

AGENDA

A REGULAR MEETING OF THE BOARD OF INVESTMENTS
LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION
300 N. LAKE AVENUE, SUITE 810, PASADENA, CALIFORNIA 91101

9:00 A.M., WEDNESDAY, DECEMBER 11, 2019

*The Board may take action on any item on the agenda,
and agenda items may be taken out of order.*

- I. CALL TO ORDER
- II. PLEDGE OF ALLEGIANCE
- III. APPROVAL OF MINUTES
 - A. Approval of the Minutes of the Special Meeting of November 20, 2019
- IV. AWARDS
- V. REPORT ON CLOSED SESSION ITEMS
- VI. PUBLIC COMMENT
- VII. CHIEF EXECUTIVE OFFICER'S REPORT
(Memo dated November 22, 2019)
- VIII. CHIEF INVESTMENT OFFICER'S REPORT
- IX. CONSENT ITEMS
 - A. Recommendation as submitted by Gina Sanchez, Chair, Equities Committee: That the Board approve the 2020 Private Equity Objectives, Policies, and Procedures.
(Memo dated November 22, 2019)

IX. CONSENT ITEMS (Continued)

B. Recommendation as submitted by Gina Sanchez, Chair, Equities Committee: That the Board approve the following changes to the Global Equity portfolio structure:

1. Revise LACERA's Global Equity benchmark from the 80% MSCI ACWI IMI Index¹ +20% MSCI World-ex US IMI Index² Currency Hedged to the MSCI ACWI IMI Index effective July 1, 2019.
2. Establish market capitalization and regional bands for the Global Equity portfolio relative to the MSCI ACWI IMI Index as follows:
 - a. Maintain market capitalization exposure of +/- 5 percentage points relative to MSCI ACWI IMI Index for each of the following market capitalization categories: small, mid, and large cap stocks.
 - b. Maintain U.S. Market, Non-U.S. Developed Markets, and Emerging Markets weights of +/- 5 percentage points relative to the MSCI ACWI IMI Index.

(Memo dated November 22, 2019)

C. Recommendation that the Board approve attendance of Board members at the International Corporate Governance Network Conference on February 25 – 26, 2020 in Seoul, South Korea and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

(Memo dated December 2, 2019)

D. Recommendation that the Board approve attendance of Board members at the 2020 SuperReturn Berlin Conference on February 25 – 28, 2020 in Berlin, Germany and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

(Memo dated December 2, 2019)

E. Recommendation that the Board Approve attendance of Board members at the 2020 SuperReturn China Conference in Beijing, China on May 6 – 8, 2020 and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

(Memo dated December 2, 2019)

X. NON-CONSENT ITEMS

- A. Recommendation as submitted by Wayne Moore, Chair, Credit and Risk Mitigation Committee; James Rice, Principal; Investment Officer and Chad Timko, Senior Investment Officer: That the Board approve the Minimum Qualifications for a separate account manager to manage a \$200 million program of emerging manager hedge funds as amended by the Credit and Risk Mitigation Committee. (Memo dated November 26, 2019)
- B. Recommendation as submitted by Santos H. Kreimann, Chief Executive Officer: That the Board review the 2020 meeting calendar and consider rescheduling meeting dates that conflict with a holiday and/or the potential of a lack of quorum. (Memo dated November 27, 2019)

XI. REPORTS

- A. Actuarial Assumption Review
Ted Granger, Interim Chief Financial Officer
Mark Olleman, Consulting Actuary
Nick Collier, Principal, Consulting Actuary
(Memo dated November 27, 2019)
- B. Emerging Manager Policy Review – Part 3
Jon Grabel, Chief Investment Officer
Leandro Festino, Meketa
Ted Wright, Principal Investment Officer
Vache Mahseredjian, Principal Investment Officer
(Memo dated November 27, 2019)
- C. Assembly Bill 2833 Report – Fiscal Year 2019
Jonathan Grabel, Chief Investment Officer
Calvin Chang, Senior Investment Analyst
Sabrina Chen, Investment Accountant
(Memo dated November 26, 2019)
- D. PAI Europe VII Manager Update
Jonathan Grabel, Chief Investment Officer
(Memo dated November 27, 2019)
- E. Real Estate Performance – Second Quarter
John McClelland, Principal Investment Officer
(For Information Only) (Memo dated November 26, 2019)

XI. REPORTS (Continued)

- F. Council of Institutional Investors Joint Letter to Securities and Exchange Commission
Scott Zdrazil, Senior Investment Officer
(For Information Only) (Memo dated November 26, 2019)
- G. Semi – Annual Report on Approved Engagements
Barry W. Lew, Legislative Affairs Officer
(For Information Only) (Memo dated November 26, 2019)
- H. LACERA Quarterly Performance Book
Jude Perez, Principal Investment Officer
(For Information Only) (Memo dated November 27, 2019)
- I. Monthly Education and Travel Report for October 2019
Ted Granger, Interim Chief Financial Officer
(For Information Only) (Public Memo dated November 25, 2019)
(Confidential Memo dated November 25, 2019 – Includes Anticipated Travel)

1st Quarter Education and Travel Expenditure Reports
Ted Granger, Interim Chief Financial Officer
(For Information Only) (Memo dated November 22, 2019)
- J. Monthly Status Report on Board of Investments Legal Projects
Steven P. Rice, Chief Counsel
(For Information Only) (Memo dated December 2, 2019)
- K. November 2019 Fiduciary Counsel Contact and Billing Report
Steven P. Rice, Chief Counsel
(For Information Only) (Privileged and Confidential)
(Attorney-Client Communication/Attorney Work Product)
(Memo dated November 22, 2019)

XII. ITEMS FOR STAFF REVIEW

- XIII. GOOD OF THE ORDER
(For information purposes only)

XIV. EXECUTIVE SESSION

- A. Conference with Legal Counsel – Anticipated Litigation Significant Exposure to Litigation (Pursuant to Paragraph (2) of Subdivision (d) of California Government Code Section 54956.9)
 - 1. Wynnchurch Capital Partners V, L.P.
 - 2. Illiquid Credit Investment Manager Search
 - 3. MBK Partners Fund V, L.P. – (For Information Only)

- B. Public Employee Performance Evaluation
(Pursuant to Paragraph (1) of Subdivision (b) of California Government Code Section 54957)

Title: Chief Counsel

XV. ADJOURNMENT

Documents subject to public disclosure that relate to an agenda item for an open session of the Board of Investments that are distributed to members of the Board of Investments less than 72 hours prior to the meeting will be available for public inspection at the time they are distributed to a majority of the Board of Investments Members at LACERA's offices at 300 N. Lake Avenue, Suite 820, Pasadena, CA 91101, during normal business hours of 9:00 a.m. to 5:00 p.m. Monday through Friday.

Persons requiring an alternative format of this agenda pursuant to Section 202 of the Americans with Disabilities Act of 1990 may request one by calling the Board Offices at (626) 564-6000, Ext. 4401/4402, from 8:30 a.m. to 5:00 p.m. Monday through Friday, but no later than 48 hours prior to the time the meeting is to commence. Assistive Listening Devices are available upon request. American Sign Language (ASL) Interpreters are available with at least three (3) business days notice before the meeting date.

MINUTES OF THE SPECIAL MEETING OF THE BOARD OF INVESTMENTS

A SPECIAL MEETING OF THE BOARD OF INVESTMENTS

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

300 N. LAKE AVENUE, SUITE 810, PASADENA, CALIFORNIA 91101

9:00 A.M., WEDNESDAY, NOVEMBER 20, 2019

PRESENT: Ronald Okum, Vice Chair

David Green

Keith Knox

David Muir

Herman B. Santos

ABSENT: Shawn Kehoe

Alan Bernstein

Wayne Moore

Gina V. Sanchez

STAFF ADVISORS AND PARTICIPANTS

Santos H. Kreimann, Chief Executive Officer

Jonathan Grabel, Chief Investment Officer

Steven P. Rice, Chief Counsel

Christine Roseland, Senior Staff Counsel

Christopher Wagner, Principal Investment Officer

John McClelland, Principal Investment Officer

STAFF ADVISORS AND PARTICIPANTS (Continued)

James Rice, Principal Investment Officer

Jude Perez, Principal Investment Officer

Vache Mahseredjian, Principal Investment Officer

David Chu, Senior Investment Officer

Didier Acevedo, Investment Officer

Johanna M. Fontenot, Senior Staff Counsel

Ted Granger, Interim Chief Financial Officer

Barry W. Lew, Legislative Affairs Officer

Meketa Investment Group

Stephen McCourt, Managing Principal

Timothy Filla, Managing Principal

StepStone Group LP

Jose Fernandez, Partner

Townsend Group

Jennifer Stevens, Partner

Albourne

James Walsh, Head of Portfolio Advisory

Mark White, Head of Real Assets

Milliman

Mark Olleman, Consulting Actuary

Nick Collier, Consulting Actuary

I. CALL TO ORDER

The meeting was called to order by Mr. Okum at 9:02 a.m., in the Board Room of Gateway Plaza.

II. PLEDGE OF ALLEGIANCE

Mr. Santos led the Board Members and staff in reciting the Pledge of Allegiance.

III. APPROVAL OF MINUTES

A. Approval of the Minutes of the Special Meeting of October 8, 2019

Mr. Santos made a motion, Mr. Green seconded, to approve the minutes of the special meeting of October 8, 2019. The motion unanimously.

IV. REPORT ON CLOSED SESSION ITEMS

(For Information Only) (Report dated November 12, 2019)

This item was received and filed.

V. PUBLIC COMMENT

Jordan Fein, Hemere Dinko, Wade Luneburg and Horacio Hidalgo from UNITE HERE addressed the Board regarding PAI Europe VII investment in Areas, pending labor issues, and the potential effect of those issues on LACERA's investment.

VI. CHIEF COUNSEL'S REPORT

(Memo dated October 31, 2019)

Mr. Rice provided a brief overview of the Chief Counsel's Report and answered questions from the Board.

VII. CHIEF EXECUTIVE OFFICER'S REPORT

Mr. Kreimann provided a brief presentation on the Chief Executive Officer's Report.

VIII. CHIEF INVESTMENT OFFICER'S REPORT

Mr. Grabel provided a brief presentation on the Chief Investment Officer's Report.

IX. CONSENT ITEMS

Mr. Santos made a motion, Mr. Muir, seconded, to approve the following agenda items. The motion passed unanimously.

- A. Recommendation as submitted by Alan Bernstein, Chair, Corporate Governance Committee: That the Board nominate Scott Zdrzil for re-election to the Council of Institutional Investors 2020 board elections. (Memo dated October 9, 2019)
- B. Recommendation as submitted by Alan Bernstein, Chair, Corporate Governance Committee: That the Board approve LACERA's endorsement of the Task force on Climate-related Financial Disclosures. (Memo dated October 9, 2019)
- C. Recommendation as submitted by Wayne Moore, Chair, Credit and Risk Mitigation Committee: That the Board approve the proposed Minimum Qualifications for a Request for Proposal for a solutions provider(s) for a dedicated managed account platform thereby authorizing staff to initiate the search. (Memo dated October 24, 2019)
- D. Recommendation as submitted by Barry W. Lew, Legislative Affairs Officers: That the Board:
 - 1. Approve a visit with Congress by Board members and staff as designated by the Chair of the Board of Investments during the week of January 26, 2020 in Washington, D.C.;
 - 2. Approve the visit as an Administrative Meeting; and
 - 3. Approve reimbursement of all travel

(Memo dated November 6, 2019)

IX. CONSENT ITEMS (Continued)

- E. Recommendation that the Board approve attendance at manager meetings in New York on Monday, December 2, 2019 to collect information regarding investments in the Real Estate and Private Equity asset classes. (Memo dated November 8, 2019)
- F. Recommendation that the Board approve attendance of Board members at the 2020 Milken Institute MEA Summit on February 11–12, 2020 in Abu Dhabi, United Arab Emirates and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy. (Memo dated November 7, 2019)
- G. Recommendation that the Board Approve attendance of Board members at the 2019 SuperReturn Japan Conference on December 3–4, 2019 in Tokyo, Japan and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy. (Memo dated November 7, 2019)
- H. Recommendation that the Board approve attendance of Board members at the International Corporate Governance Network (ICGN) Conference on February 27 – 28, 2020 in Seoul, South Korea and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy. (Memo dated November 7, 2019)

X. NON-CONSENT ITEMS

- A. Recommendation as submitted by James Rice, Principal Investment Officer, Daniel Joye, Investment Officer and Brenda Cullen, Investment Officer: That the Board:

1. Approve the Real Assets 2019 Structure Review as advanced to the Board of Investments by the Real Assets Committee.
2. Approve the Addendum to the Structure Review provided by staff.

(Memo dated November 8, 2019)

Mr. James Rice and Messrs. White and Walsh from Albourne provided a presentation and answered questions from the Board.

X. NON-CONSENT ITEMS (Continued)

Mr. Santos made a motion, Mr. Green seconded, to (1) approve the Real Assets 2019 Structure Review as advanced to the Board of Investments by the Real Assets Committee and (2) approve the Addendum to the Structure Review provided by staff. The motion passed unanimously.

- B. Recommendation as submitted by John McClelland, Principal Investment Officer: That the Board adopt the Procurement Policy for Investment-Related Services. (Memo dated November 5, 2019)

Messrs. Grabel and McClelland provided a presentation and answered questions from the Board.

Mr. Muir made a motion, Mr. Santos seconded, to adopt the Procurement Policy for Investment-Related Services. The motion passed unanimously.

- C. Recommendation as submitted by Jude Perez, Principal Investment Officer: That the Board adopt the Investment Crisis Response Plan. (Memo dated November 6, 2019)

Messrs. Grabel and Perez provided a presentation and answered questions from the Board.

Mr. Muir made a motion, Mr. Santos seconded, to adopt the Investment Crisis Response Plan. The motion passed unanimously.

- D. Recommendation as submitted by Johanna M. Fontenot, Senior Staff Counsel: That the Board approve the Chief Counsel Reporting Structure. (Memo dated October 31, 2019)

X. NON-CONSENT ITEMS (Continued)

Mrs. Fontenot was present and answered questions from the Board.

Mr. Santos made a motion, Mr. Green seconded, to approve the Chief Counsel Reporting Structure. The motion passed unanimously.

XI. REPORTS

- A. Actuarial Valuation Review
Ted Granger, Assistant Chief Financial Officer
Mark Olleman, Consulting Actuary
Nick Collier, Principal, Consulting Actuary
(Memo dated November 1, 2019)

Mr. Granger and Messrs. Olleman and Collier of Milliman were present and answered questions from the Board.

The following items were received and filed:

- B. PAI Partners Manager Update
Jonathan Grabel, Chief Investment Officer
(For Information Only) (Memo dated November 8, 2019)
- C. Securities and Exchange Commission Comment Letter Regarding Regulations S-K Human Capital Disclosures
Scott Zdrazil, Senior Investment Officer
(For Information Only) (Memo dated November 4, 2019)
- D. Principles for Responsible Investment Meeting Ballot
Scott Zdrazil, Senior Investment Officer
(For Information Only) (Memo dated October 11, 2019)
- E. Update on Council of Institutional Investors and Securities and Exchange Commission Reforms
Scott Zdrazil, Senior Investment Officer
(For Information Only) (Memo dated November 8, 2019)

XI. REPORTS (Continued)

- F. Semi-Annual Interest Crediting for Reserves as of June 30, 2019
(AUDITED)
Ted, Granger, Assistant Chief Financial Officer
(For Information Only) (Memo dated October 29, 2019)
- G. LACERA OPEB Master Trust as of September 30, 2019
Meketa OPEB Master Trust as of September 30, 2019
Jude Perez, Principal Investment Officer
(For Information Only) (Memo dated November 5, 2019)
- H. Monthly Status Report on Legislation
Barry W. Lew, Legislative Affairs Officer
(For Information Only) (Memo dated October 24, 2019)
- I. Monthly Board and Staff Education and Travel Report – September
2019
Beulah S. Auten, Chief Financial Officer
(Public Memo dated October 31, 2019)
(Confidential Memo dated October 31, 2019 – Includes Anticipated
Travel)
- J. Monthly Status Report on Board of Investments Legal Projects
Steven P. Rice, Chief Counsel
(For Information Only) (Memo dated November 12, 2019)
- K. October 2019 Fiduciary Counsel Contact and Billing Report
Steven P. Rice, Chief Counsel
(Privileged and Confidential)
(Attorney-Client Communication/Attorney Work Product)
(For Information Only) (Memo dated November 1, 2019)

XII. ITEMS FOR STAFF REVIEW

In regards to item XI. A., the Board requested for Milliman to return in December to provide an educational presentation.

In regards to item XI. B., the Board requested for staff to provide a letter to Unithere 11 and to provide the board with an update at the next meeting.

XIII. GOOD OF THE ORDER
(For information purposes only)

The Board extended its deepest gratitude to Steven P. Rice, Chief Counsel, for taking on the Chief Executive Officer responsibilities for the last five months. Lastly, the Board thanked and welcomed new Chief Executive Officer, Santos H. Kreimann to LACERA.

Mr. Santos shared his experience attending the Toigo Foundation.

XIV. EXECUTIVE SESSION

A. Conference with Legal Counsel – Anticipated Litigation Significant Exposure to Litigation (Pursuant to Paragraph (2) of Subdivision (d) of California Government Code Section 54956.9)

1. Real Estate Manager

Messrs. Grabel and McClelland were present and answered questions from the Board. The Board took action which will be reported out at a later date as provided by the Brown Act. There is nothing further to report today.

2. Sterling Investment Partners IV, L.P.

The Board received an information only report concerning a re-up commitment under the CIO's authority of \$125 million to Sterling Investment Partners IV, LP, which pursues investments in distribution and service companies in the United States. There is nothing further to report.

3. Revelstoke Capital Partners Single Asset Fund I, L.P.

Messrs. Chu and Acevedo and Mr. Fernandez of StepStone Group LP provided a presentation and answered questions from the Board.

XIV. EXECUTIVE SESSION (Continued)

Mr. Santos made a motion, seconded by Mr. Green, to approve a commitment to Revelstoke Capital Partners Single Asset Fund I, L.P. Messrs. Green, Knox, Muir, Okum, and Santos voted yes; there were no votes against or abstentions. Messrs. Moore, Kehoe, Bernstein and Mrs. Sanchez were absent.

4. Business Continuity Planning and Cash Management

The Board took action which will be reported out at a later date as provided by the Brown Act. There is nothing further to report today.

5. Real Estate Manager Update (For Information Only)

The Board received an information only real estate manager update. There is nothing to report.

XV. ADJOURNMENT

There being no further business to come before the Board, the meeting was adjourned at 1:22 p.m.

Green Folder Information (Information distributed in each Board Members Green Folder at the beginning of the meeting)

1. Item V. – PAI Partners Investor Labor Relations Advisory: Areas USA

WAYNE MOORE, SECRETARY

SHAWN KEHOE, CHAIR



November 22, 2019

TO: Each Member
Board of Retirement
Board of Investments

FROM: Santos H. Kreimann *SHK*
Chief Executive Officer

SUBJECT: **CHIEF EXECUTIVE OFFICER'S REPORT**

I am pleased to present the Chief Executive Officer's Report that highlights a few of the operational activities that have taken place during the past month, key business metrics to monitor how well we are meeting our performance objectives, and an educational calendar.

A New Beginning

I would like to begin my first CEO Report by thanking your Boards again for the opportunity and honor of joining the LACERA family. As I have mentioned to our managers and staff members, as a County employee for nearly 30 years, joining the LACERA family feels both familiar, but also carries with it the exciting opportunities of new beginnings. I would also like to thank the managers and staff members for their warm welcome and for their openness and willingness to share their hopes, ideas and concerns with me.

My first 100 days will be devoted to getting to know LACERA better. I have been meeting with the management team and staff members to begin the mutual learning process. In addition, I have been sharing with the staff members my leadership philosophy and my expectations going forward. Over the next few months, I will begin to formulate more detailed plans for our future that I will share with the Boards and staff.

In the meantime, we are not remaining idle. As discussed at the November Board meetings, the management team and I have met and discussed our plans to address the recent Los Angeles County financial and operations audit. While we do not agree with everything in the audit, it does provide an opportunity to continue the reflection, review, and development of plans to address the operational areas we internally identified as needing improvement. Under my leadership, LACERA will remain focused on continually improving our operations, enhancing our work culture, and providing opportunities for our staff members to grow both professionally and personally. We are working towards the March 2020 timeframe for making administrative changes we feel are appropriate. As always, we will keep your Boards informed about our progress.

Finally, we are beginning the annual budgeting process. This year we will be carrying forward the current Strategic Plan, while making slight changes to the budget process to meet the requirements of the Joint Organizational Governance Committee Charter and incorporate Board feedback. I have already begun working with the Budget Team to review the process and potential plans under consideration for modifying the planning and budgeting process. Once I have had an opportunity to understand the current process the team and I will provide an overview of a new strategic planning and budgeting process that we will implement in FY 2021-2022.

March Madness Begins

I am pleased to announce that staff in Member Services and Systems have been working together to expand our ability to serve members on the weekends, throughout the March Madness retirement season. Beginning in November, we will be hosting workshops and one-on-one counseling sessions in the Member Services Center on selected weekends. This takes a tremendous amount of coordination between Member Services and our Systems Division to ensure that we have enough people to support the expanded counseling offerings. I thank all of our hard working staff for being flexible and member focused. Beginning with the next CEO Report, we will report out the March Madness season numbers as they come in.

2020 Board of Retirement Offsite

We are pleased to announce the 2020 Board of Retirement Offsite scheduled for Tuesday, January 21 and Wednesday, January 22 at the Millennium Biltmore Hotel in Los Angeles. The first day of the educational meeting will focus on Board of Retirement matters, and the second day will be dedicated to our Retiree Healthcare Program. All Board members are encouraged to attend both days, as we appreciate your ideas and observations for improving our member programs and services.

We will be working on developing an informative and educational agenda. Should any Board members have a suggested topic or educational focus you would like us to consider, please reach out to myself or a member of the Executive team. Details to follow!

Update on Key Retirements

Chief Financial Officer: Beulah Auten, Chief Financial Officer (CFO), has retired effective October 31, 2019. Recruitment of her replacement will be initiated once I have had time to review the structure and job functions of the CFO. We will continue updating the Boards regularly. In the meantime, Ted Granger, will continue to serve as the Interim CFO.

Director of Human Resources: As mentioned in last month's CEO Report we have re-opened our search for a new Human Resources Director, after the previous selected candidate had to back out of the process. I will be working with the search team and the recruiter to fill this critical position.

SHK: jp
CEO report December 2019.doc

Attachments

Striving for Excellence in Service



Outreach Attendance
4,356

14,317 Year-to-Date



Outreach Events
56

198 Year-to-Date



Outreach Satisfaction
95.7%

0.4% Change Since Last Mo



Member Service Center
100.0%

-2% Change Since Last Mo

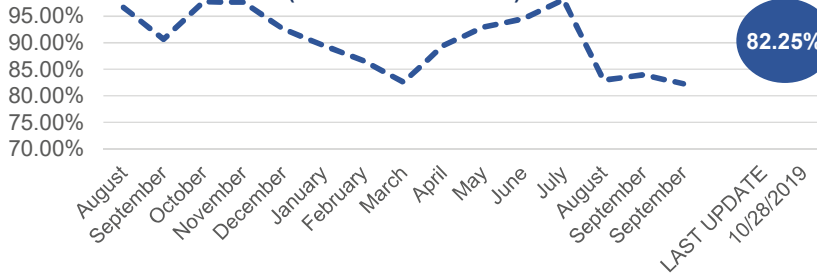


Member Services Calls
12,371

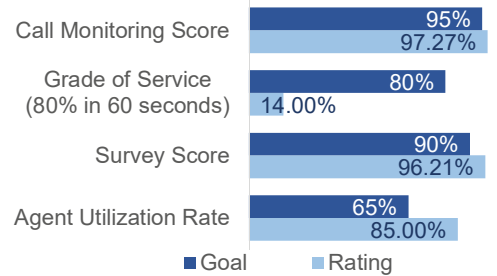
12,470 3 Mo. Avg.

Key Performance Indicator (Overall Performance)

Goal: 100%



Key Performance Indicator (Components)



Member Services



Top Calls

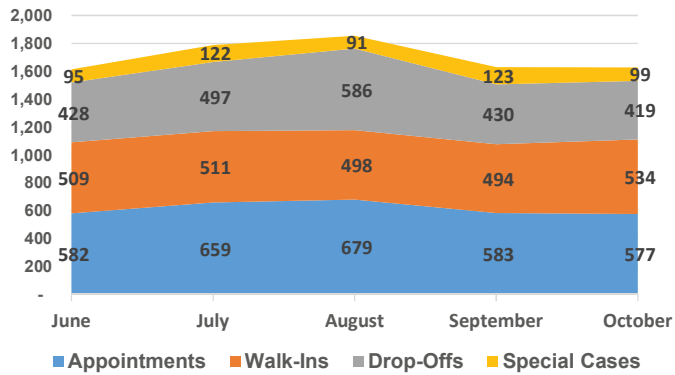
1. Workshop Information\Appointments: Inquiry
2. Retirement Counseling: Process Overview
3. My LACERA: Portal Login Issues



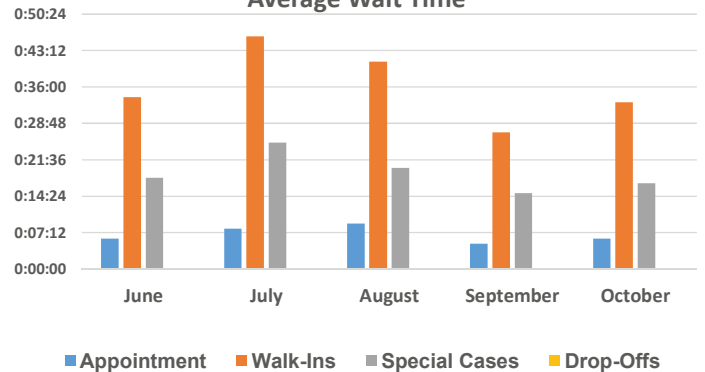
Emails 501
5:45 hours
Avg. Response Time (ART)

Secure Messages 202

Member Service Center Visits



Member Service Center Average Wait Time

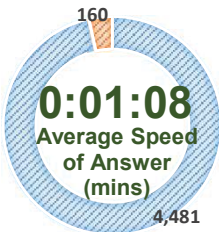


*Drop Off Wait Time: No Waiting



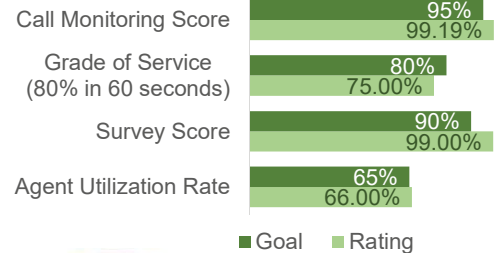
Total RHC Calls: 4,644

Retiree Healthcare



Top Calls

1. Med. Benefits - General Inquiries (RHC)
2. Medical-New Enrollment/Change/Cancel
3. General Inquiries (RHC)



Emails 265
1 Day
Avg. Response Time

Secure Messages n/a

Striving for Excellence in Service (Continued)

Applications

Appeals

Disability

683

**In Process
As Of:
10/30/2019**

681 Pending as of:

41 Received

182 Year-to-Date

0 Re-Opened

0 Year-to-Date

36 To Board - Initial

167 Year-to-Date

3 Closed

8 Year-to-Date

102

**In Process
As Of:
10/30/2019**

98 Pending as of:

4 Received

15 Year-to-Date

0 Admin Closed/Rule 32

6 Year-to-Date

0 Referee Recommended

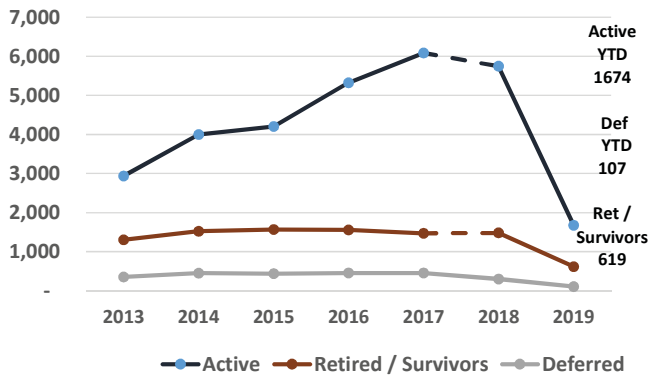
0 Year-to-Date

0 Revised/Reconsidered for Granting

0 Year-to-Date

My LACERA Registrations

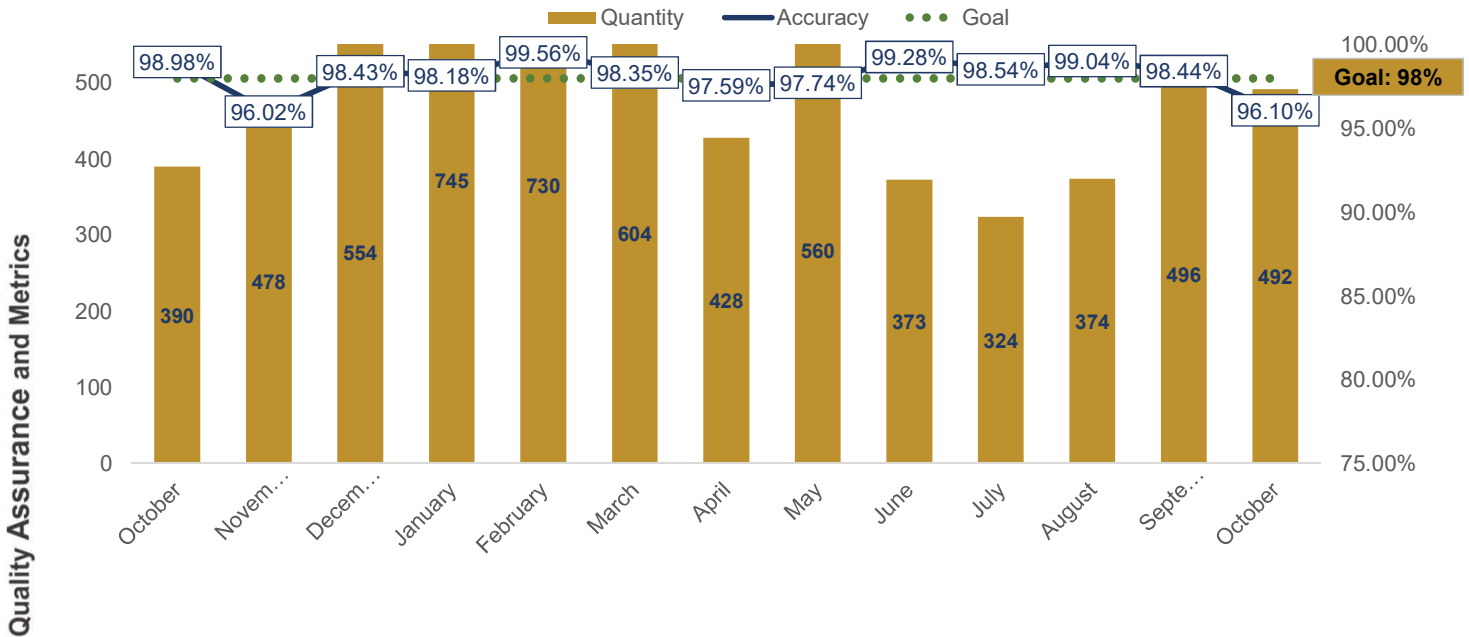
My LACERA



MORE COMING SOON!

Striving for Excellence in Quality

Audits of Retirement Elections, Payment Contracts, and Data Entry Completed by QA



**October
2019
96.10%**



Retirement Elections

309 Samples
90.49% Accuracy

Payment Contracts

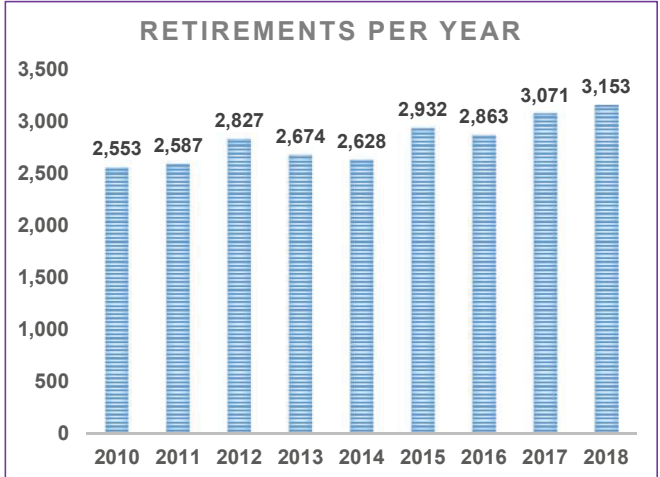
123 Samples
98.39% Accuracy

Data Entry

60 Samples
99.42% Accuracy

Member Snapshot

| | Members as of 11/14/19 | | | | |
|----------------------|------------------------|---------------|---------------|----------------|----------------|
| | Plan | Active | Retired | Survivors | Total |
| General | Plan A | 100 | 16,504 | 4,453 | 21,057 |
| | Plan B | 32 | 677 | 70 | 779 |
| | Plan C | 39 | 426 | 69 | 534 |
| | Plan D | 41,378 | 15,818 | 1,487 | 58,683 |
| | Plan E | 17,106 | 13,197 | 1,203 | 31,506 |
| | Plan G | 28,087 | 39 | 3 | 28,129 |
| | Total General | 86,742 | 46,661 | 7,285 | 140,688 |
| Safety | Plan A | 4 | 5,206 | 1,585 | 6,795 |
| | Plan B | 9,615 | 5,979 | 298 | 15,892 |
| | Plan C | 3,319 | 8 | 0 | 3,327 |
| | Total Safety | 12,938 | 11,193 | 1,883 | 26,014 |
| TOTAL MEMBERS | 99,680 | 57,854 | 9,168 | 166,702 | |
| % by Category | 60% | 35% | 5% | 100% | |



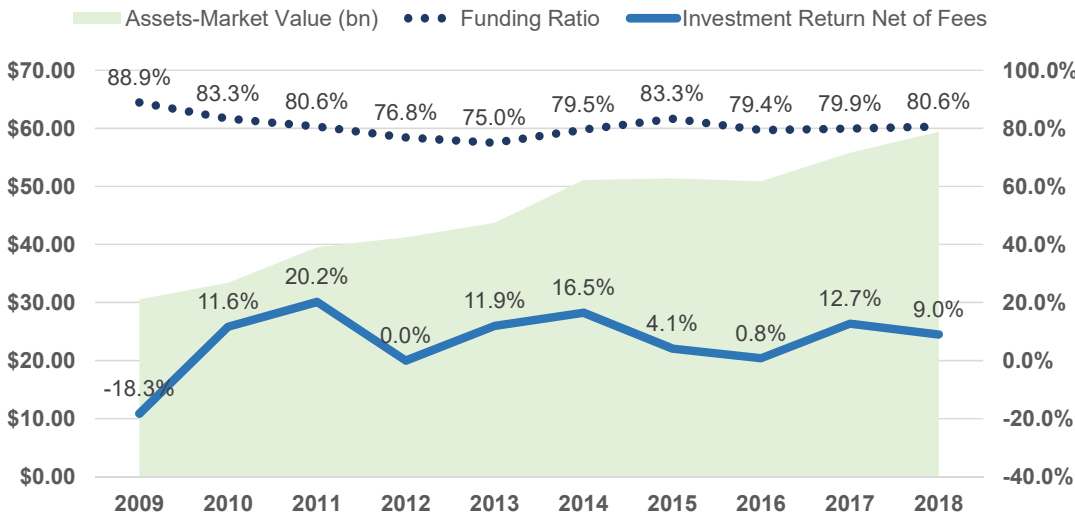
Average Monthly Benefit Allowance Distribution

| | General | Safety | Total | % |
|----------------------|---------------|---------------|---------------|-------------|
| \$0 to \$3,999 | 29,916 | 2,036 | 31,952 | 55.38% |
| \$4,000 to \$7,999 | 12,365 | 3,571 | 15,936 | 27.62% |
| \$8,000 to \$11,999 | 3,095 | 3,967 | 7,062 | 12.24% |
| \$12,000 to \$15,999 | 836 | 1,238 | 2,074 | 3.59% |
| \$16,000 to \$19,999 | 245 | 234 | 479 | 0.83% |
| \$20,000 to \$23,999 | 72 | 76 | 148 | 0.26% |
| \$24,000 to \$27,999 | 26 | 12 | 38 | 0.07% |
| > \$28,000 | 6 | 2 | 8 | 0.01% |
| Totals | 46,561 | 11,136 | 57,697 | 100% |

Average Monthly Benefit Allowance: \$ 4,320.00

| Healthcare Program (YTD) | | Healthcare Enrollments (Monthly) | |
|--------------------------|-----------------|----------------------------------|----------------------|
| | Employer | Member | |
| Medical | \$179m | \$14.8m | Medical 51,342 |
| Dental | \$14.9m | \$1.5m | Dental 52,647 |
| Part B | \$22.6m | xxxx | Part B 34,733 |
| Total | \$216.5m | \$16.3m | Total 139,351 |

Key Financial Metrics



Funding Metrics (as of 6/30/19)

| | |
|--------------|---------|
| Employer NC | 9.92%* |
| UAAL | 10.99%* |
| Assumed Rate | 7.25%* |
| Star Reserve | \$614m |
| Total Assets | \$58.3b |

Contributions (as of 6/30/18)

| | Employer | Member |
|--------------|------------|----------|
| Annual Add | \$1,524.8m | \$591.3m |
| % of Payroll | 20.91%* | 6.88%* |

*Effective July 1, 2019, as of 06/30/18 actuarial valuation

TOTAL FUND RETURN (Net of Fees)

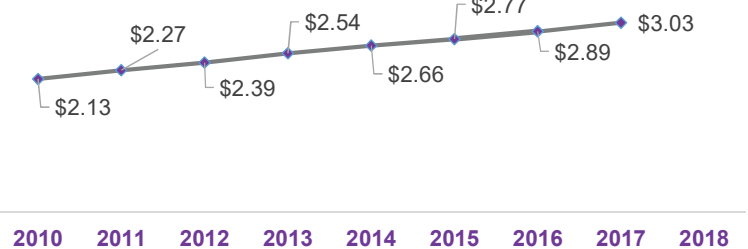
| | | | |
|-------|------|--------|------|
| 5 YR: | 8.5% | 10 YR: | 6.3% |
|-------|------|--------|------|

Retired Members Payroll

| | |
|---------------------------|-----------|
| Monthly Payroll | \$299.98m |
| Payroll YTD | 1.2b |
| New Retired Payees Added | 281 |
| Seamless % | 95.73% |
| New Seamless Payees Added | 1,149 |
| Seamless YTD | 96.78% |
| By Check % | 3.00% |
| By Direct Deposit % | 97.00% |

Billions
\$3.50
\$3.00
\$2.50
\$2.00
\$1.50
\$1.00
\$0.50
\$-

Retiree Payroll by Year



| Date | Conference |
|-----------------------|--|
| January, 2020 | |
| 26-28 | NCPERS (National Conference on Public Employee Retirement Systems) Legislative Conference Washington D.C. |
| February, 2020 | |
| 10-11 | Pension Bridge ESG Summit 2020 San Diego, CA |
| 11-12 | 2020 Milken Institute MEA Summit Abu Dhabi, United Arab Emirates |
| 12-13 | IMN (Information Management Network) Annual Beneficial Owners' Intl. Securities Finance & Collateral Mgmt. Conference Fort Lauderdale, FL |
| 12-14 | Pacific Pension Institute (PPI) North American Winter Roundtable Rancho Palos Verdes, CA |
| 27-28 | International Corporate Governance Network (ICGN) Conference Seoul, South Korea |
| March, 2020 | |
| 2-3 | National Institute on Retirement Security (NIRS) Annual Conference Washington D.C. |
| 4-5 | PREA (Pension Real Estate Association) Spring Conference Beverly Hills, CA |
| 7-10 | CALAPRS (California Association of Public Retirement Systems) General Assembly Meeting Rancho Mirage, CA |
| 9-11 | Council of Institutional Investors (CII) Spring Conference Washington D.C. |
| 18-19 | AHIP (America's Health Insurance Plans) National Health Policy Conference Washington D.C. |
| 29-April 1 | World Healthcare Congress Washington D.C. |
| 30-April 1 | CALAPRS (California Association of Public Retirement Systems) Advanced Principles of Pension Management for Trustees at UCLA Los Angeles, CA |
| April, 2020 | |
| 6-8 | CRCEA (California Retired County Employees Association) Spring Conference Visalia, CA |
| 6-8 | IFEBP (International Foundation of Employment Benefit Plans) Health Care Mgmt. Conference Phoenix, AZ |

Chief Investment Officer Monthly Report

Board of Investments

December 11, 2019



Jonathan Grabel 
Chief Investment Officer

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

Table of Contents

1. Market Environment
2. Portfolio Performance Update
3. Portfolio Structural Updates
4. Key Initiatives and Operational Updates
5. Commentary



Market Environment

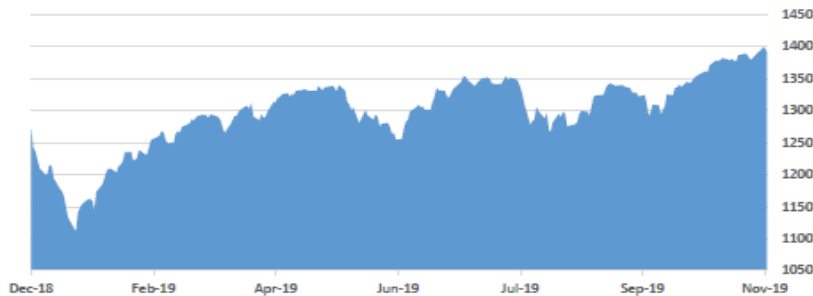


Global Market Performance as of November 30, 2019

MSCI ACWI Index (Global Equity Market)

| Trailing Returns (%) | | | Annualized Returns (%) | | | |
|----------------------|---------|------|------------------------|------|-----|-----|
| 1-month | 3-month | YTD | 1Y | 3Y | 5Y | 10Y |
| 2.4 | 7.1 | 22.7 | 13.9 | 12.3 | 7.9 | 9.4 |

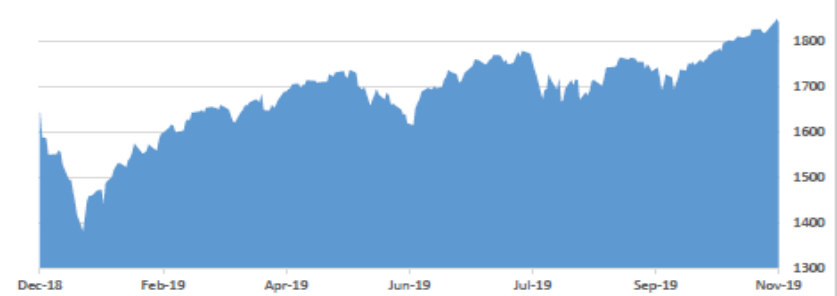
MSCI ACWI 1-Year Performance



Russell 3000 Index (U.S. Equity Market)

| Trailing Returns (%) | | | Annualized Returns (%) | | | |
|----------------------|---------|------|------------------------|------|------|------|
| 1-month | 3-month | YTD | 1Y | 3Y | 5Y | 10Y |
| 3.6 | 7.4 | 26.3 | 14.6 | 14.0 | 10.5 | 13.4 |

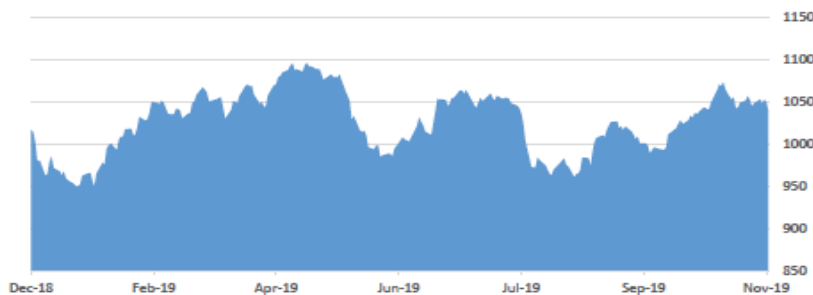
Russell 3000 1-Year Performance



MSCI Emerging Market Index

| Trailing Returns (%) | | | Annualized Returns (%) | | | |
|----------------------|---------|------|------------------------|-----|-----|-----|
| 1-month | 3-month | YTD | 1Y | 3Y | 5Y | 10Y |
| -0.2 | 5.7 | 10.5 | 7.7 | 9.8 | 3.9 | 3.7 |

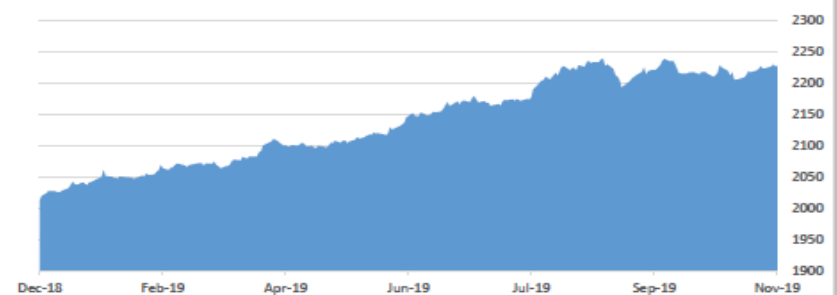
MSCI Emerging Markets 1-Year Performance



Barclays U.S. Aggregate Bond Index

| Trailing Returns (%) | | | Annualized Returns (%) | | | |
|----------------------|---------|-----|------------------------|-----|-----|-----|
| 1-month | 3-month | YTD | 1Y | 3Y | 5Y | 10Y |
| -0.1 | -0.3 | 8.8 | 10.8 | 4.1 | 3.2 | 3.6 |

Barclays U.S. Agg 1-Year Performance



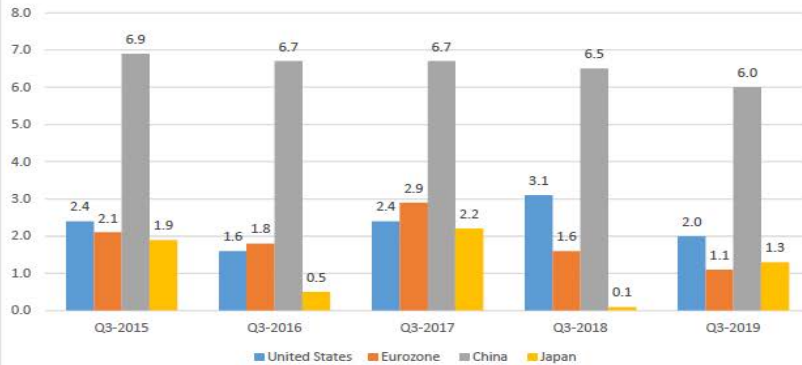
Source: Bloomberg



Key Macro Indicators

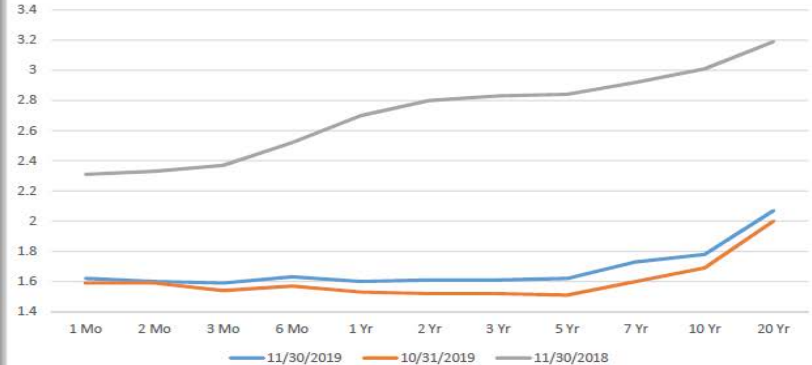
GDP Growth of Major Economies¹

Real GDP Growth YoY (%) - Past 5 Years



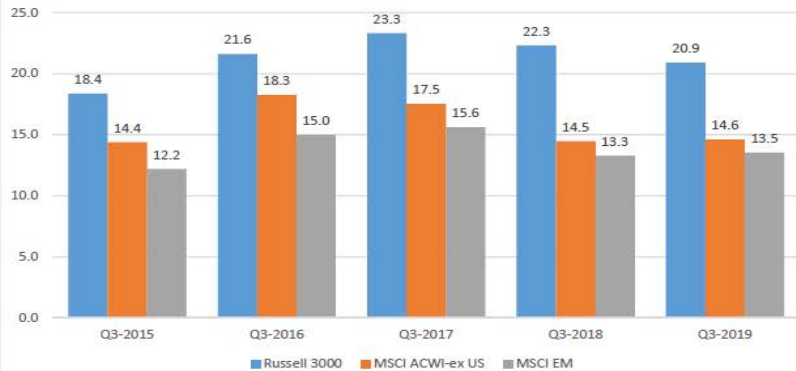
U.S. Treasury Yield Curve²

Current month vs. prior month vs. prior year

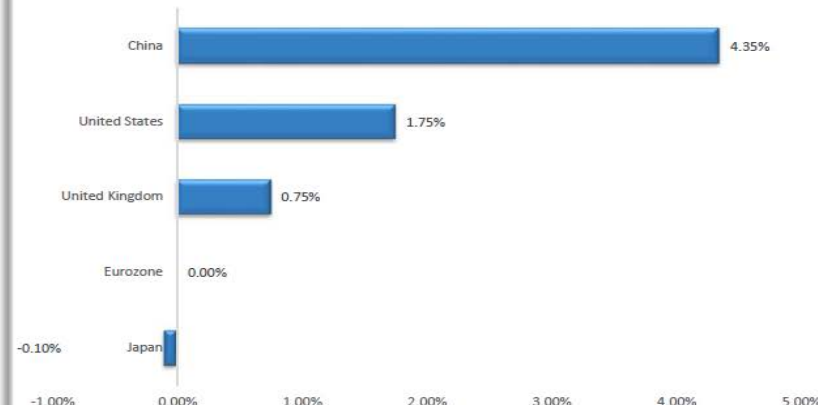


World Equity Valuation³

Price-to-Earnings - Last Five Years



Central Bank Rates⁴

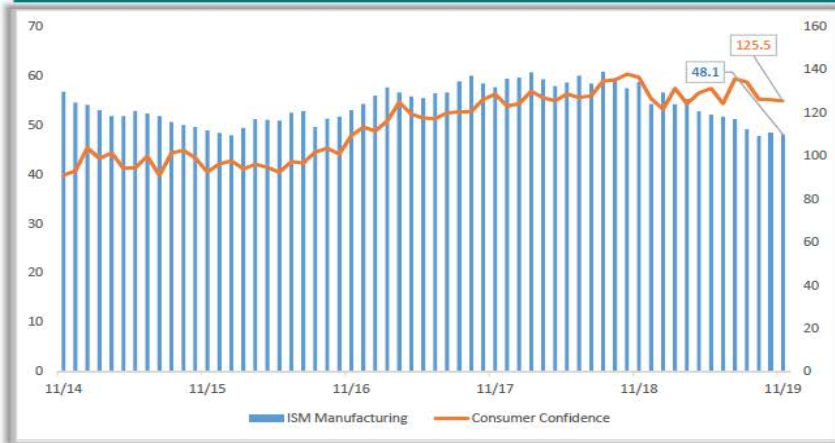


Sources: 1. Bloomberg 3. Factset
2. U.S. Treasury Department 4. Factset

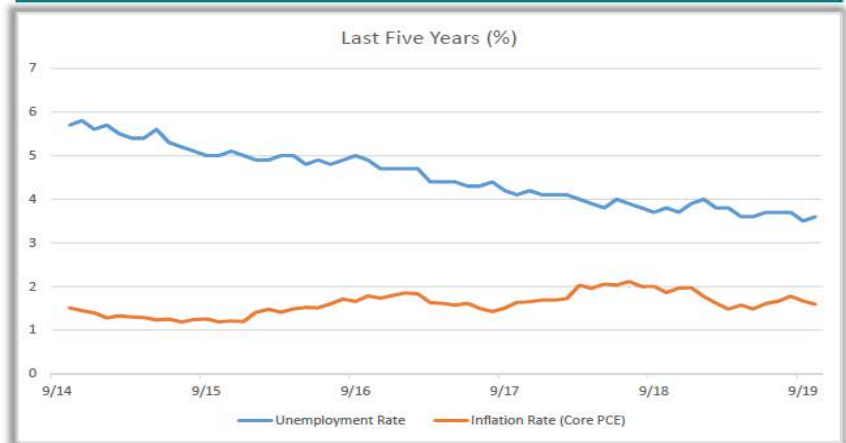


Key Macro Indicators

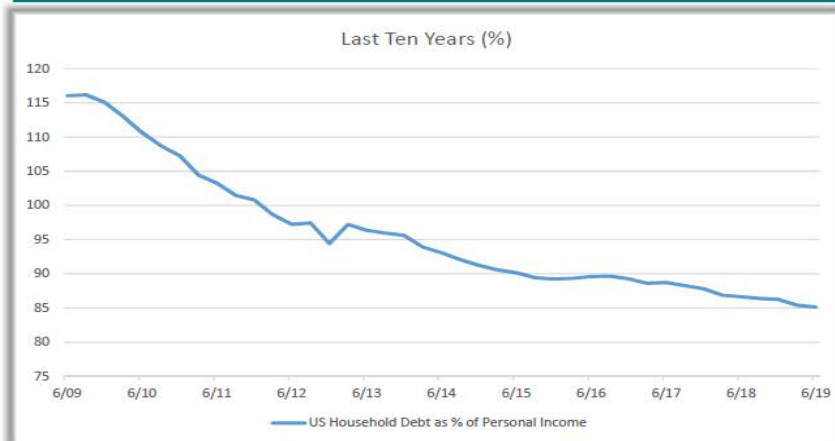
Consumer Confidence & ISM Manufacturing¹



U.S. Inflation & Unemployment²



US Household Debt as % of Personal Income³



Federal Revenue and Federal Debt as % of GDP⁴



Sources: 1. Bloomberg 3. Bloomberg
2. Bloomberg 4. Bloomberg & Federal Reserve



Market Themes and Notable Items to Watch

Recent Themes

- U.S Stock Market experienced new highs
- Low global growth
- Geopolitical Risks
 - China trade tensions; “Phase One” trade deal was announced October 11, yet to be signed.
 - Brexit negotiations
 - Hong Kong protests
- U.S. Fed signaled that future cuts are in question
- Central banks remain accommodative

What to Watch

- Brexit – Extension of the country’s departure from the EU to be deferred to January 31, 2020
- Global Central Bank stance
- Credit spreads
- Impeachment Inquiry
- Trade Policies

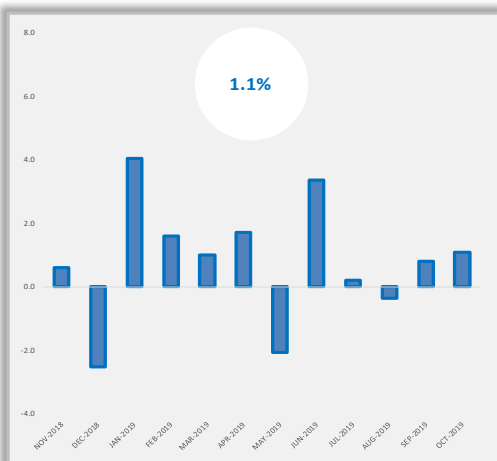


Portfolio Performance Update

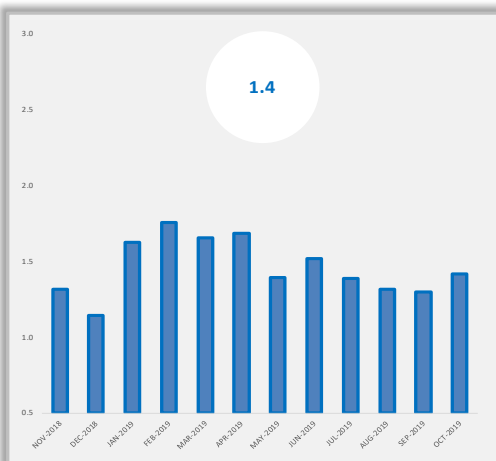


Total Fund Summary as of October 2019

Monthly Return (net)

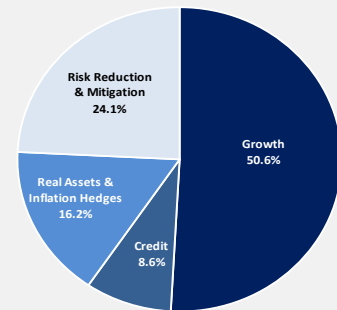


Sharpe Ratio (3-Year Annualized)

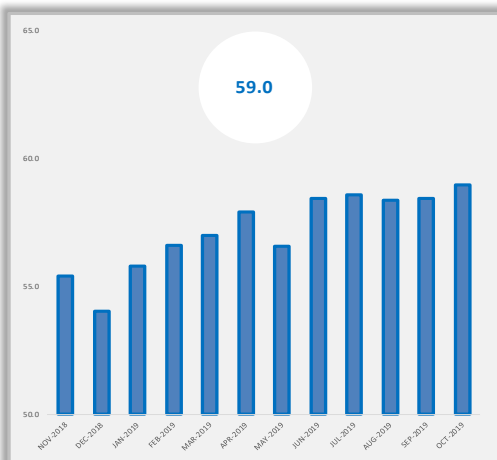


Asset Allocation

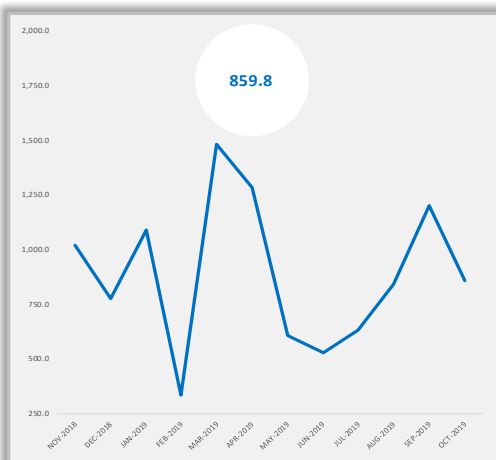
| | Market Value ¹ (\$ millions) | % of Total | Final Target ² |
|---|--|---------------|------------------------------|
| TOTAL FUND | 58,981 | 100.0% | |
| Growth | 29,833 | 50.6% | 47.0% |
| Global Equity | 23,039 | 39.1% | 35.0% |
| Private Equity ³ | 5,774 | 9.8% | 10.0% |
| Opportunistic Real Estate ⁴ | 1,020 | 1.7% | 2.0% |
| Credit | 5,061 | 8.6% | 12.0% |
| High Yield | 2,346 | 4.0% | 3.0% |
| Bank Loans | 918 | 1.6% | 4.0% |
| Emerging Market Debt | 850 | 1.4% | 2.0% |
| Illiquid Credit ^{3,4,5} | 946 | 1.6% | 3.0% |
| Real Assets & Inflation Hedges | 9,541 | 16.2% | 17.0% |
| Core & Value Added Real Estate ⁴ | 4,982 | 8.4% | 7.0% |
| Natural Resources & Commodities | 2,255 | 3.8% | 4.0% |
| Infrastructure | 1,483 | 2.5% | 3.0% |
| Treasury Inflation-Protected Securities | 821 | 1.4% | 3.0% |
| Risk Reduction & Mitigation | 14,206 | 24.1% | 24.0% |
| Investment Grade Bonds | 11,590 | 19.6% | 19.0% |
| Diversified Hedge Fund Portfolio ⁵ | 1,756 | 3.0% | 4.0% |
| Cash | 860 | 1.5% | 1.0% |
| Overlay Composite ⁶ | 341 | 0.6% | — |



Total Market Value (\$ billions)



Cash (\$ millions)



1. Transition balances are included in each subcategory total, if applicable
 2. Final target weights effective as of 10/1/19
 3. Private Equity market values reflect latest available and are adjusted for cash flows

4. Real Estate market values reflect a 3-month lag and best available values for the quarter are in the total fund
 5. Hedge Fund market values reflect a 1-month lag
 6. Reflects net cash position for overlay investing

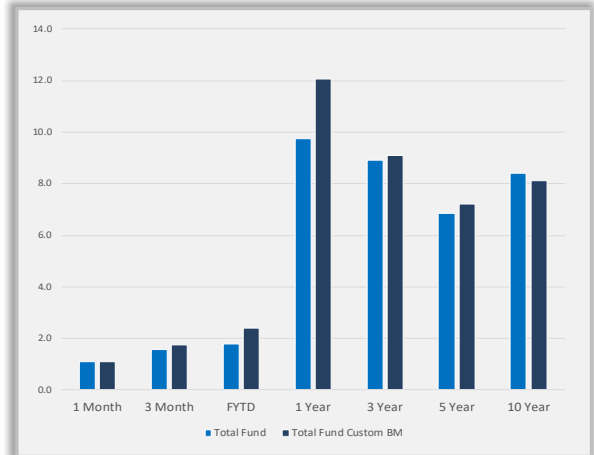


Historical Net Performance as of October 2019*

LACERA Pension Fund (net)

| | Market Value (\$ millions) | % of Total Fund | Final Target ¹ | 1 Month | 3 Month | FYTD | 1 Year | 3 Year | 5 Year | 10 Year |
|---|-------------------------------|--------------------|------------------------------|----------------|----------------|-------------|-------------|-------------|-------------|-------------|
| TOTAL FUND | 58,981 | 100.0% | 100.0% | 1.1 | 1.6 | 1.8 | 9.7 | 8.9 | 6.9 | 8.4 |
| <i>Total Fund Custom BM</i> | | | | <i>1.1</i> | <i>1.8</i> | <i>2.4</i> | <i>12.1</i> | <i>9.1</i> | <i>7.2</i> | <i>8.1</i> |
| <i>7.25% Annual Hurdle Rate</i> | | | | <i>0.58</i> | <i>1.77</i> | <i>2.36</i> | <i>7.25</i> | <i>7.25</i> | <i>7.25</i> | <i>7.25</i> |
| Functional Composites² | | | | 1 Month | 3 Month | FYTD | | | | |
| GROWTH | 29,833 | 50.6% | 47.0% | 2.0 | 2.5 | 3.0 | | | | |
| <i>Growth Custom BM</i> | | | | <i>2.0</i> | <i>2.1</i> | <i>3.1</i> | | | | |
| CREDIT | 5,061 | 8.6% | 12.0% | 0.1 | 0.5 | 0.8 | | | | |
| <i>Credit Custom BM</i> | | | | <i>0.0</i> | <i>1.0</i> | <i>1.9</i> | | | | |
| REAL ASSETS & INFLATION HEDGES | 9,541 | 16.2% | 17.0% | 0.3 | -0.6 | -0.8 | | | | |
| <i>Real Assets & Inflation Hedges Custom BM</i> | | | | <i>0.5</i> | <i>0.9</i> | <i>0.8</i> | | | | |
| RISK REDUCTION & MITIGATION | 14,206 | 24.1% | 24.0% | 0.3 | 2.0 | 2.4 | | | | |
| <i>Risk Reduction & Mitigation Custom BM</i> | | | | <i>0.3</i> | <i>2.1</i> | <i>2.4</i> | | | | |
| OVERLAY COMPOSITE | 341 | 0.6% | — | | | | | | | |

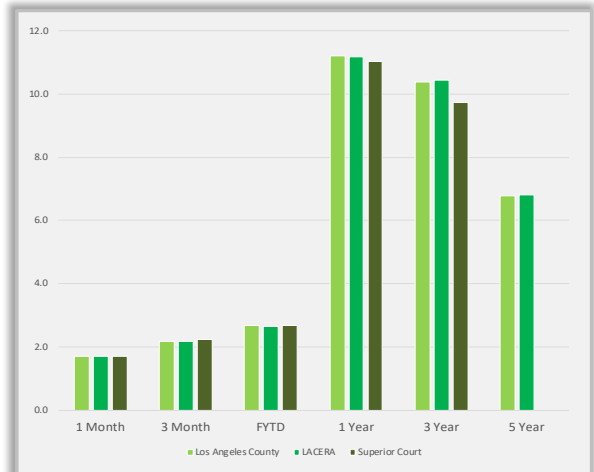
Historical Returns (net)



OPEB Master Trust Fund (net)

| Sub-Trusts | Market Value (\$ millions) ³ | Trust Ownership % | Target Weight | 1 Month | 3 Month | FYTD | 1 Year | 3 Year | 5 Year |
|--|--|----------------------|------------------|----------------|----------------|-------------|---------------|---------------|--------|
| TOTAL OPEB MASTER TRUST | 1,335 | | | | | | | | |
| Los Angeles County | 1,284 | 96.2% | — | 1.7 | 2.2 | 2.7 | 11.2 | 10.4 | 6.8 |
| LACERA | 5 | 0.4% | — | 1.7 | 2.2 | 2.7 | 11.2 | 10.4 | 6.8 |
| Superior Court | 46 | 3.4% | — | 1.7 | 2.2 | 2.7 | 11.0 | 9.7 | — |
| Functional Composites | | | | 1 Month | 3 Month | FYTD | 1 Year | 3 Year | |
| OPEB Growth | 671 | 50.2% | 50.0% | 2.8 | 2.3 | 2.7 | 12.4 | 11.4 | |
| <i>Custom OPEB MT Growth Pool</i> | | | | <i>2.8</i> | <i>2.3</i> | <i>2.6</i> | <i>12.0</i> | <i>11.1</i> | |
| OPEB Credit | 265 | 19.9% | 20.0% | 0.5 | 0.7 | 1.4 | 7.0 | — | |
| <i>Custom OPEB MT Credit Pool</i> | | | | <i>0.4</i> | <i>0.4</i> | <i>1.2</i> | <i>6.9</i> | <i>—</i> | |
| OPEB Real Assets & Inflation Hedges | 266 | 19.9% | 20.0% | 1.0 | 3.7 | 4.4 | 12.3 | — | |
| <i>Custom OPEB MT RA & IH Pool</i> | | | | <i>1.0</i> | <i>3.7</i> | <i>4.5</i> | <i>12.5</i> | <i>—</i> | |
| OPEB Risk Reduction & Mitigation | 132 | 9.9% | 10.0% | 0.3 | 2.0 | 2.2 | 9.6 | 3.9 | |
| <i>Custom OPEB MT RR & M Pool</i> | | | | <i>0.3</i> | <i>2.0</i> | <i>2.2</i> | <i>9.6</i> | <i>3.6</i> | |
| Operating Cash | 0.2 | 0.0% | — | | | | | | |

Historical Returns (net)



1. Final target weights effective as of 10/1/19
2. Functional composites were adopted on 4/1/19

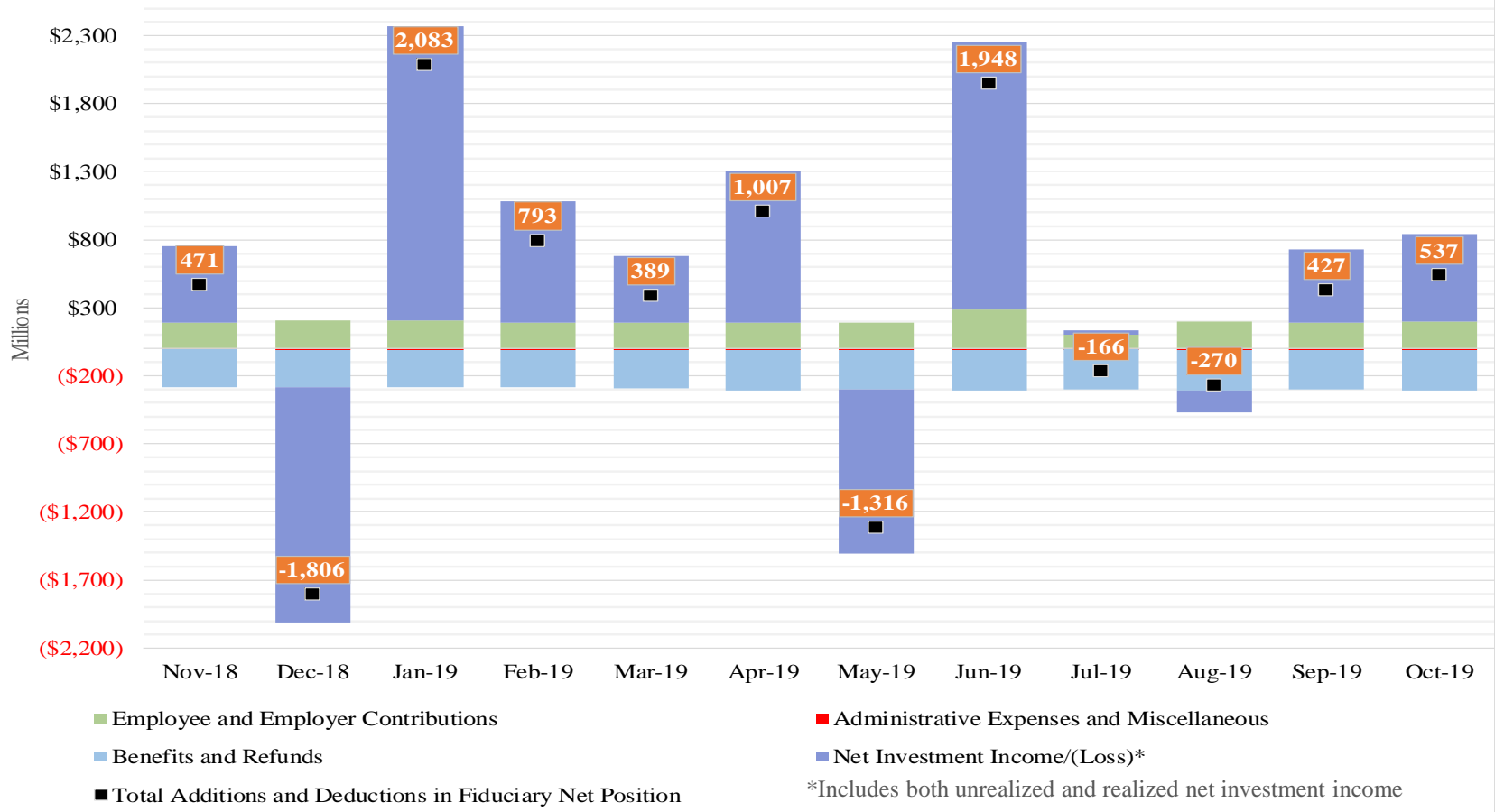
3. Market value differences between the sub-trusts and functional composites are due to operational cash

* Historical real estate valuations are currently under review, therefore October 2019 total fund, composite, and benchmark returns are preliminary



Liquidity Position

Additions and Deductions in Fiduciary Net Position (Unaudited)



| Fiscal Year | Negative Months | Positive Months | Total Net Position Change \$ |
|-------------|-----------------|-----------------|------------------------------|
| FY-18 | 3 | 9 | \$3.0 billion |
| FY-19 | 4 | 8 | \$1.9 billion |
| FY-20 YTD | 2 | 2 | \$528.2 thousand |



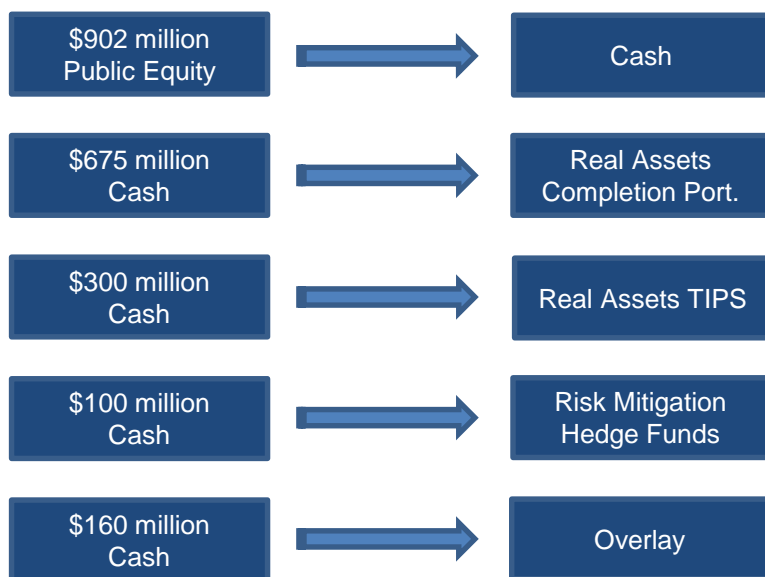
Portfolio Structural Updates



Portfolio Structural Updates

Portfolio Movements

Rebalancing Activity



Hedges and Overlays

| Program | October Return | Gain/Loss October | Gain/Loss Inception* |
|----------------|----------------|-------------------|----------------------|
| Currency Hedge | -0.8% | \$19.5 Million | \$964 Million |
| Overlay | -0.7% | -\$35.9 Million | -\$19 Million |

Current Search Activity

Status of Active Searches

| Name | RFP Issued | Due Diligence | BOI Review |
|--------------------------------------|------------|---------------|-------------------------|
| Total Fund Risk Platform | ● | ● | Anticipated Jan 2020 |
| Illiquid Credit | ● | ● | Anticipated Dec 2019 |
| Syndicated Bank Loans | ● | ● | Anticipated Early 2020 |
| Factor-Based Global Equity | ● | ● | Anticipated Early 2020 |
| Total Fund Performance Provider | | | Anticipated Spring 2020 |
| Appraisal Management Services | ● | ● | Anticipated Early 2020 |
| Alternatives Administrative Services | ● | | Anticipated Spring 2020 |
| Securities Lending Services | ● | ● | Anticipated Spring 2020 |

Quiet Period for Search Respondents

Please see the Appendix for this month's list of respondents to active searches



**Currency and overlay program since inception dates are 8/2010 & 7/2019 respectively

Key Initiatives and Operational Updates



Notable Initiatives and Operational Updates

Key Initiative Updates

- Formally endorsed the Task Force on Climate-related Financial Disclosures (TCFD) following November BOI approval
- Began engagement with NetAlpha, the consultant assisting with the feasibility of internal management
- Business continuity planning is under development

Operational Updates

- Financial Analyst III searches
 - Public Equity, Private Equity, Credit, Real Assets
- Initiating Investment Division internship program for FY-2020
- Forthcoming CIO Report additions
 - Risk update (Pending RFP)
 - Compliance Monitor (Attached)

Manager/Consultant Updates

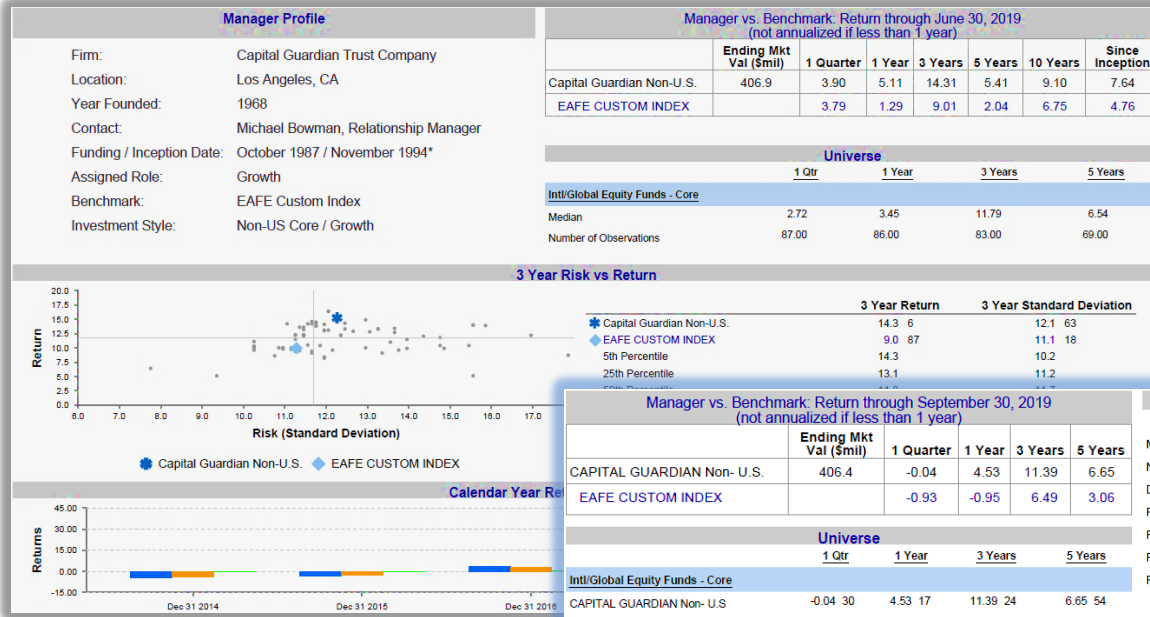
- USAA Real Estate, the minority interest owner in IDR, the sponsor of the real estate Core Property Index Fund, has announced that a management led buyout of controlling interest is expected to be completed in early 2020.

Commentary



Staff Chart of the Month*

Quarterly Performance Book Enhancements



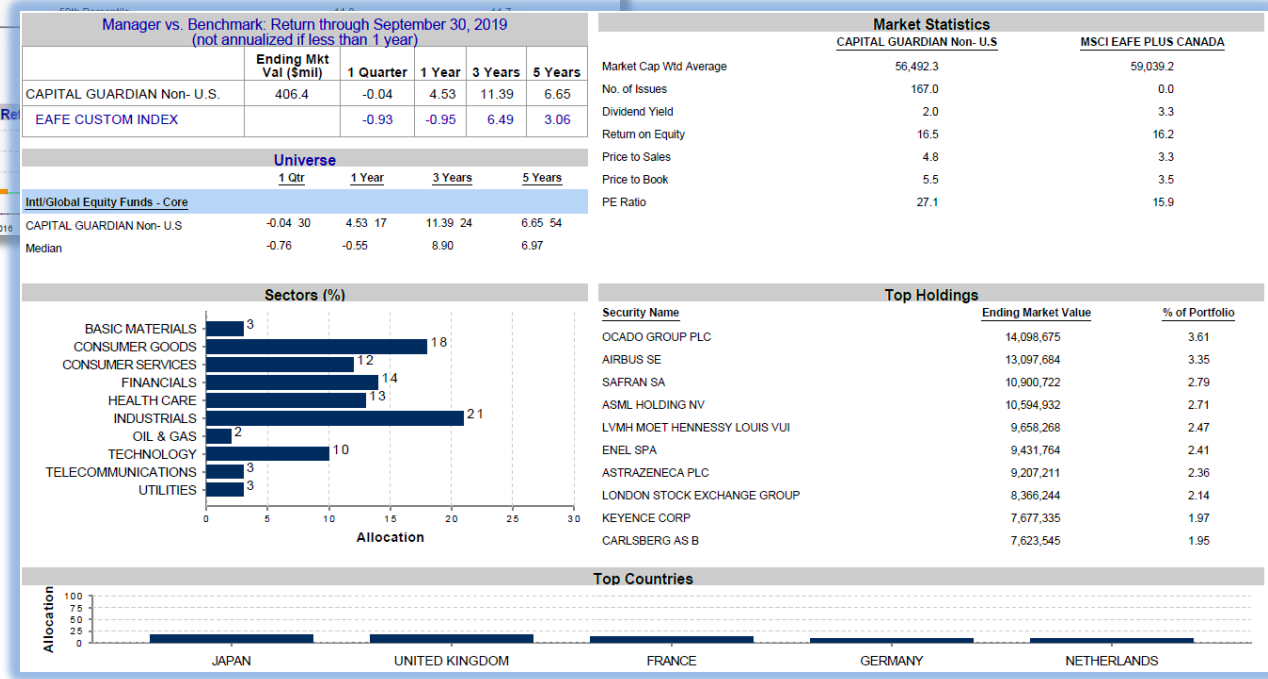
BEFORE
Summary View

- Returns only



AFTER
Holistic View

- Returns
- Portfolio characteristics
- Exposures
- Holdings



*Submitted by the Portfolio Analytics team

Appendix



Quiet Period for Search Respondents

Total Fund Risk System

- ✓ BlackRock Solutions
- ✓ BNY Mellon
- ✓ FactSet
- ✓ MSCI
- ✓ State Street
- ✓ Sustainalytics
- ✓ Wilshire Associates

Appraisal Management Service Provider

- ✓ Altus Group
- ✓ RERC, LLC.

Securities Lending Services

- ✓ Securities Finance Trust Company
- ✓ JPMorgan Chase Bank, N.A.
- ✓ State Street Bank and Trust Company
- ✓ Citibank, N.A.
- ✓ The Bank of New York Mellon
- ✓ Goldman Sachs Agency Lending
- ✓ Deutsche Bank AG, New York Branch

Syndicated Bank Loan Investment Management Services

- ✓ Neuberger Berman
- ✓ Pacific Asset Management
- ✓ PineBridge Investments LLC
- ✓ Par-Four Investment Management LLC
- ✓ Symphony Asset Management LLC
- ✓ BlackRock, Inc
- ✓ Crestline Denali Capital, LP
- ✓ T. Rowe Price Associates, Inc.
- ✓ Shenkman Capital Management, Inc.
- ✓ Barings
- ✓ Additional submission
- ✓ Crescent Capital Group LP
- ✓ THL Credit Advisors LLC
- ✓ CVC Credit Partners, LLC
- ✓ KKR Credit Advisors (US) LLC
- ✓ Lord, Abbott & Co. LLC
- ✓ Aegon Asset Management US
- ✓ Guggenheim Partners Investment Management, LLC
- ✓ Wellington Management Company LLP
- ✓ CIFC Asset Management LLC
- ✓ Seix Investment Advisors LLC
- ✓ GSO Capital Partners LP
- ✓ Credit Suisse Asset Management LLC
- ✓ Western Asset Management Company, LLC
- ✓ GoldenTree Asset Management
- ✓ Ares Management LLC
- ✓ Loomis, Sayles & Co., LP
- ✓ Goldman Sachs Asset Management LP
- ✓ Oaktree Capital Management, LP
- ✓ Brigade Capital Management, LP
- ✓ Voya Investment Management
- ✓ FIAM LLC
- ✓ M&G Investments
- ✓ Eaton Vance Management
- ✓ Invesco
- ✓ Bain Capital Credit, LP
- ✓ Franklin Resources, Inc. (Parent)
- ✓ Franklin Advisors, Inc. (Investment Adviser)

Factor-based Equity Investment Management Services

- ✓ Allianz Global Investors
- ✓ AQR Capital Management, LLC
- ✓ AXA Investment Managers, Inc.
- ✓ BlackRock, Inc.
- ✓ Brandywine Global Investment Management
- ✓ Capital International, Inc.
- ✓ Connor, Clark, and Lunn Investment Management, Ltd.
- ✓ Dimensional Fund Advisors LP
- ✓ FFCM LLC
- ✓ Goldman Sachs Asset Management, LP
- ✓ HSBC Global Asset Management Inc.
- ✓ Invesco
- ✓ J.P. Morgan Asset Management
- ✓ Lazard Asset Management LLC
- ✓ Legal & general Investment Management
- ✓ Los Angeles Capital Management and Equity Research Inc.
- ✓ Mellon Investments Corporation
- ✓ Northern Trust Investments, Inc.
- ✓ PanAgora Asset Management, Inc.
- ✓ QMA LLC
- ✓ Robeco Institutional Asset Management US, Inc.
- ✓ State Street Global Advisors, LLC
- ✓ TOBAM
- ✓ Wells Fargo Asset Management



Quiet Period for Search Respondents (continued)

Illiquid Credit Investment Management Services

- ✓ Alcentra NY, LLC
- ✓ Anchorage Capital group, LLC
- ✓ Angelo, Gordon & Co LP
- ✓ Apollo Capital Management, LP
- ✓ Ares Management
- ✓ ArrowMark Partners
- ✓ Audax Group
- ✓ Barings LLC
- ✓ BeachPoint capital Management LP
- ✓ Benefit Street Partners LLC
- ✓ BlackRock, Inc.
- ✓ Brigade Capital Management, LP
- ✓ Canyon Capital Advisors LLC
- ✓ Carlyle Global Credit Investment management LLC
- ✓ CarVal Investors, LLC
- ✓ Cerberus Capital Management, LP
- ✓ Chenavari Credit partners LLP
- ✓ Cheyne Capital Management (UK) LLP
- ✓ Clarion Capital Partners
- ✓ CQS (US), LLC
- ✓ Crescent Capital Group, LP
- ✓ Crestline Management, LP
- ✓ EIG Credit Management Company, LLC
- ✓ Fortress Lending Advisors LLC
- ✓ GoldenTree Asset Management LP
- ✓ Hayfin Capital Management LLP
- ✓ HPS Investment Partners, LLC
- ✓ KKR Credit Advisors (US) LLC
- ✓ M&G Investment Management LTD
- ✓ Magnetar Financial LLC
- ✓ Marathon Asset Management, LP
- ✓ Monroe Capital, LLC
- ✓ Napier Park Global Capital (US) LP
- ✓ Neuberger Berman Investment Advisors
- ✓ Oak Hill Advisors
- ✓ Oaktree Capital Management Company LLC
- ✓ Orchard Global Asset Management
- ✓ PGIM, Inc.
- ✓ Pacific Investment Management Company LLC
- ✓ Schroder Investment Management North America Inc
- ✓ TPG Sixth Street Partners
- ✓ Varde Management LP
- ✓ Waterfall Asset Management LLC
- ✓ White Oak Global Advisors LLC
- ✓ Zais Group



Compliance Monitor

This report highlights operational and compliance metrics monitored by the Investment Division
As of September 2019*

LACERA PENSION FUND

5

GROWTH
Total # of Advisory

GROWTH

Global Equity

- Asset Allocation Policy Compliance
- Investment Guideline Compliance
- Emerging Manager Program
- # of Sudan/Iran Holdings Held by Managers

Quarterly Review Status

of Advisory

Notes

✓

✓

✓

✓

5

5 issuers held, totaling \$3.2mm in market value

Private Equity - Growth**

- Asset Allocation Policy Compliance
- Guideline Compliance by Strategy
- Guideline Compliance by Geographic Location
- Investment Exposure Limit

✓

✓

✓

✓

Opportunistic Real Estate**

(See Real Assets & Inflation Hedges - Core & Value Added Real Estate section)

0

CREDIT
Total # of Advisory

CREDIT

High Yield, Bank Loans, EM Debt, Illiquid Credit**

- Asset Allocation Policy Compliance
- Investment Guideline Compliance
- Emerging Manager Program
- # of Sudan/Iran Holdings Held by Managers

Quarterly Review Status

of Advisory

Notes

✓

✓

✓

✓

Compliance Monitor

This report highlights operational and compliance metrics monitored by the Investment Division
As of September 2019*

LACERA PENSION FUND

0

REAL ASSETS & INFLATION HEDGES

Total # of Advisory

REAL ASSETS & INFLATION HEDGES

Core & Value Added Real Estate**

- Asset Allocation Policy Compliance
- Guideline Compliance by Strategy (Core/Non-Core)
- Guideline Compliance by Manager
- Guideline Compliance by Property Type
- Guideline Compliance by Geographic Location
- Guideline Compliance by Leverage

Quarterly Review Status

of Advisory

Notes

✓

✓

✓

✓

✓

✓

Natural Resources & Commodities***

- Asset Allocation Policy Compliance
- Investment Guideline Compliance
- # of Sudan/Iran Holdings Held by Managers

✓

✓

✓

Infrastructure

- Asset Allocation Policy Compliance
- Investment Guideline Compliance
- # of Sudan/Iran Holdings Held by Managers

✓

✓

✓

TIPS

- Asset Allocation Policy Compliance
- Investment Guideline Compliance
- # of Sudan/Iran Holdings Held by Managers

✓

✓

✓

Compliance Monitor

This report highlights operational and compliance metrics monitored by the Investment Division
As of September 2019*

LACERA PENSION FUND

3

RISK REDUCTION & MITIGATION

Total # of Advisory

RISK REDUCTION & MITIGATION

| | Quarterly Review Status | # of Advisory | Notes |
|---|-------------------------|---------------|--|
| Investment Grade Bonds | | | |
| Asset Allocation Policy Compliance | ✓ | | |
| Investment Guideline Compliance | ✓ | | |
| Emerging Manager Program | ✓ | | |
| # of Sudan/Iran Holdings Held by Managers | ✓ | 2 | 2 issuers held, totaling \$7.1mm in market value |
| Diversified Hedge Funds** | | | |
| Asset Allocation Policy Compliance | ✓ | | |
| Portfolio Level Compliance | ✓ | | |
| HFOF Manager Guideline Compliance | ✓ | 1 | Leverage ratio of relative value within GSAM was 10.3x, which is above guideline of 8.0x |
| Direct Portfolio Manager Guideline Compliance | ✓ | | |
| Cash | | | |
| Asset Allocation Policy Compliance | ✓ | | |
| Investment Guideline Compliance | ✓ | | |
| # of Sudan/Iran Holdings Held by Managers | ✓ | | |

Compliance Monitor

This report highlights operational and compliance metrics monitored by the Investment Division
As of September 2019*

INVESTMENT OPERATIONS

| |
|--|
| 6 |
| INVESTMENT OPERATIONS Total # of Advisory |

INVESTMENT OPERATIONS

| | Quarterly Review Status | # Advisory | Notes |
|--|-------------------------|------------|--|
| Securities Lending | | | |
| Investment Guideline Compliance | ✓ | | |
| \$ Value on Loan | ✓ | 1 | GSAL \$433.6mm; State Street \$553.7mm |
| \$ Value of Cash Collateral | ✓ | 1 | GSAL \$444.2mm; State Street \$575.6mm |
| Total Income - Calendar YTD | ✓ | 1 | GSAL \$1.6mm; State Street \$1.0mm |
| Proxy Voting | | | |
| Number of Meetings Voted | ✓ | 1 | 299 meetings voted |
| Tax Reclaims | | | |
| Total Paid Reclaims - Calendar YTD | ✓ | 1 | \$272,923 |
| Total Pending Reclaims | ✓ | 1 | \$4.0mm |
| Fee Validation | | | |
| Fee Reconciliation Project | ✓ | | |
| AB 2833 | ✓ | | |
| Investment Manager Meetings**** | | | |
| Manager Meeting Requests | ✓ | | |

Compliance Monitor

This report highlights operational and compliance metrics monitored by the Investment Division
As of September 2019*

OPEB MASTER TRUST

| Functional Asset Categories (Growth, Credit, Inflation Hedges, Risk Reduction & Mitigation) | Quarterly Review Status | # Advisory | Notes |
|--|-------------------------|------------|-------|
| Asset Allocation Policy Compliance | ✓ | | |
| Investment Guideline Compliance | ✓ | | |
| # of Sudan/Iran Holdings Held by Managers | ✓ | | |

* This list is not exhaustive as various compliance processes are completed throughout the year. Each quarter, different items may appear on the compliance monitor.

** Represents the comprehensive Private Equity (3-month lag), Real Estate (3-month lag), Illiquid Credit (1- and 3-month lags), and Hedge Funds (1-month lag) programs across the total plan.

*** Investment guideline compliance based on public market exposure

**** Advisory noted if the CEO or a Board member recommends staff to meet with a specific manager three or more times in a year. The purpose of notifying the activity is to promote transparency and governance best practices designed to preserve the integrity of the decision-making process.

November 22, 2019

TO: Each Member
Board of Investments

FROM: Equity: Public/Private Committee

Christopher J. Wagner *cjw*
Principal Investment Officer

David E. Simpson, CFA *DES*
Investment Officer

FOR: December 11, 2019 Board of Investments Meeting

SUBJECT: **2020 PRIVATE EQUITY OBJECTIVE, POLICIES, AND PROCEDURES**

RECOMMENDATION

Approve the 2020 Private Equity Objectives, Policies, and Procedures.

BACKGROUND

On November 20, 2019, staff presented proposed changes to the 2019 Private Equity Objectives, Policies, and Procedures (“OPP”) to the Equities: Public/Private Committee. The changes are noted in the discussion section of the attached staff cover memo to the Committee. The Committee voted to advance this item to the Board of Investments (“BOI”) for approval.

The following documents enclosed are i) the cover memo to the Committee (**Attachment**), ii) a clean version of the OPP (**Attachment A**), and iii) a redline version of the OPP with changes from last year (**Attachment B**).

OPTIONS AVAILABLE TO THE BOARD

The OPP covers the entire Private Equity Program. If the Board does not approve the OPP, staff will consult with the Committee and propose alternative OPP language or include the Board’s direction in revised documents.

DELIBERATIONS AND OPINIONS EXPRESSED BY THE COMMITTEE

In general, the Committee expressed favorable views of the co-investment, secondary, and re-up programs. The Committee discussed expanding the co-investment program parameters to allow staff to pursue international investment opportunities. Staff suggested the program should remain U.S.-focused for now.

RISKS OF ACTION AND INACTION

If the Board approves the revised OPP, the document will incorporate changes to the Private Equity Secondary Program, the Co-Investment Program, and the Re-Up Policy.

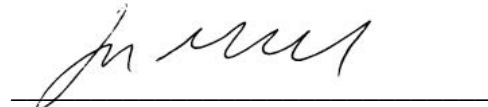
If the Board does not approve the revised OPP, the Co-Investment Program and Re-Up Policy will continue under the existing parameters. However, there would be no BOI authorized funding for the Secondary Program. Staff will revert to the Committee to determine appropriate next steps.

CONCLUSION

Staff has revised the OPP, the document that governs the Private Equity Program. The Equity Public/Private Committee reviewed and advanced the document for approval at its November 2019 meeting. Staff recommends the Board approve the document.

Attachments

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

October 29, 2019

TO: Each Member
Equity: Public/Private Committee

FROM: Christopher J. Wagner *ejw*
Principal Investment Officer

David E. Simpson, CFA *DES*
Investment Officer

FOR: November 20, 2019 Equity: Public/Private Committee Meeting

SUBJECT: **PRIVATE EQUITY OBJECTIVES, POLICIES, AND PROCEDURES**

RECOMMENDATION

Advance the revised Private Equity Objectives, Policies, and Procedures to the Board of Investments for approval.

BACKGROUND

LACERA's Private Equity Objectives, Policies, and Procedures ("OPP") (**Attachment A**) document i) defines and describes the objectives and strategy for investing in private equity assets, ii) delineates the methods and guidelines used in making private equity investments, and iii) articulates the responsibilities of the Board of Investments ("BOI"), investment staff, private equity advisor(s), and LACERA's general consultant.

Staff is reviewing and consolidating the policy statements and OPPs for all asset classes. The framework of policy and procedure documents is under review as well. Given that ongoing work, at this time, staff recommends the following changes to the Private Equity OPP.

1. LACERA's Private Equity Secondary Program (**Appendix A**)

At the October 11, 2017 Board meeting, the BOI delegated the CIO the authority to approve secondary purchases for up to \$100 million in aggregate annually for the 2018 and 2019 calendar years. To continue and expand LACERA's opportunistic secondary purchase efforts, staff proposes to:

- Increase the CIO delegated annual secondaries purchase limit to \$200 million for the 2020 and 2021 calendar years
- Add clarifying language to the definition of secondary investments and guidelines while also simplifying the secondary purchase parameters in order to provide LACERA maximum flexibility to pursue opportunities

2. LACERA's Private Equity Co-Investment Program (**Appendix C**)

At the December 12, 2018 Board meeting, the BOI delegated to the CIO the authority to approve co-investments alongside Board-approved funds in U.S.-headquartered companies meeting certain criteria. Staff proposes the following changes:

- Expand the sources of co-investment opportunities to include co-investments: (1) offered by Board-approved managers so long as the manager is currently managing capital on behalf of LACERA; and (2) alongside managers that a Board-approved discretionary private equity manager (e.g., JPMorgan, Pathway) has approved for investment for LACERA
- Incorporate LACERA's Private Equity Internal Co-Investment Program Guidelines into the OPP

Attachment C contains a short presentation that covers LACERA's private equity co-investment deal sourcing channels that staff intends to present to the Board of Investments.

3. Modify LACERA's Re-Up Policy

Currently, the CIO is authorized to approve capital commitments in follow-on-funds that meet certain criteria up to \$150 million per fund or at the same ownership percentage in the predecessor fund, provided:

- LACERA's prior investments in each predecessor fund greater than three years old exceeds the benchmark median return for the fund's sub-asset class strategy, and
- There have been no material changes in the investment strategy or key persons, and
- LACERA's Private Equity Advisor concurs with the investment

Given LACERA's larger initial fund commitments and the desire to increase exposure opportunistically to smaller funds, staff proposes to:

- Increase the CIO's authority to \$250 million
- Allow LACERA's ownership percentage in the new fund to increase by up to 25% versus the ownership percentage in the predecessor fund

Additionally, staff recommends the following clarifying language governing the three years old fund age and benchmark median return criteria:

- Begin calculation of fund age at the fund's inception date (also termed the commencement of operations date). Specify net multiple of invested capital "net MOIC" and net Internal Rate of Return "net IRR" as the applicable measures for benchmark median return

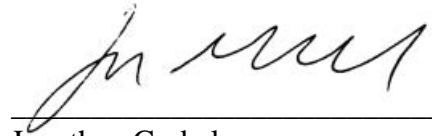
The attached redline versions are as follows: OPP (**Attachment B**), Secondary Program (**Appendix B**), and Co-Investment Program (**Appendix D**).

CONCLUSION

The current LACERA policy requires an annual review of the OPP. The OPP further requires that any necessary revisions be submitted for Board approval. Staff has completed its review of the OPP and recommends the Committee advance the revised OPP to the BOI for approval of the proposed changes.

Attachments

NOTED AND REVIEWED:



Jonathan Grabel
Chief Investment Officer

**Los Angeles County Employees Retirement Association
Private Equity Objectives, Policies, and Procedures**

Adopted: April 23, 1997

Last Revised: December 12, 2018

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A. DOCUMENT PURPOSE

The Private Equity Objectives, Policies, and Procedures (“OPP”) document sets forth LACERA’s investment objective and strategy for investing in private equity as outlined in the Fund’s Investment Policy Statement. The OPP stipulates the policies that establish parameters on the program, spells out the procedures to be followed, and delineates the responsibilities of the Board of Investments (the “Board”), staff, and the Private Equity Advisor(s) (“PEA”). In essence, the OPP provides the blueprint that guides the portfolio's construction and composition.

B. INVESTMENT OBJECTIVE AND STRATEGY

LACERA invests in private equity to obtain attractive returns for the Fund at an acceptable level of risk. The target return for this asset class, as measured by Internal Rate of Return (“IRR”), is an annualized return of 200 basis points in excess of over the MSCI ACWI IMI¹ Index return, net of all partnership and advisor fees, on a quarterly lag. The primary strategy is to prudently build a diversified portfolio of the most attractive investment opportunities securing the best possible terms while mitigating risks.

C. DEFINITIONS

I. Private Equity

Private equity refers to privately negotiated investments in companies. These investments are predominantly equity interests that are illiquid and long-term in nature. Private equity investments can be made directly, but they are more commonly made through investments in limited partnerships and other types of investment vehicles that offer limited liability to investors. Private equity strategies are classified into the following sub-asset class categories:

| Buyouts | Venture Capital |
|----------------------------|------------------------|
| Acquisitions and Takeovers | Seed Stage |
| Industry-Focused | Early Stage |
| Specialized Strategies | Middle Stage |
| Non-controlling Interests | Late Stage |
| Structured Equity | Growth Equity |

¹ MSCI ACWI IMI is an acronym for the Morgan Stanley Capital International All Country World Index Investable Market Index.

In addition to these sub-asset class categories, LACERA classifies private equity investments by general partner, industry, and geography.

II. Related Terms

Co-Investments are investments made directly into companies by a limited partner, when invited to be part of the consortium by an existing private equity fund. General partners make co-investment opportunities available to limited partners when the total required equity investment in a specific company by the fund exceeds that fund's per-company maximum investment.

Direct investments are investments made directly into companies by investors where no private equity fund is involved. The investors are not limited partners, and as such may be involved in the management of the companies and sit on their board of directors.

Emerging markets are countries other than Canada and those in the Morgan Stanley Capital Index – Europe Asia, Far East (“MSCI EAFE”) Index.

Fund-of-funds are vehicles comprised of a portfolio of funds which frequently target a particular sub-asset class or category of investments.

General Partners (“GPs”) are the managing partners in a private equity management company, who have unlimited personal liability for the debts and obligations of the limited partnership and have the right to participate in its management. Their activities include raising capital, investing the capital, actively monitoring the portfolio companies, reporting results to limited partners, and exiting the investments. The general partner receives an annual management fee and may earn “carried interest,” which is a negotiated percentage of the profits.

Limited Partners (“LPs”) are passive investors with limited liability in the partnerships who have no involvement in the day-to-day management of the partnership and underlying portfolio companies.

Non-U.S. investments are private equity investments in any of the sub-asset classes outside of the United States in both developed and emerging markets. These investments may focus on an individual country, a geographical region, or they might span the globe.

Secondary investments are limited partnership interests bought from or sold by existing investors in private equity funds. The secondary market offers limited partners the opportunity to actively manage the composition of their existing private equity portfolio.

D. INVESTMENT POLICIES AND GUIDELINES

I. Total Fund Target Allocation

In September 2018, the Board established a target allocation of 10 percent for private equity investments, with an acceptable range of 7 percent to 13 percent. Given the unpredictable nature of cash flows in this asset class, the actual allocation number fluctuates. Staff will closely monitor the actual market value of and committed exposure (new commitments and unfunded existing commitments) to this asset class.

LACERA's Plan Level Target Allocation Status¹
(As of June 30, 2019 - Millions)

| Net Asset Value ² | Total Fund Value | Allocation % | Target Allocation Range |
|------------------------------|------------------|--------------|-------------------------|
| \$5,800 | \$58,533 | 9.9% | 7% - 13% |

¹ Values adjusted from the 6/30/19 Total Asset Allocation report by +\$175 million eliminating PE reporting lag.

² Factoring in \$4,216 million in Undrawn Capital, the combined PE allocation percentage equals 16.0%.

In the biennial Structure Review, staff and PEA will recommend an annual commitment pace to ensure that investments fall within the policy's allocation range. Even so, LACERA seeks to avoid an undue concentration of commitments in any one calendar year. LACERA will adjust the amount of new commitments to the portfolio each year to capture the benefits of time diversification and to match the expected growth of LACERA's total plan assets.

II. Investment Exposure Limits

LACERA's private equity portfolio will be diversified by vintage year, sub-asset category, industry, general partner, and geography. The following guidelines will apply unless a waiver is approved by the Board.

Size of Investments: The minimum size of a fund commitment shall be \$5 million, while the maximum size of investment made shall be 10 percent of LACERA's market value exposure plus undrawn commitments. The \$5 million minimum is expected to be utilized for venture capital-type investments while the maximum would most typically apply to separate account or fund-of-fund mandates.

Partnership Limits:

1. LACERA's share in a single partnership, once the partnership has closed to new investors, shall not exceed 50 percent of that partnership's total commitments from all

limited partners. (This policy does not apply to separate accounts where LACERA may be 100% of the capital.)

2. LACERA shall limit maximum exposure (market value plus unfunded commitments) to any one general partner such that the aggregate investment with that general partner across multiple funds is not greater than 10 percent of LACERA's private equity portfolio market value plus unfunded commitments at the time of commitment.

Emerging Markets: No more than 15 percent of the portfolio will be invested in emerging markets.

III. Prohibited Investments

Hostile Takeovers: LACERA avoids investment strategies that primarily involve hostile takeovers, defined as acquisitions opposed by the board of directors of the target company.

Derivatives: Derivative instruments are not permitted to the extent that they expose LACERA to new risks not associated with the original intent of the investment.

LACERA Private Equity Privatization Policy: LACERA does not aim to promote privatization of public jobs through its private equity investment program. It is highly unlikely that LACERA would invest in private equity investments that are dependent on privatization strategies.

When performing due diligence prior to making the initial investment in a domestic partnership, staff and/or PEA, as applicable, will use reasonable efforts to ascertain the following:

1. Whether the partnership's current investment strategy includes the privatization of jobs held by LACERA members, and
2. Whether previous partnerships operated by the general partners, if any, have invested in companies dependent upon privatization of jobs held by LACERA members.

Staff and/or PEA will seek guidance from the Board before investing in a domestic partnership if the due diligence establishes a positive answer to either (1) or (2) above.

United Nations Principles for Responsible Investments: LACERA is a signatory of the United Nations Environment Programme Finance Initiative's Principles for Responsible Investments ("UNPRI") and has a conviction that environmental, social, and governance-related considerations should provide material input into the Investor's investment decision and that the integration of such criteria supports its commitment to sustainable value creation. Presently, this shall not be interpreted so as to require the general partner or the partnership to adopt the UNPRI in its analysis of any potential investment.

IV. Investment Vehicle Guidelines

LACERA deems the following types of investment vehicles appropriate for investing in this asset class, subject to the constraints mentioned in this document:

Limited Partnerships: LACERA anticipates that the majority of its exposure to this asset class will take place through these pooled investment vehicles.

Separate Accounts: Separate account vehicles may be appropriate in certain cases, e.g., to gain access, or additional exposure, to a particular sub-asset class or category of investments, or to secure favorable terms.

Fund-of-Funds: Fund-of-funds vehicles may be appropriate in certain cases, e.g., to gain access, or additional exposure, to a particular sub-asset class or category of investments.

Secondary Investments: Staff will seek to strategically increase LACERA's investment exposure to institutional quality fund managers with the goal of improving long-term economic returns through a secondary purchase or primary commitment in vehicles or funds managed by the current investment team. In addition, dispositions of LACERA's existing interests and future commitments may be undertaken after a favorable evaluation of market pricing is determined in comparison to potential future returns.

A complete description of the LACERA Private Equity Secondary Program and its investment guidelines is attached as **Appendix A**.

Co-Investments: LACERA may make co-investments alongside: (1) Board-approved managers so long as the manager is currently managing capital on behalf of LACERA; and (2) managers that a Board-approved discretionary private equity manager has approved for investment for LACERA.

Direct Investments: The Board has not authorized the staff to autonomously make direct investments.

E. INVESTMENT PROCEDURES

LACERA follows clearly established methodologies when investing in this asset class. In this section, these are defined and explained.

I. Managing Risk

Private equity investments entail a number of unique risks. Prior to investing, staff and the PEA will ascertain the pertinent risks of a particular private equity investment. This knowledge will enable the implementation of appropriate risk mitigation measures. The types of risks and LACERA's method for managing them follow:

1. *Illiquidity*: Illiquidity (whether due to the form of asset or to the investment structure) is a fundamental characteristic of the asset class and a source of the expected return premium. LACERA will ensure that each limited partnership investment provides for the maximum liquidity practical, through utilization and structure of appropriate investment vehicles and exit strategies. In addition, LACERA may opportunistically buy and sell interests in the secondary market to mitigate the liquidity risks inherent in the asset class.
2. *Volatility*: Concentrated portfolios, the uncertain prospects of companies undergoing transformational change, and the use of leverage all lead to volatility in private equity returns. LACERA will mitigate total volatility by diversifying the portfolio by strategy, sub-asset class category, manager, geography, and across vintage years.
3. *Lack of Public Information*: The limited public financial reporting requirements of most private equity investments makes it difficult to obtain unbiased, reliable information to analyze potential investments and to conduct consistent performance evaluations. LACERA will employ specialized resources (e.g., advisors, databases), as needed to evaluate potential investments in this area. LACERA will establish and maintain appropriate resources and procedures to obtain quarterly valuations of assets held in the private equity portfolio and to monitor interim performance.
4. *Non-U.S. Investments*: Non-U.S. private equity investments are exposed to all the risks associated with domestic private equity investments. In addition, they bring with them risks specific to international investments, including currency risk, political risk, regulatory risk, legal system risk, and accounting standard risk. LACERA will employ the appropriate legal resources needed to review each non-U.S. investment partnership agreement and associated documentation.

II. Sourcing Investments

Staff, and the PEA, will source potential investments and designate those that meet the Program's selection criteria and performance goals. LACERA will consider all reasonable investment opportunities. Sourcing prospective investments will entail but not be limited to the following:

1. Attending investment conferences to meet GPs
2. Traveling to the offices of general partners
3. Meeting general partners in LACERA's offices
4. Cold-calling potential general partners
5. Accessing the PEA's market intelligence on fundraising
6. Meeting with placement agents

7. Accessing proprietary databases (such as Preqin or Pitchbook) to identify potential GPs
8. Reading industry publications to keep abreast of deal, people, and fund news

III. Conducting Due Diligence

When conducting due diligence, staff, and the PEA, will pursue viable investments prioritizing the best opportunities that fit the program's goals and add value to the existing portfolio, and rejecting those that do not meet the program's criteria. Major factors to be considered include, but are not limited to, the following:

1. Experience and cohesiveness of the general partners or principals involved
2. Depth of the general partner's organization and resources
3. Assessment of the general partner's strategy
4. Analysis of the general market environment
5. Appropriateness of the investment for inclusion in LACERA's portfolio
6. Compliance with LACERA's guidelines
7. Compliance with all national, state, and local regulatory and legal requirements
8. Extensive reference and background checks on the investment sponsor
9. Comprehensive track record analysis

IV. Addressing Conflicts of Interest

Staff and the PEA shall not recommend/make any investment until all identified real and potential conflicts of interest have been addressed and mitigated. The Board shall not approve any investment until all identified conflicts of interest have been addressed and mitigated.

V. Structuring and Negotiating Key Terms, Provisions, and Fees

Staff shall negotiate terms and provisions and structure fees so as to provide maximum investor protection and value.

VI. Monitoring and Reporting Portfolio Performance

Reporting to LACERA's Board: Staff shall issue semi-annual portfolio performance reports to the Board. In addition, staff and the PEA shall report to the Board at least yearly on the status of investments currently held in the portfolio. Reports shall include, but not be limited to, such items as the following:

1. The general investment environment and expected opportunities coming to the private equity markets

2. Allocations made across different industries and sub-asset classes of private equity
3. Summary of investment portfolio performance, along with an update on overall market performance
4. New commitments made since the last report
5. Summary of drawdowns and distributions

Performance Reporting: The PEA or other service provider shall provide annual and quarterly portfolio performance reports to LACERA's staff. In general, there will be a greater level of detailed reporting on the annual report when compared to the quarterly reports. Quarterly reporting is meant to serve the purpose of alerting staff to possible adverse developments as well as providing timely updates on the performance and analyses of investments.

Returns will be measured against the universe of performance numbers for vintage year funds, as provided by a third party source such as Cambridge Associates or Burgiss. The comparison of performance to top quartile funds will be a secondary measure of the program's success for the asset class, as it will allow LACERA to measure the ability of its staff and PEA to add value within the asset class.

Monitoring Adherence to Strategy: Staff shall monitor the type, amount, and allocation of investments to ensure that the strategy set forth in this document is adhered to. While some flexibility shall be permitted because of the time that may be required to find attractive investment opportunities, LACERA expects staff and the PEA to adhere to the ranges set forth in this document as well as the investment guidelines as set forth in the Annual Investment Plan.

Proxy Voting for Distributed Securities: LACERA will retain the right to vote all proxies and will vote in accordance with LACERA's public equity proxy voting policy. Proxies for distributed securities must be voted based on protecting and promoting the economic interests of LACERA's members and beneficiaries.

Distributions: LACERA prefers cash distributions to in-kind distributions (stock distributions). Distribution management shall be handled by the PEA, or specialized distribution advisor, who will work closely with staff to ensure the timely sale or transfer of securities. Exceptions to this will be handled on a case-by-case basis.

Cash Management: The amount of cash held by partnerships should be kept to a minimum, and should be used only for working capital. "Just-in-time" drawdowns are preferred in order to stay as fully invested as possible.

F. SUMMARY OF ROLES AND RESPONSIBILITIES

The roles of the Board, staff, PEA, and the general consultant are summarized below:

Board Responsibilities

1. Review and approve the Private Equity Objectives, Policies, and Procedures.
2. Review and approve the biennial Structure Review.
3. Review performance of the private equity investment portfolio with the PEA and/or staff at least annually.
4. Review and approve primary fund investments and any investment exception or waiver to the investment guidelines, to the extent not delegated.
5. Refer private equity investment opportunities to staff for evaluation, either directly or with the assistance of the PEA.

Staff Responsibilities

1. Develop, evaluate, review, and make recommendations to the Board on the Private Equity Objectives, Policies, and Procedures developed with the PEA or general consultant.
2. Review and evaluate the biennial Structure Review with the PEA, recommending changes to the Board as appropriate.
3. Monitor and report on the activities of the PEA to the Board. Make appropriate recommendations on retention and/or hiring of PEAs.
4. Screen, evaluate, and recommend investments to the Board of Investments in consultation with the PEA.
5. Approve the purchase or sale of any existing fund investment within the Private Equity portfolio in accordance with the secondary program investment guidelines (**Appendix A**).
6. Determine the most effective procedures for addressing stock distributions.
7. Ensure that adequate measurement systems are implemented to monitor the performance and fees of LACERA's private equity investments and its PEA.
8. Meet with the PEA and the Board at least yearly to review performance, asset allocation to the various sub-asset classes of private equity, and other issues that arise.

9. Assure that LACERA has appropriate legal counsel as needed to work with staff to review terms and conditions on all proposed investment vehicles.
10. Document due diligence procedures undertaken for recommended investments, and maintain a checklist to be certified by senior management.
11. The CIO is authorized to approve capital commitments in follow-on-funds up to \$250 million per fund or up to a 25% fund ownership increase compared to LACERA's ownership percentage in the predecessor fund, provided:
 - i. LACERA's prior investments in each predecessor fund greater than three years old (based on the fund's inception or commencement of operations date) exceeds the benchmark net IRR and net MOIC median returns for the fund's sub-asset class strategy, and
 - ii. There have been no material changes in the investment strategy or key persons, and
 - iii. LACERA's PEA concurs with the investment

The Board will receive written notification of all such actions from staff and PEA.

12. Retain a veto right over which investments are approved for investment in the separate account programs to ensure portfolio fit and no overlapping positions.

PEA(s) Responsibilities

1. Serve the interest of the Board, in support of its fiduciary obligation to LACERA.
2. Proactively disclose any perceived or actual conflicts of interest that might arise.
3. Carry out strategic initiatives, as directed by the Board.
4. Identify opportunities, conduct due diligence, and make investment recommendations/ selections within their approved mandates, working in conjunction with staff.
5. Develop, with staff, the biennial Structure Review.
6. Monitor investments in conjunction with staff.
7. Work with staff to address the process for handling stock distributions.
8. Work with staff on portfolio performance measurement.
9. Meet with the Board and staff at least annually to review performance of the private equity portfolio.

10. Provide the Board and staff with ongoing educational presentations and/or materials covering market conditions and developments.
11. Adhere to the "prudent expert" standard throughout all phases of the investment process, as overseen by LACERA. Specific processes covered include investment sourcing, consideration, evaluation, recommendation, negotiation, reporting, and monitoring.

General Consultant Responsibilities

1. Work with staff to review the OPP, as necessary.
2. Work with staff, as necessary, to determine the annual private equity allocations.

G. CONCLUDING REMARKS

This Objectives, Policies, and Procedures document provides the framework to guide the private equity portfolio's construction and composition. The OPP states LACERA's investment objective and strategy and details the responsibilities of all parties. Acknowledging the unique characteristics of the asset class, LACERA will continue to be flexible, opportunistic, and innovative, striving to partner with the best managers to obtain attractive returns at acceptable levels of risk.

**Los Angeles County Employees Retirement Association
Private Equity Objectives, Policies, and Procedures**

Adopted: April 23, 1997

Last Revised: ~~November 8~~December 12, 2018

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A. DOCUMENT PURPOSE

The Private Equity Objectives, Policies, and Procedures (“OPP”) document sets forth LACERA’s investment objective and strategy for investing in private equity as outlined in the Fund’s Investment Policy Statement. The OPP stipulates the policies that establish parameters on the program, spells out the procedures to be followed, and delineates the responsibilities of the Board of Investments (the “Board”), staff, and the Private Equity Advisor(s) (“PEA”). In essence, the OPP provides the blueprint that guides the portfolio's construction and composition.

B. INVESTMENT OBJECTIVE AND STRATEGY

LACERA invests in private equity to obtain attractive returns for the Fund at an acceptable level of risk. The target return for this asset class, as measured by Internal Rate of Return (“IRR”), is an annualized return of 200 basis points in excess of over the MSCI ACWI IMI¹ Index return, net of all partnership and advisor fees, on a quarterly lag. The primary strategy is to prudently build a diversified portfolio of the most attractive investment opportunities securing the best possible terms while mitigating risks.

C. DEFINITIONS

I. Private Equity

Private equity refers to privately negotiated investments in companies. These investments are predominantly equity interests that are illiquid and long-term in nature. Private equity investments can be made directly, but they are more commonly made through investments in limited partnerships and other types of investment vehicles that offer limited liability to investors. Private equity strategies are classified into the following sub-asset class categories:

| Buyouts | Venture Capital |
|----------------------------|------------------------|
| Acquisitions and Takeovers | Seed Stage |
| Industry-Focused | Early Stage |
| Specialized Strategies | Middle Stage |
| Non-controlling Interests | Late Stage |
| Structured Equity | Growth Equity |

¹ MSCI ACWI IMI is an acronym for the Morgan Stanley Capital International All Country World Index Investable Market Index.

In addition to these sub-asset class categories, LACERA classifies private equity investments by general partner, industry, and geography.

II. Related Terms

Co-Investments are investments made directly into companies by a limited partner, when invited to be part of the consortium by an existing private equity fund. General partners make co-investment opportunities available to limited partners when the total required equity investment in a specific company by the fund exceeds that fund's per-company maximum investment.

Direct investments are investments made directly into companies by investors where no private equity fund is involved. The investors are not limited partners, and as such may be involved in the management of the companies and sit on their board of directors.

Emerging markets are countries other than Canada and those in the Morgan Stanley Capital Index – Europe Asia, Far East (“MSCI EAFE”) Index.

Fund-of-funds are vehicles comprised of a portfolio of funds which frequently target a particular sub-asset class or category of investments.

General Partners (“GPs”) are the managing partners in a private equity management company, who have unlimited personal liability for the debts and obligations of the limited partnership and have the right to participate in its management. Their activities include raising capital, investing the capital, actively monitoring the portfolio companies, reporting results to limited partners, and exiting the investments. The general partner receives an annual management fee and may earn “carried interest,” which is a negotiated percentage of the profits.

Limited Partners (“LPs”) are passive investors with limited liability in the partnerships who have no involvement in the day-to-day management of the partnership and underlying portfolio companies.

Non-U.S. investments are private equity investments in any of the sub-asset classes outside of the United States in both developed and emerging markets. These investments may focus on an individual country, a geographical region, or they might span the globe.

Secondary investments are limited partnership interests bought from or sold by existing investors in private equity funds. The secondary market offers limited partners the opportunity to actively manage the composition of their existing private equity portfolio.

D. INVESTMENT POLICIES AND GUIDELINES

I. Total Fund Target Allocation

In September 2018, the Board established a target allocation of 10 percent for private equity investments, with an acceptable range of 7 percent to 13 percent. Given the unpredictable nature of cash flows in this asset class, the actual allocation number fluctuates. Staff will closely monitor the actual market value of and committed exposure (new commitments and unfunded existing commitments) to this asset class.

LACERA's Plan Level Target Allocation Status¹
 (As of June 30, 2019~~8~~ - Millions)

| Net Asset Value ² | Total Fund Value ² | Allocation % | Target Allocation Range |
|------------------------------|-------------------------------|--------------|-------------------------|
| \$5,800,947 | \$586,533,142 | 9.910.6% | 7% - 13% |

¹ Values adjusted from the 6/30/19~~8~~ Total Asset Allocation report by +\$175~~88~~ million eliminating PE reporting lag.

² Factoring in \$43,216,759 million in Undrawn Capital, the combined PE allocation percentage equals 16.02%.

In the biennial Structure Review, staff and PEA will recommend an annual commitment pace to ensure that investments fall within the policy's allocation range. Even so, LACERA seeks to avoid an undue concentration of commitments in any one calendar year. LACERA will adjust the amount of new commitments to the portfolio each year to capture the benefits of time diversification and to match the expected growth of LACERA's total plan assets.

II. Investment Exposure Limits

LACERA's private equity portfolio will be diversified by vintage year, sub-asset category, industry, general partner, and geography. The following guidelines will apply unless a waiver is approved by the Board.

Size of Investments: The minimum size of a fund commitment shall be \$5 million, while the maximum size of investment made shall be 10 percent of LACERA's market value exposure plus undrawn commitments. The \$5 million minimum is expected to be utilized for venture capital-type investments while the maximum would most typically apply to separate account or fund-of-fund mandates.

Partnership Limits:

1. LACERA's share in a single partnership, once the partnership has closed to new investors, shall not exceed 50 percent of that partnership's total commitments from all

limited partners. (This policy does not apply to separate accounts where LACERA may be 100% of the capital.)

2. LACERA shall limit maximum exposure (market value plus unfunded commitments) to any one general partner such that the aggregate investment with that general partner across multiple funds is not greater than 10 percent of LACERA's private equity portfolio market value plus unfunded commitments at the time of commitment.

Emerging Markets: No more than 15 percent of the portfolio will be invested in emerging markets.

III. Prohibited Investments

Hostile Takeovers: LACERA avoids investment strategies that primarily involve hostile takeovers, defined as acquisitions opposed by the board of directors of the target company.

Derivatives: Derivative instruments are not permitted to the extent that they expose LACERA to new risks not associated with the original intent of the investment.

LACERA Private Equity Privatization Policy: LACERA does not aim to promote privatization of public jobs through its private equity investment program. It is highly unlikely that LACERA would invest in private equity investments that are dependent on privatization strategies.

When performing due diligence prior to making the initial investment in a domestic partnership, staff and/or PEA, as applicable, will use reasonable efforts to ascertain the following:

1. Whether the partnership's current investment strategy includes the privatization of jobs held by LACERA members, and
2. Whether previous partnerships operated by the general partners, if any, have invested in companies dependent upon privatization of jobs held by LACERA members.

Staff and/or PEA will seek guidance from the Board before investing in a domestic partnership if the due diligence establishes a positive answer to either (1) or (2) above.

United Nations Principles for Responsible Investments: LACERA is a signatory of the United Nations Environment Programme Finance Initiative's Principles for Responsible Investments ("UNPRI") and has a conviction that environmental, social, and governance-related considerations should provide material input into the Investor's investment decision and that the integration of such criteria supports its commitment to sustainable value creation. Presently, this shall not be interpreted so as to require the general partner or the partnership to adopt the UNPRI in its analysis of any potential investment.

IV. Investment Vehicle Guidelines

LACERA deems the following types of investment vehicles appropriate for investing in this asset class, subject to the constraints mentioned in this document:

Limited Partnerships: LACERA anticipates that the majority of its exposure to this asset class will take place through these pooled investment vehicles.

Separate Accounts: Separate account vehicles may be appropriate in certain cases, e.g., to gain access, or additional exposure, to a particular sub-asset class or category of investments, or to secure favorable terms.

Fund-of-Funds: Fund-of-funds vehicles may be appropriate in certain cases, e.g., to gain access, or additional exposure, to a particular sub-asset class or category of investments.

Secondary Investments: Staff ~~and the PEA~~ will seek to strategically increase LACERA's investment exposure to institutional quality fund managers with the goal of improving long-term economic returns through a secondary purchase or primary commitment in vehicles or funds managed by the current investment team ~~improve long term returns by adding exposure through the acquisition of attractively priced secondary investment opportunities in partnerships in which LACERA is already invested~~. In addition, dispositions of LACERA's existing interests and future commitments may be undertaken after a favorable evaluation of market pricing is determined in comparison to potential future returns.

A complete description of the LACERA Private Equity Secondary Program and its investment guidelines is attached as **Appendix A**.

Co-Investments: LACERA may ~~employ manager(s) to~~ make co-investments alongside: (1) Board-approved managers so long as the manager is currently managing capital on behalf of LACERA; and (2) managers that a Board-approved discretionary private equity manager has approved for investment for LACERA ~~partnerships that may or may not have an existing relationship with LACERA~~.

Direct Investments: The Board has not authorized the staff ~~or the PEA~~ to autonomously make direct investments ~~or co-investments into companies without the presence of an investment team who can manage the investment on LACERA's behalf~~.

E. INVESTMENT PROCEDURES

LACERA follows clearly established methodologies when investing in this asset class. In this section, these are defined and explained.

I. Managing Risk

Private equity investments entail a number of unique risks. Prior to investing, staff and the PEA will ascertain the pertinent risks of a particular private equity investment. This knowledge will enable the implementation of appropriate risk mitigation measures. The types of risks and LACERA's method for managing them follow:

1. *Illiquidity*: Illiquidity (whether due to the form of asset or to the investment structure) is a fundamental characteristic of the asset class and a source of the expected return premium. LACERA will ensure that each limited partnership investment provides for the maximum liquidity practical, through utilization and structure of appropriate investment vehicles and exit strategies. In addition, LACERA may opportunistically buy and sell interests in the secondary market to mitigate the liquidity risks inherent in the asset class.
2. *Volatility*: Concentrated portfolios, the uncertain prospects of companies undergoing transformational change, and the use of leverage all lead to volatility in private equity returns. LACERA will mitigate total volatility by diversifying the portfolio by strategy, sub-asset class category, manager, geography, and across vintage years.
3. *Lack of Public Information*: The limited public financial reporting requirements of most private equity investments makes it difficult to obtain unbiased, reliable information to analyze potential investments and to conduct consistent performance evaluations. LACERA will employ specialized resources (e.g., advisors, databases), as needed to evaluate potential investments in this area. LACERA will establish and maintain appropriate resources and procedures to obtain quarterly valuations of assets held in the private equity portfolio and to monitor interim performance.
4. *Non-U.S. Investments*: Non-U.S. private equity investments are exposed to all the risks associated with domestic private equity investments. In addition, they bring with them risks specific to international investments, including currency risk, political risk, regulatory risk, legal system risk, and accounting standard risk. LACERA will employ the appropriate legal resources needed to review each non-U.S. investment partnership agreement and associated documentation.

II. Sourcing Investments

Staff, and the PEA, will source potential investments and designate those that meet the Program's selection criteria and performance goals. LACERA will consider all reasonable investment opportunities. Sourcing prospective investments will entail but not be limited to the following:

1. Attending investment conferences to meet GPs
2. Traveling to the offices of general partners

3. Meeting general partners in LACERA's offices
4. Cold-calling potential general partners
5. Accessing the PEA's market intelligence on fundraising
6. Meeting with placement agents
7. Accessing proprietary databases (such as Preqin or Pitchbook) to identify potential GPs
8. Reading industry publications to keep abreast of deal, people, and fund news

III. Conducting Due Diligence

When conducting due diligence, staff, and the PEA, will pursue viable investments prioritizing the best opportunities that fit the program's goals and add value to the existing portfolio, and rejecting those that do not meet the program's criteria. Major factors to be considered include, but are not limited to, the following:

1. Experience and cohesiveness of the general partners or principals involved
2. Depth of the general partner's organization and resources
3. Assessment of the general partner's strategy
4. Analysis of the general market environment
5. Appropriateness of the investment for inclusion in LACERA's portfolio
6. Compliance with LACERA's guidelines
7. Compliance with all national, state, and local regulatory and legal requirements
8. Extensive reference and background checks on the investment sponsor
9. Comprehensive track record analysis

IV. Addressing Conflicts of Interest

Staff and the PEA shall not recommend/make any investment until all identified real and potential conflicts of interest have been addressed and mitigated. The Board shall not approve any investment until all identified conflicts of interest have been addressed and mitigated.

V. Structuring and Negotiating Key Terms, Provisions, and Fees

Staff shall negotiate terms and provisions and structure fees so as to provide maximum investor protection and value.

VI. Monitoring and Reporting Portfolio Performance

Reporting to LACERA's Board: Staff shall issue semi-annual portfolio performance reports to the Board. In addition, staff and the PEA shall report to the Board at least yearly on the status of

investments currently held in the portfolio. Reports shall include, but not be limited to, such items as the following:

1. The general investment environment and expected opportunities coming to the private equity markets
2. Allocations made across different industries and sub-asset classes of private equity
3. Summary of investment portfolio performance, along with an update on overall market performance
4. New commitments made since the last report
5. Summary of drawdowns and distributions

Performance Reporting: The PEA or other service provider shall provide annual and quarterly portfolio performance reports to LACERA's staff. In general, there will be a greater level of detailed reporting on the annual report when compared to the quarterly reports. Quarterly reporting is meant to serve the purpose of alerting staff to possible adverse developments as well as providing timely updates on the performance and analyses of investments.

Returns will be measured against the universe of performance numbers for vintage year funds, as provided by a third party source such as Cambridge Associates or Burgiss. The comparison of performance to top quartile funds will be a secondary measure of the program's success for the asset class, as it will allow LACERA to measure the ability of its staff and PEA to add value within the asset class.

Monitoring Adherence to Strategy: Staff shall monitor the type, amount, and allocation of investments to ensure that the strategy set forth in this document is adhered to. While some flexibility shall be permitted because of the time that may be required to find attractive investment opportunities, LACERA expects staff and the PEA to adhere to the ranges set forth in this document as well as the investment guidelines as set forth in the Annual Investment Plan.

Proxy Voting for Distributed Securities: LACERA will retain the right to vote all proxies and will vote in accordance with LACERA's public equity proxy voting policy. Proxies for distributed securities must be voted based on protecting and promoting the economic interests of LACERA's members and beneficiaries.

Distributions: LACERA prefers cash distributions to in-kind distributions (stock distributions). Distribution management shall be handled by the PEA, or specialized distribution advisor, who will work closely with staff to ensure the timely sale or transfer of securities. Exceptions to this will be handled on a case-by-case basis.

Cash Management: The amount of cash held by partnerships should be kept to a minimum, and should be used only for working capital. "Just-in-time" drawdowns are preferred in order to stay as fully invested as possible.

F. SUMMARY OF ROLES AND RESPONSIBILITIES

The roles of the Board, staff, PEA, and the general consultant are summarized below:

Board Responsibilities

1. Review and approve the Private Equity Objectives, Policies, and Procedures.
2. Review and approve the ~~biennial Structure Review~~Annual Investment Plan.
3. Review performance of the private equity investment portfolio with the PEA and/or staff at least annually.
4. Review and approve primary fund investments and any investment exception or waiver to the investment guidelines, to the extent not delegated.
5. Refer private equity investment opportunities to staff for evaluation, either directly or with the assistance of the PEA.

Staff Responsibilities

1. Develop, evaluate, review, and make recommendations to the Board on the Private Equity Objectives, Policies, and Procedures developed with the PEA or general consultant.
2. Review and evaluate the ~~biennial Structure Review~~Investment Plan ~~annually~~ with the PEA, recommending changes to the Board as appropriate.
3. Monitor and report on the activities of the PEA to the Board. Make appropriate recommendations on retention and/or hiring of PEAs.
4. Screen, evaluate, and recommend investments to the Board of Investments in consultation with the PEA.
5. Approve the purchase or sale of any existing fund investment within the Private Equity portfolio in accordance with the secondary program investment guidelines (**Appendix A**).
6. Determine the most effective procedures for addressing stock distributions.
7. Ensure that adequate measurement systems are implemented to monitor the performance and fees of LACERA's private equity investments and its PEA.

8. Meet with the PEA and the Board at least yearly to review performance, asset allocation to the various sub-asset classes of private equity, and other issues that arise.
9. Assure that LACERA has appropriate legal counsel as needed to work with staff to review terms and conditions on all proposed investment vehicles.
10. Document due diligence procedures undertaken for recommended investments, and maintain a checklist to be certified by senior management.
11. The CIO is authorized to approve capital commitments in follow-on-funds up to \$250~~150~~ million per fund ~~of~~ up to a 25% fund ownership increase compared to LACERA's ownership percentage in the predecessor fund ~~or at the same ownership percentage in the predecessor fund~~, provided:
 - i. LACERA's prior investments in each predecessor fund greater than three years old (based on the fund's inception or commencement of operations date) exceeds the benchmark net IRR and net MOIC ~~m~~Median ~~R~~returns for the fund's sub-asset class strategy, and
 - ii. There have been no material changes in the investment strategy or key persons, and
 - iii. LACERA's PEA concurs with the investment

The Board will receive written notification of all such actions from staff and PEA.

12. Retain a veto right over which investments are approved for investment in the separate account programs to ensure portfolio fit and no overlapping positions.

PEA(s) Responsibilities

1. Serve the interest of the Board, in support of its fiduciary obligation to LACERA.
2. Proactively disclose any perceived or actual conflicts of interest that might arise.
3. Carry out strategic initiatives, as directed by the Board.
4. Identify opportunities, conduct due diligence, and make investment recommendations/ selections within their approved mandates, working in conjunction with staff.
5. Develop, with staff, the biennial ~~Annual Investment Plan~~Structure Review.
6. Monitor investments in conjunction with staff.
7. Work with staff to address the process for handling stock distributions.
8. Work with staff on portfolio performance measurement.

9. Meet with the Board and staff at least annually to review performance of the private equity portfolio.
10. Provide the Board and staff with ongoing educational presentations and/or materials covering market conditions and developments.
11. Adhere to the "prudent expert" standard throughout all phases of the investment process, as overseen by LACERA. Specific processes covered include investment sourcing, consideration, evaluation, recommendation, negotiation, reporting, and monitoring.

General Consultant Responsibilities

1. Work with staff to review the OPP, as necessary.
2. Work with staff, as necessary, to determine the annual private equity allocations.

G. CONCLUDING REMARKS

This Objectives, Policies, and Procedures document provides the framework to guide the private equity portfolio's construction and composition. The OPP states LACERA's investment objective and strategy and details the responsibilities of all parties. Acknowledging the unique characteristics of the asset class, LACERA will continue to be flexible, opportunistic, and innovative, striving to partner with the best managers to obtain attractive returns at acceptable levels of risk.

Co-Investment Deal Sourcing

Equity: Public/Private Committee

November 20, 2019



LACERA YTD PE Co-Investment Deal Log

- LACERA has invested in 1 out of 19 deals (~5%)
- Lack of sponsor fit is the most common reason for passing on a co-investment opportunity

| # | Co-Investment Opportunity Description | |
|----|--|---|
| 1 | Education solutions serving students with special needs | 11 Supply chain management software |
| 2 | Student payment solutions platform | 12 Insurance distribution platform that partners |
| 3 | Marketing platform to serve insurance and online travel agencies | 13 Process, hauls, converts, and disposes organic waste streams |
| 4 | Global distributor of plastics | 14 SaaS provider of HER, practice management |
| 5 | eDiscovery service provider | 15 Commercial landscape services |
| 6 | Plastics manufacturer | 16 eDiscovery service provider |
| 7 | Emergency lending to consumers with lower credit scores | 17 Marketing and licensing business |
| 8 | Print-related technology | 18 Movie / Film Production |
| 9 | Physician practice platform | 19 Provider of essential ingredients |
| 10 | Specialty HVAC equipment rental solutions | |

To execute 3-5 deals annually and maintain LACERA's selectivity, LACERA would need to review 60-100 deals, which is 3x to 5x times the current deal flow amount



LACERA PE Co-Investment Relationship Funnel

- Out of 43 current core PE manager relationships, over half (22) are immediately eliminated per the co-investment program parameters
- Of the remaining 21 manager relationships, only 11 managers have provided deal flow to date
- Over 60% of the co-investment opportunities sourced this year are coming from just 4 managers



LACERA's sources of co-investment deal flow are too narrow and concentrated among a handful of managers



LACERA Co-Investment Deal Sourcing Comparison

- Due to less restrictive co-investment parameters, fund of funds and other pension plans receive ~7x the amount of deal flow on average
- LACERA's completion rate (5%) is conservative relative to fund of funds and other pension plans
- LACERA's co-investment program has a heavy filter to remove possible ESG headline risks, which is more stringent than other pension plans and fund of funds
- Widening LACERA's deal funnel would increase the quality of deals that staff could review

| | Fund of Funds | | | | Pension Plans | | Average | LACERA ⁴ |
|-----------------------------|---------------|---------------------|---------------------|---------------------|---------------|--------|---------|---------------------|
| | Firm A | Firm B ¹ | Firm C ² | Firm D ³ | Firm E | Firm F | | |
| Number of U.S. Deals | 215 | 87 | 196 | 128 | 94 | 62 | 129 | 19 |
| Number of U.S. Deals Closed | 17 | 13 | 14 | 5 | 4 | 6 | 9 | 1 |
| Completion Rate | 8% | 15% | 7% | 4% | 5% | 10% | 7% | 5% |

¹ Represents annualized number taken from 2013 to 2017 - total of 580 deals.

² Represents annualized number taken from 2005 to 2013 - total of 2,090 deals.

³ Represents annualized number taken from 2005 to 2014 - total of 1,539 deals.

⁴ Represents deals received as of October 21, 2019.

⁵ Assumed percent of deals that are domestic for better comparison purposes.



Proposed Co-Investment Parameter Modifications

Expand the sources of deal flow to include co-investment opportunities that are:

- offered by Board-approved managers so long as the manager is currently managing capital on behalf of LACERA
- alongside managers that a Board-approved discretionary private equity manager (e.g., JPMorgan, Pathway) has approved for investment for LACERA

The team has a rigorous due diligence process in place that can properly vet opportunities from additional deal flow channels

LACERA's Private Equity Secondary Program

A. Secondary Investments

The purchase and sale of secondary investments are effective tools in the management of institutional private equity investment programs. The main objective of the secondary program is to strategically increase LACERA's investment exposure to institutional quality fund managers with the goal of improving long-term economic returns. Secondary investments historically consisted of the buyer acquiring an interest in a private equity limited partnership from an existing investor that was looking to liquidate its investment prior to the expiration of the full term of the partnership. In recent years, secondary investments have evolved to take many different forms. For example, fund managers may initiate a secondary market transaction in which mature assets are contributed to a continuation vehicle that is formed and managed by the fund manager; the secondary buyer acquires an interest in the assets by making a commitment to the new vehicle.

Secondary investments can provide numerous benefits, such as:

- Investing in an existing portfolio or company interest(s) with minimal blind pool risk
- Shorter average holding periods due to nearer term realizations
- Ability to minimize the "j-curve" effect due to the more mature portfolio status
- Ability to strategically manage a portfolio's diversification
- Possibility of purchasing assets at a discount to current carrying value and a further discount to fair market value

The increasing supply and broadening access to the secondary market has enabled many institutional investors to move beyond the traditional buy-and-hold strategy to actively manage the composition of their private equity portfolios through the sale and acquisition of secondary partnership interests.

I. Secondary Investment Guidelines

The following guidelines will apply to secondary investments unless a waiver is approved by the Board:

Fund Manager and Investment Vehicle Guidelines

LACERA deems the following types of managers and investment vehicles appropriate for secondary investments, subject to the constraints mentioned in this document:

- A private equity fund in which LACERA is already an existing investor
- A private equity fund that is managed by a manager of the same institutional quality to those which LACERA has committed to on a primary basis (a "LACERA Quality Manager")
- A secondary purchase or primary commitment in vehicles or funds formed and managed by a LACERA Quality Manager with the specific purpose of acquiring the interests of one or multiple portfolio companies that has or have been managed by the current investment team for at least three years

- In each case, the primary fund to which the secondary investment relates must have at least 70% of its aggregate commitments deployed, committed or otherwise reserved for investments, fees, and expenses
- Secondary purchases must be consistent with the parameters defined in the table below. Purchase price is defined as net asset value (“NAV”) plus unfunded commitments

| (Includes NAV + Unfunded Commitments - \$MM) | Secondary Purchase Parameters CIO Delegated Authority | |
|--|--|-----------|
| | 2018-2019 | 2020-2021 |
| Annual Purchase Limit | \$100 | \$200 |
| Maximum Any Single Interest | \$65 | \$130 |
| Maximum Non-U.S. | \$75 | \$150 |

Secondary Investment Limits

- The aggregate amount committed by LACERA to secondary investments may not exceed 10 percent of LACERA’s private equity portfolio market value plus unfunded commitments at the time of purchase
- A secondary investment would be prohibited if the investment would cause LACERA to violate the most recently Board-approved Private Equity Objectives, Policies, and Procedures or Structure Review document, including, for example, Sub-Asset Class target allocation ranges and manager concentration limits

CIO Delegated Authority

- The CIO has the authority to approve secondary investments in vehicles or funds which are consistent with the criteria set forth in these guidelines, and at valuations deemed attractive by staff and a Board-approved secondary advisor
- Aggregate commitments to secondary investments approved by the CIO without Board approval shall not exceed the following limits:
 - Up to \$100 million per year in calendar years 2018 and 2019
 - Up to \$200 million per year in calendar years 2020 and 2021

II. Secondary Purchase Investment Process

Staff will implement secondary purchases through the following process:

Sourcing: Secondary investment opportunities would be sourced directly from general partners and limited partners of private equity funds. Opportunities may also be sourced through secondary managers, intermediaries, and industry databases.

Screening: Investments would be considered in partnerships that provide strategic and/or tactical benefits to the overall private equity program. This includes partnerships that have the potential to enhance returns and/or help manage sector exposure for LACERA’s private equity program.

Evaluating: Secondary opportunities that fall within the secondary purchase investment guidelines of enhancing potential returns and/or helping manage sector exposure would be evaluated to

determine if a full valuation analysis should be conducted by staff and the Secondary Advisor. A valuation analysis will be conducted to estimate the fair market value of the partnership and help determine the negotiation parameters, including a bidding range, which obtains CIO approval.

Offer and Negotiation: If a secondary opportunity meets all of LACERA's investment guidelines, staff will have discretion to make an offer, negotiate a final price, and execute transfer documents on behalf of LACERA. Since the purchase of specific partnership interests are unique to LACERA, to the extent negotiations of terms and contracts require legal counsel, outside legal counsel may need to be retained and paid for by LACERA.

Reporting: CIO's monthly letter and staff's semi-annual update report to the Board will include a summary of completed secondary purchase transactions. The information provided will include fund name, vintage year, fund type, original commitment amount, date of transfer, total amount of the transaction, and net asset value.

Monitoring: Secondary investments will be monitored along with all private equity investments. Secondary investments will be placed in the appropriate sub-asset class of the private equity program based on the investment strategy of the fund.

B. Secondary Sales

The disposition of existing limited partnership interests in the secondary market is a complicated process; however, it is an effective tool in strategically and tactically managing a private equity portfolio. Selling certain interests in a private equity portfolio can serve to:

- Eliminate lower-impact holdings including mature and non-strategic assets
- Reduce the number of holdings in the portfolio
- Provide added liquidity to recycle capital into new private equity investments
- Adjust the risk profile of the portfolio by adjusting the asset mix

While still resource intensive, the secondary sale process has become efficient. Sophisticated buyers and sellers, leveraging advisors, are able to ascertain fair market value for securities.

I. Secondary Sale Disposition Guidelines

- All sales must provide strategic, tactical, and/or economic benefits that assist LACERA in meeting its investment goals
- The program will consider selling undesired holdings that include both mature secondaries and hybrid secondaries
 - Sell determinations will fall under the following criteria:
 - *Poor Performing:* Poor performing assets that have little to no potential to materially improve the future performance of the private equity program
 - *Tail Ends:* Mature assets that have provided a significant portion of their potential performance, whether attractive or poor, and the remainder of the assets have little to no potential to materially improve the future performance of the private equity program. These assets will typically have

little value remaining in the capital account and/or few holdings remaining in the fund

- *Non-strategic*: Assets that have an investment focus that is no longer a strategic part of LACERA's investment objectives and there is little to no potential to materially improve the future performance of the private equity program
- *Strategic*: Assets that can help improve the overall purchase prices and returns associated with the secondary sale
- The secondary sale program will opportunistically consider the sale of single limited partnership interests and portions of partnership interests as well as portfolios of multiple limited partnership interests. Portfolio sales will be considered when the aggregated benefit to the private equity program is more attractive than individual dispositions
- The CIO is authorized to approve the secondary sale of limited partnership interests that fall within LACERA's disposition guidelines.
- The CIO is authorized to approve the disposition of limited partnership interests with aggregate NAV (determined at the time of disposition) of up to \$500 million per year

II. Secondary Sale Disposition Process

Staff will conduct secondary sales through the following process:

Identify assets for disposition: Analysis of private equity investments will be conducted periodically to determine if any assets are appropriate for disposition and whether the resources are available to conduct a disposition process over the coming year. The assessment will be done based on the criteria set forth in the Secondary Sale Disposition Guidelines.

Analysis of individual partnerships: The next step in the process is to gather information on each fund and the underlying portfolio companies for analysis. Further due diligence will be conducted with the general partner and the secondary advisor to estimate the fair market value of the underlying holdings. Discussions with the general partner to determine transferability of each partnership interest will also occur. The result of the analysis will be a determination of the desired value range for the portfolio of fund interests subject to the secondary sale.

Coordinating offers: At this stage, third party market makers may be contacted to evaluate the marketability of the portfolio and offer their own value assessment. If third party market makers are used, staff may interview more than one market maker to help ensure best execution. The preliminary pricing expectations will be compared to LACERA's valuation range. A determination will be made on whether the process should continue and a market maker hired. At this stage, consideration will also be given to the attractiveness of the portfolio composition. Adjustments may be made to improve marketability. Examples of possible adjustments may include adding more attractive assets to pique buyer interests or expanding the portfolio's size to appeal to larger buyers.

Facilitating due diligence: Once staff selects the partnerships to be sold, staff and the secondary advisor will organize due diligence materials, screen potential buyers and solicit bids. Staff will

provide potential buyers with access to pertinent information and data within a defined time frame with the objective of maximizing the portfolio's value. If a third party market maker is hired to coordinate offers, they could also assist with facilitating due diligence.

Negotiations: At the end of the defined due diligence time frame, final terms and prices will be collected and a preferred buyer will be selected to begin negotiation of the purchase and sale agreement and related transfer agreements. If the prices offered do not meet LACERA's expectations, the process may be halted. Outside legal counsel may be engaged to facilitate the preparation and negotiation of the relevant agreements.

Approval: Staff has discretion within the established guidelines of the disposition program to finalize terms and pricing and execute the transaction.

Completing transfer process: Final legal documents will be reviewed by legal counsel and executed by the CIO.

Reporting: Once this pool of assets has been fully disposed, staff will report to the Board of Investments as part of the semi-annual review, and also by the CIO as part of the monthly CIO letter. The report will include a summary of the completed secondary transaction. The information provided will include fund names, vintage years, fund types, commitment amounts, dates of transfer, the aggregate general partner reported net asset value, the aggregate estimated fair market value, and the aggregate sale value. Periodic reporting will include information on any fund interests sold under the program, as well as the remaining values of partially sold interests.

III. Secondary Market Consultants

Secondary Advisors: The secondary advisor is a fee-based consultant with a fiduciary responsibility to LACERA whose role is to advise on the valuations of secondary sales and purchases. Staff will establish criteria, evaluate, and periodically recommend Secondary Advisors to the Board for approval. Staff will select secondary advisors from the Board-approved list as deemed appropriate for specific situations.

Secondary Brokers or Intermediaries: Secondary Brokers or Intermediaries are commission-based consultants whose role is to facilitate the sale or purchase of secondaries by connecting buyers and sellers. Staff will establish criteria, evaluate, and periodically recommend Secondary Brokers and Intermediaries to the Board for approval. Staff will select Secondary Brokers and Advisors from the Board-approved list as they deem appropriate for specific situations.

LACERA's Private Equity Secondary Program

A. Secondary ~~Investments~~Purchases

The purchase and sale of ~~s~~Secondary investments are ~~The purchase of existing limited partnership interests in the secondary market is an~~ effective tools in the management of institutional private equity investment programs. The main objective of the secondary program is to strategically ~~and tactically~~ increase LACERA's investment exposure to ~~{high performing? Attractive?}~~ institutional quality fund managers with the goal of improving ~~the~~ long-term economic returns. Secondary investments ~~historically consisted~~typically consist of the buyer acquiring an interest in a private equity limited partnership from an existing investor that ~~was~~ looking to liquidate ~~its~~her investment prior to the expiration of the full term of the partnership. In recent years, secondary investments have evolved to take many different forms. For example, fund managers may initiate a secondary market transaction in which mature assets are contributed to a continuation vehicle that is formed and managed by the fund manager; ~~and~~ the secondary buyer acquires an interest in the assets by making a commitment to the new vehicle.

~~gain liquidity prior to the full term of the partnership. Attractive secondary purchases provide numerous benefits, such as:~~

Secondary investments can provide numerous benefits, such as:

- Investing in an existing portfolio ~~or company interest(s) with minimal,~~ ~~not a~~ blind pool risk;
- Shorter average holding periods due to nearer term realizations;
- Ability to minimize the "j-curve" effect due to the more mature portfolio status;
- Ability to strategically ~~and tactically~~ manage a portfolio's diversification;
- Possibility of purchasing assets at a discount to current carrying value and a further discount to fair market value.

The increasing supply and broadening access to ~~the secondary market~~secondaries has enabled many institutional investors to move beyond the traditional buy-and-hold strategy ~~enabling~~ to actively manage ~~the composition of their private equity~~ portfolios through the ~~sale and~~ acquisition of secondary partnership interests.

I. Secondary ~~Purchase~~Investment Guidelines

The following guidelines will apply to secondary~~Secondary~~ investments unless a waiver is approved by the Board:

Fund Manager and Investment Vehicle Guidelines

- ~~are permitted in funds where~~ LACERA deems the following types of managers and investment vehicles appropriate ~~for an existing investor.~~

~~Mature~~ secondary investments, subject to the constraints mentioned in this document:

- A private equity fund ~~are permitted~~ in which LACERA is already an existing investor;

- ~~■ A private equity fundfunds that is managed by a managerare of the same institutional quality and are substantially similar to those which LACERA has committedeommits to on a primary basis (a “LACERA Quality Manager”).~~
- A private equity fund that is managed by a manager of the same institutional quality to ~~to .~~ Mature secondary investments are those which LACERA has committed to on a primary basis (a “LACERA Quality Manager”).
- A secondary purchase or primary commitment~~where blind pool risk is eliminated, as the fund is no longer in~~ vehicles or funds formed and managed by a LACERA Quality Manager with the specific purpose of acquiring the interests of one or multiple portfolio companies that has or have been managed by the current investment team for at least three years.~~its investment period.~~
- In each case, the primary fund to which the secondary investment relates must have at least 70% of its aggregate commitments deployed, committed or otherwise reserved for investments, fees, and expenses.
- Secondary purchases must be consistent with the parameters defined in the table below. Purchase price is defined as net asset value (“NAV”) plus unfunded commitments.

| (Includes NAV + Unfunded Commitments - \$MM) | Secondary Purchase Parameters CIO Delegated Authority | |
|--|--|-----------|
| | 2018-2019 | 2020-2021 |
| Annual Purchase Limit | \$100 | \$200 |
| Maximum Any Single Interest | \$65 | \$130 |
| Maximum Non-U.S. | \$75 | \$150 |

| (Includes NAV + Unfunded Commitments - \$MM) | Secondary Purchase Parameters CIO Delegated Authority | | |
|--|--|-------|-------|
| | 2018-2019 | 2020 | 2021 |
| Annual Purchase Limit | \$100 | \$200 | \$200 |
| Maximum Any Single Interest | \$65 | \$130 | \$130 |
| Maximum Non-US | \$75 | \$150 | \$150 |

Secondary Investment Limits

- The aggregate amount committed by LACERA to secondary investments may not exceed 10 percent of LACERA’s private equity portfolio market value plus unfunded commitments at the time of purchase.
- ~~■ A secondary investment would be prohibited if the investment would cause LACERA to~~ Investments are permitted on single limited partnership interests or broad portfolios of multiple interests.
- ~~■ CIO authority to approve secondary purchases phased in over five years:~~
 - ~~○ Up to \$100 million/year in calendar years 2018 and 2019~~
- CIO has the authority to approve secondary purchases at prices deemed attractive by the Investment Division and an approved Secondary Advisor.

- ~~Investments are not permitted where they would~~ violate the most recently Board-approved Private Equity Objectives, Policies, and Procedures or **Structure Review** document, including, for example, Sub-Asset Class target allocation ranges and manager concentration limits.

