#### **VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

#### **BOARD OF RETIREMENT**

#### **BUSINESS MEETING**

#### May 16, 2016

#### **AGENDA**

<u>PLACE</u>: Ventura County Employees' Retirement Association Second Floor Boardroom

1190 South Victoria Avenue

Ventura, CA 93003

**TIME**: 9:00 a.m.

Members of the public may comment on any item under the Board's jurisdiction by filling out a speaker form and presenting it to the Clerk. Unless otherwise directed by the Chair, comments related to items on the agenda will be heard when the Board considers that item. Comments related to items not on the agenda will generally be heard at the time designated for Public Comment.

#### ITEM:

| I.   | CA         | LL TO ORDER   | Master Page No. |
|------|------------|---|-----------------|
| II.  | <u>API</u> | PROVAL OF AGENDA  | 1 – 3           |
| III. | <u>API</u> | PROVAL OF MINUTES   |                 |
|      | A.         | Disability Meeting of May 2, 2016   | 4 – 11          |
| IV.  | <u>co</u>  | NSENT AGENDA  |                 |
|      | A.         | Approve Regular and Deferred Retirements and Survivors Continuances for the Month of April 2016   | 12              |
|      | B.         | Receive and File Report of Checks Disbursed in April 2016   | 13 – 20         |
|      | C.         | Receive and File Budget Summary for FY 2015-16 Month Ending April 30, 2016  | 21              |
|      | D.         | Receive and File Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Schedule of Investments and Cash Equivalents, and Schedule of Investment Management Fees for the Period Ending March 31, 2016 | 22 – 27         |

#### A. Receive Annual Investment Presentation, Tortoise Capital 28 - 52B. Receive Annual Investment Presentation, Bridgewater, 53 - 78VCERA – Dan Gallagher, Chief Investment Officer Presentation of Investment Performance Report Month 79 - 86RECOMMENDED ACTION: Receive and file. Presentation of Investment Performance Report 87 - 167**RECOMMENDED ACTION: Receive and file.** B. 2016 Private Equity Investment Program Pacing Plan Discussion 168 - 186C. Recommendation to Approve Investments: \$60 Million in 187 - 190Harbourvest Dover Street Fund IX; \$60 Million Investment in Adams Street 2016 Global Fund; \$15 Million Investment in Drive Capital Fund II; Authorize an Amount Not to Exceed \$60,000 for Nossaman for Provision of the Necessary Attendant Legal Services; and Authorize Chair to Approve and Execute Required Documentation, Subject to Legal Review and Approval by Board Counsel Recommendation to Approve a \$60 Million Investment in Harbourvest Dover Street Fund IX 191 - 196a. NEPC Analysis 197 - 198b. Harbourvest Pitchbook 2. Recommendation to Approve a \$60 Million Investment in Adams Street 2016 Global Fund a. NEPC Analysis 199 - 204b. Adams Street Pitchbook 205 - 226Recommendation to Approve a \$15 Million Investment in Drive Capital Fund II

a. PowerPoint Presentation by Drive Capital Partners

227 - 245

| BOARD<br>BUSINE | _          |                                      |   | MAY 16, 2016   | AGENDA<br>PAGE 3 |
|-----------------|------------|--------------------------------------|---|--|------------------|
| VI.             | <u>IN\</u> | /ESTM                                | ENT INFORMA   | ATION (continued)  |                  |
|                 | C.         | 3.                                   | b. NEPC Ana   | alysis   | 246 – 252        |
|                 |            |                                      | c. Drive Capit  | tal Fact Sheet   | 253 – 254        |
|                 |            |                                      | Exceed \$60,00  | ion to Authorize an Amount Not to 00 for Nossaman for Provision of the endant Legal Services |                  |
|                 |            |                                      |   | r to Approve and Execute Required<br>n, Subject to Legal Review and Approva<br>usel          | al               |
| VII.            | <u>OL</u>  | D BUS                                | SINESS  |  |                  |
|                 | A.         | •                                    |   | uest to the County of Ventura for a Publica<br>of Market Based Premium Pay Items             | lly              |
| VIII.           | <u>INF</u> | ORMA                                 | ATIONAL   |  |                  |
|                 | A.         |                                      | RA's Analysis oʻ<br>iium Payment                                      | of the Recently Negotiated CNA Retention   | on 255 – 256     |
|                 | В.         | Lette                                | r from RREEF /  | America REIT III   | 257              |
|                 | C.         | The A                                | Ambachtsheer L  | Letter April 2016  | 258 – 261        |
|                 | D.         | Save                                 | the Date - Nos  | ssaman 2016 Fiduciaries' Forum   | 262              |
| IX.             | <u>CL</u>  | OSED.                                | SESSION   |  |                  |
|                 | A.         |                                      | FERENCE WIT<br>T. CODE SECT   | TH LABOR NEGOTIATORS,<br>TION 54957.6  |                  |
|                 |            | Tracy                                | / Towner  | Representatives:  Nossaman LLP (by teleconference)   |                  |
|                 |            | Retire<br>Retire<br>Retire<br>Retire | ement Administ<br>ement Chief Fir<br>ement General<br>ement Chief Inv | nancial Officer  |                  |
|                 |            |                                      |   |  |                  |

#### X. PUBLIC COMMENT

#### XI. STAFF COMMENT

#### XII. BOARD MEMBER COMMENT

#### XIII. <u>ADJOURNMENT</u>

#### VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

#### **BOARD OF RETIREMENT**

#### **DISABILITY MEETING**

#### May 2, 2016

#### **MINUTES**

**<u>DIRECTORS</u>** Tracy Towner, Chair, Alternate Safety Employee Member

**PRESENT:** William W. Wilson, Vice Chair, Public Member

Steven Hintz, Treasurer-Tax Collector

Mike Sedell, Public Member

Craig Winter, General Employee Member

Deanna McCormick, General Employee Member

Arthur E. Goulet, Retiree Member Will Hoag, Alternate Retiree Member

**DIRECTORS** Peter C. Foy, Public Member

**ABSENT:** Joseph Henderson, Public Member

Chris Johnston, Safety Employee Member

STAFF Lori Nemiroff, Assistant County Counsel

**PRESENT:** Linda Webb, Retirement Administrator

Henry Solis, Chief Financial Officer

Dan Gallagher, Chief Investment Officer

Donna Edwards, Retirement Benefits Specialist Chantell Garcia, Retirement Benefits Specialist

Nancy Jensen, Office Assistant

Stephanie Caiazza, Program Assistant

**PLACE:** Ventura County Employees' Retirement Association

Second Floor Boardroom 1190 South Victoria Avenue

Ventura, CA 93003

**TIME:** 9:00 a.m.

ITEM:

#### I. CALL TO ORDER

Chair Towner called the Disability Meeting of May 2, 2016, to order at 9:00 a.m.

#### II. APPROVAL OF AGENDA

MOTION: Approve.

Moved by Sedell, seconded by Winter.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No:

Absent: Foy, Henderson, Johnston

#### III. APPROVAL OF MINUTES

A. Business Meeting of April 18, 2016.

MOTION: Approve.

Moved by Hintz, seconded by Goulet.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No:

Absent: Foy, Henderson, Johnston

#### IV. RECEIVE AND FILE PENDING DISABILITY APPLICATION STATUS REPORT

MOTION: Approve.

Moved by Goulet, seconded by Wilson.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No:

Absent: Foy, Henderson, Johnston

#### V. APPLICATIONS FOR DISABILITY RETIREMENT

A. Application for Service Connected Disability Retirement, Edwin Ilano; Case No. 14-020

- 1. Application for Service Connected Disability Retirement
- 2. Medical Analysis and Recommendation by County of Ventura, Risk Management, to grant Application for Service Connected Disability Retirement and supporting documentation

3. Hearing Notice, dated April 19, 2016

Stephen D. Roberson, Attorney at Law, was present on behalf of County of Ventura Risk Management. Edwin Stone, Attorney at Law, was present on behalf of the applicant.

Both parties declined to make statements.

The following motion was made:

<u>MOTION</u>: Grant the Applicant, Edwin Ilano, a service connected disability retirement.

Moved by Sedell, seconded by Hintz.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No:

Absent: Foy, Henderson, Johnston

Both parties agreed to waive preparation of findings of fact and conclusions of law.

- B. Application for Service Connected Disability Retirement, Timothy Waite; Case No. 13-022
  - 1. Application for Service Connected Disability Retirement
  - 2. Medical Analysis and Recommendation by County of Ventura, Risk Management, to grant Application for Service Connected Disability Retirement and supporting documentation
  - 3. Hearing Notice, dated April 22, 2016

Carol A. Kempner, Attorney at Law, was present on behalf of County of Ventura Risk Management. Edwin Stone, Attorney at Law, was present on behalf of the applicant.

Both parties declined to make statements.

In response to an inquiry by Trustee Goulet, Ms. Kempner clarified that the job description submitted with Risk Management's analysis should have been an unannotated version, but it reflected the correct job description.

The following motion was made:

<u>MOTION</u>: Grant the Applicant, Timothy Waite, a service connected disability retirement.

Moved by Sedell, seconded by McCormick.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No:

Absent: Foy, Henderson, Johnston

Both parties agreed to waive preparation of findings of fact and conclusions of law.

#### VI. <u>NEW BUSINESS</u>

A. Quarterly Administrator's Report for January – March, 2016 **RECOMMENDED ACTION: Receive and file.** 

MOTION: Receive and file.

Moved by McCormick, seconded by Wilson.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No:

Absent: Foy, Henderson, Johnston

- B. Consideration of Quiet Period per Trustee Communications Policy
  - 1. Staff Letter
  - 2. Trustee Communications Policy

<u>MOTION</u>: Approve initiation of a quiet period during the search for a private equity separate account manager, which will cease upon the selection of an account manager, conclusion of the search or later action by the Board.

Moved by Hintz, seconded by Winter.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No: -

Absent: Foy, Henderson, Johnston

- C. Annual Review of Education and Travel Policy
  - 1. Staff Letter
  - 2. Education and Travel Policy Proposed (Redline)
  - 3. GSA Special Per Diem Rate Publication

The Board discussed changes to the policy in addition to those proposed in the redline draft.

In response to an inquiry by Trustee Sedell, the Board determined that "flight time" referred to the total time spent on the airplane(s).

Trustee Goulet requested that staff remove the reference to "premium economy(or equivalent)" from the table.

The Board directed Ms. Webb to add an annotation to the policy stating that the total cost of travel can be used to determine the amount that should be reimbursed.

<u>MOTION</u>: Approve the proposed changes to Education and Travel Policy.

Moved by Sedell, seconded by Wilson.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No:

Absent: Foy, Henderson, Johnston

- D. Policies to be Reviewed at May 16, 2016 Business Meeting
  - 1. Staff Letter

a. Charter: Board of Retirement

b. Charter: Chair

c. Charter: Vice Chair

d. Charter: Retirement Administrator

- e. Board Policy Development Process
- f. Monitoring and Reporting

g. Service Provider Selection

After discussion by the Board, the following motion was made:

<u>MOTION</u>: Receive and file this item, and appoint Trustee Hoag and Trustee McCormick to review the above policies and propose any changes at an upcoming board meeting.

Moved by Wilson, seconded by Winter.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No: -

Absent: Foy, Henderson, Johnston

E. Recommendation to Approve Ms. Nemiroff's Attendance at the NAPPA 2016 Legal Education Conference, June 21 – 24, 2016 in New Orleans, LA **RECOMMENDED ACTION: Approve.** 

MOTION: Approve.

Moved by Wilson, seconded by McCormick.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No.

Absent: Foy, Henderson, Johnston

F. Report on Pension Bridge Annual Conference, submitted by Trustee Goulet **RECOMMENDED ACTION: Receive and file.** 

MOTION: Receive and File.

Moved by McCormick, seconded by Winter.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No:

Absent: Foy, Henderson, Johnston

G. Consideration and Possible Approval of Merit Increase for Dan Gallagher, Chief Investment Officer

This item to be considered following "VII. Closed Session"

This item was postponed until the end of Closed Session item VII.A. Upon

returning from Closed Session item VII.A., Chair Towner stated that Mr. Gallagher was eligible for a merit increase of up to 3.8%.

<u>MOTION</u>: Approve merit increase of 3.8% for Chief Investment Officer Dan Gallagher.

Moved by Goulet, seconded by McCormick.

Vote: Motion carried

Yes: Goulet, Sedell, McCormick, Hintz, Winter, Wilson, Towner

No:

Absent: Foy, Henderson, Johnston

Trustee Sedell commended Mr. Gallagher on his job performance.

Chair Towner announced that the Board would proceed to items VIII. Public Comment, IX. Staff Comment, and X. Board Comment, then return to Closed Session item VII.B. before adjournment.

#### VII. <u>CLOSED SESSION</u>

- A. PUBLIC EMPLOYEE PERFORMANCE EVALUATION Title: Chief Investment Officer (Government Code section 54957(b)(1))
- B. CONFERENCE WITH LABOR NEGOTIATORS, GOVT. CODE SECTION 54957.6

#### <u>Agency Designated Representatives:</u>

Tracy Towner

Ashley Dunning of Nossaman LLP (by teleconference)

#### Prospective Unrepresented VCERA Employees:

Retirement Administrator

Retirement Chief Financial Officer

Retirement General Counsel

Retirement Chief Investment Officer

**Retirement Chief Operations Officer** 

#### VIII. PUBLIC COMMENT

None.

#### IX. STAFF COMMENT

Mr. Gallagher provided an organizational update on Sprucegrove and GMO, and stated that he agreed with NEPC that the recent changes would not be material to their operations.

Mr. Gallagher noted that the Board increased its allocation to private equity, and that staff and NEPC were moving forward on two tracks. The first track is a manager search to find a private equity separate account manager. The second, so as to ensure 2016 vintage year exposure, would be a recommendation for three private equity investments to be presented to the Board at the May 16, 2016 meeting.

Ms. Webb informed the Board that the first retiree payroll had been processed in V3. There was a one-time conversion error that resulted in over withholding of state taxes for a number of retirees. The majority affected had over withholding of \$25 or less. In the 35 cases where the amount was more than \$100, staff contacted the retirees to explain and offer to increase the following check. The error has been corrected going forward.

#### X. BOARD MEMBER COMMENT

Trustee Goulet requested that Mr. Gallagher provide the Board with a performance analysis of Sprucegrove and GMO at an upcoming meeting.

#### XI. ADJOURNMENT

The meeting was adjourned at 10:30 a.m.

LINDA WEBB, Retirement Administrator

Approved,

TRACY TOWNER, Chairman

Respectfully submitted,

## VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION REPORT OF REGULAR AND DEFERRED RETIREMENTS AND SURVIVORS CONTINUANCES

| _            |             |       |                       | <b>APRIL 2016</b> |                  |  |                   |
|--------------|-------------|-------|-----------------------|-------------------|------------------|--|-------------------|
| FIRST NAME   | LAST NAME   | G/S I | DATE OF<br>MEMBERSHIP | TOTAL<br>SERVICE  | OTHER<br>SERVICE | DEPARTMENT   | EFFECTIVE<br>DATE |
| REGULAR RE   | TIREMENTS:  |       |                       |                   |                  |  |                   |
| Kimberly     | Downard     | S     | 2/4/2013              | 6.22              |                  | Sheriff's Department (Non-Member Spouse, Deferred) | 04/01/16          |
| Kathleen J.  | Evans       | G     | 12/8/1991             | 23.67             | B=0.1918         | Resource Management Agency                         | 03/26/16          |
| Lisa         | Morris      | G     | 2/26/2006             | 5.40              |                  | Sheriff's Department                               | 11/22/11          |
| Josephine    | Pano        | G     | 8/16/1981             | 32.79             |                  | County Clerk-Recorder                              | 03/12/16          |
| Christine A. | Schrall     | G     | 1/14/1996             | 20.19             | B=0.00340        | Sheriff's Department                               | 03/19/16          |
| Jennifer     | Weiss       | G     | 7/10/1988             | 8.28 *            | C=18.0           | Child Support Services (Deferred)                  | 02/29/16          |
| DEFERRED R   | ETIREMENTS: |       |                       |                   |                  |  |                   |
| Raquel       | Amarales    | G     | 09/25/2005            | 9.93              |                  | Health Care Agency                                 | 04/12/2016        |
| Lorena       | Banales     | G     | 12/03/2006            | 9.10              |                  | Human Services Agency                              | 03/17/2016        |
| Rachelle     | Bobolts     | G     | 11/26/2007            | 6.82              |                  | Treasurer - Tax Collector                          | 03/17/2016        |
| Judith       | Campos      | G     | 08/19/2007            | 8.55              |                  | General Services Agency                            | 04/19/2016        |
| Jessic       | Creadick    | G     | 06/18/2006            | 7.14              |                  | Health Care Agency                                 | 04/09/2016        |
| Travis       | Foland      | G     | 04/19/2009            | 6.94              |                  | Sheriff's Department                               | 04/09/2016        |
| Lauryn       | Fuller      | G     | 09/12/2010            | 5.06              |                  | Health Care Agency                                 | 03/11/2016        |
| Erika        | Lorenzen    | G     | 09/24/2006            | 10.41             |                  | District Attorney                                  | 04/19/2016        |
| Dennis W.    | Walsh       | G     | 01/13/2008            | 7.13              |                  | General Services Agency                            | 03/18/2016        |

#### **SURVIVORS' CONTINUANCES:**

Garcia Micaela Kurta Esther

- \* = Member Establishing Reciprocity
- A = Previous Membership
- B = Other County Service (eg Extra Help)
- C = Reciprocal Service
- D = Public Service

Time: 103745 User:

#### **Ventura County Retirement Assn**

### **Check Register - Standard**

Period: 10-16 As of: 5/3/2016

Page: Report: Company: VCERA

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| Company:              | VCE           | RA                 |  |       |                |            |             |                   |                 |                   |                |
| Acct / Sub:<br>026315 | 1002<br>VC    | 4/4/2016           | 00<br>F3036S<br>ESTELA H. DE DIAZ      | 10-16 | 10-16          | 021192     | VO          | DEATH BENEFIT     | 3/18/2016       | 0.00              | -3,919.05      |
| 222242                |               | 000050             |  |       |                |            |             |                   |                 | Check Total       | -3,919.05      |
| 026316<br>026359      | СК            | 026358<br>4/4/2016 | Missing<br>F3036S<br>ESTELA H. DE DIAZ | 10-16 |                | 021192     | VO          | DEATH BENEFIT     | 3/18/2016       | 0.00              | 3,919.05       |
| 026360                | СК            | 4/6/2016           | F120684S<br>SHARON FISCHER             | 10-16 |                | 021237     | VO          | DEATH BENEFIT     | 4/6/2016        | 0.00              | 4,622.02       |
| 026361                | СК            | 4/6/2016           | F120684R<br>FIRST CLEARING LLC         | 10-16 |                | 021238     | VO          | ROLLOVER          | 4/6/2016        | 0.00              | 82,344.70      |
| 026362                | СК            | 4/6/2016           | 990006<br>MICHAEL SEDELL               | 10-16 |                | 021239     | VO          | TRAVEL REIMB      | 4/6/2016        | 0.00              | 54.00          |
| 026363                | СК            | 4/6/2016           | ADP<br>ADP, LLC                        | 10-16 |                | 021240     | VO          | ADMIN EXP         | 4/6/2016        | 0.00              | 12,378.14      |
| 026364                | СК            | 4/6/2016           | FEDEX<br>FEDEX                         | 10-16 |                | 021241     | VO          | ADMIN EXP         | 4/6/2016        | 0.00              | 48.95          |
| 026365                | СК            | 4/6/2016           | HARRIS<br>HARRIS WATER CONDITIONI      | 10-16 |                | 021242     | VO          | ADMIN EXP         | 4/6/2016        | 0.00              | 154.50         |
| 026366                | СК            | 4/6/2016           | NEPC<br>NEPC, LLC                      | 10-16 |                | 021243     | VO          | INVESTMENT FEES   | 4/6/2016        | 0.00              | 72,500.00      |
| 026367                | СК            | 4/6/2016           | VITECH<br>VITECH SYSTEMS GROUP, IN     | 10-16 |                | 021244     | VO          | PAS               | 4/6/2016        | 0.00              | 7,117.36       |
| 026368                | СК            | 4/6/2016           | VOLT<br>VOLT                           | 10-16 |                | 021245     | VO          | ADMIN EXP         | 4/6/2016        | 0.00              | 2,970.02       |
| 026369                | СК            | 4/6/2016           | 124709<br>LINDA WEBB                   | 10-16 |                | 021246     | VO          | REIMBURSEMENT     | 4/6/2016        | 0.00              | 161.24         |

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#### **Ventura County Retirement Assn**

#### **Check Register - Standard**

Period: 10-16 As of: 5/3/2016

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|--------------|---------------|---------------|-----------------------------------|-------|----------------|------------|-------------|-------------------|-----------------|-------------------|----------------|
| 026370       | VC            | 4/13/2016     | 100748<br>CHRIS JOHNSTON          | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026371       | VC            | 4/13/2016     | 990002<br>ARTHUR E. GOULET        | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026372       | VC            | 4/13/2016     | AYALA<br>IRENE P. AYALA           | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026373       | VC            | 4/13/2016     | CMP<br>CMP & ASSOCIATES, INC      | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026374       | VC            | 4/13/2016     | MEGAPATH<br>GLOBAL CAPACITY       | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026375       | VC            | 4/13/2016     | HANSONBRID<br>HANSON BRIDGETT LLP | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026376       | VC            | 4/13/2016     | HEXAVEST<br>HEXAVEST INC          | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026377       | VC            | 4/13/2016     | LINEA<br>LINEA SOLUTIONS          | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026378       | VC            | 4/13/2016     | SEGAL<br>SEGAL CONSULTING         | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026379       | VC            | 4/13/2016     | SPRUCE<br>SPRUCEGROVE INVESTMEN   |       | 10-16          |            |             |                   |                 |                   |                |
| 026380       | VC            | 4/13/2016     | TWC<br>TIME WARNER CABLE          | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026381       | VC            | 4/13/2016     | VSG<br>VSG HOSTING, INC           | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026382       | VC            | 4/13/2016     | 100748<br>CHRIS JOHNSTON          | 10-16 | 10-16          |            |             |                   |                 |                   |                |
| 026383       | VC            | 4/13/2016     | 990002<br>ARTHUR E. GOULET        | 10-16 | 10-16          |            |             |                   |                 |                   |                |

Time: 103745 User:

#### **Ventura County Retirement Assn**

#### **Check Register - Standard** Period: 10-16 As of: 5/3/2016

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|--------------|---------------|---------------|-----------------------------------|------------|----------------|------------|-------------|-------------------|-----------------|-------------------|----------------|
| 026384       | VC            | 4/13/2016     | AYALA<br>IRENE P. AYALA           | 10-16      | 10-16          |            |             |                   |                 |                   |                |
| 026385       | VC            | 4/13/2016     | CMP<br>CMP & ASSOCIATES, INC      | 10-16      | 10-16          |            |             |                   |                 |                   |                |
| 026386       | VC            | 4/13/2016     | HANSONBRID<br>HANSON BRIDGETT LLP | 10-16      | 10-16          |            |             |                   |                 |                   |                |
| 026387       | VC            | 4/13/2016     | HEXAVEST<br>HEXAVEST INC          | 10-16      | 10-16          |            |             |                   |                 |                   |                |
| 026388       | VC            | 4/13/2016     | LINEA<br>LINEA SOLUTIONS          | 10-16      | 10-16          |            |             |                   |                 |                   |                |
| 026389       | VC            | 4/13/2016     | MEGAPATH<br>GLOBAL CAPACITY       | 10-16      | 10-16          |            |             |                   |                 |                   |                |
| 026390       | VC            | 4/13/2016     | SEGAL<br>SEGAL CONSULTING         | 10-16      | 10-16          |            |             |                   |                 |                   |                |
| 026391       | VC            | 4/13/2016     | SPRUCE<br>SPRUCEGROVE INVESTMEN   | 10-16<br>N | 10-16          |            |             |                   |                 |                   |                |
| 026392       | VC            | 4/13/2016     | TWC<br>TIME WARNER CABLE          | 10-16      | 10-16          |            |             |                   |                 |                   |                |
| 026393       | VC            | 4/13/2016     | VSG<br>VSG HOSTING, INC           | 10-16      | 10-16          |            |             |                   |                 |                   |                |
| 026394       | CK            | 4/13/2016     | 100748<br>CHRIS JOHNSTON          | 10-16      |                | 021247     | VO          | MILEAGE REIMB     | 4/13/2016       | 0.00              | 194.94         |
| 026395       | CK            | 4/13/2016     | 990002<br>ARTHUR E. GOULET        | 10-16      |                | 021248     | VO          | TRAVEL REIMB      | 4/13/2016       | 0.00              | 1,061.06       |
| 026396       | СК            | 4/13/2016     | AYALA<br>IRENE P. AYALA           | 10-16      |                | 021249     | VO          | ADMIN EXP         | 4/13/2016       | 0.00              | 875.00         |

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|--------------|---------------|---------------|-----------------------------------|--------------------------|------------|-------------|-------------------|-----------------|-------------------|----------------|
| 026397       | CK            | 4/13/2016     | CMP<br>CMP & ASSOCIATES, INC      | 10-16                    | 021250     | VO          | IT/PAS            | 4/13/2016       | 0.00              | 33,527.50      |
| 026398       | CK            | 4/13/2016     | MEGAPATH<br>GLOBAL CAPACITY       | 10-16                    | 021251     | VO          | IT/PAS            | 4/13/2016       | 0.00              | 603.63         |
| 026399       | CK            | 4/13/2016     | HANSONBRID<br>HANSON BRIDGETT LLP | 10-16                    | 021252     | VO          | LEGAL FEES        | 4/13/2016       | 0.00              | 2,296.61       |
| 026400       | CK            | 4/13/2016     | HEXAVEST<br>HEXAVEST INC          | 10-16                    | 021253     | VO          | INVESTMENT FEES   | 4/13/2016       | 0.00              | 86,524.95      |
| 026401       | CK            | 4/13/2016     | LINEA<br>LINEA SOLUTIONS          | 10-16                    | 021254     | VO          | IT/PAS            | 4/13/2016       | 0.00              | 62,708.75      |
| 026402       | СК            | 4/13/2016     | SEGAL<br>SEGAL CONSULTING         | 10-16                    | 021255     | VO          | ACTUARY FEES      | 4/13/2016       | 0.00              | 22,498.00      |
| 026403       | СК            | 4/13/2016     | SPRUCE<br>SPRUCEGROVE INVESTMEN   | 10-16<br>N               | 021256     | VO          | IINVESTMENT FEE   | 4/13/2016       | 0.00              | 51,471.50      |
| 026404       | СК            | 4/13/2016     | TWC<br>TIME WARNER CABLE          | 10-16                    | 021257     | VO          | IT                | 4/13/2016       | 0.00              | 442.12         |
| 026405       | CK            | 4/13/2016     | VSG<br>VSG HOSTING, INC           | 10-16                    | 021258     | VO          | PAS               | 4/13/2016       | 0.00              | 19,500.00      |
| 026406       | CK            | 4/20/2016     | AT&T<br>AT & T MOBILITY           | 10-16                    | 021259     | VO          | IT                | 4/20/2016       | 0.00              | 315.96         |
| 026407       | CK            | 4/20/2016     | ACCESS<br>ACCESS INFORMATION MAN  | 10-16<br>I               | 021260     | VO          | ADMIN EXP         | 4/20/2016       | 0.00              | 338.03         |
| 026408       | CK            | 4/20/2016     | BARNEY<br>A.B.U. COURT REPORTING, | 10-16<br>II              | 021261     | VO          | ADMIN EXP         | 4/20/2016       | 0.00              | 315.00         |
| 026409       | CK            | 4/20/2016     | BOFA<br>BUSINESS CARD             | 10-16                    | 021262     | VO          | ADMIN/PAS/IT      | 4/20/2016       | 0.00              | 388.94         |
| 026410       | СК            | 4/20/2016     | CDW GOVERN<br>CDW GOVERNMENT      | 10-16                    | 021263     | VO          | IT                | 4/20/2016       | 0.00              | 1,235.89       |

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| 026411       | СК            | 4/20/2016     | FEDEX<br>FEDEX                     | 10-16           | 021264     | VO          | ADMIN EXP         | 4/20/2016       | 0.00              | 35.69          |
| 026412       | CK            | 4/20/2016     | MBS<br>MANAGED BUSINESS SOLUT      | 10-16           | 021265     | VO          | PAS               | 4/20/2016       | 0.00              | 590.00         |
| 026413       | СК            | 4/20/2016     | REAMS<br>REAMS ASSET MANAGEMEN     | 10-16<br>I      | 021266     | VO          | INVESTMENT FEES   | 4/20/2016       | 0.00              | 128,680.00     |
| 026414       | СК            | 4/20/2016     | SACRS<br>SACRS                     | 10-16           | 021267     | VO          | ADMIN EXP         | 4/20/2016       | 0.00              | 600.00         |
| 026415       | СК            | 4/20/2016     | CORPORATE<br>STAPLES ADVANTAGE     | 10-16           | 021268     | VO          | ADMIN EXP         | 4/20/2016       | 0.00              | 543.28         |
| 026416       | СК            | 4/20/2016     | SHRED-IT<br>SHRED-IT USA LLC       | 10-16           | 021269     | VO          | ADMIN EXP         | 4/20/2016       | 0.00              | 134.40         |
| 026417       | CK            | 4/20/2016     | SUPERIOR<br>SUPERIOR COURT REPORTE | 10-16           | 021270     | VO          | LEGAL FEES        | 4/20/2016       | 0.00              | 197.50         |
| 026418       | CK            | 4/20/2016     | VOLT<br>VOLT                       | 10-16           | 021271     | VO          | ADMIN EXP         | 4/20/2016       | 0.00              | 1,507.98       |
| 026419       | СК            | 4/20/2016     | WALTER<br>BNY MELLON INV MGMNT CA  | 10-16           | 021272     | VO          | INVESTMENT FEES   | 4/20/2016       | 0.00              | 198,694.46     |
| 026420       | CK            | 4/20/2016     | WOLTERS<br>WOLTERS KLUWER LAW & B  | 10-16           | 021273     | VO          | ADMIN EXP         | 4/20/2016       | 0.00              | 521.38         |
| 026421       | СК            | 4/20/2016     | 990002<br>ARTHUR E. GOULET         | 10-16           | 021274     | VO          | MILEAGE REIMB     | 4/20/2016       | 0.00              | 36.72          |
| 026422       | СК            | 4/27/2016     | 3013837<br>MICHAEL RHINEHEART      | 10-16           | 021275     | VO          | PENSION PAYMENT   | 4/27/2016       | 0.00              | 62.52          |
| 026423       | СК            | 4/27/2016     | 3021238<br>CHRISTINE A. SCHRALL    | 10-16           | 021276     | VO          | PENSION PAYMENT   | 4/27/2016       | 0.00              | 3,084.79       |

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| 026424       | СК            | 4/27/2016     | 3024037<br>KATHLEEN J. EVANS        | 10-16                   | 021277        | VO          | PENSION PAYMENT   | 4/27/2016       | 0.00              | 3,133.09       |
| 026425       | СК            | 4/27/2016     | 3036031<br>JOSEPHINE PANO           | 10-16                   | 021278        | VO          | PENSION PAYMENT   | 4/27/2016       | 0.00              | 5,725.07       |
| 026426       | CK            | 4/27/2016     | ADP<br>ADP, LLC                     | 10-16                   | 021279        | VO          | ADMIN EXP         | 4/27/2016       | 0.00              | 12,442.00      |
| 026427       | СК            | 4/27/2016     | HANSONBRID<br>HANSON BRIDGETT LLP   | 10-16                   | 021280        | VO          | LEGAL FEES        | 4/27/2016       | 0.00              | 211.50         |
| 026428       | СК            | 4/27/2016     | LOOMIS<br>LOOMIS, SAYLES & CO., LP  | 10-16                   | 021281        | VO          | INVESTMENT FEES   | 4/27/2016       | 0.00              | 112,871.70     |
| 026429       | СК            | 4/27/2016     | MF<br>M.F. DAILY CORPORATION        | 10-16                   | 021282        | VO          | ADMIN EXP         | 4/27/2016       | 0.00              | 16,663.48      |
| 026430       | СК            | 4/27/2016     | SAFEGUARD<br>SAFEGUARD BUSINESS SYS | 10-16<br>S              | 021283        | VO          | ADMIN EXP         | 4/27/2016       | 0.00              | 218.31         |
| 026431       | СК            | 4/27/2016     | SBS<br>SBS GROUP                    | 10-16                   | 021284        | VO          | IT                | 4/27/2016       | 0.00              | 87.50          |
| 026432       | СК            | 4/27/2016     | CORPORATE<br>STAPLES ADVANTAGE      | 10-16                   | 021285        | VO          | ADMIN EXP         | 4/27/2016       | 0.00              | 379.28         |
| 026433       | СК            | 4/27/2016     | VITECH<br>VITECH SYSTEMS GROUP, I   | 10-16<br>N              | 021286        | VO          | PAS               | 4/27/2016       | 0.00              | 152,500.00     |
| 026434       | СК            | 4/27/2016     | VOLT<br>VOLT                        | 10-16                   | 021287        | VO          | ADMIN EXP         | 4/27/2016       | 0.00              | 1,978.67       |
| 026435       | СК            | 4/28/2016     | 3010435<br>LIDIA HARRISON           | 10-16                   | 021288        | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 1,960.61       |
| 026436       | СК            | 4/28/2016     | 3011808<br>KAREN GUIDI              | 10-16                   | 021289        | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 736.86         |
| 026437       | СК            | 4/28/2016     | 3019854<br>KENNETH KIPP             | 10-16                   | 021290        | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 4,000.00       |

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| 026438       | СК            | 4/28/2016     | 3023845<br>SHIRLEY REYNOLDS   | 10-16          |       | 021291     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 4,704.31       |
| 026439       | CK            | 4/28/2016     | 3023892<br>JOHN BURTCHELL     | 10-16          |       | 021292     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 3,641.93       |
| 026440       | CK            | 4/28/2016     | 3027427<br>RICARDO ALANIZ     | 10-16          |       | 021293     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 500.00         |
| 026441       | CK            | 4/28/2016     | 3031014<br>NOLAN WESTERN      | 10-16          |       | 021294     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 2,698.30       |
| 026442       | CK            | 4/28/2016     | 3035112<br>ELEANOR HATTEN     | 10-16          |       | 021295     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 1,724.48       |
| 026443       | СК            | 4/28/2016     | 3047002<br>ELAINE WRIGHT      | 10-16          |       | 021296     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 1,220.17       |
| 026444       | CK            | 4/28/2016     | 3047002A<br>ELAINE WRIGHT     | 10-16          |       | 021297     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 2,630.06       |
| 026445       | СК            | 4/28/2016     | 3046868<br>BARBARA BORGERDING | 10-16          |       | 021298     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 935.13         |
| 026446       | СК            | 4/28/2016     | 3047397<br>SALLY HOGAN        | 10-16          | 11-16 | 021299     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 1,326.71       |
| 026447       | CK            | 4/28/2016     | 3049431<br>DIANE EDGING       | 10-16          |       | 021300     | VO          | PENSION PAYMENT   | 4/28/2016       | 0.00              | 916.47         |

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|--------------|---------------|---------------|--------------------------|-----------------------|--------------|-------------|-------------------|-----------------|-------------------|----------------|
| Check Count: |               | 90            |                          |                       |              |             |                   | Acct Sub Total: |                   | 1,134,543.16   |
|              |               |               |                          | Check Type            | С            | ount        | Amount Paid       |                 |                   |                |
|              |               |               |                          | Regular               |              | 65          | 1,138,462.21      |                 |                   |                |
|              |               |               |                          | Hand                  |              | 0           | 0.00              |                 |                   |                |
|              |               |               |                          | Electronic Payment    |              | 0           | 0.00              |                 |                   |                |
|              |               |               |                          | Void                  |              | 25          | -3,919.05         |                 |                   |                |
|              |               |               |                          | Stub                  |              | 0           | 0.00              |                 |                   |                |
|              |               |               |                          | Zero                  |              | 0           | 0.00              |                 |                   |                |
|              |               |               |                          | Mask                  |              | 0           | 0.00              |                 |                   |                |
|              |               |               |                          | Total:                |              | 90          | 1,134,543.16      |                 |                   |                |
|              |               |               |                          |                       | Company Dis  | sc Total    | 0.00              | Company Total   |                   | 1,134,543.16   |

# VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION BUDGET SUMMARY FISCAL YEAR 2015-2016 April 2016 - 83.33% of Fiscal Year Expended

| EXPENDITURE DESCRIPTIONS                               | Adopted<br>2015/2016<br><u>Budget</u> |      | Adjusted<br>2015/2016<br><u>Budget</u> | <u> Apr-16</u>      | ,  | Year to Date Expended   |    | Available<br><u>Balance</u> | Percent<br>Expended |
|--|---------------------------------------|------|--|---------------------|----|-------------------------|----|-----------------------------|---------------------|
| Salaries & Benefits:                                   |                                       |      |  |                     |    |                         |    |                             |                     |
| Salaries   | \$ 2,322,000.0                        | _    | , ,                                    | \$<br>168,762.90    | \$ | 1,746,939.87            | \$ | 575,060.13                  | 75.23%              |
| Extra-Help   | 50,000.0                              |      | 50,000.00                              | 6,456.67            |    | 69,209.41               |    | (19,209.41)                 | 138.42%             |
| Overtime   | 3,000.0                               |      | 3,000.00                               | 0.00                |    | 101.99                  |    | 2,898.01                    | 3.40%               |
| Supplemental Payments                                  | 70,800.0                              |      | 70,800.00                              | 4,992.68            |    | 51,336.38               |    | 19,463.62                   | 72.51%              |
| Vacation Redemption                                    | 111,400.0                             |      | 111,400.00                             | 9,702.57            |    | 73,555.39               |    | 37,844.61                   | 66.03%              |
| Retirement Contributions                               | 427,700.0                             |      | 427,700.00                             | 32,540.49           |    | 322,575.84              |    | 105,124.16                  | 75.42%              |
| OASDI Contributions                                    | 139,800.0                             |      | 139,800.00                             | 11,172.60           |    | 105,514.72              |    | 34,285.28                   | 75.48%              |
| FICA-Medicare  | 36,400.0                              |      | 36,400.00                              | 2,612.93            |    | 26,727.53               |    | 9,672.47                    | 73.43%              |
| Retiree Health Benefit Group Health Insurance          | 8,700.0<br>201,000.0                  |      | 8,700.00<br>201,000.00                 | 794.15<br>14,256.00 |    | 8,241.80<br>152,262.91  |    | 458.20<br>48.737.09         | 94.73%<br>75.75%    |
| Life Insurance/Mgmt                                    | 1,100.0                               |      | 1,100.00                               | 72.66               |    | 902.45                  |    | 197.55                      | 82.04%              |
| Unemployment Insurance                                 | 2,900.0                               |      | 2,900.00                               | 204.59              |    | 2,119.20                |    | 780.80                      | 73.08%              |
| Management Disability Insurance                        | 18,000.0                              |      | 18,000.00                              | 1,189.56            |    | 14,440.02               |    | 3,559.98                    | 80.22%              |
| Worker' Compensation Insurance                         | 18,700.0                              |      | 18,700.00                              | 1,364.58            |    | 13,935.32               |    | 4,764.68                    | 74.52%              |
| 401K Plan Contribution                                 | 47,500.0                              |      | 47,500.00                              | 3,609.72            |    | 36,150.38               |    | 11,349.62                   | 76.11%              |
| Transfers In   | 103,400.0                             |      | 103,400.00                             | 10,697.28           |    | 99,947.24               |    | 3,452.76                    | 96.66%              |
| Transfers Out  | (103,400.0                            |      | (103,400.00)                           | (10,697.28)         |    | (99,947.24)             |    | (3,452.76)                  | 96.66%              |
|  | (100,400.0                            | -,   | (.30,100.00)                           | (.0,007.20)         |    | (55,577.24)             |    | (5, 152.10)                 | 20.0070             |
| Total Salaries & Benefits                              | \$ 3,459,000.0                        | 0 \$ | 3,459,000.00                           | \$<br>257,732.10    | \$ | 2,624,013.21            | \$ | 834,986.79                  | 75.86%              |
| Services & Supplies:                                   |                                       |      |  |                     |    |                         |    |                             |                     |
| Telecommunication Services - ISF                       | \$ 36,500.0                           | o \$ | 36,500.00                              | \$<br>3,259.97      | \$ | 29,051.00               | \$ | 7,449.00                    | 79.59%              |
| General Insurance - ISF                                | 12,500.0                              | 0    | 12,500.00                              | 0.00                |    | 6,260.00                |    | 6,240.00                    | 50.08%              |
| Office Equipment Maintenance                           | 2,000.0                               | 0    | 2,000.00                               | 0.00                |    | 0.00                    |    | 2,000.00                    | 0.00%               |
| Membership and Dues                                    | 10,400.0                              | 0    | 10,400.00                              | 0.00                |    | 9,770.00                |    | 630.00                      | 93.94%              |
| Education Allowance                                    | 10,000.0                              | 0    | 10,000.00                              | 0.00                |    | 3,795.84                |    | 6,204.16                    | 37.96%              |
| Cost Allocation Charges                                | 17,000.0                              | 0    | 17,000.00                              | 8,505.00            |    | 17,011.00               |    | (11.00)                     | 100.06%             |
| Printing Services - Not ISF                            | 4,300.0                               |      | 4,300.00                               | 0.00                |    | 3,000.77                |    | 1,299.23                    | 69.79%              |
| Books & Publications                                   | 2,500.0                               |      | 2,500.00                               | 564.38              |    | 1,892.51                |    | 607.49                      | 75.70%              |
| Office Supplies  | 20,000.0                              |      | 20,000.00                              | 1,319.87            |    | 13,452.60               |    | 6,547.40                    | 67.26%              |
| Postage & Express                                      | 60,000.0                              |      | 60,000.00                              | 12,567.06           |    | 45,309.95               |    | 14,690.05                   | 75.52%              |
| Printing Charges - ISF                                 | 13,300.0                              |      | 13,300.00                              | 0.00                |    | 10,409.61               |    | 2,890.39                    | 78.27%              |
| Copy Machine Services - ISF                            | 6,500.0                               |      | 6,500.00                               | 957.42              |    | 2,447.55                |    | 4,052.45                    | 37.65%              |
| Board Member Fees                                      | 12,000.0                              |      | 12,000.00                              | 1,700.00            |    | 8,800.00                |    | 3,200.00                    | 73.33%              |
| Professional Services                                  | 1,002,300.0                           |      | 1,002,300.00                           | 61,376.44           |    | 769,151.21              |    | 233,148.79                  | 76.74%              |
| Storage Charges  | 4,500.0                               |      | 4,500.00                               | 338.03              |    | 2,976.61                |    | 1,523.39                    | 66.15%              |
| Equipment Office Leads Pormants                        | 5,000.0                               |      | 5,000.00                               | 0.00                |    | 0.00                    |    | 5,000.00<br>38,718.35       | 0.00%               |
| Office Lease Payments                                  | 205,200.0<br>10,000.0                 |      | 205,200.00<br>10,000.00                | 16,663.48           |    | 166,481.65<br>10,255.54 |    | (255.54)                    | 81.13%<br>102.56%   |
| Private Vehicle Mileage Conference, Seminar and Travel | 100,000.0                             |      | 100,000.00                             | 280.26<br>1,965.19  |    | 47,709.31               |    | 52,290.69                   | 47.71%              |
| Furniture  | 24,000.0                              |      | 24,000.00                              | 0.00                |    | 2,478.61                |    | 21,521.39                   | 10.33%              |
|  | 6,900.0                               |      | 6,900.00                               | 775.50              |    | 3,676.50                |    | 3,223.50                    | 53.28%              |
| Facilities Charges Judgement & Damages                 | 0.0                                   |      | 0.00                                   | 0.00                |    | 1,838.57                |    | (1,838.57)                  | #DIV/0!             |
| Transfers In   | 10.900.0                              |      | 10,900.00                              | 1,130.42            |    | 10,561.76               |    | 338.24                      | 96.90%              |
| Transfers Out  | (10,900.0                             | _    | (10,900.00)                            | (1,130.42)          |    | (10,561.76)             |    | (338.24)                    | 96.90%              |
| Total Services & Supplies                              | \$ 1,564,900.0                        |      | 1,564,900.00                           | \$<br>110,272.60    | \$ | 1,155,768.83            | \$ | 409,131.17                  | 73.86%              |
| Total Sal, Ben, Serv & Supp                            | \$ 5,023,900.0                        | 0 \$ | 5,023,900.00                           | \$<br>368,004.70    | \$ | 3,779,782.04            | \$ | 1,244,117.96                | 75.24%              |
| <u>Technology:</u>                                     |                                       |      |  |                     |    |                         |    |                             |                     |
| Computer Hardware                                      | \$ 91,600.0                           | 3    | 91,600.00                              | \$<br>-             |    | 72,464.89               | \$ | 19,135.11                   | 79.11%              |
| Computer Software                                      | 204,400.0                             |      | 204,400.00                             | 150,689.90          |    | 174,478.01              | Ė  | 29,921.99                   | 85.36%              |
| Systems & Application Support                          | 693,100.0                             |      | 693,100.00                             | 66,875.76           |    | 519,988.99              |    | 173,111.01                  | 75.02%              |
| Pension Administration System                          | 2,660,500.0                           | 0    | 2,660,500.00                           | 62,556.11           |    | 1,780,393.86            |    | 880,106.14                  | 66.92%              |
| Total Technology                                       | \$ 3,649,600.0                        | 0 \$ | 3,649,600.00                           | \$<br>280,121.77    | \$ | 2,547,325.75            | \$ | 1,102,274.25                | 69.80%              |
| Contingency  | \$ 812,400.0                          | 0 \$ | 812,400.00                             | \$<br>-             | \$ | -                       | \$ | 812,400.00                  | 0.00%               |
| Total Current Year                                     | \$ 9,485,900.0                        | 5 \$ | 9,485,900.00                           | \$<br>648,126.47    | \$ | 6,327,107.79            | \$ | 3,158,792.21                | 66.70%              |

#### VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION STATEMENT OF FIDUCIARY NET POSITION MARCH 31, 2016 (UNAUDITED)

#### **ASSETS**

| CASH & CASH EQUIVALENTS  | \$311,043,133   |
|--|---|
| DECENTARI EC   |   |
| RECEIVABLES  |   |
| EMPLOYER/EMPLOYEE CONTRIBUTIONS ACCRUED INTEREST AND DIVIDENDS SECURITY SALES MISCELLANEOUS TOTAL RECEIVABLES  | 142<br>2,638,786<br>8,873,086<br>2,950<br>11,514,964  |
| INVESTMENTS AT FAIR VALUE  |   |
| DOMESTIC EQUITY SECURITIES DOMESTIC EQUITY INDEX FUNDS INTERNATIONAL EQUITY SECURITIES INTERNATIONAL EQUITY INDEX FUNDS GLOBAL EQUITY PRIVATE EQUITY DOMESTIC FIXED INCOME - CORE PLUS DOMESTIC FIXED INCOME - U.S. INDEX GLOBAL FIXED INCOME REAL ESTATE ALTERNATIVES CASH OVERLAY - PARAMETRIC TOTAL INVESTMENTS | 116,139,449 1,193,698,346 334,460,464 237,902,996 418,371,834 154,516,050 632,460,435 144,426,324 42,196,622 365,873,002 350,831,939 27,109 3,990,904,572 |
| CAPITAL ASSET - SOFTWARE DEVELOPMENT   | 9,426,005   |
| TOTAL ASSETS   | 4,322,888,674   |
| LIABILITIES  |   |
| SECURITY PURCHASES PAYABLE ACCOUNTS PAYABLE PREPAID CONTRIBUTIONS  | 2,682,431<br>1,717,541<br>33,936,708  |
| TOTAL LIABILITIES  | 38,336,680  |
| NET POSITION RESTRICTED FOR PENSIONS   | \$4,284,551,994   |

#### VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION STATEMENT OF CHANGES IN FIDUCIARY NET POSITION FOR THE NINE MONTHS ENDED MARCH 31, 2016 (UNAUDITED)

#### **ADDITIONS**

| CONTRIBUTIONS EMPLOYER EMPLOYEE TOTAL CONTRIBUTIONS   | \$131,076,419<br>51,466,804<br>182,543,223   |
|---|--|
| INVESTMENT INCOME  NET APPRECIATION (DEPRECIATION) IN FAIR VALUE OF INVESTMENTS INTEREST INCOME DIVIDEND INCOME REAL ESTATE OPERATING INCOME, NET SECURITY LENDING INCOME TOTAL INVESTMENT INCOME | (116,508,585)<br>11,074,829<br>28,768,755<br>12,431,512<br>164,593<br>(64,068,896) |
| LESS INVESTMENT EXPENSES  MANAGEMENT & CUSTODIAL FEES SECURITIES LENDING BORROWER REBATES SECURITIES LENDING MANAGEMENT FEES TOTAL INVESTMENT EXPENSES  | 10,677,257<br>56,442<br>36,127<br><b>10,769,826</b>                                |
| NET INVESTMENT INCOME/(LOSS)  | (74,838,722)   |
| TOTAL ADDITIONS   | 107,704,501  |
| DEDUCTIONS  |  |
| BENEFIT PAYMENTS MEMBER REFUNDS ADMINISTRATIVE EXPENSES TOTAL DEDUCTIONS  | 178,665,341<br>3,627,600<br>5,654,754<br>187,947,694                               |
| NET INCREASE/(DECREASE)   | (80,243,194)   |
| NET POSITION RESTRICTED FOR PENSIONS  |  |
| BEGINNING OF YEAR   | 4,364,795,188  |
| ENDING BALANCE  | \$4,284,551,994  |

# VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION INVESTMENTS AND CASH EQUIVALENTS MARCH 31, 2016 (UNAUDITED)

| EQUITY DOMESTIC EQUITY                                   |                                   |                |
|--|-----------------------------------|----------------|
| WESTERN ASSET INDEX PLUS                                 | \$116,139,449                     | \$24,068,851   |
| TOTAL DOMESTIC EQUITY                                    | 116,139,449                       | 24,068,851     |
|  | .,,,,,,,,,,                       | ,,             |
| DOMESTIC INDEX FUNDS BLACKROCK - US EQUITY MARKET        | 1,148,940,523                     | 0              |
| BLACKROCK - US EQUITY MARKET BLACKROCK - EXTENDED EQUITY | 1, 148,940,523<br>44,757,823      | 0<br>1         |
| TOTAL EQUITY INDEX FUNDS                                 | 1,193,698,346                     | 1              |
| INTERNATIONAL EQUITY                                     |                                   |                |
| SPRUCEGROVE  | 165,287,365                       | 0              |
| HEXAVEST   | 76,709,883                        | 0              |
| WALTER SCOTT   | 92,463,216                        | 0              |
| TOTAL INTERNATIONAL EQUITY                               | 334,460,464                       | 0              |
| INTERNATIONAL INDEX FUNDS                                |                                   |                |
| BLACKROCK - ACWIXUS                                      | 237,902,996                       | 0              |
| TOTAL INTERNATIONAL INDEX FUNDS                          | 237,902,996                       | 0              |
| GLOBAL EQUITY  |                                   |                |
| GRANTHAM MAYO AND VAN OTTERLOO (GMO)                     | 199,419,351                       | 0              |
| BLACKROCK - GLOBAL INDEX                                 | 218,952,483                       | 0              |
| TOTAL GLOBAL EQUITY                                      | 418,371,834                       | 0              |
| PRIVATE EQUITY   |                                   |                |
| ADAMS STREET   | 95,734,641                        | 0              |
| PANTHEON<br>HARBOURVEST                                  | 15,255,057                        | 0              |
| TOTAL PRIVATE EQUITY                                     | 43,526,352<br>1 <b>54,516,050</b> | 0              |
| TOTAL PRIVATE EQUITY                                     | 134,510,030                       | O              |
| FIXED INCOME   |                                   |                |
| DOMESTIC   |                                   |                |
| LOOMIS SAYLES AND COMPANY                                | 68,619,898                        | 2,815,707      |
| REAMS  | 293,147,868                       | 108            |
| WESTERN ASSET MANAGEMENT                                 | 270,692,669                       | 5,700,891      |
| TOTAL DOMESTIC   | 632,460,435                       | 8,516,705      |
| DOMESTIC INDEX FUNDS                                     |                                   |                |
| BLACKROCK - US DEBT INDEX                                | 144,426,324                       | 0              |
| TOTAL DOMESTIC INDEX FUNDS                               | 144,426,324                       | 0              |
| GLOBAL   |                                   |                |
| LOOMIS SAYLES AND COMPANY                                | 0                                 | 0              |
| LOOMIS ALPHA<br>PIMCO                                    | 41,900,786<br>295,837             | 0<br>2,341,609 |
| TOTAL GLOBAL   | 42,196,622                        | 2,341,609      |
| TO THE GEODINE   | 72,100,022                        | 2,0-71,003     |

# VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION INVESTMENTS AND CASH EQUIVALENTS MARCH 31, 2016 (UNAUDITED)

| REAL ESTATE PRUDENTIAL REAL ESTATE RREEF UBS REALTY TOTAL REAL ESTATE | 127,195,743<br>1,524,224<br>237,153,034<br>365,873,002 | 0<br>0<br>0<br>0                    |
|---|--|-------------------------------------|
| ALTERNATIVES  BRIDGEWATER  TORTOISE (MLP's)  TOTAL ALTERNATIVES       | 253,962,400<br>96,869,539<br>350,831,939               | 0<br>1,705,494<br>1, <b>705,494</b> |
| CASH OVERLAY - PARAMETRIC   | 27,109   | 266,779,494                         |
| IN HOUSE CASH   |  | 7,630,979                           |
| TOTAL INVESTMENTS AND CASH  | \$3,990,904,572  | \$311,043,133                       |

#### VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION SCHEDULE OF INVESTMENT MANAGEMENT FEES FOR THE NINE MONTHS ENDED MARCH 31, 2016 (UNAUDITED)

#### **EQUITY MANAGERS**

| DOMESTIC  |                     |
|---|---------------------|
| BLACKROCK - US EQUITY                           | \$176,425           |
| BLACKROCK - EXTENDED EQUITY                     | 13,467              |
| WESTERN ASSET INDEX PLUS                        | 194,322             |
| TOTAL   | 384,214             |
| INTERNATIONAL                                   |                     |
| BLACKROCK - ACWIXUS<br>SPRUCEGROVE              | 178,094             |
| HEXAVEST  | 486,492<br>267,269  |
| WALTER SCOTT                                    | 603,572             |
| TOTAL   | 1,535,428           |
| GLOBAL  |                     |
| GRANTHAM MAYO VAN OTTERLOO (GMO)                | 871,728             |
| BLACKROCK - GLOBAL INDEX                        | 64,843              |
| TOTAL   | 936,571             |
| PRIVATE EQUITY                                  |                     |
| ADAMS STREET                                    | 1,090,818           |
| HARBOURVEST<br>PANTHEON                         | 545,236<br>449,863  |
| TOTAL   | 2,085,917           |
|   | 2,000,017           |
| FIXED INCOME MANAGERS                           |                     |
| DOMESTIC  |                     |
| BLACKROCK - US DEBT INDEX                       | 72,412              |
| LOOMIS, SAYLES AND COMPANY                      | 212,820             |
| REAMS ASSET MANAGEMENT WESTERN ASSET MANAGEMENT | 379,206<br>379,646  |
| TOTAL   | 1,044,083           |
|   | 1,511,555           |
| GLOBAL<br>LOOMIS, SAYLES AND COMPANY            | 134,794             |
| LOOMIS, SATELS AND COMPANT<br>LOOMIS ALPHA      | 126,309             |
| PIMCO   | 222,940             |
| TOTAL   | 484,043             |
| REAL ESTATE                                     |                     |
| PRUDENTIAL REAL ESTATE ADVISORS                 | 650,328             |
| RREEF<br>UBS REALTY                             | 19,114<br>1,656,995 |
| TOTAL   | 2,326,437           |
|   | 2,020,707           |
| ALTERNATIVES BRIDGEWATER                        | 789,670             |
| TORTOISE  | 479,457             |
| TOTAL   | 1,269,126           |
| CASH OVERLAY - PARAMETRIC                       | 112,623             |
| -   | <b>,</b>            |

#### VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION SCHEDULE OF INVESTMENT MANAGEMENT FEES FOR THE NINE MONTHS ENDED MARCH 31, 2016 (UNAUDITED)

| SECURITIES LENDING BORROWERS REBATE MANAGEMENT FEES | 56,442<br>36,127   |
|---|--------------------|
| TOTAL   | 92,569             |
| OTHER INVESTMENT CONSULTANT INVESTMENT CUSTODIAN    | 215,160<br>283,655 |
| TOTAL   | 498,815            |
| TOTAL INVESTMENT MANAGEMENT FEES                    | \$10,769,826       |



## Steady wins

# **Ventura County Employees' Retirement Association**

**Energy Infrastructure** 



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## Summary

- Absolute performance inception to date: 0.2%<sup>1</sup>
- Relative performance vs. Tortoise MLP Index® inception to date: outperformed by 5.6%1
- Benefiting from emphasis on larger, investment grade, more stable fee-based sectors during this volatile time
- We expect 14%-16% MLP market returns for next 12 months (9.4% MLP market yield plus 5%-7% growth)<sup>2</sup>
- Intermediate and long-term growth outlook remains favorable in our view

<sup>1</sup>As of 4/30/2016. Preliminary returns presented are gross of fees. Please see important disclosures at end of presentation. <sup>2</sup>As of 3/31/2016.

Past performance is no guarantee of future results.





## **Tortoise Capital Advisors**

#### **Our firm**

- Manages approximately \$13.0 billion with decade-plus history
- We only develop investment strategies in which we invest ourselves

#### **Our focus**

- Investing across the entire energy value chain
- Long-term investment philosophy

#### **Our process**

- Emphasizes high-quality investments
- Fundamental bottom-up approach and proprietary models

#### Our people

- Deep and experienced team of 65
- Employees own approximately 30% of the management company

As of 3/31/2016.



## The Tortoise team

#### **Investment committee**

8 professionals

65 employees20 CFA designations

# 18 portfolio management professionals

(includes 4 members of the investment committee)

- Investment research
- Trading

# 15 development professionals

- Business development
- Product development
- Marketing/communication

# 28 operations professionals

19 finance/operations 9 SMA support

- SMA client service
- Accounting/tax
- Compliance

Changes to the investment committee,\* portfolio management professionals: 3 hired, 1 departed and 1 transferred to our affiliate company (last 12 months)

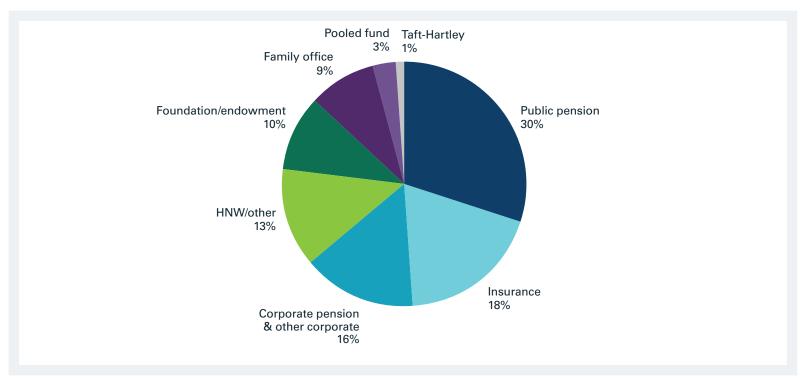
As of 3/31/2016.

\*Please see disclosure page for additional information on changes to the investment committee.



## **Breakout of institutional clients**

# SMA breakdown by client type \$6.9 billion



As of 3/31/2016.

