

## 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, MAY 15, 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 Regular Meeting of April 10, 2019
- IV. REPORT ON CLOSED SESSION ITEMS
- V. PUBLIC COMMENT
- VI. CHIEF EXECUTIVE OFFICER'S REPORT  
(Memo dated April 22, 2019)
- VII. CHIEF INVESTMENT OFFICER'S REPORT  
(Memo dated May 6, 2019)
- VIII. CONSENT ITEMS
  - A. Recommendation as submitted by Ronald Okum, Chair, Real Assets Committee: That the Board:
    - 1. Accept the proposed Real Estate Structure Review Update for Fiscal Year 2019-2020.
    - 2. Approve allocation of up to \$500 million for investment by the Fund's separate account equity managers.  
(Memo dated May 1, 2019)

VIII. CONSENT ITEMS (Continued)

- B. Recommendation as submitted by Alan Bernstein, Chair, Joint Organizational Governance Committee: That the Board approve the revised Joint Organizational Governance Committee Charter.  
(Memo dated April 17, 2019)
- C. Recommendation as submitted by Alan Bernstein, Chair, Joint Organizational Governance Committee: That the Board not adopt the proposed Joint Policy regarding External Communications of Board Members and maintain the current practice with respect to such communications without change.  
(Memo dated April 17, 2019)
- D. Recommendation that the Board approve attendance of Board members at the Oxford Impact Measurement Program on July 15 -19, 2019 in Oxford, United Kingdom and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.  
(Placed on the agenda at the request of Mrs. Sanchez)  
(Memo dated May 7, 2019)
- E. Recommendation that the Board approve attendance of Board members at the 6<sup>th</sup> Annual Hispanic Heritage Foundation Forum on June 6, 2019 in Oakland, California and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.  
(Placed on the agenda at the request of Mr. Moore)  
(Memo dated May 6, 2019)
- F. Recommendation that the Board approve attendance of Board members at the 2019 Annual International Corporate Governance Network Conference Tokyo on July 16 –18, 2019 in Tokyo, Japan and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.  
(Placed on the agenda at the request of Mr. Bernstein)  
(Memo dated May 6, 2019)
- G. Recommendation that the Board approve attendance of Board members at the African Pension and Sovereign Wealth Fund Leaders' Summit and AI CEO Infrastructure Project Developers Summit on September 2–3, 2019 in Cape Town, South Africa and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy. (Placed on the agenda at the request of Mr. Green)  
(Memo dated May 7, 2019)

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IX. NON CONSENT

X. REPORTS

- A. Update on Cooperation with Institutional Limited Partners Association  
Regarding Fiduciary Protections  
Christopher Wagner, Principal Investment Officer  
Scott Zdrzil, Senior Investment Officer  
(Memo dated April 19, 2019)
- B. Real Estate Administrative Services RFI - Update  
Esmeralda del Bosque, Senior Investment Officer  
Trina Sanders, Investment Officer  
(Memo dated May 3, 2019)
- C. Investment – Related Services Procurement Process  
John McClelland, Principal Investment Officer  
(Memo dated May 3, 2019)
- D. Real Estate Investments in Latin America  
Cindy Rivera, Investment Analyst  
DaJuan Bennett, Investment Intern  
(Memo dated April 24, 2019)
- E. Venture Capital Accelerator Activities in the U.S.  
David Simpson, Investment Officer  
Wei-Wei Lee, Investment Intern  
(Memo dated April 24, 2019)
- F. Private Equity Performance Report  
Christopher J. Wagner, Principal Investment Officer  
Calvin Chang, Senior Investment Analyst  
(Memo dated May 3, 2019)
- G. Public Markets Internal Asset Management Assessment  
Jonathan Grabel, Chief Investment Officer  
Ted Wright, Principal Investment Officer  
Brenda Cullen, Investment Officer  
(Memo dated May 6, 2019)
- H. Real Estate Recoveries Report  
Christine Roseland, Senior Staff Counsel  
(Memo dated April 19, 2019)

X. REPORTS (Continued)

- I. Securities Lending Program – 2018 Annual Review  
Adam Cheng, Senior Investment Analyst  
(For Information Only) (Memo dated April 26, 2019)
- J. Systematic Financial Management – Organizational Update  
Ted Wright, Principal Investment Officer  
Brenda Cullen, Investment Officer  
(For Information Only) (Memo dated May 3, 2019)
- K. Implementation Update on LACERA Pension Trust Strategic Asset Allocation  
Jonathan Grabel, Chief Investment Officer  
(For Information Only) (Memo dated May 3, 2019)
- L. Final Procedures and Schedule for 2019 Board Elections  
Lou Lazatin, Chief Executive Officer  
Steven P. Rice, Chief Counsel  
(For Information Only) (Memo dated April 16, 2019)
- M. Corporate Credit Card Audit Report  
Richard Bendall, Chief Audit Executive  
(For Information Only) (Memo dated April 19, 2019)
- N. OPEB Master Trust Quarterly Performance Report  
Jude Perez, Principal Investment Officer  
(For Information Only) (Memo dated May 3, 2019)
- O. LACERA Quarterly Performance Report  
Meketa Report: First Quarter Total Fund Performance Report  
Jude Perez, Principal Investment Officer  
(For Information Only) (Memo dated April 19, 2019)
- P. Securities Litigation Report for Calendar Year 2018  
Michael D. Herrera, Senior Staff Counsel  
(For Information Only) (Memo dated May 3, 2019)
- Q. Monthly Status Report on Legislation  
Barry W. Lew, Legislative Affairs Officer  
(For Information Only) (Memo dated April 20, 2019)

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X. REPORTS (Continued)

- R. Monthly Status Report on Board of Investments Legal Projects  
Steven P. Rice, Chief Counsel  
(For Information Only) (Memo dated May 3, 2019)
  
- S. April 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 April 22, 2019)

XI. ITEMS FOR STAFF REVIEW

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

XIII. EXECUTIVE SESSION

- A. Conference with Staff and Legal Counsel to Consider the Purchase or Sale of Particular, Specific Pension Fund Investments  
(Pursuant to California Government Code Section 54956.81)
  - 1. ACCEL – KKR CAPITAL PARTNERS VI. L.P.
  - 2. Other Manager: 2
  
- B. Public Employee Performance Evaluation  
(Pursuant to Paragraph (1) of Subdivision (b) of California Government Code Section 54957)  
Title: Chief Executive Officer

XIV. ADJOURNMENT

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*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 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, APRIL 10, 2019

PRESENT: Shawn Kehoe, Chair

Wayne Moore, Secretary

Alan Bernstein

David Green

Ronald Okum

Gina V. Sanchez

Herman B. Santos

ABSENT: Joseph Kelly, Vice Chair

David Muir

STAFF ADVISORS AND PARTICIPANTS

Lou Lazatin, Chief Executive Officer

Jonathan Grabel, Chief Investment Officer

Steven P. Rice, Chief Counsel

Christine Roseland, Senior Staff Counsel

Christopher Wagner, Principal Investment Officer

Vache Mahseredjian, Principal Investment Officer

STAFF ADVISORS AND PARTICIPANTS (Continued)

Jude Perez, Principal Investment Officer

Ted Wright, Principal Investment Officer

Dale Johnson, Investment Officer

Chad Timko, Senior Investment Officer

Terra Elijah, Investment Analyst

David Simpson, Investment Officer

Didier Acevedo, Investment Officer

Beulah Auten, Chief Financial Officer

Ted Granger, Assistant Chief Financial Officer

Milliman

Nick Collier, Consulting Actuary

Meketa Investment Group

Leandro A. Festino, Managing Principal

Stephen McCourt, Managing Principal

StepStone Group LP

Jose Fernandez, Partner

I. CALL TO ORDER

The meeting was called to order by Chair Kehoe at 9:04 a.m., in the Board Room of Gateway Plaza.

II. PLEDGE OF ALLEGIANCE

Mrs. Sanchez led the Board Members and staff in reciting the Pledge of Allegiance.



III. APPROVAL OF MINUTES

A. Approval of the Minutes of the Regular Meeting of March 13, 2019

Mr. Green made a motion, Mr. Bernstein seconded, to approve the revised minutes of the regular meeting of March 13, 2019. The motion passed unanimously.

IV. REPORT ON CLOSED SESSION ITEMS

There was nothing to report.

V. PUBLIC COMMENT

There were no requests from the public to speak.

VI. CHIEF EXECUTIVE OFFICER'S REPORT  
(Memo dated April 1, 2019)

Ms. Lazatin provided a brief overview of the Chief Executive Officer's Report and answered questions from the Board.

VII. CHIEF INVESTMENT OFFICER'S REPORT  
(Memo dated March 29, 2019)

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

VIII. CONSENT ITEMS

- A. Recommendation as submitted by Wayne Moore, Chair, Credit and Risk Committee: That the Board approve the Minimum Qualifications advanced by the Credit and Risk Mitigation Committee and authorize a Request for Proposal for Syndicated Bank Loan managers.  
(Memo dated March 27, 2019)

Mr. Bernstein made a motion, Mrs. Sanchez seconded, to approve agenda item VIII.A. The motion passed unanimously.

VIII. CONSENT ITEMS (Continued)

Mr. Green made a motion, Mr. Kehoe seconded, to approve agenda items, VIII. B, VIII.E. VIII.F, VIII.G and VIII.H. The motion passed unanimously.

- B. Recommendation as submitted by Gina Sanchez, Chair, Equity: Public/Private Committee: That the Board approve the proposed Minimum Qualifications for a factor-based mandate Request For Proposal, thereby authorizing staff to initiate the search. (Memo dated March 22, 2019)
- C. Recommendation as submitted by Wayne Moore, Chair, Credit and Risk Committee: That the Board approve the proposed Minimum Qualifications for a Request For Proposal for an Illiquid Credit investment manager, thereby authorizing staff to initiate the search. (Memo dated March 22, 2019)

Mr. Santos made a motion, Mrs. Sanchez seconded, to approve agenda item VIII.C. The motion passed unanimously.

- D. Recommendation as submitted by Alan Bernstein, Chair, Joint Organizational Governance Committee: That the Board approve a 60-day extension of time to the June 2019 Board meetings for the Joint Organizational Governance Committee (JOGC) to present a recommendation for revisions to the JOGC Charter. (Memo dated March 29, 2019)

Mr. Rice and Ms. Lazatin were present and answered questions from the

Board.

Mr. Moore made a motion, Mrs. Sanchez seconded, to suspend the JOGC until a new charter is approved. Per Chief Counsel, this motion is not in compliance with the Brown Act because the agenda does not provide adequate notice to Board members and the public that this issue might be addressed.

VIII. CONSENT ITEMS (Continued)

Mr. Bernstein made a motion to approve staff's recommendation, Mr. Kehoe seconded.

Mr. Santos made a substitute motion, Mrs. Sanchez seconded, to revise and approve a 30-day extension of time to the May 2019 Board meetings for the Joint Organizational Governance Committee (JOGC) to present a recommendation for revisions to the JOGC Charter. The motion passed unanimously (roll call) with Messrs. Bernstein, Green, Kehoe, Moore, Okum and Santos and Mrs. Sanchez voting yes.

- E. Recommendation that the Board approve attendance of Board members at the INCA Investments Latin American Investment Conference on October 16–17, 2019 in Buenos Aires, Argentina and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy. (Placed on the agenda at the request of Mr. Santos)  
(Memo dated March 29, 2019)
- F. Recommendation that the Board approve attendance of Board members at the National Association of Securities Professionals 30<sup>th</sup> Annual Pension and Financial Services Conference on June 24 –26, 2019 in Baltimore, Maryland and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy. (Placed on the agenda at the request of Mr. Moore)  
(Memo dated April 1, 2019)
- G. Recommendation that the Board approve attendance of Board members at the 2019 Fortune Brainstorm Tech Conference on July 15 –17, 2019 in Aspen, Colorado and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy. (Placed on the agenda at the request of Mr. Green)  
(Memo dated April 1, 2019)

VIII. CONSENT ITEMS (Continued)

- H. Recommendation that the Board approve attendance of Board members at the National Association of Corporate Directors Boot Camp for Aspiring Public Company Directors on May 13, 2019 in New York, New York and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.  
(Placed on the agenda at the request of Mrs. Sanchez)  
(Memo dated April 1, 2019)

IX. NON-CONSENT ITEMS

- A. Recommendation as submitted by Vache Mahseredjian, Principal Investment Officer: That the Board terminate the current Fixed Income Emerging Manager search and issue a new Request For Proposal after the scheduled update of LACERA's Emerging Manager Policy consistent with the new EMP adopted by the Board.  
(Memo dated March 29, 2019)

Messrs. Grabel and Mahseredjian were present and answered questions

from the Board.

Mr. Santos made a motion, Mrs. Sanchez seconded, to terminate the current Fixed Income Emerging Manager search and issue a new Request For Proposal after the scheduled update of LACERA's Emerging Manager Policy consistent with the new EMP adopted by the Board. The motion passed unanimously.

- B. Recommendation as submitted by Jude Perez, Principal Investment Officer, Chad Timko, Senior Investment Officer and Dale Johnson, Investment Officer: That the Board approve Parametric Portfolio Associates LLC to manage a passive cash overlay mandate and approve Alphaengine Global Investment Solutions to run a "paper" active cash overlay portfolio on the total Fund for six months.  
(Memo dated by March 28, 2019)

Mrs. Sanchez recused herself and exited the Boardroom.

Messrs. Grabel, Perez, Johnson and Timko were present and answered

IX. NON-CONSENT ITEMS (Continued)

questions from the Board.

Mr. Green made a motion, Mr. Santos seconded, to approve Parametric Portfolio Associates LLC to manage a passive cash overlay mandate and approve Alphaengine Global Investment Solutions to run a “paper” active cash overlay portfolio on the total Fund for six months. The motion passed unanimously.

- C. Recommendation as submitted by Steven P. Rice, Chief Counsel: That the Board review and approve the Teleconference Meeting Policy.  
(Memo dated April 1, 2019)

Mr. Steven Rice was present and answered questions from the Board.

Mr. Bernstein made a motion, Mr. Santos seconded to receive and file the Teleconference Meeting Policy.

Mr. Kehoe made a substitute motion to remove the exclusions from joint meetings and restricting it that it’s at the request of the Board member and if that doesn’t work then it would be the Chairs determination, the motion failed without a second.

The motion to receive and file the Teleconference Meeting Policy passed with Mr. Kehoe voting no.

X. REPORTS

- A. Investment Procedures Manual  
Jude Perez, Principal Investment Officer  
(Memo dated March 27, 2019)

Messrs. Grabel, and Perez and Ms. Elijah provided a brief presentation and answered questions from the Board.

X. REPORTS (Continued)

- B. Emerging Manager Policy Review  
Ted Wright, Principal Investment Officer  
Vache Mahseredjian, Principal Investment Officer  
(Memo dated March 27, 2019)

Messrs. Mahseredjian, Wright and Mr. Festino of Meketa Investment

Group provided a brief presentation and answered questions from the Board.

The following items were received and filed:

- C. Principles for Responsible Investment Election Ballot  
Scott Zdrazil, Senior Investment Officer  
(For Information Only) (Memo dated March 26, 2019)
- D. Private Equity Secondary Sale Summary Report  
Christopher Wagner, Principal Investment Officer  
David Simpson, Investment Officer  
(For Information Only) (Memo dated March 29, 2019)
- E. Board Self-Evaluations in Closed Session: Action Plan for Legislative Proposal  
Barry W. Lew, Legislative Affairs Officer  
(For Information Only) (Memo dated March 29, 2019)
- F. Implementation Update on LACERA Pension Trust Strategic Asset Allocation  
Jonathan Grabel, Chief Investment Officer  
(For Information Only) (Memo dated March 29, 2019)
- G. Private Equity Eight Percent Preferred Return Hurdle  
Christopher Wagner, Principal Investment Officer  
Didier Acevedo, Investment Officer  
(For Information Only) (Memo dated March 28, 2019)
- H. Oaktree Capital Management — Organizational Update  
Vache Mahseredjian, Principal Investment Officer  
Jeff Jia, Senior Investment Analyst  
(For Information Only) (Memo dated April 1, 2019)

X. REPORTS (Continued)

I. Sexual Harassment Prevention Training for Trustees  
John Nogales, Director, Human Resources  
Roberta Van Nortrick, Training Coordinator  
(For Information Only) (Memo dated March 29, 2019)

J. Monthly Status Report on Legislation  
Barry W. Lew, Legislative Affairs Officer  
(For Information Only) (Memo dated April 1, 2019)

K. Monthly Status Report on Board of Investments Legal Projects  
Steven P. Rice, Chief Counsel  
(For Information Only) (Memo dated April 1, 2019)

L. March 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 April 1, 2019)

XI. ITEMS FOR STAFF REVIEW

There was nothing to report.

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

Mr. Green shared his experience in attending and participating as a panelist at the premier of a new movie called FOSTER which will premiere on HBO on May 7, 2019.

Mr. Santos shared his experience in attending the USC Latino Alumni event and thanked Mr. Kehoe for the invitation and suggestion.

Mr. Moore shared that he is on the Board of Los Angeles Child Guidance Clinic and next month on May 8, 2019 is the official grand opening of the Life Learning Center. It's a \$6 million project where they are building the first ever operation that is targeting 16-25 year old transitional age youth and offering a whole array of services that address

XII. GOOD OF THE ORDER (Continued)  
(For information purposes only)

the issues of homelessness, poverty, education and transition from the foster care system into the regular world and providing a whole array of services to support those young people. This will be the first and only facility in the county and will be able to service about 300 kids at a time.

Mrs. Sanchez shared that she has been named the co-chair of the 100<sup>th</sup> Anniversary for Save the Children. The 100<sup>th</sup> Anniversary gala will be in October.

Mr. McCourt thanked staff for attending the Meketa Conference.

XIII. EXECUTIVE SESSION

A. Conference with Staff and Legal Counsel to Consider the Purchase or Sale of Particular, Specific Pension Fund Investments  
(Pursuant to California Government Code Section 54956.81)

1. VINCI CAPITAL PARTNERS III, L.P. TERMS  
REAPPROVAL

Messrs. Wagner, Simpson and Mr. Fernandez of StepStone provided a presentation and answered questions from the Board.

Mr. Santos made a motion, Mr. Green seconded, to reapprove the \$75 million commitment to Vinci Capital Partners III, L.P., following discussion of updated terms of the investment. Vinci is a Brazilian middle market private equity investment. The investment had previously been approved and publicly reported at the February 13, 2019 meeting. The motion passed (roll call) with Messrs. Bernstein, Green, Moore, Okum, Santos and Mrs. Sanchez voting yes and Mr. Kehoe voting no. Messrs. Kelly and Muir were absent.



XIII. EXECUTIVE SESSION (Continued)

2. TA ASSOCIATES XIII, L.P.

Mr. Okum made a motion, Mr. Green seconded, to approve a commitment of up to \$150 million to TA Associates XIII, L.P., which is a private equity venture capital growth investment focused on minority and control-oriented transactions in North America, Europe, and Asia. The fund will target businesses in technology, healthcare, financial services, consumer, and business services. The motion passed unanimously (roll call) with Messrs. Bernstein, Green, Kehoe, Moore, Okum, Santos and Mrs. Sanchez voting yes. Messrs. Kelly and Muir were absent.

3. Unknown Number – OPEN RFP

The Board discussed an open request for proposals. The Board took action. However, there is nothing to report at this time. The action will be reported out at the appropriate time under the Brown Act.

B. Conference with Legal Counsel - Anticipated Litigation  
Initiation of Litigation (Pursuant to Paragraph (4) of  
Subdivision (d) of California Government Code Section 54956.9)

1. Case One

The Board met with counsel under Government Code Section 54956.9(d)(4) to discuss anticipated litigation. There is nothing to report at this time.

2. Case Two

The Board met with counsel under Government Code Section 54956.9(d)(4) to discuss anticipated litigation. There is nothing to report at this time.

XIII. EXECUTIVE SESSION (Continued)

- C. Conference with Legal Counsel - Existing Litigation  
(Pursuant to Paragraph (1) of Subdivision (d) of Government Code  
Section 54956.9)

1. *LACERA v. BHP Billiton Limited, et al, etc.*  
Victoria Registry, Federal Court of Australia  
Case No. VID1218/2018  
(For Information Only)

The Board received an information only report from counsel under Government Code Section 54956.9(d)(1). There is nothing to report out.

2. *Cal Fire Local 2881 v. CalPERS et al.,*  
California Supreme Court  
Case No. S239958  
(For Information Only)

The Board received an information only report from counsel under Government Code Section 54956.9(d) (1). There is nothing to report out.

XIV. RECOGNITION

- A. National Association of Securities Professionals –  
FAST Track Program

Participating students from Crenshaw High School's Business and Entrepreneurship Academy and mentors from the F.A.S.T. Program were recognized and introduced to the Board.

XV. ADJOURNMENT

There being no further business to come before the Board, the meeting was adjourned at 2:14 p.m.

April 10, 2019

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

1. StepStone Group Organizational Update (For Information Only) (Memo dated April 3, 2019)
2. Blackrock – Organizational Update (For Information Only) (Memo dated April 4, 2019)

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WAYNE MOORE, SECRETARY

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SHAWN KEHOE, CHAIR



April 22, 2019

TO: Each Member  
Board of Retirement  
Board of Investments

FROM: Lou Lazatin  
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.

### **Thoughts on Preserving Healthcare**

During the April Joint Organizational Governance Committee meeting FY 2019-2020 budget discussion, the Committee expressed concerns and confusion regarding the use of the term "Transforming Healthcare" in the budget. Reflecting on the comments, it would be best if we change the terminology and provide some insight into our intended approach to Retiree Healthcare. Going forward we are proposing the use of the term "Preserving Retiree Healthcare" which is more in line with the intent behind the previous terminology.

I recognize we have an extremely beneficial and long running arrangement with the County of Los Angeles to provide healthcare to all LACERA retirees. The Retiree Healthcare plans we offer reflect the shared values of LACERA and Los Angeles County and demonstrate our commitment to taking care of and providing for our retired members and their families. The use of the previous terminology was never meant to imply a deviation or dissatisfaction with LACERA's current agreement with the Los Angeles County.

Rather, the intent was to share a vision of making positive and opportunistic moves to preserve the future of retiree healthcare. There are many steps LACERA can consider taking that will help keep costs down, improve access to services and the overall health for our members. We intend to open an ongoing dialogue with your Boards on what steps we may take in the future, to preserve and improve our services.

For example, LACERA may choose to focus its efforts on addressing the cost of prescription drugs. Recently, Governor Newsom announced the formation of a partnership between the state of California and the LA County Board of Supervisors to work together to negotiate lower prescription drug costs with the manufacturers. LACERA may explore supporting or partnering with the State and County on this initiative. With drug costs being a contributor to rising costs, working together on this effort may prove extremely beneficial to the continued sustainability of the retiree healthcare system.

LACERA has long recognized healthier active employees lead to healthier retired employees. We may choose to partner with the County to coordinate messaging and education to active members on the importance of adopting and maintaining good health habits as they work towards their retirement goals. The earlier we can encourage members and their families to adopt active and healthy habits the more likely they will remain in good health longer into their retirement years which in turn helps keep costs down.

LACERA can also continually look at ways to provide better service to our members. Your Boards have been very supportive in our continuing proactive steps to provide more support to the Retiree Healthcare operations by adding staff to the Retiree Healthcare Call Center and expanding their access to modern technology. In this year's budget request, we are also proposing the addition of an accountant who will report to Retiree Healthcare, but operate under the guidance of our Chief Financial Officer to improve our auditing and billing. There are many additional ways we may consider expanding and improving the already good service we provide to our members.

By taking innovative proactive steps to keep costs down and improve the services we provide today; we help preserve our valuable plans so all LACERA members (current and future) can rest easy knowing we will be there for them – as promised.

### **Legislative Visits to Sacramento**

The March CEO Report shared a short recount of the recent visit that Barry Lew, Legislative Analyst, LACERA, Joe Ackler and Naomi Padron, LACERA's Legislative Lobbyists, and myself had with legislative representatives, their staff, and Governor Newsom's staff in Sacramento. As you may recall, the purpose of our visit was to form connections with our representatives and to educate them about the LACERA story: our history, the valuable benefits we offer our members, the positive impact those benefits have on local economies, and the sound management your Boards and our staff have conducted over the years that has led to LACERA being one of the better funded plans in the state.

The conversations were informative and substantial and it is my pleasure, as requested, to share with your Boards, some of the takeaways from the conversations we held:

- One common theme among the representatives were the benefits and challenges of Environmental and Social Governance (ESG) efforts. There was an acknowledgement of the tensions between politics and investments. Specifically, the challenges created by politically driven impact and divestiture efforts in CalPERS' ability to maximize returns. The legislators recognized that the primary focus of a retirement system should be on earning a sufficient rate of return to pay the promised benefits.
- We had a productive meeting with a member of Senate Chair Jerry Hill's staff who was interested in how we balance risk vs. reward in order to outperform the market. We took this opportunity to share LACERA's story about diversification through our asset allocation policy.
- Our meeting with Senator Robert Hertzberg focused on our shared belief that defined benefit plans are the best vehicle to provide for a secure retirement and that defined contribution plans, while important, cannot meet the needs of retirees. We discussed the need to find new and innovative ways to position this narrative politically to ensure the future of defined benefit plans.
- Many of the representatives were very interested in the demographic membership within their respective districts. We committed to providing this information to them.

### **Credit Card Policy**

In our April CEO Report, we announced that we had completed an update to the LACERA Credit Card Policy. The revised policy provides updated and clearer procedures for how staff members assigned a credit card should be reporting and approving transactions. The policy, designed solely for LACERA's administrative staff members, provides stronger oversight controls to ensure compliance with the policy. Like the previous Credit Card Policy, it retains similar restrictions on the types of purchases that are allowed and supports the existing Procurement Policy and Education & Travel Policy. Financial and Accounting Services Division will be discussing the Credit Card Policy in more detail during this month's Operations Oversight Committee meeting.

### **Update on Our Focus on Strategic Plan Goals and Operations Improvement**

The Workgroups focusing on the top four Strategic Plan goals continue to meet regularly to move our goals forward. Here is a summary of the current status of their efforts:

- **Case Management Capabilities:** This redefined goal brings together at least three Strategic Plan goals (Case Management, Job Ticket, and Disability Writ Processing) and will positively impact at last seven divisions. The cross-functional workgroup consisting of the Legal Office, Disability Retirement Services (DRS), Disability Litigation, the Executive Office, Member Services, Benefits, Retiree Healthcare and Quality Assurance continue to meet weekly to move this critical project forward. All seven divisions have provided their initial input and Systems has compared and developed the initial assessment document. The workgroup is now developing a presentation for the June 2019 Operations Oversight Committee meeting to discuss the project and plans for the next phase. Weekly meetings involving Systems, Disability Retirement Services, and Disability Litigation are on-going to keep this project on track.
- **LACERA.com Redesign:** This workgroup is headed up by Communications and consists of members from Benefits, Disability Retirement Services, the Executive Office, Financial Accounting Services, Internal Audit, Investments, the Legal Office, Member Services, Retiree Healthcare, and Systems. The Workgroup focusing on this Strategic Plan goal meets regularly and recently finalized their project plan. The Workgroup's targeted launch date is March 30, 2020. The team recently introduced their proposed site architecture and Systems is modifying the current prototype to fit the revised architecture. A working wireframe prototype (a prototype designed to show how data and topics will be organized and how the site will be navigated) is scheduled to be completed by May 15, 2019. This prototype will be shared internally to solicit feedback on the site navigation. The next step is the complete review of all data and text on the website, which currently represents over 400 pages of text. We have attached the finalized project plan to this report.
- **Retirement Estimate Redesign Project:** The workgroup, consisting of members from Member Services, Benefits, Communications, Quality Assurance, Systems, the Executive Office, and the Legal Office, is making progress on defining the design for the new Retirement Application and Election form. Communications has taken all of the feedback generated by the team and developed a preliminary design. The team has completed the first review stage and Communications and the team are now working on finalizing the content with a completion goal of mid-May 2019. Following this step, the team will develop a "working model" that includes all the relevant text, which will be circulated internally for comment. The team's target date for launch of the new "Retirement Application" is scheduled for late August 2019. Phase II of this project will be to develop the on-line election process.
- **PEPRA Implementation:** This workgroup continues reviewing all the progress made to date on the implementation of the Public Employees Pension Reform Act of 2013 and subsequent updates to the act passed since then. The team is proud to announce that we

have completed the implementation of the Felony Forfeiture Appeal process. This completes a major milestone for this project. The Workgroup continues to work with the Auditor-Controller's office to address the issue with the County payroll codes. As you may recall, for LACERA to readily assess what portion of an employee's total compensation is pensionable or not, the payroll code 099 must be made more transparent so it is easier to identify the pay codes that are embedded in this code. The Auditor-Controller is focused on helping LACERA address this problem, but has recently advised us of unanticipated delays. In the meantime, the Workgroup is focusing on another part of this goal, which intersects with another Strategic Plan goal: the redesign of the Annual Benefit Statement (ABS). Our current statement only supports legacy plan members and is not supported for PEPRA members. Considerable progress was already made on the redesign efforts by the Communications team. As Communications works to finalize the design, the Workgroup has begun development of an RFP for the Operations Oversight Committee's consideration to find a vendor to produce the new ABS. The Workgroup consists of members from Benefits, Communications, the Executive Office, Internal Audit, the Legal Office, Member Services, Quality Assurance, and Systems.

My goal is to continue to keep the Boards updated on other cross-functional teams that are working hard to provide improvements to LACERA's operations and the services we provide to our members.

- **Matter/Knowledge Management System:** Investments, Legal Services, and Systems submitted their Wolter Kluwers TyMetrix T360 request for approval at the April 2019 Operations Oversight Committee (OOC) meeting. The OOC voted to recommend approval to the Board of Retirement (which will be considered in May 2019). KMS allows our staff to view all information on a vendor in one place, including contact information, meeting notes, billing, contracts, and other important documents. Currently, Legal and Investments use a patchwork of Microsoft based applications as well as time-intensive manual process in their daily work. KMS will create an environment where knowledge and work papers could be shared with this bi-divisional team that processes over four hundred investment transactions (partnership agreements, investment management agreements, and NDAs) valued at over \$4B annually. Additionally, the team reviews contracts for the entire organization and responds to over 200 public record requests annually. The BOR approved \$150,000 for KMS software in the FY 2018-2019 budget.
- **Business Continuity:** The workgroup working on this project, which is headed up by our Administrative Services Division, is still in the process of evaluating the new company that has acquired SunGard. The workgroup will review the results of the evaluation



process and determine whether we wish to proceed with the new company or re-bid the project.

- **Telecommuting Policy:** A Workgroup consisting of the Executive Office, Human Resources, and Systems has been established to take another look at allowing telecommuting. The Workgroup is currently surveying Division Management to determine what positions should be considered for telecommuting and what data/system access would be needed to support the need. We will continue to keep the Boards' updated on the progress of this goal.

### **Upcoming Retirement**

John Nogales, Director of Human Resources has provided a formal notification of his intent to retire by September 2019. Recruitment of his replacement will be initiated and updates will be provided to the Boards regularly.

LL: jp  
CEO report May 2019.doc

Attachments







# Striving for Excellence in Service



**Outreach Attendance**  
**2,833**

29,101 Year-to-Date



**Outreach Events**  
**24**

304 Year-to-Date



**Outreach Satisfaction**  
**96.5%**

2.5% Change Since Last Mo.



**Member Service Center**  
**100.0%**

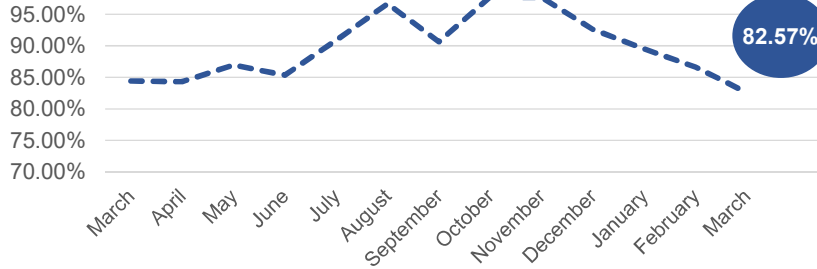
0.0% Change Since Last Mo.



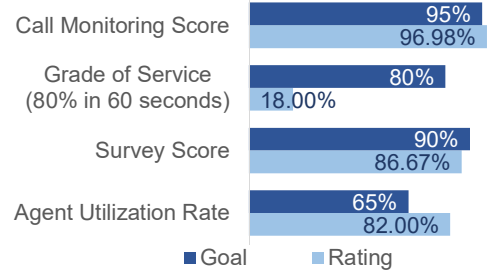
**Member Services Calls**  
**14,541**

14,048 3 Mo. Avg.

## Key Performance Indicator (Overall Performance)



## Key Performance Indicator (Components)



Member Services



■ Calls Answered ■ Calls Abandoned

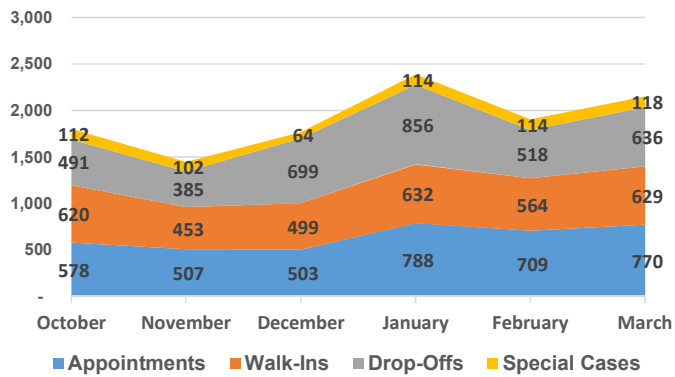
## Top Calls

1. Workshop Info./Appointments: Inquiry
2. Retirement Counseling: Process Overview
3. Benefit Payments: Gen. Inquiry/Payday Info

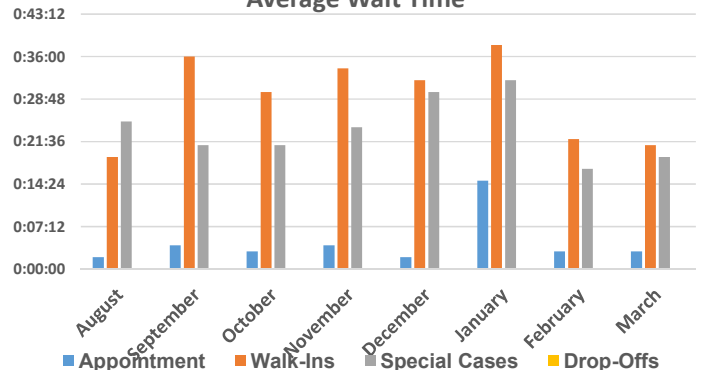


**472 Emails**  
**5:16 hours**  
Avg. Response Time (ART)

## Member Service Center Visits



## Member Service Center Average Wait Time

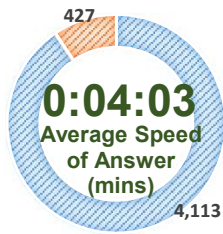


\*Drop Off Wait Time: No Waiting



**Total RHC Calls: 4,540**

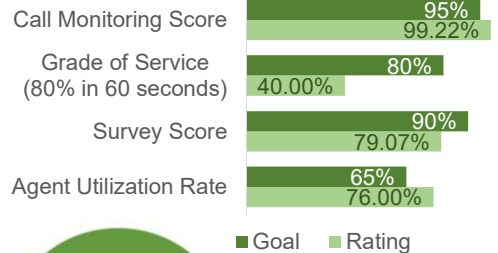
Retiree Healthcare



■ Calls Answered ■ Calls Abandoned

## Top Calls

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



**250 Emails**  
**1 day**  
Avg. Response Time (ART)

## Striving for Excellence in Service (Continued)

### Applications

**517**

On Hand

69 Received  
 380 Year-to-Date  
 0 Re-opened  
 0 Year-to-Date  
 51 To Board - Initial  
 402 Year-to-Date  
 3 Closed  
 24 Year-to-Date  
 532 In Process  
 532 Year-to-Date

### Appeals

**99**

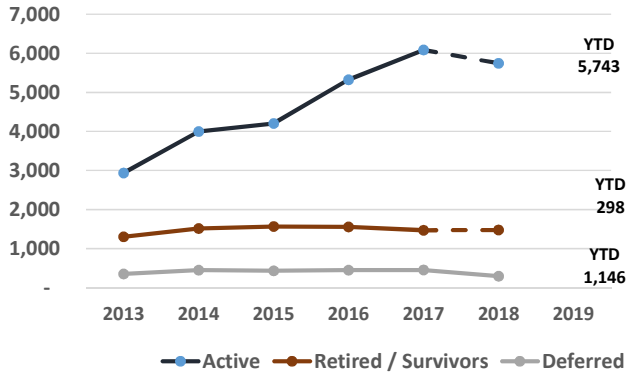
On Hand

4 Received  
 21 Year-to-Date  
 3 Admin Closed/Rule 32  
 14 Year-to-Date  
 0 Referee Recommended  
 9 Year-to-Date  
 0 Revised/Reconsidered for Granting  
 4 Year-to-Date  
 100 In Process  
 99 Year-to-Date

Disability

### My LACERA Registrations

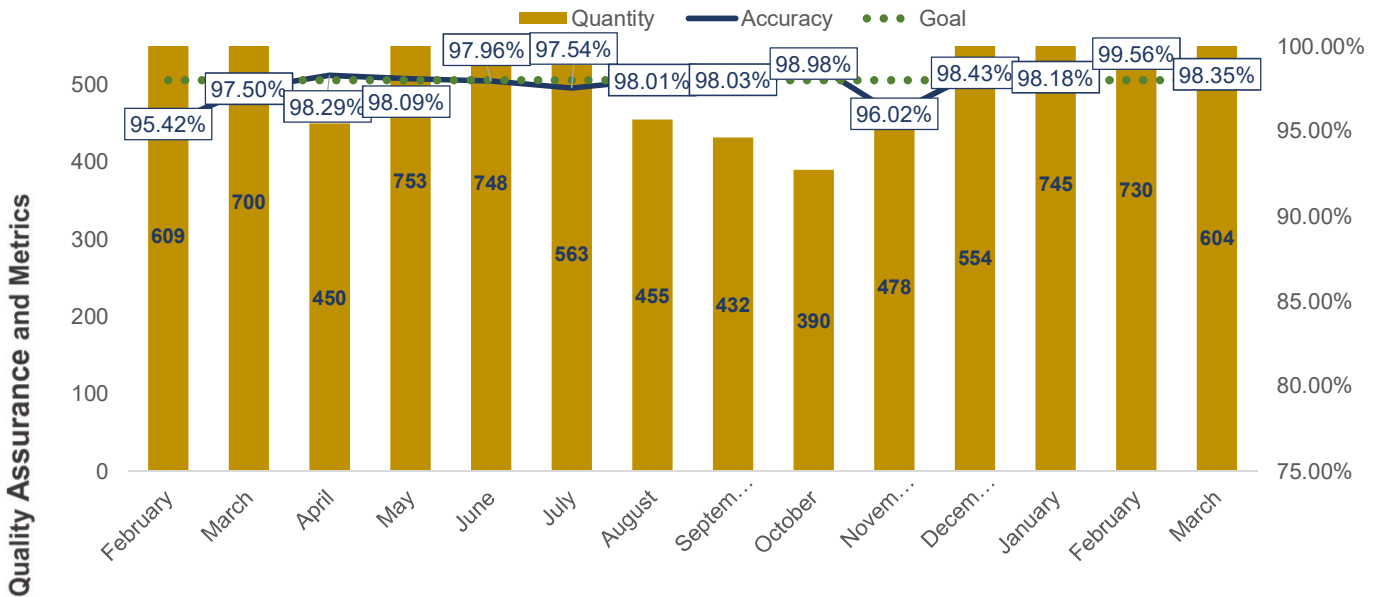
My LACERA



MORE COMING SOON!

## Striving for Excellence in Quality

### Audits of Retirement Elections, Payment Contracts, and Data Entry



**March 2019**



**98.35%**

#### Retirement Elections

**344** Samples  
**97.41%** Accuracy

#### Payment Contracts

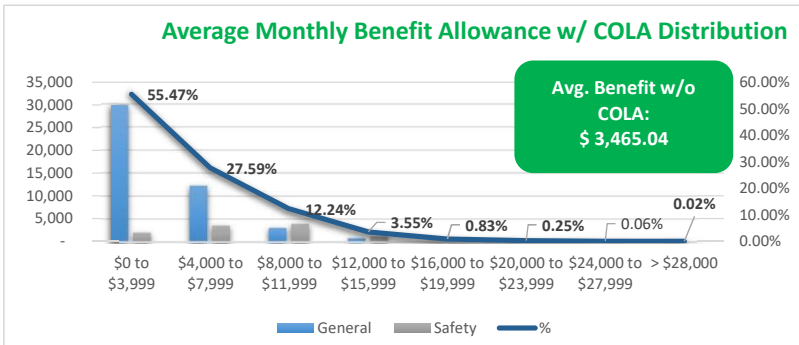
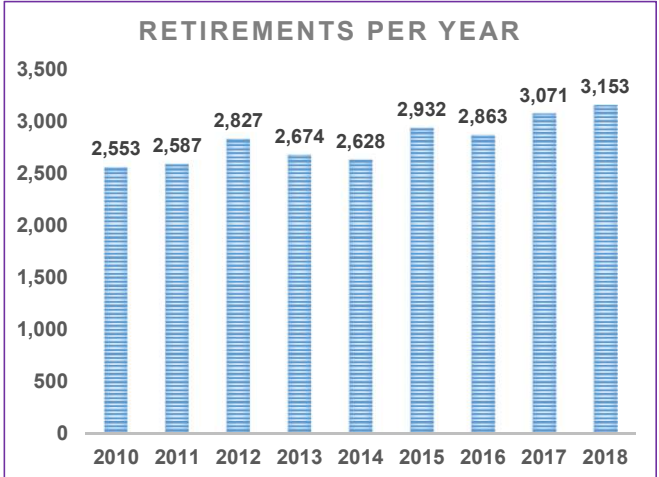
**87** Samples  
**98.03%** Accuracy

#### Data Entry

**90** Samples  
**99.61%** Accuracy

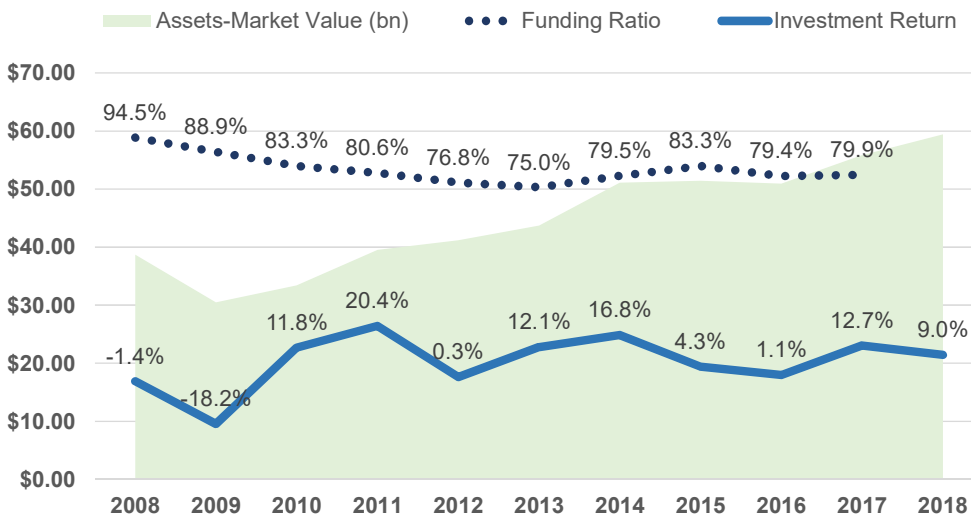
## Member Snapshot

		Members as of 04/12/19				
		Plan	Active	Retired	Survivors	Total
General	Plan A		115	16,999	4,454	21,568
	Plan B		40	681	67	788
	Plan C		47	426	67	540
	Plan D		42,417	15,044	1,390	58,851
	Plan E		17,731	12,805	1,166	31,702
	Plan G		26,174	21	1	26,196
	<b>Total General</b>			<b>86,524</b>	<b>45,976</b>	<b>7,145</b>
Safety	Plan A		5	5,316	1,586	6,907
	Plan B		9,984	5,644	280	15,908
	Plan C		2,928	8	0	2,936
	<b>Total Safety</b>			<b>12,917</b>	<b>10,968</b>	<b>1,866</b>
<b>TOTAL MEMBERS</b>			<b>99,441</b>	<b>56,944</b>	<b>9,011</b>	<b>165,396</b>
<b>% by Category</b>			<b>60%</b>	<b>34%</b>	<b>5%</b>	<b>100%</b>



Healthcare Program (YTD)		Healthcare Enrollments (Monthly)	
	Employer	Member	
Medical	\$383.3m	\$32.1m	Medical 50,373
Dental	\$32.8m	\$3.3m	Dental 51,604
Part B	\$47.2m	xxxx	Part B 33,968
<b>Total</b>	<b>\$463.2m</b>	<b>\$35.4m</b>	<b>Total LTC 646</b>
			<b>Total 136,591</b>

## Key Financial Metrics



### Funding Metrics (as of 6/30/18)

Employer NC	9.92%
UAAL	10.99%
Assumed Rate	7.25%
Star Reserve	\$614m
Total Assets	\$56.3b

### Contributions (as of 6/30/18)

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

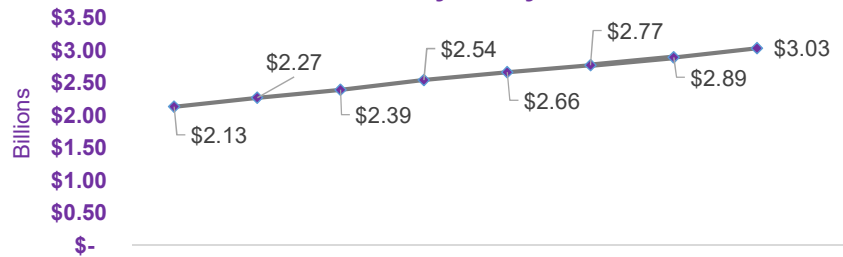
### TOTAL FUND RETURN (Net of Fees)

**5 YR: 8.5%    10 YR: 6.3%**

### Retired Members Payroll

Monthly Payroll	\$285.3m
Payroll YTD	2.5b
New Retired Payees Added	356
Seamless %	99.44%
New Seamless Payees Added	2,787
Seamless YTD	98.35%
By Check %	4.00%
By Direct Deposit %	96.00%

### Retiree Payroll by Year



Date	Conference
<b>June, 2019</b>	
10-14 (Date change)	Investment Strategies & Portfolio Management (prev. Pension Fund & Investment Mgmt.) Wharton School, University of Pennsylvania
7	CALAPRS (California Association of Public Retirement Systems) Round Table – Trustees Marriott Burbank Airport
7	CALAPRS (California Association of Public Retirement Systems) Round Table – Benefits Marriott Burbank Airport
17-18	NACD Advanced Director Professionalism Program Chicago, IL
19-20	PREA (Pension Real Estate Association) Institute 2019 York University – Schulich School of Business Toronto, Ontario, Canada
19-21	AHIP (America’s Health Insurance Plans) Institute Nashville, TN
24-25	Global Investors Annual Meeting New York, NY
24-25	KKR’s 2019 Americas Investors’ Meeting Palos Verdes, CA
24-26	IFEBP Public Employee Benefits Institute San Francisco, CA
24-26 (Date change)	National Association of Securities Professionals (NASP) 30 <sup>th</sup> Annual Pension & Financial Services Conference Baltimore, MD
24-26	SuperReturn Emerging Managers Markets Conference Amsterdam, Netherlands
26-27	AVCJ Private Equity & Venture Forum Tokyo, Japan
<b>July, 2019</b>	
10-12	Pacific Pension Institute (PPI) North American Summer Roundtable Chicago, IL
15-17	2019 Fortune Brainstorm Tech Conference Aspen, CO
<b>August, 2019</b>	
26-29	CALAPRS (California Association of Public Retirement Systems) Principles of Pension Management for Trustees Pepperdine University



May 6, 2019

TO: Each Member  
Board of Investments

FROM: Jon Grabel   
Chief Investment Officer

SUBJECT: **CHIEF INVESTMENT OFFICER'S REPORT—MARCH 2019**

At the beginning of year, the CIO Report introduced a new format that varies from the previous memoranda by incorporating three changes. First, the section titled “Updates” has been replaced with a new segment called “Delegated Authority.” This section serves to update the Board on monthly activities that derive from specific investment authority and responsibility directly delegated to the CIO by the Board as described in the Investment Policy Statement, as well as completed actions from approved recommendations. Second, a new area that will highlight specific and different areas within the Investment Division on a monthly basis called “Investment Division Spotlight” has been added to the report. Lastly, the section pertaining to investment manager meetings has been moved to the quarterly “Compliance Monitor” report.

The following memorandum and attachments constitute the CIO report for March 2019. **Attachment 1** presents summary investment information including market values, actual and target allocations, and returns. **Attachment 2** is a summary investment report for the OPEB Master Trust. A list of all current applicants for public investment-related searches is included as **Attachment 3** and will be provided on a monthly basis to identify firms with whom LACERA is in a quiet period. **Attachment 4** summarizes compliance regarding asset allocations, portfolio guidelines, and other policies across the Total Fund for the most recent quarter.

### **PERFORMANCE**

The Total Fund finished the month with an investment balance of approximately \$57.0 billion.<sup>1</sup> The month had a return of 1.0%. For fiscal year to date, the Total Fund is up 3.3% net of fees.

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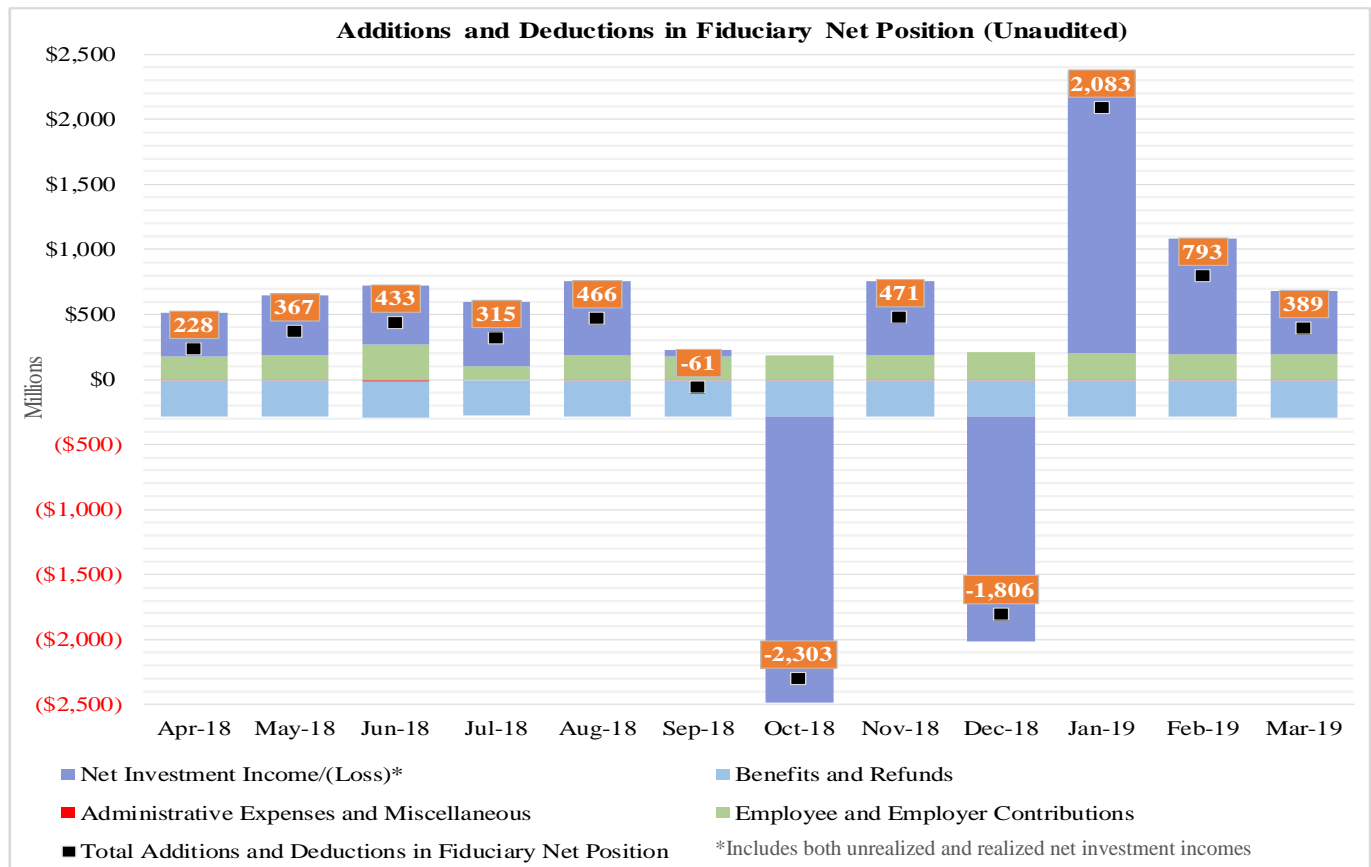
<sup>1</sup> For months that coincide with calendar quarter end, the Total Fund value is calculated using the custodian’s quarter-end market values for all asset classes. For inter-quarter periods, the Total Fund value is calculated using the custodian’s month-end market value for all asset classes except for private equity and real estate. Private equity and real estate market values are calculated by adjusting the preceding quarter-end market value for subsequent cash flows.

The OPEB Master Trust generated a positive return in March. For the month, the L.A. County, LACERA and Superior Court funds had a net gain of 1.1%. Fiscal year to date, the L.A. County and LACERA funds are up 2.8% and the Superior Court fund is up 2.6% net of fees.

### CASH FLOWS, CASH BALANCES, AND FIDUCIARY NET POSITION<sup>2</sup>

As illustrated in Chart 1 below, included to provide detail on the sources of monthly transactional flows, the Plan’s Fiduciary Net Position increased by \$388.6 million during the month of March. Over the last twelve months, the Plan’s incremental net position is up \$1.4 billion.

*Chart 1: Additions and Deductions in Fiduciary Net Position (Unaudited)*



With respect to cash, LACERA finished the month of March with approximately \$1.5 billion in the Fund’s primary operating account, as reported by the master custodian and identified as “cash” on various Total Fund reports. There was additional cash held in internal accounts dedicated to asset categories with frequent cash flows as well as cash held by select external managers. As illustrated in Chart 2, LACERA held a total

<sup>2</sup> LACERA’s fiduciary net position is an unaudited snapshot of account balances as of the preceding month end and reflects assets available for future payments to retirees and their beneficiaries, including investment fund assets, as well as any liabilities owed as of the report date. The Plan’s net position is inclusive of both investment and operational net assets, while the Total Fund’s position includes investment net assets only.

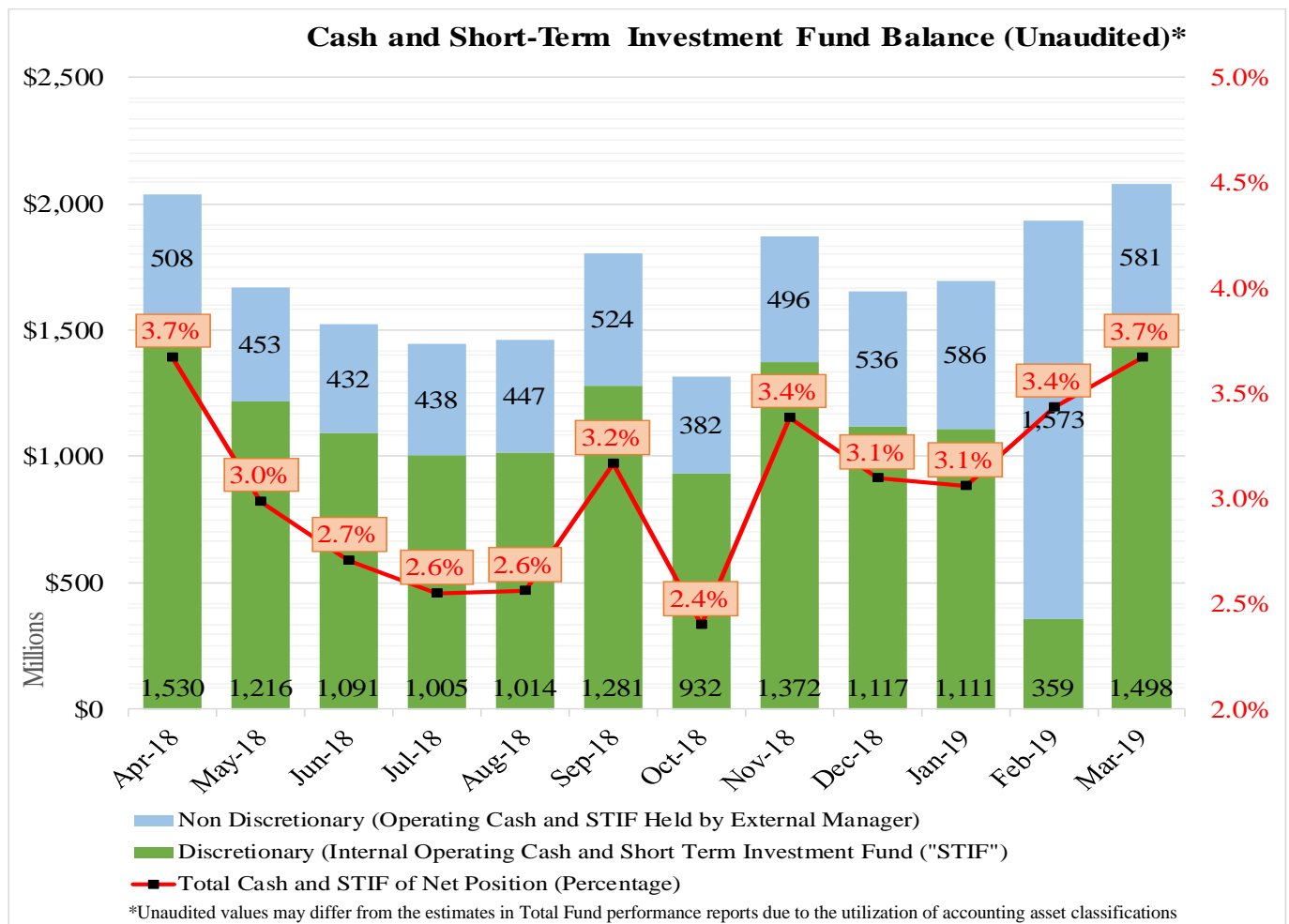
of \$1.5 billion of internal operating cash and short-term investments across all of its operating accounts and LACERA’s external investment managers held a further \$581.2 million in cash and short-term investments.

In total, LACERA held approximately \$2.1 billion in cash and short-term investment funds at the end of March, which can be categorized as follows:

- Non-discretionary (operating cash and Short Term Investment Fund (“STIF”) balances held by external investment managers): \$581.2 million
- Discretionary (internal operating cash and STIF balances accessible for the daily operating needs of the Plan): \$1.5 billion

The Fund’s total cash and short-term investment fund balance represented 3.7% of the Plan’s unaudited net position, while its discretionary cash and short-term investment fund balance represented 2.6% of the Plan’s unaudited net position.

*Chart 2: Cash and Short-Term Investment Fund Balance (Unaudited)*



The following table (Table 1) provides a summary of cash flows at the asset category level. For the month of March, the Total Fund had net investment inflows totaling \$1.2 billion.

*Table 1: Asset Category Cash Flows*

<b>Asset Category and Activity</b>	<b>Total (in \$ millions)</b>	<b>Cash Impact</b>
<b>PRIVATE EQUITY</b>		
Distributions	87.9	Inflow
Capital Calls	-112.2	Outflow
<b>Total Net Activity</b>	<b>-24.3</b>	<b>Net Outflow</b>
<b>PUBLIC EQUITY: U.S.</b>		
Distributions	3.2	Inflow
Contributions	0.0	n/m
<b>Total Net Activity</b>	<b>3.2</b>	<b>Net Inflow</b>
<b>PUBLIC EQUITY: NON-U.S.</b>		
Distributions	852.6	Inflow
Contributions	0.0	n/m
Currency Hedge	8.9	Inflow
<b>Total Net Activity</b>	<b>861.5</b>	<b>Net Inflow</b>
<b>FIXED INCOME</b>		
Distributions	674.8	Inflow
Contributions	-250.0	Outflow
<b>Total Net Activity</b>	<b>424.8</b>	<b>Net Inflow</b>
<b>COMMODITIES</b>		
No Activity	0.0	n/m
<b>Total Net Activity</b>	<b>0.0</b>	<b>n/m</b>
<b>HEDGE FUNDS</b>		
Distributions	0.0	n/m
Contributions	0.0	n/m
<b>Total Net Activity</b>	<b>0.0</b>	<b>n/m</b>
<b>REAL ESTATE</b>		
Separate Account Net Activity	-1.0	Outflow
Commingled Fund Net Activity	-22.4	Outflow
<b>Total Net Activity</b>	<b>-23.4</b>	<b>Net Outflow</b>
<b>Total Fund Net Activity</b>	<b>1,241.8</b>	<b>Net Inflow</b>

The Global Equity asset class realized an \$8.9 million cash inflow from the Non-U.S. Equity currency-hedging program. LACERA's Non-U.S. Equity Investment Policy requires that the developed markets Non-U.S. Equity allocation, currently \$8.3 billion, maintain a passive currency hedge overlay on 50% of its investment value. Note that when the currency overlay program sustains a loss due to a depreciating U.S. dollar, underlying Non-U.S. equity values should be positively impacted. Conversely, in an appreciating U.S. dollar environment, the currency-hedging program will have a gain, while underlying Non-U.S. equity values should be negatively impacted. Due to currency market movements in the previous three months, the currency hedges maturing in early March realized a gain and \$8.9 million was transferred to cash from LACERA's passive currency overlay account. The hedged Non-U.S. Equity portfolio was up 1.0% net of fees, or approximately \$81.4 million during the month. A change in currency valuation is one of many variables that influences returns for a hedged Non-U.S. Equity portfolio. Cash flow from the currency-hedging program and the related equity portfolio can both deliver positive or negative results in a given period due to the staggered rolling of multiple futures contracts across three months.

### **ACTIVE SEARCHES**

This section is intended to keep the Board of Investments apprised of active investment-related searches that include Requests for Proposal (RFP) and Information (RFI). At this time, there are six searches currently underway.

The first search is an RFI issued for real estate administrative services. The RFI was released in November 2018 and responses have been received and are being reviewed. Onsite interviews have been conducted. An update on the search will be presented at the May 2019 BOI meeting.

The second search is an RFP issued for a Total Fund risk system. The RFP was released in January 2019 and responses have been received and are being reviewed. Interviews at LACERA's offices have been conducted.

The third search is an RFP issued for MSCI ACWI IMI index services. The RFP was re-released in April 2019 and responses have been received and are being reviewed.

The fourth search is an RFP issued for syndicated bank loan investment management services. The RFP was released in April 2019 and responses are expected in May 2019.

The fifth search is an RFP issued for factor-based equity investment management services. The RFP was released in April 2019 and responses are expected in May 2019.

The sixth search is an RFP issued for illiquid credit investment management services. The RFP was released in April 2019 and responses are expected in May 2019.

## DELEGATED AUTHORITY

This section provides an update on the monthly activities that derive from specific investment authority and responsibility directly delegated to the CIO by the Board as described in the Investment Policy Statement as well as completed actions from approved recommendations.

- **Completed Actions From Approved Recommendations**
  - Real Estate completed the transfer of assets from TA Associates Realty
  - Fixed Income completed the termination of five managers and transferred approximately \$675 million to cash and \$1.4 billion was reinvested to Core Fixed Income.
  - Public Equity completed the termination of one manager and transferred approximately \$845 million to cash.

## COMPLIANCE MONITOR

Evaluating the Fund's investment portfolios against established policies and guidelines is an integral part of the ongoing portfolio management process and is commonly referred to as compliance. The Fund's portfolio is implemented in a nuanced way across multiple asset categories, so LACERA utilizes a multi-faceted approach to evaluate compliance. A summary of compliance activities across the Total Fund identifying advisory notifications where appropriate is provided on a calendar quarter basis. Compliance categories include allocation target weights, portfolio policies such as the use of leverage, and guidelines for various items such as types of permissible holdings. See attachment 4.

## INVESTMENTS DIVISION SPOTLIGHT

The primary goal of the Investment Division's Fixed Income and Commodities team is to implement the Board's strategic asset allocation. We do this primarily through investment structure; that is, by constructing composites intended to meet the objectives of the Investment Policy Statement. The composite structures reflect the functional categories adopted by the Board in last year's asset allocation. The team is also responsible for manager due diligence in these composites.

**Investment Grade Bonds:** The purpose of Investment Grade Bonds is to reduce risk and provide liquidity by generating income. The primary source of risk in this category is interest rate risk. Consistent with the most recent structure adopted by the board, Investment Grade Bonds category has a target allocation of 80% to Core, and 20% to Core Plus. Indexing is playing an increasingly larger role, with indexed assets representing the majority of the Core allocation.

**Credit:** The role of Credit is to produce current income and moderate long-term return in compensation for accepting credit risk, while providing incremental diversification to the assets in the Growth category. The

subcomponents of Credit are: high yield, bank loans, emerging market debt, and illiquid credit. Manager searches for the two underweight subcomponents—bank loans and illiquid credit—are currently underway. Furthermore, with the on-boarding of LACERA's alternative consultant, Albourne, staff will conduct another more in-depth structure review of Credit and present it to the Board in the third quarter of 2019.

**Cash:** The role of cash is to reduce risk and provide immediate liquidity for paying benefits or for rebalancing.

In addition, the team currently oversees two composites that are in the Real Assets and Inflation Hedges category – **Commodities and TIPS**. The team has overseen the commodities allocation since its inception in 2007, and recently conducted the manager search for TIPS (the manager received its first allocation at the end of April). Over time, these two areas will be transitioned to the Real Assets team.

The team also oversees LACERA's **Securities Lending Program**, in which stocks and bonds that are held in custody by State Street are loaned on a short-term basis to financial institutions, in order to generate incremental income. In 2018, this program generated \$5.8 million, with an average value on loan of \$1.5 Billion. Finally, the team also oversees **two healthcare-related portfolios** (a short-term bond portfolio called Healthcare Reserves and a cash portfolio called Healthcare Premiums) for LACERA's Retiree HealthCare Division.

The team's primary focus is portfolios of bonds, loans, and related instruments whose prices are determined by changes in interest rates. These portfolios represent over 40% of LACERA's assets. However, interest rates serve a central, fundamental role in all of finance because the price of any investment can be viewed as the present value of its expected cash flows, and present values depend, to varying degrees, on interest rates. Therefore, all 100% of LACERA's assets—stocks, bonds, real estate, and alternative investments—are impacted by changes in interest rates.

## APRIL FORECAST

The S&P 500 U.S. equity index reached new highs in April, capping a 7-month period that included a drawdown of approximately 20% and a full recovery. Corporate earnings, economic data, and inflation continues to tell a story of an economy with moderate growth. Central bankers around the world are generally maintaining accommodative interest rate conditions. The Bank of Japan, for example, pledged to keep extremely low interest rates until at least the spring of 2020 and maintained its short-term rate target at -0.1%. Additionally, the U.S. Federal Reserve left rates unchanged and cited a lack of inflation pressure during its April meeting.

As of publication of this report, during the month of April, the MSCI ACWI IMI stock index was up 1.0% while the Bloomberg Barclays Global Aggregate bond index was up 1.3%. The Total Fund will have a positive month.

Each Member, Board of Investments

May 6, 2019

Page 8 of 8

## Attachments

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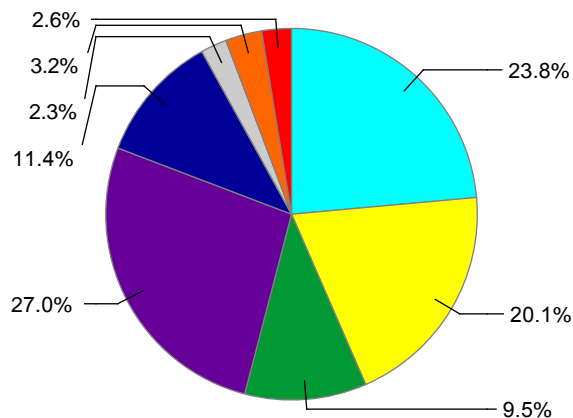
# LACERA'S *ESTIMATED* TOTAL FUND

March 31, 2019



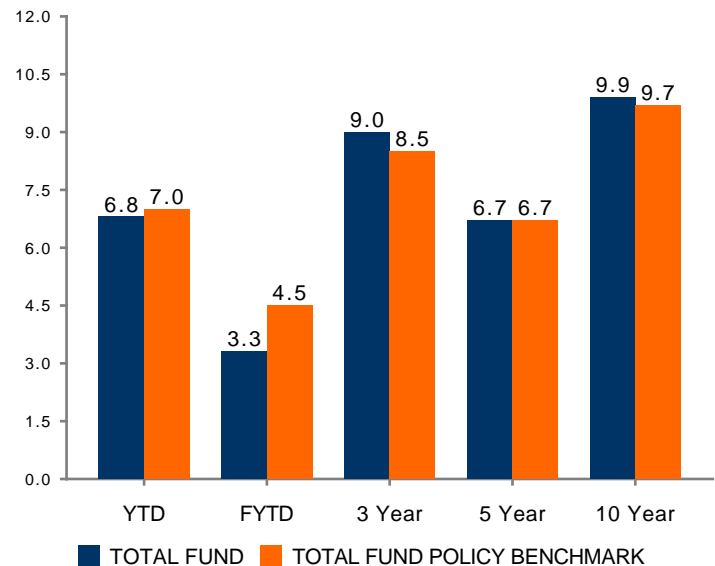
	Market Value (millions)	Actual % Total Fund	Target % Total Fund	TOTAL RETURNS (NET)				
				YTD	FYTD	3 Year	5 Year	10 Year
<b>U.S. EQUITY</b>	<b>13,573.0</b>	<b>23.8</b>	<b>22.7</b>	<b>14.0</b>	<b>3.2</b>	<b>12.7</b>	<b>9.8</b>	<b>15.7</b>
RUSSELL 3000 (DAILY)				14.0	4.7	13.5	10.4	16.0
<b>Non-U.S. EQUITY (Hedged)</b>	<b>11,476.5</b>	<b>20.1</b>	<b>18.7</b>	<b>11.2</b>	<b>-0.7</b>	<b>9.7</b>	<b>4.9</b>	<b>10.5</b>
Custom MSCI ACWI IMI N 50% H				10.7	-1.0	9.1	4.5	10.1
<b>PRIVATE EQUITY</b>	<b>5,440.9</b>	<b>9.5</b>	<b>10.0</b>	<b>-0.2</b>	<b>8.4</b>	<b>14.5</b>	<b>13.5</b>	<b>14.7</b>
PRIVATE EQUITY TARGET <sup>[1]</sup>				4.5	12.6	14.1	13.9	11.3
<b>FIXED INCOME</b>	<b>15,366.0</b>	<b>27.0</b>	<b>27.8</b>	<b>3.5</b>	<b>4.5</b>	<b>4.1</b>	<b>3.5</b>	<b>6.0</b>
FI CUSTOM INDEX				3.3	4.8	2.6	3.0	4.4
<b>REAL ESTATE</b>	<b>6,494.6</b>	<b>11.4</b>	<b>11.0</b>	<b>1.8</b>	<b>7.0</b>	<b>8.3</b>	<b>9.8</b>	<b>5.2</b>
REAL ESTATE TARGET				1.6	5.6	7.7	9.8	7.8
<b>COMMODITIES</b>	<b>1,332.0</b>	<b>2.3</b>	<b>2.8</b>	<b>7.6</b>	<b>-5.6</b>	<b>4.0</b>	<b>-7.6</b>	<b>-0.5</b>
Bloomberg Comm Index TR				6.3	-5.6	2.2	-8.9	-2.6
<b>HEDGE FUNDS <sup>[2]</sup></b>	<b>1,849.7</b>	<b>3.2</b>	<b>5.0</b>	<b>0.7</b>	<b>-0.5</b>	<b>4.4</b>	<b>2.3</b>	
HEDGE FUND CUSTOM INDEX <sup>[2]</sup>				1.8	5.4	6.2	5.7	
<b>CASH</b>	<b>1,481.7</b>	<b>2.6</b>	<b>2.0</b>	<b>0.7</b>	<b>2.0</b>	<b>1.5</b>	<b>1.1</b>	<b>1.4</b>
FTSE 6 M Treasury Bill Index				0.6	1.7	1.2	0.8	0.5
<b>TOTAL FUND <sup>[3]</sup></b>	<b>57,014.5</b>	<b>100.0</b>	<b>100.0</b>	<b>6.8</b>	<b>3.3</b>	<b>9.0</b>	<b>6.7</b>	<b>9.9</b>
TOTAL FUND POLICY BENCHMARK				7.0	4.5	8.5	6.7	9.7
7.25% Annual Hurdle Rate				1.8	5.4	7.3	7.3	7.3

Asset Allocation



■ U.S. EQUITY   
 ■ Non-U.S. EQUITY   
 ■ PRIVATE EQUITY   
 ■ FIXED INCOME  
■ REAL ESTATE   
 ■ COMMODITIES   
 ■ HEDGE FUNDS   
 ■ CASH

Net Returns



[1] Rolling ten-year return of the Russell 3000 plus 500 basis points (one-quarter lag).

[2] One-month lag. Performance included in the Total Fund beginning 10/31/11

[3] Returns for private equity and real estate are calculated on a quarterly basis and are not updated intra quarter. Therefore, 3-, 5- and 10-year returns are only calculated at quarter-end for private equity and real estate. In addition, the Total Fund's returns are based on the latest available quarterly returns for these two asset classes.

These are preliminary returns

Periods greater than 1-year are annualized

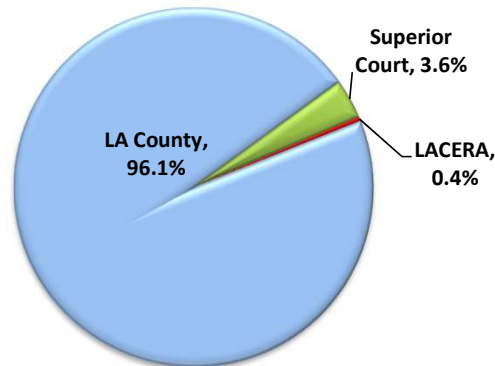
## OPEB MASTER TRUST

March 31, 2019



Fund Name		Inception Date	Market Value (millions)	Trust Ownership	Month	3 Month	FYTD	1 Year	3 Year	5 Year	Since Incept.
Los Angeles County:	Gross	Feb-2013	\$1,113.5	96.1%	1.09	9.28	2.80	4.35	9.98	6.17	5.63
	Net				1.09	9.28	2.80	4.34	9.95	6.13	5.60
	Net All				1.09	9.27	2.76	4.29	9.91	6.08	5.55
LACERA:	Gross	Feb-2013	\$4.3	0.4%	1.09	9.30	2.81	4.33	10.04	6.20	5.66
	Net				1.09	9.30	2.81	4.32	10.01	6.16	5.63
	Net All				1.07	9.23	2.53	3.99	9.24	5.70	5.24
Superior Court:	Gross	Jul-2016	\$41.4	3.6%	1.09	9.27	2.59	4.12	---	---	8.62
	Net				1.09	9.27	2.59	4.11	---	---	8.59
	Net All				1.08	9.24	2.47	3.96	---	---	7.94
<b>TRUST OWNERSHIP TOTAL:</b>			<b>\$1,159.2</b>	<b>100.0%</b>							

Trust Ownership



Fund Name		Inception Date	Market Value (millions)	Trust Ownership	Month	3 Month	FYTD	1 Year	3 Year	5 Year	Since Incept.
OPEB Growth	Gross	Jul-2016	\$576.0	49.7%	1.05	12.37	1.40	2.30	---	---	11.51
	Net				1.05	12.36	1.37	2.26	---	---	11.47
OPEB Credit	Gross	Jul-2018	\$231.1	19.9%	-0.10	4.95	3.00	---	---	---	3.00
	Net				-0.10	4.95	3.00	---	---	---	3.00
OPEB Risk Reduction & Mitigation	Gross	Jul-2016	\$117.9	10.2%	1.56	2.49	4.22	4.94	---	---	2.53
	Net				1.56	2.48	4.21	4.92	---	---	2.49
OPEB Inflation Hedges	Gross	Jul-2018	\$233.9	20.2%	1.96	9.97	3.99	---	---	---	3.99
	Net				1.96	9.95	3.93	---	---	---	3.93
<b>TRUST OWNERSHIP TOTAL:</b>			<b>\$1,159.0</b>	<b>100.0%</b>							

Differences in MV between the Sub-Trusts and Functional composites is due to operational cash

Allocation		Inception Date	Market Value (millions)	Allocation %							Since Incept.
					Month	3 Month	FYTD	1 Year	3 Year	5 Year	
<b>OPEB Global Equity:</b>	Gross	Mar-2014	\$576.0	49.7%	1.05	12.37	1.40	2.30	10.95	6.70	6.67
	Net				1.05	12.36	1.37	2.27	10.91	6.66	6.63
Benchmark: MSCI ACWI IMI Net					1.03	12.29	1.15	1.89	10.58	6.33	6.30
Excess Return (Net - Benchmark)					0.02	0.07	0.22	0.38	0.33	0.33	0.33
<b>OPEB BTC High Yield Bonds:</b>	Gross	Jul-2018	\$69.9	6.0%	0.98	7.49	4.92	---	---	---	4.92
	Net				0.98	7.46	4.83	---	---	---	4.83
Benchmark: BC High Yield Index					0.94	7.26	4.86	---	---	---	4.86
Excess Return (Net - Benchmark)					0.04	0.21	-0.02	---	---	---	-0.02
<b>OPEB BTC EM Debt LC:</b>	Gross	Jul-2018	\$45.3	3.9%	-1.36	2.91	2.77	---	---	---	2.77
	Net				-1.37	2.88	2.68	---	---	---	2.68
Benchmark: JPM GBI-EM Global Diversified Index					-1.33	2.92	3.17	---	---	---	3.17
Excess Return (Net - Benchmark)					-0.05	-0.04	-0.49	---	---	---	-0.49
<b>OPEB BTC Inv. Grade Bonds:</b>	Gross	Jul-2018	\$94.0	8.1%	1.93	2.99	4.73	---	---	---	4.73
	Net				1.93	2.99	4.72	---	---	---	4.72
Benchmark: BBG BARC US Aggregate Index					1.92	2.94	4.65	---	---	---	4.65
Excess Return (Net - Benchmark)					0.01	0.05	0.07	---	---	---	0.07
<b>OPEB BTC TIPS:</b>	Gross	Jul-2018	\$70.3	6.1%	1.85	3.24	2.01	---	---	---	2.01
	Net				1.84	3.24	1.99	---	---	---	1.99
Benchmark: BBG US TIPS Index					1.84	3.19	1.92	---	---	---	1.92
Excess Return (Net - Benchmark)					0.01	0.04	0.08	---	---	---	0.08
<b>OPEB BTC REITs:</b>	Gross	Jul-2018	\$117.9	10.2%	2.88	15.73	8.92	---	---	---	8.92
	Net				2.88	15.70	8.86	---	---	---	8.86
Benchmark: DJ US Select Real Estate Sec Index					2.88	15.72	8.86	---	---	---	8.86
Excess Return (Net - Benchmark)					0.00	-0.03	0.00	---	---	---	0.00
<b>OPEB BTC Commodities:</b>	Gross	Jul-2018	\$45.7	3.9%	-0.13	6.36	-5.50	---	---	---	-5.50
	Net				-0.14	6.32	-5.61	---	---	---	-5.61
Benchmark: Bloomberg Commodity Index (Total Return)					-0.18	6.32	-5.63	---	---	---	-5.63
Excess Return (Net - Benchmark)					0.04	0.00	0.03	---	---	---	0.03
<b>OPEB BlackRock Bank Loans:</b>	Gross	Jul-2018	\$115.9	10.0%	-0.25	3.95	2.02	---	---	---	2.02
	Net				-0.25	3.95	2.02	---	---	---	2.02
Benchmark: S&P/LSTA Leveraged Loan Index					-0.17	4.00	2.25	---	---	---	2.25
Excess Return (Net - Benchmark)					-0.08	-0.04	-0.23	---	---	---	-0.23
<b>OPEB Enhanced Cash:</b>	Gross	Feb-2013	\$23.9	2.1%	0.27	0.79	2.43	2.89	1.76	1.23	1.07
	Net				0.26	0.78	2.42	2.87	1.72	1.17	1.01
Benchmark: FTSE 6 M T-Bill Index					0.21	0.61	1.73	2.18	1.24	0.79	0.66
Excess Return (Net - Benchmark)					0.05	0.17	0.70	0.69	0.48	0.38	0.36

**Disclosure**  
Source of Bloomberg data on Attachment 1 & 2: Bloomberg Index Services Limited. BLOOMBERG® is a trademark and service mark of Bloomberg Finance L.P. and its affiliates (collectively "Bloomberg"). BARCLAYS® is a trademark and service mark of Barclays Bank Plc (collectively with its affiliates, "Barclays"), used under license. Bloomberg or Bloomberg's licensors, including Barclays, own all proprietary rights in the Bloomberg Barclays Indices. Neither Bloomberg nor Barclays approves or endorses this material, or guarantees the accuracy or completeness of any information herein, or makes any warranty, express or implied, as to the results to be obtained therefrom and, to the maximum extent allowed by law, neither shall have any liability or responsibility for injury or damages arising in connection therewith.

**PUBLIC INVESTMENT-RELATED SEARCHES APPLICANTS**

This document identifies firms who have pro-actively submitted an application to LACERA in response to a publicly posted request. These publicly posted requests are commonly referred to as searches and may include minimum qualifications. When an external firm submits an application to a search, LACERA is in a quiet period with the applying firm while the search is active.

The following firms have responded to a request for information regarding real estate administrative services:

SS&C Technologies Holdings, Inc./SS&C Globe Op  
Citco Fund Services (USA), Inc.  
State Street Bank and Trust Company

The following firms have responded to a request for proposal regarding a total Fund risk system:

BlackRock Solutions  
BNY Mellon  
FactSet  
MSCI  
State Street  
Sustainalytics  
Wilshire Associates

The following firms have responded to a request for proposal regarding MSCI ACWI IMI index services:

BlackRock, Inc  
(LIGMA) Legal & General Investment Management America, Inc.  
State Street Global Advisors Trust Company  
Northern Trust Investments, Inc.

## Compliance Monitor\* - March 2019

This report highlights operational and compliance metrics monitored by the Investment Division

	Quarterly Review Status	# Advisory	Notes
<b>PUBLIC MARKETS</b>			
<b>U.S. Equity</b>			
Asset Allocation Policy Compliance	✓		
Investment Guideline Compliance	✓		
Emerging Manager Program	✓		
# of Sudan/Iran Holdings Held by Managers	✓		
<b>Non - U.S. Equity</b>			
Asset Allocation Policy Compliance	✓		
Investment Guideline Compliance	✓		
# of Sudan/Iran Holdings Held by Managers	✓	4	4 issuers held, totaling \$3.4mm in market value
<b>Fixed Income</b>			
Asset Allocation Policy Compliance	✓		
Investment Guideline Compliance	✓	1	Enhanced cash is above the 10% limit for non-US exposure by 5.6%
Emerging Manager Program	✓		
# of Sudan/Iran Holdings Held by Managers	✓	2	2 issuers held, totaling \$7.2mm in market value
<b>Commodities</b>			
Asset Allocation Policy Compliance	✓		
Investment Guideline Compliance	✓		
# of Sudan/Iran Holdings Held by Managers	✓		
<b>Securities Lending</b>			
Investment Guideline Compliance	✓		
\$ Value on Loan	✓	1	GSAL \$534.6mm; State Street \$582.3mm
\$ Value of Cash Collateral	✓	1	GSAL \$547.3mm; State Street \$608.3mm
Total Income - Calendar YTD	✓	1	GSAL \$0.5mm; State Street \$0.4mm
<b>Proxy Voting</b>			
Number of Meetings Voted	✓	1	363 meetings voted
<b>Tax Reclaims</b>			
Total Paid Reclaims - Calendar YTD	✓	1	\$11,751
Total Pending Reclaims	✓	1	\$3.2 million
<b>PRIVATE MARKETS</b>			
<b>Real Estate (As of 12/31/2018)</b>			
Asset Allocation Policy Compliance	✓		
Guideline Compliance by Strategy (Core/Non-Core)	✓		
Guideline Compliance by Manager	✓		

## Compliance Monitor\* - March 2019

This report highlights operational and compliance metrics monitored by the Investment Division

	Quarterly Review Status	# Advisory	Notes
Guideline Compliance by Property Type	✓		
Guideline Compliance by Geographic Location	✓		
Guideline Compliance by Leverage	✓		
<b>Private Equity (As of 12/31/2018)</b>			
Asset Allocation Policy Compliance	✓		
Guideline Compliance by Strategy (Buyout/Venture/Special Situations)	✓		
Guideline Compliance by Geographic Location	✓		
Investment Exposure Limit	✓		
<b>Hedge Funds</b>			
Asset Allocation Policy Compliance	✓		
Portfolio Level Compliance	✓		
HFOF Manager Guideline Compliance	✓	2	Leverage ratio of relative value within GSAM and GCM San Gabriel is 9.0x and 9.1x, respectively, above guideline of 8.0x
Direct Portfolio Manager Guideline Compliance	✓		
<b>OPEB MASTER TRUST</b>			
<b>Functional Asset Categories</b> (Growth, Credit, Risk Reduction & Mitigation, Inflation Hedges)			
Asset Allocation Policy Compliance	✓		
Investment Guideline Compliance	✓	1	Enhanced cash is above the 10% limit for non-US exposure by 5.6%
# of Sudan/Iran Holdings Held by Managers	✓		
<b>FEE VALIDATION</b>			
Fee Reconciliation Project	✓		
AB 2833	✓		
<b>INVESTMENT MANAGER MEETINGS**</b>			
Manager Meeting Requests	✓		

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

\*\* 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.

May 1, 2019

TO: Each Member  
Board of Investments

FROM: Board of Investments Real Assets Committee   
John McClelland, Principal Investment Officer

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **REAL ESTATE STRUCTURE REVIEW UPDATE  
FISCAL YEAR 2019-2020**

## RECOMMENDATION

Advance the following proposed actions related to the 2019-2020 Real Estate Structure Review Update to the Board of Investments:

1. Accept the proposed Real Estate Structure Review Update for Fiscal Year 2019-2020.
2. Approve allocation of up to \$500 million for investment by the Fund's separate account equity managers.

## BACKGROUND

Staff has prepared the attached Update to the Real Estate Structure Review (the "Update" and **Attachment 1**) that will guide real estate activities of the Fund during the 2019-2020 fiscal year. Structure Reviews are prepared biennially to guide short-term (24-month) efforts towards meeting the long-term objectives identified within LACERA's Real Estate Objectives, Policies and Procedures. The Update is the second year of the biennial period for real estate.

Real estate is part of three functional asset classes, Real Assets and Inflation Hedges, Growth, and Credit. The Update calls for LACERA to be a net seller to bring the portfolio closer to its target allocation. However, vintage-year exposure will be maintained through limited new investment by the separate account managers.

## **OPTIONS AVAILABLE TO THE BOARD**

The Update identifies the initiatives that will be undertaken during the fiscal year. If the Board does not approve the Plan, staff will consult with the Committee to develop an alternative plan or include the Board's direction for a revised Plan.

## **DELIBERATIONS AND OPINIONS EXPRESSED BY THE COMMITTEE**

Questions and opinions expressed by Committee members during its deliberations and staff's response include the following:

- How is the credit allocation coordinated with the fixed income team? The real estate team is consulted on matters relating to real estate credit. A real estate team member is participating in the evaluation of the responses to the RFP for an illiquid credit manager.
- Will investment in construction continue? Select and limited construction investing is expected to continue since attractive returns appear to still be achievable. Supply and demand fundamentals in many markets continue to justify additional construction. This is particularly true for apartments and industrial properties.
- Are we considering the impact of urbanization and larger v. smaller markets in our investment strategy? Urbanization had favored investing in larger markets, albeit competition for opportunities in the larger markets is fierce. Nonetheless, liquidity of investments in larger markets has historically been much higher than in smaller markets during cyclical downturns. Therefore, the strategy calls for investments primarily in larger markets.
- Returns are strong, which may make it difficult to reinvest sales proceeds. Staff anticipates that sales proceeds from real estate will be reinvested in other asset classes as we move towards the new asset allocation targets.
- Are market conditions going to continue even though we are so deep into the current cycle? Although the current expansion cycle in the United States is the historical longest, there does not appear to be any imminent threats to continued growth. LACERA's strategy calls for moving closer to target allocations while maintaining vintage-year diversification.
- Is retail real estate investing as challenging ex-US? Retail investment opportunities, particularly in many Asian countries still appear to be attractive. The United States has more retail real estate space per capita than any other country in the world. LACERA will access ex-US retail investments via international commingled funds.



Each Member, Board of Investments

May 1, 2019

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### **RISKS OF ACTION AND INACTION**

Failure to approve the Update will delay execution of the themes included in the Update. No new capital will be made available to the separate account managers until an alternate update is approved.

### **CONCLUSION**

The staff-developed Structure Review Update has been reviewed by the Board's real estate consultant, The Townsend Group. A memo from the consultant with their observations and concurrence is included in **ATTACHMENT 1**.

The Committee voted unanimously to recommending adoption by the Board.

Attachments



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Jonathan Grabel  
Chief Investment Officer

JM/dr

March 29, 2019

TO: Each Member  
Real Assets Committee

FROM: John McClelland   
Principal Investment Officer

FOR: April 10, 2019 Real Assets Committee

SUBJECT: **REAL ESTATE STRUCTURE REVIEW  
UPDATE FOR FISCAL YEAR 2019-2020**

### RECOMMENDATION

Advance to the Board for approval:

1. Accept the Real Estate Structure Review Update; and
2. Approve allocating up to \$500 million for investment by separate account managers.

### BACKGROUND

Staff has prepared an Update (**ATTACHMENT A**) to the Real Estate Structure Review approved by the Board in May 2018, for review by the Real Assets Committee and ultimately for approval by the Board. Consistent with other asset classes, a biennial Structure Review replaces the annual Investment Plan. The Update is intended to cover the second year of the biennial period for real estate. It will be followed by a Structure Review in 2020 that will cover fiscal years 2020-2021 and 2021-2022. The Board's real estate consultant, The Townsend Group, has reviewed Update and concurs with the recommendation (see **ATTACHMENT B**).

The Update provides a review of the role of real estate, which is updated to reflect the asset allocation revisions completed in 2018. The Update also addresses the market environment, investment themes and prior and planned initiatives. Although a main initiative for the 2019-2020 fiscal year will be to reduce the exposure to real assets to get closer to the allocation target (i.e. sell assets), a modest amount of the new investment activity is proposed so that vintage year diversification can be maintained. Accordingly, approval is sought for up to \$500 million to be invested by the Fund's existing separate account managers, subject to the limitation described below.

Since the Update calls for LACERA to be a net seller during the 2019-2020 fiscal year, new investment by separate account managers will be contingent upon **anticipated and realized** sales using a ratio of 1:2. For every \$1 dollar of new investment, \$2 of sales should occur.

Each Member of the Committee

March 29, 2019

Page 2

The Update proposes that up to \$250 million of new investment be permitted in anticipation of sales. However, the balance of the up to \$500 million (the remaining \$250 million) will only be released for investment when the cumulative **realized** sales from the separate accounts exceeds twice the amount of new investments, or \$500 million.

Example 1: If \$250 million of new investments are made and \$500 million of realized sales occur, then no additional new investments may be permitted. (Cumulative sales of \$500 equals, but does not exceed, twice the amount of new investments (2 X \$250).

Example 2: If \$250 million of new investments are made and \$700 million of realized sales occur, then up to \$100 million of additional new investments may be permitted. (Cumulative sales of \$700 exceeds twice the amount of new investments (2 X \$250) by \$200. Maintaining the 1:2 ration would allow up to \$100 million of new investments.

Attachments

Noted and Reviewed:



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Jonathan Grabel  
Chief Investment Officer

ATTACHMENT A

# Real Estate Structure Review Update For Fiscal Year 2019-2020

Real Assets Committee

April 10, 2019

John McClelland – Principal Investment Officer



LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

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- VII. Advance to Board

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# Role of Real Estate

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Real estate is part of three Asset Classes

Real Assets (Benchmark = ODCE + 50bps)

Growth (Benchmark = ODCE + 300bps)

Credit (Benchmark = NPI Income)

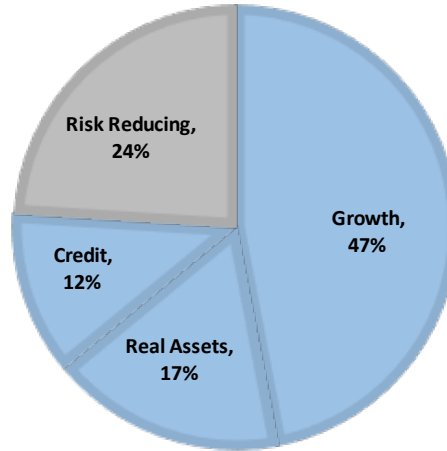
Real Assets-Diversify, generate income, inflation hedge

Growth-Drive returns

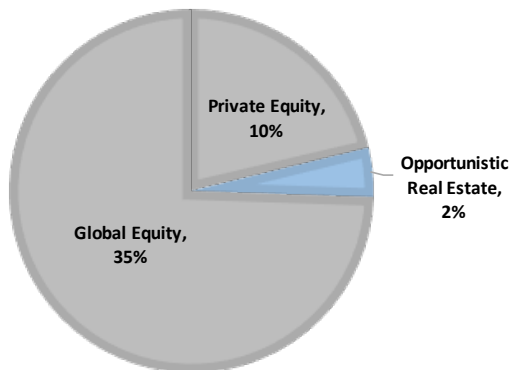
Credit-Realize attractive risk-adjusted returns, earn illiquidity premium

# Role of Real Estate

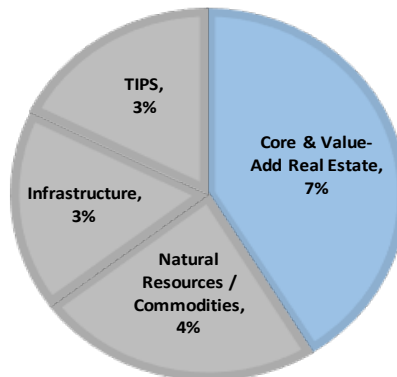
TOTAL FUND \$55.9B  
ALLOCATION TARGET



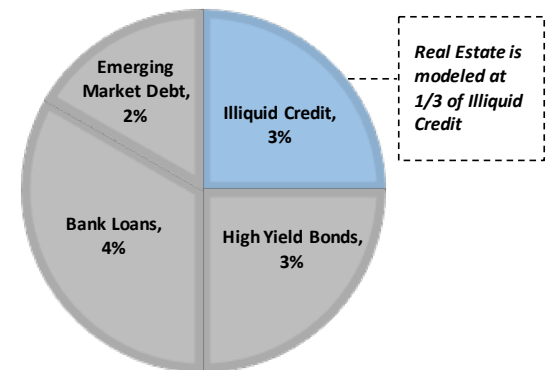
GROWTH \$31.6B  
47% TARGET



REAL ASSETS \$7.0B  
17% TARGET



CREDIT \$4.5B  
12% TARGET



\$ amounts are as of 2/28/2019.



# Market Environment and Opportunity

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## Low cap rates

- Cap rates continue to be at or close to historical lows.

## Technological disruptions

- E-commerce continues to perform well while brick and mortar retail sales weaken.

## Demographic shifts/trends

- Aging population, increased urbanization and greater attainment of higher education.

## Maintain Vintage Year Exposure

- Investing in every vintage year provides diversification across the portfolio.

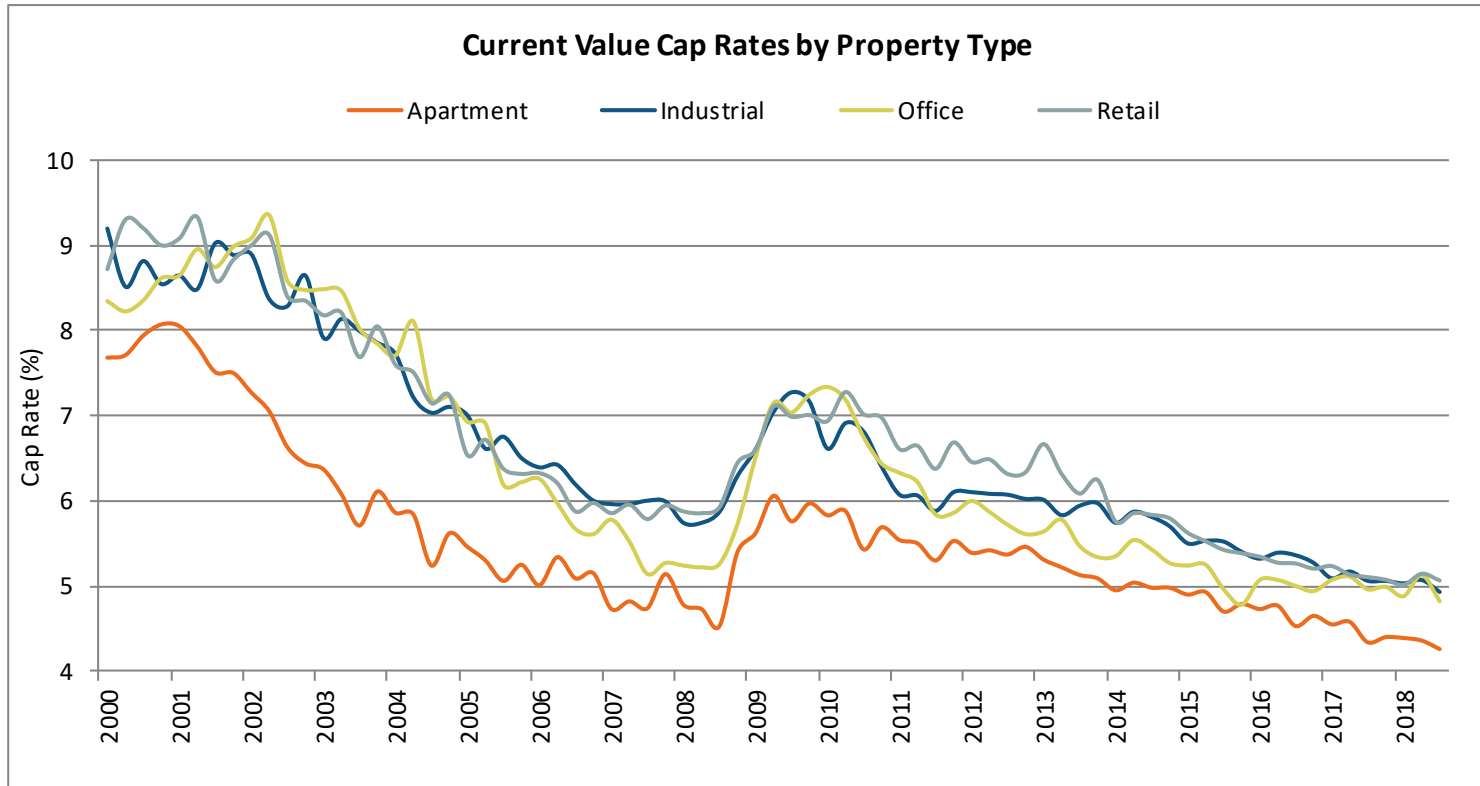
*With more conservative leverage, relative valuation metrics remaining reasonable, and healthy fundamentals, US commercial real estate markets remain on solid footing.* -What is Different in this

*Commercial Real Estate Cycle, Townsend Views Occasional Paper No.4 – March 2019, Prashant Tewari and Christian Nye*





# U.S. Cap Rate Movement Trend

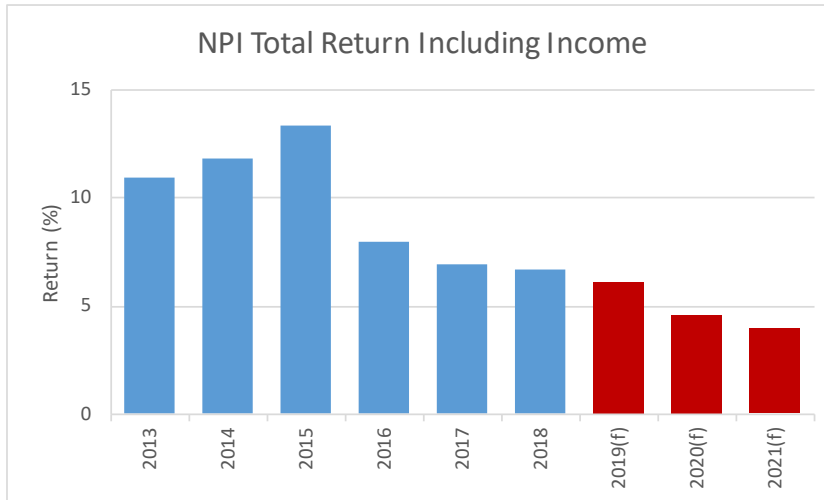


NCREIF, data as of Q3 2018

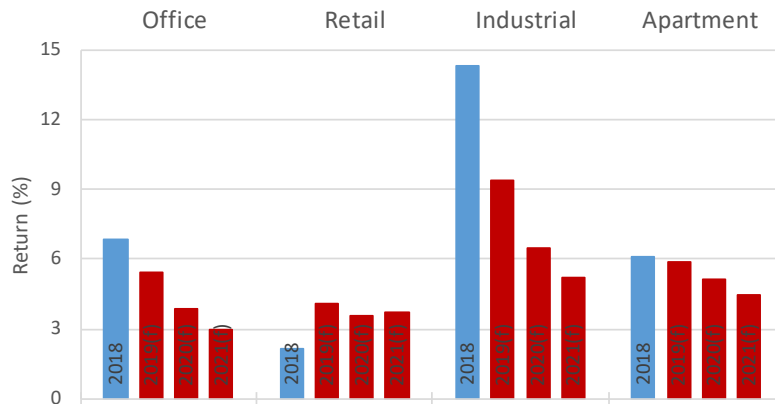


# Pension Real Estate Association (PREA)

## Consensus Forecast Survey



Average Forecast Total Returns, by Property Type



- NPI Total Return has significantly declined since 2015, due almost entirely to lower appreciation.
- Further declines in return are forecast in 2019-2021.
- Industrial provided highest total returns while Retail provided the lowest return in 2018.
- The consensus amongst investors surveyed by NCREIF is lower returns into the 2019-2021 period across property types, with Retail as the exception.
- Returns from industrial and apartments are expected to exceed returns from office and retail through 2021.

NCREIF Property Index (NPI) and Sub-Indices by Property Type survey results as of Q1 2019



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# Portfolio Structure



# Portfolio Structure

As of September 30, 2018 \$ in millions<sup>1</sup>

Functional Asset Class/Strategy	Current Market Value		Target		Difference
	\$	%	\$	%	
Real Assets and Inflation Hedges	\$5,218	9.1%	\$3,999	7.0%	(\$1,218)
Growth	\$794	1.4%	\$1,143	2.0%	\$349
Credit <sup>2</sup>	\$130	0.2%	\$571	1.0%	\$441
<b>Total</b>	<b>\$6,141</b>	<b>10.7%</b>	<b>\$5,713</b>	<b>10.0%</b>	<b>(\$428)</b>

## Structure Commentary

- Rebalancing to target requires substantial sales from Real Assets and Inflation Hedges.
- Consider reducing below target to free up capital for investment at beginning of next cycle.
- Continue search for Growth opportunities.
- Work with Credit team to determine if additional real estate debt investments should be made.

1. Adjusted to include acquisition and disposition activity through 12/31/2018.

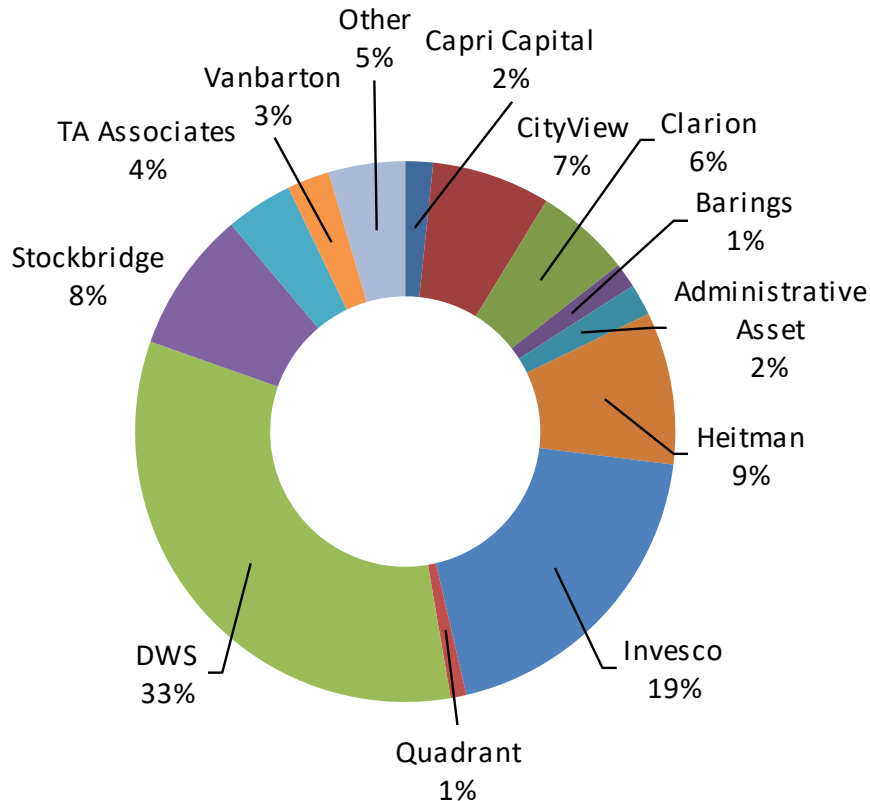
2. Real Estate is modeled at 1/3 of Illiquid Credit.



# Diversification by Manager After Transfer to DWS

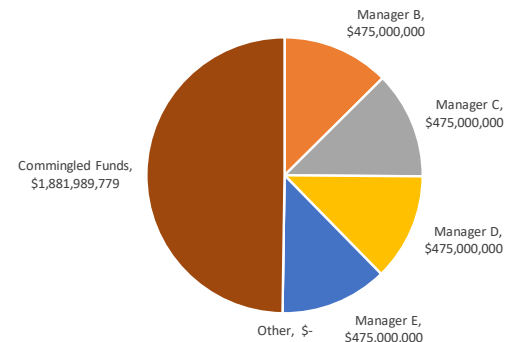
(As of September 30, 2018)<sup>1</sup>

Real Estate Portfolio \$6.4B



- Exposure to DWS to decrease significantly as assets are sold over next 24 months.
- Number of managers will decrease as legacy portfolios are liquidated over next 24 months.
- Use of ODCE funds planned to expand.

Possible Future Real Assets Allocation (\$3.8 Billion or 7% of Total Fund)

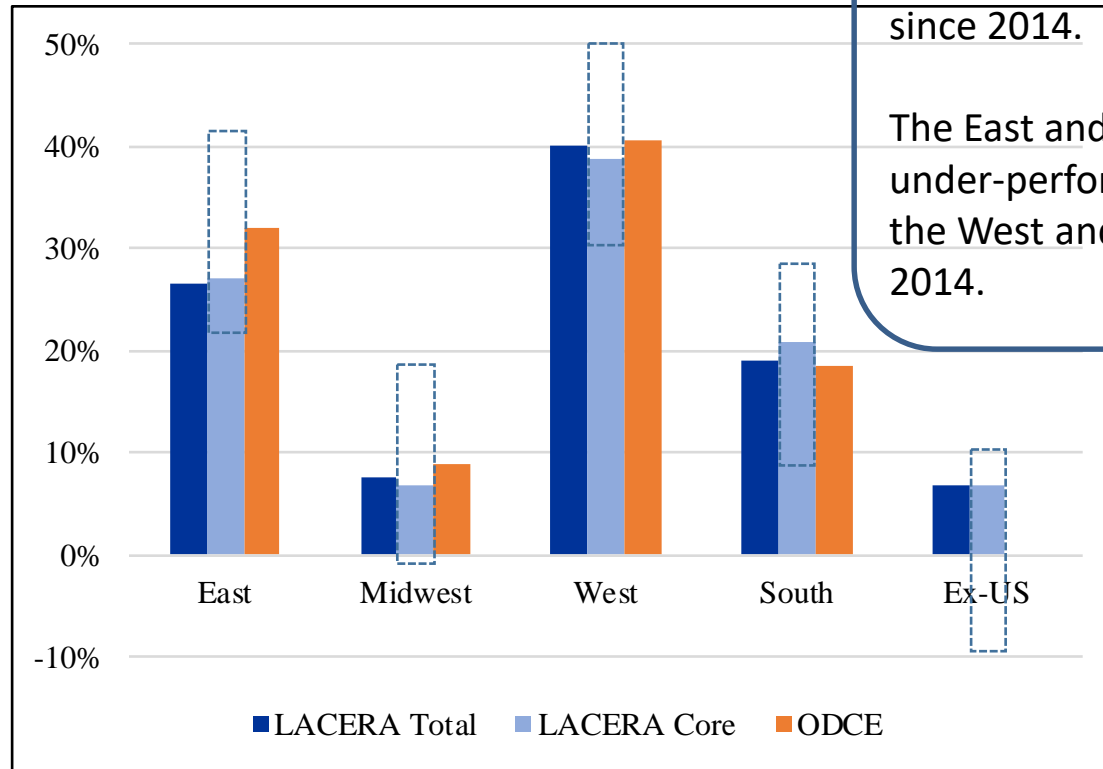


1. Adjusted to include acquisition and disposition activity through 12/31/2018 and asset transfers in Q1 2019.



# Diversification by Geography

As of September 30, 2018 \$ in millions<sup>1</sup>



The West region has out-performed all other regions since 2014.

The East and Midwest have under-performed relative to the West and South since 2014.

1. Adjusted to include acquisition and disposition activity through 12/31/2018.

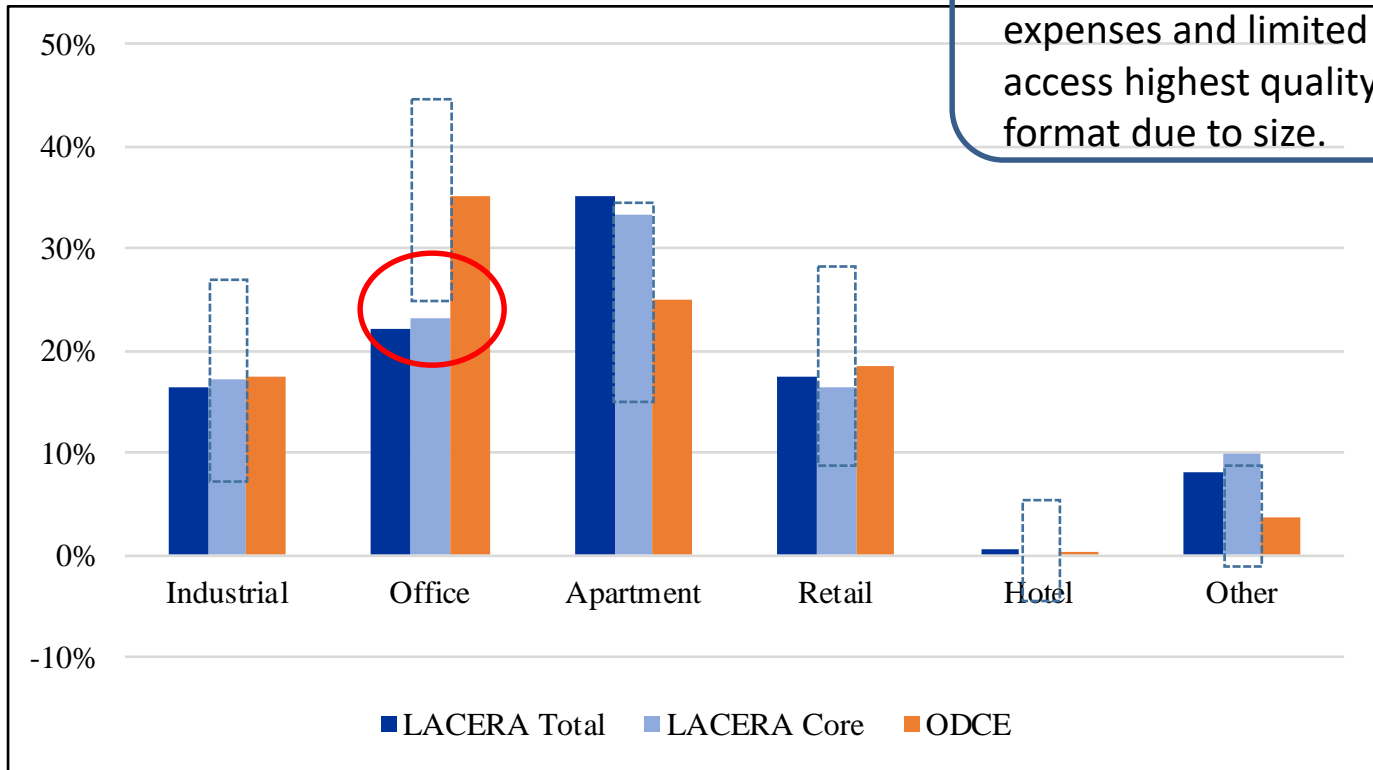
 Denotes a +/- 10% variance from the ODCE benchmark.



# Diversification by Property Type

As of September 30, 2018 \$ in millions<sup>1</sup>

Underweight office due to expected lower returns than other property types, high capital expenses and limited ability to access highest quality assets in IMA format due to size.



1. Adjusted to include acquisition and disposition activity through 12/31/2018.

Denotes a +/- 10% variance from the ODCE benchmark for Industrial, Office, Apartment, and Retail; and a +/- 5% variance for Hotel and Other.



# Real Estate Returns by Investment Type

## Five-Year Returns (as of September 30, 2018)

Functional Asset Class/Strategy	Net Market Value (\$ in millions)	% of Portfolio	Income	Apprec.	Total Gross Return	Total Net Return	Custom Benchmark	Difference
Real Assets & Inflation Hedges	\$5,408	84%	5.5%	4.2%	9.8%	9.2%	10.0%	-0.8%
Growth	\$794	12%	4.6%	11.9%	16.9%	14.1%	13.0%	1.1%
Credit	\$130	2%	9.4%	0.1%	9.5%	8.4%	4.9%	3.5%
Administrative Asset	\$117	2%	7.3%	4.4%	11.9%	11.8%	n/a	n/a
<b>Total</b>	<b>\$6,448</b>	<b>100%</b>	<b>5.5%</b>	<b>5.0%</b>	<b>10.7%</b>	<b>9.8%</b>	<b>10.6%</b>	<b>-0.8%</b>

## Ten-Year Returns (as of September 30, 2018)

Functional Asset Class/Strategy	Net Market Value (\$ in millions)	% of Portfolio	Income	Apprec.	Total Gross Return	Total Net Return	Custom Benchmark	Difference
Real Assets & Inflation Hedges	\$5,408	84%	5.9%	-0.8%	5.0%	4.4%	4.9%	-0.5%
Growth	\$794	12%	2.8%	-10.3%	-7.9%	-11.9%	9.4%	-21.3%
Credit	\$130	2%	n/a	n/a	n/a	n/a		
Administrative Asset	\$117	2%	8.0%	-6.1%	1.6%	1.6%	n/a	n/a
<b>Total</b>	<b>\$6,448</b>	<b>100%</b>	<b>5.7%</b>	<b>-0.9%</b>	<b>4.8%</b>	<b>4.0%</b>	<b>6.7%</b>	<b>-2.7%</b>





# Investment Themes

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## Low cap rates

- Consider “build-to-sell” and “build-to-core” (Growth investments) rather than core investments.
- Sell core assets.

## Technological disruptions

- Increase industrial exposure and challenge mall holdings.

## Demographic shifts

- Target niche strategies such as medical office, senior housing, student housing, self-storage, etc.

## Maintain Vintage Year Exposure

- Continue to allocate capital to IMAs, domestic and international commingled funds in order to get vintage year diversification.

# Initiatives Review

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## 2018-2019 Review



# Prior Initiatives/Themes

Approved July 2018

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- **Immediate Modifications**

- Cease Discretionary Value-Add Investing from IMA Managers – **Completed**
- Develop Manager-Specific Performance Hurdles (Present to Board for approval) – **Completed**
- Track Benchmark Variances and Impact on Performance – **Underway. The Consultant is integrating this into future performance reports.**



# Prior Initiatives/Themes

Approved July 2018

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- **Six to Twelve Months**

- Evaluate Managers and Mandates (Present to Board for approval of any changes) – **Completed**
- Increase Industrial – **Underway- \$35 million of net new industrial investments have been made.**
- Decrease Apartment – **Underway - \$263 million of sales have been completed and \$501 million of additional sales are expected within the 19-20 fiscal year.**
- Evaluate Office and Retail exposure options – **Pending – This project will be completed within the 19-20 fiscal year.**



# Prior Initiatives/Themes

Approved July 2018

## • On-Going

- Justify Benchmark Variances – Per policy, any deviation greater or less than 10% of the benchmark for property type or geography will be justified.
- Evaluate domestic commingled fund opportunities for value-add and high-return investments (Present any recommendations to the Board for approval) – Several funds have been considered, one presented to date (Bain), and additional recommendations anticipated in the 19-20 fiscal year.
- Evaluate open-end domestic commingled funds for potential core investments (Present any recommendations to the Board for approval) – Core Property Index Fund presented to Board (approved). Additional ODCE fund evaluations underway for consideration following completion of rebalancing.
- Sell chronically under-performing assets – \$230 million of sales completed. More pending.



## 2019-2020 Update

# Themes Guiding FY 2019-20 Investment Activity

Updated April 2019

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- Continue Prior initiatives
  - Reduce size and rebalance Real Assets
    - Sell assets during fiscal year to realize \$1 billion net reduction
  - Remain defensive
    - Maintain  $\geq 60\%$  of portfolio in Core
  - Maintain vintage year exposure
    - Allow IMA managers to invest up to \$500 million (see proposed conditions on later slide)
  - International Investment Plan
    - Commit to 1-3 funds annually
  - Decrease apartments
    - Sell  $\geq$  \$500 million of apartments
  - Increase industrial
    - Consider additional commitments to industrial funds.



# Themes Guiding FY 2019-20 Investment Activity

Updated April 2019

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- Continue Portfolio Rebalance Efforts
  - Evaluate office and retail
    - Consider whether to gain access to office and regional malls, and if so, how.
  - Work with Credit team regarding real estate debt investments
  - Increase use of open-end funds
    - Identify ODCE fund candidates for investment following completion of rebalance
- Operational Considerations
  - Review appraisal frequency and process
    - Consider retaining an appraisal management firm
  - Administrative Services RFI results (Performance/Title Holding Corporations/Book of Record)
- Strategy
  - Developing a more intentional portfolio composition





# Capital Allocation Authorization

## Separate Account Managers

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### Maintain Vintage Year Exposure

Authorize Up to \$500 million of new investments by existing separate account managers:

- Clarion
- Heitman
- Invesco
- DWS/RREEF
- Stockbridge

\$250 million of new funds may be made available initially. An additional \$250 million may be released on a cumulative 1:2 ratio based on realized sales. (Ex. \$100 may be invested only after \$200 of sales have been realized.)

# Advance to Board

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Staff proposes advancing the following :

1. Accept the Structure Update
2. Approve allocating up to \$500 million for investment by separate account managers

# APPENDIX

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# Real Estate Acquisitions and Dispositions

CY 2018

CLOSED										
Acquisition/Disposition	Region	Type	Style	Acq./Disp. Date	MV 1/1/2018	MV 12/31/2018	\$ Change	% Change	IRR, net lev.	IRR, net un-lev.
Acquisition	East	Apartment	High Return	1/23/2018	19,935,562	27,450,250	7,514,688	37.7%	13.0%	9.8%
Acquisition	South	Retail	Core	4/27/2018	20,755,500	20,402,000	(353,500)	-1.7%	8.2%	7.7%
Acquisition	Midwest	Office	Core	12/19/2018	N/A	38,624,850	N/A	N/A	8.4%	6.6%
Disposition	South	Retail	Value-Add	2/27/2018	3,500,000	3,600,000	100,000	2.9%	-1.4%	1.1%
Disposition	Midwest	Retail	Value-Add	7/25/2018	2,600,000	2,485,000	(115,000)	-4.4%	-1.4%	1.1%
Disposition	South	Apartment	High Return	9/11/2018	81,882,722	79,235,010	(2,647,712)	-3.2%	11.2%	N/A - JV
Disposition	East	Apartment	Core	10/10/2018	117,220,000	114,000,000	(3,220,000)	-2.7%	10.8%	10.2%
Disposition	Midwest	Office	Core	10/1/2018	19,184,727	18,625,000	(559,727)	-2.9%	N/A	8.4%
Disposition	West	Hotel	Value-Add	11/16/2018	218,200,000	224,100,000	5,900,000	2.7%	N/A	1.6%

PIPELINE										
Acquisition/Disposition	Region	Type	Style	Acquisition Date	MV 1/1/2018	MV 12/31/2018	\$ Change	% Change	IRR, net lev.	IRR, net un-lev.
Acquisition	West	Apartment	High Return	N/A	N/A	48,800,000	N/A	N/A	10.6%	9.4%
Acquisition	West	Industrial	Core	N/A	N/A	46,000,000	N/A	N/A	7.4%	6.2%
Disposition	South	Office	Core	12/30/2015	23,300,000	24,000,000	700,000	3.0%	N/A	6.8%
Disposition	West	Office	High Return	10/7/2016	19,347,998	19,000,000	(347,998)	-1.8%	N/A	N/A
Disposition	West	Office	High Return	10/7/2016	9,848,137	16,659,546	6,811,409	69.2%	N/A	N/A
Disposition	West	Industrial	Core	9/23/2016	1,293,779	1,449,368	155,589	12.0%	64.2%	41.6%
Disposition	West	Industrial	Core	11/21/2014	12,962,931	11,825,000	(1,137,931)	-8.8%	N/A	N/A
Disposition	West	Industrial	Core	11/21/2014	17,207,230	16,225,000	(982,230)	-5.7%	N/A	N/A
Disposition	West	Industrial	Core	11/21/2014	7,106,786	6,700,000	(406,786)	-5.7%	N/A	N/A
Disposition	West	Apartment	Core	7/1/2014	182,000,000	185,300,000	3,300,000	1.8%	7.3%	5.5%
Disposition	Midwest	Retail	Value-Add	2/23/2007	5,300,000	6,600,000	1,300,000	24.5%	-1.4%	1.1%
Disposition	South	Apartment	Core	2/23/2007	39,600,000	42,708,000	3,108,000	7.8%	2.3%	3.1%



# Ten Largest Assets by Gross Asset Value

As of September 30, 2018 \$ in millions<sup>1</sup>

No.	Type	City	State	GAV	NAV	NAV % of Total Real Estate
1	Apartment	New York	NY	\$444.2	\$294.2	4.6%
2	Hotel	New York	NY	\$407.0	\$132.0	2.0%
3	Apartment	Los Angeles	CA	\$332.7	\$182.7	2.8%
4	Apartment	Marina del Rey	CA	\$294.5	\$179.5	2.8%
5	Industrial	Compton	CA	\$240.6	\$135.6	2.1%
6	Student Housing	College Park	MD	\$233.7	\$124.2	1.9%
7	Retail	New York	NY	\$230.0	\$132.9	2.1%
8	Retail	Collegeville	PA	\$212.3	\$117.3	1.8%
9	Retail	Cranston	RI	\$194.0	\$152.7	2.4%
10	Apartment	Los Angeles	CA	\$184.8	\$94.4	1.5%

1. Adjusted to include acquisition and disposition activity through 12/31/2018.



# Real Estate Portfolio Leverage Summary

As of September 30, 2018 \$ in millions

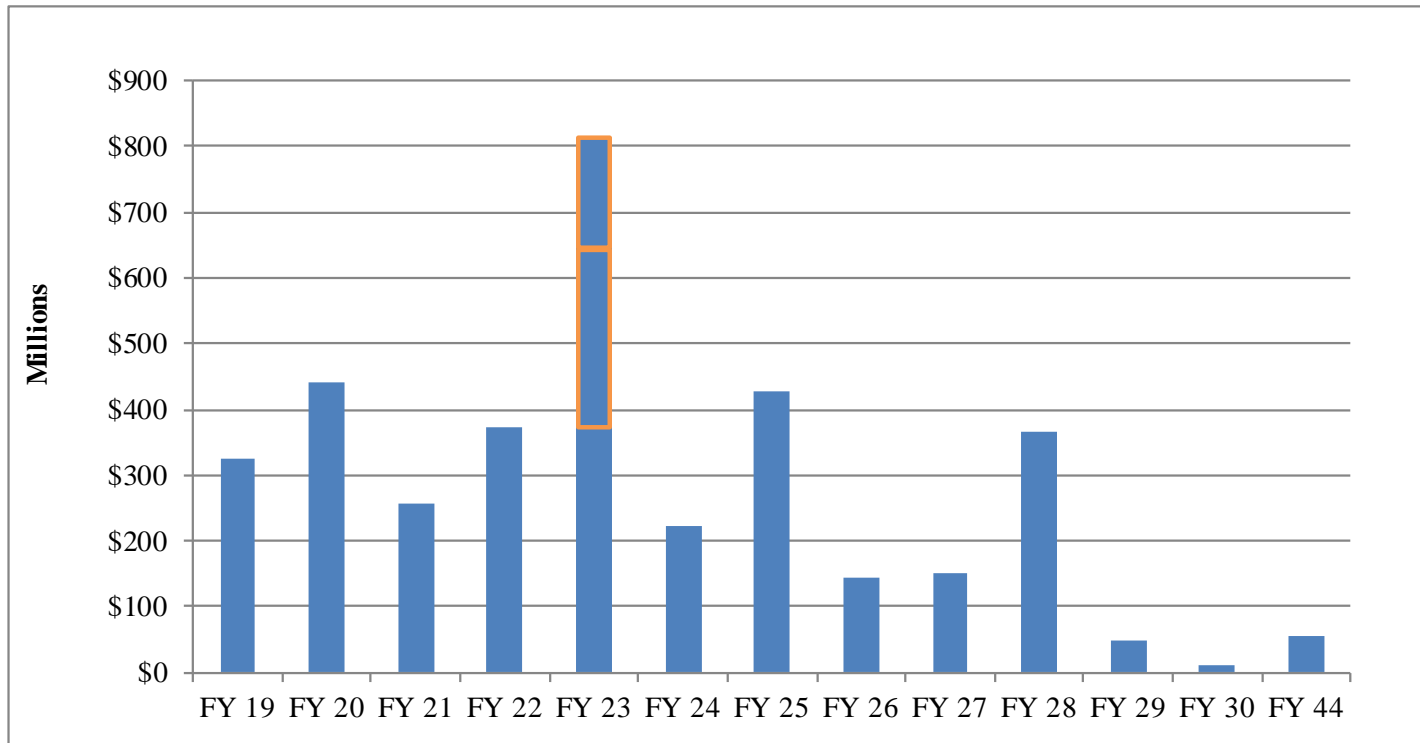
<b>Investment Style</b>	<b>Gross MV</b>	<b>Debt</b>	<b>Net Market Value</b>	<b>LTV *</b>
Real Assets and Inflation Hedges	\$8,448	\$2,923	\$5,525	<b>35%</b>
Growth	\$1,313	\$519	\$794	<b>40%</b>
Credit	\$270	\$140	\$130	<b>52%</b>
<b>Total</b>	<b>\$10,031</b>	<b>\$3,582</b>	<b>\$6,448</b>	<b>35%</b>

\* Loan To Value



# Real Estate Portfolio Debt Maturity Schedule

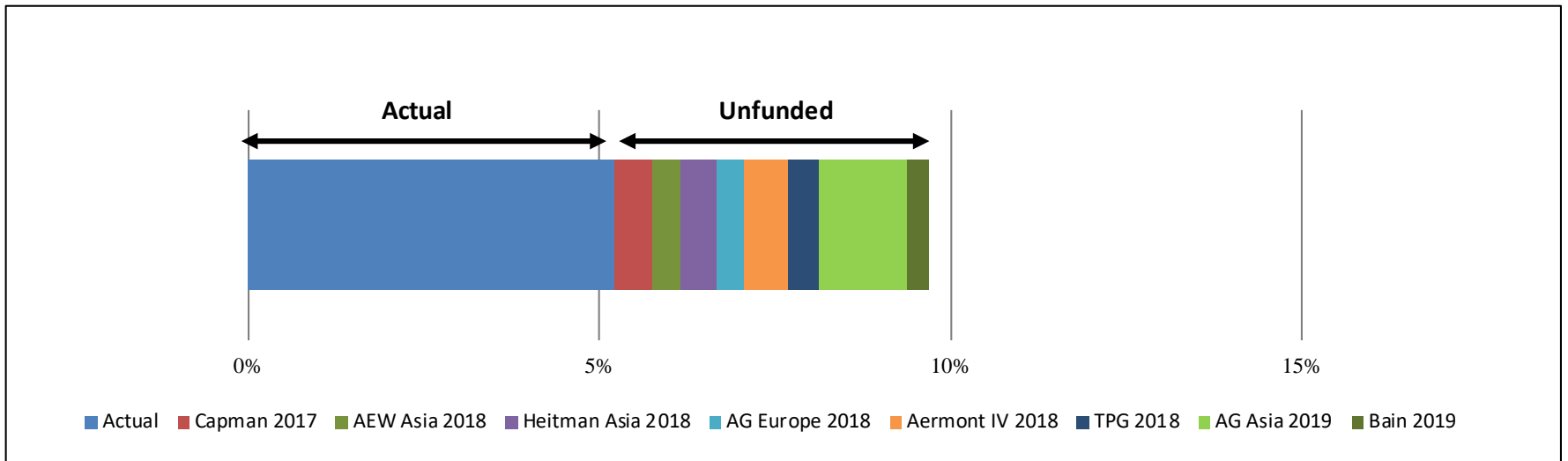
As of September 30, 2018 \$ in millions



\* FY23 includes two large loans marked in orange outline for: (i) \$150 million; and (ii) \$275 million.



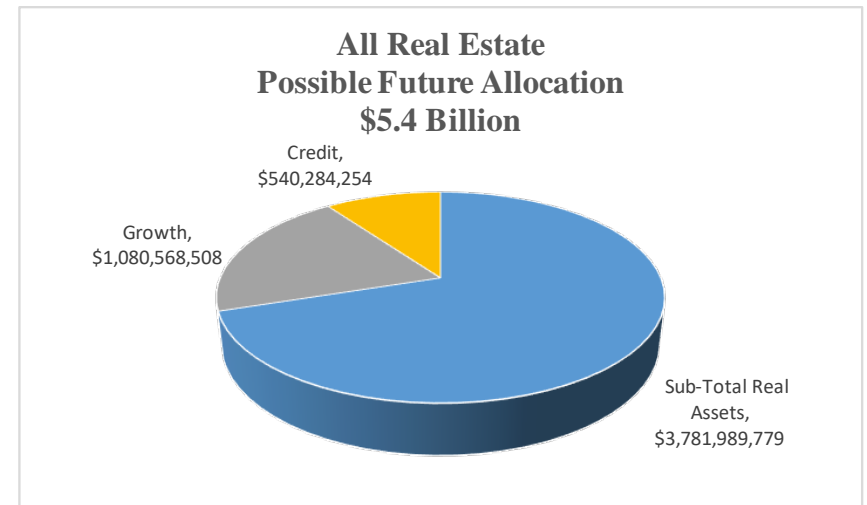
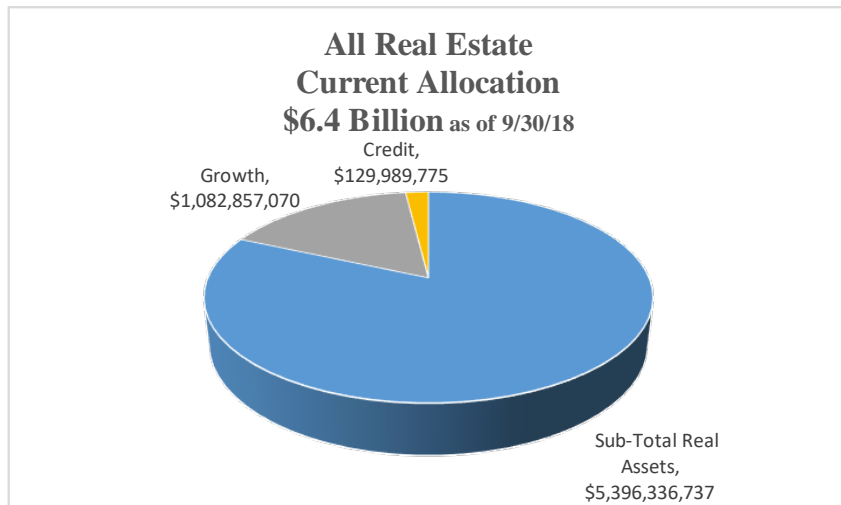
# Real Estate International Exposure





# Rebalance Illustration (All Real Estate)

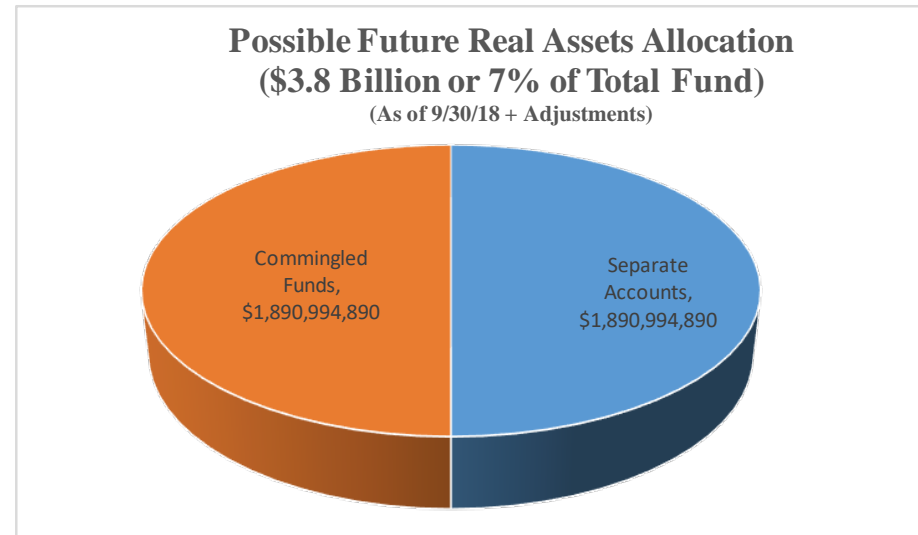
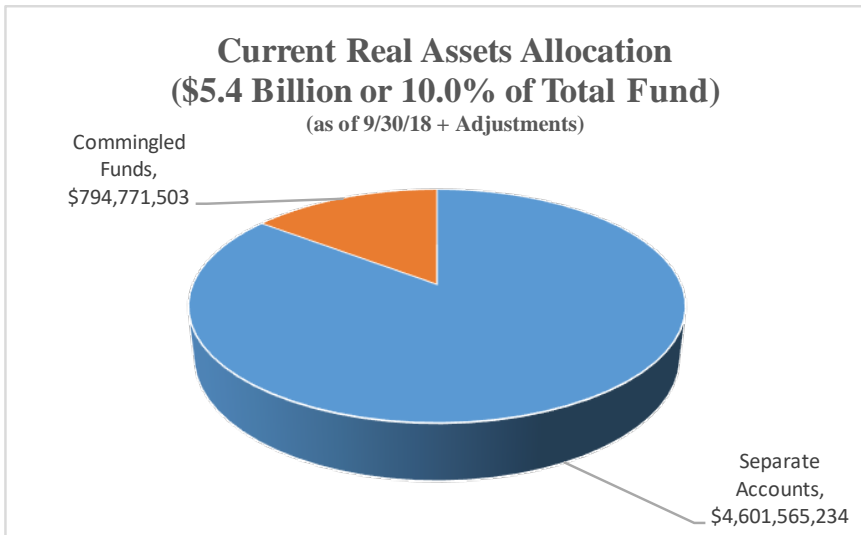
- Increase Exposure To Credit (See note)
- Decrease Exposure to Real Assets



Note: Real estate is modeled at 1/3 of the 3% allocation to illiquid credit.