CIO Delegated Authority

- ~~The CIO has the authority~~ ~~Investments are not permitted if they would result in LACERA breaching a maximum exposure~~ to approve secondary fund investments in vehicles or funds which are consistent with the criteria set forth in these guidelines, and at valuations deemed attractive by sStaff and a Board-approved ~~of 10 percent of LACERA's private equity portfolio market value plus unfunded commitments at the time of purchase.~~
- ~~sSecondary purchases are permitted if they match the parameters defined in the table below. Purchase price is defined as net asset value ("NAV") plus unfunded commitments.~~ aAdvisor:
- Aggregate commitments to secondary investments approved by the CIO without Board approval shall not exceed the following limits:
 - Up to \$100 million per year in calendar years 2018 and 2019
 - Up to \$200 million per year in calendar years 2020 and 2021
- ~~- Up to \$100 million per year in calendar years 2018 and 2019
 - Up to \$200 million in calendar year 2020
 - Up to \$250 million in calendar year 2021~~

| | SECONDARY PURCHASE PARAMETERS - |
|---|---------------------------------|
| | CIO DELEGATED AUTHORITY |
| <i>(Includes NAV + Unfunded Commitments - \$MM)</i> | 2018-2019 |
| Annual Purchase Limit | \$100 |
| Maximum Any Single Interest | \$65 |
| Maximum Non-U.S. | 75 |
| Single Non-U.S. Country Limits | 50 |
| Maximum Emerging Market | 50 |
| Maximum to Venture Capital | 65 |
| Maximum to Special Situations | 65 |
| Manager Concentration Limits | 65 |
| Percent of Mature Secondaries | 100% |
| Fund Generation | No Fund I's |

II. Secondary Purchase Investment Process

Staff will implement secondary purchases through the following process:

Sourcing:- Secondary investment opportunities would be sourced directly from general partners and limited partners of private equity funds. Opportunities may also be sourced through secondary managers, intermediaries, and industry databases.

Screening: Investments would be considered in partnerships that provide strategic and/or tactical benefits to the overall private equity program. This includes partnerships that have the potential to enhance returns and/or help manage sector exposure for LACERA's private equity program.

Evaluating: Secondary opportunities that fall within the secondary purchase investment guidelines of enhancing potential returns and/or helping manage sector exposure would be evaluated to determine if a full valuation analysis should be conducted by sStaff and the Secondary Advisor. A valuation analysis will be conducted to estimate the fair market value of the partnership and help determine the negotiation parameters, including a bidding range, which obtains CIO approval.

Offer and Negotiation: If a secondary opportunity meets all of LACERA's investment guidelines, sStaff will have discretion to make an offer, negotiate a final price, and execute transfer documents on behalf of LACERA. Since the purchase of specific partnership interests are unique to LACERA, to the extent negotiations of terms and contracts require legal counsel, outside legal counsel may need to be retained and paid for by LACERA.

Reporting: CIO's monthly letter and staff's semi-annual update report to the Board will include a summary of completed secondary purchase transactions. The information provided will include: fund name, vintage year, fund type, original commitment amount, date of transfer, total amount of the transaction, and net asset value.

Monitoring: Secondary investments will be monitored along with all private equity investments. Secondary investments will be placed in the appropriate sub-asset class of the private equity program based on the investment strategy of the fund.

B. Secondary Sales

The disposition of existing limited partnership interests in the secondary market is a complicated process; however, it is an effective tool in strategically and tactically managing a private equity portfolio. Selling certain interests in a private equity portfolio can serve to:

- Eliminate lower-impact holdings including mature and non-strategic assets-
- Reduce the number of holdings in the portfolio-
- Provide added liquidity to recycle capital into new private equity investments-
- Adjust the risk profile of the portfolio by adjusting the asset mix-

While still resource intensive, the secondary sale process has become efficient. Sophisticated buyers and sellers, leveraging advisors, are able to ascertain fair market value for securities.

I. Secondary Sale Disposition Guidelines

- All sales must provide strategic, tactical, and/or economic benefits that assist LACERA in meeting its investment goals.
- The program will consider selling undesired holdings that include both mature secondaries ~~and, as well as~~ hybrid secondaries:
 - Sell determinations will fall under the following criteria:
 - *Poor Performing*: Poor performing assets that have little to no potential to materially improve the future performance of the private equity program.
 - *Tail Ends*: Mature assets that have provided a significant portion of their potential performance, whether attractive or poor, and the remainder of the assets have little to no potential to materially improve the future performance of the private equity program. These assets will typically have little value remaining in the capital account and/or few holdings remaining in the fund.
 - *Non-strategic*: Assets that have an investment focus that is no longer a strategic part of LACERA's investment objectives and there is little to no potential to materially improve the future performance of the private equity program.
 - *Strategic*: Assets that can help improve the overall purchase prices and returns associated with the secondary sale.
- The **secondary** sale program will opportunistically consider the sale of single limited partnership interests and portions of partnership interests as well as portfolios of **multiple limited partnership** interests. Portfolio sales will be considered when the aggregated benefit to the private equity program is more attractive than individual dispositions.
- The CIO is authorized to approve ~~would have~~ the secondary sale of limited partnership interests that ~~fall~~ ~~authority to approve the disposition of portfolio assets~~ within LACERA's disposition guidelines.
- ~~The CIO is authorized to approve the disposition of limited partnership interests with aggregate NAV (determined at as long as the time sale is in the best interest of disposition) of the Trust.~~
- ~~CIO authorized to approve secondary sales~~ up to \$500 million per ~~year~~.

II. Secondary Sale Disposition Process

Staff will conduct secondary sales through the following process:

Identify assets for disposition: Analysis of private equity investments will be conducted ~~periodically at least annually~~ to determine if any assets are appropriate for disposition and whether the resources are available to conduct a disposition process over the coming year. The assessment will be done based on the ~~sell~~ criteria ~~set forth~~ ~~noted~~ in the Secondary Sale Disposition Guidelines.

Analysis of individual partnerships: The next step in the process is to gather information on each fund and the underlying portfolio companies for analysis. Further due diligence will be conducted

with the general partner and the ~~s~~Secondary ~~a~~Advisor to estimate the fair market value of the underlying holdings. Discussions with the general partner to determine transferability of each partnership interest will also occur. The result of the analysis will be a determination of the desired value range for the portfolio of ~~fund interests subject to the secondary sale.~~~~assets.~~

Coordinating offers: At this stage, third party market makers may be contacted to evaluate the marketability of the portfolio and offer their own value assessment. If third party market makers are used, staff may interview more than one market maker to help ensure best execution. The preliminary pricing expectations will be compared to LACERA's valuation range. A determination will be made on whether the process should continue and a market maker hired. At this stage, consideration will also be given to the attractiveness of the portfolio ~~composition.~~~~mix and make-up.~~ Adjustments may be made to improve marketability. Examples of possible adjustments ~~may include adding~~~~would be to add~~ more attractive ~~(i.e., "Strategic")~~ assets to pique buyer interests or ~~expanding to expand~~ the portfolio's size to appeal to larger buyers.

Facilitating due diligence: Once staff selects the partnerships to be sold, staff ~~and the secondary advisor~~ will organize due diligence ~~materials~~~~material~~, screen potential buyers and solicit bids. Staff will provide potential buyers with access to pertinent information and data within a defined time frame with the objective of maximizing ~~the portfolio's~~~~LACERA's~~ value. If a third party market maker is hired to coordinate offers, they could also assist with facilitating due diligence.

Negotiations: At the end of the defined due diligence time frame, final terms and prices will be collected and a preferred buyer will be selected to begin ~~negotiation of the~~~~negotiating transfer and purchase and~~ ~~sale agreement and related transfer~~ agreements. If the ~~prices offered do~~~~value does~~ not meet LACERA's expectations, the process may be halted. ~~Outside legal counsel may be engaged to facilitate the preparation and negotiation of the relevant agreements.~~ ~~Since the sale of specific partnership interests are unique to LACERA, to the extent negotiations of terms and contracts require legal counsel, outside legal counsel may need to be retained and paid for by the market maker or LACERA.~~

Approval: Staff has discretion within the established guidelines of the disposition program to finalize terms and pricing and execute the transaction.

Completing transfer process: Final legal documents will be reviewed by legal counsel and executed by the CIO.

Reporting: Once this pool of assets has been fully disposed, ~~s~~Staff will report to the Board of Investments as part of the semi-annual review, and ~~also by the~~ CIO as part of the monthly CIO letter. The report will include a summary of the completed secondary transaction. The information provided will include: fund names, vintage years, fund types, commitment amounts, dates of transfer, the aggregate general partner reported net asset value, the aggregate estimated fair market value, and the aggregate sale value. Periodic reporting will include information on any ~~fund interests~~~~holdings~~ sold under the program, as well as the remaining values of partially sold interests.

III. Secondary Market ~~Consultants~~~~Firms~~

Secondary Advisors: The ~~s~~Secondary ~~a~~Advisor is a fee-based consultant with a fiduciary responsibility to LACERA whose role is to advise on the valuations of secondary sales and

purchases. Staff will establish criteria, evaluate, and periodically recommend Secondary Advisors to the Board **for approval.** Staff will select **s**Secondary **a**Advisors from the **Board**-approved list as deemed appropriate for specific situations.

Secondary Brokers or Intermediaries: Secondary Brokers or Intermediaries are commission-based consultants whose role is to facilitate the sale or purchase of secondaries by connecting buyers and sellers. Staff will establish criteria, evaluate, and periodically recommend Secondary Brokers and Intermediaries to the Board **for approval.** Staff will select Secondary Brokers and Advisors from the **Board**-approved list as they deem appropriate for specific situations.

LACERA's Private Equity Co-Investment Program

Co-investments are an effective tool in the management of institutional private equity investment programs. In a single company co-investment, a limited partner invests in an operating company alongside a private equity lead manager. The lead manager is generally responsible for managing the portfolio company and may offer co-investment opportunities for a number of reasons—to bridge a funding gap, to reduce a fund's exposure to a large investment, to bring additional skills and resources to an investment or to incite more investor interest in a new fund. An attractive co-investment also provides numerous benefits to a limited partner, such as:

- Potential to earn outsized returns relative to a fund investment
- Reduction or elimination of fees
- Greater control over capital deployment pacing
- Ability to minimize the “j-curve” due to shorter hold period and less or no fees
- Ability to gain a deeper understanding of a manager's investment process
- Ability to pre-qualify an investment for portfolio and sponsor fit

The popularity of co-investments will continue to increase significantly in the years to come due to the meaningful benefits co-investments provide for both private equity managers and their limited partners.

I. Co-Investment Guidelines

The following co-investment guidelines will mitigate some of the risks inherent in private equity co-investments. Since co-investment opportunities require prompt action, the CIO has been authorized to approve co-investments when all of the following conditions are met:

Transaction Parameters

- **Sourcing** – includes co-investment opportunities: a) offered by Board-approved managers so long as the manager is currently managing capital on behalf of LACERA; and (b) alongside managers that a Board-approved discretionary private equity manager (e.g., JPMorgan, Pathway) has approved for investment for LACERA
- **Investment size** – not to exceed \$40 million in a single opportunity
- **Geography** – companies headquartered in the United States (international co-investments are currently outsourced to Morgan Stanley)
- **Deal types** – buyout and growth capital transactions¹
- **Annual capital deployment** – up to \$100 million in calendar year 2019 and up to \$150 million in calendar year 2020

¹ Buyouts involve the purchase of a controlling share in a company. Growth capital is usually defined as a minority investment, in relatively mature companies that are typically looking for capital to expand or restructure operations, enter new markets, or finance acquisitions.

II. Co-Investment Investment Process

Staff will perform many of the same diligence steps on potential co-investments as currently undertaken with private equity fund commitments. Additionally, staff will evaluate deal and company specific factors. Major evaluation criteria to be considered include, but are not limited to, the following:

Due Diligence Guidelines

- Fit with LACERA' s portfolio
- Fit with the general partner's investment strengths
- Reasonableness of valuation and proposed deal structure and terms
- Analysis of the general market environment
- Analysis of the investment merits and concerns
- Compliance with all regulatory and legal requirements
- Reference checks on the company management and the general partner investment principals
- ESG considerations, and
- Third-party documentation that confirms LACERA's due diligence process was followed in a satisfactory manner (currently being discussed with Morgan Stanley)

Monitoring Policy

Staff shall promptly notify the Board in writing of any CIO-approved co-investments. Post-investment, staff will monitor the status of the co-investments in tandem with LACERA's private equity fund investments. Additionally, staff will provide updates to the BOI annually, or as appropriate, with regard to the in-house co-investment program's performance and progress.

LACERA's Private Equity Co-Investment Program

Co-investments are an effective tool in the management of institutional private equity investment programs. In a single company co-investment, a limited partner invests in an operating company alongside a private equity lead manager. The lead manager is generally responsible for managing the portfolio company and may offer co-investment opportunities for a number of reasons—to bridge a funding gap, to reduce a fund's exposure to a large investment, to bring additional skills and resources to an investment or to incite more investor interest in a new fund. ~~Likewise, a~~ An attractive co-investment also provides numerous benefits to a limited partner, such as:

- Potential to earn outsized returns relative to a fund investment
- Reduction or elimination of fees
- Greater control over capital deployment pacing
- Ability to minimize the “j-curve” due to shorter hold period and less or no fees
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The popularity of co-investments will continue to increase significantly in the years to come due to the meaningful benefits co-investments provide for both private equity managers and their limited partners.

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Transaction Parameters

- **Sourcing** — includes co-investment opportunities: a) offered by Board-approved managers so long as the manager is currently managing capital on behalf of LACERA; and (b) alongside managers that a Board-approved discretionary private equity manager (e.g., JPMorgan, Pathway) has approved for investment for LACERA
- ~~1. from BOI-approved funds where LACERA is an existing limited partner (including those funds approved by the CIO through LACERA's private equity fund re-up procedure);~~
- ~~2.~~ ■ **Investment size** – not to exceed \$40 million in a single opportunity
- ~~3.~~ ■ **Geography** – companies headquartered in the United States (international co-investments are currently outsourced to Morgan Stanley)
- ~~1.~~ ■ **Deal types** – buyout and growth capital transactions¹
- —

¹ Buyouts involve the purchase of a controlling share in a company. Growth capital is usually defined as a minority investment, in relatively mature companies that are typically looking for capital to expand or restructure operations, enter new markets, or finance acquisitions.

- **Annual capital deployment** – up to \$100 million in calendar year 2019 and up to \$150 million in calendar year 2020

II. Co-Investment Investment Process

Staff will perform many of the same diligence steps on potential co-investments as currently undertaken with private equity fund commitments. Additionally, staff will evaluate deal and company specific factors. Major evaluation criteria to be considered include, but are not limited to, the following:

Due Diligence Guidelines

- Fit with LACERA's portfolio
- Fit with the general partner's investment strengths
- Reasonableness of valuation and proposed deal structure and terms
- Analysis of the general market environment
- Analysis of the investment merits and concerns
- Compliance with all regulatory and legal requirements
- Reference checks on the company management and the general partner investment principals
- ESG considerations, and
- Third-party documentation that confirms LACERA's due diligence process was followed in a satisfactory manner (currently being discussed with Morgan Stanley)

Monitoring Policy

Staff shall promptly notify the Board in writing of any CIO-approved co-investments. Post-investment, staff will monitor the status of the co-investments in tandem with LACERA's private equity fund investments. Additionally, staff will provide updates to the BOI annually, or as appropriate, with regard to the in-house co-investment program's performance and progress.

November 22, 2019

TO: Each Member
Board of Investments

FROM: Equity: Public/Private Committee

Ted Wright 
Principal Investment Officer

Ron Senkandwa 
Senior Investment Analyst

FOR: December 11, 2019 Board of Investments Meeting

SUBJECT: **GLOBAL EQUITY IMPLEMENTATION UPDATE**

RECOMMENDATION

Approve the following changes to the Global Equity portfolio structure:

1. Revise LACERA's Global Equity benchmark from the 80% MSCI ACWI IMI Index¹ + 20% MSCI World-ex US IMI Index² Currency Hedged to the MSCI ACWI IMI Index effective July 1, 2019.
2. Establish market capitalization and regional bands for the Global Equity portfolio relative to the MSCI ACWI IMI Index as follows:
 - a. Maintain market capitalization exposure of +/- 5 percentage points relative to MSCI ACWI IMI Index for each of the following market capitalization categories: small, mid, and large cap stocks.
 - b. Maintain U.S. Market, Non-U.S. Developed Markets, and Emerging Markets weights of +/- 5 percentage points relative to the MSCI ACWI IMI Index.

BACKGROUND

On November 20, 2019, the Equity: Public/Private Committee (“Committee”) unanimously recommended the proposed changes to LACERA’s Global Equity structure to the Board of Investments (“Board”) for approval. One reason for the proposed changes is to reduce the Global Equity portfolio’s tracking error to its policy benchmark and to provide the Board with a more accurate representation of the portfolio’s performance and risk exposures. Another important

¹ Morgan Stanley Capital International All Country World Investable Market Index.

² Morgan Stanley Capital International World-ex USA Investable Market Index.

reason is to enhance risk management of the Global Equity portfolio, thereby mitigating unintended exposures. The proposed changes are consistent with staff's goal of streamlining the management of the Global Equity portfolio.

Attached are materials presented to the Committee including a concurrence memo from the Board's general consultant, Meketa Investment Group ("Meketa").

OPTIONS AVAILABLE TO THE BOARD

The Board may wish to approve, modify, or reject the recommendations.

DELIBERATIONS AND OPINIONS EXPRESSED BY THE COMMITTEE

Committee members asked the following questions on November 20, 2019:

1. A committee member asked why the issue with using the currency-hedged blended benchmark as opposed to the unhedged MSCI ACWI IMI Index was not identified when the benchmark was assigned or during strategic asset allocation review.
 - Meketa responded that when assigning the Global Equity benchmark they looked at longer time periods where the differences between the 80/20 Custom Index and the MSCI ACWI IMI index were immaterial. Meketa noted that during the shorter time periods the differences between these two benchmarks can be significant, hence the recommendation to correct the benchmark now.
2. A committee member asked how long it would take to complete the Global Equity structure implementation.
 - Staff responded that there were multiple moving parts associated with the implementation. The consolidation of the current passive index strategies into one MSCI ACWI IMI Index separate account is expected to begin in early December 2019. The completion of the equity factor-based manager search would follow shortly thereafter at which time staff expects to recommend additional manager rebalancing. Finally, consistent with the future initiatives outlined in the 2019 structure review, staff would anticipate initiating a global equity emerging manager search upon the Board's approval of a new Emerging Manager Policy.

RISKS OF ACTION AND INACTION

The Board's approval of the recommendations would enable staff to accurately assess the portfolio's performance and risk exposures and to help mitigate unintended risks.

If the Board does not approve the recommendations, the continued evaluation of the Global Equity portfolio versus the 80/20 Custom index could result in large performance deviations from the

Each Member, Board of Investments

November 22, 2019

Page 3 of 3

benchmark and the unconstrained market capitalization and regional allocations could lead to unintended risk exposures and higher than expected tracking error relative to the index.

CONCLUSION

The Committee supports advancing the aforementioned recommendations to the Board of Investments for its approval. The proposed changes are intended to improve oversight of the Global Equity portfolio and to enhance risk management.

Attachment

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

TW:rs



November 12, 2019

TO: Each Member
Equity: Public/Private Committee

FROM: Ted Wright, CFA, FRM, PRM, CAIA 
Principal Investment Officer

Ron Senkandwa 
Senior Investment Analyst

FOR: November 20, 2019 Equity: Public/Private Committee Meeting

SUBJECT: **GLOBAL EQUITY IMPLEMENTATION UPDATE**

RECOMMENDATION

That the Committee advance the following recommendation to the Board of Investments (“Board”) for approval:

1. Revise LACERA's Global Equity benchmark from the 80% MSCI ACWI IMI Index¹ + 20% MSCI World-ex US IMI Index² Currency Hedged, to the MSCI ACWI IMI Index effective July 1, 2019.
2. Establish market capitalization and regional bands for the Global Equity portfolio relative to the MSCI ACWI IMI Index as follows:
 - a. Maintain market capitalization exposure of +/- 5 percentage points relative to MSCI ACWI IMI Index for each of the following market capitalization categories: small, mid, and large cap stocks.
 - b. Maintain U.S. Market, Non-U.S. Developed Markets, and Emerging Markets weights of +/- 5 percentage points relative to the MSCI ACWI IMI Index.

EXECUTIVE SUMMARY

With the goal of improving the management of the global equity portfolio, the Board’s general consultant, Meketa Investment Group (“Meketa”), and staff, conducted a comprehensive review of the drivers of risk and return for the portfolio. A combination of returns-based (ex-post, or backward-looking) and holdings-based (ex-ante, or forward-looking) analyses yielded the following findings: 1) a mismatch exists between LACERA’s current custom index and the MSCI ACWI IMI Index, and 2) the portfolio’s unconstrained overweight to small cap stocks has been pronounced in the current period as a result of the underperformance of small cap stocks relative to large cap stocks. Results from these analyses lead staff to propose the following

¹ Morgan Stanley Capital International All Country World Investable Market Index

² Morgan Stanley Capital International World-ex USA Investable Market Index

recommendation to the Committee to advance to the Board: 1) revise LACERA's Global Equity benchmark from its current 80% MSCI ACWI IMI Index + 20% MSCI World-ex US IMI Index Currency Hedged to the (unhedged) MSCI ACWI IMI Index, and 2) establish market capitalization and regional bands for the Global Equity portfolio relative to the MSCI ACWI IMI Index as follows: a) maintain market capitalization exposure of +/- 5 percentage points relative to MSCI ACWI IMI Index for each of the following market capitalization categories: small, mid and large cap³ stocks, and b) maintain U.S. Market, Non-U.S. Developed Markets, and Emerging Markets weights of +/- 5 percentage points relative to the MSCI ACWI IMI Index. Staff has slowed the Global Equity's factor-based manager search until after the Committee and Board has had time to complete their review of this Global Equity implementation update.

Meketa concurs with staff's recommendation. Their supporting memorandum is included as **Attachment A**.

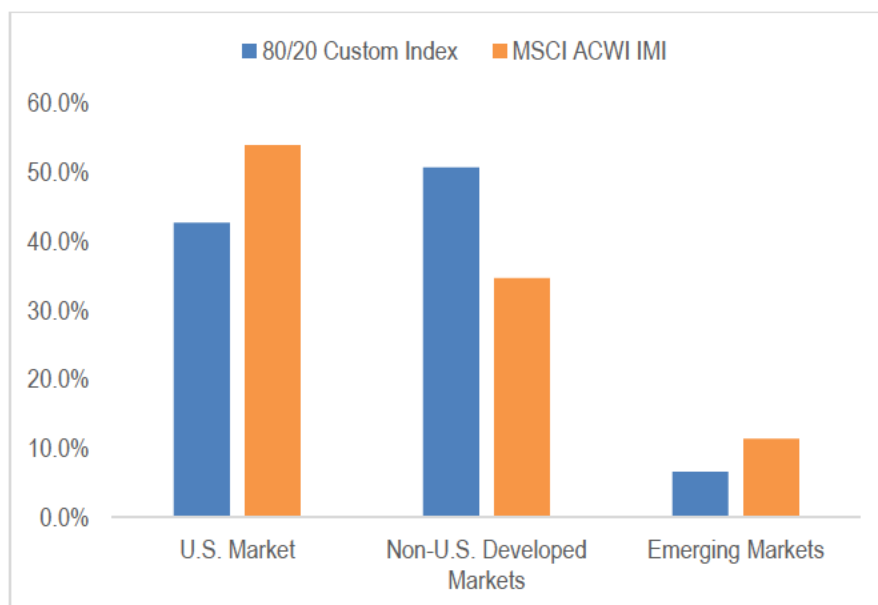
ANALYSIS

The summary findings of a returns analysis showed a material difference in returns between the new benchmark and the MSCI ACWI IMI index. The difference is primarily due to the new benchmark hedged returns versus unhedged performance of the MSCI ACWI IMI index. Additionally, the small cap overweight disproportionately contributed to the Global Equity performance. LACERA's Global Equity portfolio's current benchmark is a blend consisting of 80% MSCI ACWI IMI Index and 20% MSCI World-ex US IMI Index which is 100% hedged. The blended index incorporates a passive currency hedge on the Non-U.S. developed markets segment of the index in an effort to mitigate foreign exchange risks for Non-U.S. dollar denominated investments and reduce volatility resulting from those foreign currencies, while maintaining broad global equity market beta and risk exposures as measured by the MSCI ACWI IMI Index.

While LACERA's currency hedge overlay program has been additive to the portfolio and has generated \$954.4 million in cash inflows since the program's inception (August 2010) through October 31, 2019, the program is managed non-tactically and is implemented passively. The performance of the currency hedge program is expected to be neutral to portfolio relative returns and accordingly, it is not considered by the global equity team in the portfolio construction process.

³ Currently LACERA is underweight large cap stocks by more than 5 percentage points. This will be remedied with the implementation of factor strategy.

CHART 1
Regional Allocation
(Period ended June 30, 2019)



Source: Meketa Investment Group

CHART 1 displays the regional allocation between LACERA’s 80/20 Custom Index versus the MSCI ACWI IMI Index as of June 30, 2019.

Both the returns and the holdings analysis revealed that a mismatch existed between risk exposures of the new benchmark “80/20 Custom Index” and those of the Global Equity portfolio. The 80/20 Custom Index was proposed with the intent to fully capture the hedging aspect of the currency hedge program. However, once constructed, the benchmark’s regional allocations were substantially different from those of the MSCI ACWI IMI index. As seen in **Chart 1** above, the 80/20 Custom Index has a sizeable overweight to Non-U.S. developed markets and is materially underweight the U.S. and emerging markets. Analysis showed a structural tracking error of 122 bps between the 80/20 Custom Index and the MSCI ACWI IMI index for the trailing 5 year period ended June 30, 2019, as shown in **Table 1**. The tracking error is a result of the differences in regional allocations and currency performance. To put this in perspective, target tracking error for the portfolio as a whole is 1.0 – 2.5% with almost all of that tracking error intended for active management.

TABLE 1
 Tracking Error
 (Period ended June 30, 2019)

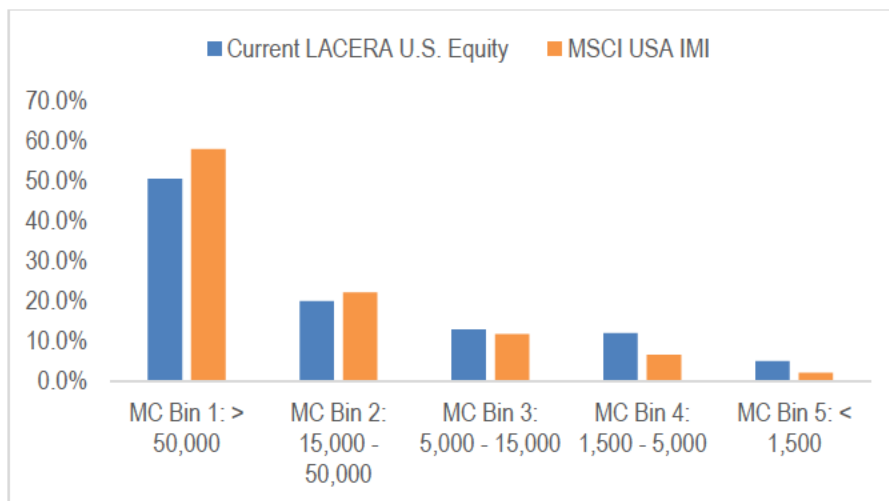
| Tracking Error | LACERA 80/20 Custom Index vs. MSCI ACWI IMI |
|----------------|---|
| 1-Year | 1.01% |
| 3-Year | 1.10% |
| 5-Year | 1.22% |

Source: StyleADVISOR

TABLE 1 above displays the tracking error between LACERA’s 80/20 Custom Index versus the MSCI ACWI IMI Index for the period ended June 30, 2019.

To properly assess the degree of the portfolio’s variability to the pure beta of global equity markets (that is, excluding short-term currency fluctuations), staff recommends that the Global Equity portfolio’s performance be evaluated relative to the unhedged MSCI ACWI IMI Index. Removing the impact of the currency hedge from the Global Equity benchmark will reduce the portfolio’s tracking error and provide the Board with a more accurate representation of the portfolio’s performance and risk exposures. However, LACERA should maintain the currency overlay program and evaluate its impact at the Total Fund level.

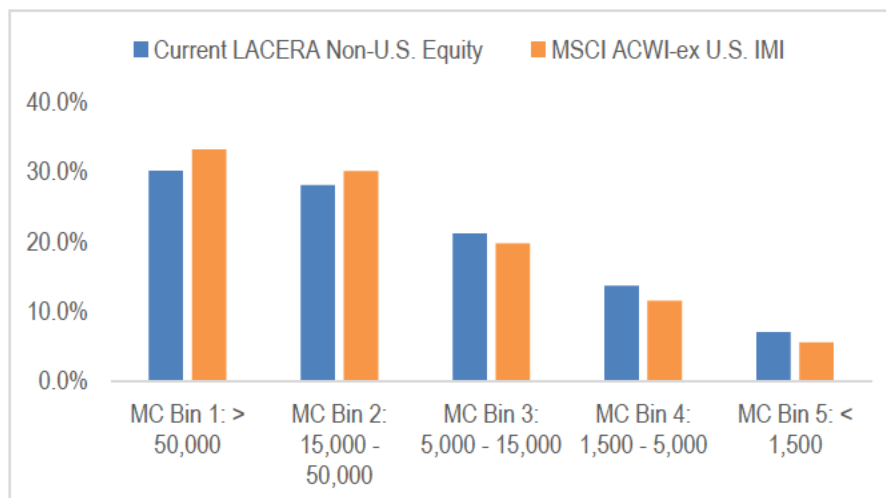
CHART 2
 Market Capitalization (MC) (in Millions (\$))
 (Period ended June 30, 2019)



Source: FactSet

CHART 2 displays LACERA’s U.S. Equity portfolio’s market capitalization versus the MSCI U.S.A. IMI Index as of June 30, 2019.

CHART 3
Market Capitalization (MC) (in Millions (\$))
(Period ended June 30, 2019)



Source: FactSet

CHART 3 displays LACERA's Non-U.S. Equity portfolio's market capitalization versus the MSCI ACWI-ex U.S. IMI Index as of June 30, 2019.

Additionally, staff observed that the portfolio's intended tilt towards the less efficient areas of the equity markets, that is, particularly U.S. small cap stocks, had become more pronounced with the recent rally of large, mega cap stocks. The overweight to small capitalization stocks is due to an effort to capture incremental alpha through active management. As illustrated in **Chart 2** and **Chart 3** above, both the U.S. equity and Non-U.S. equity portfolios are underweight the larger market cap stocks while overweight the smaller cap stocks. The tilt to small caps is consistent with the Global Equity Structure Review presented to the Board in February 2019 (**Attachment B**), and Meketa's review of LACERA's public equity program presented in September 2016 (**Attachment C**), however, the allocation to small caps relative to the benchmark was not sized appropriately within the U.S. To put it in perspective, the U.S. equity portfolio is majority passively managed and the actively managed portfolio is comprised mostly of small cap managers. Conversely, the Non-U.S. actively managed portfolio consists mainly of large cap managers.

The outsized allocation of small caps coupled with the extreme underperformance of U.S. small caps to their large cap counterparts has been the main detractor to relative performance for the past two years. U.S. small caps trailed U.S. large caps by over thirteen percentage points for the fiscal year ended June 30, 2019, the largest underperformance for small caps over the past two decades. For the fiscal year, the LACERA U.S. equity portfolio underperformed its benchmark, the Russell 3000, by 170 bps (net-of-fees) of which 120 bps was attributable to the allocation to small caps. To help mitigate unintended exposures and control portfolio risk relative to its benchmark, staff recommends that the Board establish these market capitalization and regional bands for the Global Equity portfolio relative to the MSCI ACWI IMI Index as follows: a) maintain market capitalization exposure of +/- 5 percentage points relative to MSCI ACWI IMI Index for each of the following market capitalization categories: small, mid, and large cap stocks, and b) maintain U.S. Market, Non-U.S. Developed Markets, and Emerging Markets weights of +/- 5 percentage

points relative to the MSCI ACWI IMI Index. Establishing bands will help to mitigate risk and to construct a more intentional portfolio.

Lastly, as part of the Global Equity Structure Review, staff indicated that they would bring additional recommendations to the Board in the future. The recommendations would be used to streamline the portfolio's manager line-up in order to fund the equity factor-based strategies whose minimum qualifications were approved in April 2019. As previously mentioned, the factor-based RFP manager search has been slowed and no prospective manager(s) have been identified yet; however, staff would anticipate further manager realignment if a factor manager(s) is approved and funded. In the structure review, the Board also approved the consolidation of the individual U.S. and Non-U.S. passive indexes into a single passive global MSCI ACWI IMI index manager. Staff anticipates using the transition to continue to streamline the portfolio and bring risk exposures in line with the MSCI ACWI IMI index.

CONCLUSION

Meketa and staff conducted a comprehensive review of the drivers of risk and return for LACERA's Global Equity portfolio. A summary of findings included the following: 1) a mismatch exists between LACERA's 80/20 Custom index and the MSCI ACWI IMI Index, and 2) the overweight to small caps disproportionately contributed to the risk of the portfolio. Accordingly, staff's recommendations below are intended to address the aforementioned findings and are in line with staff's goal for improving the management of the Global Equity portfolio.

1. Revise LACERA's Global Equity benchmark from the 80% MSCI ACWI IMI Index + 20% MSCI World-ex US IMI Index Currency Hedged, to the MSCI ACWI IMI Index effective July 1, 2019.
2. Establish market capitalization and regional bands for the Global Equity portfolio relative to the MSCI ACWI IMI Index as follows:
 - a. Maintain market capitalization exposure of +/- 5 percentage points relative to MSCI ACWI IMI Index for each of the following market capitalization categories: small, mid, and large cap stocks.
 - b. Maintain U.S. Market, Non-U.S. Developed Markets, and Emerging Markets weights of +/- 5 percentage points relative to the MSCI ACWI IMI Index.

Attachments

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

MEMORANDUM

To: LACERA Board of Investments

From: Stephen McCourt, Leandro Festino, Tim Filla
Meketa Investment Group

Date: November 20, 2019

Re: Global Public Equity Structure Review

BACKGROUND

In May 2018, the Board of Investments (“Board”) approved a new strategic asset allocation, which added a functional overlay to LACERA’s asset allocation and incorporated some new asset classes. Following the approval of the strategic asset allocation, Meketa recommended new benchmarks for each of the functional categories as well as the underlying asset classes. Those benchmarks recommendations reflected the first phase of implementing the new strategic asset allocation and the modelling assumptions that were used to arrive at the Total Fund expected return and risk metrics. The BOI approved the benchmarks in September of 2018. In January of 2019, staff presented a corresponding Global Public Equity Structure Review. The structure review provided a detailed implementation plan for moving to a global approach and moving to the new asset allocation targets. Over the course of the past several months, LACERA has been transitioning the global equity portfolio in accordance with the structure review. Meketa and staff have been working closely on reviewing the implementation process and planning for anticipated actions such as utilizing factor-base strategies for a portion of the global equity portfolio. As part of that dialogue, Meketa and staff have identified some areas for improvement, more specifically, to better align portfolio and risk management practices with performance measurement.

IMPLEMENTATION UPDATE

The strategic asset allocation and Global Equity Structure Review have led to significant changes to LACERA’s equity portfolio over the past year. Meketa and staff regularly review LACERA’s portfolio, and in that review process two areas for improvement recently emerged. The first relates to LACERA’s current Global Equity benchmark, and the second involves establishing specific exposure guidelines to ensure intentionality with LACERA’s Global Equity portfolio.

As part of the transition from a geographic to a global approach, LACERA moved to a new Global Equity benchmark (“hedged benchmark”) in April of 2019, which is meant to reflect both the Global Equity investment universe as defined by the MSCI ACWI IMI Index and LACERA’s 50% passive currency hedge on developed market equities. The hedged benchmark currently has notably different geographic exposures compared to the MSCI ACWI IMI Index, as shown in Chart 1 of staff’s memo. Furthermore, those exposures have the potential to fluctuate over time based on future currency movements and variations in performance between geographic equity markets. Over long periods of time, the exposure and performance differences between the MSCI ACWI IMI benchmark and the partial currency hedged benchmark should even out, but during shorter time periods there is a high probability of significant tracking error.

LACERA’s tracking error targets were established to guide use of active strategies in the portfolio, which have the potential to add alpha over time. To maximize the value of tracking error within the portfolio, Meketa believes that tracking error related to passive strategy implementation should be reduced as much as possible.

On multiple occasions (Equity Review, Equity Emerging Manager Review), Meketa has highlighted that large cap equities are a very efficient segment of the market and that large cap focused active managers have consistently struggled to produce alpha. LACERA’s recent active manager search activity has been focused on identifying promising managers, which are focused on less efficient area of the market, such as small cap (QMA, Systematic, Corner Cap, Matarin, and Global Alpha). Over long periods of time, small capitalization as a factor has had strong performance when compared to the broader market. However, over the fairly recent past, small capitalization stocks have underperformed rather dramatically, especially in the US. For Fiscal Year 2019 alone, the Russell 2000 Index (-3.4%) underperformed the S&P 500 Index (+10.5%) by nearly 14%. One consequence of the combination of LACERA’s recent search activity and the dramatic underperformance is the emergence of an overweight exposure to US small capitalization stocks within LACERA’s portfolio as shown in Chart 2 of staff’s memo. Over Fiscal Year 2019, LACERA’s overweight to small capitalization stocks resulted in 120 basis points of underperformance compared to the US Equity benchmark, which represents 70% of the total underperformance of LACERA’s US Equity portfolio during the fiscal year. Meketa believes it is prudent to monitor and manage this exposure and is therefore supportive of staff’s recommendation to utilize exposure bands.

The other area where Meketa believes a similar practice is prudent is in regards to geographic exposures. LACERA has made an intentional decision to utilize a global equity approach and, as such, LACERA's portfolio should reflect similar exposures to those of the MSCI ACWI IMI Index. In addition to the current monitoring practices of LACERA staff, Meketa believes incorporating formal exposure guidelines by geography is prudent.

RECOMMENDATION AND FUTURE CONSIDERATIONS

Meketa recommends that LACERA change the Global Equity benchmark to the ACWI IMI Index. The portion of the current benchmark that is meant to reflect the 50% developed market currency hedge creates a mismatch between how risk and exposure are monitored and managed by LACERA. Meketa recommends incorporating the currency hedge at the Total Fund level, as that is consistent with the modelling used during the strategic asset allocation.

Meketa also concurs with staff regarding utilizing exposure limits on market capitalization weights and geographic exposures. This will provide a framework for monitoring and managing risk across different dimensions of the Global Equity portfolio. Managing these specific exposure limits will become increasingly important as LACERA contemplates incorporating factor-based strategies into the portfolio.

As a future consideration, Meketa recommends reviewing the size and geographic exposure limits at the next structure review and also evaluating adding additional factor exposure limits as both the portfolio and LACERA's risk management capabilities evolve over time.

We look forward to discussing this matter with you at the November 20th meeting.

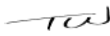
SM/LF/TF/srt



February 4, 2019

TO: Each Member
Board of Investments

FROM: Equity: Public/Private Committee: (as of 1/9/2019)
Herman Santos, Chair
Wayne Moore, Vice Chair
Shawn Kehoe
Gina Sanchez
David Green, Alternate

Ted Wright 
Principal Investment Officer

Dale Johnson 
Investment Officer

Brenda Cullen 
Investment Officer

FOR: February 13, 2019 Board of Investments Meeting

SUBJECT: **GLOBAL EQUITY STRUCTURE REVIEW**

RECOMMENDATION

Approve the following changes to the Global Equity portfolio structure:

1. Combine oversight of U.S. and Non-U.S. Public Equity Composites,
2. Consolidate U.S. and Non-U.S. passive index strategies into MSCI ACWI IMI Index separate account,
3. Approve an RFP for MSCI ACWI IMI Index separate account manager,
4. Lower the Global Equity Composite tracking error to 1.0% to 2.5% on a rolling 7-year basis,
5. Approve risk spectrum allocation groupings and ranges, and
6. Develop an RFP and establish minimum qualifications for external Factor Strategy separate account manager(s)

BACKGROUND

On January 9, 2019, the Equity: Public/Private Committee (“Committee”) unanimously recommended the proposed changes to LACERA’s Global Equity structure to the Board of Investments (“Board”) for approval with one modification (discussed below). The primary purpose of the proposed changes is to better align the existing U.S. and Non-U.S. public equity composites with the MSCI ACWI IMI blended benchmark approved by the Board in September while allowing the potential for excess returns. A simplified structure, a long-term-oriented factor sleeve, and future manager realignment/consolidation should allow risk to be allocated with a higher degree of intention.

Attached are staff’s original memo and presentation to the Committee and the memo from the Board’s general consultant, Meketa Investment Group (“Meketa”), who is in support of staff’s recommendations (**Attachments**).

OPTIONS AVAILABLE TO THE BOARD

The Board may wish to approve, modify, or reject the recommendations.

DELIBERATIONS AND OPINIONS EXPRESSED BY THE COMMITTEE

The Committee expressed concerns about issuing “invitation-only” RFPs, specifically in this case with respect to the MSCI ACWI IMI Index and factor strategy searches. The Committee expressed strong conviction that the RFP process be open in the event that there may be candidates who are able to satisfy a search’s minimum qualifications but whom are unknown to staff members.

- The Committee expressed that it is comfortable with the moderately longer time frame that an open search would entail and directed staff to remove the words “invitation-only” from its memo and its accompanying presentation.

With this modification, the Committee moved to recommend the proposed changes to LACERA’s Global Equity Structure Review to the Board for approval.

RISKS OF ACTION AND INACTION

The Board’s approval of the recommendations should allow for the more efficient and intentional positioning of the portfolio required to fulfill its primary objective of providing global equity market exposure while allowing the potential for excess returns.

If the Board does not approve the recommendations, the continued separation the U.S. and Non-U.S. Composites could result in a deviation from the portfolio’s Policy benchmark and lead to return dispersion.

Each Member, Board of Investments

February 4, 2019

Page 3 of 3

CONCLUSION

The Committee supports advancing the aforementioned recommendations to the Board of Investments for its approval. The proposed changes are intended to ensure a more efficient and intentional implementation of the asset class's Policy objective.

Attachments

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

December 20, 2018

ATTACHMENTS

TO: Each Member
Equity: Public/Private Committee

FROM: Ted Wright 
Principal Investment Officer

Dale Johnson 
Investment Officer

Brenda Cullen 
Investment Officer

FOR: January 9, 2019 Equity: Public/Private Committee Meeting

SUBJECT: **GLOBAL EQUITY STRUCTURE REVIEW**

RECOMMENDATION

That the Committee recommend the proposals in the accompanying Global Equity Structure Review to the Board of Investments for approval.

EXECUTIVE SUMMARY

The Equity team presents its Global Equity Structure Review (**Attachment A**) for review by LACERA's Equity: Public/Private Committee ("Committee") and, ultimately, for advancement to LACERA's Board of Investments ("Board") for approval. Meketa Investment Group ("Meketa"), the plan's general consultant, has reviewed the attached document and concurs with staff's recommendations (**Attachment B**).

The purpose of this structure review is to establish the framework to optimize and rebalance LACERA's Global Equity portfolio for the 2019-2020 calendar years. The primary purpose of the proposed changes to the portfolio's structure is to align the existing U.S. and Non-U.S. public equity composites with the MSCI ACWI IMI blended benchmark approved by the Board in September while, at the same time, ensuring appropriate diversification. The proposed portfolio structure is further informed by themes that have shown persistence in public equity markets, such as the variability of market efficiency across capitalizations and geographies as well as the identification of equity risk factors that can offer superior risk-adjusted performance when combined. Upcoming initiatives are also discussed.

In optimizing the public equity portfolio with its new global benchmark, staff proposes that the existing U.S. and Non-U.S. equity composites be combined into a single, global composite for

oversight purposes. Consistent with the role of Global Equity within the aggregate pension plan (“Plan” or “Fund”), the team recommends that the global equity composite’s tracking error range be lowered to 100-250 basis points over rolling seven-year periods to ensure that the portfolio is primarily a provider of equity market beta (or exposure) per the Fund’s Investment Policy Statement. It is further recommended that the portfolio’s tactical categories be revised to passive, factor-based, and active, with the aggregate allocation viewed through a global, rather than U.S./Non-U.S. lens. Reorganizing the portfolio into this structure allows risk to be allocated with a higher degree of intention and strategy. To this end, the team recommends that the largest portion of the portfolio (60% target weight) be allocated to passive index strategies that replicate the portfolio’s global benchmark and minimize tracking error, while a smaller portion (25% target weight) be allocated to active strategies which offer the potential for excess return. A 15% target allocation to low-cost factor strategies, which focus on persistent, uncorrelated risk factors, should supply modest incremental upside in the long-term with low relative volatility.

In an effort to further simplify the portfolio’s structure, the team recommends that the category’s existing passive index strategies be combined into a single MSCI ACWI IMI Index separate account. The consolidated structure that results would be a closer approximation of the composite’s benchmark, simplifying portfolio management and reducing unintended exposures. A larger allocation to a single passive strategy should also result in a reduction in fees. To this end, the team is recommending that the Committee make a recommendation to the Board to approve an invitation-only Request for Proposal (“RFP”) to procure an institutional quality MSCI ACWI IMI Index manager capable of providing low-cost services using separate account structures. A request for the Committee to recommend minimum qualifications for the search for Board approval appears as a separate agenda item.

Lastly, the team recommends that one current Non-U.S. active manager be terminated due to the retirement of the sole portfolio manager on LACERA’s account. This account will be transitioned to cash by LACERA’s transition manager and the proceeds will be redeployed to other asset categories to further the implementation of the Fund’s recently approved asset allocation. The team expects additional realignment of public equity’s active portfolio to take place to fund factor strategies should those manager(s) be hired.

Consistent with the value that LACERA places on diversity and in line with its belief that emerging managers have the potential to provide outsized excess returns, the team anticipates a second search for institutional-quality emerging managers capable of managing direct mandates to be initiated in the second half of 2019. Staff will return to the Committee for its recommendation to the Board of a broad-based RFP with updated minimum qualifications.

CONCLUSION

Combining both the oversight and passive strategies of the current U.S. and Non-U.S. equity composites will result in simplified portfolio management, lower tracking error, and fewer unintended exposures. A large strategic allocation to an MSCI ACWI IMI Index passive strategy and additional, smaller allotments to factor and active strategies can provide the public equity portfolio with general equity market exposure while, at the same time, offer the potential for excess

Equity: Public/Private Committee

December 20, 2018

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returns. Future actions such as manager realignment and the addition of emerging managers should further enhance intentionality and the potential for excess returns.

Attachments

Noted and reviewed:



Jonathan Grabel

Chief Investment Officer

TW:DJ:BCC:cl

ATTACHMENT A

Global Public Equity Structure Review

Equity: Public/Private Committee

January 9, 2019

Ted Wright, CFA, FRM, PRM, CAIA – Principal Investment Officer

Dale Johnson – Investment Officer

Brenda Cullen – Investment Officer



LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

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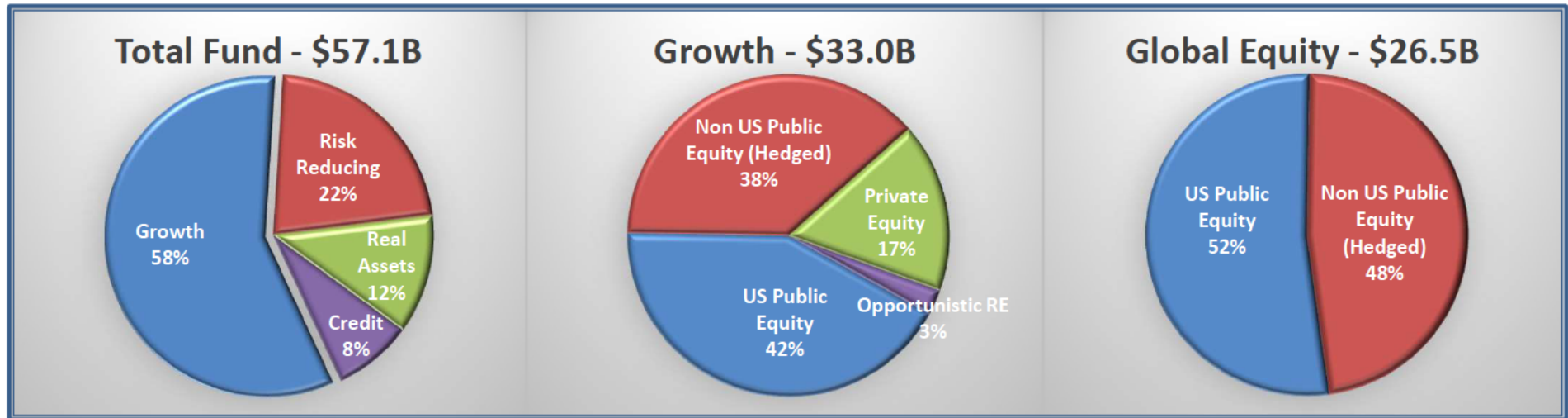
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- I. Role of Global Public Equity
- II. Portfolio Structure
- III. Performance
- IV. Market Environment
- V. Investment Themes
- VI. Proposed Structure Changes
- VII. Initiatives
- VIII. Project Timeline
- IX. Advance to Board

Appendices



Role of Global Public Equity



- Growth investments are the primary driver of long-term total Fund returns.
- Within the Growth category, Public Equity is primarily expected to provide global market beta exposure with alpha (excess returns) as a secondary consideration.
- The target return for Public Equity is 20 basis points over the 80% MSCI ACWI IMI Index¹ + 20% MSCI World IMI Index² 50% Hedged, net of all fees.

Data as of September 30, 2018

¹ Morgan Stanley Capital International All Country World Investable Market Index

² Morgan Stanley Capital International World Investable Market Index



Current Portfolio Structure – U.S. Equity Composite

Key Fundamental Characteristics

As of November 30, 2018

| | LACERA | Russell 3000 |
|---------------------------|--------|--------------|
| Price/Earnings Ratio | 18.4x | 18.4x |
| Price/Book Ratio | 2.6x | 2.6x |
| Long-term Earnings Growth | 13.9% | 13.3% |
| Dividend Yield | 1.7% | 1.8% |

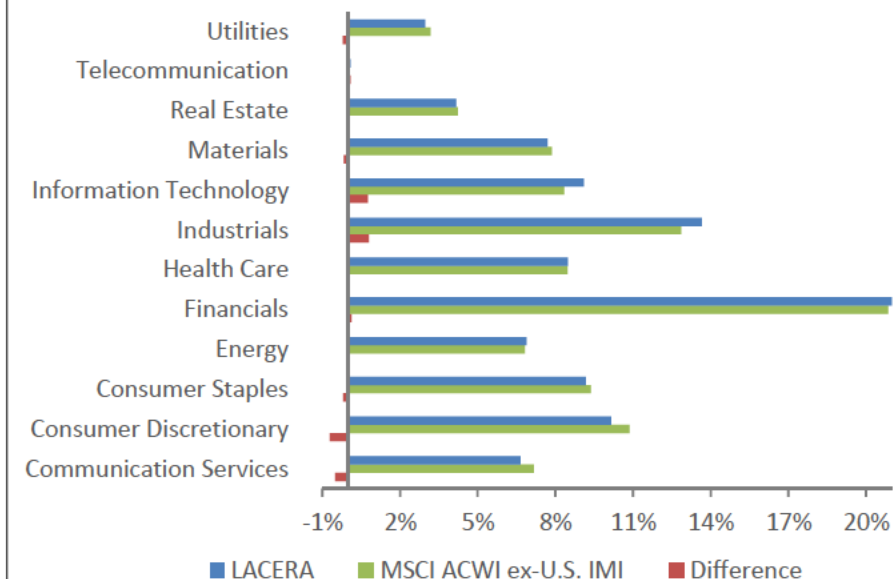
Risk Categories and Strategic Allocation Ranges

As of November 30, 2018

| Category | Expected Tracking Error (basis points) | Strategic Allocation Range | Actual Allocation | Within Range |
|------------------------|--|----------------------------|-------------------|--------------|
| Passive | 0-10 bps | 35-75% | 75.8% | No |
| Low | <300 bps | 0-25% | 10.8 | Yes |
| Moderate/High (Active) | >300 bps | 10-30% | 13.4 | Yes |

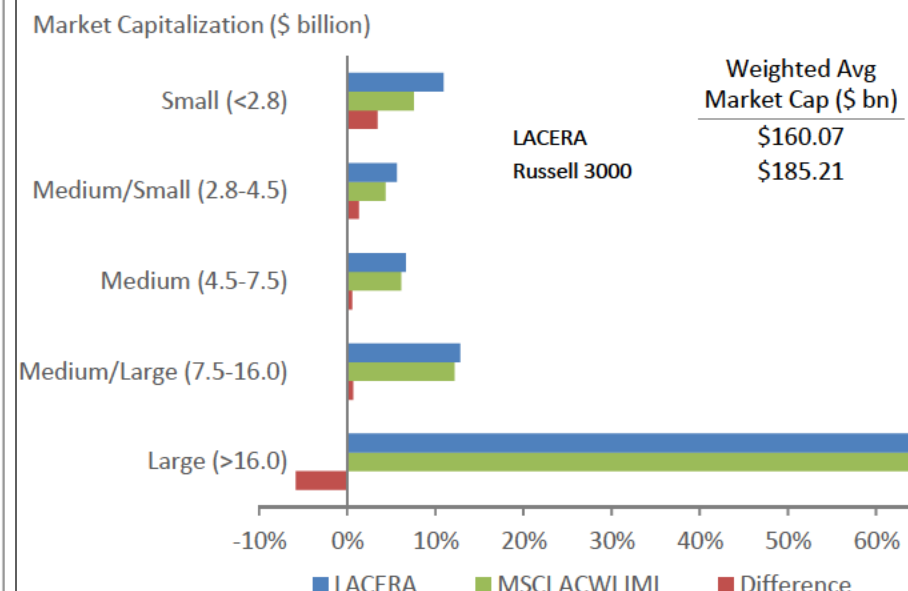
Sector Exposures

As of November 30, 2018



Market Capitalization Profile

As of November 30, 2018



U.S. Portfolio Investment Commentary:

- Fundamental and sector exposures largely inline with Russell 3000 Index
- Passive exposure slightly above target range of legacy Investment Policy Statement



Current Portfolio Structure – Non-U.S. Equity Composite

Key Fundamental Characteristics

As of November 30, 2018

| | LACERA | MSCI ACWI ex-U.S. IMI |
|---------------------------|--------|-----------------------|
| Price/Earnings Ratio | 12.2x | 12.5x |
| Price/Book Ratio | 1.6x | 1.7x |
| Long-term Earnings Growth | 10.9% | 10.5% |
| Dividend Yield | 3.1% | 3.2% |

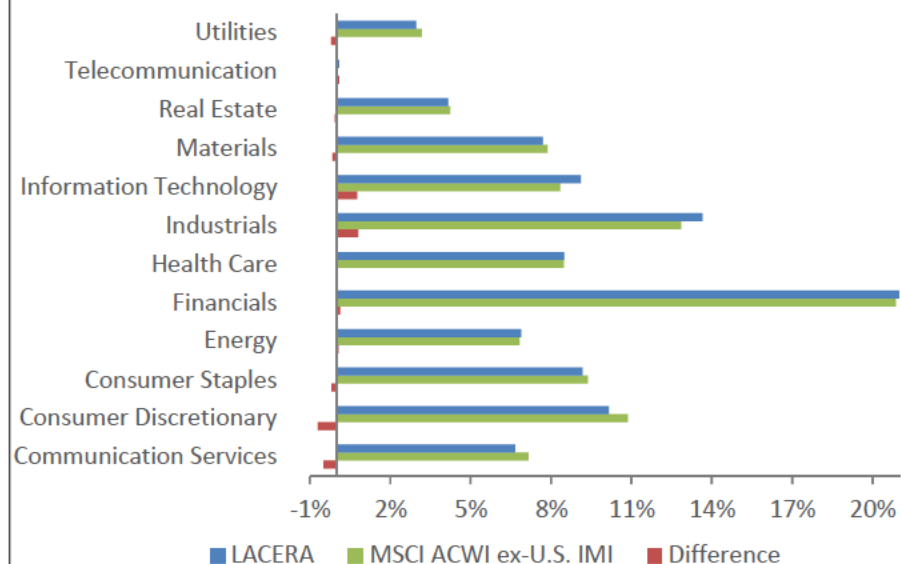
Risk Categories and Strategic Allocation Ranges

As of November 30, 2018

| Category | Strategic Allocation Range | Actual Allocation | Within Range |
|-------------------------|----------------------------|-------------------|--------------|
| Passive | 40-70% | 56.9% | Yes |
| Active Non-U.S. | 0-40% | 11.4 | Yes |
| Active Regional | 0-20% | 18.6 | Yes |
| Active Emerging Markets | 10-30% | 13.1 | Yes |

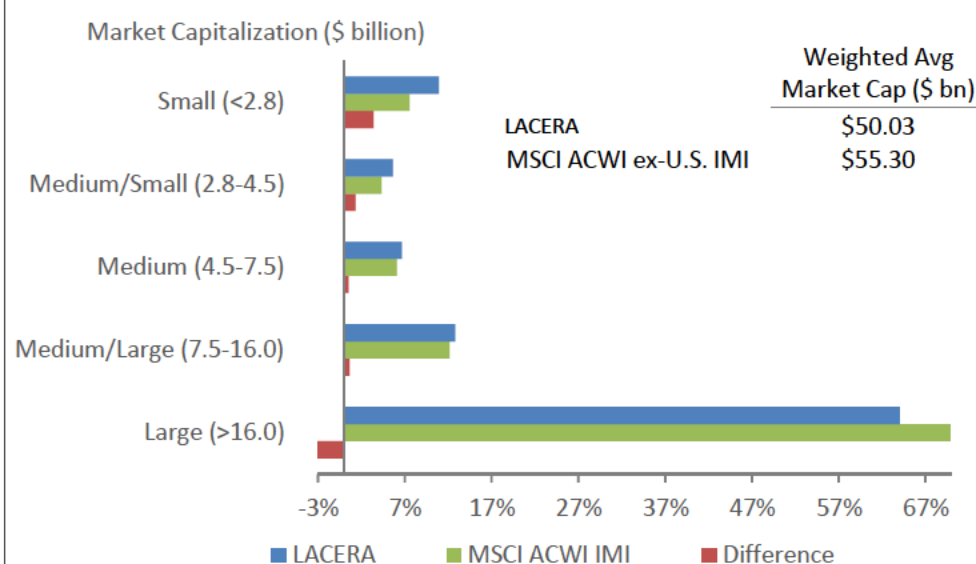
Sector Exposures

As of November 30, 2018



Market Capitalization Profile

As of November 30, 2018



Non-U.S. Portfolio Investment Commentary:

- Fundamental and sector exposures largely in line with MSCI ACWI ex-U.S. IMI Index
- Passive exposures within target ranges of legacy Investment Policy Statement



Current Portfolio Structure – Consolidated Global Composite

Key Fundamental Characteristics

As of November 30, 2018

| | LACERA | MSCI ACWI IMI |
|---------------------------|--------|---------------|
| Price/Earnings Ratio | 16.6x | 16.8x |
| Price/Book Ratio | 1.9x | 1.9x |
| Long-term Earnings Growth | 12.6% | 12.1% |
| Dividend Yield | 2.4% | 2.4% |

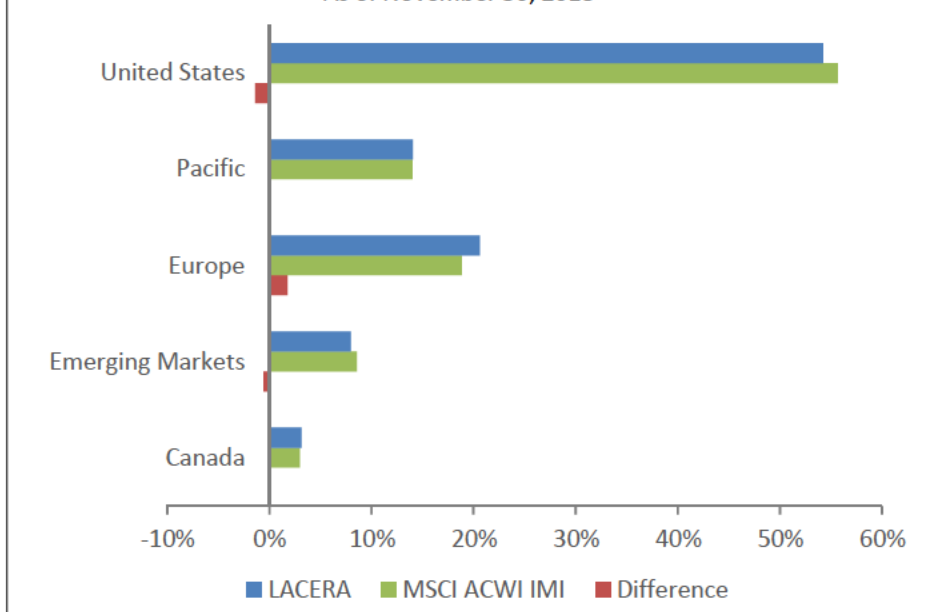
Risk Categories

As of November 30, 2018

| Category | Actual Allocation |
|----------|-------------------|
| Passive | 66.1% |
| Active | 33.9% |

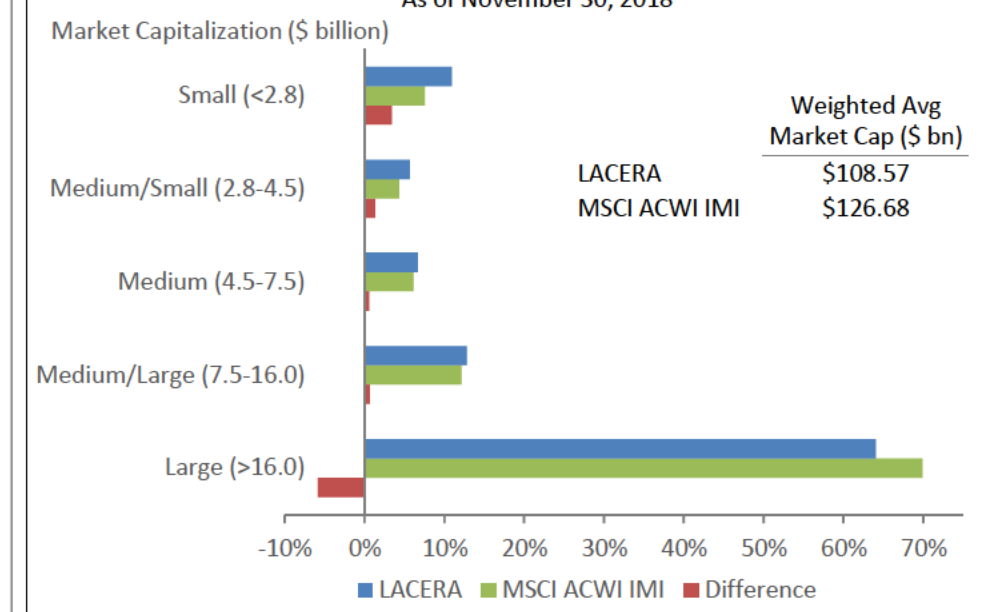
Regional Exposures

As of November 30, 2018



Market Capitalization Profile

As of November 30, 2018



Weighted Avg Market Cap (\$ bn)
 LACERA \$108.57
 MSCI ACWI IMI \$126.68

Global Equity Portfolio Investment Commentary:

- Fundamental and regional exposures are comparable to MSCI ACWI IMI Index as of November 30, 2018

Sources: FactSet, State Street



Composite Performance

U.S. Equity Composite Annualized Performance Periods ended November 30, 2018

| | 1 Year | 3 Years | 5 Years | 10 Years |
|---------------------------------|--------|---------|---------|----------|
| U.S. Equity Composite (Gross) | 4.0% | 11.2% | 10.3% | 14.4% |
| U.S. Equity Composite (Net) | 3.9 | 11.1 | 10.2 | 14.3 |
| Russell 3000 Index | 5.5 | 11.8 | 10.6 | 14.5 |
| <i>Difference (Net – Index)</i> | -1.6 | -0.7 | -0.4 | -0.2 |
| Tracking Error ¹ | | 0.5% | 0.4% | 0.5% |
| Information Ratio ² | | -1.4 | -1.0 | -0.4 |

Source: State Street

Non-U.S. Equity Composite Annualized Performance Periods ended November 30, 2018

| | 1 Year | 3 Years | 5 Years | 10 Years |
|--|--------|---------|---------|----------|
| Non-U.S. Equity Composite Unhedged (Gross) | -7.7% | 6.4% | 2.7% | 8.6% |
| Non-U.S. Equity Composite Unhedged (Net) | -7.9 | 6.1 | 2.5 | 8.4 |
| MSCI ACWI ex-U.S. IMI | -8.5 | 5.5 | 2.0 | 8.1 |
| <i>Difference (Net – Index)</i> | 0.6 | 0.6 | 0.5 | 0.3 |
| Tracking Error ¹ | | 0.5% | 0.5% | 0.5% |
| Information Ratio ² | | 1.2 | 1.0 | 0.6 |

Source: State Street

¹ Tracking error is the standard deviation of the portfolio's excess returns over its benchmark

² Information ratio is the portfolio's excess return over its benchmark divided by its tracking error



Market Environment

Increased Political Risk

- Populism is creating a heightened level of political and economic uncertainty related to trade, economic unions, currencies, and regulatory environments.

Demographic Shifts

- Aging populations in developed markets, surging youth in emerging markets, growing minority populations in the U.S., emerging market middle class growth and consumption, and sustainability.

Technological Advancement

- The convergence of media, technology, and connectivity (combined with big data and artificial intelligence) is in early stages of disrupting many industries.

Market Volatility

- Economic growth is less certain and interest rates are rising. Therefore, approach with caution.

Investment Themes

Market Efficiency

- Large capitalization developed markets are very efficient.
- Small capitalization developed markets and emerging markets are less efficient.

Factor Exposures

- Factors explain majority of outperformance of active managers, net of fees.
- Target factors to extract alpha with lower fees than traditional active managers.

Active Management

- Mainstream managers to invest in small capitalization and emerging markets
- Emerging managers
- Activist managers

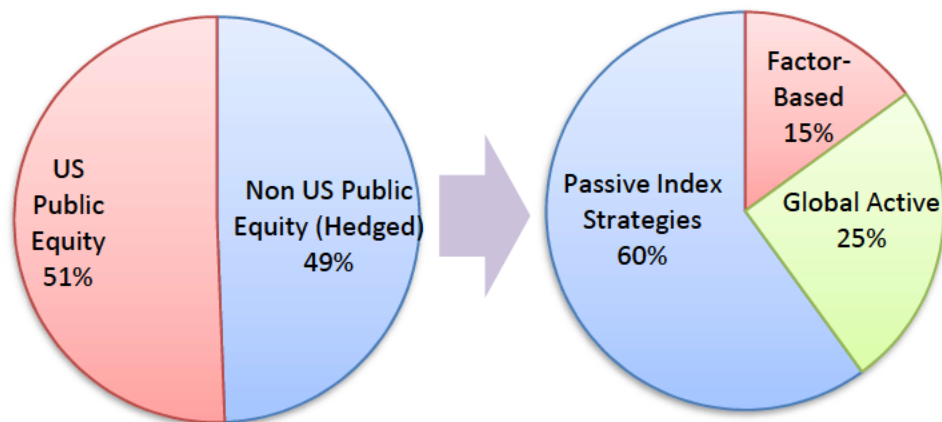
Proposed Structure Changes

1. Transition the U.S. and Non-U.S. Public Equity Composites to a single Global Equity Composite:

- Combine oversight of the U.S. and Non-U.S. Composites
- Consolidate the Russell 3000 Index separate account and Non-U.S. Index commingled funds into a single MSCI ACWI IMI Index separate account
- Issue invitation-only RFP for Global Equity Index separate account manager consistent with new Strategic Asset Allocation

2. Lower composite tracking error target to 1.0% - 2.5% on rolling 7-year basis

3. Revise risk spectrum allocation from previous structure to:



| Strategy Category | Current Allocation | Target Allocation | Target Allocation Range |
|---|--------------------|-------------------|-------------------------|
| Passive (Index) | 66.6% | 60% | 40% - 80% |
| Factor-Based | -- | 15% | 0% - 30% |
| Active (Activist, Emerging Manager, Mainstream) | 33.4% | 25% | 10% - 40% |

Proposed Structure Changes (continued)

4. **Develop invitation-only RFP for the hire of Factor Strategy manager(s)**
5. **Adjust manager allocations to reach target**
 - Note: other actions to be recommended contingent on hiring of factor manager(s)

Initiatives

Cost Savings – Ongoing

- Approximately \$1.9 mm annually¹ through renegotiation of existing contracts
- Potential additional \$14 mm annually² via:
 - Introduction of lower cost factor strategies
 - Consolidation of active managers
- Fee savings are especially important in a largely efficient asset category

RFP for Emerging Managers – 2Q2019

- Determine new Minimum Qualifications

Internal Portfolio Management – 1H2019

- Internal study on feasibility and cost/benefit analysis

Existing Manager Realignment – 2019

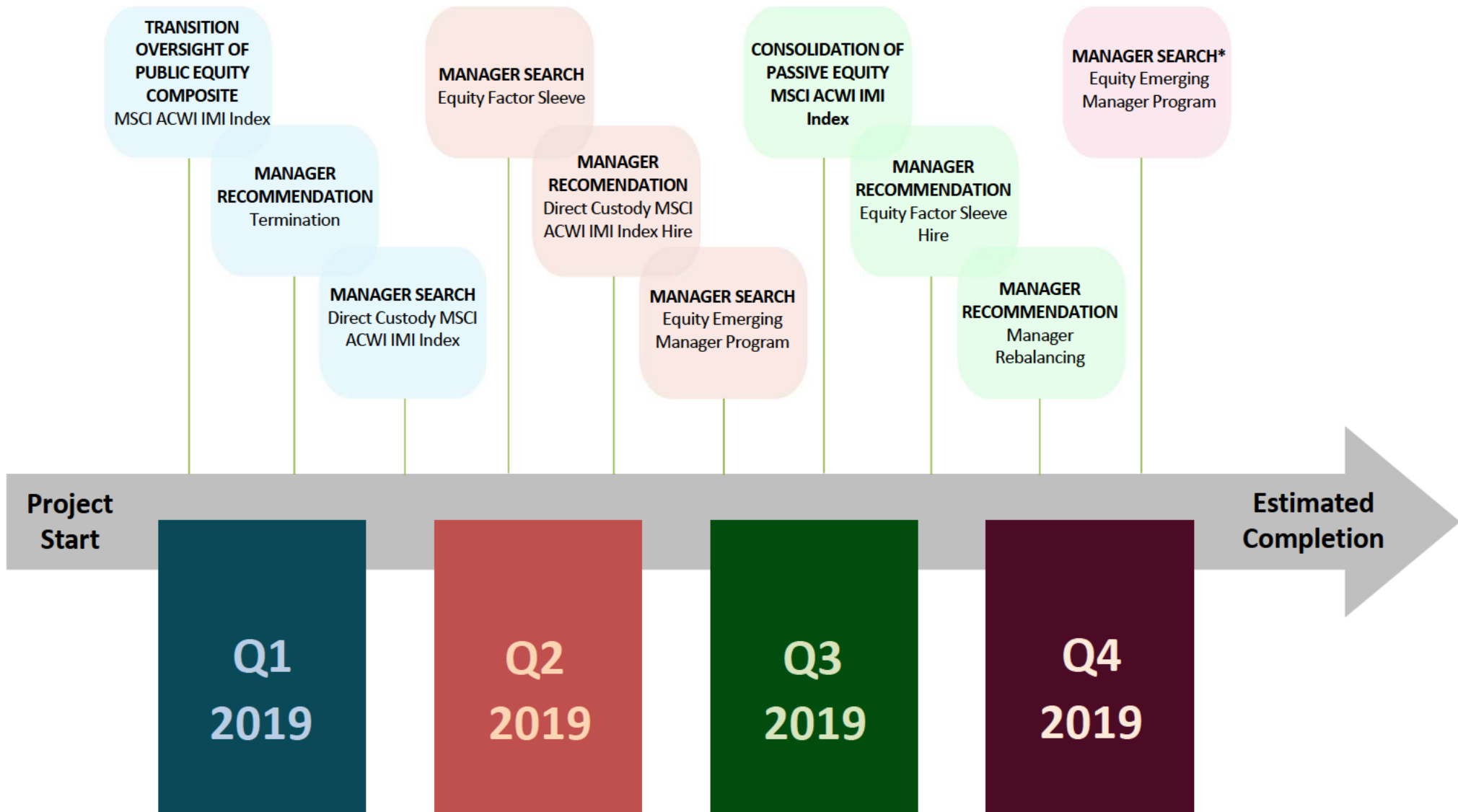
- Ongoing - contingent on approval of factor sleeve and hiring of manager(s)

¹ Using 2018 average assets under management

² Contingent on Board approval and using market values as of September 30, 2018. Assumes a 15% allocation to factor strategies coming from existing active public equity mandates. Effective fee rates utilized: weighted average of current active mandates and average rack rate for factor strategies.



Project Timeline



*Expected completion 1Q 2020



Recommend to the Board for Approval

1. Combine oversight of U.S. and Non-U.S. Public Equity Composites
2. Consolidate U.S. and Non-U.S. passive index strategies into MSCI ACWI IMI Index separate account
3. Approve invitation-only RFP for MSCI ACWI IMI Index separate account manager
4. Lower Global Equity Composite tracking error to 1.0% to 2.5% on a rolling 7-year basis
5. Approve risk spectrum allocation groupings and ranges
6. Develop invitation-only RFP and establish minimum qualifications for external Factor Strategy separate account manager(s)



Appendices



Manager Oversight

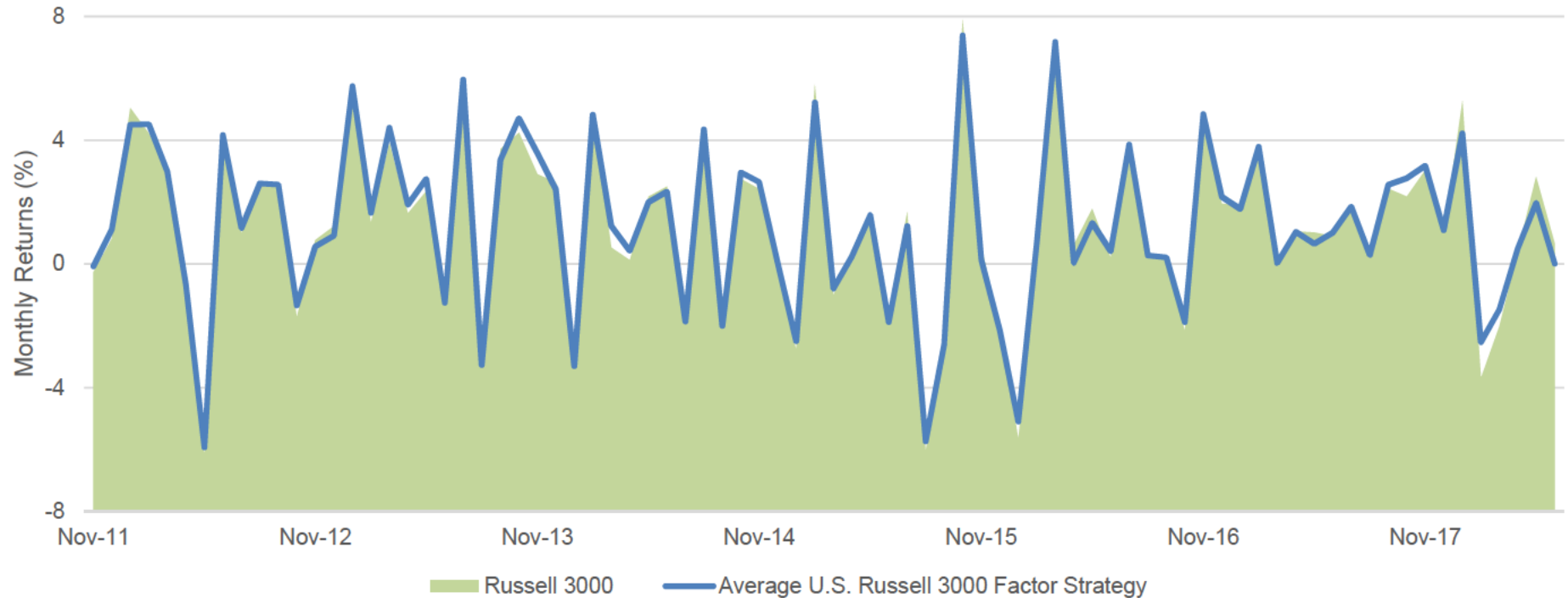
Qualitative Methods

- Monthly and Quarterly: Manager Portfolio Review
 - Performance
 - Attribution vs. Benchmark
 - Portfolio Positioning
 - Custodian/Manager Reconciliation
 - Investment Guideline Compliance – State Street Compliance Dashboard
 - Quarterly calls and discussion with portfolio managers
- Annual: Manager Contract Compliance Review
- Biennial: On-Site Manager Due Diligence

Quantitative Methods

- Multiple risk systems are used in the monitoring and analysis of managers and the composite:
 - Bloomberg, eVestment, FactSet, Zephyr StyleADVISOR, State Street (TruView)

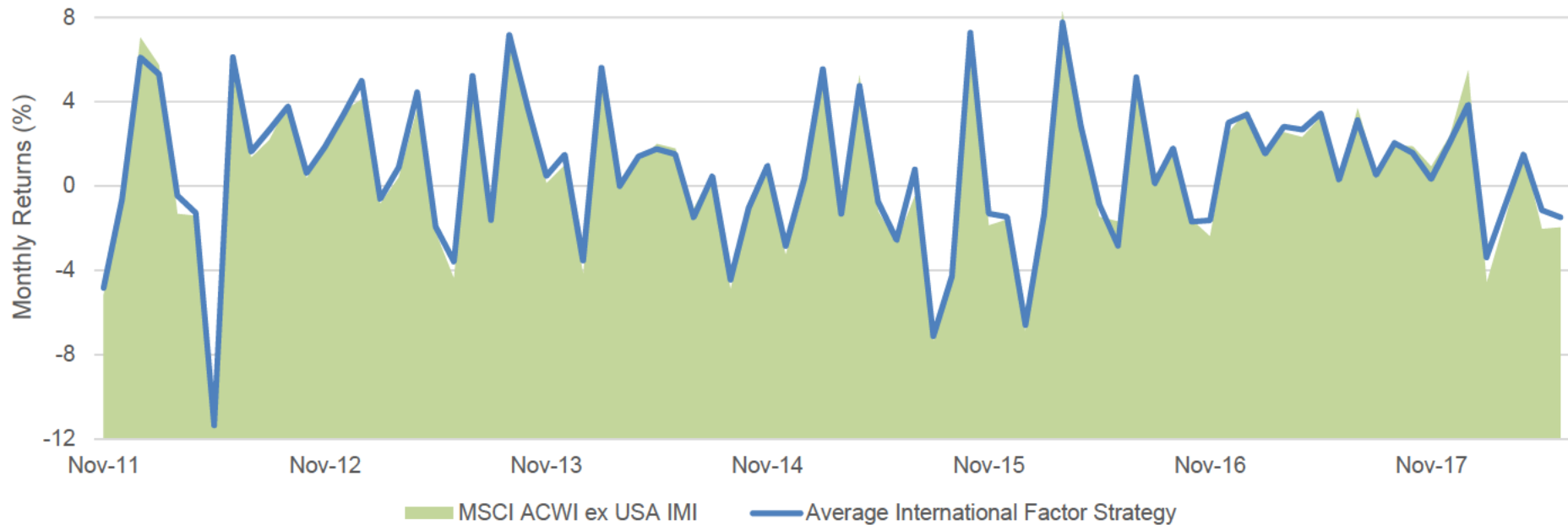
Modeled Factor Performance – U.S. Equities



| <i>(November 2011 - June 2018)</i> | Annualized Return | Excess Return | Tracking Error | Information Ratio | Up Capture | Down Capture | Beta vs. Benchmark |
|---|-------------------|---------------|----------------|-------------------|------------|--------------|--------------------|
| Average U.S. Russell 3000 Factor Strategy | 15.49% | 0.81% | 1.30% | 0.63 | 100.02% | 92.00% | 0.97 |
| Russell 3000 (Benchmark) | 14.68% | 0.00% | 0.00% | 0 | 100% | 100% | 1.00 |



Modeled Factor Performance – Non-U.S. Equities



| (November 2011 - June 2018) | Annualized Return | Excess Return | Tracking Error | Information Ratio | Up Capture | Down Capture | Beta vs. Benchmark |
|---------------------------------------|-------------------|---------------|----------------|-------------------|------------|--------------|--------------------|
| Average International Factor Strategy | 8.61% | 1.89% | 1.71% | 1.1 | 100.5% | 89.6% | 0.96 |
| MSCI ACWI ex USA IMI (Benchmark) | 6.72% | 0.00% | 0.00% | 0 | 100% | 100% | 1.00 |



MEMORANDUM

To: LACERA Board of Investments
From: Stephen McCourt, Leandro Festino, Tim Filla
Meketa Investment Group
Date: January 9, 2019
Re: Global Public Equity Structure Review

In May 2018, the Board of Investments (“Board”) approved a new strategic asset allocation, which adds several new asset classes to the Plan. It also restructures the allocation into a functional framework. The U.S. and Non-U.S. Equity composites were combined into the Global Equity composite, which is in the Growth category. As part of this transition, staff has put forth recommendations to appropriately establish the structure for the new Global Equity composite for the 2019-2020 calendar years.

In the new functional framework, the Growth category constitutes 58% of the Total Fund. Within the Growth category, U.S. and Non-U.S. Equity are being consolidated into Global Equity. This new asset class will constitute 81% of the Growth category. As part of this transition, staff has rightfully suggested combining the oversight of the U.S. and Non-U.S. composites. In addition, staff recommends consolidating the U.S. and non-U.S. passive index strategies. Currently, the Plan uses the Russell 3000 index as a passive U.S. equity index, and multiple non-U.S. indexes. Staff recommends these indexes be consolidated into the MSCI ACWI IMI under a separate account.

Staff is also proposing a 1.0% to 2.5% tracking error on a rolling 7-year basis for the new Global Equity composite. Keeping the tracking error confined to this range will help ensure the composite reduces risk and primarily provides global equity market beta. Alpha (excess returns) will be a secondary consideration. Meketa Investment Group agrees with this recommendation as it keeps the portfolio in-line with the Investment Policy Statement.

As part of the new Global Equity structure, staff proposes revising the overall risk spectrum of the composite. Currently, Public Equity is composed of 51% U.S. Equity and 49% Non-U.S. Equity. Within that mix, 67% of strategies are passive and 33% are active. The proposed Global composite would be broken down into 60% passive management, 25% active management, and 15% factor-based management. The high allocation to passive management should ensure the composite largely tracks its benchmark¹. The smaller allocations to active and

¹ 80% MSCI ACWI IMI Index / 20% MSCI World IMI Index ex. U.S. currency hedged.

factor-based management should create excess returns opportunities for the composite. Consequently, staff has recommended the implementation of a targeted RFP and the creation of minimum qualifications for an external factor-strategy manager under a separate account. Furthermore, staff recommends consolidating the roster of public equity managers.

SUMMARY AND RECOMMENDATION

Meketa has reviewed the Global Equity Structure Review. We concur with staff's recommendations that will transition the U.S. and non-U.S. Public Equity composites into a Global Equity composite, combining oversight and index managers, lowering tracking error, and revising the risk spectrum for the composite. Additionally, we support the recommendations to implement a search for a factor strategy manager under a separate account and consolidate the manager roster, both of which will aid in transitioning to the new Global Equity composite. We look forward to discussing this matter with you at the January 9th meeting.

SM/LF/TF/srt



MEMORANDUM

To: LACERA Board of Investments
From: Stephen McCourt, Leandro Festino,
Meketa Investment Group
Date: September 14, 2016
Re: Public Equity Manager Reviews

Please find attached a comprehensive review of LACERA's public equity manager roster.

We look forward to discussing this review with the Trustees and Staff at the board meeting.

LBW/srt



Los Angeles County Employees Retirement Association Public Equity Manager Reviews

Stephen McCourt, CFA
Managing Principal

Leandro Festino, CFA, CAIA
Managing Principal

**Presented on:
September 14, 2016**

Introduction

Meketa Investment Group's Initial Review of the Los Angeles County Employees Retirement Association is designed to achieve the following objectives:

- Identify the major components and characteristics essential to the long-term success of LACERA;
- Describe these components and provide their present status for LACERA;
- Develop an action plan for LACERA, including the priority level for each project.

With the initial review, we seek to identify areas of potential improvement for LACERA's structure, efficiency, and performance. This document serves as a platform from which we plan to address and discuss these issues.

Public Equity Overview

- Meketa Investment Group typically recommends a core/satellite approach to structuring global equity allocations. In general, we recommend that efficient areas of the equity market, such as large capitalization stocks, be invested passively via index funds. We prefer to hire dedicated specialist managers in less efficient sectors, such as small cap stocks and emerging markets.
- Global equities provide the opportunity for capital appreciation, as well as income via dividend payments. Equities are significantly more volatile than fixed income instruments, and as such, play a material role in the risk profile of the Fund. Even though historical correlation between U.S. and foreign equities has been relatively higher than in past decades, there is still a diversification benefit in owning a basket of global securities. Given the need to achieve a 7.5% long term rate of return, equities are likely to continue to represent a sizable portion of LACERA's investments in the foreseeable future.

Public Equity Overview (continued)

- Small capitalization and emerging market stocks tend to be the most volatile sectors of the global equity market, yet they also offer the highest expected return. Holding these allocations can increase the overall expected return of LACERA, which as a long term investor, can tolerate a modest amount of interim volatility.

Public Equity Investment Policy

LACERA has two Policies, one for U.S. Equity and one for Non-U.S. Equity.

- Both have as objectives to obtain the highest total return for the Fund at an acceptable level of risk.
 - Meketa Investment Group observation: Positive, however should define what an acceptable level of risk is.
- Both seek to beat their respective benchmarks by 10-20 basis points, net of fees.
 - Meketa Investment Group observation: *Objective is reasonable.*

Public Equity Investment Policy (continued)

- Both have low expected tracking error targets (0.5% - 2% for U.S. Equity and 1% - 3% for Non-U.S. Equity).
 - Meketa Investment Group observation: *Objective is reasonable.*
- Both have similar ranges for passive mandates, with an expected exposure to index funds of approximately one half of equity assets.
 - Meketa Investment Group observation: Positive. Both are at or near their maximum allowable range, resulting in substantial fee savings and increasing portfolio efficiency and simplicity. LACERA could consider increasing the use of passive management, through higher policy targets.
- Both seek to be style (and regional) neutral relative to benchmarks.
 - Meketa Investment Group observation: *Objective is reasonable.*

Non-U.S. Equity Currency Policy

- LACERA employs a passive 50% currency hedge overlay on the developed markets assets. The stated objective is volatility reduction.
 - Meketa Investment Group observation: We recommend an in-depth review of the Currency Policy to ascertain its objectives, characteristics, and execution, both looking backwards and into the future.

U.S. Equity Performance

Over the ten-year period ending June 30, 2016, the U.S. Equity Composite returned 7.2% on a net of fees basis, with a tracking error of 0.5%. Performance has lagged its benchmark in all trailing periods.

| | One Year | Three Years | Five Years | Seven Years | Ten Years |
|--|--------------|--------------|--------------|--------------|--------------|
| LACERA U.S. Equity Composite | 1.5% | 11.0% | 11.3% | 14.9% | 7.2% |
| Russell 3000 Index | 2.1% | 11.1% | 11.6% | 15.0% | 7.4% |
| <i>Excess Return</i> | <i>-0.6%</i> | <i>-0.1%</i> | <i>-0.3%</i> | <i>-0.1%</i> | <i>-0.2%</i> |
| Tracking Error | 0.4% | 0.3% | 0.4% | 0.4% | 0.5% |
| LACERA U.S. Equity Composite Standard Deviation | 14.6% | 11.4% | 12.6% | 13.5% | 15.7% |
| Russell 3000 Index Standard Deviation | 14.7% | 11.5% | 12.6% | 13.5% | 15.8% |
| LACERA U.S. Equity Composite Sharpe Ratio | 0.09 | 0.96 | 0.89 | 1.09 | 0.40 |
| Russell 3000 Index | 0.13 | 0.96 | 0.92 | 1.10 | 0.41 |

Non-U.S. Equity Performance

Over the ten-year period ending June 30, 2016, the Non-U.S. Equity Composite returned 3.0% on a net of fees basis, with a tracking error of 0.6%. Performance has been ahead of its benchmark in all periods.

| | One Year | Three Years | Five Years | Seven Years | Ten Years |
|--|-------------|-------------|-------------|-------------|-------------|
| LACERA Non-U.S. Equity Composite | -8.9% | 3.5% | 2.4% | 6.9% | 3.0% |
| Custom MSCI ACWI IMI Net 50% | -9.4% | 3.2% | 2.2% | 6.6% | 2.8% |
| <i>Excess Return</i> | <i>0.5%</i> | <i>0.3%</i> | <i>0.2%</i> | <i>0.3%</i> | <i>0.2%</i> |
| Tracking Error | 0.3% | 0.4% | 0.5% | 0.5% | 0.6% |
| LACERA Non-U.S. Equity Composite Standard Deviation | 15.5% | 11.8% | 13.9% | 14.7% | 18.3% |
| Custom MSCI ACWI IMI Net 50% Standard Deviation | 15.5% | 11.9% | 13.9% | 14.7% | 18.4% |
| LACERA Non-U.S. Equity Composite Sharpe Ratio | -0.58 | 0.29 | 0.16 | 0.46 | 0.11 |
| Custom MSCI ACWI IMI Net 50% Sharpe Ratio | -0.62 | 0.26 | 0.15 | 0.44 | 0.10 |

U.S. Equity Program

The U.S. Equity Composite is broken down into the following segments:

- **Passive** consists of three index funds. Substantially 100% exposure to large capitalization stocks at minimal fees (1 basis point).
 - Meketa Investment Group observation: *Positive*
- **Low Risk** consists of two managers, INTECH and Twin Capital, who manage a combined \$1 billion, approximately.
 - Meketa Investment Group observation: Acceptable. The managers seem to be meeting their objectives. Allocation amount is reasonable. Twin Capital's fees are very reasonable; INTECH's are average.

U.S. Equity Program (continued)

- **Moderate / High Risk** consists of six strategies, including four SMID managers and two manager of managers programs focused on emerging managers.
 - Meketa Investment Group observations: Acceptable. The program seeks to capture the premium and inefficiencies of small and mid capitalization stocks. Often, however, Meketa Investment Group splits mid and small capitalization stocks. The former could be indexed, with the latter invested solely by active managers. Since mid cap stocks are relatively efficient, fee savings of over \$1 million per year can be achieved. Fees for Westwood, CRM, and Eagle are attractive; Frontier's are average.

Non-U.S. Equity Program

The Non-U.S. Equity Composite is broken down into the following segments:

- **Passive** consists of five index funds. Fees are very attractive at 3 basis points.
 - Meketa Investment Group observation: *Positive*
- **Non-U.S. Developed** consists of three managers, Acadian, Capital Guardian, and Putnam, who manage a combined \$1 billion, approximately.
 - Meketa Investment Group observation: Neutral. Acadian and Capital Guardian attain similar exposure to that in the Passive category above, which is primarily focused on developed markets. Fees for all three strategies are attractive. Tracking error for these products is relatively low, however, limiting the upside from active management.

Non-U.S. Equity Program (continued)

- **Regional Developed** consists of two strategies, BTC Europe Alpha Tilts and GAM, providing exposure to Europe and the Pacific Basin, respectively.
 - Meketa Investment Group observation: Acceptable. These managers seek to beat their benchmarks, and have succeeded since inception with LACERA.
- **Emerging Markets** consists of four strategies: Acadian, AQR, Genesis, and Lazard.
 - Meketa Investment Group observation: *Acceptable. Attractive fees.*

Manager Reviews

- A more detailed description of each public equity manager has been shared with Staff.
- The table below highlights areas of further review for selected managers. Meketa Investment Group will address these concerns with Staff.

| Manager | Strategy | Observation |
|----------|--------------------------------------|-------------|
| INTECH | Large Cap Core – U.S. Enhanced Index | Fees |
| Frontier | SMID Growth | Fees |
| CRM | SMID Value | Performance |
| Westwood | SMID Value | Performance |
| Putnam | Developed Markets Small Cap | Performance |

Summary

- LACERA currently has 15 active public equity managers, not including two emerging managers fund of funds, a currency overlay program, and eight index funds. The manager roster is reasonable is reasonable for a fund the size of LACERA.
- Over the past decade, performance for public equities has been index-like, with the U.S. equity component lagging slightly, and the Non-U.S. equity roster offsetting the underperformance.
- The decision to index a substantial amount of LACERA's equities has been highly advantageous.
- Considerations for the Board include:
 - Increasing the amount of indexed assets.
 - Rationale: Given the low tracking error and fees of the active managers, passive exposure could result in similar performance at a fraction of the cost.

Summary (continued)

- Splitting SMID portfolios.
 - Rationale: Midcap stocks are relatively efficient and could be indexed. Fee savings of \$1 million per year may be achieved. Small Cap active managers may be hired with the objective of generating long term excess returns. Smaller companies tend to be less efficient than larger ones, providing opportunities for active managers to exploit them.
- Consider alternative beta factor strategies.
 - Rationale: Obtain exposure to active risk factors at a lower cost.

Global Public Equity Implementation Update

Equity: Public/Private Committee

November 20, 2019

Ted Wright, CFA, FRM, PRM, CAIA – Principal Investment Officer

Ron Senkandwa – Senior Investment Analyst

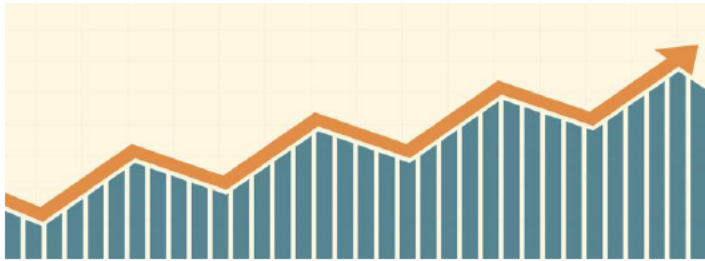


Table of Contents

- I. Objectives
- II. Background
- III. Analysis
- IV. Summary Findings
- V. Advance to Board
- VI. Next Steps
- VII. Projected Timeline



Objectives



*Highlight progress on implementing
the approved Global Public
Equity Structure*

- Identify challenges experienced during implementation
- Propose solutions to the Committee for Board approval
- Provide updated timeline for the implementation

Background

New benchmark¹ approved following 2018 strategic asset allocation review

Global Equity Structure Review approved February 2019

Meketa and staff conducted in-depth review of global equity portfolio

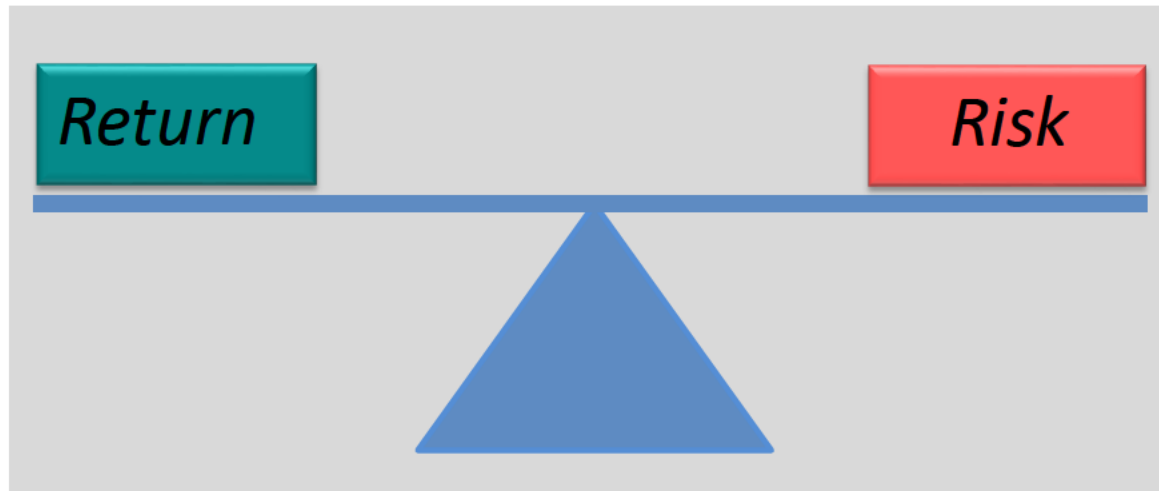
Global Equity factor-based manager search slowed in 4Q 2019

¹ 80% MSCI ACWI IMI Index + 20% MSCI World-ex U.S. IMI Index Currency Hedged



Analysis

**Meketa and staff conducted a comprehensive review of the
Global Equity portfolio**



Summary Findings - Challenges

**Mismatch exists between the
80/20 Custom Index and MSCI
ACWI IMI Index**



- Structural tracking error > 100 bps
- Substantial differences in regional allocations
- Currency hedge independent of portfolio construction
- New benchmark does not fully capture currency program hedge ratio

Tracking Error Comparison

- The 80/20 Custom Index has exhibited **101 bps**, **110 bps**, and **122 bps of tracking error** relative to the MSCI ACWI IMI index for the last 1-, 3-, and 5-year periods respectively.

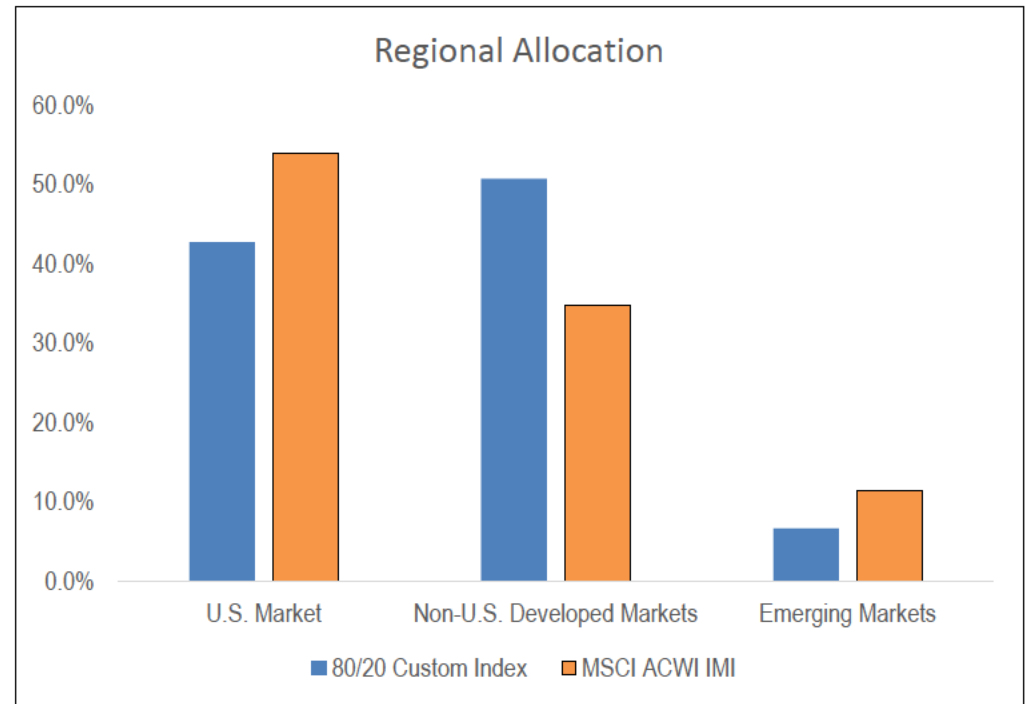
| Tracking Error | LACERA 80/20 Custom Index vs. MSCI ACWI IMI |
|----------------|---|
| 1-Year | 1.01% |
| 3-Year | 1.10% |
| 5-Year | 1.22% |

Source: StyleADVISOR. As of June 30, 2019.



Regional Allocation Comparison

- The 80/20 Custom Index has a sizeable overweight to Non-U.S. developed markets relative to the MSCI ACWI IMI index.
- Materially underweight the U.S. and emerging markets in comparison to the MSCI ACWI IMI index.



Source: Meketa Investment Group.

Summary Findings - Solutions

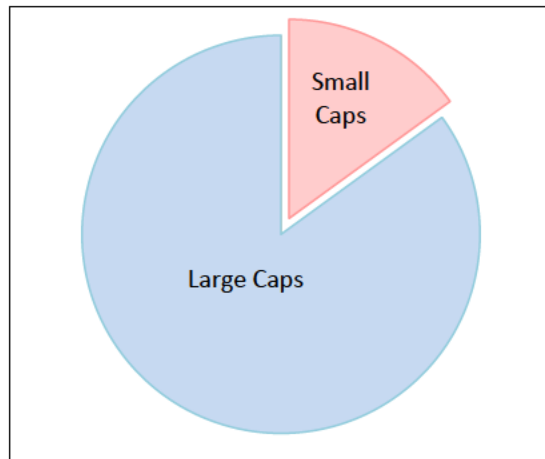
**Evaluate portfolio's performance
relative to the MSCI ACWI IMI
Index (unhedged)**



- Accurate representation of the portfolio's performance and risk exposures
- Manage risks to broad global equity market beta
- Construction of intentional portfolio
- Maintain currency overlay program

Summary Findings - Challenges

Unconstrained overweight to small caps pronounced given recent rally of large, mega cap stocks

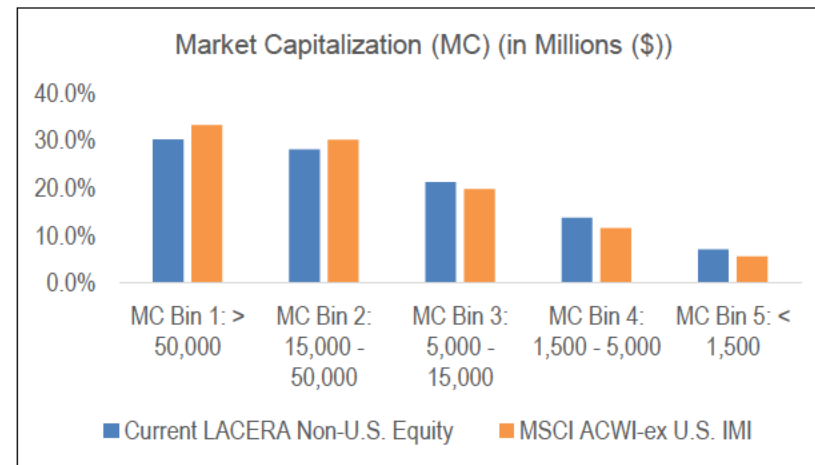
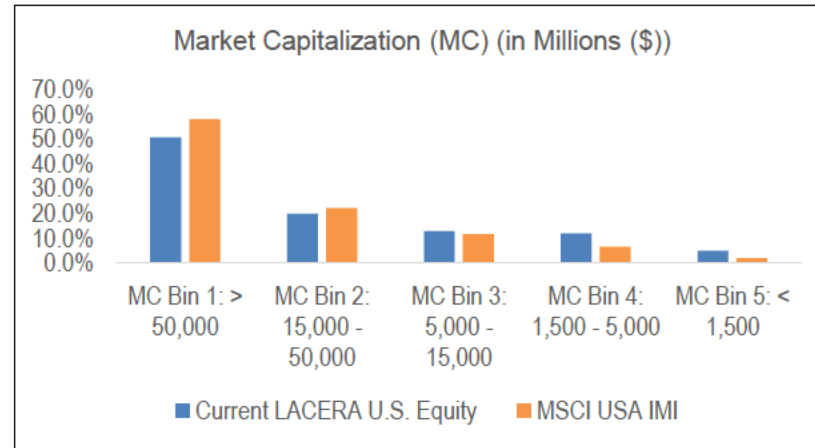


- Allocation to small caps consistent with Global Equity Structure Review and Meketa Public Equity Review
- Small cap overweight not sized appropriately within the U.S. portfolio
- Outsized allocation to small caps main detractor to results
- U.S. small caps trailed U.S. large caps by 13 percentage points*; largest underperformance in two decades

* For the 2018-2019 fiscal year period ended June 30, 2019.

Market Capitalization Comparison

- Both the LACERA U.S. Equity and Non-U.S. equity portfolios are underweight the larger market cap stocks while overweight the smaller cap stocks.
- Overweight to small cap stocks due to an effort to capture incremental alpha through active management.



Source: FactSet. As of June 30, 2019.



Summary Findings - Solutions

Establish market cap and regional bands relative to MSCI ACWI IMI Index



- Mitigate unintended exposures and control portfolio risk
- Bring risk exposures in line with MSCI ACWI IMI Index
- Use the transition to single global equity passive manager to further streamline portfolio
- Additional manager realignment expected if factor manager(s) is approved and funded

Advance to Board

1. Revise Global Equity benchmark from 80% MSCI ACWI IMI Index + 20% MSCI World-ex US IMI Index Currency Hedged to the MSCI ACWI IMI Index effective July 1, 2019



2. Establish market capitalization¹ and regional bands relative to the MSCI ACWI IMI Index

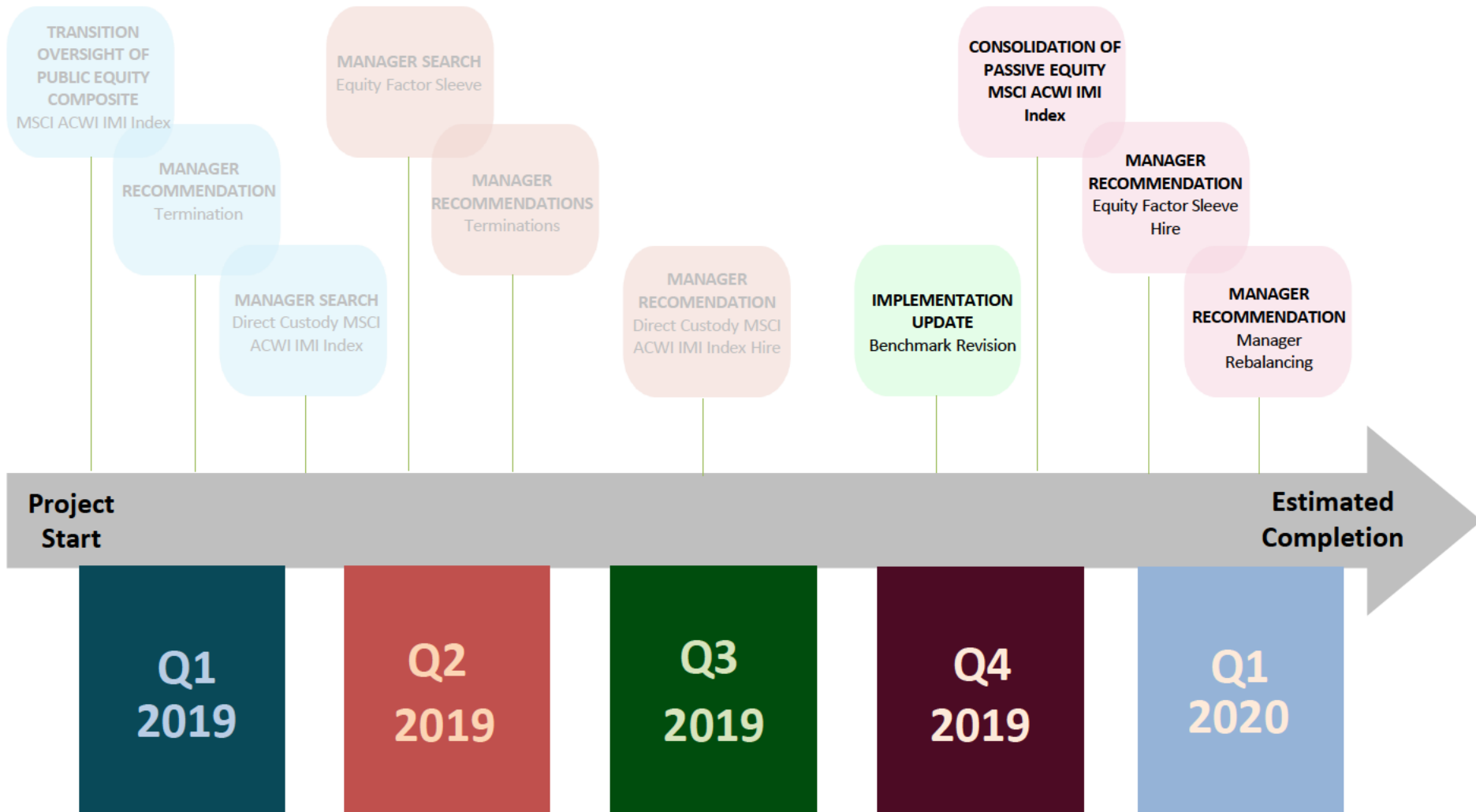
| | | |
|-----------------------|----------------------------|--------------------------|
| Market Capitalization | Large cap stocks | Maintain range of +/- 5% |
| | Mid cap stocks | Maintain range of +/- 5% |
| | Small cap stocks | Maintain range of +/- 5% |
| Region | U.S. Market | Maintain range of +/- 5% |
| | Non-U.S. Developed Markets | Maintain range of +/- 5% |
| | Emerging Markets | Maintain range of +/- 5% |

¹ Market cap breakpoints based on LACERA custom breakpoints and may differ from those of MSCI.

Next Steps

- Consolidation of Passive MSCI ACWI IMI Index
- Factor equity-based manager hire (subject to Board approval)
- Manager realignment expected if factor manager(s) is approved and funded
- Emerging manager search postponed until completion of Emerging Manager Policy Review

Projected Timeline



* Emerging Manager Search postponed until completion of Emerging Manager Policy Review.



Questions and Answers





December 2, 2019

TO: Board Trustees
Board of Investments

FOR: Board of Investments Meeting of December 11, 2019

SUBJECT: The International Corporate Governance Network (ICGN) Conference
February 25 – 28, 2020 in Seoul, South Korea

The 2020 International Corporate Governance Network (ICGN) Conference will be held on February 27 – 28, 2020 in Seoul, South Korea, was approved by the Board of Investments on November 20, 2019. ICGN will be hosting a two day event on February 25 – 26, 2020. This seminar, which is hosted by the KCGS, is made up of six modules and a case study, together with recommended reading. The aim of this seminar is to help investors and others understand how to protect and generate long-term value through careful consideration of Stewardship and ESG factors as part of their investment decision making process.

The main conference highlights include the following:

- ESG and Investment Decision-Making
- Managing Stewardship Responsibilities and Disclosures
- How to Conduct an ESG Analysis of a Company
- Effective Stewardship in Practice: Monitoring, Engaging and Voting

The conference meets LACERA's policy of an average of five (5) hours of substantive educational content per day. The standard hotel rate at the Westin Chosun Seoul Hotel is \$220.00 per night plus applicable taxes and the registration fee to attend is \$1,950.00.

If the registration fee is insufficient to pay the cost of the meals provided by the conference sponsor, LACERA must reimburse the sponsor for the actual cost of the meals, less any registration fee paid. Otherwise, the attendee will be deemed to have received a gift equal to the value of the meals, less any registration fee paid, under California's Political Reform Act.

IT IS THEREFORE RECOMMENDED THAT YOUR BOARD:

Approve attendance of Board members at the International Corporate Governance Network Conference on February 25 – 26, 2020 in Seoul, South Korea and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

ICGN Governance, Stewardship & Sustainability Course, Seoul

The aim of this seminar is to help investors and others understand how to protect and generate long-term value through careful consideration of Stewardship and ESG factors as part of their investment decision making process.

This seminar, which is kindly hosted by the KCGS, is made up of six modules and a case study, together with recommended reading.

Agenda Overview

DAY 1 ~ Tuesday, February 25, 2020

09:30 - 10:45 ~ **Module 1: Overview of Stewardship and Sustainability in theory and practice**

11:15 - 12:30 ~ **Module 2: Managing stewardship responsibilities and disclosures**

13:30 - 14:45 ~ **Module 3: Basic principles of corporate governance: what investors should expect from companies**

15:15 - 16:15 ~ **Introduction to Stewardship in Practice: Volkswagen Case Study**

DAY 2 ~ Wednesday, February 26, 2020

09:30 - 10:45 ~ **Module 4: ESG and investment decision-making**

11:15 - 12:30 ~ **Module 5: How to conduct an ESG analysis of a company**

13:15 - 14:30 ~ **Module 6: Effective stewardship in practice: monitoring, engaging and voting**

15:15 - 17:15 ~ **Introduction to Stewardship in Practice: Volkswagen Case Study**



December 2, 2019

TO: Board Trustees
Board of Investments

FOR: Board of Investments Meeting of December 11, 2019

SUBJECT: 2020 SuperReturn Berlin in Berlin, Germany on February 25 – 28, 2020

The 2020 SuperReturn Berlin Conference will be held on February 25 – 28, 2020 at the InterContinental Hotel in Berlin, Germany. The world's most influential GPs and LPs will be coming together to examine the latest opportunities, challenges and projections for 2020. This is your once a year chance to connect with 3,000+ senior decision-makers from 50+ countries.

The main conference highlights include the following:

- Sector Trends Shaping the Healthcare Industry
- Where Next For Private Debt? What Will the Landscape Look Like in 5 Years' Time?
- Bringing Private Equity into the Digital Age: How Far Have We Really Come?
- Is The Private Debt Market Ripe For Consolidation Private Capital Firms Look For Scale In The Asset Class?
- LP's on Allocating to Italian Private Equity

The conference meets LACERA's policy of an average of five (5) hours of substantive educational content. The standard hotel rate at the Four Seasons Hotel is \$275.00 per night plus applicable taxes and the registration fee is approximately \$5,400.00.

If the registration fee is insufficient to pay the cost of the meals provided by the conference sponsor, LACERA must reimburse the sponsor for the actual cost of the meals, less any registration fee paid. Otherwise, the attendee will be deemed to have received a gift equal to the value of the meals, less any registration fee paid, under California's Political Reform Act.

IT IS THEREFORE RECOMMENDED THAT YOUR BOARD:

Approve attendance of Board members at the 2020 SuperReturn Berlin Conference on February 25 – 28, 2020 in Berlin, Germany and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

LG
Attachment

SESSIONS

SP & GP WELCOME DRINKS RECEPTION - 24/02/2020

SuperReturn International

25 - 28 February 2020
InterContinental Hotel
Berlin

Registration

18:00 - 20:00
Registration

SP & GP only welcome drinks reception

18:00 - 20:00
SP & GP only welcome drinks reception

Join us for drinks at the Marlene Bar from 6pm-8pm
on the 24th of February.

Please note, in order to attend the welcome drinks
reception, you be registered to attend the Summit Day
on the 25th of February.

SCHEDULE

SP & GP WELCOME DRINKS RECEPTION - 24/02/2020

SuperReturn International

25 - 28 February 2020
InterContinental Hotel
Berlin

| TIME | REGISTRATION | SP & GP ONLY WELCOME DRINKS RECEPTION |
|--------------|----------------------|--|
| 18:00 | 18:00 - Registration | 18:00 - SP & GP only welcome drinks reception |

Registration and welcome coffee

08:15 - 09:00
Healthcare Summit

Registration and welcome coffee

08:15 - 08:35
Private Debt Summit

Registration and welcome coffee

08:20 - 09:00
ESG Summit

Registration and welcome coffee

08:30 - 09:10
German Private Equity Summit

Chair's welcome address

08:35 - 08:45
Private Debt Summit

Participants

Chair: Anthony Fobel - CEO, Arcmont Asset Management

Registration and welcome coffee

08:40 - 09:10
Disruption and Innovation Summit

Registration & coffee

08:40 - 09:40
Geo Focus Summit Day 2020: Italy

Keynote address: State of the market

08:45 - 09:05
Private Debt Summit

Chair's welcome address

09:00 - 09:05
ESG Summit

Chair's welcome address

09:00 - 09:05
Healthcare Summit

Defining ESG

09:05 - 09:30
ESG Summit

ESG vs. impact investing vs. responsible investment vs. sustainable finance. What do they all mean, and what is the difference?

Participants

Maike van der Schoot - Responsible Investment Officer, AlpInvest

Keynote address

09:05 - 09:20
Healthcare Summit

Are we at the peak? Testing the private debt market in a downturn

09:05 - 09:45
Private Debt Summit

- Preparing for the end of the cycle: how will GPs protect returns and minimise risk in a stressed market?
- How is the industry looking at current and future allocations, what strategies should GPs be deploying now to prepare, and who is best placed to survive?

Participants

Moderator: Anthony Fobel - CEO, Arcmont Asset Management

Panellists: Robin Doumar - Managing Partner, Park Square Capital

Blair Jacobson - Partner, Co-Head of European Credit, Ares Management LLC

Jaime Prieto - Founding and Managing Partner, Kartesia

Andrew Konopelski - Partner & Head of Credit Strategies, EQT Credit

Chair's welcome address

09:10 - 09:15
Disruption and Innovation Summit

Participants

Chair: George Danner - President, Business Laboratory

Chair's welcome address

09:10 - 09:15
German Private Equity Summit

Participants

Chair: Dörte M Höppner - Chief Operating Officer, Riverside Europe Fund

Latest data showing how digital transformation in different industries drives growth in PE investments.

09:15 - 09:45
Disruption and Innovation Summit

Why PE firms will fall behind if they don't adjust their own investment processes.

Participants

Daniel Schmidt - CEO, CEPRES

Geo-political events: what does the future hold for the German economy?

09:15 - 09:45
German Private Equity Summit

Predicting the effect of geo-political events around the globe on Germany and the wider Eurozone: what does the future hold?

Participants

Interviewee: Jörg Rocholl - President, EY Chair in Governance & Compliance, ESMT Berlin

Interviewer: Dörte M Höppner - Chief Operating Officer, Riverside Europe Fund

Deal drivers and the overarching market trends in Healthcare PE and VC

09:20 - 10:00
Healthcare Summit

- Examining key market drivers and trends in Healthcare investing.
- How does PE deal with high valuations and the competition from corporate healthcare buyers?
- How do you go about deal sourcing? An increased interest from infrastructure investors: what does it mean for traditional PE market players?

Participants

Panellists: Hedley Goldberg - Partner, Rothschild & Co

Michael Keyoung - Managing Director, Head of North America, C-Bridge Capital

Alexander Friedrich - Managing Director, Ardian

ESG integration update: from why to why not?

09:30 - 10:00
ESG Summit

Reflecting on the lessons learnt and evaluating the progress to date.

What are the key challenges to a successful ESG integration, and what still needs to be done to streamline the process?

What is the difference in ESG principles in developed vs. emerging markets?

Participants

Moderator: Justin Kusinskis - Partner, CBRE Caledon Capital Management

Frode Strand-Nielsen - Managing Partner, FSN Capital Partners

Rob Lake - Independent Responsible Investment Advisor & Executive Coach, Rob Lake Advisors

Chair's welcome

09:40 - 09:45
Geo Focus Summit Day 2020: Italy

The digital transformation imperative - Why PE firms must digitally transform to compete

09:45 - 10:15
Disruption and Innovation Summit

- Why is it mandatory for PE to use DT as a value creation tool?
- What is the "State of the Union" today in the PE industry?
- What are the challenges for DT programmes within portfolio companies?
- What could practical framework for a DT project look like?
- What talent is required within PE for successful DT projects?

Participants

Marko Maschek - Partner & Co-Founder, Marondo Capital GmbH

Italian market snapshot and macro-economic outlook

09:45 - 10:15
Geo Focus Summit Day 2020: Italy

- Evaluating the performance of Italian private equity, looking at the latest deals and top market players.
- Where do the best opportunities lie for Italian and foreign investors in the Italian PE market and how will political uncertainty and economic headwinds affect returns?

Private Equity outlook for Germany: Bull or Bear?

09:45 - 10:15
German Private Equity Summit

Update On German PE outlook: industry predictions on fundraising, investing, growing businesses & exits. How truly competitive is the German PE landscape?

Participants

Moderator: Michael Phillips - Managing Partner, Castik Capital

Panellists: Martina Schliemann - Principal, Hamilton Lane

Torsten Grede - Spokesman of the Board of Management, Deutsche Beteiligungs AG

Jörg Rockenhäuser - Partner & Head of DACH, Permira

Steven Roberts - Private Equity Leader, PwC

Where next for private debt? What will the landscape look like in 5 years' time?

09:45 - 10:15
Private Debt Summit

- From "shadow banking" to established asset class: will the private debt market provide steady growth over the coming years?
- With corporate balance sheet leverage high, increasing fund sizes, more flexible terms plus high market valuations, is there capacity in the market to maintain high returns?
- Will more LPs turn to debt if the economy impacts other markets?

Participants

Moderator: Frédéric Nadal - Chief Executive Officer, MV Credit

Panellists: Symon Drake-Brockman - Managing Partner, Pemberton Capital Advisors

Graeme Delaney-Smith - Co-Head of Direct Lending, Alcentra Limited

Eric Lloyd - Deputy Head of Global Markets & Head of Global Private Fixed Income, Barings

David Allen - Managing Partner, Chief Investment Officer, AlbaCore Capital Group

This is how we do it

10:00 - 10:30
ESG Summit

What does ESG best practice look like? What are the typical questions LP's ask of a GP during fundraising about ESG? Re-enacting a due diligence interview between an LP and a GP. Taking baselines and benchmarking to bona fide progress

Participants

Maarten Biermans - Head of Sustainable Markets, Rabobank

In conversation with: Cornelia Gomez - Head of ESG and Sustainability, PAI Partners

Sector trends shaping the Healthcare industry

10:00 - 10:45
Healthcare Summit

- Provider and related services: dealing with intense competition and a pushing into new segments
- Medical services: regulatory challenges to enter into medical structures which are traditionally owned by private practitioners
- Payer and related services: evaluating payer-related buyout interest and investment opportunities. Europe vs. the US
- Suppliers of products and services to the healthcare industry: advanced medical device technology, gene editing/gene therapies and personalised medicine

Participants

Jeffrey Jay - Senior Managing Director, Great Point Partners

Henry Gladwyn - Principal, OMERS Ventures

Adam Blumenthal - Founder and Managing Partner, Blue Wolf Capital Partners

Bringing private equity into the digital age: How far have we really come?

10:15 - 10:45
Disruption and Innovation Summit

- To what extent are PE firms utilising technology to optimise efficiency and disrupt traditional value chains?
- What are the best solutions for achieving accelerated access to data and speeding up the process of investor onboarding, decision making and compliance reporting?

Participants

Moderator: Priya Nair - Managing Director and Global Head of Private Capital services Product Management, RBC Investor & Treasury Services

Panellists: Nadja Borges - Head of PE Front Office Care, Unigestion

Examining the characteristics of the Italian PE market and examining key market trends and drivers

10:15 - 10:45

Geo Focus Summit Day 2020: Italy

- How has the Italian PE market evolved in the recent years?
- How do regions differ and how does Italy compare to other western markets?
- Primary deals in Italy are at their highest ever. What are the reasons for this, and is private equity in Italy a bubble or not?

Participants

Panellists: Raffaele de Courten - Founding Partner, Alto Partners SGR

LP perspectives: the return of the denominator effect?

10:15 - 10:45

German Private Equity Summit

- Where will LPs look to deploy capital and maintain allocations over the next 5 years?
- To what extent are they slowing their investment pace?
- How much exposure to the market should LPs want, where are they looking to invest and why?
- To what extent do investors focus on resilience, growth and take ESG impact into account when making investment decisions?

Participants

Moderator: Dörte M Höppner - Chief Operating Officer, Riverside Europe Fund

Panellists: Maria Sanz Garcia - Partner, YIELCO Investments

Wendelin Thönes - Director, Private Equity, Allianz Capital Partners

Verena Kempe - Co-Head, Private Equity, Feri Trust

Is the private debt market ripe for consolidation private capital firms look for scale in the asset class?

10:15 - 10:45

Private Debt Summit

Preparing for a shakeout as the big players hoover up capital while smaller operations struggle to find a niche in an ever-tougher environment for lenders where competition for assets continues to increase

Participants

Panellists: Matthias Ederer - Partner, BC Partners Credit

Reporting, measuring and monitoring

10:30 - 11:00

ESG Summit

- How are LPs monitoring ESG initiatives GPs are undertaking?
- What happens if GPs are not living up to their promises? Best strategies to avoid greenwashing.
- What is the right framework for measuring ESG? Harmonisation of reporting standards and requirements – where are we at?
- Use of SASB (Sustainable Accounting Standards Board) and TCFD (Task-Force on Climate Disclosure)

Participants

Moderator: Ignacio Sarria - Managing Director, New Mountain Capital

Panellists: Alex Scott - Partner, Pantheon

Antti Savilaakso - ESG Research Head, Auriel Investors

Beth Houghton - Partner, Palatine Private Equity

Morning coffee and networking break

10:45 - 11:15

Disruption and Innovation Summit

Morning coffee and networking break

10:45 - 11:15

Geo Focus Summit Day 2020: Italy

Morning coffee and networking break

10:45 - 11:15

German Private Equity Summit

Value creation

10:45 - 11:15

Healthcare Summit

- What are the most successful approaches to creating value through Healthcare investments?
- Improving operations with a well-defined value-creation plan.
- Buy and build vs. multi-asset buy and merge strategy: which one has a better potential to deliver impressive returns with a lesser execution risk than other buyout strategies?

Participants

Laurent Ganem - Founder and CEO, G Square Healthcare Private Equity LLP

Christian Dube - Partner, August Equity

Liz Jones - Partner, Livingbridge

Morning coffee and networking break

10:45 - 11:15

Private Debt Summit

Morning coffee and networking break

11:00 - 11:30

ESG Summit

Cryptocurrencies: paving the way for mass adoption into the crypto ecosystem

11:15 - 11:45

Disruption and Innovation Summit

- What is the future of cryptocurrencies entering the mainstream via social media?
- What is needed for traditional banking and crypto to coexist frictionlessly?
- What are the main issues of usability and scalability?

Participants

Moderator: Udayan Goyal - Managing Partner, Apis Partners

Panellists: Marcos Veremis - Managing Director, Cambridge Associates

Pascal Gauthier - CEO, Ledger

Family Fortunes: accessing the growing number of family institutions who are dedicating more time to PE, looking to learn more about the asset class and culture of PE and increasingly seeking foreign capital to boost growth

11:15 - 11:45

Geo Focus Summit Day 2020: Italy

- Understanding the nuances of partnering with family-owned and owner-managed companies.
- Exploring succession issues across the family-managed Italian businesses.
- How turning to private equity firms can facilitate succession, provide liquidity and help companies adapt to technology and globalisation.

How will a downturn affect the German PE industry? What lessons have been learned from the last recession?

11:15 - 11:45

German Private Equity Summit

- Impending market volatility and increasing competition in the German PE market: which business models will best withstand an economic downturn and why?
- Is there still potential for higher returns and if so, where?

Participants

Moderator: Michael Wolfram - Director, Bfinance

Panellists: Hermann Dambach - Managing Director, Oaktree Capital Management

Britta Lindhorst - Managing Director, Head of European Investments, HQ Capital

Henrik Fastrich - Executive Board Member, Orlando Management

Inna Gehrt - Head of German Office, Mandarin Capital

Morning coffee and networking break

11:15 - 11:45

Healthcare Summit

US vs. Europe – what is the overlap?

11:15 - 11:40

Private Debt Summit

- How much overlap exist between the two markets in terms of credit risk, underwriting standards, terms?
- Is Europe a less competitive market than US?
- Which market presents the best opportunities and diversified strategies and where can investors find best value now and going forward or is a global approach the future of the asset class?

Participants

Panellists: Michael Ewald - Managing Director, Bain Capital Credit

Christopher Bone - Partner, Managing Director of Private Debt Europe, Partners Group

Adam Wheeler - Head of European and Asia Pacific Private Finance, Barings

Regulatory update

11:30 - 12:00

ESG Summit

- How do LPs and GPs handle the increasing regulatory pressure for responsible investing and ESG integration?
- What can global market players learn from the EU regulatory incentives around ESG?
- The review of the EU Action Plan on Sustainable Finance. EU sustainable finance taxonomy: how will the EU's sustainability taxonomy work for investors?

Participants

Interviewee: Will Martindale - Director of Policy & Research, UN PRI

Interviewer: Emily S. Kreps - Global Head of Investor Initiatives, CDP

Capital deployment in the current environment: does size matter?

11:40 - 12:10

Private Debt Summit

- To what extent is size a key factor for success in private debt?
- Is being big and consistent in the market a prerequisite for sourcing better opportunities and getting better allocation in order to deploy capital more easily?
- To what extent are funds finding it challenging to continue to deploy capital in a disciplined manner in the current environment and why?
- Is competition pushing managers to take on more risk than they should?
- Which managers are outperforming competition?

Participants

Moderator: Theodore Koenig - President & CEO, Monroe Capital

Panellists: Peter Glaser - Co-Head of Direct Lending, Alcentra Limited

Benoit Durteste - Chief Investment Officer & Chief Executive Officer, Intermediate Capital Group

Blair Faulstich - Managing Director, Corporate Credit, Benefit Street Partners

Blockchain: disrupting the alternative investment sector?

11:45 - 12:15

Disruption and Innovation Summit

- How close are we to delivering an industry-wide PE blockchain solution?
- To what extent does blockchain have the potential to lower transaction costs, increase access to capital markets globally, and enhance security throughout the whole transaction process?
- Reconciling cybersecurity concerns with new, innovative applications and systems

Participants

Panellists: Myles Milston - CEO, Globacap

Nick Haskins - Research Analyst, Moore Europe Capital Management

Phil Chen - General Partner, Proof of Capital

LPs on allocating to Italian private equity

11:45 - 12:15

Geo Focus Summit Day 2020: Italy

- Who are the primary investors in Italian private equity and why is there a growing interest to invest locally?
- To what extent is Italy perceived to be a volatile market and how can reluctant investors be convinced to allocate?
- Will Italy be successful even in a downturn?
- Examining the emergence of high-net-worth individuals and family offices as new sources of capital for Italian fund managers.
- What are LP views on co-investing?

Succession deals in the Mittelstand: How have a new breed of entrepreneurs affected opportunities in the German buyout market?

11:45 - 12:15

German Private Equity Summit

- Is there likely to be a wave of transactions in the imminent future and how can firms be best positioned to take advantage?
- Which strategies are successful, which aren't and why?

Participants

Panellists: Michael Petersen - Managing Partner, Cross Equity Partners AG

Nick Money-Kyrle - Founding Partner, Steadfast Capital

Andreas Fendel - Co-Founder and Managing Partner, Quadriga Capital

Christoph Kauter - Founder & Managing Partner, Beyond Capital Partners GmbH

Keynote Address: Investing in digital innovation and transformation

11:45 - 12:00
Healthcare Summit

How investing in digital technologies can develop "smart health" approaches to increase access and affordability, improve quality, and lower costs. Exploring opportunities in Blockchain, RPA, cloud, artificial intelligence (AI), robotics and internet of medical things (IoMT)

Climate change – let's get real

12:00 - 12:30
ESG Summit

- How do you adapt your portfolio to climate change?
- It is all about regulatory compliance or is it a genuine commercial and risk management opportunity?
- Do you add a carbon tax to investments?
- Shifting towards the low carbon economy – how does one effectively do it?
- Is there a need for a "transition" economy structure?

Participants

Erin Sarret - Director, StepStone Global

Eimear Palmer - Responsible Investing Officer, Intermediate Capital Group (ICG)

Phil Davis - Head of Sustainability, EMEA, The Carlyle Group

Healthcare IT: embracing digital solutions to improve patient outcomes

12:00 - 12:30
Healthcare Summit

Exploring the most attractive investment opportunities within HCIT sector. The overview of the most recent Healthcare IT innovations and trends. Evaluating the importance of cybersecurity and data protection. Exploring challenges and solutions in dealing with collection of big data under GDPR in the HCIT sector

Participants

Michael Cole - Managing Partner, Global Neurohealth Ventures

Gavin Teo - General Partner, B Capital Group

Seeking alpha in mid- market direct lending

12:10 - 12:40
Private Debt Summit

- How can mid market players find an attractive niche to stand out in the competitive environment?
- What new products, regions and strategies are being developed and which offer the best risk-adjusted returns in the current competitive environment and why?
- Will more firms lend to companies not backed by private equity in the future?

Participants

Moderator: James Newsome - Managing Partner, Arbour Partners

Panellists: Christophe Bavière - CEO & Founding Partner, Idinvest Partners

Sengal Selassie - Co-Founder & Managing Partner, Brightwood Capital Advisors

Daniel Bartsch - COO & Co-Founder, creditshelf AG

Kenneth Kencel - President and Chief Executive Officer, Churchill Asset Management LLC

Keynote address: Software, data and machine learning

12:15 - 12:45
Disruption and Innovation Summit

The future of private equity and venture capital

Participants

Panellists: Roberto Bonanzinga - Co-Founder, InReach Ventures

A case for small and mid-cap firms: finding growth in smaller deals

12:15 - 12:45
Geo Focus Summit Day 2020: Italy

- Strong returns in the Italian mid-market: Is listed small-cap and mid-cap market the best place for investors?
- Which sectors are growing and which investment strategies provide the most successful deals for mid-sized companies?

Participants

Panellists: Filippo Gaggini - Managing Partner, Progressio SGR SpA

Paolo Gambarini - Founding Partner, Wise Equity

Keynote Address

12:15 - 12:45
German Private Equity Summit

The spotlight on investors

12:30 - 13:00
ESG Summit

What is the role of LPs in driving awareness and change amongst GPs? Portfolio construction: how do LPs integrate ESG into their portfolio? Is it possible to have a universal approach? Who should foot the bill for systems implementation at a portfolio level – the company or the GP or the LP?

Participants

Moderator: Emily S. Kreps - Global Head of Investor Initiatives, CDP

Panellists: Ana Lei Ortiz - Managing Director, Hamilton Lane

Elias Korosis - Partner, Hermes GPE

Risk management

12:30 - 13:00
Healthcare Summit

Examining risks specific to the Healthcare sector. Assessing and managing reimbursement, regulatory, political, reputation and clinical risks. Practical aspects for dealing with specific healthcare related investment risks

Participants

Sam Gray - Managing Partner, Apposite Capital

Technology and innovations in income strategies

12:40 - 13:10
Private Debt Summit

How is digitalisation disrupting current practices, what is the predicted impact of new technology trends on private credit strategies and how can forward thinking lenders harness these trends for their own advantage?

Participants

Panellists: David Flannery - President of Vista Credit Partners, Vista Equity Partners

Networking lunch break & LP only lunch

12:45 - 14:00
Disruption and Innovation Summit

13:00-14:00

This exclusive lunch is for LPs to network with their peers. Open to pre-registered development finance institutions, endowments, foundations, insurance companies, pension funds and sovereign wealth funds, subject to qualification. To register please contact Chloe Elliott at chloe.elliott@knect365.com.

Networking lunch break & LP only lunch

12:45 - 14:00

Geo Focus Summit Day 2020: Italy

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Networking lunch break & LP only lunch

13:10 - 14:05

Private Debt Summit

13:00-14:00

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Afternoon Chair

13:55 - 14:00

German Private Equity Summit

How will tokenization revolutionise the private equity industry from fundraising to transaction management?

14:00 - 14:30

Disruption and Innovation Summit

Examining the effect of cryptocurrency, digitalisation, fundraising, investment management

Participants

Moderator:: Dirk Holz - Head of Product Development Private Equity & Real Estate, Société Générale

Panellists: Myles Milston - CEO, Globacap

Kai Braun - Partner, PwC

Jack Sibley - Innovation and Technology Strategist, Nuveen Real Estate

Emerging markets – cutting edge of ESG

14:00 - 14:30

ESG Summit

What can fund managers and investors in developed markets learn from ESG experience of emerging markets?

Participants

Rashad Kaldany - Chief Investment Officer, BlueOrange Sustainable Capital

Vhangwele Manavhela - ESG Manager, PIC (Public Investment Corporation)

Menno Derks - Partner & Managing Director of Fund Investments, Sarona Asset Management

Real boundaries between majority and minority transactions: what Italian entrepreneurs really look for in terms of governance and exit rights

14:00 - 14:30

Geo Focus Summit Day 2020: Italy

- How can Italian GPs deal with an issue related to governance in a structured way?
- Planning for team continuity and succession: analysing the best approaches

Participants

Panellists: Tommaso Poletto - Head of Financial Sponsors Group, Equita Capital

Hands-on value creation: More important than ever due to high valuations

14:00 - 14:30

German Private Equity Summit

- Operational value-add: everyone says they do it, but do they? How can the quality of analysis be improved?
- Best strategies for growing the top line and making businesses more efficient

Participants

Panellists: Matthias Wilcken - Managing Director, Gilde Buy Out Advisory GmbH

Kristoffer Melinder - Managing Partner, Nordic Capital

Andreas Bohn - Co-CEO & Managing Partner, SwanCap Partners

An LP perspective

14:00 - 14:30

Healthcare Summit

- What makes Healthcare so attractive to institutional investors? Evaluating LP appetite for sector-focused funds vs. generalist/diversified funds.
- Analysing the competitive advantages and return profile of sector specialists.
- LPs on asset class allocation, portfolio construction and manager selection, governance and risk management, organizational design and decision making

Participants

Moderator: Kelly DePonte - Managing Director, Probitas Partners

Panellists: Tim Creed - Head of Investments Europe, Schroder Adveq

Sergey Sheshuryak - Managing Partner, Adams Street Partners

Lisa Edgar - Managing Director, Top Tier Capital Partners

Afternoon Chair

14:05 - 14:10

Private Debt Summit

Sluggish sponsorless: why is non-sponsored finance growing more slowly than expected?

14:10 - 14:40

Private Debt Summit

- What is holding back direct lending funds from scaling up their direct corporate lending activity?
- Assessing the benefits and challenges of sponsored vs non-sponsored lending - what are the different skill sets required and what is the risk/return profile for each strategy?
- Is a specialist approach the key to success?

Participants

Moderator: Tim Hames - Director General, BVCA 2013-2019

Panellists: Nael Khatoun - Managing Director & Co-Portfolio Manager, Oaktree Capital Management

Paul Shea - Managing Partner, Beechbrook Capital

Thomas Kyriakoudis - Chief Investment Officer, Permira Debt Managers

Tech Investing panel

14:30 - 15:00

Disruption and Innovation Summit

Participants

Moderator: Christopher Godfrey - President, CEPRES

Impact investment and UN Sustainable Development Goals (SDGs)

14:30 - 15:00

ESG Summit

- Are SDGs a reliable indicator to target impact investment opportunities?
- Are SDGs really the responsibility of private equity investors or of the government?

Participants

Panellists: Shami Nissan - Head of Responsible Investment, Actis

Eiso Vaandrager - Partner, O1 Ventures

Marc Moser - Associate Director for Impact & ESG, LGT Lightstone

Jan Ståhlberg - Founder and Managing Partner, Trill Impact AB

Significant exits in the Italian PE market

14:30 - 15:00

Geo Focus Summit Day 2020: Italy

- What does the distribution of exits by value and category of investor look like?
- Examining the exit routes for Italian-owned companies - how do international funds compare and compete with local players?
- What are the most popular and successful exit routes in the Italian market and what are the relative advantages and disadvantages of each?

Developments in fund of funds, direct and co-investments

14:30 - 15:00

German Private Equity Summit

- How successful is the fund of funds model for German investor?
- How attractive are SMAs?
- To what extent are German investors moving away from the fund of funds approach and going more directly into funds?
- How successful is the co-investment model and how should investors strike the right balance between direct, secondary and fund commitments?

Participants

Moderator: Svenja Becker - Managing Partner, Moravia Capital

Panellists: Ralph Guenther - Head of DACH & CEE Markets, Pantheon Ventures

Susanne von Gültlingen - Partner Alternatives, Siemens Fond Invest

Kathrin Kalau-Reus - Senior Investment Manager, Private Equity, Infrastructure, Timber, Bayerische Versorgungskammer

Investing in innovation – Blackstone's journey into Life Sciences

14:30 - 15:00

Healthcare Summit

Participants

Nicholas Galakatos - Head, Blackstone Life Sciences

LP perspectives on allocation to private debt

14:40 - 15:10

Private Debt Summit

- What growth have LPs seen and what effect will market volatility, interest rate increases and increased competition for deals have on investor sentiment?
- How concerned are LPs about returns, risk analysis and leverage and how has increased leverage affected pricing?
- If we are close to the top of the cycle, will private debt continue to look attractive to investors and how will investors evaluate the ability of managers to succeed in a volatile economic environment?

Participants

Panellists: John Graham - Senior Managing Director & Global Head of Credit Investments, Canada Pension Plan Investment Board (CPPIB)

John Bohill - Partner, StepStone Global

Sebastian Schroff - Global Head of Private Debt, Allianz Investment Management SE

Keynote address: How PE is systematically deploying data science and AI to drive DD and enhance value creation

15:00 - 15:30

Disruption and Innovation Summit

Participants

Christopher Kindt - Director, Hg

Diversity: how important is it really?

15:00 - 15:30

ESG Summit

- How do investment managers approach diversity?
- How much does it actually matter to LPs during the manager selection process?
- What do measuring and reporting measures look like when it comes to diversity and inclusion?

Participants

Peter Flynn - Director, Candela Capital

Dean Alborough - Head of ESG, Old Mutual Alternative Investments

Anders Strömblad - Head of External Managers, AP2

Italian venture capital- scaling up?

15:00 - 15:30

Geo Focus Summit Day 2020: Italy

- Assessing the progress of venture capital in Italy: shortening the gap with Europe?
- Has Italian VC finally entered a phase of maturity, and to what extent are start-ups entering the range of interest of international companies?

Upcoming new regulation and trends in fund structures

15:00 - 15:30

German Private Equity Summit

Discussing the effect of new requirements for pre-marketing, hosted AIFM/ own AIFM and Brexit restructurings

Participants

Patricia Volhard - Partner, Debevoise & Plimpton

Healthcare debt

15:00 - 15:30

Healthcare Summit

Joining traditional with credit products to help companies finance R&D, commercialisation and growth. Examining the options such as venture debt, royalty finance and commercial loans available for companies from pre revenue to growth

Participants

Michael Weinmann - Partner, CRG LP

Alex Hökfelt - Director, Credit team, EQT

Nooman Haque - Managing Director of Life Sciences and Healthcare, Silicon Valley Bank

Traditional vs. specialized credit

15:10 - 15:40

Private Debt Summit

What is the difference? Why now? What are the expected risk adjusted returns and losses, and how will LP portfolios benefit?

Participants

Moderator: Andre Hakkak - Founder & Managing Partner, White Oak Global Advisors

Panellists: Tod Trabocco - Managing Director, Credit Investment Group, Cambridge Associates

Gregory Racz - President, MGG Investment Group

Olya Klüppel - Partner, Global Growth Capital

Keynote Address: Work in the digital age: predicting the impact of technology, particularly artificial intelligence, on economics

15:30 - 16:00

Disruption and Innovation Summit

Artificial Intelligence is the most important technology of the 21. century. Nations and companies are competing for the best talents, infrastructure, influence and control.

In our digitalized world, machine learning and big data enable a new generation of thinking digital systems. They influence our personal life, privacy, security, freedom, health and wealth for better or worse.

Millions of current employees have to be re-skilled for new digital tasks. Policymakers have to work out regulation to control algorithms for transparency and responsibility. Companies have to face the emergence of automated state capitalism.

What is the role of the financial industry in all of this?

Participants

Fabian Westerheide - Entrepreneur and Investor for Artificial Intelligence, Asgard.vc

Afternoon refreshments and networking break

15:30 - 16:00

ESG Summit

Afternoon refreshments and networking break

15:30 - 16:00

Geo Focus Summit Day 2020: Italy

Afternoon refreshments and networking break

15:30 - 16:00

German Private Equity Summit

Afternoon refreshments and networking break

15:30 - 16:00

Healthcare Summit

Afternoon refreshments & networking break

15:40 - 16:10

Private Debt Summit

Afternoon refreshments and networking break

16:00 - 16:30

Disruption and Innovation Summit

ESG and financial returns

16:00 - 16:30

ESG Summit

- Is there a true quantifiable correlation between ESG and financial returns?
- What can we learn from the listed markets?
- Can ESG practices and methodology created by public markets be applied to private markets?

Participants

Moderator: James Brice - Group CEO, EBS Advisory

Ethan Levine - Managing Director & Co-Head of Natural Resources, Commonfund Capital

Paulus Ingram - Deputy CEO, Sarona Asset Management

Nino Tronchetti Provera - Founder and Managing Partner, Ambianta

Investment strategies: growth, directs, buy and build

16:00 - 16:30

Geo Focus Summit Day 2020: Italy

- Can buy-and-build platforms provide appealing investment opportunities for larger funds?
- What strategies do you need to apply to generate returns? How popular is growth capital amongst Italian private equity funds?
- Utilising a buy-and-build strategy for scaling up.

Participants

Panellists: Paolo Pendenza - Managing Partner, Private Debt, Equita Capital

Dario Cenci - Partner, Armonia SGR

The rising and thriving tech and growth scene in Germany: Balancing growth with profitability

16:00 - 16:30

German Private Equity Summit

- Where are the hot-spots? Are they pure innovation or copy cat?
- What is the status quo for Germany's unicorns?
- Will Brexit ultimately have a positive impact on Berlin's tech scene?
- To what extent will a downturn affect tech's business risk?

Spotlight on Europe

16:00 - 16:30
Healthcare Summit

The emergence of Healthcare-only funds in Europe and other key market trends. How can PE firms increase their participation in European Healthcare? How can investors successfully navigate the uncertain regulatory landscape?

Participants

Adam Ringer - Principal, AMP Capital

Tommi Unkuri - Partner, Summa Equity

Alan MacKay - Managing Partner, GH0 Capital

Distressed and stressed investing: is potential on the horizon?

16:10 - 16:30
Private Debt Summit

- Predicting the turn of the cycle: how are private credit managers positioned to take advantage of distressed opportunities?
- The strategy's performance is struggling to live up to expectations, but are the right conditions just around the corner?
- How much of a factor are inflation, interest rates, default rates and politics?

Participants

Panellists: Eric Larsson - Portfolio Manager & Co-Head of Special Situations, Alcentra Limited

Cyril Tergiman - Partner, EQT Credit

Kerry Hugh-Jones - Co-Managing Partner, Strategic Value Credit, Cheyne Capital

David Lyon - Co-Head of Private Credit, Neuberger Berman

Alternative data: a transformative new trend impacting investment research

16:30 - 17:00
Disruption and Innovation Summit

- Looking to alternative sources of data to help make data-driven decisions on investments.
- How can buying data sets, big data analytics solutions and data insights capitalise on new data sources?
- How can this data be analysed to evaluate public opinions, reputations, footfall and real transaction data?

Managing risks

16:30 - 17:00
ESG Summit

What are the most common internal and external risks associated with ESG integration? Environmental is not just climate. Social is not just about job creation. Governance is both macro (country) and micro (company).

Is a generic set of ESG risks feasible?

How to create a bespoke set of risks based on geography, macroeconomic situation, asset class, etc.? How to add up different risks that are specific to individual investments but difficult to consolidate at the portfolio level

Participants

Moderator: Marc Göbbels - Manager of ESG Services, Tauw

Peter Grubstein - Founder & Managing Director, NGEN

Jeremy Lytle - Partner, ECI Partners

Alison Fenton-Willock - Vice President and Head of ESG, Blackstone

The "how to" of fundraising

16:30 - 17:00
Geo Focus Summit Day 2020: Italy

- What does a successful fundraising strategy look like for Italian fund managers?
 - What are the main sources of independent fundraising?
-

Topic on secondaries

16:30 - 17:00
German Private Equity Summit

The next big thing

16:30 - 17:00
Healthcare Summit

- What sub-sector of Healthcare look most promising from the investment standpoint?
- Where are the next big opportunities for investors?

Participants

Shane Chesson - Co-Founder & Partner, Openspace Ventures

Sam Gray - Managing Partner, Apposite Capital

What to expect in the private debt secondaries market

16:30 - 17:00
Private Debt Summit

- Will 2020 be a year of growth for the private debt secondaries market as buyers position themselves for a turn in the cycle?
 - Are pressures growing across the universe of potential sellers that could drive selling in the short/medium term?
-

Employing digital capabilities to help manage, optimise and merge portfolio companies

17:00 - 17:30
Disruption and Innovation Summit

- Maximising the development of your portfolio companies so they perform better and increase returns
 - Understanding how potential portfolio companies are poised to manage digital disruption, from marketing, sales and customer care to intellectual property, data and security requirements, in order to fully calculate your risk and opportunity
-

Participants

Moderator: George Danner - President, Business Laboratory

Panellists: Tomasz Czechowicz - Managing Partner, MCI Capital

Fredrik Näslund - Head of Technology & Payments, Nordic Capital

Chair's closing remarks

17:00 - 17:05
ESG Summit

Close of Summit Day

Chair's closing remarks

17:00 - 17:05
Geo Focus Summit Day 2020: Italy

SESSIONS

SUMMIT DAY - 25/02/2020

SuperReturn International

25 - 28 February 2020
InterContinental Hotel
Berlin

Fundraising: are German PE firms still hitting the hard caps?

17:00 - 17:30

German Private Equity Summit

- Is asset gathering still the top strategic priority for private equity firms despite record fundraising?
- What are the reasons behind smaller funds raising more and doing it more quickly?
- What are the main investor concerns when faced with so much market liquidity?

Participants

Moderator: Philippe Roesch - Managing Partner , RIAM Alternative Investments

Panellists: Heiko Arnold - Managing Partner, Odewald KMU

Marc Brugger - Managing Director , LFPE

Manuel Hertweck - Managing Partner, capiton

Rainer Effinger - Managing Director, Nord Holdings

Chair's closing remarks

17:00 - 17:05

Healthcare Summit

Predictions on the performance of the asset class over the next 12 months: What will the next big thing be?