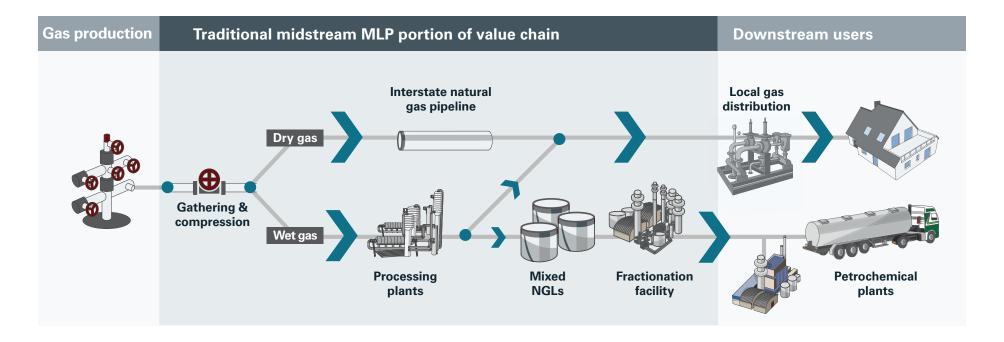


# Strategy and performance MASTER PAGE NO. 34

## **Energy value chain: midstream focus**

# Midstream MLPs are publicly traded companies operating essential energy toll roads

- Pipeline companies generally have steady, recurring, fee-based cash flows with limited direct commodity price exposure
- Cash flow generally grows with the economy, population and project development and acquisitions





## **MLP SMA investment strategy**

We have consistently pursued a strategy focused on long-haul, fee-based, investment grade companies for their compelling risk and return characteristics

Own strategic assets critical to sustainability and growth of economic activity

#### **Emphasize high quality** companies

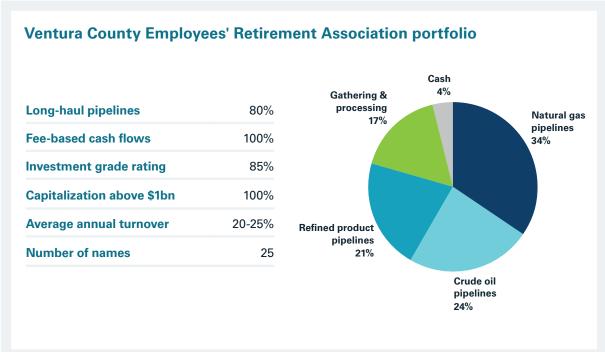
- Long-haul pipeline asset footprint
- Proven management teams
- Fee-based cash flow generation with investment grade metrics

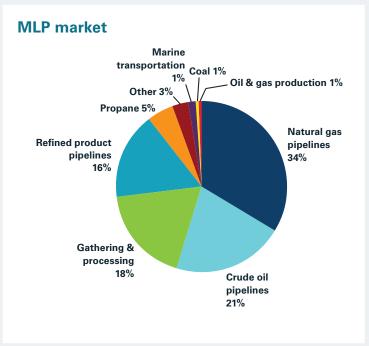
Prefer internal and dropdown growth potential with low cost of capital



# Account portfolio vs. index

# Midstream strategy emphasizes high-quality companies that generate recurring cash flows





As of 4/30/2016. MLP market represented by the Tortoise MLP Index®. Please see important disclosures at end of presentation.



# **Account performance summary (preliminary)**

|                                | Month of April | Year<br>to date | Fiscal year<br>to date <sup>1</sup> | 1<br>year | Since inception <sup>2</sup> |
|--------------------------------|----------------|-----------------|-------------------------------------|-----------|------------------------------|
| Account (gross of fees)        | 10.48          | 4.16            | (19.42)                             | (26.40)   | 0.18                         |
| Account (net of fees)          | 10.48          | 3.99            | (19.79)                             | (26.86)   | (0.44)                       |
| Tortoise MLP Index®            | 13.89          | 6.96            | (21.47)                             | (29.21)   | (5.45)                       |
| Under/over performance (gross) | (3.41)         | (2.80)          | 2.05                                | 2.81      | 5.63                         |
| Under/over performance (net)   | (3.41)         | (2.97)          | 1.68                                | 2.35      | 5.01                         |
| Wells Fargo MLP Index          | 13.15          | 6.50            | (24.90)                             | (32.23)   | (6.77)                       |
| S&P MLP Index                  | 13.45          | 6.27            | (24.88)                             | (33.01)   | (7.36)                       |
| S&P 500 <sup>®</sup> Index     | 0.39           | 1.74            | 1.89                                | 1.21      | 11.26                        |

| From 4/22/2013 to 4/30/2016       |               |
|-----------------------------------|---------------|
| Portfolio value on 4/22/2013      | \$ -          |
| Contributions                     | 109,000,000   |
| Withdrawals                       | -             |
| Realized gains/(losses)           | (7,338,313)   |
| Unrealized gains/(losses)         | (10,001,527)  |
| Interest                          | 37,110        |
| Dividends/distributions           | 17,754,550    |
| Management fees paid from account | -             |
| Expenses                          | -             |
| Portfolio value on 4/30/2016      | \$109,451,820 |

Portfolio activity summary

All returns through 4/30/2016. Annualized for periods over 1 year. ¹Fiscal year to date: 6/30/2015 to 4/30/2016. ²Performance inception date: 4/30/2013. It is not possible to invest directly in an index. Please see important disclosures at end of presentation.

Past performance is no guarantee of future results.



# **Performance drivers (last 12 months)**

### **Positive contributors**

#### **Sub-sector/thematic performance**

- Held cash in a negative return market
- Overweight refined product pipelines (down 10%)
- Underweight other (down 46%)

### **Negative contributors**

#### Sub-sector/thematic performance

- Negative selection effect, gathering & processing (down 35%)
- Underweight propane (down 12%)
- Negative selection effect, natural gas pipelines (down 26%)

Overall, outperformed MLP market by 2.8%

#### Individual security selection

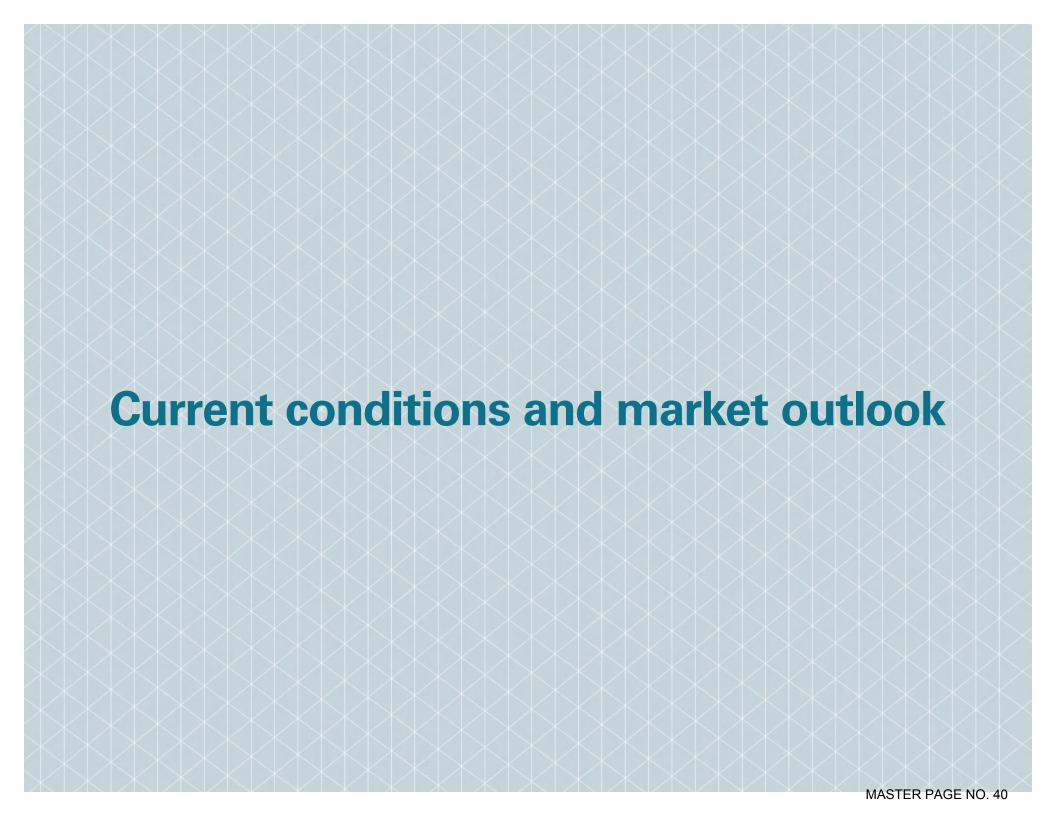
- Held cash in a negative return market
- Underweight NGLS (down 69%)
- Overweight SEP (down 2%)
- Overweight BPL (down 5%)

#### Individual security selection

- Overweight ETE (down 60%)
- Overweight TRGP (down 67%)
- Overweight WMB (down 54%)
- Overweight MPLX (down 56%)

As of 4/30/2016. Preliminary returns presented are gross of fees as compared to the Tortoise MLP Index®.

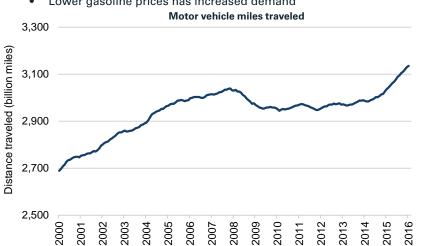




# Midstream fundamentals have remained strong

#### Refined product pipelines

Lower gasoline prices has increased demand



Source: U.S. Department of Transportation: Federal HighwayAdministration as of 1/31/2016.

#### Natural gas pipelines

Capital Advisors

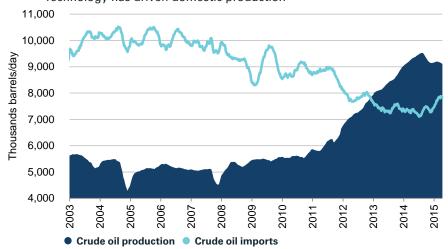
Domestic production continued to drive volumes



Source: Bentek as of 3/31/2016.

#### **Crude oil pipelines**

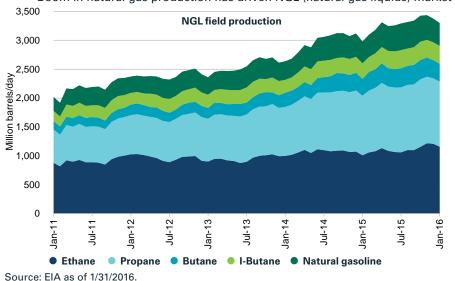
Technology has driven domestic production



Source: Bloomberg as of 4/8/2016.

#### **Gathering & processing**

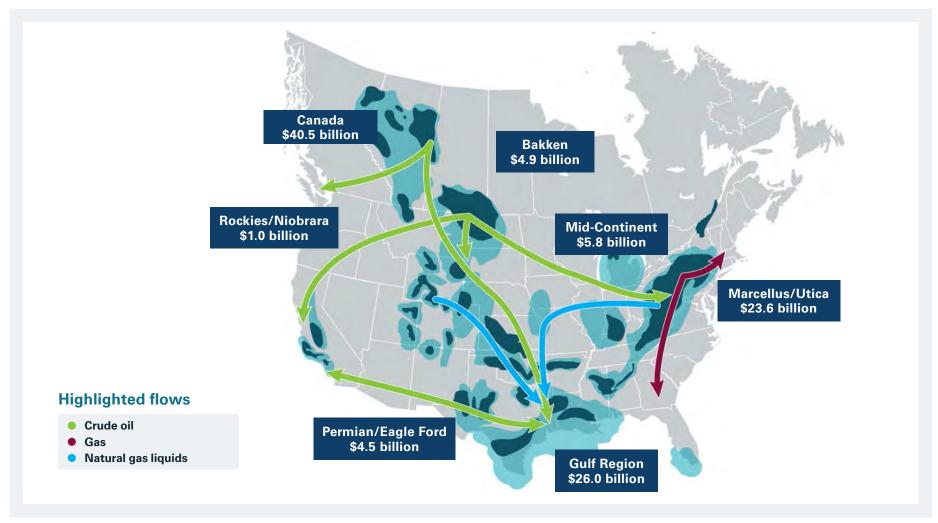
Boom in natural gas production has driven NGL (natural gas liquids) market



The projections on this page are based on industry estimates and are no guarantee of future outcomes.

# Midstream growth initiatives 2016e - 2018e

### **Approximately \$120 billion in pipeline and related projects**

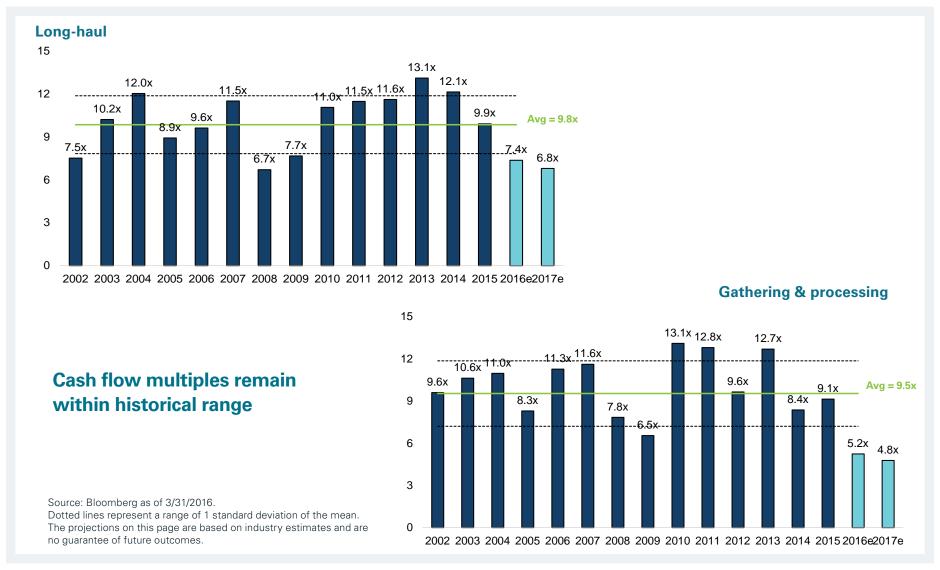


Source: Tortoise Capital Advisors as of 3/31/2016.



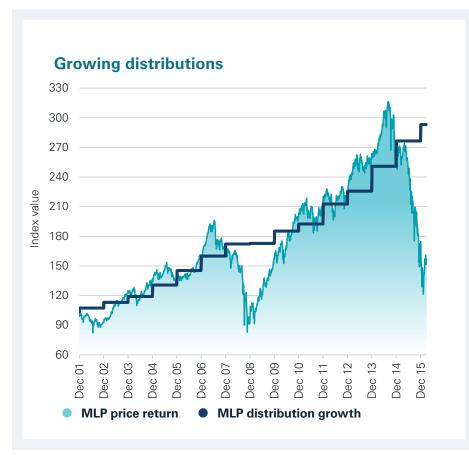
Note: Total capital investment also includes miscellaneous other projects totaling approximately \$15 billion. The projections on this page are based on industry estimates and are no guarantee of future outcomes.

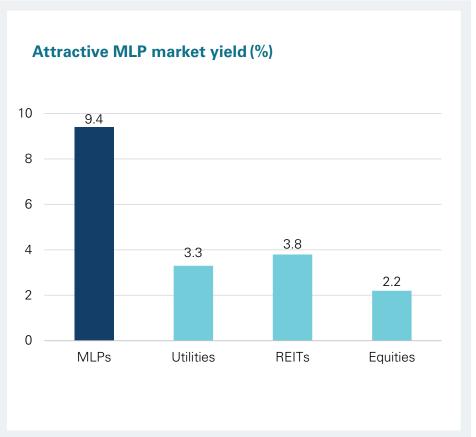
# Valuation – multiples by sector: P/DCF





### **Total return drivers**

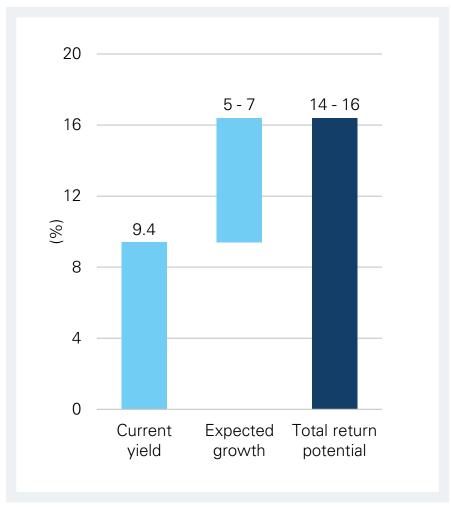




Source: Bloomberg, NAREIT (REITs yield) and Tortoise Capital Advisors as of 3/31/2016. Please see important disclosures at end of presentation.

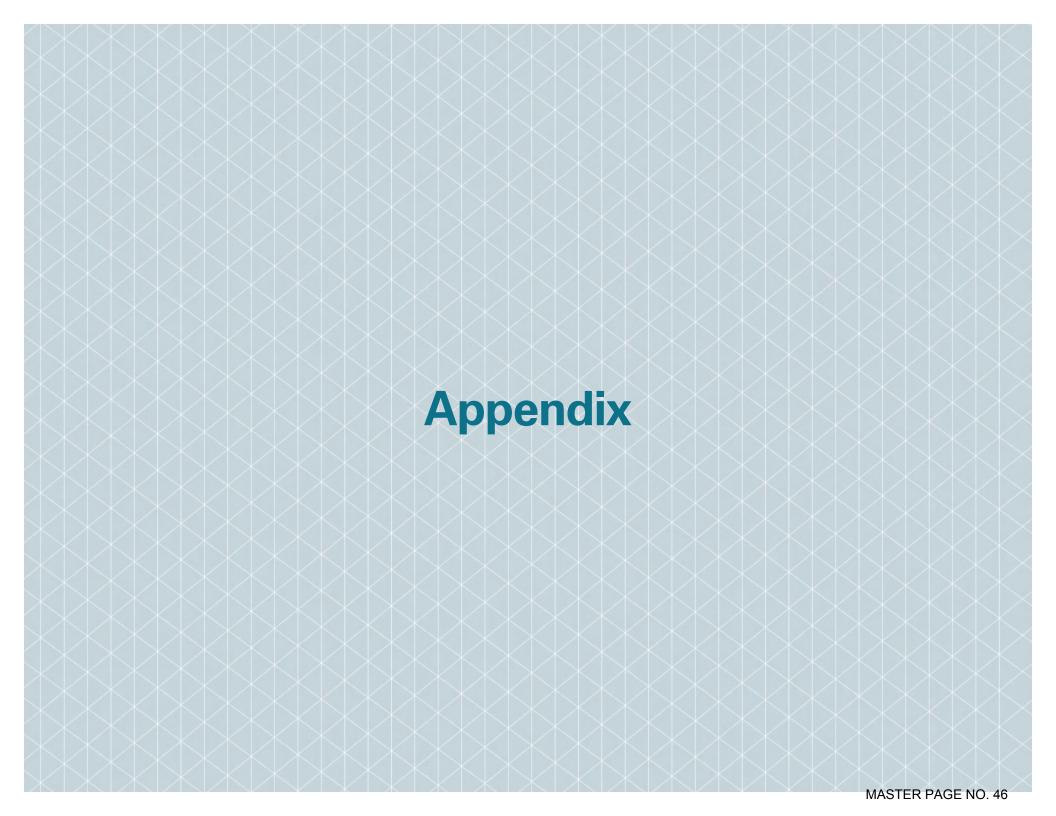


### **Next 12 months MLP market total return outlook**



Source: Tortoise Capital Advisors and Bloomberg as of 3/31/2016. Please see important disclosures at end of presentation.





# Account portfolio as of 4/30/2016

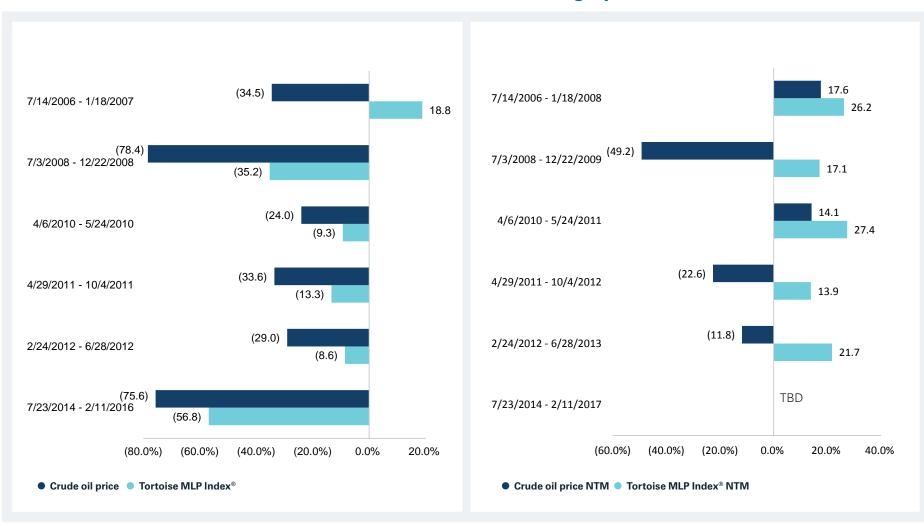
| Ticker  | · Security                         | Shares<br>Held | Unit<br>Cost | Total<br>Cost | Current<br>Price | Current<br>Value | Market<br>Weight |
|---------|------------------------------------|----------------|--------------|---------------|------------------|------------------|------------------|
|         | oil pipelines                      |                |              |               |                  |                  | g                |
| EEP     | Enbridge Energy Partners, L.P.     | 41,633         | 35.14        | 1,462,898     | 21.64            | 900,938          | 0.82             |
| GEL     | Genesis Energy L.P.                | 63,499         | 49.41        | 3,137,645     | 32.42            | 2,058,637        | 1.88             |
| PAA     | Plains All American Pipeline, L.P. | 316,984        | 45.98        | 14,576,002    | 22.94            | 7,271,613        | 6.64             |
| PAGP    | Plains GP Holdings, L.P.           | 58,908         | 8.88         | 522,862       | 9.90             | 583,189          | 0.53             |
| SHLX    | Shell Midstream Partners LP        | 96,627         | 30.58        | 2,954,566     | 37.77            | 3,649,602        | 3.33             |
| SXL     | Sunoco Logistics Partners L.P.     | 254,319        | 30.57        | 7,773,872     | 29.28            | 7,446,460        | 6.80             |
| TLLP    | Tesoro Logistics LP                | 94,283         | 55.73        | 5,254,359     | 46.24            | 4,359,646        | 3.98             |
|         | 3                                  | , , ,          |              | \$35,682,204  |                  | \$26,270,085     | 23.98%           |
| Natural | gas pipelines                      |                |              |               |                  |                  |                  |
| CPPL    | Columbia Pipeline Partners LP      | 58,869         | 26.27        | 1,546,319     | 14.53            | 855,366          | 0.78             |
| ETE     | Energy Transfer Equity, L.P.       | 413,295        | 13.40        | 5,539,203     | 12.43            | 5,137,257        | 4.69             |
| ETP     | Energy Transfer Partners, L.P.     | 134,958        | 29.31        | 3,956,084     | 35.43            | 4,781,562        | 4.37             |
| EPD     | Enterprise Products Partners L.P.  | 351,182        | 28.95        | 10,167,825    | 26.69            | 9,373,048        | 8.56             |
| EQGP    | EQT GP Holdings LP                 | 22,434         | 30.21        | 677,675       | 26.46            | 593,604          | 0.54             |
| EQM     | EQT Midstream Partners, LP         | 68,513         | 75.63        | 5,181,864     | 79.29            | 5,432,396        | 4.96             |
| OKE     | ONEOK, Inc                         | 54,717         | 35.92        | 1,965,691     | 36.15            | 1,978,019        | 1.81             |
| OKS     | ONEOK Partners, L.P.               | 128,213        | 33.48        | 4,292,100     | 35.46            | 4,546,433        | 4.15             |
| SEP     | Spectra Energy Partners, LP        | 102,874        | 47.83        | 4,920,574     | 50.43            | 5,187,936        | 4.74             |
|         |                                    |                |              | \$38,247,335  |                  | \$37,885,621     | 34.60%           |
|         | product pipelines                  |                |              |               |                  |                  |                  |
| BPL     | Buckeye Partners, L.P.             | 102,825        | 65.01        | 6,684,278     | 72.00            | 7,403,400        | 6.76             |
| MMP     | Magellan Midstream Partners, L.P.  | 130,745        | 55.98        | 7,318,745     | 72.07            | 9,422,792        | 8.61             |
| PSXP    | Phillips 66 Partners LP            | 62,178         | 50.38        | 3,132,769     | 57.24            | 3,559,069        | 3.25             |
| VLP     | Valero Energy Partners LP          | 52,827         | 35.10        | 1,854,464     | 47.69            | 2,519,320        | 2.30             |
|         |                                    |                |              | \$18,990,256  |                  | \$22,904,581     | 20.92%           |
|         | ng & processing                    |                |              |               |                  |                  |                  |
| AM      | Antero Midstream Partners LP       | 86,581         | 26.81        | 2,321,007     | 25.54            | 2,211,279        | 2.02             |
| MPLX    | MPLX LP                            | 221,324        | 45.45        | 10,059,095    | 32.19            | 7,124,419        | 6.51             |
| WGP     | Western Gas Equity Partners, LP    | 33,568         | 34.70        | 1,164,841     | 40.38            | 1,355,476        | 1.24             |
| WES     | Western Gas Partners LP            | 117,585        | 55.67        | 6,545,449     | 48.86            | 5,745,203        | 5.25             |
| WMB     | Williams Companies, Inc            | 90,881         | 30.88        | 2,806,616     | 19.39            | 1,762,183        | 1.61             |
|         |                                    |                |              | \$22,897,008  |                  | \$18,198,560     | 16.63%           |
|         | equivalents                        |                |              |               |                  |                  |                  |
| CASH    | Cash Account                       |                |              | 3,152,162     |                  | 3,152,162        | 2.88             |
| DIVAC   | Dividend Accrual                   |                |              | 1,040,811     |                  | 1,040,811        | 0.95             |
|         |                                    |                |              | \$4,192,973   |                  | \$4,192,973      | 3.83%            |
| Total p | ortfolio                           |                | <u> </u>     | \$120,009,776 |                  | \$109,451,820    | 100%             |
| _       |                                    |                |              |               |                  |                  |                  |



# MLP resilience despite crude volatility

### **Correlated in short-term**

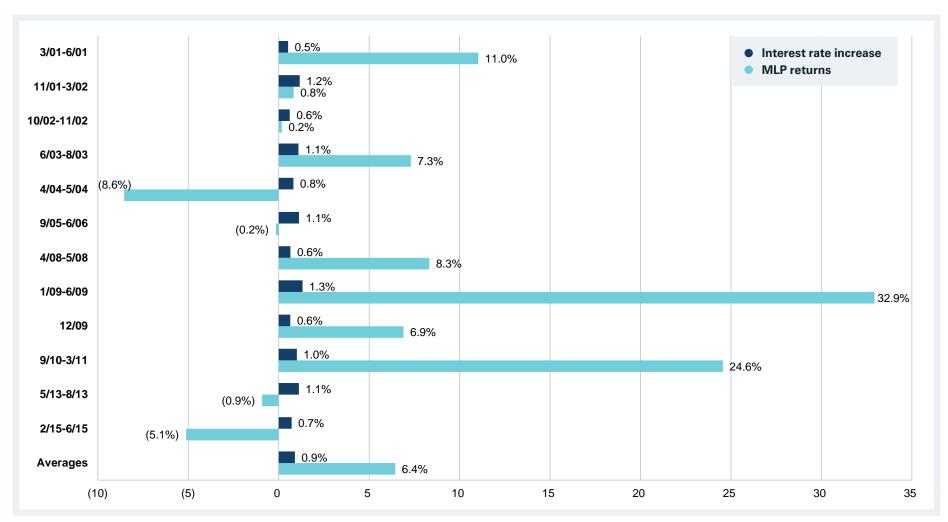
### Peak - trough plus 12 months



As of 3/31/2016. NTM returns represent returns over the 12 month period from trough relative to previous peak. Crude = Bloomberg West Texas Intermediate (WTI) Cushing Crude Oil Spot Price. It is not possible to invest directly in an index. See important disclosures at end of presentation for index descriptions.



# **MLP** long-term resiliency to interest rate increases



Periods shown are those where the U.S. 10-year government bond interest rate increased by at least 50 basis points over one or more consecutive months. Returns are period specific and are not annualized. Interest rate increase source: Bloomberg. MLP source: Tortoise MLP Index® (as of 1/1/2000). Please see important disclosures at end of presentation. It is not possible to invest directly in an index.

Past performance is no guarantee of future results.



# Separate account key contacts

### **Client Service**

Reporting
General questions
Billing (advisory fee)
K-1 checklist
General tax questions

### **Jenny Park**

Director, Head of Institutional Client Service 913-890-2132 jpark@tortoiseadvisors.com

### **Melissa Martinez**

Client Services Associate 913-890-2118 mmartinez@tortoiseadvisors.com

### Kyle Krueger, CFA, CIPM

Managing Director
Head of Separately Managed Accounts

### **Operations**

Custodial account data feed set-up
Trade settlement issues
Investment accounting and reconciliation

### Raven Olivarez~Weber

Vice President, Senior Operations Analyst 913-890-2160

### **Kelly Schuetz**

Senior Operations Specialist 913-890-2151

### SMA@tortoiseadvisors.com

### Connie Savage, CPA

Managing Director
Chief Operating Officer



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Index information: MLPs (unless noted) = Tortoise MLP Index®, a float-adjusted, capitalization weighted index of energy master limited partnerships (MLPs). To be eligible for inclusion in the Tortoise MLP Index®, a company must be publicly traded, organized as a limited partnership or a limited liability company, and be classified as an "energy MLP" by the National Association of Publicly Traded Partnerships (NAPTP). Tortoise MLP Index® (the "Index") is the exclusive property of Tortoise Index Solutions, LLC, which has contracted with S&P Opco, LLC (a subsidiary of S&P Dow Jones Indices LLC) ("S&P Dow Jones Indices") to calculate and maintain the Index. S&P® is a registered trademark of Standard & Poor's Financial Services LLC ("SPFS"); Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"); and, these trademarks have been licensed to S&P Dow Jones Indices. "Calculated by S&P Dow Jones Indices" and its related stylized mark(s) have been licensed for use by Tortoise Index Solutions, LLC and it's affiliates. Neither S&P Dow Jones Indices, SPFS, Dow Jones nor any of their affiliates sponsor and promote the Index and none shall be liable for any errors or omissions in calculating the Index. The S&P MLP Index is designed to provide investors with exposure to the leading partnerships that trade on the NYSE and NASDAQ. The index includes both master limited partnerships (MLPs) and publicly traded limited liability companies (LLCs), which have a similar structure to MLPs and share the same tax benefits. Wells Fargo MLP Index (formerly Wachovia MLP Index), a float-adjusted, capitalization-weighted index of energy master limited partnerships (MLPs) with a market capitalization of at least \$200 million at the time of inclusion. Equities = S&P 500® Index, an unmanaged market-value weighted index of stocks which is widely regarded as the standard for measuring large-cap U.S. stock market performance. Utilities = The S&P Utilities Select Sector Index is a modified market-cap weighted index com

#### Past performance is no guarantee of future results.

\*From page 5: Effective June 30, 2015 we added four existing portfolio managers, Brian Kessens, James Mick, Matthew Sallee and Robert Thummel, to the Investment Committee. They join current Investment Committee members Kevin Birzer, Zach Hamel, Terry Matlack and Ken Malvey. The portfolio managers will continue their duties and will also be included in the number for portfolio management professionals. The Investment Committee will continue to provide investment strategy oversight to the portfolio team, who implements the strategy.

Also effective June 30, 2015, one of Tortoise's five founding managing directors Dave Schulte left Tortoise Capital Advisors to allow him to focus his efforts on Corridor InfraTrust Management LLC, which he co-founded in 2011. Mr. Schulte will retain an ownership interest in Tortoise, but will no longer serve on the Investment Committee.





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Presented to:



### **Board Presentation**

May 16<sup>th</sup>, 2016

One Glendinning Place Westport, CT 06880 (203) 226-3030 www.bwater.com

## **AGENDA**

- I. Bridgewater Overview
- II. Account Review
- III. Global Outlook

I. Bridgewater Overview

### **BRIDGEWATER OVERVIEW**

- Institutional investment manager
- Founded in 1975
- Deep fundamental understanding of markets
- Built around the principle of separating alpha and beta
  - Managing Pure Alpha accounts for 25 years
  - Managing All Weather accounts for 20 years
  - Launched Optimal Portfolio in 2015
- Manage approximately \$149 billion in assets
  - \$68bln in Pure Alpha strategies\*
  - \$61bln in All Weather strategy
  - \$20bln in Optimal Portfolio strategy
- Employee controlled



### **II.** Account Review

### **ALL WEATHER MANDATE SUMMARY**

Investment Philosophy: Fundamental, Systematic, Diversified.

Strategy Overview: Bridgewater's optimal beta portfolio, designed to produce the

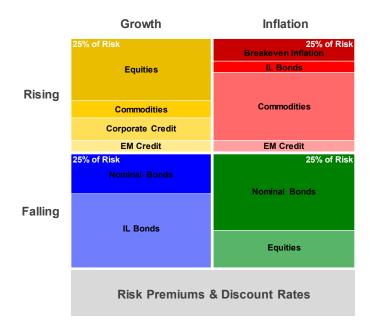
highest return-to-risk ratio for a strategic asset mix.

Approach: Collect the risk premium embedded across assets by balancing

risk across asset classes with opposing sensitivities to shifts in

the economic environment.

Size: \$265 million.





## **PERFORMANCE SUMMARY**

#### **Net of Fees Performance Summary**

|          | Excess                  | + Return on Cash =     | Total Return           |                                  |
|----------|-------------------------|------------------------|------------------------|----------------------------------|
| 1996     | 17.2 %                  | 3.1 %                  | 20.4 %                 |                                  |
| 1997     | 9.4 %                   | 5.6 %                  | 15.0 %                 |                                  |
| 1998     | -7.3 %                  | 5.5 %                  | -1.8 %                 | Bridgewater All Weather Strateg  |
| 1999     | 10.5 %                  | 5.1 %                  | 15.6 %                 | Jun 1996 - Mar 2016              |
| 2000     | 3.6 %                   | 6.3 %                  | 9.9 %                  | Net Total                        |
| 2001     | -9.8 %                  | 3.8 %                  | -6.0 %                 | Cumulative Return 338.8          |
| 2002     | 8.5 %                   | 1.7 %                  | 10.2 %                 | Annual Return 7.7                |
| 2003     | 15.6 %                  | 1.1 %                  | 16.7 %                 | Annual StDev 10.3                |
| 2004     | 16.3 %                  | 1.4 %                  | 17.7 %                 |                                  |
| 2005     | 12.2 %                  | 3.3 %                  | 15.5 %                 |                                  |
| 2006     | -3.9 %                  | 5.0 %                  | 1.2 %                  | Ventura County Employees' Retire |
| 2007     | 6.8 %                   | 5.0 %                  | 11.8 %                 | Association                      |
| 2008     | -22.0 %                 | 1.9 %                  | -20.2 %                | Aug 2013 - Mar 2016              |
| 2009     | 9.2 %                   | 0.2 %                  | 9.4 %                  | Net Total                        |
| 2010     | 17.5 %                  | 0.1 %                  | 17.6 %                 | Last 12 Months -8.0              |
| 2011     | 18.0 %                  | 0.1 %                  | 18.1 %                 | Last 2 Years (ann) -0.5          |
| 2012     | 14.5 %                  | 0.2 %                  | 14.7 %                 | Cumulative Return 4.6            |
| <br>2013 | -4.0 % / <b>1.9 %</b> * | 0.1 % / <b>0.0 %</b> * | -3.9 % / <b>2.0</b> %* | Annual Return 1.7                |
| 2014     | 7.5 %                   | 0.1 %                  | 7.6 %                  | Annual StDev 7.3                 |
| 2015     | -6.8 %                  | 0.0 %                  | -6.8 %                 |                                  |
| 2016 YTD | 2.2 %                   | 0.1 %                  | 2.4 %                  |                                  |

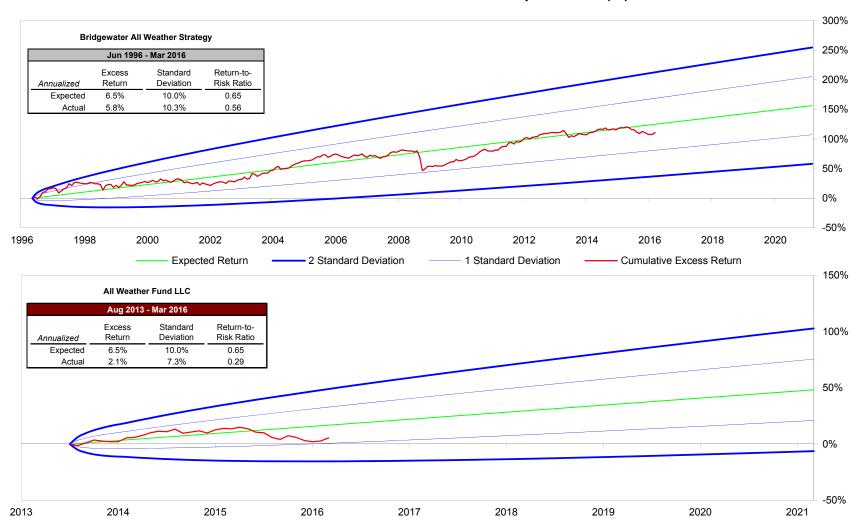
Performance is estimated through March 31, 2016. Inception of the mandate was August 2013. Inception of the strategy was June 1996. Standard deviation is calculated using gross of fees excess returns.

Please review the "Important Disclosures and Other Information" located at the end of this presentation.

<sup>\*</sup>Performance is shown for the full year for the All Weather Strategy (black text), and for the partial year for the client's specific account (bold red text). Summary statistics for the All Weather Strategy are based on the full history of the strategy, and may differ from the performance of your specific account or investment. PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.

### **PERFORMANCE VS. EXPECTATIONS**

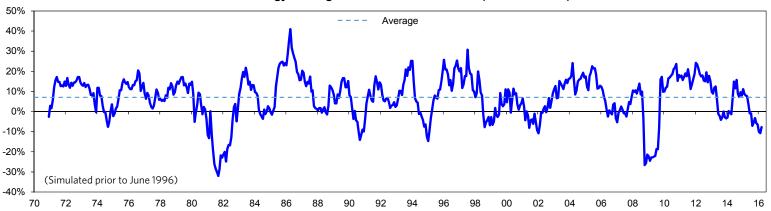
### **Gross Cumulative Excess Return vs. Expectations (In)**





### **ALL WEATHER PERFORMANCE: TRAILING ONE YEAR**

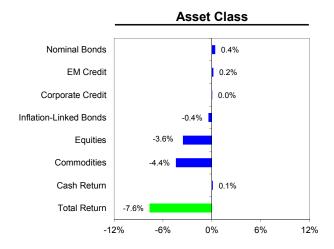
#### All Weather Strategy Rolling One Year Excess Return (Gross of Fees)



#### Trailing One Year Gross Attribution (April 2015 - March 2016)

#### **Economic Environment** Growth Inflation Return Return Risina -3.3% -3.6% Return Return Falling -0.2% -0.6% ≈ Risk Premiums & Discount Rates -7.7% Excess Return Over Cash Plus Cash Return = 0.1%

Total All Weather Return =



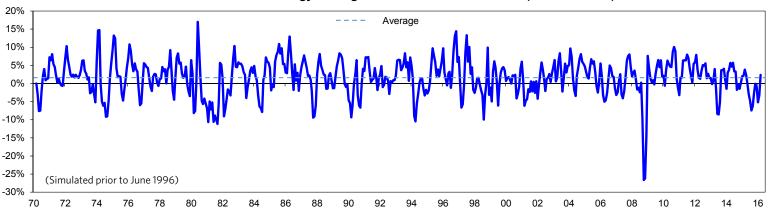
Please note the returns shown for All Weather are simulated prior to June 1996 using the All Weather Asset Mix (see All Weather Asset Mix Disclosure). It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY, SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. Please review the "important Disclosures and Other Information" located at the end of this presentation.

-7.6%



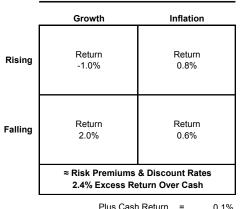
### **ALL WEATHER PERFORMANCE: TRAILING THREE MONTHS**



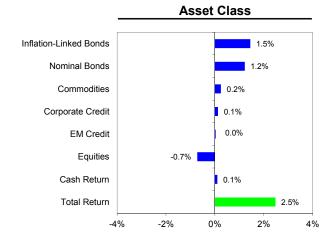


#### Trailing Three Months Gross Attribution (January 2016 - March 2016)

#### **Economic Environment**



Plus Cash Return = 0.1% Total All Weather Return = 2.5%



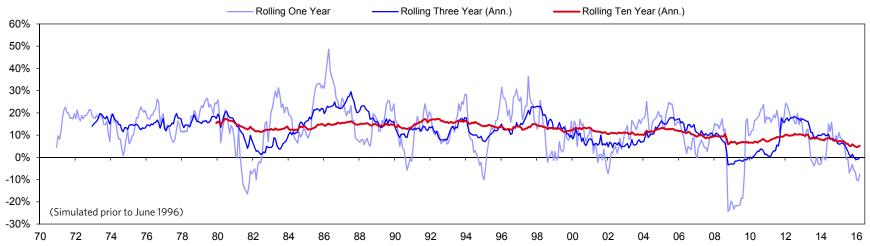
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# ALL WEATHER PERFORMANCE DRIVEN BY THE RELATIVE ATTRACTIVENESS OF CASH VS. ASSETS

- The ups and downs of All Weather's returns in the short-term normalize over longer periods as investors must be compensated for taking risk.
- When a well-diversified mix of assets underperforms cash:
  - There is a negative wealth effect and negative incentives to invest in economic activity.
  - Central banks generally look to ease if they can.

#### All Weather Strategy Total Returns (Gross of Fees)



Returns are shown through March 2016. Please note the returns shown for All Weather are simulated prior to June 1996 using the All Weather Asset Mix (see All Weather Asset Mix Disclosure). It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY, SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. Please review the "Important Disclosures and Other Information" located at the end of this presentation.



### DRAWDOWNS FOR A BALANCED PORTFOLIO ARE SHORTER LIVED

#### All Weather

Since 1970

|                           | Severity | Duration      |
|---------------------------|----------|---------------|
|                           | (% Lost) | (# of months) |
| All Drawdowns (Average)   | -7%      | 9             |
| Top 5 Drawdowns (Average) | -21%     | 29            |
| Worst Drawdown            | -34%     | 64            |

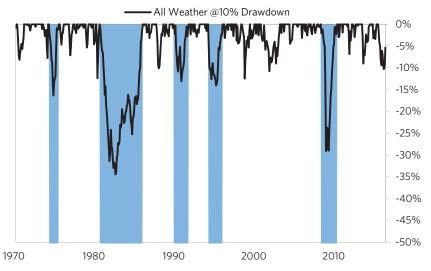
Note: Drawdowns are based on excess returns above cash and includes drawdowns that are at least three months long.

#### Global 60/40

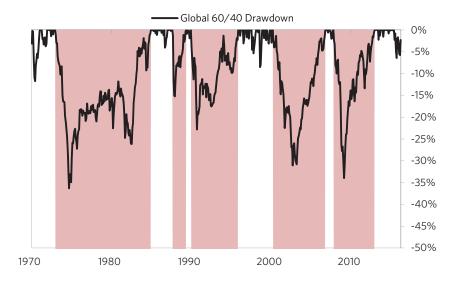
Since 1970

|                           | Severity | Duration      |
|---------------------------|----------|---------------|
|                           | (% Lost) | (# of months) |
| All Drawdowns (Average)   | -13%     | 31            |
| Top 5 Drawdowns (Average) | -28%     | 74            |
| Worst Drawdown            | -36%     | 143           |

Note: Drawdowns are based on excess returns above cash and includes drawdowns that are at least three months long.







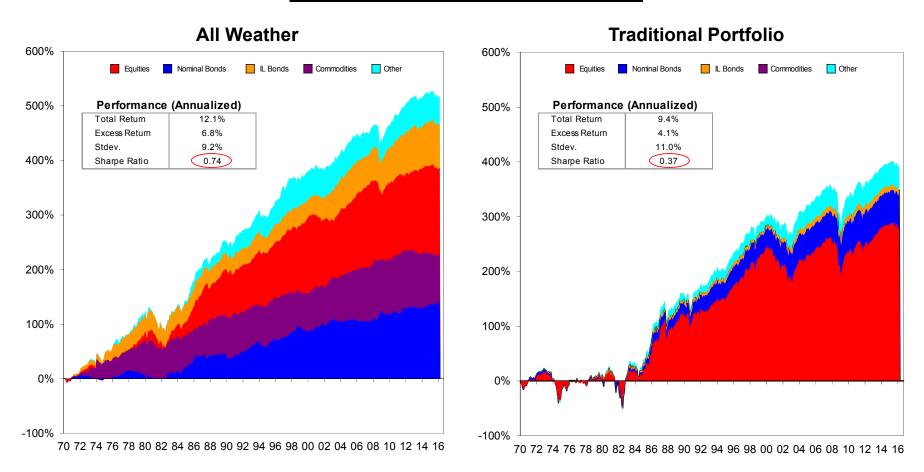
Note: Drawdowns are based on excess returns above cash. The 5 most severe drawdowns are highlighted.

Data from January 1970 through March 2016. Excess returns are gross of fees. The global 60/40 is 60% hedged world equities and 40% hedged world bonds. Please note the All Weather Asset Mix is used in this analysis (see All Weather Asset Mix Disclosure). It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. All drawdowns are calculated based off of excess returns. HYPOTHETICAL OR SIMULATED RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. Past performance is not indicative of future results. Please review the "Important Disclosures and Other Information" located at the end of this presentation.



# CONCENTRATED VS. BALANCED PORTFOLIO RETURN CONTRIBUTION

### **Cumulative Performance Attribution (In)**



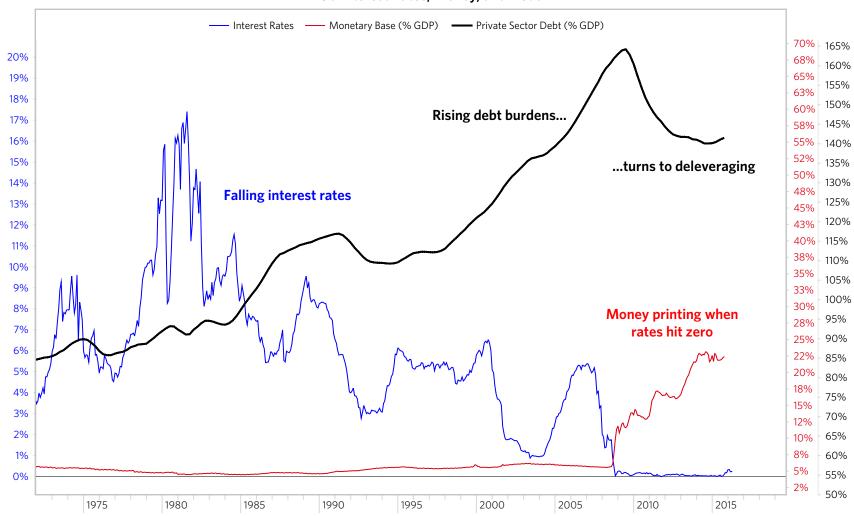
Data through March 2016. "Traditional Portfolio" refers to the U.S. Traditional Portfolio. Returns are cumulative excess returns above cash, shown gross of fees. All Weather returns are based on All Weather Asset Mix (see All Weather Asset Mix Disclosure). It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. HYPOTHETICAL OR SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. Past performance is not indicative of future results. Please review the "Important Disclosures and Other Information" located at the end of this presentation.



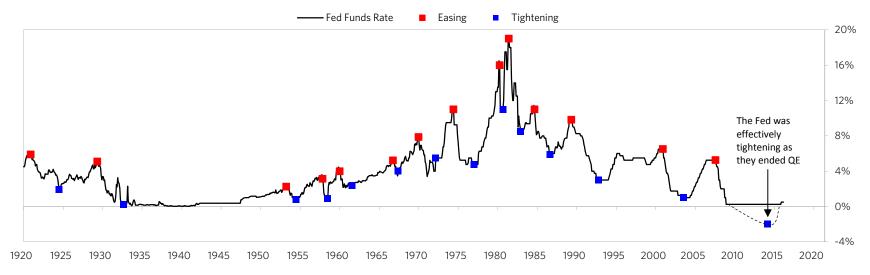
### III. Global Outlook

### SECULAR CHALLENGE: THE END OF THE MONETARY SUPERCYCLE

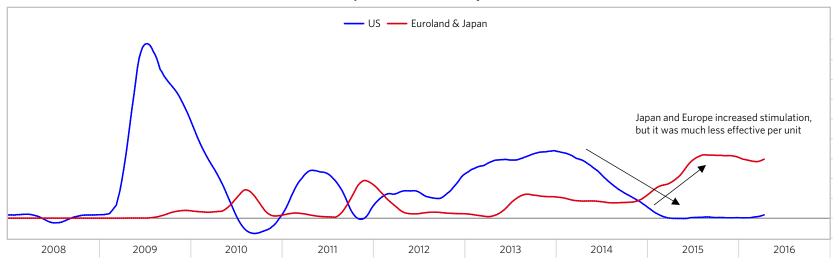
### **US Interest Rates, Money, and Debt**



### THE FED HAS BEEN TIGHTENING FOR SOME TIME



### **Developed World Monetary Stimulation**



### 2015: DOLLAR LIQUIDITY TIGHTENED, CAPITAL FLOWS REVERSED

### **US Real Exchange Rate Index**



### World USD Reserve Flows (% US GDP)



### **2016: POLICYMAKERS RESPONDED BY EASING**

- The Fed delayed tightening, Europe and Japan now both have negative rates, and China eased across multiple dimensions.
- The liquidity cycle chart below shows where we've been, where we
  are, and where we're probably going in relation to the typical cycle.





# **CENTRAL BANKS ARE CONSTRAINED IN THEIR ABILITY TO EASE**

### Developed World Monetary "Fuel in the Tank"



### WHAT MARKETS ARE DISCOUNTING

### **Growth**

### **Inflation**

Developed World:

1.0%

United States: 1.5%

Eurozone: -0.3%

Emerging Markets: 3.6%

### **Long-Term Breakeven Inflation**

United States:

1.6%

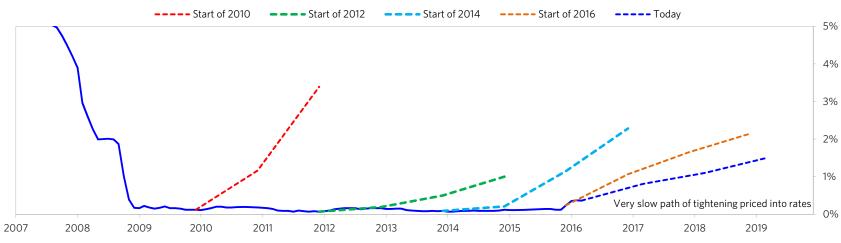
Eurozone:

1.1%

Japan:

0.2%

#### **US Priced-In Forward Short Rate Path**



Data is shown as of April 20, 2016.



| Important Disclosures and Other Information |
|---|
|   |

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# **ALL WEATHER STRATEGY DISCLOSURE**

All Weather Strategy Performance (Net of Fees)

|               | 110111141100 (1101011 000) |
|---------------|----------------------------|
|               | All Weather                |
|               | Total Return in USD        |
| Last 1 Year   | -7.8%                      |
| Last 3 Years  | -1.0%                      |
| Last 5 Years  | 5.1%                       |
| Last 10 Years | 5.0%                       |

Annualized Returns (Jun-96 through Apr-16)

Net Since Inception Jun-96 through Apr-16

| Annualized Return  | 7.8%  |
|--------------------|-------|
| Standard Deviation | 10.3% |
| Sharpe Ratio       | 0.52  |

Past results are not necessarily indicative of future results.

#### Bridgewater All Weather Strategy Performance Disclosure:

For the period June 1996 (the inception of the strategy) through August 2001 the performance is based on the total return of the Bridgewater All Weather strategy as implemented for Bridgewater's principals and their affiliates and was not fully hedged to the US Dollar. The All Weather strategy is structured to be fully hedged, and the performance reflected after August 2001 includes these hedging transactions. For the period of August 2001 through present the performance shown is the actual total returns of the longest running fully funded All Weather account. For the entire history excess returns are calculated by subtracting an approximation of a U.S. cash rate from the total returns described above. Of note, the All Weather strategy's target leverage, volatility and return, as well as the asset mix varied from June 1996 to July 2005. From August 2005 through the present the strategy has targeted 10% volatility. Bridgewater manages additional All Weather portfolios not included in this performance history.

Gross of fees performance is gross of management fees and includes the reinvestment of interest, gains, and losses. Returns will be reduced by the investment advisory fees and any other expenses that may be incurred in the management of the account.

Net of fees performance has been calculated using our standard fee schedule for a minimum size account, which are the highest fees we have or would currently charge an account. Investment advisory fees are described in Bridgewater's ADV Part 2A.

No representation is being made that any account will or is likely to achieve returns similar to those shown. Trading in futures is risky and can result in losses as well as profits. PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. Performance as of the current month is estimated and subject to change.



# **ALL WEATHER ASSET MIX DISCLOSURE**

#### All Weather Asset Mix Performance (Net of Fees)

|               | All Weather         |
|---------------|---------------------|
|               | Total Return in USD |
| Last 1 Year   | -4.2%               |
| Last 3 Years  | 1.1%                |
| Last 5 Years  | 4.9%                |
| Last 10 Years | 6.4%                |

Annualized Returns (Jun-96 through Mar-16)

#### Net Since Inception Jun-96 through Mar-16

| Annualized Return  | 8.9% |
|--------------------|------|
| Standard Deviation | 9.5% |
| Sharpe Ratio       | 0.68 |

Past results are not necessarily indicative of future results. It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. WHERE SHOWN, HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN.

#### All Weather Asset Mix Disclosure:

Where shown, simulated returns for All Weather are created using the All Weather asset mix. The All Weather asset mix performance is simulated by applying All Weather asset mix weights, which are determined by Bridgewater's proprietary process for building an environmentally balanced portfolio, to historical market returns. We use actual market returns when available and otherwise use Bridgewater Associates' proprietary estimates, based on other available data and our fundamental understanding of asset classes. In certain cases, market data for an exposure which otherwise would exist in the simulation may be omitted if the relevant data is unavailable, deemed unreliable, immaterial or accounted for using proxies. In the case of omitted markets, other markets in the same asset class, which represent the vast majority of our positions in each asset class, are scaled to represent the full asset class position. Examples of omitted markets include, but are not limited to, non-U.S. markets prior to 1970, emerging market equities, some inflation-linked bond markets and certain commodities.

Simulated asset returns are subject to considerable uncertainty and potential error, as there is a great deal that cannot be known about how assets would have performed in the absence of actual market returns. The All Weather asset mix simulation is an approximation of our actual process but not an exact replication, and may have differences including but not limited to the precise mix of markets used and the weights applied to those markets. It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology (including the addition/removal of asset classes) and the underlying market data. There is no guarantee that previous results would not be materially different. Future strategy changes could materially change previous simulated return in order to reflect the changes accurately across time.

Transaction costs are accounted for and are estimates themselves based on historical measured costs and/or modeled costs. Actual transaction costs experienced could have been higher or lower than those reflected in the simulation. Where noted, the All Weather Asset Mix Net of Fees returns have been calculated using our standard fee schedule for a minimum size account, which are the highest fees we have or would currently charge an account. Investment advisory fees are described in Bridgewater's ADV Part 2A. No claim is being made of the All Weather Asset Mix's ability to perform in absolute terms or relative to any market return in the future, during market events not represented or during market events occurring in the future. Market conditions and events vary considerably, are unpredictable and can have unforeseen impacts resulting in materially adverse performance results.



# **USD TRADITIONAL PORTFOLIO**

This page contains the allocation information for the historical simulation of the Traditional portfolio, from 1970 onwards, as well as forward looking assumptions for expected returns, volatility, tracking error, and correlations used in this analysis.

The portfolio capital allocation weights (illustrated below) are estimates based either upon Bridgewater Associates' understanding of standard asset allocation (which may change without notice) or information provided by or publicly available from the recipient of this presentation. Asset class returns are actual market returns where available and otherwise a proxy index constructed based on Bridgewater Associates understanding of global financial markets. Information regarding specific indices and simulation methods used for proxies is available upon request (except where the proprietary nature of information precludes its dissemination). Results are hypothetical or simulated and gross of fees unless otherwise indicated. HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN.

|                  |                           | Nominal  | Fx       |                 | Beta  | Alpha      | Alpha |
|------------------|---------------------------|----------|----------|-----------------|-------|------------|-------|
| Asset Type       | Benchmark                 | Exposure | Exposure | Beta Volatility | Ratio | Volatility | Ratio |
| Equities         | U.S. Equities             | 15.0%    |          | 15.3%           | 0.25  |            |       |
| Equities         | U.S. Equities             | 15.0%    |          | 15.3%           | 0.25  | 5.0%       | 0.25  |
| Equities         | Dev. World Equities Ex-US | 18.0%    | Unhedged | 15.6%           | 0.30  | 5.0%       | 0.30  |
| Equities         | Emerging Market Equities  | 3.0%     | Unhedged | 19.5%           | 0.25  | 5.0%       | 0.30  |
| Nominal Bonds    | U.S. Gov't Bonds          | 4.5%     |          | 3.8%            | 0.25  |            |       |
| Nominal Bonds    | U.S. Gov't Bonds          | 4.5%     |          | 3.8%            | 0.25  | 2.0%       | 0.25  |
| Corporate Bonds  | U.S. Corporate Bonds      | 5.0%     |          | 7.0%            | 0.30  | 3.0%       | 0.25  |
| MBS              | U.S. MBS                  | 6.0%     |          | 4.1%            | 0.25  | 2.0%       | 0.25  |
| IL Bonds         | U.S. IL Bonds             | 1.0%     |          | 7.3%            | 0.25  |            |       |
| IL Bonds         | U.S. IL Bonds             | 1.0%     |          | 7.3%            | 0.25  | 1.0%       | 0.25  |
| High Yield Bonds | U.S. High Yield           | 2.0%     |          | 11.3%           | 0.30  | 4.0%       | 0.25  |
| Nominal Bonds    | World Gov't Bonds Ex-US   | 2.0%     | Hedged   | 3.8%            | 0.30  | 2.0%       | 0.30  |
| Equities         | U.S. PE / VC              | 9.0%     |          | 24.5%           | 0.25  | 10.0%      | 0.25  |
| Real Estate      | U.S. Real Estate          | 5.0%     |          | 20.1%           | 0.25  | 6.0%       | 0.25  |
| Real Estate      | World Real Estate         | 2.0%     | Unhedged | 19.3%           | 0.30  |            |       |
| Commodities      | Bloomberg Commodity Index | 2.0%     |          | 16.5%           | 0.20  | 10.0%      | 0.30  |
| Hedge Fund       | Cash                      | 5.0%     |          |                 |       | 7.0%       | 0.70  |







Preliminary Performance Report Month Ending April 30, 2016

Daniel LeBeau, Consultant Allan Martin, Partner Anthony Ferrara, CAIA, Senior Analyst

255 State Street, Boston, MA 02109 | TEL: 617.374.1300 | FAX: 617.374.1313 | www.nepc.com BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO

### Total Fund Performance Detail Net of Fees

#### **Performance Summary**

|  | Market Value<br>(\$) | % of<br>Portfolio | Policy % | 1 Mo<br>(%) | 3 Mo<br>(%) | YTD<br>(%) | Fiscal<br>YTD<br>(%) | 1 Yr<br>(%) | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) | Return<br>(%) | Since  |
|--|----------------------|-------------------|----------|-------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|---------------|--------|
| Total Fund                                   | 4,357,354,833        | 100.0             | 100.0    | 1.3         | 6.0         | 2.7        | -0.1                 | -1.7        | 5.9          | 6.4          | 5.3           | 7.8           | Apr-94 |
| Policy Index                                 |                      |                   |          | <u>1.0</u>  | <u>6.0</u>  | <u>2.4</u> | <u>0.9</u>           | <u>0.0</u>  | <u>6.4</u>   | <u>6.5</u>   | <u>5.5</u>    | <u>7.9</u>    | Apr-94 |
| Over/Under                                   |                      |                   |          | 0.3         | 0.0         | 0.3        | -1.0                 | -1.7        | -0.5         | -0.1         | -0.2          | -0.1          |        |
| Allocation Index                             |                      |                   |          | 1.2         | 6.2         | 2.0        | -0.4                 | -1.7        | 5.5          | 5.9          | 5.0           |               | Apr-94 |
| 60% MSCI World (Net) / 40% CITI WGBI         |                      |                   |          | 1.5         | 7.4         | 4.2        | 2.4                  | 0.1         | 4.1          | 4.1          | 4.4           | 6.3           | Apr-94 |
| Total Fund ex Parametric                     | 4,100,745,314        | 94.1              |          | 1.2         | 5.8         | 3.2        | 0.5                  | -1.0        | 6.1          | 6.6          | 5.2           | 7.8           | Apr-94 |
| Total Fund ex Private Equity                 | 4,200,198,619        | 96.4              |          | 1.3         | 6.2         | 2.7        | -0.4                 | -2.1        | 5.2          |              |               | 8.3           | Jan-12 |
| Policy Index                                 |                      |                   |          | <u>1.0</u>  | <u>6.0</u>  | <u>2.4</u> | <u>0.9</u>           | <u>0.0</u>  | <u>6.4</u>   | <u>6.5</u>   | <u>5.5</u>    | <u>9.1</u>    | Jan-12 |
| Over/Under                                   |                      |                   |          | 0.3         | 0.2         | 0.3        | -1.3                 | -2.1        | -1.2         |              |               | -0.8          |        |
| Total US Equity                              | 1,345,868,648        | 30.9              | 28.0     | 0.6         | 7.7         | 1.6        | 0.1                  | -0.2        | 11.0         | 10.7         | 6.5           | 8.7           | Dec-93 |
| Russell 3000                                 |                      |                   |          | <u>0.6</u>  | <u>7.7</u>  | <u>1.6</u> | <u>0.1</u>           | <u>-0.3</u> | <u>10.7</u>  | <u>10.5</u>  | <u>6.9</u>    | <u>9.0</u>    | Dec-93 |
| Over/Under                                   |                      |                   |          | 0.0         | 0.0         | 0.0        | 0.0                  | 0.1         | 0.3          | 0.2          | -0.4          | -0.3          |        |
| BlackRock Equity Market Fund                 | 1,155,963,039        | 26.5              |          | 0.6         | 7.6         | 1.6        | 0.2                  | -0.1        | 10.8         | 10.5         |               | 6.7           | Dec-07 |
| Dow Jones U.S. Total Stock Market            |                      |                   |          | <u>0.6</u>  | <u>7.7</u>  | <u>1.5</u> | <u>0.1</u>           | <u>-0.3</u> | <u>10.7</u>  | <u>10.5</u>  | <u>7.0</u>    | <u>6.6</u>    | Dec-07 |
| Over/Under                                   |                      |                   |          | 0.0         | -0.1        | 0.1        | 0.1                  | 0.2         | 0.1          | 0.0          |               | 0.1           |        |
| Western U.S. Index Plus                      | 144,377,300          | 3.3               |          | 0.6         | 7.7         | 2.3        | 2.1                  | 1.3         | 11.5         | 11.7         |               | 3.4           | May-07 |
| S&P 500                                      |                      |                   |          | <u>0.4</u>  | <u>7.1</u>  | <u>1.7</u> | <u>1.9</u>           | <u>1.2</u>  | <u>11.3</u>  | <u>11.0</u>  | <u>6.9</u>    | <u>5.7</u>    | May-07 |
| Over/Under                                   |                      |                   |          | 0.2         | 0.6         | 0.6        | 0.2                  | 0.1         | 0.2          | 0.7          |               | -2.3          |        |
| BlackRock Extended Equity Index              | 45,528,309           | 1.0               |          | 1.7         | 10.5        | 0.9        | -6.9                 | -5.9        | 8.4          | 8.3          | 7.0           | 11.1          | Oct-02 |
| Dow Jones U.S. Completion Total Stock Market |                      |                   |          | <u>1.7</u>  | <u>10.5</u> | <u>0.7</u> | <u>-7.1</u>          | <u>-6.2</u> | <u>8.3</u>   | <u>8.1</u>   | <u>6.9</u>    | <u>11.0</u>   | Oct-02 |
| Over/Under                                   |                      |                   |          | 0.0         | 0.0         | 0.2        | 0.2                  | 0.3         | 0.1          | 0.2          | 0.1           | 0.1           |        |

Policy Index: Currently, 28% Russell 3000, 20% Barclays Aggregate, 15% MSCI ACWI ex U.S., 10%MSCI ACWI, 10% DJ U.S. Total Stock Market Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index.

