VENTURA COUNTY EMPLOYEES’ RETIREMENT ASSOCIATION
BOARD OF RETIREMENT
DISABILITY & BUSINESS MEETING
DECEMBER 11, 2017

AGENDA

PLACE: 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. CALL TO ORDER

II. APPROVAL OF AGENDA

III. APPROVAL OF MINUTES


IV. CONSENT AGENDA

A. Approve Regular and Deferred Retirements and Survivors Continuances for the Month of November 2017.


V. RECEIVE AND FILE PENDING DISABILITY APPLICATION STATUS REPORT

VI. APPLICATIONS FOR DISABILITY RETIREMENT

A. Application for Service-Connected Disability Retirement – Johnson, David L.; Case No. 16-003.

VI. APPLICATIONS FOR DISABILITY RETIREMENT (continued)


B. Application for Service-Connected Disability Retirement – Acosta, Victor L.; Case No. 17-020.


C. Application for Service-Connected Disability Retirement – Janeen R. Bittmann; Case No. 17-014.

   1. Risk Management’s Request for an Extension of time to submit Medical Analysis through March 2018.


VII. INVESTMENT MANAGER PRESENTATIONS

A. Receive Annual Investment Presentation from Loomis Sayles, Stephanie S. Lord.

VIII. INVESTMENT INFORMATION

   NEPC – Allan Martin.
   VCERA – Dan Gallagher, Chief Investment Officer

A. Investment Manager Watch List Consideration.

   1. Staff Letter by C.I.O., Dan Gallagher.

VIII. INVESTMENT INFORMATION (continued)

B. 2018 Proposed Schedule of Investment Manager Presentations and Investment On-Site Due Diligence Visits.

**Recommended Action: Approve.**

1. Staff Letter by C.I.O., Dan Gallagher.
2. Proposed VCERA 2018 Investment Presentations Calendar.
3. Proposed VCERA 2018 Investment On-Site Due Diligence Calendar.

IX. OLD BUSINESS

A. Recommendation to Approve New Walter Scott Reduced Fee Schedule.

**RECOMMENDED ACTION: Approve.**

1. Staff Letter by C.I.O., Dan Gallagher.
2. Amended and Restated Fee Schedule.

B. California Government Code Section 7514.7 Annual Reporting.

**RECOMMENDED ACTION: Receive and File.**

1. Staff Letter by C.I.O., Dan Gallagher.
3. California Reporting Templates.

X. NEW BUSINESS

A. Recommendation to Approve PEPRA Annual Compensation Limit.

**RECOMMENDED ACTION: Approve.**

1. Staff Letter.


**Recommended Action: Approve**

1. Staff Letter by C.I.O., Dan Gallagher.
2. NEPC 2018 Public Funds Workshop Agenda.
X. **NEW BUSINESS** (continued)

      **Recommended Action: Approve.**

      1. Staff Letter. 318

      2. NAPPA 2018 Winter Seminar Agenda. 319 – 326

   D. Annual Appointment of Chair and Vice-Chair.

      1. Staff Letter. 327

XI. **INFORMATIONAL**

   A. SACRS Peer Comparison Report. 328 – 396

   B. CALAPRS Advanced Principles of Pension Management for Trustees. 397 – 400

   C. The 2018 Pension Bridge Annual Conference. 401 – 418

XII. **PUBLIC COMMENT**

XIII. **STAFF COMMENT**

XIV. **BOARD MEMBER COMMENT**

XV. **ADJOURNMENT**
ITEM:

1 Trustee Fox left at 10:30 a.m.
I. CALL TO ORDER

Chair Towner called the Business Meeting of November 20, 2017, to order at 9:00 a.m.

II. APPROVAL OF AGENDA

Chair Towner proposed amendments to the agenda to consider item “V.B. “Annual Investment Presentation from Abbott Capital Management”, ahead of item V.A. “Annual Investment Presentation from BlackRock”, and that VIII.C. “Actuarial Audit Presentation from Gabriel Roeder Smith” be time specific for 10:30 a.m.

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

MOTION: Approve the Agenda as Amended.

Moved by Goulet, seconded by Bianchi.

Vote: Motion carried
Yes: Bianchi, Fox, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
No: -
Absent: Foy, Hintz

III. APPROVAL OF MINUTES

A. Disability Minutes of November 6, 2017.

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

MOTION: Approve.

Moved by Johnston, seconded by McCombs.

Vote: Motion carried
Yes: Bianchi, Fox, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
No: -
Absent: Foy, Hintz

IV. CONSENT AGENDA


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

MOTION: Receive and File.
Moved by Bianchi, seconded by Fox.

Vote: Motion carried
Yes: Bianchi, Fox, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
No: -
Absent: Foy, Hintz

Following the vote on this item, the Board advanced to agenda item V.B.

V. INVESTMENT MANAGER PRESENTATIONS

A. Receive Annual Investment Presentation from BlackRock, Anthony Freitas and Timothy Murray.

Anthony Freitas and Timothy Murray were present on behalf of BlackRock to provide an organizational and investment performance update.

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

MOTION: Receive and File.

Moved by Wilson, seconded by McCombs.

Vote: Motion carried
Yes: Bianchi, Fox, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
No: -
Absent: Foy, Hintz

Following the vote on this item, the Board took a break at 10:05 a.m.

Upon returning from break at 10:15 a.m., the Board advanced to item VI.A.


Charles Van Horne and Young Lee were present on behalf of Abbott Capital Management to provide an organizational and investment performance update.

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

MOTION: Receive and File.

Moved by Goulet, seconded by Bianchi.

Vote: Motion carried
Yes: Bianchi, Fox, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
No: -
Absent: Foy, Hintz
Following the vote on this item, the Board advanced to item VIII.A.

VI. INVESTMENT INFORMATION

A. NEPC – Allan Martin.
   VCERA – Dan Gallagher, Chief Investment Officer.

      RECOMMENDED ACTION: Receive and file.

      Trustee Johnston said that the Board should consider removing the fund manager, Sprucegrove from the watch list and add Hexavest to the list. He then asked that it be added to the agenda for the combined meeting in December.

      After discussion by the Board, staff, and consultant, the following motion was made:

      MOTION: Receive and File.

      Moved by Goulet, seconded by Winter.

      Vote: Motion carried
      Yes: Bianchi, Fox, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
      No: -
      Absent: Foy, Hintz

      RECOMMENDED ACTION: Receive and file.

      After discussion by the Board, staff, and consultant, the following motion was made:

      MOTION: Receive and File.

      Moved by Sedell, seconded by Bianchi.

      Vote: Motion carried
      Yes: Bianchi, Fox, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
      No: -
      Absent: Foy, Hintz

      Trustee Fox left at 10:30 a.m., after the vote on this item.

      Following the vote on this item, the Board advanced to item VIII.C.

VII. OLD BUSINESS

   None.

VIII. NEW BUSINESS
A. Recommendation to Approve a $25 Million Allocation to Abbott Capital Management’s Secondary Fund of Funds.
RECOMMENDED ACTION: Approve.

   1. Staff Letter by C.I.O., Dan Gallagher.

   2. Memorandum from NEPC on Abbott Capital Management’s Secondary Fund of Funds.

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

MOTION: Approve.

Moved by Sedell, seconded by Bianchi.

Vote: Motion carried
Yes: Bianchi, Fox, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
No: -
Absent: Foy, Hintz

Following the vote on this item, the Board returned to item V.A.

B. Recommendation from Ad-Hoc Committee to Approve Technical Aspects for VCERA’s Fund of One Investment.
RECOMMENDED ACTION: Approve.


Mr. Gallagher reminded the Board that at the last Board Meeting the Chairman had appointed an ad-hoc committee to discuss technical details, and propose recommendations to implement the Fund of One investment. He said that after consulting with Abbott, legal counsel, and the committee members, he drafted a memorandum on behalf of the committee to present to the Board. Subsequently, trustee Goulet discussed the memorandum with outside counsel regarding the Fund of One structure, and may have some suggested corrections concerning the memo, but Mr. Gallagher believed that the memo represented the intentions of the committee. He then asked that the Board approve the recommendations of the committee.

Trustee Goulet commented that after speaking to outside counsel they agreed that the intent of the letter was acceptable, but some of the terminology within the memo could have been stated better.

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

MOTION: Approve.

Moved by Sedell, seconded by Bianchi.
Vote: Motion carried
Yes: Bianchi, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
No: -
Absent: Foy, Fox, Hintz

Following the vote on this item, the Board advanced to item VIII.D.

C. Actuarial Audit Presentation from Gabriel Roeder Smith, Brad Armstrong.

1. Actuarial Audit.

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

MOTION: Approve.

Moved by Bianchi, seconded by Winter.

Vote: Motion carried
Yes: Bianchi, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
No: -
Absent: Foy, Fox, Hintz

Following the vote on this item, the Board returned to item VIII.B.

D. Proposed Board Calendar for 2018.

RECOMMENDED ACTION: Approve.

1. Staff Letter.

2. Proposed 2018 Board Meeting Calendar.

Ms. Webb presented a proposed Board Meeting Calendar for 2018 to the Board. She said that the calendar was designed to avoid holidays and back-to-back meetings, while still trying to adhere to the 1st and 3rd Monday schedule of previous years; exceptions were combined meetings for April and December.

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

MOTION: Approve.

Moved by Bianchi, seconded by McCombs.

Vote: Motion carried
Yes: Bianchi, Goulet, Johnston, McCombs, Sedell, Wilson, Winter
No: -
Absent: Foy, Fox, Hintz
None.

X. PUBLIC COMMENT
None.

XI. STAFF COMMENT
Mr. Gallagher informed the Board that Walter Scott had tentatively agreed to the lower fee structure. He also said that he would be proposing for Board approval, calendars for 2018 investment presentations and for 2018 investment on-site due diligence at the next Board meeting in December.

Ms. Webb commented that the Market Based Premium Pay item that had been tabled in October would be on the agenda at the combined meeting on December 11th.

XII. BOARD MEMBER COMMENT
None.

XIII. ADJOURNMENT
The Chairman adjourned the meeting at 11:22 a.m.

Respectfully submitted,

LINDA WEBB, Retirement Administrator

Approved,

TRACY TOWNER, Chairman
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**Period: 05-18 As of: 11/30/2017**

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**Ventura County Retirement Assn**

**Date:** Thursday, November 30, 2017

**Time:** 08:28AM

**User:** 104164

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**Disability & Business Meeting Agenda - IV. CONSENT AGENDA**

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Ventura County Retirement Assn

Check Register - Standard

Period: 05-18 As of: 11/30/2017

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Total: 51  969,386.12

Company Disc Total 0.00  Company Total 969,386.12
VENTURA COUNTY EMPLOYEES’ RETIREMENT

PRESENTED BY:
Stephanie S. Lord, CFA, CIC
Vice President, Client Portfolio Manager

December 11, 2017
loomis sayles at a glance

A RICH INVESTMENT TRADITION

Serving clients with integrity since 1926

$261.3 billion assets under management*

Expertise across all major asset classes

75% of investment professionals dedicated to research & trading; 159 CFA® charterholders**

Global perspective: investors in Boston, San Francisco, Detroit, London and Singapore

WHERE WE INVEST

WHAT DEFINES US

Core attributes: integrity, transparency and a team-oriented culture

Rigorous fundamental analysis complemented by robust macro and market insight

Portfolio managers, strategists, research analysts and traders collaborating to identify our best ideas

Small, accountable product teams implementing portfolio decisions

Disciplined risk awareness integrated into a high conviction investment process

AUM BY GLOBAL ACCOUNTS

$261.3 billion

- US institutional ($123.0 b)
- US retail ($72.8 b)
- Non-US institutional ($59.1 b)
- Non-US retail ($6.4 b)

As of 9/30/2017.

*Includes the assets of both Loomis, Sayles & Co., L.P. and Loomis Sayles Trust Company, LLC. ($21.0 billion for the Loomis Sayles Trust Company). Loomis Sayles Trust Company is a wholly owned subsidiary of Loomis, Sayles & Company, L.P. **As of 12/31/2016. 283 investment professionals. 82% of CFA charterholders are investment professionals and 18% are non-investment professionals.
**Firm Overview**

Deep insight fuels our pursuit of alpha.

**MACRO STRATEGIES**
- **Director**
  - 37 years experience
- **Associate Director/Senior Global Macro Strategist**
  - 22 years experience
- **Senior Equity Strategist**
  - 32 years experience
- **Economist**
  - 37 years experience
- **Senior Commodities Analyst**
  - 9 years experience
- **2 Research Analysts**
  - 8 years average experience

**CREDIT RESEARCH**
- **Director**
  - 34 years experience
- **32 Senior Credit Analysts**
  - 19 years average experience
- **8 Credit Analysts**
  - 8 years average experience
- **6 Research Associates**
- **7 Research Assistants**
- **Proprietary credit rating system since the 1930s**

**QUANTITATIVE RESEARCH & RISK ANALYSIS**
- **2 Directors**
  - 21 years average experience
- **Quantitative Strategist**
  - 22 years experience
- **Director, LDI & Solutions**
  - 11 years experience
- **3 Senior Quantitative Analysts**
  - 14 years average experience
- **8 Quantitative Analysts**
  - 7 years average experience

**TRADING**
- **Head of Trading**
  - 29 years experience
- **4 Trading Directors**
  - 24 years average experience
- **35 Traders (incl. 4 directors above)**
  - 16 years average experience
- **Dir. of Portfolio Implementation**
  - 11 years experience
- **19 Portfolio Specialists**
  - 18 years average experience
- **Dir. of Operational Trading Risk Mgmt.**
  - 16 years experience
- **Risk Analyst**
  - 10 years experience
- **10 distinct asset class teams**

**SOVEREIGN RESEARCH**
- **5 Senior Sovereign Analysts**
  - 17 years average experience
- **2 Analysts**
  - 6 years average experience
- **2 Research Associates**

**MORTGAGE & STRUCTURED FINANCE**
- **Director**
  - 20 years experience
- **4 Strategists**
  - 22 years average experience
- **3 Senior Analysts**
  - 13 years average experience
- **Senior Portfolio Analyst**
  - 9 years experience
- **2 Research Analysts**
  - 7 years average experience
- **Research Associate**

**CONVERTIBLES & SPECIAL SITUATIONS EQUITY RESEARCH**
- **Director**
  - 32 years experience
- **5 Senior Research Analysts**
  - 16 years average experience
- **Research Analyst**
  - 6 years experience
- **Research Associate**

**EQUITY RESEARCH**
- **22 Senior Analysts**
  - 20 years average experience
- **6 Analysts**
  - 7 years average experience

*As of 9/30/2017; Years experience indicates industry experience.*
## By Global Sector

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As of 9/30/2017. Due to rounding, pie chart total may not equal 100%. Sector level assets include all accrued interest, cash and unrealized gain/loss on currency forwards. Other includes municipals, cash & equivalents, and derivatives. Includes the assets of both Loomis, Sayles & Co., LP, and Loomis Sayles Trust Company LLC.
our investment platform

<table>
<thead>
<tr>
<th>ALPHA STRATEGIES</th>
<th>BANK LOANS</th>
<th>DISCIPLINED ALPHA</th>
<th>EMERGING MARKET DEBT</th>
<th>FULL DISCRETION</th>
<th>GLOBAL</th>
<th>RELATIVE RETURN</th>
<th>MORTGAGE &amp; STRUCTURED FINANCE</th>
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<tbody>
<tr>
<td>Credit Asset</td>
<td>Senior Loans</td>
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<td>Corporate</td>
<td>Multisector</td>
<td>Global Bond</td>
<td>Short Duration</td>
<td>Agency MBS</td>
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<td>Senior Floating Rate and Fixed Income</td>
<td>Long</td>
<td>Local Currency</td>
<td>Core Plus</td>
<td>Global Credit</td>
<td>Inter. Duration</td>
<td>Investment Grade</td>
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<td>Credit Opportunities</td>
<td>Corporate Long</td>
<td>Short Duration</td>
<td>High Yield Full Discretion</td>
<td>Global Debt</td>
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<td>Securitized Credit (ERISA)</td>
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<td>Hard/Local Currency</td>
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<td>High Yield Private Debt</td>
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<td>Blend</td>
<td>US High Yield</td>
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<td>Small Cap Growth</td>
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<td>Small/Mid Cap Growth</td>
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<td>Strategic Alpha</td>
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As of 9/30/2017.

* Co-managed investment strategy
Highly Experienced, Seasoned Team

As of 9/30/2017.

Investment process

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<thead>
<tr>
<th>PRODUCT TEAM</th>
<th>MATTHEW EAGAN</th>
<th>DAN FUSS</th>
<th>BRIAN KENNEDY</th>
<th>ELAINE STOKES</th>
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<th>KEY SUPPORT</th>
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<th>Portfolio Specialists</th>
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<tr>
<td></td>
<td>S. Darci</td>
<td>B. Hazleton</td>
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<tr>
<td></td>
<td>K. Doyle</td>
<td>V. Patel</td>
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<td></td>
<td>M. Fitzgerald</td>
<td>A. Steede</td>
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<tr>
<th>SECTOR TEAMS</th>
<th>Global Asset Allocation</th>
<th>Developed Non-US Markets</th>
<th>US Yield Curve</th>
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<td>High Yield / Bank Loans</td>
<td>Inv Grade / Global Credit</td>
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<td>Convertibles</td>
<td>US Government</td>
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<td>Mortgage &amp; Structured Finance</td>
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<th>Macro Strategies</th>
<th>Credit Research</th>
<th>Quant. Research &amp; Risk Analysis</th>
<th>Equity Research</th>
<th>Convertibles &amp; Special Situations</th>
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<tr>
<td>Director</td>
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<td>Director</td>
<td>2 Directors</td>
<td>22 Senior Analysts</td>
<td>Convertibles &amp; Special Situations</td>
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<tr>
<td>Senior Global Macro Strategist</td>
<td>Senior Analysts</td>
<td>8 Analysts</td>
<td>Quantitative Strategist</td>
<td>6 Analysts</td>
<td>Director</td>
</tr>
<tr>
<td>Senior Equity Strategist</td>
<td>6 Research Associates</td>
<td>7 Research Assistants</td>
<td>Director, LDI &amp; Solutions</td>
<td>Research Analyst</td>
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<tr>
<td>Economist</td>
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<td>3 Senior Quantitative Analysts</td>
<td>8 Quantitative Analysts</td>
<td>Research Associate</td>
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<tr>
<td>Senior Commodities Analyst</td>
<td>2 Research Analysts</td>
<td>Research Associate</td>
<td>Equity Research</td>
<td>2 Senior Analysts</td>
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<td>5 Senior Analysts</td>
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<tr>
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<td>3 Senior Analysts</td>
<td>8 Senior Quantitative Analysts</td>
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<td>Research Analyst</td>
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<td>6 Research Associates</td>
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<tr>
<td>2 Research Associates</td>
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<td></td>
<td></td>
<td>7 Research Assistants</td>
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As of 9/30/2017.
guideline summary

Benchmark

• 65% Barclays Aggregate, 30% Citigroup High Yield Mkt, 5% JP Morgan ex US Hedged $US

Guidelines & Limitations

• Issuer: 5% maximum market value in a single US issuer, with the exception of US Government, Agency and GSE issuers.

• Emerging Market: 10% maximum market value in emerging market securities not domiciled in the JP Morgan Government Bond Index and 2% maximum market value in securities issued by a single entity domiciled in a country not included in the JP Morgan Government Bond Index (Emerging Market Index).

• Country: 40% maximum market value in bonds issued by non-US entities, including yankees, sovereign debt, structured notes linked to non-US markets, supranationals, and emerging market bonds.

• Currency: Maximum 20% market value in non-US dollar denominated securities

• Credit Quality: All securities shall be rated no lower than C, at the time of purchase, by Moody’s, S&P or Fitch. If a security is not rated by either of Moody’s, S&P, or Fitch, the Loomis Sayles equivalent rating applies. For split rated securities, the lower rating will govern.

• The minimum average rating of the portfolio shall be equivalent to Moody or S&P Baa3/BBB-. If not rated by either of the rating agencies, the Loomis Sayles rating will be used. In the case of split rated securities, the lower of the ratings will govern.

• Account may hold up to 55% market value in the aggregate of securities not rated investment grade by Moody, S&P, or Fitch, foreign bonds, non-144A private placements and unusually interest rate sensitive MBS. In the case of split rated securities, the higher rating will govern split-rated securities. If these securities are not rated (NR), Loomis Sayles rating will be used.

• Account must hold at least 65% market value in securities rated equal to or above Baa3/BBB-/BBB- by Moody, S&P or Fitch. In the case of split rated securities, the higher rating will govern split-rated securities. If these securities are not rated (NR), Loomis Sayles rating will be used.

• Account may not purchase equity securities, excluding preferred stock, but may hold equities resulting from conversions, exchanges or debt restructurings; account may hold no more than 5% market value in such equity securities.

Guideline summary is not a complete restatement of guidelines. The slide is intended to be a summary to aid in the review process.
Ventura County Employees’ Retirement - Multisector Full Discretion

TRAILING RETURNS AS OF 10/31/2017 (%)

- Excess Return (Gross)
- Portfolio (Gross)
- Portfolio (Net)
- Benchmark

<table>
<thead>
<tr>
<th>Period</th>
<th>Excess Return</th>
<th>Portfolio 10/31/2016</th>
<th>Portfolio 10/31/2017</th>
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<td>QTD</td>
<td>+0.00</td>
<td>77,556,550</td>
<td>82,615,110</td>
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<tr>
<td>YTD</td>
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<tr>
<td>1 Year</td>
<td>+3.27</td>
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<td></td>
</tr>
<tr>
<td>2 Years</td>
<td>+2.19</td>
<td></td>
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</tr>
<tr>
<td>3 Years</td>
<td>+1.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Years</td>
<td>+1.72</td>
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</tr>
<tr>
<td>10 Years</td>
<td>+1.66</td>
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<tr>
<td>Since Inception 7/31/2005</td>
<td>+1.80</td>
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Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2017
CALENDAR YEAR RETURNS AS OF 10/31/2017 (%)


Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2017
Ventura County Employees' Retirement - Multisector Full Discretion attribution analysis
10/31/2016 TO 10/31/2017

TOTAL RETURNS

<table>
<thead>
<tr>
<th></th>
<th>Total Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Return</td>
<td>6.45</td>
</tr>
<tr>
<td>Benchmark Return</td>
<td>3.19</td>
</tr>
<tr>
<td>Excess Return</td>
<td>3.27</td>
</tr>
</tbody>
</table>

TOTAL RETURN Attribution

- Portfolio Return: 0.06
- Allocation: 0.14
- Selection: 2.46
- Total Excess Return: 3.27

EXCESS RETURN ATtribution BY SECTOR

- Cash/Equivalents: -0.06
- US Treasury: 0.85
- Securitized: 0.60
- Municipals: -0.01
- Investment Grade Credit: 1.05
- High Yield Credit: -0.03
- Emerging Market Credit: 0.50
- Non-US Dollar: -0.06
- Convertibles: 0.01
- Equity: -0.04
- Unclassified: 0.00

The current benchmark is 65% BBG BARC Aggregate 30% Citigroup High Yield Mkt 5% JP Morgan Ex US Hedged $US (M).