17:00 - 17:30

Private Debt Summit

- What are dry powder deployment expectations?
 - Which strategies will over and under-perform and why?
 - What's the next big development on the horizon?
-

Summit networking drinks reception

17:05 - 19:00

ESG Summit

Summit networking drinks reception

17:05 - 19:00

Geo Focus Summit Day 2020: Italy

Summit networking drinks reception

17:05 - 19:00

Healthcare Summit

Chair's closing remarks & close of summit day

17:30 - 17:35

Disruption and Innovation Summit

Chair's closing remarks & close of summit day

17:30 - 17:35

German Private Equity Summit

Chair's closing remarks & close of Summit Day

17:30 - 17:35

Private Debt Summit

Summit networking drinks reception

17:35 - 19:00

Disruption and Innovation Summit

Summit networking drinks reception

17:35 - 19:00

German Private Equity Summit

Summit networking drinks reception

17:35 - 19:00

Private Debt Summit

SCHEDULE

SUMMIT DAY - 25/02/2020

SuperReturn International

25 - 28 February 2020

InterContinental Hotel
Berlin

| TIME | DISRUPTION AND INNOVATION SUMMIT | ESG SUMMIT | GEO FOCUS SUMMIT DAY 2020: ITALY | GERMAN PRIVATE EQUITY SUMMIT | HEALTHCARE SUMMIT | PRIVATE DEBT SUMMIT |
|--------------|---|--|---|--|---|---|
| 08:00 | 08:40 - Registration and welcome coffee | 08:20 - Registration and welcome coffee | 08:40 - Registration & coffee | 08:30 - Registration and welcome coffee | 08:15 - Registration and welcome coffee | 08:15 - Registration and welcome coffee 08:35 - Chair's welcome address 08:45 - Keynote address: State of the market |
| 09:00 | 09:10 - Chair's welcome address 09:15 - Latest data showing how digital transformation in different industries drives growth in PE investments. 09:45 - The digital transformation imperative - Why PE firms must digitally transform to compete | 09:00 - Chair's welcome address 09:05 - Defining ESG 09:30 - ESG integration update: from why to why not? | 09:40 - Chair's welcome 09:45 - Italian market snapshot and macro-economic outlook | 09:10 - Chair's welcome address 09:15 - Geo-political events: what does the future hold for the German economy? 09:45 - Private Equity outlook for Germany: Bull or Bear? | 09:00 - Chair's welcome address 09:05 - Keynote address 09:20 - Deal drivers and the overarching market trends in Healthcare PE and VC | 09:05 - Are we at the peak? Testing the private debt market in a downturn 09:45 - Where next for private debt? What will the landscape look like in 5 years' time? |
| 10:00 | 10:15 - Bringing private equity into the digital age: How far have we really come? 10:45 - Morning coffee and networking break | 10:00 - This is how we do it 10:30 - Reporting, measuring and monitoring | 10:15 - Examining the characteristics of the Italian PE market and examining key market trends and drivers 10:45 - Morning coffee and networking break | 10:15 - LP perspectives: the return of the denominator effect? 10:45 - Morning coffee and networking break | 10:00 - Sector trends shaping the Healthcare industry 10:45 - Value creation | 10:15 - Is the private debt market ripe for consolidation private capital firms look for scale in the asset class? 10:45 - Morning coffee and networking break |

SCHEDULE

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|-------|--|--|---|---|---|---|
| 11:00 | <p>11:15 - Cryptocurrencies: paving the way for mass adoption into the crypto ecosystem</p> <p>11:45 - Blockchain: disrupting the alternative investment sector?</p> | <p>11:00 - Morning coffee and networking break</p> <p>11:30 - Regulatory update</p> | <p>11:15 - Family Fortunes: accessing the growing number of family institutions who are dedicating more time to PE, looking to learn more about the asset class and culture of PE and increasingly seeking foreign capital to boost growth</p> <p>11:45 - LPs on allocating to Italian private equity</p> | <p>11:15 - How will a downturn affect the German PE industry? What lessons have been learned from the last recession?</p> <p>11:45 - Succession deals in the Mittelstand: How have a new breed of entrepreneurs affected opportunities in the German buyout market?</p> | <p>11:15 - Morning coffee and networking break</p> <p>11:45 - Keynote Address: Investing in digital innovation and transformation</p> | <p>11:15 - US vs. Europe – what is the overlap?</p> <p>11:40 - Capital deployment in the current environment: does size matter?</p> |
| 12:00 | <p>12:15 - Keynote address: Software, data and machine learning</p> <p>12:45 - Networking lunch break & LP only lunch</p> | <p>12:00 - Climate change – let's get real</p> <p>12:30 - The spotlight on investors</p> | <p>12:15 - A case for small and mid-cap firms: finding growth in smaller deals</p> <p>12:45 - Networking lunch break & LP only lunch</p> | <p>12:15 - Keynote Address</p> <p>12:45 - Networking lunch break & LP only lunch</p> | <p>12:00 - Healthcare IT: embracing digital solutions to improve patient outcomes</p> <p>12:30 - Risk management</p> | <p>12:10 - Seeking alpha in mid-market direct lending</p> <p>12:40 - Technology and innovations in income strategies</p> |
| 13:00 | | <p>13:00 - Networking lunch break & LP only lunch</p> | | <p>13:55 - Afternoon Chair</p> | <p>13:00 - Networking lunch break & LP only lunch</p> | <p>13:10 - Networking lunch break & LP only lunch</p> |
| 14:00 | <p>14:00 - How will tokenization revolutionise the private equity industry from fundraising to transaction management?</p> <p>14:30 - Tech Investing panel</p> | <p>14:00 - Emerging markets – cutting edge of ESG</p> <p>14:30 - Impact investment and UN Sustainable Development Goals (SDGs)</p> | <p>14:00 - Real boundaries between majority and minority transactions: what Italian entrepreneurs really look for in terms of governance and exit rights</p> <p>14:30 - Significant exits in the Italian PE market</p> | <p>14:00 - Hands-on value creation: More important than ever due to high valuations</p> <p>14:30 - Developments in fund of funds, direct and co-investments</p> | <p>14:00 - An LP perspective</p> <p>14:30 - Investing in innovation – Blackstone's journey into Life Sciences</p> | <p>14:05 - Afternoon Chair</p> <p>14:10 - Sluggish sponsorless: why is non-sponsored finance growing more slowly than expected?</p> <p>14:40 - LP perspectives on allocation to private debt</p> |

SCHEDULE

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| 15:00 | <p>15:00 - Keynote address: How PE is systematically deploying data science and AI to drive DD and enhance value creation</p> <p>15:30 - Keynote Address: Work in the digital age: predicting the impact of technology, particularly artificial intelligence, on economics</p> | <p>15:00 - Diversity: how important is it really?</p> <p>15:30 - Afternoon refreshments and networking break</p> | <p>15:00 - Italian venture capital-scaling up?</p> <p>15:30 - Afternoon refreshments and networking break</p> | <p>15:00 - Upcoming new regulation and trends in fund structures</p> <p>15:30 - Afternoon refreshments and networking break</p> | <p>15:00 - Healthcare debt</p> <p>15:30 - Afternoon refreshments and networking break</p> | <p>15:10 - Traditional vs. specialized credit</p> <p>15:40 - Afternoon refreshments & networking break</p> |
| 16:00 | <p>16:00 - Afternoon refreshments and networking break</p> <p>16:30 - Alternative data: a transformative new trend impacting investment research</p> | <p>16:00 - ESG and financial returns</p> <p>16:30 - Managing risks</p> | <p>16:00 - Investment strategies: growth, directs, buy and build</p> <p>16:30 - The "how to" of fundraising</p> | <p>16:00 - The rising and thriving tech and growth scene in Germany: Balancing growth with profitability</p> <p>16:30 - Topic on secondaries</p> | <p>16:00 - Spotlight on Europe</p> <p>16:30 - The next big thing</p> | <p>16:10 - Distressed and stressed investing: is potential on the horizon?</p> <p>16:30 - What to expect in the private debt secondaries market</p> |
| 17:00 | <p>17:00 - Employing digital capabilities to help manage, optimise and merge portfolio companies</p> <p>17:30 - Chair's closing remarks & close of summit day</p> <p>17:35 - Summit networking drinks reception</p> | <p>17:00 - Chair's closing remarks</p> <p>17:05 - Summit networking drinks reception</p> | <p>17:00 - Chair's closing remarks</p> <p>17:05 - Summit networking drinks reception</p> | <p>17:00 - Fundraising: are German PE firms still hitting the hard caps?</p> <p>17:30 - Chair's closing remarks & close of summit day</p> <p>17:35 - Summit networking drinks reception</p> | <p>17:00 - Chair's closing remarks</p> <p>17:05 - Summit networking drinks reception</p> | <p>17:00 - Predictions on the performance of the asset class over the next 12 months: What will the next big thing be?</p> <p>17:30 - Chair's closing remarks & close of Summit Day</p> <p>17:35 - Summit networking drinks reception</p> |

Registration and welcome coffee

07:30 - 08:00

Chair's welcome address

08:00 - 08:15

SuperReturn International: Day 1

Participants

Chair: Ruulke Bagijn - Head of Investment Solutions, The Carlyle Group and Co-Head of Primaries, Alpinvest Partners, The Carlyle Group

2020: An economic cycle at its peak?

08:15 - 08:45

SuperReturn International: Day 1

- What implications will the China-US trade war, foreign-policy crises, interest rates, surging populism have for global supply chains?
- Is this the start of a new cold war?

Participants

Stephanie Flanders - Senior Executive Editor for Economics & Head of Bloomberg Economics, Bloomberg

Keynote interview

08:45 - 09:10

SuperReturn International: Day 1

The challenge of delivering compelling risk-adjusted investment returns throughout market cycles

Participants

Michael Arougheti - Director, Co-Founder, Chief Executive Officer and President, Ares Management LLC

Interviewed by: Jason Kelly - Executive Editor & New York Bureau Chief, Bloomberg

Engaged conversation: : Macroeconomics and politics

09:00 - 09:45

Engaged conversation

Run under the Chatham House Rule. No press.

Participants

Discussion Leader:: Stephanie Flanders - Senior Executive Editor for Economics & Head of Bloomberg Economics, Bloomberg

State of the union: What are the key gamechangers for private equity today?

09:10 - 09:40

SuperReturn International: Day 1

- How much of a threat does debt pose to private markets?
- What effect will short and long term funds have for the traditional 10 year private equity fund?
- Will multi-billion dollar family offices start investing directly and how will this change the LP landscape?
- Is the bloom off the rose for emerging markets? And have PE firms finally adapted to care about ESG, job retention, paying taxes and environmental considerations?

Participants

Moderator: Hartley Rogers - Chairman, Hamilton Lane

Panellists: Matthew Kabaker - Senior Managing Director, Global Co-Head of Private Equity, Centerbridge Partners

Bill Ford - CEO, General Atlantic

Ming Lu - Head of Asia Pacific, KKR

Christian Sinding - CEO & Managing Partner, EQT

Keynote presentation: Technology market update

09:40 - 10:05

SuperReturn International: Day 1

Participants

Deven Parekh - Managing Director, Insight Partners

The global investment landscape for 2020: CEO insights on key opportunities and challenges for private capital

10:05 - 10:30

SuperReturn International: Day 1

Participants

Interviewee: Kewson Lee - Co-Chief Executive Officer, The Carlyle Group

Morning coffee and networking break

10:30 - 11:00

SuperReturn International: Day 1

Engaged conversation: Spotlight on regulation

10:30 - 11:30

Engaged conversation

Come along for a discussion on the latest regulatory updates affecting the industry

Run under the Chatham House Rules. No press.

Participants

Discussion Leaders:: Patricia Volhard - Partner, Debevoise & Plimpton

Dörte M Höppner - Chief Operating Officer, Riverside Europe Fund

Private equity over the years: key drivers of growth and opportunity across market cycles

11:00 - 11:25

SuperReturn International: Day 1

Participants

Interviewee: Leon Black - Chairman and Chief Executive Officer, Apollo

Operating in a culture of radical truth and radical transparency to build the best possible understanding of global economies and markets

11:25 - 11:50

SuperReturn International: Day 1

Participants

Interviewee: Eileen Murray - Co-Chief Executive Officer, Bridgewater Associates

Interviewer: Jennifer Prosek - Founder & CEO, Prosek Partners

LP Perspectives: Putting capital to work

11:50 - 12:20

SuperReturn International: Day 1

Current attractive market opportunities and trends

Participants

Moderator: Philipp Patschkowski - Managing Director, Neuberger Berman

Keynote Interview: Private equity is booming, private credit is soaring, how long will it last? what's next?

12:20 - 12:45

SuperReturn International: Day 1

Participants

Interviewee: Jeff Aronson - Co-Founder, Managing Principal, Centerbridge Partners

Interviewer: Henny Sender - Chief Correspondent, Financial Times

The rise of private markets: what are the implications?

12:45 - 13:15

SuperReturn International: Day 1

Private markets are going mainstream: Private equity's net asset value has grown more than sevenfold since 2002, twice as fast as global public equities.

The rapidly developing industry now offers many ways for investors to customize their exposure: as secondaries, long-duration funds, capital call lines of credit, and other structures proliferate, are they making the industry more flexible and accommodating to investors?

Participants

Moderator: Michael Halford - Partner and Head of Private Investment Funds for Europe and Asia, Goodwin

Panellists: Robert Lucas - Managing Partner, CVC Capital Partners

J.Christopher Kojima - Managing Director, Goldman Sachs

Nikos Stanopoulos - Partner, Member of the Executive Committee, BC Partners

Michael Siefke - Managing Director and Co-Head of Europe Private Equity, Bain Capital

Engaged conversation: LP only Q&A session

12:45 - 13:15

Engaged conversation

By invitation only

Keynote Interview: Bringing an owner/operator approach to PE investing

13:15 - 13:40

SuperReturn International: Day 1

Participants

Interviewer: Sarah Syed - European Private Equity Correspondent, Bloomberg News

Engaged conversation: LP only Q&A session

13:15 - 13:45

Engaged conversation

By invitation only

Delegate quickfire showcase emerging/specialist managers

13:30 - 14:00

Quickfire showcase

Networking lunch break

13:40 - 14:15

SuperReturn International: Day 1

Afternoon Chair

14:15 - 14:20

SuperReturn International: Day 1

Keynote presentation: Investing in Growth Equity 2.0

14:20 - 14:50

SuperReturn International: Day 1

Participants

Jon Korngold - Senior Managing Director and Global Head of Blackstone's Growth Equity, Blackstone

Keynote interview : Developing differentiated angles in a competitive market

14:50 - 15:15

SuperReturn International: Day 1

Participants

Interviewee: Todd Sisitsky - Managing Partner, TPG Capital

Interviewer: Jason Kelly - Executive Editor & New York Bureau Chief, Bloomberg

Value creation and realisation: seeking new approaches to generate high returns

15:15 - 15:45

SuperReturn International: Day 1

- The importance of being involved in the entire portfolio life cycle.
- Which initiatives and capabilities are proving most effective in achieving the best possible return for their portfolio companies and investors?
- What is the best balance between digital innovation and traditional value creation measures?

Participants

Panellists: Mark Redman - Global Head of Private Equity, OMERS

Mahadeva Matt Mani - Partner, PricewaterhouseCoopers Advisory NV

Guthrie Stewart - SVP, Global Head of Private Investments, PSP Investments

Keynote address

15:45 - 16:05

SuperReturn International: Day 1

Participants

David Rubenstein - Co-Founder & Co-Executive Chairman, The Carlyle Group

Afternoon refreshments and networking break

16:05 - 16:35

Chair's opening remarks

16:35 - 16:40

Stream A: Mid market focus

Chair's opening remarks

16:35 - 16:40

Stream B: Infrastructure investments

Participants

Chair: Terrence Tehranian - Partner, Pioneer Point Partners

Chair's opening remarks

16:35 - 16:40

Stream C: Update on secondaries

Chair's opening remarks

16:35 - 16:40

Stream D: Value-added volatility & the PE cycle

Chair's opening remarks

16:35 - 16:40

Stream E: Investor outlook

Latest developments and innovations in the mid market

16:40 - 17:10

Stream A: Mid market focus

- Which funds continue to generate alpha and why?
- Does geo, size and sector make a difference to fund performance?

Participants

Moderator: Gordon Hargraves - Partner, Private Advisors

Panellists: Lindsey McMurray - Managing Partner & Co-Founder, Pollen Street Capital

Jan Johan Kühl - Managing Partner, Polaris Equity

Íñigo Sánchez-Asiain - Founding Partner, Portobello Capital

Ignacio Sarria - Managing Director, New Mountain Capital

The role of private infrastructure in driving global growth

16:40 - 17:10

Stream B: Infrastructure investments

Predicting the effect on the infrastructure sector of the increased use of data and analytics to unlock operational efficiencies, the reassertion of public sector control and increased regulation, competition for new technologies and sustainability going mainstream

Participants

Panellists: **Dmitriy Antropov** - Co-Head Private Infrastructure Integrated Investments, Partners Group

Update on secondaries

16:40 - 17:10

Stream C: Update on secondaries

An update on secondaries funds, deal flow, pricing

Participants

Bernhard Engelen - Managing Director, Greenhill & Co. International LLP

How will fund structures be altered in a post-Brexit world?

16:40 - 17:10

Stream D: Value-added volatility & the PE cycle

How will new trade barriers affect investments, what are the implications for regulation, deal flow, fundraising and fund domicile?

LP appetite

16:40 - 17:10

Stream E: Investor outlook

- How willing are LPs to back non-traditional PE products in an accelerated fundraising environment?
- Emerging manager funds, innovative structures, niche strategies, fundless sponsors, co-investment opportunities, crossing asset types, expanding into a new region: What are the risks vs the rewards?

Participants

Moderator: **Björn Waltmans** - Managing Director, Wilshire Private Markets

Panellists: **Miriam Schmitter** - Managing Director, Commonfund Capital

Sunaina Sinha - Managing Partner, Cebile Capital

Mid market – calm before the storm?

17:10 - 17:40

Stream A: Mid market focus

- Are troubled times ahead?
- What type of behavior could create a catalyst for a downturn?
- What is the current LP appetite for mid market deals and what can mid market GPs do to attract their interest?

Participants

Panellists: **Pawel Gieryński** - Managing Partner, Abris Capital

Morten Welo - COO & Head of Investor Relations, FSN Capital

Eric Bismuth - CEO, Montefiore

Adam Palmer - Managing Director and Head of the Global Aerospace, Defense and Government Services team, The Carlyle Group

The renewables revolution – only just beginning or running out of steam?

17:10 - 17:40

Stream B: Infrastructure investments

Examining the investment opportunity across renewables (including C&I) and related technologies (grids, storage, micro-grids, EV)

Participants

Moderator: **Lucy Heintz** - Partner, Actis

Panellists: **Waleed Elgohary** - Senior Principal, Energy & Resources | Real Assets, CPPIB

Pooja Goyal - Partner and Head of Renewable and Sustainable Energy Team, The Carlyle Group

Yorick Groen - Senior Portfolio Manager, Private Equity and Infrastructure, PGB

Where are the best risk-adjusted return secondary strategies?

17:10 - 17:40

Stream C: Update on secondaries

PE deal volume in 2018 finally surpassed 2007 highs. Will we look back at 2018 as a repeat of 2007's peak?

17:10 - 17:40

Stream D: Value-added volatility & the PE cycle

- Pricing is similar, covenant-light debt has returned, dry powder keeps rising, and every day new players enter.
- But private markets are twice as large; the average PE deal is smaller and less levered, club deals are no more, fundraising has taken a breather.
- Whenever the downturn comes, what do we have to fear?

Participants

Moderator: **Javier Espinoza** - Private Capital Correspondent, Financial Times

LPs on asset allocation

17:10 - 17:40

Stream E: Investor outlook

- Should LPs pursuing portfolio construction concentrate capital with fewer big managers or expand the selection with a wider range of smaller managers with some degree of specialization to incorporate higher return potential?
- How best to calibrate exposure for an LPs' risk tolerance, illiquidity capacity, and fund oversight capability?

Participants

Panellists: **Rainer Ender** - Head of Investment Management, Schroder Adveq

Joshua Fenton - Director of Investments, The Helmsley Charitable Trust

Giovanni Orsi - Managing Director, Private Equity, Funds, PSP Investments

Specialisation in the lower mid market: Small is beautiful – but is specialisation required?

17:40 - 18:10

Stream A: Mid market focus

- To what extent does sector focused investing in the LMM outperform generalist fund investments?
- What about geographic focused investing; do you need to be Spanish to excel in the Spanish LMM?
- How attractive is the LMM segment for investors; what are some of the specific segment risks; and how can those risks be avoided?
- What are the sourcing challenges in the LMM – can specialization improve the process of finding acquisition candidates?
- How is value created in the LLM – is sector or geographic specialization a necessary tool for LLM investors to accomplish meaningful transformation and improvements?

Participants

Moderator: Marc der Kinderen - Managing Partner, 747 Capital

Panellists: David Barbour - Managing Partner & Co-Founder, FPE Capital

Eric Larson - Co-CEO, Tilia Holdings

Kathryn Mayne - Managing Director, Horsley Bridge Partners

Jean Marc Jabre - Co-Founder, Capital D

“Horses for Courses”: Direct vs indirect and co-investment access to infrastructure investment opportunities

17:40 - 18:10

Stream B: Infrastructure investments

- How can investors best gain access to the infrastructure investment market?
- How are platforms and partnerships allowing investors to acquire direct expertise and what are the effects of increased competition on the asset class?

Participants

Moderator: Uwe Fleischhauer - Founding Partner and Managing Director, YIELCO Investments

Panellists: Yves Meyer Buelow - Managing Director, Allianz Capital Partners

Dominik von Scheven - Senior Investment Manager, HSBC Alternative Investments

Kelly Marshall - Executive Vice President, Strategic Partnerships, OMERS

Secondaries: the next generation

17:40 - 18:10

Stream C: Update on secondaries

- Examining innovation and creativity in the secondaries market
- What new deals are being structured, how are transactions evolving, what new investment strategies are being pursued to expand the pool of available liquidity solutions?
- Has the market become mainstream?

Participants

Moderator: Pål Ristvedt - Partner, Lexington Partners

Panellists: Christian Diller - Partner & Co-Founder, Montana Capital Partners

Oliver Gardey - Head of Private Equity Fund Investments, ICG Enterprise Trust

Gabriel Möllerberg - Managing Director, Goldman Sachs

Tristram Perkins - Global Co-Head of Secondary Private Equity, Neuberger Berman

Distressed investing: are the right conditions finally around the corner?

17:40 - 18:10

Stream D: Value-added volatility & the PE cycle

- Is now the time to invest in distressed debt? How are fund managers positioned to take advantage of distressed opportunities in the lead up to a market dislocation?
- What are the best strategies to unlock value when performance has been disappointing?
- How are concerns over vulnerability to market cycles overcome?

Participants

Chris Boehringer - Managing Director and Co-Head of Distressed Debt Europe, Oaktree Capital Management

LP innovation and syndication: what will the LP of the future look like?

17:40 - 18:10

Stream E: Investor outlook

- How can LPs find new opportunities to evolve a collaborative model in both private and public markets? How realistic is the argument for larger LPs to syndicate together instead of bidding against each other to create a more efficient business model?
- Will the terms LP/GP even exist in 10 years' time?

Participants

Moderator: Richard Clarke-Jervoise - Head of Private Equity and Private Debt, BNP Paribas Wealth Management

Exit activity in the mid market

18:10 - 18:40

Stream A: Mid market focus

Evaluating the multiple exit routes in the mid market: trade sales, secondary & IPO activity & maximising value whatever your route to realisation

Participants

Panellists: Andrew Weinberg - Founder, Managing Partner & CEO, Brightstar Capital Partners

Gilles Collombin - Partner & Head of Investor Relations, Charterhouse

Ted Kramer - President & CEO, HKW

Analysing the pros and cons of different infrastructure models: Who wants to own core infrastructure anymore? Is core plus the new core?

18:10 - 18:40

Stream B: Infrastructure investments

- To what extent will core infrastructure suffer the most if interest rates rise and return requirements adjust upwards?
- Do current levels of risk and return make sense?
- Has core moved outside the infra fund space into direct ownership?
- What are the most successful strategies for finding value in a downturn?

Participants

Moderator: Terrence Tehranian - Partner, Pioneer Point Partners

Panellists: Alexander Krater - Partner, Palladio Partners

GP-led deals Version 2.0

18:10 - 18:40

Stream C: Update on secondaries

- How are the trends of tender offers, asset sales, spinouts, strip sales, stapled deals and fund continuation vehicles unlocking value, and what is the impact on the broader PE industry?
- Where do we go from here?

Participants

Moderator: John Daghlian - Partner, Akin Gump LLP

Panellists: Matt Jones - Partner, Pantheon

Valérie Handal - Managing Director, HarbourVest Partners

Nik Morandi - Senior Principal, Funds, Secondaries & Co-Investments (London office), CPPIB

SESSIONS

MAIN CONFERENCE DAY 1 - 26/02/2020

SuperReturn International

25 - 28 February 2020
InterContinental Hotel
Berlin

Special situations and turnarounds

18:10 - 18:40

Stream D: Value-added volatility & the PE cycle

Examining the growing trend to include carve outs and turnaround investments as part of a wider investment strategy: What is the investor appetite and where do the best opportunities lie for 2020?

Participants

Moderator: Peter Laib - Chairman, YIELCO Investments

Panellists: Timothy Meyer - Co-founder and Managing Partner, Angeles Equity Partners

Stefan Lehotkay - Partner, ClearSight Investments

Dominic Slade - Managing Partner, Alchemy Partners

LP/GP Debate: Lies, damned lies and private equity performance

18:10 - 18:40

Stream E: Investor outlook

- What is the level of disconnect between LPs and GPs? Has LP-GP alignment lost its way? What is the potential impact of much lower returns?

Run under the Chatham House Rules.

No press.

Participants

Panellists: Sweta Chattopadhyay - Director, bfinance

End of Main Conference Day 1

18:40 - 18:45

Evening networking cocktail party

18:45 - 20:50

Hugo's, 14th Floor at the InterContinental Hotel, Berlin

SCHEDULE

MAIN CONFERENCE DAY 1 - 26/02/2020

SuperReturn International

25 - 28 February 2020

InterContinental Hotel
Berlin

| TIME | ENGAGED CONVERSATION | QUICKFIRE SHOW-CASE | STREAM A: MID MARKET FOCUS | STREAM B: INFRA-STRUCTURE INVESTMENTS | STREAM C: UPDATE ON SECONDARIES | STREAM D: VALUE-ADDED VOLATILITY & THE PE CYCLE | STREAM E: INVESTOR OUTLOOK | SUPERRETURN INTERNATIONAL: DAY 1 |
|-------|---|---|---|---|---|---|---|---|
| 07:00 | 07:30 - Registration and welcome coffee | 07:30 - Registration and welcome coffee | 07:30 - Registration and welcome coffee | 07:30 - Registration and welcome coffee | 07:30 - Registration and welcome coffee | 07:30 - Registration and welcome coffee | 07:30 - Registration and welcome coffee | 07:30 - Registration and welcome coffee |
| 08:00 | | | | | | | | 08:00 - Chair's welcome address 08:15 - 2020: An economic cycle at its peak? 08:45 - Keynote interview |
| 09:00 | 09:00 - Engaged conversation: : Macroeconomics and politics | | | | | | | 09:10 - State of the union: What are the key gamechangers for private equity today? 09:40 - Keynote presentation: Technology market update |
| 10:00 | 10:30 - Engaged conversation: Spotlight on regulation | | | | | | | 10:05 - The global investment landscape for 2020: CEO insights on key opportunities and challenges for private capital 10:30 - Morning coffee and networking break |

SCHEDULE

MAIN CONFERENCE DAY 1 - 26/02/2020

SuperReturn International

25 - 28 February 2020

InterContinental Hotel
Berlin

| TIME | ENGAGED CONVERSATION | QUICKFIRE SHOW-CASE | STREAM A: MID MARKET FOCUS | STREAM B: INFRA-STRUCTURE INVESTMENTS | STREAM C: UPDATE ON SECONDARIES | STREAM D: VALUE-ADDED VOLATILITY & THE PE CYCLE | STREAM E: INVESTOR OUTLOOK | SUPERRETURN INTERNATIONAL: DAY 1 |
|-------|---|---------------------|----------------------------|---------------------------------------|---------------------------------|---|----------------------------|--|
| 11:00 | | | | | | | | <p>11:00 - Private equity over the years: key drivers of growth and opportunity across market cycles</p> <p>11:25 - Operating in a culture of radical truth and radical transparency to build the best possible understanding of global economies and markets</p> <p>11:50 - LP Perspectives: Putting capital to work</p> |
| 12:00 | 12:45 - Engaged conversation: LP only Q&A session | | | | | | | <p>12:20 - Keynote Interview: Private equity is booming, private credit is soaring, how long will it last? what's next?</p> <p>12:45 - The rise of private markets: what are the implications?</p> |

SCHEDULE

MAIN CONFERENCE DAY 1 - 26/02/2020

SuperReturn International

25 - 28 February 2020

InterContinental Hotel
Berlin

| TIME | ENGAGED CONVERSATION | QUICKFIRE SHOWCASE | STREAM A: MID MARKET FOCUS | STREAM B: INFRA-STRUCTURE INVESTMENTS | STREAM C: UPDATE ON SECONDARIES | STREAM D: VALUE-ADDED VOLATILITY & THE PE CYCLE | STREAM E: INVESTOR OUTLOOK | SUPERRETURN INTERNATIONAL: DAY 1 |
|-------|---|--|----------------------------|---------------------------------------|---------------------------------|---|----------------------------|--|
| 13:00 | 13:15 - Engaged conversation: LP only Q&A session | 13:30 - Delegate quickfire showcase emerging/specialist managers | | | | | | <p>13:15 - Keynote Interview: Bringing an owner/operator approach to PE investing</p> <p>13:40 - Networking lunch break</p> |
| 14:00 | | | | | | | | <p>14:15 - Afternoon Chair</p> <p>14:20 - Keynote presentation: Investing in Growth Equity 2.0</p> <p>14:50 - Keynote interview : Developing differentiated angles in a competitive market</p> |
| 15:00 | | | | | | | | <p>15:15 - Value creation and realisation: seeking new approaches to generate high returns</p> <p>15:45 - Keynote address</p> |

SCHEDULE

MAIN CONFERENCE DAY 1 - 26/02/2020

SuperReturn International

25 - 28 February 2020
InterContinental Hotel
Berlin

| TIME | ENGAGED CONVERSATION | QUICKFIRE SHOW-CASE | STREAM A: MID MARKET FOCUS | STREAM B: INFRA-STRUCTURE INVESTMENTS | STREAM C: UPDATE ON SECONDARIES | STREAM D: VALUE-ADDED VOLATILITY & THE PE CYCLE | STREAM E: INVESTOR OUTLOOK | SUPERRETURN INTERNATIONAL: DAY 1 |
|-------|---|---|---|--|---|---|---|---|
| 16:00 | 16:05 - Afternoon refreshments and networking break | 16:05 - Afternoon refreshments and networking break | 16:05 - Afternoon refreshments and networking break 16:35 - Chair's opening remarks 16:40 - Latest developments and innovations in the mid market | 16:05 - Afternoon refreshments and networking break 16:35 - Chair's opening remarks 16:40 - The role of private infrastructure in driving global growth | 16:05 - Afternoon refreshments and networking break 16:35 - Chair's opening remarks 16:40 - Update on secondaries | 16:05 - Afternoon refreshments and networking break 16:35 - Chair's opening remarks 16:40 - How will fund structures be altered in a post-Brexit world? | 16:05 - Afternoon refreshments and networking break 16:35 - Chair's opening remarks 16:40 - LP appetite | 16:05 - Afternoon refreshments and networking break |
| 17:00 | | | 17:10 - Mid market – calm before the storm? 17:40 - Specialisation in the lower mid market: Small is beautiful – but is specialisation required? | 17:10 - The renewables revolution – only just beginning or running out of steam? 17:40 - “Horses for Courses”: Direct vs indirect and co-investment access to infrastructure investment opportunities | 17:10 - Where are the best risk-adjusted return secondary strategies? 17:40 - Secondaries: the next generation | 17:10 - PE deal volume in 2018 finally surpassed 2007 highs. Will we look back at 2018 as a repeat of 2007's peak? 17:40 - Distressed investing: are the right conditions finally around the corner? | 17:10 - LPs on asset allocation 17:40 - LP innovation and syndication: what will the LP of the future look like? | |

SCHEDULE

MAIN CONFERENCE DAY 1 - 26/02/2020

SuperReturn International

25 - 28 February 2020

InterContinental Hotel
Berlin

| TIME | ENGAGED CONVERSATION | QUICKFIRE SHOWCASE | STREAM A: MID MARKET FOCUS | STREAM B: INFRASTRUCTURE INVESTMENTS | STREAM C: UPDATE ON SECONDARIES | STREAM D: VALUE-ADDED VOLATILITY & THE PE CYCLE | STREAM E: INVESTOR OUTLOOK | SUPERRETURN INTERNATIONAL: DAY 1 |
|-------|--|--|---|--|--|--|--|--|
| 18:00 | <p>18:40 - End of Main Conference Day 1</p> <p>18:45 - Evening networking cocktail party</p> | <p>18:40 - End of Main Conference Day 1</p> <p>18:45 - Evening networking cocktail party</p> | <p>18:10 - Exit activity in the mid market</p> <p>18:40 - End of Main Conference Day 1</p> <p>18:45 - Evening networking cocktail party</p> | <p>18:10 - Analysing the pros and cons of different infrastructure models: Who wants to own core infrastructure anymore? Is core plus the new core?</p> <p>18:40 - End of Main Conference Day 1</p> <p>18:45 - Evening networking cocktail party</p> | <p>18:10 - GP-led deals Version 2.0</p> <p>18:40 - End of Main Conference Day 1</p> <p>18:45 - Evening networking cocktail party</p> | <p>18:10 - Special situations and turnarounds</p> <p>18:40 - End of Main Conference Day 1</p> <p>18:45 - Evening networking cocktail party</p> | <p>18:10 - LP/GP Debate: Lies, damned lies and private equity performance</p> <p>18:40 - End of Main Conference Day 1</p> <p>18:45 - Evening networking cocktail party</p> | <p>18:40 - End of Main Conference Day 1</p> <p>18:45 - Evening networking cocktail party</p> |

Registration and welcome coffee

08:00 - 08:30

Chair's welcome address

08:30 - 08:40

SuperReturn International: Day 2

Participants

Chair: Kevin Kuryla - Global Head of Private Funds Group, UBS Investment Bank

Impact investing – big business but does the reality match up to fund managers' claims?

08:40 - 09:10

SuperReturn International: Day 2

- Is there a commonly accepted definition of impact investing?
- What is the difference between responsible and impact?
- How can impact be measured?
- Is it being used by some large firms as a marketing varnish?

Participants

Moderator: Annachiara Marcandalli - Managing Director, Endowment & Foundation Practice, Cambridge Associates

Panellists: Megan Starr - Head of Impact, The Carlyle Group

Claire Hedley - Executive Director, Goldman Sachs

Susan Mac Cormac - Corporate Partner, Morrison & Foerster

Lila Preston - Partner & Co-Head, Growth Equity & Sustainable Solutions Fund, Generation Investment Management US LLP

Electronic polling session: Where are we in the cycle?

09:10 - 09:35

SuperReturn International: Day 2

- Have asset prices and "dry powder" reached an all-time high?
- What geopolitical events are managers most concerned about? Where are the best opportunities among the alternative asset classes to generate quality risk-adjusted returns and what should prudent investors be wary of?

Participants

Moderator: Henny Sender - Chief Correspondent, Financial Times

Panellists: Scott Sperling - Co-President, Thomas H. Lee Partners

Stéphane Etroy - Executive Vice-President and Head of Private Equity, CDPQ

Till Burges - Managing Director, HarbourVest Partners

LP only session

09:15 - 09:45

LP only

By invitation only

Keynote interview: What investment opportunities does the digital economy hold?

09:35 - 10:05

SuperReturn International: Day 2

Participants

Interviewee: Robert F. Smith - Founder, Chairman & CEO, Vista Equity Partners

Interviewer: Arash Massoudi - Corporate Finance & Deals Editor, Financial Times

Keynote address: Lessons learned building a preeminent PE business

10:05 - 10:30

SuperReturn International: Day 2

Participants

Interviewee: Stephen A. Schwarzman - Chairman, CEO, Co-Founder, Blackstone

Interviewer: Miriam Gottfried - Reporter, The Wall Street Journal

Keynote panel: Is your firm undertaking diversity efforts? If not, why not?

10:30 - 11:00

SuperReturn International: Day 2

Diverse teams drive better decision making: it is a fact that a wide range of perspectives, ideas and opinions will ultimately produce better investment outcomes. How can firms implement basic strategies to improve diversity in recruitment efforts?

Participants

Moderator: Mirja Lehmler-Brown - Partner and Managing Director, Hayfin Capital Management

Panellists: Paul Ward - Managing Partner, Pantheon

John Daghlian - Partner, Akin Gump LLP

Morning coffee and networking break

11:00 - 11:30

Keynote Interview

11:30 - 12:00

SuperReturn International: Day 2

Participants

Interviewer: David Rubenstein - Co-Founder & Co-Executive Chairman, The Carlyle Group

Value creation in an overheated market

12:00 - 12:25

SuperReturn International: Day 2

Participants

Interviewee: Steve Klinsky - CEO, New Mountain Capital

Keynote presentation: Technology investment specialisation: Buy-side and sell-side perspectives

12:25 - 12:50

SuperReturn International: Day 2

Sourcing and completing deals in an environment where technology is more sought after than 10 years ago.

Participants

A.J. Murphy - Managing Director, Silver Lake

Joe Osnoss - Managing Director, SilverLake

SuperReturn boardroom: LP only session

12:30 - 13:00
Engaged conversation

Run under the Chatham House Rules.

No press.

By invitation only

Guest speaker

12:50 - 13:30
SuperReturn International: Day 2

Participants

Major Tim Peake CMG , Astronaut

Networking lunch break

13:30 - 14:30

Afternoon plenary chairman

14:30 - 14:35
SuperReturn International: Day 2

Participants

Chair: **Marc Wursdorfer** - Managing Director, EMEA
Head of Private Funds Group, UBS Investment Bank

Keynote interview

14:35 - 15:00
SuperReturn International: Day 2

Participants

Interviewee: **Raymond Svider** - Managing Partner, BC
Partners

Interviewer: **Miriam Gottfried** - Reporter, The Wall
Street Journal

European mid-market: expanding strategies by specialising in various ways to seek sustainable competitive advantage

15:00 - 15:30
SuperReturn International: Day 2

- To what extent can sector-focused funds, strategy focused funds, funds with a key competency in sourcing, operational value-add or innovative fee structures offer LPs an edge within their programmes?

Participants

Moderator: **Merrick McKay** - Head of Europe – Private
Equity, Aberdeen Standard Investments

Panellists: **Jim Strang** - Head of EMEA, Hamilton Lane
Bjarne Lie - Managing Director, Verdane

François Jerphagnon - Head of Expansion, Ardian

Florian Schick - Managing Partner, Bregal
Unternehmerkapital

Exits in emerging markets

15:30 - 16:00
SuperReturn International: Day 2

- Exits are the main challenge in emerging markets which are typically less liquid.
- Buying the right kind of companies which sought after by strategic buyers is the key to exits.
- How should EM GPs make sure they are taking minimal currency and political risk while at the same time buying strategically relevant companies which they can easily sell?

Participants

Panellists: **Seymour Tari** - CEO , Turkven Private Equity

Afternoon refreshments and networking break

16:00 - 16:25

Chair's opening remarks

16:25 - 16:30
Stream A: Fundraising

Chair's opening remarks

16:25 - 16:30
Stream B: Value Add/Innovation

Chair's opening remarks

16:25 - 16:30
Stream C: Co-investments

Chair's opening remarks

16:25 - 16:30
Stream D: Growth equity

A look into the PE industry's analytical tools of the future

16:30 - 17:00
Stream A: Fundraising

What AI can tell us already now about the human side of PE fund due diligence?

Participants

Oliver Gottschalg - Professor of Strategy Department,
HEC Paris & Head of Research, PERACS

Value-add and innovation in private equity strategies

16:30 - 17:00
Stream B: Value Add/Innovation

- How are leading managers continuing to innovate and stay ahead of the competition?
- What are the pros and cons of GPs developing multi-business lines?
- Why do some endeavors succeed whilst others fail?

Participants

Jennifer Signori - Senior Vice President, Neuberger
Berman

New frontiers for Co-investments

16:30 - 17:00
Stream C: Co-investments

- Where is the co-investment world heading?
- How successful are pass the parcel deals?
- Will LPs move to sponsorless deals?
- What are the challenges of faster process time lines and what risks and considerations do LPs need to take heed of given current market dynamics?

Participants

Panellists: **Raja Hussain** - Director, BlackRock Private
Equity Partners

Richard Hope - Managing Director, Hamilton Lane

Growth equity: where do the most compelling opportunities lie?

16:30 - 17:00
Stream D: Growth equity

- What are the best business models for sourcing deal flow?
- How are outsized returns being generated?
- What role does this strategy bring to a portfolio and how great is LP appetite?

Participants

Panellists: **Graves Tompkins** - Managing Director,
Global Head of Capital Partnering, General Atlantic

Characterising the fundraising environment for 2020: Is some uncertainty creeping in?

17:00 - 17:30

Stream A: Fundraising

- Examining the challenges of an excess number of funds in the market and compressed fundraising timelines.
- How critical is timing, positioning and communication for GPs to retain investor faith?
- How are LPs allocating resources and capital to generate the best returns?

Participants

Moderator: Jonathan Blake - Consultant, Herbert Smith Freehills

Panellists: Constantinos Economou - Senior Vice President, Capital Dynamics

Alice Langley - Partner, IK Investment Partners

Mathew Powley - Director, Private Capital, Stonehage Fleming

Sector specialisation: gaining traction in Europe

17:00 - 17:30

Stream B: Value Add/Innovation

- The evolving PE landscape is posing challenges for generalists, giving sector specialists an edge.
- What are the benefits of being sector specialized, and how can the risks be mitigated?
- Which specialist fund are best positioned to weather a downturn?

LP appetite for co-investing: alpha or risk generator?

17:00 - 17:30

Stream C: Co-investments

- Does analysing co-investments make you a better fund picker?
- What are the entry points, what makes a good investment partner, and do co-investments really boost net performance?
- The importance of execution, quality and speed for success

Participants

Panellists: Chris Eckerman - Portfolio Manager - Private Equity Co-Investments, State of Wisconsin Investment Board

Roberto Torrini - Managing Director, Co-Investments, AlInvest Partners

Przemek Obloj - Managing Director, PSP Investments

Filippo Petrucci - Director, Cambridge Associates

Future of growth equity

17:00 - 17:30

Stream D: Growth equity

Generating alpha via top-down identification of long-term trends such as digital, emerging middle class, industrial renaissance and healthy aging combined with bottom-up selection of companies that combine a high exposure to the selected themes with upside potential.

Participants

Moderator: Anne Glover - Chief Executive, Amadeus Capital Partners

Panellists: Jan-Gisbert Schultze - Managing Partner, Acton Capital Partners

Effect on LP allocation and due diligence processes in an era of high velocity fundraising

17:30 - 18:00

Stream A: Fundraising

- How have LPs had to adapt their due diligence practices when funds are coming back to market before the performance is through?
- How can LPs see beyond the pitch and make informed decisions?
- How is this affecting decisions to re-up?

Participants

Moderator: Kelly DePonte - Managing Director, Probitas Partners

Panellists: Takahiro Kato - Head of Global Fund Investment, DBJ Asset Management

Al Kim - Director of Investments, Helmsley Charitable Trust

The rapid evolution of long term funds

17:30 - 18:00

Stream B: Value Add/Innovation

- Why has there been significant growth in longer term strategies?
- Are longer term funds complementary to traditional PE and if so how & why?
- What kind of long term strategies are working and why?
- How are LPs responding to longer term funds and looking at them from an asset allocation perspective?
- Where do long term funds go from here?

Closed door session on co-investments

17:30 - 18:00

Stream C: Co-investments

- Comparing different strategies for running a co-investment process: pros and cons
- What value can an LP bring to the table? How much LP involvement do GPs really want?
- How can you be seen as the co-investment partner of choice?
- How do the challenges and pitfalls presented to an investor vary depending on the different pipes that source the deal?
- Opaque fee structures: where are the potential misalignment of interests?
- Challenges of under-performance and adverse selection

Run under the Chatham House Rules.

No press.

Participants

Panellists: Benjamin Alt - Head of Investments DACH & Nordics, Schroder Adveq Management

Joanna Reiss - Partner, Cornell Capital

Gonzalo Erroz - Partner, Hayfin Capital Management

Is tech going mainstream and how will that affect growth equity?

17:30 - 18:00

Stream D: Growth equity

- As new sources of capital enter the market how are definitions changing?
- Tech was once the realm of the VC but is the digitalisation of economies leading to mainstream growth equity entering the market?

Participants

Moderator: Dante Leone - Managing Partner, CP-DL

Panellists: Nils Rode - Chief Investment Officer, Schroder Adveq

End of Main Conference Day 2

18:00 - 18:05

Evening networking reception – Beer & Sausage Party

18:05 - 19:30

SCHEDULE

MAIN CONFERENCE DAY 2 - 27/02/2020

SuperReturn International

25 - 28 February 2020

InterContinental Hotel
Berlin

| TIME | ENGAGED CONVERSATION | LP ONLY | STREAM A: FUNDRAISING | STREAM B: VALUE ADD/INNOVATION | STREAM C: CO-INVESTMENTS | STREAM D: GROWTH EQUITY | SUPERRETURN INTERNATIONAL: DAY 2 |
|-------|---|---|---|---|---|---|---|
| 08:00 | 08:00 - Registration and welcome coffee | 08:00 - Registration and welcome coffee | 08:00 - Registration and welcome coffee | 08:00 - Registration and welcome coffee | 08:00 - Registration and welcome coffee | 08:00 - Registration and welcome coffee | 08:00 - Registration and welcome coffee 08:30 - Chair's welcome address 08:40 - Impact investing – big business but does the reality match up to fund managers' claims? |
| 09:00 | | 09:15 - LP only session | | | | | 09:10 - Electronic polling session: Where are we in the cycle? 09:35 - Keynote interview: What investment opportunities does the digital economy hold? |
| 10:00 | | | | | | | 10:05 - Keynote address: Lessons learned building a preeminent PE business 10:30 - Keynote panel: Is your firm undertaking diversity efforts? If not, why not? |
| 11:00 | 11:00 - Morning coffee and networking break | 11:00 - Morning coffee and networking break | 11:00 - Morning coffee and networking break | 11:00 - Morning coffee and networking break | 11:00 - Morning coffee and networking break | 11:00 - Morning coffee and networking break | 11:00 - Morning coffee and networking break 11:30 - Keynote Interview |

SCHEDULE

MAIN CONFERENCE DAY 2 - 27/02/2020

SuperReturn International

25 - 28 February 2020

InterContinental Hotel
Berlin

| TIME | ENGAGED CONVERSATION | LP ONLY | STREAM A: FUNDRAISING | STREAM B: VALUE ADD/INNOVATION | STREAM C: CO-INVESTMENTS | STREAM D: GROWTH EQUITY | SUPERRETURN INTERNATIONAL: DAY 2 |
|-------|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---|
| 12:00 | 12:30 - SuperReturn boardroom: LP only session | | | | | | <p>12:00 - Value creation in an overheated market</p> <p>12:25 - Keynote presentation: Technology investment specialisation: Buy-side and sell-side perspectives</p> <p>12:50 - Guest speaker</p> |
| 13:00 | 13:30 - Networking lunch break | 13:30 - Networking lunch break | 13:30 - Networking lunch break | 13:30 - Networking lunch break | 13:30 - Networking lunch break | 13:30 - Networking lunch break | 13:30 - Networking lunch break |
| 14:00 | | | | | | | <p>14:30 - Afternoon plenary chairman</p> <p>14:35 - Keynote interview</p> |
| 15:00 | | | | | | | <p>15:00 - European mid-market: expanding strategies by specialising in various ways to seek sustainable competitive advantage</p> <p>15:30 - Exits in emerging markets</p> |

SCHEDULE

MAIN CONFERENCE DAY 2 - 27/02/2020

SuperReturn International

25 - 28 February 2020
InterContinental Hotel
Berlin

| TIME | ENGAGED CONVERSATION | LP ONLY | STREAM A: FUNDRAISING | STREAM B: VALUE ADD/INNOVATION | STREAM C: CO-INVESTMENTS | STREAM D: GROWTH EQUITY | SUPERRETURN INTERNATIONAL: DAY 2 |
|--------------|---|---|---|--|---|---|---|
| 16:00 | 16:00 - Afternoon refreshments and networking break | 16:00 - Afternoon refreshments and networking break | 16:00 - Afternoon refreshments and networking break 16:25 - Chair's opening remarks 16:30 - A look into the PE industry's analytical tools of the future | 16:00 - Afternoon refreshments and networking break 16:25 - Chair's opening remarks 16:30 - Value-add and innovation in private equity strategies | 16:00 - Afternoon refreshments and networking break 16:25 - Chair's opening remarks 16:30 - New frontiers for Co-investments | 16:00 - Afternoon refreshments and networking break 16:25 - Chair's opening remarks 16:30 - Growth equity: where do the most compelling opportunities lie? | 16:00 - Afternoon refreshments and networking break |
| 17:00 | | | 17:00 - Characterising the fundraising environment for 2020: Is some uncertainty creeping in? 17:30 - Effect on LP allocation and due diligence processes in an era of high velocity fundraising | 17:00 - Sector specialisation: gaining traction in Europe 17:30 - The rapid evolution of long term funds | 17:00 - LP appetite for co-investing: alpha or risk generator? 17:30 - Closed door session on co-investments | 17:00 - Future of growth equity 17:30 - Is tech going mainstream and how will that affect growth equity? | |
| 18:00 | 18:00 - End of Main Conference Day 2 18:05 - Evening networking reception – Beer & Sausage Party | 18:00 - End of Main Conference Day 2 18:05 - Evening networking reception – Beer & Sausage Party | 18:00 - End of Main Conference Day 2 18:05 - Evening networking reception – Beer & Sausage Party | 18:00 - End of Main Conference Day 2 18:05 - Evening networking reception – Beer & Sausage Party | 18:00 - End of Main Conference Day 2 18:05 - Evening networking reception – Beer & Sausage Party | 18:00 - End of Main Conference Day 2 18:05 - Evening networking reception – Beer & Sausage Party | 18:00 - End of Main Conference Day 2 18:05 - Evening networking reception – Beer & Sausage Party |

Registration and welcome coffee

07:30 - 08:55

SuperReturn International: Day 3

Registration and welcome coffee

07:30 - 08:00

SuperReturn International: LP only breakfast

Registration and welcome coffee

07:30 - 08:00

SuperReturn NextGen

LP only breakfast

08:00 - 09:00

SuperReturn International: LP only breakfast

Informative and invaluable networking for LPs.

Open to pre-registered development finance institutions, endowments, foundations, insurance companies, pension funds and sovereign wealth funds, subject to qualification

By Invitation Only

Participants

Hosted By: Greg Durst - Managing Director of Corporate Development, ILPA

SuperReturn NextGen breakfast

08:00 - 09:00

SuperReturn NextGen

Chair's welcome address

08:55 - 09:00

SuperReturn International: Day 3

Latest academic research

09:00 - 09:40

SuperReturn International: Day 3

Chair's welcome address

09:00 - 09:05

SuperReturn NextGen

Generation shifts in private equity firms – the LP view

09:05 - 09:35

SuperReturn NextGen

How much discussion is there around succession planning before LPs commit to a fund? What are LPs looking for from the next tier of leaders? What makes a good LP/GP relationship? What structures are in place within LP organisations to grow their next generation of leaders?

Participants

Panellists: Haresh Vazirani - Investment Director, Aberdeen Standard Investments

Fidel Manolopoulos - Principal, Hermes GPE

Mathew Powley - Director, Private Capital, Stonehage Fleming

Raphaëlle Koetschet - Head of Funds investment, Caisse des Dépôts Group

An interview with a private equity CEO

09:35 - 10:05

SuperReturn NextGen

How has the industry evolved? What does it take to be a leader today? What are some of the challenges that the industry may face over the next decade and what can the next generation bring to the table?

Follow up panel

09:40 - 10:10

SuperReturn International: Day 3

Participants

Panellists: David Jeffrey - Partner, StepStone Group

Diversity panel

10:10 - 10:40

SuperReturn International: Day 3

Participants

Moderator: Erin Sarret - Director, StepStone Global

Panellists: Mary Lavelle - Partner, Akin Gump Strauss Hauer & Feld LLP

Michelle Kathryn Essomé - CEO, AVCA

Tom Kabuga - Director of Investment Transactions, Centum Capital

Joint session with SuperReturn International: Diversity panel

10:10 - 10:40

SuperReturn NextGen

Participants

Moderator: Erin Sarret - Director, StepStone Global

Panellists: Mary Lavelle - Partner, Akin Gump Strauss Hauer & Feld LLP

Michelle Kathryn Essomé - CEO, AVCA

Tom Kabuga - Director of Investment Transactions, Centum Capital

Morning coffee and networking break

10:40 - 11:10

SuperReturn International: Day 3

Morning coffee and networking break

10:40 - 11:10

SuperReturn NextGen

Will multi-billion dollar family offices start investing directly and how will this change the LP landscape?

11:10 - 11:45

SuperReturn International: Day 3

- What do family offices want from their exposure to private markets?
 - What is the appetite for investing directly, alternative fund structures and various private asset classes?
 - Do these LPs most often take an opportunistic approach and is a strategic partnership preferable to the traditional LP-GP relationship?
-

Creating and sustaining a valuable network

11:10 - 11:45

SuperReturn NextGen

Identifying the who, what, how and why of a meaningful network – what purpose should a network serve, who should be in it, how to build sustainable relationships, identifying what you can bring to the table and having useful conversations.

Participants

Panellists: Marc Lutgen - Managing Director, MVision Private Equity Advisers

David Klein - Managing Partner, One Peak

Elizabeth Di Cioccio - Partner & Co-Head of Global Distribution, Mercury Capital Advisors

Regulatory update

11:45 - 12:15

SuperReturn International: Day 3

Regulation, self-regulation and politics: the main challenges for PE in 2019 and how the industry is preparing to deal with them

Participants

Panellists: **Dörte M Höppner** - Chief Operating Officer, Riverside Europe Fund

Patricia Volhard - Partner, Debevoise & Plimpton

Rising stars – what's the secret?

11:45 - 12:10

SuperReturn NextGen

Hear from rising stars in the industry on what's made a difference in their careers and how they have helped their firms to grow.

Participants

Moderator: **Ajay Pathak** - Partner, Goodwin

Panellists: **Joanna Reiss** - Partner, Cornell Capital

Judith Dada - Partner, La Famiglia

Louis Choy - Senior Principal, Private Equity Secondaries, CPPIB

Special guest speaker

12:15 - 13:00

SuperReturn International: Day 3

Joint session with SuperReturn International: Special guest speaker

12:15 - 13:00

SuperReturn NextGen

Networking lunch break

13:00 - 14:15

SuperReturn International: Day 3

Networking lunch break

13:00 - 14:15

SuperReturn NextGen

Fund selection masterclass

14:15 - 14:45

SuperReturn International: Day 3

One respected LP will direct a series of questions on various investment scenarios to a panel of three GPs.

The GPs will be seated behind a screen so the LP will be unable to see them. After all questions have been answered, the LP will choose the GP they would most like to invest with today in light of the responses given. Live & uncut!

Participants

Host:: **Peter Flynn** - Director, Candela Capital

Off the record session: The importance of a good mentor for you and your firm

14:15 - 14:45

SuperReturn NextGen

How much value can a mentor add to your career and indirectly to the company you work for? What should you look for in a mentor? How do you convince a mentor to spend their time developing you? How can this relationship help you navigate what is worth spending time on? How using a mentor can help make the shift to more senior roles.

Run strictly under The Chatham House Rule, what is said in this session cannot be attributed to any individual, encouraging participants to speak openly on the topics that really matter. Closed to Press.

Come along for a beer to get the session going!

Participants

Moderator: **Christopher Parmo** - COO, Verdane Capital

Panellists: **Dörte M Höppner** - Chief Operating Officer, Riverside Europe Fund

Imogen Richards - Partner, Pantheon

Off the record session: Boardroom discussion of red-hot issues

14:45 - 15:30

SuperReturn International: Day 3

Run under the Chatham House Rules.

No press.

Up-to-the-minute agenda to be announced.

Come along for a beer to help get the debate going!

Off the record session: Boardroom discussion on challenges facing the next generation

14:45 - 15:30

SuperReturn NextGen

Run strictly under The Chatham House Rule, what is said in this session cannot be attributed to any individual, encouraging participants to speak openly on the topics that really matter. Closed to Press.

Come along for a beer to get the session going!

Close of Conference

15:30 - 15:35

SuperReturn International: Day 3

End of SuperReturn NextGen

15:30 - 15:35

SuperReturn NextGen

SCHEDULE

MAIN CONFERENCE DAY 3 - 28/02/2020

SuperReturn International

25 - 28 February 2020

InterContinental Hotel
Berlin

| TIME | SUPERRETURN INTERNATIONAL: DAY 3 | SUPERRETURN INTERNATIONAL: LP ONLY BREAKFAST | SUPERRETURN NEXTGEN |
|-------|---|--|--|
| 07:00 | 07:30 - Registration and welcome coffee | 07:30 - Registration and welcome coffee | 07:30 - Registration and welcome coffee |
| 08:00 | 08:55 - Chair's welcome address | 08:00 - LP only breakfast | 08:00 - SuperReturn NextGen breakfast |
| 09:00 | 09:00 - Latest academic research 09:40 - Follow up panel | | 09:00 - Chair's welcome address 09:05 - Generation shifts in private equity firms – the LP view 09:35 - An interview with a private equity CEO |
| 10:00 | 10:10 - Diversity panel 10:40 - Morning coffee and networking break | | 10:10 - Joint session with SuperReturn International: Diversity panel 10:40 - Morning coffee and networking break |
| 11:00 | 11:10 - Will multi-billion dollar family offices start investing directly and how will this change the LP landscape? 11:45 - Regulatory update | | 11:10 - Creating and sustaining a valuable network 11:45 - Rising stars – what's the secret? |
| 12:00 | 12:15 - Special guest speaker | | 12:15 - Joint session with SuperReturn International: Special guest speaker |
| 13:00 | 13:00 - Networking lunch break | | 13:00 - Networking lunch break |
| 14:00 | 14:15 - Fund selection masterclass 14:45 - Off the record session: Boardroom discussion of red-hot issues | | 14:15 - Off the record session: The importance of a good mentor for you and your firm 14:45 - Off the record session: Boardroom discussion on challenges facing the next generation |
| 15:00 | 15:30 - Close of Conference | | 15:30 - End of SuperReturn NextGen |



December 2, 2019

TO: Board Trustees
Board of Investments

FOR: Board of Investments Meeting of December 11, 2019

SUBJECT: 2020 SuperReturn China in Beijing on May 6 – 8, 2020

The 2019 SuperReturn China Conference will be held on May 6 – 8, 2020 at the Four Seasons Hotel in Beijing, China. The agenda will include a dedicated focus to China's new economy. The rapid evolution of the country's tech sector is revolutionizing the economy and throwing out some big opportunities for investors.

The main conference highlights include the following:

- Sparks of hope: the real opportunities in China
- Navigating the new terrain
- Spotlight on mid-market buyouts: where are the opportunities?
- Value creation for buyouts: global vs local
- Spotting the best VC funds in the jungle

The conference meets LACERA's policy of an average of five (5) hours of substantive educational content. The standard hotel rate at the Four Seasons Hotel is \$275.00 per night plus applicable taxes and the registration fee is approximately \$2,200.00.

If the registration fee is insufficient to pay the cost of the meals provided by the conference sponsor, LACERA must reimburse the sponsor for the actual cost of the meals, less any registration fee paid. Otherwise, the attendee will be deemed to have received a gift equal to the value of the meals, less any registration fee paid, under California's Political Reform Act.

IT IS THEREFORE RECOMMENDED THAT YOUR BOARD:

Approve attendance of Board members at the 2020 SuperReturn China Conference in Beijing, China on May 6 – 8, 2020 and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

LG
Attachment

Registration and welcome coffee

08:30 - 08:55
Fundraising & LP/GP Relations Summit

Chair's welcome address

08:55 - 09:00
Fundraising & LP/GP Relations Summit

Brand new data perspective

09:00 - 09:30
Fundraising & LP/GP Relations Summit

A comparison on fundraising, valuation, performance and market exit data.

Participants

Judy Zhang - Managing Director, Cambridge Associates

Fundraising best practice: successfully raising a fund in a difficult market

09:30 - 10:10
Fundraising & LP/GP Relations Summit

How to stand out from the crowd when the market conditions are challenging? How can first time fund managers position themselves to attract domestic and international investors? What can established managers do to ensure existing investors reinvest? If GPs do not have a good track record, what can they do to attract investors?

Participants

Moderator: Xiao Li - Director and Head of Single Family Offices, Gopher Asset Management

Raising a successor fund: how big can it get?

10:10 - 10:50
Fundraising & LP/GP Relations Summit

How do GPs decide how big their next fund should be? How can GPs successfully convince LPs that their funds are not getting too big in relation to their investment strategy? Are LPs concerned that GPs are sacrificing performance as funds get bigger? What other factors come into play as funds scale up in size?

Participants

Moderator: Frankie Fang - Managing Partner, Starquest Capital

Panellist: Greg Ye - Co-Founder & Managing Partner, Delta Capital

Morning coffee and networking break

10:50 - 11:20
Fundraising & LP/GP Relations Summit

Manager selection: local vs international LPs

11:20 - 11:50
Fundraising & LP/GP Relations Summit

How have the criteria used in selecting GPs changed in the current market? Are there any differences between local and international LPs? What are some of the LPs' concerns and how are GPs addressing these? Beyond track record, what factors are important?

Participants

Panellist: Weichou Su - Partner and Head of Asia, StepStone Global

Panellist: Dorothy Dong - Chairman, Starr Property & Casualty (China) Co., LLC

Building a best-in-class investor relations function

11:50 - 12:20
Fundraising & LP/GP Relations Summit

What do LPs want from the GPs in terms of reporting, communications, and interactions with senior executives? How frequently do LPs want to be in touch with GPs? What are some examples of GPs going above and beyond in investor relations? What should GPs avoid doing?

Participants

Moderator: Nicole Su - Managing Director, Ping An Capital

Market norms in T&Cs

12:20 - 12:40
Fundraising & LP/GP Relations Summit

What should LPs expect from funds, as USD and RMB funds work differently? And how important is fund structure when LPs evaluate a fund investment? What are some of the differences in fees, carry, and hurdles? What voting rights can LPs expect?

Participants

Moderator: Ellen Hong - Head of Private Equity, Manulife-Sinochem Life Insurance Co. Ltd.

Panellist: Jason Zhao - Head Advisor of Private Equity Investment, China Post Life Insurance

Lunch and networking break

12:40 - 13:50
Fundraising & LP/GP Relations Summit

Special keynote address

13:50 - 14:10
Fundraising & LP/GP Relations Summit

The winning "do good" strategy

14:10 - 14:50
Fundraising & LP/GP Relations Summit

What are Chinese investors' views on ESG? How do international LPs incorporate ESG to their investments in China? How much do ESG concerns affect LPs' investment decisions? How can ESG be an alpha creation?

Participants

Moderator: Edwin Chan - Managing Director, Probitas Partners

Panellist: Steve Cowan - Managing Director & Co-Founder, 57 Stars

Looking beyond China

14:50 - 15:30
Fundraising & LP/GP Relations Summit

How do LPs evaluate GPs investing in multi geos? Which Asian markets outside of China are attractive to LPs? With growth slowing in China, which markets offer a better long-term investment opportunity? What Chinese LPs need to know when investing outside of China for the first time?

Participants

Panellist: David Pierce - Managing Director & Head of Asia, HQ Capital

Afternoon coffee and networking break

15:30 - 16:00
Fundraising & LP/GP Relations Summit

SESSIONS

FUNDRAISING & LP/GP RELATIONS SUMMIT - 06/05/2020

SuperReturn China

6-8 May 2020
Four Seasons Hotel
Beijing

Co-investment: is it the answer?

16:00 - 16:30

Fundraising & LP/GP Relations Summit

Closed door session – run under Chatham House Rule

Will GP give LPs their best recommendations? In addition to returns and exposure to a certain sector, what else are LPs looking for in co-investment? How do GPs address LPs' requests on fee structure, interest alignment and more? Are there any new approaches in co-investing with an LP?

Participants

Moderator: Eric Deram - Founder and Managing Partner, Flexstone Partners

Panellist: Bruce Ou - Managing Partner, GroveStreet

Panellist: Apurva Mehta - Managing Partner, Summit Peak Investments

Closed door session: China's new phenomenon: emerging USD fund managers

16:30 - 17:00

Fundraising & LP/GP Relations Summit

What should LPs look at when assessing a first time USD fund manager? Are track records of raising RMB funds transferrable? What do these emerging USD fund managers bring to the table when compared to established USD fund managers? Are they more incentivised to do well? Can big LPs be convinced to invest in these emerging funds?

Participants

Moderator: Myron Zhu - Head of Private Markets, Asia, Manulife Investment Management

Panellist: Shunde Tu - Investment Managing Director, HK Ranklink Limited

LP only: Does the RMB market live up LPs' expectations?

16:30 - 17:00

LP Only

Discuss the RMB market landscape: How do the new regulations and market uncertainties affect LPs? Have LPs experienced difficulties with GPs having both RMB and USD funds? What conflicts of interest could arise? What does the future hold for RMB market?

Participants

Discussion leader: Chun Song - Managing Director, SDIC Unity Capital Co., Ltd.

Discussion leader: Monica Liu - Senior Vice President, Bank of China Group Investment Limited

Evening drinks reception

17:00 - 18:30

Fundraising & LP/GP Relations Summit

SCHEDULE

FUNDRAISING & LP/GP RELATIONS SUMMIT - 06/05/2020

SuperReturn China

6-8 May 2020
Four Seasons Hotel
Beijing

| TIME | FUNDRAISING & LP/GP RELATIONS SUMMIT | LP ONLY |
|-------|---|---|
| 08:00 | 08:30 - Registration and welcome coffee 08:55 - Chair's welcome address | |
| 09:00 | 09:00 - Brand new data perspective 09:30 - Fundraising best practice: successfully raising a fund in a difficult market | |
| 10:00 | 10:10 - Raising a successor fund: how big can it get? 10:50 - Morning coffee and networking break | |
| 11:00 | 11:20 - Manager selection: local vs international LPs 11:50 - Building a best-in-class investor relations function | |
| 12:00 | 12:20 - Market norms in T&Cs 12:40 - Lunch and networking break | |
| 13:00 | 13:50 - Special keynote address | |
| 14:00 | 14:10 - The winning "do good" strategy 14:50 - Looking beyond China | |
| 15:00 | 15:30 - Afternoon coffee and networking break | |
| 16:00 | 16:00 - Co-investment: is it the answer? 16:30 - Closed door session: China's new phenomenon: emerging USD fund managers | 16:30 - LP only: Does the RMB market live up LPs' expectations? |
| 17:00 | 17:00 - Evening drinks reception | |

Registration and welcome coffee

08:30 - 09:05
New Norm. New Investment Strategies

Chair's welcome address

09:05 - 09:10
New Norm. New Investment Strategies

Sparks of hope: the real opportunities in China

09:10 - 09:50
New Norm. New Investment Strategies

Is China still a place to invest in, and why? How has the trade war affected fundraising, investment and exit strategies? How do GPs deal with the everchanging regulatory environment? What is China's next growth engine and how can fund managers capitalise on it?

Participants

Moderator: Henny Sender - Chief Correspondent, Financial Times

Panellist: JP Gan - Founding Partner, INCE Capital

Allocation, execution and strategy: China's risks vs returns

09:50 - 10:30
New Norm. New Investment Strategies

How is the changing market affecting international LPs' investment strategies in China? Where do they see opportunities and challenges? Leading international LPs discuss their long-term investment plans and adjustments made, and what they expect from the China market.

Participants

Panellist: Aaron Miller - Managing Director, Head of Venture Capital, Commonfund

Keynote address

10:30 - 10:50
New Norm. New Investment Strategies

Morning coffee and networking break

10:50 - 11:20
New Norm. New Investment Strategies

Dealing with the new norm in global trade

11:20 - 11:50
New Norm. New Investment Strategies

How has uncertainty in global trade impacted the PE and VC industry in China? What has been the effect on the manufacturing landscape and how have manufacturers adapted to this new environment? Which sectors are best placed to win in the geopolitical context?

Participants

Louis Kuijs - Head of Asia Economics, Oxford Economics

Keynote address

11:50 - 12:10
New Norm. New Investment Strategies

Cross border

12:10 - 12:50
New Norm. New Investment Strategies

Discuss the trends in outbound investment in the context of US-China trade tension. Is this a good way to hedge the tariff tension? What are the potentials and challenges? How can international firms act as their financial and strategic partners?

Lunch and networking break + Women in private equity lunch

12:50 - 14:00
New Norm. New Investment Strategies

Is VC facing its first bust?

14:00 - 14:30
Stream A - VC & Growth

Which VC sectors have been impacted by trade war the most? Are we heading for a crash? How has deal activity been affected? And what does it look like in other Asian markets?

Participants

Moderator: Ching Tan - Partner, CDBI Capital

Panellist: Edward Grefenstette - President, CEO & Chief Investment Officer, The Dietrich Foundation

When will buyouts become mainstream?

14:00 - 14:30
Stream B - Buyouts

Buyouts are commonly recognised as less proven in returns compared to VC, but does buyouts' relatively low risk necessarily mean low returns? How do funds survive the restrictions on leveraged buyouts? When are buyout deals preferable to growth capital or minority investments?

Participants

Moderator: Richard Chen - Head of China, Vitruvian Partners LLP

Spotting the best VC funds in the jungle

14:30 - 15:10
Stream A - VC & Growth

How can LPs make their best bet? Will LPs continue investing in this high valuation environment?

Participants

Moderator: Lay Hong Lee - Managing Director, Investments, Flextone Partners (formerly Eagle Asia Partners)

Panellist: Xiao Li - Director and Head of Single Family Offices, Gopher Asset Management

Value creation for buyouts: global vs local

14:30 - 15:10
Stream B - Buyouts

How should LPs pick their managers: global GPs who have better resources or local GPs who know what's not to touch?

How else do GPs add value to buyout investments and grow a company in a controlled deal? What skillsets are needed to be effective?

Participants

Moderator: Pamela Fung - Executive Director, Portfolio Manager for Asia Pacific, Morgan Stanley Alternative Investment Partners

Navigating the new terrain

15:10 - 15:40
Stream A - VC & Growth

How do VCs see themselves evolving in this highly policy-linked sector? How do new funds position themselves vs more established managers amid the uncertainties? How has this affected LPs' investment appetite?

Participants

Panellist: Jenny Lee - Managing Partner, GGV Capital

Panellist: Yuan Fang - Managing Partner, Delta Capital

SESSIONS

MAIN CONFERENCE DAY ONE - 07/05/2020

SuperReturn China

6-8 May 2020
Four Seasons Hotel
Beijing

Spotlight on mid-market buyouts: where are the opportunities?

15:10 - 15:40
Stream B - Buyouts

Which sectors offer the best opportunities for mid-market buyouts? What do LPs and GPs need to be mindful of? What are some of the trends in cross border buyouts?

Participants

Moderator: Andy Wang - Partner, Primary Investment, Adams Street Partners

Afternoon networking break

15:40 - 16:10
Stream A - VC & Growth

Afternoon networking break

15:40 - 16:10
Stream B - Buyouts

So you've heard from the experts. What does the data show?

16:10 - 16:40
New Norm. New Investment Strategies

How many VC and buyout transactions happened in the past 12 months? In terms of the number of deals and deal values, how will it look like in the next 12 months?

Participants

Ee Fai Kam - Head of Asian Operations, Preqin

LP only: Risk management

16:10 - 16:40
LP Only

How can LPs manage liquidity risks and unfunded exposure? How can LP avoid getting caught in the liquidity crunch?

Secondaries

16:40 - 17:15
New Norm. New Investment Strategies

What are the differences between RMB and USD secondaries dynamic in China? How can USD LPs participate in RMB space in secondaries? What can secondaries market do for the GPs and LPs? How are things changing in the current market?

Participants

Panellist: Brooke Zhou - Managing Director - Private Equity, Asia Pacific, LGT Capital Partners (Asia-Pacific) Limited

Evening networking reception

17:15 - 18:50
New Norm. New Investment Strategies

SCHEDULE

MAIN CONFERENCE DAY ONE - 07/05/2020

SuperReturn China

6-8 May 2020
Four Seasons Hotel
Beijing

| TIME | LP ONLY | NEW NORM. NEW INVESTMENT STRATEGIES | STREAM A - VC & GROWTH | STREAM B - BUYOUTS |
|-------|---------|--|--|---|
| 08:00 | | 08:30 - Registration and welcome coffee | | |
| 09:00 | | 09:05 - Chair's welcome address 09:10 - Sparks of hope: the real opportunities in China 09:50 - Allocation, execution and strategy: China's risks vs returns | | |
| 10:00 | | 10:30 - Keynote address 10:50 - Morning coffee and networking break | | |
| 11:00 | | 11:20 - Dealing with the new norm in global trade 11:50 - Keynote address | | |
| 12:00 | | 12:10 - Cross border 12:50 - Lunch and networking break + Women in private equity lunch | | |
| 13:00 | | | | |
| 14:00 | | | 14:00 - Is VC facing its first bust? 14:30 - Spotting the best VC funds in the jungle | 14:00 - When will buyouts become mainstream? 14:30 - Value creation for buyouts: global vs local |
| 15:00 | | | 15:10 - Navigating the new terrain 15:40 - Afternoon networking break | 15:10 - Spotlight on mid-market buyouts: where are the opportunities? 15:40 - Afternoon networking break |

SCHEDULE

MAIN CONFERENCE DAY ONE - 07/05/2020

SuperReturn China

6-8 May 2020
Four Seasons Hotel
Beijing

| TIME | LP ONLY | NEW NORM. NEW INVESTMENT STRATEGIES | STREAM A - VC & GROWTH | STREAM B - BUYOUTS |
|-------|----------------------------------|---|------------------------|--------------------|
| 16:00 | 16:10 - LP only: Risk management | 16:10 - So you've heard from the experts. What does the data show? 16:40 - Secondaries | | |
| 17:00 | | 17:15 - Evening networking reception | | |

LP Only Breakfast

08:00 - 08:55
LP Only

This exclusive breakfast is only open to a limited number of pre-registered development finance institutions, endowments, foundations, insurance companies, pension funds, and sovereign wealth funds, subject to qualification. To register please contact Krystal Pierre at Krystal.Pierre@KNect365.com

- Discussion topic: GP-led fund restructuring
- When a GP brings in fresh LPs and capital to the existing portfolio, when are the key things LPs should look out for?

Registration and welcome coffee

08:30 - 08:55
China's New Economy

Chair's welcome address

08:55 - 09:00
China's New Economy

Is China on track to be the global leader in innovation?

09:00 - 09:40
China's New Economy

Where does China stand in terms of technology innovations? Is the China-centric or China-only tech environment self-sustainable? With the current status of Sino-US relationship, can technology still be 'borderless'?

Participants

Panellist: Richard Peng - Founding Partner, Genesis Capital

Keynote address

09:40 - 10:00
China's New Economy

The new Nasdaq: the Shanghai tech board

10:00 - 10:20
China's New Economy

A complete review of the Nasdaq-style tech board: pros and cons. Is it the perfect solution for the existing challenges facing the China market, or does it encourage companies to go IPO too early? How is the STAR board going to change the overall IPO landscape in China in the next few years?

Creating value and planning exits in a more challenging market

10:20 - 11:00
China's New Economy

Which exit routes are most favourable for the current China market? What are the key drivers of value for an exit? How can these drivers be identified in the lead-up to exit? If listing in the US is no longer a profitable option, where will companies go? How successful are Chinese GPs in raising funds from US investors when listing domestically?

Participants

Moderator: Henny Sender - Chief Correspondent, Financial Times

Panellist: Mei Gao - Partner, IDG Capital

Morning coffee and networking break

11:00 - 11:30
China's New Economy

AI and IoT – applications, disruptions, and solving real world problems

11:30 - 12:15
China's New Economy

Which traditional industry are most likely disrupted by AI and IoT? Is AI a truly profitable and sustainable option adding value to traditional businesses? What knowledge do GPs need? Is being a tech expert enough? What are some of the challenges?

15mins presentation by Kai-Fu Lee, Chairman and CEO, Sinovation Ventures

Followed by a 30 mins panel

Participants

Presenter + Panellist: Kai-Fu Lee - Chairman & CEO, Sinovation Ventures

Panellist: Saman Farid - Partner, Baidu Ventures

Enterprise investing: what is the next big thing?

12:15 - 12:45
China's New Economy

How does the government support innovations? How big is the investment opportunity in enterprise investing? Where are the next best opportunities? How to reduce the risks when betting on the next rising stars?

Participants

Moderator: Mingchen Xia - Managing Director, Co-Head of Asia Investments, Hamilton Lane

Panellist: Jing Hong - Founding Partner and CEO, Gaocheng Capital

Panellist: Feng Li - Founding Partner, FreeS Fund

Lunch and networking break

12:45 - 14:00
China's New Economy

SFO Lunch

12:45 - 14:00
LP Only

This exclusive lunch is only open to a limited number of pre-registered single-family offices. To register please contact Krystal Pierre at Krystal.Pierre@KNect365.com. The Chatham House Rule

Energy, commodities and industrial: the unloved sectors worth looking at

14:00 - 14:30
China's New Economy

Discuss sectors that are overlooked: why are they underinvested and what are the opportunities? When entering these markets for the first time, where should GPs focus and why? Will some of the riskier investments today become less so in the future?

Participants

Panellist: Ming-Po Cai - Founder and President, Cathay Capital

Tackling the unique 'Cure + Care' landscape in China

14:30 - 15:00
China's New Economy

Everchanging regulations, overheated valuations, and geopolitical pressure in the healthcare landscape: how can GPs and LPs invest smartly? How much more innovation is there for the healthcare market? How can GPs add value to the investments? Have any niche areas been overlooked?

Participants

Panellist: James Zhao - Founding Partner, LYFE Capital

Panellist: Leon Chen - Founding Partner & CEO, 6 Dimensions Capital

Roundtables

15:00 - 15:40
China's New Economy

- Private Debt: are returns and downside protections good enough to justify investing?
- Real estates: what is the potential in China?
- Domestic consumption: still an attractive opportunity

SCHEDULE

MAIN CONFERENCE DAY TWO - 08/05/2020

SuperReturn China

6-8 May 2020
Four Seasons Hotel
Beijing

| TIME | CHINA'S NEW ECONOMY | LP ONLY |
|-------|--|---------------------------|
| 08:00 | 08:30 - Registration and welcome coffee 08:55 - Chair's welcome address | 08:00 - LP Only Breakfast |
| 09:00 | 09:00 - Is China on track to be the global leader in innovation? 09:40 - Keynote address | |
| 10:00 | 10:00 - The new Nasdaq: the Shanghai tech board 10:20 - Creating value and planning exits in a more challenging market | |
| 11:00 | 11:00 - Morning coffee and networking break 11:30 - AI and IoT – applications, disruptions, and solving real world problems | |
| 12:00 | 12:15 - Enterprise investing: what is the next big thing? 12:45 - Lunch and networking break | 12:45 - SFO Lunch |
| 13:00 | | |
| 14:00 | 14:00 - Energy, commodities and industrial: the unloved sectors worth looking at 14:30 - Tackling the unique 'Cure + Care' landscape in China | |
| 15:00 | 15:00 - Roundtables | |

November 26, 2019

TO: Each Member
Board of Investments

FROM: Credit and Risk Mitigation Committee

James Rice, CFA 
Principal Investment Officer

Chad Timko, CFA 
Senior Investment Officer

FOR: December 11, 2019 Board of Investments Meeting

SUBJECT: **HEDGE FUNDS EMERGING MANAGER PROGRAM SEPARATE
ACCOUNT MANAGER SEARCH – PROPOSED MINIMUM
QUALIFICATIONS**

RECOMMENDATION

Approve the Minimum Qualifications for a separate account manager to manage a \$200 million program of emerging manager hedge funds as amended and advanced to the Board of Investments by the Credit and Risk Mitigation Committee.

BACKGROUND

On October 8, 2019, staff presented the Hedge Funds Emerging Manager Program Separate Account Manager Search Proposed Minimum Qualifications presentation to the Credit and Risk Mitigation Committee (“Committee”). The Committee voted to advance the Minimum Qualifications (“MQs”) to the Board of Investments (“Board”) with two MQ amendments and asked staff to address cost-benefit considerations between in-house and external separate account implementation options. The first MQ amendment lowered the minimum number of emerging manager portfolio clients that a candidate organization must have from five to three. The second MQ amendment decreased the minimum total plan size of a public pension fund client from \$20 billion to \$10 billion. The requested MQ amendments are incorporated into **Attachment 1**. Compared to the presentation document provided previously to the committee, pages 6 and 10 of **Attachment 1** are revised to include Committee feedback on the MQs.

The cost-benefit considerations requested by the Committee are included within a presentation addendum (**Attachment 2**). This presentation identifies potential costs and benefits associated with implementing this program in either an in-house or external separate account manager model. Utilizing the services of an established separate account manager would have benefits that include

scale for greater breadth and depth of coverage, likely quicker implementation, and potentially be ¼ to ½ of the cost for like-quality implementation, compared to in-house alternatives.

Additionally, attached is an Emerging Manager Policy Review presentation (**Attachment 3**) from Meketa Investment Group that was reviewed with the Board at its June 12, 2019 meeting. This presentation indicates support for “a manager of managers SMA program” for the hedge funds category on page 14 of 16. The SMA or separately managed account structure mentioned by Meketa is also consistent with the Board-approved Hedge Funds 2019 Structure Review, which included an initiative to “hire (a) separate account manager for (an) Emerging Manager Program.” Investing in newer and smaller hedge funds may potentially enhance the risk and return profile of LACERA’s hedge funds program or otherwise help the program meet its risk mitigation objectives.

OPTIONS AVAILABLE TO THE BOARD

The Board may wish to approve, modify, or reject the recommendation. Approving the recommendation would result in the RFP search being launched.

DELIBERATIONS AND OPINIONS EXPRESSED BY THE COMMITTEE

At the October 8, 2019 meeting, Committee members inquired about the most appropriate MQs that should apply to this potential search. A Committee member requested that two MQs be amended, as identified in the “Background” section of this memo. A Committee member requested that the Board be provided with cost-benefit considerations between in-house and external separate account implementation options, which is included in **Attachment 2**.

RISKS OF ACTION AND INACTION

If the Board approves the recommendation, staff will issue an RFP and conduct a search for a separate account manager to manage a \$200 million program of emerging manager hedge funds. There is little risk of action associated with issuing this RFP and LACERA would not be obligated to take further action. The RFP would include language stating, “LACERA reserves the right to choose to not enter into an agreement with any of the respondents to this RFP.”

If the Board does not approve the recommendation, staff would then incorporate the Board’s feedback into future activity that may include a revised recommendation.

Each Member, Board of Investments

November 26, 2019

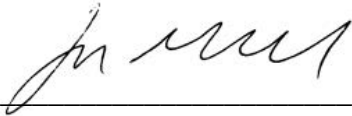
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CONCLUSION

The Credit and Risk Mitigation Committee advanced the MQs for an RFP to identify a separate account manager to manage a \$200 million program of emerging manager hedge funds to the Board of Investments. **Attachment 1** includes recommended MQs after incorporating Committee feedback. **Attachment 2** provides cost-benefit considerations between in-house and external separate account implementation options.

Attachments

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

JR:CT:mm

**Hedge Funds
Emerging Manager Program
Separate Account Manager Search
Proposed Minimum Qualifications**

Board of Investments

December 11, 2019

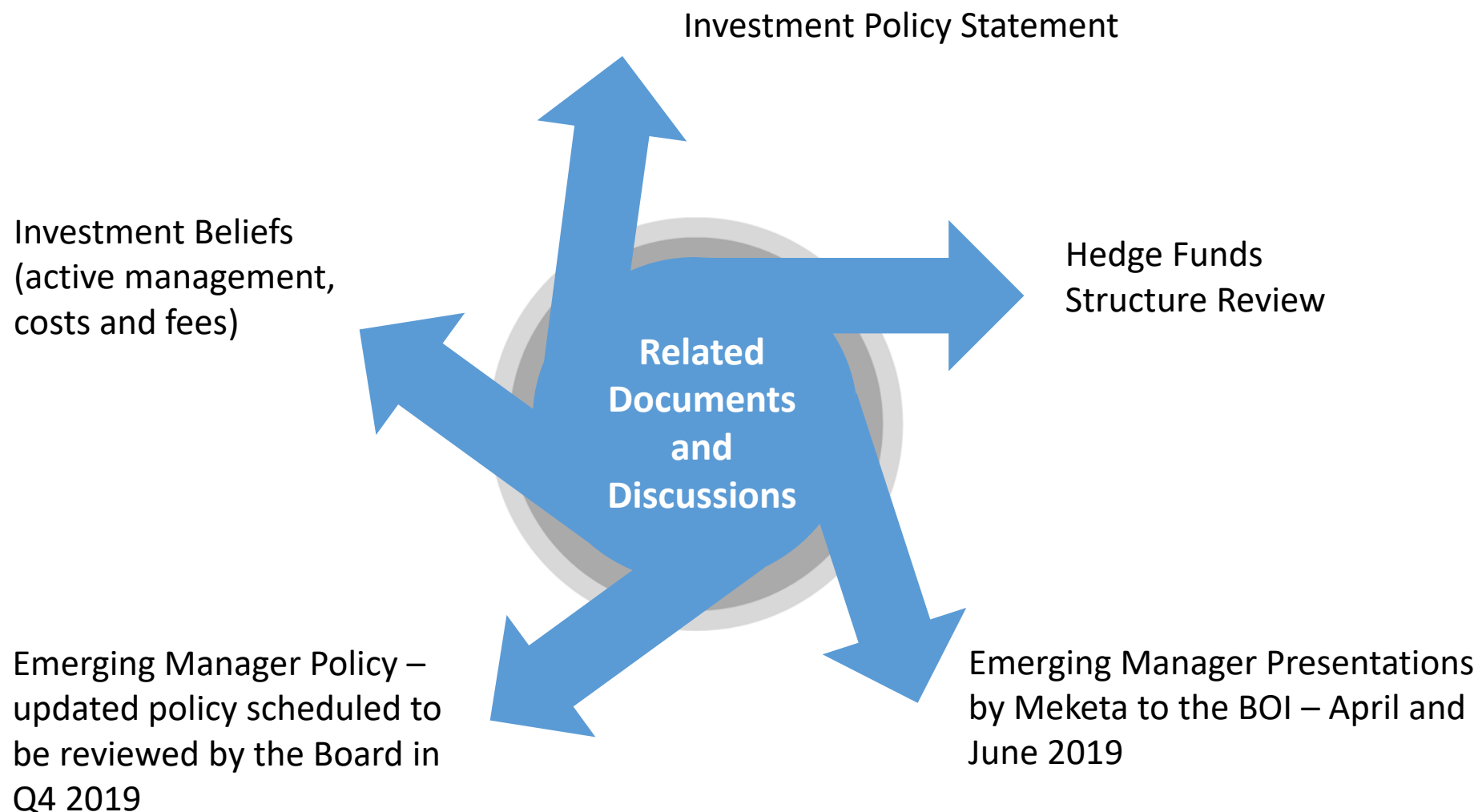
James Rice, CFA – Principal Investment Officer
Chad Timko, CFA – Senior Investment Officer



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Background – Related Documents and Discussions



Background – Program Structure

LACERA

Separate Account Manager

(pending RFP)

Invest directly

LACERA retains consent authority regarding portfolio fit

Manager sourcing, due diligence, and portfolio management

Emerging Manager Hedge Funds Portfolio

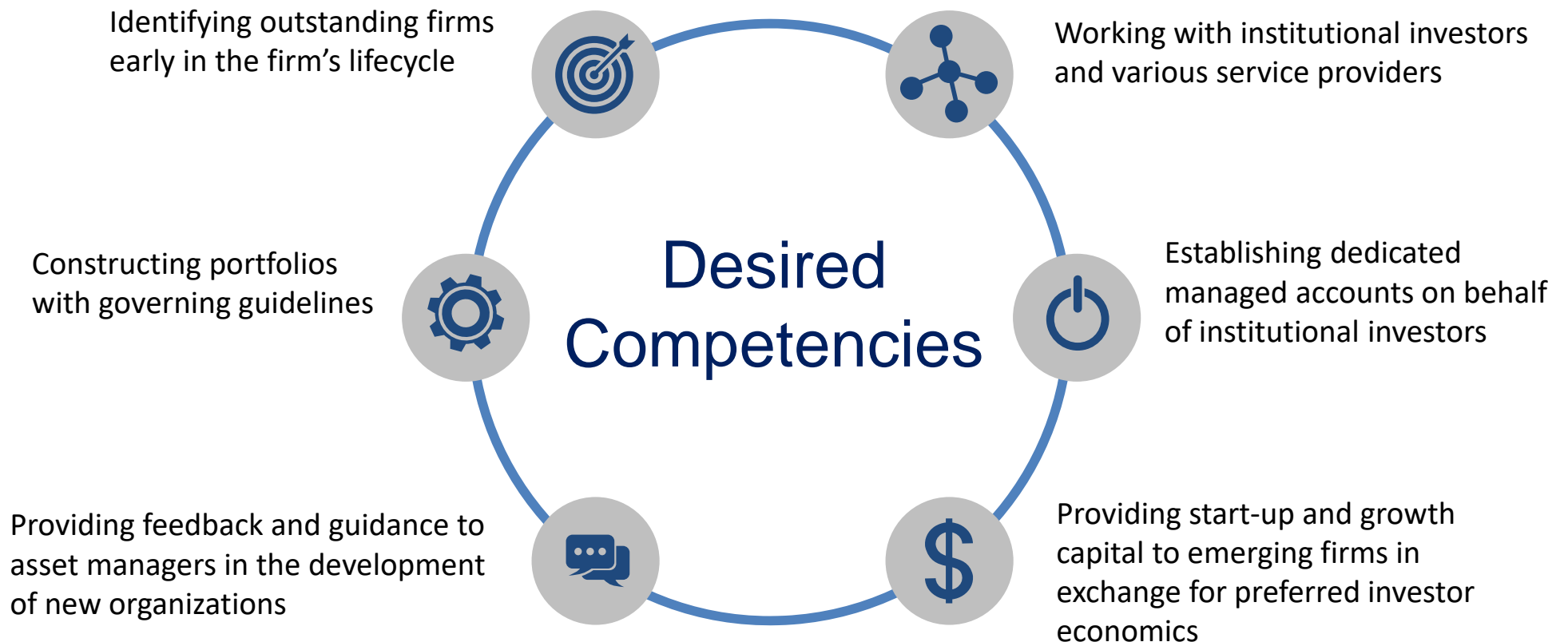
Up to \$200 million

This structure is similar to that used in LACERA's private equity emerging manager program.



Scope of Services

A separate account manager would source, conduct due diligence on, and manage a portfolio of emerging managers that adhere to LACERA's policies. LACERA seeks firms with the following experiences and competencies.



Minimum Qualifications

The organization must have at least \$500 million of discretionary assets under management in hedge fund emerging manager mandates.

The organization must have at least three institutional emerging manager program clients, at least two of which being public pension funds, and at least one of which having a plan size of at least \$10 billion.



The organization must have a performance track record of at least 5 years for a hedge funds emerging manager program.

The organization must be registered with the U.S. Securities and Exchange Commission as an investment adviser, unless the organization is exempt from registration.

Evaluation Team and Selection Authority



Evaluation Team

At least three staff members from the Investments Division with experience in hedge funds or emerging manager mandates

Albourne will be incorporated into the process as a consultant



Selection Authority

Board of Investments

Evaluation Criteria

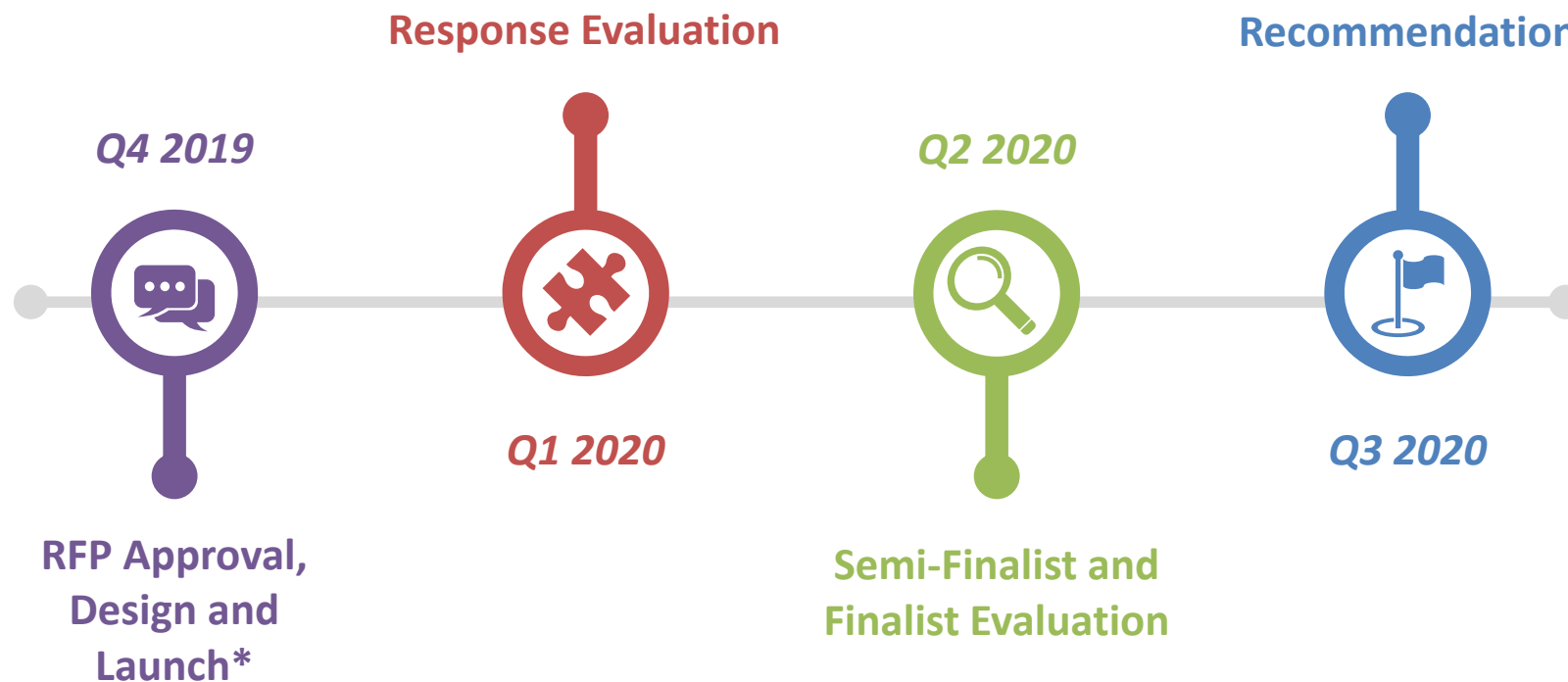
Initial RFP response
executive summary
review



Thorough RFP response evaluation and scoring



Proposed Timeline



* This RFP would be launched upon Board approval of both minimum qualifications and an updated Emerging Manager Policy, which is scheduled to be reviewed by the Board in the fourth quarter of 2019 and may subsequently be approved. If either the minimum qualifications or policy are not approved in the fourth quarter of 2019, the proposed timeline would adjust accordingly.



Recommendation

Approve the Minimum Qualifications for a separate account manager to manage a \$200 million program of emerging manager hedge funds as amended and advanced to the Board of Investments by the Credit and Risk Mitigation Committee.

Hedge Funds
Emerging Manager Program
Separate Account Manager Search
Proposed Minimum Qualifications

Addendum – Implementation Model
Cost and Benefit Considerations

Board of Investments

December 11, 2019

James Rice, CFA – Principal Investment Officer
Chad Timko, CFA – Senior Investment Officer



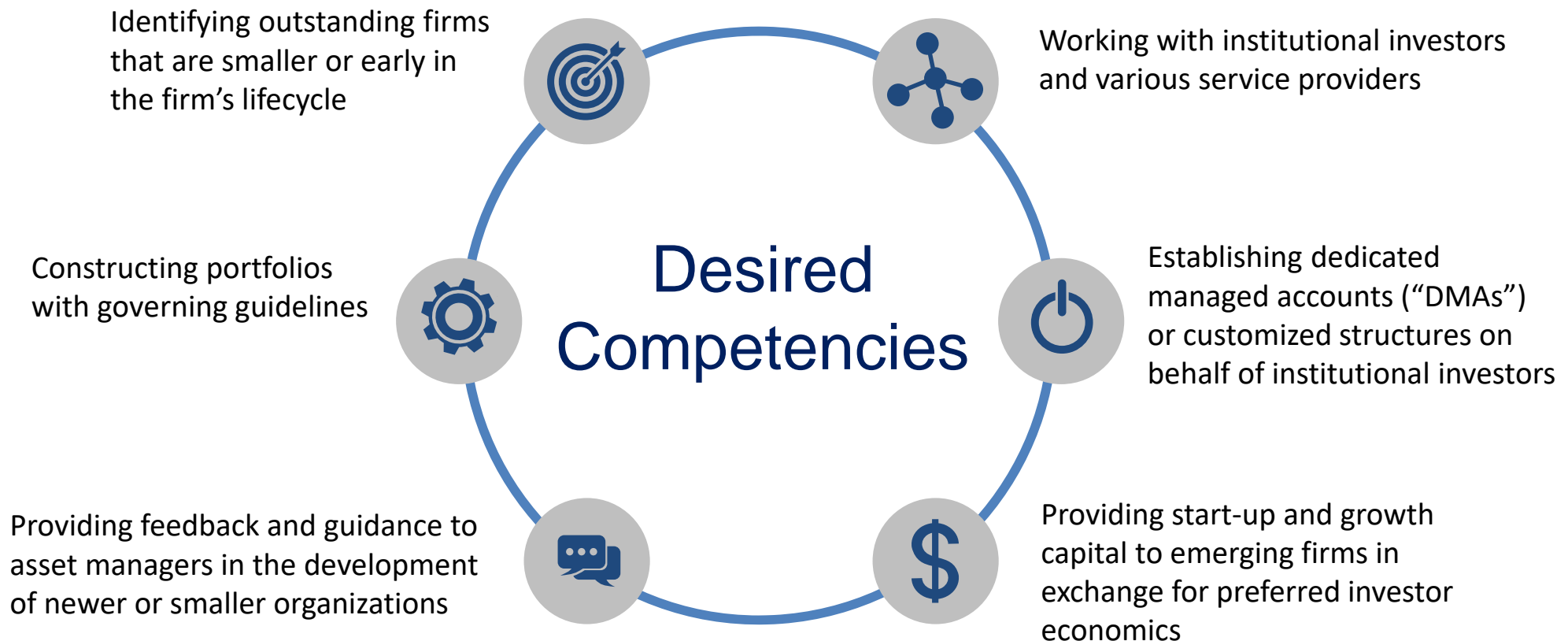
Table of Contents

- I. Scope of Services
- II. Experiences and Competencies
- III. Potential Costs
- IV. Potential Benefits



Scope of Services

A separate account manager would source, conduct due diligence on, and manage a portfolio of emerging managers that adhere to LACERA's policies. LACERA seeks firms with the following experiences and competencies.



Experiences and Competencies

The below diagram compares LACERA's current staffing and an experienced separate account manager ("SAM") regarding experiences and competencies building a portfolio of smaller and less-established (emerging) hedge fund managers.

| | LACERA In-House (current staffing) | Separate Account Manager (experienced provider) | Comments |
|--|---------------------------------------|---|--|
| Identifying outstanding firms early | | X | Approximately 500 new hedge funds launch per year, requiring substantial diligence on emerging firms. LACERA's HF team has three staff, all of whom have additional responsibilities. |
| Constructing portfolios with governing guidelines | X | X | A mandate should be tailored to LACERA's objectives and constraints. Both LACERA and SAMs have experience doing this. |
| Guiding investment firm development (consultancy) | | X | Emerging firms often need help developing institutional practices (operations, controls, compliance, valuation). Select SAMs can be a consultant resource to help institutionalize an emerging firm. |
| Working with various service providers | X | X | SAMs have experience helping to establish multiple service provider relationships (prime broker, fund administrator, auditor) on behalf of a hedge fund. |
| Establishing DMAs or customized solutions | X | X | SAMs have experience in this area. LACERA is issuing an RFP to identify a service provider with this experience. |
| Providing growth capital in exchange for preferred terms | | X | SAMs have relatively more experience than LACERA at being an early investor in firms and negotiating associated benefits such as "founders" fee terms. |



Potential Costs (annual)

| | <u>Objective</u> | <u>Action</u> | <u>Potential Costs*</u> |
|--|--|---|---|
| Expand in-house capabilities | <ul style="list-style-type: none"> • Increase investment headcount to review and monitor a universe of ~ 1,500 emerging managers/funds with potentially limited coverage or track record • Improve operational due diligence and related operational consultancy capabilities. Enhance experience aiding establishment of service provider relationships and best practices for hedge fund firms | <ul style="list-style-type: none"> • Hire 3-8 investment professionals • Hire 2 operational due diligence professionals | <ul style="list-style-type: none"> • \$1,000,000 to \$2,860,000 • \$560,000 • Total \$1,560,000 to 3,420,000 |
| | <p><i>* Potential in-house salaries start with mid-point salaries for existing FA1, FA2, FA3, and SIO positions. 40% is added to each salary for employee benefits. 60% is added to each salary for office space, shared resources, travel, and support from legal, accounting, and administration.</i></p> | | |
| Hire a separate account manager | <ul style="list-style-type: none"> • Identify an experienced separate account manager | <ul style="list-style-type: none"> • Launch an RFP | <ul style="list-style-type: none"> • 0.2% to 0.7% expected range of management fee ** • Total \$400,000 to 1,400,000 |
| | <p><i>** A performance-based fee structure may be utilized for this mandate to align interests between LACERA and a separate account manager.</i></p> | | |

Potential Benefits

Expand in-house capabilities

Consistent with allocator to investor aspirations



Fewer agency issues



Potential future portability of knowledge to other parts of the portfolio or division



Lower "investment fees"



Hire a separate account manager



Less costly for like-quality implementation



Scale – greater breadth and depth of coverage



Likely quicker implementation



Lower division budget and expenses



Potential core competency with easier severability options



Allows LACERA to focus on larger allocations

May 30, 2019

TO: Each Member
Board of Investments

FROM: Ted Wright, CFA, FRM, PRM, CAIA ^{TW}
Principal Investment Officer

Vache Mahseredjian, CFA, CAIA, FRM, ASA ^{VM}
Principal Investment Officer

FOR: June 12, 2019 Board of Investments Meeting

SUBJECT: **EMERGING MANAGER POLICY REVIEW—PART 2**

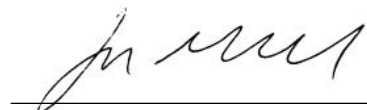
Attached is the second in a series of Meketa presentations that address LACERA's Emerging Manager Policy (EMP). The goal of these presentations is to undertake a comprehensive review of the EMP—including its objective, scope, and implementation—and with the Board's guidance, to produce a new, updated policy.

As a reminder, LACERA established the EMP in 1995. The policy initially covered U.S. equities; since then, the scope has expanded to include Fixed Income, Real Estate, Private Equity, and Non-U.S. Equities. Since the last EMP update in 2017, LACERA started making direct investments in hedge funds and adopted a functional asset allocation that expands investments into real assets and private credit. Given the portfolio changes, a review of the policy is timely, to ensure that it remains effective and up-to-date.

Meketa's first presentation on this topic was in April 2019. That session began with a review of the regulatory framework and included an overview of the emerging manager universe in both public and private markets. Guided by the Board's feedback to the April presentation, Meketa has refined the policy's objectives and the definition of emerging managers, in addition to developing specific considerations for each asset class. Their goal is to take additional direction provided by the Board at this meeting, in order to return in the coming months with a draft of a new EMP.

Attachment

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer



**Los Angeles County Employees
Retirement Association**

Emerging Manager Policy Review
June 12, 2019

Background

- At the April 10, 2019 Board of Investments meeting, Meketa provided a review of LACERA's emerging manager programs. We reviewed the programs' definitions and objectives, and looked at the universe of emerging managers across multiple asset classes. We learned that the robustness of the universe varies drastically by asset class. Finally, we raised issues to be addressed at subsequent meetings, including topics such as process, tradeoffs, and objectives.
- The ultimate goal of the review is to revise and update LACERA's emerging manager policy, and we expect the review to last several meetings.
- Recall that LACERA currently has emerging manager programs for the following asset classes: public equity, fixed income, real estate, and private equity. The first three seek direct investments in emerging managers, while the latter invests via a manager of managers separate account. LACERA has been allocating capital to emerging managers since 1995.
- There are no emerging manager programs for illiquid credit, hedge funds, and real assets.
- Recall also that California Proposition 209, passed in 1996, prohibits state, local governments, districts, public universities, colleges, and schools, and other government instrumentalities, from discriminating against or giving preferential treatment to any individual or group in public employment, public education, or public contracting on the basis of race, sex, color, ethnicity, or national origin.
- In this second presentation on emerging managers, we will seek to address the topics raised by the Trustees during the first meeting.
- At a subsequent meeting, staff and Meketa anticipate bringing a draft updated Emerging Manager Policy for review by the Trustees.

Emerging Manager Definition

LACERA¹:

- Current Definition: “Independent firms that do not have substantial assets under management (generally, less than \$2 billion) nor a long-term investment performance record (generally, less than five years). Emerging investment managers can include, but are not limited to minority-, women-, and disabled veteran-owned organizations.

Proposed Definition:

- The definition for each emerging manager asset class shall be based on assets under management and/or length of track record, and may be modified from time to time. Generally speaking, public markets emerging managers shall have a performance record no greater than five years, and firm-wide assets under management that plot in the bottom decile versus peers. The private markets emerging manager universe shall be comprised of firms seeking to fundraise for their first, second, or third fund.

Though LACERA believes markets to be generally efficient, a sound Emerging Manager Policy can be a way to capture certain market inefficiencies. LACERA will analyze and consider multiple investment structures (SMAs, commingled products, direct investments, etc.) when considering investments with emerging managers.

¹ Source: LACERA's Emerging Manager Policy, page 1.

Emerging Manager Objectives

LACERA¹:

- “Gain early access to smaller investment management organizations.”
- “LACERA recognizes that smaller firms may generate superior performance because of increased market flexibility associated with smaller asset bases.”

Proposed Objectives:

- Enhance LACERA’s risk adjusted performance without materially altering operational risks.
- Seek preferential economics, access, and future capacity rights.
- Further develop LACERA’s commitment to diversity and inclusion.

LACERA values diversity and inclusion, and believes that effectively accessing and managing diverse talent:

- is inclusive of varied backgrounds, age, experience, race, sexual orientation, gender, ethnicity, and culture;
- and leads to improved outcomes. LACERA expects external asset managers and other third party providers to respect and reflect LACERA’s value of diversity and inclusion. LACERA’s ongoing monitoring of third party service providers incorporates an assessment of vendors’ commitment to, adherence with, and track record of accessing and retaining diverse and inclusive workforces².

¹ Source: LACERA’s Emerging Manager Policy, page 1.

² Source: LACERA IPS.

Emerging Managers Analysis – Bonds¹ As of December 31, 2018

| | Emerging Managers Products | Non-Emerging Managers Products |
|------------------------------|----------------------------|--------------------------------|
| U.S Core Fixed Income | 22 | 225 |
| U.S. Core Plus Fixed Income | 4 | 124 |
| U.S. High Yield Fixed Income | 7 | 194 |

| | Emerging Managers | Non-Emerging Managers |
|------------------------------|-------------------|-----------------------|
| U.S Core Fixed Income | 19 | 163 |
| U.S. Core Plus Fixed Income | 4 | 100 |
| U.S. High Yield Fixed Income | 7 | 116 |

| | | 1-Year | | 3-Year | | 5-Year | |
|-----------------|-------------------------|--------|--------|--------|--------|--------|--------|
| | | EM | Non-EM | EM | Non-EM | EM | Non-EM |
| U.S Core | Trailing Net Return (%) | -0.05 | 0.07 | 2.16 | 2.52 | 2.61 | 2.89 |
| | Standard Deviation | 2.73 | 2.76 | 2.77 | 2.74 | 2.71 | 2.70 |
| U.S. Core Plus | Trailing Net Return (%) | 0.36 | -0.35 | 3.69 | 3.06 | 3.16 | 3.10 |
| | Standard Deviation | 1.59 | 2.47 | 2.29 | 2.72 | 2.36 | 2.71 |
| U.S. High Yield | Trailing Net Return (%) | -1.11 | -1.80 | 7.82 | 6.24 | 3.98 | 3.70 |
| | Standard Deviation | 3.99 | 3.43 | 4.92 | 3.98 | 5.34 | 4.48 |

- The emerging bond manager universe is the least robust of all major asset classes. Emerging core managers underperformed, whereas emerging core plus and high yield managers outperformed. Note the small sample size of each sector.

¹ Data from eVestment as of March 15, 2019. Definition of emerging managers: Active managers with less than \$2 billion in total assets under management. Note the dataset is subject to survivorship bias. Bonds cover two asset class categories: Risk Mitigation, and Credit.

Emerging Managers Considerations – Bonds

- Given the relatively small size of the universe, the Trustees may wish to bypass this asset class. Given industry economics, most entrepreneurs would likely focus on other asset classes to start new asset management firms. If so, then the pool of candidates is not likely to increase meaningfully. In addition, outperformance of active emerging managers appears to be mixed. Finally, unlike other asset classes, significant scale (e.g., AUM) may be a benefit to bond managers in driving down costs and fees.
- The Trustees may want to consider bypassing the investment grade bond emerging manager program, and focusing instead on other asset classes with more robust universes, where the likelihood of generating attractive risk-adjusted returns may be more favorable.
- Should the Trustees wish to seek emerging core bond managers, we suggest expanding the firm AUM threshold.

Emerging Managers Analysis – Public Equities¹ As of December 31, 2018

| | Emerging Managers Products | Non-Emerging Managers Products |
|---|----------------------------|--------------------------------|
| U.S. Large Cap Equity (Includes Growth, Core, and Value) | 189 | 781 |
| U.S. Small Cap Equity (Includes Growth, Core, and Value) | 138 | 441 |
| International Equity (Includes All Cap Growth, Core, and Value) | 9 | 109 |

| | Emerging Managers | Non-Emerging Managers |
|---|-------------------|-----------------------|
| U.S. Large Cap Equity (Includes Growth, Core, and Value) | 137 | 277 |
| U.S. Small Cap Equity (Includes Growth, Core, and Value) | 118 | 217 |
| International Equity (Includes All Cap Growth, Core, and Value) | 8 | 69 |

| | | 1-Year | | 3-Year | | 5-Year | |
|----------------------|---------------------|--------|--------|--------|--------|--------|--------|
| | | EM | Non-EM | EM | Non-EM | EM | Non-EM |
| U.S. Large Cap | Trailing Return (%) | -5.82 | -5.12 | 8.17 | 8.53 | 7.30 | 7.76 |
| | Standard Deviation | 15.94 | 15.72 | 12.03 | 11.81 | 11.80 | 11.63 |
| U.S. Small Cap | Trailing Return (%) | -10.18 | -9.87 | 7.77 | 7.86 | 4.49 | 5.15 |
| | Standard Deviation | 19.55 | 19.36 | 16.31 | 15.76 | 15.54 | 15.12 |
| International Equity | Trailing Return (%) | -15.70 | -14.72 | 5.96 | 4.62 | 2.66 | 2.02 |
| | Standard Deviation | 14.11 | 13.57 | 12.71 | 12.28 | 12.54 | 12.25 |

- The emerging equity manager universe is more robust. Domestic products underperformed, whereas international ones outperformed.

¹ Data from eVestment as of March 15, 2019. Definition of emerging managers: Active managers with less than \$2 billion in total assets under management. Note the dataset is subject to survivorship bias.

Emerging Managers Considerations – Public Equities

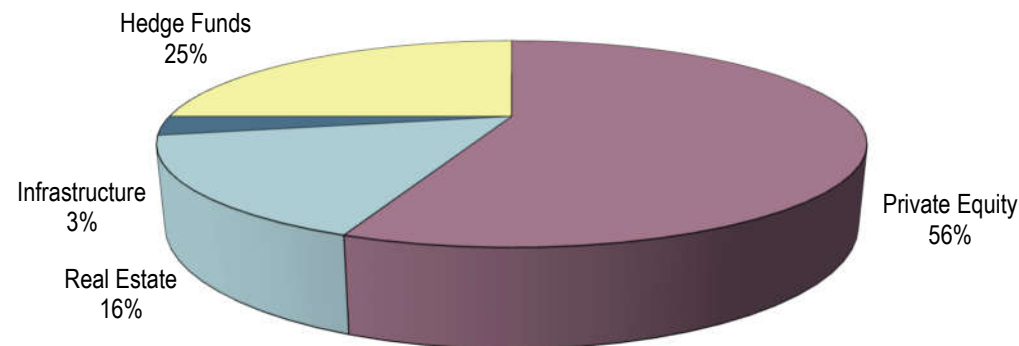
- The Trustees parted ways with emerging manager of managers running large cap-focused equity programs, in favor of a direct approach targeting small cap products, both domestically and overseas, based on the premise that these segments offer better expected risk-adjusted returns. Since making this change, the Board has hired three dedicated emerging manager equity strategies (CornerCap and Matarin – domestic small cap, and Global Alpha, foreign small cap), the result of one search.
- The universe of emerging equity managers is larger than in fixed income. While performance in the emerging small cap domestic segment has not been impressive as of December 31, 2018, we remain optimistic that less efficient strategies, both U.S. and non-U.S., present the best case for outperformance in the public markets universe. Given more favorable economics, we would expect also to have new entrants to the market on a regular basis.
- LACERA should continue to focus the direct emerging manager program in equities to less efficient strategies, such as small cap products, globally.
- Process:
 - Range of 0% to 5% of global equities target remains appropriate.
 - Maximum firm AUM of \$2 billion remains appropriate.
 - Firm established during the past 5 years.
 - Evaluate graduation after a maximum period of 5 years.

Emerging Managers Consideration – Public Equities (continued)

- Final Considerations:
 - Portfolio construction should be taken into account. In addition to meeting the emerging manager definition and criteria established by LACERA, an emerging manager product must have a fit and a purpose within the global equity portfolio. Staff and Meketa will evaluate this fit, as well as the firm’s operational risk, as part of the review process of every emerging equity strategy.
 - Time should be accounted for as well. Each emerging manager should be reevaluated to be promoted or removed from the program. The Trustees may want to consider having a decision date attached to each emerging manager.

Findings on Emerging Managers – Alternative Investments

Breakdown of the 6,000 Emerging Managers in Alternatives¹



- About 14,000 alternative investment funds have been launched during the last decade. Of this, 6,000 of them have been from emerging managers, defined by GCM Grosvenor as first-time funds with a track record of three years and assets under management of \$300 million or less for hedge funds, and 1st, 2nd, or 3rd institutional funds for all other asset classes.
- Private equity has had the highest number of emerging managers, followed by hedge funds.
- During the past decade, over 50% of all closed US-based private equity funds have been from emerging managers².
- As shown at the April Board meeting, small fund size was not correlated with outperformance. However, newer funds were, suggesting a focus on first, second, and third funds raised by a GP may be a preferred approach.
- Clearly, the alternative investments space is a very robust universe where LACERA could choose to pursue emerging manager programs.

¹ Based on data from GCM Grosvenor, November 2018.

² Source: Preqin Private Equity Online, November, 2016.

Emerging Managers Considerations – Private Equity

- LACERA has engaged J.P. Morgan to invest in emerging private equity managers, via a separately managed account. Performance of the account has been strong. Few graduations have taken place, however. The manager also invests in co-investments, which may not translate to expanded relationships with new managers.
- Consider continuing the emerging manager program in private equity.
- Process:
 - Range of 0% to 10% of private equity may be appropriate.
 - Limited to Funds I, II and III of a given GP.
 - A maximum fund size of \$1 billion.
 - Co-investments may need to be revisited.
- Final Considerations:
 - Portfolio construction should be taken into account. In addition to meeting the emerging manager definition and criteria established by LACERA, an emerging manager product must have a fit and a purpose within the private equity portfolio.
 - LACERA should expect that this program provide not only early access to new strategies, but also a mechanism to develop relationships that would allow LACERA to invest more substantial capital as the GP raises additional vehicles (Funds IV and beyond). Typically, if a GP is successful with its first few funds, additional funds raised may only be accessible to prior investors. Thus, this program serves a strategic goal, which is in addition to the objective of generating attractive risk-adjusted returns.

Emerging Managers Considerations – Real Estate

- LACERA has a real estate emerging managers program, in which it favors committing to funds directly. Limited emerging manager activity has taken place in this asset class, however.
- As is the case with private equity, the emerging manager universe is robust. The number of private real estate emerging managers is growing. As of October 2018, GCM Grosvenor estimates 938 real estate emerging manager funds have been formed during the last decade. GCM Grosvenor defines emerging managers as those managers with up to three prior funds.
- Data firm, Preqin, defines emerging managers as first- or second-time fund managers. Preqin found that emerging managers have outperformed established managers in every vintage year between 2004 and 2014. However, these higher returns come with higher standard deviation (as with private equity).
- Consider pursuing an emerging manager program in real estate.
- Process:
 - Preference for direct approach in funds and/or SMAs.
 - Range of 0% to 10% of real estate may be appropriate.
 - Limited to Funds I, II and III of a given GP, with maximum fund size of \$1 billion.
- Final Considerations:
 - Portfolio construction should be taken into account. In addition to meeting the emerging manager definition and criteria established by LACERA, an emerging manager product must have a fit and a purpose within the real estate portfolio.
 - LACERA should expect that this program provide not only early access to new strategies, but also a mechanism to develop relationships that would allow LACERA to invest more substantial capital as the GP raises additional vehicles (Funds IV and beyond). Thus, this program serves a strategic goal, which is in addition to the objective of generating attractive risk-adjusted returns.

Key Findings on Emerging Managers – Hedge Funds Preqin Emerging Funds Statistics as of 2017¹

| | 1-Year Returns (%) | 3-Year Returns (%) | 3-Year Standard Deviation (%) | 3-Year Sharpe Ratio (%) |
|-------------------|--------------------|--------------------|-------------------------------|-------------------------|
| New Hedge Funds | 14.1 | 8.5 | 4.03 | 1.62 |
| Small Hedge Funds | 11.9 | 6.0 | 4.78 | 0.83 |
| All Hedge Funds | 10.2 | 5.3 | 3.98 | 0.83 |

- Data firm Preqin found that newer and smaller hedge funds outperformed the greater hedge fund universe.
 - “New” hedge funds were first-time funds with a track record of three years or less.
 - “Small” hedge funds were first-time funds with assets under management of \$300 million or less.
- Newer funds outperformed smaller funds and the broader hedge fund universe across the 1-, 3-year periods. Smaller funds had the highest volatility levels.
- Note the dataset is subject to survivorship bias and is time dependent.

¹ Source: Preqin Hedge Fund Spotlight, June 2017.

Emerging Managers Considerations – Hedge Funds

- LACERA does not have a hedge fund emerging managers program.
- As is the case with private equity and real estate, the hedge fund emerging manager universe is robust. In fact, the hedge fund universe represents one of the larger universes where new managers come to market. Economics are favorable to the continued launch of new firms and strategies.
- Trustees could consider pursuing an emerging manager program in hedge funds.
- Process:
 - Favor a manager of managers SMA program.
 - Range of 0% to 10% of hedge funds target.
 - Limited to newer and smaller funds with less than three years of track record.
 - Max fund size of \$1 billion.
- Final Considerations:
 - As is the case with other emerging manager programs, emerging manager hedge funds must have a fit and a purpose within the asset class.
 - LACERA should expect that this program provide not only early access to new strategies, but also a mechanism to develop relationships that would allow LACERA to invest more substantial capital in the future. Thus, this program serves a strategic goal, which is in addition to the objective of generating attractive risk-adjusted returns.
 - As with public equities, LACERA may want to consider having a decision date attached to each emerging hedge fund manager so as to promote or remove such manager from the program.

Emerging Managers Considerations – Illiquid Credit and Real Assets

- LACERA does not have a real assets or illiquid credit emerging managers programs.
- As is the case with private equity and real estate, the thesis should be favorable. These are inefficient asset classes with good economics for the managers, which should attract entrants to the market. However, these asset classes, which also include infrastructure and other sub sectors, have shorter track records and smaller universes than private equity or real estate. We have found limited data to judge the merits of such programs at this time.
- LACERA should revisit in three years. In the meantime, LACERA should consider allocating resources to the other emerging manager programs while more data and research is captured in these newer asset classes.
- Notwithstanding the above consideration, LACERA should continue to cast a wide net, including emerging managers, when reviewing managers across these, and other, asset classes. A decision to not have an emerging manager policy in a given asset class should have no effect in considering emerging managers as part of broader mandates.

Next Steps

With guidance from today's meeting, we expect to come back to the Board in the coming months with a draft Emerging Manager Policy, which will include:

1. Refined Emerging Manager Definitions and Objectives by asset class.
2. Precise parameters to implement each program.
3. Graduation process.
4. Metrics to judge, report, and monitor performance and evolution of these programs.

November 27, 2019

TO: Board Trustees - Board of Retirement & Board of Investments

FROM: Santos H. Kreimann ^{SHK}
Chief Executive Officer

FOR: Board of Retirement Meeting on December 4, 2019
Board of Investments Meeting on December 11, 2019

SUBJECT: **BOARD OF RETIREMENT AND BOARD OF INVESTMENTS 2020
MEETING CALENDAR**

RECOMMENDATION

It is recommended the Boards review the 2020 meeting calendar and consider rescheduling meeting dates that conflict with a holiday and/or the potential of a lack of quorum.

DISCUSSION

Regular meetings of the Board of Retirement shall be held on the first Wednesday and the Thursday following the second Wednesday in each month. Regular meetings of the Board of Investments shall be held on the second Wednesday of each month. It is encouraged to focus on rescheduling meeting dates that conflict with a holiday and/or the potential of a lack of quorum.

For the Board of Retirement, following are meeting dates that the Board may consider rescheduling:

Thursday, May 14, 2020 – SACRS Spring Conference
Thursday, November 12, 2020 – SACRS Fall Conference

For the Board of Investments, following are meeting dates that the Board may consider rescheduling:

Wednesday, May 13, 2020 – SACRS Spring Conference
Wednesday, November 11, 2020 – Veteran's Day/SACRS Spring Conference

A copy of the 2020 meeting and educational calendar is attached for your planning convenience.

SHK:bn
Attachment

JANUARY 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|-----------------------------------|-------------------------|-------------------------|----------|--------|----------|
| | | | 1 New Year's Day | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 BOI | 9 BOR | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 Martin Luther King, Jr. Day | 21 BOR Board Offsite | 22 BOR Board Offsite | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |
| NCPERS Legislative Conference – Washington, DC | | | | | | |

FEBRUARY 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|---|--|------------------|----------------------|--------|----------|
| | | | | | | 1 |
| 2 | 3 | 4 | 5 BOR | 6 | 7 | 8 |
| 9 | 10 | 11 Milken MEA Summit – Abu Dhabi | 12 BOI | 13 BOR | 14 | 15 |
| | Pension Bridge ESG – San Diego, CA | PPI Winter Roundtable – Rancho Palos Verdes, CA | | | | |
| | IFEBP Trustees & Administrators Institute – Orlando, FL | | | | | |
| 16 | 17 President's Day | 18 | 19 | 20 RELAC Luncheon | 21 | 22 |
| | | NACD: From Battlefield to Boardroom – Washington, DC | | | | |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | SuperReturn – Berlin, Germany | | | | |
| | | ICGN Seoul Conference – Seoul, South Korea | | | | |

MARCH 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|--|---------|---|-------------------------------|--------|----------|
| 1 | 2 | 3 | 4 BOR | 5 | 6 | 7 |
| | | | PREA Spring Conference – Beverly Hills, CA | | | |
| | NACD Director Professionalism – Miami, FL | | | NACD Master Class – Miami, FL | | |
| 8 | 9 | 10 | 11 BOI | 12 BOR | 13 | 14 |
| | CII Spring Conference – Washington, DC | | | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | | | AHIP National Health Policy Conference – Washington, DC | | | |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| | | | Cesar Chavez Day | | | |
| 29 | 30 | 31 | 1 | | | |
| | NACD Director Professionalism – Grapevine, TX | | | | | |
| | CALAPRS Advanced Principles of Pension Management for Trustees – Los Angeles, CA | | | | | |
| World Healthcare Congress – Washington, DC | | | | | | |

APRIL 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|------------------|---|---------|-----------------|-----------------|--------|----------|
| | | | 1 BOR | 2 | 3 | 4 |
| 5 | 6 IFEBP Health Care Management Conference – Phoenix, AZ CRCEA Spring Conference – Visalia, CA | 7 | 8 BOI | 9 BOR | 10 | 11 |
| 12 Easter | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 Wharton Portfolio Concepts & Management – Philadelphia, PA | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 IFEBP Investments Institute – New Orleans, LA | 28 | 29 | 30 | | |

MAY 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | | |
|--|---|---------|-----------|-----------|--------|---|----|----|
| | | | | | 1 | 2 Milken Global Conference – Los Angeles, CA | | |
| 3 | 4 IFEBP Washington Legislative Update – Washington, DC | 5 | 6 BOR | 7 | 8 | 9 | | |
| Milken Global Conference – Los Angeles, CA | | | | | | | | |
| 10 Mother's Day | 11 | 12 | 13 BOI | 14 BOR | 15 | 16 | | |
| NCPERS Annual Conference – Las Vegas, NV | | | | | | | | |
| | | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 Memorial Day | 26 | 27 | 28 | 29 | 30 | | |
| | 31 | | | | | | | |

JUNE 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------------|---|----------------------------------|--|--|--------|----------|
| | 1 | 2 | 3 BOR | 4 | 5 | 6 |
| | Wharton Investment Strategies and Portfolio Management – Philadelphia, PA | | | | | |
| | | | NACD Future Trends – Washington, DC | NACD Master Class Washington DC Invite – Washington, DC | | |
| 7 | 8 | 9 | 10 BOI | 11 BOR | 12 | 13 |
| | | ICGN Annual Conference – Toronto | | | | |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | NASP 31 ST Conference – Chicago, IL | | AHIP Institute & Expo Conference – Miami, FL | | | |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| Father's Day | | | SuperReturn Emerging Manager– Amsterdam, Netherlands | | | |
| 28 | 29 | 30 | 1 | | | |
| | IFEBP Public Employee Benefits Institute – San Francisco, CA | | | | | |
| | IFEBP Trustees & Administrators Institute – San Francisco, CA | | | | | |

JULY 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|---|---------|---|-----------------|--------|---------------------------|
| | 29 | 30 | 1 BOR | 2 | 3 | 4 Independence Day |
| | IFEBP Public Employee Benefits Institute – San Francisco, CA | | | | | |
| | IFEBP Trustees & Administrators Institute – San Francisco, CA | | | | | |
| 5 | 6 | 7 | 8 BOI | 9 BOR | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| | | | PPI Summer Roundtable – Vancouver, Canada | | | |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

AUGUST 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|--|---------|--|--------------------------------------|--------|----------|
| | | | | | | 1 |
| 2 | 3 | 4 | 5 BOR | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 BOI | 13 BOR | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| | | | | NACD Master Class – Laguna Beach, CA | | |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| NCPERS Public Pension Funding Forum – Chicago, IL | | | NACD Director Professionalism – Rancho Palos Verde, CA | | | |
| | CALAPRS Principles of Pension Governance for Trustees – Malibu, CA | | | | | |
| IFEBP 39 th Annual ISCEBS Employee Benefits Symposium – San Diego, CA | | | | | | |
| 30 | 31 | | | | | |

SEPTEMBER 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|-----------------------|---|-----------------|--|--------|----------|
| | | 1 | 2 BOR | 3 | 4 | 5 |
| 6 | 7 Labor Day | 8 | 9 BOI | 10 BOR | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | | | | AHIP State Issues Retreat – Washington, DC | | |
| AHIP National Conferences on Medicare, Medicaid, and Dual Eligibles – Washington, DC | | | | | | |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| | | SuperReturn Asia – Hong Kong | | | | |
| | | ICGN – Stockholm, Germany | | | | |
| | | CII Fall Conference – Washington, DC | | | | |
| 27 | 28 | 29 | 30 | 1 | 2 | |
| Yom Kippur | Yom Kippur | PREA Institutional Investor Conference – Boston, MA | | | | |

OCTOBER 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|---|---------|---|------------------|--------|-----------|
| | | | 30 | 1 | 2 | 3 |
| | | | PREA Institutional Investor Conference – Boston, MA | | | |
| 4 | 5 | 6 | 7 BOR | 8 | 9 | 10 |
| 11 | 12 Indigenous People's Day | 13 | 14 BOI | 15 BOR | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| PPI Executive Seminar & Asia Roundtable – Tokyo, Japan | | | | | | |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| | NCPERS Public Safety Conference – Phoenix, AZ | | | | | Halloween |
| | | | | | | |

NOVEMBER 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|--------|---------|---------------------------|--------------------|-------------------------------|----------|
| 1 | 2 | 3 | 4 BOR | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 BOI Veterans Day | 12 BOR | 13 | 14 |
| SACRS Fall Conference – Indian Wells, CA | | | | | | |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Wharton Investment Strategies & Portfolio Management – Philadelphia, PA | | | | | | |
| IFEBP 66 th Annual Employee Benefits Conference – Honolulu, HI | | | | | | |
| 22 | 23 | 24 | 25 | 26 Thanksgiving | 27 Thanksgiving Holiday | 28 |
| 29 | 30 | | | | | |

DECEMBER 2020

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|---|---------|------------------------------------|-------------------------|------------------------|---------------|
| | | 1 | 2 BOR | 3 | 4 | 5 |
| | | | NACD Master Class – Scottsdale, AZ | | | |
| 6 | 7 | 8 | 9 BOI | 10 BOR | 11 | 12 |
| | NACD Director Professionalism – Orlando, FL | | | Hanukkah | | |
| | AHIP Consumer Experience & Digital Health Forum – Nashville, TN | | | | | |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 Christmas Eve | 25 Christmas Day | 26 Kwanzaa |
| 27 | 28 | 29 | 30 | 31 New Year's Eve | | |



December 4, 2019

TO: Each Member
Board of Investments

FROM: Ted Granger, CPA, CGMA, CRMA *TG*
Interim Chief Financial Officer

FOR: December 11, 2019 Board of Investments Meeting

SUBJECT: **ACTUARIAL ASSUMPTION REVIEW**

At your November 2019 meeting, the Board requested that LACERA's consulting actuaries from Milliman, Mark Olleman and Nick Collier, return to the December meeting to provide additional information regarding the updated economic assumptions focusing on the investment rate of return and amortization period. At this December meeting, the Board will need to reach a consensus on the recommended assumptions, which provides Milliman with direction in preparing the "Investigation of Experience" or "Experience Study" report. Once Milliman has completed the Experience Study, the new assumptions are used to prepare the annual Valuation report.

Milliman will present the demographic assumptions and draft Experience Study report to the Board for its consideration and adoption at the January 2020 Board meeting. Attached for your review is the actuary's economic assumption follow-up presentation for the December 11, 2019 meeting.

Attachment

Santos H. Kreimann
Chief Executive Officer

12/4/2019
Date

Actual19 Investigation Education Dec 2019
final.pdf

c: Steve Rice
Jon Gabel
Richard Bendall
Bernie Buenaflor

2019 Experience and Assumption Study

Economic Assumptions Follow-Up

Mark Olleman
Nick Collier

DECEMBER 11, 2019

Schedule

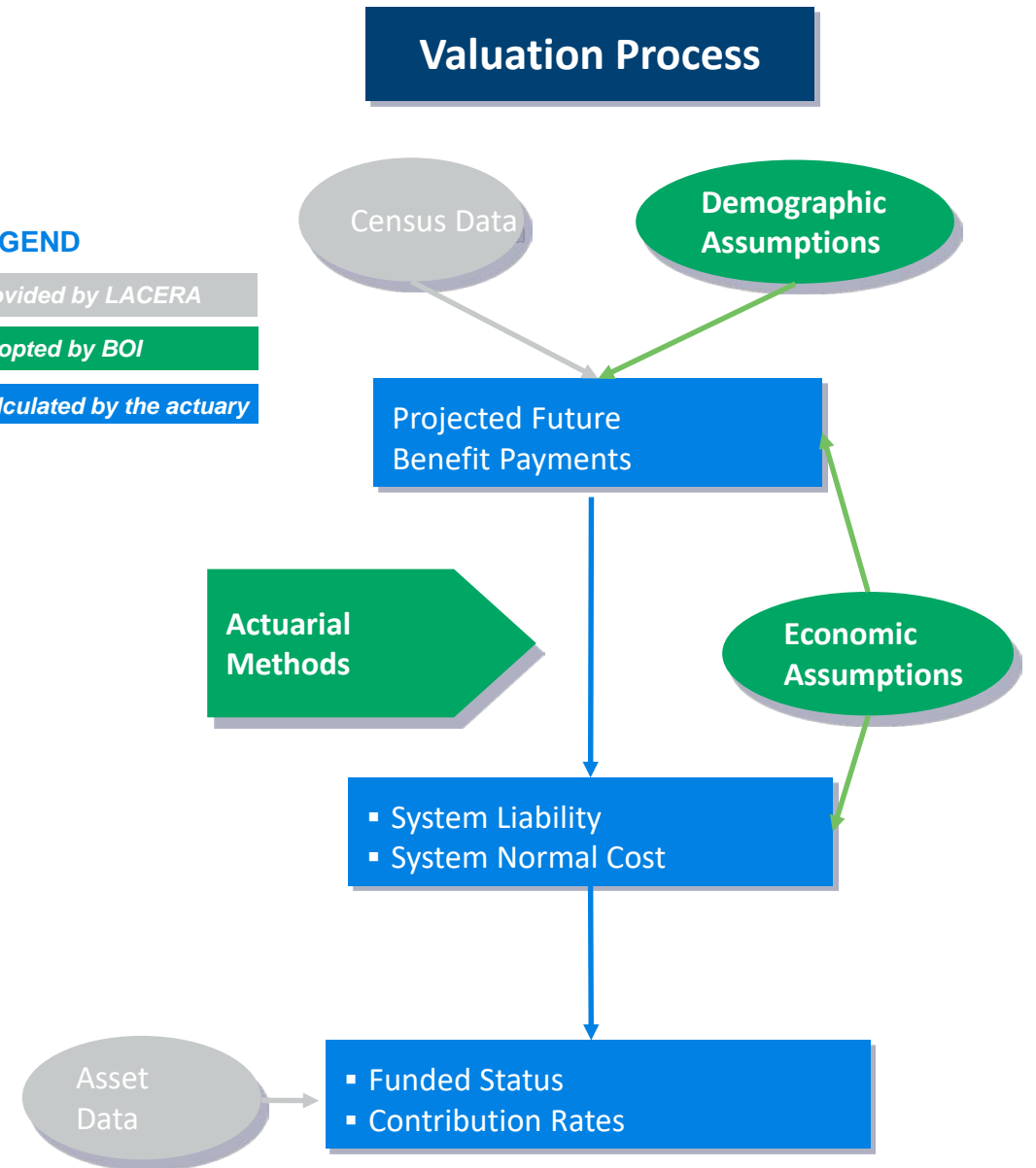
- October 2019 meeting:
 - Background on economic assumptions
- November & December 2019 meetings:
 - Follow-up discussion on economic assumptions
 - Reach general consensus on economic assumptions
- January 2020 meeting
 - Present results of demographic assumption study
 - Adopt assumptions to be used in 2019 valuation
- March 2020 meeting
 - Valuation results
 - Adopt member and employer contribution rates for fiscal year beginning July 1, 2020

LEGEND

Provided by LACERA

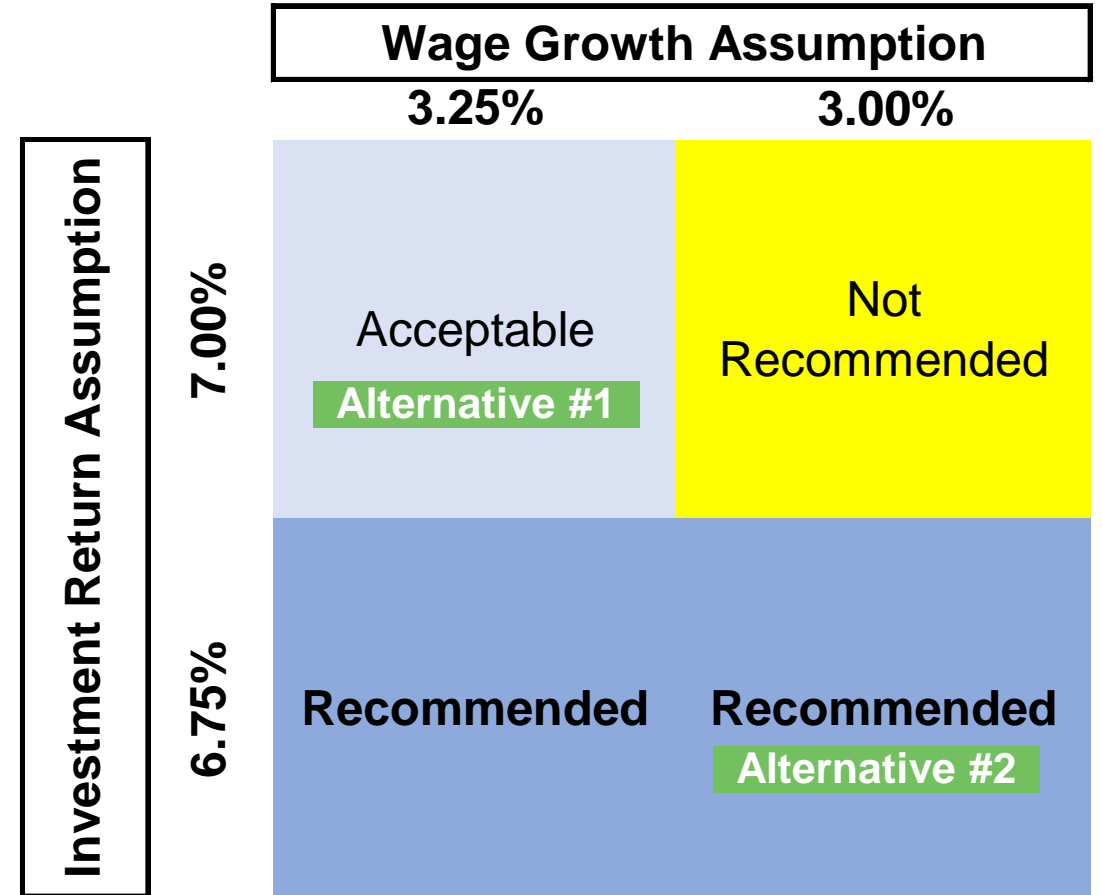
Adopted by BOI

Calculated by the actuary



Recommended Economic Assumptions

- Price inflation (2.75% or 2.50%)
 - Projections are for lower price inflation, although recent local inflation has been higher
- Wage growth assumption (price inflation plus 0.50%)
 - Consistent with historical experience for both LA County and the U.S.
- Investment return assumption (6.75%)
 - Reflects current economic environment
 - 6.50% or 7.00% would also be reasonable

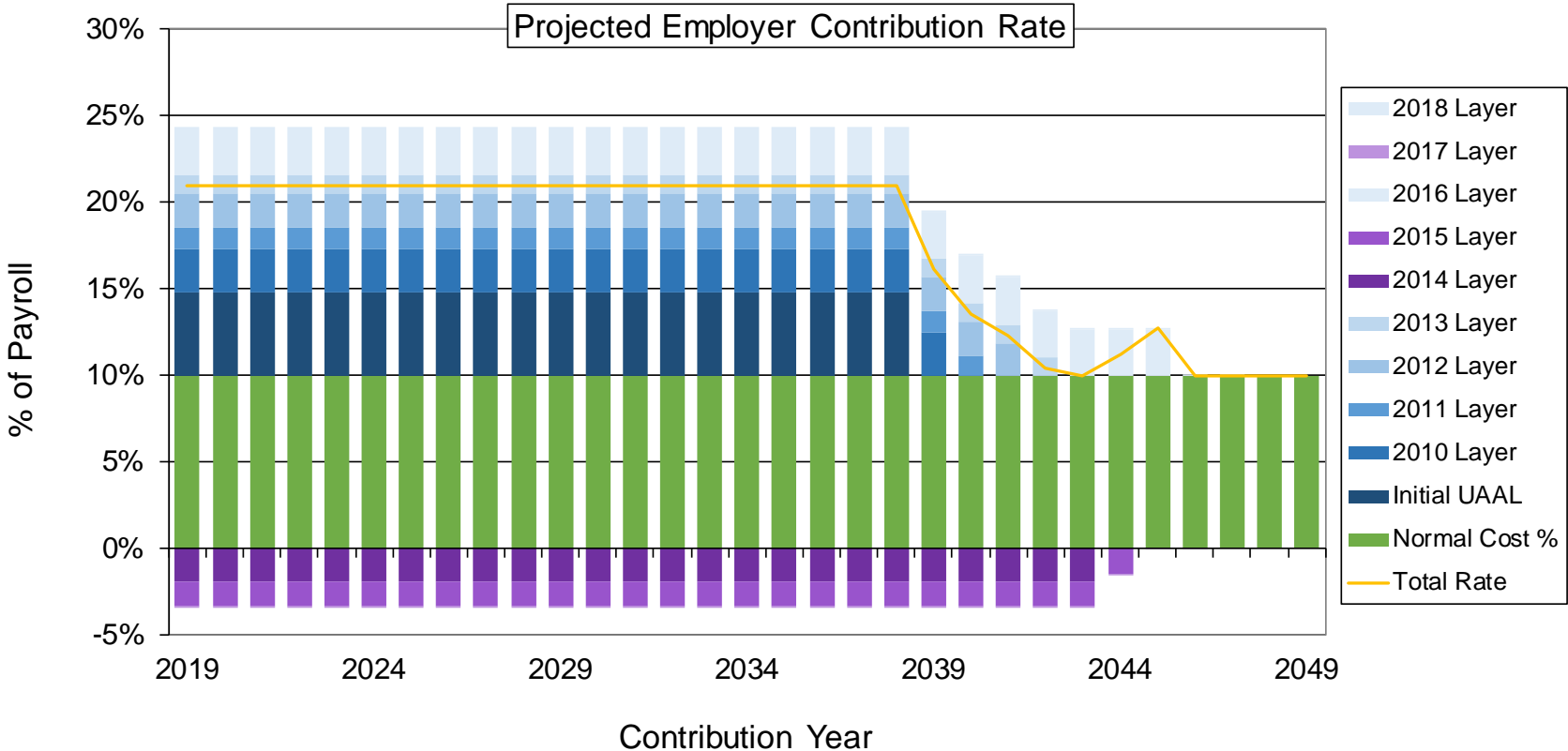


1. Milliman recommends against any set of assumptions with a 30-year amortization period, but do not believe by itself this would violate the Actuarial Standards of Practice.

Transition to 20-Year Amortization

Layered Amortization – Current Schedule

- Initial 2009 Unfunded Actuarial Accrued Liability (UAAL) is paid over 30 years as a level % of pay
 - Additional payment (or credit) schedules are set up each future year to pay for new changes in UAAL



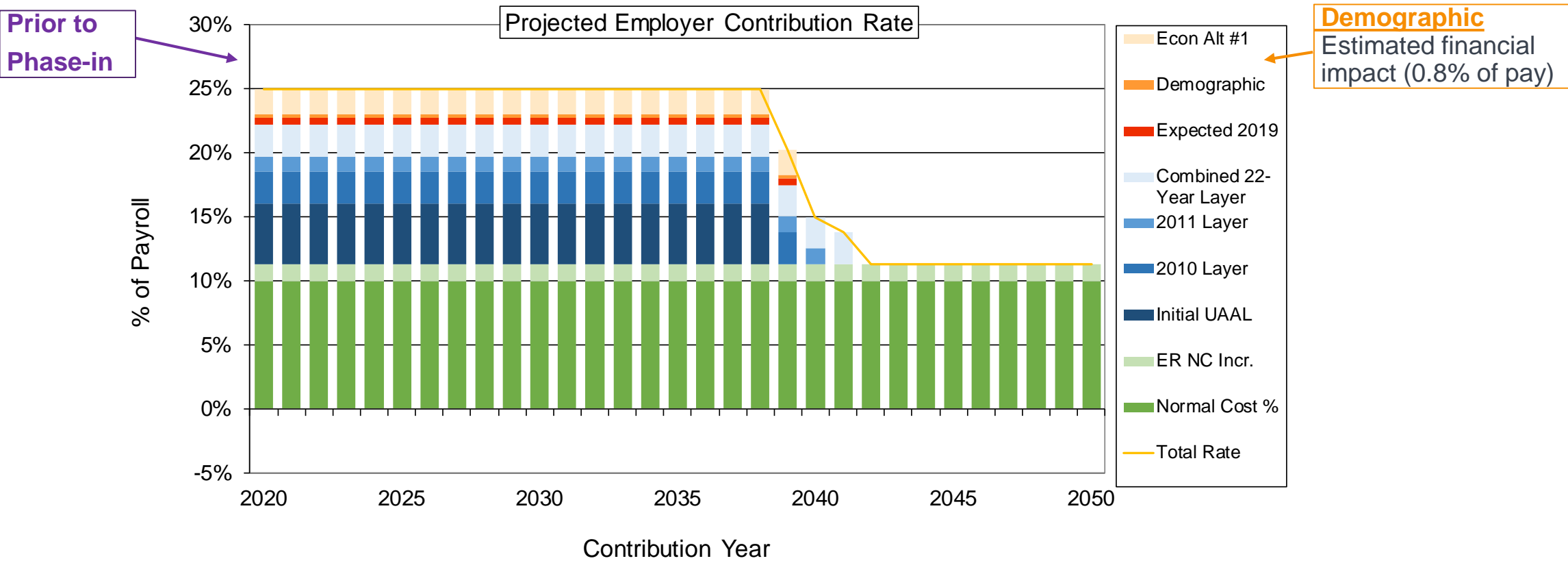
Financial Impact – Transition to 20-Year Amortization

- All future changes in the UAAL will be amortized over 20 years.
- Options for existing layers
 - Alternative #1a: No change to existing layers. UAAL is projected to have positive amortization and begin to start declining with 2021 valuation. Some existing layers will be greater than 20 years for next decade.
 - Alternative #1b: Combine all existing layers greater than 22 years and re-amortize over 22 years in the 2019 valuation. The increase in the employer contribution rate is estimated to be about 0.1% of pay. Under this approach, LACERA would be fully transitioned to 20-year amortization with the 2021 valuation.
 - Alternative #2a: Combine and amortize all existing layers over 25 years (including those created in the 2019 valuation).
 - This weakens the funding of the existing UAAL by reducing the contribution rate for existing layers. However, Milliman would view this as acceptable if the change was combined with a reduction in the investment return assumption to 6.75%. Overall, Milliman would view this as strengthening funding, and it would result in each component of the assumptions and methods being acceptable.
 - Alternative #2b: Same as Alternative #1b except using Alternative #2a investment return (6.75%) and wage growth (3.00%) assumptions. The increase in the employer contribution rate is estimated to be about 1.6% of pay over Alternative #2a.

Alternative #1b: Accelerated Amortization of Existing Layers

Investment Return = 7.00%
Wage Growth = 3.25%

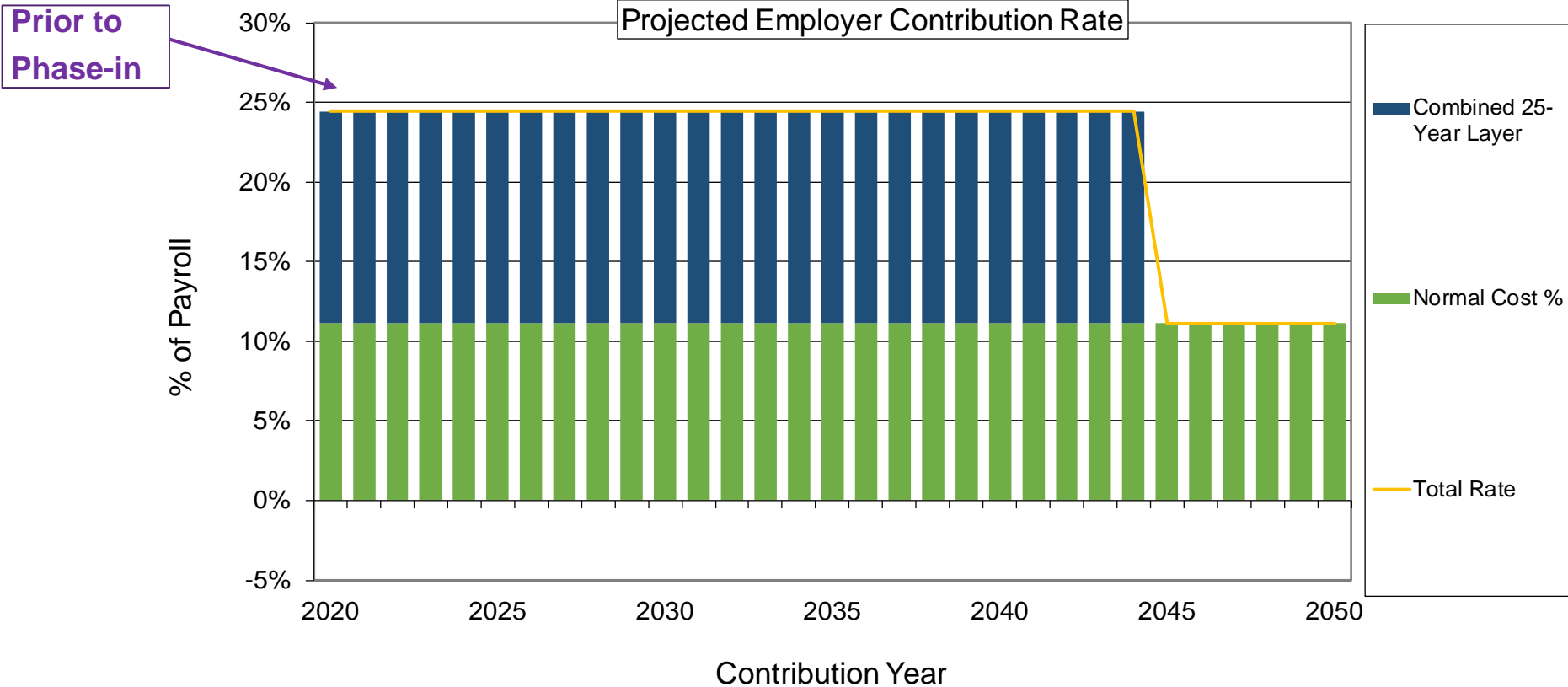
- All existing layers with a remaining period over 22 years are re-amortized at 22 years
 - Payments and credits approximately offset each other, so total rate is close to Alternative #1a (up 0.1%)



Alternative #2a: 25-Year Amortization of All Layers

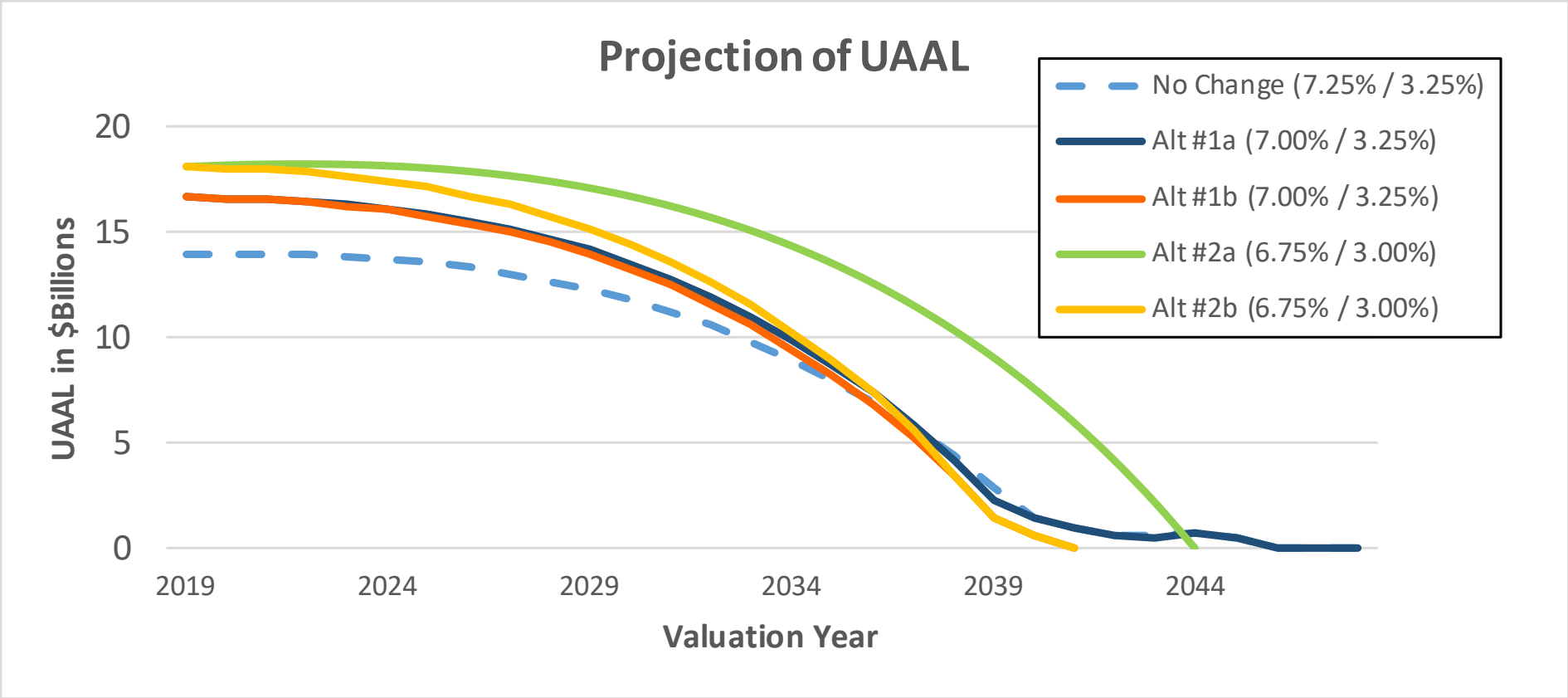
Investment Return = 6.75%
Wage Growth = 3.00%

- All existing layers are amortized over 25 years. 2019 valuation changes, including assumption changes, are also amortized over 25 years



Comparison of Projected UAAL Payoff

- Alternative #1b has the earliest projected payoff of the UAAL
 - But less likely than Alternative #2a to meet projected schedule due to higher target for assumed return



Estimated Financial Impact

The following slides present the estimated financial impact of alternative assumptions, as requested by the Board of Investments. Sound actuarial funding dictates the assumptions be based on the best estimate of future experience, not based on the expected financial impact.