Prior to January 2016 the Total U.S. Equity Benchmark was a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index

CPI+4% and CPI+5% are estimated due to CPI monthly lag



April 30, 2016

# Total Fund Performance Detail Net of Fees

|                                  | Market Value<br>(\$) | % of<br>Portfolio | Policy % | 1 Mo<br>(%) | 3 Mo<br>(%) | YTD<br>(%)  | Fiscal<br>YTD<br>(%) | 1 Yr<br>(%)  | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) | Return<br>(%) | Since  |
|----------------------------------|----------------------|-------------------|----------|-------------|-------------|-------------|----------------------|--------------|--------------|--------------|---------------|---------------|--------|
| Total Non-US Equity              | 590,567,157          | 13.6              | 15.0     | 3.1         | 10.6        | 3.3         | -5.0                 | -9.0         | 0.7          | 0.9          | 1.9           | 6.0           | Mar-94 |
| MSCI ACWI ex USA                 |                      |                   |          | <u>2.6</u>  | <u>9.7</u>  | <u>2.2</u>  | <u>-7.3</u>          | <u>-11.3</u> | <u>0.0</u>   | <u>-0.1</u>  | <u>1.7</u>    | <u>4.8</u>    | Mar-94 |
| Over/Under                       |                      |                   |          | 0.5         | 0.9         | 1.1         | 2.3                  | 2.3          | 0.7          | 1.0          | 0.2           | 1.2           |        |
| MSCI ACWI ex USA                 |                      |                   |          | 2.6         | 9.7         | 2.2         | -7.3                 | -11.3        | 0.0          | -0.1         | 1.7           |               | Mar-94 |
| BlackRock ACWI ex-U.S. Index     | 244,388,753          | 5.6               |          | 2.7         | 10.2        | 2.5         | -6.5                 | -10.1        | 0.6          | 0.3          |               | 0.9           | Mar-07 |
| MSCI ACWI ex USA                 |                      |                   |          | <u>2.6</u>  | <u>9.7</u>  | <u>2.2</u>  | <u>-7.3</u>          | <u>-11.3</u> | <u>0.0</u>   | <u>-0.1</u>  | <u>1.7</u>    | <u>0.4</u>    | Mar-07 |
| Over/Under                       |                      |                   |          | 0.1         | 0.5         | 0.3         | 8.0                  | 1.2          | 0.6          | 0.4          |               | 0.5           |        |
| Sprucegrove                      | 172,163,597          | 4.0               |          | 4.1         | 12.9        | 4.5         | -6.3                 | -10.8        | 0.1          | 1.2          | 2.4           | 6.8           | Mar-02 |
| MSCI ACWI ex USA                 |                      |                   |          | <u>2.6</u>  | <u>9.7</u>  | <u>2.2</u>  | <u>-7.3</u>          | <u>-11.3</u> | <u>0.0</u>   | <u>-0.1</u>  | <u>1.7</u>    | <u>6.0</u>    | Mar-02 |
| Over/Under                       |                      |                   |          | 1.5         | 3.2         | 2.3         | 1.0                  | 0.5          | 0.1          | 1.3          | 0.7           | 0.8           |        |
| MSCI EAFE                        |                      |                   |          | 2.9         | 7.6         | -0.2        | -6.2                 | -9.3         | 1.5          | 1.7          | 1.6           | 5.5           | Mar-02 |
| Hexavest                         | 79,011,942           | 1.8               |          | 3.0         | 8.5         | 2.9         | -2.2                 | -5.8         | 1.8          | 2.2          |               | 3.5           | Dec-10 |
| MSCI EAFE                        |                      |                   |          | <u>2.9</u>  | <u>7.6</u>  | <u>-0.2</u> | <u>-6.2</u>          | <u>-9.3</u>  | <u>1.5</u>   | <u>1.7</u>   | <u>1.6</u>    | <u>3.3</u>    | Dec-10 |
| Over/Under                       |                      |                   |          | 0.1         | 0.9         | 3.1         | 4.0                  | 3.5          | 0.3          | 0.5          |               | 0.2           |        |
| Walter Scott                     | 95,002,864           | 2.2               |          | 2.7         | 9.4         | 3.4         | -1.0                 | -5.2         | 0.6          | 2.6          |               | 3.7           | Dec-10 |
| MSCI ACWI ex USA                 |                      |                   |          | <u>2.6</u>  | <u>9.7</u>  | <u>2.2</u>  | <u>-7.3</u>          | <u>-11.3</u> | <u>0.0</u>   | <u>-0.1</u>  | <u>1.7</u>    | <u>1.4</u>    | Dec-10 |
| Over/Under                       |                      |                   |          | 0.1         | -0.3        | 1.2         | 6.3                  | 6.1          | 0.6          | 2.7          |               | 2.3           |        |
| Total Global Equity              | 423,396,011          | 9.7               | 10.0     | 1.2         | 8.4         | 2.3         | -4.5                 | -7.3         | 3.7          | 4.3          | 2.9           | 4.7           | May-05 |
| MSCI ACWI                        |                      |                   |          | <u>1.5</u>  | <u>8.2</u>  | <u>1.7</u>  | <u>-3.3</u>          | <u>-5.7</u>  | <u>5.1</u>   | <u>4.7</u>   | <u>3.9</u>    | <u>5.8</u>    | May-05 |
| Over/Under                       |                      |                   |          | -0.3        | 0.2         | 0.6         | -1.2                 | -1.6         | -1.4         | -0.4         | -1.0          | -1.1          |        |
| BlackRock MSCI ACWI Equity Index | 222,298,517          | 5.1               |          | 1.5         | 8.4         | 1.9         | -2.9                 | -5.2         | 5.5          |              |               | 9.5           | Jul-12 |
| MSCI ACWI                        |                      |                   |          | <u>1.5</u>  | <u>8.2</u>  | <u>1.7</u>  | <u>-3.3</u>          | <u>-5.7</u>  | <u>5.1</u>   | <u>4.7</u>   | <u>3.9</u>    | <u>9.1</u>    | Jul-12 |
| Over/Under                       |                      |                   |          | 0.0         | 0.2         | 0.2         | 0.4                  | 0.5          | 0.4          |              |               | 0.4           |        |
| GMO Global Equity                | 201,097,494          | 4.6               |          | 8.0         | 8.3         | 2.7         | -6.1                 | -9.5         | 2.0          | 3.7          | 3.6           | 5.5           | Apr-05 |
| MSCI ACWI                        |                      |                   |          | <u>1.5</u>  | <u>8.2</u>  | <u>1.7</u>  | <u>-3.3</u>          | <u>-5.7</u>  | <u>5.1</u>   | <u>4.7</u>   | <u>3.9</u>    | <u>5.8</u>    | Apr-05 |
| Over/Under                       |                      |                   |          | -0.7        | 0.1         | 1.0         | -2.8                 | -3.8         | -3.1         | -1.0         | -0.3          | -0.3          |        |

Prior to May 2002, Total Non-U.S. Equity Benchmark was MSCI EAFE



# Total Fund Performance Detail Net of Fees

|  | Market Value (\$) | % of<br>Portfolio | Policy % | 1 Mo<br>(%)        | 3 Mo<br>(%)        | YTD<br>(%)         | Fiscal<br>YTD<br>(%) | 1 Yr<br>(%)        | 3 Yrs<br>(%)       | 5 Yrs<br>(%)    | 10 Yrs<br>(%) | Return<br>(%)       | Since            |
|--|-------------------|-------------------|----------|--------------------|--------------------|--------------------|----------------------|--------------------|--------------------|-----------------|---------------|---------------------|------------------|
| Total Private Equity   | 157,156,214       | 3.6               | 10.0     | 0.6                | 1.3                | 1.3                | 9.8                  | 11.6               | 15.0               |                 |               | 14.5                | Jan-12           |
| DJ U.S. Total Stock Market Index + 3% Over/Under                         |                   |                   |          | <u>0.9</u><br>-0.3 | <u>8.4</u><br>-7.1 | <u>2.5</u><br>-1.2 | <u>2.6</u><br>7.2    | <u>2.7</u><br>8.9  | <u>14.0</u><br>1.0 | <u>13.7</u>     |               | <u>17.6</u><br>-3.1 | Jan-12           |
| Adams Street Partners  | 97,909,645        | 2.2               |          | 0.0                | 1.3                | 1.3                | 7.1                  | 8.3                | 14.2               |                 |               | 13.2                | Jan-12           |
| DJ U.S. Total Stock Market Index + 3% Over/Under                         |                   |                   |          | <u>0.9</u><br>-0.9 | <u>8.4</u><br>-7.1 | <u>2.5</u><br>-1.2 | <u>2.6</u><br>4.5    | <u>2.7</u><br>5.6  | <u>14.0</u><br>0.2 | <u>13.7</u>     |               | <u>17.6</u><br>-4.4 | Jan-12           |
| Harbourvest  | 44,031,683        | 1.0               |          | 1.5                | 1.3                | 1.2                | 14.9                 | 20.4               |                    |                 |               | 20.0                | Jul-13           |
| DJ U.S. Total Stock Market Index + 3% Over/Under                         |                   |                   |          | <u>0.9</u><br>0.6  | <u>8.4</u><br>-7.1 | <u>2.5</u><br>-1.3 | <u>2.6</u><br>12.3   | <u>2.7</u><br>17.7 | <u>14.0</u>        | <u>13.7</u>     |               | <u>14.2</u><br>5.8  | Jul-13           |
| Pantheon Global Secondary Fund IV  DJ U.S. Total Stock Market Index + 3% | 15,214,887        | 0.3               |          | 1.4<br><u>0.9</u>  | 1.5<br><u>8.4</u>  | 1.5<br>2.5         | 13.2<br>2.6          | 8.9<br><u>2.7</u>  | 9.4<br><u>14.0</u> | <br><u>13.7</u> | <br>          | 9.1<br><u>17.6</u>  | Jan-12<br>Jan-12 |
| Over/Under   |                   |                   |          | 0.5                | -6.9               | -1.0               | 10.6                 | 6.2                | -4.6               |                 |               | -8.5                |                  |

#### Please Note:

Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current month cash flows.



# Private Equity Limited Partnership Performance

| Fund Name                                 | Vintage Year | Initial<br>Investment Date | Commitment    | Capital<br>Called to Date <sup>1</sup> | Outstanding<br>Commitment <sup>1</sup> | Call<br>Ratio | Interest<br>Paid/(Rec'd) | Distributions<br>to Date | Valuation     | Total Value   | Net Benefit  | IRR   |       | Total Value to<br>Paid In Multiple<br>(TVPI) |
|---|--------------|----------------------------|---------------|--|--|---------------|--------------------------|--------------------------|---------------|---------------|--------------|-------|-------|--|
| Adams Street 2010 U.S. Fund               | 2010         | 5/21/2010                  | \$42,500,000  | \$29,665,000                           | \$12,835,000                           | 70%           | \$15,213                 | \$10,764,481             | \$31,612,674  | \$42,377,155  | \$12,696,942 | 14.4% | 0.36x | 1.43x  |
| Adams Street 2010 Non-U.S. Dev. Mkts Fund | 2010         | 5/21/2010                  | \$25,500,000  | \$17,697,000                           | \$7,803,000                            | 69%           | \$1,589                  | \$5,557,179              | \$15,005,080  | \$20,562,259  | \$2,863,670  | 6.6%  | 0.31x | 1.16x  |
| Adams Street 2010 Non-U.S. Emg Mkts Fund  | 2010         | 1/3/2011                   | \$8,500,000   | \$6,111,500                            | \$2,388,500                            | 72%           | <b>\$</b> 0              | \$314,436                | \$7,429,998   | \$7,744,434   | \$1,632,934  | 10.4% | 0.05x | 1.27x  |
| Adams Street 2010 Direct Fund             | 2010         | 5/21/2010                  | \$8,500,000   | \$7,837,000                            | \$663,000                              | 92%           | \$6,697                  | \$3,933,030              | \$8,369,072   | \$12,302,102  | \$4,458,405  | 14.3% | 0.5x  | 1.57x  |
| Total Adams Street 2010                   | 2010         | 5/21/2010                  | \$85,000,000  | \$61,310,500                           | \$23,689,500                           | 72%           | \$23,499                 | \$20,569,126             | \$62,416,824  | \$82,985,950  | \$21,651,951 | 12.2% | 0.34x | 1.35x  |
| Adams Street 2013 Global Fund             | 2013         | 6/27/2013                  | \$75,000,000  | \$34,200,000                           | \$40,800,000                           | 46%           | \$10,728                 | \$2,698,535              | \$33,317,817  | \$36,016,352  | \$1,805,624  | 4.1%  | 0.08x | 1.05x  |
| HarbourVest - Dover Street VIII           | 2013         | 5/30/2013                  | \$67,500,000  | \$47,756,250                           | \$19,743,750                           | 71%           | \$84,954                 | \$21,664,123             | \$44,241,007  | \$65,905,130  | \$18,063,926 | 30.0% | 0.45x | 1.38x  |
| Pantheon Global Secondary Fund IV         | 2010         | 8/20/2010                  | \$15,000,000  | \$9,960,000                            | \$5,040,000                            | 66%           | <b>\$</b> 0              | \$8,310,001              | \$6,093,687   | \$14,403,688  | \$4,443,688  | 14.9% | 0.83x | 1.45x  |
| Pantheon Global Secondary Fund V          | 2015         | 2/26/2015                  | \$50,000,000  | \$8,308,104                            | \$41,691,896                           | 17%           | (\$3,352)                | \$100,240                | \$9,122,597   | \$9,222,837   | \$918,085    | 11.3% | 0.01x | 1.11x  |
| Total VCERA Private Equity Program        |              | 5/21/2010                  | \$292,500,000 | \$161,534,854                          | \$130,965,146                          | 55%           | \$115,829                | \$53,342,025             | \$155,191,932 | \$208,533,957 | \$46,883,274 | 14.5% | 0.33x | 1.29x  |

<sup>1.</sup> Includes recycled/recallable distributions received to date.

Note: Private equity performance data is reported net of fees.

Distributions to Date shown for Pantheon Global Secondary Fund V includes management fee rebates paid to VCERA.

Performance shown is based on 12/31/2015 NAVs cash-adjusted for cash flows through 4/30/2016.



### Total Fund Performance Detail Net of Fees

|                              | Market Value<br>(\$) | % of<br>Portfolio | Policy % | 1 Mo<br>(%) | 3 Mo<br>(%) | YTD<br>(%) | Fiscal<br>YTD<br>(%) | 1 Yr<br>(%) | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) | Return<br>(%) | Since  |
|------------------------------|----------------------|-------------------|----------|-------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|---------------|--------|
| Total US Fixed Income        | 840,120,195          | 19.3              | 20.0     | 1.3         | 4.1         | 4.3        | 3.9                  | 3.1         | 2.1          | 4.2          | 6.1           | 6.1           | Feb-94 |
| Barclays Aggregate           |                      |                   |          | <u>0.4</u>  | <u>2.0</u>  | <u>3.4</u> | <u>4.1</u>           | <u>2.7</u>  | <u>2.3</u>   | <u>3.6</u>   | <u>5.0</u>    | <u>5.6</u>    | Feb-94 |
| Over/Under                   |                      |                   |          | 0.9         | 2.1         | 0.9        | -0.2                 | 0.4         | -0.2         | 0.6          | 1.1           | 0.5           |        |
| BlackRock U.S. Debt Fund     | 145,011,862          | 3.3               |          | 0.4         | 2.0         | 3.5        | 4.1                  | 2.7         | 2.3          | 3.7          | 5.0           | 5.5           | Nov-95 |
| Barclays Aggregate           |                      |                   |          | <u>0.4</u>  | <u>2.0</u>  | <u>3.4</u> | <u>4.1</u>           | <u>2.7</u>  | <u>2.3</u>   | <u>3.6</u>   | <u>5.0</u>    | <u>5.5</u>    | Nov-95 |
| Over/Under                   |                      |                   |          | 0.0         | 0.0         | 0.1        | 0.0                  | 0.0         | 0.0          | 0.1          | 0.0           | 0.0           |        |
| Western                      | 280,328,989          | 6.4               |          | 0.9         | 3.4         | 4.0        | 4.6                  | 2.9         | 3.0          | 4.9          | 5.8           | 6.4           | Dec-96 |
| Barclays Aggregate           |                      |                   |          | <u>0.4</u>  | <u>2.0</u>  | <u>3.4</u> | <u>4.1</u>           | <u>2.7</u>  | <u>2.3</u>   | <u>3.6</u>   | <u>5.0</u>    | <u>5.5</u>    | Dec-96 |
| Over/Under                   |                      |                   |          | 0.5         | 1.4         | 0.6        | 0.5                  | 0.2         | 0.7          | 1.3          | 8.0           | 0.9           |        |
| Reams                        | 298,131,502          | 6.8               |          | 1.7         | 5.7         | 5.0        | 4.1                  | 4.6         | 1.4          | 4.0          | 6.3           | 5.8           | Sep-01 |
| Reams Custom Index           |                      |                   |          | <u>0.1</u>  | <u>0.2</u>  | <u>0.2</u> | <u>0.4</u>           | <u>0.4</u>  | <u>0.3</u>   | <u>2.1</u>   | <u>4.2</u>    | <u>4.2</u>    | Sep-01 |
| Over/Under                   |                      |                   |          | 1.6         | 5.5         | 4.8        | 3.7                  | 4.2         | 1.1          | 1.9          | 2.1           | 1.6           |        |
| Barclays Aggregate           |                      |                   |          | 0.4         | 2.0         | 3.4        | 4.1                  | 2.7         | 2.3          | 3.6          | 5.0           | 4.8           | Sep-01 |
| Loomis Sayles Multi Strategy | 74,142,537           | 1.7               |          | 2.5         | 5.9         | 5.2        | 1.3                  | 0.1         | 2.0          | 5.1          | 6.8           | 6.6           | Jul-05 |
| Loomis Custom Index          |                      |                   |          | <u>1.5</u>  | <u>4.2</u>  | <u>4.7</u> | <u>2.6</u>           | <u>1.3</u>  | <u>2.2</u>   | <u>4.1</u>   | <u>5.6</u>    | <u>5.3</u>    | Jul-05 |
| Over/Under                   |                      |                   |          | 1.0         | 1.7         | 0.5        | -1.3                 | -1.2        | -0.2         | 1.0          | 1.2           | 1.3           |        |
| Barclays Govt/Credit         |                      |                   |          | 0.5         | 2.5         | 4.0        | 4.4                  | 2.8         | 2.2          | 3.9          | 5.0           | 4.6           | Jul-05 |
| Loomis Strategic Alpha       | 42,505,305           | 1.0               |          | 1.4         | 2.4         | 1.8        | -0.6                 | -1.1        |              |              |               | 1.6           | Jul-13 |
| Barclays Aggregate           |                      |                   |          | <u>0.4</u>  | <u>2.0</u>  | <u>3.4</u> | <u>4.1</u>           | <u>2.7</u>  | <u>2.3</u>   | <u>3.6</u>   | <u>5.0</u>    | <u>3.7</u>    | Jul-13 |
| Over/Under                   |                      |                   |          | 1.0         | 0.4         | -1.6       | -4.7                 | -3.8        |              |              |               | -2.1          |        |

PIMCO Global Fixed Income is liquidating. The market value of \$2,341,187 as of 4/30/2016

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Barclays Aggregate

Loomis Custom Index: 65% Barclays Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index



### Total Fund Performance Detail Net of Fees

|                                | Market Value (\$) | % of<br>Portfolio | Policy % | 1 Mo<br>(%) | 3 Mo<br>(%) | YTD<br>(%) | Fiscal<br>YTD<br>(%) | 1 Yr<br>(%)  | 3 Yrs<br>(%) | 5 Yrs<br>(%) | 10 Yrs<br>(%) | Return<br>(%) | Since  |
|--------------------------------|-------------------|-------------------|----------|-------------|-------------|------------|----------------------|--------------|--------------|--------------|---------------|---------------|--------|
| Total Real Estate              | 365,489,464       | 8.4               | 7.0      | 0.0         | 1.9         | 1.9        | 8.5                  | 11.7         | 11.6         | 11.2         | 4.1           | 7.9           | Mar-94 |
| NCREIF ODCE Net                |                   |                   |          | <u>0.0</u>  | <u>2.0</u>  | <u>2.0</u> | <u>8.7</u>           | <u>12.6</u>  | <u>12.6</u>  | <u>12.2</u>  | <u>5.4</u>    | <u>8.2</u>    | Mar-94 |
| Over/Under                     |                   |                   |          | 0.0         | -0.1        | -0.1       | -0.2                 | -0.9         | -1.0         | -1.0         | -1.3          | -0.3          |        |
| Prudential Real Estate         | 127,195,743       | 2.9               |          | 0.0         | 2.0         | 2.0        | 10.0                 | 13.4         | 13.2         | 12.8         | 5.1           | 6.0           | Jun-04 |
| NCREIF ODCE Net                |                   |                   |          | <u>0.0</u>  | <u>2.0</u>  | <u>2.0</u> | <u>8.7</u>           | <u>12.6</u>  | <u>12.6</u>  | <u>12.2</u>  | <u>5.4</u>    | <u>7.0</u>    | Jun-04 |
| Over/Under                     |                   |                   |          | 0.0         | 0.0         | 0.0        | 1.3                  | 8.0          | 0.6          | 0.6          | -0.3          | -1.0          |        |
| NCREIF ODCE                    |                   |                   |          | 0.0         | 2.2         | 2.2        | 9.5                  | 13.7         | 13.6         | 13.3         | 6.4           | 8.0           | Jun-04 |
| UBS Real Estate                | 237,153,034       | 5.4               |          | 0.0         | 1.8         | 1.8        | 8.0                  | 10.9         | 10.7         | 10.3         | 5.7           | 7.6           | Mar-03 |
| NCREIF ODCE Net                |                   |                   |          | <u>0.0</u>  | <u>2.0</u>  | <u>2.0</u> | <u>8.7</u>           | <u>12.6</u>  | <u>12.6</u>  | <u>12.2</u>  | <u>5.4</u>    | <u>7.3</u>    | Mar-03 |
| Over/Under                     |                   |                   |          | 0.0         | -0.2        | -0.2       | -0.7                 | -1.7         | -1.9         | -1.9         | 0.3           | 0.3           |        |
| NCREIF ODCE                    |                   |                   |          | 0.0         | 2.2         | 2.2        | 9.5                  | 13.7         | 13.6         | 13.3         | 6.4           | 8.3           | Mar-03 |
| RREEF                          | 1,140,686         | 0.0               |          | 0.0         | -4.8        | -4.8       | -10.7                | 0.0          | 13.2         | 21.3         |               | -5.3          | Sep-07 |
| NCREIF ODCE Net                |                   |                   |          | <u>0.0</u>  | <u>2.0</u>  | <u>2.0</u> | <u>8.7</u>           | <u>12.6</u>  | <u>12.6</u>  | <u>12.2</u>  | <u>5.4</u>    | <u>3.5</u>    | Sep-07 |
| Over/Under                     |                   |                   |          | 0.0         | -6.8        | -6.8       | -19.4                | -12.6        | 0.6          | 9.1          |               | -8.8          |        |
| NCREIF ODCE                    |                   |                   |          | 0.0         | 2.2         | 2.2        | 9.5                  | 13.7         | 13.6         | 13.3         | 6.4           | 4.5           | Sep-07 |
| Total Liquid Alternatives      | 375,806,437       | 8.6               | 10.0     | 4.2         | 9.1         | 4.1        | -8.8                 | -14.2        | 3.2          | -            |               | 3.2           | Apr-13 |
| CPI + 4% (Unadjusted)          |                   |                   |          | <u>0.8</u>  | <u>1.9</u>  | <u>2.4</u> | <u>3.5</u>           | <u>5.1</u>   | <u>5.0</u>   | <u>5.3</u>   | <u>5.8</u>    | <u>5.0</u>    | Apr-13 |
| Over/Under                     |                   |                   |          | 3.4         | 7.2         | 1.7        | -12.3                | -19.3        | -1.8         |              |               | -1.8          |        |
| Bridgewater All Weather Fund   | 266,353,727       | 6.1               |          | 1.8         | 5.4         | 4.2        | -3.4                 | -7.7         |              |              |               | 2.9           | Aug-13 |
| CPI + 5% (Unadjusted)          |                   |                   |          | <u>0.8</u>  | <u>2.2</u>  | <u>2.8</u> | <u>4.4</u>           | <u>6.1</u>   |              |              |               | <u>5.9</u>    | Aug-13 |
| Over/Under                     |                   |                   |          | 1.0         | 3.2         | 1.4        | -7.8                 | -13.8        |              |              |               | -3.0          |        |
| Tortoise Energy Infrastructure | 109,452,710       | 2.5               |          | 10.4        | 19.2        | 3.9        | -19.9                | -26.9        | -0.5         |              |               | -0.5          | Apr-13 |
| Wells Fargo MLP Index          |                   |                   |          | <u>13.9</u> | <u>23.0</u> | <u>6.9</u> | <u>-22.8</u>         | <u>-30.3</u> | <u>-6.5</u>  | <u>1.4</u>   |               | <u>-6.5</u>   | Apr-13 |
| Over/Under                     |                   |                   |          | -3.5        | -3.8        | -3.0       | 2.9                  | 3.4          | 6.0          |              |               | 6.0           |        |
| Overlay                        | 256,609,520       | 5.9               | 0.0      |             |             |            |                      |              |              |              |               |               |        |
| Parametric                     | 256,609,520       | 5.9               |          |             |             |            |                      |              |              |              |               |               |        |
|                                |                   |                   |          |             |             |            |                      |              |              |              |               |               |        |

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index

Real Estate managers and NCREIF ODCE are valued on a quarterly basis. Performance is not applicable in mid-quarter months, therefore 0% return is shown.

CPI+4% and CPI+5% is estimated by carrying the last available month forward

Real Estate Valuation is as of 3/31/2016



# Total Fund

### **Cash Flow Summary**

#### Month Ending April 30, 2016

|                                   | Beginning<br>Market Value | Withdrawals   | Contributions | Net Cash Flow | Fees       | Net Investment<br>Change | Ending<br>Market Value |
|-----------------------------------|---------------------------|---------------|---------------|---------------|------------|--------------------------|------------------------|
| Adams Street Partners             | \$95,734,628              | \$0           | \$2,175,000   | \$2,175,000   | \$0        | \$16                     | \$97,909,645           |
| BlackRock ACWI ex-U.S. Index      | \$237,902,996             | \$0           | \$0           | \$0           | -\$22,032  | \$6,485,757              | \$244,388,753          |
| BlackRock Equity Market Fund      | \$1,148,940,523           | \$0           | \$0           | \$0           | -\$21,349  | \$7,022,516              | \$1,155,963,039        |
| BlackRock Extended Equity Index   | \$44,757,824              | \$0           | \$0           | \$0           | -\$3,035   | \$770,485                | \$45,528,309           |
| BlackRock MSCI ACWI Equity Index  | \$218,952,483             | \$0           | \$0           | \$0           | -\$9,077   | \$3,346,034              | \$222,298,517          |
| BlackRock U.S. Debt Fund          | \$144,426,324             | \$0           | \$0           | \$0           | -\$8,167   | \$585,538                | \$145,011,862          |
| Bridgewater All Weather Fund      | \$261,608,219             | \$0           | \$0           | \$0           | -\$88,824  | \$4,745,508              | \$266,353,727          |
| GMO Global Equity                 | \$199,419,351             | \$0           | \$0           | \$0           | -\$92,170  | \$1,678,143              | \$201,097,494          |
| Harbourvest                       | \$43,386,234              | \$0           | \$0           | \$0           | \$0        | \$645,448                | \$44,031,683           |
| Hexavest                          | \$76,709,883              | \$0           | \$0           | \$0           | -\$30,504  | \$2,302,059              | \$79,011,942           |
| L - PIMCO Global Fixed Income     | \$2,339,996               | \$0           | \$0           | \$0           | -\$683     | \$1,192                  | \$2,341,187            |
| Loomis Sayles Multi Strategy      | \$72,294,856              | \$0           | \$0           | \$0           | -\$24,369  | \$1,847,681              | \$74,142,537           |
| Loomis Strategic Alpha            | \$41,900,786              | \$0           | \$0           | \$0           | -\$14,168  | \$604,520                | \$42,505,305           |
| Pantheon Global Secondary Fund IV | \$15,002,135              | \$0           | \$0           | \$0           | \$0        | \$212,751                | \$15,214,887           |
| Parametric                        | \$269,942,617             | -\$28,929,504 | \$17,749,201  | -\$11,180,303 | -\$61,578  | -\$2,152,794             | \$256,609,520          |
| Prudential Real Estate            | \$127,195,743             | \$0           | \$0           | \$0           | \$0        | \$0                      | \$127,195,743          |
| Reams                             | \$293,147,976             | \$0           | \$0           | \$0           | -\$43,516  | \$4,983,526              | \$298,131,502          |
| RREEF                             | \$1,140,686               | \$0           | \$0           | \$0           | \$0        | \$0                      | \$1,140,686            |
| Sprucegrove                       | \$165,287,365             | \$0           | \$0           | \$0           | -\$55,451  | \$6,876,232              | \$172,163,597          |
| Tortoise Energy Infrastructure    | \$99,070,351              | \$0           | \$0           | \$0           | -\$67,423  | \$10,382,359             | \$109,452,710          |
| UBS Real Estate                   | \$237,153,034             | \$0           | \$0           | \$0           | \$0        | \$0                      | \$237,153,034          |
| Walter Scott                      | \$92,463,216              | \$0           | \$0           | \$0           | -\$69,376  | \$2,539,648              | \$95,002,864           |
| Western                           | \$277,765,076             | \$0           | \$0           | \$0           | -\$47,541  | \$2,563,913              | \$280,328,989          |
| Western U.S. Index Plus           | \$143,435,833             | \$0           | \$0           | \$0           | -\$30,547  | \$941,467                | \$144,377,300          |
| Total                             | \$4,309,978,136           | -\$28,929,504 | \$19,924,201  | -\$9,005,303  | -\$689,812 | \$56,382,001             | \$4,357,354,833        |

L-PIMCO Global Fixed Income is liquidating



April 30, 2016





Investment Summary Quarter Ending March 31, 2016

Daniel LeBeau, Consultant Allan Martin, Partner, Anthony Ferrara, CAIA, Senior Analyst

255 State Street, Boston, MA 02109 | TEL: 617.374.1300 | FAX: 617.374.1313 | www.nepc.com BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO Market Environment Update and Outlook



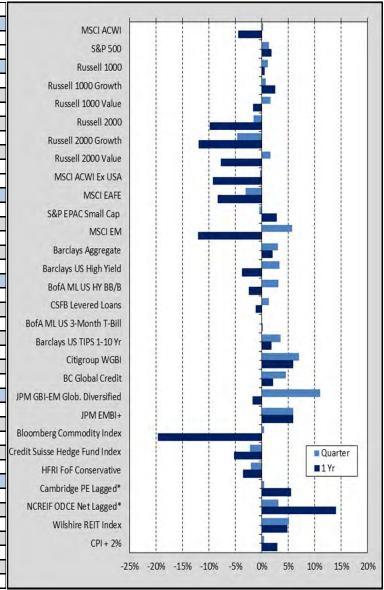
### **Economic Environment**

- Fourth quarter GDP growth rate (third estimate) printed at a modest 1.4%.
  - Retail sales ended February at +3.1% on a year-over-year growth rate basis. In the same period last year the YoY growth rate was 1.2%.
  - The inventory-to-sales ratio ended February was flat at 1.4 and has remained relatively flat since early 2010.
  - Corporate profits (ended October) as a percent of GDP declined slightly to 9.3% from 9.9% and remain elevated relative to historical levels.
  - The U.S. trade deficit widened 2.6% in February due to increased imports.
- The unemployment rate remained unchanged at 5.0% in Q1; U-6, a broader measure of unemployment, fell to 9.8% during the first quarter.
- The Case-Shiller Home Price Index (ended January) increased slightly to 175.4 from 175.3 September and is at levels higher than that of pre-financial crisis levels of 150.9.
- Rolling 12-month seasonally adjusted CPI increased to 0.8% from 0.06% at the end of December; Capacity Utilization decreased to 74.8 in March from 75.4% in December.
- Fed Funds rate was unchanged at 0.50%. The 10-year Treasury Yield (constant maturity) finished Q1 at 1.9% down from 2.2% ended December.
- The Fed balance sheet decreased slightly during Q1 2016, while the European Central Bank balance sheet continues to increase.
  - ECB cut interest rates to -0.4% and expanded asset purchases from €60 billion to €80 billion per month.
- S&P valuations decreased in March remaining above the 10-year and long-term averages
  - Cyclically adjusted Shiller PE ratio (25.38x) is above the long-term average of 16.6x and above the 10-year average of 22.8x.
- Global currencies strengthened against the dollar amid commodity price stabilization and investor confidence.



### Market Environment – Q1 2016 Overview

|                                  |                        | Qtr.  | <u>1 Yr.</u> | <u>3 Yr.</u> | <u>5 Yr.</u> | <u>10 Yr.</u> |
|----------------------------------|------------------------|-------|--------------|--------------|--------------|---------------|
| World Equity Benchmarks          |                        |       |              |              |              |               |
| MSCI ACWI                        | World                  | 0.2%  | -4.3%        | 5.5%         | 5.2%         | 4.1%          |
|                                  |                        | Qtr.  | <u>1 Yr.</u> | <u>3 Yr.</u> | <u>5 Yr.</u> | <u>10 Yr.</u> |
| Domestic Equity Benchmarks       |                        |       |              |              |              |               |
| S&P 500                          | Large Core             | 1.3%  | 1.8%         | 11.8%        | 11.6%        | 7.0%          |
| Russell 1000                     | Large Core             | 1.2%  | 0.5%         | 11.5%        | 11.4%        | 7.1%          |
| Russell 1000 Growth              | Large Growth           | 0.7%  | 2.5%         | 13.6%        | 12.4%        | 8.3%          |
| Russell 1000 Value               | Large Value            | 1.6%  | -1.5%        | 9.4%         | 10.2%        | 5.7%          |
| Russell 2000                     | Small Core             | -1.5% | -9.8%        | 6.8%         | 7.2%         | 5.3%          |
| Russell 2000 Growth              | Small Growth           | -4.7% | -11.8%       | 7.9%         | 7.7%         | 6.0%          |
| Russell 2000 Value               | Small Value            | 1.7%  | -7.7%        | 5.7%         | 6.7%         | 4.4%          |
|                                  |                        | Qtr.  | 1 Yr.        | 3 Yr.        | <u>5 Yr.</u> | <u>10 Yr.</u> |
| nternational Equity Benchmarks   |                        |       |              |              |              |               |
| MSCI ACWI Ex USA                 | World ex-US            | -0.4% | -9.2%        | 0.3%         | 0.3%         | 1.9%          |
| MSCI EAFE                        | Int'l Developed        | -3.0% | -8.3%        | 2.2%         | 2.3%         | 1.8%          |
| S&P EPAC Small Cap               | Small Cap Int'l        | -0.4% | 2.8%         | 7.9%         | 5.9%         | 4.5%          |
| MSCI EM                          | Emerging Equity        | 5.7%  | -12.0%       | -4.5%        | -4.1%        | 3.0%          |
|                                  |                        | Qtr.  | 1 Yr.        | 3 Yr.        | 5 Yr.        | 10 Yr.        |
| Domestic Fixed Income Benchmarks |                        |       |              |              |              |               |
| Barclays Aggregate               | Core Bonds             | 3.0%  | 2.0%         | 2.5%         | 3.8%         | 4.9%          |
| Barclays US High Yield           | High Yield             | 3.4%  | -3.7%        | 1.8%         | 4.9%         | 7.0%          |
| BofA ML US HY BB/B               | High Yield             | 3.1%  | -2.4%        | 2.5%         | 5.2%         | 6.5%          |
| CSFB Levered Loans               | Bank Loans             | 1.3%  | -1.1%        | 2.2%         | 3.5%         | 4.0%          |
| BofA ML US 3-Month T-Bill        | Cash                   | 0.1%  | 0.1%         | 0.1%         | 0.1%         | 1.1%          |
| Barclays US TIPS 1-10 Yr         | Inflation              | 3.6%  | 1.8%         | -0.7%        | 1.9%         | 4.0%          |
|                                  |                        | Qtr.  | <u>1 Yr.</u> | <u>3 Yr.</u> | <u>5 Yr.</u> | <u>10 Yr.</u> |
| Global Fixed Income Benchmarks   |                        |       |              |              |              |               |
| Citigroup WGBI                   | World Gov. Bonds       | 7.1%  | 5.9%         | 0.5%         | 1.2%         | 4.2%          |
| BC Global Credit                 | Global Bonds           | 4.6%  | 2.1%         | 1.6%         | 3.3%         | 4.8%          |
| JPM GBI-EM Glob. Diversified     | Em. Mkt. Bonds (Local) | 11.0% | -1.6%        | -6.7%        | -2.0%        | 5.0%          |
| JPM EMBI+                        | Em. Mkt. Bonds         | 5.9%  | 5.9%         | 2.8%         | 6.1%         | 7.1%          |
|                                  |                        | Qtr.  | <u>1 Yr.</u> | <u>3 Yr.</u> | <u>5 Yr.</u> | <u>10 Yr.</u> |
| Alternative Benchmarks           |                        |       |              |              |              |               |
| Bloomberg Commodity Index        | Commodity              | 0.4%  | -19.6%       | -16.9%       | -14.1%       | -6.2%         |
| Credit Suisse Hedge Fund Index   | Hedge Fund             | -2.2% | -5.2%        | 2.4%         | 2.7%         | 4.2%          |
| HFRI FoF Conservative            | Fund of Funds          | -2.0% | -3.5%        | 2.1%         | 1.7%         | 1.4%          |
| Cambridge PE Lagged*             | Private Equity         | 0.4%  | 5.5%         | 12.5%        | 12.5%        | 11.4%         |
| NCREIF ODCE Net Lagged*          | Real Estate            | 3.1%  | 14.0%        | 12.8%        | 12.6%        | 5.6%          |
| Wilshire REIT Index              | REIT                   | 5.2%  | 4.8%         | 11.1%        | 12.1%        | 6.3%          |
| CPI + 2%                         | Inflation/Real Assets  | 0.4%  | 2.9%         | 2.8%         | 3.3%         | 3.8%          |



<sup>\*</sup> As of 12/31/2015



March 31, 2016

#### **Global Equity**

- U.S. equities posted modest gains in the first quarter (+1.3%) rallying in March from a rocky beginning to 2016.
- Small cap stocks underperformed large cap stocks during the quarter, with the Russell 2000 Index returning -1.5% and the Russell 1000 Index returning 1.2%.
- International equities underperformed U.S. markets during the quarter, returning -0.4%, as measured by the MSCI ACWI ex-U.S. Index. Emerging markets returned 5.7% as measured by the MSCI Emerging Markets Index in U.S. dollar terms.
  - Developed international markets returned -3.0% as measured by the MSCI EAFE Index.

#### **Private Equity**

- Private equity fundraising totaled \$130.5 billion in Q1 2016.
- Buyout and Special Situations fundraising totaled \$48.1 billion in Q1 2016.
  - 55% of fundraising activity was in North America, 42% in Europe and 2.7% in Asia/Emerging Markets.
- Venture capital fundraising totaled \$9.2 billion.
  - VC fundraising as a percent of total new PE funds is in line with historical post-dot com levels at approximately 14%.
- Fund of fund and multi-manager co-investment fundraising totaled \$7.8 billion.
- Growth equity fundraising totaled \$3.4 billion.



#### **Fixed Income**

- The yield curve shifted down for maturities greater than 6 months. Intermediate yields decreased 44-49 basis points and long duration yields decreased 40 basis points.
- The spread between two and 10-year rates decreased to 105 basis points from 121 basis points ended March. Treasury Inflation-Protected Securities, or TIPS, returned +3.6% during the quarter, as measured by the Barclays US TIPS 1-10 Yr Index.
- The Barclays Long Duration Credit Index gained +6.82% as the long end of the curve ended the quarter 40 basis points lower.
- Long Treasuries gained +8.49% and investment-grade corporate debt gained 3.03%.
- The Barclays 1-3 year Government/ Credit Index returned +0.97% and US high yield bonds gained +3.4%.
- Emerging markets debt gained broadly and were especially pronounced in local currency as relative dollar weakness spurred strong gains.
  - US dollar-denominated debt, as measured by the JP Morgan EMBI Index, gained 5.9%; local currency debt gained +11.0%, according to the JP Morgan GBI-EM Index.



#### Real Assets/Inflation-Linked Assets

- Massive energy market dislocation.
  - Seek inflation sensitive asset classes that offer positive yield
  - Oil prices stabilizing and remain low.
  - Private equity and private debt opportunities may be relatively attractive.
  - Potential for public stressed/distressed credit, equity and commodity plays.
- OPEC, Saudi Arabia and oil producing countries continue to show a willingness to allow lower oil
  prices to persist in efforts to cement market share and reduce marginal supply.
- Select infrastructure opportunities showing signs of being attractive.
  - Target opportunistic strategies in niche sub-sectors to take advantage of market dislocations.
  - Secular opportunities may exist within the shipping industry as traditional financing sources (both debt and equity) are less abundant
- Timber opportunities remain elusive.
  - Income yields (net) are low as assets are predominantly traded between like-minded institutions
  - Private strategies are illiquid and constrain quick entrance/exit (i.e. long-term lock-up)
  - Liquid strategies have limited pure timber exposure (and limited active-play options)



#### **Commodities**

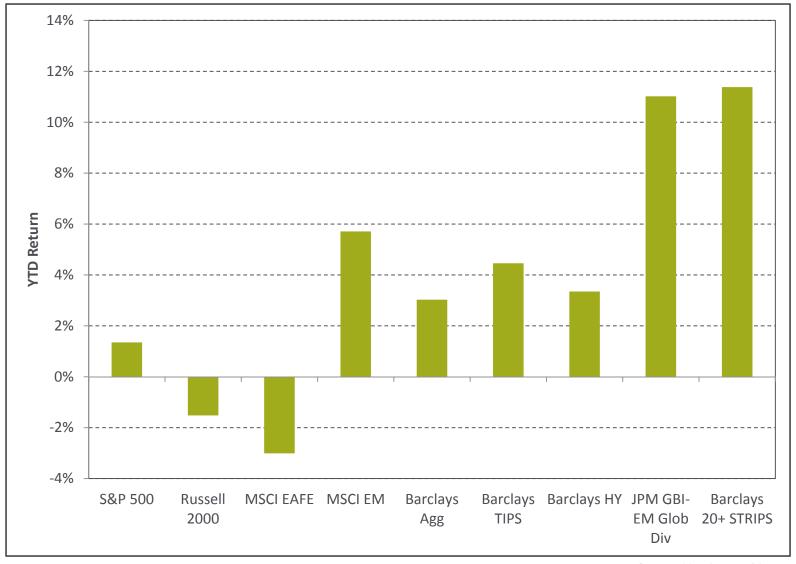
- Commodities ended quarter with a meager +0.51% as measured by the Bloomberg Commodity Index.
  - Volatility continued in oil markets as price discovery continues into 2016 with oil reaching multi-year lows in February preceding a rebound in March.
  - Precious metals were the best performing group appreciating nearly 9.5% on average.

#### **Real Estate**

- NEPC continues to be neutral on core real estate in the US and remains positive on non-core real estate, that is, value-add and opportunistic strategies.
- Within U.S. core real estate, strong fundamentals continue to be the story along with attractive income spreads relative to interest rates.
  - Real estate fundamentals and debt terms are attractive, however valuations are high and the possibility of rising interest rates and the impact on cap rates causes concern.
- Overall, the non-core real estate investment environment in the U.S. is normalizing; however, select areas remain attractive.
- Europe is viewed as the best place for a marginal dollar of non-core real estate investment.
  - Europe is emerging from multi-year recession, but recovery is slow and uneven with global markets experiencing large capital inflows.
  - Banks in EU are still overleveraged and have significant real estate exposure to jettison.



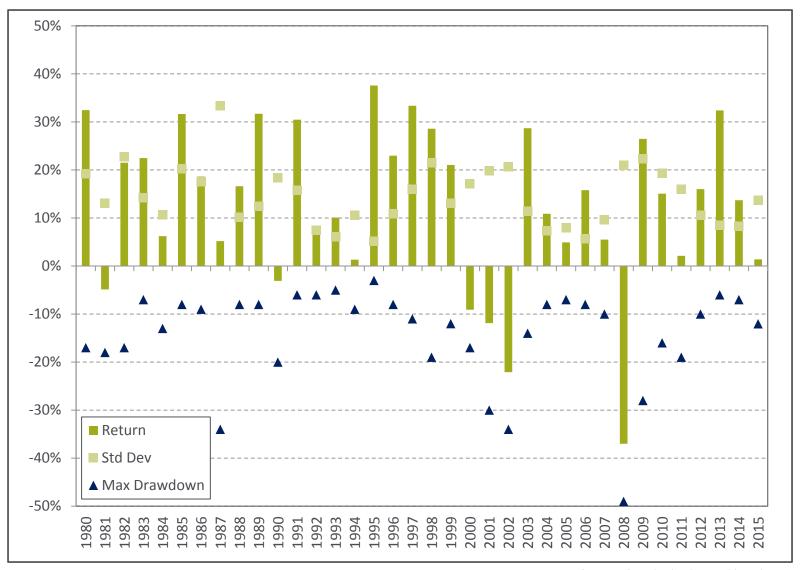
# Year to Date Performance – Sharp Market Rally Masks Scale of Recent Sell-Off



Source: Morningstar Direct



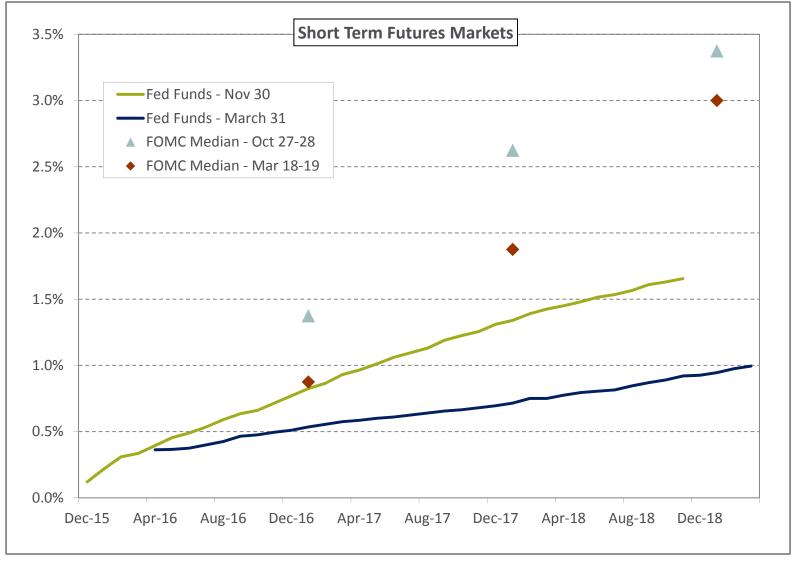
### S&P 500 Intra-Year Drawdowns of Recent Magnitude Relatively Common



Source: Standard & Poors, Bloomberg



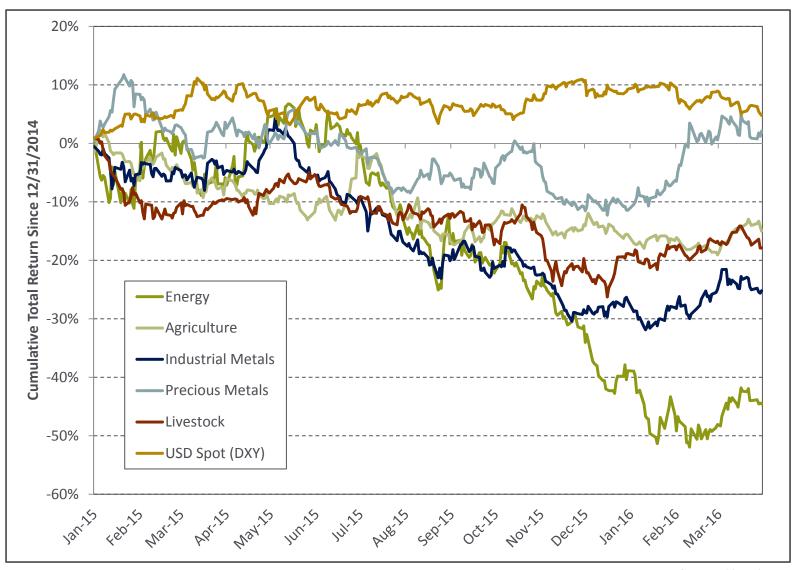
### Fed Funds Curve and FOMC Appropriate Pace of Policy Firming Has Moderated



Source: Federal Reserve, Bloomberg



### Stabilizing Commodity Returns are Positive for EM



Source: Bloomberg



### **General Actions for Clients**

- Prospects of low US core bond returns warrant a more positive tilt to US equity, especially following sell-offs
  - Macro policy remains supportive but corporate earnings quality is deteriorating
  - Lower returns expected but pockets of opportunity can be found in US equity and credit
- Overweight non-US developed market equities
  - Central bank support and dollar strength provide a positive economic backdrop
  - Small-cap equities offer purest opportunity to benefit from local earnings recovery
  - EAFE equity markets offer the potential for strong returns relative to US equities
- Overweight emerging market small-cap and consumer focused strategies relative to broad equity mandates
  - Valuations and long-term fundamentals suggest a strategic overweight
  - China uncertainty, dollar pressure and idiosyncratic country risks temper excitement
- Seek tactical fixed income strategies but preserve duration exposure
  - US duration continues to have a role in a diversified and risk-aware portfolio
  - TIPS offer an attractive duration profile with inflation expectations at secular lows
  - Credit selection is critical as credit cycle matures and spreads contract in recent rally
- Private market opportunities are the preferred access point as energy market distress continues to evolve
  - Return opportunities of private strategies are compelling but suggest patience



# NEPC Updates

March 31, 2016

#### **Highlights of First Quarter Happenings at NEPC**

#### **NEPC Research**

#### **Recent White Papers**

- 2016 First Quarter Market Thoughts
- Market Chatter: Is it really All About China? (January 2016)
- Market Chatter: Monetary Policy Divergence and Developed Currency (April 2016)

#### **Upcoming Events**

- 'Opportunities for Future Investments' is the theme for NEPC's 21st Annual Investment Conference – May 10-11, 2016 at the Hynes Convention Center in Boston, MA. Keynote Speakers are:
  - Michael Cembalest, Chairman of Market and Investment Strategy, J.P. Morgan Asset Management
  - > Dr. Dambisa Moyo, Global Economist and Author

Register at www.NEPC.com

#### **NEPC Client Recognitions**

We are excited to announce that three of NEPC's clients were nominated for the 2016 "Chief Investment Officer of the Year" Investor Intelligence Award. The winners will be announced at Institutional Investor's annual Roundtable for Public Funds, taking place April 27-29, 2016 in Los Angeles, CA. We wish them luck!

- Arn Andrews, CIO, City of San Jose Department of Retirement Services
- Ryan Parham, CIO, Arizona Public Safety Personnel Retirement Systems
- Girard Miller, CIO, Orange County Employees Retirement System



#### **NEPC Client Recognitions (continued)**

A number of NEPC clients were named on TrustedInsight's list of <u>Top 30 Pension Fund Chief Investment Officers</u>. According to the January 2016 issue, "these 30 chief investment officers manage more than \$1.3 trillion in assets for millions of retirees in the United States. These professionals are at the forefront of an industry that's slow to evolve, under constant scrutiny and vital to the wellbeing of many average Americans. Nonetheless, they operate at the top of their field to prudently protect the benefits of their constituency." NEPC clients that made the list include:

- Scott Evans, CIO, New York Employees Retirement System -\$78.5B AUM
- David Villa, CIO, State of Wisconsin Investment Board -\$102B AUM
- Gary Dokes, CIO, Arizona State Retirement System \$31B AUM
- Michael Trotsky, Executive Director, CIO, Massachusetts PRIM Board - \$62B AUM
- Robert Beale, CIO, Louisiana State Employees' Retirement System - \$5.2B AUM
- Richard Shafer, CIO, Ohio Public Employees' Retirement System - \$91.5B AUM
- James Perry, CIO, Dallas Police and Fire Pension System -\$3B AUM
- William Coaker, CIO, San Francisco Employees Retirement System - \$20.3B AUM
- Bob Jacksha, CIO, New Mexico Education Retirement Fund -\$11B AUM
- Girard Miller, CIO, Orange County Employees Retirement System - \$12.1B AUM
- Sam Masoudi, CFA, CAIA, CIO, Wyoming Retirement System
   \$7.8B AUM



# **Total Fund Performance**

Note: All of the data shown on the following pages is as of March 31, 2016 and reflects the deduction of investment manager fees, unless otherwise noted.

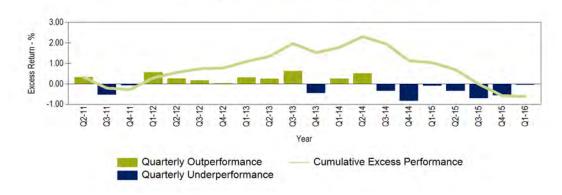
### Total Fund Performance Summary (Net)

|   | Market Value    | 3 Mo | Rank | Fiscal<br>YTD | Rank | 1 Yr  | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 10 Yrs | Rank | Return | Since  |
|---|-----------------|------|------|---------------|------|-------|------|-------|------|-------|------|--------|------|--------|--------|
| Total Fund                                | \$4,309,978,136 | 1.4% | 18   | -1.4%         | 33   | -1.5% | 48   | 6.1%  | 31   | 6.8%  | 26   | 5.3%   | 39   | 7.8%   | Apr-94 |
| Policy Index                              |                 | 1.4% | 15   | -0.1%         | 9    | 0.2%  | 15   | 6.7%  | 10   | 6.9%  | 16   | 5.6%   | 28   | 7.9%   | Apr-94 |
| Allocation Index                          |                 | 0.9% | 53   | -1.6%         | 45   | -1.5% | 50   | 5.7%  | 47   | 6.2%  | 51   | 5.1%   | 55   |        | Apr-94 |
| 60% MSCI World (Net) / 40% CITI WGBI      |                 | 2.7% | 1    | 0.9%          | 2    | 0.5%  | 11   | 4.4%  | 78   | 4.6%  | 96   | 4.6%   | 78   | 6.3%   | Apr-94 |
| InvestorForce Public DB > \$1B Net Median |                 | 0.9% |      | -1.8%         |      | -1.5% |      | 5.6%  |      | 6.3%  |      | 5.1%   |      | 7.4%   | Apr-94 |

- -For the five-year period ending March 31, 2016, the Fund returned 6.8%, trailing the policy index by 0.1% and ranking in the 26th percentile of its peers. The Fund's volatility, as measured by standard deviation, ranked in the 71st percentile of its peers, and the risk-adjusted return, or Sharpe Ratio, ranks in the 48th percentile. This means that the Fund has earned more return per unit of volatility taken than 52% of its peers.
- For the three-year period ending March 31, 2016, the Fund returned 6.1%, trailing the policy index by 0.6% and ranking in the 31st percentile of its peers. The Fund's volatility ranks in the bottom half of its peers over this period, with the Fund's Sharpe Ratio ranking in the 49th percentile.
- For the one-year period ending March 31, 2016, the Fund returned -1.5%, trailing the policy index by 1.7% and ranking in the 48th percentile of the InvestorForce Public Funds > \$1 Billion Universe (Net of Fees).
- For the one-year period ending March 31, 2016, the Fund experienced a net investment loss of \$44 million, which includes a net investment gain of \$63 million in the quarter. Assets decreased from \$4.37 billion one year ago to \$4.31 billion on March 31, 2016.

Policy Index as of January 2016: 28% Russell 3000, 20% Barclays Aggregate, 15% MSCI ACWI ex U.S., 10% MSCI ACWI, 10% DJ U.S. Total Stock Market Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index.

