key Person Event occurs the General Partner shall promptly notify the Limited Partners of such event, the investment period shall be automatically suspended and the Fund placed into "Limited Operations Mode". While in Limited Operations mode the Limited Partners will remain obligated to make cash contributions throughout the duration of the Fund to the extent needed to fund post-investment period obligations. The Limited Operations Mode may be terminated with the Fund re-enabled to make new investments upon the vote of a majority-in-interest of the LPs or the consent of the LP Advisory Committee.

GP Removal Provisions

The GP may be removed "For Cause" upon at least thirty days' notice by two-thirds (67%) in interest of the Limited Partners of the Fund. As defined by the Fund VIII LP Agreement, For Cause shall mean situations where the General Partner has committed fraud, a felony, moral turpitude, willful misconduct, gross negligence, a breach of fiduciary duty or a material breach of applicable law in its management of the Fund. Additionally, the GP may be removed as General Partner, upon at least sixty days' notice, by three-fourths (75%) in interest of the Limited Partners without cause.

Reporting

Limited Partners of the Fund will receive annual reports containing audited financial statements of the Fund as well as quarterly reports with relevant updates and unaudited financial statements of the Fund. In addition, Limited Partners will have access to a secure internet site that will act as a repository for historical financial statements, schedule K-1s, partner capital account statements, capital call notices and other information relevant to Limited Partners.

Valuation Policy

Portfolio entities held by the Fund and other assets of the Fund will be valued at the fair market value as determined by the General Partner under the principles of US Generally Accepted Accounting Principles and FASB ASC 820. In general, the fair value reported by the managers of the portfolio entities, if any, will be used by the General Partner in making its determination of value. In cases where there is no fund or transaction sponsor valuation available Industry believes that additional valuation adjustments may be warranted, Industry Ventures will determine the valuation using a range of approaches including last round, revenue and EBITDA comparables, transaction price comparables and discounted public market comparables.

Litigation, Regulation and Compliance

Current Litigation
According to Industry Ventures, there is no past or pending litigation against the Firm or any of the Firm's partners or principals.

Compliance Staff and Philosophy
Robert May is the Chief Compliance Officer and Chief Operations Officer. Cordium LLC acts as the firm's outsourced provider of compliance services and is overseen by the CCO. Cordium is a full-service compliance firm that conducts an annual mock SEC audit as well as ongoing monitoring related to personal trading/dealing monitoring, affirmations, gift and political contribution reporting and more. In addition, Cordium LLC provides on-site compliance training for all employees on an annual basis.

SEC Oversight
Since registering with the SEC on March 30, 2012, Industry Ventures has not been subjected to a regulatory exam.

Subject to Other Regulators
Industry Ventures is not registered with any other regulatory bodies to which it is subject.

Personal Trading
In order to prevent improper trading, avoid the appearance of conflicts of interest, or for other business or legal reasons, Industry Ventures maintains a "Restricted List" of issuers whose securities may not be transacted in by the Funds or in any personal accounts. The CCO will maintain the Restricted List.

The Restricted List is confidential, and no information about the Restricted List may be disclosed to anyone outside of the Firm. All Employees should consult the Restricted List before submitting any pre-clearance request for the purchase or sale of securities. Generally Employees (and in certain cases the Funds) will not be allowed to trade in securities on the Restricted List. The CCO will review all information to monitor compliance.

Firm Infrastructure

Office Locations
All Industry Ventures employees are based in the San Francisco office with the exception of Roland Reynolds (a Managing Director on the Partnership Holdings funds), who is based out of the office near Washington, D.C.

Technology Resources and Systems
Investor Reporting is provided by an external fund administrator, Standish Management, using Standish's systems. Compliance ELF is the system used to monitor and track personal trading/dealing monitoring, affirmations, gift and political contribution reporting and more. This is overseen by Cordium and CCO Robert May.

Business Continuity Planning
Industry Ventures maintains a comprehensive disaster recovery plan that addresses key personnel contact information, a backup strategy with risk management, emergency response procedures, insurance, and financial and legal issues.

Industry Ventures uses BlueRock Networks to provide IT services. BlueRock is familiar with Industry Ventures' environment and is expected to assist in ongoing maintenance and the recovery process as needed.

Fund Administration/ Back Office Resources
Industry Ventures uses Standish Management as the Fund Administrator for all of the Firm's secondary funds. Standish Management assists with all functional accounting items including cash management, LP reporting, and capital account monitoring under the supervision of the COO/CCO, Robert May.

Industry Ventures Secondary Fund VIII
Secondary Strategy

Firm Track Record

Fund-Level Returns									
Fund	Vintage Year	Capital Committed	Capital Funded	Reported Value	Amount Distributed	Total Value, Net of Carry	TVPI Multiple	DPI Multiple	Current Net IRR
Secondary I-III	2003	$7	$7	$0	$23	$23	3.27x	3.27x	36.6%
Secondary IV	2006	$108	$104	$43	$95	$138	1.33x	0.91x	5.6%
Secondary V	2008	$267	$251	$290	$480	$770	3.07x	1.92x	35.0%
Secondary VI	2011	$405	$351	$275	$190	$465	1.32x	0.54x	13.8%
Secondary VII	2013	$430	$217	$233	$22	$255	1.17x	0.10x	23.5%
Secondary IV Side Funds	2006	$18	$18	$0	$24	$24	1.28x	1.28x	10.3%
Secondary V Side Funds	2008	$9	$9	$0	$22	$22	2.48x	2.48x	69.0%
Secondary VI Side Funds	2011	$157	$91	$58	$67	$125	1.38x	0.74x	14.2%
Secondary VII Side Funds	2013	$202	$0	$0	$0	$0	N/A	N/A	N/A

Notes:
- $ in millions; data as of 09/30/2015 and provided by Industry Ventures.
- Secondary I-III returns reflect only secondary fund transactions made after 10/01/2002 when Industry Ventures changed its fund strategy to focus on secondary venture capital transactions. Full returns for Secondary I-III including direct angel investments were lower.
- Secondary side funds represent side by side or overflow funds that supplement the capital investing in the main secondary funds. Management fee and carried interest terms on the side funds are different from the main secondary funds, which partially explain the performance differences between the side funds and the main funds. Main funds have first allocation priority on all deals; side funds do not participate in all deals of the main funds.

Track Record Benchmarking

For benchmarking purposes, we compared past fund performance to the Thomson One/Cambridge Associates US Venture Capital Universe as of September 30, 2015.

Thomson One/Cambridge Associates - IRR Comparison

Net IRR	Industry Ventures			Vintage Year Benchmark Net IRR Comparison			
Vintage Year	Fund	Current Net IRR	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2003	Secondary I-III	36.6%	1	40	9.2%	3.5%	-5.5%
2006	Secondary IV	5.6%	3	85	12.4%	5.9%	-2.5%
2008	Secondary V	35.0%	1	66	20.4%	10.5%	-0.5%
2011	Secondary VI	13.8%	3	47	33.7%	18.2%	7.9%
2013	Secondary VII	23.5%	2	49	28.5%	11.6%	0.4%
2006	Secondary IV Side Funds	10.3%	2	85	12.4%	5.9%	-2.5%
2008	Secondary V Side Funds	69.0%	1	66	20.4%	10.5%	-0.5%
2011	Secondary VI Side Funds	14.2%	3	47	33.7%	18.2%	7.9%
2013	Secondary VII Side Funds	N/A	N/A	49	28.5%	11.6%	0.4%

Thomson One/Cambridge Associates - DPI Multiple Comparison

DPI Multiple	Industry Ventures			Vintage Year Benchmark DPI Multiple Comparison			
Vintage Year	Fund	DPI Multiple	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2003	Secondary I-III	3.27x	1	40	1.43x	0.80x	0.44x
2006	Secondary IV	0.91x	2	85	0.98x	0.61x	0.30x
2008	Secondary V	1.92x	1	66	0.76x	0.38x	0.13x
2011	Secondary VI	0.54x	1	47	0.21x	0.05x	0.00x
2013	Secondary VII	0.10x	1	49	0.05x	0.00x	0.00x
2006	Secondary IV Side Funds	1.28x	1	85	0.98x	0.61x	0.30x
2008	Secondary V Side Funds	2.48x	1	66	0.76x	0.38x	0.13x
2011	Secondary VI Side Funds	0.74x	1	47	0.21x	0.05x	0.00x
2013	Secondary VII Side Funds	N/A	N/A	49	0.05x	0.00x	0.00x

Note: **GREEN** shaded cells indicate that the fund outperformed the benchmark; **RED** shaded cells indicate that the fund underperformed the benchmark. Amounts are net of fees, carried interest and expenses. Performance is as of 9/30/2015. Thomson One/Cambridge Associates data is as of 9/30/2015.

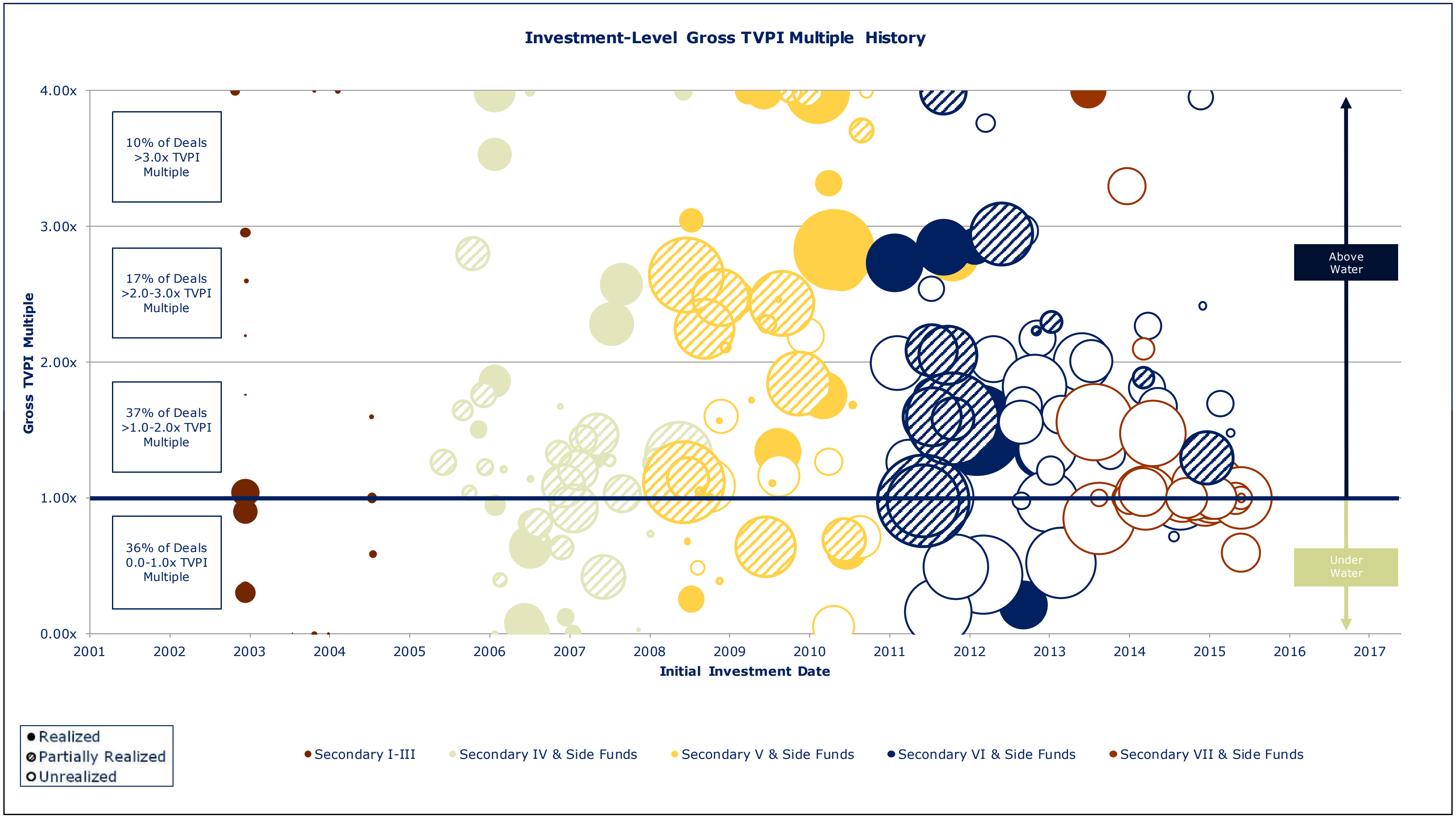
Thomson One/Cambridge Associates - TVPI Multiple Comparison

TVPI Multiple	Industry Ventures			Vintage Year Benchmark TVPI Multiple Comparison			
Vintage Year	Fund	TVPI Multiple	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2003	Secondary I-III	3.27x	1	40	1.66x	1.21x	0.73x
2006	Secondary IV	1.33x	3	85	1.78x	1.39x	0.88x
2008	Secondary V	3.07x	1	66	1.86x	1.44x	0.99x
2011	Secondary VI	1.32x	3	47	1.89x	1.51x	1.19x
2013	Secondary VII	1.17x	2	49	1.39x	1.14x	1.00x
2006	Secondary IV Side Funds	1.28x	3	85	1.78x	1.39x	0.88x
2008	Secondary V Side Funds	2.48x	1	66	1.86x	1.44x	0.99x
2011	Secondary VI Side Funds	1.38x	3	47	1.89x	1.51x	1.19x
2013	Secondary VII Side Funds	N/A	N/A	49	1.39x	1.14x	1.00x

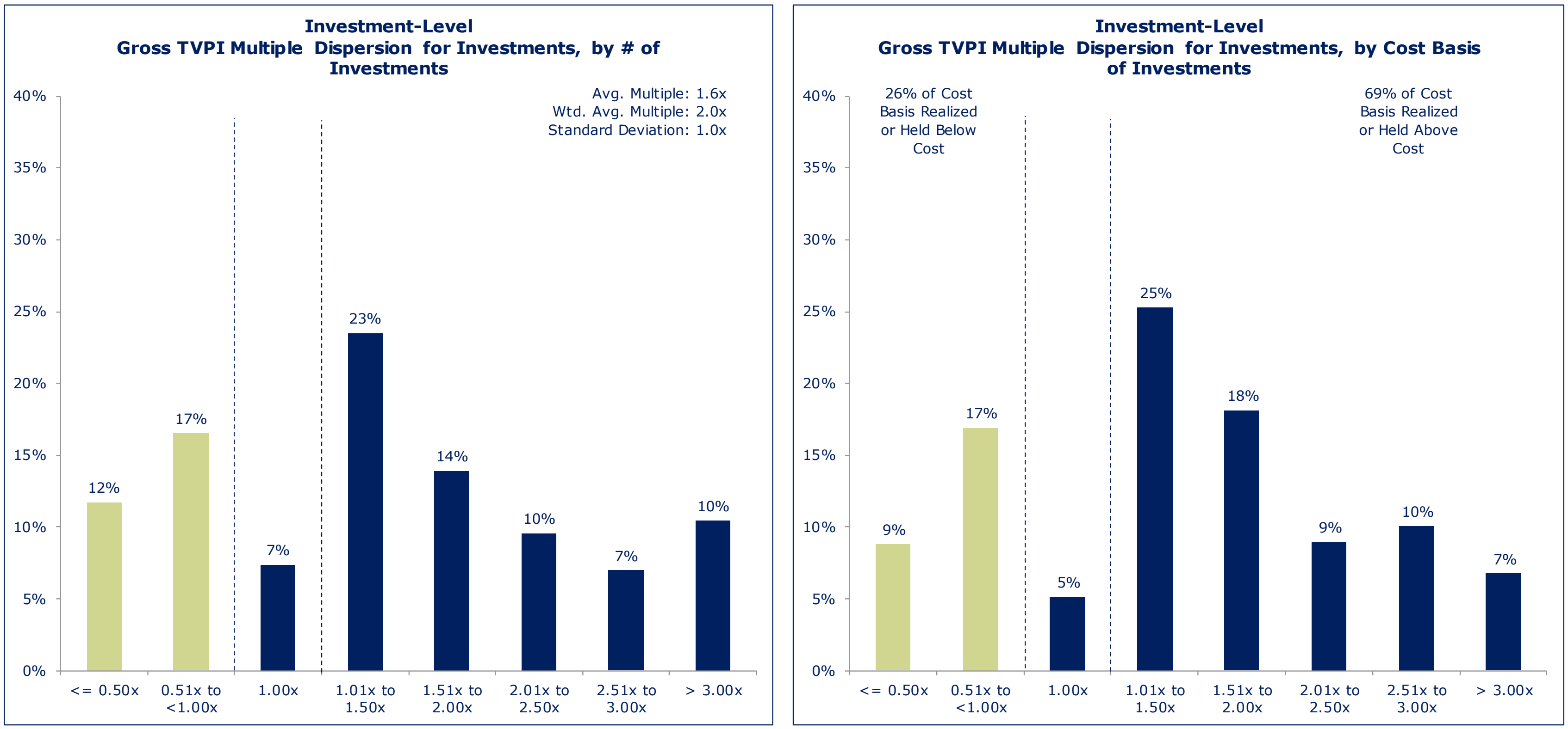
Note: **GREEN** shaded cells indicate that the fund outperformed the benchmark; **RED** shaded cells indicate that the fund underperformed the benchmark. Amounts are net of fees, carried interest and expenses. Performance is as of 9/30/2015. Thomson One/Cambridge Associates data is as of 9/30/2015.

Fund Attribution Analysis

Total Value to Paid-In-Capital (TVPI) Deal Frequency Analysis
The chart below shows the individual portfolio investment TVPI multiples for previous Secondary fund deals. The size of the bubbles on the chart indicates the relative size of the equity commitment to a given investment. The gross TVPI multiples on this graph are capped at 4.0x. Some of the investments have generated gross TPVI multiples that were higher than 4.0x.

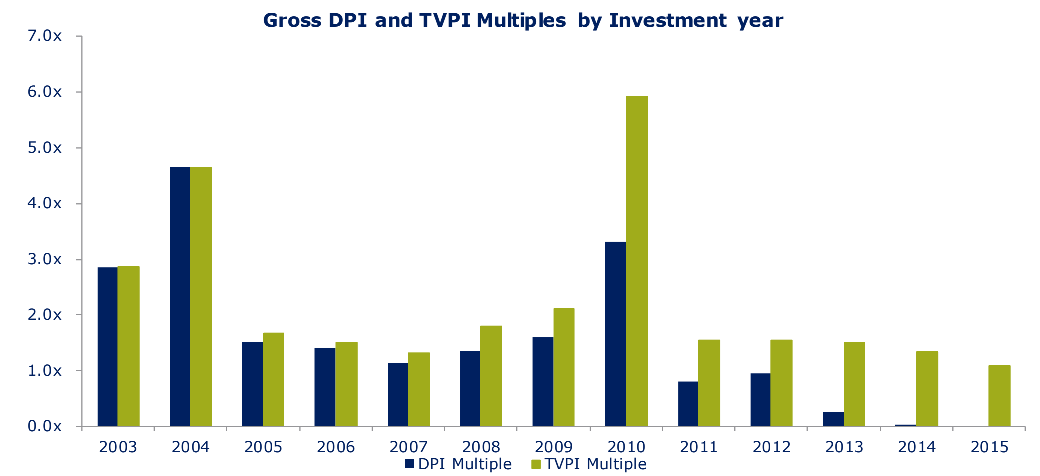


Investment-Level Returns Analysis
The chart below shows the investment-level multiple dispersion by number of investments and by cost basis of investments for previous secondary fund investments.



Investment Volume Analysis

The chart below shows the annual investment volumes and performance for investments of the previous secondary funds.

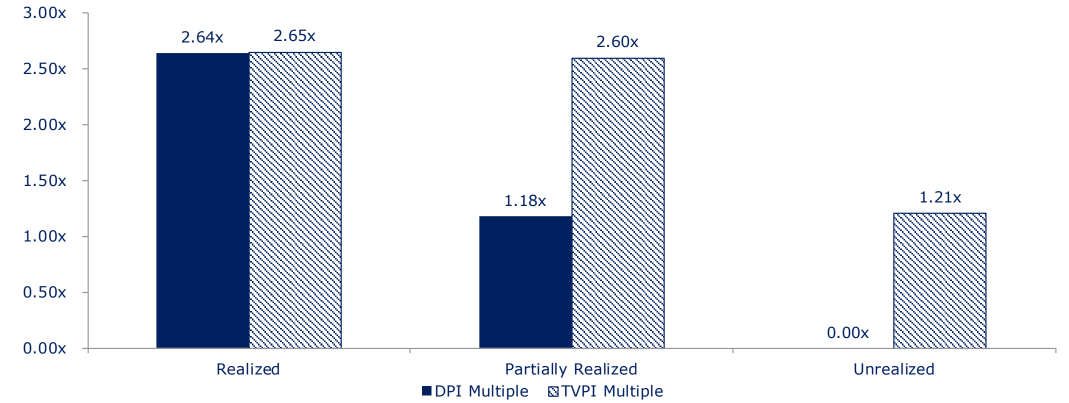


Investment Status	Number of Investments	Equity Capital Invested	Amount Distributed	Current Reported Equity Value	Total Equity Value	Wtd. Average Gross DPI Multiple	Wtd. Average Gross TVPI Multiple
2003	10	$7	$19	$0	$19	2.86x	2.86x
2004	9	$1	$5	$0	$5	4.65x	4.65x
2005	3	$3	$4	$0	$5	1.52x	1.68x
2006	30	$45	$63	$4	$67	1.41x	1.50x
2007	16	$55	$62	$10	$72	1.14x	1.32x
2008	16	$75	$100	$34	$134	1.34x	1.80x
2009	20	$69	$110	$36	$147	1.60x	2.12x
2010	19	$109	$362	$284	$646	3.32x	5.93x
2011	17	$149	$120	$109	$229	0.81x	1.54x
2012	22	$181	$172	$109	$282	0.95x	1.55x
2013	21	$128	$34	$160	$194	0.26x	1.51x
2014	26	$95	$3	$123	$127	0.04x	1.33x
2015	28	$109	$0	$120	$120	0.00x	1.10x
Total	237	$1,026	$1,057	$990	$2,047	1.03x	2.00x

Industry Ventures Secondary Fund VIII
Secondary Strategy

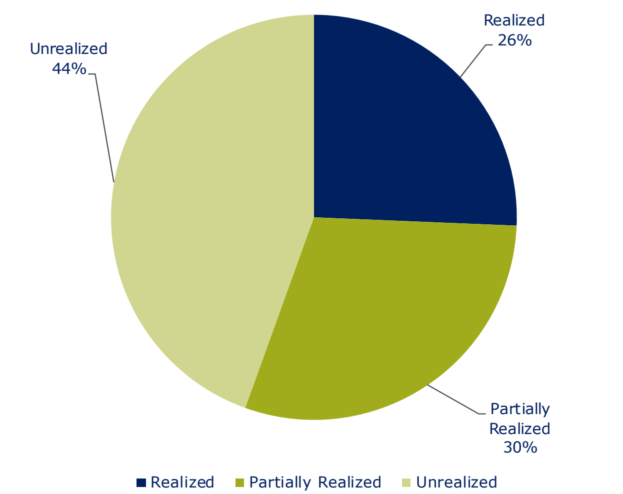
Investment Realization Analysis
The chart below shows DPI and TVPI multiples for all realized, partially realized, and unrealized deals in previous secondary funds.

Gross DPI and TVPI Multiples

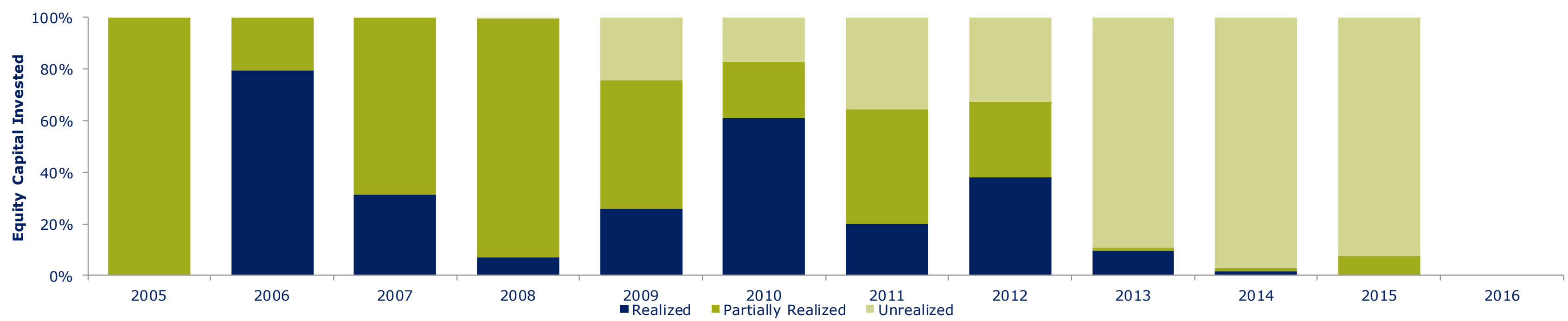


Investment Status	Number of Investments	Equity Capital Invested	Amount Distributed	Current Reported Equity Value	Total Equity Value	Wtd. Average Gross DPI Multiple	Wtd. Average Gross TVPI Multiple
Realized	82	$263	$695	$3	$698	2.64x	2.65x
Partially Realized	63	$306	$361	$435	$797	1.18x	2.60x
Unrealized	92	$456	$0	$552	$552	0.00x	1.21x
Total	237	$1,026	$1,057	$990	$2,047	1.03x	2.00x

Invested Capital Split



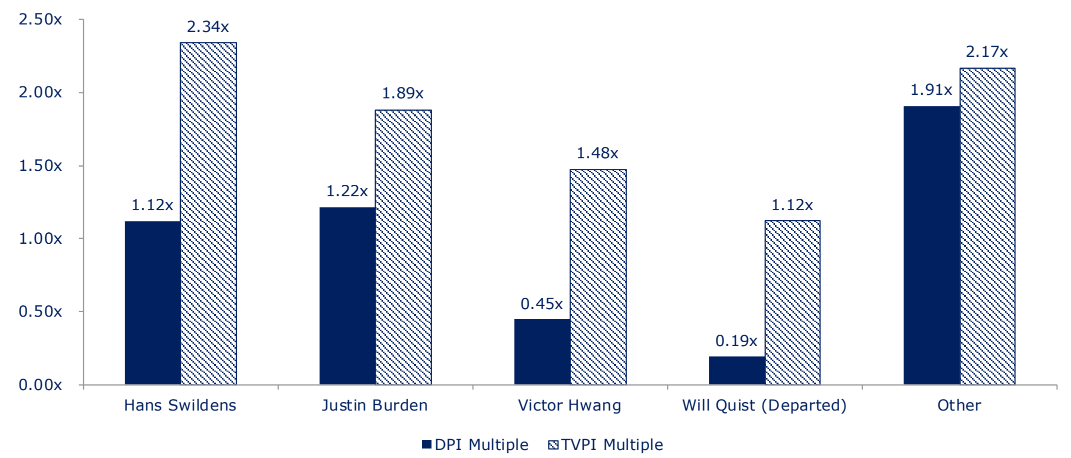
Invested Capital by Year (%)



Investment Sourcing Analysis

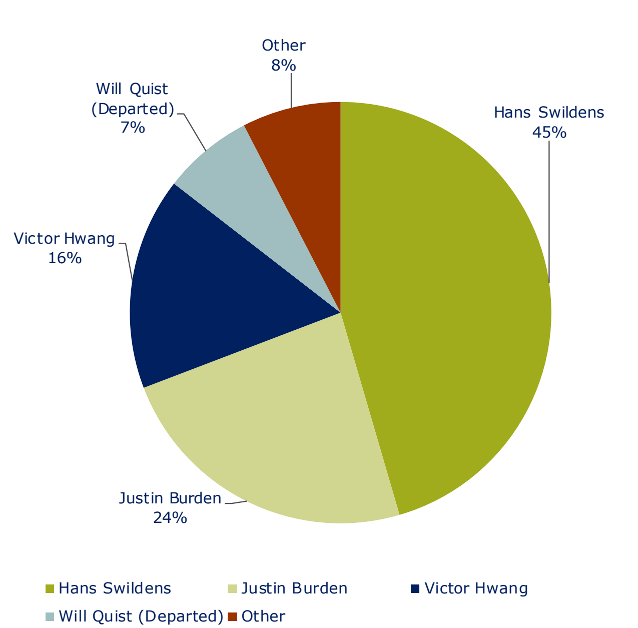
The chart below shows DPI and TVPI multiples grouped by the individual who sourced each secondary transaction in the previous funds.