Financial Impact – Estimated Contribution Rates

See Supplemental Exhibits for Alt #2b financial impact

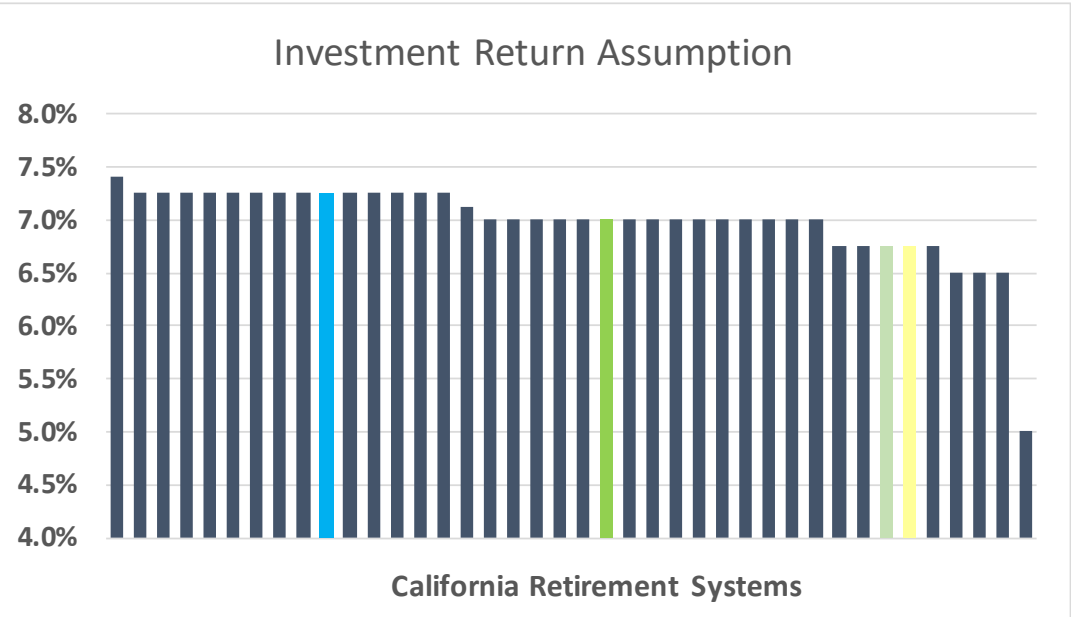
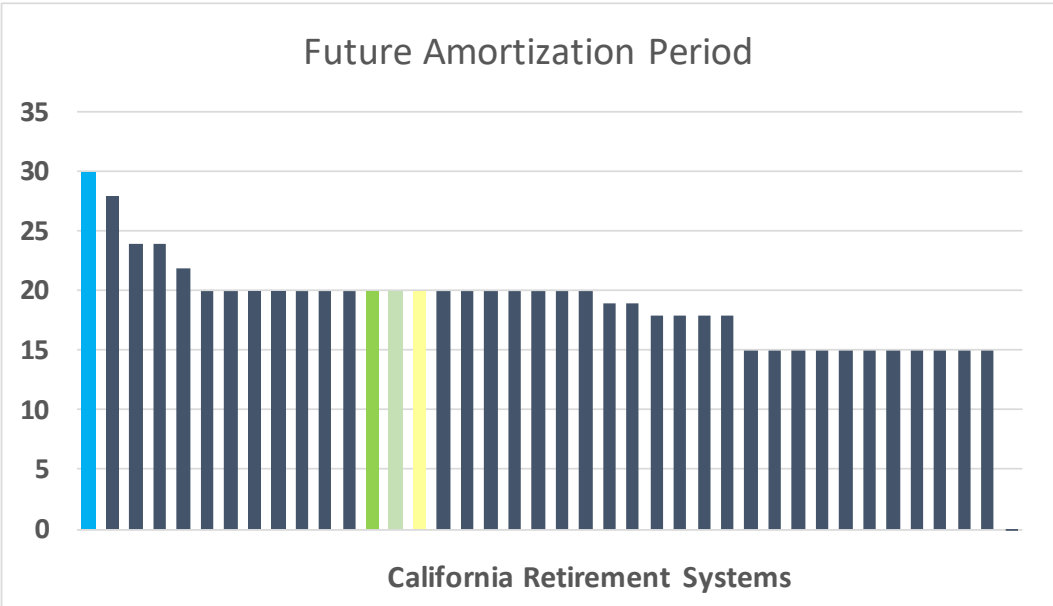
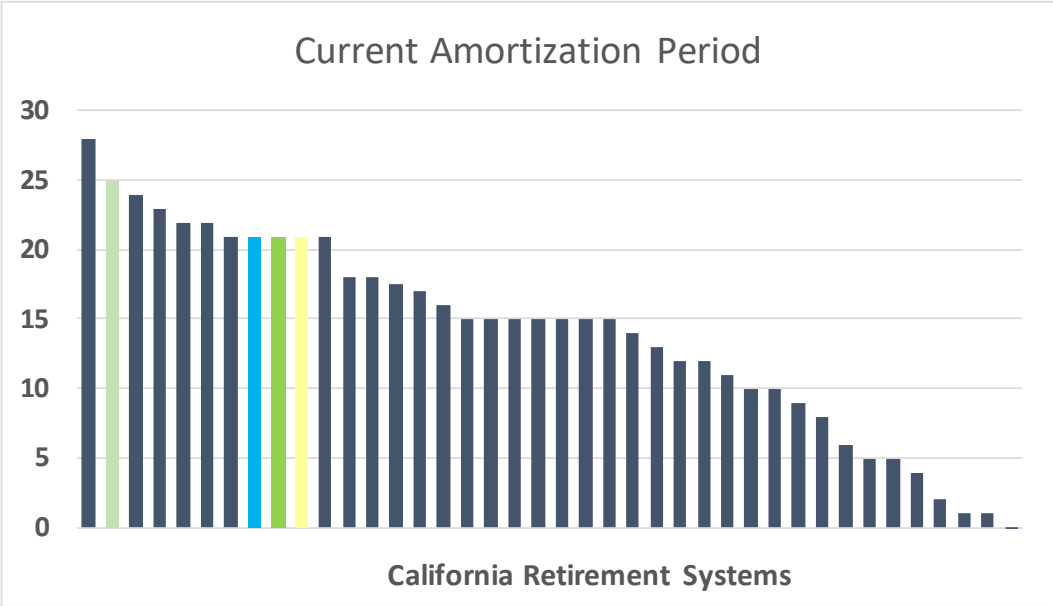
| | Year | Current | Alternative 1a | | Alternative 1b | | Alternative 2a | |
|--|---------------|---------------|----------------|----------|------------------|----------|----------------|----------|
| | | Total | Total | Increase | Total | Increase | Total | Increase |
| Assump / Current Layers | 2019 & Later | 7.25% / 3.25% | 7.00% / 3.25% | | 7.00% / 3.25% | | 6.75% / 3.00% | |
| | 2020 & Later | No Change | No Change | | Maximum 22 Years | | 25 Years | |
| Projected Employer Contrib. % | FYB 2019 | 20.9% | 20.9% | 0.0% | 20.9% | 0.0% | 20.9% | 0.0% |
| | FYB 2020 | 21.3% | 22.5% | 1.2% | 22.5% | 1.2% | 22.5% | 1.2% |
| | FYB 2021 | 21.3% | 23.7% | 2.4% | 23.8% | 2.5% | 23.7% | 2.4% |
| | FYB 2022 | 20.8% | 24.5% | 3.7% | 24.6% | 3.8% | 24.5% | 3.7% |
| Projected Employer Contrib. in \$Millions | FYB 2019 | \$ 1,771 | \$ 1,771 | \$ - | \$ 1,771 | \$ - | \$ 1,771 | \$ - |
| | FYB 2020 | 1,864 | 1,969 | 105 | 1,972 | 108 | 1,969 | 105 |
| | FYB 2021 | 1,925 | 2,141 | 216 | 2,147 | 222 | 2,141 | 216 |
| | FYB 2022 | 1,940 | 2,286 | 346 | 2,295 | 355 | 2,286 | 346 |
| Est. Funded Ratio | June 30, 2019 | 80.7% | 77.8% | -2.9% | 77.8% | -2.9% | 76.4% | -4.3% |
| Average Member Rate | General D | 7.4% | 8.1% | 0.7% | 8.1% | 0.7% | 8.2% | 0.8% |
| | General G | 8.4% | 9.2% | 0.8% | 9.2% | 0.8% | 9.5% | 1.1% |
| | Safety B | 10.1% | 11.5% | 1.4% | 11.5% | 1.4% | 11.9% | 1.8% |
| | Safety C | 13.7% | 14.9% | 1.2% | 14.9% | 1.2% | 15.3% | 1.6% |



1) All alternatives include 3-year phase-in of employer increases due to assumptions and estimate of demographic changes.
 2) Estimates only. Final results will be determined upon completion of the June 30, 2019 actuarial valuation.

California Funding Survey

- LACERA currently is ranked 37th out of 37 California retirement systems in survey published by Roeder Financial Services
 - Blue = Current assumptions
 - Bright Green = Alt #1a & #1b (7.00% / 3.25%)
 - Pale Green = Alt #2a (6.75% / 3.00% / 25-yr Reset)
 - Pale Yellow = Alt #2b (6.75% / 3.00%)



Summary

- Comparison of alternatives requested for further study

| | Alternative #1a | Alternative #1b | Alternative #2a | Alternative #2b |
|---|---|--|--|--|
| Assumptions and Amortization of Current Layers | 7.00% / 3.25% No changes to current layers | 7.00% / 3.25% Current layers with periods longer than 22 years are combined and amortized over 22 years | 6.75% / 3.00% All current layers, including those created in the 2019 valuation, are combined and amortized over 25 years | 6.75% / 3.00% Current layers with periods longer than 22 years are combined and amortized over 22 years |
| Payoff of UAAL | Longest period. Negative amortization ends in 2021. | Shortest period. Negative amortization ends in 2021. | Payoff quicker than Alternative #1a, but negative amortization occurs for the first five years. | Shortest period. Negative amortization ends in 2021. |
| Ability to achieve return assumption | Lower probability than Alternative #2 | Lower probability than Alternative #2 | Highest probability of the alternatives (same as Alt #2b) | Highest probability of the alternatives (same as Alt #2a) |
| Employer contribution rate | Estimated 3.8% of pay increase over prior year with out phase-in. With 3-year phase-in, FYB 2020 rate is 1.6% increase over FYB 2019. | Approximately 0.1% higher than Alternative #1a. Only 1/3rd of that in first year with phase-in. | Approximately the same as Alternative #1a. | Approximately 1.6% higher than Alternative #1a. Only 1/3rd of that in first year with phase-in. |
| Member contribution rates | Material increases, but less than Alternative #2 | Same as Alternative #1a | Greatest increase in the member rates of the alternatives (same as Alt #2b) | Greatest increase in the member rates of the alternatives (same as Alt #2a) |

Notes: 1) All alternatives assumed to have 20-year amortization of future layers and reflect demographic changes

2) All options include STAR reserve but not associated liabilities (no change from current method) 13

Questions



Caveats and Disclaimers

This presentation is based on the data, methods, assumptions and plan provisions described in our actuarial valuation report dated November 29, 2018. The statements of reliance and limitations on the use of this material is reflected in the actuarial report and still apply to this presentation.

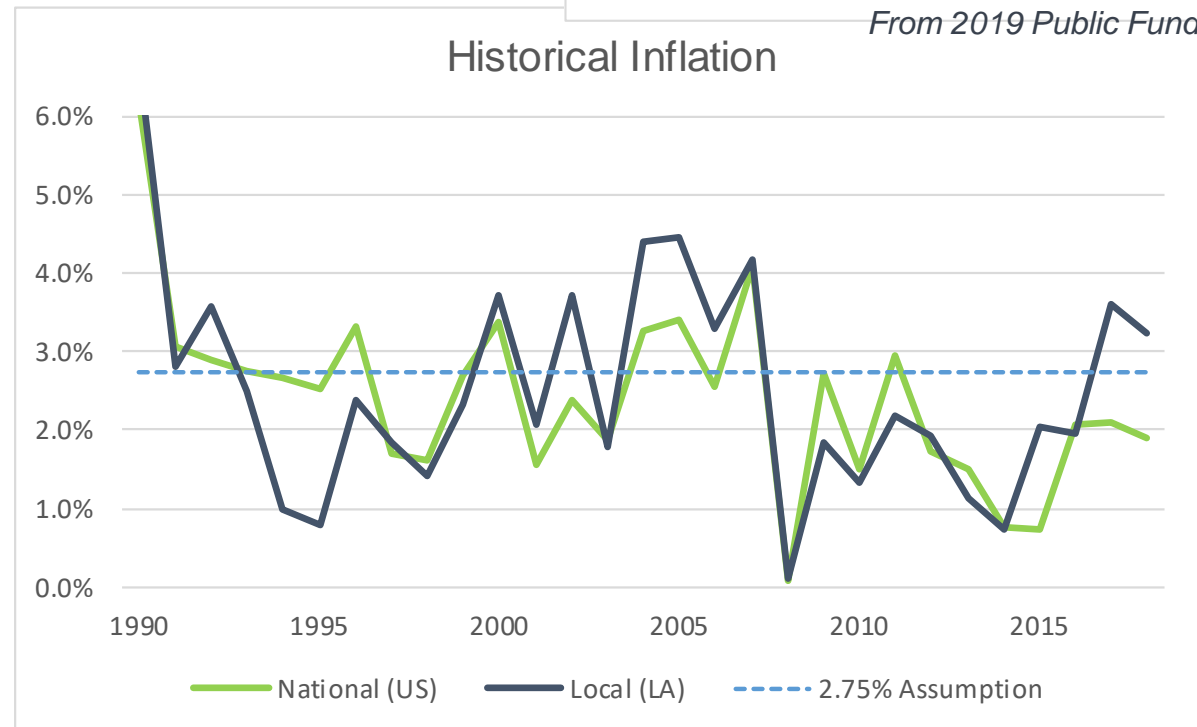
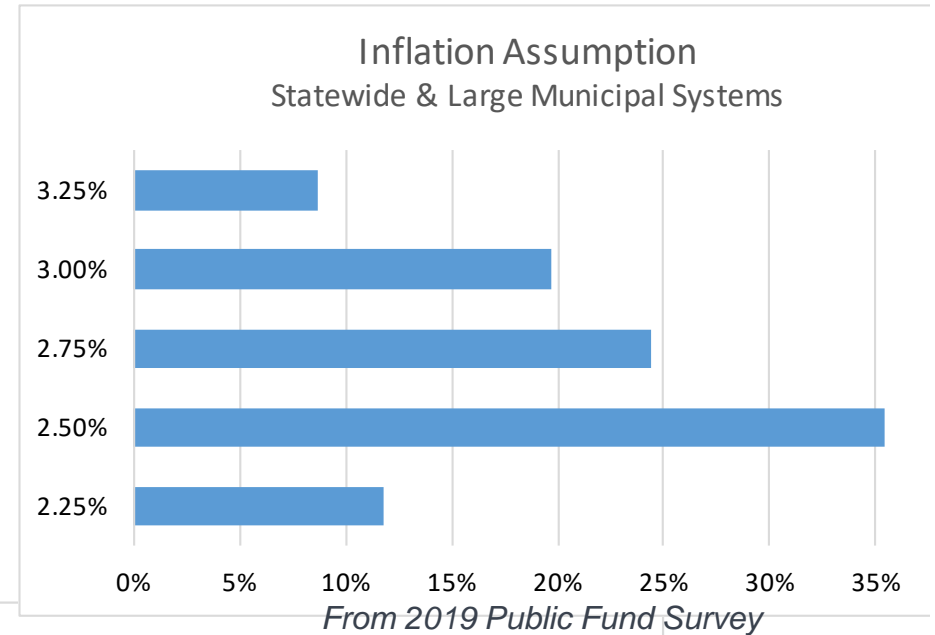
These statements include reliance on data provided, on actuarial certification, and the purpose of the report.

Milliman's work product was prepared exclusively for LACERA for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning LACERA's operations, and uses LACERA's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

Supplemental Exhibits

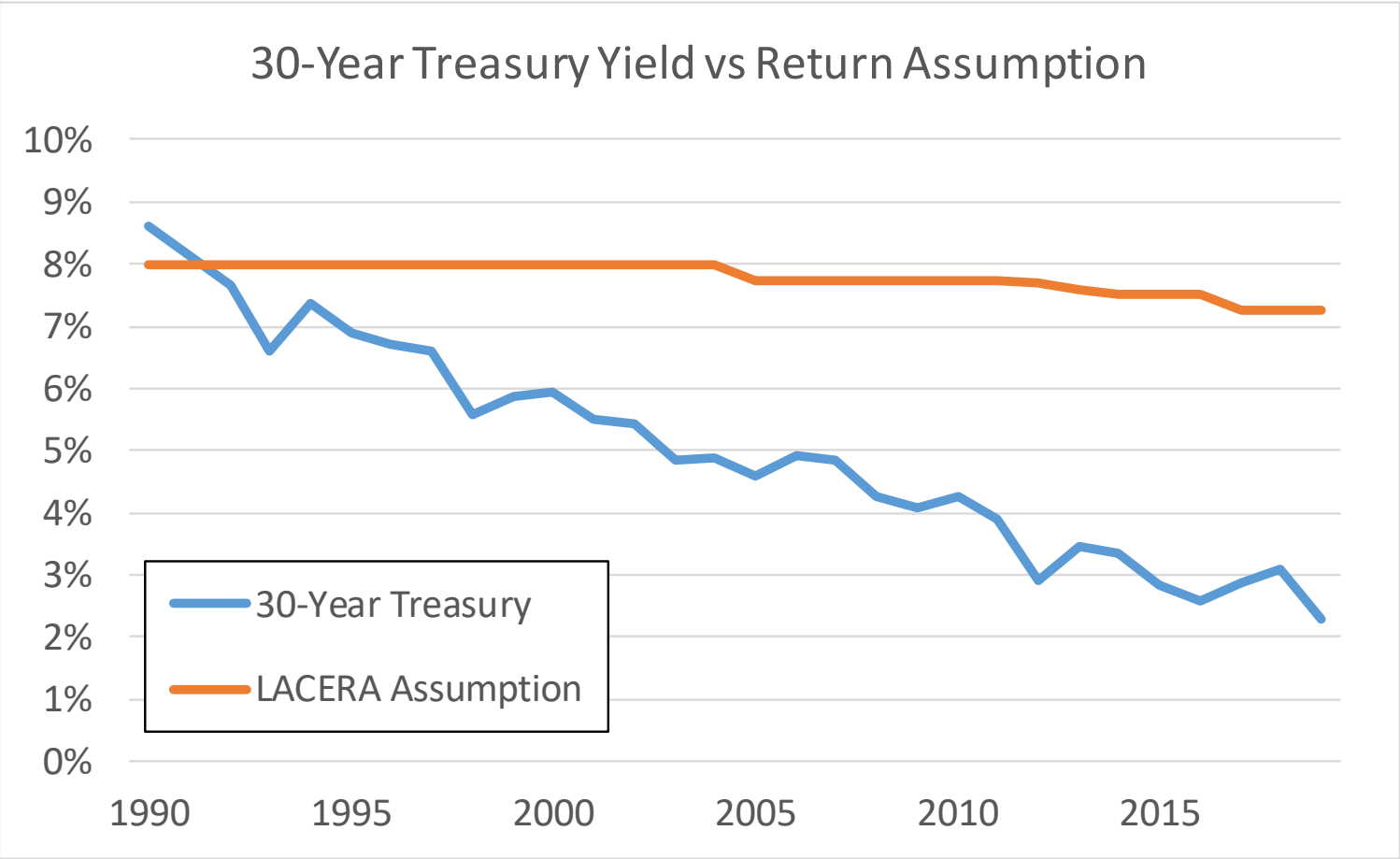
Price Inflation

- Current inflation assumption is 2.75%
 - CalPERS and CalSTRS also at 2.75%
 - 2.75% is median assumption for large systems
- Long-range Social Security projection is 2.6%
- Other forecasts are lower
 - Implied inflation from TIPS
 - Most investment consultants
- Current assumption is reasonable
 - Milliman would also view 2.50% as reasonable



Change in Investment Environment

- Significant increase in investment risk needed to achieve return assumption



Expected Return

- Milliman calculated the median expected return for LACERA's target portfolio using the January, 2019 capital market outlook assumptions from three sources
 - Meketa
 - Milliman
 - 2019 Horizon survey of capital market assumptions (survey of 34 advisors)
- Estimates do not reflect any possible "alpha" due to selected managers potentially outperforming market benchmarks over the long term
- Milliman believes future expectations of returns have decreased materially since January, 2019

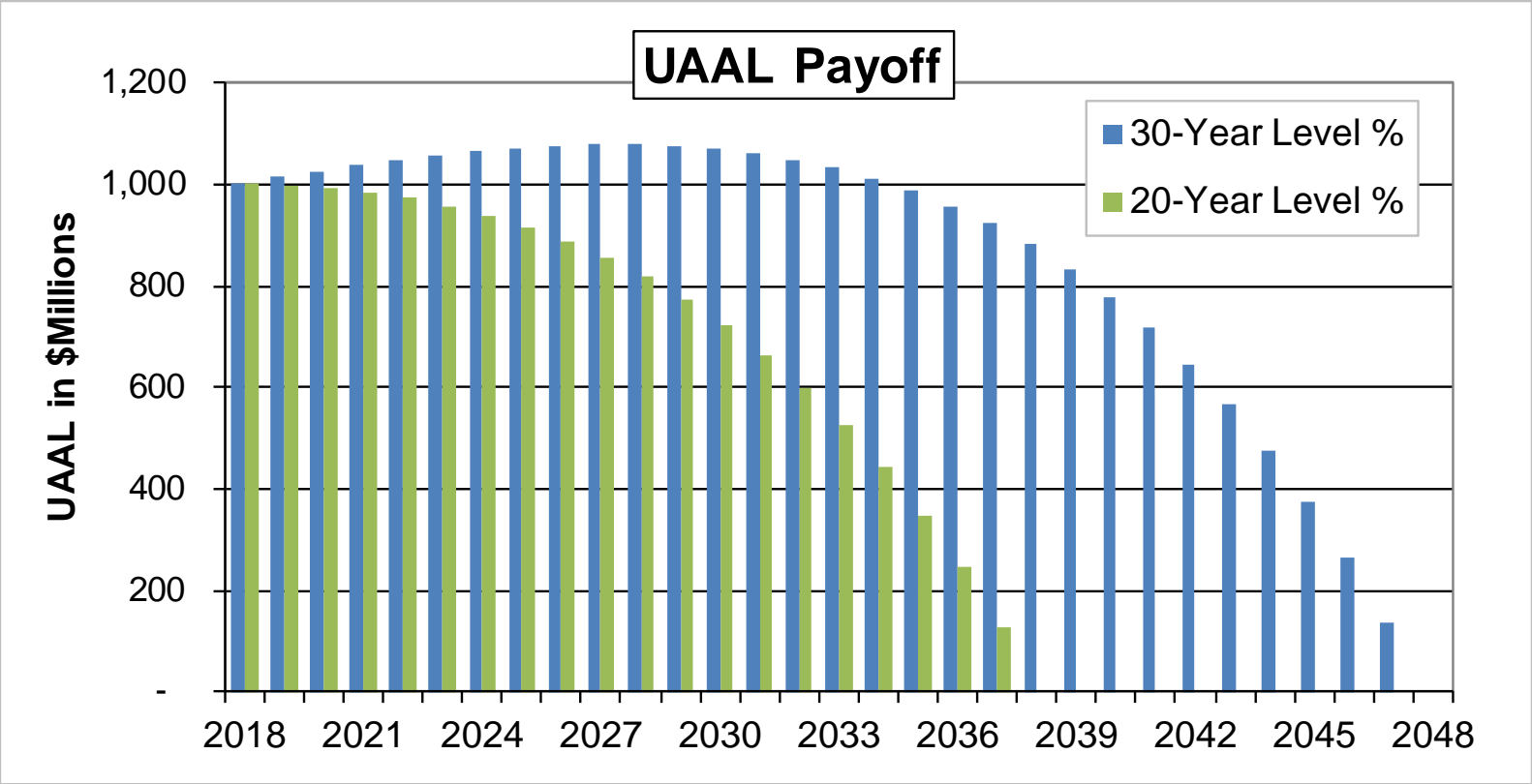
| | Meketa | Milliman | Horizon |
|-------------------------------------|--------|----------|---------|
| Based on 10-Year Assumptions | | | |
| Median Annualized Return | 6.8% | 6.3% | 6.6% |
| Assumed Inflation | 2.1% | 2.3% | 2.2% |
| Based on 20-Year Assumptions | | | |
| Median Annualized Return | 7.5% | 6.4% | 7.3% |
| Assumed Inflation | 2.6% | 2.3% | 2.3% |

Notes:

- Returns are net of assumed expenses of 0.18% of assets.
- The Horizon Survey reports a limited number of asset classes. In cases where there was not a corresponding asset class in the survey, Meketa's assumptions for the corresponding time horizon were used.
- Horizon 10-year assumptions include some consultants with less than 10 years. Horizon 20-year assumptions include some consultants with more than 20 years and are based on a subgroup of less than half of the full group.

Comparison of UAAL Amortization Periods

- LACERA’s current funding policy has negative amortization (increasing UAAL) for a number of years for new payment layers
 - Example of one layer with a \$1 billion actuarial loss in 2018



Financial Impact – Estimated Contribution Rates (Alt #2b)

| | Year | Current | Alternative 2a | | Alternative 2b | |
|--|---------------|---------------|----------------|----------|------------------|----------|
| | | Total | Total | Increase | Total | Increase |
| Assump / Current Layers | 2019 & Later | 7.25% / 3.25% | 6.75% / 3.00% | | 6.75% / 3.00% | |
| | 2020 & Later | No Change | 25 Years | | Maximum 22 Years | |
| Projected Employer Contrib. % | FYB 2019 | 20.9% | 20.9% | 0.0% | 20.9% | 0.0% |
| | FYB 2020 | 21.3% | 22.5% | 1.2% | 22.9% | 1.6% |
| | FYB 2021 | 21.3% | 23.7% | 2.4% | 23.0% | 1.7% |
| | FYB 2022 | 20.8% | 24.5% | 3.7% | 26.1% | 5.3% |
| Projected Employer Contrib. in \$Millions | FYB 2019 | \$ 1,771 | \$ 1,771 | \$ - | \$ 1,771 | \$ - |
| | FYB 2020 | 1,864 | 1,969 | 105 | 2,004 | 140 |
| | FYB 2021 | 1,925 | 2,141 | 216 | 2,078 | 153 |
| | FYB 2022 | 1,940 | 2,286 | 346 | 2,435 | 495 |
| Est. Funded Ratio | June 30, 2019 | 80.7% | 76.4% | -4.3% | 76.4% | -4.3% |
| Average Member Rate | General D | 7.4% | 8.2% | 0.8% | 8.2% | 0.8% |
| | General G | 8.4% | 9.5% | 1.1% | 9.5% | 1.1% |
| | Safety B | 10.1% | 11.9% | 1.8% | 11.9% | 1.8% |
| | Safety C | 13.7% | 15.3% | 1.6% | 15.3% | 1.6% |

November 27, 2019

TO: Each Member
Board of Investments

FROM: Ted Wright, CFA, FRM, PRM, CAIA 
Principal Investment Officer

Vache Mahseredjian, CFA, CAIA, FRM, ASA 
Principal Investment Officer

FOR: December 11, 2019 Board of Investments Meeting

SUBJECT: **EMERGING MANAGER POLICY REVIEW—PART 3**

This is the third in a series of presentations intended to review and revise LACERA's Emerging Manager Policy (EMP). At the April 2019 BOI meeting, Meketa began by reviewing the regulatory framework that governs EMPs in California, and presented statistics on the size and performance of emerging managers in public and private markets. Based on feedback and direction from the Board, Meketa fine-tuned its analysis and returned at the June BOI meeting with deliberations on the policy's objectives, the definition of emerging managers, and specific considerations for different asset classes. Staff has taken guidance provided by Board members at the April and June meetings, as well as subsequent discussions, to develop—in conjunction with Meketa—the attached draft EMP.

The proposed policy is condensed into six sections. **Section I** emphasizes that all LACERA policies, the EMP included, are intended to help achieve LACERA's mission to "Produce, Protect, and Provide the Promised Benefit." The EMP is also consistent with LACERA's Investment Policy Statement (IPS), the Code of Ethical Conduct and the Conflict of Interest Code, as well as the fundamental concepts of loyalty and prudence.

The EMP exemplifies the high value LACERA places on diversity and inclusion. However, LACERA's focus on diversity and inclusion extends beyond the EMP and permeates the entire LACERA portfolio. As stated in the IPS, LACERA believes that hiring diverse managers, inclusive of varied backgrounds, leads to improved outcomes.

Section II, Purpose and Objective, expands on the improved outcomes by clearly stating that the EMP's objective is to enhance the Total Fund's risk-adjusted return. This section also describes the balance between the potential for higher returns from investing with emerging managers, and the potentially higher risks associated with less established firms.

Section III addresses the definition of emerging managers and notes that the definition will be tailored to each asset class and will adapt over time in order to reflect the manager universe prevailing at the time of each search. This section also makes clear that emerging managers are held to the same high performance standards that apply to all of LACERA's external managers.

Section IV identifies another flexible aspect of the policy—Structure—which can be implemented either via a direct program or by employing a fund-of-funds manager. **Section V** provides a mechanism for evaluating emerging managers to determine if they qualify for graduation from emerging status. The final section, **Section VI**, outlines the monitoring and reporting of emerging managers.

Staff worked closely with Meketa in drafting this policy, and Meketa's concurrence memo is attached. Staff and Meketa will incorporate any feedback provided at the December meeting into a revised draft to be presented in January.

Attachment

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

Emerging Manager Policy

I. Introduction

LACERA's mission is to "Produce, Protect, and Provide the Promised Benefit" for all its members. In order to achieve this mission, LACERA has developed various policies to guide its investments. These policies are governed by the California constitution and by various statutes, and embedded within the regulations are fundamental concepts of loyalty and prudence. The duty of loyalty means that Board members and staff must act in the sole interest of LACERA's members and beneficiaries; the duty of prudence requires that we discharge our responsibilities with skill, care, and diligence—and that we diversify the portfolio in order to minimize the risk of loss and maximize the expected rate of return.

The Emerging Manager Policy ("Policy") furthers the investment beliefs, philosophy, and strategies outlined in LACERA's Investment Policy Statement (IPS), adheres in all respects to the Code of Ethical Conduct and the Conflict of Interest Code, and complies with all applicable governing regulations.

LACERA values diversity and inclusion. These values permeate the entire LACERA portfolio and extend beyond the emerging manager program. As stated in the IPS, LACERA believes that effectively accessing and managing diverse talent—inclusive of varied backgrounds, age, experience, race, sexual orientation, gender, ethnicity, and culture—leads to improved outcomes. LACERA expects all its external asset managers and third party providers to respect LACERA's values of diversity and inclusion and to reflect them in their own organizations.

II. Purpose and Objective

The objective of LACERA's Emerging Manager Policy is to enhance the total Fund's risk-adjusted return. The Policy seeks a proper balance between the potential for higher returns available to select emerging managers, and the higher risks—both investment-related and operational—associated with less established firms.

The Policy provides LACERA an opportunity to invest in promising investment management organizations early in their development. Investing with managers that have fewer clients, smaller assets, or a short track record may provide LACERA access to investment strategies that larger, more established managers might overlook. Smaller investment management firms may generate attractive performance, net-of-fees, because of increased market flexibility associated with smaller asset bases. In addition, first- or second-time funds may outperform later funds in private markets. Furthermore, investing early in the lifecycle of select emerging managers may carry benefits that include lower fees (founder's terms), future capacity rights, and preferred economics such as a share of future revenues.

Counterbalancing the attractive returns from investing with emerging managers is a greater return dispersion and the possibility of greater investment and operational risk—particularly in areas such as compliance, portfolio administration, cybersecurity, business continuity, and succession planning.

Emerging managers are highly motivated to perform well for early investors because doing so can be crucial to their firm's growth. As a result, institutional investors such as LACERA may have a greater alignment of interests with emerging managers than with more established ones.

III. Emerging Manager Definition

Emerging investment managers are independent firms that have less substantial assets under management or may lack a long-term investment performance record. LACERA is interested in emerging managers that have strong alignment of interest with their investors and expects principals of the firm to hold at least 66% of the ownership interest of the company. Specific requirements for AUM and length of track record are tailored for each asset class and updated for each mandate to take into account the composition of the manager universe prevailing at the time a search is conducted.

Emerging managers are held to the same high performance standards that apply to all of LACERA's external managers. In addition, LACERA conducts an ongoing assessment of all external managers' commitment to, adherence with, and track record of accessing and retaining diverse and inclusive workforces. Emerging managers may include, but are not limited to, investment managers that are owned by individuals of diverse backgrounds that have traditionally been

underrepresented in the financial services industry. More broadly, all else equal, LACERA prefers firms that are committed to and have established a demonstrated track record of diversity and inclusion throughout the firm's workforce, inclusive of investment professionals.

IV. Structure

LACERA may hire emerging managers either directly or by employing a fund-of-funds manager skilled at sourcing emerging managers. Either type of mandate must adhere to LACERA's defined procurement procedures and requires approval by the Board of Investments. Investment strategies managed by emerging managers must be suitable for LACERA's portfolio and fit within the approved strategic asset allocation and asset class structure, as well as the portfolio's risk and liquidity constraints.

For each asset class, LACERA conducts periodic structure reviews that incorporate specific criteria and recommended allocation ranges for emerging managers (see "Attachment A" for current BOI-approved ranges). The structure reviews take into consideration the opportunities and risks of the asset class and are conducted in consultation with LACERA's applicable investment consultants. The implementation of any emerging manager program must advance the principles, objectives, and initiatives established within the asset class structure review.

V. Graduation

Selected emerging managers will be reviewed in accordance with their respective asset class policies to determine if they continue to meet the requirements of the emerging manager program or if they qualify for graduation from emerging status.

VI. Monitoring and Reporting

LACERA staff will monitor the emerging managers on an ongoing basis and periodically report to the Board on potential issues, performance, and significant developments.

Emerging Manager Allocation Ranges¹

| | Minimum | Maximum |
|--------------------------|---------|---------|
| U.S. Equities | 0% | 5% |
| Fixed Income | 0% | 4% |
| Real Estate | 0% | 20% |
| Private Equity | 0% | 7% |
| Hedge Funds ² | 0% | 10% |
| Total Fund | 0% | 6% |

Document History

Revised August 8, 2016

Revised November 19, 2014

Revised: November 20, 2013

Revised: November 13, 2012

Revised: October 31, 2012

Revised: July 8, 2009

Revised: March 11, 2009

Revised September 13, 2006

Adopted June 13, 2001

¹ The allocation ranges shown are the most recent numbers approved by the BOI.

² The BOI approved a \$200 million allocation in September of 2019, and \$200 million is approximately 10% of the target Hedge Fund allocation.

MEMORANDUM

To: LACERA Board of Investments
From: Stephen McCourt, Leandro Festino, Tim Filla
Meketa Investment Group
Date: December 11, 2019
Re: Emerging Manager Policy

BACKGROUND

LACERA's Emerging Manager Policy was adopted by the Board of Investments in 2001 and most recently revised in 2014. At the April and June Board of Investment Meetings, Meketa and LACERA staff discussed potential updates to the Emerging Manager Policy with the Board. Based on those discussions, staff and Meketa developed the policy revisions being presented today.

ROLE OF EMERGING MANAGERS

Emerging Managers are defined broadly as small, independent, and relatively new investment managers. Investing with Emerging Managers provides LACERA the opportunity to invest with promising managers in the early stages of development and to consider a broader set of managers that would otherwise be limited by certain constraints such as length of track record. Identifying and investing with these early stage investment firms has the potential to provide multiple benefits for LACERA, such as access to return streams which may not be accessible or meaningful for managers with larger asset bases or the ability to secure preferential fees and future capacity rights. Independent ownership structures provide a strong alignment of interests between Emerging Managers and LACERA.

SUMMARY OF REVISIONS RECOMMENDATION

The overall goal of revising the Emerging Manager Policy is similar to other governance initiatives undertaken at LACERA, to streamline, harmonize, and elevate policy while shifting procedure and specific processes to other more specific documents such as asset class manuals or structure reviews. The main changes are outlined below:

1. The revised policy adds an introduction section which provides context for the policy and its implementation and also elevates LACERA's belief

from the Investment Policy Statement that “effectively accessing and managing diverse talent—inclusive of varied backgrounds, age, experience, race, sexual orientation, gender, ethnicity, and culture—leads to improved outcomes.”


2. The Purpose and Objective section has been expanded to include a primary objective to enhance risk adjusted returns and provide more detail on additional benefits such as preferential economics and future capacity rights.
3. All specific asset class criteria have been removed in favor of the more dynamic approach of delineating those during structure reviews.
4. A section on Graduation replaces more proscriptive language previously contained in the Qualifications for Promotional Opportunities section.


Meketa has reviewed the revised Emerging Manager Policy. We believe the revised policy enhances LACERA’s efforts to access Emerging Managers by removing specific constraints from the policy and allowing for the development of guidelines, qualifications, and procedures during asset class specific structure reviews. Additionally, the revised policy more clearly states the objectives of utilizing Emerging Managers within LACERA’s investment portfolio and better highlights the importance that LACERA places on diversity and inclusion. We look forward to discussing this matter with you at the December 11th meeting and using your feedback to further refine the Policy.


SM/LF/TF/srt

November 26, 2019

TO: Each Member
Board of Investments

FROM: Jonathan Grabel 
Chief Investment Officer

Calvin Chang 
Senior Investment Analyst

Sabrina Chen  for
Investment Accountant

FOR: December 11, 2019 Board of Investments Meeting

SUBJECT: **ASSEMBLY BILL 2833 REPORT – FISCAL YEAR 2019**

California Assembly Bill 2833 ("AB 2833") requires the public pension systems to obtain information on fees, expenses, and carried interest information in connection with their investments in alternative investment vehicles and disclose, at least on an annual basis, the results to the public in an open meeting for all new commitments made on and after January 1, 2017. In addition, the bill requires each public pension system to undertake reasonable efforts to obtain the aforementioned information for any existing contracts to which the public pension has not made a new capital commitment on or after January 1, 2017. This expense and fee report provides maximum transparency within the limitations of the law and existing confidentiality agreements.

LACERA collected data from 263 active alternative investment vehicles and aggregated the data consistent with the mandate and spirit of AB 2833. For the fiscal year ending June 30, 2019, the private equity asset category accounted for the majority of both the four percent increase and the \$317 million of alternative investment vehicle costs, respectively.

It is worth noting that staff converted this year's AB 2833 reporting from the previous asset class structure to the new functional asset category construct. In addition, the report now includes expanded analysis of each asset category, such as a comparison of cost per market value, distribution of total costs, and a cost bridge that identifies the sources of change year over year.

An overview of AB 2833 (**Attachment 1**) and the fees listed in the summary above will be discussed at the December 11, 2019 Board of Investments meeting. An expanded view of the fees is provided (**Attachment 2**) as required by AB 2833, in addition to Section 6254.26(b) reporting (**Attachment 3**).

Attachments

AB 2833 Fiscal Year 2019

Board of Investments

December 11, 2019

Jonathan Grabel – Chief Investment Officer

Calvin Chang – Senior Investment Analyst

Sabrina Chen – Investment Accountant



LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

Overview of AB 2833

The intent of California Assembly Bill 2833 ("AB 2833") is to increase the transparency of fees paid by public investment funds to alternative investments¹ by requiring public investment funds to disclose the fees, expenses, and carried interest in connection with alternative investment vehicles and their underlying investments at least once annually at an open meeting. The fee transparency disclosure requirements are applicable to:

- 1) New contracts entered into on and after January 1, 2017; and
- 2) Existing contracts for which a new capital commitment is made on or after January 1, 2017
- 3) In addition, each public pension system is required to undertake reasonable efforts to disclose such information for any existing contract for which the public investment fund has not made a new capital commitment on or after January 1, 2017

¹ "Alternative investment" is defined in AB 2833 as an investment in a private equity fund, venture fund, hedge fund, or absolute return fund.



Requirements Under AB 2833

Effective January 1, 2017, annual reporting rules require the disclosure of the following:

- 1) The fees and expenses paid directly to the alternative investment vehicle, the fund manager, or related parties;
- 2) Pro rata share of fees and expenses not covered by item (1) above that are paid from the alternative investment vehicle to the fund manager or related parties;
- 3) Pro rata share of carried interest distributed to the fund manager or related parties;
- 4) Pro rata share of aggregate fees and expenses paid by all of the portfolio companies held within the alternative investment vehicle to the fund manager or related parties;
- 5) The gross and net rate of return of each alternative investment vehicle since inception; and
- 6) The information described in subdivision (b) of Section 6254.26 of the Public Records Act.



Government Code Section 6254.26 (b)

Included as a subset of AB 2833, Section 6254.26(b) requires the disclosure of the following:

- 1) Name, address and vintage year of fund;
- 2) Dollar amount since inception of Public Plan's commitment to fund;
- 3) Dollar amount since inception of Public Plan's cash contributions to fund;
- 4) Fiscal year-end dollar amount of fund's cash distributions received by Public Plan from fund;
- 5) Fiscal year-end dollar amount of cash distributions received plus the remaining value of fund's assets attributable to the investment by Public Plan;
- 6) Net internal rate of return of fund since inception;
- 7) Investment multiple of fund since inception;
- 8) Dollar amount of total management fees and costs paid by Public Plan on an annual fiscal year-end basis; and
- 9) Annual fiscal year-end dollar amount of cash profit Public Plan has received from fund.



Summary of Alternative Investment Fees, Expenses, and Carried Interest for the period July 1, 2018 through June 30, 2019

| Functional Category ¹ | Management Fee ² | Fund Expenses ³ | Carried Interest ⁴ | Total Costs |
|---|-----------------------------|----------------------------|-------------------------------|-----------------------|
| Growth | \$ 106,378,675 | \$ 36,562,122 | \$ 107,388,599 | \$ 250,329,397 |
| Global Equity | 6,586,120 | 902,317 | 2,188,297 | 9,676,735 |
| Private Equity | 91,300,041 | 32,094,805 | 105,156,260 | 228,551,107 |
| Opportunistic RE | 8,492,513 | 3,565,000 | 44,042 | 12,101,554 |
| Credit | \$ 11,920,221 | \$ 4,232,567 | \$ 5,434,458 | \$ 21,587,246 |
| Bank Loans | 2,383,918 | 476,497 | - | 2,860,415 |
| Illiquid Credit | 9,536,303 | 3,756,070 | 5,434,458 | 18,726,831 |
| Real Assets and Inflation Hedges | \$ 7,255,110 | \$ 2,427,967 | \$ - | \$ 9,683,078 |
| Core and Value Added RE | 5,362,107 | 2,404,307 | - | 7,766,415 |
| Natural Resources & Commodities | 1,893,003 | 23,660 | - | 1,916,663 |
| Risk Reduction and Mitigation | \$ 22,412,070 | \$ 8,027,972 | \$ 5,641,009 | \$ 36,081,051 |
| Diversified Hedge Fund | 22,412,070 | 8,027,972 | 5,641,009 | 36,081,051 |
| Total | \$ 147,966,076 | \$ 51,250,629 | \$ 118,464,067 | \$ 317,680,772 |

¹ Cost data representative for only alternative investment vehicles within each functional asset category.

² Management fees paid or accrued to the alternative investment fund during the fiscal year. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, calculation using the respective management fee rate, and pro rata share of the alternative investment fund's total management fee. Negative values indicate giveback of previously accrued or paid fees.

³ Fund expenses paid or accrued to the alternative investment fund during the fiscal year, including by portfolio companies. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, pro rata share of the alternative investment fund's total fund expenses, and estimations based on alternative investment fund's operating expense ratios obtained from the most recent audited financial statement. Negative values indicate giveback of previously accrued or paid fees.

⁴ Carried interest paid or accrued to the alternative investment fund during the fiscal year. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, and pro rata share of the alternative investment fund's total carried interest. Negative values indicate giveback of previously accrued or paid fees.



Summary of Alternative Investment Fees, Expenses, and Carried Interest for the period July 1, 2017 through June 30, 2018

| Functional Category ¹ | Management Fee ² | Fund Expenses ³ | Carried Interest ⁴ | Total Costs |
|---|-----------------------------|----------------------------|-------------------------------|----------------|
| Growth | \$ 94,273,959 | \$ 31,576,231 | \$ 107,815,959 | \$ 233,666,149 |
| Global Equity | 6,742,342 | 843,877 | 3,951,343 | 11,537,562 |
| Private Equity | 80,661,162 | 28,430,758 | 101,645,322 | 210,737,242 |
| Opportunistic RE | 6,870,455 | 2,301,596 | 2,219,295 | 11,391,345 |
| Credit | \$ 12,731,259 | \$ 4,310,537 | \$ 5,886,697 | \$ 22,928,493 |
| Bank Loans | 1,942,167 | 391,861 | - | 2,334,028 |
| Illiquid Credit | 10,789,092 | 3,918,676 | 5,886,697 | 20,594,465 |
| Real Assets and Inflation Hedges | \$ 5,359,776 | \$ 1,916,899 | \$ - | \$ 7,276,676 |
| Core and Value Added RE | 3,448,470 | 1,877,986 | - | 5,326,457 |
| Natural Resources & Commodities | 1,911,306 | 38,913 | - | 1,950,219 |
| Risk Reduction and Mitigation | \$ 18,413,063 | \$ 6,063,011 | \$ 16,060,125 | \$ 40,536,199 |
| Diversified Hedge Fund | 18,413,063 | 6,063,011 | 16,060,125 | 40,536,199 |
| Total | \$ 130,778,058 | \$ 43,866,678 | \$ 129,762,782 | \$ 304,407,518 |

¹ Cost data representative for only alternative investment vehicles within each functional asset category.

² Management fees paid or accrued to the alternative investment fund during the fiscal year. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, calculation using the respective management fee rate, and pro rata share of the alternative investment fund's total management fee. Negative values indicate giveback of previously accrued or paid fees.

³ Fund expenses paid or accrued to the alternative investment fund during the fiscal year, including by portfolio companies. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, pro rata share of the alternative investment fund's total fund expenses, and estimations based on alternative investment fund's operating expense ratios obtained from the most recent audited financial statement. Negative values indicate giveback of previously accrued or paid fees.

⁴ Carried interest paid or accrued to the alternative investment fund during the fiscal year. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, and pro rata share of the alternative investment fund's total carried interest. Negative values indicate giveback of previously accrued or paid fees.



Year-Over-Year Changes

| Functional Category ¹ | Management Fee ² | Fund Expenses ³ | Carried Interest ⁴ | Total Costs |
|---|-----------------------------|----------------------------|-------------------------------|-------------|
| Growth | 13% | 16% | 0% | 7% |
| Global Equity | -2% | 7% | -45% | -16% |
| Private Equity | 13% | 13% | 3% | 8% |
| Opportunistic RE | 24% | 55% | -98% | 6% |
| Credit | -6% | -2% | -8% | -6% |
| Bank Loans | 23% | 22% | 0% | 23% |
| Illiquid Credit | -12% | -4% | -8% | -9% |
| Real Assets and Inflation Hedges | 35% | 27% | 0% | 33% |
| Core and Value Added RE | 55% | 28% | 0% | 46% |
| Natural Resources & Commodities | -1% | -39% | 0% | -2% |
| Risk Reduction and Mitigation | 22% | 32% | -65% | -11% |
| Diversified Hedge Fund | 22% | 32% | -65% | -11% |
| Total | 13% | 17% | -9% | 4% |

¹ Cost data representative for only alternative investment vehicles within each functional asset category.

² Management fees paid or accrued to the alternative investment fund during the fiscal year. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, calculation using the respective management fee rate, and pro rata share of the alternative investment fund's total management fee. Negative values indicate giveback of previously accrued or paid fees.

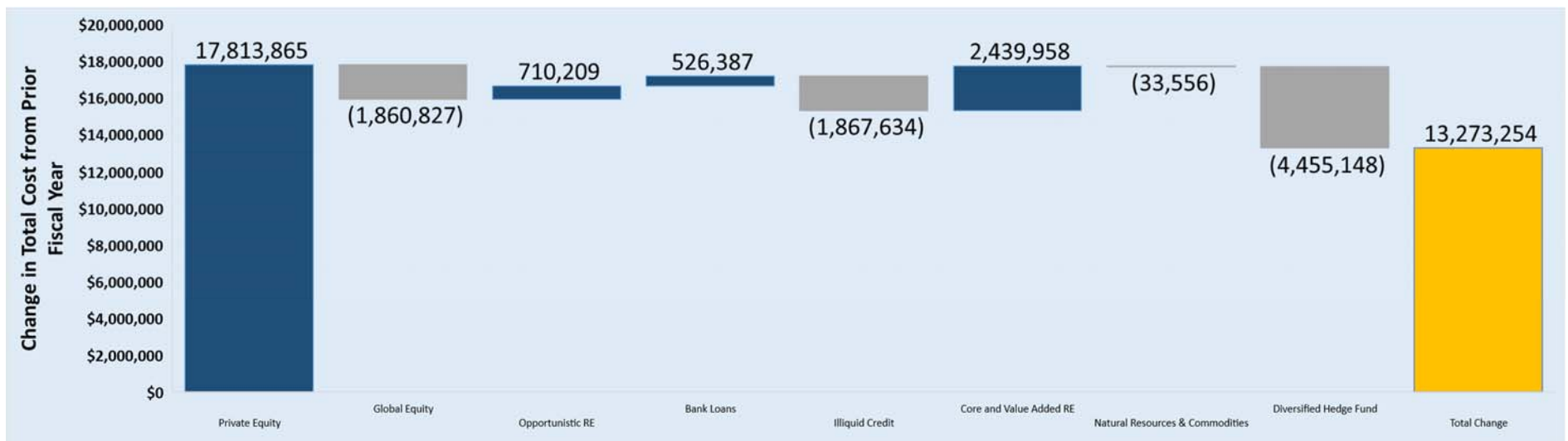
³ Fund expenses paid or accrued to the alternative investment fund during the fiscal year, including by portfolio companies. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, pro rata share of the alternative investment fund's total fund expenses, and estimations based on alternative investment fund's operating expense ratios obtained from the most recent audited financial statement. Negative values indicate giveback of previously accrued or paid fees.

⁴ Carried interest paid or accrued to the alternative investment fund during the fiscal year. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, and pro rata share of the alternative investment fund's total carried interest. Negative values indicate giveback of previously accrued or paid fees.

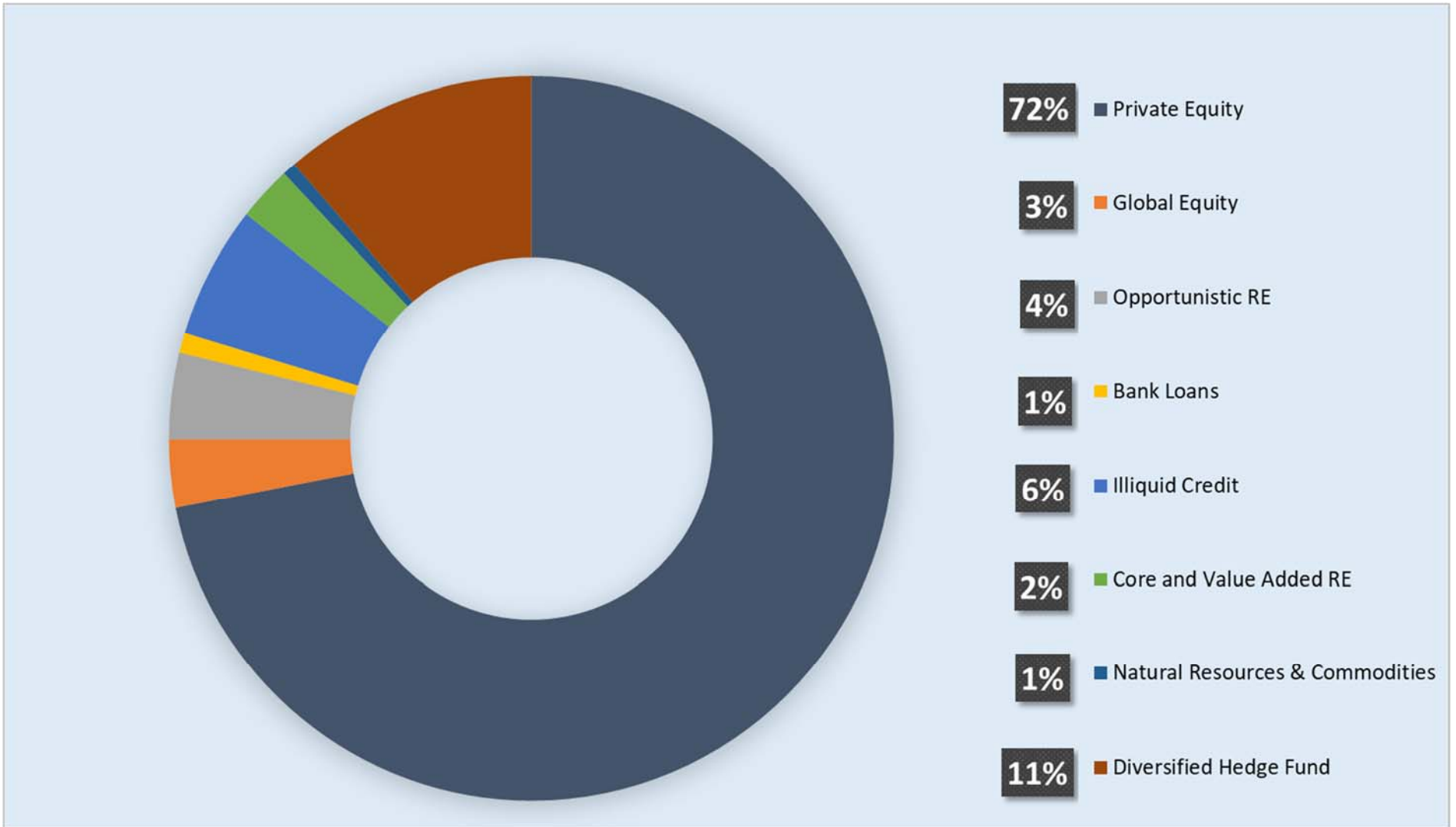


Sources of Change

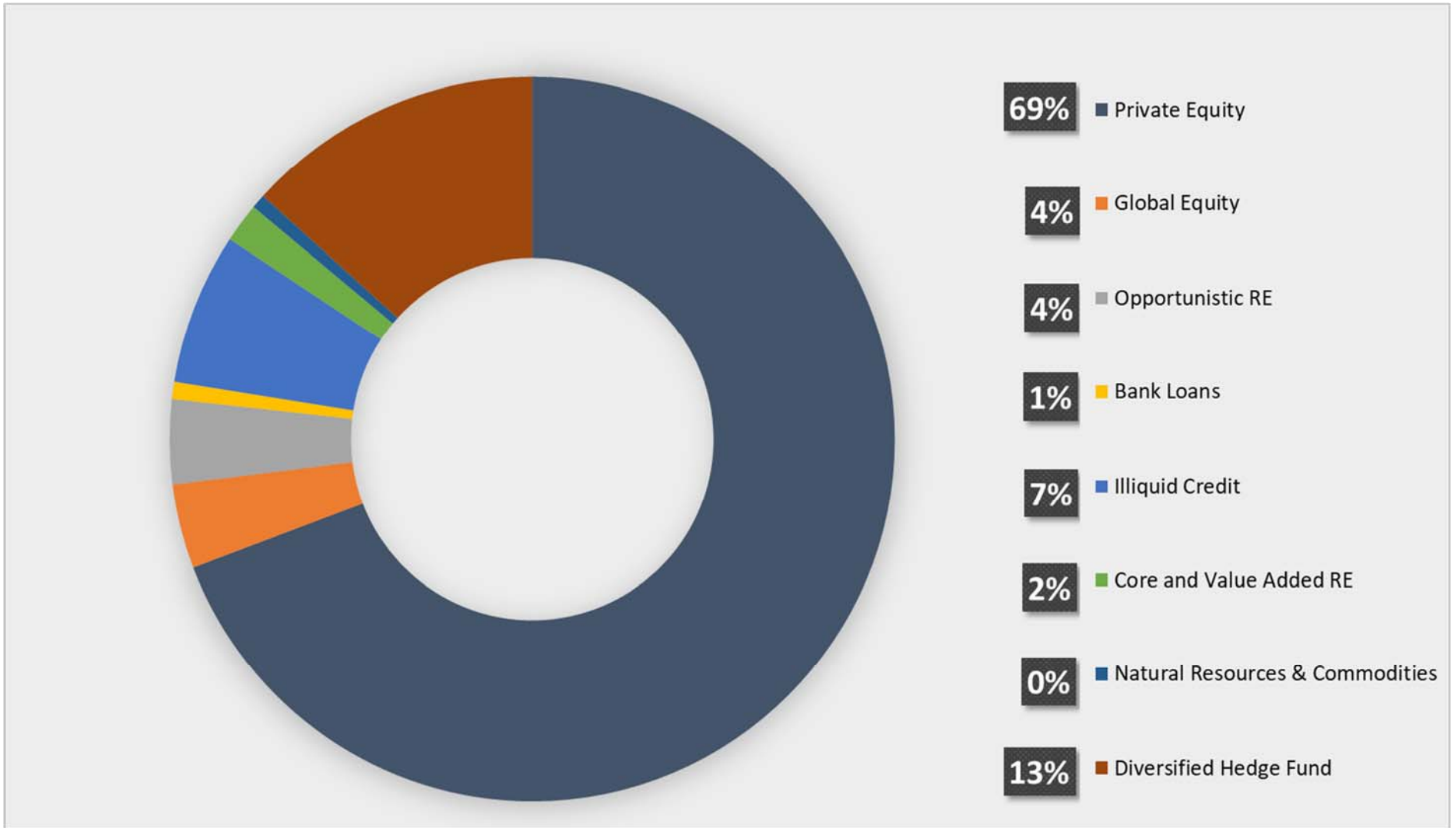
| Functional Category | Sources of Change |
|---|--|
| Growth | |
| Private Equity | Management fee and expenses increased as a result of 2018 and 2019 vintage year fund activations |
| Global Equity | Lower carried interest due to modestly lower returns relative to high-water mark |
| Opportunistic RE | Increased fees due to a higher number of funds |
| Credit | |
| Bank Loans | Increased commitment amount lead to greater management fee and expenses |
| Illiquid Credit | Decreased management fees and expenses due to culmination of credit hedge fund-of-fund and decreased carried interest resulting from lower returns |
| Real Assets and Inflation Hedges | |
| Core and Value Added RE | Increased fees due to a higher number of funds |
| Natural Resources & Commodities | Small base in prior year fund expenses was impacted by a nominal (~\$10K) change in current year |
| Risk Reduction and Mitigation | |
| Diversified Hedge Fund | Decreased management fees and expenses due to culmination of credit hedge fund-of-fund and decreased carried interest resulting from lower returns |



Distribution of Total Costs FY 2019

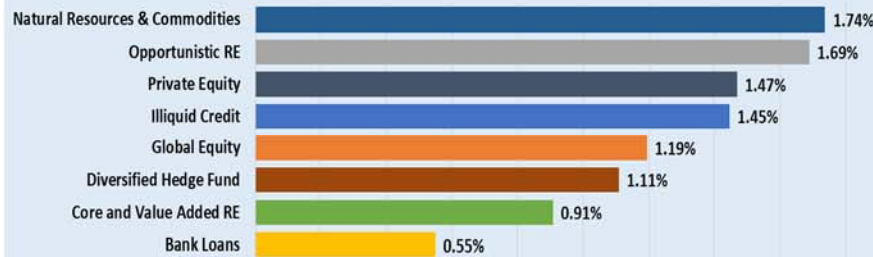


Distribution of Total Costs FY 2018

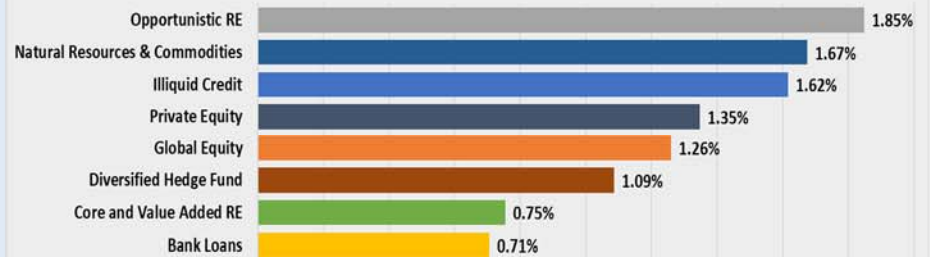


Costs Per Market Value Comparison

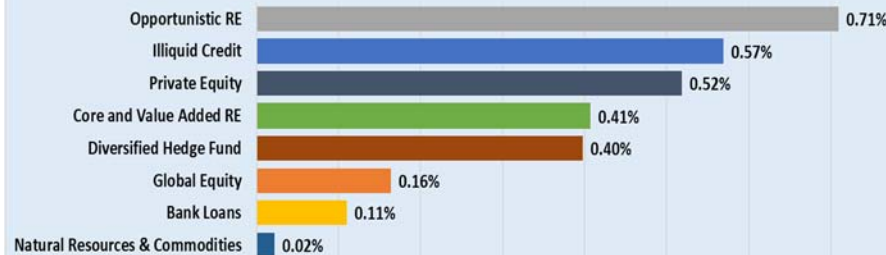
FY 2019 Management Fee per Market Value



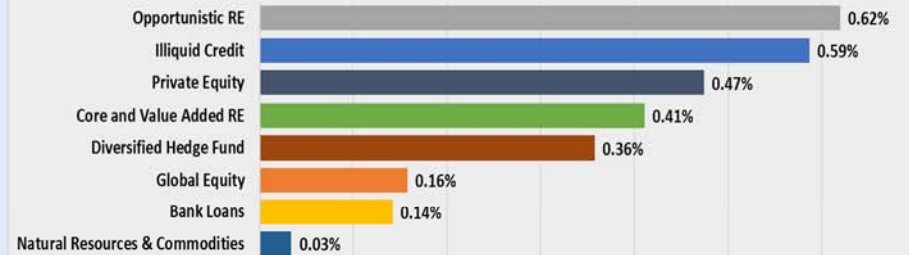
FY 2018 Management Fee per Market Value



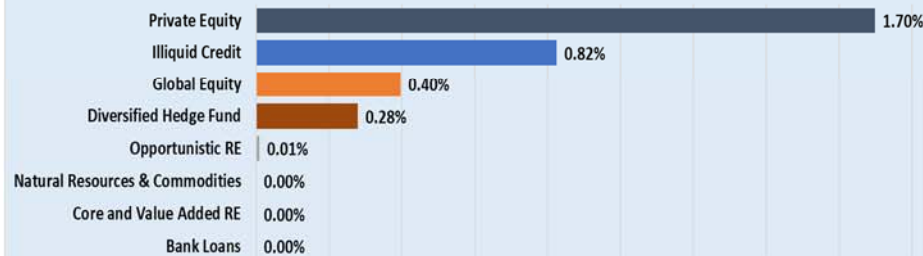
FY 2019 Fund Expenses per Market Value



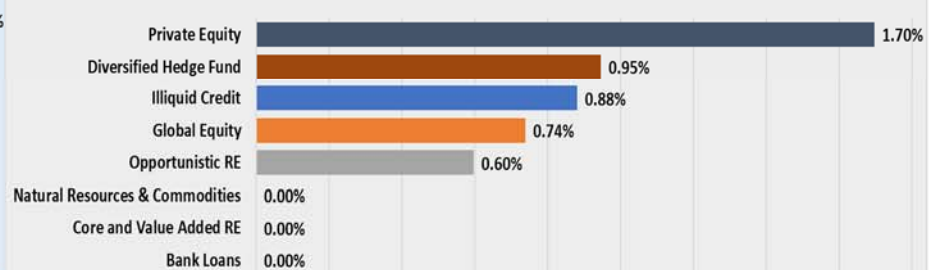
FY 2018 Fund Expenses per Market Value



FY 2019 Carried Interest per Market Value



FY 2018 Carried Interest per Market Value



LACERA reports performance net of costs



Assembly Bill 2833

Fiscal Year-Ended June 30, 2019

| | | | A | B | C | | | | Sum of A + B + C |
|----------------|------------------------|---|------------------------------|----------------------------|-------------------------------|---|---|---|------------------|
| Asset Category | Functional Category | Alternative Investment Fund | Management Fees ¹ | Fund Expenses ² | Carried Interest ³ | Portfolio Company Expenses ⁴ | Since Inception Gross Return ⁵ | Since Inception Net Return ⁶ | Total Fees |
| Fixed Income | Illiquid Credit | BPC Opportunities Fund II, L.P. | \$ 599,419 | \$ 304,729 | \$ - | \$ - | 9.90% | 8.00% | \$ 904,148 |
| Fixed Income | Illiquid Credit | BPC Opportunities Fund III, L.P. | \$ 979,601 | \$ 1,053,304 | \$ - | \$ - | 14.20% | 9.50% | \$ 2,032,905 |
| Fixed Income | Bank Loans | Tennenbaum Senior Loan Fund V, LLC | \$ 2,383,918 | \$ 476,497 | \$ - | \$ - | 8.80% | 7.80% | \$ 2,860,415 |
| Global Equity | Global Equity | Cevian Capital II Master Fund L.P. | \$ 4,277,464 | \$ 184,454 | \$ - | \$ - | 18.60% | 17.40% | \$ 4,461,917 |
| Global Equity | Global Equity | JANA Strategic Investment Fund V, L.P. | \$ 1,200,000 | \$ 199,421 | \$ 1,672,352 | \$ 9,306 | 20.65% | 12.96% | \$ 1,408,727 |
| Global Equity | Global Equity | The SFP Value Realization Master Fund Ltd | \$ 1,108,657 | \$ 509,137 | \$ 515,945 | \$ - | 20.21% | 17.11% | \$ 1,617,794 |
| Hedge Fund | Diversified Hedge Fund | Alyeska Fund 2, L.P. - Class A | \$ 261,450 | \$ 12,938 | \$ - | \$ - | 1.07% | -1.92% | \$ 274,388 |
| Hedge Fund | Diversified Hedge Fund | AQR Liquid Enhanced Alternative Premia Fund L.P. | \$ 505,633 | \$ 105,178 | \$ - | \$ - | -8.32% | -9.00% | \$ 610,811 |
| Hedge Fund | Diversified Hedge Fund | Atreaus Fund, L.P. - Tranche F | \$ 94,127 | \$ 12,748 | \$ - | \$ - | -3.84% | -3.90% | \$ 106,876 |
| Hedge Fund | Diversified Hedge Fund | BosValen US Feeder Fund | \$ 137,485 | \$ 166,274 | \$ - | \$ - | -9.74% | -9.80% | \$ 303,759 |
| Hedge Fund | Diversified Hedge Fund | Bridgewater Pure Alpha Major Markets II, LLC | \$ 594,795 | \$ 30,107 | \$ 182,277 | \$ - | 2.09% | -1.58% | \$ 624,902 |
| Hedge Fund | Diversified Hedge Fund | Capula Global Relative Value Fund L.P. | \$ 1,201,419 | \$ 367,029 | \$ 35,872 | \$ - | 10.95% | 4.01% | \$ 1,568,448 |
| Hedge Fund | Diversified Hedge Fund | Crabel Multi Product Program | \$ 134,872 | \$ 11,738 | \$ 139,772 | \$ - | 7.47% | 4.02% | \$ 146,610 |
| Hedge Fund | Diversified Hedge Fund | D.E. Shaw Valence Fund, LLC | \$ 998,616 | \$ 44,472 | \$ 1,243,333 | \$ - | 20.89% | 10.88% | \$ 1,043,088 |
| Hedge Fund | Diversified Hedge Fund | Davidson Kempner Institutional Partners, L.P. ¹⁰ | \$ 1,408,355 | \$ 63,810 | \$ 14,336 | \$ 23,572 | 6.59% | 4.00% | \$ 1,495,738 |
| Hedge Fund | Diversified Hedge Fund | Deep Basin Long-Short Fund, L.P. | \$ 179,174 | \$ 53,189 | \$ 138,364 | \$ - | 10.24% | 7.57% | \$ 232,362 |
| Hedge Fund | Diversified Hedge Fund | Dymon Asia Macro (US) Fund - Class P3 Unrestricted | \$ 134,624 | \$ 37,536 | \$ - | \$ - | 0.17% | -0.55% | \$ 172,160 |
| Hedge Fund | Diversified Hedge Fund | Edgestream Sumatra Fund, L.P. | \$ 147,661 | \$ 35,370 | \$ 38,759 | \$ - | 7.90% | 5.02% | \$ 183,032 |
| Hedge Fund | Diversified Hedge Fund | Empyrean Capital Fund, L.P. - Class 2 Series N | \$ 269,274 | \$ 3,296 | \$ 74,157 | \$ - | 7.57% | 4.94% | \$ 272,570 |
| Hedge Fund | Diversified Hedge Fund | EMSO Saguaro Ltd. - Class A | \$ 162,216 | \$ 29,240 | \$ - | \$ - | 0.71% | -0.54% | \$ 191,456 |
| Hedge Fund | Diversified Hedge Fund | Exoduspoint Partners Fund, LP | \$ - | \$ 819,883 | \$ 5,849 | \$ - | 4.09% | 3.43% | \$ 819,883 |
| Hedge Fund | Diversified Hedge Fund | Farallon Capital Institutional Partners, L.P. | \$ - | \$ - | \$ - | \$ - | 6.36% | 4.20% | \$ - |
| Hedge Fund | Diversified Hedge Fund | Glen Point Global Macro Fund, L.P. - Class A | \$ 196,166 | \$ 96,287 | \$ - | \$ - | 0.00% | -1.58% | \$ 292,453 |
| Hedge Fund | Diversified Hedge Fund | Goldman Sachs Asset Management ⁸ | \$ 1,816,072 | \$ 21,366 | \$ - | \$ - | 4.70% | 2.25% | \$ 1,837,438 |
| Hedge Fund | Diversified Hedge Fund | HBK Multi-Strategy Fund, L.P. | \$ 1,730,442 | \$ 510,604 | \$ 707,567 | \$ - | 7.27% | 4.65% | \$ 2,241,046 |
| Hedge Fund | Diversified Hedge Fund | HG Vora Special Opportunities Fund, LP - Series 1 | \$ 340,348 | \$ 64,221 | \$ 69,393 | \$ - | 9.98% | 6.88% | \$ 404,569 |
| Hedge Fund | Diversified Hedge Fund | Holocene Advisors Fund, L.P. - Class AI-A | \$ 357,458 | \$ 34,204 | \$ 231,741 | \$ - | 13.89% | 10.37% | \$ 391,663 |
| Hedge Fund | Diversified Hedge Fund | Kinbury Equity Fund L.P. - Class F | \$ 234,745 | \$ 36,974 | \$ - | \$ - | 3.23% | 1.63% | \$ 271,719 |
| Hedge Fund | Diversified Hedge Fund | Lakewood Capital Partners, L.P. | \$ 306,117 | \$ 29,580 | \$ - | \$ - | 7.41% | 4.61% | \$ 335,698 |
| Hedge Fund | Diversified Hedge Fund | Macquarie Global Alpha US Feeder Fund - Class L | \$ - | \$ - | \$ - | \$ - | 3.32% | 3.10% | \$ - |
| Hedge Fund | Diversified Hedge Fund | Manikay Onshore Fund, L.P. | \$ 261,809 | \$ 83,538 | \$ - | \$ - | 9.72% | 6.77% | \$ 345,347 |
| Hedge Fund | Diversified Hedge Fund | Palestra Capital Partners, LP - Series 3G Interests | \$ 291,055 | \$ 31,791 | \$ - | \$ - | 15.40% | 11.35% | \$ 322,847 |
| Hedge Fund | Diversified Hedge Fund | Palmetto Catastrophe Fund L.P. - Class H | \$ 188,339 | \$ 21,624 | \$ - | \$ - | -1.57% | -2.84% | \$ 209,963 |
| Hedge Fund | Diversified Hedge Fund | PFM Therapeutics Fund, L.P. | \$ 101,388 | \$ 123,560 | \$ - | \$ - | 3.46% | 1.57% | \$ 224,947 |
| Hedge Fund | Diversified Hedge Fund | PIMCO Tactical Opportunities Onshore Fund L.P. | \$ 771,060 | \$ 154,212 | \$ - | \$ - | 6.58% | 3.19% | \$ 925,272 |
| Hedge Fund | Diversified Hedge Fund | Rubic Capital Partners, L.P. - Series FI G | \$ 254,473 | \$ 70,457 | \$ - | \$ - | 12.64% | 8.41% | \$ 324,930 |
| Hedge Fund | Illiquid Credit | San Gabriel Fund 2, L.P. ⁹ | \$ 76,584 | \$ 63,511 | \$ 64,580 | \$ - | 8.90% | 5.86% | \$ 140,095 |
| Hedge Fund | Illiquid Credit | San Gabriel Fund 3, L.P. ⁹ | \$ 6,371,400 | \$ 1,994,053 | \$ 2,947,847 | \$ - | 7.53% | 6.78% | \$ 8,365,453 |
| Hedge Fund | Diversified Hedge Fund | San Gabriel Fund, L.P. ⁹ | \$ 8,610,114 | \$ 4,773,557 | \$ 2,812,897 | \$ - | 4.25% | 3.49% | \$ 13,383,671 |
| Hedge Fund | Diversified Hedge Fund | Stone Milliner Macro Fund Delaware L.P. - Class A | \$ 269,684 | \$ 27,836 | \$ - | \$ - | 2.87% | 0.66% | \$ 297,521 |
| Hedge Fund | Diversified Hedge Fund | Swiftcurrent Partners, L.P. - Class C | \$ 44,062 | \$ 11,600 | \$ (276,918) | \$ - | 4.62% | 2.18% | \$ 55,662 |
| Hedge Fund | Diversified Hedge Fund | Taconic Opportunity Fund L.P. | \$ 282,733 | \$ 63,838 | \$ 223,609 | \$ - | 8.27% | 6.43% | \$ 346,571 |
| Hedge Fund | Diversified Hedge Fund | Warlander Partners, L.P. - Class W | \$ 34,910 | \$ 14,795 | \$ - | \$ - | -0.31% | -2.21% | \$ 49,705 |
| Hedge Fund | Diversified Hedge Fund | Winton Diversified Strategy Fund (US), L.P. | \$ 91,391 | \$ 41,546 | \$ - | \$ - | 3.57% | 2.22% | \$ 132,937 |
| Private Equity | Private Equity | Accel-KKR Growth Capital Partners III, L.P. | \$ - | \$ - | \$ - | \$ - | NM | 0.00% | \$ - |
| Private Equity | Private Equity | Accel-KKR Capital Partners VI, L.P. | \$ - | \$ - | \$ - | \$ - | NM | 0.00% | \$ - |
| Private Equity | Private Equity | Advent International GPE IX, L.P. | \$ - | \$ - | \$ - | \$ - | NM | 0.00% | \$ - |
| Private Equity | Private Equity | AE Industrial Partners Fund II, L.P. | \$ 529,847 | \$ 510,409 | \$ - | \$ - | 5.80% | -16.07% | \$ 1,040,256 |
| Private Equity | Private Equity | Alchemy Special Opportunities Fund IV, L.P. | \$ 682,315 | \$ 278,976 | \$ - | \$ - | NM | 0.00% | \$ 961,291 |
| Private Equity | Private Equity | Alsop Louie Capital II, L.P. | \$ (505) | \$ 11,230 | \$ - | \$ - | N/A | -5.33% | \$ 10,725 |
| Private Equity | Private Equity | Alsop Louie Capital III, L.P. | \$ 89,142 | \$ 13,960 | \$ - | \$ - | N/A | 16.41% | \$ 103,102 |
| Private Equity | Private Equity | Alta California Partners III, L.P. | \$ - | \$ 3,088 | \$ - | \$ - | N/A | 2.20% | \$ 3,088 |
| Private Equity | Private Equity | Apollo Investment Fund V, L.P. | \$ - | \$ 6,331 | \$ - | \$ 12,745 | N/A | 37.62% | \$ 19,075 |
| Private Equity | Private Equity | Atlantic Street Capital II, L.P. | \$ - | \$ 9,416 | \$ - | \$ - | 54.10% | 40.40% | \$ 9,416 |
| Private Equity | Private Equity | Atlantic Street Capital III, L.P. | \$ 172,625 | \$ 47,510 | \$ - | \$ - | 53.30% | 32.90% | \$ 220,135 |
| Private Equity | Private Equity | Australis Partners Fund, L.P. | \$ 2,017,891 | \$ 557,470 | \$ - | \$ - | N/A | 3.19% | \$ 2,575,361 |
| Private Equity | Private Equity | Blackstone Capital Partners IV, L.P. | \$ - | \$ 6,409 | \$ 91,994 | \$ 583 | N/A | 37.54% | \$ 6,992 |
| Private Equity | Private Equity | Blackstone Capital Partners IV - Secondary | \$ - | \$ 427 | \$ 6,133 | \$ 39 | N/A | 14.27% | \$ 466 |
| Private Equity | Private Equity | Blackstone Capital Partners V, L.P. | \$ - | \$ 12,821 | \$ 187,335 | \$ 10,590 | N/A | 7.57% | \$ 23,411 |

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| | | A | B | C | | Sum of A + B + C | | | |
|----------------|---------------------|---|------------------------------|----------------------------|-------------------------------|---|---|---|--------------|
| Asset Category | Functional Category | Alternative Investment Fund | Management Fees ¹ | Fund Expenses ² | Carried Interest ³ | Portfolio Company Expenses ⁴ | Since Inception Gross Return ⁵ | Since Inception Net Return ⁶ | Total Fees |
| Private Equity | Private Equity | Blackstone Capital Partners VI, L.P. | \$ 255,886 | \$ 56,417 | \$ 2,020,906 | \$ 95,741 | N/A | 12.82% | \$ 408,044 |
| Private Equity | Private Equity | Blackstone Capital Partners VII, L.P. | \$ 2,700,000 | \$ 566,330 | \$ 447,464 | \$ 221,559 | N/A | 18.83% | \$ 3,487,889 |
| Private Equity | Private Equity | Blackstone Communications Partners I, L.P. | \$ - | \$ 1,527 | \$ - | \$ 177 | N/A | 6.52% | \$ 1,704 |
| Private Equity | Private Equity | Brinson International Partners Fund | \$ - | \$ 8,799 | \$ - | \$ 15,365 | N/A | 11.24% | \$ 24,165 |
| Private Equity | Private Equity | BRV Aster Opportunity Fund II, L.P. | \$ - | \$ - | \$ - | \$ - | NM | 0.00% | \$ - |
| Private Equity | Private Equity | BRV Aster Fund III, L.P. | \$ - | \$ - | \$ - | \$ - | NM | 0.00% | \$ - |
| Private Equity | Private Equity | Carlyle Partners V, L.P. | \$ (3,377) | \$ 12,023 | \$ 413,587 | \$ 72,888 | N/A | 13.69% | \$ 81,534 |
| Private Equity | Private Equity | Carlyle Partners VI, L.P. | \$ 666,278 | \$ 151,934 | \$ - | \$ 200,735 | N/A | 10.15% | \$ 1,018,947 |
| Private Equity | Private Equity | Carlyle U.S. Equity Opportunity Fund II, L.P. | \$ 2,448,080 | \$ 884,506 | \$ - | \$ 954,538 | N/A | 1.19% | \$ 4,287,124 |
| Private Equity | Private Equity | Canaan XI, L.P. ¹⁰ | \$ 1,055,728 | \$ 83,862 | \$ - | \$ 25,761 | N/A | 19.54% | \$ 1,165,351 |
| Private Equity | Private Equity | Centerbridge Capital Partners II, L.P. | \$ 342,246 | \$ 88,147 | \$ (812,506) | \$ 25,791 | N/A | -2.12% | \$ 456,184 |
| Private Equity | Private Equity | Centerbridge Capital Partners III, L.P. | \$ 1,099,632 | \$ 512,309 | \$ 635,449 | \$ 32,198 | N/A | 14.90% | \$ 1,644,139 |
| Private Equity | Private Equity | Centerbridge Capital Partners, L.P. | \$ 56,318 | \$ 45,888 | \$ 1,127,166 | \$ 47,833 | N/A | 19.41% | \$ 150,039 |
| Private Equity | Private Equity | Chart Capital Partners II | \$ 0 | \$ 16,135 | \$ 994,529 | \$ 48,070 | 15.10% | 10.50% | \$ 64,205 |
| Private Equity | Private Equity | Clarion Investors II, L.P. | \$ 1 | \$ 15,709 | \$ - | \$ 62,928 | 41.80% | 30.68% | \$ 78,638 |
| Private Equity | Private Equity | Clarion Investors III, L.P. | \$ 327,005 | \$ 225,909 | \$ - | \$ - | NM | -16.31% | \$ 552,914 |
| Private Equity | Private Equity | Clearlake Capital Partners V, L.P. | \$ 1,371,986 | \$ 655,813 | \$ - | \$ - | N/A | 63.83% | \$ 2,027,799 |
| Private Equity | Private Equity | CVC Capital Partners VI (B) L.P. | \$ 1,098,938 | \$ 56,686 | \$ - | \$ 18,938 | 21.40% | 16.90% | \$ 1,174,562 |
| Private Equity | Private Equity | CVC Capital Partners VII, L.P. | \$ 3,249,086 | \$ 774,404 | \$ - | \$ 1,934 | 36.30% | 50.80% | \$ 4,025,423 |
| Private Equity | Private Equity | CVC European Equity Partners III, L.P. | \$ - | \$ 7,294 | \$ - | \$ - | 40.00% | 34.00% | \$ 7,294 |
| Private Equity | Private Equity | CVC European Equity Partners IV (D), L.P. | \$ - | \$ 9,398 | \$ 7,838 | \$ - | 22.60% | 16.60% | \$ 9,398 |
| Private Equity | Private Equity | CVC European Equity Partners Tandem Fund, L.P. | \$ - | \$ 5,268 | \$ 50,959 | \$ - | 9.10% | 12.00% | \$ 5,268 |
| Private Equity | Private Equity | CVC European Equity Partners V (A), L.P. | \$ 8,453 | \$ 19,035 | \$ 5,908,791 | \$ 44,666 | 26.30% | 20.20% | \$ 72,154 |
| Private Equity | Private Equity | Draper Fisher Jurvetson Fund VII, L.P. | \$ - | \$ 3,961 | \$ - | \$ - | -0.79% | -3.14% | \$ 3,961 |
| Private Equity | Private Equity | Exponent Private Equity Partners II, L.P. | \$ 19,318 | \$ 8,050 | \$ - | \$ 5,358 | N/A | 8.87% | \$ 32,725 |
| Private Equity | Private Equity | Exponent Private Equity Partners, L.P. | \$ - | \$ 5,863 | \$ - | \$ 10,249 | N/A | 7.20% | \$ 16,112 |
| Private Equity | Private Equity | Financial Partners Fund I - (Secondary) | \$ 34,599 | \$ 10,799 | \$ - | \$ - | 43.86% | 29.94% | \$ 45,398 |
| Private Equity | Private Equity | Financial Partners Fund II, L.P. | \$ 61,924 | \$ 157,816 | \$ - | \$ (11,608) | 41.38% | 20.13% | \$ 208,132 |
| Private Equity | Private Equity | Foundation Investment Partners, L.P. | \$ 60,750 | \$ 5,095 | \$ 311,454 | \$ 6,618 | 51.00% | 32.84% | \$ 72,462 |
| Private Equity | Private Equity | Gateway Private Equity Fund, L.P. | \$ 2,019,778 | \$ 114,491 | \$ - | \$ - | N/A | 11.59% | \$ 2,134,269 |
| Private Equity | Private Equity | Gateway Private Equity Fund-B, L.P. | \$ 1,015,744 | \$ 41,719 | \$ - | \$ - | N/A | 15.49% | \$ 1,057,463 |
| Private Equity | Private Equity | GGV Capital IV, L.P. | \$ 341,970 | \$ 87,122 | \$ - | \$ - | N/A | 17.66% | \$ 429,092 |
| Private Equity | Private Equity | GGV Capital V, L.P. | \$ 852,403 | \$ 197,251 | \$ 191,667 | \$ - | N/A | 30.99% | \$ 1,049,654 |
| Private Equity | Private Equity | GGV Capital VI Plus, L.P. | \$ - | \$ 9,229 | \$ - | \$ - | N/A | -4.61% | \$ 9,229 |
| Private Equity | Private Equity | GGV Capital VI, L.P. | \$ 879,167 | \$ 32,914 | \$ - | \$ - | N/A | 18.07% | \$ 912,081 |
| Private Equity | Private Equity | GGV Capital VII Plus, L.P. | \$ - | \$ 257 | \$ - | \$ - | NM | 0.00% | \$ 257 |
| Private Equity | Private Equity | GGV Capital VII, L.P. | \$ 702,222 | \$ 69,644 | \$ - | \$ - | NM | -13.04% | \$ 771,866 |
| Private Equity | Private Equity | GGV Discovery I, L.P. | \$ 291,182 | \$ 17,345 | \$ - | \$ - | N/A | 26.79% | \$ 308,527 |
| Private Equity | Private Equity | GGV Discovery II, L.P. | \$ 219,444 | \$ 19,220 | \$ - | \$ - | NM | -14.98% | \$ 238,664 |
| Private Equity | Private Equity | GBOF V Feeder SCS | \$ 1,148,763 | \$ 212,587 | \$ - | \$ 5,834 | N/A | 8.04% | \$ 1,367,184 |
| Private Equity | Private Equity | Glendon Opportunities Fund, L.P. | \$ 1,096,725 | \$ 149,695 | \$ - | \$ - | N/A | 6.12% | \$ 1,246,420 |
| Private Equity | Private Equity | Green Equity Investors VII, L.P. | \$ 2,085,017 | \$ 93,420 | \$ - | \$ - | N/A | 13.48% | \$ 2,178,437 |
| Private Equity | Private Equity | Greycroft Growth, L.P. | \$ 150,000 | \$ 10,317 | \$ - | \$ - | N/A | 12.99% | \$ 160,317 |
| Private Equity | Private Equity | Greycroft Growth II, L.P. | \$ 150,000 | \$ 6,984 | \$ - | \$ - | N/A | 16.10% | \$ 156,984 |
| Private Equity | Private Equity | Greycroft Partners II, L.P. | \$ 120,000 | \$ 15,340 | \$ - | \$ - | N/A | 19.29% | \$ 135,340 |
| Private Equity | Private Equity | Greycroft Partners III, L.P. | \$ 201,160 | \$ 18,714 | \$ - | \$ - | N/A | 13.74% | \$ 219,874 |
| Private Equity | Private Equity | Greycroft Partners IV, L.P. | \$ 187,500 | \$ 17,871 | \$ - | \$ - | N/A | 23.96% | \$ 205,371 |
| Private Equity | Private Equity | GTB Capital Partners, L.P. | \$ 24,158 | \$ 40,393 | \$ 95,064 | \$ - | N/A | 12.00% | \$ 64,551 |
| Private Equity | Private Equity | GTB Capital Partners II, L.P. | \$ 2,179,611 | \$ 565,029 | \$ - | \$ - | N/A | 9.23% | \$ 2,744,640 |
| Private Equity | Private Equity | HarbourVest International Private Equity Partners | \$ - | \$ 1,018 | \$ 419 | \$ - | N/A | 8.56% | \$ 1,018 |
| Private Equity | Private Equity | Hellman & Friedman Capital Partners IX, L.P. | \$ 1,056,250 | \$ 477,885 | \$ - | \$ - | NM | 0.00% | \$ 1,534,135 |
| Private Equity | Private Equity | Incline Equity Partners III, L.P. | \$ - | \$ 4,713 | \$ 1,045,880 | \$ 189,104 | N/A | 37.40% | \$ 193,817 |
| Private Equity | Private Equity | Incline Equity Partners IV, L.P. (JPM) | \$ 142,255 | \$ 2,713 | \$ - | \$ 34,150 | N/A | 6.62% | \$ 179,119 |
| Private Equity | Private Equity | Incline Equity Partners IV, L.P. | \$ 533,458 | \$ 10,174 | \$ - | \$ 128,063 | N/A | 6.62% | \$ 671,695 |
| Private Equity | Private Equity | Insignia Capital Partners (Parallel A), L.P. | \$ 1,492,822 | \$ 358,443 | \$ - | \$ 188,693 | 14.50% | 4.94% | \$ 2,039,958 |
| Private Equity | Private Equity | Institutional Venture Partners XIV, L.P. | \$ 1,425,000 | \$ 28,472 | \$ 1,930,716 | \$ - | 0.00% | 12.74% | \$ 1,453,472 |
| Private Equity | Private Equity | Institutional Venture Partners XV, L.P. | \$ 1,972,165 | \$ 94,400 | \$ 141,477 | \$ - | N/A | 21.86% | \$ 2,066,565 |
| Private Equity | Private Equity | Intersouth Partners VII, L.P. | \$ 12,182 | \$ 2,233 | \$ - | \$ - | N/A | -9.95% | \$ 14,415 |
| Private Equity | Private Equity | JMI Equity Fund VI, L.P. | \$ - | \$ 5,253 | \$ - | \$ - | 16.64% | 11.24% | \$ 5,253 |

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| | | A | B | C | | Sum of A + B + C | | | |
|----------------|---------------------|--|------------------------------|----------------------------|-------------------------------|---|---|---|--------------|
| Asset Category | Functional Category | Alternative Investment Fund | Management Fees ¹ | Fund Expenses ² | Carried Interest ³ | Portfolio Company Expenses ⁴ | Since Inception Gross Return ⁵ | Since Inception Net Return ⁶ | Total Fees |
| Private Equity | Private Equity | JMI Equity Fund VII, L.P. | \$ 390,605 | \$ 44,897 | \$ 555,627 | \$ 13,990 | N/A | 16.34% | \$ 449,492 |
| Private Equity | Private Equity | Joy Capital I, L.P. | \$ 103,125 | \$ 15,406 | \$ - | \$ - | N/A | 57.29% | \$ 118,531 |
| Private Equity | Private Equity | Joy Capital II, L.P. | \$ 125,000 | \$ 6,551 | \$ - | \$ - | N/A | 42.43% | \$ 131,551 |
| Private Equity | Private Equity | Joy Capital Opportunity, L.P. | \$ 53,807 | \$ 28,261 | \$ - | \$ - | NM | 16.51% | \$ 82,069 |
| Private Equity | Private Equity | Joy Capital Opportunity, L.P. (JPM) | \$ 32,284 | \$ 16,957 | \$ - | \$ - | NM | 14.19% | \$ 49,241 |
| Private Equity | Private Equity | J.P. Morgan Emerging Managers Program | \$ 451,000 | \$ - | \$ - | \$ - | 20.22% | 18.00% | \$ 451,000 |
| Private Equity | Private Equity | J.P. Morgan Emerging Managers Program II | \$ 440,526 | \$ - | \$ - | \$ - | 45.59% | 42.23% | \$ 440,526 |
| Private Equity | Private Equity | J.P. Morgan Emerging Managers Program III | \$ 379,256 | \$ 69,603 | \$ - | \$ - | 21.07% | 17.38% | \$ 448,859 |
| Private Equity | Private Equity | J.P. Morgan Emerging Managers Program IV | \$ 82,798 | \$ 41,862 | \$ - | \$ - | 30.27% | 26.15% | \$ 124,660 |
| Private Equity | Private Equity | Juggernaut Capital Partners II, L.P. | \$ 861,244 | \$ 244,453 | \$ - | \$ - | 19.10% | 12.68% | \$ 1,105,697 |
| Private Equity | Private Equity | Juggernaut Capital Partners III, L.P. | \$ 1,526,250 | \$ 163,927 | \$ - | \$ 71,406 | 10.90% | 7.15% | \$ 1,761,583 |
| Private Equity | Private Equity | Juggernaut Capital Partners IV, L.P. | \$ 1,451,596 | \$ 565,132 | \$ - | \$ - | 22.80% | -1.56% | \$ 2,016,728 |
| Private Equity | Private Equity | JZI Fund III, L.P. | \$ 92,026 | \$ 46,204 | \$ - | \$ 45,741 | N/A | 15.45% | \$ 183,971 |
| Private Equity | Private Equity | KarpReilly Capital Partners II, L.P. | \$ 67,100 | \$ 20,812 | \$ - | \$ - | N/A | 4.35% | \$ 87,912 |
| Private Equity | Private Equity | Kelso Investment Associates VIII, L.P. | \$ - | \$ 38,853 | \$ - | \$ - | 0.00% | 3.99% | \$ 38,853 |
| Private Equity | Private Equity | Kerogen Expansion Fund, L.P. | \$ 132,048 | \$ 66,759 | \$ - | \$ - | N/A | 26.54% | \$ 198,807 |
| Private Equity | Private Equity | Kerogen Pandion Energy AS | \$ - | \$ 7,537 | \$ - | \$ - | N/A | 13.13% | \$ 7,537 |
| Private Equity | Private Equity | Knightsbridge Integrated Holdings V, L.P. | \$ 1,791 | \$ 838 | \$ - | \$ - | N/A | 1.07% | \$ 2,629 |
| Private Equity | Private Equity | Kohlberg Investors IV, L.P. | \$ - | \$ 9,474 | \$ - | \$ - | 17.15% | 9.42% | \$ 9,474 |
| Private Equity | Private Equity | LAV Biosciences Fund IV, L.P. | \$ 756,770 | \$ 78,397 | \$ - | \$ - | 48.10% | 31.73% | \$ 835,167 |
| Private Equity | Private Equity | LAV Biosciences Fund V, L.P. | \$ 468,179 | \$ 99,982 | \$ - | \$ - | 24.00% | -9.34% | \$ 568,161 |
| Private Equity | Private Equity | Liberty Co-Investors, L.P. | \$ - | \$ - | \$ - | \$ - | 45.90% | 45.29% | \$ - |
| Private Equity | Private Equity | Madison Dearborn Capital Partners IV, L.P. | \$ - | \$ 24,809 | \$ - | \$ - | 0.00% | 13.93% | \$ 24,809 |
| Private Equity | Private Equity | Madison Dearborn Capital Partners V-A, L.P. | \$ - | \$ 8,262 | \$ 7,525,074 | \$ 151,731 | N/A | 7.17% | \$ 159,993 |
| Private Equity | Private Equity | Marlin Equity IV, L.P. | \$ 186,213 | \$ 23,928 | \$ - | \$ 543,890 | N/A | 7.47% | \$ 754,032 |
| Private Equity | Private Equity | MBK Partners Fund III, L.P. | \$ 1,068,245 | \$ 53,283 | \$ 3,377,202 | \$ - | 22.70% | 16.41% | \$ 1,121,528 |
| Private Equity | Private Equity | MBK Partners Fund IV, L.P. | \$ 2,057,756 | \$ 285,206 | \$ - | \$ - | 29.63% | 17.34% | \$ 2,342,962 |
| Private Equity | Private Equity | Menlo Ventures IX, L.P. | \$ - | \$ 734 | \$ 203,580 | \$ - | N/A | -0.33% | \$ 734 |
| Private Equity | Private Equity | Mercato Partners Growth II, L.P. | \$ 112,363 | \$ 8,297 | \$ - | \$ - | N/A | 1.55% | \$ 120,660 |
| Private Equity | Private Equity | NeoTribe Ventures I, L.P. | \$ 125,000 | \$ 8,484 | \$ - | \$ - | 36.00% | 10.44% | \$ 133,484 |
| Private Equity | Private Equity | New Mainstream Capital II, L.P. | \$ 57,900 | \$ 20,970 | \$ 92,608 | \$ 86,461 | N/A | 14.84% | \$ 165,331 |
| Private Equity | Private Equity | Next Coast Ventures I, L.P. | \$ 125,000 | \$ 7,168 | \$ - | \$ - | 19.60% | 8.92% | \$ 132,168 |
| Private Equity | Private Equity | Northgate Venture Partners VI, L.P. | \$ 200,000 | \$ 16,385 | \$ - | \$ - | N/A | 9.25% | \$ 216,385 |
| Private Equity | Illiquid Credit | Oaktree Opportunities Fund IX, L.P. | \$ 1,130,781 | \$ 249,605 | \$ - | \$ 11,319 | N/A | 4.00% | \$ 1,391,705 |
| Private Equity | Private Equity | One Rock Capital Partners II, L.P. | \$ 1,166,609 | \$ 38,068 | \$ - | \$ 283,391 | N/A | -5.89% | \$ 1,488,068 |
| Private Equity | Private Equity | Onex Partners II, L.P. | \$ - | \$ 5,665 | \$ - | \$ 794 | N/A | 13.17% | \$ 6,459 |
| Private Equity | Private Equity | Onex Partners III, L.P. | \$ 234,760 | \$ 21,336 | \$ 1,439,454 | \$ 27,739 | N/A | 12.47% | \$ 283,835 |
| Private Equity | Private Equity | Onex Partners IV, L.P. | \$ 1,758,359 | \$ 163,795 | \$ - | \$ 129,078 | N/A | 2.63% | \$ 2,051,232 |
| Private Equity | Private Equity | Onex Partners V, L.P. | \$ 2,019,181 | \$ 488,331 | \$ - | \$ 73 | N/A | -35.18% | \$ 2,507,585 |
| Private Equity | Private Equity | PAI Europe VII, L.P. | \$ 2,448,797 | \$ 1,010,098 | \$ - | \$ - | N/A | 0.00% | \$ 3,458,895 |
| Private Equity | Private Equity | Palladium Equity Partners IV, L.P. | \$ 444,256 | \$ 282,071 | \$ - | \$ 293,363 | N/A | 13.81% | \$ 1,019,690 |
| Private Equity | Private Equity | Palm Beach Capital Fund III, L.P. | \$ 31,313 | \$ 27,697 | \$ - | \$ 78,819 | 24.30% | 19.24% | \$ 137,830 |
| Private Equity | Private Equity | Palm Beach Capital Fund IV, L.P. | \$ 200,000 | \$ 56,279 | \$ - | \$ 276,269 | 39.98% | 37.90% | \$ 532,548 |
| Private Equity | Private Equity | Peak Rock Capital Fund, L.P. | \$ 47,333 | \$ 13,589 | \$ 245,779 | \$ 70,598 | 45.80% | 30.31% | \$ 131,520 |
| Private Equity | Private Equity | Permira Europe III, L.P. | \$ - | \$ 10,129 | \$ - | \$ - | N/A | 25.84% | \$ 10,129 |
| Private Equity | Private Equity | Riverside Capital Appreciation Fund VI, L.P. | \$ 1,006,733 | \$ 295,587 | \$ 1,184,398 | \$ - | N/A | 13.21% | \$ 1,302,320 |
| Private Equity | Private Equity | Riverside Micro-Cap Fund V, L.P. | \$ 1,125,805 | \$ 273,867 | \$ - | \$ - | NM | -22.92% | \$ 1,399,672 |
| Private Equity | Private Equity | Rizvi Opportunistic Equity Fund II | \$ 36,438 | \$ 5,444 | \$ - | \$ - | N/A | 7.89% | \$ 41,882 |
| Private Equity | Private Equity | Silver Lake Partners III, L.P. | \$ 85,064 | \$ 12,212 | \$ 297,351 | \$ - | 25.00% | 18.79% | \$ 97,276 |
| Private Equity | Private Equity | Silver Lake Partners IV, L.P. | \$ 759,655 | \$ 64,068 | \$ 4,162,285 | \$ 61,129 | 38.00% | 26.99% | \$ 884,852 |
| Private Equity | Private Equity | Silver Lake Partners V, L.P. | \$ 2,509,798 | \$ 1,065,990 | \$ - | \$ 210,904 | 17.00% | 11.50% | \$ 3,786,692 |
| Private Equity | Private Equity | Sinovation Fund IV, L.P. | \$ 1,875,000 | \$ (67,597) | \$ - | \$ - | 0.30% | -2.36% | \$ 1,807,403 |
| Private Equity | Private Equity | Siris Partners III, L.P. | \$ 927,000 | \$ 43,121 | \$ 1,440,404 | \$ 23,632 | 16.94% | 10.59% | \$ 993,753 |
| Private Equity | Private Equity | Siris Partners IV, L.P. | \$ 1,264,946 | \$ 245,722 | \$ - | \$ 421,701 | 0.00% | -1.41% | \$ 1,932,369 |
| Private Equity | Private Equity | SP FGT Investors, LLC | \$ - | \$ - | \$ - | \$ - | N/A | 0.00% | \$ - |
| Private Equity | Private Equity | Sterling Investment Partners III, L.P. | \$ 167,911 | \$ 538,057 | \$ 5,747,996 | \$ 1,682,089 | N/A | 17.51% | \$ 2,388,057 |
| Private Equity | Private Equity | Storm Ventures Fund V, L.P. | \$ 1,000,000 | \$ 15,900 | \$ - | \$ - | 22.14% | 11.92% | \$ 1,015,900 |
| Private Equity | Private Equity | Storm Ventures Fund VI, L.P. | \$ 202,610 | \$ 42,721 | \$ - | \$ - | NM | -9.81% | \$ 245,331 |
| Private Equity | Private Equity | Summit Park I-A | \$ - | \$ 11,469 | \$ 15,734 | \$ - | N/A | 28.43% | \$ 11,469 |

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| | | | A | B | C | | | Sum of A + B + C | |
|---------------------|---------------------------------|---|------------------------------|----------------------------|-------------------------------|---|---|---|---------------|
| Asset Category | Functional Category | Alternative Investment Fund | Management Fees ¹ | Fund Expenses ² | Carried Interest ³ | Portfolio Company Expenses ⁴ | Since Inception Gross Return ⁵ | Since Inception Net Return ⁶ | Total Fees |
| Private Equity | Private Equity | Summit Park II, L.P. | \$ - | \$ 34,221 | \$ - | \$ - | N/A | 21.72% | \$ 34,221 |
| Private Equity | Private Equity | Summit Park III, L.P. | \$ 30,628 | \$ 38,144 | \$ - | \$ - | N/A | -7.70% | \$ 68,772 |
| Private Equity | Private Equity | Syndicated Communications Venture Partners IV, L.P. | \$ - | \$ - | \$ - | \$ - | N/A | -5.29% | \$ - |
| Private Equity | Private Equity | TA X, L.P. | \$ - | \$ 570 | \$ - | \$ - | N/A | 5.18% | \$ 570 |
| Private Equity | Private Equity | TA XIII, L.P. | \$ - | \$ - | \$ - | \$ - | NM | 0.00% | \$ - |
| Private Equity | Natural Resources & Commodities | The Energy & Minerals Group Fund III, L.P. | \$ 1,893,003 | \$ 23,660 | \$ - | \$ - | -1.96% | -4.01% | \$ 1,916,663 |
| Private Equity | Private Equity | The Resolute Fund II, L.P. | \$ 42,637 | \$ 8,559 | \$ - | \$ (15,098) | N/A | 7.47% | \$ 36,098 |
| Private Equity | Private Equity | TPG Partners V, L.P. | \$ - | \$ 8,219 | \$ - | \$ (726) | N/A | 4.05% | \$ 7,493 |
| Private Equity | Private Equity | TPG Partners VI, L.P. | \$ 58,575 | \$ (913) | \$ 932,103 | \$ (10,395) | N/A | 9.09% | \$ 47,267 |
| Private Equity | Private Equity | Triton Fund V, L.P. | \$ 1,810,849 | \$ 1,283,273 | \$ - | \$ 725,929 | NM | 0.00% | \$ 3,820,051 |
| Multiple Categories | Multiple Categories | Undisclosed ⁷ | \$ 11,992,939 | \$ 7,014,829 | \$ 49,865,899 | \$ 31,914 | N/A | N/A | \$ 19,039,682 |
| Private Equity | Private Equity | USV 2019, L.P. | \$ - | \$ - | \$ - | \$ - | NM | -14.19% | \$ - |
| Private Equity | Private Equity | USV Opportunity 2019, L.P. | \$ - | \$ - | \$ - | \$ - | NM | -4.21% | \$ - |
| Private Equity | Private Equity | Vinci Capital Partners III, L.P. | \$ - | \$ - | \$ - | \$ - | NM | -78.35% | \$ - |
| Private Equity | Private Equity | Vista Equity Partners Fund III, L.P. | \$ 34,656 | \$ 24,266 | \$ 227,748 | \$ - | N/A | 28.02% | \$ 58,922 |
| Private Equity | Private Equity | Vista Equity Partners Fund IV, L.P. | \$ 733,260 | \$ 58,293 | \$ 478,728 | \$ - | N/A | 17.72% | \$ 791,553 |
| Private Equity | Private Equity | Vista Equity Partners Fund V, L.P. | \$ 2,606,584 | \$ 103,617 | \$ 14,990,000 | \$ - | N/A | 23.89% | \$ 2,710,201 |
| Private Equity | Private Equity | Vista Equity Partners Fund VI, L.P. | \$ 2,378,652 | \$ 232,131 | \$ - | \$ - | N/A | 18.46% | \$ 2,610,783 |
| Private Equity | Private Equity | Vista Equity Partners Fund VII, L.P. | \$ 2,502,717 | \$ 265,035 | \$ - | \$ - | NM | -15.44% | \$ 2,767,752 |
| Private Equity | Private Equity | Warren Equity Partners Fund II, L.P. | \$ 184,470 | \$ 59,912 | \$ - | \$ 147,572 | N/A | -14.46% | \$ 391,954 |
| Private Equity | Private Equity | Worldview Technology Partners IV, L.P. | \$ - | \$ 3,748 | \$ - | \$ - | N/A | -9.24% | \$ 3,748 |
| Real Estate | Opportunistic RE | Aermont Capital Real Estate Fund IV SCSp | \$ 761,670 | \$ 125,978 | \$ - | \$ - | NM | NM | \$ 887,648 |
| Real Estate | Core and Value Added RE | AEW Value Investors Asia III, L.P. | \$ 625,000 | \$ 109,830 | \$ - | \$ - | 5.40% | 2.30% | \$ 734,830 |
| Real Estate | Opportunistic RE | AG Asia Realty Fund IV, L.P. | \$ 1,030,446 | \$ 174,891 | \$ - | \$ - | NM | NM | \$ 1,205,337 |
| Real Estate | Opportunistic RE | AG Europe Realty Fund II, L.P. | \$ 659,110 | \$ 433,320 | \$ - | \$ - | NM | 10.79% | \$ 1,092,430 |
| Real Estate | Core and Value Added RE | Bain Capital Real Estate Fund I-A, L.P. | \$ 1,400,000 | \$ 1,563,394 | \$ - | \$ - | 14.00% | 64.00% | \$ 2,963,394 |
| Real Estate | Core and Value Added RE | CapMan Nordic Real Estate II FCP-RAIF | \$ 371,933 | \$ 96,552 | \$ - | \$ - | 16.40% | 10.00% | \$ 468,485 |
| Real Estate | Opportunistic RE | Capri Urban Investors, LLC | \$ 86,415 | \$ - | \$ - | \$ - | -2.21% | -4.26% | \$ 86,415 |
| Real Estate | Opportunistic RE | Carlyle Europe Real Estate Partners III, L.P. | \$ 22,344 | \$ 6,905 | \$ - | \$ - | 3.88% | 0.83% | \$ 29,249 |
| Real Estate | Core and Value Added RE | CBRE Strategic Partners European Fund III | \$ - | \$ - | \$ - | \$ - | -13.92% | -15.36% | \$ - |
| Real Estate | Opportunistic RE | CityView Bay Area Fund II, L.P. | \$ 1,137,866 | \$ 96,261 | \$ - | \$ - | 17.16% | 14.23% | \$ 1,234,126 |
| Real Estate | Opportunistic RE | CityView LA Urban Fund I, L.P. | \$ - | \$ - | \$ - | \$ - | 18.40% | 11.94% | \$ - |
| Real Estate | Opportunistic RE | CityView Southern California Fund II, L.P. | \$ 1,211,833 | \$ 38,995 | \$ - | \$ 616,835 | 19.87% | 16.57% | \$ 1,867,663 |
| Real Estate | Opportunistic RE | CityView Western Fund I, L.P. | \$ 1,875,000 | \$ 104,700 | \$ - | \$ 1,399,370 | 17.90% | 14.40% | \$ 3,379,070 |
| Real Estate | Core and Value Added RE | Core Property Index Fund | \$ - | \$ - | \$ - | \$ - | 0.00% | 0.00% | \$ - |
| Real Estate | Core and Value Added RE | Cornerstone Hotel Income Equity Fund II, L.P. | \$ - | \$ - | \$ - | \$ - | N/A | 9.17% | \$ - |
| Real Estate | Opportunistic RE | Europa Fund III, L.P. | \$ - | \$ 1,625 | \$ 64,833 | \$ - | 14.94% | 9.93% | \$ 1,625 |
| Real Estate | Opportunistic RE | Europa Fund IV, L.P. | \$ 525,488 | \$ 110,188 | \$ - | \$ - | 16.82% | 12.04% | \$ 635,676 |
| Real Estate | Core and Value Added RE | Hunt UK Realty Partners, L.P. | \$ - | \$ - | \$ - | \$ - | N/A | -21.06% | \$ - |
| Real Estate | Core and Value Added RE | Heitman Asia-Pacific Property Investors, L.P. | \$ 146,414 | \$ - | \$ - | \$ - | N/A | -11.37% | \$ 146,414 |
| Real Estate | Opportunistic RE | Invesco Asian Real Estate Partners II, L.P. | \$ - | \$ 1,864 | \$ - | \$ 14,053 | 16.00% | 9.50% | \$ 15,917 |
| Real Estate | Core and Value Added RE | Invesco Real Estate Asia Fund, L.P. | \$ 925,623 | \$ 27,931 | \$ - | \$ 200,889 | 7.91% | 7.14% | \$ 1,154,443 |
| Real Estate | Core and Value Added RE | Prologis European Logistics Fund | \$ 1,429,961 | \$ 354,810 | \$ - | \$ - | 9.70% | 8.60% | \$ 1,784,771 |
| Real Estate | Core and Value Added RE | RREEF Core Plus Industrial Fund, L.P. | \$ 463,177 | \$ 50,901 | \$ - | \$ - | 37.33% | 36.48% | \$ 514,078 |
| Real Estate | Opportunistic RE | Starwood Capital Hospitality Fund II, L.P. | \$ 434,267 | \$ 59,411 | \$ - | \$ - | 13.00% | 10.00% | \$ 493,678 |
| Real Estate | Opportunistic RE | SH Group (Branco) | \$ 4,636 | \$ - | \$ (20,791) | \$ - | N/A | N/A | \$ 4,636 |
| Real Estate | Opportunistic RE | TPG Real Estate Partners III, L.P. | \$ 743,438 | \$ 380,605 | \$ - | \$ - | NM | NM | \$ 1,124,043 |

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Fiscal Year-Ended June 30, 2019

| Asset Category | Functional Category | Alternative Investment Fund | A | | B | | C | | Sum of A + B + C |
|----------------|---------------------|-----------------------------|------------------------------|----------------------------|-------------------------------|---|---|---|------------------|
| | | | Management Fees ¹ | Fund Expenses ² | Carried Interest ³ | Portfolio Company Expenses ⁴ | Since Inception Gross Return ⁵ | Since Inception Net Return ⁶ | Total Fees |

¹ Management fees paid or accrued to the alternative investment fund during the fiscal year. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, calculation using the respective management fee rate, and pro rata share of the alternative investment fund's total management fee. Negative values indicate giveback of previously accrued or paid fees.

² Fund expenses paid or accrued to the alternative investment fund during the fiscal year. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, pro rata share of the alternative investment fund's total fund expenses, and estimations based on alternative investment fund's operating expense ratios obtained from the most recent audited financial statement. Negative values indicate giveback of previously accrued or paid fees.

³ Carried interest paid or accrued to the alternative investment fund during the fiscal year. Data sources include: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, and pro rata share of the alternative investment fund's total carried interest. Negative values indicate giveback of previously accrued or paid fees.

⁴ LACERA's pro rata share of fees and expenses paid by the portfolio companies to the general partner or related parties.

⁵ Since-inception money-weighted gross returns for Private Equity, Fixed Income, Real Estate, and Global Equity asset category were calculated by the respective alternative investment funds, custodian banks, or asset category advisor. Hedge Funds since-inception gross returns were provided by the manager or estimated by annualizing the manager's total fees as an annualized percentage of monthly average NAV and adding the annualized fee return to the fund's since-inception net return. Hedge Funds since-inception gross returns are cumulative geometric returns for holding periods less than 12 months of the alternative investment fund and annualized geometric return for holding periods greater than 12 months. Performance results marked "NM" signifies not meaningful due to recency of the fund.

⁶ Since-inception money-weighted net returns for Private Equity asset category were calculated by LACERA using all the outflows to and inflows from the underlying fund investments, including cash flows for expenses and fees paid by the Portfolio to those underlying fund investments. The terminal values used are the capital account balances as of the reporting period, as stated by the General Partners of the underlying fund investment, whether at cost or fair value. If the underlying fund investment's terminal value is prior to the reporting period, the internal rate of return (IRR) was calculated as of the last valuation date indicated by the fund manager. Real Estate since-inception IRR were provided by Townsend Group (asset category advisor). Hedge Fund, Fixed Income, and Global Equity (excluding JANA Strategic Investment Fund V) are cumulative geometric returns for holding periods less than 12 months of the alternative investment fund and annualized geometric return for holding periods greater than 12 months. JANA Strategic Investment Fund V (Global Equity) is a money-weighted return provided by the alternative investment fund.

⁷ Cost data for a subset of alternative investment funds were aggregated due to existing confidentiality agreements. Management fees, fund expenses, and since inception net returns for these funds are disclosed individually in the Section 6254.26(b) report.

⁸ Since-inception gross return is gross of Goldman Sachs Hedge Fund Strategies, LLC fund of hedge fund fees. Since-inception gross return does not include underlying hedge fund fees.

⁹ Since-inception gross return is gross of Grosvenor Capital Management's fund of hedge fund fees. Since-inception gross return does not include underlying hedge fund fees.

¹⁰ Fee and expense data as of calendar year-ended December 31, 2018

Section 6254.26 (b)

Fiscal Year-Ended June 30, 2019

| Functional Category | Name ¹ | Address ¹ | Vintage Year ¹ | Commitment ² | Contribution ³ | Distributions ⁴ | Distribution Plus Market Value ⁵ | Since Inception Net Return ⁶ | Investment Multiple ⁷ | Dollar amount of the total fees paid on a fiscal year-end basis ⁸ | Dollar amount of cash profit received on a fiscal year-end basis ⁹ |
|------------------------|---|--|---------------------------|-------------------------|---------------------------|----------------------------|---|---|----------------------------------|--|---|
| | Fixed Income | | | | | | | | | | |
| Illiquid Credit | BPC Opportunities Fund II, L.P. | 1620 26th Street, Suite 6000N, Santa Monica, CA 90404 | 2014 | \$ 150,000,000 | \$ 150,000,000 | \$ 152,370,690 | \$ 192,989,479 | 8.00% | 1.29x | \$ 904,148 | N/A |
| Illiquid Credit | BPC Opportunities Fund III, L.P. | 1620 26th Street, Suite 6000N, Santa Monica, CA 90404 | 2016 | \$ 170,000,000 | \$ 135,694,263 | \$ - | \$ 153,057,451 | 9.50% | 1.13x | \$ 2,032,905 | N/A |
| Bank Loans | Tennenbaum Senior Loan Fund V, LLC | 2951 28th Street, Suite 1000, Santa Monica, CA 90405 | 2014 | \$ 475,000,000 | \$ 360,974,125 | \$ - | \$ 432,969,556 | 7.80% | 1.20x | \$ 2,860,415 | N/A |
| | Global Equity | | | | | | | | | | |
| Global Equity | Cevian Capital II Master Fund L.P. | LaMotte Chambers, St. Helier, Jersey, JE1-1BJ | 2016 | \$ 250,000,000 | \$ 250,000,000 | \$ - | \$ 293,505,868 | 17.40% | 1.17x | \$ 4,461,917 | N/A |
| Global Equity | JANA Strategic Investment Fund V, L.P. | 767 Fifth Avenue, 8th Floor, New York, NY 10153 | 2016 | \$ 120,000,000 | \$ 297,000,000 | \$ 221,846,987 | \$ 327,923,624 | 12.96% | 1.10x | \$ 1,408,727 | N/A |
| Global Equity | The SFP Value Realization Master Fund Ltd | 80 Raffles Place, #24-21 UOB Plaza 2, Singapore, 048624 | 2016 | \$ 100,000,000 | \$ 100,000,000 | \$ - | \$ 152,073,847 | 17.11% | 1.52x | \$ 1,617,794 | N/A |
| | Hedge Fund | | | | | | | | | | |
| Diversified Hedge Fund | Alyeska Fund 2, L.P. - Class A | 77 West Wacker Drive, Suite 700, Chicago, IL 60601 | 2015 | \$ 24,500,000 | \$ 24,500,000 | \$ 23,206,190 | \$ 23,206,190 | -1.92% | 0.95x | \$ 274,388 | \$ (938,291) |
| Diversified Hedge Fund | AQR Liquid Enhanced Alternative Premia Fund L.P. | Two Greenwich Plaza, Fourth Floor, Greenwich, CT 06830 | 2018 | \$ 75,000,000 | \$ 75,000,000 | \$ - | \$ 66,657,088 | -8.32% | 0.89x | \$ 610,811 | \$ (980,603) |
| Diversified Hedge Fund | Atreaus Fund, L.P. - Tranche F | 599 Lexington Avenue, 38th Floor, New York, NY 10022 | 2015 | \$ 19,280,029 | \$ 19,280,029 | \$ 16,551,117 | \$ 16,551,117 | -3.90% | 0.86x | \$ 106,876 | \$ (142,843) |
| Diversified Hedge Fund | BosValen US Feeder Fund | The Hong Kong Club Building, 3A Chater Road, Suite 701, 7/F, Central, Hong Kong | 2018 | \$ 19,000,000 | \$ 19,000,000 | \$ - | \$ 17,835,554 | -9.74% | 0.94x | \$ 303,759 | \$ (1,164,446) |
| Diversified Hedge Fund | Bridgewater Pure Alpha Major Markets II, LLC | One Glendinning Place, Westport, CT 06880 | 2015 | \$ 21,250,000 | \$ 21,250,000 | \$ 2,000,000 | \$ 20,355,999 | 2.09% | 0.96x | \$ 624,902 | \$ (1,384,742) |
| Diversified Hedge Fund | Capula Global Relative Value Fund L.P. | 7 Clarges Street, W1J 8AE, London, United Kingdom | 2018 | \$ 100,000,000 | \$ 100,000,000 | \$ - | \$ 104,012,650 | 10.95% | 1.04x | \$ 1,568,448 | \$ 4,012,650 |
| Diversified Hedge Fund | Crabel Multi Product Program | 10250 Constellation Boulevard, Suite 2650, Los Angeles, CA 90067 | 2015 | \$ 27,000,000 | \$ 27,000,000 | \$ 14,500,000 | \$ 29,228,151 | 7.47% | 1.08x | \$ 146,610 | \$ 445,232 |
| Diversified Hedge Fund | D.E. Shaw Valence Fund, LLC | 1166 Avenue of the Americas, Ninth Floor, New York, NY 10036 | 2016 | \$ 20,000,000 | \$ 20,000,000 | \$ - | \$ 28,462,554 | 20.89% | 1.42x | \$ 1,043,088 | \$ 1,352,021 |
| Diversified Hedge Fund | Davidson Kempner Institutional Partners, L.P. ¹⁰ | 520 Madison Avenue, 30th Floor, New York, NY 10022 | 2018 | \$ 110,000,000 | \$ 110,000,000 | \$ - | \$ 114,543,330 | 6.59% | 1.04x | \$ 1,495,738 | \$ 4,120,989 |
| Diversified Hedge Fund | Deep Basin Long-Short Fund, L.P. | 484 Pacific Street, Stamford, CT 06902 | 2017 | \$ 19,000,000 | \$ 19,000,000 | \$ - | \$ 20,777,326 | 10.24% | 1.09x | \$ 232,362 | \$ 1,047,048 |
| Diversified Hedge Fund | Dymon Asia Macro (US) Fund - Class P3 Unrestricted | 10 Changi Business Park Central 2, #01-02 Hansapoint @ CBP, Singapore | 2015 | \$ 15,528,340 | \$ 15,528,340 | \$ 14,431,245 | \$ 14,431,245 | -0.55% | 0.93x | \$ 172,160 | \$ (500,327) |
| Diversified Hedge Fund | Edgestream Sumatra Fund, L.P. | 902 Carnegie Center, Suite 200, Princeton, NJ 8540 | 2015 | \$ 11,750,000 | \$ 11,750,000 | \$ 3,500,000 | \$ 13,342,829 | 7.90% | 1.14x | \$ 183,032 | \$ 637,330 |
| Diversified Hedge Fund | Empyrean Capital Fund, L.P. - Class 2 Series N | 10250 Constellation Blvd, Ste 2950, Los Angeles, CA 90067 | 2015 | \$ 22,500,000 | \$ 22,500,000 | \$ - | \$ 27,128,824 | 7.57% | 1.21x | \$ 272,570 | \$ 60,970 |
| Diversified Hedge Fund | EMSO Saguro Ltd. - Class A | Iron Trades House, 21 Grosvenor Place, SW1X 7HN, London, United Kingdom | 2018 | \$ 13,500,000 | \$ 13,500,000 | \$ - | \$ 13,396,060 | 0.71% | 0.99x | \$ 191,456 | \$ 393,963 |
| Diversified Hedge Fund | Exoduspoint Partners Fund, LP | 65 East 55th Street, 9th Floor, New York, NY, 10022 | 2018 | \$ 18,200,000 | \$ 18,200,000 | \$ - | \$ 18,822,535 | 4.09% | 1.03x | \$ 819,883 | \$ 622,535 |
| Diversified Hedge Fund | Farallon Capital Institutional Partners, L.P. | 1 Maritime Plaza, Suite 2100, San Francisco, CA 94111 | 2015 | \$ 18,030,423 | \$ 18,030,423 | \$ 20,437,188 | \$ 20,437,188 | 4.20% | 1.13x | \$ - | \$ - |
| Diversified Hedge Fund | Glen Point Global Macro Fund, L.P. - Class A | 10 Stratton Street, W1S 2XH, London, United Kingdom | 2017 | \$ 16,500,000 | \$ 16,500,000 | \$ - | \$ 16,321,558 | 0.00% | 0.99x | \$ 292,453 | \$ 625,705 |
| Diversified Hedge Fund | Goldman Sachs Asset Management | 200 West Street, New York, NY 10282 | 2015 | \$ 450,000,000 | \$ 450,000,000 | \$ - | \$ 490,800,292 | 2.25% | 1.09x | \$ 1,837,438 | \$ 6,365,267 |
| Diversified Hedge Fund | HBK Multi-Strategy Fund, L.P. | 2101 Cedar Springs Rad, Suite 700, Dallas, TX 75201 | 2018 | \$ 125,000,000 | \$ 125,000,000 | \$ - | \$ 131,812,239 | 7.27% | 1.05x | \$ 2,241,046 | \$ 4,864,654 |
| Diversified Hedge Fund | HG Vora Special Opportunities Fund, LP - Series 1 | 20th Floor, 330 Madison Avenue, New York, NY 10017 | 2017 | \$ 25,000,000 | \$ 25,000,000 | \$ - | \$ 28,089,519 | 9.98% | 1.12x | \$ 404,569 | \$ 888,850 |
| Diversified Hedge Fund | Holocene Advisors Fund, L.P. - Class AI-A | 15 East 26th Street, Suite 601, New York, NY 10010 | 2017 | \$ 25,000,000 | \$ 25,000,000 | \$ - | \$ 30,959,899 | 13.89% | 1.24x | \$ 391,663 | \$ 2,610,921 |
| Diversified Hedge Fund | Kinbury Equity Fund L.P. - Class F | 22 Sackville Street, W1S 3DN, London, United Kingdom | 2015 | \$ 23,526,750 | \$ 23,526,750 | \$ - | \$ 23,204,791 | -3.23% | 0.99x | \$ 271,719 | \$ (470,565) |
| Diversified Hedge Fund | Lakewood Capital Partners, L.P. | 650 Madison Avenue, 25th Floor, New York, NY 10022 | 2015 | \$ 18,000,000 | \$ 18,000,000 | \$ - | \$ 21,525,126 | 7.41% | 1.20x | \$ 335,698 | \$ 651,284 |
| Diversified Hedge Fund | Macquarie Global Alpha US Feeder Fund - Class L | 580 George Street, Sydney, NSW 2000 Australia | 2016 | \$ 23,016,112 | \$ 23,016,112 | \$ 23,912,642 | \$ 23,912,642 | 3.10% | 1.04x | \$ - | \$ - |
| Diversified Hedge Fund | Manikay Onshore Fund, L.P. | 580 George Street, Sydney, NSW 2000 Australia | 2015 | \$ 22,000,000 | \$ 22,000,000 | \$ - | \$ 28,625,294 | 9.72% | 1.30x | \$ 345,347 | \$ 2,302,008 |
| Diversified Hedge Fund | Palestra Capital Partners, LP - Series 3G Interests | 888 Seventh Avenue, 23rd Floor, New York, NY 10019 | 2015 | \$ 20,750,000 | \$ 20,750,000 | \$ - | \$ 31,667,279 | 15.40% | 1.53x | \$ 322,847 | \$ 2,692,559 |
| Diversified Hedge Fund | Palmetto Catastrophe Fund L.P. - Class H | 31 Victoria Street, 3rd Floor West, HM 10, Hamilton, Bermuda | 2018 | \$ 15,000,000 | \$ 15,000,000 | \$ - | \$ 14,538,688 | -1.57% | 0.97x | \$ 209,963 | \$ (524,183) |
| Diversified Hedge Fund | PFM Therapeutics Fund, L.P. | Four Embarcadero Center, Suite 3500, San Francisco, CA 94111 | 2015 | \$ 9,000,000 | \$ 9,000,000 | \$ - | \$ 9,347,084 | 3.46% | 1.04x | \$ 224,947 | \$ (2,185,444) |
| Diversified Hedge Fund | PIMCO Tactical Opportunities Onshore Fund L.P. | 650 Newport Center Drive, Newport Beach, CA 92660 | 2018 | \$ 156,500,000 | \$ 156,500,000 | \$ - | \$ 161,572,254 | 6.58% | 1.03x | \$ 925,272 | \$ 5,072,254 |
| Diversified Hedge Fund | Rubric Capital Partners, L.P. - Series F1 G | 23rd Floor, 20 Fenchurch Street, London, EC3M 3BY, United Kingdom | 2017 | \$ 23,000,000 | \$ 23,000,000 | \$ - | \$ 27,770,363 | 12.64% | 1.21x | \$ 324,930 | \$ 728,927 |
| Illiquid Credit | San Gabriel Fund 2, L.P. | 101 Barclay Street, 20th Floor West, New York, NY 10286 | 2013 | \$ 200,000,000 | \$ 200,000,000 | \$ 183,237,136 | \$ 192,735,545 | 5.86% | 0.96x | \$ 140,095 | \$ 4,985,910 |
| Illiquid Credit | San Gabriel Fund 3, L.P. | 101 Barclay Street, 20th Floor West, New York, NY 10286 | 2016 | \$ 300,000,000 | \$ 300,000,000 | \$ - | \$ 361,252,730 | 6.78% | 1.20x | \$ 8,365,453 | \$ 1,379,082 |
| Diversified Hedge Fund | San Gabriel Fund, L.P. | 101 Barclay Street, 20th Floor West, New York, NY 10286 | 2011 | \$ 400,000,000 | \$ 400,000,000 | \$ - | \$ 489,283,578 | 3.49% | 1.22x | \$ 13,383,671 | \$ 1,229,443 |
| Diversified Hedge Fund | Stone Milliner Macro Fund Delaware L.P. - Class A | 1 Curzon Street, W1J 5HD, London, United Kingdom | 2015 | \$ 17,500,000 | \$ 17,500,000 | \$ - | \$ 18,037,811 | 2.87% | 1.03x | \$ 297,521 | \$ 19,368 |
| Diversified Hedge Fund | Swiftcurrent Partners, L.P. - Class C | 90 Park Avenue, 40th Floor, New York, NY 10016 | 2015 | \$ 17,915,312 | \$ 17,915,312 | \$ 19,866,913 | \$ 19,866,913 | 2.18% | 1.11x | \$ 55,662 | \$ (502,716) |
| Diversified Hedge Fund | Taconic Opportunity Fund L.P. | 280 Park Avenue, 5th Floor, New York, NY 10017 | 2018 | \$ 30,000,000 | \$ 30,000,000 | \$ - | \$ 32,039,875 | 8.27% | 1.07x | \$ 346,571 | \$ 1,285,057 |
| Diversified Hedge Fund | Warlander Partners, L.P. - Class W | 250 West 55th Street, New York, NY 10019 | 2016 | \$ 7,000,000 | \$ 7,000,000 | \$ 6,369,543 | \$ 6,369,543 | -2.21% | 0.91x | \$ 49,705 | \$ 380,728 |
| Diversified Hedge Fund | Winton Diversified Strategy Fund (US), L.P. | 807 Montgomery Street, San Francisco, CA 94133 | 2016 | \$ 14,640,258 | \$ 14,640,258 | \$ 5,000,000 | \$ 15,128,897 | 3.57% | 1.03x | \$ 132,937 | \$ (48,340) |
| | Private Equity | | | | | | | | | | |
| Private Equity | ABRY Advanced Securities Fund III, L.P. | 888 Boylston Street, 16th Floor, Boston, MA 02199 | 2014 | \$ 25,000,000 | \$ 15,295,308 | \$ 23,853,755 | \$ 23,853,755 | 18.01% | 1.56x | \$ 256,405 | \$ 8,558,447 |
| Private Equity | ABRY Partners VIII, L.P. | 888 Boylston Street, 16th Floor, Boston, MA 02199 | 2014 | \$ 35,000,000 | \$ 36,590,937 | \$ 44,820,102 | \$ 44,820,102 | 9.69% | 1.22x | \$ 316,840 | \$ 8,229,165 |
| Private Equity | Accel IV, L.P. | 428 University Avenue, Palo Alto, CA 94301 | 1993 | \$ 5,000,000 | \$ 5,010,800 | \$ 40,440,003 | \$ 40,440,003 | 78.00% | 8.07x | \$ - | \$ 35,429,203 |
| Private Equity | Accel V, L.P. | 428 University Avenue, Palo Alto, CA 94301 | 1996 | \$ 9,000,000 | \$ 9,000,000 | \$ 176,580,105 | \$ 176,580,105 | 188.44% | 19.62x | \$ - | \$ 167,580,105 |
| Private Equity | Accel VI, L.P. | 428 University Avenue, Palo Alto, CA 94301 | 1998 | \$ 9,000,000 | \$ 9,000,000 | \$ 3,267,735 | \$ 3,660,856 | -7.44% | 0.41x | \$ 1,711 | N/A |
| Private Equity | Accel VIII, L.P. | 428 University Avenue, Palo Alto, CA 94301 | 2000 | \$ 7,293,000 | \$ 5,858,250 | \$ 8,402,555 | \$ 8,476,418 | 4.69% | 1.45x | \$ 759 | N/A |
| Private Equity | Accel VI-S, L.P. | 428 University Avenue, Palo Alto, CA 94301 | 2001 | \$ 1,451,613 | \$ 1,154,031 | \$ 4,494,408 | \$ 5,467,155 | 14.80% | 4.74x | \$ 1,224 | N/A |
| Private Equity | Accel-KKR Capital Partners VI, L.P. | 2500 Sand Hill Road, Menlo Park, CA 94025 | 2019 | \$ 110,000,000 | \$ - | \$ - | \$ - | 0.00% | 0.00x | \$ - | N/A |
| Private Equity | Accel-KKR Growth Capital Partners III, L.P. | 2500 Sand Hill Road, Menlo Park, CA 94025 | 2019 | \$ 50,000,000 | \$ - | \$ - | \$ - | 0.00% | 0.00x | \$ - | N/A |
| Private Equity | Advent International GPE IX, L.P. | 160 Victoria Street, London, SW1E 5LB | 2019 | \$ 100,000,000 | \$ - | \$ - | \$ - | 0.00% | 0.00x | \$ - | N/A |
| Private Equity | AE Industrial Partners Fund II, L.P. | 2500 N Military Trail, Suite 470, Boca Raton, FL 33431 | 2018 | \$ 100,000,000 | \$ 7,549,906 | \$ - | \$ 6,336,360 | -16.07% | 0.84x | \$ 1,040,256 | N/A |
| Private Equity | Alchemy Plan (Pasadena), L.P. | 21 Palmer Street, London, SW1H 0AD United Kingdom | 2005 | \$ 44,416,660 | \$ 28,571,492 | \$ 32,512,635 | \$ 32,512,635 | 1.74% | 1.14x | \$ - | \$ 3,941,142 |
| Private Equity | Alchemy Special Opportunities Fund IV, L.P. | 21 Palmer Street, London, SW1H 0AD United Kingdom | 2018 | \$ 82,725,512 | \$ - | \$ - | \$ (2,455,278) | 0.00% | 0.00x | \$ 961,291 | N/A |
| Private Equity | Aldrich Capital Partners Fund LP | 8614 Westwood Center Drive, Suite 710, Vienna, VA 22182 | 2018 | \$ 10,000,000 | \$ 3,307,061 | \$ - | \$ 3,933,087 | 23.41% | 1.19x | \$ - | N/A |
| Private Equity | Alsop Louie Capital II, L.P. | 50 Pacific Avenue, San Francisco, CA 94111 | 2010 | \$ 5,000,000 | \$ 5,000,000 | \$ - | \$ 3,392,914 | -5.33% | 0.68x | \$ 10,725 | N/A |
| Private Equity | Alsop Louie Capital III, L.P. | 50 Pacific Avenue, San Francisco, CA 94111 | 2015 | \$ 5,000,000 | \$ 4,600,000 | \$ 574,968 | \$ 7,230,827 | 16.41% | 1.57x | \$ 103,102 | N/A |
| Private Equity | Alta California Partners II, L.P. | One Embarcadero Center, 37th Floor, San Francisco, CA 94111 | 1998 | \$ 15,000,000 | \$ 15,000,000 | \$ 10,576,049 | \$ 10,576,049 | -5.57% | 0.71x | \$ - | \$ (4,423,951) |
| Private Equity | Alta California Partners III, L.P. | One Embarcadero Center, 37th Floor, San Francisco, CA 94111 | 2000 | \$ 15,000,000 | \$ 14,574,076 | \$ 17,083,596 | \$ 17,105,062 | 2.20% | 1.17x | \$ 3,088 | N/A |
| Private Equity | Apax Europe IV-A, L.P. | Third Floor Royal Bank Place, 1 Glatigny Esplanade, St. Peter Port, GY1 2HJ Guernsey | 1999 | \$ 19,543,836 | \$ 20,079,264 | \$ 27,299,661 | \$ 27,299,661 | 7.10% | 1.36x | \$ - | \$ 7,220,398 |
| Private Equity | Apax Europe V-A, L.P. | Third Floor Royal Bank Place, 1 Glatigny Esplanade, St. Peter Port, GY1 2HJ Guernsey | 2001 | \$ 57,967,184 | \$ 59,047,867 | \$ 125,378,810 | \$ 125,378,810 | 36.09% | 2.12x | \$ - | \$ 66,330,943 |
| Private Equity | Apollo Investment Fund III, L.P. | 2 Manhattanville Road, 2nd Floor, Suite 203, Purchase, NY 10577 | 1995 | \$ 15,000,000 | \$ 17,236,337 | \$ 24,695,084 | \$ 24,695,084 | 9.62% | 1.43x | \$ - | \$ 7,458,747 |

Section 6254.26 (b)

Fiscal Year-Ended June 30, 2019

| Functional Category | Name ¹ | Address ¹ | Vintage Year ¹ | Commitment ² | Contribution ³ | Distributions ⁴ | Distribution Plus Market Value ⁵ | Since Inception Net Return ⁶ | Investment Multiple ⁷ | Dollar amount of the total fees paid on a fiscal year-end basis ⁸ | Dollar amount of cash profit received on a fiscal year-end basis ⁹ |
|---------------------|---|---|---------------------------|-------------------------|---------------------------|----------------------------|---|---|----------------------------------|--|---|
| Private Equity | Apollo Investment Fund IV, L.P. | 2 Manhattanville Road, 2nd Floor, Suite 203, Purchase, NY 10577 | 1998 | \$ 50,000,000 | \$ 51,236,447 | \$ 84,562,235 | \$ 84,619,303 | 8.47% | 1.65x | \$ 8,922 | N/A |
| Private Equity | Apollo Investment Fund V, L.P. | 2 Manhattanville Road, 2nd Floor, Suite 203, Purchase, NY 10577 | 2001 | \$ 30,000,000 | \$ 45,638,384 | \$ 92,513,248 | \$ 92,513,248 | 37.62% | 2.03x | \$ 19,075 | \$ 46,874,864 |
| Private Equity | ASC Network Corporation | 4041 MacArthur Boulevard, Suite 210, Newport Beach, CA 92660 | 1992 | \$ 5,000,000 | \$ 5,000,000 | \$ 8,502,725 | \$ 8,502,725 | 14.24% | 1.70x | \$ - | \$ 3,502,725 |
| Private Equity | Atlantic Street Capital II, L.P. | 300 Main Street, Suite 801, Stamford, CT, 06901 | 2011 | \$ 7,000,000 | \$ 7,800,748 | \$ 13,247,227 | \$ 24,654,209 | 40.40% | 3.16x | \$ 9,416 | N/A |
| Private Equity | Atlantic Street Capital III, L.P. | 300 Main Street, Suite 801, Stamford, CT, 06901 | 2015 | \$ 10,000,000 | \$ 8,311,341 | \$ 7,516 | \$ 11,731,195 | 32.90% | 1.41x | \$ 220,135 | N/A |
| Private Equity | Aurora Equity Partners II, L.P. | 10877 Wilshire Boulevard, Suite 2100, Los Angeles, CA 90024 | 1998 | \$ 30,000,000 | \$ 33,792,031 | \$ 47,497,863 | \$ 47,497,863 | 4.69% | 1.41x | \$ - | \$ 13,705,832 |
| Private Equity | Austin Ventures IX, L.P. | 300 West Sixth Street, Suite 2300, Austin, TX 78701 | 2006 | \$ 7,600,000 | \$ 7,664,734 | \$ 10,453,298 | \$ 10,453,298 | 5.12% | 1.36x | \$ - | \$ 2,788,564 |
| Private Equity | Austin Ventures VII, L.P. | 300 West Sixth Street, Suite 2300, Austin, TX 78701 | 1999 | \$ 5,000,000 | \$ 5,000,000 | \$ 4,028,377 | \$ 4,028,377 | -2.84% | 0.81x | \$ 1,308 | \$ (971,623) |
| Private Equity | Austin Ventures VIII, L.P. | 300 West Sixth Street, Suite 2300, Austin, TX 78701 | 2001 | \$ 11,066,667 | \$ 11,563,792 | \$ 18,908,284 | \$ 18,908,284 | 6.92% | 1.64x | \$ 1,434 | \$ 7,344,492 |
| Private Equity | Australis Partners Fund, L.P. | 675 Third Avenue, New York, NY 10017 | 2016 | \$ 125,000,000 | \$ 83,789,466 | \$ 221,255 | \$ 86,561,336 | 3.19% | 1.03x | \$ 2,575,361 | N/A |
| Private Equity | BDCM Opportunity Fund IV, L.P. | One Sound Shore Drive, Suite 200, Greenwich, CT 6830 | 2015 | \$ 100,000,000 | \$ 105,096,428 | \$ 29,206,572 | \$ 127,093,482 | 11.49% | 1.21x | \$ 2,228,440 | N/A |
| Private Equity | Behrman Capital II, L.P. | One Letterman Drive, Suite D4900, San Francisco, CA 94129 | 1998 | \$ 34,101,071 | \$ 34,101,071 | \$ 41,945,892 | \$ 41,945,892 | 3.03% | 1.23x | \$ - | \$ 7,844,821 |
| Private Equity | Behrman Capital III, L.P. | One Letterman Drive, Suite D4900, San Francisco, CA 94129 | 2000 | \$ 35,000,000 | \$ 34,999,999 | \$ 62,109,146 | \$ 62,109,146 | 11.79% | 1.77x | \$ - | \$ 27,109,147 |
| Private Equity | Berkshire Fund III, L.P. | 200 Clarendon Street, 35th Floor, Boston, MA 02116 | 1993 | \$ 5,000,000 | \$ 4,839,500 | \$ 18,502,393 | \$ 18,502,393 | 55.07% | 3.82x | \$ - | \$ 13,662,893 |
| Private Equity | Berkshire Fund IV, L.P. | 200 Clarendon Street, 35th Floor, Boston, MA 02116 | 1996 | \$ 20,000,000 | \$ 19,160,798 | \$ 49,899,467 | \$ 49,899,467 | 33.41% | 2.60x | \$ - | \$ 30,738,668 |
| Private Equity | Berkshire Fund V, L.P. | 200 Clarendon Street, 35th Floor, Boston, MA 02116 | 1998 | \$ 40,000,000 | \$ 38,259,380 | \$ 100,517,633 | \$ 100,517,633 | 22.98% | 2.63x | \$ - | \$ 62,258,253 |
| Private Equity | Berkshire Fund VI, L.P. | 200 Clarendon Street, 35th Floor, Boston, MA 02116 | 2002 | \$ 60,000,000 | \$ 59,683,417 | \$ 176,349,021 | \$ 176,349,021 | 25.06% | 2.95x | \$ (27,464) | \$ 116,665,604 |
| Private Equity | Berkshire Fund VII, L.P. | 200 Clarendon Street, 35th Floor, Boston, MA 02116 | 2006 | \$ 60,000,000 | \$ 61,474,445 | \$ 123,232,538 | \$ 123,232,538 | 16.76% | 2.00x | \$ - | \$ 61,758,093 |
| Private Equity | Berkshire Fund VIII, L.P. | 200 Clarendon Street, 35th Floor, Boston, MA 02116 | 2011 | \$ 75,000,000 | \$ 73,176,141 | \$ 123,350,909 | \$ 123,350,909 | 15.75% | 1.69x | \$ 971,619 | \$ 50,174,768 |
| Private Equity | Bertram Growth Capital I, L.P. | 950 Tower Lane, Foster City, CA 94404 | 2006 | \$ 10,000,000 | \$ 9,404,833 | \$ 13,591,449 | \$ 14,972,350 | 9.89% | 1.59x | \$ - | N/A |
| Private Equity | Best Friends Pet Care | 19717 62 Avenue South, Suite F103, Kent, WA, 98032 | 1994 | \$ 3,665,530 | \$ 3,665,530 | \$ 64,260 | \$ 64,260 | 0.00% | 0.02x | \$ - | \$ (3,601,270) |
| Private Equity | Blackstone Capital Partners II, L.P. | 345 Park Avenue, New York, NY 10154 | 1993 | \$ 25,000,000 | \$ 26,330,670 | \$ 59,014,041 | \$ 59,014,041 | 37.56% | 2.24x | \$ - | \$ 32,683,371 |
| Private Equity | Blackstone Capital Partners III Merchant, L.P. | 345 Park Avenue, New York, NY 10154 | 1997 | \$ 50,000,000 | \$ 54,055,169 | \$ 105,633,891 | \$ 105,633,891 | 14.63% | 1.95x | \$ 466 | \$ 51,578,723 |
| Private Equity | Blackstone Capital Partners IV - Secondary | 345 Park Avenue, New York, NY 10154 | 2012 | \$ 5,000,000 | \$ 3,092,067 | \$ 3,903,631 | \$ 3,987,231 | 14.27% | 1.29x | \$ - | N/A |
| Private Equity | Blackstone Capital Partners IV, L.P. | 345 Park Avenue, New York, NY 10154 | 2003 | \$ 75,000,000 | \$ 89,343,363 | \$ 210,746,912 | \$ 212,000,910 | 37.54% | 2.37x | \$ 6,992 | N/A |
| Private Equity | Blackstone Capital Partners V, L.P. | 345 Park Avenue, New York, NY 10154 | 2006 | \$ 74,054,134 | \$ 73,905,874 | \$ 119,627,394 | \$ 123,276,143 | 7.57% | 1.67x | \$ 23,411 | N/A |
| Private Equity | Blackstone Capital Partners VI, L.P. | 345 Park Avenue, New York, NY 10154 | 2010 | \$ 75,000,000 | \$ 80,291,175 | \$ 61,372,925 | \$ 126,153,978 | 12.82% | 1.57x | \$ 408,044 | N/A |
| Private Equity | Blackstone Capital Partners VII, L.P. | 345 Park Avenue, New York, NY 10154 | 2016 | \$ 200,000,000 | \$ 105,459,949 | \$ 12,249,478 | \$ 129,697,195 | 18.83% | 1.23x | \$ 3,487,889 | N/A |
| Private Equity | Blackstone Communications Partners I, L.P. | 345 Park Avenue, New York, NY 10154 | 2000 | \$ 25,000,000 | \$ 27,657,709 | \$ 33,725,886 | \$ 33,877,167 | 6.52% | 1.22x | \$ 1,704 | N/A |
| Private Equity | Blackstone Mezzanine Partners, L.P. | 345 Park Avenue, New York, NY 10154 | 1999 | \$ 10,000,000 | \$ 6,785,498 | \$ 9,127,513 | \$ 9,127,513 | 10.15% | 1.35x | \$ - | \$ 2,342,015 |
| Private Equity | Binary Capital Fund II, L.P. | 1550 Bryant Street, Suite 700, San Francisco, CA 94103 | 2017 | \$ 34,000,000 | \$ 2,442,381 | \$ 418,091 | \$ 2,375,018 | -1.55% | 0.97x | \$ 186,828 | N/A |
| Private Equity | Brinson International Partners Fund | One North Wacker Drive, Suite 2200, Chicago, IL 60606 | 1998 | \$ 49,256,579 | \$ 53,350,625 | \$ 90,745,507 | \$ 92,631,750 | 11.24% | 1.74x | \$ 24,165 | N/A |
| Private Equity | Bruckmann, Rosser, Sherrill & Co. II, L.P. | 126 East 56th Street, 29th Floor, New York, NY 10022 | 1999 | \$ 25,000,000 | \$ 26,673,337 | \$ 53,836,427 | \$ 53,836,427 | 12.01% | 2.02x | \$ - | \$ 27,163,090 |
| Private Equity | Bruckmann, Rosser, Sherrill & Co., L.P. | 126 East 56th Street, 29th Floor, New York, NY 10022 | 1996 | \$ 28,000,000 | \$ 29,307,496 | \$ 51,731,311 | \$ 51,731,311 | 10.35% | 1.77x | \$ (460) | \$ 22,423,814 |
| Private Equity | BRV Aster Fund II, L.P. | Unit 1308, Tower 1, China Central, NO. 81 Jian Guo Road, Chaoyang Distric, Beijing 100025 China | 2017 | \$ 40,000,000 | \$ 24,000,000 | \$ - | \$ 25,403,814 | 5.33% | 1.06x | \$ 1,392,190 | N/A |
| Private Equity | BRV Aster Opportunity Fund II, L.P. | Unit 1308, Tower 1, China Central, NO. 81 Jian Guo Road, Chaoyang Distric, Beijing 100025 China | 2019 | \$ 25,000,000 | \$ - | \$ - | \$ - | 0.00% | 0.00x | \$ - | N/A |
| Private Equity | BRV Aster Fund III, L.P. | Unit 1308, Tower 1, China Central, NO. 81 Jian Guo Road, Chaoyang Distric, Beijing 100025 China | 2019 | \$ 50,000,000 | \$ - | \$ - | \$ - | 0.00% | 0.00x | \$ - | N/A |
| Private Equity | Canaan VII, L.P. | 285 Riverside Avenue, Suite 250, Westport, CT 06880 | 2005 | \$ 9,500,000 | \$ 9,500,000 | \$ 21,186,935 | \$ 22,683,094 | 14.58% | 2.39x | \$ - | N/A |
| Private Equity | Canaan XI, L.P. ¹⁰ | 285 Riverside Avenue, Suite 250, Westport, CT 06880 | 2018 | \$ 50,000,000 | \$ 15,500,000 | \$ - | \$ 18,253,996 | 19.54% | 1.18x | \$ 1,165,351 | N/A |
| Private Equity | Candover 2005 Fund, L.P. | 12 Charles II Street, 3rd Floor, London, SW1Y 4QU United Kingdom | 2005 | \$ 78,210,646 | \$ 93,797,310 | \$ 51,210,873 | \$ 51,210,873 | -11.19% | 0.55x | \$ - | \$ (42,586,437) |
| Private Equity | Cardinal Health Partners, L.P. | 230 Nassau Street, Princeton, NJ 08542 | 1997 | \$ 10,000,000 | \$ 10,000,000 | \$ 18,733,679 | \$ 18,733,679 | 9.70% | 1.87x | \$ - | \$ 8,733,679 |
| Private Equity | Carlye U.S. Equity Opportunity Fund II, L.P. | 1001 Pennsylvania Avenue N.W., Suite 220 South, Washington, D.C. 20004 | 2015 | \$ 200,000,000 | \$ 125,736,779 | \$ 13,576,888 | \$ 128,539,659 | 1.19% | 1.02x | \$ 4,287,124 | N/A |
| Private Equity | Carlyle Management Group Partners, L.P. | 1001 Pennsylvania Avenue N.W., Suite 220 South, Washington, D.C. 20004 | 2002 | \$ 5,364,308 | \$ 5,364,308 | \$ 5,798,577 | \$ 5,798,577 | 6.01% | 1.08x | \$ - | \$ 434,269 |
| Private Equity | Carlyle Partners II, L.P. | 1001 Pennsylvania Avenue N.W., Suite 220 South, Washington, D.C. 20004 | 1994 | \$ 30,000,000 | \$ 33,939,244 | \$ 81,622,138 | \$ 81,622,138 | 25.74% | 2.40x | \$ - | \$ 47,682,894 |
| Private Equity | Carlyle Partners III, L.P. | 1001 Pennsylvania Avenue N.W., Suite 220 South, Washington, D.C. 20004 | 2000 | \$ 22,487,354 | \$ 26,871,391 | \$ 58,770,979 | \$ 58,770,979 | 22.93% | 2.19x | \$ - | \$ 31,899,588 |
| Private Equity | Carlyle Partners IV, L.P. | 1001 Pennsylvania Avenue N.W., Suite 220 South, Washington, D.C. 20004 | 2005 | \$ 75,000,000 | \$ 77,680,174 | \$ 151,741,201 | \$ 153,696,171 | 13.01% | 1.98x | \$ 8,951 | N/A |
| Private Equity | Carlyle Partners V, L.P. | 1001 Pennsylvania Avenue N.W., Suite 220 South, Washington, D.C. 20004 | 2007 | \$ 75,000,000 | \$ 68,118,106 | \$ 118,429,102 | \$ 128,557,109 | 13.69% | 1.89x | \$ 81,534 | N/A |
| Private Equity | Carlyle Partners VI, L.P. | 1001 Pennsylvania Avenue N.W., Suite 220 South, Washington, D.C. 20004 | 2013 | \$ 150,000,000 | \$ 159,023,261 | \$ 67,796,980 | \$ 204,922,120 | 10.15% | 1.29x | \$ 1,018,947 | N/A |
| Private Equity | Centerbridge Capital Partners II, L.P. | 375 Park Avenue, 12th Floor, New York, NY 10152 | 2010 | \$ 50,000,000 | \$ 57,005,393 | \$ 36,211,358 | \$ 52,741,201 | -2.12% | 0.93x | \$ 456,184 | N/A |
| Private Equity | Centerbridge Capital Partners III, L.P. | 375 Park Avenue, 12th Floor, New York, NY 10152 | 2014 | \$ 75,000,000 | \$ 49,191,408 | \$ 16,379,794 | \$ 66,007,079 | 14.90% | 1.34x | \$ 1,644,139 | N/A |
| Private Equity | Centerbridge Capital Partners, L.P. | 375 Park Avenue, 12th Floor, New York, NY 10152 | 2006 | \$ 60,000,000 | \$ 59,384,459 | \$ 126,039,623 | \$ 134,123,204 | 19.41% | 2.26x | \$ 150,039 | N/A |
| Private Equity | Chart Capital Partners II | 53 Forest Avenue, Old Greenwich, CT, 10019 | 2010 | \$ 6,700,000 | \$ 8,626,374 | \$ 12,515,689 | \$ 13,740,267 | 10.50% | 1.59x | \$ 64,205 | N/A |
| Private Equity | CHP II, L.P. | 230 Nassau Street, Princeton, NJ 08540 | 2000 | \$ 10,000,000 | \$ 10,000,000 | \$ 15,266,971 | \$ 15,314,754 | 12.64% | 1.53x | \$ - | N/A |
| Private Equity | CHS Private Equity V, L.P. | 10 South Wacker Drive, Suite 3300, Chicago, IL 60606 | 2005 | \$ 60,000,000 | \$ 53,524,388 | \$ 98,712,992 | \$ 98,830,141 | 9.82% | 1.85x | \$ 168,062 | N/A |
| Private Equity | Churchill Capital Partners II, L.P. | 333 South 7th Street, Suite 3100, Minneapolis, MN 55402 | 1992 | \$ 25,000,000 | \$ 25,000,000 | \$ 34,314,641 | \$ 34,314,641 | 10.11% | 1.37x | \$ - | \$ 9,314,641 |
| Private Equity | Clarion Investors II, L.P. | 527 Madison Avenue, 10th Floor, New York, NY 10022 | 2013 | \$ 7,500,000 | \$ 6,001,390 | \$ 8,179,398 | \$ 12,221,017 | 30.68% | 2.04x | \$ 78,638 | N/A |
| Private Equity | Clarion Investors III, L.P. | 527 Madison Avenue, 10th Floor, New York, NY 10022 | 2018 | \$ 50,000,000 | \$ 3,580,075 | \$ - | \$ 2,996,128 | -16.31% | 0.84x | \$ - | N/A |
| Private Equity | Clearlake Capital Partners III, L.P. | 233 Wilshire Boulevard, Suite 800, Santa Monica, CA 90401 | 2012 | \$ 75,000,000 | \$ 135,507,390 | \$ 258,941,990 | \$ 306,177,527 | 41.33% | 2.26x | \$ 116,990 | N/A |
| Private Equity | Clearlake Capital Partners IV, L.P. | 233 Wilshire Boulevard, Suite 800, Santa Monica, CA 90401 | 2015 | \$ 77,000,000 | \$ 91,106,102 | \$ 50,919,834 | \$ 144,554,430 | 31.75% | 1.59x | \$ 729,279 | N/A |
| Private Equity | Clearlake Capital Partners V, L.P. | 233 Wilshire Boulevard, Suite 800, Santa Monica, CA 90401 | 2018 | \$ 100,000,000 | \$ 48,055,036 | \$ 1,509,452 | \$ 72,980,318 | 63.83% | 1.52x | \$ 2,027,799 | N/A |
| Private Equity | Clearstone Venture Partners II-A, L.P. | 1351 4th Street, 4th Floor, Santa Monica, CA 90401 | 1999 | \$ 5,000,000 | \$ 5,000,000 | \$ 1,184,982 | \$ 1,184,982 | -20.04% | 0.24x | \$ - | \$ (3,815,018) |
| Private Equity | Columbia Capital Equity Partners II (QP), L.P. | 204 South Union Street, Alexandria, VA 22314 | 1999 | \$ 12,000,000 | \$ 12,039,711 | \$ 9,537,357 | \$ 9,537,357 | -4.62% | 0.79x | \$ - | \$ (2,502,354) |
| Private Equity | Columbia Capital Equity Partners III (QP), L.P. | 204 South Union Street, Alexandria, VA 22314 | 2000 | \$ 15,000,000 | \$ 16,899,640 | \$ 19,910,812 | \$ 19,910,812 | 3.10% | 1.18x | \$ 2,022 | \$ 3,011,172 |
| Private Equity | Copley Partners 1, L.P. | N/A | 1986 | \$ 15,000,000 | \$ 15,000,000 | \$ 27,320,000 | \$ 27,320,000 | 9.53% | 1.82x | \$ - | \$ 12,320,000 |
| Private Equity | Copley Partners 2, L.P. | N/A | 1986 | \$ 15,000,000 | \$ 15,000,000 | \$ 21,782,515 | \$ 21,782,515 | 5.66% | 1.45x | \$ - | \$ 6,782,515 |
| Private Equity | Cornerstone Equity Partners IV, L.P. | 355 Lexington Avenue, Suite 1400, New York, NY 10017 | 1996 | \$ 25,000,000 | \$ 25,000,000 | \$ 40,412,377 | \$ 40,412,377 | 8.58% | 1.62x | \$ - | \$ 15,412,377 |
| Private Equity | CVC Capital Partners VI (B) L.P. | 111 Strand, London, WC2R OAG, United Kingdom | 2013 | \$ 114,947,370 | \$ 121,256,069 | \$ 40,803,497 | \$ 169,883,455 | 16.17% | 1.40x | \$ 1,174,562 | N/A |
| Private Equity | CVC Capital Partners VII, L.P. | 111 Strand, London, WC2R OAG, United Kingdom | 2017 | \$ 227,614,092 | \$ 35,838,811 | \$ 338,467 | \$ 44,045,224 | 43.59% | 1.23x | \$ 4,025,423 | N/A |
| Private Equity | CVC European Equity Partners II, L.P. | 111 Strand, London, WC2R OAG, United Kingdom | 1 | | | | | | | | |