#### Quarterly and Cumulative Excess Performance



#### 3 Years Ending March 31, 2016

|   | Anlzd Ret | Rank | Anlzd Std<br>Dev | Rank | Sharpe<br>Ratio | Rank | Sortino<br>Ratio RF | Rank |
|---|-----------|------|------------------|------|-----------------|------|---------------------|------|
| Total Fund                                | 6.1%      | 31   | 7.4%             | 64   | 0.8             | 49   | 1.6                 | 36   |
| Policy Index                              | 6.7%      | 10   | 7.3%             | 61   | 0.9             | 27   | 1.7                 | 29   |
| InvestorForce Public DB > \$1B Net Median | 5.6%      |      | 7.0%             |      | 0.8             |      | 1.5                 |      |

#### 5 Years Ending March 31, 2016

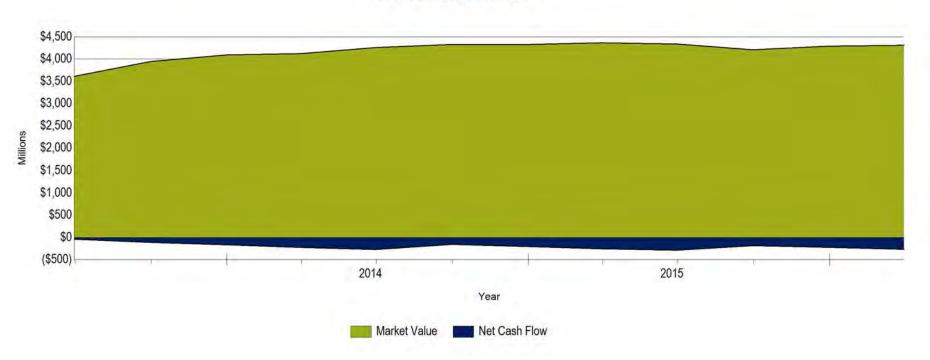
|   | Anlzd Ret | Rank | Anlzd Std<br>Dev | Rank | Sharpe<br>Ratio | Rank | Sortino<br>Ratio RF | Rank |
|---|-----------|------|------------------|------|-----------------|------|---------------------|------|
| Total Fund                                | 6.8%      | 26   | 8.4%             | 71   | 0.8             | 48   | 1.3                 | 43   |
| Policy Index                              | 6.9%      | 16   | 8.4%             | 69   | 0.8             | 41   | 1.3                 | 39   |
| InvestorForce Public DB > \$1B Net Median | 6.3%      |      | 7.7%             |      | 0.8             |      | 1.2                 |      |



March 31, 2016

### Total Fund Asset Growth Summary

Market Value History 3 Years Ending March 31, 2016

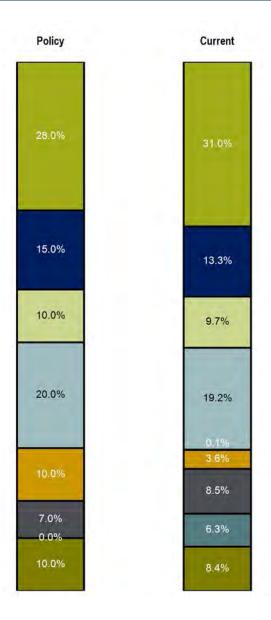


### **Summary of Cash Flows**

| Sources of Portfolio Growth | First Quarter   | Fiscal Year-To-Date | One Year        | Three Years     |
|-----------------------------|-----------------|---------------------|-----------------|-----------------|
| Beginning Market Value      | \$4,290,811,595 | \$4,338,136,581     | \$4,365,835,058 | \$3,648,861,350 |
| Net Additions/Withdrawals   | -\$43,916,187   | \$19,254,076        | -\$11,187,980   | -\$268,005,932  |
| Investment Earnings         | \$63,082,728    | -\$47,412,521       | -\$44,668,942   | \$929,122,718   |
| Ending Market Value         | \$4,309,978,136 | \$4,309,978,136     | \$4,309,978,136 | \$4,309,978,136 |



### Total Fund Asset Allocation vs. Policy Targets



| Asset Allocation vs. Target |                 |         |        |                 |               |                 |  |  |
|-----------------------------|-----------------|---------|--------|-----------------|---------------|-----------------|--|--|
|                             | Current         | Current | Policy | Difference<br>* | Policy Range  | Within<br>Range |  |  |
| U.S. Equity                 | \$1,337,134,180 | 31.0%   | 28.0%  | 3.0%            | 24.0% - 32.0% | Yes             |  |  |
| Non-US Equity               | \$572,363,460   | 13.3%   | 15.0%  | -1.7%           | 12.0% - 18.0% | Yes             |  |  |
| Global Equity               | \$418,371,834   | 9.7%    | 10.0%  | -0.3%           | 7.0% - 13.0%  | Yes             |  |  |
| U.S. Fixed Income           | \$829,535,018   | 19.2%   | 20.0%  | -0.8%           | 16.0% - 24.0% | Yes             |  |  |
| Global Bonds                | \$2,339,996     | 0.1%    |        | 0.1%            |               | No              |  |  |
| Private Equity              | \$154,122,998   | 3.6%    | 10.0%  | -6.4%           | 0.0% - 12.0%  | Yes             |  |  |
| Real Estate                 | \$365,489,464   | 8.5%    | 7.0%   | 1.5%            | 4.0% - 10.0%  | Yes             |  |  |
| Cash                        | \$269,942,617   | 6.3%    | 0.0%   | 6.3%            | 0.0% - 3.0%   | No              |  |  |
| Liquid Alternatives         | \$360,678,570   | 8.4%    | 10.0%  | -1.6%           | 5.0% - 15.0%  | Yes             |  |  |
|                             |                 |         |        |                 |               |                 |  |  |

100.0%

100.0%

Asset Allocation vs. Target

Total

Cash represents assest in Parametric Overlay

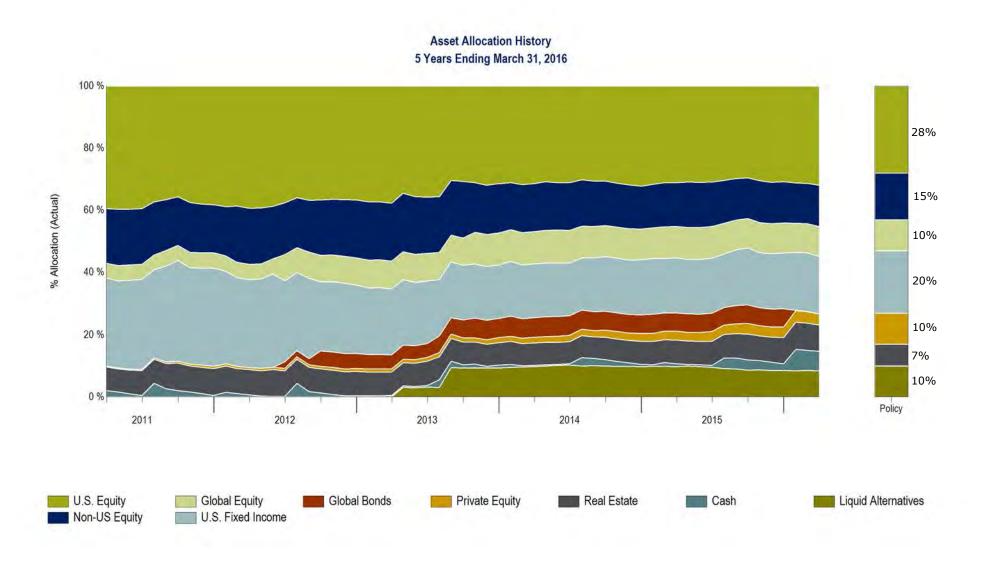
Global bonds consists of \$2,339,996 from the liquidating manager PIMCO Global Fixed Income

\$4,309,978,136

Policy Index as of January 2016:, 28% Russell 3000, 20% Barclays Aggregate, 15% MSCI ACWI ex U.S., 10%MSCI ACWI, 10% DJ U.S. Total Stock Market Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index.

<sup>\*</sup>Difference between Policy and Current Allocation

### Total Fund Allocation History



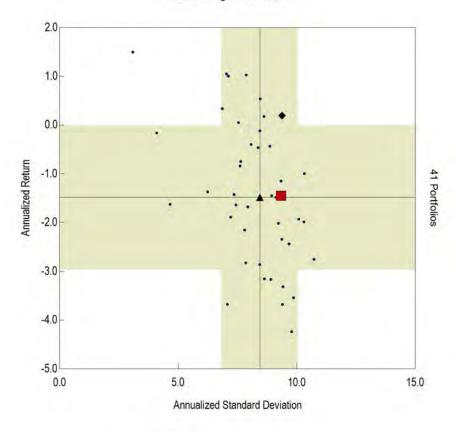
Policy Index shown is most recently approved index



March 31, 2016

# Total Fund Risk/Return

#### 1 Years Ending March 31, 2016



| 1 Voore | Ending | March ' | 21  | 2016 |
|---------|--------|---------|-----|------|
| 1 Years | Enaina | warch . | 51. | 2010 |

|   | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
|---|-----------|------|---------------|------|
| Total Fund                                | -1.5%     | 48   | 9.3%          | 75   |
| Policy Index                              | 0.2%      | 15   | 9.4%          | 79   |
| InvestorForce Public DB > \$1B Net Median | -1.5%     |      | 8.4%          |      |

#### 1 Years Ending March 31, 2016

|   | Sharpe Ratio | Rank | Sortino Ratio | Rank |
|---|--------------|------|---------------|------|
| Total Fund                                | -0.2         | 43   | -0.3          | 46   |
| Policy Index                              | 0.0          | 15   | 0.0           | 15   |
| InvestorForce Public DB > \$1B Net Median | -0.2         |      | -0.3          |      |

Total Fund

Policy Index

▲ Universe Median

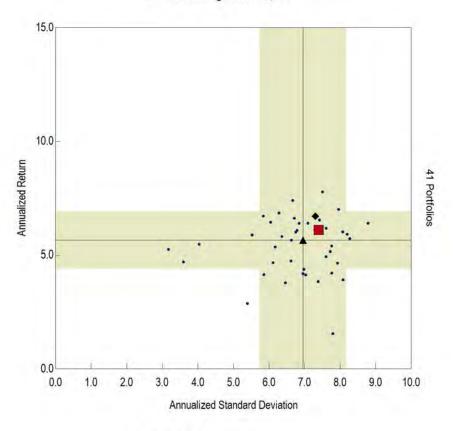
68% Confidence Interval

InvestorForce Public DB > \$1B Net



# Total Fund Risk/Return

#### 3 Years Ending March 31, 2016



| 3 Yea | ars Ending Marc | :h 31, 2016 |               |  |
|-------|-----------------|-------------|---------------|--|
|       | Anlzd Ret       | Rank        | Anlzd Std Dev |  |

|   | Anlzd Ret | Rank | Anlzd Std Dev | Rank |  |
|---|-----------|------|---------------|------|--|
| Total Fund                                | 6.1%      | 31   | 7.4%          | 64   |  |
| Policy Index                              | 6.7%      | 11   | 7.3%          | 61   |  |
| InvestorForce Public DB > \$1B Net Median | 5.6%      |      | 7.0%          |      |  |

#### 3 Years Ending March 31, 2016

|   | Sharpe Ratio | Rank | Sortino Ratio | Rank |
|---|--------------|------|---------------|------|
| Total Fund                                | 0.8          | 49   | 1.7           | 36   |
| Policy Index                              | 0.9          | 27   | 1.8           | 30   |
| InvestorForce Public DB > \$1B Net Median | 8.0          |      | 1.5           |      |

Total Fund

Policy Index

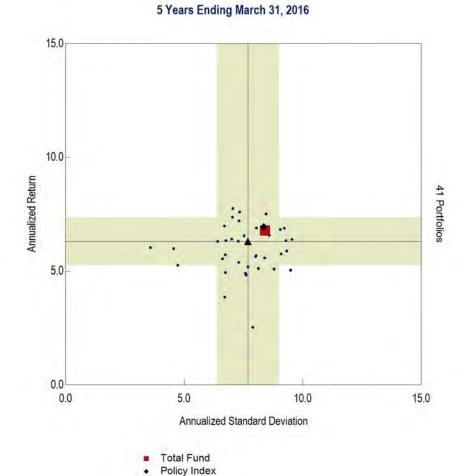
Universe Median

68% Confidence Interval

InvestorForce Public DB > \$1B Net



# Total Fund Risk/Return



Universe Median 68% Confidence Interval InvestorForce Public DB > \$1B Net 5 Years Ending March 31, 2016

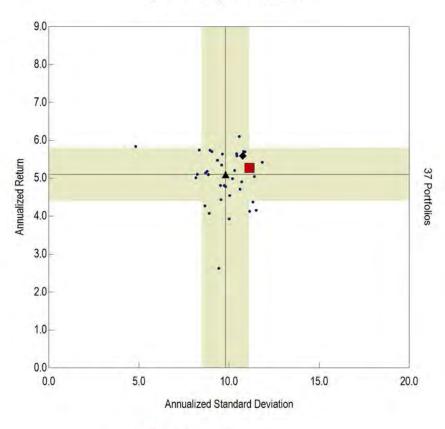
|   | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
|---|-----------|------|---------------|------|
| Total Fund                                | 6.8%      | 26   | 8.4%          | 71   |
| Policy Index                              | 6.9%      | 16   | 8.4%          | 69   |
| InvestorForce Public DB > \$1B Net Median | 6.3%      |      | 7.7%          |      |

5 Years Ending March 31, 2016

|   | Sharpe Ratio | Rank | Sortino Ratio | Rank |  |
|---|--------------|------|---------------|------|--|
| Total Fund                                | 0.8          | 48   | 1.3           | 43   |  |
| Policy Index                              | 0.8          | 41   | 1.3           | 40   |  |
| InvestorForce Public DB > \$1B Net Median | 0.8          |      | 1.2           |      |  |

## Total Fund Risk/Return





- Total Fund
- Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net

#### 10 Years Ending March 31, 2016

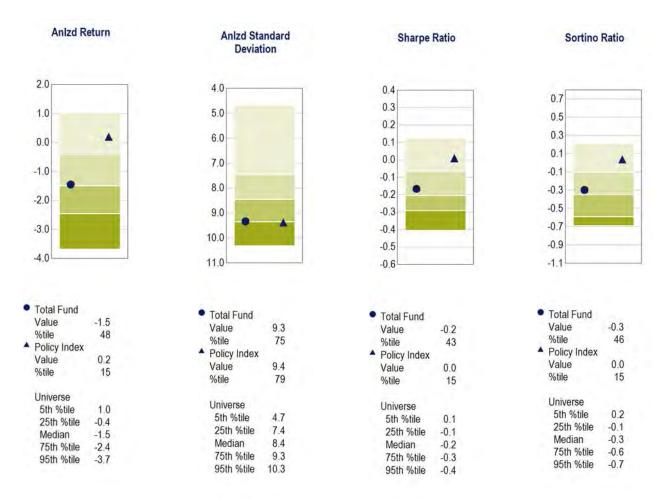
|   | Anlzd Ret | Rank | Anlzd Std Dev | Rank |
|---|-----------|------|---------------|------|
| Total Fund                                | 5.3%      | 39   | 11.1%         | 89   |
| Policy Index                              | 5.6%      | 28   | 10.8%         | 77   |
| InvestorForce Public DB > \$1B Net Median | 5.1%      |      | 9.8%          |      |

#### 10 Years Ending March 31, 2016

|   | Sharpe Ratio | Rank | Sortino Ratio | Rank |  |
|---|--------------|------|---------------|------|--|
| Total Fund                                | 0.4          | 65   | 0.6           | 59   |  |
| Policy Index                              | 0.4          | 48   | 0.6           | 44   |  |
| InvestorForce Public DB > \$1B Net Median | 0.4          |      | 0.6           |      |  |

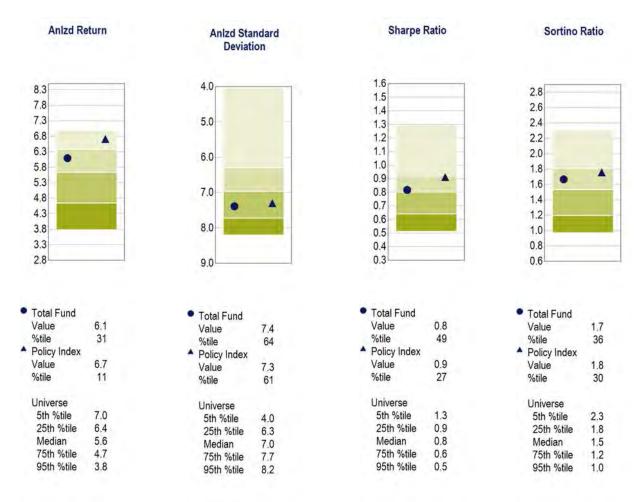


Total Fund vs. InvestorForce Public DB > \$1B Net
1 Year

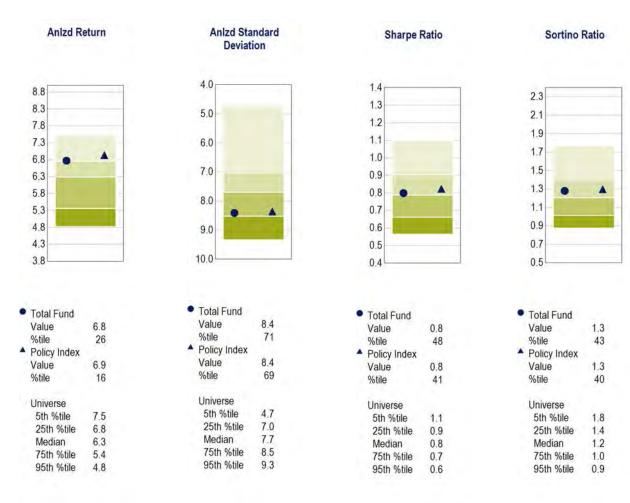




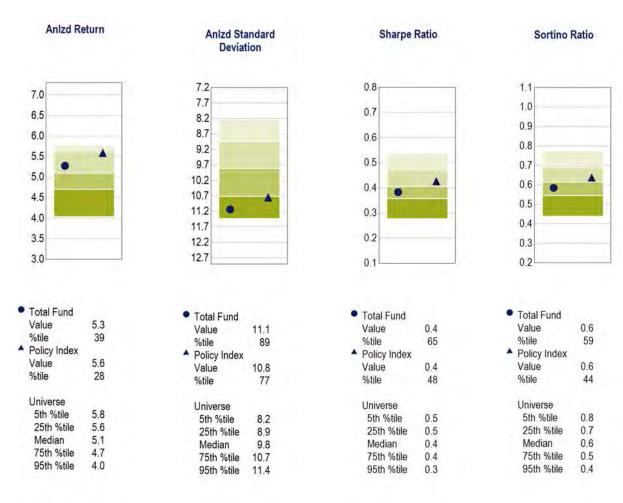
Total Fund vs. InvestorForce Public DB > \$1B Net 3 Years



Total Fund vs. InvestorForce Public DB > \$1B Net 5 Years

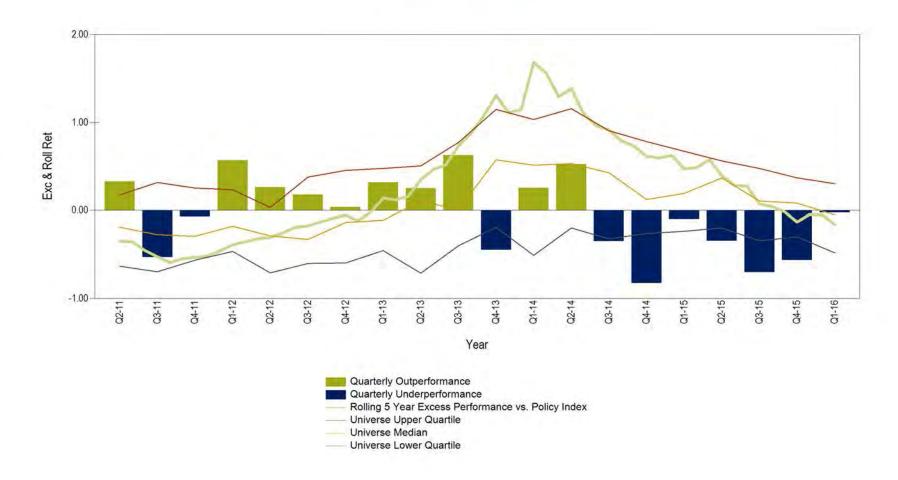


Total Fund vs. InvestorForce Public DB > \$1B Net 10 Years



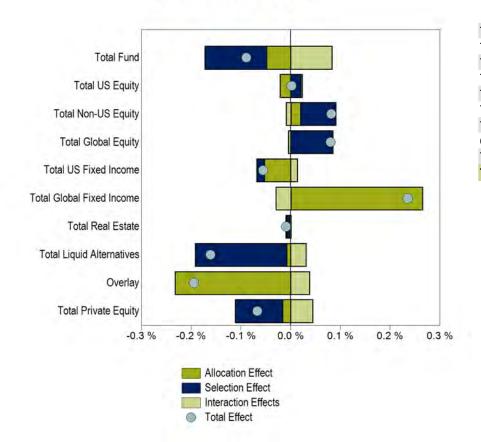
## Rolling 5 Year Excess Returns- Net of Fees

#### **Annualized Excess Performance**



## Total Fund Attribution Analysis

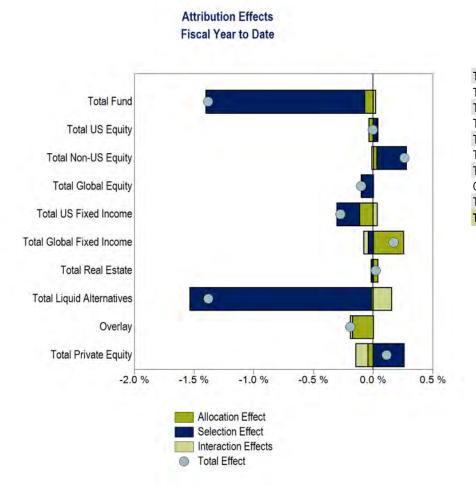
Attribution Effects
3 Months Ending March 31, 2016



#### Attribution Summary 3 Months Ending March 31, 2016

|                           | Wtd.<br>Actual<br>Return | Wtd. Index<br>Return | Excess<br>Return | Selection<br>Effect | Allocation<br>Effect | Interaction<br>Effects | Total<br>Effects |
|---------------------------|--------------------------|----------------------|------------------|---------------------|----------------------|------------------------|------------------|
| Total US Equity           | 1.0%                     | 0.9%                 | 0.1%             | 0.0%                | 0.0%                 | 0.0%                   | 0.0%             |
| Total Non-US Equity       | 0.1%                     | -0.4%                | 0.5%             | 0.1%                | 0.0%                 | 0.0%                   | 0.1%             |
| Total Global Equity       | 1.1%                     | 0.2%                 | 0.8%             | 0.1%                | 0.0%                 | 0.0%                   | 0.1%             |
| Total US Fixed Income     | 3.0%                     | 3.0%                 | -0.1%            | 0.0%                | -0.1%                | 0.0%                   | -0.1%            |
| Total Global Fixed Income | 2.6%                     | 5.9%                 | -3.3%            | 0.0%                | 0.3%                 | 0.0%                   | 0.2%             |
| Total Real Estate         | 1.9%                     | 2.0%                 | -0.1%            | 0.0%                | 0.0%                 | 0.0%                   | 0.0%             |
| Total Liquid Alternatives | -0.1%                    | 1.7%                 | -1.7%            | -0.2%               | 0.0%                 | 0.0%                   | -0.2%            |
| Overlay                   | 7.3%                     | 0.1%                 | 7.3%             | 0.0%                | -0.2%                | 0.0%                   | -0.2%            |
| Total Private Equity      | 0.7%                     | 1.7%                 | -1.0%            | -0.1%               | 0.0%                 | 0.0%                   | -0.1%            |
| Total                     | 1.3%                     | 1.4%                 | -0.1%            | -0.1%               | 0.0%                 | 0.1%                   | -0.1%            |
|                           |                          |                      |                  |                     |                      |                        |                  |

## Total Fund Attribution Analysis

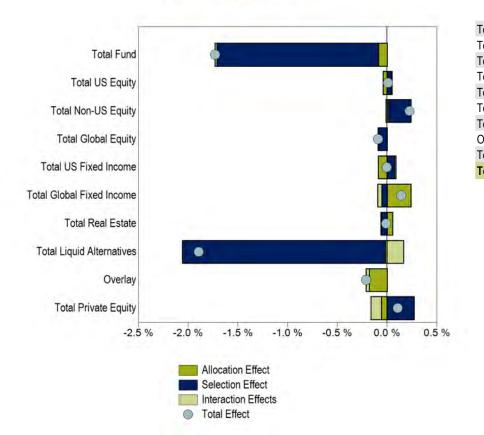


# Attribution Summary Fiscal Year to Date

|                           | Wtd.<br>Actual<br>Return | Wtd. Index<br>Return | Excess<br>Return | Selection<br>Effect | Allocation<br>Effect | Interaction<br>Effects | Total<br>Effects |
|---------------------------|--------------------------|----------------------|------------------|---------------------|----------------------|------------------------|------------------|
| Total US Equity           | -0.5%                    | -0.6%                | 0.1%             | 0.0%                | 0.0%                 | 0.0%                   | 0.0%             |
| Total Non-US Equity       | -7.9%                    | -9.7%                | 1.7%             | 0.2%                | 0.0%                 | 0.0%                   | 0.3%             |
| Total Global Equity       | -5.6%                    | -4.7%                | -0.9%            | -0.1%               | 0.0%                 | 0.0%                   | -0.1%            |
| Total US Fixed Income     | 2.6%                     | 3.7%                 | -1.1%            | -0.2%               | -0.1%                | 0.0%                   | -0.3%            |
| Total Global Fixed Income | 1.6%                     | 5.8%                 | -4.2%            | 0.0%                | 0.3%                 | 0.0%                   | 0.2%             |
| Total Real Estate         | 8.5%                     | 8.7%                 | -0.2%            | 0.0%                | 0.0%                 | 0.0%                   | 0.0%             |
| Total Liquid Alternatives | -12.5%                   | 2.8%                 | -15.3%           | -1.5%               | 0.0%                 | 0.2%                   | -1.4%            |
| Overlay                   | 9.6%                     | 0.1%                 | 9.5%             | 0.0%                | -0.2%                | 0.0%                   | -0.2%            |
| Total Private Equity      | 9.2%                     | 1.7%                 | 7.5%             | 0.3%                | 0.0%                 | -0.1%                  | 0.1%             |
| Total                     | -1.5%                    | -0.1%                | -1.4%            | -1.3%               | -0.1%                | 0.0%                   | -1.4%            |

## Total Fund Attribution Analysis

Attribution Effects
1 Year Ending March 31, 2016



# Attribution Summary 1 Year Ending March 31, 2016

|                           |                          |                      | •                |                     |                      |                        |                  |
|---------------------------|--------------------------|----------------------|------------------|---------------------|----------------------|------------------------|------------------|
|                           | Wtd.<br>Actual<br>Return | Wtd. Index<br>Return | Excess<br>Return | Selection<br>Effect | Allocation<br>Effect | Interaction<br>Effects | Total<br>Effects |
| Total US Equity           | -0.4%                    | -0.5%                | 0.2%             | 0.0%                | 0.0%                 | 0.0%                   | 0.0%             |
| Total Non-US Equity       | -7.6%                    | -9.2%                | 1.6%             | 0.2%                | 0.0%                 | 0.0%                   | 0.2%             |
| Total Global Equity       | -5.1%                    | -4.3%                | -0.8%            | -0.1%               | 0.0%                 | 0.0%                   | -0.1%            |
| Total US Fixed Income     | 2.3%                     | 2.0%                 | 0.3%             | 0.1%                | -0.1%                | 0.0%                   | 0.0%             |
| Total Global Fixed Income | 0.2%                     | 4.6%                 | -4.4%            | -0.1%               | 0.2%                 | 0.0%                   | 0.1%             |
| Total Real Estate         | 11.7%                    | 12.6%                | -0.9%            | -0.1%               | 0.1%                 | 0.0%                   | 0.0%             |
| Total Liquid Alternatives | -15.3%                   | 4.9%                 | -20.2%           | -2.0%               | 0.0%                 | 0.2%                   | -1.9%            |
| Overlay                   | 9.4%                     | 0.1%                 | 9.3%             | 0.0%                | -0.2%                | 0.0%                   | -0.2%            |
| Total Private Equity      | 10.5%                    | 2.6%                 | 8.0%             | 0.3%                | -0.1%                | -0.1%                  | 0.1%             |
| Total                     | -1.6%                    | 0.2%                 | -1.8%            | -1.6%               | -0.1%                | 0.0%                   | -1.7%            |
|                           |                          |                      |                  |                     |                      |                        |                  |

## Total Fund Risk Statistics

#### 1 Year Ending March 31, 2016

|                           |          |           |      |                  | i i cui | Linaming ma     | 1011 0 1, 20 |                   |      |            |      |          |      |      |
|---------------------------|----------|-----------|------|------------------|---------|-----------------|--------------|-------------------|------|------------|------|----------|------|------|
|                           | % of Tot | Anlzd Ret | Rank | Anlzd Std<br>Dev | Rank    | Sharpe<br>Ratio | Rank         | Tracking<br>Error | Rank | Info Ratio | Rank | Anlzd AJ | Rank | Beta |
| Total Fund                | 100.0%   | -1.5%     | 48   | 9.3%             | 75      | -0.2            | 43           | 0.8%              | 12   | -2.1       | 86   | -1.7%    | 75   | 1.0  |
| Policy Index              |          | 0.2%      | 15   | 9.4%             | 78      | 0.0             | 15           | 0.0%              | 1    |            |      | 0.0%     | 33   | 1.0  |
| Total Equity              | 54.0%    | -3.1%     | 42   | 15.2%            | 59      | -0.2            | 42           | 1.3%              | 1    | 0.9        | 15   | 1.0%     | 41   | 1.0  |
| MSCI ACWI                 |          | -4.3%     | 52   | 15.9%            | 70      | -0.3            | 49           | 0.0%              | 1    |            |      | 0.0%     | 47   | 1.0  |
| Total US Equity           | 31.0%    | -0.4%     | 23   | 14.8%            | 51      | 0.0             | 23           | 0.1%              | 1    | 0.9        | 7    | 0.1%     | 23   | 1.0  |
| Russell 3000              |          | -0.5%     | 23   | 14.8%            | 49      | 0.0             | 23           | 0.0%              | 1    |            |      | 0.0%     | 23   | 1.0  |
| Total Non-US Equity       | 13.3%    | -7.6%     | 68   | 16.7%            | 85      | -0.5            | 64           | 1.5%              | 1    | 1.1        | 39   | 1.0%     | 63   | 0.9  |
| MSCI ACWI ex US           | -        | -9.2%     | 85   | 17.7%            | 96      | -0.5            | 76           | 0.0%              | 1    |            |      | 0.0%     | 76   | 1.0  |
| Total Global Equity       | 9.7%     | -5.1%     | 62   | 15.9%            | 72      | -0.3            | 61           | 1.5%              | 1    | -0.5       | 74   | -0.8%    | 61   | 1.0  |
| MSCI ACWI                 |          | -4.3%     | 55   | 15.9%            | 72      | -0.3            | 52           | 0.0%              | 1    |            |      | 0.0%     | 52   | 1.0  |
| Total Fixed Income        | 19.3%    | 1.9%      | 34   | 3.0%             | 65      | 0.6             | 44           | 3.1%              | 79   | -0.9       | 83   | -0.3%    | 57   | 0.5  |
| Barclays Global Aggregate |          | 4.6%      | 1    | 4.6%             | 93      | 1.0             | 30           | 0.0%              | 1    |            |      | 0.0%     | 41   | 1.0  |
| Total US Fixed Income     | 19.2%    | 2.3%      | 14   | 3.0%             | 68      | 0.7             | 48           | 2.5%              | 67   | 0.1        | 19   | 0.9%     | 16   | 0.7  |
| Barclays Aggregate        |          | 2.0%      | 23   | 2.4%             | 60      | 8.0             | 47           | 0.0%              | 1    |            |      | 0.0%     | 52   | 1.0  |
| Total Global Fixed Income | 0.1%     | 0.2%      | 51   | 3.5%             | 17      | 0.0             | 51           | 3.1%              | 23   | -1.4       | 89   | -2.4%    | 43   | 0.6  |
| Barclays Global Aggregate |          | 4.6%      | 5    | 4.6%             | 38      | 1.0             | 7            | 0.0%              | 1    |            |      | 0.0%     | 10   | 1.0  |
| Total Liquid Alternatives | 8.4%     | -15.3%    |      | 13.0%            |         | -1.2            |              | 12.7%             |      | -1.6       |      | -34.0%   |      | 3.9  |
| CPI + 4% (Unadjusted)     | -        | 4.9%      |      | 0.9%             |         | 5.1             |              | 0.0%              | -    |            | -    | 0.0%     |      | 1.0  |
|                           |          |           |      |                  |         |                 |              |                   |      |            |      |          |      |      |

|                                       | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Sharpe Ratio | Rank |
|---------------------------------------|----------|-----------|------|---------------|------|--------------|------|
| Total Real Estate                     | 8.5%     | 11.7%     | 46   | 5.0%          | 56   | 2.3          | 54   |
| NCREIF ODCE Net                       | -        | 12.6%     | 26   | 5.3%          | 58   | 2.4          | 54   |
| Total Private Equity                  | 3.6%     | 10.5%     | 37   | 7.6%          | 75   | 1.4          | 53   |
| DJ U.S. Total Stock Market Index + 3% | -        | 2.6%      | 85   | 14.8%         | 97   | 0.2          | 86   |

Total U.S. Equity Benchmark: Russell 3000 Index, Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE

Composite rankings are used for Total Real Estate and Total Private Equity



## Total Fund Risk Statistics

| 3 Y | ears | Ending | March | 31 | . 2016 |
|-----|------|--------|-------|----|--------|
|     |      |        |       |    |        |

|                           |          |           |      |                  | JICai | S Linuing Mic   | 11 611 51, 20 | 10                |      |            |      |          |      |      |
|---------------------------|----------|-----------|------|------------------|-------|-----------------|---------------|-------------------|------|------------|------|----------|------|------|
|                           | % of Tot | Anlzd Ret | Rank | Anlzd Std<br>Dev | Rank  | Sharpe<br>Ratio | Rank          | Tracking<br>Error | Rank | Info Ratio | Rank | Anlzd AJ | Rank | Beta |
| Total Fund                | 100.0%   | 6.1%      | 31   | 7.4%             | 64    | 0.8             | 49            | 0.8%              | 15   | -0.8       | 88   | -0.7%    | 70   | 1.0  |
| Policy Index              |          | 6.7%      | 10   | 7.3%             | 61    | 0.9             | 27            | 0.0%              | 1    |            |      | 0.0%     | 42   | 1.0  |
| Total Equity              | 54.0%    | 7.1%      | 77   | 11.6%            | 24    | 0.6             | 68            | 1.3%              | 1    | 1.3        | 13   | 1.8%     | 79   | 1.0  |
| MSCI ACWI                 |          | 5.5%      | 89   | 12.0%            | 33    | 0.5             | 83            | 0.0%              | 1    |            |      | 0.0%     | 91   | 1.0  |
| Total US Equity           | 31.0%    | 11.3%     | 26   | 11.6%            | 23    | 1.0             | 20            | 0.3%              | 1    | 0.6        | 6    | 0.2%     | 27   | 1.0  |
| Russell 3000              |          | 11.1%     | 29   | 11.6%            | 22    | 1.0             | 21            | 0.0%              | 1    |            |      | 0.0%     | 30   | 1.0  |
| Total Non-US Equity       | 13.3%    | 0.8%      | 93   | 12.8%            | 44    | 0.1             | 93            | 1.2%              | 1    | 0.4        | 76   | 0.5%     | 93   | 0.9  |
| MSCI ACWI ex US           |          | 0.3%      | 98   | 13.6%            | 84    | 0.0             | 98            | 0.0%              | 1    |            |      | 0.0%     | 98   | 1.0  |
| Total Global Equity       | 9.7%     | 4.4%      | 79   | 12.2%            | 49    | 0.4             | 77            | 1.3%              | 1    | -0.9       | 91   | -1.2%    | 79   | 1.0  |
| MSCI ACWI                 |          | 5.5%      | 68   | 12.0%            | 45    | 0.5             | 67            | 0.0%              | 1    |            |      | 0.0%     | 71   | 1.0  |
| Total Fixed Income        | 19.3%    | 1.5%      | 76   | 2.7%             | 36    | 0.5             | 67            | 2.8%              | 86   | 0.2        | 42   | 1.0%     | 13   | 0.5  |
| Barclays Global Aggregate |          | 0.9%      | 94   | 4.4%             | 93    | 0.2             | 95            | 0.0%              | 1    |            |      | 0.0%     | 61   | 1.0  |
| Total US Fixed Income     | 19.2%    | 2.0%      | 55   | 2.6%             | 45    | 0.7             | 58            | 2.1%              | 46   | -0.2       | 51   | 0.4%     | 36   | 0.6  |
| Barclays Aggregate        |          | 2.5%      | 37   | 3.0%             | 56    | 8.0             | 50            | 0.0%              | 1    |            |      | 0.0%     | 65   | 1.0  |
| Total Global Fixed Income | 0.1%     | 0.0%      | 79   | 4.0%             | 25    | 0.0             | 79            | 2.1%              | 16   | -0.4       | 84   | -0.7%    | 75   | 0.8  |
| Barclays Global Aggregate |          | 0.9%      | 54   | 4.4%             | 35    | 0.2             | 51            | 0.0%              | 1    |            |      | 0.0%     | 57   | 1.0  |
| Total Liquid Alternatives | 8.4%     |           |      |                  |       |                 |               |                   |      |            |      |          |      |      |
| CPI + 4% (Unadjusted)     |          | 4.8%      |      | 1.1%             |       | 4.4             | -             | 0.0%              |      |            |      | 0.0%     |      | 1.0  |
|                           |          |           |      |                  |       |                 |               |                   |      |            |      |          |      |      |

|                                       | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Sharpe Ratio | Rank |
|---------------------------------------|----------|-----------|------|---------------|------|--------------|------|
| Total Real Estate                     | 8.5%     | 11.6%     | 66   | 4.7%          | 50   | 2.5          | 55   |
| NCREIF ODCE Net                       | -        | 12.6%     | 42   | 5.1%          | 60   | 2.5          | 54   |
| Total Private Equity                  | 3.6%     | 15.4%     | 21   | 7.2%          | 76   | 2.1          | 47   |
| DJ U.S. Total Stock Market Index + 3% | -        | 14.4%     | 31   | 11.6%         | 93   | 1.2          | 85   |

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE

Composite rankings are used for Total Real Estate and Total Private Equity



#### Total Fund Risk Statistics

#### 5 Years Ending March 31, 2016

|                           |          |           |      |                  | o i cui | o Enamy me      | 11 011 0 1, 20 | 10                |      |            |      |          |      |      |
|---------------------------|----------|-----------|------|------------------|---------|-----------------|----------------|-------------------|------|------------|------|----------|------|------|
|                           | % of Tot | Anlzd Ret | Rank | Anlzd Std<br>Dev | Rank    | Sharpe<br>Ratio | Rank           | Tracking<br>Error | Rank | Info Ratio | Rank | Anlzd AJ | Rank | Beta |
| Total Fund                | 100.0%   | 6.8%      | 26   | 8.4%             | 71      | 0.8             | 48             | 0.8%              | 8    | -0.2       | 63   | -0.2%    | 52   | 1.0  |
| Policy Index              |          | 6.9%      | 16   | 8.4%             | 69      | 0.8             | 41             | 0.0%              | 1    |            |      | 0.0%     | 35   | 1.0  |
| Total Equity              | 54.0%    | 7.5%      | 76   | 12.9%            | 28      | 0.6             | 62             | 1.7%              | 1    | 1.4        | 6    | 2.6%     | 74   | 0.9  |
| MSCI ACWI                 |          | 5.2%      | 92   | 13.7%            | 41      | 0.4             | 89             | 0.0%              | 1    |            |      | 0.0%     | 92   | 1.0  |
| Total US Equity           | 31.0%    | 11.2%     | 22   | 12.8%            | 24      | 0.9             | 18             | 0.3%              | 1    | 0.8        | 2    | 0.2%     | 24   | 1.0  |
| Russell 3000              |          | 11.0%     | 25   | 12.7%            | 23      | 0.9             | 20             | 0.0%              | 1    |            |      | 0.0%     | 26   | 1.0  |
| Total Non-US Equity       | 13.3%    | 1.2%      | 91   | 14.8%            | 38      | 0.1             | 91             | 1.3%              | 1    | 0.7        | 59   | 0.9%     | 91   | 0.9  |
| MSCI ACWI ex US           |          | 0.3%      | 96   | 15.7%            | 73      | 0.0             | 96             | 0.0%              | 1    |            |      | 0.0%     | 96   | 1.0  |
| Total Global Equity       | 9.7%     | 5.0%      | 74   | 12.9%            | 23      | 0.4             | 67             | 2.1%              | 4    | -0.1       | 75   | 0.2%     | 70   | 0.9  |
| MSCI ACWI                 |          | 5.2%      | 72   | 13.7%            | 42      | 0.4             | 68             | 0.0%              | 1    |            |      | 0.0%     | 71   | 1.0  |
| Total Fixed Income        | 19.3%    | 4.0%      | 42   | 2.8%             | 33      | 1.4             | 28             | 2.8%              | 72   | 0.8        | 11   | 3.0%     | 13   | 0.5  |
| Barclays Global Aggregate |          | 1.8%      | 99   | 4.4%             | 88      | 0.4             | 99             | 0.0%              | 1    |            |      | 0.0%     | 88   | 1.0  |
| Total US Fixed Income     | 19.2%    | 4.3%      | 38   | 2.7%             | 46      | 1.6             | 29             | 2.2%              | 44   | 0.2        | 37   | 1.8%     | 25   | 0.7  |
| Barclays Aggregate        |          | 3.8%      | 49   | 2.8%             | 50      | 1.3             | 50             | 0.0%              | 1    |            |      | 0.0%     | 82   | 1.0  |
| Total Global Fixed Income | 0.1%     |           |      |                  |         |                 |                |                   |      |            |      |          |      |      |
| Barclays Global Aggregate |          | 1.8%      | 72   | 4.4%             | 27      | 0.4             | 62             | 0.0%              | 1    |            |      | 0.0%     | 74   | 1.0  |
| Total Liquid Alternatives | 8.4%     |           |      |                  |         |                 |                |                   |      |            |      |          |      |      |
| CPI + 4% (Unadjusted)     |          | 5.3%      |      | 1.1%             |         | 4.6             |                | 0.0%              |      |            |      | 0.0%     |      | 1.0  |
|                           |          |           |      |                  |         |                 |                |                   |      |            |      |          |      |      |

|                   | % of Tot | Anlzd Ret | Rank | Anlzd Std Dev | Rank | Sharpe Ratio | Rank |
|-------------------|----------|-----------|------|---------------|------|--------------|------|
| Total Real Estate | 8.5%     | 11.2%     | 70   | 4.6%          | 31   | 2.4          | 44   |
| NCREIF ODCE Net   | -        | 12.2%     | 46   | 5.0%          | 38   | 2.5          | 33   |

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE

Composite rankings are used for Total Real Estate



#### Total Fund Performance Detail (Net)

|  | Market Value<br>(\$) | % of<br>Portfolio | Policy % | 3 Mo<br>(%) | Rank | Fiscal<br>YTD I<br>(%) | Rank | 1 Yr<br>(%) | Rank | 3 Yrs<br>(%) | Rank | 5 Yrs<br>(%) | Rank | 10 Yrs<br>(%) | Rank | Return<br>(%) | Since         |
|--|----------------------|-------------------|----------|-------------|------|------------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|---------------|
| Total Fund                                   | 4,309,978,136        | 100.0             | 100.0    | 1.4         | 18   | -1.4                   | 33   | -1.5        | 48   | 6.1          | 31   | 6.8          | 26   | 5.3           | 39   | 7.8           | Apr-94        |
| Policy Index                                 |                      |                   |          | <u>1.4</u>  | 15   | <u>-0.1</u>            | 9    | <u>0.2</u>  | 15   | <u>6.7</u>   | 11   | <u>6.9</u>   | 16   | <u>5.6</u>    | 28   | <u>7.9</u>    | Apr-94        |
| Over/Under                                   |                      |                   |          | 0.0         |      | -1.3                   |      | -1.7        |      | -0.6         |      | -0.1         |      | -0.3          |      | -0.1          |               |
| Allocation Index                             |                      |                   |          | 0.9         | 53   | -1.6                   | 45   | -1.5        | 50   | 5.7          | 47   | 6.2          | 51   | 5.1           | 55   |               | Apr-94        |
| 60% MSCI World (Net) / 40% CITI WGBI         |                      |                   |          | 2.7         | 1    | 0.9                    | 2    | 0.5         | 11   | 4.4          | 78   | 4.6          | 96   | 4.6           | 78   | 6.3           | Apr-94        |
| InvestorForce Public DB > \$1B Net Median    |                      |                   |          | 0.9         |      | -1.8                   |      | -1.5        |      | 5.6          |      | 6.3          |      | 5.1           |      | 7.4           | Apr-94        |
| Total Fund ex Parametric                     | 4,040,035,519        | 93.7              | -        | 1.9         |      | -0.7                   |      | -0.8        | -    | 6.3          |      | 6.9          |      | 5.3           |      | 7.8           | Apr-94        |
| Total Fund ex Private Equity                 | 4,155,855,138        | 96.4              |          | 1.4         | 15   | <b>-1.7</b>            | 48   | -1.8        | 60   | 5.3          | 58   |              |      | -             |      | 8.2           | Jan-12        |
| Policy Index                                 |                      |                   |          | <u>1.4</u>  | 15   | <u>-0.1</u>            | 9    | <u>0.2</u>  | 15   | <u>6.7</u>   | 11   | <u>6.9</u>   | 16   | <u>5.6</u>    | 28   | <u>9.0</u>    | Jan-12        |
| Over/Under                                   |                      |                   |          | 0.0         |      | -1.6                   |      | -2.0        |      | -1.4         |      |              |      |               |      | -0.8          |               |
| InvestorForce Public DB > \$1B Net Median    |                      |                   |          | 0.9         |      | -1.8                   |      | -1.5        |      | 5.6          |      | 6.3          |      | 5.1           |      | 8.2           | Jan-12        |
| Total US Equity                              | 1,337,134,180        | 31.0              | 28.0     | 1.0         | 39   | -0.5                   | 23   | -0.4        | 23   | 11.3         | 26   | 11.2         | 22   | 6.6           | 51   | 8.7           | Dec-93        |
| Total U.S. Equity Benchmark                  |                      |                   |          | <u>0.9</u>  | 40   | <u>-0.6</u>            | 23   | <u>-0.5</u> | 24   | <u>11.0</u>  | 29   | <u>11.0</u>  | 25   | <u>7.0</u>    | 40   | <u>9.0</u>    | Dec-93        |
| Over/Under                                   |                      |                   |          | 0.1         |      | 0.1                    |      | 0.1         |      | 0.3          |      | 0.2          |      | -0.4          |      | -0.3          |               |
| eA All US Equity Net Median                  |                      |                   |          | 0.1         |      | -4.3                   |      | -4.2        |      | 9.5          |      | 9.4          |      | 6.6           |      | 9.8           | Dec-93        |
| BlackRock Equity Market Fund                 | 1,148,940,523        | 26.7              |          | 1.0         | 40   | -0.4                   | 23   | -0.2        | 23   | 11.2         | 27   | 11.0         | 24   |               |      | 6.7           | Dec-07        |
| Dow Jones U.S. Total Stock Market            |                      |                   |          | <u>0.9</u>  | 40   | <u>-0.6</u>            | 23   | <u>-0.4</u> | 23   | <u>11.1</u>  | 29   | <u>11.0</u>  | 25   | <u>7.0</u>    | 39   | <u>6.6</u>    | Dec-07        |
| Over/Under                                   |                      |                   |          | 0.1         |      | 0.2                    |      | 0.2         |      | 0.1          |      | 0.0          |      |               |      | 0.1           |               |
| eA All US Equity Net Median                  |                      |                   |          | 0.1         |      | -4.3                   |      | -4.2        |      | 9.5          |      | 9.4          |      | 6.6           |      | 6.5           | Dec-07        |
| Western U.S. Index Plus                      | 143,435,833          | 3.3               |          | 1.7         | 30   | 1.5                    | 14   | 1.6         | 13   | 12.1         | 16   | 12.2         | 10   |               |      | 3.4           | May-07        |
| S&P 500                                      |                      |                   |          | <u>1.3</u>  | 34   | <u>1.5</u>             | 13   | <u>1.8</u>  | 12   | <u>11.8</u>  | 18   | <u>11.6</u>  | 18   | <u>7.0</u>    | 39   | <u>5.7</u>    | <i>May-07</i> |
| Over/Under                                   |                      |                   |          | 0.4         |      | 0.0                    |      | -0.2        |      | 0.3          |      | 0.6          |      |               |      | -2.3          |               |
| eA All US Equity Net Median                  |                      |                   |          | 0.1         |      | -4.3                   |      | -4.2        |      | 9.5          |      | 9.4          |      | 6.6           |      | 5.6           | May-07        |
| BlackRock Extended Equity Index              | 44,757,824           | 1.0               |          | -0.8        | 66   | -8.4                   | 58   | -8.9        | 64   | 8.1          | 46   | 8.6          | 40   | 6.8           | 47   | 11.0          | Oct-02        |
| Dow Jones U.S. Completion Total Stock Market |                      |                   |          | <u>-0.9</u> | 67   | <u>-8.7</u>            | 61   | <u>-9.1</u> | 65   | <u>7.9</u>   | 47   | <u>8.4</u>   | 43   | <u>6.8</u>    | 48   | <u>11.0</u>   | Oct-02        |
| Over/Under                                   |                      |                   |          | 0.1         |      | 0.3                    |      | 0.2         |      | 0.2          |      | 0.2          |      | 0.0           |      | 0.0           |               |
| eA US Small-Mid Cap Equity Net Median        |                      |                   |          | 0.5         |      | -7.4                   |      | -7.2        |      | 7.7          |      | 7.7          |      | 6.7           |      | 10.6          | Oct-02        |

Color Coding: PERFORMANCE: Green-Over performance, Red-Under performance / Color Coding: RANKS: 1 - 25 Green - Positive Result, 26 - 50 Yellow, 50 - 75 Orange, 76 - 100 Red - Negative Result.

Policy Index: Currently, 28% Russell 3000 Index, 20% Barclays Aggregate, 15% MSCI ACWI ex U.S., 10% MSCI ACWI, 10% DJ U.S. Total Stock Market Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index.

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.



# Total Fund Performance Detail (Net)

|   | Market Value (\$) | % of<br>Portfolio | Policy % | 3 Mo<br>(%) | Rank | Fiscal<br>YTD I<br>(%) | Rank | 1 Yr<br>(%) | Rank | 3 Yrs<br>(%) | Rank | 5 Yrs<br>(%) | Rank | 10 Yrs<br>(%) | Rank | Return<br>(%) | Since  |
|---|-------------------|-------------------|----------|-------------|------|------------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Non-US Equity                     | 572,363,460       | 13.3              | 15.0     | 0.1         | 16   | -7.9                   | 59   | -7.6        | 68   | 0.8          | 93   | 1.2          | 91   | 2.0           | 70   | 5.9           | Mar-94 |
| MSCI ACWI ex USA                        |                   |                   |          | <u>-0.4</u> | 20   | <u>-9.7</u>            | 76   | <u>-9.2</u> | 85   | <u>0.3</u>   | 98   | <u>0.3</u>   | 96   | <u>1.9</u>    | 73   | <u>4.7</u>    | Mar-94 |
| Over/Under                              |                   |                   |          | 0.5         |      | 1.8                    |      | 1.6         |      | 0.5          |      | 0.9          |      | 0.1           |      | 1.2           |        |
| eA All EAFE Equity Net Median           |                   |                   |          | -2.2        |      | -7.4                   |      | -5.9        |      | 3.6          |      | 3.6          |      | 2.9           |      | 6.2           | Mar-94 |
| BlackRock ACWI ex-U.S. Index            | 237,902,996       | 5.5               |          | -0.2        | 35   | -8.9                   | 63   | -8.0        | 66   | 0.9          | 84   | 0.8          | 85   |               |      | 0.6           | Mar-07 |
| MSCI ACWI ex USA                        |                   |                   |          | <u>-0.4</u> | 36   | <u>-9.7</u>            | 76   | <u>-9.2</u> | 77   | <u>0.3</u>   | 88   | <u>0.3</u>   | 89   | <u>1.9</u>    | 74   | <u>0.1</u>    | Mar-07 |
| Over/Under                              |                   |                   |          | 0.2         |      | 8.0                    |      | 1.2         |      | 0.6          |      | 0.5          |      |               |      | 0.5           |        |
| eA ACWI ex-US All Cap Equity Net Median |                   |                   |          | -1.5        |      | -7.0                   |      | -5.8        |      | 3.3          |      | 3.3          |      | 2.9           |      | 1.7           | Mar-07 |
| Sprucegrove                             | 165,287,365       | 3.8               |          | 0.4         | 29   | -10.1                  | 82   | -10.6       | 86   | -0.3         | 89   | 1.4          | 78   | 2.4           | 70   | 6.5           | Mar-02 |
| MSCI ACWI ex USA                        |                   |                   |          | <u>-0.4</u> | 36   | <u>-9.7</u>            | 76   | <u>-9.2</u> | 77   | <u>0.3</u>   | 88   | <u>0.3</u>   | 89   | <u>1.9</u>    | 74   | <u>5.8</u>    | Mar-02 |
| Over/Under                              |                   |                   |          | 8.0         |      | -0.4                   |      | -1.4        |      | -0.6         |      | 1.1          |      | 0.5           |      | 0.7           |        |
| MSCI EAFE                               |                   |                   |          | -3.0        | 80   | -8.8                   | 61   | -8.3        | 69   | 2.2          | 64   | 2.3          | 61   | 1.8           | 80   | 5.3           | Mar-02 |
| eA ACWI ex-US All Cap Equity Net Median |                   |                   |          | -1.5        |      | -7.0                   |      | -5.8        |      | 3.3          |      | 3.3          |      | 2.9           |      | 6.8           | Mar-02 |
| Hexavest                                | 76,709,883        | 1.8               |          | 0.0         | 19   | -5.0                   | 28   | -5.0        | 49   | 2.2          | 82   | 2.6          | 70   |               |      | 2.9           | Dec-10 |
| MSCI EAFE                               |                   |                   |          | <u>-3.0</u> | 67   | <u>-8.8</u>            | 70   | <u>-8.3</u> | 79   | <u>2.2</u>   | 82   | <u>2.3</u>   | 73   | <u>1.8</u>    | 67   | <u>2.8</u>    | Dec-10 |
| Over/Under                              |                   |                   |          | 3.0         |      | 3.8                    |      | 3.3         |      | 0.0          |      | 0.3          |      |               |      | 0.1           |        |
| eA EAFE All Cap Equity Net Median       |                   |                   |          | -2.0        |      | -7.5                   |      | -5.4        |      | 3.8          |      | 3.4          |      | 2.3           |      | 4.0           | Dec-10 |
| Walter Scott                            | 92,463,216        | 2.1               |          | 0.7         | 23   | -3.6                   | 25   | -3.1        | 28   | 1.1          | 83   | 3.1          | 51   |               |      | 3.2           | Dec-10 |
| MSCI ACWI ex USA                        |                   |                   |          | <u>-0.4</u> | 36   | <u>-9.7</u>            | 76   | <u>-9.2</u> | 77   | <u>0.3</u>   | 88   | <u>0.3</u>   | 89   | <u>1.9</u>    | 74   | <u>0.9</u>    | Dec-10 |
| Over/Under                              |                   |                   |          | 1.1         |      | 6.1                    |      | 6.1         |      | 0.8          |      | 2.8          |      |               |      | 2.3           |        |
| eA ACWI ex-US All Cap Equity Net Median |                   |                   |          | -1.5        |      | -7.0                   |      | -5.8        |      | 3.3          |      | 3.3          |      | 2.9           |      | 3.3           | Dec-10 |

Prior to May 2002, the Non-U.S. Equity benchmark was MSCI EAFE



# Total Fund Performance Detail (Net)

|                                  | Market Value (\$) | % of<br>Portfolio | Policy % | 3 Mo<br>(%) | Rank | Fiscal<br>YTD (%) | Rank | 1 Yr<br>(%) | Rank | 3 Yrs<br>(%) | Rank | 5 Yrs<br>(%) | Rank | 10 Yrs<br>(%) | Rank | Return<br>(%) | Since  |
|----------------------------------|-------------------|-------------------|----------|-------------|------|-------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Global Equity              | 418,371,834       | 9.7               | 10.0     | 1.1         | 38   | -5.6              | 59   | <b>-5.1</b> | 62   | 4.4          | 79   | 5.0          | 74   | 3.1           | 76   | 4.6           | May-05 |
| MSCI ACWI                        |                   |                   |          | <u>0.2</u>  | 47   | <u>-4.7</u>       | 52   | <u>-4.3</u> | 55   | <u>5.5</u>   | 68   | <u>5.2</u>   | 72   | <u>4.1</u>    | 65   | <u>5.7</u>    | May-05 |
| Over/Under                       |                   |                   |          | 0.9         |      | -0.9              |      | -0.8        |      | -1.1         |      | -0.2         |      | -1.0          |      | -1.1          |        |
| eA All Global Equity Net Median  |                   |                   |          | -0.2        |      | -4.5              |      | -3.7        |      | 6.7          |      | 6.7          |      | 4.7           |      | 6.7           | May-05 |
| BlackRock MSCI ACWI Equity Index | 218,952,483       | 5.1               |          | 0.4         | 45   | -4.4              | 49   | -3.9        | 52   | 5.9          | 62   |              |      |               |      | 9.3           | Jul-12 |
| MSCI ACWI                        |                   |                   |          | <u>0.2</u>  | 47   | <u>-4.7</u>       | 52   | <u>-4.3</u> | 55   | <u>5.5</u>   | 68   | <u>5.2</u>   | 72   | <u>4.1</u>    | 65   | <u>8.9</u>    | Jul-12 |
| Over/Under                       |                   |                   |          | 0.2         |      | 0.3               |      | 0.4         |      | 0.4          |      |              |      |               |      | 0.4           |        |
| eA All Global Equity Net Median  |                   |                   |          | -0.2        |      | -4.5              |      | -3.7        |      | 6.7          |      | 6.7          |      | 4.7           |      | 10.0          | Jul-12 |
| GMO Global Equity                | 199,419,351       | 4.6               |          | 1.9         | 35   | -6.9              | 71   | -6.4        | 71   | 2.9          | 86   | 4.6          | 76   | 3.9           | 70   | 5.5           | Apr-05 |
| MSCI ACWI                        |                   |                   |          | <u>0.2</u>  | 47   | <u>-4.7</u>       | 52   | <u>-4.3</u> | 55   | <u>5.5</u>   | 68   | <u>5.2</u>   | 72   | <u>4.1</u>    | 65   | <u>5.7</u>    | Apr-05 |
| Over/Under                       |                   |                   |          | 1.7         |      | -2.2              |      | -2.1        |      | -2.6         |      | -0.6         |      | -0.2          |      | -0.2          |        |
| eA All Global Equity Net Median  |                   |                   |          | -0.2        |      | -4.5              |      | -3.7        |      | 6.7          |      | 6.7          |      | 4.7           |      | 6.7           | Apr-05 |



# Total Fund Performance Detail (Net)

|   | Market Value (\$) | % of<br>Portfolio | Policy % | 3 Mo<br>(%) | Rank | Fiscal<br>YTD I<br>(%) | Rank | 1 Yr<br>(%) | Rank | 3 Yrs<br>(%) | Rank | 5 Yrs<br>(%) | Rank | 10 Yrs<br>(%) | Rank | Return<br>(%) | Since  |
|---|-------------------|-------------------|----------|-------------|------|------------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Private Equity                          | 154,122,998       | 3.6               | 10.0     | 0.7         | 37   | 9.2                    | 17   | 10.5        | 37   | 15.4         | 21   |              |      |               |      | 14.6          | Jan-12 |
| DJ U.S. Total Stock Market Index + 3%         |                   |                   |          | <u>1.7</u>  | 17   | <u>1.7</u>             | 64   | <u>2.6</u>  | 85   | <u>14.4</u>  | 31   | <u>14.3</u>  | 12   |               |      | <u>17.8</u>   | Jan-12 |
| Over/Under                                    |                   |                   |          | -1.0        |      | 7.5                    |      | 7.9         |      | 1.0          |      |              |      |               |      | -3.2          |        |
| InvestorForce Public DB Private Eq Net Median |                   |                   | _        | 0.5         |      | 3.4                    |      | 7.2         |      | 11.9         |      | 10.9         |      | 10.3          |      | 11.6          | Jan-12 |
| Adams Street Partners                         | 95,734,628        | 2.2               |          | 1.3         |      | 7.1                    |      | 8.2         |      | 14.7         |      |              | -    |               |      | 13.5          | Jan-12 |
| DJ U.S. Total Stock Market Index + 3%         |                   |                   |          | <u>1.7</u>  |      | <u>1.7</u>             |      | <u>2.6</u>  |      | <u>14.4</u>  |      | <u>14.3</u>  |      |               |      | <u>17.8</u>   | Jan-12 |
| Over/Under                                    |                   |                   |          | -0.4        |      | 5.4                    |      | 5.6         |      | 0.3          |      |              |      |               | _    | -4.3          |        |
| Harbourvest                                   | 43,386,234        | 1.0               |          | -0.3        |      | 13.3                   |      | 18.6        |      |              |      |              | -    |               |      | 20.1          | Jul-13 |
| DJ U.S. Total Stock Market Index + 3%         |                   |                   |          | <u>1.7</u>  |      | <u>1.7</u>             |      | <u>2.6</u>  |      | <u>14.4</u>  |      | <u>14.3</u>  |      |               |      | <u>14.3</u>   | Jul-13 |
| Over/Under                                    |                   |                   | _        | -2.0        |      | 11.6                   |      | 16.0        |      |              |      |              |      |               |      | 5.8           |        |
| Pantheon Global Secondary Fund IV             | 15,002,135        | 0.3               |          | 0.1         |      | 11.6                   |      | 4.2         |      | 9.5          |      |              | -    |               |      | 9.0           | Jan-12 |
| DJ U.S. Total Stock Market Index + 3%         |                   |                   |          | <u>1.7</u>  |      | <u>1.7</u>             |      | <u>2.6</u>  |      | <u>14.4</u>  |      | <u>14.3</u>  |      |               |      | <u>17.8</u>   | Jan-12 |
| Over/Under                                    |                   |                   |          | -1.6        |      | 9.9                    |      | 1.6         |      | -4.9         |      |              |      |               |      | -8.8          |        |

Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current quarter cash flows.