Sources: Loomis, Sayles & Company, L.P. and others
For Institutional Investor Use Only. Not for Further Distribution
October 31, 2017
## SECTOR DISTRIBUTION

<table>
<thead>
<tr>
<th>Sector</th>
<th>Portfolio Final Weight</th>
<th>Benchmark Final Weight</th>
<th>Portfolio Average Weight</th>
<th>Benchmark Average Weight</th>
<th>Portfolio Return</th>
<th>Benchmark Return</th>
<th>Total Effect</th>
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<tbody>
<tr>
<td>Investment Grade Credit</td>
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<td>19.89</td>
<td>43.45</td>
<td>19.97</td>
<td>5.52</td>
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<td>4.20</td>
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<td>19.81</td>
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<td>0.00</td>
<td>0.82</td>
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</table>

Total Effects are impacted by sector returns, allocation shifts and market timing. Total Effect includes yield curve impact.

The current benchmark is 65% BBG BARC Aggregate 30% Citigroup High Yield Mkt 5% JP Morgan Ex US Hedged $US (M).

Sources: Loomis, Sayles & Company, L.P. and others

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October 31, 2017
## CURRENCY DISTRIBUTION

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<tr>
<th>Currency</th>
<th>Portfolio Weight Pre-Hedge</th>
<th>Portfolio Weight Post-Hedge</th>
<th>Currency Contribution</th>
<th>Bond Contribution</th>
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Weights reflect end of period holdings. Effects are as of the entire period. Bond Contribution is the sum of Country Allocation and Local Market effects. The current benchmark is 65% BBG BARC Aggregate 30% Citigroup High Yield Mkt 5% JP Morgan Ex US Hedged $US (M).
### Portfolio Summary

**AS OF 10/31/2017**

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<th>Portfolio 10/31/2017</th>
<th>Benchmark 10/31/2017</th>
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<tr>
<td>Yield to Worst (%)</td>
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<td>3.38</td>
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<tr>
<td>Effective Duration (years)</td>
<td>5.52</td>
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<tr>
<td>Effective Maturity (years)</td>
<td>7.71</td>
<td>6.96</td>
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<tr>
<td>OAS * (bps)</td>
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<td>129</td>
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<td>Coupon (%)</td>
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<td>3.93</td>
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<tr>
<td>Current Yield (%)</td>
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<td>Average Quality</td>
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<td>A2</td>
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<tr>
<td>Number of Securities</td>
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<table>
<thead>
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<th>Quality</th>
<th>Portfolio 10/31/2017</th>
<th>Benchmark 10/31/2017</th>
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<tbody>
<tr>
<td>AAA</td>
<td>10.98</td>
<td>47.78</td>
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<td>AA</td>
<td>3.43</td>
<td>4.88</td>
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<td>A</td>
<td>19.06</td>
<td>10.00</td>
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<td>BAA</td>
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<td>8.02</td>
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<td>BA</td>
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<td>16.18</td>
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<td>CAA</td>
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<td>2.48</td>
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<tr>
<td>CA</td>
<td>0.00</td>
<td>0.05</td>
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<tr>
<td>C</td>
<td>0.17</td>
<td>0.05</td>
</tr>
</tbody>
</table>

* OAS is option adjusted spread.

Client Guideline Quality Methodology presented.

The current benchmark is 65% BBG BARC Aggregate 30% Citigroup High Yield Mkt 5% JP Morgan Ex US Hedged $US (M).
### Sector Allocation

**10/31/2016 TO 10/31/2017 (%)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Portfolio 10/31/2017</th>
<th>Over/Under Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash/Equivalents</td>
<td>1.10</td>
<td>1.10</td>
</tr>
<tr>
<td>US Treasury</td>
<td>2.91</td>
<td>-21.08</td>
</tr>
<tr>
<td>Securitized</td>
<td>17.44</td>
<td>-2.37</td>
</tr>
<tr>
<td>Municipals</td>
<td>0.00</td>
<td>-0.20</td>
</tr>
<tr>
<td>Investment Grade Credit</td>
<td>45.08</td>
<td>25.19</td>
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<tr>
<td>High Yield Credit</td>
<td>18.44</td>
<td>-11.19</td>
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<tr>
<td>Emerging Market Credit</td>
<td>6.53</td>
<td>5.04</td>
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<td>Non-US Dollar</td>
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<td>6.17</td>
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<td>Convertibles</td>
<td>2.06</td>
<td>2.06</td>
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<tr>
<td>Equity</td>
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<td>Hedge</td>
<td>0.21</td>
<td>-4.79</td>
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</table>

The current benchmark is 65% BBG BARC Aggregate 30% Citigroup High Yield Mkt 5% JP Morgan Ex US Hedged $US (M).

Sources: Loomis, Sayles & Company, L.P. and others

For Institutional Investor Use Only. Not for Further Distribution

October 31, 2017
investment team

HIGHLY EXPERIENCED, SEASONED TEAM

<table>
<thead>
<tr>
<th>PRODUCT TEAM</th>
<th>Yrs of industry experience</th>
<th>Yrs with firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATTHEW EAGAN</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>KEVIN KEARNS</td>
<td>31</td>
<td>10</td>
</tr>
<tr>
<td>TODD VANDAM</td>
<td>23</td>
<td>23</td>
</tr>
</tbody>
</table>

| BRIAN HESS | Global Strategist | 14 | 3 |
| ELAINE KAN | Rates & Currency Strategist | 20 | 6 |
| DIANA MONTEITH | Convertibles and Special Situations Strategist | 32 | 15 |
| JOHN DEVOY | Credit Strategist | 18 | 2 |

| ROGER ACKERMAN | Product Manager | 30 | 8 |

| SCOTT DARCI | Senior Investment Analyst, Derivatives Strategist | 11 | 9 |

<table>
<thead>
<tr>
<th>KEY SUPPORT</th>
<th>Investment Analysts</th>
<th>Portfolio Specialists</th>
<th>Product Managers</th>
</tr>
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<tbody>
<tr>
<td>Kristen Doyle</td>
<td>Brian Hazelton</td>
<td>Boeurn Kan-Crawford</td>
<td>Fred Sweeney</td>
</tr>
<tr>
<td>Vishal Patel</td>
<td>Christopher Romanelli</td>
<td>Anthony Falzarano</td>
<td>Ken Johnson</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Emerging Markets</td>
<td>High Yield / Bank Loans</td>
<td>Convertibles</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Macro Strategies</td>
<td>Director</td>
<td>32 Senior Analysts</td>
<td>8 Analysts</td>
<td>6 Research Associates</td>
<td>7 Research Assistants</td>
</tr>
<tr>
<td>Senior Global Macro Strategist</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Equity Strategist</td>
<td>Economist</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Senior Commodities Analyst</td>
<td>2 Research Analysts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sovereign Research</td>
<td>5 Senior Analysts</td>
<td>2 Analysts</td>
<td>2 Research Associates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Research</td>
<td>Director</td>
<td>4 Strategists</td>
<td>3 Senior Analysts</td>
<td>Senior Portfolio Analyst</td>
<td>2 Research Analysts</td>
</tr>
<tr>
<td>Mortgage &amp; Structured Finance</td>
<td></td>
<td></td>
<td>Research Associate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quant. Research &amp; Risk Analysis</td>
<td></td>
<td></td>
<td></td>
<td>2 Directors</td>
<td>Quantitative Strategist</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Director, LDI &amp; Solutions</td>
<td>3 Senior Quantitative Analysts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8 Quantitative Analysts</td>
<td></td>
</tr>
<tr>
<td>Equity Research</td>
<td></td>
<td></td>
<td></td>
<td>22 Senior Analysts</td>
<td>6 Analysts</td>
</tr>
<tr>
<td>Convertibles &amp; Special Situations</td>
<td></td>
<td></td>
<td></td>
<td>Director</td>
<td>5 Senior Analysts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Research Analyst</td>
<td>Research Associate</td>
</tr>
<tr>
<td>Fixed Income Trading</td>
<td>29 Traders/TAs</td>
<td>Director, Portfolio Implementation</td>
<td>16 Portfolio Specialists</td>
<td>Director, Operational Trading Risk Mgt.</td>
<td>Risk Analyst</td>
</tr>
</tbody>
</table>

As of 9/30/2017.
guideline summary

Benchmark

• BoA ML U.S. Dollar LIBOR 3-month Constant Maturity

Guidelines & Limitations

• Minimum Credit Quality: The Fund will not hold more than +/-50% MV in securities rated below Baa3/BBB-/BBB- by Moody, S&P and Fitch (best) as determined at the time of purchase. If unrated, Loomis rating applies.

• Emerging Markets: The Account’s NET emerging market currency exposure shall be limited to +/-20% as determined at the time of purchase.

• Convertibles & Residual Equity: The Account’s net equity exposure is +/-5%, excluding Preferred Stock, Convertible Preferred Stock and Commingled Pools as determined at the time of purchase.

• Duration: The effective duration of the Fund will not exceed 5 years and may be as low as -2 years.

• Industry Concentration: The Fund’s NET exposure to any individual industry is +/- 25%, excluding securities issued or guaranteed by Government issuers as determined at time of purchase.

• Currency: The Account’s NET individual currency, excluding U.S. dollar shall be limited to +/-15% as determined at the time of purchase.

*Guideline summary is not a complete restatement of guidelines. The slide is intended to be a summary to aid in the review process.*
Strategic Alpha is an all-weather fixed income strategy that seeks to insulate investors from traditional risks of fixed income investing.

A complement or replacement to traditional fixed income

<table>
<thead>
<tr>
<th>SOURCES OF MARKET RISK</th>
<th>TRADITIONAL FIXED INCOME</th>
<th>MULTISECTOR</th>
<th>STRATEGIC ALPHA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excess Return Through the Cycle</td>
<td>Total Return</td>
<td>Uncorrelated, Positive Returns Through the Cycle</td>
</tr>
<tr>
<td>Benchmark Awareness</td>
<td>Relatively Tight tracking Error</td>
<td>Wide Tracking Error</td>
<td>Benchmark Agnostic</td>
</tr>
<tr>
<td>Risk Neutral Point</td>
<td>Benchmark</td>
<td>Benchmark</td>
<td>Cash</td>
</tr>
<tr>
<td>Curve/Term Structure Risk</td>
<td>Benchmark +/-</td>
<td>Long</td>
<td>Long/Short</td>
</tr>
<tr>
<td>Credit/Spread Risk</td>
<td>Benchmark +/-</td>
<td>Long</td>
<td>Long/Short</td>
</tr>
<tr>
<td>Currency Risk</td>
<td>Zero to Modest Long</td>
<td>Zero to Long</td>
<td>Long/Short</td>
</tr>
<tr>
<td>Hedging</td>
<td>Manage Risk versus Benchmark</td>
<td>Manage Risk versus Benchmark</td>
<td>Isolate Beta and Alpha Opportunities</td>
</tr>
<tr>
<td>Risk Management Focus</td>
<td>Tracking Error</td>
<td>Absolute Volatility</td>
<td>Absolute Volatility and Drawdown</td>
</tr>
</tbody>
</table>

There is no guarantee that the investment objective will be realized or that the strategy will generate positive or excess return. Traditional Fixed Income and Multisector strategies are shown for illustrative purposes only. They are not intended to represent any actual portfolios managed by Loomis Sayles. This reflects the current opinions of the sector team and views are subject to change at any time without notice. Other industry analysts and investment personnel may have different views and opinions.
## Strategy Overview

### Complementing Core

A hypothetical equal weighted blend of Strategic Alpha and the Bloomberg Barclays Aggregate has:

- Lowered volatility
- Improved risk-adjusted returns

<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS Strategic Alpha Composite</td>
<td>3.91</td>
<td>2.64</td>
<td>2.57</td>
</tr>
<tr>
<td>Bloomberg Barclays Aggregate Index</td>
<td>0.07</td>
<td>2.71</td>
<td>2.06</td>
</tr>
<tr>
<td>Hypothetical 50% Strat Alpha / 50% BBg Barc Agg</td>
<td>1.99</td>
<td>2.70</td>
<td>2.33</td>
</tr>
</tbody>
</table>

**Data Sources:** Loomis Sayles and Zephyr Style Advisor.

*Return and Risk metrics for blended portfolio are based on monthly rebalancing.*

*Past performance is no guarantee of future results.*
alpha generation

CREDIT

The portfolio’s flexibility in credit market beta allows it to tactically adjust these allocations throughout various market environment and economic regimes.

- **Jan 12–Aug 12**: Reduced overall credit exposure as the cycle progressed and top-down valuations became less compelling.
- **Feb 13–Dec 13**: Gradually emphasized bank loan exposure to move up capital structure.
- **Sep 14–Mar 15**: Increased HY and IG allocation.

Due to active management, allocations will evolve over time. The chart above shows credit markets only. Certain portfolio exposures may be excluded from this chart because in our view, they are best represented in terms of contribution to duration as shown later in the presentation.

<table>
<thead>
<tr>
<th>Period</th>
<th>Exposures (%) of Net Notional</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/30/2017</td>
<td>Dividend Equity: 6.56, Max: 7.72, Min: 4.61</td>
</tr>
<tr>
<td></td>
<td>Convertibles: 5.11, Max: 6.21, Min: 3.11</td>
</tr>
<tr>
<td></td>
<td>Emerging Mkt: 8.66, Max: 11.13, Min: 2.94</td>
</tr>
<tr>
<td></td>
<td>Global Credit: 3.80, Max: 5.26, Min: 1.43</td>
</tr>
<tr>
<td></td>
<td>Securitized: 42.52, Max: 48.00, Min: 36.42</td>
</tr>
<tr>
<td></td>
<td>IG Corp: 26.96, Max: 30.72, Min: 9.42</td>
</tr>
<tr>
<td></td>
<td>HY Corp: 37.47, Max: 41.61, Min: 9.13</td>
</tr>
</tbody>
</table>

Source: Loomis Sayles, as of 9/30/2017.
alpha generation

CURVE

Seeks to benefit from movements in global interest rates. Portfolio’s flexibility allows duration to be adjusted tactically.

As of 9/30/2017.
Source: Loomis Sayles.
alpha generation

CURRENCY

Seeks to benefit from attractive yields and directional movements in foreign exchange rates. Broadens alpha universe and may be used to hedge other portfolio exposures.

Notional exposure of currency positioning as of 9/30/2017

Source: Loomis Sayles. Notional exposure of currency related trading strategies does not represent comprehensive portfolio exposures. It excludes currency exposure of unrealized gains or losses on non-currency related derivatives positions.

VS. US DOLLAR

<table>
<thead>
<tr>
<th>Currency</th>
<th>Net Notional Exposure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentine Peso</td>
<td>1.76</td>
</tr>
<tr>
<td>Malaysian Ringgit</td>
<td>1.00</td>
</tr>
<tr>
<td>Philippine Peso</td>
<td>1.21</td>
</tr>
<tr>
<td>Canadian Dollar</td>
<td>0.20</td>
</tr>
<tr>
<td>Euro</td>
<td>-1.40</td>
</tr>
<tr>
<td>British Pound</td>
<td>1.37</td>
</tr>
<tr>
<td>Brazilian Real</td>
<td>1.25</td>
</tr>
<tr>
<td>Mexican Peso</td>
<td>1.28</td>
</tr>
<tr>
<td>Australian Dollar</td>
<td>1.00</td>
</tr>
<tr>
<td>New Zealand Dollar</td>
<td>-1.00</td>
</tr>
<tr>
<td>South African Rand</td>
<td>1.00</td>
</tr>
<tr>
<td>New Israeli Shekel</td>
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<tr>
<td>Euros</td>
<td>1.68</td>
</tr>
<tr>
<td>Russian Ruble</td>
<td>1.00</td>
</tr>
<tr>
<td>Turkish Lira</td>
<td>1.72</td>
</tr>
<tr>
<td>South African Rand</td>
<td>-1.50</td>
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<tr>
<td>South African Rand</td>
<td>1.00</td>
</tr>
<tr>
<td>Norwegian Krone</td>
<td>-1.03</td>
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<tr>
<td>Euros</td>
<td>14.60</td>
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<tr>
<td>Euros</td>
<td>-10.68</td>
</tr>
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</table>

Total Net Notional Exposure: 3.92%
investment results

CALENDAR YEAR RETURNS (%) AS OF 10/31/2017

Returns over one year are annualized. Information is reported on a trade date basis. Data Source: BofA Merrill Lynch, Loomis Sayles.
attribution analysis

10/31/2016 - 10/31/2017 (%)

Total Return

<table>
<thead>
<tr>
<th>Category</th>
<th>Long</th>
<th>Short</th>
<th>Net Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Return</td>
<td>4.15%</td>
<td>4.69%</td>
<td>-0.54%</td>
</tr>
<tr>
<td>Long</td>
<td>0.36%</td>
<td>0.44%</td>
<td>0.44%</td>
</tr>
<tr>
<td>Short</td>
<td>-0.25%</td>
<td>-0.42%</td>
<td>-0.25%</td>
</tr>
<tr>
<td>Net Total</td>
<td>0.11%</td>
<td>0.02%</td>
<td>0.09%</td>
</tr>
</tbody>
</table>

Source: Loomis Sayles (In2: Absolute Return Attribution)

Past performance does not guarantee future results.
Strategies are based on internal Loomis Sayles classifications. Equity securities are deemed to have a duration and maturity value of zero. Yield is Yield to Effective Maturity. Data Source: Loomis Sayles.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Portfolio</th>
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<tbody>
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<td>Effective Duration</td>
<td>0.87</td>
</tr>
<tr>
<td>Yield</td>
<td>3.70</td>
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<tr>
<td>Number of Issues</td>
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<table>
<thead>
<tr>
<th>Strategy</th>
<th>Net</th>
<th>Long Physical</th>
<th>Long Derivative</th>
<th>Long Exposure</th>
<th>Short Physical</th>
<th>Short Derivative</th>
<th>Short Exposure</th>
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<tr>
<td>Global Rates</td>
<td>-35.74</td>
<td>6.97</td>
<td>24.35</td>
<td>31.33</td>
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<td>Securitized</td>
<td>34.35</td>
<td>35.53</td>
<td>0.62</td>
<td>36.15</td>
<td>0.00</td>
<td>-1.80</td>
<td>-1.80</td>
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<td>Investment Grade Corporate</td>
<td>10.53</td>
<td>10.53</td>
<td>0.00</td>
<td>10.53</td>
<td>0.00</td>
<td>0.00</td>
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<td>Bank Loans</td>
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<td>0.00</td>
<td>9.13</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>High Yield Corporate</td>
<td>5.81</td>
<td>7.97</td>
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<td>7.97</td>
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<td>-2.15</td>
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<td>Emerging Market</td>
<td>4.19</td>
<td>7.92</td>
<td>0.00</td>
<td>7.92</td>
<td>0.00</td>
<td>-3.74</td>
<td>-3.74</td>
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<tr>
<td>Dividend Equity</td>
<td>3.74</td>
<td>5.13</td>
<td>1.77</td>
<td>6.90</td>
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<td>-3.16</td>
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<td>Risk Management</td>
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<td>Convertibles</td>
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<td>0.00</td>
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<tr>
<td>Global Credit</td>
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<td>1.27</td>
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<td>1.27</td>
<td>0.00</td>
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<td>Currency</td>
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<td>9.65</td>
<td>9.65</td>
<td>0.00</td>
<td>-9.92</td>
<td>-9.92</td>
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<tr>
<td>Subtotal</td>
<td>32.55</td>
<td>87.32</td>
<td>36.83</td>
<td>124.14</td>
<td>0.00</td>
<td>-91.59</td>
<td>-91.59</td>
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<tr>
<td>Cash and Equivalents</td>
<td>12.53</td>
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<td>12.53</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Duration Management</td>
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<td>0.03</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>45.12</td>
<td>99.88</td>
<td>36.83</td>
<td>136.71</td>
<td>0.00</td>
<td>-91.59</td>
<td>-91.59</td>
</tr>
</tbody>
</table>

Fund structure summary

Summary of Strategies and Positions (%) as of 10/31/2017
2017-2018 global growth themes

**US & CANADA**
US growth is expected to rise from 1.5% in 2016 to 2% or higher in 2017 and 2018. Growth in Canada is solid, broad based, and should be close to 3% this year. The BOC has begun normalizing interest rates, taking rates 50 bps higher so far.

**UK**
Growth still positive but below potential. Consumers pinched by a lack of real wage growth and softer housing. Domestic politics stay messy as the government negotiates with the EU toward Brexit.

**LATIN AMERICA**
Growth in the region should slowdown in 2017 but should pick up in 2018, except in Colombia where we are more bearish than consensus. Brazil is expected to post economic recovery this year of 0.7%.

**AFRICA & MIDDLE EAST**
Growth varies widely across the region, but expect a further improvement into 2018. Africa’s two largest economies (Nigeria and Egypt) should see better economic activity following currency devaluations and policy reforms. Oil production cuts and fiscal austerity will challenge growth in the GCC. Geopolitical/security risks are on the rise.

**EUROPE**
Solid 1.8% expected growth in the euro area into 2018. Policy tailwind should diminish as ECB tapers QE, vulnerabilities remain mainly political. GDP has picked up in emerging Europe with growth in Czech, Hungary and Poland between 3.5-4%, Turkey above 5% and Russia close to 2%.

**CHINA**
GDP growth is stable, near 6.7% for 2017 but likely slower in 2018. The property sector is slowing, but manufacturing is a brighter spot. Policy makers remain focused on reducing financial stability risks via regulatory tightening.

**JAPAN**
Growth expected to improve to around 1% or higher in 2017 and 2018 on firmer export and consumer sectors. Support comes from lower energy prices, strength in tourism, and corporate profits, along with a tight labor market and rising wages.

**ASIA**
Growth has been revised up for much of Asia, given strong external tailwinds. These tailwinds are expected to moderate in 2018, but remain positive. The housing market has been slowing in New Zealand. For emerging Asia, growth should remain more robust, over 5% in 2017 and 2018.
global growth

EXPECTED REAL GDP GROWTH

Bloomberg Consensus: 11/30/2017
investment process

DIVERGING CREDIT CYCLES AMONG COUNTRIES AND REGIONS CAN PROVIDE OPPORTUNITIES

Views as of 9/30/2017. Green shading denotes asset classes the presenter expects to appreciate and red shading denotes asset classes the presenter expects to depreciate at each point in the economic cycle. This material is provided for informational purposes only and should not be construed as investment advice. Investment decisions should consider the individual circumstances of the particular investor. This reflects the current opinions of the presenter and views are subject to change at any time without notice. Other industry analysts and investment personnel may have different views and opinions.
bond market environment

US IG CREDIT SECTORS: CURRENT SPREAD LEVELS VS. 10-YR HIGH AND LOW

Data source: Barclays Capital, history through 11/30/2017.
bond market environment

SELECT US HIGH YIELD SECTORS: CURRENT SPREAD LEVELS VS. 10-YR HIGH AND LOW

Data source: Barclays Capital, history through 11/30/2017.
reduced liquidity + volatility = greater potential market fragility

MARKET ILLIQUIDITY REMAINS A CONCERN

*Data sources: Deutsche Bank, Bloomberg Barclays, history through 9/27/2017
**Data source: Thomson Reuters Datastream, as of 9/27/2017

LIQUIDITY IN THE CORPORATE SECTOR*

US PRIMARY DEALER HOLDINGS**

Disability & Business Meeting Agenda - VII.A. INVESTMENT MANAGER PRESENTATIONS - LOOMIS SAYLES
“DISTRESSED” SECURITIES AND DEFAULT RATES HAVE DECREASED SINCE EARLY 2010

‘Distressed’ securities reached pre-Lehman levels in December 2009.