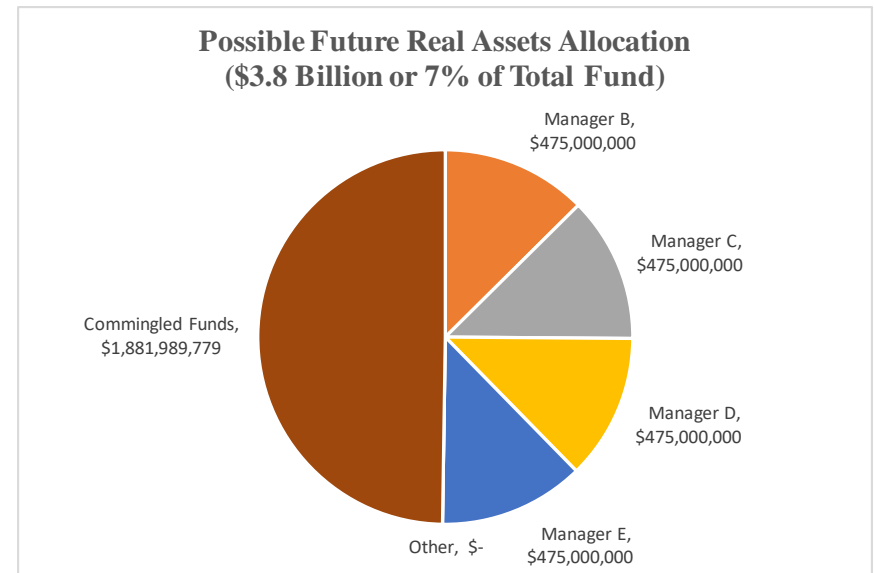
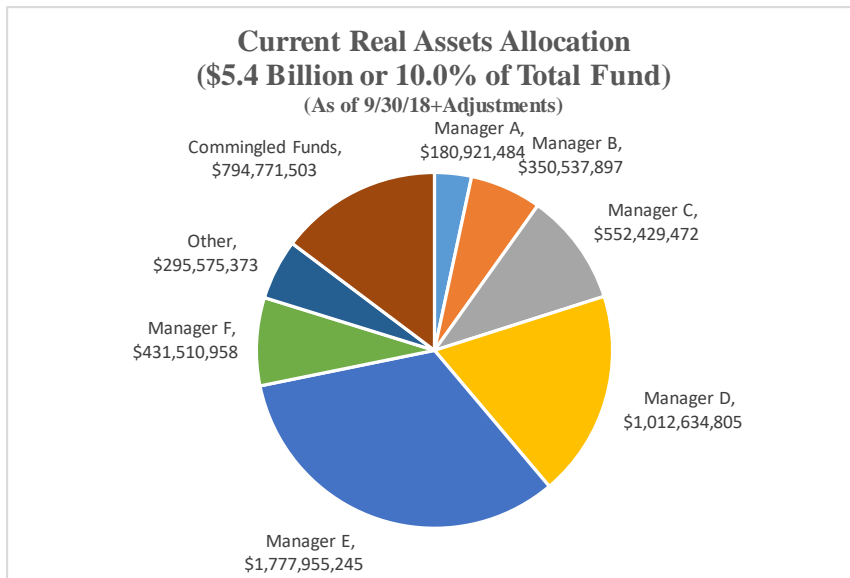
# Rebalance Illustration— Real Assets

- Decrease Exposure to Real Assets
- Consider Using More Open-End Fund Vehicles
  - May improve
    - Liquidity
    - Diversification
    - Performance



# Rebalance Illustration— Real Assets Continued

- Sample of Potential Structure of Real Assets
  - 50% Commingled funds
    - Diversity
  - 50% to limited number of Separate Account managers
    - Alpha generators



**Memorandum**

**To:** LACERA Real Assets Committee (“RAC”)  
**From:** Townsend   
**Date:** April 10, 2019  
**Re:** Real Estate Structure Review

In 2018, Townsend completed a multi-stage Performance Attribution Project related to the LACERA Individually Managed Account (“IMA”) Program and opined on the resulting changes to the LACERA Real Estate program structure. This memorandum provides a status report on the recommendations set forth in 2018 and outlines a set of recommendations for the LACERA RAC to consider in conjunction with the 2019 Real Estate Structure Review.

**Real Estate Market Commentary**

In 2018, U.S. private real estate markets continued their positive run for the ninth straight year. Mid-range return expectations for real estate have decreased since last year. Townsend’s private real estate and real asset return forecasts as of January 2019 are set forth below. These are net levered return expectations.

Risk & Return	Core	Value	Opportunistic	REITs	Timber	Row Crop	Perm Crop	Private Infrastructure
Expected Net Return	<b>5.7%</b>	<b>6.2%</b>	<b>8.7%</b>	<b>6.0%</b>	<b>5.8%</b>	<b>6.0%</b>	<b>11.0%</b>	<b>7.0%</b>
Standard Deviation	<b>6.5%</b>	<b>9.1%</b>	<b>10.4%</b>	<b>21.0%</b>	<b>5.0%</b>	<b>4.3%</b>	<b>10.7%</b>	<b>7.5%</b>

Additional market commentary is available in Townsend’s View of The World, provided separately to LACERA Staff.

**Townsend 2019 Recommendations & Status Report**

- 1. Terminate Underperforming IMA Managers**
  - Consider direct asset sales and/or portfolio sales
  - Consider transfer to Open-End Commingled Funds

*Status Report: Ongoing. As a result of this analysis, in 2018 LACERA transferred assets away from underperforming managers and presented Phase 1 of the Core Open-End Commingled Fund allocation*

*effort, a commitment to IDR's Core Index Fund. Townsend recommends proceeding with Phase 2 of the program by further reducing the IMA exposure through asset sales and/or manager terminations and re-allocating to Core and Core Plus Open-End Commingled funds as capital becomes available.*

**2. Retain Outperforming IMA Managers**

- Restructure IMA Contracts for Retained IMA Managers,
- Hold IMA Managers Accountable for Performance,
- Set IMA Primary and Secondary Performance Target,
- Recommend managers sell assets that will not meet future performance targets,
- Continue approving dollars available for deployment of capital on an annual basis, while limiting Non-Core exposure. Note: ODCE allows for Non-Core of up to 20%.

*Status Report: Ongoing. In 2018, LACERA amended contracts with IMA managers, setting performance targets for each account. Townsend and LACERA Staff will monitor and report the performance of the IMA managers quarterly.*

**3. Establish Mix of Open-End Commingled Funds & Separate Accounts for US Core Investment Portfolio**

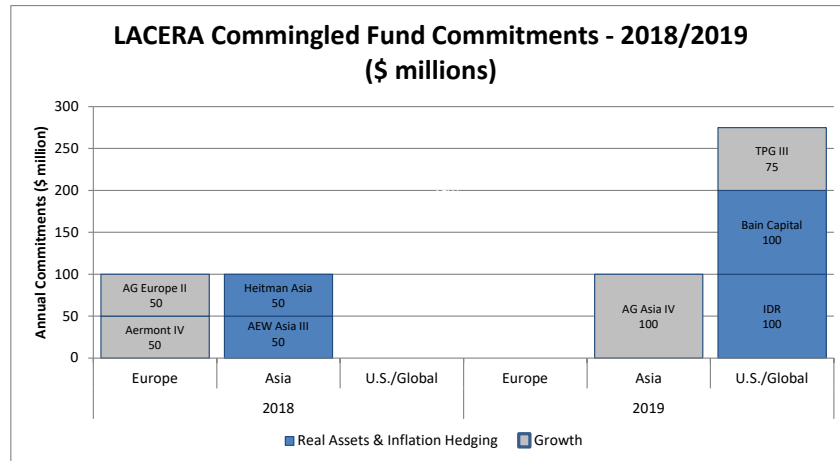
- Compliment IMA Exposure with Commingled Fund Exposure
- Allow for periodic rebalancing of positions to achieve competitive risk adjusted returns and/or take advantage of market opportunity

*Status Report: Ongoing. As a result of this analysis, LACERA presented Phase 1 of the Core Open-End Commingled Fund allocation effort, a commitment to IDR's Core Index Fund. Townsend recommends proceeding with Phase 2 of the program by further reducing the IMA exposure through asset sales and/or manager terminations and re-allocating to Core and Core Plus Open-End Commingled funds as capital becomes available.*

**4. Re-introduce US Closed-End Non-Core Commingled Funds**

- Target specific Non-Core strategies that cannot be replicated in IMA format (specific examples provided to the LACERA Real Estate Committee)

*Status Report: Ongoing. In 2018 and 2019, LACERA invested in several commingled funds (both US and International).*



### 2019/2020 Recommendations

1. Further Reduce IMA Exposure with a goal of introducing OEFCs
2. Evaluate OECF universe & select potential partners
  - a. Focus on complimentary diversification to existing LACERA positions
  - b. Target managers with the ability to outperform the ODCE
  - c. Increase net return potential by focusing on favorable fee structures (where possible)
3. Revisit International Implementation Plan to take into account the new asset allocation targets for real estate
4. Be mindful of reduced real estate allocation, as well as maintaining adequate vintage year diversification in late cycle deployment. Regarding the Staff recommendation to authorize up to \$500 Million in new allocation for the IMA managers, Townsend recommends offsetting new capital allocation allowances with asset sales, keeping in mind the overall goal of reducing in the size of Real Assets and Inflation Hedging category.

Functional Asset Class/Strategy	Current Market Value		Target		Difference
	\$	%	\$	%	
Real Assets and Inflation Hedges	\$5,218	9.1%	\$3,999	7.0%	(\$1,218)
Growth	\$794	1.4%	\$1,143	2.0%	\$349
Credit	\$130	0.2%	\$571	1.0%	\$441
<b>Total</b>	<b>\$6,141</b>	<b>10.7%</b>	<b>\$5,713</b>	<b>10.0%</b>	<b>(\$428)</b>

\*Source: LACERA

5. Revisit LACERA IMA Appraisal Policies; Revise as necessary to reflect best practices

### Recommendation

**Townsend reviewed the 2019 LACERA Real Estate Structure Review and concurs with the LACERA Staff Report. Townsend recommends that the LACERA RAC approve the Real Estate Structure Review and advance it to the Board of Investments for consideration.**

April 17, 2019

TO: Each Member,  
Board of Retirement  
Board of Investments

FROM: Joint Organizational Governance Committee

FOR: May 1, 2019 Board of Retirement Meeting  
May 15, 2019 Board of Investments Meeting

SUBJECT: Revised JOGC Charter

## **RECOMMENDATION**

That the revised Joint Organizational Governance Committee (JOGC) Charter be approved by the Board of Retirement and the Board of Investments.

## **LEGAL AUTHORITY**

The Boards have plenary authority under the California Constitution, Article XVI, Section 17, over administration of the system. The constitutional language is broad and encompasses all actions, including policies and procedures for system governance, reasonably necessary in the exercise of the Boards' fiduciary judgment to accomplish LACERA's purpose to pay benefits to members.

The County Employees Retirement Law of 1937 (CERL) provides, in Government Code Section 31525, that the Boards may adopt regulations not inconsistent with other provisions of CERL. The Board of Retirement and Board of Investments have both adopted regulations that permit the Chairs to appoint committees as necessary to carry out the separate business of each Board. Neither CERL nor the Boards' regulations specifically addresses joint committees.

Historically, the Boards formed joint committees by joint action, including, for example, the Audit Committee, the Travel Policy Committee, and ad hoc committees for the CEO search, claim and litigation oversight, and other matters. This practice is consistent with the Boards' constitutional plenary authority. The Boards have the legal authority to form joint committees, such as the JOGC, to address joint issues.

## **BACKGROUND**

The JOGC was originally formed, and its Charter approved, by the Boards at a joint meeting on August 10, 2017. The JOGC was disbanded on January 30, 2018 by vote of the Board of Retirement. The JOGC was reestablished by both Boards at a joint meeting on January 17, 2019, with the Boards directing that the JOGC review the Charter and

return with any recommendation within 90 days.

The 90-day period expired at the April 2019 Board meetings. However, at the Board of Investments meeting on April 10, 2019, and the Board of Retirement meeting on April 11, 2019, the Boards voted to extend the review period by 30 and 60 days, respectively. The current recommendation is presented at the first meeting of each Board following the April meetings, and is therefore timely under both Boards' April scheduling actions.

## **DISCUSSION**

At the February 13, 2019 JOGC meeting, the members engaged in lengthy and detailed section-by-section discussion of the existing JOGC Charter and provided a great deal of input to staff. Staff was directed to return with a revised draft Charter. Staff returned at the March 14, 2019 JOGC meeting with a revised charter, but, due to other business at the March meeting, the item was held over to the April 10, 2019 JOGC meeting. At the April meeting, the JOGC voted unanimously by all members present to recommend the revised Charter to both Boards. (Messrs. Bernstein, Green, Kehoe, Okum, and Robbins, and Ms. Gray voted yes; Messrs. Kelly and Muir were absent.) The revised Charter is attached as Exhibit A.

The revised Charter is based on extensive comments from the JOGC. The revised Charter also incorporates input from several affected divisions, including the Executive Office, Administrative Services, Financial and Accounting Services, and Legal. The revised Charter is not redlined from the current version because, given the extent of the changes, including a great deal of new language and reorganization of large portions of the Charter, a redline would not be a useful tool. However, the original Charter is attached as Exhibit B for comparison.

The revisions are summarized below:

**Section 1 – Overview of the LACERA Board of Retirement and the Board of Investments.** This section is revised to (a) be less legalistic by removing references to specific Government Code sections, (b) provide a more plain English statement of the Boards' responsibilities, (c) add a reference to the Boards' plenary authority under the California Constitution, and (d) update the responsibilities of the Boards with respect to the OPEB Program, which were not fully addressed in the original Charter. The effect of these changes is a shorter but more complete and readable summary of the Boards and their responsibilities.

**Section 2 – Purpose of this Charter.** An ambiguous and nonsubstantive bullet regarding the "terms of reference" for the JOGC is removed. This issue is addressed in



other sections of the Charter.

**Section 3 – Purpose of the JOGC.** A duplicative bullet already covered elsewhere later in the charter regarding the JOGC's role in dispute resolution is deleted.

**Section 4 – Scope.** This section is revised and reorganized to track, in order, the nine responsibilities of the JOGC discussed in Section 7.

**Section 5 – Powers Reserved for the BOR and BOI.** This section is revised to accurately and succinctly state the responsibilities of the BOR and BOI with regard to the pension fund and the OPEB Program.

**Section 6 – Authority.** This section is unchanged, except that the chart showing the overlap in the BOR and BOI is revised to more accurately refer to it as a Venn diagram.

**Section 7 – Responsibilities.** This section is extensively revised to logically reorder the JOGC's areas of responsibility and to restate the responsibilities to provide a more useful guide than in the original Charter.

**Section 7.1 – Organizational Philosophy (part of Section 7.8 in the original Charter).** This responsibility is restated to refer to LACERA's Mission, Vision, and Values. References to strategic planning and engagement are removed and relocated to separate sections covering these areas.

**Section 7.2 – Strategic Planning and Budgeting (Sections 7.3, 7.4, 7.6, and part of 7.8 in the original Charter).** The previously fragmented presentation of responsibilities in these areas are reorganized and restated in a single provision presenting a unified approach the JOGC's role in strategic planning and budgeting over the three-year planning cycle as well as the annual budgets. Among other changes, new Section 7.3 includes an update in the JOGC's role with respect to staff classifications and compensation to clarify the JOGC will address (a) new items and salary range changes as well as collective bargaining agreements, all of which require action by the LACERA Boards and approval by the Board of Supervisors to incorporate the action in the County Code as required by the County Employees Retirement Law of 1937, and (b) budgeting for existing positions already part of the County Code. The section clarifies that the JOGC is not performing the role of Appointing Authority. The section provides that staff will prepare a budget plan for the JOGC's approval stating how and when staff proposes to conduct the planning and budgeting process. This approach provides staff with flexibility to define the plan based on needs, as they may change over time, rather than locking staff into a calendar defined in the Charter. Such flexibility

is important to the budget team, and it also reserves final approval to the JOGC so that the committee can exercise overall control.

**Section 7.3 – Education and Travel (Section 7.7 in the original Charter).** This section is unchanged.

**Section 7.4 – Joint Policies.** This new section clarifies that the JOGC may oversee development of joint policies. The Boards currently have a number of joint policies and may create new ones in the future. This section provides that the JOGC is a vehicle for the development and recommendation of such policies.

**Section 7.5 – Legislation, Advocacy, and Engagement (Section 7.2 and part of Section 7.8 in the original Charter).** This section combines legislation, advocacy, and engagement on joint issues into a single provision, and provides that the JOGC may make recommendations in these areas.

**Section 7.6 – Litigation and Claims (Section 7.1 in the original Charter).** This section is largely unchanged, except that it is revised to clarify that the JOGC will oversee litigation regarding the CEO, those reporting directly to the CEO, and others as to whom the Boards or any of their committees have an Appointing Authority role (currently the Chief Investment Officer and Chief Audit Executive). The section states that the JOGC does not intend to exercise any Appointing Authority not granted to the Boards or any of their committees.

**Section 7.7 – Chief Executive Officer (Section 7.5 in the original Charter).** The JOGC's role is narrowed to the recommendation of a search consultant and such other assistance as the Boards may delegate at the time of a search. There was discussion at the February 13, 2019 JOGC meeting about the use of an ad hoc committee process to oversee other aspects of the CEO search and selection process. Staff proposes that, if the committee wishes to develop a CEO search and selection policy for the Boards, that is be addressed separately, rather than in the JOGC Charter.

**Section 7.8 – Board Disputes (part of Section 7.9 in the original Charter).** This section provides that the JOGC may facilitate resolution of disputes between the Boards or between one Board and/or Board members, on the one hand, and non-overlapping Board members, on the other hand.

**Section 7.9 – Miscellaneous Matters (Section 7.9 in the original Charter).** This section is an open-ended provision permitting miscellaneous matters to be brought to the JOGC by the Board and JOGC Chairs, in consultation with the CEO, or by

any JOGC member.

**Section 8 – Membership, Quorum, and Rules.** This section is revised from the original Charter to add language providing that the Chairs, in making their appointments to the JOGC, will consider the overall mix of the different classes of trustees and also consider continuity of service. This language is adapted from a proposal made to the Boards by Mr. Kelly in August 2018.

**Section 9 – Leadership.** This section is unchanged.

**Section 10 – Meeting Frequency and Dates.** This section is revised only to include language that the meeting schedule will be subject to the planning and budgeting plan approved under Section 7.2.

**Section 11 – Elimination of Committees.** This section is unchanged.

**Section 12 – Charter Review.** This section is revised to reflect that the Boards' triennial review of the Charter will be based on a recommendation from the JOGC to allow for the committee itself to review the Charter in the future, just as is being done now.

## **CONCLUSION**

For the reasons stated in this memo, the JOGC recommends that the revised JOGC Charter be approved by the Board of Retirement and the Board of Investments.

### Attachments

c: Lou Lazatin  
JJ Popowich  
Jonathan Grabel  
Steven P. Rice  
Richard Bendall  
Beulah Auten  
Ted Granger  
Kimberly Hines  
Harvey Leiderman

# **EXHIBIT A**

Revised JOGC Charter



# LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

## Joint Organizational Governance Committee Charter

Revised and Restated

Adopted by Board of Retirement on \_\_\_\_\_, 2019

Adopted by the Board of Investments on \_\_\_\_\_, 2019

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## 1 Overview of the LACERA Board of Retirement and the Board of Investments

The Los Angeles County Employees Retirement Association (LACERA) is a public pension system formed in 1937 in accordance with the County Employees Retirement Law of 1937 (the '37 Act or CERL) and administered pursuant to the '37 Act, the California Public Employees' Pension Reform Act of 2013 (PEPRA), and the California Constitution. Since 1971, LACERA has also administered the Retiree Healthcare Benefits Program for the County and outside districts, through contractual agreements with the County.

LACERA is an independent governmental entity. LACERA is the largest county retirement system in America. LACERA is funded by the County, participating employers, employees, and investment earnings.

LACERA is governed by two Boards. Both Boards include a mix of trustees that are appointed and elected members and an ex-officio member, the sitting County Treasurer and Tax Collector. The Board of Retirement (BOR) is responsible for the overall management of the retirement system and the LACERA-administered Retiree Healthcare Benefits Program. The Board of Investments (BOI) is responsible for determining LACERA's investment objectives, strategies, and policies, as well as exercising authority and control over the investment management of the Fund. The BOI also invests and manages the Other Postemployment Benefits Program (OPEB) trust assets for participating employers. In addition, the BOI is responsible for obtaining pension actuarial valuations that measure the funded status and serve as the basis for setting employer and employee contribution rates required to fund the system. The BOR is responsible for obtaining actuarial valuations for the OPEB Program as part of its responsibility for administration of the OPEB Program.

The BOR and BOI have joint authority under CERL over certain shared responsibilities, including: classification and compensation of personnel; adoption of LACERA's administrative budget; the appointment and evaluation of the Chief Executive Officer (CEO); and other matters as specified in CERL.

Under the California Constitution, the Boards have plenary authority over administration of the pension fund.

## 2 Purpose of this Document

The purpose of this document is to describe:

- the purpose, scope, responsibilities, meetings, and structure of the Joint Organizational Governance Committee (JOGC);

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- the committee’s membership and leadership; and
- meeting frequency and dates.

### 3 Purpose of the JOGC

The purpose of the JOGC is to:

- serve and facilitate the work of both Boards when the two boards duties intersect;
- improve the combined oversight of both Boards;
- facilitate effective two-way communications and act as liaison between the Boards;
- ensure that both Boards are comfortable that their perspectives are properly represented; and
- make recommendations, not decisions.

### 4 Scope

The scope of the JOGC’s responsibilities, as explained and defined in Section 7, includes:

- Organizational Philosophy;
- Strategic Planning and Budgeting;
- Education and Travel;
- Joint Board Policy Development;
- Legislation, Engagement, and Advocacy;
- Litigation and Claims Relating to Unusual and Materials Risks;
- Chief Executive Officer Search;
- Board Disputes; and
- Miscellaneous Matters.

### 5 Powers Reserved for the BOR and BOI

The BOR reserves for itself all powers related to (i) retirement and healthcare benefits including policy, legislation, litigation, operations, and administration, and (ii) actuarial valuations of the OPEB Program.

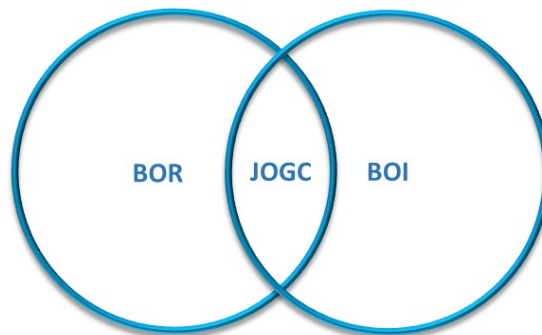


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The BOI reserves for itself all powers related to (i) investments, including policy, legislation, litigation, operations, and administration, (ii) actuarial valuations of the pension fund, and (iii) oversight of the OPEB Trusts.

## 6 Authority

The JOGC will only make recommendations to each Board on matters that intersect and affect both the BOR and BOI as described in Section 7, Responsibilities of this Charter. The following Venn diagram visually highlights the JOGC role to facilitate the work of both Boards when the Boards' duties intersect.



## 7 Responsibilities

### 7.1 Organizational Philosophy

Make recommendations regarding LACERA's Mission, Vision, and Values.

### 7.2 Strategic Planning and Budgeting

Provide oversight and guidance on the development of a three-year strategic plan and the associated annual budgeting process for the Administrative, Retiree Healthcare, OPEB Program, and Non-Administrative budgets and make recommendations to the Boards, including the following:

- Strategic Plan: Provide oversight and guidance on the development of a three-year strategic plan that will guide the annual budgeting process, including resources needed to achieve organizational objectives.

In providing input and guidance on the development of the strategic plan, and associated budget plans, the JOGC will take into account, but will not reconsider, actions taken by the Boards within the areas of their separate jurisdiction, including the Board of Retirement for pension, healthcare, and administrative matters and the Board of

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Investments for investment-related strategic planning. The JOGC’s role reflects an understanding that the entire budget process for LACERA, under Government Code Section 31580.2, is subject to the approval of both Boards, and that therefore oversight and guidance for the development of the budget is a joint Board responsibility, based in part upon actions taken by the Boards separately, including vendor selections and other matters.

Additionally, the JOGC’s role reflects an understanding that each three-year strategic plan is a rolling plan and will also take into account past strategic plan initiatives that have already been set in motion and for which resources have already been allocated and expended as they provide input on new expectations and initiatives.

- Staffing Needs.
  - Staff Classifications: Review and make recommendations on staff requests to create all new Staff Member classifications.
  - Staff Compensation: Review and make recommendations on Staff Member requests related to:
    - Negotiation and approval of collective bargaining agreements;
    - Approval of initial compensation levels and ranges applicable to new positions to be added to the County Code;
    - Approval of compensation level and range changes for existing positions that require changes to the County Code; and
    - Budgeting for compensation to be provided for existing positions within existing County Code ranges.
- Budget Development: Provide oversight and guidance during the annual budget development cycle for the Administrative, Retiree Healthcare, OPEB Program, and Non-Administrative budgets. The staff will develop preliminary budget plans that take into account and support the approved strategic plans and general operating needs. The JOGC will review and provide a recommendation regarding the proposed budgets which will in turn be presented to the Boards during budget hearings. Both Boards will then independently take action on the JOGC’s recommended proposed budget.

Staff will present a three-year strategic plan and annual budget plan development process, including a proposed JOGC meeting schedule with respect to planning and budget issues, for the JOGC’s approval. This process will govern how the organization will conduct the strategic plan and budgeting process on an annual basis. Once approved the process will remain in effect until reviewed and modified by the JOGC and staff, with a mandatory review every six years.

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The JOGC will complete its strategic planning and budgeting responsibilities on a timetable outlined in the approved annual strategic planning and budgeting process. All plans will include presentation of the budget to the Boards for final approval no later than June of each year.

On-going Oversight: Once a three-year strategic plan and annual budget is approved the JOGC will provide on-going oversight of the budget-to-actual results and the progress made towards fulfilling the Strategic Plan initiatives, during the fiscal year according to a schedule approved by the Committee in consultation with the staff.

By this section, the JOGC does not assume and will not exercise any responsibility as Appointing Authority not granted to the Boards under the Los Angeles County Code, including Section 5 (Personnel) and Section 6 (Salaries), or otherwise in conflict with the County Code and LACERA Policy.

### 7.3 Education and Travel

Oversee and make recommendations with respect to the:

- Education and Travel Policy; and
- Other training issues relevant to both Boards as needed.

### 7.4 Joint Policies

Oversee development of and make recommendations with respect to all joint policies.

### 7.5 Legislation, Engagement, and Advocacy

May make recommendations about legislation, engagement, and advocacy that impact both Boards.

### 7.6 Litigation and Claims

Oversee and make recommendations about Litigation and Claims that, in the judgment of the Board Chairs, the Chief Executive Officer, or Chief Counsel, raise Unusual and Material Risks to the organization. Unusual and Material Risks may include Litigation and Claims making allegations of

- (1) legal theories,
- (2) conduct by LACERA, the Board, Board members, staff, members, vendors, or other third-parties,
- (3) an amount or type of damages, or
- (4) potential adverse reputational impact or publicity,

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that are beyond the type of Litigation or Claims that each Board is generally expected to separately manage, as stated below. Unusual and Material Risks may include Litigation and Claims by or against or concerning the conduct of the Chief Executive Officer and those reporting directly to them, and others as to whom the Boards or any of their committees have an Appointing Authority role. They may also include any other Litigation and Claims, including ones that each Board is generally expected to separately manage, that the Board Chairs, the CEO, or Chief Counsel reasonably believe justify the involvement of this Committee because of mutual interest and concern to both Boards.

Litigation and Claims are defined as court actions, pre-litigation demands or claims, potential court actions, demands, or claims, and other forms of dispute resolution, such as arbitration and mediation.

Each Board is generally expected to separately manage:

- (1) As to the Board of Retirement, Litigation and Claims relating to the regular course of business regarding retirement, disability, and healthcare benefits, all LACERA personnel (other than the Chief Executive Officer, and all those reporting directly to them or as to whom the Boards or any of their committees have an Appointing Authority role as stated in this section), and the general operations and administration of the retirement system and the OPEB Program (including actuarial services for the OPEB Program),
- (2) As to the Board of Investments, Litigation and Claims relating to the regular course of business regarding investments, pension actuarial services, and the OPEB Trusts, and
- (3) Litigation and Claims concerning contracts approved only by that Board.

By this section, the JOGC does not assume any responsibility as Appointing Authority not granted to the Boards under the Los Angeles County Code, including Section 5 (Personnel) and Section 6 (Salaries) or otherwise in conflict with the County Code.

### 7.7 Chief Executive Officer

Should a vacancy occur:

- Make a recommendation for a search consultant; and
- Provide such additional assistance in the selection process as the Boards may determine at the time.

### 7.8 Board Disputes

May facilitate dispute resolution between the Boards and between one Board, or one Board's members, on the one hand, and members of the other Board that do not serve on both Boards, on the other hand. The JOGC does not have the authority to enforce a resolution of such issues.

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The JOGC's role is to provide a forum for discussion of such issues and serve as a resource that may facilitate constructive resolution in the interest of LACERA.

### 7.9 Miscellaneous Matters

Miscellaneous matters that may need to be brought before the JOGC will be determined on a case by case basis by the respective Board Chairs and the Chair of the JOGC in consultation with the CEO. Additionally, miscellaneous matters may be brought before the JOGC by any JOGC member.

## 8 Membership, Quorum, and Rules

There will be eight (8) members with no designated alternates. The JOGC will be comprised of the BOR and BOI Chairs and Vice-Chairs plus one member appointed by each Chair and one member elected by each Board. In making their appointment, each Chair will endeavor to include an overall mix of trustees who are appointed by the Board of Supervisors, elected by active employees (general and safety), elected by retired members, and who serve in an ex officio capacity. The Chairs will also consider continuity of service when appointing members, so that development of expertise and familiarity with the subject matters jurisdictional to the JOGC are encouraged, and to benefit the JOGC's goals.

If there is one JOGC member who represents both Boards (one overlap), then an additional appointment will be made by the BOR Chair in even years and by the BOI Chair in odd years. If there is more than one overlap, the BOR and BOI Chairs will make an equal number of additional appointments; if there are an odd number of overlaps, the final appointment, after the Board Chairs make their separate appointments, will be made following the rule as stated in the preceding sentence that applies in the case of one overlap.

A quorum exists when a majority of the members are present, without regard to the Board from which individual members were appointed.

The JOGC is subject to the Ralph M. Brown Act (Brown Act), and its meetings will be noticed, agendaized, and conducted in accordance with the Brown Act. The JOGC may meet in closed session as provided in the Brown Act.

Robert's Rules of Order will also apply in the JOGC's meetings. A motion may be made or seconded by any member. A motion passes if a majority of the members present, without regard to the Board from which they were appointed, vote in favor of the motion.

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## 9 Leadership

The Chair and Vice Chair of the JOGC will be elected by members of the JOGC at the first meeting of each year.

## 10 Meeting Frequency and Dates

### 10.1 Frequency

The regular meeting schedule will be established at the first meeting of each year. Generally, the meeting schedule will be March, April, June, September, and December, subject to the strategic and planning process calendar to be approved under Section 7.2. Special meetings may be called as needed in accordance with the Ralph M. Brown Act.

### 10.2 Dates

Meetings will alternate between scheduled BOR and BOI meetings, and as needed.

## 11 Elimination of Certain Committees

With the establishment of the JOGC, the following committees will be eliminated:

- CEO Performance Committee; and
- Education and Travel Committee.

## 12 Charter Review

The BOR and BOI shall review and update this Charter, based on recommendations from the JOGC, at least once every three years.

This Charter was adopted by the Board of Retirement on August 10, 2017 and by the Board of Investments on August 10, 2017.

HISTORY:

Revised and Restated \_\_\_\_\_, 2019

# **EXHIBIT B**

Existing JOGC Charter



# LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

Joint Organizational Governance Committee Charter

Adopted by Board of Retirement on August 10, 2017  
Adopted by the Board of Investments on August 10, 2017

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## 1 Overview of the LACERA Board of Retirement and the Board of Investments

In 1937, Los Angeles County (County) established a pension trust fund (Fund) to provide defined retirement and death benefits to eligible County employees to be governed by the County Employees Retirement Law of 1937. In 1938, the Los Angeles County Employees Retirement Association (LACERA) was formed to administer the Fund. Since 1971, LACERA has also administered the Retiree Healthcare Benefits Program for the County and outside districts, through contractual agreements with the County.

LACERA is an independent governmental entity. LACERA is the largest county retirement system in America. LACERA is funded by the County, participating employers, employees, and investment earnings.

LACERA is governed by two Boards. Both Boards include a mix of trustees which are appointed and elected members and an ex-officio member, the sitting County Treasurer and Tax Collector. The Board of Retirement (BOR) is responsible for the overall management of the retirement system and the LACERA-administered Retiree Healthcare Benefits Program. The Board of Investments (BOI) is responsible for determining LACERA's investment objectives, strategies, and policies, as well as exercising authority and control over the investment management of the Fund. The BOI also invests and manages the Other Postemployment Benefits Program (OPEB) trust assets for participating employers. In addition, the BOI is responsible for obtaining actuarial valuations that serve as the basis for setting employer and employee contribution rates required to fund the system.

LACERA is a public pension system created in accordance with the County Employees Retirement Law of 1937 (the '37 Act or CERL) and administered pursuant to the '37 Act and the California Public Employees' Pension Reform Act of 2013 (PEPRA). CERL Section 31520 provides that "Except as otherwise delegated to the board of investment and except for the statutory duties of the county treasurer, the management of the retirement system is vested in the board of retirement." CERL Section 31520.2(b) provides that "The board of investments shall be responsible for all investments of the retirement system." The BOR and BOI have joint authority over certain shared responsibilities, including: the appointment and evaluation of the Chief Executive Officer (CEO) (CERL Section 31522.2); classification and compensation of personnel (CERL Sections 31522.1, 31522.4); adoption of LACERA's administrative budget (CERL 31580.2(a)); other matters as specified in CERL, including but not limited to CERL Section 31459.1 defining the term "Board" used in CERL; and as described in this Charter.

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## 2 Purpose of this Document

The purpose of this document is to describe:

- the purpose, scope, responsibilities, meetings, and structure of the Joint Organizational Governance Committee (JOGC);
- the specific terms of reference for the JOGC;
- the committee’s membership and leadership; and
- meeting frequency and dates.

## 3 Purpose of the JOGC

The purpose of the JOGC is to:

- serve and facilitate the work of both Boards when the two boards duties intersect;
- improve the combined oversight of both Boards;
- facilitate effective two-way communications and act as liaison between the Boards;
- ensure that both Boards are comfortable that their perspectives are properly represented;
- make recommendations, not decisions; and
- assist the Boards in resolving potential disputes effectively and at the earliest possible stage.

## 4 Scope

The scope of the JOGC includes:

- Litigation and Claims Impacting Both Boards
- Legislation Impacting Both Boards
- Staff Compensation
- Staff Classification
- Chief Executive Officer Review
- Budget
- Education and Travel
- Organizational Philosophy
- Miscellaneous Matters Impacting Both Boards

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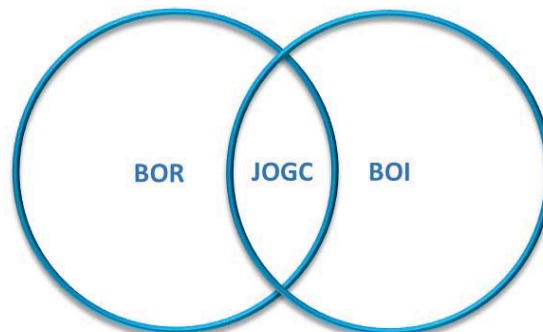
## 5 Powers Reserved for the BOR and BOI

The BOR reserves for itself all powers related to retirement benefit, disability and healthcare policy, legislation, litigation, operations, and administration, except as defined in its Board Charter and as described in this Charter.

The BOI reserves for itself all powers related to investment policy, legislation, litigation, operations, and administration, and actuarial valuations, except as defined in its Board Charter and as described in this Charter.

## 6 Authority

The JOGC will only make recommendations to each Board on matters that intersect and affect both the BOR and BOI as described in Section 7, Responsibilities of this Charter. The following figure visually highlights the JOGC role to facilitate the work of both Boards when the Boards' duties intersect.



## 7 Responsibilities

### 7.1 Litigation and Claims

Oversee and make recommendations about Litigation and Claims that, in the judgment of the Board Chairs, the Chief Executive Officer, or Chief Counsel, raise Unusual and Material Risks to the organization. Unusual and Material Risks may include Litigation and Claims making allegations of

- (1) legal theories,
- (2) conduct by LACERA, the Board, Board members, staff, members, vendors, or other third-parties,

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- (3) an amount or type of damages, or
- (4) potential adverse reputational impact or publicity,

that are beyond the type of Litigation or Claims that each Board is generally expected to separately manage, as stated below. Unusual and Material Risks may include Litigation and Claims by or against or concerning the conduct of the Chief Executive Officer and those reporting directly to him. They may also include any other Litigation and Claims, including ones that each Board is generally expected to separately manage, that the Board Chairs, the CEO, or Chief Counsel reasonably believe justify the involvement of this Committee because of mutual interest and concern to both Boards.

Litigation and Claims are defined as court actions, pre-litigation demands or claims, potential court actions, demands, or claims, and other forms of dispute resolution, such as arbitration and mediation.

Each Board is generally expected to separately manage:

- (1) As to the Board of Retirement, Litigation and Claims relating to the regular course of business regarding retirement, disability, and healthcare benefits, all LACERA personnel (other than the Chief Executive Officer and those reporting directly to him), and the general operations and administration of the retirement system and the OPEB plan,
- (2) As to the Board of Investments, Litigation and Claims relating to the regular course of business regarding investments, actuarial services, and the OPEB Trusts, and
- (3) Litigation and Claims concerning contracts approved only by that Board.

## **7.2 Legislation**

Make recommendations about Legislation that impacts both Boards.

## **7.3 Staff Compensation**

Make recommendations related to all types of compensation and compensation policy for:

- Union represented employees, including overseeing the collective bargaining agreements
- Non-represented employees
- Management employees

**LACERA**  
**Joint Organizational Governance Committee Charter**

Administration of the Chief Audit Executive's compensation using the Boards' established compensation structure is reserved to the Audit Committee.

#### **7.4 Staff Classification**

Make recommendations to create all new staff classifications.

#### **7.5 Chief Executive Officer**

- Should a vacancy occur, conduct the initial search for the CEO and produce a short-list of recommended candidates to each Board (supported by a search consultant)
- Oversee the CEO evaluation and provide timely feedback based on input from all Board members
- Recommend CEO compensation
- Oversee CEO succession planning
- Any other issues related to oversight of the CEO not rising to the level of a joint meeting

#### **7.6 Budget**

Oversee the Administrative and Retiree Healthcare budgets according to the following process:

- Staff develop preliminary budget plan in February
- The budget's preliminary budget plan is presented to JOGC in March
- Draft budget package is presented to JOGC in April for release to the Boards
- Budget hearings are held in May
- Proposed budget package is presented to each Board for approval at the Board's June meeting
- The JOGC will provide on-going oversight of the budget-to-actual results during the fiscal year

#### **7.7 Education and Travel**

Oversee and make recommendations with respect to the:

- Education and Travel Policy according to its terms
- Other training issues relevant to both Boards as needed

#### **7.8 Organizational Philosophy**

Make recommendations regarding LACERA:

- Mission statement

**LACERA**  
**Joint Organizational Governance Committee Charter**

- Values
- Vision
- Strategic planning
- General engagement

### **7.9 Miscellaneous Matters**

Miscellaneous matters, including dispute resolution between the Boards and its members, that may need to be brought before the JOGC will be determined on a case by case basis by the respective Board Chairs and the Chair of the JOGC in consultation with the CEO. Additionally, miscellaneous matters may be brought before the JOGC by any JOGC member.

## **8 Membership, Quorum, and Rules**

There will be eight (8) members with no designated alternates. The JOGC will be comprised of the BOR and BOI Chairs and Vice-Chairs plus one member appointed by each Chair and one member elected by each Board. If there is one JOGC member who represents both Boards (one overlap), then an additional appointment will be made by the BOR Chair in even years and by the BOI Chair in odd years. If there is more than one overlap, the BOR and BOI Chairs will make an equal number of additional appointments; if there are an odd number of overlaps, the final appointment, after the Board Chairs make their separate appointments, will be made following the rule as stated in the preceding sentence that applies in the case of one overlap.

A quorum exists when a majority of the members are present, without regard to the Board from which individual members were appointed.

The JOGC is subject to the Ralph M. Brown Act (Brown Act), and its meetings will be noticed, agendaized, and conducted in accordance with the Brown Act. The JOGC may meet in closed session as provided in the Brown Act.

Robert's Rules of Order will also apply in the JOGC's meetings. A motion may be made or seconded by any member. A motion passes if a majority of the members present, without regard to the Board from which they were appointed, vote in favor of the motion.

## **9 Leadership**

The Chair and Vice Chair of the JOGC will be elected by members of the JOGC at the first meeting of each year.

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## 10 Meeting Frequency and Dates

### 10.1 Frequency

The regular meeting schedule will be established at the first meeting of each year. Generally, the meeting schedule will be March, April, June, September, and December. Special meetings may be called as needed in accordance with the Ralph M. Brown Act.

### 10.2 Dates

Meetings will alternate between scheduled BOR and BOI meetings, and as needed.

## 11 Elimination of Certain Committees

With the establishment of the JOGC, the following committees will be eliminated:

- CEO Performance Committee
- Education and Travel Committee

## 12 Charter Review

The BOR and BOI shall review and update this Charter at least once every three years.

This Charter was adopted by the Board of Retirement on August 10, 2017 and by the Board of Investments on August 10, 2017.



April 17, 2019

TO: Each Member,  
Board of Retirement  
Board of Investments

FROM: Joint Organizational Governance Committee

FOR: May 1, 2019 Board of Retirement Meeting  
May 15, 2019 Board of Investments Meeting

SUBJECT: External Board Member Communications Policy

### **RECOMMENDATION**

That the Board of Retirement and the Board of Investments not adopt the proposed Joint Policy regarding External Communications of Board Members and maintain the current practice with respect to such communications without change.

### **LEGAL AUTHORITY**

The Board of Retirement and the Board of Investments have plenary authority over administration of the system (Cal. Const., art. XVI, § 17), which includes the ability to consider policies, such as the Joint Policy regarding External Communications of Board Members, relating to the conduct of the Board's business so long as it does not infringe Board Member's individual rights. Under its Charter, the Joint Organizational Governance Committee (JOGC) has authority to review and recommend – or in this case, not recommend – the proposed policy to the Board as a “miscellaneous matter.” (Section 7.9.)

### **DISCUSSION**

Public pension systems routinely adopt policies regarding board member communications in order to control the orderly flow of information and ensure that the organization speaks with one voice. However, the approach taken by systems varies widely. Some systems have policies that provide minimal controls, and simply require Board members not to speak for the organization. Other systems require approval of communications on behalf of the organization, while reserving the ability of members to speak on their own behalf provided that it is clear they are speaking for themselves and not the system.

The LACERA Boards have evolved such that the Boards and the Board Members are

Each Member, Board of Retirement and Board of Investments  
Re: External Board Member Communications Policy  
April 17, 2019  
Page 2

highly engaged in the community. This engagement takes a number of forms, including membership in organizations, leadership positions, advocacy on legislative and regulatory issues, public speaking, and other activities. Given this high level of activity, and the importance of maintaining consistent messaging on behalf of LACERA as a whole, the attached proposed policy takes the approach the Board Member's external communications for the organization require prior Board approval. The right of Members to speak for themselves is preserved.

LACERA's Code of Ethical Code (Sections IX, X), which is also attached, currently address certain external communications and political activities from an ethics point of view. LACERA's current practice is to address Board member external communications on a case-by-case basis. The proposed policy suggested a more fully developed and structured LACERA approach to Board Member communications.

However, at its April 10, 2019 meeting, the JOGC engaged in a full discussion of the issue of external communications and the proposed policy. Differing perspectives were expressed. Some members were concerned about that the proposed policy could be interpreted and enforced to limit or chill Board member's ability to express themselves on LACERA matters in their various activities. On the other hand, the view was expressed that the policy will provide clarity in LACERA's messaging. In the end, the JOGC voted to recommend to both Boards that the policy not be adopted and maintain the current practice with respect to such communications without change. (Ms. Gray and Messrs. Green, Okum, and Robbins voted yes; Messrs. Bernstein and Kehoe voted no; and Messrs. Kelly and Muir were absent).

## **CONCLUSION**

The JOGC recommends that that the Boards not adopt the proposed Joint Policy regarding External Communications of Board Members and maintain the current practice with respect to such communications without change.

### Attachments

c: Lou Lazatin  
JJ Popowich  
Jonathan Grabel  
Steven P. Rice

**BOARD OF RETIREMENT AND BOARD OF INVESTMENTS**  
**JOINT POLICY REGARDING EXTERNAL COMMUNICATIONS**  
**OF BOARD MEMBERS**

**A. Statement of Purpose.**

The Board of Retirement and the Board of Investment (Boards) support Board Members in their engagement and visibility with third parties in furtherance of LACERA's interests and objectives. The Boards also respect the right of Board Members to communicate in their own names on matters of interest to them as individuals separate from their role as LACERA trustees.

The purpose of this policy is to establish standards for Members of both Boards in their LACERA and personal roles. When Board Members are communicating in their LACERA role, their message as a matter of good governance should be consistent with Board decisions and policies, without regard to their position or vote, and with fiduciary duty. When Board Members communicate in their personal capacity, it should be expressly stated that the views are their own and do not represent the views of LACERA or the Boards.

This policy is intended to encourage and facilitate good communication and mitigate risks to LACERA, the Boards, and Board Members that may arise in connection with communications.

For purposes of this policy, "communicate" and "communication" refer to all forms of communication, including: verbally in speeches, presentations, and conversation, whether live or recorded, in person or by means of audio or video technology; by email; over social media; in writing; and any other means by which information is shared and opinions are expressed.

**B. Communications on Behalf of LACERA.**

**1. *Speeches and Presentations.***

A Board Member shall seek authorization from the Member's Board before making a speech or written or verbal presentation on behalf of LACERA or either Board. If a Member is on both Boards, the Member will seek advance approval from the Board with authority over the subject matter of the communication. If a Member gives a speech or presentation at any event for which the costs of attendance are paid by LACERA, such speech or presentation shall be deemed to be on behalf of LACERA and shall require Board approval.

///

**2. *Communications with Legislators, Regulators, the Plan Sponsor, or Other Public Officials.***

When communicating for LACERA with public officials, such communications shall be subject to the advance approval of the Member's Board.

**3. *Communications with Vendors or Potential Vendors.***

Board Members should not communicate with LACERA vendors or potential LACERA vendors concerning LACERA business unless authorized in advance by the Member's Board. "Vendors" is defined to include all parties that contract, are participating in an RFP or other vendor selection process or contract negotiations, or desire to do business with LACERA in connection with any goods and services, including providers of goods, service providers, consultants, and investment managers.

**4. *Media Inquiries.***

Board Members will not make communications to the media on behalf of LACERA without the advance approval of the Member's Board. All media inquiries shall be referred to the Chief Executive Officer and, for investment-related matters, also to the Chief Investment Officer, who are authorized to speak on behalf of LACERA.

**5. *Other Communications and Actions.***

With respect to other communications and actions, a Board Member will not communicate or take other actions on of behalf of LACERA or the Boards unless authorized in advance by the Member's Board, provided that Board Members may accurately summarize public Board actions.

**6. *Approval Request.***

In seeking authorization under this section, a Member will provide a brief written statement of proposed talking points for review by the Board. When a communication opportunity arises without time to present a request to the Board, a Member may direct their request to the Chair and the Vice Chair for decision, provided that notice will be provided by the Chair to the Board at its next meeting.

**C. Personal Communications.**

A Member may make communications on their own behalf on matters relating to LACERA, the Boards, and issues of interest to LACERA and the Boards so long as it expressly stated that the Member's communication is on behalf of the member in their

personal capacity, not as a Member of the Board, and does not represent the views of and is not on behalf of LACERA or the Boards.

**D. Limitation on All Communications.**

Board Members may not under any circumstances disclose confidential LACERA information, including information received in closed session, member information, attorney-client communications, information regarding LACERA employees, or other confidential or privileged information. In all communications, Board Member shall comply with all applicable law and other LACERA policies, including but not limited to the Code of Ethical Conduct.

**E. Review.**

This policy shall be review by the Joint Organizational Governance Committee and both Boards at least every three years.

Approved by the Board of Retirement: \_\_\_\_\_, 2019

Approved by Board of Investments: \_\_\_\_\_, 2019

# **CODE OF ETHICAL CONDUCT**

Restated  
and Approved:

Board of Retirement: December 15, 2016  
Board of Investments: December 14, 2016

To LACERA Board Members and Staff:

LACERA holds itself to the highest ethical standards of honesty, integrity, trustworthiness, and fairness.

We must employ these principles every day in fulfilling LACERA's **Mission** to *produce, protect, and provide the promised benefits*. These principles are an important part of our shared **Values** of *Professionalism, Respect, Open Communications, Fairness, Integrity, and Teamwork* (PROFIT) and our collective **Vision** of *Excellence, Commitment, Trust, and Service*.

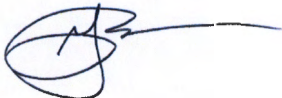
Ethics extends to all aspects of our business, including our interactions with each other inside the organization, with LACERA's members, with our plan sponsor, with vendors, with the public, and with all others.

The attached Code of Ethical Conduct provides detailed information as to the ethical standards of conduct required at LACERA. The Code addresses specific legal requirements. The Code also includes other standards rooted beyond the law in concepts of what we want to be as an organization. The Code applies equally to everyone at LACERA, including Board members and staff, because ethical lapses by any of us will reflect on all of us.

Please read the Code carefully and familiarize yourself with it. Every ethical situation you may encounter cannot be specifically addressed in such a document, and it is important that you seek additional information when needed. In this regard, the Code has sections on Reporting and Resources, including contacts for specific questions and reporting of ethical concerns.

Ethics is one of the most important criteria by which our colleagues and stakeholders will measure us. Each and every one of us has responsibility for ensuring the excellence of LACERA's ethics. Thank you for following the Code of Ethical Conduct in your work at LACERA.

Very truly yours,



Gregg Rademacher  
Chief Executive Officer

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**APPENDIX A – SUMMARY OF GIFT LIMITATIONS AND RESTRICTIONS**

## I. Purpose and Scope

The Los Angeles County Employees Retirement Association (LACERA) is a public pension plan organized under the County Employees Retirement Law of 1937 (CERL) (Cal. Gov't Code §§ 31450 et seq.) and the California Public Employees' Pension Reform Act of 2013 (PEPRA) (Cal. Gov't Code §§ 7522 et seq.). The management and administration of LACERA are vested in the Board of Retirement. All investments of LACERA are the responsibility of the Board of Investments.

The members of the LACERA Boards are mindful of the positions of trust and confidence they hold. The Boards adopt this Code of Ethical Conduct to define standards of ethical conduct required of LACERA Board members and staff. The purpose of the Code is to ensure the proper administration of LACERA and to foster public confidence in LACERA's institutional integrity as a well-managed public pension system.

"Ethics" and "ethical conduct" are defined for purposes of this Code as conduct that complies with principles of honesty, integrity, trust, fairness, and duty in connection with LACERA's business as a public pension fund. This Code looks to three sources for determination of ethical standards:

- First, laws and regulations applicable to LACERA and its business, Board members, and staff, including the California Constitution, CERL, the Political Reform Act and the regulations adopted thereunder, and other statutes, regulations, and case law.
- Second, best practices of ethical conduct. Best practices are drawn from ethical codes and practices of other public pension systems in California and elsewhere, professional associations, and similar sources.
- Third, LACERA's **Mission, Values, and Vision**, historical LACERA practices, and judgment as to the moral principles and behavior that LACERA as an organization strives to follow.

This Code provides ethical standards for LACERA Board members and staff. The Code provides specific guidance for common situations raising ethical issues. However, the Code does not specifically address every issue that Board members and staff will encounter. As to those other situations, the Code should be used and followed as a reference for standards of conduct and the basis for evaluation of facts and circumstances. The Code requires that additional information be requested when a user is unsure as to how the Code should be interpreted or when a user encounters an ethical issue not covered in the Code.

This Code is important:

- To ensure legal compliance with ethics laws and regulations.

- To further best ethical business practices.
- To establish an organization-wide culture and accountability for ethics.
- To foster trust, credibility, and positive relationships between LACERA and all parties necessary for the effective performance of LACERA's **Mission to produce, protect and provide the promised benefits**. These parties include others inside the organization, members, the plan sponsor and other participating employers, vendors, the public, and all others with whom LACERA may deal.
- To further LACERA's **Values and Vision**, which incorporate ethics, honesty, integrity, fairness, and trust.
- To establish common ethical standards followed by everyone at LACERA, instead of leaving ethics to unguided and possibly inconsistent personal judgment and interpretation.
- To mitigate the legal and business risks associated with ethical issues.
- To further the organization's business goals and objectives.
- To confirm the process for reporting or raising ethical concerns or questions.
- To identify resources for additional information concerning ethics and the applicable laws and regulations.

The Code shall not be construed as the sole source of ethics laws and regulations which must be observed by LACERA Board members and staff. Nothing in this Code shall exempt any person from any other applicable federal, state, or local law or regulation. The standards of ethical conduct in this Code are in addition to any such other laws and regulations.

## II. General Ethical Standards

This Code addresses specific ethical requirements in subsequent sections. The application of those specific requirements is summarized in this Section II as General Ethical Standards.

The following General Ethical Standards apply to LACERA Board members and staff:

- Recognize and be accountable for all fiduciary responsibilities.
- Comply with all applicable laws and regulations.
- Conduct all LACERA business in a fair manner, and be honest in all business dealings.
- Strive to provide the highest quality of performance and counsel.
- Avoid any activity which constitutes an actual conflict of interest or which could be perceived or interpreted as a conflict of interest by others.
- Avoid exerting improper influence or being improperly influenced, and the appearance of improper influence or being improperly influenced.
- Exercise prudence and integrity in the management of funds.
- Report to an appropriate person actions which may constitute violations of this Code of Ethical Conduct.
- Be responsible for maintaining professional competence.
- Be respectful, professional, and courteous to all LACERA Board members and staff, LACERA members, and all persons and entities with which LACERA does business or may otherwise interact.
- Maintain the confidentiality of all plan member information and all other confidential or privileged information so designated, including but not limited to information provided for or related to closed sessions of the Boards, which is received from or created or maintained by LACERA.
- To the extent not otherwise covered by the preceding bullets, conduct LACERA business in a manner consistent with:
  - LACERA's **Mission** to produce, protect, and provide the promised benefits.
  - LACERA's **Values** of Professionalism, Respect, Open Communications, Fairness, Integrity, and Teamwork.
  - LACERA's **Vision** of Excellence, Commitment, Trust, and Service.

- All other applicable LACERA policies and procedures.
- Report or seek additional information from an appropriate person, when necessary, concerning ethical questions and issues.

### **III. Prohibited Transactions**

The specific ethical requirements in subsequent sections of the Code define and describe certain prohibited conduct. Those prohibitions are summarized in this Section III as Prohibited Transactions.

LACERA Board members and staff shall not engage in the following Prohibited Transactions:

- Utilizing any property, resources, information, or opportunity of LACERA for personal gain.
- Falsifying or failing to record proper entries on any books or records of LACERA.
- Knowingly becoming a party to, or condoning, any illegal activity.
- Authorizing payment of any amount on behalf of LACERA, or for any purpose, other than that explicitly disclosed in the original request for payment.
- Directly or indirectly seeking or accepting gifts, money, property, or other benefit that would influence or appear to influence the conduct of duties.
- Engaging in or conducting outside activities or offices of financial or personal interest that may conflict with the impartial and objective execution of LACERA business activities.
- Selling or providing goods or services to LACERA without disclosure.
- Utilizing the services of relatives or close personal associates for LACERA business without disclosing such relationship prior to execution and obtaining the appropriate approval.
- Engaging in activities involving dishonesty, fraud, deceit or misrepresentation.
- Engaging in outside employment with any providers of supplies or services to LACERA.
- Engaging in outside employment that would interfere with or hamper expected performance at LACERA.
- Engaging in other activities which compromise or appear to compromise one's objectivity in the conduct of one's duties.
- Releasing to any third person plan member information or other confidential or privileged information so designated, including but not limited to information provided for or related to closed sessions of the Boards, which is received from or created or maintained by LACERA.

- Engaging in any other conduct prohibited by this Code of Ethical Conduct or applicable laws and regulations.

## **IV. Fiduciary Duties**

Members of LACERA's Board of Retirement and Board of Investments have fiduciary duties under the California Constitution and other law. LACERA as an organization also has fiduciary duties, which are implemented through LACERA's employees. Finally, certain of LACERA's vendors have a fiduciary duty to LACERA. This Section IV addresses all three categories of fiduciary duty.

### **A. Fiduciary Duties of Board Members**

The California Constitution, Article XVI, Section 17, defines the fiduciary duties of the LACERA Boards, and the Board members:

- The Boards "shall have plenary authority and fiduciary responsibility for investment of moneys and administration of the system."
- The Boards "shall have the sole and exclusive fiduciary responsibility over the assets of the system. The retirement board also has sole and exclusive responsibility to administer the system in a manner that will assure prompt delivery of benefits and related services to the participants and their beneficiaries. The assets of a public pension or retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system."
- The members of the LACERA Boards "shall discharge their duties solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. A retirement board's duty to its participants and their beneficiaries shall take precedence over any other duty."
- The member of the LACERA Boards "shall discharge their duties with the care, skill, prudence, and diligence under the prevailing circumstances that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise with a like character and like aims."
- As to the Board of Investments, the members of the Board "shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so."

These duties are also included in Section 31595 of CERL.

California case law provides that the Boards and the Board members have a trust relationship with LACERA's members and beneficiaries. This trust relationship means that the Boards and the Board members have a fiduciary duty of prudence and loyalty to members and beneficiaries, which must be exercised in good faith. Further, the Boards and the Board members have a duty to deal fairly with the members and beneficiaries,



without the slightest misrepresentation, concealment, threat, or adverse pressure. *Hittle v. Santa Barbara County Employees Retirement Assn.* (1985) 39 Cal.3d 374.

To perform their fiduciary duties, each member of the LACERA Boards shall diligently attend to the business of the Board on which he or she serves, and shall not leave to the other members of the Board control over the administration of the affairs of such Board.

## **B. Fiduciary Duties of LACERA, and Staff's Role**

LACERA as an organization has the same fiduciary duties. LACERA staff supports the organization, the LACERA Boards, and Board members in the fulfillment of their fiduciary duties as described in Section IV(A) of this Code. Accordingly, LACERA staff shall be familiar with the fiduciary duties described in Section IV(A) and conduct themselves at all times in a manner consistent with those duties. LACERA staff shall take no action inconsistent with those duties. LACERA staff shall avoid any conduct which is, or may be perceived to be, detrimental to LACERA and its members and beneficiaries. In dealing with members, LACERA staff shall be honest and forthright. Staff shall ensure that the information provided to members in connection with their rights, questions, choices and decisions, concerns, and issues is complete and accurate.

## **C. Fiduciary Duties of Certain Vendors**

Certain LACERA vendors have a fiduciary duty to the organization under applicable law or under the terms of a contract with LACERA. LACERA Board members and staff shall be aware of those vendors that owe a fiduciary duty and monitor them to ensure that the vendors comply with that duty.

## **V. Conflicts of Interest**

LACERA Board members and staff shall avoid conflicts of interest, including the appearance of conflicts of interest, in all aspects of their work for LACERA and shall comply with applicable laws and regulations relating to conflicts.

### **A. Form 700 Statement of Economic Interests**

Public officials, including LACERA Board members and certain staff, who make or influence governmental decisions are required to submit Form 700 Statements of Economic Interests. Form 700s are an important tool in the identification of actual or potential conflicts of interest by LACERA Board members and staff. Form 700s are public documents. LACERA Board members and designated staff shall file Form 700s when and as required by applicable law and regulations, which are generally summarized here. Additional information can be obtained from LACERA's Legal Office and from Fair Political Practices Commission publications.

Pursuant to California's Political Reform Act, LACERA's Boards have adopted, and the County of Los Angeles Board of Supervisors has approved as code reviewing authority, a Conflict of Interest Code that requires the filing of a Form 700 by positions "which involve the making or participation in the making of decisions which may foreseeably have a material effect on any financial interest," except positions which manage public investments. Cal. Gov't Code § 87302(a). Persons, including members of the Board of Retirement and identified staff, who file under an agency-adopted Conflict of Interest Code are referred to as "Code Filers." LACERA's Conflict of Interest Code sets forth the positions of all Code Filers and describes the specific economic interest Disclosure Categories that apply to each position.

There is also a separate Conflict of Interest Code for staff who serve as officers or hold other positions in LACERA's wholly-owned title holding entities.

Separate provisions of the Political Reform Act require positions managing public investments to file a Form 700. Cal. Gov't Code § 87200. Persons who file under Section 87200, including members of the Board of Investments and identified staff, are referred to as "87200 Filers." 87200 Filers are required to disclose investments, interests in real property, income (including gifts, loans, and travel payments), and business positions as described in Form 700 and the Political Reform Act. While 87200 Filers are not subject to LACERA's Conflict of Interest Codes, they are listed as a matter of information in the Appendix to LACERA's Code.

Form 700s shall be filed, both by Code Filers and 87200 Filers, upon assuming an applicable position, annually thereafter, and on leaving an applicable position. Form 700s shall be filled out by all required filers in a timely, accurate, and thorough and complete manner.

## B. Gifts, Honoraria, Travel & Loans

The Political Reform Act, and Regulations promulgated thereunder by the Fair Political Practices Commission (FPPC), impose limitations on gifts, honoraria, travel, and loans. The legal rules associated with gifts, honoraria, travel, and loans are lengthy and detailed. Additional information can be obtained from LACERA's Legal Office and from FPPC publications. A summary of the general standards with respect to these matters is as follows:

**Gifts.** LACERA Board of Retirement members and staff who are Code Filers are prohibited from receiving gifts totaling more than the legally established gift limit from any single source in a calendar year, if receipts of gifts from that source are required to be disclosed on Form 700 by LACERA's Conflict of Interest Code. LACERA Board of Investments members and staff who are 87200 Filers may not accept gifts totaling more than the legally established limit from any single source in a calendar year. Even if a gift is not subject to Form 700 reporting or the gift limit, a gift may still create a conflict of interest; therefore, LACERA requires Board members and all staff shall make disclosure to the Legal Office of all gifts from a single source with a combined total equal to or greater than \$50 in a calendar year from any individual or entity. Gifts to family members are included in the gift rules under certain circumstances. There are also exceptions to the gift rules for certain gifts; questions should be addressed to LACERA's Legal Office or the FPPC. The gift limit is adjusted biennially. The gift limit for 2015-2016 is \$460; the limit for 2017-2018 is \$470; the limit for any date after December 31, 2018 should be confirmed with the LACERA Legal Office or the FPPC. Gifts from a single source with a combined total less than \$50 in a calendar year currently are not reportable under FPPC law and regulations; gifts equal to or in excess of this limit are subject to reporting on Form 700, subject to the requirements and limitations described above. A more detailed SUMMARY OF GIFT LIMITATIONS AND RESTRICTIONS is attached as Appendix A.

**Honoraria.** LACERA Board of Retirement members and staff who are Code Filers are prohibited from receiving honoraria from any source if receipts of gifts from that source are required to be disclosed on Form 700 by LACERA's Conflict of Interest Code. LACERA Board of Investments members and staff who are 87200 Filers may not accept any honoraria payments. There are certain exceptions to the honoraria rules; questions should be addressed to LACERA's Legal Office or the FPPC. Even if an honorarium is not subject to disclosure, Board members and staff shall make disclosure to the Legal Office of such a payment from any individual or entity as to which LACERA will take any action.

**Travel.** Payments or reimbursement for travel are subject to the reporting requirements for gifts and income. If a travel payment is a gift, it is subject to the gift limit. A travel payment can also be considered an honorarium. Recusal may be required from any decision that will have a materially foreseeable financial effect on the source of a travel payment. There are exceptions to the travel

rules; additional information can be obtained from LACERA's Legal Office or the FPPC.

**Loans.** 87200 Filers and elected members of the Boards may not receive a personal loan that exceeds \$250 at any given time from an officer, employee, member, or consultant of LACERA or from any individual or entity that has a contract with LACERA. Ordinary retail loans and credit card transactions are excepted if they are offered on the same terms as generally available to the public. Elected members of the Boards may not receive a loan of \$500 or more unless the loan is made in writing and clearly states the terms. There are other limitations and exceptions. A loan can constitute a gift under certain circumstances. Additional information is available from LACERA's Legal Office or the FPPC.

Board members and staff are prohibited from soliciting any gift or any other consideration (including but not limited to money, service, gratuity, favor, entertainment, hospitality, loan, or other thing of value) from anyone who is doing or is seeking to do business of any kind with LACERA.

Board members and staff are prohibited from accepting any gift from anyone who is doing or is seeking to do business of any kind with LACERA, when the gift is offered with a view toward securing favorable treatment in the awarding of any contract or agreement, or the making of any determination.

All rules relating to gifts, honoraria, travel, and loans are subject to change by the FPPC and other authority. Confirmation of the current rules can be obtained from LACERA's Legal Office or the FPPC.

### **C. Incompatible Activities/Incompatible Offices**

LACERA Board members and staff shall not engage in any employment, activity, or enterprise which is inconsistent, incompatible, in conflict with, or inimical to his or her duties for or on behalf of LACERA, or with the duties, functions, or responsibilities of the position he or she occupies for LACERA. LACERA Board members and staff shall not perform any work, service, or counsel outside his or her responsibilities for LACERA where any part of his or her efforts will be subject to approval by the Boards or any employee of LACERA acting in that capacity. Cal. Gov't Code § 1126.

Board members may not simultaneously hold two public offices where the functions of the offices are inconsistent or where there are conflicting interests. Cal. Gov't Code § 1199.

### **D. Contracts**

LACERA Board members and staff shall not be financially interested, directly or indirectly, in any contract made between LACERA and any individual or entity. The making of a contract includes any participation whatsoever, including the development

of the need for the goods or services subject to the contract, issuance of a Request for Proposals (RFP), Request for Information (RFI), purchase order, or other solicitation or contracting process, evaluation of prospective contracting parties, selection of contracting parties, negotiation of the terms of the contract, and performance of the contract. Cal. Gov't Code § 1090 et seq.

#### **E. Investments**

LACERA Board members and staff shall not have any personal interest, direct or indirect, in the making of any investment by LACERA, or in the gains or profits from any investment. Board members and staff shall not, directly or indirectly, for himself or herself, or as an agent or partner of others, sell or provide any investment product to LACERA. Cal Gov't Code § 31528 (a), (b).

#### **F. Disclosure and Recusal**

LACERA Board members and staff shall disclose actual or potential conflict of interest, or the appearance of an actual or potential conflict of interest, to the Chief Executive Officer and the Legal Office. Board members and staff shall recuse themselves from involvement, consideration, and decision of a matter as to which the member has an actual conflict of interest. Recusal, or disqualification, is mandatory in certain circumstances, and discretionary in others. Board members and staff should consider recusing themselves from consideration and decision of a matter as to which the member has a potential conflict of interest, or the appearance of an actual or potential conflict of interest. Board members and staff shall consult with the Legal Office on any issue of recusal to discuss legal requirements that may apply to the particular circumstances, including whether recusal is required, whether recusal is an effective remedy for a conflict or potential conflict or whether other steps (up to and including disqualification of an individual or the Board) are necessary, and the way in which recusal, if possible, should be documented.

#### **G. Conflicts of Interest by Vendors**

LACERA's contracts shall include appropriate provisions to ensure that there are no conflicts of interest during the contracting process and to prevent conflicts of interest during the term of a contract. Board members and staff should be alert to, and take other appropriate steps to prevent, actual or potential conflicts of interest by vendors in connection with the making or performance of contracts.

## **VI. Employment of Related and Unrelated Persons**

To avoid nepotism or the appearance of nepotism, LACERA may not employ a person who is related to:

- A Board member.
- The Chief Executive Officer.
- Persons serving as an Assistant Executive Officer and any other employee reporting directly to the Chief Executive Officer.
- A division manager.

This prohibition does not prevent the continued employment of a person who has already been working for LACERA in a full time and non-probationary capacity for thirty consecutive days prior to the date the Board member or other individual described above acquired their position, or the related party became related. If a related party is retained under these circumstances, any actual or potential conflict of interest must still be corrected or sufficiently mitigated.

Related parties of other LACERA staff may be considered for employment by LACERA provided the applicant possesses all the qualifications for employment. Such a related party may not be hired for or assigned to a position which would either:

1. Create either a direct or indirect supervisor/subordinate relationship with a related party; or
2. Create either an actual conflict of interest or the appearance of a conflict of interest.

These criteria will also be considered when assigning, transferring, or promoting a staff member.

For purposes of this policy, related parties include:

- Spouse, parent or grandparent, child or grandchild, or sibling.
- First degree aunt, uncle, niece, nephew or cousin.
- Any “step” or “in-law” variant of the aforementioned relationships.
- Any member of the employee’s household, whether or not related.

A LACERA Board member or staff may not exercise discretionary authority to hire, evaluate or promote a related party under any circumstances, even when otherwise permitted under the standards above.

Board members and staff may participate in the hiring process for any person, whether related or unrelated, only in accordance with established LACERA policies and procedures and shall not use or attempt to use influence outside of their individual hiring authority to cause the organization to hire any individual as a permanent or temporary LACERA employee. Board members and staff may refer individuals interested in potential employment to LACERA's Human Resources.

## **VII. Contracting and Vendor Relationships**

LACERA Board members and staff shall not have contact with individuals or entities who are seeking engagement by LACERA in response to an RFP, RFI, purchase order, or other solicitation or contracting process, except in accordance with the published terms of the contracting process or except for, and limited to, contact necessary in connection with ongoing LACERA business with an individual or entity.

LACERA's RFPs, RFIs, and other contract solicitations shall include notice that a "quiet period" will be in place from the beginning of the contracting process until the selection of the successful party such that LACERA Board members and staff, as well as potential contracting parties, are instructed that contact between Board members and staff, on the one hand, and all potential contracting parties, on the other hand, shall not occur, except as provided in the preceding paragraph. As part of the contracting process, potential contracting parties shall be required to disclose potential conflicts of interest.

LACERA Board members and staff shall participate in the contracting process only in accordance with established LACERA policies and procedures, and the published terms of the process. Board members and staff shall not use or attempt to use influence, outside of their individual authority to cause the organization to enter into a contract with any individual or entity. Board members and staff may refer individuals or entities for consideration for contracting to the appropriate LACERA staff responsible for the particular procurement or contract process.



## **VIII. Use of LACERA Position, Resources, and Information**

LACERA Board members and staff shall not use their position or status with LACERA, LACERA property, funds, or other resources, or LACERA information, including plan member information, investment information, and other information concerning LACERA's business, for any personal purpose or gain, to secure any special privilege or exemption for himself or herself or any other individual or entity, or to assist or further the interests of any other individual or entity except in the normal course of LACERA's business. LACERA position, resources and information are to be exclusively used for LACERA business.

Board members and staff shall maintain the confidentiality of plan member information. Cal. Gov't Code § 31532.

Disclosures of public LACERA information pursuant to the Public Records Act shall be handled by the Legal Office to ensure compliance with legal requirements, consistency, and proper recordkeeping.

Board members and staff shall not disclose information acquired during a closed session of the Board unless the Board takes action to authorize disclosure. Cal. Gov't Code § 54963.

Board members and staff shall not, directly or indirectly, for himself or herself, or as an agent or partner of others, borrow or use any of the funds or deposits of LACERA, except to make authorized current and necessary payments of the retirement system. Cal. Gov't Code § 31528(a).

## IX. Personal Conduct and Communication

LACERA Board members and staff shall adhere to the following standards in their personal conduct in performing their work on behalf of LACERA:

- Board members and staff shall conduct themselves in accordance with this Code of Ethical Conduct.
- Board members and staff shall abide all applicable laws and regulations.
- Board members and staff shall act in a manner consistent with LACERA's **Mission, Values, and Vision** and shall follow all LACERA policies and procedures.
- Board members and staff shall treat similarly situated individuals and entities in a similar way, absent good cause, in the conduct of LACERA's business and decision-making to ensure consistency and fairness.
- Board members and staff shall communicate with, orally and in writing, and otherwise in all respects and at all times treat each other and all others in a respectful, professional, courteous, and civil manner.

A Board member shall not correspond with a non-LACERA person or entity using LACERA letterhead unless the communication is authorized by the Board on which the member serves. Copies of all written communications from a Board member to a current service provider, or person or entity related to a current service provider, relating to LACERA's business (other than purely personal or social correspondence) shall be provided to the Chief Executive Officer for subsequent distribution to all members of the Board on which the member serves. A copy of any written communication (other than purely personal or social correspondence, routine announcements, generally distributed newsletters, and the like) received by a Board member from a current LACERA service provider, or person or entity related to a current service provider, shall be forwarded to the Chief Executive Officer for subsequent distribution to all members of the Board on which the member serves. For purposes of this paragraph, the terms "communication" and "written communication" include email and other forms of electronic communication as well as physical or hard copy forms of communication.

Board members and staff shall be aware of the risk of communicating inaccurate information to plan members. Board members and staff shall refrain from providing specific advice or counsel with respect to a plan member's rights, benefits, or obligations, except staff who are authorized to communicate with members on such matters. All others should refer plan member questions and concerns to the Chief Executive Officer or appropriate designee.

## **X. Political Activities**

LACERA Board members and staff may work on individual candidate and ballot campaigns, and attend campaign events, during their personal time. They may make campaign contributions using personal funds, subject to applicable campaign finance laws. No LACERA funds, property, technology, letterhead, logo, or other resources may be used by LACERA Board members and staff to support personal political activities. LACERA Board members and staff may not solicit political contributions to a candidate or ballot campaign from other Board members and staff except (1) as part of a solicitation that is made to a significant segment of the public or (2) with respect to a ballot measure which would affect the rate of pay, hours of work, retirement, civil service, or other working conditions of LACERA employees; solicitations permitted by these two exceptions may only be made on personal time. LACERA Board members and staff may not use their influence or make any threats or promises relating to potential or current employment, promotion, or compensation to secure a vote or financial or other support for a candidate or ballot campaign. Cal. Gov't Code §§ 3201 et seq. LACERA Board members and staff may use their LACERA position to identify themselves when making an endorsement, provided that no statement may be made or action taken directly or indirectly indicating that the person represents LACERA in making the endorsement or that the endorsement is supported by or represents the position of LACERA, except when providing information authorized by the Boards. Nothing in this section is intended to impose any limitation on the personal political activities of LACERA Board members and staff not permitted by California law.

## **XI. Leaving LACERA**

### **A. Prospective Employment**

LACERA Board members and all staff shall not make, participate in making, or influence a decision by LACERA that directly relates to a nongovernmental prospective employer while negotiating or after reaching an employment agreement. The foregoing prohibition is triggered by an interview with a nongovernmental prospective employer or a nongovernmental prospective employer's agent, discussing an offer of employment with a nongovernmental prospective employer or a nongovernmental prospective employer's agent, or accepting an offer of employment. The foregoing prohibition does not apply if the Board member or staff is legally required to make or participate in the making of the decision or if the decision affects the nongovernmental prospective employer in substantially the same way as it will affect a significant segment of the public generally. Cal. Gov't Code § 87407.

### **B. Limitations on Subsequent Activities**

LACERA Boards members, the Chief Executive Officer, Assistant Executive Officers, persons next in line to Assistant Executive Officers, Chief Counsel, chief deputy legal officers, the Chief Investment Officer, and persons next in line to the Chief Investment Officer shall not, for two years after leaving that position, for compensation, act as agent or attorney for, or otherwise represent, any person except the County of Los Angeles, by making any formal or informal appearance before, or any oral or written communication to, LACERA, or any Board member or employee of LACERA, for the purpose of influencing action by LACERA, including any action involving the awarding or issuance of a contract or sale or purchase of goods or property. Cal. Gov't Code § 31528(c).

## **XII. Reporting**

Reporting of ethical issues is an important element of ensuring compliance with ethical requirements. Any concerns by Board members and staff about possible violations of this Code of Ethical Conduct or other ethical issues shall be reported to the Chief Executive Officer, the Chief Audit Executive, or Chief Counsel. Board members may also report concerns to their Board Chair. Staff may also report ethical issues to their immediate supervisor or division manager.

Concerns may be reported anonymously at the Internal Audit Hotline, which may be reached externally at (626) 564-6000, extension 2040, or internally by dialing extension 2040 directly.

### **XIII. Enforcement**

LACERA's Chief Executive Officer is responsible for communicating, implementing and enforcing the Code of Ethical Conduct with respect to LACERA staff. The Board Chairs will enforce this Code with respect to Board members and the Chief Executive Officer in accordance with Board administrative policies and applicable laws.

Violations of any of the provisions of the Code by staff may result in disciplinary action as the situation may warrant, up to and including termination of employment. Violations by Board members will be handled in accordance with Board Regulations, Bylaws, and policies and applicable law.

Questions on this matter should be referred to LACERA's Director of Human Resources, Internal Audit, or the Legal Office.

#### **XIV. Training**

LACERA management will provide training to new staff on this Code of Ethical Conduct as part of the new employee orientation. Management will provide training to existing staff on this Code at least every two years.

Management will include discussion of this Code in the training for new and incoming Board members. The Code will be circulated to all Board members at least every two years.

## **XV. Resources**

Board members and staff may refer to the following resources for additional information concerning this Code, questions concerning the application and interpretation of the Code to specific situations, and other issues concerning ethics and ethical conduct relevant to the performance of their duties and work for LACERA and its members and beneficiaries.

### **A. LACERA's Legal Office**

The LACERA Legal Office is familiar with the laws and regulations that form the foundation for this Code. The Legal Office is experienced in applying those laws and regulations to specific situations. The Legal Office is available at any time to provide additional information concerning ethics questions and issues and provide written or oral advice or opinions with respect to specific situations. The Legal Office will respond to information about potential ethical issues, concerns, and violations in the LACERA organization and take appropriate action. Questions for the Legal Office should be directed to LACERA's Chief Counsel.

### **B. LACERA's Internal Audit Division/Audit Hotline**

LACERA's Internal Audit Division will respond to information concerning ethical issues, problems, and concerns regarding acts or omissions in connection with LACERA's operations and will take appropriate action. Questions for the Internal Audit Division should be directed to LACERA's Chief Audit Executive. The Internal Audit Division may also be contacted anonymously on the Internal Audit Hotline, which may be reached externally at (626) 564-6000, extension 2040, or internally by dialing extension 2040 directly.

### **C. LACERA's Conflict of Interest Code**

Board members and staff should refer to LACERA's current Conflict of Interest Code, which is available on LACERA's website, [www.lacera.com](http://www.lacera.com), with respect to LACERA's requirements for the filing of Form 700 Statements of Economic Interests.

### **D. California Constitution**

The California Constitution, Article XVI, Section 17, which sets forth the fiduciary duties of the Board and Board members and the retirement system, is available on line at [https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=CONS&division=&title=&part=&chapter=&article=XVI](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=CONS&division=&title=&part=&chapter=&article=XVI).

### **E. CERL**

CERL, California Government Code §§ 31450 et seq., is available online at [https://leginfo.legislature.ca.gov/faces/codes\\_displayexpandedbranch.xhtml?tocCode=GOV&division=4.&title=3.&part=3.&chapter=3.&article=](https://leginfo.legislature.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=GOV&division=4.&title=3.&part=3.&chapter=3.&article=)



## **F. California Government Code Section 1090 et seq.**

Conflict of interest rules relating to financial interest in the making of contracts, incompatible activities, and incompatible offices are contained in California Government Code Section 1090 et seq., which is available online at [https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=GOV&division=4.&title=1.&part=&chapter=1.&article=4](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=GOV&division=4.&title=1.&part=&chapter=1.&article=4).

## **G. California Government Code Section 3201 et seq.**

Rules regarding political activities are contained in California Government Code Section 3201 et seq., which is available online at [https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=GOV&division=4.&title=1.&part=&chapter=9.5.&article=](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=GOV&division=4.&title=1.&part=&chapter=9.5.&article=).

## **H. Other California Statutes**

Other California statutes relating to ethics issues are available online at <https://leginfo.legislature.ca.gov/faces/codes.xhtml>.

## **I. Fair Political Practices Commission**

The California Fair Political Practices Commission (FPPC) has a large number of resources available concerning ethics issues under the Political Reform Act, FPPC Regulations, and related law. FPPC resources include:

1. Website: [www.fppc.ca.gov/](http://www.fppc.ca.gov/).
2. FPPC Publications available on the website:
  - a. Form 700 Statement of Economic Interests, and Form 700 Statement of Economic Interests Reference Pamphlet.
  - b. Limitations and Restrictions on Gifts, Honoraria, Travel and Loans: A Fact Sheet for Local Officials.
  - c. Recognizing Conflicts of Interest: A Guide to the Conflict of Interest Rules of the Political Reform Act.
  - d. Leaving Local Government Employment.
  - e. Political Reform Act, including the full text of the law.
  - f. FPPC Regulations, including the full text of the regulations.
  - g. FPPC Letters and Opinions, including a searchable database of letter and opinions issued by the FPPC on ethical issues.

3. Campaign Rules/Finance. <http://www.fppc.ca.gov/learn/campaign-rules.html>.
4. Advice and Enforcement. The FPPC offers informal and formal advice on ethical issues and has procedures for making a complaint. Instructions for seeking advice or making a complaint are on the FPPC website.

#### **J. California Attorney General Conflict of Interest Guide**

The California Attorney General has published a Conflict of Interest Guide which contains information on a wide range of conflict of interest issues. Although the Guide was last updated in 2010, it remains a useful reference. The Guide is available online at <https://oag.ca.gov/sites/all/files/agweb/pdfs/publications/coi.pdf>.

#### **K. Los Angeles County Registrar-Recorder/County Clerk**

Information concerning Los Angeles County campaign rules and finance can be obtained at <https://lavote.net/home/voting-elections/candidate-measure-information/campaign-finance-prop-b-reporting/campaign-disclosure-information>.

#### **L. Los Angeles County Fraud Hotline**

Ethical concerns may be reported to the Los Angeles County Fraud Hotline, <http://fraud.lacounty.gov/>. The County Fraud Hotline will not generally investigate LACERA issues, but it will forward concerns to LACERA for response.

## **XVI. Review of Code**

This Code shall be reviewed by the Board of Retirement and Board of Investments every three years. The Legal Office and Internal Audit shall monitor applicable laws, regulations, and best practices on an ongoing basis and shall request amendment of the Code when deemed necessary and appropriate. This Code may be amended by action of both Boards at any time.

## APPENDIX A – SUMMARY OF GIFT LIMITATIONS AND RESTRICTIONS

**WHAT IS A GIFT?** A “gift” is any payment or other benefit that confers a personal benefit for which you do not provide payment or services of equal or greater value. Gifts are valued at fair market value as of the time the gift is received. Gifts include price discounts and rebates, unless generally available to the public. Gifts are income reportable on Form 700, Schedule D or E, subject to applicable rules and exceptions, including those below.

### ***Examples of Gift Exceptions (no reporting/no dollar limit/no conflict of interest):***

1. Items returned unused to the donor, or for which you reimburse the donor, within 30 days.
2. Items donated unused, within 30 days of receipt, to (a) a 501(c)(3) non-profit with which you do not hold a position, or (b) a government agency. You cannot claim a tax deduction.
3. Gifts from a family member (spouse or former spouse, child, parent, grandparent, grandchild, sibling, current or former parent-in-law, siblings-in-law, aunt, uncle, niece, nephew, or first cousin, or the spouse of any such person), unless the family member is acting for another person.
4. Informational material provided to assist you in performing your official duties, including books, periodicals, videos, admission or discounts to informational conferences, demonstrations, or tours. This exception does NOT apply to meals, lodging, or (generally) transportation.
5. Tickets that you do not use and do not give to another person.
6. Two tickets, used by you and one guest, to attend a fundraiser for a campaign committee or candidate or a 501(c)(3) non-profit, provided the tickets are received from the organizer.
7. Items provided to LACERA and used by you for official business.
8. Travel payments made to LACERA and used to pay for your official business travel.

### ***Examples of Limited Gift Exceptions:***

1. Gifts commonly received from a dating partner, long-time personal friend, existing personal or business relationship unrelated to LACERA, or as an act of human compassion (no reporting or dollar limit, but these exceptions do not apply if person has LACERA business).
2. Wedding gifts received (not subject to dollar limit but reportable on Form 700 if meet gift threshold, with ½ of value reportable by each spouse; disqualification applies if donor has LACERA business).
3. Gifts commonly exchanged on holidays, birthdays, or similar occasions to the extent the gifts exchanged are not disproportionate in value.
4. Reciprocal exchanges with another individual (e.g., rotating lunches) so long as payments are not substantially disproportionate, payments are roughly equal over any calendar year, and no single payment is greater than the gift limit.
5. Travel payments for actual transportation, meals, and lodging the day of, day before, and day after you give a speech for a legitimate LACERA business purpose or on a state/national policy issue. Such payments are reportable on Form 700 and subject to conflict of interest disqualification.

## **GIFT LIMITS**

Gifts with a combined total of under \$50 from a single source for the calendar year need not be disclosed. Gifts greater than the gift limit below in any 12-month period may require disqualification.

### ***Board of Retirement and Staff Identified in LACERA Conflict of Interest Code (“Code Filers”):***

For 2016, you may not accept gifts from a single source with a combined total of more than \$460 for the calendar year if the Code requires you to report gifts from that source on your Form 700. For 2017-18, the limit increases to \$470.

### ***Board of Investments and Staff Identified in Appendix to the Conflict of Interest Code (“87200 Filers”):***

For 2016, you may not accept gifts from ANY single source with a combined total of more than \$460 for the calendar year. For 2017-18, the limit increases to \$470.

**IMPORTANT NOTE:** *This document is only a summary of applicable law as of December 2016; additional rules apply. Any gift may create the appearance of a conflict of interest. Please contact the LACERA Legal Office with any questions. This summary will be updated as needed.*



May 7, 2019

TO: Each Member  
Board of Investments

FOR: Board of Investments Meeting of May 15, 2019

SUBJECT: Oxford Impact Measurement Program  
Oxford, United Kingdom on July 15 – 19, 2019

The Oxford Impact Measurement Program will be held on July 15 -19, 2019 at the Saïd Business School in Oxford, United Kingdom. This program will explore the nature of impact while developing a practical impact measurement strategy and action plan for your organization in discussion with academics, industry pioneers and experienced peers from across the globe.

The main conference highlights include the following:

- Critically Assess the Main Impact Methodologies and Frameworks
- Look at How to Achieve Management Buy-In
- Examine the Choices, Trade-Offs And Opportunities Posed by Impact Measurement
- Assess a Range of Measurement Tools and Methods
- Learn How to Optimize Impact

The program meets LACERA's policy of an average of five (5) hours of substantive educational content. The standard hotel rate ranges from \$265.00 to \$325.00 per night plus applicable taxes and the registration fee is \$7,850.00.

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 Oxford Impact Measurement Program on July 15 -19, 2019 in Oxford, United Kingdom and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

LG  
Attachment



# The Oxford Impact Measurement Programme

Executive Education  
at Oxford Saïd

# Welcome

While all organisations have impact, there is growing interest in better understanding and measuring the various dimensions of this impact – from investors and funders, employees, customers and beneficiaries, and communities.

Impact measurement is about more than just collecting data. It involves understanding why impact matters and for whom, engaging in robust measurement and performance management practices, and making better decisions with all stakeholders.

**Karim Harji**  
Programme Director

# The Oxford Impact Measurement Programme

A one-week programme for experienced executives from the private, public, and social sectors

## Lead with confidence

Develop an informed understanding of approaches, frameworks and standards, and master the range of measurement tools.

## Improve your personal and organisational influence

Be able to articulate clearly what you value and why it matters in order to navigate shared impact priorities.

## Manage for impact

Move from measuring short-term outputs to long-term outcomes, and develop new insights for your stakeholders.

## Make better decisions

Use robust impact data to inform your social investments, or improve your products and services.

## Expand your network

Join a growing community of innovative, impact-focused companies, institutions, entrepreneurs, and funds.

## Quick facts



5 days



Annually in July



Certificate of completion



Membership of Oxford Business Alumni network



Qualified, experienced peer group



7 regions represented



11 sectors



# Programme overview

## Day 1

### Orientation

#### Overview of impact measurement theory and practice, state of the field

What is impact? Why do we measure? For whom is impact most relevant? Who decides what matters? How do we situate the different stakeholders within impact measurement? What is the state of play around impact measurement practice globally?

**Themes include: defining impact, context, causal links, stakeholder participation, SDGs**

## Day 2

### Strategy

#### Building an impact measurement strategy for your programme or portfolio

How do you define your theory of change? How do you set expectations around impact? How do you embed impact considerations within all stages of an impact portfolio or programme? What approaches, frameworks, and standards should you consider?

**Themes include: theory of change, aggregation, alignment, impact management, standards**

## Day 3

### Perspectives

#### Situating impact measurement priorities within your organisation

What methods and tools should you consider, and how do you choose among them? How do you build systems and capability to build excellence in impact measurement, including using technology? Whose perspectives are included and excluded as a result of these choices?

**Themes include: beneficiary perspectives, participatory approaches, lean data, feasibility**

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## Day 4

### Evidence

#### Practices to value, account for, report on, and verify impact claims

What types of evidence do we need, and how do we obtain reliable and comparable data? How do we account for impact, and how do we know which impacts are material? How do we mitigate impact risk? What are we learning from mainstream financial and social accounting?


**Themes include: impact evidence, unintended consequences, impact risk, materiality, reporting**

## Day 5

### Inspiration

#### Reflections on translating intentions to actions in a responsible manner

Perspectives: How do we apply principles, practices and systems? What does it mean to be responsible around measurement? What are the choices and trade-offs you have to make?



Visit [www.sbs.oxford.edu/imp](http://www.sbs.oxford.edu/imp) for further details and a sample timetable

# Is the programme right for you?

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## Yes, if you are:

**A corporate executive** who is responsible for measuring the effectiveness of social investments – including corporate, philanthropic, and impact investments – and opportunities to align with (and contribute to) global standards

**A Board member or programme leader from a foundation** who is seeking to build or strengthen the evidence base for your programme or portfolio, and to find new strategies and approaches improve impact management

**A civil servant, government commissioner or development professional** who wants to implement and measure outcomes-based financing e.g. Social, Development or Health Impact Bonds (SIBs)

**An asset manager, investment banker, family office manager or wealth manager** who needs to assess the impact performance of your individual (direct and fund) investments and broader portfolio

**A financial services professional or wealth manager** who intends to design impact-focused products, and needs to design frameworks and tools to describe the impact thesis, streamline reporting, and value these impacts

**A fund manager** looking to design or refine your impact measurement strategy for your products and/or portfolios, including aligning environmental, social and corporate governance (ESG) reporting with impact measurement and management approaches

**A consultant or intermediary** who wants to deepen your impact measurement expertise, including understanding global perspectives from a range of sectors and issue areas







# Benefits

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## For you

- You will gain a detailed overview of the impact measurement field, including leading tools, methodologies and frameworks, and an understanding of different perspectives throughout the capital chain (from investors to intermediaries, investees, networks and other stakeholders)
- You will practise developing and critiquing a range of impact measurement strategies in different contexts; you will become familiar with the range of measurement tools available, and be able choose the correct one for your circumstances
- You will receive a certificate of completion, which can be used as evidence of knowledge and experience in impact measurement
- You will join a growing and supportive community of practice to whom you can turn for help, different perspectives, and further development
- You have the opportunity to become part of the Oxford Business Alumni Network, which has volunteer-led chapters across the globe. These chapters are active in running events and other activities that will keep you thinking, allow you to share expertise, and build useful relationships

## For your organisation

- You will return with an impact measurement strategy and implementation plan for your organisation that you can share with others and put into practice
- You and your organisation will be invited to continue the connection through an ongoing series of topical webinars with global leaders in the impact measurement industry
- Through you, your organisation will have access to a growing international network of private and public-sector organisations, philanthropists, social entrepreneurs, and institutions, all keen to share the challenges of social change

# Our social impact community

Africa	10%	Europe	35%	Middle East	2%
Asia	6%	Far East	1%	North America	20%
Australasia	2%	Latin America	4%	UK	14%



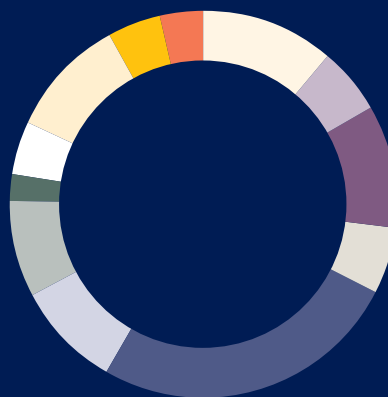
48%

Female participants



52%

Male participants



Charity/ NGO	10%
Corporate	5%
Dev Agency	9%
Education	5%
Financial Serv	23%
Foundation	8%
Impact Investing	7%
Gov	2%
Priv Cap	4%
Prof Serv	9%
Soc Ent	4%
Soc Fin	3%
Retail	0.2%
Public Administration	0.4%
Oil/Gas/Energy	0.2%
Healthcare	0.4%
Aerospace	0.2%

# Who teaches on the programme?

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The Impact Measurement Programme is delivered by a team drawn from the worlds of research and practice. A wide array of individuals from across the globe will contribute their expertise, including experts from SVI, Bridges, and UNSIF.

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## Alex Nicholls

Professor of Social Entrepreneurship



Alex Nicholls is Professor of Social Entrepreneurship within the Skoll Centre for Social Entrepreneurship at Oxford Saïd. His research focuses on several key areas in social entrepreneurship

and social innovation, including the nexus of relationships between accounting, accountability and governance; public and social policy contexts of social entrepreneurship; impact investing; and Fair Trade.

## Karim Harji

Programme Director



Karim Harji is the Programme Director, and an Associate Fellow at Oxford Saïd. He has over a decade of international experience in impact measurement and evaluation, and was previously an Advisor to the Rockefeller Foundation, Co-Chair of the Impact Measurement Task Force convened by the Government of Ontario, and member of the Impact Measurement Working Group of the G8 Social Impact Investment Task Force. Karim also brings substantial experience in impact investing and social finance, and co-founded Purpose Capital, the leading impact investment advisory firm in Canada.

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Visit [www.sbs.oxford.edu/imp](http://www.sbs.oxford.edu/imp) for an up-to-date list of speakers



# Why measurement matters...

*An interview with the Programme Directors*

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*“Impact is what drives the people and organisations in impact investing and social finance, and distinguishes them from conventional investors and businesses. But, arguably, unless you are actively measuring your impact, you are not operating or managing in a way that fully reflects your social mission and goals.”*

**Karim Harji and Alex Nicholls**

Programme Directors



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## Why did you develop this programme?

We've been running the Oxford Impact Investing Programme for five years, and recently hosted our first Social Finance programme. Around 300 people have passed through these doors, from those who are managing impact investing funds and portfolios, corporate and foundation grant-making programmes, and large public-sector programmes to social entrepreneurs, philanthropists, and consultants.

All of them are wrestling with the problem of how to understand and measure impact. We've seen a lot of progress and innovation in recent years on accessing and deploying investments for impact, but relatively little on measurement. This is the gap we will be addressing with this new programme.

Impact is what drives the people and organisations in this field, and distinguishes them from conventional investors and businesses. But, arguably, unless you are actively measuring your impact, you are not operating or managing in a way that fully reflects your social mission and goals.

We have a module on impact measurement in each of these programmes, but there is never enough time to cover everything that people want to know. Each year, we are asked more questions about impact measurement, and it became obvious that there was strong demand for a new programme.

## What will I learn?

A lot of the challenges of impact measurement stem from the fact that our expectations are uncertain: we're not clear about why we measure, what we should be measuring and then, what to do once we get the results. This programme is built around helping you to clarify these issues for your organisation.

In the programme, we will introduce you to measurement tools and help you develop the knowledge to design effective measurement frameworks. There is no single model for measuring impact, and of course the different stakeholders in any business or programme may have very different ideas about what they are going to achieve. An investor might say, 'Here's my investment thesis, and I will judge the success of my investment these measures.' But an entrepreneur might respond, 'What we're trying to accomplish is a bit broader than that, and so we're going to define our success in a slightly different way'.

So there's an underappreciated element of negotiation to impact measurement, as all parties have to work together to define and prioritise what they value, and therefore what they measure. With the Sustainable Development Goals and cross-sectoral collaborations, navigating among these issues will become even more important.

That is why it is so important that the Impact Measurement Programme features participants and speakers from a range of organisations with diverse impact goals, needs and challenges. Through group discussions on the broad issues, and targeted exercises for the case studies, we will be working together to develop a better understanding of both our own and others' values and priorities.

Another important element of the programme focuses on how to move from measuring outputs to outcomes. While we all recognise that positive long-term results are desirable, it is often difficult to trace outcomes over time among different target groups. You also have to look at both positive and negative results, and even any unintended consequences that may run counter to your stated impact objectives. We will review these issues, drawing on diverse sectoral and regional experiences.

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## How will I learn?

At the centre of the programme is the idea of a conversation. All Oxford Saïd programmes work by bringing together professionals from a range of sectors, contexts and countries and helping them to learn from each other through discussion and debate.

You will start with preparation and reading before the programme so that you can hit the ground running when you arrive in Oxford. And, once here, the work will be intensive – starting early, finishing late, and cramming in additional discussions with your classmates, faculty and tutors where you can.

There will be some theory-based sessions, and a critical review of the leading tools, methodologies and frameworks that are being used today – explained by the people who are actually using them. We will use case studies to illustrate how organisations have dealt with – or failed to address – impact measurement challenges and opportunities. And we will expect you to apply what you have learned each day through regular tutorial sessions and group-based discussions and presentations.

Throughout the week, you will also be reflecting on your own learning and creating an impact measurement strategy, which you can share with colleagues and faculty. You will then convert this strategy into an implementation plan to start working on as soon as you return home.

## How is this programme different?

Oxford has a track record of excellence and academic rigour. But more than that, as an institution we are characterised by our ability and desire to draw on multiple perspectives. This is particularly important in a field in which we are developing participants' ability to navigate between different stakeholders and sectors. When you come on this programme, you will be able to hear from world-class people with a variety of perspectives – including practitioners, executives, and academics,

The pioneering Oxford Impact Investing Programme was launched five years ago, and we have recently built on that with the Oxford Social Finance Programme. So we bring deep experience and expertise in both these areas, and with the Impact Measurement Programme, we can draw on an already thriving community of practice. We know that people are thinking about the issues relating to impact measurement. At Oxford Saïd, we offer a distinctive combination of institutional credibility, academic rigour, technical capability, and a global network of alumni, faculty and partners.

This is partly because, at a wider level, Oxford Saïd is interested in the idea of leadership that goes beyond the traditional business school focus of maximising shareholder value. So our expertise in finance and investment is matched by research on governance and leadership that takes into account a wide range of stakeholders. Impact measurement fits very comfortably with this outlook.

# Next steps...



## Contact us

Visit [www.sbs.oxford.edu/imp](http://www.sbs.oxford.edu/imp) for contact details and how to apply.



The Oxford Impact Measurement Programme is one of three programmes in the social impact space available from Saïd Business School. You may also be interested in:

### Impact Investment

- Deal-focused, detailed and practical
- Enterprise and fund level
- Includes role of intermediaries, fund creation, and deal-making
- Education, agriculture, technology

### Social Finance

- Systems approach to allocating capital to address world-scale problems
- National and international levels
- Blended capital; Catalytic Philanthropy; Public-Private Partnership; Corporate Social Responsibility; Social Impact Bonds
- Climate change, infrastructure, supply chain

Saïd Business School  
University of Oxford  
Park End Street  
Oxford, OX1 1HP  
United Kingdom

[www.sbs.oxford.edu](http://www.sbs.oxford.edu)

All information is correct at time of going to press please check our website for most up-to-date information.

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# Draft Timetable (subject to change)

<b>Monday – Framing</b>	<b>Tuesday – Evidence</b>	<b>Wednesday – Approaches</b>	<b>Thursday – Decisions</b>	<b>Friday – Possibilities</b>
0830-1000 A1. Overview	0830-0900 B1. Overview	0830-0900 C1. Overview	0830-0900 D1. Overview	0830-0900 E1. Overview
1000-1100 A2. Why Measure?	0900-1100 B2. Evidence of Impact	0900-1030 C2. Theory of Change	0900-1030 D2. Payment By Results	0900-1100 E2. Impact in a Textured World
1100 Break	1100 Break	1030 Break	1030 Break	1100 Break
1130-1300 A3. Models and Questions	1130-1300 B3. Whose Evidence?	1100-1300 C3. “How To” workshops	1100-1300 D3. “How To” workshops	1130-1230 E3. Mainstreaming Impact
1300 Lunch	1300 Lunch	1300 Lunch	1300 Lunch	1230-1300 E4. Wrap Up
1400-1530 A4. Whose Impact?	1400-1530 B4. Organizing Evidence	1400-1530 C4. Valuing Impact	1400-15:30 D4. Expecting Impact	1300 Lunch
1530 Break	1530 Break	15:30 Break	1530 Break	<b>DRAFT</b>
1600-1730 A5. How Much Impact?	1600-1730 B5. Measuring Well-Being	1600-1800 C5. Tutorials	1600-1800 D5. Tutorials	



May 6, 2019

TO: Each Member  
Board of Investments

FOR: Board of Investments Meeting of May 15, 2019

SUBJECT: The 6th Annual Hispanic Heritage Foundation (HHF) Investors Group Conference  
June 6, 2019 in Oakland, California

The 6th Annual Hispanic Heritage Foundation (HHF) Investors Group Conference will be held on June 6, 2019 at the Mills College in Oakland, California. The HHF Investors Forum is centered around educational training for Latino institutional investment professionals including trustees, investment staff, asset managers, and other industry stakeholders. The HHF Investors Forum is an initiative for Latino investors, trustees, investment staff, and asset managers. The Forum provides educational content on investments and asset management best practices builds a diverse network of investors and asset managers and creates a pipeline of Latinos to grow into trustee and senior investment roles.

Main conference highlights include the following:

- Personal Experiences of Trustees Driving Change
- Investing in the Private Markets
- Emerging and Specialized Manager Programs
- Cultivating the Next Generation of Women Leaders

The conference meets LACERA's policy of an average of five (5) hours of substantive educational content per day. The conference will be held at the White & Case LLP Office and attendees are responsible for their hotel accommodations. The hotel rates range from \$282.00 to \$320.00 plus applicable resort fees and taxes and the registration fee to attend is \$175.00.

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 6th Annual Hispanic Heritage Foundation (HHF) Investors Group Conference on June 6, 2019 in Oakland, CA and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

LG

Attachment

**2019 HHF Investors Forum Agenda**  
**June 6, 2019 | Oakland, CA**

**Wednesday, June 5, 2019**

**6:00 – 7:30 PM      Pre-Forum Happy Hour**

**Thursday, June 6, 2019**

**8:00 AM                      Registration and Continental Breakfast**  
**Personal Experiences of Trustees Driving Change**  
**Understanding Institutional Asset Allocation**  
**Networking Break**  
**Investing in the Private Markets**  
**Emerging Manager Showcase**

**12:00 PM                    Lunch Keynote: State of the Capital Markets**  
**Wellness Exercise**  
**Emerging and Specialized Manager Programs**  
**Networking Break**  
**Current Lending Environment**  
**Networking Break**  
**Opportunities in Real Estate**  
**Networking Break**  
**Cultivating the Next Generation of Women Leaders**

**5:00 PM                    Closing Remarks**  
**Networking Reception**  
**Dinner**





May 6, 2019

TO: Each Member  
Board of Investments

FOR: Board of Investments Meeting of May 15, 2019

SUBJECT: The International Corporate Governance Network (ICGN) Conference  
July 16–18, 2019 in Tokyo, Japan

This year's International Corporate Governance Network (ICGN) Conference will be held on July 16–18, 2019 at the Hotel New Otani in Tokyo, Japan. ICGN is proud to be hosted by the Tokyo Stock Exchange (TSE) for the 2019 Annual Conference & Annual General Meeting. Over 600 influential governance professionals will convene in Tokyo to discuss progress towards Japan's Revitalization Strategy to enhance long-term corporate value contributing to sustainable economies world-wide. The three-day event will address the impact of corporate governance and investor stewardship reforms and highlight future priorities for companies, investors and stakeholders alike.

The main conference highlights include the following:

- A New Era for Japanese Corporate Governance
- Strengthening the Power And Influence of Independent Directors
- Governing Culture and Talent for the Long-Term
- Reforming Corporate Disclosure and Assurance for 21st Century Reporting

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 Hotel New Otani Tokyo is \$325.00 per night plus applicable taxes and the registration fee to attend is \$1,400.00.

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 International Corporate Governance Network conference on July 16–18, 2019 in Tokyo, Japan and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

LG

Attachment

# ICGN ANNUAL CONFERENCE TOKYO

Hosted by The Tokyo Stock Exchange

**16 – 18 July 2019 | Hotel New Otani Tokyo**



## **Tuesday, July 16**

- |               |  |
|---------------|--|
| 08:00         | <b>Registration</b>  |
| 08:30 – 09:30 | <b>ICGN Committee Meetings</b> <i>Taking place on Main Arcade Level – open to ICGN members &amp; non-members.</i><br>Committee Meetings occur in English only. Language interpretation will be available for the conference from 16th July at 16:00. |
| 09:30 – 09:50 | <b>Refreshments</b>  |
| 09:50 – 10:50 | <b>ICGN Committee Meetings</b> <i>Taking place on Main Arcade Level - open to ICGN members &amp; non-members.</i> Committee Meetings occur in English only. Language interpretation will be available for the conference from July 16 at 16:00.      |
| 10:55 – 11:55 | <b>ICGN Committee Meetings</b> <i>Taking place on Main Arcade Level - open to ICGN members &amp; non-members</i> Committee Meetings occur in English only. Language interpretation will be available for the conference from July 16 at 16:00.       |
| 12:05 – 13:20 | <b>Hosted Lunch Session (sponsored)</b>  |
| 13:30 – 15:30 | <b>Annual General Meeting</b><br>AGM will occur in English only. Language interpretation will be available for the conference from July 16 at 16:00.   |
| 15:30 – 15:55 | <b>Refreshments</b>  |
| 16:00 – 16:15 | <b>Welcome from the Host</b> <ul style="list-style-type: none"><li>• <a href="#"><u>Mr. Koichiro Miyahara, President &amp; CEO, Tokyo Stock Exchange, Inc</u></a></li></ul>  |
| 16:15 – 16:30 | <b>Welcome from the ICGN</b>   |
| 16:30 – 16:45 | <b>Keynote Address</b>   |

- [Toshihide Endo, Commissioner, Financial Services Agency \(FSA\), Japan](#)

16:45 – 18:00

### **Plenary 1: A new era for Japanese corporate governance**

In 2018 the Japan Corporate Governance Code was updated, following a revision of Japan’s Stewardship Code in 2017. To what extent have these initiatives led to tangible improvements in practice –reducing cross-shareholdings, enhancing board diversity or promoting awareness of the cost of capital in strategic business decisions? What are the next steps to help ensure long term value creation by companies and investors alike?

- Introductory remarks [Hidenori Mitsui, Director-General, The Policy and Markets Bureau, Financial Services Agency \(FSA\), Japan](#)
- [Naoki Izumiya, Chairman of the Board, Asahi Group Holdings and Chairman, Japan Investor Relations Association \(JIRA\) Japan](#)
- [Anne-Marie Jourdan, Chief Legal Officer, Fonds de Reserve Pour Les Retraites](#)
- [Akira Sugano, President & CEO, Asset Management One, Japan](#)
- Chaired by: [Professor Hideki Kanda, Professor, Gakushuin University Law School, Japan](#)

18:00 – 19:00

### **Press Conference**

18:00 – 19:30

### **Networking Drinks**

## **Wednesday, July 17**

07:30 – 09:00

### **Registration**

08:00 – 09:00

### **Breakfast session: Linking purpose with profits - Creating shared value – Hosted by Nestle**

For many years, Nestlé has pursued an approach to business which it calls “Creating Shared Value”. It is based on the notion that a company can only be successful in the long term, and create sustainable shareholder value, if it also creates value for society. Many other companies have demonstrated how “doing well” can mean “doing good”. Increasingly, there is evidence of a positive financial impact. The breakfast session aims to discuss how linking purpose with profits can not only have a sustained, positive impact on the communities in which companies are present, but lead to higher growth and profitability.

- [David Frick, Member of the Executive Board, Nestle S.A](#)
- [Charles Macek, Chairman, Vivid Technology Ltd. & Earthwatch Institute, Australia](#)

- [Jen Sisson, Chief of Staff, Financial Reporting Council, UK](#)
- Chaired by: [David Couldridge, Head of ESG Engagement, Investec Asset Management, South Africa](#)

09:30 – 09:40

**Welcome from the ICGN**

- [Kerrie Waring, Chief Executive Officer, ICGN](#)

09:40 – 10:00

**Opening Keynote Address**

- [Hiro Mizuno, Executive Managing Director and CIO, GPIF, Japan](#)

10:00 – 11:00

**Plenary 2: Linking sustainable finance to the real economy**

In October 2018, the UN’s Intergovernmental Panel on Climate Change warned that not enough is being done to avoid irrevocable damage to the planet – in fact instead of cutting carbon dioxide emissions, world consumption of oil, coal and natural gas is increasing. How are governments supporting the UN’s Sustainable Development Goals in alignment with TCFD disclosure requirements? Should other markets follow the Bank of England’s lead and impose rules requiring a senior executive to take charge of climate change risks? What lessons can we learn from the Canadian experiences of carbon offsetting? How is the EU Action Plan linking sustainable finance to the real economy?

- [Sarah Breeden, Executive Director of International Banks Directorate, Prudential Regulation Authority \(PRA\), Bank of England](#)
- [Takuya Fukumoto, Director, Industrial Finance Division & Director, New Business Policy Office, METI, Japan](#)
- [Barb Zvan, Member, Canada’s Expert Panel on Sustainable Finance; Chief Risk & Strategy Officer, Ontario Teachers’ Pension Plan, Canada](#)
- Chaired by: [Claudia Kruse, Managing Director Global Responsible Investment & Governance, APG Asset Management, Netherlands](#)

11:00 – 11:30

**Refreshments**

11:30 – 12:30

**Plenary 3: Strengthening the power and influence of independent directors**

Independent Directors, free from external influence, offset the domination of decision-making from any single individual in the boardroom. How can the role of independent directors in Japan and around the world be strengthened to mitigate an overly powerful Chairman or CEO? What measures can be implemented to ensure effective oversight of CEO remuneration? And what steps should be taken to improve corporate

governance disclosures – approved by the Board? Is there an optimal proportion of independent directors for a board to be truly effective?

- [Carine Smith Ihenacho, Chief Corporate Governance Officer, Norges Bank Investment Management](#)
- [Dr. Yoshiko Takayama, Managing Director, J-Eurus IR Co., Ltd. & President, Japan Board Review Co., Ltd.](#)
- [Dr. Isao Teshirogi, President & CEO, Shionogi & Co., LTD, Japan](#)
- [Sakon Uda, Independent Director, Chairman of the Board, Ebara Corporation](#)
- Chaired by: [Christina Ahmadjian, Professor, Graduate School of Business Administration, Hitotsubashi University](#)

12:30 – 13:30

### **Networking Lunch**

13:45 – 14:45

### **Hosted Sessions**

**Session A: Globalizing Japan: Making stewardship engagement effective – a global, local and inter-cultural perspective** *Hosted by: Japan Shareholder Services*

In order to sustain company growth, major Japanese corporates have no choice but to further globalize. Japanese CG Codes encourage corporate boards to take dynamic risks to be innovative, efficient, and profitable. The session aims to highlight complex issues contained within shareholder-company engagement from a sustainable growth and dynamic corporate action perspective, while touching on regulatory and cultural matters often involved with engagement activities.

- [Jamie Allen, Founding Secretary General, ACGA](#)
- [Naoki Kamiyama, Chief Strategist, Nikko Asset Management](#)
- [Emi Onozuka, Head of Stewardship, Goldman Sachs Asset Management Japan & Member, Japan Stewardship Forum](#)
- Chaired by: [Tatsuya Imade, Managing Executive Officer, JSS](#)

**Session B: Japanese corporate governance in practice: board diversity & group corporate governance** *Hosted by: Sumitomo Mitsui Trust Asset Management*

Recent reforms in Japan’s stewardship code and corporate governance code have led to a notable increase in engagement activities among investors and companies in Japan. The addition of governance factors which were not on the agenda in the past; namely “board diversity” and “corporate governance of subsidiary companies” are expected to further revitalize engagement between corporate and investment communities. An experienced panel of academics and practitioners will discuss these two factors, including what the points of engagement are and how these

activities may lead to further developments in Japanese corporate governance reform.

- [Hiroyuki Horii, Executive Officer, General Manager of Stewardship Development Department, Sumitomo Mitsui Trust Asset Management](#)
- [Professor Hideki Kanda, Professor, Gakushuin University Law School, Japan](#)
- [Yoshimitsu Kobayashi, Chairman of Keizai Doyukai and Chairman of Mitsubishi Chemical Holdings](#)

**Session C: Governing culture and talent for the long-term** *Hosted by EY*

People and culture are priority issues for boards and investors concerned about long-term value. As technology disrupts the workplace, how are best practices in human capital management changing? How are Japanese companies interpreting the revised Japan Corporate Governance Code's emphasis on the board's role vis-à-vis organizational culture? Measuring intangibles is difficult, but not impossible, as demonstrated by the work of the Embankment Project for Inclusive Capitalism (EPIC). How can consistent metrics advance understanding of whether culture and strategy are aligned?

- [Michael Jenkins, CEO, Human Capital Leadership Institute, Singapore](#)
- [Jenn-Hui Tan, Head of Capital Markets and Corporate Governance, Fidelity International](#)
- Chaired by: [Stephen Klemash, Partner, Americas Leader, Center for Board Matters, EY](#)

**Session D: The power of trust - Is confidentiality the differentiating factor in shareholder engagements in Japan?**

*Hosted by GO Investment Partners & Tokio Marine Asset Management*

Most activist shareholders share their agenda publicly and widely sometimes even before they have met companies' management. Some argue “unless you beat management into submission and you are seen to do so, you are not really engaging”. Conversely, the Japan's Stewardship Code encourages constructive engagement based upon in-depth knowledge of companies and their business environment to promote sustainable growth. Our panel will review the effectiveness of different engagement models over the past 10 years in Japan and discuss whether a model that respects trust and confidentiality may achieve more sustainable long-term changes.

- [Satoshi Taguchi, Director, Senior Vice President, JXTG Holdings., Inc.](#)
- [Yoshikazu Maeda, Director of Responsible Investment, Governance for Owners](#)
- [Kazunori Suzuki, Professor of Finance, Graduate School of Business and Finance at Waseda University](#)
- Chaired by: [Kana Inagaki, Tokyo Correspondent of Financial Times](#)

15:00 – 15:30

**Refreshments**

15:30 – 16:15

**Keynote Chairman Interview**

- [Hiroaki Nakanishi, Chairman, Keidanren & Executive Chairman, Hitachi, Ltd., Japan](#)

16:30 – 17:30

**Plenary 4: Reforming corporate disclosure and assurance for 21st Century reporting**

In Japan efforts are underway to provide better corporate reporting to address long term risks and opportunities. What can be learnt from other initiatives such as the UK's Strategic Business Report? What measures are regulators taking to help ensure market confidence, integrity and transparency? What are the roles and responsibilities of the board and the management in the corporate reporting model in 21st century? How can reporting systems and processes be improved to ensure the credibility of reporting?

- [Tomoyuki Furusawa, Deputy Director-General of Planning & Coordination Bureau, Financial Service Agency, Japan](#)
- [Stephen Haddrill, Chief Executive Officer, Financial Reporting Council \(FRC\) UK](#)
- [Prof. Arnold Schilder, Chairman, International Auditing and Assurance Standards Board](#)
- [Aiko Sekine, Chairman & President, The Japanese Institute of Certified Public Accountants \(JICPA\)](#)
- Chaired by: [Javier de Frutos, CIO, Sailbridge Capital and Chairman of the Commission on Financial Reporting of the European Federation of Financial Analysts' Societies](#)

17:30 - 18:00

**ICGN Corporate Governance Awards *Announcement of the winners***

18:00 – 21:00

**Annual Conference Dinner**

**Thursday, July 18**

08:00 – 09:30

### **Registration**

07:45 – 08:45

### **Breakfast Session**

09:00 - 09:30

### **Carbon Neutral Vote**

- [George Iguchi, Chief Corporate Governance Officer, Nissay Asset Management & Board Member, ICGN](#)

09:30 – 10:00

### **Opening Remarks**

- [Professor Kunio Ito, Graduate School of Commerce & Management, Hitotsubashi University](#)

10:00 – 11:00

### **Plenary 5: Shareholder primacy versus stakeholder primacy: is there an optimal model?**

Western democracies are increasingly challenged by stakeholders demanding a greater voice in holding companies to account. This is evidenced in the UK Corporate Governance Code and mooted in the proposed USA's 'Accountable Capitalism Act.' Japanese companies are accustomed to responding to the interests of the workforce (some might say at the expense of shareholders). How do boards promote the success of the company in the interests of shareholders and relevant stakeholders in various markets? What are the implications for collective board responsibility when specific interest groups are represented? Who is most able to hold companies to account and keep a check and balance on corporate governance – shareholders or stakeholders?

- [George Dallas, Policy Director, ICGN](#)
- [Harry Keiley, Board Member, Investment Committee Chairman, CalSTRS, USA](#)
- [Dr. Tetsuo Kitagawa, Emeritus Professor of Aoyama Gakuin University /Professor of Tokyo Metropolitan University](#)
- Chaired by: [Margo Cook, President, Nuveen Advisory Services](#)

11:00 – 11:30

### **Refreshments**

11:30 – 12:30

### **Plenary 6: Leadership perspectives: role and effectiveness of asset owners and their managers in corporate governance oversight**

The concept of investor stewardship is now formalized in multiple markets around the world as a key discipline to effective corporate governance oversight. What are leaders of investment institutions



doing to ensure that best practice principles are adopted in practice? How assertive are asset owners in assessing the performance of their managers who act on their behalf? What are the impediments to effectively holding companies to account, for example through voting and engagement?

- [Debby Blakey, CEO, HESTA](#)
- [Ron Mock, President and CEO, Ontario Teachers' Pension Plan](#)
- [Barbara Novick, Co-Founder & Vice Chairman, BlackRock](#)
- [Hiroyuki Nishi, President and Chief Executive Officer, Nissay Asset Management Corporation, Japan](#)
- Chaired by: [Ryushiro Kodaira, Senior Staff Writer, Nikkei](#)

12:45 – 13:45

### **Hosted Sessions**

**Session E: Leadership in the age of transparency** *Hosted by: MSCI*

The age of transparency has shone a light on corporate leadership. The disintegration of boundaries between boards and markets has exposed leaders to potential reputational damage and opened investors to new vulnerabilities. Controversies are on the increase, but some corporates have been slow to react. Join us to explore how investors and corporates across Asia-Pacific are responding to the increased level scrutiny and what they are doing longer term to manage and mitigate the growing risk.

- [Naoko Nemoto, Financial Economist, Asian Development Bank Institute & Board Member of GPIF](#)
- [Michael Man-Yeung Cheng, Executive Director, Head of Corporate Governance, APAC, MSCI](#)
- [Atsushi Tachibana, Chief Investment Officer, Japan Post Insurance](#)
- Chaired by: [Seiichiro Uchi, Managing Director, Head of Japan Index & ESG Coverage, MSCI](#)

**Session F: Disclosure enhancement – toward improvement of management quality** *Hosted by Deloitte*

Japanese regulators have decided to enhance the disclosure of non-financial information on the annual report and include Key Audit Matter (KAM) description, with the intention of deepening investors' understanding of companies as well as to enhance the conversation between investors and companies toward mid-term corporate value enhancement. During this session, we will discuss corporate management personnel, corporate governance personnel and hear from institutional investors who have overseas case examples.

- [Shiro Fujii, Executive Vice President & CFO, MS&AD Insurance Group Holdings, Inc., Japan](#)
- [Karin Ri, Director, Responsible Investment, Asset Management One \(London\)](#)
- [Takatoshi Yamamoto, Independent Director, Hitachi, Ltd., Japan](#)
- Chaired by: [Taisei Kunii, Audit & Assurance and Risk Advisory CEO, Deloitte Touche Tohmatsu LLC](#)

**Session G: Passive investors’ engagement for enhancing sustainable corporate value** *Hosted by: Asset Management One*

There has been a dramatic shift to index investing over the last decade. How does this shift change investors’ engagement activities and investee companies’ management? What are the characteristics of passive investors’ engagement? Players in the investment chain will discuss these topics by showing some case studies of engagement from the perspective of enhancing sustainable corporate value.

- [Megumi Sakuramoto, Chief ESG Analyst, Responsible Investment Dept., Asset Management One](#)
- Chaired by: [Akiyoshi Oba, Chairman, Japan Investment Advisers Association, Japan](#)

13:45 – 14:45

**Networking Lunch**

14:45 – 15:45

**Plenary 7: Corporate board responsibility for managing systemic risk in times of uncertainty**

Systemic risks present challenges to corporate board’s way beyond the ordinary course of business. How are corporate boards equipped to deal with environmental risks such as climate change, water scarcity, pollution and natural disasters? What about social risks culminating from human migration, resulting in a rise in populist movements around the world? How ready are we for technological innovations such as autonomous cars and e-commerce, which are set to shape our future?

- [Scott Callon, Chairman, Ichigo, Japan](#)
- [Blair Cowper-Smith, Principal, Erin Park Business Solutions and Director, Hydro One Limited, Porter Airlines and the Financial Services Regulatory Authority, Canada](#)
- [Louise Davidson, Chief Executive Officer, Australian Council of Superannuation Investors](#)
- [Tsutomu Tannowa, President & CEO, Mitsui Chemicals, Japan](#)

- Chaired by: [Robert Walker, Global Consultant, NEI Investments](#)

15:45 – 16:15

**Refreshments**

16:15 – 17:15

**Plenary 8: The future beyond 2020**

Corporate governance and responsible investment practices evolve as markets globalize and adapt to new environments, technologies and demography. This creates uncertainty but also opportunity. Populations are ageing and are more divided as the gap grows between the rich and poor. Economic power is shifting from West to East while both grapple with perhaps the biggest challenge yet – how to deal with climate change. What does this mean for the way we do business, the way we invest and the way we regulate and what does the future hold beyond 2020?

- [Charles T. Canfield, Principal Corporate Governance Officer, IFC Corporate Governance Group](#)
- [Yoshio Hishida, President and CEO, Sumitomo Mitsui Trust Asset Management](#)
- [Sacha Sadan, Director of Corporate Governance, Legal & General Investment Management, United Kingdom](#)
- [Emily Woodland, Co-Head of Sustainable Investment, AMP Capital](#)
- Chaired by: [Carola van Lamoen, Head of Active Ownership, Robeco](#)

17:15 – 17:30

**ICGN Annual Conference Handover Ceremony**

- [Ron Mock, President and CEO, Ontario Teachers' Pension Plan](#)
- [Yasuyuki Konuma, Director, Senior Executive Officer, Tokyo Stock Exchange](#)

17:30

**Close of Conference**

18:00 - 20:00

**Closing Drinks Reception at the Canadian Embassy**



May 7, 2019

TO: Each Member  
Board of Investments

FOR: Board of Investments Meeting of May 15, 2019

SUBJECT: The African Pension and Sovereign Wealth Fund Leaders' Summit and  
AI CEO Infrastructure Project Developers Summit  
Cape Town, South Africa on September 2–3, 2019

The African Pension and Sovereign Wealth Fund Leaders' Summit and AI CEO Infrastructure Project Developers Summit will be held on September 2–3, 2019 at the One & Only Hotel in Cape Town, South Africa. The Africa investor CEO Infrastructure Project Developers Summit will be held in association with Africa50, which is an annual CEO gathering of Africa's top project developers, co-developers, infrastructure investors, PPP project preparation facilities, PPP Units and infrastructure policy makers to promote the industry, forge partnerships and advance critical projects.

The main conference highlights include the following:

- Unpacking Africa's Asset Recycling and Asset Refinancing Landscape
- Infrastructure Investment Clinic
- De-Risking Infrastructure Investments: Tools Tactics, Belts And Braces
- Developmental Investing & Blended Finance – Dilemma or Solution?

The AI CEO Infrastructure Project Developers Summit will be issuing the agenda mid-July and will mirror last year's meeting agenda, which met LACERA's policy of an average of five (5) hours of substantive educational content per day. The African Pension and Sovereign Wealth Fund Leaders' Summit meets LACERA's policy of an average of five (5) hours of substantive educational content per day. The standard hotel rate ranges between \$180.00 to \$300.00 per night plus applicable taxes at the One and Only Hotel and the registration fee to attend is \$1,695.00

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 African Pension and Sovereign Wealth Fund Leaders' Summit and AI CEO Infrastructure Project Developers Summit on September 2–3, 2019 in Cape Town, South Africa and approve reimbursement of all travel costs incurred in accordance with LACERA's Education and Travel Policy.

3 September 2019, One & Only Hotel, Cape Town

**THE Ai AFRICAN PENSION AND SOVEREIGN  
WEALTH FUND LEADERS SUMMIT & AWARDS  
2019  
IN ASSOCIATION WITH BATSETA**

One & Only Hotel, Cape Town, South Africa, 3 September 2019

**“An Institutional Infrastructure Investment Leaders  
Roundtable on Asset Recycling, Refinancing & Co-Investing.”**

An invitation only discussion, aimed at Investment Committee Members, Pension Funds, Asset Owners, and institutional investors looking to make a social difference - and a return on investment.

The Summit is a unique platform to assist domestic and international asset owners, participate in a dynamic investment mandate and policy alignment process, and engage decision makers from across the continent, international financial institutions, regulators and donor organizations, mandated to create the pipeline of investable and bankable infrastructure projects and putting a more hospitable environment for long-term investors to responsibly allocate to infrastructure as an investable asset class..

**09h00 – 09h20: Registration & Welcome Note**

**09h20 – 09h30 – Keynote Address:**

**09h30- 10h45 – Unpacking Africa’s Asset Recycling and Asset Refinancing Landscape**

Infrastructure asset recycling and the concept of asset recycling consists of two main components: Monetizing existing infrastructure assets through sale or lease to the private sector, followed by; Investing in new infrastructure using the proceeds received from asset monetization. This session will look at Africa’s project pipeline, for both asset recycling, as well as asset refinancing opportunities from a strategic asset allocation and risk return position.

**10h45-11h10 – Networking Break**

**11h10-11h30 – Infrastructure Investment Clinic**

We ask our expert advisors to address the typical mistakes made by institutional investors when allocating to infrastructure projects in Africa. Speakers will share the good, the bad and the ugly, as well as their secrets for success.

Both pension and sovereign fund leaders, should come prepared with questions!!

**11h30-12h30 – Session: Co Investing / Financing:**

**In this session we look at the rise of Co investing / financing** Limited Partners usually pursue infrastructure co-investments through one of three strategies: investing in Fund of Funds with a small percentage allocated to co-investments; investing in a co-investment-only platform or directly into projects. This session will review approaches used by pension and sovereign funds around the world and the models best suited to African institutional investors investment mandates and policy.

**12h30-13h30 – Lunch | Advisory Board Working Lunch**

**13h30-14h30 Project and Investor Pitching Session:**

Infrastructure investment managers, developers and sponsors from across Africa will take the opportunity to pitch their infrastructure investment opportunities to participating investors.

**14h30-15h30 – De-Risking Infrastructure investments: Tools tactics, belts and braces**

Establishing credit enhancements facilities and de-risking instruments for African infrastructure transactions, have been at the forefront of development partners initiatives, to create a more hospitable environment for African pension and sovereign funds to invest in African infrastructure as an investable asset class. This session will introduce and evaluate the risk mitigation facilities and instruments in the market, used by institutional investors to de-risk African infrastructure investments.

**15h30-16h00 - Network Break**

**16h00-16h30 – The Ai Infrastructure Investment Awards Ceremony 2019**

This unique set of Awards officially recognises achievements across the main infrastructure sectors in Africa and will reward the personalities driving transactions and improving the continent’s infrastructure investment climate.

**16h30-17h00 – Developmental Investing & Blended Finance – Dilemma or Solution?**

Asset Owners are routinely confronted with the difficulty of seeking optimal returns for their members at the investment stage, whilst at the same time, having to recognize their members are the beneficiary consumers, seeking competitive pricing to use the infrastructure asset(s).

This session will explore and showcase the role blended finance and developmental investment partnerships can play, to innovatively draw a balance and meet investors return expectations and competitive pricing for consumers.

**17h00-17h30 – Closing Remarks**

**17h30-19h00 – | Ai-EPPF Cocktail Reception**

## Registration Form

Yes, please register me for the Africa investor (Ai) CEO African Pension and Sovereign Wealth Fund Summit & Awards 2019, 3<sup>rd</sup> September 2019, One & Only Hotel, Cape Town, South Africa.

Your investment includes lunch, refreshments on the day, any documentation made available to the delegates and countless valuable networking opportunities.

### **African Pension and Sovereign Wealth Fund Summit & Awards**

#### **Early Bird Savings**

Register by 20 April 2019 and save \$300

**- you pay only \$1,395**

Register by the 20 May 2019 and save \$200

**- you pay only \$1,495**

Thereafter all registrations at the full fee of \$1,695

#### **Group Booking Offer**

Register 3 or more delegates and qualify for a **further saving of \$150 per delegate**

Register 5 or more delegates and qualify for a **further saving of \$300 per delegate**

#### **Delegate Details:**

First Name \_\_\_\_\_  
Surname \_\_\_\_\_  
Designation \_\_\_\_\_  
Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
Mobile \_\_\_\_\_ Email \_\_\_\_\_  
Assistant \_\_\_\_\_  
Email \_\_\_\_\_

#### **Delegate Details:**

First Name \_\_\_\_\_  
Surname \_\_\_\_\_  
Designation \_\_\_\_\_  
Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
Mobile \_\_\_\_\_ Email \_\_\_\_\_  
Assistant \_\_\_\_\_  
Email \_\_\_\_\_

#### **Organisation Details:**

Name of company \_\_\_\_\_  
Address \_\_\_\_\_  
Nature of Business \_\_\_\_\_  
Switchboard \_\_\_\_\_

Contact person for Invoice (other than delegate):

First Name \_\_\_\_\_  
Surname \_\_\_\_\_  
Designation \_\_\_\_\_  
Telephone \_\_\_\_\_  
E-mail \_\_\_\_\_

(Please photocopy this form for additional delegates)

#### **TERMS AND CONDITIONS**

**Payment:** Invoices are payable on receipt and full payment must be received before the summit starts. Government purchase orders are accepted and the original must reach Africa investor (Ai) prior to the running of the event. The organisers reserve the right to refuse admission if payment has not been received before the Summit takes place.

**Cancellations:** All cancellations must be received in writing. For cancellations received up to 1 month prior to the running of this event a cancellation fee of 10% will be charged. Cancellations received up to 2 weeks prior to the running of this event will be subject to a 50% cancellation fee. All cancellations received after 2 weeks prior to the event will be liable for the full fee; however, substitute delegates are always welcome.

**Confirmation:** All registrations received will be taken as confirmed and are subject to these terms and conditions.

#### **Authorised by:**

I hereby acknowledge that I have read and agree to these terms and conditions.

First Name \_\_\_\_\_  
Surname \_\_\_\_\_  
Designation \_\_\_\_\_  
Signed \_\_\_\_\_ Date \_\_\_\_\_

#### **Payment**

Please debit my:  Visa  Mastercard

Cardholders Name: \_\_\_\_\_

Card Number: \_\_\_\_\_

CCV (3 or 4 digit security number): \_\_\_\_\_

Expiry: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### **Complimentary VIP Investor Passes**

Due to high demand, we have made available a number of complimentary passes for senior representatives from pension funds, sovereign wealth funds and endowments (please note: a maximum of 2 passes per organisation, subject to verification). If you or your company would like to apply, please contact Renee Montez at [rmontez@africainvestor.com](mailto:rmontez@africainvestor.com) using CVIP as a reference.

Enquiries: For any enquiries please contact Renee' Montez-Avinir +27 11 783 2431 or [rmontez@africainvestor.com](mailto:rmontez@africainvestor.com)



# AiCEO INFRASTRUCTURE PROJECT DEVELOPERS SUMMIT & AWARDS 2018

[www.aidevelopersummit.com](http://www.aidevelopersummit.com) | [#aidevelopersummit](https://twitter.com/aidevelopersummit)

Co-Host Partner

AFRICA50

**18 June 2018**  
St. Regis Hotel, Le Mourné, Mauritius

## “PUTTING FINANCIAL CLOSE FIRST”

The **4th Ai CEO Infrastructure Project Developers Summit & Awards 2018** held in association with **Africa50**, builds on past Summit themes, designed to highlight the opportunities and bottlenecks to mobilizing innovative private capital to early stage infrastructure project development. Recurring observations constraining increased private capital for project development from the investment community centre on the lack of bankable projects and the time to reach financial close.

This unique, CEO-level Summit, will bring together critical decision makers from across Africa’s infrastructure project development community, for a dynamic public-private sector dialogue, on how to reprioritize and fast track financial close, as a critical stimulant to increasing the number of early stage, green field projects and developers that attract and mobilize private and institutional capital.

**THE SUMMIT WILL ALSO HOST A SPECIAL AFTERNOON FEATURE FOR ENERGY LEADERS, AT THE INVITATION ONLY:  
AFRICA INVESTOR (Ai) – AFRICA50 ENERGY PROJECT DEVELOPERS SUMMIT**

Supporting Partners



Institutional Partner



Media Partner



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Africa investor (Ai) Media is registered with CFA Institute as an Approved Provider of continuing education programs for CFA Institute members

# programme

## MORNING THEME: PARTNERSHIP MODELS TO INCREASE PRIVATE PROJECT DEVELOPMENT CAPITAL

**08h45 - 08h50** Welcome

**08h50 - 09h10** Opening Keynote

**09h10 - 09h55** Leaders Dialogue: **The 2018 AiProject Developers Forum Benchmarking Survey**

Leaders in this panel will present and discuss the highlights of the 2018 Ai Project Developers Forum Benchmarking Survey.

**09h55 - 10h40** Public Sector Dialogue: **Improving Private Sector Participation (PPI) in Infrastructure Models**

Africa has the lowest continental levels globally of private sector participation in Infrastructure (PPI), according to the World Bank PPI database. Discussion leaders will share their views on how to improve the participation of African project developers in infrastructure and the role African governments can play, to facilitate domestic and international co-developer partnerships.

**10h40 - 11h00** Networking Break

**11h00 - 11h45** The Rise of 'Developer Tech': **Are Traditional Developer Business Models Under Threat?**

This session introduces how technology is impacting and accelerating infrastructure development and finance in Africa and the extent to which 'Developer Tech', Blockchain and ICO's (Initial Coin Offerings), could disrupt traditional developer models and whether analogies can be drawn with the impact 'FinTech' had on the banking and finance sector.

**11h45 - 12h30** Leaders Dialogue: **DFI Project Development Innovations and Leadership**

The Ai Infrastructure Project Developers Forum Benchmarking Survey confirmed that African infrastructure is short of investment-ready projects, not construction finance, and that DFIs need to focus more finance and expertise on project preparation and take more risks. Developers and DFI leaders will discuss how to improve project development, including options and requirements for increased risk sharing and reprioritisation on financial close in the procurement and award process.

**12h30 - 14h00** Networking Lunch & The 2018 AiInfrastructure Investment Awards Ceremony

## AFTERNOON THEME: THE AIAFRICAINVESTOR - AFRICA<sup>50</sup> ENERGY PROJECT DEVELOPERS SUMMIT

**14h00 - 14h15** Keynote Address

**14h15 - 15h15** CEO Roundtable: **Best Practices for Developing Energy Projects**

Africa's project development market is rapidly evolving, driven by countries' pressing infrastructure needs, technological change, the strategic interest of global players, and the emergence of disruptive competitors. This is causing established developers to review their business models. In this round table CEOs of infrastructure companies will discuss how they are approaching these challenges. They will provide examples and best practices from both Africa and other regions.

**15h15 - 16h15** African Institutional Investor Dialogue: **Attracting Capital to Project Development**

Institutional investors worldwide have more than \$100 trillion in assets that seek long-term, stable returns. Tapping even a small fraction of this for infrastructure project development in Africa would have a sizable impact. However, Africa is competing on a global scale for these funds and risk perceptions remain high. To make project development finance an investible asset class on the continent will require initiative and concerted action from all partners. In this panel, African institutional investors will share their views on long-term capital and how to attract institutional funding for pre-financial close development.

**16h15 - 16h45** Networking Break

**16h45 - 17h45** Ministers of Energy Round Table: **Fast Tracking Energy Projects - the Government View**

Improving power generation and distribution is Africa's most urgent development need, as highlighted by the first of the Africa Development Banks's High 5 priorities: "Power Africa". While some African governments have been successful facilitators of energy projects, others are still struggling to create the necessary enabling environment. In this round table Ministers will share their experiences and best practices and outline priority projects in their countries.

**17h45 - 18h00** Closing Remarks

**18h00 - 18h30** The 2018 AiInfrastructure Project Developers Awards Ceremony

**18h30 - 20h00** AiCocktail Reception





www.africainvestor.com



Co-Host Partner

AFRICA50

“PUTTING FINANCIAL CLOSE FIRST”

AiCEO INFRASTRUCTURE PROJECT DEVELOPERS SUMMIT & AWARDS 2018

For more information, go to www.aidevelopersummit.com or join the conversation on #aidevelopersummit

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April 19, 2019

TO: Each Member  
Board of Investments

FROM: Christopher Wagner *cfw*  
Principal Investment Officer

Scott Zdrazil *SZ*  
Senior Investment Officer

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **UPDATE ON COOPERATION WITH INSTITUTIONAL LIMITED PARTNERS ASSOCIATION REGARDING FIDUCIARY PROTECTIONS**

This memo is intended to provide the Board of Investments (“Board”) with an update regarding LACERA’s cooperation with the Institutional Limited Partners Association (“ILPA”), of which LACERA is a member, to strengthen fiduciary protections for limited partners.