Gross DPI and TVPI Multiples

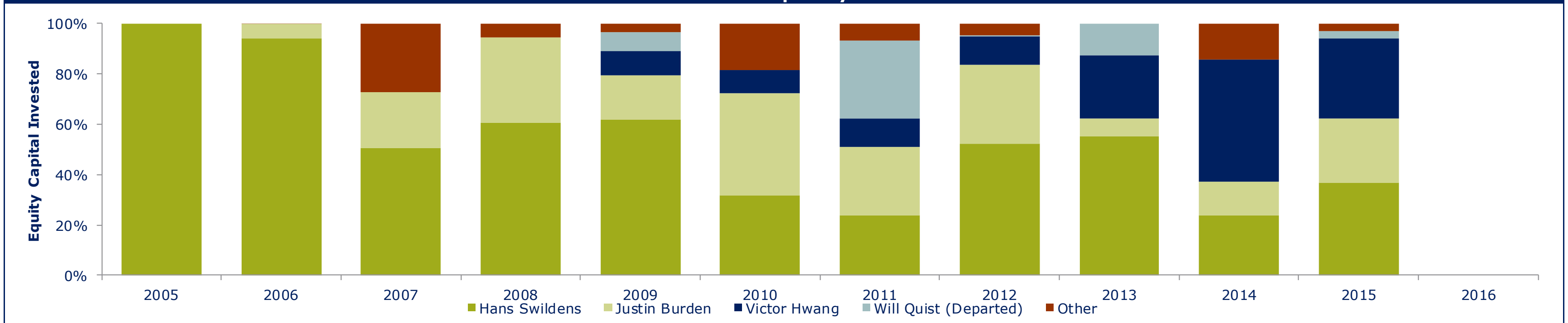


Deal Sourcing Channel	Number of Investments	Equity Capital Invested	Amount Distributed	Current Reported Equity Value	Total Equity Value	Wtd. Average Gross DPI Multiple	Wtd. Average Gross TVPI Multiple
Hans Swildens	125	$467	$524	$569	$1,093	1.12x	2.34x
Justin Burden	54	$243	$296	$163	$459	1.22x	1.89x
Victor Hwang	34	$167	$75	$172	$247	0.45x	1.48x
Will Quist	9	$71	$14	$66	$80	0.19x	1.12x
Other	15	$78	$148	$20	$169	1.91x	2.17x
Total	237	$1,026	$1,057	$990	$2,047	1.03x	2.00x

Invested Capital Split



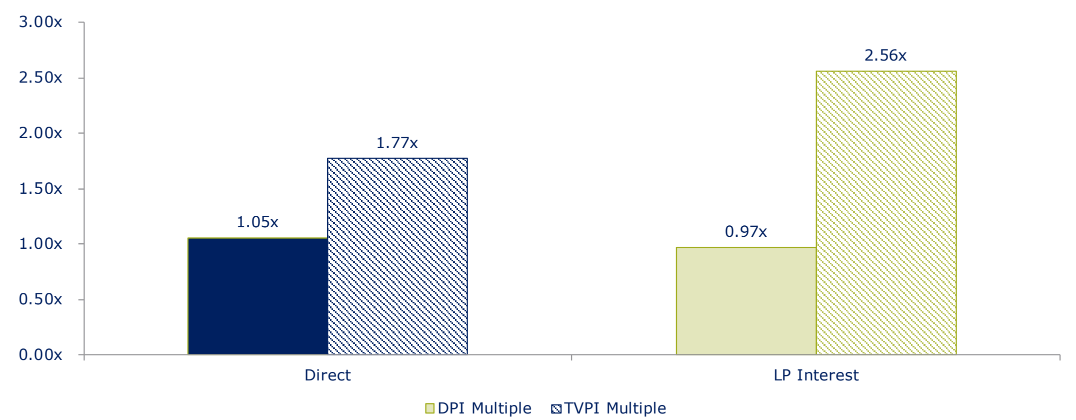
Invested Capital by Year



Investment Type Analysis

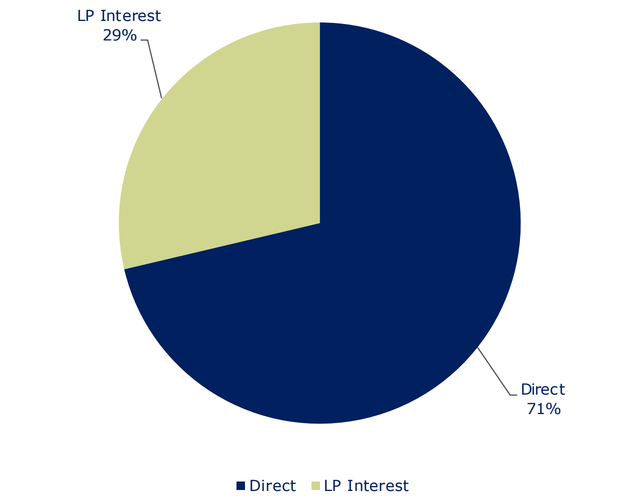
The chart below shows DPI and TVPI multiples for all direct deals and purchases of LP interests in previous secondary funds.

Gross DPI and TVPI Multiples

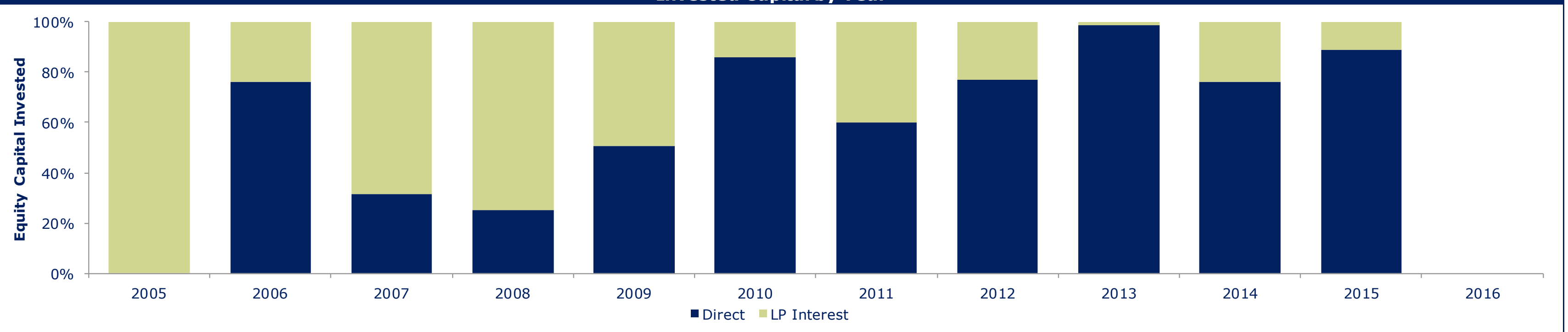


Investment Strategy	Number of Investments	Equity Capital Invested	Amount Distributed	Current Reported Equity Value	Total Equity Value	Wtd. Average Gross DPI Multiple	Wtd. Average Gross TVPI Multiple
Direct	169	$731	$771	$523	$1,294	1.05x	1.77x
LP Interest	68	$294	$285	$468	$753	0.97x	2.56x
Total	237	$1,026	$1,057	$990	$2,047	1.03x	2.00x

Invested Capital Split



Invested Capital by Year



Key Fund Professionals

Name	Title	Years with Firm	Years of PE Experience
Hans Swildens	Managing Director & CEO	15	19
Justin Burden	Managing Director	12	16
Victor Hwang	Managing Director	6	26
Robert May	COO & CCO	5	17
Lindsay Sharma	Vice President	2	5
Ira Simkhovitch	Vice President	2	7
Amir Malayery	Vice President	<1	7

Detailed Biographies

Hans Swildens, Founder, Managing Director & CEO
Mr. Swildens is the founder of Industry Ventures and a Managing Director responsible for the origination and execution of investment opportunities for the Firm. Additionally, he directs the Firm's investment processes, operations and limited partner relationships. Prior to founding Industry Ventures, Mr. Swildens was the Co-Founder and President of Microline Software. Microline was acquired by Blaze Software, which was subsequently acquired by Fair Isaac. Mr. Swildens was also an advisor to the founders of Speedera Networks (acquired by Akamai), where he completed Industry Ventures' first secondary investment and debt restructuring transaction.

Mr. Swildens holds an MBA from Columbia Business School and a BA with distinction from the University of California at Santa Barbara.

Justin Burden, Managing Director
Mr. Burden concentrates on originating, valuing, and managing investment opportunities in secondary venture portfolios and serves on the Fund VIII investment committee. Since joining Industry Ventures in 2004, Justin has sourced and led the acquisition of over twenty-five secondary transactions in both secondary directs and limited partnership interests. Previously he worked at GE Equity in San Francisco, the $4 billion venture capital arm of the General Electric Company where he sourced, structured and managed investments in the technology, consumer, media, and telecom sectors. Prior to GE Equity, Justin worked at Wells Fargo's high yield fund purchasing debt securities in buyout transactions.

Mr. Burden holds a BA from University of California, Berkeley and an MS from the London School of Economics.

Victor Hwang, Managing Director
Mr. Hwang concentrates on originating, valuing and managing secondary direct investment opportunities in venture backed technology companies and serves on the Fund VIII investment committee. Prior to joining Industry Ventures, Mr. Hwang was the founder and Managing Partner of Agile Capital Partners, where he has focused on opportunistic investments in growth oriented technology companies. He successfully invested in and exited StepUp Commerce (sold to Intuit) and Simple Star (sold to Sonic Solutions). Prior to founding Agile Capital Partners, Mr. Hwang was an early, pre-IPO member of Internet Capital Group (ICG) and he was CEO and Vice Chairman of ICG Asia, based in Hong Kong. Mr. Hwang began his career as an investment banker at Goldman Sachs where he helped build its Internet investment banking business by leading the IPOs for eBay, GeoCities and Yahoo!.

Mr. Hwang received his BA from Stanford University and his MBA from the Stanford Graduate School of Business, where he was an Arjay Miller scholar.

Robert May, Chief Operating Officer and Chief Compliance Officer
Mr. May is the Chief Operating Officer and Chief Compliance Officer for Industry Ventures. As the COO and CCO, Mr. May is responsible for all of the financial, compliance, and operational aspects of Industry Ventures. Prior to joining Industry Ventures, Mr. May worked as a consultant for Standish Management and led the Palo Alto office. Prior to that, Mr. May was the COO and CFO for Founders Fund and also spent four years as the CFO of Thomas Weisel Venture Partners.

Mr. May graduated with honors from San Jose State University with a BS in Business Administration.

Lindsay Sharma, Vice President
Ms. Sharma focuses on originating, valuing and heling to manage the Firm’s secondary investments. Prior to Industry Ventures, Ms. Sharma was a Principal in corporate strategy and development at Intuit, leading merger and acquisition activities for the company. Previously, Ms. Sharma was one of twenty one investment professionals with Great Hill Partners, a Boston-based growth equity firm focused on tech-enabled business services investing. She began her career in investment banking with the Technology, Media and Telecommunications team at Bear Stearns in New York.

Ms. Sharma received her MBA from Harvard Business School and her BS in finance and accounting from Indiana University, graduating with high distinction.

Ira Simkhovitch, Vice President
Mr. Simkhovitch focuses on originating, valuing and helping to manage the Firm’s secondary investments. Prior to Industry Ventures, Mr. Simkhovitch worked on the Investment Team at The Carlyle Group/AlpInvest Partners where he committed capital to private equity and venture capital funds. Previously, Mr. Simkhovitch was a Senior Analyst at Commonfund Capital, investing in private equity funds, secondary investments and direct investments globally. Mr. Simkhovitch began his career at Booz Allen Hamilton on a team developing software and analytics for the Department of Defense.

Mr. Simkhovitch received a BS in Civil Engineering from MIT and his MBA from Columbia Business School, where he graduated with Dean’s Honors. Ira is a CFA Charterholder.

Amir Malayery, Vice President
Mr. Malayery focuses on originating, valuing and helping to manage the Firm’s secondary investments. Prior to Industry Ventures, Mr. Malayery was Founder and CEO of Dapper Shopping, a mobile commerce startup focused on menswear. Previously, Mr. Malayery was an investment professional at Summit Partners, a growth equity firm where he focused on internet, media and technology investments.

Mr. Malayery received his MBA from Harvard Business School and dual MA/BA degrees from Stanford University.

Disclaimers and Disclosures

- Past performance is no guarantee of future results.
- 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.
- Information used to prepare this report was obtained directly from the investment manager, and market index data was provided by other external sources. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

In addition, it is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds, real estate and private equity:

1. Performance can be volatile and investors could lose all or a substantial portion of their investment
2. Leverage and other speculative practices may increase the risk of loss
3. Past performance may be revised due to the revaluation of investments
4. These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms
5. A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value
6. These funds are not subject to the same regulatory requirements as registered investment vehicles
7. Managers may not be required to provide periodic pricing or valuation information to investors
8. These funds may have complex tax structures and delays in distributing important tax information
9. These funds often charge high fees
10. Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy

NEPC, LLC

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NEPC Private Markets
Investment Due Diligence Research Report

Industry Ventures
Industry Ventures Partnership Holdings IV

Report written by the NEPC Private Markets Team as of March 2016.

Product Rating: Preferred

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Table of Contents

Executive Summary

Industry Ventures (the "Firm") was founded by Hans Swildens in 2000 to make venture capital investments in early stage information technology companies. Mr. Swildens soon recognized an investment opportunity existed for a specialized secondary strategy that focused on venture-backed companies and assembled a team to focus on these efforts. In 2009, the Firm acquired Little Hawk Capital ("Little Hawk"), a Washington D.C. based fund-of-funds platform founded by Roland Reynolds focused on making commitments to small, top-performing venture capital funds. Little Hawk committed to an Industry Ventures Secondaries fund, and the two firms soon recognized the merits of combining the Little Hawk fund-of-funds program with a secondary component. Subsequently, the two firms merged. The merging of the two firms broadened the knowledge base of Industry Ventures and has been additive for both strategies. Today, the Firm has 18 investment team members operating out of offices in San Francisco, CA and Washington D.C.

Industry Ventures is raising Industry Ventures Partnership Holdings IV, L.P. (the "Fund" or "IVPH IV") and is seeking $200 million in commitments. IVPH IV will be a hybrid fund structure, consisting of direct and indirect investments in early and mid-stage venture-backed companies primarily in the information technology sector. The Fund will purchase early secondary limited partnership interests (i.e., interests less than 50% funded) while also targeting primary commitments in high performing small funds that are typically between $25 million and $150 million in size. The Fund will also make direct investments in operating companies typically with at least $5M-$10M in revenues that are generally outperforming expectations. The Fund is targeting a net multiple of 2.5x and a net 20%-25% internal rate of return.

Investors in IVPH IV should benefit from the following positives:

- **Strong Track Record –** Prior Partnership Holdings funds have shown strong performance across most metrics. IVPH III has earned top quartile performance on an IRR, TVPI and DPI basis. IVPH II has produced top quartile performance on an IRR and TVPI basis and is currently in the second quartile on a DPI basis but with value that has yet to be realized. Fund I is the weakest performer in the Partnership Holdings line of funds with second and third quartile performance.

- **Experienced Team –**The senior Partnership Holdings team has been investing together since the merger with Little Hawk in 2009. Individually, Mr. Swildens' experience dates back to 2000 with the founding of Industry Ventures. He also worked in the IT industry in the 1990s prior to founding the Firm. Mr. Reynolds experience dates back 15 years to his time at Columbia Capital, Kitty Hawk and now Industry Ventures. The third Managing Director, Ken Wallace, has worked as a venture capitalist for 11 years with the past eight years in his role at Industry Ventures.

- **Diversified Portfolio Construction –** When constructing the Partnership Holdings portfolio, the Firm will focus on investing in small venture capital funds and high growth companies as the team believes these are attractive opportunities within the venture industry. The Fund will also include investments into mid-stage companies acquired through early secondary purchases, special purpose funds and direct investments. This portfolio construction strategy is differentiated from traditional venture investing and should provide investors early liquidity and thus a mitigated J-curve.

- **Sourcing Network** – The Industry Ventures platform provides a key advantage in sourcing, evaluating and selecting fund managers and direct investments. Combined, the previous Industry Ventures funds have committed to more than 215 venture capital limited partnerships, and the Firm has cultivated relationships with the managers of these funds and others over the past 15 years. As a result, IVPH IV should continue to gain access to select high-performing funds and other select direct opportunities that are typically unavailable to new investors. Additionally, the bi-coastal presence of the team continues to help extend the breadth of the Firm's network.

Investors in IVPH IV should be aware of the following negatives:

- **Small Team –** Although small teams are not uncommon in venture capital, the senior investment team managing the Fund consists only of Roland Reynolds, Ken Wallace and Hans Swildens. Mr. Reynolds and Mr. Wallace are dedicated full-time to the Partnership Holdings strategy along with one investment analyst. Mr. Swildens splits time between the Partnership Holdings line of funds, the Industry Ventures Secondary line of funds, and managing the business.

- **Market Environment –** Venture capital pre-money valuations across the various stages have increased dramatically over the past 5-7 years. Navigating in a rich valuation environment with massive liquidity chasing deals could pose a challenge to the team's ability to produce similar returns to those experienced in previous Partnership Holdings funds. However, in Q4 2015 and Q1 2016, a dearth of venture-backed IPOs coupled with falling valuations has coalesced to make for an interesting opportunity to invest in the space.

- **Inherent Risk in Early-Stage Venture Capital** – IVPH IV will be investing in early - stage venture-backed companies through primary fund commitments. Early-stage venture companies are generally fraught with business execution and technology risks, among others, resulting in high failure rates within the industry. Although IVPH IV targets these segments of the market, the Fund's diversification strategy should mitigate some of the concerns around portfolio company failures significantly impacting the Fund.

- **Lack of a Full Fund Liquidation** – Although earlier Partnership Holdings funds have attractive performance relative to other venture capital funds, IVPH I still has only returned 42% of called capital eight years into the fund life, with no deals being fully realized across IVPH I and only one full realization across all IVPH funds. Full liquidation and completion of a Partnership Holdings fund has yet to be achieved and the timing of the deal realizations and resulting fund liquidation could have a negative impact on investors' final return numbers.

Fund Characteristics

Investment Vehicle	Delaware Limited Partnership
Investment Manager	Industry Ventures Partnership Holdings
Target Size/Max Size	$200 million/$250 million
Amount Raised	$180 million
Minimum Investment Size	$5 million, subject to waiver by the General Partner ("GP")
Target Final Close Date	Q2 2016
Investment Period	Four years after the latter of the initial capital contribution date or the final close.
Fund Term	10 years from final closing, with two one-year extensions at GP discretion.
Sponsor's Investment	The lesser of 2% or $4 million
Assets Under Management	$2 billion
Investment Focus	Primary and secondary investments in small venture capital funds with an allocation to direct investments and co-investments.
Geographic Focus	US focused
Projected Number of Investments	10-15 primary investments, 10-20 secondary and/or Special Purpose Fund ("SPF") investments, 15-20 direct company investments
Deal Size	$2.5 million to $20 million for primary and secondary commitments $1 million to $4 million for directs/co-investments
Target Fund Return	IVPH IV will target a net multiple of 2.5x and a net 20%-25% internal rate of return
Leverage	The Fund will not utilize fund-level leverage. The Firm has a working capital line of credit used for capital calls.
Annual Management Fee	Years 1-7: 1.0% of committed capital; Thereafter: management fee rate is 95% of the prior year's rate applied to the aggregate capital contributions
Other Fees	N/A
Organizational Costs	The Fund will bear up to of $750,000 of organizational expenses.
Carried Interest	5% on primary investments 10% on secondaries and special purpose fund investments 20% on directs/co-investments
Preferred Return	6% compounded annually
Distribution Waterfall	• First, 100% to LPs until they have received a full return of capital and a 6% preferred return on all investments in the Fund; • Then, 100% to the GP as carried interest catch up; • Thereafter, split pro-rata according to carried interest percentages for the underlying asset types.
ERISA Fiduciary	Industry Ventures does not operate as an ERISA fiduciary. Industry Ventures has ERISA investors in prior funds and may have ERISA investors in IVPH IV, but under all circumstances they will be limited to less than 25% of fund commitments.
Fund Auditor	Ernst & Young
Fund Legal Counsel	Cooley LLP
Placement Agents	N/A
Website	www.industryventures.com

Firm Description

Firm Overview

Industry Ventures was founded by Hans Swildens in 2000 to make venture capital investments in early stage information technology companies. In 2002, Industry Ventures purchased an interest in Speedera Networks from a public corporation. With this transaction, Mr. Swildens recognized an investment opportunity existed for a specialized secondary strategy that focused on venture backed companies. To implement the investment strategy, Mr. Swildens assembled a team with venture capital investment experience to establish the Firm's secondary investment efforts. In 2009, the Firm acquired Little Hawk Capital ("Little Hawk"), a Washington D.C. based fund-of-funds platform founded by Roland Reynolds that focused on making commitments to small, top-performing venture capital funds. Little Hawk committed to an Industry Ventures Secondaries fund and the two firms soon recognized the merits of combining the Little Hawk fund-of-funds program with a secondary component. Subsequently, the two firms merged.

Today, the Firm has 18 employees operating out of offices in San Francisco and Washington D.C. that are focused on two venture capital fund offerings: Industry Ventures Secondary Funds and Industry Ventures Partnership Holdings. With investments in over 215 venture capital limited partnerships and 110 direct company investments, the Firm maintains one of the most comprehensive databases of venture capital limited partnership data and portfolio company performance data. Industry Ventures now manages approximately $2.0 billion in commitments between the two strategies.

Team Overview

The Industry Ventures team consists of 12 investment professionals. The Firm's three Managing Directors, Roland Reynolds, Hans Swildens and Ken Wallace, will be the investment professionals managing the Fund. They are supported by COO Robert May, investment analyst Brian Langner, and other administrative and operations support personnel. The IVPH investment professionals also have the ability to leverage the broader Industry Ventures secondary team for sourcing and investment analysis.

Recent Turnover/ Key Departures

There has been one departure at the senior level in the past five years. Mike Gridley, Managing Director, left the firm in January 2013 to pursue other opportunities. NEPC was also recently notified that discussions are under way with a junior partner at the Firm regarding a potential amicable transition out of Industry Ventures. As this team member has no explicit duties with regard to the Partnership Holdings funds, the proposed transition is expected to have little to no effect on the performance of IVPH IV.

Succession Planning

The Industry Ventures organization is composed entirely of professionals that work on a team basis and are in their 30s and 40s, so a formal succession plan is not currently in place. None of the current Managing Directors expect to retire any time soon. The management company is owned by a Trust which has a process for succession in the event of the death of the Trustees.

Fund Investment Strategy

Investment Strategy

Industry Ventures intends to continue the same investment strategy for IVPH IV as the prior Partnership Holdings funds. Industry Ventures believes that the Fund will provide a diversified, systematic, multi-year investment program that concentrates capital in early and mid-stage venture capital companies while providing early liquidity and J-curve mitigation to investors through the inclusion of secondary LP purchases, special purpose funds and direct investments.

The Firm intends to target approximately 40% of the Fund's investments in primary commitments to smaller, early stage venture capital funds that are approximately $25 million to $250 million in size. These primary commitments will provide broad exposure to venture companies while also enhancing the Firm's knowledge of, and relationships in, the industry. The Firm also believes that primary commitments provide the impetus and incentive for general partners to facilitate secondary transactions in prior funds and investments in existing portfolio companies. IVPH IV will invest in 10-15 venture capital fund managers with a goal of diversifying investments across: i) sectors such as information technology, healthcare IT, and communications; ii) stages, including seed, early and growth; and iii) three vintage years.

The Firm will also target approximately 40% of the Fund's investments (10-20 transactions) in a mix of secondary purchases of limited partnership stakes that are less than 50% funded and special purpose funds that aim to capitalize on excess pro-rata rights. Industry Ventures believes that the special purpose funds and secondary interests can provide early liquidity to investors due to the mid-stage assets being acquired, helping to mitigate venture capital J-curve concerns from potential LPs.

Finally, the Firm intends to target approximately 20% of the Fund for investment into 15-20 direct venture investments. The team believes these direct investments will serve to further shorten the J-curve and accelerate liquidity for investors.

The three sleeves of the Fund are designed to be complementary to one another in building an atypical venture portfolio. The three sleeves, once filled, provide not only diversification but also a different return profile for investors when compared to classic venture capital funds.

Target Return

The team is targeting net annualized returns of 20-25% and a 2.5x-3.0x net multiple on contributed capital.

Target Fund Size

The Firm is targeting $200 million in commitments for IVPH IV.

Target Investment Type

Industry Ventures intends to invest approximately 40% of the Fund into small, early stage venture capital funds. The Firm expects to invest approximately 40% of the Fund into special purpose funds and secondary commitments that are less than 50% funded, with the final 20% of the Fund targeted for direct investments into venture companies.

Target Geographic Focus

IVPH IV will focus on venture capital opportunities that are mainly domiciled in the United States. The team expects that at least 80% of investments made will be in North America.

Target Deal Size

The team anticipates the typical deal size for primary and secondary commitments to be between $2.5 million and $20 million, with investments in the range of $1 million to $4 million for directs/co-investments.

Use of Leverage

The Fund does not have a formal leverage exposure policy and to date has not utilized leverage as part of the investment strategy. The Firm has a line of credit that is used for bridging capital calls and was recently renewed with First Republic Bank.

Recycling of Capital

IVPH IV may recycle capital provided that the aggregate cost basis of the Fund's investments does not exceed 120% of the aggregate Fund subscriptions.

Manager's View of Current Market Conditions

Industry Ventures believes the current environment for venture capital remains attractive, particularly for investors in the early and mid-stage companies that IVPH IV is targeting. Venture capital investors have experienced strong cash distributions over the past several years fueled by strong M&A activity and a large number of IPOs in 2014.

Despite the recently healthy IPO market, the Firm has recognized the shift in the type of venture-backed exits from one that has historically been IPO-centric to one that is now driven by M&A activity. With an emphasis on small investments in early and mid-stage companies with low entry valuations and high ownership positions, the Firm believes that small funds can still produce attractive returns from more modest M&A exits with the potential for a small number of "home runs" to help drive outsized returns. The Firm also believes that as later stage, venture-backed companies grow larger and valuations become increasingly robust, IVPH investments should benefit from this dynamic as the IVPH portfolio companies grow larger and eventually blossom into attractive targets for later stage companies and investors.

Expected Fund Investor Base

IVPH IV is expected to have a similar breakdown of investors by type as those seen in IVPH III. The breakdown of investor type for IVPH III is as follows:

- High net worth individuals: 7%
- Private Funds: 4%
- Pension plans (excluding government pension plans): 2%
- State or municipal governmental pension plans: 68%
- Other: 19%

Current Fund Investments

To date, the fund has committed just over $25mm to six small venture funds and one SPV.

Example of a Prior Investment

Partnership Holdings recently invested $6.2M into Fastly, a next generation internet Content Delivery Network ("CDN"), which offers superior performance and a better end-user experience than traditional CDN's. A content delivery network is a system of distributed servers that deliver webpages and other Web content to a user based on the geographic locations of the user, the origin of the webpage and a content delivery server.

The investment was funded via a Special Purpose Fund ("SPF") that Partnership Holdings formed with two venture capital managers, leveraging the managers' pro-rata participation rights. Iconiq Capital, a Silicon Valley venture capital firm, recently led a $75 million Series D financing. Three existing Industry Ventures managers each separately reached out to Industry Ventures to recommend the pro-rata rights investment into the Series D for Fastly. The managers all felt that this was a compelling opportunity to invest in what is expected to be the last round of a hyper-growth company that is displacing legacy CDN providers.

An IVPH III manager, OATV, seeded the company in 2011 alongside Battery Ventures. August Capital led the Series B in 2013 and IDG Ventures led the Series C in 2014. All of these Industry Ventures managers had reserved capital to invest in follow-on rounds, but due to the size of the allocation available to insiders, OATV and Amplify did not have capacity to exercise all of their pro-rata rights.

Partnership Holdings subsequently invested $3.4 million via a previously established SPF with OATV and $2.8 million via an SPF with Amplify. Neither vehicle is subject to a management fee. Both vehicles are subject to carried interest of 15% after a return of contributions. The OATV SPF is also cross-collateralized with a prior investment in 3D Robotics, providing some carried interest protection if one investment performs poorly. With this preferred equity investment, if the company performs as expected Partnership Holdings believes the investment will produce a 2x multiple on invested capital for investors.

Fund Investment Process

Deal Sourcing

The Firm believes that the Industry Ventures platform provides a key advantage in sourcing, evaluating and selecting fund managers due to its exclusive focus on venture capital, its prior commitments, its deep relationships, and its bi-coastal presence. Across Industry Ventures funds, the Firm has committed to more than 215 limited partnerships and developed relationships with these managers over the past 15 years. The Firm believes that it is considered a valuable limited partner due to the breadth of its capabilities to assist general partners over the lifecycle of a fund through unique deal structuring capabilities. As a result, the team anticipates that IVPH IV will enjoy access to select high-performing funds that are typically closed to new investors.

Industry Ventures is also one of the few institutional investors with a focus on purchasing limited partnership interests that are less than 50% funded. As a result, the Firm anticipates that the Fund should continue to have a wealth of proprietary secondary LP opportunities from which to select. Many traditional secondary firms target near or fully-funded interests because of the relative ease in identifying and pricing the assets. Early secondary purchases generally require a portfolio fund manager analysis as well as direct company analyses. These two different activities involve a different skill set and level of due diligence that the Firm believes traditional secondary or fund-of-funds investors typically will not possess or pursue.