*Percent of bonds in Merrill Lynch High Yield Master Index with Spreads 1000 bps over Treasurys.
Data source: Bloomberg, Merrill Lynch, Moody’s, history through October 2017, monthly data.
bond market environment

US INVESTMENT GRADE AND HIGH YIELD OPTION-ADJUSTED SPREADS

Data source: Barclays Capital, history through 11/30/2017.
This report is a service provided to customers of Loomis Sayles for informational purposes and is not a recommendation to purchase or sell securities. Unless otherwise noted, the performance shown is gross of management fees. Past performance is not a guarantee of future results. Loomis Sayles believes the information contained in this report is reliable but we do not guarantee its accuracy. Additional information on portfolio holdings, portfolio attribution and portfolio transactions are available to all investors upon request.

contacts

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Executive VP, Portfolio Manager

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Portfolio Manager

Elaine M. Stokes
Portfolio Manager

Brian Kennedy
Portfolio Manager

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Portfolio Manager

Kevin Kearns
Portfolio Manager
Senior Derivatives Strategist

Todd Vandam, CFA
Portfolio Manager

Roger Ackerman
Product Manager
December 11, 2017

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

SUBJECT: INVESTMENT MANAGER WATCH LIST UPDATE

Dear Board Members:

At the Board meeting of November 20, 2017, Board Member Chris Johnston asked that the Board agendize a discussion to add Hexavest to the Board's investment Watch List because of investment performance concerns, and remove Sprucegrove.

Attached is a report of annualized non-U.S. investment manager performance from NEPC's October 31, 2017 monthly report for your review. This report was presented to the Board at its November 20, 2017 meeting.

RECOMMENDATION: CONSIDER ADDING HEXAVEST TO AND REMOVING SPRUCEGROVE FROM THE BOARD'S INVESTMENT WATCHLIST

Respectfully submitted,

Dan Gallagher
Chief Investment Officer
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<th>% of Portfolio</th>
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<th>YTD (%)</th>
<th>1 Yr (%)</th>
<th>3 Yrs (%)</th>
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December 11, 2017

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

SUBJECT:  2018 CALENDARS OF INVESTMENT MANAGER PRESENTATIONS AND OF INVESTMENT ON-SITE DUE DILIGENCE VISITS

Dear Board Members:

Attached for your consideration and adoption are two calendars. One is a proposed calendar of 2018 annual investment presentations. The other is a proposed calendar of 2018 investment on-site due diligence visits.

Please approve both calendars, and authorize expenditures for investment on-site due diligence travel in accordance with the Board adopted Education and Travel Policy. Appropriations for on-site due diligence travel are included in the current year Board adopted budget, and for the remainder of the calendar year, will be included in the FY2018-2019 Budget.

IT IS RECOMMENDED THAT THE BOARD APPROVE:
   1. THE PROPOSED 2018 CALENDARS FOR INVESTMENT PRESENTATIONS AND FOR INVESTMENT ON-SITE DUE DILIGENCE TRAVEL AND,
   2. AUTHORIZE NECESSARY EXPENDITURES, IN ACCORDANCE WITH THE BOARD’S ADOPTED TRAVEL POLICY AND BUDGET.

Sincerely,

Dan Gallagher
Chief Investment Officer
### VCERA 2018 INVESTMENT PRESENTATIONS CALENDAR

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<th>Presentations</th>
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# VCERA 2018 INVESTMENT ON-SITE DUE DILIGENCE CALENDAR

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Ver. 12/11/2017
December 11, 2017

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

SUBJECT: BOARD APPROVAL OF WALTER SCOTT INVESTMENT MANAGEMENT FEE REDUCTION

Dear Board Members:

Attached is an Amended and Restated Fee Schedule reflecting VCERA’s assets under management by Walter Scott as of the effective date of this Fee Schedule. The manager will review VCERA’s assets under management on a quarterly basis, and will adjust the management fee to the applicable schedule as set forth in the document.

To effect this change, VCERA is required to return an executed copy of the amended fee schedule prior to the end of this calendar year.

RECOMMENDATION: AUTHORIZE THE BOARD CHAIR OR RETIREMENT ADMINISTRATOR, OR THE CHIEF INVESTMENT OFFICER AS A BACK-UP, TO APPROVE AND EXECUTE THE AMENDED AND RESTATED FEE SCHEDULE DOCUMENT.

Respectfully submitted,

[Signature]
Dan Gallagher
Chief Investment Officer
This Amended and Restated Fee Schedule (this “Fee Schedule”), between BNY Mellon Investment Management Cayman Ltd (the “Manager”) and the undersigned (the “Investment Fiduciary”), on behalf of Ventura County Employees’ Retirement Association (the “Participating Trust”), will become effective as of January 1, 2018. Capitalized terms used herein and not otherwise defined shall have the meanings given to them in the current confidential offering memorandum of the NCS Group Trust, as the same may be amended or supplemented from time to time.

WHEREAS, the Manager and the Investment Fiduciary have previously entered into a fee schedule or similar agreement setting forth the management fee payable to the Manager with respect to the Participating Trust’s investment in the NCS Group Trust (the “Existing Fee Schedule”); and

WHEREAS, the Manager and the Investment Fiduciary wish to amend and restate the Existing Fee Schedule.

NOW, THEREFORE, the Manager and the Investment Fiduciary amend and restate the Existing Fee Schedule as follows:

Management Fee for the Global Fund, the Global Emerging Markets Fund and the International Fund

Up to US$100m:

☐ 0.95% on the first $50m,
☐ 0.85% on the next $25m, and
☐ 0.60% thereafter.

US$100m or more but less than US$175m:

✓ 0.75% on the first $100m, and
☐ 0.50% thereafter.

US$175m or more:

☐ 0.70% on the first $100m, and
☐ 0.50% thereafter.

The Management Fee will be based on the Participating Trust’s AUM as of the effective date of this Fee Schedule. The Manager will review the Participating Trust’s AUM on a quarterly basis. In the event the Participating Trust’s AUM crosses one of the thresholds specified above (with a tolerance of +/- US$5m, to be applied at the Manager’s discretion), the Manager shall have the right, without obligation, on a going forward basis, upon notice to the Investment Fiduciary, to adjust the Participating Trust’s Management Fee to the applicable annual rate as set forth above.

OR

Management Fee for the US Fund

☐ 0.70% on the first $100m, and
☐ 0.50% thereafter.

In the event that the Participating Trust purchases Units other than as of the first day of a calendar month or redeems Units other than as of the last day of a calendar month, the monthly Management Fee calculation in respect of such Units will be pro-rated based on such date of purchase or redemption, as applicable. Notwithstanding the foregoing, if the Participating Trust redeems all of its Units, the Manager will apply (or procure the application of) such portion of the redemption proceeds against any amount of the Management Fee accrued or due from the Participating Trust as at the redemption date as required to settle such amount. If the amount of the Management Fee then accrued or due exceeds the redemption proceeds, the Participating Trust will be invoiced for the amount of the shortfall.
The Management Fee will cover all management, portfolio management and risk management services and the fees and expenses of the Custodial Trustee as well as any compensation to the Placement Agent or other expenses relating to the offering of Units. The Manager shall pay out of the Management Fee received by it, the fees of the Investment Manager as agreed between the Manager and the Investment Manager from time to time. To the extent the Manager engages any other placement agents, it may enter into other compensation arrangements that differ from that with respect to the Placement Agent and such compensation arrangements shall be disclosed to applicable investors.

This Fee Schedule may only be amended with the express written consent of the Investment Fiduciary and Manager, provided, however, that any amendment to lower the Management Fee may be effected in the Manager’s sole discretion by providing notice of such lower rate to the Investment Fiduciary. Notwithstanding any amendment to this Fee Schedule, from time to time, all other provisions of the Adoption Agreement shall remain in full force and effect and binding on the Investment Fiduciary and Manager.

We elect to pay our fees by either (please tick method of payment):

☑ (a) wire transfer to Bank (wire instructions will be provided to the Subscriber on the quarterly Management Fee invoice):

OR

☐ (b) effecting a redemption of Units held by the Participating Trust, the proceeds of which are equal to the management fee owing to the Manager.

Dated this __________ day of __________, 20__

BNY MELLON INVESTMENT MANAGEMENT CAYMAN LTD

By: ________________________________

Name: ________________________________

Title: ________________________________

PARTICIPATING TRUST

Ventura County Employees’ Retirement Association, in its capacity as the Investment Fiduciary

(print name of investment fiduciary)

By: ________________________________

Authorized Signature

Name: ________________________________

Name of Authorized Signatory (please print)

Title: ________________________________

Title of Authorized Signatory (please print)
December 11, 2017

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

SUBJECT: CALIFORNIA GOVERNMENT CODE SECTION 7514.7 ANNUAL REPORTING

Dear Board Members:

Presented to the Board are reports meeting the public disclosure requirements for alternative investments under California Government Code Section 7514.7. Note that the private equity reports have already been reviewed with the Board as part of Abbott’s prior presentation on November 20, 2017. Reports from open-ended commingled fund real estate managers Prudential and UBS are also included for your review.

RECOMMENDATION: RECEIVE AND FILE THE ATTACHED ALTERNATIVE INVESTMENT DISCLOSURE REPORTS

Respectfully submitted,

Dan Gallagher
Chief Investment Officer
California Disclosure Reporting

Disability & Business Meeting Agenda - IX.B. OLD BUSINESS: CA GOVT. CODE SECTION 7514.7 ANNUAL REPORTING
## California Disclosure Reporting

### California Code, Government Code - GOV § 7514.7

Private Equity Investments as of December 31, 2016

<table>
<thead>
<tr>
<th>Name of Fund</th>
<th>Address of Fund Manager</th>
<th>Closing Date</th>
<th>Commitment</th>
<th>Vintage Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams Street 2010 Direct Fund</td>
<td>One North Wacker Drive, Suite 2700, Chicago, IL 60606-2823</td>
<td>5/21/10</td>
<td>$6,500,000</td>
<td>2010</td>
</tr>
<tr>
<td>Adams Street 2013 Global Fund</td>
<td>One North Wacker Drive, Suite 2700, Chicago, IL 60606-2823</td>
<td>6/27/13</td>
<td>$75,000,000</td>
<td>2013</td>
</tr>
<tr>
<td>Adams Street 2016 Global Fund</td>
<td>One North Wacker Drive, Suite 2700, Chicago, IL 60606-2823</td>
<td>8/16/16</td>
<td>$50,000,000</td>
<td>2016</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 Non-U.S. Developed Markets Fund</td>
<td>One North Wacker Drive, Suite 2200, Chicago, IL 60606-2823</td>
<td>5/21/10</td>
<td>$25,000,000</td>
<td>2010</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 Non-U.S. Emerging Markets Fund</td>
<td>One North Wacker Drive, Suite 2200, Chicago, IL 60606-2823</td>
<td>5/21/10</td>
<td>$6,500,000</td>
<td>2010</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 U.S. Fund</td>
<td>One North Wacker Drive, Suite 2200, Chicago, IL 60606-2823</td>
<td>5/21/10</td>
<td>$42,500,000</td>
<td>2010</td>
</tr>
<tr>
<td>Drive Capital Fund II</td>
<td>629 N. High Street, Columbus, OH 43215</td>
<td>8/13/16</td>
<td>$15,000,000</td>
<td>2016</td>
</tr>
<tr>
<td>HarbourYest - Dover Street IX</td>
<td>One Financial Center, Boston, MA 02111</td>
<td>7/8/16</td>
<td>$50,000,000</td>
<td>2016</td>
</tr>
<tr>
<td>HarbourYest - Dover Street VIII</td>
<td>One Financial Center, Boston, MA 02111</td>
<td>5/30/13</td>
<td>$67,500,000</td>
<td>2012</td>
</tr>
<tr>
<td>Pantheon Global Secondary Fund IV</td>
<td>10 Finsbury Square, 4th Floor, London EC2A1AF</td>
<td>6/24/10</td>
<td>$15,000,000</td>
<td>2010</td>
</tr>
<tr>
<td>Pantheon Global Secondary Fund V</td>
<td>10 Finsbury Square, 4th Floor, London EC2A1AF</td>
<td>2/6/15</td>
<td>$50,000,000</td>
<td>2015</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$427,500,000</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Performance and Fee Information

#### As of December 31, 2016 (Since Inception)

<table>
<thead>
<tr>
<th>Name of Fund</th>
<th>Contributions</th>
<th>Distributions</th>
<th>Valuation</th>
<th>TVPI</th>
<th>GP RR</th>
<th>Net IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams Street 2010 Direct Fund</td>
<td>$7,879,500</td>
<td>$5,660,562</td>
<td>$6,408,768</td>
<td>1.53</td>
<td>18.33%</td>
<td>11.97%</td>
</tr>
<tr>
<td>Adams Street 2016 Global Fund</td>
<td>$1,500,000</td>
<td>$0</td>
<td>$2,054,581</td>
<td>1.37</td>
<td>NM</td>
<td>NM</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 Non-U.S. Developed Markets Fund</td>
<td>$20,591,249</td>
<td>$8,141,472</td>
<td>$17,004,917</td>
<td>1.22</td>
<td>11.92%</td>
<td>8.12%</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 Non-U.S. Emerging Markets Fund</td>
<td>$6,621,500</td>
<td>$738,789</td>
<td>$7,882,770</td>
<td>1.30</td>
<td>12.18%</td>
<td>9.56%</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 U.S. Fund</td>
<td>$37,852,500</td>
<td>$14,394,035</td>
<td>$34,463,147</td>
<td>1.49</td>
<td>17.80%</td>
<td>14.34%</td>
</tr>
<tr>
<td>U.S. Fund</td>
<td>$452,592</td>
<td>$244,730</td>
<td>$424,353</td>
<td>$703,773</td>
<td>$61,973</td>
<td>$40,183</td>
</tr>
<tr>
<td>HarbourYest - Dover Street IX</td>
<td>$2,400,000</td>
<td>$841,512</td>
<td>$8,035,942</td>
<td>1.62</td>
<td>NM</td>
<td>NM</td>
</tr>
<tr>
<td>HarbourYest - Dover Street VIII</td>
<td>$56,447,454</td>
<td>$29,369,896</td>
<td>$48,274,491</td>
<td>1.38</td>
<td>NR</td>
<td>23.90%</td>
</tr>
<tr>
<td>Pantheon Global Secondary Fund IV</td>
<td>$5,960,000</td>
<td>$8,005,001</td>
<td>$5,922,596</td>
<td>1.48</td>
<td>NR</td>
<td>14.17%</td>
</tr>
<tr>
<td>Pantheon Global Secondary Fund V</td>
<td>$13,391,510</td>
<td>$0</td>
<td>$17,284,973</td>
<td>1.29</td>
<td>NR</td>
<td>25.31%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$136,346,305</strong></td>
<td><strong>$71,060,194</strong></td>
<td><strong>$188,447,016</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### For the Year Ended December 31, 2016

<table>
<thead>
<tr>
<th>Name of Fund</th>
<th>Cash Profit Received(1)</th>
<th>Management Fees(2)</th>
<th>Carried Interests(3)</th>
<th>Other Expenses(4)</th>
<th>Fees &amp; Expense Paid by Portfolio Cos. (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams Street 2010 Direct Fund</td>
<td>$1,777,532</td>
<td>$1,023,308</td>
<td>$141,135</td>
<td>$(68,819)</td>
<td>$4,465</td>
</tr>
<tr>
<td>Adams Street 2013 Global Fund</td>
<td>$1,599,027</td>
<td>$703,773</td>
<td>$61,973</td>
<td>$40,183</td>
<td>$35,349</td>
</tr>
<tr>
<td>Adams Street 2016 Global Fund</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 Non-U.S. Developed Markets Fund</td>
<td>$2,584,293</td>
<td>$1,322,254</td>
<td>$224,583</td>
<td>$20,362</td>
<td>$5,336</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 Non-U.S. Emerging Markets Fund</td>
<td>$424,353</td>
<td>$67,823</td>
<td>$74,861</td>
<td>$1,451</td>
<td>$3,175</td>
</tr>
<tr>
<td>U.S. Fund</td>
<td>$427,500</td>
<td>$(515,122)</td>
<td>$(68,290)</td>
<td>$29,101</td>
<td>$(3,598)</td>
</tr>
<tr>
<td>HarbourYest - Dover Street IX</td>
<td>$(5,284,786)</td>
<td>$(58,165)</td>
<td>$(133,633)</td>
<td>$(36,199)</td>
<td>$(29,101)</td>
</tr>
<tr>
<td>HarbourYest - Dover Street VIII</td>
<td>$(10,125,862)</td>
<td>$(582,770)</td>
<td>$(133,633)</td>
<td>$(36,199)</td>
<td>$(29,101)</td>
</tr>
<tr>
<td>Pantheon Global Secondary Fund IV</td>
<td>$(575,000)</td>
<td>$(2,041,195)</td>
<td>$(374,306)</td>
<td>$(11,862)</td>
<td>$(13,375)</td>
</tr>
<tr>
<td>Pantheon Global Secondary Fund V</td>
<td>$(359,994)</td>
<td>$(2,041,195)</td>
<td>$(374,306)</td>
<td>$(11,862)</td>
<td>$(13,375)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$21,597,153</strong></td>
<td><strong>$11,593,894</strong></td>
<td><strong>$3,511,071</strong></td>
<td><strong>$(270,773)</strong></td>
<td><strong>$421,371</strong></td>
</tr>
</tbody>
</table>

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Please see notes on following page.

Confidential, Trade Secret and Proprietary Information For Recipient's Use Only.
California Disclosure Reporting

Consolidated Fee Information at the Underlying Fund Level\(^{(3)}\)

<table>
<thead>
<tr>
<th>Name of Fund(^{(4)})</th>
<th>Management Fees</th>
<th>Carried Interest(^{(2)})</th>
<th>Other Expenses</th>
<th>Fees &amp; Expenses Paid by Portfolio Cos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams Street 2013 Global Fund</td>
<td>$973,263</td>
<td>$708,350</td>
<td>$137,188</td>
<td>NR</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 Non-U.S. Developed Markets Fund</td>
<td>$251,758</td>
<td>$486,528</td>
<td>$71,646</td>
<td>NR</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 Non-U.S. Emerging Markets Fund</td>
<td>$145,878</td>
<td>$120,740</td>
<td>$33,682</td>
<td>NR</td>
</tr>
<tr>
<td>Adams Street Partnership Fund - 2010 U.S. Fund</td>
<td>$537,198</td>
<td>$560,841</td>
<td>$71,785</td>
<td>NR</td>
</tr>
<tr>
<td>HarbourVest - Dover Street IX</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>HarbourVest - Dover Street VIII</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Pantheon Global Secondary Fund IV</td>
<td>$21,171</td>
<td>$410</td>
<td>$61,669</td>
<td>NR</td>
</tr>
<tr>
<td>Pantheon Global Secondary Fund V</td>
<td>$166,313</td>
<td>$324,978</td>
<td>$126,579</td>
<td>NR</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,243,633</strong></td>
<td><strong>$2,660,138</strong></td>
<td><strong>$520,194</strong></td>
<td></td>
</tr>
</tbody>
</table>

**NM** = IRR is not meaningful. Investment is less than one year old.

**N/A** = Not Applicable. Fund of Funds do not have direct portfolio company investments.

**NR** = Information was not reported.

(1) Represents amounts included in distributions received during the year that are classified as gain, dividend, interest or income per the fund's distribution notice.

(2) Except as otherwise noted, amounts represent realized and unrealized carried interest allocations for the year ended December 31, 2016.

(3) The information included herein is sourced from data provided by the managers of the funds. Such information has not been independently verified and no representation or warranty, express or implied, is given by or on behalf of Abbott as to the accuracy, fairness, correctness or completeness of the information.

(4) VCERA's pro rata share was not reported. Amounts represent estimates based on fund level amounts reported in the financial statements. Fund level amounts were allocated to VCERA based on VCERA's proportionate share of the fund. Actual allocated amounts may differ and such differences could be material.

(5) Represents carried interest paid.

(6) Adams Street Adams Street 2010 Direct Fund and Drive Capital Fund II were omitted from the list titled "Consolidated Fee Information at the Underlying Fund Level" because these funds make direct investments and have no funds on which to report fees.
CALIFORNIA REPORTING TEMPLATE

Reporting Period: 12/31/2016

CPRA Disclosures (Cal. Govt. Code § 6254.26(b)):
1. Name, address and vintage year of Partnership- Name: PGIM Real Estate 
Address: 7 Giralda Farms Madison, NJ 07940; Vintage Year: 1970
2. Date the investment in Partnership was made by Investor- Investors inception- 3/31/2005
3. Dollar amount of cash contributions made by Investor to Partnership since inception- $60,000,000
4. Dollar amount of Investor’s Distributions from Partnership since inception- $42,694,948
5. Dollar amount on a fiscal year-end basis of cash distributions received by Investor, and remaining value of Partnership assets attributable to Investor’s investment in Partnership- $42,694,948
6. Net internal rate of return (“IRR”) of Investor’s investment in Partnership since inception- Net IRR 3.40%¹
7. The investment multiple of Investor’s investment in Partnership since inception- N/A, PRISA SA is an open end fund
8. Dollar amount of the total management fees and costs paid on an annual fiscal year-end basis by Investor to Partnership- Annual period ending 12/31/2016 is $999,503.83.
9. Dollar amount of cash profit received by Investor from Partnership on a fiscal year-end basis- Not applicable, Investor is invested in an insurance company separate account not a limited partnership construct.