Section 6254.26 (b)

Fiscal Year-Ended June 30, 2019

| Functional Category | Name ¹ | Address ¹ | Vintage Year ¹ | Commitment ² | Contribution ³ | Distributions ⁴ | Distribution Plus Market Value ⁵ | Since Inception Net Return ⁶ | Investment Multiple ⁷ | Dollar amount of the total fees paid on a fiscal year-end basis ⁸ | Dollar amount of cash profit received on a fiscal year-end basis ⁹ |
|---------------------------------|---|---|---------------------------|-------------------------|---------------------------|----------------------------|---|---|----------------------------------|--|---|
| Private Equity | CVC European Equity Partners III, L.P. | 111 Strand, London, WC2R OAG, United Kingdom | 2001 | \$ 30,000,000 | \$ 29,566,313 | \$ 83,252,788 | \$ 85,218,426 | 41.03% | 2.88x | \$ 7,294 | N/A |
| Private Equity | CVC European Equity Partners IV (D), L.P. | 111 Strand, London, WC2R OAG, United Kingdom | 2005 | \$ 75,854,099 | \$ 69,863,375 | \$ 137,317,386 | \$ 137,381,603 | 16.66% | 1.97x | \$ 9,398 | N/A |
| Private Equity | CVC European Equity Partners Tandem Fund, L.P. | 111 Strand, London, WC2R OAG, United Kingdom | 2006 | \$ 30,382,463 | \$ 28,711,984 | \$ 38,530,687 | \$ 38,558,168 | 6.55% | 1.34x | \$ 5,268 | N/A |
| Private Equity | CVC European Equity Partners V (A), L.P. | 111 Strand, London, WC2R OAG, United Kingdom | 2008 | \$ 87,627,375 | \$ 97,625,413 | \$ 166,129,480 | \$ 185,047,281 | 16.21% | 1.90x | \$ 72,154 | N/A |
| Private Equity | CVC European Equity Partners, L.P. | 111 Strand, London, WC2R OAG, United Kingdom | 1996 | \$ 25,000,000 | \$ 24,301,498 | \$ 61,070,457 | \$ 61,070,457 | 22.96% | 2.51x | \$ - | \$ 36,768,959 |
| Private Equity | Cypress Merchant Banking Partners II, L.P. | 437 Madison Avenue, 33rd Floor, New York, NY 10022 | 1999 | \$ 40,000,000 | \$ 41,816,808 | \$ 40,563,605 | \$ 40,563,605 | -0.51% | 0.97x | \$ - | \$ (1,253,204) |
| Private Equity | Cypress Merchant Banking Partners, L.P. | 437 Madison Avenue, 33rd Floor, New York, NY 10022 | 1995 | \$ 10,000,000 | \$ 10,465,248 | \$ 12,641,091 | \$ 12,641,091 | 2.57% | 1.21x | \$ - | \$ 2,175,843 |
| Private Equity | DLJ Merchant Banking Partners II, L.P. | 11 Madison Avenue, 16th Floor, New York, NY 10010 | 1997 | \$ 25,000,000 | \$ 28,545,519 | \$ 36,654,221 | \$ 36,654,221 | 6.01% | 1.28x | \$ - | \$ 8,108,702 |
| Private Equity | Draper Fisher Jurvetson Fund VII, L.P. | 2882 Sand Hill Road, Suite 150, Menlo Park, CA 94025 | 2000 | \$ 10,000,000 | \$ 10,000,000 | \$ 7,238,170 | \$ 7,238,170 | -3.14% | 0.72x | \$ 3,961 | \$ (2,761,830) |
| Private Equity | Enterprise Partners III, L.P. | 2223 Avenida de la Playa, Suite 300, La Jolla, CA 92037 | 1993 | \$ 10,000,000 | \$ 10,000,000 | \$ 74,198,158 | \$ 74,198,158 | 63.67% | 7.42x | \$ - | \$ 64,198,158 |
| Private Equity | Excellere Capital Fund II, L.P. | 3033 East First Avenue, Suite 700, Denver, CO 80206 | 2011 | \$ 50,000,000 | \$ 45,076,545 | \$ 59,247,844 | \$ 85,312,071 | 32.56% | 1.89x | \$ 62,265 | N/A |
| Private Equity | Excellere Capital Fund III, L.P. | 3033 East First Avenue, Suite 700, Denver, CO 80206 | 2016 | \$ 70,000,000 | \$ 35,807,480 | \$ 3,644,340 | \$ 39,315,667 | 13.21% | 1.10x | \$ 793,427 | N/A |
| Private Equity | Excellere Capital Fund, L.P. | 3033 East First Avenue, Suite 700, Denver, CO 80206 | 2007 | \$ 25,000,000 | \$ 21,410,078 | \$ 45,267,872 | \$ 45,267,872 | 32.71% | 2.11x | \$ 4,416 | \$ 23,857,794 |
| Private Equity | Exponent Private Equity Partners II, L.P. | 2 London Bridge, London, SE1 9RA United Kingdom | 2007 | \$ 42,422,912 | \$ 41,386,361 | \$ 61,948,392 | \$ 61,948,392 | 8.87% | 1.50x | \$ 32,725 | \$ 20,562,031 |
| Private Equity | Exponent Private Equity Partners, L.P. | 2 London Bridge, London, SE1 9RA United Kingdom | 2004 | \$ 46,301,651 | \$ 52,872,752 | \$ 69,894,805 | \$ 69,894,805 | 7.20% | 1.32x | \$ 16,112 | \$ 17,022,053 |
| Private Equity | Falcon Mezzanine Partners, L.P. | 21 Custom House Street, 10th Floor, Boston, MA 02110 | 2003 | \$ 20,000,000 | \$ 19,559,608 | \$ 37,695,417 | \$ 37,695,417 | 26.03% | 1.93x | \$ - | \$ 18,135,809 |
| Private Equity | Financial Partners Fund I - (Secondary) | 280 Park Avenue, 3rd Floor, New York, NY 10017 | 2018 | \$ 2,902,557 | \$ 2,611,522 | \$ 224,965 | \$ 3,522,591 | 29.94% | 1.35x | \$ 45,398 | N/A |
| Private Equity | Financial Partners Fund II, L.P. | 280 Park Avenue, 3rd Floor, New York, NY 10017 | 2018 | \$ 8,225,255 | \$ 2,600,401 | \$ 1,419,256 | \$ 3,151,393 | 20.13% | 1.21x | \$ 208,132 | N/A |
| Private Equity | First Data Corporation | 5565 Glenridge Connector NE, Suite 2000, Atlanta, GA 30342 | 1992 | \$ 5,000,000 | \$ 5,000,000 | \$ 24,897,520 | \$ 24,897,520 | 91.84% | 4.98x | \$ - | \$ 19,897,520 |
| Natural Resources & Commodities | First Reserve Fund X, L.P. | 290 Harbor Drive, Stamford, CT 06902 | 2004 | \$ 50,000,000 | \$ 50,000,000 | \$ 91,214,503 | \$ 91,387,427 | 31.05% | 1.83x | \$ 6,067 | N/A |
| Private Equity | First Reserve Fund XI, L.P. | 290 Harbor Drive, Stamford, CT 06902 | 2006 | \$ 60,000,000 | \$ 60,000,000 | \$ 39,646,621 | \$ 39,646,621 | -8.70% | 0.66x | \$ 10,346 | \$ (20,353,379) |
| Private Equity | First Reserve Fund XII, L.P. | 290 Harbor Drive, Stamford, CT 06902 | 2008 | \$ 100,000,000 | \$ 101,822,018 | \$ 69,240,943 | \$ 69,240,943 | -7.86% | 0.68x | \$ 74,419 | \$ (32,581,075) |
| Private Equity | Forward Ventures IV, L.P. | 4747 Executive Drive, Suite 700, San Diego, CA 92121 | 2000 | \$ 10,000,000 | \$ 10,051,899 | \$ 6,371,752 | \$ 6,371,752 | -4.67% | 0.63x | \$ 2,759 | \$ (3,680,147) |
| Private Equity | Foundation Investment Partners II, L.P. | 50 Curzon Street, Floor 3, London, W1J 7UW | 2018 | \$ 14,821,560 | \$ 671,742 | \$ - | \$ 562,980 | -16.19% | 0.84x | \$ - | N/A |
| Private Equity | Foundation Investment Partners, L.P. | 50 Curzon Street, Floor 3, London, W1J 7UW | 2015 | \$ 5,421,280 | \$ 5,146,960 | \$ 7,004,338 | \$ 7,773,561 | 32.84% | 1.51x | \$ 72,462 | N/A |
| Private Equity | Gateway Private Equity Fund, L.P. | 18575 Jamboree Road, 7th Floor, Irvine, CA, 92612 | 2010 | \$ 300,000,000 | \$ 278,733,369 | \$ 201,090,869 | \$ 420,327,990 | 11.59% | 1.51x | \$ 2,134,269 | N/A |
| Private Equity | Gateway Private Equity Fund-B, L.P. | 18575 Jamboree Road, 7th Floor, Irvine, CA, 92612 | 2015 | \$ 300,000,000 | \$ 213,284,046 | \$ 7,987,780 | \$ 278,583,527 | 15.49% | 1.31x | \$ 1,057,463 | N/A |
| Private Equity | GBOF V Feeder SCS | Herculesplein 104, 3584, AA Utrecht Netherlands | 2016 | \$ 86,354,639 | \$ 60,784,122 | \$ 3,483,744 | \$ 68,267,440 | 8.04% | 1.12x | \$ 1,367,184 | N/A |
| Private Equity | Geopacital IV, L.P. | 1821 Hillandale Road, Suite 1 B-341, Durham, NC 27705 | 1996 | \$ 9,000,000 | \$ 9,000,000 | \$ 15,606,095 | \$ 15,606,095 | 14.14% | 1.73x | \$ 21,624 | \$ 6,606,095 |
| Private Equity | GGV Capital IV, L.P. | 2494 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2012 | \$ 50,000,000 | \$ 49,909,342 | \$ 27,930,146 | \$ 120,377,747 | 17.66% | 2.41x | \$ 429,092 | N/A |
| Private Equity | GGV Capital V, L.P. | 2494 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2014 | \$ 50,000,000 | \$ 47,500,070 | \$ 7,716,911 | \$ 130,056,724 | 30.99% | 2.74x | \$ 1,049,654 | N/A |
| Private Equity | GGV Capital VI Plus, L.P. | 2494 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2017 | \$ 15,000,000 | \$ 9,450,000 | \$ - | \$ 9,120,949 | -4.61% | 0.97x | \$ 9,229 | N/A |
| Private Equity | GGV Capital VII, L.P. | 2494 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2016 | \$ 45,000,000 | \$ 39,825,000 | \$ - | \$ 51,260,318 | 18.07% | 1.29x | \$ 912,081 | N/A |
| Private Equity | GGV Capital VII Plus, L.P. | 2494 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2019 | \$ 16,000,000 | \$ 2,880,000 | \$ - | \$ 2,880,000 | 0.00% | 1.00x | \$ 257 | N/A |
| Private Equity | GGV Capital VIII, L.P. | 2494 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2019 | \$ 64,000,000 | \$ 10,240,000 | \$ - | \$ 9,492,386 | -13.04% | 0.93x | \$ 771,866 | N/A |
| Private Equity | GGV Discovery I, L.P. | 2494 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2016 | \$ 15,000,000 | \$ 13,125,000 | \$ - | \$ 18,997,000 | 26.79% | 1.45x | \$ 308,527 | N/A |
| Private Equity | GGV Discovery II, L.P. | 2494 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2019 | \$ 20,000,000 | \$ 2,300,000 | \$ - | \$ 2,112,632 | -14.98% | 0.92x | \$ 238,664 | N/A |
| Private Equity | GKH Investments, L.P. | 200 West Madison Street, Suite 3800, Chicago, IL 60606 | 1988 | \$ 150,000,000 | \$ 166,588,304 | \$ 350,453,542 | \$ 350,453,542 | 13.13% | 2.10x | \$ - | \$ 183,865,238 |
| Private Equity | Glendon Opportunities Fund II, L.P. | 1620 26th Street, Suite 2000N, Santa Monica, CA 90404 | 2017 | \$ 100,000,000 | \$ - | \$ - | \$ - | 0.00% | 0.00x | \$ - | N/A |
| Private Equity | Glendon Opportunities Fund, L.P. | 1620 26th Street, Suite 2000N, Santa Monica, CA 90404 | 2014 | \$ 60,000,000 | \$ 51,299,529 | \$ - | \$ 63,372,859 | 6.12% | 1.24x | \$ 1,246,420 | N/A |
| Private Equity | Goode Partners Consumer Fund II, L.P. | 767 Third Avenue, 22nd Floor, New York, NY 10017 | 2013 | \$ 8,040,750 | \$ 10,404,356 | \$ 19,620,645 | \$ 31,230,277 | 53.30% | 3.00x | \$ - | N/A |
| Private Equity | Goode Partners Consumer Fund III, L.P. | 767 Third Avenue, 22nd Floor, New York, NY 10017 | 2015 | \$ 10,000,000 | \$ 5,861,227 | \$ 66,207 | \$ 3,535,893 | -23.24% | 0.60x | \$ 168,455 | N/A |
| Private Equity | Goode Supreme Holdings Co-Invest, LLC | 767 Third Avenue, 22nd Floor, New York, NY 10017 | 2015 | \$ 4,600,206 | \$ 4,600,206 | \$ 49,885,424 | \$ 86,869,791 | 132.11% | 18.88x | \$ - | N/A |
| Private Equity | Great Point Partners III, L.P. | 165 Mason Street, 3rd Floor, Greenwich, CT, 06830 | 2018 | \$ 15,000,000 | \$ 1,585,900 | \$ - | \$ 2,913,546 | 93.77% | 1.84x | \$ - | N/A |
| Private Equity | Green Equity Investors VII, L.P. | 11111 Santa Monica Boulevard, Suite 2000, Los Angeles, CA 90025 | 2017 | \$ 150,000,000 | \$ 88,616,289 | \$ 593,982 | \$ 103,880,127 | 13.48% | 1.17x | \$ 2,178,437 | N/A |
| Private Equity | Greycroft Growth II, L.P. | 292 Madison Avenue, 20th Floor, New York, NY 10017 | 2017 | \$ 7,500,000 | \$ 4,437,375 | \$ 1,016,876 | \$ 4,943,822 | 16.10% | 1.11x | \$ 156,984 | N/A |
| Private Equity | Greycroft Growth, L.P. | 292 Madison Avenue, 20th Floor, New York, NY 10017 | 2014 | \$ 7,500,000 | \$ 7,659,201 | \$ 238,672 | \$ 11,331,985 | 12.99% | 1.48x | \$ 160,317 | N/A |
| Private Equity | Greycroft Partners II, L.P. | 292 Madison Avenue, 20th Floor, New York, NY 10017 | 2010 | \$ 7,500,000 | \$ 9,693,043 | \$ 9,305,963 | \$ 20,685,426 | 19.29% | 2.13x | \$ 135,340 | N/A |
| Private Equity | Greycroft Partners III, L.P. | 292 Madison Avenue, 20th Floor, New York, NY 10017 | 2012 | \$ 8,560,000 | \$ 10,080,544 | \$ 4,076,888 | \$ 15,672,336 | 13.74% | 1.55x | \$ 219,874 | N/A |
| Private Equity | Greycroft Partners IV, L.P. | 292 Madison Avenue, 20th Floor, New York, NY 10017 | 2015 | \$ 7,500,000 | \$ 7,908,466 | \$ 1,602,297 | \$ 11,271,496 | 23.96% | 1.43x | \$ 205,371 | N/A |
| Private Equity | Gridiron Capital Fund II, L.P. | 220 Elm Street, New Canaan, CT 06840 | 2012 | \$ 10,000,000 | \$ 10,330,199 | \$ 10,546,643 | \$ 16,921,890 | 13.09% | 1.64x | \$ 81,247 | N/A |
| Private Equity | GS Capital Partners II, L.P. | 85 Broad Street, New York, NY 10004 | 1995 | \$ 20,000,000 | \$ 19,716,236 | \$ 24,256,758 | \$ 24,256,758 | 4.78% | 1.23x | \$ - | \$ 4,540,522 |
| Private Equity | GTB Capital Partners II, L.P. | 100 Front Street, Suite 400, West Conshohocken, PA 19248 | 2014 | \$ 400,000,000 | \$ 294,363,186 | \$ 79,135,882 | \$ 375,330,528 | 9.23% | 1.28x | \$ 2,744,640 | N/A |
| Private Equity | GTB Capital Partners, L.P. | 100 Front Street, Suite 400, West Conshohocken, PA 19248 | 2006 | \$ 250,000,000 | \$ 264,962,800 | \$ 502,979,007 | \$ 502,979,007 | 12.00% | 1.90x | \$ 64,551 | \$ 238,016,207 |
| Private Equity | GTCR Fund IX/A, L.P. | 7776 Ivanhoe Avenue, Suite 200, La Jolla, CA 92037 | 2006 | \$ 60,000,000 | \$ 57,132,136 | \$ 103,011,717 | \$ 103,011,717 | 13.75% | 1.80x | \$ 13,233 | \$ 45,879,581 |
| Private Equity | GTCR Fund VIII, L.P. | 7776 Ivanhoe Avenue, Suite 200, La Jolla, CA 92037 | 2003 | \$ 75,000,000 | \$ 69,393,692 | \$ 120,641,835 | \$ 120,641,835 | 22.29% | 1.74x | \$ 14,516 | \$ 51,248,143 |
| Private Equity | Halpern Denny Fund II, L.P. | 500 Boylstone Street, Suite 1880, Boston, MA 02116 | 1997 | \$ 10,000,000 | \$ 10,199,997 | \$ 2,334,835 | \$ 2,334,835 | -22.36% | 0.23x | \$ - | \$ (7,865,162) |
| Private Equity | HarbourVest International Private Equity Partners | One Financial Center, 44th Floor, Boston, MA 02111 | 1998 | \$ 25,000,000 | \$ 24,625,000 | \$ 38,182,604 | \$ 38,233,225 | 8.56% | 1.55x | \$ 1,018 | N/A |
| Private Equity | Harvest Partners VII, L.P. | 280 Park Avenue, 25th Floor, New York, NY 10017 | 2016 | \$ 80,000,000 | \$ 65,231,836 | \$ 6,920,092 | \$ 71,227,897 | 7.36% | 1.09x | \$ 895,314 | N/A |
| Private Equity | Hellman & Friedman Capital Partners V, L.P. | 415 Mission Street, San Francisco, CA 94105 | 2004 | \$ 39,953,351 | \$ 38,227,150 | \$ 102,043,445 | \$ 102,043,445 | 27.86% | 2.67x | \$ - | \$ 63,816,296 |
| Private Equity | Hellman & Friedman Capital Partners VI, L.P. | 415 Mission Street, San Francisco, CA 94105 | 2007 | \$ 60,000,000 | \$ 61,620,868 | \$ 95,878,988 | \$ 114,901,373 | 12.09% | 1.86x | \$ - | N/A |
| Private Equity | Hellman & Friedman Capital Partners VIII, L.P. | 415 Mission Street, San Francisco, CA 94105 | 2016 | \$ 125,000,000 | \$ 119,966,176 | \$ 9,077,916 | \$ 143,133,017 | 15.94% | 1.19x | \$ 1,783,642 | N/A |
| Private Equity | Hellman & Friedman Capital Partners IX, L.P. | 415 Mission Street, San Francisco, CA 94105 | 2019 | \$ 150,000,000 | \$ - | \$ - | \$ (756,580) | 0.00% | 0.00x | \$ 1,534,135 | N/A |
| Private Equity | Incline Equity Partners III, L.P. | 625 Liberty Avenue, Suite 340, Pittsburgh, PA 15222 | 2013 | \$ 10,000,000 | \$ 10,664,653 | \$ 14,037,251 | \$ 23,885,717 | 37.40% | 2.24x | \$ 193,817 | N/A |
| Private Equity | Incline Equity Partners IV, L.P. | 625 Liberty Avenue, Suite 340, Pittsburgh, PA 15222 | 2017 | \$ 37,500,000 | \$ 17,119,074 | \$ 43,893 | \$ 17,804,079 | 6.62% | 1.04x | \$ 671,695 | N/A |
| Private Equity | Incline Equity Partners IV, L.P. (JPM) | 625 Liberty Avenue, Suite 340, Pittsburgh, PA 15222 | 2017 | \$ 10,000,000 | \$ 4,565,086 | \$ 11,705 | \$ 4,747,755 | 6.62% | 1.04x | \$ 179,119 | N/A |
| Private Equity | Indigo N.V. | 5 Limburglaan, Maastricht, 6229 SH, Netherlands | 1996 | \$ 8,385,925 | \$ 7,000,000 | \$ 9,251,063 | \$ 9,251,063 | 5.11% | 1.32x | \$ - | \$ 2,251,063 |
| Private Equity | Infinity Capital Venture Fund 1999, L.P. | N/A | 1999 | \$ 15,000,000 | \$ 15,000,000 | \$ 1,643,938 | \$ 1,643,938 | -33.68% | 0.11x | \$ - | \$ (13,356,062) |
| Private Equity | Information Technology Venture II, L.P. | N/A | 1998 | \$ 15,000,000 | \$ 15,000,000 | \$ 11,580,601 | \$ 11,580,601 | -11.07% | 0.77x | \$ - | |

Section 6254.26 (b)

Fiscal Year-Ended June 30, 2019

| Functional Category | Name ¹ | Address ¹ | Vintage Year ¹ | Commitment ² | Contribution ³ | Distributions ⁴ | Distribution Plus Market Value ⁵ | Since Inception Net Return ⁶ | Investment Multiple ⁷ | Dollar amount of the total fees paid on a fiscal year-end basis ⁸ | Dollar amount of cash profit received on a fiscal year-end basis ⁹ |
|---------------------|--|--|---------------------------|-------------------------|---------------------------|----------------------------|---|---|----------------------------------|--|---|
| Private Equity | Insight Venture Partners V Coinvestment Fund, L.P. | 1114 Avenue of the Americas, 36th Floor, New York, NY 10036 | 2005 | \$ 8,180,615 | \$ 8,348,123 | \$ 28,122,135 | \$ 28,122,135 | 26.87% | 3.37x | \$ - | \$ 19,774,012 |
| Private Equity | Insight Venture Partners V, L.P. | 1114 Avenue of the Americas, 36th Floor, New York, NY 10036 | 2005 | \$ 9,500,000 | \$ 9,916,890 | \$ 26,581,388 | \$ 26,581,388 | 20.90% | 2.68x | \$ 88 | \$ 16,664,498 |
| Private Equity | Insignia Capital Partners (Parallel A), L.P. | 1333 North California Blvd, Suite 520, Walnut Creek, CA 94596 | 2013 | \$ 100,000,000 | \$ 65,562,141 | \$ 9,334,822 | \$ 72,845,821 | 4.94% | 1.11x | \$ 2,039,958 | N/A |
| Private Equity | Institutional Venture Partners XIV, L.P. | 3000 Sand Hill Road, Building 2, Suite 250, Menlo Park, CA 94025 | 2012 | \$ 60,000,000 | \$ 60,054,117 | \$ 34,901,898 | \$ 95,209,197 | 12.74% | 1.59x | \$ 1,453,472 | N/A |
| Private Equity | Institutional Venture Partners XV, L.P. | 3000 Sand Hill Road, Building 2, Suite 250, Menlo Park, CA 94025 | 2015 | \$ 90,000,000 | \$ 85,500,000 | \$ 14,760,678 | \$ 134,098,354 | 21.86% | 1.57x | \$ 2,066,565 | N/A |
| Private Equity | Intersouth Partners VII, L.P. | 102 City Hall Plaza, Suite 200, Durham, NC 27701 | 2006 | \$ 6,700,000 | \$ 6,700,000 | \$ 3,455,010 | \$ 3,455,010 | -9.95% | 0.52x | \$ 14,415 | \$ (3,244,990) |
| Private Equity | Invesco Partnership Fund II, L.P. | 1166 Avenue of the Americas, New York, NY 10036 | 1999 | \$ 20,000,000 | \$ 21,480,641 | \$ 16,500,663 | \$ 16,500,663 | -4.14% | 0.77x | \$ - | \$ (4,979,978) |
| Private Equity | J.P. Morgan Emerging Managers Program | 320 Park Avenue, New York, NY 10022 | 2010 | \$ 150,000,000 | \$ 160,637,624 | \$ 179,329,107 | \$ 312,727,938 | 19.94% | 1.95x | \$ - | N/A |
| Private Equity | J.P. Morgan Emerging Managers Program II | 320 Park Avenue, New York, NY 10022 | 2015 | \$ 100,000,000 | \$ 90,786,717 | \$ 93,724,526 | \$ 219,623,992 | 45.06% | 2.42x | \$ - | N/A |
| Private Equity | J.P. Morgan Emerging Managers Program III | 320 Park Avenue, New York, NY 10022 | 2017 | \$ 100,000,000 | \$ 52,597,516 | \$ 4,069,925 | \$ 63,160,389 | 30.21% | 1.21x | \$ - | N/A |
| Private Equity | J.P. Morgan Emerging Managers Program IV | 320 Park Avenue, New York, NY 10022 | 2018 | \$ 300,000,000 | \$ 10,734,762 | \$ - | \$ 12,949,633 | 21.07% | 1.20x | \$ - | N/A |
| Private Equity | JMI Equity Fund V, L.P. | 100 International Drive, Suite 19100, Baltimore, MD 21202 | 2005 | \$ 16,200,000 | \$ 16,203,728 | \$ 87,013,410 | \$ 87,013,410 | 39.38% | 5.37x | \$ - | \$ 70,809,682 |
| Private Equity | JMI Equity Fund VI, L.P. | 100 International Drive, Suite 19100, Baltimore, MD 21202 | 2007 | \$ 19,500,000 | \$ 19,509,927 | \$ 32,966,151 | \$ 33,748,029 | 11.24% | 1.73x | \$ 5,253 | N/A |
| Private Equity | JMI Equity Fund VII, L.P. | 100 International Drive, Suite 19100, Baltimore, MD 21202 | 2010 | \$ 30,000,000 | \$ 29,340,000 | \$ 36,142,309 | \$ 60,222,488 | 16.34% | 2.05x | \$ 449,492 | N/A |
| Private Equity | Joy Capital I, L.P. | Room 1501, Wangjing Greenland Center B, Chaoyang District, China | 2015 | \$ 5,000,000 | \$ 4,512,641 | \$ 4,191,116 | \$ 16,090,547 | 57.29% | 3.57x | \$ 118,531 | N/A |
| Private Equity | Joy Capital II, L.P. | Room 1501, Wangjing Greenland Center B, Chaoyang District, China | 2018 | \$ 5,000,000 | \$ 4,113,516 | \$ - | \$ 6,089,874 | 42.43% | 1.48x | \$ 131,551 | N/A |
| Private Equity | Joy Capital Opportunity, L.P. | Room 1501, Wangjing Greenland Center B, Chaoyang District, China | 2018 | \$ 25,000,000 | \$ 10,056,056 | \$ - | \$ 11,716,035 | 16.51% | 1.17x | \$ 82,069 | N/A |
| Private Equity | Joy Capital Opportunity, L.P. (JPM) | Room 1501, Wangjing Greenland Center B, Chaoyang District, China | 2018 | \$ 15,000,000 | \$ 8,477,120 | \$ - | \$ 9,473,107 | 14.19% | 1.12x | \$ 49,241 | N/A |
| Private Equity | Juggernaut Capital Partners II, L.P. | 4445 Willard Avenue, Suite 1040, Chevy Chase, MD 20815 | 2012 | \$ 75,000,000 | \$ 75,568,914 | \$ 28,209,280 | \$ 125,387,466 | 12.68% | 1.66x | \$ 1,105,697 | N/A |
| Private Equity | Juggernaut Capital Partners III, L.P. | 4445 Willard Avenue, Suite 1040, Chevy Chase, MD 20815 | 2015 | \$ 100,000,000 | \$ 101,766,787 | \$ 6,155,700 | \$ 117,092,624 | 7.15% | 1.15x | \$ 1,761,583 | N/A |
| Private Equity | Juggernaut Capital Partners IV, L.P. | 4445 Willard Avenue, Suite 1040, Chevy Chase, MD 20815 | 2018 | \$ 125,000,000 | \$ 23,366,954 | \$ - | \$ 23,219,234 | -1.56% | 0.99x | \$ 2,016,728 | N/A |
| Private Equity | JZI Fund III, L.P. | 9 West 57th Street, 33rd Floor, New York, NY 10019 | 2015 | \$ 6,749,136 | \$ 4,295,669 | \$ 1,291,575 | \$ 5,927,375 | 15.45% | 1.38x | \$ 183,971 | N/A |
| Private Equity | KarpReilly Capital Partners II, L.P. | 102 Greenwich Avenue, 2nd Floor, Greenwich, CT 06830 | 2012 | \$ 10,000,000 | \$ 9,673,832 | \$ 2,962,934 | \$ 11,626,001 | 4.35% | 1.20x | \$ 87,912 | N/A |
| Private Equity | Kelso Investment Associates VII, L.P. | 320 Park Ave, 24th Floor, New York, NY 10022 | 2004 | \$ 46,000,000 | \$ 49,479,790 | \$ 78,216,333 | \$ 78,216,333 | 11.35% | 1.58x | \$ - | \$ 28,736,543 |
| Private Equity | Kelso Investment Associates VIII, L.P. | 320 Park Ave, 24th Floor, New York, NY 10022 | 2007 | \$ 75,000,000 | \$ 74,241,945 | \$ 87,934,233 | \$ 87,934,233 | 3.99% | 1.18x | \$ 38,853 | \$ 13,692,278 |
| Private Equity | Kerogen Expansion Fund, L.P. | 190 Elgin Avenue, George Town, Grand Cayman KY1-9001, Cayman Islands | 2018 | \$ 6,666,667 | \$ 3,439,198 | \$ - | \$ 4,578,989 | 26.54% | 1.33x | \$ 198,807 | N/A |
| Private Equity | Kidd Kamm Equity Partners, L.P. | N/A | 1992 | \$ 15,000,000 | \$ 14,874,159 | \$ 587,583 | \$ 587,583 | -49.85% | 0.04x | \$ - | \$ (14,286,575) |
| Private Equity | Kinderhook Capital III, L.P. | 505 Fifth Avenue, 25th Floor, New York, NY 10017 | 2010 | \$ 7,000,000 | \$ 8,323,921 | \$ 6,762,716 | \$ 15,035,938 | 15.60% | 1.81x | \$ - | N/A |
| Private Equity | KKR 1996 Fund, L.P. | 9 West 57th Street, Suite 4200, New York, NY 10019 | 1997 | \$ 125,000,000 | \$ 131,822,098 | \$ 235,069,550 | \$ 235,069,550 | 13.18% | 1.78x | \$ - | \$ 103,247,452 |
| Private Equity | KKR 2006 Fund, L.P. | 9 West 57th Street, Suite 4200, New York, NY 10019 | 2006 | \$ 60,000,000 | \$ 64,488,155 | \$ 100,624,957 | \$ 100,624,957 | 7.71% | 1.56x | \$ 112 | \$ 36,136,802 |
| Private Equity | KKR Millennium Fund, L.P. | 9 West 57th Street, Suite 4200, New York, NY 10019 | 2002 | \$ 50,000,000 | \$ 67,839,702 | \$ 122,794,809 | \$ 122,794,809 | 16.36% | 1.81x | \$ - | \$ 54,955,107 |
| Private Equity | Kleiner Perkins Caufield & Byers VI, L.P. | 2750 Sand Hill Road, Menlo Park, CA 94025 | 1992 | \$ 5,000,000 | \$ 5,000,000 | \$ 16,562,188 | \$ 16,562,188 | 39.44% | 3.31x | \$ - | \$ 11,562,188 |
| Private Equity | Kleiner Perkins Caufield & Byers VII, L.P. | 2750 Sand Hill Road, Menlo Park, CA 94025 | 1994 | \$ 3,750,000 | \$ 3,750,000 | \$ 121,557,017 | \$ 121,557,017 | 124.57% | 32.42x | \$ - | \$ 117,807,017 |
| Private Equity | Kline Hawkes Pacific, L.P. | 11726 San Vicente Boulevard, Suite 300, Los Angeles, CA 90049 | 2000 | \$ 5,000,000 | \$ 5,000,000 | \$ 3,372,135 | \$ 3,372,135 | -4.81% | 0.67x | \$ 3,572 | \$ (1,627,865) |
| Private Equity | Knightsbridge Integrated Holdings IV, L.P. | 122 S.W. Frank Phillips Boulevard, Bartlesville, OK 74003 | 1999 | \$ 12,000,000 | \$ 11,817,257 | \$ 11,834,267 | \$ 11,834,267 | 0.02% | 1.00x | \$ - | \$ 17,010 |
| Private Equity | Knightsbridge Integrated Holdings V, L.P. | 122 S.W. Frank Phillips Boulevard, Bartlesville, OK 74003 | 2000 | \$ 20,000,000 | \$ 19,743,132 | \$ 21,401,367 | \$ 21,401,367 | 1.07% | 1.08x | \$ 2,629 | \$ 1,658,235 |
| Private Equity | Kohlberg Investors IV, L.P. | 111 Radio Circle, Mount Kisco, NY 10549 | 2001 | \$ 25,000,000 | \$ 21,656,624 | \$ 29,236,119 | \$ 29,236,119 | 9.42% | 1.35x | \$ 9,474 | \$ 7,579,491 |
| Private Equity | Landmark Equity Partners III, L.P. | 681 Fifth Avenue, 14th Floor, New York, NY 10022 | 1993 | \$ 10,000,000 | \$ 10,286,670 | \$ 26,789,111 | \$ 26,789,111 | 35.08% | 2.60x | \$ - | \$ 16,502,441 |
| Private Equity | Landmark Equity Partners IV, L.P. | 681 Fifth Avenue, 14th Floor, New York, NY 10022 | 1994 | \$ 10,533,677 | \$ 11,011,182 | \$ 16,218,022 | \$ 16,218,022 | 15.81% | 1.47x | \$ - | \$ 5,206,840 |
| Private Equity | LAV Biosciences Fund IV, L.P. | Room 2909-14, 168 Hubin Road, Huangpu District, Shanghai, China | 2017 | \$ 40,000,000 | \$ 32,360,417 | \$ 2,756,892 | \$ 45,315,764 | 31.73% | 1.40x | \$ 835,167 | N/A |
| Private Equity | LAV Biosciences Fund V, L.P. | Room 2909-14, 168 Hubin Road, Huangpu District, Shanghai, China | 2019 | \$ 48,000,000 | \$ 5,943,534 | \$ - | \$ 5,496,100 | -9.34% | 0.92x | \$ 568,161 | N/A |
| Private Equity | Levine Leichtman Capital Partners II, L.P. | 335 North Maple Drive, Suite 130, Beverly Hills, CA 90210 | 1998 | \$ 30,000,000 | \$ 50,043,193 | \$ 57,458,553 | \$ 57,604,155 | 4.91% | 1.15x | \$ 5,012 | N/A |
| Private Equity | Lexington Capital Partners II, L.P. | 660 Madison Avenue, 23rd Floor, New York, NY 10065 | 1998 | \$ 50,000,000 | \$ 49,422,500 | \$ 65,710,274 | \$ 65,710,274 | 8.17% | 1.33x | \$ - | \$ 16,287,774 |
| Private Equity | Lexington Capital Partners III, L.P. | 660 Madison Avenue, 23rd Floor, New York, NY 10065 | 1999 | \$ 25,000,000 | \$ 24,654,618 | \$ 30,973,827 | \$ 31,158,399 | 8.64% | 1.26x | \$ 3,126 | N/A |
| Private Equity | Lexington Capital Partners V, L.P. | 660 Madison Avenue, 23rd Floor, New York, NY 10065 | 2001 | \$ 50,000,000 | \$ 49,756,618 | \$ 83,315,442 | \$ 83,611,291 | 18.21% | 1.68x | \$ 27,023 | N/A |
| Private Equity | Liberty Co-Investors, L.P. | 525 South Flagler Drive, Suite 201, West Palm Beach, FL 33401 | 2014 | \$ 2,000,000 | \$ 2,000,000 | \$ 4,448,746 | \$ 4,975,761 | 45.29% | 2.49x | \$ - | N/A |
| Private Equity | Lightspeed Venture Partners VI, L.P. | 2200 Sand Hill Road, Menlo Park, CA 94025 | 2000 | \$ 8,000,000 | \$ 7,340,182 | \$ 7,727,896 | \$ 7,792,762 | 1.15% | 1.06x | \$ 1,027 | N/A |
| Private Equity | Lightyear Fund III, L.P. | 9 West 57th Street, 31st Floor, New York, NY 10019 | 2011 | \$ 105,000,000 | \$ 107,464,371 | \$ 151,714,378 | \$ 240,980,268 | 25.37% | 2.24x | \$ 390,680 | N/A |
| Private Equity | Lightyear Fund IV, L.P. | 9 West 57th Street, 31st Floor, New York, NY 10019 | 2016 | \$ 150,000,000 | \$ 117,185,123 | \$ 3,326,753 | \$ 126,772,689 | 6.99% | 1.08x | \$ 3,024,028 | N/A |
| Private Equity | Lindsay Goldberg & Bessemer, L.P. | 630 Fifth Avenue, 30th Floor, New York, NY 10111 | 2002 | \$ 30,000,000 | \$ 29,160,283 | \$ 70,239,033 | \$ 70,239,033 | 33.25% | 2.41x | \$ 20,221 | \$ 41,078,750 |
| Private Equity | Livingbridge G, L.P. | 100 Wood Street, London, EC2V 7AN United Kingdom | 2016 | \$ 51,891,372 | \$ 31,624,175 | \$ - | \$ 31,153,445 | -1.32% | 0.99x | \$ 1,142,145 | N/A |
| Private Equity | M/C Venture Partners VI, L.P. | 75 State Street, Suite 2500, Boston, MA 02109 | 2006 | \$ 19,000,000 | \$ 18,813,924 | \$ 39,761,999 | \$ 39,761,999 | 13.31% | 2.11x | \$ 4,050 | \$ 20,948,075 |
| Private Equity | Madison Dearborn Capital Partners III, L.P. | Three First National Plaza, Suite 4600, Chicago, IL 60602 | 1999 | \$ 30,000,000 | \$ 30,021,318 | \$ 45,791,560 | \$ 45,791,560 | 8.59% | 1.53x | \$ - | \$ 15,770,243 |
| Private Equity | Madison Dearborn Capital Partners IV, L.P. | Three First National Plaza, Suite 4600, Chicago, IL 60602 | 2000 | \$ 25,000,000 | \$ 24,258,894 | \$ 46,119,536 | \$ 47,039,132 | 13.93% | 1.94x | \$ 24,809 | N/A |
| Private Equity | Madison Dearborn Capital Partners V-A, L.P. | Three First National Plaza, Suite 4600, Chicago, IL 60602 | 2006 | \$ 75,000,000 | \$ 72,529,852 | \$ 114,599,502 | \$ 116,175,624 | 7.17% | 1.60x | \$ 159,993 | N/A |
| Private Equity | Madison Dearborn Capital Partners VI, L.P. | Three First National Plaza, Suite 4600, Chicago, IL 60602 | 2008 | \$ 75,000,000 | \$ 68,228,887 | \$ 149,537,439 | \$ 149,537,439 | 24.29% | 2.19x | \$ 117,496 | \$ 81,308,552 |
| Private Equity | Marlin Equity IV, L.P. | 338 Pier Avenue, Hermosa Beach, CA 90254 | 2013 | \$ 50,000,000 | \$ 49,653,620 | \$ 24,695,330 | \$ 60,563,560 | 7.47% | 1.22x | \$ 754,032 | N/A |
| Private Equity | MBK Partners Fund III, L.P. | 22nd Floor, D Tower D1, 17 Jongno 3-gil, Jongno-gu, Seoul Korea | 2013 | \$ 100,000,000 | \$ 108,322,706 | \$ 50,897,547 | \$ 175,736,974 | 16.41% | 1.62x | \$ 1,121,528 | N/A |
| Private Equity | MBK Partners Fund IV, L.P. | 22nd Floor, D Tower D1, 17 Jongno 3-gil, Jongno-gu, Seoul Korea | 2017 | \$ 120,000,000 | \$ 72,547,952 | \$ 6,491,537 | \$ 86,641,783 | 17.34% | 1.19x | \$ 2,342,962 | N/A |
| Private Equity | McCown DeLeuw & Co. Fund IV, L.P. | 950 Tower Lane, Suite 800, Foster City, CA 94404 | 1998 | \$ 25,000,000 | \$ 21,327,148 | \$ 15,493,357 | \$ 15,493,357 | -4.50% | 0.73x | \$ - | \$ (5,833,791) |
| Private Equity | Media Communications Partners, L.P. | 75 State Street, Suite 2500, Boston, MA 02109 | 1986 | \$ 25,000,000 | \$ 25,000,000 | \$ 40,272,681 | \$ 40,272,681 | 7.25% | 1.61x | \$ - | \$ 15,272,681 |
| Private Equity | Mediphase Venture Partners II, L.P. | One Gateway Center, Suite 407, Newton, MA 02458 | 2002 | \$ 10,000,000 | \$ 9,703,163 | \$ 17,662,114 | \$ 17,662,114 | 7.56% | 1.82x | \$ - | \$ 7,958,951 |
| Private Equity | Menlo Ventures IX, L.P. | 3000 Sand Hill Road, Building 4, Suite 100, Menlo Park, CA 94025 | 2001 | \$ 10,000,000 | \$ 10,000,000 | \$ 9,812,008 | \$ 9,812,008 | -0.33% | 0.98x | \$ 734 | \$ (187,992) |
| Private Equity | Mercato Partners Growth II, L.P. | 2750 E. Cottonwood Pkwy, Suite 300, Cottonwood Heights, UT 84121 | 2011 | \$ 7,000,000 | \$ 7,000,000 | \$ 581,953 | \$ 7,523,053 | 1.55% | 1.07x | \$ 120,660 | N/A |
| Private Equity | MetroPCS | 2250 Lakeside Boulevard, Richardson, TX 75082 | 1995 | \$ 5,784,200 | \$ 5,920,141 | \$ 54,529,368 | \$ 54,529,368 | 26.34% | 9.21x | \$ - | \$ 48,609,227 |
| Private Equity | Moelis Capital Partners Opp. Fund I-B LP | 399 Park Avenue, 6th Floor, New York, NY 10022 | 2014 | \$ 10,000,000 | \$ 8,471,709 | \$ 4,886,639 | \$ 12,357,096 | 11.44% | 1.46x | \$ 36,765 | N/A |
| Private Equity | Montagu III, L.P. | 2 More London Riverside, London, SE1 2AP, United Kingdom | 2005 | \$ 76,404,757 | \$ 74,273,362 | \$ 97,904,791 | \$ 97,904,791 | 7.34% | 1.32x | \$ - | \$ 23,631,429 |
| Private Equity | Morgan Stanley Dean Witter Venture Partners IV, L.P. | 1585 Broadway, New York, NY 10036 | 1999 | \$ 5,000,000 | \$ 5,126,102 | \$ 4,098,815 | \$ 4,218,316 | -2.52% | 0.82x | \$ - | N/A |

Section 6254.26 (b)

Fiscal Year-Ended June 30, 2019

| Functional Category | Name ¹ | Address ¹ | Vintage Year ¹ | Commitment ² | Contribution ³ | Distributions ⁴ | Distribution Plus Market Value ⁵ | Since Inception Net Return ⁶ | Investment Multiple ⁷ | Dollar amount of the total fees paid on a fiscal year-end basis ⁸ | Dollar amount of cash profit received on a fiscal year-end basis ⁹ |
|---------------------|---|---|---------------------------|-------------------------|---------------------------|----------------------------|---|---|----------------------------------|--|---|
| Private Equity | NeoTribe Ventures I, L.P. | 3340 Hillview Avenue, Palo Alto, CA 94304 | 2017 | \$ 5,000,000 | \$ 2,700,000 | \$ 26,072 | \$ 2,972,236 | 10.44% | 1.10x | \$ 133,484 | N/A |
| Private Equity | New Mainstream Capital II, L.P. | 5949 Sherry Lane, Suite 180, Dallas, TX 75225 | 2014 | \$ 10,000,000 | \$ 10,863,843 | \$ 5,025,726 | \$ 15,249,655 | 14.84% | 1.40x | \$ 165,331 | N/A |
| Private Equity | Next Coast Ventures I, L.P. | 1204 Nueces Street, Austin, TX 78701 | 2016 | \$ 5,000,000 | \$ 4,125,000 | \$ - | \$ 4,520,780 | 8.92% | 1.10x | \$ 132,168 | N/A |
| Private Equity | Next Coast Ventures II, L.P. | 3600 North Capital of Texas Highway, Building B Suite 250, Austin, TX 78746 | 2019 | \$ 15,000,000 | \$ - | \$ - | \$ - | 0.00% | 0.00x | \$ - | N/A |
| Private Equity | Nordic Capital Fund VI, L.P. | 26 Esplanade, St. Helier, Jersey, JE4 8PX Channel Islands | 2006 | \$ 59,027,621 | \$ 62,740,012 | \$ 96,405,223 | \$ 96,405,223 | 6.86% | 1.54x | \$ - | \$ 33,665,211 |
| Private Equity | Nordic Capital V, L.P. | 26 Esplanade, St. Helier, Jersey, JE4 8PX Channel Islands | 2003 | \$ 46,013,772 | \$ 51,554,630 | \$ 144,089,091 | \$ 144,089,091 | 20.62% | 2.79x | \$ - | \$ 92,534,461 |
| Private Equity | Nordic Capital VII Beta, L.P. | 26 Esplanade, St. Helier, Jersey, JE4 8PX Channel Islands | 2007 | \$ 67,574,115 | \$ 66,746,079 | \$ 89,419,798 | \$ 89,419,798 | 4.81% | 1.34x | \$ 27,069 | \$ 22,673,719 |
| Private Equity | Nordic Capital VIII Beta, L.P. | 26 Esplanade, St. Helier, Jersey, JE4 8PX Channel Islands | 2012 | \$ 92,027,352 | \$ 94,897,893 | \$ 141,743,554 | \$ 141,743,554 | 16.69% | 1.49x | \$ 560,525 | \$ 46,845,661 |
| Private Equity | Northgate Venture Partners VI, L.P. | 649 San Ramon Valley Boulevard, Danville, CA 94526 | 2012 | \$ 50,000,000 | \$ 45,500,000 | \$ 62,179,857 | \$ 62,179,857 | 9.25% | 1.37x | \$ 216,385 | \$ 16,679,857 |
| Private Equity | Oak Investment Partners IX, L.P. | 901 Main Avenue, Suite 600, Norwalk, CT 06851 | 1999 | \$ 10,000,000 | \$ 9,999,798 | \$ 6,457,952 | \$ 6,590,894 | -6.32% | 0.66x | \$ 1,242 | N/A |
| Private Equity | Oak Investment Partners V, L.P. | 901 Main Avenue, Suite 600, Norwalk, CT 06851 | 1992 | \$ 11,250,000 | \$ 11,250,000 | \$ 17,094,361 | \$ 17,094,361 | 10.55% | 1.52x | \$ - | \$ 5,844,361 |
| Private Equity | Oak Investment Partners VI, L.P. | 901 Main Avenue, Suite 600, Norwalk, CT 06851 | 1994 | \$ 14,000,000 | \$ 14,000,000 | \$ 40,701,314 | \$ 40,701,314 | 34.57% | 2.91x | \$ - | \$ 26,701,314 |
| Private Equity | Oak Investment Partners VII, L.P. | 901 Main Avenue, Suite 600, Norwalk, CT 06851 | 1998 | \$ 10,000,000 | \$ 10,000,000 | \$ 18,005,960 | \$ 18,005,960 | 54.28% | 1.80x | \$ - | \$ 8,005,960 |
| Private Equity | Oak Investment Partners VIII, L.P. | 901 Main Avenue, Suite 600, Norwalk, CT 06851 | 2001 | \$ 20,000,000 | \$ 20,000,000 | \$ 22,717,957 | \$ 25,491,486 | 3.61% | 1.27x | \$ 3,634 | N/A |
| Private Equity | Oak Investment Partners X, L.P. | 901 Main Avenue, Suite 600, Norwalk, CT 06851 | 2004 | \$ 32,050,000 | \$ 32,040,260 | \$ 24,215,226 | \$ 31,957,397 | -0.03% | 1.00x | \$ 10,045 | N/A |
| Private Equity | Oak Investment Partners XI, L.P. | 901 Main Avenue, Suite 600, Norwalk, CT 06851 | 2006 | \$ 40,000,000 | \$ 39,933,414 | \$ 30,398,594 | \$ 38,355,316 | -0.65% | 0.96x | \$ 27,553 | N/A |
| Private Equity | Oak Investment Partners XII, L.P. | 901 Main Avenue, Suite 600, Norwalk, CT 06851 | 2010 | \$ 37,500,000 | \$ 37,832,825 | \$ 36,369,931 | \$ 50,543,327 | 5.98% | 1.34x | \$ 341,312 | N/A |
| Illiquid Credit | Oaktree Opportunities Fund VIII b, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 2010 | \$ 37,500,000 | \$ 38,535,991 | \$ 52,292,335 | \$ 54,280,173 | 8.61% | 1.41x | \$ 88,850 | N/A |
| Illiquid Credit | Oaktree Opportunities Fund VIII, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 2010 | \$ 37,500,000 | \$ 38,535,991 | \$ 52,292,335 | \$ 54,280,173 | 8.61% | 1.41x | \$ 88,850 | N/A |
| Illiquid Credit | Oaktree Opportunities Fund IX, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 2012 | \$ 100,000,000 | \$ 100,000,004 | \$ 42,895,430 | \$ 119,645,190 | 4.00% | 1.20x | \$ 1,391,705 | N/A |
| Private Equity | Oaktree Opportunities Fund II, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 1997 | \$ 25,000,000 | \$ 25,000,000 | \$ 37,729,349 | \$ 37,729,349 | 8.45% | 1.51x | \$ - | \$ 12,729,349 |
| Private Equity | OCM Opportunities Fund III, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 1999 | \$ 25,000,000 | \$ 26,250,000 | \$ 38,928,680 | \$ 38,928,680 | 11.93% | 1.48x | \$ - | \$ 12,678,680 |
| Private Equity | OCM Opportunities Fund IV, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 2001 | \$ 35,000,000 | \$ 35,000,000 | \$ 57,817,459 | \$ 57,817,459 | 28.03% | 1.65x | \$ - | \$ 22,817,459 |
| Private Equity | OCM Opportunities Fund V, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 2004 | \$ 32,400,000 | \$ 32,400,000 | \$ 53,454,578 | \$ 53,467,239 | 14.18% | 1.65x | \$ 5,120 | N/A |
| Private Equity | OCM Opportunities Fund VI, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 2005 | \$ 32,400,000 | \$ 32,400,000 | \$ 51,168,515 | \$ 51,168,515 | 8.75% | 1.58x | \$ 4,981 | \$ 18,768,515 |
| Private Equity | OCM Opportunities Fund VII b, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 2007 | \$ 45,000,000 | \$ 40,500,000 | \$ 69,174,039 | \$ 70,151,092 | 16.55% | 1.73x | \$ 38,032 | N/A |
| Private Equity | OCM Opportunities Fund VII, L.P. | 333 South Grand Avenue, 28th Floor, Los Angeles, CA 90071 | 2007 | \$ 30,000,000 | \$ 30,011,836 | \$ 40,180,990 | \$ 41,649,831 | 7.43% | 1.39x | \$ 10,600 | N/A |
| Private Equity | Olympus Growth Fund IV, L.P. | Metro Center, One Station Place, 4th Floor, Stamford, CT 06902 | 2003 | \$ 18,000,000 | \$ 16,361,176 | \$ 26,995,690 | \$ 26,995,690 | 8.43% | 1.65x | \$ - | \$ 10,634,514 |
| Private Equity | One Rock Capital Partners II, L.P. | 30 Rockefeller Plaza, 54th Floor, New York, NY 10112 | 2017 | \$ 72,500,000 | \$ 44,236,153 | \$ - | \$ 42,228,764 | -5.89% | 0.95x | \$ 1,488,068 | N/A |
| Private Equity | Onex Partners II, L.P. | 161 Bay Street, P.O. Box 700, Toronto, ON M5J 2S1 Canada | 2006 | \$ 60,000,000 | \$ 53,620,551 | \$ 96,860,529 | \$ 101,348,143 | 13.17% | 1.89x | \$ 6,459 | N/A |
| Private Equity | Onex Partners III, L.P. | 161 Bay Street, P.O. Box 700, Toronto, ON M5J 2S1 Canada | 2008 | \$ 75,000,000 | \$ 82,993,803 | \$ 108,990,570 | \$ 137,740,323 | 12.47% | 1.66x | \$ 283,835 | N/A |
| Private Equity | Onex Partners IV, L.P. | 161 Bay Street, P.O. Box 700, Toronto, ON M5J 2S1 Canada | 2014 | \$ 150,000,000 | \$ 143,534,268 | \$ 14,808,246 | \$ 153,625,355 | 2.63% | 1.07x | \$ 2,051,232 | N/A |
| Private Equity | Onex Partners V, L.P. | 161 Bay Street, P.O. Box 700, Toronto, ON M5J 2S1 Canada | 2018 | \$ 200,000,000 | \$ 17,481,514 | \$ - | \$ 14,837,541 | -35.18% | 0.85x | \$ 2,507,585 | N/A |
| Private Equity | Onex Partners, L.P. | 161 Bay Street, P.O. Box 700, Toronto, ON M5J 2S1 Canada | 2003 | \$ 75,000,000 | \$ 73,888,766 | \$ 221,118,181 | \$ 221,678,152 | 38.28% | 3.00x | \$ 275,035 | N/A |
| Private Equity | Oxford Bioscience Partners IV, L.P. | P.O. Box 2017, 12 Giles Place, Mansfield, MA 02048 | 2001 | \$ 20,000,000 | \$ 20,000,000 | \$ 12,341,882 | \$ 12,341,882 | -9.74% | 0.62x | \$ - | \$ (7,658,118) |
| Private Equity | PAI Europe VII, L.P. | 232, rue de Rivoli, 75054 Paris CEDEX 01, France | 2018 | \$ 170,820,057 | \$ - | \$ - | \$ (3,453,109) | 0.00% | 0.00x | \$ 3,458,895 | N/A |
| Private Equity | Palladium Equity Partners IV, L.P. | 1270 Avenue of the Americas, 31st Floor, New York, NY 10020 | 2014 | \$ 100,000,000 | \$ 94,768,103 | \$ 54,806,352 | \$ 133,729,448 | 13.81% | 1.41x | \$ 1,019,690 | N/A |
| Private Equity | Palm Beach Capital Fund III, L.P. | 525 South Flagler Drive, Suite 201, West Palm Beach, FL 33401 | 2011 | \$ 7,000,000 | \$ 6,846,163 | \$ 8,175,340 | \$ 11,699,763 | 19.24% | 1.71x | \$ 137,830 | N/A |
| Private Equity | Palm Beach Capital Fund IV, L.P. | 525 South Flagler Drive, Suite 201, West Palm Beach, FL 33401 | 2018 | \$ 10,000,000 | \$ 8,489,855 | \$ 1,371,052 | \$ 12,515,321 | 40.22% | 1.47x | \$ 532,548 | N/A |
| Private Equity | Palm Beach Capital III, L.P.-Secondary | 525 South Flagler Drive, Suite 201, West Palm Beach, FL 33401 | 2015 | \$ 1,053,866 | \$ 949,156 | \$ 794,446 | \$ 1,555,129 | 21.94% | 1.64x | \$ - | N/A |
| Private Equity | Kerogen Pandion Energy AS | 190 Elgin Avenue, George Town, Grand Cayman KY1-9001, Cayman Islands | 2018 | \$ 3,333,333 | \$ 1,994,880 | \$ - | \$ 2,516,812 | 13.13% | 1.26x | \$ 7,537 | N/A |
| Private Equity | Peak Rock Capital Fund, L.P. | 13413 Galleria Circle, Suite Q-300, Austin, TX 78738 | 2013 | \$ 11,000,000 | \$ 9,553,568 | \$ 8,223,849 | \$ 16,876,870 | 30.31% | 1.77x | \$ 131,520 | N/A |
| Private Equity | Pemira Europe III, L.P. | 80 Pall Mall, London, SW1Y 5ES United Kingdom | 2003 | \$ 95,225,609 | \$ 106,826,510 | \$ 174,297,908 | \$ 174,678,489 | 25.84% | 1.64x | \$ 10,129 | N/A |
| Private Equity | Pemira Europe IV, L.P. | 80 Pall Mall, London, SW1Y 5ES United Kingdom | 2006 | \$ 66,709,332 | \$ 75,442,718 | \$ 114,482,443 | \$ 114,482,443 | 8.42% | 1.52x | \$ - | \$ 39,039,724 |
| Private Equity | Phillips-Smith Specialty Retail Group III, L.P. | 5080 Spectrum Drive, Suite 805, West Addison, TX 75001 | 1993 | \$ 5,000,000 | \$ 5,000,000 | \$ 10,942,836 | \$ 10,942,836 | 23.26% | 2.19x | \$ - | \$ 5,942,836 |
| Private Equity | Phoenix Equity Partners III, L.P. | 123 Victoria Street, London, Sw1E 6DE United Kingdom | 2000 | \$ 5,195,919 | \$ 4,017,519 | \$ 5,407,526 | \$ 5,407,526 | 5.99% | 1.35x | \$ - | \$ 1,390,007 |
| Private Equity | Phoenix Equity Partners IV, L.P. | 123 Victoria Street, London, Sw1E 6DE United Kingdom | 2001 | \$ 17,494,723 | \$ 23,037,525 | \$ 49,761,888 | \$ 49,761,888 | 31.41% | 2.16x | \$ - | \$ 26,724,363 |
| Private Equity | Prospect Venture Partners I, L.P. | 435 Tasso Street, Suite 200, Palo Alto, CA 94301 | 1997 | \$ 10,000,000 | \$ 10,000,000 | \$ 7,477,919 | \$ 7,477,919 | -3.78% | 0.75x | \$ - | \$ (2,522,081) |
| Private Equity | Prospect Venture Partners II, L.P. | 435 Tasso Street, Suite 200, Palo Alto, CA 94301 | 2001 | \$ 20,000,000 | \$ 18,500,000 | \$ 23,938,622 | \$ 23,938,622 | 5.22% | 1.29x | \$ 1,290 | \$ 5,438,622 |
| Private Equity | Providence Equity Partners III, L.P. | 50 Kennedy Plaza, 18th Floor, Providence, RI 02903 | 1999 | \$ 21,765,349 | \$ 25,250,994 | \$ 38,719,924 | \$ 38,719,924 | 14.47% | 1.53x | \$ - | \$ 13,468,930 |
| Private Equity | Providence Equity Partners IV - Secondary | 50 Kennedy Plaza, 18th Floor, Providence, RI 02903 | 2005 | \$ 1,330,097 | \$ 1,251,039 | \$ 2,233,649 | \$ 2,233,649 | 19.47% | 1.79x | \$ - | \$ 982,609 |
| Private Equity | Providence Equity Partners IV, L.P. | 50 Kennedy Plaza, 18th Floor, Providence, RI 02903 | 2000 | \$ 35,000,000 | \$ 43,939,032 | \$ 89,498,730 | \$ 89,498,730 | 23.83% | 2.04x | \$ 1,978 | \$ 45,559,699 |
| Private Equity | Providence Equity Partners V, L.P. | 50 Kennedy Plaza, 18th Floor, Providence, RI 02903 | 2005 | \$ 73,000,000 | \$ 69,499,729 | \$ 85,416,140 | \$ 85,416,140 | 3.08% | 1.23x | \$ 11,170 | \$ 15,916,411 |
| Private Equity | Providence Equity Partners VI, L.P. | 50 Kennedy Plaza, 18th Floor, Providence, RI 02903 | 2007 | \$ 80,000,000 | \$ 77,988,274 | \$ 107,823,757 | \$ 107,823,757 | 5.44% | 1.38x | \$ 25,487 | \$ 29,835,483 |
| Private Equity | Providence Growth Investors, L.P. | 50 Kennedy Plaza, 18th Floor, Providence, RI 02903 | 2000 | \$ 10,000,000 | \$ 10,245,962 | \$ 12,397,723 | \$ 12,397,723 | 4.85% | 1.21x | \$ - | \$ 2,151,761 |
| Private Equity | Prudential Venture Partners II | 355 Lexington Avenue, Suite 1400, New York, NY 10017 | 1987 | \$ 50,000,000 | \$ 50,000,000 | \$ 116,405,441 | \$ 116,405,441 | 23.45% | 2.33x | \$ - | \$ 66,405,441 |
| Private Equity | Q4 Holdings LLC | 280 Park Avenue, 3rd Floor, New York, NY 10017 | 2019 | \$ 3,000,000 | \$ 2,307,062 | \$ - | \$ 2,254,395 | -2.29% | 0.98x | \$ - | \$ N/A |
| Private Equity | Quad C Partners V, L.P. | 200 Garrett Street, Suite M, Charlottesville, VA 22902 | 1998 | \$ 25,000,000 | \$ 24,966,260 | \$ 36,516,994 | \$ 36,516,994 | 9.11% | 1.46x | \$ - | \$ 11,550,734 |
| Private Equity | Quad-C Partners VII Co-Investment Fund, L.P. | 200 Garrett Street, Suite M, Charlottesville, VA 22902 | 2007 | \$ 13,639,253 | \$ 13,561,143 | \$ 19,291,212 | \$ 19,291,212 | 8.18% | 1.42x | \$ 61,030 | \$ 5,730,069 |
| Private Equity | Quad-C Partners VII, L.P. | 200 Garrett Street, Suite M, Charlottesville, VA 22902 | 2006 | \$ 43,723,396 | \$ 44,927,887 | \$ 73,036,197 | \$ 73,036,197 | 10.88% | 1.63x | \$ 141 | \$ 28,108,310 |
| Private Equity | Questor Partners Fund II, L.P. | 101 Southfield Road, 2nd Floor, Birmingham, MI 48009 | 1999 | \$ 30,000,000 | \$ 32,873,554 | \$ 39,052,065 | \$ 39,052,065 | 3.89% | 1.19x | \$ - | \$ 6,178,511 |
| Private Equity | Questor Partners Fund, L.P. | 101 Southfield Road, 2nd Floor, Birmingham, MI 48009 | 1996 | \$ 30,000,000 | \$ 30,335,510 | \$ 42,894,358 | \$ 42,894,358 | 15.70% | 1.41x | \$ - | \$ 12,558,848 |
| Private Equity | Redpoint Ventures II, L.P. | 3000 Sand Hill Road, Building 2, Suite 290, Menlo Park, CA 94025 | 2000 | \$ 4,800,000 | \$ 4,656,000 | \$ 6,546,873 | \$ 6,546,873 | 5.09% | 1.41x | \$ 1,302 | \$ 1,890,873 |
| Private Equity | Reliant Equity Partners, L.P. | 401 North Michigan Avenue, Suite 550, Chicago, IL 60611 | 2003 | \$ 10,000,000 | \$ 9,058,279 | \$ 126,988 | \$ 126,988 | -48.09% | 0.01x | \$ - | \$ (8,931,291) |
| Private Equity | Ripplewood Partners, L.P. | 1 Rockefeller Plaza, 32nd Floor, New York, NY 10020 | 1996 | \$ 20,000,000 | \$ 19,604,622 | \$ 36,396,534 | \$ 36,396,534 | 13.62% | 1.86x | \$ - | \$ 16,791,912 |
| Private Equity | Riverside Capital Appreciation Fund VI, L.P. | 45 Rockefeller Center, New York, NY 10111 | 2013 | \$ 100,000,000 | \$ 77,012,063 | \$ 29,315,568 | \$ 118,695,848 | 13.21% | 1.54x | \$ 1,302,320 | N/A |
| Private Equity | Riverside Micro-Cap Fund V, L.P. | 45 Rockefeller Center, New York, NY 10111 | 2019 | \$ 65,000,000 | \$ 5,649,195 | \$ - | \$ 4,354,371 | -22.92% | 0.77x | \$ 1,399,672 | N/A |
| Private Equity | Rizvi Opportunistic Equity Fund II | 260 East Brown Street, Suite 380, Birmingham, MI 48009 | 2010 | \$ 4,293,000 | \$ 4,891,681 | \$ 4,753,927 | \$ 7,427,681 | 7.89% | 1.52x | \$ 41,882 | N/A |
| Private Equity | RLH Investors II, L.P. | 10900 Wilshire Boulevard, Suite 85 | | | | | | | | | |

Section 6254.26 (b)

Fiscal Year-Ended June 30, 2019

| Functional Category | Name ¹ | Address ¹ | Vintage Year ¹ | Commitment ² | Contribution ³ | Distributions ⁴ | Distribution Plus Market Value ⁵ | Since Inception Net Return ⁶ | Investment Multiple ⁷ | Dollar amount of the total fees paid on a fiscal year-end basis ⁸ | Dollar amount of cash profit received on a fiscal year-end basis ⁹ |
|---------------------------------|---|--|---------------------------|-------------------------|---------------------------|----------------------------|---|---|----------------------------------|--|---|
| Private Equity | RSTW Partners III, L.P. | 5847 San Felipe, Suite 2929, Houston, TX 77057 | 1997 | \$ 25,000,000 | \$ 23,010,874 | \$ 21,623,881 | \$ 21,623,881 | -1.19% | 0.94x | \$ - | \$ (1,386,993) |
| Private Equity | Sevin Rosen Fund IV, L.P. | P.O Box 192128, Dallas, TX 75219 | 1992 | \$ 5,000,000 | \$ 5,032,048 | \$ 5,124,930 | \$ 5,124,930 | 87.17% | 10.18x | \$ - | \$ 46,217,322 |
| Private Equity | Sevin Rosen Fund V, L.P. | P.O Box 192128, Dallas, TX 75219 | 1996 | \$ 10,000,000 | \$ 10,029,497 | \$ 11,068,441 | \$ 11,068,441 | 9.29% | 1.10x | \$ - | \$ 1,038,945 |
| Private Equity | Sevin Rosen Fund VII, L.P. | P.O Box 192128, Dallas, TX 75219 | 1999 | \$ 10,000,000 | \$ 9,875,000 | \$ 2,054,166 | \$ 2,054,166 | -10.26% | 0.21x | \$ 774 | \$ (7,820,834) |
| Private Equity | Sevin Rosen Fund VIII, L.P. | P.O Box 192128, Dallas, TX 75219 | 2000 | \$ 13,720,000 | \$ 13,514,200 | \$ 15,553,187 | \$ 15,617,380 | 1.61% | 1.16x | \$ 1,993 | \$ N/A |
| Private Equity | Sevin Rosen VI, L.P. | P.O Box 192128, Dallas, TX 75219 | 1998 | \$ 5,000,000 | \$ 5,000,000 | \$ 9,184,249 | \$ 9,184,249 | 53.46% | 1.84x | \$ - | \$ 4,184,249 |
| Private Equity | Sierra Ventures V, L.P. | 1400 Fashion Island Boulevard, Suite 1010, San Mateo, CA 94404 | 1995 | \$ 5,000,000 | \$ 5,000,000 | \$ 21,267,421 | \$ 21,267,421 | 80.00% | 4.25x | \$ - | \$ 16,267,421 |
| Private Equity | Sierra Ventures VIII-A, L.P. | 1400 Fashion Island Boulevard, Suite 1010, San Mateo, CA 94404 | 2000 | \$ 15,000,000 | \$ 15,000,000 | \$ 11,727,374 | \$ 11,727,374 | -3.87% | 0.78x | \$ 1,696 | \$ (3,272,626) |
| Private Equity | Silver Lake Partners III, L.P. | 2775 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2007 | \$ 60,000,000 | \$ 58,973,758 | \$ 99,041,741 | \$ 131,577,612 | 18.79% | 2.23x | \$ 97,276 | \$ N/A |
| Private Equity | Silver Lake Partners IV, L.P. | 2775 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2013 | \$ 105,000,000 | \$ 120,469,821 | \$ 69,684,717 | \$ 217,150,941 | 26.99% | 1.80x | \$ 884,852 | \$ N/A |
| Private Equity | Silver Lake Partners V, L.P. | 2775 Sand Hill Road, Suite 100, Menlo Park, CA 94025 | 2017 | \$ 180,000,000 | \$ 72,249,067 | \$ - | \$ 78,003,650 | 11.50% | 1.08x | \$ 3,786,692 | \$ N/A |
| Private Equity | Silver Oak Services Partners II, L.P. | 1560 Sherman Avenue, Suite 1200, Evanston, IL 60201 | 2012 | \$ 12,000,000 | \$ 11,031,387 | \$ 13,095,658 | \$ 24,288,217 | 25.48% | 2.20x | \$ - | \$ N/A |
| Private Equity | Silverhawk Capital Partners II, L.P. | 140 Greenwich Avenue, Suite 2, Greenwich, CT 06830 | 2010 | \$ 7,000,000 | \$ 7,856,465 | \$ 11,649,771 | \$ 14,582,571 | 21.84% | 1.86x | \$ (3,101) | \$ N/A |
| Private Equity | Sinovation Fund IV, L.P. | Dinghao Tower Block A, Haidian District, Beijing, China | 2010 | \$ 75,000,000 | \$ 18,750,000 | \$ - | \$ 18,314,516 | -2.36% | 0.98x | \$ 1,807,403 | \$ N/A |
| Private Equity | Siris Partners III, L.P. | 601 Lexington Avenue, 59th Floor, New York, NY 10022 | 2014 | \$ 60,000,000 | \$ 55,433,051 | \$ 29,667,058 | \$ 66,338,690 | 10.59% | 1.20x | \$ 993,753 | \$ N/A |
| Private Equity | Siris Partners IV, L.P. | 601 Lexington Avenue, 59th Floor, New York, NY 10022 | 2019 | \$ 100,000,000 | \$ 15,258,091 | \$ - | \$ 15,042,968 | -1.41% | 0.99x | \$ 1,932,369 | \$ N/A |
| Private Equity | Solera Partners, L.P. | 625 Madison Avenue, 3rd Floor, New York, NY 10022 | 2002 | \$ 10,000,000 | \$ 5,119,929 | \$ 14,890,218 | \$ 14,890,218 | 9.60% | 2.91x | \$ 19,388 | \$ 9,770,289 |
| Private Equity | Southwest Fund V, L.P. | 40 Burton Hills Boulevard, Suite 420, Nashville, TN 37215 | 2005 | \$ 8,811,316 | \$ 8,598,559 | \$ 17,893,177 | \$ 18,797,874 | 15.60% | 2.19x | \$ - | \$ N/A |
| Private Equity | SP FGT Investors, LLC | 300 South Tryon Street, Suite 1210, Charlotte, NC, 28202 | 2018 | \$ 2,090,000 | \$ 2,090,000 | \$ - | \$ 2,090,000 | 0.00% | 1.00x | \$ - | \$ N/A |
| Private Equity | Spectrum Equity Investors V, L.P. | 140 New Montgomery, San Francisco, CA 94105 | 2005 | \$ 3,000,000 | \$ 32,842,996 | \$ 76,646,031 | \$ 80,188,164 | 18.01% | 2.44x | \$ 31,946 | \$ N/A |
| Private Equity | Sprout VIII, L.P. | 1 Madison Avenue, Floor 7-T, New York, NY 10010 | 1998 | \$ 20,000,000 | \$ 20,000,000 | \$ 18,911,128 | \$ 18,911,128 | -0.89% | 0.95x | \$ - | \$ (1,088,872) |
| Private Equity | Sterling Investment Partners III, L.P. | 285 Riverside Avenue, Westport, CT 06880 | 2013 | \$ 100,000,000 | \$ 63,471,371 | \$ 55,890,025 | \$ 102,269,054 | 17.51% | 1.61x | \$ 2,388,057 | \$ N/A |
| Private Equity | Storm Ventures Fund V, L.P. | 3000 Sand Hill Road, Building 4-210, Menlo Park, CA 94025 | 2015 | \$ 50,000,000 | \$ 37,000,000 | \$ 1,750,000 | \$ 49,261,011 | 11.92% | 1.33x | \$ 1,015,900 | \$ N/A |
| Private Equity | Storm Ventures Fund VI, L.P. | 3000 Sand Hill Road, Building 4-210, Menlo Park, CA 94025 | 2019 | \$ 50,000,000 | \$ 2,500,000 | \$ - | \$ 2,254,669 | -9.81% | 0.90x | \$ 245,331 | \$ N/A |
| Private Equity | Summit Accelerator Fund, L.P. | 300 S. Tryon Street, Suite 1210, Charlotte, NC, 28202 | 1999 | \$ 5,600,000 | \$ 5,422,717 | \$ 9,408,201 | \$ 9,562,007 | 9.81% | 1.76x | \$ 28 | \$ N/A |
| Private Equity | Summit Park Control 3 Co-Invest | 300 S. Tryon Street, Suite 1210, Charlotte, NC, 28202 | 2015 | \$ 1,774,500 | \$ 1,774,486 | \$ 5,136,360 | \$ 5,136,360 | 62.38% | 2.89x | \$ - | \$ 3,361,874 |
| Private Equity | Summit Park II-A, L.P. | 300 S. Tryon Street, Suite 1210, Charlotte, NC, 28202 | 2012 | \$ 7,406,250 | \$ 7,616,140 | \$ 18,325,987 | \$ 24,300,987 | 28.43% | 3.19x | \$ 11,469 | \$ N/A |
| Private Equity | Summit Park II, L.P. | 300 S. Tryon Street, Suite 1210, Charlotte, NC, 28202 | 2014 | \$ 10,000,000 | \$ 10,049,928 | \$ 8,472,643 | \$ 15,009,652 | 21.72% | 1.49x | \$ 34,221 | \$ N/A |
| Private Equity | Summit Park III, L.P. | 300 S. Tryon Street, Suite 1210, Charlotte, NC, 28202 | 2018 | \$ 9,375,000 | \$ 1,617,140 | \$ - | \$ 1,530,019 | -7.70% | 0.95x | \$ 68,772 | \$ N/A |
| Private Equity | Summit Park TIE Co-Invest | 300 S. Tryon Street, Suite 1210, Charlotte, NC, 28202 | 2014 | \$ 2,970,545 | \$ 2,970,545 | \$ 97,855 | \$ 3,577,670 | 4.27% | 1.20x | \$ - | \$ N/A |
| Private Equity | Summit Partners Growth Equity Fund VIII-A, L.P. | 222 Berkeley Street, 18th Floor, Boston, MA 02116 | 2011 | \$ 75,000,000 | \$ 95,902,515 | \$ 128,013,310 | \$ 192,728,348 | 27.11% | 2.01x | \$ 821,341 | \$ N/A |
| Private Equity | Summit Partners Private Equity Fund VII-A, L.P. | 222 Berkeley Street, 18th Floor, Boston, MA 02116 | 2006 | \$ 69,900,000 | \$ 73,561,446 | \$ 117,556,324 | \$ 134,901,234 | 10.66% | 1.83x | \$ - | \$ N/A |
| Private Equity | Summit Partners Venture Capital Fund II-A, L.P. | 222 Berkeley Street, 18th Floor, Boston, MA 02116 | 2006 | \$ 8,400,000 | \$ 10,072,628 | \$ 19,713,447 | \$ 21,102,316 | 19.57% | 2.10x | \$ 4,040 | \$ N/A |
| Private Equity | Summit Ventures III, L.P. | 222 Berkeley Street, 18th Floor, Boston, MA 02116 | 1992 | \$ 25,000,000 | \$ 20,000,000 | \$ 78,763,052 | \$ 78,763,052 | 61.71% | 3.94x | \$ - | \$ 58,763,052 |
| Private Equity | Summit Ventures IV, L.P. | 222 Berkeley Street, 18th Floor, Boston, MA 02116 | 1995 | \$ 24,750,000 | \$ 24,007,500 | \$ 181,655,345 | \$ 181,655,345 | 103.98% | 7.57x | \$ - | \$ 157,647,845 |
| Private Equity | Summit Ventures V, L.P. | 222 Berkeley Street, 18th Floor, Boston, MA 02116 | 1998 | \$ 37,000,000 | \$ 35,705,000 | \$ 49,485,953 | \$ 49,485,953 | 8.12% | 1.39x | \$ - | \$ 13,780,953 |
| Private Equity | Summit Ventures VI-A, L.P. | 222 Berkeley Street, 18th Floor, Boston, MA 02116 | 2001 | \$ 50,000,000 | \$ 53,101,121 | \$ 109,632,004 | \$ 111,588,194 | 15.37% | 2.10x | \$ 3,483 | \$ N/A |
| Private Equity | Symantec Corp. | 350 Ellis Street, Mountain View, CA 94043 | 1992 | \$ 5,569,791 | \$ 5,569,791 | \$ 2,222,145 | \$ 2,222,145 | -28.51% | 0.40x | \$ - | \$ (3,347,646) |
| Private Equity | Syndicated Communications II, L.P. | 4800 Hampden Lane, Suite 200, Bethesda, MD 20814 | 1990 | \$ 7,500,000 | \$ 7,500,000 | \$ 16,664,333 | \$ 16,664,333 | 12.98% | 2.22x | \$ - | \$ 9,164,333 |
| Private Equity | Syndicated Communications Venture Partners IV, L.P. | 4800 Hampden Lane, Suite 200, Bethesda, MD 20814 | 2000 | \$ 7,500,000 | \$ 7,445,705 | \$ 5,205,401 | \$ 5,205,401 | -5.29% | 0.70x | \$ - | \$ (2,240,304) |
| Private Equity | T3 Partners II, L.P. | 301 Commerce Street, Suite 3300, Fort Worth, TX 76102 | 2001 | \$ 18,707,131 | \$ 18,360,961 | \$ 56,361,527 | \$ 56,361,527 | 93.85% | 3.07x | \$ 4,507 | \$ 38,000,566 |
| Private Equity | TA X, L.P. | John Hancock Tower, 56th Floor, 200 Clarendon Street, Boston, MA 02116 | 2006 | \$ 7,900,000 | \$ 7,623,500 | \$ 9,954,000 | \$ 10,041,116 | 5.18% | 1.32x | \$ 570 | \$ N/A |
| Private Equity | TA XIII, L.P. | John Hancock Tower, 56th Floor, Boston, MA 02116 | 2019 | \$ 75,000,000 | \$ - | \$ - | \$ - | 0.00% | 0.00x | \$ - | \$ N/A |
| Private Equity | TCV V, L.P. | 528 Ramona Street, Palo Alto, CA 94301 | 2004 | \$ 39,000,000 | \$ 38,668,500 | \$ 68,026,937 | \$ 73,314,690 | 10.86% | 1.90x | \$ - | \$ N/A |
| Private Equity | TCV VI, L.P. | 528 Ramona Street, Palo Alto, CA 94301 | 2006 | \$ 50,000,000 | \$ 51,685,000 | \$ 72,979,387 | \$ 84,045,823 | 13.17% | 1.63x | \$ 19,162 | \$ N/A |
| Private Equity | TCV VII, L.P. | 528 Ramona Street, Palo Alto, CA 94301 | 2007 | \$ 75,000,000 | \$ 73,808,932 | \$ 151,596,798 | \$ 214,846,243 | 23.44% | 2.91x | \$ 181,440 | \$ N/A |
| Private Equity | TH Lee Putnam Parallel Ventures, L.P. | 200 Madison Avenue, Suite 1900, New York, NY 10016 | 2000 | \$ 5,000,000 | \$ 5,055,906 | \$ 5,833,008 | \$ 5,833,008 | 3.01% | 1.15x | \$ - | \$ 777,102 |
| Private Equity | The 1818 Fund II, L.P. | 140 Broadway, 16th Floor, New York, NY 10005 | 1993 | \$ 15,000,000 | \$ 12,862,874 | \$ 23,988,308 | \$ 23,988,308 | 12.15% | 1.86x | \$ - | \$ 11,125,434 |
| Private Equity | The Beacon Group III - Focus Value Fund, L.P. | N/A | 1996 | \$ 40,000,000 | \$ 39,634,747 | \$ 10,102,452 | \$ 10,102,452 | -18.19% | 0.25x | \$ - | \$ (29,532,295) |
| Natural Resources & Commodities | The Energy & Minerals Group Fund III, L.P. | 2229 San Felipe Street, Houston, TX 77017 | 2014 | \$ 150,000,000 | \$ 144,376,058 | \$ 13,713,347 | \$ 122,518,066 | -4.01% | 0.85x | \$ 1,916,663 | \$ N/A |
| Private Equity | The Resolute Fund II, L.P. | 399 Park Avenue, 30th Floor, New York, NY 10022 | 2007 | \$ 60,000,000 | \$ 61,670,887 | \$ 85,432,018 | \$ 85,432,018 | 7.47% | 1.39x | \$ 36,098 | \$ 23,761,131 |
| Private Equity | The Resolute Fund, L.P. | 399 Park Avenue, 30th Floor, New York, NY 10022 | 2002 | \$ 50,000,000 | \$ 47,806,413 | \$ 120,845,133 | \$ 120,845,133 | 16.96% | 2.53x | \$ - | \$ 73,038,720 |
| Private Equity | Thomas H. Lee Equity Fund IV, L.P. | 100 Federal Street, 35th Floor, Boston, MA 02110 | 1998 | \$ 70,000,000 | \$ 63,149,612 | \$ 54,841,198 | \$ 54,841,198 | -2.61% | 0.87x | \$ - | \$ (8,308,414) |
| Private Equity | Thomas H. Lee Equity Fund V, L.P. | 100 Federal Street, 35th Floor, Boston, MA 02110 | 2000 | \$ 45,000,000 | \$ 47,123,524 | \$ 78,980,820 | \$ 78,980,820 | 13.70% | 1.68x | \$ - | \$ 31,857,296 |
| Private Equity | Thomas H. Lee Equity Fund VI, L.P. | 100 Federal Street, 35th Floor, Boston, MA 02110 | 2006 | \$ 60,000,000 | \$ 59,938,866 | \$ 99,643,854 | \$ 99,643,854 | 8.08% | 1.66x | \$ 29,518 | \$ 39,704,988 |
| Private Equity | TPG Partners II, L.P. | 301 Commerce Street, Suite 3300, Fort Worth, TX 76102 | 1997 | \$ 75,000,000 | \$ 76,009,954 | \$ 132,273,911 | \$ 132,273,911 | 9.93% | 1.74x | \$ - | \$ 56,263,957 |
| Private Equity | TPG Partners III, L.P. | 301 Commerce Street, Suite 3300, Fort Worth, TX 76102 | 2000 | \$ 25,750,055 | \$ 27,527,988 | \$ 68,499,799 | \$ 68,499,799 | 24.49% | 2.49x | \$ 1,083 | \$ 40,971,811 |
| Private Equity | TPG Partners IV, L.P. | 301 Commerce Street, Suite 3300, Fort Worth, TX 76102 | 2003 | \$ 69,768,736 | \$ 81,273,945 | \$ 156,336,517 | \$ 158,511,922 | 15.31% | 1.95x | \$ - | \$ N/A |
| Private Equity | TPG Partners V, L.P. | 301 Commerce Street, Suite 3300, Fort Worth, TX 76102 | 2006 | \$ 75,000,000 | \$ 65,377,267 | \$ 87,755,202 | \$ 87,755,202 | 4.05% | 1.34x | \$ 7,493 | \$ 22,377,935 |
| Private Equity | TPG Partners VI, L.P. | 301 Commerce Street, Suite 3300, Fort Worth, TX 76102 | 2008 | \$ 100,000,000 | \$ 99,595,863 | \$ 144,234,418 | \$ 144,234,418 | 9.09% | 1.45x | \$ 47,267 | \$ 44,638,554 |
| Private Equity | Triton Fund V, L.P. | 9 South Street, 3rd Fl, London, W1K 2XA | 2019 | \$ 170,820,057 | \$ - | \$ - | \$ (3,104,333) | 0.00% | 0.00x | \$ 3,820,051 | \$ N/A |
| Private Equity | Union Square Ventures 2004, L.P. | 915 Broadway, 19th Floor, New York, NY 10010 | 2005 | \$ 10,000,000 | \$ 8,900,000 | \$ 122,172,136 | \$ 123,308,055 | 68.00% | 13.85x | \$ 5,195 | \$ N/A |
| Private Equity | Union Square Ventures 2008, L.P. | 915 Broadway, 19th Floor, New York, NY 10010 | 2008 | \$ 10,000,000 | \$ 9,500,000 | \$ 23,493,768 | \$ 34,036,552 | 20.60% | 3.58x | \$ 96,085 | \$ N/A |
| Private Equity | Union Square Ventures 2012 Fund, L.P. | 915 Broadway, 19th Floor, New York, NY 10010 | 2011 | \$ 11,000,000 | \$ 10,285,000 | \$ 1,852,609 | \$ 33,529,223 | 25.56% | 3.26x | \$ 79,125 | \$ N/A |
| Private Equity | Union Square Ventures Opportunity Fund, L.P. | 915 Broadway, 19th Floor, New York, NY 10010 | 2010 | \$ 7,000,000 | \$ 5,110,000 | \$ 13,267,267 | \$ 16,962,803 | 58.41% | 3.32x | \$ 60,443 | \$ N/A |
| Private Equity | USV 2014, L.P. | 915 Broadway, 19th Floor, New York, NY 10010 | 2014 | \$ 8,250,000 | \$ 7,672,500 | \$ 418,460 | \$ 14,218,228 | 22.08% | 1.85x | \$ 177,107 | \$ N/A |
| Private Equity | USV 2016, L.P. | 915 Broadway, 19th Floor, New York, NY 10010 | 2016 | \$ 9,000,000 | \$ 5,085,000 | \$ - | \$ 6,556,574 | 19.37% | 1.29x | \$ 222,367 | \$ N/A |
| Private Equity | USV 2019, L.P. | 915 Broadway, 19th Floor, New York, NY 10010 | 2019 | \$ 9,000,000 | \$ 360,000 | \$ - | \$ 297,584 | -14.19% | 0.83x | \$ - | \$ N/A |
| Private Equity | USV Opportunity 2014, L.P. | 915 Broadway, 19th Floor, New York, NY 10010 | 2014 | \$ 8,250,000 | \$ 6,022,500 | \$ 471,428 | \$ 9,420,123 | 15. | | | |

Section 6254.26 (b)

Fiscal Year-Ended June 30, 2019

| Functional Category | Name ¹ | Address ¹ | Vintage Year ¹ | Commitment ² | Contribution ³ | Distributions ⁴ | Distribution Plus Market Value ⁵ | Since Inception Net Return ⁶ | Investment Multiple ⁷ | Dollar amount of the total fees paid on a fiscal year-end basis ⁸ | Dollar amount of cash profit received on a fiscal year-end basis ⁹ |
|-------------------------|---|--|---------------------------|-------------------------|---------------------------|----------------------------|---|---|----------------------------------|--|---|
| Private Equity | USV Opportunity 2019, L.P. | 915 Broadway, 19th Floor, New York, NY 10010 | 2019 | \$ 11,250,000 | \$ 2,025,000 | \$ - | \$ 1,966,167 | -4.21% | 0.97x | \$ - | \$ N/A |
| Private Equity | Vestar Capital Partners IV, L.P. | 245 Park Avenue, 41st Floor, New York, NY 10167 | 1999 | \$ 25,000,000 | \$ 24,468,277 | \$ 43,362,057 | \$ 43,362,057 | 13.45% | 1.77x | \$ - | \$ 18,893,791 |
| Private Equity | Vestar Capital Partners V, L.P. | 245 Park Avenue, 41st Floor, New York, NY 10167 | 2005 | \$ 75,000,000 | \$ 76,707,066 | \$ 93,397,012 | \$ 93,397,012 | 2.94% | 1.22x | \$ 78,726 | \$ 16,689,946 |
| Private Equity | Vestar Equity Partners III, L.P. | 245 Park Avenue, 41st Floor, New York, NY 10167 | 1997 | \$ 17,500,000 | \$ 17,154,331 | \$ 19,588,323 | \$ 19,588,323 | 2.63% | 1.14x | \$ - | \$ 2,433,992 |
| Private Equity | Vestar Equity Partners, L.P. | 245 Park Avenue, 41st Floor, New York, NY 10167 | 1993 | \$ 8,000,000 | \$ 6,796,492 | \$ 23,880,961 | \$ 23,880,961 | 56.48% | 3.51x | \$ - | \$ 17,084,469 |
| Private Equity | Vinci Capital Partners III, L.P. | 535 Madison Avenue, New York, NY 10022 | 2019 | \$ 75,000,000 | \$ 2,220,789 | \$ - | \$ 434,795 | -78.35% | 0.20x | \$ - | \$ N/A |
| Private Equity | Vista Equity Partners Fund III, L.P. | 1111 Broadway, Suite 1980, Oakland, CA 94607 | 2008 | \$ 50,000,000 | \$ 51,535,437 | \$ 125,104,261 | \$ 130,138,268 | 28.02% | 2.53x | \$ 58,922 | \$ N/A |
| Private Equity | Vista Equity Partners Fund IV, L.P. | 1111 Broadway, Suite 1980, Oakland, CA 94607 | 2011 | \$ 100,000,000 | \$ 97,655,786 | \$ 127,832,291 | \$ 198,701,684 | 17.72% | 2.03x | \$ 791,553 | \$ N/A |
| Private Equity | Vista Equity Partners Fund V, L.P. | 1111 Broadway, Suite 1980, Oakland, CA 94607 | 2014 | \$ 200,000,000 | \$ 246,935,067 | \$ 196,820,000 | \$ 456,479,602 | 23.89% | 1.85x | \$ 2,710,201 | \$ N/A |
| Private Equity | Vista Equity Partners Fund VI, L.P. | 1111 Broadway, Suite 1980, Oakland, CA 94607 | 2016 | \$ 200,000,000 | \$ 230,232,902 | \$ 64,458,429 | \$ 304,097,899 | 18.46% | 1.32x | \$ 2,610,783 | \$ N/A |
| Private Equity | Vista Equity Partners Fund VII, L.P. | 1111 Broadway, Oakland, CA 94607 | 2019 | \$ 200,000,000 | \$ 28,865,420 | \$ 745 | \$ 26,147,384 | -15.44% | 0.91x | \$ - | \$ 2,767,752 |
| Private Equity | Warburg Pincus Capital Company, L.P. | 466 Lexington Avenue, New York, NY 10017 | 1986 | \$ 50,000,000 | \$ 50,000,000 | \$ 218,432,276 | \$ 218,432,276 | 18.41% | 4.37x | \$ - | \$ 168,432,276 |
| Private Equity | Warren Equity Partners Fund II, L.P. | 320 1st Street N, Suite 608, Jacksonville Beach, FL 32250 | 2018 | \$ 7,500,000 | \$ 4,197,678 | \$ - | \$ 3,793,315 | -14.46% | 0.90x | \$ 391,954 | \$ N/A |
| Private Equity | Wayzata Opportunities Fund II, L.P. | 701 East Lake Street, Suite 300, Wayzata, MN 55391 | 2007 | \$ 75,000,000 | \$ 23,175,000 | \$ 100,495,702 | \$ 100,495,702 | 16.49% | 4.34x | \$ 1,361 | \$ 77,320,702 |
| Private Equity | Wayzata Opportunities Fund III, L.P. | 701 East Lake Street, Suite 300, Wayzata, MN 55391 | 2012 | \$ 100,000,000 | \$ 47,460,000 | \$ 47,683,053 | \$ 47,683,053 | 0.17% | 1.00x | \$ 196,621 | \$ 223,053 |
| Private Equity | Wayzata Opportunities Fund, LLC | 701 East Lake Street, Suite 300, Wayzata, MN 55391 | 2005 | \$ 40,000,000 | \$ 37,428,325 | \$ 62,803,809 | \$ 62,803,809 | 8.40% | 1.68x | \$ (4,402) | \$ 25,375,484 |
| Private Equity | Welsh, Carson, Anderson & Stowe VI, L.P. | 320 Park Avenue, Suite 2500, New York, NY 10022 | 1993 | \$ 10,000,000 | \$ 10,000,000 | \$ 20,712,010 | \$ 20,712,010 | 13.94% | 2.07x | \$ - | \$ 10,712,010 |
| Private Equity | Welsh, Carson, Anderson & Stowe VII, L.P. | 320 Park Avenue, Suite 2500, New York, NY 10022 | 1995 | \$ 20,000,000 | \$ 20,000,000 | \$ 43,513,904 | \$ 43,513,904 | 17.71% | 2.18x | \$ - | \$ 23,513,904 |
| Private Equity | Welsh, Carson, Anderson & Stowe VIII, L.P. | 320 Park Avenue, Suite 2500, New York, NY 10022 | 1998 | \$ 25,000,000 | \$ 25,000,000 | \$ 32,204,360 | \$ 32,204,360 | 3.12% | 1.29x | \$ - | \$ 7,204,360 |
| Private Equity | Weston Presidio Capital IV - Secondary | 200 Clarendon Street, 50th Floor, Boston, MA 02116 | 2003 | \$ 1,811,720 | \$ 1,811,720 | \$ 2,311,117 | \$ 2,311,117 | 5.22% | 1.28x | \$ - | \$ 499,397 |
| Private Equity | Weston Presidio Capital IV, L.P. | 200 Clarendon Street, 50th Floor, Boston, MA 02116 | 2000 | \$ 9,665,712 | \$ 9,665,712 | \$ 11,401,437 | \$ 11,401,437 | 2.96% | 1.18x | \$ 564 | \$ 1,735,725 |
| Private Equity | Weston Presidio V, L.P. | 200 Clarendon Street, 50th Floor, Boston, MA 02116 | 2005 | \$ 35,000,000 | \$ 34,660,903 | \$ 79,153,937 | \$ 79,153,937 | 15.29% | 2.28x | \$ 3,682 | \$ 44,493,034 |
| Private Equity | Whitman Heffernan & Rhein Fund II, L.P. | N/A | 1992 | \$ 14,200,000 | \$ 14,232,703 | \$ 8,329,230 | \$ 8,329,230 | -23.34% | 0.59x | \$ - | \$ (5,903,473) |
| Private Equity | William Blair Mezzanine Capital Fund II, L.P. | 222 West Adams Street, Chicago, IL 60606 | 1997 | \$ 10,000,000 | \$ 10,000,000 | \$ 16,954,398 | \$ 16,954,398 | 11.84% | 1.70x | \$ - | \$ 6,954,398 |
| Private Equity | Worldview Technology Partners I, L.P. | 99 South Almaden Boulevard, 6th Floor, San Jose, CA 95113 | 1996 | \$ 8,500,000 | \$ 8,500,000 | \$ 32,237,243 | \$ 32,237,243 | 68.50% | 3.79x | \$ - | \$ 23,737,243 |
| Private Equity | Worldview Technology Partners II, L.P. | 99 South Almaden Boulevard, 6th Floor, San Jose, CA 95113 | 1998 | \$ 5,000,000 | \$ 5,000,000 | \$ 8,406,737 | \$ 8,406,737 | 10.06% | 1.68x | \$ - | \$ 3,406,737 |
| Private Equity | Worldview Technology Partners III, L.P. | 99 South Almaden Boulevard, 6th Floor, San Jose, CA 95113 | 1999 | \$ 10,000,000 | \$ 10,000,000 | \$ 1,532,976 | \$ 1,532,976 | -22.59% | 0.15x | \$ - | \$ (8,467,024) |
| Private Equity | Worldview Technology Partners IV, L.P. | 99 South Almaden Boulevard, 6th Floor, San Jose, CA 95113 | 2000 | \$ 12,086,682 | \$ 11,300,783 | \$ 5,670,097 | \$ 5,670,097 | -9.24% | 0.50x | \$ 3,748 | \$ (5,630,687) |
| Real Estate | | | | | | | | | | | |
| Opportunistic RE | Aermont Capital Real Estate Fund IV SCSF | 28 Boulevard Royal - 5th Floor L-2449 Luxembourg | 2018 | \$ 56,940,020 | \$ 4,676,139 | \$ - | \$ 3,745,293 | NM | 0.80x | \$ 887,648 | \$ (5,251,728) |
| Core and Value Added RE | AEW Value Investors Asia III, L.P. | 3rd Floor, Liberation House, Castle Street, St. Helier, Jersey, Channel Islands, JE1 1BL | 2017 | \$ 50,000,000 | \$ 37,632,763 | \$ - | \$ 37,988,850 | 2.30% | 1.01x | \$ 734,830 | \$ (27,691,365) |
| Opportunistic RE | AG Asia Realty Fund IV, L.P. | Angelo, Gordon & Co., L.P. 245 Park Avenue, New York, NY 10167 | 2018 | \$ 100,000,000 | \$ 12,500,000 | \$ - | \$ 11,287,275 | NM | 0.90x | \$ 1,205,337 | \$ (12,500,000) |
| Opportunistic RE | AG Europe Realty Fund II, L.P. | Angelo, Gordon & Co., L.P. 245 Park Avenue, New York, NY 10167 | 2018 | \$ 50,000,000 | \$ 25,000,000 | \$ 125,000 | \$ 27,295,663 | 10.79% | 1.09x | \$ 1,092,430 | \$ (16,000,000) |
| Core and Value Added RE | Bain Capital Real Estate Fund I-A, L.P. | 200 Clarendon Street, Boston, MA 02116 | 2018 | \$ 100,000,000 | \$ 6,206,934 | \$ 5,070,815 | \$ 6,364,770 | 64.00% | 1.03x | \$ 2,963,394 | \$ (1,136,119) |
| Core and Value Added RE | CapMan Nordic Real Estate II FCP-RAIF | Ludviginkatu 6, 4 Floor 00130 Helsinki Finland | 2017 | \$ 56,940,020 | \$ 23,200,767 | \$ - | \$ 19,635,129 | 10.00% | 0.85x | \$ 468,485 | \$ (12,315,670) |
| Opportunistic RE | Capri Urban Investors, LLC | 875 North Michigan Avenue, Suite 3430, Chicago, Illinois 60611 | 2007 | \$ 150,000,000 | \$ 150,000,000 | \$ 68,858,024 | \$ 110,311,821 | -4.26% | 0.74x | \$ 86,415 | \$ - |
| Opportunistic RE | Carlyle Europe Real Estate Partners III, L.P. | 1001 Pennsylvania Avenue, NWWashington, DC 20004-2505 | 2007 | \$ 20,143,101 | \$ 21,915,419 | \$ 21,246,136 | \$ 22,407,090 | 0.83% | 1.02x | \$ 29,249 | \$ 581,140 |
| Core and Value Added RE | CBRE Strategic Partners European Fund III | 601 S. Figueroa, 49th Floor, Los Angeles, CA 90071 | 2006 | \$ 18,220,806 | \$ 17,974,826 | \$ 5,550,390 | \$ 5,999,674 | -15.36% | 0.33x | \$ - | \$ - |
| Opportunistic RE | CityView Bay Area Fund II, L.P. | 1901 Avenue of the Stars, Suite 1950, Los Angeles, CA 90025 | 2012 | \$ 134,100,000 | \$ 142,068,725 | \$ 127,465,855 | \$ 218,080,472 | 14.23% | 1.54x | \$ 1,234,126 | \$ (6,620,004) |
| Opportunistic RE | CityView LA Urban Fund I, L.P. | 1901 Avenue of the Stars, Suite 1950, Los Angeles, CA 90025 | 2007 | \$ 50,000,000 | \$ 118,285,495 | \$ 143,266,842 | \$ 143,339,207 | 11.94% | 1.21x | \$ - | \$ 377,013 |
| Opportunistic RE | CityView Southern California Fund II, L.P. | 1901 Avenue of the Stars, Suite 1950, Los Angeles, CA 90025 | 2013 | \$ 100,000,000 | \$ 98,346,789 | \$ - | \$ 158,347,389 | 16.57% | 1.61x | \$ 1,867,663 | \$ (3,171,833) |
| Opportunistic RE | CityView Western Fund I, L.P. | 1901 Avenue of the Stars, Suite 1950, Los Angeles, CA 90025 | 2016 | \$ 150,000,000 | \$ 106,140,638 | \$ - | \$ 118,254,758 | 14.40% | 1.11x | \$ 3,379,070 | \$ (66,821,970) |
| Core and Value Added RE | Core Property Index Fund | 1111 Superior Avenue, Suite 1100, Cleveland, Ohio 44114 | 2019 | \$ 100,000,000 | \$ 45,409,092 | \$ - | \$ 45,409,092 | 0.00% | 1.00x | \$ - | \$ (45,409,092) |
| Core and Value Added RE | Cornerstone Hotel Income Equity Fund II, L.P. | 300 South Tryon Street, Suite 2500, Charlotte, NC 28202 | 2008 | \$ 150,000,000 | \$ 140,830,910 | \$ 179,268,554 | \$ 179,268,554 | 9.17% | 1.27x | \$ - | \$ - |
| Opportunistic RE | Europa Fund III, L.P. | Europa Capital LLP 15 Sloane Square London SW1W 8ER United Kingdom | 2007 | \$ 19,701,247 | \$ 18,752,429 | \$ 24,912,434 | \$ 25,565,800 | 9.93% | 1.36x | \$ 1,625 | \$ 1,189,295 |
| Opportunistic RE | Europa Fund IV, L.P. | Europa Capital LLP 15 Sloane Square London SW1W 8ER United Kingdom | 2012 | \$ 56,940,020 | \$ 54,033,068 | \$ 38,900,381 | \$ 66,352,438 | 12.04% | 1.23x | \$ 635,676 | \$ 8,807,771 |
| Core and Value Added RE | Hunt UK Realty Partners, L.P. | 4 International Drive, Rye brook, NY 10523 | 2007 | \$ 18,730,688 | \$ 20,659,285 | \$ 801,370 | \$ 2,216,549 | -21.06% | 0.11x | \$ - | \$ - |
| Core and Value Added RE | Heitman Asia-Pacific Property Investors, L.P. | 401 Wilshire, Suite 1200, Santa Monica, CA 90401 | 2017 | \$ 50,000,000 | \$ 26,033,693 | \$ - | \$ 24,288,809 | -11.37% | 0.93x | \$ 146,414 | \$ (19,408,911) |
| Opportunistic RE | Invesco Asian Real Estate Partners II, L.P. | 2001 Ross Avenue, Suite 3400, Dallas, TX 75201 | 2007 | \$ 25,000,000 | \$ 11,251,165 | \$ 14,905,477 | \$ 15,086,581 | 9.50% | 1.34x | \$ 15,917 | \$ - |
| Core and Value Added RE | Invesco Real Estate Asia Fund, L.P. | 37A, Avenue J.F. Kennedy L-1855 Luxembourg, Grand-Duchy of Luxembourg | 2014 | \$ 100,000,000 | \$ 100,000,000 | \$ - | \$ 140,478,647 | 7.14% | 1.40x | \$ 1,154,443 | \$ - |
| Core and Value Added RE | Prologis European Logistics Fund | 34-38, avenue de la Liberte, L-1930 Luxembourg | 2007 | \$ 113,880,040 | \$ 113,800,000 | \$ 31,142,636 | \$ 191,251,118 | 8.60% | 1.68x | \$ 1,784,771 | \$ 7,328,317 |
| Core and Value Added RE | RREEF Core Plus Industrial Fund, L.P. | 345 Park Avenue, Floor 24, New York, NY 10154-0102 | 2017 | \$ 125,000,000 | \$ 125,000,000 | \$ 9,824,582 | \$ 169,307,973 | 36.48% | 1.35x | \$ 514,078 | \$ 4,659,403 |
| Opportunistic RE | Starwood Capital Hospitality Fund II, L.P. | 1601 Washington Avenue, Suite 800, Miami Beach, FL 33139 | 2007 | \$ 100,000,000 | \$ 96,340,000 | \$ 129,633,925 | \$ 151,859,720 | 10.00% | 1.58x | \$ 493,678 | \$ 18,300,085 |
| Opportunistic RE | SH Group (Branco) | One StarPoint, Stamford, CT 06902 | 2011 | \$ 2,000,000 | \$ 1,253,399 | \$ 1,584,385 | \$ 1,584,385 | N/A | 1.26x | \$ 4,636 | \$ 2,692,119 |
| Opportunistic RE | TPG Real Estate Partners III, L.P. | 301 Commerce St, Suite 3300, Fort Worth, TX 76102 | 2018 | \$ 58,750,000 | \$ - | \$ - | \$ - | NM | 0.00x | \$ 1,124,043 | \$ - |

¹ Name, address, and vintage year of the alternative investment fund.

² Since-inception dollar amount of commitments to the alternative investment fund.

³ Since-inception dollar amount of cash contributions to the alternative investment fund.

⁴ Since-inception dollar amount of cash distributions received from the alternative investment funds.

⁵ Since-inception dollar amount of cash distributions received plus the remaining value of the alternative investment fund.

⁶ Since-inception net returns for Private Equity were calculated by LACERA using all the outflows to and inflows from the underlying fund investments, including cash flows for expenses and fees paid by the Portfolio to those underlying fund investments. The terminal values used are the capital account balances as of the reporting period, as stated by the General Partners of the underlying fund investment, whether at cost or fair value. If the underlying fund investment's terminal value is prior to the reporting period, the internal rate of return (IRR) was calculated as of the last valuation date indicated by the fund manager. Real Estate since-inception IRR were provided by Townsend Group (asset category advisor). Hedge Fund, Fixed Income, and Global Equity (excluding JANA Strategic Investment Fund V) are cumulative geometric returns for holding periods less than 12 months of the alternative investment fund and annualized geometric return for holding periods greater than 12 months. JANA Strategic Investment Fund V (Global Equity) is a money-weighted return provided by the alternative investment fund.

⁷ Since-inception investment multiple is calculated by the sum of market value of the alternative investment fund as of the fiscal year-end and the cumulative distribution divided by the cumulative contribution.

⁸ Dollar amount of total management fees and costs paid or accrued to the alternative investment manager on an annual fiscal year-end basis. Data sources included the following: aggregation of cash payments to the alternative investment fund, confirmation with the alternative investment fund, financial statements and partner capital account statements, calculation using the respective management fee rate, pro rata share of the alternative investment fund's total management fee, and estimations based on alternative investment fund's operating expense ratios obtained from the most recent audited financial statement. Negative values indicate giveback of previously accrued or paid fees.

⁹ Annual fiscal year-end dollar amount of cash distribution net of cash contributions from the alternative investment fund for the Real Estate asset category. The since-inception total cash profit after final liquidation are reported for the remaining asset categories. All periods prior to the final liquidation are reported as not applicable.

¹⁰ Total fees paid as of calendar year-ended December 31, 2018.

November 27, 2019

TO: Each Member
Board of Investments

FROM: Jonathan Grabel 
Chief Investment Officer

FOR: December 11, 2019 Board of Investments Meeting

SUBJECT: **PAI EUROPE VII MANAGER UPDATE**

The following memo provides the Board of Investments (“Board”) with an update regarding LACERA’s investment and dialogue with the general partner of PAI Europe VII (“PAI”), following public comments submitted by representatives of UNITE HERE, a North American labor union, at the Board’s September 11, 2019; October 8, 2019; and November 20, 2019, meetings. UNITE HERE’s comments addressed labor relations and union contract negotiations at PAI portfolio company, Areas Worldwide (“Areas”) (an airport concessions firm). This memo follows a memo presented at the Board’s November 20, 2019, meeting (**Attachment 1**) on the matter.

Key highlights of background information and developments include:

- **PAI recently acquired Areas, the subject of UNITE HERE’s concerns**
PAI acquired Areas in July, 2019, approximately two months prior to UNITE HERE’s public statements describing a history of labor concerns at HMS Host (the predecessor concessions operator) and currently active contract negotiations. PAI is in the process of developing a work plan for the newly acquired company.
- **LACERA has formally responded to UNITE HERE’s public comments**
Attachments 2 and 3 contain responses to September and November comments.
- **LACERA values constructive human capital practices and monitors external managers, including assessing ESG integration as part of a manager scorecard**
LACERA’s *Corporate Governance Principles* promote constructive human capital practices at portfolio companies. As the Board is aware, LACERA seeks to understand and assess how all external managers identify and integrate relevant environmental, social, and governance (“ESG”) factors, such as human capital, into the mandate managed on behalf of LACERA. PAI has been cooperative with LACERA in describing their approach to ESG integration. PAI incorporates ESG into pre-acquisition due diligence, drawing in part from the materiality matrix developed by the Sustainability Accounting Standards Board (“SASB”), to which LACERA is affiliated. PAI works with recently acquired portfolio firms to develop

work plans to address corrective actions, as necessary, and pursue ESG-related opportunities for value creation. PAI also spearheads an initiative among European private equity firms to address climate risks within its portfolio. ESG integration continues to develop across the private equity space and LACERA continues regular discussions to assess how general partners identify and effectively address relevant ESG factors.

- **LACERA has encouraged all parties to promote stable, constructive labor relations**
LACERA folded discussions of Areas' labor relations into the regular course of our ongoing manager monitoring, subsequent to UNITE HERE's first public comments. LACERA has met in person and by phone with PAI senior executives numerous times to understand PAI's due diligence, the status of negotiations, and to encourage all parties to negotiate in good faith and promote stable workforce relations. LACERA understands that PAI's pre-acquisition due diligence of Areas included several ESG factors relevant to operating airport concessions, including regulatory relations, food safety, and human capital practices.
- **Some indication of progress, but union contract negotiations will be routine**
Both PAI and UNITE HERE have represented that negotiations have been settled at one of the three airports reported to the Board in September. However, LACERA understands that during the regular course of business, Areas has numerous union contracts that will expire and be subject to negotiations as part of normal business operations in the months and years to come. Since September, for example, Areas and UNITE HERE have initiated negotiations at several additional airports, underscoring that labor negotiations are a regular aspect of Areas' business.
- **LACERA has limited rights and must act in line with its fiduciary duty in all matters**
LACERA is a limited partner in PAI Europe VII. As a limited partner, LACERA's liability, risk exposure, and management rights are limited. The general partner, PAI, is responsible for selecting investments, building value, exiting holdings, and overseeing all investment activity, as it deems appropriate. LACERA relies on PAI to manage all matters relating to PAI Europe VII and its investments. LACERA participates in the Limited Partner Advisory Committee, annual meetings, and regular discussions with PAI to monitor its investment.

LACERA must also act in the exclusive interests of its members. Actively monitoring risks related to our investments is appropriate; however, LACERA is not the authorized agent for either the employer or the employees in these contract negotiations. LACERA encourages all parties to engage in negotiations in good faith and a constructive manner to achieve stable labor relations.

The information above is summarized in the attached timeline (**Attachment 4**).

CONCLUSION

LACERA actively monitors all aspects of performance at its external asset managers, including at general partners (such as PAI) where LACERA's legal rights are limited. LACERA considers constructive human capital practices to be a vital component of delivering financial returns. Accordingly, LACERA will continue to monitor its investment with PAI, including its portfolio companies, through ongoing discussions with PAI partners and as a participant of the PAI Europe VII Limited Partner Advisory Committee.

Additionally, LACERA will continue to update PAI's "manager scorecard," including assessing the quality of communications and relationship with PAI and how effectively PAI integrates aspects of ESG into its investment strategy. PAI's ability to effectively manage labor contract negotiations and achieve labor peace will be among the factors that will inform LACERA's ongoing assessment.

Finally, LACERA will take into account all aspects of PAI Europe VII's performance and how the general partner creates value at portfolio companies when underwriting any future PAI fundraising prior to recommending additional commitments.

Attachments

FOR INFORMATION ONLY

November 8, 2019

TO: Each Member
Board of Investments

FROM: Jonathan Grabel 
Chief Investment Officer

FOR: November 20, 2019 Board of Investments Meeting

SUBJECT: **PAI PARTNERS MANAGER UPDATE**

The following memo is intended to provide the Board of Investments (“Board”) with background information regarding LACERA’s investment with and monitoring of PAI Partners Europe Fund VII (“PAI”), following public comments submitted by representatives of UNITE HERE at the Board’s September 11, 2019, meeting.

UNITE HERE’s comments addressed labor contract negotiations at airport concessions operated by Areas USA at three U.S. airports: Los Angeles International (“LAX”), Detroit Metropolitan Airport (“DTW”), and Minneapolis-St. Paul International (“MSP”). Areas USA is a subsidiary of Areas Worldwide (“Areas”), a global airport concessions firm based in Barcelona, Spain.

PAI acquired Areas in July 2019. PAI is a private equity firm based in Paris, France, that focuses on buyout transactions. PAI typically targets companies sized between €300 million to €1.5 billion in enterprise value, operating principally in Europe in one of five sectors: business services, food and consumer, general industrials, healthcare, and retail and distribution.

SUMMARY TIMELINE

November 2, 2017 LACERA’s Board approves a €150 million commitment to PAI Fund VII.

July 1, 2019 PAI acquires global airport concessions company Areas Worldwide.

September 11, 2019 UNITE HERE, in public comments to the Board, outlines concerns about labor contract negotiations at LAX, DTW, and MSP airports, and a history of labor relations dating back to HMS Host, which operated the Minneapolis airport concessions prior to Areas acquiring the concession in October 2017.

LEGAL PARAMETERS

LACERA is a limited partner in PAI Europe VII. By design, the limited partnership agreement limits LACERA's liability, risk exposure, and management rights. The PAI Europe VII partnership agreement provides that:

In accordance with articles L-222-6 and R 222-2 of the French Commercial Code, Limited Partners who are not otherwise Manager or AIFM (Alternative Investment Fund Manager) shall take no part in the external management of the business and affairs of the Partnership and shall have no right or authority to act towards third parties for the Partnership.

As the general partner, PAI is responsible for selecting investments, building value, exiting holdings, and overseeing all investment activity, as they deem appropriate. LACERA relies on PAI to manage all matters relating to PAI Europe VII and its investments.

All LACERA actions must adhere to LACERA's fiduciary duties of loyalty and prudence to act in the exclusive interest of plan beneficiaries in an informed manner.

LACERA MANAGER MONITORING AND PAI

LACERA conducts upfront due diligence and ongoing monitoring of external managers' performance, including how they mitigate a variety of investment risks. Routine due diligence and monitoring includes assessing how external managers identify, evaluate, and integrate environmental, social, and governance ("ESG") factors that are relevant to their investment strategies. As articulated in LACERA's *Corporate Governance Principles*, LACERA considers constructive human capital practices to be a core component of any business' success in creating and sustaining long-term economic value. LACERA therefore expects external managers such as private equity general partners to cultivate constructive labor relations at portfolio companies and mitigate the operational, legal, reputational, and financial risks that poor workforce relations and practices may present. Active monitoring not only aims to fulfill LACERA's fiduciary duty to monitor our capital at risk, but also informs whether additional investments with current external managers are merited.

As a new relationship, LACERA continues an active dialogue with PAI on all aspects of the fund's progress, including newly acquired portfolio companies such as Areas. LACERA monitoring is facilitated in part by LACERA's participation in PAI Fund VII's Limited Partner Advisory Committee, as well as regular discussion, meetings, and surveys. Active monitoring informs LACERA's manager assessments in a "manager scorecard," comprised of five core components including organizational quality of the manager, performance, fees, ESG integration, and the quality of the strategic relationship.

In early 2019, LACERA included PAI in a survey of 11 of its private equity general partners regarding how private equity firms are incorporating ESG factors throughout the investment life cycle, including:

- *Pre-acquisition due diligence of their portfolio firms:* To what extent does the general partner identify relevant ESG factors that may shape risks and returns of a potential acquisition target, how they consider such factors in investment committee deliberations, and how they incorporate such assessments into their decisions whether to proceed with an acquisition;
- Ownership period: How they integrate corrective actions and other ESG strategies into portfolio companies' business plans during the general partners' ownership period, if they proceed with an acquisition; and
- Pre-exit preparation: To what extent they address necessary aspects of ESG during preparations for exit, such as an initial public offering.

LACERA noted that PAI is a signatory to the Principles for Responsible Investment and in recent years has undertaken efforts to formalize ESG into industry-specific due diligence with its deal teams, including identifying ESG factors related to an acquisition target's business profile as part of its internal investment committee memo and analysis. LACERA also noted that PAI is leading efforts among a small number of European general partners to develop and disseminate tools for private equity firms to identify and report climate risks at portfolio firms, as part of an initiative called "Initiativ Climat 2020". An overview of PAI's ESG efforts is available on its website.¹ LACERA has noted PAI's efforts to develop a systematic approach for ESG integration and continues to track PAI's progress to assess how effectively and comprehensively it identifies, mitigates, and – ultimately – addresses relevant ESG factors in its investment process.

PAI AND AREAS

LACERA has recently held at least five meetings with PAI's executive team, including in-person discussions both at LACERA's offices and at PAI's headquarters. As part of broader portfolio monitoring, LACERA has discussed with PAI its due diligence process (including ESG) in evaluating the recent acquisition of Areas and its history of labor relations as represented during the public comments presented to the Board at its September 2019 meeting, how it integrates ESG into the portfolio company's business plan for value creation, and the current status of labor contract negotiations since PAI's July 2019 acquisition of Areas.

While respecting the legal parameters of LACERA's limited partner agreement with PAI and the privacy of ongoing contract negotiations between the labor union and PAI's portfolio company, LACERA notes the following for the Board's information:

- Areas USA has successfully concluded labor contract negotiations in the past.
- Negotiations continue at LAX, DTW, and MSP.
- A majority of Areas USA's hourly employees are represented by UNITE HERE.
- Several additional UNITE HERE contracts at various airports will expire and be in negotiations in the coming years.

¹ <https://www.paipartners.com/responsibility/esg-reports/>.

CONCLUSION

LACERA actively monitors all aspects of fund performance at its external asset managers, including at general partners (such as PAI) where LACERA's legal rights are limited. LACERA considers constructive human capital practices to be a vital component of delivering financial returns. Accordingly, LACERA will continue to monitor its investment with PAI, including its portfolio companies, through ongoing discussions with PAI partners and as a participant of the PAI Europe Fund VII Limited Partner Advisory Committee.

Additionally, LACERA will continue to update PAI's "manager scorecard," including assessing the quality of communications and relationship with PAI and how effectively PAI integrates aspects of ESG into its investment strategy. PAI's ability to effectively manage labor contract negotiations and achieve labor peace will be among the factors that will inform LACERA's ongoing assessment.

Finally, LACERA will take into account all aspects of PAI Fund VII's performance and how the general partner creates value at portfolio companies when underwriting any future PAI fundraising prior to recommending additional commitments.

October 2, 2019

VIA EMAIL: jfein@unitehere11.org

Ms. Hamere Dinku
Mr. Jordan Fein
Mr. Wade Luneberg
Ms. Sylvia Resendiz
UNITE HERE

Dear Mr. Fein, Ms. Dinku, Mr. Fein, Mr. Luneberg, and Mr. Resendiz:

Thank you for your recent comments and supplemental materials to LACERA's Board of Investments on September 11, 2019, regarding workforce relations at Areas, which was recently acquired by PAI Partners. We appreciate your information and would like to take this opportunity to respond.

As you are aware, LACERA is a defined benefit plan with approximately \$58 billion in assets and the mission "to produce, protect, and provide the promised benefits" to over 170,000 plan members. In an effort to fulfill our mission, LACERA promotes business practices that we believe will help generate and safeguard sustainable value. Our [Corporate Governance Principles](#) articulate LACERA's views on sound governance and sustainable business practices and recognize effective human capital management as an integral component for any company to accomplish its strategic objectives, create value, and thrive.

Since all of LACERA's investments are managed by external asset management firms, LACERA conducts upfront due diligence and active monitoring of external managers' performance, including how they assess a variety of investment risks. Our routine due diligence includes, for example, evaluating how private equity firms cultivate constructive human capital practices at portfolio companies, as well as identify and mitigate the operational, legal, reputational, and financial risks that poor workforce relations and practices may present. Active monitoring not only aims to fulfil our fiduciary duty to monitor our capital at risk, but also informs whether additional investments with current external managers are merited.

Towards that end, we appreciate the information that UNITE HERE shared with the Board. As you know, LACERA's Board of Investments approved a commitment to PAI Partners' Fund VII in November 2017. As a new relationship, we continue an active dialogue with the firm on all aspects of the fund's progress, including newly acquired portfolio companies such as Areas.

Thank you for your communication as we aim to fulfill LACERA's mission to our members through robust investment analysis and risk management. Please contact me if you would like to further discuss.

Regards,



Jonathan Grabel
Chief Investment Officer

cc: Shawn Kehoe, Chair, Board of Investments
Alan Bernstein, Chair, Board of Retirement

November 27, 2019

VIA EMAIL: jfein@unitehere11.org

Mr. Jordan Fein, UNITE HERE

Dear Mr. Fein:

I am writing in response to your recent comments made at the November 20, 2019, LACERA Board of Investments meeting, regarding the multiple year history of workforce relations at Areas, which was more recently acquired in July of this year by PAI Europe VII. This letter is in furtherance to my October 2, 2019, letter responding to your comments to the Board of Investments on September 11, 2019.

LACERA is firmly dedicated to the retirement security of over 170,000 members in fulfillment of our mission “to produce, protect, and provide the promised benefits” and in adherence to our fiduciary duty to act in the exclusive interests of our members. In line with our mission and fiduciary duty, LACERA has incorporated into policies and practice a recognition that environmental, social, and governance (ESG) factors may shape investment risks and returns, including an affirmation that constructive human capital practices are crucial to creating and sustaining long-term value.

Also in line with our mission and fiduciary duty, LACERA actively engages and monitors all external asset managers. At private equity investments where LACERA has limited rights, active monitoring includes regular dialogue, participation on Limited Partner Advisory Committees and annual meetings, and additional channels. Such dialogue helps us assess how LACERA’s capital is being managed and informs prospective future investments with the general partner. As you will find in the November 20, 2019, Board of Investments meeting materials, our discussions with external managers incorporate assessing how effectively they incorporate and address relevant ESG factors – such as human capital – into their portfolio construction and management. The report is publicly available, starting on page 267 of the following link: http://www.lacera.com/about_lacera/boi/meetings/2019-11-20_boi_agnd.pdf.

From numerous discussions with PAI, we have understood that a tentative agreement has been reached between PAI portfolio company, Areas, and UNITE HERE at one of the three airports cited in your September comments (LAX). We further understand from both PAI and your November materials that this agreement has now been settled. We welcome this sign of progress.

We also understand that negotiations continue at the other airports (DTW and MSP). In recent weeks, additional contracts have expired and are being negotiated. Moreover, in the coming months and years, more collective bargaining agreements will expire and be subject to negotiations. We encourage all parties to approach negotiations in good faith and in a constructive manner, so that agreements may be successfully reached in these matters as well. While LACERA is not an authorized agent for either the employees or the employer, we value constructive, stable workforce relations at portfolio companies.

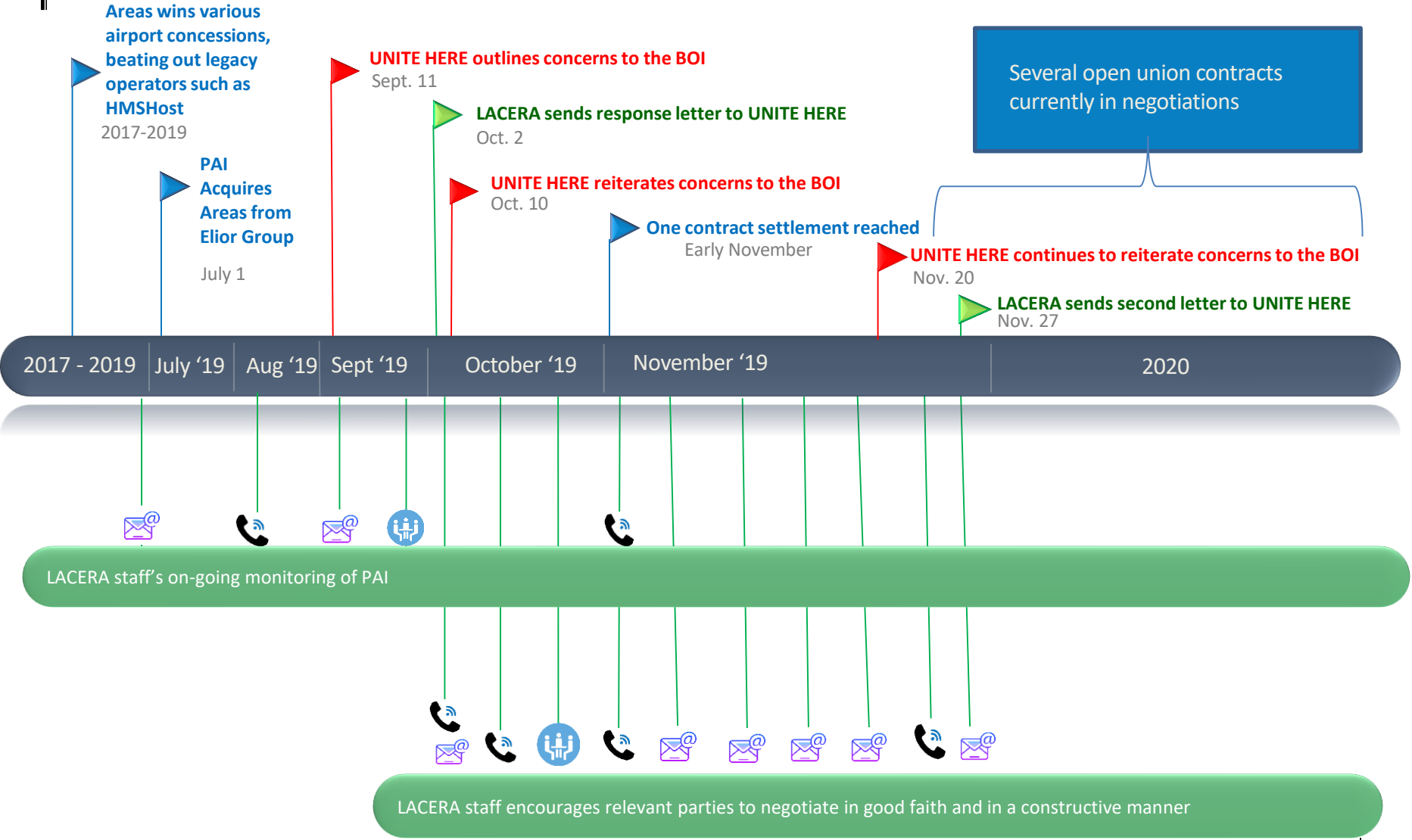
As offered in my October 2, 2019, letter and in your discussions with LACERA staff, you are welcome to contact the investment team to further discuss.

Regards,



Jonathan Grabel
Chief Investment Officer

Summary Timeline of Events



FOR INFORMATION ONLY

November 26, 2019

TO: Each Member
Board of Investments

FROM: John McClelland 
Principal Investment Officer

FOR: December 11, 2019 Board of Investments Meeting

**SUBJECT: Real Estate Performance
Q2 2019**

Delivery of the real estate performance measurement report for the second quarter of 2019 has been postponed. As previously reported to the Board, a review and reconciliation project relating to real estate performance measurement is underway. The second quarter performance report will be finalized and presented to the Board once that project is completed. Staff estimates presenting the report to the Board in February 2020.

Noted & Reviewed:


Jonathan Gabel
Chief Investment Officer

FOR INFORMATION ONLY

November 26, 2019

TO: Each Member
Board of Investments

FROM: Scott Zdrazil 
Senior Investment Officer

FOR: December 11, 2019 Board of Investments Meeting

SUBJECT: **COUNCIL OF INSTITUTIONAL INVESTORS JOINT LETTER TO
SECURITIES AND EXCHANGE COMMISSION**


Please find attached a joint investor letter dated November 15, 2019, coordinated by the Council of Institutional Investors (CII) to the U.S. Securities and Exchange Commission (SEC) requesting an extension of comment periods from 60 to 120 days for proposed regulatory reforms related to proxy research and shareholder proposals. The letter has been signed by 88 institutional investors,¹ including LACERA, which participated in the letter in adherence to our [Corporate Governance Principles](#) and policy, and in consultation with the Corporate Governance Committee chair.

As reported to the Board of Investments (Board) at its November 20, 2019, meeting, the SEC proposed two rulemakings on November 5th that would revise regulation related to proxy research firms and requirements by which investors may submit shareholder proposals for inclusion on corporate ballots for a vote at annual shareholder meetings of publicly-listed companies in the U.S. (These proposals were anticipated and discussed at the October 8, 2019, Corporate Governance Committee meeting.) The two proposals allow for a 60 day comment period for market input. As CII has stated, the two proposals “would result in the most significant changes to the voting rights of shareowners in decades.” The proposals total 320 pages and include 345 questions seeking market input, data, and analysis to assess the impact of the proposals. Given the complexity of the proposals and their prospectively far-reaching ramifications, CII and investors are seeking additional time in order to provide informed commentary for the SEC’s consideration.

LACERA is assessing the SEC’s two proposals and coordinating with CII on additional prospective responses. Staff will continue to apprise the Board of developments and initiatives.

Attachment

Noted and Reviewed:



Jonathan Grabel
Chief Investment Officer

¹ CII sent an initial letter with 74 signatures on November 15, 2019, and a second follow-up letter with 14 additional signatures on November 22, 2019. Both complete letters are available at: <https://www.cii.org/correspondence>.

Via Hand Delivery

November 15, 2019

The Honorable Jay Clayton
Chairman
Securities and Exchange Commission
100 F Street NE
Washington, DC 20549

Re: File Nos. S7-22-19 & S7-23-19

Dear Mr. Chairman:

The Council of Institutional Investors and the undersigned investors respectfully request an extension of the comment period from 60 to 120 days for the proposals entitled “Amendments to Exemptions from the Proxy Voting Rules for Proxy Voting Advice” and “Procedural Requirements and Resubmission Thresholds under Exchange Act Rule 14a-8.”

The two concurrent proposed rules individually, and collectively, if adopted, would result in the most significant changes to the voting rights of shareowners in decades. The proposals are complex, a combined 320 pages in length, and include 345 individual questions for commentators. The proposals explicitly and repeatedly request that commentators provide supporting “data.” To the extent possible, we intend to be responsive to this request in comment letters.

The proposed concurrent 60-day comment period for the proposals will include at least three public holidays depending upon when the proposals are published in the federal register. Thus, the proposed concurrent comment period is effectively much shorter than 60 days for proposals.

For the benefit of investors, issuers, other market participants, the Securities and Exchange Commission, and the capital markets generally, we respectfully request that you extend the comment period from 60 to 120 days for the aforementioned proposals.

Sincerely,



Kenneth A. Bertsch
Executive Director
Council of Institutional Investors

Marcie Frost
Chief Executive Officer
California Public Employees' Retirement
System

Aeisha Mastagni
Portfolio Manager
California State Teachers' Retirement
System

Ron Baker
Executive Director
Colorado Public Employees' Retirement
Association

Jonathan Grabel
Chief Investment Officer
Los Angeles County Employees Retirement
Association

Thomas P. DiNapoli
New York State Comptroller
New York State Common Retirement Fund

Tom Lee
Executive Director & Chief Investment
Officer
New York State Teachers Retirement
System

Michael Frerichs
Illinois State Treasurer
Office of the Illinois State Treasurer

Scott Stringer
Comptroller
Office of the NYC Comptroller

Karen Carraher
Executive Director
Ohio Public Employees Retirement System

Tobias Read
Oregon State Treasurer
Oregon Public Employee Retirement System

Alec Stais
Chief Investment Officer
State of Rhode Island Office of the General
Treasurer

Theresa Whitmarsh
Executive Director
Washington State Investment Board

Dave Zellner
Chief Investment Officer
Wespath Benefits and Investments

Brandon Rees
Deputy Director, Corporations and Capital
Markets
AFL-CIO

Meredith Miller
Chief Corporate Governance Officer
UAW Retiree Medical Benefits Trust

Euan Stirling
Global Head of Stewardship and ESG
Investment
Aberdeen Standard Investments, US Office

Andrew Behar
Chief Executive Officer
As You Sow

Adam Kanzer
Head of Stewardship - Americas
BNP Paribas Asset Management

Mindy S. Lubber
President and Chief Executive Officer
Ceres

Kurt Schacht
Managing Director, Advocacy
CFA Institute

Christine O'Brien
Head of Investment Stewardship
Elliott Management

Timothy Youmans
Lead – North America
Hermes EOS

John Hoeppe
Head of US Stewardship and Sustainable
Investments
Legal & General Investment Management
America

Benjamin Allen
Chief Executive Officer
Parnassus Investments

Joseph F. Keefe
President
Pax World Funds

Maureen O'Brien
Vice President and Corporate Governance
Director
Segal Marco Advisors

Donna F. Anderson
Head of Corporate Governance
T. Rowe Price

Allison Bennington
Partner and Chief Global Relations Officer
ValueAct Capital

A. Carolina San Martin
Managing Director and Director, ESG
Research
Wellington Management

Marilyn Llanes
Chair
Adrian Dominican Sisters, Portfolio
Advisory Board

Joshua Brockwell
Investment Communications Director
Azzad Asset Management

Sr. Susan Mika OSB
Benedictine Coalition for Responsible
Investment

Jerry Judd
Senior Vice President & Treasurer
Bon Secours Mercy Health

Lauren Compere
Managing Director
Boston Common Asset Management

Tim Smith
Director of ESG Shareowner Engagement
Boston Trust Walden

Colleen Scanlon
Executive Vice President & Chief Advocacy
Officer
Catholic Health Initiatives

John Chevedden

John Geissinger
Chief Investment Officer
Christian Brothers Investment Services, Inc.

Karen Watson
Chief Investment Officer
Congregation of St. Joseph

Erika Karp
Founder and Chief Executive Officer
Cornerstone Capital Group

John J. Jesse III
Associate Vice President for Finance
Creighton University

Sister Teresa George
Provincial Treasurer
Daughters of Charity, Province of St. Louise

Mary Ellen Leciejewski, OP
Vice President, Corporate Responsibility
Dignity Health

Corey Klemmer
Director of Engagement
Domini Impact Investments LLC

Edward R. Doughty
Managing Director
Epic Capital Wealth Management

Holly A. Testa
Director, Shareowner Engagement
First Affirmative Financial Network

Jeffery W. Perkins
Executive Director
Friends Fiduciary Corporation

Janet M. Brown
Chief Executive Officer
FundX Investment Group

Leslie Samuelrich
President
Green Century Capital Management

John Harrington
President & Chief Executive Officer
Harrington Investments

Mary Vaccari
Programs Coordinator
Interfaith Center on Corporate
Responsibility

Christine Jantz
Chief Executive Officer
Jantz Management LLC

Ted Penton, SJ
Secretary of the Office of Justice and
Ecology
Jesuit Committee on Investment
Responsibility

Mary Baudouin
Provincial Assistant for Social Ministries
Jesuits of the US Central and Southern
Province

Nick Napolitano
Provincial Assistant for Social Ministries
Maryland Province of the Society of Jesus
(Jesuits)

Susan Makos
Vice President and Corporate Governance
Director
Mercy Investment Services, Inc.

Michael Kramer
Managing Partner
Natural Investments

Mari Schwartzer
Director of Shareholder Activism and
Engagement
NorthStar Asset Management, Inc.

Judy Byron
Director
Northwest Coalition for Responsible
Investment

Diana Kearney
Legal and Shareholder Advocacy Advisor
Oxfam America

Chris Fowle
Director of Americas
PRI

Bartlett Collins Naylor
Financial policy advocate
Public Citizen

Sanford Lewis
Director
Shareholder Rights Group

Heidi Welsh
Executive Director
Sustainable Investments Institute (Si2)

Jennifer N. Coombs
Associate Professor
The College for Financial Planning

N. Kurt Barnes
Treasurer & CFO
The Episcopal Church (DFMS)

W. Andrew Mims
Partner and Trustee
The Sustainability Group of Loring, Wolcott
& Coolidge

Jonas Kron
Senior Vice President
Trillium Asset Management, LLC

Katie McCloskey
Director, Social Responsibility
United Church Funds

John Sealey
Provincial Asst. Social and International
Ministries
USA Midwest Province of the Society of
Jesus (Jesuits)

Lisa Woll
Chief Executive Officer
US SIF

Patricia Farrar-Rivas
Chief Executive Officer
Veris Wealth Partners

Sarah Adams
Chief Sustainability Officer
Vert Asset Management


Pat Miguel Tomaino
Director of Socially Responsible Investing
Zevin Asset Management

CC: The Honorable Robert J. Jackson, Jr., Commissioner
The Honorable Allison Herren Lee, Commissioner
The Honorable Hester M. Peirce, Commissioner
The Honorable Elad L. Roisman, Commissioner
Dalia Osman Blass, Director, Division of Investment Management
William H. Hinman, Director, Division of Corporation Finance
Rick Fleming, Investor Advocate

FOR INFORMATION ONLY

November 25, 2019

TO: Insurance, Benefits and Legislative Committee
Les Robbins, Chair
Shawn R. Kehoe, Vice Chair
Vivian H. Gray
Ronald A. Okum
J.P. Harris, Alternate

FROM: Barry W. Lew 
Legislative Affairs Officer

FOR: December 12, 2019 Insurance, Benefits and Legislative Committee Meeting

SUBJECT: **Semi-Annual Report on Approved Engagements**

LEGAL AUTHORITY

The Board of Retirement's Policy on Engagement for Public Policy Issues Relating to Plan Administration and Retirement and Health Care Benefits provides that staff will present semi-annual reports to the Insurance, Benefits and Legislative Committee each year as to the status of all approved engagements.

DISCUSSION

At the Insurance, Benefits and Legislative Committee meeting on June 13, 2019, staff previously reported three engagements in the first half of 2019 that included visits to Congress on January 29-30, 2019 and May 22-23, 2019 and to the California State Legislature on March 26, 2019.

For the second half of 2019, staff and LACERA's legislative advocate, Anthony J. Roda of Williams & Jensen, were able to arrange for Representative Judy Chu to visit LACERA on July 3, 2019 at a joint Board meeting. Ms. Chu represents the 27th Congressional District, in which LACERA is located, and is also a member of the House Ways & Means Committee, which has jurisdiction over Social Security and Medicare. Ms. Chu provided updates on several topics of interest to LACERA and its members: the Social Security Fairness Act, the Affordable Care Act's excise tax, the Setting Every Community Up for Retirement Enhancement Act, early Medicare buy-in for first responders, Medicare expansion, and prescription drug pricing. LACERA has fostered a strong relationship with Ms. Chu and will continue engaging with her.

With regard to pending engagements, on November 6, 2019 and November 20, 2019, the Board of Retirement and Board of Investments respectively approved a visit with Congress by board members and staff following the National Conference on Public

Employee Retirement Systems 2020 Legislative Conference on January 26-28, 2020.
Staff will provide a further update after the first half of 2020.

Reviewed and Approved:




Steven P. Rice, Chief Counsel

cc: Board of Investments
Santos H. Kreimann
JJ Popowich
Steven P. Rice
Jon Grabel
Anthony J. Roda, Williams & Jensen
Joe Ackler, Ackler & Associates

FOR INFORMATION ONLY

November 27, 2019

TO: Each Member
Board of Investments

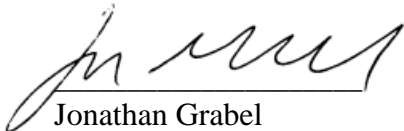
FROM: Jude Perez 
Principal Investment Officer

FOR: December 11, 2019 BOARD OF INVESTMENTS MEETING

SUBJECT: **LACERA QUARTERLY PERFORMANCE BOOK**

Attached is LACERA's quarterly performance book as of September 30, 2019.

Noted and Reviewed



Jonathan Grabel
Chief Investment Officer

Attachments

EdB:JP



PERFORMANCE *REVIEW*

AS OF SEPTEMBER 30, 2019



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for the quarter ended September 30, 2019



TOTAL FUND PERFORMANCE

The Total fund returned 0.7% in the third quarter, underperforming its policy benchmark by 60 basis points (bps). For the quarter, non-U.S. equity, opportunistic real estate, natural resources/commodities, and diversified hedge funds were the asset categories that generated positive excess returns.

LACERA's Growth composite returned 0.9% for the quarter, trailing its benchmark by 10 bps. Within Growth, global equity and opportunistic real estate outpaced the benchmark while private equity underperformed. As a reminder, the private equity benchmark shifted last quarter, transitioning from a rolling to a trailing calculation. Therefore, return dispersion between the composite and benchmark are exacerbated due to a continued outperformance of public market equity returns versus private market equity returns.

LACERA's Credit composite returned 0.7% for the quarter and lagged its benchmark by 120 bps. As was the case for the second quarter, of the four sub-components in Credit, only bank loans outperformed. High yield, emerging markets debt, and illiquid credit lagged their respective benchmarks.

LACERA's Real Asset and Inflation Hedges composite returned -1.1% for the quarter, underperforming its benchmark by 130 bps. Three of the four sub-composites within Real Asset and Inflation Hedges underperformed: Natural resources & commodities surpassed the index by 90 bps; while core & value added real estate, infrastructure, and TIPS lagged their respective benchmarks.

LACERA's Risk Reduction and Mitigation composite matched its benchmark, as both returned 2.1% for the quarter. The diversified hedge fund sub-composite outperformed, and both investment grade bonds and cash were flat versus their index.

Note on 3Q2019 real estate performance:

Market values and returns for the quarter reflect reported numbers from the Townsend Group (Townsend). Historical real estate valuations are currently under review; therefore, real estate and total fund composites and benchmarks reflect best available figures.