## Private Equity Limited Partnership Performance

|   |              |                            |               |  |  |               |                          |                          |               |               |              |       | Since Inception | b-   |
|---|--------------|----------------------------|---------------|--|--|---------------|--------------------------|--------------------------|---------------|---------------|--------------|-------|-----------------|--|
| Fund Name                                 | Vintage Year | Initial<br>Investment Date | Commitment    | Capital<br>Called to Date <sup>1</sup> | Outstanding<br>Commitment <sup>1</sup> | Call<br>Ratio | Interest<br>Paid/(Rec'd) | Distributions<br>to Date | Valuation     | Total Value   | Net Benefit  | IRR   |                 | Total Value to<br>Paid In Multiple<br>(TVPI) |
| Adams Street 2010 U.S. Fund               | 2010         | 5/21/2010                  | \$42,500,000  | \$29,665,000                           | \$12,835,000                           | 70%           | \$15,213                 | \$10,764,481             | \$31,612,674  | \$42,377,155  | \$12,696,942 | 14.4% | 0.36x           | 1.43x  |
| Adams Street 2010 Non-U.S. Dev. Mkts Fund | 2010         | 5/21/2010                  | \$25,500,000  | \$17,697,000                           | \$7,803,000                            | 69%           | \$1,589                  | \$5,557,179              | \$15,005,080  | \$20,562,259  | \$2,863,670  | 6.6%  | 0.31x           | 1.16x  |
| Adams Street 2010 Non-U.S. Emg Mkts Fund  | 2010         | 1/3/2011                   | \$8,500,000   | \$6,111,500                            | \$2,388,500                            | 72%           | \$0                      | \$314,436                | \$7,429,998   | \$7,744,434   | \$1,632,934  | 10.4% | 0.05x           | 1.27x  |
| Adams Street 2010 Direct Fund             | 2010         | 5/21/2010                  | \$8,500,000   | \$7,837,000                            | \$663,000                              | 92%           | \$6,697                  | \$3,933,030              | \$8,369,072   | \$12,302,102  | \$4,458,405  | 14.3% | 0.5x            | 1.57x  |
| Total Adams Street 2010                   | 2010         | 5/21/2010                  | \$85,000,000  | \$61,310,500                           | \$23,689,500                           | 72%           | \$23,499                 | \$20,569,126             | \$62,416,824  | \$82,985,950  | \$21,651,951 | 12.2% | 0.34x           | 1.35x  |
| Adams Street 2013 Global Fund             | 2013         | 6/27/2013                  | \$75,000,000  | \$34,200,000                           | \$40,800,000                           | 46%           | \$10,728                 | \$2,698,535              | \$33,317,817  | \$36,016,352  | \$1,805,624  | 4.1%  | 0.08x           | 1.05x  |
| HarbourVest - Dover Street VIII           | 2013         | 5/30/2013                  | \$67,500,000  | \$47,756,250                           | \$19,743,750                           | 71%           | \$84,954                 | \$21,664,123             | \$43,118,543  | \$64,782,666  | \$16,941,462 | 28.4% | 0.45x           | 1.35x  |
| Pantheon Global Secondary Fund IV         | 2010         | 8/20/2010                  | \$15,000,000  | \$9,960,000                            | \$5,040,000                            | 66%           | \$0                      | \$8,310,001              | \$6,232,558   | \$14,542,559  | \$4,582,559  | 15.3% | 0.83x           | 1.46x  |
| Pantheon Global Secondary Fund V          | 2015         | 2/26/2015                  | \$50,000,000  | \$8,308,104                            | \$41,691,896                           | 17%           | -\$3,352                 | \$100,240                | \$9,134,665   | \$9,234,905   | \$930,152    | 11.5% | 0.01x           | 1.11x  |
| Total VCERA Private Equity Program        | -            | 5/21/2010                  | \$292,500,000 | \$161,534,854                          | \$130,965,146                          | 55%           | \$115,829                | \$53,342,025             | \$154,220,407 | \$207,562,432 | \$45,911,748 | 14.1% | 0.33x           | 1.28x  |

<sup>1.</sup> Includes recycled/recallable distributions received to date.

Note: Private equity performance data is reported net of fees.

Distributions to Date shown for Pantheon Global Secondary Fund V includes management fee rebates paid to VCERA.

Performance shown is based on 9/30/2015 NAVs cash-adjusted for cash flows through 3/31/2016.



## Total Fund Performance Detail (Net)

|                                | Market Value (\$) | % of<br>Portfolio | Policy % | 3 Mo<br>(%) | Rank | Fiscal<br>YTD<br>(%) | Rank | 1 Yr<br>(%) | Rank | 3 Yrs<br>(%) | Rank | 5 Yrs<br>(%) | Rank | 10 Yrs<br>(%) | Rank | Return<br>(%) | Since  |
|--------------------------------|-------------------|-------------------|----------|-------------|------|----------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total US Fixed Income          | 829,535,018       | 19.2              | 20.0     | 3.0         | 28   | 2.6                  | 43   | 2.3         | 14   | 2.0          | 55   | 4.3          | 38   | 5.9           | 23   | 6.1           | Feb-94 |
| Barclays Aggregate             |                   |                   |          | <u>3.0</u>  | 26   | <u>3.7</u>           | 21   | <u>2.0</u>  | 23   | <u>2.5</u>   | 37   | <u>3.8</u>   | 49   | <u>4.9</u>    | 48   | <u>5.7</u>    | Feb-94 |
| Over/Under                     |                   |                   |          | 0.0         |      | -1.1                 |      | 0.3         |      | -0.5         |      | 0.5          |      | 1.0           |      | 0.4           |        |
| eA All US Fixed Inc Net Median |                   |                   |          | 2.2         |      | 2.2                  |      | 1.1         |      | 2.1          |      | 3.7          |      | 4.8           |      | 5.4           | Feb-94 |
| BlackRock U.S. Debt Fund       | 144,426,324       | 3.4               |          | 3.1         | 25   | 3.7                  | 21   | 2.0         | 22   | 2.5          | 35   | 3.8          | 48   | 5.0           | 44   | 5.5           | Nov-95 |
| Barclays Aggregate             |                   |                   |          | <u>3.0</u>  | 26   | <u>3.7</u>           | 21   | <u>2.0</u>  | 23   | <u>2.5</u>   | 37   | <u>3.8</u>   | 49   | <u>4.9</u>    | 48   | <u>5.5</u>    | Nov-95 |
| Over/Under                     |                   |                   |          | 0.1         |      | 0.0                  |      | 0.0         |      | 0.0          |      | 0.0          |      | 0.1           |      | 0.0           |        |
| eA All US Fixed Inc Net Median |                   |                   |          | 2.2         |      | 2.2                  |      | 1.1         |      | 2.1          |      | 3.7          |      | 4.8           |      | 5.3           | Nov-95 |
| Western                        | 277,765,076       | 6.4               |          | 3.1         | 24   | 3.6                  | 22   | 1.8         | 27   | 3.2          | 20   | 5.0          | 25   | 5.6           | 28   | 6.4           | Dec-96 |
| Barclays Aggregate             |                   |                   |          | <u>3.0</u>  | 26   | <u>3.7</u>           | 21   | <u>2.0</u>  | 23   | <u>2.5</u>   | 37   | <u>3.8</u>   | 49   | <u>4.9</u>    | 48   | <u>5.5</u>    | Dec-96 |
| Over/Under                     |                   |                   |          | 0.1         |      | -0.1                 |      | -0.2        |      | 0.7          |      | 1.2          |      | 0.7           |      | 0.9           |        |
| eA All US Fixed Inc Net Median |                   |                   |          | 2.2         |      | 2.2                  |      | 1.1         |      | 2.1          |      | 3.7          |      | 4.8           |      | 5.4           | Dec-96 |
| Reams                          | 293,147,976       | 6.8               |          | 3.3         | 19   | 2.4                  | 47   | 4.4         | 3    | 0.7          | 86   | 3.9          | 48   | 6.1           | 20   | 5.7           | Sep-01 |
| Reams Custom Index             |                   |                   |          | <u>0.1</u>  | 95   | <u>0.3</u>           | 79   | <u>0.4</u>  | 70   | <u>0.3</u>   | 93   | <u>2.3</u>   | 79   | <u>4.2</u>    | 66   | <u>4.3</u>    | Sep-01 |
| Over/Under                     |                   |                   |          | 3.2         |      | 2.1                  |      | 4.0         |      | 0.4          |      | 1.6          |      | 1.9           |      | 1.4           |        |
| Barclays Aggregate             |                   |                   |          | 3.0         | 26   | 3.7                  | 21   | 2.0         | 23   | 2.5          | 37   | 3.8          | 49   | 4.9           | 48   | 4.8           | Sep-01 |
| eA All US Fixed Inc Net Median |                   |                   |          | 2.2         |      | 2.2                  |      | 1.1         |      | 2.1          |      | 3.7          |      | 4.8           |      | 4.8           | Sep-01 |
| Loomis Sayles Multi Strategy   | 72,294,856        | 1.7               |          | 2.6         | 39   | -1.2                 | 88   | -1.8        | 90   | 1.9          | 59   | 5.1          | 24   | 6.6           | 13   | 6.4           | Jul-05 |
| Loomis Custom Index            |                   |                   |          | <u>3.1</u>  | 23   | <u>1.1</u>           | 65   | <u>0.0</u>  | 77   | <u>2.1</u>   | 49   | <u>4.0</u>   | 42   | <u>5.5</u>    | 32   | <u>5.2</u>    | Jul-05 |
| Over/Under                     |                   |                   |          | -0.5        |      | -2.3                 |      | -1.8        |      | -0.2         |      | 1.1          |      | 1.1           |      | 1.2           |        |
| Barclays Govt/Credit           |                   |                   |          | 3.5         | 17   | 3.9                  | 18   | 1.7         | 29   | 2.4          | 40   | 4.0          | 42   | 4.9           | 46   | 4.6           | Jul-05 |
| eA All US Fixed Inc Net Median |                   |                   |          | 2.2         |      | 2.2                  |      | 1.1         |      | 2.1          |      | 3.7          |      | 4.8           |      | 4.6           | Jul-05 |
| Loomis Strategic Alpha         | 41,900,786        | 1.0               |          | 0.4         | 91   | -2.0                 | 90   | -2.3        | 91   |              |      |              |      | -             |      | 1.2           | Jul-13 |
| Barclays Aggregate             |                   |                   |          | <u>3.0</u>  | 26   | <u>3.7</u>           | 21   | <u>2.0</u>  | 23   | <u>2.5</u>   | 37   | <u>3.8</u>   | 49   | <u>4.9</u>    | 48   | <u>3.7</u>    | Jul-13 |
| Over/Under                     |                   |                   |          | -2.6        |      | -5.7                 |      | -4.3        |      |              |      |              |      |               |      | -2.5          |        |
| eA All US Fixed Inc Net Median |                   |                   |          | 2.2         |      | 2.2                  |      | 1.1         |      | 2.1          |      | 3.7          |      | 4.8           |      | 2.9           | Jul-13 |

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Barclays Aggregate
Loomis Custom Index: 65% Barclays Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index
As of January 2016, Loomis Strategic Alpha was moved from the Total Global Fixed Income composite to the Total US Fixed Income composite.



# Total Fund Performance Detail (Net)

|   | Market Value (\$) | % of<br>Portfolio | Policy % | 3 Mo<br>(%) | Rank | Fiscal<br>YTD<br>(%) | Rank | 1 Yr<br>(%) | Rank | 3 Yrs<br>(%) | Rank | 5 Yrs<br>(%) | Rank | 10 Yrs<br>(%) | Rank | Return<br>(%) | Since  |
|---|-------------------|-------------------|----------|-------------|------|----------------------|------|-------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Real Estate                                       | 365,489,464       | 8.5               | 7.0      | 1.9         | 69   | 8.5                  | 76   | 11.7        | 46   | 11.6         | 66   | 11.2         | 70   | 4.1           | 83   | 8.0           | Mar-94 |
| NCREIF ODCE Net   |                   |                   |          | <u>2.0</u>  | 66   | <u>8.7</u>           | 65   | <u>12.6</u> | 26   | <u>12.6</u>  | 42   | <u>12.2</u>  | 46   | <u>5.4</u>    | 44   | <u>8.2</u>    | Mar-94 |
| Over/Under  |                   |                   |          | -0.1        |      | -0.2                 |      | -0.9        |      | -1.0         |      | -1.0         |      | -1.3          |      | -0.2          |        |
| InvestorForce Public DB Real Estate Pub+Priv Net Median |                   |                   |          | 2.2         |      | 9.3                  |      | 10.9        |      | 12.4         |      | 12.2         |      | 5.3           |      | 7.1           | Mar-94 |
| Prudential Real Estate                                  | 127,195,743       | 3.0               |          | 2.0         |      | 10.0                 |      | 13.4        |      | 13.2         |      | 12.8         |      | 5.1           |      | 6.0           | Jun-04 |
| NCREIF ODCE Net   |                   |                   |          | <u>2.0</u>  |      | <u>8.7</u>           |      | <u>12.6</u> |      | <u>12.6</u>  |      | <u>12.2</u>  |      | <u>5.4</u>    |      | <u>7.1</u>    | Jun-04 |
| Over/Under  |                   |                   |          | 0.0         |      | 1.3                  |      | 8.0         |      | 0.6          |      | 0.6          |      | -0.3          |      | -1.1          |        |
| NCREIF ODCE   |                   |                   |          | 2.2         |      | 9.5                  |      | 13.7        |      | 13.6         |      | 13.3         |      | 6.4           |      | 8.1           | Jun-04 |
| UBS Real Estate   | 237,153,034       | 5.5               |          | 1.8         |      | 8.0                  |      | 10.9        |      | 10.7         |      | 10.3         | -    | 5.7           |      | 7.7           | Mar-03 |
| NCREIF ODCE Net   |                   |                   |          | <u>2.0</u>  |      | <u>8.7</u>           |      | <u>12.6</u> |      | <u>12.6</u>  |      | <u>12.2</u>  |      | <u>5.4</u>    |      | <u>7.3</u>    | Mar-03 |
| Over/Under  |                   |                   |          | -0.2        |      | -0.7                 |      | -1.7        |      | -1.9         |      | -1.9         |      | 0.3           |      | 0.4           |        |
| NCREIF ODCE   |                   |                   |          | 2.2         |      | 9.5                  |      | 13.7        |      | 13.6         |      | 13.3         |      | 6.4           |      | 8.3           | Mar-03 |
| RREEF   | 1,140,686         | 0.0               |          | -4.8        |      | -10.7                |      | 0.0         |      | 13.2         |      | 21.3         | -    |               |      | -5.4          | Sep-07 |
| NCREIF ODCE Net   |                   |                   |          | <u>2.0</u>  |      | <u>8.7</u>           |      | <u>12.6</u> |      | <u>12.6</u>  |      | <u>12.2</u>  |      | <u>5.4</u>    |      | <u>3.6</u>    | Sep-07 |
| Over/Under  |                   |                   |          | -6.8        |      | -19.4                |      | -12.6       |      | 0.6          |      | 9.1          |      |               |      | -9.0          |        |
| NCREIF ODCE   |                   |                   |          | 2.2         |      | 9.5                  |      | 13.7        |      | 13.6         |      | 13.3         |      | 6.4           |      | 4.5           | Sep-07 |

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index



# Total Fund Performance Detail (Net)

|                                | Market Value (\$) | % of<br>Portfolio | Policy % | 3 Mo<br>(%) Ra | ank | Fiscal<br>YTD F<br>(%) | Rank | 1 Yr<br>(%)  | Rank | 3 Yrs<br>(%) | Rank | 5 Yrs<br>(%) | Rank | 10 Yrs<br>(%) | Rank | Return<br>(%) | Since  |
|--------------------------------|-------------------|-------------------|----------|----------------|-----|------------------------|------|--------------|------|--------------|------|--------------|------|---------------|------|---------------|--------|
| Total Liquid Alternatives      | 360,678,570       | 8.4               | 10.0     | -0.1           |     | -12.5                  |      | -15.3        |      |              |      |              |      |               |      | 1.8           | Apr-13 |
| CPI + 4% (Unadjusted)          |                   |                   |          | <u>1.7</u>     |     | <u>2.8</u>             |      | <u>4.9</u>   |      | <u>4.8</u>   |      | <u>5.3</u>   |      | <u>5.8</u>    |      | <u>4.8</u>    | Apr-13 |
| Over/Under                     |                   |                   |          | -1.8           |     | -15.3                  |      | -20.2        |      |              |      |              |      |               |      | -3.0          |        |
| Bridgewater All Weather Fund   | 261,608,219       | 6.1               |          | 2.4            |     | -5.1                   |      | -8.0         |      |              |      |              |      |               |      | 2.3           | Aug-13 |
| CPI + 5% (Unadjusted)          |                   |                   |          | <u>1.9</u>     |     | <u>3.5</u>             |      | <u>5.9</u>   |      |              |      |              |      |               |      | <u>5.7</u>    | Aug-13 |
| Over/Under                     |                   |                   |          | 0.5            |     | -8.6                   |      | -13.9        |      |              |      |              |      |               | _    | -3.4          |        |
| Tortoise Energy Infrastructure | 99,070,351        | 2.3               |          | -5.9           | -   | -27.5                  |      | -30.0        |      |              |      |              |      |               |      | -3.9          | Apr-13 |
| Wells Fargo MLP Index          |                   |                   |          | <u>-6.1</u>    |     | <u>-32.2</u>           |      | <u>-35.2</u> |      | <u>-10.1</u> |      | <u>-0.5</u>  |      |               |      | <u>-10.7</u>  | Apr-13 |
| Over/Under                     |                   |                   |          | 0.2            |     | 4.7                    |      | 5.2          |      |              |      |              |      |               |      | 6.8           |        |
| Overlay                        | 269,942,617       | 6.3               | 0.0      |                |     |                        |      |              |      |              |      |              |      |               |      |               |        |
| Parametric                     | 269,942,617       | 6.3               |          |                |     |                        |      |              |      |              |      |              |      |               |      |               |        |

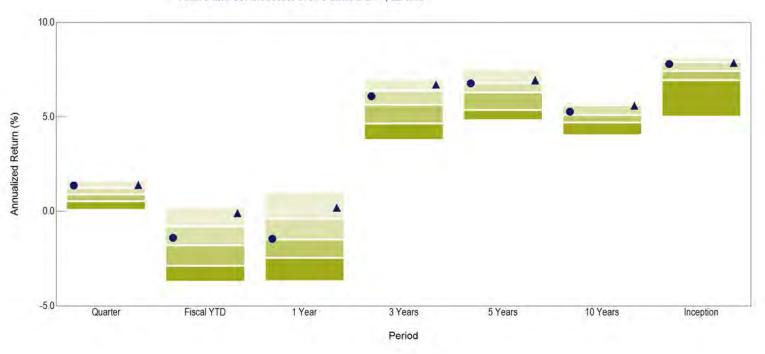
Overlay performance is not applicable on an individual account level

PIMCO Global Fixed Income is liquidating. The market value as of 3/31/2106 is \$2,339,996



## Total Fund Return Summary vs. Peer Universe

#### Total Fund vs. InvestorForce Public DB > \$1B Net

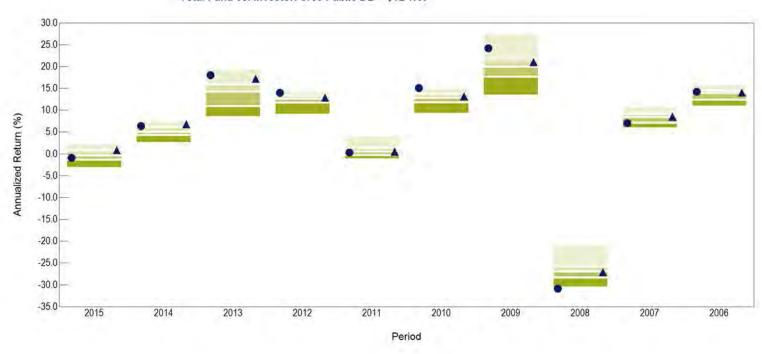


|                 | Return (Rank) |      |      |      |      |      |     |      |     |      |     |      |     |      |
|-----------------|---------------|------|------|------|------|------|-----|------|-----|------|-----|------|-----|------|
| 5th Percentile  | 1.6           |      | 0.2  |      | 1.0  |      | 7.0 |      | 7.5 |      | 5.8 |      | 8.1 |      |
| 25th Percentile | 1.2           |      | -0.8 |      | -0.4 |      | 6.4 |      | 6.8 |      | 5.6 |      | 7.9 |      |
| Median          | 0.9           |      | -1.8 |      | -1.5 |      | 5.6 |      | 6.3 |      | 5.1 |      | 7.4 |      |
| 75th Percentile | 0.6           |      | -2.9 |      | -2.4 |      | 4.7 |      | 5.4 |      | 4.7 |      | 6.9 |      |
| 95th Percentile | 0.1           |      | -3.7 |      | -3.7 |      | 3.8 |      | 4.8 |      | 4.0 |      | 5.0 |      |
| # of Portfolios | 41            |      | 41   |      | 41   |      | 41  |      | 41  |      | 37  |      | 22  |      |
| Total Fund      | 1.4           | (18) | -1.4 | (33) | -1.5 | (48) | 6.1 | (31) | 6.8 | (26) | 5.3 | (39) | 7.8 | (29) |
| Policy Index    | 1.4           | (15) | -0.1 | (9)  | 0.2  | (15) | 6.7 | (11) | 6.9 | (16) | 5.6 | (28) | 7.9 | (27) |



## Total Fund Return Summary vs. Peer Universe

#### Total Fund vs. InvestorForce Public DB > \$1B Net

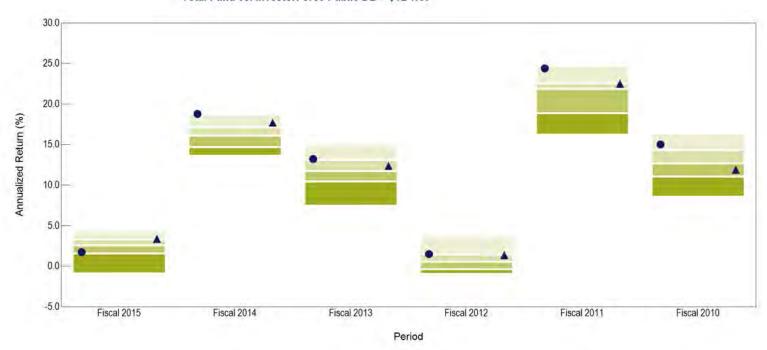


|                 | Return (R | ank) |     |      |      |      |      |      |      |      |      |      |      |      |       |      |      |      |      |      |
|-----------------|-----------|------|-----|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|
| 5th Percentile  | 2.4       |      | 7.6 |      | 19.5 |      | 14.3 |      | 4.2  |      | 15.1 |      | 27.5 |      | -20.9 |      | 10.7 |      | 15.8 |      |
| 25th Percentile | 0.8       |      | 6.1 |      | 16.0 |      | 13.4 |      | 1.5  |      | 13.8 |      | 21.7 |      | -25.7 |      | 9.2  |      | 14.6 |      |
| Median          | -0,4      |      | 5.1 |      | 14.3 |      | 12.7 |      | 0.6  |      | 12.8 |      | 20.0 |      | -26.9 |      | 8.5  |      | 14.0 |      |
| 75th Percentile | -1.3      |      | 4.4 |      | 11.0 |      | 11.8 |      | -0.3 |      | 11.8 |      | 17.7 |      | -28.3 |      | 7.1  |      | 12.5 |      |
| 95th Percentile | -3.2      |      | 2.6 |      | 8.5  |      | 9.0  |      | -1.2 |      | 9.3  |      | 13.4 |      | -30.5 |      | 5.9  |      | 10.9 |      |
| # of Portfolios | 57        |      | 55  |      | 48   |      | 44   |      | 42   |      | 41   |      | 40   |      | 39    |      | 39   |      | 38   |      |
| Total Fund      | -0.9      | (61) | 6.4 | (19) | 18.0 | (10) | 14.0 | (15) | 0.3  | (61) | 15.1 | (6)  | 24.2 | (16) | -30.9 | (98) | 7.0  | (77) | 14.2 | (41) |
| Policy Index    | 0.8       | (25) | 6.8 | (12) | 17.2 | (14) | 12.9 | (41) | 0.5  | (55) | 13.2 | (44) | 21.0 | (33) | -27.1 | (54) | 8.5  | (50) | 14.0 | (50) |
|                 |           |      |     |      |      |      |      |      |      |      |      |      |      |      |       |      |      |      |      |      |



## Total Fund Return Summary vs. Peer Universe



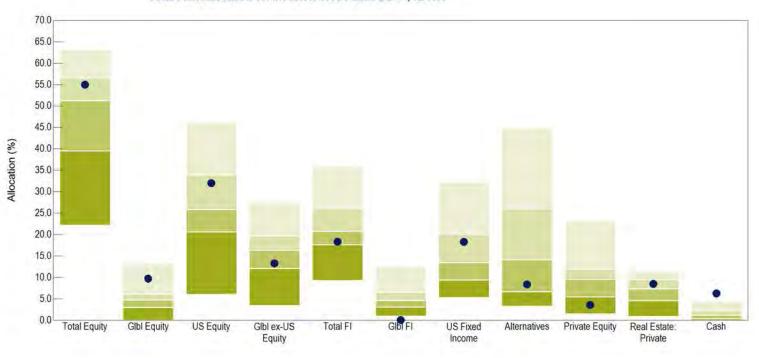


|                 | Return (Rank) |      |      |      |      |      |      |      |      |      |      |      |
|-----------------|---------------|------|------|------|------|------|------|------|------|------|------|------|
| 5th Percentile  | 4.3           |      | 18.7 |      | 15.0 |      | 3.7  |      | 24.7 |      | 16.3 |      |
| 25th Percentile | 3.3           |      | 17.2 |      | 13.1 |      | 1.5  |      | 22.5 |      | 14.4 |      |
| Median          | 2.6           |      | 16.1 |      | 11.8 |      | 0.5  |      | 21.9 |      | 12.7 |      |
| 75th Percentile | 1.6           |      | 14.7 |      | 10.5 |      | -0.3 |      | 18.9 |      | 11.1 |      |
| 95th Percentile | -0.9          |      | 13.6 |      | 7.5  |      | -0.9 |      | 16.3 |      | 8.6  |      |
| # of Portfolios | 53            |      | 43   |      | 56   |      | 41   |      | 42   |      | 41   |      |
| Total Fund      | 1.7           | (70) | 18.8 | (5)  | 13.2 | (22) | 1.5  | (25) | 24.4 | (10) | 15.0 | (15) |
| Policy Index    | 3.4           | (25) | 17.7 | (20) | 12.4 | (39) | 1.4  | (27) | 22.5 | (30) | 11.9 | (64) |



## Total Fund Allocations vs. Peer Universe

Total Plan Allocation vs. InvestorForce Public DB > \$1B Net



5th Percentile 25th Percentile Median 75th Percentile 95th Percentile # of Portfolios Total Fund

| Allocatio | n (Rank | )    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |  |
|-----------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|--|
| 63.2      |         | 13.3 | -    | 46.1 |      | 27.5 |      | 35.9 |      | 12.4 |      | 32.2 |      | 44.9 |      | 23.1 |      | 11.6 |      | 4.4 |  |
| 56.6      |         | 6.2  |      | 34.0 |      | 19.7 |      | 26.0 |      | 6.6  |      | 20.1 |      | 26.1 |      | 12.0 |      | 9.5  |      | 2.2 |  |
| 51.3      |         | 4.7  |      | 25.9 |      | 16.5 |      | 20.8 |      | 4.7  |      | 13.5 |      | 14.1 |      | 9.6  |      | 7.4  |      | 1.2 |  |
| 39.6      |         | 3.1  |      | 20.7 |      | 12.2 |      | 17.7 |      | 3.1  |      | 9.5  |      | 6.7  |      | 5.5  |      | 4.6  |      | 0.4 |  |
| 22.2      |         | 0.1  |      | 6.1  |      | 3.5  |      | 9.3  |      | 1.0  |      | 5.4  |      | 3.4  |      | 1.6  |      | 1.0  |      | 0.0 |  |
| 38        |         | 16   |      | 36   |      | 36   |      | 39   |      | 21   |      | 34   |      | 37   |      | 34   |      | 29   |      | 36  |  |
| 55.0      | (39)    | 9.7  | (12) | 32.0 | (31) | 13.3 | (70) | 18.3 | (69) | 0.1  | (99) | 18.3 | (31) | 8.4  | (68) | 3.6  | (82) | 8.5  | (33) | 6.3 |  |



March 31, 2016

(3)

# Manager Due Diligence

## Due Diligence Monitor

The items below summarize the recent quarter's performance and any changes or announcements from the Plan's managers/products. A "-" indicates there were no material announcements. A "Yes" indicates there was an announcement and a brief summary is provided on the following pages. NEPC's Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determine if any action should be taken (by NEPC and/or by our clients). Events are rated: No Action, Watch, Hold, Client Review or Terminate. NEPC's recommendation in view of the recent quarter's developments (performance, manager events, and any of the longer-term trending data) is refreshed quarterly.

| Investment Options                         | Performance<br>(Recent Quarter) | Changes/<br>Announcements<br>(Recent Quarter) | NEPC DD<br>Committee Rec. | Plan Rec. | Comments                              | Last Onsite<br>Conducted |
|--|---------------------------------|---|---------------------------|-----------|---------------------------------------|--------------------------|
| BlackRock Equity Market Index              | -                               | -   | -                         | -         |                                       | 10/2013                  |
| Western U.S. Index Plus                    | -                               | -   | -                         | -         |                                       | 6/2014                   |
| BlackRock Extended Equity Index            | -                               | -   | -                         | -         |                                       | 10/2013                  |
| BlackRock MSCI ACWI ex-U.S. Index          | -                               | -   | -                         | -         |                                       | 10/2013                  |
| Sprucegrove                                | -                               | No  | Hold                      | No Action | 3Q 2014 Departure                     | N/A                      |
| Hexavest                                   | Top Quartile                    | -   | -                         | -         |                                       | 1/2013                   |
| Walter Scott                               | Top Quartile                    | -<br>-  | -                         | -         |                                       | 10/2012                  |
| BlackRock MSCI ACWI Index                  | -                               | -<br> <br> -                                  | -                         | -         |                                       | 10/2013                  |
| GMO  | -                               | -   | -                         | -         |                                       | 7/2014                   |
| Adams Street                               | N/A                             | -<br> <br>                                    | -                         | -         |                                       | 11/2013                  |
| HarbourVest                                | N/A                             | -<br> <br> -                                  | -                         | -         |                                       | 3/2014                   |
| Pantheon                                   | N/A                             | -<br> <br>                                    | -                         | -         |                                       | 1/2015                   |
| BlackRock U.S. Debt Fund                   | Top Quartile                    | Yes   | No Action                 | No Action | Jon Rubinstein Joining as<br>a Co-CEO | 10/2013                  |
| Western                                    | Top Quartile                    | -   | -                         | -         |                                       | 6/2014                   |
| Reams                                      | Top Quartile                    | -   | -                         | -         |                                       | 11/2013                  |
| Loomis Sayles Multi-Sector Full Discretion | -                               | i<br> <br> -<br> -                            | -                         | -         |                                       | 11/2013                  |



# Due Diligence Monitor Continued

| Investment Options            | Performance<br>(Recent<br>Quarter) | Changes/<br>Announcements<br>(Recent<br>Quarter) | NEPC DD<br>Committee<br>Rec. | Plan Rec. | Comments                              | Last Onsite<br>Conducted |
|-------------------------------|------------------------------------|--|------------------------------|-----------|---------------------------------------|--------------------------|
| Loomis Sayles Strategic Alpha | Bottom Decile                      | -  | -                            | -         |                                       | 11/2013                  |
| Prudential                    | N/A                                | -  | -                            | -         |                                       | 7/2014                   |
| RREEF                         | N/A                                | -  | -                            | -         |                                       | 7/2013                   |
| UBS                           | N/A                                | -  | -                            | -         |                                       | 8/2011                   |
| Bridgewater                   | N/A                                | Yes  | No Action                    | No Action | Jon Rubinstein<br>Joining as a Co-CEO | 9/2012                   |
| Tortoise                      | N/A                                | -  | -                            | -         |                                       | 8/2013                   |
| Parametric/Clifton            | N/A                                | -  | -                            | -         |                                       | 7/2013                   |

| NEPC Due Diligence Committee Recommendation Key |   |  |  |  |  |  |
|---|---|--|--|--|--|--|
| No Action                                       | Informational items have surfaced; no action is recommended.  |  |  |  |  |  |
| Watch   | 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.  |  |  |  |  |  |
| Hold  | Serious issues have surfaced to be concerned over; manager cannot participate in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.   |  |  |  |  |  |
| Client Review                                   | Very serious issues have surfaced with an Investment Manager; manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to review the manager.   |  |  |  |  |  |
| Terminate                                       | We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to replace the manager. |  |  |  |  |  |



#### Due Diligence Commentary

Below is a summary of manager changes, announcements and due diligence events since the issuance of our last quarterly report.

Manager Changes/Announcements

#### **Bridgewater**

Jon Rubenstein is now Co-CEO alongside Eileen Murray. In addition, Greg Jensen, who holds the position of both Co-CEO and Co-CIO, will shift to focus exclusively on the investment side of the business. Mr. Jensen will remain Co-CIO along with Bob Prince and Ray Dalio.

NEPC recommends No Action at this time. We will continue to monitor the situation and provide updates as necessary.



**Appendix: Market Environment** 



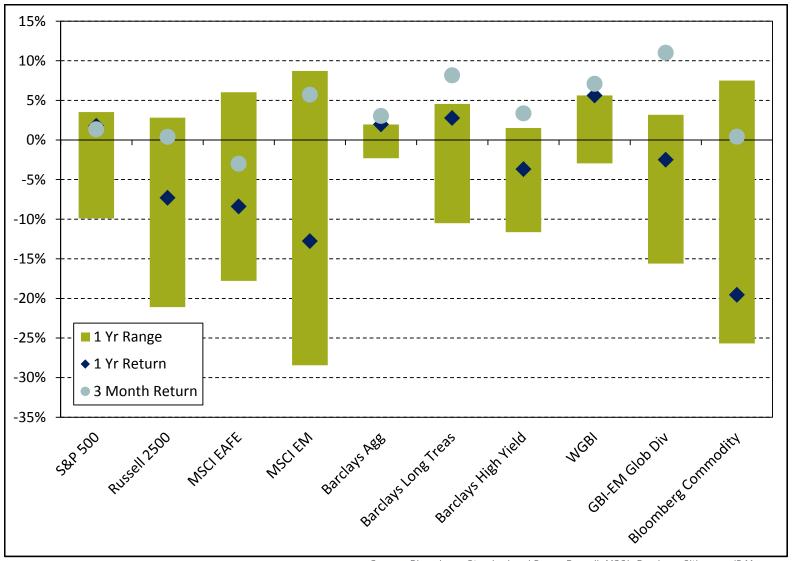
# Index Performance Summary as of 3/31/2016

|                                | 2009   | 2010  | 2011   | 2012  | 2013   | 2014   | 2015   | JAN    | FEB   | MAR   | YTD   |
|--------------------------------|--------|-------|--------|-------|--------|--------|--------|--------|-------|-------|-------|
| Barclays US Strips 20+ Yr      | -36.0% | 10.9% | 58.5%  | 3.0%  | -21.0% | 46.4%  | -3.7%  | 6.9%   | 4.6%  | -0.3% | 11.4% |
| JPM GBI-EM Global Diversified  | 22.0%  | 15.7% | -1.8%  | 16.8% | -9.0%  | -5.7%  | -14.9% | 0.4%   | 1.4%  | 9.1%  | 11.0% |
| Barclays US Govt/Credit Long   | 1.9%   | 10.2% | 22.5%  | 8.8%  | -8.8%  | 19.3%  | -3.3%  | 2.1%   | 2.2%  | 2.8%  | 7.3%  |
| Citi WGBI                      | 2.6%   | 5.2%  | 6.4%   | 1.7%  | -4.0%  | -0.5%  | -3.6%  | 1.4%   | 2.9%  | 2.7%  | 7.1%  |
| Barclays US Long Credit        | 16.8%  | 10.7% | 17.1%  | 12.7% | -6.6%  | 16.4%  | -4.6%  | 0.3%   | 1.7%  | 4.8%  | 6.8%  |
| FTSE NAREIT Equity REITs       | 28.0%  | 28.0% | 8.3%   | 18.1% | 2.5%   | 30.1%  | 3.2%   | -3.4%  | -0.4% | 10.1% | 6.0%  |
| MSCI EM                        | 78.5%  | 18.9% | -18.4% | 18.2% | -2.6%  | -2.2%  | -14.9% | -6.5%  | -0.2% | 13.2% | 5.7%  |
| JPM EMBI Global Diversified    | 29.8%  | 12.2% | 7.4%   | 17.4% | -5.3%  | 7.4%   | 1.2%   | -0.2%  | 1.9%  | 3.3%  | 5.0%  |
| Barclays US Corporate HY       | 58.2%  | 15.1% | 5.0%   | 15.8% | 7.4%   | 2.5%   | -4.5%  | -1.6%  | 0.6%  | 4.4%  | 3.4%  |
| Barclays US Agg Bond           | 5.9%   | 6.5%  | 7.8%   | 4.2%  | -2.0%  | 6.0%   | 0.6%   | 1.4%   | 0.7%  | 0.9%  | 3.0%  |
| Barclays US Agg Interm         | 6.5%   | 6.2%  | 6.0%   | 3.6%  | -1.0%  | 4.1%   | 1.2%   | 1.3%   | 0.5%  | 0.6%  | 2.3%  |
| Barclays Municipal             | 12.9%  | 2.4%  | 10.7%  | 6.8%  | -2.6%  | 9.1%   | 3.3%   | 1.2%   | 0.2%  | 0.3%  | 1.7%  |
| S&P 500                        | 26.5%  | 15.1% | 2.1%   | 16.0% | 32.4%  | 13.7%  | 1.4%   | -5.0%  | -0.1% | 6.8%  | 1.4%  |
| Credit Suisse Leveraged Loan   | 44.9%  | 10.0% | 1.8%   | 9.4%  | 6.2%   | 2.1%   | -0.4%  | -0.7%  | -0.6% | 2.6%  | 1.3%  |
| Russell 1000                   | 28.4%  | 16.1% | 1.5%   | 16.4% | 33.1%  | 13.2%  | 0.9%   | -5.4%  | 0.0%  | 7.0%  | 1.2%  |
| Barclays US Govt/Credit 1-3 Yr | 3.8%   | 2.8%  | 1.6%   | 1.3%  | 0.6%   | 0.8%   | 0.7%   | 0.5%   | 0.1%  | 0.4%  | 1.0%  |
| Bloomberg Commodity            | 18.9%  | 16.8% | -13.3% | -1.1% | -9.5%  | -17.0% | -24.7% | -1.7%  | -1.6% | 3.8%  | 0.4%  |
| Russell 2500                   | 34.4%  | 26.7% | -2.5%  | 17.9% | 36.8%  | 7.1%   | -2.9%  | -8.0%  | 0.7%  | 8.3%  | 0.4%  |
| MSCI ACWI                      | 34.6%  | 12.7% | -7.4%  | 16.1% | 22.8%  | 4.2%   | -2.4%  | -6.0%  | -0.7% | 7.4%  | 0.2%  |
| Russell 2000                   | 27.2%  | 26.9% | -4.2%  | 16.4% | 38.8%  | 4.9%   | -4.4%  | -8.8%  | 0.0%  | 8.0%  | -1.5% |
| Credit Suisse Hedge Fund       | 18.6%  | 11.0% | -2.5%  | 7.7%  | 9.7%   | 4.1%   | -0.7%  | -1.4%  | -1.1% | N/A   | -2.5% |
| MSCI EAFE                      | 31.8%  | 7.8%  | -12.1% | 17.3% | 22.8%  | -4.9%  | -0.8%  | -7.2%  | -1.8% | 6.5%  | -3.0% |
| Alerian MLP                    | 76.4%  | 35.9% | 13.9%  | 4.8%  | 27.6%  | 4.8%   | -32.6% | -11.1% | -0.5% | 8.3%  | -4.2% |

Source: Morningstar Direct



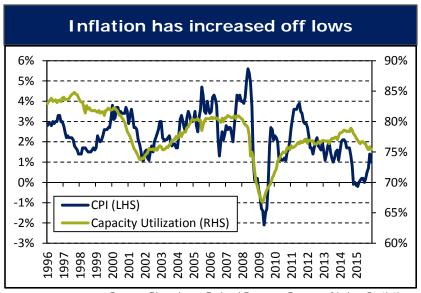
## Broad Market Performance Summary as of 3/31/2016



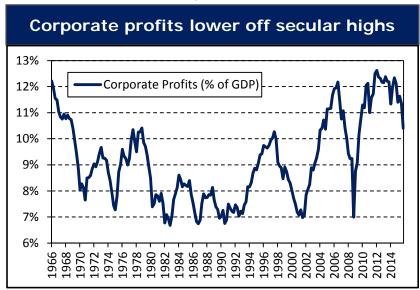
Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, Citigroup, JP Morgan \*1 Yr Range: Represents range of cumulative high/low daily index returns for an investment made one year ago



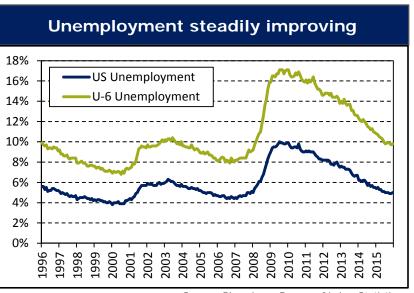
#### US Economic Indicators



Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics



Source: Bloomberg, Bureau of Economic Analysis



Source: Bloomberg, Bureau of Labor Statistics

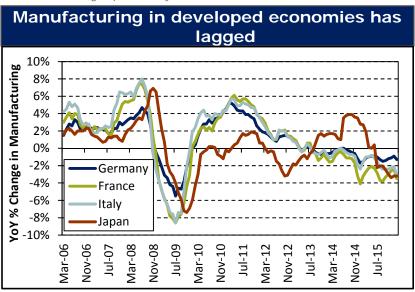


Source: Bloomberg, Institute for Supply Management



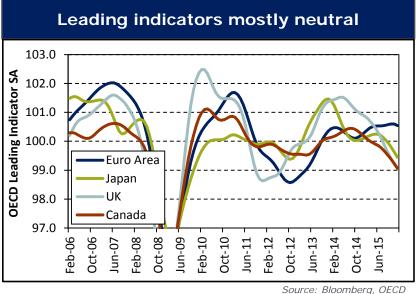
#### **International Economic Indicators**





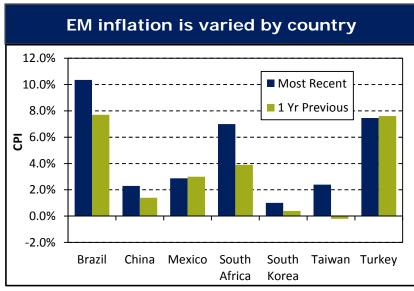
Source: Bloomberg, OECD, Eurostat



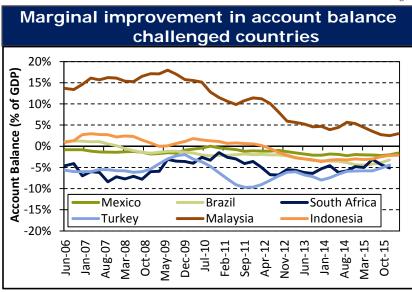




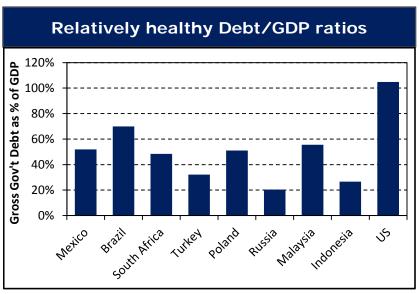
#### Emerging Market Economic Indicators



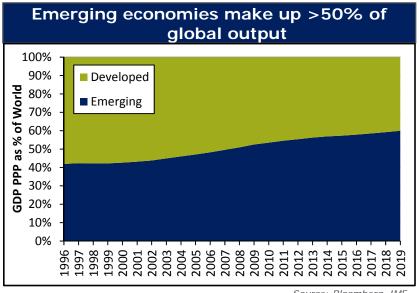
Source: Bloomberg



Source: Bloomberg



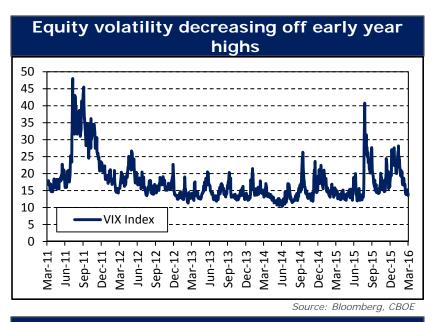
Source: Bloomberg, IMF



Source: Bloomberg, IMF



#### Volatility





Source: Bloomberg, Merrill Lynch



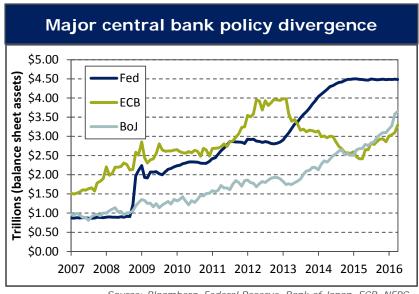
#### Commodity pricing volatility has increased 23 21 19 17 15 13 11 Bloomberg Commodity 90D Vol May-12 Aug-12 May-13 Aug-14 Nov-14 Aug-15 Nov-15 Feb-13 Aug-13 May-14 May-15 Nov-11 Feb-12 Nov-12 Nov-13 Feb-14 Feb-15

Source: Bloomberg, Merrill Lynch

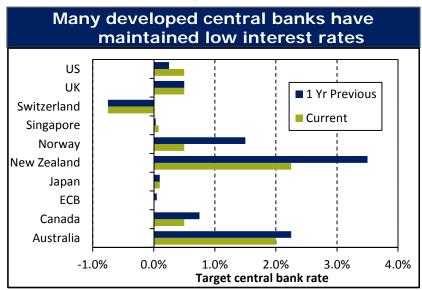


Source: Bloomberg, Deutsche Bank

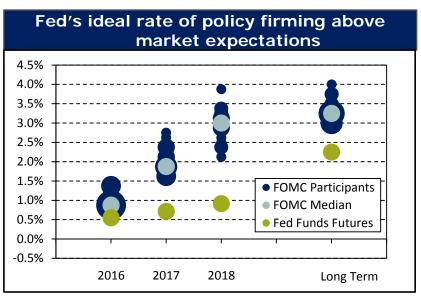
#### Central Banks



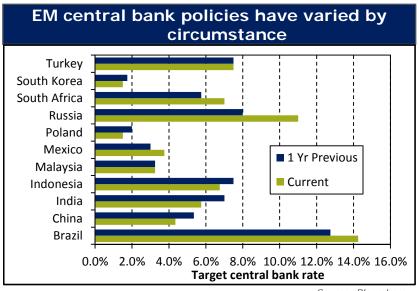
Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC



Source: Bloomberg



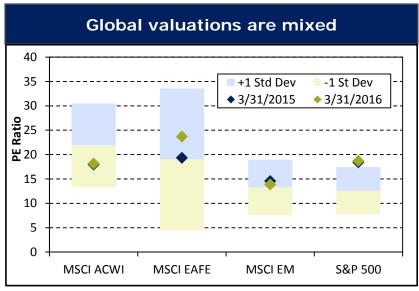
Source: Bloomberg, Federal Reserve, NEPC



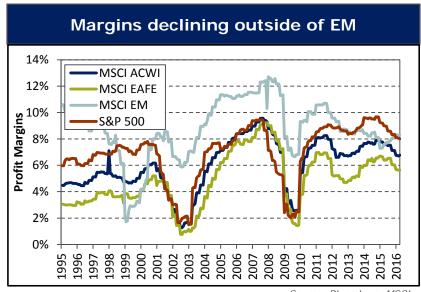
Source: Bloomberg



## Global Equity



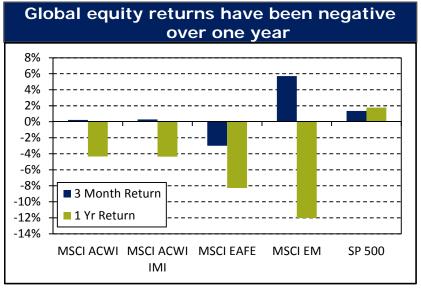
Source: Bloomberg, Standard and Poors, MSCI \*MSCI EAFE is ex UK Telecom



Source: Bloomberg, MSCI



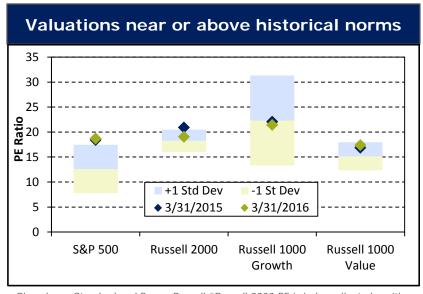
Source: Bloomberg, Standard and Poors, MSCI



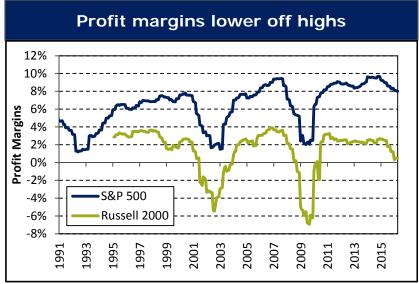
Source: Bloomberg, MSCI



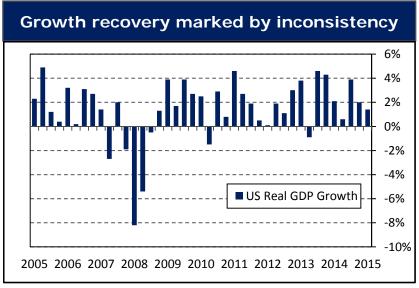
## **US** Equity



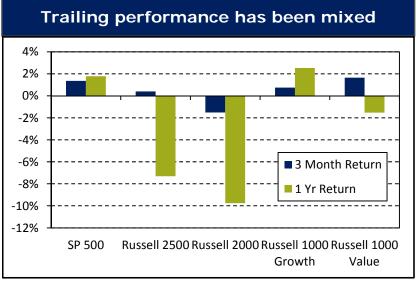
Source: Bloomberg, Standard and Poors, Russell \*Russell 2000 PE is index adjusted positive



Source: Bloomberg, Standard and Poors, Russell



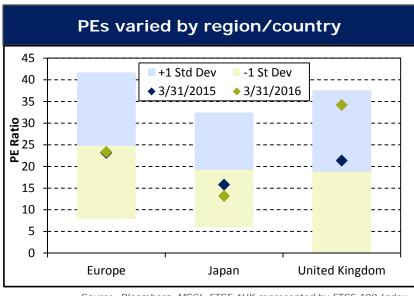
Source: Bloomberg, Bureau of Economic Analysis

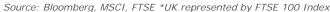


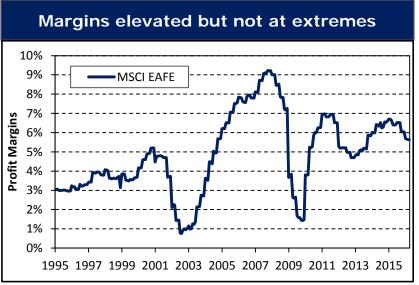
Source: Bloomberg, Standard and Poors, Russell



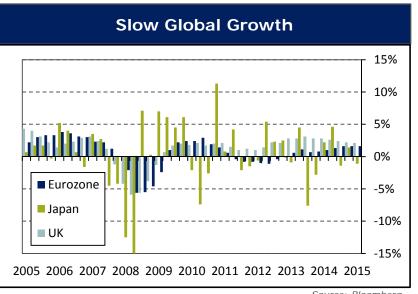
## International Equity



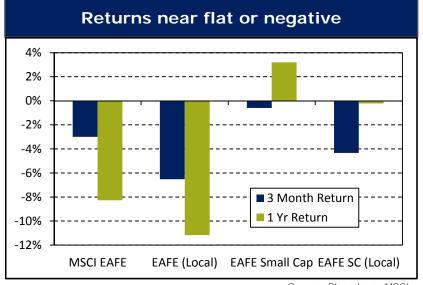




Source: Bloomberg, MSCI



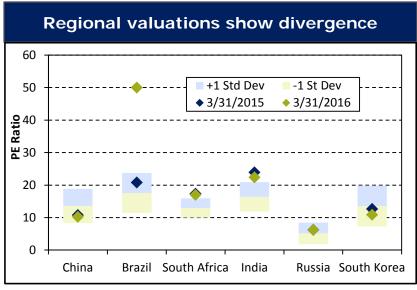
Source: Bloomberg



Source: Bloomberg, MSCI



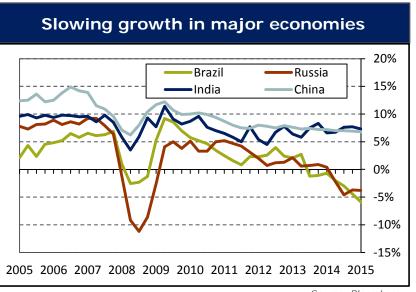
## **Emerging Markets Equity**



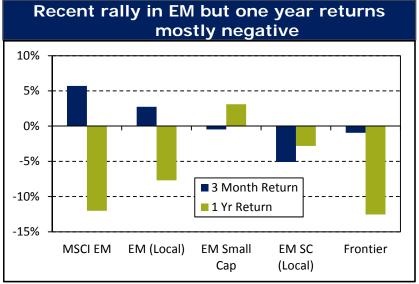




#### Source: Bloomberg, MSCI



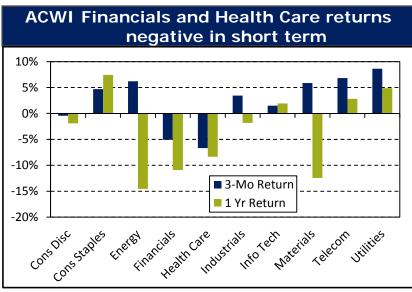
Source: Bloomberg



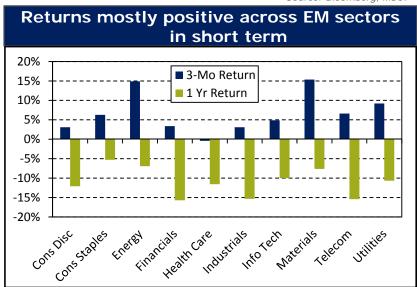
Source: Bloomberg, MSCI



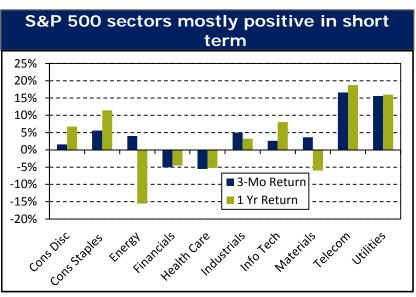
## Global Equity by Sector



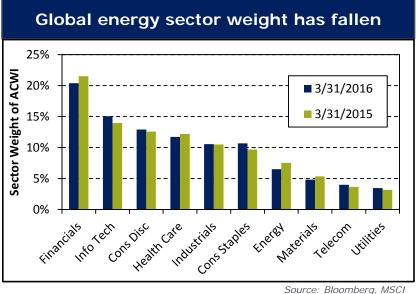
Source: Bloomberg, MSCI



Source: Bloomberg, MSCI

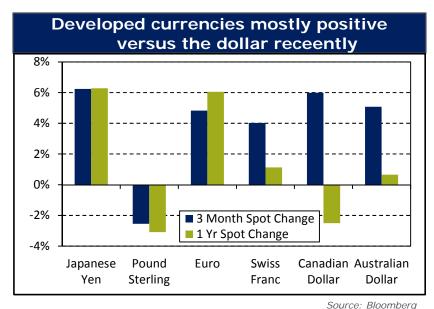


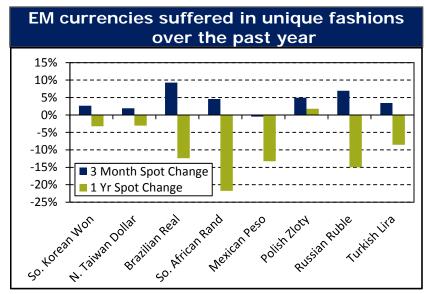
Source: Bloomberg, Standard and Poors



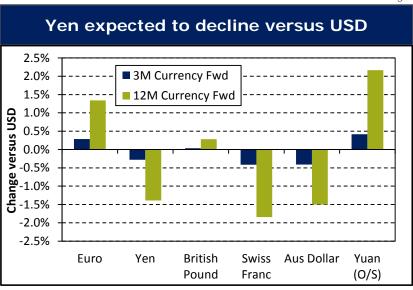


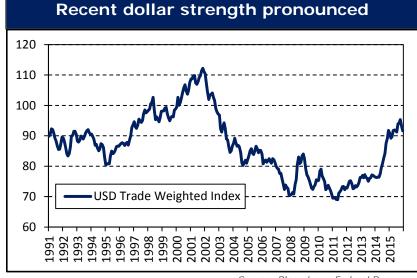
## Currencies





Source: Bloomberg



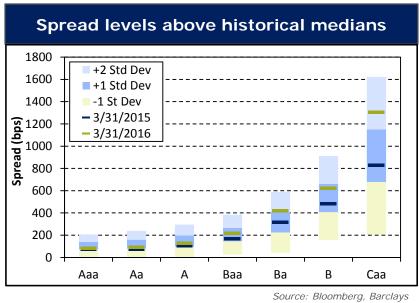


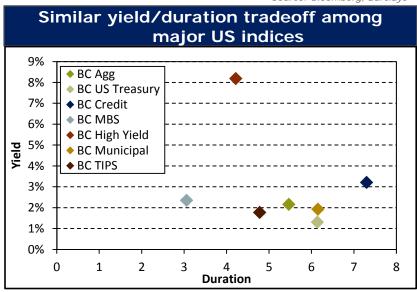
Source: Bloomberg, Federal Reserve



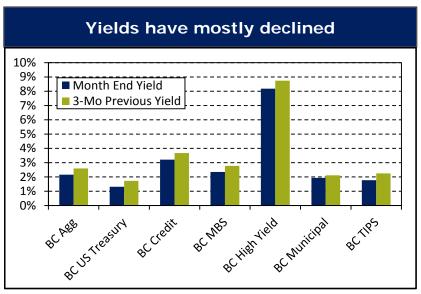


## **US Fixed Income**

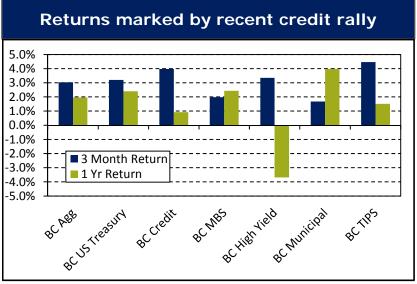




Source: Bloomberg, Barclays



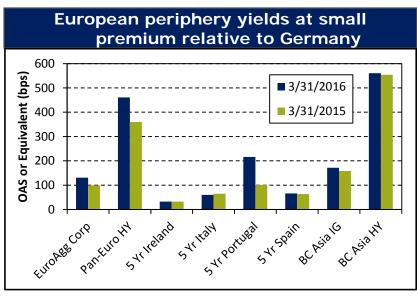
Source: Bloomberg, Barclays



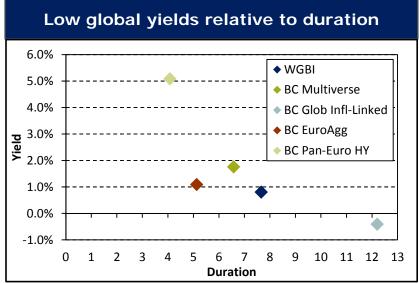
Source: Bloomberg, Barclays



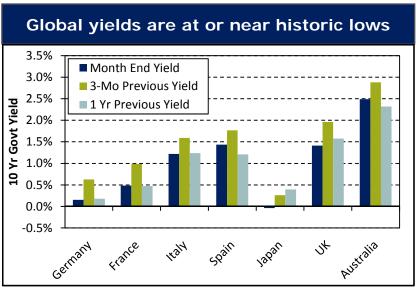
## International Developed Fixed Income



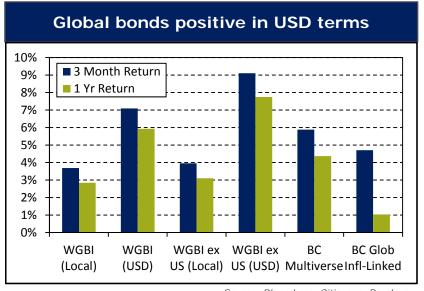




Source: Bloomberg, Citigroup, Barclays



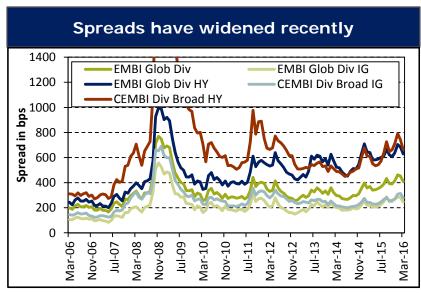
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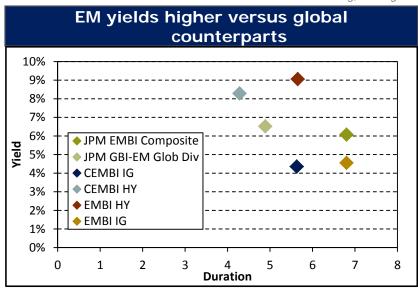
Source: Bloomberg, Citigroup, Barclays