ILPA is coordinating an initiative among institutional investors to protect core legal rights for limited partners, promote transparency in fee arrangements, disclose conflicts of interest, flag potential wrongdoing, and encourage best practices, such as establishment of limited partner advisory committees and enabling limited partner communication.

As an initial step, and as reported at the March 2019 Board meeting, ILPA coordinated a joint investor letter to the Securities and Exchange Commission (“SEC”) (**Attachment 1**) requesting that the SEC issue interpretive guidance and take related steps regarding general partners’ fiduciary practices and limited partner agreements. The letter, signed by LACERA along with 31 other institutional investors, requested that general partners clearly state the standard of care owed to limited partners, that such standard of care specifically be “negligence” (and not “gross negligence,” as some general partners have imposed), and that details of prospective conflicts of interest from private fund advisors be clearly presented to limited partners in order for limited partners to provide informed consent. Moreover, the letter suggests that the SEC state that it considers the establishment of a Limited Partner Advisory Committee for private funds to be best practice.

The joint letter is consistent with LACERA’s *Corporate Governance Principles*, which support core investor rights and protections, robust and viable litigation rights, and clear information regarding conflicts of interests and related-party transactions in order for investors to safeguard investments and foster a stable investment climate (see §II[A]9 and §II[B]6). LACERA participated in this collaborative engagement in adherence with its *Corporate Governance Policy* (§IV[C] and §V[C]v).

As an additional step, ILPA has drafted a legislative proposal, the “Investor Advisor Alignment Act” (**Attachment 2**), to amend the Investment Advisers Act of 1940, which seeks to:

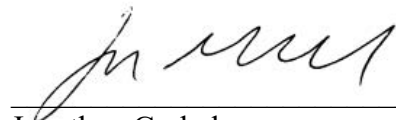
- Provide transparency for all fees and expenses charged to limited partners;
- Enable limited partners to know the names of other limited partners in a fund to facilitate communication, unless the limited partner opts to remain confidential;
- Reinforce investment advisers’ duty to act in the best interest of investors; and
- Require disclosure to limited partners of certain SEC communications resulting from an examination.

Similar to the joint letter to the SEC, each of the above requests is consistent with LACERA’s *Corporate Governance Principles*, which seek robust and viable investor litigation rights to enable prospective legal recourse, clear and comprehensive transparency of compensation arrangements, and firm alignment of interests. LACERA’s investment and legal staff have met with ILPA to discuss the proposal and offer input. The Council of Institutional Investors has also informed LACERA of its likely stance of support for the proposed legislation. And LACERA has liaised with the Principles for Responsible Investment which is developing a statement of support.

ILPA is currently seeking sponsors of the legislation and a prospective hearing before the House Financial Services Committee in the near future. Confirmation and timing of a hearing is unknown, although it may develop quickly and may occur before a sponsor has been formalized. ILPA has solicited the participation of LACERA’s Chief Investment Officer to speak in support of the tenets of the proposal, should a Congressional hearing be arranged. Consistent with LACERA’s *Corporate Governance Policy* by which staff represents the *Corporate Governance Principles* to legislative and regulatory bodies on investment-related issues, staff is preparing to participate in such a hearing, should it take place, and will apprise the Board of any further developments.

#### Attachments

Noted and Reviewed:



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Jonathan Grabel  
Chief Investment Officer

**FOR INFORMATION ONLY**

February 15, 2019

TO: Each Member  
Board of Investments

FROM: Scott Zdrazil   
Senior Investment Officer

Barry Lew  
Legislative Affairs Director

FOR: March 13, 2019 Board of Investments Meeting

SUBJECT: **INSTITUTIONAL LIMITED PARTNERS ASSOCIATION  
JOINT LETTER TO THE U.S. SECURITIES AND EXCHANGE  
COMMISSION REGARDING FIDUCIARY PROTECTIONS**

Please find attached a copy of a joint investor letter from the Institutional Limited Partners Association (ILPA) and 32 affiliated funds (including LACERA) to the U.S. Securities and Exchange Commission (SEC), dated February 12, 2019. The letter requests the SEC to issue interpretive guidance and take related steps to strengthen fiduciary protections for investors entering limited partner agreements. Among the letter's requests are that private fund advisors clearly state the standard of care owed to limited partners, that such standard of care specifically be "negligence" (and not "gross negligence" as some general partners have imposed), and that details of prospective conflicts of interest from private fund advisors be clearly presented to limited partners in order for limited partners to provide informed consent. Moreover, the letter suggests that the SEC state that it considers the establishment of a Limited Partner Advisory Committee for private funds to be best practice.

The letter aligns with LACERA's *Corporate Governance Principles*, which support core investor rights and protections, robust and viable litigation rights, and clear information regarding conflicts of interests and related-party transactions in order for investors to safeguard investments and foster a stable investment climate (see §II[A]9 and §II[B]6). LACERA participated in this collaborative engagement in adherence with its *Corporate Governance Policy* (§IV[C] and §V[C]v) and with the approval of the chief executive officer, chief investment officer, and chief counsel.

Attachment

Noted and Reviewed:



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Jonathan Grabel  
Chief Investment Officer



February 12, 2019

Brent Fields  
Secretary  
U.S. Securities & Exchange Commission  
100 F Street NE  
Washington, D.C. 20549-1090

**Re: Institutional Investor Letter on Proposed Commission Interpretation  
Regarding Standard of Conduct for Investment Advisers; Request for  
Comment on Enhancing Investment Adviser Regulation – File No. S7-09-18**

Dear Mr. Fields:

On behalf of the Institutional Limited Partners Association (“ILPA”) and the undersigned institutional investors in private markets, we are writing to follow up on our letters of August 6, 2018<sup>1</sup> and November 21, 2018<sup>2</sup>, subsequent letters by ILPA members<sup>3</sup> in support of said letters, and the various meetings ILPA and our institutional investor members have held on this issue with the Chairman, Commissioners and staff of the Securities & Exchange Commission (“SEC” or “Commission”). These letters and meetings have centered on the challenge to fiduciary protections that investors are facing in the private equity market and the actions the Commission can take in terms of adjustments to staff guidance, market signals, and their recent rulemaking proposals<sup>4</sup> to ensure investor confidence in the marketplace.

ILPA is the voice of institutional investors in the private equity asset class, known as Limited Partners (“LPs”). Our ~500 member institutions represent over \$2 trillion in

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<sup>1</sup> Letter from the Institutional Limited Partners Association to the Securities & Exchange Commission regarding the “*Proposed Commission Interpretation Regarding Standard of Conduct for Investment Advisers; Request for Comment on Enhancing Investment Adviser Regulation – File No. S7-09-18*”, August 6, 2018.

<sup>2</sup> Follow up letter from the Institutional Limited Partners Association to the Securities & Exchange Commission regarding the “*Proposed Commission Interpretation Regarding Standard of Conduct for Investment Advisers; Request for Comment on Enhancing Investment Adviser Regulation – File No. S7-09-18*”, November 21, 2018.

<sup>3</sup> See Letter from Gary Bruebaker, Chief Investment Officer, Washington State Investment Board to the Securities & Exchange Commission titled “*Support for the Institutional Limited Partners Association (ILPA) position regarding Standard of Conduct or Investment Advisers, Investment Advisor Reg. File No. S7-09-18*”, August 6, 2018; Letter from Jack Ehnes, Chief Executive Officer, CalSTRS to the Securities & Exchange Commission titled: “*Re: Proposed Commission Interpretation Regarding Standard of Conduct for Investment Advisers, Request for Comment on Enhancing Investment Adviser Regulation – File No. S7-09-18*”, October 11, 2018.

<sup>4</sup> Proposed Commission Interpretation Regarding Standard of Conduct for Investment Advisers; Request for Comment on Enhancing Investment Adviser Regulation, SEC Rel. IA-4889, File No. S7-09-18 (Apr. 18, 2018). (“Proposed Interpretation”)

private equity (“PE”) assets under management and include U.S. and global public and private pension funds, insurance companies, university endowments, charitable foundations, family offices, and sovereign wealth funds, all of which invest in the U.S. private equity market.<sup>5</sup>

Strong fiduciary duties are the foundation of the vibrant private markets in the United States. These duties of care, loyalty, and good faith foster the trust that give investors confidence to invest with fund managers, particularly in private markets, which, through their nature, have less transparency. Unfortunately, LPs have been facing significant resistance in their efforts to retain meaningful fiduciary protections while investing in the private equity market on behalf of themselves or their beneficiaries. These headwinds can be alleviated if the Commission acts on certain items, well within its authority, to signal to the market that it is important for investment advisers to act in the best interests of their investors.

Specifically, we urge the SEC to consider rescinding the Heitman Capital Management no-action letter<sup>6</sup> as part of its current review of staff guidance, as it diminishes the effectiveness of the fiduciary duty standard in the Investment Advisers Act of 1940 (“Advisers Act”). We also encourage the SEC to issue a statement indicating that any settlements of an enforcement action with a private fund adviser will be conditioned upon that adviser itself assuming those costs, rather than seeking indemnification from investors. The SEC should also conduct an examination sweep of hedge clauses to ensure they are being appropriately used by private fund advisers. In addition to the above recommendations, ILPA suggests the following clarifications be adopted in the Proposed Interpretation:

- Private fund advisers should be required to explicitly and clearly disclose the standard of care under both state law and the Advisers Act owed to LPs and the fund.
- The SEC should clearly state that the standard of care owed to the clients of private fund advisers under the Advisers Act is a “negligence” standard.
- “Pre-clearance” of conflicts of interest should be limited, and specific details of each conflict must be presented to the LPs to receive true “informed consent.”

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<sup>5</sup> As an illustration of the members we represent, the ILPA Board of Directors includes representatives from: Guardian Life Insurance Company, Teacher Retirement System of Texas, Oregon State Treasury, Washington State Investment Board, California State Teachers Retirement System (CalSTRS), Tufts University Investment Office, and the Alaska Permanent Fund Corporation, among others: <https://ilpa.org/who-we-are/board-of-directors/>

<sup>6</sup> Heitman Capital Management, LLC, SEC Staff No-Action Letter (February 12, 2007).

- The SEC should indicate that for private fund advisers, having a Limited Partner Advisory Committee (LPAC) is best practice, and all perceived conflicts should be presented to the committee for resolution.
- The SEC should provide more clarity surrounding hedge clauses, including the limits of their scope, and the facts and circumstances in which they can be used.

For additional information on these suggested clarifications, please refer to the recent follow-up letter sent by ILPA on November 21, 2018.

We look forward to continuing our dialogue with the Commission to ensure that investors and private fund advisers are aware of their rights and fiduciary obligations under the Advisers Act.

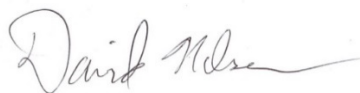
Sincerely,



Steve Nelson  
Chief Executive Officer  
Institutional Limited Partners Association



Angela Rodell  
Chief Executive Officer  
Alaska Permanent Fund Corporation



David H. Nelsen  
Chief Executive Officer  
Alameda County Employees' Retirement  
Association



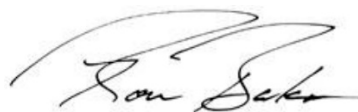
Marcie Frost  
Chief Executive Officer  
California Public Employees' Retirement  
System (CalPERS)



Christopher Ailman  
Chief Investment Officer  
California State Teachers Retirement  
System (CalSTRS)




Charles A. Burbridge  
Executive Director  
Chicago Teachers' Pension Fund (CTPF)



Ron Baker  
Executive Director  
Colorado Public Employees' Retirement  
Association (PERA)



Dan Slack  
Executive Director  
Fire and Police Pension Association of  
Colorado



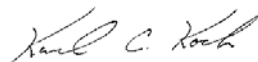
Sheila Morgan-Johnson  
Executive Director  
District of Columbia Retirement Board



Ash Williams  
Executive Director & CIO  
State Board of Administration of Florida



Ms. Dhvani Shah, CFA  
Chief Investment Officer  
Illinois Municipal Retirement Fund



Karl C. Koch, CFA  
Chief Investment Officer  
Iowa Public Employees' Retirement System



Tim Recker  
Chief Investment Officer & Treasurer  
The James Irvine Foundation



Jonathan Grabel  
Chief Investment Officer  
Los Angeles County Employees Retirement  
Association (LACERA)



Mansco Perry III  
Executive Director & CIO  
Minnesota State Board of Investment

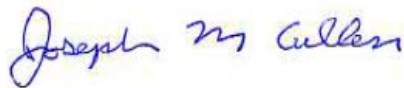


Larry Krummen, CFA  
Chief Investment Officer  
Missouri DOT & Patrol Employees'  
Retirement System (MPERS)



Brian Collett  
Chief Investment Officer  
Missouri Local Government Employees  
Retirement System (MOLAGERS)





Joseph M. Cullen, CFA, CAIA, FRM  
Chief Investment Officer  
Montana Board of Investments



Michael W. Walden-Newman  
State Investment Officer  
Nebraska Investment Council

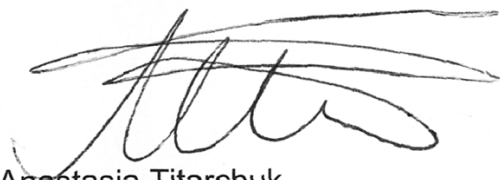


Dominic Garcia  
Chief Investment Officer  
Public Employees Retirement Association of  
New Mexico



ALEX DOÑÉ  
Deputy Comptroller-Asset Management &  
Chief Investment Officer  
Office of New York City Comptroller

On behalf of:  
New York City Employees' Retirement  
System  
Teachers' Retirement System of New  
York  
New York City Police Pension Fund  
New York City Fire Pension Fund  
New York City Board of Education  
Retirement System



Anastasia Titarchuk  
Interim Chief Investment Officer  
New York State Common Retirement Fund



Tom Lee  
Executive Director & Chief Investment  
Officer  
New York State Teachers' Retirement  
System



Glenn R. Grell  
Executive Director



James H. Grossman, Jr. CPA, CFA  
Chief Investment Officer

Pennsylvania Public School Employees'  
Retirement System (PSERS)



Charles Van Vleet  
Chief Investment Officer of Pension  
Investments  
Textron, Inc.  
Providence, RI



Bruce H. Cundick  
Chief Investment Officer  
Utah Retirement System



Gary Bruebaker  
Chief Investment Officer  
Washington State Investment Board

**s/ Sam Masoudi**

Sam Masoudi, CFA, CAIA  
Chief Investment Officer  
Wyoming Retirement System



Jerry Albright  
Chief Investment Officer  
Teacher Retirement System of Texas



Rich Hall  
Deputy Chief Investment Officer  
University of Texas /Texas A&M  
Investment Management Co. (UTIMCO)



Mary Morris  
Chief Executive Officer  
Virginia529



Craig Slaughter, JD, CFA  
Executive Director & CIO  
West Virginia Investment Management  
Board

cc. The Honorable Jay Clayton  
The Honorable Robert J. Jackson, Jr.  
The Honorable Hester M. Peirce  
The Honorable Elad L. Roisman

Dalia Blass, Director, Division of Investment Management  
Paul Cellupica, Chief Counsel, Division of Investment Management  
Sara Cortes, Assistant Director, Investment Adviser Rulemaking Office



## **Investment Adviser Alignment Act**

**Need for This Legislation:** The Private Equity asset class has experienced exponential growth in assets under management, and is attracting an increasingly diverse range of investors, from the smallest individual accredited investor to the largest public pension plans. As the industry continues to mature and assets shift from public markets to private assets, the need for alignment, transparency and information access for investors has never been greater.

The Investment Adviser Alignment Act (“Alignment Act”) seeks to promote increased transparency, certainty and accountability for the benefit of investors, to drive greater alignment between private equity managers and their investor partners, while preserving the best aspects of the private equity model that drive economic growth and job creation.

The Alignment Act consists of 4 provisions to drive greater alignment in the private equity industry:

**Providing Investor Transparency about Manager Wrongdoing:** Since SEC registration of private equity managers was enacted in 2010, the SEC has examined a significant portion of the industry. Many managers are doing the right thing and following the terms of the contracts they sign with their investors. However, some are not, and have been singled out by SEC enforcement actions. When a manager has been examined, investors in those managers are not privy to any of the compliance or other issues that the SEC may have uncovered—not because this information is protected but because most managers refuse to share it with their own investors. The Alignment Act would require managers to share these communications, including SEC deficiency letters, with their investors to ensure investors are aware of any potential regulator concerns and remedial steps taken.



**Ensuring Managers Act in the Best Interests of their Investors:** The Investment Advisers Act requires that advisers, including those to private funds, owe a fiduciary duty to act in the best interest of their investors. Increasingly, the SEC has taken the position that these duties can be “disclosed” away either under the Advisers Act, or under the contract (limited partnership agreement – LPA) binding the investors to the fund. This practice is increasingly prevalent but hard to quantify given the opacity around these contracts and the legal terms. The Alignment Act would limit the ability for the manager to act not in the best interests of the fund and the investors it represents and ensure that there is true alignment in the investment relationship.

**Ensuring Investor Partners in a Fund Can Communicate with One Another:** Often, private equity LPAs will include provisions limiting the ability of investors in the partnership to communicate about the fund, even with other investors in that same partnership. In addition, managers do not routinely provide a complete list of all the investors in the fund. Investors may be unaware of their peers in the fund, which could prevent them from exercising their contractual rights with respect to fund governance where certain matters require investor consent or a vote within the partnership. The Alignment Act would prevent including in the LPA such restrictions on communications and would require disclosure of investor names to the other partners within the fund, with the exception of those electing not to be named in writing. These measures will ensure that investors can have the necessary discussions relating to fund governance with their fellow partners in the fund.

**Making Investors Aware of All Fees & Expenses Being Charged:** The SEC’s enforcement efforts in private equity have brought to light cases of inappropriately charged fees and expenses, to both the fund and the underlying portfolio companies. ILPA has worked with industry to create a standard for reporting fees and expenses to investors; this standard is used by managers representing nearly half of private equity capital under management. ILPA believes that fee and expense reporting is critical information that should be required disclosure to investors. By mandating a certain baseline of information and indicating industry formats that satisfy that baseline, such as the ILPA template, the SEC could ensure investors have sufficient awareness while allowing flexibility for managers to use the reporting format most suitable for a particular investment.

May 3, 2019

TO: Each Member  
Board of Investments

FROM: Esmeralda V. del Bosque, Senior Investment Officer   
Trina Sanders, Investment Officer 

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **REAL ESTATE ADMINISTRATIVE SERVICES RFI - UPDATE**

### **BACKGROUND**

At the October Board of Investments meeting, the Board of Investments (“Board”) approved a Request for Information for Real Estate Administrative Services (“RE RFI,” attached). This memo is to update the Board on the status of that search.

As of March 31, 2019, LACERA’s real estate allocation was \$6.5 billion, consisting of approximately 100 separate account properties and 20 commingled funds<sup>1</sup>. The goal for launching the RE RFI is to enhance operational controls, streamline and automate real estate related administrative tasks, and increase transparency to the total Fund. Therefore, the search covers two distinct areas of focus: 1) a review of the fund administration landscape to determine if an outside service provider could take on the myriad of operational tasks that LACERA staff is responsible for; and 2) to assess administrators’ capabilities in assuming the role as the official accounting and performance book of record. Townsend, LACERA’s real estate consultant, currently serves that role.

As noted in the September memo, real estate is the only asset class whose investment consultant is also the administrator for both accounting and performance. The typical model disaggregates fund administration from investment advice – where a custodian or an administrator is the official record keeper, and the consultant independently calculates performance for the Board.

Due to the need to consider differentiated goals, staff issued a Request for Information (“RFI”) instead of a Request for Proposal. An RFI allows staff to gather information and vet the current state of real estate administration, with a specific eye on reviewing capabilities of administrators in the monitoring of individually held real estate properties.

The scope of work defined in the RE RFI was intentionally broad, covering standard administration duties such as portfolio accounting, capital call tracking, performance calculation, and analytics reporting. The scope also included non-traditional services such as tax and legal functions, specialized wire management, and investment fee validation. Given that fund administration for alternative assets has developed extensively over the last five to seven years, evaluating a broad range of services allowed staff to gain deeper insights into the current state of the real estate administration space.

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<sup>1</sup> The real estate market value used for LACERA’s total fund is one-quarter lagged (12/31/2018).

Each Member, Board of Investments

May 3, 2019

Page 2 of 3

The search team (“Team”) consists of the four individuals at LACERA that are most familiar with the different operational aspects of LACERA’s real estate investments:

Trina Sanders, Real Estate Investment Officer - Investment Division (Co-Lead)

Esme del Bosque, Portfolio Analytics Sr. Investment Officer - Investment Division (Co-Lead)

Christine Roseland, Senior Staff Counsel - Legal Division

Margaret Lei Chwa, Senior Accountant – Financial Services and Accounting Division

Having a multi-departmental group work on this search incorporated insights from legal, accounting, investment, and operational perspectives. To date, the Team has completed phase one and two of a typical search, which includes the scoring of the RFI questionnaires as well as in-house and on-site visits.

## **DISCUSSION**

The Team realized early in the process that no respondent could fulfill the full scope of work. For example, outsourcing the legal and tax services to an administrator is not feasible. More importantly, the in-house and on-site visits with the candidates re-emphasized the operational intensity of holding separate account properties. The search respondents asked the Team precise questions to understand LACERA's administrative needs and due to the various in-house processes that touch multiple LACERA departments, some of those questions flagged overlapping as well as under-developed functions in LACERA’s processes.

The Team decided to pause the search in early March to conduct a full-scale review of LACERA's separate account lifecycle, from property purchase and general maintenance through property sale and dissolution of a title holding company. The Team has been working on an investment process workflow, which incorporates real estate, legal, and accounting responsibilities related to real estate operations. The workflow is a means to thoroughly document the process as well as to determine ways to enhance real estate investment operations, evaluate internal controls, and mitigate inherent risks.

The Team is in the final stage of completing the workflow and has started to draft a report with relevant findings and recommendations. The Team will present that report to the Board at the June meeting and will include high-level observations of the costs to run the program. Importantly, the review has already identified operational enhancements that can facilitate improved investment operations. The enhancements will also allow LACERA to effectively engage and more efficiently onboard an administrator if the Board so wishes.

Another meaningful outcome of the search is the validation that fund administration has advanced tremendously. So much so, that LACERA may consider broadening the original search from a real estate only mandate, to cover all alternative investments (real estate, private equity, and infrastructure). In fact, the technological and portfolio modeling tools of one of the administrators is so robust, a search for an administrator for total fund performance may be a staff recommendation.

Finally, the investment operations process review for real estate has been such a valuable exercise, that the Portfolio Analytics team plans to conduct similar process reviews for each of LACERA's asset classes in the future.

Each Member, Board of Investments

May 3, 2019

Page 3 of 3

## CONCLUSION

The Board approved an RFI for Real Estate Administrative services in October 2018. Following approval, a search team consisting of members from investments, legal, and accounting immediately embarked on the search. The diligence process highlighted the operational complexity of owning separate account properties, prompting the RFI team to pause the search in order to conduct a full review of LACERA's current processes. Findings and recommendations that result from that review will be presented to the Board at the June Board of Investments meeting.

Noted and Reviewed:



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Jonathan Grabel  
Chief Investment Officer

Attachments

EDB:

August 28, 2018

TO: Each Member  
Real Asset Committee

FROM: Jon Grabel   
Chief Investment Officer

John McClelland   
Principal Investment Officer

FOR: September 12, 2018 Real Assets Committee Meeting

SUBJECT: **RFI RECOMMENDATION**  
**REAL ESTATE ADMINISTRATIVE SERVICES**

### **RECOMMENDATION**

Advance a recommendation to conduct a Request for Information for Real Estate Administrative Services for approval by the Board of Investments.

### **BACKGROUND**

The real estate investment program requires a substantial amount of operational-related work to administer. Commingled vehicles make periodic capital calls and distributions. The Fund's separate account activities utilize special purpose entities (or SPEs), such as Title Holding Companies (or THC's) to hold title to real estate. Each THC requires a significant amount of maintenance to protect the integrity of the entity. Further, there are frequent transfers of funds from an entity to/from a LACERA account. The large amount of administrative activity necessitated by these structures requires the full-time equivalent (FTE) of several employees and creates compliance and operational risk to the Fund.

Staff suggests that a Request for Information be issued to determine whether there is an outside service provider that could perform the real estate-related administrative and operational-related tasks currently done in-house at a reasonable cost while increasing internal controls and transparency to the Fund. A possible additional benefit to the Fund could be making higher and better use of its employees. Incremental benefits may include enhanced performance reporting, entity level accounting, fee transparency and Fund level risk metrics. This process may result in consolidation of the use of external bank accounts and service providers and better aggregate the book of record for the real estate program.<sup>1</sup> It is important to note that third party service providers perform these functions for all other asset categories.

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<sup>1</sup> The current book of record for real estate is The Townsend Group and FASD.



## **DISCUSSION**

The operational and administrative responsibilities incident with the real estate investment activity of the Fund impact several groups within the organization, including the Executive Office, the Legal Office, Financial Accounting Services Division (FASD) and the Investment Office. Each group devotes significant FTEs to tasks such as:

- Establishing legal SPEs
  - Preparing articles of incorporation
  - Making necessary filings in states of operations
  - Obtaining appropriate federal and state identification numbers
  - Engaging legal service agents in each state where property is held
  - Engaging auditors
  - Maintaining corporate records
  - Holding mandatory corporate meetings
  - Declaring and making dividend distributions to the shareholder
- Establishing and maintaining accounting records
  - Fee validation
  - Book to market value reconciliation
- Creating separate bank accounts for each SPE
  - Administering bank account signature authority
- Reviewing and approving each capital call and distribution
- Preparing wire transfer requests/documentation as needed to/from each SPE to/from LACERA
- Reconciling amounts funded/received for each SPE

Personnel involved in these and related activity include the Assistant Chief Executive Officer, Chief Investment Officer, Principal Investment Officer, Investment Officer, Senior Staff Counsel, Paralegal, Senior Accountant, Staff Accountant, and Finance Analysts I, II, and III. The numerous and detailed tasks that are necessitated by the investment structure create risk to LACERA of compliance lapses or administrative errors.

Providers of fund administrative services have developed increased capability to address the needs and requirements of private real estate investors. They are structurally organized to handle the large amount of detailed activity that is incident to real estate investing.

## **MANDATE DESCRIPTION**

Staff proposes investigating the possibility that LACERA could utilize the services of a fund administrator for real estate. Such a service provider could improve operational accuracy and efficiency. Substantial LACERA resources could be freed up for potential enhanced value creation.

The evaluation of prospective service providers would balance internal controls, portfolio insights and expenses.

According to an eVestment survey conducted in 2018, sixteen firms were identified that provide fund administration services relating to real assets, including real estate. Only five firms reported more than \$50 billion of Assets Under Administration (AUA). **TABLE 1** lists the five firms.

**TABLE 1**  
**Fund Administration Firms**  
**In Excess of \$50 billion of AUA**

Company Name	Real Assets AUA (\$ in billions)
State Street	\$ 165
BNY Mellon Alt. Inv. Svcs.	\$ 115
Citco Fund Services	\$ 112
RBC I&TS	\$ 88
SS&C GlobeOp	\$ 76

Source: eVestment Industry Survey. Alternative Fund Administration 2018, May 8, 2018

Staff considers these five firms to be most likely to respond to an RFI from LACERA. However, staff suggests that an open RFI is appropriate and the RFI would not be limited to the five firms listed on TABLE 1.

### **SCOPE OF WORK**

The suggested scope of work would include the administrator performing as much of the administrative and operational tasks relating to LACERA's real estate investment program as possible. Tasks would relate to both commingled fund and separate account activities.

The fund administrator would be charged with:

1. Establishing and maintaining bank accounts as required by LACERA's activity
2. Reviewing and acting on capital draws and distributions
3. Preparing records and reconciliations of investment and banking activity
4. Providing monthly reports on investment and banking activity
5. Reporting investment activity to LACERA's master custodian
6. Fee validation
7. Ability to act as the book of record for Real Estate
8. Ability to calculate performance measurement
9. Other duties as determined by a review of the internal operation-related activities

### **MINIMUM QUALIFICATIONS**

Staff proposes an open search be conducted in order to maximize the chances of identifying the best qualified firms that can meet LACERA's needs. Consequently, only two minimum qualifications are suggested.

1. The service provider must have at least three years of history providing fund and program administration services relating to real estate.
2. The service provider must have at least three institutional clients for which real estate fund administration services are provided.

### **PROPOSED TIMELINE**

The proposed timeline for the RFI is outlined in **TABLE 2** below.

**TABLE 2  
PROPOSED RFI TIMELINE**

<b>Date</b>	<b>Task</b>
September 2018	Real Assets Committee
October 2018	Board of Investments
November 2018	Issue RFI
December 2018	RFI Responses Due
December 2018-January 2019	Evaluate RFIs
February 2019	Report Results to Board of Investments

### **CONCLUSION**

Fund administration service providers have expanded into real estate and may now offer LACERA a viable way to improve operational accuracy and efficiency while freeing up staff resources. An RFI would allow a complete evaluation of the costs and benefits of using such a service provider. Staff would report findings and conclusions, and possibly a recommendation, to the Board for consideration.

# Real Estate Administrative Services RFI – Update

Board of Investments

May 15, 2019

Esmeralda del Bosque – Senior Investment Officer

Trina Sanders – Investment Officer



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## I. Background

- a. Real estate portfolio breakdown
- b. RFI search objectives
- c. Scope of work
- d. Search team

## II. RFI Status Update

- a. Update
- b. Real estate investment operations workflow
- c. Workflow goals

## III. Next Steps

- a. Process
- b. Timeline

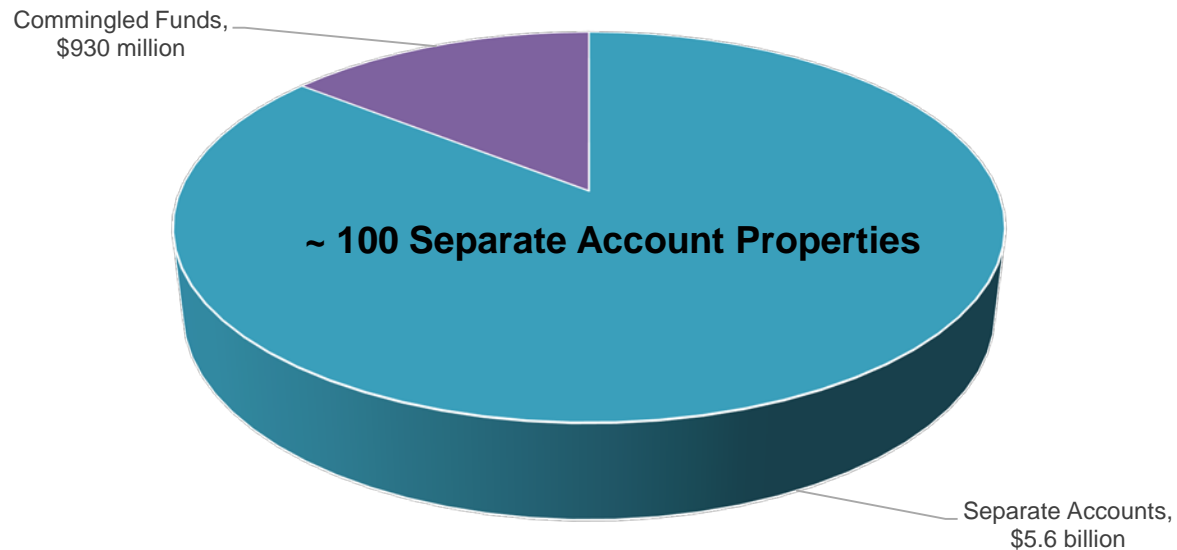


# RFI Search Background



# Real Estate Portfolio

**Current Real Estate Allocation**  
**(\$6.5 Billion or 11.4% of Total Fund)**  
(as of 12/30/18)



Separate account properties represent 85%  
of the real estate composite

# RFI Search Objectives

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1. Enhance operational controls

2. Increase transparency to the Total Fund

3. Streamline and automate operational tasks

4. Hire an independent book of record



# Scope of Work – Deliberately Broad

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## Standard Fund Administration Services

Portfolio Accounting

Capital Call Tracking

Performance Calculation

Analytics Reporting

## Additional Services Requested in RFI

Legal Fund Formation

Tax Preparation

Wire Management

Investment Fee Validation

# Search Team

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Trina Sanders, Senior Investment Analyst – Real Estate (Co-Lead)



Esme del Bosque, Senior Investment Officer – Portfolio Analytics (Co-Lead)



Christine Roseland , Senior Staff Counsel – Legal Division



Margaret Lei Chwa, Senior Accountant – Financial Services & Accounting Division

# Status Update



# RFI Update

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## Phase I

- Review RFI responses
- Phase I scores complete

## Phase II

- In-house interview; On-site interview + Analytics demo
- Review full service offering – Phase II scores complete

- The diligence process in Phase II highlighted the operational complexity of owning separate account properties
- Team paused the search to conduct a process review of separate account lifecycle

# Real Estate Investment Process Workflow

Real Estate

- Identification of investment advisors
- Approve allocation of investments

Legal

- Establish title holding companies
- Contract with investment advisors

FASD

- Facilitate wires to/from LACERA
- Record cash flows and market values

Portfolio  
Analytics

- Performance reporting
- Portfolio Analytics & Risk



# Workflow Objectives

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1. Document real estate tasks & responsibilities by LACERA department
2. Identify ways to:
  - Enhance real estate operations
  - Evaluate internal controls
  - Mitigate inherent risks



# Next Steps: Process and Timeline



# Next Steps

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- Complete Process Work Flow
- Prepare Findings and Recommendations for the BOI
- Portfolio Analytics will conduct similar process reviews for each asset class



# Timeline

2018

Q3

- RFI for Real Estate Administrative Services presented to Real Assets Committee
- RFI for Real Estate Administrative Services advanced to the BOI

2018

Q4

- BOI approves RFI
- RFI Questionnaire Released
- RFI Team Reviews Questionnaire Responses, Phase I Scores Complete

2019

Q1

- RFI Team conducts In-House Interviews
- RFI Team conducts On-Site Interviews
- Phase II Scores Complete
- RFI Team pauses search to conduct Real Estate Separate Account Property Investment Process Review

2019

Q2

- **RE RFI Update presented to the BOI**
- Process review finalized
- Team identifies findings and recommendations for the Board
- Team presents findings and Recommendations to the BOI




# Questions and Discussion



May 3, 2019

TO: Each Member  
Board of Investments

FROM: John McClelland   
Principal Investment Officer

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **INVESTMENT-RELATED SERVICES PROCUREMENT PROCESS**

Staff continues to develop an Investment-Related Services Procurement Process (Procurement Process or Process) that describes how investment-related services are procured on an on-going basis. Attached is a collection of slides designed to stimulate discussion about some specific aspects of the process so that Board direction can be integrated into the next draft document.

Investment-related services include, but are not limited to, active managers, passive managers, consultants, independent fiduciaries, data analytics providers, securities lending and appraisers. These services vary widely. Thus, the procurement process used to select managers/firms, likewise, will vary.

As a reminder, the Procurement Process under development will relate only to investment-related services. Procurement of all non-investment-related services is expected to be controlled by a LACERA-wide Policy for Purchasing Goods and Services, which is currently being developed.

Attachment

Noted and Reviewed:

 \_\_\_\_\_

Jonathan Grabel  
Chief Investment Officer

JM/dr

# Investment-Related Services Procurement Process

Board of Investments

May 15, 2019

Jon Grabel – Chief Investment Officer  
John McClelland – Principal Investment Officer



# Procurement Process Discussion

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**This material focuses on two aspects of the Investment-Related Procurement Process that is under development:**

1. Service Being Procured
  - Investment Management Services
  - Consulting Services
  - Investment-Related Services
  
2. Proposal Evaluation

Note: The procurement process discussion relates only to investment-related services. There is a separate procurement process for other LACERA matters.



# Procurement Process Guiding Principles

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- I. Fiduciary
- II. Inclusive
- III. Fair
- IV. Timely
- V. Rule-Based
- VI. Market Aware
- VII. Advances in Underwriting

# Multi-Dimensional Considerations

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- Portfolio Fit
- Uniqueness of Mandate
- Complexity of Operational Due Diligence
- ESG factors
- Consistency with Investment Beliefs and LACERA Values
- Recommendation-Potential Outcomes
  - Hire One Manager/Firm
  - Hire Multiple Managers/Firms
  - Hire Bench

# Services Being Procured - Examples

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- **Investment Management Services**

- May be private or public
- May be liquid or illiquid

*Illiquid, private searches do not lend themselves to selection by RFPs.*

- **Consulting Services**

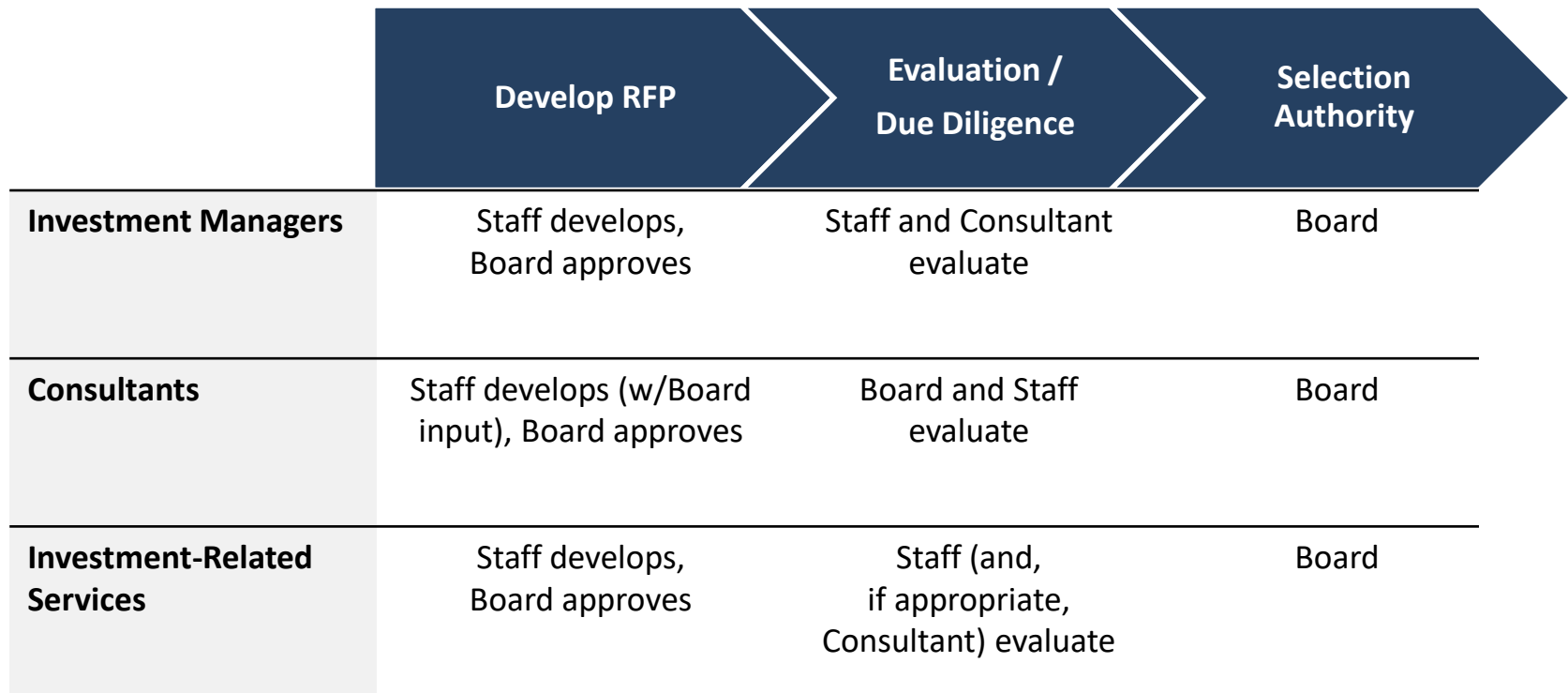
- General
- Specialty

- **Investment-Related Services**

- Master custodian
- P/E fee verification
- Independent fiduciaries
- R/E appraisers
- Analytics/Databases
- Securities lending



# Process Steps



Note: All members of Evaluation Team assess each RFP.



# Public Markets

	Evaluation Phase	
	1 <sup>st</sup> Round	2 <sup>nd</sup> Round
Active Mandates	Quantitative* and qualitative	Quantitative and qualitative
Passive Mandates	Quantitative*	Quantitative and qualitative

\* Quantitative assessment may be completed quickly, expediting searches.



# Private Markets

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## NOT Conducive to RFP Selection Process

### Illiquid Investment Markets:

- Universe monitored/evaluated
- Staff works with specialty Consultant to best portfolio fits
- Individual fund due diligence completed
- Consultant independently evaluates
- Recommendation made to Board\*

\* Re-ups reported to Board.



# Primary Takeaways

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- Complexity of LACERA's portfolio necessitates some flexibility between mandates, but not within a search
- An RFP is the preferred method of procurement if feasible
- Staff recommendations to Board may vary depending on the complexity of the search
- A revised Procurement Process draft will be delivered to the Board at a subsequent meeting



April 24, 2019

TO: Each Member  
Board of Investments

FROM: Cindy Rivera   
Investment Analyst

DaJuan Bennett  
Intern

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **REAL ESTATE INVESTMENTS IN LATIN AMERICA**

### DISCUSSION

For the third year, the Investments division has worked with Human Resources to conduct internship programs with local area universities. The program objectives are to gain early access to a wider pool of talent, provide interns with exposure to LACERA and institutional money management, and to direct the interns to undertake projects that are meaningful to the division. The current intern class represents the first time that LACERA has run the program during the school year, having the MBA student interns work on their projects one to two days weekly over a 4-month period.

One of the two interns, DaJuan Bennett, has worked with the real estate team and completed a report (**Attachment**) summarizing the state of the market for real estate investments in Latin America. The presentation discusses which Latin American countries have experienced significant foreign investment, what has and has not worked well, and the investment structures typically deployed by foreign investors in the region. The report also identifies some of the key risks and benefits LACERA should consider relating to real estate investing in Latin America.

Attachment



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Jonathan Grabel  
Chief Investment Officer

ATTACHMENT

# Real Estate Investments in Latin America

Board of Investments

May 15, 2019

DaJuan Bennett – Investment Analyst Intern



LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

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- I. Objectives & Research Overview
- II. Country Analysis
- III. Investment Trends
- IV. Successes & Lessons Learned
- V. Appendix

# Objectives

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- Which Latin American countries have experienced significant foreign real estate investments?
  - What has worked well?
  - What has not worked well?
- What real estate investment structures and strategies are typically deployed in Latin America by foreign investors?

Note: This is not a recommendation on whether LACERA should or should not invest in Latin America, it is research to help the team make an informed decision in the future; data is from several sources, but does not represent all investments in the region.





# Research Overview

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**21**

## **FUNDS EXAMINED**

Received detailed list of funds investing in Latin America totaling \$6.3B; provided big picture view of select, client-driven research

**12**

## **MANAGER MEETINGS**

Talked to investment managers about specific real estate transactions in Latin America; provided data to support decisions on which assets and countries to invest in

**2**

## **PENSION FUND MEETINGS**

Met with pension funds to discuss what their strategies are for emerging markets; received information on their successes and lessons learned

**50+**

## **RESEARCH PAPERS READ**

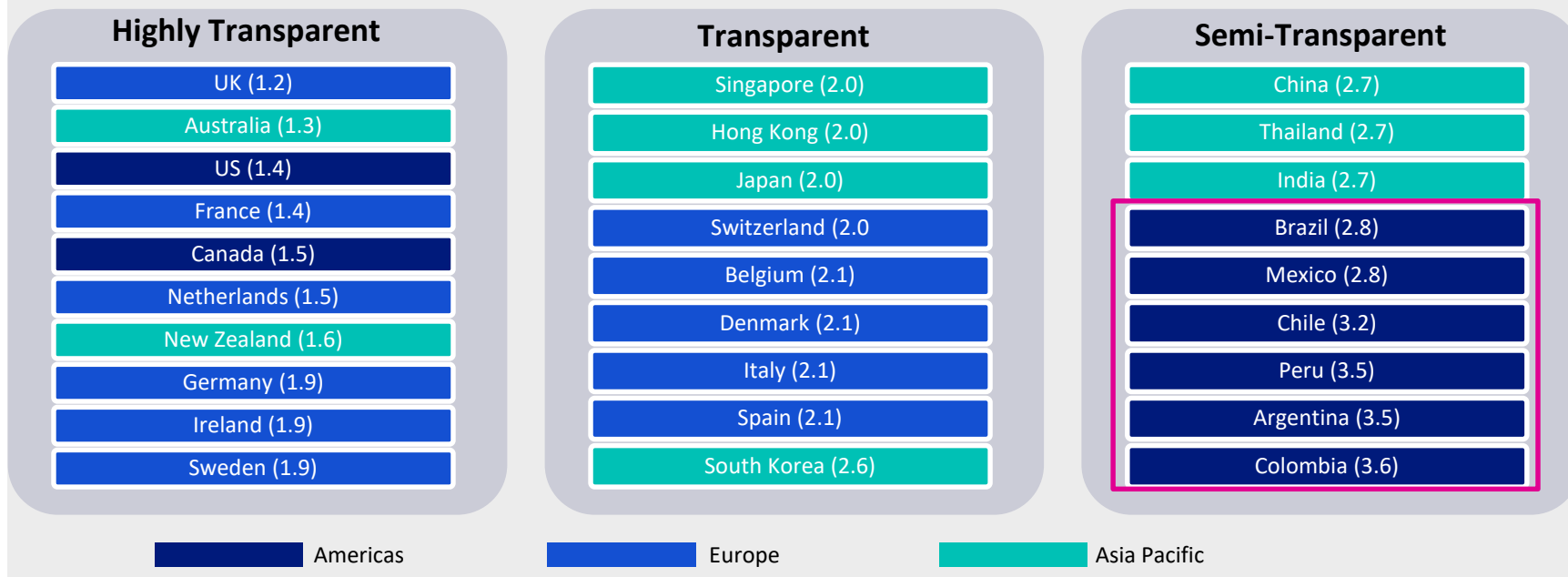
Compiled research received from various sources detailing economic outlook on Latin America



# Real Estate Market Transparency

Latin American countries are among the least transparent based on the transparency index.

JLL Global Real Estate Transparency Index composite scores and groupings, select countries, 2018 (1 = best)



The Global Real Estate Transparency Index is based on a combination of quantitative market data and survey results across 100 markets. 186 individual measures are divided into 14 topic areas, which are then grouped and weighted into six broad sub-indices:

- Performance Measurement 28.5%
- Market Fundamentals 16.5%
- Governance of Listed Vehicles 10%
- Regulatory and Legal 25%
- Transaction Process 15%
- Sustainability 5%

Source: Invesco Real Estate using data from JLL's Global Real Estate Transparency Index as of 2018.



# Country Analysis

COUNTRY	ANALYSIS	ASSET TYPES INVESTED					
		Industrial	Multi-Fam	Office	Retail	Hotel	Other*
BRAZIL	<ul style="list-style-type: none"> <li>Recovering from recession; limited supply, increased demand; inflation is down, interest rates near historic lows</li> <li>Residential activity rebounding strongly, Sao Paulo office market is recovering</li> </ul>	✓	✓	✓	✓	✓	✓
MEXICO	<ul style="list-style-type: none"> <li>Attractive currency, and likely rate cuts beginning in 2019</li> <li>Infrastructure mega-projects such as inter-city train and transfer center are underway to be delivered in the next 2 years</li> </ul>	✓	✓	✓	✓		✓
COLOMBIA	<ul style="list-style-type: none"> <li>Economy growing at higher rate as oil prices increase and reforms aim to increase productivity</li> <li>Bogota's office market in the midst of its largest expansion</li> </ul>	✓	✓	✓		✓	
PERU	<ul style="list-style-type: none"> <li>Investment grade credit rating due to balance budget, significant external debt reduction over last decade, and well-anchored inflation</li> <li>Reform to increase home building production to 100K units per year</li> </ul>		✓	✓	✓		
CHILE	<ul style="list-style-type: none"> <li>Chile was one of the fastest-growing major economies in the region over the last 20 years due to expanding consumption and surging investment</li> </ul>		✓	✓			
ARGENTINA	<ul style="list-style-type: none"> <li>In recent years, Argentina has struggled against the backdrop of a currency crisis underpinned by policy missteps</li> <li>The Argentine peso traded at 20.33 per USD in March 2018; as of April 2019, the ARS is trading at 42.00 per USD</li> </ul>		✓	✓	✓	✓	

\*Self storage, parking, and other specialty real estate asset types. Based on research, requested by clients, conducted by Townsend Consulting Group on a list of 21 funds investing in Latin America.

Source: Patria Realty One Pager 2019; Townsend Latin America Open Funds 2019.



# Foreign Fund Investments in Latin America

Data collected from consultant to show amounts invested in each country across 21 funds over the past 8 years.

## Colombia

Capital Allocated\*: \$900M  
 Asset Types: Residential, Hotels, Industrial, Office

## Peru

Capital Allocated\*: \$125M  
 Asset Types: Office, Multi-Family, Residential

## Chile

Capital Allocated\*: \$40M  
 Asset Types: Office & Multi-Family

## Argentina

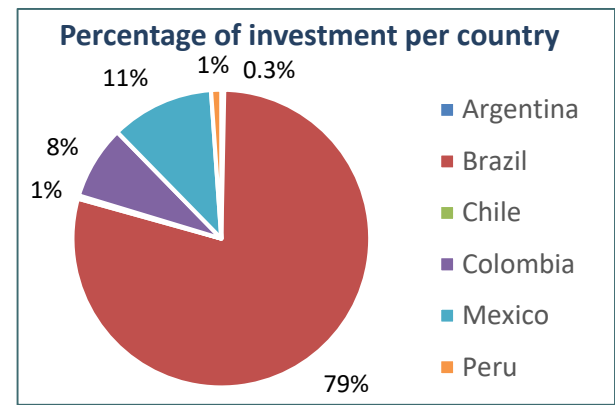
Capital Allocated\*: \$35M  
 Asset Types: Residential, Multi-Family, Hotels, Office

## Brazil

Capital Allocated\*: \$8.8B  
 Asset Types: Self Storage, For Sale Housing, Industrial, Hotels

## Mexico

Capital Allocated\*: \$1.2B  
 Asset Types: Industrial, Retail, Multi-Family, Office



\*Based on research, requested by clients, conducted by Townsend Consulting Group on a list of 21 funds investing in Latin America.

Source: Townsend Latin America Open Funds 2019.



# Investment Strategies

Various vehicles have been used to invest in LATAM by domestic and foreign investors (2010 – 2018).

Asset Type	Vintage	Country Invested	Transaction Volume (USD)	Vehicle	Country of Investor
Industrial	2010	Brazil	\$986M	Semi-Open Ended	Singapore
Mall	2010	Brazil	\$43M	Separate Account	Canada
Retail	2010	Brazil	\$39M	JV Equity	Brazil
Office	2011	Brazil	\$350M	Separate Account	Canada
Mall	2012	Brazil	\$247M	Separate Account	Israel
Hotels	2012	Colombia	\$100M	Semi-Open Ended	U.S.
Office	2014	Brazil, Chile, Colombia, Mexico, and Peru	\$200M	Open-Ended Fund	Germany
Multi-Family	2018	Argentina, Brazil, Colombia, Peru, Mexico	\$250M	Closed Fund	U.S.
Industrial	2018	Mexico	\$250M	Closed Fund	U.S.
Mixed-Use Retail	2019	Mexico	\$400M	Closed Fund	U.S.

Note: List is not exhaustive.

Source: Townsend Latin America Open Funds 2019.



# Recent Transactions

US based investors are among top buyers and sellers of LATAM real estate (2017-2018).

Buyer Groups			
Top 10 buyers	Country of Investor HQ	Acquisition volumes, past 24 months	# of properties
1	Canada	\$1,936M	10
2	US	\$1,835M	9
3	China	\$955M	61
4	Mexico	\$763M	22
5	US	\$414M	12
6	France	\$402M	12
7	US	\$350M	2
8	Japan	\$340M	2
9	Mexico	\$303M	2
10	Cayman	\$285M	1
<b>Total</b>		<b>\$7,583M</b>	<b>131</b>

Seller Groups			
Top 10 sellers	Country of Investor HQ	Disposition volumes, past 24 months	# of properties
1	Brazil	\$1,835M	9
2	Singapore	\$981M	63
3	US	\$566M	19
4	US	\$517M	24
5	UK	\$402M	12
6	US	\$340M	2
7	Panama	\$303M	2
8	US	\$285M	1
9	Brazil	\$260M	5
10	US	\$251M	7
<b>Total</b>		<b>\$5,740M</b>	<b>144</b>

Note: Reflects aggregate transactions across Latin America. Numbers in USD millions.

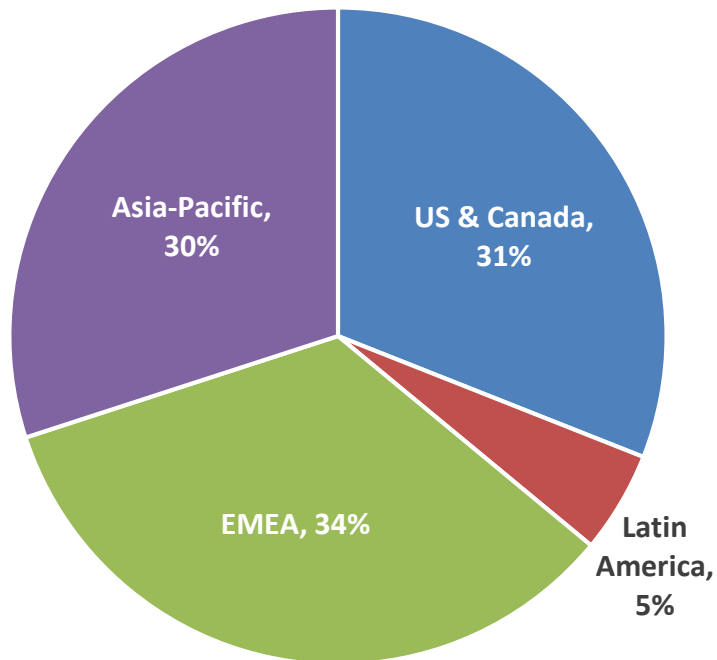
Source: Invesco Real Estate using data from Real Capital Analytics as of March 2019.



# Transaction Volumes

Following political upheaval in Latin America, and a pullback in investment linked to exchange rate depreciation against the dollar, the region recorded the lowest transaction volumes in almost ten years in 2018.

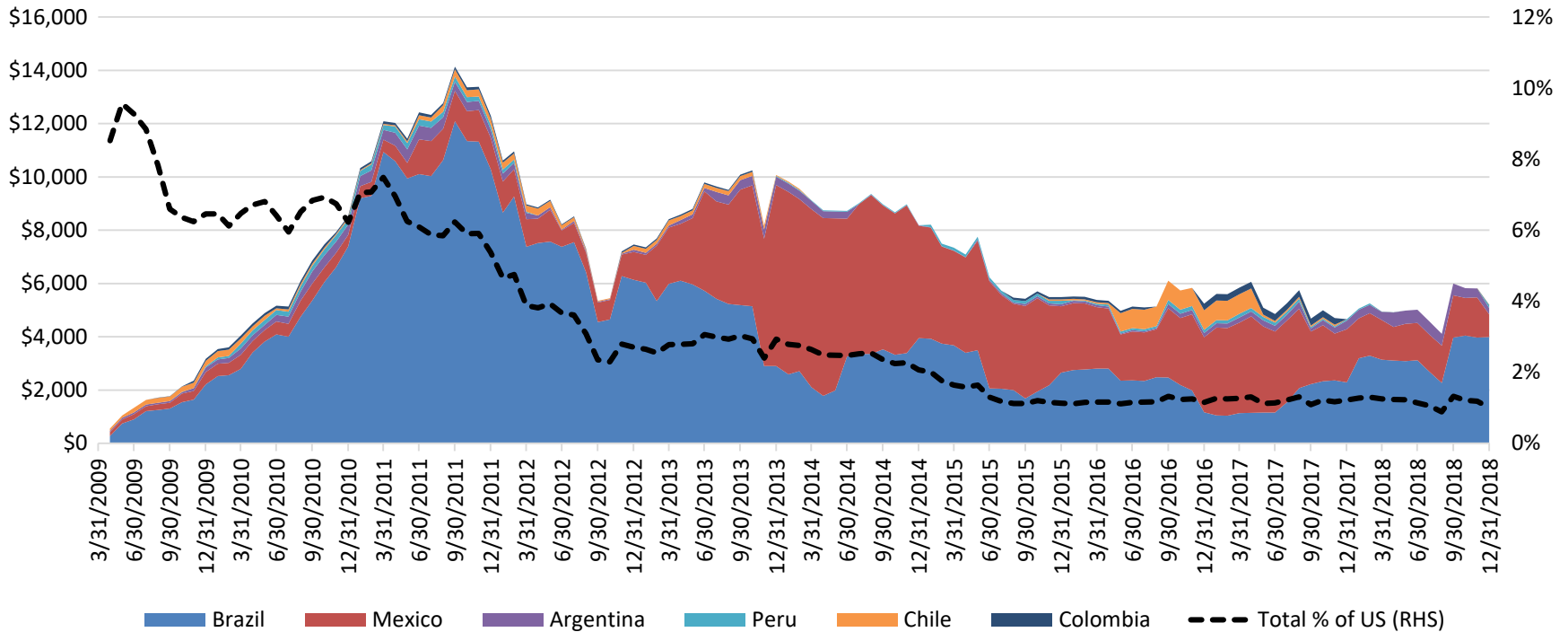
Investment allocations per region (2018)



# Transaction Volumes by Market

Brazil and Mexico have had the highest transaction volume over the last decade.

Rolling 12-month transaction volumes by market, March 2009 – December 2018 (USD, millions)



Note: Volumes include office, industrial, retail, hotel, apartment, seniors housing & care, development sites/land, and self-storage. Different source of data from previous slide.

Source: Invesco Real Estate using data from Real Capital Analytics as of March 2019.

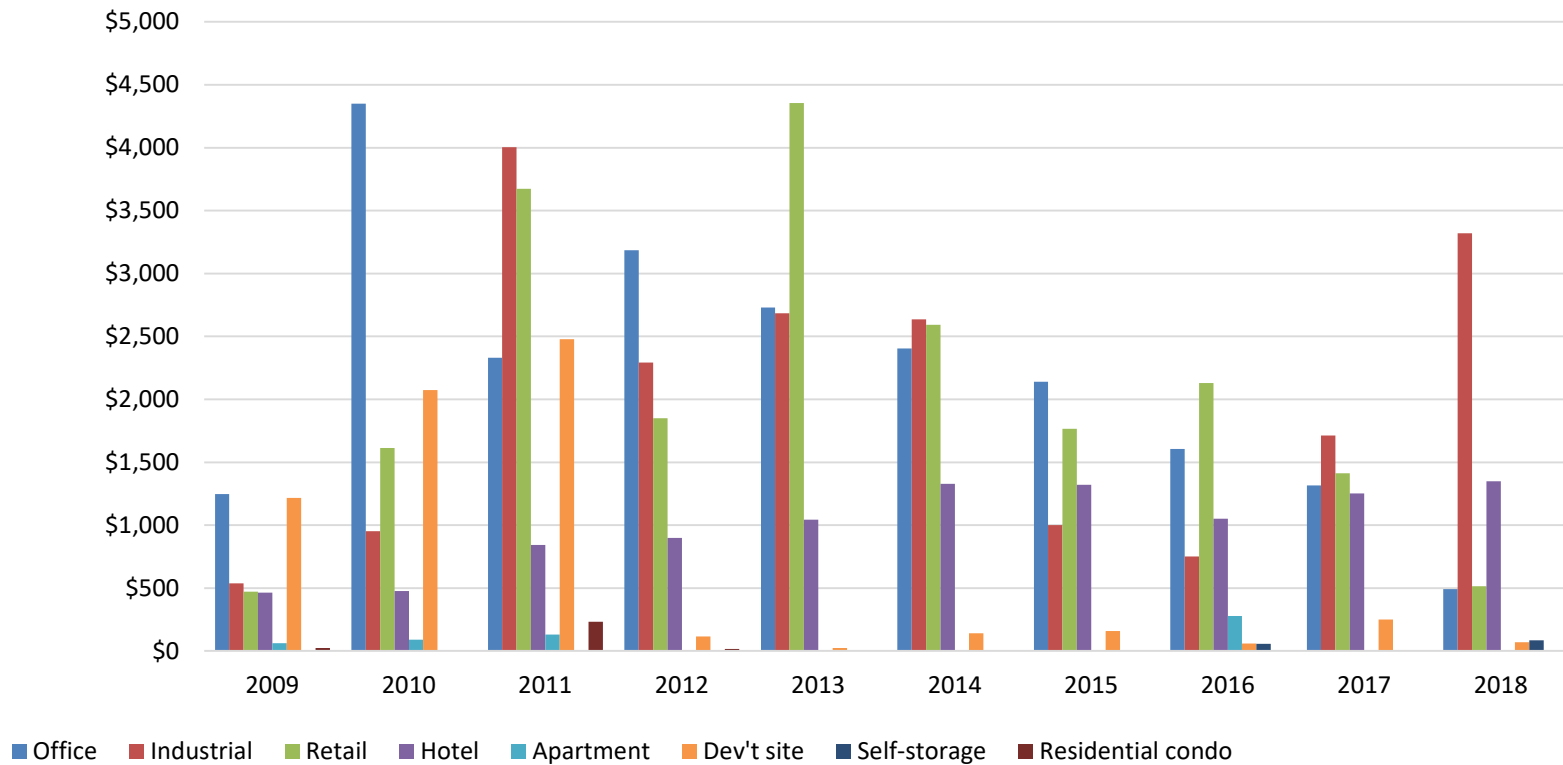




# Transaction Trends

Industrial had the largest transaction volume in 2018.

Transaction volume by property type, 2009-18 (USD, millions)



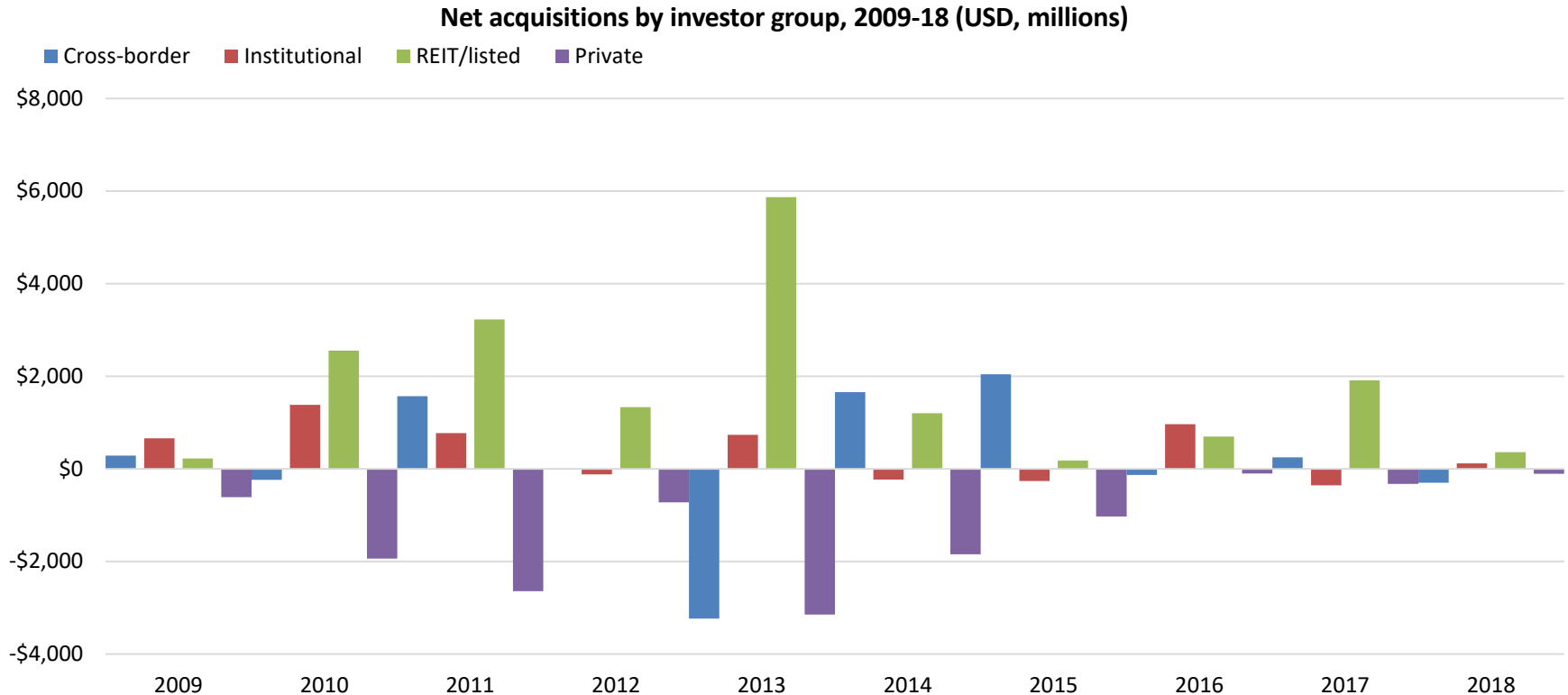
Note: Volumes include office, industrial, retail, hotel, apartment, seniors housing & care, development sites/land, and self-storage. Reflects transactions in Brazil, Mexico, Colombia, Peru, Chile, and Argentina.

Source: Invesco Real Estate using data from Real Capital Analytics as of March 2019.



# Capital Flow by Investor Group

Local REITs have been the largest net acquirers over the last decade.



Note: Volumes include office, industrial, retail, hotel, apartment, seniors housing & care, development sites/land, and self-storage. Reflects transactions in Brazil, Mexico, Colombia, Peru, Chile, and Argentina. The REITs/listed category is inclusive of both Latin American-domiciled REITs as well as foreign REIT structures.

Source: Invesco Real Estate using data from Real Capital Analytics as of March 2019.



# Attractions

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- **High Cap Rates**

- Relatively high cap rates in the region for prime commercial properties helps further mitigate cap rate risk compared to rich pricing of similar assets in the U.S. and other developed markets

- **Minimal Leverage**

- Commercial investments are typically unleveraged, further mitigating risk
- Because of the region's lesser-developed capital markets, with limited debt for real estate and relatively low penetration of private equity capital, Latin America offers favorable project-level economics for real estate investments

- **Higher Potential Returns**

- Returns for real estate investments in Latin America are targeted at 15-30%, higher than comparable investments in the more developed economies of the United States, Europe or Asia



# Case Studies

## U.S. Developer partners with local REIT to develop multi-family in Mexico



Investment Vehicle	Forward Fund
Location	Mexico
Asset Type	Multi-Family
Equity Multiple	1.74x
Net IRR*	15.9%

## Real estate investment firm creates co-investment vehicle to invest in malls in Brazil



Investment Vehicle	Co-investment w/ int'l institutional investor
Location	Brazil
Asset Type	Shopping Malls
Equity Multiple	1.70x
Net IRR*	20.6%

\*Realized returns; Net to fund.  
Source: Greystar & Vinci Partners.

# Reservations

- **Fragmented regional conditions**

- Latin America is a broad, complex region comprising of many different cultures that present institutional operators a multitude of language and regulatory challenges
- Corruption, either in perception or reality, hinders long-term stability measures
- Proximity and shared borders between countries can create instability spillover

- **Limited liquidity in all but the top destinations**

- 90% of real estate transactions were concentrated in just 4 countries: Brazil, Mexico, Argentina and Peru. This is further concentrated by city, as Sao Paulo, Rio de Janeiro, and Mexico City comprised 65% of that total
- Investable stock in Mexico and Brazil (only countries for which Cushman & Wakefield provides data for) estimated at USD 1.6 trillion – less than the investable stock in France

- **Transparency**

- The region is home to some of the world's most opaque real estate markets, although this has been improving gradually
- Only Brazil and Mexico are within striking distance of Jones Lang LaSalle's "transparent" tier but are still considered semi-transparent today, hindered by investment performance and sustainability weakness; Chile, Peru and Argentina are nearer to a categorization of "low"

# Case Studies

## Local asset manager raises shopping mall fund in Brazil



<b>Investment Vehicle</b>	Closed-End Commingled Fund
<b>Location</b>	Brazil
<b>Asset Type</b>	Retail
<b>Equity Multiple</b>	0.80x
<b>Net IRR*</b>	-5.0%

## U.S. investor raises fund to invest in for sale housing in Latin America



<b>Investment Vehicle</b>	Commingled Fund
<b>Location</b>	Brazil, Mexico, Peru
<b>Asset Type</b>	For Sale Housing
<b>Equity Multiple</b>	0.90x
<b>Net IRR*</b>	-4.4%

\*Realized returns; Net to fund.

Source: VBI & Paladin.

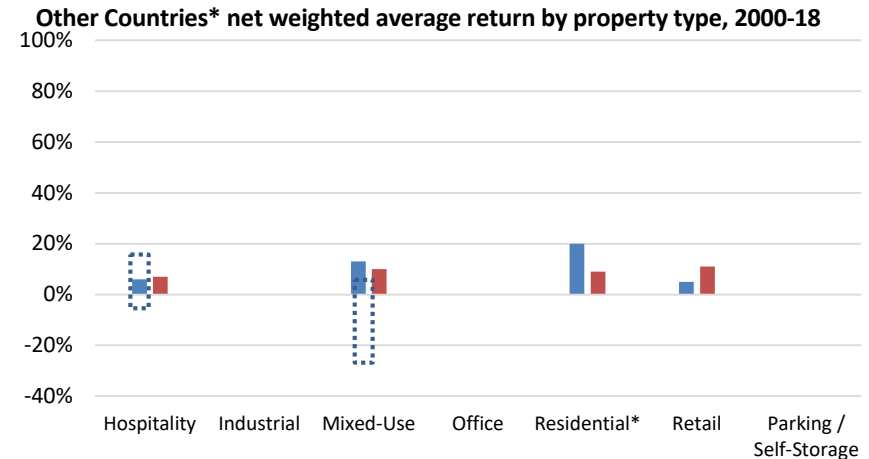
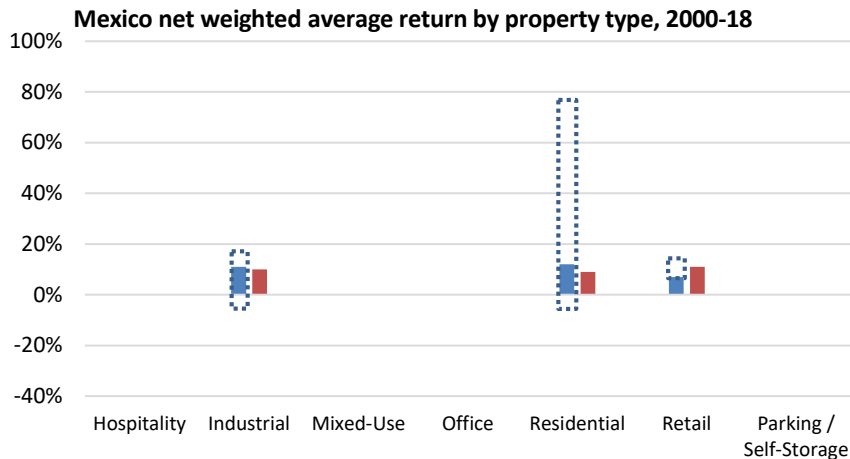
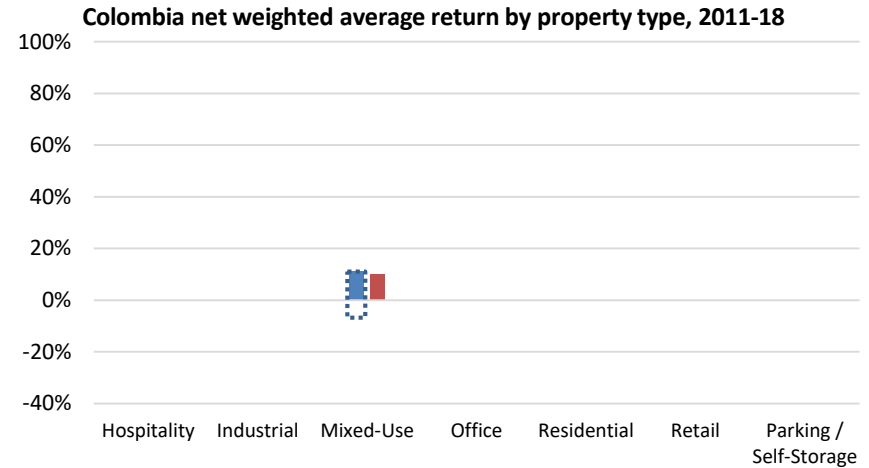
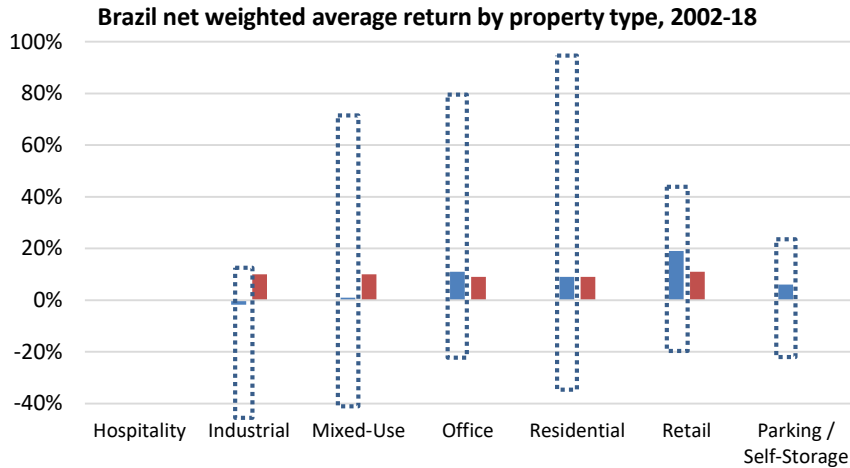


# Net Returns by Property Type

**Legend**

- Country (Blue square)
- NCREIF (Red square)
- Range (Dotted line)

Overall, investments in Latin American markets have had positive returns. However, returns display significant variability.



Note: Analyzed USD 11.2B in investments over 2 decades. Other Countries include Pan-LATAM investments and Argentina, Chile, Peru, and Venezuela. Mixed-Use includes investments in a combination of office, retail, and residential; weighted average calculations include total amount invested and return per investment. Other countries – residential and retail include 1 investment.

Source: Investor decks and reports; NCREIF.



# Conclusions

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**A greater materialization of ongoing structural reform is necessary for LATAM to represent a durable investment opportunity.**

- **Latin America is a small piece of the institutional investible universe**
  - Investments in Latin America account for only 5% of total global real estate investments in 2018
  - Difficult to achieve scale in LATAM countries outside of Brazil and Mexico
- **Right strategy, right time**
  - Strategy selection appears to be critical to investment performance
  - Each country should be examined in light of different strategies (e.g., retail in Sao Paulo, distressed assets in Argentina, or industrial in Mexico)
- **Risk tolerance**
  - Decision to invest should consider the level of acceptable risk relative to the high variability of returns and available alternatives
  - Global uncertainty tends to translate into volatility of LATAM currencies, therefore negatively affecting returns

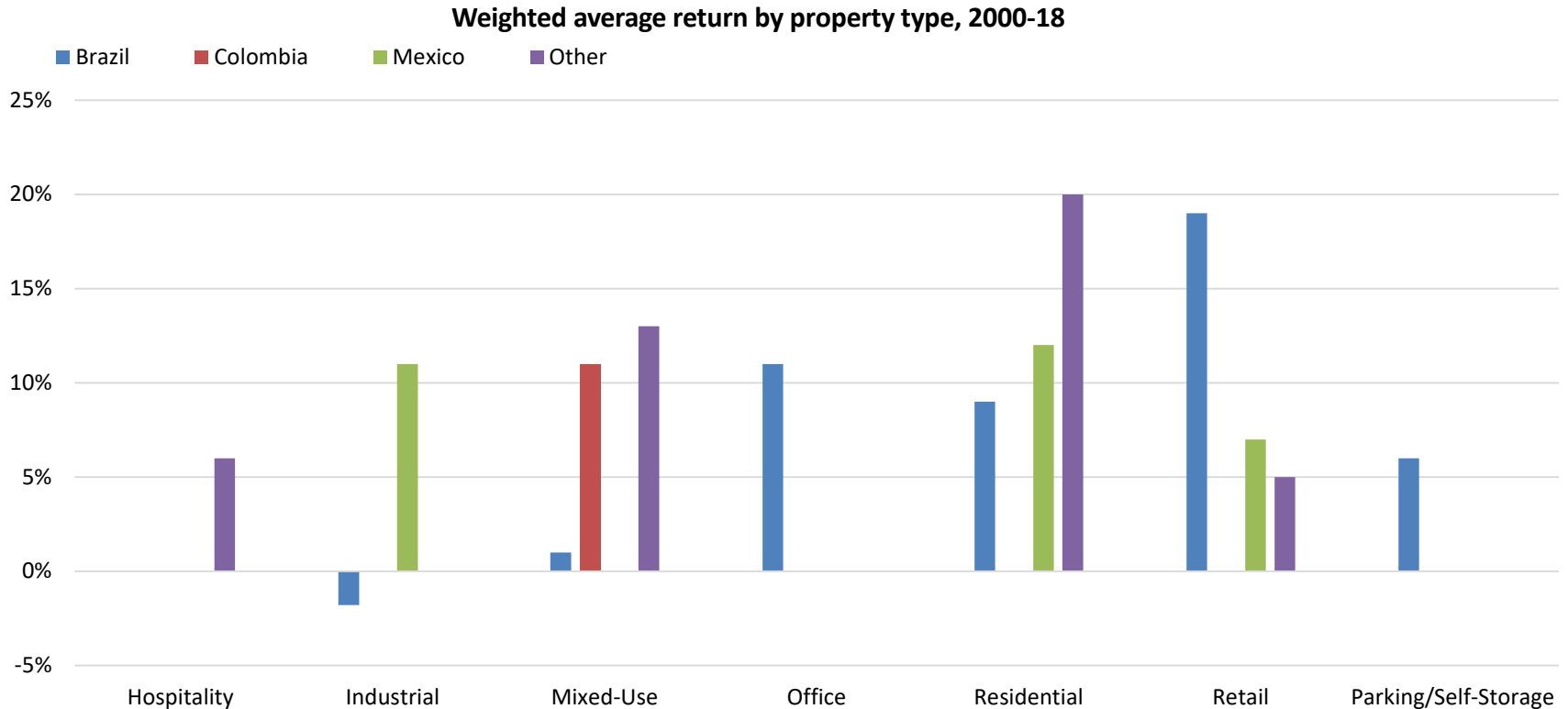


# Appendix



# Returns by Property Type

Brazil retail investments have had the highest returns, while industrial and residential have struggled.



Note: Analyzed USD 11.2B in investments over 2 decades. Other Countries include Pan-LATAM investments and Chile, Peru, and Venezuela. Mixed-Use includes investments in a combination of office, retail, industrial, and residential; weighted average calculations include total amount invested and return per investment. Other countries – residential includes 1 investment.

Source: Investor decks and reports.



# What Has Worked Well

Investors have had success in Latin America, but asset selection, location, and timing are key.

Asset Type	Vehicle	Country	Commitment	Classification	Vintage	IRR	Multiple
Industrial	Co-invest	Brazil	\$61M	Opportunistic	2018	17.7%*	1.73x*
Multi-Family	Joint Venture	Brazil	\$10M		2013	60.70%	5.30x
Multi-Family	Joint Venture	Chile	\$151M		2015	37.40%	1.95x
Office	Equity	Brazil	\$65M		2007	78.00%	1.90x
Office	Equity	Brazil	\$134M		2008	30.00%	2.00x
Office	Co-invest	Brazil	\$209M		2018	20.8%*	1.76x*
Shopping Malls	Co-invest	Brazil	\$30M		2012	16.20%	1.60x

\*Projected returns.

Source: Investor decks.



# What Has Not Worked Well

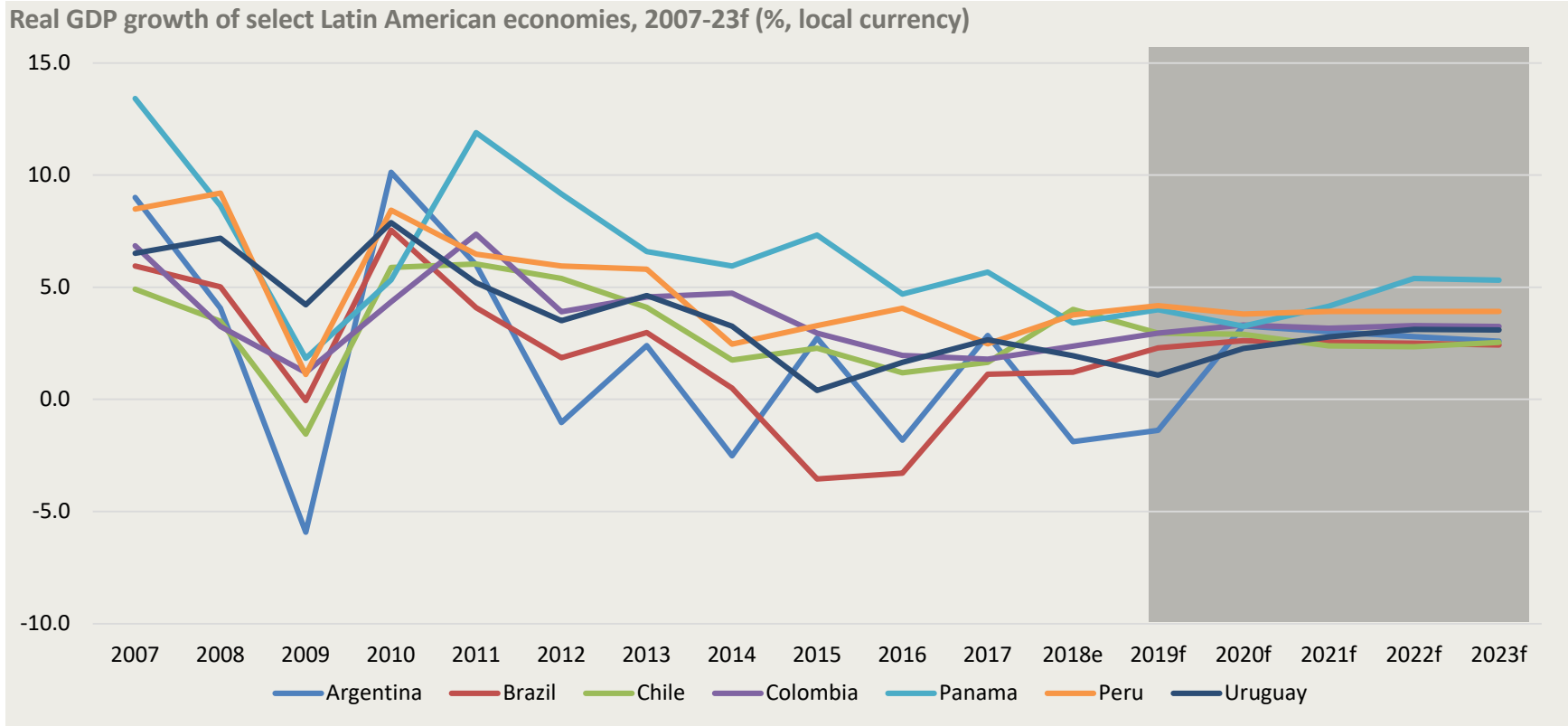
Investors with similar risk profiles as LACERA have been investing in Latin America since 2005 and have generally not met the expected return targets.

Asset Type	Vehicle	Country	Commitment	Classification	Vintage	IRR	Multiple
For Sale Housing	Co-Invest	Mexico	\$150M	Opportunistic	2005	-1.60%	0.91x
For Sale Housing	Co-Invest	Mexico, Colombia, Peru, Brazil	\$83M		2005	-5.60%	0.73x
For Sale Housing	Co-Invest	Mexico, Colombia, Peru, Brazil	\$165M		2008	-25.80%	0.31x
For Sale Housing	Co-Invest	Mexico, Colombia, Peru, Brazil	\$75M		2013	-4.40%	0.90x
Industrial	Co-Invest	Mexico	\$200M		2005	4.70%	1.27x
Office/Industrial	Separate Account	Brazil	\$231M		2007	-7.90%	-
Retail	Co-Invest	Mexico	\$75M		2005	5.40%	1.43x

Source: Returns from investing in LATAM.



# GDP Growth



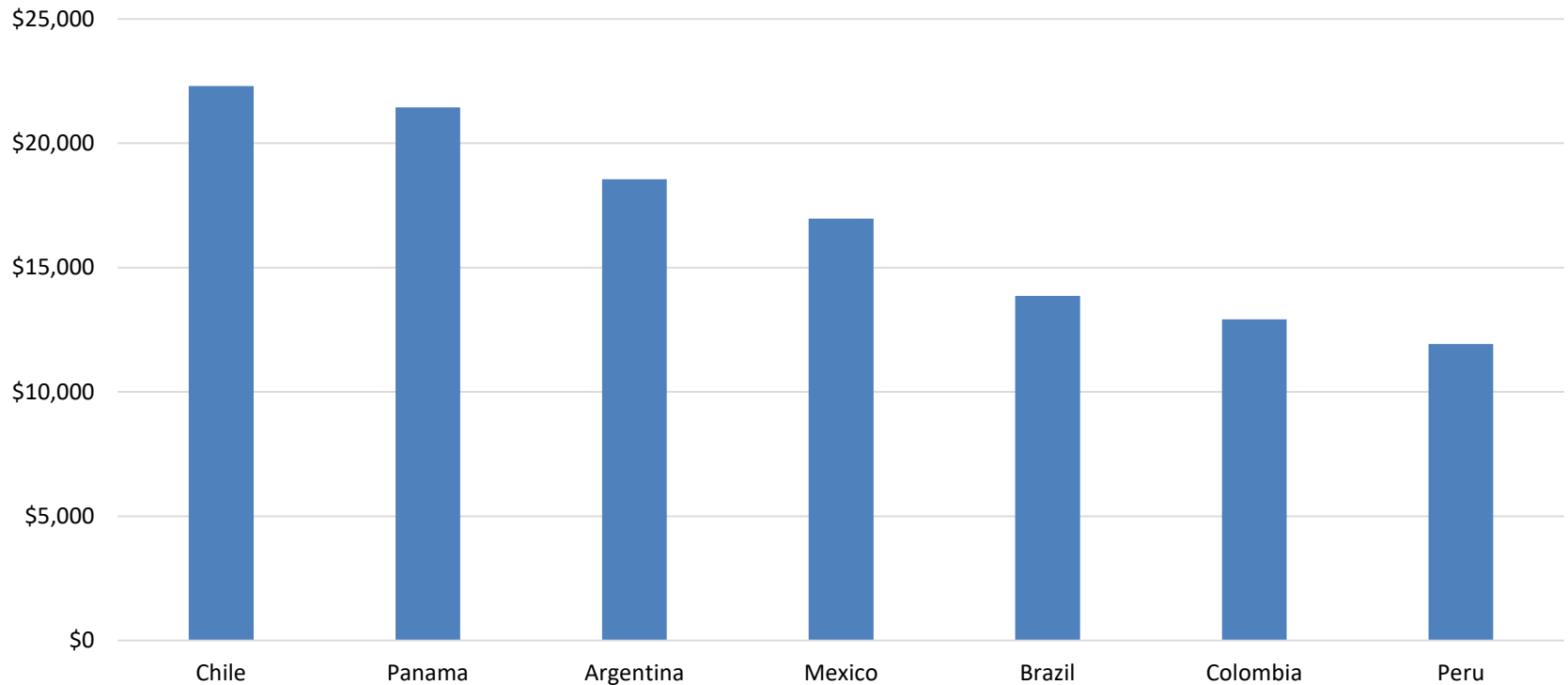
Note: Figures reflect annual year-over-year change in seasonally-adjusted GDP in local currency. e=estimate, f=forecast.

Source: Invesco Real Estate using data from Oxford Economics as of March 2019.



# GDP per capita

GDP per capita, USD, 2017



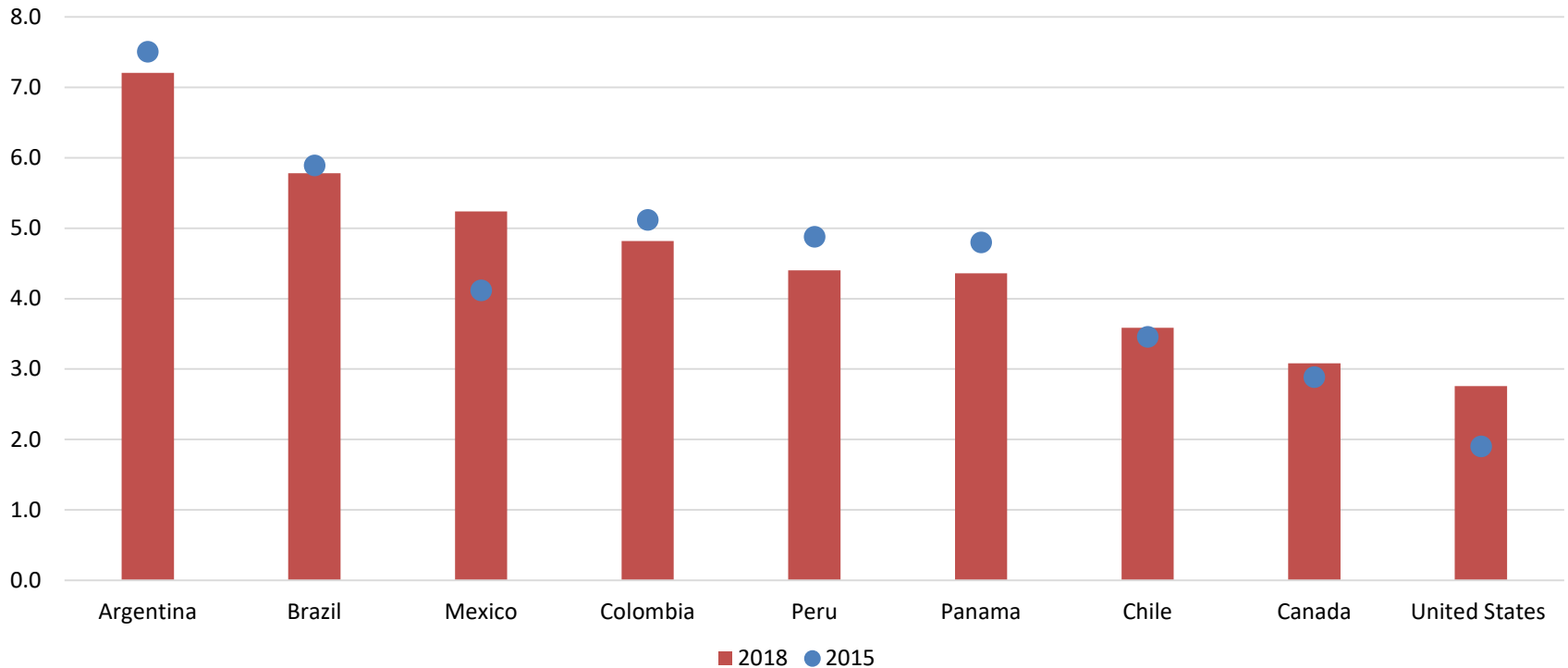
Note: GDP per capita reflects Gross Domestic Product per capita in Purchase Power Parity (PPP) in constant 2010 U.S. dollars.

Source: Invesco Real Estate using data from Oxford Economics as of March 2019



# Evaluating Economic Risk

Overall economic and political risk score of select countries (1-10, 1=lowest risk), 2015 and 2018

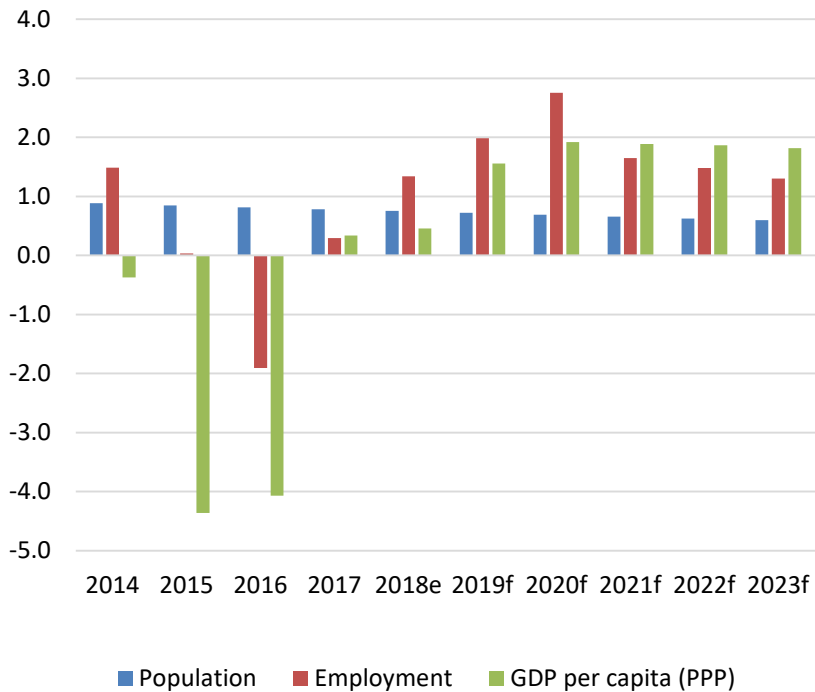


Source: Invesco Real Estate using data from Oxford Economics as of March 2019.



# Country Summary - Brazil

**Brazil population, employment and GDP per capita growth, 2014-23f (%)**



- Brazil is the largest economy in Latin America, boasting a population of more than 210 million people
- A series of fiscal and political crises beginning in 2014, including the sentencing and impeachment of two former presidents, drove government distrust to all-time highs at the peak of the country's deepest and longest recession.
- This culminated in a sharp swing away from the prominent political party of the last 30 years when Jair Bolsonaro was elected president in 2018
- Bolsonaro represents the first far-right administration since 1985; initial party rhetoric suggests an increasingly nationalist agenda.
- Yet given the size and depth of the country's real estate market, it is likely to continue to be the top destination for foreign capital in the region

Note: GDP per capita reflects Gross Domestic Product per capita in Purchase Power Parity (PPP) in constant 2010 U.S. dollars.

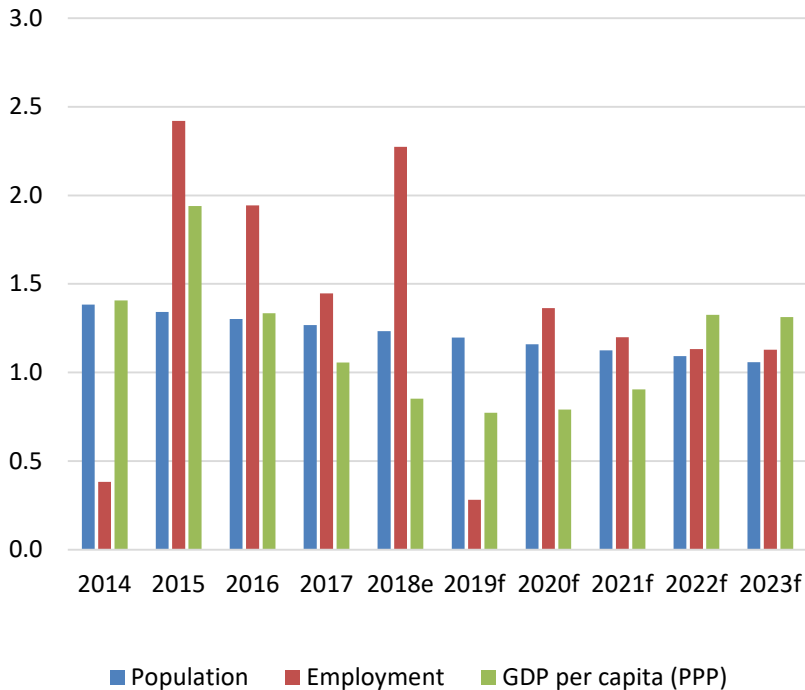
Source: Invesco Real Estate using data from Oxford Economics as of March 2019





# Country Summary - Mexico

Mexico population, employment and GDP per capita growth, 2014-23f (%)



- Mexico is the sixth-largest emerging market in the region, bolstered by its close economic ties to the U.S.
- The U.S./Mexico relationship accounts for 80% of the country's exports and almost 50% of its imports; however, this makes Mexico particularly vulnerable to changes in the U.S. economic cycle or in economic policy
- Solid population growth and a growing middle class has supported consumption; at USD17,000, Mexico's GDP per capita (PPP) is among the highest in the region
- Yet crime and political corruption are still significant deterrents to new entrants into the market

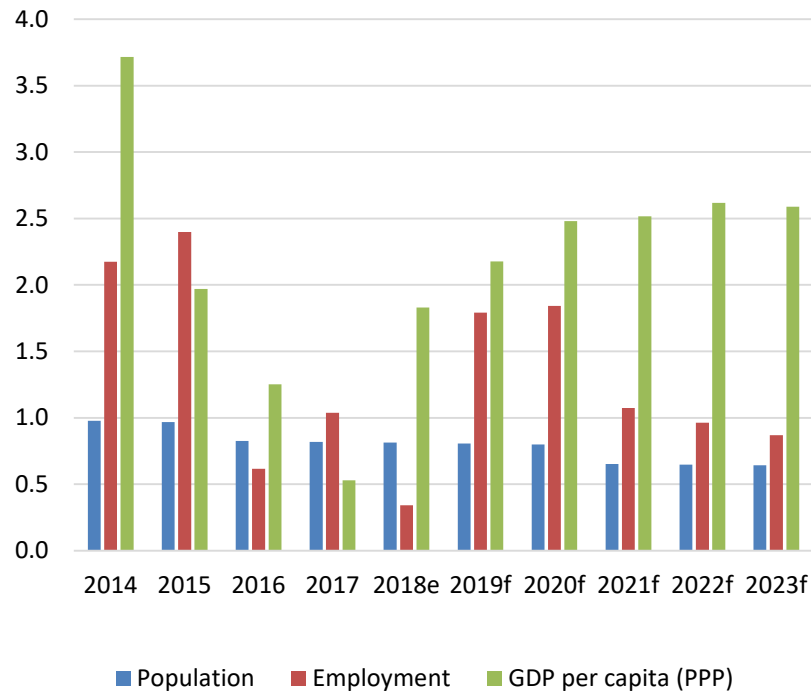
Note: GDP per capita reflects Gross Domestic Product per capita in Purchase Power Parity (PPP) in constant 2010 U.S. dollars.

Source: Invesco Real Estate using data from Oxford Economics as of March 2019.



# Country Summary - Colombia

Colombia population, employment and GDP per capita growth, 2014-23f (%)



- Colombia's recovery has been uneven, as GDP per capita slowed from an annual growth of 3.7% in 2014 to a low of 0.5% in 2017. While consumption and investment should provide a boost this year
- The Colombian economy is susceptible to volatility in oil prices, as oil accounts for approximately 40% of the country's export revenue
- According to the Heritage Foundation, Colombia has the second highest economic freedom score in Latin America (behind Chile), ranking particularly high in trade, investment and business freedom, which should lead to further increases in FDI

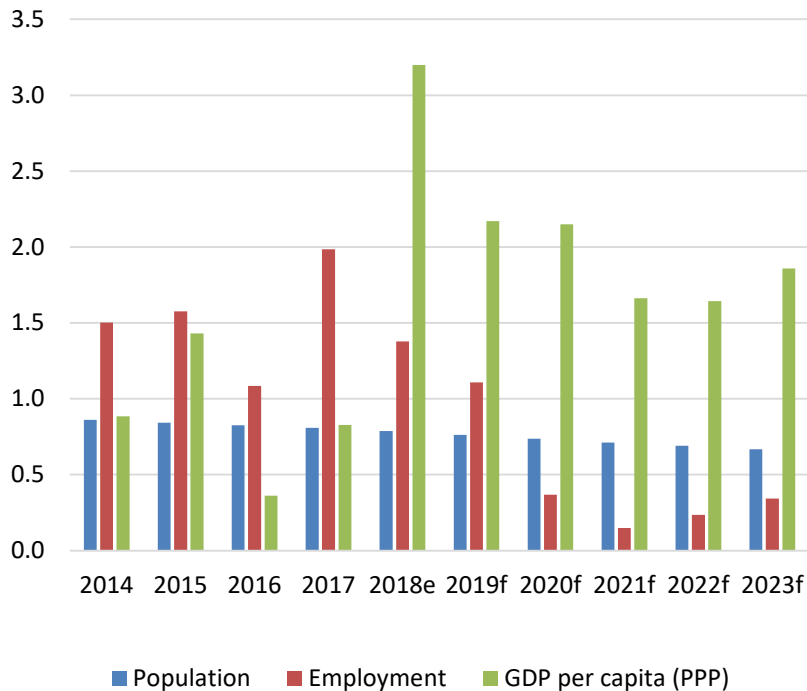
Note: GDP per capita reflects Gross Domestic Product per capita in Purchase Power Parity (PPP) in constant 2010 U.S. dollars.

Source: Invesco Real Estate using data from Oxford Economics as of March 2019.



# Country Summary - Chile

Chile population, employment and GDP per capita growth, 2014-23f (%)



- Chile was one of the fastest-growing major economies in the region over the last 20 years, due to expanding consumption and surging investment, although growth is expected to moderate over the next few years
- The economy has a greater exposure to China than any others in South America (with exports to China accounting for 26% of the total); a moderation of Chinese demand for materials is a key vulnerability going forward
- Chile's GDP per capita is estimated at USD 23,000; these high incomes have consistently contributed to strong retail sales growth and private domestic demand

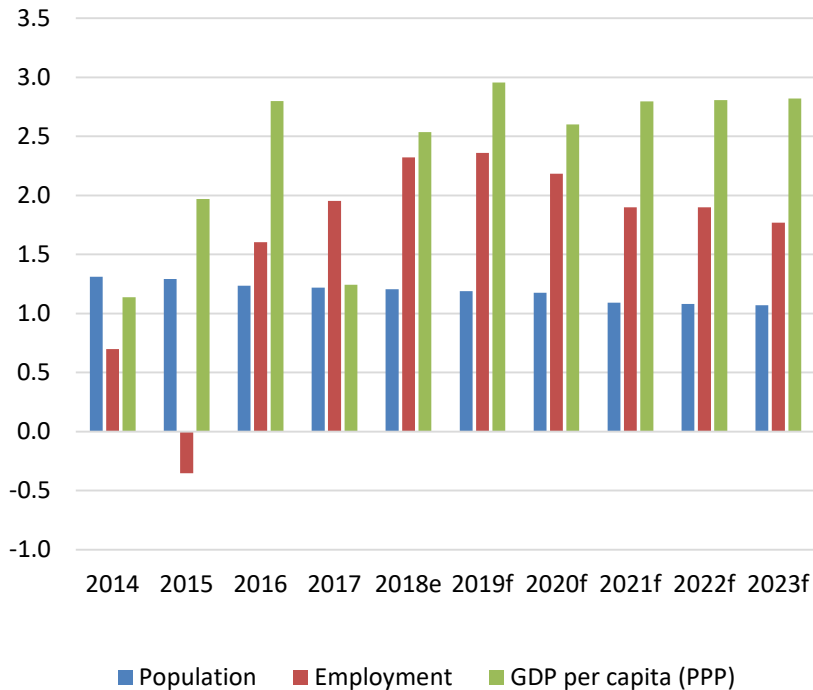
Note: GDP per capita reflects Gross Domestic Product per capita in Purchase Power Parity (PPP) in constant 2010 U.S. dollars.

Source: Invesco Real Estate using data from Oxford Economics as of March 2019.



# Country Summary - Peru

Peru population, employment and GDP per capita growth, 2014-23f (%)



- Peru has been one of the standouts in Latin America in terms of GDP growth, averaging nearly 5% per year since 2000
- Roughly 80% of the country’s 30 million inhabitants live in urban areas, the largest being Lima. Services account for 60% of domestic output and employment
- Domestic demand was boosted in 2018 by a recent minimum wage hike; this, plus expectations for ongoing employment growth are likely to keep consumption a key driver
- The country is also one of the top three producers worldwide of copper and silver and a top-ten producer of gold; fluctuations in commodities markets can have an outsized impact on the local economy

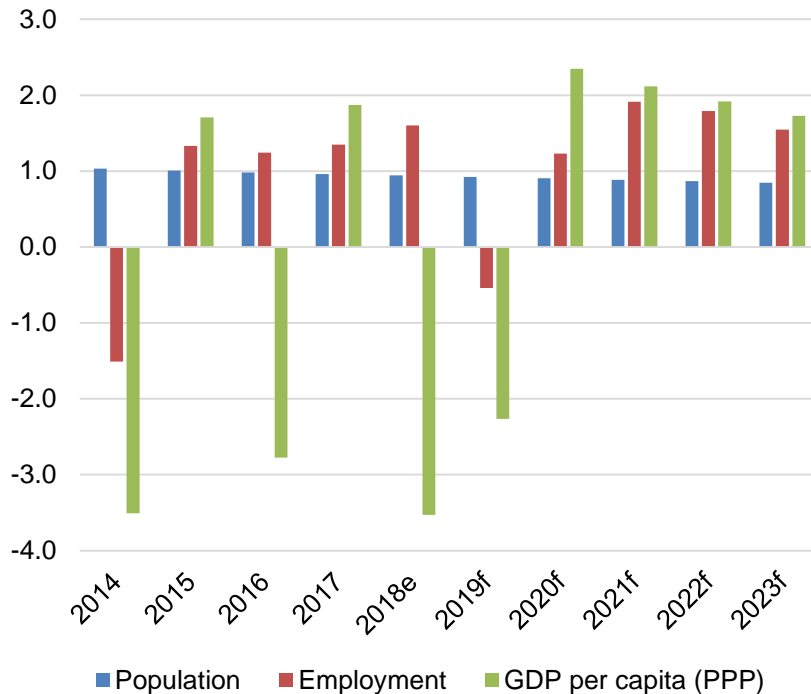
Note: GDP per capita reflects Gross Domestic Product per capita in Purchase Power Parity (PPP) in constant 2010 U.S. dollars.

Source: Invesco Real Estate using data from Oxford Economics as of March 2019.



# Country Summary - Argentina

Argentina population, employment and GDP per capita growth, 2014-23f (%)









- Inflationary pressures have long plagued Argentina; in 2018, the consumer price index increased 47.6%, the highest annual rate since 1991. Year-over-year changes to the CPI have averaged 22% since 2002
- In recent years, Argentina has struggled against the backdrop of a currency crisis underpinned by policy missteps. The Argentine peso traded at 20.33 per USD in March 2018; as of April 2019, the USD:ARS is nearer to 42.00
- The country entered a technical recession in Q4 2018, prompting an IMF bailout to the tune of USD56 billion. The bailout requires further austerity measures, which are like to further exacerbate the country's slowdown in the near-term

Note: GDP per capita reflects Gross Domestic Product per capita in Purchase Power Parity (PPP) in constant 2010 U.S. dollars.

Source: Invesco Real Estate using data from Oxford Economics as of March 2019.



# Positive FX Fundamentals

	LATAM FX Outlook (3-5 years)		Implications
Trade	China economic slow-down and low commodities prices already priced in; current account deficits are shrinking		Current account deficits mean a country is spending more on foreign trade than it earns from exports, resulting in a weaker currency
Interest Rates	Interest rates decline in Brazil as inflationary pressures ease, helping the mortgage market; higher US rates will create FX pressure		Higher interest rates attract capital flows causing the currency to rise, but may be offset by higher local inflation
Inflation	Tight monetary policy and recession reduced Brazil's inflation from 10.5% to 4.1%		Lower inflation raises the relative purchasing power of a country leading to stronger currency
Fiscal Balance	Deteriorating fiscal accounts largely priced into Brazilian real; low levels of debt in rest of region		Budget deficits lead to higher debt levels, which can be inflationary resulting in weaker currency
Economic Growth	Mexico and Andean region growing at 2-4%; Brazil resumed growth in 2017		Generally, growth attracts investment leading to a stronger currency, however inflation can offset
Political Stability	Mexican peso has stabilized with political uncertainty behind us; Brazil appears to be following a similar path		Countries with political uncertainty can deter investments, leading to a weaker currency

Source: Paladin Realty 2019 Latin America Macro Outlook.



# Due Diligence Template

Company Name

Contact

Date

Country	Capital				Asset Type					Notes			
	Invested	\$ Invested	Returns	Duration	Investment Vehicle	Industrial	Office	Multi-Family	Retail	Other	Opportunities	Challenges	Strategy
Argentina													
Bolivia													
Brazil													
Chile													
Colombia													
Ecuador													
French Guiana													
Guyana													
Mexico													
Paraguay													
Peru													
Suriname													
Uruguay													
Venezuela													

General Questions

- Which countries are you currently invested in?
- What factors did you consider when evaluating these countries?
- Which countries have you assessed and decided not to invest in? Why?
- How long have you been invested in these countries?
- What have your returns been?
- Which asset classes are you invested in?
- Do you have any upcoming funds?
- What has made you successful in these countries?
- How much do you have invested in each country?
- What are your future plans for this country?





April 24, 2019

TO: Each Member  
Board of Investments

FROM: David E. Simpson, CFA *DES*  
Investment Officer

Wei-Wei Lee  
Intern

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **VENTURE CAPITAL ACCELERATOR ACTIVITIES IN THE U.S.**

### DISCUSSION

For the third year, the Investments division has worked with Human Resources to conduct internship programs with local area universities. The program objectives are to gain early access to a wider pool of talent, provide interns exposure to LACERA and institutional money management, and to direct the interns to undertake projects that are meaningful to the division. The current intern class represents the first time that LACERA has run the program during the school year, having the MBA student interns work on their projects one to two days weekly over a 4-month period.

Today, the Board of Investments (the “Board” or the “BOI”) is being presented with a summary report (**Attachment**) covering Venture Capital accelerator activities in the U.S. The presentation discusses the structures of startup accelerators and the ecosystem of early stage investments. The report also explores accelerator success factors and evaluates potential LACERA strategies to obtain exposure to these early stage investments.

Attachment

Noted and Reviewed:

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Jonathan Grabel  
Chief Investment Officer



# Venture Capital Accelerator Activities in the U.S.

Board of Investments

May 15, 2019

Wei-Wei Lee – USC MBA Candidate, Intern



# Table of Contents

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- I. Market Overview
- II. Foundational Knowledge – Incubators and Accelerators
- III. U.S. Marketplace
- IV. Los Angeles Ecosystem
- V. Potential LACERA Strategies
- VI. Appendix



# Opening Remarks

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The inception of this project began with a question:

Can LACERA meet its private equity return objectives through the Los Angeles County venture capital ecosystem by deploying sizable capital to high-growth, startup companies?

In the past 10 years, new technologies (e.g., cloud, big data, SaaS, smartphone) have lowered the costs of launching a business.

Successful startup companies have outplayed incumbent players (e.g., retail, publishing, transportation, entertainment, social media). Several of those companies (Hulu, Snap, Bird, Goop, SpaceX, Tinder) call LA home.

The objective is to understand the ecosystem of startups and early stage investments nationally and in LA to determine viable LACERA actions.

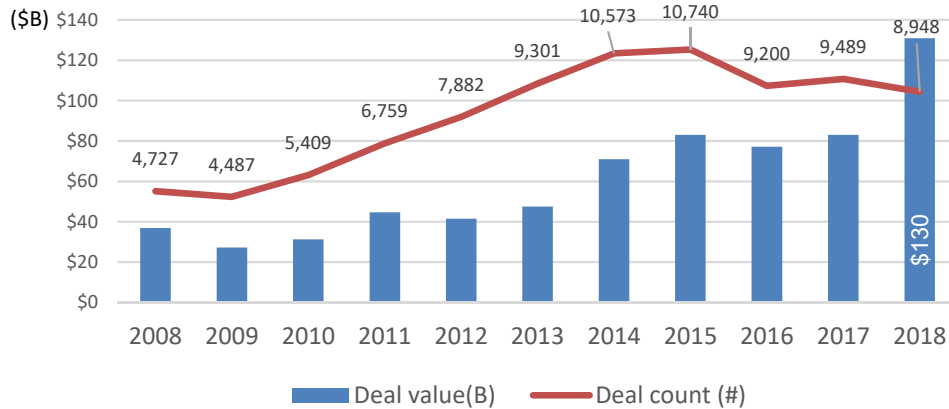
# Market Overview



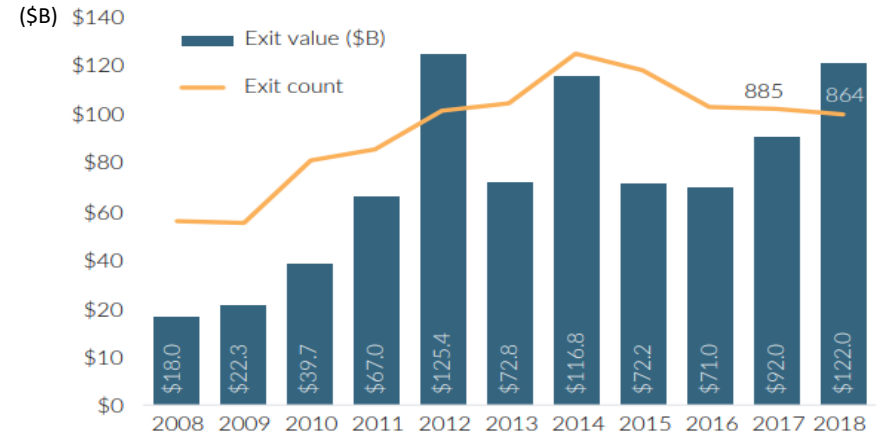
# 2018 U.S. Investment Activities

*In 2018, capital investment into U.S. VC reached a record high of \$130.9B (vs. \$105B in 2000 & \$83B in 2017).*

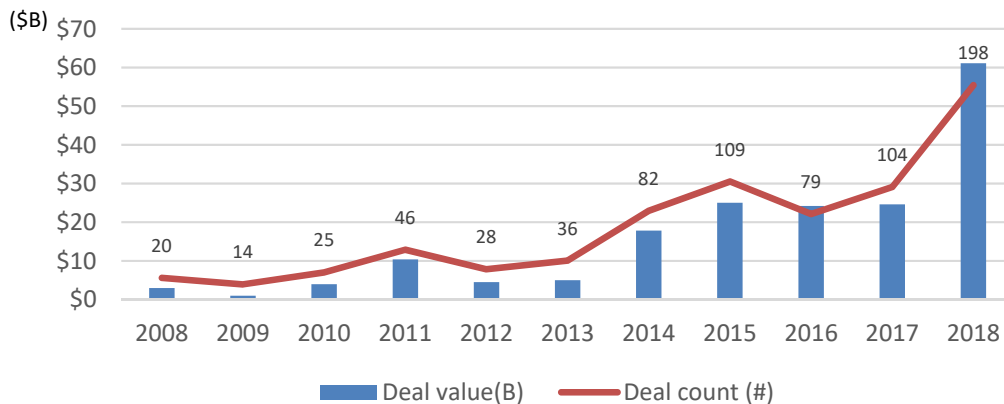
**Capital investment into U.S. VC reaches new all-time high**



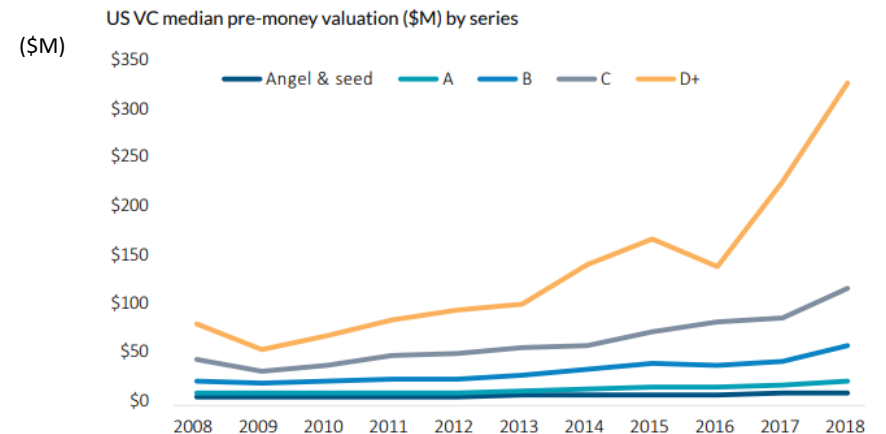
**Exit value reaches \$122B in 2018, 32% YoY**



**Mega round deals (>\$100M valuation) doubled in 2018**



**Later stage valuations remain fastest growing**

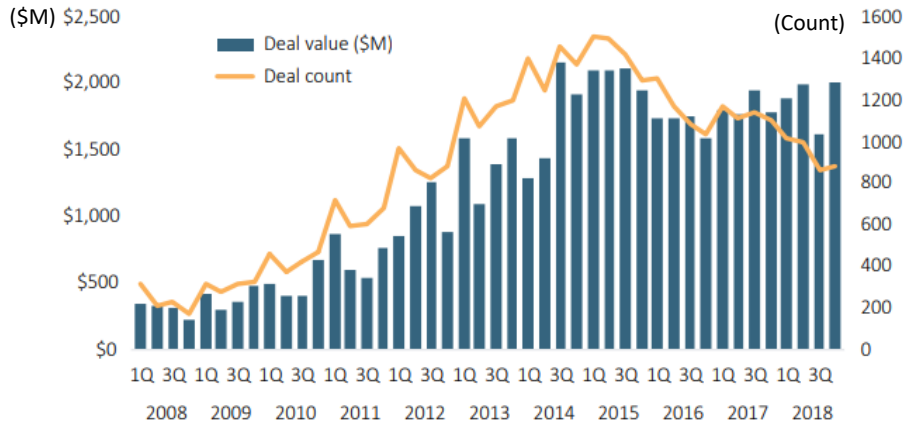


Source: Pitchbook-NVCA Venture Monitor Report.



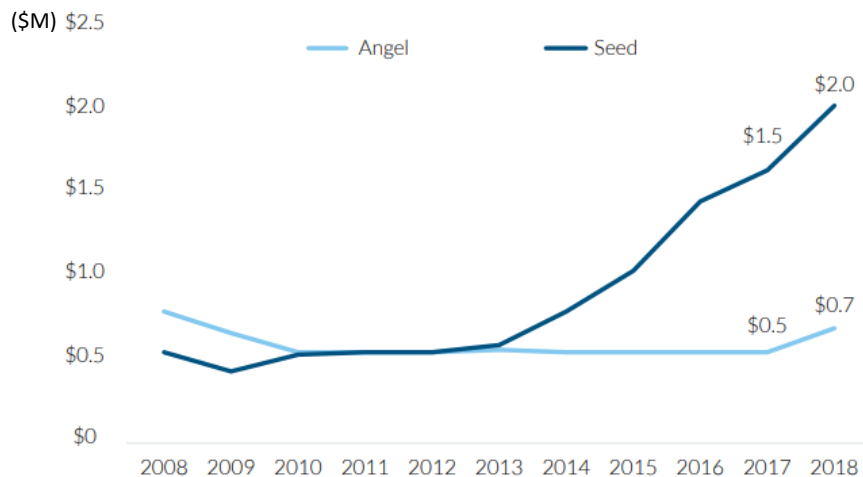
# Angel and Seed are Attracting More Capital

## 2018 Angel & Seed deal activity reaches \$7.5B value

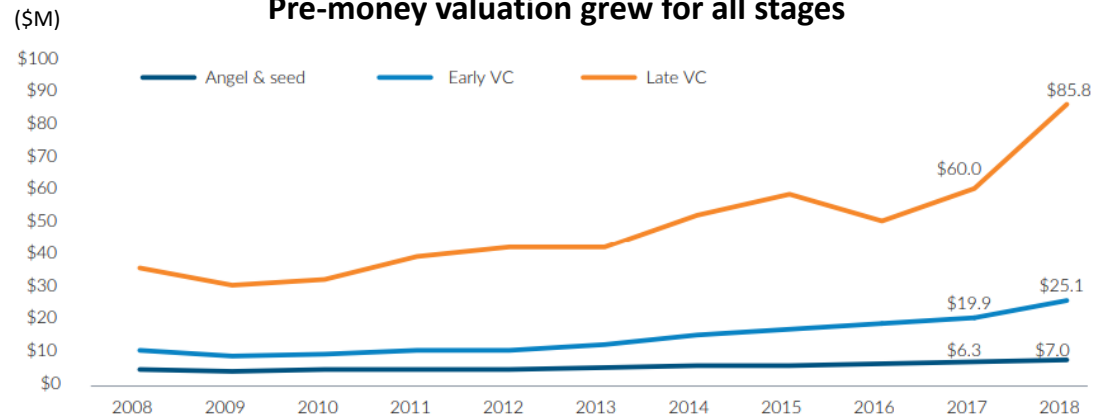


- Angel and seed stage had a strong year in 2018, with deal value reaching \$7.5B.
- The median pre-money valuation\* and deal size grew at a double digit pace YoY, as a result of available capital.

## Angel & Seed median deal size comes to a record high



## Pre-money valuation grew for all stages

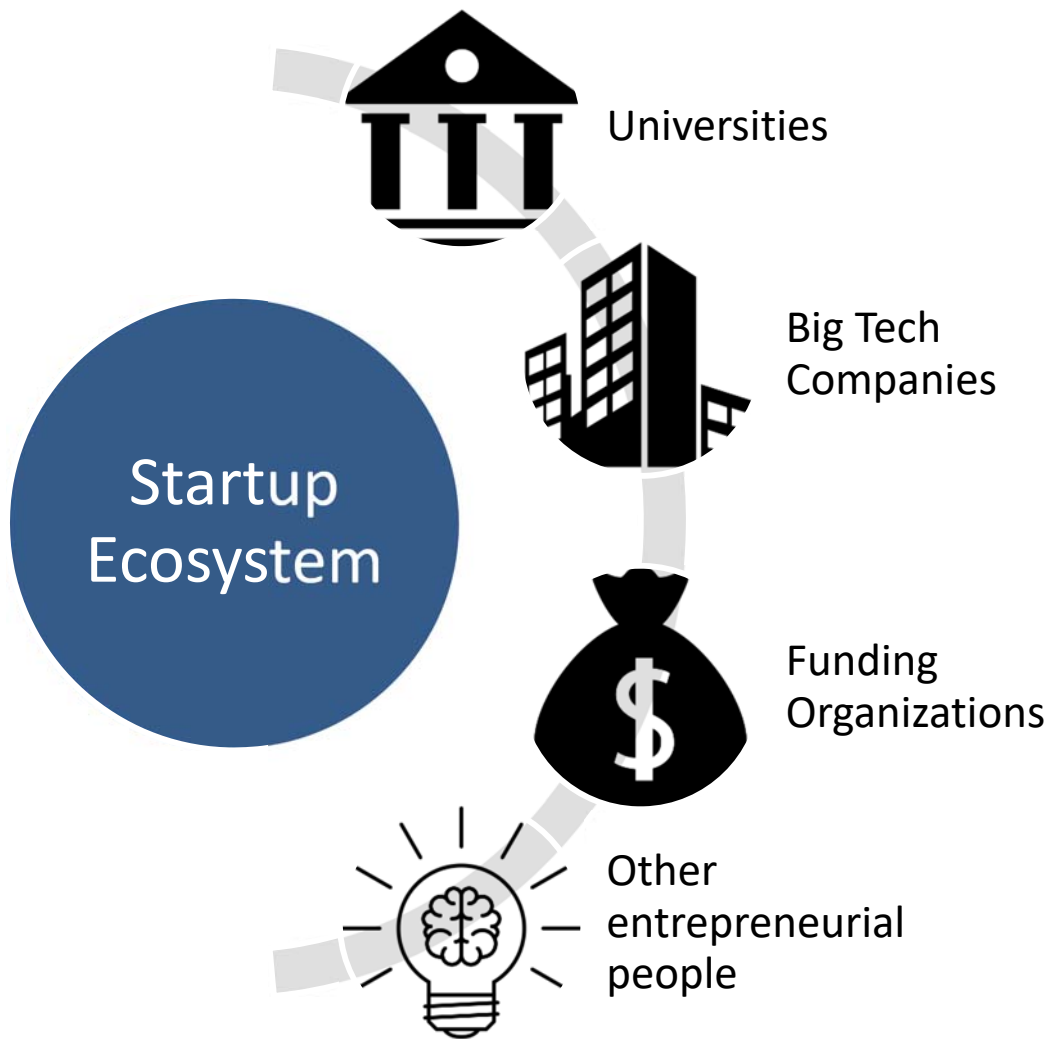


\*Pre-money valuation: the value of a company's stock before it receives other investments.

Source: Pitchbook-NVCA Venture Monitor Report.



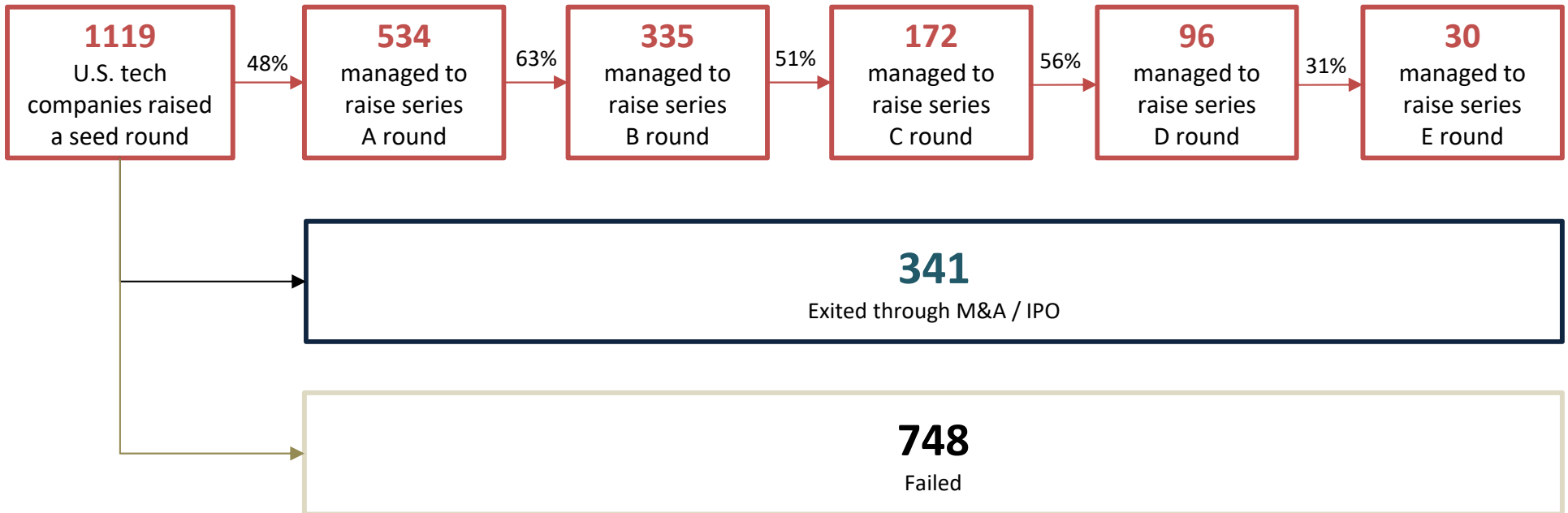
# Startup Ecosystem



Top Acquirers (2010-2018)			
Name	HQ	Acquisitions	Deal Value (\$B)
Google	Mountain View, CA	150	8
Facebook	Menlo Park, CA	69	22.8
Apple	Cupertino, CA	68	51
Microsoft	Redmond, WA	67	39.4
Accenture	New York, NY	61	0.4
Cisco	San Jose, CA	60	17.4
Yahoo	Redwood City, CA	56	3
Oracle	Sunnyvale, CA	51	10.8
IBM	Armonk, NY	49	8.1
Salesforce	San Francisco, CA	46	15.7
Twitter	San Francisco, CA	46	1.5
Amazon	Seattle, WA	45	5.9

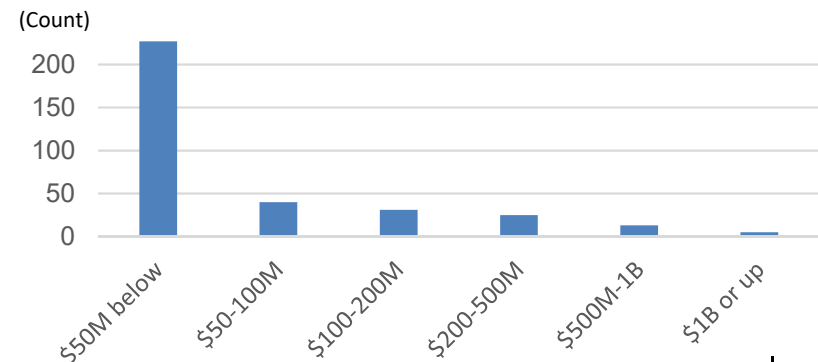
# Startup Failure and Success in the U.S.

2008-2010 → 2018



- Tracking 1,119 startups from the moment they raise their first seed investment in 2008-2010.
- Until 2018, 341 (or 30%) of these companies exited through an IPO or M&A. Most of which are valued below \$50M.
- 748 (or 67%) companies failed and many of them failed within 20 months after their first round of financing.
- 12 companies (or 1%) reached unicorn\* status.

Exited Valuations by Deal Count



\* Unicorn: a privately held startup company valued at over \$1 billion.

Source: CB Insights September 2018.





# Foundation Knowledge — Incubators and Accelerators



# Different Types of Early Stage Investors

	Incubators	Angel Investors	Accelerators
Business model	Rent; non-profit	Investment	Investment; non-profit
Investment size	\$0-50K	\$25K-\$250K	\$150K-\$2.5M
Resources	Product formation, mentorship	Angel's personal advice	Intense mentorship, operations, network
Venture location	On-site	Off-site	On-site

The miniscule amounts of capital being deployed to incubators forced the focus of this research on accelerators.

# What is an Accelerator?

## Cohort-based



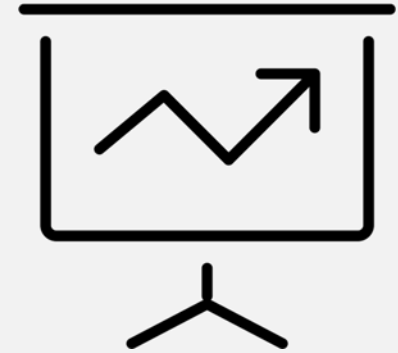
Select 10 to 15 teams in each cohort  
Provide working spaces for fixed terms

## Mentor-driven



Invite mentors from VC, industrial experts, legal advice, recruiting techniques

## Demo day



Culminate in a graduation or demo day with VC audience

# U.S. Marketplace



# Three Largest Accelerator Programs in the U.S.

## Y Combinator

- Founded in 2005 in Silicon Valley & Cambridge, MA (Cambridge site closed in 2009)
- AUM ~\$1.7B
- Average check size \$150K
- # of investments 2334
- Portfolio includes Airbnb, Reddit, Dropbox, Instacart, DoorDash

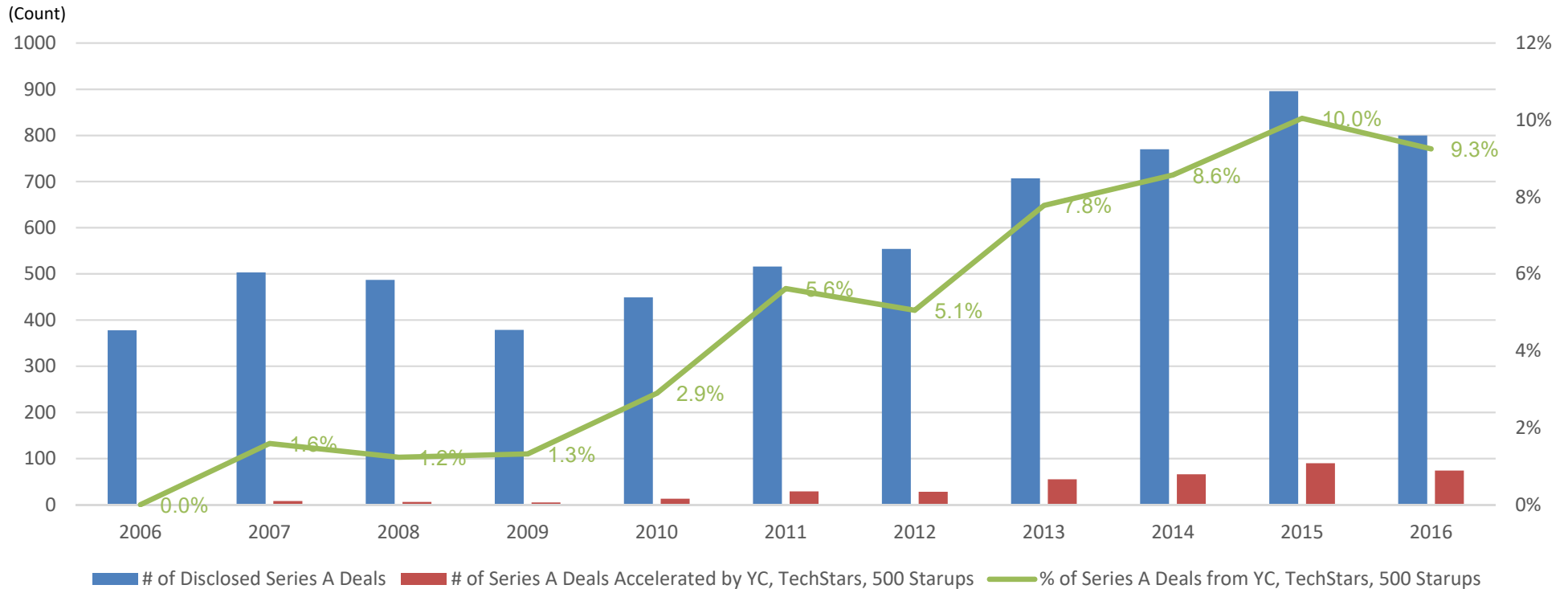


- Founded in 2006 Boulder, Colorado. Expand into 29 programs around the world, including SF, LA, NY, Chicago, London, Toronto
- AUM ~300M
- Average check size \$150K
- # of investments 1500
- Portfolio includes PillPack, Datacamp

## 500 STARTUPS

- Founded in 2010 in Silicon Valley
- Operates in over 74 countries e.g., US, Mexico, Israel
- AUM ~500M
- Average check size \$150K
- # of investments 2300
- Portfolio includes Twillio, Credit Karma

# Top 3 Accelerators Produce ~10% of Series A Deals



- The number of Series A round companies was about 800 in year 2016.
- 10% of Series A round companies have gone through one of the three top accelerators.

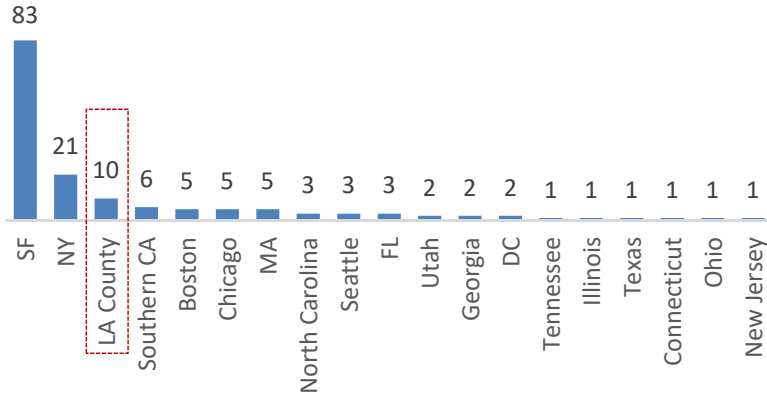


# Los Angeles Ecosystem

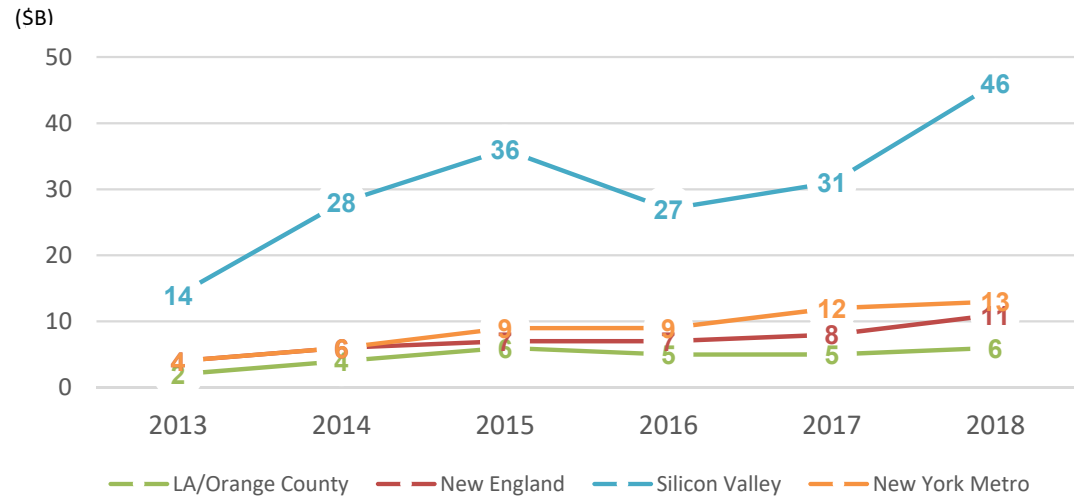


# Los Angeles VC Investment Overview

Out of 156 unicorn\* companies, 10 are from LA County (as of December 2018)



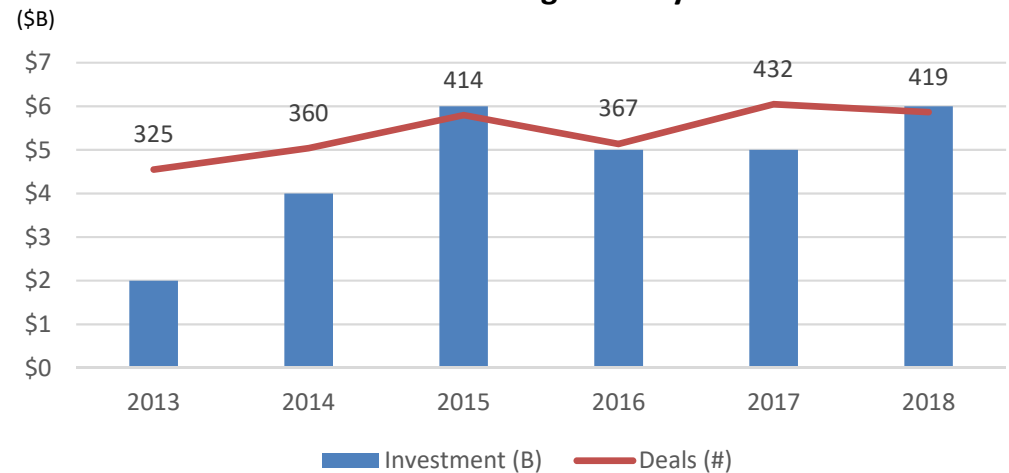
## U.S. metropolitans financing trend



## Unicorns in LA County (as of December 2018)



## 2018 \$6B with 419 number deals get financing at LA & Orange County



\*Unicorn: a privately held startup company valued at over \$1 billion.