NET-OF-FEES

| | <u>1 Month</u> | <u>3 Month</u> | <u>FYTD</u> |
|---|----------------|----------------|-------------|
| Growth | 2.0 | 0.9 | 0.9 |
| Growth Custom BM | 3.2 | 1.1 | 1.1 |
| Credit | 0.2 | 0.7 | 0.7 |
| Credit Custom BM | 0.8 | 1.9 | 1.9 |
| Real Assets & Inflation Hedges | -0.5 | -1.1 | -1.1 |
| Real Assets & Inflation Hedges Custom BM | 0.5 | 0.3 | 0.3 |
| Risk Reduction & Mitigation | -0.4 | 2.1 | 2.1 |
| Risk Reduction & Mitigation Custom BM | -0.4 | 2.1 | 2.1 |

| | <u>Qtr</u> | <u>FYTD</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|----------------------|------------|-------------|-------------|--------------|--------------|---------------|
| Total Fund * | 0.7 | 0.7 | 4.4 | 8.3 | 6.8 | 8.2 |
| Total Fund Custom BM | 1.3 | 1.3 | 7.3 | 8.5 | 7.2 | 8.0 |

Fiscal Year Returns

| | <u>FYTD</u> | <u>Jun 30 2018</u> | <u>Jun 30 2017</u> | <u>Jun 30 2016</u> | <u>Jun 30 2015</u> |
|----------------------|-------------|--------------------|--------------------|--------------------|--------------------|
| Total Fund | 0.7 | 9.0 | 12.7 | 0.8 | 4.1 |
| Total Fund Custom BM | 1.3 | 7.8 | 11.2 | 2.2 | 4.5 |

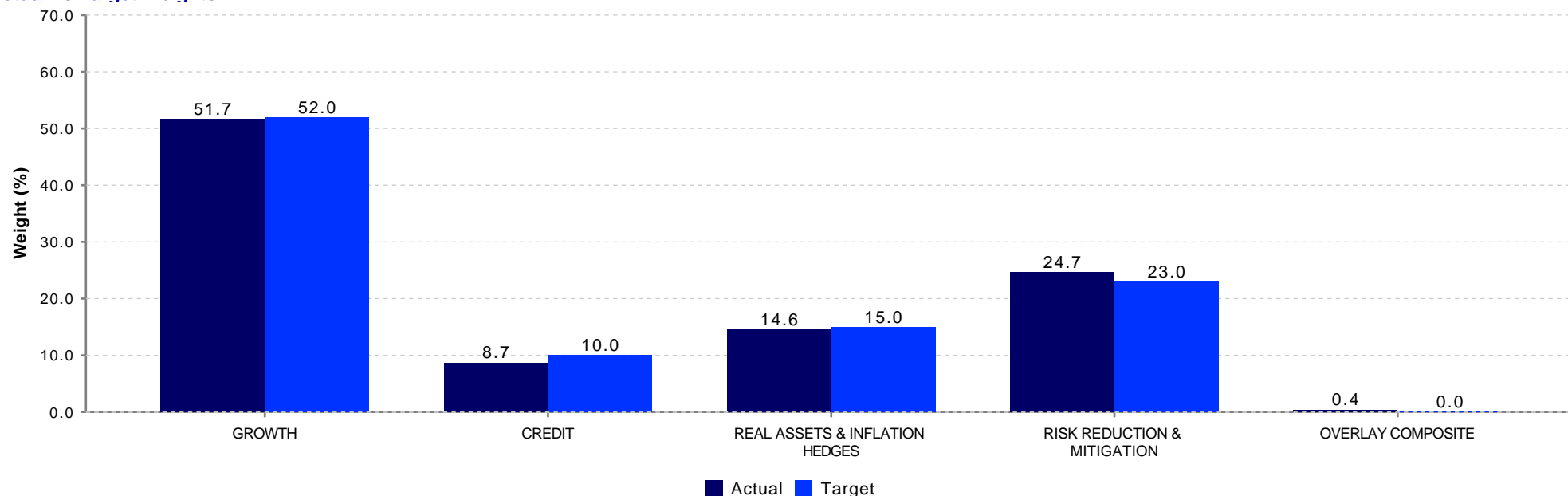
EXECUTIVE SUMMARY

ASSET ALLOCATION - ACTUAL vs. TARGET

for the quarter ended September 30, 2019



Actual vs Target Weights



| | Ending Market Value | Actual | Target | Relative | Min | Max |
|---|-----------------------|--------------|--------------|-------------|-------------|-------------|
| GROWTH | 30,194,576,523 | 51.7 | 52.0 | -0.3 | 45.0 | 59.0 |
| CREDIT | 5,055,821,915 | 8.7 | 10.0 | -1.3 | 7.0 | 13.0 |
| REAL ASSETS & INFLATION HEDGES | 8,533,506,855 | 14.6 | 15.0 | -0.4 | 12.0 | 18.0 |
| RISK REDUCTION & MITIGATION | 14,444,011,315 | 24.7 | 23.0 | 1.7 | 17.0 | 29.0 |
| OVERLAY COMPOSITE | 217,178,293 | 0.4 | 0.0 | 0.4 | 0.0 | 0.0 |
| Total Fund | 58,445,094,901 | 100.0 | 100.0 | 0.0 | | |

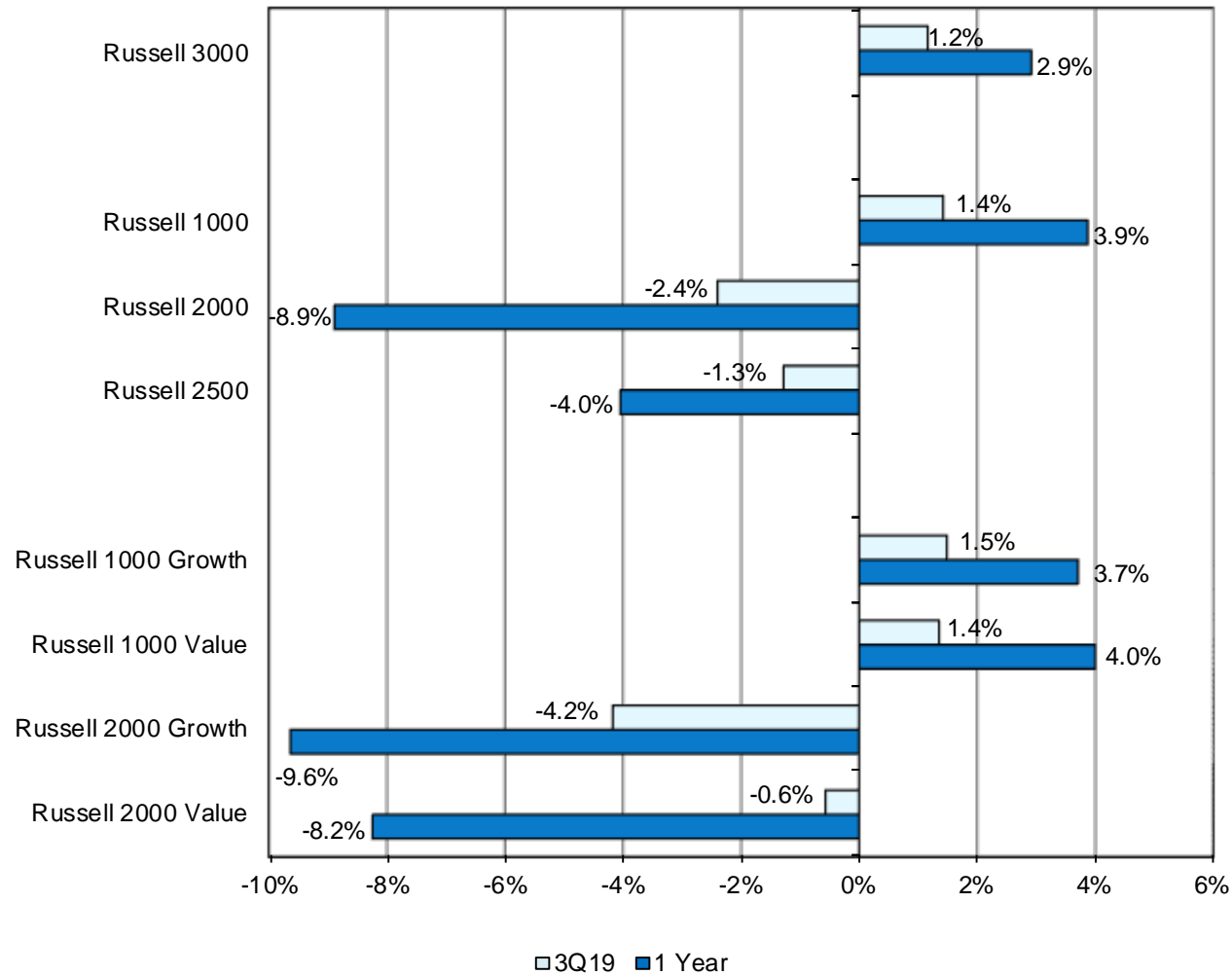
MARKET SUMMARY

for the quarter ended September 30, 2019



GROWTH

U.S. EQUITY INDEX RETURNS



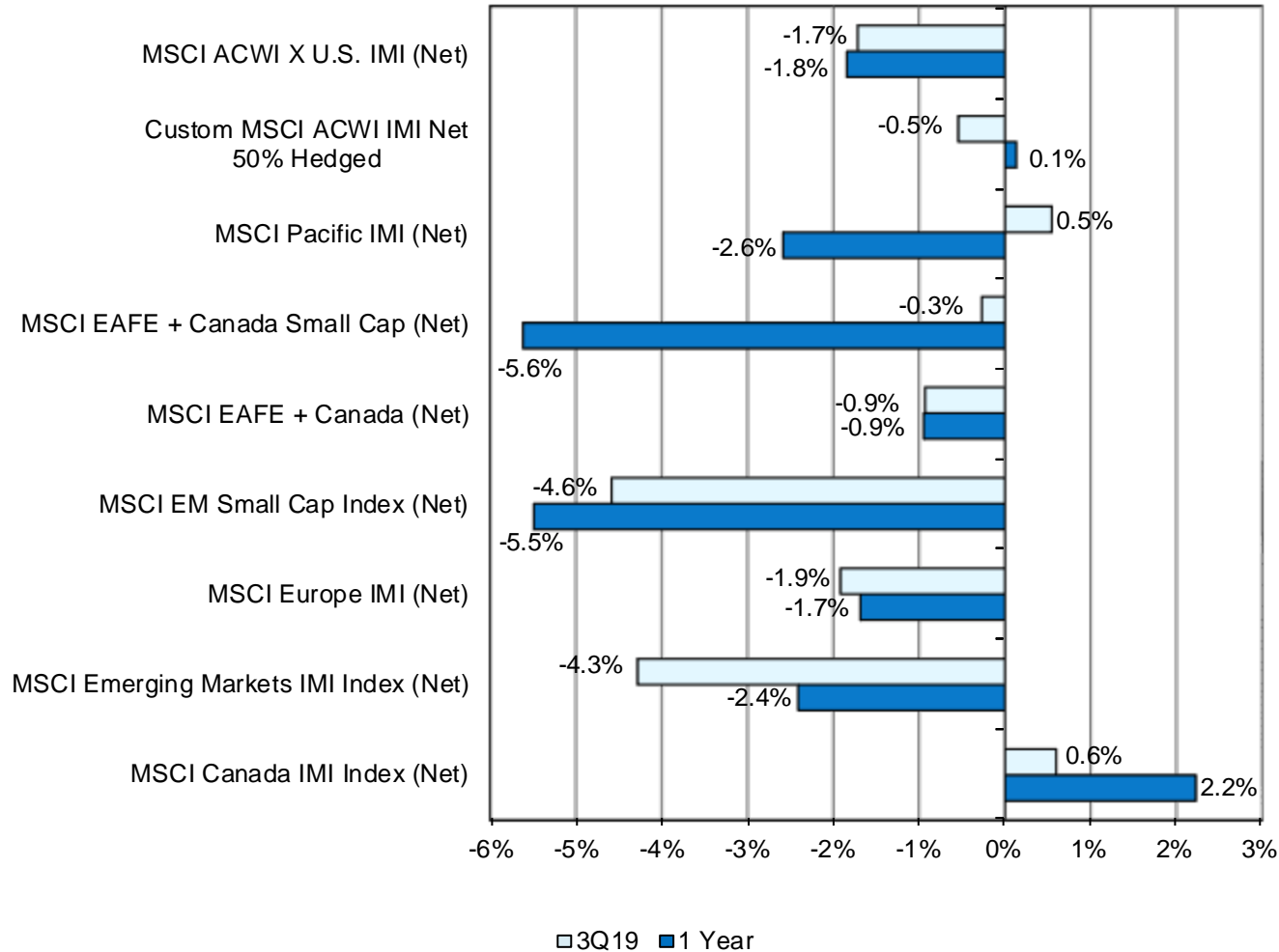
MARKET SUMMARY

for the quarter ended September 30, 2019



GROWTH

NON-U.S. EQUITY INDEX RETURNS

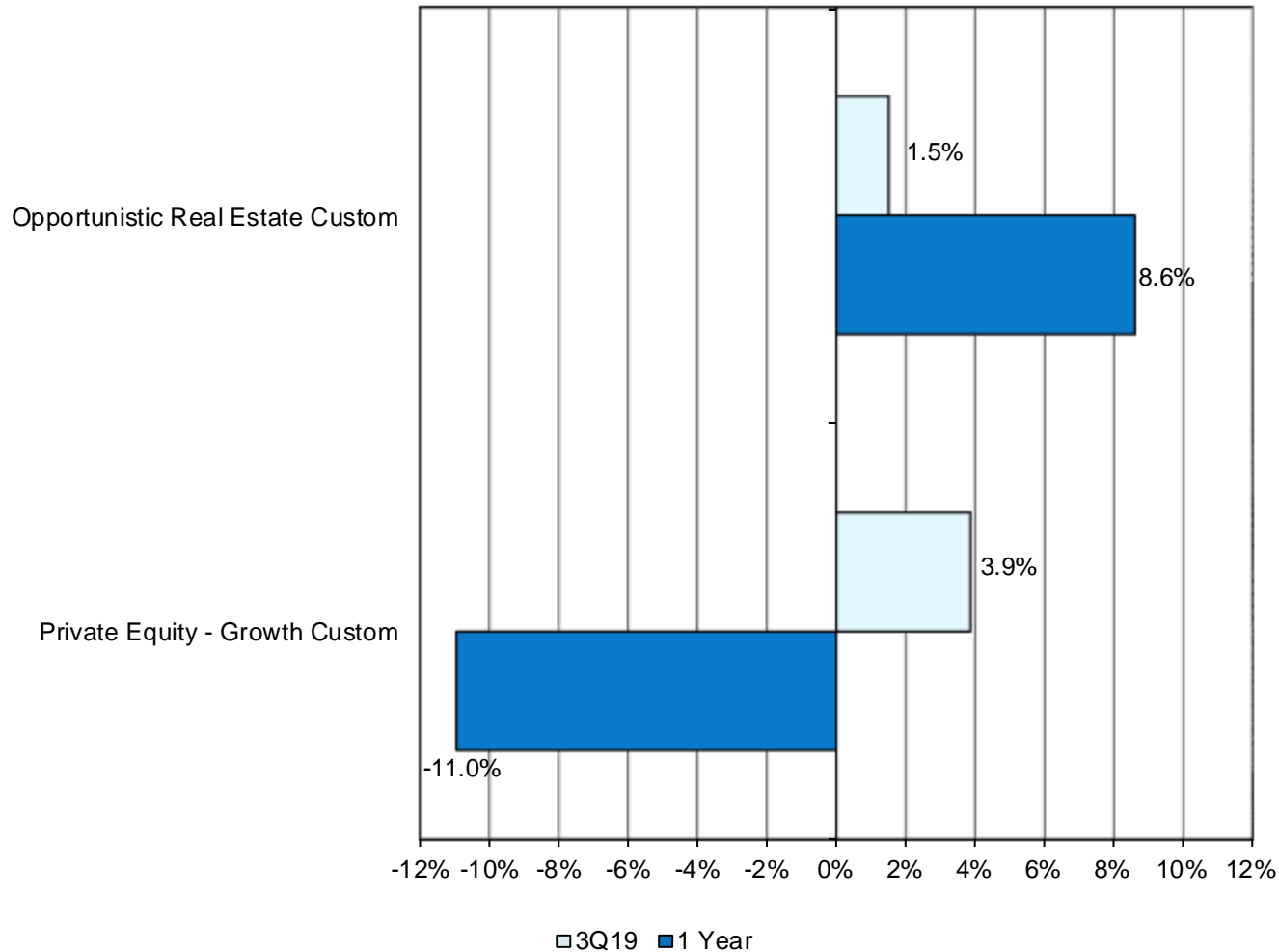


MARKET SUMMARY

for the quarter ended September 30, 2019



GROWTH PRIVATE EQUITY & OPPORTUNISTIC REAL ESTATE INDEX RETURNS

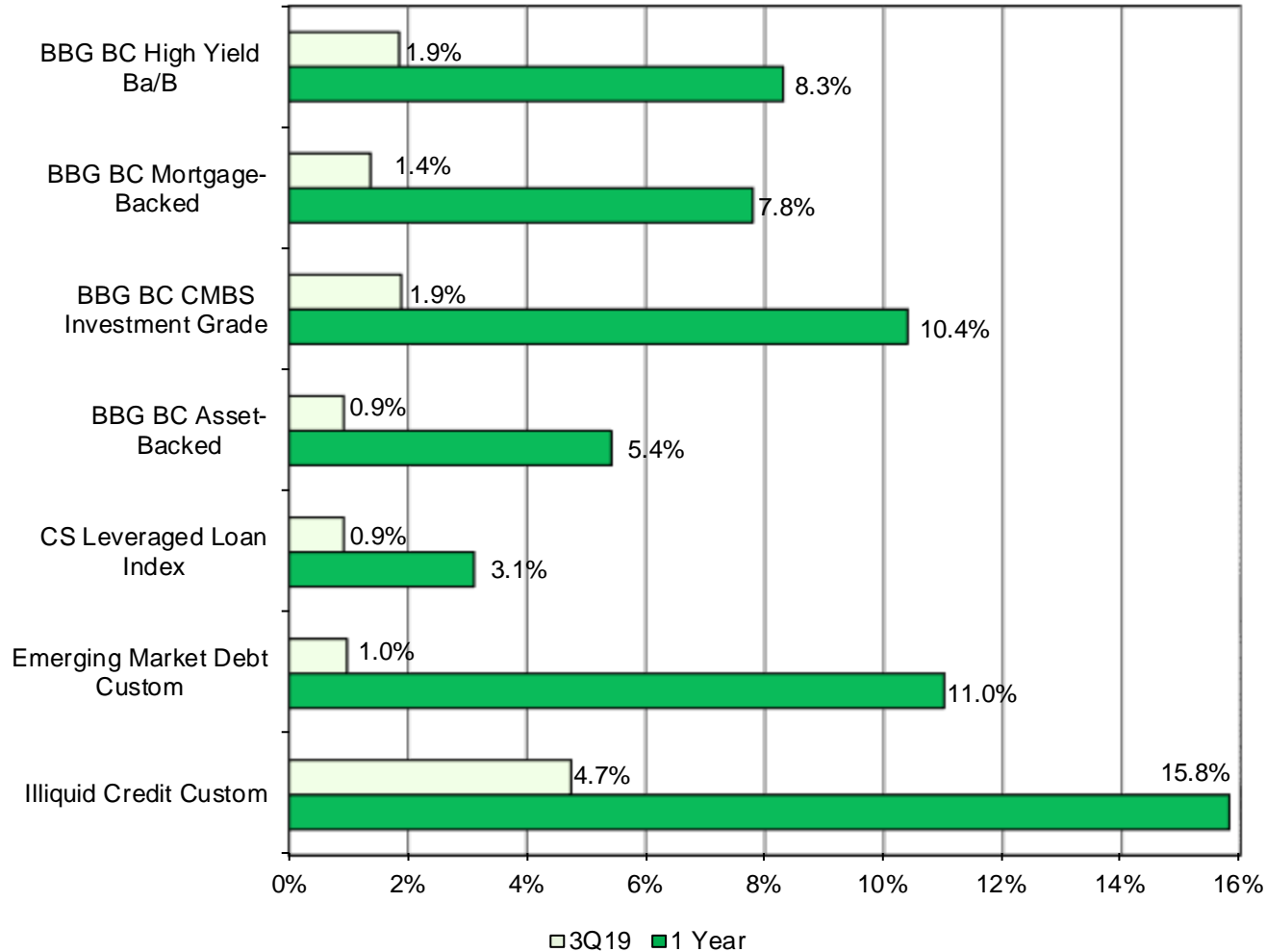


MARKET SUMMARY

for the quarter ended September 30, 2019



CREDIT INDEX RETURNS

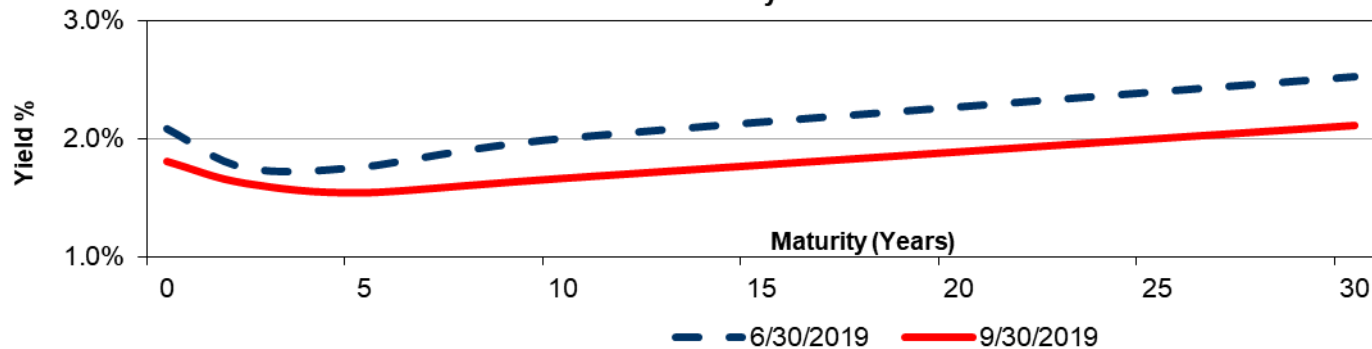


MARKET SUMMARY

for the quarter ended September 30, 2019

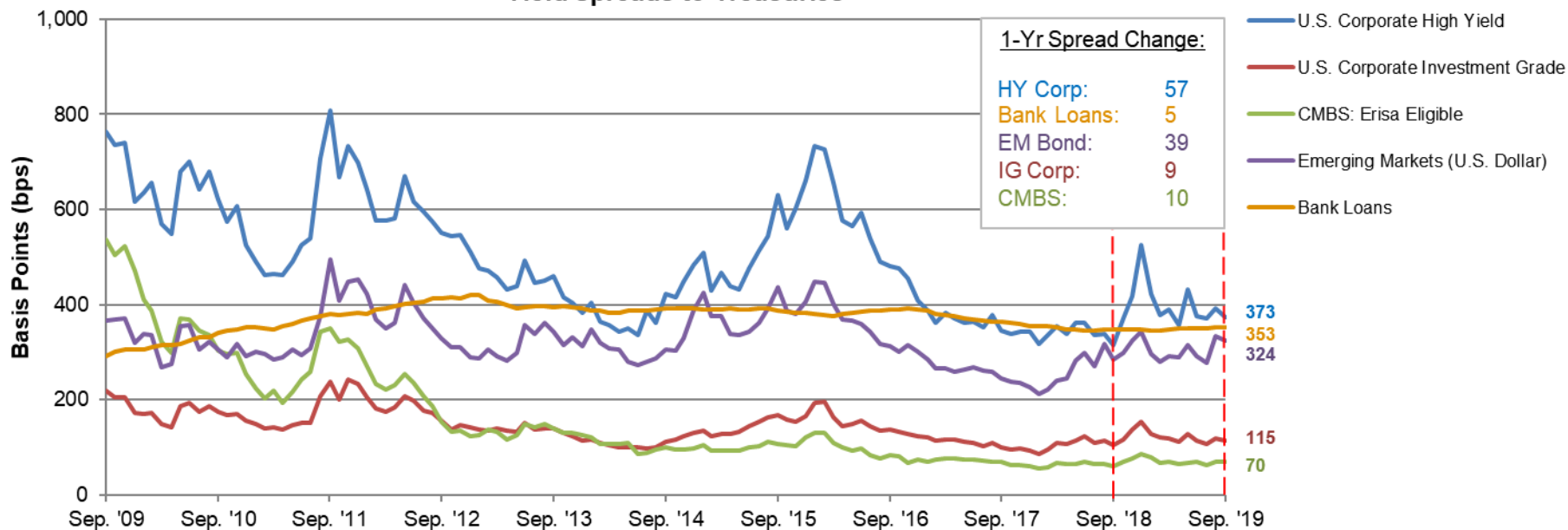


U.S. Treasury Yield Curve



| | 6/30/2019 | 9/30/2019 |
|----------|-----------|-----------|
| 3 months | 2.09% | 1.81% |
| 2 years | 1.76% | 1.62% |
| 5 years | 1.77% | 1.54% |
| 10 years | 2.01% | 1.67% |
| 30 years | 2.53% | 2.11% |

Yield Spreads to Treasuries



Source: Bloomberg Barclays

See Glossary for all custom benchmark definitions.

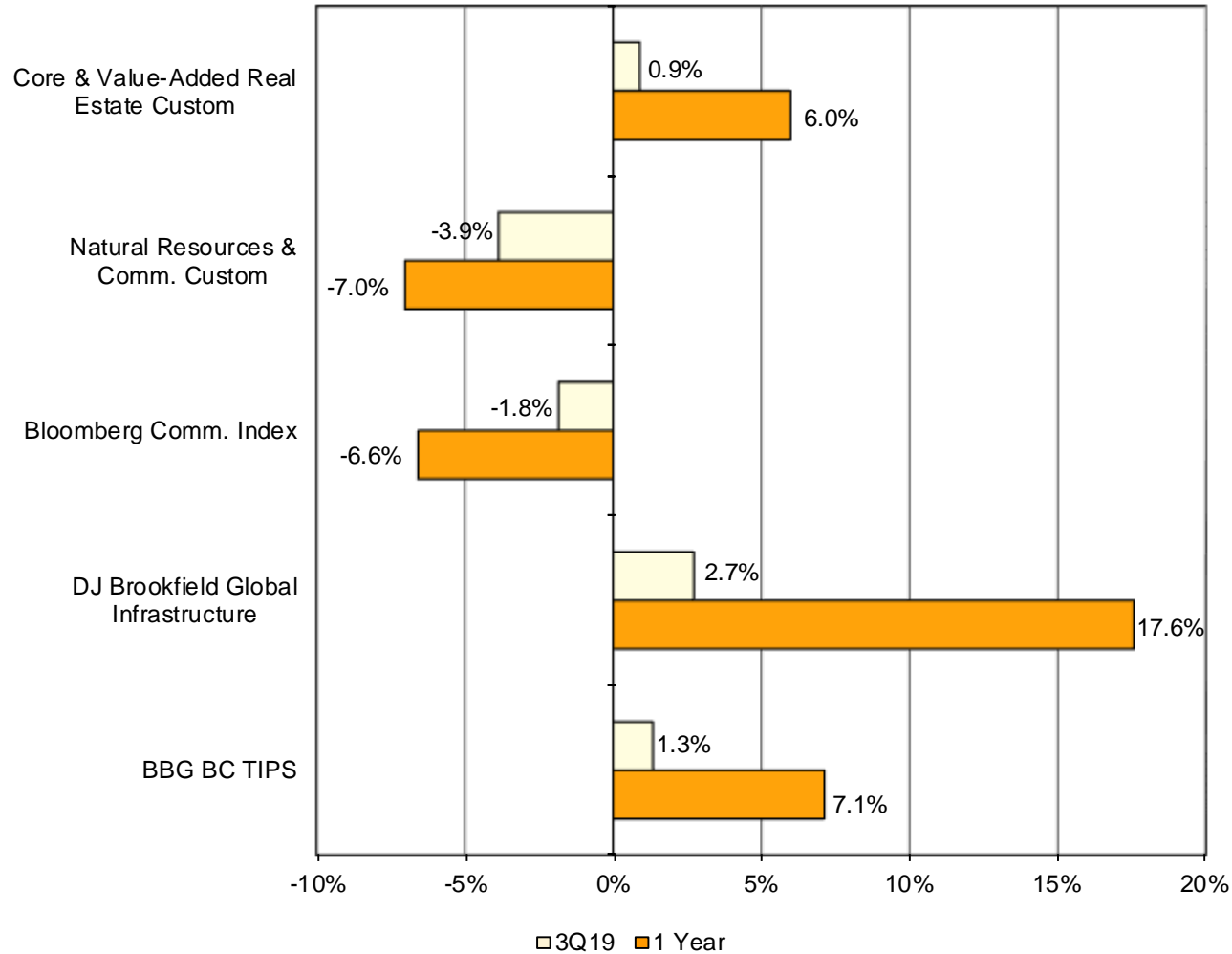
MARKET SUMMARY

for the quarter ended September 30, 2019



REAL ASSETS & INFLATION HEDGES

INDEX RETURNS

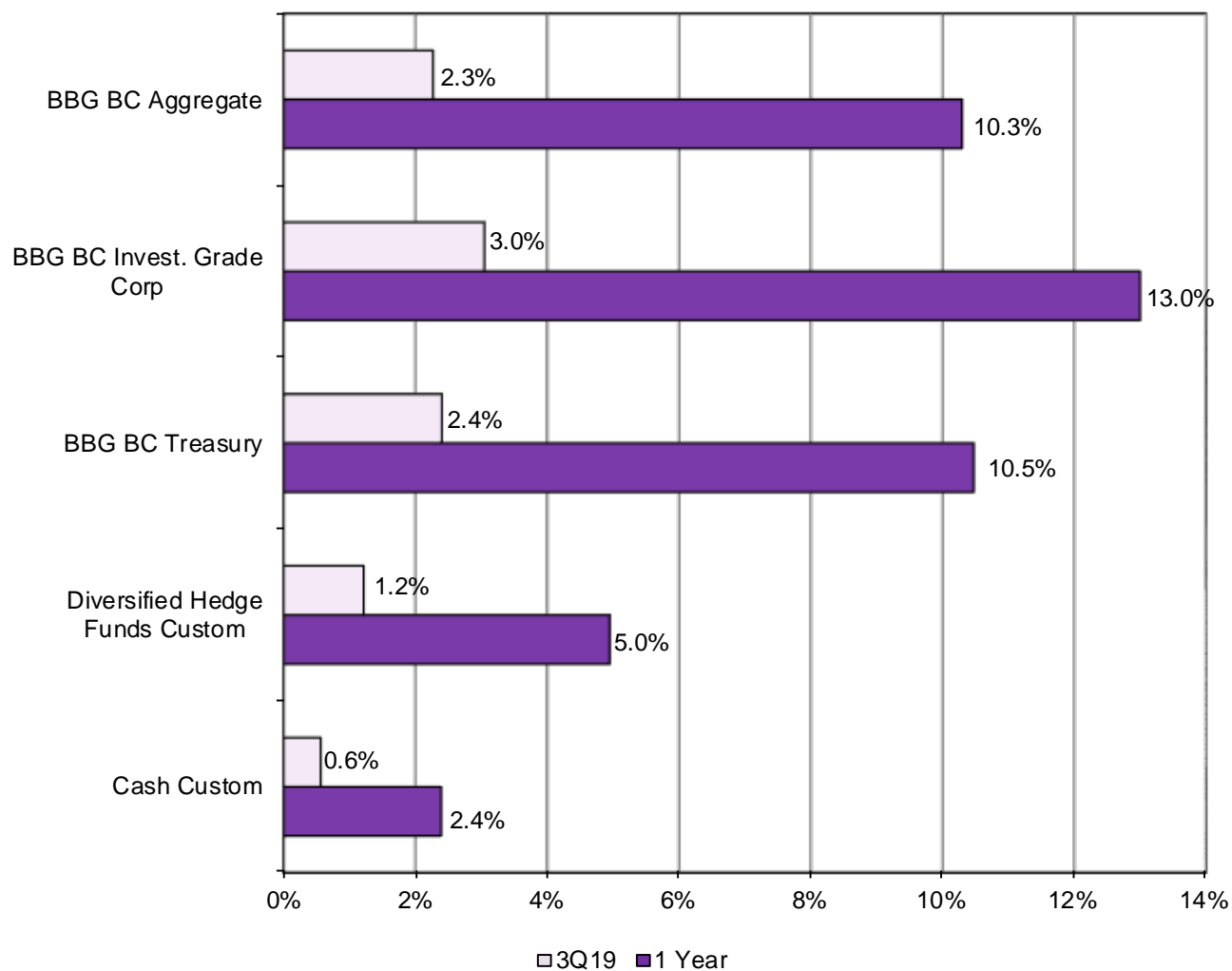


MARKET SUMMARY

for the quarter ended September 30, 2019



RISK REDUCTION & MITIGATION INDEX RETURNS



TOTAL FUND

ANNUALIZED & ANNUAL RETURNS

for the quarter ended September 30, 2019
Net-of-Fees



| FUNCTIONAL (After 4/1/2019) | Qtr End | CLASSICAL (Before 3/31/2019) | Qtr End | 1 Year | 3 Years | 5 Years | 10 Years |
|---|----------------|---------------------------------|-------------|---------------|----------------|----------------|-----------------|
| GROWTH | 0.9 | DOMESTIC EQUITY | 1.1 | 1.7 | 12.0 | 9.8 | 12.8 |
| Growth Custom BM | 1.1 | RUSSELL 3000 (DAILY) | 1.2 | 2.9 | 12.8 | 10.4 | 13.1 |
| | | NON-U.S. EQUITY w/ HEDGE | -0.5 | 0.8 | 8.2 | 5.1 | 6.0 |
| | | Custom MSCI ACWI IMI N 50% H | -0.5 | 0.1 | 7.5 | 4.6 | 5.7 |
| CREDIT | 0.7 | FIXED INCOME | 1.8 | 8.8 | 4.0 | 4.0 | 5.1 |
| Credit Custom BM | 1.9 | FI CUSTOM INDEX | 2.1 | 10.1 | 3.2 | 3.6 | 4.1 |
| | | BBG BC U.S. Universal | 2.1 | 10.1 | 3.2 | 3.6 | 4.1 |
| REAL ASSETS & INFLATION HEDGES | -1.1 | COMMODITIES COMPOSITE | -2.3 | -8.0 | -0.4 | -6.3 | -2.8 |
| Real Assets & Inflation Hedges Custom BM | 0.3 | Bloomberg Comm Index TR | -1.8 | -6.6 | -1.5 | -7.2 | -4.3 |
| | | CASH | 0.6 | 2.7 | 1.8 | 1.3 | 1.2 |
| RISK REDUCTION & MITIGATION | 2.1 | Cash Custom BM | 0.6 | 2.4 | 1.6 | 1.0 | 0.6 |
| Risk Reduction & Mitigation Custom BM | 2.1 | TOTAL HEDGE FUNDS** | 0.9 | 1.4 | 4.0 | 2.2 | |
| | | CUSTOM HEDGE FUND BM | 1.2 | 6.2 | 6.1 | 5.7 | |
| | | TOTAL REAL ESTATE | -0.8 | 4.9 | 7.0 | 8.6 | 7.5 |
| | | TOTAL REAL ESTATE BENCHMARK | 1.0 | 6.1 | 7.1 | 9.2 | 9.4 |
| | | PRIVATE EQUITY COMPOSITE | 3.0 | 12.4 | 16.1 | 13.0 | 15.5 |
| | | TOTAL PRIVATE EQUITY BENCHMARK | 3.9 | 27.0 | 17.9 | 16.0 | 12.9 |
| | Qtr End | | | 1 Year | 3 Years | 5 Years | 10 Years |
| TOTAL FUND* | 0.7 | | | 4.4 | 8.3 | 6.8 | 8.2 |
| Total Fund Custom BM | 1.3 | | | 7.3 | 8.5 | 7.2 | 8.0 |

See Glossary for all custom benchmark definitions.

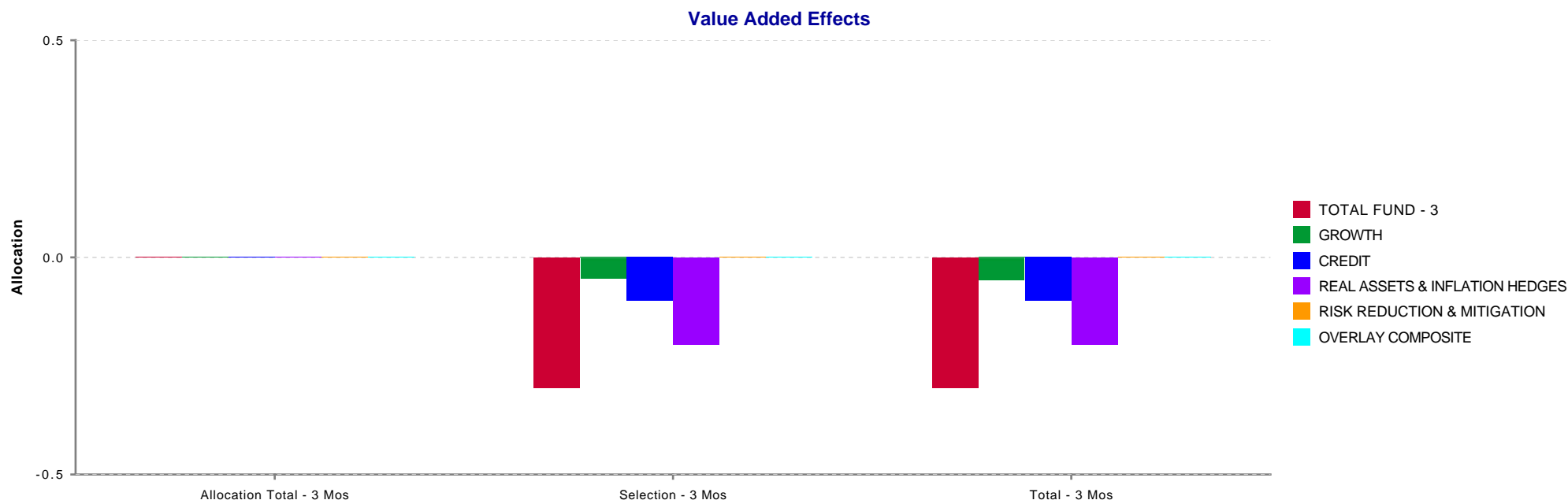
* Historical real estate valuations are currently under review; total fund/real estate composite and benchmark returns are preliminary.

** Hedge fund returns are reported on a net of all fees basis

TOTAL FUND ATTRIBUTION

TOTAL FUND vs. BENCHMARK

for the quarter ended September 30, 2019



| | Fund Weight | Target Weight | Relative | Fund Return | Benchmark Return | Return Difference | Allocation Effect* | Selection Effect** | BM Impact | Residual | Total Value Add |
|--------------------------------|-------------|---------------|----------|-------------|------------------|-------------------|--------------------|--------------------|-----------|----------|-----------------|
| TOTAL FUND - 3 | 100.00 | 100.00 | 0.00 | 0.73 | 1.28 | -0.55 | -0.02 | -0.31 | 0.00 | -0.22 | -0.33 |
| GROWTH | 51.66 | 52.00 | -0.34 | 1.01 | 1.05 | -0.04 | -0.01 | -0.04 | - | 0.00 | -0.05 |
| CREDIT | 8.65 | 10.00 | -1.35 | 0.89 | 1.85 | -0.96 | -0.01 | -0.08 | - | 0.00 | -0.09 |
| REAL ASSETS & INFLATION HEDGES | 14.60 | 15.00 | -0.40 | -1.06 | 0.26 | -1.31 | 0.00 | -0.20 | - | 0.00 | -0.20 |
| RISK REDUCTION & MITIGATION | 24.71 | 23.00 | 1.71 | 2.07 | 2.06 | 0.01 | -0.01 | 0.00 | - | 0.00 | -0.01 |
| OVERLAY COMPOSITE | 0.37 | 0.00 | 0.37 | | | | | | | | |

Historical real estate valuations are currently under review; total fund/real estate composite and benchmark returns are preliminary.

* Allocation effect reflects the asset class over or underweight (versus the policy weight) multiplied by the difference between the asset class benchmark and the Fund Policy benchmark return.

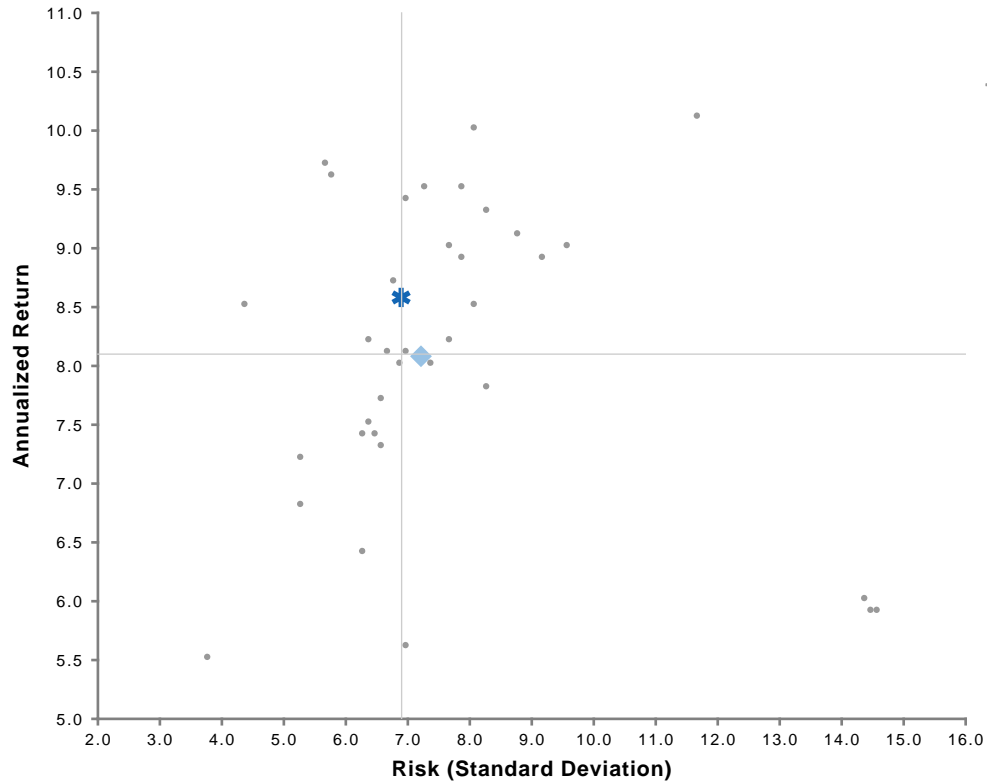
** Selection effect reflects the Fund's asset class return minus the asset class benchmark return, multiplied by the asset class weight.

TOTAL FUND RISK-ADJUSTED RETURN

for the quarter ended September 30, 2019



10 Year Risk vs Return



| | Rate of Return 10 Years | Standard Deviation 10 Years |
|------------------------|----------------------------|--------------------------------|
| * TOTAL FUND - 3 | 8.5 45 | 6.8 41 |
| ◆ Total Fund Custom BM | 8.0 61 | 6.6 52 |
| 5th Percentile | 10.0 | 4.1 |
| 25th Percentile | 9.1 | 6.3 |
| 50th Percentile | 8.1 | 6.9 |
| 75th Percentile | 7.3 | 8.1 |
| 95th Percentile | 5.6 | 14.4 |
| Number of Observations | 36 | 36 |

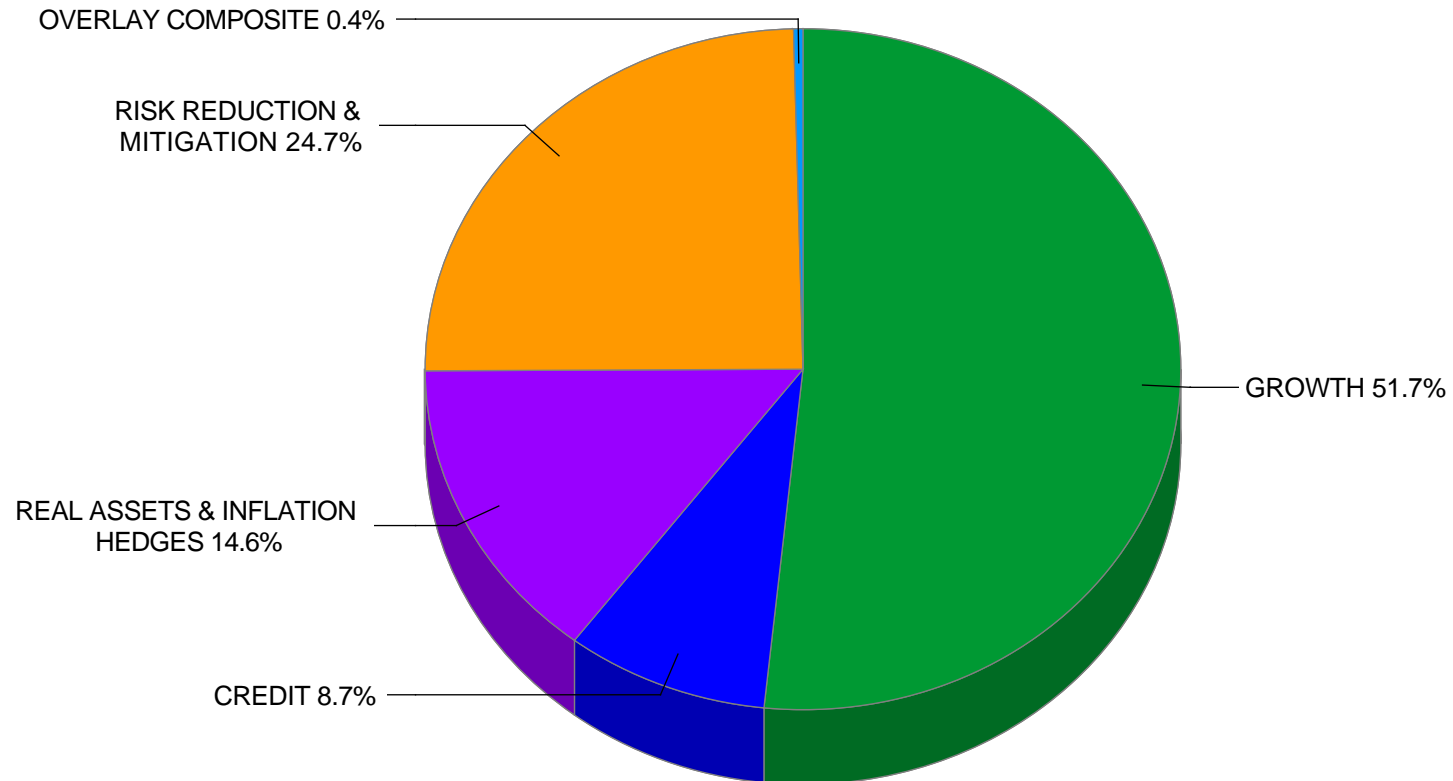
◆ TOTAL FUND - 3 ◆ Total Fund Custom BM

| | <u>Rate of Return 10 Years</u> | <u>Standard Deviation 10 Years</u> | <u>Tracking Error 10 Years</u> |
|---|--------------------------------|------------------------------------|--------------------------------|
| Public Funds (DB) > \$1 Billion | | | |
| TOTAL FUND | 8.5 45 | 6.8 41 | 0.9 |
| Total Fund Custom BM | 8.0 61 | 6.6 52 | |

Historical real estate valuations are currently under review; total fund/real estate composite and benchmark returns are preliminary.

ASSET ALLOCATION TOTAL FUND

for the quarter ended September 30, 2019



ASSET ALLOCATION GROWTH

for the quarter ended September 30, 2019



September 30, 2019

June 30, 2019

| | Assets (\$ millions) | % of Composite | | Assets (\$ millions) | % of Composite |
|--------------------------------------|-------------------------|-------------------|--------------------------------------|-------------------------|-------------------|
| GLOBAL EQUITY | | | GLOBAL EQUITY | | |
| PASSIVE | | | PASSIVE | | |
| BTC Russell 3000 Index | 11,255.8 | 37.3 | BTC Russell 3000 Index | 11,666.7 | 37.3 |
| TOTAL PASSIVE U.S. EQUITY | 11,255.8 | 37.3 | TOTAL PASSIVE U.S. EQUITY | 11,666.7 | 37.3 |
| | | | | | |
| BTC CANADA IMI | 744.9 | 2.5 | BTC CANADA IMI | 738.8 | 2.4 |
| BTC EAFE IMI | 4,231.5 | 14.0 | BTC EAFE IMI | 4,521.3 | 14.5 |
| BTC EAFE SMALL CAP | 94.9 | 0.3 | BTC EAFE SMALL CAP | 134.9 | 0.4 |
| BTC EMERGING MARKETS | 1,149.6 | 3.8 | BTC EMERGING MARKETS | 1,200.9 | 3.8 |
| BTC EMERGING MARKETS SMALL CAP | 55.8 | 0.2 | BTC EMERGING MARKETS SMALL CAP | 88.7 | 0.3 |
| BTC EUROPE INDEX | 202.2 | 0.7 | BTC EUROPE INDEX | 306.5 | 1.0 |
| TOTAL PASSIVE NON-U.S. EQUITY | 6,478.8 | 21.5 | TOTAL PASSIVE NON-U.S. EQUITY | 6,991.1 | 22.4 |
| | | | | | |
| ACTIVE | | | ACTIVE | | |
| CORNERCAP US SC - EMP | 57.8 | 0.2 | CORNERCAP US SC - EMP | 57.6 | 0.2 |
| EAGLE US SMID CORE | 227.9 | 0.8 | EAGLE US SMID CORE | 292.3 | 0.9 |
| FRONTIER US SMID GROWTH | 492.5 | 1.6 | FRONTIER US SMID GROWTH | 603.1 | 1.9 |
| JANA JSI FUND V - ACTIVIST | 101.7 | 0.3 | JANA JSI FUND V - ACTIVIST | 106.2 | 0.3 |
| MATARIN US SC - EMP | 109.0 | 0.4 | MATARIN US SC - EMP | 109.6 | 0.4 |
| QMA US SMALL CAP CORE | 265.9 | 0.9 | QMA US SMALL CAP CORE | 268.5 | 0.9 |
| SYSTEMATIC US SMALL CAP VALUE | 233.0 | 0.8 | SYSTEMATIC US SMALL CAP VALUE | 232.8 | 0.7 |
| TOTAL ACTIVE U.S. EQUITY | 1,487.9 | 4.9 | TOTAL ACTIVE U.S. EQUITY | 1,672.5 | 5.4 |

ASSET ALLOCATION GROWTH

for the quarter ended September 30, 2019



September 30, 2019

June 30, 2019

| | Assets (\$ millions) | % of Composite | | Assets (\$ millions) | % of Composite |
|--|-------------------------|-------------------|--|-------------------------|-------------------|
| ACTIVE DEVELOPED MARKETS | | | ACTIVE DEVELOPED MARKETS | | |
| ACADIAN DEVELOPED MARKETS | 706.2 | 2.3 | ACADIAN DEVELOPED MARKETS | 768.1 | 2.5 |
| BTC EURO TILTS | 824.7 | 2.7 | BTC EURO TILTS | 988.7 | 3.2 |
| CAPITAL GROUP DEVELOPED MARKETS | 406.4 | 1.3 | CAPITAL GROUP DEVELOPED MARKETS | 406.9 | 1.3 |
| CEVIAN CAPITAL II - ACTIVIST | 288.9 | 1.0 | CEVIAN CAPITAL II - ACTIVIST | 293.5 | 0.9 |
| GLOBAL ALPHA IE SC - EMP | 171.2 | 0.6 | GLOBAL ALPHA IE SC - EMP | 173.3 | 0.6 |
| SYMPHONY FINANCIAL - ACTIVIST | 170.1 | 0.6 | SYMPHONY FINANCIAL - ACTIVIST | 161.8 | 0.5 |
| ACTIVE EMERGING MARKETS | | | ACTIVE EMERGING MARKETS | | |
| ACADIAN EMERGING MARKETS | 273.9 | 0.9 | ACADIAN EMERGING MARKETS | 306.2 | 1.0 |
| AQR EMERGING MARKETS | 202.1 | 0.7 | AQR EMERGING MARKETS | 243.2 | 0.8 |
| GENESIS EMERGING MARKETS | 703.5 | 2.3 | GENESIS EMERGING MARKETS | 712.4 | 2.3 |
| LAZARD EMERGING MARKETS | 347.8 | 1.2 | LAZARD EMERGING MARKETS | 360.7 | 1.2 |
| CURRENCY HEDGE GAIN/LOSS | 70.7 | 0.2 | CURRENCY HEDGE GAIN/LOSS | -35.1 | -0.1 |
| TOTAL ACTIVE NON-U.S. EQUITY (HEDGED) | 4,165.5 | 13.8 | TOTAL ACTIVE NON-U.S. EQUITY (HEDGED) | 4,379.7 | 14.0 |
| TOTAL GLOBAL EQUITY | 23,388.1 | 77.5 | TOTAL GLOBAL EQUITY | 24,710.0 | 79.1 |

ASSET ALLOCATION GROWTH

for the quarter ended September 30, 2019



September 30, 2019

June 30, 2019

| | Assets (\$ millions) | % of Composite | | Assets (\$ millions) | % of Composite |
|----------------------------------|-------------------------|-------------------|----------------------------------|-------------------------|-------------------|
| PRIVATE EQUITY GROWTH | | | PRIVATE EQUITY GROWTH | | |
| PRIVATE EQUITY - GROWTH | 5,786.9 | 19.2 | PRIVATE EQUITY - GROWTH | 5,625.1 | 18.0 |
| OPPORTUNISTIC REAL ESTATE | | | OPPORTUNISTIC REAL ESTATE | | |
| OPPORTUNISTIC REAL ESTATE | 1,019.6 | 3.4 | OPPORTUNISTIC REAL ESTATE | 921.6 | 2.9 |
| TOTAL GROWTH | 30,194.6 | 100.0 | TOTAL GROWTH | 31,256.7 | 100.0 |

ASSET ALLOCATION CREDIT

for the quarter ended September 30, 2019



| | <i>September 30, 2019</i> | | | <i>June 30, 2019</i> | |
|-------------------------|---------------------------|-------------------|-------------------------|-------------------------|-------------------|
| | Assets (\$ millions) | % of Composite | | Assets (\$ millions) | % of Composite |
| HIGH YIELD | | | HIGH YIELD | | |
| BAIN CAPITAL CREDIT | 371.7 | 7.4 | BAIN CAPITAL CREDIT | 370.7 | 7.3 |
| BEACH POINT | 255.4 | 5.1 | BEACH POINT | 260.5 | 5.1 |
| BRIGADE CAP MGMT | 584.2 | 11.6 | BRIGADE CAP MGMT | 587.0 | 11.5 |
| DOUBLELINE CAPITAL | 345.7 | 6.8 | DOUBLELINE CAPITAL | 339.3 | 6.7 |
| OAKTREE CAPITAL | 446.1 | 8.8 | OAKTREE CAPITAL | 437.0 | 8.6 |
| TCW | 343.6 | 6.8 | TCW | 339.4 | 6.7 |
| TOTAL HIGH YIELD | 2,346.6 | 46.4 | TOTAL HIGH YIELD | 2,334.5 | 45.9 |
| BANK LOANS | | | BANK LOANS | | |
| CRESCENT CAPITAL | 445.8 | 8.8 | CRESCENT CAPITAL | 440.5 | 8.7 |
| TENNENBAUM CAPITAL | 471.1 | 9.3 | TENNENBAUM CAPITAL | 434.3 | 8.5 |
| TOTAL BANK LOANS | 916.9 | 18.1 | TOTAL BANK LOANS | 874.9 | 17.2 |

ASSET ALLOCATION CREDIT

for the quarter ended September 30, 2019



September 30, 2019

June 30, 2019

| | Assets (\$ millions) | % of Composite | | Assets (\$ millions) | % of Composite |
|-----------------------------------|-------------------------|-------------------|-----------------------------------|-------------------------|-------------------|
| EMERGING MARKET DEBT | | | EMERGING MARKET DEBT | | |
| ABERDEEN ASSET MANAGEMENT | 427.4 | 8.5 | ABERDEEN ASSET MANAGEMENT | 423.5 | 8.3 |
| ASHMORE INVESTMENT MANAGEMENT | 416.9 | 8.2 | ASHMORE INVESTMENT MANAGEMENT | 429.4 | 8.4 |
| TOTAL EMERGING MARKET DEBT | 844.3 | 16.7 | TOTAL EMERGING MARKET DEBT | 852.9 | 16.8 |
| ILLIQUID CREDIT | | | ILLIQUID CREDIT | | |
| BEACH POINT - FUND II | 37.0 | 0.7 | BEACH POINT - FUND II | 41.5 | 0.8 |
| BEACH POINT - FUND III | 189.1 | 3.7 | BEACH POINT - FUND III | 170.0 | 3.3 |
| GROSVENOR OPCRD 2 HFOF | 358.4 | 7.1 | GROSVENOR OPCRD 2 HFOF | 360.4 | 7.1 |
| PRIVATE EQUITY- CREDIT | 158.7 | 3.1 | PRIVATE EQUITY- CREDIT | 152.9 | 3.0 |
| REAL ESTATE- CREDIT | 203.5 | 4.0 | REAL ESTATE- CREDIT | 301.3 | 5.9 |
| TOTAL ILLIQUID CREDIT | 946.7 | 18.7 | TOTAL ILLIQUID CREDIT | 1,026.1 | 20.2 |
| TOTAL CREDIT | 5,055.8 | 100.0 | TOTAL CREDIT | 5,089.5 | 100.0 |

ASSET ALLOCATION

REAL ASSETS & INFLATION HEDGES

for the quarter ended September 30, 2019



September 30, 2019

June 30, 2019

| | Assets (\$ millions) | % of Composite | | Assets (\$ millions) | % of Composite |
|--|-------------------------|-------------------|--|-------------------------|-------------------|
| CORE & VALUE-ADDED REAL ESTATE | | | CORE & VALUE-ADDED REAL ESTATE | | |
| CORE & VALUE-ADDED REAL ESTATE | 4,982.2 | 58.4 | CORE & VALUE-ADDED REAL ESTATE | 5,355.5 | 63.6 |
| NATURAL RESOURCES & COMMODITIES | | | NATURAL RESOURCES & COMMODITIES | | |
| CREDIT SUISSE COMMODITY | 414.8 | 4.9 | CREDIT SUISSE COMMODITY | 423.1 | 5.0 |
| DWS NATURAL RESOURCES | 476.1 | 5.6 | DWS NATURAL RESOURCES | 318.0 | 3.8 |
| NEUBERGER BERMAN/GRESHAM | 434.5 | 5.1 | NEUBERGER BERMAN/GRESHAM | 445.4 | 5.3 |
| PIMCO COMMODITY PLUS | 431.3 | 5.1 | PIMCO COMMODITY PLUS | 442.3 | 5.3 |
| PRIVATE EQUITY - REAL ASSETS | 109.4 | 1.3 | PRIVATE EQUITY - REAL ASSETS | 111.8 | 1.3 |
| TOTAL NATURAL RESOURCES & COMMODITIES | 1,866.1 | 21.9 | TOTAL NATURAL RESOURCES & COMMODITIES | 1,740.7 | 20.7 |
| INFRASTRUCTURE | | | INFRASTRUCTURE | | |
| DWS INFRASTRUCTURE | 1,166.4 | 13.7 | DWS INFRASTRUCTURE | 814.4 | 9.7 |
| TOTAL INFRASTRUCTURE | 1,166.4 | 13.7 | TOTAL INFRASTRUCTURE | 814.4 | 9.7 |
| TIPS | | | TIPS | | |
| BLACKROCK TIPS | 518.8 | 6.1 | BLACKROCK TIPS | 512.1 | 6.1 |
| TOTAL TIPS | 518.8 | 6.1 | TOTAL TIPS | 512.1 | 6.1 |
| TOTAL REAL ASSETS & INFLATION HEDGES | 8,533.5 | 100.0 | TOTAL REAL ASSETS & INFLATION HEDGES | 8,422.7 | 100.0 |

ASSET ALLOCATION RISK REDUCTION & MITIGATION

for the quarter ended September 30, 2019



September 30, 2019

| | Assets (\$ millions) | % of Composite |
|-------------------------------------|-------------------------|-------------------|
| INVESTMENT GRADE BONDS | | |
| BTC US DEBT INDEX FUND | 6,684.0 | 46.3 |
| MHLP | 26.3 | 0.2 |
| PUGH CAPITAL MGMT | 364.1 | 2.5 |
| WELLS CAPITAL | 1,579.8 | 10.9 |
| TOTAL CORE MANAGERS | 8,654.2 | 59.9 |
| | | |
| DODGE & COX | 1,080.9 | 7.5 |
| PIMCO | 870.5 | 6.0 |
| WESTERN ASSET MGMT. | 943.4 | 6.5 |
| TOTAL CORE PLUS MANAGERS | 2,894.8 | 20.0 |
| | | |
| TOTAL INVESTMENT GRADE BONDS | 11,548.9 | 80.0 |

June 30, 2019

| | Assets (\$ millions) | % of Composite |
|-------------------------------------|-------------------------|-------------------|
| INVESTMENT GRADE BONDS | | |
| BTC US DEBT INDEX FUND | 6,536.1 | 47.8 |
| MHLP | 26.9 | 0.2 |
| PUGH CAPITAL MGMT | 355.7 | 2.6 |
| WELLS CAPITAL | 1,544.4 | 11.3 |
| TOTAL CORE MANAGERS | 8,463.1 | 61.9 |
| | | |
| DODGE & COX | 1,182.3 | 8.6 |
| PIMCO | 929.3 | 6.8 |
| WESTERN ASSET MGMT. | 1,019.0 | 7.5 |
| TOTAL CORE PLUS MANAGERS | 3,130.6 | 22.9 |
| | | |
| TOTAL INVESTMENT GRADE BONDS | 11,597.7 | 84.8 |

ASSET ALLOCATION RISK REDUCTION & MITIGATION

for the quarter ended September 30, 2019



September 30, 2019

| | Assets (\$ millions) | % of Composite |
|--|-------------------------|-------------------|
| DIVERSIFIED HEDGE FUNDS | | |
| GROSVENOR HFOF | 485.9 | 3.4 |
| GSAM HFOF | 498.0 | 3.4 |
| AQR LEAP | 66.8 | 0.5 |
| CAPULA GRV | 204.9 | 1.4 |
| DK INSTITUTIONAL PARTNERS | 125.3 | 0.9 |
| HBK MULTI-STRATEGY | 130.4 | 0.9 |
| PIMCO TAC OPPS FUNDS | 182.4 | 1.3 |
| TOTAL DIVERSIFIED HEDGE FUNDS | 1,693.7 | 11.7 |
| CASH | | |
| CASH | 1,201.3 | 8.3 |
| TOTAL RISK REDUCTION & MITIGATION | 14,444.0 | 100.0 |

June 30, 2019

| | Assets (\$ millions) | % of Composite |
|--|-------------------------|-------------------|
| DIVERSIFIED HEDGE FUNDS | | |
| GROSVENOR HFOF | 482.9 | 3.5 |
| GSAM HFOF | 487.6 | 3.6 |
| LACERA HF DIRECT* | 574.8 | 4.2 |
| TOTAL DIVERSIFIED HEDGE FUNDS | 1,545.4 | 11.3 |
| CASH | | |
| CASH | 529.5 | 3.9 |
| TOTAL RISK REDUCTION & MITIGATION | 13,672.6 | 100.0 |

*The assets held in the LACERA HF DIRECT account were disaggregated effective July 2019

ANNUALIZED TOTAL RETURNS GROWTH

for the quarter ended September 30, 2019



| | <i>Gross-of-Fees</i> | | | | | | | <i>Net-of-Fees</i> | | | | | |
|---------------------------------------|--------------------------|-------------|-------------|--------------|--------------|---------------|---------------------------------------|--------------------------|-------------|-------------|--------------|--------------|---------------|
| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> | | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
| GLOBAL EQUITY | | | | | | | GLOBAL EQUITY | | | | | | |
| PASSIVE | | | | | | | PASSIVE | | | | | | |
| BTC RUSSELL 3000 | 11,255.8 | 1.2 | 3.0 | | | | BTC RUSSELL 3000 | 11,255.8 | 1.2 | 3.0 | | | |
| TOTAL PASSIVE U.S. EQUITY | 11,255.8 | 1.2 | | | | | TOTAL PASSIVE U.S. EQUITY | 11,255.8 | 1.2 | | | | |
| BTC CANADA IMI | 744.9 | 0.8 | 3.1 | 6.6 | 1.3 | 4.2 | BTC CANADA IMI | 744.9 | 0.8 | 3.1 | 6.6 | 1.3 | 4.2 |
| BTC EAFE IMI | 4,231.5 | -0.9 | -1.6 | 6.8 | 4.0 | 5.6 | BTC EAFE IMI | 4,231.5 | -0.9 | -1.7 | 6.8 | 4.0 | 5.6 |
| BTC EMERGING MARKETS | 1,149.6 | -4.3 | -2.1 | 5.9 | 2.3 | 3.3 | BTC EMERGING MARKETS | 1,149.6 | -4.3 | -2.2 | 5.8 | 2.1 | 3.1 |
| BTC EUROPE INDEX | 202.2 | -1.8 | -0.3 | 7.1 | 2.9 | 5.1 | BTC EUROPE INDEX | 202.2 | -1.8 | -0.3 | 7.1 | 2.9 | 5.1 |
| TOTAL PASSIVE NON-U.S. EQUITY* | 6,478.8 | -1.4 | | | | | TOTAL PASSIVE NON-U.S. EQUITY* | 6,478.8 | -1.4 | | | | |
| ACTIVE | | | | | | | ACTIVE | | | | | | |
| CORNERCAP US SC - EMP | 57.8 | 0.5 | -2.9 | | | | CORNERCAP US SC - EMP | 57.8 | 0.3 | -3.4 | | | |
| EAGLE US SMID CORE | 227.9 | 0.2 | -5.5 | 9.4 | 10.3 | 12.7 | EAGLE US SMID CORE | 227.9 | 0.1 | -6.0 | 8.8 | 9.7 | 12.1 |
| FRONTIER US SMID GROWTH | 492.5 | -0.3 | -4.8 | 8.7 | 8.8 | 12.9 | FRONTIER US SMID GROWTH | 492.5 | -0.5 | -5.5 | 7.9 | 8.0 | 12.0 |
| JANA JSI FUND V - ACTIVIST | 101.7 | 13.6 | 9.9 | 24.8 | | | JANA JSI FUND V - ACTIVIST | 101.7 | 12.6 | 6.6 | 20.1 | | |
| MATARIN US SC - EMP | 109.0 | -0.4 | -11.1 | | | | MATARIN US SC - EMP | 109.0 | -0.6 | -11.6 | | | |
| QMA US SMALL CAP CORE | 265.9 | -0.8 | -12.0 | | | | QMA US SMALL CAP CORE | 265.9 | -1.0 | -12.5 | | | |
| SYSTEMATIC US SMALL CAP VALUE | 233.0 | 0.2 | -5.7 | | | | SYSTEMATIC US SMALL CAP VALUE | 233.0 | 0.1 | -6.2 | | | |
| TOTAL ACTIVE U.S. EQUITY | 1,487.9 | 0.7 | | | | | TOTAL ACTIVE U.S. EQUITY | 1,487.9 | 0.5 | | | | |

*The BTC EAFE SMALL CAP and BTC EMERGING MARKETS SMALL CAP accounts were terminated during the month of September, and therefore the funds are not displayed.

ANNUALIZED TOTAL RETURNS GROWTH

for the quarter ended September 30, 2019



Gross-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|--|--------------------------|------------|-------------|--------------|--------------|---------------|
| ACTIVE DEVELOPED MARKETS | | | | | | |
| ACADIAN DEVELOPED MARKETS | 706.2 | -1.5 | -3.9 | 9.3 | 6.7 | 7.8 |
| BTC EURO TILTS | 824.7 | -3.4 | -2.6 | 6.2 | 3.8 | 6.3 |
| CAPITAL GROUP DEVELOPED MARKETS | 406.4 | -0.0 | 4.5 | 11.4 | 6.6 | 7.3 |
| CEVIAN CAPITAL II - ACTIVIST | 288.9 | -1.3 | -5.9 | 6.4 | | |
| GLOBAL ALPHA IE SC - EMP | 171.2 | -1.0 | | | | |
| SYMPHONY FINANCIAL - ACTIVIST | 170.1 | 5.2 | 5.6 | | | |
| ACTIVE EMERGING MARKETS | | | | | | |
| ACADIAN EMERGING MARKETS | 273.9 | -4.2 | -4.5 | 5.1 | 1.7 | |
| AQR EMERGING MARKETS | 202.1 | -4.3 | -6.1 | 5.4 | 2.2 | |
| GENESIS EMERGING MARKETS | 703.5 | -1.1 | 8.7 | 9.1 | 4.2 | 6.6 |
| LAZARD EMERGING MARKETS | 347.8 | -3.4 | 4.4 | 7.5 | 4.0 | |
| CURRENCY HEDGE GAIN/LOSS | 70.7 | 1.6 | 2.5 | 1.6 | 1.8 | |
| TOTAL ACTIVE NON US EQUITY (HEDGED) | 4,165.5 | 1.0 | | | | |
| TOTAL GLOBAL EQUITY | 23,388.1 | 0.4 | | | | |
| Global Equity Custom BM | | 0.3 | | | | |

Net-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|--|--------------------------|------------|-------------|--------------|--------------|---------------|
| ACTIVE DEVELOPED MARKETS | | | | | | |
| ACADIAN DEVELOPED MARKETS | 706.2 | -1.6 | -4.3 | 8.9 | 6.3 | 7.4 |
| BTC EURO TILTS | 824.7 | -3.5 | -3.0 | 5.8 | 3.4 | 5.8 |
| CAPITAL GROUP DEVELOPED MARKETS | 406.4 | -0.1 | 4.2 | 11.0 | 6.3 | 6.9 |
| CEVIAN CAPITAL II - ACTIVIST | 288.9 | -1.6 | -7.3 | 4.8 | | |
| GLOBAL ALPHA IE SC - EMP | 171.2 | -1.2 | | | | |
| SYMPHONY FINANCIAL - ACTIVIST | 170.1 | 5.0 | 4.8 | | | |
| ACTIVE EMERGING MARKETS | | | | | | |
| ACADIAN EMERGING MARKETS | 273.9 | -4.3 | -5.0 | 4.5 | 1.2 | |
| AQR EMERGING MARKETS | 202.1 | -4.5 | -6.7 | 4.6 | 1.5 | |
| GENESIS EMERGING MARKETS | 703.5 | -1.3 | 8.0 | 8.3 | 3.5 | 5.8 |
| LAZARD EMERGING MARKETS | 347.8 | -3.6 | 3.7 | 6.7 | 3.2 | |
| CURRENCY HEDGE GAIN/LOSS | 70.7 | 1.6 | 2.5 | 1.6 | 1.8 | |
| TOTAL ACTIVE NON US EQUITY (HEDGED) | 4,165.5 | 0.8 | | | | |
| TOTAL GLOBAL EQUITY | 23,388.1 | 0.4 | | | | |
| Global Equity Custom BM | | 0.3 | | | | |

ANNUALIZED TOTAL RETURNS GROWTH

for the quarter ended September 30, 2019



| | <i>Gross-of-Fees</i> | | | | | | <i>Net-of-Fees</i> | | | | | | |
|-------------------------------------|--------------------------|------------|-------------|--------------|--------------|---------------|-------------------------------------|-----------------|-------------|--------------|--------------|---------------|------|
| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> | |
| PRIVATE EQUITY GROWTH | | | | | | | PRIVATE EQUITY GROWTH | | | | | | |
| PRIVATE EQUITY - GROWTH | 5,786.9 | 3.2 | | | | | PRIVATE EQUITY - GROWTH | 5,786.9 | 3.1 | | | | |
| Private Equity - Growth Custom BM | | 3.9 | | | | | Private Equity - Growth Custom BM | | 3.9 | | | | |
| OPPORTUNISTIC REAL ESTATE | | | | | | | OPPORTUNISTIC REAL ESTATE | | | | | | |
| OPPORTUNISTIC REAL ESTATE | 1,019.6 | 3.2 | 11.2 | 13.5 | 14.7 | 4.8 | OPPORTUNISTIC REAL ESTATE | 1,019.6 | 2.6 | 9.1 | 11.5 | 12.5 | 1.8 |
| Opportunistic Real Estate Custom BM | | 1.5 | 8.6 | 9.8 | 12.0 | 12.1 | Opportunistic Real Estate Custom BM | | 1.5 | 8.6 | 9.8 | 12.0 | 12.1 |
| TOTAL GROWTH | 30,194.6 | 1.0 | | | | | TOTAL GROWTH | 30,194.6 | 0.9 | | | | |
| Growth Custom BM | | 1.1 | | | | | Growth Custom BM | | 1.1 | | | | |

ANNUALIZED TOTAL RETURNS CREDIT

for the quarter ended September 30, 2019



| | <i>Gross-of-Fees</i> | | | | | | <i>Net-of-Fees</i> | | | | | | |
|-------------------------|--------------------------|------------|-------------|--------------|--------------|---------------|--------------------------|----------------|-------------|--------------|--------------|---------------|-----|
| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> | |
| HIGH YIELD | | | | | | | HIGH YIELD | | | | | | |
| BAIN CAPITAL CREDIT | 371.7 | 0.4 | 4.0 | 5.7 | 4.5 | | BAIN CAPITAL CREDIT | 371.7 | 0.3 | 3.3 | 4.9 | 3.7 | |
| BEACH POINT | 255.4 | 2.5 | 8.4 | 7.4 | 7.3 | | BEACH POINT | 255.4 | 2.3 | 7.7 | 6.7 | 6.6 | |
| BRIGADE CAP MGMT | 584.2 | -0.3 | 0.6 | 5.4 | 4.6 | | BRIGADE CAP MGMT | 584.2 | -0.5 | -0.2 | 4.6 | 3.8 | |
| DOUBLELINE CAPITAL | 345.7 | 2.1 | 9.3 | 5.4 | | | DOUBLELINE CAPITAL | 345.7 | 1.9 | 8.4 | 4.6 | | |
| OAKTREE CAPITAL | 446.1 | 2.2 | 7.8 | 5.7 | 5.1 | 7.5 | OAKTREE CAPITAL | 446.1 | 2.1 | 7.4 | 5.3 | 4.7 | 7.0 |
| TCW | 343.6 | 1.4 | 6.5 | 5.2 | | | TCW | 343.6 | 1.2 | 5.9 | 4.6 | | |
| TOTAL HIGH YIELD | 2,346.6 | 1.2 | | | | | TOTAL HIGH YIELD | 2,346.6 | 1.0 | | | | |
| BBG BARC US Corp HY Idx | | 1.3 | | | | | BBG BARC US Corp HY Idx | | 1.3 | | | | |
| BANK LOANS | | | | | | | BANK LOANS | | | | | | |
| CRESCENT CAPITAL | 445.8 | 1.3 | 4.4 | 6.0 | 4.1 | | CRESCENT CAPITAL | 445.8 | 1.2 | 3.9 | 5.4 | 3.5 | |
| TENNENBAUM CAPITAL | 471.1 | 0.9 | 7.7 | 9.0 | | | TENNENBAUM CAPITAL | 471.1 | 0.8 | 6.9 | 8.1 | | |
| TOTAL BANK LOANS | 916.9 | 1.1 | | | | | TOTAL BANK LOANS | 916.9 | 1.0 | | | | |
| CS Leveraged Loan Index | | 0.9 | | | | | CS Leveraged Loan Index | | 0.9 | | | | |

ANNUALIZED TOTAL RETURNS CREDIT

for the quarter ended September 30, 2019



Gross-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|-----------------------------------|--------------------------|-------------|-------------|--------------|--------------|---------------|
| EMERGING MARKET DEBT | | | | | | |
| ABERDEEN ASSET MANAGEMENT | 427.4 | 1.0 | 11.3 | | | |
| ASHMORE INVESTMENT MANAGEMENT | 416.9 | -2.8 | 7.7 | | | |
| TOTAL EMERGING MARKET DEBT | 844.3 | -0.9 | 9.5 | | | |
| EMD Custom | | 1.0 | 11.0 | | | |
| ILLIQUID CREDIT | | | | | | |
| BEACH POINT - FUND II | 37.0 | 2.0 | 5.3 | 6.8 | 9.1 | |
| BEACH POINT - FUND III | 189.1 | 3.2 | 11.3 | | | |
| GROSVENOR OPCRD 2 HFOF | 358.4 | -0.6 | -0.8 | 5.3 | | |
| LACERA PE - CREDIT | 158.7 | 3.8 | | | | |
| LACERA RE - CREDIT | 203.5 | 2.5 | 9.4 | 9.8 | 9.6 | |
| TOTAL ILLIQUID CREDIT | 946.7 | 1.4 | | | | |
| Illiquid Credit Custom BM | | 4.7 | | | | |
| TOTAL CREDIT | 5,055.8 | 0.9 | | | | |
| Credit Custom BM | | 1.9 | | | | |

Net-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|-----------------------------------|--------------------------|-------------|-------------|--------------|--------------|---------------|
| EMERGING MARKET DEBT | | | | | | |
| ABERDEEN ASSET MANAGEMENT | 427.4 | 0.9 | 10.9 | | | |
| ASHMORE INVESTMENT MANAGEMENT | 416.9 | -2.9 | 7.1 | | | |
| TOTAL EMERGING MARKET DEBT | 844.3 | -1.0 | 9.0 | | | |
| EMD Custom | | 1.0 | 11.0 | | | |
| ILLIQUID CREDIT | | | | | | |
| BEACH POINT - FUND II | 37.0 | -0.7 | 8.5 | 6.0 | 7.8 | |
| BEACH POINT - FUND III | 189.1 | 2.1 | 7.5 | | | |
| GROSVENOR OPCRD 2 HFOF* | 358.4 | -0.6 | -0.8 | 5.3 | | |
| LACERA PE - CREDIT | 158.7 | 3.8 | | | | |
| LACERA RE - CREDIT | 203.5 | 2.2 | 8.5 | 8.8 | 8.5 | |
| TOTAL ILLIQUID CREDIT | 946.7 | 1.1 | | | | |
| Illiquid Credit Custom BM | | 4.7 | | | | |
| TOTAL CREDIT | 5,055.8 | 0.7 | | | | |
| Credit Custom BM | | 1.9 | | | | |

See Glossary for all custom benchmark definitions.
*Hedge fund returns are reported on a net of all fees basis

ANNUALIZED TOTAL RETURNS

REAL ASSETS & INFLATION HEDGES

for the quarter ended September 30, 2019



Gross-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|--|--------------------------|-------------|-------------|--------------|--------------|---------------|
| CORE & VALUE-ADDED REAL ESTATE | | | | | | |
| CORE & VALUE-ADDED REAL ESTATE | 4,982.2 | -1.4 | 4.6 | 6.7 | 8.6 | 8.5 |
| Core & Value-Added Real Estate Custom BM | | 0.9 | 6.0 | 7.1 | 9.3 | 9.4 |
| NATURAL RESOURCES & COMMODITIES | | | | | | |
| CREDIT SUISSE COMMODITY | 414.8 | -1.9 | -6.8 | -1.5 | -6.7 | |
| DWS NATURAL RESOURCES | 476.1 | -4.8 | | | | |
| LACERA PE - REAL ASSETS | 109.4 | -2.5 | | | | |
| NEUBERGER BERMAN/GRESHAM | 434.5 | -2.4 | -9.1 | 0.9 | -6.2 | -2.0 |
| PIMCO COMMODITY PLUS | 431.3 | -2.4 | -7.0 | 0.4 | -5.1 | -2.3 |
| TOTAL NATURAL RESOURCES & COMMODITIES | 1,866.1 | -2.9 | -7.5 | 0.0 | -5.9 | -2.4 |
| Natural Resources & Comm Custom BM | | -3.9 | -7.0 | -1.7 | -7.3 | -4.4 |

Net-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|--|--------------------------|-------------|-------------|--------------|--------------|---------------|
| CORE & VALUE-ADDED REAL ESTATE | | | | | | |
| CORE & VALUE-ADDED REAL ESTATE | 4,982.2 | -1.5 | 4.0 | 6.1 | 8.0 | 7.8 |
| Core & Value-Added Real Estate Custom BM | | 0.9 | 6.0 | 7.1 | 9.3 | 9.4 |
| NATURAL RESOURCES & COMMODITIES | | | | | | |
| CREDIT SUISSE COMMODITY | 414.8 | -2.0 | -7.1 | -1.7 | -6.9 | |
| DWS NATURAL RESOURCES | 476.1 | -4.8 | | | | |
| LACERA PE - REAL ASSETS | 109.4 | -2.5 | | | | |
| NEUBERGER BERMAN/GRESHAM | 434.5 | -2.5 | -9.4 | 0.5 | -6.6 | -2.4 |
| PIMCO COMMODITY PLUS | 431.3 | -2.5 | -7.3 | -0.0 | -5.5 | -2.8 |
| TOTAL NATURAL RESOURCES & COMMODITIES | 1,866.1 | -2.9 | -7.8 | -0.3 | -6.3 | -2.8 |
| Natural Resources & Comm Custom BM | | -3.9 | -7.0 | -1.7 | -7.3 | -4.4 |

ANNUALIZED TOTAL RETURNS

REAL ASSETS & INFLATION HEDGES

for the quarter ended September 30, 2019



Gross-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|---|--------------------------|-------------|-------------|--------------|--------------|---------------|
| INFRASTRUCTURE | | | | | | |
| DWS INFRASTRUCTURE | 1,166.4 | 2.3 | | | | |
| TOTAL INFRASTRUCTURE | 1,166.4 | 2.3 | | | | |
| DJ Brookfield Global Infrastructure | | 2.7 | | | | |
| TIPS | | | | | | |
| BLACKROCK TIPS | 518.8 | 1.3 | | | | |
| TOTAL TIPS | 518.8 | 1.3 | | | | |
| BBG BC TIPS | | 1.3 | | | | |
| TOTAL REAL ASSETS & INFLATION HEDGES | 8,533.5 | -1.1 | | | | |
| Real Assets & Inflation Hedges Custom BM | | 0.3 | | | | |

Net-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|---|--------------------------|-------------|-------------|--------------|--------------|---------------|
| INFRASTRUCTURE | | | | | | |
| DWS INFRASTRUCTURE | 1,166.4 | 2.3 | | | | |
| TOTAL INFRASTRUCTURE | 1,166.4 | 2.3 | | | | |
| DJ Brookfield Global Infrastructure | | 2.7 | | | | |
| TIPS | | | | | | |
| BLACKROCK TIPS | 518.8 | 1.3 | | | | |
| TOTAL TIPS | 518.8 | 1.3 | | | | |
| BBG BC TIPS | | 1.3 | | | | |
| TOTAL REAL ASSETS & INFLATION HEDGES | 8,533.5 | -1.1 | | | | |
| Real Assets & Inflation Hedges Custom BM | | 0.3 | | | | |

ANNUALIZED TOTAL RETURNS

RISK REDUCTION & MITIGATION

for the quarter ended September 30, 2019



| | <i>Gross-of-Fees</i> | | | | | | | <i>Net-of-Fees</i> | | | | | |
|-------------------------------------|--------------------------|------------|-------------|--------------|--------------|---------------|-------------------------------------|--------------------------|------------|-------------|--------------|--------------|---------------|
| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> | | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
| INVESTMENT GRADE BONDS | | | | | | | INVESTMENT GRADE BONDS | | | | | | |
| BTC US DEBT INDEX FUND | 6,684.0 | 2.3 | 10.3 | 3.0 | 3.5 | 3.9 | BTC US DEBT INDEX FUND | 6,684.0 | 2.3 | 10.3 | 3.0 | 3.5 | 3.9 |
| MHLP | 26.3 | 1.4 | 5.4 | 8.5 | 6.1 | 5.7 | MHLP | 26.3 | 1.3 | 5.1 | 8.2 | 5.8 | 5.4 |
| PUGH CAPITAL MGMT | 364.1 | 2.4 | 10.6 | 3.1 | 3.6 | 4.2 | PUGH CAPITAL MGMT | 364.1 | 2.3 | 10.4 | 2.9 | 3.4 | 4.0 |
| WELLS CAPITAL | 1,579.8 | 2.3 | 10.4 | 3.2 | 3.7 | 4.6 | WELLS CAPITAL | 1,579.8 | 2.3 | 10.3 | 3.1 | 3.6 | 4.5 |
| TOTAL CORE MANAGERS | 8,654.2 | 2.3 | 10.2 | 3.4 | 3.8 | 4.5 | TOTAL CORE MANAGERS | 8,654.2 | 2.3 | 10.1 | 3.4 | 3.7 | 4.4 |
| BBG BC Aggregate Bond Index | | 2.3 | 10.3 | 2.9 | 3.4 | 3.7 | BBG BC Aggregate Bond Index | | 2.3 | 10.3 | 2.9 | 3.4 | 3.7 |
| DODGE & COX | 1,080.9 | 2.3 | 9.6 | 4.1 | 4.2 | 5.1 | DODGE & COX | 1,080.9 | 2.2 | 9.5 | 4.0 | 4.1 | 5.0 |
| PIMCO | 870.5 | 2.0 | 9.4 | 4.2 | 4.3 | 4.7 | PIMCO | 870.5 | 1.9 | 9.2 | 4.0 | 4.1 | 4.5 |
| WESTERN ASSET MGMT. | 943.4 | 2.7 | 12.3 | 3.9 | 4.5 | 5.9 | WESTERN ASSET MGMT. | 943.4 | 2.7 | 12.1 | 3.7 | 4.4 | 5.8 |
| TOTAL CORE PLUS MANAGERS | 2,894.8 | 2.3 | 10.0 | 3.9 | 4.1 | 5.1 | TOTAL CORE PLUS MANAGERS | 2,894.8 | 2.2 | 9.9 | 3.7 | 3.9 | 5.0 |
| BBG BC Aggregate Bond Index | | 2.3 | 10.3 | 2.9 | 3.4 | 3.7 | BBG BC Aggregate Bond Index | | 2.3 | 10.3 | 2.9 | 3.4 | 3.7 |
| TOTAL INVESTMENT GRADE BONDS | 11,548.9 | 2.3 | 10.1 | 3.6 | 3.9 | 4.8 | TOTAL INVESTMENT GRADE BONDS | 11,548.9 | 2.3 | 10.0 | 3.5 | 3.8 | 4.7 |
| BBG BC Aggregate Bond Index | | 2.3 | 10.3 | 2.9 | 3.4 | 3.7 | BBG BC Aggregate Bond Index | | 2.3 | 10.3 | 2.9 | 3.4 | 3.7 |

ANNUALIZED TOTAL RETURNS

RISK REDUCTION & MITIGATION

for the quarter ended September 30, 2019



Gross-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|--|--------------------------|------------|-------------|--------------|--------------|---------------|
| DIVERSIFIED HEDGE FUNDS | | | | | | |
| AQR LEAP | 66.8 | 0.4 | -1.5 | | | |
| CAPULA GRV | 204.9 | 1.3 | | | | |
| DK INSTITUTIONAL PARTNERS | 125.3 | 1.4 | 4.1 | | | |
| GROSVENOR HFOF | 485.9 | 0.6 | -0.9 | 3.1 | 1.3 | |
| GSAM HFOF | 498.0 | 2.2 | 3.0 | 4.0 | | |
| HBK MULTI-STRATEGY | 130.4 | 0.4 | 4.9 | | | |
| PIMCO TAC OPPS FUNDS | 182.4 | 1.6 | | | | |
| TOTAL DIVERSIFIED HEDGE FUNDS | 1,693.7 | 1.3 | | | | |
| Diversified Hedge Funds Custom BM | | 1.2 | | | | |
| CASH | | | | | | |
| CASH | 1,201.3 | 0.6 | 2.7 | 1.9 | 1.3 | 1.2 |
| Cash Custom BM | | 0.6 | 2.4 | 1.6 | 1.0 | 0.6 |
| TOTAL RISK REDUCTION & MITIGATION | 14,444.0 | 2.1 | | | | |
| Risk Reduction & Mitigation Custom BM | | 2.1 | | | | |

Net-of-Fees

| | <u>Mkt Value (\$Mil)</u> | <u>Qtr</u> | <u>1 Yr</u> | <u>3 Yrs</u> | <u>5 Yrs</u> | <u>10 Yrs</u> |
|--|--------------------------|------------|-------------|--------------|--------------|---------------|
| DIVERSIFIED HEDGE FUNDS* | | | | | | |
| AQR LEAP | 66.8 | 0.4 | -1.5 | | | |
| CAPULA GRV | 204.9 | 1.3 | | | | |
| DK INSTITUTIONAL PARTNERS | 125.3 | 1.4 | 4.1 | | | |
| GROSVENOR HFOF | 485.9 | 0.6 | -0.9 | 3.1 | 1.3 | |
| GSAM HFOF | 498.0 | 2.1 | 2.6 | 3.5 | | |
| HBK MULTI-STRATEGY | 130.4 | 0.4 | 4.9 | | | |
| PIMCO TAC OPPS FUNDS | 182.4 | 1.6 | | | | |
| TOTAL DIVERSIFIED HEDGE FUNDS | 1,693.7 | 1.3 | | | | |
| Diversified Hedge Funds Custom BM | | 1.2 | | | | |
| CASH | | | | | | |
| CASH | 1,201.3 | 0.6 | 2.7 | 1.8 | 1.3 | |
| Cash Custom BM | | 0.6 | 2.4 | 1.6 | 1.0 | |
| TOTAL RISK REDUCTION & MITIGATION | 14,444.0 | 2.0 | | | | |
| Risk Reduction & Mitigation Custom BM | | 2.1 | | | | |

See Glossary for all custom benchmark definitions.
 * Hedge fund returns are reported on a net of all fees basis

GROWTH - U.S. EQUITY

CORNERCAP INVESTMENT COUNSEL

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| CORNERCAP | 57.8 | 0.47 | -2.90 | | | |
| RUSSELL 2000 (DAILY) | | -2.40 | -8.89 | | | |

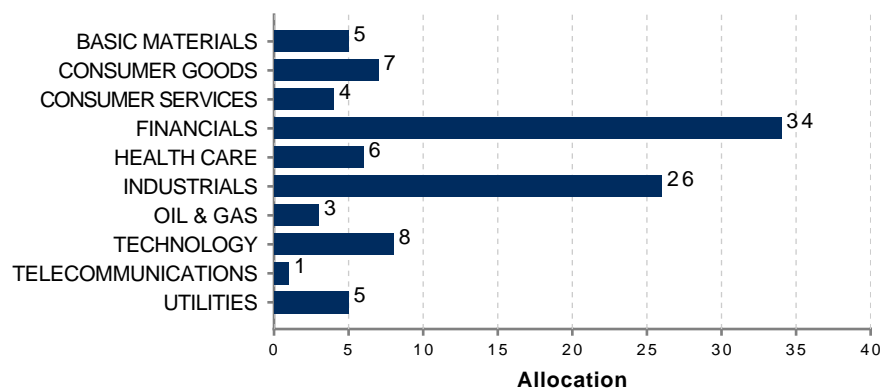
Market Statistics

| | CORNERCAP | Russell 2000 |
|------------------------|-----------|--------------|
| Market Cap Wtd Average | 2,226.9 | 2,245.0 |
| No. of Issues | 224.0 | 0.0 |
| Dividend Yield | 2.0 | 1.5 |
| Return on Equity | 12.5 | 8.7 |
| Price to Sales | 2.4 | 7.7 |
| Price to Book | 2.5 | 3.6 |
| PE Ratio | 17.8 | 41.0 |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|------------------------------------|---------|----------|---------|---------|
| US Equity Funds - Small Cap | | | | |
| CORNERCAP | 0.47 23 | -2.90 12 | | |
| Median | -0.72 | -7.50 | 8.25 | 8.46 |

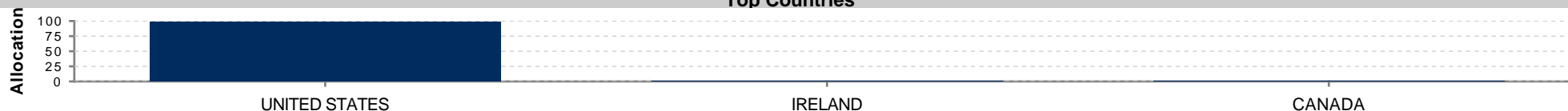
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------------|---------------------|----------------|
| JABIL INC | 366,285 | 0.65 |
| NORTHWESTERN CORP | 364,368 | 0.65 |
| UNIVERSAL ELECTRONICS INC | 362,866 | 0.65 |
| MERITAGE HOMES CORP | 349,640 | 0.62 |
| SPIRE INC | 338,594 | 0.60 |
| SOUTHWEST GAS HOLDINGS INC | 331,841 | 0.59 |
| ATKORE INTERNATIONAL GROUP I | 325,959 | 0.58 |
| WORLD FUEL SERVICES CORP | 321,801 | 0.57 |
| INGLES MARKETS INC CLASS A | 319,429 | 0.57 |
| RADIAN GROUP INC | 317,476 | 0.57 |

Top Countries



Universe data: U.S. Equities Small Cap
Top Holdings exclude cash, cash equivalents, and derivatives

GROWTH - U.S. EQUITY

EAGLE ASSET MANAGEMENT, INC.

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| EAGLE US SMID CORE | 227.9 | 0.25 | -5.49 | 9.38 | 10.26 | 12.73 |
| RUSSELL 2500 (DAILY) | | -1.28 | -4.04 | 9.51 | 8.57 | 12.22 |

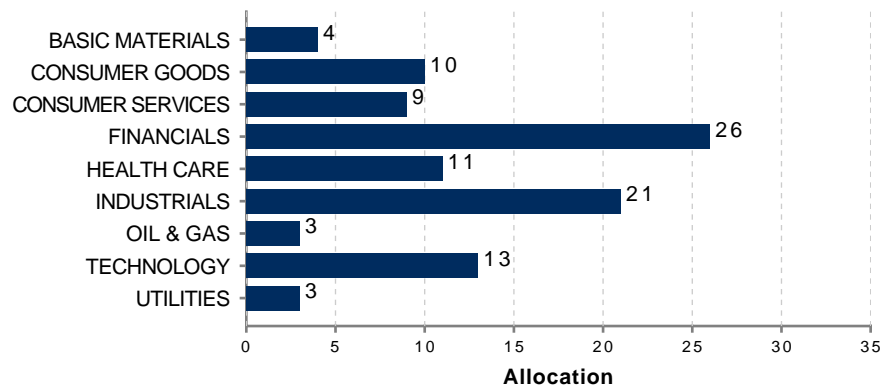
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|-------------------------------|---------|----------|---------|----------|
| US Equity Funds - SMID | | | | |
| EAGLE US SMID CORE | 0.25 24 | -5.49 44 | 9.38 46 | 10.26 23 |
| Median | -0.49 | -6.26 | 8.54 | 8.92 |

Market Statistics

| | EAGLE US SMID CORE | Russell 2500 Index |
|------------------------|--------------------|--------------------|
| Market Cap Wtd Average | 4,117.0 | 5,207.4 |
| No. of Issues | 110.0 | 0.0 |
| Dividend Yield | 1.1 | 1.7 |
| Return on Equity | 12.6 | 11.5 |
| Price to Sales | 3.7 | 6.5 |
| Price to Book | 3.6 | 4.4 |
| PE Ratio | 23.6 | 30.5 |

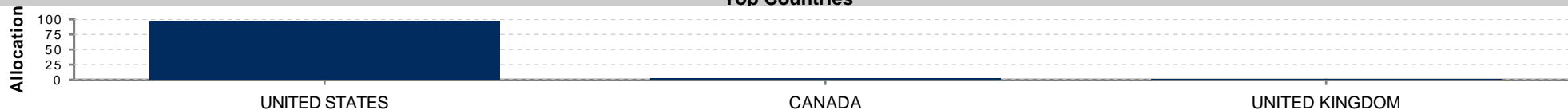
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------------|---------------------|----------------|
| CACI INTERNATIONAL INC CL A | 3,216,133 | 1.80 |
| RADIAN GROUP INC | 3,070,221 | 1.71 |
| NCR CORPORATION | 2,931,892 | 1.64 |
| SPX CORP | 2,914,288 | 1.63 |
| CHURCHILL DOWNS INC | 2,888,724 | 1.61 |
| REXFORD INDUSTRIAL REALTY IN | 2,804,695 | 1.57 |
| FEDERAL SIGNAL CORP | 2,752,026 | 1.54 |
| SPIRE INC | 2,683,194 | 1.50 |
| GENERAC HOLDINGS INC | 2,650,712 | 1.48 |
| HELEN OF TROY LTD | 2,625,354 | 1.47 |

Top Countries



Universe data: U.S. Equity Funds-SMID
Top Holdings exclude cash, cash equivalents, and derivatives

GROWTH - U.S. EQUITY

FRONTIER CAPITAL MANAGEMENT COMPANY, LLC

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years |
|-------------------------|------------------------|-----------|--------|---------|---------|
| FRONTIER US SMID GROWTH | 492.5 | -0.30 | -4.75 | 8.67 | 8.82 |
| RUSSELL 2500 (DAILY) | | -1.28 | -4.04 | 9.51 | 8.57 |

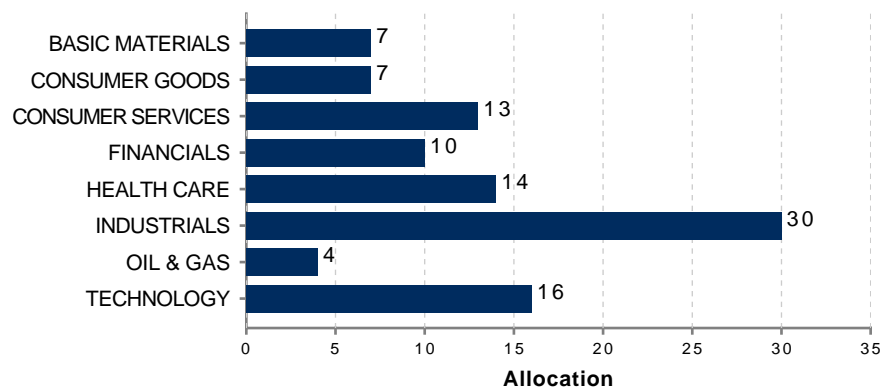
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|-------------------------------|----------|----------|---------|---------|
| US Equity Funds - SMID | | | | |
| FRONTIER US SMID GROWTH | -0.30 45 | -4.75 40 | 8.67 48 | 8.82 52 |
| Median | -0.49 | -6.26 | 8.54 | 8.92 |

Market Statistics

| | FRONTIER US SMID GROWTH | Russell 2500 Index |
|------------------------|-------------------------|--------------------|
| Market Cap Wtd Average | 6,307.2 | 5,207.4 |
| No. of Issues | 141.0 | 0.0 |
| Dividend Yield | 0.8 | 1.7 |
| Return on Equity | 8.0 | 11.5 |
| Price to Sales | 4.2 | 6.5 |
| Price to Book | 4.1 | 4.4 |
| PE Ratio | 31.0 | 30.5 |

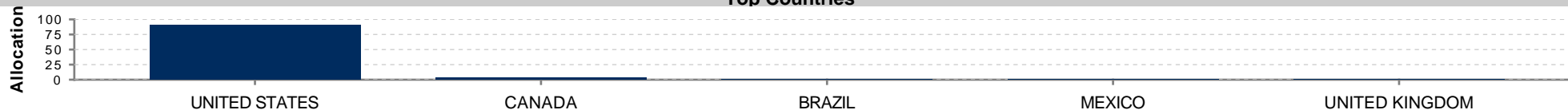
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------------|---------------------|----------------|
| UNITED AIRLINES HOLDINGS INC | 15,693,571 | 3.34 |
| INSULET CORP | 13,091,319 | 2.79 |
| TUTOR PERINI CORP | 12,038,475 | 2.56 |
| MASTEC INC | 8,862,166 | 1.89 |
| MONOLITHIC POWER SYSTEMS INC | 8,653,427 | 1.84 |
| COOPER COS INC/THE | 8,491,824 | 1.81 |
| ALLEGHENY TECHNOLOGIES INC | 8,117,800 | 1.73 |
| COGENT COMMUNICATIONS HOLDIN | 7,656,696 | 1.63 |
| FMC CORP | 7,602,390 | 1.62 |
| AMERICAN AIRLINES GROUP INC | 7,478,107 | 1.59 |

Top Countries



Universe data: U.S. Equity Funds-SMID
Top Holdings exclude cash, cash equivalents, and derivatives

GROWTH - U.S. EQUITY

JANA PARTNERS LLC

for the quarter ended September 30, 2019



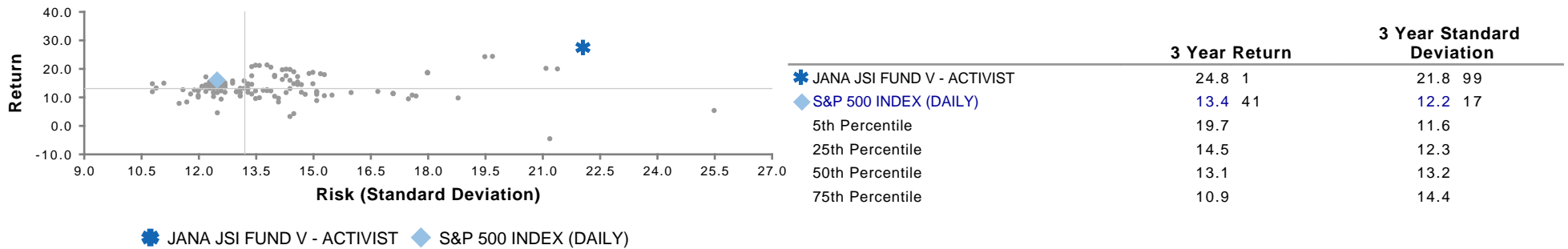
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------------|------------------------|-----------|--------|---------|---------|----------|
| JANA JSI FUND V - ACTIVIST | 101.7 | 13.58 | 9.89 | 24.84 | | |
| S&P 500 INDEX (DAILY) | | 1.70 | 4.25 | 13.39 | | |

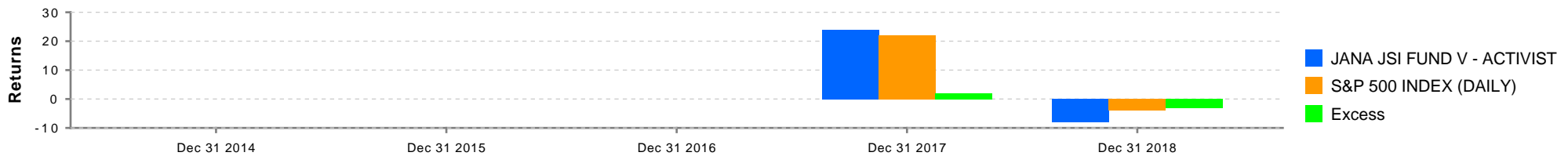
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|------------------------------------|---------|--------|---------|---------|
| US Equity Funds - Large Cap | | | | |
| JANA JSI FUND V - ACTIVIST | 13.58 1 | 9.89 3 | 24.84 1 | |
| Median | 1.00 | 2.37 | 13.10 | 10.55 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



GROWTH - U.S. EQUITY

MATARIN CAPITAL MANAGEMENT

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| MATARIN | 109.0 | -0.44 | -11.10 | | | |
| RUSSELL 2000 (DAILY) | | -2.40 | -8.89 | | | |

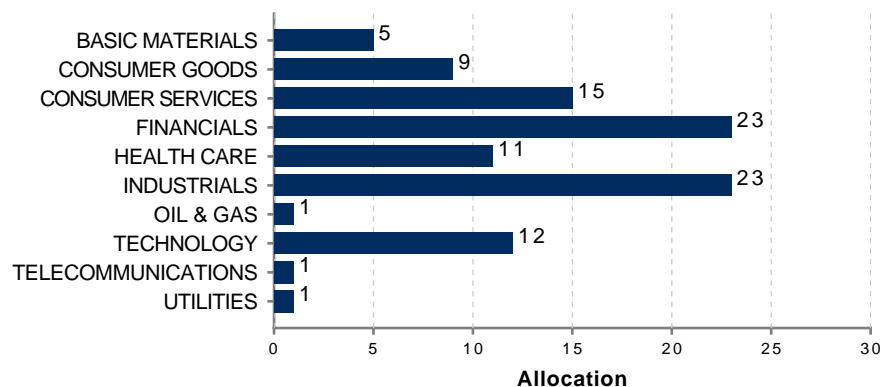
Market Statistics

| | MATARIN | Russell 2000 |
|------------------------|---------|--------------|
| Market Cap Wtd Average | 2,016.0 | 2,245.0 |
| No. of Issues | 159.0 | 0.0 |
| Dividend Yield | 1.5 | 1.5 |
| Return on Equity | 15.2 | 8.7 |
| Price to Sales | 4.0 | 7.7 |
| Price to Book | 2.8 | 3.6 |
| PE Ratio | 15.3 | 41.0 |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|------------------------------------|----------|-----------|---------|---------|
| US Equity Funds - Small Cap | | | | |
| MATARIN | -0.44 41 | -11.10 76 | | |
| Median | -0.72 | -7.50 | 8.25 | 8.46 |

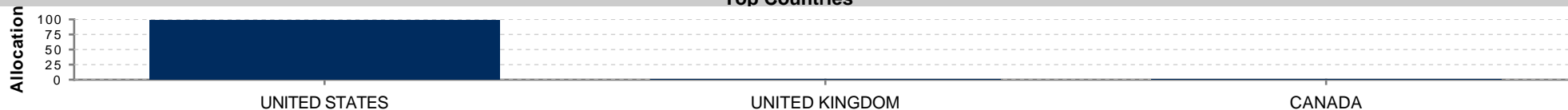
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------------|---------------------|----------------|
| SANMINA CORP | 1,832,678 | 1.69 |
| FTI CONSULTING INC | 1,677,398 | 1.55 |
| COGENT COMMUNICATIONS HOLDIN | 1,511,448 | 1.39 |
| ALLEGIAN T RAVEL CO | 1,507,825 | 1.39 |
| INSIGHT ENTERPRISES INC | 1,489,708 | 1.37 |
| GROUP 1 AUTOMOTIVE INC | 1,489,330 | 1.37 |
| EVERTEC INC | 1,475,051 | 1.36 |
| KULICKE + SOFFA INDUSTRIES | 1,465,725 | 1.35 |
| US CONCRETE INC | 1,417,048 | 1.31 |
| CARDTRONICS PLC A | 1,414,234 | 1.30 |

Top Countries



Universe data: U.S. Equities Small Cap
Top Holdings exclude cash, cash equivalents, and derivatives

GROWTH - U.S. EQUITY

QUANTITATIVE MANAGEMENT ASSOCIATES

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| QMA | 265.9 | -0.83 | -12.01 | | | |
| RUSSELL 2000 (DAILY) | | -2.40 | -8.89 | | | |

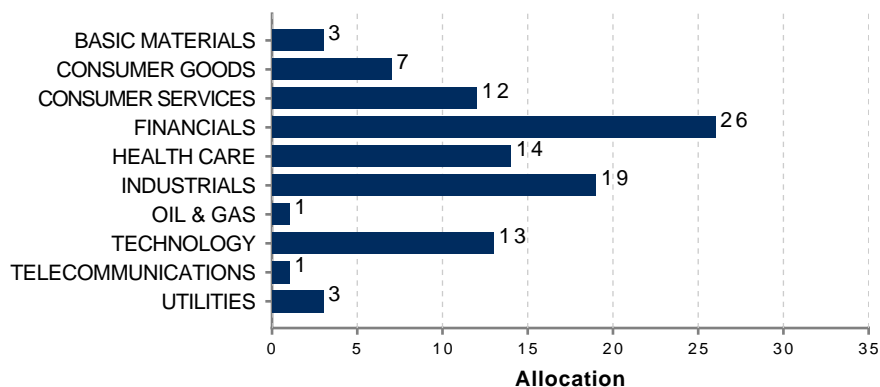
Market Statistics

| | QMA | Russell 2000 |
|------------------------|---------|--------------|
| Market Cap Wtd Average | 2,164.0 | 2,245.0 |
| No. of Issues | 346.0 | 0.0 |
| Dividend Yield | 1.6 | 1.5 |
| Return on Equity | 12.6 | 8.7 |
| Price to Sales | 2.5 | 7.7 |
| Price to Book | 2.7 | 3.6 |
| PE Ratio | 20.9 | 41.0 |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|------------------------------------|----------|-----------|---------|---------|
| US Equity Funds - Small Cap | | | | |
| QMA | -0.83 53 | -12.01 81 | | |
| Median | -0.72 | -7.50 | 8.25 | 8.46 |

Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------------|---------------------|----------------|
| HAEMONETICS CORP/MASS | 2,674,168 | 1.01 |
| PORTLAND GENERAL ELECTRIC CO | 2,553,975 | 0.96 |
| EMCOR GROUP INC | 2,402,748 | 0.91 |
| WORLD FUEL SERVICES CORP | 2,382,380 | 0.90 |
| ASBURY AUTOMOTIVE GROUP | 2,302,425 | 0.87 |
| ACADIA PHARMACEUTICALS INC | 2,256,573 | 0.85 |
| J2 GLOBAL INC | 2,243,254 | 0.85 |
| BMC STOCK HOLDINGS INC | 2,217,446 | 0.84 |
| PERSPECTA INC | 2,047,276 | 0.77 |
| IBERIABANK CORP | 2,028,933 | 0.76 |

Top Countries



Universe data: U.S. Equities Small Cap
Top Holdings exclude cash, cash equivalents, and derivatives

GROWTH - U.S. EQUITY

SYSTEMATIC FINANCIAL MANAGEMENT

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| SYSTEMATIC | 233.0 | 0.24 | -5.66 | | | |
| RUSSELL 2000 (DAILY) | | -2.40 | -8.89 | | | |

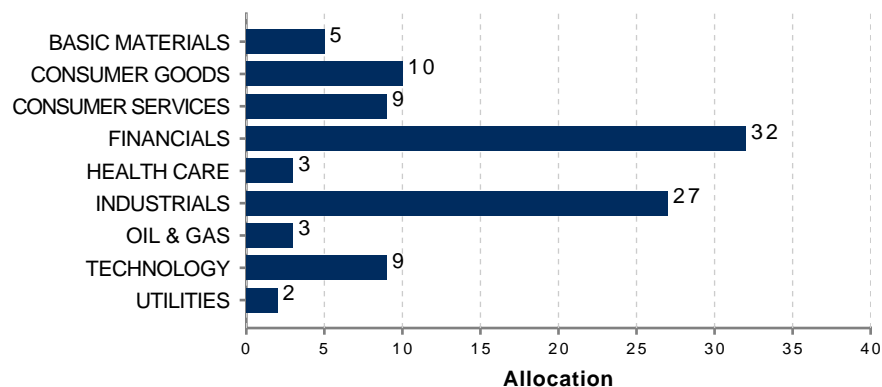
Market Statistics

| | SYSTEMATIC | Russell 2000 |
|------------------------|------------|--------------|
| Market Cap Wtd Average | 2,887.7 | 2,245.0 |
| No. of Issues | 147.0 | 0.0 |
| Dividend Yield | 2.0 | 1.5 |
| Return on Equity | 14.0 | 8.7 |
| Price to Sales | 2.4 | 7.7 |
| Price to Book | 2.4 | 3.6 |
| PE Ratio | 20.8 | 41.0 |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|------------------------------------|---------|----------|---------|---------|
| US Equity Funds - Small Cap | | | | |
| SYSTEMATIC | 0.24 25 | -5.66 36 | | |
| Median | -0.72 | -7.50 | 8.25 | 8.46 |

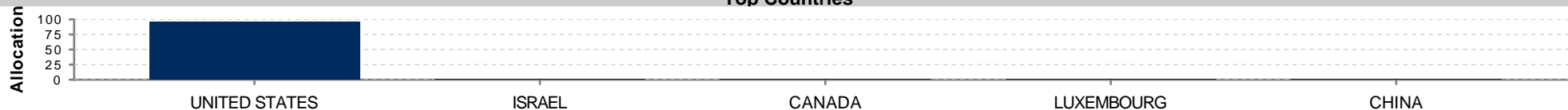
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------------|---------------------|----------------|
| FIRST CITIZENS BCSHS CL A | 6,229,740 | 2.77 |
| NORTHWESTERN CORP | 3,714,975 | 1.65 |
| SELECTIVE INSURANCE GROUP | 3,439,943 | 1.53 |
| WASHINGTON FEDERAL INC | 3,310,605 | 1.47 |
| CONTINENTAL BUILDING PRODUCT | 3,310,277 | 1.47 |
| EMCOR GROUP INC | 3,276,866 | 1.46 |
| ICF INTERNATIONAL INC | 3,020,577 | 1.34 |
| CHURCHILL DOWNS INC | 2,617,246 | 1.16 |
| SANDY SPRING BANCORP INC | 2,572,073 | 1.14 |
| UNITED FIRE GROUP INC | 2,534,571 | 1.13 |

Top Countries



Universe data: U.S. Equities Small Cap
Top Holdings exclude cash, cash equivalents, and derivatives

GROWTH - NON-US DEVELOPED MARKETS EQUITY

ACADIAN ASSET MANAGEMENT, LLC

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years |
|------------------------------|------------------------|-----------|--------|---------|---------|
| ACADIAN DEVELOPED MARKETS | 706.2 | -1.48 | -3.95 | 9.31 | 6.67 |
| MSCI EAFE + Canada Net Index | | -0.93 | -0.95 | 6.49 | 3.06 |

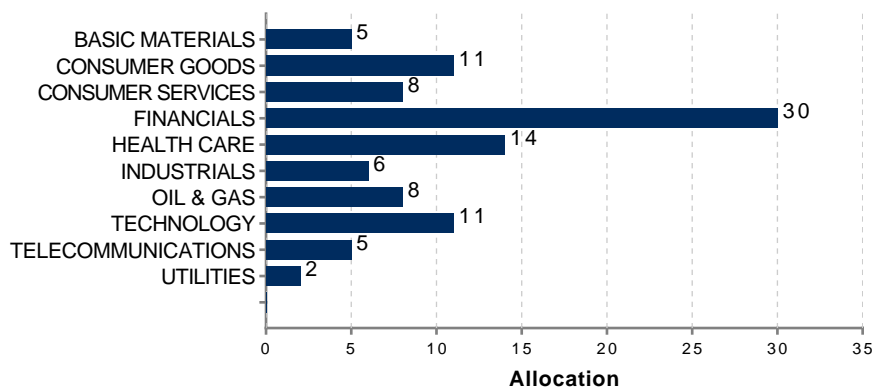
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---------------------------------|----------|----------|---------|---------|
| Intl/Global Equity Funds - Core | | | | |
| ACADIAN DEVELOPED MARKETS | -1.48 69 | -3.95 79 | 9.31 43 | 6.67 54 |
| Median | -0.76 | -0.55 | 8.90 | 6.97 |

Market Statistics

| | ACADIAN DEV MKTS | MSCI EAFE PLUS CANADA |
|------------------------|------------------|-----------------------|
| Market Cap Wtd Average | 37,556.9 | 59,039.2 |
| No. of Issues | 575.0 | 0.0 |
| Dividend Yield | 3.2 | 3.3 |
| Return on Equity | 18.0 | 16.2 |
| Price to Sales | 2.5 | 3.3 |
| Price to Book | 3.6 | 3.5 |
| PE Ratio | 12.7 | 15.9 |

Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|-------------------------------|---------------------|----------------|
| ROCHE HOLDING AG GENUSSSCHEIN | 22,547,429 | 3.19 |
| ROYAL BANK OF CANADA | 19,750,940 | 2.80 |
| CONSTELLATION SOFTWARE INC | 16,305,835 | 2.31 |
| KONINKLIJKE AHOLD DELHAIZE N | 15,560,728 | 2.20 |
| BANK OF MONTREAL | 15,528,781 | 2.20 |
| FUJITSU LTD | 14,604,807 | 2.07 |
| TORONTO DOMINION BANK | 14,561,450 | 2.06 |
| ICON PLC | 14,385,394 | 2.04 |
| BP PLC SPONS ADR | 13,620,479 | 1.93 |
| KONINKLIJKE PHILIPS NV | 13,455,905 | 1.91 |

Top Countries



Universe data: International Equity Funds Core
Top Holdings exclude cash, cash equivalents, and derivatives

GROWTH - NON-US DEVELOPED MARKETS EQUITY

CAPITAL GUARDIAN TRUST COMPANY

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years |
|----------------------------|------------------------|-----------|--------|---------|---------|
| CAPITAL GUARDIAN Non- U.S. | 406.4 | -0.04 | 4.53 | 11.39 | 6.65 |
| EAFE CUSTOM INDEX | | -0.93 | -0.95 | 6.49 | 3.06 |

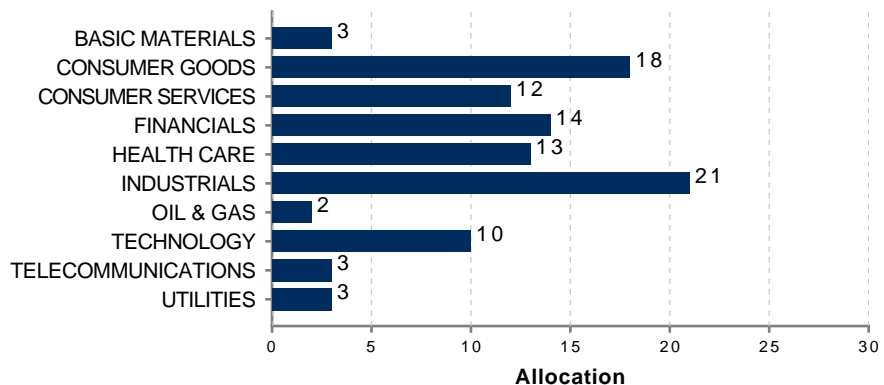
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--|----------|---------|----------|---------|
| Intl/Global Equity Funds - Core | | | | |
| CAPITAL GUARDIAN Non- U.S | -0.04 30 | 4.53 17 | 11.39 24 | 6.65 54 |
| Median | -0.76 | -0.55 | 8.90 | 6.97 |

Market Statistics

| | CAPITAL GUARDIAN Non- U.S | MSCI EAFE PLUS CANADA |
|------------------------|---------------------------|-----------------------|
| Market Cap Wtd Average | 56,492.3 | 59,039.2 |
| No. of Issues | 167.0 | 0.0 |
| Dividend Yield | 2.0 | 3.3 |
| Return on Equity | 16.5 | 16.2 |
| Price to Sales | 4.8 | 3.3 |
| Price to Book | 5.5 | 3.5 |
| PE Ratio | 27.1 | 15.9 |

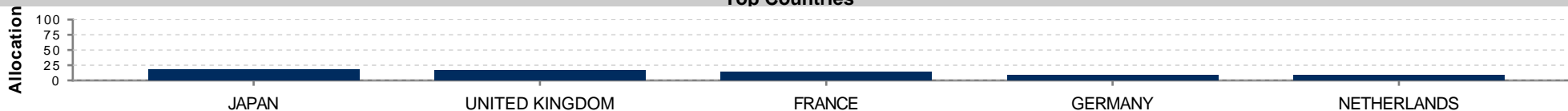
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------------|---------------------|----------------|
| OCADO GROUP PLC | 14,098,675 | 3.61 |
| AIRBUS SE | 13,097,684 | 3.35 |
| SAFRAN SA | 10,900,722 | 2.79 |
| ASML HOLDING NV | 10,594,932 | 2.71 |
| LVMH MOET HENNESSY LOUIS VUI | 9,658,268 | 2.47 |
| ENEL SPA | 9,431,764 | 2.41 |
| ASTRAZENECA PLC | 9,207,211 | 2.36 |
| LONDON STOCK EXCHANGE GROUP | 8,366,244 | 2.14 |
| KEYENCE CORP | 7,677,335 | 1.97 |
| CARLSBERG AS B | 7,623,545 | 1.95 |

Top Countries



Universe data: International Equity Funds Core
Top Holdings exclude cash, cash equivalents, and derivatives

GROWTH - NON-US DEVELOPED MARKETS EQUITY

GLOBAL ALPHA CAPITAL MANAGEMENT

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years |
|-------------------------|------------------------|-----------|--------|---------|---------|
| GLOBAL ALPHA | 171.2 | -1.05 | | | |
| MSCI EAFE SMALL CAP NET | | -0.44 | | | |

Universe

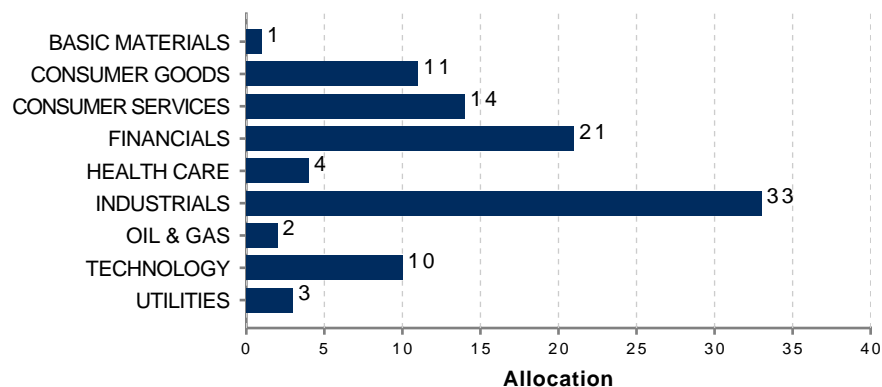
| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--|-------|--------|---------|---------|
|--|-------|--------|---------|---------|

| Intl/Global Equity Funds - Core | | | | |
|---------------------------------|-------|--------|---------|---------|
| | 1 Qtr | 1 Year | 3 Years | 5 Years |
| GLOBAL ALPHA | -1.05 | 58 | | |
| Median | -0.76 | -0.55 | 8.90 | 6.97 |

Market Statistics

| | GLOBAL ALPHA | MSCI EAFE SMALL CAP NET |
|------------------------|--------------|-------------------------|
| Market Cap Wtd Average | 1,890.5 | 2,528.1 |
| No. of Issues | 63.0 | 0.0 |
| Dividend Yield | 2.3 | 3.0 |
| Return on Equity | 13.6 | 12.6 |
| Price to Sales | 2.5 | 4.8 |
| Price to Book | 3.1 | 3.0 |
| PE Ratio | 17.4 | 18.6 |

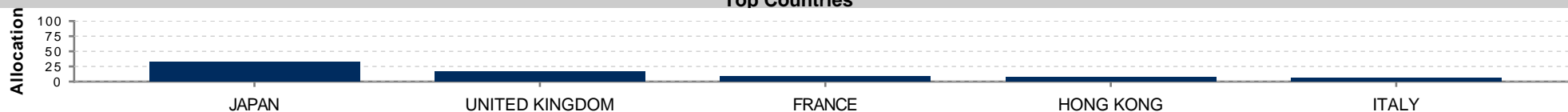
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------------|---------------------|----------------|
| ORMAT TECHNOLOGIES INC | 5,281,599 | 3.09 |
| KERRY LOGISTICS NETWORK LTD | 5,107,562 | 2.98 |
| IWG PLC | 5,086,556 | 2.97 |
| AUTOGRILL SPA | 5,064,325 | 2.96 |
| L OCCITANE INTERNATIONAL SA | 5,028,040 | 2.94 |
| ADVANCE RESIDENCE INVESTMENT | 4,640,980 | 2.71 |
| ASICS CORP | 4,489,799 | 2.62 |
| ROTHSCHILD + CO | 4,333,381 | 2.53 |
| INTERNET INITIATIVE JAPAN | 4,232,093 | 2.47 |
| SAVILLS PLC | 4,143,804 | 2.42 |

Top Countries



Universe data: International Equity Funds Core
Top Holdings exclude cash, cash equivalents, and derivatives

GROWTH - NON-US DEVELOPED MARKETS EQUITY

SYMPHONY FINANCIAL PARTNERS PTE. LTD.

for the quarter ended September 30, 2019



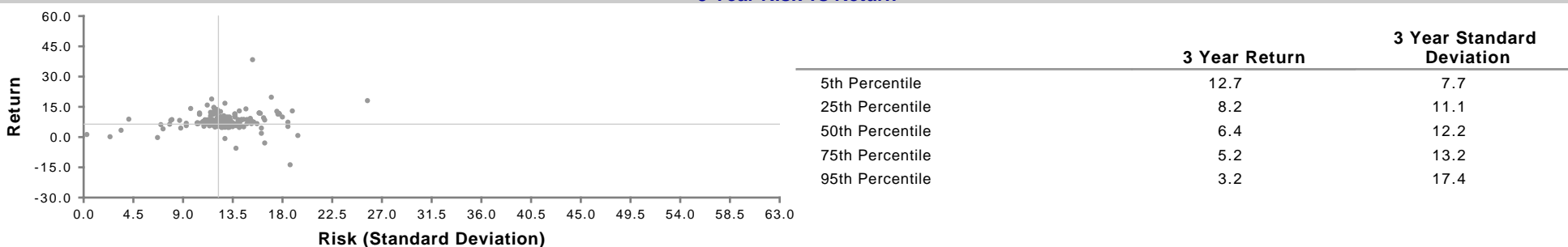
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-------------------------------|------------------------|-----------|--------|---------|---------|----------|
| SYMPHONY FINANCIAL - ACTIVIST | 170.1 | 5.16 | 5.59 | | | |
| MSCI Japan Small Cap | | 3.95 | -6.11 | | | |

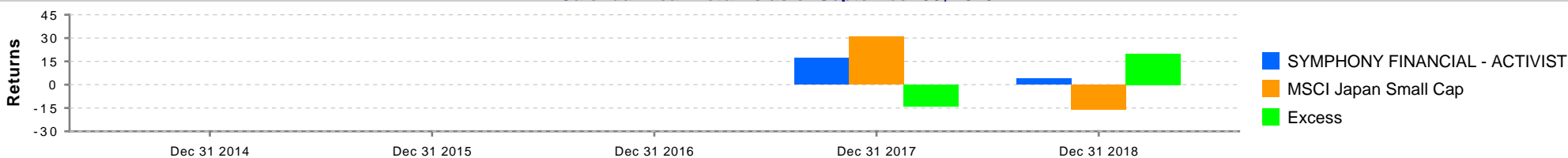
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|-------|--------|---------|---------|
| Intl Equity Developed Mkt Funds (Active) | | | | |
| SYMPHONY FINANCIAL - ACTIVIST | 5.16 | 5.59 | | |
| Median | -1.05 | -1.36 | 6.40 | 4.47 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



GROWTH - NON-US DEVELOPED MARKETS EQUITY

BLACKROCK INSTITUTIONAL TRUST COMPANY, N.A.- EUROPE ALPHA TILTS

for the quarter ended September 30, 2019



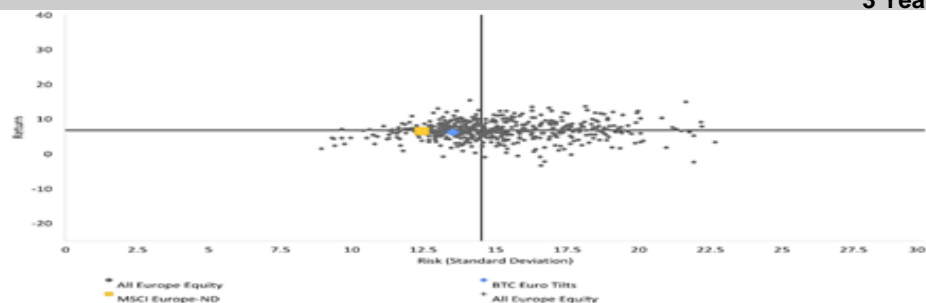
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|---------------------|------------------------|-----------|--------|---------|---------|----------|
| BTC EURO TILTS | 824.7 | -3.39 | -2.61 | 6.22 | 3.78 | 6.26 |
| MSCI EUROPE (DAILY) | | -1.80 | -0.75 | 6.57 | 2.38 | 4.61 |

Universe

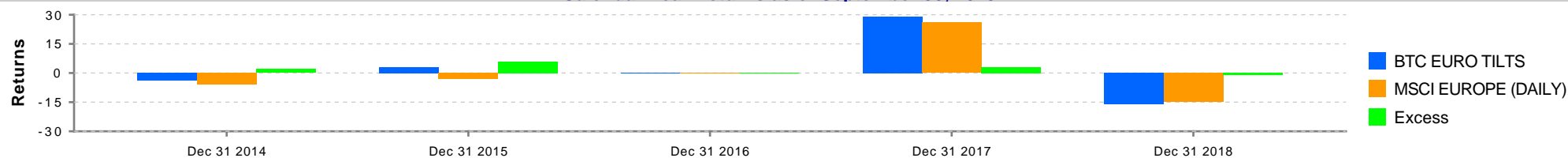
| Europe Equity | 1 Qtr | 1 Year | 3 Years | 5 Years |
|----------------|----------|----------|---------|---------|
| BTC EURO TILTS | -3.39 72 | -2.61 47 | 6.22 62 | 3.78 60 |
| Median | -2.34 | -3.14 | 6.76 | 4.42 |

3 Year Risk vs. Return



| | 3 Year Return | 3 Year Standard Deviation |
|-----------------------|---------------|---------------------------|
| ■ BTC EURO TILTS | 6.2 62 | 13.5 29 |
| ◆ MSCI EUROPE (DAILY) | 6.6 55 | 12.5 10 |
| 5th Percentile | 11.2 | 11.7 |
| 25th Percentile | 8.2 | 13.3 |
| 50th Percentile | 6.8 | 14.5 |
| 75th Percentile | 5.5 | 16.5 |
| 95th Percentile | 2.3 | 19.4 |

Calendar Year Returns as of September 30, 2019



GROWTH - NON-US DEVELOPED MARKETS EQUITY

CEVIAN CAPITAL

for the quarter ended September 30, 2019



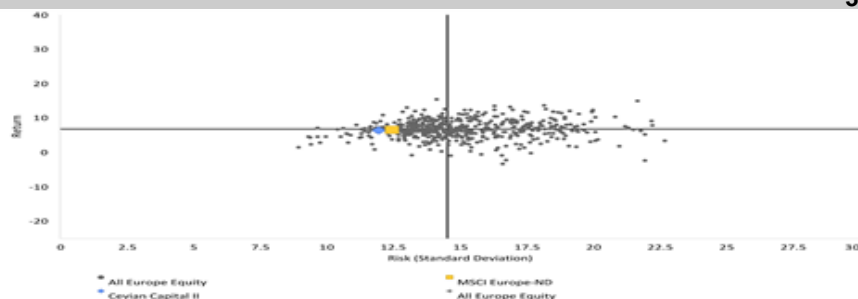
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|------------------------------|------------------------|-----------|--------|---------|---------|----------|
| CEVIAN CAPITAL II - ACTIVIST | 288.9 | -1.25 | -5.95 | 6.41 | | |
| MSCI EUROPE (DAILY) | | -1.80 | -0.75 | 6.57 | | |

Universe

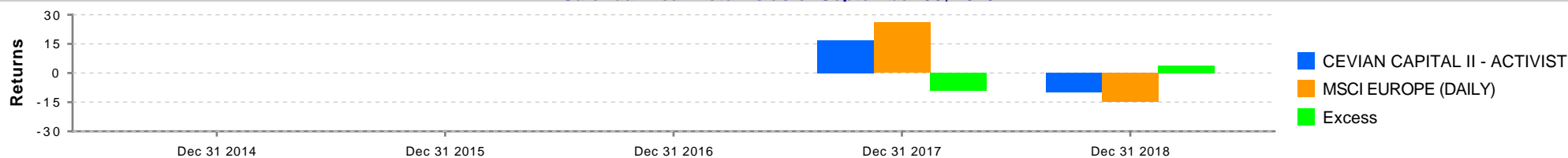
| Europe Equity | 1 Qtr | 1 Year | 3 Years | 5 Years |
|------------------------------|----------|----------|---------|---------|
| CEVIAN CAPITAL II - ACTIVIST | -1.25 24 | -5.95 69 | 6.41 58 | |
| Median | -2.34 | -3.14 | 6.76 | |

3 Year Risk vs. Return



| | 3 Year Return | | 3 Year Standard Deviation (Qtr) | |
|---------------------|---------------|----|---------------------------------|----|
| CEVIAN CAPITAL | 6.4 | 58 | 12.0 | 7 |
| MSCI EUROPE (DAILY) | 6.6 | 55 | 12.5 | 10 |
| 5th Percentile | 11.2 | | 11.7 | |
| 25th Percentile | 8.2 | | 13.3 | |
| 50th Percentile | 6.8 | | 14.5 | |
| 75th Percentile | 5.5 | | 16.5 | |
| 95th Percentile | 2.3 | | 19.4 | |

Calendar Year Returns as of September 30, 2019



GROWTH - NON-US EMERGING MARKETS EQUITY

ACADIAN ASSET MANAGEMENT, LLC

for the quarter ended September 30, 2019



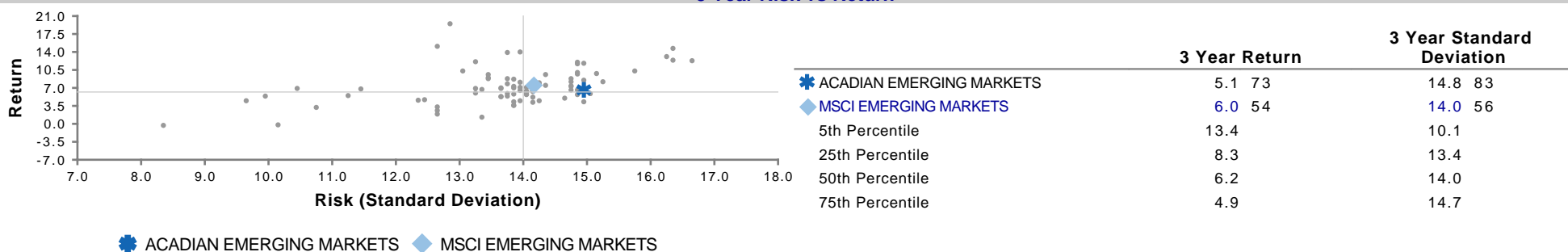
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|--------------------------|------------------------|-----------|--------|---------|---------|----------|
| ACADIAN EMERGING MARKETS | 273.9 | -4.15 | -4.49 | 5.05 | 1.75 | |
| MSCI EMERGING MARKETS | | -4.25 | -2.02 | 5.97 | 2.33 | |

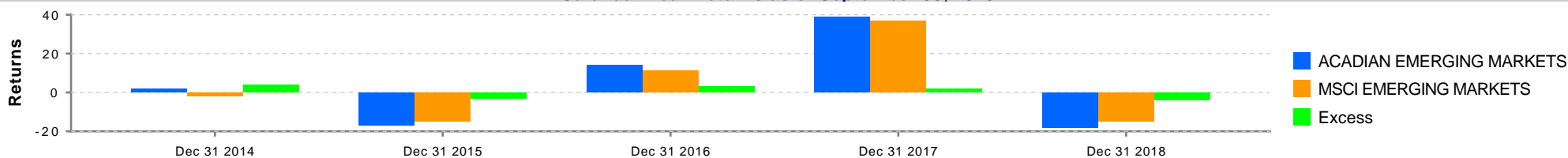
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---------------------------------------|----------|----------|---------|---------|
| Intl Equity Emerging Mkt Funds | | | | |
| ACADIAN EMERGING MARKETS | -4.15 66 | -4.49 86 | 5.05 73 | 1.75 84 |
| Median | -3.56 | 0.83 | 6.18 | 2.98 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



GROWTH - NON-US EMERGING MARKETS EQUITY

AQR CAPITAL MANAGEMENT, LLC

for the quarter ended September 30, 2019



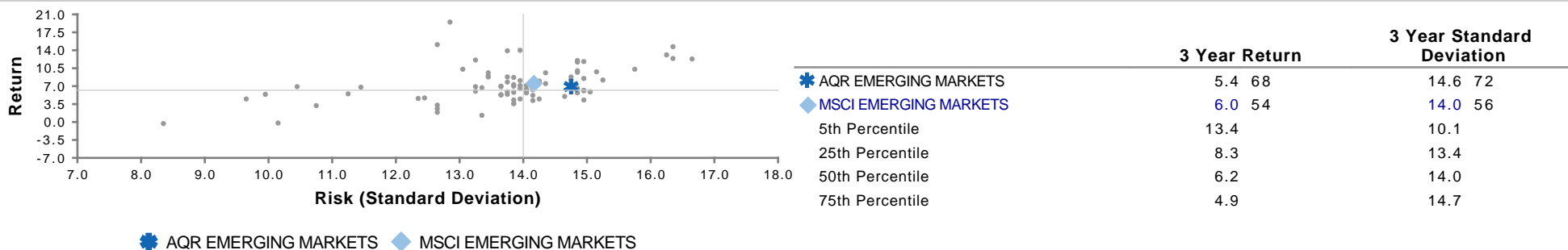
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-----------------------|------------------------|-----------|--------|---------|---------|----------|
| AQR EMERGING MARKETS | 202.1 | -4.30 | -6.07 | 5.36 | 2.17 | |
| MSCI EMERGING MARKETS | | -4.25 | -2.02 | 5.97 | 2.33 | |

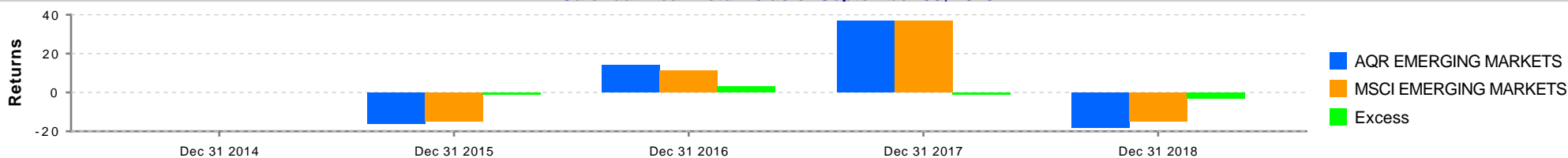
Universe

| Intl Equity Emerging Mkt Funds | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--------------------------------|----------|----------|---------|---------|
| AQR EMERGING MARKETS | -4.30 74 | -6.07 94 | 5.36 68 | 2.17 73 |
| Median | -3.56 | 0.83 | 6.18 | 2.98 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



GROWTH - NON-US EMERGING MARKETS EQUITY

GENESIS INVESTMENT MANAGEMENT, LLP

for the quarter ended September 30, 2019



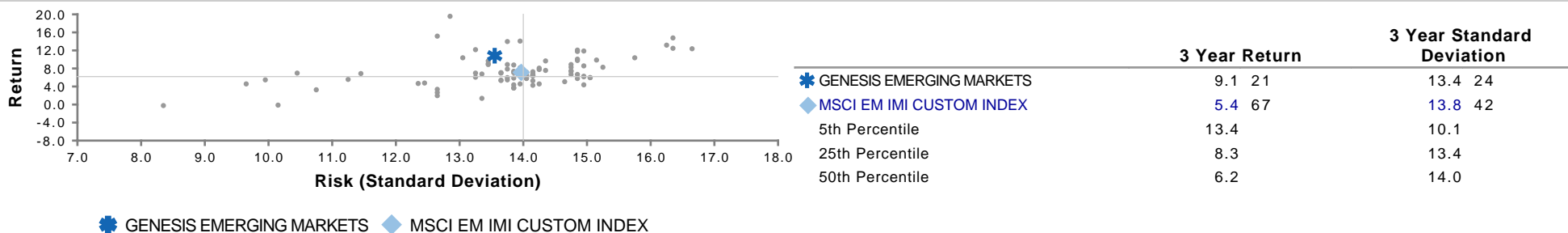
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|--------------------------|------------------------|-----------|--------|---------|---------|----------|
| GENESIS EMERGING MARKETS | 703.5 | -1.07 | 8.75 | 9.11 | 4.21 | 6.60 |
| MSCI EM IMI CUSTOM INDEX | | -4.28 | -2.41 | 5.41 | 2.03 | 3.36 |

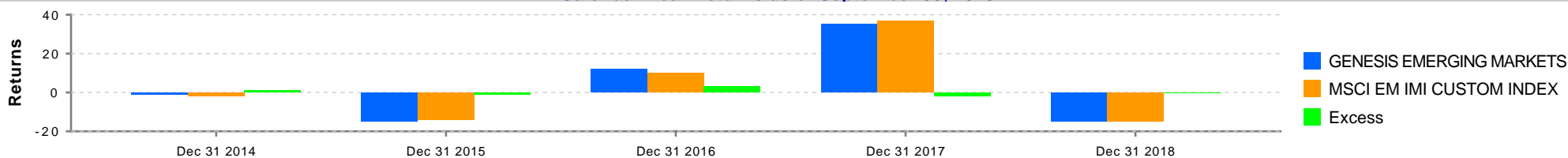
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---------------------------------------|----------|--------|---------|---------|
| Intl Equity Emerging Mkt Funds | | | | |
| GENESIS EMERGING MARKETS | -1.07 18 | 8.75 4 | 9.11 21 | 4.21 24 |
| Median | -3.56 | 0.83 | 6.18 | 2.98 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



GROWTH - NON-US EMERGING MARKETS EQUITY

LAZARD ASSET MANAGEMENT, LLC

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years |
|-------------------------|------------------------|-----------|--------|---------|---------|
| LAZARD EMERGING MARKETS | 347.8 | -3.41 | 4.45 | 7.51 | 4.00 |
| MSCI EMERGING MARKETS | | -4.25 | -2.02 | 5.97 | 2.33 |

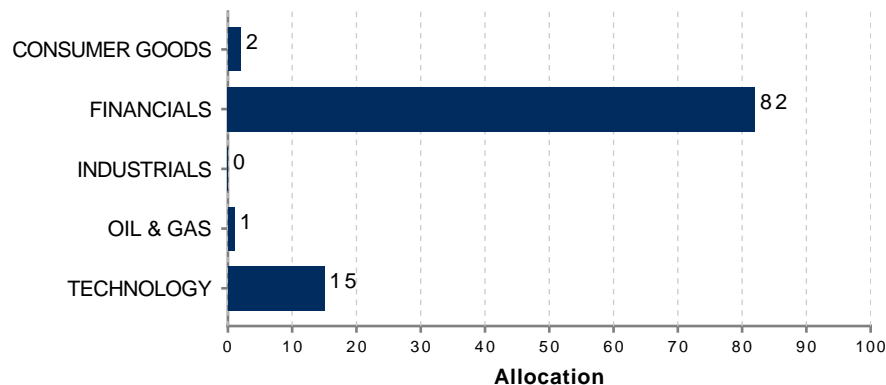
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---------------------------------------|----------|---------|---------|---------|
| Intl Equity Emerging Mkt Funds | | | | |
| LAZARD EMERGING MARKETS | -3.41 47 | 4.45 29 | 7.51 31 | 4.00 27 |
| Median | -3.56 | 0.83 | 6.18 | 2.98 |

Market Statistics

| | LAZARD EMERGING MARKETS | MSCI Emerging Markets |
|------------------------|-------------------------|-----------------------|
| Market Cap Wtd Average | 9,927.3 | 79,935.8 |
| No. of Issues | 58.0 | 0.0 |
| Dividend Yield | 2.6 | 2.9 |
| Return on Equity | 6.1 | 16.6 |
| Price to Sales | 8.8 | 4.2 |
| Price to Book | 1.2 | 3.2 |
| PE Ratio | 27.2 | 13.2 |

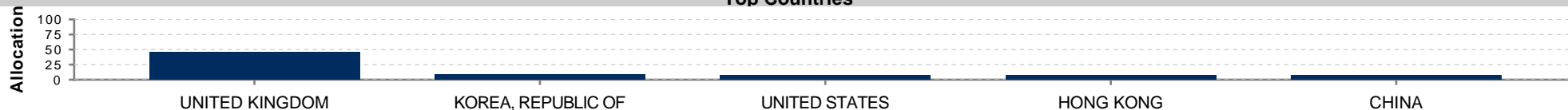
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------------|---------------------|----------------|
| JPMORGAN EMERGING MARKETS INVE | 25,045,451 | 7.30 |
| TEMPLETON EMERGING MARKETS INV | 20,725,251 | 6.04 |
| FIDELITY CHINA SPECIAL SITUATI | 20,668,756 | 6.03 |
| NASPERS LTD N SHS | 18,626,951 | 5.43 |
| SAMSUNG ELECTRONICS PREF | 15,042,560 | 4.39 |
| JPMORGAN RUSSIAN SECURITIES PL | 12,211,337 | 3.56 |
| GENESIS EMERGING MARKETS FUND | 11,976,254 | 3.49 |
| VINACAPITAL VIETNAM OPPORTUNIT | 10,919,128 | 3.18 |
| PROSUS NV | 10,849,346 | 3.16 |
| CITIC SECURITIES CO LTD H | 10,344,200 | 3.02 |

Top Countries



Universe data: International Equity Funds Emerging Markets
Top Holdings exclude cash, cash equivalents, and derivatives

CREDIT - HIGH YIELD

BAIN CAPITAL CREDIT

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|---------------------|------------------------|-----------|--------|---------|---------|----------|
| BAIN CAPITAL CREDIT | 371.7 | 0.42 | 4.02 | 5.70 | 4.54 | |
| HYBL Custom Index | | 1.13 | 4.74 | 5.38 | 4.76 | |

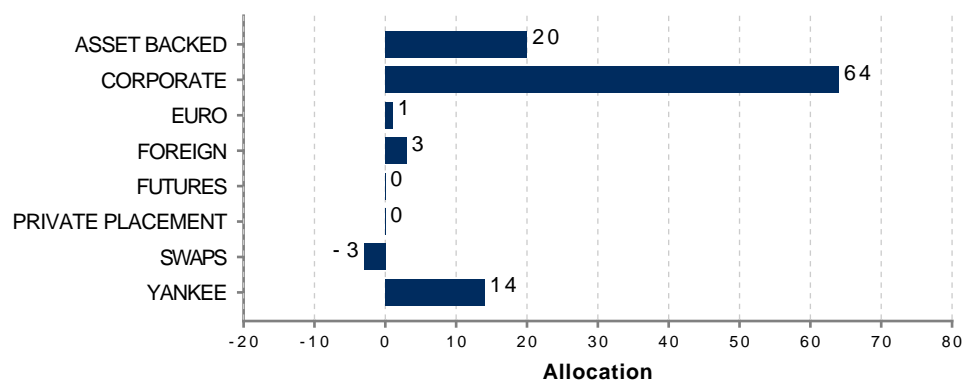
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|---------|---------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| BAIN CAPITAL CREDIT | 0.42 95 | 4.02 95 | 5.70 53 | 4.54 64 |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

Market Statistics

| | BAIN CAPITAL CREDIT | BBG BARC Corp HY |
|---------------------|---------------------|------------------|
| No. of Issues | 442.0 | 0.0 |
| Duration - Modified | 1.3 | 3.1 |
| Convexity | -0.3 | -0.6 |
| Coupon Rate | 5.4 | 6.3 |
| Yield to Maturity | 5.5 | 6.2 |
| Current Yield | 5.6 | 6.4 |
| Rating - Moody's | B-2 | B-1 |
| Rating - S & P | B | B+ |

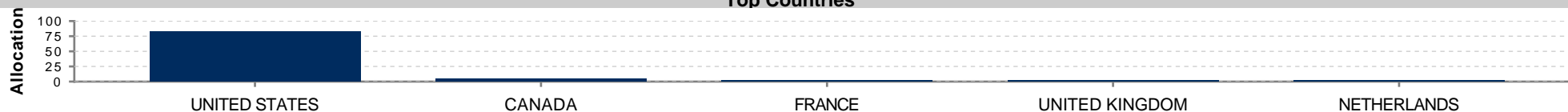
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------------|---------------------|----------------|
| INVESCO SENIOR LOAN ETF | 14,173,937 | 4.50 |
| AQGEN ISLAND MERGER SUB INC | 3,877,155 | 1.23 |
| ZELIS HEALTHCARE CORPORATION | 3,673,650 | 1.17 |
| MH SUB I LLC | 3,559,196 | 1.13 |
| SOPHIA L P | 2,809,018 | 0.89 |
| KRONOS INC | 2,775,534 | 0.88 |
| BEACON ROOFING SUPPLY IN | 2,749,447 | 0.87 |
| ASCEND PRFRMCE MTLN OPRNTS LLC | 2,628,021 | 0.83 |
| WILLIAM MORRIS ENDEAVOR ENTMT | 2,621,938 | 0.83 |
| SOLARWINDS HLDGS INC | 2,407,452 | 0.76 |

Top Countries



Universe data: U.S. Fixed Income Funds High Yield
 Top Holdings exclude cash, cash equivalents, and derivatives
 Universe and Market Statistics are measured against the overall composite's benchmark

CREDIT - HIGH YIELD

BEACH POINT CAPITAL

for the quarter ended September 30, 2019



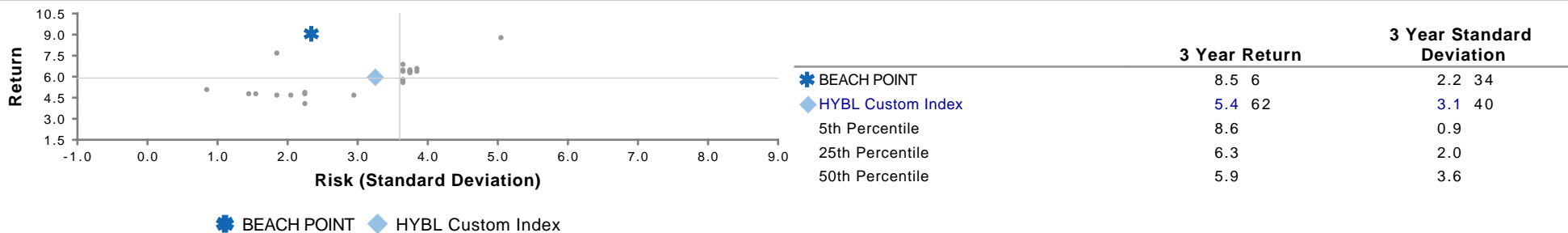
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-------------------|------------------------|-----------|--------|---------|---------|----------|
| BEACH POINT | 481.5 | 2.71 | 8.91 | 8.47 | 8.76 | |
| HYBL Custom Index | | 1.13 | 4.74 | 5.38 | 4.76 | |

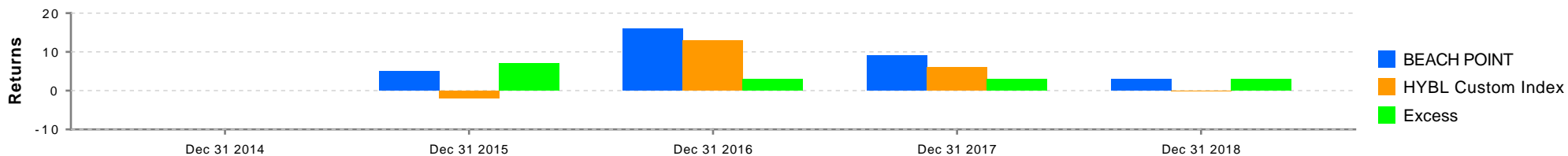
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|--------|---------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| BEACH POINT | 2.71 8 | 8.91 10 | 8.47 6 | 8.76 5 |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



CREDIT - HIGH YIELD

BRIGADE CAPITAL MANAGEMENT

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| BRIGADE CAP MGMT | 584.2 | -0.30 | 0.55 | 5.37 | 4.62 | |
| Brigade Custom Index | | 1.39 | 5.70 | 5.37 | 4.79 | |

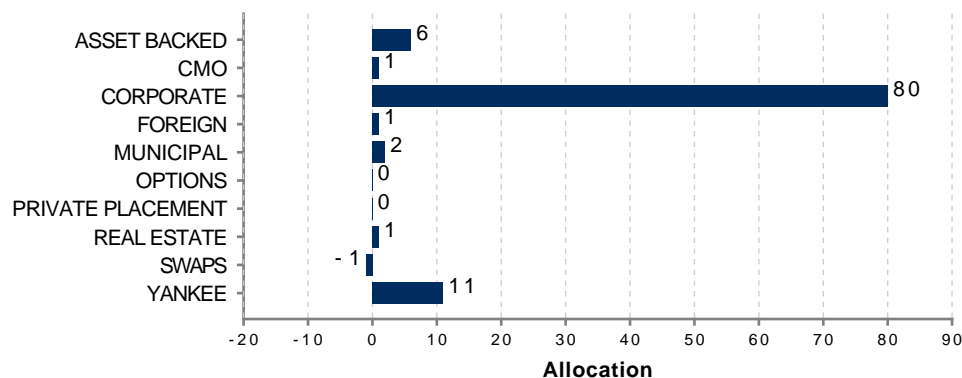
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|-----------|----------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| BRIGADE CAP MGMT | -0.30 100 | 0.55 100 | 5.37 62 | 4.62 61 |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

Market Statistics

| | BRIGADE CAP MGMT | BBG BARC Corp HY |
|---------------------|------------------|------------------|
| No. of Issues | 284.0 | 0.0 |
| Duration - Modified | 2.3 | 3.1 |
| Convexity | -0.1 | -0.6 |
| Coupon Rate | 6.9 | 6.3 |
| Yield to Maturity | 8.5 | 6.2 |
| Current Yield | 7.6 | 6.4 |
| Rating - Moody's | B-2 | B-1 |
| Rating - S & P | B | B+ |

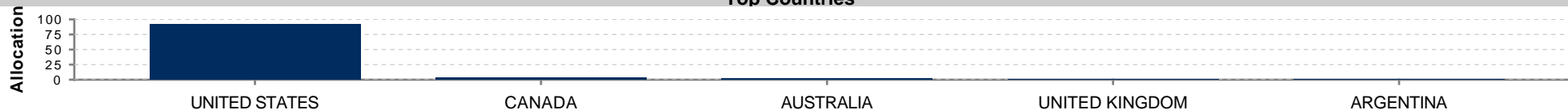
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|-------------------------------|---------------------|----------------|
| GUITAR CENTER INC | 9,756,275 | 1.91 |
| MASHANTUCKET (WESTERN) PEQU | 8,992,572 | 1.76 |
| GLOBAL A+T ELECTRONICS | 8,076,424 | 1.58 |
| URBAN ONE INC | 7,436,381 | 1.46 |
| RACKSPACE HOSTIN | 7,181,724 | 1.41 |
| RAIN CII CARBON LLC/CII | 7,156,825 | 1.40 |
| TEAM HEALTH INC DEL | 7,131,976 | 1.40 |
| LIFESCAN GLOBAL CORP | 7,074,678 | 1.39 |
| LIBERTY INTERACTIVE LLC | 6,982,290 | 1.37 |
| WINDSTREAM CORP | 6,804,756 | 1.33 |

Top Countries



Universe data: U.S. Fixed Income Funds High Yield
 Top Holdings exclude cash, cash equivalents, and derivatives
 Universe and Market Statistics are measured against the overall composite's benchmark

CREDIT - HIGH YIELD

DOUBLELINE CAPITAL LP

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|--------------------------|------------------------|-----------|--------|---------|---------|----------|
| DOUBLELINE CAPITAL | 345.7 | 2.08 | 9.26 | 5.39 | | |
| Securitized Custom Index | | 2.39 | 12.22 | 6.46 | | |

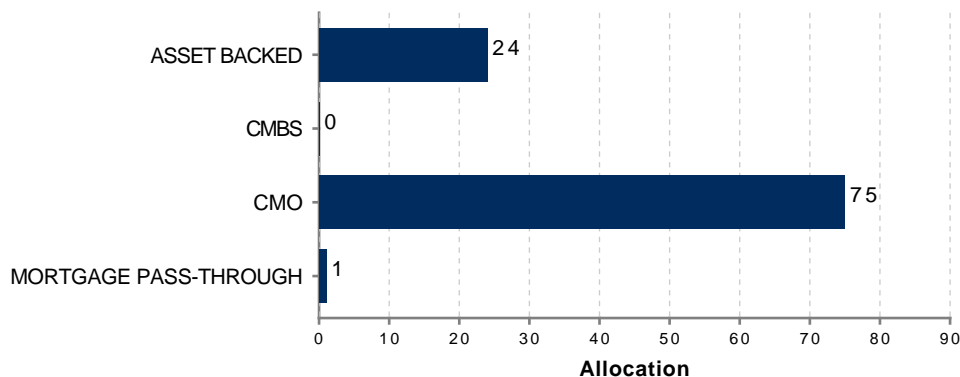
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|---------|--------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| DOUBLELINE CAPITAL | 2.08 53 | 9.26 8 | 5.39 62 | |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

Market Statistics

| | DOUBLELINE CAPITAL | BBG BARC Corp HY |
|---------------------|--------------------|------------------|
| No. of Issues | 248.0 | 0.0 |
| Duration - Modified | 3.5 | 3.1 |
| Coupon Rate | 4.2 | 6.3 |
| Yield to Maturity | 7.1 | 6.2 |
| Current Yield | 4.7 | 6.4 |
| Rating - Moody's | BA-2 | B-1 |
| Rating - S & P | BB- | B+ |

Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------------|---------------------|----------------|
| CENTEX HOME EQUITY | 6,179,125 | 1.92 |
| FREDDIE MAC | 6,004,412 | 1.86 |
| APS RESECURITIZATION TRUST | 5,617,396 | 1.74 |
| FREDDIE MAC | 5,494,075 | 1.71 |
| FMC GMSR ISSUER TRUST | 5,168,166 | 1.60 |
| CITIMORTGAGE ALTERNATIVE LOAN | 5,006,204 | 1.55 |
| FANNIE MAE | 4,978,341 | 1.55 |
| MORGAN STANLEY REREMIC TRUST | 4,760,900 | 1.48 |
| LUMINENT MORTGAGE TRUST | 4,628,992 | 1.44 |
| GOVERNMENT NATIONAL MORTGAGE A | 4,571,741 | 1.42 |

Top Countries



Universe data: U.S. Fixed Income Funds High Yield
 Top Holdings exclude cash, cash equivalents, and derivatives
 Universe and Market Statistics are measured against the overall composite's benchmark

CREDIT - HIGH YIELD

OAKTREE CAPITAL MANAGEMENT, LP

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|---------------------------------|------------------------|-----------|--------|---------|---------|----------|
| OAKTREE CAPITAL | 446.1 | 2.19 | 7.81 | 5.68 | 5.13 | 7.51 |
| BBG BC Ba/B US High Yield Index | | 1.85 | 8.31 | 6.04 | 5.45 | 7.70 |

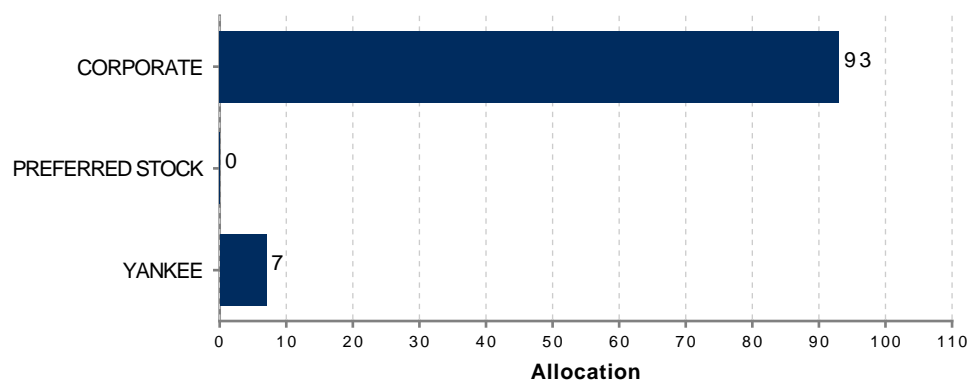
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|---------|---------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| OAKTREE CAPITAL | 2.19 44 | 7.81 52 | 5.68 53 | 5.13 53 |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