Investment Process

Industry Ventures has developed a detailed and proven investment process. The process begins with gathering information on 300-400 venture capital firms, further screening to a universe of 250-300 partnerships, in-person meetings and conference calls with 150-200, deep due diligence on 75-100 firms and ultimately investing in and monitoring approximately 15-20 of these firms. Direct co-invest, special purpose fund and early secondary due diligence typically involves leveraging the sector expertise from the Industry Ventures secondary investment team and the Firm's proprietary database of venture-backed company information.

At each step in the process, there are a number of specific activities and output documents that are created to record the knowledge acquired at each phase. The due diligence efforts culminate in a comprehensive investment memorandum that details the investment rationale and the supporting information discovered in the diligence process. This investment memorandum is reviewed and discussed by the members of the Fund's three-person Investment Committee.

The Investment Committee collectively determines to approve or reject investment opportunities for the Fund. The Investment Committee will be responsible for all final investment decisions following the performance of more extensive due diligence and preparation of a detailed investment memorandum. After the Fund's commitments are made, the team will actively monitor the portfolio, continue to meet with the portfolio fund managers, manage capital calls and distributions, and report quarterly to the Fund's LPs.

Industry Ventures seeks to cultivate relationships with prospective portfolio fund managers over several years. Industry Ventures generally meets with managers and builds relationships when these funds are not raising capital. The Firm prefers not to meet new fund managers for the first time when they are in the market raising capital. The investment process is predicated on the three Ts:

- **Thorough** – multiple meetings in fund managers' offices with entire investment teams; reference calls augment years of relationship cultivation
- **Timely** – Industry Ventures' industry contacts, asset class specialization and lack of bureaucracy ensures timely decisions without compromising a rigorous process
- **Transparent** – the "GP ScoreCard" ensures that both Fund investors and portfolio fund managers have an understanding of Industry Ventures' evaluation methodology

The GP ScoreCard, Industry Ventures' proprietary manager evaluation methodology, is a key tool utilized in the investment process. This methodology has been developed based on the team's venture expertise and the industry network the team has developed. The objective of designing and implementing the GP ScoreCard is to resist "gut feel" decisions about portfolio fund managers based on an inconsistent or less rigorous process.

The GP ScoreCard measures partnerships along three basic categories: people, firm, and sector. Each category carries a relative weight based on importance—all adding up to 100%. In this way, Industry Ventures can quantify the manager evaluation process and compare across firms in an objective and consistent manner. Industry Ventures believes this methodology provides a distinct competitive advantage that will enable the Fund to achieve superior investment returns through unparalleled manager selection.

Value Creation

The team believes that the Industry Ventures platform provides a key advantage in sourcing, evaluating and selecting fund managers given the Firm's exclusive focus on venture capital, its list of prior commitments leading to deep relationships, and its bi-coastal presence. These advantages lead to a source of value creation for investors. The Firm believes that it is considered a valuable limited partner to GPs due to the breadth of Industry Ventures capabilities to assist GPs over the life of a fund through unique deal-structuring capabilities.

As a result of being considered a value-add LP by venture fund managers, the Firm anticipates that IVPH IV will enjoy access to select high-performing managers and funds that are typically closed to new investors. As a result of this limited competition, the Firm anticipates that IVPH IV will have a wealth of proprietary primary and secondary opportunities from which to select.

Risk Mitigation

The Firm believes that diversification is central to risk mitigation and thus will diversify the portfolio as outlined in the preceding paragraphs. IVPH IV will also seek to provide downside protection through the purchase of secondary interests at discounts. The Fund will further mitigate risk through the use of special purpose funds and direct investing to fund mid-stage companies that should have a lower failure rate and shorter time to liquidity than early stage companies.

Fund Economics

Management Fee
The investors will pay an annual management fee of 1.0% on committed capital until the seventh anniversary of the initial close. After the seventh anniversary, investors will pay management fees equal to 95% of the prior year's management fee rate multiplied by the investor's respective aggregate capital contributions.

Distribution Waterfall
The Fund will employ a European waterfall methodology that provides LPs a full return of invested capital and a preferred return on all realized and unrealized investments prior to the GP receiving profit distributions. Specifically, the distribution waterfall for IVPH IV will be as follows:

- First, distributions will be made to all Limited Partners until they receive aggregate distributions (with any in-kind distributions being valued at the time of distribution) equal to their respective capital contributions to the Fund;
- Second, distributions will be made to all Limited Partners until they receive a preferred return equal to six percent (6%) per annum on capital contributed to the Fund;
- Third, distributions will be made one hundred percent (100%) to the General Partner until the General Partner has received the target carry of the amount by which the aggregate of all Fund distributions exceeds the aggregate of all Capital Contributions made (5% for primaries, 10% for secondaries and 20% for directs/co-investments).
- Thereafter, distributions will be made in the respective carry proportions based on the type of underlying investment.

Allocation of Carried Interest
The majority of the carried interest will be distributed evenly across the three Managing Directors that oversee the Fund: Hans Swildens, Roland Reynolds and Ken Wallace will each receive 29%. Robert May, COO, will receive 3% and the remaining 10% will be distributed to the Industry Ventures secondary investment team.

Other Fees and Expenses
The Fund will bear up to of $750,000 of organization and syndication costs.

Fund Administration, Structure and Policies

Fund Structure
The partnership is structured as a Delaware limited partnership.

ERISA Provisions
Industry Ventures does not operate as an ERISA fiduciary. Industry Ventures has ERISA investors in prior funds and may have ERISA investors in the Fund but under all circumstances they will be limited to less than 25% of fund commitments.

UBTI Considerations
The amount of UBTI that may be realized by tax-exempt investors in the Fund will depend on the nature of the Fund's operations and investments and the operations and investments of its underlying portfolio funds. The potential for having income characterized as UBTI may have a significant effect on any investment by a tax-exempt entity in the Fund and may make investment in the Fund unsuitable for some tax-exempt entities. Tax-exempt investors should consult tax advisors regarding all aspects on an investment in the Fund.

Environmental, Social & Governance Disclosures
Industry Ventures recognizes that as venture capital fund manager, the Firm has the fiduciary duty to act in the best interest of its LPs over the long-term. In this fiduciary role, Industry Ventures believes that environmental, social and corporate governance (ESG) issues can affect the performance of the portfolio companies (to varying degrees across companies, industry sectors, regions, and investment stages and through time). Industry Ventures also recognizes that applying these principles may better align the investments with broader objectives of society and thus may lead to better returns over the longer term.

Therefore, where consistent with the Firm's fiduciary responsibilities, and where appropriate without causing material undue burden on Industry Ventures' mission to act in the best long-term interest of its investors, it will be Industry Ventures' policy to work towards the following principles:

1) Industry Ventures should promote and support the incorporation of ESG issues into investment analysis and decision making processes.
2) Industry Ventures should incorporate ESG issues into its ownership policies and practices.
3) Industry Ventures should seek appropriate disclosure on ESG issues by the entities in which its funds invest.
4) Industry Ventures should promote acceptance and implementation of these (or similar) principles within the private equity investment industry.
5) The members and employees of Industry Ventures should work together to enhance effectiveness in implementing these principles.
6) Industry Ventures should report on its activities and progress towards implementing these principles.

Industry Ventures will evaluate the effectiveness and improve the content of these principles over time.

Labor Policy
Industry Ventures does not have a formal labor policy.

Key Person Provision
In the event that prior to the completion of the investment period, any two of the three following Managing Directors cease to fulfill the following obligations: (A) with respect to Roland Reynolds and Ken Wallace, ceasing to remain active in the affairs of the General Partner or (B) with respect to Hans Swildens, ceasing to remain an active member of the Investment Committee, the General Partner shall promptly notify the LPs of such event and the investment period shall be

automatically suspended; provided, however, that in such event the Limited Partners will remain obligated to make cash contributions throughout the duration of the Fund to the extent needed to fund post-investment period obligations. A suspension period may be terminated at any time upon the vote of a majority in interest of the LPs or the consent of the LP Advisory Committee; provided, however, that unless within 180 days after the commencement of a suspension period, a majority in interest of the LPs or the LP Advisory Committee has elected to terminate the suspension period and re-commence normal Fund operations, the investment period shall terminate and the Managing Directors shall be permitted to raise a new fund or other entity with objectives similar to the Fund.

GP Removal Provisions

The GP may be removed as general partner for cause, upon at least thirty days' notice, by two-thirds in interest of the Limited Partners.

Reporting

Limited Partners of the Fund will receive annual reports containing audited financial statements of the Fund as well as quarterly reports with relevant updates and unaudited financial statements of the Fund. In addition, Limited Partners will have access to a secure internet site that will act as a repository for historical financial statements, schedule K-1s, partner capital account statements, capital call notices and other information relevant to Limited Partners.

Valuation Policy

Portfolio entities held by the Fund and other assets of the Fund will be valued at the fair market value as determined by the General Partner. In general, the net asset value reported by the managers of the portfolio entities, if any, will be used by the General Partner in making its determination of value. The LP Advisory Committee has the right to object to the valuation of one or more assets of the Fund set forth in the Fund's annual financial statement, with the disputed valuation being resolved pursuant to the appraisal procedure set forth in the Partnership Agreement.

Litigation, Regulation and Compliance

Current Litigation
According to Industry Ventures, there is no past or pending litigation against the Firm or any of the Firm's partners or principals.

Compliance Staff and Philosophy
Robert May is the Chief Compliance Officer and Chief Operations Officer. Cordium LLC acts as the firm's outsourced provider of compliance services and is overseen by the CCO. Cordium is a full-service compliance firm that conducts an annual mock SEC audit as well as ongoing monitoring related to personal trading/dealing monitoring, affirmations, gift and political contribution reporting and more. In addition, Cordium LLC provides on-site compliance training for all employees on an annual basis.

SEC Oversight
Since registering with the SEC on March 31st 2012, Industry Ventures has not been subjected to a regulatory exam.

Subject to Other Regulators
Industry Ventures is not registered with any other regulatory bodies to which it is subject.

Personal Trading
In order to prevent improper trading, avoid the appearance of conflicts of interest, or for other business or legal reasons, Industry Ventures maintains a "Restricted List" of issuers whose securities may not be transacted in by the Funds or in any personal accounts. The CCO will maintain the Restricted List.

The Restricted List is confidential, and no information about the Restricted List may be disclosed to anyone outside of the Firm. All Employees should consult the Restricted List before submitting any pre-clearance request for the purchase or sale of securities. Generally Employees (and in certain cases the Funds) will not be allowed to trade in securities on the Restricted List. The CCO will review all information to monitor compliance.

Firm Infrastructure

Office Locations
All Industry Ventures employees are based in the San Francisco office with the exception of Roland Reynolds, who is based out of the office near Washington, D.C.

Technology Resources and Systems
Investor Reporting: Through the Fund Administrator (Q-Biz Solutions), the Partnership Holdings Funds use the Netage's Dynamo platform for all LP reporting. A project is currently underway that will transition reporting to AltaReturn.

Reporting / Account: Q-Biz Solutions uses their own proprietary portfolio accounting software.

Compliance: As mentioned above, Compliance ELF is the system used to monitor and track personal trading/dealing monitoring, affirmations, gift and political contribution reporting and more. This is overseen by Cordium and CCO Robert May.

Business Continuity Planning
Industry Ventures maintains a comprehensive disaster recovery plan that addresses key personnel contact information, a backup strategy with risk management, emergency response procedures, insurance, and financial and legal issues.

Industry Ventures uses BlueRock Networks to provide IT services. BlueRock is familiar with Industry Ventures' environment and is expected to assist in ongoing maintenance and the recovery process as needed.

Fund Administration/ Back Office Resources
Industry Ventures uses Q-Biz Solutions as the Fund Administrator for all of the firm's Partnership Holdings funds. Q-Biz assists with all functional accounting items including cash management, LP reporting, and capital account monitoring under the supervision of the COO/CCO, Robert May.

Firm Track Record

Fund-Level Returns									
Fund	Vintage Year	Capital Committed	Capital Funded	Reported Value	Amount Distributed	Total Value, Net of Carry	TVPI Multiple	DPI Multiple	Current Net IRR
Partnership Holdings I	2007	$30	$28	$39	$16	$55	1.81x	0.42x	14.0%
Partnership Holdings II	2011	$55	$33	$71	$4	$75	2.01x	0.11x	46.7%
Partnership Holdings II-A	2011	$12	$10	$28	$4	$33	3.07x	0.41x	54.1%
Partnership Holdings III	2013	$170	$39	$49	$3	$52	1.20x	0.06x	63.4%
Partnership Holdings III-A	2014	$13	$5	$5	$2	$7	1.26x	0.35x	62.4%
Partnership Holdings III-B	2014	$20	$3	$3	$1	$4	1.14x	0.22x	51.6%

Note: $ in millions; data as of 12/31/2014 and provided by Industry Ventures.

Industry Ventures Partnership Holdings IV
Venture Capital Strategy

Track Record Benchmarking

For benchmarking purposes, we compared past fund performance to the Thomson One/Cambridge Associates US Venture Universe.

Thomson One/Cambridge Associates - IRR Comparison

Vintage Year	Fund	Current Net IRR	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2007	Partnership Holdings I	14.0%	2	75	17.6%	12.6%	5.9%
2011	Partnership Holdings II	46.7%	1	46	36.1%	19.9%	3.1%
2011	Partnership Holdings II-A	54.1%	1	46	36.1%	19.9%	3.1%
2013	Partnership Holdings III	63.4%	1	44	11.2%	(0.1%)	(16.0%)
2014	Partnership Holdings III-A	62.4%	1	42	(2.8%)	(9.0%)	(19.2%)
2014	Partnership Holdings III-B	51.6%	1	42	(2.8%)	(9.0%)	(19.2%)

Thomson One/Cambridge Associates - DPI Multiple Comparison

Vintage Year	Fund	DPI Multiple	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2007	Partnership Holdings I	0.42x	3	75	0.99x	0.58x	0.19x
2011	Partnership Holdings II	0.11x	2	46	0.15x	0.03x	0.00x
2011	Partnership Holdings II-A	0.41x	1	46	0.15x	0.03x	0.00x
2013	Partnership Holdings III	0.06x	1	44	0.00x	0.00x	0.00x
2014	Partnership Holdings III-A	0.35x	1	42	0.00x	0.00x	0.00x
2014	Partnership Holdings III-B	0.22x	1	42	0.00x	0.00x	0.00x

Thomson One/Cambridge Associates - TVPI Multiple Comparison

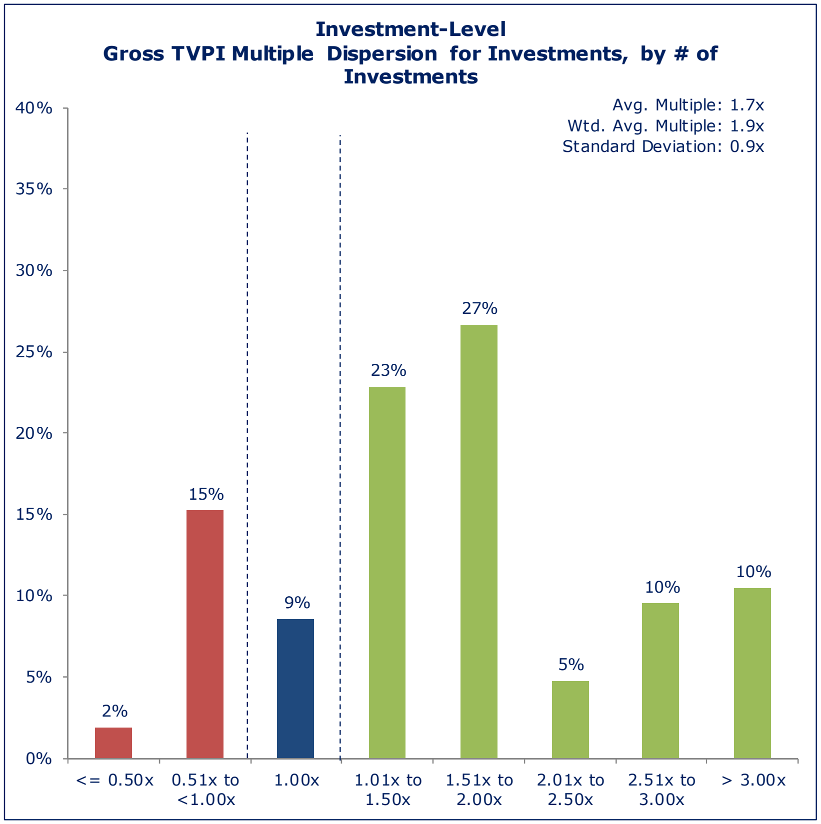
Vintage Year	Fund	TVPI Multiple	Quartile	# Funds	Upper Quartile	Median	Lower Quartile
2007	Partnership Holdings I	1.8x	2	75	2.0x	1.6x	1.3x
2011	Partnership Holdings II	2.0x	1	46	1.7x	1.3x	1.1x
2011	Partnership Holdings II-A	3.1x	1	46	1.7x	1.3x	1.1x
2013	Partnership Holdings III	1.2x	1	44	1.1x	1.0x	0.9x
2014	Partnership Holdings III-A	1.3x	1	42	1.0x	0.9x	0.9x
2014	Partnership Holdings III-B	1.1x	1	42	1.0x	0.9x	0.9x

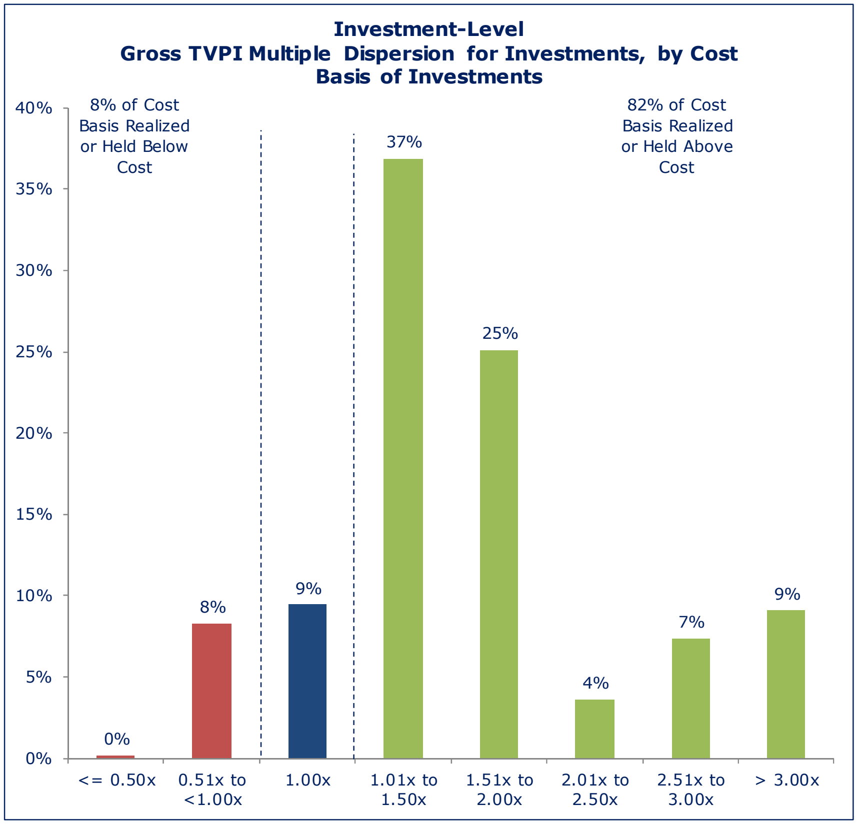
Note: **GREEN** shaded cells indicate that the fund outperformed the benchmark; **RED** shaded cells indicate that the fund underperformed the benchmark. Amounts are net of fees, carried interest and expenses. Performance is as of 12/31/2014. Thomson One/Cambridge Associates data is as of 12/31/2014, the most recent date for which the data is available.

Fund Attribution Analysis

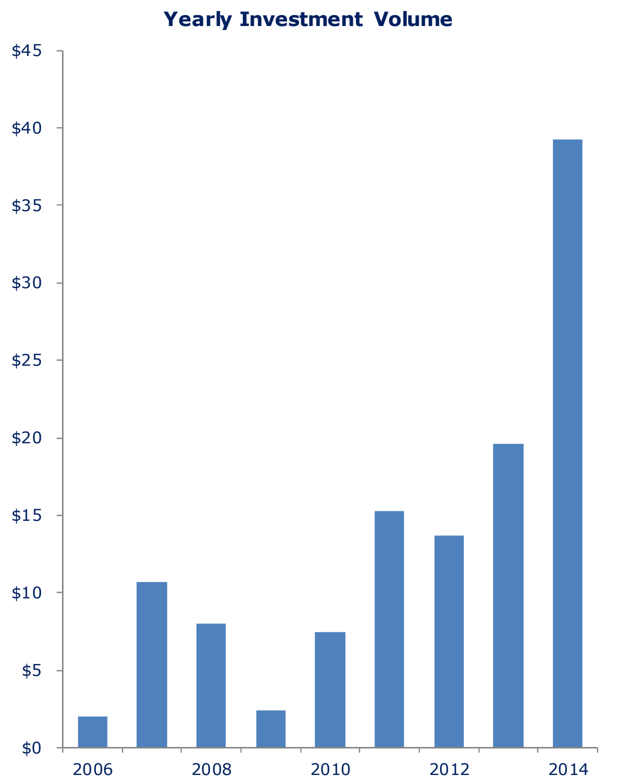
Total Value to Paid-In-Capital (TVPI) Deal Frequency Analysis
The chart below shows the individual portfolio investment TVPI multiples for previous Partnership Holdings funds. The size of the bubbles on the chart indicates the relative size of the equity commitment to a given investment.

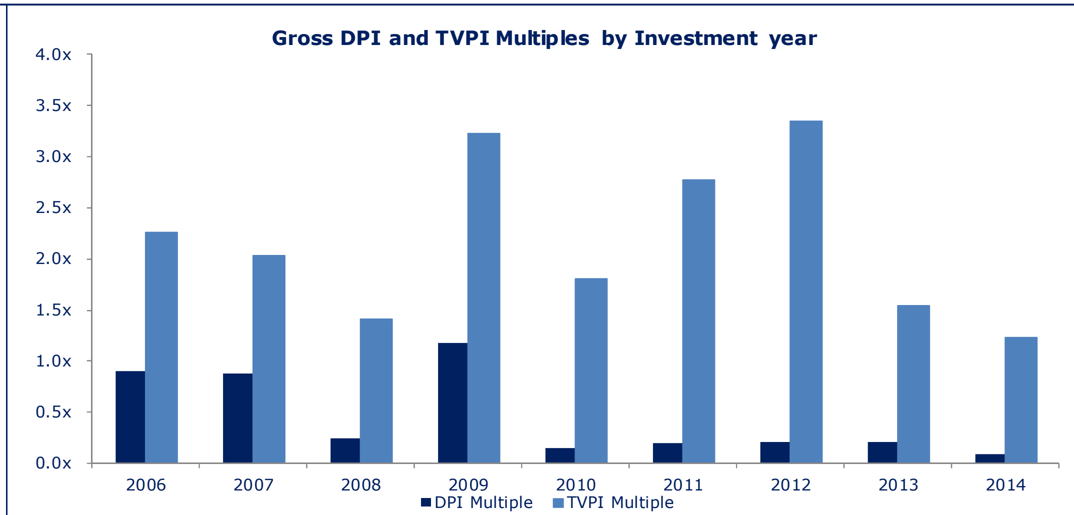
Investment-Level Returns Analysis
The chart below shows the investment-level multiple dispersion by number of investments and by cost basis of investments for previous Partnership Holdings funds.





Investment Volume Analysis
The chart below shows the investment level multiple dispersion by number of investments and by cost basis of investments for previous Partnership Holdings funds.



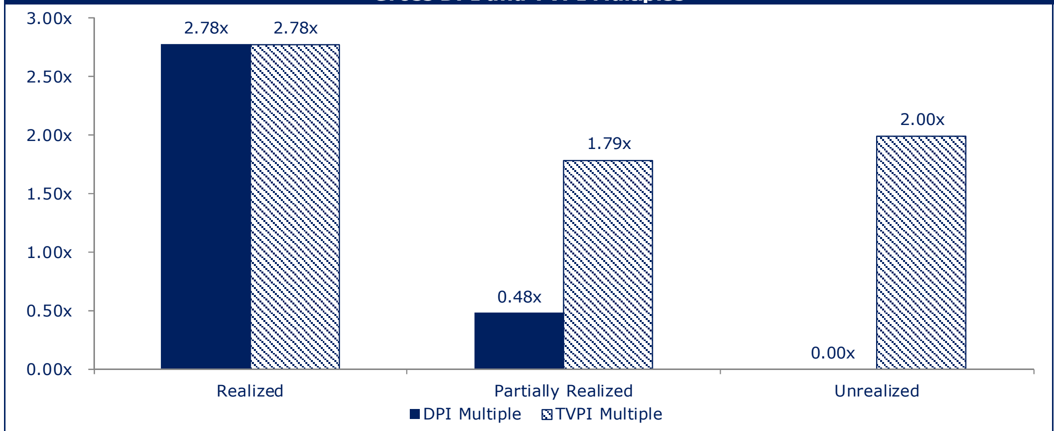


Investment Status	Number of Investments	Equity Capital Invested	Amount Distributed	Current Reported Equity Value	Total Equity Value	Wtd. Average Gross DPI Multiple	Wtd. Average Gross TVPI Multiple
2006	1	$2	$2	$3	$4	0.90x	2.26x
2007	6	$11	$9	$12	$22	0.88x	2.03x
2008	5	$8	$2	$9	$11	0.25x	1.41x
2009	2	$2	$3	$5	$8	1.18x	3.23x
2010	8	$7	$1	$12	$13	0.15x	1.80x
2011	15	$15	$3	$39	$42	0.20x	2.77x
2012	17	$14	$3	$43	$46	0.21x	3.34x
2013	24	$20	$4	$26	$30	0.21x	1.54x
2014	29	$39	$3	$45	$48	0.08x	1.23x
Total	107	$118	$31	$195	$225	0.26x	1.90x

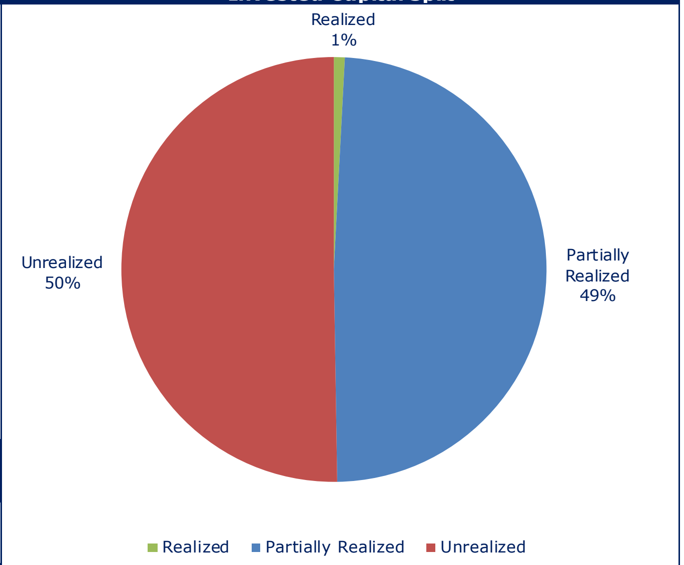
Investment Realization Analysis

The chart below shows DPI and TVPI multiples across realized, partially realized, and unrealized deals in previous Partnership Holdings funds.

Gross DPI and TVPI Multiples



Invested Capital Split



Investment Status	Number of Investments	Equity Capital Invested	Amount Distributed	Current Reported Equity Value	Total Equity Value	Wtd. Average Gross DPI Multiple	Wtd. Average Gross TVPI Multiple
Realized	1	$1	$3	$0	$3	2.78x	2.78x
Partially Realized	46	$58	$28	$76	$104	0.48x	1.79x
Unrealized	58	$59	$0	$119	$119	0.00x	2.00x
Total	105	$118	$31	$195	$225	0.26x	1.90x

Key Fund Professionals

Name	Title	Years with Firm	Years of PE Experience
Hans Swildens	Managing Director & CEO	15	19
Roland Reynolds	Managing Director	7	15
Ken Wallace	Managing Director	8	11
Robert May	COO & CCO	4	16

Detailed Biographies

Hans Swildens, Founder, Managing Director & CEO
Hans is the founder of Industry Ventures and a Managing Director responsible for the origination and execution of investment opportunities for the Firm. Additionally, he directs the Firm's investment processes, operations and limited partner relationships. Prior to founding Industry Ventures, Hans was the co-founder and President of Microline Software. Microline was acquired by Blaze Software (IPO), which was subsequently acquired by Fair Isaac. Hans was also an advisor to the founders of Speedera Networks (acquired by Akamai), where he completed Industry Ventures' first secondary investment and debt restructuring transaction.

Hans holds an MBA from Columbia Business School and a BA with distinction from the University of California at Santa Barbara.

Roland Reynolds, Managing Director
Roland is a Managing Director focused on sourcing and evaluating unfunded secondary purchases, primary commitments and co-investments for the Firm's Partnership Holdings strategy. Prior to joining Industry Ventures, he was the founder and Managing Partner of Little Hawk Capital, which was acquired by Industry Ventures. Prior to that, Roland was a Principal with Columbia Capital, a leading communications and IT venture capital firm. Prior to that, Roland worked in investment banking at JP Morgan & Co.