Source: PwC MoneyTree Report, CB Insight.





# Accelerators & Investors in LA

## LA Accelerators & School Funds



- Help entrepreneurs succeed with resources and know-how
- Accelerators normally have an investment vehicle
- Sources of returns: revenue share, capital return, debt, run corporate accelerator programs
- Some invest in follow-on rounds, some do not.
- Check size ~\$150K per company
- Program: 3M to 1 year
- Fund sizes are normally <100M



- Goal is to develop a school network to help faculty, students and alumni
- Most incubators do not invest
- As of investment vehicles, fund sizes are ranging from 1M to 60M. There are two types of school funds:
  - Traditional LP structure, receive outside investment capital
  - Donation based non-profit funds
- Two types of sector focus
  - Technology transfer offices: biotech, therapeutic, chemistry
  - Tech, entertainment

## Other Investors



Angels who know & invest in other entrepreneurs e.g., Scouts



Family offices



Early stage VCs

Corporate entities

# Potential LACERA Strategies



# Critical Factors for LACERA

## Goal



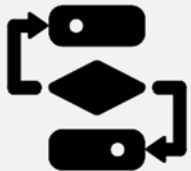
**Profits**  
**Sustainable access to early deal flows**

## People



**Experienced and understand the dynamics of developing early stage companies**

## Infrastructure






**Program needs to have systems, procedures, policies, processes, and governance structures**

## Risks



**Adverse selection**  
**High failure rate, low success rate**  
**Economic cyclicality**  
**Program duration and time to exit**

# Strategy Discussion

	Strategies	Pros	Cons	
<p>More diversified; less LACERA resources needed</p>  <p>Less diversified; more LACERA resources needed</p>	<p>1. Fund of accelerator funds (Similar to JPM EM program)</p>	<ul style="list-style-type: none"> <li>Invest in a well-diversified portfolio</li> <li>Cultivate relationships with underlying funds</li> <li>Co-invest in follow-on rounds (limited)</li> <li>Less resources by outsourcing fund evaluation and management</li> </ul>	<ul style="list-style-type: none"> <li>Multiple layers of management fees</li> <li>Buying the market generates median performance</li> <li>Long program duration</li> <li>No LACERA or LA angle</li> </ul>	<p>Less control; more fees</p> 
	<p>2. Primary fund investment in one accelerator fund (separate account for co-investments or follow-on investments)</p>	<ul style="list-style-type: none"> <li>Similar to current investment approach</li> <li>Ability to be anchor investor, negotiate fees</li> <li>Co-invest in follow-on rounds (limited)</li> <li>Develop network with early stage CEOs</li> </ul>	<ul style="list-style-type: none"> <li>Hard to deploy significant dollars to best accelerators</li> <li>Fee leverage tied to weaker entrants</li> <li>Less diversified portfolio leads to wider range of positive and negative outcomes</li> <li>Small capital deployed per company</li> <li>No LACERA or LA angle</li> </ul>	
	<p>3. Separately managed accelerator account with LACERA criteria (Similar to the MS Co-Invest program)</p>	<ul style="list-style-type: none"> <li>Customized fund with capital deployed in specified criteria</li> <li>Negotiated fee structure</li> <li>Have some control over investment</li> <li>LACERA staff manage 3<sup>rd</sup> party relationship</li> <li>Knowledge transfer potential</li> <li>Co-invest in follow-on rounds (structured)</li> <li>LACERA/LA angle option</li> </ul>	<ul style="list-style-type: none"> <li>Risk of adverse selection based on designated criteria</li> <li>Greater volatility of results</li> <li>Dependent upon the 3<sup>rd</sup> party manager's key people to source deals and create value</li> </ul>	
	<p>4. LACERA accelerator – direct company investments</p>	<ul style="list-style-type: none"> <li>Favorable cost structure versus outsource</li> <li>Direct control of portfolio composition</li> <li>Company involvement/board participation</li> <li>Greater ownership stakes/follow-on rounds</li> <li>Leverage LACERA facilities and purchasing power</li> </ul>	<ul style="list-style-type: none"> <li>More LACERA resources needed</li> <li>Unable to find the right team to run the accelerator cohort</li> <li>Requires long term LACERA commitment to see results</li> <li>Greater PR exposure risk if any issues arise</li> </ul>	<p>More control; Less fees</p> 



# Concluding Remarks

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1 The market is frothy. Any strategy must be thoughtful and measured. No impetus to jump into the fray.

2 There are many accelerator programs in the U.S. and each has a different mission. Staff should monitor these programs and report back as merited.

3 Accelerator programs are highly selective but are not necessary. Companies like Twitter, Snapchat, Pinterest, Spotify, and Lyft did not start in accelerator programs.

4 Further investigation needed on past returns, valuation processes, and investment rationale before partnering with a local accelerator or manager.

**Thank You**



# Appendix – LA Area Programs

Name	Type	Start Date	AUM	Structure	Focus	Target	Value add	Funding source
USC Marshall Venture Fund	University	2018	1M	VC	Tech, CPG, Entertainment	USC alumni, student	Network	Donation
USC Incubator	University	2015	NA	Incubator	Tech	USC alumni, student	Space, mentor, school network	Donation
Caltech licensing office	University	NA	NA	Accelerator	Biotech, Tech	Caltech professor, researcher	Space, mentor, funding	GP, LP
UCLA Fund for Innovation	University	2015	8.5M	Accelerator	Therapeutics	UCLA professor, researcher	Space, mentor, funding	GP, LP
UCLA Anderson Venture Accelerator	Non-profit	2019	NA	Accelerator	Life Sciences, CPG, Tech, Real Estate	UCLA alumni, student	Mentor, network, space	Donation
Techstars	Fund	2006	300M	Accelerator	Tech	NA	Mentor, network, space	GP, LP
Mucker Lab/ Capital	Fund	2011	121.8M	Accelerator	Tech	NA	Mentor, network, space	GP, LP
Quake	Fund	2016	45M	Accelerator	Tech	NA	Mentor, network, space	GP, LP
Amplify.LA	Fund	2011	50M	Accelerator	Tech	NA	Mentor, network, space	GP, LP
Idealab	Fund	1996	NA	Incubator	Tech	NA	Mentor, space	NA
Science Inc.	Fund	2011	156M	Accelerator	Tech	NA	Mentor, network, space	GP, LP
Medtech Innovator	Non-profit	2013	NA	Accelerator	Medical device, digital health	NA	Prizes award, mentor	NA
LACI	Non-profit	2011	NA	Incubator	Cleantech	NA	Network, mentor, job creation	City of LA
The Global Social Benefit Institute	Non-profit	2003	NA	Accelerator	Impact investing	NA	Mentor, network, space	Donation
Launchpad LA	Fund	2009	NA	Accelerator	Tech	NA	Mentor, network, space	GP, LP
Make in LA	Fund	2015	NA	Accelerator	Hardware	NA	Mentor, network, space	GP, LP
Disney Accelerator LA	Fund	2014	NA	Accelerator	Creative	NA	Mentor, network, space	GP, LP
Bunker Labs	Non-profit	2014	NA	Incubator	Software	Veteran	Mentor, network, space	Donation
Propellant Labs	NA	2018	NA	Incubator	All	NA	Mentor, network	NA
Cleantech Open (CTO)	Non-profit	2005	NA	Accelerator	Cleantech	NA	Mentor, network	Donation
Plug In South LA	NA	NA	NA	Accelerator	Creative, tech	NA	Mentor, network, space	NA
The Vinetta Project	NA	2013	NA	Accelerator	All	Female	Mentor, network	NA
The International Business Accelerator	NA	2014	NA	Accelerator	Blockchain, hardware	NA	Mentor, network	NA
Curious Minds	Fund	2004	NA	Incubator	Tech	NA	Mentor, network, space	NA



May 3, 2019

TO: Each Member  
Board of Investments

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

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **PRIVATE EQUITY PERFORMANCE REPORT**

The Board of Investments (“BOI”) is being presented with its December 31, 2018 Private Equity Performance Report, one of two private equity performance reports it receives each year. Historically, the Private Equity Advisor presents fiscal year end results; staff does the same for calendar year end results, thereby providing the BOI with regular updates on Program performance.

This is the final performance report prior to implementing the asset category structure changes approved at the December 2018, Board of Investments Meeting. Future reports will no longer include the performance of the special situations sub-asset category as those assets have moved to the credit and real assets asset categories. Additional changes will include the new private equity benchmark (Morgan Stanley Capital International All Country World Index Investible Market Index plus 200 basis points), a Separately Managed Accounts sub-asset category, and an increase to the Venture Capital/Growth Equity investment target range of 15%-30%.

Performance and highlights from the period ending December 31, 2018 are summarized below:

- The Private Equity portfolio represents \$5.4 billion/10.2% of Net Asset Value, and is within its total portfolio policy range of 7%-14% (page 16)
- The ten-year portfolio return is 15.2%, and below its benchmark (Russell 3000 plus 500 basis points) by 300 basis points (page 2)
- The portfolio’s strategy diversification and non-U.S. investment exposure are within their target ranges (page 11)
- For the year ending December 31, 2018, the portfolio had a net cash flow inflow of \$802 million (page 17), including a \$600 million cash inflow as a result of a secondary sale

Staff will further address these highlights and other performance metrics during the presentation at the May 15<sup>th</sup> Board Meeting.

Attachment

Noted and Reviewed:



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Jonathan Grabel  
Chief Investment Officer





**LOS ANGELES COUNTY EMPLOYEES  
RETIREMENT ASSOCIATION**

**LACERA PRIVATE EQUITY  
PERFORMANCE REVIEW**

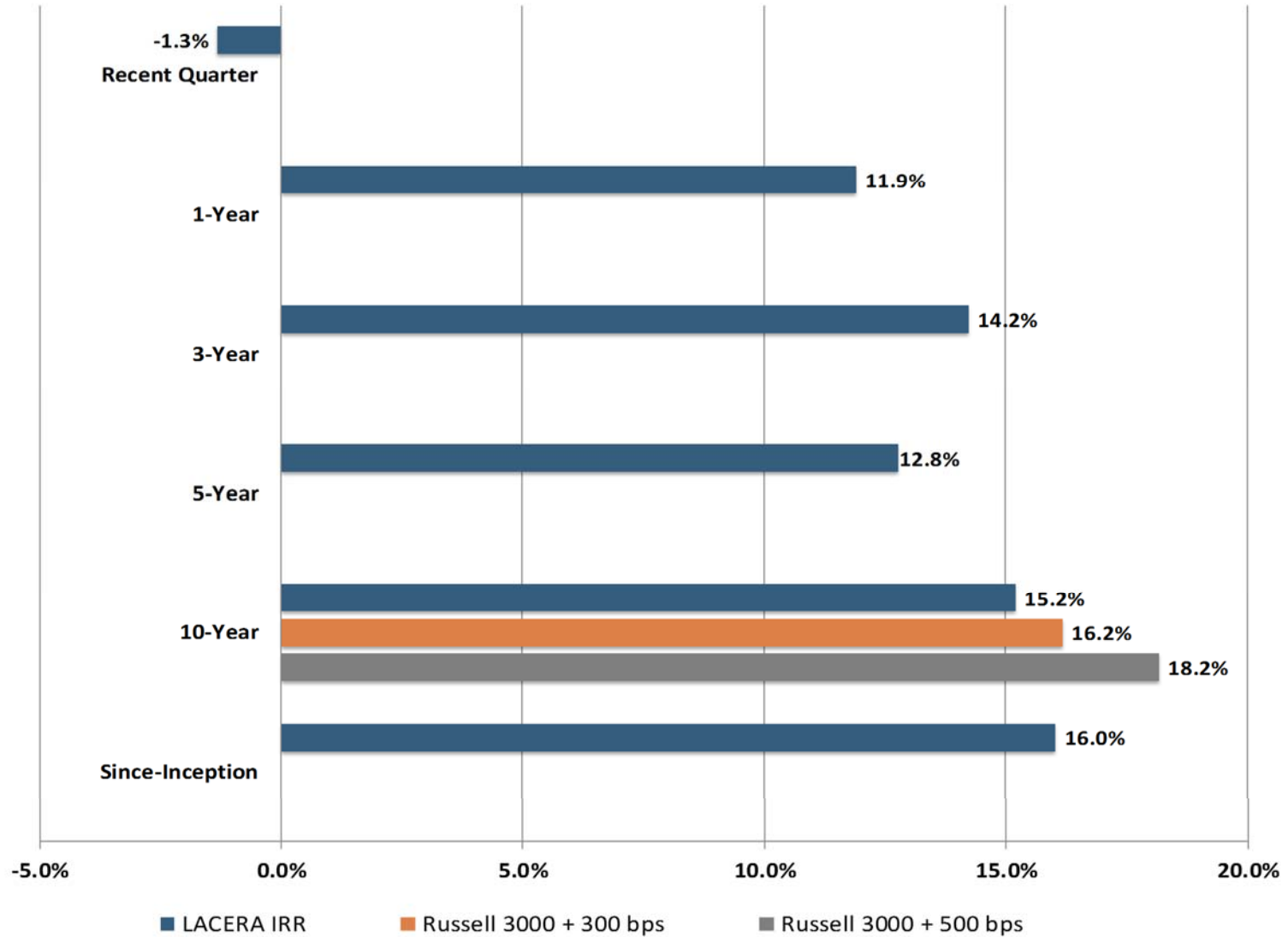


**2018 Fourth Quarter**

**May 15, 2019**

# Periodic Returns

As of December 31, 2018



Quarterly returns are not annualized.

Source: Russell Investments' Russell 3000 Index (U.S.) returns reflect the index total return which includes the impact of reinvested dividends.

# Portfolio Metrics

(\$ in Millions)

	Active	Exited	Dec 31, 2018 Total	Dec 31, 2017 Total	Period Change
<b>Exposure Summary</b>					
Number of Managers <sup>1</sup>	76	79	155	151	4
Number of Investments <sup>2</sup>	155	177	332	316	16
Commitments <sup>3</sup>	\$11,077.0	\$5,551.3	\$16,628.3	\$15,222.8	\$1,405.6
Unfunded Commitment	\$4,253.1	\$ -	\$4,253.1	\$3,973.8	\$279.3
Total Exposure <sup>4</sup>	\$9,666.7	\$ -	\$9,666.7	\$9,496.9	\$169.8
<b>Cash Flow Summary</b>					
Cumulative Contributions	\$7,521.2	\$5,511.7	\$13,032.8	\$11,915.8	\$1,117.0
Cumulative Distributions	\$6,383.6	\$9,736.7	\$16,120.3	\$14,201.4	\$1,918.9
<b>Valuation Summary</b>					
Market Value	\$5,413.6	\$ -	\$5,413.6	\$5,523.1	(\$109.5)
Total Value <sup>5</sup>	\$11,797.2	\$9,736.7	\$21,533.9	\$19,724.5	\$1,809.4
Total Gain/(Loss) <sup>6</sup>	\$4,276.1	\$4,225.0	\$8,501.1	\$7,808.7	\$692.4
<b>Performance Summary</b>					
Distributed to Paid-in <sup>7</sup>	0.85x	1.77x	1.24x	1.19x	0.05x
Total Value to Paid-in <sup>8</sup>	1.57x	1.77x	1.65x	1.66x	(0.01x)
Since-Inception Net IRR <sup>9</sup>	14.36%	16.52%	16.04%	16.09%	-0.10%

<sup>1</sup> Count of unique managers and excludes underlying manager relationships from the JP Morgan Emerging Manager and Pathway Capital portfolios.

<sup>2</sup> Excludes underlying manager relationships from the JP Morgan Emerging Manager and Pathway Capital portfolios.

<sup>3</sup> Commitments are as of since inception (October 1986), net of releases and expirations, and after foreign currency conversions as of the reported periods.

<sup>4</sup> Total Exposure represents sum of Unfunded Commitment and Market Value.

<sup>5</sup> Total Value represents the sum of Cumulative Distributions and Market Value.

<sup>6</sup> Total Gain/(Loss) represents the sum of Market Value plus Cumulative Distributions minus Cumulative Contributions.

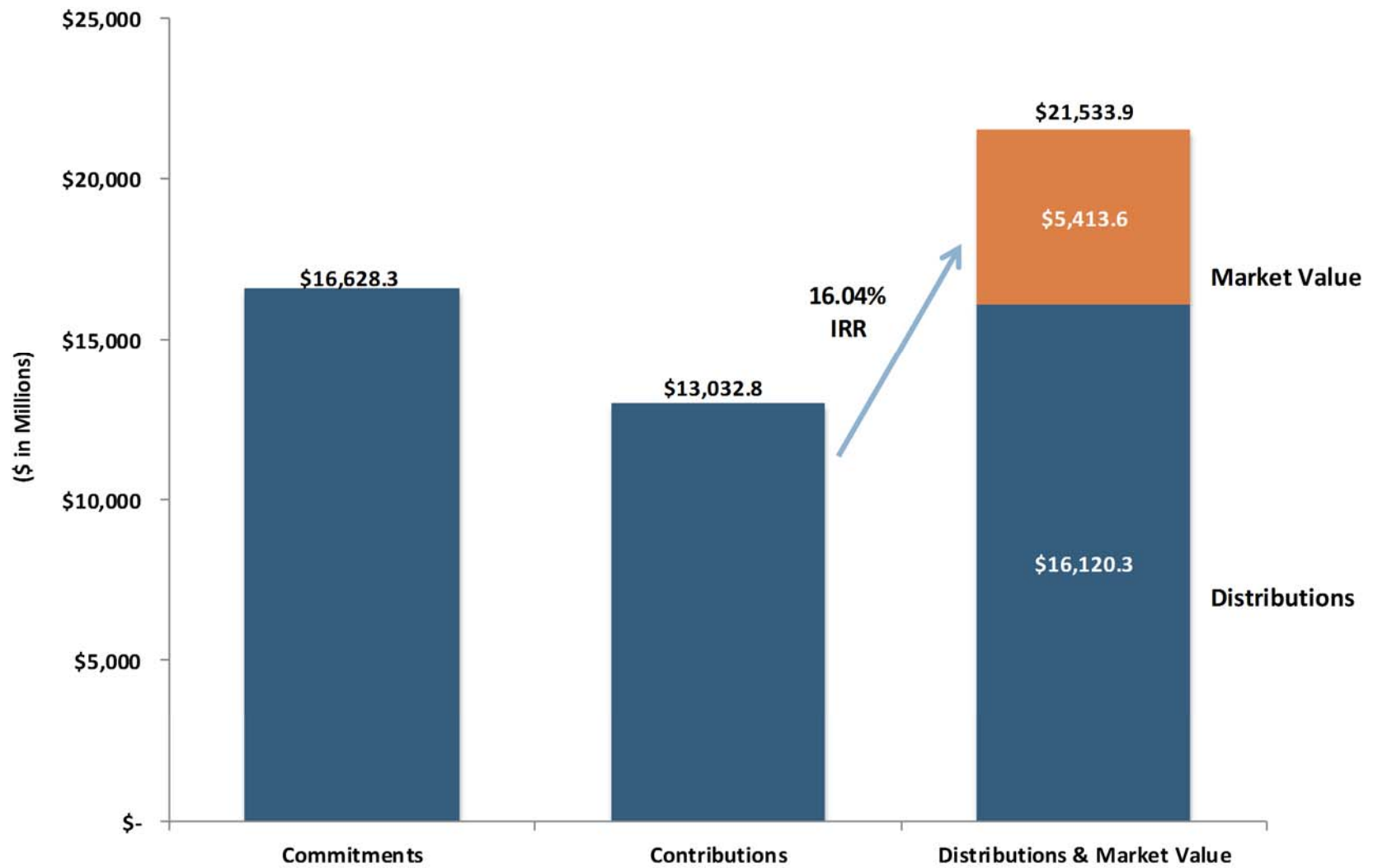
<sup>7</sup> Distributed to Paid-in (DPI) is a measurement of distributions received relative to contributed capital and calculated as Cumulative Distribution divided by Cumulative Contributions.

<sup>8</sup> Total Value to Paid-in (TVPI) is a measurement of total value created relative to capital invested and calculated as Market Value plus Cumulative Distribution divided by Cumulative Contributions.

<sup>9</sup> The Since-Inception Net IRR (Internal Rate of Return) is calculated using all the daily outflows to and inflows from the underlying fund investments and the market values as stated by the General Partners of the underlying fund investment as of the measured period ended. If the investment's terminal value is prior to the measurement date, the IRR is calculated as of the last valuation date indicated by the underlying fund manager. The IRR is net of fees, expenses, and carried interest.

# Portfolio Performance

Since Inception October 31, 1986 - December 31, 2018



# Vintage Year Performance

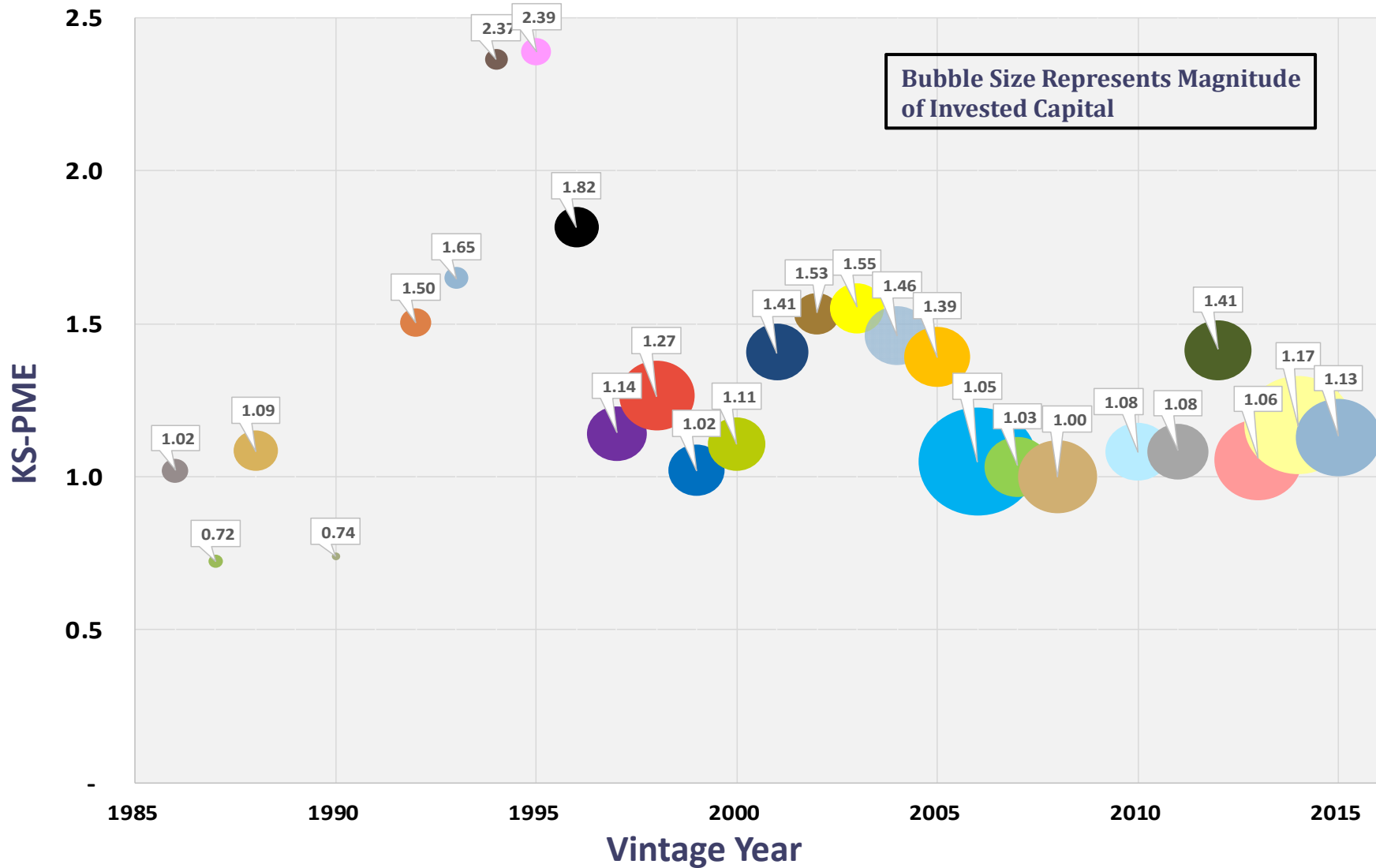
As of December 31, 2018 (\$ in Millions)

Vintage Year	Number of Investments	Commitments	Cumulative Contributions	Cumulative Distributions	Market Value	Total Value	Total Gain/(Loss)	Distributed to Paid-in	Total Value to Paid-in	Since-Inception Net IRR	IRR QUARTILE RANKING
1986	3	\$80.0	\$80.0	\$267.5	\$-	\$267.5	\$187.5	3.34x	3.34x	15.7%	1st
1987	1	25.0	25.0	40.3	-	40.3	15.3	1.61x	1.61x	7.2%	3rd
1988	2	200.0	216.6	466.9	-	466.9	250.3	2.16x	2.16x	15.5%	2nd
1989	-	-	-	-	-	-	-	-	-	0.0%	N/A
1990	1	7.5	7.5	16.7	-	16.7	9.2	2.22x	2.22x	13.0%	3rd
1991	-	-	-	-	-	-	-	-	-	0.0%	N/A
1992	10	116.0	111.0	242.5	-	242.5	131.6	2.19x	2.19x	29.0%	2nd
1993	8	68.0	64.8	239.5	-	239.5	174.7	3.70x	3.70x	39.7%	1st
1994	5	56.9	58.8	237.6	-	237.6	178.8	4.04x	4.04x	54.1%	1st
1995	7	100.5	102.3	362.6	-	362.6	260.2	3.54x	3.54x	43.1%	1st
1996	12	222.9	225.2	607.7	1.0	608.7	383.5	2.70x	2.70x	37.4%	1st
1997	11	397.5	410.4	606.4	-	606.4	196.0	1.48x	1.48x	7.7%	3rd
1998	22	644.4	655.3	943.2	2.8	946.0	290.7	1.44x	1.44x	7.3%	3rd
1999	21	360.9	369.6	435.8	.7	436.5	66.8	1.18x	1.18x	3.4%	2nd
2000	25	376.5	387.7	573.4	2.8	576.2	188.5	1.48x	1.49x	8.8%	2nd
2001	15	416.7	441.9	827.6	8.5	836.1	394.3	1.87x	1.89x	21.7%	1st
2002	8	220.4	230.3	536.6	.4	537.1	306.8	2.33x	2.33x	19.0%	2nd
2003	8	315.6	338.3	696.1	6.2	702.2	364.0	2.06x	2.08x	21.3%	2nd
2004	9	455.9	471.9	855.2	37.9	893.1	421.2	1.81x	1.89x	19.8%	1st
2005	15	534.2	505.6	1,032.4	6.9	1,039.3	533.7	2.04x	2.06x	13.3%	1st
2006	28	1,572.6	1,602.5	2,502.6	86.8	2,589.4	986.9	1.56x	1.62x	9.0%	2nd
2007	12	553.5	484.7	772.5	58.3	830.8	346.1	1.59x	1.71x	11.2%	2nd
2008	11	727.6	729.4	1,129.2	140.9	1,270.1	540.7	1.55x	1.74x	13.3%	2nd
2009	-	-	-	-	-	-	-	-	-	0.0%	N/A
2010	3	487.5	469.4	392.1	359.6	751.7	282.3	0.84x	1.60x	14.1%	2nd
2011	8	428.5	421.6	442.4	269.9	712.3	290.7	1.05x	1.69x	14.5%	2nd
2012	7	435.0	497.4	579.2	419.1	998.3	500.9	1.16x	2.01x	23.8%	1st
2013	11	1,007.0	893.4	515.3	700.0	1,215.3	321.9	0.58x	1.36x	11.2%	3rd
2014	13	1,466.5	1,304.0	507.7	1,343.5	1,851.2	547.1	0.39x	1.42x	14.6%	2nd
2015	10	1,087.0	823.6	197.9	824.9	1,022.8	199.3	0.24x	1.24x	13.7%	2nd
2016	12	1,157.3	717.5	88.5	731.8	820.4	102.9	0.12x	1.14x	12.5%	N/A
2017	8	594.0	222.3	4.6	243.2	247.8	25.5	0.02x	1.11x	11.6%	N/A
2018	12	1,273.3	165.0	.4	175.4	175.8	10.8	-	1.07x	20.1%	N/A
2019	14	1,239.5	-	-	(7.0)	(7.0)	(7.0)	N/A	N/A	N/A	N/A

Fund benchmark data provided by Burgiss Private IQ as of the reporting date and represents comparable strategies aggregated by Vintage Year. Quartile rankings are reported as not applicable (N/A) if commitment date is within 3 years of reporting date or if no commitments were made for the respective vintage year.

# KS-PME by Vintage Year / Invested Capital

As of December 31, 2018



A Kaplan & Schoar Public Market Equivalent ("KS-PME") value greater than one indicates that an investor benefited from investing in the respective private equity fund rather than the index (Russell 3000).

# Performance by Strategy / Sub-Strategy

Since Inception October 31, 1986 - December 31, 2018 (\$ in Millions)

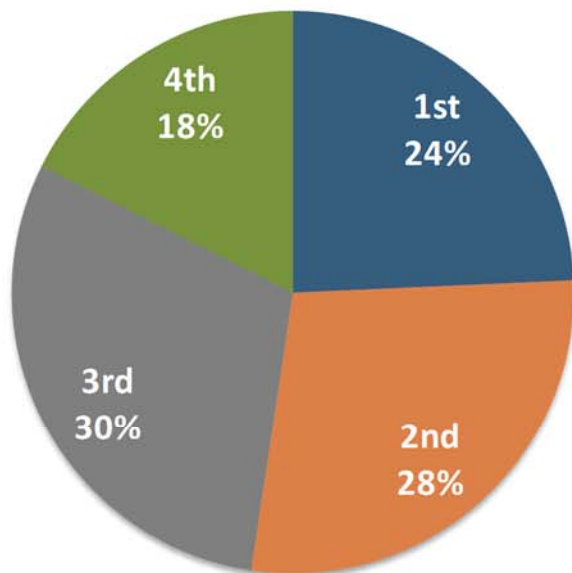
Strategy / Sub-Strategy	Number of Investments	Commitments	Cumulative Contributions	Cumulative Distributions	Market Value	Total Value	Total Gain/(Loss)	Distributed to Paid-in	Total Value to Paid-in	Since-Inception Net IRR	Since-Inception PME
<b>Buyout</b>	165	\$10,315.2	\$8,161.9	\$10,422.9	\$2,938.2	\$13,361.1	\$5,199.2	1.28x	1.64x	13.7%	1.22
Buyout - Global	50	3,883.8	3,159.0	4,322.9	1,040.3	5,363.2	2,204.2	1.37x	1.70x	16.2%	1.31
Buyout - Large	36	2,453.6	2,068.6	2,963.4	656.2	3,619.6	1,551.0	1.43x	1.75x	15.3%	1.24
Buyout - Mid	35	1,930.2	1,561.7	1,636.0	626.8	2,262.8	701.1	1.05x	1.45x	10.1%	1.11
Buyout - Small	44	2,047.5	1,372.6	1,500.7	614.9	2,115.6	743.0	1.09x	1.54x	10.8%	1.10
<b>Special Situations</b>	31	\$1,667.6	\$1,315.4	\$1,243.4	\$468.9	\$1,712.2	\$396.8	0.95x	1.30x	8.5%	1.01
Distressed	22	1,217.6	875.4	913.1	355.7	1,268.8	393.4	1.04x	1.45x	11.3%	1.11
Energy	4	360.0	355.6	210.5	113.2	323.7	(32.0)	0.59x	0.91x	-2.9%	0.69
Mezzanine	5	90.0	84.4	119.7	-	119.7	35.4	1.42x	1.42x	9.0%	1.09
<b>Venture Capital</b>	93	\$1,703.2	\$1,301.0	\$1,843.4	\$652.0	\$2,495.3	\$1,194.3	1.42x	1.92x	21.7%	1.23
Venture Capital - Balanced	35	622.7	580.4	772.7	299.7	1,072.4	492.1	1.33x	1.85x	16.3%	1.11
Venture Capital - Early Stage	46	700.6	463.4	782.7	169.5	952.2	488.8	1.69x	2.05x	73.0%	1.35
Venture Capital - Late Stage	12	380.0	257.3	287.9	182.7	470.7	213.4	1.12x	1.83x	24.7%	1.38
<b>Co-Investments</b>	8	\$683.4	\$581.9	\$645.1	\$314.6	\$959.8	\$377.8	1.11x	1.65x	18.2%	1.13
<b>Fund of Funds</b>	12	\$1,426.3	\$930.3	\$673.3	\$793.4	\$1,466.7	\$536.4	0.72x	1.58x	11.8%	1.19
<b>Growth Equity</b>	15	\$679.0	\$591.0	\$1,061.0	\$245.7	\$1,306.7	\$715.7	1.80x	2.21x	86.8%	1.61
<b>Secondaries</b>	8	\$153.7	\$151.3	\$231.2	\$8	\$232.0	\$80.7	1.53x	1.53x	17.2%	1.23

A Kaplan & Schoar Public Market Equivalent ("KS-PME") value greater than one indicates that an investor benefited from investing in the respective private equity fund rather than the index (Russell 3000).

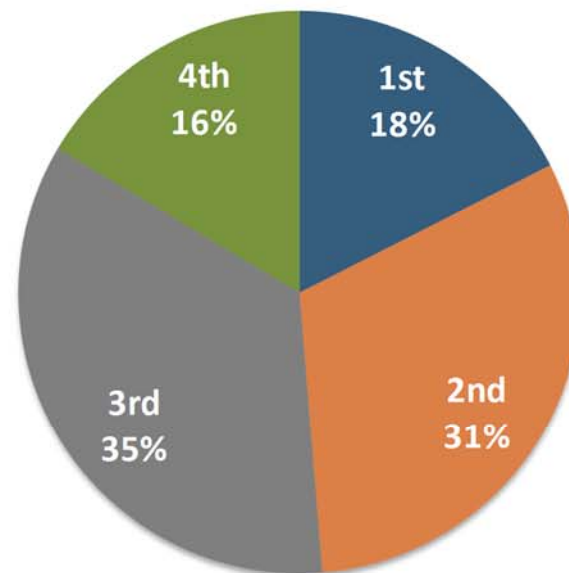
# Net IRR By Quartile

Since Inception October 31, 1986 - December 31, 2018

## Since Inception By Commitment



## Since Inception By Exposure<sup>1</sup>



Quartile ranking provided by Burgiss Private IQ as of the reporting date and represents comparable strategies aggregated by Vintage Year. Quartile rankings for commitments made within last 3 years of reporting date are excluded.

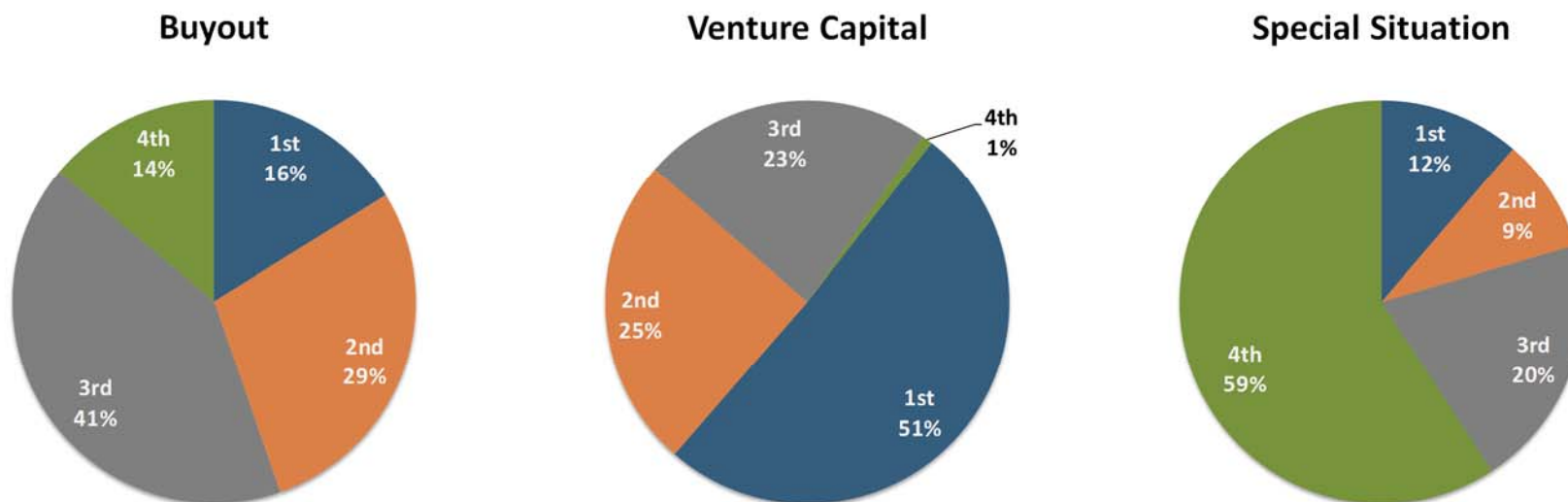
<sup>1</sup> Exposure represents sum of Unfunded Commitment and Market Value.



# Net IRR By Quartile

As of December 31, 2018

## NET IRR QUARTILE BY COMMITMENT FOR VINTAGE YEARS 2006-2015



Quartile ranking provided by Burgiss Private IQ as of the reporting date and represents comparable strategies aggregated by commitment amount. Quartile rankings for commitments made within last 3 years of reporting date are excluded.

Buyout includes co-investment, secondary, and fund-of-fund strategies.

Venture Capital includes growth equity.

# Top 40 Largest Manager Relationships by Total Exposure

As of December 31, 2018 (\$ in Millions)

Manager	# of Funds	Total Commitments	Total Exposure	% of Total PE Portfolio Exposure	Total Value to Paid-in	Since-Inception IRR	Since-Inception TVPI Attribution	Since-Inception KS-PME
Vista Equity Partners	5	\$750.0	\$847.0	8.8%	1.7x	22.5%	4.7%	1.30
J.P. Morgan	4	650.0	709.1	7.3%	2.0x	26.0%	3.3%	1.47
Gateway	2	600.0	633.8	6.6%	1.4x	13.1%	2.2%	1.10
MS GTB Capital Partners	2	650.0	443.9	4.6%	1.6x	11.6%	3.7%	1.10
Onex Partners	5	560.0	401.0	4.1%	1.7x	23.7%	2.8%	1.40
GGV Capital	8	275.0	396.8	4.1%	2.1x	23.3%	1.8%	1.54
CVC Capital Partners	8	642.2	392.3	4.1%	1.8x	21.0%	4.2%	1.39
Carlyle Group	7	557.9	389.8	4.0%	1.6x	18.8%	3.1%	1.29
Silver Lake Partners	3	345.0	374.3	3.9%	1.7x	20.4%	1.7%	1.31
Clearlake Capital	3	252.0	323.1	3.3%	1.9x	41.0%	2.6%	1.64
Juggernaut Capital Partners	3	300.0	321.9	3.3%	1.3x	10.7%	0.6%	1.07
Blackstone Management	9	539.1	321.8	3.3%	1.7x	20.9%	3.8%	1.35
Hellman & Friedman	4	375.0	301.6	3.1%	1.6x	18.9%	1.5%	1.47
Lightyear Capital	2	255.0	246.7	2.6%	1.6x	22.4%	1.4%	1.28
MBK	2	220.0	244.6	2.5%	1.4x	14.6%	0.7%	1.16
PAI	1	171.5	169.6	1.8%	0.0x	0.0%	0.0%	N/A
Glendon Capital Management	2	160.0	167.8	1.7%	1.2x	4.6%	0.1%	0.93
Institutional Venture Partners	2	150.0	163.8	1.7%	1.4x	13.8%	0.7%	1.14
Riverside Capital	2	165.0	161.5	1.7%	1.5x	13.2%	0.4%	1.12
Leonard Green & Partners, L.P.	1	150.0	155.7	1.6%	1.1x	8.0%	0.1%	1.09
Siris Capital Group	2	160.0	150.7	1.6%	1.1x	8.0%	0.1%	1.01
Centerbridge	3	185.0	122.5	1.3%	1.5x	14.1%	1.0%	1.10
Energy & Minerals Group	1	150.0	120.6	1.2%	0.9x	-4.2%	-0.2%	0.66
Australis Partners	1	125.0	118.2	1.2%	0.9x	-13.4%	-0.1%	0.94
Black Diamond	1	100.0	113.8	1.2%	1.2x	10.2%	0.2%	1.06
Oaktree Capital Management, LLC	10	399.8	110.5	1.1%	1.4x	10.8%	2.0%	1.15
Storm Ventures LLC	2	100.0	109.4	1.1%	1.3x	13.5%	0.1%	1.16
Excellere Partners	3	145.0	109.3	1.1%	1.9x	32.8%	0.8%	1.56
Summit Partners	8	295.7	103.0	1.1%	2.4x	67.3%	5.3%	1.76
Insignia Capital Partners	1	100.0	102.1	1.1%	1.1x	5.3%	0.1%	0.98
Union Square	8	76.8	100.4	1.0%	4.7x	59.7%	2.0%	3.73
AE Industrial Partners	1	100.0	99.8	1.0%	0.0x	0.0%	0.0%	N/A
Sterling Partners	1	100.0	95.3	1.0%	1.5x	14.6%	0.3%	1.20
Palladium Equity Partners	1	100.0	94.0	1.0%	1.4x	15.2%	0.4%	1.13
Gilde Partners	1	86.5	91.1	0.9%	1.1x	12.7%	0.1%	1.12
Harvest Partners	1	80.0	83.0	0.9%	1.1x	5.3%	0.0%	1.04
Technology Crossover Ventures	3	164.0	82.3	0.9%	2.2x	15.8%	2.3%	1.33
Alchemy Partners	2	127.2	81.5	0.8%	1.1x	1.2%	0.0%	0.86
Sinovation Ventures	1	75.0	74.5	0.8%	1.0x	-3.9%	0.0%	1.08
One Rock Capital Partners	1	72.5	71.2	0.7%	0.9x	-6.3%	0.0%	0.97
<b>Top 40 Managers Total</b>	<b>127</b>	<b>\$10,509.9</b>	<b>\$9,199.2</b>	<b>95.2%</b>	<b>1.6x</b>	<b>32.8%</b>	<b>53.9%</b>	<b>1.32</b>
<b>Other Managers Total</b>	<b>205</b>	<b>\$6,118.4</b>	<b>\$467.5</b>	<b>4.8%</b>	<b>1.7x</b>	<b>14.3%</b>	<b>46.1%</b>	<b>1.14</b>
<b>LACERA Total</b>	<b>332</b>	<b>\$16,628.3</b>	<b>\$9,666.7</b>	<b>100.0%</b>	<b>1.7x</b>	<b>16.0%</b>	<b>100.0%</b>	<b>1.21</b>

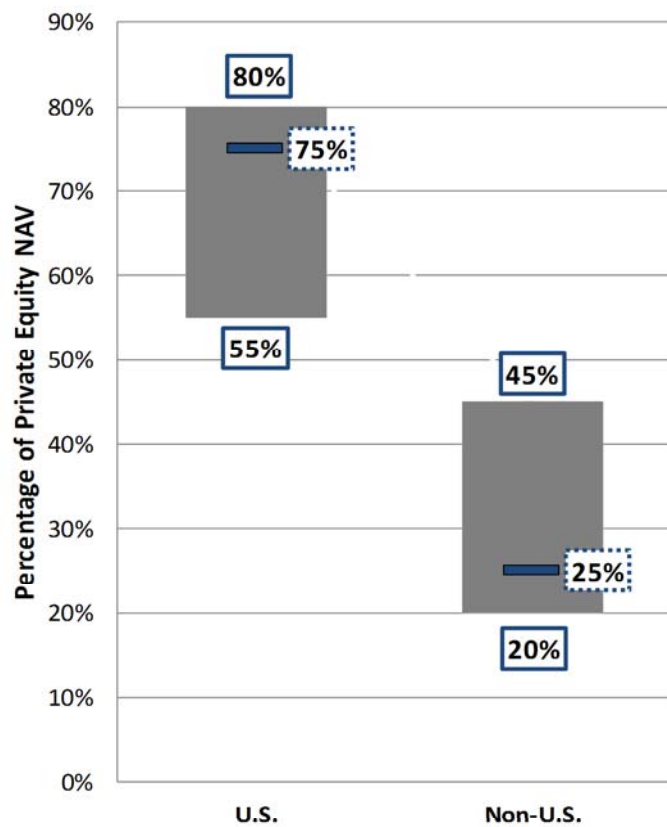
Total Exposure is equal to Net Asset Value plus Unfunded Commitments. Fund Count includes both Active and Inactive funds.

The Since Inception Net IRR is 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 IRR is calculated as of the last valuation date indicated by the fund manager. A Kaplan & Schoar Public Market Equivalent ("KS-PME") value greater than one indicates that an investor benefited from investing in the respective private equity fund rather than the index (Russell 3000).

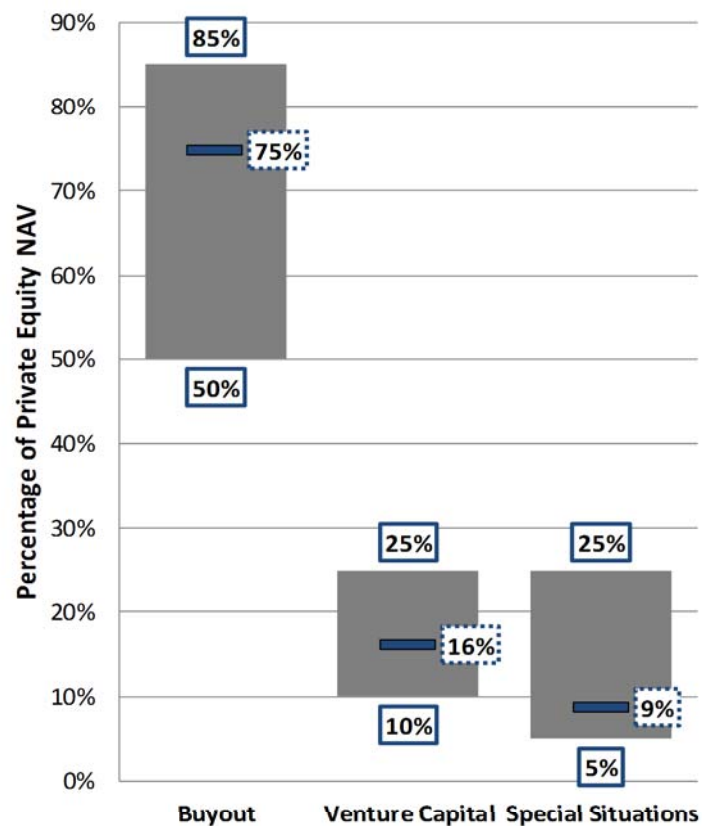
# Portfolio Company Exposure

As of December 31, 2018

### By Geography



### By Strategy



 Allocation Range  
 Actual as of December 31, 2018

Buyout includes Co-Investments, Fund of Funds, and Secondaries.

# Portfolio Company Diversification by Country

As of December 31, 2018 (\$ in Millions)

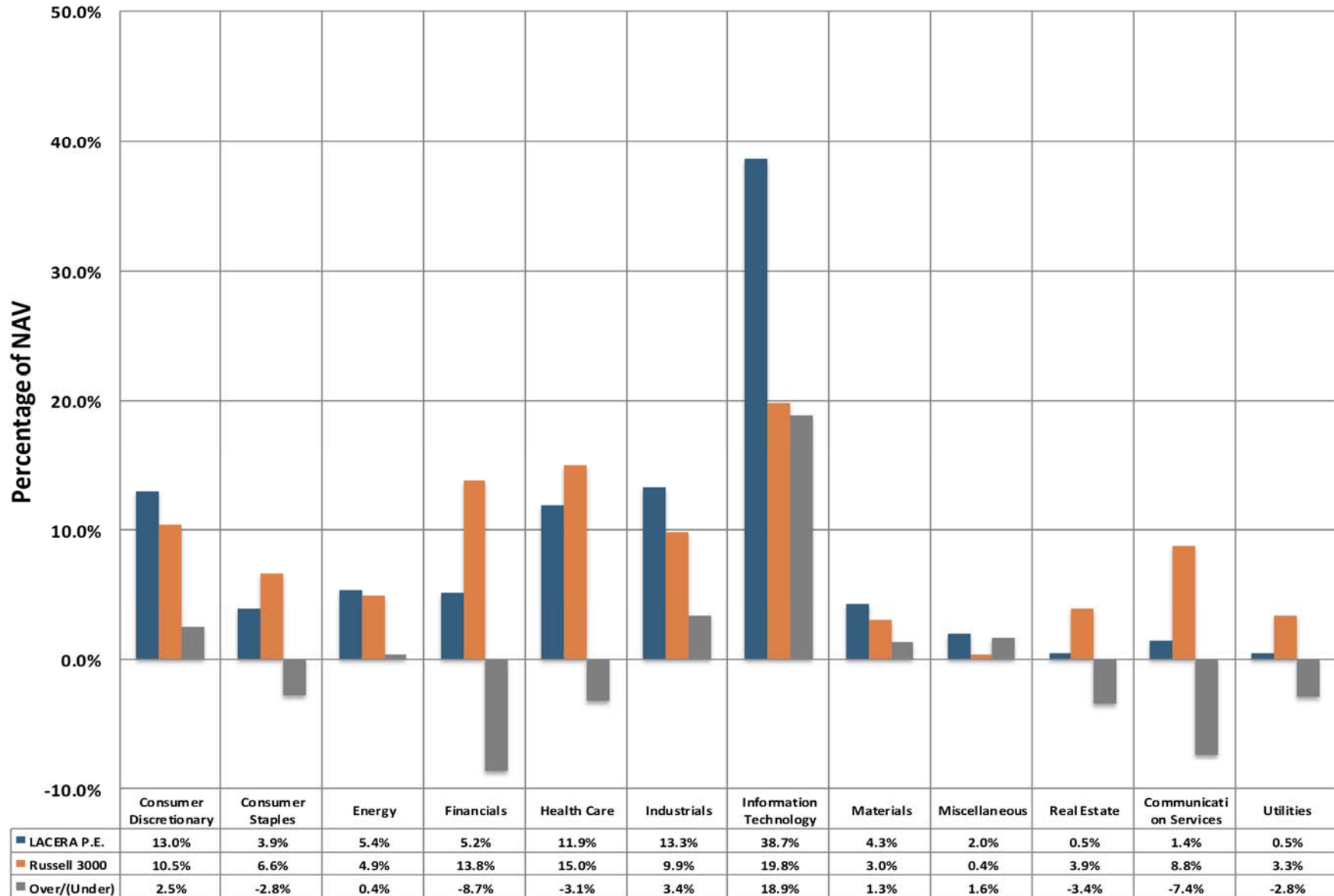
Country	Market Value	Percentage
United States of America	3,709.4	75.0%
China	262.6	5.3%
United Kingdom	235.2	4.8%
South Korea	104.7	2.1%
Canada	73.3	1.5%
Switzerland	49.7	1.0%
Germany	43.0	0.9%
Spain	39.1	0.8%
Sweden	35.6	0.7%
Japan	33.6	0.7%
Italy	32.4	0.7%
France	29.3	0.6%
Luxembourg	21.6	0.4%
Netherlands	21.3	0.4%
Mexico	20.8	0.4%
N/A	19.6	0.4%
Australia	18.5	0.4%
Jersey	18.2	0.4%
Denmark	17.8	0.4%
Panama	17.7	0.4%
Chile	16.8	0.3%
Poland	15.2	0.3%
Ireland	13.4	0.3%
Brazil	10.6	0.2%
Singapore	8.4	0.2%
Finland	8.0	0.2%
India	7.7	0.2%
Greece	7.7	0.2%
Isle of Man	6.7	0.1%

Country	Market Value	Percentage
Colombia	6.0	0.1%
Malta	6.0	0.1%
Norway	5.9	0.1%
Belgium	5.3	0.1%
Israel	4.2	0.1%
Czech Republic	4.0	0.1%
Cayman Islands	3.2	0.1%
Bermuda	2.7	0.1%
Vietnam	2.2	0.0%
New Zealand	1.6	0.0%
Marshall Islands	1.6	0.0%
Puerto Rico	1.5	0.0%
Argentina	1.5	0.0%
United Arab Emirates	.7	0.0%
Portugal	.6	0.0%
Russia	.6	0.0%
Taiwan	.5	0.0%
Indonesia	.3	0.0%
Kenya	.3	0.0%
Austria	.3	0.0%
Hungary	.3	0.0%
Estonia	.1	0.0%
Bangladesh	.1	0.0%
Senegal	.0	0.0%
Nigeria	.0	0.0%

N/A includes undisclosed geographic locations.

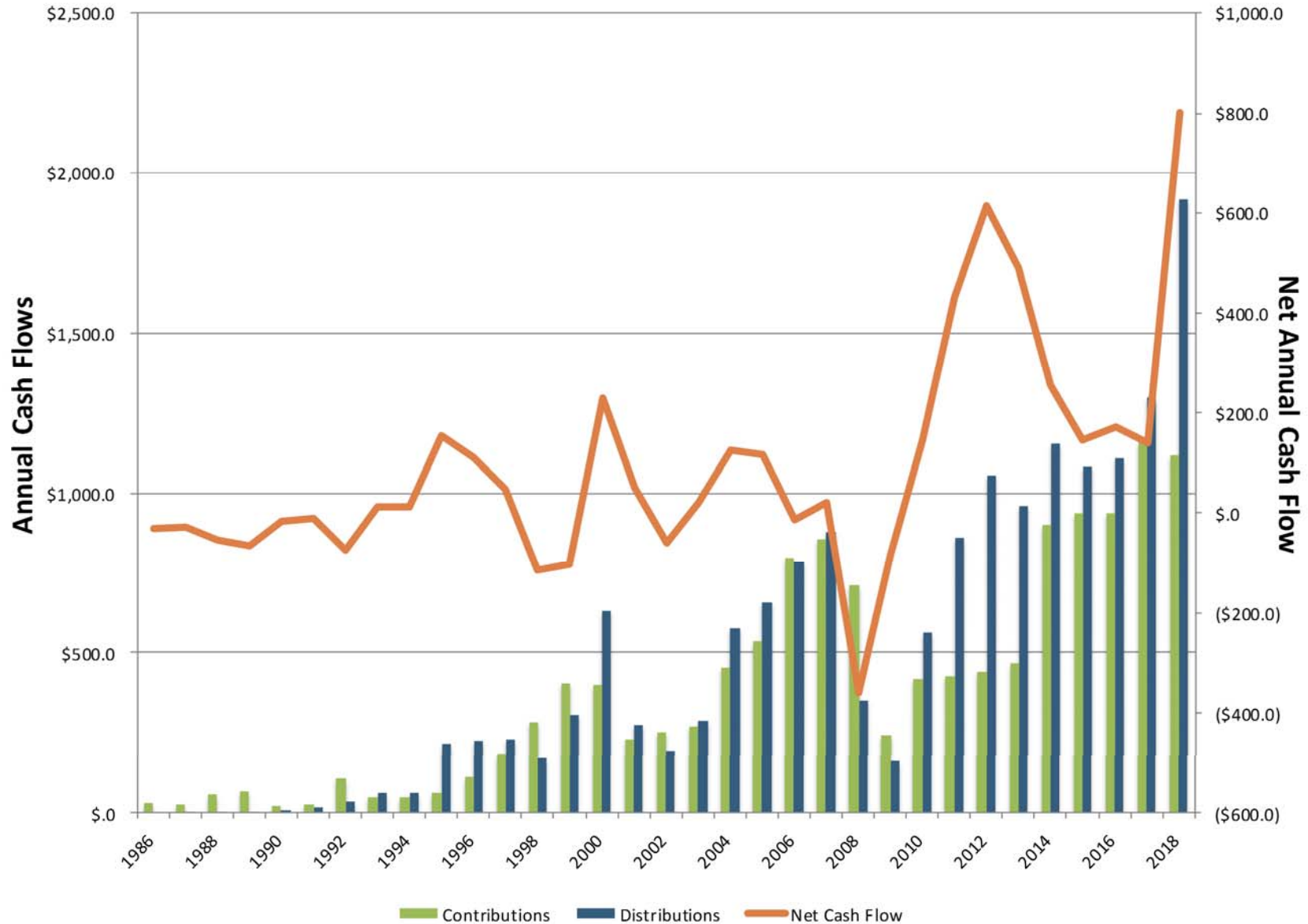
# Portfolio Company Diversification by Industry Sector

As of December 31, 2018



# Annual Cash Flow Activity

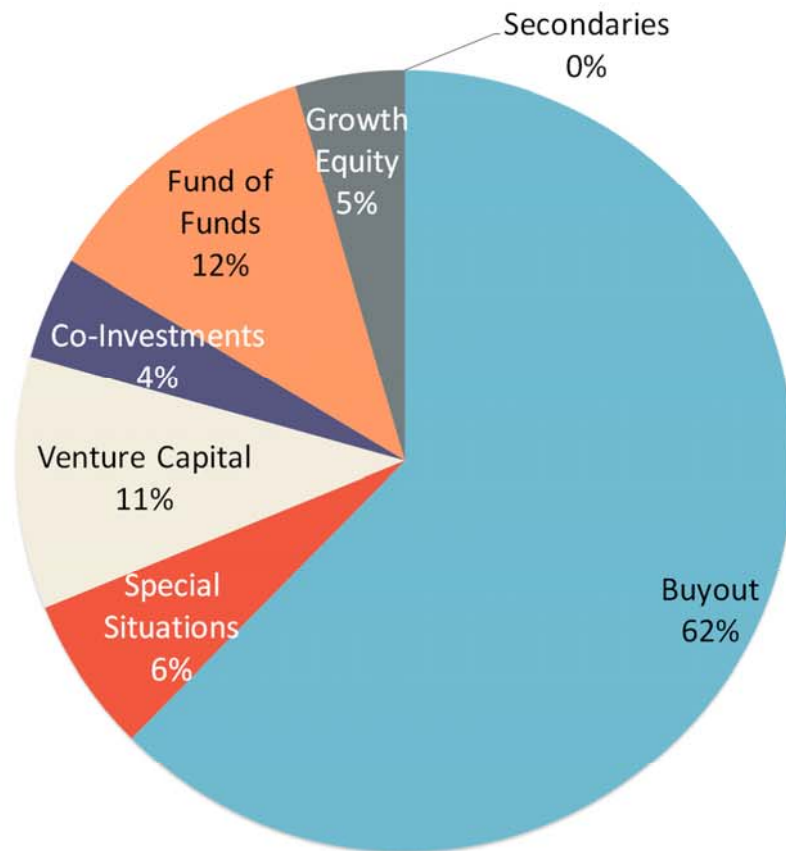
As of December 31, 2018 (\$ in Millions)



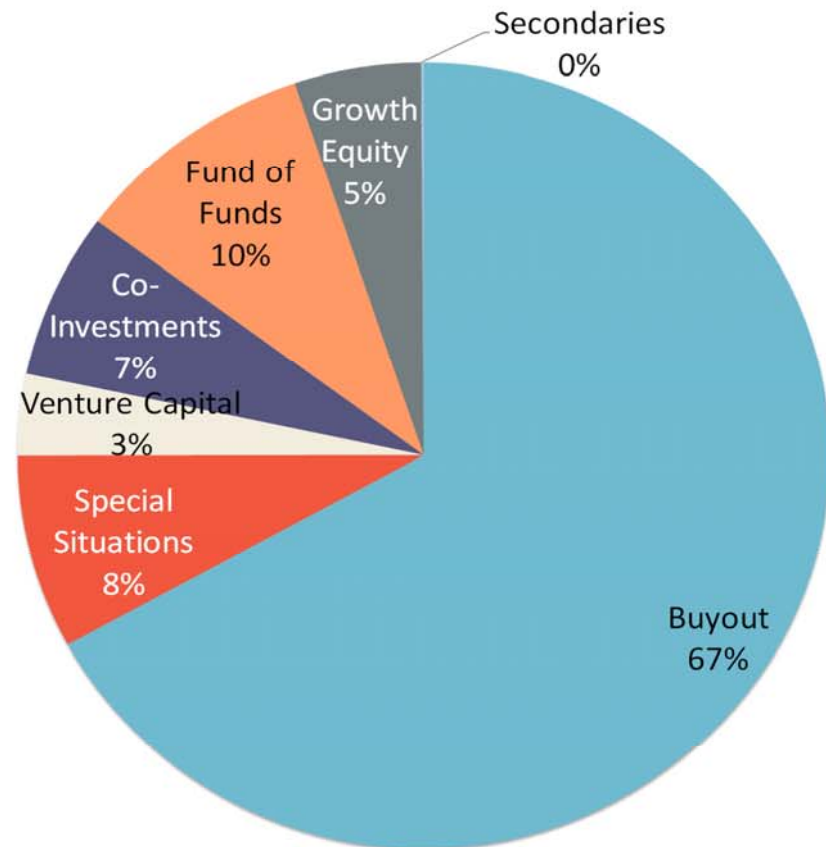
# Annual Cash Flow By Strategy in 2018

As of December 31, 2018

## Total Contributions

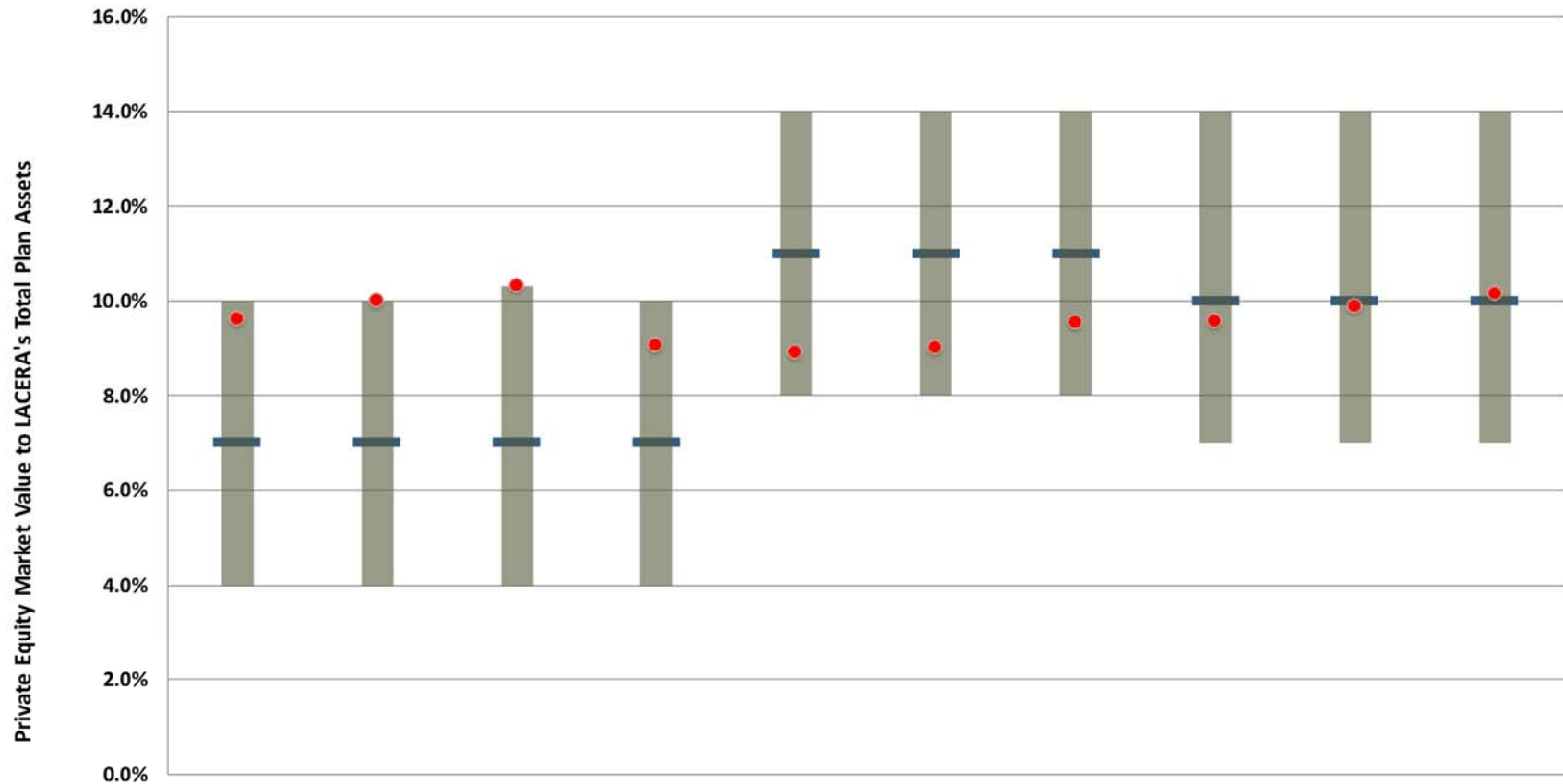


## Total Distributions



# 10 Year Allocation History

As of December 31, 2018



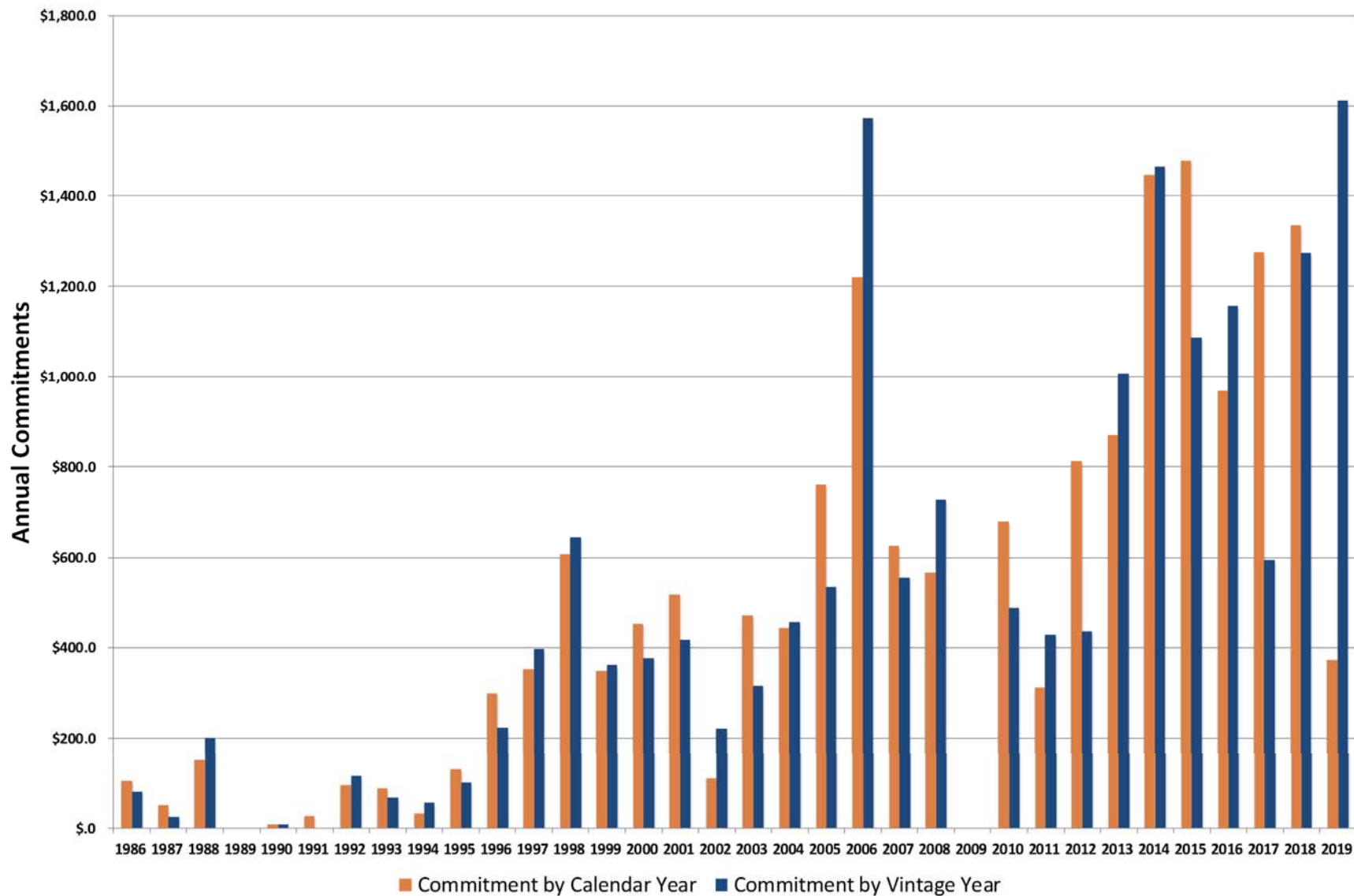
	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
— Target	7.0%	7.0%	7.0%	7.0%	11.0%	11.0%	11.0%	10.0%	10.0%	10.0%
■ Top Target Range	10.0%	10.0%	10.0%	10.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%
■ Bottom Target Range	4.0%	4.0%	4.0%	4.0%	8.0%	8.0%	8.0%	7.0%	7.0%	7.0%
● Actual Allocation	9.6%	10.0%	10.3%	9.0%	8.9%	9.0%	9.5%	9.6%	9.9%	10.2%

LACERA Total Plan Assets is the quarterly performance book market value adjusted for actual period ending private equity market values.



# Commitments by Year

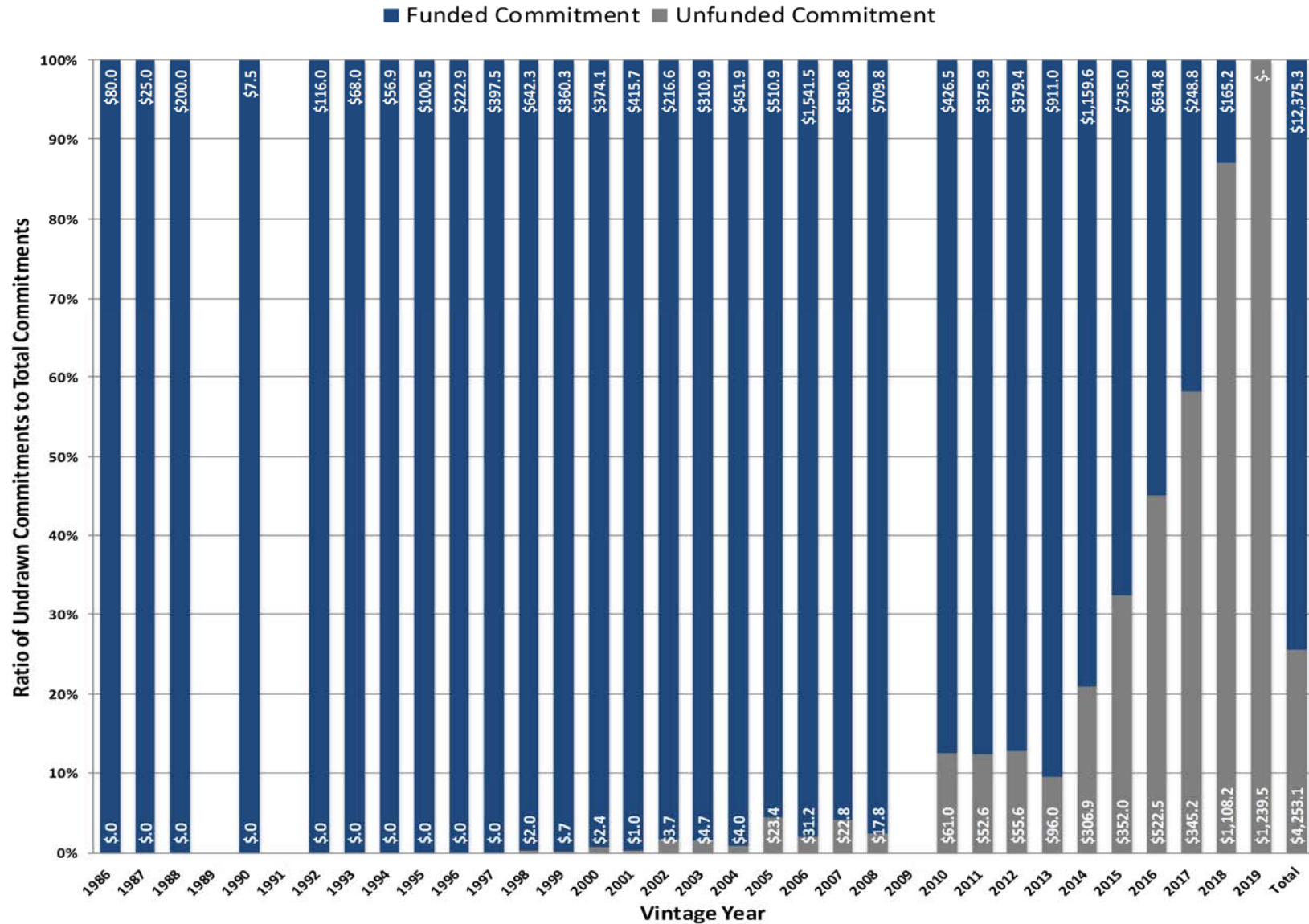
As of December 31, 2018 (\$ in Millions)



Includes commitments made after the reporting period and vintage year classification may change to a future year if no cash is drawn before the end of year.

# Percentage of Undrawn Commitments by Vintage Year

As of December 31, 2018 (\$ in Millions)



# New Investment History

New Investments through Reporting Period	Commitment Date	Vintage Year <sup>1</sup>	Strategy	Commitment (\$ in Millions)
Sinovation Fund IV, L.P.	March 2018	2018	Venture Capital - Early Stage	\$75.0
Juggernaut Capital Partners IV, L.P.	March 2018	2018	Buyout - Small	125.0
AE Industrial Partners Fund II, L.P.	August 2018	2019	Buyout - Small	100.0
Riverside Micro-Cap Fund V, L.P.	August 2018	2019	Growth Equity	65.0
Hellman & Friedman Capital Partners IX, L.P.	August 2018	2019	Growth Equity	150.0
GGV Capital VII Plus, L.P.	August 2018	2019	Venture Capital - Late Stage	20.0
GGV Capital VII, L.P.	August 2018	2019	Venture Capital - Balanced	60.0
GGV Discovery II, L.P.	August 2018	2019	Venture Capital - Late Stage	20.0
Accel-KKR Growth Capital Partners III, L.P.	September 2018	2019	Buyout - Global	50.0
J.P. Morgan Emerging Managers Program IV	October 2018	2018	Fund of Funds	300.0
Triton Fund V, L.P.	October 2018	2019	Buyout - Large	175.0
Siris Partners IV, L.P.	October 2018	2019	Buyout - Mid	100.0
Vista Equity Partners Fund VII, L.P.	December 2018	2019	Buyout - Large	175.0
USV 2019, L.P.	December 2018	2019	Venture Capital - Early Stage	9.0
USV Opportunity 2019, L.P.	December 2018	2019	Venture Capital - Early Stage	11.3
Storm Ventures Fund VI, L.P.	December 2018	2019	Venture Capital - Early Stage	50.0
<b>Total of New Investments through Reporting Period</b>				<b>\$1,485.3</b>

New Investments after Reporting Period (Subsequent)	Commitment Date	Vintage Year <sup>1</sup>	Strategy	Commitment (\$ in Millions)
LAV Bioscience V, L.P.	January 2019	2019	Venture Capital - Early Stage	48.0
BRV Aster Fund III, L.P.	February 2019	2019	Venture Capital - Early Stage	40.0
BRV Aster Opportunity Fund III, L.P.	February 2019	2019	Venture Capital - Early Stage	35.0
Vinci Capital Partners III, L.P.	April 2019	2019	Buyout - Mid	75.0
Advent International GPE IX, L.P.	April 2019	2019	Buyout - Global	100.0
TA Associates XIII, L.P.	May 2019	2019	Growth Equity	75.0
<b>Total of New Investments after Reporting Period</b>				<b>\$373.0</b>

<sup>1</sup>Vintage Year based on LACERA's first cash flow or projected first cash flow, as applicable.



# Individual Fund Performance

# Portfolio Investment Report

As of December 31, 2018  
(\$ in millions)

INVESTMENTS	COMMITMENT DATE	VINTAGE YEAR	STATUS	STRATEGY	COMMITMENT	CUMULATIVE CONTRIBUTIONS	CUMULATIVE DISTRIBUTIONS	MARKET VALUE	Exposure	TOTAL VALUE	DPI MULTIPLE	TVPI MULTIPLE	SINCE INCEPTION NET IRR	IRR QUANTILE RANKING	Private IQ Benchmarks			KS-PME	
															UPPER IRR	MEDIAN IRR	LOWER IRR		
<b>1986 Vintage</b>																			
Warburg Pincus Capital Company, L.P.	10/1986	1986	Exited	Buyout - Global	\$50.0	\$50.0	\$218.4	\$-	\$-	\$218.4	4.37x	4.37x	18.41%	2nd	19.8%	16.8%	8.0%	1.24	
Copley Partners 1, L.P.	12/1986	1986	Exited	Venture Capital - Balanced	15.0	15.0	27.3	-	-	27.3	1.82x	1.82x	9.53%	2nd	12.5%	6.6%	5.5%	0.84	
Copley Partners 2, L.P.	12/1986	1986	Exited	Venture Capital - Balanced	15.0	15.0	21.8	-	-	21.8	1.45x	1.45x	5.66%	3rd	12.5%	6.6%	5.5%	0.66	
<b>1986 Vintage Total</b>					80.0	80.0	267.5	-	-	267.5	3.34x	3.34x	15.72%					1.02	
<b>1987 Vintage</b>																			
Media Communications Partners, L.P.	11/1986	1987	Exited	Venture Capital - Balanced	25.0	25.0	40.3	-	-	40.3	1.61x	1.61x	7.25%	3rd	19.5%	13.4%	2.2%	0.72	
<b>1987 Vintage Total</b>					25.0	25.0	40.3	-	-	40.3	1.61x	1.61x	7.25%					0.72	
<b>1988 Vintage</b>																			
Prudential Venture Partners II	1/1987	1988	Exited	Venture Capital - Late Stage	50.0	50.0	116.4	-	-	116.4	2.33x	2.33x	23.45%	1st	21.2%	9.9%	4.7%	1.38	
GKH Investments, L.P.	1/1988	1988	Exited	Buyout - Small	150.0	166.6	350.5	-	-	350.5	2.10x	2.10x	13.13%	1st	12.3%	10.7%	10.1%	1.01	
<b>1988 Vintage Total</b>					200.0	216.6	466.9	-	-	466.9	2.16x	2.16x	15.54%					1.09	
<b>1990 Vintage</b>																			
Syndicated Communications II, L.P.	1/1990	1990	Exited	Venture Capital - Balanced	7.5	7.5	16.7	-	-	16.7	2.22x	2.22x	12.98%	3rd	37.6%	21.5%	12.9%	0.74	
<b>1990 Vintage Total</b>					7.5	7.5	16.7	-	-	16.7	2.22x	2.22x	12.98%					0.74	
<b>1992 Vintage</b>																			
Oak Investment Partners V, L.P.	11/1991	1992	Exited	Venture Capital - Balanced	11.3	11.3	17.1	-	-	17.1	1.52x	1.52x	10.55%	3rd	25.2%	12.6%	5.8%	0.76	
Kidd Kamm Equity Partners, L.P.	12/1991	1992	Exited	Buyout - Small	15.0	14.9	.6	-	-	.6	0.04x	0.04x	-49.85%	4th	54.3%	20.0%	10.7%	0.02	
Sevin Rosen Fund IV, L.P.	1/1992	1992	Exited	Venture Capital - Early Stage	5.0	5.0	51.2	-	-	51.2	10.18x	10.18x	87.17%	1st	25.2%	12.6%	5.8%	4.90	
Symantec Corp.	1/1992	1992	Exited	Co-Investments	5.6	5.6	2.2	-	-	2.2	0.40x	0.40x	-28.51%	4th	54.3%	20.0%	10.7%	0.32	
Summit Ventures III, L.P.	1/1992	1992	Exited	Venture Capital - Balanced	25.0	20.0	78.8	-	-	78.8	3.94x	3.94x	61.71%	1st	25.2%	12.6%	5.8%	2.13	
Kleiner Perkins Caufield & Byers VI, L.P.	5/1992	1992	Exited	Venture Capital - Balanced	5.0	5.0	16.6	-	-	16.6	3.31x	3.31x	39.44%	1st	25.2%	12.6%	5.8%	1.73	
Churchill Capital Partners II, L.P.	7/1992	1992	Exited	Mezzanine	25.0	25.0	34.3	-	-	34.3	1.37x	1.37x	10.11%	4th	39.2%	22.8%	17.6%	0.84	
Whitman Heffernan & Rhein Fund II, L.P.	7/1992	1992	Exited	Buyout - Small	14.2	14.2	8.3	-	-	8.3	0.59x	0.59x	-23.34%	4th	54.3%	20.0%	10.7%	0.40	
ASC Network Corporation	12/1992	1992	Exited	Co-Investments	5.0	5.0	8.5	-	-	8.5	1.70x	1.70x	14.24%	3rd	54.3%	20.0%	10.7%	0.92	
First Data Corporation	12/1992	1992	Exited	Co-Investments	5.0	5.0	24.9	-	-	24.9	4.98x	4.98x	91.84%	1st	54.3%	20.0%	10.7%	3.80	
<b>1992 Vintage Total</b>					116.0	111.0	242.5	-	-	242.5	2.19x	2.19x	29.03%					1.50	
<b>1993 Vintage</b>																			
Berkshire Fund III, L.P.	10/1992	1993	Exited	Buyout - Large	5.0	4.8	18.5	-	-	18.5	3.82x	3.82x	55.07%	1st	17.6%	16.1%	10.1%	2.01	
Landmark Equity Partners III, L.P.	1/1993	1993	Exited	Secondaries	10.0	10.3	26.8	-	-	26.8	2.60x	2.60x	35.08%	2nd	40.1%	21.1%	13.4%	1.46	
The 1818 Fund II, L.P.	1/1993	1993	Exited	Buyout - Small	15.0	12.9	24.0	-	-	24.0	1.86x	1.86x	12.15%	3rd	17.6%	16.1%	10.1%	0.90	
Vestar Equity Partners, L.P.	1/1993	1993	Exited	Buyout - Mid	8.0	6.8	23.9	-	-	23.9	3.51x	3.51x	56.48%	1st	17.6%	16.1%	10.1%	2.00	
Welsh, Carson, Anderson & Stowe VI, L.P.	1/1993	1993	Exited	Buyout - Large	10.0	10.0	20.7	-	-	20.7	2.07x	2.07x	13.94%	3rd	17.6%	16.1%	10.1%	0.92	
Accel IV, L.P.	5/1993	1993	Exited	Venture Capital - Late Stage	5.0	5.0	40.4	-	-	40.4	8.07x	8.07x	78.00%	1st	68.7%	39.0%	20.1%	3.77	
Phillips-Smith Specialty Retail Group III, L.P.	6/1993	1993	Exited	Venture Capital - Balanced	5.0	5.0	10.9	-	-	10.9	2.19x	2.19x	23.26%	3rd	68.7%	39.0%	20.1%	1.17	
Enterprise Partners III, L.P.	12/1993	1993	Exited	Venture Capital - Early Stage	10.0	10.0	74.2	-	-	74.2	7.42x	7.42x	63.67%	2nd	68.7%	39.0%	20.1%	3.44	
<b>1993 Vintage Total</b>					68.0	64.8	239.5	-	-	239.5	3.70x	3.70x	39.68%					1.65	
<b>1994 Vintage</b>																			
Blackstone Capital Partners II, L.P.	1/1993	1994	Exited	Buyout - Global	25.0	26.3	59.0	-	-	59.0	2.24x	2.24x	37.56%	1st	25.0%	8.8%	6.3%	1.47	
Kleiner Perkins Caufield & Byers VII, L.P.	5/1994	1994	Exited	Venture Capital - Balanced	3.8	3.8	121.6	-	-	121.6	32.42x	32.42x	124.57%	1st	73.1%	47.7%	15.7%	13.61	
Oak Investment Partners VI, L.P.	10/1994	1994	Exited	Venture Capital - Balanced	14.0	14.0	40.7	-	-	40.7	2.91x	2.91x	34.57%	3rd	73.1%	47.7%	15.7%	1.52	
Landmark Equity Partners IV, L.P.	12/1994	1994	Exited	Secondaries	10.5	11.0	16.2	-	-	16.2	1.47x	1.47x	15.81%	3rd	37.6%	19.9%	6.8%	1.00	
Best Friends Pet Care	12/1994	1994	Exited	Co-Investments	3.7	3.7	.1	-	-	.1	0.02x	0.02x	0.00%	4th	25.0%	8.8%	6.3%	0.01	
<b>1994 Vintage Total</b>					56.9	58.8	237.6	-	-	237.6	4.04x	4.04x	54.09%					2.37	
<b>1995 Vintage</b>																			
Summit Ventures IV, L.P.	1/1995	1995	Exited	Growth Equity	24.8	24.0	181.7	-	-	181.7	7.57x	7.57x	103.98%	1st	91.9%	33.9%	12.8%	4.39	
Welsh, Carson, Anderson & Stowe VII, L.P.	1/1995	1995	Exited	Buyout - Large	20.0	20.0	43.5	-	-	43.5	2.18x	2.18x	17.71%	2nd	20.8%	10.5%	2.9%	1.39	
Apollo Investment Fund III, L.P.	3/1995	1995	Exited	Buyout - Large	15.0	17.2	24.7	-	-	24.7	1.43x	1.43x	9.62%	3rd	20.8%	10.5%	2.9%	0.98	
GS Capital Partners II, L.P.	4/1995	1995	Exited	Buyout - Mid	20.0	19.7	24.3	-	-	24.3	1.23x	1.23x	4.78%	3rd	20.8%	10.5%	2.9%	0.85	
Sierra Ventures V, L.P.	4/1995	1995	Exited	Venture Capital - Early Stage	5.0	5.0	21.3	-	-	21.3	4.25x	4.25x	80.00%	2nd	91.9%	33.9%	12.8%	2.56	
Cypress Merchant Banking Partners, L.P.	11/1995	1995	Exited	Buyout - Mid	10.0	10.5	12.6	-	-	12.6	1.21x	1.21x	2.57%	4th	20.8%	10.5%	2.9%	0.79	
MetroPCS	11/1995	1995	Exited	Co-Investments	5.8	5.9	54.5	-	-	54.5	9.21x	9.21x	26.34%	1st	20.8%	10.5%	2.9%	4.23	
<b>1995 Vintage Total</b>					100.5	102.3	362.6	-	-	362.6	3.54x	3.54x	43.13%					2.39	
<b>1996 Vintage</b>																			
Questor Partners Fund, L.P.	1/1995	1996	Exited	Buyout - Small	30.0	30.3	42.9	-	-	42.9	1.41x	1.41x	15.70%	2nd	20.7%	9.1%	2.8%	1.00	
Cornerstone Equity Partners IV, L.P.	1/1996	1996	Exited	Buyout - Small	25.0	25.0	40.4	-	-	40.4	1.62x	1.62x	8.58%	3rd	20.7%	9.1%	2.8%	1.31	
CVC European Equity Partners, L.P.	2/1996	1996	Exited	Buyout - Global	25.0	24.3	61.1	-	-	61.1	2.51x	2.51x	22.96%	1st	22.7%	17.5%	8.8%	1.61	
Accel V, L.P.	3/1996	1996	Exited	Venture Capital - Early Stage	9.0	9.0	176.6	-	-	176.6	19.62x	19.62x	188.44%	1st	153.9%	64.0%	-1.7%	12.36	
Bruckmann, Rosser, Sherrill & Co., L.P.	3/1996	1996	Exited	Buyout - Small	28.0	29.3	51.7	-	-	51.7	1.77x	1.77x	10.35%	2nd	20.7%	9.1%	2.8%	1.29	
Geocapital IV, L.P.	3/1996	1996	Active	Venture Capital - Early Stage	9.0	9.0	14.6	1.0	1.0	15.5	1.62x	1.73x	14.13%	3rd	153.9%	64.0%	-1.7%	1.15	
Carlyle Partners II, L.P.	4/1996	1996	Exited	Buyout - Global	30.0	33.9	81.6	-	-	81.6	2.40x	2.40x	25.74%	1st	20.7%	9.1%	2.8%	1.70	
Sevin Rosen Fund V, L.P.	4/1996	1996	Exited	Venture Capital - Early Stage	10.0	10.0	11.1	-	-	11.1	1.10x	1.10x	9.29%	3rd	153.9%	64.0%	-1.7%	0.89	
Berkshire Fund IV, L.P.	5/1996	1996	Exited	Buyout - Large	20.0	19.2	49.9	-	-	49.9	2.60x	2.60x	33.41%	1st	20.7%	9.1%	2.8%	1.81	
Indigo N.V.	5/1996	1996	Exited	Co-Investments	8.4	7.0	9.3	-	-	9.3	1.32x	1.32x	5.11%	3rd	20.7%	9.1%	2.8%	0.74	
Worldview Technology Partners I, L.P.	9/1996	1996	Exited	Venture Capital - Balanced	8.5	8.5	32.2	-	-	32.2	3.79x	3.79x	68.50%	2nd	153.9%	64.0%	-1.7%	2.66	
Ripplewood Partners, L.P.	1/1997	1996	Exited	Buyout - Small	20.0	19.6	36.4	-	-	36.4	1.86x	1.86x	13.62%	2nd	20.7%	9.1%	2.8%	1.54	
<b>1996 Vintage Total</b>					222.9	225.2	607.7	1.0	1.0	608.7	2.70x	2.70x	37.42%					1.82	
<b>1997 Vintage</b>																			
KKR 1996 Fund, L.P.	9/1996	1997	Exited	Buyout - Global	125.0	131.8	235.1	-	-	235.1	1.78x	1.78x	13.18%	1st	7.4%	3.8%	-1.2%	1.38	
Blackstone Capital Partners III Merchant, L.P.	1/1997	1997	Exited	Buyout - Global	50.0	54.1	105.6	-	-	105.6	1.95x	1.95x	14.63%	1st	7.4%	3.8%	-1.2%	1.54	
DLJ Merchant Banking Partners II, L.P.	1/1997	1997	Exited	Buyout - Mid	25.0	28.5	36.7	-	-	36.7	1.28x	1.28x	6.01%	2nd	7.4%	3.8%	-1.2%	1.12	
RSTW Partners III, L.P.	1/1997	1997	Exited	Mezzanine	25.0	23.0	21.6	-	-	21.6	0.94x	0.94x	-1.19%	4th	13.0%	5.8%	0.2%	0.86	

# Portfolio Investment Report

As of December 31, 2018  
(\$ in millions)

INVESTMENTS	COMMITMENT DATE	VINTAGE YEAR	STATUS	STRATEGY	COMMITMENT	CUMULATIVE CONTRIBUTIONS	CUMULATIVE DISTRIBUTIONS	MARKET VALUE	Exposure	TOTAL VALUE	DPI MULTIPLE	TVPI MULTIPLE	SINCE INCEPTION NET IRR	IRR QUARTILE RANKING	Private IQ Benchmarks			KS-PME
															UPPER IRR	MEDIAN IRR	LOWER IRR	
TPG Partners II, L.P.	1/1997	1997	Exited	Buyout - Global	75.0	76.0	132.3	-	-	132.3	1.74x	1.74x	9.93%	1st	7.4%	3.8%	-1.2%	1.35
Vestar Equity Partners III, L.P.	1/1997	1997	Exited	Buyout - Mid	17.5	17.2	19.6	-	-	19.6	1.14x	1.14x	2.63%	3rd	7.4%	3.8%	-1.2%	0.94
The Beacon Group III - Focus Value Fund, L.P.	3/1997	1997	Exited	Venture Capital - Balanced	40.0	39.6	10.1	-	-	10.1	0.25x	0.25x	-18.19%	4th	127.9%	30.2%	1.0%	0.25
William Blair Mezzanine Capital Fund II, L.P.	3/1997	1997	Exited	Mezzanine	10.0	10.0	17.0	-	-	17.0	1.70x	1.70x	11.84%	2nd	13.0%	5.8%	0.2%	1.33
Cardinal Health Partners, L.P.	7/1997	1997	Exited	Venture Capital - Early Stage	10.0	10.0	18.7	-	-	18.7	1.87x	1.87x	9.70%	3rd	127.9%	30.2%	1.0%	1.57
Prospect Venture Partners I, L.P.	10/1997	1997	Exited	Venture Capital - Early Stage	10.0	10.0	7.5	-	-	7.5	0.75x	0.75x	-3.78%	4th	127.9%	30.2%	1.0%	0.58
Halpern Denny Fund II, L.P.	11/1997	1997	Exited	Buyout - Small	10.0	10.2	2.3	-	-	2.3	0.23x	0.23x	-22.36%	4th	7.4%	3.8%	-1.2%	0.20
<b>1997 Vintage Total</b>					<b>397.5</b>	<b>410.4</b>	<b>606.4</b>	<b>-</b>	<b>-</b>	<b>606.4</b>	<b>1.48x</b>	<b>1.48x</b>	<b>7.71%</b>					<b>1.14</b>
<b>1998 Vintage</b>																		
OCM Opportunities Fund II, L.P.	1/1998	1998	Exited	Distressed	25.0	25.0	37.7	-	-	37.7	1.51x	1.51x	8.45%	3rd	15.2%	8.8%	0.2%	1.32
Behrman Capital II, L.P.	5/1998	1998	Exited	Buyout - Mid	34.1	34.1	41.9	-	-	41.9	1.23x	1.23x	3.03%	3rd	15.0%	8.8%	-1.7%	1.05
Accel VI, L.P.	1/1998	1998	Active	Venture Capital - Early Stage	9.0	9.0	3.3	.4	.4	3.7	0.36x	0.41x	-7.50%	4th	21.7%	5.2%	-5.4%	0.30
Apollo Investment Fund IV, L.P.	1/1998	1998	Active	Buyout - Large	50.0	51.2	84.6	.1	.2	84.6	1.65x	1.65x	8.47%	3rd	15.0%	8.8%	-1.7%	1.46
CVC European Equity Partners II, L.P.	1/1998	1998	Exited	Buyout - Global	50.0	46.4	110.7	-	-	110.7	2.39x	2.39x	18.94%	1st	18.7%	12.8%	9.2%	1.82
Information Technology Venture II, L.P.	1/1998	1998	Exited	Venture Capital - Early Stage	15.0	15.0	11.6	-	-	11.6	0.77x	0.77x	-11.07%	4th	21.7%	5.2%	-5.4%	0.75
Thomas H. Lee Equity Fund IV, L.P.	1/1998	1998	Exited	Buyout - Global	70.0	63.1	58.7	-	-	54.8	0.87x	0.87x	-2.61%	4th	15.0%	8.8%	-1.7%	0.86
Welsh, Carson, Anderson & Stowe VIII, L.P.	1/1998	1998	Exited	Buyout - Large	25.0	25.0	32.2	-	-	32.2	1.29x	1.29x	3.12%	3rd	15.0%	8.8%	-1.7%	1.05
Summit Ventures V, L.P.	1/1998	1998	Exited	Growth Equity	37.0	35.7	49.5	-	-	49.5	1.39x	1.39x	8.12%	2nd	21.7%	5.2%	-5.4%	1.23
McCown DeLeeuw & Co. Fund IV, L.P.	2/1998	1998	Exited	Buyout - Small	25.0	21.3	15.5	-	-	15.5	0.73x	0.73x	-4.50%	4th	15.0%	8.8%	-1.7%	0.64
Aurora Equity Partners II, L.P.	3/1998	1998	Exited	Buyout - Small	30.0	33.8	47.5	-	-	47.5	1.41x	1.41x	4.69%	3rd	15.0%	8.8%	-1.7%	1.05
Levine Leichtman Capital Partners II, L.P.	3/1998	1998	Active	Buyout - Mid	30.0	50.0	57.5	.2	.2	57.6	1.15x	1.15x	4.92%	3rd	15.0%	8.8%	-1.7%	1.04
Lexington Capital Partners II, L.P.	3/1998	1998	Exited	Secondaries	50.0	49.4	65.7	-	-	65.7	1.33x	1.33x	8.17%	2nd	17.3%	7.7%	-2.7%	1.22
Sevin Rosen VI, L.P.	3/1998	1998	Exited	Venture Capital - Early Stage	5.0	5.0	9.2	-	-	9.2	1.84x	1.84x	53.46%	1st	21.7%	5.2%	-5.4%	1.64
HarbourVest International Private Equity Partners	4/1998	1998	Active	Fund of Funds	25.0	24.6	38.2	.1	.4	38.2	1.55x	1.55x	8.56%	2nd	17.1%	7.8%	-2.1%	1.25
Quad C Partners V, L.P.	4/1998	1998	Exited	Buyout - Small	25.0	25.0	36.5	-	-	36.5	1.46x	1.46x	9.11%	2nd	15.0%	8.8%	-1.7%	1.34
Sprout VIII, L.P.	5/1998	1998	Exited	Venture Capital - Balanced	20.0	20.0	18.9	-	-	18.9	0.95x	0.95x	-0.89%	3rd	21.7%	5.2%	-5.4%	0.82
Brinson International Partners Fund	7/1998	1998	Active	Fund of Funds	49.3	53.4	90.4	2.2	3.7	92.6	1.69x	1.74x	11.24%	2nd	17.1%	7.8%	-2.1%	1.31
Oak Investment Partners VIII, L.P.	7/1998	1998	Exited	Venture Capital - Balanced	18.0	10.0	18.0	-	-	18.0	1.80x	1.80x	54.28%	1st	21.7%	5.2%	-5.4%	1.60
Berkshire Fund V, L.P.	8/1998	1998	Exited	Buyout - Large	40.0	38.3	100.5	-	-	100.5	2.63x	2.63x	22.98%	1st	15.0%	8.8%	-1.7%	2.07
Worldview Technology Partners II, L.P.	9/1998	1998	Exited	Venture Capital - Balanced	5.0	5.0	8.4	-	-	8.4	1.68x	1.68x	10.06%	2nd	21.7%	5.2%	-5.4%	1.58
Alta California Partners II, L.P.	10/1998	1998	Exited	Venture Capital - Early Stage	15.0	15.0	10.6	-	-	10.6	0.71x	0.71x	-5.57%	4th	21.7%	5.2%	-5.4%	0.59
<b>1998 Vintage Total</b>					<b>644.4</b>	<b>655.3</b>	<b>943.2</b>	<b>2.8</b>	<b>4.9</b>	<b>946.0</b>	<b>1.44x</b>	<b>1.44x</b>	<b>7.27%</b>					<b>1.27</b>
<b>1999 Vintage</b>																		
Providence Equity Partners III, L.P.	12/1998	1999	Exited	Buyout - Global	21.8	25.3	38.7	-	-	38.7	1.53x	1.53x	14.47%	1st	14.2%	8.7%	-1.9%	1.41
Austin Ventures VII, L.P.	1/1999	1999	Exited	Venture Capital - Balanced	5.0	5.0	4.0	-	-	4.0	0.81x	0.81x	-2.84%	2nd	1.1%	-5.4%	-10.9%	0.59
Cypress Merchant Banking Partners II, L.P.	1/1999	1999	Exited	Buyout - Mid	40.0	41.8	40.6	-	-	40.6	0.97x	0.97x	-0.51%	3rd	14.2%	8.7%	-1.9%	0.77
Lexington Capital Partners III, L.P.	1/1999	1999	Active	Secondaries	25.0	24.7	31.0	.2	.5	31.2	1.26x	1.26x	8.64%	2nd	9.3%	-1.5%	-9.1%	1.13
Madison Dearborn Capital Partners III, L.P.	1/1999	1999	Exited	Buyout - Large	30.0	30.0	45.8	-	-	45.8	1.53x	1.53x	8.59%	3rd	14.2%	8.7%	-1.9%	1.36
OCM Opportunities Fund III, L.P.	1/1999	1999	Exited	Distressed	25.0	26.3	38.9	-	-	38.9	1.48x	1.48x	11.93%	2nd	12.8%	8.5%	-0.8%	1.71
Questor Partners Fund II, L.P.	1/1999	1999	Exited	Buyout - Small	30.0	32.9	39.1	-	-	39.1	1.19x	1.19x	3.89%	3rd	14.2%	8.7%	-1.9%	0.87
Vestar Capital Partners IV, L.P.	1/1999	1999	Exited	Buyout - Mid	25.0	24.5	43.4	-	-	43.4	1.77x	1.77x	13.45%	2nd	14.2%	8.7%	-1.9%	1.37
Apax Europe IV-A, L.P.	2/1999	1999	Exited	Buyout - Global	19.5	20.1	27.3	-	-	27.3	1.36x	1.36x	7.10%	4th	20.0%	17.8%	12.4%	1.14
Columbia Capital Equity Partners II (QP), L.P.	5/1999	1999	Exited	Venture Capital - Early Stage	12.0	12.0	9.5	-	-	9.5	0.79x	0.79x	-4.62%	2nd	1.1%	-5.4%	-10.9%	0.79
Knightsbridge Integrated Holdings IV	6/1999	1999	Exited	Fund of Funds	12.0	11.8	11.8	-	-	11.8	1.00x	1.00x	0.02%	2nd	9.3%	-1.5%	-9.1%	0.82
Invesco Partnership Fund II, L.P.	7/1999	1999	Exited	Fund of Funds	20.0	21.5	16.5	-	-	16.5	0.77x	0.77x	-4.14%	3rd	9.3%	-1.5%	-9.1%	0.67
Bruckmann, Rosser, Sherrill & Co. II, L.P.	8/1999	1999	Exited	Buyout - Small	25.0	26.7	53.8	-	-	53.8	2.02x	2.02x	12.01%	2nd	14.2%	8.7%	-1.9%	1.39
Clearstone Venture Partners II-A, L.P.	8/1999	1999	Exited	Venture Capital - Early Stage	5.0	5.0	1.2	-	-	1.2	0.24x	0.24x	-20.04%	4th	1.1%	-5.4%	-10.9%	0.26
Summit Accelerator Fund, L.P.	8/1999	1999	Active	Venture Capital - Early Stage	5.6	5.4	9.4	.2	.5	9.6	1.73x	1.76x	9.82%	1st	1.1%	-5.4%	-10.9%	1.46
Infinity Capital Venture Fund 1999, L.P.	9/1999	1999	Exited	Venture Capital - Early Stage	15.0	15.0	1.6	-	-	1.6	0.11x	0.11x	-33.68%	4th	1.1%	-5.4%	-10.9%	0.10
Oak Investment Partners IX, L.P.	9/1999	1999	Active	Venture Capital - Balanced	10.0	10.0	6.3	.2	.2	6.5	0.63x	0.65x	-6.60%	3rd	1.1%	-5.4%	-10.9%	0.57
Blackstone Mezzanine Partners, L.P.	10/1999	1999	Exited	Mezzanine	10.0	6.8	9.1	-	-	9.1	1.35x	1.35x	10.15%	2nd	12.8%	8.5%	-0.8%	1.12
Sevin Rosen Fund VII, L.P.	10/1999	1999	Exited	Venture Capital - Early Stage	10.0	9.9	2.1	-	-	2.1	0.21x	0.21x	-10.26%	3rd	1.1%	-5.4%	-10.9%	0.11
Worldview Technology Partners III, L.P.	12/1999	1999	Exited	Venture Capital - Balanced	10.0	10.0	1.5	-	-	1.5	0.15x	0.15x	-22.59%	4th	1.1%	-5.4%	-10.9%	0.14
Morgan Stanley Dean Witter Venture Partners IV, L.P.	12/1999	1999	Active	Venture Capital - Late Stage	5.0	5.1	4.1	.1	.1	4.2	0.80x	0.82x	-2.50%	2nd	1.1%	-5.4%	-10.9%	0.72
<b>1999 Vintage Total</b>					<b>360.9</b>	<b>369.6</b>	<b>435.8</b>	<b>7</b>	<b>1.3</b>	<b>436.5</b>	<b>1.18x</b>	<b>1.18x</b>	<b>3.39%</b>					<b>1.02</b>
<b>2000 Vintage</b>																		
Providence Growth Investors, L.P.	12/1999	2000	Exited	Buyout - Global	10.0	10.2	12.4	-	-	12.4	1.21x	1.21x	4.85%	4th	21.8%	13.1%	7.4%	1.06
Blackstone Communications Partners I, L.P.	1/2000	2000	Active	Buyout - Mid	25.0	27.7	33.7	.2	.5	33.9	1.22x	1.23x	6.55%	4th	21.8%	13.1%	7.4%	0.98
Madison Dearborn Capital Partners IV, L.P.	1/2000	2000	Active	Buyout - Large	25.0	24.3	46.1	-	-	47.0	1.90x	1.94x	13.93%	2nd	21.8%	13.1%	7.4%	1.32
Providence Equity Partners IV, L.P.	1/2000	2000	Exited	Buyout - Global	35.0	43.9	89.5	-	-	89.5	2.04x	2.04x	23.83%	1st	21.8%	13.1%	7.4%	1.40
TPG Partners III, L.P.	1/2000	2000	Exited	Buyout - Global	25.8	27.5	68.5	-	-	68.5	2.49x	2.49x	24.49%	1st	21.8%	13.1%	7.4%	2.00
Weston Presidio Capital IV, L.P.	1/2000	2000	Active	Buyout - Small	9.7	9.7	11.3	.1	.1	11.4	1.17x	1.18x	2.96%	2nd	3.7%	-3.3%	-7.3%	0.89
TH Lee Putnam Parallel Ventures, L.P.	2/2000	2000	Exited	Venture Capital - Balanced	5.0	5.1	5.8	-	-	5.8	1.15x	1.15x	3.01%	2nd	3.7%	-3.3%	-7.3%	0.97
Carlyle Partners III, L.P.	2/2000	2000	Exited	Buyout - Global	22.5	26.9	58.8	-	-	58.8	2.19x	2.19x	22.93%	1st	21.8%	13.1%	7.4%	1.54
Syndicated Communications Venture Partners IV, L.P.	3/2000	2000	Exited	Venture Capital - Balanced	7.5	7.4	5.2	-	-	5.2	0.70x	0.70x	-5.29%	3rd	3.7%	-3.3%	-7.3%	0.69
Phoenix Equity Partners III, L.P.	3/2000	2000	Exited	Buyout - Small	5.2	4.0	5.4	-	-	5.4	1.35x	1.35x	5.99%	4th	27.9%	22.1%	12.4%	1.35
Behrman Capital III, L.P.	4/2000	2000	Exited	Buyout - Mid	35.0	35.0	62.1	-	-	62.1	1.77x	1.77x	11.79%	3rd	21.8%	13.1%	7.4%	1.27
CHP II, L.P.	4/2000	2000	Active	Venture Capital - Early Stage	10.0	10.0	15.3	.1	.1	15.3	1.53x	1.53x	12.65%	1st	3.7%	-3.3%	-7.3%	1.23
Kline Hawkes Pacific, L.P.	4/2000	2000	Exited	Buyout - Small	5.0	5.0	3.4	-	-	3.4	0.67x	0.67x	-4.81%	4th	21.8%	13.1%	7.4%	0.50
Accel VIII, L.P.	5/2000	2000	Active	Venture Capital - Early Stage	7.3	5.9	8.4	.1	1.5	8.5	1.43x	1.45x	4.69%	1st	3.7%	-3.3%	-7.3%	1.00
Sierra Ventures VIII-A, L.P.	6/2000	2000	Active	Venture Capital - Early Stage	15.0	15.0	11.1	.6	.6	11.7	0.74x	0.78x	-3.86%	3rd	3.7%	-3.3%	-7.3%	0.59
Sevin Rosen Fund VIII, L.P.	7/2000	2000	Active	Venture Capital - Early Stage	13.7	13.5	15.1	.5	.5	15.6	1.12x	1.16x						

# Portfolio Investment Report

As of December 31, 2018  
(\$ in millions)

INVESTMENTS	COMMITMENT DATE	VINTAGE YEAR	STATUS	STRATEGY	COMMITMENT	CUMULATIVE CONTRIBUTIONS	CUMULATIVE DISTRIBUTIONS	MARKET VALUE	Exposure	TOTAL VALUE	DPI MULTIPLE	TVPI MULTIPLE	SINCE INCEPTION NET IRR	IRR QUARTILE RANKING	Private IQ Benchmarks			KS-PME
															UPPER IRR	MEDIAN IRR	LOWER IRR	
Knightsbridge Integrated Holdings V, L.P.	9/2000	2000	Exited	Fund of Funds	20.0	19.7	21.4	-	-	21.4	1.08x	1.08x	1.07%	3rd	11.0%	2.8%	-5.1%	0.68
Lightspeed Venture Partners VI, L.P.	9/2000	2000	Active	Venture Capital - Early Stage	8.0	7.3	7.7	-	.1	7.8	1.05x	1.06x	1.15%	2nd	3.7%	-3.3%	-7.3%	0.78
Draper Fisher Jurvetson Fund VII, L.P.	10/2000	2000	Exited	Venture Capital - Early Stage	10.0	10.0	7.2	-	-	7.2	0.72x	0.72x	-3.14%	2nd	3.7%	-3.3%	-7.3%	0.36
Worldview Technology Partners IV, L.P.	12/2000	2000	Exited	Venture Capital - Balanced	12.1	11.3	5.7	-	-	5.7	0.50x	0.50x	-9.24%	4th	3.7%	-3.3%	-7.3%	0.41
Forward Ventures IV, L.P.	12/2000	2000	Exited	Venture Capital - Balanced	10.0	10.1	6.4	-	-	6.4	0.63x	0.63x	-4.67%	3rd	3.7%	-3.3%	-7.3%	0.36
Kohlberg Investors IV, L.P.	12/2000	2000	Exited	Buyout - Mid	25.0	21.7	29.2	-	-	29.2	1.35x	1.35x	9.42%	3rd	21.8%	13.1%	7.4%	1.02
<b>2000 Vintage Total</b>					<b>376.5</b>	<b>387.7</b>	<b>573.4</b>	<b>2.8</b>	<b>5.2</b>	<b>576.2</b>	<b>1.48x</b>	<b>1.49x</b>	<b>8.75%</b>					<b>1.11</b>
<b>2001 Vintage</b>																		
Thomas H. Lee Equity Fund V, L.P.	1/2001	2001	Exited	Buyout - Global	45.0	47.1	79.0	-	-	79.0	1.68x	1.68x	13.70%	3rd	30.1%	20.5%	8.6%	1.24
Menlo Ventures IX, L.P.	7/2001	2001	Exited	Venture Capital - Early Stage	10.0	10.0	9.8	-	-	9.8	0.98x	0.98x	-0.33%	3rd	7.0%	1.7%	-4.9%	0.71
Apollo Investment Fund V, L.P.	10/2001	2001	Exited	Buyout - Large	30.0	45.6	92.5	-	-	92.5	2.03x	2.03x	37.62%	1st	30.1%	20.5%	8.6%	1.50
Austin Ventures VIII, L.P.	1/2001	2001	Exited	Venture Capital - Balanced	11.1	11.6	18.9	-	-	18.9	1.64x	1.64x	6.92%	2nd	7.0%	1.7%	-4.9%	1.00
Oak Investment Partners X, L.P.	1/2001	2001	Active	Venture Capital - Balanced	20.0	20.0	21.2	3.4	3.4	24.6	1.06x	1.23x	3.19%	2nd	7.0%	1.7%	-4.9%	0.82
Summit Ventures VI-A, L.P.	1/2001	2001	Active	Growth Equity	50.0	53.1	109.6	1.7	1.7	111.4	2.06x	2.10x	15.36%	1st	7.0%	1.7%	-4.9%	1.48
Apax Europe V-A, L.P.	2/2001	2001	Exited	Buyout - Global	58.0	59.0	125.4	-	-	125.4	2.12x	2.12x	36.09%	1st	35.9%	31.5%	23.2%	1.67
Phoenix Equity Partners IV, L.P.	4/2001	2001	Exited	Buyout - Small	17.5	23.0	49.8	-	-	49.8	2.16x	2.16x	31.41%	3rd	35.9%	31.5%	23.2%	1.58
Prospect Venture Partners II, L.P.	5/2001	2001	Exited	Venture Capital - Early Stage	20.0	18.5	23.9	-	-	23.9	1.29x	1.29x	5.22%	2nd	7.0%	1.7%	-4.9%	1.02
CVC European Equity Partners III, L.P.	6/2001	2001	Active	Buyout - Global	30.0	29.6	83.3	2.1	2.5	85.3	2.82x	2.89x	41.04%	1st	35.9%	31.5%	23.2%	1.84
T3 Partners II, L.P.	7/2001	2001	Exited	Venture Capital - Balanced	18.7	18.4	56.4	-	-	56.4	3.07x	3.07x	93.85%	1st	7.0%	1.7%	-4.9%	2.36
Accel VI-S, L.P.	7/2001	2001	Active	Venture Capital - Early Stage	1.5	1.2	4.5	1.0	1.3	5.5	3.89x	4.73x	14.85%	1st	7.0%	1.7%	-4.9%	2.36
Oxford Bioscience Partners IV, L.P.	9/2001	2001	Exited	Venture Capital - Early Stage	20.0	20.0	12.3	-	-	12.3	0.62x	0.62x	-9.74%	4th	7.0%	1.7%	-4.9%	0.43
OCM Opportunities Fund IV, L.P.	10/2001	2001	Exited	Distressed	35.0	35.0	57.8	-	-	57.8	1.65x	1.65x	28.03%	1st	25.5%	18.0%	8.3%	1.39
Lexington Capital Partners V, L.P.	11/2001	2001	Active	Secondaries	50.0	49.8	83.2	.4	.6	83.6	1.67x	1.68x	18.21%	1st	17.6%	6.9%	-0.4%	1.31
<b>2001 Vintage Total</b>					<b>416.7</b>	<b>441.9</b>	<b>827.6</b>	<b>8.5</b>	<b>9.5</b>	<b>836.1</b>	<b>1.87x</b>	<b>1.89x</b>	<b>21.66%</b>					<b>1.41</b>
<b>2002 Vintage</b>																		
KKR Millennium Fund, L.P.	7/2002	2002	Exited	Buyout - Global	50.0	67.8	122.8	-	-	122.8	1.81x	1.81x	16.36%	3rd	25.3%	17.3%	8.7%	1.26
Berkshire Fund VI, L.P.	10/2002	2002	Exited	Buyout - Large	60.0	59.7	176.3	-	-	176.3	2.95x	2.95x	25.06%	2nd	25.3%	17.3%	8.7%	1.95
Lindsay Goldberg & Bessemer, L.P.	2/2002	2002	Exited	Buyout - Mid	30.0	29.2	70.2	-	-	70.2	2.41x	2.41x	33.25%	1st	25.3%	17.3%	8.7%	1.70
Solera Partners, L.P.	3/2002	2002	Active	Buyout - Small	10.0	5.1	14.4	.2	3.9	14.6	2.82x	2.85x	9.47%	3rd	25.3%	17.3%	8.7%	1.19
Carlyle Management Group Partners, L.P.	3/2002	2002	Exited	Buyout - Global	5.4	5.4	5.8	-	-	5.8	1.08x	1.08x	6.01%	4th	25.3%	17.3%	8.7%	0.88
Morgan Stanley Venture Partners 2002 Fund, L.P.	6/2002	2002	Active	Venture Capital - Late Stage	5.0	5.6	8.5	.3	.3	8.8	1.52x	1.57x	9.37%	1st	8.0%	1.8%	-3.8%	1.29
Mediphase Venture Partners II, L.P.	7/2002	2002	Exited	Venture Capital - Early Stage	10.0	9.7	17.7	-	-	17.7	1.82x	1.82x	7.56%	2nd	8.0%	1.8%	-3.8%	0.90
The Resolute Fund, L.P.	9/2002	2002	Exited	Buyout - Large	50.0	47.8	120.8	-	-	120.8	2.53x	2.53x	16.96%	3rd	25.3%	17.3%	8.7%	1.72
<b>2002 Vintage Total</b>					<b>220.4</b>	<b>230.3</b>	<b>536.6</b>	<b>.4</b>	<b>4.2</b>	<b>537.1</b>	<b>2.33x</b>	<b>2.33x</b>	<b>18.97%</b>					<b>1.53</b>
<b>2003 Vintage</b>																		
Blackstone Capital Partners IV, L.P.	11/2003	2003	Active	Buyout - Global	75.0	89.3	207.9	3.9	8.3	211.7	2.33x	2.37x	37.54%	1st	25.1%	14.2%	9.2%	1.78
GTCR Fund VIII, L.P.	1/2003	2003	Exited	Buyout - Mid	75.0	69.4	120.6	-	-	120.6	1.74x	1.74x	22.29%	2nd	25.1%	14.2%	9.2%	1.41
Nordic Capital V, L.P.	3/2003	2003	Exited	Buyout - Large	46.0	51.6	144.1	-	-	144.1	2.79x	2.79x	20.62%	3rd	34.2%	21.1%	11.3%	1.84
Falcon Mezzanine Partners, L.P.	5/2003	2003	Exited	Mezzanine	20.0	19.6	37.7	-	-	37.7	1.93x	1.93x	26.03%	1st	22.5%	13.9%	8.4%	1.44
Olympus Growth Fund IV, L.P.	5/2003	2003	Exited	Buyout - Mid	18.0	16.4	27.0	-	-	27.0	1.65x	1.65x	8.43%	4th	25.1%	14.2%	9.2%	1.12
Reliant Equity Partners, L.P.	7/2003	2003	Exited	Buyout - Small	10.0	9.1	.1	-	-	.1	0.01x	0.01x	-48.09%	4th	25.1%	14.2%	9.2%	0.08
TPG Partners IV, L.P.	10/2003	2003	Active	Buyout - Global	69.8	81.3	156.3	2.3	2.6	158.6	1.92x	1.95x	15.33%	2nd	25.1%	14.2%	9.2%	1.42
Weston Presidio Capital IV - Secondary	10/2003	2003	Active	Secondaries	1.8	1.8	2.3	.0	.0	2.3	1.27x	1.28x	5.22%	4th	25.1%	14.2%	9.2%	0.98
<b>2003 Vintage Total</b>					<b>315.6</b>	<b>338.3</b>	<b>696.1</b>	<b>6.2</b>	<b>10.9</b>	<b>702.2</b>	<b>2.06x</b>	<b>2.08x</b>	<b>21.27%</b>					<b>1.55</b>
<b>2004 Vintage</b>																		
Permira Europe III, L.P.	7/2004	2004	Active	Buyout - Global	95.2	106.8	174.3	.4	.4	174.7	1.63x	1.64x	25.84%	2nd	28.8%	15.8%	6.0%	1.42
TCV V, L.P.	12/2004	2004	Active	Growth Equity	39.0	38.7	57.5	15.3	15.6	72.8	1.49x	1.88x	10.86%	1st	6.6%	-1.0%	-7.6%	1.23
Kelso Investment Associates VII, L.P.	12/2004	2004	Exited	Buyout - Mid	46.0	49.5	78.2	-	-	78.2	1.58x	1.58x	11.35%	3rd	17.4%	11.8%	7.2%	1.22
First Reserve Fund X, L.P.	12/2004	2004	Active	Energy	50.0	50.0	91.2	.2	.2	91.4	1.82x	1.83x	31.05%	1st	14.0%	9.6%	4.0%	1.56
Onex Partners, L.P.	2/2004	2004	Active	Buyout - Large	75.0	71.4	204.7	14.4	18.1	219.1	2.87x	3.07x	38.29%	1st	23.8%	13.0%	7.0%	2.32
Hellman & Friedman Capital Partners V, L.P.	6/2004	2004	Exited	Buyout - Global	40.0	38.2	102.0	-	-	102.0	2.67x	2.67x	27.86%	1st	17.4%	11.8%	7.2%	2.06
Oak Investment Partners XI, L.P.	7/2004	2004	Active	Venture Capital - Balanced	32.1	32.0	24.2	7.4	7.4	31.6	0.76x	0.99x	-0.18%	2nd	6.6%	-1.0%	-7.6%	0.59
Exponent Private Equity Partners, L.P.	8/2004	2004	Exited	Buyout - Mid	46.3	52.9	69.9	-	-	69.9	1.32x	1.32x	7.20%	3rd	28.8%	15.8%	6.0%	0.97
OCM Opportunities Fund V, L.P.	8/2004	2004	Active	Distressed	32.4	32.4	53.1	.3	.3	53.3	1.64x	1.65x	14.16%	1st	14.0%	9.6%	4.0%	1.21
<b>2004 Vintage Total</b>					<b>455.9</b>	<b>471.9</b>	<b>855.2</b>	<b>37.9</b>	<b>41.9</b>	<b>893.1</b>	<b>1.81x</b>	<b>1.89x</b>	<b>19.83%</b>					<b>1.46</b>
<b>2005 Vintage</b>																		
Providence Equity Partners V, L.P.	9/2004	2005	Exited	Buyout - Global	73.0	69.5	85.4	-	-	85.4	1.23x	1.23x	3.08%	4th	13.8%	8.5%	3.5%	0.95
CHS Private Equity V, L.P.	11/2004	2005	Active	Buyout - Mid	60.0	53.5	98.7	-	8.4	98.8	1.84x	1.85x	9.82%	2nd	13.8%	8.5%	3.5%	1.14
Carlyle Partners IV, L.P.	12/2004	2005	Active	Buyout - Global	75.0	77.6	151.5	1.6	7.6	153.1	1.95x	1.97x	12.98%	2nd	13.8%	8.5%	3.5%	1.49
Southwest Fund V, L.P.	12/2004	2005	Active	Buyout - Small	8.8	8.6	17.9	.8	1.0	18.6	2.08x	2.17x	15.55%	1st	13.8%	8.5%	3.5%	1.38
Union Square Ventures 2004, L.P.	2/2005	2005	Active	Venture Capital - Early Stage	10.0	8.9	121.2	2.0	3.1	123.2	13.62x	13.85x	68.01%	1st	9.0%	3.4%	-2.2%	9.06
Weston Presidio V, L.P.	2/2005	2005	Exited	Buyout - Small	35.0	34.7	79.2	-	-	79.2	2.28x	2.28x	15.29%	1st	13.8%	8.5%	3.5%	1.49
Canaan VII, L.P.	4/2005	2005	Active	Venture Capital - Early Stage	9.5	9.5	20.1	2.4	2.4	22.5	2.12x	2.37x	14.57%	1st	9.0%	3.4%	-2.2%	1.38
Insight Venture Partners V Coinvestment Fund, L.P.	4/2005	2005	Exited	Growth Equity	8.2	8.3	28.1	-	-	28.1	3.37x	3.37x	26.87%	1st	9.0%	3.4%	-2.	