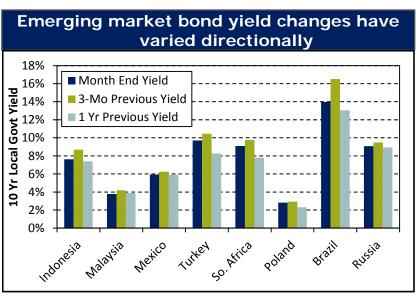
## Emerging Markets Fixed Income



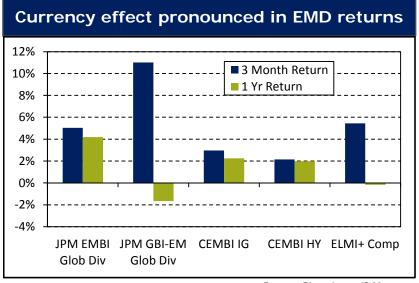
Source: Bloomberg, JP Morgan



Source: Bloomberg, JP Morgan



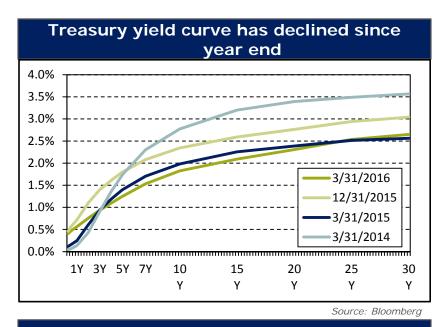
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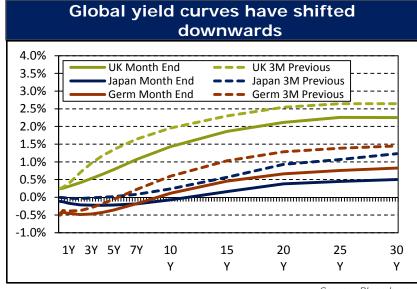


Source: Bloomberg, JP Morgan

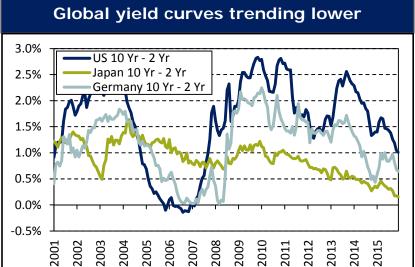


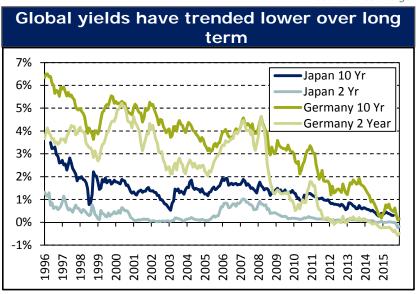
#### Rates





Source: Bloomberg



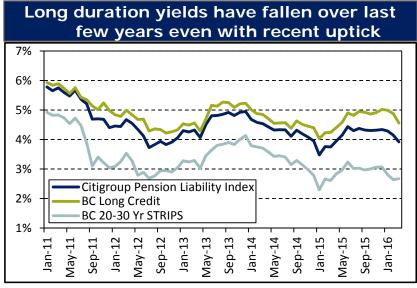


Source: Bloomberg

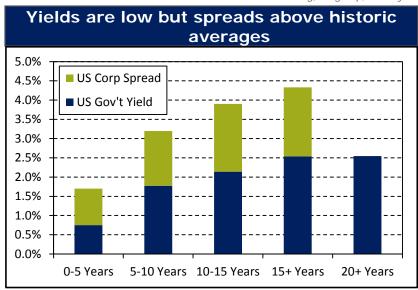


Source: Bloomberg

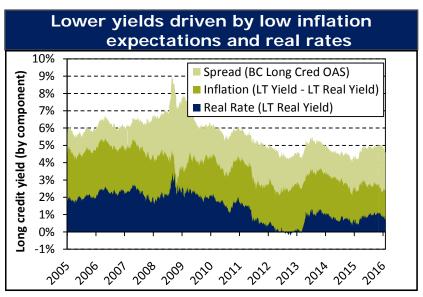
#### Long Rates and Liability



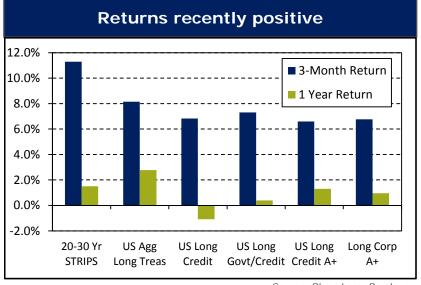
Source: Bloomberg, Citigroup, Barclays



Source: Bloomberg, BofA Merrill Lynch, Barclays \*No index for 20+ year corporate



Source: Bloomberg, US Treasury, Barclays, NEPC



Source: Bloomberg, Barclays



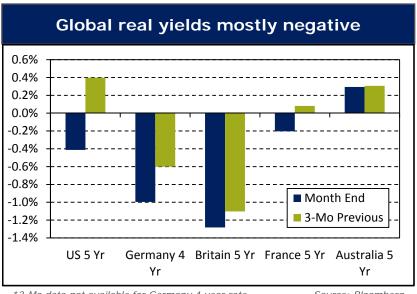
## Inflation and Real Rates





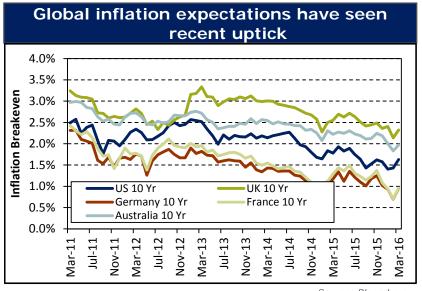


#### Source: Bloomberg



\*3-Mo data not available for Germany 4 year rate

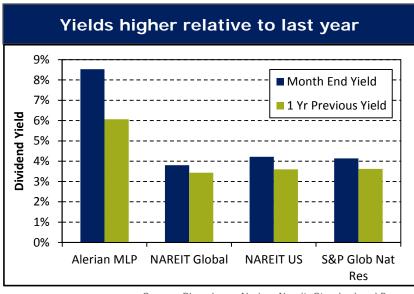
Source: Bloombera



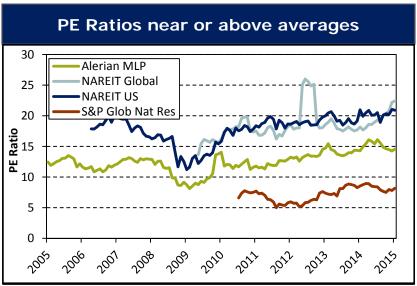
Source: Bloomberg



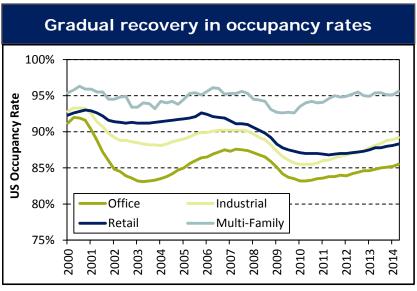
## Inflation Sensitive Growth Assets



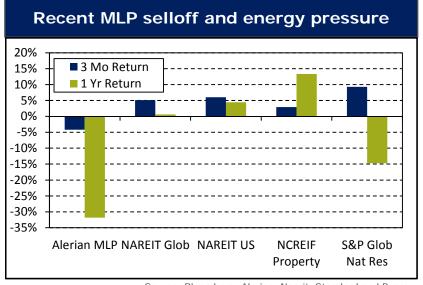
Source: Bloomberg, Alerian, Nareit, Standard and Poors



Source: Bloomberg, US Census Bureau



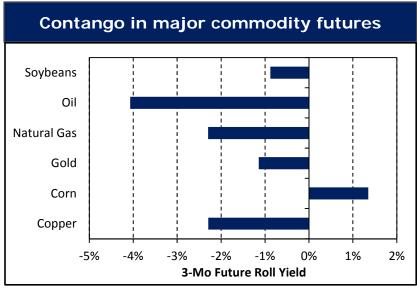
Source: Bloomberg, CB Richard Ellis



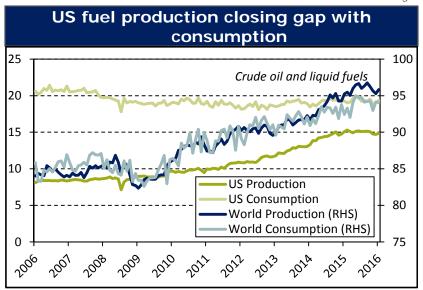
Source: Bloomberg, Alerian, Nareit, Standard and Poors



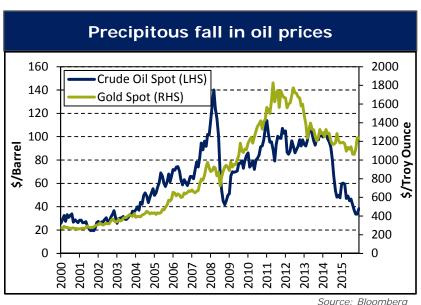
#### Commodities

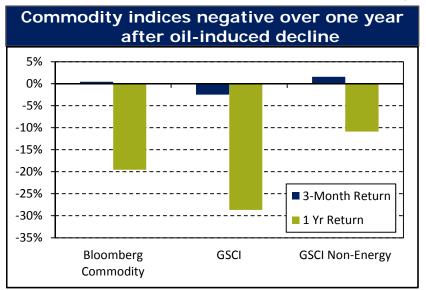






Source: Bloomberg, US Department of Energy \*Crude oil and liquid fuels





Source: Bloomberg, Standard and Poors



## Sprucegrove

| 3 Years Ending March 31 | , 2016 |
|-------------------------|--------|
|-------------------------|--------|

|                  | Anlzd<br>Return | Rank | Anlzd<br>Standard<br>Deviation | Rank | Tracking<br>Error | Rank | Information<br>Ratio | Rank | Anlzd Alpha<br>J | Rank | Beta | Sharpe<br>Ratio |
|------------------|-----------------|------|--------------------------------|------|-------------------|------|----------------------|------|------------------|------|------|-----------------|
| Sprucegrove      | -0.3%           | 89   | 13.1%                          | 73   | 2.5%              | 2    | -0.2                 |      | -0.6%            | 89   | 1.0  | 0.0             |
| MSCI ACWI ex USA | 0.3%            | 88   | 13.6%                          | 85   | 0.0%              | 1    | -                    |      | 0.0%             | 88   | 1.0  | 0.0             |

#### 5 Years Ending March 31, 2016

|                  | Anlzd<br>Return | Rank | Anlzd<br>Standard<br>Deviation | Rank | Tracking<br>Error | Rank | Information<br>Ratio | Rank | Anlzd Alpha<br>J | Rank | Beta | Sharpe<br>Ratio |
|------------------|-----------------|------|--------------------------------|------|-------------------|------|----------------------|------|------------------|------|------|-----------------|
| Sprucegrove      | 1.4%            | 78   | 14.4%                          | 19   | 2.9%              | 11   | 0.4                  | 68   | 1.1%             | 77   | 0.9  | 0.1             |
| MSCI ACWI ex USA | 0.3%            | 89   | 15.7%                          | 72   | 0.0%              | 1    | -                    |      | 0.0%             | 89   | 1.0  | 0.0             |

#### 7 Years Ending March 31, 2016

|                  | Anlzd<br>Return | Rank | Anlzd<br>Standard<br>Deviation | Rank | Tracking<br>Error | Rank | Information<br>Ratio | Rank | Anlzd Alpha<br>J | Rank | Beta | Sharpe<br>Ratio |
|------------------|-----------------|------|--------------------------------|------|-------------------|------|----------------------|------|------------------|------|------|-----------------|
| Sprucegrove      | 9.9%            | 76   | 16.2%                          | 21   | 3.7%              | 18   | 0.2                  | 75   | 1.6%             | 68   | 0.9  | 0.6             |
| MSCI ACWI ex USA | 9.2%            | 81   | 17.6%                          | 75   | 0.0%              | 1    | -                    |      | 0.0%             | 91   | 1.0  | 0.5             |

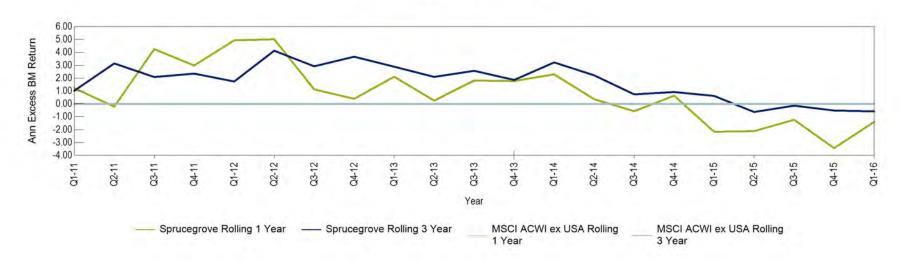
#### 10 Years Ending March 31, 2016

|                  | Anlzd<br>Return | Rank | Anlzd<br>Standard<br>Deviation | Rank | Tracking<br>Error | Rank | Information<br>Ratio | Rank | Anlzd Alpha<br>J | Rank | Beta | Sharpe<br>Ratio |
|------------------|-----------------|------|--------------------------------|------|-------------------|------|----------------------|------|------------------|------|------|-----------------|
| Sprucegrove      | 2.4%            | 70   | 17.4%                          | 20   | 4.3%              | 33   | 0.1                  | 68   | 0.6%             | 68   | 0.9  | 0.1             |
| MSCI ACWI ex USA | 1.9%            | 74   | 19.2%                          | 67   | 0.0%              | 1    |                      |      | 0.0%             | 74   | 1.0  | 0.0             |

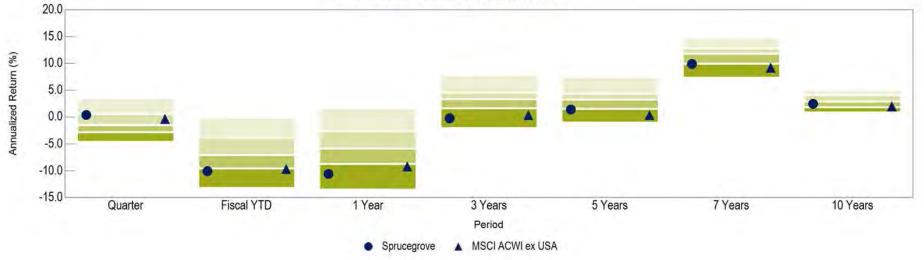


## Sprucegrove

#### Rolling Annual Excess Benchmark Return

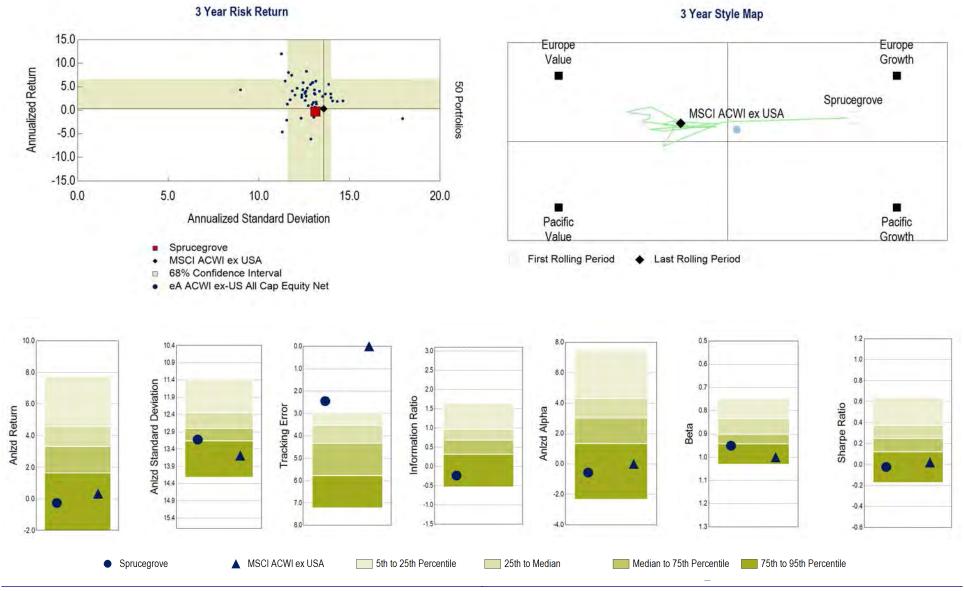


#### eA ACWI ex-US All Cap Equity Net Accounts



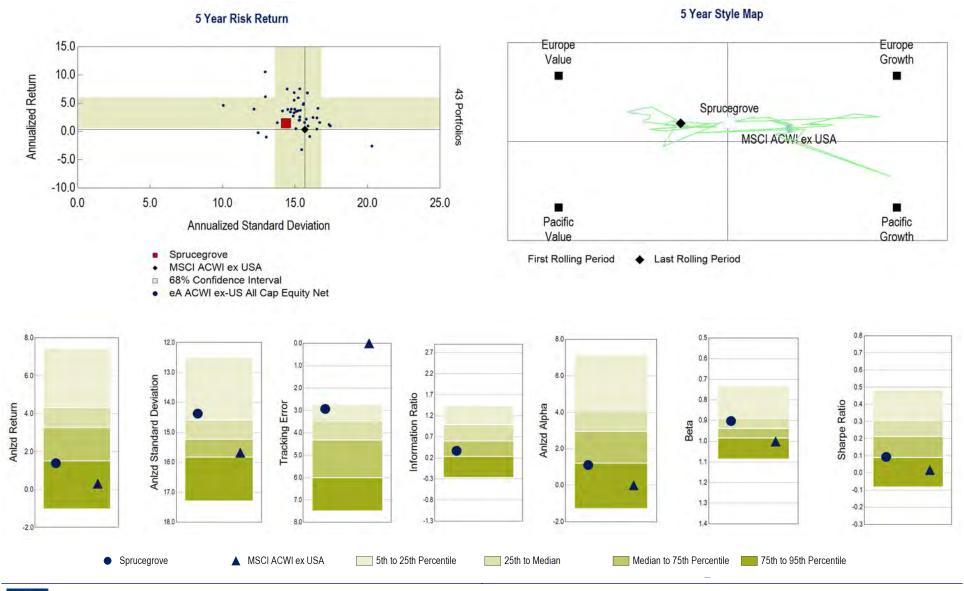


## Spurcegrove



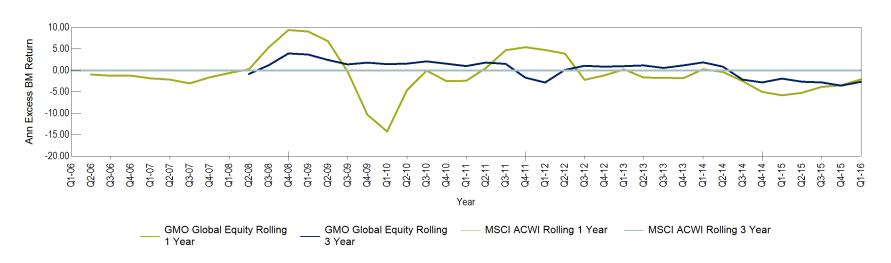


## Spurcegrove





#### Rolling Annual Excess Benchmark Return



#### eA All Global Equity Net Accounts 25.0 20.0 15.0 Annualized Return (%) 10.0 5.0 0.0 -5.0 -10.0 -15.0 -20.0 Fiscal YTD Quarter 1 Year 3 Years 5 Years 7 Years 10 Years Period GMO Global Equity ▲ MSCI ACWI



| 3 Years Ending March 31, 2 | 2016 |
|----------------------------|------|
|----------------------------|------|

|                  | Anlzd<br>Return | Rank | Anlzd<br>Standard<br>Deviation | Rank | Tracking<br>Error | Rank | Information<br>Ratio | Rank | Anlzd Alpha<br>J | Rank | Beta | Sharpe<br>Ratio |
|------------------|-----------------|------|--------------------------------|------|-------------------|------|----------------------|------|------------------|------|------|-----------------|
| Sprucegrove      | -0.3%           | 89   | 13.1%                          | 73   | 2.5%              | 2    | -0.2                 |      | -0.6%            | 89   | 1.0  | 0.0             |
| MSCI ACWI ex USA | 0.3%            | 88   | 13.6%                          | 85   | 0.0%              | 1    |                      |      | 0.0%             | 88   | 1.0  | 0.0             |

#### 5 Years Ending March 31, 2016

|                  | Anlzd<br>Return | Rank | Anlzd<br>Standard<br>Deviation | Rank | Tracking<br>Error | Rank | Information<br>Ratio | Rank | Anlzd Alpha<br>J | Rank | Beta | Sharpe<br>Ratio |
|------------------|-----------------|------|--------------------------------|------|-------------------|------|----------------------|------|------------------|------|------|-----------------|
| Sprucegrove      | 1.4%            | 78   | 14.4%                          | 19   | 2.9%              | 11   | 0.4                  | 68   | 1.1%             | 77   | 0.9  | 0.1             |
| MSCI ACWI ex USA | 0.3%            | 89   | 15.7%                          | 72   | 0.0%              | 1    | -                    |      | 0.0%             | 89   | 1.0  | 0.0             |

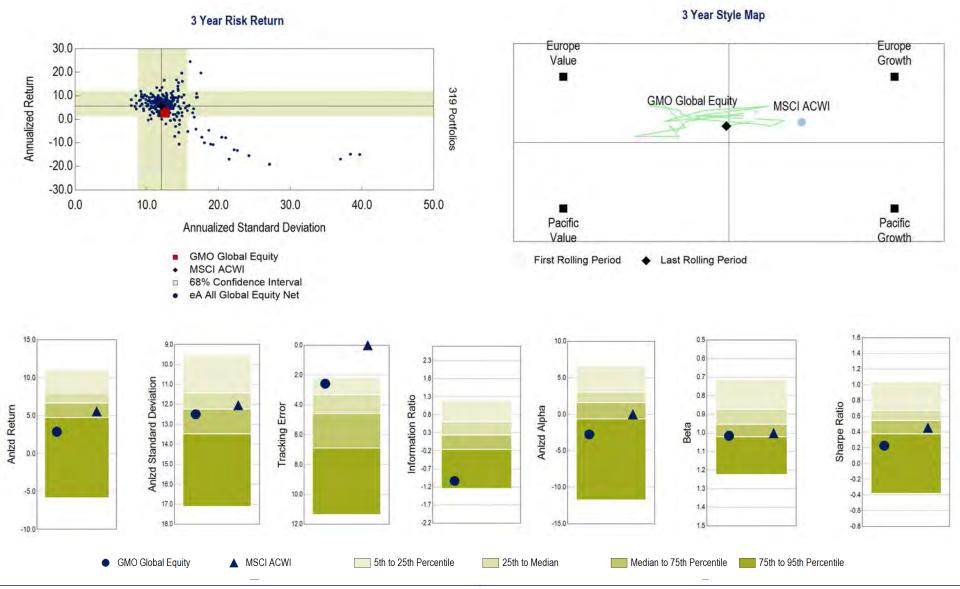
#### 7 Years Ending March 31, 2016

|                  | Anlzd<br>Return | Rank | Anlzd<br>Standard<br>Deviation | Rank | Tracking<br>Error | Rank | Information<br>Ratio | Rank | Anlzd Alpha<br>J | Rank | Beta | Sharpe<br>Ratio |
|------------------|-----------------|------|--------------------------------|------|-------------------|------|----------------------|------|------------------|------|------|-----------------|
| Sprucegrove      | 9.9%            | 76   | 16.2%                          | 21   | 3.7%              | 18   | 0.2                  | 75   | 1.6%             | 68   | 0.9  | 0.6             |
| MSCI ACWI ex USA | 9.2%            | 81   | 17.6%                          | 75   | 0.0%              | 1    |                      |      | 0.0%             | 91   | 1.0  | 0.5             |

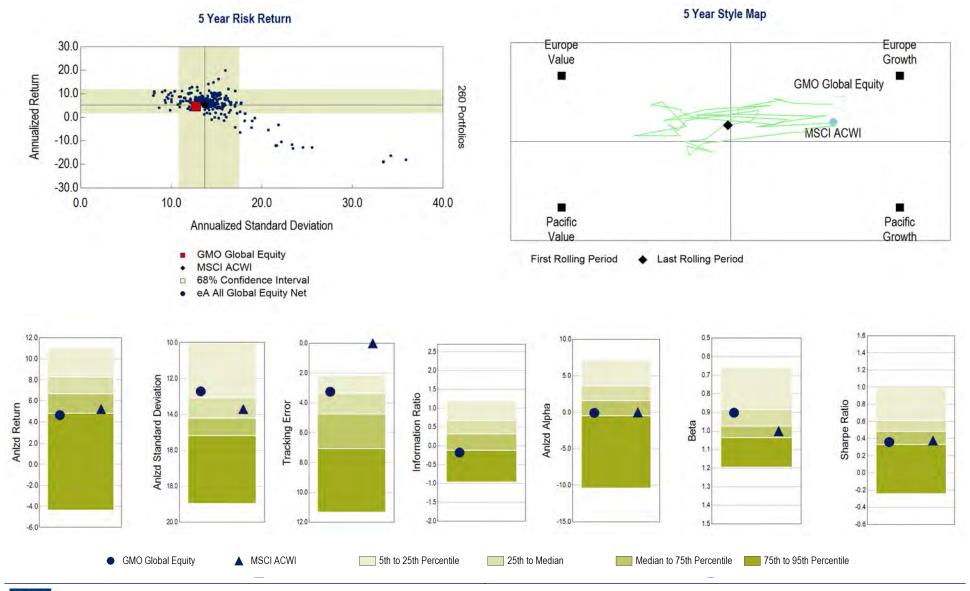
#### 10 Years Ending March 31, 2016

|                  | Anlzd<br>Return | Rank | Anlzd<br>Standard<br>Deviation | Rank | Tracking<br>Error | Rank | Information<br>Ratio | Rank | Anlzd Alpha<br>J | Rank | Beta | Sharpe<br>Ratio |
|------------------|-----------------|------|--------------------------------|------|-------------------|------|----------------------|------|------------------|------|------|-----------------|
| Sprucegrove      | 2.4%            | 70   | 17.4%                          | 20   | 4.3%              | 33   | 0.1                  | 68   | 0.6%             | 68   | 0.9  | 0.1             |
| MSCI ACWI ex USA | 1.9%            | 74   | 19.2%                          | 67   | 0.0%              | 1    |                      |      | 0.0%             | 74   | 1.0  | 0.0             |











#### Information Disclaimer

- Past performance is no guarantee of future results.
- The goal of this report is to provide a basis for monitoring financial markets. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.
- Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.
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## **Ventura County Employees' Retirement Association**

Private Equity Program Review & 2016 Strategic Investment Plan

May 16, 2016

255 State Street, Boston, MA 02109 | TEL: 617.374.1300 | FAX: 617.374.1313 | www.nepc.com BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO

# VCERA Private Equity Program Review



#### **NEPC Recommendation**

- NEPC recommends VCERA give consideration to committing approximately \$130 million to private equity in the coming year.
- With the recent increase in the private equity allocation from 5% to 10%, annual commitment pace should increase accordingly.
- NEPC expects the program to hit its 10% target Net Asset Value ("NAV") in the next 5-7 years.
- VCERA should maintain an active, annual commitment pace, being mindful of the Plan's liquidity needs.



#### **Current Private Equity Program**

#### Current Investment Status

- As of March 31, 2016, VCERA had made \$292.5 million in commitments to three FoF managers.
  - Adams Street Partners ("ASP")
    - \$42.5 million commitment in 2010 to ASP U.S. Fund 2010
    - \$25.5 million commitment in 2010 to ASP Non-U.S. Developed Fund 2010
    - \$8.5 million commitment in 2010 to ASP Emerging Markets Fund 2010
    - \$8.5 million commitment in 2010 to ASP Direct Fund 2010
    - \$75 million commitment in 2013 to ASP Global Fund 2013
  - HarbourVest
    - \$67.5 million commitment in 2013 to Dover Street VIII (Secondaries Fund)
  - Pantheon
    - \$15.0 million in 2010 to Pantheon Global Secondary Fund IV
    - \$50.0 million in 2014/2015 to Pantheon Global Secondary Fund V
- As of March 31, 2016, the private equity cash-adjusted NAV of \$155.2 million represents approximately 3.6% of the total VCERA portfolio.
- The private equity portfolio is diversified, with commitments to both U.S. and non-U.S. funds that includes a mix of primary, secondary, and co-investment funds.

#### Private Equity Target Allocation

- Policy target of 10% of the total portfolio (up from 5% previously).
- As of March 31, 2016, total exposure of \$286.2 million (current private equity cash-adjusted NAV + uncalled commitments) represents approximately 6.6% of the total VCERA portfolio.
  - We typically recommend clients overcommit to private equity at 1.5x the target weight, which suggests a commitment target of approximately 15%, or \$646 million.



## Current Private Equity Program & Allocation

|   |              |                            |               |  |  |               |                          |                          |               |               |              |       | Since Inception                               |       |
|---|--------------|----------------------------|---------------|--|--|---------------|--------------------------|--------------------------|---------------|---------------|--------------|-------|---|-------|
| Fund Name                                 | Vintage Year | Initial<br>Investment Date | Commitment    | Capital<br>Called to Date <sup>1</sup> | Outstanding<br>Commitment <sup>1</sup> | Call<br>Ratio | Interest<br>Paid/(Rec'd) | Distributions<br>to Date | Valuation     | Total Value   | Net Benefit  | IRR   | Distributions to<br>Paid In Multiple<br>(DPI) |       |
| Adams Street 2010 U.S. Fund               | 2010         | 5/21/2010                  | \$42,500,000  | \$29,665,000                           | \$12,835,000                           | 70%           | \$15,213                 | \$10,764,481             | \$31,612,674  | \$42,377,155  | \$12,696,942 | 14.4% | 0.36x   | 1.43x |
| Adams Street 2010 Non-U.S. Dev. Mkts Fund | 2010         | 5/21/2010                  | \$25,500,000  | \$17,697,000                           | \$7,803,000                            | 69%           | \$1,589                  | \$5,557,179              | \$15,005,080  | \$20,562,259  | \$2,863,670  | 6.6%  | 0.31x   | 1.16x |
| Adams Street 2010 Non-U.S. Emg Mkts Fund  | 2010         | 1/3/2011                   | \$8,500,000   | \$6,111,500                            | \$2,388,500                            | 72%           | \$0                      | \$314,436                | \$7,429,998   | \$7,744,434   | \$1,632,934  | 10.4% | 0.05x   | 1.27x |
| Adams Street 2010 Direct Fund             | 2010         | 5/21/2010                  | \$8,500,000   | \$7,837,000                            | \$663,000                              | 92%           | \$6,697                  | \$3,933,030              | \$8,369,072   | \$12,302,102  | \$4,458,405  | 14.3% | 0.5x  | 1.57x |
| Total Adams Street 2010                   | 2010         | 5/21/2010                  | \$85,000,000  | \$61,310,500                           | \$23,689,500                           | 72%           | \$23,499                 | \$20,569,126             | \$62,416,824  | \$82,985,950  | \$21,651,951 | 12.2% | 0.34x   | 1.35x |
| Adams Street 2013 Global Fund             | 2013         | 6/27/2013                  | \$75,000,000  | \$34,200,000                           | \$40,800,000                           | 46%           | \$10,728                 | \$2,698,535              | \$33,317,817  | \$36,016,352  | \$1,805,624  | 4.1%  | 0.08x   | 1.05x |
| HarbourVest - Dover Street VIII           | 2013         | 5/30/2013                  | \$67,500,000  | \$47,756,250                           | \$19,743,750                           | 71%           | \$84,954                 | \$21,664,123             | \$44,241,007  | \$65,905,130  | \$18,063,926 | 30.0% | 0.45x   | 1.38x |
| Pantheon Global Secondary Fund IV         | 2010         | 8/20/2010                  | \$15,000,000  | \$9,960,000                            | \$5,040,000                            | 66%           | \$0                      | \$8,310,001              | \$6,093,687   | \$14,403,688  | \$4,443,688  | 14.9% | 0.83x   | 1.45x |
| Pantheon Global Secondary Fund V          | 2015         | 2/26/2015                  | \$50,000,000  | \$8,308,104                            | \$41,691,896                           | 17%           | (\$3,352)                | \$100,240                | \$9,122,597   | \$9,222,837   | \$918,085    | 11.3% | 0.01x   | 1.11x |
| Total VCERA Private Equity Program        | _            | 5/21/2010                  | \$292,500,000 | \$161,534,854                          | \$130,965,146                          | 55%           | \$115,829                | \$53,342,025             | \$155,191,932 | \$208,533,957 | \$46,883,274 | 14.5% | 0.33x   | 1.29x |

<sup>1.</sup> Includes recycled/recallable distributions received to date.

Distributions to Date shown for Pantheon Global Secondary Fund V includes management fee rebates paid to VCERA. Performance shown is based on 12/31/2015 NAVs cash-adjusted for cash flows through 3/31/2016.



Note: Private equity performance data is reported net of fees.

# 2016 Private Equity Pacing Plan



## Current Private Equity Program & Allocation

#### **Private Equity NAVs and Exposures** Current Capital Total % of Valuation to be Current Total **Investment Strategy** (NAV) Funded **Exposure** Exposure Buyouts \$0.0 \$0.0 \$0.0 0% Fund of Funds \$94.1 \$67.3 \$161.4 56% Secondaries \$57.5 \$128.5 \$71.0 44% Venture \$0.0 \$0.0 \$0.0 0% Total / Wtd. Avg. \$151.6 \$138.3 \$290.0 100%



| Private Equity Investments by Vintage Year   |       |       |       |      |       |       |      |     |      |      |  |  |  |  |
|--|-------|-------|-------|------|-------|-------|------|-----|------|------|--|--|--|--|
| Vintage Year Commitment Paid In Capital to be Cumulative Distributed Valuation (NAV)  Capital to be Cumulative Distributed Valuation (NAV)  Total Value Net Benefit Call Ratio DPI Ratio TVP |       |       |       |      |       |       |      |     |      |      |  |  |  |  |
| 2010   | \$100 | \$71  | \$29  | \$29 | \$69  | \$97  | \$26 | 71% | 0.4x | 1.4x |  |  |  |  |
| 2013   | \$143 | \$74  | \$69  | \$21 | \$73  | \$94  | \$20 | 52% | 0.3x | 1.3x |  |  |  |  |
| 2015   | \$50  | \$9   | \$41  | \$0  | \$10  | \$10  | \$1  | 18% | 0.0x | 1.1x |  |  |  |  |
| Total Private Equity   | \$293 | \$154 | \$138 | \$50 | \$152 | \$201 | \$47 | 53% | 0.3x | 1.3x |  |  |  |  |

| Existing Private Equity Investments |              |           |                    |                         |                             |                               |             |             |           |            |  |  |  |
|-------------------------------------|--------------|-----------|--------------------|-------------------------|-----------------------------|-------------------------------|-------------|-------------|-----------|------------|--|--|--|
| Fund of Funds                       |              |           |                    |                         |                             |                               |             |             |           |            |  |  |  |
| Fund Name                           | Vintage Year | Committed | Paid In<br>Capital | Capital To Be<br>Funded | Cumulative<br>Distributions | Current<br>Valuation<br>(NAV) | Total Value | Net Benefit | DPI Ratio | TVPI Ratio |  |  |  |
| Adams St 2010 Non-US Dev Mkts Fund  | 2010         | \$26      | \$18               | \$8                     | \$6                         | \$15                          | \$21        | \$3         | 0.3x      | 1.2x       |  |  |  |
| Adams St 2010 Direct Fund           | 2010         | \$9       | \$8                | \$1                     | \$4                         | \$8                           | \$12        | \$4         | 0.5x      | 1.6x       |  |  |  |
| Adams St 2010 Non-US Emg Mkts Fund  | 2010         | \$9       | \$6                | \$2                     | \$0                         | \$7                           | \$8         | \$2         | 0.1x      | 1.3x       |  |  |  |
| Adams St 2010 US Fund               | 2010         | \$43      | \$30               | \$13                    | \$11                        | \$32                          | \$42        | \$13        | 0.4x      | 1.4x       |  |  |  |
| Adams St 2013 Global Fund           | 2013         | \$75      | \$31               | \$44                    | \$2                         | \$32                          | \$33        | \$2         | 0.0x      | 1.1x       |  |  |  |
| Total Fund of Funds                 |              | \$160     | \$93               | \$67                    | \$22                        | \$94                          | \$116       | \$23        | 0.2x      | 1.3x       |  |  |  |
| Secondaries                         |              |           |                    |                         |                             |                               |             |             |           |            |  |  |  |
| Fund Name                           | Vintage Year | Committed | Paid In<br>Capital | Capital To Be<br>Funded | Cumulative<br>Distributions | Current<br>Valuation<br>(NAV) | Total Value | Net Benefit | DPI Ratio | TVPI Ratio |  |  |  |
| HarbourVest – Dover Street VIII     | 2013         | \$68      | \$43               | \$25                    | \$19                        | \$41                          | \$61        | \$18        | 0.5x      | 1.4x       |  |  |  |
| Pantheon Global Secondary Fund IV   | 2010         | \$15      | \$10               | \$5                     | \$8                         | \$6                           | \$14        | \$4         | 0.8x      | 1.4x       |  |  |  |
| Pantheon Global Secondary Fund V    | 2015         | \$50      | \$9                | \$41                    | \$0                         | \$10                          | \$10        | \$1         | 0.0x      | 1.1x       |  |  |  |
| Total Secondaries                   |              | \$133     | \$61               | \$71                    | \$27                        | \$58                          | \$85        | \$23        | 0.4x      | 1.4x       |  |  |  |



## Plan Overview and Assumptions

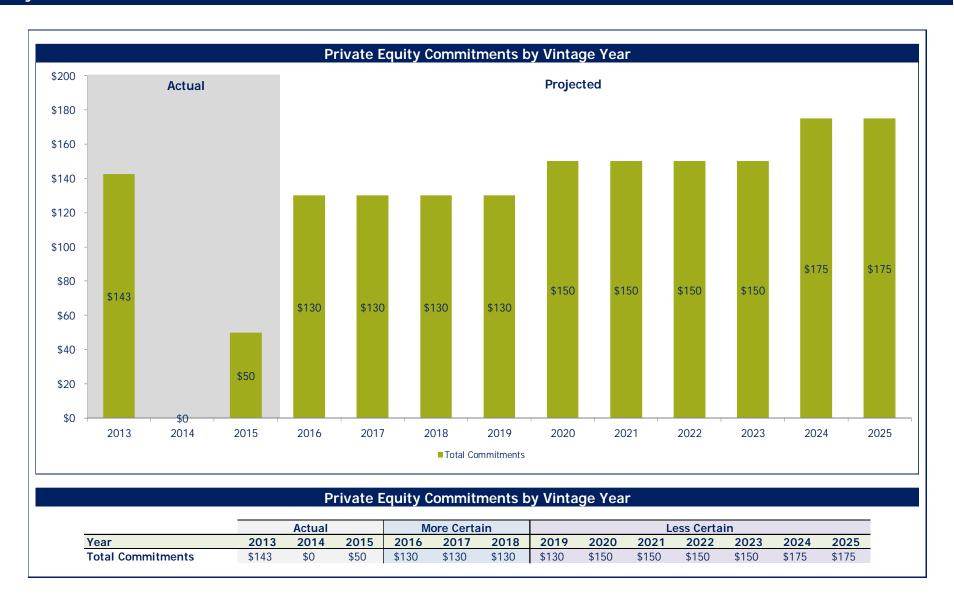
| General Plan Assumptions                            |         |                            |      |      |            |  |  |  |  |  |
|---|---------|----------------------------|------|------|------------|--|--|--|--|--|
| Total Plan Assets                                   | \$4,291 | Plan Return Assumptions    | 2016 | 2017 | 2018       |  |  |  |  |  |
| Total Private Equity Assets                         | \$152   | Net Growth Rate %          | 5.0% | 5.0% | 5.0%       |  |  |  |  |  |
| Private Equity Capital to be Funded                 | \$138_  |                            |      |      |            |  |  |  |  |  |
| Total Private Equity Exposure                       | \$290   | Plan Data as of:           |      |      | 12/31/2015 |  |  |  |  |  |
|   |         | Private Equity Data as of: |      |      | 12/31/2015 |  |  |  |  |  |
| Total Private Equity Assets / Total Plan Assets     | 3.5%    |                            |      |      |            |  |  |  |  |  |
| Total Private Equity Exposure / Total Plan Assets   | 6.8%    |                            |      |      |            |  |  |  |  |  |
| Target Private Equity Allocation % (Current Target) | 10.0%   |                            |      |      |            |  |  |  |  |  |

| Total Projected Plan Assets                                   |                  |                  |                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|---|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|   | Actual           |                  |                   | Projected        |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|   | 2013             | 2014             | 2015              | 2016             | 2017             | 2018             | 2019             | 2020             | 2021             | 2022             | 2023             | 2024             | 2025             |
| Total Plan Net Growth Rate                                    | 17.0%            | 5.8%             | (0.9%)            | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             |
| Total Plan Beginning NAV<br>Yearly Net Growth                 | \$3,499<br>\$593 | \$4,092<br>\$236 | \$4,328<br>(\$37) | \$4,291<br>\$215 | \$4,505<br>\$225 | \$4,731<br>\$237 | \$4,967<br>\$248 | \$5,216<br>\$261 | \$5,476<br>\$274 | \$5,750<br>\$288 | \$6,038<br>\$302 | \$6,339<br>\$317 | \$6,656<br>\$333 |
| Total Plan Ending NAV   | \$4,092          | \$4,328          | \$4,291           | \$4,505          | \$4,731          | \$4,967          | \$5,216          | \$5,476          | \$5,750          | \$6,038          | \$6,339          | \$6,656          | \$6,989          |
| Target Private Equity Allocation<br>Target Private Equity NAV | 5.0%<br>\$205    | 5.0%<br>\$216    | 5.0%<br>\$215     | 10.0%<br>\$451   | 10.0%<br>\$473   | 10.0%<br>\$497   | 10.0%<br>\$522   | 10.0%<br>\$548   | 10.0%<br>\$575   | 10.0%<br>\$604   | 10.0%<br>\$634   | 10.0%<br>\$666   | 10.0%<br>\$699   |





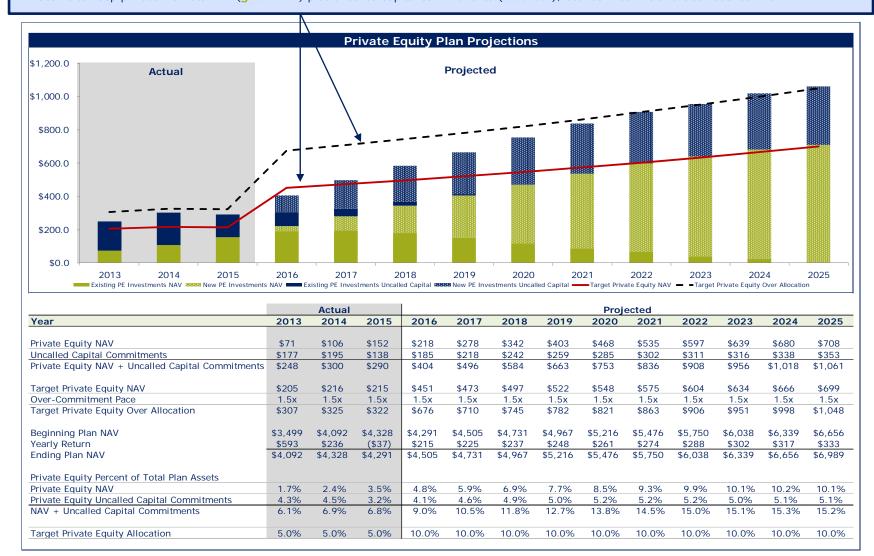
## Projected Commitment Pace





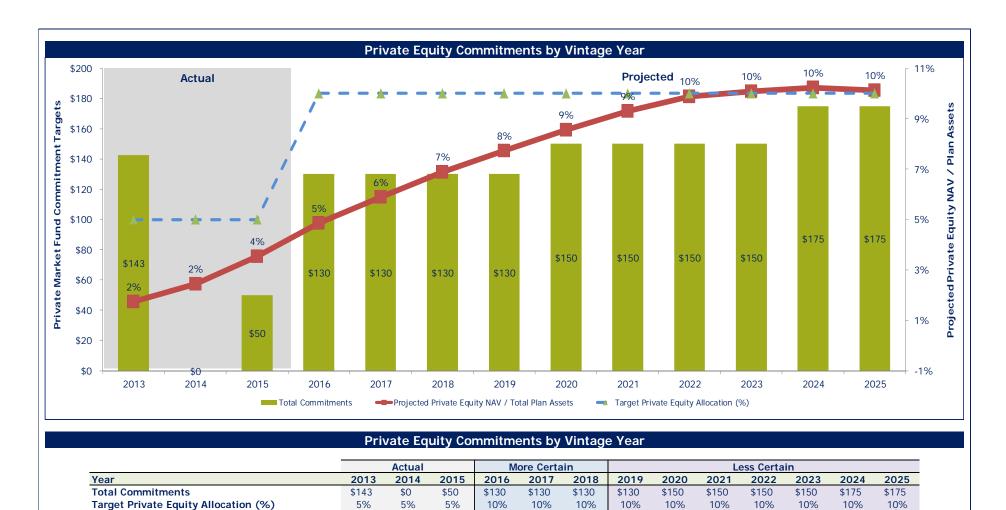
#### **Fund Projections**

- Red line is the 10% target Private Markets allocation based on projected plan total NAV; Black dashed line is the 1.5x over-commitment.
- Goal is to keep private markets NAV (green bar) plus uncalled capital commitments (blue bar), between red line and black dashed line.





## Projected Commitment vs. Target



Note: Data as of 12/31/2015

Projected Private Equity NAV / Total Plan Assets

2%

2%

4%



5%

6%

7%

8%

9%

10%

10%

10%

10%

## Projected Cash Flows



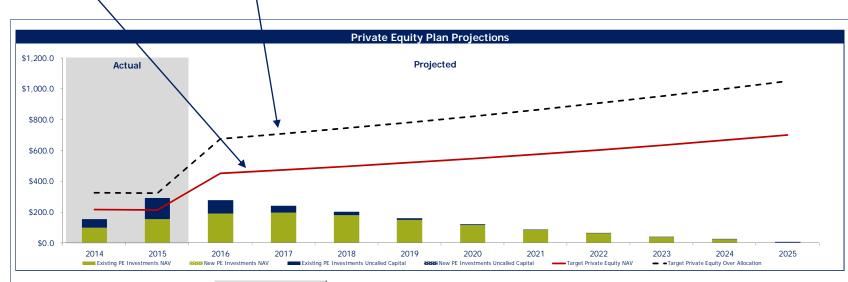


"No More Commitments" Scenario



# Fund Projections – "No More Commitments" Scenario

- Red line is the 10% target Private Equity allocation based on projected plan total NAV; Black dashed line is the 1.5x over-commitment. Goal is to keep private equity NAV (green bars) plus uncalled capital commitments (blue bars), between red line and black dashed line.

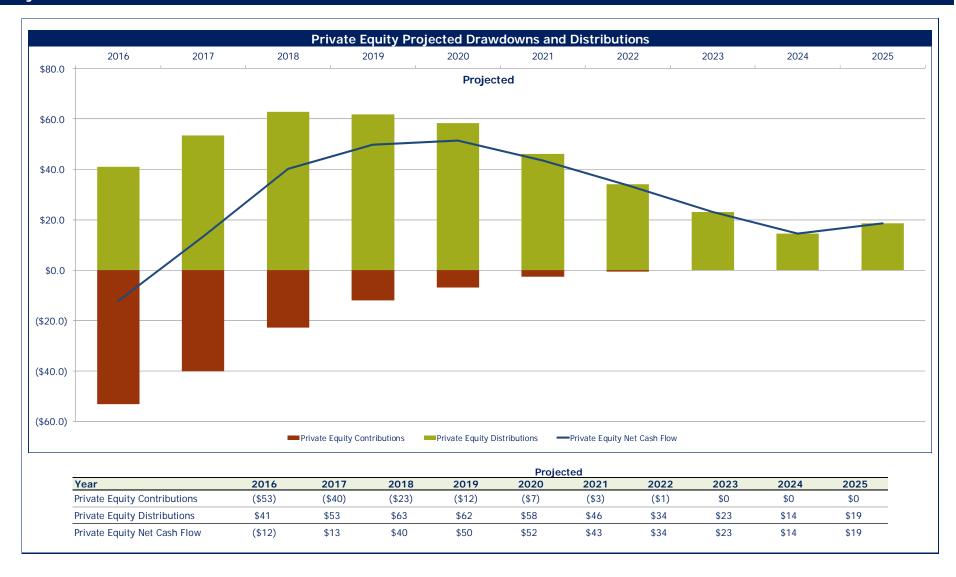


|   |         |         | Projected |         |         |         |         |         |         |         |         |         |
|---|---------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Year  | 2014    | 2015    | 2016      | 2017    | 2018    | 2019    | 2020    | 2021    | 2022    | 2023    | 2024    | 2025    |
|   |         |         |           |         |         |         |         |         |         |         |         |         |
| Private Equity NAV                                | \$98    | \$152   | \$190     | \$194   | \$179   | \$148   | \$115   | \$83    | \$61    | \$36    | \$21    | \$2     |
| Uncalled Capital Commitments                      | \$54    | \$138   | \$85      | \$45    | \$22    | \$10    | \$3     | \$1     | \$0     | \$0     | \$0     | \$0     |
| Private Equity NAV + Uncalled Capital Commitments | \$151   | \$290   | \$275     | \$239   | \$201   | \$158   | \$118   | \$83    | \$61    | \$36    | \$21    | \$2     |
| Target Private Equity NAV                         | \$216   | \$215   | \$451     | \$473   | \$497   | \$522   | \$548   | \$575   | \$604   | \$634   | \$666   | \$699   |
| Over-Commitment Pace                              | 1.5x    | 1.50x   | 1.50x     | 1.50x   | 1.50x   | 1.50x   | 1.50x   | 1.50x   | 1.50x   | 1.50x   | 1.50x   | 1.50x   |
| Target Private Equity Over Allocation             | \$325   | \$322   | \$676     | \$710   | \$745   | \$782   | \$821   | \$863   | \$906   | \$951   | \$998   | \$1,048 |
| Beginning Plan NAV                                | \$4,092 | \$4,328 | \$4,291   | \$4,505 | \$4,731 | \$4,967 | \$5,216 | \$5,476 | \$5,750 | \$6,038 | \$6,339 | \$6,656 |
| Yearly Return                                     | \$236   | (\$37)  | \$215     | \$225   | \$237   | \$248   | \$261   | \$274   | \$288   | \$302   | \$317   | \$333   |
| Ending Plan NAV                                   | \$4,328 | \$4,291 | \$4,505   | \$4,731 | \$4,967 | \$5,216 | \$5,476 | \$5,750 | \$6,038 | \$6,339 | \$6,656 | \$6,989 |
| Private Equity Percent of Total Plan Assets       |         |         |           |         |         |         |         |         |         |         |         |         |
| Private Equity NAV                                | 2.3%    | 3.5%    | 4.2%      | 4.1%    | 3.6%    | 2.8%    | 2.1%    | 1.4%    | 1.0%    | 0.6%    | 0.3%    | 0.0%    |
| Private Equity Uncalled Capital Commitments       | 1.2%    | 3.2%    | 1.9%      | 1.0%    | 0.4%    | 0.2%    | 0.1%    | 0.0%    | 0.0%    | 0.0%    | 0.0%    | 0.0%    |
| NAV + Uncalled Capital Commitments                | 3.5%    | 6.8%    | 6.1%      | 5.1%    | 4.0%    | 3.0%    | 2.2%    | 1.5%    | 1.0%    | 0.6%    | 0.3%    | 0.0%    |
| Target Private Equity Allocation                  | 5.0%    | 5.0%    | 10.0%     | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%   | 10.0%   |

Note: Data as of 12/31/2015



# Projected Cash Flows – "No More Commitments" Scenario



Note: Data as of 12/31/2015



# Disclaimers and Disclosures



#### Disclaimer

- 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 managers or custodians, 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.



# Pacing Plan Disclaimers

- NEPC's private markets pacing analysis projects a potential level of future assets and cash flows for a single scenario based on a series of assumptions. This analysis is intended to help estimate future exposure levels. It is not a guarantee of future cash flows, appreciation or returns.
- The timing and amounts of projected future cash flows and market values
  of investments could vary significantly from the amounts projected in this
  pacing analysis due to manager-specific and industry-wide macroeconomic
  factors.
- Estimates of projected cash flows and market values for existing private markets commitments were made at the Fund level and do not incorporate any underlying portfolio company projections or analysis.



#### Alternative Investment Disclosures

It is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds 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.



#### **VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

1190 South Victoria Avenue, Suite 200 Ventura, CA 93003-6572 (805) 339-4250 • Fax: (805) 339-4269

http://www.ventura.org/vcera

May 16, 2016

Board of Retirement Ventura County Employees' Retirement Association 1190 South Victoria Avenue, Suite 200 Ventura, CA 93003

SUBJECT:

RECOMMENDATION THAT THE BOARD APPROVE INVESTMENTS IN HARBOURVEST DOVER STREET FUND IX; ADAMS STREET 2016 GLOBAL FUND; AND DRIVE CAPITAL FUND II; AUTHORIZE PAYMENT FOR LEGAL SERVICES PROVIDED BY NOSSAMAN; AND, AUTHORIZE THE BOARD CHAIR TO APPROVE AND EXECUTE THE REQUIRED DOCUMENTATION SUBJECT TO LEGAL REVIEW AND APPROVAL

#### Dear Board Members:

The Board approved an asset allocation implementation plan at its December 21, 2015 meeting. Part of the implementation was increasing the allocation to private equity from 5% to 10% of the portfolio. To accomplish this, we have begun a search process to engage a separate account manager. Staff and NEPC are currently reviewing Request For Information (RFI) responses to identify a short list of qualified candidates to send detailed Request For Proposals (RFP). Successful candidates from the RFP process will be invited to be considered by the Board. Following Board selection, contract negotiation, development of policies, procedures, guidelines, modelling our portfolio, and other implementation steps, the manager will begin identifying investment opportunities.

We have been working on a separate track to ensure there is no pause in VCERA's private equity program build-out, and that 2016 vintage year exposure is assured. We have identified and recommend three currently available high quality opportunities for Board consideration. Two of the three opportunities are follow-on funds of existing managers. The third opportunity would be a new relationship.

Below are summary analyses and recommendations. Also included are an investment pacing analysis, cover memos by NEPC containing more detailed descriptions and analysis of each of the opportunities, and promotional materials provided by each of the managers.

Both Harbourvest and Adams Street Partners have presented to the Board recently, and the products being recommended are follow-on funds similar to VCERA's current investments, so we did not ask them to make presentations to the Board. However, Drive Capital would be a new relationship, so they will present to the Board.

#### Harbourvest's Dover Street Fund IX

The first opportunity we are recommending is a \$60 million allocation to Harbourvest's Dover Street Fund IX (Dover 9).

In 2013 the Board approved a \$75 million allocation to Harbourvest's Dover Fund VIII (Dover 8), a secondaries fund. At that time, the Board wished to take advantage of an opportunity to get funds deployed more quickly than would be possible investing in a 'primaries' fund, and simultaneously mitigate the "J" curve. However, the fund was oversubscribed, and VCERA's allocation got cut back to \$67.5 million.

The current net internal rate of return (IRR) of Dover 8 since 2012 is 43.2%, with an investment multiple of 1.36 times invested capital, first quartile performance. Dover 8 is ranked as the #1 secondaries fund in the Cambridge private equity universe. Although it is highly unlikely that Dover 9 will deliver a similar 43.2% rate of return, we believe that Harbourvest's differentiated process of successfully executing large, highly complicated deals, and their highly regarded, talented team, are well positioned to continue to outperform in this segment of the market.

#### Adams Street 2016 Global Fund

The second opportunity we are recommending is a \$60 million allocation to Adams Street 2016 Global Fund (ASP 2016).

In 2010 the Board approved an \$85 million allocation to Adams Street Partners which was spread across U.S., non-U.S., emerging markets, and co-investments sleeves. In 2013 the Board allocated \$75 million to the Adams Street 2013 Global Fund which consolidated the individual disciplines used in the 2010 fund. Primary investments will typically underperform secondaries early in the fund's life as they are subject to the "J" curve effect, but are expected to outperform secondaries over the long term.

Adams Street 2010 fund has delivered 13.1% net IRR as of 9/30/2015, with an investment multiple of 1.3 times invested capital. This investment is expected to help diversify the secondaries exposure in both the 2015 vintage Pantheon Fund 5 which is expected to make its final close on May 31, and the Dover Fund 9 secondaries funds. The returns of Adams Street 2013 investments are too early to tell.

We believe that Adams Street's long standing in the industry, relationships with managers, and experience with global partnerships across primaries, secondaries, and co-investments provides both information advantages plus diversification benefits to add value in VCERA's private equity program.

#### Drive Capital Fund II

The third opportunity we are recommending is a \$15 million allocation to Drive Capital Fund II (Drive).

Drive is a venture capital fund, and is very different than the above described funds of funds. An investment in a single fund lacks the diversification of a fund of funds, but doesn't have the second layer of fees. A goal in building out the VCERA portfolio is to move away from a fund of funds model to one where VCERA will have direct exposure to top quality funds.

Drive was formed in 2013 by two former partners of Sequoia, a top Silicon Valley venture capital firm. At Sequoia, Drive's founding partners invested a combined \$395 million in companies that are now valued at \$3.45 billion, with more than \$2.2 billion in distributions. Their combined investments are currently valued at 8.7 times invested capital.

Although there have not yet been any realizations in their first fund, Drive I, investments are currently valued at 1.7 times invested capital, with a net IRR of 42%, top quartile performance.

Drive's focus is on early and expansion stage companies with global market opportunities based in the Midwest, an attractive, underserved market. They anticipate 20 – 30 companies in information technology, financial services, consumer, and healthcare services. They pursue investment themes, building 'market maps' across sectors to identify companies best at solving the largest problems within each sector.

The partners have put together an impressive, experienced team with significant, high profile venture capital investment experience. Direct access to best-in-class, seasoned venture capital firms like Sequoia is not available to new investors. Investing in top quality spin-outs from these firms early in their life cycle offers the best long-term alternative.

Although venture capital offers the highest return potential in private equity, it also carries the highest risk. Also, VCERA currently has 26% – 27% of its private equity exposure in venture capital, which is on the high side.

We believe that Drive's highly experienced team, extensive contacts in the industry, strong early investment track record, and a deep and broad attractive market offer a great first direct investment opportunity for VCERA.

#### Legal Review

We recommend that the Board approve funding not to exceed a total of \$60,000 for legal work attendant to these three opportunities.

Attached please find analysis provided by NEPC, and information provided by each of the

respective managers.

I believe that these proposals are in the best interest of VCERA, and therefore recommend the following:

#### **RECOMMEND:** THAT THE BOARD:

- 1. APPROVE A TOTAL OF \$135 MILLION TO 3 NEW INVESTMENTS:
  - a. \$60 MILLION TO HARBOURVEST DOVER STREET FUND IX;
  - b. \$60 MILLION TO ADAMS STREET 2016 GLOBAL FUND;
  - c. \$15 MILLION TO DRIVE CAPITAL FUND II.
- 2. AUTHORIZE AN AMOUNT NOT TO EXCEED \$60,000 FOR LEGAL SERVICES TO BE PROVIDED BY NOSSAMAN.
- 3. AUTHORIZE THE BOARD CHAIR TO APPROVE AND EXECUTE THE REQUIRED DOCUMENTATION SUBJECT TO LEGAL REVIEW AND APPROVAL.

Sincerely,

Dan Gallagher Chief Investment Officer

Daniel P. Gallagher



**To:** Ventura County Employees' Retirement Association

From: NEPC Consulting Team

**Date:** May 11, 2016

**Subject:** Secondaries Private Equity Manager Recommendation

#### Recommendation

NEPC recommends the Ventura County Employees' Retirement Association ("VCERA" or the "Plan") give consideration to making a \$60 million commitment to Dover Street IX, L.P. ("Dover Street IX" or the "Fund") pending the successful completion of contract negotiations between HarbourVest Partners, LLC ("HarbourVest" or the "Firm") and the Plan's legal counsel.

#### **Executive Summary**

HarbourVest is targeting \$3.6 billion of investor commitments (\$4.25 billion hard cap) for Dover Street IX, which is intended to provide investors access to a diversified portfolio of global secondary investments. The Fund will be constructed to provide investors with near-term liquidity and compelling long-term performance by creating a diversified portfolio of private equity assets that will include exposure to leveraged buyouts, growth equity, venture capital, and other private equity strategies.

Dover Street IX intends to leverage HarbourVest's proven strategy of investing in the less efficient segments of the private equity secondaries market as a means for generating outperformance for investors. The portfolio is expected to emphasize more complex secondaries transactions, an area where HarbourVest is a market leader given its experience and dedicated resources. The Fund will also have exposure to traditional transactions, which will generally reflect opportunities where HarbourVest has a competitive advantage due to differentiated information access, manager relationships, and/or a compelling competitive dynamic.