Roland received an MBA from Harvard Business School and a BA from Princeton University, where he graduated with high honors.

Ken Wallace, Managing Director
Ken is a Managing Director focused on sourcing and evaluating unfunded secondary purchases, primary commitments and co-investments for the Firm's Partnership Holdings strategy. Ken joined Industry Ventures as an Associate on the secondaries investment team. Prior to joining the Firm, Ken worked as an Associate Vice President at Bessemer Trust's Private Equity Funds Group, where he led the firm's venture capital fund investment strategy. Prior to that, he was in business development with Bessemer Trust.

Ken received an MBA from the Haas School of Business at the University California, Berkeley and a BA from Wake Forest University.

Robert May, Chief Operating Officer and Chief Compliance Officer
Robert is the Chief Operating Officer and Chief Compliance Officer for Industry Ventures. As the COO and CCO, Robert is responsible for all of the financial, compliance, and operational aspects of Industry Ventures.

Prior to joining Industry Ventures, Robert worked as a consultant for Standish Management and led the Palo Alto office. Prior to that, Robert was the COO and CFO for Founders Fund. Prior to Founders Fund, Robert spent four years as the CFO of Thomas Weisel Venture Partners. Robert graduated with honors from San Jose State University with a BS in Business Administration.

Disclaimers and Disclosures

- Past performance is no guarantee of future results.
- 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.
- Information used to prepare this report was obtained directly from the investment manager, and market index data was provided by other external sources. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

In addition, it is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds, real estate and private equity:

1. Performance can be volatile and investors could lose all or a substantial portion of their investment
2. Leverage and other speculative practices may increase the risk of loss
3. Past performance may be revised due to the revaluation of investments
4. These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms
5. A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value
6. These funds are not subject to the same regulatory requirements as registered investment vehicles
7. Managers may not be required to provide periodic pricing or valuation information to investors
8. These funds may have complex tax structures and delays in distributing important tax information
9. These funds often charge high fees
10. Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager’s realm of expertise or contemplated investment strategy

DISCUSSION SHEET

ITEM #C7

Topic: **North Texas Opportunity Fund extension**

Attendees: Arthur Hollingsworth, Managing Partner
John McGuire, Managing Director of Operations

Discussion: The North Texas Opportunity Fund, LP commenced in May 2000 and is approaching the expiration of the fund on May 13, 2016. The manager requests that DPFP consent to a one-year extension in order to wind down the remaining assets in the fund and maximize investors' return. This extension of the fund is the seventh extension requested by the manager under the terms of the limited partnership and requires approval of two-thirds of the limited partners. The partnership ceased payment of management fee to the Investment Manager on July 1, 2013.

DPFP committed and funded $10 million to the fund, and has received $8.8 million in distributions, earning an IRR since inception of 3.56%. Staff and NEPC have reviewed the fund, remaining assets, terms of the fund, and potential outcomes if no extension is granted.

Staff Recommendation: **Approve** the extension and **authorize** the Executive Director to negotiate and execute documentation and perform all necessary acts and exercise all appropriate discretion to facilitate the extension.

DALLAS POLICE & FIRE PENSION SYSTEM

INVESTMENT RECOMMENDATION

Date:	April 14, 2016
To:	DPFP Board
From:	Investment Staff
Subject:	North Texas Opportunity Fund 7th Extension

Recommendation

Investments staff recommends approving the North Texas Opportunity Fund extension, which extends the duration of the fund by one year from May 13, 2016 to May 12, 2017.

Executive Summary

The General Partner of the North Texas Opportunity Fund is requesting a seventh extension of the fund term in order to facilitate liquidation of the remaining assets. The primary remaining asset is Irving Holdings, Inc. (aka "Yellow Cab"). The fund also has a small cash position and escrow receivable from selling another holding. The General Partner expects to initiate steps towards a sale process by mid-year, and anticipates a sale by year end.

Performance

DPFP has funded the full $10 million commitment made to the North Texas Opportunity Fund, which began in May of 2000. DPFP has received $8.8 million in distributions from the fund, resulting in a Distributions to Paid in Capital ratio of 0.88. DPFP's market value in the fund is approximately $5 million, resulting a Total Value to Paid in Capital ratio of 1.38 as of September 30, 2015, the most recent data available. DPFP has achieved an IRR since inception of 3.56% on the investment.

Process

Staff reviewed the contract, performance, history, and holdings of the North Texas Opportunity Fund. Staff also analyzed the underlying financial statements of the primary remaining asset. Staff met with the General Partner several times and conducted multiple phone calls for answers to questions. Staff also consulted with NEPC, who themselves held phone calls with the General Partner.

Rationale

The General Partner intends to initiate key steps towards a sale process by mid-year, and is targeting year-end to complete the sale process. The General Partner receives no compensation for managing the fund or the asset. The General Partner has also expressed an intent to distribute shares in kind in the event the fund term is not extended. It is more efficient to allow the General Partner to conduct and manage the sale process with no compensation than for DPFP to receive the shares in kind and attempt to monetize the asset as a direct owner of a private company.

NEPC, LLC

To: Dallas Police and Fire Pension System

From: NEPC Private Markets

Date: April 14, 2016

Subject: Request to Extend Duration of North Texas Opportunity Fund LP

Issue

North Texas Opportunity Fund was originally scheduled to terminate on May 10, 2010. Since then, the General Partner has requested six one-year extensions, and has now requested a seventh. The Fund is in the liquidating stage but still has one core remaining asset, Yellow Checker Cab Company of DFW, yet to be fully realized. Additionally, there are residual payments due to DPF related to the Fund's past investment in InStaff as well as an outstanding claim against the buyer of the Fund's past investment in HGI Global, which pending a favorable ruling or settlement agreement, should result in additional proceeds to DPF.

The General Partner of the Fund is requesting a one-year extension to permit an orderly liquidation of the remaining asset, Yellow Checker. According to the GP, the there is a potential buyer interested in Yellow Checker, however, due to entrants such as Uber in the Dallas area, the acquisition has been put off until the impact of deregulation within the industry can be better understood. Per the terms of the Limited Partnership Agreement, the Fund can be extended for one additional year through May 13, 2016 if the General Partner receives consent from 2/3 of Limited Partners interest. DPFP represents 36.6% of total LP interests.

Recommendation

We are recommending that DPFP agree to the extension as presented by the General Partner. The acceptance of the extension will allow the manager to continue the orderly liquidation of the remaining asset which is in the best interests of the limited partner investors. DPFP's portions of the remaining net assets (Yellow Checker and InStaff payments) held in the portfolio are valued at ~$5M as of December 31, 2015. Additionally, the manager is no longer charging a management fee so there is no additional cost to DPFP to allow the General Partner to harvest the remaining portfolio company. It should be noted that at this time last year, the GP expected the remaining NTOF assets to be liquidated by the end of 2015, with no material progress made toward that goal. The GP stated that in Q2/Q3 2016 it will select an advisor to assist in the sale of Yellow Checker with the expectation that the Company will be sold by year end.

Foundation for the Recommendation

In forming our recommendation, NEPC performed the following activities:

1. Spoke with Arthur Hollingsworth on March 30, 2016
2. Reviewed the Written Consent of Limited Partner of North Texas Opportunity Fund LP
3. Reviewed the Fifteenth Annual Partners' Meeting Partnership Review Presentation
4. Reviewed the Yellow Checker Financial Overview Presentation
5. Reviewed the NTOF Limited Partnership Agreement

OpportunityFund
North Texas

Dear North Texas Opportunity Fund Investor:

As discussed in our Annual Meeting on December 10, 2015, the General Partner for North Texas Opportunity Fund is seeking an additional one year extension through May 13, 2017. This request requires an amendment to the Partnership Agreement by a two-thirds approval of all Limited Partners. Please see the attached Extension Consent. As discussed in the Partners' Report, the remaining assets of InStaff have largely been liquidated, and the investment in Irving Holdings, Inc. "Yellow Cab" is the only remaining portfolio company remaining to be sold. Please review and if you are in agreement with extending the Partnership through May 12, 2017, please execute the attached extension consent and return via email, fax, or mail to North Texas Opportunity Fund by April 1, 2016.

Please note we moved to a new location at the end of October 2014. The new office address is 4455 LBJ Freeway, Suite 300, Dallas, TX 75244. Our phone number remains 972-702-7390 and our fax number is now 972-705-7064.

If you have any questions, please contact me at 972-702-7390. Thank you.

Best regards,

Scott Billings
Chief Financial Officer

WRITTEN CONSENT
OF LIMITED PARTNER OF
NORTH TEXAS OPPORTUNITY FUND LP
(a Texas partnership)

The undersigned, being a limited partner (the "Partner") of North Texas Opportunity Fund LP, a Texas partnership (the "Partnership"), hereby consents to the adoption of the following resolution as of this 10th day of December, 2015:

1. Approval of Extension of Duration

WHEREAS, the Partnership's ten-year duration commenced May 10, 2000. In March of 2010, two-thirds of the limited partners voted to extend the duration of the partnership for a period of one year, from May 10, 2010 to May 10, 2011.

WHEREAS, in February of 2011, two-thirds of the limited partners voted to extend the duration of the partnership for a period of one year, from May 10, 2011 to May 10, 2012.

WHEREAS, in February of 2012, two-thirds of the limited partners voted to extend the duration of the partnership for a period of one year, from May 10, 2012 to May 10, 2013.

WHEREAS, per section 2.5 (a) of the LPA, the Partnership will cease payment of the management fee to the Investment Manager July 1, 2013.

WHEREAS, in February of 2013, two-thirds of the limited partners voted to extend the duration of the partnership for a period of one year, from May 10, 2013 to May 10, 2014. Currently, the Partnership duration will expire May 10, 2014, subject to this extension consent.

WHEREAS, in May of 2014, two-thirds of the limited partners voted to extend the duration of the partnership for a period of one year, from May 10, 2014 to May 10, 2015. Currently, the Partnership duration will expire May 10, 2015, subject to this extension consent.

WHEREAS, in May of 2015, two-thirds of the limited partners voted to extend the duration of the partnership for a period of one year, from May 10, 2015 to May 13, 2016. Currently, the Partnership duration will expire May 13, 2015, subject to this extension consent.

NOW, THEREFORE, BE IT RESOLVED, that the Partner approves amending the North Texas Opportunity Fund LP Limited Partnership Agreement ("LPA") dated May 10, 2000 (the date of the filing for record in the Office of the Secretary of State of the State of Texas) to effect extending the duration of the Fund by one year from May 13, 2016 to May 12, 2017 (changes in **bold**):

*The Partnership shall commence business upon the date upon which both (a) the General Partner has received executed counterparts of this Agreement from Limited Partners whose Commitments aggregate at least $12,500,000 and (b) the Certificate of Limited Partnership has been filed for record in the Office of Secretary of the State of Texas, and shall continue through the close of business on **May 12, 2017,** unless sooner terminated pursuant to the provisions of Article IV hereof.*

The undersigned has executed this Written Consent as of the date first set forth above.

GENERAL PARTNER:
NORTH TEXAS OPPORTUNITY FUND
CAPITAL PARTNERS LP

By: NTOF Capital Partners LLC, its general partner

By: A.W. Hollingsworth
Name: Arthur Hollingsworth
Title: Partner

LIMITED PARTNER:

By:__________________________
Name:________________________
Title:________________________

DISCUSSION SHEET

ITEM #C8

Topic: **Investment reports**

Discussion: Review of investment reports.

DISCUSSION SHEET

ITEM #C9

Topic: **2015 audit plan**

Attendees: Jill Svoboda, BDO, Partner
Rachel Pierson, BDO, Manager

Discussion: Representatives from BDO, DPFP's external independent audit firm, will be present to discuss their audit plan for the year ended December 31, 2015.

AUDIT PLANNING

December 31, 2015

The following communication was prepared as part of our audit, has consequential limitations, and is intended solely for the information and use of those charged with governance (e.g., Board of Trustees and Administrative and Audit Advisory Committee) and, if appropriate, management of the System and is not intended and shall not be used by anyone other than these specified parties.

Tel: 215-969-7007
Fax: 214-953-0722
www.bdo.com

700 North Pearl, Suite 2000
Dallas, Texas 75201

Board of Trustees
Dallas Police and Fire Pension System

Professional standards require us to communicate with you regarding matters related to the audit plan that are, in our professional judgment, significant and relevant to your responsibilities in overseeing the financial reporting process. This report provides an overview of our plan for the audit of the financial statements of the Dallas Police and Fire Pension System (the System) as of and for the year ending December 31, 2015, including a summary of our overall objectives for the audit, and the nature, scope, and timing of the planned audit work, including procedures applied to management's discussion and analysis (MD&A), required supplementary information and schedules and any other permitted services requested by the System.

We are pleased to be of service to the System and are always available to discuss our audit plan as well as other matters that may be of interest to you.

Respectfully,

BDO USA, LLP

Discussion Outline

Client Service Team

Our engagement team members for this year's audit are listed in the organizational chart below. As a matter of policy, we attempt to provide continuity of service to our clients to the greatest extent possible in accordance with mandated partner rotation rules and other circumstances that may impact continuity. Where engagement team rotation is necessary, we will discuss this matter with those charged with governance and determine the appropriate new individual to be assigned to the engagement based on particular experience, expertise, and engagement needs.

Real Estate Valuation Reviewer
Benjamin Laird
blaird@bdo.com

Engagement Partner
Jill Svoboda
jsvoboda@bdo.com

Focused Consulting Reviewer
Kristy VanderMolen
kvandermolen@bdo.com

Manager
Rachel Pierson
rpierson@bdo.com

In addition, as part of our engagement team, we will utilize the services of Actuarial Risk Management (ARM), a member firm of the BDO alliance network. Corwin Zass, Principal and founder of ARM, as well as Timothy Leier, will assist our engagement team in the review and audit of the actuarial report provided by the DPFP actuary for the audit of the December 31, 2015 financial statements.

All members of the team listed above were part of the engagement team during the 2014 audit and are continuing with the engagement team for the 2015 audit.

Management’s Responsibilities

System management is responsible for preparing, with the oversight of those charged with governance, the financial statements and disclosures in conformity with accounting principles generally accepted in the United States of America (GAAP) and adhere to the guidelines established by the Governmental Accounting Standards Board (GASB) as of December 31, 2015. The System management’s responsibilities also include the following:

- Establish and maintain effective internal control over financial reporting and proper accounting records.
- Identify and ensure compliance with relevant laws and regulations.
- Safeguard the System’s assets.
- Select appropriate accounting principles.
- Use reasonable judgments and accounting estimates.
- Complete GAAP and GASB disclosure checklists to ensure there are no significant financial statement disclosure deficiencies.
- Make all financial records and related information available to BDO.
- Record material audit adjustments and affirm to BDO that the impact of uncorrected misstatements, if any, is immaterial to the financial statements taken as a whole.
- Provide BDO with a letter confirming representations made during the audit.

Engagement Objectives

Our objectives with respect to the audit of the System's financial statements are summarized below:

- Plan and perform an audit to obtain reasonable assurance about whether the financial statements are free of material misstatements, whether caused by error or fraud. An audit in accordance with auditing standards generally accepted in the United States of America and Government Auditing Standards do not provide absolute assurance relative to or any guarantee of the accuracy of the financial statements and is subject to the inherent risk that errors or fraud, if they exist, may not be detected.
- As part of our engagement, we will apply certain limited procedures to the required supplementary information ("RSI") in accordance with auditing standards generally accepted in the United States of America. These limited procedures will consist primarily of inquiries of management regarding their methods of measurement and presentation, and comparing the information for consistency with management's responses to our inquiries. We will not express an opinion or provide any form of assurance on the RSI.
- Obtain a sufficient understanding of the System's internal control to plan the audit of the financial statements. However, such understanding is required for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.
- Communicate our responsibilities in relation to the audit and establish an understanding of the terms of the engagement, including our engagement letter dated January 6, 2016 previously reviewed and approved by management.
- Provide an overview of the overall audit strategy and planned scope and timing of the audit.
- Inquire of those charged with governance about risks of material misstatement, including fraud risks, and whether those charged with governance are aware of other matters that may be relevant to the audit such as, but not limited to, violations or possible violations of laws or regulations, and complaints or concerns raised regarding accounting or auditing matters.
- Communicate with System management and those charged with governance regarding significant deficiencies and material weaknesses identified during our audit, and other timely observations that are significant and relevant to the financial reporting process.
- Consult regarding accounting and reporting matters as needed throughout the year.
- Work with System management toward timely issuance of financial statements.
- Maintain our independence with respect to the System.
- Ensure that those charged with governance are kept appropriately informed in a timely manner of the System's financial reporting matters; comply with professional standards as to communications with those charged with governance.

Overall Audit Strategy - Planned Scope

Overall, our audit strategy is to focus on higher risk areas of material misstatement (whether due to error or fraud) and other areas of concern for System management and those charged with governance.

Our audit strategy includes consideration of:

- Prior year audit results together with recent System results, investment industry results, regulatory changes, significant current year events, and discussions with management and those charged with governance regarding the System's operations, activities, and risks.
- Inherent risk within the System (i.e., the susceptibility of the financial statements to material error or fraud) before recognizing the effectiveness of the control systems.
- A continual assessment of materiality thresholds based upon qualitative and quantitative factors affecting the System.
- Recent developments within the industry, regulatory environment, and general economic conditions.
- Recently issued and effective accounting and financial reporting guidance including the disclosure requirements of GASB 67.
- The System's significant accounting policies and procedures, including those requiring significant management judgments and estimates and those related to significant unusual transactions.
- The control environment, risk management and monitoring processes, and the possibility that the control systems and procedures may fail to prevent or detect a material error or fraud. We do not expect to perform tests of controls and will plan a substantive audit.
- Information about systems and the computer environment in which financial records and related systems operate (including the trustee/custodian's service provider's systems as reported in their SOC 1 reports).
- Possible internal plan changes for the audited plan year, such as the following:
  - ✓ Accounting systems
  - ✓ System management personnel or those charged with governance
  - ✓ Internal control processes in accounting and financial reporting
  - ✓ Service providers (such as actuary, legal, trustee, custodian, investment managers, etc.)
  - ✓ Trustee, custodian and/or investment advisor agreements
  - ✓ System amendments
  - ✓ Investment policies and practices
  - ✓ Workforce (significant layoffs, acquisitions, terminations, future reductions in force)
- Possible issues impacting audit, such as the following:
  - ✓ System management's review of the recent System results when compared to the investment industry results
  - ✓ Regulatory reviews or communications and/or pending litigation
  - ✓ Transactions with parties-in-interest
  - ✓ Errors or fraud related to the System
  - ✓ Misappropriation of System assets

Overall Audit Strategy - Planned Scope

- ✓ Concerns about fictitious participants or distributions made to missing, ineligible, or incorrect individuals
- ✓ Fees and expenses paid to inappropriate vendors
- ✓ Significant assumptions used in the valuation of the System assets
- ✓ Significant assumptions used in the actuarial determination of the total pension liability

Overall Audit Strategy - Planned Scope

Based upon our initial assessment, our audit will primarily entail substantive testing. The primary areas of focus in our overall audit strategy include the following:

- Fraud Risk
- Entity/System Level Internal Controls Over Financial Reporting
- Actuarial Valuation
- Compliance with System Documents (eligibility, contributions/contribution receivables, and benefit payments)
- Investments (Existence and Valuation)
- Other Receivables, Payables and System Expenses
- Investment Income (Loss)
- Other Matters, Including Significant Unusual Transactions and Proper Disclosure of GASB 67, Accounting and Financial Reporting for Pensions
- Evaluation of Related Party Transactions, Including Transactions with Parties-in-Interest, and any identified Significant Unusual Transactions
- Evaluation of Legal Matter Disclosures including consideration of the status of the member lawsuit still in appeal and lawsuits with CDK

Primary Areas of Focus and Audit Strategy

FRAUD RISK

Consideration	Approach
• Professional standards require us to plan and conduct our audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud. • Fraud risk may be impacted by the following characteristics: ✓ Incentive or pressure ✓ Opportunity ✓ Rationalization or attitude • Presence of fraud risk factors and how management's controls and programs to detect and prevent fraud may mitigate these risks. • Risk of management override of controls.	• Review System management's controls and programs relating to fraud, and assess operating effectiveness of such programs. • Inquire of System management and other client personnel as to their knowledge of any potential fraudulent or alleged fraudulent activities. • Inquire of those charged with governance about their views about risks of material misstatements, including fraud risk and whether they are aware of: ✓ tips or complaints regarding the System's financial reporting; and ✓ matters relevant to the audit including, but not limited to, violations or possible violation of laws or regulations • Consider additional procedures to address any specific fraud risks identified, including management override of controls. • Introduce an element of unpredictability into our procedures by either altering the nature, timing, or extent of the procedures when compared to procedures performed in the prior year. • Perform focused procedures on any significant unusual transactions, including gaining an understanding of the business purpose or lack thereof for the System entering into the transaction. • Obtain an understanding of the System's financial relationships and transactions with those charged with governance of the System and the System Executive Director for risk assessment purposes. • Exercise professional skepticism. • Communicate with System management, those charged with governance and the System Executive Director, as necessary.

Primary Areas of Focus and Audit Strategy

ENTITY/SYSTEM LEVEL INTERNAL CONTROLS OVER FINANCIAL REPORTING

Consideration	Approach
• System management has controls in place to maintain compliance with applicable rules and regulations and provisions of the System Document. • The Staff or the Executive Director has controls to monitor the activities of the outside service providers. • Significant changes to personnel and internal control processes increase the risk that an internal control failure will occur due to either the design or operation of a particular control.	• Consider the System's internal control environment for purposes of planning our audit. • Review the System's control processes in a number of areas to evaluate whether sufficient controls are in place and functioning effectively. • Review SOC 1 reports for the trustee/custodian service provider to determine whether adequate controls are in place and functioning effectively.

ACTUARIAL VALUATION

Consideration	Approach
• Whether the actuarial calculation appropriately applies current standards. • Whether actuarial provisions and assumptions are deemed reasonable. • Whether disclosures over actuarial assumptions and funding issues are appropriate.	• Confirm the actuarial data directly with the actuary. • Have the actuarial report reviewed by Actuarial Risk Management, an Alliance Firm of BDO specializing in actuarial valuations, for reasonableness. • Perform census data reconciliations. • Review funding requirements, actuarial provisions and assumptions used for accuracy.

ELIGIBILITY

Consideration	Approach
• Whether all covered employees have been properly included in employee eligibility records. • Whether accurate participant data for eligible employees was supplied to the trustee/custodian/service providers.	• Test that participating employees are eligible per the System Documents on a sample basis. • Review participant personnel files.

Primary Areas of Focus and Audit Strategy

CONTRIBUTIONS

Consideration	Approach
• Whether the amounts received or due to the System have been determined, recorded, and disclosed in the financial statements in conformity with the System Document and accounting principles generally accepted in the U.S.	• Test the calculation of employer and employee contributions in accordance with the System document. • Ensure that active eligible members in the Deferred Retirement Option Plan (DROP) contributions are in accordance with the System documents. • Ensure contributions are in accordance with Group A or Group B membership depending on election. • Test the reasonableness of contribution receivables.

BENEFIT PAYMENTS

Consideration	Approach
• Whether benefit payments are in accordance with the System Document. • Whether benefit payments are made to or on behalf of person entitled to them and only to such persons. • Whether transactions are recorded in the proper account, amount, and period.	• Agree distributions to request for distribution and supporting checks. • Verify eligibility to receive the distribution. • Test that proper tax withholdings, if any. • Review and recalculate benefit payments.

Primary Areas of Focus and Audit Strategy

INVESTMENTS

Consideration	Approach
• Due to significant valuation issues with certain investments in the industry over the last several years, consider whether investments are properly valued and whether classified in conformity with accounting principles generally accepted in the U.S. • Whether investment transactions are recorded in conformity with accounting principles generally accepted in the U.S.	• Confirm investments with third-party fund managers and/or custodians. • Test fair value of investments at year-end by comparing the carrying value to an outside third-party source, including audited financial statements presented at fair value, real estate appraisals, and partnership agreements. • Compare the investment income to rates of return per a third-party source, including audited financial statements at fair value, and test earning allocations. • Due to the specialized skill and knowledge required, utilize Valuation Manager, to assist us in corroborating the valuation of investments. • Consider the System management's policy of reviewing valuation methodologies, inputs and assumptions. • Review the System's investment policy in correlation with the investments in place.

OTHER RECEIVABLES, PAYABLES AND SYSTEM EXPENSES

Consideration	Approach
• Whether receivables and payables are appropriately recorded. • Whether liabilities recorded are complete and all expenses are captured. • Whether securities lending obligations are appropriately recorded.	• For loans payable review maturity schedules and covenants, and send confirmations, if applicable. • Review schedules of uncompensated liabilities. • Review securities lending arrangements. • Obtain forward currency contracts and review the appropriateness of the receivable and payable balances. • Perform a search of unrecorded liabilities. • Obtain a detail break out of System expenses. • Confirm fund management fees in correlation with the investment confirms. • Select a sample of expenses and agree them to invoices and payments.

Primary Areas of Focus and Audit Strategy

INVESTMENT INCOME (LOSS)

Consideration	Approach
• Whether the realized gain or loss on investments is appropriately recorded. • Whether dividends are appropriately recorded by the System. • Whether interest earned is appropriately recorded by the System.	• For a selection of transactions recalculate the realized and unrealized gains and losses. • For a selection of transactions test dividends received by the System to independent market sources. • Test interest earned by recalculating or performing reasonableness tests.

OTHER MATTERS

Consideration	Approach
• Ensure the financial report includes all appropriate disclosures.	• Complete a disclosure checklist specific to Pension System and one specific to GASB standards. • Review the credit risk disclosure for appropriateness and adequacy. • Review legal expenses and obtain a legal confirmation for any potential commitments and contingencies that may require disclosure.

Primary Areas of Focus and Audit Strategy

EVALUATION OF RELATED PARTY TRANSACTIONS, INCLUDING TRANSACTIONS WITH PARTIES IN INTEREST

Consideration	Approach
• Consider the System's relationships and transactions with its related parties. For the purposes of this section, the term "related party" is deemed to also incorporate the term "party in interest." • Consider the susceptibility of the System financial statements to material misstatement (whether due to error or to fraud) that could result from the System's related party relationships and transactions.	• Assess the risk of material misstatement associated with System related party relationships and transactions. • Perform inquiry of System management regarding the identity of the System's related parties, the nature of the System's relationships and transactions with related parties and the System's process for identifying, authorizing and approving, and accounting for and disclosing such relationships and transactions. • Perform inquiry and other procedures deemed appropriate to obtain an understanding of the controls, if any, that System management has established to identify, authorize and approve, and account for and disclose such relationships and transactions. • Evaluate whether the System financial statements 1) appropriately account for and disclose identified relationships and transactions with related parties and 2) are fairly presented given any such relationships and transactions identified. • Communicate to those charged with governance regarding significant matters arising from our audit.

We will communicate to those charged with governance, in a timely manner, any significant changes to the planned audit strategy or the significant risks initially identified that may occur during the audit to the results of audit procedures or in response to external factors, such as changes in the economic environment.

Audit Readiness and Overall Audit Timeline

The following represents our anticipated schedule with regard to our audit of the System's financial statements:

Description	Date
Planning meeting; client assistance listings provided to System management	Early March, 2016
Develop audit strategy; determine nature and scope of testing	Mid-March, 2016
Confirmation procedures	Mid-March, 2016
Fieldwork begins	Weeks of April 18, April 25 and May 2, 2016
Review draft financial statements	By end of May, 2016
Final communications with those charged with governance; release opinion on financial statements (pending review of final investment audited financials that may come later in the audit process)	June 16, 2016
Release of audit opinion (Dependent on timing of audit reports from external investment managers)	Approximately June 30, 2016

Independence Communication

Our engagement letter to you dated January 6, 2016 describes our responsibilities in accordance with professional standards and certain regulatory authorities with regard to independence and the performance of our services. This letter also stipulates the responsibilities of the System with respect to independence as agreed to by the System. Please refer to that letter for further information.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C10

Topic: **Annual 2015 budget review**

Discussion: Attached is a review of the Calendar Year 2015 Administrative and Professional Services Budgets detailing expenditures for the year. Actual expenses for the combined Administrative and Professional Services budgets, net of expenses allocated to the Supplemental Plan, are approximately *9.9% below* the budget.

Administrative expenses for the period totaled $5,542,660, *10.7% below* the budget.

Professional services expenses for the period totaled $3,515,776, *8.6% below* the budget.

Expense items which vary from the budget by at least 5% <u>and</u> $5,000 are explained in the attached review.

Investment management expenses for the period totaled an estimated $32,774,652, *5.7% below* the budget.

Supplemental Plan expenses are deducted from total expenses in arriving at Regular Plan expenses. Expenses are allocated to the two plans on a pro-rata basis, according to the ratio of each plan's assets to the total Group Trust assets. The ratio is derived from the Unitization Report prepared by JPMorgan. The ratio is 99.28% Regular Plan to .72% Supplemental Plan as of December 31, 2015.