# Portfolio Investment Report

As of December 31, 2018  
(\$ in millions)

INVESTMENTS	COMMITMENT DATE	VINTAGE YEAR	STATUS	STRATEGY	COMMITMENT	CUMULATIVE CONTRIBUTIONS	CUMULATIVE DISTRIBUTIONS	MARKET VALUE	Exposure	TOTAL VALUE	DPI MULTIPLE	TVPI MULTIPLE	SINCE INCEPTION NET IRR	IRR QUARTILE RANKING	Private IQ Benchmarks			
															UPPER IRR	MEDIAN IRR	LOWER IRR	KS-PME
<b>2006 Vintage</b>																		
Spectrum Equity Investors V, L.P.	2/2005	2006	Active	Venture Capital - Late Stage	35.0	32.8	75.2	3.6	5.8	78.8	2.29x	2.40x	17.90%	1st	9.9%	4.4%	-4.7%	1.77
Montagu III, L.P.	6/2005	2006	Exited	Buyout - Large	76.4	74.3	97.9	-	-	97.9	1.32x	1.32x	7.34%	2nd	9.1%	6.4%	-0.6%	1.06
Candover 2005 Fund, L.P.	8/2005	2006	Exited	Buyout - Large	78.2	93.8	51.2	-	-	51.2	0.55x	0.55x	-11.19%	4th	9.1%	6.4%	-0.6%	0.53
Austin Ventures IX, L.P.	4/2005	2006	Exited	Venture Capital - Balanced	7.6	7.7	10.5	-	-	10.5	1.36x	1.36x	5.12%	2nd	9.9%	4.4%	-4.7%	0.75
Summit Partners Private Equity Fund VII-A, L.P.	5/2005	2006	Active	Growth Equity	69.9	73.3	115.8	22.9	22.9	138.7	1.58x	1.89x	11.13%	1st	9.9%	4.4%	-4.7%	1.09
Summit Partners Venture Capital Fund II-A, L.P.	5/2005	2006	Active	Venture Capital - Balanced	8.4	10.1	19.7	1.3	1.3	21.0	1.96x	2.09x	19.61%	1st	9.9%	4.4%	-4.7%	1.40
Blackstone Capital Partners V, L.P.	10/2005	2006	Active	Buyout - Global	74.1	73.9	116.1	7.1	10.7	123.2	1.57x	1.67x	7.59%	3rd	13.7%	8.6%	3.5%	0.97
TCV VI, L.P.	11/2005	2006	Active	Growth Equity	50.0	51.7	73.0	10.7	10.9	83.7	1.41x	1.62x	13.22%	1st	9.9%	4.4%	-4.7%	1.29
Quad-C Partners VII, L.P.	12/2005	2006	Exited	Buyout - Small	43.7	44.9	73.0	-	-	73.0	1.63x	1.63x	10.88%	2nd	13.7%	8.6%	3.5%	1.04
Wayzata Opportunities Fund, LLC	1/2006	2006	Exited	Distressed	40.0	37.4	62.8	-	-	62.8	1.68x	1.68x	8.40%	2nd	13.3%	8.0%	2.9%	1.17
Madison Dearborn Capital Partners V-A, L.P.	2/2006	2006	Active	Buyout - Large	75.0	72.5	114.6	1.3	13.6	115.9	1.58x	1.60x	7.15%	3rd	13.7%	8.6%	3.5%	1.04
M/C Venture Partners VI, L.P.	3/2006	2006	Exited	Venture Capital - Balanced	19.0	18.8	39.8	-	-	39.8	2.11x	2.11x	13.31%	1st	9.9%	4.4%	-4.7%	1.32
Nordic Capital Fund VI, L.P.	3/2006	2006	Exited	Buyout - Large	59.0	62.7	96.4	-	-	96.4	1.54x	1.54x	6.86%	2nd	9.1%	6.4%	-0.6%	1.11
TA X, L.P.	3/2006	2006	Active	Buyout - Large	7.9	7.6	10.0	1.0	3	10.0	1.31x	1.32x	5.17%	3rd	13.7%	8.6%	3.5%	0.93
TPG Partners V, L.P.	4/2006	2006	Active	Buyout - Global	75.0	65.4	87.8	-	-	87.8	1.34x	1.34x	4.05%	3rd	13.7%	8.6%	3.5%	0.93
Onex Partners II, L.P.	4/2006	2006	Active	Buyout - Large	60.0	53.6	96.9	4.5	11.2	101.4	1.81x	1.89x	13.20%	1st	12.2%	7.8%	1.8%	1.43
Oak Investment Partners XII, L.P.	5/2006	2006	Active	Venture Capital - Balanced	40.0	39.9	30.4	9.1	9.1	39.5	0.76x	0.99x	-0.19%	3rd	9.9%	4.4%	-4.7%	0.59
Intersouth Partners VII, L.P.	5/2006	2006	Exited	Venture Capital - Early Stage	6.7	6.7	3.5	-	-	3.5	0.52x	0.52x	-9.95%	4th	9.9%	4.4%	-4.7%	0.25
RLH Investors II, L.P.	5/2006	2006	Exited	Buyout - Small	10.0	11.5	24.9	-	-	24.9	2.17x	2.17x	21.73%	1st	13.7%	8.6%	3.5%	1.49
GTCR Fund IX(A), L.P.	6/2006	2006	Exited	Buyout - Mid	60.0	57.1	103.0	-	-	103.0	1.80x	1.80x	13.75%	1st	13.7%	8.6%	3.5%	1.07
GTB Capital Partners, L.P.	6/2006	2006	Exited	Co-Investments	250.0	265.0	503.0	-	-	503.0	1.90x	1.90x	12.00%	2nd	12.8%	6.1%	0.3%	1.12
Permira Europe IV, L.P.	7/2006	2006	Exited	Buyout - Global	66.7	75.4	114.5	-	-	114.5	1.52x	1.52x	8.42%	2nd	9.1%	6.4%	-0.6%	0.96
Berkshire Fund VII, L.P.	7/2006	2006	Exited	Buyout - Large	60.0	61.5	123.2	-	-	123.2	2.00x	2.00x	16.76%	1st	13.7%	8.6%	3.5%	1.24
Thomas H. Lee Equity Fund VI, L.P.	7/2006	2006	Exited	Buyout - Global	60.0	59.9	99.6	-	-	99.6	1.66x	1.66x	8.08%	3rd	13.7%	8.6%	3.5%	0.94
First Reserve Fund XI, L.P.	7/2006	2006	Exited	Energy	60.0	60.0	39.6	-	-	39.6	0.66x	0.66x	-8.70%	4th	13.3%	8.0%	2.9%	0.57
KKR 2006 Fund, L.P.	7/2006	2006	Exited	Buyout - Global	60.0	64.5	100.6	-	-	100.6	1.56x	1.56x	7.71%	3rd	13.7%	8.6%	3.5%	1.08
Centerbridge Capital Partners, L.P.	8/2006	2006	Active	Distressed	60.0	58.7	124.2	10.2	14.2	134.4	2.11x	2.29x	19.54%	1st	13.3%	8.0%	2.9%	1.29
Hellman & Friedman Capital Partners VI, L.P.	10/2006	2006	Active	Buyout - Global	60.0	61.6	95.5	16.0	17.7	111.5	1.55x	1.81x	11.82%	2nd	13.7%	8.6%	3.5%	1.22
<b>2006 Vintage Total</b>					<b>1,572.6</b>	<b>1,602.5</b>	<b>2,502.6</b>	<b>86.8</b>	<b>117.9</b>	<b>2,589.4</b>	<b>1.56x</b>	<b>1.62x</b>	<b>9.00%</b>					<b>1.05</b>
<b>2007 Vintage</b>																		
Bertram Growth Capital I, L.P.	8/2006	2007	Active	Buyout - Small	10.0	9.4	13.6	1.4	2.1	15.0	1.45x	1.59x	9.95%	3rd	17.2%	11.8%	6.5%	1.02
Providence Equity Partners VI, L.P.	12/2006	2007	Exited	Buyout - Global	80.0	78.0	107.8	-	-	107.8	1.38x	1.38x	5.44%	4th	17.2%	11.8%	6.5%	0.85
CVX European Equity Partners Tandem Fund, L.P.	1/2007	2007	Active	Buyout - Global	30.4	28.7	38.2	3	2.5	38.5	1.33x	1.34x	6.55%	3rd	10.7%	6.7%	-2.3%	0.94
The Resolute Fund II, L.P.	1/2007	2007	Exited	Buyout - Large	60.0	61.7	85.4	-	-	85.4	1.39x	1.39x	7.47%	3rd	17.2%	11.8%	6.5%	0.86
Silver Lake Partners III, L.P.	1/2007	2007	Active	Buyout - Global	60.0	57.0	86.0	42.0	48.3	128.0	1.51x	2.24x	18.94%	1st	17.2%	11.8%	6.5%	1.31
Quad-C Partners VII Co-Investment Fund, L.P.	2/2007	2007	Exited	Buyout - Small	13.6	13.6	19.3	-	-	19.3	1.42x	1.42x	8.18%	3rd	17.2%	11.8%	6.5%	0.94
Excellere Capital Fund, L.P.	2/2007	2007	Exited	Buyout - Small	25.0	21.4	45.3	-	-	45.3	2.11x	2.11x	32.71%	1st	17.2%	11.8%	6.5%	1.68
OCM Opportunities Fund VII, L.P.	3/2007	2007	Active	Distressed	30.0	30.0	40.2	1.5	1.5	41.6	1.34x	1.39x	7.44%	3rd	15.1%	10.2%	4.6%	1.22
Carlyle Partners V, L.P.	5/2007	2007	Active	Buyout - Global	75.0	68.1	115.3	12.6	26.2	127.9	1.69x	1.88x	13.71%	2nd	17.2%	11.8%	6.5%	1.10
Kelso Investment Associates VIII, L.P.	6/2007	2007	Exited	Buyout - Mid	75.0	74.2	87.9	-	-	87.9	1.18x	1.18x	3.99%	4th	17.2%	11.8%	6.5%	0.76
JMI Equity Fund VI, L.P.	7/2007	2007	Active	Growth Equity	19.5	19.5	33.0	6	6	33.6	1.69x	1.72x	11.20%	2nd	16.1%	9.8%	1.5%	0.99
Wayzata Opportunities Fund II, L.P.	11/2007	2007	Exited	Distressed	75.0	23.2	100.5	-	-	100.5	4.34x	4.34x	16.49%	1st	15.1%	10.2%	4.6%	1.19
<b>2007 Vintage Total</b>					<b>553.5</b>	<b>484.7</b>	<b>772.5</b>	<b>58.3</b>	<b>81.1</b>	<b>830.8</b>	<b>1.59x</b>	<b>1.71x</b>	<b>11.20%</b>					<b>1.03</b>
<b>2008 Vintage</b>																		
OCM Opportunities Fund VII b, L.P.	3/2007	2008	Active	Distressed	45.0	40.5	68.9	1.3	5.8	70.1	1.70x	1.73x	16.56%	2nd	17.5%	11.8%	6.8%	1.11
TCV VIII, L.P.	10/2007	2008	Active	Growth Equity	75.0	73.8	148.7	54.6	55.8	203.3	2.01x	2.75x	23.06%	1st	21.3%	8.2%	0.9%	1.43
Exponent Private Equity Partners II, L.P.	12/2007	2008	Exited	Buyout - Mid	42.4	41.4	61.9	-	-	61.9	1.50x	1.50x	8.87%	2nd	15.7%	7.9%	4.4%	0.98
Nordic Capital VII Beta, L.P.	1/2008	2008	Exited	Buyout - Large	67.6	66.7	89.4	-	-	89.4	1.34x	1.34x	4.81%	3rd	15.7%	7.9%	4.4%	0.72
Union Square Ventures 2008, L.P.	3/2008	2008	Active	Venture Capital - Early Stage	10.0	9.5	23.5	10.5	11.0	34.0	2.47x	3.58x	20.99%	2nd	21.3%	8.2%	0.9%	1.60
Vista Equity Partners Fund III, L.P.	4/2008	2008	Active	Buyout - Large	50.0	51.4	120.5	12.5	16.3	133.0	2.35x	2.59x	28.26%	1st	20.7%	12.4%	8.0%	1.64
CVX European Equity Partners V (A), L.P.	5/2008	2008	Active	Buyout - Global	87.6	94.6	150.9	29.0	30.1	179.9	1.59x	1.90x	16.20%	1st	15.7%	7.9%	4.4%	1.13
TPG Partners VI, L.P.	5/2008	2008	Exited	Buyout - Global	100.0	99.6	144.2	-	-	144.2	1.45x	1.45x	9.09%	3rd	20.7%	12.4%	8.0%	0.88
Onex Partners III, L.P.	6/2008	2008	Active	Buyout - Large	75.0	81.8	102.4	33.0	39.7	135.3	1.25x	1.66x	12.55%	2nd	18.3%	9.9%	4.5%	0.95
Madison Dearborn Capital Partners VI, L.P.	9/2008	2008	Exited	Buyout - Large	75.0	68.2	149.5	-	-	149.5	2.19x	2.19x	24.29%	1st	20.7%	12.4%	8.0%	1.25
First Reserve Fund XII, L.P.	10/2008	2008	Exited	Energy	100.0	101.8	69.2	-	-	69.2	0.68x	0.68x	-7.86%	4th	17.5%	11.8%	6.8%	0.42
<b>2008 Vintage Total</b>					<b>727.6</b>	<b>729.4</b>	<b>1,129.2</b>	<b>140.9</b>	<b>158.7</b>	<b>1,270.1</b>	<b>1.55x</b>	<b>1.74x</b>	<b>13.32%</b>					<b>1.00</b>
<b>2010 Vintage</b>																		
J.P. Morgan Emerging Managers Program	1/2010	2010	Active	Fund of Funds	150.0	158.6	165.0	127.8	141.9	292.8	1.04x	1.85x	19.48%	1st	18.7%	13.0%	7.9%	1.24
Gateway Private Equity Fund, L.P.	5/2010	2010	Active	Fund of Funds	300.0	272.3	175.1	229.5	276.5	404.6	0.64x	1.49x	11.80%	3rd	18.7%	13.0%	7.9%	1.04
Oaktree Opportunities Fund VIII, L.P.	7/2010	2010	Active	Distressed	37.5	38.5	51.9	2.3	2.3	54.2	1.35x	1.41x	8.62%	3rd	16.8%	12.7%	8.2%	0.79
<b>2010 Vintage Total</b>					<b>487.5</b>	<b>469.4</b>	<b>392.1</b>	<b>359.6</b>	<b>420.6</b>	<b>751.7</b>	<b>0.84x</b>	<b>1.60x</b>	<b>14.11%</b>					<b>1.08</b>
<b>2011 Vintage</b>																		
JMI Equity Fund VII, L.P.	7/2010	2011	Active	Growth Equity	30.0	29.3	30.9	25.8	26.4	56.6	1.05x	1.93x	15.68%	3rd	25.9%	16.3%	4.2%	1.14
Oaktree Opportunities Fund VIII b, L.P.	7/2010	2011	Active	Distressed	37.5	37.8	28.4	21.4	21.4	49.8	0.75x	1.32x	5.92%	4th	22.2%	16.7%	11.5%	0.72
Blackstone Capital Partners VI, L.P.	8/2010	2011	Active	Buyout - Global	75.0	78.6	54.4	68.3	79									



# Portfolio Investment Report

As of December 31, 2018  
(\$ in millions)

INVESTMENTS	COMMITMENT DATE	VINTAGE YEAR	STATUS	STRATEGY	COMMITMENT	CUMULATIVE CONTRIBUTIONS	CUMULATIVE DISTRIBUTIONS	MARKET VALUE	Exposure	TOTAL VALUE	DPI MULTIPLE	TVPI MULTIPLE	SINCE INCEPTION NET IRR	IRR QUARTILE RANKING	Private IQ Benchmarks			KS-PME
															UPPER IRR	MEDIAN IRR	LOWER IRR	
<b>2012 Vintage</b>																		
Summit Partners Growth Equity Fund VIII-A, L.P.	8/2011	2012	Active	Growth Equity	75.0	95.3	119.5	59.1	76.6	178.7	1.25x	1.88x	25.99%	1st	22.3%	16.4%	9.9%	1.39
Juggernaut Capital Partners II, L.P.	2/2012	2012	Active	Buyout - Small	75.0	75.6	28.2	88.7	88.1	116.9	0.37x	1.55x	12.01%	3rd	26.5%	15.7%	9.8%	1.11
Northgate Venture Partners VI, L.P.	3/2012	2012	Exited	Fund of Funds	50.0	45.5	62.2	-	-	62.2	1.37x	1.37x	9.25%	3rd	21.0%	14.5%	8.3%	0.94
GGV Capital IV, L.P.	5/2012	2012	Active	Venture Capital - Balanced	50.0	49.7	27.0	90.3	91.0	117.2	0.54x	2.36x	18.48%	2nd	21.7%	15.9%	9.4%	1.40
Clearlake Capital Partners III, L.P.	8/2012	2012	Active	Buyout - Mid	75.0	120.9	191.8	100.7	121.3	292.5	1.59x	2.42x	42.40%	1st	26.5%	15.7%	9.8%	1.89
Lightyear Fund III, L.P.	8/2012	2012	Active	Buyout - Small	105.0	107.4	146.8	80.0	97.0	226.8	1.37x	2.11x	24.85%	2nd	26.5%	15.7%	9.8%	1.39
Blackstone Capital Partners IV - Secondary	12/2012	2012	Active	Secondaries	5.0	3.1	3.7	.3	.6	4.0	1.20x	1.29x	14.23%	3rd	26.5%	15.7%	9.8%	0.93
<b>2012 Vintage Total</b>					<b>435.0</b>	<b>497.4</b>	<b>579.2</b>	<b>419.1</b>	<b>474.7</b>	<b>998.3</b>	<b>1.16x</b>	<b>2.01x</b>	<b>23.78%</b>					<b>1.41</b>
<b>2013 Vintage</b>																		
Oaktree Opportunities Fund IX, L.P.	2/2012	2013	Active	Distressed	100.0	100.0	32.9	79.3	79.3	112.2	0.33x	1.12x	2.77%	4th	20.2%	14.7%	9.2%	0.78
Institutional Venture Partners XIV, L.P.	6/2012	2013	Active	Venture Capital - Late Stage	60.0	60.1	28.5	60.0	60.0	88.5	0.47x	1.47x	11.73%	3rd	25.5%	18.6%	11.0%	1.08
Wayzata Opportunities Fund III, L.P.	9/2012	2013	Exited	Distressed	100.0	47.5	47.7	-	-	47.7	1.00x	1.00x	0.17%	4th	20.2%	14.7%	9.2%	0.90
Nordic Capital VIII Beta, L.P.	11/2012	2013	Exited	Buyout - Large	92.0	94.9	141.7	-	-	141.7	1.49x	1.49x	16.69%	2nd	16.8%	8.4%	6.4%	1.13
Riverside Capital Appreciation Fund VI, L.P.	12/2012	2013	Active	Buyout - Mid	100.0	73.4	29.2	81.2	97.1	110.4	0.40x	1.50x	13.33%	3rd	28.8%	17.2%	9.8%	1.13
Silver Lake Partners IV, L.P.	3/2013	2013	Active	Buyout - Global	105.0	114.0	50.6	137.4	148.3	188.0	0.44x	1.65x	25.53%	2nd	28.8%	17.2%	9.8%	1.38
RLH Investors III, L.P.	3/2013	2013	Exited	Buyout - Small	50.0	45.1	56.3	-	-	56.3	1.25x	1.25x	6.56%	4th	28.8%	17.2%	9.8%	0.86
Marlin Equity IV, L.P.	4/2013	2013	Active	Distressed	50.0	49.4	19.9	39.1	39.7	59.0	0.40x	1.19x	7.43%	4th	20.2%	14.7%	9.2%	0.97
Carlyle Partners VI, L.P.	8/2013	2013	Active	Buyout - Global	150.0	156.7	61.5	137.8	149.9	199.3	0.39x	1.27x	10.86%	3rd	28.8%	17.2%	9.8%	1.07
MBK Partners Fund III, L.P.	8/2013	2013	Active	Buyout - Large	100.0	101.9	37.7	118.0	119.6	155.6	0.37x	1.53x	15.36%	2nd	20.8%	15.0%	8.2%	1.18
Insignia Capital Partners (Parallel A), L.P.	9/2013	2013	Active	Buyout - Small	100.0	50.3	9.3	47.3	102.1	56.7	0.19x	1.13x	5.28%	4th	28.8%	17.2%	9.8%	0.98
<b>2013 Vintage Total</b>					<b>1,007.0</b>	<b>893.4</b>	<b>515.3</b>	<b>700.0</b>	<b>796.0</b>	<b>1,215.3</b>	<b>0.58x</b>	<b>1.36x</b>	<b>11.23%</b>					<b>1.06</b>
<b>2014 Vintage</b>																		
Sterling Investment Partners III, L.P.	6/2013	2014	Active	Buyout - Small	100.0	63.0	33.2	57.9	95.3	91.1	0.53x	1.45x	14.57%	3rd	24.3%	17.2%	10.2%	1.20
CVC Capital Partners VI (B) L.P.	7/2013	2014	Active	Buyout - Global	115.0	121.3	38.6	115.9	118.6	154.5	0.32x	1.27x	14.00%	3rd	23.6%	14.4%	7.5%	1.12
J.P. Morgan Emerging Managers Program II	12/2013	2014	Active	Fund of Funds	100.0	87.0	87.3	136.3	159.0	223.6	1.00x	2.57x	51.76%	1st	23.4%	14.4%	7.9%	2.16
USV 2014, L.P.	1/2014	2014	Active	Venture Capital - Early Stage	8.3	7.5	-	11.5	12.3	11.5	0.00x	1.53x	17.75%	2nd	22.5%	13.1%	5.6%	1.29
USV Opportunity 2014, L.P.	1/2014	2014	Active	Venture Capital - Early Stage	8.3	6.0	.5	8.8	11.1	9.3	0.08x	1.54x	18.04%	2nd	22.5%	13.1%	5.6%	1.34
GTB Capital Partners II, L.P.	2/2014	2014	Active	Co-Investments	400.0	284.8	42.7	314.6	443.9	357.3	0.15x	1.25x	9.77%	3rd	23.4%	14.4%	7.9%	1.05
Onex Partners IV, L.P.	2/2014	2014	Active	Buyout - Large	150.0	143.5	13.5	123.2	132.7	136.7	0.09x	0.95x	-2.29%	4th	24.5%	15.9%	9.7%	0.85
Palladium Equity Partners IV, L.P.	2/2014	2014	Active	Buyout - Small	100.0	91.4	53.8	75.8	94.0	129.6	0.59x	1.42x	15.15%	3rd	24.3%	17.2%	10.2%	1.13
The Energy & Minerals Group Fund III, L.P.	3/2014	2014	Active	Energy	150.0	143.8	10.4	113.0	120.6	123.4	0.07x	0.86x	-4.19%	4th	24.0%	15.2%	8.2%	0.66
Vista Equity Partners Fund V, L.P.	3/2014	2014	Active	Buyout - Large	200.0	245.8	196.1	220.0	280.7	416.1	0.80x	1.69x	22.59%	2nd	24.3%	17.2%	10.2%	1.34
GGV Capital V L.P.	4/2014	2014	Active	Venture Capital - Balanced	50.0	46.3	7.7	110.7	114.4	118.4	0.17x	2.56x	32.55%	1st	25.0%	13.1%	6.4%	1.99
ABRY Advanced Securities Fund III, L.P.	4/2014	2014	Exited	Distressed	25.0	15.3	23.9	-	-	23.9	1.56x	1.56x	18.01%	2nd	24.0%	15.2%	8.2%	1.16
Glendon Opportunities Fund, L.P.	12/2014	2014	Active	Distressed	60.0	48.3	-	55.8	67.8	55.8	0.00x	1.15x	4.56%	4th	24.0%	15.2%	8.2%	0.93
<b>2014 Vintage Total</b>					<b>1,466.5</b>	<b>1,304.0</b>	<b>507.7</b>	<b>1,343.5</b>	<b>1,650.4</b>	<b>1,851.2</b>	<b>0.39x</b>	<b>1.42x</b>	<b>14.65%</b>					<b>1.17</b>
<b>2015 Vintage</b>																		
ABRY Partners VIII, L.P.	8/2014	2015	Exited	Buyout - Mid	35.0	36.6	44.8	-	-	44.8	1.22x	1.22x	9.69%	3rd	19.4%	13.1%	6.5%	1.04
Centerbridge Capital Partners III, L.P.	10/2014	2015	Active	Distressed	75.0	42.9	14.7	38.0	84.9	52.8	0.34x	1.23x	11.03%	3rd	19.4%	12.8%	7.8%	1.07
Siris Partners III, L.P.	12/2014	2015	Active	Buyout - Mid	60.0	52.3	28.7	31.2	51.4	59.9	0.55x	1.14x	8.77%	3rd	19.4%	13.1%	6.5%	1.02
Juggernaut Capital Partners III, L.P.	2/2015	2015	Active	Buyout - Small	100.0	90.4	3.6	98.7	108.4	102.3	0.04x	1.13x	7.19%	3rd	19.4%	13.1%	6.5%	1.03
Carlyle U.S. Equity Opportunity Fund II, L.P.	3/2015	2015	Active	Buyout - Mid	200.0	106.1	13.1	99.1	206.1	112.2	0.12x	1.06x	3.29%	4th	19.4%	13.1%	6.5%	0.96
Storm Ventures Fund V, L.P.	3/2015	2015	Active	Venture Capital - Early Stage	50.0	35.0	1.8	44.4	59.4	46.2	0.05x	1.32x	13.49%	3rd	22.1%	13.6%	5.5%	1.16
Institutional Venture Partners XV, L.P.	4/2015	2015	Active	Venture Capital - Late Stage	90.0	79.2	14.8	93.0	103.8	107.8	0.19x	1.36x	17.21%	2nd	22.1%	13.6%	5.5%	1.20
BDCM Opportunity Fund IV, L.P.	6/2015	2015	Active	Distressed	100.0	98.0	22.7	90.2	113.8	112.9	0.23x	1.15x	10.22%	3rd	19.4%	12.8%	7.8%	1.06
Clearlake Capital Partners IV, L.P.	6/2015	2015	Active	Buyout - Mid	77.0	87.8	49.6	80.2	91.8	129.7	0.56x	1.48x	32.02%	1st	19.4%	13.1%	6.5%	1.34
Gateway Private Equity Fund-B, L.P.	9/2015	2015	Active	Fund of Funds	300.0	195.4	4.3	250.0	357.3	254.3	0.02x	1.30x	19.04%	2nd	21.0%	13.0%	6.3%	1.24
<b>2015 Vintage Total</b>					<b>1,087.0</b>	<b>823.6</b>	<b>197.9</b>	<b>824.9</b>	<b>1,176.9</b>	<b>1,022.8</b>	<b>0.24x</b>	<b>1.24x</b>	<b>13.74%</b>					<b>1.13</b>
<b>2016 Vintage</b>																		
Hellman & Friedman Capital Partners VIII, L.P.	9/2014	2016	Active	Buyout - Global	125.0	98.3	7.3	104.9	133.9	112.2	0.07x	1.14x	15.23%	2nd	22.1%	9.1%	2.8%	1.15
Blackstone Capital Partners VII, L.P.	5/2015	2016	Active	Buyout - Global	200.0	84.3	5.2	96.5	222.5	101.7	0.06x	1.21x	21.59%	2nd	22.1%	9.1%	2.8%	1.21
Excellere Capital Fund III, L.P.	7/2015	2016	Active	Buyout - Small	70.0	10.2	-	12.6	72.4	12.6	0.00x	1.23x	20.36%	2nd	22.1%	9.1%	2.8%	1.28
GBOF V Feeder SCS	11/2015	2016	Active	Buyout - Mid	86.5	60.8	3.5	65.4	91.1	68.9	0.06x	1.13x	12.71%	2nd	16.0%	8.3%	-1.1%	1.12
Australis Partners Fund, L.P.	12/2015	2016	Active	Growth Equity	125.0	62.2	.2	55.0	118.2	55.3	0.00x	0.89x	-13.39%	4th	25.4%	14.4%	3.1%	0.94
Harvest Partners VII, L.P.	12/2015	2016	Active	Buyout - Mid	80.0	48.7	5.4	46.3	83.0	51.7	0.11x	1.06x	5.28%	3rd	22.1%	9.1%	2.8%	1.04
GGV Capital VI, L.P.	2/2016	2016	Active	Venture Capital - Balanced	45.0	34.0	-	44.1	55.1	44.1	0.00x	1.30x	23.85%	NM	25.4%	14.4%	3.1%	NM
GGV Discovery I, L.P.	2/2016	2016	Active	Venture Capital - Late Stage	15.0	11.9	-	17.6	20.6	17.6	0.00x	1.47x	38.36%	NM	25.4%	14.4%	3.1%	NM
Lightyear Fund IV, L.P.	2/2016	2016	Active	Buyout - Small	150.0	82.2	3.0	81.0	149.7	84.0	0.04x	1.02x	2.03%	NM	22.1%	9.1%	2.8%	NM
USV 2016, L.P.	3/2016	2016	Active	Venture Capital - Early Stage	9.0	3.5	-	4.2	9.7	4.2	0.00x	1.19x	13.43%	NM	20.6%	12.3%	0.0%	NM
Vista Equity Partners Fund VI, L.P.	3/2016	2016	Active	Buyout - Global	200.0	199.1	63.9	184.6	249.0	248.5	0.32x	1.25x	16.77%	NM	22.1%	9.1%	2.8%	NM
Livingbridge 6, L.P.	7/2016	2016	Active	Buyout - Small	51.8	22.5	-	19.8	49.1	19.8	0.00x	0.88x	-12.19%	NM	16.0%	8.3%	-1.1%	NM
<b>2016 Vintage Total</b>					<b>1,157.3</b>	<b>717.5</b>	<b>88.5</b>	<b>731.8</b>	<b>1,254.3</b>	<b>820.4</b>	<b>0.12x</b>	<b>1.14x</b>	<b>12.53%</b>					<b>1.12</b>

# Portfolio Investment Report

As of December 31, 2018  
(\$ in millions)

INVESTMENTS	COMMITMENT DATE	VINTAGE YEAR	STATUS	STRATEGY	COMMITMENT	CUMULATIVE CONTRIBUTIONS	CUMULATIVE DISTRIBUTIONS	MARKET VALUE	Exposure	TOTAL VALUE	DPI MULTIPLE	TVPI MULTIPLE	SINCE INCEPTION NET IRR	IRR QUARTILE RANKING	Private IQ Benchmarks			KS-PME
															UPPER IRR	MEDIAN IRR	LOWER IRR	
<b>2017 Vintage</b>																		
Green Equity Investors VII, L.P.	2/2016	2017	Active	Buyout - Mid	150.0	69.0	.6	74.0	155.7	74.6	0.01x	1.08x	8.01%	NM	17.3%	8.7%	-6.6%	NM
Binary Capital Fund II, L.P.	5/2016	2017	Active	Venture Capital - Early Stage	34.0	2.4	.1	2.3	2.7	2.4	0.05x	0.99x	-0.74%	NM	15.8%	3.9%	-3.8%	NM
BRV Aster Fund II, L.P.	9/2016	2017	Active	Venture Capital - Early Stage	40.0	16.0	-	15.9	39.9	15.9	0.00x	0.99x	-0.82%	NM	15.8%	3.9%	-3.3%	NM
J.P. Morgan Emerging Managers Program III	9/2016	2017	Active	Fund of Funds	100.0	36.0	1.1	43.1	108.3	44.1	0.03x	1.00x	-0.44%	NM	18.9%	7.7%	-3.5%	NM
MBK Partners Fund IV, L.P.	11/2016	2017	Active	Buyout - Large	120.0	37.6	-	42.5	124.9	42.5	0.00x	1.13x	9.13%	NM	20.6%	5.3%	-7.7%	NM
Incline Equity Partners IV, L.P.	12/2016	2017	Active	Buyout - Small	37.5	10.5	.0	11.2	38.2	11.2	0.00x	1.07x	18.04%	NM	17.3%	8.7%	-6.6%	NM
LAV Biosciences Fund IV, L.P.	2/2017	2017	Active	Venture Capital - Balanced	40.0	28.6	2.8	33.3	47.5	36.1	0.10x	1.26x	31.01%	NM	22.4%	4.6%	-3.8%	NM
One Rock Capital Partners II, L.P.	3/2017	2017	Active	Buyout - Small	72.5	22.2	-	20.9	71.2	20.9	0.00x	0.94x	-6.27%	NM	17.3%	8.7%	-6.6%	NM
<b>2017 Vintage Total</b>					<b>594.0</b>	<b>222.3</b>	<b>4.6</b>	<b>243.2</b>	<b>588.4</b>	<b>247.8</b>	<b>0.02x</b>	<b>1.11x</b>	<b>11.57%</b>					<b>1.11</b>
<b>2018 Vintage</b>																		
GGV Capital VI Plus, L.P.	2/2016	2018	Active	Venture Capital - Late Stage	15.0	7.5	-	8.1	15.6	8.1	0.00x	1.08x	18.40%	NM	-0.4%	-6.7%	-14.6%	NM
Silver Lake Partners V, L.P.	3/2017	2018	Active	Buyout - Global	180.0	42.8	-	40.5	177.7	40.5	0.00x	0.95x	-7.91%	NM	9.6%	-7.5%	-22.8%	NM
CVC Capital Partners VII, L.P.	5/2017	2018	Active	Buyout - Global	228.3	35.8	-	38.4	230.7	38.4	0.00x	1.07x	99.31%	NM	9.6%	-7.5%	-22.8%	NM
Onex Partners V, L.P.	7/2017	2018	Active	Buyout - Large	200.0	3.0	-	2.3	199.2	2.3	0.00x	0.75x	-25.20%	NM	0.0%	-15.7%	-32.0%	NM
Canaan XI, L.P.	7/2017	2018	Active	Venture Capital - Early Stage	50.0	12.3	-	12.7	50.4	12.7	0.00x	1.03x	6.15%	NM	-1.5%	-10.6%	-17.5%	NM
J.P. Morgan Emerging Managers Program IV	10/2018	2018	Active	Fund of Funds	300.0	4.5	-	4.5	300.0	4.5	0.00x	1.00x	-0.44%	NM	4.2%	-7.0%	-19.8%	NM
Clearlake Capital Partners V, L.P.	11/2017	2018	Active	Buyout - Mid	100.0	40.0	.4	50.0	110.0	50.3	0.01x	1.26x	60.89%	NM	9.6%	-7.5%	-22.8%	NM
Sinovation Fund IV, L.P.	3/2018	2018	Active	Venture Capital - Early Stage	75.0	18.8	-	18.2	74.5	18.2	0.00x	0.97x	-3.90%	NM	-1.5%	-10.6%	-17.5%	NM
Juggernaut Capital Partners IV, L.P.	3/2018	2018	Active	Buyout - Small	125.0	.4	-	.7	125.4	.7	0.00x	2.08x	108.29%	NM	9.6%	-7.5%	-22.8%	NM
<b>2018 Vintage Total</b>					<b>1,273.3</b>	<b>165.0</b>	<b>.4</b>	<b>175.4</b>	<b>1,283.6</b>	<b>175.8</b>	<b>0.00x</b>	<b>1.07x</b>	<b>20.13%</b>					<b>1.17</b>
<b>2019 Vintage</b>																		
Glendon Opportunities Fund II, L.P.	5/2017	2019	Active	Distressed	100.0	-	-	-	100.0	-	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
AE Industrial Partners Fund II, L.P.	6/2018	2019	Active	Buyout - Small	100.0	-	-	(.2)	99.8	(.2)	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
Riverside Micro-Cap Fund V, L.P.	8/2018	2019	Active	Buyout - Small	65.0	-	-	(.6)	64.4	(.6)	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
Accel-KKR Growth Capital Partners III, L.P.	8/2018	2019	Active	Growth Equity	50.0	-	-	-	50.0	-	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
Hellman & Friedman Capital Partners IX, L.P.	9/2018	2019	Active	Buyout - Global	150.0	-	-	-	150.0	-	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
GGV Capital VIII Plus, L.P.	8/2018	2019	Active	Venture Capital - Late Stage	16.0	-	-	16.0	-	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM	
GGV Capital VII, L.P.	8/2018	2019	Active	Venture Capital - Late Stage	64.0	-	-	64.0	-	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM	
GGV Discovery II, L.P.	8/2018	2019	Active	Venture Capital - Late Stage	20.0	-	-	20.0	-	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM	
Triton Fund V, L.P.	10/2018	2019	Active	Buyout - Mid	-	-	-	(1.0)	(1.0)	(1.0)	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
Siris Partners IV, L.P.	10/2018	2019	Active	Buyout - Mid	100.0	-	-	(.7)	99.3	(.7)	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
Clarion Investors III, L.P.	11/2017	2019	Active	Buyout - Small	50.0	-	-	(.2)	49.8	(.2)	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
Alchemy Special Opportunities Fund IV, L.P.	11/2017	2019	Active	Distressed	82.8	-	-	(1.3)	81.5	(1.3)	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
PAI Europe VII, L.P.	12/2017	2019	Active	Buyout - Large	171.5	-	-	(1.9)	169.6	(1.9)	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
Vista Equity Partners Fund VII, L.P.	12/2018	2019	Active	Buyout - Global	200.0	-	-	(1.2)	198.8	(1.2)	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
USV 2019, L.P.	12/2018	2019	Active	Venture Capital - Early Stage	9.0	-	-	-	9.0	-	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
USV Opportunity 2019, L.P.	12/2018	2019	Active	Venture Capital - Balanced	11.3	-	-	-	11.3	-	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
Storm Ventures Fund VI, L.P.	12/2018	2019	Active	Venture Capital - Early Stage	50.0	-	-	-	50.0	-	0.00x	0.00x	0.00%	NM	N/A	N/A	N/A	NM
<b>2019 Vintage Total</b>					<b>1,239.5</b>	<b>-</b>	<b>-</b>	<b>(7.0)</b>	<b>1,232.5</b>	<b>(7.0)</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>					<b>NM</b>
<b>Total Portfolio Investments</b>					<b>\$16,628.3</b>	<b>\$13,032.8</b>	<b>\$16,120.3</b>	<b>\$5,413.6</b>	<b>\$9,666.7</b>	<b>\$21,533.9</b>	<b>1.24x</b>	<b>1.65x</b>	<b>16.04 %</b>					<b>1.21</b>

The Since Inception Net IRR and return multiples are 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 IRR and return multiples are calculated as of the last valuation date indicated by the fund manager. None of the information contained herein has been reviewed or approved by the General Partners of the Funds.

Vintage years are based on LACERA's initial cash contribution to the fund.  
Fund benchmark data provided by Burgiss Private IQ as of the reporting date and represents comparable strategies aggregated by Vintage Year. Quartile rankings are reported as not material (NM) if commitment date is within 3 years of reporting date.  
A Kaplan & Schoar Public Market Equivalent ("KS-PME") value greater than one indicates that an investor benefited from investing in the respective private equity fund rather than the index (Russell 3000).



## **Market Overview**

December 31, 2018

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All data is as of December 31, 2018 unless otherwise noted.

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## I. Executive Summary

Concerns over global trade, moderated economic data, and tightening central banks shocked equity markets in the fourth quarter of 2018. The MSCI Emerging Markets index outperformed developed markets, declining 7.8%, reversing the trend from earlier in the year. The MSCI Europe index fell 13.0%, as Prime Minister Theresa May postponed the vote on the controversial Withdrawal Agreement and uncertainty of a successful United Kingdom exit from the European Union came to the fore. The European Central Bank ended its stimulus program and downgraded economic forecasts, leading to speculation that interest rates would not be raised until later in 2019. The S&P 500 Total Return index was an underperformer, decreasing 13.5% for the quarter, with Energy decreasing 24.9% following lower demand from China and a potential oversupply. The US Federal Reserve raised interest rates in December, for a total of four increases in 2018, and signaled for only two interest rate increases in 2019 down from three previously.

In private markets, US leveraged buyout (“LBO”) debt volume decreased by 42.8% quarter-over-quarter, from US\$46.5 billion to US\$26.6 billion, more than twice the fourth quarter of 2017 and 50.2% higher than the 10-year quarterly average of US\$17.7 billion. According to data from S&P, purchase price multiples for US LBOs decreased to 10.3x EBITDA in the fourth quarter, down 7.0% from 11.0x EBITDA in the prior quarter, and above the 10-year average of 9.2x EBITDA. Average debt multiples of large corporate US LBO loans remained at 5.9x for the quarter, above the 10-year average of 5.2x. Equity contributions for US LBOs decreased to 42.9%, a 1.3% decrease quarter-over-quarter and slightly above the 10-year average of 42.3%.<sup>1</sup>

Fundraising for global private equity totaled US\$130.3 billion in the fourth quarter of 2018, a 1.6% decrease compared to the prior quarter and a 50.2% increase from the fourth quarter of 2017. Geographically, the US represented 67.4% of total funds raised in the quarter, higher than the 10-year average of 59.5%. Funds raised in Europe, Asia, and the Rest of World made up 14.6%, 9.8% and 8.1%, respectively, of global fundraising for the quarter. Invested capital for private equity funds increased 33.0% quarter-over-quarter and increased 92.8% year-over-year, with US\$111.1 billion invested in 3,571 deals. A significant portion of the capital deployed was in the Industrials sector, accounting for 26.4% compared to the 10-year average of 11.8%.<sup>2</sup>

Private equity-backed IPO transaction volume decreased in the fourth quarter with US\$5.1 billion raised in 24 IPOs. The amount raised through IPOs decreased 38.2% compared to the prior quarter and 19.1% compared to the fourth quarter of 2017. The largest IPOs of the quarter were completed by Tencent Music Entertainment Shenzhen Co Ltd (NYSE: TME), a provider of online music and music-centric social entertainment services in China, which raised US\$1.1 billion, and Moderna, Inc. (NASDAQ: MRNA), a developer of medicines based on messenger RNA (mRNA), which raised US\$604.4 million, together representing 33.0% of the total value for all IPOs in the quarter. M&A activity increased in the fourth quarter with a total value of US\$250.0 billion, a 66.7% increase compared to the prior quarter and a 19.3% increase compared to the fourth quarter of 2017. The largest M&A deals of the quarter were the US\$69.5 billion purchase of Aetna Inc. by CVS Health Corporation (NYSE:CVS) and the US\$53.4 billion purchase of Linde Aktiengesellschaft (DB:LNA) by Linde plc (XTRA:LIN). Together these deals represent 49.2% of the total value for all deals in the quarter.<sup>3</sup>

<sup>1</sup> S&P US LBO Review, Q4 2018

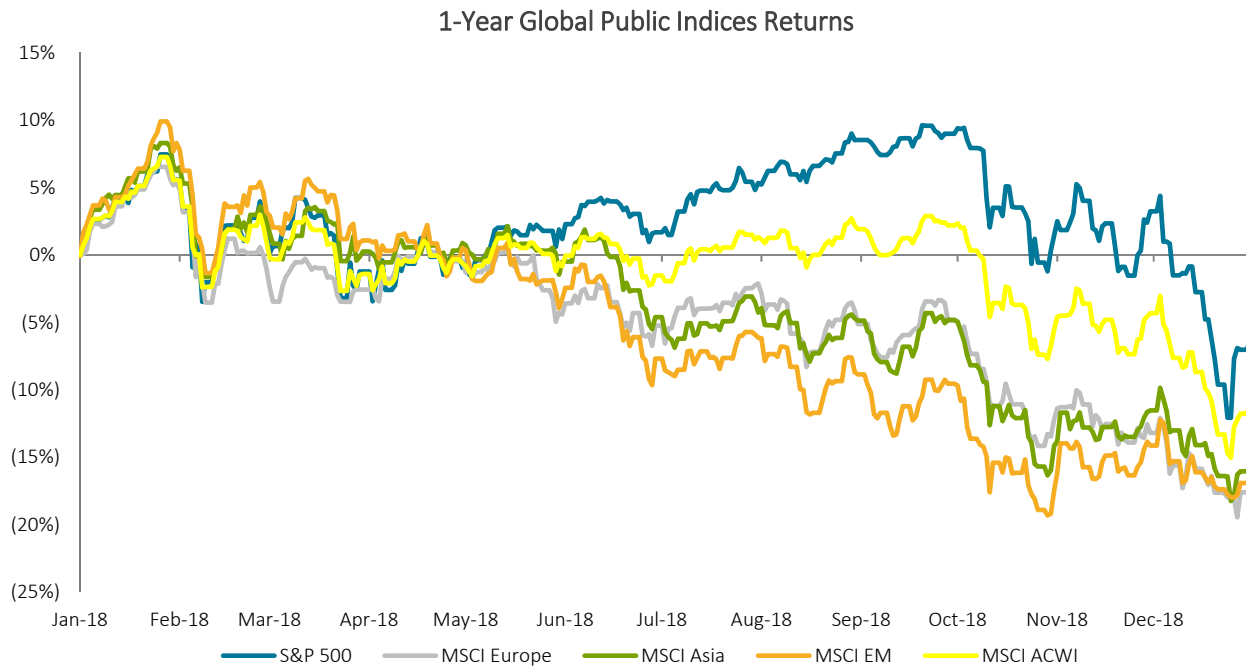
<sup>2</sup> Thomson ONE data as of March 12, 2019. Please note, all data in this report from Thomson ONE is subject to revision as further data is made available.

<sup>3</sup> Capital IQ Transaction Screening Report as of March 12, 2019

## II. Capital Markets Overview

### Public Equity Markets

Volatility in global public markets was sparked by moderated economic data, as US markets posted their first annual loss in nine years following lowered guidance from high profile information technology companies. Energy, Industrials, and Information Technology sectors for US equities declined 24.9%, 18.0%, and 17.7% for the quarter, respectively. Although volatility has returned, earnings growth for the S&P 500 was near 26.0% for the quarter, signaling strong corporate data.



The following table shows the returns of four major MSCI indices, as well as the S&P 500 and the S&P 500 Total Return Index, over various time horizons through December 31, 2018. Returns for time periods greater than one year are annualized. During the quarter, US markets decreased 13.5% followed by MSCI Europe down 13.0%. MSCI Asia and MSCI Emerging Markets decreased 11.3% and 7.8%, respectively.

#### Regional Indices

	3 Mo	1 Yr	3 Yr	5 Yr	10 Yr
MSCI Asia	(11.3%)	(15.6%)	3.9%	1.5%	5.1%
MSCI Europe	(13.0%)	(17.3%)	(0.8%)	(3.3%)	3.1%
MSCI EM	(7.8%)	(16.6%)	6.7%	(0.7%)	5.5%
MSCI ACWI	(13.1%)	(11.2%)	4.5%	2.2%	7.2%
S&P 500	(14.0%)	(6.2%)	7.0%	6.3%	10.7%
S&P 500 Total Return*	(13.5%)	(4.4%)	9.3%	8.5%	13.1%

For the period ended December 31, 2018

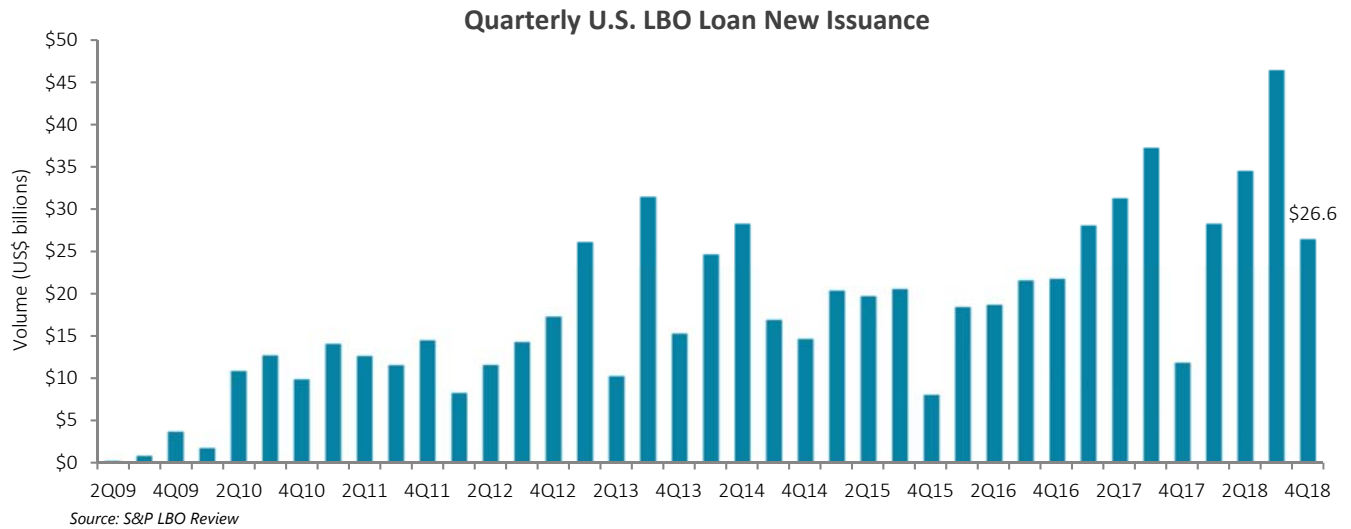
\*Includes reinvestment of dividends.

Source: Capital IQ

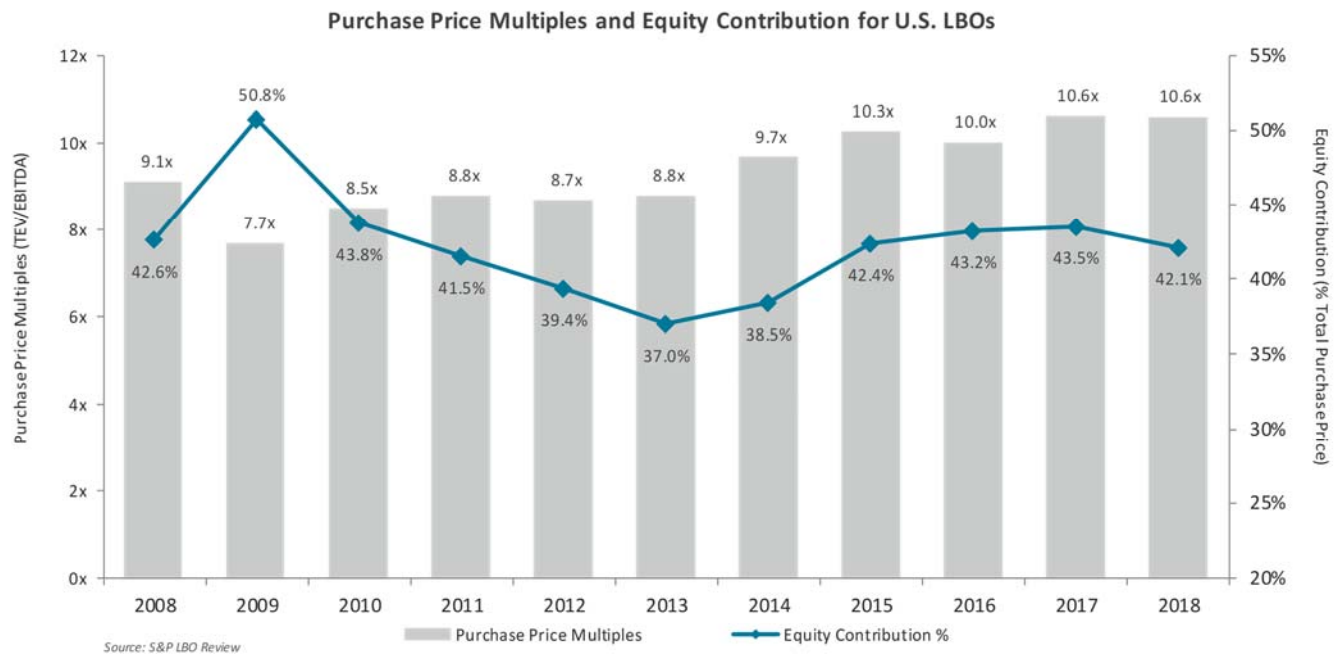
The referenced indices are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

## Debt Markets

During the fourth quarter of 2018, US LBO new loan issuance totaled US\$26.6 billion, representing a decrease of 42.8% from the prior quarter and an increase from US\$11.9 billion from the fourth quarter of 2017. The following chart shows the quarterly volume of US LBO new loan issuance for the past ten years.



The weighted average purchase price multiple for US LBO deals was 10.3x total enterprise value (“TEV”) to EBITDA in the fourth quarter, a decrease from 11.0x in the prior quarter and above the 10-year average of 9.2x. Average debt multiples of large corporate US LBO loans increased year-over-year from 5.8x EBITDA to 5.9x EBITDA, as equity contributions for US LBOs decreased from 43.5% to 42.1%. The following chart compares purchase price multiples and equity contribution percentages for US LBO deals.





### III. Private Equity Market Overview

#### All Private Equity

The table below shows the pooled Internal Rate of Return (“IRR”) performance of global private equity investments by sector over various investment horizons through December 31, 2018. The All Private Equity benchmark had an IRR of (0.8%) for the quarter. Two out of five sectors were positive for the quarter, led by Venture Capital with 1.4%, followed by Small/Middle Buyouts with 0.7%, Mezzanine with 0.0%, Large Buyouts with (2.3%), and Energy with (11.1%)

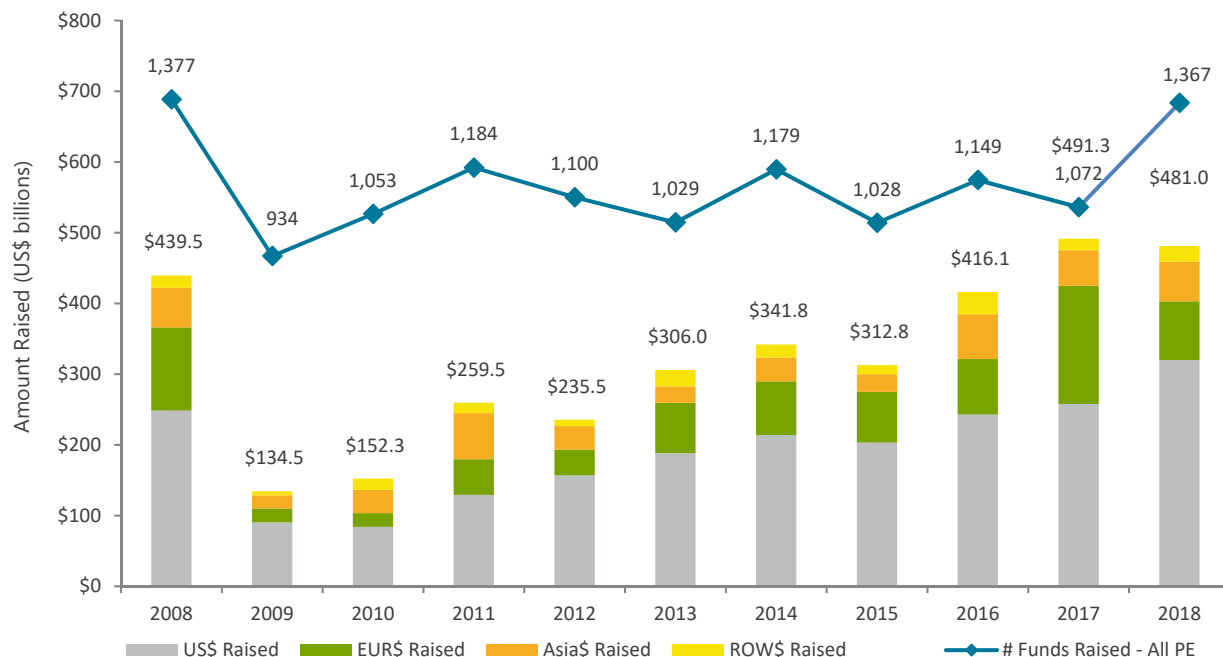
Sector	3 Mo	1 Yr	3 Yr	5 Yr	10 Yr
Small/Middle Buyouts (<\$3bn)	0.7%	9.7%	14.7%	11.8%	13.0%
Large Buyouts (>\$3bn)	(2.3%)	8.9%	14.6%	12.4%	14.6%
Mezzanine	0.0%	6.9%	8.9%	8.6%	9.2%
Energy	(11.1%)	(5.6%)	7.3%	(0.3%)	5.5%
Venture Capital	1.4%	21.1%	11.9%	15.3%	14.0%
<b>All Private Equity</b>	<b>(0.8%)</b>	<b>10.9%</b>	<b>13.0%</b>	<b>11.7%</b>	<b>13.4%</b>

Source: Burgiss PrivateIQ

#### Fundraising

Global private equity fundraising totaled US\$481.0 billion in 2018, representing a decrease of 2.1% year-over-year. Buyout fundraising totaled US\$326.1 billion in 2018, decreasing 10.4% compared to US\$364.1 billion in 2017. Venture Capital raised US\$78.3 billion in 2018, an increase of 18.6% compared to US\$66.0 billion in 2017. Geographically, the US represented 66.5% of total funds raised in the year, higher than the 10-year average of 59.6%. Funds raised in Europe, Asia, and the Rest of World made up 17.3%, 11.6% and 4.6%, respectively, of global fundraising for the year. The chart below shows annual private equity fundraising activity across all sectors.

Regional Fundraising by Year – All Private Equity

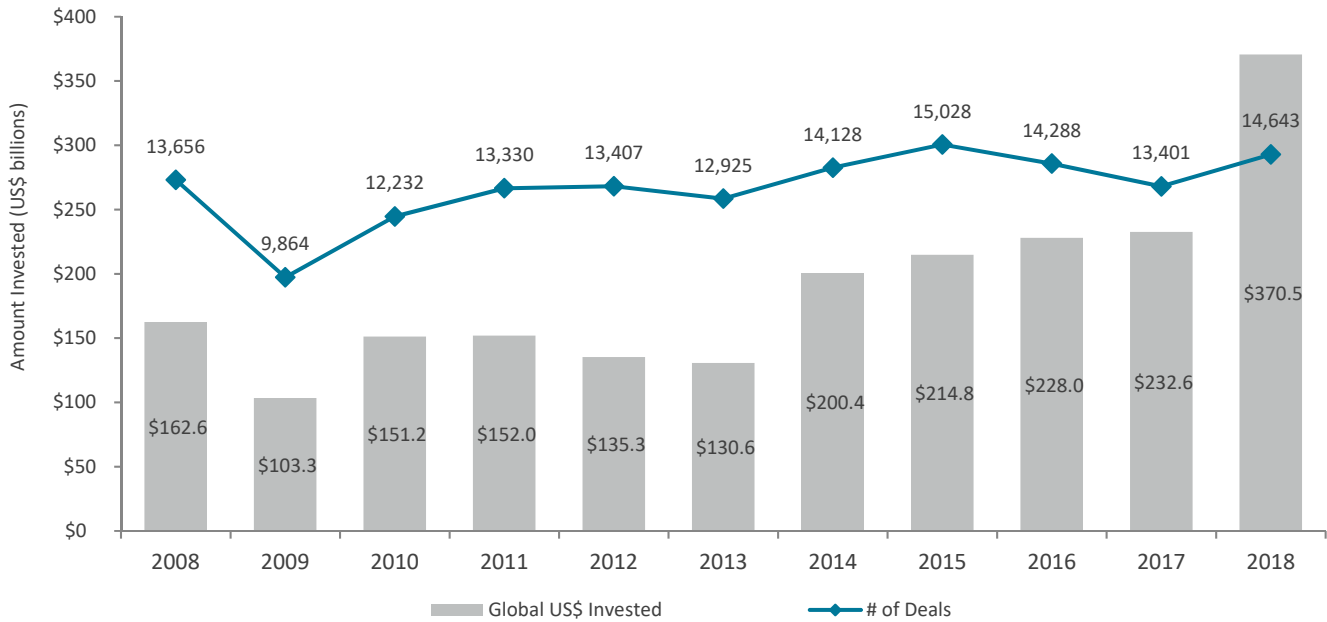


Source: Thomson ONE

## Investment Activity

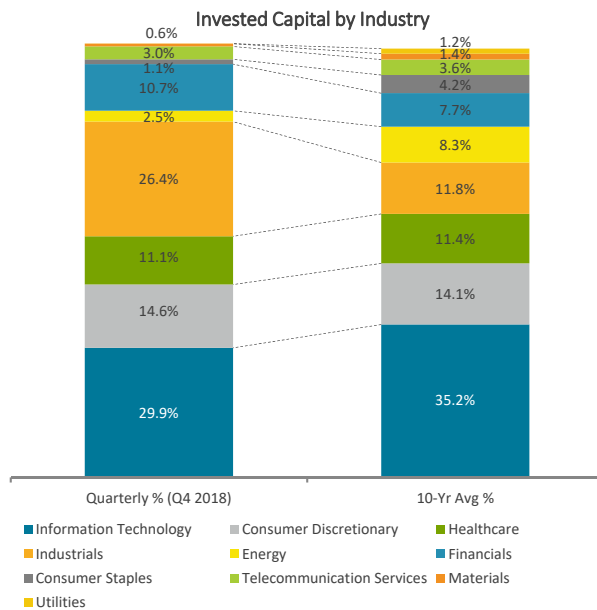
Private equity funds invested US\$370.5 billion globally during 2018, representing an increase of 59.3% from US\$232.6 billion in 2017. The average investment size during the year was US\$25.3 million, an increase of 45.8% compared to the average investment size of US\$17.4 million in 2017.

Investment Activity - All Private Equity

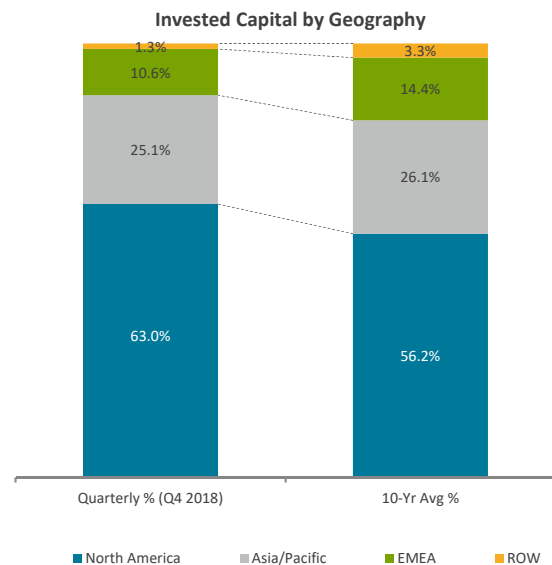


Source: Thomson ONE

The graphs below depict the percentage of invested capital by industry and geography for the fourth quarter of 2018 and over the last ten years. The Industrials sector had the largest departure from its 10-year average, accounting for US\$29.3 billion of transactions, or 26.4% of total capital invested by private equity firms, compared to its 10-year average of 11.8%. Considering geography, investment activity was above average in North America, comprising 63.0% of total capital invested compared to its 10-year historical average of 56.2%.



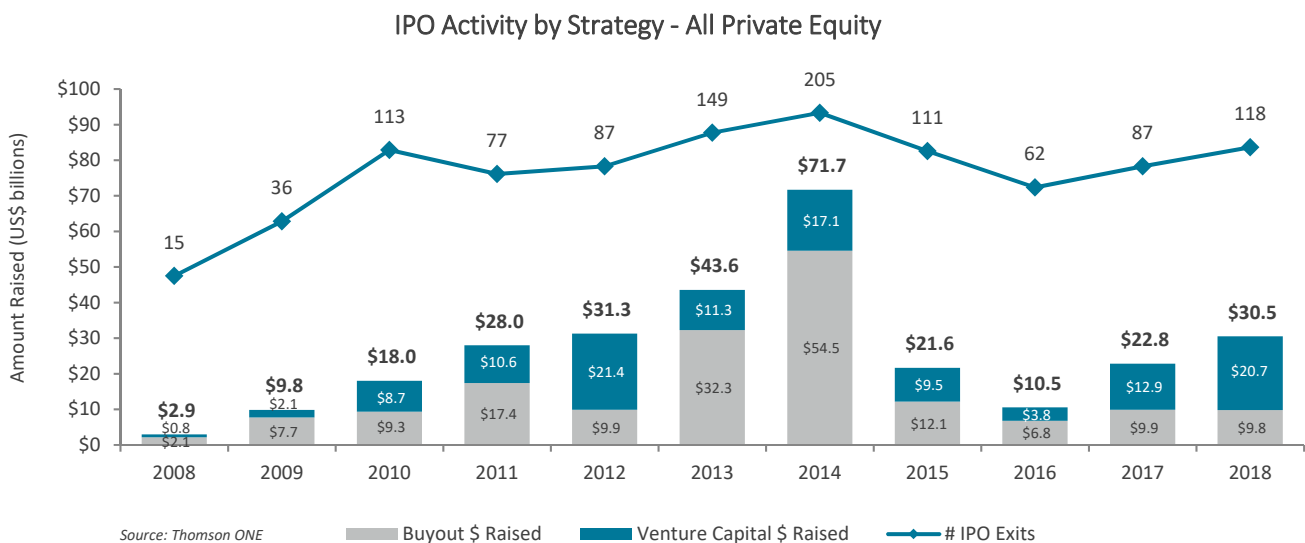
Source: Thomson ONE



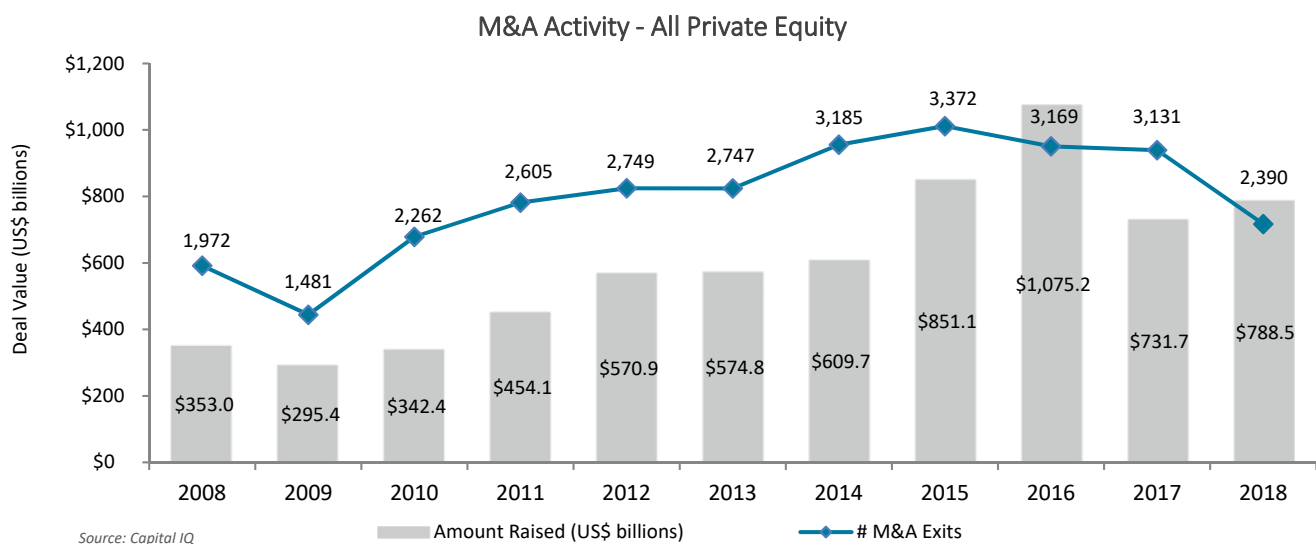
Source: Thomson ONE

## Deal Environment

In 2018, the number of private equity-backed IPOs increased 35.6%, from 87 to 118, and the amount raised increased 33.9%, from US\$22.8 billion to US\$30.5 billion, compared to the prior year. The IPOs were comprised of 94 venture capital-backed IPOs that raised a total of US\$20.7 billion and 24 IPOs from buyouts that raised US\$9.8 billion. The largest IPOs of the quarter were completed by Tencent Music Entertainment Shenzhen Co Ltd (NYSE: TME), a provider of online music and music-centric social entertainment services in China, which raised US\$1.1 billion, and Moderna, Inc. (NASDAQ: MRNA), a developer of medicines based on messenger RNA (mRNA), which raised US\$604.4 million, together representing 33.0% of the total value for all IPOs in the quarter. The graph below shows the amount raised and the number of IPOs on the NYSE and NASDAQ.




The number of private equity-backed Mergers and Acquisitions (“M&A”) declined 23.7%, and the total value of M&A deals increased 7.8% compared to the prior year. In the fourth quarter, there were 536 private-equity backed M&A deals totaling US\$250.0 billion. The largest M&A deals of the quarter were the US\$69.5 billion purchase of Aetna Inc. by CVS Health Corporation (NYSE:CVS) and the US\$53.4 billion purchase of Linde Aktiengesellschaft (DB:LNA) by Linde plc (XTRA:LIN). Together these deals represent 49.2% of the total value for all deals in the quarter. The graph below shows the deal value and the number of M&A deals.




May 3, 2019

TO: Each Member  
Board of Investments

FROM: Jonathan Grabel   
Chief Investment Officer

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

Brenda Cullen   
Investment Officer

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **PUBLIC MARKETS INTERNAL ASSET MANAGEMENT ASSESSMENT**

At the August 2018 LACERA Board of Investments (“Board”) meeting, there was interest and discussion about the internal management of the TIPS allocation. Staff was asked to conduct a preliminary assessment of internal management including the merits and risks and report its findings to the Board for TIPS and other public market mandates.

In response to this request, staff presented an overview of internal management for certain non-active public markets mandates at the February 2019 Board meeting that included a survey of public plans, a high-level cost benefit analysis, and suggestions regarding additional qualitative items that the Board may want to consider. In their assessment, staff concluded that internal management could potentially reduce costs, particularly with multiple mandates, but that other factors may present challenges. A discussion ensued after which the Board directed staff to continue its investigation.

Today’s presentation summarizes the findings from due diligence activities that have taken place since the February meeting and offers some suggestions for next steps, if so desired.

Attachment

ATTACHMENT

# Public Markets Internal Asset Management Assessment

Board of Investments

May 15, 2019



Jonathan Grabel – Chief Investment Officer  
Ted Wright – Principal Investment Officer  
Brenda Cullen – Investment Officer

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

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- I. Review of Prior Findings
- II. Interim Due Diligence Activities
- III. Key Findings from Due Diligence
- IV. Next Steps



# Review of Prior Findings

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## Potential Benefits:

- Lower management costs
- Increased transparency/  
beneficial ownership rights
- Greater control over investment portfolio
- Enhanced investment culture

## Potential Challenges:

- Increased tracking error
- Governance considerations (authority, liability)
- Additional compliance, operations, and reporting requirements
- Upfront fixed cost investment
- Headline risk

## Conclusions:

- May reduce costs with multiple mandates
- Tracking error may add to indirect costs
- Internal management has advantages and disadvantages
- Continue methodical evaluation

# Interim Due Diligence Activities

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- Surveyed peers, managers, partners with similar programs
  - Discussed necessary processes, best practices
  - Identified infrastructure/data requirements
- Oregon State Treasury Site Visit – public markets internal management demo and discussion
- Held discussions with existing service providers regarding middle/back office requirements to assess
  - Existing capabilities
  - Gaps in capabilities



# Key Findings of Due Diligence

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- Typical trajectory: simple (U.S. equity indices) to more complex (international equities, active equity strategies, fixed income)
- Complexity of architecture: varies based on budget and/or risk appetite, even for less complex strategies
- Considerable infrastructure/data required for public market strategies now resident at LACERA, but gaps exist (e.g., daily valuation, robust risk controls)
- Implementation process should be pre-architected (based on near-term AND longer-term objectives)
- Knowledgeable and experienced personnel necessary to realize greatest cost savings
- Potential savings corroborated despite initial investment, fixed costs, and higher tracking error



# Next Steps

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- Case studies to be presented at July Board offsite
- If sufficient BOI interest, retain third-party subject matter experts to provide more granularity on:
  - Architecture and implementation
  - Compliance, risk, governance
  - Detailed cost/benefit analysis



April 25, 2019

TO: Each Member  
Board of Investments

FROM: Christine Roseland *CR*  
Senior Staff Counsel

FOR: Board of Investments Meeting of May 15, 2019

**SUBJECT: Real Estate Recoveries Report**

**Separate Account Real Estate Program**

LACERA's Real Estate Program consists of, among other things, separate account equity positions that cover a broad array of property types diversified throughout the U.S., including office buildings, industrial properties, multi-family apartments, retail centers, and development projects. LACERA acquires and sells properties utilizing private real estate advisory firms which are under contract to LACERA as fiduciaries. The properties are held through tax exempt title holding companies (THCs) formed as corporations, limited liability companies, or limited partnerships.

The Legal Office handles the documentation relating to the transactions involving the acquisition, disposition, and leveraging of these properties as well as the formation, maintenance, management, and dissolution of the THCs formed to hold the properties. The Legal Office's management of the THCs includes tax exemption filings, refunds relating to property tax reassessments, reclaiming unclaimed property, and refunds of state and local transfer, income, and franchise taxes and withholdings as well as annual state registration fees.

Through these efforts, LACERA recovered \$668,091.28 in tax and unclaimed property related proceeds in calendar year 2018 and \$555,727.69 so far in the first four months of 2019. This brings the total amount recovered on behalf of the fund to over \$2.7 million since 2014. The following is a breakdown of the amounts recovered on an annual basis since that time:

<b>Year</b>	<b>Recovery</b>
2014	\$ 447,579.38
2015	\$ 6,681.82
2016	\$ 748,771.65
2017	\$ 280,020.77
2018	\$ 668,091.28
2019	\$ 555,727.69
<b>Total</b>	<b>\$ 2,706,872.59</b>

In addition, many of the separate account real estate transactions are handled by LACERA's outside counsel, who are in turn overseen by the Legal Office. LACERA has saved \$393,456.33 between 2014 and April 2019 by negotiating fee breaks and discounts with outside counsel to be deducted from the final invoiced total. These amounts are in addition to discounted rates negotiated at the inception of an outside counsel relationship and result from staff's monitoring of the efficiency and value provided by outside counsel on a particular real estate transaction. The following is a breakdown of the amounts saved off invoice amounts on an annual basis since 2014:

<b>Year</b>	<b>Legal Fee Savings</b>
2014	\$ 21,786.40
2015	\$ 110,692.80
2016	\$ 40,409.27
2017	\$ 53,784.84
2018	\$ 162,127.31
2019	\$ 4,655.71
<b>Total</b>	<b>\$ 393,456.33</b>

Fee savings, which are not included here because this memo focuses on the real estate program, are also negotiated with outside counsel providing representation in other asset classes. Those savings, and additional legal efficiencies in other assets classes, will be the subject of a report to be provided to the Board in August or September 2019.

## **Background**

A team of one attorney, two legal analysts, and two secretaries oversees the legal aspects of the Real Estate Program. That team is responsible for handling the transactions as well as the management of the THC's. LACERA currently maintains about 180 THC's holding approximately 100 assets. Among other things related to the management of the THC's, the team is responsible for (1) filing all tax exemption applications for each THC with the federal and applicable state governments (if such exemption is available), (2) recovering taxes for each THC, at the federal, state, or local levels, to the extent taxes were paid when there was an exemption available, (3) monitoring and processing property tax refunds for each THC, (4) researching and applying for unclaimed property in various states when discovered, (5) managing state registrations for each THC, (6) monitoring income tax filings and withholdings, including applying for refunds when applicable, and (7) selecting, supervising, and monitoring outside counsel.

LACERA typically negotiates a discounted hourly rate with its panel of outside counsel engaged in connection with investment transactions. These discounts are typically 10 to 20% off regular rates. In addition to this rate discount, the Legal Office often negotiates an additional discount on final invoices of outside counsel in connection with individual transactions. Reasons for these discounts include, among other things, (1) exceeding the budgeted amount due to unanticipated issues or out of scope work, (2) reasonableness of the total amount in light of the circumstances, including value of

Each Member, Board of Investments

April 25, 2019

Page 3

and efficiency of services provided, (3) volume discounts, (4) a hard not to exceed fee cap in situations where the hourly fees could eat up any gains (such as a tax refund or settlement), and (5) fairness in situations where multiple firms bid on the same transaction.

As noted above, efforts on tax and unclaimed property claims have resulted in the recovery by the fund of \$668,091.28 in 2018 and \$555,727.69 so far in the first four months of 2019, and over \$2.7 million in total proceeds since 2014, plus an additional \$393,456.33 in legal fee savings. These recoveries have a combined grand total of \$3,100,328.92 since 2014. Because most of these recoveries were handled internally, offsetting fees or costs incurred to collect these amounts are negligible. Accordingly, these real estate recoveries add directly to the fund's bottom line assets.

Reviewed and Approved:



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Steven P. Rice  
Chief Counsel

cc: Lou Lazatin  
JJ Popowich  
Jonathan Grabel  
John McClelland

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**FOR INFORMATION ONLY**

April 26, 2019

TO: Each Member  
Board of Investments

FROM: Adam Cheng, CFA *Ac*  
Sr. Investment Analyst

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **SECURITIES LENDING PROGRAM—2018 ANNUAL REVIEW**

**EXECUTIVE SUMMARY**

During calendar year 2018, LACERA's Securities Lending Program ("Program") generated \$5.8 million in net income. Total income increased by \$0.6 million (approximately 12.5%) when compared to the income generated in calendar year 2017 (\$5.2 million). The increase in overall Program revenue was driven primarily by improved utilization rates and higher reinvestment income.

State Street Bank and Trust Company ("State Street"), LACERA's custodian, continues to act as a lending agent for non-U.S. equities, U.S. Treasuries, and U.S. Agency securities. Goldman Sachs Agency Lending ("GSAL") continues to act as LACERA's third-party lending agent for corporate bonds and domestic equities.

**BACKGROUND**

To generate additional income for the Fund, LACERA lends some of its portfolio securities to qualified borrowers (such as brokers/dealers) in exchange for cash and non-cash collateral, typically U.S. Treasury securities, as well as U.S. and non-U.S. Equities. When cash collateral is received, the income generated from securities lending has two sources: lending and reinvestment. As for non-cash collateral, income is only generated from the lending activity. **ATTACHMENT A** provides an overview of securities lending and **ATTACHMENT B** summarizes the risks in securities lending.

LACERA has negotiated income split (profit sharing) arrangements with State Street and GSAL. As a result, these firms have an incentive to maximize Program earnings. **TABLE 1** (on the following page) highlights each income split.

**TABLE 1**

	State Street	GSAL
Income Split*	85%/15%	87%/13%

\* LACERA's share is 85% of the income generated by State Street and 87% of the income generated by GSAL.

Collateral investment management is not a service offered by GSAL, therefore all reinvestment activity is conducted by State Street Global Advisors ("SSgA") in two separately managed accounts. SSgA charges LACERA 1 basis point (bp) to reinvest collateral received for lending securities by State Street, and 5 bps for managing the collateral backing securities lent through GSAL. The numbers in this report are net of these costs.

Securities lending authorization agreements ("SLAA") with both State Street and GSAL are reviewed on a regular basis. Staff believes that the current income splits remain competitive. Contracts with key vendors of services such as securities lending, custody, consulting, actuarial, or auditing are periodically rebid to ensure that terms are in-line with current market pricing. Consistent with the 2019 Work Plan, staff intends to work with Meketa to conduct a securities lending RFP and place the entire Program out for bid in the coming months.

### **SECURITIES LENDING PROGRAM PERFORMANCE**

The Program generated approximately \$5.8 million of income in 2018, an increase of nearly \$0.6 million compared to the previous year's results. In percentage terms, this income represents 6 bps of the average lendable balance and 39 bps of the average amount of securities on loan.

**TABLE 2** (on the following page )compares the average lendable base, average market value of securities on loan, and utilization rates<sup>1</sup> for calendar years 2017 and 2018 — for the entire Program and by provider.

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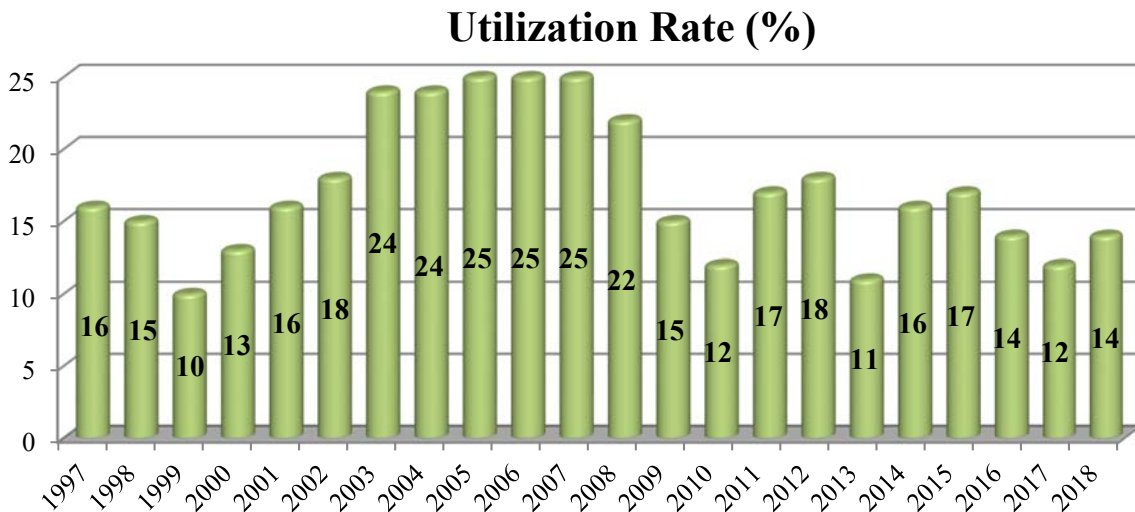
<sup>1</sup> Utilization rate equals the market value of securities on loan divided by the market value of securities available for lending.

**TABLE 2**

<b>Program Size</b>	<b>State Street</b>	<b>GSAL</b>	<b>Program Totals</b>
2017 Average Lendable	\$3,773,058,305	\$7,164,077,305	\$10,937,135,610
2018 Average Lendable	\$3,711,144,842	\$6,921,666,943	\$10,632,811,785
% Change from 2017	-1.6%	-3.4%	-2.8%
2017 Average on Loan	\$763,963,213	\$587,729,501	\$1,351,692,714
2018 Average on Loan	\$813,920,889	\$672,084,190	\$1,486,005,078
% Change from 2017	6.5%	14.4%	9.9%
2017 Utilization (%)	20.2%	8.2%	12.4%
2018 Utilization (%)	21.9%	9.7%	14.0%
Difference	8.4%	18.3%	12.9%

Average lendable balances declined slightly while the average amount on loan increased. Therefore, utilization rates increased from 2017 by 12.9%. Nevertheless, utilization levels remain on the low end of the historical range. (See **Chart 1**)

**CHART 1**





**TABLE 3** compares the lending income (income generated from securities on loan), reinvestment income (interest income on cash collateral), and total income generated by each provider for calendar years 2017 and 2018. As shown in the table, lending income dropped by \$0.4 million (-12.3%), while collateral reinvestment earnings increased (48.6%) as a result of higher reinvestment spreads. Ultimately, the increase in reinvestment activity more than offset the decline in lending income.

**TABLE 3**

	State Street	GSAL	Program Totals
2017 Lending Income	\$1,580,064	\$1,632,108	\$3,212,172
2018 Lending Income	\$1,021,802	\$1,796,024	\$2,817,826
\$ Change from 2017	-\$558,262	\$163,916	-\$394,346
% Change from 2017	-35.3%	10.0%	-12.3%
<hr/>			
2017 Reinvestment Income	\$944,520	\$1,238,990	\$2,183,510
2018 Reinvestment Income	\$1,276,806	\$1,968,731	\$3,245,537
\$ Change from 2017	\$332,286	\$729,741	\$1,062,027
% Change from 2017	35.2%	58.9%	48.6%
<hr/>			
2017 Total Income	\$2,524,584	\$2,672,721*	\$5,197,305
2018 Total Income	\$2,298,608	\$3,549,452*	\$5,848,061
\$ Change from 2017	-\$225,976	\$876,731	\$650,756
% Change from 2017	-9.0%	32.8%	12.5%

\* Includes fees paid to LACERA's custodian for transaction charges associated with LACERA having a third-party lending agent.

## Performance by Provider

### State Street

LACERA's custodial lending agent generated over \$2.3 million in income during calendar year 2018. Of this amount, \$1.0 million came from lending activity, while \$1.3 million came from collateral reinvestment. State Street's earnings declined year-over-year by approximately \$0.2 million (-9.0%) which was largely attributed to lower demand spreads in the Treasury and Agency markets. The Fed increased issuance of Bills, Notes, and Bonds by approximately \$500 billion during the year. The increase in supply caused demand spreads to drop. This led to the pronounced decline in State Street's lending income of roughly 35% which was offset by an increase in reinvestment income. Reinvestment income was helped by rate hikes in 2018 which added 9 basis points to reinvestment spread. Loan collateralized by cash dropped, while non-cash collateralized loans increased by 16%.

GSAL

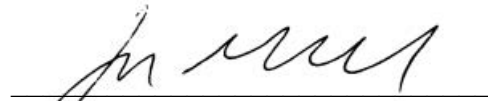
GSAL, LACERA's third-party lending agent for domestic equities and corporate bonds, produced nearly \$3.5 million in income during calendar year 2018. When compared to earnings generated in the prior year, total income earned in 2017 was higher by approximately \$0.9 million. The growth was driven by continued strength in corporate bond lending which saw an increase of \$119.6 million (42%). Cash reinvestment was also strong, helped by higher interest rates. Equity lending saw softness year-over-year dropping 35.3 million (12%). LACERA's top ten earning positions produced 23% of the revenue for 2018, versus 28% in 2017.

**CONCLUSION**

LACERA's Securities Lending Program generated approximately \$5.8 million in net income during calendar year 2018, an increase of \$0.6 million compared to the prior year. The increase in net income was driven by improved utilization and higher collateral reinvestment income. Both lending agents benefited from an increase in collateral levels and reinvestment spreads. Future results from the program will largely depend on LACERA's new asset allocation which increases non-lendable assets such as infrastructure and natural resources. Furthermore, regulatory capital requirements will continue to drive the use of non-cash collateral. As a result, brokers will search for lenders with flexible collateral schedules. LACERA's continued acceptance of non-cash collateral could help in elevating utilization levels and revenues without increasing reinvestment risk.

Attachments

Noted and Reviewed:



Jonathan Grabel  
Chief Investment Officer

## WHAT IS SECURITIES LENDING?

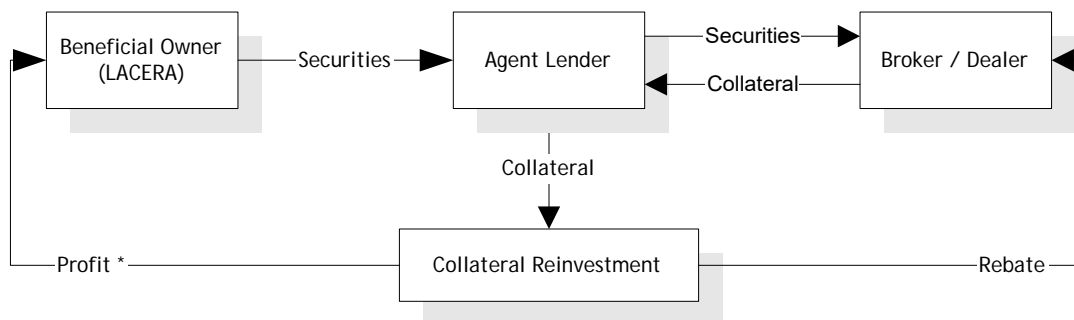
Securities lending is an activity where a beneficial owner (such as LACERA) lends its securities to qualified borrowers (such as broker/dealers) in exchange for collateral (typically cash). The collateral is invested in short-term, high quality fixed income instruments with the purpose of maximizing investment earnings at the lowest level of risk. When the borrower returns the securities to the beneficial owner, the collateral is then given back to the borrower with interest – this is known as the **rebate**. Earnings from the reinvestment of collateral in excess of the rebate represent the profit or securities lending income.

There are two types of service relationships: an agency relationship and a principal relationship.

**FIGURE 1** illustrates the flow of securities in an agency relationship.

**FIGURE 1**

### THIRD PARTY / CUSTODIAN AGENT RELATIONSHIP



\* Profit is split between LACERA and Agent Lender.

In an agency relationship, the agent (an intermediary between the beneficial owner and broker/dealers) is responsible for lending the securities to a qualified group of borrowers and for obtaining the collateral from the borrower. At the time the loan is initiated, the agent also negotiates the rebate that will eventually be paid to the borrower when the loaned securities are returned to the beneficial owner. The collateral is then invested in short-term securities by the agent or by a designated cash manager. Earnings from cash reinvestment minus the rebate paid to the borrower are divided between the agent and the beneficial owner based on a pre-determined split.

LACERA has two agency relationships: State Street (custodian agent), and Goldman Sachs Agency Lending (GSAL – third-party lending agent).

## WHAT ARE THE RISKS IN SECURITIES LENDING?

There are three key risks inherent in securities lending: 1) borrower default risk, 2) cash reinvestment risk, and 3) operational risk.

### Borrower Default Risk

This is the risk that the borrower may go bankrupt and therefore not return the securities on loan. In this case, LACERA may use the cash collateral and purchase the security in the open market. Please note that domestic loans are collateralized at 102% while international loans carry 105% collateral. Additionally, all loans are marked-to-market daily.

Under the terms of their lending agreements, all of LACERA's lending agents provide borrower default indemnification in the event a borrower does not return securities on loan. The terms of the lending agreements entitle LACERA to terminate all loans upon the occurrence of default and purchase a like amount of "replacement securities." In the event the purchase price of replacement securities exceeds the amount of collateral, the lending agent shall be liable to LACERA for the amount of such excess, with interest. Either LACERA or the borrower of the security can terminate a loan on demand.

### Cash Reinvestment Risk

This is the risk that the earnings generated by cash reinvestment are not sufficient to cover the rebate paid to the borrower. There are two key sources of risk in the reinvestment of cash: credit risk and interest rate risk. Credit risk is the risk that the investment depreciates as a result of a credit quality downgrade or bond issuer default. Interest rate risk occurs when the return on the portfolio is less than the rebate rate. To manage these risks, securities lending cash portfolios are well diversified and invested in highly liquid, high credit quality, short-term fixed income securities.

### Operational Risk

This risk includes: 1) sell fail risk—failure by the borrower to return a loaned security that LACERA's investment manager has sold, 2) mark-to-market—failure to conduct daily market valuations and maintain appropriate collateral in the event of borrower default, 3) collection of income—failure to collect dividends and interest paid on loaned securities, and 4) corporate actions—failure to ensure accurate adjustments and maintain collateral levels as a result of stock splits and stock dividends.

Utilizing entities with highly sophisticated and advanced trading systems mitigates these risks. Additionally, borrower loan levels, mark-to-market activities, and investment guideline compliance are among the risks routinely monitored by staff.

**FOR INFORMATION ONLY**

May 3, 2019

TO: Each Member  
Board of Investments

FROM: Ted Wright, CFA, FRM, PRM, CAIA <sup>TW</sup>  
Principal Investment Officer

Brenda Cullen <sup>BC</sup>  
Investment Officer

FOR: May 15, 2019 Board of Investments Meeting

SUBJECT: **SYSTEMATIC FINANCIAL MANAGEMENT – ORGANIZATIONAL  
UPDATE**

Systematic Financial Management, L.P. (“Systematic”) has managed a small cap value mandate for LACERA since July 2018. The market value of the LACERA portfolio managed by Systematic was approximately \$225 million as of March 31, 2019. Systematic had \$3.3 billion in total firm-wide assets as of the same date.

On April 10, 2019, LACERA was notified that Systematic was closing its Catalyst Value equity product as outflows in that discipline, following an extended medical leave of the primary portfolio manager, had rendered the product unprofitable.

These strategies represented \$584 million of the firm’s total \$3.3 billion in assets under management (“AUM”) as of March 31, 2019, a reduction of approximately \$2.5 billion since December 31, 2017. Systematic intends to continue managing the remaining accounts in the catalyst value discipline until clients make alternative arrangements or the close of business on September 30, 2019, whichever comes first.

Systematic is a wholly owned but autonomous affiliate of Affiliated Managers Group, Inc. (NYSE: AMG), a global asset management company with equity investments in leading boutique investment management firms. Although Systematic operates independently from its parent, AMG does provides the firm with centralized support capabilities such as marketing, distribution, product development, and legal/compliance. Systematic expects no change in its relationship with AMG as a result of the strategies’ closure; however, the firm plans to reduce its internal headcount to better align with remaining assets, focusing remaining team members on its two continuing disciplines, Free Cash Flow and Disciplined Value.

Assets under management in the firm’s Small Cap Value Free Cash Flow strategy, in which LACERA is invested, totaled \$2.0 billion as of March 31, 2019, and are described as stable with

Each Member, Board of Investments

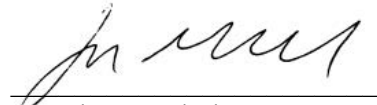
May 3, 2019

Page 2 of 2

no announced account terminations and, instead, the prospect for growth, both from new wins as well as from potential conversions from the closing strategies. The strategy's three-person dedicated investment team, also depicted as stable, will be bolstered by three additional dedicated analysts as a result of the Catalyst Value strategies' closure.

It remains to be seen how the planned closure will affect the firm's culture, philosophy, investment process, and ultimately, its performance. Accordingly, staff will continue to monitor Systematic closely and will report any further significant developments to the Board.

Noted and Reviewed:



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Jonathan Grabel  
Chief Investment Officer

JG:TW:bc

**FOR INFORMATION ONLY**

May 3, 2019

TO: Each Member  
Board of Investments

FROM: Jonathan Grabel   
Chief Investment Officer

FOR: May 15, 2019 Board of Investments

**SUBJECT: IMPLEMENTATION UPDATE ON LACERA PENSION TRUST STRATEGIC ASSET ALLOCATION**

At the May 9, 2018 Board of Investments meeting (BOI), the Board approved a new Strategic Asset Allocation (SAA) for LACERA’s Pension Trust. At the July 9, 2018 BOI Offsite, a prospective implementation plan was reviewed.

During the BOI Offsite, staff noted that the SAA could be prudently implemented in the next 12 to 24 months. **Table 1** below summarizes the status of the actions and reports as well as the timeline for transitioning to the new SAA targets. Future items that require BOI approval will be placed on the agenda of subsequent meetings along with supporting documentation.

**Table 1  
Strategic Asset Allocation Implementation Timeline**

Implementation Steps	Target Dates for Completion or Discussion
<b>Determine the appropriate policy ranges for the Pension Trust Asset Allocation</b>	Completed
<b>Identify the appropriate benchmarks for the Pension Trust Asset Allocation</b>	Completed
<b>Update Governance Documents</b> <ul style="list-style-type: none"> <li>• Investment Policy Statement</li> <li>• Procedures manual</li> </ul>	Completed 4 <sup>th</sup> Quarter of 2019
<b>Align Management and Oversight</b> <ul style="list-style-type: none"> <li>• Align Committees to new SAA</li> <li>• Staffing                             <ul style="list-style-type: none"> <li>• Real Assets – PIO</li> <li>• Real Assets – FA-III</li> <li>• Real Assets – FA-II</li> <li>• Portfolio Analytics – SIO</li> <li>• Portfolio Analytics – FA-II</li> <li>• Portfolio Analytics – FA-I</li> </ul> </li> </ul>	Completed  Completed 2 <sup>nd</sup> Quarter of 2019 3 <sup>rd</sup> Quarter of 2019 Completed Completed Completed

<ul style="list-style-type: none"> <li>• Consultant searches</li> </ul>	Approved – In Process
<b>Growth</b> <ul style="list-style-type: none"> <li>• Public Equities <ul style="list-style-type: none"> <li>• Implementation of structure review <ul style="list-style-type: none"> <li>• Reduce public equity exposure</li> <li>• Factor mandate</li> </ul> </li> </ul> </li> <li>• Private Equity <ul style="list-style-type: none"> <li>• Investment plan</li> <li>• Secondary sale</li> </ul> </li> <li>• Opportunistic Real Estate <ul style="list-style-type: none"> <li>• Implement structure review and investment plan</li> </ul> </li> </ul>	In Process In Process In Process  Completed Completed  Ongoing
<b>Credit</b> <ul style="list-style-type: none"> <li>• Conduct consultant search – Credit</li> <li>• Implementation of Credit structure review <ul style="list-style-type: none"> <li>• Realign weights with targets</li> <li>• Resize current liquid managers</li> </ul> </li> <li>• Conduct new mandate searches</li> </ul>	Approved – In Process In Process  Ongoing
<b>Risk Reducing &amp; Mitigation</b> <ul style="list-style-type: none"> <li>• Conduct consultant search – Hedge Funds</li> <li>• Implementation of Fixed Income structure review <ul style="list-style-type: none"> <li>• Potential manager rebalancing and consolidation</li> </ul> </li> <li>• Conduct RFP for cash overlay program</li> </ul>	Approved – In Process In Process  Approved – In Process
<b>Real Assets &amp; Inflation Hedges</b> <ul style="list-style-type: none"> <li>• Conduct consultant search – Real Assets</li> <li>• RFP for a completion portfolio</li> <li>• Add TIPS through invitation to bid process</li> <li>• Conduct new mandate searches</li> </ul>	Approved – In Process Approved – In Process Completed Pending New Consultant
<b>Adapt Portfolio Analytics</b> <ul style="list-style-type: none"> <li>• Analytics Reporting</li> <li>• Performance Reporting</li> <li>• Interim Benchmarks and Policy Weights</li> </ul>	Second Quarter 2019 Second Quarter 2019 Second Quarter 2019
<b>Complete operational updates at State Street</b>	Ongoing
<b>Transition to updated asset allocation</b>	September 2018 – June 2020

This timeline allows for a comprehensive review and revision of LACERA’s Pension Trust Investment Policy Statement as well as pertinent operational changes including composite structure, custodian accounts, investment management agreements and new target allocations. Barring any unforeseen circumstances, staff expects to complete the transition by June 2020. This document will be updated monthly, communicating the progress of individual steps and provided to the BOI throughout the implementation process.



**FOR INFORMATION ONLY**

April 16, 2019

TO: Each Member  
Board of Retirement  
Board of Investments

FROM: Lou Lazatin  
Chief Executive Officer

Steven P. Rice *SPR*  
Chief Counsel

FOR: May 1, 2019 Board of Retirement Meeting  
May 15, 2019 Board of Investments Meeting

SUBJECT: Final Procedures and Schedule for 2019 Board Elections

Staff previously provided the Board of Retirement and Board of Investments with information about this year's LACERA Board elections, and specifically the County's intention to use e-voting. The Boards provided input about e-voting, which was shared with the County. The County acknowledged the Boards' comments and concerns and made efforts to address them. The Boards also requested that LACERA staff be actively engaged with County staff. As a result, LACERA staff communicated with County personnel as the election procedures were developed and finalized. The County and LACERA had a productive collaboration.

On April 9, 2019, the Board of Supervisors (BOS) adopted the resolution for this year's elections, which will be for the safety member seats on both Boards. The BOS Board letter and resolution are attached. The resolution provides for online e-voting and telephonic voting options. The election schedule is:

Nomination packages available: On and after Monday, May 20, 2019

Completed petitions/qualifications due: Tuesday, June 18, 2019

Voting Period: Monday, August 5, 2019 to Friday, August 30, 2019

Election results confirmed by BOS Executive Officer: By Monday, September 9, 2019

Results declared official by the BOS: By Tuesday, October 15, 2019

The term of office begins on January 1, 2020.

Attachments

c: Jonathan Grabel  
JJ Popowich



CELIA ZAVALA  
EXECUTIVE OFFICER

# COUNTY OF LOS ANGELES BOARD OF SUPERVISORS

KENNETH HAHN HALL OF ADMINISTRATION  
500 WEST TEMPLE STREET, ROOM 383  
LOS ANGELES, CALIFORNIA 90012  
(213) 974-1411 • FAX: (213) 620-0636

## MEMBERS OF THE BOARD

HILDA L. SOLIS

MARK RIDLEY-THOMAS

SHEILA KUEHL

JANICE HAHN

KATHRYN BARGER

# ADOPTED

BOARD OF SUPERVISORS  
COUNTY OF LOS ANGELES

17 April 9, 2019

CELIA ZAVALA  
EXECUTIVE OFFICER

April 09, 2019

The Honorable Board of Supervisors  
County of Los Angeles  
383 Kenneth Hahn Hall of Administration  
500 West Temple Street  
Los Angeles, California 90012

Dear Supervisors:

## **ELECTION OF THE SEVENTH MEMBER AND ALTERNATE SAFETY MEMBER OF THE BOARD OF RETIREMENT AND THE FOURTH MEMBER OF THE BOARD OF INVESTMENTS (ALL DISTRICTS) (3-VOTES)**

### **SUBJECT**

ADOPTION OF RESOLUTION ESTABLISHING THE GOVERNING PROCEDURES FOR THE 2019 LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION (LACERA) ELECTION.

### **IT IS RECOMMENDED THAT THE BOARD:**

Adopt the attached resolution establishing the procedures to elect the Seventh Member and Alternate Safety Member of the Board of Retirement and the Fourth Member of the Board of Investments for the Los Angeles County Employees Retirement Association (LACERA), with three-year terms beginning on January 1, 2020, and expiring on December 31, 2022; and instruct the Executive Officer of the Board of Supervisors to send notice of the election and copies of the election resolution to all County departments that employ Safety Members of LACERA.

### **PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION**

The County Employees Retirement Law of 1937 provides for the membership of the Board of Retirement and the Board of Investments of LACERA. Every year the Board of Supervisors adopts, by resolution, the election procedures for members of the Board of Retirement and the Board of Investments of LACERA whose terms of office will expire on December 31st of that year.

### **Implementation of Strategic Plan Goals**

Approval of the attached resolution broadly supports the County Strategic Goal of Operational Effectiveness/Fiscal Responsibility and Accountability.

### **FISCAL IMPACT/FINANCING**

The cost of conducting the LACERA election will be absorbed within the Board of Supervisor's and the Registrar-Recorder/County Clerk's budgets.

### **FACTS AND PROVISIONS/LEGAL REQUIREMENTS**

Government Code Sections 31520.1 and 31520.2 grant the Board of Supervisors the authority to conduct the election for the elected members of the Board of Retirement and the Board of Investments. Your Board has given the Executive Officer of the Board of Supervisors the responsibility for coordinating these elections with the Registrar-Recorder/County Clerk, LACERA and with County departments through departmental election coordinators.

The election for the Seventh Member and Alternate Safety Member of the Board of Retirement and the Fourth Member of the Board of Investments is a regular election to fill terms of office that expire on December 31, 2019. Active Safety Members of LACERA on May 15, 2019, are eligible to vote in this election. The total eligible voting population in this election is approximately 13,000 persons. In an effort to reduce costs and increase voter turnout, voters will be able to cast their votes either online or by telephone, thereby eliminating the need for, and costs of, paper ballots.

### **IMPACT ON CURRENT SERVICES (OR PROJECTS)**

Besides the evident need to fill these offices on the Board of Retirement and the Board of Investments, this election provides an opportunity for Safety Members to participate in selecting board members whose official decisions have a great impact on their own retirement system. Thus, County departments must ensure that any communication from the Executive Officer concerning this election is posted and/or distributed in a timely manner. As always, departments will be called upon to respond immediately to situations that may surface. It is important to emphasize that the integrity of these elections often rests with a department's cooperation and active participation in the election process.

The Honorable Board of Supervisors

4/9/2019

Page 3

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Celia Zavala".

CELIA ZAVALA

Executive Officer, Board of Supervisors

CZ:dg

Enclosures

c: Chief Executive Officer  
County Counsel  
Chief Executive Officer, LACERA  
Registrar-Recorder/County Clerk  
Auditor-Controller  
Director, Internal Services Department

**RESOLUTION ESTABLISHING THE ELECTION FOR SEVENTH MEMBER AND  
ALTERNATE SAFETY MEMBER OF THE BOARD OF RETIREMENT  
AND FOURTH MEMBER OF THE BOARD OF INVESTMENTS**

WHEREAS, under the provisions of the County Employees Retirement Law of 1937, the Board of Retirement shall consist of nine members and two alternate members; the Board of Investments shall consist of nine members; and

WHEREAS, the term of the Seventh and Alternate Safety Member of the Board of Retirement, and Fourth Member of the Board of Investments, will expire on December 31, 2019; and

WHEREAS, pursuant to the provisions of the County Employees Retirement Law of 1937, Section 31520.1 and 31520.2 of the Government Code, a successor shall be elected to fill the offices for the term beginning January 1, 2020, at an election conducted in a manner to be determined by the Board of Supervisors:

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Los Angeles that the nomination of candidates and the election of the Seventh Member and Alternate Safety Member of the Board of Retirement, Los Angeles County Employees Retirement Association (LACERA), and election of the Fourth Member of the Board of Investments (LACERA), elected by the Safety Members of said Retirement Association to fill the term beginning January 1, 2020, and expiring December 31, 2022, shall be in accordance with the rules and process herein prescribed:

1. The Executive Officer of the Board of Supervisors shall administer the election for the Seventh Member and Alternate Safety Member of the Board of Retirement of LACERA, and the Fourth Member of the Board of Investments of LACERA.
  
2. The Executive Officer of the Board of Supervisors shall, on or before Tuesday, April 30, 2019, notify department heads who employ Safety Members of the election and shall provide department heads with an election notice for use in notifying their respective employees.

3. Department heads with Safety Member employees in their departments shall notify their employees of the election by posting sufficient copies of the election notice in work areas on or before Tuesday, May 14, 2019.
4. The Executive Officer of the Board of Supervisors, through a coordinated effort with the Internal Services and Auditor-Controller Departments, shall, on or before Friday, May 17, 2019, send an email to Safety Members within the County that have County email addresses, advising them of the upcoming LACERA election.
5. Each department head with Safety Members in his or her department shall appoint at least one employee who will act as the departmental election coordinator, and at least one employee who will act as the alternate departmental election coordinator. Election coordinators and alternate coordinators shall be responsible for communicating election information to the employees of the department, and shall attend all training sessions, as specified by the Executive Officer of the Board of Supervisors, regarding the administration of the election. Departments with work locations which have more than 100 employees who are eligible to vote are urged to select an on-site election coordinator for each of these locations. It is the responsibility of the department head to notify the Executive Office of the Board of Supervisors at (213) 974-1093 or email to LACERA\_ELECTION@bos.lacounty.gov the names, telephone numbers, work place mailing addresses and/or email addresses for employees appointed on or before Monday, May 13, 2019.
6. LACERA Safety Member candidates shall a) be active Safety Members of LACERA on May 15, 2019, b) submit the required documents in the nomination packet to the Registrar-Recorder/County Clerk's office and c) be nominated by a petition signed by at least fifty (50) active Safety Members of LACERA, who themselves were active Safety Members on May 15, 2019, and no member may sign more than one nominating petition. Nomination packets may be obtained from the Registrar-Recorder/County Clerk, 12400 Imperial Highway, Norwalk, 90650, on or after Monday, May 20, 2019. Nomination packets contain: (1) nomination petitions; (2) Candidate Statement of Qualifications Form; (3) resolution; and (4) candidate information booklet. Nominating petitions must be filed with the Registrar-

Recorder/County Clerk, 12400 Imperial Highway, Norwalk, 90650, no later than 5:00 p.m. on Tuesday, June 18, 2019.

7. Each department head shall allow nominees to solicit nominating signatures and candidates to engage in campaign-related activities during working hours on County property provided such signature solicitation and campaign activities are conducted during the employees' lunch, break time, or other off-duty time and does not interfere with County operations or the conduct of County business.
8. The Registrar-Recorder/County Clerk shall examine the signatures on the nominating petitions and notify each nominee of his or her status, no later than Friday, June 21, 2019. If the Registrar-Recorder/County Clerk determines that only one member has been duly nominated, pursuant to the provisions of the County Employees Retirement Law of 1937, Sections 31523 and 31523.1 of the Government Code, the Registrar-Recorder/County Clerk shall notify the Board of Supervisors and the Board of Supervisors shall order that no election be held and the Executive Officer of the Board of Supervisors shall be directed to cast a unanimous ballot in favor of such nominated member. If more than one member has been duly nominated, The Registrar-Recorder/County Clerk shall certify to the Executive Officer of the Board of Supervisors by Friday, June 21, 2019, the names of the candidates to be placed on the official ballot.
9. Nominees in this election may file with the Registrar-Recorder/County Clerk a statement of qualifications of not more than 200 words. Words shall be counted as provided in Elections Code Section 9. Any statement of qualifications filed with the Registrar-Recorder/County Clerk shall be limited to a recitation of the nominee's own personal background and qualifications, and shall not in any way make reference to other nominees or to another nominee's qualifications. A nominee may file his or her statement of qualifications beginning Monday, May 20, 2019 and ending Tuesday, June 18, 2019. No statement of qualifications may be withdrawn and/or re-filed after 5:00 p.m., Tuesday, June 18, 2019. The statement shall become a part of the official voting material, except as provided in paragraph 10, below.

10. Within 5 days of receipt of a candidate's statement of qualifications, the Registrar-Recorder/County Clerk shall examine the statement of qualifications. Any statement of qualifications which the Registrar-Recorder/County Clerk determines is not limited to a recitation of the nominee's own personal background and qualifications or which includes any reference to other nominees or to another nominee's qualifications shall not be printed or circulated by the Registrar-Recorder/County Clerk. The Registrar-Recorder/County Clerk shall notify each nominee by telephone at his or her telephone number that the nominee has provided, and via U.S. Mail sent to the nominee's mailing address if the nominee's statement of qualifications is rejected pursuant to this provision. The decision of the Registrar-Recorder/County Clerk to accept or reject a nominee's statement of qualifications is final. However, a candidate may re-file a statement of qualifications for reconsideration prior to 5:00 p.m., Tuesday, June 18, 2019. Any judicial proceeding challenging the decision of the Registrar-Recorder/County Clerk to reject or accept a nominee's statement of qualifications shall be governed, to the extent determined applicable by the courts, under the procedures set forth in Elections Code Section 13314.
  
11. Candidates' statements of qualifications will be available for public inspection at the Registrar-Recorder/County Clerk, 12400 Imperial Highway, Norwalk, 90650, beginning on Monday, June 24, 2019, and ending at 5:00 p.m. Friday, June 28, 2019. On Monday, July 1, 2019, candidates' statements of qualifications approved by the Registrar-Recorder/County Clerk may be viewed at:  
  
<http://bos.co.la.ca.us/Services/ConflictofInterest/LACERAElection.aspx>
  
12. A public drawing will be held to determine the ballot order at 2:00 p.m. on Wednesday, June 26, 2019, in the Executive Office of the Board of Supervisors, B-1 Kenneth Hahn Hall of Administration, 500 West Temple Street, Los Angeles.
  
13. Any County employee who is a candidate in this election is a candidate in his or her personal capacity, and may not use County time or County resources to further his or her campaign or election. Any candidate who violates this provision, or has others violate this provision on behalf of his or her candidacy, is subject to discipline, including discharge from County employment.



14. Each department head shall designate existing departmental bulletin board space for all candidates to display campaign material. Campaign material shall clearly state that employees are prohibited from using County time or County resources to further the campaign or election of the candidate.
15. Upon request of a candidate, on or after Monday, June 24, 2019, each department head shall provide the address of each department's work locations where employees who are eligible to vote in this election are employed.
16. Except as otherwise prohibited by law, employees may wear campaign badges or buttons during working hours.
17. Eligible voters will be able to cast their votes either online or by telephone beginning Monday, August 5, 2019, through the closing of the election on Friday, August 30, 2019. The online voting system will be provided through a secure website and can be accessed using any web enabled device. The telephone voting system will be provided through a dedicated toll-free number for voters using a touch-tone dial pad. The online voting and telephone system shall be available 24 hours per day, seven days a week, with 99% up-time during the voting period.
18. Members eligible to vote in this election shall be Safety Members of LACERA on May 15, 2019. In coordination with the Auditor-Controller and Internal Services Department, the Executive Officer of the Board of Supervisors will obtain an electronic file of eligible Safety Members who were active Safety Members of LACERA on May 15, 2019.
19. Safety Members eligible to vote in this election who have valid County email addresses will be sent login credentials to their County email address on opening voting day Monday, August 5, 2019. The email will contain: (1) a URL link to the online voting website; (2) toll-free number to the telephone voting system; (3) username, identified as the employee number; (4) unique pin number; (5) voting instructions; and (6) links to candidate statements (if applicable) and statement of

powers and duties of Board of Retirement Member (Attachment A) and Board of Investments Member (Attachment B). An added layer of security will require eligible voters to provide additional identifying information before gaining access to the online or telephone voting system.

Eligible voters who do not have a valid email address will be identified before the election period and will receive login credentials and voter information by U.S. mail that will be mailed no later than 5:00 p.m. on Thursday, August 1, 2019.

20. The online voting system will require voters to enter their login credentials and other identifying information. Once logged in, the online voting website will include the following: (1) a list of the certified candidates and sufficient information to acquaint members with the nature of the election and the proper method of casting an electronic ballot; (2) a link to the statements of qualifications if properly filed by the candidate; and (3) a link to the statement of powers and duties of the Board Members. Voters will be able to mark their selection for each seat and make changes before confirming their final selections.
21. The telephone voting system will require voters to enter their login credentials and other identifying information before accessing their telephonic ballot. The telephone system will play a recording of the election seat and the candidates for the seat, along with a corresponding number for the voter to select the candidate of their choosing, or allow the voter to move on to the next election seat if they choose not to cast a vote for any candidate. Once the voter has selected the corresponding number of the candidate they wish to vote for using their touch-tone dial pad, the telephone system will ask the voter to confirm the vote or go back to the menu selection of candidates. If the voter confirms their candidate selection, the telephone system will proceed to the next election seat following the same steps noted in this paragraph.
22. No member may vote more than once in this election. The online and telephone system will include controls to prevent a voter from accessing their online or telephonic ballot if a ballot has been cast. Eligible voters will have the opportunity to

review their final selections before casting their online/telephonic vote as final. Once a final ballot is cast by the voter, a unique receipt code will be displayed online for the voter to print or write down for reference, and receipt codes provided by the telephone voting system will be recited for the voter to write down.

23. The Executive Office of the Board of Supervisors shall provide eligible voters with the contact information to use if voter assistance is needed. Contact information will be provided with the login information sent to voters, listed on the online voting system, and posted on the Executive Office of the Board of Supervisors' website.
24. The Executive Officer of the Board of Supervisors shall confirm the election results on or before Monday, September 9, 2019.
25. The Executive Office of the Board of Supervisors shall (a) telephone each candidate receiving more than 20 percent of the total votes cast at his or her telephone number provided as to the results on or before Monday, September 9, 2019, and (b) send written notice of the results via U.S. Mail to each candidate's mailing address, or send electronic mail to those candidates who prefer electronic communication on or before Monday, September 9, 2019.
26. In the event any candidate desires to protest the results of the election, he or she must file a written protest with the Executive Office of the Board of Supervisors no later than 5:00 p.m., Friday, September 13, 2019. The written protest must specify the grounds for the protest and be accompanied by supporting documentation.
27. In the event that a candidate makes a request for a recount, the requestor shall bear the cost of such recount and shall file a written request with the Executive Officer of the Board of Supervisor no later than 5:00 p.m., Friday September 13, 2019. The requester of the recount shall, before the recount is commenced deposit with the Executive Officer of the Board of Supervisors a sum as required by the Executive Officer of the Board of Supervisors to cover the cost of the recount. The Executive Officer of the Board of Supervisors shall commence a recount no later than Friday, September 20, 2019. In the event the recount results in a determination that the

candidate who requested the recount has received a plurality of the votes cast, all money deposited shall be returned to the requester.

28. The Board of Supervisors at its meeting on or before Tuesday, October 15, 2019, or on a date following the completion of any recount and/or investigation of a protest, shall declare the results official. The person receiving the highest number of votes for the Seventh Member, Board of Retirement, and Fourth Member, Board of Investments, shall be declared elected. The elected Alternate Safety Member of the Board of Retirement shall be that candidate, if any, for the Seventh Member from the group under Government Code Section 31470.2 or 31470.4, or any other eligible Safety Member candidate, if there is no eligible candidate from the groups under Sections 31470.2 and 31470.4 which is not represented by the candidate who received the highest number of votes of all candidates in that group. In the event of a tie, such persons shall determine which of them shall be elected by drawing lots before the Board of Supervisors.
29. In lieu of declaring the results official, the Board of Supervisors may order a new election if the Board determines, on the basis of written protest or on its own motion, that any error, omission or neglect occurred attributable to the County in the administration of the election sufficient to change the result. The rejection of a candidate's statement of qualifications by the Registrar-Recorder/County Clerk, or the failure of the Registrar-Recorder/County Clerk to reject a candidate's statement of qualifications shall not constitute grounds for a new election. Allegations of candidate misconduct shall not constitute grounds for a new election, but if later substantiated may lead to administrative discipline or criminal culpability.
30. Election material/data retained by the Executive Office of the Board of Supervisors and its affiliates; nominating petitions retained by the Registrar-Recorder/County Clerk may be discarded or otherwise disposed of no earlier than sixty (60) days after the date of the final declaration of the election results by the Board of Supervisors.
31. The Executive Officer of the Board of Supervisors may, in the exercise of her discretion, implement additional procedures, as she may deem necessary in order to

preserve a fair and equitable election process. The Executive Officer of the Board of Supervisors shall, within ten (10) days, notify the Board of Supervisors, the Boards of Investments and Retirement and all candidates of any additional procedures implemented pursuant to this provision.

The foregoing resolution was adopted on the 9<sup>th</sup> day of April, 2019, by the Board of Supervisors of the County of Los Angeles and ex officio the governing body of all other special assessment and taxing districts, agencies and authorities for which said Board so acts.



Celia Zavala, Executive Officer-  
Clerk of the Board of Supervisors of the  
County of Los Angeles

By: *Tanya Ruiz*  
Deputy

APPROVED AS TO FORM:  
MARY WICKHAM  
County Counsel

By *Gina Eachus*  
Gina Eachus  
Senior Deputy County Counsel

**POWERS AND DUTIES  
OF RETIREMENT BOARD MEMBERS**

The Board of Retirement provides this summary to enable voters to evaluate candidates for the Board. The Board urges voters to review this summary prior to voting.

**INTRODUCTION**

The overall responsibility of the Board of Retirement is to oversee the administration of the retirement pension system and the retiree health care program to ensure that members are provided with the promised benefits upon completion of their public service with Los Angeles County and other participating public employers. In total, members of the Board of Retirement can expect to commit approximately 120-140 hours of their time each month to discharging their duties to the retirement system.

As to those elected Board members who are employed by the County or a participating district, the law provides that these LACERA duties are included as part of their County or other public employment and shall normally take precedence over any other duties. Given the time commitment necessary to fulfill the responsibilities of Board membership, elected Board members will be required to spend a great majority of their working time each month in carrying out their important LACERA duties and responsibilities.

The responsibilities and duties of Board members are explained in detail below.

**BOARD MEMBER RESPONSIBILITIES**

A Board member's duties include:

1. **Board and Committee Meetings.** The Board meets twice each month unless otherwise specified, usually on the first Wednesday and second Thursday, with each meeting generally lasting from 6 to 8 hours. In addition, the Board has established committees to assist in carrying out its responsibilities. The Board also shares additional committees jointly with the system's Board of Investments, including the Audit Committee. Some committees meet monthly; others meet less frequently but up to several times per year. Committee meetings may be held both before and after regular Board meetings, and at other times, and generally last 1 to 2 hours. In addition to the time required to attend meetings, considerable time is required to prepare for meetings and review relevant materials developed by staff and management.
2. **General Management.** The general management of LACERA is under the Board of Retirement's oversight. To exercise this responsibility, the Board establishes policies, procedures, and governance processes, and

receives, discusses, and questions reports on operational activities. A few management functions are shared with the Board of Investments. The Boards of Retirement and Investments, acting jointly, adopt the annual budget covering LACERA's operations. The two Boards also act jointly in certain employee relations matters, including approval of Memoranda of Understanding (MOU's) negotiated with SEIU Local 721, the union bargaining for represented employees of LACERA, and approval of compensation to be provided to LACERA's nonrepresented employees. The Board of Retirement is not responsible for investments or for the adoption of funding policies and the setting of contribution rates. The Legislature assigned those responsibilities to the Board of Investments.

3. ***Payment of Retirement Pension Benefits.*** The Board of Retirement administers a statutory retirement plan; it does not establish retirement benefits. This means that retirement benefits can only be provided if they have been authorized by the State Legislature in the County Employees Retirement Law of 1937, found in the California Government Code beginning at Section 31450, and the California Public Employees' Pension Reform Act of 2013, found in the California Government Code beginning at Section 7522. Retirement benefits not authorized by the retirement laws cannot be implemented by the Board of Retirement; rather, a bill must be processed through the Legislature to amend the retirement laws. With only a few exceptions, the Legislature has required the County Board of Supervisors to adopt a resolution approving benefit enhancements before they can take effect.
4. ***Disability Retirement Applications.*** One of the most important – and by far the most time consuming – duties of a Board member is to review disability retirement applications and to participate in the Board's decision to grant or deny disability retirements according to applicable legal standards. It is anticipated the Board of Retirement will process approximately 30 to 50 disability retirement cases per month. Board members carefully review each application and the medical evidence supporting the application. A Board member will then participate in the Board's deliberations and vote on each application.
5. ***Retiree Healthcare Benefits.*** The Board oversees the administration of retiree healthcare benefits under contract with the County and other participating employers.
6. ***Claims and Litigation.*** The Board decides claims made by members concerning their benefits and related issues. The Board also oversees litigation, other than securities litigation.
7. ***Retention and Oversight of Vendors, Consultants, and Experts.*** The Board approves and oversees the retention and performance of vendors, consultants, and experts to assist in the administration of the system and to aid the Board when appropriate.

8. **Delegation.** The day-to-day operations of the retirement system are delegated to staff and outside service providers. Board members consider what responsibilities will be delegated and to whom delegation is made. Board members ensure that delegated responsibilities are properly performed through monitoring, questioning, and accountability.
9. **Legal Compliance.** The Board ensures that the retirement system maintains compliance with the plan documents and all applicable laws governing the system. Board members comply with this responsibility by conducting a periodic review of plan documents and monitoring changing legal requirements.
10. **Education.** Board members are legally required to educate themselves on appropriate topics, which may include benefits administration, disability evaluation, fair hearings, pension fund governance, new board member orientation, ethics, and fiduciary responsibilities, among other topics. Such education must consist of a minimum of 24 hours within two years of assuming office and 24 hours every subsequent two-year period the member continues on the Board.
11. **Involvement.** Board members may participate in state and national pension and retirement related organizations, including serving as an executive or committee member in these organizations. Board members may also represent LACERA's interests through engagement with the legislative and executive branches of state and federal government.

## FIDUCIARY DUTIES

Board members have the following fiduciary duties:

1. **Duty of Loyalty.** The California Constitution provides that Board of Retirement members are fiduciaries and are required to, "discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. A retirement board's duty to its participants and their beneficiaries shall take precedence over any other duty." All Board members, whether elected or appointed, have the same fiduciary duty. The Board members' duty of loyalty at all times is to the participants and beneficiaries as a whole. Board members do not serve as the agent or representative of the agency or group responsible for their election or appointment. Where different groups of participants have different interests on an issue, Board members have a duty to be impartial as between conflicting participant interests and act to serve the overall best interests of all of the participants of the system.
2. **Duty of Care.** The California Constitution provides that assets of the retirement system are trust funds to be used only for the purpose of



providing benefits and paying the costs of administering the system. Under the Constitution, members of the Board of Retirement “shall discharge their duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.”

The duty of care means that Board members must exercise reasonable effort and diligence in administering and exercising oversight over the system, including: implementing, and periodically reviewing and updating, policies, procedures, and processes; requesting necessary reports and information; analyzing the information, advice, and recommendations received; asking questions; seeking expert advice when required from staff and outside expert consultants; deliberating carefully before making decisions; and understanding the reason for actions before taking them. Board members must monitor the administration of the system, follow the plan documents and applicable law, and take corrective action when required to ensure the sound administration of the system so that benefits and related services are timely and correctly delivered to participants and their beneficiaries and the other matters under the responsibility of the Board of Retirement are properly performed.

## **CONFLICTS OF INTEREST**

Board members must be free of conflicts of interest in compliance with applicable legal requirements and LACERA’s Conflict of Interest Code and Code of Ethical Conduct. Board members must disclose conflicts of interest when they arise, and they cannot participate in decisions that will impact, positively or negatively, their own financial interests or the interests of certain of their related persons and entities. Board members are public officials under California conflict of interest laws, and they must be familiar with and follow those laws. Board members are subject to public disclosure of their economic interests and annual reporting requirements under the Political Reform Act and Fair Political Practices Commission regulations. Violation of conflict of interest laws and regulations can result in civil and criminal penalties. Conflict of interest laws and regulations are complex, and Board members should seek legal advice when appropriate. See <http://www.fppc.ca.gov/> for more information.

APPROVED BY THE BOARD OF RETIREMENT ON FEBRUARY 14, 2019.

**POWERS AND DUTIES  
OF INVESTMENTS BOARD MEMBERS**

The Board of Investments provides this summary to enable voters to evaluate candidates for the Board. The Board urges voters to review this summary prior to voting.

**INTRODUCTION**

The Board of Investments oversees investment of LACERA's pension retirement fund (\$56.3 billion as of June 30, 2018) and determination of County and member contribution rates. In total, members of the Board of Investments can expect to commit approximately 80 hours of their time each month to discharging their duties to the retirement system.

As to those elected Board members who are employed by the County or a participating district, the law provides that these LACERA duties are included as part of their County or other public employment and shall normally take precedence over any other duties. Given the time commitment necessary to fulfill the responsibilities of Board membership, elected Board members will be required to spend a great majority of their working time each month in carrying out their important LACERA duties and responsibilities.

The responsibilities and duties of Board members are explained in detail below.

**BOARD MEMBER RESPONSIBILITIES**

A Board member's duties include:

1. ***Board and Committee Meetings.*** The Board meets once each month unless otherwise specified, usually on the second Wednesday, with each meeting generally lasting from 6 to 8 hours. In addition to the time required to attend meetings, approximately 24 hours per meeting is required to prepare for meetings and review relevant materials developed by staff and management. The Board has established committees to assist in carrying out its responsibilities. The Board also shares additional committees jointly with the system's Board of Retirement, including the Audit Committee. Committee meetings may be held both before and after regular Board meetings, and at other times, and generally last 1 to 2 hours per committee plus additional preparation time of a similar or greater number of hours.
2. ***Pension Fund Investments.*** The Board of Investments has exclusive control of all retirement system investments and is responsible for establishing investment beliefs and objectives, the asset allocation for the portfolio, strategies, policies, and governance processes, which are subject to change by Board action. The Board evaluates risk and return,

including consideration of corporate governance issues. The Board makes these decisions based on information and input provided by staff and external consultants. Currently, LACERA's investment portfolio is, with a few exceptions, externally managed. The Board does not make individual investment selections for the externally managed portfolio; rather, it selects investment advisors and managers to make investments for LACERA in accordance with investment objectives and guidelines established by the Board. The Board of Investments and its staff then regularly monitor and evaluate the investment activities and results of its advisors and managers.

3. **Retiree Healthcare Funds.** Under agreement with the County and other participating employers, the Board of Investments manages and invests trust funds prepaid for future retiree healthcare benefits.
4. **Contribution Rates and Actuarial Services.** Using an actuarial valuation process, the Board of Investments determines the level of contributions necessary to fund retirement benefits. The Board of Investments is responsible for setting actuarial valuation policies, selecting the actuary who will perform the valuation, and approving the actuarial valuation services provided. The actuary submits to the Board of Investments for the Board's approval such changes in County and member contribution rates as are necessary to fund retirement benefits.
5. **Securities Litigation.** The Board of Investments, with the assistance of counsel and staff, is charged with actively identifying, evaluating and monitoring securities class action lawsuits in which the fund has sustained a loss, and to determine whether the best interests of the fund are served by actively participating in such cases.
6. **Other Fund Management.** A few management functions are shared with the Board of Retirement. The Boards of Retirement and Investments, acting jointly, adopt the annual budget covering LACERA's operations. The two Boards also act jointly in certain employee relations matters, including the approval of class specifications for LACERA's employees, the approval of Memoranda of Understanding (MOU's) negotiated with SEIU Local 721, the union bargaining for represented employees of LACERA, and the approval of compensation to be provided to LACERA's nonrepresented employees. The Board of Investments is not responsible for general administration of the retirement system and benefits. The Legislature assigned those responsibilities to the Board of Retirement.
7. **Retention and Oversight of Vendors, Consultants, and Experts.** The Board approves and oversees the retention and performance of vendors, consultants, and experts to assist in system operations and aid the Board when appropriate.

8. **Delegation.** The day-to-day investment operations of the retirement system are delegated to staff and outside service providers. Board members consider what responsibilities will be delegated and to whom delegation is made. Board members ensure that delegated responsibilities are properly performed through monitoring, questioning, and accountability.
9. **Legal Compliance.** The Board ensures that the retirement system maintains compliance with the plan documents and all applicable laws governing the system. Board members comply with this responsibility by conducting a periodic review of plan documents and monitoring changing legal requirements.
10. **Education.** Board members are legally required to educate themselves on appropriate topics, which may include pension fund investments and investment management processes, actuarial matters, pension funding, pension fund governance, new board member orientation, ethics, and fiduciary responsibilities, among other topics. Such education must consist of a minimum of 24 hours within two years of assuming office and 24 hours every subsequent two-year period the member continues on the Board.
11. **Involvement.** Board members may participate in state and national pension and investment related organizations, including serving as an executive or committee member in these organizations. Board members may also represent LACERA's interests through engagement with the legislative and executive branches of state and federal government.

## FIDUCIARY DUTIES

Board members have the following fiduciary duties:

1. **Duty of Loyalty.** The California Constitution provides that Board of Investments members are fiduciaries and are required to, "discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. A retirement board's duty to its participants and their beneficiaries shall take precedence over any other duty." All Board members, whether elected or appointed, have the same fiduciary duty. The Board members' duty of loyalty at all times is to the participants and beneficiaries as a whole. Board members do not serve as the agent or representative of the agency or group responsible for their election or appointment. Where different groups of participants have different interests on an issue, Board members have a duty to be impartial as between conflicting participant interests and act to serve the overall best interests of all of the participants of the system.

2. ***Duty of Care.*** The California Constitution provides that assets of the retirement system are trust funds to be used only for the purpose of providing benefits and paying the costs of administering the system. Under the Constitution, members of the Board of Investments “shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so.” Governing law provides that the Board “may, in its discretion, invest, or delegate the authority to invest, the assets of the fund through the purchase, holding, or sale of any form or type of investment, financial instrument, or financial transaction when prudent in the informed opinion of the board.” The Constitution further requires that Board members “shall discharge their duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.”

The duty of care means that Board members must exercise reasonable effort and diligence in administering and exercising oversight over the investments of the system, including: implementing, and periodically reviewing and updating, policies, procedures, and processes; requesting necessary reports and information; analyzing the information, advice, and recommendations received; asking questions; seeking expert advice when required from staff and outside expert consultants; deliberating carefully before making decisions; and understanding the reason for actions before taking them. Board members must monitor the investments of the system, follow the plan documents and applicable law, and take corrective action when required to ensure the sound administration of the retirement fund’s investments and the other matters under the responsibility of the Board of Investments are properly performed.

## **CONFLICTS OF INTEREST**

Board members must be free of conflicts of interest in compliance with applicable legal requirements and LACERA’s Conflict of Interest Code and Code of Ethical Conduct. Board members must disclose conflicts of interest when they arise, and they cannot participate in decisions that will impact, positively or negatively, their own financial interests or the interests of certain of their related persons and entities. Board members are public officials under California conflict of interest laws, and they must be familiar with and follow those laws. Board members are subject to public disclosure of their economic interests and annual reporting requirements under the Political Reform Act and Fair Political Practices Commission regulations. Violation of conflict of interest laws and regulations can result in civil and criminal penalties. Conflict of interest laws and regulations are complex, and Board members should seek legal advice when appropriate. See <http://www.fppc.ca.gov/> for more information.

APPROVED BY THE BOARD OF INVESTMENTS ON FEBRUARY 13, 2019.



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**FOR INFORMATION ONLY**

April 19, 2019

TO: Each Member  
Board of Retirement  
Board of Investments

FROM: Audit Committee

Richard Bendall   
Chief Audit Executive

FOR: May 1, 2019 Board of Retirement Meeting  
May 15, 2019 Board of Investments Meeting

SUBJECT: **Corporate Credit Card Audit Report**

At our March 14, 2019 meeting, the Audit Committee instructed staff to forward the Corporate Credit Audit Report to each Board. Based on the audit, the Financial Accounting Services Division (FASD) has revised the Credit Card Policy to strengthen controls over card expenditures, and provided training to all cardholders on the updated procedures. Additionally, the Audit Committee requested that FASD present the Board of Retirement's Operations Oversight Committee (OOC) with the revised Corporate Credit Card Policy at the May 1, 2019 OOC meeting.

RB:lc  
Attachment



**LACERA INTERNAL AUDIT DIVISION**

## **Corporate Credit Card Audit**

February 25, 2019

**AUDIT PERFORMED BY:**

Kathryn Ton, CPA, CFE  
*Senior Internal Auditor*

## EXECUTIVE SUMMARY

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We reviewed LACERA's corporate credit card policy as part of the fiscal year 2018/19 audit plan. Corporate credit cards, or P-Cards, facilitate purchases authorized by the LACERA Boards or Chief Executive Officer (CEO) for business-related expenses. Generally, P-Cards are issued to division and assistant division managers, in addition to certain administrative positions that have been pre-approved by the Executive Office. The Financial and Accounting Services Division (FASD) administers LACERA's Corporate Credit Card Policy (policy) and program. Internal Audit routinely audits P-Cards to ensure that it is effectively managed and compliant with LACERA's policy. The last time the program was audited was in 2011, and there were no significant issues to report. Since that audit, LACERA has changed credit card providers to Bank of America and made improvements to the policy. For this audit, we assessed whether P-Cards are used in accordance with the April 2016 policy. In addition, we evaluated security controls in place to detect improper credit card use.

The corporate credit card is a large component of LACERA's procurement activities. For fiscal year 2017/18, LACERA had total credit card expenditures of \$1,230,724 across 15 divisions. Cumulatively, there were 3,497 transactions from 40 accounts from July 1, 2017 to June 30, 2018.

In general, Internal Audit found LACERA to have adequate controls and procedures in place to manage credit card use. Notably, we observed the following good practices with FASD's administration of the program:

- Segregation of duties exist between cardholders and the FASD Disbursements Unit.
- The policy sets forth guidelines, responsibilities, and expectations for cardholders.
- Card authorizations and credit agreements are properly recorded and maintained.
- Lost or comprised cards are reported and replaced timely to avoid misuse.
- User access controls exist within the Bank of America WORKS online payment management system.

While we observed some good practices, we also identified opportunities for LACERA to strengthen controls over the program:

- Ensure cardholders are adequately trained on the policy and held accountable for noncompliance.
- FASD Disbursements Unit to escalate issues of noncompliance to management, and revise policy and procedures as needed for clarification.
- FASD to assess options to streamline receipt management and expense reporting in Bank of America WORKS.

The details of our observations and recommendations are addressed in the report. We thank FASD for their assistance and cooperation with this audit.



## CORPORATE CREDIT CARD AUDIT

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## INTRODUCTION

We reviewed LACERA’s corporate credit card policy as part of the fiscal year 2018/19 audit plan. Corporate credit cards, or P-Cards, facilitate purchases authorized by the LACERA Boards or Chief Executive Officer (CEO) for business-related expenses. Generally, P-Cards are issued to division and assistant division managers, in addition to certain administrative positions that have been pre-approved by the Executive Office. The Financial and Accounting Services Division (FASD) administers LACERA’s Corporate Credit Card Policy (policy) and program. Internal Audit routinely audits P-Cards to ensure that it is effectively managed and compliant with LACERA’s policy. The last time the program was audited was in 2011, and there were no significant issues to report. Since that audit, LACERA has changed credit card providers to Bank of America and made improvements to the policy. For this audit, we assessed whether P-Cards are used in accordance with the April 2016 policy. In addition, we evaluated security controls in place to detect improper credit card use.

The corporate credit card is a large component of LACERA’s procurement activities. For fiscal year 2017/18, LACERA had total credit card expenditures of \$1,230,724 across 15 divisions. Cumulatively, there were 3,497 transactions from 40 accounts through June 30, 2018.

## BACKGROUND

LACERA has partnered with Bank of America’s Works Card Program (WORKS) since 2013 to offer credit cards to staff members who make regular purchases of goods and services. Goods and services are purchased in accordance with the policy and annual budget. Personal use of the card is strictly prohibited. The table below shows the types of budgeted services and supplies that can be purchased on the P-Cards by division. Board member purchases for the Board of Investments (BOI) and Board of Retirement (BOR) are made by the Executive Office secretaries.

SERVICES AND SUPPLIES	LACERA DIVISIONS																
	Admin Serv	Benefits	BOI	BOR	Comm	Disability Lit	Disability Ret	Exec Office	FASD	HR	Int Audit	Investments	Legal	Member Serv	QA	RHC	Systems
Auto Expense	X					X	X					X	X				
Bank Services								X									
Building Costs	X																
Communication			X	X													X
Computer Services & Support					X				X								X
Disability Fees & Services						X											
Educational Expenses	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Equipment Maintenance	X																X
Equipment Rents & Leases	X																
Insurance	X																
Legal Fees & Services						X	X						X				
Miscellaneous	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
Office Supplies & Equipment	X	X				X	X	X	X	X	X	X	X	X	X	X	X
Operational Costs																X	
Parking Fees									X								
Postage	X				X											X	X
Professional & Specialized Services	X	X				X	X		X	X		X		X	X	X	X
Stationery & Forms	X				X												
Transportation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

### ***Issuance of Credit Cards***

P-Cards are issued to staff members who have the appropriate purchasing authorities within their divisions. Generally, division managers, assistant managers, and certain administrative service positions are granted P-Cards. The division manager initiates the request by submitting the corporate card request form, along with the corporate card agreement, to the Executive Office for approval. Usually, the CEO reviews the request and makes a determination on the credit limit for the cardholder. Credit limits range from \$450 to \$50,000 based on the frequency and level of use. Approved requests are forwarded to FASD for processing. The FASD Program Administrator acts as the liaison between Bank of America and LACERA, and works with Bank of America to issue the card.

### ***Reconciliation of Credit Card Charges***

Credit card charges are reconciled on a monthly basis by the cardholder/proxy and FASD. The LACERA policy allows cardholders to designate proxies to access and submit receipts on their behalf. Once a month, cardholders/proxies are required to sign into the Bank of America online payment management system (WORKS) to verify that each charge on their credit card statement is correct. In addition, the system requires that cardholders/proxies assign expense codes to each charge, so that charges can be linked to the appropriate fund and division budget. Once expense codes have been entered, the cardholders/proxies certify in the system that all transactions have been properly reviewed. When charges are made, cardholders' credit lines are reduced. Once cardholders/proxies sign-off on the transactions, the available credit for purchases is restored.

### ***Substantiation of Charges***

FASD also substantiates charges against cardholder receipts, but only after credit card balances have been paid from the LACERA bank account. The LACERA policy requires that cardholders/proxies submit receipts within five business days after month-end close. The FASD Disbursements Unit, which is comprised of five accounting staff, maintains and enforces the policy. Each month, the Disbursements Unit reconciles credit card statements to the itemized receipts, invoices, and supporting documentation, and follows up on potential issues with cardholders.

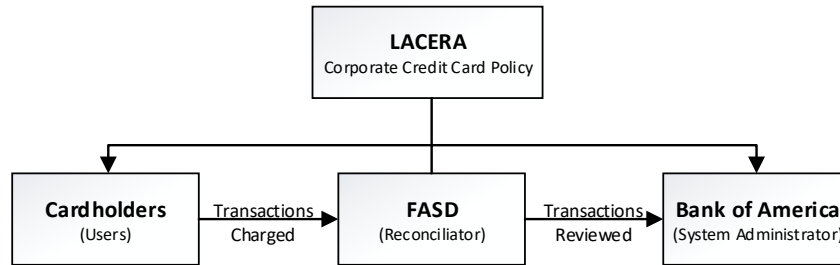
## **AUDIT OBJECTIVES**

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The audit objectives were to assess whether P-Cards are used in accordance with the policy. In addition, Internal Audit evaluated security controls in place to monitor and detect improper credit card use. Specifically, we verified the following:

1. Authorization of credit cards and credit limits.
2. Substantiation of charges.
3. Completeness of the LACERA policy.

The diagram below illustrates the process flows between the parties involved when administering the program.



## AUDIT SCOPE

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The audit scope covered fiscal year 2017/18 and involved:

- Discussions with FASD staff about administering the corporate credit card program.
- Review of LACERA's corporate credit card policy and procedures.
- List of corporate cardholders and credit limits.
- List of division budgets and general ledger accounts.
- Cardholders' monthly credit card statements.
- Cardholders' submission of supporting documentation.
- Review of the Bank of America online payment management system (WORKS) as it relates to:
  - User access controls
  - Certification of credit card transactions
- Controls and transactions testing to determine whether operations are performed according to established procedures.

**Note:** Internal Audit did not review Board and Staff Travel, because this will be performed in a separate audit.

## AUDIT METHODOLOGY

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1. To test for the authorization of credit cards and credits limits:

- Verified cardholders are LACERA employees. Compared credit limits established for each cardholder to supporting documentation.
- Confirmed that P-Cards issued to staff who retired/resigned/transferred divisions were deactivated and destroyed.
- Confirmed that staff with temporary credit increases obtained approval from the Executive Office.
- Verified that staff who had lost or compromised cards were issued replacement cards with new account numbers.
- Obtained assurance that P-Cards were administered by appropriate FASD staff.

2. To test for the substantiation of charges:
  - Calculated and reviewed 100% of credit card transactions for 40 accounts (\$1,230,724 total dollar value). Verified that charges were allocated to the correct expense codes. Exceptions noted in the Audit Results section of the report.
  - Calculated total expenditures for each division. Determined that division expenditures are within the approved budget for fiscal year 2017/18.
  - Confirmed that monthly credit card balances are paid timely to Bank of America.
  - Sampled 90 credit card transactions to check on the appropriateness of the charges. Reviewed supporting documentation for completeness. Exceptions noted in the Audit Results section of the report.
  
3. To test for the completeness of the LACERA policy:
  - Discussed controls with the FASD Program Administrator and Disbursements Unit.
  - Reviewed policies, procedures, and processes in place to assess the completeness and comprehensiveness of the policy.

## AUDIT RESULTS

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Overall, Internal Audit found LACERA to be compliant with some, but not all, policy areas reviewed. The table below summarizes Internal Audit's assessment of LACERA's Corporate Credit Card Policy.

**Table A: Audit Areas Reviewed**

Rating	Sample Exceptions
Good	None
Fair	Between 1-10%
Needs Improvement	More than 10%

Audit Area	Metric	Policy Guidelines / Audit Observations	Compliance Assessment	
			Cardholders	FASD
Authorization of Cards	Cardholder approvals	<b>Policy:</b> Generally, division managers are granted corporate cards, in addition to certain positions that have been pre-approved by the Executive Office to be authorized cardholders.	Good	Good
	Credit limits	<b>Policy:</b> Individual corporate card limits have been established and identified on the Corporate Card Agreement.	Good	Good
	Replacement cards	<b>Policy:</b> The Cardholder is required to sign a new Agreement in situations where a new Corporate Card with a new number is issued, such as replacement of stolen, lost, or compromised Corporate Card, and replacement of expired Corporate Card.	Good	Good
Substantiation of Charges	Division-approved purchases	<b>Policy:</b> Funding must be available in each individual Division's current budget in order to fund purchases.	Good	Good
	Monthly statement reviews	<b>Policy:</b> The cardholder is required to log on to Bank of America's Online Works System at the end of each billing cycle to compare each transaction to his/her receipts, order confirmation, and/or any shipping documents. After the sign off/s, the accompanying receipts, along with the Corporate Card Program Submission of Supporting Documentation, must be sent to FASD's Disbursements Unit within five (5) business days after the end of each calendar month-end cycle. <b>Audit Observations:</b> 281 improper codings of expenses from cardholders/proxies. Incomplete supporting documentation.	Fair	Fair
	Itemized receipts, supported by business purpose	<b>Policy:</b> FASD staff will review and reconcile all expenditures charged on the Corporate Card to the actual itemized receipt, invoice, or supporting documentation. All receipts must individually list the items purchased. A receipt showing only the total dollar amount will NOT be accepted. <b>Audit Observations:</b> Late submission of expense reports and non-itemized receipts from cardholders.	Needs Improvement	Fair
	Personal purchases	<b>Policy:</b> In order to promote the public's confidence in the integrity of the Corporate Card Program and avoid any appearance of commingling of business-related expenditures with personal expenditures, use of the Corporate Card for personal purchases is strictly prohibited. <b>Audit Observations:</b> 2 personal expenses later reimbursed to LACERA.	Fair	Good
Policies and Admin. Systems	Meals (Clarification needed)	<b>Policy:</b> Purchases of food and beverages by Board Secretaries for Board member functions, Brown Bag coordinators for monthly CEO Brown Bag, and other LACERA sponsored employee events are assigned to expense code 9984. All other divisions must obtain pre-approval from the Executive Office before they make food and beverage purchases other than those instances noted above. <b>Audit Observations:</b> 40 business meals with affiliates (i.e. Board members and fund managers) expensed.	Fair	Fair
	Equipment	<b>Policy:</b> The following goods and services must be requested through the Procurement Unit, or as defined otherwise, with Executive Office's written approval, or obtained through the regular request process: Capital Equipment Furniture Software (Systems Division) Standard Stock Consulting Agreements/Contracts Time and Material Agreements Any special contractual agreements with suppliers Contracts with Exemployment Agencies for temporary help.  <b>Audit Observations:</b> 108 software and hardware equipment purchases made on Amazon for \$9,853 that did not fall within the Corporate Credit Card Policy.	Needs Improvement	Needs Improvement
	Memberships (Clarification needed)	<b>Policy:</b> No general description provided. <b>Audit Observations:</b> 2 Amazon Prime Memberships expensed.	Fair	Fair
	Bank of America WORKS (Improvements needed)	<b>Policy:</b> Procedural guide. <b>Audit Observations:</b> Limited knowledge of system features/functionality.	Fair	Fair

Internal Audit observed the following good practices with FASD's administration of the program:

- Segregation of duties exist between cardholders and the FASD Disbursements Unit.
- The policy sets forth guidelines, responsibilities, and expectations for cardholders.
- Card authorizations and credit agreements are properly recorded and maintained.
- Lost or comprised cards are reported and replaced timely to avoid misuse.
- User access controls exist within the Bank of America WORKS online payment management system.

While we observed some good practices as noted above, we also identified controls that can be strengthened. The following is a summary of audit results and recommendations to address the issues of accountability, policies and procedures, and outdated systems (WORKS).

***Issue #1: Cardholders were not held accountable for noncompliant transactions.***

During our audit, we identified several areas of noncompliance with the current policy, such as:

- ***Personal Purchases***  
Per the policy, personal purchases are strictly prohibited. We identified two personal purchases made by two different cardholders. One of the cardholders immediately reported and reimbursed LACERA for the purchase. The other purchase was identified by FASD during the review process, and once contacted, the cardholder reimbursed LACERA for the personal charge.
- ***Equipment and Supplies***  
According to the policy, software and hardware equipment should be purchased through the Administrative Services Procurement Unit (Procurement), albeit an emergency. Our test work identified 108 software and hardware equipment purchases that were expensed on the P-Cards. We noted a pattern of purchases made through Amazon (\$9,853 in equipment purchases during fiscal year 2017/18), and in some instances, delivered directly to individuals. Regardless of the vendor used for purchases, items such as these should have been procured and delivered through Procurement, as stated in the LACERA credit card and procurement policies.
- ***Business Meals***  
The policy allows charges for food and beverages during travel, for Board member functions, monthly CEO Brown Bags, and other LACERA-sponsored employee events. Per the policy, any meals outside of these activities require Executive Office approval. During our audit, we identified 40 meals expensed on P-Cards without documented Executive Office approval. The majority of these meals were for business meetings with Board members and fund managers. Without sufficient documentation of the business purpose and appropriate approvals, these meals could be perceived as a conflict of interest. To minimize potential conflicts of interest, the policy should state clearly the types and purpose of business meals that are allowable.

- **Membership Fees**

The policy allows cardholders to charge memberships on P-Cards, and even though the policy does not specify which memberships are allowable, it is generally assumed to mean business association fees. During our audit, we noted two cardholders (not associated with Procurement) charged Amazon Prime memberships on their P-Cards. From an operational standpoint, LACERA may benefit from centralizing purchases under one Amazon Prime account to reduce costs and monitor purchases. Since the procurement policy is overseen by Administrative Services, we suggest that this division assess the need for an Amazon Prime account.

- **Telephone and Internet Coverage**

Similar to membership subscriptions, the policy does not address charges made for business related telephones and internet coverage. Our audit identified monthly telephone and internet service charges, totaling \$883. Since these were monthly repeat charges with no written approval from the Executive Office, at some point, the Disbursements Unit should have questioned the charges and obtained documentation of the business purpose during the review process. Executive Office approval should be documented and updated in the policy for the continuation of these monthly charges.

- **Training Courses**

The policy allows for the purchase of educational materials, but does not include training courses. This type of service is typically handled by the Human Resources Training Coordinator. We noted that a \$3,900 contracted coaching fee was expensed on a P-Card when it should have gone through the training coordinator.

- **Insufficient Documentation**

Per the policy, cardholders are required to submit itemized receipts as supporting documentation. A receipt showing only the total dollar amount is not acceptable. Based on our sample of 90 transactions, the majority of cardholders failed to submit itemized receipts, invoices, or written justification for the business purpose. In many cases, the explanation listed the item(s) purchased, but failed to explain who received the items and the business purpose. Without more information, it is difficult for Internal Audit to determine the appropriateness of some purchases. Better monitoring controls during the review process can assist in the early detection of inappropriate or unauthorized transactions.

Based on the findings noted above, cardholders should be held accountable and adequately trained to ensure their understanding of acceptable charges. Furthermore, the Disbursements Unit needs to follow established procedures when reconciling credit card purchases to supporting documentation and elevate noncompliant transactions to management when necessary.



## **RECOMMENDATION**

1. FASD management should ensure that cardholders are adequately trained on the policy, and hold cardholders accountable for noncompliance. FASD management should assess the need and frequency of training provided to cardholders, and implement a timeline for training.
2. FASD management should assess the need to obtain missing documentation and/or recover amounts from cardholders for noncompliant transactions that were identified during the audit.