Dover Street IX is targeting net returns of 300-500 basis points above public equity markets. The Fund will target underlying investments globally, and in past Dover Street funds, the underlying investments were domiciled primarily in the U.S. (40%-65%), Europe (30%-40%), and Asia Pacific (10%-15%), with the balance invested in emerging markets. The Fund is expected to make approximately 25 to 40 investments with an average size between \$75 and \$150 million and no one investment exceeding 20% of committed capital.

The private equity secondaries market is a \$40 billion subset of the global private equity market that has experienced dramatic growth over the last three decades. Over this time period, the secondaries market's growth has significantly exceeded that of the primary market as a result of an increase in the turnover ratio of Limited Partnership interests, the



broader acceptance of the secondaries market as a portfolio management tool, and the increasing array of transactions that have resulted from investors' overarching desire for more liquidity in what is otherwise an illiquid asset class. In addition, secondaries market activity experiences added momentum during periods of distress and economic dislocation.

Today, the secondaries market is also experiencing significant levels of additional divestment activity as a result of the regulatory pressure on the world's banks and other financial institutions. The secondaries market is expected to experience strong growth going forward as a result of continued growth of the overall private equity market and other incremental growth factors, which are further described below.

- 1. Financial institutions continue to divest assets via the secondaries market as a means for complying with regulations related to illiquid assets and risk-weighted capital that were established following the global financial crisis. Financial institutions accounted for 34% of market deal flow in 2014, and they are expected to continue to be a source of future deal flow during the Dover Street IX investment period.
- 2. Sovereign Wealth Funds ("SWFs") have recently emerged as a meaningful category of sellers and are expected to be a source of growth for the secondaries market in the future. SWFs have become significant primary investors in the private equity asset class over the last five to ten years, accounting for 14% of private equity funds raised in the first half of 2015. Conversely, prior to 2013, SWFs accounted for a minimal percentage of overall private equity secondaries sales. As many SWF portfolios have become more mature, they have recently become more active sellers. As more SWFs enter the private equity asset class, and as those with existing portfolios look to the secondaries market as a tool for rebalancing and refocusing their portfolios, they are likely to account for an increasing percentage of secondaries market activity. Given the size and quality of the private equity portfolios held by many SWFs, they are expected to be a driver of high quality deal flow going forward.
- 3. The secondaries market continues to evolve in its ability to offer new forms of liquidity to investors and accordingly presents new opportunities for sophisticated secondaries buyers. Specifically, over the last three years, whole fund liquidity solutions have been one of the fastest growing segments of the secondaries market. In these transactions, a liquidity solution is offered simultaneously to all investors in a fund later in its life, typically as part of a coordinated process involving both the fund's General Partner and a secondary buyer. Although this market segment is still evolving, secondary buyers with the experience and resources to successfully source, screen, and execute in this part of the market may be well positioned to capitalize on its rapid growth.

Dover Street IX intends to take advantage of the secondaries market's expected growth by capitalizing on an expanding set of investment opportunities. With increased deal flow, the Fund should be well positioned to be highly selective in the opportunities it pursues, which should translate into strong performance.



#### Overview of the VCERA Private Equity Program

VCERA has a long-term target allocation to private equity of 10% and began investing in the private equity asset class in 2010. Due to the need to over commit to private equity to achieve the target allocation, we have recommended a commitment pace that "over commits" to the private equity target at 150%. It is also recommended that the Plan conduct an annual private equity structural study and make adjustments to the strategy and commitment pace during the annual structural study, as needed.

The 2016 Private Equity Strategic Plan recommended commitments of \$130 million for the year, diversified by sub-strategy. A summary of the recommended allocation for 2016 is below.

- \$60 million to a Diversified Fund-of-funds
  - Adams Street 2016 Global Fund
- \$60 million to Secondaries
  - Dover Street IX
- \$15 million to Venture Capital
  - Drive Capital II

Should the Plan approve the proposed \$60 million commitment to Dover Street IX, approximately forty-five percent of the Plan's allocation to private equity in the 2016 Private Equity Strategic Plan will be filled.

#### **Selection Process**

NEPC meets regularly with a large number of market participants in an effort to identify the most attractive funds within a particular market segment. Throughout 2015, NEPC met with several leading candidates that were 1) in the market; 2) offered an experienced and successful team in the strategy; and 3) provided a well-diversified portfolio. NEPC completed full due diligence on Dover Street IX and rated the Fund as a preferred strategy within the secondaries private equity market segment.

With record transaction volume and pricing levels close to par, we have been cautious in our evaluation of potential secondaries options based on our view that the private equity secondaries market was becoming a bit overheated. However, when HarbourVest notified investors in 2015 that they would be coming to market with Dover Street IX, we felt that provided an opportunity to invest with an experienced and successful secondaries team focused on complex transactions that has consistently added value for investors historically. In addition, HarbourVest is an existing manager for the Plan, and a 're-up' with an existing manager is an attractive option as we attempt to manage the number of investment managers employed within the Plan's allocation to private equity. Ultimately, Dover Street IX was selected as a candidate jointly by NEPC and Staff.

#### **Portfolio Fit**

Dover Street IX is a private equity secondaries fund that will be diversified globally, by strategy, and by vintage year. The Plan previously invested in HarbourVest's prior



secondaries fund, Dover Street VIII. We expect that there will be no portfolio overlap (duplication) with the funds that are currently investing in the Plan's private equity portfolio.

#### **Advantages**

*Large, established organization -* HarbourVest has more than 80 investment professionals from the primary, secondary, and direct co-investment groups located globally. These professionals possess longstanding relationships with General Partners ("GPs") and Limited Partners ("LPs") in all of the world's private markets. Currently, this includes more than 450 active GP relationships and more than 600 LP relationships.

**Team stability** - HarbourVest's secondaries team includes 27 dedicated investment professionals. Of those, 18 are senior professionals who have worked together at HarbourVest for an average of 11 years. This tenure and continuity of investing together across multiple private market and economic cycles should equip the team with the knowledge and experience to identify investment opportunities and invest clients' capital with prudence and discipline.

**Primary platform** - In addition to the secondaries investment business, HarbourVest has a large primary fund-of-funds platform. As a result, the team has a large database of information related to investment funds that the secondaries team may leverage to complete due diligence on investments. The primary business helps Dover Street source investments from GPs in addition to increasing the Firm's attractiveness as a potential LP for GPs approving the sale of interests in their funds.

**Global sourcing** - HarbourVest operates across seven offices on four continents, which has given them the ability to leverage this global platform to generate deal flow. Additionally, HarbourVest possesses a global network of industry operators, managers, and intermediaries that are essential relationships to sourcing and evaluating investment opportunities.

Focus on complex transactions - Complex deals represented approximately two-thirds of the secondaries capital deployed by HarbourVest in 2014. HarbourVest believes that a minority of secondary players is focused on these transaction types due to the differentiated skill sets and/or resources required to successfully execute on these transaction types as well as the fact that these transactions accounted for less than one-third of all secondaries industry deal flow in 2014. HarbourVest has been a market leader in this space and this gives them a competitive advantage in sourcing and transacting on these deals.

#### **Potential Issues**

Heated market environment - The secondaries market has seen record transaction volume and pricing levels close to par, which is generally sub-optimal for secondaries investments unless a prolonged economic recovery persists. Pricing for traditional transactions have been unattractive; however, the majority of HarbourVest's secondaries deals have been complex transactions where they are able to take advantage of dislocations in the market.



**Potential use of leverage** - Fund documents allow the Fund to utilize up to 30% leverage on transactions as a method to enhance the Fund's returns. Should its investments underperform, this leverage could negatively impact the Fund's performance. The maximum amount of leverage used historically has been 13.9%.

**Fees on committed capital** - HarbourVest will receive a management fee on committed capital throughout the life of the Fund. Much of the market has been charging fees on invested capital post investment period; however, the average annual management fee for the Fund is 0.75%, which remains competitive with other secondaries funds.

#### **Fund Terms**

#### Annual Management Fee

0.75% on committed capital for the life of the Fund

#### Preferred Return

8% compounded annually

#### Carried Interest

12.5% carried interest at the Fund level

#### **Distribution Waterfall**

100%/0% LP/GP split until LPs have received distributions equal to such LPs capital contributions plus a compounded net annual preferred return of 8%; 0%/100% LP/GP split until the GP has received 12.5% of total distributions; 87.5%/12.5% LP/GP split thereafter.

Based on a \$60 million commitment, VCERA would pay an average management fee of \$450,000 per annum over the life of the Fund, which equates to approximately one basis point at the Total Fund level, or 0.01% per annum, based on the current market value of the Plan's assets.

#### **Track Record of Prior Funds**

|                   | Vintage | Capital   | Capital | Reported | Amount      | Total Value, | TVPI     |                     |       |
|-------------------|---------|-----------|---------|----------|-------------|--------------|----------|---------------------|-------|
| Fund              | Year    | Committed | Funded  | Value    | Distributed | Net of Carry | Multiple | <b>DPI Multiple</b> | IRR   |
| Dover Street la   | 1991    | \$10      | \$10    | \$0      | \$22        | \$22         | 2.20x    | 2.20x               | 31.5% |
| Dover Street II   | 1994    | \$38      | \$38    | \$0      | \$64        | \$64         | 1.69x    | 1.69x               | 24.0% |
| Dover Street III  | 1996    | \$101     | \$100   | \$0      | \$210       | \$210        | 2.10x    | 2.10x               | 31.6% |
| Dover Street IV   | 1999    | \$214     | \$200   | \$0      | \$277       | \$277        | 1.39x    | 1.39x               | 8.2%  |
| Dover Street V    | 2003    | \$515     | \$495   | \$55     | \$705       | \$760        | 1.54x    | 1.42x               | 18.6% |
| Dover Street VI   | 2005    | \$621     | \$587   | \$331    | \$440       | \$771        | 1.31x    | 0.75x               | 5.2%  |
| Dover Street VII  | 2008    | \$2,929   | \$2,748 | \$1,614  | \$2,508     | \$4,122      | 1.50x    | 0.91x               | 12.6% |
| Dover Street VIII | 2012    | \$3,591   | \$1,769 | \$1,883  | \$526       | \$2,409      | 1.36x    | 0.30x               | 43.2% |

Note: \$ in millions; data as of 3/31/2015 and provided by HarbourVest.



|                   | Vintage | TVPI     |              |       |
|-------------------|---------|----------|--------------|-------|
| Fund              | Year    | Multiple | DPI Multiple | IRR   |
| Dover Street la   | 1991    | 2.2x     | 2.2x         | 31.5% |
| Dover Street II   | 1994    | 1.7x     | 1.7x         | 24.0% |
| Dover Street III  | 1996    | 2.1x     | 2.1x         | 31.6% |
| Dover Street IV   | 1999    | 1.4x     | 1.4x         | 8.2%  |
| Dover Street V    | 2003    | 1.5x     | 1.4x         | 18.2% |
| Dover Street VI   | 2005    | 1.3x     | 0.9x         | 5.2%  |
| Dover Street VII  | 2008    | 1.5x     | 1.0x         | 12.1% |
| Dover Street VIII | 2012    | 1.4x     | 0.3x         | 38.0% |

Note: data as of 9/30/2015 and provided by HarbourVest.

#### **Conclusion**

As VCERA continues toward its 10% long-term target allocation to private equity, Dover Street IX provides the Plan with (i) access to secondaries fund investments with a team of highly experienced investors seeking complex deal structures; (ii) a strategy that can potentially fill some of the vintage year gaps in the Plan's private equity program; (iii) additional geographic and strategy diversification; (iv) a potential J-curve mitigant; and (v) a source for potentially outsized returns relative to other areas of the portfolio. We recommend the Plan give consideration to making a \$60 million commitment to Dover Street IX, L.P.

### DOVER STREET IX



HarbourVest is offering **Dover Street IX L.P.** (the "Fund" or "Dover IX"),\* a diversified portfolio of global secondary investments in buyout, growth equity, venture capital, and other private equity assets. For over 30 years, HarbourVest has built a successful track record of investing in private markets on a global basis. HarbourVest has also been a leader in the secondaries market since 1986, and intends to follow its proven strategy of constructing a secondary portfolio with an emphasis on more complex transactions in order to offer investors the potential for outperformance.

#### Dover IX Differentiated Investment Strategy

- Focus on less efficient segments of the secondaries market to generate outperformance
- Leverage HarbourVest's global footprint from each of its seven offices across four continents to generate attractive deal flow
- Gain access to information through longstanding manager relationships
- Utilize HarbourVest's broader platform, including exposure to more than 950 partnerships, 450 managers, and 7,500 companies, as well as 450 advisory board seats
- Construct a diversified portfolio that offers attractive risk-adjusted returns

#### Portfolio Construction

- Emphasis on more complex secondary transactions which are often less efficient and therefore less competitive relative to traditional secondary transactions. Complex transactions may include captive team spinouts, whole fund liquidity solutions, public-to-private transactions, and other sophisticated transactions.
- Exposure to traditional secondary investments where HarbourVest has an advantage due to its information access, manager relationships, or competitive dynamic
- Global portfolio diversified by stage, geography, industry, and vintage year

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| Focus                                  | A global, diversified private equity secondary portfolio of investments designed to offer investors attractive risk-adjusted returns |
|--|--|
| Target (Max) Size                      | \$3.6 billion (\$4.25 billion)   |
| Investment Period                      | Approximately 4 years  |
| Average<br>Management Fee <sup>†</sup> | <ul> <li>75 bps average annual fee, based on<br/>committed capital<sup>‡</sup></li> </ul>  |
| Carried Interest                       | 12.5% after generating an 8% Limited Partner<br>Preferred Return   |

#### HarbourVest Strengths

- Experience HarbourVest has invested more than \$13 billion in global secondary transactions since 1986 across multiple macroeconomic and market cycles
- Access By partnering with HarbourVest, investors can access tailored solutions, longstanding relationships, actionable insights, and strong results
- Global Platform HarbourVest's powerful global platform provides investors access to local specialized expertise, in depth experience, and long-term relationships in Asia, Europe and the Americas
- Operational Excellence Full-service monitoring, reporting, cash management, and legal and regulatory compliance provide turnkey solutions to investors' portfolio analysis and management needs
- Aligned Interests HarbourVest is a privately and independently owned firm focused solely on the interests of our investors
- \* All references to the terms of Dover Street IX L.P. are assumed to include Dover Street IX AIF L.P. (the "AIF Fund"). The AIF Fund is primarily for European-based investors and is designed to meet the regulatory requirements of the Alternative Investment Fund Managers Directive (the "AIFMD"), a European Union Directive. The AIF Fund is expected to invest alongside Dover Street IX L.P.
- † Average annual management fee of 75 basis points is calculated over 14 years and assumes that the Fund's term is extended for four, one-year extensions, which can be exercised at the discretion of the General Partner. The terms of prior Dover Street programs have historically been extended. The average annual management fee over the Fund's term without extensions (10 years) would be 101 basis points. The actual average management fee will depend on the Fund's actual term.
- ‡ Investors committing \$100 million or more to the Fund will receive a discount of 5 basis points per annum and investors committing \$200 million or more to the Fund will receive a discount of 10 basis points per annum on their entire commitment.

Includes data (prior to 1998) related to transactions that occurred when the HarbourVest team was affiliated with Hancock Venture Partners, Inc.

This communication does not constitute an offer to sell or the solicitation of an offer to buy interests in the Fund or any other fund or investment product sponsored by HarbourVest, or investment services provided by, HarbourVest Partners L.P. or its affiliates. Such an offer may be made only to qualified investors by means of delivery of a confidential Private Placement Memorandum or similar materials that contain a description of the material terms of such investment. No sale will be made in any jurisdiction in which the offer, solicitation, or sale is not authorized or to any person to whom it is unlawful to make the offer, solicitation or sale. Offers and sales of interests in the Fund may not be registered under the laws of any jurisdiction. The information in this document is highly confidential and must be read in conjunction with the Private Placement Memorandum of the Fund. This communication does not purport to contain all the information relevant to evaluating an investment in the Fund described herein.

An investment in the Fund involves a high degree of risk and therefore, should be undertaken only by prospective investors capable of evaluating the risks of the Fund and bearing the risks such an investment represents. There can be no assurance that the Fund will be able to achieve its investment objectives or that the investors will receive a return on their capital.

The representative of the Fund in Switzerland is Hugo Fund Services SA, 6 Cours de Rive, 1204 Geneva. The Paying Agent in Switzerland is Banque Cantonale de Genève, 17 Quai de l'Ile, CH-1211 Geneva 2, Switzerland. The distribution of Interests in Switzerland must exclusively be made to qualified investors. Copies of the Private Placement Memorandum, Limited Partnership Agreement and annual and semi-annual reports of the Fund can be obtained free of charge from the Representative. The place of performance for Interests of the Fund offered or distributed in or from Switzerland is the registered office of the Representative.

For additional legal and regulatory information please refer to www.harbourvest.com/important-legal-disclosures.

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**To:** Ventura County Employees' Retirement Association

From: NEPC Consulting Team

**Date:** May 11, 2016

**Subject:** Global Fund-of-Funds Private Equity Manager Recommendation

#### Recommendation

NEPC recommends the Ventura County Employees' Retirement Association ("VCERA" or the "Plan") give consideration to making a \$60 million commitment to Adams Street 2016 Global Fund, L.P. ("Adams Street 2016" or the "Fund") pending the successful completion of contract negotiations between Adams Street Partners ("Adams Street" or the "Firm") and the Plan's legal counsel.

#### **Executive Summary**

Adams Street has been an investor in private equity since the 1970s and today is an active investor in all areas of the global private equity markets. Adams Street's long standing history in the industry, its relationships with managers and its experience investing in partnerships on a primary and secondary basis, as well as directly into companies, provides meaningful information advantages that create synergies across Adams Street's various fund lines, resulting in deep manager insight and increased deal flow.

Each year, Adams Street raises an annual fund-of-funds ("FoF") program across various geographies and strategies. One such program, the annual Global Fund program (the "Global Fund"), is constructed to provide Limited Partners ("LPs") with exposure to the Adams Street U.S. Partnership Fund, the Adams Street Non-U.S. Partnership Fund, and the Adams Street Direct Venture/Growth Fund (collectively, the "Partnership Funds"). This Global Fund provides administrative convenience to LPs by investing in pre-determined percentages in the underlying U.S. Fund (55%), Non-U.S. Fund (35%), and the Direct Venture/Growth Fund (10%).

The Global Fund is expected to commit capital over the course of three to four years and will include a core allocation of approximately 60%-100% primary fund investments and up to 40% in secondaries investments and/or co-investments. The Global Fund is expected to be diversified geographically across the U.S., Europe and Asia. U.S. investments are expected to comprise 60%-70% of the portfolio with the remainder in global private equity investments. Strategies in the Fund will include buyouts, venture capital, growth equity, and other more niche strategies. The Global Fund targets a 12%-15% IRR and a 1.7x-2.0x multiple of invested capital, both net to LPs.

Adams Street is an independent, employee-owned firm that exclusively focuses on private equity asset management. The Firm was founded in 1972 as the growth equity division



within the First National Bank of Chicago. Through several corporate events, including the 1995 acquisition of Brinson Partners by Swiss Bank Corporation (SBC), and the acquisition of SBC by Union Bank of Switzerland (UBS), Adams Street operated from 1998 to 2001 as a part of UBS Asset Management. Today, Adams Street is an independent, 100% employee-owned organization. The firm has grown to more than \$25 billion in AUM and has experience investing across primary, secondary, direct and co-investment strategies. Adams Street employs approximately 130 employees across six offices worldwide.

The Adams Street team consists of 60 partners, 27 of which are investment professionals. A total of 54 investment professionals are stationed in offices around the globe. The Primary Investment Team is led by Kelly Meldrum and supported by a team of 21 other investment professionals, including 11 other Adams Street Partners. Secondary investments are led by Jason Gull and his team of 11 other professionals, four of which are Partners in the Firm. David Brett is a Partner in the Firm and leads the Co-Investment Team. He is supported by two other Partners and one Principal. Terry Gould leads the Direct Venture/Growth Equity Fund investments and is supported by a team of eight other investment professionals, including Managing Partner Jeff Diehl. Bon French leads the Firm as CEO.

Adams Street is an active investor in all areas of the global private equity business and constructs portfolios that are highly diversified across a number of dimensions including strategy, investment type (primary, secondary, co-investments and direct), time, manager, subclass and geography. ASP's global positioning enables the team to allocate capital to the various subclasses based on its view of the most attractive opportunities through which to access private equity in a given market. Notably, Adams Street has had a heavier weighting toward venture capital in their recent funds and has thus benefited from the strategy's recent performance bump. Adams Street expects that as the global investment landscape changes, the Firm will be able to take advantage of, and adjust to, the opportunities that arise during the commitment period of the Global Fund.

#### Overview of the VCERA Private Equity Program

VCERA has a long-term target allocation to private equity of 10% and began investing in the private equity asset class in 2010. Due to the need to over commit to private equity to achieve the target allocation, we have recommended a commitment pace that "over commits" to the private equity target at 150%. It is also recommended that the Plan conduct an annual private equity structural study and make adjustments to the strategy and commitment pace during the annual structural study, as needed.

The 2016 Private Equity Strategic Plan recommended commitments of \$130 million for the year, diversified by sub-strategy. A summary of the recommended allocation for 2016 is below.

- \$60 million to a Diversified Fund-of-funds
  - Adams Street 2016 Global Fund
- \$60 million to Secondaries
  - Dover Street IX
- \$15 million to Venture Capital
  - Drive Capital II



Should the Plan approve the proposed \$60 million commitment to Adams Street 2016, approximately forty-five percent of the Plan's allocation to private equity in the 2016 Private Equity Strategic Plan will be filled.

#### **Selection Process**

NEPC meets regularly with a large number of market participants in an effort to identify the most attractive funds within a particular market segment. We seek to identify candidates that are 1) in the market; 2) offer an experienced and successful team in the strategy; and 3) provide a well-diversified portfolio.

As mentioned earlier, Adams Street raises an annual fund-of-funds program across geographies and strategies. NEPC has conducted full due diligence on the Adams Street Global Fund Series and rated the Fund as a preferred strategy within the private equity fund-of-funds market segment. It should be noted that the entire Adams Street Global Fund Series has been underwritten by NEPC research, and not just the 2016 Fund series, as we believe Adams Street is a leader in the fund-of-funds market segment and we seek to leverage the research we've done on an annual basis. It should also be noted that Adams Street is an existing manager for the Plan, and a 're-up' with an existing manager is an attractive option as we attempt to manage the number of investment managers employed within the Plan's allocation to private equity. Ultimately, Adams Street 2016 was selected as a candidate jointly by NEPC and Staff.

#### **Portfolio Fit**

Adams Street 2016 is a global, private equity fund-of-funds that is diversified by vintage year, geography and sector The Plan previously invested in two of Adams Street's series of funds, 2010 and 2013. We expect that there will be no portfolio overlap (duplication) with the funds that are currently investing in the Plan's private equity portfolio.

#### **Advantages**

*Industry standing -* Adams Street's long tenure in the industry provides it with a high volume of quality deal and information flow, resulting in synergies across the Adams Street platform.

**Team and firm stability** - The Firm has a deep and experienced team that provides continuity to its LPs and GPs and mitigates risk of succession issues. With 60 partners, the broad ownership of the Firm provides organizational stability for clients.

**Performance consistency** - Historical performance of comparable funds is consistent over time. The diversified nature of the portfolios decreases the risk profile and provides LPs with broad private equity exposure across vintage years, strategies, and geographies.

**Flexibility** - The ability to invest in secondaries and co-investments in the Global Fund will help improve the average economic terms and cash flow profile of a commitment, with early distributions offsetting the deep, prolonged J-curve of a private equity fund-of-funds.



#### Potential Issues

**Double layer of fees -** The double layer of fees for a fund-of-funds program mutes net performance to investors.

**Median performance** - Although performance has been remarkably consistent across funds, net fund performance has been around the median.

**Possibly overlap of exposures -** There is the potential for additional strategy and manager overlap issues for LPs by adding a fund-of-funds manager to an existing roster of direct or fund-of-funds managers. While the portfolio diversification minimizes the risk of loss, it also decreases the potential for any outperformance and may lead to unintended exposures.

Liquidity and program life - Adams Street's plan for committing capital over at least three years extends the life of an LP's investment to 12-15 years. While this extended term is typical for a fund-of-funds investment, investors should be aware of this extended fund life when compared to investing directly into private equity funds.

#### **Fund Terms**

#### Annual Management Fee

U.S. and non-U.S. Partnership Funds

1.00% per annum on the first \$25 million;

0.90% per annum on amounts over \$25 million up to \$50 million;

0.75% per annum on amounts over \$50 million up to \$100 million;

0.50% per annum on amounts over \$100 million up to \$150 million;

0.40% per annum on amounts over \$150 million.

In year seven of the Fund, the annual management fee will be reduced by 10% of the annual fee charged with respect to year six and by 10% of the year six fee each year thereafter (i.e., 90% of the year six fee in year seven, 80% of the year six fee in year eight, etc.)

Direct Venture/Growth Fund 2.00% per annum

In year six, the annual management fee will be reduced by 10% of the original annual fee and by 10% of the original annual fee each year thereafter.

Fee Offset – The fee payable by the Direct Venture/Growth Fund will be reduced by any fees received by ASP Management, Adams Street Partners or their respective affiliates from portfolio companies, as well as by any net break-up or other fees from broken deals.

#### Preferred Return

No preferred return on primary investments 7% preferred return on secondaries and co-investments



#### **Carried Interest**

20% for the Direct Venture/Growth Fund 10% for the U.S. and non-U.S. Partnership Funds

#### **Distribution Waterfall**

*U.S. and non-U.S. Partnership Funds (co-investments and secondaries)* 90% to the LPs, 10% to the GP after an amount equal to the subscription attributable to such secondary and co-investments has been returned

#### Direct Venture/Growth Fund

80% to the LPs, 20% to the GP after each LP has received aggregate distributions equal to such LP's aggregate capital contributions.

#### **Track Record of Prior Funds**

|                           | Vintage | Capital   | Capital | Reported | Amount      | Total Value,        | TVPI     |                     |       |
|---------------------------|---------|-----------|---------|----------|-------------|---------------------|----------|---------------------|-------|
| Fund Level Returns - U.S. | Year    | Committed | Funded  | Value    | Distributed | <b>Net of Carry</b> | Multiple | <b>DPI Multiple</b> | IRR   |
| 2002 U.S. Fund            | 2002    | \$760     | \$723   | \$310    | \$851       | \$1,161             | 1.6x     | 1.2x                | 8.7%  |
| 2003 U.S. Fund            | 2003    | \$705     | \$670   | \$370    | \$665       | \$1,034             | 1.5x     | 1.0x                | 8.1%  |
| 2004 U.S. Fund            | 2004    | \$559     | \$531   | \$304    | \$477       | \$780               | 1.5x     | 0.9x                | 7.3%  |
| 2005 U.S. Fund            | 2005    | \$809     | \$768   | \$547    | \$559       | \$1,107             | 1.4x     | 0.7x                | 7.1%  |
| 2006 U.S. Fund            | 2006    | \$814     | \$753   | \$547    | \$511       | \$1,058             | 1.4x     | 0.7x                | 7.4%  |
| 2007 U.S. Fund            | 2007    | \$1,042   | \$933   | \$825    | \$648       | \$1,473             | 1.6x     | 0.7x                | 12.1% |
| 2008 U.S. Fund            | 2008    | \$1,001   | \$829   | \$776    | \$587       | \$1,364             | 1.6x     | 0.7x                | 16.2% |
| 2009 U.S. Fund            | 2009    | \$888     | \$620   | \$701    | \$216       | \$917               | 1.5x     | 0.4x                | 15.6% |
| 2010 U.S. Fund            | 2010    | \$615     | \$343   | \$419    | \$90        | \$509               | 1.5x     | 0.3x                | 17.0% |
| 2011 U.S. Fund            | 2011    | \$548     | \$267   | \$309    | \$49        | \$359               | 1.3x     | 0.2x                | 15.2% |

Note: \$ in millions; data as of 9/30/2015 and provided by Adams Street Partners

|                               | Vintage | Capital   | Capital | Reported | Amount      | Total Value,        | TVPI     |                     |       |
|-------------------------------|---------|-----------|---------|----------|-------------|---------------------|----------|---------------------|-------|
| Fund Level Returns - Non-U.S. | Year    | Committed | Funded  | Value    | Distributed | <b>Net of Carry</b> | Multiple | <b>DPI Multiple</b> | IRR   |
| 2002 Non-U.S. Fund            | 2002    | \$140     | \$135   | \$37     | \$193       | \$230               | 1.7x     | 1.4x                | 11.8% |
| 2003 Non-U.S. Fund            | 2003    | \$206     | \$196   | \$80     | \$227       | \$307               | 1.6x     | 1.1x                | 10.0% |
| 2004 Non-U.S. Fund            | 2004    | \$408     | \$389   | \$181    | \$351       | \$532               | 1.4x     | 0.9x                | 6.2%  |
| 2005 Non-U.S. Fund            | 2005    | \$528     | \$502   | \$296    | \$357       | \$653               | 1.3x     | 0.7x                | 4.9%  |
| 2006 Non-U.S. Fund            | 2006    | \$570     | \$542   | \$383    | \$317       | \$700               | 1.3x     | 0.6x                | 5.4%  |
| 2007 Non-U.S. Fund            | 2007    | \$918     | \$794   | \$718    | \$314       | \$1,031             | 1.3x     | 0.4x                | 6.7%  |
| 2008 Non-U.S. Fund            | 2008    | \$979     | \$740   | \$745    | \$187       | \$933               | 1.3x     | 0.3x                | 8.3%  |
| 2009 Non-U.S. Dev Mkts Fund   | 2009    | \$692     | \$436   | \$394    | \$93        | \$488               | 1.1x     | 0.2x                | 4.9%  |
| 2009 Non-U.S. Emg Mkts Fund   | 2009    | \$527     | \$388   | \$438    | \$27        | \$465               | 1.2x     | 0.1x                | 8.5%  |
| 2010 Non-U.S. Dev Mkts Fund   | 2010    | \$384     | \$208   | \$195    | \$38        | \$232               | 1.1x     | 0.2x                | 4.4%  |
| 2010 Non-U.S. Emg Mkts Fund   | 2010    | \$134     | \$80    | \$95     | \$0         | \$95                | 1.2x     | 0.0x                | 9.7%  |
| 2011 Non-U.S. Dev Mkts Fund   | 2011    | \$352     | \$177   | \$158    | \$37        | \$195               | 1.1x     | 0.2x                | 4.9%  |
| 2011 Non-U.S. Emg Mkts Fund   | 2011    | \$147     | \$83    | \$94     | \$5         | \$99                | 1.2x     | 0.1x                | 11.0% |

Note: \$ in millions; data as of 9/30/2015 and provided by Adams Street Partners



| Fund Level Returns - Global Funds &  | Vintage | Capital   | Capital | Reported | Amount      | Total Value,        | TVPI     |                     |       |
|--------------------------------------|---------|-----------|---------|----------|-------------|---------------------|----------|---------------------|-------|
| Subscriptions                        | Year    | Committed | Funded  | Value    | Distributed | <b>Net of Carry</b> | Multiple | <b>DPI Multiple</b> | IRR   |
| 2000 Brinson Part. Fund Subscription | 2000    | \$3       | \$3     | \$1      | \$4         | \$5                 | 1.5x     | 1.3x                | 7.4%  |
| 2001 Brinson Part. Fund Subscription | 2001    | \$25      | \$24    | \$7      | \$35        | \$42                | 1.6x     | 1.3x                | 8.9%  |
| 2002 Part. Fund Global Sub. SMA      | 2002    | \$5       | \$5     | \$2      | \$6         | \$8                 | 1.6x     | 1.2x                | 9.0%  |
| 2003 Part. Fund Global Sub. SMA      | 2003    | \$10      | \$10    | \$5      | \$10        | \$15                | 1.5x     | 1.0x                | 8.4%  |
| 2004 Part. Fund Global Sub. SMA      | 2004    | \$3       | \$2     | \$1      | \$2         | \$3                 | 1.4x     | 0.9x                | 6.9%  |
| 2005 Part. Fund Global Subscription  | 2005    | \$10      | \$10    | \$6      | \$7         | \$13                | 1.4x     | 0.7x                | 6.3%  |
| 2006 Global Opportunities Portfolio  | 2006    | \$351     | \$338   | \$231    | \$231       | \$462               | 1.3x     | 0.7x                | 5.3%  |
| 2006 Part. Fund Global Subscription  | 2006    | \$10      | \$9     | \$7      | \$6         | \$13                | 1.4x     | 0.6x                | 6.6%  |
| 2007 Global Opportunities Portfolio  | 2007    | \$392     | \$355   | \$316    | \$210       | \$526               | 1.4x     | 0.6x                | 7.8%  |
| 2007 Part. Fund Global Subscription  | 2007    | \$10      | \$9     | \$8      | \$5         | \$13                | 1.5x     | 0.6x                | 10.1% |
| 2008 Global Opportunities Portfolio  | 2008    | \$354     | \$297   | \$300    | \$141       | \$441               | 1.4x     | 0.5x                | 11.0% |
| 2008 Part. Fund Global Subscription  | 2008    | \$15      | \$12    | \$12     | \$6         | \$18                | 1.5x     | 0.5x                | 13.5% |
| 2009 Part. Fund Global Subscription  | 2009    | \$7       | \$5     | \$5      | \$1         | \$6                 | 1.4x     | 0.3x                | 12.7% |
| 2010 Part. Fund Global Subscription  | 2010    | \$10      | \$6     | \$7      | \$1         | \$8                 | 1.3x     | 0.2x                | 13.1% |
| 2011 Part. Fund Global Subscription  | 2011    | \$3       | \$2     | \$2      | \$0         | \$2                 | 1.2x     | 0.2x                | 12.4% |

Note: \$ in millions; data as of 9/30/2015 and provided by Adams Street Partners

| Fund Level Returns - Secondaries | Vintage<br>Year | Capital<br>Committed | Capital<br>Funded | Reported<br>Value | Amount<br>Distributed | Total Value,<br>Net of Carry | TVPI<br>Multiple | DPI Multiple | IRR   |
|----------------------------------|-----------------|----------------------|-------------------|-------------------|-----------------------|------------------------------|------------------|--------------|-------|
| Global Opps Secondary Fund       | 2004            | \$211                | \$179             | \$55              | \$223                 | \$278                        | 1.5x             | 1.2x         | 10.7% |
| Global Opps Secondary Fund II    | 2009            | \$738                | \$699             | \$654             | \$548                 | \$1,202                      | 1.7x             | 0.8x         | 19.9% |
| Global Secondary Fund 5          | 2012            | \$1,054              | \$465             | \$383             | \$89                  | \$472                        | 1.0x             | 0.2x         | 1.9%  |

Note: \$ in millions; data as of 9/30/2015 and provided by Adams Street Partners

|                                     | Vintage | Capital   | Capital | Reported | Amount      | Total Value,        | TVPI     |              |       |
|-------------------------------------|---------|-----------|---------|----------|-------------|---------------------|----------|--------------|-------|
| Fund Level Returns - Co-Investments | Year    | Committed | Funded  | Value    | Distributed | <b>Net of Carry</b> | Multiple | DPI Multiple | IRR   |
| Direct Co-Investment Fund           | 2006    | \$251     | \$239   | \$182    | \$174       | \$356               | 1.4x     | 0.7x         | 5.5%  |
| Co-Investment Fund II               | 2009    | \$263     | \$222   | \$305    | \$153       | \$458               | 2.0x     | 0.7x         | 31.2% |

Note: \$ in millions; data as of 9/30/2015 and provided by Adams Street Partners

| Front Level Between Western Bloods   | Vintage | Capital   | Capital | Reported | Amount      | Total Value, | TVPI     | DDI Moldolo  | IDD   |
|--------------------------------------|---------|-----------|---------|----------|-------------|--------------|----------|--------------|-------|
| Fund Level Returns - Venture Directs | Year    | Committed | Funded  | Value    | Distributed | Net of Carry | Multiple | DPI Multiple | IRR   |
| 2006 Direct Fund                     | 2006    | \$169     | \$164   | \$201    | \$95        | \$296        | 1.7x     | 0.6x         | 7.3%  |
| 2007 Direct Fund                     | 2007    | \$190     | \$180   | \$228    | \$142       | \$370        | 1.9x     | 0.8x         | 11.1% |
| 2008 Direct Fund                     | 2008    | \$215     | \$198   | \$327    | \$100       | \$426        | 1.9x     | 0.5x         | 15.6% |
| 2009 Direct Fund                     | 2009    | \$186     | \$171   | \$253    | \$63        | \$316        | 1.7x     | 0.4x         | 17.4% |
| 2010 Direct Fund                     | 2010    | \$105     | \$97    | \$133    | \$15        | \$148        | 1.4x     | 0.2x         | 14.5% |
| 2011 Direct Fund                     | 2011    | \$85      | \$70    | \$103    | \$6         | \$108        | 1.4x     | 0.1x         | 19.9% |

Note: \$ in millions; data as of 9/30/2015 and provided by Adams Street Partners

#### **Conclusion**

As VCERA continues toward its 10% long-term target allocation to private equity, Adams Street 2016 provides the Plan with (i) access to a fund-of-funds strategy with a team of highly experienced investors; (ii) a strategy that can potentially fill some of the vintage year gaps in the Plan's private equity program; (iii) additional geographic and strategy diversification; (iv) a potential J-curve mitigant via secondaries and co-investments; and (v) a source for potentially outsized returns relative to other areas of the portfolio. We recommend the Plan give consideration to making a \$60 million commitment to Adams Street 2016 Global Fund, L.P.







# Ventura County Employees' Retirement Association

May 2016



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Past performance is not a guarantee of future results. Projections or forward looking statements contained in the Presentation are only estimates of future results or events that are based upon assumptions made at the time such projections or statements were developed or made. There can be no assurance that the results set forth in the projections or the events predicted will be attained, and actual results may be significantly different from the projections. Also, general economic factors, which are not predictable, can have a material impact on the reliability of projections or forward looking statements.

### Five Critical Elements Drive Success



 Unparalleled reputation, relationships and information

"We only promise what we can deliver, and deliver what we promise."

 Proven performance across all strategies and market cycles

"Our track record speaks for itself."

 100% employee-owned with significant personal capital invested alongside our clients

"We eat our own cooking."



 Global portfolio construction, investment and research teams build portfolios that meet investors' objectives

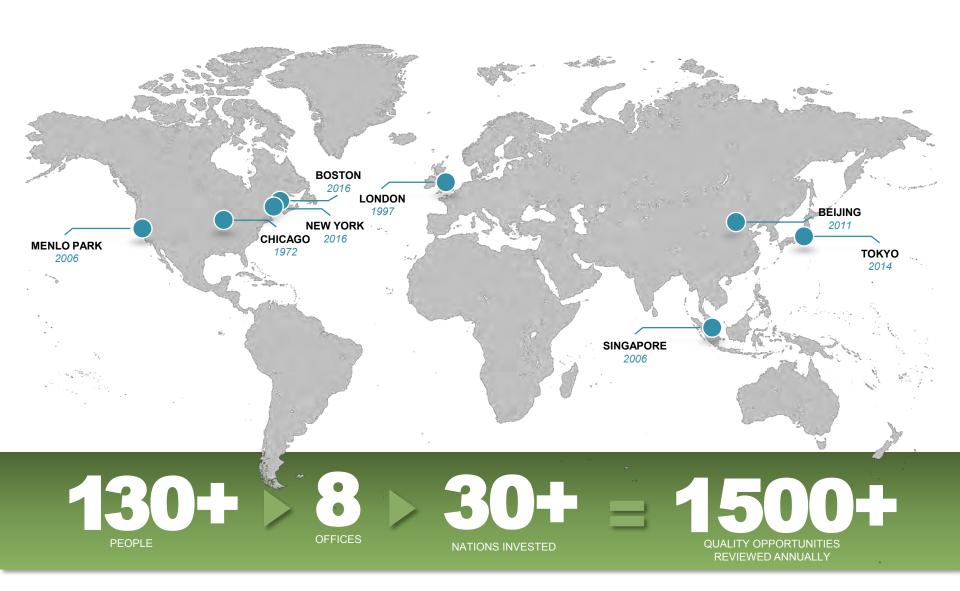
"We use our information and analytics to construct portfolios that maximize returns and minimize risk."

 Dedicated client and analytics teams that utilize our proprietary database (ASPIRE) to manage portfolio exposures

"We train you where you want it, and handle what you don't."

# We Have a Global Footprint





# Experienced, Cohesive and Strategically Integrated Platform





Jeff Diehl Managing Partner & **Head of Investments** 

21 Years of Experience\*

**Bon French** Executive Chairman

39 Years of Experience\*



#### **Primary Investments** Since 1979



730+ funds 250+ GP relationships 330+ advisory boards

21 Professionals

**Kelly Meldrum** Partner & Head of **Primary Investments** 

31 Years of Experience\*

#### **Secondary Investments** Since 1986

320 funds 145+ GP relationships 12 Professionals



**Jason Gull** Partner & Head of **Secondary Investments** 

24 Years of Experience\*

#### **Venture/Growth Investments** Since 1972



250+ companies

9 Professionals

Since 2016 2 Professionals



**Private Credit** 

Strategically

Integrated

Platform

Private

Credit

**Bill Sacher** Partner & Head of **Private Credit** 

30 Years of Experience\*

#### **Co-Investments** Since 1989

95+ companies 65+ GP relationships 5 Professionals



**David Brett** Partner & Head of Co-Investments

31 Years of Experience\*

36 Years of Experience\*

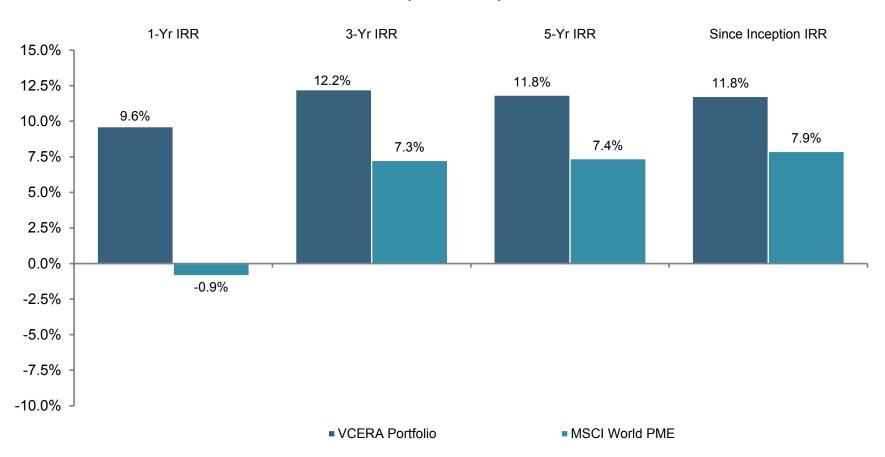
**Terry Gould** Partner & Head of **Direct Investments** 

# Ventura County Employees' Retirement Association



Intraperiod Returns
Total Portfolio (2010 and 2013 Global Programs) as of December 31, 2015

# Internal Rate of Return (Net of Fees)



VCERA's Global PE Program has established meaningful premium over global public equity markets



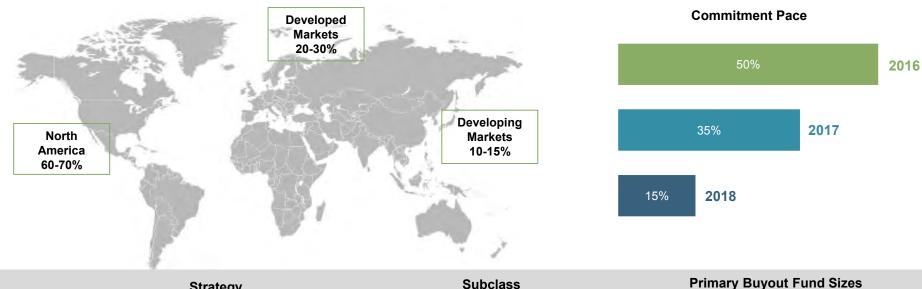
What We Are Offering

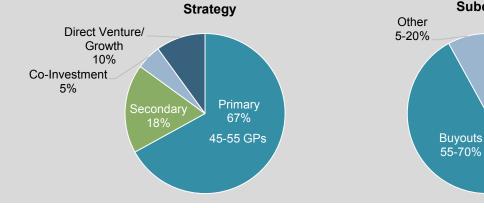


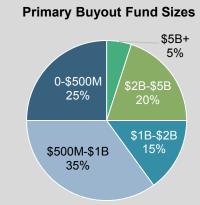
# 2016 Global Private Equity Program

Projected allocations\*









#### 2016 Annual Global Private Equity Program Already Committed/Near Term Pipeline:









Capital

25-35%

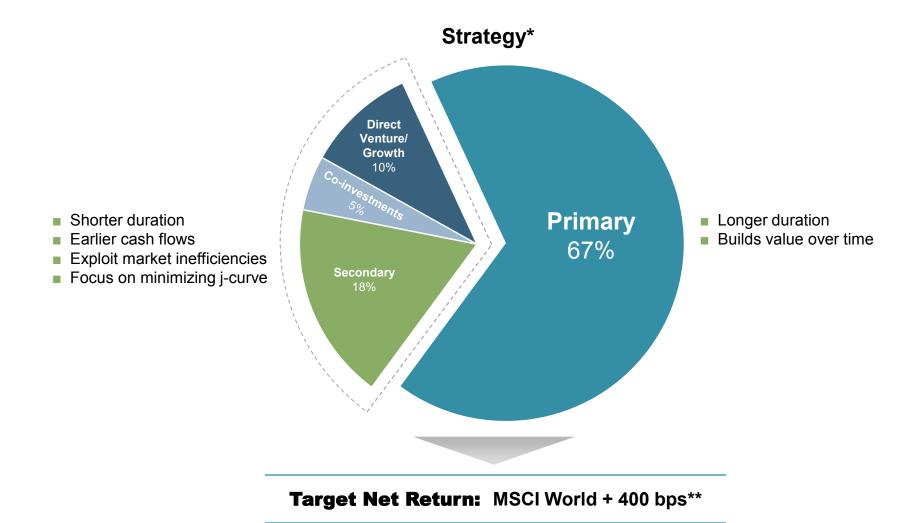




# **Building Value While Maximizing IRR**



Constructing the 2016 Global Private Equity Program



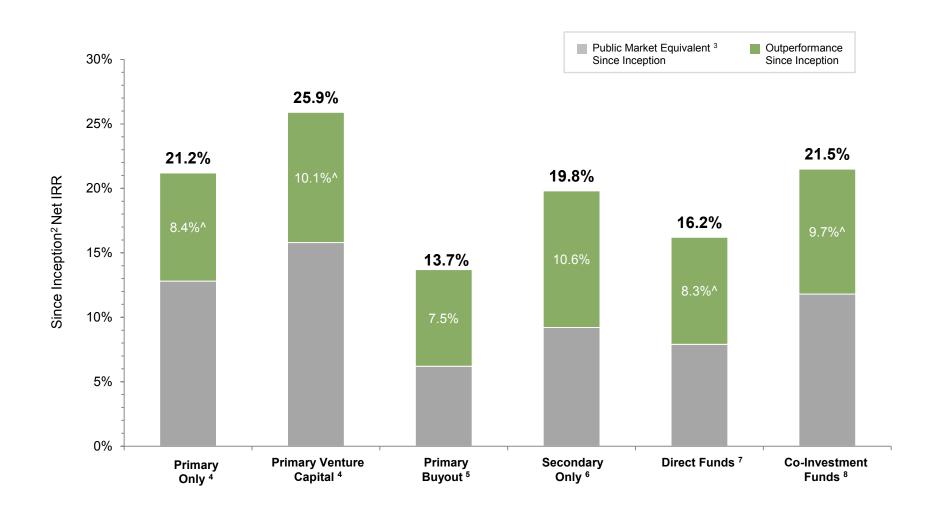
<sup>\*</sup> Actual allocations will differ once the Program is fully invested.

<sup>\*\*</sup> The targeted annual net return (after Adams Street Partners' fees, expenses and carried interest) is only a target. There can be no guarantee that the 2016 Global Private Equity Program will achieve returns in the targeted range.

# All Strategies<sup>1</sup> Outperform Public Market Equivalents by 400 bps\*



As of September 30, 2015



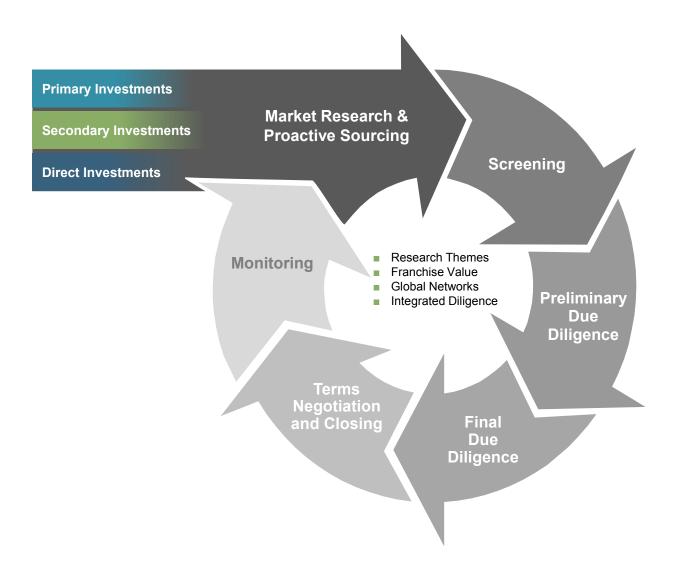


**Investment Selection** 



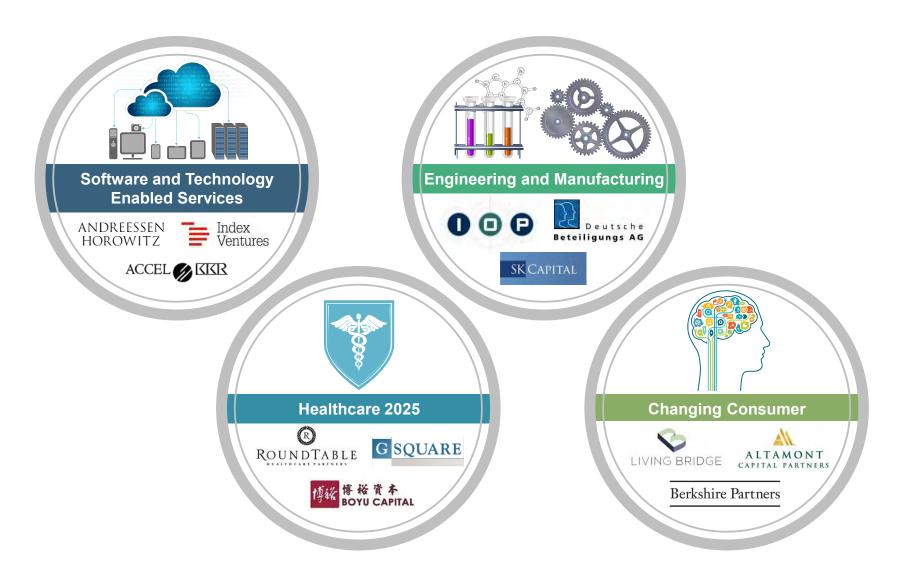
# Iterative and Continuous Process with Shared Insights





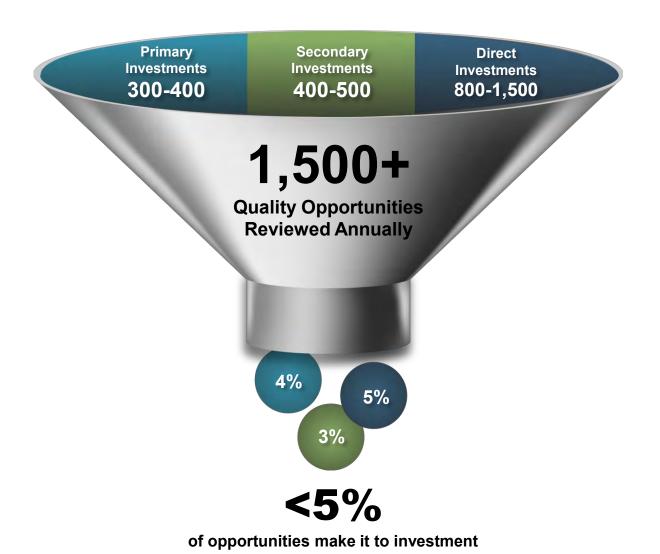
### Current Investment Themes Drive our Manager Selection





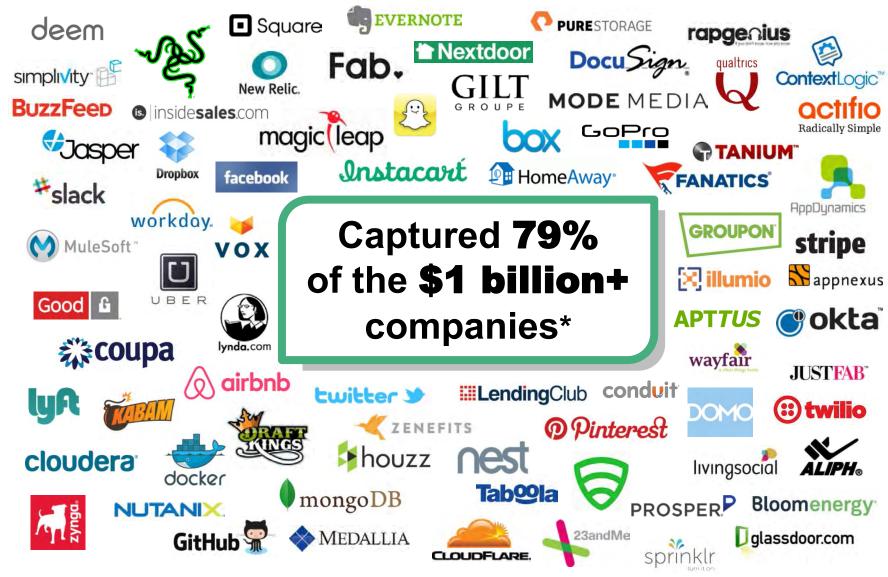
### Proactive Reach Where Selectivity is the Key





### Primary Manager Selection Leads to Strong Share





Source: VentureSource as of September 1, 2015 and ASPIRE as of June 30, 2015.

<sup>\*</sup> Adams Street Partners captured 79% of the US non-healthcare \$1 billion+ companies since 2000

### And Our Company Selection Adds Value

IPO & M&A activity mid-2013-2015



2014

\$219M or 20% of beginning portfolio turned into liquidity<sup>1</sup>

2015

\$590M or 39% of beginning portfolio turned into liquidity<sup>2</sup>

**IPO** Activity



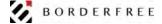
































A complete list of Adams Street Partners' Venture/Growth investments is available on the Adams Street Partners website or upon request.

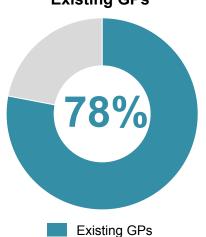
 <sup>2014</sup> liquidity generated by all of Adams Street Partners' Direct funds, of which the investments listed on this page are a subset. Beginning NAV is the net asset value of this portfolio as of December 31, 2013.

<sup>2. 2015</sup> liquidity generated by all of Adams Street Partners' Direct funds, of which the investments listed on this page are a subset. Beginning NAV is the net asset value of this portfolio as of December 31, 2014.

### Secondary Selection Adds Value Early in the Program











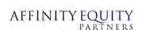








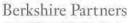
















- General Partners in the Primary Portfolio
- Calculated for all secondary deals in all portfolios managed by Adams Street Partners that closed on or before 6/30/2012.
- IRR is calculated at secondary investment or "deal" level from each deal's inception through 6/30/15, net of underlying GP fees, carried interest, and expenses but gross of any Adams Street fees, carried interest and expenses. For net returns of Adams Street Partners funds, please see the Adams Street Partners Net Performance chart in this presentation.
- Payback is defined as full return of contributed capital (i.e., >=1x DPI) at secondary investment or "deal" level.

### Ventura County Employees' Retirement Association



Strategic partnership – access to all of ASP's firm-wide resources



**Primary** 



Appendix



### Notes to Performance: All Strategies<sup>1</sup> Outperform Public Market Equivalents by 400 bps\*



As September 30, 2015

- \* The strategies listed exceeded public market equivalents by 400 bps based on the composite, since inception IRR for each strategy as described herein.
- 1. This chart, in USD, shows composite performance of private equity fund investments in Adams Street Partners "Core Portfolios" which are funds and separate accounts (excluding special mandate funds and non-discretionary separate accounts) of which Adams Street Partners is the general partner, manager or investment adviser (as applicable) and for which Adams Street Partners makes discretionary investments in private equity. For each category listed in the chart, performance is shown on a composite basis for all investments in Core Portfolios that are within that category. The returns presented in this chart do not represent returns achieved by any particular Adams Street Partners fund or any investor in an Adams Street Partners fund. For Adams Street Partners funds' net returns, please see the Adams Street Partners Net Performance chart in the notes section of this presentation.
- 2. With respect to Adams Street Partners primary and secondary investments, IRRs are net of fees, carried interest and expenses charged to the underlying private equity funds, but are gross of Adams Street Partners' fees, carried interest and expenses, which reduce returns to investors. For the effect of Adams Street Partners' fees, carried interest and expenses on Adams Street Partners' fund returns to investors, please see Adams Street Partners Net Performance chart in the notes section of this presentation. There can be no guarantee that unrealized investments will ultimately be liquidated at the values reflected in this return data. With respect to Adams Street Partners direct/co-investment funds included in this data, performance is net of Adams Street Partners' fees, carried interest and expenses.
- 3. Public Market Equivalent (PME) is calculated using the MSCI World Index.
- Inception date as of November 1, 1979.
- 5. Inception date as of February 21, 1985.
- 6. Inception date as of August 29, 1986.
- 7. Inception date as of March 1, 1989. Composite since inception IRR is net of Adams Street Partners' fees, carried interest and expenses. IVCF II, a component of this composite, charged only management fees and expenses. Includes IVCF II (invested in both partnerships and direct portfolio companies), IVCF III, BVCF IV, AS V, AS 2006, AS 2007, AS 2008, AS 2009, AS 2010, AS 2011, AS 2012, AS 2013, AS 2014, AS 2015 and AS Venture/Growth VI. Inception date as of September 5, 1989. Co-Investment Funds includes a separate account (1992-1998), Co-Investment I (2006), II (2009) and III (2014).
- 8. Inception date as of July 8, 1992. Co-Investment Funds includes a separate account (1992-1998), Co-Investment I (2006), II (2009) and III (2014).
- ^ For some periods, it was not possible to calculate traditional PME because the pace of distributions would have created a short position in the public index. In these cases PME is calculated using the "Direct Alpha" PME methodology (Gredil, Griffiths, Stucke, "Benchmarking Private Equity: The Direct Alpha Method," 2014). Mathematically, Direct Alpha PME is equal to the IRR of the future value of cash flows, where future value is based on the return of the benchmark index, less than the IRR of the actual value of the cash flows.

Past performance is not a guarantee of future results.