2015 12-Month Budget vs Actual Review

Regular Board Meeting

April 14, 2016

DALLAS POLICE & FIRE PENSION SYSTEM
ADMINISTRATIVE BUDGET
FISCAL YEAR 2015
12-MONTH REVIEW

DESCRIPTION	2015 BUDGET	2015 ACTUAL	2014 ACTUAL	OVER(UNDER) BUDGET VARIANCE	% BUDGET VARIANCE
SALARIES & BENEFITS:					
Salaries and Benefits	4,576,263	4,170,702	4,502,187	(405,561)	-8.9%
Supplies and Materials:					
Office Supplies	77,000	51,206	57,846	(25,794)	-33.5%
Postage	87,000	29,370	88,953	(57,630)	-66.2%
Educational Programs	36,000	18,461	19,641	(17,539)	-48.7%
Sub-Total Supplies & Materials	**200,000**	**99,037**	**166,440**	**(100,963)**	**-50.5%**
Services:					
Printing	78,000	57,234	52,117	(20,766)	-26.6%
Disability Medical Evaluations	13,000	7,160	16,860	(5,840)	-44.9%
Communications	99,000	68,497	84,527	(30,503)	-30.8%
Repairs and Maintenance	42,500	39,846	29,695	(2,654)	-6.2%
Leased Equipment	28,000	23,726	23,267	(4,274)	-15.3%
Memberships and Dues	15,500	12,978	11,012	(2,522)	-16.3%
Subscriptions	3,500	1,574	3,648	(1,926)	-55.0%
Continuing Education	245,000	184,421	205,872	(60,579)	-24.7%
Mileage Reimbursement	1,000	100	454	(900)	-90.0%
Staff Development	100,000	49,031	62,831	(50,969)	-51.0%
Business Continuity	50,500	36,814	36,379	(13,686)	-27.1%
Employment Expenses	27,000	125,519	1,745	98,519	364.9%
Contingency Reserve	-	425	-	425	N/A
Sub-Total Services	**703,000**	**607,325**	**528,407**	**(95,675)**	**-13.6%**
Fixed Assets (includes Building)	770,000	705,845	48,773	(64,155)	-8.3%
Sub-Total, Gross of allocation to Supp Plan	**6,249,263**	**5,582,909**	**5,245,807**	**(666,354)**	**-10.7%**
Allocation to Supplemental Plan	43,845	40,249	36,336	(3,596)	-8.2%
Net Administrative Services Expenses Reg Plan	**6,205,418**	**5,542,660**	**5,209,471**	**(662,758)**	**-10.7%**

Administrative Budget
Fiscal Year 2015
12-Month Review

The following expense items vary from the budgeted amount by more than 5% and $5K.

LINE ITEM	VARIANCE AMOUNT	% VARIANCE	EXPLANATION
Salaries and benefits	$ (405,561)	-8.9%	(1) Timing of transition from Interim Administrator to ED resulted in 1 month less total comp; (2) Hiring of CIO later than anticipated; (3) Retirement of Assistant Administrator-Investments and lack of replacment of Assistance Administrator-Operations
Office supplies	$ (25,794)	-33.5%	(1) Fewer software upgrades than planned; (2) Reduced purchasing of office supplies; (3) Slight reduction in Cintas contract
Postage	$ (57,630)	-66.2%	(1) Budgeted for mailing of newsletters 12 times per year, mailed only 6 newsletters per year; (2) Reduced overnight mailings; (3) Lower daily mail volume than expected; (4) Cancelled mailing of condensed annual report and member handbooks - distributed during rookie classes & online
Educational programs	$ (17,539)	-48.7%	(1) Focused reduction in meal costs; (2) No station visits; (3) Less involvement in retiree meetings (other than 1st Sunday meeting)
Printing	$ (20,766)	-26.6%	(1) Budgeted for producing newsletters monthly, but produced only bi-monthly; (2) Reduced number of printed annual reports
Disability medical evaluations	$ (5,840)	-44.9%	Fewer number of evaluations than anticipated
Communications	$ (30,503)	-30.8%	(1) Reduced long distance and tablet data contract charges; (2) Fewer replacements of phones & tablets
Continuing education	$ (60,579)	-24.7%	(1) Less conference travel; (3) Lower attendance of professional education courses (i.e. Wharton)
Staff development	$ (50,969)	-51.0%	(1) Less conference travel; (2) Less tuition reimbursement than anticipated; (3) Cancellation of Wellness program by provider
Business continuity	$ (13,686)	-27.1%	Imaging support upgrade was postponed to 2016
Employment expenses	$ 98,519	364.9%	Costs for ED and CIO searches

DALLAS POLICE & FIRE PENSION SYSTEM
PROFESSIONAL SERVICES BUDGET
FISCAL YEAR 2015
12-MONTH REVIEW

DESCRIPTION	2015 BUDGET	2015 ACTUAL	2014 ACTUAL	OVER(UNDER) BUDGET VARIANCE	% BUDGET VARIANCE
Actuarial Services	200,000	258,891	205,926	58,891	29.4%
Bank Custodian Services	500,000	268,115	301,973	(231,885)	-46.4%
Insurance	361,000	288,116	200,310	(72,884)	-20.2%
Elections	20,000	19,666	43,081	(334)	-1.7%
Accounting Services	59,000	59,000	59,000	-	0.0%
Independent Audit	200,000	177,450	76,699	(22,550)	-11.3%
Information Technology Projects	145,000	112,079	153,234	(32,921)	-22.7%
Investment Consultant	576,000	544,449	345,730	(31,551)	-5.5%
Investment Research Expense	75,000	17,674	9,376	(57,326)	-76.4%
Legal Fees	750,000	771,280	1,045,343	21,280	2.8%
Legislative Consultants	251,000	262,716	248,423	11,716	4.7%
Legislative Conferences and Meetings	25,500	19,472	28,639	(6,028)	-23.6%
Misc. Professional Services	139,000	257,080	478,936	118,080	84.9%
Network Security	49,000	22,721	28,501	(26,279)	-53.6%
Pension Administration Software	314,000	261,670	203,212	(52,330)	-16.7%
Real Estate Consultant	210,000	200,000	201,715	(10,000)	-4.8%
Records Storage	1,200	927	971	(273)	-22.8%
Professional Services Expenses	**3,875,700**	**3,541,306**	**3,631,069**	**(334,394)**	**-8.6%**
Allocation to Supplemental Plan	27,192	25,530	25,151	(1,662)	-6.1%
Net Professional Services Expenses Reg Plan	**3,848,508**	**3,515,776**	**3,605,918**	**(332,732)**	**-8.6%**

Professional Services Budget
Fiscal Year 2015
12-Month Review

The following expense items vary from the budgeted amount by more than 5% and $5K.

LINE ITEM	VARIANCE AMOUNT	% VARIANCE	EXPLANATION
Actuarial services	$ 58,891	29.4%	Services performed on revisions to assumed rate of return, potential plan amendment, GASB 68
Bank custodian services	$ (231,885)	-46.4%	(1) Credits from fees from prior years; (2) lack of initiation of private equity reporting software; (3) lower fees than anticipated for online services
Insurance	$ (72,884)	-20.2%	Premium increases were less than anticipated
Independent audit	$ (22,550)	-11.3%	Audit fees for new firm were lower than anticipated
IT projects	$ (32,921)	-22.7%	Delay of some planned projects into 2016
Investment consultant	$ (31,551)	-5.5%	(1) General consulting fees slightly lower than anticipated; (2) Marco proxy consulting services were budgeted as Investment Consultant but reported as Misc. Professional Services; (3) Maples start-up fees of 25K not included in budget
Investment research expense	$ (57,326)	-76.4%	Lack of anticipated travel for due diligence due to lack of new investments
Legislative conferences & meetings	$ (6,028)	-23.6%	Less travel than anticipated
Misc. professional services	$ 118,080	84.9%	(1) Allison & Partners services more than anticipated during first 1/2 of yr; (2) Search firm fees for CIO were not budgeted; (3) Higher than anticipated travel costs associated with hiring of ED; (4) Marco was budgeted for as Investment Consulting but reported as Misc. Prof Services
Network security	$ (26,279)	-53.6%	Network security audit was delayed into 2016
Pension administration software	$ (52,330)	-16.7%	Fewer changes than expected were needed for pension software as a result of plan amendment

DALLAS POLICE & FIRE PENSION SYSTEM
TOTAL EXPENSES
FISCAL YEAR 2015
12-MONTH REVIEW

(Net of Supplemental Plan Expenses)

DESCRIPTION	2015 BUDGET	2015 ACTUAL	2014 ACTUAL	OVER(UNDER) BUDGET VARIANCE	% BUDGET VARIANCE
Administrative Expenses	6,205,418	5,542,660	5,209,471	(662,758)	-10.7%
Professional Services Expenses	3,848,508	3,515,776	3,605,916	(332,732)	-8.6%
Total	10,053,926	9,058,436	8,815,387	(995,490)	-9.9%

DALLAS POLICE & FIRE PENSION SYSTEM
INVESTMENT MANAGEMENT EXPENSES
FISCAL YEAR 2015
12-MONTH REVIEW

DESCRIPTION	2015 BUDGET	2015 ACTUAL	2014 ACTUAL	OVER(UNDER) BUDGET VARIANCE	% BUDGET VARIANCE
Investment Management Fees*	35,000,000	33,012,650	33,249,180	(1,987,350)	-5.7%
Allocation to Supplemental Plan	245,560	237,998	230,308	(7,562)	-3.1%
Net Investment Management Expenses Reg Plan	34,754,440	32,774,652	33,018,872	(1,979,788)	-5.7%

** Includes fund level fees as well as fees paid directly by DPFP. Amt presented is an estimate as final amounts will not be known until final reporting is received from managers. Final amount will be disclosed in 2015 annual report.*

DISCUSSION SHEET

DALLAS POLICE & FIRE PENSION SYSTEM

ITEM #C11

Topic: **Employee recognition – First Quarter 2016**

Employee of the Quarter award

Discussion: The Chairman will present a performance award for Employee of the Quarter, First Quarter 2016.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C12

Topic: **Disability recall process**

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: DPFP has a Disability Pension Recall Policy dated October 12, 2006 that defines the process and procedure for the medical reexamination and recall of pensioners on disability retirement. Two specific situations are nearing the time when staff would normally begin the process for ordering a reexamination. Prior to starting the process on these two cases staff is requesting direction from the Board. Additional information will be provided at the meeting.

Staff Recommendation: Available at the meeting.

DALLAS POLICE & FIRE PENSION SYSTEM

DISABILITY PENSION RECALL POLICY

As Amended Through October 12, 2006

DISABILITY PENSION
RECALL POLICY

As Amended Through October 12, 2006

A. PURPOSE

1. The Board of Trustees ("Board") of the Dallas Police and Fire Pension System ("System") hereby adopts the following as its policy and procedure ("Policy") for the medical reexamination and recall of pensioners on disability retirement ("Pensioner"). This Policy is intended to establish a coordinated and documented means for considering disability recalls under the Combined Pension Plan ("Plan").

2. Generally, disability recalls are made in accordance with the terms of Section 6.15 of the Pension Plan to the following Pensioners:

- Group A Pensioners who have less than 20 years of pension service;
- Group A Pensioners who have more than 20 years of pension service, but who are less than 55 years of age; and
- Group B Pensioners who are less than 50 years of age.

3. The Board intends that this Policy will clarify the requirements for a disability recall, the rights and responsibilities of the Member and the role of the Staff and Board in the disability pension recall process. The System's Administrator will adopt formal and/or informal procedures that will not conflict with this Board Policy to facilitate the disability recall process.

B. FREQUENCY OF RECALLS

The Board will designate the initial recall period at the time the disability pension is granted. Subsequent recalls will be made in accordance with instructions given by the Board. Generally, the interval will not be more often than once in a 6 month period. If the Board has reason to believe the disability has been removed or if the Pensioner requests to be allowed to return to duty, this 6 month rule shall not apply.

C. PHYSICIAN

For purposes of this Policy, the term "physician" means a licensed medical doctor or doctor of osteopathic medicine.

D. BOARD MEETING PROCEDURES

1. Unless the Pensioner requests otherwise, any testimony or discussion regarding the Pensioner's medical condition will be held in a session that is closed to the public. The Board will render in open session its determination concerning the Pensioner's recall. The medical records related to the disability pension will be kept confidential pursuant to federal law.

2. The Pensioner may attend all portions of the Board meeting dealing with his or her benefits in person or through a representative. The Pensioner, or the Pensioner's representative, may be accompanied by legal counsel or any other person desired.

3. The Board may require the Pensioner and any persons who can provide information regarding the Pensioner's disability to be present during consideration of the Pensioner's recall.

4. The Board, in its sole discretion, may subpoena witnesses (physicians, co-workers, supervisors, or anyone else who can provide useful information).

5. The Pensioner, or the Pensioner's representative, may present evidence that might bear on the Pensioner's entitlement for disability benefits, including testimonial evidence given under oath by any person with knowledge of facts of the situation.

6. The Pensioner may ask the Pension Office to call any person who may have knowledge of the facts of the disability to appear before the Board. Upon receiving such request, the Pension Office will attempt to call the person(s) to appear before the Board. The Pensioner's request must be in writing and should be received by the Pension Office at least 10 working days before the scheduled meeting. Receipt of a request less than 10 days before the meeting may require an additional postponement of the Pensioner's hearing. If a person who may have relevant information is not in attendance the Board may, if it sees fit, attempt to contact that person by speaker telephone during the course of the hearing. Any communication about the matter must be clearly audible to those in attendance.

7. Witnesses, whether called by the board or requested by the Member, may be questioned under oath.

D. BOARD MEETING PROCEDURES (continued)

8. When reconsidering eligibility for disability benefits, the Board may decide that additional information on some subject relating to the disability status is desirable. If so, then it may defer action until a subsequent meeting.

E. THE BOARD'S DECISION

1. The Board will make its decision whether to continue the disability retirement or require the Pensioner to return to active service in accordance with this Policy and the requirements of Section 6.15 of the Plan.

a. The Board shall have the sole and absolute duty to be the final "finder of fact". The Board will take into account and evaluate the claim of the Pension, any reports as to any injury or illness, as well as the evidence in reports submitted by the System's private investigator, the Pensioner's attending physician, the City's Medical Officer and/or the independent physician and any other medical providers, and any other witnesses who present evidence or testimony at the Board meeting.

b. As the finder of fact, the Board will determine the weight to give to any reports or testimony using the same considerations that they apply in everyday life when questions of truth and credibility arise. The Board will, for example, consider any possible bias or prejudice a witness may have, his or her interest, or lack of interest in the outcome of the hearing, if relevant to any event or conduct, the person's ability to observe facts correctly, and to remember and relate them truly and accurately. No relevant fact shall be determined merely by the number of witnesses testifying for or against the fact. It shall be the quality, rather than the quantity, of testimony that controls. Whether to believe all, some or none of a witness' testimony is for the Board alone to decide, using each Board member's knowledge of and experience with human nature.

2. The Board's written decision regarding the Pensioner's recall will be provided to the Pensioner within 10 working days of the meeting in which the decision was made.

F. RECONSIDERATION OF A BOARD DECISION

1. The Board will reconsider its decision to discontinue a Pensioner's disability retirement if, within 90 days of Board's decision, the Board receives a written request from the Pensioner along with additional medical evidence that directly relates to medical information previously considered by the Board.

2. A Pensioner's request for reconsideration of a disability recall meeting the above criteria will be presented at a regularly scheduled Board meeting as soon as is reasonably possible.

G. APPEAL OF THE BOARD'S DECISION

A Pensioner may seek to appeal the decision of the Board in the Dallas County District Court in accordance with the provisions of Sections 6.18(b) and (c) of the Plan.

H. BOARD SUSPENSION AND TERMINATION OF BENEFITS

1. If the System receives credible information that a disability Pensioner is engaging in activities that are inconsistent with the statements made by or on behalf of that person or are inconsistent with payment of disability benefits, the Administrator will advise the Board Chairman of the information. Then, unless instructed by the Chairman to first present the issue to the Board at a Board meeting, the Administrator will engage the services of a private investigative service. The private investigative service is authorized to investigate the accuracy of the information received by the Board. Any such investigation shall be conducted with reasonable regard for the Pensioner's dignity, shall not be in violation of law and any report shall be written in a thorough, proper and dignified manner. No activity on the disability pension or payment will take place pending consideration by the Board of the report of the private investigative service.

2. Any investigator who makes a report to the Board may be called upon to testify under oath and may be examined at such time by the Board, the Pensioner, and the Pensioner's representative.

H. BOARD SUSPENSION AND TERMINATION OF BENEFITS (continued)

3. If a Pensioner refuses to cooperate or otherwise takes action which leads the Administrator to conclude that the Pensioner may be ineligible for continued benefits, the Administrator shall place the Pensioner's name on the next Board agenda for possible suspension of benefits. The Board may, if it deems it appropriate, suspend payment of monthly benefits until any matters clouding the right to benefits are resolved. Upon completion of any necessary investigation, the Pensioner will be notified of the date of the hearing at which the right to benefits will be determined. After a hearing, including, among other things, an opportunity for the Pensioner to respond to any reports, analysis and testimony, the Board will make a determination as to the Pensioner's eligibility for continued benefits. The effective date of the Board's decision will be the date of the earlier suspension of benefits.

4. Timing for notice of the Board's action and rights to appeal will be dated from the meeting at which the decision is actually made.

I. OTHER GUIDELINES

1. The reasonable costs for medical re-examinations and completion of forms by the Pensioner's Attending Physician, as well as other authorized medical examinations and other costs associated with the recall will be paid for by the System.

2. The Pensioner's failure to appear for any reason without good cause shown shall not prevent the Board from considering the matter and entering a final decision based upon all the evidence presented.

3. If the Board determines that the Pensioner can return to his or her former Department and normal or sedentary job duties are available to the Pensioner, the Pension Office will send a letter to the City of Dallas Civil Service Board requesting that the Pensioner be placed on a special Civil Service certification list. A copy of the letter, as well as the Civil Service certification, will be sent to the Chief of the Pensioner's former Department by the Pension Office with the request that it be placed on a list for the next position opening. Should a position for the Pensioner become available, the Chief (or the Chief's designee) will notify the Pension Office in writing.

4. Unless otherwise stated in this Policy, a Pensioner's disability pension will continue to be paid until the date before the Pensioner returns to the active payroll of his former Department.

5. If after a reasonable probationary period, the Pensioner cannot perform the job duties of the offered position, the Pensioner's Department will notify the Board through the Pension Office. If requested, the Board will consider the possible reinstatement of the Pensioner's disability benefits.

6. The Board may require future medical examinations and recalls. As a general rule, it will not require examinations or recalls more frequently than once in every 6 months.

APPROVED on October 12, 2006 the Board of Trustees of the Dallas Police and Fire Pension System.

Gerald Brown
Chairman

ATTEST:

Richard L. Tettamant
Secretary

DISCUSSION SHEET

ITEM #C13

Topic: **Disability recall**

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: Staff will present an On-Duty disability pension for review and consideration by the Board in accordance with Plan Section 6.15. This section provides that the Board may require that certain Pensioners receiving a disability pension (non service-connected) or a periodic disability compensation benefit (service-connected) to appear and undergo a medical examination by the Health Director or, if the Health Director approves, by any licensed medical practitioner, to determine if the Pensioner's disability continues or the Pensioner's condition has improved to the extent that the Pensioner is able to resume duties with the Department.

In accordance with Section 6.15 of the Plan and the Board Disability Recall Policy, Staff has referred the Pensioner for medical examination and review of the Pensioner's disability.

Detailed medical reports and recommendations regarding the disability recall will be available on the network Board drive for review by the Trustees.

Staff Recommendation: Available at the meeting.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C14

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

Discussion: Counsel will brief the Board on these issues.

DISCUSSION SHEET

ITEM #C15

Topic: **Ad hoc committee reports**

Discussion: A brief update on the ad hoc committees will be provided.

DISCUSSION SHEET

ITEM #C16

Topic: **Business continuity update**

Discussion: John Holt, IT Manager, will provide an update of the business continuity plan to the Board. The update will include a discussion of hot site options.

Staff Recommendation: **Approve** decommissioning of the hot site after successful test of cloud based disaster recovery.

DALLAS POLICE & FIRE PENSION SYSTEM

DISCUSSION SHEET

ITEM #C17

Topic:	**Board Members' reports on meetings, seminars and/or conferences attended**			
	a.	**Conference:**	**IFEBP: Investments Institute**	SF, CC
		Dates:	March 14-16, 2016	
		Location:	Las Vegas, NV	
	b.	**Conference:**	**Society of Pension Professionals**	JS, JB, GI, CW
		Dates:	March 15, 2016	
		Location:	Dallas, TX	
	c.	**Conference:**	**House Pension Public Hearing**	PK, JS, KG
		Dates:	March 15, 2016	
		Location:	Dallas, TX	
	d.	**Conference:**	**TEXPERS Basic Trustee Training Course**	CC
		Dates:	April 2, 2016	
		Location:	Dallas, TX	
	e.	**Conference:**	**TEXPERS Annual Conference**	SF, KH, JS, JM, JB, CC,
		Dates:	April 3-6, 2016	TH, BH, KG, JP, JMond
		Location:	Dallas, TX	SL, GI, CW, RW, MR, BS
	f.	**Conference:**	**Merit Energy Annual Meeting**	KH, JP, GI, CW
		Dates:	April 12-13, 2016	
		Location:	Dallas, TX	

Staff Recommendation: **Receive** and **file**.

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. Associations' newsletters
- NCPERS Monitor (March 2016)
- NCPERS Monitor (April 2016)
- NCPERS PERSist (Spring 2016)
- TEXPERS Outlook (April 2016)

b. Future Education and Business Related Travel

c. Future Investment Related Travel

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

NCPERS 1941
THE MONITOR
The Voice for Public Pensions
March 2016

State Update

2016 is shaping up to be an interesting year for public pension reform proposals. On a positive note, Iowa has recently introduced legislation calling for the creation of a state-run private-sector pension plan, which brings the issue of retirement security to the forefront and reminds voters of the success of public pension plans.

On a negative note, we are unfortunately still seeing reform legislation aimed at closing public defined-benefit plans and converting them to defined-contribution plans. Details about specific state legislation follow.

Florida

Rep. Matt Caldwell (R) has sponsored House Bill (HB) 87, which would reform the Florida Retirement System; the bill is currently on the House floor. The bill would change the defined-benefit pension default to a defined-contribution plan and extend the time for employees to make the decision from six to nine months. The bill also establishes a survivor benefit for members of the defined-contribution plan who are killed in the line of duty (those in the defined-benefit plan already have that benefit) and makes the benefit retroactive to the beginning of the defined-contribution plan in 2002. A similar death benefits bill (Senate Bill [SB] 7012), sponsored by Sen. Jeremy Ring (D), was unanimously passed by the Senate in February and is en route to the House.

Georgia:

In Whitfield County, Commissioner Harold Brooker made a motion to close the defined-benefit pension system for new hires and open a defined-contribution plan. Human resources director Jackie Carlo and finance director Alicia Vaughn have been tasked with developing the new plan by the end of February. No changes to the current employee defined-benefit plan have been introduced.

Indiana

Rep. Robert Behning (R) has sponsored HB 1004, which would allow teachers to negotiate extra pay and allow school districts the option to offer a defined-contribution pension. The bill is a reaction to a bill that was ruled illegal in November by the courts. Some superintendents were given flexibility to negotiate where teachers were placed on the pay scale; however, it was ruled that decisions about pay can only be negotiated with unions. The new bill passed the House on February 3, despite opposition from House Democrats and the teachers unions, and is moving on to the Senate.

Iowa

Sen. Janet Peterson (D) and state treasurer Michael Fitzgerald (D) have proposed a state-run plan for private employees in order to address retirement security in the state. The proposal asks for $1.5 million to set up Retirement Savings Iowa, which would focus on providing a retirement savings option for small business that do not offer retirement plans. The legislation will seek a mandate for Iowa employers to offer the state-run option. Contributions to the plan would come from automatic payroll deductions, and employees would be able to opt out of the plan. The proposal must be approved by the state legislature and signed into law by the governor.

continued on page 2

State Update continued from page 1

Kansas

Gov. Sam Brownback (R) could delay making pension payments to the Kansas Public Employees Retirement System (KPERS) under a bill already approved by the Senate Ways and Means Committee. HB 2365 would allow Governor Brownback to delay payments to KPERS and then pay with an 8 percent interest rate over two years. The House version of the budget bill also allows the governor to delay contributions but does not include an interest rate and requires the delayed payment to be paid the next year. The House and Senate are both expected to vote on their versions of the bill by the end of February.

Louisiana

On January 29, Rep. Barry Ivey (R) sponsored HB 65, a bill that would shift the Teachers' Retirement System of Louisiana's defined-benefit pension to a combination plan. The bill would also raise the minimum retirement age from 62 to 65 for new hires as of July 1, 2018, and make an automatic cost-of-living adjustment to the pension every other year.

Maryland

Gov. Larry Hogan (R) has proposed a new budget that would provide $25 million more than required under Maryland law for the state employees' pension fund, which had its annual contributions cut under the previous administration (Gov. Martin O'Malley [D]). This budget is lumped in with many other bills. The budget is currently in the General Assembly.

South Dakota

At the end of January, a legislative panel approved SB 13, which offers a new benefit structure for new hires joining the South Dakota Retirement System after July 1, 2017. The bill includes a two-year increase in the retirement age, to 67. The legislation is now in front of the House.

Virginia

House Speaker William Howell (R) has filed HB 665 to create the Commission on Employee Retirement Security and Pension Reform. The commission will study the soundness of the defined-benefit retirement plans, the impact of and strategies for addressing anticipating state employees' retirements in the next 10 years, and the benefit packages of state employees. The bill passed the House and has been referred to the Senate Committee on Rules. Separately, Sen. Chris Jones (R) has introduced HB 1072, which would modify the current hybrid retirement plan for the Virginia Retirement System. The legislation would increase the employer contribution from 1 percent to 2 percent, decrease the employer maximum matching contribution from 2.5 percent to 1.5 percent in the defined-contribution component of the plan, increase the employee contribution from 1 percent to 2 percent, decrease the employee maximum contribution from 4 percent to 3 percent, and decrease the employee contribution to the defined-benefit component from 4 percent to 3 percent. The bill has been referred to the House Committee on Appropriations.

Washington

In Seattle, city council members are voting on a new retirement plan for the Seattle City Employees' Retirement System's new hires. The new plan, called SCERS II, will give new hires smaller pensions because of an adjustment in how their benefits are calculated, the retirement age will rise to 55, and employees will not be allowed to retire with full benefits until their age and years of service add up to 85, instead of the current 80. Employees will contribute 7 percent, instead of the current 10 percent, and the city will contribute only 5 percent, versus the current 6 percent. The city council is expected to vote on the measure by the end of February.

Stay tuned and visit www.NCPERS.org for more information on upcoming state pension reform battles. As always, if your state is facing pension reform efforts and you would like NCPERS' help, please let us know.

Members Urged to Join March 8 Webinar Spotlighting Latest NCPERS Research

NCPERS is hosting a members' webinar March 8 to share two recent additions to the NCPERS Research Series. The new studies provide a data-driven perspective on important questions and trends in retirement security.

"How Did the Shift from Defined Benefit Pensions to Defined Contribution Plans in the Private Sector Impact Retirement Savings?" published in February 2016, examines the impact on retirement savings resulting from the historic shift from defined-benefit to defined-contribution plans.

The analysis of US Department of Labor data concludes that retirement savings, which totaled $6.9 trillion at the end of 2012, would have been twice that level, or $13.9 trillion, if everyone had remained in defined-benefit plans. The analysis covered the period 1977 to 2012.

Published in March 2016, "Are State and Local Pension Funds Taking More Risk Now Than Before?" examines US Bureau of Census data on assets and investable income to counter the assumption that public pension funds are taking on too much risk. The risk analysis draws on two data sets, covering the periods 1967 to 2007 and 1993 to 2014. The data show that public pension plans are taking on slightly more risk to generate returns in recent decades than they did in the 1960s and 1970s. However, the risk level taken to generate a unit of return has been relatively stable for 30 years.

"Arguments advanced by the opponents of public pensions are based on ideology rather than facts," wrote Michael Kahn, the author of both reports and director of research for NCPERS.

"The findings of these studies have important implications for NCPERS members," said Mel Aaronson, president of NCPERS. "At a time when public pensions are coming under frequent attack as too risky and costly, and 401(k) plans are being held out as the model of how to move forward, it is important to know the real facts. NCPERS research seriously undermines the arguments of those who oppose defined-benefit pension plans."

To join the webinar on March 8, please click here. ■

Hank H. Kim, Esq.
Executive Director
& Counsel

Election 2016 Is Right Time for National Conversation on Retirement Security

At this early stage in the presidential campaign, candidates and the American public alike see the issues in rough strokes. The economy, immigration, national defense, and societal change dominate the policy agenda, and Social Security and Medicare remain perennially hot topics. But the top concerns of NCPERS members – ensuring the future of public pensions and promoting retirement security for all Americans – are just seeping into the consciousness of candidates and the electorate.

We can all play a role in sharpening the focus, because we know the time is ripe for a national conversation about ensuring a secure retirement for all Americans. And public pension funds, which have done the job for decades, are a great model for the future – a point that has been underscored by the US Department of Labor's decision to amend the Employee Retirement Income Security Act (ERISA) to facilitate state-sponsored retirement plans for private-sector workers.