## **Management Response**

1. Management agrees with the recommendation. The Corporate Credit Card Policy is under review and revision. The policy will require reviews and approvals for all cardholders including Division Managers to enhance cardholder accountability. FASD is working with the LACERA management team to schedule the corporate credit card policy training event. This recommendation is expected to be completed by March 31, 2019.
2. Management agrees with this recommendation and will complete the assessment. This recommendation is expected to be implemented by June 30, 2019.

### ***Issue #2: The policy needs to be updated to clearly define allowable charges.***

It is a good business practice to routinely review and revise the policy. Process issues are often associated with policies and procedures, accountability, and outdated systems. Consequently, as these areas are enhanced, processes will also change. As detailed above, we identified purchases that the Disbursements Unit should have raised with FASD management during the review process. Specifically, we identified transactions that were not covered in the policy, missing detailed receipts, or missing approvals. To prevent these types of transactions from occurring in the future, it is important that the Disbursements Unit escalate exceptions to management so that appropriate action can be taken for noncompliance. Once management determines that a purchase is unacceptable, it should be documented in the policy and communicated across the organization to prevent repeat purchases. Likewise, purchases considered acceptable or labeled management exceptions should be clearly documented and explained in the policy. Ongoing training and communication can minimize the number of missing receipts and unauthorized purchases, enhance the effectiveness of existing processes, and ensure that key information is reinforced.

## **RECOMMENDATION**

3. FASD Disbursements Unit escalate issues to management, and management revise policies and procedures as needed for clarification.
4. FASD management train and educate cardholders on new policies and procedural changes with divisions involved.

### **Management Response**

3. Management agrees with the recommendation. Management has instructed staff to elevate exceptions on policy non-compliance. In addition, the cardholder training will reinforce compliance with the policy at the cardholder level and the importance of the supervisory review for identifying and addressing instances of non-compliance. This recommendation is expected to be completed by March 31, 2019.
4. Management agrees with the recommendation. The Corporate Credit Card Policy will be scheduled for review and update at least every 3 years. Management is in the process of updating the April 2016 version. This recommendation is expected to be completed by March 31, 2019.

### ***Issue #3: Management needs to assess the options to streamline expense reporting in WORKS.***

Another good business practice is to make the expense reporting process as straightforward as possible. The easier the process, the less the likelihood that cardholders will make mistakes. During our audit, we noted 281 instances (or 8%) when charges were expensed to GL account #4590. GL account #4590 is the code for missing receipts or receipts submitted late. Every month, FASD is responsible for clearing the #4590 account, so improvements should be made within Bank of America WORKS to minimize the number of late/lost receipts and incomplete reports.

One suggestion to address this issue is to add a feature within WORKS to allow receipts to be scanned and uploaded. If there is a WORKS mobile app, then cardholders can snap photos of their receipts and upload them onto the application. The other option is for cardholders to log onto the system and upload digital images of their receipts. Additionally, there should be a feature that allows for descriptions to be inputted next to the receipts, so that FASD can monitor monthly statements online. With these modifications, cardholders can certify in WORKS that transactions have been reviewed and supported, without having to submit hard copies of their expense reports. Since our audit, FASD has contacted Bank of America to implement this recommendation, and the WORKS system now allows for the uploading of receipts. However, this latest feature needs to be documented in the current policy and procedures established.

**RECOMMENDATION**

5. FASD to assess options to streamline expense reporting in Bank of America WORKS so that cardholders are less likely to lose receipts and submit incomplete reports. Additional features should allow for receipts to be scanned and uploaded, and fields to describe the nature of the charges.

**Management Response**

5. Management agrees with the recommendation. Management will work with Bank of America and LACERA Systems Division to study and evaluate the feasibility of implementing a receipt capture tool. This recommendation is expected to be implemented by June 30, 2019.

We thank FASD for their assistance and cooperation with this audit.

**NOTED AND APPROVED**



**Date:** February 25, 2019

Richard Bendall  
*Chief Audit Executive*

**REPORT DISTRIBUTION**

*2019 Audit Committee*  
*Rick Wentzel*  
*Steven Rice*


*Lou Lazatin*  
*JJ Popowich*  
*Internal Audit Staff*

*Beulah Auten*  
*Ted Granger*

**FOR INFORMATION ONLY**

May 3, 2019

TO: Each Member  
Board of Investments

FROM: Jude Perez   
Principal Investment Officer

FOR: May 15, 2019 BOARD OF INVESTMENTS MEETING

SUBJECT: **OPEB MASTER TRUST PERFORMANCE BOOK**

Attached is the OPEB Master Trust quarterly performance book as of March 31, 2019.

Noted and Reviewed



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Jonathan Grabel  
Chief Investment Officer

Attachment  
JP:st

# PERFORMANCE REVIEW



## OPEB Master Trust

AS OF MARCH 31, 2019



# OPEB MASTER TRUST

for the quarter ended March 31, 2019

## COMMENTARY

The OPEB Master Trust (OPEB Trust) is comprised of three separate trusts: 1) Los Angeles County, 2) LACERA, and 3) Superior Court. The net-of-fee performance for the first quarter was 9.3% for all sub-trusts.

As a reminder, return differences between the trusts may result due to distinct contribution and rebalancing activity within each plan.

The OPEB Trust consists of four functional categories: Growth, Credit, Risk Reduction and Mitigation, and Inflation Hedges. The balance of this report will review the net-of-fee first quarter performance of these categories. Notably, all accounts within the OPEB Trust posted positive absolute returns in the first quarter.

The OPEB Growth component is comprised of a global equity MSCI All Country World IMI fund. In a sharp reversal from last quarter's negative performance, Growth was the strongest returning category, increasing 12.4% for the quarter.

The OPEB Credit allocation consists of three funds: high yield bonds, emerging markets debt (local currency), and bank loans. All categories generated positive absolute returns for the quarter: 7.5%, 2.9%, and 4.0%, respectively. As a group, Credit returned 5.0%.

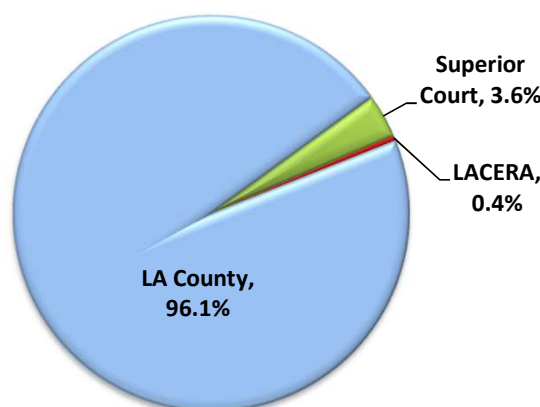
The OPEB Risk Reduction and Mitigation composite returned 2.5% for the quarter. The investment grade bond fund rose 3.0%, and the J.P. Morgan separately managed enhanced cash account generated 0.8%.

The OPEB Inflation Hedges category returned 9.9%. Treasury inflation protected securities (TIPS) returned 3.2%, real estate investment trusts (REITs) rose 15.7%, and Commodities gained 6.3%.

Fund Name	Inception Date	Market Value (millions)	Trust Ownership	Qtr	FYTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Los Angeles County:</b>	Feb-2013	\$1,113.5	96.1%						
Gross				9.3	2.8	4.3	10.0	6.2	---
Net				9.3	2.8	4.3	9.9	6.1	---
Net All <sup>1</sup>				9.3	2.8	4.3	9.9	6.1	---
<b>LACERA:</b>	Feb-2013	\$4.3	0.4%						
Gross				9.3	2.8	4.3	10.0	6.2	---
Net				9.3	2.8	4.3	10.0	6.2	---
Net All <sup>1</sup>				9.2	2.5	4.0	9.2	5.7	---
<b>Superior Court:</b>	Jul-2016	\$41.4	3.6%						
Gross				9.3	2.6	4.1	---	---	---
Net				9.3	2.6	4.1	---	---	---
Net All <sup>1</sup>				9.2	2.5	4.0	---	---	---
<b>TRUST OWNERSHIP TOTAL:</b>		<b>\$1,159.2</b>	<b>100.0%</b>						

<sup>1</sup> Includes Custody & LACERA's Administrative Fees.

Trust Ownership





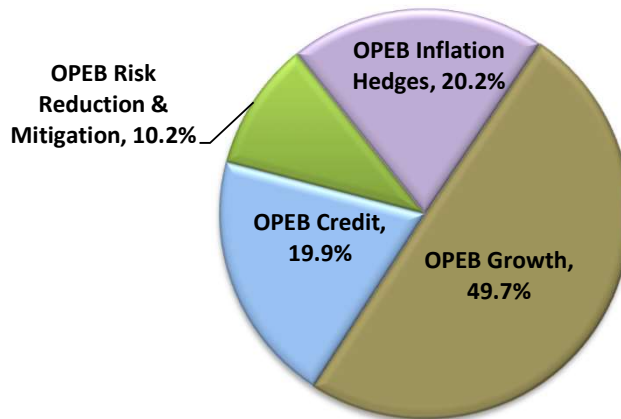
# OPEB MASTER TRUST

for the quarter ended March 31, 2019

Fund Name	Inception Date	Market Value (millions)	Trust Ownership	Qtr	FYTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>OPEB Growth</b>	Jul-2016	\$576.0	49.7%						
Gross				12.4	1.4	2.3	---	---	---
Net				12.4	1.4	2.3	---	---	---
Net All				12.4	1.4	2.3	---	---	---
<b>OPEB Credit</b>	Jul-2018	\$231.1	19.9%						
Gross				5.0	3.0	---	---	---	---
Net				5.0	3.0	---	---	---	---
Net All				5.0	3.0	---	---	---	---
<b>OPEB Risk Reduction &amp; Mitigation</b>	Jul-2016	\$117.9	10.2%						
Gross				2.5	4.2	4.9	---	---	---
Net				2.5	4.2	4.9	---	---	---
Net All				2.5	4.2	4.9	---	---	---
<b>OPEB Inflation Hedges</b>	Jul-2018	\$233.9	20.2%						
Gross				10.0	4.0	---	---	---	---
Net				9.9	3.9	---	---	---	---
Net All				9.9	3.9	---	---	---	---
<b>TRUST OWNERSHIP TOTAL:</b>		<b>\$1,159.0</b>	<b>100.0%</b>						

Differences in MV between the Sub-Trusts and Functional composites is due to operational cash

**Trust Ownership**





# OPEB MASTER TRUST

for the quarter ended March 31, 2019

Allocation	Inception Date	Market Value (millions)	Allocation %	Qtr	FYTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>OPEB Global Equity:</b>	Mar-2014	\$576.0	49.7%						
Gross				12.4	1.4	2.3	11.0	6.7	---
Net				12.4	1.4	2.3	10.9	6.7	---
Benchmark: MSCI ACWI IMI Net				12.3	1.2	1.9	10.6	6.3	---
Excess Return (Net - Benchmark)				0.1	0.2	0.4	0.3	0.3	---
<b>OPEB BTC High Yield Bonds</b>	Jul-2018	\$69.9	6.0%						
Gross				7.5	4.9	---	---	---	---
Net				7.5	4.8	---	---	---	---
Benchmark: BC High Yield Index				7.3	4.9	---	---	---	---
Excess Return (Net - Benchmark)				0.2	0.0	---	---	---	---
<b>OPEB BTC EM Debt LC</b>	Jul-2018	\$45.3	3.9%						
Gross				2.9	2.8	---	---	---	---
Net				2.9	2.7	---	---	---	---
Benchmark: JPM GBI-EM Global Diversified Index				2.9	3.2	---	---	---	---
Excess Return (Net - Benchmark)				0.0	-0.5	---	---	---	---
<b>OPEB BTC Inv. Grade Bonds</b>	Jul-2018	\$94.0	8.1%						
Gross				3.0	4.7	---	---	---	---
Net				3.0	4.7	---	---	---	---
Benchmark: BBG BARC US Aggregate Index				2.9	4.6	---	---	---	---
Excess Return (Net - Benchmark)				0.0	0.1	---	---	---	---
<b>OPEB BTC TIPS</b>	Jul-2018	\$70.3	6.1%						
Gross				3.2	2.0	---	---	---	---
Net				3.2	2.0	---	---	---	---
Benchmark: BBG US TIPS Index				3.2	1.9	---	---	---	---
Excess Return (Net - Benchmark)				0.0	0.1	---	---	---	---
<b>OPEB BTC REITs</b>	Jul-2018	\$117.9	10.2%						
Gross				15.7	8.9	---	---	---	---
Net				15.7	8.9	---	---	---	---
Benchmark: DJ US Select Real Estate Sec Index				15.7	8.9	---	---	---	---
Excess Return (Net - Benchmark)				0.0	0.0	---	---	---	---
<b>OPEB BTC Commodities</b>	Jul-2018	\$45.7	3.9%						
Gross				6.4	-5.5	---	---	---	---
Net				6.3	-5.6	---	---	---	---
Benchmark: Bloomberg Commodity Index (Total Return)				6.3	-5.6	---	---	---	---
Excess Return (Net - Benchmark)				0.0	0.0	---	---	---	---
<b>OPEB BTC Bank Loans</b>	Jul-2018	\$115.9	10.0%						
Gross				4.0	2.0	---	---	---	---
Net				4.0	2.0	---	---	---	---
Benchmark: S&P/LSTA Leveraged Loan Index				4.0	2.3	---	---	---	---
Excess Return (Net - Benchmark)				0.0	-0.2	---	---	---	---
<b>OPEB Enhanced Cash:</b>	Feb-2013	\$23.9	2.1%						
Gross				0.8	2.4	2.9	1.8	1.2	---
Net				0.8	2.4	2.9	1.7	1.2	---
Benchmark: FTSE 6 M T-Bill Index				0.6	1.7	2.2	1.2	0.8	---
Excess Return (Net - Benchmark)				0.2	0.7	0.7	0.5	0.4	---

**Disclosure**

Source of Bloomberg data: Bloomberg Index Services Limited. BLOOMBERG® is a trademark and service mark of Bloomberg Finance L.P. and its affiliates (collectively "Bloomberg"). BARCLAYS® is a trademark and service mark of Barclays Bank Plc (collectively with its affiliates, "Barclays"), used under license. Bloomberg or Bloomberg's licensors, including Barclays, own all proprietary rights in the Bloomberg Barclays Indices. Neither Bloomberg nor Barclays approves or endorses this material, or guarantees the accuracy or completeness of any information herein, or makes any warranty, express or implied, as to the results to be obtained therefrom and, to the maximum extent allowed by law, neither shall have any liability or responsibility for injury or damages arising in connection therewith.



# Master Trust OPEB Analytics Report

Prepared for LACERA

29 March 2019

## Master Trust OPEB Asset Allocation &amp; Analytics

LACERA

29-Mar-2019

Reporting Currency: USD

## Master Trust OPEB Allocation vs Policy Benchmark

	Market Value (Millions)	Allocation (%)	Policy Benchmark (%)	Benchmark	Relative (%)
Growth	576.04	49.7%	50.0%	OPEB Growth Blend	-0.3%
Credit	230.58	19.9%	20.0%	OPEB Credit Blend	-0.1%
Inflation Hedges	233.88	20.2%	20.0%	OPEB Inflation Blend	0.2%
Risk Reduction and Mitigation	117.98	10.2%	10.0%	OPEB Risk Reduc Blend	0.2%
<b>TOTAL</b>	<b>1,158.48</b>	<b>100.0%</b>	<b>100.0%</b>		<b>0.0%</b>

Risk Reports are based on accounting valuations. An accounting adjustment for March OPEB values will be reflected in April reporting. This report understates the Credit allocation by apx. \$500K.

## OPEB Asset Allocation &amp; Analytics

LACERA

29-Mar-2019

Reporting Currency: USD

## OPEB Allocation vs Policy Benchmark

	Market Value (Millions)	Allocation (%)	Policy Benchmark (%)	Benchmark	Relative (%)
<b>LA County</b>					
Growth	553.20	49.7%	50.0%	OPEB Growth Blend	-0.3%
Credit	221.62	19.9%	20.0%	OPEB Credit Blend	-0.1%
Inflation Hedges	224.76	20.2%	20.0%	OPEB Inflation Blend	0.2%
Risk Reduction and Mitigation	113.29	10.2%	10.0%	OPEB Risk Reduc Blend	0.2%
<b>TOTAL</b>	<b>1,112.88</b>	<b>100.0%</b>	<b>100.0%</b>		<b>0.0%</b>
<b>LACERA OPEB</b>					
Growth	2.13	49.8%	50.0%	OPEB Growth Blend	-0.2%
Credit	0.85	19.8%	20.0%	OPEB Credit Blend	-0.2%
Inflation Hedges	0.86	20.2%	20.0%	OPEB Inflation Blend	0.2%
Risk Reduction and Mitigation	0.44	10.2%	10.0%	OPEB Risk Reduc Blend	0.2%
<b>TOTAL</b>	<b>4.29</b>	<b>0.4%</b>	<b>100.0%</b>		<b>0.0%</b>
<b>Superior Court</b>					
Growth	20.71	50.1%	50.0%	OPEB Growth Blend	0.1%
Credit	8.11	19.6%	20.0%	OPEB Credit Blend	-0.4%
Inflation Hedges	8.25	20.0%	20.0%	OPEB Inflation Blend	-0.0%
Risk Reduction and Mitigation	4.25	10.3%	10.0%	OPEB Risk Reduc Blend	0.3%
<b>TOTAL</b>	<b>41.32</b>	<b>3.7%</b>	<b>100.0%</b>		<b>0.0%</b>

OPEB Analytics, Volatility & Tracking Error  
LACERA

29-Mar-2019  
Reporting Currency: USD

OPEB Analytics

	Benchmark	Market Value (Millions)	Allocation (%)	Volatility (% per annum) <sup>1</sup>	Standalone VaR (% of MV) <sup>2</sup>	Total VaR Contribution (% of Total MV) <sup>3</sup>	Tracking Error Contribution (% of Total MV) <sup>4</sup>
<b>LA County</b>							
Growth	OPEB Growth Blend	553.20	49.7%	11.60%	19.42%	10.16%	0.01%
Credit	OPEB Credit Blend	221.62	19.9%	5.45%	9.50%	1.56%	0.00%
Inflation Hedges	OPEB Inflation Blend	224.76	20.2%	7.97%	12.25%	1.36%	0.00%
Risk Reduction and Mitigation	OPEB Risk Reduc Blend	113.29	10.2%	3.03%	5.21%	-0.01%	0.00%
<b>TOTAL</b>		<b>1,112.88</b>	<b>100.0%</b>	<b>7.69%</b>	<b>13.07%</b>	<b>13.07%</b>	<b>0.01%</b>
		<i>Weighted Average Benchmark<sup>5</sup></i>		7.69%	13.06%	13.06%	
<b>Benchmark</b>	<b>Policy Benchmark</b>			<b>7.69%</b>	<b>13.06%</b>	<b>13.06%</b>	<b>0.01%</b>
					<i>Aggregate Benchmark Structural Risk<sup>6</sup></i>		<b>0.00%</b>
<b>LACERA</b>							
Growth	OPEB Growth Blend	2.13	49.8%	11.60%	19.42%	10.17%	0.01%
Credit	OPEB Credit Blend	0.85	19.8%	5.45%	9.50%	1.55%	0.00%
Inflation Hedges	OPEB Inflation Blend	0.86	20.2%	7.97%	12.25%	1.36%	0.00%
Risk Reduction and Mitigation	OPEB Risk Reduc Blend	0.44	10.2%	3.00%	5.16%	-0.01%	0.00%
<b>TOTAL</b>		<b>4.29</b>	<b>100.0%</b>	<b>7.69%</b>	<b>13.08%</b>	<b>13.08%</b>	<b>0.01%</b>
		<i>Weighted Average Benchmark<sup>5</sup></i>		7.69%	13.07%	13.07%	
<b>Benchmark</b>	<b>Policy Benchmark</b>			<b>7.69%</b>	<b>13.07%</b>	<b>13.07%</b>	<b>0.01%</b>
					<i>Aggregate Benchmark Structural Risk<sup>6</sup></i>		<b>0.00%</b>
<b>Superior Court</b>							
Growth	OPEB Growth Blend	20.71	50.1%	11.60%	19.42%	10.24%	0.01%
Credit	OPEB Credit Blend	8.11	19.6%	5.45%	9.50%	1.53%	0.00%
Inflation Hedges	OPEB Inflation Blend	8.25	20.0%	7.97%	12.25%	1.34%	0.00%
Risk Reduction and Mitigation	OPEB Risk Reduc Blend	4.25	10.3%	3.00%	5.15%	-0.01%	0.00%
<b>TOTAL</b>		<b>41.32</b>	<b>100.0%</b>	<b>7.71%</b>	<b>13.11%</b>	<b>13.11%</b>	<b>0.01%</b>
		<i>Weighted Average Benchmark<sup>5</sup></i>		7.71%	13.11%	13.11%	
<b>Benchmark</b>	<b>Policy Benchmark</b>			<b>7.71%</b>	<b>13.11%</b>	<b>13.11%</b>	<b>0.01%</b>
					<i>Aggregate Benchmark Structural Risk<sup>6</sup></i>		<b>0.00%</b>
<b>Master Trust OPEB</b>							
<b>TOTAL</b>		<b>1,158.48</b>	<b>100.0%</b>	<b>7.69%</b>	<b>13.07%</b>	<b>13.07%</b>	<b>0.01%</b>
<b>Benchmark</b>	<b>Policy Benchmark</b>			<b>7.69%</b>	<b>13.06%</b>	<b>13.06%</b>	

1: 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.

2: Standalone VaR is the annualized Value-at-Risk at the 95th percentile expressed as a percentage of the market value of each asset class.

3: 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.

4: 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.

5: Weighted average benchmark is the market value weighted average of the asset class benchmarks.

6: 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]

Master Trust OPEB Asset Allocation & Analytics

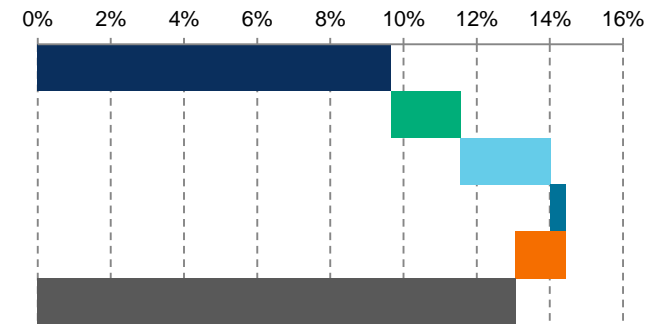
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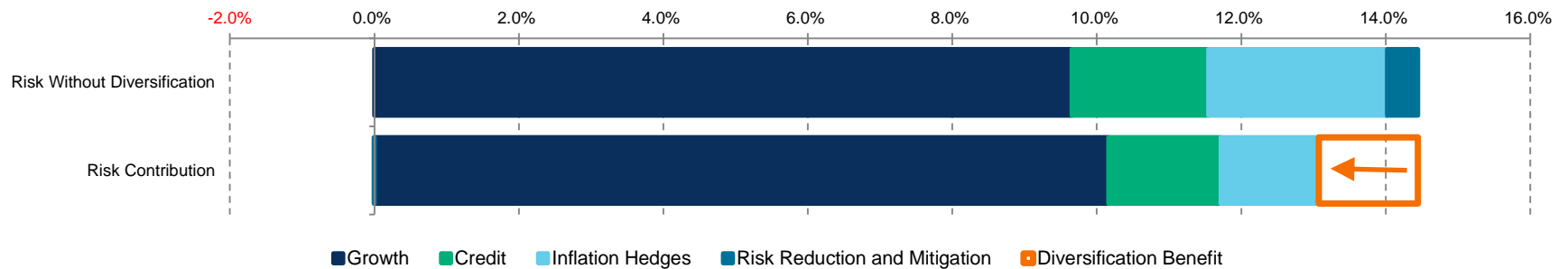
Reporting Currency: USD

Master Trust OPEB Risk & Diversification

	Allocation (%)	Weighted Standalone VaR (% of Total MV) <sup>1</sup>	
		Monthly	Annual
Growth	49.7%	2.8%	9.7%
Credit	19.9%	0.5%	1.9%
Inflation Hedges	20.2%	0.7%	2.5%
Risk Reduction and Mitigation	10.2%	0.1%	0.4%
Diversification Benefit <sup>2</sup>	-	-0.4%	-1.4%
<b>TOTAL</b>	<b>100.0%</b>	<b>3.8%</b>	<b>13.1%</b>



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.

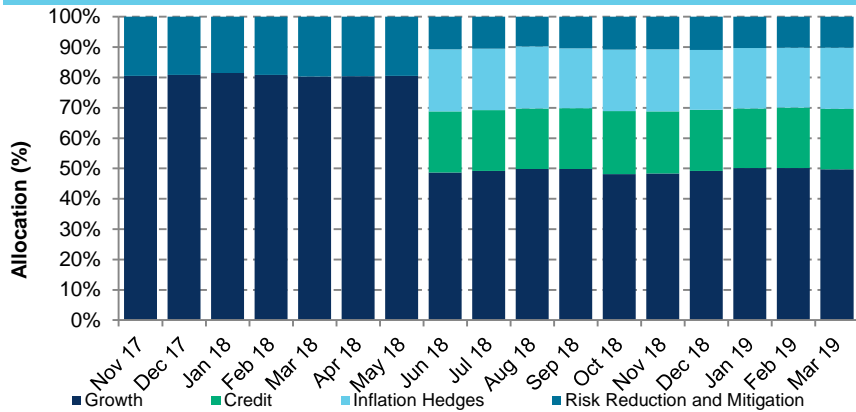
Master Trust OPEB Analytics, Volatility & Tracking Error

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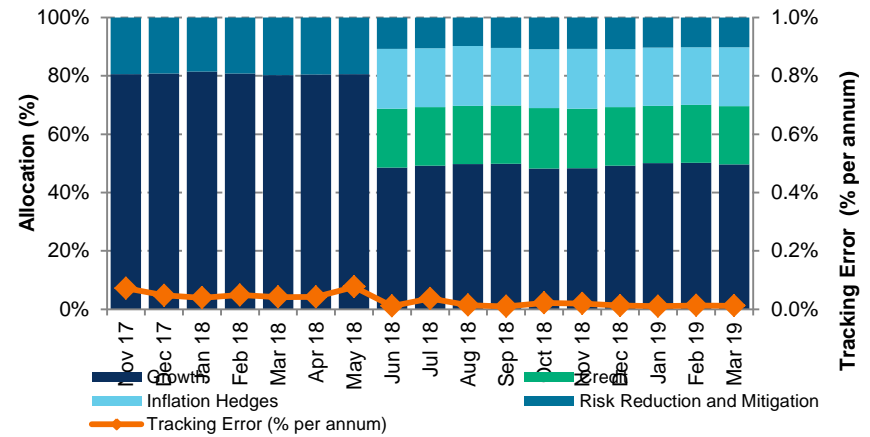
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Reporting Currency: USD

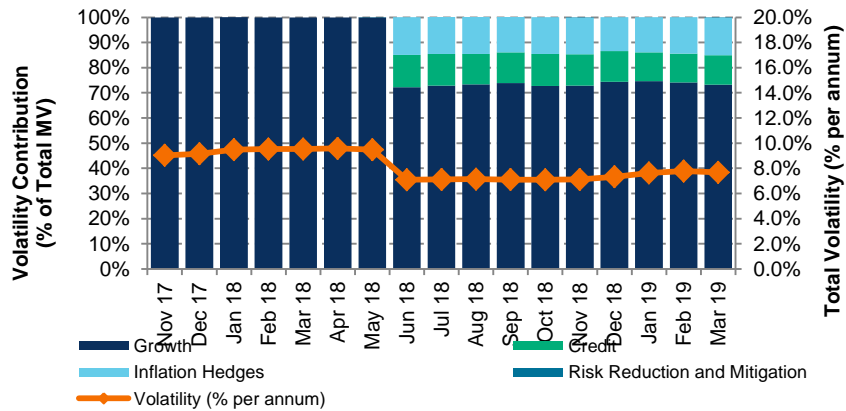
Master Trust OPEB Allocation Trend



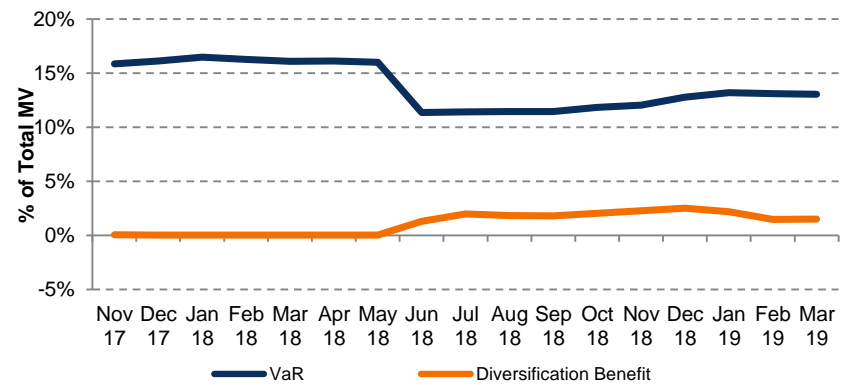
Master Trust OPEB Allocation & Tracking Error Trend<sup>1</sup>



Master Trust OPEB Volatility & Contrib. to Volatility Trend<sup>2</sup>



Master Trust OPEB Total Risk & Diversification Trend<sup>3</sup>



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.

Master Trust OPEB Stress Testing

LACERA

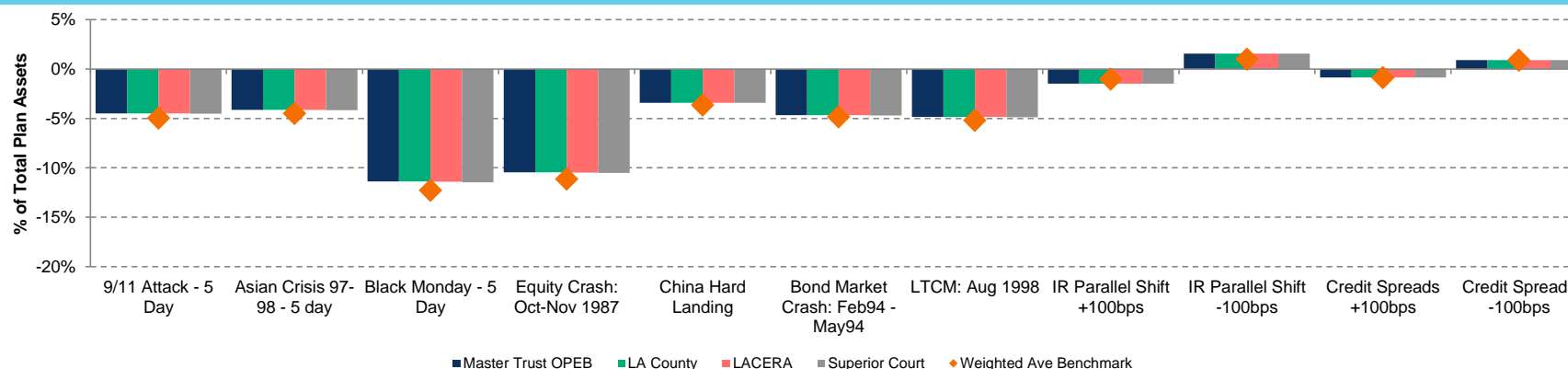
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Reporting Currency: USD

Stress Test - % of Market Value

	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	49.7%	-4.4%	-4.0%	-10.3%	-8.9%	-3.1%	-3.3%	-4.1%	0.0%	-0.0%	0.0%	0.0%
Credit	19.9%	0.3%	0.2%	0.2%	-0.3%	-0.1%	-0.6%	-0.2%	-0.5%	0.5%	-0.6%	0.6%
Inflation Hedges	20.2%	-0.5%	-0.4%	-1.4%	-1.2%	-0.2%	-0.5%	-0.5%	-0.4%	0.5%	-0.0%	0.0%
Risk Reduction and Mitigation	10.2%	0.2%	0.1%	0.1%	-0.0%	0.0%	-0.2%	-0.1%	-0.6%	0.6%	-0.2%	0.2%
<b>Master Trust OPEB</b>	<b>100.0%</b>	<b>-4.5%</b>	<b>-4.1%</b>	<b>-11.4%</b>	<b>-10.5%</b>	<b>-3.4%</b>	<b>-4.7%</b>	<b>-4.9%</b>	<b>-1.5%</b>	<b>1.6%</b>	<b>-0.9%</b>	<b>0.9%</b>
<i>Benchmark</i>		-5.0%	-4.5%	-12.3%	-11.1%	-3.6%	-4.8%	-5.2%	-1.0%	1.0%	-0.9%	0.9%
<b>LA County</b>		<b>-4.5%</b>	<b>-4.1%</b>	<b>-11.4%</b>	<b>-10.5%</b>	<b>-3.4%</b>	<b>-4.7%</b>	<b>-4.9%</b>	<b>-1.5%</b>	<b>1.6%</b>	<b>-0.9%</b>	<b>0.9%</b>
<i>Benchmark</i>		-4.9%	-4.5%	-12.2%	-11.2%	-3.6%	-4.9%	-5.2%	-1.1%	1.1%	-0.9%	0.9%
<b>LACERA</b>		<b>-4.5%</b>	<b>-4.1%</b>	<b>-11.4%</b>	<b>-10.5%</b>	<b>-3.4%</b>	<b>-4.7%</b>	<b>-4.9%</b>	<b>-1.5%</b>	<b>1.6%</b>	<b>-0.9%</b>	<b>0.9%</b>
<i>Benchmark</i>		-4.9%	-4.5%	-12.3%	-11.2%	-3.7%	-4.9%	-5.2%	-1.1%	1.1%	-0.9%	0.9%
<b>Superior Court</b>		<b>-4.5%</b>	<b>-4.2%</b>	<b>-11.5%</b>	<b>-10.5%</b>	<b>-3.4%</b>	<b>-4.7%</b>	<b>-4.9%</b>	<b>-1.5%</b>	<b>1.5%</b>	<b>-0.9%</b>	<b>0.9%</b>
<i>Benchmark</i>		-5.0%	-4.5%	-12.3%	-11.2%	-3.7%	-4.9%	-5.2%	-1.1%	1.1%	-0.9%	0.9%

Stress Test Chart



# Glossary



## Appendix - Glossary

LACERA

29-Mar-2019

Reporting Currency: USD

## Terms and Definitions

**Analytics**

Value-at-Risk 95%	Value-at-risk quantifies the potential loss in a portfolio at a certain level of confidence. Value-at-Risk 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 Value-at Risk at 95th percentile for each asset class/strategy less the total plan Value-at Risk, 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 <sup>SM</sup> 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.

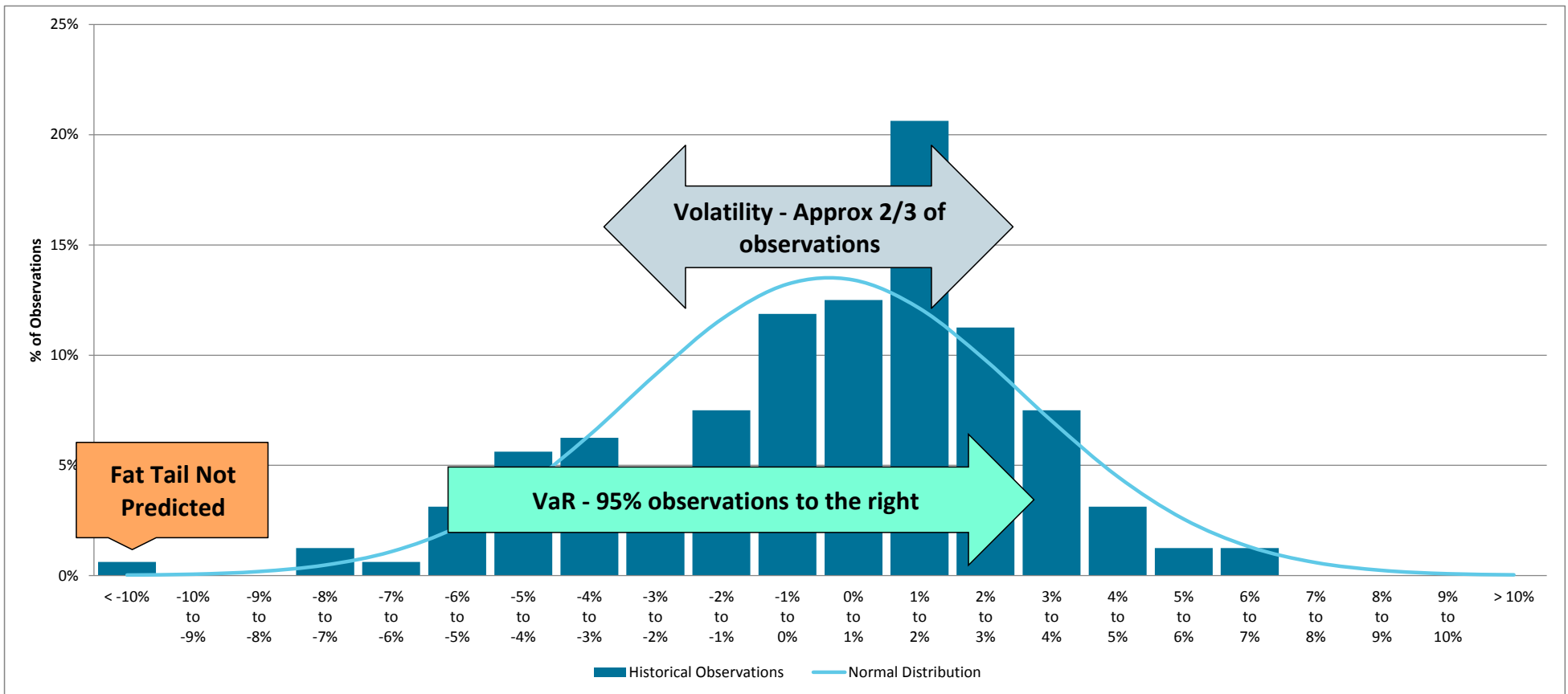
VaR and Volatility

Example Illustration of VaR and Volatility

VaR = 5.6%

Volatility = 2.9%

Mean = 0.1%



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# FUND EVALUATION REPORT

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## Los Angeles County OPEB Master Trust

March 31, 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

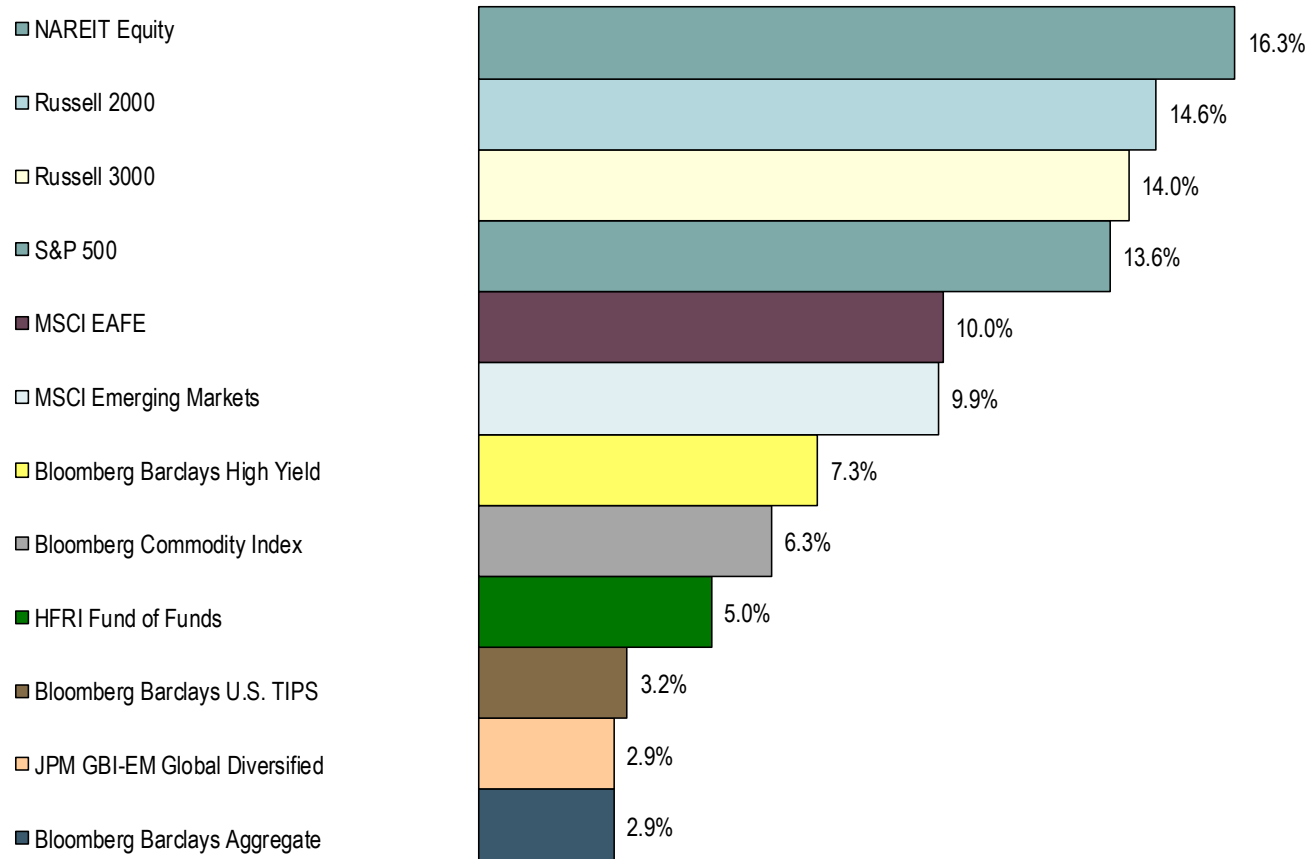
SAN DIEGO  
CALIFORNIA

LONDON  
UNITED KINGDOM

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# Market Commentary

### The World Markets<sup>1</sup> First Quarter of 2019



<sup>1</sup> Source: InvestorForce.



Index Returns<sup>1</sup>

	1Q19 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
<b>Domestic Equity</b>					
S&P 500	13.6	9.5	13.5	10.9	15.9
Russell 3000	14.0	8.8	13.5	10.4	16.0
Russell 1000	14.0	9.3	13.5	10.6	16.0
Russell 1000 Growth	16.1	12.7	16.5	13.5	17.5
Russell 1000 Value	11.9	5.7	10.5	7.7	14.5
Russell MidCap	16.5	6.5	11.8	8.8	16.9
Russell MidCap Growth	19.6	11.5	15.1	10.9	17.6
Russell MidCap Value	14.4	2.9	9.5	7.2	16.4
Russell 2000	14.6	2.0	12.9	7.1	15.4
Russell 2000 Growth	17.1	3.9	14.9	8.4	16.5
Russell 2000 Value	11.9	0.2	10.9	5.6	14.1
<b>Foreign Equity</b>					
MSCI ACWI (ex. U.S.)	10.3	-4.2	8.1	2.6	8.8
MSCI EAFE	10.0	-3.7	7.3	2.3	9.0
MSCI EAFE (Local Currency)	10.6	2.8	8.5	6.0	9.8
MSCI EAFE Small Cap	10.7	-9.4	7.5	4.5	12.8
MSCI Emerging Markets	9.9	-7.4	10.7	3.7	8.9
MSCI Emerging Markets (Local Currency)	10.1	-1.7	11.3	7.2	10.2
<b>Fixed Income</b>					
Bloomberg Barclays Universal	3.3	4.5	2.6	3.0	4.4
Bloomberg Barclays Aggregate	2.9	4.5	2.0	2.7	3.8
Bloomberg Barclays U.S. TIPS	3.2	2.7	1.7	1.9	3.4
Bloomberg Barclays High Yield	7.3	5.9	8.6	4.7	11.3
JPM GBI-EM Global Diversified	2.9	-7.6	3.3	-0.8	4.3
<b>Other</b>					
NAREIT Equity	16.3	20.3	6.0	9.0	18.2
Bloomberg Commodity Index	6.3	-5.3	2.2	-8.9	-2.6
HFRI Fund of Funds	5.0	0.5	4.1	2.3	3.6

<sup>1</sup> Source: InvestorForce.

## Global Economic Outlook

### The IMF continues to reduce their projections for the coming years as the global economic expansion slows.

- For 2018, the IMF's forecast remains at 3.7%, while for 2019 (3.5%) and 2020 (3.6%) they lowered their projections by 0.2% and 0.1%, respectively.
- In the IMF's January update, their growth projections for advanced economies in 2018 was 2.3%, 2.0% for 2019 (-0.1% from the last report), and 1.7% for 2020. Growth in the U.S. is projected to be the strongest, but will slow in the coming years due in part to the reduction in fiscal and monetary stimulus. Growth in the euro area is projected to decline slightly in the coming years due to higher borrowing costs in Italy, slowing growth in Germany, and social unrest in France.
- Projections for growth in the emerging and developing economies declined for 2018 (4.6% versus 4.7%) and 2019 (4.5% versus 4.7%), but is expected to pick up in 2020 (4.9%). Growth in China is expected to slow as the economy continues to transition away from an investment-based growth model. Fiscal stimulus is expected to offset only part of the impact of trade tensions with the U.S. The IMF projects improved growth in India and Brazil in 2019 and Mexico in 2020.
- Overall, inflation is expected to remain at the same level in 2019 compared to 2018 and around long-term averages.

	Real GDP (%) <sup>1</sup>				Inflation (%) <sup>1</sup>			
	IMF 2018 Forecast	IMF 2019 Forecast	IMF 2020 Forecast	Actual 10 Year Average	IMF 2018 Forecast	IMF 2019 Forecast	IMF 2020 Forecast	Actual 10 Year Average
World	3.7	3.5	3.6	3.3	3.8	3.8	3.6	3.7
U.S.	2.9	2.5	1.8	1.4	2.4	2.1	2.3	1.7
Euro Area	1.8	1.6	1.7	0.7	1.7	1.7	1.8	1.4
Japan	0.9	1.1	0.5	0.5	1.2	1.3	1.7	0.3
China	6.6	6.2	6.2	8.2	2.2	2.4	2.7	2.6
Emerging Markets (ex. China)	3.9	4.2	4.2	3.8	6.8	7.0	5.9	6.9

<sup>1</sup> Source: IMF. World Economic Outlook. January 2019 Update. "Actual 10 Year Average" represents data from 2008 to 2017.



## Global Economic Outlook (continued)

**The boost to growth from recent U.S. tax cuts will likely be short lived, while China could increase policy support. We could be moving into a period of coordinated monetary tightening across central banks.**

- The Federal Reserve continued their rate hiking campaign making their ninth increase in December. They also continue to reduce their balance sheet. Projections for rate increases in 2019 have declined as inflationary pressures slow and market volatility has increased.
- Of all the major central banks, the Bank of Japan (BOJ) is showing no signs of pulling back from its unprecedented monetary stimulus, as inflation remains well below target and is projected to decline. At their recent meeting the BOJ made no changes to their stimulative efforts, keeping bank deposit rates negative (-0.1%), and continuing to target a 0% yield on the 10-year government bond.
- The European Central Bank held low rates steady and reaffirmed that they could remain unchanged at least through the summer of 2019. The asset purchases (i.e., quantitative easing) ended, but the proceeds from maturing bonds will continue to be invested for now. If conditions in Italy turn negative, given the political changes and budget discussions, the ECB could reconsider its policies.
- The People's Bank of China (PBOC) continues to cut bank reserve requirements in an effort to stimulate growth as the trade war with the U.S. weighs on the already slowing economy. They may take additional steps to support the economy, but already high debt levels, and their looser peg to the U.S. dollar, limit the extent of possible stimulus.

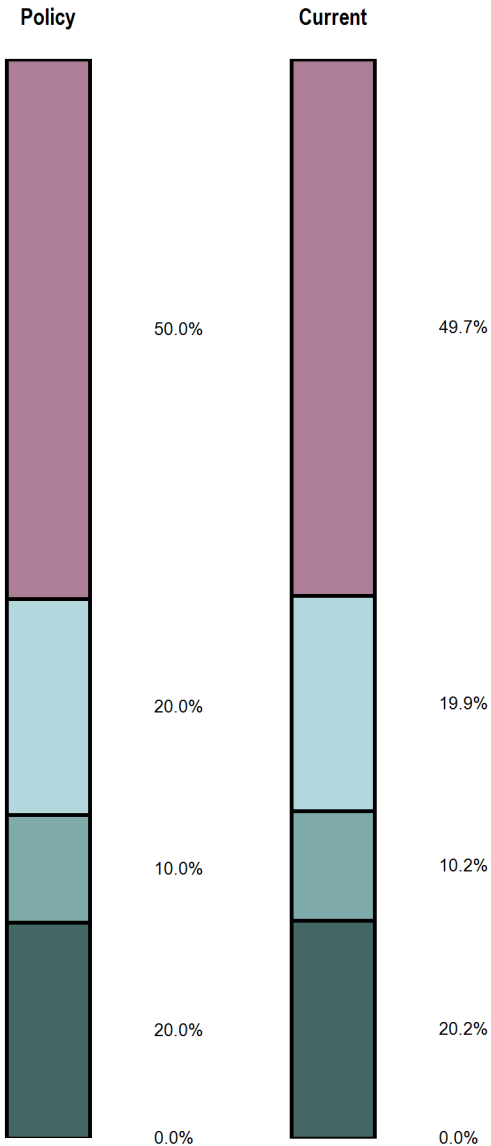
**Several issues are of primary concern: 1) the potential for simultaneous monetary tightening globally; 2) uncertainty related to the U.S. economy and policies; 3) declining growth in China, along with uncertain fiscal and monetary policies; and 4) political uncertainty in Europe and risks related to the U.K.'s exit from the European Union.**

## Capital Markets Outlook<sup>1</sup>

- Diverging global economic growth, nuanced monetary policies, and ongoing geopolitical turmoil has resulted in increased uncertainty in the global capital markets.
  - Systemic Risk has been elevated since October 2018, but has recently started to decline.
    - In agreement with this measure, the widely cited VIX index is also declining.
    - Risk environments can change quickly, and caution is warranted especially given high U.S. valuations and global political risk.
  - The price of the U.S. stock market relative to ten-year average earnings remains above its historical average (29.9x versus 16.9x).
    - Within U.S. Equity markets, valuations for companies based on both size (small vs. large cap) and value (growth vs. value) remain within a reasonable range.
  - Developed international and emerging market stocks are trading at lower valuations than U.S. stocks.
    - Both of these measures have seen sustained positive trends as economic fundamentals continue to strengthen.
  - At 2.4%, the yield on the ten-year Treasury declined, to the surprise of many investors.
    - The yield curve is essentially flat, indicating that investors may expect short-term rates are more likely to move down than up from here.
  - As of March 31st, spreads for high yield corporate bonds (4%) were below their historical average.
    - Higher equity valuations and tighter credit spreads are potentially inconsistent with a flattening yield curve.

<sup>1</sup> Sources: Bloomberg, U.S. Treasury, and Meketa Investment Group. Data is as of March 31, 2019.

# 1Q2019 Review

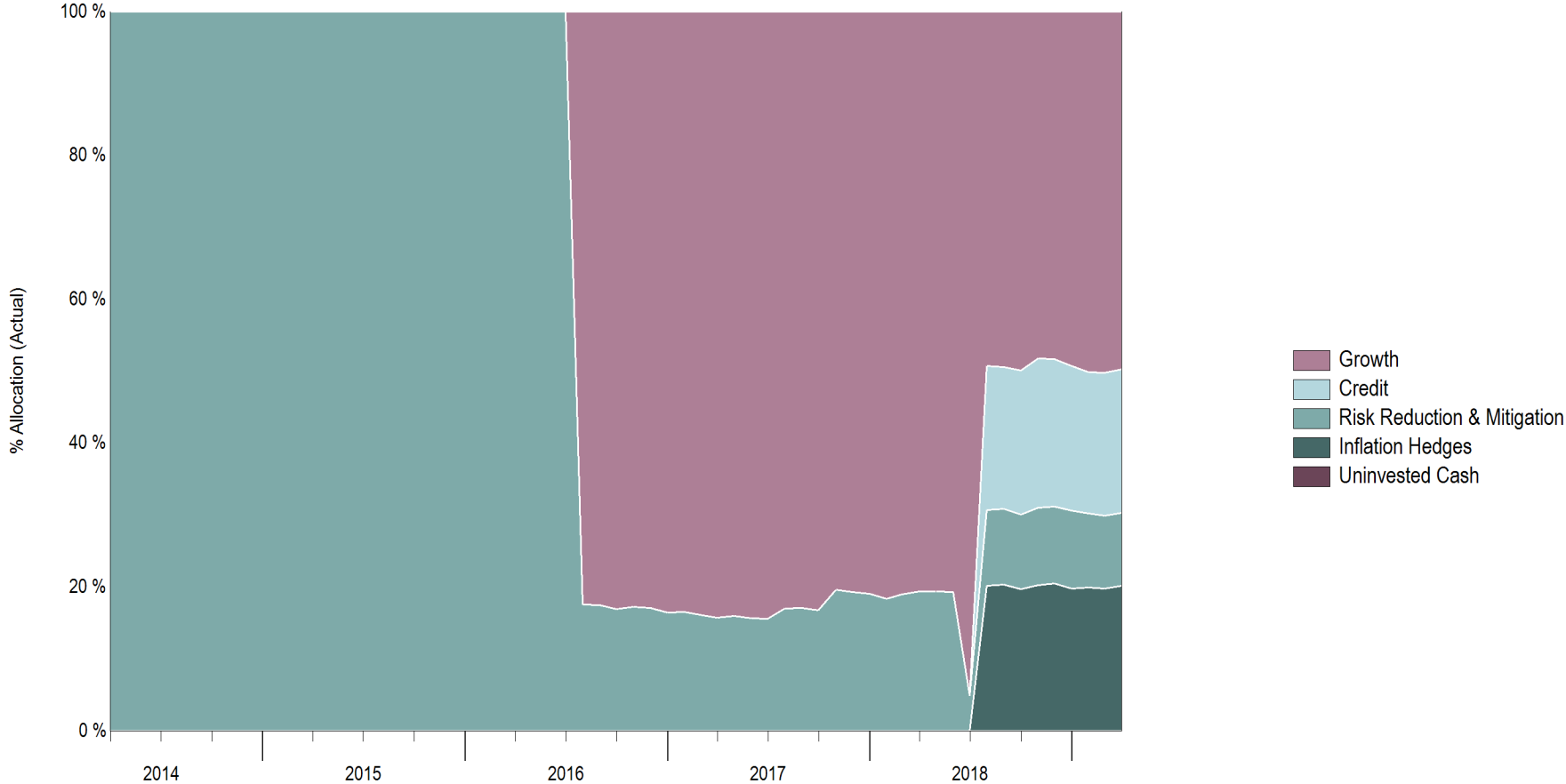


Allocation vs. Target					
	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
<b>Growth</b>	<b>\$576,044,841</b>	<b>49.7%</b>	<b>50.0%</b>	<b>40.0% - 60.0%</b>	<b>Yes</b>
Global Equity	\$576,044,841	49.7%	50.0%		
<b>Credit</b>	<b>\$231,089,299</b>	<b>19.9%</b>	<b>20.0%</b>	<b>15.0% - 25.0%</b>	<b>Yes</b>
High Yield Bonds	\$69,906,673	6.0%	6.0%		
Bank Loans	\$115,869,064	10.0%	10.0%		
Emerging Market Debt	\$45,313,561	3.9%	4.0%		
<b>Risk Reduction &amp; Mitigation</b>	<b>\$117,869,938</b>	<b>10.2%</b>	<b>10.0%</b>	<b>5.0% - 15.0%</b>	<b>Yes</b>
Cash Equivalents	\$23,870,820	2.1%	2.0%		
Investment Grade Bonds	\$93,999,119	8.1%	8.0%		
<b>Inflation Hedges</b>	<b>\$233,876,814</b>	<b>20.2%</b>	<b>20.0%</b>	<b>15.0% - 25.0%</b>	<b>Yes</b>
TIPS	\$70,276,464	6.1%	6.0%		
REITs	\$117,904,872	10.2%	10.0%		
Commodities	\$45,695,477	3.9%	4.0%		
<b>Uninvested Cash</b>	<b>\$109,611</b>	<b>0.0%</b>			
<b>Total</b>	<b>\$1,158,990,504</b>	<b>100.0%</b>	<b>100.0%</b>		

<sup>1</sup>Total market value does not include all cash at the participant level.



Asset Allocation History  
5 Years Ending March 31, 2019



As of March 31, 2019

## Trailing Net Performance

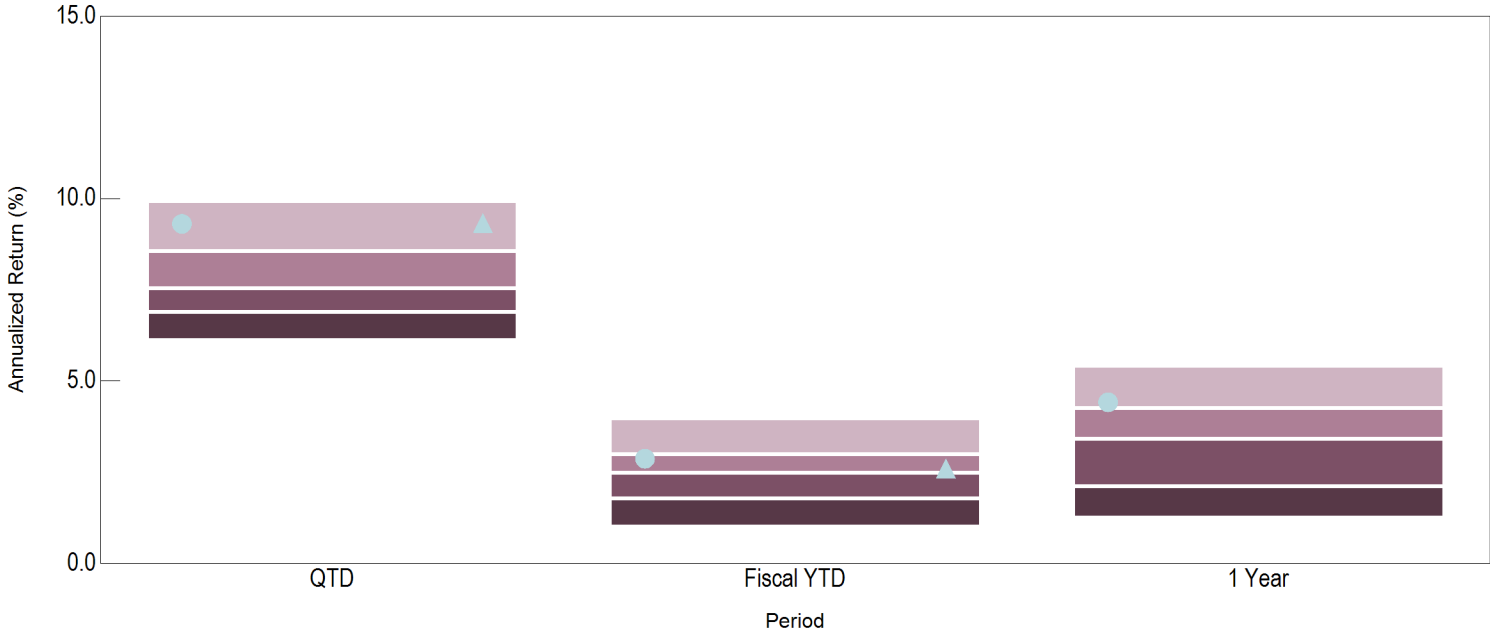
	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
<b>Total Fund (Net)</b>	<b>1,159,155,777</b>	<b>100.0</b>	<b>9.3</b>	<b>2.8</b>	<b>4.3</b>	--	--
<b>Total Fund (Gross)</b>			<b>9.3</b>	<b>2.9</b>	<b>4.4</b>	--	--
<i>Custom OPEB Total Fund</i>			9.3	2.6	--	--	--
<b>Growth (Net)</b>	<b>576,044,841</b>	<b>49.7</b>	<b>12.4</b>	<b>1.4</b>	<b>2.3</b>	--	--
<b>Growth (Gross)</b>			<b>12.4</b>	<b>1.4</b>	<b>2.3</b>	--	--
OPEB Global Equity (Net)	576,044,841	49.7	12.4	1.4	2.3	--	--
OPEB Global Equity (Gross)			12.4	1.4	2.3	--	--
<i>MSCI ACWI IMI Net USD</i>			12.3	1.2	1.9		
<b>Credit (Net)</b>	<b>231,089,299</b>	<b>19.9</b>	<b>4.7</b>	<b>2.8</b>	--	--	--
<b>Credit (Gross)</b>			<b>4.8</b>	<b>3.0</b>	--	--	--
OPEB BTC High Yield Bonds (Net)	69,906,673	6.0	7.5	4.8	--	--	--
OPEB BTC High Yield Bonds (Gross)			7.5	4.9	--	--	--
<i>BBgBarc US High Yield TR</i>			7.3	4.9			
OPEB BTC Bank Loans (Net)	115,869,064	10.0	4.0	2.0	--	--	--
OPEB BTC Bank Loans (Gross)			4.0	2.0	--	--	--
<i>S&amp;P/LSTA Leveraged Loan TR</i>			4.0	2.3			
OPEB BTC EM Debt LC (Net)	45,313,561	3.9	2.9	2.7	--	--	--
OPEB BTC EM Debt LC (Gross)			2.9	2.8	--	--	--
<i>JP Morgan GBI EM Global Diversified TR USD</i>			2.9	3.2			

Fiscal Year begins July 1.



	As of March 31, 2019						
	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
<b>Risk Reduction &amp; Mitigation (Net)</b>	<b>117,869,938</b>	<b>10.2</b>	<b>2.5</b>	<b>4.2</b>	<b>4.9</b>	<b>--</b>	<b>--</b>
<b>Risk Reduction &amp; Mitigation (Gross)</b>			<b>2.5</b>	<b>4.2</b>	<b>4.9</b>	<b>--</b>	<b>--</b>
OPEB Enhanced Cash (Net)	23,870,820	2.1	0.8	2.4	2.9	1.7	1.2
OPEB Enhanced Cash (Gross)			0.8	2.4	2.9	1.8	1.2
<i>FTSE T-Bill 6 Months TR</i>			0.6	1.7	2.2	1.2	0.8
OPEB BTC Investment Grade Bonds (Net)	93,999,119	8.1	3.0	4.7	--	--	--
OPEB BTC Investment Grade Bonds (Gross)			3.0	4.7	--	--	--
<i>BBgBarc US Aggregate TR</i>			2.9	4.6			
<b>Inflation Hedges (Net)</b>	<b>233,876,814</b>	<b>20.2</b>	<b>9.9</b>	<b>3.9</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Inflation Hedges (Gross)</b>			<b>10.0</b>	<b>4.0</b>	<b>--</b>	<b>--</b>	<b>--</b>
OPEB BTC TIPS (Net)	70,276,464	6.1	3.2	2.0	--	--	--
OPEB BTC TIPS (Gross)			3.2	2.0	--	--	--
<i>BBgBarc US TIPS TR</i>			3.2	1.9			
OPEB BTC REITs (Net)	117,904,872	10.2	15.7	8.9	--	--	--
OPEB BTC REITs (Gross)			15.7	8.9	--	--	--
<i>DJ US Select REIT TR USD</i>			15.7	8.9			
OPEB BTC Commodities (Net)	45,695,477	3.9	6.3	-5.6	--	--	--
OPEB BTC Commodities (Gross)			6.4	-5.5	--	--	--
<i>Bloomberg Commodity Index TR USD</i>			6.3	-5.6			
<b>Uninvested Cash (Net)</b>	<b>109,611</b>	<b>0.0</b>					
<b>Uninvested Cash (Gross)</b>							

InvestorForce Public DB > \$1B Gross Return Comparison

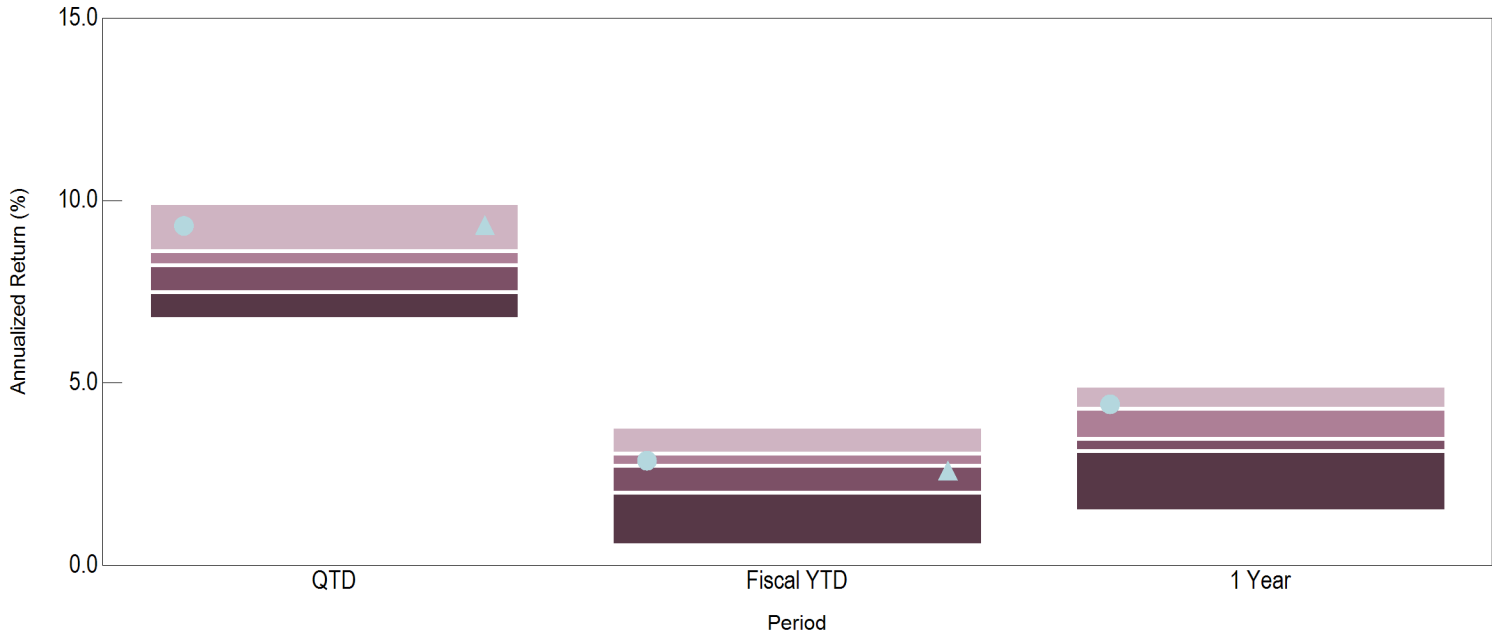


	QTD		Fiscal YTD		1 Year	
5th Percentile	9.9		4.0		5.4	
25th Percentile	8.6		3.0		4.3	
Median	7.6		2.5		3.4	
75th Percentile	6.9		1.8		2.1	
95th Percentile	6.1		1.0		1.3	
# of Portfolios	45		44		44	
● Total Fund	9.3	(11)	2.9	(33)	4.4	(16)
▲ Custom OPEB Total Fund	9.3	(11)	2.6	(46)	--	(--)





InvestorForce Public DB \$250mm-\$1B Gross Return Comparison



	Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	9.9		3.8		4.9	
25th Percentile	8.6		3.1		4.3	
Median	8.2		2.7		3.5	
75th Percentile	7.5		2.0		3.1	
95th Percentile	6.8		0.6		1.5	
# of Portfolios	48		48		48	
● Total Fund	9.3	(12)	2.9	(32)	4.4	(19)
▲ Custom OPEB Total Fund	9.3	(12)	2.6	(55)	--	(--)



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.

May 3, 2019

TO: Each Member  
Board of Investments

FROM: Jude Perez   
Principal Investment Officer

FOR: May 15, 2019 BOARD OF INVESTMENTS MEETING

SUBJECT: **LACERA QUARTERLY PERFORMANCE BOOK**

Attached is LACERA's quarterly performance book as of March 31, 2019.

Noted and Reviewed



---

Jonathan Grabel  
Chief Investment Officer

Attachment

JP:st

# PERFORMANCE REVIEW



AS OF MARCH 31, 2019

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### **Glossary**

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# EXECUTIVE SUMMARY

for the quarter ended March 31, 2019



## TOTAL FUND PERFORMANCE

LACERA's Total Fund returned 6.8% in the first quarter and 3.3% fiscal year-to-date (FYTD), underperforming its policy benchmark by 20 basis points (bps) and 120 bps, respectively. For the FYTD period, Non-U.S. Equity and Real Estate were the only asset categories to generate positive excess returns.

LACERA's U.S. Equity composite returned 14.0% for the quarter and was flat versus its benchmark. Results were mixed among the nine active managers.

LACERA's Non-U.S. Equity composite returned 11.2% for the quarter and outpaced its benchmark by 50 bps. Active developed market managers generated the vast majority of outperformance for the quarter.

LACERA's Fixed Income composite returned 3.5% for the quarter, outperforming its benchmark by 20 bps. Both the core and core plus composites realized positive excess returns in the quarter, outpacing the index by 10 and 60 bps, respectively.

LACERA's Real Estate portfolio rose 1.8% for the quarter, and surpassed its index by 20 bps. LACERA's Private Equity portfolio fell 0.2% for the quarter, trailing its benchmark by 470 bps. The Hedge Fund portfolio returned 0.7% for the quarter, underperforming its benchmark by 110 bps.

LACERA's Commodities composite surpassed its benchmark by 130 bps for the quarter as all three managers within the composite outperformed.

Three of LACERA's public market managers had four observations<sup>1</sup> below their respective performance bands: Western Core Plus, Aberdeen, and Doubleline. Enhanced scrutiny is placed on a manager when the manager realizes more than three observations outside of their performance bands.

## NET-OF-FEES

	Qtr	FYTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>U.S. Equity</b>	<b>14.0</b>	<b>3.2</b>	<b>7.0</b>	<b>12.7</b>	<b>9.8</b>	<b>15.7</b>
RUSSELL 3000 (DAILY)	14.0	4.7	8.8	13.5	10.4	16.0
<b>Non-U.S. Equity 50% Dev Mkt Hdg'd</b>	<b>11.2</b>	<b>-0.7</b>	<b>-1.0</b>	<b>9.7</b>	<b>4.9</b>	<b>10.5</b>
Custom MSCI ACWI IMI N 50% H	10.7	-1.0	-1.8	9.1	4.5	10.1
<b>Fixed Income*</b>	<b>3.5</b>	<b>4.5</b>	<b>4.4</b>	<b>4.1</b>	<b>3.5</b>	<b>6.0</b>
FI CUSTOM INDEX	3.3	4.8	4.5	2.6	3.0	4.4
BBG BC U.S. Universal	3.3	4.8	4.5	2.6	3.0	4.4
<b>Real Estate**</b>	<b>1.8</b>	<b>7.0</b>	<b>9.9</b>	<b>8.3</b>	<b>9.8</b>	<b>5.2</b>
REAL ESTATE TARGET	1.6	5.6	7.8	7.7	9.8	7.8
<b>Private Equity**</b>	<b>-0.2</b>	<b>8.4</b>	<b>13.0</b>	<b>14.5</b>	<b>13.5</b>	<b>14.7</b>
PRIVATE EQUITY TARGET	4.5	12.6	16.7	14.1	13.9	11.3
<b>Commodities</b>	<b>7.6</b>	<b>-5.6</b>	<b>-4.7</b>	<b>4.0</b>	<b>-7.6</b>	<b>-0.5</b>
Bloomberg Comm Index TR	6.3	-5.6	-5.3	2.2	-8.9	-2.6
<b>Hedge Funds***</b>	<b>0.7</b>	<b>-0.5</b>	<b>0.1</b>	<b>4.4</b>	<b>2.3</b>	
HEDGE FUND CUSTOM INDEX	1.8	5.4	7.1	6.2	5.7	
<b>Cash</b>	<b>0.7</b>	<b>2.0</b>	<b>2.5</b>	<b>1.5</b>	<b>1.1</b>	<b>1.4</b>
FTSE 6 M Treasury Bill Index	0.6	1.7	2.2	1.2	0.8	0.5
<b>Total Fund</b>	<b>6.8</b>	<b>3.3</b>	<b>4.9</b>	<b>9.0</b>	<b>6.7</b>	<b>9.9</b>
TOTAL FUND POLICY BENCHMARK	7.0	4.5	5.8	8.5	6.7	9.7
7.25% Annual Hurdle Rate	1.8	5.4	7.3	7.3	7.3	7.3

See Glossary for all benchmark definitions. Yearly returns are annualized.

<sup>1</sup> Each quarterly observation is based on trailing one year excess returns.

\* The performance and market values of two opportunistic portfolios are reported with a one-month lag.

\*\* Portfolio and benchmark are reported with a one-quarter lag. Preliminary returns.

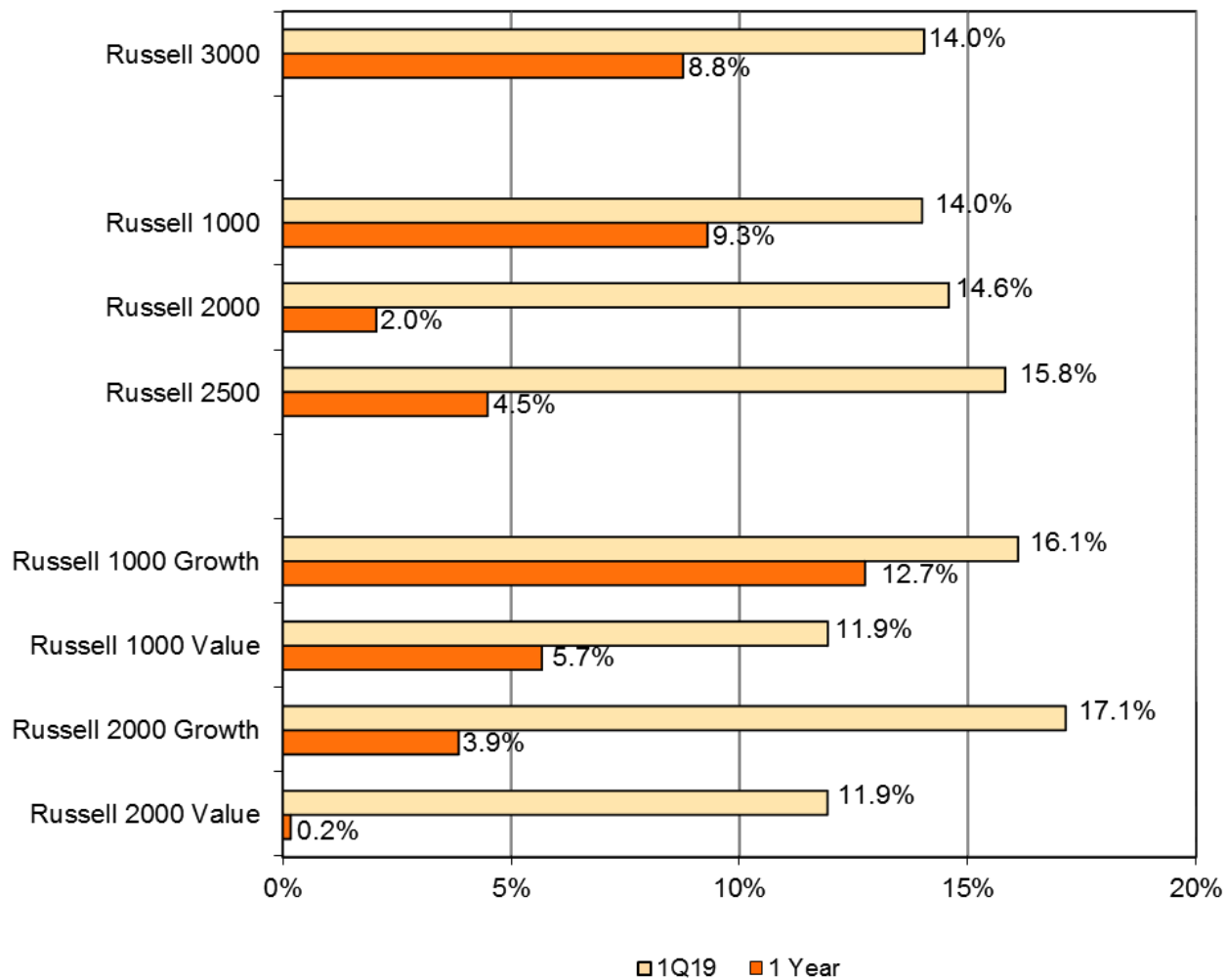
\*\*\* Portfolio and benchmark are reported with a one-month lag.

# EXECUTIVE SUMMARY

for the quarter ended March 31, 2019



## U.S. EQUITY INDEX TOTAL RETURNS





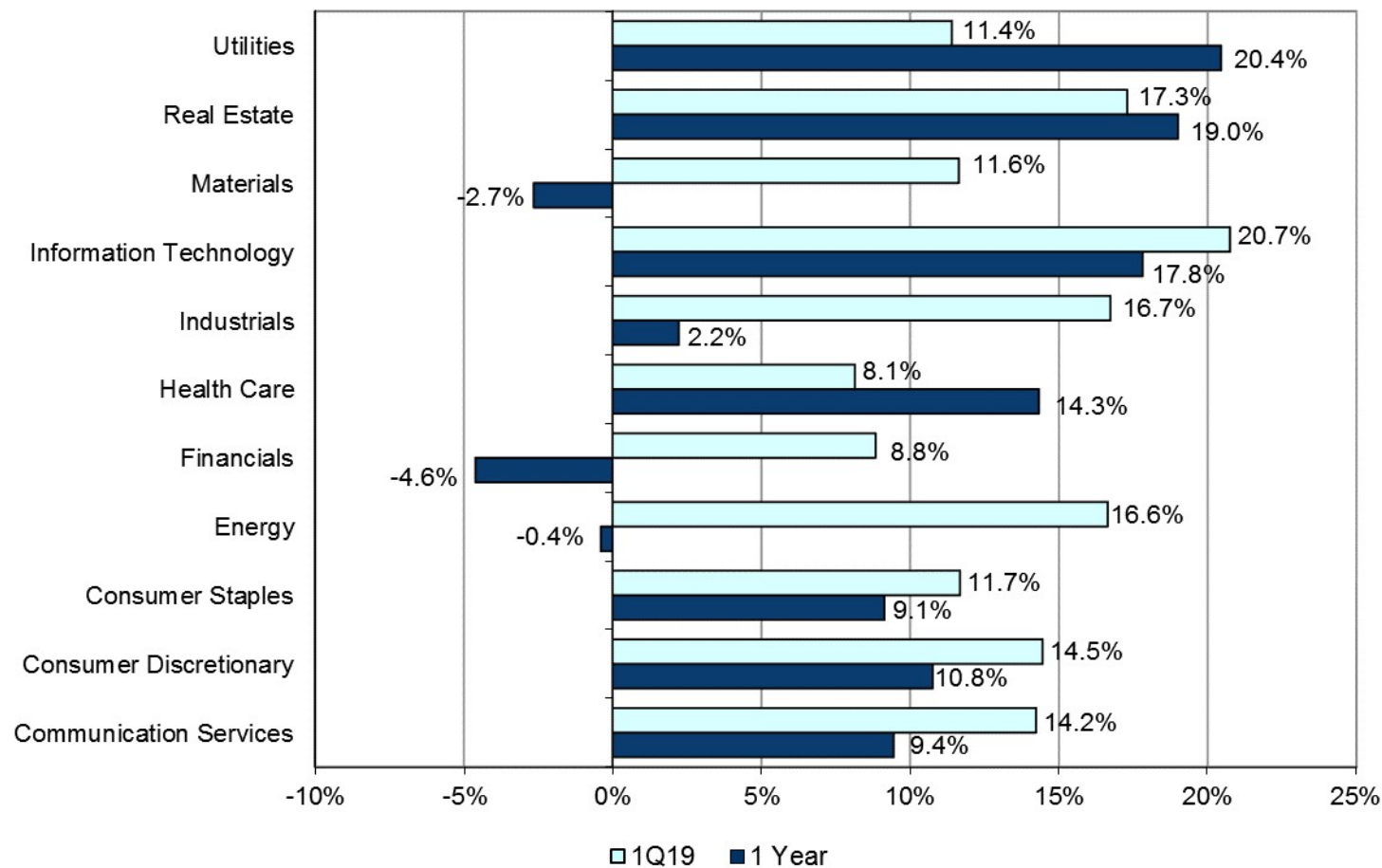
# EXECUTIVE SUMMARY

for the quarter ended March 31, 2019



## U.S. EQUITY SECTOR TOTAL RETURNS

### Russell 3000

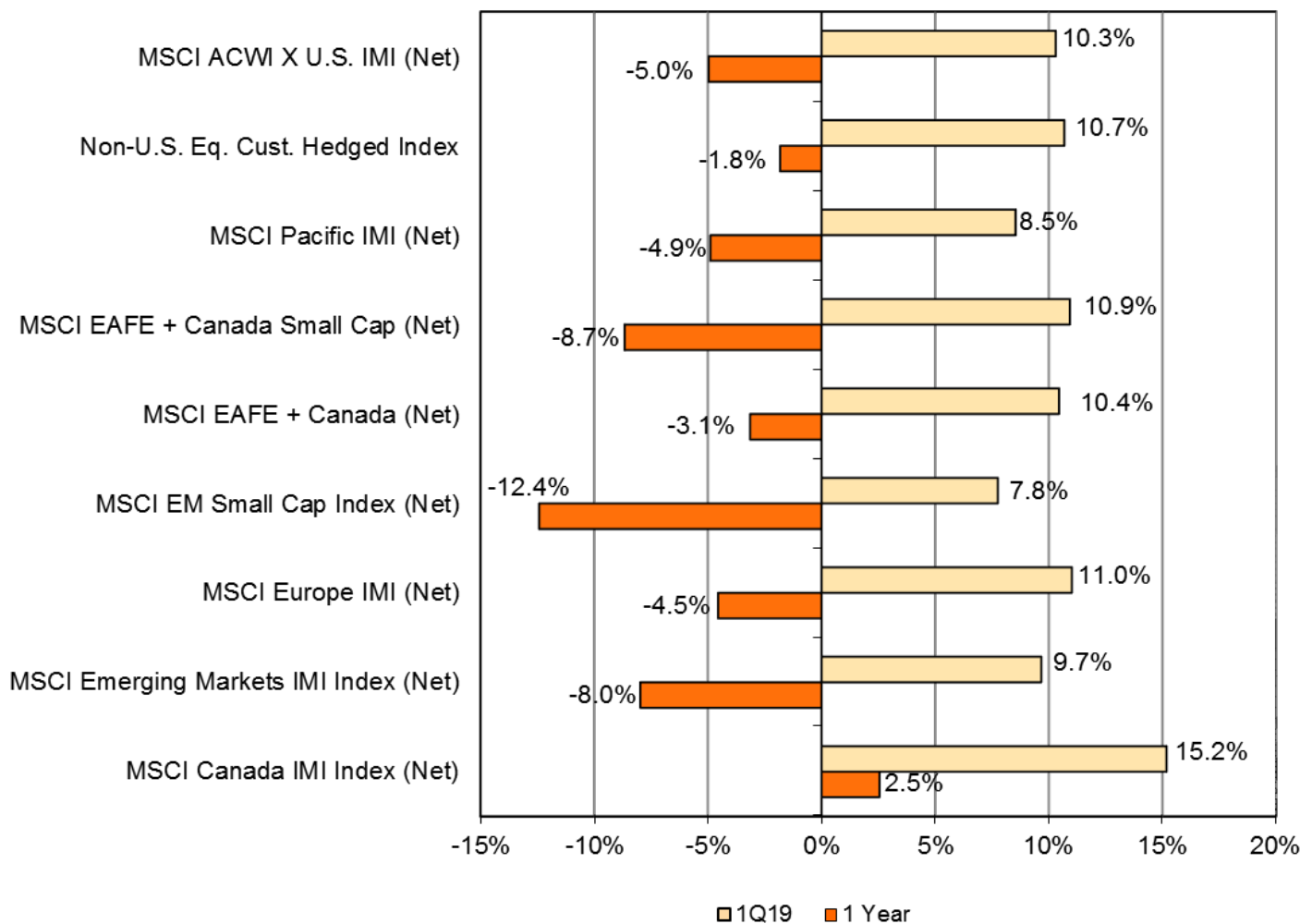


# EXECUTIVE SUMMARY

for the quarter ended March 31, 2019



## NON-U.S. EQUITY INDEX TOTAL RETURNS



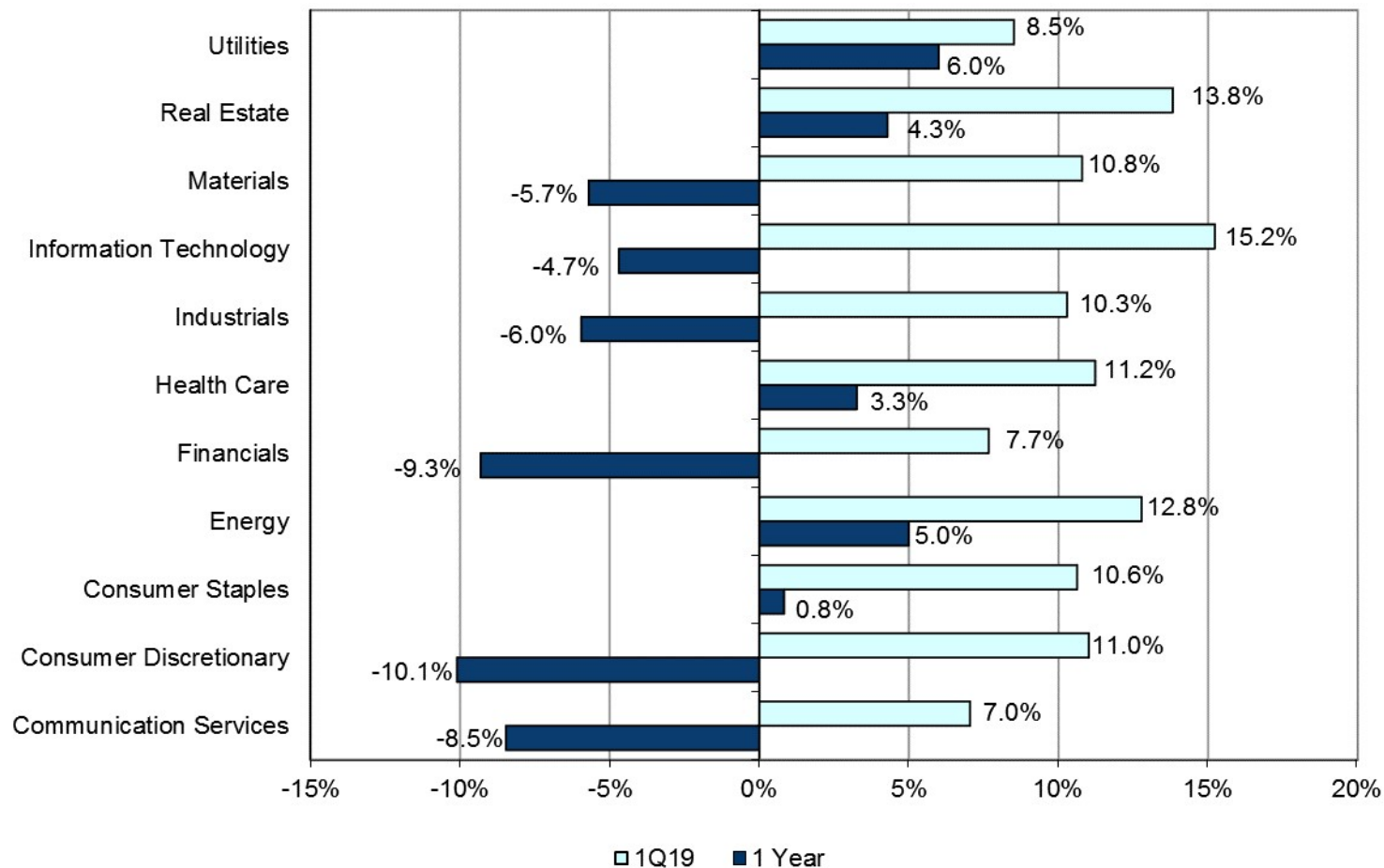
# EXECUTIVE SUMMARY

for the quarter ended March 31, 2019



## NON-U.S. EQUITY SECTOR TOTAL RETURNS

### MSCI ACWI ex U.S. IMI

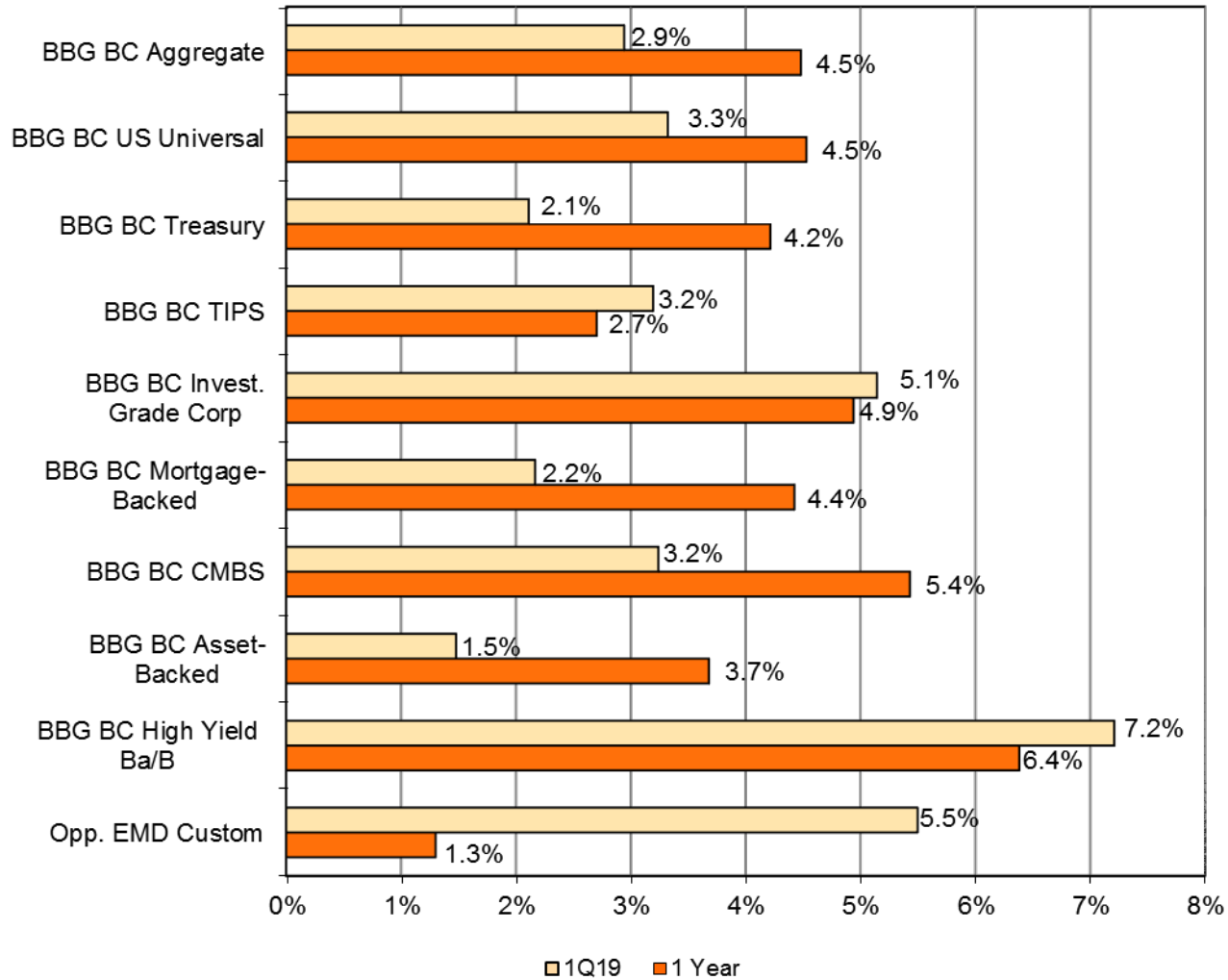


# EXECUTIVE SUMMARY

for the quarter ended March 31, 2019



## MAJOR FIXED INCOME INDICES

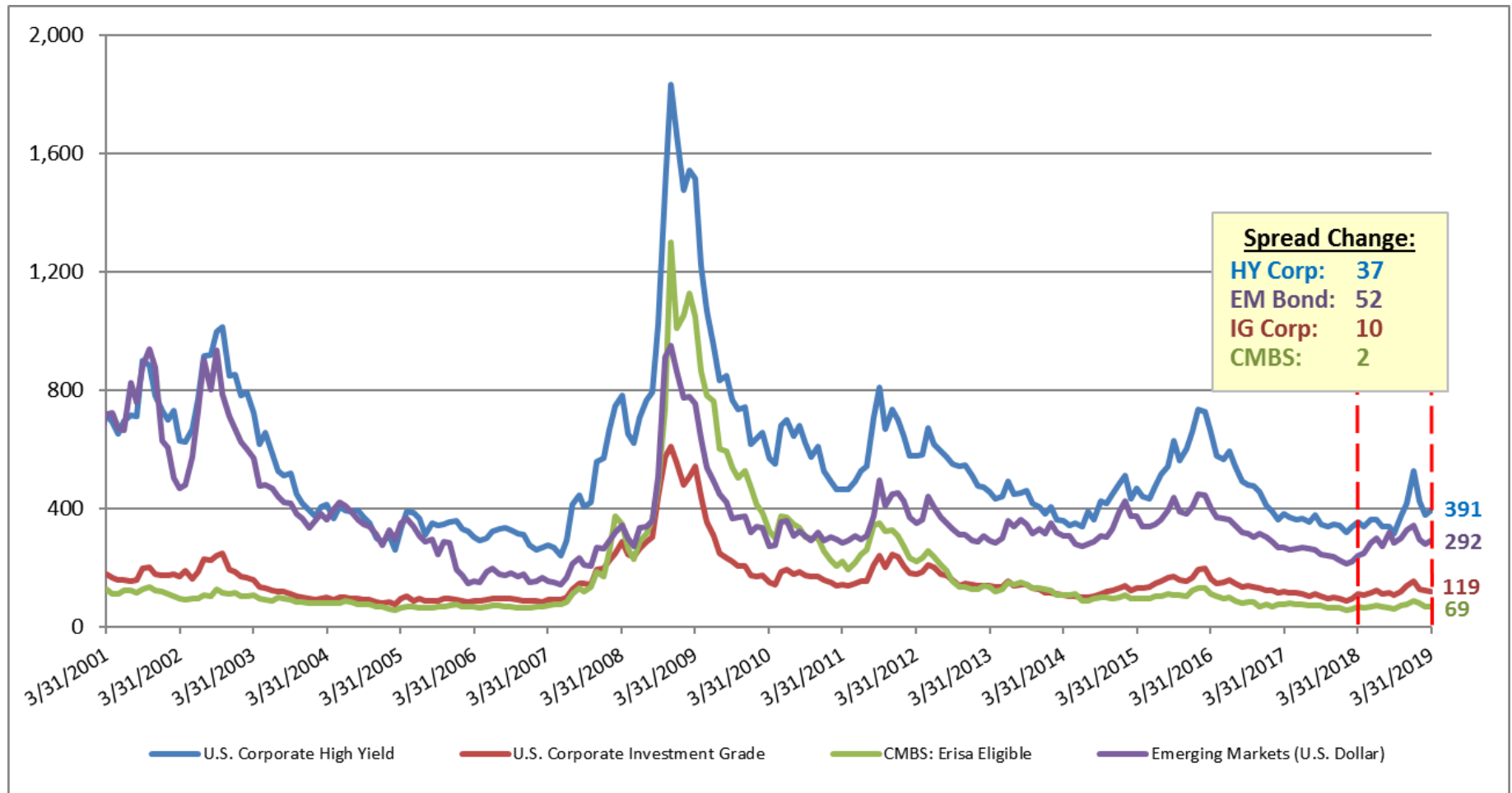


# EXECUTIVE SUMMARY

for the quarter ended March 31, 2019



## YIELD SPREADS TO TREASURIES



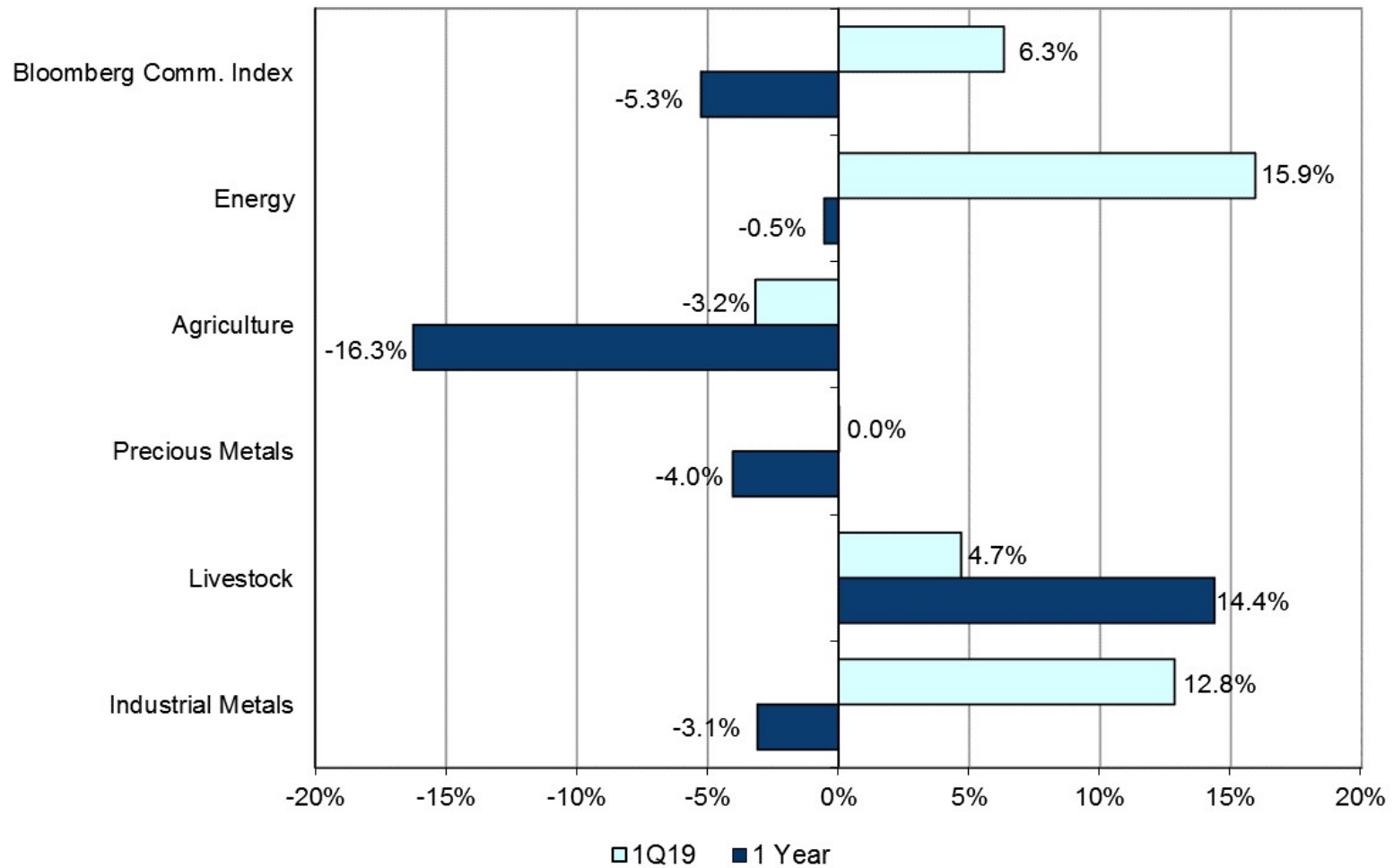
Source: Bloomberg Barclays

# EXECUTIVE SUMMARY

for the quarter ended March 31, 2019



## BLOOMBERG COMMODITY INDEX TOTAL RETURNS



# TOTAL FUND

## ANNUALIZED & ANNUAL RETURNS

for the quarter ended March 31, 2019  
Gross-of-Fees



	<u>Qtr End</u>	<u>1 Year</u>	<u>3 Years</u>	<u>5 Years</u>	<u>7 Years</u>	<u>10 Years</u>	<u>Dec 31 2018</u>	<u>Dec 31 2017</u>	<u>Dec 31 2016</u>	<u>Dec 31 2015</u>
<b>U.S. Equity</b>	<b>14.0</b>	<b>7.1</b>	<b>12.8</b>	<b>9.9</b>	<b>12.4</b>	<b>15.8</b>	<b>-6.7</b>	<b>21.1</b>	<b>12.6</b>	<b>0.4</b>
RUSSELL 3000 (DAILY)	14.0	8.8	13.5	10.4	12.6	16.0	-5.2	21.1	12.7	0.5
<b>Non-U.S. Equity 50% Dev Mkt Hedged</b>	<b>11.2</b>	<b>-0.8</b>	<b>10.0</b>	<b>5.2</b>	<b>7.1</b>	<b>10.7</b>	<b>-12.4</b>	<b>25.6</b>	<b>7.2</b>	<b>-1.9</b>
Custom MSCI ACWI IMI N 50% H	10.7	-1.8	9.1	4.5	6.4	10.1	-12.8	24.6	6.2	-2.0
<b>Fixed Income*</b>	<b>3.5</b>	<b>4.6</b>	<b>4.4</b>	<b>3.7</b>	<b>3.9</b>	<b>6.2</b>	<b>0.2</b>	<b>5.5</b>	<b>6.6</b>	<b>-0.1</b>
FI CUSTOM INDEX	3.3	4.5	2.6	3.0	2.9	4.4	-0.3	4.1	3.9	0.4
BBG BC U.S. Universal	3.3	4.5	2.6	3.0	2.9	4.4	-0.3	4.1	3.9	0.4
<b>Real Estate**</b>	<b>2.0</b>	<b>10.8</b>	<b>9.1</b>	<b>10.7</b>	<b>10.2</b>	<b>6.1</b>	<b>10.6</b>	<b>7.9</b>	<b>9.2</b>	<b>15.0</b>
REAL ESTATE TARGET	1.6	7.8	7.7	9.8	10.3	7.8	8.1	7.1	9.5	14.3
<b>Private Equity**</b>	<b>-0.1</b>	<b>13.1</b>	<b>14.5</b>	<b>13.6</b>	<b>14.7</b>	<b>14.7</b>	<b>19.2</b>	<b>17.6</b>	<b>7.9</b>	<b>10.8</b>
PRIVATE EQUITY TARGET	4.5	16.7	14.1	13.9	13.6	11.3	15.2	12.8	12.7	13.6
<b>Commodities</b>	<b>7.7</b>	<b>-4.4</b>	<b>4.3</b>	<b>-7.3</b>	<b>-5.6</b>	<b>-0.0</b>	<b>-11.3</b>	<b>4.4</b>	<b>14.9</b>	<b>-24.1</b>
Bloomberg Comm Index TR	6.3	-5.3	2.2	-8.9	-7.1	-2.6	-11.2	1.7	11.8	-24.7
<b>Hedge Funds***</b>	<b>0.7</b>	<b>0.2</b>	<b>4.5</b>	<b>2.4</b>	<b>4.5</b>		<b>1.4</b>	<b>5.9</b>	<b>2.2</b>	<b>-0.1</b>
HEDGE FUND CUSTOM INDEX	1.8	7.1	6.2	5.7	5.5		6.8	5.8	5.3	5.0
<b>Cash</b>	<b>0.7</b>	<b>2.5</b>	<b>1.6</b>	<b>1.1</b>	<b>0.9</b>	<b>1.4</b>	<b>2.2</b>	<b>1.2</b>	<b>0.9</b>	<b>0.4</b>
FTSE 6 M Treasury Bill Index	0.6	2.2	1.2	0.8	0.6	0.5	1.9	0.9	0.4	0.1
<b>Total Fund (Gross-of-Fees)</b>	<b>6.8</b>	<b>5.2</b>	<b>9.3</b>	<b>6.9</b>	<b>8.2</b>	<b>10.1</b>	<b>-1.6</b>	<b>15.2</b>	<b>8.6</b>	<b>1.6</b>
TOTAL FUND POLICY BENCHMARK	7.0	5.8	8.5	6.7	7.7	9.7	-1.3	13.4	8.3	2.1
7.25% Annual Hurdle Rate	1.8	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3

See Glossary for all benchmark definitions.

\* The performance and market values of two opportunistic portfolios are reported with a one-month lag.

\*\* Portfolio and benchmark are reported with a one-quarter lag. Preliminary returns.

\*\*\* Portfolio and benchmark are reported with a one-month lag. Performance included in Total Fund beginning 10/31/11.

# TOTAL FUND

## ANNUALIZED & ANNUAL RETURNS

for the quarter ended March 31, 2019  
Net-of-Fees



	<u>Qtr End</u>	<u>1Year</u>	<u>3 Years</u>	<u>5 Years</u>	<u>7 Years</u>	<u>10 Years</u>	<u>Dec 31 2018</u>	<u>Dec 31 2017</u>	<u>Dec 31 2016</u>	<u>Dec 31 2015</u>
<b>U.S. Equity</b>	<b>14.0</b>	<b>7.0</b>	<b>12.7</b>	<b>9.8</b>	<b>12.2</b>	<b>15.7</b>	<b>-6.8</b>	<b>20.9</b>	<b>12.5</b>	<b>0.2</b>
RUSSELL 3000 (DAILY)	14.0	8.8	13.5	10.4	12.6	16.0	-5.2	21.1	12.7	0.5
<b>Non-U.S. Equity 50% Dev Mkt Hedged</b>	<b>11.2</b>	<b>-1.0</b>	<b>9.7</b>	<b>4.9</b>	<b>6.9</b>	<b>10.5</b>	<b>-12.6</b>	<b>25.3</b>	<b>7.0</b>	<b>-2.1</b>
Custom MSCI ACWI IMI N 50% H	10.7	-1.8	9.1	4.5	6.4	10.1	-12.8	24.6	6.2	-2.0
<b>Fixed Income*</b>	<b>3.5</b>	<b>4.4</b>	<b>4.1</b>	<b>3.5</b>	<b>3.7</b>	<b>6.0</b>	<b>-0.0</b>	<b>5.2</b>	<b>6.3</b>	<b>-0.3</b>
FI CUSTOM INDEX	3.3	4.5	2.6	3.0	2.9	4.4	-0.3	4.1	3.9	0.4
BBG BC U.S. Universal	3.3	4.5	2.6	3.0	2.9	4.4	-0.3	4.1	3.9	0.4
<b>Real Estate**</b>	<b>1.8</b>	<b>9.9</b>	<b>8.3</b>	<b>9.8</b>	<b>9.3</b>	<b>5.2</b>	<b>9.6</b>	<b>7.2</b>	<b>8.4</b>	<b>14.1</b>
REAL ESTATE TARGET	1.6	7.8	7.7	9.8	10.3	7.8	8.1	7.1	9.5	14.3
<b>Private Equity**</b>	<b>-0.2</b>	<b>13.0</b>	<b>14.5</b>	<b>13.5</b>	<b>14.6</b>	<b>14.7</b>	<b>19.2</b>	<b>17.6</b>	<b>7.9</b>	<b>10.8</b>
PRIVATE EQUITY TARGET	4.5	16.7	14.1	13.9	13.6	11.3	15.2	12.8	12.7	13.6
<b>Commodities</b>	<b>7.6</b>	<b>-4.7</b>	<b>4.0</b>	<b>-7.6</b>	<b>-6.0</b>	<b>-0.5</b>	<b>-11.6</b>	<b>4.1</b>	<b>14.5</b>	<b>-24.4</b>
Bloomberg Comm Index TR	6.3	-5.3	2.2	-8.9	-7.1	-2.6	-11.2	1.7	11.8	-24.7
<b>Hedge Funds (Net All) ***</b>	<b>0.7</b>	<b>0.1</b>	<b>4.4</b>	<b>2.3</b>	<b>4.4</b>		<b>1.3</b>	<b>5.8</b>	<b>2.0</b>	<b>-0.2</b>
HEDGE FUND CUSTOM INDEX	1.8	7.1	6.2	5.7	5.5		6.8	5.8	5.3	5.0
<b>Cash</b>	<b>0.7</b>	<b>2.5</b>	<b>1.5</b>	<b>1.1</b>	<b>0.9</b>	<b>1.4</b>	<b>2.1</b>	<b>1.1</b>	<b>0.8</b>	<b>0.3</b>
FTSE 6 M Treasury Bill Index	0.6	2.2	1.2	0.8	0.6	0.5	1.9	0.9	0.4	0.1
<b>Total Fund (Net-of-Fees)</b>	<b>6.8</b>	<b>4.9</b>	<b>9.0</b>	<b>6.7</b>	<b>8.0</b>	<b>9.9</b>	<b>-1.8</b>	<b>14.9</b>	<b>8.3</b>	<b>1.5</b>
TOTAL FUND POLICY BENCHMARK	7.0	5.8	8.5	6.7	7.7	9.7	-1.3	13.4	8.3	2.1
7.25% Annual Hurdle Rate	1.8	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3

See Glossary for all benchmark definitions.

\* The performance and market values of two opportunistic portfolios are reported with a one-month lag.

\*\* Portfolio and benchmark are reported with a one-quarter lag. Preliminary returns.

\*\*\* Portfolio and benchmark are reported with a one-month lag. Performance included in Total Fund beginning 10/31/11.



# TOTAL FUND 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>	<u>Jun 30 2014</u>
<b>U.S. Equity</b>	<b>3.3</b>	<b>14.2</b>	<b>18.7</b>	<b>1.6</b>	<b>7.4</b>	<b>25.8</b>
RUSSELL 3000 (DAILY)	4.7	14.8	18.5	2.1	7.3	25.2
<b>Non-U.S. Equity 50% Dev Mkt Hedged</b>	<b>-0.6</b>	<b>9.1</b>	<b>23.0</b>	<b>-8.7</b>	<b>1.1</b>	<b>20.9</b>
Custom MSCI ACWI IMI N 50% H	-1.0	8.2	21.7	-9.4	0.9	20.3
<b>Fixed Income*</b>	<b>4.6</b>	<b>1.1</b>	<b>4.3</b>	<b>4.7</b>	<b>1.6</b>	<b>6.6</b>
FI CUSTOM INDEX	4.8	-0.3	0.9	5.8	1.6	5.2
BBG BC U.S. Universal	4.8	-0.3	0.9	5.8	1.6	5.2
<b>Real Estate**</b>	<b>7.6</b>	<b>9.2</b>	<b>8.4</b>	<b>13.2</b>	<b>12.8</b>	<b>9.1</b>
REAL ESTATE TARGET	5.6	7.5	7.8	13.1	12.8	12.2
<b>Private Equity**</b>	<b>8.5</b>	<b>21.2</b>	<b>12.5</b>	<b>6.7</b>	<b>13.2</b>	<b>23.5</b>
PRIVATE EQUITY TARGET	12.6	13.7	12.7	13.0	13.8	13.3
<b>Commodities</b>	<b>-5.3</b>	<b>10.4</b>	<b>-3.6</b>	<b>-12.7</b>	<b>-23.0</b>	<b>10.2</b>
Bloomberg Comm Index TR	-5.6	7.3	-6.5	-13.3	-23.7	8.2
<b>Hedge Funds***</b>	<b>-0.4</b>	<b>5.7</b>	<b>7.0</b>	<b>-4.2</b>	<b>3.1</b>	<b>8.3</b>
HEDGE FUND CUSTOM INDEX	5.4	6.3	5.4	5.1	5.0	5.0
<b>Cash</b>	<b>2.0</b>	<b>1.5</b>	<b>1.0</b>	<b>0.6</b>	<b>0.4</b>	<b>0.4</b>
FTSE 6 M Treasury Bill Index	1.7	1.3	0.5	0.2	0.1	0.1
<b>Total Fund (Gross-of-Fees)</b>	<b>3.5</b>	<b>9.3</b>	<b>13.0</b>	<b>1.1</b>	<b>4.3</b>	<b>16.8</b>
TOTAL FUND POLICY BENCHMARK	4.5	7.8	11.2	2.2	4.5	15.3
7.25% Annual Hurdle Rate	5.4	7.3	7.3	7.3	7.3	7.3
<b>Total Fund (Net-of-Fees)</b>	<b>3.3</b>	<b>9.0</b>	<b>12.7</b>	<b>0.8</b>	<b>4.1</b>	<b>16.5</b>

See Glossary for all benchmark definitions.

\* The performance and market values of two opportunistic portfolios are reported with a one-month lag.

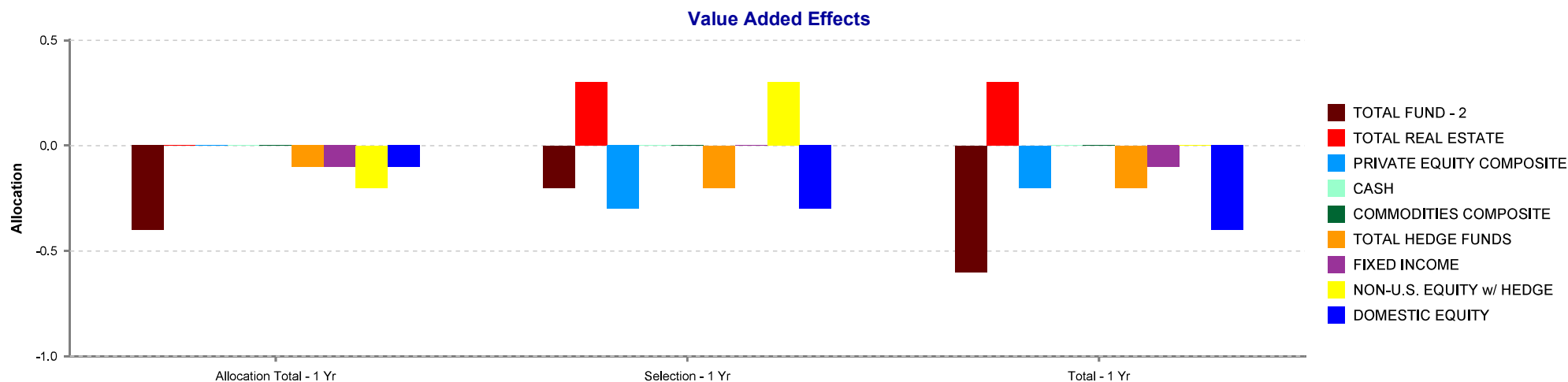
\*\* Portfolio and benchmark are reported with a one-quarter lag. Preliminary returns.

\*\*\* Portfolio and benchmark are reported with a one-month lag. Performance included in Total Fund beginning 10/31/11.

# TOTAL FUND ATTRIBUTION

## TOTAL FUND vs. BENCHMARK

for the one-year ended March 31, 2019



	Fund Weight	Target Weight	Relative	Fund Return	Benchmark Return	Return Difference	Allocation Effect*	Selection Effect**	BM Impact	Residual	Total Value Add
TOTAL FUND - 2	100.0	100.0	-0.0	5.2	5.8	-0.7	-0.4	-0.2	-0.9	0.8	-0.6
TOTAL REAL ESTATE	11.4	11.0	0.4	10.8	7.8	3.0	-0.0	0.3	-	-	0.3
PRIVATE EQUITY COMPOSITE	9.5	10.0	-0.5	13.1	16.7	-3.5	0.0	-0.3	-	-	-0.2
CASH	2.6	2.0	0.6	2.5	2.2	0.3	-0.0	0.0	-	-	0.0
COMMODITIES COMPOSITE	2.3	2.8	-0.5	-4.4	-5.3	0.9	0.0	0.0	-	-	0.0
TOTAL HEDGE FUNDS	3.2	5.0	-1.8	0.2	7.1	-6.9	-0.1	-0.2	-	-	-0.2
FIXED INCOME	27.0	27.8	-0.8	4.6	4.5	0.0	-0.1	-0.0	-	-	-0.1
NON-U.S. EQUITY w/ HEDGE	20.1	18.7	1.4	-0.8	-1.8	1.1	-0.2	0.3	-	-	0.0
DOMESTIC EQUITY	23.8	22.7	1.1	7.1	8.8	-1.7	-0.1	-0.3	-	-	-0.4

\* Allocation decision reflects the asset class over or underweight (versus the policy weight) multiplied by the difference between the asset class benchmark and Fund Policy benchmark return.

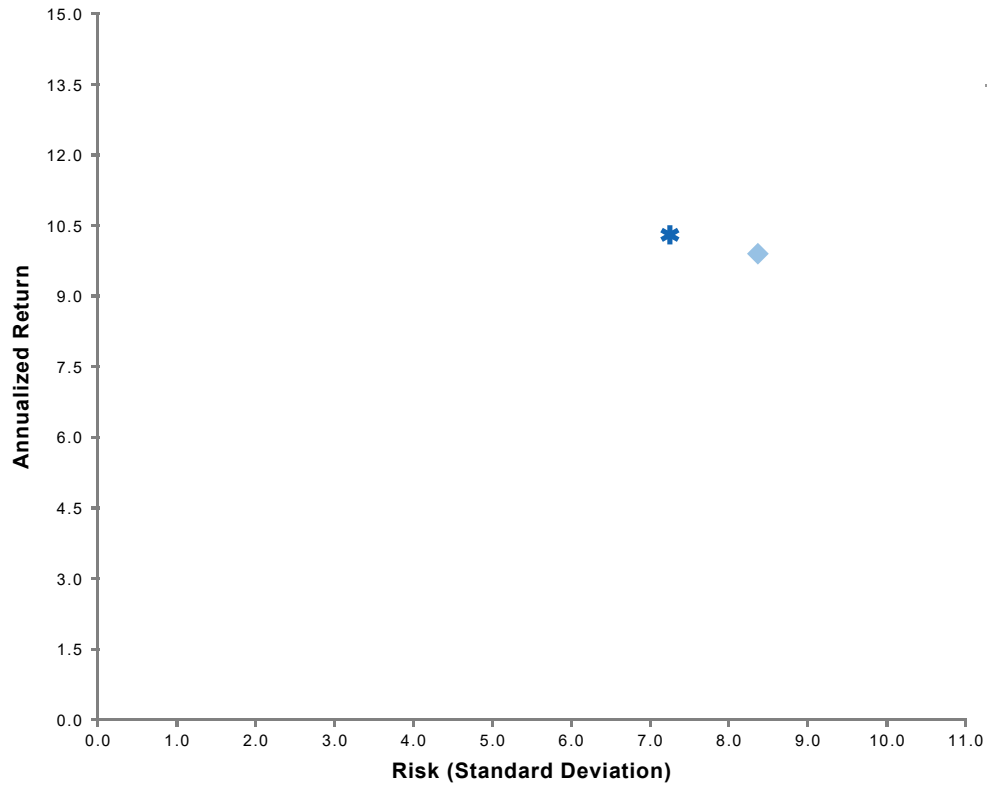
\*\* Selection decision reflects the Fund's asset class return minus the asset class benchmark return, multiplied by the asset class weight.

# TOTAL FUND RISK-ADJUSTED RETURN

for the quarter ended March 31, 2019



## 10 Year Risk vs Return



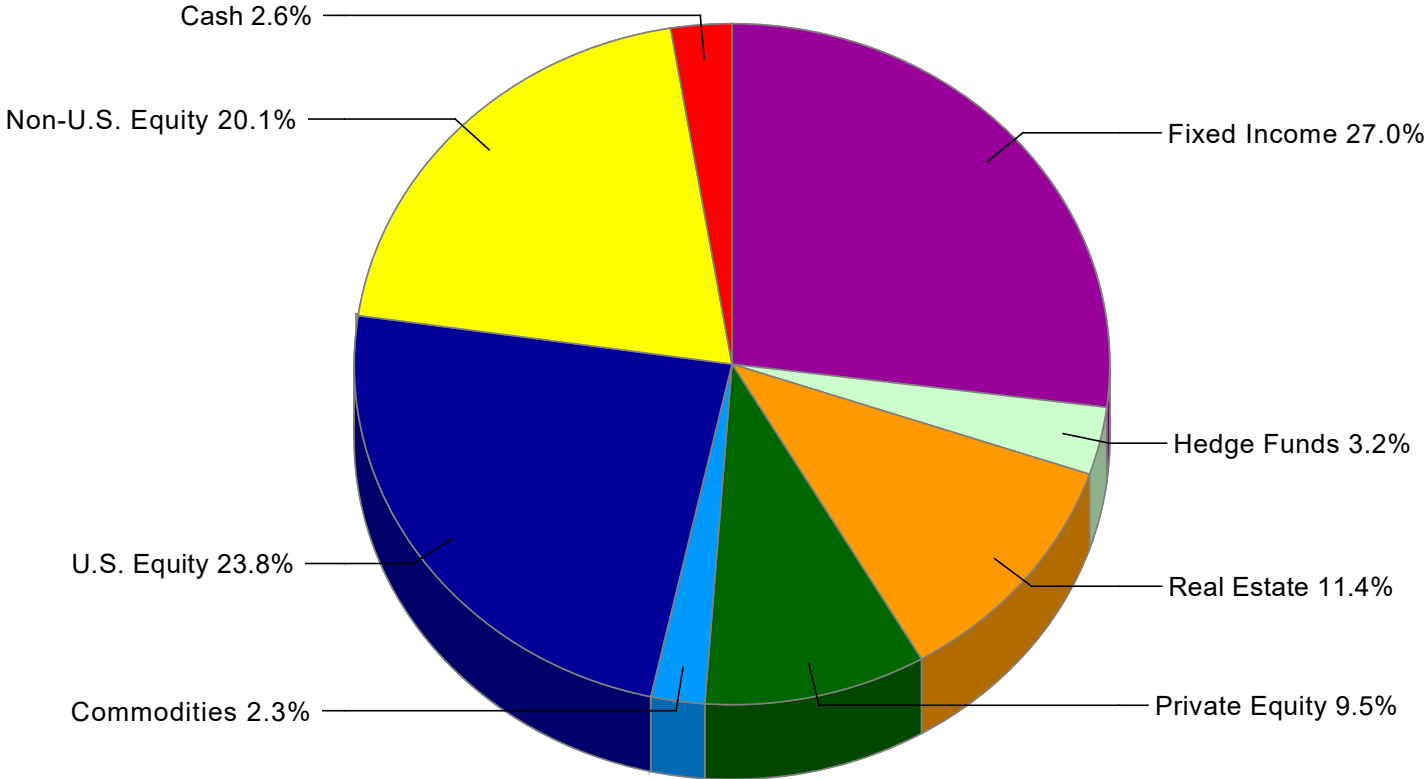
	Rate of Return 10 Years	Standard Deviation 10 Years
* TOTAL FUND	10.1	7.1
◆ TOTAL FUND POLICY BENCHMARK	9.7	8.2

◆ TOTAL FUND    ◆ TOTAL FUND POLICY BENCHMARK

	<u>Rate of Return 10 Years</u>	<u>Standard Deviation 10 Years</u>	<u>Tracking Error 10 Years</u>
<b>Public Funds (DB) &gt; \$1 Billion</b>			
TOTAL FUND - 2	10.1	7.1	1.0
TOTAL FUND POLICY BENCHMARK	9.7	8.2	

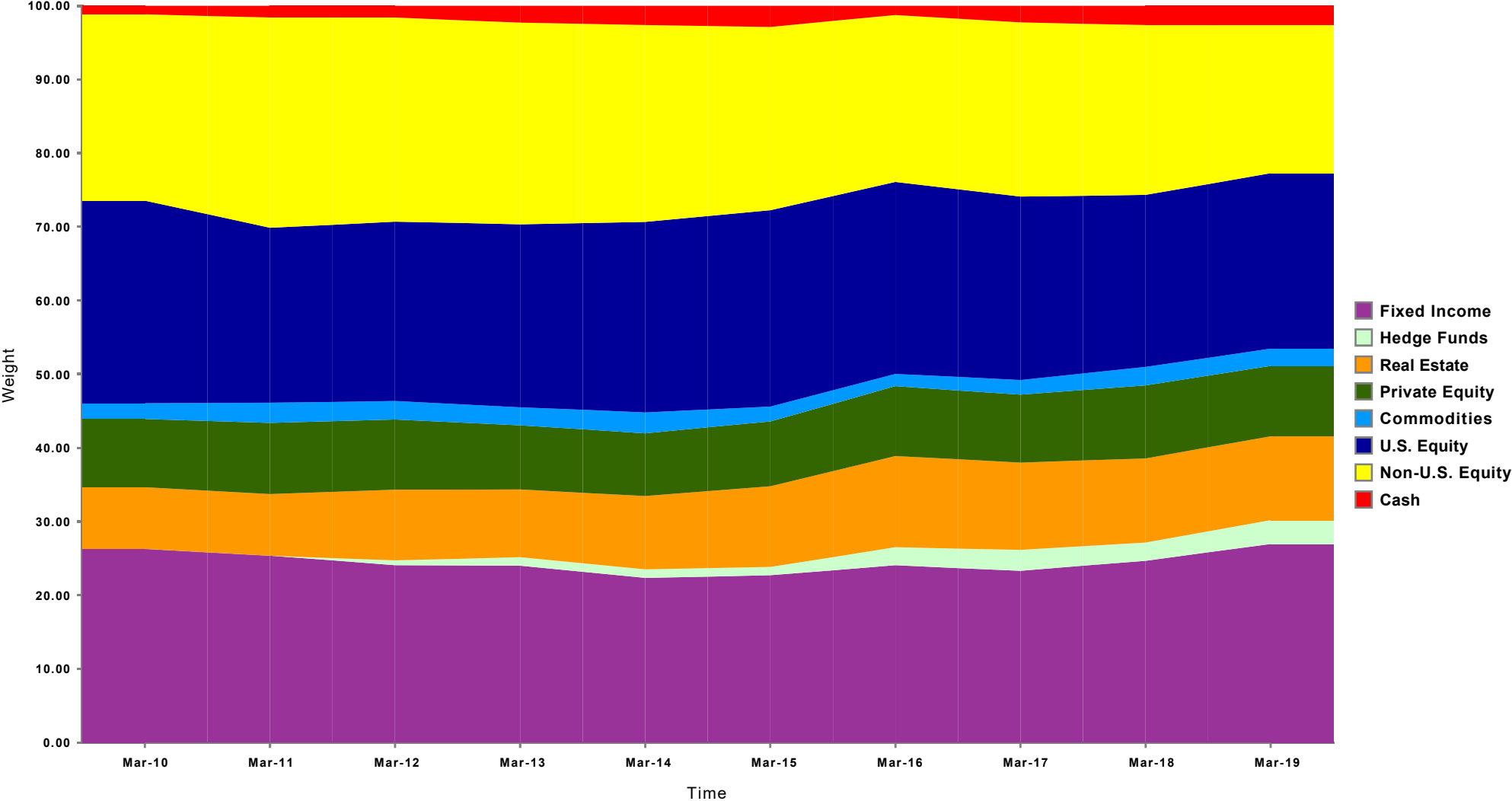
# ASSET ALLOCATION TOTAL FUND

for the quarter ended March 31, 2019



# ASSET ALLOCATION TOTAL FUND

for the quarter ended March 31, 2019



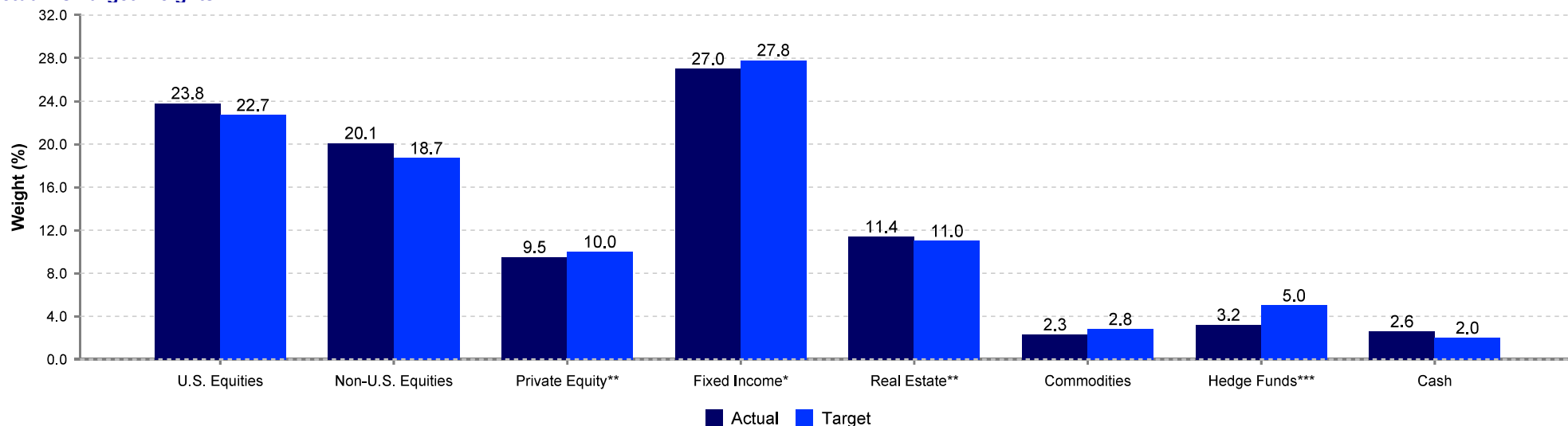
# ASSET ALLOCATION

## ACTUAL vs. TARGET

for the quarter ended March 31, 2019



Actual vs Target Weights



	Ending Market Value	Actual	Target	Relative	Min	Max
<b>Total Equity</b>	<b>25,049,437,686</b>	<b>43.9</b>	<b>41.4</b>	<b>2.5</b>	<b>31.4</b>	<b>51.4</b>
U.S. Equities	13,572,959,556	23.8	22.7	1.1		
Non-U.S. Equities	11,476,478,130	20.1	18.7	1.4		
Fixed Income*	15,366,041,871	27.0	27.8	-0.8	24.8	30.8
Real Estate**	6,494,644,085	11.4	11.0	0.4	8.0	16.0
Private Equity**	5,440,901,267	9.5	10.0	-0.5	7.0	14.0
Commodities	1,331,975,963	2.3	2.8	-0.5	0.0	4.8
Hedge Funds***	1,849,749,797	3.2	5.0	-1.8	2.0	7.0
Cash	1,481,749,082	2.6	2.0	0.6	0.0	4.0
<b>Total Fund</b>	<b>57,014,499,752</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>		

\* The performance and market values of two opportunistic portfolios are reported with a one-month lag.

\*\* Portfolio and benchmark are reported with a one-quarter lag. Preliminary returns.

\*\*\* Portfolio and benchmark are reported with a one-month lag.

# ASSET ALLOCATION

## U.S. EQUITY MANAGERS

for the quarter ended March 31, 2019



	<i>March 31, 2019</i>			<i>December 31, 2018</i>	
	Assets (\$ millions)	% of Composite		Assets (\$ millions)	% of Composite
<b>PASSIVE</b>					
BTC Russell 3000 Index	10,324.2	76.1	BTC Russell 3000 Index	9,052.6	76.0
<b>LOW RISK</b>					
INTECH US ENHANCED PLUS	907.5	6.7	INTECH US ENHANCED PLUS	793.8	6.7
Twin Capital	562.1	4.1	Twin Capital	498.1	4.2
<b>MODERATE / HIGH RISK</b>					
CornerCap	55.2	0.4	CornerCap	48.8	0.4
Eagle Asset Mgmt.	346.4	2.6	Eagle Asset Mgmt.	305.2	2.6
Frontier Capital Mgmt.	688.4	5.1	Frontier Capital Mgmt.	597.7	5.0
JANA Partners	86.0	0.6	JANA Partners	73.2	0.6
Matarin	108.9	0.8	Matarin	97.8	0.8
QMA	269.4	2.0	QMA	239.3	2.0
Systematic	224.8	1.7	Systematic	201.9	1.7
<b>TOTAL U.S. EQUITY</b>	<b>13,573.0</b>	<b>100.0</b>	<b>TOTAL U.S. EQUITY</b>	<b>11,908.3</b>	<b>100.0</b>

# ASSET ALLOCATION

## NON-U.S. EQUITY MANAGERS (cont's...)

for the quarter ended March 31, 2019



	<i>March 31, 2019</i>			<i>December 31, 2018</i>	
	Assets (\$ millions)	% of Composite		Assets (\$ millions)	% of Composite
<b>PASSIVE</b>			<b>PASSIVE</b>		
BTC Canada Index IMI	705.3	6.2	BTC Canada Index IMI	611.1	5.5
BTC EAFE Index IMI	4,402.0	38.4	BTC EAFE Index IMI	3,995.5	36.0
BTC EAFE Small Cap	191.6	1.7	BTC EAFE Small Cap	173.0	1.6
BTC Emerging Markets Index	1,194.2	10.4	BTC Emerging Markets Index	1,087.3	9.8
BTC Europe Index	364.2	3.2	BTC Europe Index	328.3	3.0
BTC Emerging Markets Small Cap Index	130.3	1.1	BTC Emerging Markets Small Cap Index	121.0	1.1
<b>NON-US DEVELOPED</b>			<b>NON-US DEVELOPED</b>		
Acadian Asset Mgmt.	854.0	7.5	Acadian Asset Mgmt.	770.0	6.9
Capital Guardian	392.0	3.4	Capital Guardian	338.9	3.1
Global Alpha	167.9	1.5	Global Alpha	150.0	1.3
<b>REGIONAL DEVELOPED</b>			<b>REGIONAL DEVELOPED</b>		
BTC Europe Alpha Tilts	946.0	8.3	BTC Europe Alpha Tilts	850.5	7.7
Cevian Capital	284.6	2.5	Cevian Capital	268.1	2.4
GAM International Mgmt.*	5.0	0.0	GAM International Mgmt.	801.0	7.2
Symphony Financial Partners	154.8	1.4	Symphony Financial Partners	135.4	1.2
<b>EMERGING MARKETS</b>			<b>EMERGING MARKETS</b>		
Acadian Emrg. Markets	374.0	3.3	Acadian Emrg. Markets	343.7	3.1
AQR Emerging Markets	242.2	2.1	AQR Emerging Markets	220.2	2.0
Genesis Investment Mgmt.	695.9	6.1	Genesis Investment Mgmt.	602.1	5.4
Lazard	351.9	3.1	Lazard	313.9	2.8
<b>TOTAL NON-U.S. EQUITY (Unhedged)</b>	<b>11,456.6</b>	<b>100.0</b>	<b>TOTAL NON-U.S. EQUITY (Unhedged)</b>	<b>11,109.8</b>	<b>100.0</b>

\* Manager was terminated and market value reflects residual value.



# ASSET ALLOCATION

## NON-U.S. EQUITY MANAGERS (...cont'd)

for the quarter ended March 31, 2019



**March 31, 2019**

**December 31, 2018**

	<b>Assets (\$ millions)</b>		<b>Assets (\$ millions)</b>
<b>PASSIVE HEDGE</b>		<b>PASSIVE HEDGE</b>	
Currency Hedge Gain/Loss	19.9	Currency Hedge Gain/Loss	39.0
<b>TOTAL NON-U.S. EQUITY (Hedged)</b>	<b>11,476.5</b>	<b>TOTAL NON-U.S. EQUITY (Hedged)</b>	<b>11,148.8</b>

# ASSET ALLOCATION

## FIXED INCOME MANAGERS & PROGRAMS (cont's...)

for the quarter ended March 31, 2019



**March 31, 2019**

**December 31, 2018**

	Assets (\$ millions)	% of Composite		Assets (\$ millions)	% of Composite
<b>CORE</b>			<b>CORE</b>		
BTC US Debt Index	5,851.5	38.1	BTC US Debt Index	4,260.6	29.2
Dodge & Cox	1,344.5	8.7	Dodge & Cox	1,297.7	8.9
Pugh Capital Mgmt.	345.0	2.2	Pugh Capital Mgmt.	136.9	0.9
Wells Capital Mgmt.	1,400.1	9.1	Wells Capital Mgmt.	1,359.3	9.3
<b>TOTAL CORE</b>	<b>8,941.1</b>	<b>58.2</b>	<b>TOTAL CORE</b>	<b>7,054.5</b>	<b>48.4</b>
<b>CORE PLUS</b>			<b>CORE PLUS</b>		
Dolan McEniry Capital Mgmt.*	0.1	0.0	Dolan McEniry Capital Mgmt.	345.9	2.4
Loomis, Sayles & Co.*	9.6	0.1	Loomis, Sayles & Co.	1,082.7	7.4
PIMCO	1,104.5	7.2	PIMCO	1,068.6	7.3
Western Asset Mgmt.	1,178.5	7.7	Western Asset Mgmt.	1,132.5	7.8
<b>TOTAL CORE PLUS</b>	<b>2,292.7</b>	<b>14.9</b>	<b>TOTAL CORE PLUS</b>	<b>3,629.7</b>	<b>24.9</b>
<b>MORTGAGE PROGRAM</b>			<b>MORTGAGE PROGRAM</b>		
Member Home Loan Program (MHLP)	28.5	0.2	Member Home Loan Program (MHLP)	29.5	0.2
Investment Grade Transition Account	4.0	0.0			

**Policy Ranges**

Core: 35% - 55%

Core Plus: 15% - 35%

High Yield & Opportunistic: 20% - 40%

\* Manager was terminated and market value reflects residual value.