Market Statistics

| | OAKTREE CAPITAL | BBG BARC Ba to B US HY |
|---------------------|-----------------|------------------------|
| No. of Issues | 283.0 | 0.0 |
| Duration - Modified | 2.7 | 3.1 |
| Convexity | -1.1 | -0.6 |
| Coupon Rate | 5.8 | 6.1 |
| Yield to Maturity | 5.2 | 5.4 |
| Current Yield | 5.7 | 5.9 |
| Rating - Moody's | B-1 | B-1 |
| Rating - S & P | BB- | BB- |

Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------------|---------------------|----------------|
| OCM EUROPEAN HIGH YIELD FUND | 54,513,935 | 12.43 |
| VALEANT PHARMACEUTICALS | 5,498,107 | 1.25 |
| SPRINT COMMUNICATIONS | 4,769,307 | 1.09 |
| HCA INC | 4,257,136 | 0.97 |
| TENET HEALTHCARE CORP | 3,892,180 | 0.89 |
| KENNEDY WILSON INC | 3,799,134 | 0.87 |
| PRIME SECSRVC BRW/FINANC | 3,554,328 | 0.81 |
| ESH HOSPITALITY INC | 3,389,359 | 0.77 |
| DAVITA INC | 3,289,682 | 0.75 |
| PLANTRONICS INC | 3,238,674 | 0.74 |

Top Countries



Universe data: U.S. Fixed Income Funds High Yield
Top Holdings exclude cash, cash equivalents, and derivatives

CREDIT - HIGH YIELD

TCW ASSET MANAGEMENT COMPANY

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|--------------------------|------------------------|-----------|--------|---------|---------|----------|
| TCW | 343.6 | 1.36 | 6.48 | 5.22 | | |
| Securitized Custom Index | | 2.39 | 12.22 | 6.46 | | |

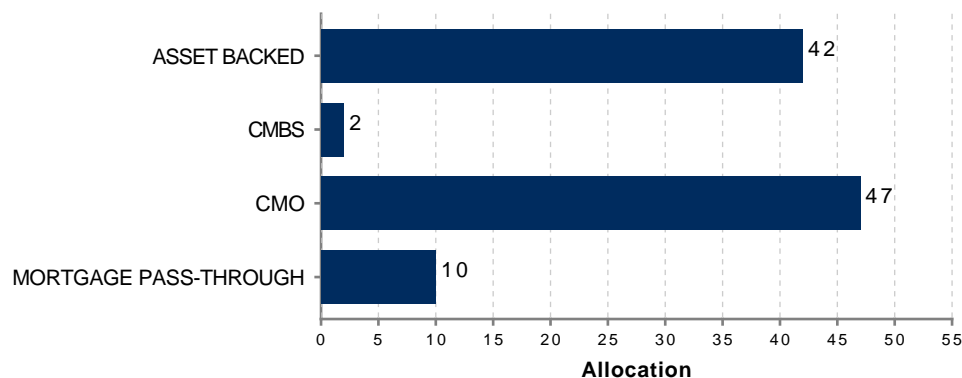
Market Statistics

| | TCW | BBG BARC Corp HY |
|---------------------|-------|------------------|
| No. of Issues | 412.0 | 0.0 |
| Duration - Modified | 1.2 | 3.1 |
| Convexity | -0.1 | -0.6 |
| Coupon Rate | 3.0 | 6.3 |
| Yield to Maturity | 2.7 | 6.2 |
| Current Yield | 4.3 | 6.4 |
| Rating - Moody's | A-3 | B-1 |
| Rating - S & P | BBB- | B+ |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|---------|---------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| TCW | 1.36 80 | 6.48 66 | 5.22 63 | |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------------|---------------------|----------------|
| JPMBB COMMERCIAL MORTGAGE SECU | 2,707,490 | 0.80 |
| NAVIENT STUDENT LOAN TRUST | 2,679,026 | 0.79 |
| RECETTE CLO LLC | 2,514,488 | 0.74 |
| FNMA POOL AN2799 | 2,333,008 | 0.69 |
| ECMC GROUP STUDENT LOAN TRUST | 2,319,096 | 0.68 |
| GSAMP TRUST | 2,277,230 | 0.67 |
| ECMC GROUP STUDENT LOAN TRUST | 2,254,945 | 0.66 |
| FHLMC MULTIFAMILY STRUCTURED P | 2,135,810 | 0.63 |
| NAVIENT STUDENT LOAN TRUST | 2,052,105 | 0.61 |
| NELNET STUDENT LOAN TRUST | 2,040,900 | 0.60 |

Top Countries



Universe data: U.S. Fixed Income Funds High Yield
 Top Holdings exclude cash, cash equivalents, and derivatives
 Universe and Market Statistics are measured against the overall composite's benchmark

CREDIT - BANK LOANS

CRESCENT CAPITAL GROUP LP

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-------------------|------------------------|-----------|--------|---------|---------|----------|
| CRESCENT CAPITAL | 445.8 | 1.33 | 4.42 | 6.00 | 4.10 | |
| HYBL Custom Index | | 1.13 | 4.74 | 5.38 | 4.76 | |

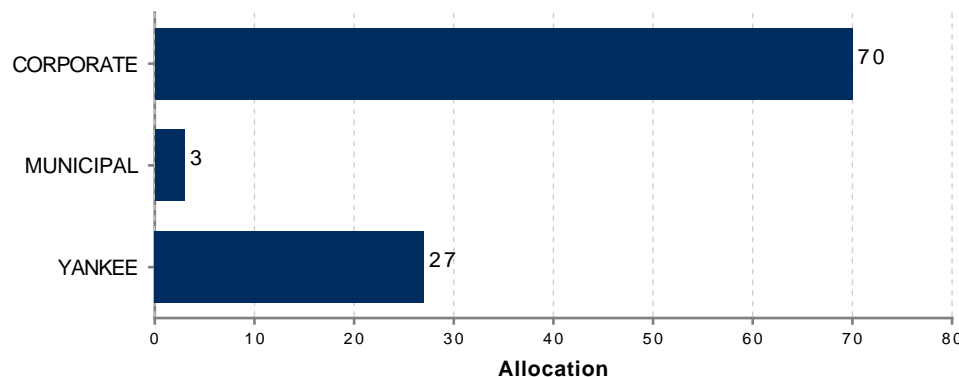
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|---------|---------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| CRESCENT CAPITAL | 1.33 80 | 4.42 90 | 6.00 50 | 4.10 87 |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

Market Statistics

| | CRESCENT CAPITAL | BBG BARC Corp HY |
|---------------------|------------------|------------------|
| No. of Issues | 126.0 | 0.0 |
| Duration - Modified | 0.7 | 3.1 |
| Convexity | -0.2 | -0.6 |
| Coupon Rate | 5.8 | 6.3 |
| Yield to Maturity | 5.8 | 6.2 |
| Current Yield | 5.9 | 6.4 |
| Rating - Moody's | B-2 | B-1 |
| Rating - S & P | B | B+ |

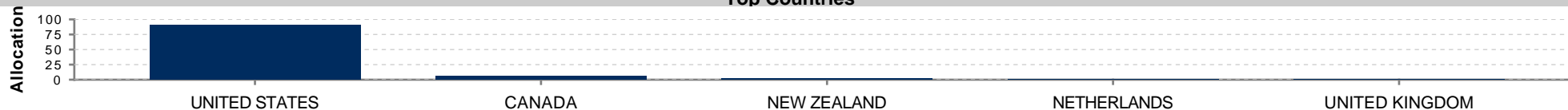
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------------|---------------------|----------------|
| FEMUR BUYER INC | 9,524,170 | 2.28 |
| KESTRA ADVISOR SERVICES | 8,425,932 | 2.02 |
| API TECHNOLOGIES CORP | 8,337,167 | 1.99 |
| WORLD TRIATHLON CORPORATION | 7,831,965 | 1.87 |
| MHI HOLDINGS LLC | 7,803,443 | 1.87 |
| S2P ACQUISITION BORROWER INC | 7,462,020 | 1.79 |
| TITAN ACQUISITIONCO NEW ZEALAN | 7,449,737 | 1.78 |
| KAMC HOLDINGS, INC. | 7,175,018 | 1.72 |
| NUVEI TECHNOLOGIES CORP | 7,034,870 | 1.68 |
| MAGNOLIA ENERGY L.P. | 7,005,027 | 1.68 |

Top Countries



Universe data: U.S. Fixed Income Funds High Yield
 Top Holdings exclude cash, cash equivalents, and derivatives
 Universe and Market Statistics are measured against the overall composite's benchmark

CREDIT - BANK LOANS

TENNENBAUM CAPITAL PARTNERS INC.

for the quarter ended September 30, 2019



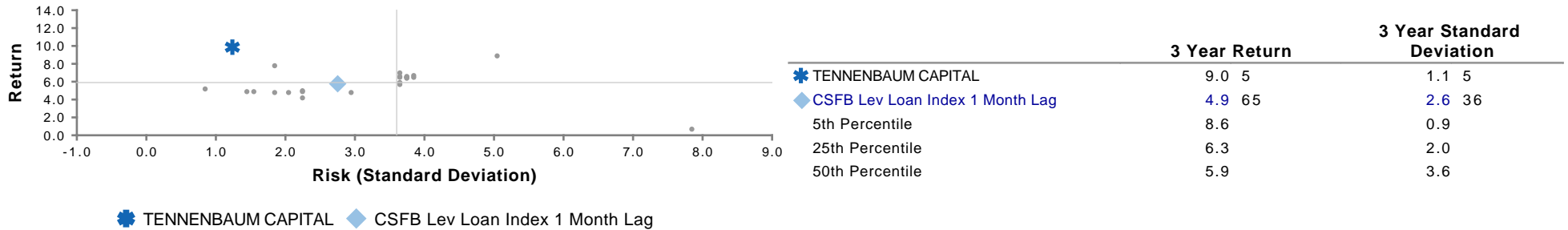
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|---------------------------------|------------------------|-----------|--------|---------|---------|----------|
| TENNENBAUM CAPITAL | 471.1 | 0.92 | 7.71 | 8.99 | | |
| CSFB Lev Loan Index 1 Month Lag | | 0.72 | 3.38 | 4.93 | | |

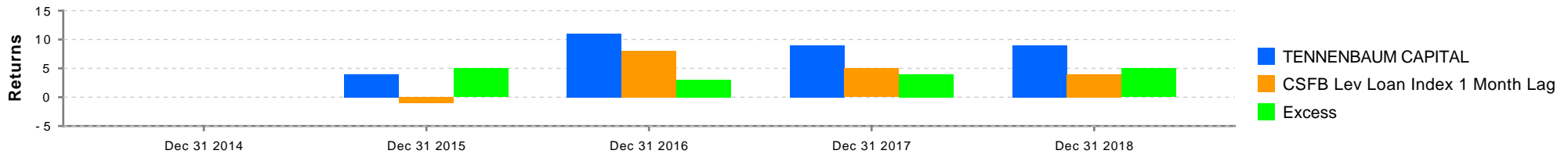
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|---------|---------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| TENNENBAUM CAPITAL | 0.92 88 | 7.71 55 | 8.99 5 | |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



CREDIT - EMERGING MARKET DEBT

ABERDEEN ASSET MANAGEMENT INC.

for the quarter ended September 30, 2019



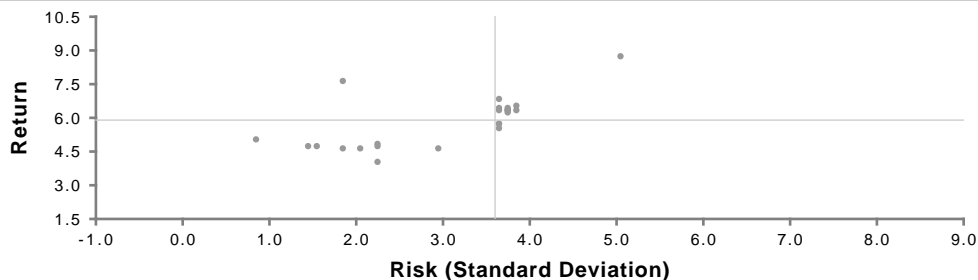
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|---------------------------|------------------------|-----------|--------|---------|---------|----------|
| ABERDEEN ASSET MANAGEMENT | 427.4 | 1.02 | 11.34 | | | |
| EMD Custom | | 0.98 | 11.02 | | | |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|---------|---------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| ABERDEEN ASSET MANAGEMENT | 1.02 87 | 11.34 4 | | |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

3 Year Risk vs Return



| | 3 Year Return | 3 Year Standard Deviation |
|-----------------|---------------|---------------------------|
| 5th Percentile | 8.6 | 0.9 |
| 25th Percentile | 6.3 | 2.0 |
| 50th Percentile | 5.9 | 3.6 |
| 75th Percentile | 4.6 | 3.7 |
| 95th Percentile | 4.2 | 6.4 |

Calendar Year Returns as of September 30, 2019



CREDIT - EMERGING MARKET DEBT

ASHMORE INVESTMENT MANAGEMENT LIMITED

for the quarter ended September 30, 2019



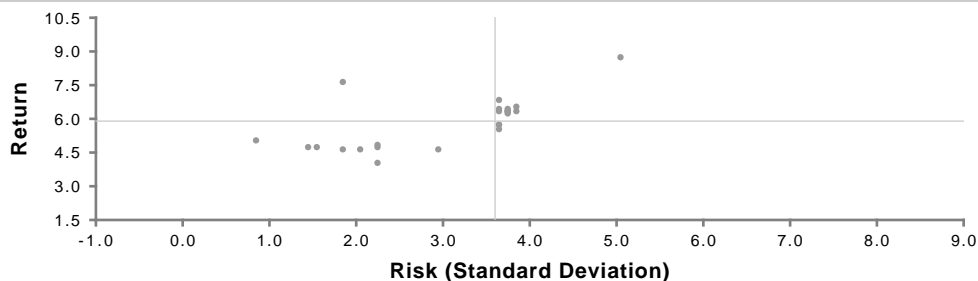
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-------------------------------|------------------------|-----------|--------|---------|---------|----------|
| ASHMORE INVESTMENT MANAGEMENT | 416.9 | -2.75 | 7.67 | | | |
| EMD Custom | | 0.98 | 11.02 | | | |

Universe

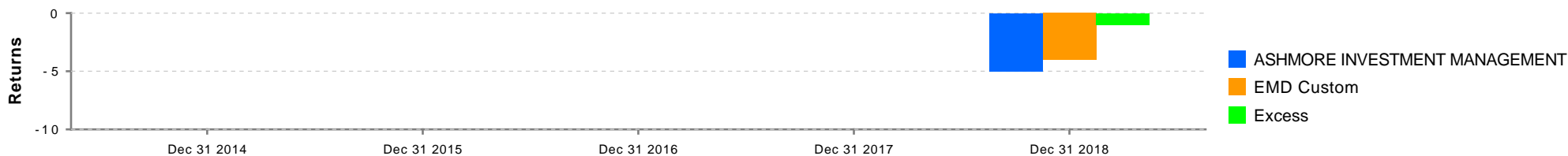
| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---|-----------|---------|---------|---------|
| US Fixed Income Funds - High Yield | | | | |
| ASHMORE INVESTMENT MANAGEMENT | -2.75 100 | 7.67 55 | | |
| Median | 2.11 | 7.81 | 5.94 | 5.25 |

3 Year Risk vs Return



| | 3 Year Return | 3 Year Standard Deviation |
|-----------------|---------------|---------------------------|
| 5th Percentile | 8.6 | 0.9 |
| 25th Percentile | 6.3 | 2.0 |
| 50th Percentile | 5.9 | 3.6 |
| 75th Percentile | 4.6 | 3.7 |
| 95th Percentile | 4.2 | 6.4 |

Calendar Year Returns as of September 30, 2019



REAL ASSETS & INFLATION HEDGES- NAT RESOURCES & COM

CREDIT SUISSE ASSET MANAGEMENT



for the quarter ended September 30, 2019

Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-------------------------|------------------------|-----------|--------|---------|---------|----------|
| CREDIT SUISSE COMMODITY | 414.8 | -1.91 | -6.83 | -1.48 | -6.67 | |
| Bloomberg Comm Index TR | | -1.84 | -6.57 | -1.50 | -7.18 | |

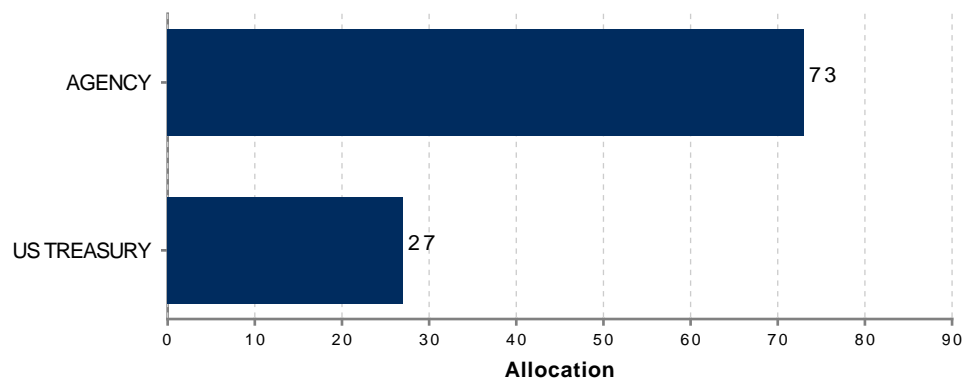
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|-------------------------|----------|----------|----------|---------|
| Commodity Funds | | | | |
| CREDIT SUISSE COMMODITY | -1.91 84 | -6.83 90 | -1.48 82 | -6.67 |
| Median | 0.06 | 5.41 | 6.57 | |

Market Statistics

| | CREDIT SUISSE | BLOOMBERG COMMODITY INDEX |
|------------------------|---------------|---------------------------|
| No. of Issues | 27.0 | 0.0 |
| Metals % of Total | 36% | 35% |
| Agriculture % of Total | 28% | 30% |
| Energy % of Total | 30% | 29% |
| Livestock % of Total | 6% | 6% |

Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------|---------------------|----------------|
| FREDDIE MAC | 48,576,562 | 11.82 |
| US TREASURY FRN | 27,060,396 | 6.58 |
| US TREASURY FRN | 24,269,656 | 5.91 |
| FANNIE MAE | 23,087,329 | 5.62 |
| FEDERAL FARM CREDIT BANK | 23,056,885 | 5.61 |
| FEDERAL FARM CREDIT BANK | 19,424,765 | 4.73 |
| FEDERAL FARM CREDIT BANK | 18,872,530 | 4.59 |
| FEDERAL HOME LOAN BANK | 18,046,811 | 4.39 |
| US TREASURY FRN | 18,037,003 | 4.39 |
| US TREASURY N/B | 17,207,741 | 4.19 |

Top Countries



Universe data: Commodities Funds
Top Holdings exclude cash, cash equivalents, and derivatives
Asset Type, Top Holdings, and Top Countries sections predominately represent the collateral

REAL ASSETS & INFLATION HEDGES - NAT RESOURCES & COM. DWS



for the quarter ended September 30, 2019

Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years |
|--|------------------------|-----------|--------|---------|
| DWS Natural Resources | 476.1 | -4.76 | | |
| S&P Glb LargeMidCap Commod & Resources | | -5.90 | | |

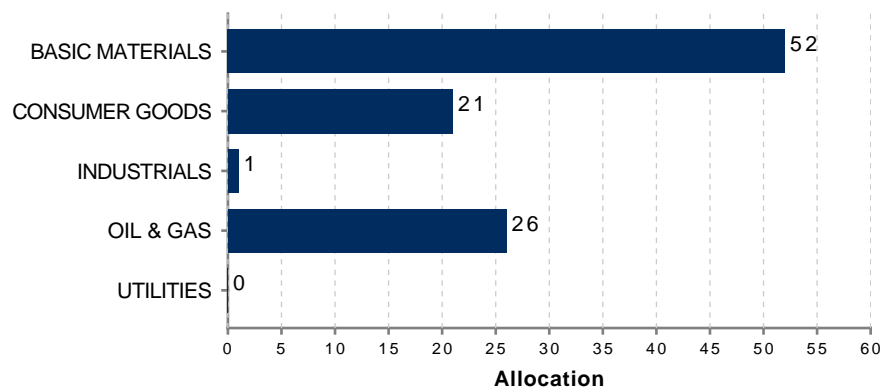
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|------------------------|-------|--------|---------|---------|
| Commodity Funds | | | | |
| DWS Natural Resources | -4.76 | 97 | | |
| Median | 0.06 | 5.41 | 6.57 | |

Market Statistics

| | DWS NATURAL RESOURCES | S&P GLOBAL LARGEMIDCAP COMMODITY & RESOURCES INDEX |
|------------------------|-----------------------|--|
| Market Cap Wtd Average | 47,100.4 | 69,698.8 |
| No. of Issues | 62.0 | 0.0 |
| Dividend Yield | 3.2 | 3.7 |
| Return on Equity | 9.2 | 10.5 |
| Price to Sales | 2.3 | 5.6 |
| Price to Book | 1.8 | 1.9 |
| PE Ratio | 21.3 | 28.7 |

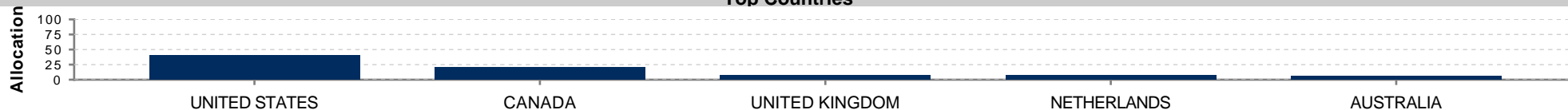
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|-----------------------------|---------------------|----------------|
| NUTRIEN LTD | 42,578,055 | 9.03 |
| MOSAIC CO/THE | 34,331,350 | 7.28 |
| BUNGE LTD | 26,634,048 | 5.65 |
| ROYAL DUTCH SHELL PLC A SHS | 25,501,582 | 5.41 |
| ARCHER DANIELS MIDLAND CO | 25,028,684 | 5.31 |
| FMC CORP | 24,001,800 | 5.09 |
| BHP GROUP LTD | 18,269,729 | 3.87 |
| ANGLO AMERICAN PLC | 16,807,552 | 3.56 |
| CONOCOPHILLIPS | 15,963,517 | 3.39 |
| CORTEVA INC | 15,752,800 | 3.34 |

Top Countries



Universe data: Commodities Funds
Top Holdings exclude cash, cash equivalents, and derivatives

REAL ASSETS & INFLATION HEDGES- NAT RESOURCES & COM

NEUBERGER BERMAN ALTERNATIVE FUND MANAGEMENT LLC/GRESHAM

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|--------------------------|------------------------|-----------|--------|---------|---------|----------|
| NEUBERGER BERMAN/GRESHAM | 434.5 | -2.37 | -9.08 | 0.90 | -6.25 | -1.99 |
| Bloomberg Comm Index TR | | -1.84 | -6.57 | -1.50 | -7.18 | -4.32 |

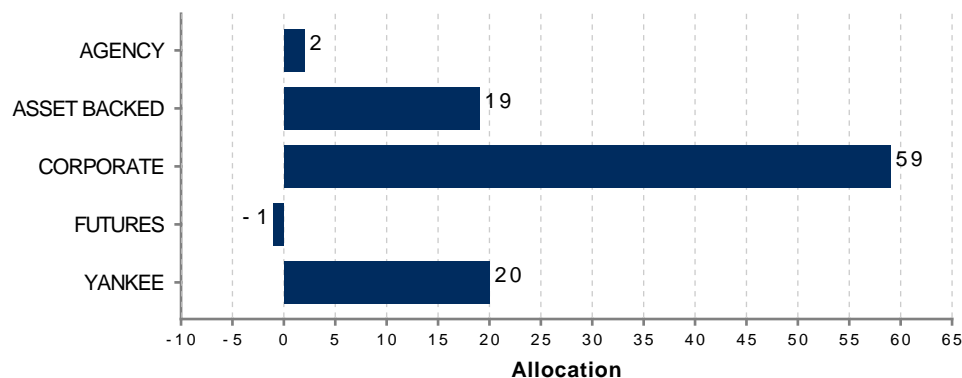
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--------------------------|----------|----------|---------|---------|
| Commodity Funds | | | | |
| NEUBERGER BERMAN/GRESHAM | -2.37 85 | -9.08 91 | 0.90 72 | -6.25 |
| Median | 0.06 | 5.41 | 6.57 | |

Market Statistics

| | NEUBERGER / GRESHAM | BLOOMBERG COMMODITY INDEX |
|------------------------|---------------------|---------------------------|
| No. of Issues | 85.0 | 0.0 |
| Metals % of Total | 34% | 35% |
| Agriculture % of Total | 22% | 30% |
| Energy % of Total | 35% | 29% |
| Livestock % of Total | 9% | 6% |

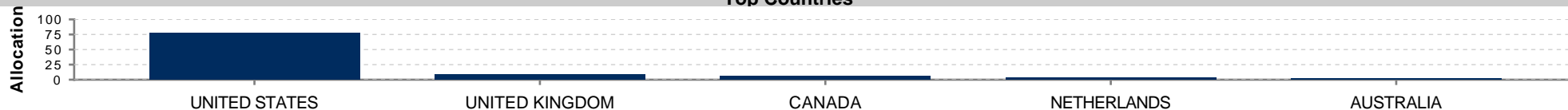
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|-------------------------|---------------------|----------------|
| US DOLLAR | 24,093,055 | 5.76 |
| TREASURY BILL | 17,497,732 | 4.18 |
| MORGAN STANLEY | 10,673,325 | 2.55 |
| GOLDMAN SACHS GROUP INC | 10,645,978 | 2.54 |
| BANK OF AMERICA CORP | 10,485,657 | 2.51 |
| WELLS FARGO + COMPANY | 10,407,578 | 2.49 |
| WESTPAC BANKING CORP | 10,016,929 | 2.39 |
| OPEN TRADES RECEIVABLES | 10,000,000 | 2.39 |
| TREASURY BILL | 9,940,172 | 2.38 |
| AMERICAN EXPRESS CO | 9,806,220 | 2.34 |

Top Countries



Universe data: Commodities Funds
 Top Holdings exclude cash, cash equivalents, and derivatives
 Asset Type, Top Holdings, and Top Countries sections predominately represent the collateral

REAL ASSETS & INFLATION HEDGES- NAT RESOURCES & COM

PACIFIC INVESTMENT MANAGEMENT COMPANY

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-------------------------|------------------------|-----------|--------|---------|---------|----------|
| PIMCO COMMODITY PLUS | 431.3 | -2.38 | -6.98 | 0.37 | -5.12 | -2.32 |
| Bloomberg Comm Index TR | | -1.84 | -6.57 | -1.50 | -7.18 | -4.32 |

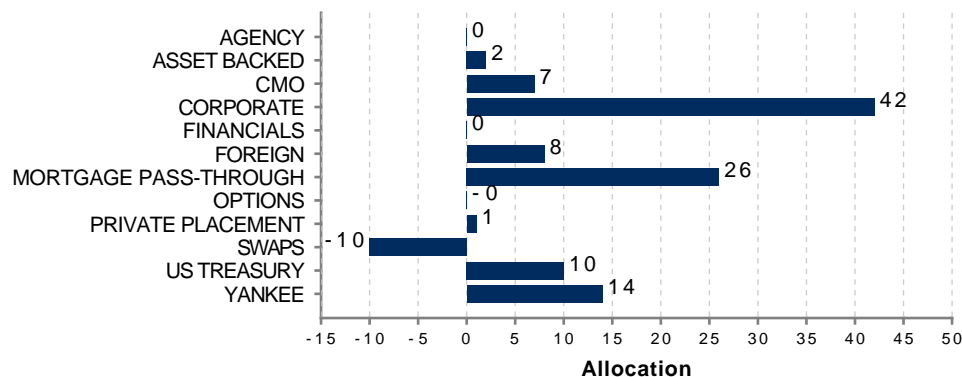
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|------------------------|----------|----------|---------|---------|
| Commodity Funds | | | | |
| PIMCO COMMODITY PLUS | -2.38 85 | -6.98 90 | 0.37 73 | -5.12 |
| Median | 0.06 | 5.41 | 6.57 | |

Market Statistics

| | PIMCO | BLOOMBERG COMMODITY INDEX |
|------------------------|-------|---------------------------|
| No. of Issues | 566.0 | 0.0 |
| Metals % of Total | 35% | 35% |
| Agriculture % of Total | 27% | 30% |
| Energy % of Total | 33% | 29% |
| Livestock % of Total | 5% | 6% |

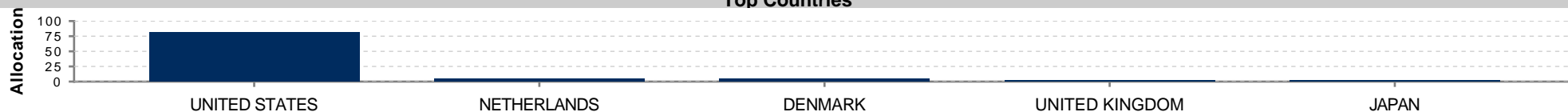
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|-----------------------|---------------------|----------------|
| SWU0DF158 TRS USD R E | 76,193,467 | 17.67 |
| SWU0DF760 TRS USD R E | 69,094,310 | 16.02 |
| FNMA TBA 30 YR 4 | 59,173,125 | 13.72 |
| SWU0JD678 TRS USD R E | 46,103,749 | 10.69 |
| SWU0DF620 TRS USD R E | 45,005,218 | 10.43 |
| SWU0DF794 TRS USD R E | 40,409,836 | 9.37 |
| SWU0DF182 TRS USD R E | 38,963,350 | 9.03 |
| SWU0DF414 TRS USD R E | 31,397,032 | 7.28 |
| SWU0DF398 TRS USD R E | 27,009,039 | 6.26 |
| SWU0DF315 TRS USD R E | 22,203,249 | 5.15 |

Top Countries



Universe data: Commodities Funds

Top Holdings exclude cash, cash equivalents, derivatives, and short positions; therefore, total percent of portfolio may exceed 100%

Asset Type, Top Holdings, and Top Countries sections predominately represent the collateral

REAL ASSETS & INFLATION HEDGES - INFRASTRUCTURE

DWS

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year |
|--|------------------------|-----------|--------|
| DWS INFRASTRUCTURE | 1,166.4 | 2.30 | |
| DJ BROOKFIELD GLOBAL INFRASTRUCTURE TR | | 2.73 | |

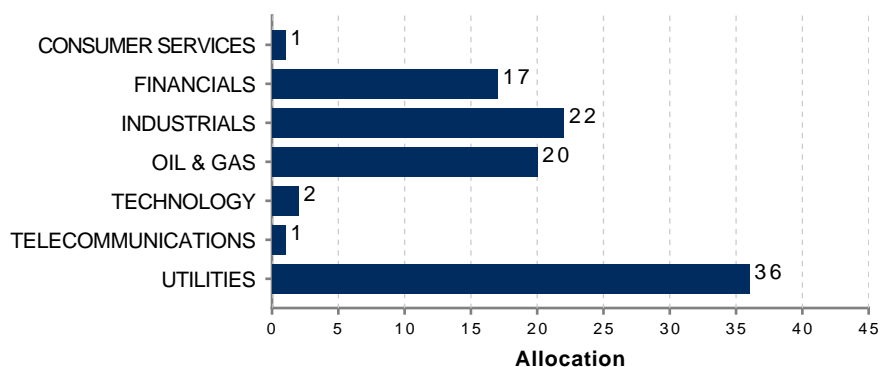
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|-----------------------|-------|--------|---------|---------|
| Infrastructure | | | | |
| DWS INFRASTRUCTURE | 2.30 | | | |

Market Statistics

| | DWS INFRASTRUCTURE | DJ BROOKFIELD GLOBAL INFRASTRUCTURE |
|------------------------|--------------------|-------------------------------------|
| Market Cap Wtd Average | 36,804.6 | 36,173.4 |
| No. of Issues | 53.0 | 0.0 |
| Dividend Yield | 3.0 | 3.5 |
| Return on Equity | 8.1 | 8.9 |
| Price to Sales | 6.0 | 5.3 |
| Price to Book | 2.9 | 3.3 |
| PE Ratio | 58.6 | 47.2 |

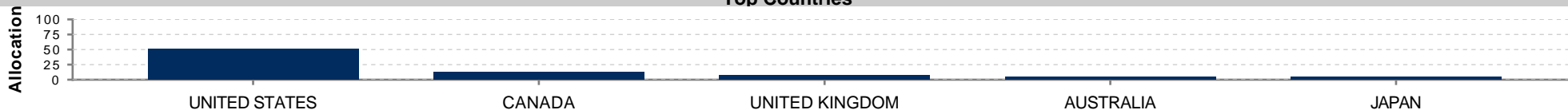
Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|------------------------|---------------------|----------------|
| AMERICAN TOWER CORP | 101,890,304 | 8.85 |
| TC ENERGY CORP | 81,406,738 | 7.07 |
| SEMPRA ENERGY | 68,421,425 | 5.94 |
| CROWN CASTLE INTL CORP | 64,278,224 | 5.58 |
| NISOURCE INC | 46,529,609 | 4.04 |
| TRANSURBAN GROUP | 45,558,306 | 3.96 |
| NATIONAL GRID PLC | 44,166,129 | 3.84 |
| WILLIAMS COS INC | 39,540,204 | 3.43 |
| CHENIERE ENERGY INC | 38,781,900 | 3.37 |

Top Countries



Universe data: Infrastructure
Top Holdings exclude cash, cash equivalents, and derivatives

REAL ASSETS & INFLATION HEDGES - TIPS

BLACKROCK

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------|------------------------|-----------|--------|---------|---------|----------|
| BLACKROCK TIPS | 518.8 | 1.31 | | | | |
| BBG BC TIPS | | 1.35 | | | | |

Universe

1 Qtr 1 Year 3 Years 5 Years

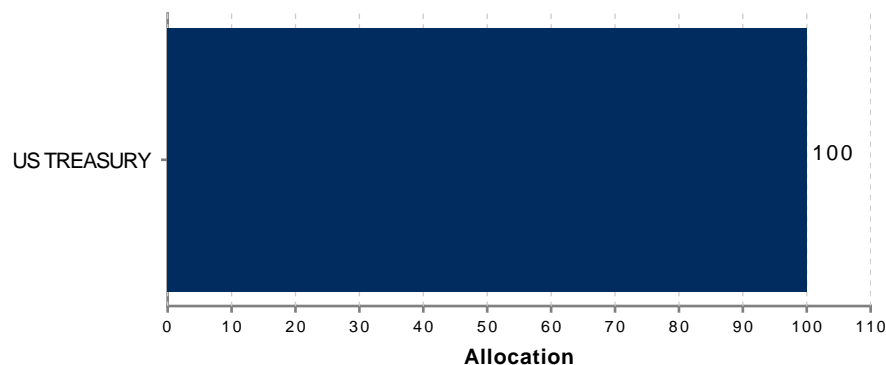
Inflation Linked Bond Funds

| | | |
|----------------|------|------|
| BLACKROCK TIPS | 1.31 | 27 |
| Median | 0.24 | 3.55 |

Market Statistics

| | BLACKROCK TIPS | BBG BC TIPS |
|---------------------|----------------|-------------|
| No. of Issues | 40.0 | 0.0 |
| Duration - Modified | 7.7 | 7.8 |
| Convexity | 1.1 | 1.2 |
| Coupon Rate | 0.8 | 0.8 |
| Yield to Maturity | 1.7 | 0.3 |
| Current Yield | 0.8 | 0.7 |
| Rating - Moody's | Aaa | Aaa |
| Rating - S & P | AA+ | AA+ |

Sectors (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|-----------------|---------------------|----------------|
| TSY INFL IX N/B | 24,011,651 | 4.64 |
| TSY INFL IX N/B | 23,143,969 | 4.47 |
| TSY INFL IX N/B | 22,450,270 | 4.33 |
| TSY INFL IX N/B | 22,148,936 | 4.28 |
| TSY INFL IX N/B | 21,925,812 | 4.23 |
| TSY INFL IX N/B | 20,415,453 | 3.94 |
| TSY INFL IX N/B | 20,241,393 | 3.91 |
| TSY INFL IX N/B | 19,708,974 | 3.80 |
| TSY INFL IX N/B | 18,999,007 | 3.67 |

Top Countries



RISK REDUCTION & MITIGATION - INVESTMENT GRADE BONDS

PUGH MANAGEMENT

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-----------------------------|------------------------|-----------|--------|---------|---------|----------|
| PUGH CAPITAL MGMT | 364.1 | 2.38 | 10.60 | 3.10 | 3.57 | 4.24 |
| BBG BC Aggregate Bond Index | | 2.27 | 10.30 | 2.92 | 3.38 | 3.75 |

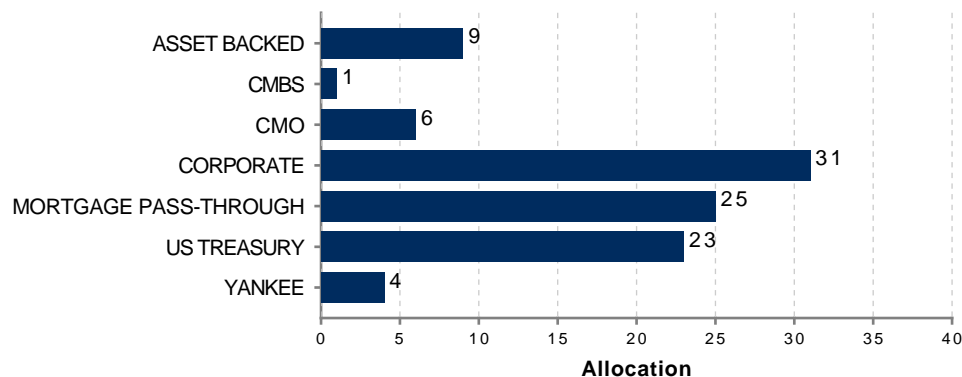
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|-------------------------------------|---------|----------|---------|---------|
| US Fixed Income Funds - Core | | | | |
| PUGH CAPITAL MGMT | 2.38 34 | 10.60 33 | 3.10 69 | 3.57 70 |
| Median | 2.30 | 10.29 | 3.41 | 3.74 |

Market Statistics

| | PUGH CAPITAL MGMT | BBG BC Aggregate Bond Index |
|---------------------|-------------------|-----------------------------|
| No. of Issues | 221.0 | 0.0 |
| Duration - Modified | 6.2 | 6.7 |
| Convexity | 0.4 | 1.0 |
| Coupon Rate | 3.4 | 3.1 |
| Yield to Maturity | 2.6 | 2.2 |
| Current Yield | 3.1 | 2.8 |
| Rating - Moody's | AA-3 | AA-2 |
| Rating - S & P | AA- | AA- |

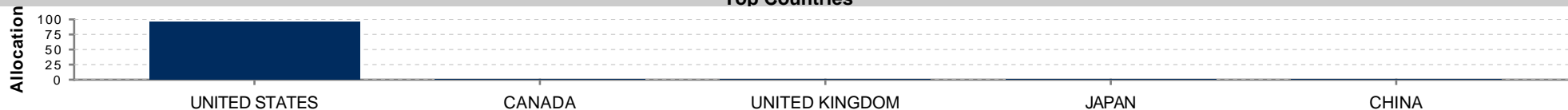
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------|---------------------|----------------|
| GNMA II POOL MA3873 | 11,765,343 | 3.24 |
| US TREASURY N/B | 10,775,148 | 2.97 |
| US TREASURY N/B | 10,770,037 | 2.96 |
| US TREASURY N/B | 10,213,719 | 2.81 |
| FED HM LN PC POOL G08784 | 10,178,584 | 2.80 |
| US TREASURY N/B | 10,100,648 | 2.78 |
| US TREASURY N/B | 9,373,898 | 2.58 |
| US TREASURY N/B | 8,738,269 | 2.41 |
| FED HM LN PC POOL QA0127 | 7,811,830 | 2.15 |
| US TREASURY N/B | 7,345,268 | 2.02 |

Top Countries



Universe data: U.S. Fixed Income Funds Core
Top Holdings exclude cash, cash equivalents, and derivatives

RISK REDUCTION & MITIGATION - INVESTMENT GRADE BONDS

WELLS CAPITAL MANAGEMENT

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-----------------------------|------------------------|-----------|--------|---------|---------|----------|
| WELLS CAPITAL | 1,579.8 | 2.32 | 10.40 | 3.19 | 3.75 | 4.64 |
| BBG BC Aggregate Bond Index | | 2.27 | 10.30 | 2.92 | 3.38 | 3.75 |

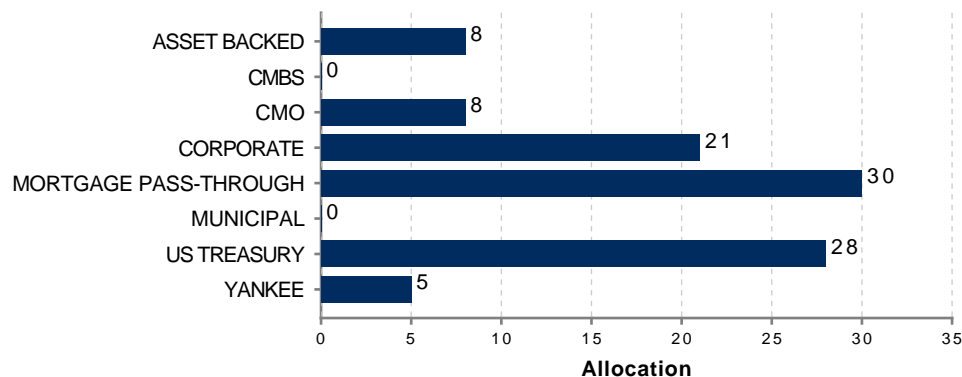
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|-------------------------------------|---------|----------|---------|---------|
| US Fixed Income Funds - Core | | | | |
| WELLS CAPITAL | 2.32 47 | 10.40 40 | 3.19 62 | 3.75 49 |
| Median | 2.30 | 10.29 | 3.41 | 3.74 |

Market Statistics

| | WELLS CAPITAL | BBG BC Aggregate Bond Index |
|---------------------|---------------|-----------------------------|
| No. of Issues | 817.0 | 0.0 |
| Duration - Modified | 5.5 | 6.7 |
| Convexity | 0.3 | 1.0 |
| Coupon Rate | 3.3 | 3.1 |
| Yield to Maturity | 2.6 | 2.2 |
| Current Yield | 3.1 | 2.8 |
| Rating - Moody's | AA-2 | AA-2 |
| Rating - S & P | AA | AA- |

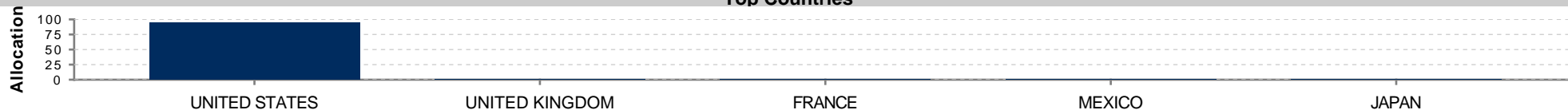
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|---------------------|---------------------|----------------|
| US TREASURY N/B | 56,309,692 | 3.99 |
| FNMA TBA 30 YR 3 | 49,873,325 | 3.53 |
| US TREASURY N/B | 32,991,052 | 2.34 |
| US TREASURY N/B | 30,046,755 | 2.13 |
| US TREASURY N/B | 28,079,073 | 1.99 |
| US TREASURY N/B | 27,256,007 | 1.93 |
| US TREASURY N/B | 25,537,289 | 1.81 |
| US TREASURY N/B | 24,795,654 | 1.76 |
| GNMA II TBA 30 YR 3 | 24,234,742 | 1.72 |
| FNMA TBA 30 YR 3.5 | 23,405,981 | 1.66 |

Top Countries



Universe data: U.S. Fixed Income Funds Core
Top Holdings exclude cash, cash equivalents, and derivatives

RISK REDUCTION & MITIGATION - INVESTMENT GRADE BONDS

DODGE & COX

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-----------------------------|------------------------|-----------|--------|---------|---------|----------|
| DODGE & COX | 1,080.9 | 2.27 | 9.63 | 4.09 | 4.16 | 5.06 |
| BBG BC Aggregate Bond Index | | 2.27 | 10.30 | 2.92 | 3.38 | 3.75 |

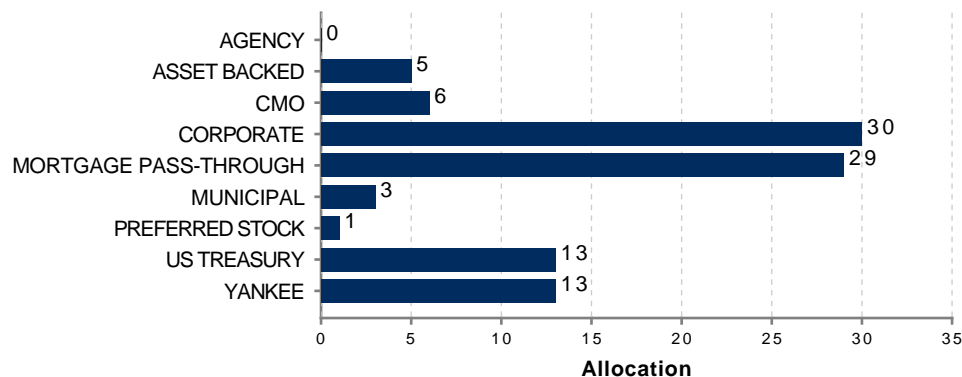
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--|---------|---------|---------|---------|
| US Fixed Income Funds - Core Plus | | | | |
| DODGE & COX | 2.27 60 | 9.63 87 | 4.09 3 | 4.16 30 |
| Median | 2.42 | 10.51 | 3.18 | 3.37 |

Market Statistics

| | DODGE & COX | BBG BC Aggregate Bond Index |
|---------------------|-------------|-----------------------------|
| No. of Issues | 251.0 | 0.0 |
| Duration - Modified | 4.9 | 6.7 |
| Convexity | 0.4 | 1.0 |
| Coupon Rate | 4.5 | 3.1 |
| Yield to Maturity | 3.3 | 2.2 |
| Current Yield | 4.1 | 2.8 |
| Rating - Moody's | A-1 | AA-2 |
| Rating - S & P | A+ | AA- |

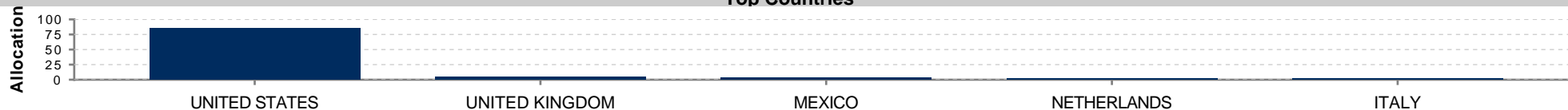
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------------|---------------------|----------------|
| US TREASURY N/B | 35,341,070 | 3.38 |
| NAVIENT STUDENT LOAN TRUST | 34,678,584 | 3.31 |
| FED HM LN PC POOL G08772 | 29,972,734 | 2.86 |
| US TREASURY N/B | 25,562,002 | 2.44 |
| FNMA POOL MA3616 | 21,932,558 | 2.10 |
| US TREASURY N/B | 20,235,530 | 1.93 |
| FED HM LN PC POOL G61218 | 19,061,883 | 1.82 |
| GOVERNMENT NATIONAL MORTGAGE A | 18,496,290 | 1.77 |
| CHARTER COMM OPT LLC/CAP | 16,250,959 | 1.55 |
| FNMA POOL MA3416 | 15,812,384 | 1.51 |

Top Countries



Universe data: U.S. Fixed Income Funds Core Plus
Top Holdings exclude cash, cash equivalents, and derivatives

RISK REDUCTION & MITIGATION - INVESTMENT GRADE BONDS

PACIFIC INVESTMENT MANAGEMENT COMPANY

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-----------------------------|------------------------|-----------|--------|---------|---------|----------|
| PIMCO | 870.5 | 1.97 | 9.39 | 4.24 | 4.34 | 4.74 |
| BBG BC Aggregate Bond Index | | 2.27 | 10.30 | 2.92 | 3.38 | 3.75 |

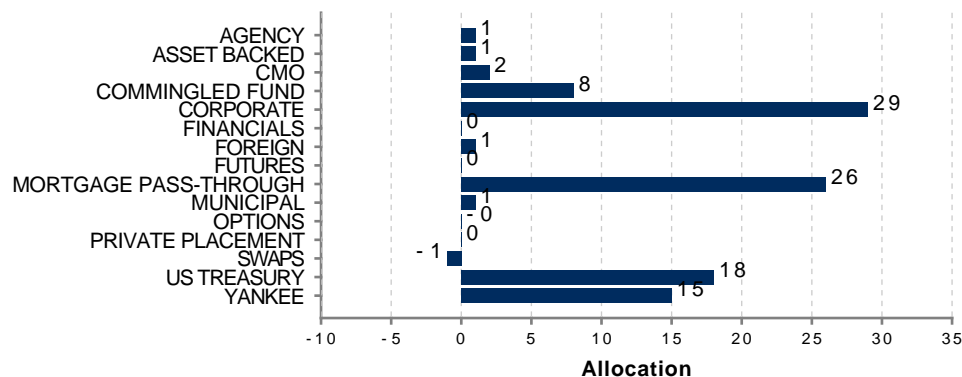
Market Statistics

| | PIMCO | BBG BC Aggregate Bond Index |
|---------------------|-------|-----------------------------|
| No. of Issues | 782.0 | 0.0 |
| Duration - Modified | 5.7 | 6.7 |
| Convexity | 0.1 | 1.0 |
| Coupon Rate | 3.2 | 3.1 |
| Yield to Maturity | 2.7 | 2.2 |
| Current Yield | 3.2 | 2.8 |
| Rating - Moody's | A-1 | AA-2 |
| Rating - S & P | A+ | AA- |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--|---------|---------|---------|---------|
| US Fixed Income Funds - Core Plus | | | | |
| PIMCO | 1.97 82 | 9.39 88 | 4.24 3 | 4.34 27 |
| Median | 2.42 | 10.51 | 3.18 | 3.37 |

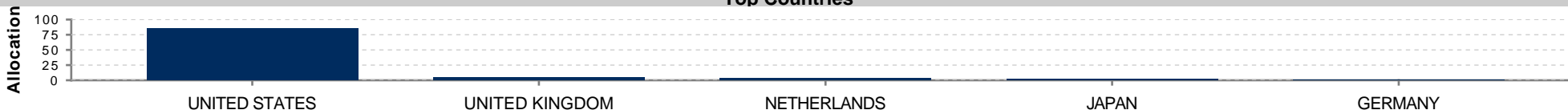
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------------|---------------------|----------------|
| BWU00VVP0 IRS USD R V 03MLIBOR | 142,100,000 | 16.32 |
| SWU00VVS4 IRS USD R F 1.50000 | 90,275,121 | 10.37 |
| US TREASURY N/B | 87,441,010 | 10.05 |
| PIMCO FDS PAC INVT MGMT SER | 82,227,578 | 9.45 |
| FNMA TBA 30 YR 3.5 | 67,195,068 | 7.72 |
| FNMA TBA 30 YR 3 | 66,905,117 | 7.69 |
| BWU00RZL4 IRS USD R V 03MLIBOR | 38,627,845 | 4.44 |
| FNMA TBA 30 YR 3 | 36,618,937 | 4.21 |
| STRIP PRINC | 34,034,963 | 3.91 |
| US TREASURY N/B | 30,391,194 | 3.49 |

Top Countries



Universe data: U.S. Fixed Income Funds Core Plus
Top Holdings exclude cash, cash equivalents, and derivatives

RISK REDUCTION & MITIGATION - INVESTMENT GRADE BONDS

WESTERN ASSET MANAGEMENT

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|-----------------------------|------------------------|-----------|--------|---------|---------|----------|
| WESTERN ASSET MGMT. | 943.4 | 2.71 | 12.26 | 3.87 | 4.49 | 5.93 |
| BBG BC Aggregate Bond Index | | 2.27 | 10.30 | 2.92 | 3.38 | 3.75 |

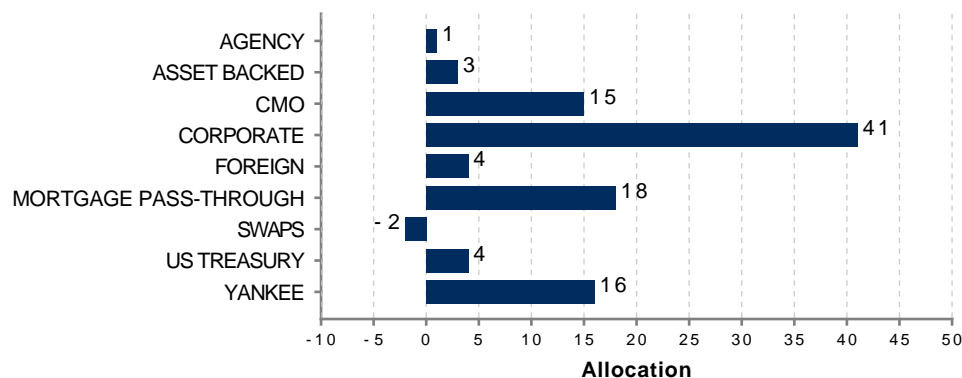
Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--|---------|---------|---------|---------|
| US Fixed Income Funds - Core Plus | | | | |
| WESTERN ASSET MGMT. | 2.71 21 | 12.26 6 | 3.87 5 | 4.49 26 |
| Median | 2.42 | 10.51 | 3.18 | 3.37 |

Market Statistics

| | WESTERN ASSET MGMT. | BBG BC Aggregate Bond Index |
|---------------------|---------------------|-----------------------------|
| No. of Issues | 816.0 | 0.0 |
| Duration - Modified | 6.2 | 6.7 |
| Convexity | 0.4 | 1.0 |
| Coupon Rate | 4.3 | 3.1 |
| Yield to Maturity | 3.5 | 2.2 |
| Current Yield | 4.2 | 2.8 |
| Rating - Moody's | A-3 | AA-2 |
| Rating - S & P | A- | AA- |

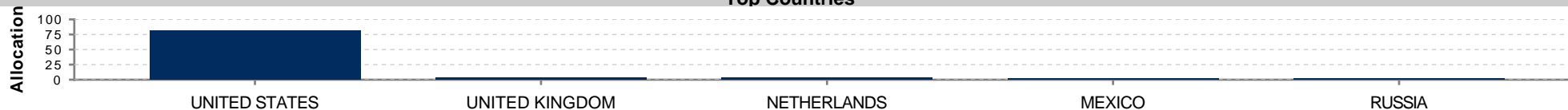
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|--------------------------------|---------------------|----------------|
| W25000000 WA MBS | 228,814,829 | 42.30 |
| W90000014 WA OPP LOC MKT DEBT | 31,482,664 | 5.82 |
| BWS030668 IRS USD R V 03MLIBOR | 30,063,992 | 5.56 |
| SWS029421 IRS USD R F 3.00000 | 24,479,692 | 4.53 |
| US HIGH YIELD SEC PORT L | 23,462,425 | 4.34 |
| BWS032300 IRS USD R V 03MLIBOR | 23,140,000 | 4.28 |
| FED HM LN PC POOL SD8004 | 19,393,357 | 3.59 |
| BWS032706 CDS USD R V 03MEVENT | 16,440,000 | 3.04 |
| BWS029405 IRS USD R V 03MLIBOR | 15,138,534 | 2.80 |
| BWS029025 IRS USD R V 03MLIBOR | 12,889,214 | 2.38 |

Top Countries



Universe data: U.S. Fixed Income Funds Core Plus
Top Holdings exclude cash, cash equivalents, and derivatives

RISK REDUCTION & MITIGATION - CASH

J.P. MORGAN ASSET MANAGEMENT

for the quarter ended September 30, 2019



Manager vs. Benchmark: Return through September 30, 2019 (not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years |
|--------------------------------|------------------------|-----------|--------|---------|---------|
| STIF - JP MORGAN ENHANCED CASH | 1,574.4 | 0.59 | 2.74 | 1.87 | 1.33 |
| Cash Custom BM | | 0.56 | 2.39 | 1.56 | 1.02 |

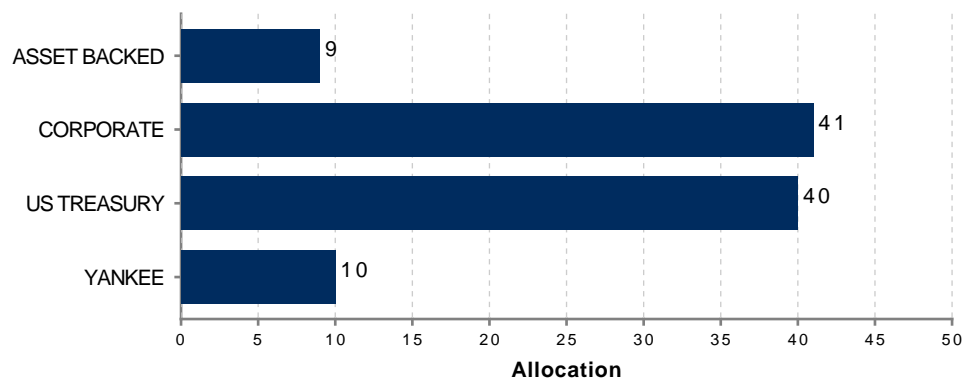
Market Statistics

| | JP MORGAN ENHANCED CASH |
|---------------------|-------------------------|
| No. of Issues | 99.0 |
| Duration - Modified | 0.8 |
| Convexity | 0.0 |
| Coupon Rate | 2.3 |
| Yield to Maturity | 2.0 |
| Current Yield | 2.3 |
| Rating - Moody's | AA-2 |
| Rating - S & P | AA- |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--------------------------------|---------|---------|---------|---------|
| Cash Funds | | | | |
| STIF - JP MORGAN ENHANCED CASH | 0.59 30 | 2.74 24 | 1.87 29 | 1.33 31 |
| Median | 0.54 | 2.40 | 1.27 | 0.79 |

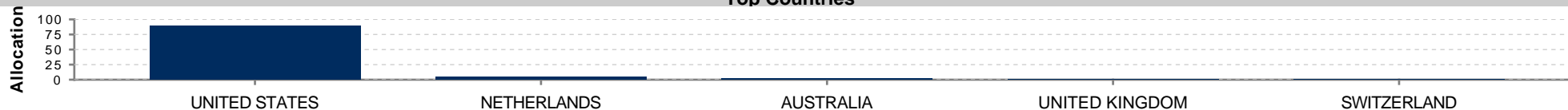
Asset Type (%)



Top Holdings

| Security Name | Ending Market Value | % of Portfolio |
|-------------------------|---------------------|----------------|
| FED HOME LN DISCOUNT NT | 380,000,000 | 24.14 |
| SSC GOVERNMENT MM GVMXX | 100,070,446 | 6.36 |
| US TREASURY N/B | 50,057,235 | 3.18 |
| US TREASURY N/B | 29,906,224 | 1.90 |
| CARGILL INC | 27,000,000 | 1.71 |
| US TREASURY N/B | 25,577,063 | 1.62 |
| US TREASURY N/B | 25,511,468 | 1.62 |
| US TREASURY N/B | 25,020,593 | 1.59 |
| US TREASURY N/B | 24,974,588 | 1.59 |
| US TREASURY N/B | 24,824,058 | 1.58 |

Top Countries



Universe data: Cash Funds
Market Statistics for cash custom benchmark not available
Top Holdings exclude cash, cash equivalents, and derivatives

RISK REDUCTION & MITIGATION - DIVERSIFIED HEDGE FUNDS

AQR LEAP



for the quarter ended September 30, 2019

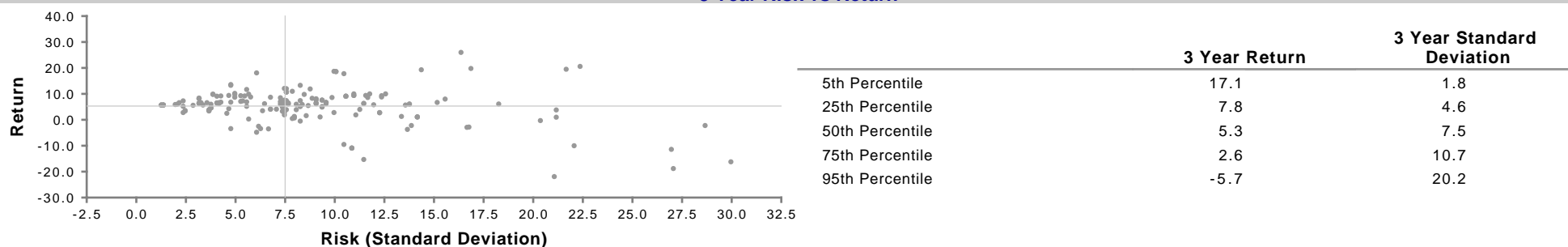
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| AQR LEAP | 66.8 | 0.38 | -1.46 | | | |
| CUSTOM HEDGE FUND BM | | 1.21 | 6.18 | | | |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--------------------|---------|----------|---------|---------|
| Hedge Funds | | | | |
| AQR LEAP | 0.38 47 | -1.46 83 | | |
| Median | 0.22 | 2.99 | 5.31 | 3.95 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



RISK REDUCTION & MITIGATION - DIVERSIFIED HEDGE FUNDS

CAPULA GRV



for the quarter ended September 30, 2019

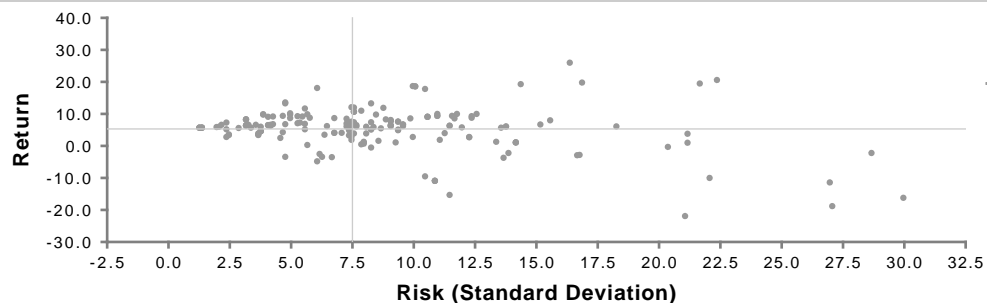
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| CAPULA GRV | 204.9 | 1.29 | | | | |
| CUSTOM HEDGE FUND BM | | 1.21 | | | | |

Universe

| Hedge Funds | 1 Qtr | 1 Year | 3 Years | 5 Years |
|-------------|-------|--------|---------|---------|
| CAPULA GRV | 1.29 | 3.0 | | |
| Median | 0.22 | 2.99 | 5.31 | 3.95 |

3 Year Risk vs Return



| | 3 Year Return | 3 Year Standard Deviation |
|-----------------|---------------|---------------------------|
| 5th Percentile | 17.1 | 1.8 |
| 25th Percentile | 7.8 | 4.6 |
| 50th Percentile | 5.3 | 7.5 |
| 75th Percentile | 2.6 | 10.7 |
| 95th Percentile | -5.7 | 20.2 |

Calendar Year Returns as of September 30, 2019



RISK REDUCTION & MITIGATION - DIVERSIFIED HEDGE FUNDS

DK INSTITUTIONAL PARTNERS

for the quarter ended September 30, 2019



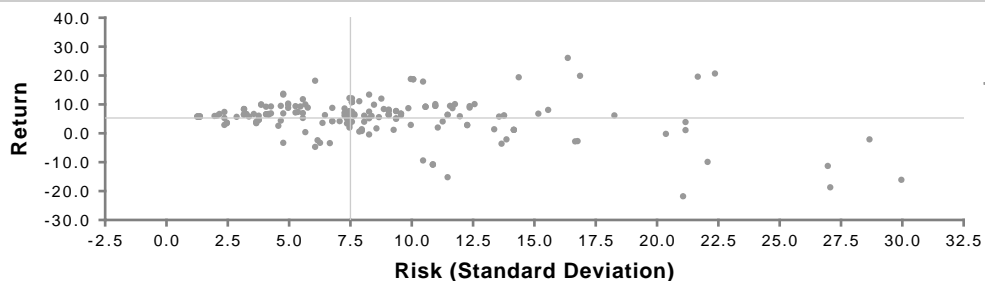
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|---------------------------|------------------------|-----------|--------|---------|---------|----------|
| DK INSTITUTIONAL PARTNERS | 125.3 | 1.38 | 4.13 | | | |
| CUSTOM HEDGE FUND BM | | 1.21 | 6.18 | | | |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|---------------------------|---------|---------|---------|---------|
| Hedge Funds | | | | |
| DK INSTITUTIONAL PARTNERS | 1.38 29 | 4.13 42 | | |
| Median | 0.22 | 2.99 | 5.31 | 3.95 |

3 Year Risk vs Return



| | 3 Year Return | 3 Year Standard Deviation |
|-----------------|---------------|---------------------------|
| 5th Percentile | 17.1 | 1.8 |
| 25th Percentile | 7.8 | 4.6 |
| 50th Percentile | 5.3 | 7.5 |
| 75th Percentile | 2.6 | 10.7 |
| 95th Percentile | -5.7 | 20.2 |

Calendar Year Returns as of September 30, 2019



RISK REDUCTION & MITIGATION - DIVERSIFIED HEDGE FUNDS

GROSVENOR HFOF



for the quarter ended September 30, 2019

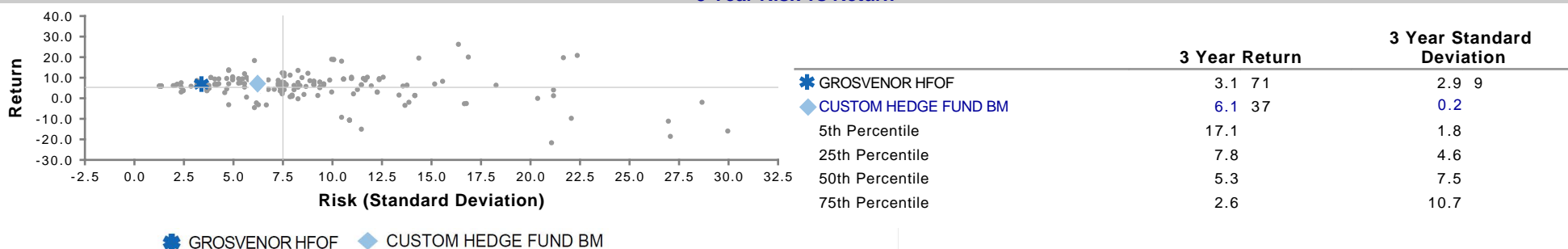
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| GROSVENOR HFOF | 485.9 | 0.61 | -0.86 | 3.12 | 1.25 | |
| CUSTOM HEDGE FUND BM | | 1.21 | 6.18 | 6.11 | 5.71 | |

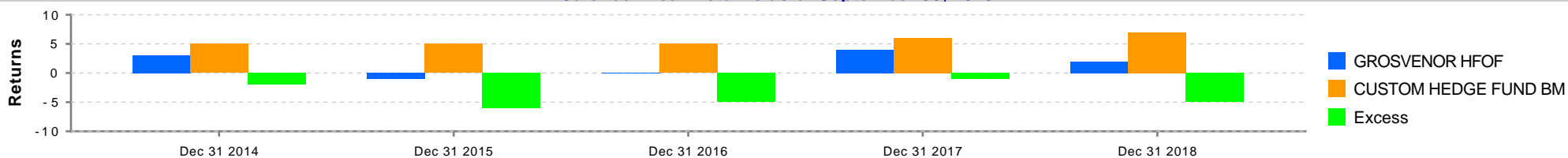
Universe

| Hedge Funds | 1 Qtr | 1 Year | 3 Years | 5 Years |
|----------------|---------|----------|---------|---------|
| GROSVENOR HFOF | 0.61 42 | -0.86 79 | 3.12 71 | 1.25 79 |
| Median | 0.22 | 2.99 | 5.31 | 3.95 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



RISK REDUCTION & MITIGATION - DIVERSIFIED HEDGE FUNDS

GSAM HFOF

for the quarter ended September 30, 2019



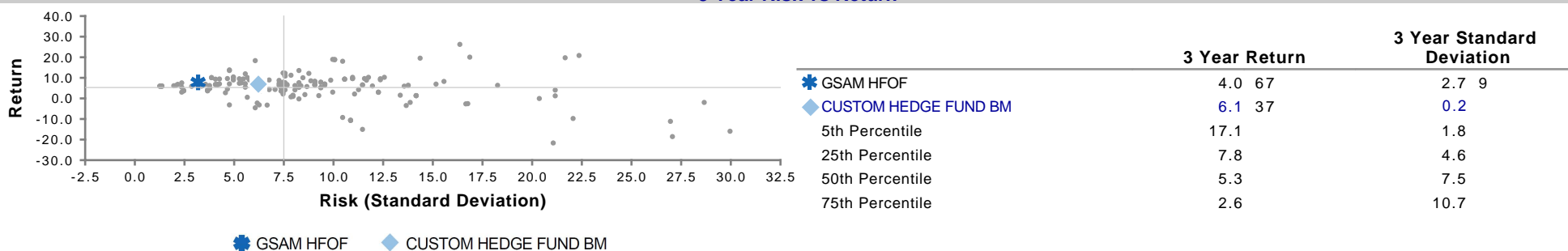
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| GSAM HFOF | 498.0 | 2.23 | 3.00 | 3.96 | | |
| CUSTOM HEDGE FUND BM | | 1.21 | 6.18 | 6.11 | | |

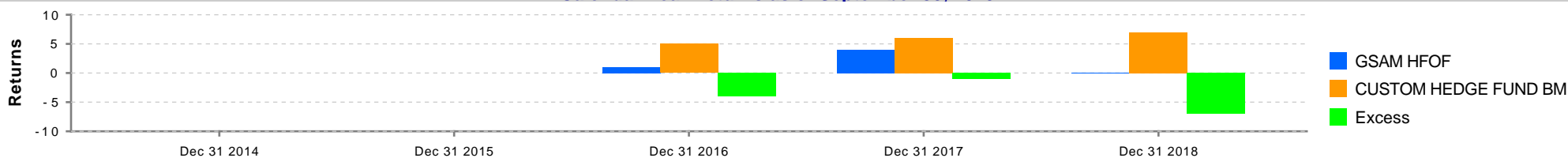
Universe

| Hedge Funds | 1 Qtr | 1 Year | 3 Years | 5 Years |
|-------------|---------|---------|---------|---------|
| GSAM HFOF | 2.23 24 | 3.00 50 | 3.96 67 | |
| Median | 0.22 | 2.99 | 5.31 | 3.95 |

3 Year Risk vs Return



Calendar Year Returns as of September 30, 2019



RISK REDUCTION & MITIGATION - DIVERSIFIED HEDGE FUNDS

HBK MULTI-STRATEGY

for the quarter ended September 30, 2019



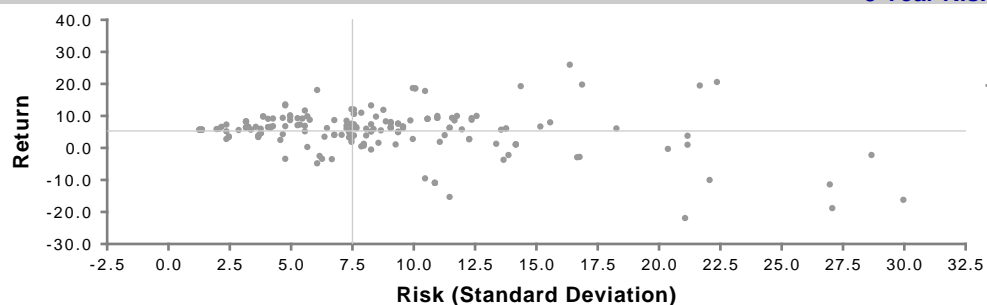
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| HBK MULTI-STRATEGY | 130.4 | 0.37 | 4.86 | | | |
| CUSTOM HEDGE FUND BM | | 1.21 | 6.18 | | | |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|--------------------|---------|---------|---------|---------|
| Hedge Funds | | | | |
| HBK MULTI-STRATEGY | 0.37 47 | 4.86 40 | | |
| Median | 0.22 | 2.99 | 5.31 | 3.95 |

3 Year Risk vs Return



| | 3 Year Return | 3 Year Standard Deviation |
|-----------------|---------------|---------------------------|
| 5th Percentile | 17.1 | 1.8 |
| 25th Percentile | 7.8 | 4.6 |
| 50th Percentile | 5.3 | 7.5 |
| 75th Percentile | 2.6 | 10.7 |
| 95th Percentile | -5.7 | 20.2 |

Calendar Year Returns as of September 30, 2019



RISK REDUCTION & MITIGATION - DIVERSIFIED HEDGE FUNDS

PIMCO TAC OPFS FUND

for the quarter ended September 30, 2019



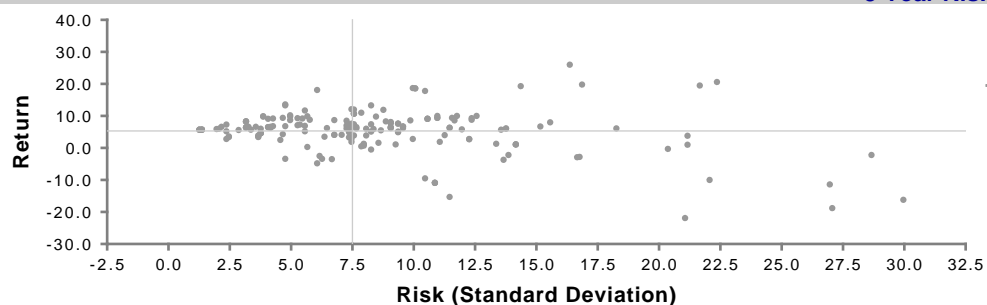
Manager vs. Benchmark: Return through September 30, 2019
(not annualized if less than 1 year)

| | Ending Mkt Val (\$mil) | 1 Quarter | 1 Year | 3 Years | 5 Years | 10 Years |
|----------------------|------------------------|-----------|--------|---------|---------|----------|
| PIMCO TAC OPFS FUNDS | 182.4 | 1.59 | | | | |
| CUSTOM HEDGE FUND BM | | 1.21 | | | | |

Universe

| | 1 Qtr | 1 Year | 3 Years | 5 Years |
|----------------------|---------|--------|---------|---------|
| Hedge Funds | | | | |
| PIMCO TAC OPFS FUNDS | 1.59 27 | | | |
| Median | 0.22 | 2.99 | 5.31 | 3.95 |

3 Year Risk vs Return



| | 3 Year Return | 3 Year Standard Deviation |
|-----------------|---------------|---------------------------|
| 5th Percentile | 17.1 | 1.8 |
| 25th Percentile | 7.8 | 4.6 |
| 50th Percentile | 5.3 | 7.5 |
| 75th Percentile | 2.6 | 10.7 |
| 95th Percentile | -5.7 | 20.2 |

Calendar Year Returns as of September 30, 2019



ESTIMATED PUBLIC MARKETS MANAGER FEES¹

for the quarter ended September 30, 2019



GROWTH

| Global Equity | Average Market Value (Millions) | Fees | Annualized Effective Rate (bps) |
|-----------------------------------|------------------------------------|-------------|------------------------------------|
| Active | | | |
| Acadian Asset Mgmt. | \$735.5 | \$664,157 | 36.1 |
| Acadian Emrg. Markets | \$279.9 | \$382,953 | 54.7 |
| AQR Capital Mgmt. | \$213.0 | \$381,722 | 71.7 |
| BTC Europe Alpha Tilts | \$820.3 | \$723,644 | 35.3 |
| Capital Guardian | \$388.2 | \$345,727 | 35.6 |
| Cevian Capital | \$282.4 | \$883,438 | 125.1 |
| CornerCap | \$57.0 | \$76,892 | 53.9 |
| Eagle Asset Mgmt. | \$227.1 | \$293,037 | 51.6 |
| Frontier Capital Mgmt. | \$525.1 | \$978,271 | 74.5 |
| Genesis Investment Mgmt. | \$705.9 | \$1,258,919 | 71.3 |
| Global Alpha | \$170.2 | \$304,054 | 71.5 |
| JANA Partners ² | \$107.7 | \$300,000 | 100.0 |
| Lazard Asset Mgmt. | \$348.7 | \$560,500 | 64.3 |
| Matarin | \$108.2 | \$171,675 | 63.5 |
| QMA | \$264.3 | \$348,731 | 52.8 |
| Symphony Financial | \$159.7 | \$286,836 | 71.8 |
| Systematic | \$229.6 | \$315,702 | 55.0 |
| Subtotal: | \$5,622.7 | \$8,276,258 | 58.9 |
| Passive | | | |
| BTC Canada IMI | \$737.6 | \$27,889 | 1.5 |
| BTC EAFE IMI | \$4,121.7 | \$155,835 | 1.5 |
| BTC EAFE Small Cap | \$93.9 | \$9,154 | 3.9 |
| BTC EM | \$1,155.2 | \$262,054 | 9.1 |
| BTC EM Small Cap | \$56.2 | \$27,401 | 19.5 |
| BTC Europe Index | \$200.3 | \$4,998 | 1.0 |
| Subtotal: ³ | \$17,898.2 | \$734,428 | 1.6 |
| Currency Hedge | | | |
| 50% Developed Mkt. Currency Hedge | \$7,851.1 | \$296,837 | 1.5 |
| Subtotal: | \$7,851.1 | \$296,837 | 1.5 |

¹ Estimations may not match net-of-fee returns on "Annualized Total Returns" pages; reflects investment management fee only

² Fees are based on committed capital of \$120 million

³ Includes BTC Russell 3000 Index

ESTIMATED PUBLIC MARKETS MANAGER FEES¹

for the quarter ended September 30, 2019



CREDIT

| Credit | Average Market Value (Millions) | Fees | Annualized Effective Rate (bps) |
|--------------------------------|------------------------------------|-------------|------------------------------------|
| Bank Loans | | | |
| Crescent Capital Group | \$444.0 | \$592,445 | 53.4 |
| Tennenbaum Capital Partners | \$442.0 | \$882,913 | 79.9 |
| Subtotal: | \$886.0 | \$1,475,358 | 66.6 |
| Emerging Market Debt | | | |
| Aberdeen Standard Investments | \$428.3 | \$423,755 | 39.6 |
| Ashmore Investment Mgmt. | \$420.6 | \$705,748 | 67.1 |
| Subtotal: | \$849.0 | \$1,129,503 | 53.2 |
| High Yield | | | |
| Bain Capital | \$371.7 | \$603,955 | 65.0 |
| Beach Point Capital | \$250.8 | \$407,510 | 65.0 |
| Brigade Capital Mgmt. | \$584.9 | \$1,096,624 | 75.0 |
| Doubleline Capital | \$343.4 | \$643,832 | 75.0 |
| Oaktree Capital Mgmt. | \$442.7 | \$429,483 | 38.8 |
| TCW | \$332.0 | \$477,503 | 57.5 |
| Subtotal: | \$2,325.4 | \$3,658,906 | 62.9 |
| Illiquid Credit | | | |
| Beach Point Capital - Fund II | \$39.8 | \$191,166 | 192.2 |
| Beach Point Capital - Fund III | \$189.1 | \$719,765 | 152.2 |
| Subtotal: | \$228.9 | \$910,931 | 159.2 |

¹ Estimations may not match net-of-fee returns on "Annualized Total Returns" pages; reflects investment management fee only

ESTIMATED PUBLIC MARKETS MANAGER FEES¹

for the quarter ended September 30, 2019



REAL ASSETS & INFLATION HEDGES

| Real Assets & Inflation Hedges | Average Market Value (Millions) | Fees | Annualized Effective Rate (bps) |
|--|------------------------------------|-------------|------------------------------------|
| Natural Resources & Commodities | | | |
| Credit Suisse | \$415.1 | \$271,577 | 26.2 |
| DWS Natural Resources | \$424.5 | \$212,260 | 20.0 |
| Neuberger Berman/Gresham | \$435.6 | \$408,924 | 37.5 |
| PIMCO | \$433.3 | \$394,473 | 36.4 |
| Subtotal: | \$1,708.5 | \$1,287,235 | 30.1 |
| Infrastructure | | | |
| DWS Infrastructure | \$1,132.9 | \$559,811 | 19.8 |
| Subtotal: | \$1,132.9 | \$559,811 | 19.8 |
| Treasury Inflation-Protected Securities | | | |
| BlackRock TIPS | \$519.7 | \$12,992 | 1.0 |
| Subtotal: | \$519.7 | \$12,992 | 1.0 |

¹ Estimations may not match net-of-fee returns on "Annualized Total Returns" pages; reflects investment management fee only

ESTIMATED PUBLIC MARKETS MANAGER FEES¹

for the quarter ended September 30, 2019



RISK REDUCTION & MITIGATION

| Risk Reduction & Mitigation | Average Market Value (Millions) | Fees | Annualized Effective Rate (bps) |
|-------------------------------|------------------------------------|-------------|------------------------------------|
| Investment Grade Bonds | | | |
| Dodge & Cox | \$1,156.7 | \$290,708 | 10.1 |
| PIMCO | \$879.8 | \$457,095 | 20.8 |
| Pugh Capital Mgmt. | \$362.3 | \$134,321 | 14.8 |
| Wells Capital Mgmt. | \$1,571.8 | \$373,970 | 9.5 |
| Western Asset Mgmt. | \$936.1 | \$334,030 | 14.3 |
| Subtotal: ² | \$11,558.4 | \$1,732,635 | 6.0 |
| Cash | | | |
| J.P. Morgan Asset Mgmt. | \$1,316.4 | \$131,645 | 4.0 |
| Subtotal: | \$1,316.4 | \$131,645 | 4.0 |

¹ Estimations may not match net-of-fee returns on "Annualized Total Returns" pages; reflects investment management fee only

² Includes BTC US Debt Index

ALLOCATION RANGES

for the quarter ended September 30, 2019



STRATEGIC vs. ACTUAL

| | Target Range ¹ | Actual Allocation ² |
|--|---------------------------|--------------------------------|
| GROWTH: | 45-59% | 51.7% |
| Global Equity | 34-48% | 40.0% |
| Private Equity - Growth | 7-13% | 9.9% |
| Opportunistic Real Estate | 0-2% | 1.7% |
| CREDIT: | 7-13% | 8.7% |
| High Yield | 1-7% | 4.0% |
| Bank Loans | 0-5% | 1.6% |
| Emerging Market Debt | 0-3% | 1.4% |
| Illiquid Credit | 0-4% | 1.6% |
| REAL ASSETS & INFLATION HEDGES: | 12-18% | 14.6% |
| Core & Value Added Real Estate | 5-11% | 8.5% |
| Natural Resources & Commodities | 1-5% | 3.2% |
| Infrastructure | 0-3% | 2.0% |
| Treasury Inflation-Protected Securities | 0-4% | 0.9% |
| RISK REDUCTION & MITIGATION | 17-29% | 24.7% |
| Investment Grade Bonds | 13-25% | 19.8% |
| Diversified Hedge Funds | 0-5% | 2.9% |
| Cash | 0-3% | 2.1% |
| TOTAL OVERLAY | — | 0.4% |

¹ Represents interim strategic asset allocation target ranges

² Totals may not add up due to rounding

Glossary

A

ANNUAL RETURN: The total return of a security over a specified period, expressed as an annual rate of interest.

ANNUALIZED: A figure (as in a percentage) calculated by a formula to find the "average" performance per year for a period greater than one year.

B

BASIS POINTS (BPS): One one-hundredth of one percent. One hundred basis points equal one percent.

BETA: A measure of the volatility of a stock relative to the overall market. A beta of less than one indicates lower risk than the market; a beta of more than one indicates higher risk than the market.

BLOOMBERG COMMODITY INDEX TOTAL RETURN: The Bloomberg Commodity Index Total Return is composed of futures contracts on physical commodities.

BRIGADE CUSTOM INDEX: 50% Bloomberg Barclays Ba to B U.S. High Yield; 50% Credit Suisse Leveraged Loan Index.

C

CASH CUSTOM BM: Inception – 3/31/19 Citigroup/FTSE 6-Month U.S. T-Bill Index; 3/31/19 – Present FTSE 3-Month U.S. T-Bill Index.

CORE & VALUE-ADDED REAL ESTATE CUSTOM BM: NFI ODCE + 50 bps (3-month lag).

CREDIT CUSTOM BM: 40% Bloomberg Barclays Ba to B U.S. High Yield; 30% Credit Suisse Leveraged Loan Index; 10% Emerging Markets Debt Custom BM; 20% Illiquid Credit Custom BM.

CUSTOM HEDGE FUND BM: Inception – 3/31/19 Citigroup/FTSE 3-Month U.S. T-Bill Index + 500 bps (1-month lag); 3/31/19 – Present FTSE 3-Month U.S. T-Bill Index plus 250 bps (1-month lag).

CUSTOM MSCI ACWI IMI NET 50% HEDGED: MSCI ACWI ex U.S. IMI (Net) with 50% Developed Markets hedged to USD.

D

DIVERSIFIED HEDGE FUNDS CUSTOM INDEX: FTSE 3-Month U.S. T-Bill Index plus 250 bps (1-month lag).

DURATION: A measure of the price sensitivity of a bond portfolio to changes in interest rates. It is calculated as the weighted average time to receive a bond's coupon and principal payments. The closer the

coupon and principal payments, the shorter the duration. The more distant the coupon and principal payments, the longer the duration. Portfolios with longer maturity bonds will normally have longer duration and will, therefore, have greater price sensitivities to changes in interest rates.

E

EAFE CUSTOM INDEX: Inception - 6/30/06 MSCI EAFE (Net); 6/30/06 - Present MSCI EAFE + Canada (Net).

EMERGING MARKET DEBT (EMD) CUSTOM INDEX: 50% JP Morgan EMBI; 25% JP Morgan GBI-EM GD; 25% JP Morgan CEMBI BD.

F

FIXED INCOME (FI) CUSTOM INDEX: Inception - 3/31/09: A combination of the Barclays US Aggregate Bond Index and the Barclays US High Yield Ba/B Index. The weights have varied over time, but as of 9/30/06, the mix was 93% Aggregate and 7% high yield. 3/31/09 - Present : 100% Barclays U.S. Universal.

FUTURES CONTRACT: Agreement to buy or sell a specific amount of a commodity or financial instrument at a particular price and a stipulated future date.

G

GLOBAL EQUITY CUSTOM BM: 80% MSCI ACWI IMI Net; 20% MSCI WORLD IMI ex U.S. Currency Hedged.

GROWTH CUSTOM BM: Based on sub-asset market value: ~79% Global Equity Custom BM; 19% Private Equity - Growth Custom BM; 2% Opportunistic Real Estate Custom BM.

H

HEDGING: The temporary purchase or sale of a contract calling for future delivery of a specific security at an agreed upon price to offset a present or anticipated position in the cash market.

HIGH YIELD BOND: A bond with a low investment quality and credit worthiness, usually with a rating of BB or less.

HY/BL CUSTOM INDEX: 50% Barclays U.S. High Yield Index; 50% Credit Suisse Leveraged Loan Index.

I

ILLIQUID CREDIT CUSTOM BM: Bloomberg Barclays U.S. Aggregate Index + 250 bps (1-month lag).

INDEX: A statistical yardstick composed of a basket of securities with a set of

characteristics. An example of this would include the "S&P 500" which is an index of 500 stocks.

INFORMATION RATIO: The information ratio is the excess return (alpha) per unit of active risk (tracking error). It is measured by dividing alpha by the tracking error.

INTERNAL RATE OF RETURN: The Internal rate of return is a total rate of return that gives full weight to the size and time of cash flows over the period measured and fully reflects unrealized gains and losses in addition to realized gains and losses, interest and dividend income.

M

MARKET CAPITALIZATION: The market value of all outstanding shares of common stock of a company. Derived by multiplying the number of shares outstanding at month-end by the month-end closing price of the security.

MSCI CANADA IMI CUSTOM INDEX (NET): Inception – 8/31/08 MSCI Canada (Net); 8/31/08 - Present MSCI Canada IMI (Net).

MSCI EAFE IMI CUSTOM INDEX (NET): Inception – 8/31/08 MSCI EAFE (Net); 8/31/08 - Present MSCI EAFE IMI (Net).

MSCI EM IMI CUSTOM INDEX: Inception – 12/31/00 MSCI EM (Gross); 12/31/00 – 8/31/08 MSCI EM (Net); 8/31/08 – Present MSCI EM IMI (Net).

N

NATURAL RESOURCES & COMMODITIES CUSTOM BM: 50% Bloomberg Commodity Index; 50% S&P Global Large MidCap Commodity and Resources Index.

O

OPPORTUNISTIC REAL ESTATE CUSTOM BM: NFI ODCE + 300 bps (3-month lag).

P

PE – CREDIT CUSTOM BM: Bloomberg Barclays U.S. Aggregate + 250 bps (3-month lag).

PRIVATE EQUITY – GROWTH CUSTOM BM: MSCI ACWI IMI Net Index + 200 bps (3-month lag).

R

REAL ASSETS & INFLATION HEDGES CUSTOM BM: Based on sub-asset market value: ~ 54% Core & Value-Added Real Estate Custom BM; 20% Natural Resources & Commodities Custom BM; 13% DJ Brookfield Global Infrastructure; 13% Bloomberg Barclays U.S. TSY TIPS.

RETURN CORRELATION: The relationship between the returns on investments. A negative return correlation between two investments means that most of the time

when investment A has a positive return, investment B will have a negative return.

RISK REDUCTION & MITIGATION CUSTOM BM:

Based on sub-asset market value:
~ 83% Bloomberg Barclays Aggregate;
13% Diversified Hedge Funds Custom BM;
4% FTSE 3-month Treasury Bill.

RUSSELL 3000 INDEX: The Russell 3000 Index measures the performance of the largest 3000 U.S. companies representing approximately 98% of the investable U.S. equity market.

S

SECURITIZED CUSTOM INDEX: Barclays U.S. Securitized Bond Index + 400 bps.

STANDARD DEVIATION: Statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. The greater the degree of dispersion, the greater the risk.

T

TIME-WEIGHTED RATE OF RETURN:

The “time-weighted” rate of return is the investment performance (return), measured from beginning market value, of a unit of assets held continuously for the entire time period measured. This rate provides a standard for comparing the

performance of different funds in which the size and timing of contributions and payouts could vary considerably. Consequently, the time-weighted rate of return is a mathematical measure that eliminates the effects of fund cash flows.

TIPS: Inflation-indexed securities issued by the U.S. Treasury Department (commonly known as Treasury Inflation-Protection Securities). TIPS have been issued in the U.S. since January 1997. These securities adjust both their principal and coupon payments upward with any rise in inflation. Like all Treasuries, they enjoy the full guarantee of the U.S. government.

TOTAL FUND CUSTOM BENCHMARK: Uses the Board approved Total Fund Target Policy asset allocation.

TOTAL PRIVATE EQUITY BENCHMARK:
Inception – 3/31/19 Private Equity Target (Russell 3000 rolling 10 year + 500 bps);
3/31/19 – Present Composite weighted blend of Private Equity-Growth Custom BM, PE-Credit Custom BM, and PE-Real Assets Custom BM.

TOTAL REAL ESTATE BENCHMARK:
Inception – 3/31/19 Real Estate Target (NCREIF ODCE Net + 40 bps);
3/31/19 – Present Composite weighted blend of Opportunistic Real Estate Custom BM, NPI Income Lagged, and Core & Value-Added Real Estate Custom BM.

TOTAL RETURN: The aggregate increase or decrease in the value of the portfolio

resulting from the net appreciation or depreciation of the principal of the fund, plus or minus the net income or loss experienced by the fund during the period.

TRACKING ERROR: Tracking error is the volatility of a manager’s excess return. It is measured by subtracting the benchmark return from the manager’s return and calculating the standard deviation.

U

UNIVERSE DATA SOURCE: State Street utilizing Wilshire Associates’ TUCS Universe Data.

Y

YIELD: The rate of annual income return on an investment expressed as a percentage. Income yield is obtained by dividing the current dollar income by the current market price of the security.

YIELD TO MATURITY: The return a bond earns on the price at which it was purchased if it were held to maturity. It assumes that coupon payments can be reinvested at the yield to maturity.

SOURCE: www.nasdaq.com & www.investopedia.com

Last updated: 11/25/19

Disclosure

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Total Plan Analytics Board Report

Prepared for LACERA

30 September 2019

Total Plan Asset Allocation & Analytics

30-Sep-2019

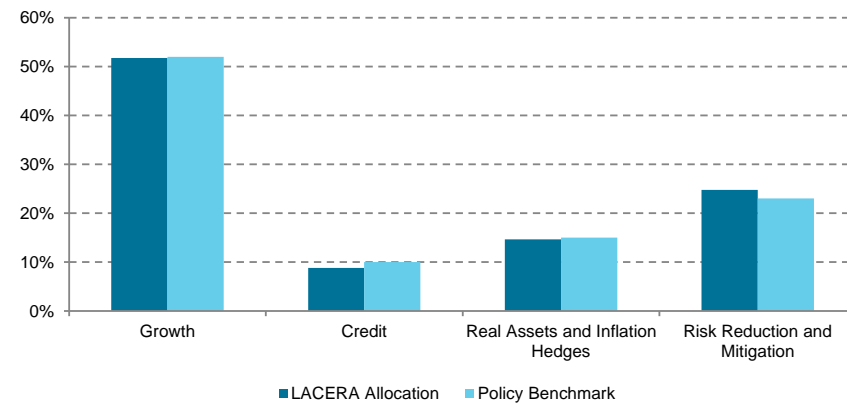
LACERA

Reporting Currency: USD

Total Plan Allocation vs Policy Benchmark

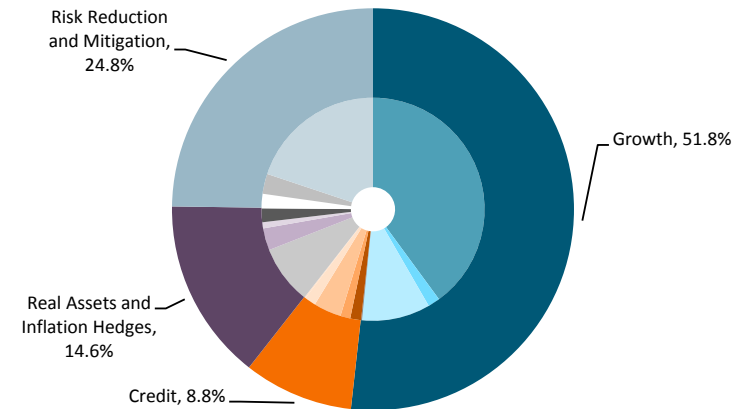
| | Market Value (Millions) ¹ | Allocation (%) | Policy Benchmark (%) | Benchmark | Relative (%) |
|----------------------------------|--------------------------------------|----------------|----------------------|-----------------------------|--------------|
| Growth | 30,212 | 51.8% | 52.0% | Growth Composite | -0.2% |
| Credit | 5,153 | 8.8% | 10.0% | Credit Composite | -1.2% |
| Real Assets and Inflation Hedges | 8,547 | 14.6% | 15.0% | RA & Infl. Hedges Composite | -0.4% |
| Risk Reduction and Mitigation | 14,461 | 24.8% | 23.0% | Risk Red. & Mit. Composite | 1.8% |
| TOTAL | 58,374 | 100.0% | 100.0% | | 0.0% |

Total Plan Allocation vs Policy Benchmark



1: Currency Hedge is excluded from Growth Market Value

Asset Class Detail



Total Plan Analytics, Volatility & Tracking Error

30-Sep-2019

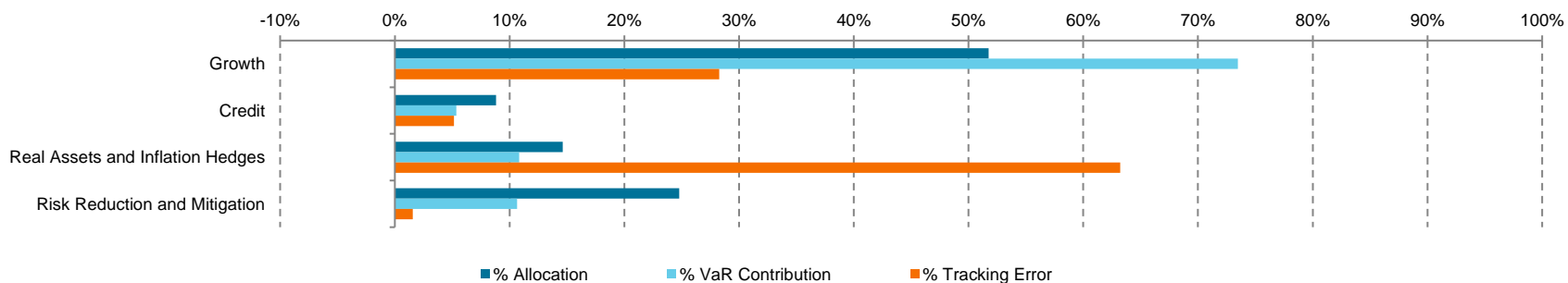
LACERA

Reporting Currency: USD

Total Plan Risk Measures

| | Benchmark | Market Value (Millions) ¹ | Allocation (%) | Volatility (% per annum) ² | Standalone VaR (% of MV) ³ | Total VaR Contribution (% of Total MV) ⁴ | Tracking Error Contribution (% of Total MV) ⁵ |
|----------------------------------|---|--------------------------------------|----------------|---------------------------------------|--|---|--|
| Growth | Growth Composite | 30,212 | 51.8% | 10.58% | 17.51% | 8.86% | 0.33% |
| Credit | Credit Composite | 5,153 | 8.8% | 4.25% | 6.70% | 0.65% | 0.06% |
| Real Assets and Inflation Hedges | RA & Infl. Hedges Composite | 8,547 | 14.6% | 9.64% | 15.47% | 1.31% | 0.75% |
| Risk Reduction and Mitigation | Risk Red. & Mit. Composite | 14,461 | 24.8% | 2.56% | 3.93% | 1.28% | 0.02% |
| TOTAL | | 58,374 | 100.0% | 7.06% | 12.06% | 12.06% | 1.18% |
| | <i>Weighted Average Benchmark⁶</i> | | | 6.70% | 10.73% | 10.73% | |
| Benchmark | Policy Benchmark | | | 6.80% | 10.83% | 10.83% | 1.17% |
| | | | | | <i>Aggregate Benchmark Structural Risk⁷</i> | | -0.01% |

Dollar vs Risk Allocation



1: Currency Hedge is excluded from Growth Market Value

2: Volatility at the asset class level is calculated using parametric VaR at 84th percentile, annualized and expressed as a percentage of the market value of each asset class.

3: Standalone VaR is the annualized Value-at-Risk at the 95th percentile expressed as a percentage of the market value of each asset class.

4: Total VaR Contribution is calculated using historic VaR at 95th percentile, 1 month horizon, annualized excluding the mean, and expressed as a percentage of the total plan assets.

5: Tracking Error is calculated using relative parametric VaR at 84th percentile (assets less benchmark), annualized and expressed as a percentage of the total plan assets.

6: Weighted average benchmark is the market value weighted average of the asset class benchmarks.

7: Aggregate Benchmark Structural Risk = [Tracking Error of the Total Plan to the policy benchmark] - [Tracking Error of the Total Plan to the weighted average of asset class benchmarks]

Total Plan Analytics, Volatility & Tracking Error

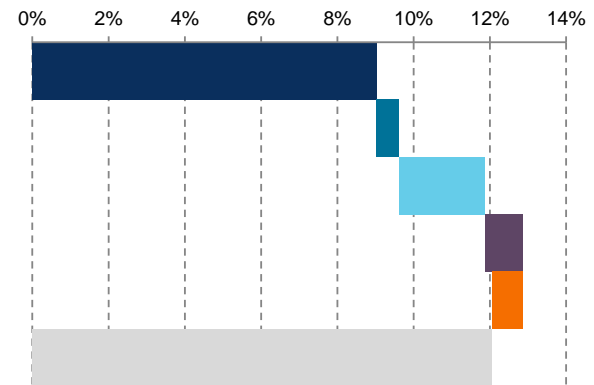
30-Sep-2019

LACERA

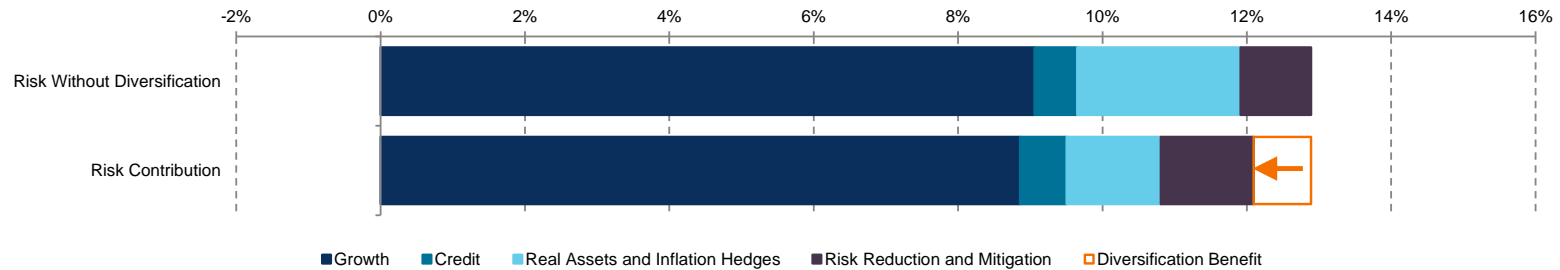
Reporting Currency: USD

Total Plan Risk & Diversification

| | Allocation (%) | Weighted Standalone VaR (% of Total MV) ¹ | |
|--------------------------------------|----------------|---|--------------|
| | | Monthly | Annual |
| Growth | 51.8% | 2.6% | 9.1% |
| Credit | 8.8% | 0.2% | 0.6% |
| Real Assets and Inflation Hedges | 14.6% | 0.7% | 2.3% |
| Risk Reduction and Mitigation | 24.8% | 0.3% | 1.0% |
| Diversification Benefit ² | - | -0.2% | -0.8% |
| TOTAL | 100.0% | 3.5% | 12.1% |



Risk Contribution and Diversification



1: Standalone risk (historical VaR 95) of each asset class is weighted and expressed as a percent of total plan assets, i.e. contribution to risk without diversification benefit.

2: Diversification benefit is calculated as the sum of the standalone VaR at 95th percentile for each asset class less the total plan VaR.

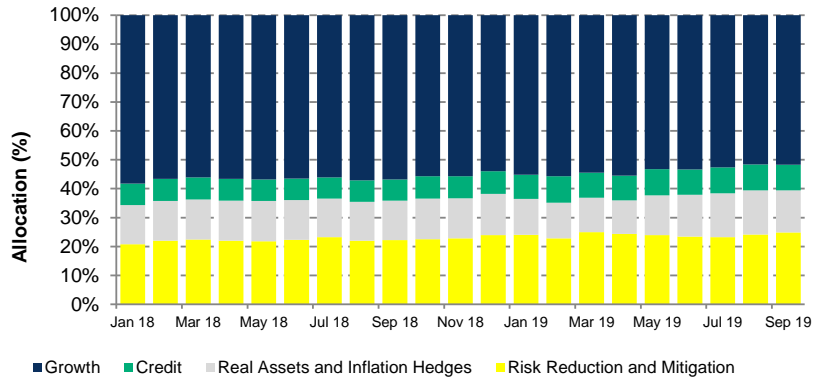
Total Plan Analytics, Volatility & Tracking Error

30-Sep-2019

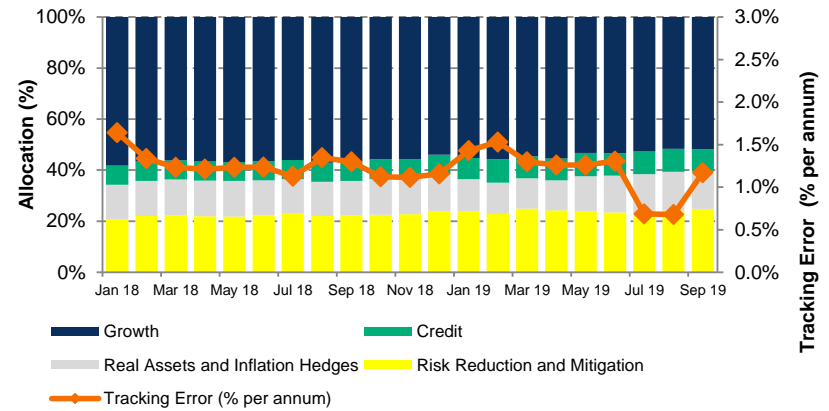
LACERA

Reporting Currency: USD

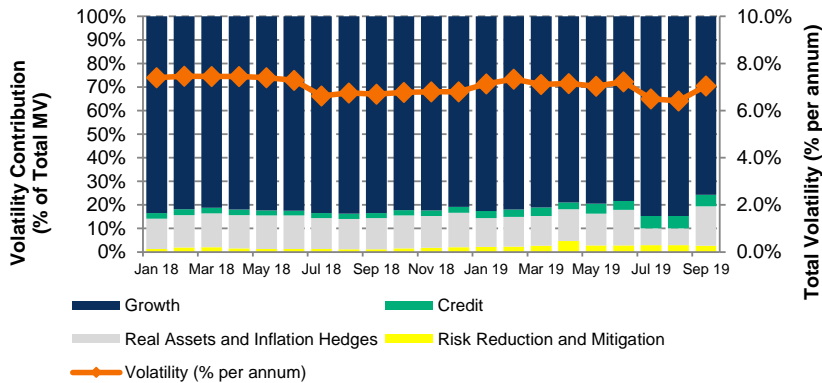
Total Plan Allocation Trend



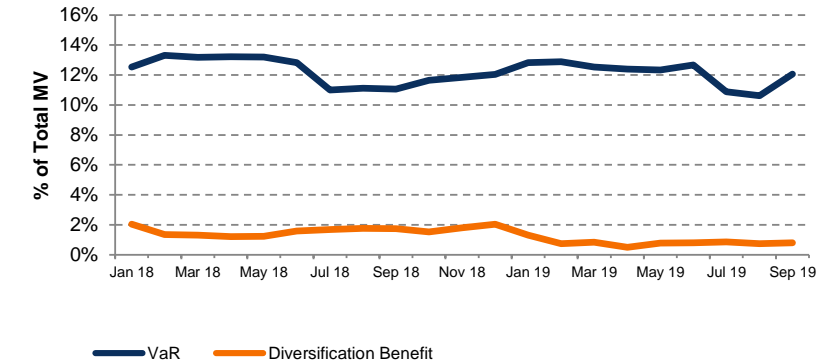
Total Plan Allocation & Tracking Error Trend¹



Total Plan Volatility & Contribution to Volatility Trend²



Total Plan Risk & Diversification Trend³



1: Tracking Error is calculated using relative parametric VaR at 84th percentile (assets less benchmark), annualized and expressed as a percentage of the total plan assets.
 2: Volatility at the asset class level is calculated using parametric VaR at 84th percentile, annualized and expressed as a percentage of the market value of each asset class.
 3: Diversification benefit is calculated as the sum of the standalone VaR at 95th percentile for each asset class less the total plan VaR.

Total Plan Stress Testing

30-Sep-2019

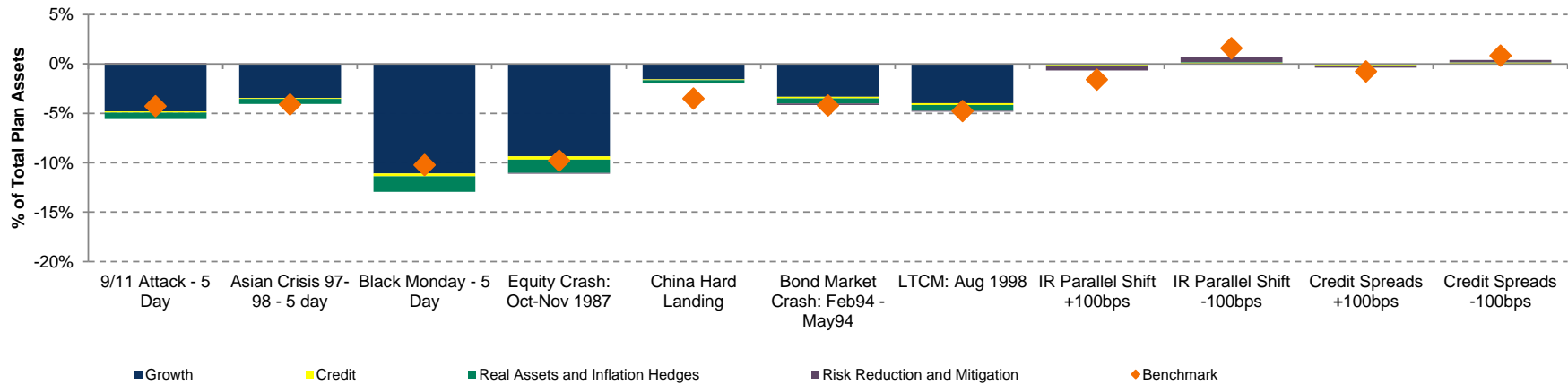
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Reporting Currency: USD

Stress Test - % of Total Plan Assets

| | Allocation (%) | 9/11 Attack - 5 Day | Asian Crisis 97- 98 - 5 day | Black Monday - 5 Day | Equity Crash: Oct-Nov 1987 | China Hard Landing | Bond Market Crash: Feb94 - May94 | LTCM: Aug 1998 | IR Parallel Shift +100bps | IR Parallel Shift -100bps | Credit Spreads +100bps | Credit Spreads -100bps |
|----------------------------------|----------------|---------------------|-----------------------------|----------------------|----------------------------|--------------------|----------------------------------|----------------|---------------------------|---------------------------|------------------------|------------------------|
| Growth | 51.8% | -4.8% | -3.5% | -11.1% | -9.3% | -1.6% | -3.3% | -4.0% | -0.0% | 0.0% | 0.0% | 0.0% |
| Credit | 8.8% | -0.1% | -0.1% | -0.3% | -0.4% | -0.1% | -0.2% | -0.2% | -0.1% | 0.1% | -0.2% | 0.1% |
| Real Assets and Inflation Hedges | 14.6% | -0.7% | -0.5% | -1.6% | -1.3% | -0.3% | -0.5% | -0.6% | -0.1% | 0.1% | -0.0% | 0.0% |
| Risk Reduction and Mitigation | 24.8% | 0.1% | 0.0% | 0.0% | -0.1% | -0.0% | -0.2% | -0.1% | -0.4% | 0.5% | -0.2% | 0.2% |
| TOTAL | | -5.5% | -4.0% | -12.9% | -11.1% | -2.0% | -4.1% | -4.8% | -0.7% | 0.7% | -0.4% | 0.4% |
| Benchmark | | -4.3% | -4.1% | -10.2% | -9.8% | -3.5% | -4.2% | -4.8% | -1.6% | 1.6% | -0.8% | 0.8% |

Stress Test Chart



Glossary

Appendix - Glossary

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30-Sep-2019

Reporting Currency: USD

Terms and Definitions

Analytics

| | |
|-------------------------------------|---|
| Value-at-Risk 95% (VaR) | Value-at-risk or VaR quantifies the potential loss in a portfolio at a certain level of confidence. VaR 95th percentile means there is a 5% chance of losing more than X%. Alternatively, it can be expressed as there is a 1 in 20 chance of losing more than X% in the next month (or year if it is an annual measure). |
| Volatility | Volatility is another measure quantifying the potential variability in a portfolio's asset value. Volatility means there is a 1 in 3 chance the portfolio will change in value by +/- X% in 1 year. Alternatively, it can be expressed that 1 year in 3 years, the portfolio will change in value by +/- X% per annum. |
| Tracking Error | An ex-ante (forward looking, or before the event) measure of how closely a portfolio follows the index to which it is compared. It measures the standard deviation of the difference between the portfolio and benchmark scenario returns. |
| Aggregate Benchmark Structural Risk | Aggregate Benchmark Structural Risk = [Tracking Error of the Total Plan to the policy benchmark] - [Tracking Error of the Total Plan to the weighted average of asset class benchmarks]. This can equally be applied to strategy level benchmarks, compared to the aggregate of the underlying managers' benchmarks. |
| Diversification Benefit | Diversification benefit is calculated as the sum of the standalone VaR at 95th percentile for each asset class/strategy less the total plan VaR, 1 month horizon, annualized. This measures the reduction of risk due to the benefits of diversification. |
| Duration | The sensitivity of a bond's price to changes in the interest rate usually measured in years. The higher the duration, the more sensitive the portfolio is to changes in interest rates. |
| Expected Yield | This measures the projected annual yield on the portfolio adjusting for option-adjusted probabilities. |
| Beta | Beta estimates the risk of the portfolio to a single market risk factor, i.e. systematic risk. |

Stress Tests

| | |
|----------------------------------|---|
| 9/11 Attack - 5 Day | Historic stress scenario observed from 9/17/2001 to 9/21/2001 where the US faced an act of terrorism. Trading was suspended on the NYSE and only resumed on 9/17/2001. The US stock market (S&P 500) declined 12%. |
| Asian Crisis 97-98 - 5 day | Historic stress scenario observed from 10/21/1997 to 10/27/1997 where the Bank of Thailand abandons the Baht's peg to the Dollar and the currency fell 18%. US equity markets fell 7% on the realization that the crisis was no longer localized. Asian currencies were the hardest struck, such as the South Korean Won fell 47.5% and Indonesian Rupiah fell 56%. |
| Black Monday - 5 Day | Historic stress scenario observed from 10/13/1987 to 10/19/1987 where the US stock market (DJIA) declined 31% with the world market following the decline. |
| Equity Crash: Oct-Nov 1987 | Historic stress scenario observed from 10/5/1987 to 11/02/1987 where the world equity markets feared another Great Depression. |
| China Hard Landing | This is a macro-economic stress test, developed by State Street Global Exchange's SM research team. The stress test aims to estimate the potential impact, if China's economy and economic growth were to experience a "hard landing". |
| Bond Market Crash: Feb94 - May94 | Historic stress scenario observed from 2/1/1994 to 9/15/1994 where the FED raised rates by approx. 250 basis points (against market expectations). 1994 became the year of the worst bond market loss in history. The Fed hiked interest rates in 1994 also precipitated a year-long correction in the stock market. |
| LTCM: Aug 1998 | Historic stress scenario observed from 08/03/1998 to 08/31/1998 where LTCM's failure triggered a wide spread concern of potential catastrophic losses throughout the financial system. |
| IR Parallel Shift +100bps | All interest rate curves are shifted up 100bps, and the portfolio is revalued to assess the impact in dollar terms. |
| IR Parallel Shift -100bps | All interest rate curves are shifted down 100bps, and the portfolio is revalued to assess the impact in dollar terms. |
| Credit Spreads +100bps | All credit spread curves are shifted up 100bps, and the portfolio is revalued to assess the impact in dollar terms. |
| Credit Spreads -100bps | All credit spread curves are shifted down 100bps, and the portfolio is revalued to assess the impact in dollar terms. |
| FX +5% | All exchange rate curves are shifted up 5%, and the portfolio is revalued to assess the impact in dollar terms. |
| FX -5% | All exchange rate curves are shifted down 5%, and the portfolio is revalued to assess the impact in dollar terms. |

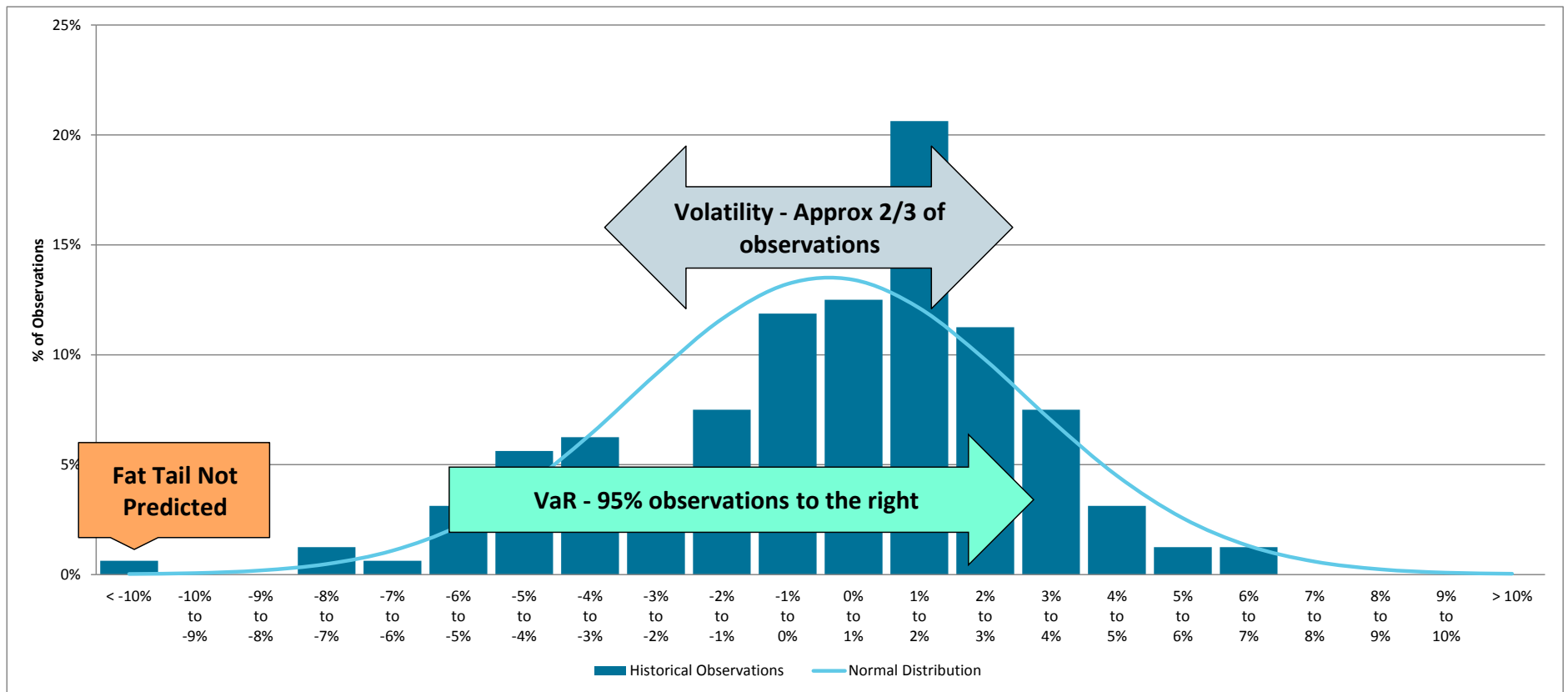
VaR and Volatility

Example Illustration of VaR and Volatility

VaR = 5.6%

Volatility = 2.9%

Mean = 0.1%



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Detailed Analytics Board Report

Prepared for LACERA

30 September 2019

Growth



Growth Analytics, Volatility & Tracking Error by Sub-Asset Class Category

30-Sep-2019

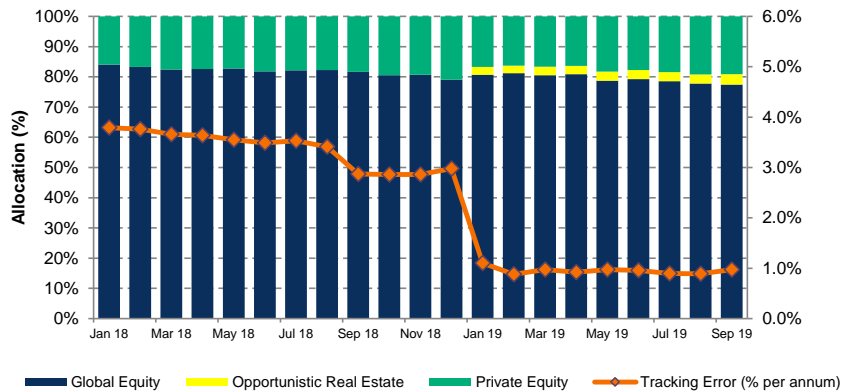
LACERA

Reporting Currency: USD

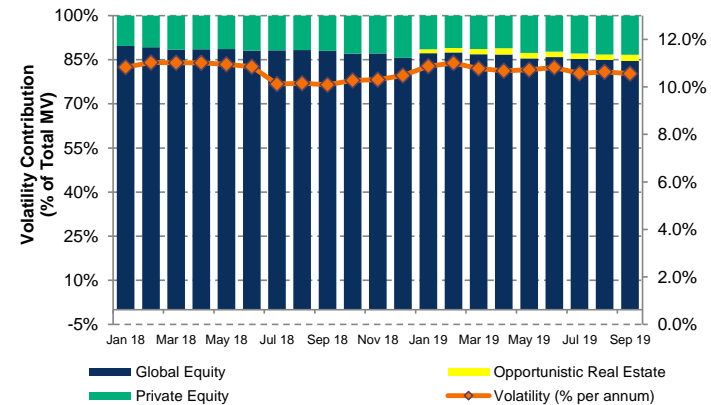
Growth Analytics excluding Currency Hedge

| | Benchmark | Market Value (Millions) | Allocation (%) | Beta S&P 500 ¹ | Beta Russell 3000 ¹ | Beta MSCI ACWixUS ¹ | Volatility (% per annum) ² | Standalone VaR (% of MV) ³ | Tracking Error (% per annum) ⁴ |
|----------------------------------|---|-------------------------|----------------|---------------------------|--------------------------------|--------------------------------|---------------------------------------|---------------------------------------|--|
| Global Equity | | 23,327 | 77.2% | 0.95 | 0.92 | 0.87 | 11.83% | 19.16% | 0.93% |
| | <i>Blended BM - Global Equity</i> | | | 0.93 | 0.90 | 0.88 | 11.71% | 19.18% | |
| | Domestic | 12,753 | 42.2% | 1.03 | 1.01 | 0.80 | 12.50% | 20.06% | |
| | International | 10,574 | 35.0% | 0.84 | 0.81 | 0.96 | 12.20% | 18.25% | |
| Private Equity - Growth | | 5,787 | 19.2% | 0.61 | 0.59 | 0.56 | 7.52% | 13.59% | 7.25% |
| | <i>MSCI ACWI IMI</i> | | | 0.95 | 0.93 | 0.89 | 11.88% | 19.41% | |
| Opportunistic Real Estate | | 1,020 | 3.4% | 0.54 | 0.53 | 0.39 | 11.48% | 18.61% | 11.46% |
| | <i>NCREIF Fund Index - ODCE</i> | | | 0.04 | 0.04 | 0.03 | 1.23% | 0.11% | |
| TOTAL⁵ | | 30,212 | 100.0% | 0.86 | 0.84 | 0.79 | 10.58% | 17.51% | 0.97% |
| | <i>Weighted Average Benchmark⁶</i> | | | 0.91 | 0.88 | 0.85 | 11.33% | 18.48% | |
| Benchmark | <i>Growth Composite</i> | | | 0.92 | 0.89 | 0.87 | 11.41% | 18.89% | 1.37% |
| | | | | | | | | | Aggregate Benchmark Structural Risk⁷ |
| | | | | | | | | | 0.40% |

Growth Allocation & Tracking Error Trend



Growth Volatility & Contribution to Volatility Trend



1: Ex-ante beta from truView*

2: Volatility at the subcomposite is calculated using parametric VaR at 84th percentile, annualized and expressed as a percentage of the market value of each subcomposite.

3: Standalone VaR is calculated using historic Value-at-Risk at 95th percentile, 1 month horizon, annualized, and expressed as a percentage of the market value of each subcomposite, i.e. row.

4: Tracking Error is calculated using relative parametric VaR at 84th percentile (assets less benchmark), annualized and expressed as a percentage of either the market value of each equity strategy or weighted average of the benchmarks of the Growth.

5: Total Equity Tracking Error is calculated using the market value weighted average of the Domestic Equity and International Equity benchmarks.

6: Weighted average benchmark is the market value weighted average of the manager category benchmarks.

7: Aggregate Benchmark Structural Risk = [Tracking Error of Growth to the Growth Composite Benchmark] - [Tracking Error of Growth Strategies to the weighted average of Strategies Benchmarks]

Global Equity Analytics, Volatility & Tracking Error by Strategy Category

30-Sep-2019

LACERA

Reporting Currency: USD

Domestic Equity Analytics

| | Benchmark | Market Value (Millions) | Allocation (%) | Beta S&P 500 ¹ | Beta Russell 3000 ¹ | Beta MSCI ACWIxUS ¹ | Volatility (% per annum) ² | Standalone VaR (% of MV) ³ | Tracking Error (% per annum) ⁴ |
|------------------|--|----------------------------|----------------|------------------------------|-----------------------------------|-----------------------------------|--|--|--|
| Active | Weighted Average Manager Benchmarks | 1,497 | 11.7% | 1.15 | 1.16 | 0.88 | 15.42% | 23.44% | 2.09% |
| Passive | Weighted Average Manager Benchmarks | 11,256 | 88.3% | 1.02 | 0.99 | 0.79 | 12.27% | 20.06% | 0.03% |
| TOTAL | Weighted Average Manager Benchmarks | 12,753 | 100.0% | 1.03 | 1.01 | 0.80 | 12.50% | 20.06% | 0.25% |
| Benchmark | Russell 3000 | | | 1.02 | - | 0.79 | 12.25% | 20.02% | 0.79% |
| | | | | | | | <i>Aggregate Benchmark Structural Risk⁵</i> | | 0.54% |

International Equity Analytics excluding Currency Hedge

| | Benchmark | Market Value (Millions) | Allocation (%) | Beta S&P 500 ¹ | Beta Russell 3000 ¹ | Beta MSCI ACWIxUS ¹ | Volatility (% per annum) ² | Standalone VaR (% of MV) ³ | Tracking Error (% per annum) ⁴ |
|------------------|--|----------------------------|----------------|------------------------------|-----------------------------------|-----------------------------------|--|--|--|
| Active | Weighted Average Manager Benchmarks | 4,095 | 38.7% | 0.89 | 0.86 | 1.00 | 12.88% | 19.01% | 1.81% |
| Passive | Weighted Average Manager Benchmarks | 6,479 | 61.3% | 0.82 | 0.79 | 0.93 | 11.84% | 18.10% | 0.67% |
| TOTAL | Weighted Average Manager Benchmarks | 10,574 | 100.0% | 0.84 | 0.81 | 0.96 | 12.20% | 18.25% | 0.91% |
| Benchmark | MSCI ACWI ex US IMI | | | 0.88 | 0.85 | - | 12.82% | 18.77% | 1.06% |
| | | | | | | | <i>Aggregate Benchmark Structural Risk⁵</i> | | 0.15% |

1: Ex-ante beta from truView®

2: Volatility at the subcomposite is calculated using parametric VaR at 84th percentile, annualized and expressed as a percentage of the market value of each subcomposite.

3: Standalone VaR is calculated using historic Value-at-Risk at 95th percentile, 1 month horizon, annualized, and expressed as a percentage of the market value of each subcomposite, i.e. row.

4: Tracking Error is calculated using relative parametric VaR at 84th percentile (assets less benchmark), annualized and expressed as a percentage of either the market value of each equity strategy or total equity assets.

5: Aggregate Benchmark Structural Risk = [Tracking Error of Domestic/International Equity to the Russell 3000/MSCI ACWI ex US IMI] - [Tracking Error of Domestic/International Equity to the weighted average of manager benchmarks]

Credit

Credit Analytics, Volatility & Tracking Error by Sub-Asset Class Category

30-Sep-2019

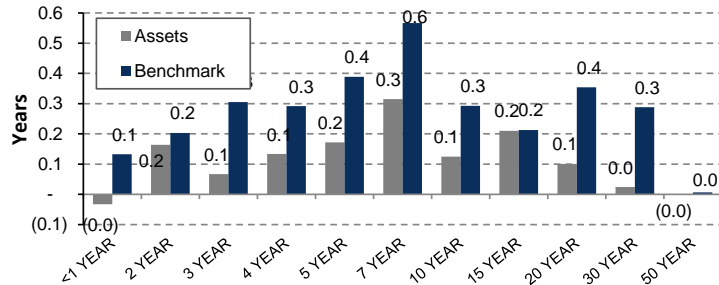
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Reporting Currency: USD

Credit Analytics

| | Benchmark | Market Value (Millions) | Allocation (%) | Duration (Years) | Expected Yield (% per annum) | Credit Spread (OAS) (%) | Volatility (% per annum) ¹ | Standalone VaR (% of MV) ² | Tracking Error (% per annum) ³ |
|------------------|---|-------------------------|----------------|------------------|------------------------------|-------------------------|---------------------------------------|---------------------------------------|--|
| High Yield | | 2,347 | 45.5% | 2.21 | 3.78% | 4.70% | 2.63% | 4.53% | 0.76% |
| | <i>Barclays US High Yield</i> | | | 3.48 | 6.09% | 3.67% | 3.30% | 5.75% | |
| Bank Loans | | 918 | 17.8% | 0.43 | 5.43% | 4.05% | 5.95% | 10.32% | 0.52% |
| | <i>CSFB Lev Loan Index</i> | | | 0.10 | 1.50% | 4.65% | 6.44% | 11.11% | |
| EM Debt | | 837 | 16.2% | - | - | - | 3.65% | 5.58% | 4.71% |
| | <i>Blended - EM Debt</i> | | | 6.27 | 4.69% | 2.28% | 5.70% | 9.26% | |
| Illiquid Credit | | 947 | 18.4% | - | - | - | 4.80% | 7.72% | 5.49% |
| | <i>Barclays US Aggregate</i> | | | 5.91 | 2.45% | 0.41% | 3.19% | 4.53% | |
| TOTAL | | 5,153 | 100.0% | 1.52 | 2.74% | 4.37% | 4.25% | 6.70% | 1.38% |
| | <i>Weighted Average Benchmark⁴</i> | | | 3.71 | 4.34% | 3.01% | 3.36% | 5.36% | |
| Benchmark | <i>Credit Composite</i> | | | 3.22 | 4.48% | 4.37% | 3.58% | 5.83% | 1.36% |
| | | | | | | | | | <i>Aggregate Benchmark Structural Risk⁵</i> |
| | | | | | | | | | -0.02% |

Credit Contribution to Duration By Period



Credit Correlations

| | Bank Loans | EM Debt | High Yield | Illiquid Credit | TOTAL |
|-----------------|------------|---------|------------|-----------------|-------|
| Bank Loans | 1.00 | 0.92 | 0.91 | 0.79 | 0.93 |
| EM Debt | 0.92 | 1.00 | 0.93 | 0.81 | 0.93 |
| High Yield | 0.91 | 0.93 | 1.00 | 0.82 | 0.96 |
| Illiquid Credit | 0.79 | 0.81 | 0.82 | 1.00 | 0.93 |
| TOTAL | 0.93 | 0.93 | 0.96 | 0.93 | 1.00 |

1: Volatility at each subcomposite is calculated using parametric VaR at 84th percentile, annualized and expressed as a percentage of the market value of each subcomposite.

2: Standalone VaR is calculated using historic Value-at-Risk at 95th percentile, 1 month horizon, annualized, and expressed as a percentage of the market value of each subcomposite, i.e. row.

3: Tracking Error is calculated using relative parametric VaR at 84th percentile (assets less benchmark), annualized and expressed as a percentage of the market value of each subcomposite.

4: Weighted average benchmark is the market value weighted average of the manager category benchmarks.

5: Aggregate Benchmark Structural Risk = [Tracking Error of Credit to the Credit Composite] - [Tracking Error of Credit to the weighted average of manager category benchmarks]

Real Assets & Inflation Hedges

Real Assets & Inflation Hedges Analytics, Volatility & Tracking Error by Sub-Asset Class Category

30-Sep-2019

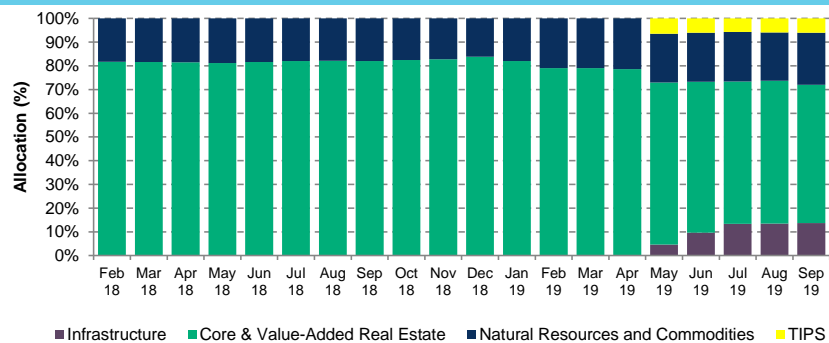
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Reporting Currency: USD

Real Assets & Inflation Hedges Analytics

| Benchmark | Market Value (Millions) | Allocation (%) | Beta S&P 500 ¹ | Beta MSCI ACWIxUS ¹ | Beta BCOM | Volatility (% per annum) ² | Standalone VaR (% of MV) ³ | Tracking Error (% per annum) ⁴ |
|---|--|----------------|---------------------------|--------------------------------|-------------|---------------------------------------|---------------------------------------|--|
| Core & Value-Added Real Estate | 4,979 | 58.3% | 0.54 | 0.39 | 0.15 | 12.35% | 20.02% | 10.48% |
| <i>NCREIF Fund Index - ODCE</i> | | | <i>0.04</i> | <i>0.03</i> | <i>0.00</i> | <i>1.33%</i> | <i>0.12%</i> | |
| Natural Resources & Commodities | 1,868 | 21.9% | 0.41 | 0.46 | 0.36 | 12.21% | 19.25% | 3.35% |
| <i>Blended BM - Natural Resources</i> | | | <i>0.72</i> | <i>0.82</i> | <i>1.09</i> | <i>14.34%</i> | <i>23.00%</i> | |
| Infrastructure | 1,166 | 13.6% | 0.60 | 0.63 | 0.37 | 10.57% | 16.24% | 2.53% |
| <i>DJ-Brookfield Global Infrastructure</i> | | | <i>0.58</i> | <i>0.63</i> | <i>0.41</i> | <i>11.14%</i> | <i>18.02%</i> | |
| TIPS | 519 | 6.1% | (0.00) | 0.02 | 0.01 | 3.54% | 2.64% | 0.03% |
| <i>BBG-Barclays US TIPS</i> | | | <i>(0.00)</i> | <i>0.03</i> | <i>0.01</i> | <i>3.53%</i> | <i>2.64%</i> | |
| TOTAL | 8,547 | 100.0% | 0.48 | 0.46 | 0.32 | 9.64% | 15.47% | 6.13% |
| <i>Weighted Average Benchmark⁵</i> | | | <i>0.25</i> | <i>0.27</i> | <i>0.28</i> | <i>9.64%</i> | <i>6.43%</i> | |
| Benchmark | <i>RA & Infl. Hedges Composite</i> | | 0.24 | 0.26 | 0.28 | 4.55% | 6.45% | 6.08% |
| | | | | | | | | <i>Aggregate Benchmark Structural Risk⁶</i> |
| | | | | | | | | -0.05% |

Real Assets & Inflation Hedges - Allocation



1: Ex-ante beta from truView®

2: Volatility at the asset class level is calculated using parametric VaR at 84th percentile, annualized and expressed as a percentage of the market value of each manager or RA & IH.

3: VaR is calculated using historical Value-at-Risk at 95th percentile, 1 month horizon annualized and expressed as a percentage of each manager or RA & IH.

4: Tracking Error is calculated using relative parametric VaR at 84th percentile (assets less benchmark), annualized and expressed as a percentage of either the market value of each manager or RA & IH.

5: Weighted average benchmark is the market value weighted average of the manager category benchmarks.

6: Aggregate Benchmark Structural Risk = [Tracking Error of RA & Infl. Hedges to the RA & Infl. Hedges Composite Benchmark] - [Tracking Error of RA & Infl. Hedges Strategies to the weighted average of Strategies Benchmarks]

Risk Reduction & Mitigation

Risk Reduction & Mitigation Analytics, Volatility & Tracking Error by Sub-Asset Class Category

30-Sep-2019

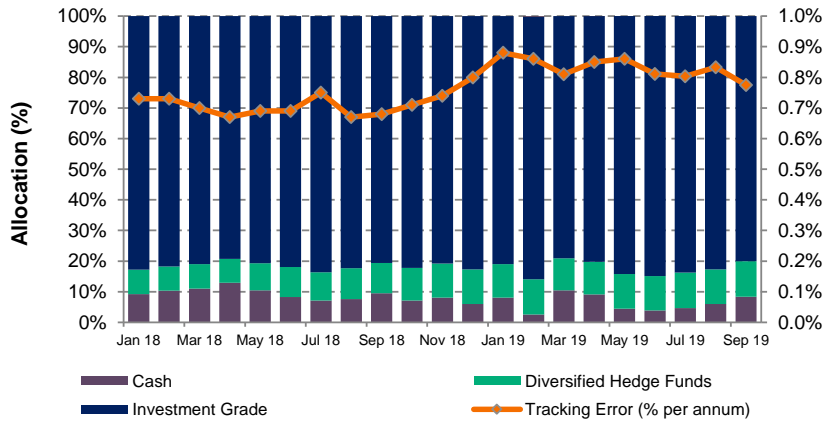
LACERA

Reporting Currency: USD

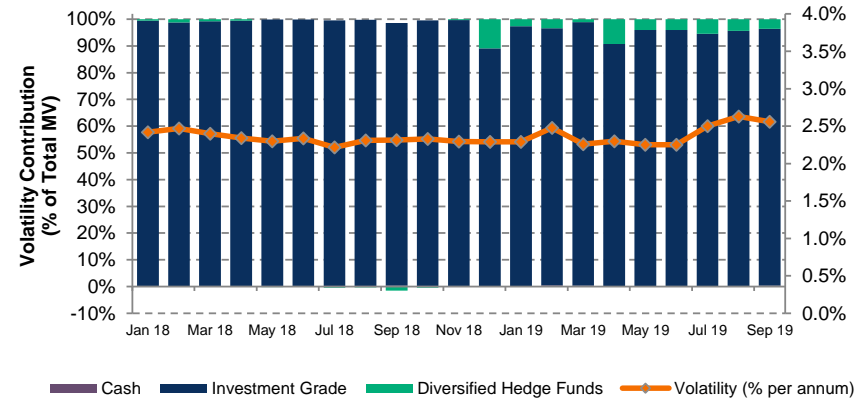
Risk Reduction & Mitigation Analytics

| | Benchmark | Market Value (Millions) | Allocation | Duration (Years) | Beta MSCI ACWI ¹ | Beta Barclays US Agg | Volatility (% per annum) ² | Standalone VaR (% of Total MV) ³ | Tracking Error (% per annum) ⁴ |
|-------------------------|---|-------------------------|---------------|------------------|-----------------------------|----------------------|---------------------------------------|---|--|
| Investment Grade Bonds | | 11,546 | 79.8% | 5.76 | (0.01) | 0.88 | 3.11% | 4.37% | 0.32% |
| | <i>Barclays US Aggregate</i> | | | 5.95 | (0.04) | 1.04 | 3.21% | 4.56% | |
| Diversified Hedge Funds | | 1,694 | 11.7% | 0.43 | 0.36 | (0.14) | 4.86% | 9.61% | 4.85% |
| | <i>Citiigroup 3 M Treasury Bill</i> | | | 0.00 | 0.00 | 0.02 | 0.26% | 0.01% | |
| Cash | | 1,201 | 8.3% | 0.32 | 0.00 | 0.00 | 0.12% | 0.21% | 0.25% |
| | <i>Citiigroup 3 M Treasury Bill</i> | | | 0.00 | 0.00 | 0.02 | 0.26% | 0.00% | |
| TOTAL | | 14,461 | 100.0% | 4.74 | 0.03 | 0.71 | 2.56% | 3.93% | 0.77% |
| | <i>Weighted Average Benchmark⁵</i> | | | 4.75 | (0.03) | 0.84 | 2.57% | 3.61% | |
| Benchmark | <i>Risk Red. & Mit. Composite</i> | | | 4.91 | (0.03) | 0.86 | 2.66% | 3.73% | 0.78% |
| | | | | | | | | | Aggregate Benchmark Structural Risk⁶ |
| | | | | | | | | | 0.00% |

Risk Reduction & Mitigation Allocation & Tracking Error Trend



Risk Reduction & Mitigation Volatility & Contribution to Volatility Trend



1: Ex-ante beta from truView®

2: Volatility at each subcomposite is calculated using parametric VaR at 84th percentile, annualized and expressed as a percentage of the market value of each subcomposite.

3: Standalone VaR is calculated using historic Value-at-Risk at 95th percentile, 1 month horizon, annualized, and expressed as a percentage of the market value of each subcomposite, i.e. row.

4: Tracking Error is calculated using relative parametric VaR at 84th percentile (assets less benchmark), annualized and expressed as a percentage of the market value of each subcomposite.

5: Weighted average benchmark is the market value weighted average of the manager category benchmarks.

6: Aggregate Benchmark Structural Risk = [Tracking Error of Total RR&M to the Composite Benchmark] - [Tracking Error of RR&M to the weighted average of manager category benchmarks]

Glossary

Appendix - Glossary

LACERA

30-Sep-2019

Reporting Currency: USD

Terms and Definitions

Analytics

| | |
|-------------------------------------|---|
| Value-at-Risk 95% (VaR) | Value-at-risk or VaR quantifies the potential loss in a portfolio at a certain level of confidence. VaR 95th percentile means there is a 5% chance of losing more than X%. Alternatively, it can be expressed as there is a 1 in 20 chance of losing more than X% in the next month (or year if it is an annual measure). |
| Volatility | Volatility is another measure quantifying the potential variability in a portfolio's asset value. Volatility means there is a 1 in 3 chance the portfolio will change in value by +/- X% in 1 year. Alternatively, it can be expressed that 1 year in 3 years, the portfolio will change in value by +/- X% per annum. |
| Tracking Error | An ex-ante (forward looking, or before the event) measure of how closely a portfolio follows the index to which it is compared. It measures the standard deviation of the difference between the portfolio and benchmark scenario returns. |
| Aggregate Benchmark Structural Risk | Aggregate Benchmark Structural Risk = [Tracking Error of the Total Plan to the policy benchmark] - [Tracking Error of the Total Plan to the weighted average of asset class benchmarks]. This can equally be applied to strategy level benchmarks, compared to the aggregate of the underlying managers' benchmarks. |
| Diversification Benefit | Diversification benefit is calculated as the sum of the standalone VaR at 95th percentile for each asset class/strategy less the total plan VaR, 1 month horizon, annualized. This measures the reduction of risk due to the benefits of diversification. |
| Duration | The sensitivity of a bond's price to changes in the interest rate usually measured in years. The higher the duration, the more sensitive the portfolio is to changes in interest rates. |
| Expected Yield | This measures the projected annual yield on the portfolio adjusting for option-adjusted probabilities. |
| Beta | Beta estimates the risk of the portfolio to a single market risk factor, i.e. systematic risk. |

Stress Tests

| | |
|----------------------------------|---|
| 9/11 Attack - 5 Day | Historic stress scenario observed from 9/17/2001 to 9/21/2001 where the US faced an act of terrorism. Trading was suspended on the NYSE and only resumed on 9/17/2001. The US stock market (S&P 500) declined 12%. |
| Asian Crisis 97-98 - 5 day | Historic stress scenario observed from 10/21/1997 to 10/27/1997 where the Bank of Thailand abandons the Baht's peg to the Dollar and the currency fell 18%. US equity markets fell 7% on the realization that the crisis was no longer localized. Asian currencies were the hardest struck, such as the South Korean Won fell 47.5% and Indonesian Rupiah fell 56%. |
| Black Monday - 5 Day | Historic stress scenario observed from 10/13/1987 to 10/19/1987 where the US stock market (DJIA) declined 31% with the world market following the decline. |
| Equity Crash: Oct-Nov 1987 | Historic stress scenario observed from 10/5/1987 to 11/02/1987 where the world equity markets feared another Great Depression. |
| China Hard Landing | This is a macro-economic stress test, developed by State Street Global Exchange's SM research team. The stress test aims to estimate the potential impact, if China's economy and economic growth were to experience a "hard landing". |
| Bond Market Crash: Feb94 - May94 | Historic stress scenario observed from 2/1/1994 to 9/15/1994 where the FED raised rates by approx. 250 basis points (against market expectations). 1994 became the year of the worst bond market loss in history. The Fed hiked interest rates in 1994 also precipitated a year-long correction in the stock market. |
| LTCM: Aug 1998 | Historic stress scenario observed from 08/03/1998 to 08/31/1998 where LTCM's failure triggered a wide spread concern of potential catastrophic losses throughout the financial system. |
| IR Parallel Shift +100bps | All interest rate curves are shifted up 100bps, and the portfolio is revalued to assess the impact in dollar terms. |
| IR Parallel Shift -100bps | All interest rate curves are shifted down 100bps, and the portfolio is revalued to assess the impact in dollar terms. |
| Credit Spreads +100bps | All credit spread curves are shifted up 100bps, and the portfolio is revalued to assess the impact in dollar terms. |
| Credit Spreads -100bps | All credit spread curves are shifted down 100bps, and the portfolio is revalued to assess the impact in dollar terms. |
| FX +5% | All exchange rate curves are shifted up 5%, and the portfolio is revalued to assess the impact in dollar terms. |
| FX -5% | All exchange rate curves are shifted down 5%, and the portfolio is revalued to assess the impact in dollar terms. |

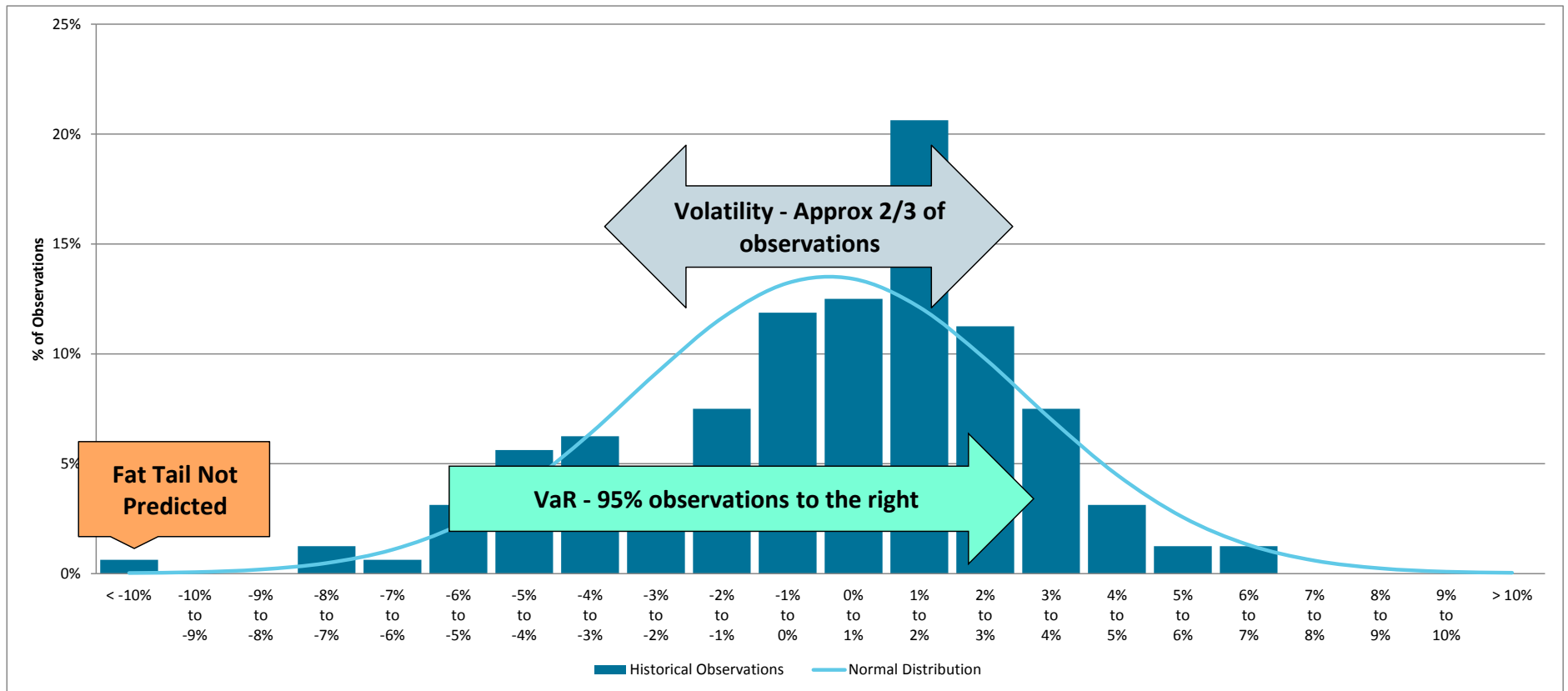
VaR and Volatility

Example Illustration of VaR and Volatility

VaR = 5.6%

Volatility = 2.9%

Mean = 0.1%



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FUND EVALUATION REPORT

Los Angeles County Employees Retirement Association

September 30, 2019



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M E K E T A I N V E S T M E N T G R O U P

BOSTON
MASSACHUSETTS

CHICAGO
ILLINOIS

MIAMI
FLORIDA

NEW YORK
NEW YORK

PORTLAND
OREGON

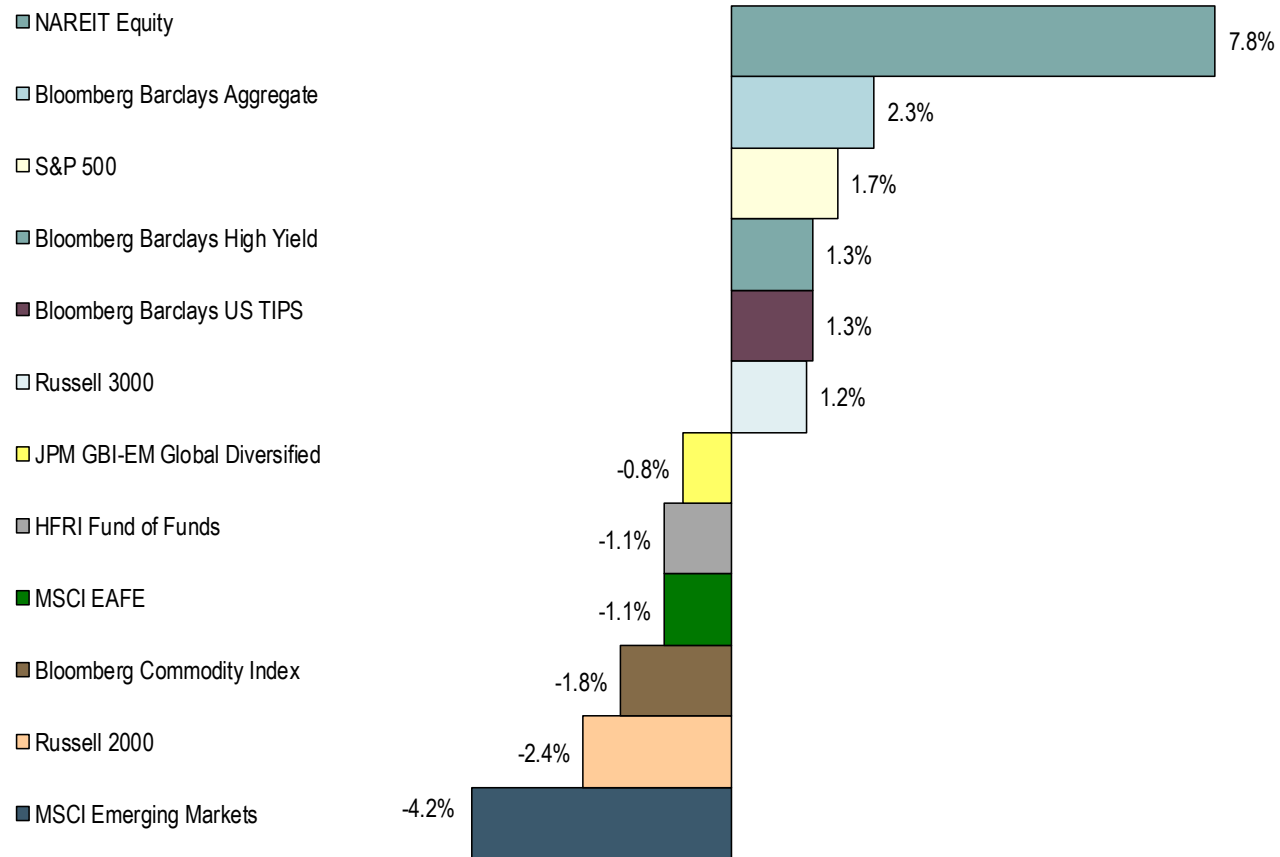
SAN DIEGO
CALIFORNIA

LONDON
UNITED KINGDOM

www.meketagroup.com

Market Commentary

The World Markets¹ Third Quarter of 2019



¹ Source: InvestorForce.