The good news is that public pension funds are not being used as a political football at the national level the way they have been in some states. The bad news is that none of the candidates are addressing retirement security with any depth, though several have staked out positions on Social Security, focusing on privatization, payroll caps, and the retirement age.

March through June is a key presidential primary period and a critical time for members to help elevate the dialogue about America's future. You don't have to be a political pro to help raise our concerns.

- **Speak up** if you are attending events for candidates for any federal, state, or local office. Ask questions about where they stand on public pensions and fostering retirement security for all. Tell them unequivocally how pensions benefit communities.
- **Stay abreast of the news** in your community and be prepared to defend public pensions when they are attacked in newspaper articles and op-eds. Our members have been very successful in correcting misconceptions about public pensions and getting their positions published, and at the national office we stand ready to help.
- **Know our latest positions and research**. Take part in events such as our semiannual legislative update (the next one

continued on page 5

Executive Director's Corner

Hank H. Kim, Esq.
Executive Director
& Counsel

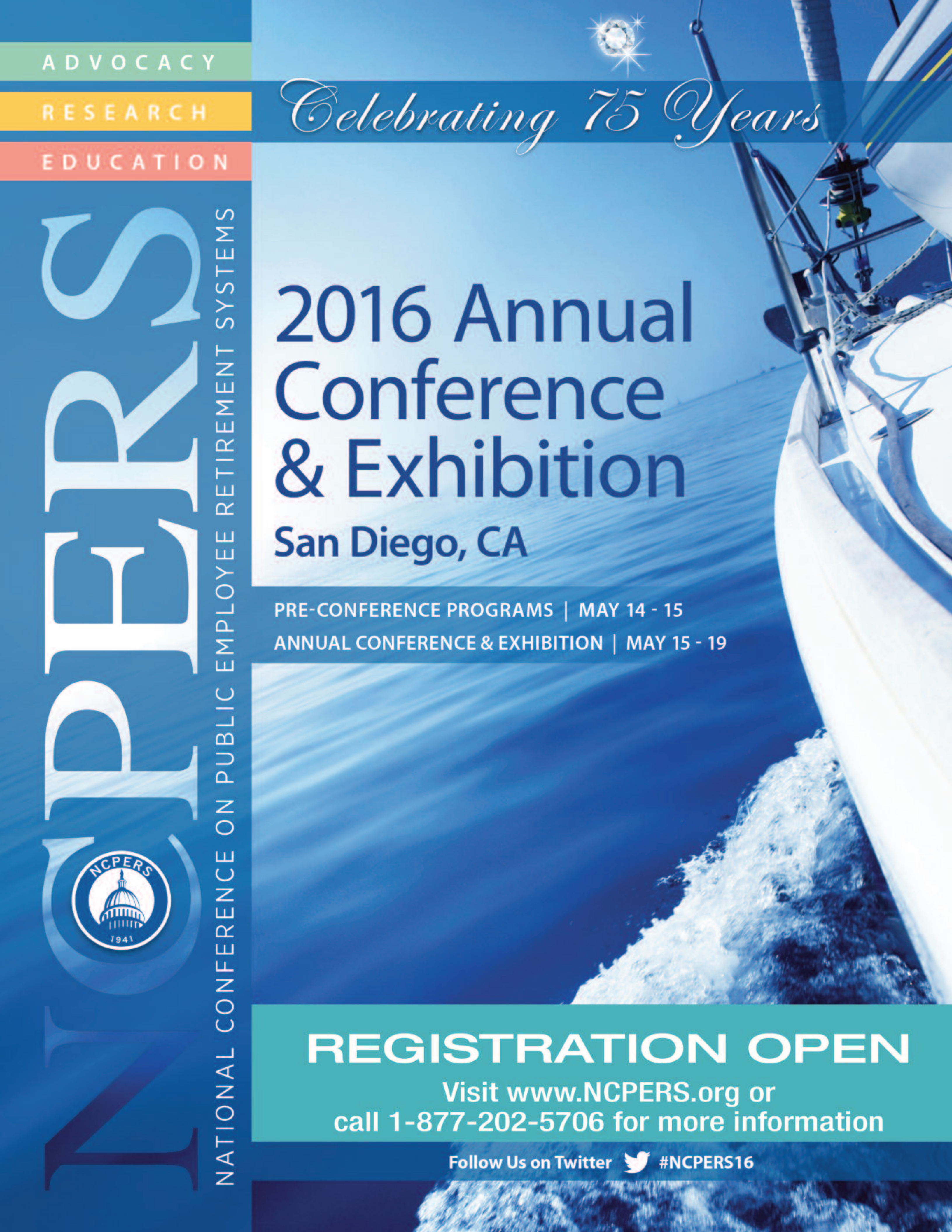
continued from page 4

is in July) or our forthcoming research update webinar to arm yourself with facts you can use to stand up for public pensions.

- **Keep in touch**. Reach out to your team at NCPERS to keep us apprised of the topics you are raising and how lawmakers and candidates are responding.

Of course, you can count on us at NCPERS headquarters to continue to address public pension priorities with members of the Senate and House of Representatives and with the presidential candidates and their key advisers.

It is still very early in the presidential campaign cycle. March begins with a torrent of primaries; by the end of March, we should have greater clarity on who will receive the nomination when the Democrats and Republicans hold their conventions in July. In the meantime, however, it is a long road to November. We have a compelling story to tell about the critical role of public pensions in our communities, and over the next eight months we need to keep telling it.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THE MONITOR
The Voice for Public Pensions
April 2016

Newly Formed Antipension Group Twists "Retirement Security" Label

There's an old saying that goes, "To avoid criticism, say nothing, do nothing, be nothing." But that's not how public pension systems roll. When you do important work, as we do, you sometimes end up drawing detractors as well as fans.
Honest critics are one thing; agenda-driven critics are another story. In our sphere, the Laura and John Arnold Foundation and the Pew Charitable Trusts are examples of organizations intent on attacking public pensions at any cost and replacing them with 401(k) plans or the equivalent.

Now there's a new group of critics taking shape, known as the Retirement Security Initiative. Yet, RSI's idea of "security" distorts the meaning of the word, as its aim is to chip away at the retirement security of teachers, firefighters, social workers, nurses, and other public employees.

The National Public Pension Coalition, of which NCPERS is a member, recently shared insights into what RSI is and what it hopes to accomplish. RSI maintains that it is bringing a new face and "bipartisan reformer" credentials to the dialogue over the future of public pensions. Nothing could be further from the truth.

RSI is a well-funded, well-connected group of anti-labor Republicans and Democrats. Its members are likely to surface in advocacy roles, including meeting with lawmakers, providing testimony, and helping to draft legislation; writing and disseminating public and private documents that support antipension legislation; and offering interviews and public appearances.

Members include the following:

- **Chuck Reed**, the former Democratic mayor of San Jose, championed a so-called reform measure to gut the retirement security of his own workers. Reed's former chief of staff, **Peter Furman**, serves as RSI's executive director.
- **Dan Liljenquist**, a former one-term Republican state senator from Utah, advocated a move from a defined-benefit (DB) pension to a hybrid plan.
- **Lois Scott**, the former chief financial officer in Rahm Emanuel's Chicago, paved the way for Mayor Emanuel's pension attacks, which are now being challenged in court. She resigned under fire when one of her chief aides fled the country to avoid prosecution.
- **James Spiotto** is a municipal finance consultant with a record of attacking DB pensions.
- **Richard Ravitch,** who served 18 months as the appointed lieutenant governor of New York, has been a regular critic of pensions for public employees.

We want to hear from you if RSI members become a presence in your communities! Please email us at amanda@ncpers.org.

Update on Legislative Issues

This article covers the primary federal legislative issues of importance to public pension plans. Although other issues could be included, the issues discussed here have the potential for movement or are new and worthy of analysis.

PEPTA and the Annuity Accumulation Plan

The key committees in the House are inching closer to releasing their legislative proposals on providing

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Retirement Security continued from page 1

financial assistance, debt restructuring authority, and greater oversight of the Commonwealth of Puerto Rico, which is beset with debt and is losing more and more of its educated, professional workers every day. The proposals should be released by the end of March, with committee markups likely to take place in April. The Senate appears to be working on a slightly slower timetable.

It is important for our community to monitor this legislation. As you may recall, in December 2015, Senate Finance Committee chair Orrin Hatch (R-UT) introduced S. 2381, his version of legislation to assist Puerto Rico. The bill contains two provisions that have nothing to do with Puerto Rico; instead, it introduces legislation that would affect all state and local governmental pension plans in the 50 states with new federal reporting requirements and the promotion of annuity accumulation plans.

The provisions are taken from legislation previously introduced in the 113th Congress – H.R. 1628/S. 779, known as the Public Employee Pension Transparency Act (PEPTA). Individual House legislation on PEPTA is expected to be introduced again soon. The provisions require, for the first time in our nation's history, that sponsors of state and local governmental pension plans report their funding status to the federal Treasury Department. There is also a requirement that a plan's funding status, if it is not calculated using fair market value or the specific interest rates proscribed in the legislation, be recalculated using those interest rates. As a result of the recalculation, even well-funded pension plans will appear to be poorly funded. This recalculation does not reflect economic reality and will serve only to create negative headlines for public plans.

The second provision relates to a new annuity accumulation plan for state and local governmental pension plans. The provisions, while slightly modified, are essentially those found in S. 1270 (113th Congress). Let me be clear at the outset: although the plan is purely optional for state and local governments, we see it as being positioned as an alternative and an ultimate replacement for defined benefit pension plans.

As a replacement plan, this new plan has many deficiencies. First, there are no survivor or disability benefits for firefighters and other public safety employees. These benefits are essential for public safety employees and their families. Second, employee contributions to the annuity plans are prohibited; only employers may contribute. This prohibition runs counter to the vast majority of funding streams for public plans in which both employees and employers contribute to the plans. Finally, the plan sponsor may choose to lower, or not make any, contributions to the plan in any given year, provided it is done uniformly, which would create great uncertainty on whether the benefit will be consistently funded from year to year.

Windfall Elimination Provision

House Ways and Means Committee chair Kevin Brady (R-TX) introduced H.R. 711 to repeal the windfall elimination provision (WEP), which reduces your Social Security benefit if you also earn a pension from noncovered earnings. This change would affect many state and local workers. A hearing at the Ways and Means Subcommittee on Social Security is scheduled for March 22. Chairman Brady has said that, following the hearing, he is interested in marking up the legislation and attempting to move the bill, either individually or as part of a larger package, through the full House.

Corporate Tax Integration and Dividends

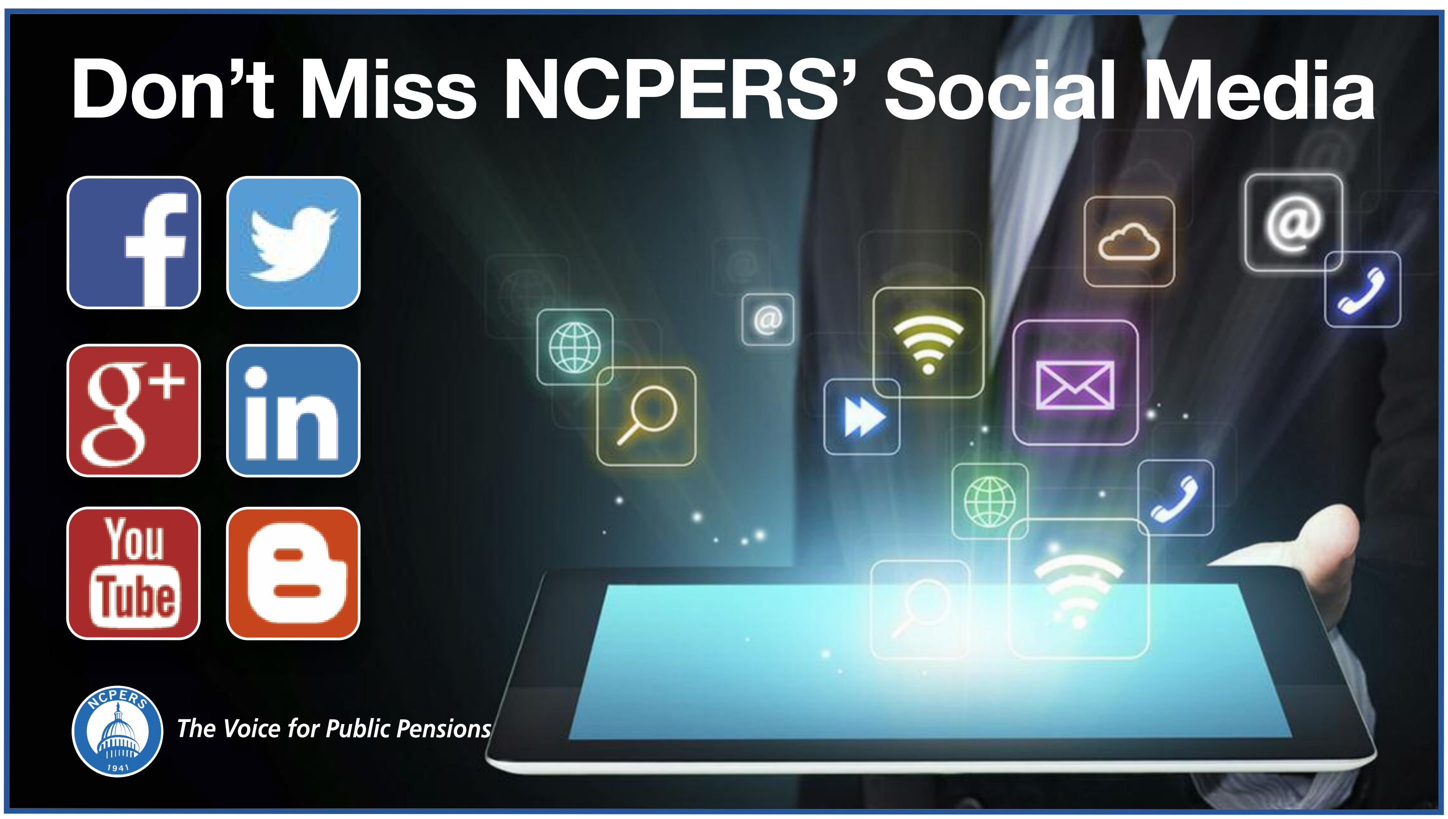
As part of his effort on tax reform, Finance Chairman Hatch is developing a corporate integration tax reform proposal that would eliminate the double taxation of corporate income. Under current tax law, corporate earnings are taxed at the corporate-entity level (first level of taxation); then, if those earnings are distributed as dividends to shareholders, those dividends are taxable income to the recipient (second level of taxation).

While the draft legislative language has not been made public, it is clear that the elimination of this double taxation of dividends is a central piece of the proposal. Depending on how this provision is structured, it may have a significant impact on pension funds, endowments, and other nontaxable entities that own equity shares in corporations and receive dividend income from those investments.

Under the approach currently being contemplated by Chairman Hatch, corporate earnings distributed as dividends would be taxed one time at the shareholder level. A tax-withholding scheme would be created whereby the corporation would withhold tax from the dividend. The shareholder would then receive the net amount as a dividend. The proposal does not differentiate between tax-paying and nontaxable recipients of dividends. Since nontaxable entities, such as pension plans, do not currently pay tax on dividend income, they would simply receive a lower dividend.

Some observers have suggested that, since the corporation would no longer be taxed at the entity level on earnings that it distributes as dividends (the Hatch proposal is expected to contain a dividends-paid deduction for the corporation), many corporations would plus-up the gross amount of the dividend. Thus, the recipient would receive, after withholding, roughly the same amount he or she would have received under the current system. However, that's just speculation and would, of course, vary by corporation. Chairman Hatch has sent the draft legislative language to the Joint Tax Committee for it to be scored, which should take several weeks. Hatch is targeting May for unveiling the language, perhaps in an introduced bill, but that's unclear at this time. What is clear is that the corporate integration proposal will be a part of the debate on tax reform that will begin in earnest in 2017. ■

__Tony Roda__ is a partner at the Washington, D.C., law and lobbying firm Williams & Jensen, where he specializes in legislative and regulatory issues affecting state and local pension plans. He represents NCPERS and individual pension plans in California, Ohio, Tennessee, and Texas.



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Executive Director
& Counsel

NCPERS Annual Conference Intensifies Emphasis on Investment Education

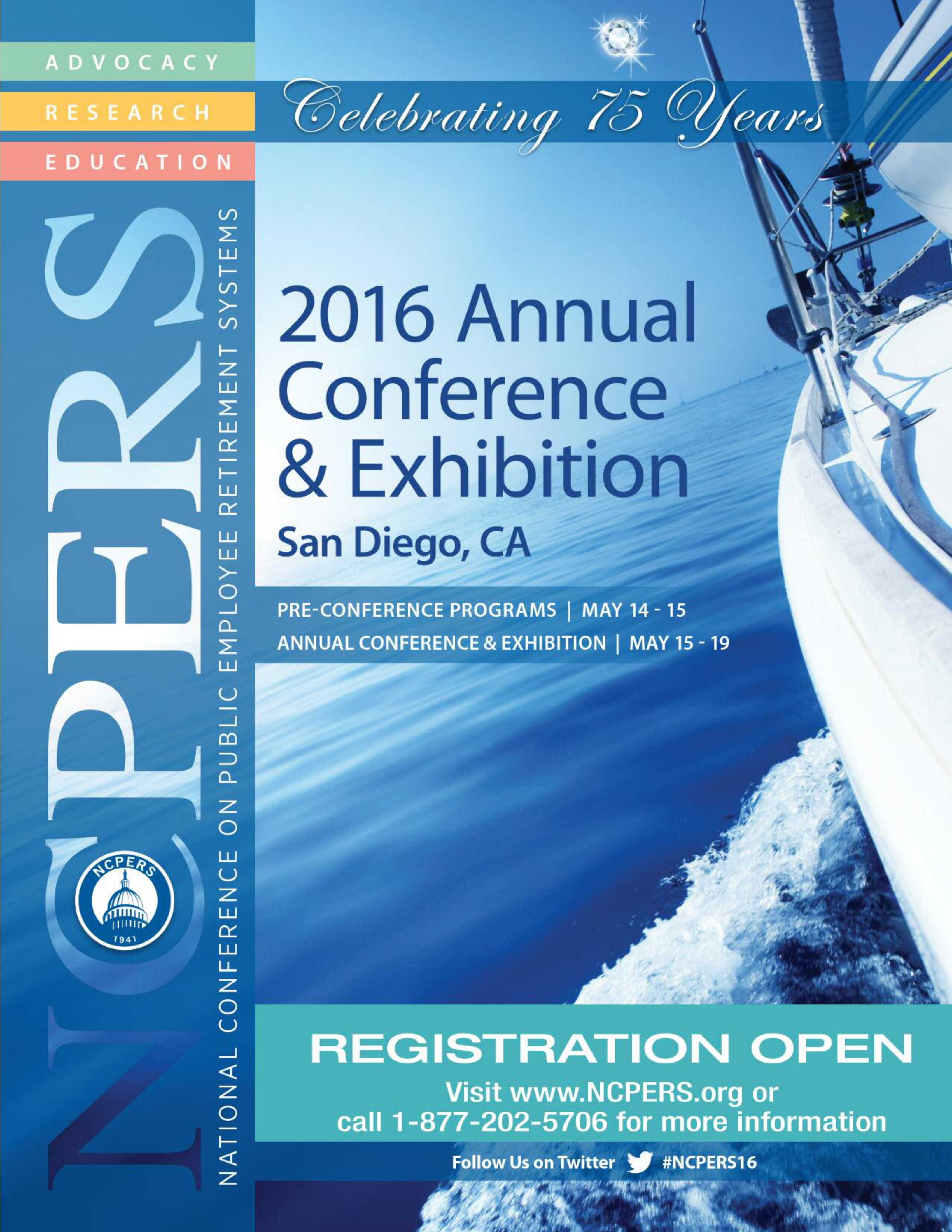
Education, the cornerstone of the NCPERS Annual Conference and Exhibition, is the big draw for more than 1,000 participants who will gather in San Diego on May 15–19.

We also have something big to celebrate – the 75th anniversary of NCPERS. We mark this milestone proudly, knowing that we are strong because we are constantly evolving. But just like the public pension systems we represent, NCPERS isn't yet done growing and becoming the best, most responsive organization we can be.

Federal Reserve interest rate hikes and other external factors are shining an ever-brighter light on the performance of public pension fund investments. This new reality will be reflected throughout the conference, making this program an excellent fit for pension fund chief investment officers (CIOs) and investment staff. While investment topics have always been a significant feature of the annual conference, this year's program reflects the rising importance of the CIO and investment staff. Tuesday's general session is devoted to investment topics, including a CIO panel discussion, a detailed look at indexing, and a dive into investment governance. Concurrent sessions aimed at the CIO team abound, with Wednesday afternoon featuring a brand-new, hour-long forum tailored to their concerns.

Preceding the conference, on May 14 and 15, is a two-part training session for those pursuing the NCPERS Accredited Fiduciary (NAF) designation. This program is ideal for elected or appointed public pension trustees who want to take their professional development to the next level. In separate six-hour sessions, participants will explore two of the four modules required for NAF designation – Governance and the Board's Role, and Investment, Finance, and Accounting. Upon completion of all four modules, participants may take an exam and, if successful, earn the NCPERS NAF designation.

You will never go wrong investing in the professional training offered by NCPERS. Our annual conference has so much to offer – networking opportunities, exposure to other professionals and experts, updates on legislation and regulation, an opportunity to step away from the day-to-day and think more freely, and, yes, even a fun celebration. Ultimately, you – our members – come out for the educational offerings. Engaging and participating in the annual conference is the best way for you to capitalize on your investment in an NCPERS membership. ■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Message From the President

Mel Aaronson
NCPERS President

For the past four years, it has been my distinct pleasure and honor to lead our great organization as president! As my presidency draws to a close the natural tendency is to look back on the past accomplishments. Over the past four years, NCPERS has been the leader in helping states establish Secure Choice retirement savings plans for the private sector. The most significant development in this area is Department of Labor's proposed regulations to clarify how states can implement such retirement plans for the private sector without running afoul of ERISA. Another NCPERS achievement in 2015 was the launch of NCPERS Code of Conduct for Public Plan Service Providers to ensure ethical behavior and minimize conflict of interest between public pensions and their vendors. I'm very proud these things have happened during my tenure.

However, I want to spend the remainder of this note on the Annual Conference & Exhibition (ACE). This year's ACE program, held May 15-19 at the Hilton San Diego, CA, will be the 75th ACE program! Sometimes I wonder if the founders of our association could have imagined a time when our organization would be celebrating its 75 Anniversary. For the past 75 years, NCPERS has been the premier conference for public pension education and the best place to connect with pension trustees, administrators, staff members, union officials, and investment professionals. This year's program is designed to inform attendees of issues facing public pension plans, and most importantly provide you with the tools to face these issues. Addressing these issues of public pension plans, with the following tracks:

Monday, May 16

David A. Vaudt, Chairman, Governmental Accounting Standards Board (GASB)

In this session, the GASB Chair will present his views on Board activities designed to improve accounting and financial reporting for U.S. state and local governments, and highlight the key issues and impacts NCPERS members should know about. Specifically, Vaudt will discuss issues relating to: OPEB standards finalized in 2015, pensions, and fair value.

Monday, May 16 and Tuesday, May 17

Social Media Track, **James Spellos,** Meetings U

In these sessions, whether you are fully immersed in social media or still testing the waters, you will learn how to interact on various social media platforms and how to get the most of

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INSIDE THIS ISSUE (Click on Page Link)

Another Reason WHY Public Pensions Should Conduct Periodic Internal Check-ups: ALTERNATIVE INVESTMENTS

By Chet B. Waldman

In an effort to boost returns in recent years, pension funds have shifted away from traditional fixed-income investments, such as government and high-quality corporate bonds, and significantly increased their reliance on stocks and alternative investments, including private equity, hedge funds, real estate, and commodities. This change in investment strategy and allocation has affected the costs, fees, and complexity associated with pension investments. Many pension boards and beneficiaries have struggled to understand the structure and economic returns of alternative investments, which are more complex and less transparent than stocks and bonds.

However, one consequence of the 2008 financial crisis is that many public pension systems have taken affirmative steps to review the costs of their investments, especially "alternative" investments, and question whether they are appropriate in light of expected returns, risks, and upside potential. For example, in September 2014, CalPERS ended its investments in hedge funds owing to the cost, complexity, and risk associated with these investments.[1] Many pensions have followed CalPERS' lead.[2]

Pension fiduciaries need to understand the benefits and risks of alternative investments and assess the efficacy and true cost of employing outside managers and advisers. Indeed, failure to understand and periodically review pension investments may come at a trustee's peril. In a unanimous 2015 decision in *Tibble v. Edison International*,[3] the U.S. Supreme Court held that ERISA fiduciaries have a continuing duty to monitor plan investments to ensure they remain prudent, even if they were prudent when originally offered.

The *Tibble* opinion also implicitly approved of a lower court's decision there suggesting that where two investments options are otherwise mirror images of each other (such as retail and institutional share classes of the same mutual fund), plan fiduciaries may be liable if they did not select the investment option with lower expenses. If the available investment options are not exactly the same, however, courts appear reluctant to second-guess fiduciaries' investment strategy, notwithstanding a difference in cost. The lesson here is that plan fiduciaries should have a procedure in place to review the continued prudence of their investments and associated costs, and be able to document that procedure.

Pension trustees can shield themselves from potential liability by proactively retaining their own forensic and legal professionals to investigate and review investments, investment adviser performance, and related costs. Such periodic checkups also demonstrate to pension constituents, regulators, and the public that pension trustees and management are attentive and vigilant in protecting pension assets and monitoring long-term pension sustainability.

Below is a checklist of some critical issues that should be addressed and documented in an internal checkup aided by independent professionals:

- Review investment advisers with a focus on their independence and performance.
- Review compliance with investment guidelines, and consider whether such guidelines need modifications.
- Analyze the true costs of alternative investments, including fee

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Chet B. Waldman is a graduate of Cornell University (A.B. 1982) and Boston University School of Law (J.D., 1985) (G. Joseph Tauro Scholar and Paul J. Liacos Scholar) and was a member of the American Journal of Law and Medicine. *He was admitted to the bar for the State of New York in 1986, to the US District Court for the Southern/Eastern District of New York in 1988, and to the US Court of Appeals (1st Circuit) in 2013. He previously worked at Weil, Gotshal & Manges and now works at Wolf Popper LLP (since 1988), where he became a partner as of January 1, 1995, and a member of the Executive Committee as of January 1, 2015. He has extensive experience in litigating cases on behalf of pension funds (primarily securities and merger and acquisition cases) and has been a member of the Securities Litigation Committee and the Mergers & Acquisition Committee of the New York City Bar Association.*

Pension Rebalancing in a Time of Market Volatility

By Michael A. Moran

1. **Rebalancing policies:** Doing something may be better than doing nothing. Year-to-date capital market moves have shifted some plans away from their strategic asset allocation targets. This development has led some plans to once again revisit their policies as to when and how to rebalance their portfolios. We have observed that having some type of rebalancing policy, whatever that may be, and following it may be preferable to simply letting asset allocation drift based on market movements. Some plans may be concerned about the transaction costs involved in rebalancing or the reality that these actions usually involve selling asset classes that have done well and buying asset classes that had been out of favor. Nonetheless, empirical evidence suggests that a disciplined policy of rebalancing can yield better Sharpe ratios for the portfolio.[1]

2. **The question of timing:** Periodic rebalancing and establishing materiality thresholds at asset-class level is recommended. While doing something may be better than doing nothing, it still leads to the question of when to rebalance. There is no general consensus on an optimal rebalancing policy. Typically, rebalancing is effectuated either at a periodic set time or when asset allocation drifts outside of a predetermined threshold, or both. Frequent rebalancing, such as on a daily basis or with a de minimus threshold, can be suboptimal, given cumulative transaction costs. However, the differences between rebalancing on a monthly, quarterly, or annual basis or when established thresholds are breached may be limited. All those strategies result in higher Sharpe ratios for portfolios than does not rebalancing at all (with quarterly rebalancing subject to a material threshold having a slightly higher Sharpe ratio than other options).

3. **Differentiating rebalancing from a tactical shift:** In the current environment of heightened volatility, more muted growth prospects in some economies, and increased recession fears in the United States, some plans are considering shifting their risk exposures. Some clients have expressed a desire to become more defensive, including even contemplating raising cash levels in their portfolio. Consequently, some plans may seek to hold off on rebalancing altogether since, given year-to-date moves, more defensive positions like investing in US Treasuries have increased portfolios' value while riskier assets like public equities make up a smaller percentage of portfolios today. We would note that rebalancing is typically viewed as a risk management exercise, whereas a tactical shift is typically an expression of an investment view, and it is often important to distinguish between the two concepts.

4. **Integrating tactical allocation into overall portfolio design:** Plan sponsors that would like to act more tactically may want to consider the potential advantages of embedding a tactical allocation "bucket" into the portfolio. By establishing a specific allocation to tactical strategies in the investment policy statement, the sponsor can, either directly or through the use of external managers, shift risk exposures based on their views on various markets and sectors. By doing so, strategic allocations to public equities and fixed-income investments are rebalanced on schedule and the value added from a tactical view can be exposed and quantified. Given that the governance structures of many plans may not be conducive to effectuating such tactical moves in a timely manner, for many plans, optimal implementation may be achieved through the use of external tactical managers.