### Adams Street Partners Net Performance



As of September 30, 2015

|   |           | Performance in USD |        |              |  |  |
|---|-----------|--------------------|--------|--------------|--|--|
|   | Gross IRR | Net IRR            | PME*   | Net Multiple |  |  |
| Brinson Partnership 1996 Subscription                                     | 16.93%    | 14.22%             | 6.8%^  | 1.69x        |  |  |
| Brinson Partnership 1997 Subscription                                     | 15.10%    | 12.16%             | 3.4%^  | 1.62x        |  |  |
| Brinson Partnership 1998 Subscription                                     | 6.88%     | 5.03%              | 3.1%^  | 1.35x        |  |  |
| Brinson Partnership 1999 Subscription                                     | 7.65%     | 5.77%              | 4.2%^  | 1.40x        |  |  |
| Brinson Partnership 2000 Subscription                                     | 9.41%     | 7.33%              | 5.2%^  | 1.49x        |  |  |
| Brinson Partnership 2001 Subscription                                     | 10.96%    | 8.70%              | 6.4%^  | 1.56x        |  |  |
| Adams Street Partnership Fund - 2002 Non-U.S. Fund, LP                    | 14.21%    | 11.76%             | 7.9%^  | 1.70x        |  |  |
| Adams Street Partnership Fund - 2002 U.S. Fund, LP                        | 10.69%    | 8.59%              | 6.3%   | 1.60x        |  |  |
| Adams Street Partnership Fund - 2003 Non-U.S. Fund, LP                    | 12.44%    | 9.92%              | 5.2%   | 1.56x        |  |  |
| dams Street Partnership Fund - 2003 U.S. Fund, LP                         | 9.93%     | 7.95%              | 6.3%   | 1.54x        |  |  |
| dams Street Partnership Fund - 2004 Non-U.S. Fund, LP                     | 8.25%     | 6.22%              | 3.3%   | 1.38x        |  |  |
| dams Street Partnership Fund - 2004 U.S. Fund, LP                         | 8.90%     | 7.09%              | 6.5%   | 1.47x        |  |  |
| Adams Street Partnership Fund - 2005 Non-U.S. Fund, LP                    | 6.69%     | 5.05%              | 2.4%   | 1.32x        |  |  |
| dams Street Partnership Fund - 2005 U.S. Fund, LP                         | 8.60%     | 6.94%              | 7.4%   | 1.45x        |  |  |
| Adams Street 2006 Direct Fund, L.P.                                       | 10.79%    | 7.33%              | 6.8%   | 1.69x        |  |  |
| dams Street Partnership Fund - 2006 Non-U.S. Fund, LP                     | 7.41%     | 5.75%              | 3.0%   | 1.33x        |  |  |
| dams Street Partnership Fund - 2006 U.S. Fund, LP                         | 8.89%     | 7.12%              | 8.1%   | 1.40x        |  |  |
| dams Street 2007 Direct Fund, L.P.  | 15.23%    | 10.87%             | 8.3%   | 1.88x        |  |  |
| dams Street Partnership Fund - 2007 Non-U.S. Fund, LP                     | 9.36%     | 7.30%              | 3.8%   | 1.35x        |  |  |
| dams Street Partnership Fund - 2007 U.S. Fund, LP                         | 14.32%    | 12.07%             | 10.2%  | 1.60x        |  |  |
| dams Street 2008 Direct Fund, L.P.  | 21.08%    | 15.29%             | 12.0%  | 2.00x        |  |  |
| dams Street Partnership Fund - 2008 Non-U.S. Fund, L.P.                   | 12.83%    | 9.70%              | 4.0%   | 1.34x        |  |  |
| dams Street Partnership Fund - 2008 U.S. Fund, L.P.                       | 19.06%    | 16.10%             | 12.6%  | 1.65x        |  |  |
| Adams Street 2009 Direct Fund, L.P.                                       | 24.37%    | 17.07%             | 14.0%  | 1.77x        |  |  |
| dams Street Partnership Fund - 2009 Non-U.S. Developed Markets, L.P.      | 12.07%    | 7.53%              | 4.2%   | 1.18x        |  |  |
| dams Street Partnership Fund - 2009 Non-U.S. Emerging Markets Fund, L.P.  | 11.73%    | 8.63%              | -4.7%  | 1.24x        |  |  |
| dams Street Partnership Fund - 2009 U.S. Fund, L.P.                       | 19.06%    | 15.24%             | 12.6%  | 1.48x        |  |  |
| dams Street 2010 Direct Fund, L.P.  | 22.47%    | 15.09%             | 12.2%  | 1.54x        |  |  |
| dams Street Partnership Fund - 2010 Non-U.S. Developed Markets Fund, L.P. | 11.52%    | 7.00%              | 3.9%   | 1.16x        |  |  |
| Adams Street Partnership Fund - 2010 Non-U.S. Emerging Markets Fund, L.P. | 14.26%    | 11.04%             | -7.2%  | 1.24x        |  |  |
| Adams Street Partnership Fund - 2010 U.S. Fund, L.P.                      | 20.46%    | 16.41%             | 11.6%  | 1.47x        |  |  |
| Adams Street 2011 Direct Fund LP  | 32.86%    | 22.93%             | 10.7%  | 1.64x        |  |  |
| dams Street 2011 Emerging Markets Fund LP                                 | 15.29%    | 12.00%             | -7.6%  | 1.26x        |  |  |
| dams Street 2011 Non-US Developed Markets Fund LP                         | 11.86%    | 7.27%              | 3.5%   | 1.14x        |  |  |
| dams Street 2011 US Fund LP   | 18.61%    | 14.64%             | 11.2%  | 1.33x        |  |  |
| dams Street 2012 Developed Markets Fund LP                                | 15.09%    | 6.36%              | -2.9%  | 1.08x        |  |  |
| Adams Street 2012 Direct Fund LP  | 44.03%    | 20.73%             | 7.3%   | 1.37x        |  |  |
| Adams Street 2012 Emerging Markets Fund LP                                | 10.05%    | 5.51%              | -11.0% | 1.08x        |  |  |
| Adams Street 2012 Global Fund LP  | 14.99%    | 8.34%              | 1.5%   | 1.11x        |  |  |
| Adams Street 2012 US Fund LP  | 13.16%    | 6.65%              | 5.1%   | 1.09x        |  |  |

The page entitled "Notes to Performance: Adams Street Partners Net Performance." included on the following page of this presentation, is an important component of this performance data. Past performance is not a guarantee of future results.

### Notes to Performance: Adams Street Partners Net Performance



As of September 30, 2015

Note: Brinson Partnership Subscription gross and net IRR presents representative subscription performance of a subscriber that followed Adams Street Partners' recommended allocation and pays the highest fees. For Adams Street Funds, actual commingled fund performance gross and net IRR are presented. Gross IRRs are net of management fees, carried interest and expenses charged to the underlying private equity funds, in the case of primary and secondary funds, but gross of Adams Street Partners' management fees and carried interest, which reduce returns to investors. Net IRRs are net of Adams Street Partners' management fees, carried interest and expenses as well as net of management fees, carried interest and expenses charged to the underlying private equity funds (in the case of primary and secondary funds). Capital-weighted annualized returns from inception through quarter end. There can be no guarantee that unrealized investments will ultimately be liquidated at the values reflected in this return data. Each Brinson Partnership Subscription includes fund allocations made within a series of pooled investment vehicles. Performance for vintage years later than 2013 is not shown because performance early in a fund's life is not generally meaningful due to fee drag and immature investments. Past performance is not a guarantee of future results.

\*Public Market Equivalent (PME) is calculated using the S&P 500 Index for Brinson Partnership Subscription, US Funds and Direct Funds; MSCI EAFE (Europe, Australasia, Far East) for Non-US and Non-US Developed Funds; MSCI Emerging for Emerging Markets Funds; and MSCI World for Global Funds. The PME calculation is based on the Net IRR cash flows which reflects the payments of fees, carried interest and expenses.

^During some periods in which Adams Street Partners investments outperformed the benchmark by a substantial margin, PME could not be calculated because the tracking position in the underlying benchmark index would have resulted in a short position. In these cases, the PME is calculated using the "Direct Alpha" PME methodology (Gredil, Griffiths, Stucke, "Benchmarking Private Equity: The Direct Alpha Method," 2014). Mathematically, Direct Alpha PME is equal to the IRR of the future value of the cash flows underlying the IRR calculation, where future value is based on the return of the benchmark index, less the IRR of the actual value of the cash flows.



### Drive Capital Background



- Two Former Sequoia Capital partners with a proven track record, and experience working together
- Invested \$395M that is today worth \$3.5B (\$2.2B returned to Sequoia LPs)
- Industry experience in technology, healthcare and consumer



# Transportation







# Shop







# Inauguration of the Pope



2005 2013

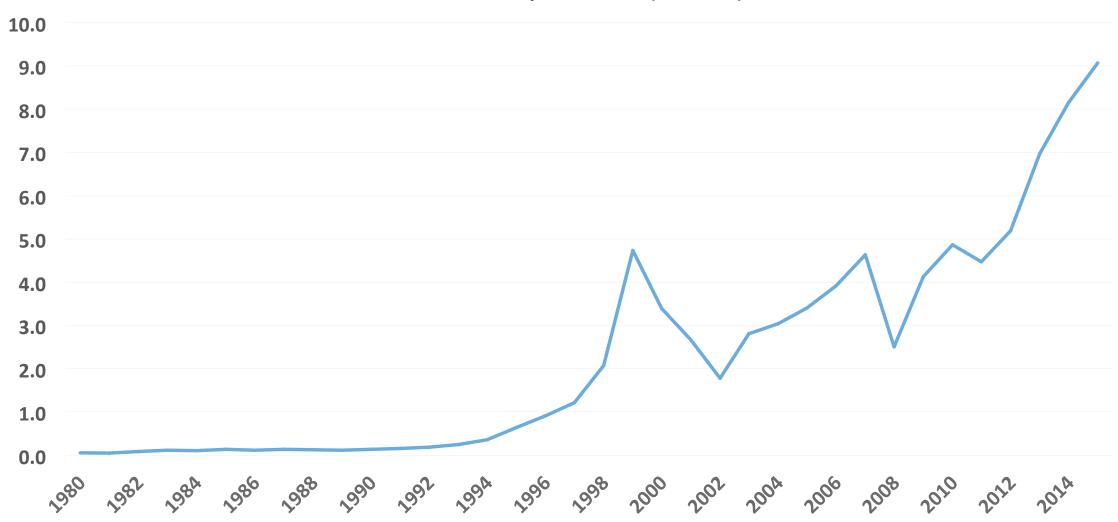




# Technology Market Cap







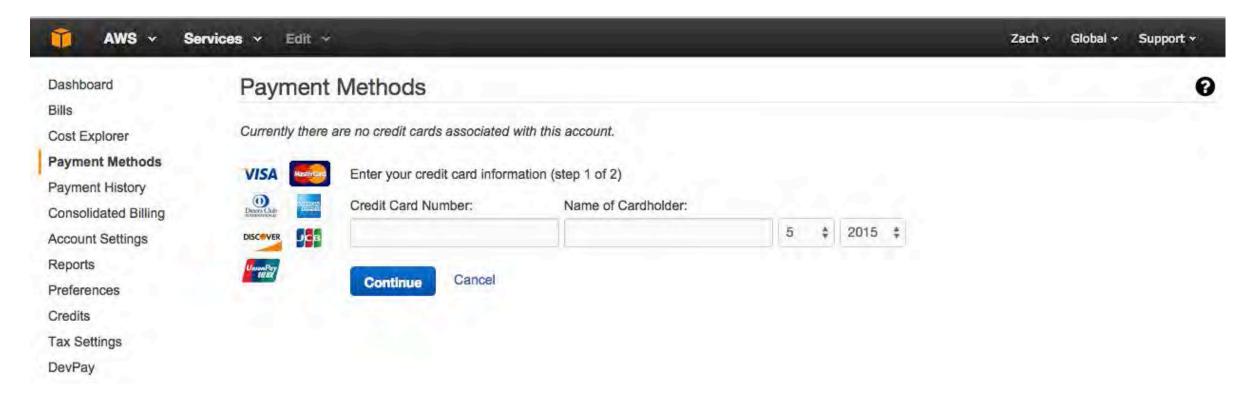
# Why Now?





# Why Now?







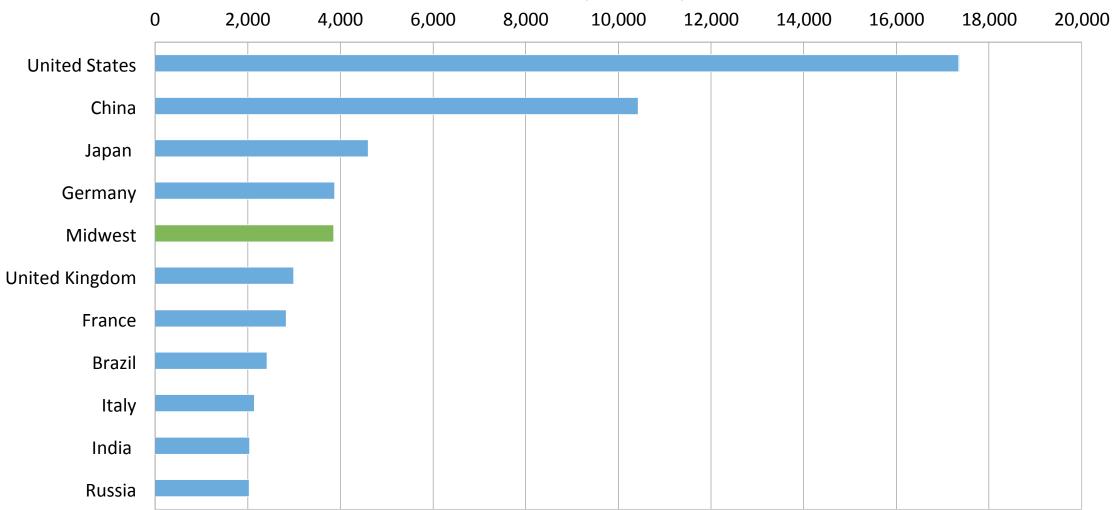




# Midwest GDP – 5<sup>th</sup> largest in the world

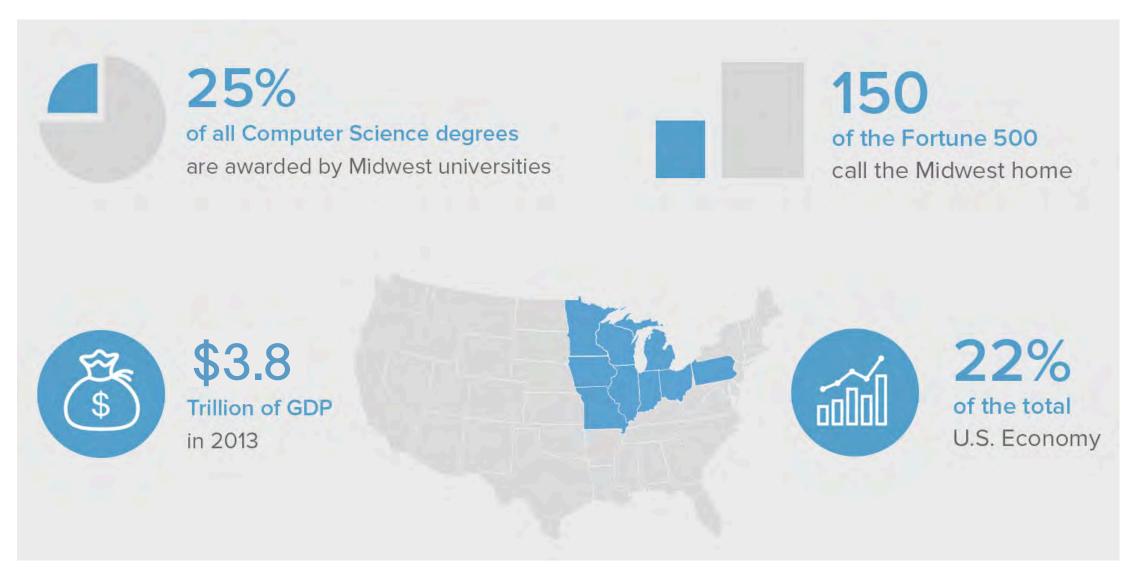






### Midwest Raw Ingredients





# Drive Capital Fund I



- Committed to using Midwest raw ingredients to build market leading companies
- \$250M to invest in venture and expansion stage companies
- 20 30 investments in technology, healthcare and consumer industries
- ~1/3<sup>rd</sup> invested in venture stage companies, ~2/3<sup>rd</sup> invested in expansion stage companies

### LTM Investment Flow - 2015



~3,500 Opportunities Evaluated

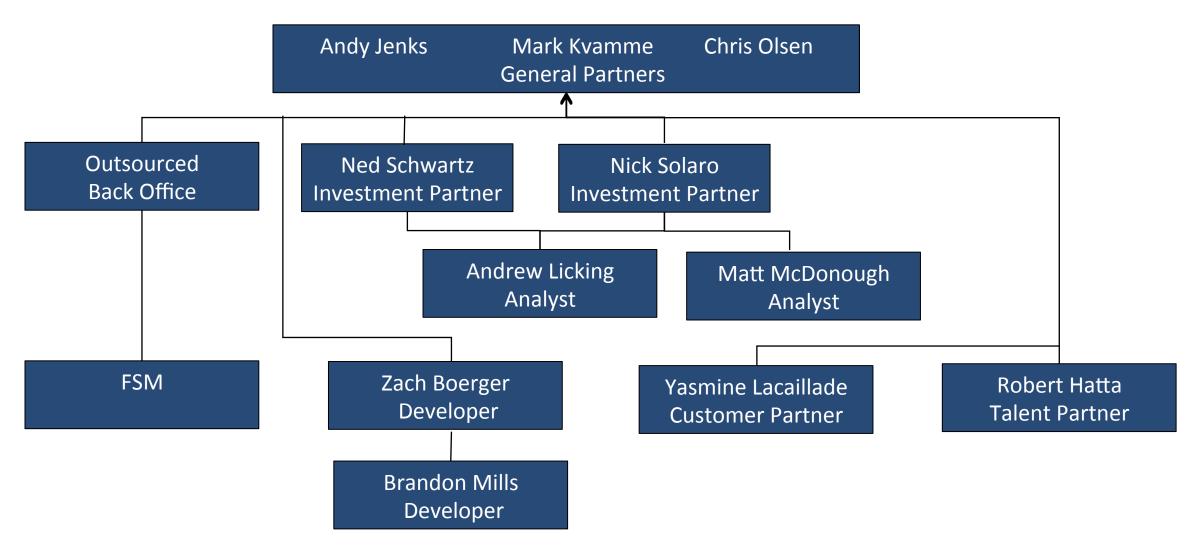
238 Initial Diligence

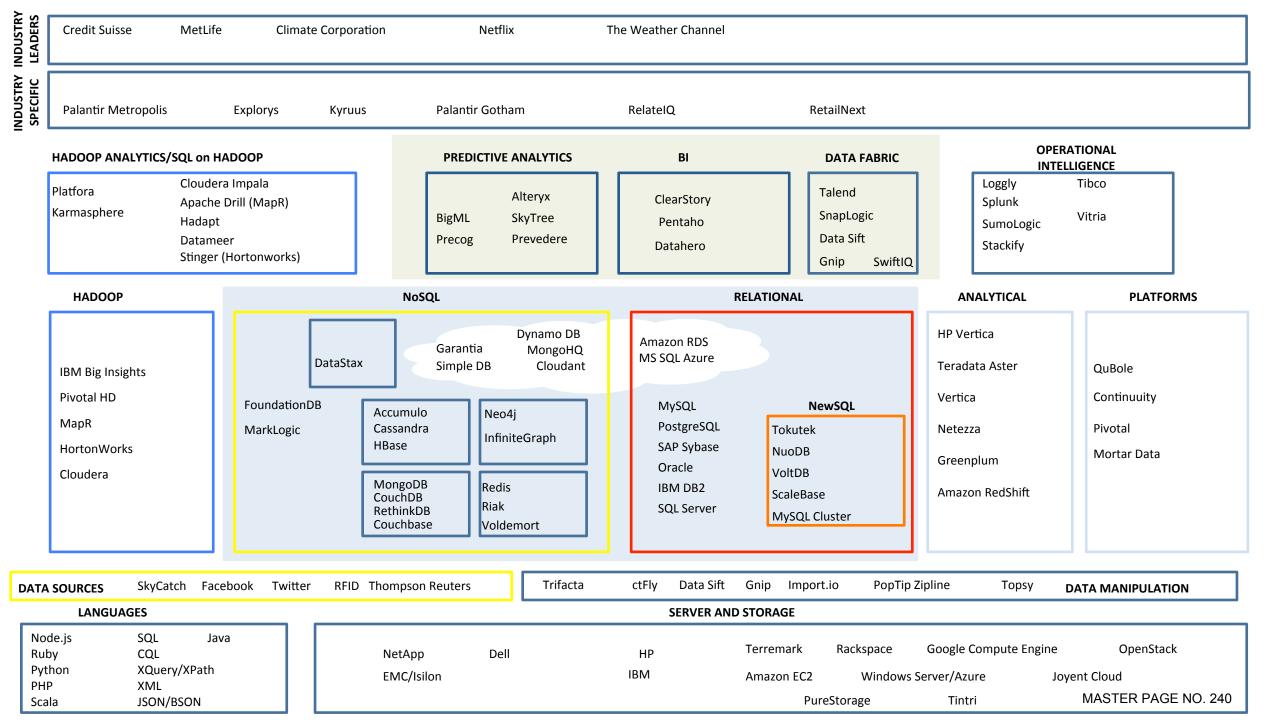
10 Term Sheets

7 New Investments

### Drive Team



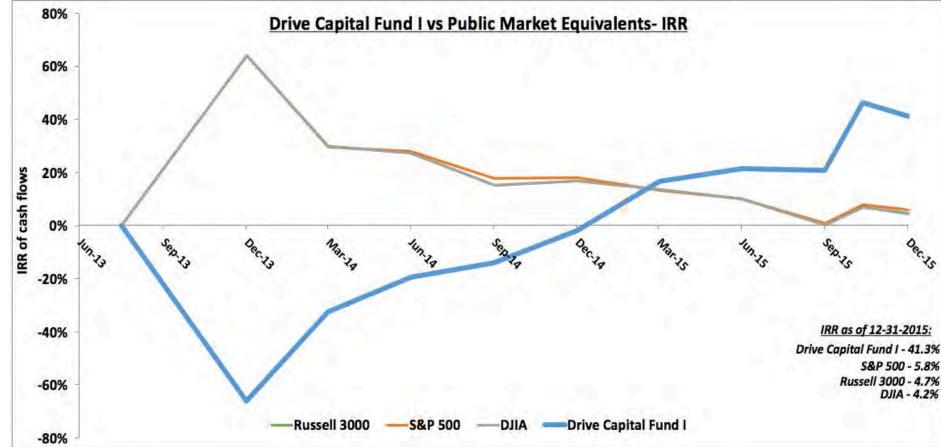




### Drive Capital Fund I Performance



- Performance (12/31/15): 42% net IRR, 1.7x TVPI
- \$185M in follow-on financing (4/30/16)



# Drive Capital Fund II



- \$250M \$300M Fund
- Replicate strategy and methodology of Fund I
- Return objective:
  - 10 percentage points above the Russell Small Cap 1,000 over next 10 years
  - Mid 20s IRR, >3.5x committed capital

# Fund I Portfolio Companies





CAREERS



HOME

ABOUT

NEWS

RESOURCES

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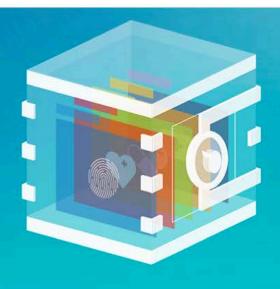
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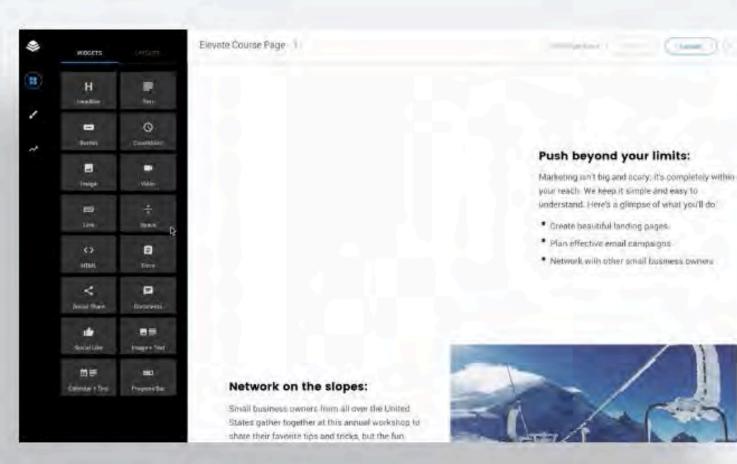
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**To:** Ventura County Employees' Retirement Association

From: NEPC Consulting Team

**Date:** May 11, 2016

**Subject:** Venture Capital Private Equity Manager Recommendation

#### Recommendation

NEPC recommends the Ventura County Employees' Retirement Association ("VCERA" or the "Plan") give consideration to making a \$15 million commitment to Drive Capital Fund II, L.P. ("Drive II" or the "Fund") pending the successful completion of contract negotiations between Drive Capital (the "Firm") and the Plan's legal counsel.

#### **Executive Summary**

Drive Capital is targeting \$250 million of investor commitments (\$350 million hard cap) for Drive Capital Fund II, which is intended to invest in early stage and expansion stage companies in the Midwestern United States. The Firm's strategy is to leverage the Founders' history and experience at Sequoia Capital and apply Sequoia Capital's well-tested approach to opportunities in the Midwest that are overlooked by traditional venture capitalists. The team invests in what it believes are market leading companies focused on the technology, technology-enabled services, and healthcare sectors. Companies in the portfolio will typically have less than \$10 million in annualized sales and many will be pre-revenue.

Drive II is targeting an IRR ten percentage points above the Russell 1,000 Small Cap Index, or approximately 25%, and a net multiple of at least 3.5x on invested capital. The Fund expects to invest in early stage businesses that will each have the ability to generate \$100 million of value for the Fund and in expansion stage businesses expected to generate at least 5.0x the invested capital over the life of the investment. The Firm's expectation is that the bulk of these returns will be generated in the last five years of the Fund. The Fund will generally focus on investments in companies that are headquartered in the Midwestern U.S. (IL, IN, IA, MI, MN, MO, OH, PA, WI). The Fund plans to build a portfolio of approximately 25 early and expansion stage companies, and is expected to invest between \$2 million and \$15 million per deal.

Drive Capital was established in 2013 by Chris Olsen and Mark Kvamme (the "Founders") to focus on investments in early stage and expansion stage companies in the Midwestern United States. The Firm is based in Columbus, Ohio and has 13 employees including seven Partners. Prior to founding Drive, Messrs. Olsen and Kvamme managed investments at Seguoia Capital, a highly regarded Silicon Valley venture capital firm.

Mr. Kvamme, who is 54, was a Partner at Sequoia Capital for 12 years where he led investments in companies such as LinkedIn, MarkLogic, Cast Iron and Funnyordie.com. Prior



to joining Sequoia Capital in 1999, Mr. Kvamme was Chairman, CEO and Founder of CKS Group, a NASDAQ-listed advertising agency that focused on integrating marketing with technology. Mr. Kvamme left Sequoia Capital in 2011 to work for Ohio Governor John Kasich's administration to accelerate Ohio's economic growth and recovery by attracting and retaining jobs in strategic industry sectors. Mr. Olsen, who is 36 and a native of Cincinnati, spent six years at Sequoia Capital. He helped to hire the growth equity team and led investments in technology and services companies including Lightpoint, Klarna, Weebly, Electronic Arts, GSI Commerce and eMeter. Per the Fund's Private Placement Memorandum ("PPM"), Messrs. Olsen and Kvamme invested \$395 million while at Sequoia Capital that is currently valued at \$3.45 billion (with over \$2.2 billion having been returned to Sequoia Capital LPs).

In launching Drive in 2013, the Founders believed that the next 15 years would see a majority of the market capitalization in venture being built beyond Silicon Valley. In particular, the Founders believed that this trend would favor, among other geographies, the Midwest, which they believe is frequently overlooked as an attractive place to build a technology company.

Drive Capital has raised one prior fund: Drive Capital Fund I ("Fund I") with \$247 million in commitments. Fund I's strategy is to invest in early and expansion stage companies across the Midwest in technology, technology-enabled services, and healthcare sectors. As of December 31, 2015, Fund I had invested \$132 million in 16 companies. On a net basis, the reported cash-on-cash return for Fund I is 1.6x and the IRR is 41.3%. As a caveat to this performance, Fund I is still early in its investments cycle and has not made any distributions (i.e. the returns are paper returns at this point).

Drive Capital considers the Midwest an attractive region to invest in because they believe the region is overlooked by many venture investors. According to the Firm, despite accounting for \$3.8 trillion of GDP in 2014 (22% of the U.S. economy), the Midwest only attracted \$3 billion of venture capital investment, accounting for approximately 6% of the venture capital dollars invested in the U.S. By contrast, California accounted for \$2.3 trillion of GDP (13% of the U.S. economy), but received \$29 billion (\$25 billion to Silicon Valley) of venture capital dollars, which equates to over 50% of all venture capital in the U.S.

Drive Capital believes it can leverage the high levels of university research and the existing manufacturing base in the region to find attractive opportunities for investment. The Firm notes that approximately 25% of all university research in the U.S. is completed in the Midwest and 138 of the Fortune 500 companies are headquartered there. The Firm believes that this existing ecosystem reduces costs for businesses. Housing, education, transportation, and communications infrastructure all exist at a low cost as well, making the Midwest an attractive area for potential start-ups and employees.

Drive Capital notes a robust and competitive early-stage ecosystem for investments less than \$2 million in the region. The Firm also found that financing rounds above \$40 million in size are also fairly competitive, yet there is a hole between \$2 million up to \$40 million. This is precisely the area of the market that Drive Capital will invest.



#### Overview of the VCERA Private Equity Program

VCERA has a long-term target allocation to private equity of 10% and began investing in the private equity asset class in 2010. Due to the need to over commit to private equity to achieve the target allocation, we have recommended a commitment pace that "over commits" to the private equity target at 150%. It is also recommended that the Plan conduct an annual private equity structural study and make adjustments to the strategy and commitment pace during the annual structural study, as needed.

The 2016 Private Equity Strategic Plan recommended commitments of \$130 million for the year, diversified by sub-strategy. A summary of the recommended allocation for 2016 is below.

- \$60 million to a Diversified Fund-of-funds
  - Adams Street 2016 Global Fund
- \$60 million to Secondaries
  - Dover Street IX
- \$15 million to Venture Capital
  - Drive Capital II

Should the Plan approve the proposed \$15 million commitment to Drive II, approximately ten percent of the Plan's allocation to private equity in the 2016 Private Equity Strategic Plan will be filled.

#### **Selection Process**

NEPC meets regularly with a large number of market participants in an effort to identify the most attractive funds within a particular market segment. Throughout 2015, NEPC met with several leading candidates that were 1) in the market; 2) offered an experienced and successful team in the strategy; and 3) provided a well-diversified portfolio. NEPC completed full due diligence on Drive Capital Fund II and rated the Fund as a preferred strategy within the venture capital private equity market segment.

#### **Portfolio Fit**

Drive II is a venture capital private equity fund that is focused on the Midwestern U.S. The Plan's current allocation to venture capital comprises approximately 25% of the private equity allocation, which is pushing against limits with respect to what we would typically recommend a private equity program allocate to venture capital. However, the opportunity to invest with a firm of experienced and talented investors such as Messrs. Kvamme and Olsen, in addition to the fact that much of the Plan's venture exposure is currently being gained through the Plan's investment in the Adams Street 2010 Global Fund Series, we are comfortable with the recommended allocation. In addition, we expect that there will be no portfolio overlap (duplication) with the funds that are currently investing in the Plan's private equity portfolio.



#### <u>Advantages</u>

Experienced team - Messrs. Kvamme and Olsen have solid experience from Sequoia Capital, a highly regarded Silicon Valley based venture capital firm. Mr. Kvamme was a Partner at Sequoia Capital for 12 years where he led investments in companies such as LinkedIn, MarkLogic, Cast Iron and Funnyordie.com. Mr. Olsen spent six years at Sequoia Capital and led investments in technology and services companies including Lightpoint, Klarna, Weebly, Electronic Arts, GSI Commerce and eMeter. Per the Firm's PPM, Messrs. Olsen and Kvamme invested a combined \$395 million while at Sequoia Capital that is currently valued at \$3.45 billion (with over \$2.2 billion in distributions). In addition to the Founders, Drive Capital has five other Partners with significant venture capital and start-up experience. Although untested given the newness of the Firm (and the Fund I portfolio), this combination of pedigree and experience is an attractive combination for the formation of a new venture capital firm and is evident in the Firm's professional approach to building the firm.

**Solid early performance -** Drive Capital Fund I's returns, although early, are solid and place the Fund in the 1<sup>st</sup> quartile of its universe. The Firm also provided data on the investments led by Messrs. Kvamme and Olsen while at Sequoia Capital. As discussed previously, those combined investments have performed well and are currently marked at an 8.7x equity multiple.

Attractive and underserved market - Drive Capital is targeting investments largely in the Midwest U.S., which the Founders believe is an attractive and underserved venture capital market. The Founders believe that the Midwest is currently one of the most favorable U.S. geographies to build a business. They view the region as a cost effective economy with all of the necessary ingredients for successful venture-backed companies. In particular, the Midwest offers existing industry (22% of the U.S. GDP); innovation (25% of all U.S. university research); young entrepreneurs (currently 3 of the top 6 undergraduate engineering programs in the U.S.); access to talent (138 of the Fortune 500 are in the region); and a proven breeding ground for successful companies (65 companies headquartered in the Midwest have gone public or have been acquired for a purchase price over \$1 billion in the past five years). From a funding standpoint, however, the Midwest only attracted \$3 billion of venture capital investment, approximately 6% of the venture capital dollars invested in the U.S.

#### Potential Issues

Heated venture capital market environment - Venture capital valuations, investment volumes and deal sizes have soared since 2011, particularly in the later stages and into growth equity markets. Fundraising has also risen dramatically since 2009 and there is now ample liquidity looking for new deals. Today, there is a significant worry that the venture capital market is in a new bubble that is showing signs of deflation.

**Limited geographic focus** - Drive Capital's focus on the Midwest could limit deal flow and/or create adverse selection issues for the Firm.

**New firm** - Drive Capital was formed in 2013. Although the team, firm and limited track record look strong, it is still a very new Firm with a largely unproven track record.



**Venture capital conundrum -** Top quartile venture capital returns have been attractive. However, access to best-in-class firms like Sequoia Capital is difficult or not available to most new investors. The risk/return tradeoff of venture outside of the top quartile is questionable (over longer rolling time periods, NASDAQ returns have exceeded median venture returns). Drive Capital provides the opportunity to invest with professionals from a best-in-class firm who are building a new firm. However, this comes with the real risk that the team may not be able to replicate the success achieved previously.

Volatility of venture capital investing - Venture capital fund returns are typically driven by a small percentage of investments that do really well offset by a large number of investments that perform poorly or are complete losses. In looking at Messrs. Kvamme and Olsen's prior track record at Sequoia Capital, this is true for them as well. Although the aggregate returns of the Founder's 27 investments at Sequoia Capital from 2000 to 2011 are impressive (8.7x equity multiple), the components of the return are driven by nine 'winners' (defined as >2.0x multiple) that generated an 18.1x equity multiple and 18 'losers' that generated a 0.5x equity multiple. Within the nine winners, one investment in particular generated a 265.1x equity multiple. If this investment is removed, the Founder's aggregate equity multiple drops to 4.1x (which is still very attractive). Given this dispersion of investment returns, the aggregate returns would have been significantly different if more of the winners had been losers, which is typical of any venture capital fund.

#### **Fund Terms**

#### Annual Management Fee

2.00% on committed capital during the Fund's investment period; Once the investment period has ended, the management fee will be reduced to the sum of (A) + (B) shown below:

- (A) The aggregate original cost of all Portfolio Investments
- Less The aggregate original cost of all Realized Securities
- Less The aggregate original cost of all Portfolio Investments made using "recycled" capital (in each case, avoiding any "double-counting")
  - (B) That amount of uncalled Commitments as is reasonably reserved by the General Partner for purposes of anticipated Portfolio Investments (be they initial or follow-on) as and to the extent permitted by the Agreement, calculated as of the end of the preceding Management Fee Period.

#### Preferred Return

N/A

#### **Carried Interest**

20.0% carried interest until such time as the LPs have received distributions equal to 300% of such Limited Partner's capital contributions to date (3.0x); 30.0% carried interest once the 3.0x return has been achieved



#### **Distribution Waterfall**

100%/0% LP/GP split until LPs have received distributions equal to such LPs capital contributions;

80%/20% LP/GP split until such time as the LPs have received distributions equal to 300% of such LPs capital contributions to date (3.0x);

70.0%/30.0% LP/GP split thereafter.

Based on a \$15 million commitment, and assuming the Fund invests the entire \$15 million and realizes no investments during the life of the Fund, VCERA would pay an average management fee of \$300,000 per annum over the life of the Fund, which equates to less than three-quarters of a basis point at the Total Fund level, or 0.0069% per annum, based on the current market value of the Plan's assets.

#### **Track Record of Prior Investments/Funds**

#### Sequoia Capital Track Record

|              |            | Familia            | Returned/ | TVPI     |
|--------------|------------|--------------------|-----------|----------|
| Name         | Status     | Equity<br>Invested | Current   |          |
|              |            |                    |           | Multiple |
| Kvamme       | Realized   | \$7                | \$1,856   | 265.1x   |
| Kvamme       | Unrealized | \$9                | \$400     | 44.4x    |
| Kvamme       | Unrealized | \$5                | \$55      | 11.0x    |
| Kvamme       | Realized   | \$16               | \$50      | 3.1x     |
| Kvamme       | Unrealized | \$15               | \$12      | 0.8x     |
| Kvamme       | Realized   | \$4                | \$14      | 3.5x     |
| Kvamme       | Unrealized | \$2                | \$8       | 4.0x     |
| Kvamme       | Realized   | \$12               | \$1       | 0.1x     |
| Kvamme       | Realized   | \$10               | \$0       | 0.0x     |
| Kvamme       | Realized   | \$10               | \$0       | 0.0x     |
| Kvamme       | Realized   | \$5                | \$0       | 0.0x     |
| Kvamme       | Realized   | \$5                | \$0       | 0.0x     |
| Kvamme       | Realized   | \$7                | \$0       | 0.0x     |
| Kvamme       | Realized   | \$12               | \$0       | 0.0x     |
| Kvamme       | Realized   | \$10               | \$0       | 0.0x     |
| Kvamme       | Realized   | \$4                | \$0       | 0.0x     |
| Kvamme       | Realized   | \$10               | \$0       | 0.0x     |
| Kvamme       | Realized   | \$9                | \$0       | 0.0x     |
| Kvamme       | Realized   | \$1                | \$0       | 0.0x     |
| Kvamme       | Realized   | \$4                | \$0       | 0.0x     |
| Kvamme       | Realized   | \$14               | \$0       | 0.0x     |
| Kvamme Total |            | \$171              | \$2,396   | 14.0x    |
| Average      |            | \$8                | \$114     | 15.8x    |
| Realized     |            | \$140              | \$1,921   | 13.7x    |
| Unrealized   |            | \$31               | \$475     | 15.3x    |

|             |            | Equity   | Returned/ | TVPI     |
|-------------|------------|----------|-----------|----------|
| Name        | Status     | Invested | Current   | Multiple |
| Olsen       | Unrealized | \$56     | \$625     | 11.2x    |
| Olsen       | Realized   | \$45     | \$223     | 5.0x     |
| Olsen       | Unrealized | \$40     | \$105     | 2.6x     |
| Olsen       | Realized   | \$24     | \$45      | 1.9x     |
| Olsen       | Realized   | \$40     | \$32      | 0.8x     |
| Olsen       | Realized   | \$19     | \$25      | 1.3x     |
| Olsen Total |            | \$224    | \$1,055   | 4.7x     |
| Average     |            | \$37     | \$176     | 3.8x     |
| Realized    |            | \$128    | \$325     | 2.5x     |
| Unrealized  |            | \$96     | \$730     | 7.6x     |

| Kvamme and Olsen Total | \$395 | \$3,451 | 8.7x  |
|------------------------|-------|---------|-------|
| Average                | \$15  | \$128   | 13.1x |
| Realized               | \$268 | \$2,246 | 8.4x  |
| Unrealized             | \$127 | \$1,205 | 9.5x  |

Note: \$ in millions; data provided by Drive Capital

#### Drive Capital Fund I Track Record

|                      | Vintage | Capital   | Capital | Reported |             | Total Value, |          |              |       |
|----------------------|---------|-----------|---------|----------|-------------|--------------|----------|--------------|-------|
| Fund                 | Year    | Committed | Funded  | Value    | Distributed | Net of Carry | Multiple | DPI Multiple | IRR   |
| Drive Capital Fund I | 2013    | \$247     | \$143   | \$229    | \$0         | \$229        | 1.6x     | 0.0x         | 41.3% |

Note: \$ in millions; data as of 12/31/2015 and provided by Drive Capital.



#### **Conclusion**

As VCERA continues toward its 10% long-term target allocation to private equity, Drive Capital Fund II provides the Plan with (i) access to venture capital investments with a team of highly experienced investors that have historically successfully invested in the venture capital arena; (ii) additional vintage year, geographic, and strategy diversification; and (iii) a source for potentially outsized returns relative to other areas of the portfolio. We recommend the Plan give consideration to making a \$15 million commitment to Drive Capital Fund II, L.P.



#### **DRIVE CAPITAL FUND II**

Drive Capital Fund II is a \$250M-\$300M private investment fund (the "Fund"). The Fund will invest in venture and expansion companies building long-term, sustainable businesses based in the Midwest<sup>1</sup>. The founding principals are two former Sequoia Capital partners with a proven track record, having invested \$395M that is currently valued at \$3.5B (\$2.2B has been distributed to Sequoia Capital LPs). They left Silicon Valley because they believe the next 15 years of shareholder value will be created outside of the Bay area, and the Midwest is the best place to build these market-defining companies. Drive Capital Fund I launched in 2013 to invest in this thesis. As of December 31, 2015 Drive Capital Fund I reports a 42% net IRR and a 1.7x TVPI (total value to paid-in).

#### The Opportunity

The Midwest is a highly attractive place to build these companies and invest in them. It is the 5<sup>th</sup> largest economy in the world (larger than India), with \$3.8 trillion of GDP in 2014, or 22% of the US economy. In the last five years 65 companies with headquarters in the Midwest have gone public or been acquired at shareholder equity values above \$1 billion creating over \$200 billion of aggregate shareholder value.

The Midwest has proven that it can create successful, innovative companies by capitalizing on its raw ingredients, including access to Fortune 500 talent, over 25% of the nation's research facilities, and a collection of the largest universities in America that annually produce thousands of the best minds and entrepreneurs. Midwest-based companies like ExactTarget, Duo Security, Grub Hub, Options Express, the CBOE, and Groupon are building billions of dollars in aggregate shareholder value.

Despite its scale the Midwest is overlooked by the venture capital industry, which invested a mere \$2 billion compared to over \$12 billion in Silicon Valley<sup>2</sup>. We believe these companies are the first of many and we intend to be the entrepreneurs' preferred investment partner over coastal firms who view the Midwest as a secondary market.

#### **Our Strategy**

Drive Capital Fund II seeks to generate above public market returns for Limited Partners for the next 10 years, targeting more than 3.5x contributed capital at internal rates of return "IRRs" 10 points above the equivalent market index.

We invest funds and expertise into venture and expansion stage companies with global market opportunities and help these entrepreneurs build the next generation of innovative companies. The Fund's portfolio will be comprised of 20 to 30 investments in the IT, financial services, consumer, and healthcare services industries. Approximately 2/3rds of the Fund's dollars will be invested in expansion stage companies and the remainder in venture stage investment opportunities.

#### **Our Methodology**

We spend the bulk of our time proactively pursuing investment themes we believe to be the leading markets of tomorrow. We have experience in building these efforts from scratch, as investors and operators, and iterate on what we have learned at Drive. Our efforts to date have led us to build market maps across sectors such as healthcare payments, the Internet of Things, enterprise mobility and the emerging data science sector. The size and dynamic of these markets allows us to identify the companies that are the best at solving the largest problems within each sector.

Once we identify a market-defining company, we go out of our way to create an investment opportunity, regardless of its location. Frequently, we find the market leading company is in fact a Midwest business, and in those cases we immediately pursue an investment in the company. Where those companies are based outside of the region, we either relocate the company to the Midwest (we have done this three times to date), or simply invest in a company outside the region (although we have only done this twice). We are stage-agnostic in this approach.

The team's prior experience shows that appropriately applied advice and help from investors improve the chances an entrepreneur succeeds. This is one of Drive's greatest differentiators from the competition, but to correctly apply their influence requires the right relationship with entrepreneurs and in-house support personnel.

<sup>&</sup>lt;sup>1</sup> Midwest: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Pennsylvania, and Wisconsin

<sup>&</sup>lt;sup>2</sup> 2011 vintage statistics

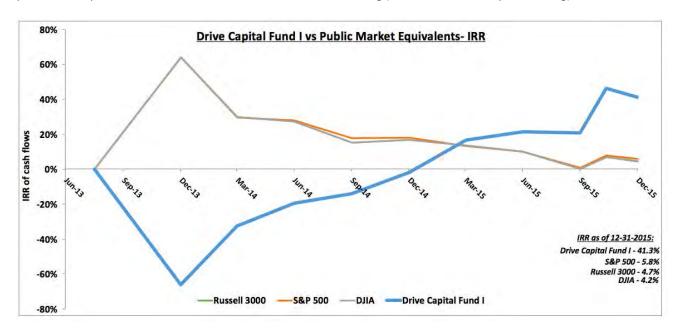


Investment Innovation in the Midwest

In addition to advice there are three things our entrepreneurs need to grow their companies: customers, talented people, and money. In that order. We have built a platform to address these needs. We have a customer partner who builds out our network with Fortune 1,000 companies and helps portfolio companies get their first or next customer. And we have a talent partner who builds out our network of people and helps portfolio companies get their next employees.

#### **Our Performance**

Fund II will replicate the investment strategy and methodology of Drive Capital Fund I. Early results are promising: Fund I has made 16 investments to date and represents, on paper, a 1.7x TVPI to our investors with a net IRR of 42%, a 7.1x premium to the best public market equivalent index performance under the same conditions<sup>3</sup>. As of April 30<sup>th</sup>, 2016, our portfolio companies have raised \$185 million of follow-on financing (inclusive of Drive Capital funding).



#### **Our Objective**

Drive Capital Fund II is seeking investment from Limited Partners committed to our long-term strategy to use the Midwest's raw ingredients to create world-class companies and build the next world-class investment firm.

<sup>&</sup>lt;sup>3</sup> Summary statistics on Drive Capital Fund I through 12-31-2015.

#### VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

1190 South Victoria Avenue, Suite 200 Ventura, CA 93003-6572 (805) 339-4250 • Fax: (805) 339-4269 http://www.ventura.org/vcera

May 4, 2016

Michael Powers County Executive Officer County of Ventura 800 South Victoria Avenue Ventura, CA 93009

Attention: Shawn Atin, Human Resources Director

### SUBJECT: RETIREMENT/VCERA PENSIONABILITY OF CNA "RETENTION PREMIUM PAYMENT"

Dear Mr. Powers,

Recently, VCERA was asked to provide an analysis of the recently-negotiated CNA "Retention Premium Payment" (RPP) for the purposes of pensionability and reporting. We have done so, with the assistance of both County Counsel and VCERA's outside counsel.

Based on our review of the County of Ventura Tentative Agreement with the California Nurses Association dated March 10, 2016, ("Agreement"), our discussions, and the subsequent information provided by your office and the Auditor-Controller's office, we understand the following to be correct regarding this payment.

- Eligibility for, and entitlement to, the RPP is established on the first day of the quarterly period ("eligibility date").
- In order for a nurse to be eligible for the RPP, he or she must be covered by the CNA contract at the eligibility date.
- The amount of the RPP is determined by the rate of pay applicable for the pay period in which the eligibility date falls.
- Though the calculation is based on the regularly-scheduled hours worked in the prior quarter, the RPP itself is not a retroactive pay increase.
- If a nurse terminates employment subsequent to the beginning of a quarter (eligibility date), regardless of whether the payment has been issued, he or she will still receive the RPP for that quarter.
- If a nurse's rate of pay changes with an effective date subsequent to the beginning of a quarter (such as for a merit increase) the amount of the quarter's corresponding RPP will not be adjusted as a result.
- Pursuant to the Agreement, the RPP will be issued through the term of the Memorandum of Understanding to all nurses who are eligible.

#### <u>Pensionability</u>

Bearing in mind these points, VCERA staff has determined the RPP to be pensionable for both Legacy and PEPRA members. The payment is in the nature of salary, as its purpose is to make up the difference in base salary for nurses whose pay does increase by 6% under the terms of the Agreement; it is not a one-time, ad-hoc payment, but a recurring one, and; it appears to take the place of market-based premium pay items that were previously determined by the Board of Retirement to be pensionable.

#### Reporting

The County of Ventura must report compensation to VCERA for the pay period in which it was earned, regardless of when it was paid. (Govt. Code § 31542.5.) Based on the above contract points, VCERA views the RPP as "earned" on the eligibility date, and not the date of the payment. Accordingly, the RPP payment should be reported to VCERA for the pay period in which the eligibility date falls, not the pay period in which the payment is issued. The payment dates are scheduled approximately a month after the eligibility dates; thus, when the RPPs are issued, the County should process retroactive adjustments for the previous pay period in which the eligibility date fell.

The authority to determine pensionable compensation ultimately lies with the VCERA Board of Retirement. Staff is scheduled to bring any new pay codes to the Board on an annual basis to recommend pensionability under PEPRA. Pay codes added during the 2016 calendar year are scheduled for review at the January 2017 VCERA business meeting. At that time, the code of "NRP", which is what has been reported to VCERA as the code to be used for the RPPs, will be brought to the Board for the ultimate determination.

If the County of Ventura would like to appeal staff's analysis of the RPP payment as pensionable, it may request that the Board of Retirement review it sooner than January 2017. If this is the case, please submit an appeal in writing to my attention so that it may be brought to the Board for a determination at the June 6<sup>th</sup>, 2015 disability meeting.

Sincerely,

Linda Webb

Retirement Administrator

CC: Board of Retirement, VCERA

Jeff Burgh, Auditor-Controller

Zach Goldman, California Nurses Association

May 3, 2016

Dear RREEF America REIT III Shareholder,

On behalf of your Board of Directors, I would like to take a moment to communicate directly with you regarding the final wind down of RREEF America REIT III. We want to thank you for your patience and support over the years as we worked the strategic plan to sell all of the assets. It was not an easy task but I think you will agree the final execution of approximately \$80 per share Net Asset Value was a good outcome for our investors.

In order to provide a further update as it relates to the oversight of the Fund, effective immediately, four of the five independent Directors have resigned/concluded their terms bringing further closure on one of the remaining open items in the final dissolution of the Fund. I want to personally thank Daryl Carter, Alice Connell, Trish Healy, and Steve LeBlanc for their dedicated service during their tenure on the Board. I will remain on the Board as the sole independent director and work closely with RREEF Management to wind down and account for the remaining assets and distribute the remaining funds. All of the material real property assets except one income producing property in California have been sold. Your Board and Management anticipate that all assets will be sold and that the remaining contingencies and known payables will be resolved on or before December 2017, at which point your final cash distribution will be made. The Fund is simply holding back reserves sufficient to take care of these items.

It is also appropriate to recognize and thank the RREEF Management team for the fine work they did in repositioning the balance sheet of the Fund, re-working the assets, developing the plan for maximizing value and executing the plan in good form. I can say from my vantage point as Chairman that the amount of dedication, hard work and enthusiasm exhibited by these men and women was exemplary.

Please know that the remaining assets are in good hands as we complete the final dissolution. If I can be of assistance to you in any way, please do not hesitate to contact me directly or through your RREEF America REIT III client representative.

Respectfully submitted,
Steven & Rogers

Steven G. Rogers
Chairman of the Board
RREEF America REIT III

Cell: 601-672-1117



### The AMBACHTSHEER Letter

Sustainable Pension Design • Effective Pension Management

**April 2016** 

#### FOCUSING CAPITAL ON THE LONG TERM:

#### FROM TALKING TO WALKING

The title of this Letter was also the title of a workshop for Dutch pension fund managers organized by Kempen Capital Management in Amsterdam this past March.

As the title suggests, the goal of the event was to move participants from talking about the merits of 'long-termism' to actually living it. The program started with two 'context' presentations, one by McKinsey's Dominic Barton about the ongoing 'short-termism cycle' that must be broken, and one by this author about what academia has to say about the 'short-termism' problem, and if shifting to 'long-termism' really increases investment return prospects.

This Letter summarizes the Barton message, and sets out mine in some detail.

#### The FCLT Initiative

The Focusing Capital on the Long Term initiative was kick-started by Dominic Barton and CPPIB's Mark Wiseman three years ago. Its stated goal is to break the 'short-termism' cycle that rotates from a perceived need by investors for short-term performance to a perceived need for continuously positive quarterly earnings guidance by corporate boards and senior management. The result is a systemic underinvestment in the kind of longer-term value-creation that retirement savers need to generate adequate, affordable post-work income streams.

In the Amsterdam workshop, Barton listed three steps needed to break this ongoing value-destroying 'short-termism' cycle:

- 1. Shift the focus of corporate boards to supporting long-term value-creating initiatives.
- 2. Shift the focus of institutional investors to investment strategies that recognize the importance of corporate long-term value-creating initiatives.
- 3. Create an environment of constructive dialogue and active engagement between the corporate and investment communities.

Barton pointed to a number of concrete steps the FCLT initiative has taken over the course of the last three years towards achieving these three outcomes.' The most recent initiative was the launch of the 250 stock S&P Long-Term Value-Creation Index earlier this year. Only companies with high sustainability and governance scores will be included in the LTVC Index.

#### **Academic Insights?**

What insights does academia have to offer on the 'investing for the long term' question? More specifically, does it really produce higher investment returns? It was my job to answer these questions. I started with the confession of never having completed the PhD (Economics) program I entered in 1968. I escaped in 1969 to join the investment department of an insurance company. So I am only a 'semi' academic, but with the comparative advantage of understanding both the theory and the 'real world' practice of institutional investing.

One of the plusses of this duality was meeting John Maynard Keynes early in my career (only figuratively speaking, as he died in 1946). I was awed by the man's towering intellect, his wide range of interests, his willingness to go against academic orthodoxy, his focus on solving practical problems, and his interesting social life in English high society of the day. You will see that JMK and his ideas and actions are featured prominently as this *Letter* unfolds. But first, a few words about my 1969 entry into the institutional investment world.

#### My Institutional Investor Days

My institutional assignment was to answer the question: "Is portfolio theory useful in a 'real world' institutional investment department?" I don't pursue the answer to that question here, except to say that it <u>can</u> be, under the right set of circumstances. Here, I want to describe my entry into the strange world of institutional investing and what I learned.

I discovered that this world has an inside hierarchy made up of portfolio managers, research analysts, and traders, as well as an outside hierarchy made up of institutional brokerage sales people, research analysts, and traders. This unique 'inside/outside' world had its own currency called 'soft dollars'. The basic idea was that stock trading generated gross commissions which the broker divided into net commissions and a 'soft dollar' component which went into the investor's 'soft dollar' account. Most of these 'soft dollars' were spent on research. However, there were also trips, lunches, dinners, and other benefits.

In short, here is how 'institutional investing' seemed to work in a pensions context: employers offered pension plans to their employees, and hired investing institutions to manage pension assets for a fee. Brokers fed an ongoing stream of trading ideas to these institutions, which in turn placed buy (or sell) orders with the brokers that generated the trading idea. And what were the motivations in this game? To 'beat' the competition! Brokers competed with each other to sell the 'best' trading ideas. Institutional investors competed with each other to produce the 'best' investment returns. This was 'short-termism' in action!

#### **Keynes: an Early Institutional Investor!**

Sometime during my 1970s period of personal discovery I became aware Keynes had described this institutional investor behavior 40 years earlier in his opus "The General Theory of Employment, Interest, and Money". I dusted off my copy, and found that Chapter 12 reflected my own 1970s observations pretty accurately. Keynes dismissively called it "beauty contest investing", in contrast with the real purpose of investing: turning savings into value-producing capital. It is surely ironical that Keynes had already called for a *FCLT* initiative in 1936!

My rediscovery of Chapter 12 raised another question: how did Keynes know so much about the strange world of institutional investing? Much later, I would discover the answer: because as a sideline, he managed the King's College/Cambridge University Endowment Fund from 1921 to his death in 1946. Keynes was an early institutional investor himself!

How did that go for Keynes? Cambridge professors David Chambers and Elroy Dimson decided to find out by computerizing the Fund's 1921-1946 trading and valuation records. They found that he flailed about at first (i.e., behaving like a beauty contest investor). However, he learned from his early mistakes and by the 1930s he had become a low-turnover, high-conviction 'value' investor. In a 1938 speech, he said the best strategy "....is to carefully select a few investments having regard to their intrinsic value for a period of years ahead....". And how did the Endowment Fund do over the 25-year period it was managed by Keynes? Chamber and Dimson estimate the Fund generated a net excess return of 8%/year over a passively-managed fund with the same risk characteristics.

#### **Corroborating Evidence**

Is there any corroborating evidence that this strategy of carefully selecting and holding investments with strong long-term value-creating prospects produces superior multi-decade returns? There is. About the same time as Keynes penned his famous Chapter 12, apparently unbeknown to him, two Columbia University professors named Benjamin Graham and David Dodd formalized Keynes' approach in their classic 1934 text "Security Analysis". Their most famous disciple was Warren Buffett. His estimated 1976-2011 (35-year) net excess return was 13%/year. In the control of the contr

There is more. In the year 2000, Yale University's David Swenson wrote "Pioneering Portfolio Management: An Unconventional Approach to Institutional Investing". In this book, he integrates the Keynes and Buffett stories, and summarizes the five common success drivers as: 1. Long-term focus, 2. Equity-bias, 3. Contrarian 'value'/'bottom up' approach, 4. High-conviction, 5. Simple decision-making structure. Adding credibility to his 2000 Keynes-Buffett story, Swenson had already been applying these rules to managing the Yale Endowment for 14 years, as he continues to do to this day. The measured performance of the Yale Endowment Fund? A net excess return of 5%/year for the last 20 years.

New for this talk, I uncovered two more stories that fit the 'five common success drivers' theme, though with a more explicit focus on long-term sustainability and strong ESG scores. David Blood and Al Gore founded Generation Investment Management based on these principles in 2004. Alex van der Velden and his team began managing money this way for PGGM in 2007 and independently as Ownership Capital since 2013. Both organizations are generating net excess returns of 5%/year with equal or lower return volatility than their index comparator.

I noted earlier that *FCLT* and S&P have just launched that 250 stock S&P LTVC Index based on state-of-the -art Sustainability/ESG selection criteria. To that point, my February 2015 *Letter* reported the results of a study conducted by Eccles, Ioannou, and Serafeim titled "The Impact of Corporate Sustainability on Organizational Processes and Performance". The study matched up the investment performances of two 80-stock portfolios over the 1993-2010 period. One portfolio had high sustainability scores, the other low sustainability scores. The high-scoring portfolio outperformed the low-scoring one by 5%/year over the 17-year period, while exhibiting 20% lower return volatility. That same *Letter* turned the spotlight on the #1 sustainability company Unilever. It has outperformed its index comparator by 4%/year over the last 15 years with a beta of 0.7.

Finally, I wrote a 2014 article in support of the *FCLT* initiative titled "The Case for Long-Termism". There I document the cases of Mass Financial Services (MFS) and Ontario Teachers' Pension Plan (OTPP). Both organizations have generated a net excess return of 2%/year for 25 years using the principles of long-term investing set out above.

#### A Counter-Example from the IMF

A recent IMF study authored by Brad Jones titled "Institutionalizing Countercyclical Investing: A Framework for Long-Term Asset Owners" offers an interesting counter-example to this listing of long-term, high -performance track records. His findings are based on examining the investment behavior of a large, diverse group of institutional investors (\$24 trillion) over a 25-year period.

Rather than finding the market-stabilizing, counter-cyclical behavior he had hoped for, he found the opposite to be true. Specifically, he found that, on average, institutional investors contribute to financial market instability in two equally-important ways: 1. Investors fail to rebalance after major market movements, and 2. Investors chase performance by doubling up so as to ride major market trends (i.e., they chase historical performance in the hope it will continue).



In short, the IMF study shows 'short-termism' is alive and well in the global institutional Investment community, and continues to adversely affect the behavior of financial markets. Jones concludes that changing this will require four things:

- 1. More effective institutional governance
- 2. Recognizing and addressing underlying principal/agent problems
- 3. Measuring the right things, including the longer-term risk of failure
- 4. Updating regulatory processes to promote counter-cyclical rather than pro-cyclical behaviour

Will this be enough to take us from talking to walking the 'long-termism' road?

#### **Closing Thoughts**

George Bernard Shaw and John Maynard Keynes would both say 'no' to that question:

Shaw: "The reasonable man adapts himself to the world......the unreasonable one persists in trying to adapt the world to himself.....thus all progress depends on the unreasonable man....."

Keynes: "Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally..."

I agree with them, and that leaves us with two possible paths to walking the 'long-termism' road:

1. Persuade more unreasonable, unconventional people like Keynes, Buffett, Swenson, Lamoureux, Bertram, Gore, Blood, van der Velden, Wiseman, and Barton to join the cause.....

and

2. Somehow turn long-term investing into a reasonable, conventional practice.

Fortunately, these two paths are not mutually exclusive. The more unreasonable, unconventional people start walking down the 'long-termism' road, the more it will seem like a reasonable and conventional thing to do.

#### Keith Ambachtsheer

#### Endnotes:

- i. For example, my April 2015 Letter summarized the key recommendations in the FCLT's 54-page "Long-Term Portfolio Guide" related to investment beliefs, risk appetite, benchmarking, and incentive compensation. It is Chapter 22 in my just-released book "The Future of Pension Management".
- ii. For a more complete answer, I refer curious readers to the 1979 FAJ article (with Jim Farrell) "Can Active Management Add Value?"
- iii. Frazzini, Kabiller, Pederson (2013), "Buffett's Alpha", NBER Working Paper.
- iv. Ambachtsheer (2014), "The Case for Long-Termism", Rotman International Journal of Pension Management, Fall 2014.

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#### TAKE THE SURVEY

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2016 Nossaman Fiduciaries' Forum
Thursday, October 27 – Friday, October 28
San Francisco, CA



Thank you,

Ashley Dunning & Yuliya Oryol

Co-Chairs, Nossaman Public Pension & Investments Practice Group

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This email was sent to: Linda.Webb@ventura.org

This email was sent by: Nossaman LLP, 777 South Figueroa Street, 34th Floor, Los Angeles, CA 90017