Additional Disclosures (Cal. Govt. Code § 7514.7):
  a. Fees and expenses that Investor pays directly to Partnership, General Partner or related parties: n/a
  b. Investor’s pro rata share of fees and expenses, not included in (a) above, that are paid from Partnership to General Partner or related parties: n/a
  c. Investor’s pro rata share of carried interest distributed to General Partner or related parties: n/a
  d. Investor’s pro rata share of aggregate fees and expenses paid by all of the portfolio companies held by Partnership to General Partner or related parties: .73%
  e. Gross and net IRR of investment of Partnership since inception: Gross 9.05%, Net 7.96%¹
CALIFORNIA REPORTING TEMPLATE

Reporting Period: 12/31/2016

CPRA Disclosures (Cal. Govt. Code § 6254.26(b)):
1. Name, address and vintage year of Partnership
   Name: Trumbull Property Fund LP (TPF)
   Address: 10 State House Square, 15th Floor, Hartford CT 06103
   Vintage Year: 1978

2. Date the investment in Partnership was made by Investor. 03/31/2003

3. Dollar amount of cash contributions made by Investor to Partnership since inception: $124,000,000

4. Dollar amount of Investor's Distributions from Partnership since inception: $17,789,760

5. Dollar amount on a fiscal year-end basis of cash distributions received by Investor, and remaining value of Partnership assets attributable to Investor's investment in Partnership
   $17,789,760 Distributions and redemptions from inception
   $246,664,840 Account value after fee payable at Dec 31, 2016
   $264,454,600

6. Net internal rate of return (“IRR”) of Investor's investment in Partnership since inception:
   The Investor's net IRR(after fees) is 8.12%

7. The investment multiple of Investor's investment in Partnership since inception
   ($264,454,600 / $124,000,000) = 2.13

8. Dollar amount of the total management fees and costs paid on an annual fiscal year-end basis by Investor to Partnership $17,588,117 from inception to December 31, 2016

9. Dollar amount of cash profit received by Investor from Partnership on a fiscal year-end basis
   $ 96,803,463 of earnings
   $ 61,843,797 of Unrealized and realized gains
   $158,647,260 Total investment earnings

Additional Disclosures (Cal. Govt. Code § 7514.7):
a. Fees and expenses that Investor pays directly to Partnership, General Partner or related parties: For calendar year 2016, advisory fees of $2,322,526 were deducted and paid from the investor's account to the partnership.
b. Investor’s pro rata share of fees and expenses, not included in (a) above, that are paid from Partnership to General Partner or related parties:
The Fund will pay all costs, expenses and fees incurred in operating the Fund (including amounts paid to third parties unaffiliated with the Fund or the Advisor), including costs, expenses and fees incurred for legal, accounting, audit, appraisal and other third-party valuation services, insurance and indemnification, tax and other consulting services (including engineering and environmental consulting), and other costs, expenses and fees incurred in the evaluation, acquisition, financing, leasing, development, management, operation, monitoring and disposition of investments (including such expenses incurred in connection with transactions that are not consummated for any reason). Costs and expenses related to quarterly offerings of Units will be operating expenses paid by the Fund. Operating expenses will include costs incurred in connection with formation of underlying subsidiaries for acquisition of assets. The Advisor will not be reimbursed by the Fund for the Advisor’s overhead or employee compensation or for any fees or expenses paid to sub-advisors. In addition, the Fund will reimburse reasonable expenses incurred by members of the Advisory Council. The investor is allocated its pro rata share of the expenses above.

c. Investor’s pro rata share of carried interest distributed to General Partner or related parties: Not applicable. There is no carried interest.

d. Investor’s pro rata share of aggregate fees and expenses paid by all of the portfolio companies held by Partnership to General Partner or related parties: For calendar year 2016, the investors share of advisory fees paid to the general partner and related parties was $2,322,526. For calendar year 2016, the investors share of the Funds general & administrative costs was $89,509.

e. Gross and net IRR of investment of Partnership since inception:
The TPF is an open-end commingled real estate fund with an inception date of January 13, 1978. The TPF gross and net returns from inception to December 31, 2016 are 9.07% and 8.07%, respectively. These returns are time-weighted, leveraged, and include reinvestment of income.

Notes:
The Trumbull Property Fund LP ("TPF" or the "Fund") is an open-end, commingled private real estate portfolio advised by UBS Realty Investors LLC. The REIT-based fund is structured as a limited partnership.

All information furnished in this report is confidential and proprietary information of TPF, its general and limited partners and UBS Realty Investors LLC. This material should not be shared with third parties without the prior written permission of UBS Realty Investors LLC.

Past performance is not indicative of future results. Actual results may be materially different. The material content of this response is based upon information obtained by UBS Realty Investors LLC through December 31, 2016.
December 11, 2017

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

SUBJECT: PEPRA ANNUAL COMPENSATION LIMIT FOR 2018

Dear Board Members,

The California Public Employees’ Pension Reform Act (PEPRA) limits the pensionable compensation used in the calculation of retirement benefits. Specifically, the PEPRA statutes set an initial limit of the Social Security maximum, or 120% of the maximum for member plans not integrated with Social Security. VCERA General Member plans are integrated with Social Security, while the Safety Member plans are not. Additionally, PEPRA instructs “retirement systems” to adjust the compensation limit annually for inflation based upon annual changes to the Consumer Price Index for All Urban Consumers.

As an advisory organization, the California Actuarial Advisory Panel (CAAP) issues a letter annually for California public retirement systems, detailing its calculation of the PEPRA compensation limits. In March of 2014, the VCERA Board of Retirement directed staff to identify the annual adjustments to the PEPRA compensation limits and submit them to the Board for approval.

In November 2017, CAAP again calculated the compensation limit amounts using the required criteria, with the results producing an increase to both amounts, as follows:

- $121,388 (integrated with Social Security)
- $145,666 (not integrated with Social Security)

The calculation steps are detailed in the full published letter, which is attached.


I would be pleased to respond to any questions on this matter at our December 11, 2017 meeting.

Sincerely,

Linda Webb
Retirement Administrator
November 21, 2017

SUBJECT: PEPRa Compensation Limit for 2018 (Code Section 7522.10)

To Whom It May Concern:

Pursuant to a request from a Public Agency, the California Actuarial Advisory Panel (the Panel) is publishing this letter to provide a calculation of the Pension Compensation Limits for the Calendar Year 2018.

Background

Pursuant to Government Code section 7507.2(b), the responsibilities of the Panel include “Replying to policy questions from public retirement systems in California” and “Providing comment upon request by public agencies.” In 2013, members of the Panel received a request from a public retirement system (the San Joaquin County Employees’ Retirement Association) to compute and publish the annual compensation limit prescribed by the California Public Employees’ Pension Reform Act of 2013 (PEPRA), as amended by Senate Bill No. 13 (SB 13). This request was made to address a concern that minor calculation or rounding differences could result in different systems calculating slightly different pension compensation limits.

The Panel agreed to calculate the dollar amounts of the pension compensation limits for 2014 and future years, as we believe that the use of a uniform compensation limit will provide administrative benefits to California’s public retirement systems. However, as the Panel is an advisory body only (Government Code section 7507.2(e) states that “The opinions of the California Actuarial Advisory Panel are nonbinding and advisory only”), the Panel encourages each system to independently review the calculation of the pension compensation limits contained in this letter.
Analysis

Section 7522.10 of the Government Code is as follows:

7522.10. (a) On and after January 1, 2013, each public retirement system shall modify its plan or plans to comply with the requirements of this section for each public employer that participates in the system.
(b) Whenever pensionable compensation, as defined in Section 7522.34, is used in the calculation of a benefit, the pensionable compensation shall be subject to the limitations set forth in subdivision (c).
(c) The pensionable compensation used to calculate the defined benefit paid to a new member who retires from the system shall not exceed the following applicable percentage of the contribution and benefit base specified in Section 430(b) of Title 42 of the United States Code on January 1, 2013:
(1) One hundred percent for a member whose service is included in the federal system.
(2) One hundred twenty percent for a member whose service is not included in the federal system.
(d) (1) The retirement system shall adjust the pensionable compensation described in subdivision (c) based on the annual changes to the Consumer Price Index for All Urban Consumers: U.S. City Average, calculated by dividing the Consumer Price Index for All Urban Consumers: U.S. City Average, for the month of September in the calendar year preceding the adjustment by the Consumer Price Index for All Urban Consumers: U.S. City Average, for the month of September of the previous year rounded to the nearest thousandth. The adjustment shall be effective annually on January 1, beginning in 2014.

The annual compensation pensionable compensation limit computed by the Panel for 2017 was $118,775 for those included in the federal Social Security system and $142,530 for those not included.

The Consumer Price Indices for All Urban Consumers (CPI-U) U.S. City Average for the months of September 2016 and 2017 are as follows:\(^1\):

- September, 2017: 246.819
- September, 2016: 241.428

The annual change, computed by dividing the 2017 Index by the 2016 Index, rounded to the nearest thousandth is as follows:

\[
\text{Annual Change} = \frac{246.819}{241.428} = 1.022
\]

\(^1\) [http://data.bls.gov/timeseries/CUUR0000SA0](http://data.bls.gov/timeseries/CUUR0000SA0)
Applying this annual adjustment to the 2017 limits yields the following limits for calendar year 2018:

- $118,775 x 1.022 = $121,388 (included in federal system)
- $142,530 x 1.022 = $145,666 (not included in federal system)

The indexation of the maximum compensation to be used by CalSTRS using the February CPI-U, based on AB 1381 passed by the legislature in 2013, is not addressed in this letter.

Conclusion

The calculations described above indicate the compensation limit for PEPRA members for Calendar Year 2018 will increase to $121,388 for members participating in the federal system (7522.10(c)(1) limit) and $145,666 for members not participating in the federal system (7522.10(c)(2) limit). The Panel intends to provide similar calculations in future years. The contents of this letter are nonbinding and advisory only, and we encourage each public retirement system to independently evaluate these calculations.

Sincerely,

[Signature]

Paul Angelo
Chair, California Actuarial Advisory Panel

cc: Panel members
    John Bartel, Vice Chair
    Ian Altman
    David Driscoll
    David Lamoureux
    Steve Ohanian
    Graham Schmidt
    Scott Terando
December 11, 2017

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

SUBJECT: AUTHORIZATION OF UP TO 2 VCERA TRUSTEES AND CIO TO ATTEND NEPC’S 2018 PUBLIC FUNDS WORKSHOP IN TEMPE, ARIZONA ON JANUARY 22 – 23, 2018

Dear Board Members:

NEPC’s 2018 Public Funds Workshop in Tempe, Arizona is scheduled for January 22 – 23, 2018. Attached is the Workshop agenda. The estimated cost to attend is approximately $600 per person including airfare, hotel, meals, and other related expenses.

Allan Martin of NEPC and I are available to respond to any questions you may have on this matter.

RECOMMENDATION: AUTHORIZE UP TO 2 VCERA TRUSTEES AND CIO TO ATTEND NEPC’S 2018 PUBLIC FUNDS WORKSHOP IN TEMPE, ARIZONA ON JANUARY 22 – 23, 2018

Respectfully submitted,

Dan Gallagher
Chief Investment Officer
2018 Public Funds Workshop
Monday and Tuesday, January 22 and 23
Tempe Mission Palms
60 East Fifth Street
Tempe, AZ 85281

Workshop Agenda — January 22-23

Monday, January 22
6:30am-7:45a: Buffet breakfast at the Cloister (at your leisure)
7:45am: Adjourn to the Palm B/C meeting room

8:00a-9:00a: Opening Remarks/Fund Introductions
Kevin Leonard of NEPC to provide opening remarks, followed by Allan Martin of NEPC and participants discussing Impactful actions from 2017 and key initiatives for 2018

9:00-10:00a: NEPC 2018 Capital Markets Update and Asset Allocation Thoughts
Presentation and discussion of NEPC’s 2018 Capital Markets and outlook
Phill Nelson, NEPC

10:00a–10:15a: Break

10:15a–11:15a: Megatrends
Tim McCusker of NEPC to discuss Megatrends, their potential impact on asset allocation structures, and creation of investment opportunities. Megatrends are long-term structural shifts with the potential to influence culture, politics, and economics across the globe but unlikely to occur in the near term.

11:15a–12:15p: Strategies for Public Market Equity Investments
Moderated by (TBD) of NEPC
Bob Jacksha of NMERB to discuss in-house, passive and (others TBD)

12:15pm-1:00pm: Lunch (in the Cloister)

1:00p–2:00p: Opportunities in European Private Debt
David Forbes Nixon, Alcentra

2:00pm–3:00p: Managing Private Debt
Moderated by Chris Hill of NEPC
Client panel to include Matt O’Reilly of San Antonio Fire & Police and (others TBD)

3:00pm–3:15pm: Break
3:15pm-4:00pm: Strategies for Cost-Effective Investment Structures
Moderated by Rhett Humphreys of NEPC
Tom Tull (Texas ERS) Darren Fournerat, (LASERS) and (others TBD)

Monday, January 22 (cont.)

4:00p-5:00p: The Death of Retail
Mike Yang of NEPC to discuss how the death of the retail marketplace has impacted commercial real estate (client participant TBD)

5:00pm: End of day one
5:30p: Cocktails (Mission Grille)
6:00pm: Dinner (Ben Hunt of Salient Partners, LP to give a presentation on Artificial Intelligence)

Tuesday, January 23

6:30am-7:45am: Buffet breakfast at the Cloister (at your leisure)
7:45am: Adjourn to the Palm B/C meeting room

8:00a-9:00a: Emerging Markets – Still Attractive?
TBD of NEPC to introduce outside speaker (TBD)

9:00a-10:00a: Effective Management of Downside Risk
Phill Nelson, NEPC
(Client panel TBD)

10:00-10:15a: Break

10:15-11:00a: Public Plan Trends, Threats and Challenges
Hank Kim, Executive Director and Counsel of NCPERS will discuss legislation and regulatory issues facing Public Plans

11:00a-11:45a: SPONSOR PANEL
Led by Kevin Leonard of NEPC
(Participants TBD)

11:45a: Concluding Remarks
12:00pm: Box lunch
December 11, 2017

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

SUBJECT: AUTHORIZATION FOR MS. NEMIROFF’S ATTENDANCE; NAPPA WINTER SEMINAR; FEBRUARY 21st – 23rd, 2018; TEMPE, AZ

Dear Board Members:

Staff recommends authorization for Ms. Nemiroff to attend the NAPPA Winter Seminar being held February 21st – 23rd, 2018 in Tempe, Arizona. The cost to attend is estimated to be $1,600 including event registration, hotel, air fare and other travel related expenses. The Conference brochure is attached.

VCERA staff will be pleased to respond to any questions you may have on this matter at the December 11, 2017, board meeting.

Sincerely,

Linda Webb
Retirement Administrator

Attachment
Registration Information & Deadlines

**Online registration** begins Tuesday, December 5, 2017.

To register for the conference:
- Go to [www.nappa.org](http://www.nappa.org)
- Click on "2018 Winter Seminar Registration"

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<tr>
<th>Date Range</th>
<th>Event</th>
<th>Fee</th>
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<tr>
<td>December 5-January 31</td>
<td>Winter Seminar Registration Open</td>
<td>$485 (if registered before 1/17)</td>
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<td>$585 (if registered 1/17 or after)</td>
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<tr>
<td>December 5-January 31</td>
<td>Senior Counsel Meeting Registration Open</td>
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<td>This session is designed for attorneys with substantial experience as counsel for a public retirement system. Less experienced attorneys are welcome, but may not find this session as valuable.</td>
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<tr>
<td>January 31, 2018</td>
<td>Last day to register for the Winter Seminar</td>
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Seminar Cancellation Policy

- **Prior to January 17**: Full refund
- **January 17 - January 31**: $100 administrative fee charged
- **February 1 or later**: No refund

If you have any questions, please call the NAPPA office at (573) 616-1895, or send an email to:
- Karen Holterman: Karen@nappa.org
- Brenda Faken: Brenda@nappa.org
- Doris Dorge: Doris@nappa.org

2 NAPPA | 2410 Hyde Park Road, Suite B | Jefferson City, MO 65109
Hotel Information

All meetings will be held at the:

Tempe Mission Palms Hotel
60 E. 5th Street
Tempe, AZ 85281
Phone: (480) 894-1400
Toll Free: (800) 547-8705
www.missionpalms.com

Conference Room Rate: $216 per night (single/double occupancy)

A block of rooms has been reserved at the Tempe Mission Palms Hotel. The block room rate will be available until the room block is filled or until January 29, 2018, at 5:00 p.m. (MST), whichever comes first.

To Make Hotel Reservations

To ensure registered members can book a room in the NAPPA block, we would appreciate you registering for the conference before booking your room.

Online: www.nappa.org
Click on “2018 Winter Seminar Registration”

Hotel Cancellation Policy: Guest room reservations must be cancelled 48 hours prior to arrival date or you will be charged for one night’s accommodation.

Please Note!

• Materials will be provided electronically through the mobile app.
• NAPPA does not apply for CLE credits for the Winter Seminar.
• You are responsible for your own airfare and hotel accommodations.
• There is a “No Smoking” policy at all sessions.
• Dress is business casual. Please note that most meeting rooms tend to be on the chilly side, so a sweater or jacket is recommended.

Solicitation and Marketing are prohibited at all NAPPA meetings.

Phone: (573) 616-1895 | Fax: (573) 616-1897 | www.nappa.org
Wednesday, February 21

7:00 a.m. - 4:30 p.m.  Registration

7:30 a.m. - 8:15 a.m.  Breakfast (provided by NAPPA)

**Investment Section Meeting**
(8:30 a.m. - 11:30 a.m.)

8:30 a.m. - 9:20 a.m.  Subscription Agreements – Creation of a Standard Uniform Template

This panel will discuss the role of the Subscription Agreement in private investment transactions. In addition, the panel will address ILPA's project to streamline the Subscription Agreement and other fund documents (such as the Limited Partnership Agreement) to create standard uniform templates acceptable to GPs and LPs.

9:20 a.m. - 10:10 a.m.  Strategies for Negotiating Best Terms Before Investing and Available Exit Strategies

This panel will discuss considerations to negotiating the best possible fund terms and protections for LPs before making an investment and how to hold the GPs accountable, as well as suggested exit strategies should problems arise afterwards.

10:10 a.m. - 10:40 a.m.  Break

10:40 a.m. - 11:30 a.m.  Everything LPs Need to Know About Credit Facilities

This panel will discuss credit facilities/lines of credit from a business and legal perspective. The discussion will also address ILPA guidelines for use of subscription lines of credit.

11:30 a.m. - 1:00 p.m.  Lunch (provided by NAPPA)
Wednesday, February 21

Fiduciary and Plan Governance Section Meeting
(1:30 p.m. - 4:30 p.m.)

1:30 p.m. - 2:45 p.m. Public Pension System Operational Compliance

This session will focus on building a strong culture of compliance within a public pension system. Our panelists will discuss the pros and cons of having a separate compliance function/office within the pension system and share some success stories of high functioning compliance offices or compliance officers. To whom does the compliance officer report? How does the compliance function interact with the legal office? With internal audits? How big is the staff? We will look to models in the industry and discuss the challenges/obstacles of creating a compliance office. Is this something only a big system can afford? If you don't have a separate function/office, who is in charge of compliance within your organization and what challenges does that present?

2:45 p.m. - 3:15 p.m. Break

3:15 p.m. - 4:30 p.m. Delegation Without Abdication

We've heard it time and again, a retirement board can better meet its fiduciary duties if it has appropriate and clear delegations to competent staff and advisors. But how often does this happen in practice? This panel will focus on actual examples of success stories where pension boards have evolved from micromanaging boards to those with clear delegations to, accountability of, and trust in staff and advisors. The panelists will discuss the hallmarks of an effective model of delegation and how systems have made it happen. We will consider what the impetus for the change might be and the obstacles to success. Finally, what have been some of the positive outcomes from sound delegation practices? Fewer or shorter board meetings? Better service to members? Better investment returns? Greater accountability? A higher functioning organization?

5:00 p.m. - 6:30 p.m. Reception (provided by NAPPA)
Thursday, February 22

7:00 a.m. - 4:30 p.m.   Registration

7:30 a.m. - 8:15 a.m.   Breakfast (provided by NAPPA)

**Benefit Section Meeting**
(8:30 a.m. - 11:30 a.m.)

8:30 a.m. - 9:15 a.m.   When Public Plans Sue Their Actuaries

The panel will discuss litigation between public plans and their actuaries.

9:15 a.m. - 10:00 a.m.   Overview of Changes Nationwide

The following topics will be discussed during this session:

- State and Local Pension Reform Since the Financial Crisis
- Alternative Plans: Money Purchase, Cash Balance, Hybrid and Recent Events

10:00 a.m. - 10:30 a.m.   Break

10:30 a.m. - 11:30 a.m.   Limitations on Changes – “Tracks of My Tiers”

The panel will discuss legal and administrative challenges of identifying and managing different tiers.

11:30 a.m. - 1:00 p.m.   Lunch (provided by NAPPA)
Thursday, February 22

Tax Section Meeting
(1:30 p.m. - 4:30 p.m.)

1:30 p.m. - 2:00 p.m.  Demystifying the Legislative Process

The Tax Cuts and Jobs Act of 2017 ("TCJA") represents the most significant revision of the Internal Revenue Code in 30 years. This session will provide an overview of the legislative procedures for complex tax legislation, the roles of the various committees, the impact of revenue estimates and the interplay between the House and Senate that is specific to the tax legislative process.

2:00 p.m. - 2:45 p.m.  TCJA: Impact on Tax Qualified Plans

TCJA has a number of provisions that will impact the operation and documentation of tax-qualified defined benefit, defined contribution and governmental 457(b) plans. Specifically addressed in this panel discussion are new rules regarding in-service distributions, plan loan requirements and hardship withdrawals. We will also discuss proposed increases in the “cash-out” limitations under the Retirement Plan Modernization Act.

2:45 p.m. - 3:15 p.m.  Break

3:15 p.m. - 3:45 p.m.  TCJA: Impact on Executive Compensation

TCJA contains a number of revenue raisers targeting executive level employees. These provisions will impact highly paid employees of governmental entities, and to a surprising extent, the governmental entities themselves. This session will discuss the impact on governmental non-qualified deferred compensation plans and qualified governmental excess benefit plans. The panel will also discuss proposed compensation-based excise taxes applicable to governmental entities.

3:45 p.m. - 4:30 p.m.  The Third Rail - Governmental Plans and UBTI

Unrelated Business Taxable Income ("UBTI") has always been a potential issue for governmental tax-qualified plans. In many ways, it represents the proverbial “third rail” of pension tax policy that neither the IRS nor the governmental plan community appear anxious to address. TCJA addresses UBTI head on. This session will provide an overview of UBTI, why it is so controversial in the governmental plan context and the proposed manner in which it is addressed in the TCJA.

Phone: (573) 616-1895 | Fax: (573) 616-1897 | www.nappa.org
Friday, February 23

7:00 a.m. - 11:30 a.m. Registration

7:30 a.m. - 8:15 a.m. Breakfast - For Senior Counsel Attendees Only (provided by NAPPA)

Senior Counsel Meeting
Pre-Registration Required
(8:30 a.m. - 11:30 a.m.)

8:30 a.m. - 9:30 a.m. UBTI and Other Hot Investment Topics

Whether proposed Unrelated Business Taxable Income (UBTI) legislation passes or not, private equity investment vehicles often have options for tax avoidance. This session will discuss deal structuring and other strategies to minimize UBTI. Additional discussion will include current trends in waterfalls and clawbacks.

9:30 a.m. - 10:30 a.m. Using Social or Political Criteria in Making Investment Decisions for Pension Plans

There are no consistent legal standards for fiduciaries across types of pension funds using, or not using, social or political criteria as a factor in making investment decisions. This session will look at the different standards under various state plans, ERISA, DOL and common law for what is required and allowed under a fiduciary’s duty of prudence and loyalty.