[1] Analysis and further disclosures available upon request.

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Michael A. Moran, CFA, Senior Pension Strategist at Goldman Sachs Asset Management, provides four observations on pension rebalancing, based on research and conversations with clients.

The Investment Case for Global Listed Infrastructure

By Peter Meany

Global GDP growth rates are slowing due to declining population growth rates, aging workforces, and dwindling productivity gains. Muted future growth expectations are reflected in low global bond yields. Historically, brisk GDP growth enabled companies to grow by increasing output. In this lower-growth environment, other ways will need to be found to stimulate earnings and generate real returns.

Global listed infrastructure is less dependent on the broader economic cycle. Key assets include toll roads, airports, utilities, mobile towers, and energy pipelines. Steady demand for infrastructure's essential services gives it a unique combination of characteristics: namely, predictable cash flows, strong pricing power, high barriers to entry, and structural growth. These characteristics enable infrastructure to offer a number of valuable benefits to an investment portfolio.

First, infrastructure earnings growth tends to be relatively insensitive to slowing GDP growth. For example, earnings growth at mobile tower operator Crown Castle is underpinned by growing demand for mobile data, which is compelling telecom companies to upgrade their equipment.

Toll road operators, such as Australian operator Transurban, derive earnings growth from stable or growing commuter volumes, pricing that is linked to (or better than) infla-

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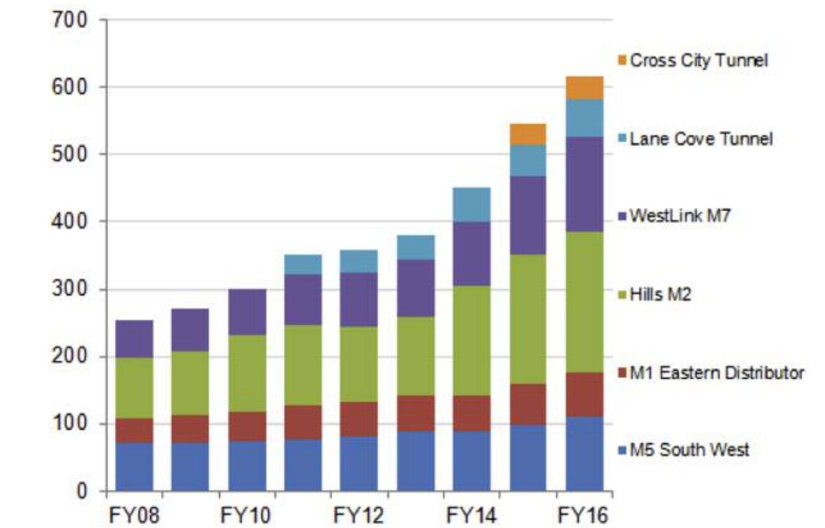
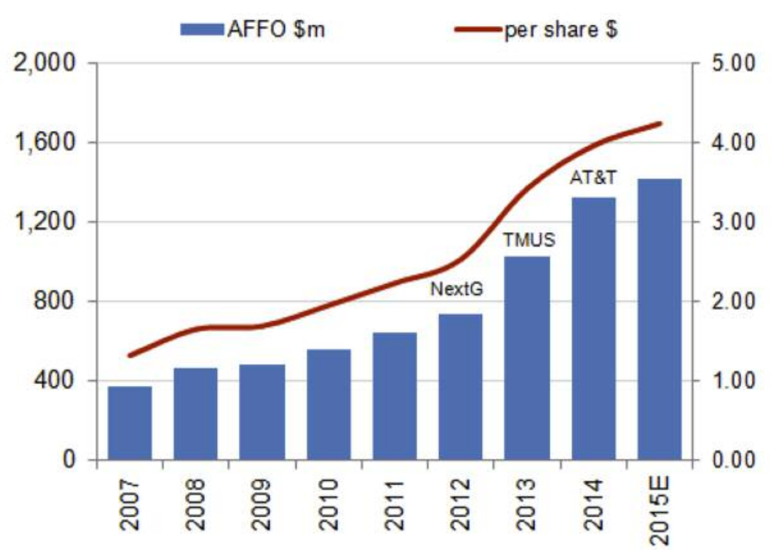
Transurban (Sydney Orbital Network Proportionate EBITDA $m)



Source: Transurban, First State Investments

Crown Castle (Adjusted Funds From Operations)



Source: Company, First State Investments

Divestiture—When Does De Minimis Become "De Maximus?"

By Robert D. Klausner, NCPERS General Counsel

In deciding whether to follow or decline divestiture mandates, the courts have looked to whether the effect on the portfolio is "de minimus." *Black's Law Dictionary* defines de minimis as "of the least" or "trifling; minimal" and a fact or thing that is "so insignificant that a court may overlook it in deciding an issue or case." In the context of an investment decision, when is an effect de minimis? The term comes from a Latin legal standard, *De minimis non curat lex:* "The law does not concern itself with trifles."

At least one state, New York, rejected the above maxim in the context of a fiduciary duty. In *Sorin v. Shahmoon Industries*, 220 N.Y.S.2d 760 (Sup. Ct. N.Y. Cnty. 1961), challenge regarding waste of corporate assets, the court held that where a fiduciary's duty to account is at issue, it is a question of "principle," not principal. When a fiduciary is to account for funds entrusted to his or her care, it means *all* funds, "not some, or even most." This would seem to suggest that there is no de minimis exception (at least in New York), highlighting the confused and unsettled state of the law.

The leading (and really the only) case in this context remains *Board of Trustees v. Mayor and City Council*, 562 A.2d 720 (Md. 1989). Here the trustees of the Baltimore city pension fund sued to challenge ordinances requiring divestiture of holdings in companies doing business with the Apartheid government of South Africa. In upholding the ordinances, the Court observed that given the "vast power that pension funds exert in American society, it would be unwise to bar trustees from considering the social consequences of investment decisions," where the cost was de minimis. In this case, the trial court found that the initial cost of divestment was 1/32 percent (3 basis points) and the ongoing cost was 1/20 percent (2 basis points). To date, this remains the only public pension case giving some concrete definition to the term "de minimis" in the divestiture context.

A similar case concerned an action by the Oregon Board of Higher Education passing a divestiture resolution relating to investment of endowment funds (*Associated Students v. Oregon Investment Council,* 728 P.2d 30 [Or. App. 1986]). The State Investment Council declined to adopt the resolution, finding it contravened prudent investment standards. Various student groups whose members received endowment-funded scholarships sued. An Oregon trial court held that the Board of Higher Education and not the State Investment Council controlled the endowment funds, but agreed that divestiture was a violation of the prudent investor standard. The decision was overturned on appeal when the student plaintiffs were found to lack standing sufficient to challenge the investment decision. The trial court's decision on prudent investment standards contrasted with the result reached in Maryland. Significantly, the Maryland divestiture was legislatively driven by the plan sponsor, whereas the Oregon decision was driven by Board of Higher Education policy.

What if survival of the entire system is at stake? Are the rules different? In *Withers v. Teachers' Retirement System*, 447 F.Supp. 1248 (S.D.N.Y. 1978), the Board of Trustees agreed to buy $2.53 billion (approximately $10 billion in 2015) in New York City bonds to prevent the City from becoming insolvent. This commitment raised the amount of the portfolio in City securities to more than 37 percent. Members of the plan sued the trustees for breach of fiduciary duty. Ultimately, the court ruled that trustees acted reasonably, as the insolvency of the City would have led to depletion of the retirement system within less than 10 years. The court rejected the claim of breach of fiduciary duty because the motivation of the decision was the long-term solvency of the system and not the long-term welfare of New York City. The trustees reasonably feared that in bankruptcy, the protection of employee benefits would be secondary to claims of bondholders and the preservation of essential public services.

Can environmental, social, and governance (ESG) issues be related to the long-term survival of the plan sponsor and the retirement plan? To the extent that ESG is integral to the long-term success and prosperity of

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Why Digital Privacy Matters: A Look at the FBI versus Apple Face-Off

By Jerry Thompson

Digital privacy, simply put, is our fundamental right as citizens to control where our Personally Identifiable Information (PII) is exposed and shared. As our world becomes increasingly digital and much of our lives move to online systems, digital privacy has taken center stage. We now contend with all sorts of privacy concerns: how much of my information is Google tracking? Are my text messages encrypted? How is my social media usage affecting my risk of becoming a victim of identity theft?

Why Does Digital Privacy Matter?

But why does digital privacy matter? Let's be honest: most of us don't have state secrets on our cell phones or home computers, but that doesn't mean that we don't have a right to privacy or that the digital footprints we leave behind aren't valuable.

Many companies track consumer behavior online and use it for advertising or sell the information to third parties. But that isn't the only reason digital privacy is important. Many of us check work documents that contain private company information from our cell phones. We also access sensitive financial information online or store important personal documents on our computers.

Digital privacy is important, and nothing illustrates this more than the current battle between FBI and Apple.

Photo Illustration ©2016 Depositphoto.com

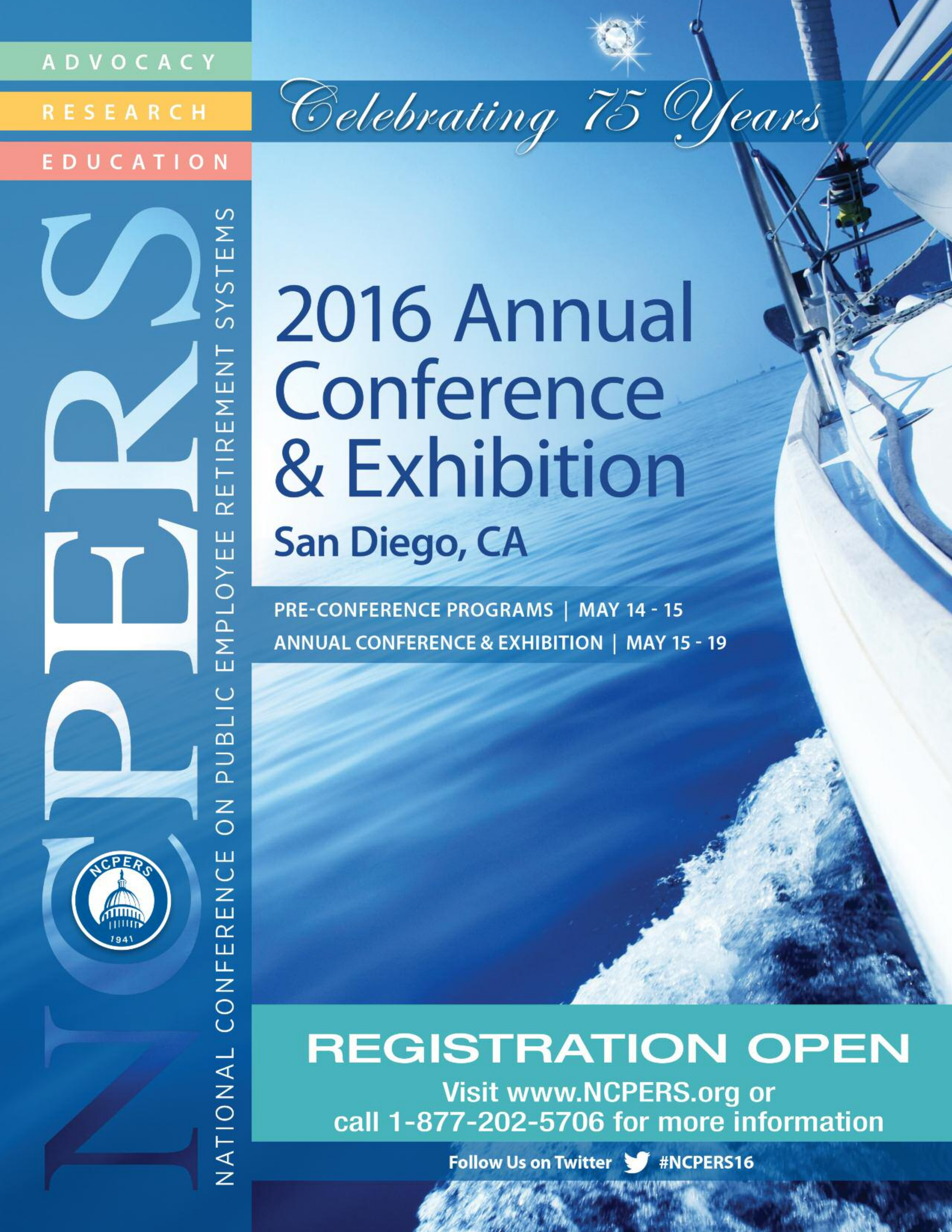
The FBI versus Apple

In the months following the San Bernardino shootings, the FBI continued to investigate the gunmen involved and recovered an iPhone 5C. As a result of Apple's strong encryption software, the FBI was unable to recover all the information on the phone, which they believe may contain valuable leads in the case. To gain access to the information, a federal judge ordered Apple to create a custom version of its iOS operating system to bypass security measures. Apple contends that creating this "backdoor" would be dangerous and would seriously endanger digital privacy for all.

What Does This Mean?

If Apple concedes to creating a backdoor to their encryption system, it would set a dangerous precedent in the use of the All Writs Act of 1789 and expand the FBI's authority. Apple CEO, Tim Cook, warned that complying with such orders would give the government the power to "capture" anyone's data. He also cautioned that the act could allow the government to demand that companies build surveillance software, undermining the privacy of all Americans. Another concern is that creating the means to bypass the security of one iPhone and allow brute-force hacking would weaken

continued on page 12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President's Message continued from page 1

your online investments. In the digital age, social media is more important to members now more than ever. These sessions (Social Media 101 & 201 and It's App-tastic) will give you fundamental information you need to be part of the social revolution.

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NEW CIOs & Investment Staff Forum, Girard Miller, CIO of the Orange County (CA) Employees Retirement System

The complexities and challenges that public plan investment professional face are numerous and daunting. NCPERS first CIO & Investment Staf forum will be structured as a participant- driven session, providing a comfortable and open setting for CIOs and other investment personnel to discuss, learn, and network with peers. Topics will include timely strategies, pitfalls to avoid, governance issues, and common professional challenges.

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I look forward to seeing you at the 2016 NCPERS Annual Conference & Exhibition in May! ❖

Check-ups continued from page 2

arrangements and incentive compensation agreements with outside managers, advisers, and consultants.

- Review portfolios for investments that may become high risk under stressed conditions (e.g., securities lending).
- Carefully scrutinize and limit gifts from outside managers and consultants; strive for transparency and accountability.
- Establish rules regarding future employment for board members and staff by outside advisers and managers.[4] ❖

[1]Michael B. Marois, "Calpers to Exit Hedge Funds, Divest $4 Billion Stake," *Bloomberg Business*, September 15, 2014, www.bloomberg.com/news/articles/2014-09-15/calpers-to exit-hedge-funds-citing-expenses-complexity.

[2] For example, public pensions in Los Angeles, New Mexico, and Louisiana have eliminated or reduced their hedge fund investments. See Christine Williamson, "Hedge Fund Investing Strong in 2014," *Pensions & Investments*, August 18, 2014, http://www.pionline.com/article/20140818/PRINT/308189978/hedge-fund-investing-strong-in-2014.

[3] __ U.S. __, 135 S. Ct. 1823 (2015).

[4] For example, see "CalPERS Strengthens Accountability, Transparency and Ethics" Fact Sheet, https://www.calpers.ca.gov/docs/ethics-fact-sheet.pdf.

Pension continued from page 3

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Global continued from page 4

tion, and the optionality of network expansions.

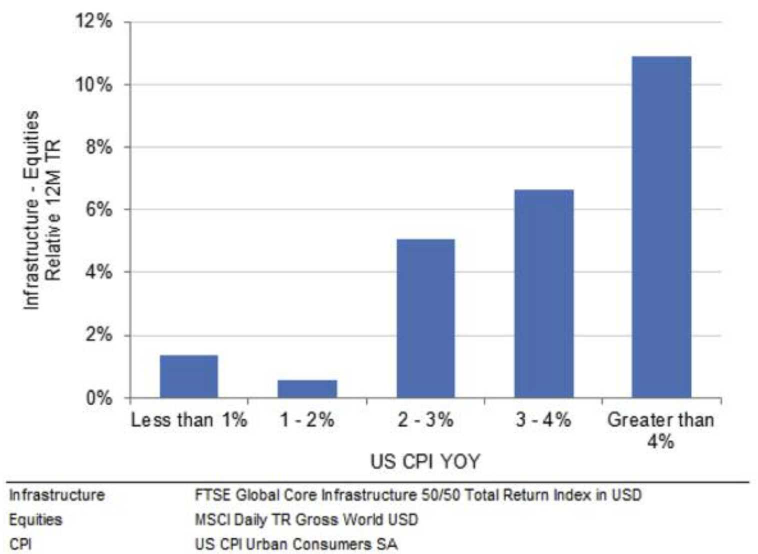
Second, infrastructure can protect investors from the impact of inflation.

The chart below illustrates how listed infrastructure has performed relative to global equities during different inflation environments. Outperformance has been greatest when inflation is highest.

This pattern of performance is based on several factors, including regulated real returns for utilities, allowed returns explicitly linking tolls to inflation, and effective barriers to entry supporting robust pricing outcomes for sectors without explicit inflation links.

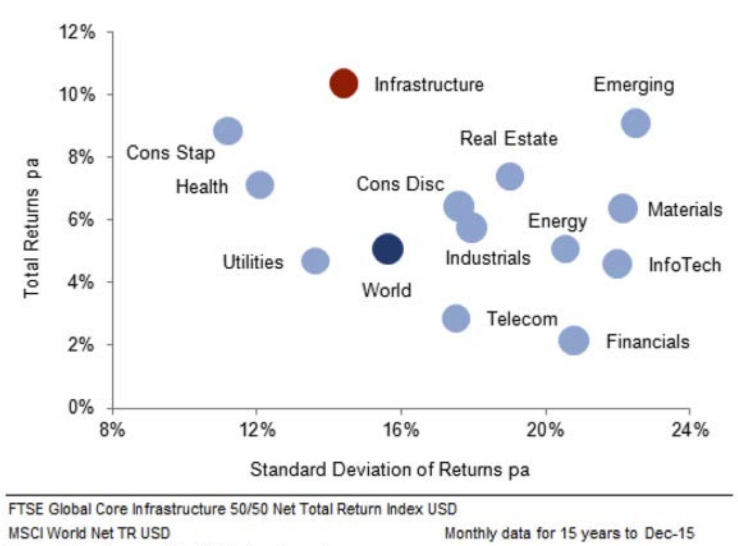
These factors have helped listed infrastructure produce higher returns than global equities over the long term with less risk.

Infrastructure Performance During Periods of Inflation



Source: Bloomberg and First State Investments | Quarterly time series from 2000-2015

Global Listed Infrastructure Relative Risk/Return



Source: Bloomberg and First State Investments

Peter Meany is the Head of Listed Infrastructure at First State Investments.

Peter is responsible for managing infrastructure securities on behalf of institutional and wholesale clients in North America, Europe, Middle East, and Asia-Pacific. Since establishing the strategy in 2007, he has built a high-quality team of investment specialists who have delivered consistent outperformance through challenging market conditions.

Peter has more than 19 years of experience as a specialist infrastructure portfolio manager and analyst. Prior to his time at First State Investments, Peter was responsible for research coverage of the Infrastructure & Utilities sectors at Credit Suisse (Australia). He also gained experience at Credit Suisse as an analyst in the telecom and energy sectors.

Peter started his career as an analyst at Macquarie Equities when the infrastructure sector was in its infancy.

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Listed infrastructure has delivered more than 90 percent of the upside of global equities in rising markets, but less than 60 percent of the downside in falling ones, making it suitable for investors who are looking for a relatively defensive investment during market volatility.

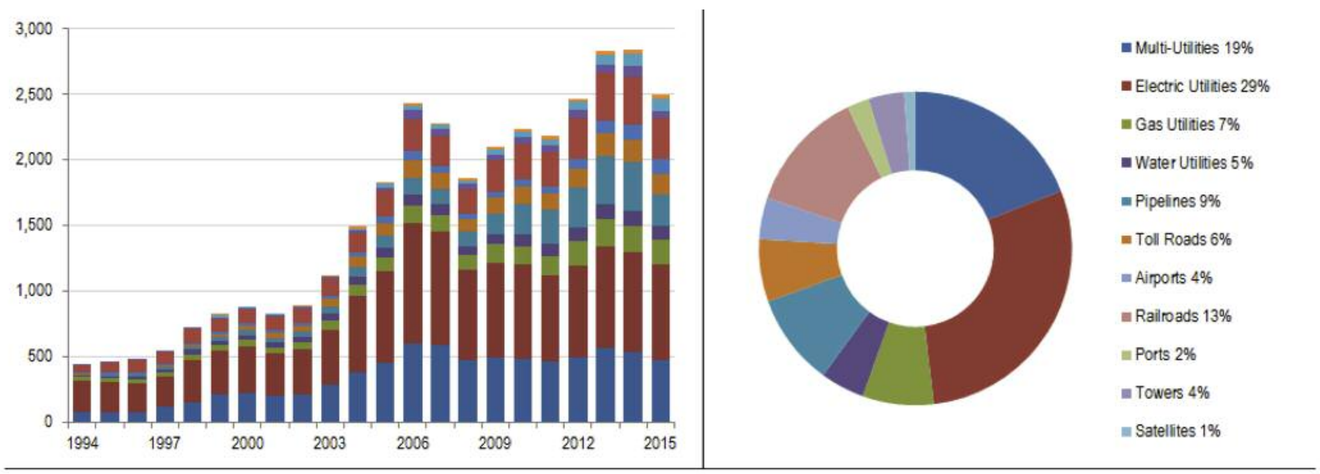
As a relatively new and still growing asset class, a number of clear inefficiencies exist in the listed infrastructure market, giving managers the scope to generate alpha by taking an active approach.

For example, the sector is under-researched with few broker-dealers providing dedicated listed infrastructure research coverage. Some infrastructure stocks have been listed only in the last decade, and investors are still building knowledge about the assets and their management. In addition, valuation differentials can arise among similar stocks in the same sector that are listed in different countries.

Specialist global listed infrastructure teams are well positioned to identify and capture the mispricing that arises as a result of carrying out on-the-ground research by conducting thorough due diligence and focusing on quality.

As with any asset class, there are risks involved. The threat of political or regulatory intervention can be a key risk for infrastructure investors. These risks can be mitigated by using an active manager who is able to recognize and manage these risks appropriately. ❖

Market Cap $bn



Legal Report continued from page 5

the plan sponsor and the employers' ability to make required employer contributions to sustain the system, it is comparable in sound fiduciary practice to the New York City system's decision to invest in the long-term economic survival of the primary plan sponsor. Development of that information as part of the ESG consideration is an appropriate means of insulating the decision making of the trustees. But can a plan align its ESG policy, including divestiture, with the marketplace?

The Florida Attorney General opined that a decision by the State Board of Investment (which acts as the fiduciary for the Florida Retirement System) could not adopt, in the absence of enabling legislation, an administrative rule on divestiture based on ethical considerations. The opinion continued, however, that instability in a region (here, South Africa) would be a legitimate consideration in making an investment decision because of the potential effect on economic considerations.

More recently, the Attorney General of Maryland considered whether Iran and Sudan divestiture was inconsistent with the State Retirement Board's fiduciary duty. The Attorney General concluded that divestment was appropriate only when fair market value was received for the divested interests; substitute investments had comparable returns and risks; the timing and manner of divestment transactions were prudent; and the effect was de minimis as compared with "total fund assets."

A number of plans divested from firearms after the school deaths in Sandy Hook, Connecticut, and many divested from tobacco for social health reasons. Such decisions clearly have an economic impact on the retirement plan, as they take the fund out of a potentially profitable sector of the investment environment. In order to be insulated as sound fiduciary decisions, these divestment actions ultimately must be rooted in the economics of the system.

Several states have recently considered or have begun adopting laws that require divestiture from companies that boycott Israel. The question a fiduciary should ask is whether the divestment is in the best interest of the retirement plan and its members.

Divestment has generally been shunned by pension plans and large endowments, with the notable exception of church plans, as destructive of the mission of achieving the highest and best returns at a reasonable risk. Divestment has most recently been criticized for causing loss of an investor voice in a critical industry that directly impacts virtually every economic sector in which pension plans are invested. The goals of ESG, particularly in the area of sustainability, are directly compromised by loss of the presence at the corporate table, thereby making divestment of fossil fuels a "futile act," according to Professor Edward Zelinsky of the Cardozo School of Law in New York City.

Not all are in agreement. On June 4, 2015, Georgetown University announced it would make no further investments in thermal coal. (See discussion in C. Hottinger, "In Support of Fossil Fuel Divestiture," *Georgetown International Environmental Law Review Online*, June 13, 2015.) Also, in California Government Code 7513.75, the Legislature made express findings that divestiture from thermal coal was of long-term economic benefit to California, although not expressly in relation to CalPERS and CalSTRS.

The general body of American trust law is collected in the Restatement of the Law of Trusts. The current version relating to institutional investment decision making is the Restatement (3d) of the Law of Trusts. Under the Restatement, investments are to be viewed on a case-by-case basis and made based on the information known at the time the investment decision is made rather than in hindsight.

Comment C in Section 227 of the Restatement concludes that while the duty of loyalty of a fiduciary does not permit a trustee to ignore legal prohibitions, it also "...does not require the trustee to disregard ethical principles generally applicable to investment managers." In other words, the Restatement offers seemingly self-contradictory guidance.

Divestiture will continue to be a matter of controversy and politically influenced legislation. Trustees are obligated to follow their governing statutes but should remain sensitive to the concept that divestment decisions should always be soundly rooted in the economic benefit to the retirement plan and its participants. ❖

This article is a regular feature of PERSIST. ***Robert D. Klausner****, a well-known lawyer specializing in public pension law throughout the United States, is General Counsel of NCPERS as well as a lecturer and law professor. While all efforts have been made to insure the accuracy of this section, the materials presented here are for the education of NCPERS members and are not intended as specific legal advice. For more information go to* www.robertdklausner.com.

Digital Privacy continued from page 6

security overall and compromise the data of any iPhone.

What Should We Do Moving Forward?

We'll have to monitor what becomes of this legal showdown, but in the meantime, follow these tips to safeguard your privacy:

- Enable all the security measures your cell phone has to offer.
- Manage your privacy settings on different devices, browsers, social networks, and apps.
- Regularly review and delete your browser's cookies.
- Read privacy policies on websites, apps, and social networks and adjust your online behavior accordingly.

No one should have to compromise on digital privacy. Learn more about what you can do to manage your digital privacy and help protect your identity at www.identityguard.com/NCPERS. ❖

Jerry Thompson is the SVP at Intersections, Inc.®, the parent company of Identity Guard®. He joined the company after Intersections acquired White Sky, Inc., where Jerry was the co-founder and Chief Revenue Officer. As part of White Sky's executive team, he led the development and innovation of mobile security and commerce applications, providing new ways for companies to interact, monetize, and retain their customers through solutions that consumers use daily to protect their identities while banking, investing, shopping, socializing, and browsing.

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NCPERS Fiduciary Liability Insurance

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

Key Policy Highlights

- Broad definition of “Insured”
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- Coverage for Improper advice or disclosure
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- Imprudent investments coverage
- Breach of responsibilities, obligations or duties imposed upon fiduciaries of a plan coverage
- Coverage for Conflict of interest with regard to investments
- Lack of investment diversity coverage
- Negligence in the administration of a plan coverage
- Voluntary compliance program
- HIPAA and PPACA penalty coverage

Other Key Policy Features

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

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National Accredited Fiduciary (NAF) Program
May 14 – 15, 2016
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Annual Conference & Exhibition
May 15 – 19, 2016
Hilton San Diego Bayfront | San Diego, CA

Public Pension Funding Forum
August 21 – 23, 2016 | New Haven, CT

Public Safety Employees Pension & Benefits Conference
October 23 – 26, 2016
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Studies: Women Are at Greater Risk than Men of Not Achieving a Secure Retirement

A woman's path to a secure retirement is filled with obstacles, such as lower pay and time out of the workforce for parenting or caregiving, which can negatively impact her own long-term financial prospects, according to new research from several sources.

Women continue to lag behind men in terms of saving and planning for retirement, even though they are better educated and enjoy better career opportunities than previous generations, according to a report by the Transamerica Center for Retirement Studies.

The findings are especially concerning because women statistically tend to live longer than men, meaning there is an even greater need for savings and retirement preparations.

The report lays out 16 facts about women's retirement outlook and explains why women are at a greater risk of not achieving a financially secure retirement compared to men.

Among the findings:

- Half of women plan to continue working in retirement. Fifty-one percent of women plan to work after they retire, including 40% who plan to work part-time and 11% who plan to work full-time.