# ASSET ALLOCATION

## FIXED INCOME MANAGERS & PROGRAMS (...cont'd)

for the quarter ended March 31, 2019



	<b>March 31, 2019</b>			<b>December 31, 2018</b>	
	<b>Assets (\$ millions)</b>	<b>% of Composite</b>		<b>Assets (\$ millions)</b>	<b>% of Composite</b>
<b>HIGH YIELD</b>			<b>HIGH YIELD</b>		
Oaktree Capital Mgmt.	426.6	2.8	Oaktree Capital Mgmt.	398.3	2.7
PENN Capital Mgmt.^	1.5	0.0	PENN Capital Mgmt.	107.2	0.7
<b>TOTAL HIGH YIELD</b>	<b>428.1</b>	<b>2.8</b>	<b>TOTAL HIGH YIELD</b>	<b>505.5</b>	<b>3.5</b>
<b>OPPORTUNISTIC</b>			<b>OPPORTUNISTIC</b>		
Aberdeen	407.8	2.7	Aberdeen	192.4	1.3
Ashmore	410.8	2.7	Ashmore	199.0	1.4
Bain Capital	365.0	2.4	Bain Capital	301.0	2.1
Beach Point Capital*	462.1	3.0	Beach Point Capital*	388.7	2.7
Brigade Capital Mgmt.	578.4	3.8	Brigade Capital Mgmt.	483.5	3.3
Crescent Capital	432.7	2.8	Crescent Capital	346.9	2.4
DoubleLine Capital	329.0	2.1	DoubleLine Capital	272.5	1.9
Principal Opportunistic^	13.9	0.1	Principal Opportunistic	266.3	1.8
TCW Asset Mgmt.	332.5	2.2	TCW	277.5	1.9
Tennenbaum Capital**	330.8	2.2	Tennenbaum Capital**	315.0	2.2
Western Opportunistic^	6.4	0.0	Western Opportunistic	310.6	2.1
<b>TOTAL OPPORTUNISTIC</b>	<b>3,669.3</b>	<b>23.9</b>	<b>TOTAL OPPORTUNISTIC</b>	<b>3,353.2</b>	<b>23.0</b>
Credit Transition Account	2.3	0.0			
<b>TOTAL FIXED INCOME***</b>	<b>15,366.0</b>	<b>100.0</b>	<b>TOTAL FIXED INCOME***</b>	<b>14,572.5</b>	<b>100.0</b>

### Policy Ranges

Core: 35% - 55%

Core Plus: 15% - 35%

High Yield & Opportunistic: 20% - 40%

^ Manager was terminated and market value reflects residual value.

\* Represents the combined assets of three portfolios, one of which is reported with a one-month lag.

\*\* Reported with a one-month lag.

\*\*\* Does not include cash. The performance and market values of two opportunistic portfolios are reported with a one-month lag.

# ASSET ALLOCATION COMMODITIES MANAGERS

for the quarter ended March 31, 2019



	<b>March 31, 2019</b>			<b>December 31, 2018</b>	
	<b>Assets (\$ millions)</b>	<b>% of Composite</b>		<b>Assets (\$ millions)</b>	<b>% of Composite</b>
Credit Suisse	427.8	32.1	Credit Suisse	401.8	32.4
Neuberger Berman/Gresham	453.9	34.1	Neuberger Berman/Gresham	419.9	33.9
PIMCO	450.3	33.8	PIMCO	416.7	33.7
<b>TOTAL COMMODITIES</b>	<b>1,332.0</b>	<b>100.0</b>	<b>TOTAL COMMODITIES</b>	<b>1,238.3</b>	<b>100.0</b>

# ANNUALIZED TOTAL RETURNS

## U.S. EQUITY MANAGERS

for the quarter ended March 31, 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>
<b>LARGE CAP</b>							<b>LARGE CAP</b>						
INTECH US ENHANCED PLUS	907.5	14.4	4.7	12.1	10.6	16.0	INTECH US ENHANCED PLUS	907.5	14.3	4.5	11.8	10.3	15.6
JANA Partners	86.0	14.2	10.8				JANA Partners	86.0	13.7	7.2			
Twin Capital	562.1	12.9	7.1	12.4	10.4	15.9	Twin Capital	562.1	12.8	6.9	12.2	10.2	15.7
<b>S&amp;P 500</b>		<b>13.6</b>	<b>9.5</b>	<b>13.5</b>	<b>10.9</b>	<b>15.9</b>	<b>S&amp;P 500</b>		<b>13.6</b>	<b>9.5</b>	<b>13.5</b>	<b>10.9</b>	<b>15.9</b>
BTC Russell 3000	10,324.2	14.1	8.8				BTC Russell 3000	10,324.2	14.0	8.8			
Russell 3000		14.0	8.8	13.5	10.4	16.0	Russell 3000		14.0	8.8	13.5	10.4	16.0
<b>SMALL / MID CAP</b>							<b>SMALL / MID CAP</b>						
CornerCap	55.2	13.2					CornerCap	55.2	13.1				
Matarin	108.9	11.5					Matarin	108.9	11.4				
QMA	269.4	12.7					QMA	269.4	12.6				
Systematic	224.8	11.5					Systematic	224.8	11.3				
<b>Russell 2000</b>		<b>14.6</b>	<b>2.0</b>	<b>12.9</b>	<b>7.1</b>	<b>15.4</b>	<b>Russell 2000</b>		<b>14.6</b>	<b>2.0</b>	<b>12.9</b>	<b>7.1</b>	<b>15.4</b>
Eagle Asset Management	346.4	13.6	1.8	13.0	8.8	15.4	Eagle Asset Management	346.4	13.5	1.3	12.4	8.2	14.8
Frontier Capital Management	688.4	15.4	2.9	12.7	8.0	16.9	Frontier Capital Management	688.4	15.2	2.1	11.9	7.1	16.0
Russell 2500		15.8	4.5	12.6	7.8	16.2	Russell 2500		15.8	4.5	12.6	7.8	16.2

# ANNUALIZED TOTAL RETURNS

## NON-U.S. EQUITY MANAGERS (cont's...)

for the quarter ended March 31, 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>
<b>NON U.S.</b>							<b>NON U.S.</b>						
Acadian Asset Management	854.0	11.0	-3.3	11.7	5.9	12.0	Acadian Asset Management	854.0	10.9	-3.6	11.3	5.5	11.6
Capital Guardian	392.0	15.8	2.9	12.2	5.2	10.7	Capital Guardian	392.0	15.7	2.5	11.8	4.8	10.3
MSCI EAFE + CANADA Net (Daily)		10.4	-3.1	7.3	2.2	8.8	MSCI EAFE + Canada Net (Daily)		10.4	-3.1	7.3	2.2	8.8
BTC EAFE IMI*	4,402.0	10.2	-4.0	7.8	3.0	9.8	BTC EAFE IMI*	4,402.0	10.2	-4.0	7.7	3.0	9.8
MSCI EAFE IMI Custom Index		10.1	-4.6	7.3	2.6	9.4	MSCI EAFE IMI Custom Index		10.1	-4.6	7.3	2.6	9.4
BTC EAFE Small Cap	191.6	10.8	-8.6				BTC EAFE Small Cap	191.6	10.8	-8.7			
MSCI EAFE Small Cap Net		10.7	-9.4	7.5	4.5	12.8	MSCI EAFE Small Cap Net		10.7	-9.4	7.5	4.5	12.8
BTC Canada IMI*	705.3	15.4	3.4	7.9	1.1	8.4	BTC Canada IMI*	705.3	15.4	3.4	7.9	1.0	8.4
MSCI Canada Custom IMI (Net)		15.2	2.5	7.1	0.3	7.7	MSCI Canada Custom IMI (Net)		15.2	2.5	7.1	0.3	7.7
<b>PACIFIC BASIN</b>							<b>PACIFIC BASIN</b>						
Symphony Financial Partners	154.8	14.3	12.8				Symphony Financial Partners	154.8	14.1	12.0			
MSCI Japan Small Cap Net		7.1	-11.9	8.9	8.3	10.5	MSCI Japan Small Cap Net		7.1	-11.9	8.9	8.3	10.5

See Glossary for all Custom index definitions.

\* BTC EAFE & Canada Funds; 8/31/08 - Present: BTC EAFE & Canada IMI Funds.

# ANNUALIZED TOTAL RETURNS

## NON-U.S. EQUITY MANAGERS (...cont'd)

for the quarter ended March 31, 2019



	<i>Gross-of-Fees</i>						<i>Net-of-Fees</i>						
	<i>Mkt Value (\$Mil)</i>	<i>Qtr</i>	<i>1 Yr</i>	<i>3 Yrs</i>	<i>5 Yrs</i>	<i>10 Yrs</i>	<i>Mkt Value (\$Mil)</i>	<i>Qtr</i>	<i>1 Yr</i>	<i>3 Yrs</i>	<i>5 Yrs</i>	<i>10 Yrs</i>	
<b>EUROPE</b>						<b>EUROPE</b>							
BTC Euro Tilts	946.0	11.3	-5.0	6.9	2.7	10.7	BTC Euro Tilts	946.0	11.2	-5.3	6.4	2.3	10.2
BTC Europe Index	364.2	11.0	-3.3	7.1	1.5	9.5	BTC Europe Index	364.2	11.0	-3.3	7.1	1.5	9.5
Cevian Capital	284.6	6.6	0.2				Cevian Capital	284.6	6.2	-1.3			
MSCI Europe (Net)		10.8	-3.7	6.6	1.0	8.9	MSCI Europe (Net)		10.8	-3.7	6.6	1.0	8.9
<b>EMERGING MARKETS</b>						<b>EMERGING MARKETS</b>							
Acadian Emerging Markets	374.0	8.9	-13.2	10.0	3.5		Acadian Emerging Markets	374.0	8.8	-13.6	9.4	3.0	
AQR Emerging Markets	242.2	10.2	-11.8	10.4	3.5		AQR Emerging Markets	242.2	10.0	-12.5	9.7	2.8	
Lazard Emerging Markets	351.9	12.3	-4.5	11.6	5.6		Lazard Emerging Markets	351.9	12.1	-5.3	10.7	4.7	
BTC - Emerging Markets	1,194.2	9.9	-7.3	10.6	3.6	8.8	BTC - Emerging Markets	1,194.2	9.8	-7.4	10.5	3.5	8.6
MSCI EM Standard (Net)		9.9	-7.4	10.7	3.7	8.9	MSCI EM Standard (Net)		9.9	-7.4	10.7	3.7	8.9
BTC Emerging Markets Small Cap	130.3	7.7	-12.1	6.1	1.8		BTC Emerging Markets Small Cap	130.3	7.6	-12.3	5.9	1.6	
MSCI EM Small Cap - Net Return		7.8	-12.4	5.9	1.8	10.4	MSCI EM Small Cap - Net Return		7.8	-12.4	5.9	1.8	10.4
Genesis	695.9	15.8	-3.4	11.7	4.7	12.7	Genesis	695.9	15.6	-4.1	11.0	4.0	11.9
MSCI EM IMI Custom Index		9.7	-8.0	10.1	3.4	9.1	MSCI EM IMI Custom Index		9.7	-8.0	10.1	3.4	9.1
<b>PASSIVE HEDGE</b>						<b>PASSIVE HEDGE</b>							
BTC Passive Currency Hedge	19.9	0.4	4.3	1.2	2.1		BTC Passive Currency Hedging	19.9	0.4	4.2	1.2	2.0	
50% FX Hedge Index		0.4	4.3	1.2	2.1		50% FX Hedge Index		0.4	4.3	1.2	2.1	

# ANNUALIZED TOTAL RETURNS

## FIXED INCOME MANAGERS & PROGRAMS (cont's...)

for the quarter ended March 31, 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>
<b>CORE</b>							<b>CORE</b>						
BTC US Debt Index	5,851.5	3.0	4.6	2.1	2.9	3.9	BTC US Debt Index	5,851.5	3.0	4.6	2.1	2.9	3.9
Dodge & Cox	1,344.5	3.6	4.7	3.9	3.6	6.0	Dodge & Cox	1,344.5	3.6	4.6	3.8	3.5	5.9
Pugh Capital Mgmt.	345.0	3.1	4.7	2.2	2.9	4.4	Pugh Capital Mgmt.	345.0	3.1	4.5	2.0	2.7	4.2
Wells Capital Mgmt.	1,400.1	3.0	4.6	2.4	3.1	4.9	Wells Capital Mgmt.	1,400.1	3.0	4.5	2.3	3.0	4.8
BBG BC Aggregate Bond Index		2.9	4.5	2.0	2.7	3.8	BBG BC Aggregate Bond Index		2.9	4.5	2.0	2.7	3.8
<b>CORE PLUS</b>							<b>CORE PLUS</b>						
PIMCO	1,104.5	3.4	5.7	4.1	3.8	5.7	PIMCO	1,104.5	3.4	5.5	3.8	3.6	5.4
Western Asset Mgmt.	1,178.5	4.1	4.1	3.4	3.8	7.1	Western Asset Mgmt.	1,178.5	4.0	4.0	3.2	3.6	7.0
BBG BC Aggregate Bond Index		2.9	4.5	2.0	2.7	3.8	BBG BC Aggregate Bond Index		2.9	4.5	2.0	2.7	3.8



# ANNUALIZED TOTAL RETURNS

## FIXED INCOME MANAGERS & PROGRAMS (...cont'd)

for the quarter ended March 31, 2019



	<b>Gross-of-Fees</b>						<b>Net-of-Fees</b>						
	<b>Mkt Value (\$Mil)</b>	<b>Qtr</b>	<b>1 Yr</b>	<b>3 Yrs</b>	<b>5 Yrs</b>	<b>10 Yrs</b>	<b>Mkt Value (\$Mil)</b>	<b>Qtr</b>	<b>1 Yr</b>	<b>3 Yrs</b>	<b>5 Yrs</b>	<b>10 Yrs</b>	
<b>HIGH YIELD</b>													
Oaktree Capital Mgmt.	426.6	7.1	6.0	6.9	4.2	9.7	426.6	7.0	5.6	6.5	3.7	9.2	
BBG BC Ba/B US High Yield Index		7.2	6.4	7.6	4.6	10.0	BBG BC Ba/B US High Yield Index	7.2	6.4	7.6	4.6	10.0	
<b>OPPORTUNISTIC</b>													
Aberdeen	407.8	7.4	0.8				Aberdeen	407.8	7.3	0.4			
Ashmore	410.8	5.8	-0.4				Ashmore	410.8	5.6	-1.0			
Opportunistic EMD Custom Index		5.5	1.3				Opportunistic EMD Custom Index	5.5	1.3				
Bain Capital	365.0	4.6	5.3	8.6			Bain Capital	365.0	4.4	4.6	7.8		
Beach Point Capital*	462.1	4.9	6.6	10.7	7.8		Beach Point Capital*	462.1	5.9	6.9	9.0	6.5	
Crescent Capital Group	432.7	3.1	3.9	7.6			Crescent Capital Group	432.7	2.9	3.3	7.0		
Opportunistic Custom Index		5.5	4.6	7.2	4.3		Opportunistic Custom Index	5.5	4.6	7.2	4.3		
Brigade Capital Mgmt.	578.4	4.2	3.2	10.3	4.7		Brigade Capital Mgmt.	578.4	4.0	2.5	9.5	3.9	
Brigade Custom Index		5.5	4.9	6.7	4.2		Brigade Custom Index	5.5	4.9	6.7	4.2		
DoubleLine Capital	329.0	2.3	5.3	5.0			DoubleLine Capital	329.0	2.2	4.5	4.2		
TCW	332.5	1.8	4.3	5.1			TCW	332.5	1.6	3.7	4.5		
Securitized Custom Index		3.2	8.6	5.9			Securitized Custom Index	3.2	8.6	5.9			
Tennenbaum Capital**	330.8	2.0	8.4	10.8			Tennenbaum Capital**	330.8	1.8	7.5	9.8		
CS Leveraged Loan Index**		1.5	3.8	6.9			CS Leveraged Loan Index**	1.5	3.8	6.9			
<b>MORTGAGE PROGRAM</b>													
Member Home Loan Program (MHLP)	28.5	1.3	9.1	8.2	6.5	5.6	Member Home Loan Program (MHLP)	28.5	1.3	8.9	7.9	6.2	5.4

See Glossary for all Custom index definitions.

\* Represents the combined assets & performance of two portfolios, one of which is reported with a one-month lag.

\*\* Reported with a one-month lag.

# ANNUALIZED TOTAL RETURNS

## COMMODITIES MANAGERS

for the quarter ended March 31, 2019



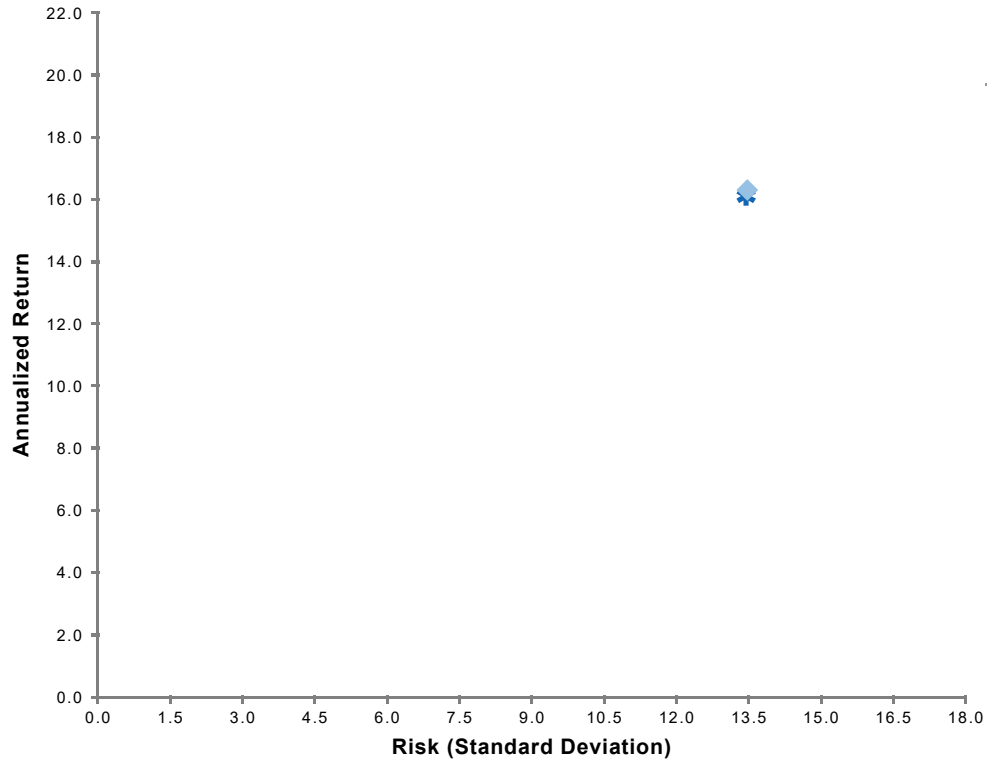
	<i>Gross-of-Fees</i>							<i>Net-of-Fees</i>					
	<u>Mkt Value (\$Mil)</u>	<u>Qtr</u>	<u>1 Yr</u>	<u>3 Yrs</u>	<u>5 Yrs</u>	<u>10 Yrs</u>		<u>Mkt Value (\$Mil)</u>	<u>Qtr</u>	<u>1 Yr</u>	<u>3 Yrs</u>	<u>5 Yrs</u>	<u>10 Yrs</u>
<b>COMMODITIES MANAGERS</b>							<b>COMMODITIES MANAGERS</b>						
Credit Suisse	427.8	6.5	-5.7	2.7	-8.3		Credit Suisse	427.8	6.5	-5.9	2.4	-8.6	
Neuberger Berman/Gresham	453.9	8.2	-3.4	4.9	-7.2	0.2	Neuberger Berman/Gresham	453.9	8.1	-3.8	4.5	-7.6	-0.1
PIMCO	450.3	8.2	-4.1	5.1	-6.4	0.2	PIMCO	450.3	8.1	-4.5	4.7	-6.8	-0.3
Bloomberg Comm Index TR		6.3	-5.3	2.2	-8.9	-2.6	Bloomberg Comm Index TR		6.3	-5.3	2.2	-8.9	-2.6

# U.S. EQUITY RISK ADJUSTED RETURN

for the quarter ended March 31, 2019



## 10 Year Risk vs Return



	Rate of Return 10 Years	Standard Deviation 10 Years
U.S. Equity	15.8	13.2
RUSSELL 3000 (DAILY)	16.0	13.2

◆ U.S. Equity
 ◆ RUSSELL 3000 (DAILY)

	<u>Rate of Return 10 Years</u>	<u>Standard Deviation 10 Years</u>	<u>Tracking Error 10 Years</u>
U.S. Equity	15.8	13.2	0.5
RUSSELL 3000 (DAILY)	16.0	13.2	

# U.S. EQUITY - LARGE CAP

## INTECH INVESTMENT MANAGEMENT LLC

for the quarter ended March 31, 2019



### Manager Profile

Firm: INTECH Investment Management LLC  
 Location: West Palm Beach, FL  
 Year Founded: 1987  
 Contact: Nancy Holden, Sr. Managing Director  
 Inception Date: December 2006  
 Assigned Role: Enhanced Index  
 Benchmark: S&P 500  
 Investment Style: Core

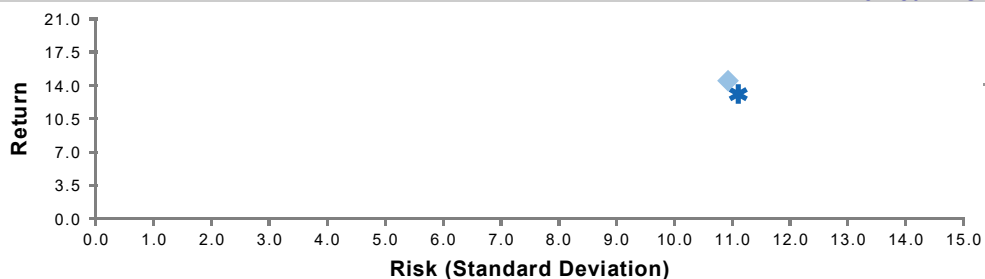
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
INTECH US ENHANCED PLUS	907.5	14.39	4.74	12.07	10.64	15.96	8.46
S&P 500 INDEX (DAILY)		13.65	9.50	13.51	10.91	15.92	8.15

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

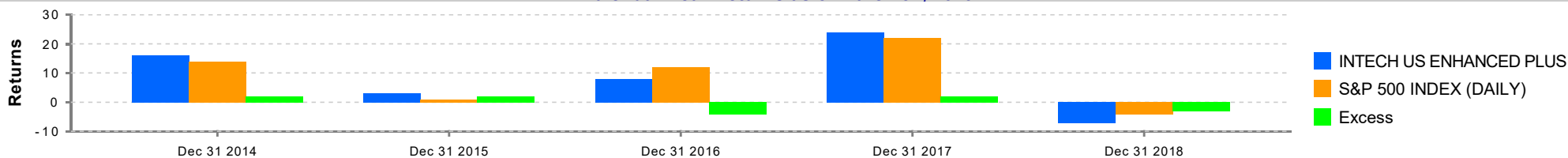
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
INTECH US ENHANCED PLUS	12.1	10.9
S&P 500 INDEX (DAILY)	13.5	10.7

INTECH US ENHANCED PLUS    S&P 500 INDEX (DAILY)

### Calendar Year Returns as of March 31, 2019



# U.S. EQUITY - LARGE CAP

## JANA PARTNERS LLC

for the quarter ended March 31, 2019



### Manager Profile

Firm: JANA Partners LLC  
 Location: New York, NY  
 Year Founded: 2001  
 Contact: Darya Mastronardi, Director  
 Inception Date: October 2016  
 Assigned Role: Large Cap Equity  
 Benchmark: S&P 500  
 Investment Style: Activist

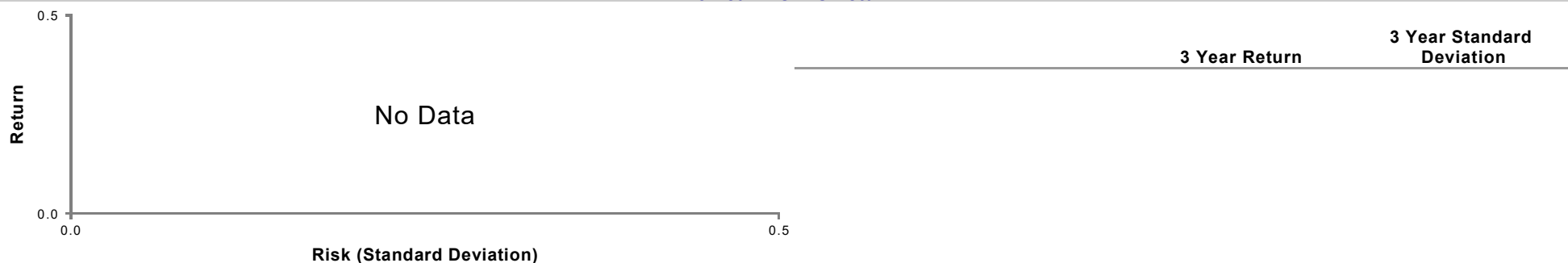
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
JANA Partners	86.0	14.15	10.83				22.91
S&P 500 INDEX (DAILY)		13.65	9.50				13.58

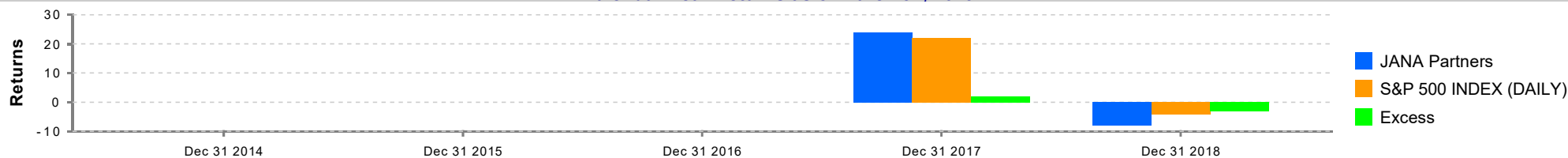
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019



# U.S. EQUITY - LARGE CAP

## TWIN CAPITAL MANAGEMENT, INC.

for the quarter ended March 31, 2019



### Manager Profile

Firm: Twin Capital Management, Inc.  
 Location: McMurray, PA  
 Year Founded: 1990  
 Contact: Geoffrey Gerber, Ph.D., President  
 Inception Date: December 2006  
 Assigned Role: Enhanced Index  
 Benchmark: S&P 500  
 Investment Style: Core

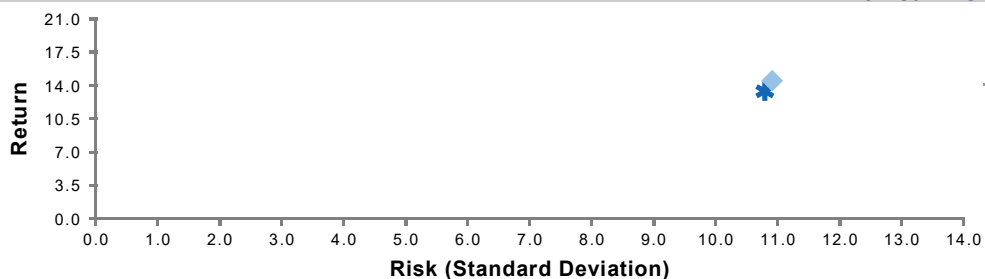
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Twin Capital Management	562.1	12.88	7.09	12.39	10.41	15.89	8.32
S&P 500 INDEX (DAILY)		13.65	9.50	13.51	10.91	15.92	8.15

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

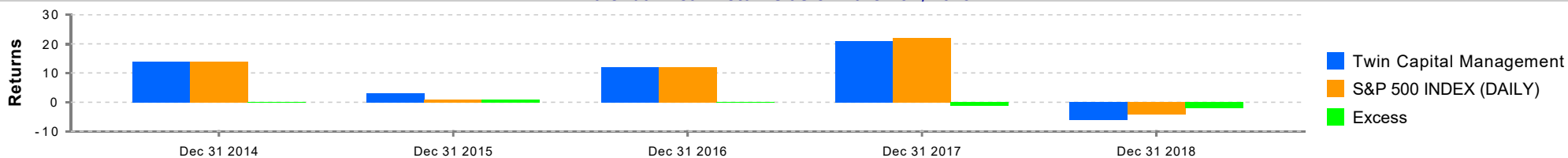
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
Twin Capital Management	12.4	10.6
S&P 500 INDEX (DAILY)	13.5	10.7

• Twin Capital Management    ◆ S&P 500 INDEX (DAILY)

### Calendar Year Returns as of March 31, 2019



# U.S. EQUITY - SMALL/MID CAP

## CORNERCAP INVESTMENT COUNSEL

for the quarter ended March 31, 2019



### Manager Profile

Firm: CornerCap Investment Counsel  
 Location: Atlanta, GA  
 Year Founded: 1989  
 Contact: Cannon Carr, CIO  
 Inception Date: October 2018  
 Assigned Role: Small/Mid Cap Equity  
 Benchmark: Russell 2000  
 Investment Style: Core

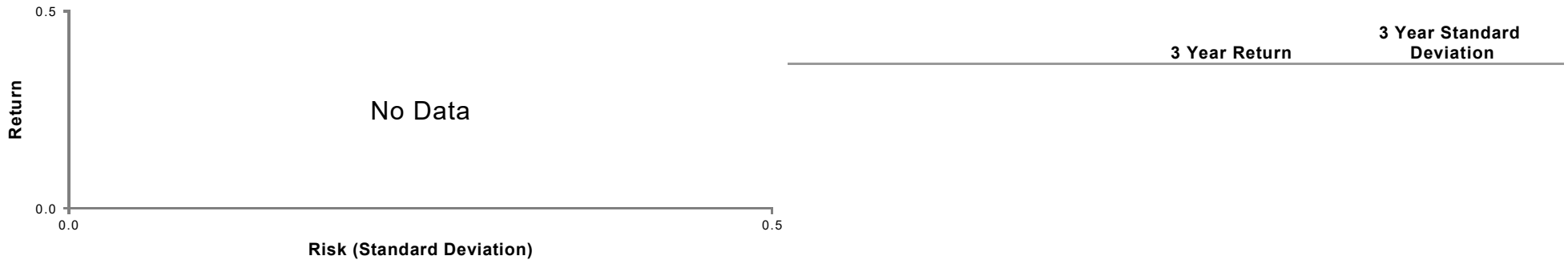
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
CornerCap	55.2	13.22					-7.63
RUSSELL 2000 (DAILY)		14.58					-8.56

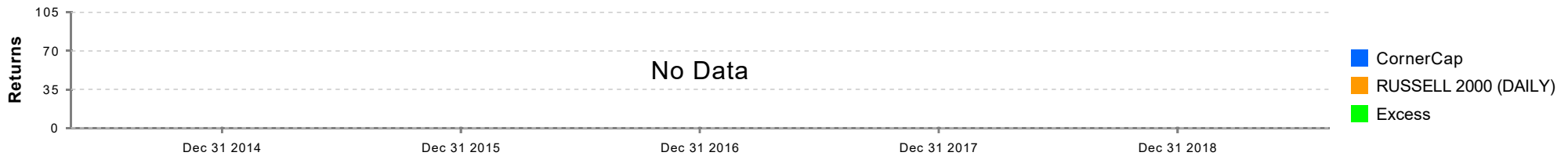
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019



# U.S. EQUITY - SMALL/MID CAP

## EAGLE ASSET MANAGEMENT, INC.

for the quarter ended March 31, 2019



### Manager Profile

Firm: Eagle Asset Management, Inc.  
 Location: St. Petersburg, FL  
 Year Founded: 1976  
 Contact: Ed Rick, CFA, Senior Vice President  
 Inception Date: February 2005  
 Assigned Role: Small/Mid Cap Equity  
 Benchmark: Russell 2500  
 Investment Style: Core / Growth

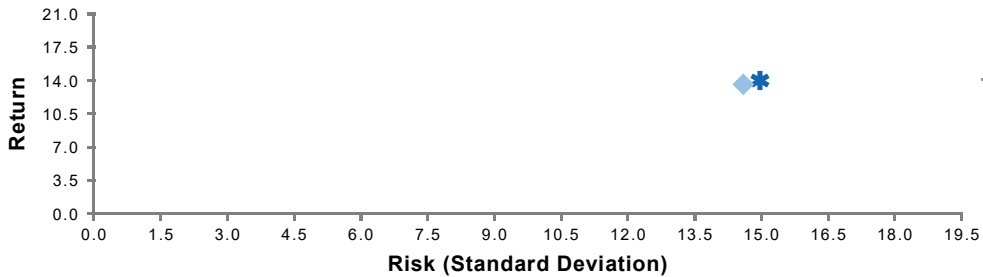
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Eagle Asset Management	346.4	13.63	1.85	12.98	8.81	15.43	9.76
RUSSELL 2500 (DAILY)		15.82	4.48	12.56	7.79	16.23	8.84

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

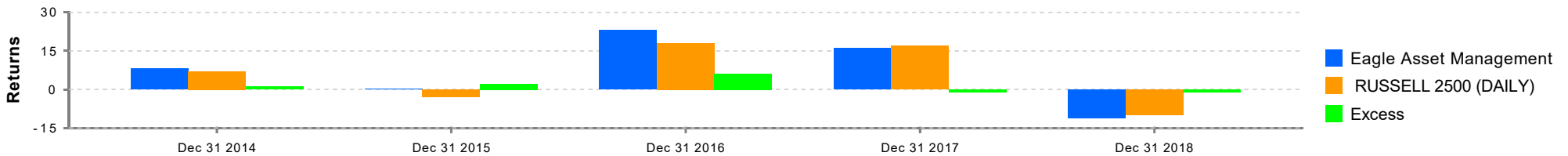
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
EAGLE US SMID CORE	13.0	14.7
RUSSELL 2500 (DAILY)	12.6	14.3

\* EAGLE US SMID CORE     ◆ RUSSELL 2500 (DAILY)

### Calendar Year Returns as of March 31, 2019





# U.S. EQUITY - SMALL/MID CAP

## FRONTIER CAPITAL MANAGEMENT COMPANY, LLC

for the quarter ended March 31, 2019



### Manager Profile

Firm: Frontier Capital Mgmt. Company, LLC  
 Location: Boston, MA  
 Year Founded: 1980  
 Contact: Michael Cavarretta, Chairman-Portf. Manager  
 Inception Date: June 2002  
 Assigned Role: Small/Mid Cap Equity  
 Benchmark: Russell 2500  
 Investment Style: Core / Growth

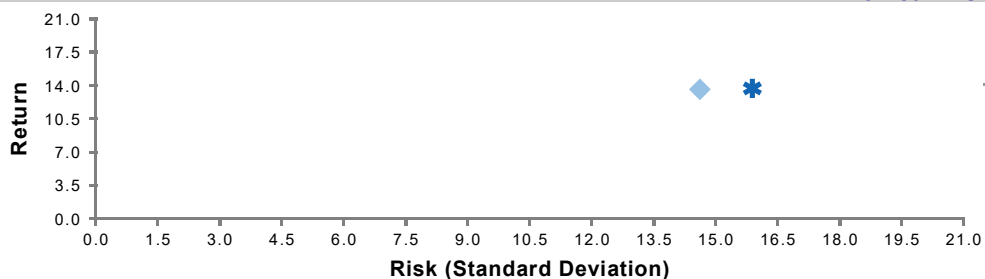
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Frontier Capital Management	688.4	15.38	2.86	12.70	8.00	16.89	11.19
RUSSELL 2500 (DAILY)		15.82	4.48	12.56	7.79	16.23	9.37

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

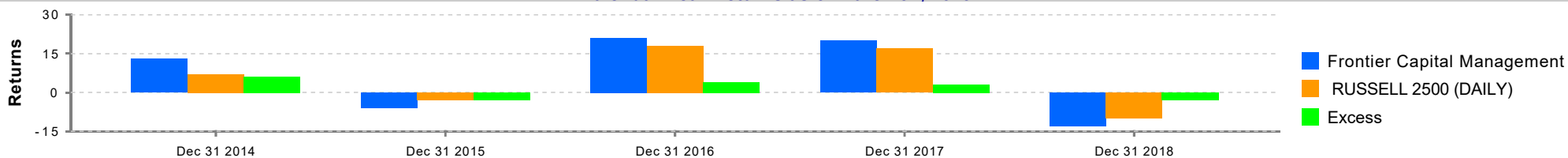
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
* FRONTIER US SMID GROWTH	12.7	15.6
◆ RUSSELL 2500 (DAILY)	12.6	14.3

◆ FRONTIER US SMID GROWTH    ◆ RUSSELL 2500 (DAILY)

### Calendar Year Returns as of March 31, 2019



# U.S. EQUITY - SMALL/MID CAP

## MATARIN CAPITAL MANAGEMENT

for the quarter ended March 31, 2019



### Manager Profile

Firm: Matarin Capital Management  
 Location: New York, NY  
 Year Founded: 1989  
 Contact: Valerie Malter, Managing Principal  
 Inception Date: October 2018  
 Assigned Role: Small Mid/Cap Equity  
 Benchmark: Russell 2000  
 Investment Style: Core

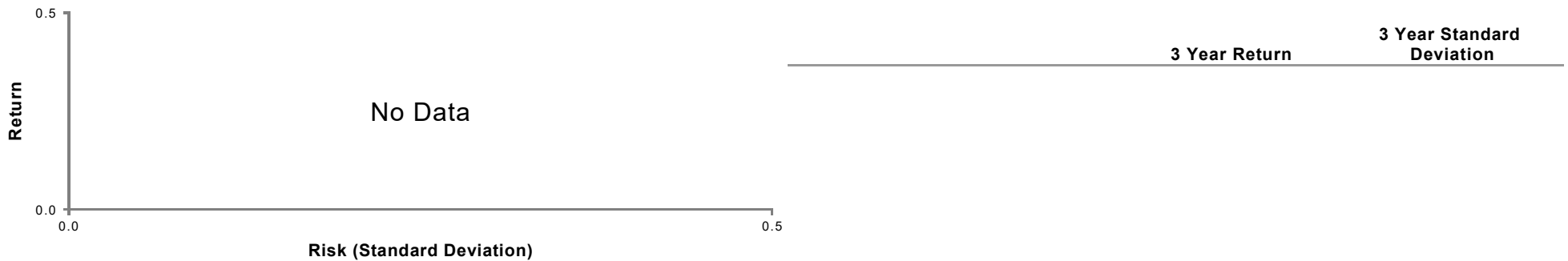
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Matarin	108.9	11.54					-11.41
RUSSELL 2000 (DAILY)		14.58					-8.56

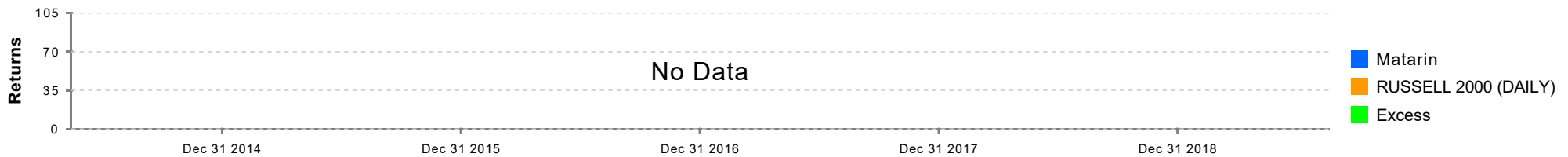
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019



# U.S. EQUITY - SMALL/MID CAP QUANTITATIVE MANAGEMENT ASSOCIATES

for the quarter ended March 31, 2019



### Manager Profile

Firm: Quantitative Management Associates  
 Location: Newark, NJ  
 Year Founded: 1975  
 Contact: Brad Zenz, Managing Director  
 Inception Date: July 2018  
 Assigned Role: Small Cap Equity  
 Benchmark: Russell 2000  
 Investment Style: Core

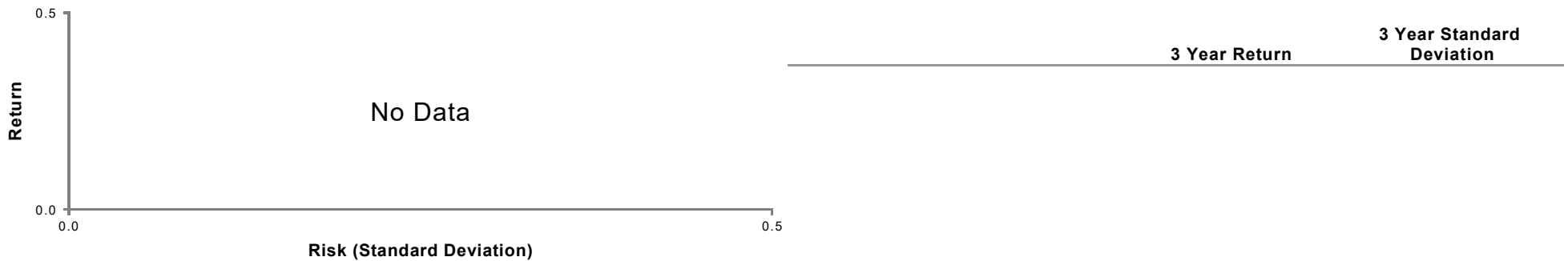
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
QMA	269.4	12.72					-8.13
RUSSELL 2000 (DAILY)		14.58					-5.29

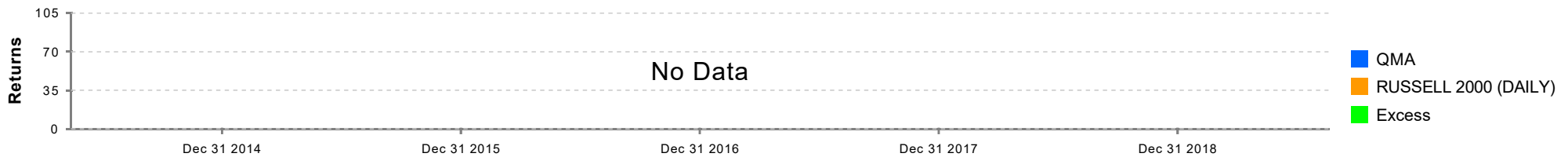
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019



# U.S. EQUITY - SMALL/MID CAP SYSTEMATIC FINANCIAL MANAGEMENT

for the quarter ended March 31, 2019



### Manager Profile

Firm: Systematic Financial Management  
 Location: Teaneck, NJ  
 Year Founded: 1982  
 Contact: Steven Shaw, Senior VP  
 Inception Date: July 2018  
 Assigned Role: Small Cap Equity  
 Benchmark: Russell 2000  
 Investment Style: Value

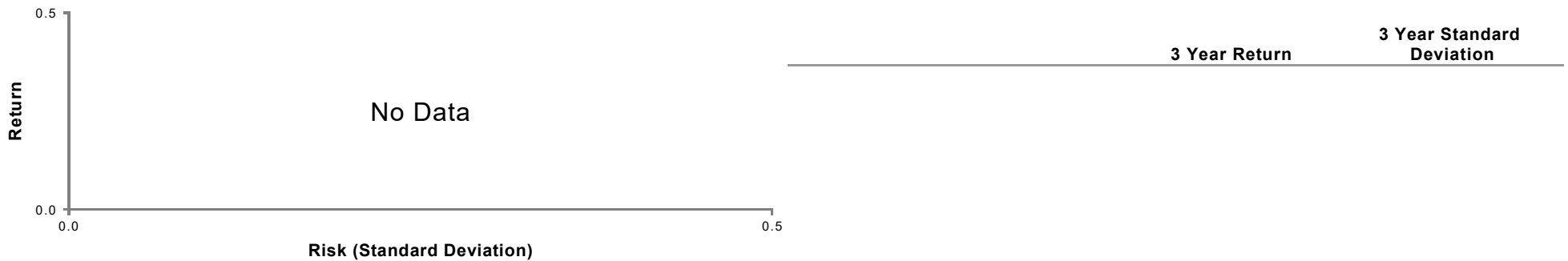
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Systematic	224.8	11.45					-7.95
RUSSELL 2000 (DAILY)		14.58					-5.29

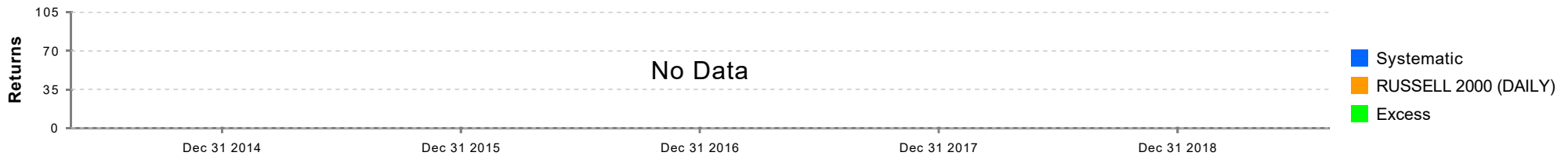
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019

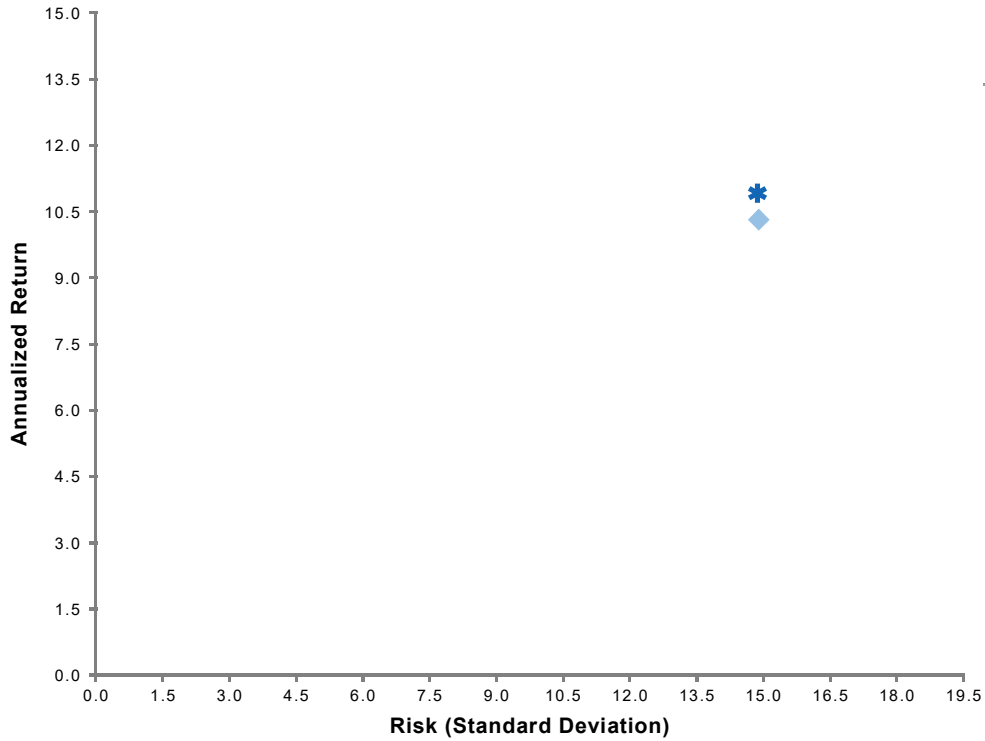


# NON-U.S. EQUITY RISK ADJUSTED RETURN

for the quarter ended March 31, 2019



## 10 Year Risk vs Return



	Rate of Return 10 Years	Standard Deviation 10 Years
* Non-U.S. Equity 50% Dev Mkt Hedged	10.7	14.6
◆ Custom MSCI ACWI IMI N 50% H	10.1	14.6

\* Non-U.S. Equity 50% Dev Mkt Hedged 
 ◆ Custom MSCI ACWI IMI N 50% H

	<u>Rate of Return 10 Years</u>	<u>Standard Deviation 10 Years</u>	<u>Tracking Error 10 Years</u>
Non-U.S. Equity 50% Dev Mkt Hedged	10.7	14.6	0.5
Custom MSCI ACWI IMI N 50% H	10.1	14.6	

# NON-U.S. EQUITY

## ACADIAN ASSET MANAGEMENT, LLC

for the quarter ended March 31, 2019



### Manager Profile

Firm: Acadian Asset Management, LLC  
 Location: Boston, MA  
 Year Founded: 1986  
 Contact: Julia Khan, Associate Relationship Manager  
 Inception Date: April 2006  
 Assigned Role: Non-U.S. Equity  
 Benchmark: MSCI EAFE + Canada (Net)  
 Investment Style: Core / Value

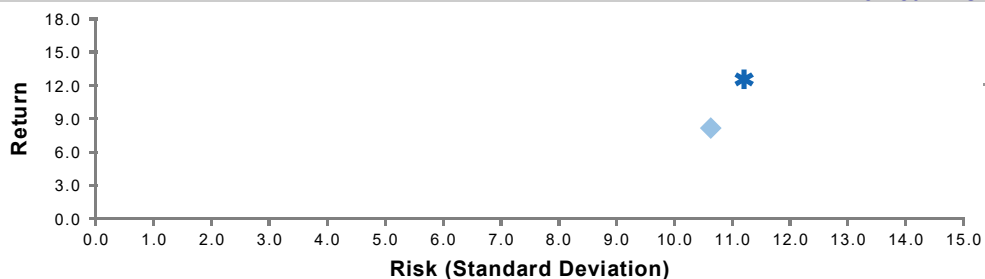
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Acadian Developed Markets	854.0	11.00	-3.28	11.75	5.92	12.04	4.46
MSCI EAFE + Canada Net Index		10.45	-3.14	7.29	2.20	8.82	3.04

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

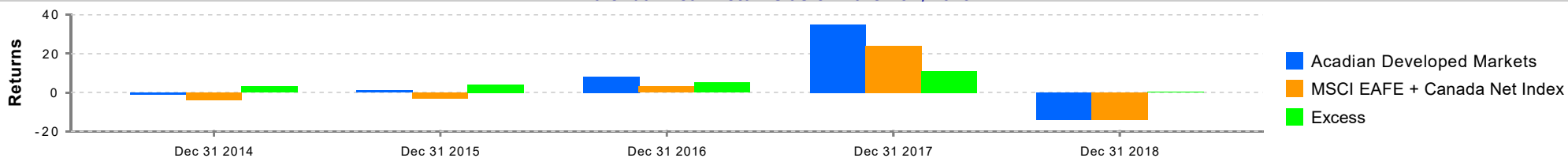
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
Acadian Developed Markets	11.7	11.0
MSCI EAFE + Canada Net Index	7.3	10.4

Acadian Developed Markets    MSCI EAFE + Canada Net Index

### Calendar Year Returns as of March 31, 2019



# NON-U.S. EQUITY CAPITAL GUARDIAN TRUST COMPANY

for the quarter ended March 31, 2019



### Manager Profile

Firm: Capital Guardian Trust Company  
 Location: Los Angeles, CA  
 Year Founded: 1968  
 Contact: Michael Bowman, Relationship Manager  
 Funding / Inception Date: October 1987 / November 1994\*  
 Assigned Role: Non-U.S. Equity  
 Benchmark: EAFE Custom Index  
 Investment Style: Core / Growth

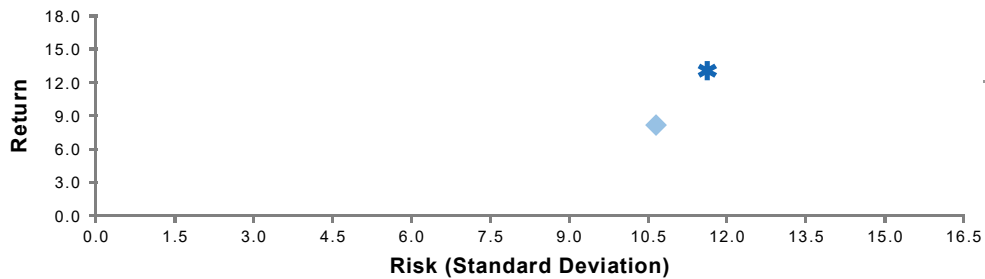
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Capital Guardian Non-U.S.	392.0	15.78	2.87	12.20	5.16	10.71	7.55
EAFE CUSTOM INDEX		10.45	-3.14	7.29	2.20	8.82	4.65

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

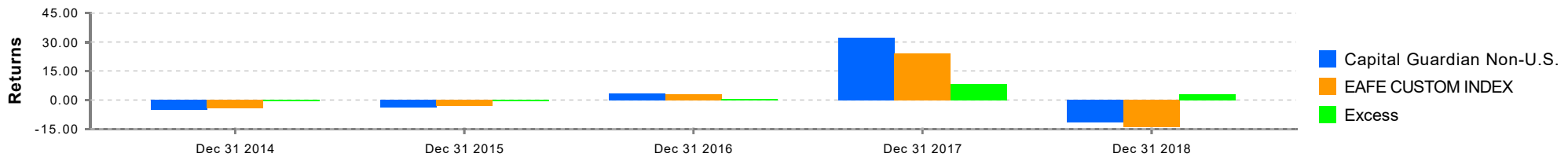
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
* Capital Guardian Non-U.S.	12.2	11.4
◆ EAFE CUSTOM INDEX	7.3	10.4

◆ Capital Guardian Non-U.S.    ◆ EAFE CUSTOM INDEX

### Calendar Year Returns as of March 31, 2019



\* State Street performance data begins November 1994.  
 Universe data: International Equity Funds Core

# NON-U.S. EQUITY

## GLOBAL ALPHA CAPITAL MANAGEMENT

for the quarter ended March 31, 2019



### Manager Profile

Firm: Global Alpha Capital Management  
 Location: Montreal, Quebec Canada  
 Year Founded: 2008  
 Contact: Robert Beauregard, CEO/CIO  
 Inception Date: November 2018  
 Assigned Role: Non-U.S. Equity  
 Benchmark: MSCI EAFE Small Cap Index  
 Investment Style: Core

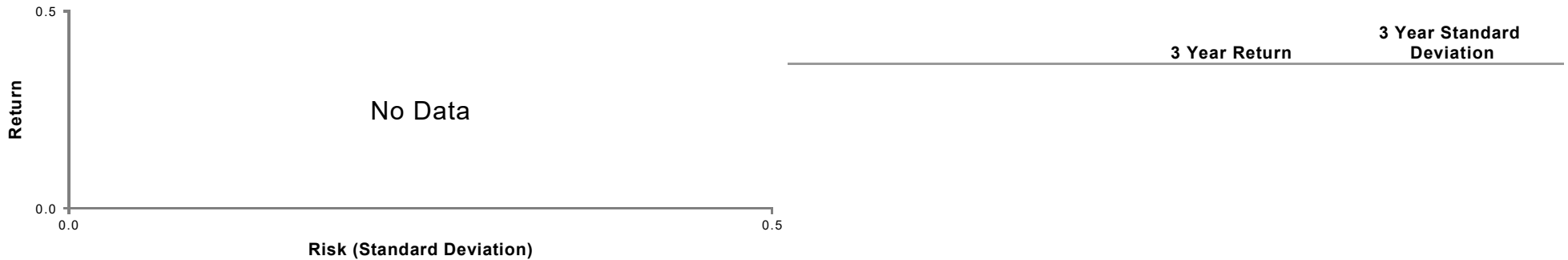
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Global Alpha	167.9	12.15					5.57
MSCI EAFE SMALL CAP NET		10.65					2.79

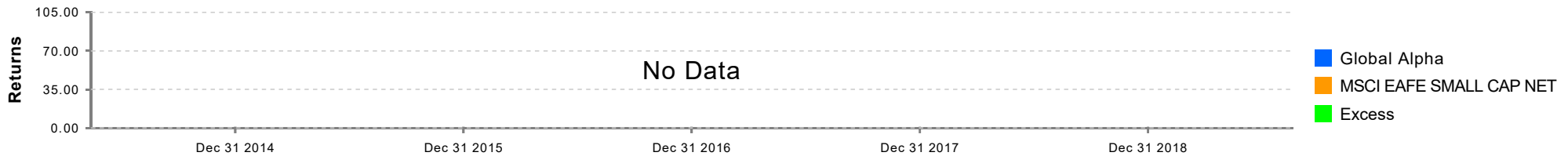
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019



\* State Street performance data begins November 1994.  
 Universe data: International Equity Funds Core



# NON-U.S. EQUITY - PACIFIC BASIN

## SYMPHONY FINANCIAL PARTNERS PTE. LTD.

for the quarter ended March 31, 2019



### Manager Profile

Firm: Symphony Financial Partners Pte. Ltd.  
 Location: Singapore, Singapore  
 Year Founded: 2001  
 Contact: David Baran, Co-CEO/Co-Founder  
 Inception Date: November 2016  
 Assigned Role: Pacific Basin  
 Benchmark: MSCI Japan Small Cap Net  
 Investment Style: Activist

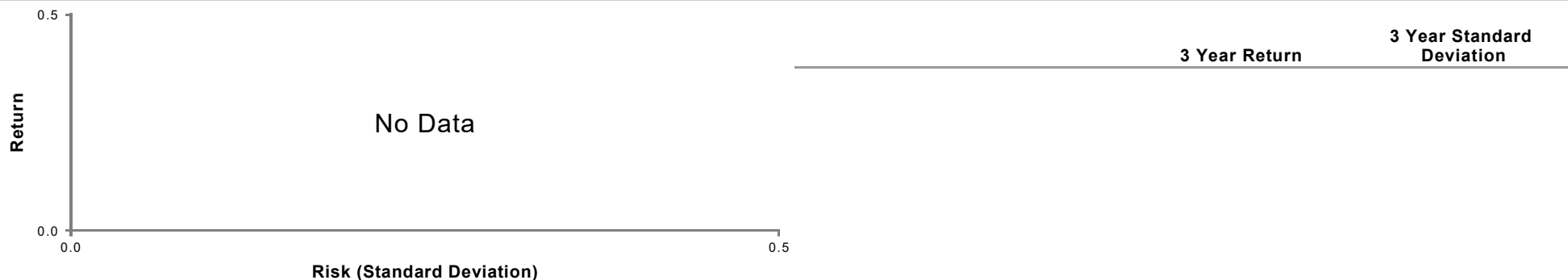
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Symphony Financial Partners	154.8	14.32	12.78				19.85
MSCI JAPAN SMALL CAP NET		7.11	-11.87				5.80

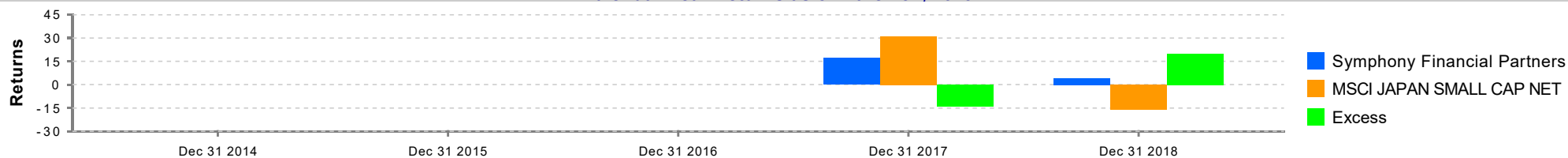
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019



# NON-U.S. EQUITY - EUROPE

## BLACKROCK INSTITUTIONAL TRUST COMPANY, N.A. - EUROPE ALPHA TILTS

for the quarter ended March 31, 2019



### Manager Profile

Firm: BlackRock Institutional Trust Company, N.A.  
 Location: San Francisco, CA  
 Year Founded: 1985  
 Contact: Lilian Wan, Managing Director  
 Inception Date: January 2007  
 Assigned Role: Non-U.S. Equity Enhanced Index  
 Benchmark: MSCI Europe Net  
 Investment Style: Core

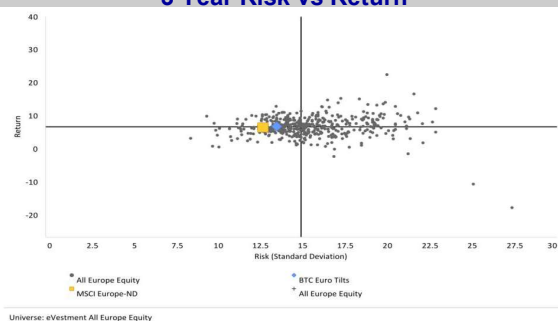
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
BTC Euro Tilts	946.0	11.31	-4.95	6.88	2.71	10.70	2.93
MSCI EUROPE (DAILY)		10.84	-3.72	6.56	1.04	8.95	1.69

### Universe

	1 Qtr	1 Year	3 Years	5 Years	
<b>Europe Equity</b>					
Median		10.72	-6.50	6.73	2.40
Number of Observations		495	495	483	453

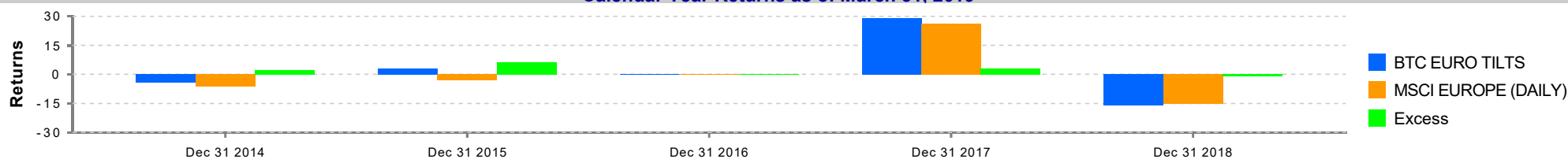
### 3 Year Risk vs Return



### 3 Year Risk vs Return

	3 Year Return		3 Year Standard Deviation	
<b>BTC EURO TILTS</b>	6.9	49	13.5	87
<b>MSCI EUROPE (DAILY)</b>	6.6	53	12.7	79
5th Percentile	11.0		11.8	
25th Percentile	8.4		13.5	
50th Percentile	6.7		14.9	
75th Percentile	5.3		16.8	
95th Percentile	2.4		20.3	

### Calendar Year Returns as of March 31, 2019



# NON-U.S. EQUITY - EUROPE

## CEVIAN CAPITAL

for the quarter ended March 31, 2019



### Manager Profile

Firm: Cevian Capital  
 Location: Stockholm, Sweden  
 Year Founded: 2002  
 Contact: David Henderson, Director  
 Inception Date: October 2016  
 Assigned Role: Europe  
 Benchmark: MSCI Europe Net  
 Investment Style: Activist

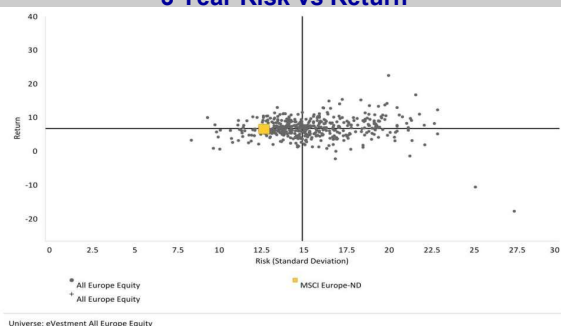
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Cevian Capital	284.6	6.56	0.25				6.83
MSCI EUROPE (DAILY)		10.84	-3.72				6.83

### Universe

	1 Qtr	1 Year	3 Years	5 Years
<b>Europe Equity</b>				
Median	10.72	-6.50	6.73	2.40
Number of Observations	495	495	483	453

### 3 Year Risk vs Return



### 3 Year Risk vs Return

	3 Year Return		3 Year Standard	
<b>CEVIAN CAPITAL</b>	N/A	-	N/A	-
<b>MSCI EUROPE (DAILY)</b>	6.6	53	12.7	10
5th Percentile	11.0		11.8	
25th Percentile	8.4		13.5	
50th Percentile	6.7		14.9	
75th Percentile	5.3		16.8	
95th Percentile	2.4		20.3	

### Calendar Year Returns as of March 31, 2019



# NON-U.S. EQUITY - EMERGING MARKETS

## ACADIAN ASSET MANAGEMENT, LLC

for the quarter ended March 31, 2019



### Manager Profile

Firm: Acadian Asset Management, LLC  
 Location: Boston, MA  
 Year Founded: 1986  
 Contact: Julia Khan, Associate Relationship Manager  
 Inception Date: January 2013  
 Assigned Role: Emerging Markets  
 Benchmark: MSCI EMF (Net)  
 Investment Style: Core / Value

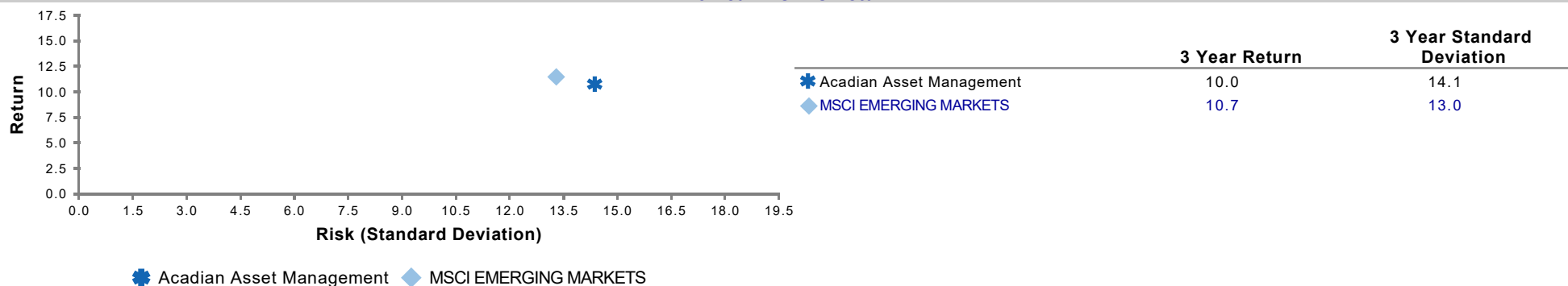
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Incept
Acadian Asset Management	374.0	8.94	-13.18	9.95	3.49		2.55
MSCI EMERGING MARKETS		9.92	-7.41	10.68	3.68		2.43

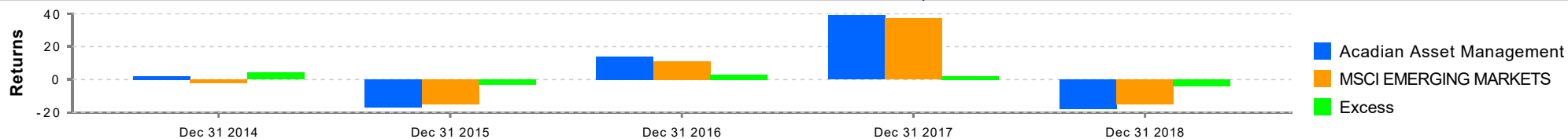
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019



# NON-U.S. EQUITY - EMERGING MARKETS

## AQR CAPITAL MANAGEMENT, LLC

for the quarter ended March 31, 2019



### Manager Profile

Firm: AQR Capital Management, LLC  
 Location: Greenwich, CT  
 Year Founded: 1998  
 Contact: Joey Lee, Vice President  
 Inception Date: February 2014  
 Assigned Role: Emerging Markets  
 Benchmark: MSCI EMF (Net)  
 Investment Style: Core

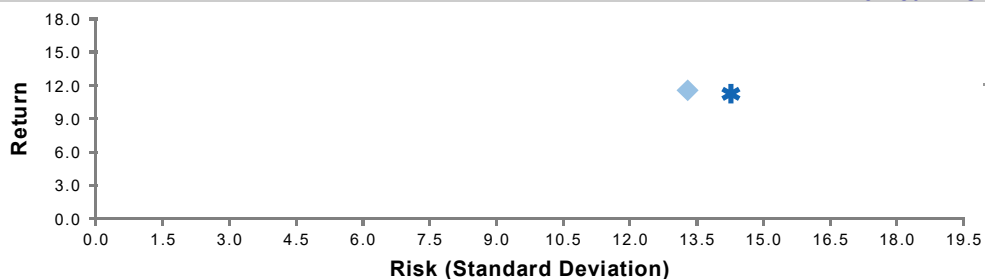
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Incept
AQR Emerging Markets	242.2	10.15	-11.83	10.43	3.48		4.51
MSCI EMERGING MARKETS		9.92	-7.41	10.68	3.68		4.83

### Universe

1 Qtr      1 Year      3 Years      5 Years

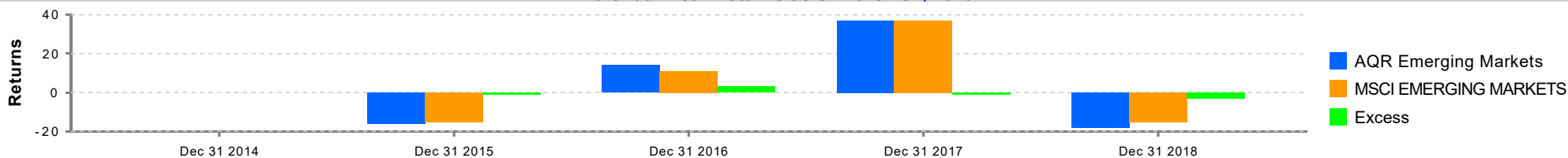
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
AQR EMERGING MARKETS	10.4	14.0
MSCI EMERGING MARKETS	10.7	13.0

● AQR EMERGING MARKETS    ◆ MSCI EMERGING MARKETS

### Calendar Year Returns as of March 31, 2019



# NON-U.S. EQUITY - EMERGING MARKETS

## GENESIS INVESTMENT MANAGEMENT, LLP

for the quarter ended March 31, 2019



### Manager Profile

Firm: Genesis Investment Management, LLP  
 Location: London, England  
 Year Founded: 1989  
 Contact: Sedef Koktenturk, Director  
 Inception Date: September 2007  
 Assigned Role: Emerging Markets  
 Benchmark: MSCI EMF IMI Custom  
 Investment Style: Core

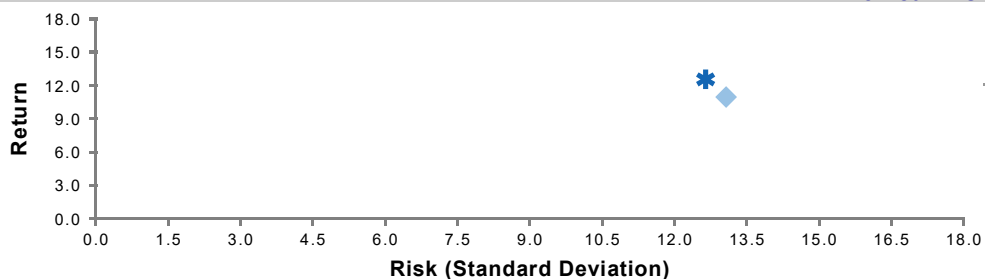
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Genesis	695.9	15.78	-3.40	11.75	4.72	12.72	5.36
MSCI EM IMI CUSTOM INDEX		9.67	-7.97	10.08	3.45	9.12	2.29

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

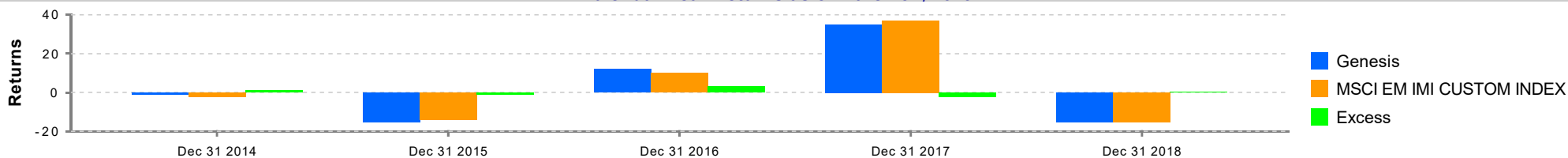
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
* GENESIS EMERGING MARKETS	11.7	12.4
◆ MSCI EM IMI CUSTOM INDEX	10.1	12.8

\* GENESIS EMERGING MARKETS    ◆ MSCI EM IMI CUSTOM INDEX

### Calendar Year Returns as of March 31, 2019



# NON-U.S. EQUITY - EMERGING MARKETS

## LAZARD ASSET MANAGEMENT, LLC

for the quarter ended March 31, 2019



### Manager Profile

Firm: Lazard Asset Management, LLC  
 Location: New York, NY  
 Year Founded: 1970  
 Contact: Tony Dote, Managing Director  
 Inception Date: February 2013  
 Assigned Role: Emerging Markets  
 Benchmark: MSCI EMF (Net)  
 Investment Style: Core

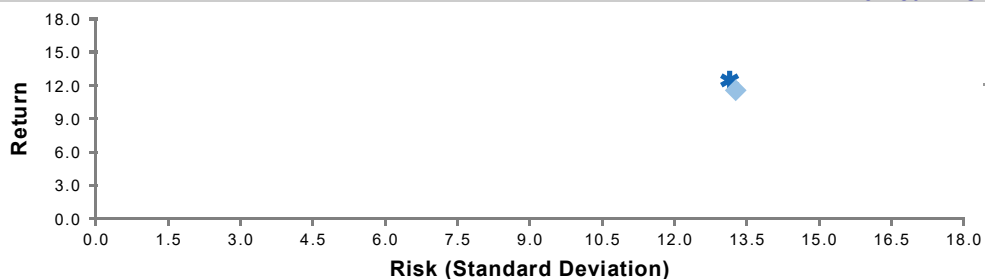
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Incept
Lazard Emerging Markets	351.9	12.32	-4.55	11.55	5.58		2.89
MSCI EMERGING MARKETS		9.92	-7.41	10.68	3.68		2.24

### Universe

1 Qtr      1 Year      3 Years      5 Years

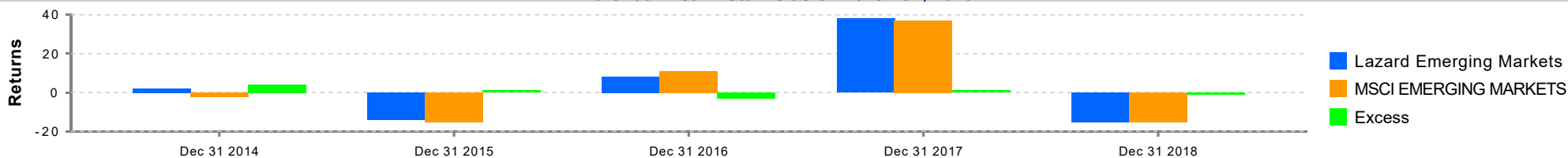
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
Lazard Emerging Markets	11.6	12.9
MSCI EMERGING MARKETS	10.7	13.0

• Lazard Emerging Markets    ◆ MSCI EMERGING MARKETS

### Calendar Year Returns as of March 31, 2019

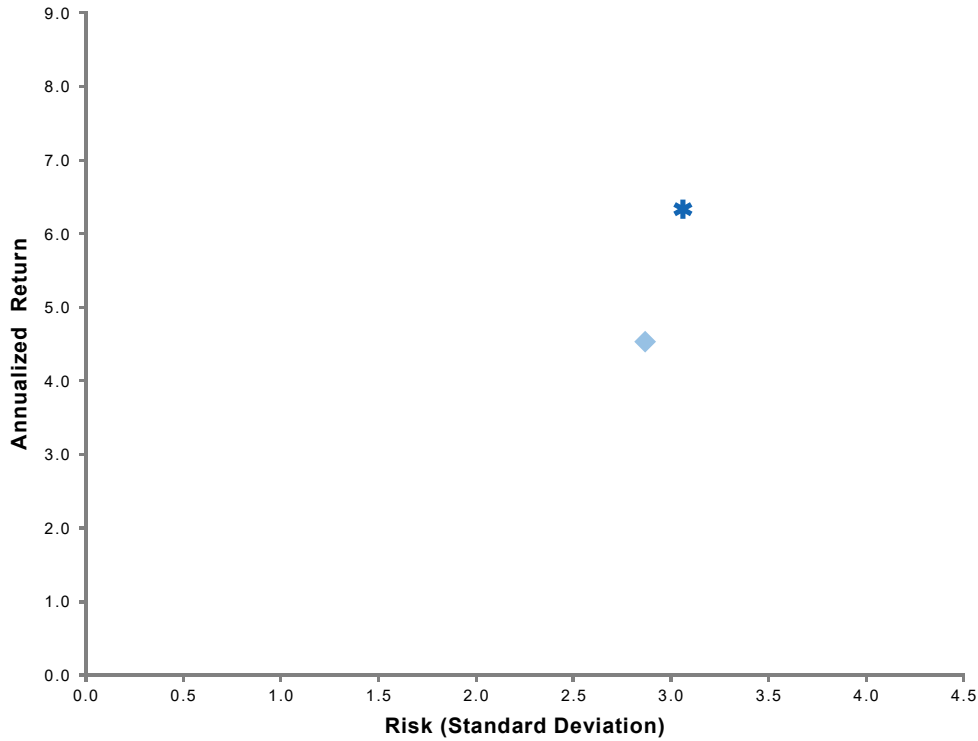


# FIXED INCOME RISK ADJUSTED RETURN

for the quarter ended March 31, 2019



## 10 Year Risk vs Return



	Rate of Return 10 Years	Standard Deviation 10 Years
* FIXED INCOME	6.2	3.0
◆ FI CUSTOM INDEX	4.4	2.8

\* FIXED INCOME   
 ◆ FI CUSTOM INDEX

	<u>Rate of Return 10 Years</u>	<u>Standard Deviation 10 Years</u>	<u>Tracking Error 10 Years</u>
FIXED INCOME	6.2	3.0	1.4
FI CUSTOM INDEX	4.4	2.8	



# FIXED INCOME - CORE

## DODGE & COX

for the quarter ended March 31, 2019



### Manager Profile

Firm: Dodge & Cox  
 Location: San Francisco, CA  
 Year Founded: 1930  
 Contact: Terrill Armstrong, Client Relationship Mngr.  
 Inception Date: March 1997  
 Assigned Role: Full Mandate  
 Benchmark: BBG BC Aggregate Bond Index  
 Investment Style: Core Fixed Income

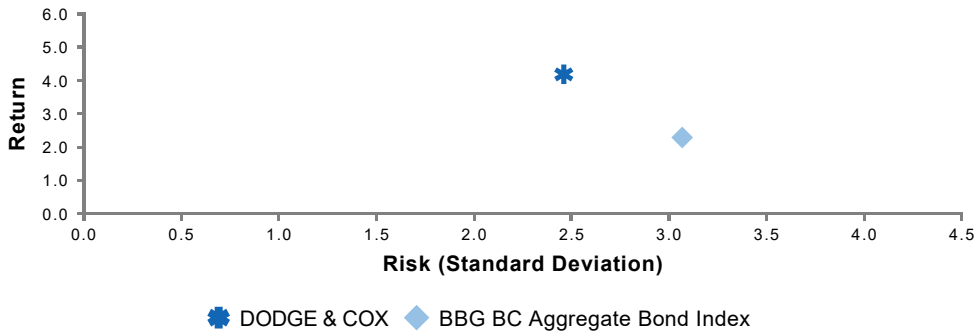
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Dodge & Cox	1,344.5	3.63	4.69	3.85	3.60	5.97	6.07
BBG BC Aggregate Bond Index		2.94	4.48	2.03	2.74	3.77	5.05

### Universe

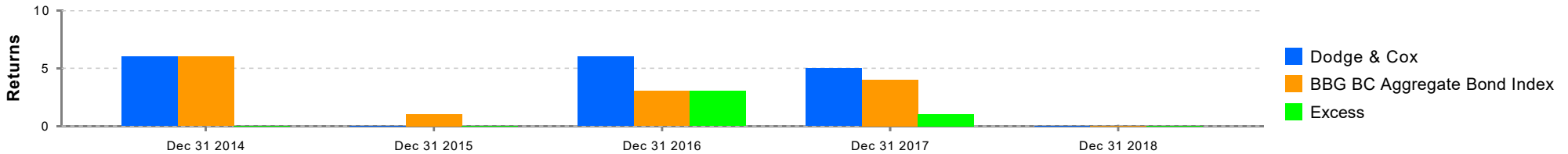
1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
DODGE & COX	3.9	2.4
BBG BC Aggregate Bond Index	2.0	3.0

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - CORE

## PUGH CAPITAL MANAGEMENT, INC.

for the quarter ended March 31, 2019



### Manager Profile

Firm: Pugh Capital Management, Inc.  
 Location: Seattle, WA  
 Year Founded: 1991  
 Contact: Mary E. Pugh, President  
 Inception Date: July 2005  
 Assigned Role: Emerging Manager  
 Benchmark: BBG BC Aggregate Bond Index  
 Investment Style: Core Fixed Income

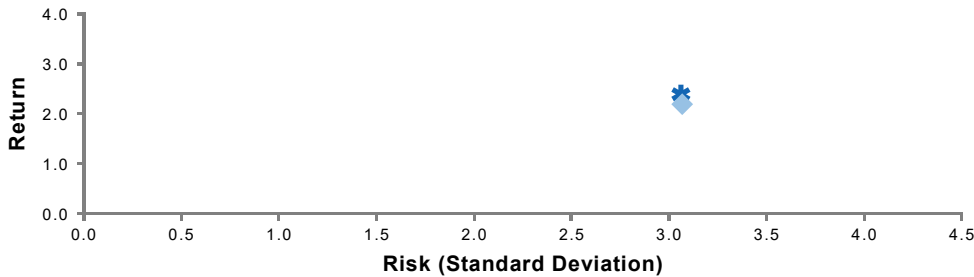
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Pugh Capital	345.0	3.10	4.66	2.23	2.95	4.45	4.48
BBG BC Aggregate Bond Index		2.94	4.48	2.03	2.74	3.77	3.94

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

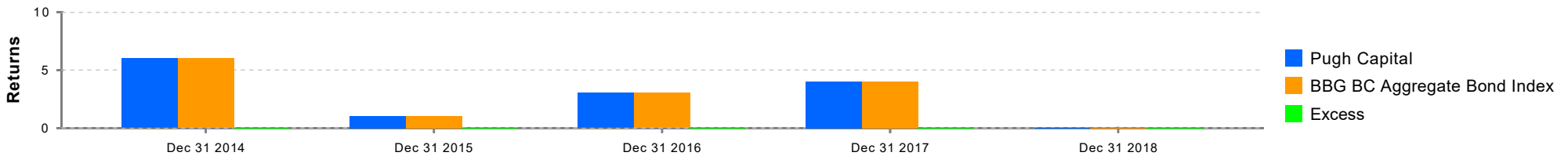
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
* Pugh Capital	2.2	3.0
◆ BBG BC Aggregate Bond Index	2.0	3.0

\* Pugh Capital    ◆ BBG BC Aggregate Bond Index

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - CORE

## WELLS CAPITAL MANAGEMENT

for the quarter ended March 31, 2019



### Manager Profile

Firm: Wells Capital Management  
 Location: Walnut Creek, CA  
 Year Founded: 1981  
 Contact: Daniel Anderson, Client Relations Director  
 Inception Date: March 2004  
 Assigned Role: Full Mandate  
 Benchmark: BBG BC Aggregate Bond Index  
 Investment Style: Core Fixed Income

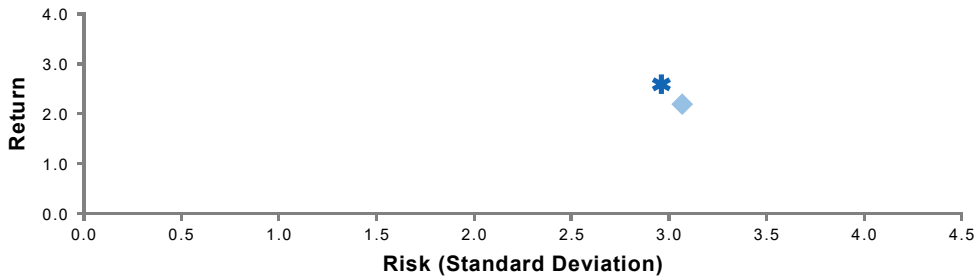
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Wells Capital	1,400.1	3.03	4.59	2.43	3.14	4.94	4.92
BBG BC Aggregate Bond Index		2.94	4.48	2.03	2.74	3.77	3.92

### Universe

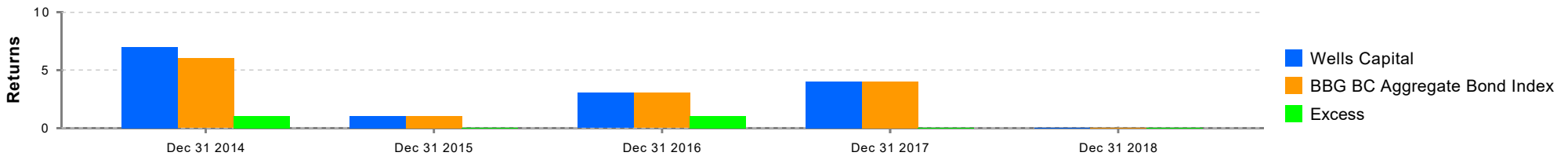
1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



\* WELLS CAPITAL    ◆ BBG BC Aggregate Bond Index

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - CORE PLUS

## PACIFIC INVESTMENT MANAGEMENT COMPANY

for the quarter ended March 31, 2019



### Manager Profile

Firm: Pacific Investment Management Company  
 Location: Newport Beach, CA  
 Year Founded: 1971  
 Contact: Stephanie King, Executive Vice President  
 Inception Date: March 2004  
 Assigned Role: Full Mandate  
 Benchmark: BBG BC Aggregate Bond Index  
 Investment Style: Core Plus Fixed Income

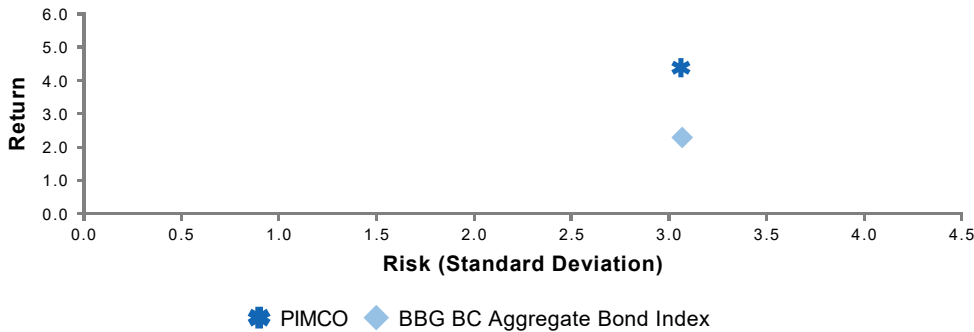
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
PIMCO	1,104.5	3.42	5.71	4.07	3.81	5.66	5.12
BBG BC Aggregate Bond Index		2.94	4.48	2.03	2.74	3.77	3.92

### Universe

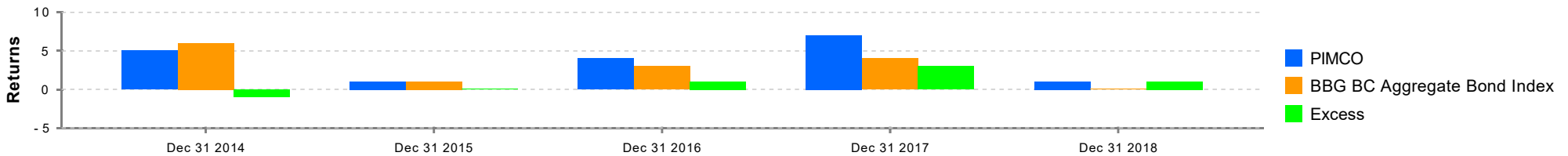
1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
PIMCO	4.1	3.0
BBG BC Aggregate Bond Index	2.0	3.0

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - CORE PLUS

## WESTERN ASSET MANAGEMENT COMPANY

for the quarter ended March 31, 2019



### Manager Profile

Firm: Western Asset Management Company  
 Location: Pasadena, CA  
 Year Founded: 1971  
 Contact: Veronica Amici, Head of Public Funds  
 Inception Date: March 1997  
 Assigned Role: Full Mandate  
 Benchmark: BBG BC Aggregate Bond Index  
 Investment Style: Core Plus Fixed Income

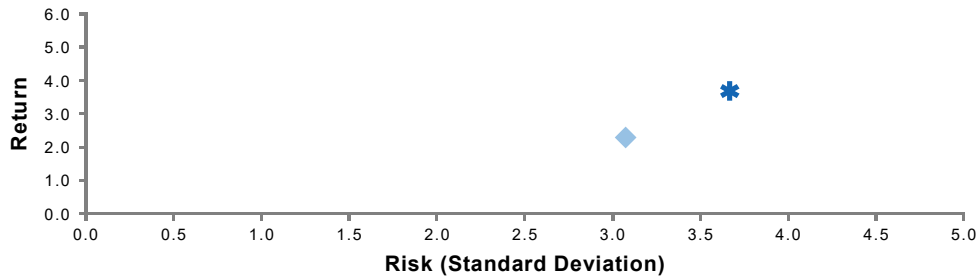
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Western Asset	1,178.5	4.06	4.09	3.38	3.76	7.14	6.32
BBG BC Aggregate Bond Index		2.94	4.48	2.03	2.74	3.77	5.05

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

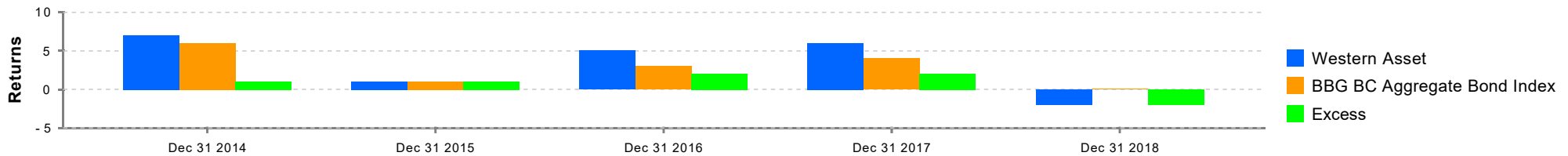
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
Western Asset	3.4	3.6
BBG BC Aggregate Bond Index	2.0	3.0

Western Asset    BBG BC Aggregate Bond Index

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - HIGH YIELD

## OAKTREE CAPITAL MANAGEMENT, L.P.

for the quarter ended March 31, 2019



### Manager Profile

Firm: Oaktree Capital Management, L.P.  
 Location: Los Angeles, CA  
 Year Founded: 1995  
 Contact: Sheldon M. Stone, Principal  
 Inception Date: July 1997  
 Assigned Role: Full Mandate  
 Benchmark: BBG BC Ba/B US High Yield Index  
 Investment Style: High Yield

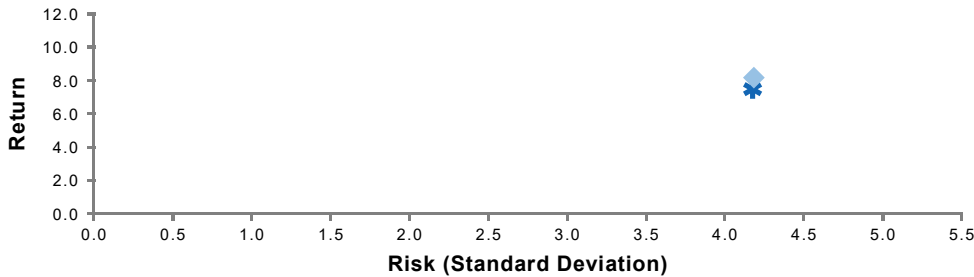
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Oaktree Capital	426.6	7.06	6.02	6.93	4.16	9.71	7.06
BBG BC Ba/B US High Yield Index		7.21	6.38	7.55	4.63	10.03	6.47

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

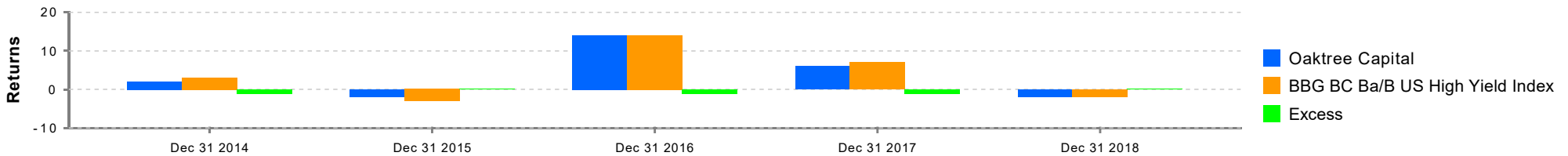
### 3 Year Risk vs Return



\* Oaktree Capital    ◆ BBG BC Ba/B US High Yield Index

	3 Year Return	3 Year Standard Deviation
Oaktree Capital	6.9	4.1
BBG BC Ba/B US High Yield Index	7.6	4.1

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - OPPORTUNISTIC

## ABERDEEN ASSET MANAGEMENT INC.

for the quarter ended March 31, 2019



### Manager Profile

Firm: Aberdeen Asset Management Inc.  
 Location: London, England  
 Year Founded: 1983  
 Contact: Teri Smith, Senior Relationship Manager  
 Inception Date: July 2017  
 Assigned Role: Full Mandate  
 Benchmark: Opportunistic EMD Custom  
 Investment Style: Opportunistic Credit – Emerging Mkt. Debt

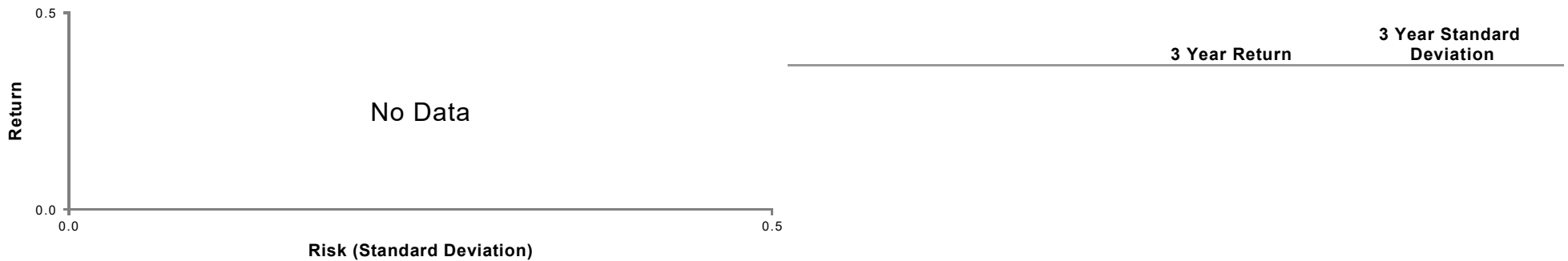
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Aberdeen	407.8	7.41	0.78				2.73
Opportunistic EMD Custom		5.50	1.30				2.84

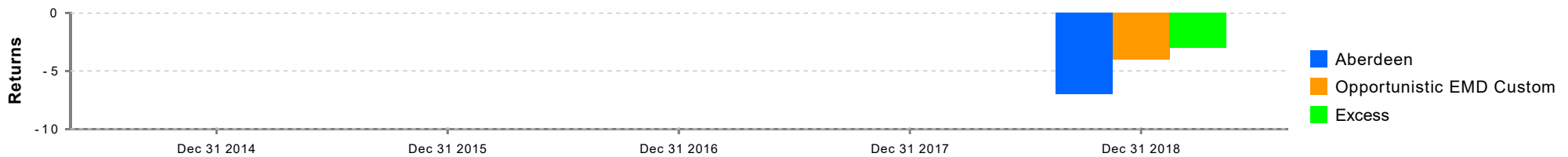
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - OPPORTUNISTIC

## ASHMORE INVESTMENT MANAGEMENT LIMITED

for the quarter ended March 31, 2019



### Manager Profile

Firm: Ashmore Investment Management Limited  
 Location: London, England  
 Year Founded: 1999  
 Contact: John Ricketts, Inst. Business Development  
 Inception Date: June 2017  
 Assigned Role: Full Mandate  
 Benchmark: Opportunistic EMD Custom  
 Investment Style: Opportunistic Credit – Emerging Mkt. Debt

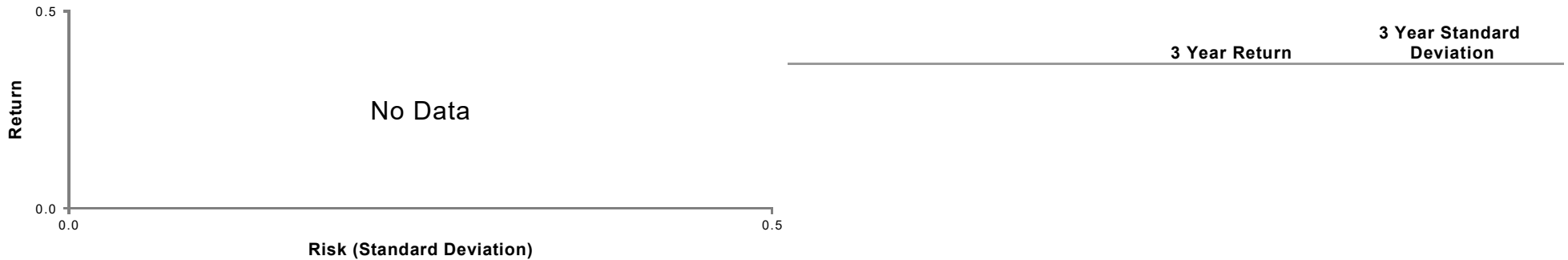
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Ashmore	410.8	5.80	-0.42				3.34
Opportunistic EMD Custom		5.50	1.30				2.76

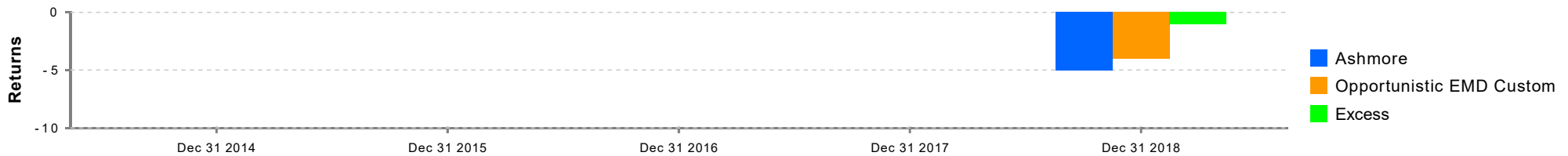
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019





# FIXED INCOME - OPPORTUNISTIC

## BAIN CAPITAL CREDIT, LP

for the quarter ended March 31, 2019



### Manager Profile

Firm: Bain Capital Credit, LP  
 Location: Boston, MA  
 Year Founded: 1998  
 Contact: Kyle Betty, Managing Director  
 Inception Date: June 2014  
 Assigned Role: Full Mandate  
 Benchmark: Opportunistic Custom Index  
 Investment Style: Opportunistic Credit – Multi Strategy

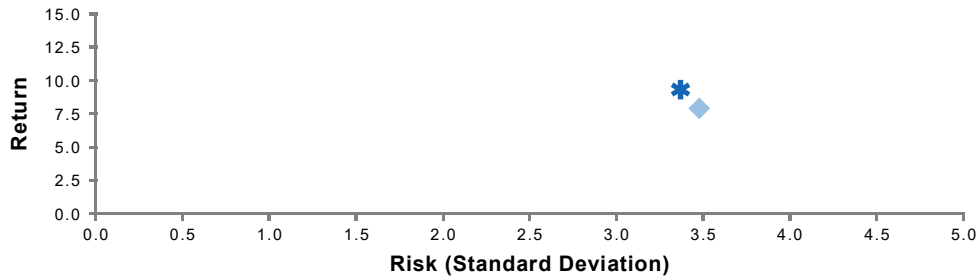
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Bain Capital	365.0	4.59	5.29	8.64			4.21
OPPORTUNISTIC CUSTOM INDEX		5.51	4.63	7.22			4.16

### Universe

1 Qtr      1 Year      3 Years      5 Years

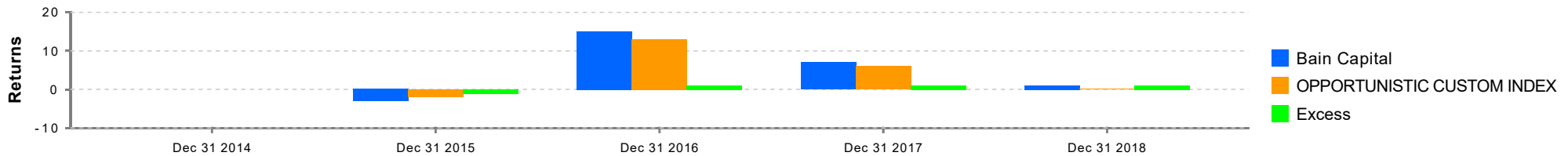
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
* Bain Capital	8.6	3.3
◆ OPPORTUNISTIC CUSTOM INDEX	7.2	3.4

\* Bain Capital    ◆ OPPORTUNISTIC CUSTOM INDEX

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - OPPORTUNISTIC

## BEACH POINT CAPITAL

for the quarter ended March 31, 2019



### Manager Profile

Firm: Beach Point Capital  
 Location: Santa Monica, CA  
 Year Founded: 2008  
 Contact: Larissa Chapin, Director  
 Inception Date: March 2014  
 Assigned Role: Full Mandate  
 Benchmark: Opportunistic Custom Index  
 Investment Style: Opportunistic – Credit

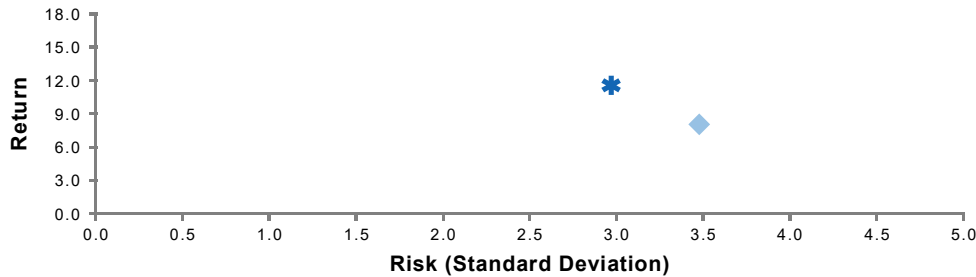
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Beach Point*	462.1	4.86	6.59	10.69	7.81		7.81
OPPORTUNISTIC CUSTOM INDEX		5.51	4.63	7.22	4.27		4.26

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

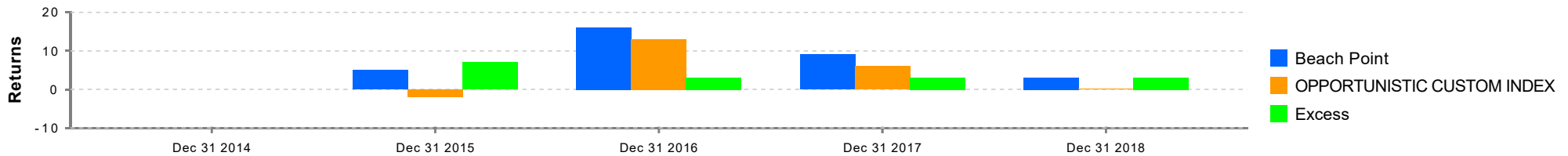
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
* BEACH POINT - TOTAL	10.7	2.9
◆ OPPORTUNISTIC CUSTOM INDEX	7.2	3.4

◆ BEACH POINT - TOTAL    ◆ OPPORTUNISTIC CUSTOM INDEX

### Calendar Year Returns as of March 31, 2019



Universe data: U.S. Fixed Income Funds High Yield

\* Represents the combined assets & performance of two portfolios, one of which is reported with a one-month lag.

# FIXED INCOME - OPPORTUNISTIC

## BRIGADE CAPITAL MANAGEMENT

for the quarter ended March 31, 2019



### Manager Profile

Firm: Brigade Capital Management  
 Location: New York, NY  
 Year Founded: 2006  
 Contact: Rob Brady, Director  
 Inception Date: July 2010  
 Assigned Role: Full Mandate  
 Benchmark: Brigade Custom Index  
 Investment Style: Opportunistic – Credit

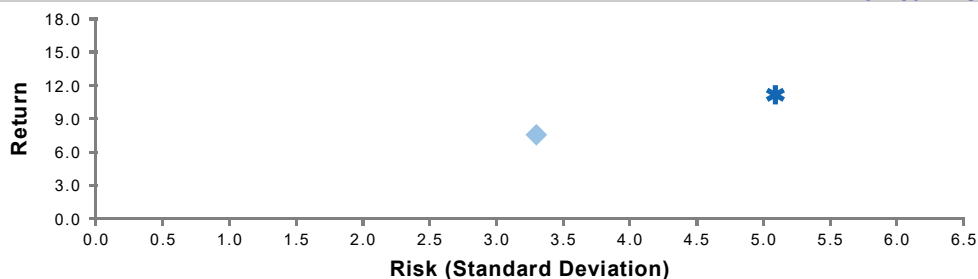
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Brigade Capital	578.4	4.23	3.24	10.33	4.69		8.03
BRIGADE CUSTOM INDEX		5.49	4.86	6.71	4.24		6.13

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

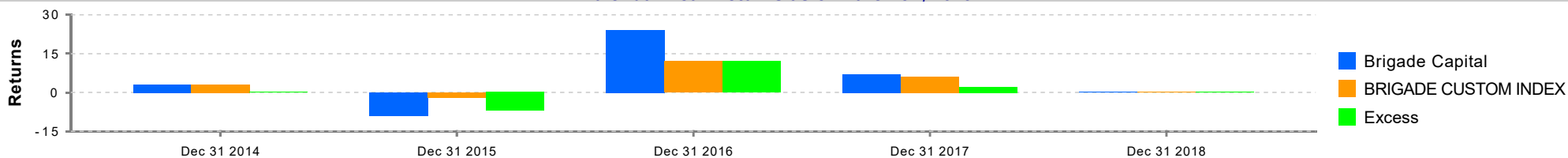
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
Brigade Capital	10.3	5.0
BRIGADE CUSTOM INDEX	6.7	3.2

• Brigade Capital    ◆ BRIGADE CUSTOM INDEX

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - OPPORTUNISTIC

## CRESCENT CAPITAL GROUP LP

for the quarter ended March 31, 2019



### Manager Profile

Firm: Crescent Capital Group LP  
 Location: Los Angeles, CA  
 Year Founded: 1991  
 Contact: John Fekete, Managing Director  
 Inception Date: May 2014  
 Assigned Role: Full Mandate  
 Benchmark: Opportunistic Custom Index  
 Investment Style: Opportunistic Credit – Direct Lending

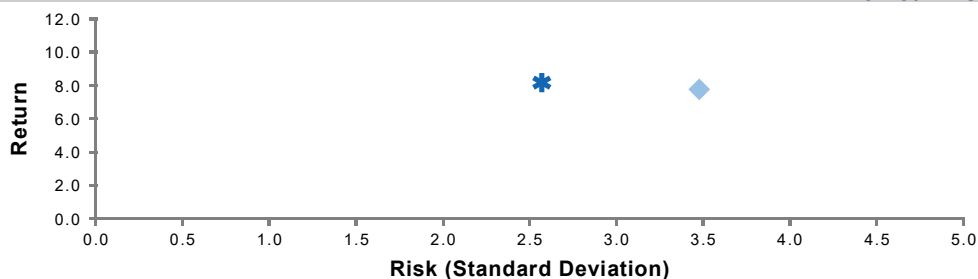
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Crescent Capital	432.7	3.06	3.88	7.59			3.37
OPPORTUNISTIC CUSTOM INDEX		5.51	4.63	7.22			4.25

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

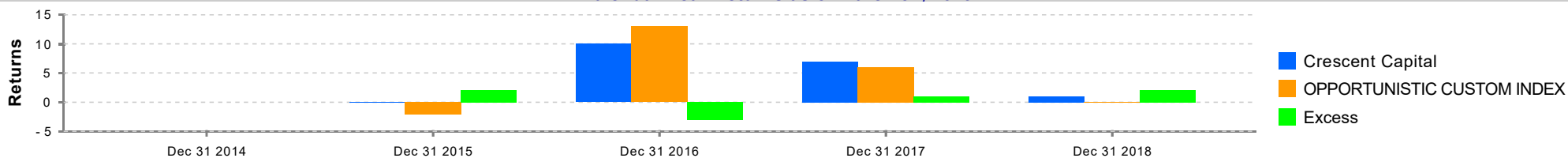
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
CRESCENT CAPITAL	7.6	2.5
OPPORTUNISTIC CUSTOM INDEX	7.2	3.4

CRESCENT CAPITAL      OPPORTUNISTIC CUSTOM INDEX

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - OPPORTUNISTIC

## DOUBLELINE CAPITAL LP

for the quarter ended March 31, 2019



### Manager Profile

Firm: DoubleLine Capital LP  
 Location: Los Angeles, CA  
 Year Founded: 2009  
 Contact: Aaron Prince, Sr. Product Specialist  
 Inception Date: February 2016  
 Assigned Role: Full Mandate  
 Benchmark: Securitized Custom Index  
 Investment Style: Opportunistic FI - Securitized Credit

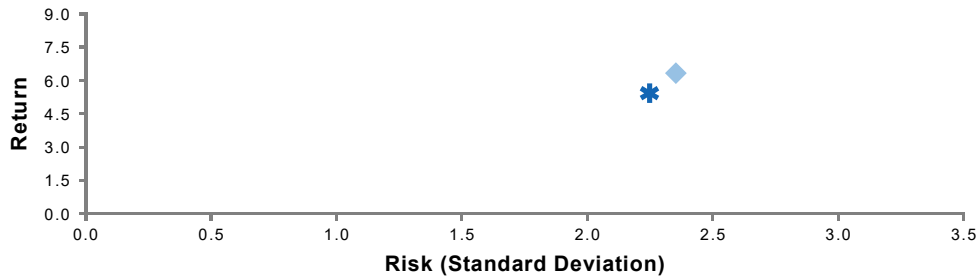
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
DoubleLine Capital	329.0	2.35	5.27	4.95			4.81
Securitized Custom Index		3.22	8.64	5.88			6.03

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

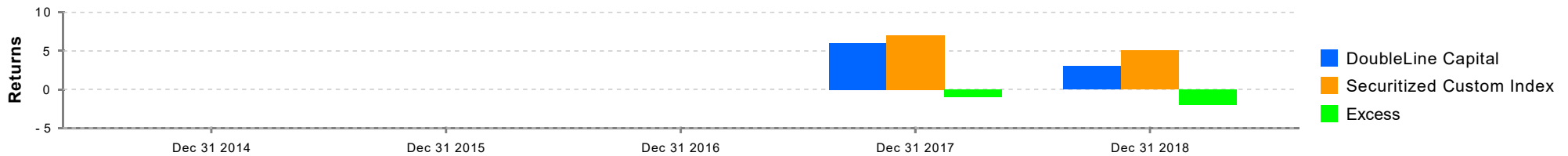
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
DoubleLine Capital	5.0	2.2
Securitized Custom Index	5.9	2.3

● DoubleLine Capital    ◆ Securitized Custom Index

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - OPPORTUNISTIC

## TCW ASSET MANAGEMENT COMPANY

for the quarter ended March 31, 2019



### Manager Profile

Firm: TCW Asset Management Company  
 Location: Los Angeles, CA  
 Year Founded: 1971  
 Contact: Jeffrey Katz, Sr. Vice President  
 Inception Date: October 2015  
 Assigned Role: Full Mandate  
 Benchmark: Securitized Custom Index  
 Investment Style: Opportunistic FI – Securitized Credit

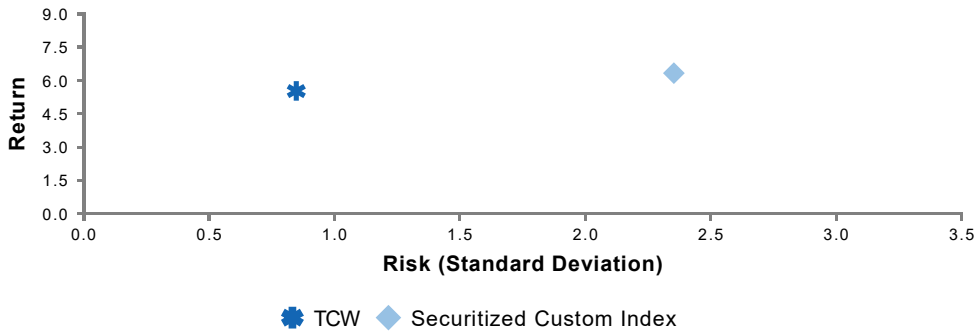
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
TCW	332.5	1.78	4.34	5.15			4.57
Securitized Custom Index		3.22	8.64	5.88			6.17

### Universe

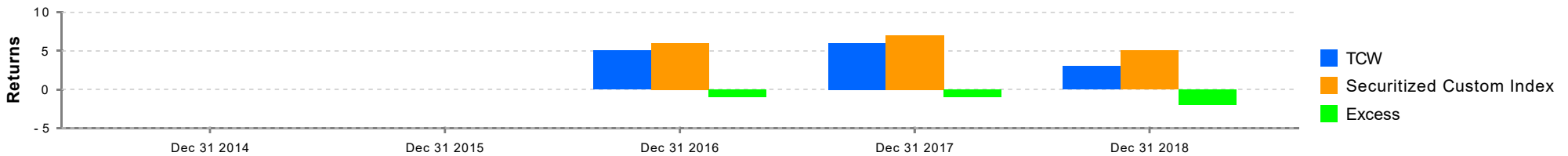
1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
TCW	5.1	0.8
Securitized Custom Index	5.9	2.3

### Calendar Year Returns as of March 31, 2019



# FIXED INCOME - OPPORTUNISTIC

## TENNEBAUM CAPITAL PARTNERS, LLC

for the quarter ended March 31, 2019



### Manager Profile

Firm: Tennenbaum Capital Partners, LLC  
 Location: Santa Monica, CA  
 Year Founded: 1999  
 Contact: Lee R. Landrum, Partner  
 Inception Date: November 2014  
 Assigned Role: Full Mandate  
 Benchmark: Credit Suisse Leveraged Loan Index  
 Investment Style: Opportunistic Credit – Direct Lending

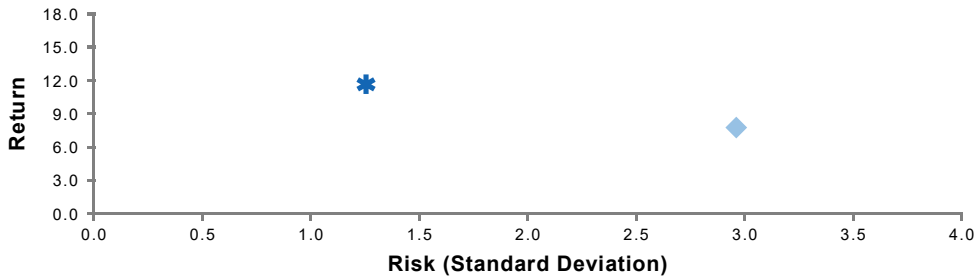
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Tennenbaum Capital*	330.8	2.00	8.38	10.80			8.37
CSFB Lev Loan Index 1 Month Lag		1.53	3.78	6.93			4.18

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

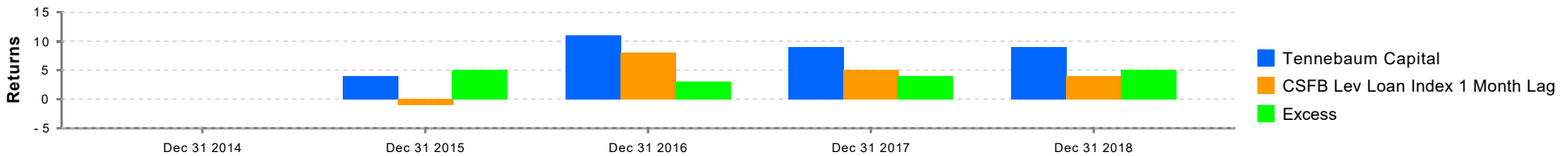
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
* Tennenbaum Capital	10.8	1.2
◆ CSFB Lev Loan Index 1 Month Lag	6.9	2.9

\* Tennenbaum Capital    ◆ CSFB Lev Loan Index 1 Month Lag

### Calendar Year Returns as of March 31, 2019



Universe data: U.S. Fixed Income Funds High Yield  
 \* One-month lag.

# FIXED INCOME - CASH

## J.P. MORGAN ASSET MANAGEMENT

for the quarter ended March 31, 2019



### Manager Profile

Firm: J.P. Morgan Asset Management  
 Location: New York, NY  
 Year Founded: 1871  
 Contact: Kyongsoo Noh (KNoh), Executive Director  
 Inception Date: September 2012  
 Assigned Role: Full Mandate  
 Benchmark: FTSE 6-month T-Bill  
 Investment Style: Enhanced Cash

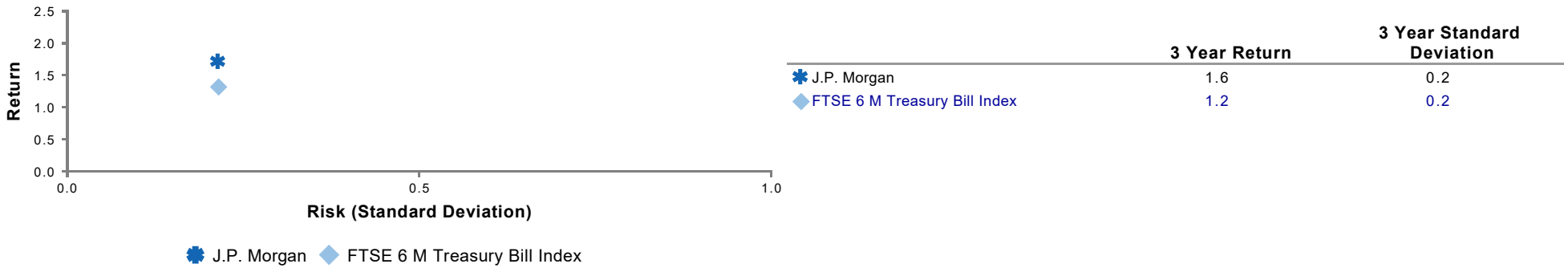
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
J.P. Morgan	1,965.8	0.73	2.52	1.57	1.10		0.94
FTSE 6 M Treasury Bill Index		0.61	2.18	1.24	0.79		0.62

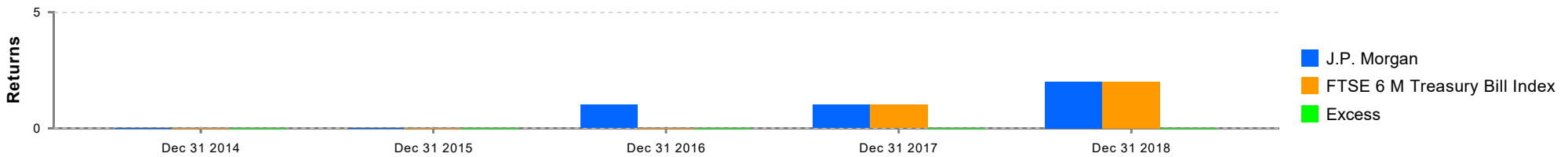
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019





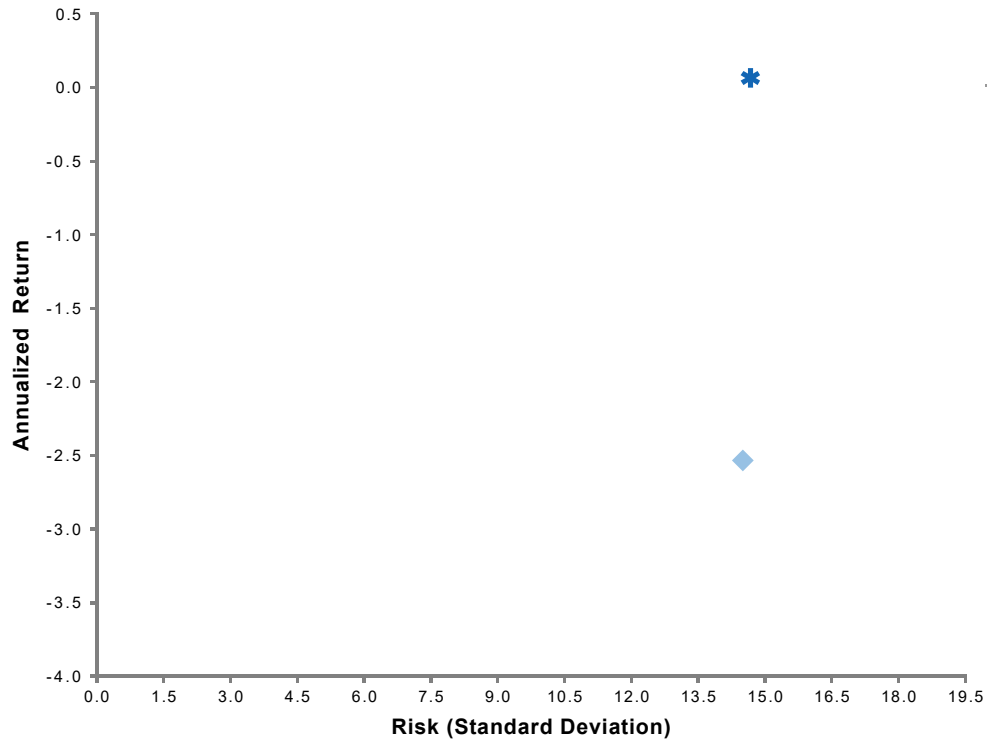
# COMMODITIES

## RISK ADJUSTED RETURN

for the quarter ended March 31, 2019



### 7 Year Risk vs Return



	Rate of Return 10 Years	Standard Deviation 10 Years
* COMMODITIES	0.0	14.4
◆ Bloomberg Comm Index TR	-2.6	14.2

\* COMMODITIES ◆ Bloomberg Comm Index TR

	<u>Rate of Return 10 Years</u>	<u>Standard Deviation 10 Years</u>	<u>Tracking Error 10 Years</u>
COMMODITIES	-0.0	14.4	1.6
Bloomberg Comm Index TR	-2.6	14.2	

# COMMODITIES

## CREDIT SUISSE ASSET MANAGEMENT, LLC

for the quarter ended March 31, 2019



### Manager Profile

Firm: Credit Suisse Asset Management, LLC  
 Location: New York, NY  
 Year Founded: 1935  
 Contact: Nelson Louie, Managing Director  
 Inception Date: March 2011  
 Assigned Role: Commodities  
 Benchmark: Bloomberg Commodity Index Total Return  
 Investment Style: Active Commodities

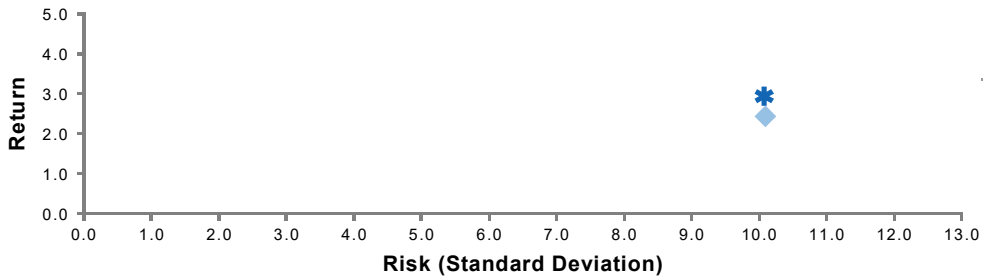
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Credit Suisse Commodity	427.8	6.55	-5.69	2.69	-8.33		-7.50
Bloomberg Comm Index TR		6.32	-5.25	2.22	-8.92		-8.02

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

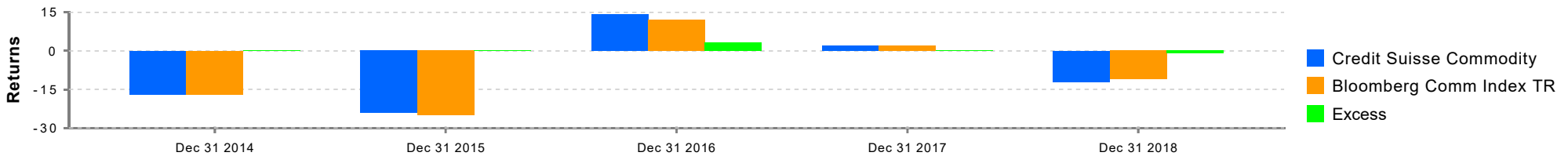
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
* CREDIT SUISSE COMMODITY	2.7	9.9
◆ Bloomberg Comm Index TR	2.2	9.9

\* CREDIT SUISSE COMMODITY    ◆ Bloomberg Comm Index TR

### Calendar Year Returns as of March 31, 2019



# COMMODITIES

## NEUBERGER BERMAN ALTERNATIVE FUND MANAGEMENT LLC/GRESHAM

for the quarter ended March 31, 2019



### Manager Profile

Firm: Neuberger Berman/Gresham  
 Location: New York, NY  
 Year Founded: 1850/1987  
 Contact: Jonathan Spencer, President (Gresham)  
 Inception Date: July 2007  
 Assigned Role: Commodities  
 Benchmark: Bloomberg Commodity Index Total Return  
 Investment Style: Active Commodities

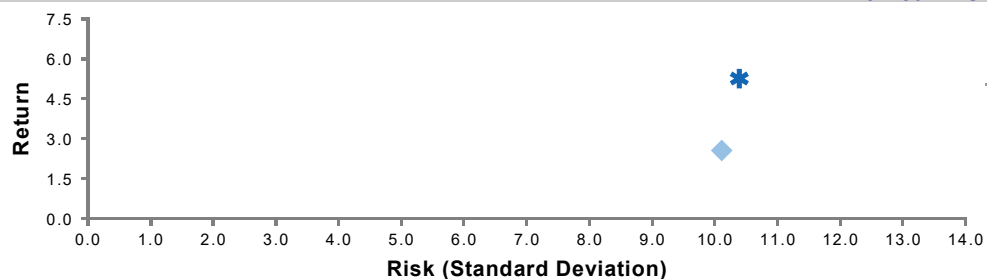
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
Neuberger Berman/Gresham	453.9	8.19	-3.42	4.93	-7.20	0.24	-3.43
Bloomberg Comm Index TR		6.32	-5.25	2.22	-8.92	-2.56	-5.45

### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

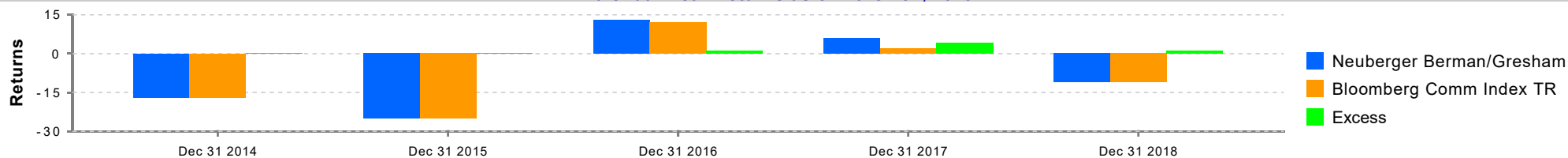
### 3 Year Risk vs Return



	3 Year Return	3 Year Standard Deviation
NEUBERGER BERMAN/GRESHAM	4.9	10.2
Bloomberg Comm Index TR	2.2	9.9

NEUBERGER BERMAN/GRESHAM    Bloomberg Comm Index TR

### Calendar Year Returns as of March 31, 2019



# COMMODITIES

## PACIFIC INVESTMENT MANAGEMENT COMPANY

for the quarter ended March 31, 2019



### Manager Profile

Firm: Pacific Investment Management Company  
 Location: Newport Beach, CA  
 Year Founded: 1971  
 Contact: Stephanie King, Executive Vice President  
 Inception Date: July 2007  
 Assigned Role: Commodities  
 Benchmark: Bloomberg Commodity Index Total Return  
 Investment Style: Active Commodities

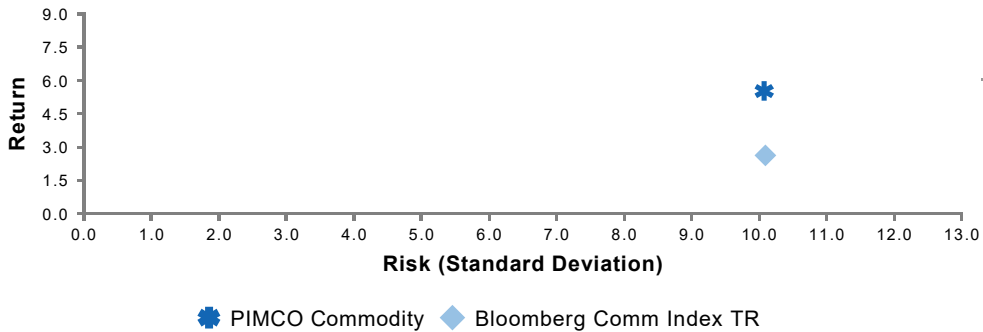
### Manager vs. Benchmark: Return through March 31, 2019 (not annualized if less than 1 year)

	Ending Mkt Val (\$mil)	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception
PIMCO Commodity	450.3	8.17	-4.14	5.15	-6.39	0.24	-3.50
Bloomberg Comm Index TR		6.32	-5.25	2.22	-8.92	-2.56	-5.45

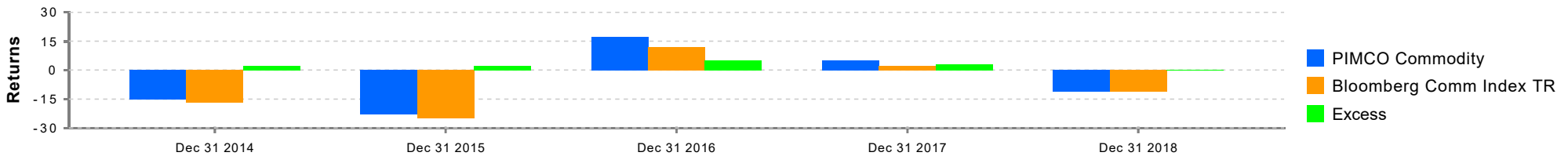
### Universe

1 Qtr                      1 Year                      3 Years                      5 Years

### 3 Year Risk vs Return



### Calendar Year Returns as of March 31, 2019



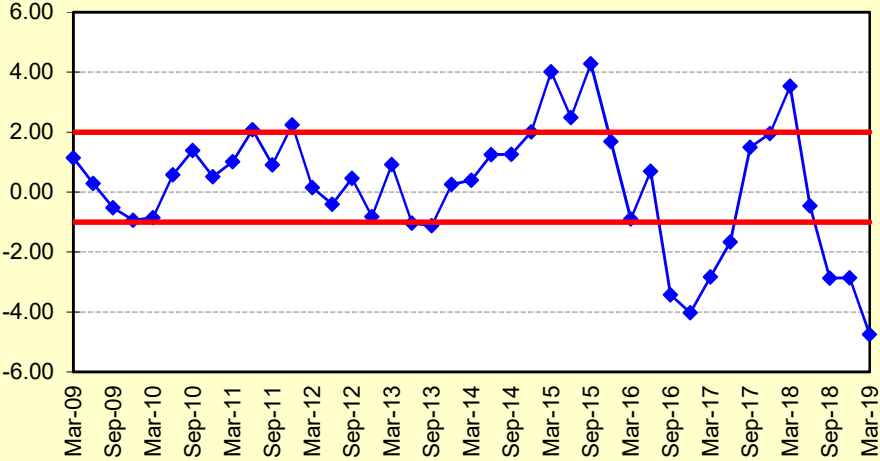
# U.S. EQUITY - LARGE CAP

## ONE-YEAR ROLLING EXCESS RETURNS

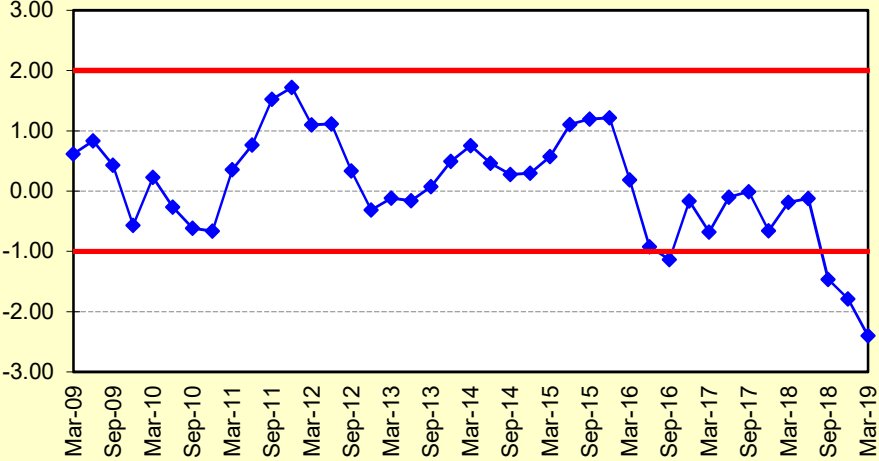
for the quarter ended March 31, 2019



**INTECH**



**Twin Capital**



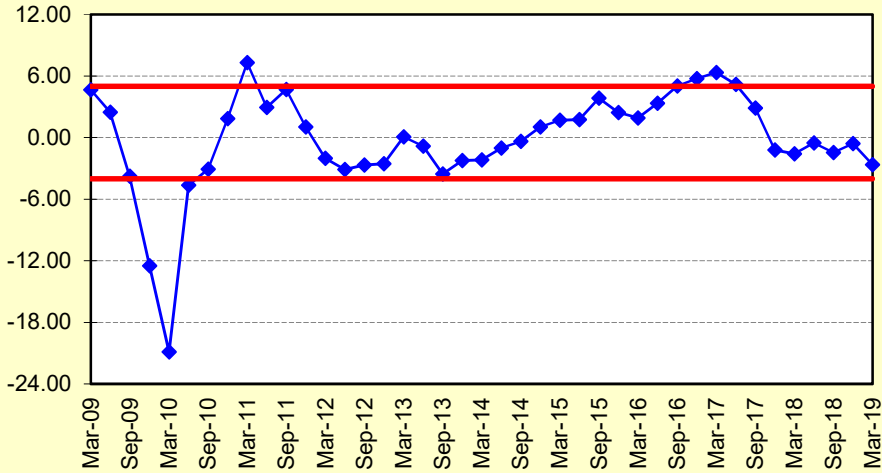
# U.S. EQUITY - SMALL/MID CAP

## ONE-YEAR ROLLING EXCESS RETURNS

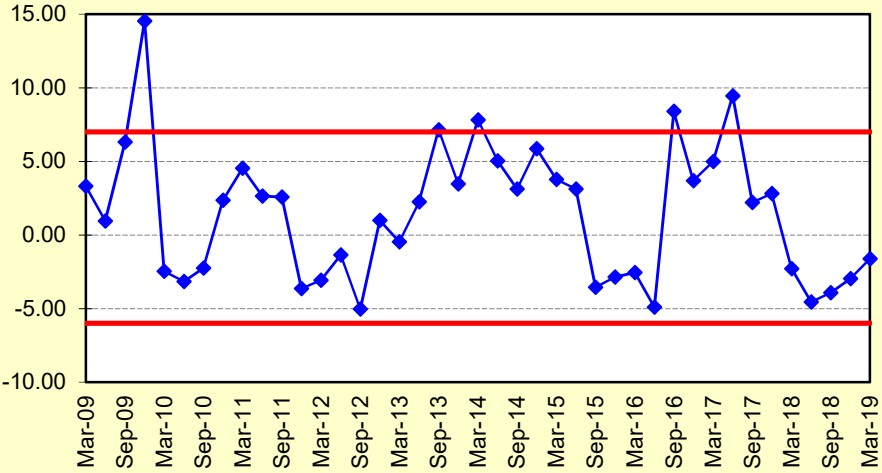
for the quarter ended March 31, 2019



**Eagle**



**Frontier**



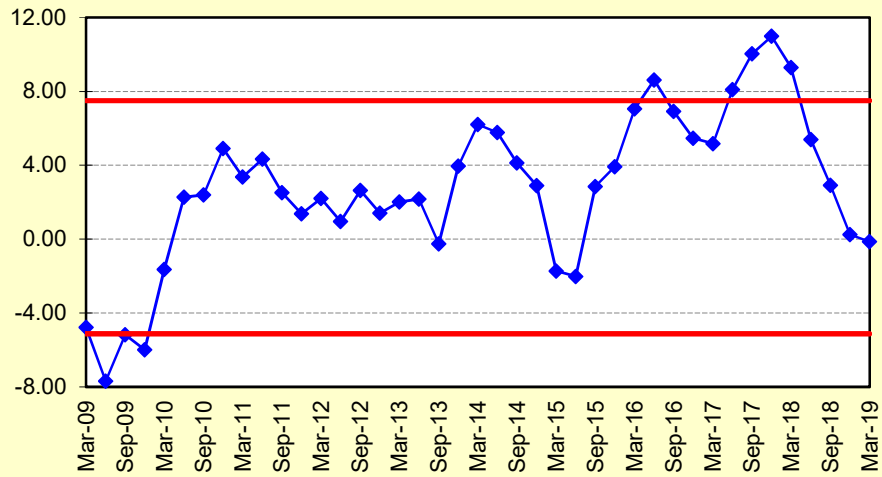
# NON-U.S. EQUITY

## ONE-YEAR ROLLING EXCESS RETURNS

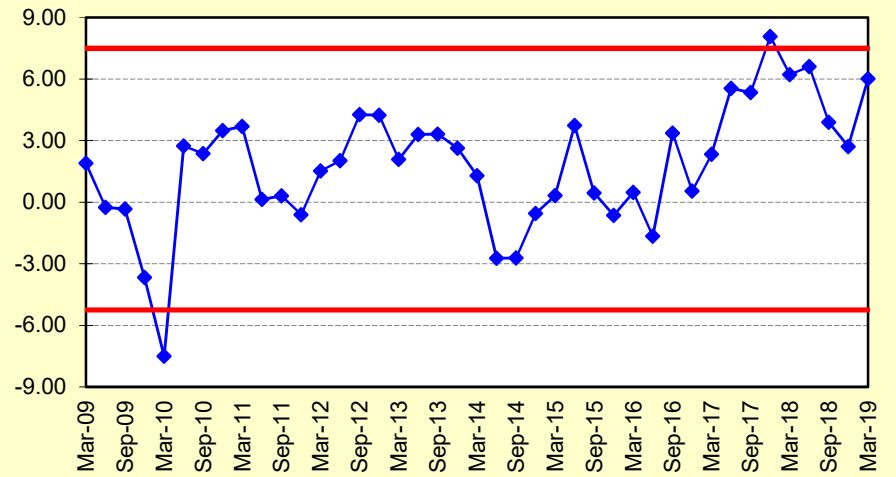
for the quarter ended March 31, 2019



**Acadian**



**Capital Guardian Non-U.S.**



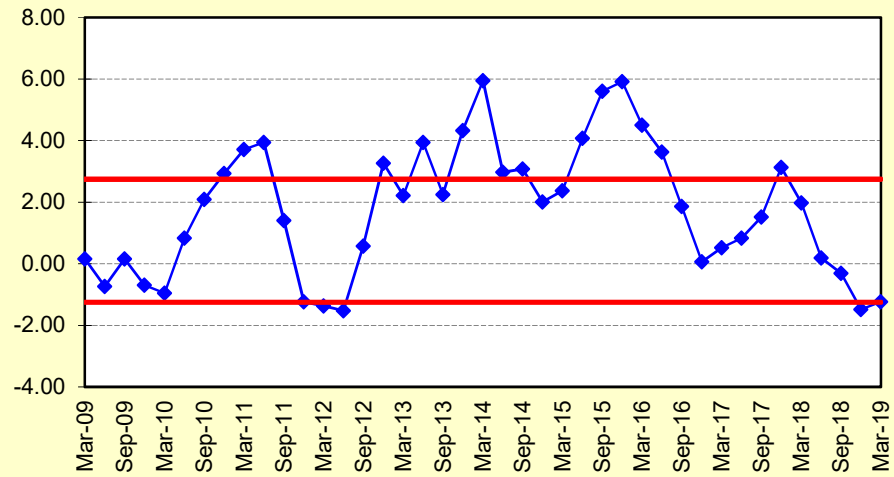
# NON-U.S. EQUITY - PACIFIC BASIN & EUROPE