10:30 a.m. - 11:00 a.m. Break

11:00 a.m. - 11:30 a.m. After The Breach: When the Worst Happens, What Happens?

Insights from those that have been through it.

This Senior Counsel Meeting is designed for attorneys with substantial experience as counsel for a public retirement system. Less experienced attorneys are welcome but may not find this session as valuable.
December 11, 2017

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

SUBJECT: APPOINTMENT OF 2018 CHAIR AND VICE CHAIR

Dear Board Members:

The Board of Retirement Bylaws and Regulations require the Board to take action at the first meeting in December to appoint a Chair and Vice Chair for the upcoming calendar year. The Regulations state that no member shall serve in either capacity until he/she has served on the Board for a minimum of one year.

I will be pleased to respond to any questions you may have at the December 11, 2017 meeting.

Sincerely,

Linda Webb
Retirement Administrator
Public Fund Universe Analysis

Ventura County Employees' Retirement Association

Period Ending June 30, 2017
Fund Number: 52
OVERVIEW
RVK, Inc. (“RVK”) was founded in 1985 and is one of the largest independent and employee-owned investment consulting firms in the US, providing world-class investment advice to institutional investors. We serve over 400 plans, including pension plans, defined contribution plans, endowments & foundations, insurance pools, and special purpose funds.

MISSION STATEMENT
To provide best-in-class investment consulting services to a wide array of sophisticated investors.

STRATEGIC INVESTMENT ADVICE WITH NO CONFLICTS OF INTEREST
RVK built its investment consulting practice on the principles of integrity, investment knowledge, client service, and our no conflicts of interest policy. We are exclusively focused on strategic investment consulting services and solely owned by active employees, enabling us to offer advice that is not influenced by other business activities. As a privately-held firm, with no affiliates or parent company, we provide informed and unbiased investment advice to our clients. We offer an extensive slate of consulting services and produce deliverables fully customized to meet each client's needs.

KEY TENETS OF OUR CULTURE

![Diagram showing Key Tenets of RVK's Culture]

1. Collaborative & Team-Based Approach
2. Dedication to Client Service
3. Innovation
4. Employee Ownership
5. Commitment to Ethics
GENERAL CONSULTING SERVICES

- Plan Evaluation
- Strategic Asset Allocation
- Investment Policy Development & Review
- Investment Manager Search & Selection
- Performance Analysis & Reporting
- Manager Structure Analysis
- Risk Monitoring and Management
- Client Education
- Special Projects

SPECIALTY CONSULTING SERVICES

- Strategic Planning Reviews
- Custody, Record keeper, Third-Party Administrator Searches
- Asset/Liability Studies
- Endowment Spending Policy Studies
- Securities Lending Reviews
- Pacing Studies
- Outsourced CIO (“OCIO”) Searches, Evaluation, and Ongoing Monitoring
- Directed Consulting Services
- Fee Reviews
- Defined Contribution Solutions Services
- Investment Operations Solutions
- Board and Investment Program Operational Reviews

FOR MORE INFORMATION ABOUT OUR SERVICES, PLEASE CONTACT:

Business.Development@RVKInc.com
503-221-4200

RVK BY THE NUMBERS

- 30+ years of business
- 3 offices - Portland, Chicago, New York
- $800+ billion Full-Retainer AUA
- 90+ Investment Professionals
- 50+ Advanced Degrees and Certifications
- 100% Employee Ownership
- 100% Revenue Derived from Client Fees
- 100% Non-Discretionary Services
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<td>Alameda County Employees' Retirement Association</td>
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<td>District of Columbia Retirement Board</td>
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<td>Employees Retirement System of Texas</td>
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<td>Fort Worth Employees' Retirement Fund</td>
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<td>Kentucky Teachers' Retirement System</td>
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<td>Los Angeles City Employees' Retirement System</td>
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<td>Los Angeles Fire and Police Pension System</td>
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<td>Marin County Employees' Retirement Association</td>
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<td>Montana Public Employees' Retirement System</td>
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<td>Pennsylvania State Employees' Retirement System</td>
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<td>Public Employees Retirement Association of New Mexico</td>
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<td>Sacramento County Employees' Retirement System</td>
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<td>Anchorage Police &amp; Fire Retirement System</td>
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<td>California State Teachers' Retirement System</td>
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<td>City of Fresno Retirement Systems</td>
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<td>City of Plano Other Post-Employment Benefits Trust</td>
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<td>Civilian Employees' Retirement System of the Police Department of Kansas City, Missouri</td>
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<td>Confederated Tribes of the Warm Springs Tribal Council Pension Fund</td>
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<td>County Employees' Annuity &amp; Benefit Fund of Cook County</td>
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<td>Educational Employees' Supplementary Retirement System of Fairfax County</td>
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<td>Fire &amp; Police Employees' Retirement System of Baltimore</td>
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<td>Florida State Board of Administration</td>
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<td>The Navajo Nation Retirement Plan</td>
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<td><strong>Ventura County Employees' Retirement Association (52)</strong></td>
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<td>West Virginia Investment Management Board</td>
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<td>Virginia Retirement System</td>
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<td>Wyoming Retirement System</td>
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Report and Firm Summary

The following report is a compilation of data provided to RVK, Inc. by 79 public funds throughout the United States. We are a registered investment advisor with the Securities Exchange Commission under the Investment Advisors Act of 1940. Our firm provides investment consulting services to nearly 200 clients across more than 460 plans with total assets under advisement in excess of $2.1 trillion. The confidentiality of participants is maintained by revealing the fund name only to each individual fund. For more information about services provided by RVK, please visit our website at www.RVKInc.com.
As of June 30, 2017

Fund Number: 52

Universe Characteristics

**Asset Size**

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**Geographical Distribution**

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<thead>
<tr>
<th>Region</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwest</td>
<td>17</td>
</tr>
<tr>
<td>Northeast</td>
<td>6</td>
</tr>
<tr>
<td>South</td>
<td>17</td>
</tr>
<tr>
<td>West</td>
<td>39</td>
</tr>
</tbody>
</table>

**Fund Classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERS</td>
<td>58</td>
</tr>
<tr>
<td>Police/Fire</td>
<td>5</td>
</tr>
<tr>
<td>Teachers/School</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
</tr>
</tbody>
</table>

**Fund Type**

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Gov</td>
<td>43</td>
</tr>
<tr>
<td>Special District</td>
<td>4</td>
</tr>
<tr>
<td>State Gov</td>
<td>32</td>
</tr>
</tbody>
</table>

Universe: 79 funds
Portfolio Management

Percentage Externally Managed & Percentage Actively Managed

As of June 30, 2017

Fund Number: 52

External Management (%)

- External Average: 90.15

Active Management (%)

- Active Average: 74.22

VCERA
### Portfolio Management Statistics

**As of June 30, 2017**

<table>
<thead>
<tr>
<th>Asset Range</th>
<th>Actively Managed (%)</th>
<th>Passively Managed (%)</th>
<th>Externally Managed (%)</th>
<th>Internally Managed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over $20B</td>
<td>74.88</td>
<td>25.12</td>
<td>75.88</td>
<td>24.12</td>
</tr>
<tr>
<td>$10B-$20B</td>
<td>70.66</td>
<td>29.34</td>
<td>84.00</td>
<td>16.00</td>
</tr>
<tr>
<td>$5B-$10B</td>
<td>71.13</td>
<td>28.87</td>
<td>97.67</td>
<td>2.33</td>
</tr>
<tr>
<td>$1B-$5B</td>
<td>74.13</td>
<td>25.87</td>
<td>98.83</td>
<td>1.17</td>
</tr>
<tr>
<td>$500mm-$1B</td>
<td>72.74</td>
<td>27.26</td>
<td>99.88</td>
<td>0.12</td>
</tr>
<tr>
<td>Under $500mm</td>
<td>82.63</td>
<td>17.37</td>
<td>100.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>VCERA</strong></td>
<td><strong>43.48</strong></td>
<td><strong>56.52</strong></td>
<td><strong>100.00</strong></td>
<td><strong>0.00</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Portfolio (%)</th>
<th>Active Management</th>
<th>External Management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public Fund Universe</td>
<td>VCERA</td>
</tr>
<tr>
<td>90 to 100</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>50 to 89</td>
<td>64</td>
<td>0</td>
</tr>
<tr>
<td>10 to 49</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Less than 10</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Funds Reporting</strong></td>
<td><strong>79</strong></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>
As of June 30, 2017

Fund Number: 52
Asset Allocation
VCERA vs. Average of Similar Size Funds

Allocations shown may not sum up to 100% exactly due to rounding.

Variance (%)

Disability & Business Meeting Agenda - XI. INFORMATIONAL
Fund Number: 52  
Equity Style Allocation  
VCERA vs. Average of All Funds  

As of June 30, 2017  
Allocations shown may not sum up to 100% exactly due to rounding.
VCERA vs. Average of Similar Size Funds

As of June 30, 2017
Fund Number: 52

Equity Style Allocation

Allocations shown may not sum up to 100% exactly due to rounding.
Fund Number: 52
Alternatives Style Allocation
VCERA vs. Average of All Funds

VCERA

HF 46.89%
Venture 0.11%
Other PE 33.43%
Other Alts 19.58%

All Funds

HF 26.78%
Distressed 4.11%
Other PE 33.43%
Other Alts 19.58%
HF 46.89%

Variance (%)

HF 20.13
Distressed -4.11
Buyout -21.24
Venture -6.31
Other PE 12.99
Nat Res -7.52
Other Alts 6.14

Allocations shown may not sum up to 100% exactly due to rounding.
Fund Number: 52
Alternatives Style Allocation
VCERA vs. Average of Similar Size Funds

VCERA

- Other Alts 19.58%
- HF 46.89%
- Venture 0.11%
- Other PE 33.43%

$1-$5 Billion

- Other Alts 15.35%
- Nat Res 11.25%
- HF 27.98%
- Distressed 3.12%
- Buyout 7.10%
- Venture 2.80%

Variance (%)

- HF: 18.93%
- Distressed: -3.12%
- Buyout: -7.10%
- Venture: -2.69%
- Other PE: 1.05%
- Nat Res: -11.24%
- Other Alts: 4.24%

Allocations shown may not sum up to 100% exactly due to rounding.
79 of 79 funds invest in Equity (%)

- US Equity
- International Equity
- Emerging Markets
- Global Equity

Universe Median: 51.15

As of June 30, 2017

Fund Number: 52
Equity Style Allocation
79 of 79 funds invest in Fixed Income (%)
75 of 79 funds invest in Real Estate (%)

Universe Median: 8.40
Alternatives Style Allocation

As of June 30, 2017

72 of 79 funds invest in Alternatives (%)

Hedge Funds  Distressed Debt  Buyout  Venture Capital

Other Private Equity  Natural Res  Other Alternative

Universe Median: 13.60
Funds with less history than the specified time period will not appear in the chart.

As of June 30, 2017

Funds with less history than the specified time period will not appear in the chart.

Universe Median: 12.78
60% R 3000/40% B US Agg Bond Index: 10.69
Universe Median: 9.27
60% R 3000/40% B US Agg Bond Index: 9.62

78 of 79 funds provided Total Fund returns for this time period (%)

With a return of 9.60, Fund 52 received a percentile rank of 34

As of June 30, 2017

Funds with less history than the specified time period will not appear in the chart.
75 of 79 funds provided Total Fund returns for this time period (%)

With a return of 5.68, Fund 52 received a percentile rank of 30

Funds with less history than the specified time period will not appear in the chart.
Total Return - Total Fund
VCERA vs. 60% R 3000/40% B US Agg Bond Index

Calendar Year Rates of Return (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>VCERA</th>
<th>60% R 3000/40% B US Agg Bond Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>14.08</td>
<td>11.55</td>
</tr>
<tr>
<td>2013</td>
<td>19.21</td>
<td>18.19</td>
</tr>
<tr>
<td>2014</td>
<td>6.65</td>
<td>9.96</td>
</tr>
<tr>
<td>2015</td>
<td>-0.67</td>
<td>0.73</td>
</tr>
<tr>
<td>2016</td>
<td>8.66</td>
<td>8.79</td>
</tr>
</tbody>
</table>

Cumulative Performance (Growth of $100)

Annualized Returns (%)

<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCERA</td>
<td>12.86</td>
<td>5.13</td>
<td>9.60</td>
</tr>
<tr>
<td>60% R 3000/40% B US Agg Bond Index</td>
<td>10.69</td>
<td>6.56</td>
<td>9.62</td>
</tr>
<tr>
<td>Variance</td>
<td>2.17</td>
<td>-1.43</td>
<td>-0.02</td>
</tr>
</tbody>
</table>

As of June 30, 2017
75 of 79 funds provided Total Fund returns for this time period

With a beta of 0.74, Fund 52 received a percentile rank of 3

Universe Median: 0.64
76 of 79 funds provided US Equity returns for this time period (%)

With a return of 18.62, Fund 52 received a percentile rank of 62

Funds with less history than the specified time period will not appear in the chart.
Fund Number: 52
5 Year Annualized US Equity Returns

With a return of 14.65, Fund 52 received a percentile rank of 42

Funds with less history than the specified time period will not appear in the chart.
Fund Number: 52
10 Year Annualized US Equity Returns

As of June 30, 2017

69 of 79 funds provided US Equity returns for this time period (%)

With a return of 7.02, Fund 52 received a percentile rank of 68

Funds with less history than the specified time period will not appear in the chart.
VCERA Russell 3000 Index

Calendar Year Rates of Return (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>VCERA</th>
<th>Russell 3000 Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>16.96</td>
<td>16.42</td>
</tr>
<tr>
<td>2013</td>
<td>33.24</td>
<td>33.55</td>
</tr>
<tr>
<td>2014</td>
<td>12.56</td>
<td>12.56</td>
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<tr>
<td>2015</td>
<td>0.63</td>
<td>0.48</td>
</tr>
<tr>
<td>2016</td>
<td>13.04</td>
<td>12.74</td>
</tr>
</tbody>
</table>

Cumulative Performance (Growth of $100)

<table>
<thead>
<tr>
<th>Month</th>
<th>VCERA: $198</th>
<th>Russell 3000 Index: $198</th>
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</thead>
<tbody>
<tr>
<td>Jun-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec-12</td>
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<td></td>
</tr>
<tr>
<td>Mar-13</td>
<td></td>
<td></td>
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<tr>
<td>Jun-13</td>
<td></td>
<td></td>
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<tr>
<td>Sep-13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec-13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun-14</td>
<td></td>
<td></td>
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<tr>
<td>Sep-14</td>
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<tr>
<td>Dec-14</td>
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<tr>
<td>Mar-15</td>
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<tr>
<td>Jun-15</td>
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<tr>
<td>Sep-15</td>
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<td></td>
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<td>Dec-15</td>
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<td>Mar-16</td>
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<tr>
<td>Jun-16</td>
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<tr>
<td>Sep-16</td>
<td></td>
<td></td>
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<tr>
<td>Dec-16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar-17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun-17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Annualized Returns (%)

<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCERA</td>
<td>18.62</td>
<td>9.20</td>
<td>14.65</td>
</tr>
<tr>
<td>Russell 3000 Index</td>
<td>18.51</td>
<td>9.10</td>
<td>14.58</td>
</tr>
<tr>
<td>Variance</td>
<td>0.11</td>
<td>0.10</td>
<td>0.07</td>
</tr>
</tbody>
</table>
1 Year Annualized International Equity Returns

As of June 30, 2017

76 of 79 funds provided International Equity returns for this time period (%)

With a return of 20.61, Fund 52 received a percentile rank of 66

Universe Median: 21.48
MSCI ACW Ex US Index (USD) (Gross): 21.00

Funds with less history than the specified time period will not appear in the chart.
Fund Number: 52

5 Year Annualized International Equity Returns

As of June 30, 2017

73 of 79 funds provided International Equity returns for this time period (%)

With a return of 8.05, Fund 52 received a percentile rank of 88

Universe Median: 8.75
MSCI ACW Ex US Index (USD) (Gross): 7.70

Funds with less history than the specified time period will not appear in the chart.
Fund Number: 52
10 Year Annualized International Equity Returns

As of June 30, 2017

67 of 79 funds provided International Equity returns for this time period (%)

With a return of 1.85, Fund 52 received a percentile rank of 52

Disability & Business Meeting Agenda - XI. INFORMATIONAL

Funds with less history than the specified time period will not appear in the chart.
VCERA vs. MSCI ACW Ex US Index (USD) (Gross)

Total Return - International Equity

Calendar Year Rates of Return (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>VCERA</th>
<th>MSCI ACW Ex US Index (USD) (Gross)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>17.88</td>
<td>16.52</td>
</tr>
<tr>
<td>2013</td>
<td>17.39</td>
<td>15.79</td>
</tr>
<tr>
<td>2014</td>
<td>15.78</td>
<td>-3.29</td>
</tr>
<tr>
<td>2015</td>
<td>4.51</td>
<td>-3.44</td>
</tr>
<tr>
<td>2016</td>
<td>6.98</td>
<td>-5.25</td>
</tr>
</tbody>
</table>

Cumulative Performance (Growth of $100)

VCERA: $147
MSCI ACW Ex US Index (USD) (Gross): $145

Annualized Returns (%)

<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCERA</td>
<td>20.61</td>
<td>2.12</td>
<td>8.05</td>
</tr>
<tr>
<td>MSCI ACW Ex US Index (USD) (Gross)</td>
<td>21.00</td>
<td>1.27</td>
<td>7.70</td>
</tr>
</tbody>
</table>

Variance

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VCERA</td>
<td>-0.39</td>
<td>0.85</td>
<td>0.35</td>
</tr>
</tbody>
</table>

As of June 30, 2017

Fund Number: 52
Universe Median: 20.33
MSCI ACW Index (USD) (Gross): 19.42

29 of 79 funds provided Global Equity returns for this time period (%)

With a return of 19.56, Fund 52 received a percentile rank of 65

Funds with less history than the specified time period will not appear in the chart.
24 of 79 funds provided Global Equity returns for this time period (%)

With a return of 10.02, Fund 52 received a percentile rank of 100.

Funds with less history than the specified time period will not appear in the chart.
10 Year Annualized Global Equity Returns

As of June 30, 2017

Funds with less history than the specified time period will not appear in the chart.
VCERA vs. MSCI ACW Index (USD) (Gross)

Calendar Year Rates of Return (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>VCERA</th>
<th>MSCI ACW Index (USD) (Gross)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>16.09</td>
<td>16.80</td>
</tr>
<tr>
<td>2013</td>
<td>22.40</td>
<td>23.44</td>
</tr>
<tr>
<td>2014</td>
<td>2.16</td>
<td>4.71</td>
</tr>
<tr>
<td>2015</td>
<td>3.56</td>
<td>1.84</td>
</tr>
<tr>
<td>2016</td>
<td>9.13</td>
<td>8.49</td>
</tr>
</tbody>
</table>

Cumulative Performance (Growth of $100)

- VCERA: $161
- MSCI ACW Index (USD) (Gross): $170

Annualized Returns (%)

<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCERA</td>
<td>19.56</td>
<td>4.00</td>
<td>10.02</td>
</tr>
<tr>
<td>MSCI ACW Index (USD) (Gross)</td>
<td>19.42</td>
<td>5.39</td>
<td>11.14</td>
</tr>
<tr>
<td>Variance</td>
<td>0.14</td>
<td>-1.39</td>
<td>-1.12</td>
</tr>
</tbody>
</table>
71 of 79 funds provided US Fixed Income returns for this time period (%)

With a return of 2.44, Fund 52 received a percentile rank of 48.