Index Returns¹

| | 3Q19 (%) | YTD (%) | 1 YR (%) | 3 YR (%) | 5 YR (%) | 10 YR (%) |
|--|-------------|------------|-------------|-------------|-------------|--------------|
| Domestic Equity | | | | | | |
| S&P 500 | 1.7 | 20.6 | 4.3 | 13.4 | 10.8 | 13.2 |
| Russell 3000 | 1.2 | 20.1 | 2.9 | 12.8 | 10.4 | 13.1 |
| Russell 1000 | 1.4 | 20.5 | 3.9 | 13.2 | 10.6 | 13.2 |
| Russell 1000 Growth | 1.5 | 23.3 | 3.7 | 16.9 | 13.4 | 14.9 |
| Russell 1000 Value | 1.4 | 17.8 | 4.0 | 9.4 | 7.8 | 11.5 |
| Russell MidCap | 0.5 | 21.9 | 3.2 | 10.7 | 9.1 | 13.1 |
| Russell MidCap Growth | -0.7 | 25.2 | 5.2 | 14.5 | 11.1 | 14.1 |
| Russell MidCap Value | 1.2 | 19.5 | 1.6 | 7.8 | 7.6 | 12.3 |
| Russell 2000 | -2.4 | 14.2 | -8.9 | 8.2 | 8.2 | 11.2 |
| Russell 2000 Growth | -4.2 | 15.3 | -9.6 | 9.8 | 9.1 | 12.2 |
| Russell 2000 Value | -0.6 | 12.8 | -8.2 | 6.5 | 7.2 | 10.1 |
| Foreign Equity | | | | | | |
| MSCI ACWI (ex. US) | -1.8 | 11.6 | -1.2 | 6.3 | 2.9 | 4.5 |
| MSCI EAFE | -1.1 | 12.8 | -1.3 | 6.5 | 3.3 | 4.9 |
| MSCI EAFE (Local Currency) | 1.8 | 15.7 | 1.6 | 8.3 | 6.0 | 7.0 |
| MSCI EAFE Small Cap | -0.4 | 12.1 | -5.9 | 5.9 | 6.0 | 7.5 |
| MSCI Emerging Markets | -4.2 | 5.9 | -2.0 | 6.0 | 2.3 | 3.4 |
| MSCI Emerging Markets (Local Currency) | -2.1 | 7.8 | -0.2 | 7.6 | 5.5 | 5.9 |
| Fixed Income | | | | | | |
| Bloomberg Barclays Universal | 2.1 | 8.8 | 10.1 | 3.2 | 3.6 | 4.1 |
| Bloomberg Barclays Aggregate | 2.3 | 8.5 | 10.3 | 2.9 | 3.4 | 3.7 |
| Bloomberg Barclays US TIPS | 1.3 | 7.6 | 7.1 | 2.2 | 2.4 | 3.5 |
| Bloomberg Barclays High Yield | 1.3 | 11.4 | 6.4 | 6.1 | 5.4 | 7.9 |
| JPM GBI-EM Global Diversified | -0.8 | 7.9 | 10.1 | 3.1 | 0.6 | 2.4 |
| Other | | | | | | |
| NAREIT Equity | 7.8 | 26.2 | 17.7 | 7.0 | 10.0 | 12.9 |
| Bloomberg Commodity Index | -1.8 | 3.1 | -6.6 | -1.5 | -7.2 | -4.3 |
| HFRI Fund of Funds | -1.1 | 5.0 | -0.2 | 3.1 | 1.9 | 2.7 |

¹ Source: InvestorForce.

Capital Markets Outlook

Takeaways

- From a market performance perspective, September was a relatively normal “risk-on” month as most Global Equity markets produced positive returns whereas most sovereign-oriented Fixed Income markets produced negative returns. On a year-to-date basis, however, most indices across Global Equity and Global Fixed Income markets have produced unusually high returns.
- Recent interest rate movements are historically consistent with oncoming recessions. However, economic data remains extremely mixed and shifting political rhetoric regarding global trade has added to short-term uncertainty. In the face of all this, Global Equity markets have continued to deliver positive returns.
- While there continues to be significant discussion regarding interest rates (e.g., yield curve inversions, central bank policy, etc.), the complexity of the current environment has increased what is always an immense challenge for forecasting.
- US Equity markets remain expensive whereas Non-US Equity markets remain reasonably valued relative to their history.
- Implied equity market volatility¹ remained lower than its historical average (≈ 19) throughout the entire month of September, although this metric did steadily rise from mid-month (≈ 13) to the end of the month (≈ 17).
- The Market Sentiment Indicator² stayed at neutral at month end.
- Market uncertainty, as measured by Systemic Risk, decreased during September. With that said, recent economic data suggests that the global economy is in a slowing, but not yet recessionary, phase. The potential for negative surprises exists as global economies navigate their respective “late-cycle” dynamics and geopolitical events continue to unfold, as evidenced by recent market movements.
- *New Addition: We incorporated a measure of Fixed Income Volatility to the Dashboard.*

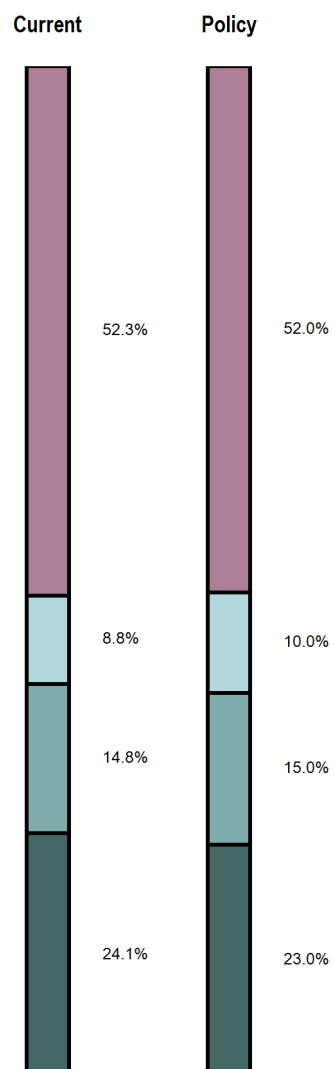
¹ As measured by VIX Index.

² See Appendix for the rationale for selection and calculation methodology used for the risk metrics.



3Q2019 Review

As of September 30, 2019



| Allocation vs. Targets and Policy | | | | | | | |
|---|-------------------------|--------------------|---------------|--------------|----------------------|-------------------|--|
| | Current Balance | Current Allocation | Policy | Difference | Policy Range | Within IPS Range? | |
| Growth | \$30,194,576,523 | 51.7% | 52.0% | -0.3% | 45.0% - 59.0% | Yes | |
| Global Equity | \$23,388,091,591 | 40.0% | 41.0% | -1.0% | 34.0% - 48.0% | Yes | |
| Private Equity | \$5,786,930,268 | 9.9% | 10.0% | -0.1% | 7.0% - 13.0% | Yes | |
| Opportunistic Real Estate | \$1,019,554,663 | 1.7% | 1.0% | 0.7% | 0.0% - 2.0% | Yes | |
| Credit | \$5,055,821,915 | 8.7% | 10.0% | -1.3% | 7.0% - 13.0% | Yes | |
| High Yield | \$2,346,641,348 | 4.0% | 4.0% | 0.0% | 1.0% - 7.0% | Yes | |
| Bank Loans | \$916,913,206 | 1.6% | 3.0% | -1.4% | 0.0% - 5.0% | Yes | |
| EM Debt | \$844,308,681 | 1.4% | 1.0% | 0.4% | 0.0% - 3.0% | Yes | |
| Illiquid Credit ¹ | \$946,732,942 | 1.6% | 2.0% | -0.4% | 0.0% - 4.0% | Yes | |
| Real Assets and Inflation Hedges | \$8,533,506,855 | 14.6% | 15.0% | -0.4% | 12.0% - 18.0% | Yes | |
| Core and Value-Added Real Estate | \$4,982,164,968 | 8.5% | 8.0% | 0.5% | 5.0% - 11.0% | Yes | |
| Natural Resources and Commodities | \$1,866,112,587 | 3.2% | 3.0% | 0.2% | 1.0% - 5.0% | Yes | |
| Infrastructure | \$1,166,431,703 | 2.0% | 2.0% | 0.0% | 0.0% - 3.0% | Yes | |
| TIPS | \$518,797,597 | 0.9% | 2.0% | -1.1% | 0.0% - 4.0% | Yes | |
| Risk Reduction and Mitigation | \$14,444,011,315 | 24.7% | 23.0% | 1.7% | 17.0% - 29.0% | Yes | |
| Investment Grade Bonds | \$11,548,935,116 | 19.8% | 19.0% | 0.8% | 13.0% - 25.0% | Yes | |
| Diversified Hedge Fund Portfolio | \$1,693,738,222 | 2.9% | 3.0% | -0.1% | 0.0% - 5.0% | Yes | |
| Cash | \$1,201,337,976 | 2.1% | 1.0% | 1.1% | 0.0% - 3.0% | Yes | |
| Overlay | \$217,178,293 | 0.4% | -- | 0.4% | | | |
| Total² | \$58,445,094,901 | 100.0% | 100.0% | | | | |

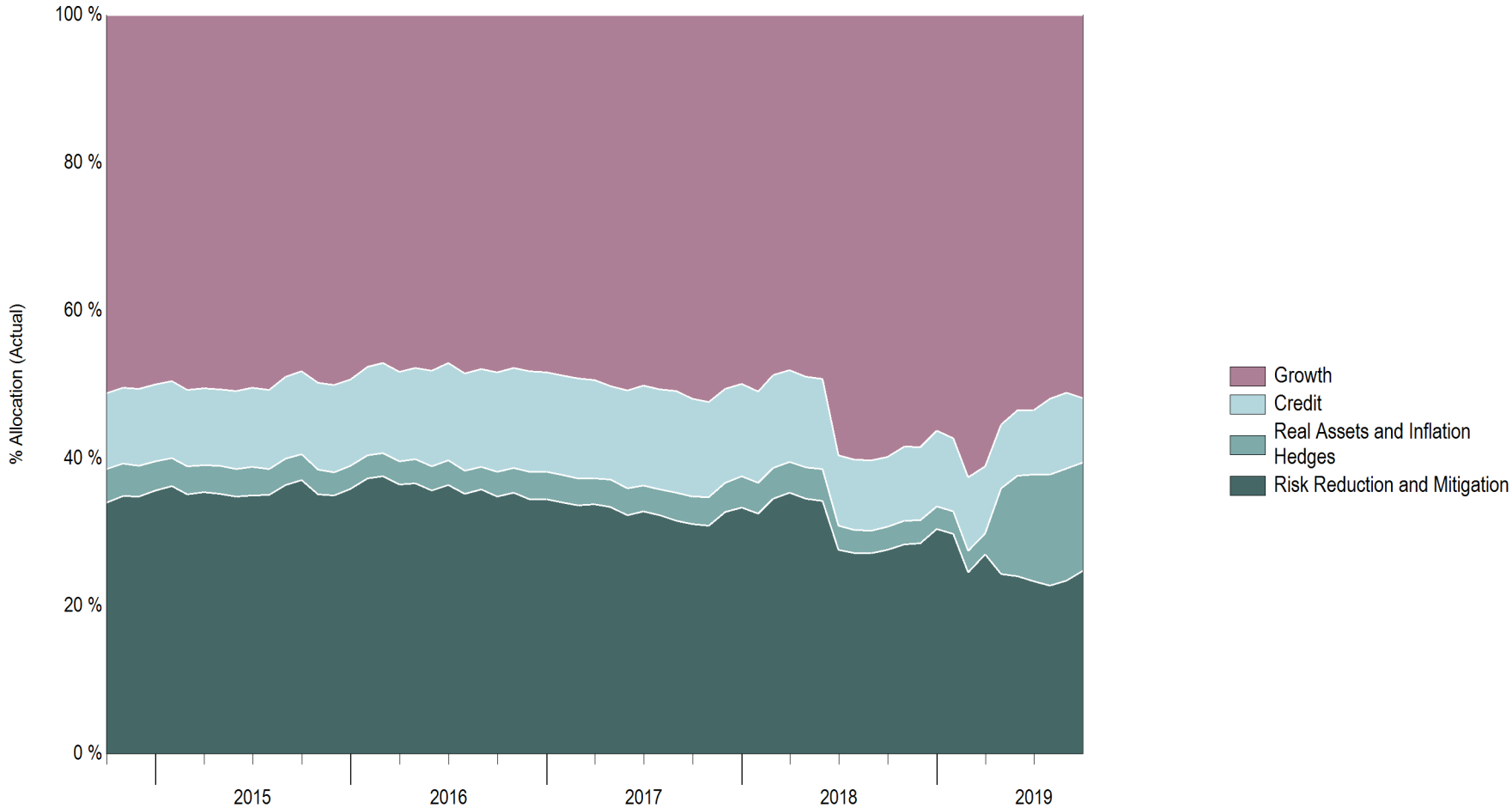
¹ Illiquid Credit contains credit hedge funds, real estate debt, private debt strategies and private equity-related debt.

² Totals may not add up due to rounding.

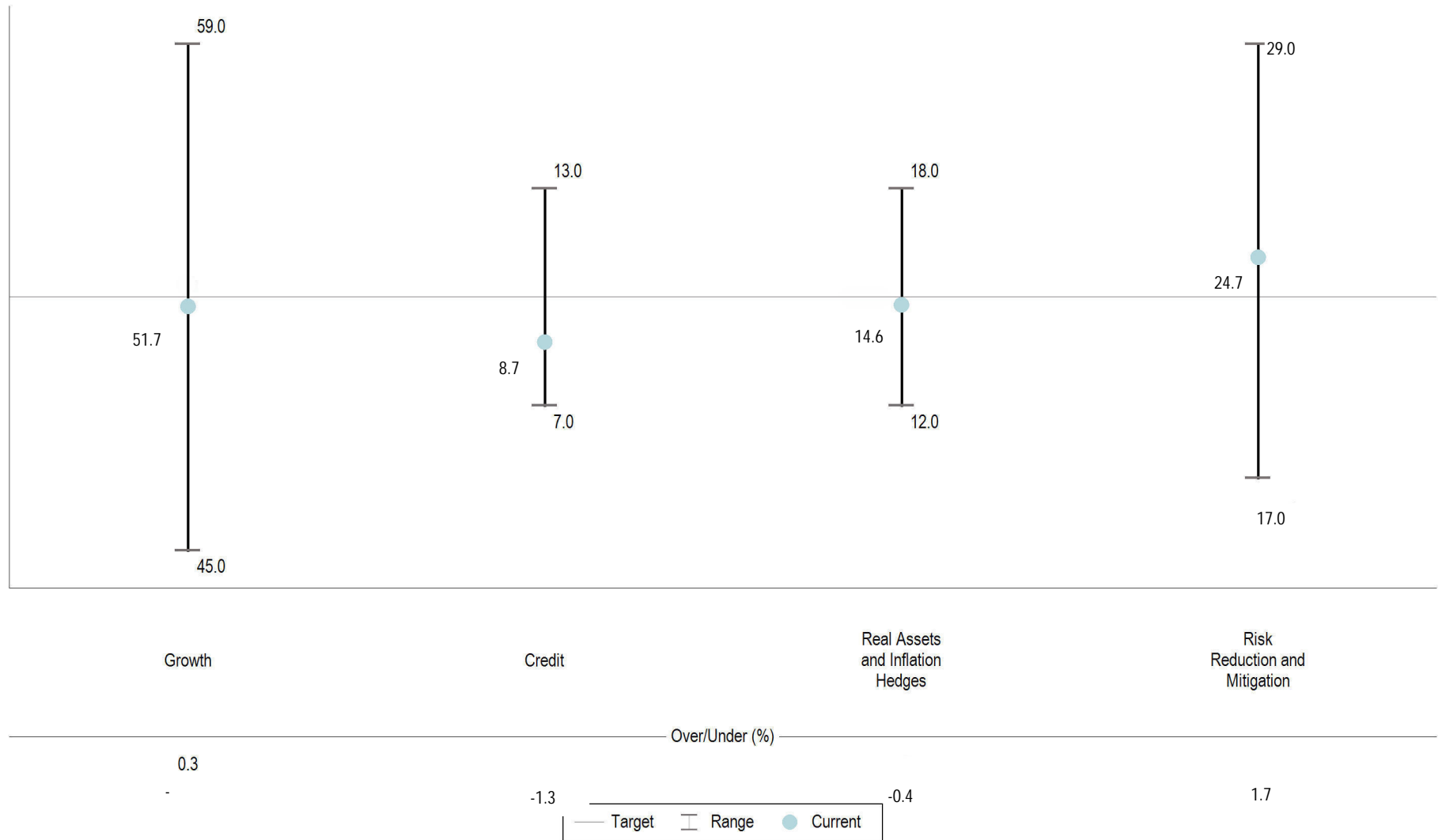
* The Functional Framework became effective April 1, 2019.



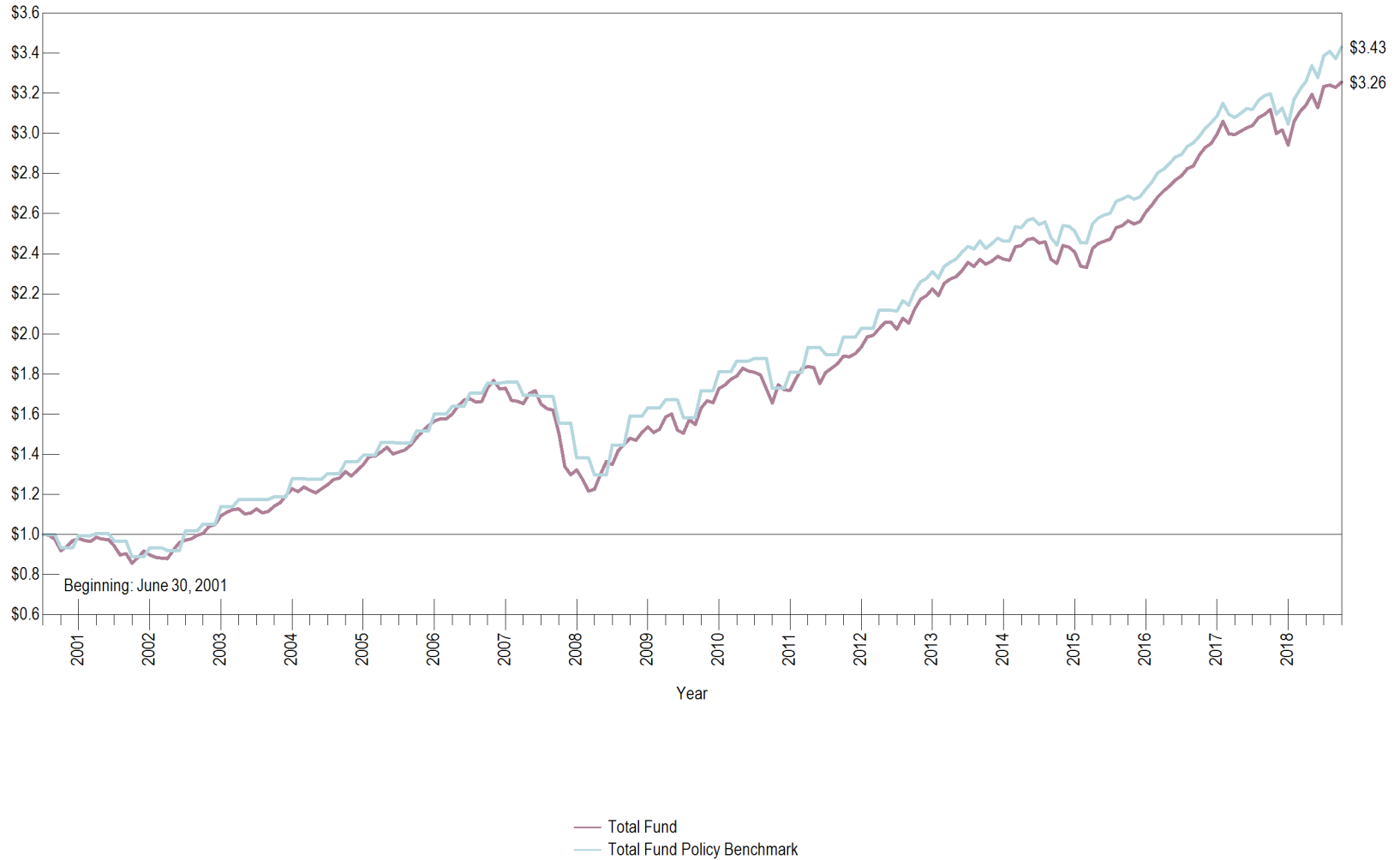
Asset Allocation History
5 Years Ending September 30, 2019



Actual vs. Target



Growth of a Dollar



As of September 30, 2019

Asset Class Performance Summary (Net)

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD ¹ (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|-----------------------|-------------------|-------------|-------------|-----------------------------------|-------------|--------------|--------------|---------------|
| Total Fund (Net) | 58,445,094,901 | 100.0 | 0.8 | 0.7 | 0.7 | 4.4 | 8.3 | 6.8 | 8.2 |
| <i>Total Fund Policy Benchmark</i> | | | <u>1.7</u> | <u>1.3</u> | <u>1.3</u> | <u>7.3</u> | <u>8.5</u> | <u>7.2</u> | <u>8.0</u> |
| Excess Return | | | -0.9 | -0.6 | -0.6 | -2.9 | -0.2 | -0.4 | 0.2 |
| Growth (Net) | 30,194,576,523 | 51.7 | 2.0 | 0.9 | 0.9 | -- | -- | -- | -- |
| <i>Growth Custom Blended Benchmark</i> | | | <u>3.2</u> | <u>1.1</u> | <u>1.1</u> | -- | -- | -- | -- |
| Excess Return | | | -1.2 | -0.2 | -0.2 | | | | |
| Credit (Net) | 5,055,821,915 | 8.7 | 0.3 | 0.7 | 0.7 | -- | -- | -- | -- |
| <i>Credit Custom Blended Benchmark</i> | | | <u>0.9</u> | <u>1.9</u> | <u>1.9</u> | -- | -- | -- | -- |
| Excess Return | | | -0.6 | -1.2 | -1.2 | | | | |
| Real Assets and Inflation Hedges (Net) | 8,533,506,855 | 14.6 | -0.5 | -1.1 | -1.1 | -- | -- | -- | -- |
| <i>Real Assets and Inflation Hedges Custom Blended Benchmark</i> | | | <u>0.5</u> | <u>0.3</u> | <u>0.3</u> | -- | -- | -- | -- |
| Excess Return | | | -1.0 | -1.4 | -1.4 | | | | |
| Risk Reduction and Mitigation (Net) | 14,444,011,315 | 24.7 | -0.4 | 2.1 | 2.1 | -- | -- | -- | -- |
| <i>Risk Reduction and Mitigation Custom Blended Benchmark</i> | | | <u>-0.4</u> | <u>2.1</u> | <u>2.1</u> | -- | -- | -- | -- |
| Excess Return | | | 0.0 | 0.0 | 0.0 | | | | |
| Parametric Overlay (Net) | 217,178,293 | 0.4 | | | | | | | |

¹ Fiscal Year begins July 1.

As of September 30, 2019

Trailing Performance

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|-----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| Total Fund (Net) | 58,445,094,901 | 100.0 | 0.8 | 0.7 | 0.7 | 4.4 | 8.3 | 6.8 | 8.2 |
| Total Fund (Gross) | | | 0.8 | 0.7 | 0.7 | 4.6 | 8.6 | 7.0 | 8.5 |
| <i>Total Fund Policy Benchmark</i> | | | <u>1.7</u> | <u>1.3</u> | <u>1.3</u> | <u>7.3</u> | <u>8.5</u> | <u>7.2</u> | <u>8.0</u> |
| Excess Return (vs. Net) | | | -0.9 | -0.6 | -0.6 | -2.9 | -0.2 | -0.4 | 0.2 |
| Growth (Net)¹ | 30,194,576,523 | 51.7 | 2.0 | 0.9 | 0.9 | -- | -- | -- | -- |
| Growth (Gross) | | | 2.0 | 1.0 | 1.0 | -- | -- | -- | -- |
| <i>Growth Custom Blended Benchmark</i> | | | <u>3.2</u> | <u>1.1</u> | <u>1.1</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -1.2 | -0.2 | -0.2 | | | | |
| Global Equity (Net) | 23,388,091,591 | 40.0 | 2.4 | 0.4 | 0.4 | -- | -- | -- | -- |
| Global Equity (Gross) | | | 2.4 | 0.4 | 0.4 | -- | -- | -- | -- |
| <i>Global Equity Custom BM</i> | | | <u>2.4</u> | <u>0.3</u> | <u>0.3</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | 0.1 | 0.1 | | | | |
| BTC Russell 3000 (Net) | 11,255,820,147 | 19.3 | 1.8 | 1.2 | 1.2 | 3.0 | -- | -- | -- |
| BTC Russell 3000 (Gross) | | | 1.8 | 1.2 | 1.2 | 3.0 | -- | -- | -- |
| <i>Russell 3000</i> | | | <u>1.8</u> | <u>1.2</u> | <u>1.2</u> | <u>2.9</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.0 | 0.1 | | | |

¹ Includes accounts that are lagged by 3-months and latest available adjusted for cash flows.

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-------------------------------------|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| BTC EAFE IMI (Net) ¹ | 4,231,488,267 | 7.2 | 2.9 | -1.0 | -1.0 | -1.7 | 6.8 | 4.0 | 5.6 |
| BTC EAFE IMI (Gross) | | | 2.9 | -0.9 | -0.9 | -1.6 | 6.8 | 4.0 | 5.6 |
| <i>MSCI EAFE IMI Custom Index</i> | | | <u>2.9</u> | <u>-1.0</u> | <u>-1.0</u> | <u>-2.0</u> | <u>6.4</u> | <u>3.6</u> | <u>5.2</u> |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.0 | 0.3 | 0.4 | 0.4 | 0.4 |
| BTC Emerging Markets (Net) | 1,149,587,150 | 2.0 | 1.9 | -4.3 | -4.3 | -2.2 | 5.8 | 2.1 | 3.1 |
| BTC Emerging Markets (Gross) | | | 1.9 | -4.3 | -4.3 | -2.1 | 5.9 | 2.3 | 3.3 |
| <i>MSCI Emerging Markets</i> | | | <u>1.9</u> | <u>-4.2</u> | <u>-4.2</u> | <u>-2.0</u> | <u>6.0</u> | <u>2.3</u> | <u>3.4</u> |
| Excess Return (vs. Net) | | | 0.0 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.3 |
| BTC Euro Tilts (Net) | 824,709,606 | 1.4 | 2.8 | -3.5 | -3.5 | -3.0 | 5.8 | 3.4 | 5.8 |
| BTC Euro Tilts (Gross) | | | 2.8 | -3.4 | -3.4 | -2.6 | 6.2 | 3.8 | 6.3 |
| <i>MSCI EUROPE</i> | | | <u>2.7</u> | <u>-1.8</u> | <u>-1.8</u> | <u>-0.8</u> | <u>6.6</u> | <u>2.4</u> | <u>4.6</u> |
| Excess Return (vs. Net) | | | 0.1 | -1.7 | -1.7 | -2.2 | -0.8 | 1.0 | 1.2 |
| BTC Canada IMI (Net) ¹ | 744,882,445 | 1.3 | 2.0 | 0.8 | 0.8 | 3.1 | 6.6 | 1.3 | 4.2 |
| BTC Canada IMI (Gross) | | | 2.0 | 0.8 | 0.8 | 3.1 | 6.6 | 1.3 | 4.2 |
| <i>MSCI Canada IMI Custom Index</i> | | | <u>1.9</u> | <u>0.6</u> | <u>0.6</u> | <u>2.2</u> | <u>5.8</u> | <u>0.5</u> | <u>3.5</u> |
| Excess Return (vs. Net) | | | 0.1 | 0.2 | 0.2 | 0.9 | 0.8 | 0.8 | 0.7 |
| Acadian Developed Markets (Net) | 706,153,209 | 1.2 | 2.6 | -1.6 | -1.6 | -4.3 | 8.9 | 6.3 | 7.4 |
| Acadian Developed Markets (Gross) | | | 2.6 | -1.5 | -1.5 | -3.9 | 9.3 | 6.7 | 7.8 |
| <i>EAFE Custom Benchmark</i> | | | <u>2.8</u> | <u>-0.9</u> | <u>-0.9</u> | <u>-1.0</u> | <u>6.5</u> | <u>3.1</u> | <u>4.8</u> |
| Excess Return (vs. Net) | | | -0.2 | -0.7 | -0.7 | -3.3 | 2.4 | 3.2 | 2.6 |

¹ BTC EAFE & Canada Funds from 11/1999 - 8/2008; and BTC EAFE & Canada IMI Funds from 8/2008 - Present.

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-------------------------------------|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| Genesis (Net) | 703,532,425 | 1.2 | 0.7 | -1.3 | -1.3 | 8.0 | 8.3 | 3.5 | 5.8 |
| Genesis (Gross) | | | 0.8 | -1.1 | -1.1 | 8.7 | 9.1 | 4.2 | 6.6 |
| <i>MSCI EM IMI Custom Index</i> | | | <u>1.9</u> | <u>-4.3</u> | <u>-4.3</u> | <u>-2.4</u> | <u>5.4</u> | <u>2.0</u> | <u>3.4</u> |
| Excess Return (vs. Net) | | | -1.2 | 3.0 | 3.0 | 10.4 | 2.9 | 1.5 | 2.4 |
| Frontier Capital Management (Net) | 492,512,595 | 0.8 | 2.9 | -0.5 | -0.5 | -5.5 | 7.9 | 8.0 | 12.0 |
| Frontier Capital Management (Gross) | | | 2.9 | -0.3 | -0.3 | -4.8 | 8.7 | 8.8 | 12.9 |
| <i>Russell 2500</i> | | | <u>1.8</u> | <u>-1.3</u> | <u>-1.3</u> | <u>-4.0</u> | <u>9.5</u> | <u>8.6</u> | <u>12.2</u> |
| Excess Return (vs. Net) | | | 1.1 | 0.8 | 0.8 | -1.5 | -1.6 | -0.6 | -0.2 |
| Capital Guardian (Net) | 406,439,950 | 0.7 | 1.3 | -0.1 | -0.1 | 4.2 | 11.0 | 6.3 | 6.9 |
| Capital Guardian (Gross) | | | 1.3 | 0.0 | 0.0 | 4.5 | 11.4 | 6.6 | 7.3 |
| <i>EAFE Custom Benchmark</i> | | | <u>2.8</u> | <u>-0.9</u> | <u>-0.9</u> | <u>-1.0</u> | <u>6.5</u> | <u>3.1</u> | <u>4.8</u> |
| Excess Return (vs. Net) | | | -1.5 | 0.8 | 0.8 | 5.2 | 4.5 | 3.2 | 2.1 |
| Lazard Emerging Markets (Net) | 347,788,993 | 0.6 | 2.6 | -3.6 | -3.6 | 3.7 | 6.7 | 3.2 | -- |
| Lazard Emerging Markets (Gross) | | | 2.6 | -3.4 | -3.4 | 4.4 | 7.5 | 4.0 | -- |
| <i>MSCI Emerging Markets</i> | | | <u>1.9</u> | <u>-4.2</u> | <u>-4.2</u> | <u>-2.0</u> | <u>6.0</u> | <u>2.3</u> | -- |
| Excess Return (vs. Net) | | | 0.7 | 0.6 | 0.6 | 5.7 | 0.7 | 0.9 | |
| Cevian Capital (Net) | 288,923,265 | 0.5 | 5.9 | -1.6 | -1.6 | -7.3 | 4.8 | -- | -- |
| Cevian Capital (Gross) | | | 6.0 | -1.3 | -1.3 | -5.9 | 6.4 | -- | -- |
| <i>MSCI EUROPE</i> | | | <u>2.7</u> | <u>-1.8</u> | <u>-1.8</u> | <u>-0.8</u> | <u>6.6</u> | -- | -- |
| Excess Return (vs. Net) | | | 3.2 | 0.2 | 0.2 | -6.5 | -1.8 | | |

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| Acadian Emerging Markets (Net) | 273,853,590 | 0.5 | 3.3 | -4.3 | -4.3 | -5.0 | 4.5 | 1.2 | -- |
| Acadian Emerging Markets (Gross) | | | 3.3 | -4.2 | -4.2 | -4.5 | 5.1 | 1.7 | -- |
| <i>MSCI Emerging Markets</i> | | | <u>1.9</u> | <u>-4.2</u> | <u>-4.2</u> | <u>-2.0</u> | <u>6.0</u> | <u>2.3</u> | -- |
| Excess Return (vs. Net) | | | 1.4 | -0.1 | -0.1 | -3.0 | -1.5 | -1.1 | |
| Quantitative Management Associates (Net) | 265,929,098 | 0.5 | 4.0 | -1.0 | -1.0 | -12.5 | -- | -- | -- |
| Quantitative Management Associates (Gross) | | | 4.0 | -0.8 | -0.8 | -12.0 | -- | -- | -- |
| <i>Russell 2000</i> | | | <u>2.1</u> | <u>-2.4</u> | <u>-2.4</u> | <u>-8.9</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 1.9 | 1.4 | 1.4 | -3.6 | | | |
| Systematic Financial Management (Net) | 233,031,608 | 0.4 | 5.1 | 0.1 | 0.1 | -6.2 | -- | -- | -- |
| Systematic Financial Management (Gross) | | | 5.1 | 0.2 | 0.2 | -5.7 | -- | -- | -- |
| <i>Russell 2000</i> | | | <u>2.1</u> | <u>-2.4</u> | <u>-2.4</u> | <u>-8.9</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 3.0 | 2.5 | 2.5 | 2.7 | | | |
| Eagle Asset Management (Net) | 227,935,817 | 0.4 | 2.4 | 0.1 | 0.1 | -6.0 | 8.8 | 9.7 | 12.1 |
| Eagle Asset Management (Gross) | | | 2.5 | 0.2 | 0.2 | -5.5 | 9.4 | 10.3 | 12.7 |
| <i>Russell 2500</i> | | | <u>1.8</u> | <u>-1.3</u> | <u>-1.3</u> | <u>-4.0</u> | <u>9.5</u> | <u>8.6</u> | <u>12.2</u> |
| Excess Return (vs. Net) | | | 0.6 | 1.4 | 1.4 | -2.0 | -0.7 | 1.1 | -0.1 |
| BTC Europe Index (Net) | 202,188,958 | 0.3 | 2.8 | -1.8 | -1.8 | -0.3 | 7.1 | 2.9 | 5.1 |
| BTC Europe Index (Gross) | | | 2.8 | -1.8 | -1.8 | -0.3 | 7.1 | 2.9 | 5.1 |
| <i>MSCI EUROPE</i> | | | <u>2.7</u> | <u>-1.8</u> | <u>-1.8</u> | <u>-0.8</u> | <u>6.6</u> | <u>2.4</u> | <u>4.6</u> |
| Excess Return (vs. Net) | | | 0.1 | 0.0 | 0.0 | 0.5 | 0.5 | 0.5 | 0.5 |

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-------------------------------------|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| AQR Emerging Markets (Net) | 202,096,732 | 0.3 | 2.2 | -4.5 | -4.5 | -6.7 | 4.6 | 1.5 | -- |
| AQR Emerging Markets (Gross) | | | 2.3 | -4.3 | -4.3 | -6.1 | 5.4 | 2.2 | -- |
| <i>MSCI Emerging Markets</i> | | | <u>1.9</u> | <u>-4.2</u> | <u>-4.2</u> | <u>-2.0</u> | <u>6.0</u> | <u>2.3</u> | -- |
| Excess Return (vs. Net) | | | 0.3 | -0.3 | -0.3 | -4.7 | -1.4 | -0.8 | |
| Global Alpha IE EMP (Net) | 171,160,369 | 0.3 | 2.9 | -1.2 | -1.2 | -- | -- | -- | -- |
| Global Alpha IE EMP (Gross) | | | 3.0 | -1.0 | -1.0 | -- | -- | -- | -- |
| <i>MSCI EAFE Small Cap</i> | | | <u>2.8</u> | <u>-0.4</u> | <u>-0.4</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.1 | -0.8 | -0.8 | | | | |
| Symphony Financial Partners (Net) | 170,128,245 | 0.3 | 9.6 | 5.0 | 5.0 | 4.8 | -- | -- | -- |
| Symphony Financial Partners (Gross) | | | 9.7 | 5.2 | 5.2 | 5.6 | -- | -- | -- |
| <i>MSCI Japan Small Cap NR USD</i> | | | <u>3.6</u> | <u>3.9</u> | <u>3.9</u> | <u>-6.1</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 6.0 | 1.1 | 1.1 | 10.9 | | | |
| Matarin (Net) | 108,987,844 | 0.2 | 3.5 | -0.6 | -0.6 | -11.6 | -- | -- | -- |
| Matarin (Gross) | | | 3.5 | -0.4 | -0.4 | -11.1 | -- | -- | -- |
| <i>Russell 2000</i> | | | <u>2.1</u> | <u>-2.4</u> | <u>-2.4</u> | <u>-8.9</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 1.4 | 1.8 | 1.8 | -2.7 | | | |
| Jana Partners (Net) | 101,670,473 | 0.2 | 4.6 | 12.6 | 12.6 | 6.6 | 20.1 | -- | -- |
| Jana Partners (Gross) | | | 4.9 | 13.6 | 13.6 | 9.9 | 24.8 | -- | -- |
| <i>S&P 500</i> | | | <u>1.9</u> | <u>1.7</u> | <u>1.7</u> | <u>4.3</u> | <u>13.4</u> | -- | -- |
| Excess Return (vs. Net) | | | 2.7 | 10.9 | 10.9 | 2.3 | 6.7 | | |

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| BTC Passive Currency Hedge (Net) | 70,747,267 | 0.1 | 0.4 | 1.6 | 1.6 | 2.5 | 1.6 | 1.8 | -- |
| BTC Passive Currency Hedge (Gross) | | | 0.4 | 1.6 | 1.6 | 2.5 | 1.6 | 1.8 | -- |
| <i>50% FX Hedge Index</i> | | | <u>0.4</u> | <u>1.6</u> | <u>1.6</u> | <u>2.6</u> | <u>1.6</u> | <u>1.8</u> | -- |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | |
| CornerCap (Net) | 57,829,655 | 0.1 | 5.1 | 0.3 | 0.3 | -3.4 | -- | -- | -- |
| CornerCap (Gross) | | | 5.1 | 0.5 | 0.5 | -2.9 | -- | -- | -- |
| <i>Russell 2000</i> | | | <u>2.1</u> | <u>-2.4</u> | <u>-2.4</u> | <u>-8.9</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 3.0 | 2.7 | 2.7 | 5.5 | | | |
| Private Equity - Growth (Net) | 5,786,930,268 | 9.9 | 0.1 | 3.1 | 3.1 | -- | -- | -- | -- |
| Private Equity - Growth (Gross) | | | 0.1 | 3.2 | 3.2 | -- | -- | -- | -- |
| <i>Private Equity - Growth Custom BM</i> | | | <u>6.6</u> | <u>3.9</u> | <u>3.9</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -6.5 | -0.8 | -0.8 | | | | |
| Opportunistic Real Estate (Net) | 1,019,554,663 | 1.7 | 2.6 | 2.6 | 2.6 | 9.1 | 11.5 | 12.5 | 1.8 |
| Opportunistic Real Estate (Gross) | | | 3.2 | 3.2 | 3.2 | 11.2 | 13.5 | 14.7 | 4.8 |
| <i>Opportunistic Real Estate Custom BM</i> | | | <u>0.5</u> | <u>1.5</u> | <u>1.5</u> | <u>8.6</u> | <u>9.8</u> | <u>12.0</u> | <u>12.1</u> |
| Excess Return (vs. Net) | | | 2.1 | 1.1 | 1.1 | 0.5 | 1.7 | 0.5 | -10.3 |
| Credit (Net)¹ | 5,055,821,915 | 8.7 | 0.3 | 0.7 | 0.7 | -- | -- | -- | -- |
| Credit (Gross) | | | 0.3 | 0.9 | 0.9 | -- | -- | -- | -- |
| <i>Credit Custom Blended Benchmark</i> | | | <u>0.9</u> | <u>1.9</u> | <u>1.9</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.6 | -1.2 | -1.2 | | | | |

¹ Includes accounts that are lagged by 1-month, 3-months, and latest available adjusted for cash flows.

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|------------------------------------|----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| Credit Transition Account (Net) | 1,225,738 | 0.0 | | | | | | | |
| High Yield (Net) | 2,346,641,348 | 4.0 | 0.3 | 1.0 | 1.0 | -- | -- | -- | -- |
| High Yield (Gross) | | | 0.4 | 1.2 | 1.2 | -- | -- | -- | -- |
| <i>BBG BARC US Corp HY Idx</i> | | | <u>0.4</u> | <u>1.3</u> | <u>1.3</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.1 | -0.3 | -0.3 | | | | |
| Brigade Capital Management (Net) | 584,168,279 | 1.0 | 0.2 | -0.5 | -0.5 | -0.2 | 4.6 | 3.8 | -- |
| Brigade Capital Management (Gross) | | | 0.2 | -0.3 | -0.3 | 0.6 | 5.4 | 4.6 | -- |
| <i>Brigade Custom Index</i> | | | <u>0.4</u> | <u>1.4</u> | <u>1.4</u> | <u>5.7</u> | <u>5.4</u> | <u>4.8</u> | -- |
| Excess Return (vs. Net) | | | -0.2 | -1.9 | -1.9 | -5.9 | -0.8 | -1.0 | |
| Oaktree Capital Management (Net) | 446,147,968 | 0.8 | 0.7 | 2.1 | 2.1 | 7.4 | 5.3 | 4.7 | 7.0 |
| Oaktree Capital Management (Gross) | | | 0.7 | 2.2 | 2.2 | 7.8 | 5.7 | 5.1 | 7.5 |
| <i>BBG BARC Ba to B US HY</i> | | | <u>0.4</u> | <u>1.9</u> | <u>1.9</u> | <u>8.3</u> | <u>6.0</u> | <u>5.5</u> | <u>7.7</u> |
| Excess Return (vs. Net) | | | 0.3 | 0.2 | 0.2 | -0.9 | -0.7 | -0.8 | -0.7 |
| Bain Capital (Net) | 371,664,871 | 0.6 | 0.5 | 0.3 | 0.3 | 3.3 | 4.9 | 3.8 | -- |
| Bain Capital (Gross) | | | 0.5 | 0.4 | 0.4 | 4.0 | 5.7 | 4.5 | -- |
| <i>HY/BL Custom Benchmark</i> | | | <u>0.4</u> | <u>1.1</u> | <u>1.1</u> | <u>4.7</u> | <u>5.4</u> | <u>4.8</u> | -- |
| Excess Return (vs. Net) | | | 0.1 | -0.8 | -0.8 | -1.4 | -0.5 | -1.0 | |

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| Doubleline Capital (Net) | 345,665,357 | 0.6 | 0.0 | 1.9 | 1.9 | 8.4 | 4.6 | -- | -- |
| Doubleline Capital (Gross) | | | 0.1 | 2.1 | 2.1 | 9.3 | 5.4 | -- | -- |
| <i>Securitized Custom Index</i> | | | <u>0.3</u> | <u>2.4</u> | <u>2.4</u> | <u>12.2</u> | <u>6.5</u> | -- | -- |
| Excess Return (vs. Net) | | | -0.3 | -0.5 | -0.5 | -3.8 | -1.9 | | |
| TCW (Net) | 343,551,273 | 0.6 | 0.1 | 1.2 | 1.2 | 5.9 | 4.6 | -- | -- |
| TCW (Gross) | | | 0.1 | 1.4 | 1.4 | 6.5 | 5.2 | -- | -- |
| <i>Securitized Custom Index</i> | | | <u>0.3</u> | <u>2.4</u> | <u>2.4</u> | <u>12.2</u> | <u>6.5</u> | -- | -- |
| Excess Return (vs. Net) | | | -0.2 | -1.2 | -1.2 | -6.3 | -1.9 | | |
| Beach Point (Net) | 255,417,013 | 0.4 | 0.7 | 2.3 | 2.3 | 7.7 | 6.7 | 6.6 | -- |
| Beach Point (Gross) | | | 0.7 | 2.5 | 2.5 | 8.4 | 7.4 | 7.3 | -- |
| <i>HY/BL Custom Benchmark</i> | | | <u>0.4</u> | <u>1.1</u> | <u>1.1</u> | <u>4.7</u> | <u>5.4</u> | <u>4.8</u> | -- |
| Excess Return (vs. Net) | | | 0.3 | 1.2 | 1.2 | 3.0 | 1.3 | 1.8 | |
| Bank Loans (Net) | 916,913,206 | 1.6 | 0.5 | 1.0 | 1.0 | -- | -- | -- | -- |
| Bank Loans (Gross) | | | 0.6 | 1.1 | 1.1 | -- | -- | -- | -- |
| <i>Credit Suisse Leveraged Loans</i> | | | <u>0.4</u> | <u>0.9</u> | <u>0.9</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.1 | 0.1 | 0.1 | | | | |
| Tennenbaum Capital (Net) | 471,099,879 | 0.8 | 0.5 | 0.8 | 0.8 | 7.0 | 8.1 | -- | -- |
| Tennenbaum Capital (Gross) | | | 0.5 | 0.9 | 0.9 | 7.7 | 9.0 | -- | -- |
| <i>Credit Suisse Leveraged Loan (1 month lagged)</i> | | | <u>-0.3</u> | <u>0.7</u> | <u>0.7</u> | <u>3.4</u> | <u>4.9</u> | -- | -- |
| Excess Return (vs. Net) | | | 0.8 | 0.1 | 0.1 | 3.6 | 3.2 | | |

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---------------------------------------|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| Crescent Capital Group (Net) | 445,813,327 | 0.8 | 0.6 | 1.2 | 1.2 | 3.9 | 5.4 | 3.5 | -- |
| Crescent Capital Group (Gross) | | | 0.6 | 1.3 | 1.3 | 4.4 | 6.0 | 4.1 | -- |
| <i>HY/BL Custom Benchmark</i> | | | <u>0.4</u> | <u>1.1</u> | <u>1.1</u> | <u>4.7</u> | <u>5.4</u> | <u>4.8</u> | -- |
| Excess Return (vs. Net) | | | 0.2 | 0.1 | 0.1 | -0.8 | 0.0 | -1.3 | |
| EM Debt (Net) | 844,308,681 | 1.4 | -0.1 | -1.0 | -1.0 | 9.0 | -- | -- | -- |
| EM Debt (Gross) | | | 0.0 | -0.9 | -0.9 | 9.5 | -- | -- | -- |
| <i>EMD Custom</i> | | | <u>0.2</u> | <u>1.0</u> | <u>1.0</u> | <u>11.0</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.3 | -2.0 | -2.0 | -2.0 | | | |
| Aberdeen Asset Management (Net) | 427,426,524 | 0.7 | -0.4 | 0.9 | 0.9 | 10.9 | -- | -- | -- |
| Aberdeen Asset Management (Gross) | | | -0.3 | 1.0 | 1.0 | 11.3 | -- | -- | -- |
| <i>EMD Custom</i> | | | <u>0.2</u> | <u>1.0</u> | <u>1.0</u> | <u>11.0</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.6 | -0.1 | -0.1 | -0.1 | | | |
| Ashmore Investment Management (Net) | 416,882,156 | 0.7 | 0.2 | -2.9 | -2.9 | 7.1 | -- | -- | -- |
| Ashmore Investment Management (Gross) | | | 0.3 | -2.8 | -2.8 | 7.7 | -- | -- | -- |
| <i>EMD Custom</i> | | | <u>0.2</u> | <u>1.0</u> | <u>1.0</u> | <u>11.0</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | -3.9 | -3.9 | -3.9 | | | |
| Illiquid Credit (Net) | 946,732,942 | 1.6 | 0.2 | 1.1 | 1.1 | -- | -- | -- | -- |
| Illiquid Credit (Gross) | | | 0.2 | 1.4 | 1.4 | -- | -- | -- | -- |
| <i>Illiquid Credit Custom BM</i> | | | <u>2.8</u> | <u>4.7</u> | <u>4.7</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -2.6 | -3.6 | -3.6 | | | | |

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| Grosvenor OPCRD 2 HFOF (Net) | 358,408,500 | 0.6 | -0.9 | -0.6 | -0.6 | -0.8 | 5.3 | -- | -- |
| Grosvenor OPCRD 2 HFOF (Gross) | | | -0.9 | -0.6 | -0.6 | -0.8 | 5.3 | -- | -- |
| <i>Grosvenor Custom Benchmark</i> | | | <u>2.8</u> | <u>4.7</u> | <u>4.7</u> | <u>13.3</u> | <u>8.4</u> | -- | -- |
| Excess Return (vs. Net) | | | -3.7 | -5.3 | -5.3 | -14.1 | -3.1 | | |
| Real Estate - Credit (Net) | 203,499,819 | 0.3 | 2.2 | 2.2 | 2.2 | 8.5 | 8.8 | 8.5 | -- |
| Real Estate - Credit (Gross) | | | 2.5 | 2.5 | 2.5 | 9.4 | 9.8 | 9.6 | -- |
| <i>NPI Income Lagged</i> | | | <u>0.4</u> | <u>1.1</u> | <u>1.1</u> | <u>4.5</u> | <u>4.6</u> | <u>4.8</u> | -- |
| Excess Return (vs. Net) | | | 1.8 | 1.1 | 1.1 | 4.0 | 4.2 | 3.7 | |
| Beach Point Opportunities III (Net) | 189,122,766 | 0.3 | 0.4 | 2.1 | 2.1 | 7.5 | -- | -- | -- |
| Beach Point Opportunities III (Gross) | | | 0.4 | 3.2 | 3.2 | 11.3 | -- | -- | -- |
| <i>Opportunistic Custom Index 1 Month Lag</i> | | | <u>0.1</u> | <u>2.0</u> | <u>2.0</u> | <u>5.0</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.3 | 0.1 | 0.1 | 2.5 | | | |
| Private Equity - Credit (Net) | 158,743,307 | 0.3 | 0.0 | 3.8 | 3.8 | -- | -- | -- | -- |
| Private Equity - Credit (Gross) | | | 0.0 | 3.8 | 3.8 | -- | -- | -- | -- |
| <i>PE - Credit Custom BM</i> | | | <u>1.5</u> | <u>3.7</u> | <u>3.7</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -1.5 | 0.1 | 0.1 | | | | |
| Beach Point Opportunities II (Net) | 36,958,550 | 0.1 | 0.6 | -0.7 | -0.7 | 8.5 | 6.0 | 7.8 | -- |
| Beach Point Opportunities II (Gross) | | | 0.6 | 2.0 | 2.0 | 5.3 | 6.8 | 9.1 | -- |
| <i>Opportunistic Custom Index 1 Month Lag</i> | | | <u>0.1</u> | <u>2.0</u> | <u>2.0</u> | <u>5.0</u> | <u>5.5</u> | <u>4.4</u> | -- |
| Excess Return (vs. Net) | | | 0.5 | -2.7 | -2.7 | 3.5 | 0.5 | 3.4 | |

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|--|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| Real Assets and Inflation Hedges (Net)¹ | 8,533,506,855 | 14.6 | -0.5 | -1.1 | -1.1 | -- | -- | -- | -- |
| Real Assets and Inflation Hedges (Gross) | | | -0.5 | -1.1 | -1.1 | -- | -- | -- | -- |
| <i>Real Assets and Inflation Hedges Custom Blended Benchmark</i> | | | <u>0.5</u> | <u>0.3</u> | <u>0.3</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -1.0 | -1.4 | -1.4 | | | | |
| Core and Value-Added Real Estate (Net) | 4,982,164,968 | 8.5 | -1.5 | -1.5 | -1.5 | 4.0 | 6.1 | 8.0 | 7.8 |
| Core and Value-Added Real Estate (Gross) | | | -1.4 | -1.4 | -1.4 | 4.6 | 6.7 | 8.6 | 8.5 |
| <i>Core & Value-Added Real Estate Custom BM</i> | | | <u>0.3</u> | <u>0.9</u> | <u>0.9</u> | <u>6.0</u> | <u>7.1</u> | <u>9.3</u> | <u>9.4</u> |
| Excess Return (vs. Net) | | | -1.8 | -2.4 | -2.4 | -2.0 | -1.0 | -1.3 | -1.6 |
| Natural Resources and Commodities (Net) | 1,866,112,587 | 3.2 | 1.5 | -2.9 | -2.9 | -7.8 | -0.3 | -6.3 | -2.8 |
| Natural Resources and Commodities (Gross) | | | 1.6 | -2.9 | -2.9 | -7.5 | 0.0 | -5.9 | -2.4 |
| <i>Natural Resources & Commodities Custom BM</i> | | | <u>1.8</u> | <u>-3.9</u> | <u>-3.9</u> | <u>-7.0</u> | <u>-1.7</u> | <u>-7.3</u> | <u>-4.4</u> |
| Excess Return (vs. Net) | | | -0.3 | 1.0 | 1.0 | -0.8 | 1.4 | 1.0 | 1.6 |
| DWS Natural Resources (Net) | 476,134,463 | 0.8 | 3.1 | -4.8 | -4.8 | -- | -- | -- | -- |
| DWS Natural Resources (Gross) | | | 3.1 | -4.8 | -4.8 | -- | -- | -- | -- |
| <i>S&P Global Large/MidCap Commodities & Resources</i> | | | <u>2.4</u> | <u>-5.9</u> | <u>-5.9</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.7 | 1.1 | 1.1 | | | | |
| Neuberger Berman/ Gresham (Net) | 434,470,947 | 0.7 | 1.6 | -2.5 | -2.5 | -9.4 | 0.5 | -6.6 | -2.4 |
| Neuberger Berman/ Gresham (Gross) | | | 1.6 | -2.4 | -2.4 | -9.1 | 0.9 | -6.2 | -2.0 |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>1.2</u> | <u>-1.8</u> | <u>-1.8</u> | <u>-6.6</u> | <u>-1.5</u> | <u>-7.2</u> | <u>-4.3</u> |
| Excess Return (vs. Net) | | | 0.4 | -0.7 | -0.7 | -2.8 | 2.0 | 0.6 | 1.9 |

¹ Includes accounts that are lagged by 3-months and latest available adjusted for cash flows.

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|----------------------|-------------------|-------------|-------------|----------------------|-------------|--------------|--------------|---------------|
| PIMCO Commodities (Net) | 431,331,857 | 0.7 | 0.9 | -2.5 | -2.5 | -7.3 | 0.0 | -5.5 | -2.8 |
| PIMCO Commodities (Gross) | | | 0.9 | -2.4 | -2.4 | -7.0 | 0.4 | -5.1 | -2.3 |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>1.2</u> | <u>-1.8</u> | <u>-1.8</u> | <u>-6.6</u> | <u>-1.5</u> | <u>-7.2</u> | <u>-4.3</u> |
| Excess Return (vs. Net) | | | -0.3 | -0.7 | -0.7 | -0.7 | 1.5 | 1.7 | 1.5 |
| Credit Suisse (Net) | 414,770,520 | 0.7 | 1.1 | -2.0 | -2.0 | -7.1 | -1.7 | -6.9 | -- |
| Credit Suisse (Gross) | | | 1.1 | -1.9 | -1.9 | -6.8 | -1.5 | -6.7 | -- |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>1.2</u> | <u>-1.8</u> | <u>-1.8</u> | <u>-6.6</u> | <u>-1.5</u> | <u>-7.2</u> | -- |
| Excess Return (vs. Net) | | | -0.1 | -0.2 | -0.2 | -0.5 | -0.2 | 0.3 | |
| PE - Real Assets & Inflation Hedges (Net) | 109,404,800 | 0.2 | 0.0 | -2.5 | -2.5 | -- | -- | -- | -- |
| PE - Real Assets & Inflation Hedges (Gross) | | | 0.0 | -2.5 | -2.5 | -- | -- | -- | -- |
| <i>PE - Real Assets Custom BM</i> | | | <u>9.8</u> | <u>1.9</u> | <u>1.9</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -9.8 | -4.4 | -4.4 | | | | |
| Infrastructure (Net) | 1,166,431,703 | 2.0 | 0.7 | 2.3 | 2.3 | -- | -- | -- | -- |
| Infrastructure (Gross) | | | 0.7 | 2.3 | 2.3 | -- | -- | -- | -- |
| <i>Dow Jones Brookfield Global Infrastructure Index</i> | | | <u>1.2</u> | <u>2.7</u> | <u>2.7</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.5 | -0.4 | -0.4 | | | | |
| TIPS (Net) | 518,797,597 | 0.9 | -1.4 | 1.3 | 1.3 | -- | -- | -- | -- |
| TIPS (Gross) | | | -1.4 | 1.3 | 1.3 | -- | -- | -- | -- |
| <i>Bloomberg Barclays U.S. TIPS Index</i> | | | <u>-1.4</u> | <u>1.4</u> | <u>1.4</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | -0.1 | -0.1 | | | | |

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|-----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| Risk Reduction and Mitigation (Net)¹ | 14,444,011,315 | 24.7 | -0.4 | 2.1 | 2.1 | -- | -- | -- | -- |
| Risk Reduction and Mitigation (Gross) | | | -0.4 | 2.1 | 2.1 | -- | -- | -- | -- |
| <i>Risk Reduction and Mitigation Custom Blended Benchmark</i> | | | <u>-0.4</u> | <u>2.1</u> | <u>2.1</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.0 | | | | |
| Investment Grade Bonds (Net) | 11,548,935,116 | 19.8 | -0.4 | 2.3 | 2.3 | 10.0 | 3.5 | 3.8 | 4.7 |
| Investment Grade Bonds (Gross) | | | -0.4 | 2.3 | 2.3 | 10.1 | 3.6 | 4.0 | 4.8 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>2.3</u> | <u>2.3</u> | <u>10.3</u> | <u>2.9</u> | <u>3.4</u> | <u>3.8</u> |
| Excess Return (vs. Net) | | | 0.1 | 0.0 | 0.0 | -0.3 | 0.6 | 0.4 | 0.9 |
| BTC US Debt Index (Net) | 6,684,040,679 | 11.4 | -0.5 | 2.3 | 2.3 | 10.3 | 3.0 | 3.5 | 3.9 |
| BTC US Debt Index (Gross) | | | -0.5 | 2.3 | 2.3 | 10.3 | 3.0 | 3.5 | 3.9 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>2.3</u> | <u>2.3</u> | <u>10.3</u> | <u>2.9</u> | <u>3.4</u> | <u>3.8</u> |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| Wells Capital Management (Net) | 1,579,759,987 | 2.7 | -0.5 | 2.3 | 2.3 | 10.3 | 3.1 | 3.6 | 4.5 |
| Wells Capital Management (Gross) | | | -0.5 | 2.3 | 2.3 | 10.4 | 3.2 | 3.7 | 4.6 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>2.3</u> | <u>2.3</u> | <u>10.3</u> | <u>2.9</u> | <u>3.4</u> | <u>3.8</u> |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.7 |
| Dodge & Cox (Net) | 1,080,897,373 | 1.8 | 0.0 | 2.2 | 2.2 | 9.5 | 4.0 | 4.1 | 5.0 |
| Dodge & Cox (Gross) | | | 0.0 | 2.3 | 2.3 | 9.6 | 4.1 | 4.2 | 5.1 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>2.3</u> | <u>2.3</u> | <u>10.3</u> | <u>2.9</u> | <u>3.4</u> | <u>3.8</u> |
| Excess Return (vs. Net) | | | 0.5 | -0.1 | -0.1 | -0.8 | 1.1 | 0.7 | 1.2 |

¹ Includes accounts that are lagged by 1-month.

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| Western Asset Management (Net) | 943,373,457 | 1.6 | 0.1 | 2.7 | 2.7 | 12.1 | 3.7 | 4.4 | 5.8 |
| Western Asset Management (Gross) | | | 0.1 | 2.7 | 2.7 | 12.3 | 3.9 | 4.5 | 5.9 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>2.3</u> | <u>2.3</u> | <u>10.3</u> | <u>2.9</u> | <u>3.4</u> | <u>3.8</u> |
| Excess Return (vs. Net) | | | 0.6 | 0.4 | 0.4 | 1.8 | 0.8 | 1.0 | 2.0 |
| PIMCO (Net) | 870,489,972 | 1.5 | -0.6 | 1.9 | 1.9 | 9.2 | 4.0 | 4.1 | 4.5 |
| PIMCO (Gross) | | | -0.5 | 2.0 | 2.0 | 9.4 | 4.2 | 4.3 | 4.7 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>2.3</u> | <u>2.3</u> | <u>10.3</u> | <u>2.9</u> | <u>3.4</u> | <u>3.8</u> |
| Excess Return (vs. Net) | | | -0.1 | -0.4 | -0.4 | -1.1 | 1.1 | 0.7 | 0.7 |
| Pugh Capital Management (Net) | 364,052,781 | 0.6 | -0.5 | 2.3 | 2.3 | 10.4 | 2.9 | 3.4 | 4.0 |
| Pugh Capital Management (Gross) | | | -0.5 | 2.4 | 2.4 | 10.6 | 3.1 | 3.6 | 4.2 |
| <i>BBgBarc US Aggregate TR</i> | | | <u>-0.5</u> | <u>2.3</u> | <u>2.3</u> | <u>10.3</u> | <u>2.9</u> | <u>3.4</u> | <u>3.8</u> |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 |
| Member Home Loan Program (MHLP) (Net) | 26,307,981 | 0.0 | 0.4 | 1.3 | 1.3 | 5.1 | 8.2 | 5.9 | 5.4 |
| Member Home Loan Program (MHLP) (Gross) | | | 0.4 | 1.4 | 1.4 | 5.4 | 8.5 | 6.1 | 5.7 |
| Investment Grade Transition Account (Net) | 1,004 | 0.0 | | | | | | | |

As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|---|----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| Diversified Hedge Fund Portfolio (Net) | 1,693,738,222 | 2.9 | -0.3 | 1.3 | 1.3 | -- | -- | -- | -- |
| Diversified Hedge Fund Portfolio (Gross) | | | -0.3 | 1.3 | 1.3 | -- | -- | -- | -- |
| <i>Diversified Hedge Funds Custom BM</i> | | | <u>0.4</u> | <u>1.2</u> | <u>1.2</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.7 | 0.1 | 0.1 | | | | |
| GSAM HFOF (Net) | 498,018,940 | 0.9 | 0.1 | 2.1 | 2.1 | 2.6 | 3.5 | -- | -- |
| GSAM HFOF (Gross) | | | 0.1 | 2.2 | 2.2 | 3.0 | 4.0 | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.4</u> | <u>1.2</u> | <u>1.2</u> | <u>6.2</u> | <u>6.1</u> | -- | -- |
| Excess Return (vs. Net) | | | -0.3 | 0.9 | 0.9 | -3.6 | -2.6 | | |
| Grosvenor HFOF (Net) | 485,864,857 | 0.8 | -0.8 | 0.6 | 0.6 | -0.9 | 3.1 | 1.3 | -- |
| Grosvenor HFOF (Gross) | | | -0.8 | 0.6 | 0.6 | -0.9 | 3.1 | 1.3 | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.4</u> | <u>1.2</u> | <u>1.2</u> | <u>6.2</u> | <u>6.1</u> | <u>5.7</u> | -- |
| Excess Return (vs. Net) | | | -1.2 | -0.6 | -0.6 | -7.1 | -3.0 | -4.4 | |
| AQR Leap (Net) | 66,842,681 | 0.1 | -0.1 | 0.4 | 0.4 | -1.5 | -- | -- | -- |
| AQR Leap (Gross) | | | -0.1 | 0.4 | 0.4 | -1.5 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.4</u> | <u>1.2</u> | <u>1.2</u> | <u>6.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.5 | -0.8 | -0.8 | -7.7 | | | |
| Capula GRV (Net) | 204,874,294 | 0.4 | 0.0 | 1.3 | 1.3 | -- | -- | -- | -- |
| Capula GRV (Gross) | | | 0.0 | 1.3 | 1.3 | -- | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.4</u> | <u>1.2</u> | <u>1.2</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.4 | 0.1 | 0.1 | | | | |

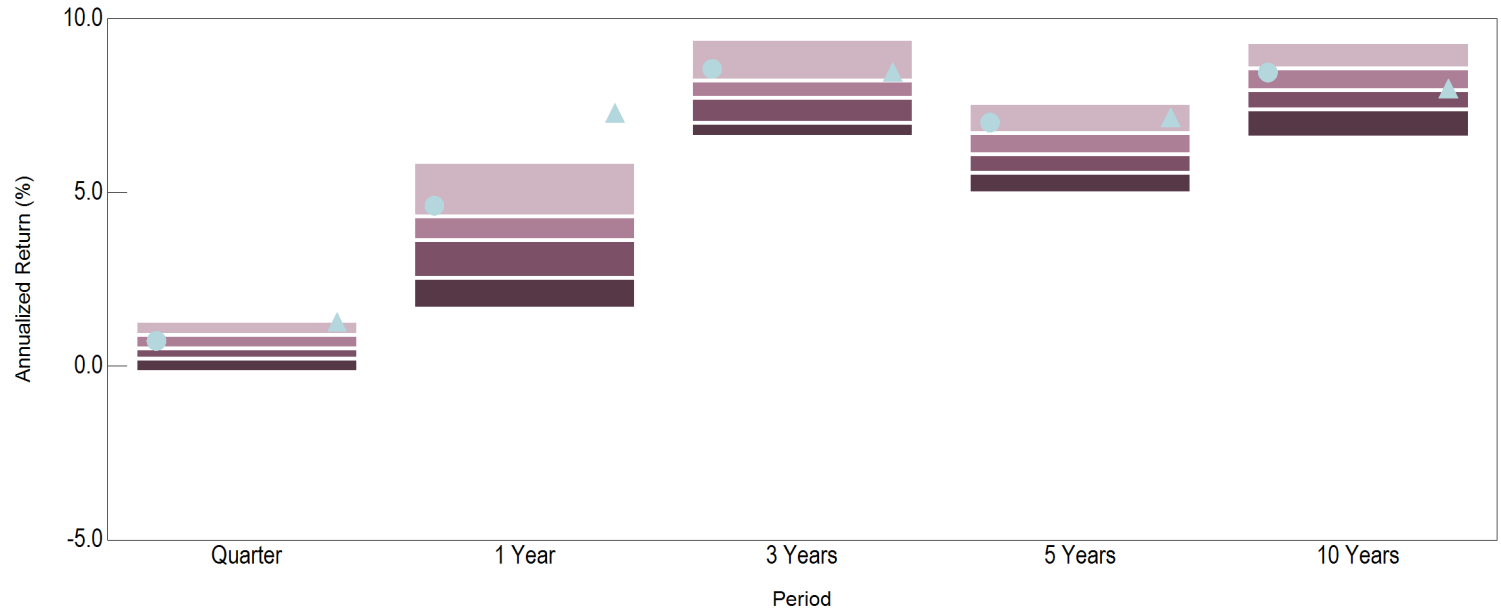
* See Glossary for all custom index definitions.



As of September 30, 2019

| | Market Value (\$) | % of Portfolio | 1 Mo (%) | QTD (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) |
|-----------------------------------|----------------------|-------------------|-------------|------------|----------------------|-------------|--------------|--------------|---------------|
| DK Institutional Partners (Net) | 125,298,574 | 0.2 | 0.1 | 1.4 | 1.4 | 4.1 | -- | -- | -- |
| DK Institutional Partners (Gross) | | | 0.1 | 1.4 | 1.4 | 4.1 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.4</u> | <u>1.2</u> | <u>1.2</u> | <u>6.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.3 | 0.2 | 0.2 | -2.1 | | | |
| HBK Multistrategy (Net) | 130,448,792 | 0.2 | -1.5 | 0.4 | 0.4 | 4.9 | -- | -- | -- |
| HBK Multistrategy (Gross) | | | -1.5 | 0.4 | 0.4 | 4.9 | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.4</u> | <u>1.2</u> | <u>1.2</u> | <u>6.2</u> | -- | -- | -- |
| Excess Return (vs. Net) | | | -1.9 | -0.8 | -0.8 | -1.3 | | | |
| Pimco TAC OPPS Funds (Net) | 182,390,081 | 0.3 | 0.3 | 1.6 | 1.6 | -- | -- | -- | -- |
| Pimco TAC OPPS Funds (Gross) | | | 0.3 | 1.6 | 1.6 | -- | -- | -- | -- |
| <i>Hedge Fund Custom BM</i> | | | <u>0.4</u> | <u>1.2</u> | <u>1.2</u> | -- | -- | -- | -- |
| Excess Return (vs. Net) | | | -0.1 | 0.4 | 0.4 | | | | |
| Cash (Net) | 1,201,337,976 | 2.1 | 0.2 | 0.6 | 0.6 | 2.7 | 1.9 | 1.3 | 1.2 |
| Cash (Gross) | | | 0.2 | 0.6 | 0.6 | 2.7 | 1.9 | 1.3 | 1.2 |
| <i>Cash Custom BM</i> | | | <u>0.2</u> | <u>0.6</u> | <u>0.6</u> | <u>2.4</u> | <u>1.6</u> | <u>1.0</u> | <u>0.6</u> |
| Excess Return (vs. Net) | | | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.3 | 0.6 |
| Parametric Overlay (Net) | 217,178,293 | 0.4 | | | | | | | |

InvMetrics Public DB > \$1B Net Return Comparison
Ending September 30, 2019



| | Return (Rank) | | | | | | | | | |
|-------------------------------|---------------|------|-----|------|-----|------|-----|------|-----|------|
| 5th Percentile | 1.3 | | 5.9 | | 9.4 | | 7.6 | | 9.3 | |
| 25th Percentile | 0.9 | | 4.3 | | 8.2 | | 6.7 | | 8.6 | |
| Median | 0.5 | | 3.6 | | 7.7 | | 6.1 | | 8.0 | |
| 75th Percentile | 0.2 | | 2.6 | | 7.0 | | 5.6 | | 7.4 | |
| 95th Percentile | -0.2 | | 1.7 | | 6.6 | | 5.0 | | 6.6 | |
| # of Portfolios | 71 | | 71 | | 71 | | 69 | | 63 | |
| ● Total Fund | 0.7 | (36) | 4.6 | (21) | 8.6 | (14) | 7.0 | (13) | 8.5 | (31) |
| ▲ Total Fund Policy Benchmark | 1.3 | (6) | 7.3 | (1) | 8.5 | (15) | 7.2 | (11) | 8.0 | (49) |

Benchmark History
As of September 30, 2019

| Total Fund | | |
|------------|------------|--|
| 1/1/2019 | Present | 41% Global Equity Custom BM / 10% PE - Credit Custom BM / 1% Opportunistic Real Estate Custom BM / 4% Bloomberg Barclays U.S. High Yield / 3% Credit Suisse Leveraged Loans / 1% EMD Custom / 2% Illiquid Credit Custom BM / 8% Core & Value-Added Real Estate Custom BM / 3% Natural Resources & Commodities Custom BM / 2% Dow Jones Brookfield Global Infrastructure Index / 2% Bloomberg Barclays U.S. TIPS Index / 19% BBgBarc US Aggregate TR / 3% Diversified Hedge Funds Custom BM / 1% Citigroup 3-Month U.S. Treasury Bill Index |
| 10/1/2018 | 12/31/2018 | 22.7% Russell 3000 / 18.7% Custom MSCI ACWI IMI Net 50% Hedge / 27.8% BBgBarc US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 5.0% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 7/1/2018 | 9/30/2018 | 23.1% Russell 3000 / 20.3% Custom MSCI ACWI IMI Net 50% Hedge / 26.6% BBgBarc US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 4.2% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 1/1/2018 | 6/30/2018 | 22.4% Russell 3000 / 21.0% Custom MSCI ACWI IMI Net 50% Hedge / 26.6% BBgBarc US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 4.2% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 10/1/2017 | 12/31/2017 | 23.5% Russell 3000 / 21.9% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% BBgBarc US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 7/1/2017 | 9/30/2017 | 23.7% Russell 3000 / 21.7% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% BBgBarc US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 4/1/2017 | 6/30/2017 | 24.1% Russell 3000 / 21.3% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% BBgBarc US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 1/1/2017 | 3/31/2017 | 24.4% Russell 3000 / 21.0% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% BBgBarc US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 10/1/2016 | 12/31/2016 | 23.8% Russell 3000 / 21.6% Custom MSCI ACWI IMI Net 50% Hedge / 25.4% BBgBarc US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.4% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 7/1/2016 | 9/30/2016 | 24.5% Russell 3000 / 21.4% Custom MSCI ACWI IMI Net 50% Hedge / 25.1% BBgBarc US Universal TR / 10% Private Equity Target / 11% Real Estate Target / 3.2% Hedge Fund Custom Index / 2.8% Bloomberg Commodity Index TR USD / 2% FTSE T-Bill 6 Months TR |
| 10/1/2015 | 6/30/2016 | 3% Bloomberg Commodity Index TR USD / 25.5% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 22.5% BBgBarc US Universal TR / 11% Private Equity Target / 23% Custom MSCI ACWI IMI Net 50% Hedge / 3% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 4/1/2015 | 9/30/2015 | 3% Bloomberg Commodity Index TR USD / 25% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 22.5% BBgBarc US Universal TR / 11% Private Equity Target / 23.5% Custom MSCI ACWI IMI Net 50% Hedge / 3% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 1/1/2015 | 3/31/2015 | 3% Bloomberg Commodity Index TR USD / 25.5% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 22.5% BBgBarc US Universal TR / 11% Private Equity Target / 23% Custom MSCI ACWI IMI Net 50% Hedge / 3% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 10/1/2014 | 12/31/2014 | 3% Bloomberg Commodity Index TR USD / 25% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 23% BBgBarc US Universal TR / 11% Private Equity Target / 24% Custom MSCI ACWI IMI Net 50% Hedge / 2% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 1/1/2014 | 9/30/2014 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 23% BBgBarc US Universal TR / 11% Private Equity Target / 25% Custom MSCI ACWI IMI Net 50% Hedge / 2% 3-month U.S. T-Bill Index + 5% (1M-lag) |



As of September 30, 2019

| | | |
|-----------|------------|--|
| 10/1/2013 | 12/31/2013 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% Real Estate Target / 2% FTSE T-Bill 6 Months TR / 24% BBgBarc US Universal TR / 10% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 4/1/2013 | 9/30/2013 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 24% BBgBarc US Universal TR / 10% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 1/1/2013 | 3/31/2013 | 3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 24% BBgBarc US Universal TR / 10% Private Equity Target / 27% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 10/1/2012 | 12/31/2012 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 24% BBgBarc US Universal TR / 10% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 1/1/2012 | 9/30/2012 | 3% Bloomberg Commodity Index TR USD / 24% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% BBgBarc US Universal TR / 7% Private Equity Target / 27% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 10/1/2011 | 12/31/2011 | 3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% BBgBarc US Universal TR / 7% Private Equity Target / 28% Custom MSCI ACWI IMI Net 50% Hedge / 1% 3-month U.S. T-Bill Index + 5% (1M-lag) |
| 4/1/2011 | 9/30/2011 | 3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% BBgBarc US Universal TR / 7% Private Equity Target / 29% Custom MSCI ACWI IMI Net 50% Hedge |
| 1/1/2011 | 3/31/2011 | 3% Bloomberg Commodity Index TR USD / 22% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% BBgBarc US Universal TR / 7% Private Equity Target / 30% Custom MSCI ACWI IMI Net 50% Hedge |
| 10/1/2010 | 12/31/2010 | 3% Bloomberg Commodity Index TR USD / 23% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% BBgBarc US Universal TR / 7% Private Equity Target / 29% Custom MSCI ACWI IMI Net 50% Hedge |
| 7/1/2010 | 9/30/2010 | 3% Bloomberg Commodity Index TR USD / 26% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% BBgBarc US Universal TR / 7% Private Equity Target / 26% Custom MSCI ACWI IMI Net 50% Hedge |
| 4/1/2010 | 6/30/2010 | 3% Bloomberg Commodity Index TR USD / 26% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% BBgBarc US Universal TR / 7% Private Equity Target / 26% MSCI ACWI ex USA IMI |
| 1/1/2010 | 3/31/2010 | 3% Bloomberg Commodity Index TR USD / 29% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 26% BBgBarc US Universal TR / 7% Private Equity Target / 23% MSCI ACWI ex USA IMI |
| 4/1/2009 | 12/31/2009 | 2% Bloomberg Commodity Index TR USD / 30% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 28% BBgBarc US Universal TR / 7% Private Equity Target / 21% MSCI ACWI ex USA IMI |
| 10/1/2008 | 3/31/2009 | 2% Bloomberg Commodity Index TR USD / 30% Russell 3000 / 10% NCREIF Property Index - 25 bps / 2% FTSE T-Bill 6 Months TR / 1.96% BBgBarc US High Yield BA/B TR / 26.04% BBgBarc US Aggregate TR / 7% Private Equity Target / 21% MSCI ACWI ex USA IMI |
| 3/1/2001 | 9/30/2008 | 100% LACERA TF Blended Benchmark |

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

**FOR INFORMATION ONLY**

November 25, 2019

TO: Each Member
Board of Retirement
Board of Investments

FROM: Ted Granger, CPA, CGMA, CRMA 
Interim Chief Financial Officer

SUBJECT: MONTHLY EDUCATION & TRAVEL REPORT – OCTOBER 2019

Attached, for your review, are the Board and Staff Education & Travel Reports as of October 2019. These reports include travel (i.e., completed and canceled) during Fiscal Year 2019-2020.

REVIEWED AND APPROVED:



Santos H. Kreimann
Chief Executive Officer

TG/EW/krh

Attachments

c: J. Popowich
J. Gabel
S. Rice
K. Hines

**BOARD EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | Purpose of Travel - Location | Event Dates | Travel Status |
|-----------------------|---|-------------------------|----------------------|
| Alan Bernstein | | | |
| A | 1 Edu - PPI 2019 Summer Roundtable - Chicago IL | 07/10/2019 - 07/12/2019 | Attended |
| B | - Edu - NACD Southern California Chapter Luncheon - Los Angeles CA | 09/10/2019 - 09/10/2019 | Attended |
| | - Edu - 2019 Pension Bridge Alternatives - Beverly Hills CA | 10/28/2019 - 10/29/2019 | Attended |
| | - Edu - KACALP Annual Conference - Los Angeles CA | 10/29/2019 - 10/30/2019 | Attended |
| | - Edu - NACD Illuminating Data in the Boardroom - Los Angeles CA | 10/30/2019 - 10/30/2019 | Attended |
| Vivian Gray | | | |
| B | - Admin - SACRS Program Committee and SACRS Board of Directors Meeting - Sacramento CA | 07/15/2019 - 07/16/2019 | Attended |
| | - Admin - SACRS Legislative Committee - Sacramento CA | 07/19/2019 - 07/19/2019 | Attended |
| | - Edu - SACRS Public Pension Investment Management Program - Berkeley CA | 07/22/2019 - 07/24/2019 | Attended |
| James Harris | | | |
| B | - Edu - CALAPRS Principles of Pension Governance - Malibu CA | 08/26/2019 - 08/29/2019 | Attended |
| Shawn Kehoe | | | |
| A | 1 Edu - IAFCI Annual Training Conference & Exhibitor Show - Raleigh NC | 08/26/2019 - 08/30/2019 | Attended |
| B | - Edu - KACALP Annual Conference - Los Angeles CA | 10/29/2019 - 10/30/2019 | Attended |
| X | - Edu - National Association of Corporate Directors - Global Board Leaders' Summit - Washington D.C. MD | 09/21/2019 - 09/24/2019 | Canceled |
| Keith Knox | | | |
| X | - Edu - CII's Trustee Training Course for California Public Fund Trustees - Berkeley CA | 10/04/2019 - 10/04/2019 | Canceled |
| Wayne Moore | | | |
| A | 1 Edu - PPI 2019 Summer Roundtable - Chicago IL | 07/10/2019 - 07/12/2019 | Attended |
| | 2 Edu - 2019 Council of Institutional Investors (CII) Fall Conference - Minneapolis MN | 09/16/2019 - 09/18/2019 | Attended |
| B | - Edu - NAIC 2019 Annual Private Equity & Hedge Fund Conference - Los Angeles CA | 10/23/2019 - 10/24/2019 | Attended |
| Ronald Okum | | | |
| B | - Edu - 2019 Pension Bridge Alternatives - Beverly Hills CA | 10/28/2019 - 10/29/2019 | Attended |
| | - Edu - KACALP Annual Conference - Los Angeles CA | 10/29/2019 - 10/30/2019 | Attended |
| William Pryor | | | |
| X | - Edu - NCPERS 2019 Public Safety Conference - New Orleans LA | 10/27/2019 - 10/30/2019 | Canceled |
| Les Robbins | | | |
| X | - Edu - CRCEA Fall 2019 Conference - Rohnert Park CA | 10/28/2019 - 10/30/2019 | Canceled |

**BOARD EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | Purpose of Travel - Location | Event Dates | Travel Status |
|----------------------------|---|-------------------------|----------------------|
| Gina Sanchez | | | |
| A | 1 Edu - Oxford Impact Measurement Program - Oxford, United Kingdom | 07/15/2019 - 07/19/2019 | Attended |
| | 2 Edu - 2019 Council of Institutional Investors (CII) Fall Conference - Minneapolis MN | 09/16/2019 - 09/18/2019 | Attended |
| | 3 Edu - National Association of Corporate Directors - Global Board Leaders' Summit - Washington D.C. MD | 09/21/2019 - 09/24/2019 | Attended |
| B | - Edu - 2019 Western North American PRI Symposium - Los Angeles CA | 10/24/2019 - 10/24/2019 | Attended |
| | - Edu - 2019 Pension Bridge Alternatives - Beverly Hills CA | 10/28/2019 - 10/29/2019 | Attended |
| | - Edu - 2019 RFKennedy Human Rights Compass Conference - West Hollywood CA | 10/29/2019 - 10/30/2019 | Attended |
| Herman Santos | | | |
| A | 1 Edu - 2019 Latin America Private Equity & Venture Capital Association Summit and Investor Roundtable and LAVCA Venture Investors Annual Meeting - New York NY | 09/23/2019 - 09/26/2019 | Attended |
| X | - Edu - INCA Investments Latin American Investments Conference - Buenos Aires, Argentina | 10/16/2019 - 10/17/2019 | Canceled |
| Gina Zapanta-Murphy | | | |
| B | - Edu - SACRS Public Pension Investment Management Program - Berkeley CA | 07/22/2019 - 07/24/2019 | Attended |
| | - Edu - Network Ethnic Physician Organizations (NEPO) Summit - Pasadena CA | 08/23/2019 - 08/24/2019 | Attended |
| X | - Edu - IFEBP 65th Employee Benefits Conference - San Diego CA | 10/20/2019 - 10/23/2019 | Canceled |

Category Legend:

A - Pre-Approved/Board Approved

B - Educational Conferences and Administrative Meetings in CA where total cost is no more than \$2,000.

C - Second of two conferences and/or meetings counted as one conference per Section 705.00.A.1 of the Travel Policy

X - Canceled events for which expenses have been incurred



**STAFF EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | | Purpose of Travel - Location | Event Dates | Travel Status |
|---------------------------------------|---|---|-------------------------|----------------------|
| Administrative Services | | | | |
| Holly Henderson | 1 | Edu - GFOA Budgeting Best Practices: Budget Monitoring - Sacramento CA | 09/16/2019 - 09/18/2019 | Attended |
| Kimberly Hines | 1 | Edu - GFOA Budgeting Best Practices: Budget Monitoring - Sacramento CA | 09/16/2019 - 09/18/2019 | Attended |
| Benefits | | | | |
| Sylvia Botros | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| Dmitriy Khaytovich | 1 | Edu - CALAPRS Benefits Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Attended |
| Linda Moss | 1 | Edu - 38th ISCEBS Employee Benefits Symposium - New Orleans CA | 09/08/2019 - 09/11/2019 | Attended |
| Communications | | | | |
| Sarah Scott | 1 | Edu - Writing Compelling Digital Copy as part of the UX Conference - Chicago IL | 09/12/2019 - 09/12/2019 | Attended |
| Disability Litigation Services | | | | |
| Eugenia Der | 1 | Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA | 09/19/2019 - 09/19/2019 | Attended |
| Jason Waller | 1 | Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA | 09/19/2019 - 09/19/2019 | Canceled |

**STAFF EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | | Purpose of Travel - Location | Event Dates | Travel Status |
|---------------------------------------|---|---|-------------------------|----------------------|
| Disability Retirement Services | | | | |
| Stephanie Ashley | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Hernan Barrientos | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Redjan Bitri | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Tamara Caldwell | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Justin Chiu | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Ricki Contreras | 1 | Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA | 09/19/2019 - 09/19/2019 | Attended |
| | 2 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Amabelle Delin | 1 | Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA | 09/19/2019 - 09/19/2019 | Attended |
| | 2 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Shamila Freeman | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Russell Lurina | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Debra Martin | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Ruby Minjares | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Melena Sarkisian | 1 | Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA | 09/19/2019 - 09/19/2019 | Attended |
| | 2 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Maria Silva | 1 | Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA | 09/19/2019 - 09/19/2019 | Attended |
| | 2 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Frida Skugrud | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Justin Stewart | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Kerri Wilson | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |
| Michelle Yanes | 1 | Edu - Council of Self-Insured Public Agencies (COSIPA) Fall Educational Seminar (South) - Costa Mesa CA | 10/17/2019 - 10/17/2019 | Attended |

**STAFF EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | | Purpose of Travel - Location | Event Dates | Travel Status |
|--|---|---|-------------------------|----------------------|
| Executive Offices | | | | |
| John Popowich | 1 | Edu - GFOA Budgeting Best Practices: Budget Monitoring - Sacramento CA | 09/16/2019 - 09/18/2019 | Attended |
| Financial & Accounting Services | | | | |
| Beulah Auten | 1 | Edu - Public Pension Financial Forum (P2F2) 16th Annual Conference - Salt Lake City UT | 10/20/2019 - 10/23/2019 | Canceled |
| Ana Chang | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| | 2 | Edu - Public Pension Financial Forum (P2F2) 16th Annual Conference - Salt Lake City UT | 10/20/2019 - 10/23/2019 | Attended |
| Esther Chang | 1 | Edu - Association of Government Accountants (AGA) 2019 Professional Development Training (PDT) - New Orleans LA | 07/21/2019 - 07/24/2019 | Attended |
| | 2 | Edu - CALAPRS Intermediate Retirement Plan Administration - San Jose CA | 10/16/2019 - 10/18/2019 | Canceled |
| Sabrina Chen | 1 | Edu - Great Plains (Dynamics) User Group Summit - Orlando FL | 10/15/2019 - 10/18/2019 | Attended |
| Margaret Chwa | 1 | Edu - CALAPRS Fall Accountants Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Attended |
| Ted Granger | 1 | Edu - Public Pension Financial Forum (P2F2) 16th Annual Conference - Salt Lake City UT | 10/20/2019 - 10/23/2019 | Attended |
| Michael Huang | 1 | Edu - Great Plains (Dynamics) User Group Summit - Orlando FL | 10/15/2019 - 10/18/2019 | Attended |
| Diana Huang | 1 | Edu - Public Pension Financial Forum (P2F2) 16th Annual Conference - Salt Lake City UT | 10/20/2019 - 10/23/2019 | Attended |
| Anh Huynh | 1 | Edu - Public Pension Financial Forum (P2F2) 16th Annual Conference - Salt Lake City UT | 10/20/2019 - 10/23/2019 | Attended |
| Chona Labtic-Austin | 1 | Edu - Association of Government Accountants (AGA) 2019 Professional Development Training (PDT) - New Orleans LA | 07/21/2019 - 07/24/2019 | Attended |
| | 2 | Edu - Public Pension Financial Forum (P2F2) 16th Annual Conference - Salt Lake City UT | 10/20/2019 - 10/23/2019 | Attended |
| Claro Lanting | 1 | Edu - IFEBP 65th Employee Benefits Conference - San Diego CA | 10/20/2019 - 10/23/2019 | Attended |
| Alyce Provencio | 1 | Edu - CALAPRS Fall Accountants Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Attended |
| | 2 | Edu - CALAPRS Intermediate Retirement Plan Administration - San Jose CA | 10/16/2019 - 10/18/2019 | Attended |
| Gloria Rios | 1 | Edu - CALAPRS Fall Accountants Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Attended |
| | 2 | Edu - CALAPRS Intermediate Retirement Plan Administration - San Jose CA | 10/16/2019 - 10/18/2019 | Attended |
| | 3 | Edu - IFEBP 65th Employee Benefits Conference - San Diego CA | 10/20/2019 - 10/23/2019 | Attended |
| Imelda Saldivar | 1 | Edu - CALAPRS Fall Accountants Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Canceled |
| | 2 | Edu - Great Plains (Dynamics) User Group Summit - Orlando FL | 10/15/2019 - 10/18/2019 | Canceled |
| | 3 | Edu - APP2P Fall Conference & Expo - Scottsdale AZ | 10/15/2019 - 10/17/2019 | Canceled |

**STAFF EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | | Purpose of Travel - Location | Event Dates | Travel Status |
|--|---|---|-------------------------|----------------------|
| Financial & Accounting Services | | | | |
| Felisa Valdepenas | 1 | Edu - Association of Government Accountants (AGA) 2019 Professional Development Training (PDT) - New Orleans LA | 07/21/2019 - 07/24/2019 | Attended |
| Srbui Vartanian | 1 | Edu - APP2P Fall Conference & Expo - Scottsdale AZ | 10/15/2019 - 10/17/2019 | Attended |
| Elda Villarroel | 1 | Edu - Great Plains (Dynamics) User Group Summit - Orlando FL | 10/15/2019 - 10/18/2019 | Attended |
| Edward Wong | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| Koreana Wong | 1 | Edu - Public Pension Financial Forum (P2F2) 16th Annual Conference - Salt Lake City UT | 10/20/2019 - 10/23/2019 | Canceled |
| Ervin Wu | 1 | Edu - IFEBP 65th Employee Benefits Conference - San Diego CA | 10/20/2019 - 10/23/2019 | Attended |
| Alice Yen | 1 | Edu - Public Pension Financial Forum (P2F2) 16th Annual Conference - Salt Lake City UT | 10/20/2019 - 10/23/2019 | Canceled |
| Mei Zhang | 1 | Edu - Great Plains (Dynamics) User Group Summit - Orlando FL | 10/15/2019 - 10/18/2019 | Attended |
| Human Resources | | | | |
| Ana Ronquillo | 1 | Edu - SHRM Diversity and Inclusion Conference - New Orleans LA | 10/28/2019 - 10/30/2019 | Attended |
| Roberta Van Nortrick | 1 | Edu - Society of Corporate Compliance and Ethics (SCCE) Annual Meeting - Washington D.C. (National Harbor, MD) | 09/15/2019 - 09/18/2019 | Attended |
| Internal Audit | | | | |
| Nathan Amick | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| | 2 | Edu - Association of Public Pension Fund Auditors (APPFA) - Lake Tahoe CA | 09/27/2019 - 09/30/2019 | Attended |
| Richard Bendall | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| | 2 | Edu - Enterprise Risk Management (ERM) Pension Peer Group - Sacramento CA | 09/22/2019 - 09/25/2019 | Attended |
| Leisha Collins | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| | 2 | Edu - Association of Public Pension Fund Auditors (APPFA) - Lake Tahoe CA | 09/27/2019 - 09/30/2019 | Attended |
| Christina Logan | 1 | Edu - Association of Public Pension Fund Auditors (APPFA) - Lake Tahoe CA | 09/27/2019 - 09/30/2019 | Attended |
| Kristina Sun | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| Gabriel Tafoya | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| Summy Voong | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |

**STAFF EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | | Purpose of Travel - Location | Event Dates | Travel Status |
|----------------------|---|---|-------------------------|----------------------|
| Investments | | | | |
| Didier Acevedo | 1 | Admin - Due Diligence of Illiquid Credit Finalist Managers - New York, NY and Chicago, IL | 08/27/2019 - 08/29/2019 | Attended |
| | 2 | Edu - 2019 Latin America Private Equity & Venture Capital Association Summit and Investor Roundtable and LAVCA Venture Investors Annual Meeting - New York NY | 09/23/2019 - 09/26/2019 | Attended |
| Amit Aggarwal | 1 | Edu - Investors in Non-Listed Real Estate Vehicles (INREV) North America Conference. - New York NY | 10/02/2019 - 10/02/2019 | Attended |
| | 2 | Admin - Site inspections and meeting with perspective managers. - New York NY | 10/03/2019 - 10/03/2019 | Attended |
| Kevin Bassi | 1 | Admin - Due Diligence of Clarion Partners - Seattle WA | 08/08/2019 - 08/08/2019 | Canceled |
| Adam Cheng | 1 | Admin - Due diligence of Syndicated Bank Loan finalist managers (Credit Suisse and Barings) and visit with Brigade Capital Management. - New York, NY and Charlotte, NC | 10/16/2019 - 10/17/2019 | Attended |
| | 2 | Admin - Due diligence of Syndicated Bank Loan finalist manager, Voya. - Scottsdale AZ | 10/21/2019 - 10/21/2019 | Attended |
| David Chu | 1 | Admin - GGV Capital Limited Partner Advisory Committee Roundtable and Private Limited Partner Reception - San Francisco CA | 07/25/2019 - 07/25/2019 | Attended |
| | 2 | Admin - Due diligence on potential and existing managers (MBK Partners, BRV China, Joy Capital); and attend Lilly Asian Ventures annual investor meeting. - Singapore; Hong Kong; Shanghai, China | 09/18/2019 - 09/27/2019 | Attended |
| | 3 | Edu - SuperReturn Asia Conference. - Hong Kong, China | 09/23/2019 - 09/26/2019 | Attended |
| | 4 | Admin - GGV Annual General Meeting and meet with existing managers (AKKR, Lilly Asia Ventures). - Menlo Park CA | 10/17/2019 - 10/18/2019 | Attended |
| Esmeralda Del Bosque | 1 | Edu - 2019 Alternative Investments Forum (AIF) Women Investor's Forum - New York NY | 09/09/2019 - 09/10/2019 | Attended |
| | 2 | Edu - Investment Operations Forum at CalSTRS - Sacramento CA | 09/24/2019 - 09/24/2019 | Attended |
| | 3 | Admin - Meeting with State Street - Sacramento CA | 09/24/2019 - 09/24/2019 | Attended |
| | 4 | Admin - Meeting with Meketa - Carlsbad CA | 10/18/2019 - 10/18/2019 | Attended |
| Jon Grabel | 1 | Edu - Public CIO Forum - Detroit MI | 09/17/2019 - 09/18/2019 | Canceled |
| | 2 | Edu - Institutional Limited Partners Association (ILPA) 3rd Annual CIO Symposium - Cambridge MA | 09/25/2019 - 09/25/2019 | Attended |
| | 3 | Edu - Albourne 2019 Client Conference - Philadelphia PA | 10/21/2019 - 10/23/2019 | Canceled |
| Jeff Jia | 1 | Admin - Due diligence of Syndicated Bank Loan finalist managers (Credit Suisse and Barings) and visit with Brigade Capital Management. - New York, NY and Charlotte, NC | 10/16/2019 - 10/17/2019 | Attended |
| | 2 | Admin - Due diligence of Syndicated Bank Loan finalist manager, Voya. - Scottsdale AZ | 10/21/2019 - 10/21/2019 | Attended |
| Dale Johnson | 1 | Admin - Due Diligence with Prospective Manager - Plano TX | 08/20/2019 - 08/20/2019 | Attended |
| | 2 | Edu - 2019 Council of Institutional Investors (CII) Fall Conference - Minneapolis MN | 09/16/2019 - 09/18/2019 | Attended |

**STAFF EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | | Purpose of Travel - Location | Event Dates | Travel Status |
|--------------------|---|---|-------------------------|----------------------|
| Investments | | | | |
| John Kim | 1 | Edu - Investment Operations Forum at CalSTRS - Sacramento CA | 09/24/2019 - 09/24/2019 | Attended |
| | 2 | Admin - Meeting with State Street - Sacramento CA | 09/24/2019 - 09/24/2019 | Attended |
| | 3 | Admin - Meeting with Meketa - Carlsbad CA | 10/18/2019 - 10/18/2019 | Attended |
| Derek Kong | 1 | Admin - Due Diligence on potential managers and existing managers (Alchemy SOF, Triton, LivingBridge) - London, England; Paris, France; Amsterdam, Netherlands; Zurich, Switzerland | 09/18/2019 - 09/26/2019 | Attended |
| Vache Mahseredjian | 1 | Admin - Due Diligence of Illiquid Credit Finalist Managers - New York, NY and Chicago, IL | 08/27/2019 - 08/29/2019 | Attended |
| John McClelland | 1 | Edu - Pension Real Estate Association (PREA) Leadership Summit. - West Sacramento CA | 09/10/2019 - 09/10/2019 | Canceled |
| | 2 | Admin - Site inspections with DWS and Varsity. - Washington DC | 10/15/2019 - 10/18/2019 | Attended |
| | 3 | Edu - Pension Real Estate Association (PREA) 29th Annual Institutional Investor Conference. - Washington DC | 10/16/2019 - 10/18/2019 | Attended |
| Quoc Nguyen | 1 | Edu - Albourne 2019 Client Conference - Philadelphia PA | 10/21/2019 - 10/23/2019 | Attended |
| Cindy Rivera | 1 | Edu - 2019 Institutional Real Estate, Inc. (IREI) Springboard Conference - Ojai CA | 10/01/2019 - 10/03/2019 | Attended |
| Michael Romero | 1 | Admin - Gateway Empire Industrial site inspection. - Riverside CA | 09/25/2019 - 09/25/2019 | Attended |
| Robert Santos | 1 | Admin - Due diligence of Syndicated Bank Loan finalist managers (Credit Suisse and Barings) and visit with Brigade Capital Management. - New York, NY and Charlotte, NC | 10/16/2019 - 10/17/2019 | Attended |
| | 2 | Admin - Due diligence of Syndicated Bank Loan finalist manager, Voya. - Scottsdale AZ | 10/21/2019 - 10/21/2019 | Attended |
| David Simpson | 1 | Admin - Vinci Partners Annual General Meeting and Limited Partner Advisory Committee. Due diligence with potential manager and meet with existing managers (Incline Equity, Sterling IP, Clarion, and One Rock). - New York, NY; Pittsburgh, PA; Westport, CT | 09/25/2019 - 09/27/2019 | Attended |
| Shelly Tilaye | 1 | Admin - Attend Annual General Meetings (AGMs) and Limited Partner Advisory Committee (LPACs) hosted by Juggernaut and Vista. Meet with existing manager, Atlantic Street, for an update. - Washington, D.C. and New York, NY | 10/22/2019 - 10/25/2019 | Attended |
| Chad Timko | 1 | Admin - Due Diligence with Prospective Manager - Plano TX | 08/20/2019 - 08/20/2019 | Attended |
| | 2 | Admin - Due Diligence of Illiquid Credit Finalist Managers - New York, NY and Chicago, IL | 08/27/2019 - 08/29/2019 | Attended |
| Scott Zdrazil | 1 | Admin - Council of Institutional Board and Committee meetings - Washington D.C. | 07/31/2019 - 08/01/2019 | Attended |
| | 2 | Admin - Principles for Responsible Investment Private Equity Advisory Committee Meeting - Paris, France | 09/08/2019 - 09/09/2019 | Attended |
| | 3 | Edu - Annual PRI in Person Conference - Paris, France | 09/10/2019 - 09/12/2019 | Attended |

**STAFF EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | | Purpose of Travel - Location | Event Dates | Travel Status |
|-------------------------|---|--|-------------------------|----------------------|
| Investments | | | | |
| Scott Zdrazil | 4 | Admin - Council of Institutional Investors (CII) Board of Directors Meeting - Minneapolis MN | 09/16/2019 - 09/18/2019 | Attended |
| Legal Services | | | | |
| Frank Boyd | 1 | Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA | 09/19/2019 - 09/19/2019 | Attended |
| Michael Herrera | 1 | Admin - NAPPA Executive Board Meeting - Jackson WY | 10/03/2019 - 10/04/2019 | Attended |
| Barry Lew | 1 | Admin - SACRS Legislative Committee - Sacramento CA | 07/19/2019 - 07/19/2019 | Attended |
| Christine Roseland | 1 | Edu - Association of Corporate Counsel (ACC) Annual Meeting - Phoenix AZ | 10/27/2019 - 10/30/2019 | Attended |
| Member Services | | | | |
| Carlos Barrios | 1 | Edu - 38th ISCEBS Employee Benefits Symposium - New Orleans CA | 09/08/2019 - 09/11/2019 | Attended |
| | 2 | EDU- 2019 National Preretirement Education Association (NPEA) Annual Conference - Naples FL | 10/19/2019 - 10/23/2019 | Attended |
| Jacqueline Boute | 1 | Edu - CALAPRS Benefits Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Attended |
| Renee Copeland | 1 | Edu - CALAPRS Benefits Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Attended |
| Beatriz Daryaie | 1 | Edu - CALAPRS Benefits Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Attended |
| Armendina Lejano | 1 | Edu - CALAPRS Intermediate Retirement Plan Administration - San Jose CA | 10/16/2019 - 10/18/2019 | Attended |
| Alejandro Ochoa | 1 | Edu - CALAPRS Benefits Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Attended |
| Persian Petrov | 1 | Edu - CALAPRS Benefits Roundtable - Oakland CA | 09/20/2019 - 09/20/2019 | Attended |
| Kelly Puga | 1 | EDU- 2019 National Preretirement Education Association (NPEA) Annual Conference - Naples FL | 10/19/2019 - 10/23/2019 | Attended |
| Jeff Shevlowitz | 1 | Edu - 38th ISCEBS Employee Benefits Symposium - New Orleans CA | 09/08/2019 - 09/11/2019 | Attended |
| QA & Metrics | | | | |
| Derwin Brown | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| | 2 | Edu - ASQ Audit Conference 2019 - Orlando FL | 10/17/2019 - 10/18/2019 | Attended |
| Calvin Chow | 1 | Edu - IFEBP 65th Employee Benefits Conference - San Diego CA | 10/20/2019 - 10/23/2019 | Attended |
| Flora Zhu | 1 | Edu - ATD Certificate Program - Train the Trainer - Orlando FL | 07/08/2019 - 07/10/2019 | Attended |

**STAFF EDUCATION AND TRAVEL REPORT
FOR FISCAL YEAR 2019 - 2020
OCTOBER 2019**

| Attendee | | Purpose of Travel - Location | Event Dates | Travel Status |
|---------------------------|---|---|-------------------------|----------------------|
| Retiree Healthcare | | | | |
| Tionna Fredericks | 1 | Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA | 07/07/2019 - 07/10/2019 | Attended |
| Leilani Ignacio | 1 | Edu - IFEBP 65th Employee Benefits Conference - San Diego CA | 10/20/2019 - 10/23/2019 | Attended |
| Kathy Migita | 1 | Edu - AHIP National Conferences on Medicare, Medicaid & Dual Eligibles - Washington, D.C. | 09/23/2019 - 09/26/2019 | Attended |
| | 2 | Admin - Annual Kaiser Due Diligence - Washington D.C. MD | 09/27/2019 - 09/28/2019 | Attended |
| | 3 | Edu - IFEBP 65th Employee Benefits Conference - San Diego CA | 10/20/2019 - 10/23/2019 | Attended |
| | 4 | Edu - NCPERS 2019 Public Safety Conference - New Orleans LA | 10/27/2019 - 10/30/2019 | Attended |
| Cassandra Smith | 1 | Edu - AHIP National Conferences on Medicare, Medicaid & Dual Eligibles - Washington, D.C. | 09/23/2019 - 09/26/2019 | Attended |
| | 2 | Admin - Annual Kaiser Due Diligence - Washington D.C. MD | 09/27/2019 - 09/28/2019 | Attended |
| | 3 | Edu - IFEBP 65th Employee Benefits Conference - San Diego CA | 10/20/2019 - 10/23/2019 | Attended |
| | 4 | Edu - NCPERS 2019 Public Safety Conference - New Orleans LA | 10/27/2019 - 10/30/2019 | Attended |
| Systems | | | | |
| James Brekk | 1 | Edu - IAFCI Annual Training Conference & Exhibitor Show - Raleigh NC | 08/26/2019 - 08/30/2019 | Attended |
| | 2 | Edu - Cyber Threat Intelligence Leadership Forum - Orlando FL | 09/16/2019 - 09/17/2019 | Attended |
| Roxana Castillo | 1 | Edu - IFEBP 65th Employee Benefits Conference - San Diego CA | 10/20/2019 - 10/23/2019 | Attended |
| Irwin Devries | 1 | Admin - LACERA Co-location Lan Migration to new circuit - Mesa AZ | 08/28/2019 - 08/28/2019 | Attended |
| Francisco Jaranilla | 1 | Edu - Great Plains (Dynamics) User Group Summit - Orlando FL | 10/15/2019 - 10/18/2019 | Attended |




Documents not attached are exempt from disclosure under the California Public Records Act and other legal authority.

**For further information, contact:
LACERA
Attention: Public Records Act Requests
300 N. Lake Ave., Suite 620
Pasadena, CA 91101**

**FOR INFORMATION ONLY**

November 22, 2019

TO: Each Member
Board of Retirement
Board of Investments

FROM: Ted Granger, CPA, CGMA, CRMA 
Interim Chief Financial Officer

SUBJECT: 1ST QUARTER EDUCATION & TRAVEL EXPENDITURE REPORTS

Attached, for your review, are the Board and Staff Education & Travel Reports as of September 2019. These include expenses paid or submitted for reimbursement for travel completed through the first quarter of Fiscal Year 2019-2020.

REVIEWED AND APPROVED:



Santos H. Kreimann
Chief Executive Officer

TG/EW/krh

Attachments

c: J. Popowich
J. Grabel
S. Rice
K. Hines



**1ST QUARTER BOARD
EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019**

| Cat | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|-----------------------------------|---|---------------|---------------|--------------|------------|------------|--------------|---------|-----------|---------|--------|----------|---------|
| Alan Bernstein | | | | | | | | | | | | | |
| A | 1 Edu - PPI 2019 Summer Roundtable - Chicago IL - 07/10/2019 - 07/12/2019 | Attended | \$3,214.76 | \$900.00 | \$1,279.67 | \$607.30 | \$176.00 | \$18.79 | \$0.00 | \$0.00 | \$0.00 | \$213.00 | \$20.00 |
| B | - Edu - NACD Southern California Chapter Luncheon - Los Angeles CA - 09/10/2019 - 09/10/2019 | Attended | \$91.38 | \$85.00 | \$0.00 | \$0.00 | \$0.00 | \$6.38 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Alan Bernstein: | | | \$3,306.14 | \$985.00 | \$1,279.67 | \$607.30 | \$176.00 | \$25.17 | \$0.00 | \$0.00 | \$0.00 | \$213.00 | \$20.00 |
| Vivian Gray | | | | | | | | | | | | | |
| B | - Edu - SACRS Public Pension Investment Management Program - Berkeley CA - 07/22/2019 - 07/24/2019 | Attended | \$4,132.24 | \$2,500.00 | \$1,106.28 | \$525.96 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Vivian Gray: | | | \$4,132.24 | \$2,500.00 | \$1,106.28 | \$525.96 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| James Harris | | | | | | | | | | | | | |
| B | - Edu - CALAPRS Principles of Pension Governance - Malibu CA - 08/26/2019 - 08/29/2019 | Attended | \$3,056.84 | \$3,000.00 | \$0.00 | \$0.00 | \$0.00 | \$56.84 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for James Harris: | | | \$3,056.84 | \$3,000.00 | \$0.00 | \$0.00 | \$0.00 | \$56.84 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Shawn Kehoe | | | | | | | | | | | | | |
| A | 1 Edu - IAFCI Annual Training Conference & Exhibitor Show - Raleigh NC - 08/26/2019 - 08/30/2019 | Attended | \$4,062.81 | \$490.00 | \$574.17 | \$2,712.86 | \$54.02 | \$20.76 | \$0.00 | \$0.00 | \$0.00 | \$191.00 | \$20.00 |
| X | - Edu - National Association of Corporate Directors - Global Board Leaders' Summit - Washington D.C. MD - 09/21/2019 - 09/24/2019 | Canceled | \$4,765.50 | \$4,765.50 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Shawn Kehoe: | | | \$8,828.31 | \$5,255.50 | \$574.17 | \$2,712.86 | \$54.02 | \$20.76 | \$0.00 | \$0.00 | \$0.00 | \$191.00 | \$20.00 |



**1ST QUARTER BOARD
EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019**

| Cat | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|----------------------------------|---|---------------|---------------|--------------|------------|------------|--------------|---------|-----------|----------|----------|----------|---------|
| Wayne Moore | | | | | | | | | | | | | |
| A | 1 Edu - PPI 2019 Summer Roundtable - Chicago IL - 07/10/2019 - 07/12/2019 | Attended | \$2,297.24 | \$900.00 | \$702.06 | \$480.61 | \$158.57 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$56.00 | \$0.00 |
| | 2 Edu - 2019 Council of Institutional Investors (CII) Fall Conference - Minneapolis MN - 09/16/2019 - 09/18/2019 | Attended | \$1,448.10 | \$0.00 | \$629.82 | \$590.00 | \$108.28 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$105.00 | \$15.00 |
| Totals for Wayne Moore: | | | \$3,745.34 | \$900.00 | \$1,331.88 | \$1,070.61 | \$266.85 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$161.00 | \$15.00 |
| Gina Sanchez | | | | | | | | | | | | | |
| A | 1 Edu - Oxford Impact Measurement Program - Oxford, United Kingdom - 07/15/2019 - 07/19/2019 | Attended | \$17,272.06 | \$7,947.07 | \$1,582.87 | \$7,189.83 | \$315.29 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$237.00 | \$0.00 |
| | 2 Edu - 2019 Council of Institutional Investors (CII) Fall Conference - Minneapolis MN - 09/16/2019 - 09/18/2019 | Attended | \$1,270.92 | \$0.00 | \$577.40 | \$425.98 | \$110.54 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$142.00 | \$15.00 |
| | 3 Edu - National Association of Corporate Directors - Global Board Leaders' Summit - Washington D.C. MD - 09/21/2019 - 09/24/2019 | Attended | \$8,138.05 | \$5,632.50 | \$1,672.96 | \$484.59 | \$135.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$193.00 | \$20.00 |
| Totals for Gina Sanchez: | | | \$26,681.03 | \$13,579.57 | \$3,833.23 | \$8,100.40 | \$560.83 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$572.00 | \$35.00 |
| Herman Santos | | | | | | | | | | | | | |
| A | 1 Edu - 2019 Latin America Private Equity & Venture Capital Association Summit and Investor Roundtable and LAVCA Venture Investors Annual Meeting - New York NY - 09/23/2019 - 09/26/2019 | Attended | \$4,239.36 | \$0.00 | \$2,633.09 | \$583.30 | \$140.67 | \$55.68 | \$0.00 | \$136.62 | \$393.00 | \$267.00 | \$30.00 |
| Totals for Herman Santos: | | | \$4,239.36 | \$0.00 | \$2,633.09 | \$583.30 | \$140.67 | \$55.68 | \$0.00 | \$136.62 | \$393.00 | \$267.00 | \$30.00 |



1ST QUARTER BOARD
EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019

| Cat | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. | |
|--|--|---------------|----------------------|--------------|-------------|-------------|--------------|------------|-----------|----------|----------|----------|------------|----------|
| Gina Zapanta-Murphy | | | | | | | | | | | | | | |
| B - | Edu - SACRS Public Pension Investment Management Program - Berkeley CA - 07/22/2019 - 07/24/2019 | Attended | \$4,412.71 | \$2,500.00 | \$1,089.24 | \$487.30 | \$171.85 | \$31.32 | \$0.00 | \$133.00 | \$0.00 | \$0.00 | \$0.00 | |
| - | Edu - Network Ethnic Physician Organizations (NEPO) Summit - Pasadena CA - 08/23/2019 - 08/24/2019 | Attended | \$299.00 | \$299.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | |
| Totals for Gina Zapanta-Murphy: | | | \$4,711.71 | \$2,799.00 | \$1,089.24 | \$487.30 | \$171.85 | \$31.32 | \$0.00 | \$133.00 | \$0.00 | \$0.00 | \$0.00 | |
| Cnt: 8 | | | Grand Totals: | \$58,700.97 | \$29,019.07 | \$11,847.56 | \$14,087.73 | \$1,370.22 | \$189.77 | \$0.00 | \$269.62 | \$393.00 | \$1,404.00 | \$120.00 |

Category Legend:

- A - Pre-Approved/Board Approved
- B - Educational Conferences and Administrative Meetings in CA where total cost is no more than \$2,000.
- C - Second of two conferences and/or meetings counted as one conference per Section 705.00.A.1 of the Travel Policy
- X - Canceled events for which expenses have been incurred



**1ST QUARTER STAFF
EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019**

| Attendee | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|---------------------------------------|---|---------------|---------------|--------------|------------|----------|--------------|----------|-----------|---------|--------|----------|---------|
| Administrative Services | | | | | | | | | | | | | |
| Holly Henderson | 1 Edu - GFOA Budgeting Best Practices: Budget Monitoring - Sacramento CA - 09/16/2019 - 09/18/2019 | Attended | \$2,848.10 | \$1,004.50 | \$1,269.45 | \$204.96 | \$89.19 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$255.00 | \$25.00 |
| Totals for Holly Henderson: | | | \$2,848.10 | \$1,004.50 | \$1,269.45 | \$204.96 | \$89.19 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$255.00 | \$25.00 |
| Kimberly Hines | 1 Edu - GFOA Budgeting Best Practices: Budget Monitoring - Sacramento CA - 09/16/2019 - 09/18/2019 | Attended | \$3,453.56 | \$1,414.50 | \$1,463.56 | \$22.00 | \$273.50 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$255.00 | \$25.00 |
| Totals for Kimberly Hines: | | | \$3,453.56 | \$1,414.50 | \$1,463.56 | \$22.00 | \$273.50 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$255.00 | \$25.00 |
| Cnt: 2 | Totals for Administrative Services: | | \$6,301.66 | \$2,419.00 | \$2,733.01 | \$226.96 | \$362.69 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$510.00 | \$50.00 |
| Benefits | | | | | | | | | | | | | |
| Sylvia Botros | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$1,597.38 | \$1,400.00 | \$0.00 | \$0.00 | \$0.00 | \$143.38 | \$0.00 | \$54.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Sylvia Botros: | | | \$1,597.38 | \$1,400.00 | \$0.00 | \$0.00 | \$0.00 | \$143.38 | \$0.00 | \$54.00 | \$0.00 | \$0.00 | \$0.00 |
| Dmitriy Khaytovich | 1 Edu - CALAPRS Benefits Roundtable - Oakland CA - 09/20/2019 - 09/20/2019 | Attended | \$872.73 | \$125.00 | \$297.77 | \$347.96 | \$0.00 | \$0.00 | \$0.00 | \$24.00 | \$0.00 | \$73.00 | \$5.00 |
| Totals for Dmitriy Khaytovich: | | | \$872.73 | \$125.00 | \$297.77 | \$347.96 | \$0.00 | \$0.00 | \$0.00 | \$24.00 | \$0.00 | \$73.00 | \$5.00 |



**1ST QUARTER STAFF
EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019**

| Attendee | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|---------------------------------------|---|---------------|---------------|--------------|----------|----------|--------------|----------|-----------|---------|--------|----------|--------|
| Benefits | | | | | | | | | | | | | |
| Linda Moss | 1 Edu - 38th ISCEBS Employee Benefits Symposium - New Orleans CA - 09/08/2019 - 09/11/2019 | Attended | \$374.91 | \$0.00 | \$133.28 | \$108.30 | \$67.33 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$66.00 | \$0.00 |
| Totals for Linda Moss: | | | \$374.91 | \$0.00 | \$133.28 | \$108.30 | \$67.33 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$66.00 | \$0.00 |
| Cnt: 3 | Totals for Benefits: | | \$2,845.02 | \$1,525.00 | \$431.05 | \$456.26 | \$67.33 | \$143.38 | \$0.00 | \$78.00 | \$0.00 | \$139.00 | \$5.00 |
| Disability Litigation Services | | | | | | | | | | | | | |
| Eugenia Der | 1 Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA - 09/19/2019 - 09/19/2019 | Attended | \$518.04 | \$0.00 | \$224.56 | \$161.96 | \$0.00 | \$17.52 | \$0.00 | \$48.00 | \$0.00 | \$61.00 | \$5.00 |
| Totals for Eugenia Der: | | | \$518.04 | \$0.00 | \$224.56 | \$161.96 | \$0.00 | \$17.52 | \$0.00 | \$48.00 | \$0.00 | \$61.00 | \$5.00 |
| Jason Waller | 1 Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA - 09/19/2019 - 09/19/2019 | Canceled | \$25.00 | \$0.00 | \$0.00 | \$25.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Jason Waller: | | | \$25.00 | \$0.00 | \$0.00 | \$25.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Cnt: 2 | Totals for Disability Litigation Services: | | \$543.04 | \$0.00 | \$224.56 | \$186.96 | \$0.00 | \$17.52 | \$0.00 | \$48.00 | \$0.00 | \$61.00 | \$5.00 |



1ST QUARTER STAFF
EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019

| Attendee | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|---------------------------------------|---|---------------|---------------|--------------|----------|----------|--------------|---------|-----------|---------|----------|----------|--------|
| Disability Retirement Services | | | | | | | | | | | | | |
| Ricki Contreras | 1 Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA - 09/19/2019 - 09/19/2019 | Attended | \$506.70 | \$0.00 | \$224.56 | \$164.96 | \$0.00 | \$0.00 | \$0.00 | \$54.00 | \$63.18 | \$0.00 | \$0.00 |
| Totals for Ricki Contreras: | | | \$506.70 | \$0.00 | \$224.56 | \$164.96 | \$0.00 | \$0.00 | \$0.00 | \$54.00 | \$63.18 | \$0.00 | \$0.00 |
| Amabelle Delin | 1 Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA - 09/19/2019 - 09/19/2019 | Attended | \$798.60 | \$250.00 | \$230.90 | \$164.96 | \$62.36 | \$0.00 | \$0.00 | \$0.00 | \$90.38 | \$0.00 | \$0.00 |
| Totals for Amabelle Delin: | | | \$798.60 | \$250.00 | \$230.90 | \$164.96 | \$62.36 | \$0.00 | \$0.00 | \$0.00 | \$90.38 | \$0.00 | \$0.00 |
| Melena Sarkisian | 1 Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA - 09/19/2019 - 09/19/2019 | Attended | \$810.94 | \$250.00 | \$230.90 | \$164.96 | \$62.37 | \$0.00 | \$0.00 | \$0.00 | \$102.71 | \$0.00 | \$0.00 |
| Totals for Melena Sarkisian: | | | \$810.94 | \$250.00 | \$230.90 | \$164.96 | \$62.37 | \$0.00 | \$0.00 | \$0.00 | \$102.71 | \$0.00 | \$0.00 |
| Maria Silva | 1 Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA - 09/19/2019 - 09/19/2019 | Attended | \$796.52 | \$250.00 | \$230.90 | \$155.96 | \$62.37 | \$0.00 | \$0.00 | \$0.00 | \$97.29 | \$0.00 | \$0.00 |
| Totals for Maria Silva: | | | \$796.52 | \$250.00 | \$230.90 | \$155.96 | \$62.37 | \$0.00 | \$0.00 | \$0.00 | \$97.29 | \$0.00 | \$0.00 |



**1ST QUARTER STAFF
EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019**

| Attendee | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|--|---|---------------|---------------|--------------|----------|----------|--------------|---------|-----------|---------|----------|----------|---------|
| Cnt: 4 | Totals for Disability Retirement Services: | | \$2,912.76 | \$750.00 | \$917.26 | \$650.84 | \$187.10 | \$0.00 | \$0.00 | \$54.00 | \$353.56 | \$0.00 | \$0.00 |
| Executive Offices | | | | | | | | | | | | | |
| John Popowich | 1 Edu - GFOA Budgeting Best Practices: Budget Monitoring - Sacramento CA - 09/16/2019 - 09/18/2019 | Attended | \$726.51 | \$544.50 | \$182.01 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for John Popowich: | | | \$726.51 | \$544.50 | \$182.01 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Cnt: 1 | Totals for Executive Offices: | | \$726.51 | \$544.50 | \$182.01 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Financial & Accounting Services | | | | | | | | | | | | | |
| Ana Chang | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$2,309.81 | \$1,400.00 | \$677.79 | \$0.00 | \$0.00 | \$48.02 | \$0.00 | \$63.00 | \$0.00 | \$101.00 | \$20.00 |
| Totals for Ana Chang: | | | \$2,309.81 | \$1,400.00 | \$677.79 | \$0.00 | \$0.00 | \$48.02 | \$0.00 | \$63.00 | \$0.00 | \$101.00 | \$20.00 |
| Esther Chang | 1 Edu - Association of Government Accountants (AGA) 2019 Professional Development Training (PDT) - New Orleans LA - 07/21/2019 - 07/24/2019 | Attended | \$1,435.48 | \$875.00 | \$560.48 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Esther Chang: | | | \$1,435.48 | \$875.00 | \$560.48 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |



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|--|---|---------------|---------------|--------------|----------|----------|--------------|---------|-----------|---------|--------|----------|---------|
| Financial & Accounting Services | | | | | | | | | | | | | |
| Margaret Chwa | 1 Edu - CALAPRS Fall Accountants Roundtable - Oakland CA - 09/20/2019 - 09/20/2019 | Attended | \$698.10 | \$125.00 | \$224.56 | \$215.96 | \$66.58 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$56.00 | \$10.00 |
| Totals for Margaret Chwa: | | | \$698.10 | \$125.00 | \$224.56 | \$215.96 | \$66.58 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$56.00 | \$10.00 |
| Chona Labtic-Austin | 1 Edu - Association of Government Accountants (AGA) 2019 Professional Development Training (PDT) - New Orleans LA - 07/21/2019 - 07/24/2019 | Attended | \$2,216.23 | \$875.00 | \$555.53 | \$411.61 | \$124.09 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$225.00 | \$25.00 |
| Totals for Chona Labtic-Austin: | | | \$2,216.23 | \$875.00 | \$555.53 | \$411.61 | \$124.09 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$225.00 | \$25.00 |
| Alyce Provencio | 1 Edu - CALAPRS Fall Accountants Roundtable - Oakland CA - 09/20/2019 - 09/20/2019 | Attended | \$562.50 | \$125.00 | \$224.56 | \$161.96 | \$0.00 | \$17.98 | \$0.00 | \$0.00 | \$0.00 | \$28.00 | \$5.00 |
| Totals for Alyce Provencio: | | | \$562.50 | \$125.00 | \$224.56 | \$161.96 | \$0.00 | \$17.98 | \$0.00 | \$0.00 | \$0.00 | \$28.00 | \$5.00 |
| Gloria Rios | 1 Edu - CALAPRS Fall Accountants Roundtable - Oakland CA - 09/20/2019 - 09/20/2019 | Attended | \$676.17 | \$125.00 | \$224.56 | \$215.96 | \$35.43 | \$9.22 | \$0.00 | \$0.00 | \$0.00 | \$56.00 | \$10.00 |
| Totals for Gloria Rios: | | | \$676.17 | \$125.00 | \$224.56 | \$215.96 | \$35.43 | \$9.22 | \$0.00 | \$0.00 | \$0.00 | \$56.00 | \$10.00 |



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|--|---|---------------|---------------|--------------|------------|------------|--------------|----------|-----------|----------|--------|----------|----------|
| Financial & Accounting Services | | | | | | | | | | | | | |
| Felisa Valdepenas | 1 Edu - Association of Government Accountants (AGA) 2019 Professional Development Training (PDT) - New Orleans LA - 07/21/2019 - 07/24/2019 | Attended | \$2,226.99 | \$875.00 | \$555.53 | \$411.61 | \$134.85 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$225.00 | \$25.00 |
| Totals for Felisa Valdepenas: | | | \$2,226.99 | \$875.00 | \$555.53 | \$411.61 | \$134.85 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$225.00 | \$25.00 |
| Edward Wong | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$1,555.60 | \$1,400.00 | \$0.00 | \$0.00 | \$0.00 | \$69.60 | \$0.00 | \$54.00 | \$0.00 | \$17.00 | \$15.00 |
| Totals for Edward Wong: | | | \$1,555.60 | \$1,400.00 | \$0.00 | \$0.00 | \$0.00 | \$69.60 | \$0.00 | \$54.00 | \$0.00 | \$17.00 | \$15.00 |
| Cnt: 8 | Totals for Financial & Accounting Services: | | \$11,680.88 | \$5,800.00 | \$3,023.01 | \$1,417.10 | \$360.95 | \$144.82 | \$0.00 | \$117.00 | \$0.00 | \$708.00 | \$110.00 |
| Human Resources | | | | | | | | | | | | | |
| Roberta Van Nortrick | 1 Edu - Society of Corporate Compliance and Ethics (SCCE) Annual Meeting - Washington D.C. (National Harbor, MD) - 09/15/2019 - 09/18/2019 | Attended | \$4,297.23 | \$1,774.00 | \$1,411.28 | \$613.43 | \$54.30 | \$42.22 | \$0.00 | \$94.00 | \$0.00 | \$283.00 | \$25.00 |
| Totals for Roberta Van Nortrick: | | | \$4,297.23 | \$1,774.00 | \$1,411.28 | \$613.43 | \$54.30 | \$42.22 | \$0.00 | \$94.00 | \$0.00 | \$283.00 | \$25.00 |
| Cnt: 1 | Totals for Human Resources: | | \$4,297.23 | \$1,774.00 | \$1,411.28 | \$613.43 | \$54.30 | \$42.22 | \$0.00 | \$94.00 | \$0.00 | \$283.00 | \$25.00 |



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FOR FISCAL YEAR 2020
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|------------------------------------|---|---------------|---------------|--------------|----------|----------|--------------|---------|-----------|---------|--------|----------|---------|
| Internal Audit | | | | | | | | | | | | | |
| Nathan Amick | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$2,132.85 | \$1,400.00 | \$705.24 | \$0.00 | \$0.00 | \$27.61 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| | 2 Edu - Association of Public Pension Fund Auditors (APPFA) - Lake Tahoe CA - 09/27/2019 - 09/30/2019 | Attended | \$425.00 | \$425.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Nathan Amick: | | | \$2,557.85 | \$1,825.00 | \$705.24 | \$0.00 | \$0.00 | \$27.61 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Richard Bendall | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$1,876.00 | \$1,400.00 | \$450.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$26.00 | \$0.00 | \$0.00 | \$0.00 |
| | 2 Edu - Enterprise Risk Management (ERM) Pension Peer Group - Sacramento CA - 09/22/2019 - 09/25/2019 | Attended | \$816.32 | \$0.00 | \$331.95 | \$256.96 | \$48.75 | \$23.66 | \$0.00 | \$0.00 | \$0.00 | \$135.00 | \$20.00 |
| Totals for Richard Bendall: | | | \$2,692.32 | \$1,400.00 | \$781.95 | \$256.96 | \$48.75 | \$23.66 | \$0.00 | \$26.00 | \$0.00 | \$135.00 | \$20.00 |
| Leisha Collins | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$2,248.04 | \$1,400.00 | \$705.24 | \$0.00 | \$0.00 | \$34.80 | \$0.00 | \$93.00 | \$0.00 | \$0.00 | \$15.00 |



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|------------------------------------|---|---------------|---------------|--------------|----------|---------|--------------|---------|-----------|---------|--------|----------|---------|
| Internal Audit | | | | | | | | | | | | | |
| Leisha Collins | 2 Edu - Association of Public Pension Fund Auditors (APPFA) - Lake Tahoe CA - 09/27/2019 - 09/30/2019 | Attended | \$425.00 | \$425.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Leisha Collins: | | | \$2,673.04 | \$1,825.00 | \$705.24 | \$0.00 | \$0.00 | \$34.80 | \$0.00 | \$93.00 | \$0.00 | \$0.00 | \$15.00 |
| Christina Logan | 1 Edu - Association of Public Pension Fund Auditors (APPFA) - Lake Tahoe CA - 09/27/2019 - 09/30/2019 | Attended | \$425.00 | \$425.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Christina Logan: | | | \$425.00 | \$425.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Kristina Sun | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$2,231.50 | \$1,400.00 | \$705.24 | \$0.00 | \$0.00 | \$48.26 | \$0.00 | \$78.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Kristina Sun: | | | \$2,231.50 | \$1,400.00 | \$705.24 | \$0.00 | \$0.00 | \$48.26 | \$0.00 | \$78.00 | \$0.00 | \$0.00 | \$0.00 |
| Gabriel Tafoya | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$2,183.24 | \$1,400.00 | \$705.24 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$78.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Gabriel Tafoya: | | | \$2,183.24 | \$1,400.00 | \$705.24 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$78.00 | \$0.00 | \$0.00 | \$0.00 |



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|-----------------------------------|---|---------------|---------------|--------------|------------|------------|--------------|----------|-----------|----------|----------|----------|---------|
| Internal Audit | | | | | | | | | | | | | |
| Summy Voong | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$2,213.63 | \$1,400.00 | \$705.24 | \$0.00 | \$0.00 | \$30.39 | \$0.00 | \$78.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Summy Voong: | | | \$2,213.63 | \$1,400.00 | \$705.24 | \$0.00 | \$0.00 | \$30.39 | \$0.00 | \$78.00 | \$0.00 | \$0.00 | \$0.00 |
| Cnt: 10 | Totals for Internal Audit: | | \$14,976.58 | \$9,675.00 | \$4,308.15 | \$256.96 | \$48.75 | \$164.72 | \$0.00 | \$353.00 | \$0.00 | \$135.00 | \$35.00 |
| Investments | | | | | | | | | | | | | |
| Didier Acevedo | 1 Admin - Due Diligence of Illiquid Credit Finalist Managers - New York, NY and Chicago, IL - 08/27/2019 - 08/29/2019 | Attended | \$1,487.10 | \$0.00 | \$681.72 | \$550.90 | \$155.22 | \$0.00 | \$0.00 | \$0.00 | \$99.26 | \$0.00 | \$0.00 |
| | 2 Edu - 2019 Latin America Private Equity & Venture Capital Association Summit and Investor Roundtable and LAVCA Venture Investors Annual Meeting - New York NY - 09/23/2019 - 09/26/2019 | Attended | \$2,186.74 | \$0.00 | \$921.66 | \$484.60 | \$285.87 | \$0.00 | \$0.00 | \$0.00 | \$494.61 | \$0.00 | \$0.00 |
| Totals for Didier Acevedo: | | | \$3,673.84 | \$0.00 | \$1,603.38 | \$1,035.50 | \$441.09 | \$0.00 | \$0.00 | \$0.00 | \$593.87 | \$0.00 | \$0.00 |



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|------------------------------|---|---------------|---------------|--------------|------------|------------|--------------|---------|-----------|---------|----------|----------|---------|
| Investments | | | | | | | | | | | | | |
| David Chu | 1 Admin - GGV Capital Limited Partner Advisory Committee Roundtable and Private Limited Partner Reception - San Francisco CA - 07/25/2019 - 07/25/2019 | Attended | \$329.19 | \$0.00 | \$0.00 | \$210.96 | \$118.23 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| | 2 Admin - Due diligence on potential and existing managers (MBK Partners, BRV China, Joy Capital); and attend Lilly Asian Ventures annual investor meeting. - Singapore; Hong Kong; Shanghai, China - 09/18/2019 - 09/27/2019 | Attended | \$4,747.15 | \$0.00 | \$1,332.35 | \$2,891.58 | \$277.98 | \$0.00 | \$0.00 | \$0.00 | \$207.93 | \$0.00 | \$37.31 |
| | 3 Edu - SuperReturn Asia Conference. - Hong Kong, China - 09/23/2019 - 09/26/2019 | Attended | \$1,973.85 | \$0.00 | \$1,292.84 | \$400.18 | \$145.04 | \$0.00 | \$0.00 | \$0.00 | \$135.79 | \$0.00 | \$0.00 |
| Totals for David Chu: | | | \$7,050.19 | \$0.00 | \$2,625.19 | \$3,502.72 | \$541.25 | \$0.00 | \$0.00 | \$0.00 | \$343.72 | \$0.00 | \$37.31 |
| Jon Gabel | 1 Edu - Institutional Limited Partners Association (ILPA) 3rd Annual CIO Symposium - Cambridge MA - 09/25/2019 - 09/25/2019 | Attended | \$1,455.67 | \$80.00 | \$863.10 | \$329.29 | \$156.92 | \$0.00 | \$0.00 | \$0.00 | \$26.36 | \$0.00 | \$0.00 |
| Totals for Jon Gabel: | | | \$1,455.67 | \$80.00 | \$863.10 | \$329.29 | \$156.92 | \$0.00 | \$0.00 | \$0.00 | \$26.36 | \$0.00 | \$0.00 |



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|---------------------------------|--|---------------|---------------|--------------|----------|----------|--------------|---------|-----------|---------|---------|----------|--------|
| Investments | | | | | | | | | | | | | |
| Dale Johnson | 1 Admin - Due Diligence with Prospective Manager - Plano TX - 08/20/2019 - 08/20/2019 | Attended | \$415.46 | \$0.00 | \$0.00 | \$287.98 | \$87.33 | \$0.00 | \$0.00 | \$16.00 | \$24.15 | \$0.00 | \$0.00 |
| | 2 Edu - 2019 Council of Institutional Investors (CII) Fall Conference - Minneapolis MN - 09/16/2019 - 09/18/2019 | Attended | \$1,751.04 | \$295.00 | \$777.33 | \$533.00 | \$4.00 | \$7.54 | \$0.00 | \$64.00 | \$70.17 | \$0.00 | \$0.00 |
| Totals for Dale Johnson: | | | \$2,166.50 | \$295.00 | \$777.33 | \$820.98 | \$91.33 | \$7.54 | \$0.00 | \$80.00 | \$94.32 | \$0.00 | \$0.00 |
| John Kim | 1 Edu - Investment Operations Forum at CalSTRS - Sacramento CA - 09/24/2019 - 09/24/2019 | Attended | \$112.55 | \$0.00 | \$0.00 | \$53.98 | \$0.00 | \$9.57 | \$0.00 | \$24.00 | \$0.00 | \$22.50 | \$2.50 |
| | 2 Admin - Meeting with State Street - Sacramento CA - 09/24/2019 - 09/24/2019 | Attended | \$112.55 | \$0.00 | \$0.00 | \$53.98 | \$0.00 | \$9.57 | \$0.00 | \$24.00 | \$0.00 | \$22.50 | \$2.50 |
| Totals for John Kim: | | | \$225.10 | \$0.00 | \$0.00 | \$107.96 | \$0.00 | \$19.14 | \$0.00 | \$48.00 | \$0.00 | \$45.00 | \$5.00 |



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|---------------------------------------|---|---------------|---------------|--------------|------------|------------|--------------|---------|-----------|---------|----------|----------|---------|
| Investments | | | | | | | | | | | | | |
| Derek Kong | 1 Admin - Due Diligence on potential managers and existing managers (Alchemy SOF, Triton, LivingBridge) - London, England; Paris, France; Amsterdam, Netherlands; Zurich, Switzerland - 09/18/2019 - 09/26/2019 | Attended | \$6,455.56 | \$0.00 | \$2,087.95 | \$3,069.53 | \$908.31 | \$7.37 | \$5.00 | \$0.00 | \$342.40 | \$0.00 | \$35.00 |
| Totals for Derek Kong: | | | \$6,455.56 | \$0.00 | \$2,087.95 | \$3,069.53 | \$908.31 | \$7.37 | \$5.00 | \$0.00 | \$342.40 | \$0.00 | \$35.00 |
| Vache Mahseredjian | 1 Admin - Due Diligence of Illiquid Credit Finalist Managers - New York, NY and Chicago, IL - 08/27/2019 - 08/29/2019 | Attended | \$1,363.83 | \$0.00 | \$589.92 | \$506.09 | \$188.22 | \$0.00 | \$0.00 | \$0.00 | \$79.60 | \$0.00 | \$0.00 |
| Totals for Vache Mahseredjian: | | | \$1,363.83 | \$0.00 | \$589.92 | \$506.09 | \$188.22 | \$0.00 | \$0.00 | \$0.00 | \$79.60 | \$0.00 | \$0.00 |



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|----------------------------------|---|---------------|---------------|--------------|------------|----------|--------------|---------|-----------|---------|---------|----------|---------|
| Investments | | | | | | | | | | | | | |
| David Simpson | 1 Admin - Vinci Partners Annual General Meeting and Limited Partner Advisory Committee. Due diligence with potential manager and meet with existing managers (Incline Equity, Sterling IP, Clarion, and One Rock). - New York, NY; Pittsburgh, PA; Westport, CT - 09/25/2019 - 09/27/2019 | Attended | \$1,930.51 | \$0.00 | \$1,241.22 | \$453.30 | \$211.01 | \$0.00 | \$0.00 | \$0.00 | \$24.98 | \$0.00 | \$0.00 |
| Totals for David Simpson: | | | \$1,930.51 | \$0.00 | \$1,241.22 | \$453.30 | \$211.01 | \$0.00 | \$0.00 | \$0.00 | \$24.98 | \$0.00 | \$0.00 |
| Chad Timko | 1 Admin - Due Diligence with Prospective Manager - Plano TX - 08/20/2019 - 08/20/2019 | Attended | \$399.40 | \$0.00 | \$0.00 | \$287.98 | \$58.29 | \$27.96 | \$0.00 | \$13.00 | \$12.17 | \$0.00 | \$0.00 |
| | 2 Admin - Due Diligence of Illiquid Credit Finalist Managers - New York, NY and Chicago, IL - 08/27/2019 - 08/29/2019 | Attended | \$1,187.01 | \$0.00 | \$502.16 | \$418.90 | \$72.49 | \$35.73 | \$0.00 | \$75.90 | \$81.83 | \$0.00 | \$0.00 |
| Totals for Chad Timko: | | | \$1,586.41 | \$0.00 | \$502.16 | \$706.88 | \$130.78 | \$63.69 | \$0.00 | \$88.90 | \$94.00 | \$0.00 | \$0.00 |
| Scott Zdrzil | 1 Admin - Council of Institutional Board and Committee meetings - Washington D.C. - 07/31/2019 - 08/01/2019 | Attended | \$1,065.39 | \$0.00 | \$205.76 | \$672.52 | \$81.89 | \$0.00 | \$0.00 | \$61.22 | \$0.00 | \$34.00 | \$10.00 |



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|----------------------------------|---|---------------|---------------|--------------|-------------|-------------|--------------|---------|-----------|----------|------------|----------|----------|
| Investments | | | | | | | | | | | | | |
| Scott Zdrazil | 2 Admin - Principles for Responsible Investment Private Equity Advisory Committee Meeting - Paris, France - 09/08/2019 - 09/09/2019 | Attended | \$646.96 | \$0.00 | \$307.06 | \$329.90 | \$0.00 | \$0.00 | \$10.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| | 3 Edu - Annual PRI in Person Conference - Paris, France - 09/10/2019 - 09/12/2019 | Attended | \$1,155.23 | \$0.00 | \$614.10 | \$329.90 | \$140.98 | \$0.00 | \$10.00 | \$0.00 | \$60.25 | \$0.00 | \$0.00 |
| | 4 Admin - Council of Institutional Investors (CII) Board of Directors Meeting - Minneapolis MN - 09/16/2019 - 09/18/2019 | Attended | \$1,569.59 | \$0.00 | \$777.34 | \$496.59 | \$173.66 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$102.00 | \$20.00 |
| Totals for Scott Zdrazil: | | | \$4,437.17 | \$0.00 | \$1,904.26 | \$1,828.91 | \$396.53 | \$0.00 | \$20.00 | \$61.22 | \$60.25 | \$136.00 | \$30.00 |
| Cnt: 19 | Totals for Investments: | | \$30,344.78 | \$375.00 | \$12,194.51 | \$12,361.16 | \$3,065.44 | \$97.74 | \$25.00 | \$278.12 | \$1,659.50 | \$181.00 | \$107.31 |
| Legal Services | | | | | | | | | | | | | |
| Frank Boyd | 1 Edu - CALAPRS Course in Retirement Disability Administration - Oakland CA - 09/19/2019 - 09/19/2019 | Attended | \$542.36 | \$0.00 | \$224.56 | \$226.96 | \$0.00 | \$22.27 | \$7.00 | \$0.00 | \$61.57 | \$0.00 | \$0.00 |
| Totals for Frank Boyd: | | | \$542.36 | \$0.00 | \$224.56 | \$226.96 | \$0.00 | \$22.27 | \$7.00 | \$0.00 | \$61.57 | \$0.00 | \$0.00 |



**1ST QUARTER STAFF
EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019**

| Attendee | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|-------------------------------------|--|---------------|---------------|--------------|----------|----------|--------------|---------|-----------|---------|----------|----------|---------|
| Legal Services | | | | | | | | | | | | | |
| Barry Lew | 1 Admin - SACRS Legislative Committee - Sacramento CA - 07/19/2019 - 07/19/2019 | Attended | \$279.85 | \$0.00 | \$0.00 | \$157.96 | \$50.15 | \$17.40 | \$0.00 | \$12.00 | \$42.34 | \$0.00 | \$0.00 |
| Totals for Barry Lew: | | | \$279.85 | \$0.00 | \$0.00 | \$157.96 | \$50.15 | \$17.40 | \$0.00 | \$12.00 | \$42.34 | \$0.00 | \$0.00 |
| Cnt: 2 | Totals for Legal Services: | | \$822.21 | \$0.00 | \$224.56 | \$384.92 | \$50.15 | \$39.67 | \$7.00 | \$12.00 | \$103.91 | \$0.00 | \$0.00 |
| Member Services | | | | | | | | | | | | | |
| Carlos Barrios | 1 Edu - 38th ISCEBS Employee Benefits Symposium - New Orleans CA - 09/08/2019 - 09/11/2019 | Attended | \$1,823.02 | \$985.00 | \$525.42 | \$268.60 | \$44.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Carlos Barrios: | | | \$1,823.02 | \$985.00 | \$525.42 | \$268.60 | \$44.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Jacqueline Boute | 1 Edu - CALAPRS Benefits Roundtable - Oakland CA - 09/20/2019 - 09/20/2019 | Attended | \$654.73 | \$125.00 | \$201.68 | \$183.96 | \$0.00 | \$14.09 | \$0.00 | \$64.00 | \$0.00 | \$56.00 | \$10.00 |
| Totals for Jacqueline Boute: | | | \$654.73 | \$125.00 | \$201.68 | \$183.96 | \$0.00 | \$14.09 | \$0.00 | \$64.00 | \$0.00 | \$56.00 | \$10.00 |
| Renee Copeland | 1 Edu - CALAPRS Benefits Roundtable - Oakland CA - 09/20/2019 - 09/20/2019 | Attended | \$536.46 | \$125.00 | \$184.52 | \$142.96 | \$0.00 | \$17.98 | \$0.00 | \$0.00 | \$0.00 | \$56.00 | \$10.00 |
| Totals for Renee Copeland: | | | \$536.46 | \$125.00 | \$184.52 | \$142.96 | \$0.00 | \$17.98 | \$0.00 | \$0.00 | \$0.00 | \$56.00 | \$10.00 |



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FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019**

| Attendee | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|------------------------------------|--|---------------|---------------|--------------|------------|------------|--------------|---------|-----------|---------|--------|----------|---------|
| Member Services | | | | | | | | | | | | | |
| Beatriz Daryaie | 1 Edu - CALAPRS Benefits Roundtable - Oakland CA - 09/20/2019 - 09/20/2019 | Attended | \$602.32 | \$125.00 | \$201.68 | \$166.96 | \$0.00 | \$18.68 | \$0.00 | \$24.00 | \$0.00 | \$56.00 | \$10.00 |
| Totals for Beatriz Daryaie: | | | \$602.32 | \$125.00 | \$201.68 | \$166.96 | \$0.00 | \$18.68 | \$0.00 | \$24.00 | \$0.00 | \$56.00 | \$10.00 |
| Alejandro Ochoa | 1 Edu - CALAPRS Benefits Roundtable - Oakland CA - 09/20/2019 - 09/20/2019 | Attended | \$452.48 | \$125.00 | \$184.52 | \$142.96 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Alejandro Ochoa: | | | \$452.48 | \$125.00 | \$184.52 | \$142.96 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Persian Petrov | 1 Edu - CALAPRS Benefits Roundtable - Oakland CA - 09/20/2019 - 09/20/2019 | Attended | \$452.48 | \$125.00 | \$184.52 | \$142.96 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Persian Petrov: | | | \$452.48 | \$125.00 | \$184.52 | \$142.96 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Jeff Shevlowitz | 1 Edu - 38th ISCEBS Employee Benefits Symposium - New Orleans CA - 09/08/2019 - 09/11/2019 | Attended | \$1,887.72 | \$1,185.00 | \$702.72 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for Jeff Shevlowitz: | | | \$1,887.72 | \$1,185.00 | \$702.72 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Cnt: 7 | Totals for Member Services: | | \$6,409.21 | \$2,795.00 | \$2,185.06 | \$1,048.40 | \$44.00 | \$50.75 | \$0.00 | \$88.00 | \$0.00 | \$168.00 | \$30.00 |



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EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019**

| Attendee | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|--------------------------------------|---|---------------|---------------|--------------|------------|----------|--------------|---------|-----------|---------|----------|----------|---------|
| QA & Metrics | | | | | | | | | | | | | |
| Derwin Brown | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$2,583.98 | \$1,500.00 | \$705.24 | \$0.00 | \$0.00 | \$32.07 | \$10.00 | \$78.00 | \$192.67 | \$56.00 | \$10.00 |
| Totals for Derwin Brown: | | | \$2,583.98 | \$1,500.00 | \$705.24 | \$0.00 | \$0.00 | \$32.07 | \$10.00 | \$78.00 | \$192.67 | \$56.00 | \$10.00 |
| Flora Zhu | 1 Edu - ATD Certificate Program - Train the Trainer - Orlando FL - 07/08/2019 - 07/10/2019 | Attended | \$2,764.12 | \$1,595.00 | \$445.52 | \$501.60 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$197.00 | \$25.00 |
| Totals for Flora Zhu: | | | \$2,764.12 | \$1,595.00 | \$445.52 | \$501.60 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$197.00 | \$25.00 |
| Cnt: 2 | Totals for QA & Metrics: | | \$5,348.10 | \$3,095.00 | \$1,150.76 | \$501.60 | \$0.00 | \$32.07 | \$10.00 | \$78.00 | \$192.67 | \$253.00 | \$35.00 |
| Retiree Healthcare | | | | | | | | | | | | | |
| Tionna Fredericks | 1 Edu - IIA Institute of Internal Auditors 2019 International Conference - Anaheim CA - 07/07/2019 - 07/10/2019 | Attended | \$2,361.05 | \$1,775.00 | \$440.04 | \$0.00 | \$0.00 | \$45.01 | \$0.00 | \$0.00 | \$0.00 | \$101.00 | \$0.00 |
| Totals for Tionna Fredericks: | | | \$2,361.05 | \$1,775.00 | \$440.04 | \$0.00 | \$0.00 | \$45.01 | \$0.00 | \$0.00 | \$0.00 | \$101.00 | \$0.00 |
| Kathy Migita | 1 Edu - AHIP National Conferences on Medicare, Medicaid & Dual Eligibles - Washington, D.C. - 09/23/2019 - 09/26/2019 | Attended | \$2,531.95 | \$995.00 | \$800.07 | \$275.98 | \$0.00 | \$0.00 | \$0.00 | \$80.90 | \$0.00 | \$355.00 | \$25.00 |



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EDUCATION AND TRAVEL EXPENDITURE REPORT
FOR FISCAL YEAR 2020
FOR TRAVEL DURING JULY 2019 - SEPTEMBER 2019**

| Attendee | Purpose of Travel - Location - Travel Dates | Travel Status | Total Expense | Registration | Lodging | Airfare | Ground Trans | Mileage | Porterage | Parking | Meals | Per Diem | Misc. |
|------------------------------------|---|---------------|---------------|--------------|-------------|-------------|--------------|----------|-----------|------------|------------|------------|----------|
| Retiree Healthcare | | | | | | | | | | | | | |
| Kathy Migita | 2 Admin - Annual Kaiser Due Diligence - Washington D.C. MD - 09/27/2019 - 09/28/2019 | Attended | \$1,207.39 | \$0.00 | \$800.06 | \$275.97 | \$0.00 | \$0.00 | \$0.00 | \$32.36 | \$0.00 | \$89.00 | \$10.00 |
| Totals for Kathy Migita: | | | \$3,739.34 | \$995.00 | \$1,600.13 | \$551.95 | \$0.00 | \$0.00 | \$0.00 | \$113.26 | \$0.00 | \$444.00 | \$35.00 |
| Cassandra Smith | 1 Edu - AHIP National Conferences on Medicare, Medicaid & Dual Eligibles - Washington, D.C. - 09/23/2019 - 09/26/2019 | Attended | \$3,618.17 | \$995.00 | \$1,600.13 | \$527.84 | \$18.56 | \$14.27 | \$0.00 | \$138.37 | \$0.00 | \$299.00 | \$25.00 |
| | 2 Admin - Annual Kaiser Due Diligence - Washington D.C. MD - 09/27/2019 - 09/28/2019 | Attended | \$948.69 | \$0.00 | \$800.05 | \$0.00 | \$17.28 | \$0.00 | \$0.00 | \$55.36 | \$0.00 | \$71.00 | \$5.00 |
| Totals for Cassandra Smith: | | | \$4,566.86 | \$995.00 | \$2,400.18 | \$527.84 | \$35.84 | \$14.27 | \$0.00 | \$193.73 | \$0.00 | \$370.00 | \$30.00 |
| Cnt: 5 | Totals for Retiree Healthcare: | | \$10,667.25 | \$3,765.00 | \$4,440.35 | \$1,079.79 | \$35.84 | \$59.28 | \$0.00 | \$306.99 | \$0.00 | \$915.00 | \$65.00 |
| Systems | | | | | | | | | | | | | |
| James Brekk | 1 Edu - IAFCI Annual Training Conference & Exhibitor Show - Raleigh NC - 08/26/2019 - 08/30/2019 | Attended | \$1,749.79 | \$570.00 | \$0.00 | \$1,029.55 | \$150.24 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Totals for James Brekk: | | | \$1,749.79 | \$570.00 | \$0.00 | \$1,029.55 | \$150.24 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Cnt: 1 | Totals for Systems: | | \$1,749.79 | \$570.00 | \$0.00 | \$1,029.55 | \$150.24 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Cnt: 67 | Grand Totals: | | \$99,625.02 | \$33,087.50 | \$33,425.57 | \$20,213.93 | \$4,426.79 | \$792.17 | \$42.00 | \$1,507.11 | \$2,309.64 | \$3,353.00 | \$467.31 |

FOR INFORMATION ONLY

December 2, 2019

TO: Each Member
Board of Investments

FROM: Steven P. Rice *SPR*
Chief Counsel

FOR: December 11, 2019 Board of Investments Meeting

SUBJECT: Monthly Status Report on Board of Investments Legal Projects

Attached is the monthly report on the status of Board-directed investment-related projects handled by the Legal Division as of December 2, 2019.

Attachment

c: Santos H. Kreimann
Jonathan Grabel
JJ Popowich
Vache Mahseredjian
John McClelland
Christopher Wagner
Ted Wright
Jim Rice
Jude Perez
Christine Roseland
John Harrington
Cheryl Lu
Margo McCabe
Lisa Garcia



LACERA Legal Division
Board of Investments Projects
Monthly Status Report - Pending as of December 2, 2019



| | Project/ Investment | Description | Amount | Board Approval Date | Completion Status | % Complete | Notes |
|----------------|---|---------------------------------------|---------------------|---------------------------|----------------------|------------|--------------------------------|
| EQUITIES | MSCI ACWI IMI Index Manger (State Street) | Investment Management Agreement | \$14,800,000,000.00 | August 14, 2019 | Completed | 100% | Completed. |
| PRIVATE EQUITY | Revelstoke Capital Partners Single Asset Fund I, LP | Subscription | \$60,000,000.00 | November 20, 2019 | Completed | 100% | Completed. |
| | Sterling Investment Partners IV, LP | Subscription | \$125,000,000.00 | November 20, 2019 | In Progress | 75% | Legal negotiations in process. |



Documents not attached are exempt from disclosure under the California Public Records Act and other legal authority.

**For further information, contact:
LACERA
Attention: Public Records Act Requests
300 N. Lake Ave., Suite 620
Pasadena, CA 91101**



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