Continued on p. 2

In this issue:

Women at Risk continued from p. 1

- Most baby boomer women do not have a backup plan. Among baby boomers (born 1946 to 1964), an alarmingly low percentage of women (21%) and men (30%) have a backup plan if forced into retirement sooner than expected.
- Many women plan to self-fund their retirement. Nearly half of women (46%) expect to self-fund their retirement through 401(k) or similar retirement accounts (35%) or other savings and investments (11%).

On the Web at: https://www.transamericacenter.org/retirement-research/women-and-retirement.

Meanwhile, a new study from the National Institute on Retirement Security (NIRS) documents the vulnerability for women in retirement. The study, "Shortchanged in Retirement, The Continuing Challenges to Women's Financial Future" and released on March 1 finds that women are far more likely than men to face financial hardship in retirement, revealing that across all age groups, women have substantially less income in retirement than men.

For women age 65 and older, the data indicate that their typical income is 25 percent lower than men. Furthermore, men's income advantage expands to 44 percent by age 80 and older.

Women are 80 percent more likely than men to be impoverished at age 65 and older, "while women age 75 to 79 were three times more likely to fall below the poverty level as compared to their male counterparts," according to NIRS.

The NIRS report, in addition to making these troubling findings, also contains public policy options that can help reduce women's vulnerability to financial hardship in retirement.

On the Web at: http://www.nirsonline.org/index.php?option=content&task=view&id=912 and http://www.nirsonline.org/index.php?option=com_content&task=view&id=912&Itemid=48.

Finally, BNY Mellon released a new publication that explores how women in all stages of life can prepare for a secure retirement. It examines how women's challenges evolve over the decades as they prepare for retirement, and offers ideas for actions they can take at any age.

The guide, "The Retirement Challenge – Dilemmas and Decisions Through Every Decade," is designed to help women face with the prospect of preparing for retirement. It helps answer questions such as: How will the markets affect my portfolio? Will I see reductions to my Social Security? How healthy will I be? What am I not thinking of that might send a shock wave through my plans?

Women face a variety of compounding factors in retirement, such as: longer average life expectancies, lower incomes during working years, gaps in employment, lower savings levels, higher medical costs and higher taxes.

The publication provides specific detail for women planning their retirement through each decade of life, starting with the twenties and ending with the seventies and beyond.

On the Web at: https://www.bnymellon.com/us/en/newsroom/news/company-news/the-retirement-challenge-dilemmas-and-decisions-through-every-decade.jsp.

New Law Changes Social Security Rules about Claiming Retirement and Spousal Benefits

Social Security's rules about claiming benefits are changing. The Bipartisan Budget Act that passed last November closed two complex loopholes that were used primarily by married couples.

The Social Security Administration (SSA) is educating the public about why the rules were changed, how the change might affect beneficiaries and what they should do next.

The new law closed loopholes that allowed some married couples to receive higher benefits than intended. Only a small fraction of retirees used these loopholes. SSA says closing them helped restore fairness and strengthened Social Security's long-term financing.

The first change states that if you are eligible for benefits both as a retiree and as a spouse (or divorced spouse), you must start both benefits at the same time. This "deemed filing" used to apply only before full retirement age, which is currently 66. Now it applies at any age up to 70, if you turned 62 after January 1, 2016.

The second rule change states that if you take your retirement benefit and then ask (on or after April 30, 2016) to suspend it to earn delayed retirement credits, your spouse or dependents generally will not be able to receive benefits on your Social Security record during the suspension. You also will not be able to receive spouse benefits on anyone else's record during that time.

On the Web at: https://www.ssa.gov/planners/retire/claiming.html.

Morningstar Releases ESG Sustainability Ratings for 20,000 Funds

Morningstar Inc. has released the investment industry's first sustainability rating for 20,000 funds to help investors evaluate funds based on environmental, social and corporate governance (ESG).

The new ratings will enable investors to evaluate mutual funds and exchange-traded funds based on how well the companies held in their funds are managing their ESG risks and opportunities.

Morningstar rolled out its first batch of mutual fund scores with sustainable-investing grades related to ESG screens applied to the underlying securities in each fund.

The scoring system add scores at both the fund and category levels. Funds receive scores based on ESG metrics applied to their underlying holdings, and at least 50% of funds underlying holdings need to be scored in order for the fund to receive an ESG score. Many investors are interested in sustainable investing, but unsure how to put it into practice.

On the Web at: https://www.morningstar.com/news/pr-news-wire/PRNews_20160301CG33842/morningstar-introduces-industrys-first-sustainability-rating-for-20000-funds-globally-giving-investors-new-way-to-evaluate-investments-based-on-environmental-social-and-governance-esg-factors.html

Facts about the Public-Sector Workforce Published

More than 40% of the local government workforce will be eligible for retirement by 2017, according to a publication released by Govtech.com, the online portal to Government Technology, a division of e.Republic, Inc., whose primary focus is on public-sector innovation for state and local government and education.

The publication, "Reviving the Public Sector Employee Lifecycle," also states that it takes an average of 36 days for government agencies to hire a new employee – and even longer to fill positions that require specialized skills.

Nearly 25% of federal government hires leave their jobs within two years, and the cost to replace a government employee is approximately one-fifth of salary.

The publication states that governments must be more strategic in selecting employees – and more effective in retaining them.

On the Web at: http://www.govtech.com/library/papers/Reviving-the-Public-Sector-Employee-Lifecycle-8747.html.

Consulting Firm Releases Guidance on Keeping DB Plans Sustainable

Defined benefit (DB) pension plans continue to be a great recruiting tool because employees prefer traditional pensions, according to the consulting firm Willis Towers Watson.

"With so many companies changing to defined contribution (DC) plans in recent years to reduce cost and risk, organizations that still offer DB plans are finding they are instrumental in attracting and retaining employees," firm says in introducing a new guide on making DB plans sustainable.

"In fact, according to our most recent Global Benefits Attitudes Study, globally, employee desire for retirement security and guaranteed benefits has never been higher," the firm said. "With the value of these programs growing, plan sponsors face a greater need than ever to manage, their cost and cost volatility over the long-term."

The firm's new guidance includes 10 strategies to make DB plans sustainable. The strategies cover compliance/governance; plan design; administration; communication; assumptions; plan costs; plan funding, and more.

On the Web at: https://www.towerswatson.com/en/Services/Services/sustaining-for-success and https://www.towerswatson.com/DownloadMedia.aspx?media={B8700D4F-BF67-4C65-9D0D-F3F2193B4A80}.

More Evidence that Defined Contribution 401(k)-Style Plans Continue Failing Retirees

Studies and articles continue to show how wrong it is for states and localities to dismantle their traditional defined benefit (DB) pension plans in favor of 401(k)-style defined contribution (DC) plans.

Dan Doonan, a senior pension specialist at the National Education Association (NEA) in Washington, wrote an article that appeared in the Feb. 24, 2016, Bloomberg BNA "Pension and Benefits" blog entitled "401(K) Plans' Inefficiency Struggles Will Grow."

In it, Doonan outlines why the 401(k) model "is no closer to working today" than it was when it was created, despite 35 years of "tweaking." Doonan concludes that the system "remains inefficient, and financial advisors still can't tell people how much they can safely withdraw per year in retirement."

"For individuals in or approaching retirement today, the fundamentals they face are brutal: historically low bond yields and a loss of principal (in "safe" bond investments) if interest rates rise," Doonan wrote. "Meanwhile, retail investment advisors continue to fight a requirement that they work in their client's interests – what most of us see as a basic professional responsibility!"

Meanwhile, a column in Slate authored by Helaine Olen implores: "It's time for the presidential candidates to give it the urgency it deserves."

In "The Retirement Crisis Is Getting Truly Scary," Olen stresses that the numbers are getting "worse and worse," pointing out that a lot of people "still don't seem to think they can afford to save money for retirement at all, or they can't figure out how to do it."

"Even as expert after expert stresses the importance of saving for retirement, the percentage of prime-working-age families putting money aside in any type of retirement plan fell from 60 percent in 2000 to 53 percent in 2013," she notes, underscoring that for "almost every age cohort, the median amount invested in retirement plans was lower in 2013 than prior to the start of the Great Recession."

The Slate article points out that with regard to the presidential campaign, Bernie Sanders "champions an expansion in Social Security benefits, financed by lifting the payroll tax cap on income greater than $250,000," while Hillary Clinton "supports instituting a caregiver credit and recalculating the method used to determine survivor benefits."

However, as Olen also points out, addressing Social Security is only one piece of what she calls "the retirement puzzle." But talking about how to increase retirement savings "gets no love," she says.

A new study from the Economic Policy Institute (EPI), entitled "The State of American Retirement: How 401(k)s Have failed Most American Workers," by economist Monique Morrissey, includes a "chartbook" assessing the impact of the shift from pensions to individual savings by examining disparities in retirement

Continued on p. 6

Research Shows Public Pensions Not Taking Any More Risk Today than Before

In order to counter opponents of public pension funds, the National Conference on Public Employee Retirement Systems (NCPERS) released research showing that public funds are not taking higher risk now than they did before, even though the asset allocation may have changed over time.

The research paper, "Are State and Local Pension Funds Taking More Risk Now Than Before?" is based on data from the Census of Governments, U.S. Bureau of Census, from the 1960s, 1970s, 1980s, 1990s and 2000s.

"The ultimate goal of opponents of public pensions is to dismantle them and convert them into do-it-yourself retirement saving schemes," the paper states. "Our earlier research shows that when public or private pensions are converted from defined benefits to do-it-yourself defined contribution plans, income inequality rises. When income inequality rises, it drags the economy down. In the end everyone suffers, not just public employees."

The arguments advanced by the opponents of public pensions "are based on ideology rather than facts," the paper concludes.

On the Web at: http://www.ncpers.org/files/NCPERS%20Research%20Series_2016_Risk%20Calculations.pdf.

GAO Schools DOL on Its Poor Education of Retirement Replacement Rates for Workers

The Department of Labor (DOL) indicated it agrees with the findings of a Government Accountability Office (GAO) report that it needs to update its retirement planning tools and guidance when it comes to calculating replacement rates for retirement savings. It is advice that any retirement plan sponsor can learn from.

GAO found that the information and tools on replacement rates that DOL provides may be too limited to help workers understand how to use such rates for retirement planning.

DOL's Employee Benefits Security Administration's (EBSA) website provides information and tools to help American workers better plan for retirement, including a tool to help workers calculate their retirement income needs as a percentage of preretirement income.

While EBSA's materials note that a target replacement rate can vary based on individual circumstances, they do not include specific examples of demographic groups that research indicates can result in higher or lower income replacement needs, or how much a replacement rate might need to be adjusted for those groups or for other individual circumstances.

Without additional information, workers may not understand how to adjust target replacement rates when planning for retirement, GAO said. In addition, EBSA's worksheet and online tool for calculating how much to save use a default replacement rate and do not allow the user to adjust the rate based on individual circumstances. Without the ability to adjust the replacement rates used in planning tools, workers may over- or under-estimate how much they need to save for retirement.

On the Web at: at http://www.gao.gov/assets/680/675526.pdf.

SEC Creates Office of Risk and Strategy for Its National Exam Program

The Securities and Exchange Commission today announced the creation of the Office of Risk and Strategy within its Office of Compliance Inspections and Examinations (OCIE). The new office will consolidate and streamline OCIE's risk assessment, market surveillance, and quantitative analysis teams and provide operational risk management and organizational strategy for OCIE.

Peter B. Driscoll will lead the office and has been named as its first Chief Risk and Strategy Officer. In this role, Driscoll will manage the new office and the Investment Adviser/Investment Company examination staff based in Washington, D.C.\

OCIE conducts the SEC's National Examination Program through examinations of SEC-registered investment advisers, investment companies, broker-dealers, municipal advisors, self-regulatory organizations, clearing agencies, and transfer agents. It uses a risk-based approach to examinations to fulfill its mission to promote compliance with U.S. securities laws, prevent fraud, monitor risk, and inform SEC policy.

On the Web at: http://www.sec.gov/news/pressrelease/2016-38.html.

401-K Style Plans continued from p. 4

preparedness and outcomes by income, race, ethnicity, education, gender, and marital status.

The first section examines retirement-plan participation and retirement account savings of working-age families, focusing on those headed by someone age 32-61, "a 30-year period before the Social Security early eligibility age of 62 when most families should be accumulating pension benefits and retirement savings," as she explains. The second section looks at seniors and their income sources, focusing on retirement outcomes of people age 65 and older.

It paints a "picture of increasingly inadequate savings and retirement income for successive generations of Americans – and growing disparities by income, race, ethnicity, education, and marital status," Morrissey warns. "Women, who by some measures are narrowing gaps with men, remain much more vulnerable in retirement due to lower lifetime earnings and longer life expectancies," she finds.

The bottom line: "Decades after the number of active participants in 401(k)-style plans edged out those in traditional pensions, 401(k)s are not delivering substantial income in retirement, and that income is not equally shared," Morrissey concludes.

The shift from pensions to account-type savings plans "has been a disaster for lower-income, black, Hispanic, non-college-educated, and single workers, who together add up to a majority of the American population," she adds. However, she also points out that "even among upper-income white college-educated married couples, many do not have adequate retirement savings or benefits."

"The evidence presented in this chartbook— that the retirement system does not work for most workers – underscores the importance of preserving and expanding Social Security, defending defined-benefit pensions for workers who have them, and seeking new solutions for those who do not," Morrissey concludes.

On the Web at: http://www.bna.com/401k-plans-inefficiency-b57982067698/, http://www.slate.com/articles/business/the_bills/2016/03/retirement_for_americans_is_getting_even_scarier_the_candidates_need_to.html, http://www.epi.org/publication/retirement-in-america/, http://www.businessinsider.com/why-the-401k-isnt-working-2016-3 and http://www.latimes.com/business/hiltzik/la-fi-mh-six-charts-on-the-retirement-crisis-20160302-column.html

State and Local OPEB Commitments Outlined in New Research

Aggregate unfunded Other Post-Employment Benefits (OPEB) liabilities are estimated to be $862 billion – nearly two thirds of which is held at the local level, according to new research conducted for the Center for State & Local Government Excellence (SLGE).

These liabilities are equivalent to 28 percent of unfunded pension liabilities and while OPEB liabilities are large, several factors limit their potential drain on state and local resources, the researchers found.

The research provides an updated accounting of OPEB commitments with data for 2012 or 2013. The first section describes the evolution of the new reporting framework. The second section discusses the OPEB sample. The third section compares OPEB and pension liabilities in the aggregate, and the fourth section puts the OPEB liabilities in perspective.

The report, "How Big a Burden Are State and Local OPEB Benefits?" is available at: http://slge.org/wp-content/uploads/2016/03/16-03-SLGE-OPEBweb.pdf.

CalPERS Revises Global Governance Principles

The California Public Employees' Retirement System (CalPERS) Board of Administration has adopted a revised version of its Global Governance Principles, including a new provision that cautions that corporate board directors who serve more than 12 years on the same company board are at risk of compromising their independence.

If a director reaches 12 years of service on a board, CalPERS' principles now call for a company to carry out rigorous evaluations either to classify the director as non-independent or provide a detailed explanation as to why the director continues to be independent.

The principles serve as framework by which CalPERS executes its shareowner proxy voting responsibilities; engages public companies to achieve long-term, sustainable risk-adjusted returns; and works with internal and external investment managers to ensure that their practices align with CalPERS' Investment Beliefs.

On the Web at: https://www.calpers.ca.gov/docs/board-agendas/201603/invest/item05a-02.pdf.

Digital Investment Advice Comes Under the Microscope for Broker-Dealers

The Financial Industry Regulatory Authority (FINRA) is reminding broker-dealers of their obligations under FINRA rules when it comes to digital investment advice, which includes technology management, portfolio development and conflicts of interest mitigation.

FINRA, a non-governmental organization that regulates member brokerage firms and exchange markets, released a new report that offers guidance for investors in evaluating investment advice derived entirely or in part from digital investment advice tools, sometimes known as "robo advisors."

The report does not create any new legal requirements or change any existing broker-dealer regulatory obligations. But it does identify practices that FINRA believes firms should consider and tailor to their business mode.

The 17-page report gives broker-dealers a "firm reminder" about areas of concern with digital advice, particularly the use of algorithm-based investments and relying solely on automated questionnaires.

Online advice firms have experienced explosive growth. They are expected to gather more than $655 billion in assets by 2019, up from $192.4 billion in 2014, according to research firm Tiburon Strategic Advisors.

The promise of digital assets has prompted moves from a variety of firms: Merrill Lynch announced it was developing a robo advice platform, while LPL is in the pilot phase of developing its own digital advice offering.

On the Web at: http://www.finra.org/sites/default/files/digital-investment-advice-report.pdf?utm_source=MM&utm_medium=email&utm_campaign=NewsRelease_031516_FINAL.

State and Local Government Contributions to Public Pension Plans Reached $121 Billion in FY'14

On average, retirement programs remain a relatively small part of state and local government spending, although required costs, benefit levels, funding levels, and funding adequacy vary widely, and this rate has been rising in recent years, according to new research by the National Association of State Retirement Administrators (NASRA).

Based on the most recent U.S. Census Bureau data, 4.1 percent of all state and local government spending is used to fund pension benefits for employees of state and local government. Pension costs have remained within a narrow range over a 30-year period, declining from a high point of 5.0 percent, in FY'85, to a low of 2.3 percent in FY'02, and reaching 4.1 percent in FY'13, the research found.

State and local governments contributed, in aggregate, an estimated $121 billion to pension funds in FY'14, a figure that is projected to equal 4.5 percent of projected state and local direct general spending.

More than $250 billion is paid out annually from these trusts to retirees and their beneficiaries, reaching virtually every city and town in the nation, according to the report, "State and Local Government Spending on Public Employee Retirement Systems."

Changes to benefit levels and required employee contributions adopted by states and cities have been widespread and diverse, depending in part on such factors as the legal authority to make changes to benefits or required employee contribution rates, and the plan's financial condition.

Generally, states and cities with a history of paying their required pension contributions are in better condition and have needed more minor adjustments to benefits or financing arrangements compared to those with a history of not adequately making their contributions, the report found.

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

GAO Schools DOL on Its Poor Education of Retirement Replacement Rates for Workers

The Department of Labor (DOL) indicated it agrees with the findings of a Government Accountability Office (GAO) report that it needs to update its retirement planning tools and guidance when it comes to calculating replacement rates for retirement savings. It is advice that any retirement plan sponsor can learn from.

GAO found that the information and tools on replacement rates that DOL provides may be too limited to help workers understand how to use such rates for retirement planning.

DOL's Employee Benefits Security Administration's (EBSA) website provides information and tools to help American workers better plan for retirement, including a tool to help workers calculate their retirement income needs as a percentage of preretirement income.

While EBSA's materials note that a target replacement rate can vary based on individual circumstances, they do not include specific examples of demographic groups that research indicates can result in higher or lower income replacement needs, or how much a replacement rate might need to be adjusted for those groups or for other individual circumstances.

Without additional information, workers may not understand how to adjust target replacement rates when planning for retirement, GAO said. In addition, EBSA's worksheet and online tool for calculating how much to save use a default replacement rate and do not allow the user to adjust the rate based on individual circumstances. Without the ability to adjust the replacement rates used in planning tools, workers may over- or under-estimate how much they need to save for retirement.

On the Web at: at http://www.gao.gov/assets/680/675526.pdf.

Moody's Settles CalPERS Lawsuit over Erroneous Ratings for $130 Million

The California Public Employees' Retirement System (CalPERS) has won a record $130 million settlement from Moody's and Moody's Investors' Services, stemming from the firms' erroneous "AAA" ratings of certain investments that performed poorly during the 2008 and 2009 financial crisis.

Early in 2015, CalPERS settled with separate defendant, Standard & Poor's, for $125 million, bringing total recovery from the now-concluded lawsuit to $255 million. The lawsuit is now resolved against Moody's, and restores money that belonged to CalPERS members and employers, said Matthew Jacobs, general counsel for CalPERS.

CalPERS sued Moody's and other rating agencies in 2009 after the nation's largest public pension plan sustained losses from investments in three structured investment vehicles that relied on the liquidity of assets that turned out to be much more illiquid than portrayed by their sellers and raters, such as subprime retail mortgage backed securities, collateralized debt obligations and other asset-backed securities.

In the initial lawsuit, CalPERS alleged that Moody's made negligent misrepresentations by assigning the investments their highest credit rating.

On the Web at: https://www.calpers.ca.gov/page/newsroom/calpers-news/2016/settles-moodys-negligent-ratings-case.

Social Security's Chief Actuary Estimates Cost of Repealing GPO and WEP

The Social Security Administration's chief actuary has responded to a senatorial request for an estimate of the financial consequences of eliminating the Government Pension Offset (GPO) and the Windfall Elimination Provision (WEP).

The chief actuary, Stephen C. Goss, was responding to a request from U.S. Sen. Sherrod Brown (D-Ohio) with respect to his introduction of S. 1651, the Social Security Fairness Act of 2015, introduced on June 23, 2015. The bill would eliminate the GPO and WEP from the Social Security Act.

Assuming enactment of the elimination proposals effective for all benefits payable for entitlement in January 2017 and later (without regard for when the beneficiary became initially entitled), Goss estimated the increase in benefit obligations for the Old Age, Survivor Disability Insurance program would reduce the OASDI long-range actuarial balance by 0.13% of taxable payroll, and would change the projected year of reserve depletion for the combined OASI and DI Trust Funds from 2034 under current law to 2033 under the proposal.

GPO and WEP provisions reduce OASI and DI benefits for most workers who receive a pension based on earnings in employment that was not covered under the Social Security program.

About one-fourth of state and local government employees are currently not covered

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under Social Security. Most federal government employees who were hired before 1984 were not covered.

Workers not covered incur no OASDI payroll tax liability and also earn no credit toward benefits under the program from the non-covered earnings. In addition, employers of workers not covered also pay no OASDI payroll tax based on their earnings.

"As shown in the enclosed table, the cost of benefits under the OASDI program would be increased by 0.14 percent of taxable payroll over the next 75 years. This additional cost would be partly offset by increased federal income tax on OASDI benefits dedicated to the trust funds in the amount of 0.01 percent of payroll over the 75-year period," Goss wrote.

On the Web at: https://www.ssa.gov/oact/solvency/SBrown_20160224.pdf.

Stakeholders in Arizona Reach Consensus on Major Public Pension Overhaul

Arizona's sweeping overhaul of its statewide public-safety pension system is a model of reform that other states should follow if they want to curb unfunded pension liabilities, according to an article in Governing.

Arizona's Public Safety Personnel Retirement System (PSPRS) faced $12.7 billion in liabilities and $6.2 billion in assets. Spurred on by state Sen. Debbie Lesko and other legislators, the stakeholders involved made a bipartisan effort at reform and did so "thoughtfully," including the PSPRS, firefighters' and police officers' associations and local governments, the authors wrote.

Arizona reforms included replacing the broken cost-of-living formula structure with a traditional Consumer Price Index-based calculation for employees and retirees; offering new workers a choice between a defined-contribution plan and a traditional defined-benefit plan; and requiring new employees and their employers to share equally, 50/50, in retirement account costs.

Without immediate changes, Arizona's pension debt would have continued to escalate, with every downturn in the market putting the system at risk of collapse.

On the Web at: http://www.governing.com/gov-institute/voices/col-consensus-public-pension-reform.html.

Municipal Advisor Charged for Fiduciary Duty Failings

Kansas-based Central States Capital Markets, its CEO and two employees have been charged with for breaching their fiduciary duty by failing to disclose a conflict of interest to a municipal client. The case is the Securities and Exchange Commission's (SEC) first to enforce the fiduciary duty for municipal advisors created by the 2010 Dodd-Frank Act, which requires these advisors to put their municipal clients' interests ahead of their own.

While Central States served as a municipal advisor to a client on municipal bond offerings in 2011, two of its employees, in consultation with the CEO, arranged for the offerings to be underwritten by a broker-dealer where all three worked as registered representatives, the SEC charged.

The order found that Central States CEO John Stepp and employees Mark Detter and David Malone did not inform the client, identified in the order only as "the City," of their relationship to the underwriter or the financial benefit they obtained from serving in dual roles.

Municipal advisors advise municipal and conduit borrowers about the terms of offerings, including interest rates, the selection of underwriters, and underwriting fees. In the three offerings, Central States collected fees from the City for the municipal advisory work and received 90 percent of the underwriting fees the City paid to the broker-dealer. The SEC's order found that Central States, Stepp, Detter, and Malone, breached their duty to the City by failing to disclose the conflict of interest.

The order found that Detter and Malone were aware of the conflict and that Detter emailed Malone that "we should resign" as municipal advisor to serve solely as underwriter on the offerings.

Central States agreed to settle the SEC's charges by paying $289,827.80 in disgorgement and interest and an $85,000 civil penalty. Detter agreed to settle the charges by paying a $25,000 civil penalty and agreeing to a bar from the financial services industry for a minimum of two years. Malone agreed to settle the charges by paying a $20,000 civil penalty and agreeing to a bar from the financial services industry for a one-year minimum. Stepp agreed to settle the charges by paying a $17,500 civil penalty and agreeing to a six-month suspension from acting in a supervisory capacity with any broker-dealer, investment adviser, or municipal advisor.

On the Web at: http://www.sec.gov/litigation/admin/2016/34-77369.pdf.

Future Education and Business Related Travel
Regular Board Meeting – April 14, 2016

ATTENDING

1.	**Conference:**	**Society of Pension Professionals**	JS, JB, GI, CW
	Dates:	April 19, 2016	
	Location:	Dallas, TX	
	Est. Cost:	$250.00 Per Person Annually	
2.	**Conference:**	**TEXPERS Secure Retirement for All**	SF, CC, BH
	Dates:	April 21-22, 2016	
	Location:	Washington, DC	
	Est. Cost:	$1,000	

Special Board Meeting April 28, 2016

3.	**Conference:**	**Commerce Street Capital: Bank Conference**	JB, KH
	Dates:	April 28, 2016	
	Location:	Irving, TX	
	Est. Cost:	$275	
4.	**Conference:**	**Wharton: Portfolio, Concepts, and Management**	BH, CC, TH
	Dates:	May 2-5, 2016	
	Location:	Pennsylvania, PA	
	Est. Cost:	$5,000	

* New/No one has signed up

5. **Conference:** **PRB Meeting** SF, KG, JMond
Dates: May 5, 2016
Location: Austin, TX
Est. Cost: $250

Regular Board Meeting May 12, 2016

6. **Conference:** **NCPERS Trustee Educational Seminar (TEDS)** JM
Dates: May 14-15, 2016
Location: San Diego, CA
Est. Cost: $750

7. **Conference:** **NCPERS Accredited Fiduciary (NAF) Program** KH, SF, CC
Dates: May 14-15, 2016
Location: San Diego, CA
Est. Cost: $900

8. **Conference:** **NCPERS Annual Conference** KH, SF, JM, CC
Dates: May 15-19, 2016
Location: San Diego, CA
Est. Cost: $2,500

9. **Conference:** **Pharos Annual Investor Conference** KH, JB, GI
Dates: June 7-8, 2016
Location: Irving, TX
Est. Cost: None

Regular Board Meeting June 9, 2016

* New/No one has signed up

10.	**Conference:**	**Society of Pension Professionals**	JS, JB, GI, CW
	Dates:	June 21, 2016	
	Location:	Dallas, TX	
	Est. Cost:	$250.00 Per Person Annually	

Regular Board Meeting July 14, 2016

11.	**Conference:**	**Society of Pension Professionals**	JS, JB, GI, CW
	Dates:	July 19, 2016	
	Location:	Dallas, TX	
	Est. Cost:	$250.00 Per Person Annually	
12.	**Conference:**	**Wharton: International and Emerging Market Investing**	TH, BH
	Dates:	July 25-27, 2016	
	Location:	San Francisco, CA	
	Est. Cost:	$6,000	

Regular Board Meeting August 11, 2016

13.	**Conference:**	**TEXPERS Summer Educational Forum**	SF
	Dates:	August 14-16, 2016	
	Location:	San Antonio, TX	
	Est. Cost:	TBD	
14.	**Conference:**	**NCPERS Public Pensions Funding Forum**	SF
	Dates:	August 21-23, 2016	
	Location:	New Haven, CT	
	Est. Cost:	TBD	

Regular Board Meeting September 8, 2016

* New/No one has signed up

15. Conference: **Society of Pension Professionals** JS, JB, GI, CW
Dates: September 20, 2016
Location: Dallas, TX
Est. Cost: $250.00 Per Person Annually

16. Conference: **TLFFRA Pension Conference** *
Dates: October 2-4, 2016
Location: McAllen, TX
Est. Cost: TBD

Regular Board Meeting October 13, 2016

Board and Staff Workshop October 17-19, 2016

17. Conference: **NCPERS Public Safety Conference** SF
Dates: October 23-26, 2016
Location: Las Vegas, NV
Est. Cost: TBD

Regular Board Meeting November 10, 2016

Regular Board Meeting December 8, 2016

18. Conference: **Society of Pension Professionals** JS, JB, GI, CW
Dates: December 20, 2016
Location: Dallas, TX
Est. Cost: $250.00 Per Person Annually

19. Conference: **PRB: MET Online Course:** **<u>Benefits Administration</u>**
Dates: Anytime on line
Location: PRB.org

* New/No one has signed up

Future Investment Related Travel
Regular Board Meeting – April 14, 2016

NONE

* New/No one has signed up