Universe Median: 2.19
Bloomberg US Agg Bond Index: -0.31

Funds with less history than the specified time period will not appear in the chart.
Funds with less history than the specified time period will not appear in the chart.
62 of 79 funds provided US Fixed Income returns for this time period (%)

With a return of 6.11, Fund 52 received a percentile rank of 7

Universe Median: 5.29  Bloomberg US Agg Bond Index: 4.48

Funds with less history than the specified time period will not appear in the chart.
VCERA vs. Bloomberg US Agg Bond Index

Calendar Year Rates of Return (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>VCERA</th>
<th>Bloomberg US Agg Bond Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>10.10</td>
<td>4.21</td>
</tr>
<tr>
<td>2013</td>
<td>9.39</td>
<td>-2.02</td>
</tr>
<tr>
<td>2014</td>
<td>3.23</td>
<td>5.97</td>
</tr>
<tr>
<td>2015</td>
<td>0.52</td>
<td>0.55</td>
</tr>
<tr>
<td>2016</td>
<td>5.08</td>
<td>2.66</td>
</tr>
</tbody>
</table>

Cumulative Performance (Growth of $100)

<table>
<thead>
<tr>
<th>Date</th>
<th>VCERA: $118</th>
<th>Bloomberg US Agg Bond Index: $112</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun-12</td>
<td>$95</td>
<td>$95</td>
</tr>
<tr>
<td>Sep-12</td>
<td>$100</td>
<td>$100</td>
</tr>
<tr>
<td>Dec-12</td>
<td>$105</td>
<td>$105</td>
</tr>
<tr>
<td>Mar-13</td>
<td>$110</td>
<td>$110</td>
</tr>
<tr>
<td>Jun-13</td>
<td>$115</td>
<td>$115</td>
</tr>
<tr>
<td>Sep-13</td>
<td>$120</td>
<td>$120</td>
</tr>
<tr>
<td>Dec-13</td>
<td>$125</td>
<td>$125</td>
</tr>
<tr>
<td>Mar-14</td>
<td>$130</td>
<td>$130</td>
</tr>
<tr>
<td>Jun-14</td>
<td>$135</td>
<td>$135</td>
</tr>
<tr>
<td>Sep-14</td>
<td>$140</td>
<td>$140</td>
</tr>
<tr>
<td>Dec-14</td>
<td>$145</td>
<td>$145</td>
</tr>
<tr>
<td>Mar-15</td>
<td>$150</td>
<td>$150</td>
</tr>
<tr>
<td>Jun-15</td>
<td>$155</td>
<td>$155</td>
</tr>
<tr>
<td>Sep-15</td>
<td>$160</td>
<td>$160</td>
</tr>
<tr>
<td>Dec-15</td>
<td>$165</td>
<td>$165</td>
</tr>
<tr>
<td>Mar-16</td>
<td>$170</td>
<td>$170</td>
</tr>
<tr>
<td>Jun-16</td>
<td>$175</td>
<td>$175</td>
</tr>
<tr>
<td>Sep-16</td>
<td>$180</td>
<td>$180</td>
</tr>
<tr>
<td>Dec-16</td>
<td>$185</td>
<td>$185</td>
</tr>
<tr>
<td>Mar-17</td>
<td>$190</td>
<td>$190</td>
</tr>
</tbody>
</table>

Annualized Returns (%)

<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCERA</td>
<td>2.44</td>
<td>2.87</td>
<td>3.37</td>
</tr>
<tr>
<td>Bloomberg US Agg Bond Index</td>
<td>-0.31</td>
<td>2.48</td>
<td>2.21</td>
</tr>
</tbody>
</table>

Variance

VCERA
Bloomberg US Agg Bond Index
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
-1.00
-2.00
2012
2013
2014
2015
2016
VCERA
Bloomberg US Agg Bond Index

Page 40
Fund Number: 52

As of June 30, 2017

1 Year Annualized Global Fixed Income Returns

21 of 79 funds provided Global Fixed Income returns for this time period (%)

Universe Median: 5.24
Bloomberg Gbl Agg Bond Index: -2.18

Funds with less history than the specified time period will not appear in the chart.
17 of 79 funds provided Global Fixed Income returns for this time period (%)

Universe Median: 3.35
Bloomberg Gbl Agg Bond Index: 0.78

Funds with less history than the specified time period will not appear in the chart.
11 of 79 funds provided Global Fixed Income returns for this time period (%)

Universe Median: 5.42
Bloomberg Gbl Agg Bond Index: 3.69

Funds with less history than the specified time period will not appear in the chart.
<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCERA</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Bloomberg Gbl Agg Bond Index</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Variance</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

VCERA does not have return data for Global Fixed Income.
Fund Number: 52
1 Year Annualized Real Estate Returns

74 of 79 funds provided Real Estate returns for this time period (%)

With a return of 6.25, Fund 52 received a percentile rank of 68

Fund 52

As of June 30, 2017

Funds with less history than the specified time period will not appear in the chart.
72 of 79 funds provided Real Estate returns for this time period (%)

With a return of 10.60, Fund 52 received a percentile rank of 77.
66 of 79 funds provided Real Estate returns for this time period (%)

With a return of 3.36, Fund 52 received a percentile rank of 87

Universe Median: 4.62
NCREIF ODCE Index (AWA) (Gross): 5.25

Funds with less history than the specified time period will not appear in the chart.
VCERA vs. NCREIF ODCE Index (AWA) (Gross)

### Annualized Returns (%)

<table>
<thead>
<tr>
<th></th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCERA</td>
<td>6.25</td>
<td>10.24</td>
<td>10.60</td>
</tr>
<tr>
<td>NCREIF ODCE Index (AWA) (Gross)</td>
<td>7.87</td>
<td>11.34</td>
<td>11.79</td>
</tr>
<tr>
<td>Variance</td>
<td>-1.62</td>
<td>-1.10</td>
<td>-1.19</td>
</tr>
</tbody>
</table>
Universe Median Risk: 4.94      Median Return: 9.27      Median Sharpe Ratio: 1.79

Funds with less history than the specified time period will not appear in the chart.
Risk/Return Analysis

10 Year Annualized Total Fund Returns vs. Standard Deviation

As of June 30, 2017

Funds with less history than the specified time period will not appear in the chart.
Risk/Return Analysis

5 Year Annualized US Equity Returns vs. Standard Deviation

As of June 30, 2017

Fund Number: 52

74 of 79 funds provided US Equity returns for this time period (%)

Fund Sharpe Ratio: 1.81

Universe Median Risk: 7.91  Median Return: 14.51  Median Sharpe Ratio: 1.77

Funds with less history than the specified time period will not appear in the chart.
<table>
<thead>
<tr>
<th>Annualized Return</th>
<th>Standard Deviation (Risk)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.60</td>
<td>16.30</td>
</tr>
<tr>
<td>13.30</td>
<td>16.80</td>
</tr>
<tr>
<td>14.00</td>
<td>17.50</td>
</tr>
<tr>
<td>14.70</td>
<td>18.20</td>
</tr>
<tr>
<td>15.40</td>
<td>18.90</td>
</tr>
<tr>
<td>16.10</td>
<td>19.60</td>
</tr>
<tr>
<td>16.80</td>
<td>20.30</td>
</tr>
<tr>
<td>17.50</td>
<td>21.00</td>
</tr>
</tbody>
</table>

Funds with less history than the specified time period will not appear in the chart.

69 of 79 funds provided US Equity returns for this time period (%)

Fund Sharpe Ratio: 0.45

Universe Median Risk: 17.15  
Median Return: 7.15  
Median Sharpe Ratio: 0.46

As of June 30, 2017
As of June 30, 2017

Risk/Return Analysis

5 Year Annualized International Equity Returns vs. Standard Deviation

73 of 79 funds provided International Equity returns for this time period (%)

Fund Sharpe Ratio: 0.83

Universe Median Risk: 10.41      Median Return: 8.75      Median Sharpe Ratio: 0.85

Funds with less history than the specified time period will not appear in the chart.
67 of 79 funds provided International Equity returns for this time period (%)

Fund Sharpe Ratio: 0.16

Universe Median Risk: 19.79  Median Return: 1.89  Median Sharpe Ratio: 0.17

Funds with less history than the specified time period will not appear in the chart.
Fund Number: 52
Risk/Return Analysis
5 Year Annualized Global Equity Returns vs. Standard Deviation

As of June 30, 2017

24 of 79 funds provided Global Equity returns for this time period (%)

Fund Sharpe Ratio: 1.19

Universe Median Risk: 8.06      Median Return: 11.69      Median Sharpe Ratio: 1.44

Funds with less history than the specified time period will not appear in the chart.
Risk/Return Analysis

10 Year Annualized Global Equity Returns vs. Standard Deviation

As of June 30, 2017

10 of 79 funds provided Global Equity returns for this time period (%)

Universe Median Risk: 17.67  Median Return: 4.46  Median Sharpe Ratio: 0.31

Funds with less history than the specified time period will not appear in the chart.
Risk/Return Analysis

5 Year Annualized US Fixed Income Returns vs. Standard Deviation

As of June 30, 2017

Fund Number: 52

68 of 79 funds provided US Fixed Income returns for this time period (%)

Fund Sharpe Ratio: 1.21

Universe Median Risk: 3.06      Median Return: 3.10      Median Sharpe Ratio: 0.96

Funds with less history than the specified time period will not appear in the chart.
62 of 79 funds provided US Fixed Income returns for this time period (%)

Fund Sharpe Ratio: 0.89

Universe Median Risk: 3.95      Median Return: 5.29      Median Sharpe Ratio: 1.15

As of June 30, 2017

Funds with less history than the specified time period will not appear in the chart.
17 of 79 funds provided Global Fixed Income returns for this time period (%)

Universe Median Risk: 3.76  Median Return: 3.35  Median Sharpe Ratio: 0.80

As of June 30, 2017

Funds with less history than the specified time period will not appear in the chart.
Fund Number: 52  
Risk/Return Analysis  
10 Year Annualized Global Fixed Income Returns vs. Standard Deviation  

11 of 79 funds provided Global Fixed Income returns for this time period (%)

- Universe Median Risk: 4.65
- Median Return: 5.42
- Median Sharpe Ratio: 0.87

As of June 30, 2017

Funds with less history than the specified time period will not appear in the chart.
Fund Number: 52
Risk/Return Analysis
5 Year Annualized Real Estate Returns vs. Standard Deviation

As of June 30, 2017

72 of 79 funds provided Real Estate returns for this time period (%)
Fund Sharpe Ratio: 6.59

Universe Median Risk: 2.31      
Median Return: 11.56      
Median Sharpe Ratio: 4.67

Funds with less history than the specified time period will not appear in the chart.
Fund Number: 52
Risk/Return Analysis
10 Year Annualized Real Estate Returns vs. Standard Deviation

As of June 30, 2017

66 of 79 funds provided Real Estate returns for this time period (%)

Funds with less history than the specified time period will not appear in the chart.
As of June 30, 2017

54 of 79 funds provided Net Assets Available data (%)

Funds that did not provide data will not appear in the chart.
Actuarial Assumption Rates

As of June 30, 2017

Funds that did not provide data will not appear in the chart.

Actuarial Rate Assumptions - 7.50% Median
57 of 79 funds provided Actuarial Rate data

Salary Growth Rate Assumptions (Inflation plus Merit) - 3.75% Median
53 of 79 funds provided Salary Growth Rate data

Real Rate of Assumed Investment Return (Interest Rate minus Inflation) - 4.50% Median
53 of 79 funds provided Real Rate of Assumed Investment Return data

VCERA
VCERA did not provide fee data

Variance (%)

VCERA did not provide fee data

Allocations shown may not sum up to 100% exactly due to rounding.
### Administrative Expenses

<table>
<thead>
<tr>
<th>VCERA</th>
<th>Under $500 Million</th>
<th>$500mm - $1 Billion</th>
<th>$1 - $5 Billion</th>
<th>$5 - $10 Billion</th>
<th>$10 - $20 Billion</th>
<th>Over $20 Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Inv. Div. Staff</td>
<td>1.96</td>
<td>0.00</td>
<td>0.91</td>
<td>0.63</td>
<td>0.85</td>
<td>2.04</td>
</tr>
<tr>
<td>Actuary</td>
<td>3.25</td>
<td>1.80</td>
<td>0.54</td>
<td>0.24</td>
<td>0.13</td>
<td>0.11</td>
</tr>
<tr>
<td>Legal</td>
<td>1.45</td>
<td>1.18</td>
<td>0.68</td>
<td>0.20</td>
<td>0.31</td>
<td>0.15</td>
</tr>
<tr>
<td>Consultant</td>
<td>0.00</td>
<td>0.25</td>
<td>0.26</td>
<td>0.07</td>
<td>0.12</td>
<td>0.13</td>
</tr>
<tr>
<td>Audit</td>
<td>0.92</td>
<td>0.64</td>
<td>0.21</td>
<td>0.11</td>
<td>0.06</td>
<td>0.07</td>
</tr>
<tr>
<td>Other Professional</td>
<td>0.00</td>
<td>1.73</td>
<td>0.27</td>
<td>0.60</td>
<td>0.43</td>
<td>0.77</td>
</tr>
<tr>
<td>General Administrative</td>
<td>21.89</td>
<td>13.74</td>
<td>7.42</td>
<td>6.46</td>
<td>4.47</td>
<td>3.30</td>
</tr>
</tbody>
</table>

#### Total Administrative Expenses

| VCERA | N/A | 29.48 | 19.34 | 10.28 | 8.32 | 6.37 | 6.57 |

### Investment Expenses

<table>
<thead>
<tr>
<th>VCERA</th>
<th>Under $500 Million</th>
<th>$500mm - $1 Billion</th>
<th>$1 - $5 Billion</th>
<th>$5 - $10 Billion</th>
<th>$10 - $20 Billion</th>
<th>Over $20 Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodial</td>
<td>1.29</td>
<td>3.03</td>
<td>1.16</td>
<td>0.71</td>
<td>0.55</td>
<td>0.30</td>
</tr>
<tr>
<td>Investment Consulting</td>
<td>3.05</td>
<td>2.40</td>
<td>2.22</td>
<td>0.69</td>
<td>0.70</td>
<td>0.45</td>
</tr>
<tr>
<td>US Equity</td>
<td>0.00</td>
<td>7.38</td>
<td>6.66</td>
<td>6.35</td>
<td>3.26</td>
<td>2.19</td>
</tr>
<tr>
<td>International Equity</td>
<td>0.00</td>
<td>6.71</td>
<td>7.62</td>
<td>5.29</td>
<td>5.68</td>
<td>4.20</td>
</tr>
<tr>
<td>Global Equity</td>
<td>4.32</td>
<td>1.00</td>
<td>2.43</td>
<td>2.29</td>
<td>1.11</td>
<td>0.95</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>0.00</td>
<td>5.32</td>
<td>6.07</td>
<td>3.24</td>
<td>4.42</td>
<td>3.80</td>
</tr>
<tr>
<td>Real Estate</td>
<td>0.00</td>
<td>5.98</td>
<td>5.73</td>
<td>7.86</td>
<td>4.49</td>
<td>6.77</td>
</tr>
<tr>
<td>Other Investment Management</td>
<td>0.00</td>
<td>0.00</td>
<td>0.38</td>
<td>0.07</td>
<td>0.88</td>
<td>1.78</td>
</tr>
</tbody>
</table>

#### Total Investment Expenses (ex. Alt Inv)

| VCERA | N/A | 8.66 | 31.81 | 32.28 | 26.49 | 21.10 | 20.42 |

#### Alternative Investments

| VCERA | N/A | 3.98 | 18.11 | 23.98 | 14.10 | 21.73 |

#### Total Investment Expenses

| VCERA | N/A | 8.66 | 35.79 | 50.39 | 50.46 | 35.20 | 42.15 |

#### Total Expenses

| VCERA | N/A | 38.14 | 55.13 | 60.67 | 58.78 | 41.57 | 48.73 |

Expressed in basis points on total fund assets. Funds that did not provide fee data will not appear in the table.
GIPS Compliance Survey Summary

Q1. Are you currently claiming compliance or considering compliance with the CFA Institute’s Guidance Statement on the Application of the Global Investment Performance Standards (GIPS) to Asset Owners, effective January 1, 2015?

Of the 79 participants in the 2017Q2 Public Fund Report, 51 participants provided a reply to the GIPS Compliance Survey. Of those participants, 6 answered “Yes, Currently Comply”, 4 answered “Yes, Considering”, and 41 answered “Not Considering”.

Q2. According to the GIPS standards, asset owner net of fees performance must reflect internal as well as external investment costs, and such net of all fee performance is required to be calculated and presented to fund oversight committees/Boards. Please identify which, if any, of the following costs you are currently including or will consider including in net performance that is in compliance with the GIPS standards.

<table>
<thead>
<tr>
<th>Costs</th>
<th>Currently Include</th>
<th>Considering</th>
<th>Not Considering</th>
<th>Unsure at this Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal investment department compensation/benefits</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Allocation of non-investment department expenses (human resources, communications, technology, performance measurement, and compliance to support internal management team)</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Investment research services (100% or pro-rata determination)</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Investment consulting fees (general investment consulting and project fees; 100% or pro-rata determination)</td>
<td>8</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Pro-rata data valuation fees</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Pro-rata overhead indirectly related to asset management (building and utilities fees to support internal management team)</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>
Miscellaneous Comments

- Performance shown is gross of fees, with the exception of the following:
  - **Funds 31, 49, 350, 351, and 355**: Performance shown is net of fees.
  - **Funds 5 and 20**: Performance shown is net of fees, except for Total Fund performance.
  - **Fund 85**: Performance shown for Real Estate is net of fees.
- Performance shown is calculated using quarterly performance provided by participating public funds.
- Performance shown may differ from a fund's actual performance due to rounding.
- Net Assets Available for Benefit includes funding percentage valuation as of dates between June 2016 and June 2017.
- Allocations shown reflect dedicated managers/mandates rather than actual exposure, with the exception of the following:
  - **Fund 61**: Performance shown for Global Equity includes US and Non-US exposure.
  - **Funds 1, 29, and 119**: Performance shown for Global Fixed Income includes US and Non-US exposure.
  - **Funds 4, 42, and 64**: Performance shown for US Fixed Income includes US and Non-US exposure.

Glossary of Terms

**Beta** - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

**Return** - Compounded rate of return for the period.

**% Return** - The time-weighted rate of return of a portfolio for a given period.

**Sharpe Ratio** - Represents the excess rate of return over the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

**Standard Deviation** - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period. Calculation is based on quarterly periodicity.
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MARCH 28-30, 2018
UCLA LUSKIN CONFERENCE CENTER
LOS ANGELES, CA

Advanced Principles of Pension Management
for Trustees

FOR THE CALIFORNIA ASSOCIATION OF PUBLIC RETIREMENT SYSTEMS
ADVANCED PRINCIPLES OF PENSION MANAGEMENT
The Advanced course is about building trustee skills and strengthening board governance. Today's pension trustees have many opportunities to learn about the several disciplines required to run a pension system: institutional investing, actuarial science, benefits law, etc. But another highly important area of knowledge is the business of being a trustee and of contributing to a well-functioning board. The CALAPRS Advanced Principles of Pension Management course exposes veteran trustees to the most effective pension management thinking to enhance service to their retirement systems.

COURSE RATINGS
100% of last year’s participants agreed that the course would "enhance their performance and leadership abilities as a board member," and that they would, "recommend the program to their colleagues."

THE PROGRAM
Course attendees will hear from and discuss issues with top-level presenters in the areas of board/staff roles, governance, pension law, economic forecasting and actuarial science.

CURRICULUM | YOUR COURSE OF STUDY
Over the course of two days, attendees will be immersed in a powerful learning process—acquiring the skills they need to lead their organizations effectively.

The 2018 Program will cover:
- Policy-Based Boards
- Effective Planning
- Economics Forecasting Methods and the annual forecast of the UCLA Anderson School
- Good Governance & the Investment Team
- Wearing the Right Hat at the Right Time — The Fiduciary Duties of Public Pension System Board Members
- Advanced Actuarial Principles

PARTICIPANTS | WHO IS RIGHT FOR THE PROGRAM?
The program is designed for an experienced group of trustees. Trustees should have already acquired a basic understanding of board governance practices, actuarial and investment principles, and fiduciary responsibility. CALAPRS recommends that newer trustees first attend the trustee training course at Pepperdine University entitled: “Principles of Pension Management for Trustees” which is specifically designed for new trustees. The course was previously held at Stanford University.
EXPERIENCE UCLA’S TRADITION OF EXCELLENCE AT THE LUSKIN CONFERENCE CENTER

In the heart of UCLA’s vibrant campus, the new UCLA Meyer and Renee Luskin Conference Center is set amid iconic campus buildings and the exhilarating backdrop of daily student life. The Luskin Conference Center is a place where the best academic minds, innovators, researchers, political leaders, and societal visionaries meet to exchange ideas that help shape the world.

The UCLA Luskin Conference Center is an ideal central meeting place where California’s public pension trustees can gather for a transformational academic experience that transcends the acquisition of knowledge, skills, and tools—and fosters professional, intellectual, and personal development.

Participants will receive a Certificate of Completion for this program.

**PROGRAM DATES**
March 28-30, 2018

---

LEARNING COMMITMENT

Active involvement in all classroom sessions, case discussions, and other program activities is expected. Participants devote considerable time and intellect to the learning experience. Therefore, they must be free of outside responsibilities during the two days of the program.

**THE FACULTY**

The Advanced Principles Program is taught by a faculty of highly regarded experts and experienced professionals in the field of public pension management.

**TUITION**

Program tuition is $3,100 for CALAPRS members and $3,400 for non-members and includes all lodging, meals, and materials. Tuition must be paid in full by March 9, 2018.

**ACCOMMODATIONS**

Program tuition includes all meals and lodging on the nights of March 28 and 29, 2018 at the acclaimed UCLA Luskin Conference Center, located at 425 Westwood Plaza, Los Angeles, CA. To ensure full participation, all participants are required to stay on-site in the provided private, comfortable hotel rooms.

**REGISTRATION**

Applications must be received by February 16, 2018. Since space is limited, CALAPRS reserves the right to limit the number of trustees accepted from each retirement system, if need be.
Applications must be received by February 16, 2018. Since space is limited, CALAPRS reserves the right to limit the number of trustees accepted from each retirement system, if need be. Accepted applicants will be notified via email on February 20, 2018.

**Applicant Qualifications:** The Advanced Principles Program is designed for an experienced group of trustees. In evaluating readiness for this program, trustees should have already acquired a basic understanding of board governance practices, actuarial and investment principles, and fiduciary responsibility. CALAPRS recommends that newer trustees first attend the initial trustee training course at Pepperdine University entitled: “Principles of Pension Management for Trustees” that is specifically designed for new trustees. The course was previously held at Stanford University.

### Applicant Information

**Trustee’s Name (for certificate/name badge):**

**Retirement System:**

Trustee Type:  
- [ ] Elected  
- [ ] Appointed  
- [ ] Ex-Officio

**Date Became a Trustee:**

**Date Current Term Expires:**

**Trustee’s Mailing Address:**

**Trustee’s Phone:**

**Trustee’s Email:**

**Emergency Contact (name, phone):**

**Dietary Restrictions (if any):**

**Administrative Contact (name, email):**

☐ I have e-mailed this applicant’s biography (≤150 words) to register@calaprs.org for printing in the attendee materials.

### Applicant Signature

If admitted, I agree to attend the Advanced Principles program in full and acknowledge that missing one or more sessions may result in forfeiture of my Certificate of Completion, as determined by the Faculty.

**Trustee Signature (required)**

**Date:**

### Administrator Approval

**Administrator Name:**

**Email:**

**Administrator Signature (required):**

### Tuition Payment

☐ $3,100 CALAPRS Member  
☐ $3,400 Non-member

Program tuition must be paid in full by March 9, 2018. Tuition includes all meals, materials, and mandatory lodging for all participants for the nights of March 28 and 29 in the UCLA Luskin Conference Center. Payable by check only made out and mailed to “CALAPRS”. A separate invoice will not be sent.

If, due to a disability, you have any special needs, call 415-764-4860 to let us know. We will do our best to accommodate your needs.

---

**CALAPRS**

**Education, Communication, Networking**

**California Association of Public Retirement Systems**

Mail, email or fax form and payment to CALAPRS:

575 Market Street, Suite 2125
San Francisco, CA 94105

Phone: 415-764-4860  Fax: 415-764-4915

register@calaprs.org  www.calaprs.org
The Pension Bridge Annual Conference provides the highest level of education and networking to the institutional investment community. A mix of Public Funds, Corporate Funds, Foundations, Endowments, Union Funds, Taft-Hartleys, Family Offices, Sovereign Wealth Funds, Consultants and Investment Managers will come together for this exclusive event.

The Pension Bridge Annual provides the industry’s only controlled attendance structured event. This helps The Pension Bridge to maintain the best conference ratio in the industry. There will be over 200 Pension Fund Representatives and Non-Discretionary Consultants in attendance. We have allowed for only 100 Manager Firms. This better than 2:1 ratio, combined with participation from the most influential industry figures, creates a more enjoyable environment for all.

April 10th & 11th, 2018 | Four Seasons Hotel, San Francisco
THE PENSION BRIDGE ANNUAL
April 10th & 11th, 2018 | Four Seasons Hotel, San Francisco

LEARN FROM THE EXPERTS

ABOUT THE MOST IMPORTANT ISSUES, CHALLENGES, TRENDS, OPPORTUNITIES, AND STRATEGIES THAT WILL SHAPE OUR INDUSTRY FOR TODAY AND THE FUTURE:

- Macroeconomic View and Future Expectations for the Equity and Bond Markets
- What does the Future hold for Artificial Intelligence and Machine Learning in Investment Management?
- Active vs. Passive Management - Will it take a Market Sell-Off to Show the Need for Active Managers?
- Executive Directors/CEOs Views on the Current and Future State of the Industry
- Women and their Increasing Role in Investment Management Overview of the Cybersecurity Landscape and the Necessary Steps for Protection
- Challenges of the Risk Allocation Framework and Considerations when Building a Risk Culture from Within
- Does Risk Parity Make Sense Now? - Scenario Analysis for Risk Parity Performance
- Why Tail Risk Hedging is Important Now - Costs vs. Benefits
- In-Depth View of the Unconstrained Fixed Income Space and ways to Simplify the Sub-Allocations
- Does ESG Add Value? Best Approaches for ESG Integration in the Investment Process
- Emerging Markets Valuations Relative to Risk – a Look at Various Regions/Countries
- Why should Plans Sponsors Actively Manage Currency? – Hedging vs. Alpha
- The Benefits and Criticisms of Multi-Asset Strategies
- Current and Future State of the Hedge Fund Industry
- Impact from Global Central Bank Policy on Risk and Opportunities Across Credit Markets Going Forward
- Which Sectors, Strategies and Geographies will create the Best Opportunities in the Distressed Space?
- Investing in Commodities via Private Equity vs. Public - Benefits and Drawbacks of Each
- Most Attractive Sectors and Opportunities in Energy
- Top Trends to Watch in Real Estate; Strategies that Offer the Best Value
- Listed vs. Unlisted Infrastructure – which will Deliver Better Returns in a Volatile Down Market?
- Protecting your Existing Private Equity Portfolio and Avoiding Getting Involved in Expensive Deals
- Impactful Industry CIOs Provide their Insights on their Allocations, Risks and Macro-Based Decisions

We remain in a low growth, low return environment with unfavorable demographics in the U.S. The Pension Bridge Annual will uncover various structural transformations and investment ideas that will be beneficial for long-term fiscal sustainability.

In addition to the listed themes above, we will be covering many more challenging issues that are crucial to the investment decision making process during these uncertain economic times. We will learn from the best about how to adapt in our industry which is always evolving and transforming.
THE PENSION BRIDGE ANNUAL HAS TWO GOALS IN MIND

First is to provide the highest level of education with the top speaker faculty. This highly regarded group will bring forth influential insights and concepts. The second goal is to help build relationships between the pension plans, consultants and investment managers. We have provided the best possible environment for this event which is designed to be conducive for networking. We will cap off the event with a fun and enjoyable networking outing necessary for maintaining relationships and connecting with your peers and prospective business contacts.

We look forward to a strong event and a very productive one from both an educational and relationship perspective. We have structured this conference in a manner that will be most productive and beneficial for you. We hope that you will join us to be amongst your industry peers to learn about the most up-to-date insights, investment strategies, and trends.

TUESDAY, APRIL 10TH  
Four Seasons, San Francisco

7:00 AM – BREAKFAST

SPONSORED BY:  
ClearBridge Investments

8:00 AM – OPENING REMARKS

8:05 AM – KEYNOTE SPEAKER

Speaker:
Ashbel C. “Ash” Williams, Executive Director & Chief Investment Officer, Florida State Board of Administration, (SBA)
Interviewed by:
Kristen Doyle, CFA, Partner, Head of Public Pension Funds, Aon Hewitt Investment Consulting

8:35 AM – KEYNOTE SPEAKER – MACROECONOMIC VIEW

- Easy Money Central Bank Policy and the Consequences Down the Road
- Debt to GDP
- Corporate Debt Growth for Financial Engineering
- Oil and High Yield Defaults Outlook
- Are we in a Credit Bubble?
- Margin Debt and Valuation Levels
- Algo’s and Passive Investment as a Market Risk
- Inflation/Deflation Argument
- Outlook for Europe and Emerging Markets
- China – Debt Levels, Leverage, and Real Estate Bubble as a Wildcard
- Japan’s Demographics and Debt - what might be the Far Reaching Effects?
- Currencies
- Derivatives Risk
- Expectations for Equities and Bonds
- Expectations for the Next Black Swan?
- What are your Best Bets for a Low Growth, Low Return Environment?

Speaker:
J. Kyle Bass, Founder, Chief Investment Officer, Hayman Capital Management, L.P.
**9:05 AM – ARTIFICIAL INTELLIGENCE IN ASSET MANAGEMENT**

- What is the latest you’ve seen with Big, Established Asset Managers and Hedge Funds Pouring Money into Technology and Data Management to Develop Next-Generation Investment Systems?
- How Long Before AI becomes Mainstream in Hedge Fund Asset Management?
- Investing with Artificial Intelligence via Natural Language Processing so that Algorithms can Systematically Look for Verbal Cues. How are these Quant Hedge Funds doing as far as Inflows and Returns?
- Giving Computers and Data Science More Significant Roles over Humans in the Quant Space – How Big has the Movement Become at the Big Firms for Humans to be Replaced by Robots and Quant Researchers? Might this spread from Equity Trading to Fixed Income?
- Do you believe the AI Quants Combined with Leverage and the Inflows into Smart Beta might one day lead to a Massive Flash Crash or Quant Quake?
- When the next Quant Hedge Fund Sell-Off Unfolds, will the Risk Issues that are now used to address the 2007 Crisis still be applicable today?
- Do you have any Performance Concerns for Funds Relying on Algorithms during a Bear Market? Will the Risk Management side still largely be run by Humans?
- What does the Future Hold for Artificial Intelligence and Machine Learning?
- Do you believe Automated Technology will Eventually Play a Role in the Outsourced CIO Business and Reduce Costs?
- Will Robo-Advice Technology go Beyond Passive Investing and Move into Active? Might it be used by Consultants?
- What are the Roadblocks for AI?

**PRESENTED BY:** BlackRock

**Speaker:**
Jeff Shen, Managing Director, Head of Emerging Markets, Co-Head Scientific Equity, BlackRock

**9:35 AM – ACTIVE VS. PASSIVE MANAGEMENT**

- When making the Active/Passive Decision, what Factors should be Considered?
- Is Active Management a Dying Breed or is it simply at a Cyclical Low?
- Do you believe that the Extraordinary Growth in Passive Management is One of the Factors Contributing to Drive High Valuations?
- Agree or Disagree: With Volatility, Risk Premia, and the Dispersion of Risk being Low for an Extended Period of Time, it has made it Difficult for Active Managers to Shine
- When Volatility and Risk Premia Rise, will a Larger Number of Active Managers Stand Out?
- Do you believe it will take a Substantial Market Sell-Off for Investors to Realize their Need for Active Managers?
- What do Smaller Managers need to do to Compete with Flows going to Large Active Managers?
- How should Active Managers Differentiate Themselves to Justify the Fee Premium over Low-Cost Indexed Funds?
- Importance of Passive Managers to Identify Mispricings and Dislocations
- What are the Hidden Risks of both Passive Investing and Smart Beta?
- What are some Customization or Niche Strategies that will be necessary for both Active and Passive Managers to Adapt?

**Moderator:**
William Chau, CFA, Senior Manager, Retirement Investments, Intel Corporation

**Speaker:**
Mark Higgins, CFA, Consultant, Principal, RVK, Inc.

**10:10 AM – REFRESHMENT BREAK**

**SPONSORED BY:** GCM Grosvenor
10:40 AM - EXECUTIVE DIRECTOR/CEO ROUNDTABLE

(A) PENSION HEALTH/GOVERNANCE

- Do you believe Plans will be able to Meet or Beat the Assumed Rate of Return over the next 5 to 10 Years? What about in the Longer Term?
- Should we be Spending Political Capital to Lower Assumed Rate of Return Targets?
- Dealing with Legislature – what is your Biggest Concern? Is Trust a Factor?
- How do you approach Increases in Longevity and Costs for Healthcare Drugs for Retirees? Any possible Solutions?
- Agree or Disagree with this Concept: "We need to disconnect our healthcare and retirement plans from the employer-sponsored model. Employers are not in the health-care business; they aren't in the retirement business."
- Do you see the Benefits of Adopting a Hybrid DB/DC Plan? What are the Drawbacks?
- Best Governance Practices to Keep Plans Optimally Invested, Managed, Funded and in Regulatory Compliance
- How do you ensure your Board Members receive Continual Education of their Fiduciary Roles/Duties and keep them Updated on Risk Factors?
- Have you Educated Internally on the Risks or Steps for Cybersecurity Protection? Do you have Cybersecurity Questions or Guidelines in your Due Diligence of your Managers?

(B) LONG-TERM STRUCTURAL CHANGES FOR FISCAL SUSTAINABILITY

- Do you have Internal Management Capabilities?
- Will we see a Shift to Hunt for Long-Term Cash Flow Investments through Partnerships and Co-Investment Structures? Greater Competition to Follow?
- Have we made Strides to Solve the Talent and Compensation Struggle? Will we see More Compensation-Based Pay to Attract and Retain Talent to be Competitive with the Private Sector?
- Will we see a Continued Shift towards Investing in Passive, Low-Cost Vehicles, Index Funds, and ETFs over Actively Managed Funds? Is it Passive here to stay?
- Requirement for Better Transparency
- Do you believe we’ll see a Consolidation of Public Pension Plans Under One Entity, (such as INPRS or IMCO in Canada)? What are the Benefits?
- Making Governance More Effective – Identifying Key Board Member Roles with Expertise in Particular Areas with an Independent Board
- What is your Biggest Threat to your DB Plan? What keeps you up at night?

Moderator:
Gary A. Amelio, Chief Executive Officer, San Bernardino County Employees’ Retirement Association

Speakers:
Paul Matson, Executive Director, Arizona State Retirement System
R. Dean Kenderdine, Executive Director, Maryland State Retirement and Pension System
Brian Guthrie, Executive Director, Teacher Retirement System of Texas
11:30 AM – WOMEN AND THEIR INCREASING ROLE IN INVESTMENT MANAGEMENT

- What are some Ways we can Encourage Organizations to Embrace Diversity?
- Have we seen any Statistical Performance for Women and Minority-Owned Investing? What about the Performance of Female Hedge Fund and Private Equity Managers?
- Should Pensions put Pressure on Investment Managers to Formalize Family-Leave Policies to Encourage Diversity or is that the Responsibility of the Manager?
- Is there a way to Close the Income Gap?
- What is the Most Common Reason why Investors do not have Specific Women-Owned Investment Mandates? How Big an Issue is Lack of Supply?
- With just 6.5% of Global Private Equity Firms having Partners or Managing Partners that are Women (source: Preqin), how do you approach Beating those Odds?
- What are the Recent Findings from Women in Alternative Investments Report by KPMG? Any Takeaways?
- What is the Gender Retirement Gap and what are the Ways Women can Overcome these Hurdles?
- What Programs or Organizations do you believe are Helpful in the Advancement of Women in the Industry?
- What Can Institutions do to Support Women’s Advancement to the Top Levels of Leadership?
- How might Specialization be an Important Way for Women to offer a Diversified Strategy Approach?
- What Career Advancement Advice would you give to Younger Women who are Passionate and Fairly New to Investment Management?

**Moderator:**
**Meredith A. Jones,** Partner & Head of Emerging Manager Research, **Aon Hewitt Investment Consulting**

**Speakers:**
- **Anne Sheehan,** Director of Corporate Governance, **California State Teachers’ Retirement System, (CalSTRS)**
- **Sharmila Chatterjee Kassam,** Deputy Chief Investment Officer, **Employees Retirement System of Texas**
- **Susan E. Oh,** CFA, Senior Portfolio Manager, **Pennsylvania Public School Employees’ Retirement System**

12:10 PM – CYBERSECURITY

(A) INVESTMENT MANAGERS

- What are the Biggest Cybersecurity Challenges Investment Managers Face Today?
- Overview of the Cybersecurity Landscape – Phishing, Botnet Hackers, Insider Threats, Compromised Business E-mails, and Attempts to Steal Healthcare Data
- Ransomware and the Use of Bitcoin for the Hijacked Information’s Return
- What Initiatives should Firms take to Protect Against Phishing and Other Critical Threats?
- With the SEC Flagging Third Party Vendors as a Crack in a Firm’s Cybersecurity Shield, what Detailed Measures should be taken to Help a Firm to Avoid a Cybersecurity Breach?
- What are the Biggest Challenges to the Implementation of Corporate Security Analytics?

(B) PENSION PLANS

- What are the Necessary Steps for Cybersecurity Protection for Pension Plans?
- As a Pension Plan, Endowment, Foundation or Family Office, what Cybersecurity Questions should you ask in your Due Diligence of your Investment Managers?
- Have we seen any Education of the Risks, Steps for Protection and Internal Accountability yet?
- Pension Plans’ Responsibility starting at the Request for Proposal (RFP) Stage – providing Details for Data Protection and Privacy Provisions
- Should Plan Sponsors have Cybersecurity Insurance Coverage? What is typically Covered in a Policy?

**Speaker:**
**M. K. Palmore,** CISM, CISSP, Assistant Special Agent In Charge – Cyber Branch, San Francisco, **FBI**
### 1:40 PM – RISK MANAGEMENT AND ADOPTING A RISK CULTURE

#### (A) KEY CONSIDERATIONS AND TOOLS FOR MANAGING RISKS

- Overview of the Transformation from an Asset Allocation-Centered Process to a More Comprehensive Risk Allocation-Based Process
- Discuss the Challenges that have Prevented Wide-Spread Adoption of a Risk Allocation Framework?
  1. What Governance Challenges have you seen?
  2. What are the Implementation Challenges?
  3. What are the Key Challenges as it relates to Measuring Risk?
  4. Balance Between Cost and Comprehensive Risk Approach
  5. Challenges of Performance Monitoring, Risk Data and Systems – getting good Risk Information Across All Asset Classes and Fund/Investment Structures, (Pooled Vehicles vs. Separate Accounts)
- How can considering Diversification and Risk Independently help Investors Build More Efficient Portfolios?
- What Developments have we seen for Combining Several Risk Premiums as a part of Portfolio Diversification?
- How has taking a Risk Allocation Approach changed the Structure of your Plan's Fixed Income Investments? Understanding Return Seeking Fixed Income and Traditional Risk Reducing Fixed Income
- What Irregularities have we seen in Portfolios as Asset Classes are Redrawn and Renamed via Risk Allocation? Are we still too Over-Reliant on Equities?
- How do you Communicate your Risk Tolerances with your Board, Managers, and Media?
- How has the Role of Fiduciary Responsibility Changed in this New Era of Risk?
- What should Boards/Organizations Consider when Building a Risk Culture?
- How can Fiduciaries Adapt and Safeguard Against Today's Challenges?
- How do you go about Educating a Board on Risk?
- Have you Developed a Process for Monitoring Risk being taken by your Money Managers?
- What Metrics Aid in the Decision-Making Process?
- How does a Plan's Size affect the Approach to Pension Risk Management?

#### (B) TOP PENSION RISKS WE SHOULD BE MOST WARY OF

- Understanding Asset Class Correlation and Behavior Risk – Tendency of Interest Rate and Inflation Shocks Driving Both Equities and Bonds in the Same Direction, (Correlations Change)

#### (C) COMMUNICATION

- How do you Communicate your Risk Tolerances with your Board, Managers, and Media?
- How has the Role of Fiduciary Responsibility Changed in this New Era of Risk?
- What should Boards/Organizations Consider when Building a Risk Culture?
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**Moderator:**
Vijoy Chattergy, CAIA, Chief Investment Officer, Employees’ Retirement System of the State of Hawaii

**Speakers:**
Luis J. Roman, Ph.D., Senior Investment Officer, Director of Risk Management, Massachusetts Pension Reserves Investment Management Board, (PRIM)
Timothy F. McCusker, FSA, CFA, CAIA, Chief Investment Officer, Partner, NEPC, LLC
Bruce H. Cundick, CFA, CPA, Chief Investment Officer, Utah Retirement Systems
### 2:30 PM – RISK PARITY

- Risk Parity Explained
- Do you Consider it a Drawback that there’s Only a Positive Weight to an Asset with No Ability to go Short?
- Active Strategy? Passive? Extent to which a Risk Parity Portfolio is Managed?
- Risk Parity’s Role in a Portfolio and Benchmarking – why might these tend to Complicate and Potentially Discourage Investor Adoption/Implementation? What Progress have we seen towards Adopting an Appropriate Benchmark?
- Does Risk Parity Make Sense Now if we Expect Low Market Returns in the Future?
- Is it possible that Bonds will Become Less Likely to Protect against a Large Drawdown in Equities?
- Should we be Worried about Leverage or Leveraging the Inappropriate Assets? Is there an Over-Reliance on Bonds with Current Valuations?
- Do Commodities Make Sense in Risk Parity if Inflation Remains Low?
- Performance in the Past Decade and Longer – how does Risk Parity look over time Compared to Other Asset Mix Models?
- Leverage and Illiquidity Do Not Mix – any Approaches to Avoid this Combination?
- Do you View it as a Flaw that Portfolio Construction Approaches only consider Volatility Risk, Not Tail Risk or Drawdown Risk?
- Could Tail Risk Parity be More Effective? Thoughts on the Concept of Measuring Expected Tail Loss Rather Than Volatility – Cheaper Hedges for Protection, Reducing Tail Risks while Retaining More Upside than Risk Parity?
- Aside from the Money Concentrated in the Top “Founding Firms,” how should we Approach Managers with Short Track Records?

### 3:05 PM – REFRESHMENT BREAK

### 3:35 PM – TAIL RISK HEDGING

- Why is Tail Risk Hedging Important Now?
- Understanding Tail Risk Frequency, Severity and Impact
- Why are the Markets Vulnerable to a Substantial Decline Today? Does the Impact of Central Bank Tapering and the Fed Reducing its Balance Sheet Weigh on you?
- Understanding the Risk of Correlated Global Markets for Developed Countries
- How can you Quantify the Costs vs. the Benefits?
- What are the Merits of an Option Overlay Strategy In Lieu of Owning a Tail Risk Hedge?
- What Risks can be Efficiently Hedged in the Financial Markets?
- What Types of Strategies and Approaches are used to Hedge?
- Where have you seen it Work Successfully and Not So Well?
- What are the Implementation Challenges?
- Why is there often Difficulty Implementing a Tail Risk Program within the context of a Committee and how can we overcome this?
- Are there Alternative Ways to Deal with Tail Risk?
- Using Information from the Derivatives Markets to assess Stress Points – where we are seeing Tail Risks Building?
- Does the Growth in the VIX Universe pose a Risk?
- Pension Plans developing a Contingency Plan – What are the Best Practices to Navigate through Stressful Periods?
- Any Experiences you can Share among your Clients with Tail Risk Hedging?
4:05 PM – **UNCONSTRAINED FIXED INCOME**

- What are your Best Ideas for ways to Simplify the Sub-Allocations within the Fixed Income Space? Any Preferred Allocation Breakdowns or Weightings?
- With the Proliferation of Products which are Diverse, what is the Return Objective?
- Portfolio Construction – Need for Increased Disaggregation of Alpha Sources
- Understanding Return Sources/Attribution and Correlation that Unconstrained Funds have had with other Fixed Income Sectors and Equity Markets
- Impact of the Non-Linearity of Risk Correlations and Volatility Not Being Stable through time. Is that something you look to Measure in case of Market Dislocations?
- How are you Taking Advantage of Current Market Dislocations?
- What are the Implications of Reduced Liquidity?
- How should Investors think about Transparency of Positioning in Unconstrained Fixed Income?
- What Progress have we seen for a Factor or Risk Premium Approach for Assessing Risk?
- Do you see a Supply/Demand Imbalance in Long-Duration Fixed Income?
- Using Structured Products, Swaps, and Derivatives to Create Alpha and Hedge Volatility
- Emerging Markets Local Fixed Income – what are the Opportunities? Currency Risk Factors? Should Currency Exposures be Hedged or Unhedged?
- What are your Expectations and Outlook for Corporate Debt?
- Taxable Municipals vs. Corporate Bonds – Which Make More Sense Now?
- Do you view Bank Loans as a Hedge in Rising Rate Environment?
- If Trump Moves on GSE Reform (as he’s indicated), how would that Impact the MBS Market?
- Where do you see the Greatest Risks in the Debt Markets and what might be the Trigger Points that Enhance that Potential?
- Understanding how to Select Alternative Managers – Multi-Sector, Multi-Region and Multi-Currency Skill Set
- How do you Define Success for Unconstrained Fixed Income Strategies?

4:50 PM – **ENVIRONMENTAL, SOCIAL AND GOVERNANCE, (ESG)**

- Do we have Proof that ESG Integration Adds Value?
- ESG Fund Performance vs. Traditional Funds
- Do Firms with Good Performance on SASB Topics Outperform Firms with Poor Performance on those Topics?
- How do you Approach ESG from a Fiduciary Standpoint and for the Development of your Plan’s Investment Beliefs?
- How should ESG be best incorporated into the Investment and Due Diligence Process?
- Factors Needed to make ESG Mainstream and Integrated into Every Investment Process – Agreement on Weightings, Scoring and Definitions
- What are the Perceived Obstacles to applying an ESG Framework to the Stock Selection Process?
- Considerations for Investing in a Passive ESG Index – thoughts on Low Carbon Index? Combining ESG with Smart Beta?
- Climate Change and Investment – what’s the Relationship and how do you Integrate Climate Risks into your Process?
- What should Pension Funds be asking their Existing Active Managers in terms of whether they are looking at Climate Risk or Opportunity?

**Moderator:**
Scottie D. Bevill, Senior Investment Officer - Global Bonds and Real Return, Teachers’ Retirement System of Illinois

**Speaker:**
Thomas Henley, Senior Managing Director of Strategic Opportunities, UAW Retiree Medical Benefits Trust
WEDNESDAY, APRIL 11TH
Four Seasons, San Francisco

8:00 AM – EMERGING MARKETS

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<td>How have EM Headwinds Impacted your Deployment?</td>
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<td>What would be the Effects on Emerging Markets if we see Weak or Negative Growth in the U.S or Instability in Eurozone?</td>
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<td>What are Realistic Return Expectations? How might that Differ based on Region?</td>
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<td>How do Valuations look Relative to Risk?</td>
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<td>Are you Investing in Higher Growth Markets such as Southeast Asia, Africa or Latin America? Which particular Countries? Do you see Higher Risk, Returns and Diversification Factors here?</td>
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<td>Outlook for China – are you Concerned about their Credit and Real Estate Bubbles?</td>
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<td>What Dangers do you see with the EM Equity Benchmark with China’s Heavy Weighting?</td>
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<td>India to Benefit from its Fast Rate of Urbanization? Still in Need of Substantial Reform?</td>
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<td>Identify what Country or Region you see Favorable Demographic Trends such as a Growing Middle Class, Promising Consumer Buying Behavior and Economic/Fiscal Reforms</td>
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<td>Which Markets in Frontier Countries can you Profit from Strong Growth and Access a Lower Correlation?</td>
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<td>What can be done to Mitigate Currency Risks?</td>
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<td>The Case for Emerging Markets Corporate Debt</td>
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<td>What Metrics are you using to Determine Relative Value in Sovereign Bonds?</td>
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<td>Public vs. Private Emerging Markets – Benefits and Drawbacks of each</td>
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<td>Active vs. Passive Debate</td>
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<td>What is an Appropriate Long-Term Allocation to Emerging Markets? What should that Allocation look like, (Public Equity, Fixed Income, Private Equity, Frontier Markets, Alternatives, etc.)?</td>
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<td>Choosing an Emerging Markets Fund or Manager – should you be Investing by Region, Country or Sector?</td>
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<td>Given the Current Environment, will Emerging Markets Outperform Developed Markets?</td>
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Moderator:
Hayden Gallary, CFA, Managing Director, Cambridge Associates LLC

Speaker:
Candace Ronan, CFA, Portfolio Manager, Global Equity, California State Teachers’ Retirement System, (CalSTRS)
### 8:40 AM – CURRENCY AND CURRENCY ALPHA

#### (A) CURRENCY MARKET OVERVIEW
- What are the Factors Driving Currencies?
- What is the Relationship Between Volatility and Currency Returns?
- Can Currencies be Forecasted via Fundamentals, Cycles and Trends?
- Benefits of Active and Dynamic Currency Management
- Widely Confused Difference Between Currency Hedging and Currency as an Asset Class – How do they Differ in terms of Implementation Approaches?
- What are the most Common Reasons Asset Owners give for Not Actively Managing Currency? Are these Reasons Valid or Not?
- What is the Impact Forex can have on Overall Risk and Returns for International Equity and Bond Portfolios?
- Different Skills Required for Currency Hedging vs. Currency Alpha – should a Different Manager be used for Each Approach or is it Possible to be Skilled in Both?
- What are the Merits and Demerits of Adopting a Hedging Program vs. an Alpha Program?

#### (B) CURRENCY OVERLAY HEDGING
- Given Plan Sponsors Non-U.S. Exposure, what Factors should be Considered in the Determination of Implementing a Currency Hedging Program?
- Is there an Optimum Currency Hedge Ratio for a Plan?
- How much of a Reduction in Portfolio Volatility and Risk should be Expected?
- Can it be More Beneficial to be Unhedged?
- Hedging Costs – how should this factor into your Decision?

#### (C) CURRENCY ALPHA
- How does Employing a Currency Alpha Strategy fit into an Asset Allocation Framework?
- Benefits of Non-Correlated Returns to Equities, Fixed Income and Alternative Investments
- How does Investing in Currency Diversify and Reduce Risk? Natural Diversifier for the Duration Risk in Bonds?
- How do you Manage Risk Factors?
- What are the Return Expectations?
- When considering Investing in an Active Currency Strategy, what should you look for in a Manager?

**Moderator:** Aoifinn Devitt, Chief Investment Officer, **Policemen’s Annuity and Benefit Fund of Chicago**
### 9:10 AM – MULTI-ASSET STRATEGIES

**(A) CONSTRUCTION AND SKILLS**

- Why is Multi-Asset Investing Attractive to Investors?
- What are the Common Sub-Asset Classes Included in Multi-Asset Strategies?
- Do these Strategies Reduce Correlation, Lower Volatility and Limit Downside Risk or Drawdown? If so, by How Much?
- How do Investors utilize Multi-Asset Strategies in their Portfolios?
- With Dynamic and Tactical Asset Allocation Skills yet to be Put to the Test in recent years, how do you see this Space Evolving in a more Treacherous/Volatile Market?
- Aside from Asset Allocation Skills, what other Skills are Required for the Ability to Generate Alpha and be Successful?
- Constructing the Portfolio – Risk Factor Approach
- How do you Measure Performance?

**(B) CRITICISM**

- Do you believe Central Bank Policy has Limited the Ability of Multi-Asset Managers?
- Do these Strategies Rely Too Heavily on Market Timing?
- Do you Agree or Disagree with the Willis Towers Watson Report saying Multi-Asset Managers have actually Harmed Performance via Tactical Asset Allocation Decisions?
- The Skill of Moving Opportunistically Between Markets, a Function of Asset Allocation Alpha is an All-to-Rare Commodity – any Truth to this?
- Do you believe that many Multi-Asset Funds have Not Sufficiently Incorporated Risk Controls into the Design of their Products as the Willis Towers Watson Report Noted?
- Reliance on Stable Correlation Relationships although there is No Certainty those Relationships will Persist
- Is Excessive Leverage a Concern?
- High Fees
- Is Transparency often Obscure or Hazy?

**PRESENTED BY:** Janus Henderson Investors

**Speaker:**
Ashwin Alankar, Ph.D., Senior Vice President, Global Head of Asset Allocation & Risk Management, Janus Henderson Investors

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**9:40 AM – REFRESHMENT BREAK**
10:10 AM – HEDGE FUNDS

(A) CURRENT AND FUTURE STATE OF THE HEDGE FUND INDUSTRY

- Why have Hedge Funds Underperformed? Will this Shift?
- Is Hedge Fund Investor Risk Appetite and Hedge Fund Manager Willingness to Take On Risk High Enough to Generate an Acceptable Level of Return for Hedge Funds?
- Will we see More Hedge Funds Continuing to Shut Down?
- What is an Appropriate Fee Structure for Hedge Funds? How do you Assess the Tradeoff Between Fees and Liquidity?
- As an LP, do you find it Difficult to get Hedge Fund Managers to Provide Accurate Fee Information in a Timely, Efficient Manner? Do you believe we’re In Need of a Standardized Reporting Template like ILPA for Private Equity?
- Do Smaller Hedge Funds Outperform and if so, why?
- What is Driving the Increase in Demand for Strategies Uncorrelated with the Capital Markets? Which Low Correlated Strategies are Most Attractive?
- With Crowding on the Rise for Particular Stocks, do you see this as a Risk and a Contrarian Indicator for those Equity Holdings when the Cycle Turns?

(B) IMPLEMENTATION OPTIONS

- Long-Short Equity Hedge Funds – what Differentiates Managers that have been able to Outperform?
- Do you find Opportunities within the Global Macro Space Attractive and if so, why?
- Managed Futures – Diversification and Performance during Periods of Market Stress or Crisis Events. How much can it Decrease the Depth of Portfolio Drawdowns and Volatility?
- Liquid Hedge Fund Products such as UCITS, 40 Act and Hedge Fund Replication – are they a Viable Alternative and Under what Circumstances? How has their Performance and the Lower Fees Fared to Hedge Funds?
- The Role of Alternative Beta/Risk Premia Strategies in a Hedge Fund Portfolio – what are the Appropriate Expectations from a Sharpe Perspective?
- If there was a Hedge Fund Strategy you would Invest in over the next Few Years, which one would it be and why?
- What is the Future of the Fund of Funds Space? How is it Changing? Where will Fees be? What will it take to Stay Competitive?
- How do Emerging Managers Differentiate Themselves in the quest for Institutional Capital?
- What sort of Downside Protection, Drawdown or Return Range do you expect we'll see from each of the Different Hedge Fund Strategies during the Next Market Downturn?
- Implementation Considerations for Due Diligence, Portfolio Function and Manager Selection. What are the Key Traits you should be looking for?

(C) IMPLEMENTATION OPTIONS

- What does a Diversified Portfolio of Hedge Funds look like? How Many Funds do you need? Should you focus on a few better Strategies or is the Size of your Portfolio a Factor?
- What is the Role of Separate Managed Accounts? What are the Benefits? Are they Better than Commingled Funds?
- Any Recent Trends you’ve seen for Pension Plans as far as Fees, Transparency, Increased Partnership, etc.?
- Importance of Operations Due Diligence. Any recent Developments? How often should Operations be Reviewed?
- Transparency and Risk Aggregation Data – are they Accurate?
- What Monitoring Tools or Reports do you feel give you the most Bang for your Buck when Monitoring Individual Managers and Portfolios?
- What Trends do you see Developing in Regards to the way we Evaluate Liquidity Provisions for Hedge Funds?

Moderator: Dr. John Claisse, CEO, Albourne America LLC
Speaker: Neil Messing, Head of Hedge Funds, New York City Office of the Comptroller, Bureau of Asset Management
## CREDIT STRATEGIES

- Current State of the Credit Market
- Where are we in the Credit Cycle and how does it Differ from the Past?
- What will be the Catalyst that will cause Credit Spreads to Widen and Defaults to Rise?
- What Impact do you see from Global Central Bank Policy on Risk and Opportunities Across Credit Markets going forward?
- How will the Sector you Invest in Perform when Rates Rise? Is that a Concern and how do you Manage that?
- Where are we at with Regulatory Issues Today? How might Policy Impact Fund Managers and Investors Mandates?
- What Subsectors of Credit are Most Attractive given the Stretched Valuations? Any Areas you are Avoiding?
- High Yield Market – is it possible to see a High Yield Meltdown with a Lack of Liquidity? Understanding the Risk Factors and the Strong Correlation to Equities
- Bank Loans Overview
- State of Securitized Markets – RMBS, CMBS and CLO Overview
- Outlook and Considerations for Structured
- Outlook for Emerging Market Debt
- Opportunities and Risks for Europe and Asia
- Do you see Investors being more willing to Trade Liquidity for Yield and should that be of Concern?
- How much should Plan Sponsors be Allocating to Credit? What is the Optimal Structure to a Credit Portfolio?
- Considerations for Selecting a Manager and Strategy
- What are the Trade-offs between Mid-Market and Large Market Credit Investing?
- Public vs. Private Credit
- Credit Investment Mandates – are they Too Narrow? Which Bucket or Asset Class does it fit into and should it be Defined as Opportunistic Credit?

**Moderator:**  
Steve Woodall, CFA, CAIA, Portfolio Manager, Virginia Retirement System  
**Speaker:**  
Stephen L. Nesbitt, CEO, CIO, Cliffwater LLC

## DISTRESSED INVESTING – OPPORTUNISTIC AND SPECIAL SITUATIONS

- When will the Vast Sums of Undeployed Capital come in off the Sidelines? Do you Need an Economic Downturn?
- Does the Interest Rate Environment and Fed Balance Sheet Unwind Affect your Plans?
- What are your Expectations for Default Rates going forward?
- Where do you see the Largest Demand from Clients? What are they Most Interested in?
- Where do you see the Best Opportunities over the next 12-24 Months?
- Which Sectors, Strategies, and Geographies will create the Best Opportunities? Any Areas that should be Avoided?
- What Distressed Opportunities are we seeing the Energy Sector?
- What are the Opportunities and Risks in Europe? Any Countries, Sectors or Types of Deals that Stand Out?
- Do you see Opportunities in Asia or Elsewhere Globally?
- What’s the Potential Impact of the Debt Piled up by Corporations for their Share Buybacks?
- Will the Prevalent Covenant-Lite Deals create Problems during the Next Cycle?
- What are your thoughts on the Recent Leverage Trends?
- Do you worry about a Liquidity Problem in ETFs and other Structured Credit Vehicles if there is Credit Event?
- Has the Regulatory Environment Changed the Opportunity Set? How has it Impacted your Firm?
- Marketable Distressed Strategies – how Correlated are they to Public Equities? Might they have Merit or is it a Fad?
- What are the Biggest Challenges you face to Delivering Returns?
- How do Investors go about Choosing the Right Distressed Strategy, Investment Style and Approach?
- How will the Different Implementation Approaches affect Expected Returns? Control vs. Non-Control? Private vs. Public?
- Distressed Debt Vehicles in Hedge Fund Format vs. Private Equity Drawdown Structures – what are the Pros and Cons of Each?
- What Skill Sets/Characteristics should Pension Plans look for in a Distressed Manager?

**Moderator:**  
Keith M. Berlin, Director of Global Fixed Income and Credit, Fund Evaluation Group, LLC
12:10 PM – **LUNCH**

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**1:15 PM – COMMODITIES**

- Current Market Environment
- With the Lack of Evidence that Inflation has had a Significant Uptick, what Factors do we need to see for us to Believe that Commodities have Bottomed and we are ready to begin a Reflationary Regime?
- Based on Previous Down Equity Markets, what Performance can we Expect from Commodities if we have Market Turbulence? How Strong is the Correlation?
- What are your Views on particular Sub-Sectors and where are the Pockets of Value?
- How are Renewables Affecting Specific Commodities?
- What Currency or Weather Related Impacts are you seeing on Specific Commodities?
- Investing in Commodities through Private Equity vs. Stocks or Indexes – Benefits and Drawbacks of Each
- True or False – Natural Resource Stocks are Not an Efficient Way to get Commodities Exposure
- Are MLPs more Highly Correlated to Commodity Prices than we thought?
- Investing in Long/Short vs. Long Only
- Active vs. Passive
- Any Recent Developments in Commodities Risk Premia? Smart Beta as applied to Commodities?
- What are the Key Criteria that would lead to Manager Outperformance?
- Risk Factors

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**1:45 PM – ENERGY**

- Macro Landscape in Energy – is now the Time to be Investing?
- What are the Best Opportunities and Most Attractive Sectors you are seeing Today?
- What Risks do you see that some Investors might not be Considering?
- How Important are the Credit Markets in the Deployment of Private Capital? What have you seen in regards to the Growth of Credit/Lending Energy Strategies?
- How has the Current Commodity Market Distress Impacted the Balance Sheets of Oil and Gas Companies?
- Public vs. Private Investing in Energy – what are the Advantages and Disadvantages of each?
- Thoughts on Midstream MLPs with their Business of Oil Storage Services and its Cashflow?
- How has the Oilfield Service Industry Impacted Upstream Oil and Gas Operators?
- What does the Future Hold for Shale and Natural Gas?
- ESG Considerations, Climate Change and Portfolio Decarbonization – how do you Deal with LP Concerns on this Issue? Has it Impacted your Fund Commitments?
- How will the Growth of Renewables or Alternative Forms of Energy fit into your Portfolio? Will the Best Opportunities be in the U.S. or in Emerging Markets?

**Speaker:** Tom Masthay, CFA, CAIA, FRM, Director, Real Assets, **Texas Municipal Retirement System, (TMRS)**
2:15 PM – REAL ESTATE

- Global Macro Views and Trends in Real Estate
- Is a Correction on the Horizon and How Significant? If so, what is the Single Biggest Risk Factor?
- Challenges of Meeting Target Rate of Return
- What are your Return Expectations for the Core?
- Within Non-Core, which Value-Added and Opportunistic Strategies are Most Appealing?
- What is the Biggest Threat to Commercial in the next few years for this Fully Priced Market?
- Do you see a Trend Towards Direct and Away from Commingled Closed-Ended Funds? If so, will it Continue?
- Is the Bridge Financing Opportunity Attractive from Maturing CMBS?
- Debt vs. Equity Preference?
- What’s happening with Leverage?
- Which Property Types are At Risk Today?
- Any Niche Property Types that you Like?
- Analysis of Cap Rates and Vacancy/Occupancy Rates – any Conclusions you can draw?
- Asia and European Real Estate Outlook - Opportunities, Investment Trends and Capital Flows
- Will Co-Investments become more Common?
- Current State of the Real Estate Secondary Market
- Programmatic Joint Ventures – why are these Joint Ventures being done? Will more Pension Plans Team up with Commercial REITs?
- Larger vs. Smaller Fund Size – which ones will Outperform going forward?
- Entry Issues with Open-Ended Funds and Concentration into Fewer Funds?
- What Strategies do you see as the Biggest Risks and the Biggest Rewards/Relative Value for the Future?

Moderator:
Christy Fields, Managing Director – Real Estate, Pension Consulting Alliance, LLC, (PCA)

Speaker:
Anthony Breault, Senior Investment Officer, Real Estate, Oregon State Treasury

3:25 PM – INFRASTRUCTURE MARKET OUTLOOK

- Why should Investors consider Committing Capital to the Infrastructure Space?
- Funding Gap and State of Development of the Infrastructure Asset Class – Where are we now in terms of Appetite/Penetration amongst Investors Allocations? How much Room to Run is there for the Asset Class to Continue to Develop?
- Is there Too Much Money Chasing Too Few Opportunities?
- How has Performance been and what are the Recent Return Expectations?
- How will Opportunities and Returns and be Impacted by Low Oil Prices for an Extended Period?
- What has been the Effects of the Low Interest Rate Environment on Infrastructure and how might that Effect Returns and Leverage Going Forward?
- Which Geographies are Most Appealing? Developed or Emerging Economies?
- Which Sectors are Most Attractive?
- Approach – Greenfield vs. Brownfield?
- Infrastructure Debt – will it deliver for Investors Searching for Yield?
- What are the Biggest Challenges/Risks associated with Infrastructure Investing?
- Opportunities in Public-Private Partnerships?
- Debt Heavy/Equity Shortage Deals – How and When will Pension Investors Overcome this Highly Leveraged Roadblock?
- Any Advantages or Limitations for Co-Investments? Separate Accounts?
- What are the Advantages of Open-Ended Funds over Closed-Ended Funds? Will we Continue to see a Surge in Open-Ended Funds in the Coming Years?

Speaker:
Paul V. Shantic, Director – Inflation Sensitive Investments, California State Teachers’ Retirement System, (CalSTRS)
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<tr>
<th>Time</th>
<th>Topic</th>
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<tr>
<td>3:40 PM</td>
<td><strong>PRIVATE EQUITY</strong></td>
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<td>- Are we at a Market Peak? If so, what Clues Lead you to Believe So?</td>
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<td>- Protecting your Current Portfolio – How would you Guard Against your Existing Portfolio?</td>
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<td>- What are you doing Differently when Approaching New Investments? How do you Avoid Possible Pitfalls or Getting Involved in Expensive Deals?</td>
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<td>- Are High Levels of Dry Powder Here to Stay? Do you Believe it will Impact Returns?</td>
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<td>- Thoughts on GP Stakes being Bought by Dyal, Petershill and Others? Any Implications?</td>
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<td>- Subscription Lines of Credit – How do the Pros and Cons Stack Up and what are the Risks to LPs? Thoughts on ILPA’s Guidelines?</td>
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<td>- For Buyouts, what Sectors or Geographies do you Favor? What Sectors do you tend to Avoid in this Environment and why?</td>
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<td>- Do you Prefer Buyouts or Growth Equity over the next few years and why?</td>
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<td>- Does the Huge Growth in Co-Investments in Recent Years make you Cautious if the Cycle Turns?</td>
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<td>- Understanding the Trends and Performance of Co-Investments in Small, Medium, and Large Buyouts. Where do Co-Investments make the Most Sense?</td>
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<td>- Where are we in the Private Credit Cycle right now and where can we find Good Returns Without Taking Inordinate Risk?</td>
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<td>- State of the Venture Industry – Fundraising Environment, Valuations, and Exit Market</td>
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<td>- Venture Capital Winners – Limited Access to the Top Few VCs that Generate the Bulk of the Industry’s Returns? What’s the Best Approach to this Challenge?</td>
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<td>- Secondaries Deal Volume, Pricing, Pressures, and Future Expectations</td>
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<td>- Why should Secondaries be a Core Holding?</td>
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<td>- Issues, Outlook and Opportunities for European PE</td>
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<td>- Have you taken Steps to Diversify your PE Portfolio and find Investments with a Non-Correlation to the PE Space in General? Which of these Non-Correlation Strategies have you Allocated to or Favor?</td>
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<td>- Transparency and Fees – As an LP, what do you Need and how do you Get It? What is the SEC’s Impact on your Ability to get the Information you Require?</td>
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<td>- Have you gotten More Involved in your GPs Valuation Process? How have you Achieved this Transparency Demand?</td>
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**Speaker:** Rodney June, Chief Investment Officer, **Los Angeles City Employees’ Retirement System, (LACERS)**
## 4:25 PM - CIO ROUNDTABLE

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<thead>
<tr>
<th>(A) RISKS, ALLOCATIONS AND MACRO-BASED DECISIONS</th>
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<tbody>
<tr>
<td>In this Low Growth, Low Return and Fully-Valued Environment, how has it Impacted your Investment Program and your Asset Allocation? What Steps have you Taken?</td>
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<tr>
<td>Is there a Good Way to Hedge your Longevity Risk?</td>
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<td>What’s your Opinion on the Sustainability of the Stock Market Rally? Thoughts on Central Banks Monetary Policy, Tapering and Balance Sheet Reduction?</td>
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<td>Are there any Strategies you like that provide a Low or Non-Correlation to Traditional Investments that can Provide Outsized Returns during Periods of Market Stress?</td>
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<td>What Strategies does your Fund utilize that will Protect against Interest Rate Risk and Duration Risk?</td>
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<td>Are you Positioning for a Reflationary Regime or Hedging Against the Risk of Further Deflation and why?</td>
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<td>What De-Risking Strategies or Risk Management Approaches has your Fund Integrated into the Investment Decision Process?</td>
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<td>Does LDI or Risk Parity Make Sense Now Considering Current and Future Market Conditions?</td>
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<td>Do you Incorporate Multi-Asset Investing and do you believe it can Limit Downside Risk?</td>
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<td>Do you believe your Hedge Fund Strategies will provide a Cushion for the next Market Downturn? How do you use them to Reduce Risk?</td>
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<td>Have you Trended Towards a Passive Equity Allocation? When Volatility Rises, do you Believe Active Managers will Outperform?</td>
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<td>What do you feel is the proper Emerging Markets Allocation and are there any Regional or Frontier Strategies that interest you?</td>
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<td>Have you made Long-Term Cash Flow Investments through Partnerships and Co-Investment Structures?</td>
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<td>Do you Believe the impact of Regulation has Created a Reduction in Market Liquidity? Has it Impacted your Fund or Decisions? Will there be Sufficient Liquidity in the System to Cope with Conditions of Market Stress?</td>
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## (B) ALIGNMENT OF INTERESTS

| What Changes or Trends have you noticed in Fee Structures/Terms and your Bargaining Power? |
| How to Respond to Legislative Demands for more Transparency on Profit Sharing/Carried Interest |
| Governance Issues Surrounding Investment Programs - How has this been the Basis for Success or the Lack Thereof at Many Programs? |
| Should there be an Industry-Wide Threshold (perhaps 3% - 4%), before Carried Interest Kicks in? Is there a Way to go about Making Progress with this Issue? |
| What Tactics work best for you when attempting to Negotiate Private Placement Agreements? |
| Do You and Your Investment Departments have the Authority to be a Dynamic, Tactical, and Active Investor In Response to Extreme Economic Conditions? |
| Any Important Lessons Learned that you can Share from your Individual Plan Experiences? |

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### Moderator:
Andrew Junkin, CFA, CAIA, President, Wilshire Consulting

### Speakers:
Russell Read, Chief Investment Officer, Alaska Permanent Fund Corporation
Mansco Perry III, CFA, CAIA, Executive Director, Chief Investment Officer, Minnesota State Board of Investment
Scott C. Evans, CFA, Deputy Comptroller - Asset Management & Chief Investment Officer, New York City Office of the Comptroller, Bureau of Asset Management
Craig Husting, CFA, Chief Investment Officer, Public School & Education Employee Retirement Systems of Missouri, (PSRS/PEERS)

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### 5:20 PM - CONFERENCE CONCLUDES

### 5:20 PM - TICKETS FOR NETWORKING EVENT HANDED OUT IN THE CONFERENCE ROOM

### 6:00 PM - WINE TASTING & DINNER NETWORKING EVENT

HOSTED BY THE PENSION BRIDGE

Join our group at for a wine tasting and dinner at the Press Club, located just next door to the Four Seasons. Meet your industry peers in great setting as California Wine Country comes to the heart of the city. Experience the finest winemakers with new and rare vintages. We'll have a fun wine tasting reception, followed by a tasteful dinner with the highest quality organic ingredients. The Pension Bridge will utilize the 9000 square feet of the award winning “Best Restaurant Design” event space for networking for our high quality conference group.

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