## ONE-YEAR ROLLING EXCESS RETURNS

for the quarter ended March 31, 2019



**BTC Europe Alpha Tilts**





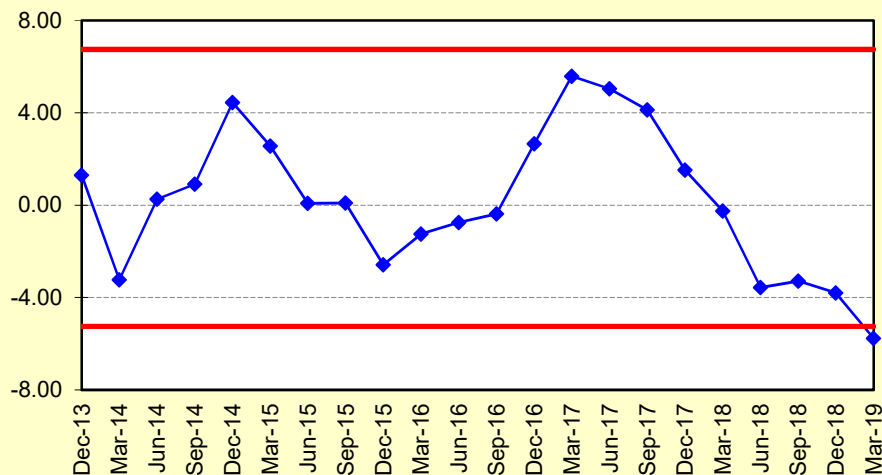
# NON-U.S. EQUITY - EMERGING MARKETS

## ONE-YEAR ROLLING EXCESS RETURNS

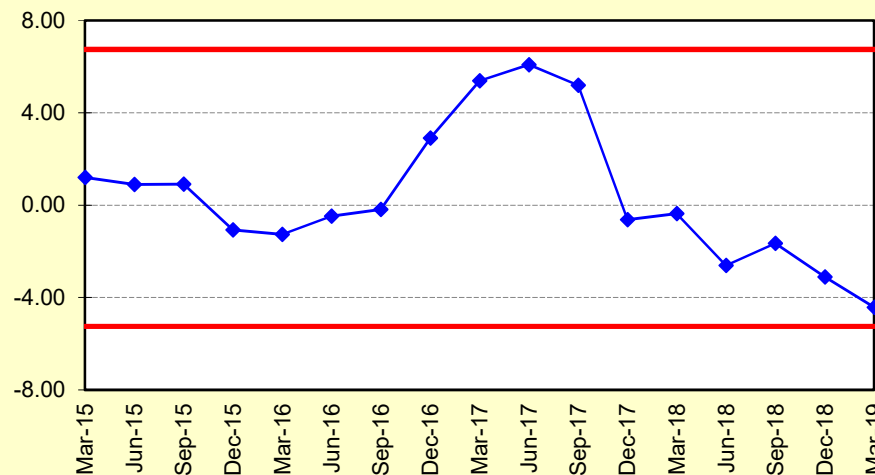
for the quarter ended March 31, 2019



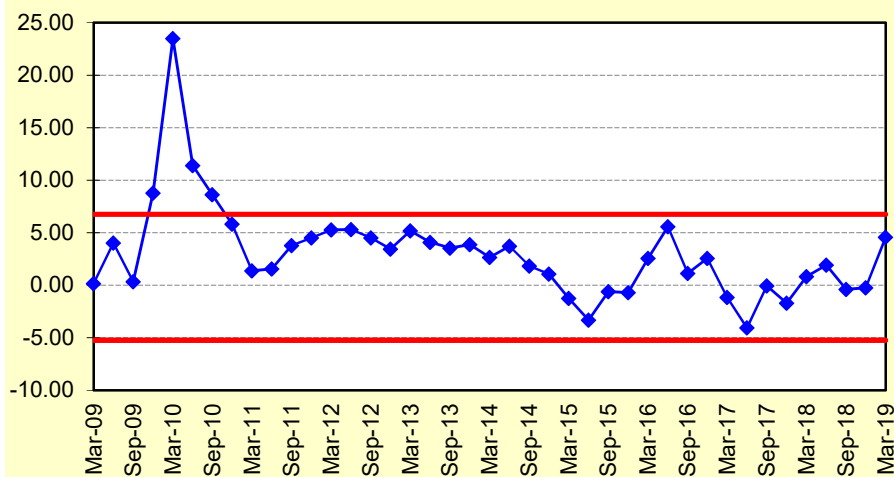
### Acadian Emerging



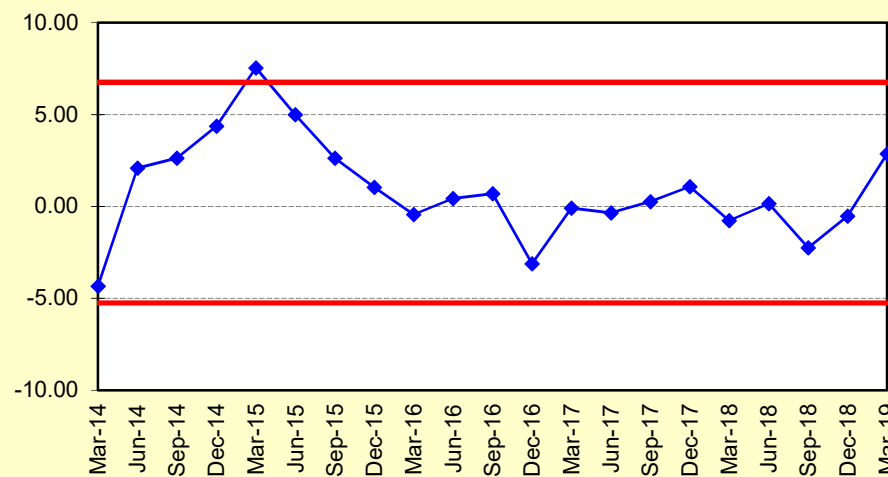
### AQR



### Genesis



### Lazard



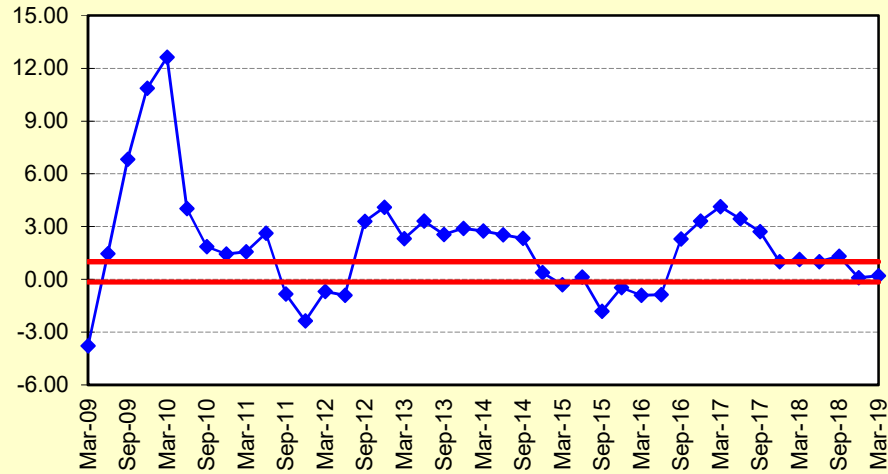
# FIXED INCOME - CORE

## ONE-YEAR ROLLING EXCESS RETURNS

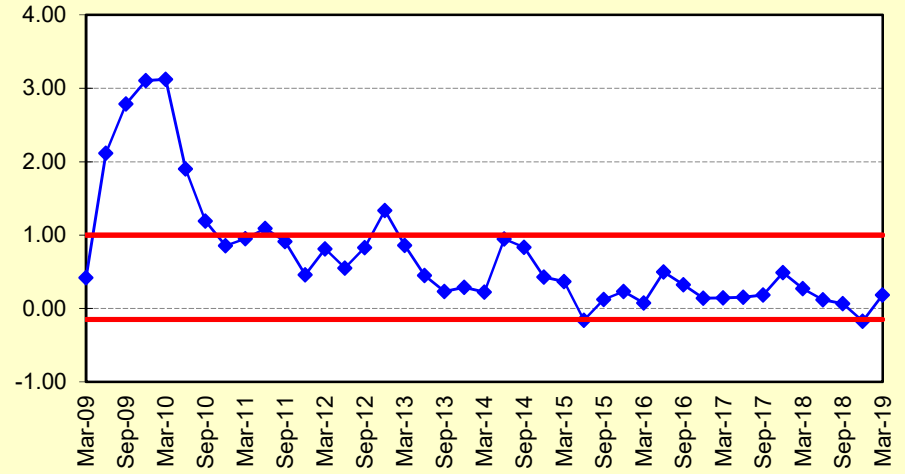
for the quarter ended March 31, 2019



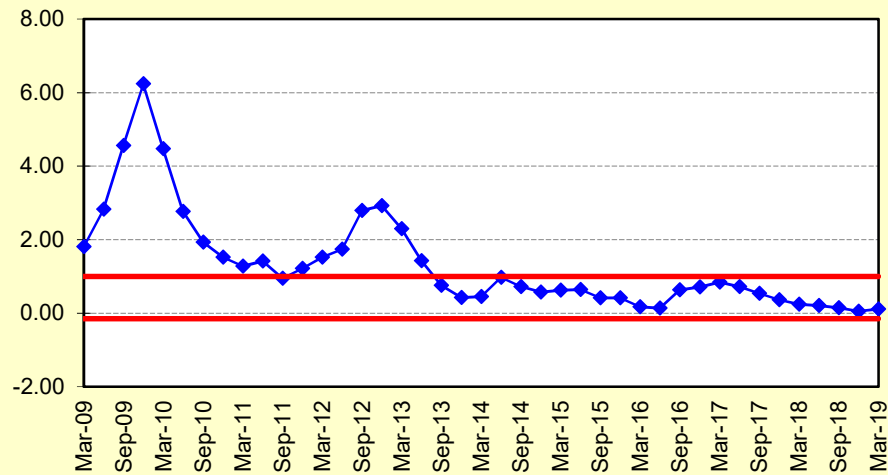
**Dodge & Cox**



**Pugh Capital**



**Wells Capital**



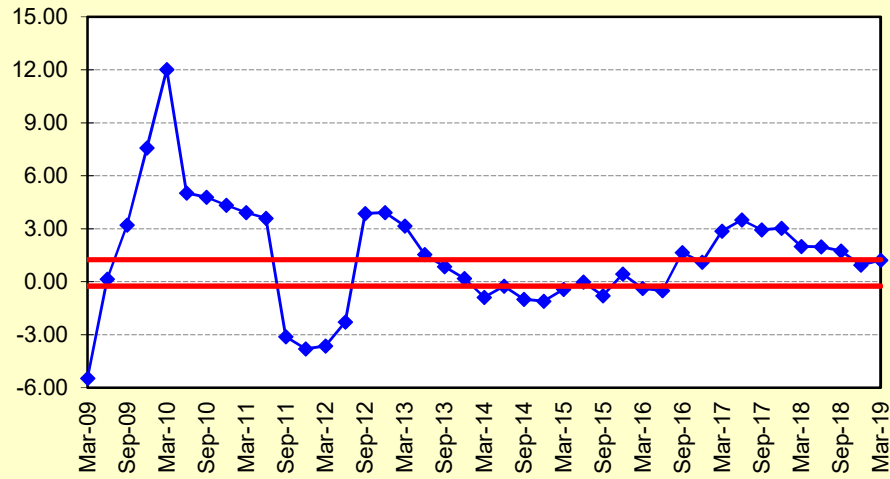
# FIXED INCOME - CORE PLUS

## ONE-YEAR ROLLING EXCESS RETURNS

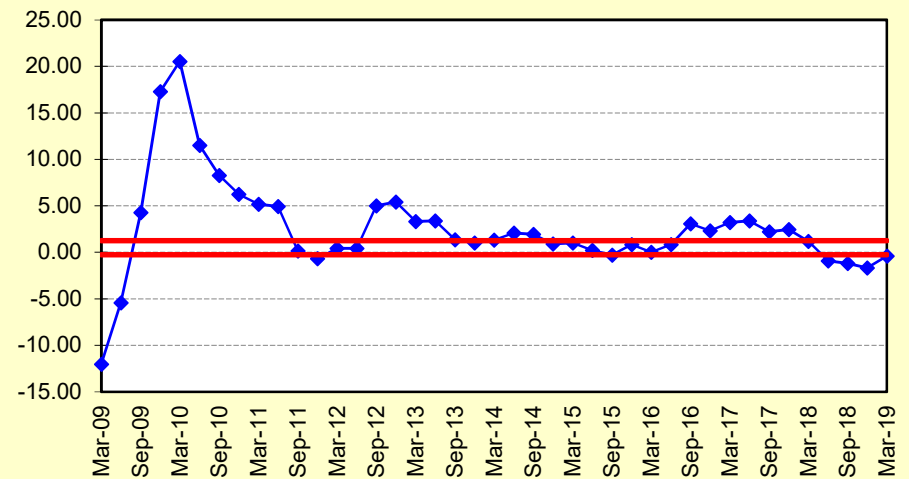
for the quarter ended March 31, 2019



**PIMCO**



**Western Asset - Core Plus**



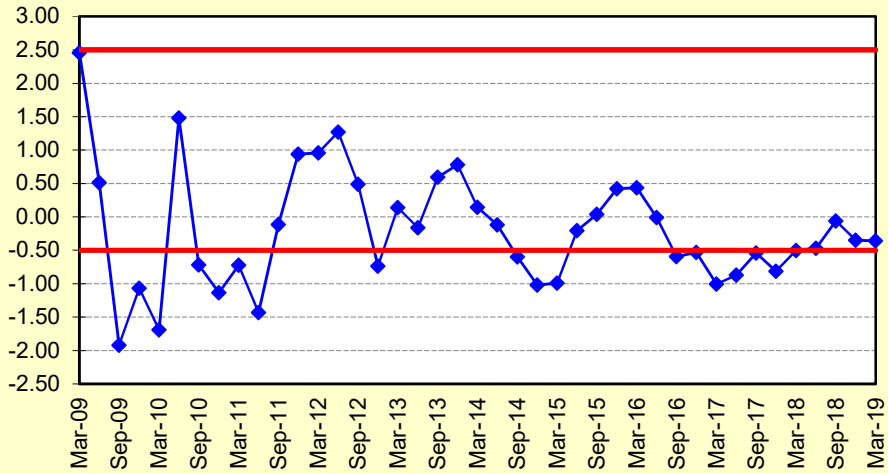
# FIXED INCOME - HIGH YIELD

## ONE-YEAR ROLLING EXCESS RETURNS

for the quarter ended March 31, 2019



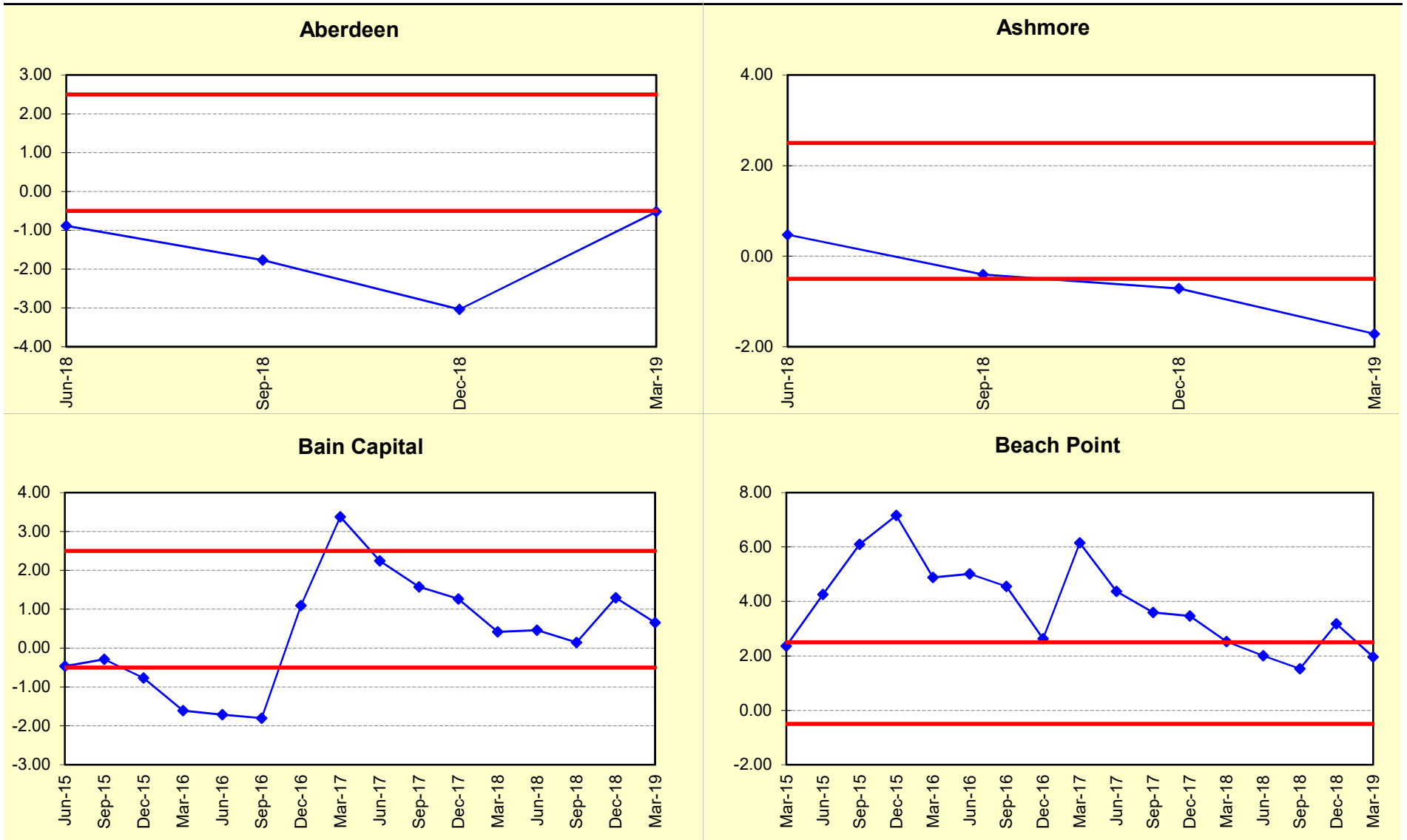
Oaktree Capital



# FIXED INCOME - OPPORTUNISTIC

## ONE-YEAR ROLLING EXCESS RETURNS

for the quarter ended March 31, 2019



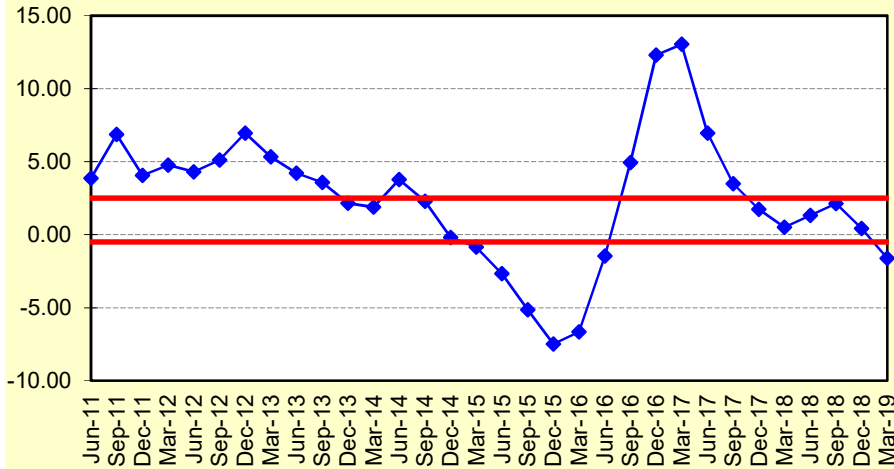
# FIXED INCOME - OPPORTUNISTIC

## ONE-YEAR ROLLING EXCESS RETURNS

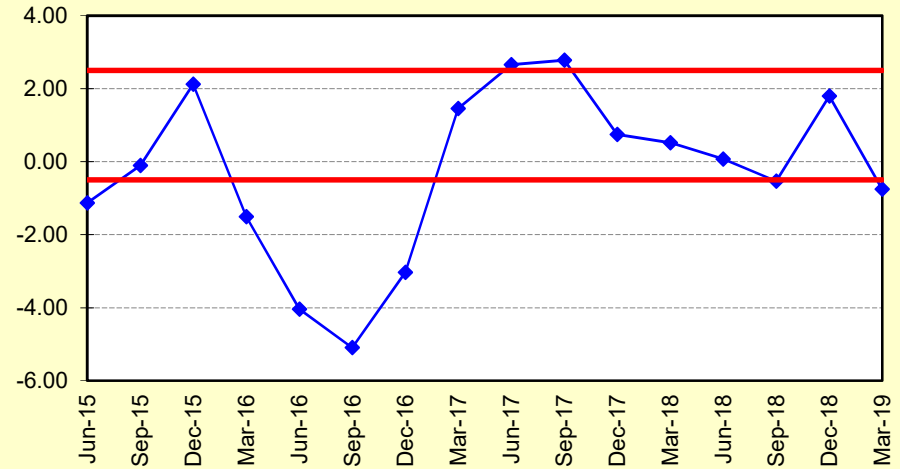
for the quarter ended March 31, 2019



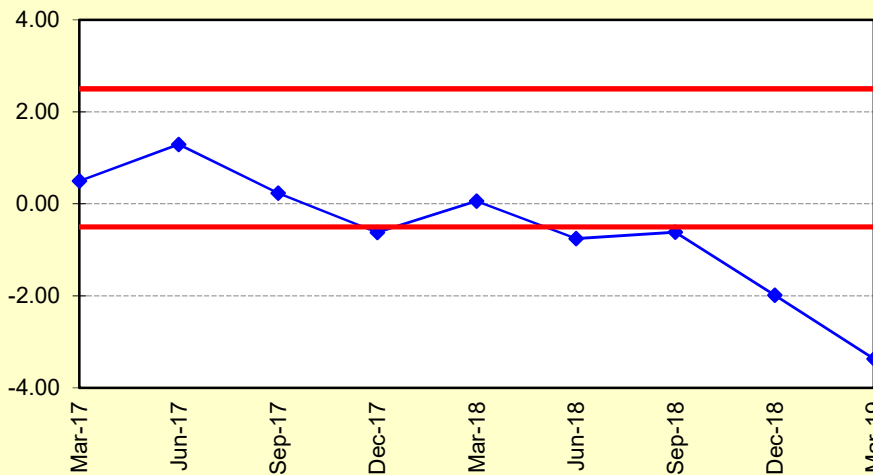
**Brigade Capital**



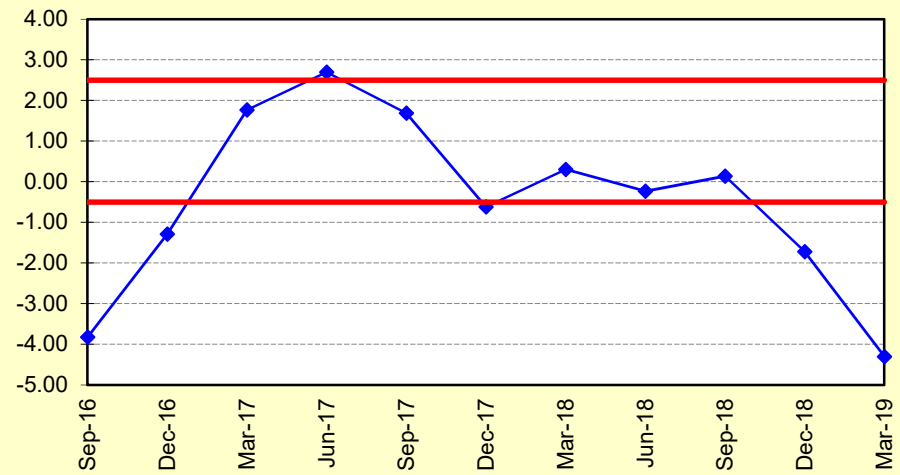
**Crescent**



**DoubleLine**



**TCW**



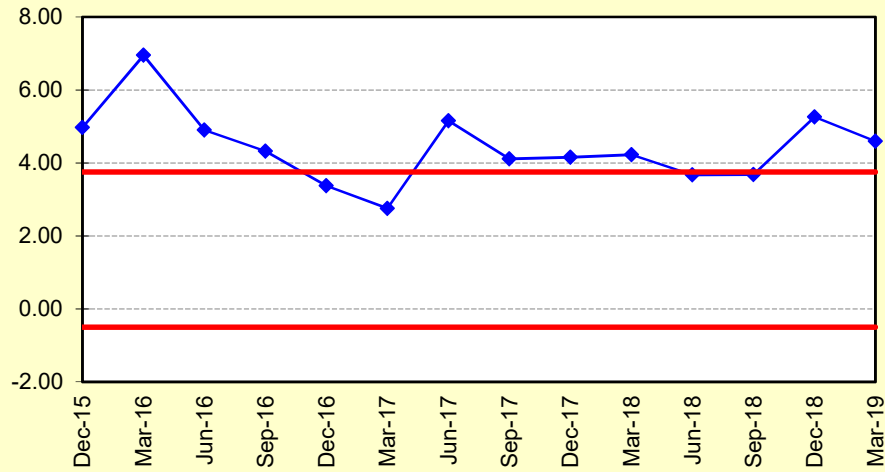
# FIXED INCOME - OPPORTUNISTIC

## ONE-YEAR ROLLING EXCESS RETURNS

for the quarter ended March 31, 2019



Tennenbaum



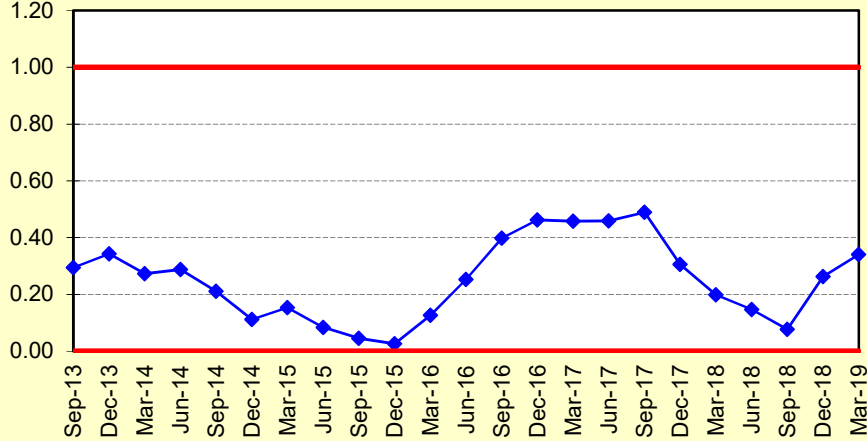
# FIXED INCOME - CASH

## ONE-YEAR ROLLING EXCESS RETURNS

for the quarter ended March 31, 2019



J.P. Morgan Asset Management





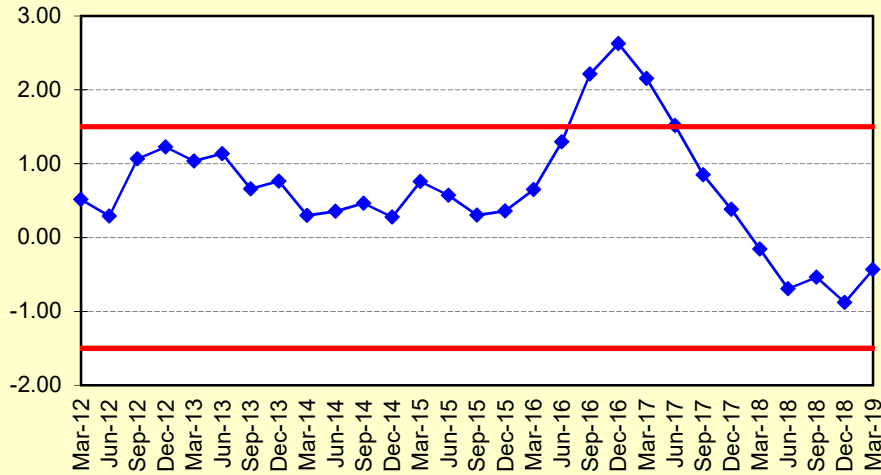
# COMMODITIES

## ONE-YEAR ROLLING EXCESS RETURNS

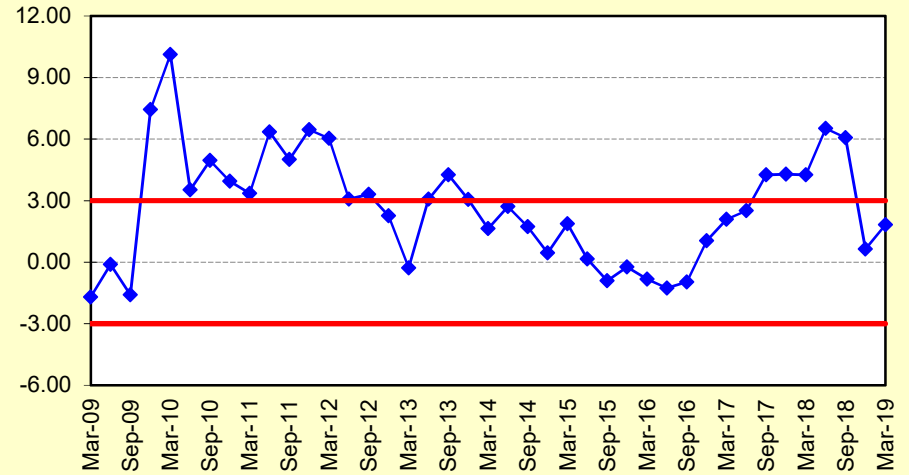
for the quarter ended March 31, 2019



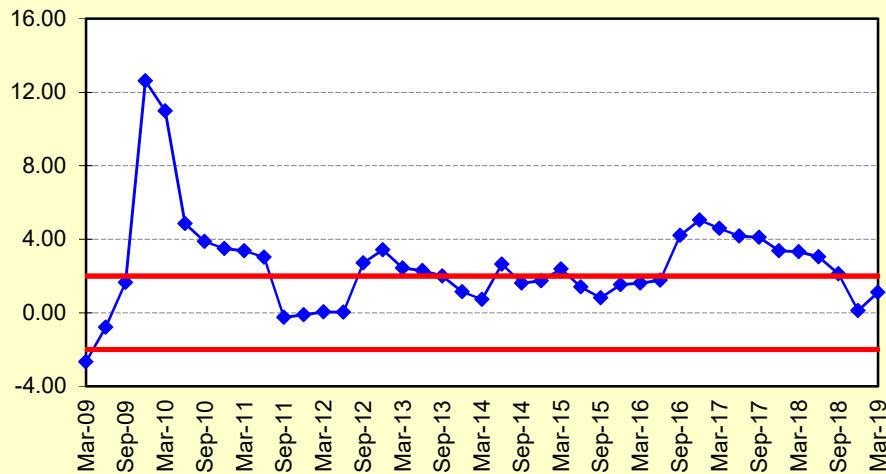
**Credit Suisse**



**Neuberger Berman/Gresham**



**PIMCO**



# ESTIMATED FEES<sup>1</sup>

## EQUITIES

for the quarter ended March 31, 2019



<u>U.S. EQUITY</u>	<u>Avg. Market Value (Millions)</u>	<u>Fees</u>	<u>Annualized Effective Rate</u>
<b>Active</b>			
CornerCap	\$55.7	\$75,210	54.0 bps
Eagle Asset Mgmt.	\$344.8	\$456,026	52.9 bps
Frontier Capital Mgmt.	\$688.9	\$1,291,626	75.0 bps
INTECH	\$888.0	\$495,013	22.3 bps
JANA Partners <sup>2</sup>	\$82.3	\$300,000	100.0 bps
Matarin	\$110.1	\$173,451	63.0 bps
QMA	\$270.8	\$356,765	52.7 bps
Systematic	\$226.4	\$311,246	55.0 bps
Twin Capital Mgmt.	\$551.6	\$206,865	15.0 bps
<b>Total U.S. Equity:<sup>3</sup></b>	<b>\$13,328.7</b>	<b>\$3,882,808</b>	<b>11.7 bps</b>

<sup>1</sup> Estimations may not match net-of-fee returns on "Annualized Total Returns" pages; reflects investment management fee only.

<sup>2</sup> Fees are based on committed capital of \$120 million.

<sup>3</sup> Includes BTC Russell 3000 Index.

# ESTIMATED FEES<sup>1</sup>

## EQUITIES

for the quarter ended March 31, 2019



<u>NON-U.S. EQUITY</u>	<u>Avg. Market Value (Millions)</u>	<u>Fees</u>	<u>Annualized Effective Rate</u>
<b>Active</b>			
Acadian Asset Mgmt.	\$845.6	\$789,938	37.4 bps
Acadian Emrg. Markets	\$369.1	\$445,467	48.3 bps
AQR Capital Mgmt.	\$241.2	\$394,963	65.5 bps
BTC Europe Alpha Tilts	\$935.2	\$825,010	35.3 bps
Capital Guardian	\$343.5	\$305,966	35.6 bps
Cevian Capital	\$285.3	\$1,075,417	150.8 bps
Genesis Investment Mgmt.	\$680.6	\$1,190,003	69.9 bps
Lazard Asset Mgmt.	\$346.3	\$649,810	75.1 bps
Symphony Financial	\$147.0	\$264,152	71.9 bps
<b>Subtotal:</b>	<b>\$4,194</b>	<b>\$5,940,726</b>	<b>56.7 bps</b>
<b>Passive</b>			
BTC Canada Index IMI	\$702.5	\$26,559	1.5 bps
BTC EAFE Index IMI	\$4,347.6	\$164,375	1.5 bps
BTC EAFE Small Cap Index	\$189.9	\$19,143	4.0 bps
BTC Emerging Markets Index	\$1,187.4	\$269,370	9.1 bps
BTC Emrg. Mkt. Small Cap Index	\$129.0	\$65,034	20.2 bps
BTC Europe Index	\$358.6	\$8,948	1.0 bps
<b>Subtotal:</b>	<b>\$6,915</b>	<b>\$553,429</b>	<b>3.2 bps</b>
<b>Total Non-U.S. Equity:</b>	<b>\$11,108.8</b>	<b>\$6,494,154</b>	<b>23.4 bps</b>
<b>Currency Hedge</b>			
50% Developed Mkt. Currency Hedge	\$8,773.1	\$324,485	1.5 bps

<sup>1</sup> Estimations may not match net-of-fee returns on "Annualized Total Returns" pages; reflects investment management fee only.

# ESTIMATED FEES<sup>1</sup>

## FIXED INCOME

for the quarter ended March 31, 2019



<u>FIXED INCOME</u>	<u>Avg. Market Value (Millions)</u>	<u>Fees</u>	<u>Annualized Effective Rate</u>
<b>Core</b>			
BTC US Debt Index	\$5,293.3	\$132,087	1.0 bps
Dodge & Cox	\$1,312.1	\$321,799	9.8 bps
Pugh Capital Mgmt.	\$273.9	\$115,199	16.8 bps
Wells Capital Mgmt.	\$1,382.6	\$385,328	11.1 bps
<b>Subtotal:</b>	<b>\$8,262</b>	<b>\$954,414</b>	<b>4.6 bps</b>
<b>Core Plus</b>			
PIMCO	\$1,089.0	\$549,777	20.2 bps
Western Asset Mgmt.	\$1,163.1	\$370,383	12.7 bps
<b>Subtotal:</b>	<b>\$2,252</b>	<b>\$920,160</b>	<b>16.3 bps</b>
<b>High Yield</b>			
Oaktree Capital Mgmt.	\$422.0	\$422,425	40.0 bps
<b>Subtotal:</b>	<b>\$422</b>	<b>\$422,425</b>	<b>40.0 bps</b>
<b>Opportunistic</b>			
Aberdeen	\$261.7	\$258,002	39.4 bps
Ashmore	\$309.3	\$440,716	57.0 bps
Bain Capital	\$365.0	\$593,049	65.0 bps
Beach Point Capital	\$424.3	\$1,277,590	120.4 bps
Brigade Capital Mgmt.	\$549.7	\$1,030,654	75.0 bps
Crescent Capital Group	\$394.0	\$530,001	53.8 bps
Doubleline Capital	\$301.9	\$566,134	75.0 bps
TCW	\$292.5	\$428,080	58.5 bps
Tennenbaum Capital Partners	\$324.6	\$729,754	89.9 bps
<b>Subtotal:</b>	<b>\$3,223</b>	<b>\$5,853,981</b>	<b>72.7 bps</b>
<b>Total Fixed Income:</b>	<b>\$14,158.9</b>	<b>\$8,150,980</b>	<b>23.0 bps</b>
<b>Cash</b>			
J.P. Morgan Asset Mgmt.	\$1,800.0	\$179,996	4.0 bps

<sup>1</sup> Estimations may not match net-of-fee returns on "Annualized Total Returns" pages; reflects investment management fee only.

# ESTIMATED FEES<sup>1</sup>

## COMMODITIES

for the quarter ended March 31, 2019



<u>COMMODITIES</u>	<u>Avg. Market Value (Millions)</u>	<u>Fees</u>	<u>Annualized Effective Rate</u>
Credit Suisse	\$426.8	\$278,593	26.1 bps
Neuberger Berman/Gresham	\$450.2	\$420,735	37.4 bps
PIMCO	\$447.1	\$371,664	33.3 bps
<b>Total Commodities:</b>	<b>\$1,324</b>	<b>\$1,070,993</b>	<b>32.4 bps</b>

<sup>1</sup> Estimations may not match net-of-fee returns on "Annualized Total Returns" pages; reflects investment management fee only.

# ALLOCATION RANGES

## STRATEGIC vs. ACTUAL

for the quarter ended March 31, 2019



### U.S. EQUITY:

Mandate	Strategic Allocation Range	Actual Allocation
Passive	35-75%	76.1%
Low Risk	0-25%	10.8%
Moderate/High Risk	10-30%	13.0%

#### U.S. Equity Managers:

Passive – BTC Russell 3000.

Low Risk – INTECH, Twin.

Moderate/High Risk – JANA, Eagle, Frontier, QMA, Systematic, CornerCap, Matarin.

### NON-U.S. EQUITY:

Mandate	Strategic Allocation Range	Actual Allocation
Passive Non-U.S.	40-70%	61.0%
Active Non-U.S.	0-40%	12.3%
Active Regional	0-20%	12.1%
Active Emerging Markets	10-30%	14.5%

#### Non-U.S. Equity Managers:

Passive – BTC Canada IMI, BTC EAFE IMI, BTC Emerging Markets, BTC EAFE - Euro Cons, BTC EAFE Small Cap, BTC Emrg Mkt Small Cap.

Non-U.S. Developed – Acadian, Capital Guardian, Global Alpha.

Regional Developed – BTC Euro Tilts, Cevian Capital, Symphony Financial.

Emerging Markets – Acadian Emerging, AQR, Genesis, Lazard.

	Market Value (In Millions)	% of Total Market Value
50% Passive Currency Hedge Overlay	\$ 4,093	49.3%
Total Non-US Developed Markets	\$ 8,307	

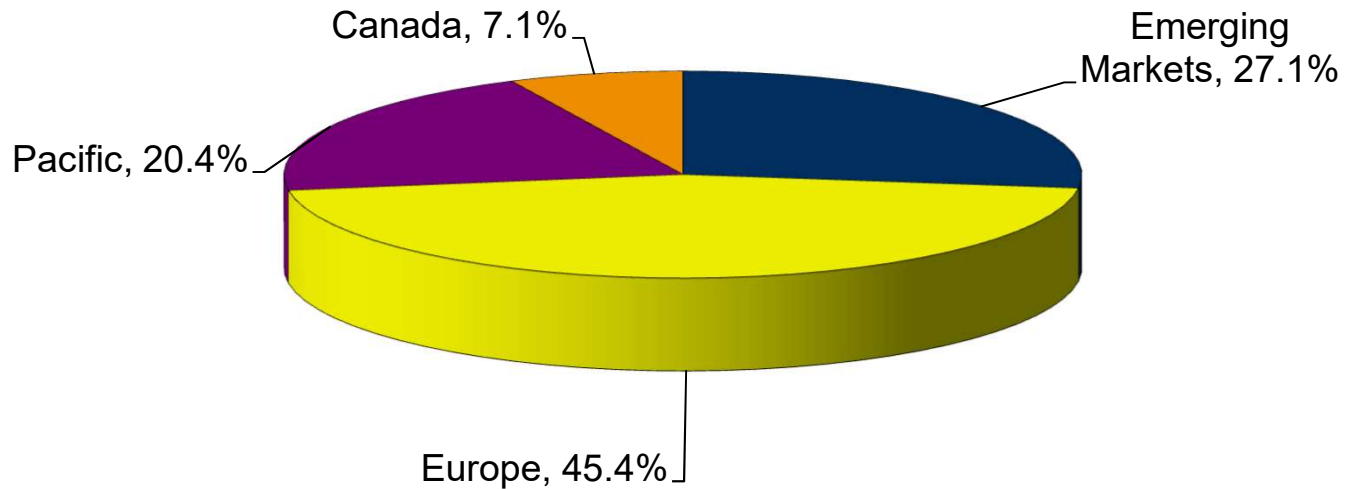
# ALLOCATION RANGES

## STRATEGIC vs. ACTUAL (Cont'd)

for the quarter ended March 31, 2019



	<b>Non-U.S. Composite</b>	<b>ACWIX U.S. IMI Net</b>	<b>Difference</b>
<b>Emerging Markets</b>	27.1%	25.4%	1.7%
<b>Europe</b>	45.4%	42.4%	3.0%
<b>Pacific</b>	20.4%	25.4%	-5.0%
<b>Canada</b>	7.1%	6.8%	0.3%
	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>



# ALLOCATION RANGES

## STRATEGIC vs. ACTUAL

for the quarter ended March 31, 2019



### FIXED INCOME STRUCTURE:

Strategy	Strategic Allocation Range	Actual Allocation	Strategic Target
Core <sup>1</sup>	35-55%	58.4%	45%
Core Plus	15-35%	14.9%	25%
Opportunistic & High Yield	20-40%	26.7%	30%

### CASH:

Strategy	Strategic Allocation Range	Actual Allocation	Strategic Target
Cash	0-4%	2.6%	2%

### COMMODITIES STRUCTURE:

Strategy	Strategic Allocation Range	Actual Allocation	Strategic Target
Commodities	0-4.8%	2.3%	2.8%

<sup>1</sup> Includes Member Home Loan Program (MHLP).



**Disclosure**

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# Glossary

## A

**Alpha:** Alpha is an estimate of the contribution to investment performance attributable to the manager's selection of securities. It is calculated by subtracting the manager's return from the benchmark return.

**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

**Barbell Strategy:** Fixed income portfolio structuring technique using a mix of short and long-term securities to achieve a targeted average maturity or duration.

**BBG BC (Bloomberg Barclays) U.S. Universal Index:** The Barclays U.S. Universal Index represents the union of the U.S. Aggregate Index, U.S. Corporate High-Yield, Investment Grade 144A Index, Eurodollar Index, U.S. Emerging Markets Index, and the non-ERISA eligible portion of the CMBS Index.

**Basis Points (bps):** One one-hundredth of one percent. One hundred basis points equal one percent.

**Bear Market:** A market characterized by a trend of falling prices.

**Bearish:** Pessimistic about the market; anticipating a decline in prices

**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.

**Brigade Custom Index:** 50% Barclays U.S. Corporate High Yield Ba/B & 50% Credit Suisse Leveraged Loan Index.

**Bull Market:** A market characterized by a trend of rising prices.

**Bullet:** Fixed Income portfolio structuring technique focusing on a particular maturity or duration.

**Bullish:** Optimistic about the market; anticipating a rise in prices.

## C

**Capital Structure:** The division of a company's capitalization among bonds, debentures, preferred and common stock, earned surplus and retained income.

**Carried Interest:** Share of profits or common stock ownership (beyond pro-rata investment) granted to a venture fund or promoter for its/his role in originating and structuring an investment. The general partner's carried interest is his share of the partnership profits.

**Carrying Value:** A venture capital limited partnership must list on its balance sheet a value for every investment it holds. These valuations are called the carrying values.

**Cash-On-Cash Return:** The return to limited partners. Cash inflows are the capital calls of the partnership. Cash outflows are all distributions to limited partners. Note that stock distributions are considered cash for this calculation.

**Committed Capital:** When a venture capital limited partnership is formed, each limited partner agrees to contribute a certain amount of capital to the partnership. Once the agreement is signed, the dollar amount is said to be capital committed to the partnership.

**Common Stock:** Ordinary capital stock (representing ownership) in a company. Common stock does not enjoy the special privileges of preferred stock, but has voting rights.

**Convertible Bond:** A bond which, at the option of the holder, is convertible into other types of securities.

**Convexity:** A measure of how the duration of a bond portfolio changes with interest rate movements. Higher convexity means that if interest rates rise, bond prices fall by relatively small amounts and when interest rates fall, bond prices rise by higher relative amounts. Therefore, for either direction of interest rate movements, the greater the convexity the more beneficial the impact on bond prices.

**Coupon Income (Average Coupon):** The annual coupon payments of a bond divided by the par value.

**Current Yield:** The annual coupon payments of a bond divided by the market price.

**Current Ratio:** The ratio of current assets over current liabilities. A measure of a company's ability to pay its bills.

**Custom MSCI ACWI IMI N 50%H:**  
7/31/10 – Present MSCI ACWI X U.S. IMI (Net) with 50% hedged Developed Markets; 8/31/08 – 7/31/10 MSCI ACWI X U.S. IMI (Net); Inception – 8/31/08 MSCI ACWI X U.S. (Net), except the ten-year return (Gross).

## D

**50% Developed Market Currency Hedge Index:** A custom index based on a MSCI FX Hedged Index return.

**Deflation:** A progressive reduction in the price level, which would make real interest rates greater than nominal rates.

**Discount Rate:** The interest rate used in present value calculations to “discount” or convert future cash flows into terms of present dollars.

**Dividend:** A cash or other distribution to preferred or common stockholders.

**Bloomberg Commodity Index Total Return:** The Bloomberg Commodity Index Total Return is composed of futures contracts on physical commodities.

**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).

**Earnings per Share:** Latest reported earnings for the last 12-month period divided by the current number of shares of common stock outstanding.

**Earnings Yield:** The percentage found by dividing the earnings per share by the market price of a stock.

**Equity:** Ownership or proprietary rights and interests in a company. Synonymous with common stock.

**EBITDA:** Earnings before Interest, Taxes, Depreciation and Amortization.

**Enterprise Value:** Enterprise value represents the Equity + Debt value of the company.

## F

**Federal Funds Rate:** The interest rate at which federal funds are traded. It is monitored by the Fed in the process of regulating the growth of bank reserves and money supply in the execution of its monetary policy. As such, it is closely watched by market participants.

**Fiscal Policy:** Federal Government policies affecting government spending, taxation, and deficits (or surpluses), viewed from a macroeconomics standpoint.

**Fixed Income 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.

**FTSE 6-month T-Bill:** The FTSE 6-Month T-Bill Index is a market value-weighted index of public obligations of the U.S. Treasury with maturities of six months.

**Fully-Diluted Ownership:** Proportionate ownership assuming the exercise of all common stock options, warrants, and the conversion of any convertible securities.

**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.

## 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.

**Hedge Fund Custom Index:** The FTSE 3-Month U.S. T-Bill Index plus 500 bps.

**High Yield Bond:** A bond with a low investment quality and credit worthiness, usually with a rating of BB or less.

## I

**Immunization:** A process for designing fixed income portfolios to obtain a target rate of return over a specified time period, within a narrow range, despite market conditions.

**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.

**Inflation:** A general rise in prices, usually measured by changes in prices of major indices, such as the Consumer Price Index. An increase in a particular price may or may not be inflationary, depending on how it affects other prices and on how promptly it brings to market additional supplies of a product.

**Inflation Index Bond:** Fixed income securities whose principal value is periodically adjusted according to the rate of inflation. The interest rate on these bonds is fixed at issuance, but over the life of the bond this interest is paid on an increasing principal value, which has been adjusted for inflation.

**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.

**Interest-Rate Risk:** When interest rates rise, the market value of fixed-income securities (such as bonds) declines. Similarly, when interest rates decline, the market value of fixed-income securities increases.

**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.

## J

**J-Curve:** Most venture partnerships go through their first few years with write-offs/write-downs exceeding write-ups, after which value increases rapidly as successful companies emerge. The plot of partnership values versus time, therefore, resembles a "J".

## L

**Laddering:** A fixed income portfolio strategy in which assets are distributed evenly over a range of maturities.

**LBO (Leveraged Buyout):** The purchase of a business using the debt capacity of the business to borrow funds (sometimes by issuing notes to the seller) to finance the purchase.

**Limited Partner:** The main investment subscribers to a Limited Partnership Fund. They have limited liability and no executive or management control of the Partnership. As defined by the IRS code, any investor in a venture capital limited partnership.

## 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.

**Maturity:** The date on which a loan, bond, mortgage or other debt security becomes due and is to be paid off.

**Mezzanine Stage:** The last private round of financing before an anticipated public offering. Implies substantial revenues and usually the expectation of imminent profitability.

**Modern Portfolio Theory:** The theoretical framework for designing investment portfolios based upon the risk and reward characteristics of the entire portfolio. The major tenet of the theory holds that reward is directly related to risk, which can be divided into two basic parts: 1) systematic risk (portfolios' behavior as a function of the market's behavior), and 2) unsystematic risk (portfolios' behavior attributable to selection of individual securities). Because un-systematic risk can be largely eliminated through diversification, the portfolio will be subject principally to systematic risk.

**Mortgage-Backed Securities:** Bonds which are a general obligation of the issuing institution but are collateralized by a pool of mortgages.

**MSCI Canada IMI Custom Index (Net):**  
Inception – 8/31/08 MSCI Canada (Net);  
8/31/08 - Present MSCI Canada IMI (Net).

**MSCI EMF IMI Custom Index:**  
Inception – 12/31/00 MSCI EMF (Gross);  
12/31/00 – 8/31/08 MSCI EMF (Net);  
8/31/08 – Present MSCI EMF IMI (Net).

**MSCI EAFE IMI Custom Index (Net):**  
Inception – 8/31/08 MSCI EAFE (Net);  
8/31/08 - Present MSCI EAFE IMI (Net).

## O

**Opportunistic Custom Index:**  
50% Barclays U.S. Corporate High Yield Index & 50% Credit Suisse Leveraged Loan Index.

**Opportunistic EMD Custom Index:** 50% EMBI Global Diversified + 25% GBI-EM GD + 25% CEMBI BD.

## P

**Private Equity Target:** Rolling ten-year return of the Russell 3000 Index plus 500 bps.

**Payout Ratio:** A measurement of the percent of a firm's earnings that is paid out to Shareholders in dividends. Calculated by dividing most recently reported fiscal year-end dividends per share by most recently reported annual primary earnings per share.

**Preferred Stock:** Securities or shares representing an ownership interest in a business, but which have "preference" over common shares, in regards to dividends and distribution of assets in the event of liquidation.

**Present Value:** The discounted value of a series of future cash flows so as to account for the time value of money. Alternatively, the value of a future series of cash flows stated in terms of current dollars.

**Price/Book Ratio:** Calculated by dividing the current month-end stock price by the book value per share.

**Price/Earnings Ratio:** A popular measure of relative stock value and investor expectations of future earnings growth. Calculated by dividing the current month-end stock price by the latest 12-months reported earnings per share.

## R

**Real Estate Target:**  
7/1/13-Present: Open End Diversified Core Equity (ODCE) Index + 40 basis points.  
Inception-6/30/13: NCREIF Property Index (NPI) minus 25 basis points.

**Recession:** A decline in total physical output that lasts six consecutive months or more. A growth recession is marked by a six-month or longer slowdown (but no decline) in the growth rate.

**Reflation:** A fiscal or monetary policy that is designed to expand a country's output and curb the effects of deflation. Reflation is usually accomplished by increasing the money supply or by reducing taxes.

**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.

**Return on Equity:** A measurement of return on stockholders' investment. Calculated by dividing the most recently reported fiscal year-end Net Income by the most recently reported fiscal year-end Common Equity (Common Stock outstanding + Capital Surplus + Retained Earnings).

**Risk-vs.-Return:** Risk measures the probability of financial loss. Investors often compare risk, as measured by standard deviation of returns, to historical or expected return when making investment decisions. Typically, investors demand higher returns for investments they consider more risky.

**ROI:** Return on investment. For limited partnership investments the IRR serves as the measure of return on investment.

**Rule 144:** An SEC rule permitting the sale of restricted investment letter stock by affiliated persons in small amounts without first registering the stock with the SEC. It is designed to prohibit the creation of public

markets in securities of issuers for which adequate current information is not available to the public. (The rule permits the public sale in ordinary trading transactions of limited amounts of securities owned by persons controlling, controlled by, or under common control with the issuer and by persons who have acquired restricted securities of the issuer).

**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

**Secular Trend:** A long-term movement in the price of a security or of interest rates, either upward or downward, which is not related to seasonal or technical factors.

**Securitized Custom Index:**  
Barclays Securitized Index + 400 bps.

**Stages of Venture Capital Investing:** Seed Capital: Financing provided to enable an entrepreneur to establish a business plan and undertake market research etc., to the point where they can seek first round financing to establish a business. First Round and Early Stage: Financing a company that will have a net cash outflow, maybe with only a prototype product. It will still need to establish prices, employ staff and develop the product with often little or no sales.

Middle Stage or 'Market Entry: Financing a growing company whose income may still be below expenses but sales will be generating revenue. Equity finance will normally be required to enlarge the working capital base and to extend marketing activity.

Late Stage or Development Capital: Equity capital required for major growth, acquisition, product development, etc. Mezzanine and Bridge: Financing the equity capital required by rapidly expanding companies who hold off from a public offering until the public marketplace is prime.

**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. In portfolio theory, the past performance of securities is used to determine the range of possible future performances and a probability is attached to each performance. The standard deviation of performance can then be calculated for each security and for the portfolio as a whole. 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 Policy Benchmark:** Uses the fund's Board approved target asset allocations.

**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.

**Treasury Bill:** A non-interest bearing obligation, fully guaranteed by the U.S. Government, payable to the bearer. Bills are sold on a discount basis so that the income is the difference between the purchase price and the face value.

**Treasury Bond:** A coupon security of the U.S. Treasury which may be issued with any maturity but generally carries a maturity of more than 10 years.

**Treasury Note:** A coupon security issued by the U.S. Treasury with a maturity of not less than one year not more than 10 years.

## U

**Universe Data Source:** State Street utilizing Wilshire Associates' TUCS Universe Data.

## V

**Vintage Year:** The Vintage Year benchmark approach assumes that there is a definite and unique life cycle to a group of venture capital funds formed in the same year. Venture Economics has maintained that a fund can be compared fairly on an interim basis only to other funds in its vintage year. A fund's vintage year is defined as the year of first investment or capital call. In some cases funds that were formed in the last three months of the year but did not have a capital call until the next year or those funds that made their first investment more than six months after the closing are categorized by the date of their first investment.

## W

**Warrant:** An option to purchase stock in a corporation, typically over a specified period of time and under preset conditions.

## Y

**Years to Maturity:** Market value weighted average time to stated maturity for all securities held in the portfolio.

**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 Curve:** A graphic depiction of interest rates across all maturities, 0-30 years. The shape of the curve is largely influenced by the Federal Reserve Policy.

**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.

**Yield to Worst:** The yield resulting from the most adverse set of circumstances from the investor's point of view; the lowest of all possible yields.

SOURCE: [www.nasdaq.com](http://www.nasdaq.com) & [www.pimco.com](http://www.pimco.com)

Last updated: 4/18/19

# Total Plan Analytics Board Report

Prepared for LACERA

29 March 2019



Total Plan Asset Allocation & Analytics

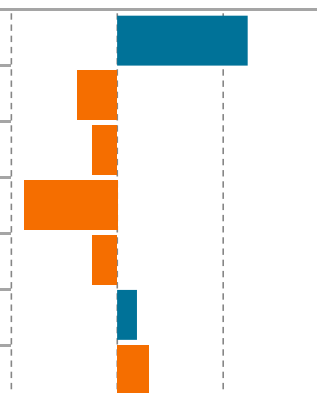
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29-Mar-2019

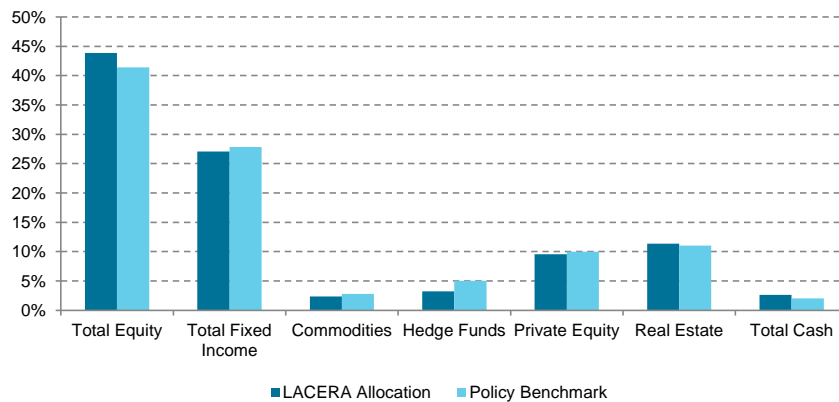
Reporting Currency: USD

Total Plan Allocation vs Policy Benchmark

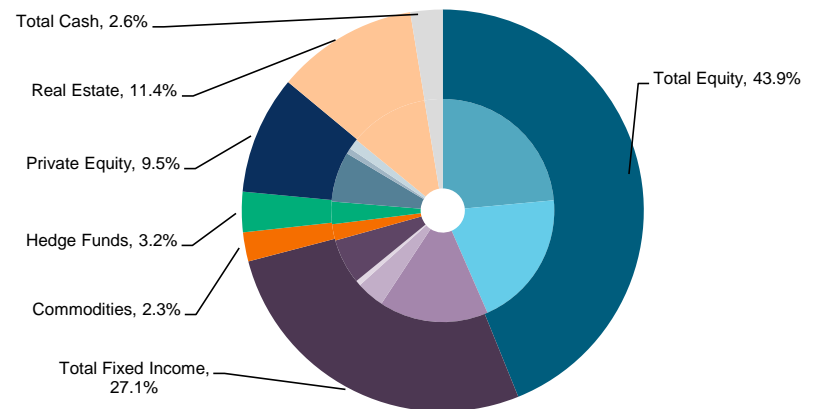
	Market Value (Millions)	Allocation (%)	Policy Benchmark (%)	Benchmark	Relative (%)
Total Equity	25,047	43.9%	41.4%	Equity Composite	2.5%
Total Fixed Income	15,449	27.1%	27.8%	Barclays US Universal	-0.7%
Commodities	1,336	2.3%	2.8%	Bloomberg Commodity Index	-0.5%
Hedge Funds (Proxy)	1,850	3.2%	5.0%	Hedge Fund Composite	-1.8%
Private Equity (Proxy)	5,441	9.5%	10.0%	Private Equity Composite	-0.5%
Real Estate (Proxy)	6,495	11.4%	11.0%	Real Estate Composite	0.4%
Total Cash	1,482	2.6%	2.0%	Citigroup 6M Treas. Bill	0.6%
<b>TOTAL</b>	<b>57,099</b>	<b>100.0%</b>	<b>100.0%</b>		<b>0.0%</b>



Total Plan Allocation vs Policy Benchmark



Asset Class Detail



Total Plan Analytics, Volatility & Tracking Error

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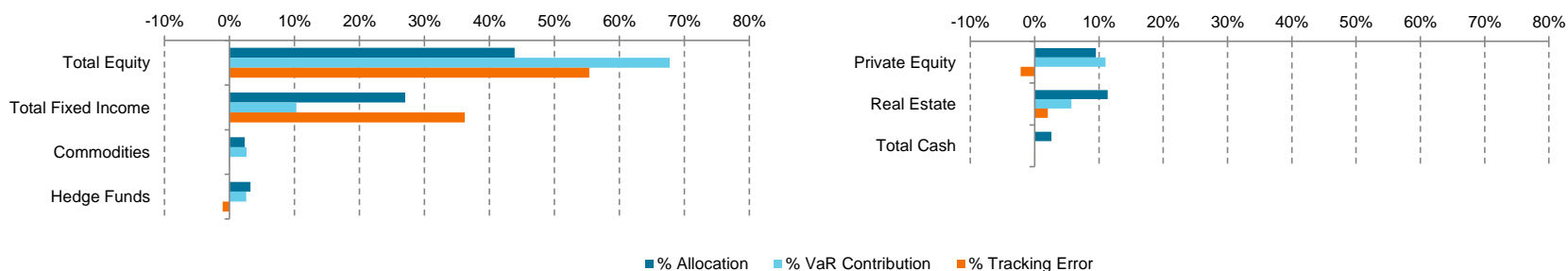
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Reporting Currency: USD

Total Plan Risk Measures

	Benchmark	Market Value (Millions)	Allocation (%)	Volatility (% per annum) <sup>1</sup>	Standalone VaR (% of MV) <sup>2</sup>	Total VaR Contribution (% of Total MV) <sup>3</sup>	Tracking Error Contribution (% of Total MV) <sup>4</sup>
Total Equity	Equity Composite	25,047	43.9%	11.63%	19.72%	8.49%	0.40%
Total Fixed Income	Barclays US Universal	15,449	27.1%	2.34%	3.79%	1.29%	0.26%
Commodities	Bloomberg Commodity Index	1,336	2.3%	13.77%	26.53%	0.33%	0.00%
Hedge Funds (Proxy)	Hedge Fund Composite	1,850	3.2%	4.35%	8.44%	0.32%	-0.01%
Private Equity (Proxy)	Private Equity Composite	5,441	9.5%	7.44%	13.83%	1.38%	-0.02%
Real Estate (Proxy)	Real Estate Composite	6,495	11.4%	11.90%	18.68%	0.72%	0.01%
Total Cash	Citigroup 6M Treas. Bill	1,482	2.6%	0.09%	0.19%	0.00%	0.00%
<b>TOTAL</b>		<b>57,099</b>	<b>100.0%</b>	<b>7.12%</b>	<b>12.53%</b>	<b>12.53%</b>	<b>0.72%</b>
	<i>Weighted Average Benchmark<sup>5</sup></i>			6.91%	11.84%	11.84%	
<b>Benchmark</b>	<b>Policy Benchmark</b>			<b>6.65%</b>	<b>11.61%</b>	<b>11.61%</b>	<b>0.65%</b>
					<i>Aggregate Benchmark Structural Risk<sup>6</sup></i>		<b>-0.07%</b>

Dollar vs Risk Allocation



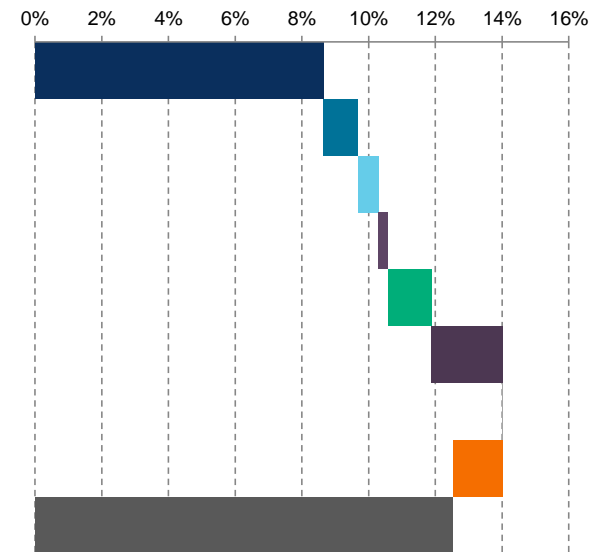
1: Volatility at the asset class level is calculated using parametric VaR at 84th percentile, annualized and expressed as a percentage of the market value of each asset class.  
 2: Standalone VaR is the annualized Value-at-Risk at the 95th percentile expressed as a percentage of the market value of each asset class.  
 3: 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.  
 4: 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.  
 5: Weighted average benchmark is the market value weighted average of the asset class benchmarks.  
 6: 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**  
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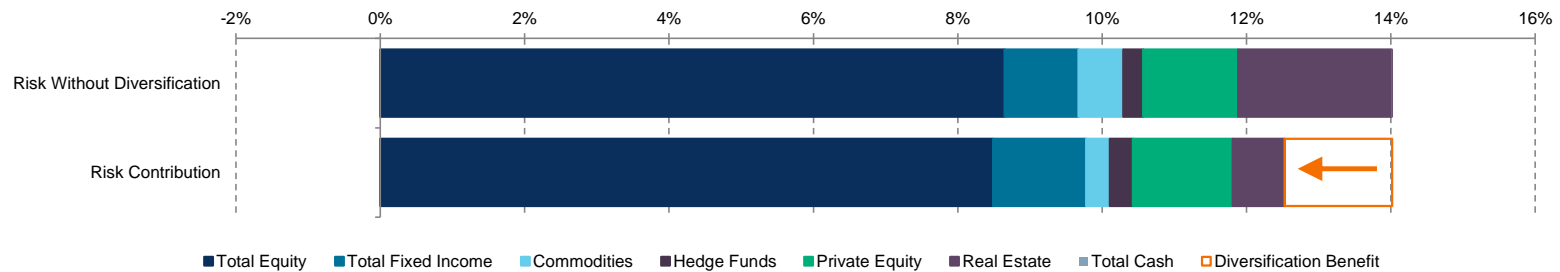
29-Mar-2019  
Reporting Currency: USD

**Total Plan Risk & Diversification**

	Allocation (%)	Weighted Standalone VaR (% of Total MV) <sup>1</sup>	
		Monthly	Annual
Total Equity	43.9%	2.5%	8.6%
Total Fixed Income	27.1%	0.3%	1.0%
Commodities	2.3%	0.2%	0.6%
Hedge Funds (Proxy)	3.2%	0.1%	0.3%
Private Equity (Proxy)	9.5%	0.4%	1.3%
Real Estate (Proxy)	11.4%	0.6%	2.1%
Total Cash	2.6%	0.0%	0.0%
Diversification Benefit <sup>2</sup>	-	-0.4%	-1.5%
<b>TOTAL</b>	<b>100.0%</b>	<b>3.6%</b>	<b>12.5%</b>



**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.

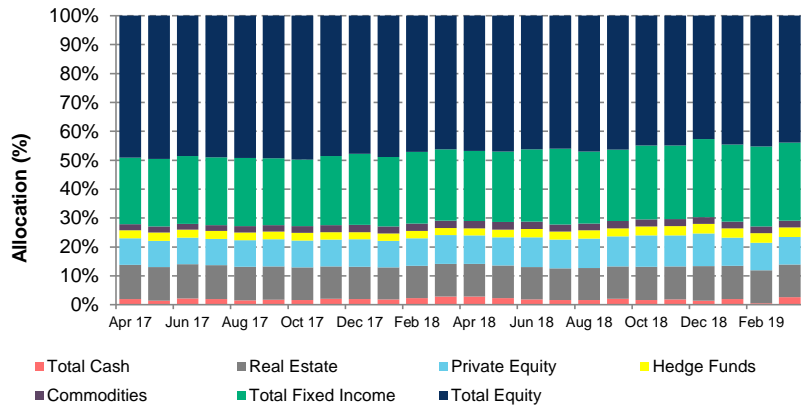
Total Plan Analytics, Volatility & Tracking Error

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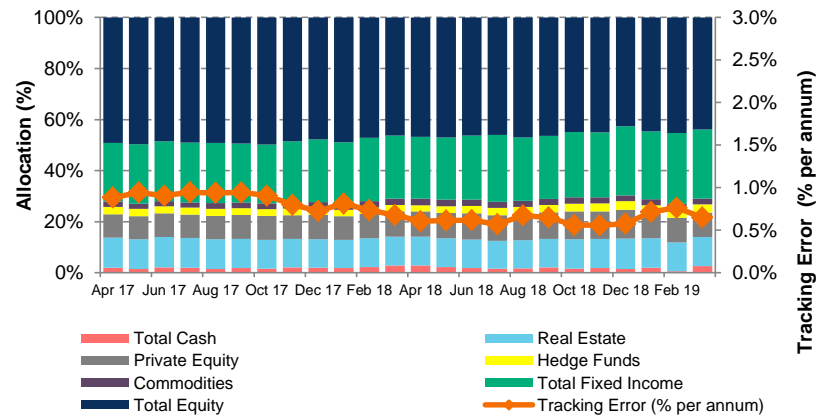
29-Mar-2019

Reporting Currency: USD

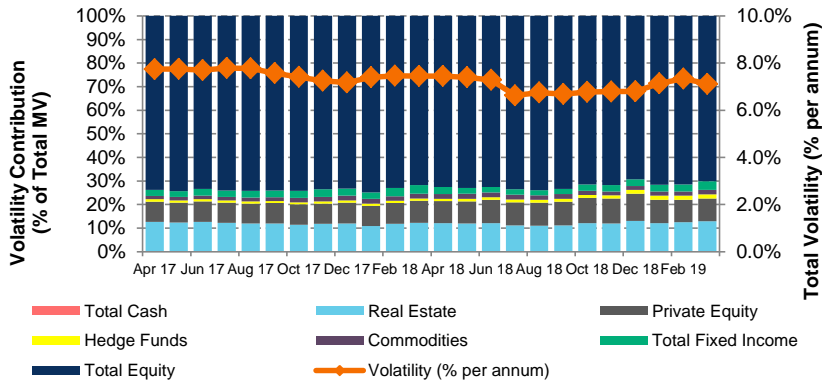
Total Plan Allocation Trend



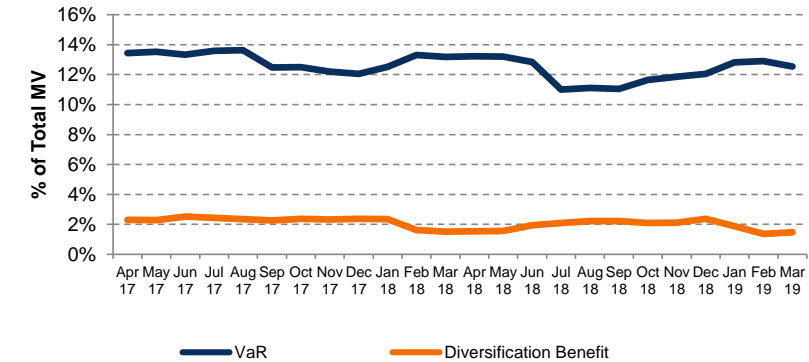
Total Plan Allocation & Tracking Error Trend<sup>1</sup>



Total Plan Volatility & Contribution to Volatility Trend<sup>2</sup>



Total Plan Risk & Diversification Trend<sup>3</sup>



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

LACERA

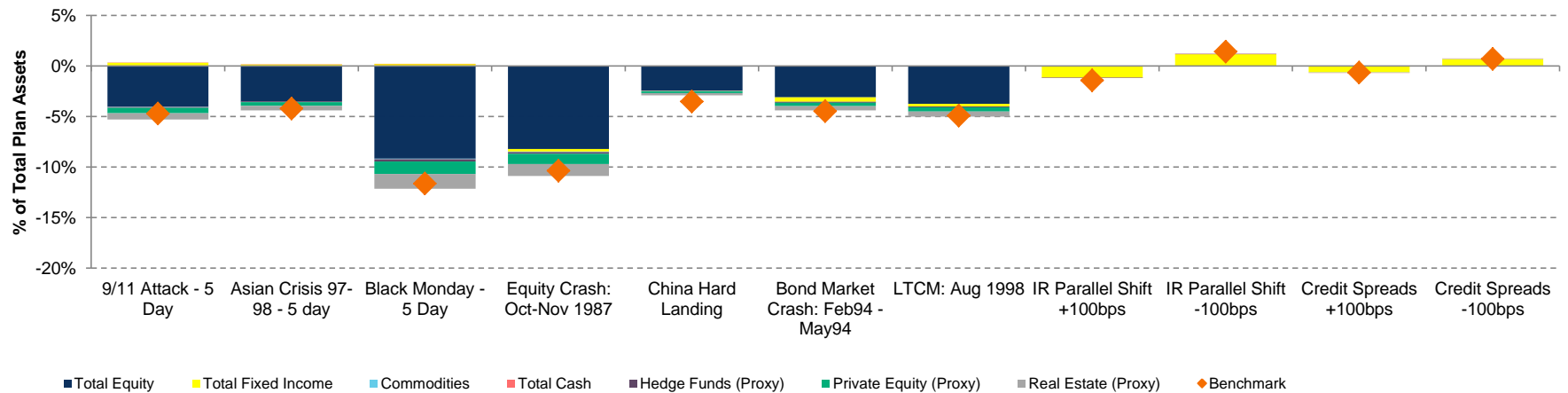
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Reporting Currency: USD

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
Total Equity	43.9%	-4.0%	-3.5%	-9.2%	-8.2%	-2.4%	-3.1%	-3.8%	0.0%	-0.0%	0.0%	0.0%
Total Fixed Income	27.1%	0.3%	0.2%	0.2%	-0.2%	-0.0%	-0.4%	-0.2%	-1.2%	1.2%	-0.6%	0.7%
Commodities	2.3%	-0.0%	-0.0%	-0.1%	-0.1%	-0.0%	-0.0%	-0.0%	-0.0%	-0.0%	-0.0%	0.0%
Hedge Funds (Proxy)	3.2%	-0.1%	-0.1%	-0.2%	-0.2%	-0.0%	-0.1%	-0.1%	-0.0%	0.0%	0.0%	0.0%
Private Equity (Proxy)	9.5%	-0.5%	-0.4%	-1.2%	-1.0%	-0.2%	-0.4%	-0.4%	0.0%	0.0%	0.0%	0.0%
Real Estate (Proxy)	11.4%	-0.6%	-0.4%	-1.5%	-1.2%	-0.2%	-0.4%	-0.5%	0.0%	0.0%	0.0%	0.0%
Total Cash	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.0%	0.0%	-0.0%	0.0%	-0.0%	0.0%
<b>TOTAL</b>		<b>-5.0%</b>	<b>-4.2%</b>	<b>-11.9%</b>	<b>-10.9%</b>	<b>-2.9%</b>	<b>-4.4%</b>	<b>-5.0%</b>	<b>-1.2%</b>	<b>1.2%</b>	<b>-0.7%</b>	<b>0.7%</b>
<b>Benchmark</b>		<b>-4.7%</b>	<b>-4.2%</b>	<b>-11.6%</b>	<b>-10.4%</b>	<b>-3.5%</b>	<b>-4.5%</b>	<b>-4.9%</b>	<b>-1.4%</b>	<b>1.4%</b>	<b>-0.6%</b>	<b>0.7%</b>

Stress Test Chart



Public Market (Equities & Fixed Income) Analytics By Top 10 Country & Sector

LACERA

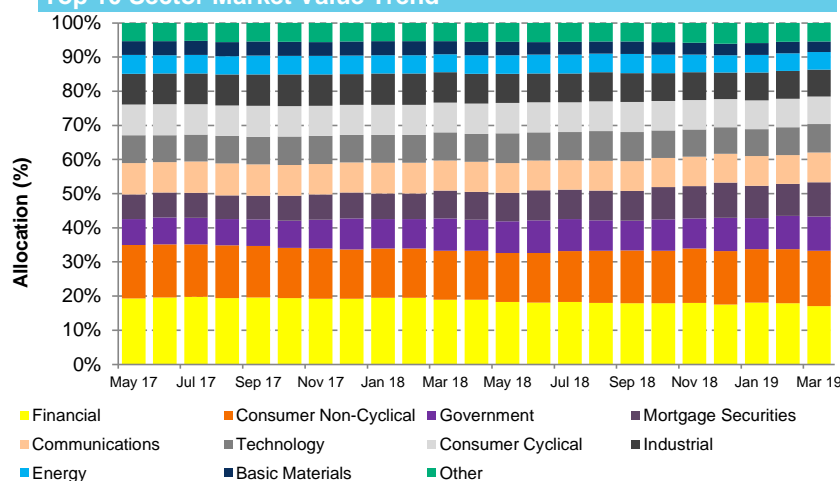
29-Mar-2019

Reporting Currency: USD

Top 10 Sector Analysis

	Market Value (Millions)	Allocation (%)	Volatility (% per annum) <sup>1</sup>
Financial	6,593	17.1%	10.15%
Consumer Non-Cyclical	6,232	16.2%	9.09%
Government	3,866	10.0%	4.37%
Mortgage Securities	3,850	10.0%	1.88%
Communications	3,384	8.8%	11.10%
Technology	3,194	8.3%	13.98%
Consumer Cyclical	3,094	8.0%	9.91%
Industrial	3,049	7.9%	11.92%
Energy	1,974	5.1%	15.28%
Basic Materials	1,210	3.1%	17.54%
Other <sup>2</sup>	2,089	5.4%	-
<b>TOTAL</b>	<b>38,533</b>	<b>100.0%</b>	<b>7.76%</b>

Top 10 Sector Market Value Trend



Top 10 Country Analysis - Public Market Equities

	Market Value (Millions)	Allocation (%)	Volatility (% per annum) <sup>1</sup>
United States	13,121	54.0%	12.50%
Japan	1,533	6.3%	11.85%
United Kingdom	1,416	5.8%	13.43%
Canada	840	3.5%	16.28%
France	779	3.2%	14.52%
China	688	2.8%	23.57%
Switzerland	671	2.8%	11.25%
Germany	608	2.5%	14.37%
Netherlands	465	1.9%	14.33%
Australia	396	1.6%	16.05%
Other <sup>2</sup>	3,781	15.6%	-
<b>TOTAL</b>	<b>24,298</b>	<b>100.0%</b>	<b>11.63%</b>

Top 10 Country Analysis - Public Market Fixed Income

	Market Value (Millions)	Allocation (%)	Volatility (% per annum) <sup>1</sup>
United States	12,791	89.9%	2.39%
United Kingdom	249	1.8%	2.70%
Canada	173	1.2%	3.30%
Netherlands	144	1.0%	3.83%
Cayman Islands	104	0.7%	1.60%
Luxembourg	103	0.7%	3.22%
Mexico	89	0.6%	9.85%
Japan	81	0.6%	1.54%
France	71	0.5%	2.70%
Ireland	47	0.3%	2.61%
Other <sup>2</sup>	383	2.7%	-
<b>TOTAL</b>	<b>14,235</b>	<b>100.0%</b>	<b>2.34%</b>

1: Volatility of each category is calculated using parametric VaR at 84th percentile, annualized and expressed as a percentage of the market value of each category.

2: Other category contains remaining categories if displaying top 10, excluding securities that cannot be modeled.

# Detailed Analytics Board Report

Prepared for LACERA

29 March 2019

# Total Fixed Income





Fixed Income Analytics, Volatility & Tracking Error by Manager Category

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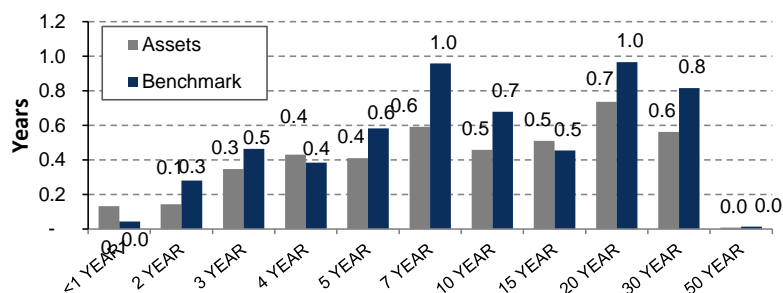
29-Mar-2019

Reporting Currency: USD

Fixed Income Analytics

	Benchmark	Market Value (Millions)	Allocation (%)	Duration (Years)	Expected Yield (% per annum)	Credit Spread (OAS) (%)	Volatility (% per annum) <sup>1</sup>	Standalone VaR (% of MV) <sup>2</sup>	Tracking Error (% per annum) <sup>3</sup>
Core Managers		8,959	58.0%	5.58	3.26%	0.46%	2.85%	4.83%	0.27%
	<i>Barclays US Aggregate</i>			5.84	3.13%	0.35%	3.04%	5.22%	
Core Plus Managers		2,306	14.9%	4.64	3.34%	1.20%	2.85%	4.52%	1.30%
	<i>Barclays US Aggregate</i>			5.84	3.13%	0.35%	3.04%	5.22%	
High Yield Managers		435	2.8%	3.00	5.92%	2.96%	3.56%	6.39%	0.97%
	<i>Barclays US High Yield Ba to B</i>			3.83	6.02%	3.01%	3.71%	6.72%	
Opportunistic Managers		3,713	24.0%	1.46	5.23%	3.96%	3.37%	5.70%	1.09%
	<i>Barclays US High Yield Ba to B</i>			3.83	6.02%	3.01%	3.71%	6.72%	
<b>TOTAL</b>		<b>15,449</b>	<b>100.0%</b>	<b>4.36</b>	<b>3.82%</b>	<b>1.31%</b>	<b>2.34%</b>	<b>3.79%</b>	<b>0.44%</b>
	<i>Weighted Average Benchmark<sup>4</sup></i>			5.28	3.90%	1.06%	2.56%	4.27%	
<b>Benchmark</b>	<b>Barclays US Universal</b>			<b>5.71</b>	<b>3.42%</b>	<b>1.31%</b>	<b>2.85%</b>	<b>4.61%</b>	<b>1.11%</b>
									<i>Aggregate Benchmark Structural Risk<sup>5</sup></i> <b>0.66%</b>

Fixed Income Contribution to Duration By Period



Fixed Income Correlations

	Core Managers	Core Plus Managers	High Yield Managers	Opportunistic Managers	TOTAL
Core Managers	1.00	0.92	0.17	0.03	0.89
Core Plus Managers	0.92	1.00	0.48	0.36	0.98
High Yield Managers	0.17	0.48	1.00	0.91	0.57
Opportunistic Managers	0.03	0.36	0.91	1.00	0.48
<b>TOTAL</b>	<b>0.89</b>	<b>0.98</b>	<b>0.57</b>	<b>0.48</b>	<b>1.00</b>

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 Total Fixed Income to the Barclays US Universal] - [Tracking Error of Total Fixed Income to the weighted average of manager category benchmarks]

# Total Equity

Total Equity Analytics, Volatility & Tracking Error by Manager Category

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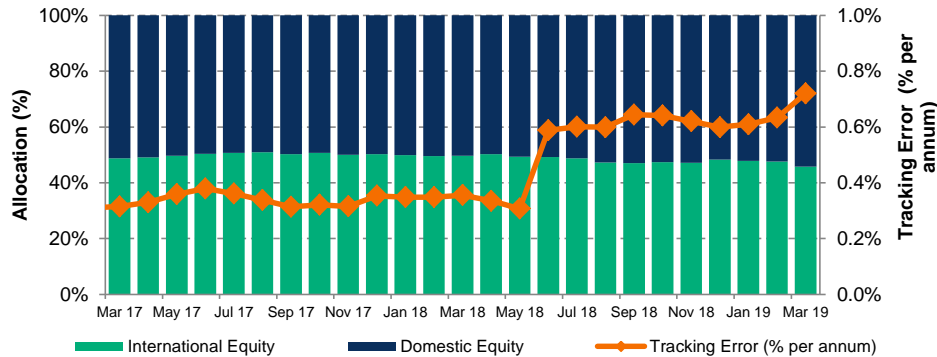
29-Mar-2019

Reporting Currency: USD

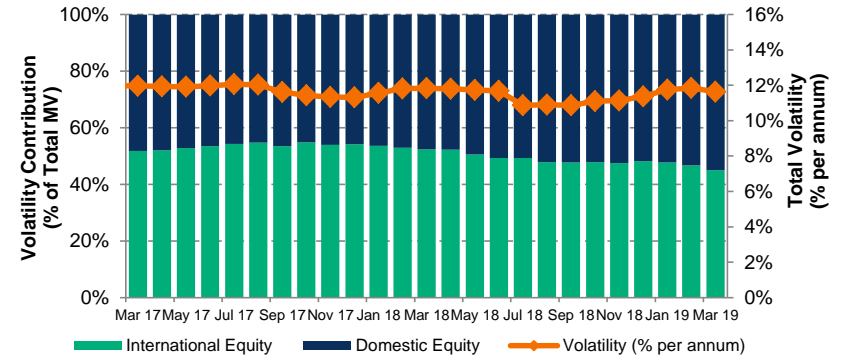
Total Equity Analytics excluding Currency Hedge

	Benchmark	Market Value (Millions)	Allocation (%)	Beta S&P 500 <sup>1</sup>	Beta Russell 3000 <sup>1</sup>	Beta MSCI ACWIxUS <sup>1</sup>	Volatility (% per annum) <sup>2</sup>	Standalone VaR (% of MV) <sup>3</sup>	Tracking Error (% per annum) <sup>4</sup>
<b>Domestic Equity</b>	Russell 3000	<b>13,323</b>	<b>54.2%</b>	<b>1.08</b>	<b>1.06</b>	<b>0.78</b>	<b>12.49%</b>	<b>20.95%</b>	<b>0.99%</b>
Moderate/High Risk		1,744	7.1%	1.26	1.27	0.89	16.21%	24.52%	
Passive		10,120	41.2%	1.06	1.03	0.77	12.19%	20.55%	
Total Low Risk		1,459	5.9%	1.01	0.98	0.73	11.67%	19.52%	
<b>International Equity</b>	MSCI ACWI IMI exUS	<b>11,262</b>	<b>45.8%</b>	<b>0.89</b>	<b>0.86</b>	<b>1.03</b>	<b>12.78%</b>	<b>18.95%</b>	<b>1.03%</b>
Passive		6,929	28.2%	0.88	0.85	1.02	12.62%	19.25%	
Total Active Emerging Markets		1,600	6.5%	0.99	0.95	1.23	16.58%	24.14%	
Total Active Non-U.S.		1,386	5.6%	0.90	0.87	0.98	12.45%	18.88%	
Total Active Regional		1,347	5.5%	0.83	0.80	0.90	12.14%	20.73%	
<b>TOTAL<sup>5</sup></b>		<b>24,585</b>	<b>100.0%</b>	<b>0.99</b>	<b>0.99</b>	<b>0.99</b>	<b>11.85%</b>	<b>20.09%</b>	<b>0.72%</b>

Total Equity Allocation & Tracking Error Trend



Total Equity 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 Total Equity assets.
- 5: Total Equity Tracking Error is calculated using the market value weighted average of the Domestic Equity and International Equity benchmarks.

## Total Equity Analytics, Volatility &amp; Tracking Error by Manager Category

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29-Mar-2019

Reporting Currency: USD

## Domestic Equity Analytics

	Benchmark	Market Value (Millions)	Allocation (%)	Beta S&P 500 <sup>1</sup>	Beta Russell 3000 <sup>1</sup>	Beta MSCI ACWI ex US <sup>1</sup>	Volatility (% per annum) <sup>2</sup>	Standalone VaR (% of MV) <sup>3</sup>	Tracking Error (% per annum) <sup>4</sup>
Moderate/High Risk	Weighted Average Manager Benchmarks	1,779	13.1%	1.23	1.25	0.87	15.89%	24.04%	2.32%
Passive	Weighted Average Manager Benchmarks	10,324	76.1%	1.02	0.99	0.74	11.95%	20.14%	0.03%
Total Low Risk	Weighted Average Manager Benchmarks	1,470	10.8%	1.00	0.97	0.73	11.58%	19.38%	1.51%
<b>TOTAL</b>	<b>Weighted Average Manager Benchmarks</b>	<b>13,573</b>	<b>100.0%</b>	<b>1.05</b>	<b>1.02</b>	<b>0.76</b>	<b>12.26%</b>	<b>20.56%</b>	<b>0.35%</b>
<b>Benchmark</b>	<b>Russell 3000</b>			<b>1.04</b>	<b>-</b>	<b>0.76</b>	<b>11.96%</b>	<b>20.10%</b>	<b>0.88%</b>
								<i>Aggregate Benchmark Structural Risk<sup>5</sup></i>	<b>0.53%</b>

## International Equity Analytics excluding Currency Hedge

	Benchmark	Market Value (Millions)	Allocation (%)	Beta S&P 500 <sup>1</sup>	Beta Russell 3000 <sup>1</sup>	Beta MSCI ACWI ex US <sup>1</sup>	Volatility (% per annum) <sup>2</sup>	Standalone VaR (% of MV) <sup>3</sup>	Tracking Error (% per annum) <sup>4</sup>
Total Active Emerging Markets	Weighted Average Manager Benchmarks	1,664	14.5%	0.94	0.90	1.17	15.97%	23.28%	2.56%
Total Active Non-U.S.	Weighted Average Manager Benchmarks	1,414	12.3%	0.88	0.85	0.96	12.23%	18.51%	2.19%
Total Active Regional	Weighted Average Manager Benchmarks	1,390	12.1%	0.80	0.78	0.87	11.75%	19.99%	3.29%
Passive	Weighted Average Manager Benchmarks	6,988	61.0%	0.87	0.83	1.00	12.51%	19.09%	0.09%
<b>TOTAL</b>	<b>Weighted Average Manager Benchmarks</b>	<b>11,456</b>	<b>100.0%</b>	<b>0.87</b>	<b>0.84</b>	<b>1.00</b>	<b>12.57%</b>	<b>18.63%</b>	<b>0.67%</b>
<b>Benchmark</b>	<b>MSCI ACWI ex US IMI</b>			<b>0.88</b>	<b>0.85</b>	<b>-</b>	<b>12.75%</b>	<b>18.44%</b>	<b>1.03%</b>
								<i>Aggregate Benchmark Structural Risk<sup>5</sup></i>	<b>0.37%</b>

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]

# Commodities

Commodity Analytics, Volatility & Tracking Error

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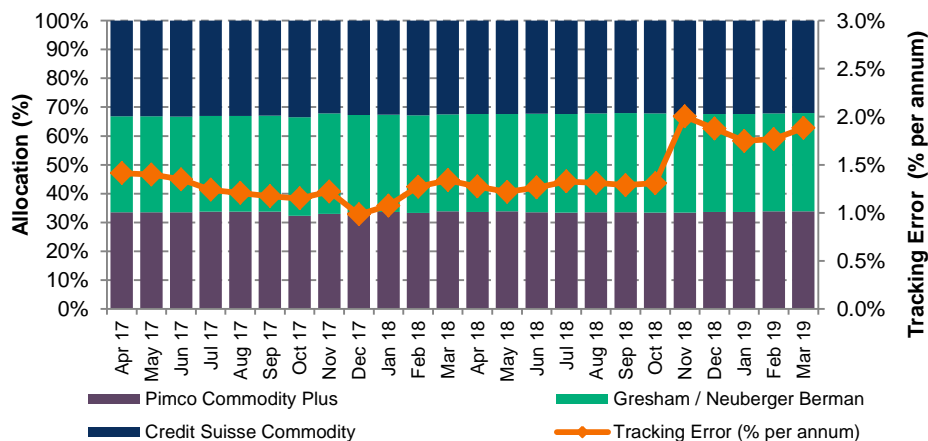
29-Mar-2019

Reporting Currency: USD

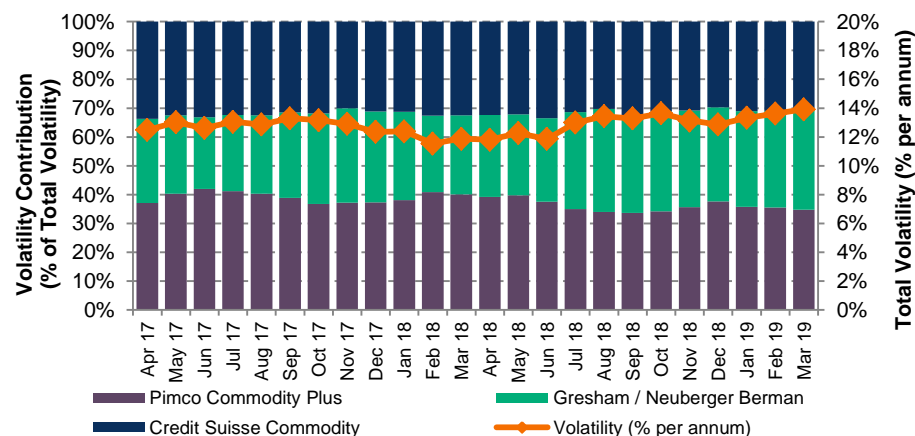
Commodity Analysis

	Market Value (Millions)	Allocation (%)	Net <sup>1</sup>	Beta BCOM	Volatility (% per annum) <sup>2</sup>	Standalone VaR (% of MV) <sup>3</sup>	Tracking Error (% per annum) <sup>4</sup>
Credit Suisse Commodity	429	32.1%	99.8%	1.07	13.28%	23.83%	0.89%
Gresham / Neuberger Berman	455	34.1%	99.8%	1.10	13.86%	25.27%	2.84%
Pimco Commodity Plus	452	33.8%	92.3%	0.93	15.23%	24.11%	3.81%
<b>TOTAL</b>	<b>1,336</b>	<b>100.0%</b>	<b>97.3%</b>	<b>1.03</b>	<b>13.92%</b>	<b>26.64%</b>	<b>1.88%</b>
Benchmark			100.0%		12.73%	23.27%	

Commodity Allocation & Tracking Error Trend



Commodity Volatility & Contribution to Volatility Trend



1: Net exposure excludes basis swaps which generally have no net exposure to the underlying commodities

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 total Commodity assets.

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 total Commodity assets

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

# Private Equity, Real Estate & Hedge Funds

Private Equity Analytics & Volatility by Strategy ex PE Stock Distribution Account

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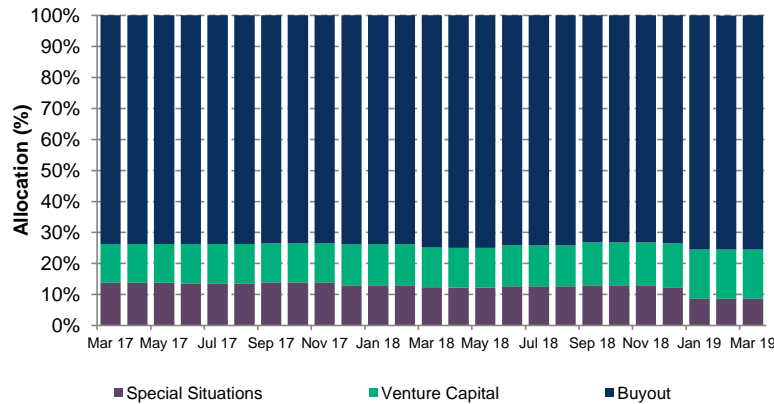
29-Mar-2019

Reporting Currency: USD

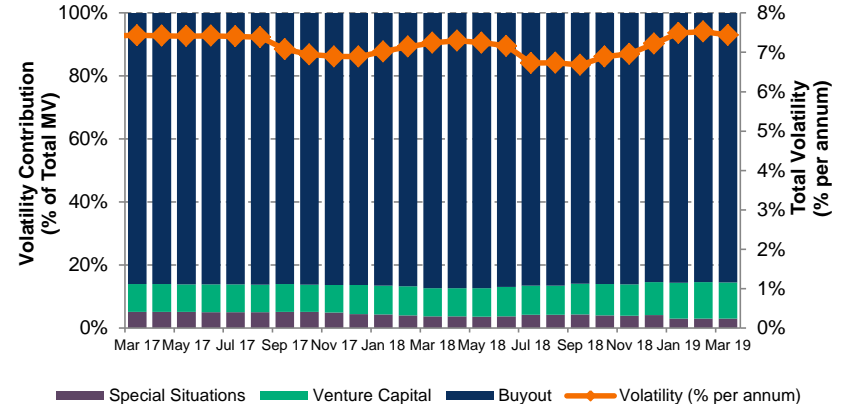
Private Equity Analytics

	Market Value (Millions)	Allocation (%)	Beta S&P 500 <sup>1</sup>	Beta Russell 3000 <sup>1</sup>	Beta MSCI ACWIxUS <sup>1</sup>	Volatility (% per annum) <sup>2</sup>
Buyout	4,108	75.5%	0.70	0.64	0.67	8.44%
Special Situations	472	8.7%	0.19	0.19	0.19	4.24%
Venture Capital	861	15.8%	0.49	0.36	0.48	5.66%
<b>TOTAL</b>	<b>5,441</b>	<b>100.0%</b>	<b>0.62</b>	<b>0.56</b>	<b>0.60</b>	<b>7.44%</b>

Private Equity Allocation Trend



Private Equity Volatility & Contribution to Volatility Trend



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 private equity strategy.

3: PE Stock Distribution Account 2MM



Real Estate Analytics & Volatility

LACERA

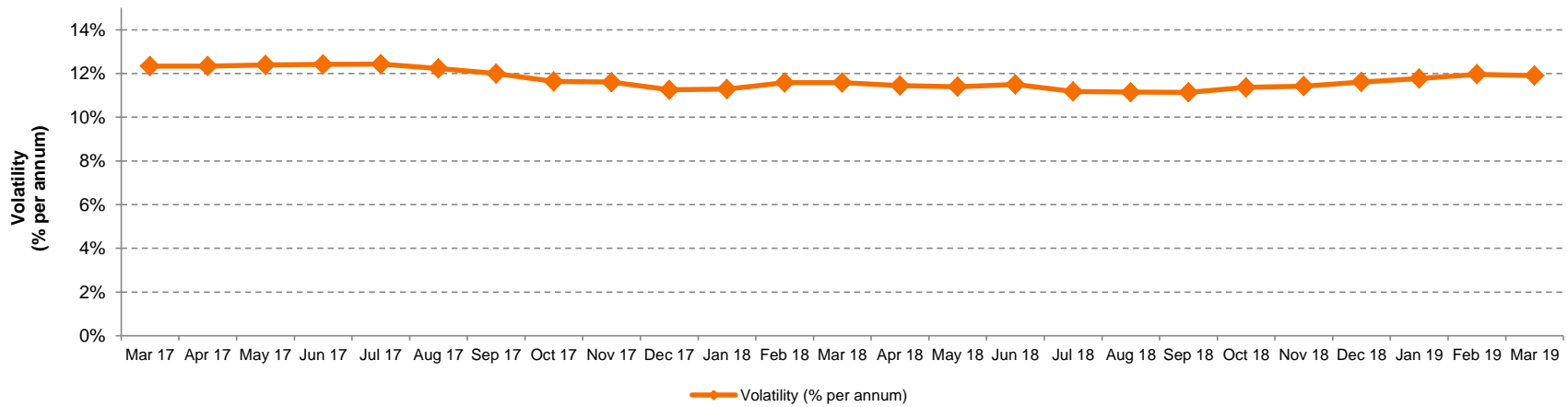
29-Mar-2019

Reporting Currency: USD

Real Estate Analytics

	Market Value (Millions)	Beta S&P 500 <sup>1</sup>	Beta Russell 3000 <sup>1</sup>	Beta MSCI ACWIxUS <sup>1</sup>	Volatility (% per annum) <sup>2</sup>
<b>TOTAL</b>	<b>6,495</b>	<b>0.56</b>	<b>0.38</b>	<b>0.55</b>	<b>11.90%</b>

Real Estate Volatility Trend



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 the real estate allocation.

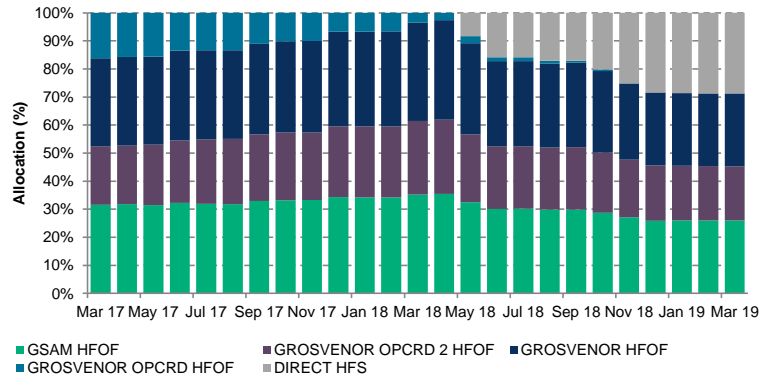
Hedge Funds Analytics & Volatility by Strategy  
LACERA

29-Mar-2019  
Reporting Currency: USD

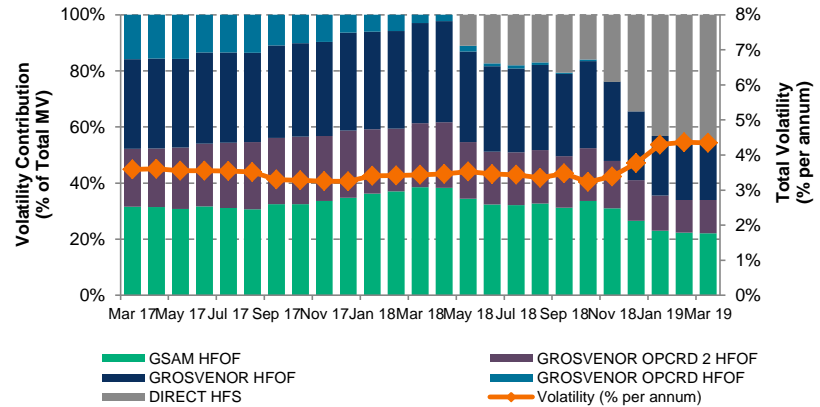
Hedge Funds Analytics

	Market Value (Millions)	Allocation (%)	Beta MSCI ACWI <sup>1</sup>	Beta Barclays US HY Ba to B <sup>1</sup>	Beta BCOM <sup>1</sup>	Volatility (% per annum) <sup>2</sup>
GROSVENOR HFOF	479	25.9%	0.27	0.51	0.12	3.56%
GROSVENOR OPCRD 2 HFOF	358	19.3%	0.20	0.50	0.14	3.28%
GSAM HFOF	480	26.0%	0.29	0.48	0.09	3.97%
DIRECT HFS	532	28.8%	0.48	0.75	0.16	7.15%
<b>TOTAL</b>	<b>1,849.8</b>	<b>100.0%</b>	<b>0.33</b>	<b>0.58</b>	<b>0.13</b>	<b>4.35%</b>

Hedge Fund Allocation Trend



Hedge Fund Volatility & Contribution to Volatility Trend



# Glossary

## Appendix - Glossary

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29-Mar-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 <sup>SM</sup> 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.

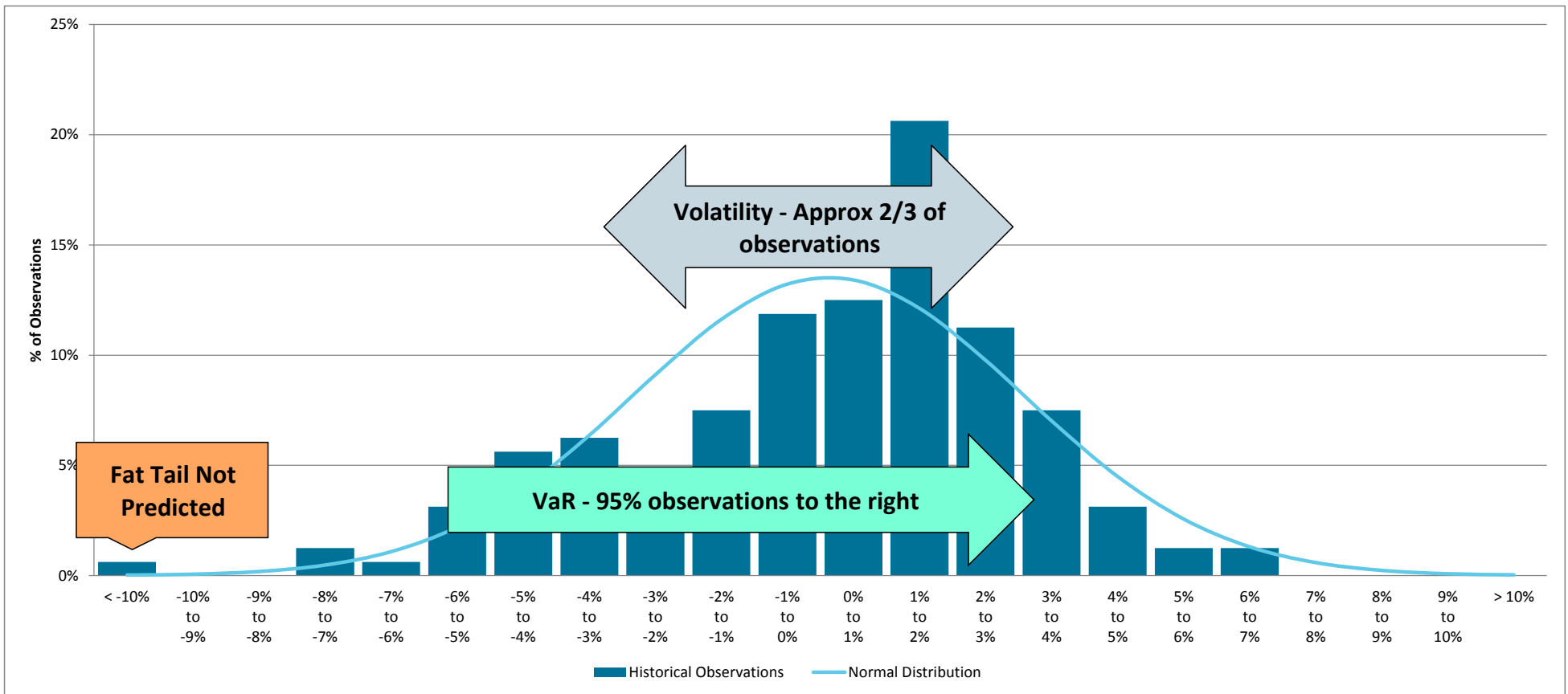
VaR and Volatility

Example Illustration of VaR and Volatility

VaR = 5.6%

Volatility = 2.9%

Mean = 0.1%



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# FUND EVALUATION REPORT

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## Los Angeles County Employees Retirement Association

March 31, 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

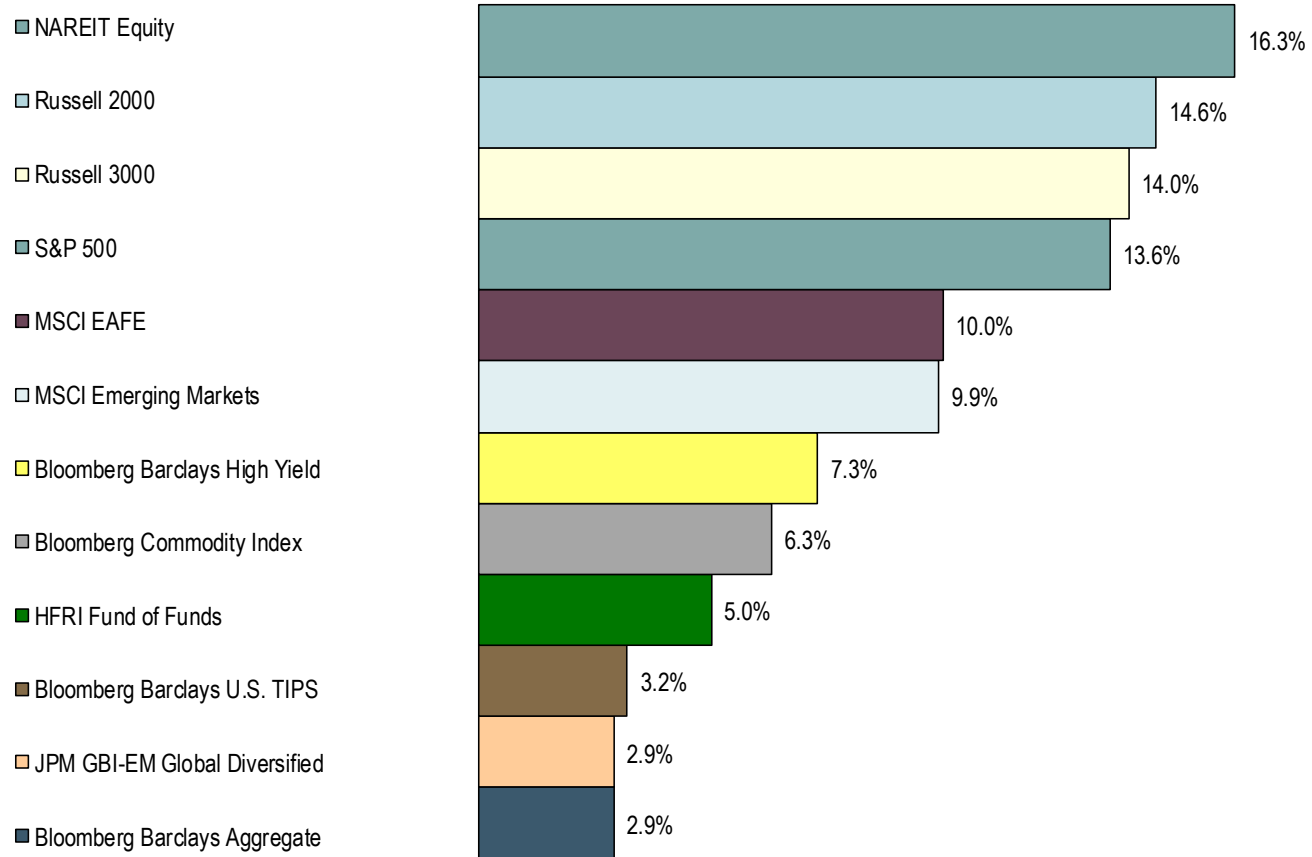
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# Market Commentary



### The World Markets<sup>1</sup> First Quarter of 2019



<sup>1</sup> Source: InvestorForce.



Index Returns<sup>1</sup>

	1Q19 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
<b>Domestic Equity</b>					
S&P 500	13.6	9.5	13.5	10.9	15.9
Russell 3000	14.0	8.8	13.5	10.4	16.0
Russell 1000	14.0	9.3	13.5	10.6	16.0
Russell 1000 Growth	16.1	12.7	16.5	13.5	17.5
Russell 1000 Value	11.9	5.7	10.5	7.7	14.5
Russell MidCap	16.5	6.5	11.8	8.8	16.9
Russell MidCap Growth	19.6	11.5	15.1	10.9	17.6
Russell MidCap Value	14.4	2.9	9.5	7.2	16.4
Russell 2000	14.6	2.0	12.9	7.1	15.4
Russell 2000 Growth	17.1	3.9	14.9	8.4	16.5
Russell 2000 Value	11.9	0.2	10.9	5.6	14.1
<b>Foreign Equity</b>					
MSCI ACWI (ex. U.S.)	10.3	-4.2	8.1	2.6	8.8
MSCI EAFE	10.0	-3.7	7.3	2.3	9.0
MSCI EAFE (Local Currency)	10.6	2.8	8.5	6.0	9.8
MSCI EAFE Small Cap	10.7	-9.4	7.5	4.5	12.8
MSCI Emerging Markets	9.9	-7.4	10.7	3.7	8.9
MSCI Emerging Markets (Local Currency)	10.1	-1.7	11.3	7.2	10.2
<b>Fixed Income</b>					
Bloomberg Barclays Universal	3.3	4.5	2.6	3.0	4.4
Bloomberg Barclays Aggregate	2.9	4.5	2.0	2.7	3.8
Bloomberg Barclays U.S. TIPS	3.2	2.7	1.7	1.9	3.4
Bloomberg Barclays High Yield	7.3	5.9	8.6	4.7	11.3
JPM GBI-EM Global Diversified	2.9	-7.6	3.3	-0.8	4.3
<b>Other</b>					
NAREIT Equity	16.3	20.3	6.0	9.0	18.2
Bloomberg Commodity Index	6.3	-5.3	2.2	-8.9	-2.6
HFRI Fund of Funds	5.0	0.5	4.1	2.3	3.6

<sup>1</sup> Source: InvestorForce.

## Global Economic Outlook

### The IMF continues to reduce their projections for the coming years as the global economic expansion slows.

- For 2018, the IMF's forecast remains at 3.7%, while for 2019 (3.5%) and 2020 (3.6%) they lowered their projections by 0.2% and 0.1%, respectively.
- In the IMF's January update, their growth projections for advanced economies in 2018 was 2.3%, 2.0% for 2019 (-0.1% from the last report), and 1.7% for 2020. Growth in the U.S. is projected to be the strongest, but will slow in the coming years due in part to the reduction in fiscal and monetary stimulus. Growth in the euro area is projected to decline slightly in the coming years due to higher borrowing costs in Italy, slowing growth in Germany, and social unrest in France.
- Projections for growth in the emerging and developing economies declined for 2018 (4.6% versus 4.7%) and 2019 (4.5% versus 4.7%), but is expected to pick up in 2020 (4.9%). Growth in China is expected to slow as the economy continues to transition away from an investment-based growth model. Fiscal stimulus is expected to offset only part of the impact of trade tensions with the U.S. The IMF projects improved growth in India and Brazil in 2019 and Mexico in 2020.
- Overall, inflation is expected to remain at the same level in 2019 compared to 2018 and around long-term averages.

	Real GDP (%) <sup>1</sup>				Inflation (%) <sup>1</sup>			
	IMF 2018 Forecast	IMF 2019 Forecast	IMF 2020 Forecast	Actual 10 Year Average	IMF 2018 Forecast	IMF 2019 Forecast	IMF 2020 Forecast	Actual 10 Year Average
World	3.7	3.5	3.6	3.3	3.8	3.8	3.6	3.7
U.S.	2.9	2.5	1.8	1.4	2.4	2.1	2.3	1.7
Euro Area	1.8	1.6	1.7	0.7	1.7	1.7	1.8	1.4
Japan	0.9	1.1	0.5	0.5	1.2	1.3	1.7	0.3
China	6.6	6.2	6.2	8.2	2.2	2.4	2.7	2.6
Emerging Markets (ex. China)	3.9	4.2	4.2	3.8	6.8	7.0	5.9	6.9

<sup>1</sup> Source: IMF. World Economic Outlook. January 2019 Update. "Actual 10 Year Average" represents data from 2008 to 2017.

### Global Economic Outlook (continued)

**The boost to growth from recent U.S. tax cuts will likely be short lived, while China could increase policy support. We could be moving into a period of coordinated monetary tightening across central banks.**

- The Federal Reserve continued their rate hiking campaign making their ninth increase in December. They also continue to reduce their balance sheet. Projections for rate increases in 2019 have declined as inflationary pressures slow and market volatility has increased.
- Of all the major central banks, the Bank of Japan (BOJ) is showing no signs of pulling back from its unprecedented monetary stimulus, as inflation remains well below target and is projected to decline. At their recent meeting the BOJ made no changes to their stimulative efforts, keeping bank deposit rates negative (-0.1%), and continuing to target a 0% yield on the 10-year government bond.
- The European Central Bank held low rates steady and reaffirmed that they could remain unchanged at least through the summer of 2019. The asset purchases (i.e., quantitative easing) ended, but the proceeds from maturing bonds will continue to be invested for now. If conditions in Italy turn negative, given the political changes and budget discussions, the ECB could reconsider its policies.
- The People's Bank of China (PBOC) continues to cut bank reserve requirements in an effort to stimulate growth as the trade war with the U.S. weighs on the already slowing economy. They may take additional steps to support the economy, but already high debt levels, and their looser peg to the U.S. dollar, limit the extent of possible stimulus.

**Several issues are of primary concern: 1) the potential for simultaneous monetary tightening globally; 2) uncertainty related to the U.S. economy and policies; 3) declining growth in China, along with uncertain fiscal and monetary policies; and 4) political uncertainty in Europe and risks related to the U.K.'s exit from the European Union.**

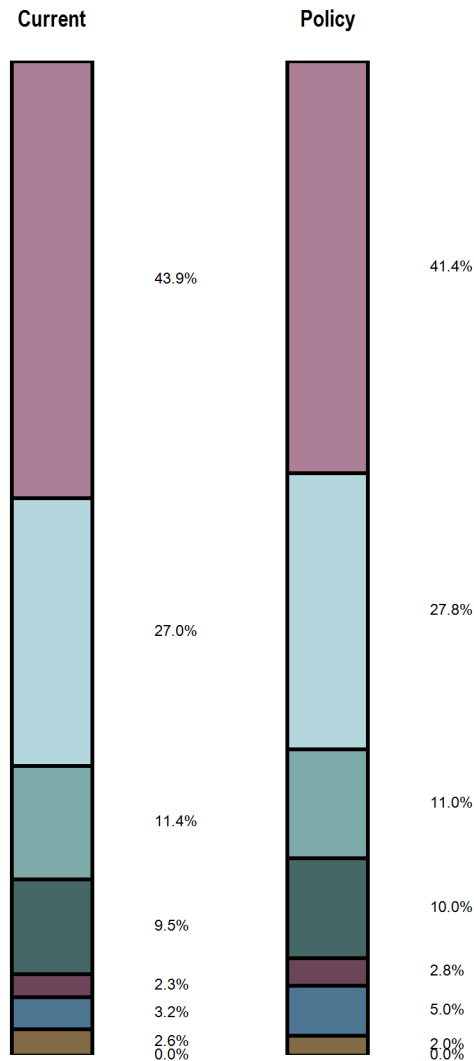
## Capital Markets Outlook<sup>1</sup>

- Diverging global economic growth, nuanced monetary policies, and ongoing geopolitical turmoil has resulted in increased uncertainty in the global capital markets.
  - Systemic Risk has been elevated since October 2018, but has recently started to decline.
    - In agreement with this measure, the widely cited VIX index is also declining.
    - Risk environments can change quickly, and caution is warranted especially given high U.S. valuations and global political risk.
  - The price of the U.S. stock market relative to ten-year average earnings remains above its historical average (29.9x versus 16.9x).
    - Within U.S. Equity markets, valuations for companies based on both size (small vs. large cap) and value (growth vs. value) remain within a reasonable range.
  - Developed international and emerging market stocks are trading at lower valuations than U.S. stocks.
    - Both of these measures have seen sustained positive trends as economic fundamentals continue to strengthen.
  - At 2.4%, the yield on the ten-year Treasury declined, to the surprise of many investors.
    - The yield curve is essentially flat, indicating that investors may expect short-term rates are more likely to move down than up from here.
  - As of March 31st, spreads for high yield corporate bonds (4%) were below their historical average.
    - Higher equity valuations and tighter credit spreads are potentially inconsistent with a flattening yield curve.

<sup>1</sup> Sources: Bloomberg, U.S. Treasury, and Meketa Investment Group. Data is as of March 31, 2019.

# 1Q2019 Review

As of March 31, 2019



Allocation vs. Targets						
	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
<b>Total Equity</b>	<b>\$25,049,437,686</b>	<b>43.9%</b>	<b>41.4%</b>	<b>2.5%</b>	<b>31.4% - 51.4%</b>	<b>Yes</b>
U.S. Equity	\$13,572,959,556	23.8%	22.7%	1.1%		
Non-U.S. Equity	\$11,476,478,130	20.1%	18.7%	1.4%		
<b>Fixed Income<sup>1</sup></b>	<b>\$15,366,041,871</b>	<b>27.0%</b>	<b>27.8%</b>	<b>-0.8%</b>	<b>24.8% - 30.8%</b>	<b>Yes</b>
<b>Real Estate<sup>2</sup></b>	<b>\$6,494,644,085</b>	<b>11.4%</b>	<b>11.0%</b>	<b>0.4%</b>	<b>8.0% - 16.0%</b>	<b>Yes</b>
<b>Private Equity<sup>2</sup></b>	<b>\$5,440,901,267</b>	<b>9.5%</b>	<b>10.0%</b>	<b>-0.5%</b>	<b>7.0% - 14.0%</b>	<b>Yes</b>
<b>Commodities</b>	<b>\$1,331,975,963</b>	<b>2.3%</b>	<b>2.8%</b>	<b>-0.5%</b>	<b>0.0% - 4.8%</b>	<b>Yes</b>
<b>Hedge Funds<sup>3</sup></b>	<b>\$1,849,749,797</b>	<b>3.2%</b>	<b>5.0%</b>	<b>-1.8%</b>	<b>2.0% - 7.0%</b>	<b>Yes</b>
<b>Cash</b>	<b>\$1,481,749,082</b>	<b>2.6%</b>	<b>2.0%</b>	<b>0.6%</b>	<b>0.0% - 4.0%</b>	<b>Yes</b>
<b>Other Opportunities</b>	--	--	<b>0.0%</b>	<b>0.0%</b>	<b>0.0% - 5.0%</b>	<b>Yes</b>
<b>Total<sup>4</sup></b>	<b>\$57,014,499,752</b>	<b>100.0%</b>	<b>100.0%</b>			

<sup>1</sup> The performance and market values of two opportunistic managers are reported with a one-month lag.

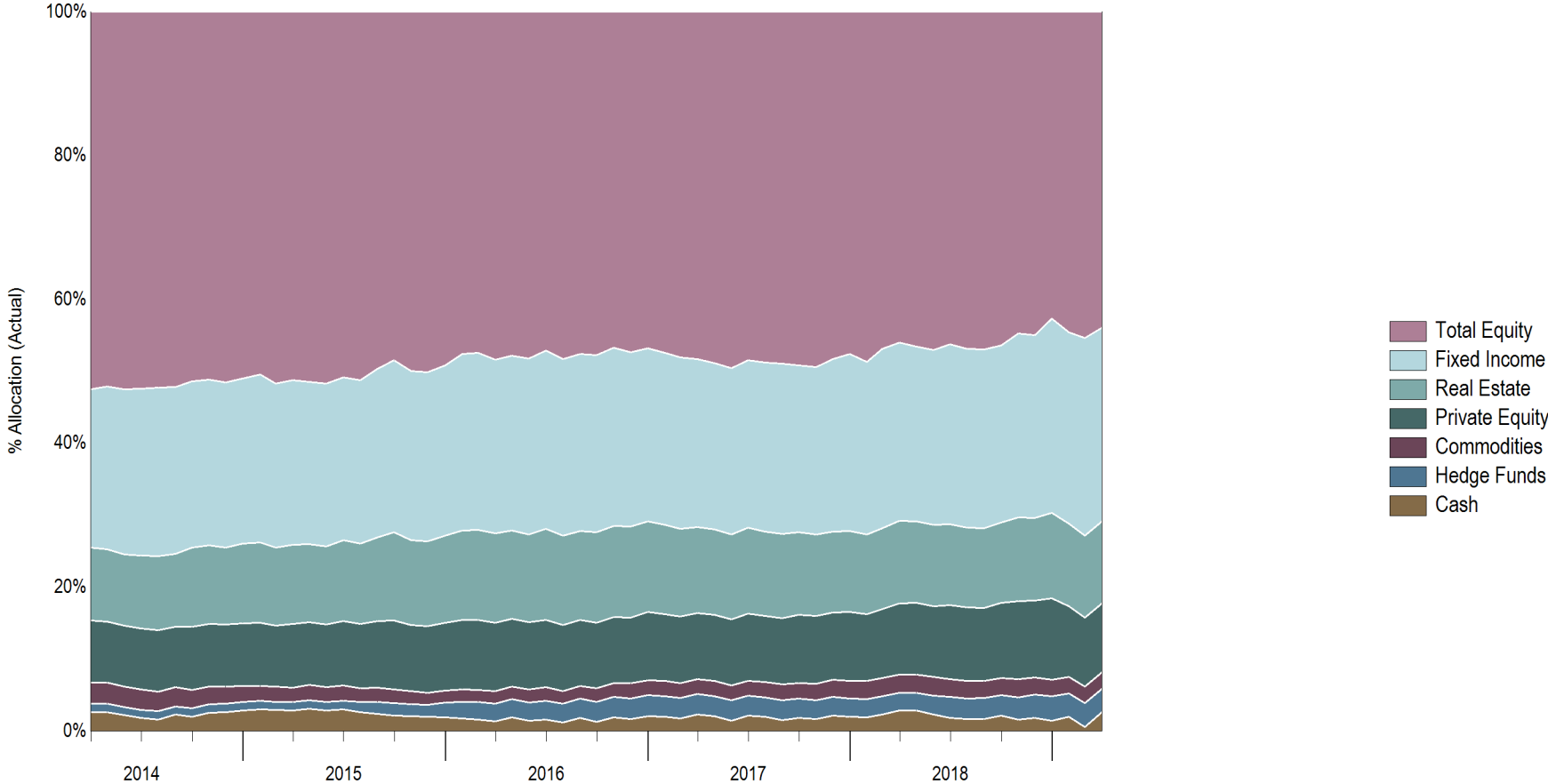
<sup>2</sup> Portfolio and benchmark are reported with a one-quarter lag. Returns are preliminary.

<sup>3</sup> Portfolio and benchmark are reported with a one-month lag.

<sup>4</sup> Totals do not add up due to rounding.



Asset Allocation History  
5 Years Ending March 31, 2019





## Sources of Fund Growth

As of March 31, 2019

U.S. Equity						
	Beginning Market Value (\$000's)	Net Cash Flow (\$000's)	Fees (\$000's)	Net Investment Change (\$000's)	Ending Market Value (\$000's)	Quarter Return (%)
BTC Russell 3000	9,052,567	-	225	1,271,655	10,324,222	14.0
Intech	793,764	-	443	113,768	907,532	14.3
Frontier Capital Management	597,657	-	1,115	90,770	688,427	15.2
Twin Capital	498,112	-	184	63,988	562,100	12.8
Eagle Asset Management	305,191	-	397	41,178	346,370	13.5
Quantitative Management Associates	239,273	-	310	30,129	269,402	12.6
Systematic Financial Management	201,929	-	273	22,852	224,781	11.3
Matarin	97,804	-	155	11,133	108,938	11.4
Jana Partners	73,188	2,094	298	10,738	86,020	13.7
CornerCap	48,795	-	77	6,374	55,169	13.1
DE Transtion	0	-	-	0	0	-

Quarterly return shown net of fees.



## Sources of Fund Growth

As of March 31, 2019

Non-U.S. Equity						
	Beginning Market Value (\$000's)	Net Cash Flow (\$000's)	Fees (\$000's)	Net Investment Change (\$000's)	Ending Market Value (\$000's)	Quarter Return (%)
BTC EAFE IMI	3,995,461	-	147	406,549	4,402,010	10.2
BTC Emerging Markets	1,087,291	-	248	106,939	1,194,230	9.8
BTC Euro Tilts	850,486	-	877	95,488	945,974	11.2
BTC Canada IMI	611,119	-	19	94,141	705,260	15.4
Genesis	602,074	-	1,190	93,780	695,854	15.6
Acadian Developed Markets	769,989	-	702	83,970	853,959	10.9
GAM Pacific Basin	800,960	-859,156	860	63,164	4,968	-
Capital Guardian	338,859	-	295	53,153	392,012	15.7
BTC Passive Currency Hedge	38,981	-59,219	309	40,090	19,852	0.4
Lazard Emerging Markets	313,905	-	600	38,039	351,944	12.1
BTC Europe Index	328,258	-	8	35,950	364,208	11.0
Acadian Emerging Markets	343,678	-	442	30,290	373,968	8.8
AQR Emerging Markets	220,230	-	395	21,962	242,192	10.0
Symphony Financial Partners	135,436	266	782	19,135	154,837	14.1
BTC EAFE Small Cap	172,955	-	17	18,607	191,562	10.8
Global Alpha IE EMP	149,972	-	303	17,920	167,892	11.9
Cevian Capital	268,060	-	1,085	16,499	284,558	6.2
BTC Emerging Markets Small Cap	121,024	-	79	9,244	130,268	7.6
International Equity Transition Account	-	9,715	-	-	914	-

Quarterly return shown net of fees.



## Sources of Fund Growth

As of March 31, 2019

	Fixed Income					
	Beginning Market Value (\$000's)	Net Cash Flow (\$000's)	Fees (\$000's)	Net Investment Change (\$000's)	Ending Market Value (\$000's)	Quarter Return (%)
BTC US Debt Index	4,260,625	1,441,359	120	149,512	5,851,496	3.0
Dodge & Cox	1,297,664	-	315	46,818	1,344,482	3.6
Western Asset Management	1,132,546	305	361	45,641	1,178,492	4.0
Wells Capital Management	1,359,301	-	376	40,819	1,400,120	3.0
PIMCO	1,068,574	-	605	35,953	1,104,527	3.4
Oaktree Capital Management	398,302	562	397	27,735	426,599	7.0
Beach Point Capital	388,695	50,000	-3,738	23,419	462,114	5.9
Brigade Capital Management	483,455	75,000	930	19,910	578,364	4.0
Aberdeen Asset Management	192,387	200,000	258	15,384	407,770	7.3
Bain Capital	300,960	50,495	27	13,499	364,953	4.4
Loomis, Sayles & Co.	1,082,699	-1,085,532	115	12,463	9,630	-
Ashmore Investment Management	198,988	200,000	441	11,825	410,813	5.6
Crescent Capital Group	346,862	75,000	524	10,887	432,749	2.9
Pugh Capital Management	136,867	200,000	89	8,149	345,016	3.1
Doubleline Capital	272,501	50,000	532	6,513	329,013	2.2
Principal Opportunistic	266,257	-258,872	30	6,467	13,852	-
Dolan McEniry Capital Management	345,882	-352,192	72	6,373	63	-
Tennenbaum Capital	315,031	9,881	730	5,861	330,774	1.8
PENN Capital Management	107,244	-110,785	38	5,054	1,513	-
TCW	277,512	50,000	419	5,012	332,524	1.6
Western Opportunistic	310,582	-307,989	28	3,801	6,393	-
Member Home Loan Program Mirror (MHLP)	29,520	-1,387	19	369	28,502	1.3
Investment Grade Transition Account	-	-3,635	-	-	3,978	-
Credit Transition Account	-	1,995	-	-	2,303	-

Quarterly return shown net of fees.



## Sources of Fund Growth

As of March 31, 2019

## Private Equity

	Beginning Market Value (\$000's)	Net Cash Flow (\$000's)	Fees (\$000's)	Net Investment Change (\$000's)	Ending Market Value (\$000's)	Quarter Return (%)
Private Equity	6,116,029	-263,479	5,377	-411,649	5,440,901	-0.2

## Real Estate

	Beginning Market Value (\$000's)	Net Cash Flow (\$000's)	Fees (\$000's)	Net Investment Change (\$000's)	Ending Market Value (\$000's)	Quarter Return (%)
Real Estate	6,435,681	-67,221	12,620	126,184	6,494,644	1.8

## Commodities

	Beginning Market Value (\$000's)	Net Cash Flow (\$000's)	Fees (\$000's)	Net Investment Change (\$000's)	Ending Market Value (\$000's)	Quarter Return (%)
Neuberger Berman/Gresham	419,864	-	385	34,009	453,873	8.1
PIMCO Commodities	416,721	-	459	33,576	450,298	8.1
Credit Suisse	401,763	-	258	26,043	427,806	6.5

Quarterly return shown net of fees.



## Sources of Fund Growth

As of March 31, 2019

## Total Hedge Funds

	Beginning Market Value (\$000's)	Net Cash Flow (\$000's)	Fees (\$000's)	Net Investment Change (\$000's)	Ending Market Value (\$000's)	Quarter Return (%)
LACERA HF Direct	519,583	4,998	24	7,657	532,239	1.5
GSAM HFOF	474,427	-1	437	5,807	480,233	1.2
Grosvenor HFOF	477,632	-	-	1,805	479,437	0.4
Grosvenor OPCRD 2 HFOF	359,858	-	-	-2,017	357,841	-0.6

## Cash

	Beginning Market Value (\$000's)	Net Cash Flow (\$000's)	Fees (\$000's)	Net Investment Change (\$000's)	Ending Market Value (\$000's)	Quarter Return (%)
Cash	777,378	694,738	674	9,633	1,481,749	0.7

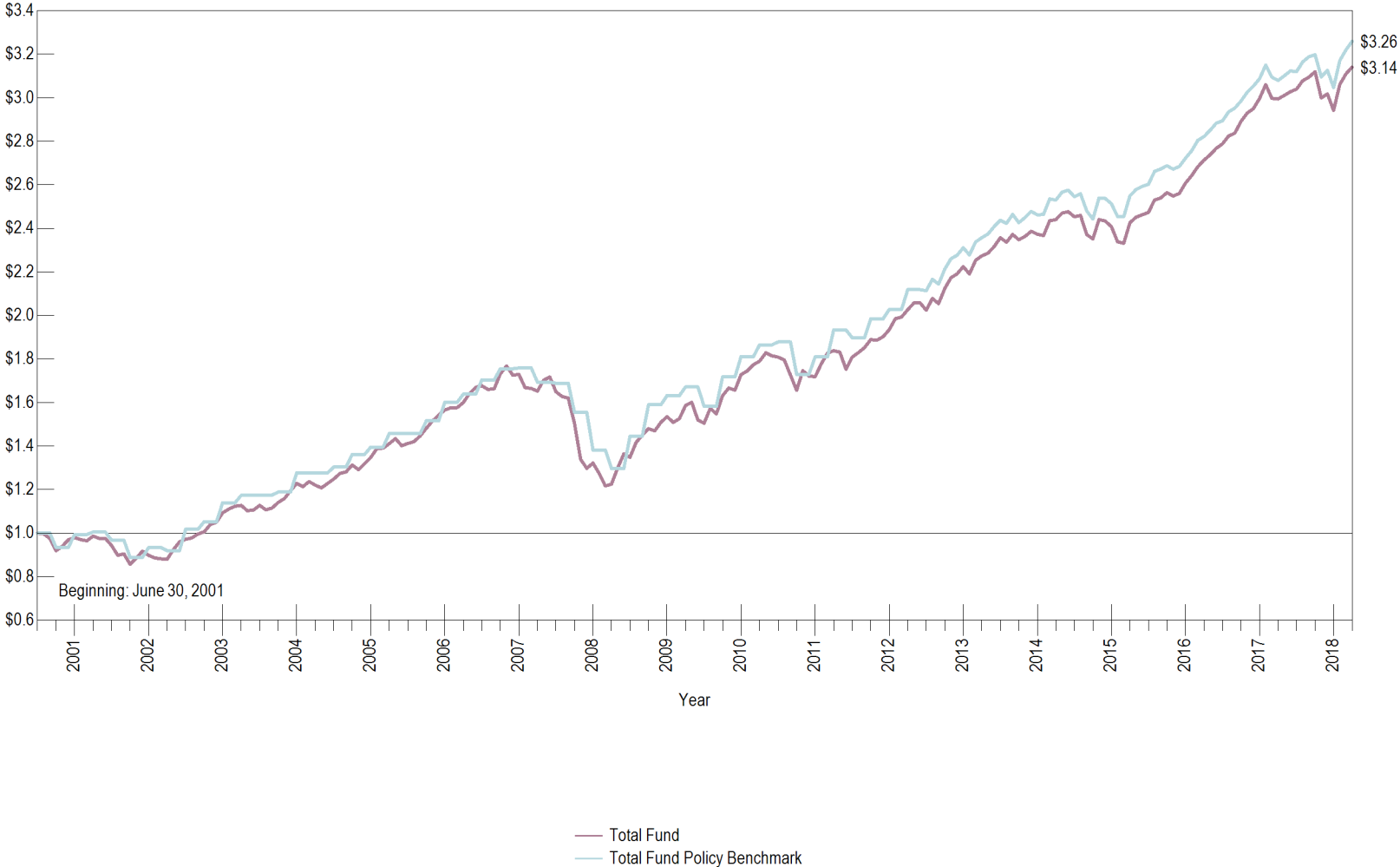
## Total Fund

	Beginning Market Value (\$000's)	Net Cash Flow (\$000's)	Fees (\$000's)	Net Investment Change (\$000's)	Ending Market Value (\$000's)	Quarter Return (%)
Total Fund	54,028,425	-168,003	34,757	3,154,077	57,014,500	6.8

Quarterly return shown net of fees.



Growth of a Dollar



As of March 31, 2019

## Asset Class Performance Summary (Gross)

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD <sup>4</sup> (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fund</b>	<b>57,014,499,752</b>	<b>100.0</b>	<b>6.8</b>	<b>3.5</b>	<b>5.2</b>	<b>9.3</b>	<b>7.0</b>	<b>10.1</b>
<i>Total Fund Policy Benchmark</i>			7.0	4.5	5.8	8.5	6.7	9.7
<b>U.S. Equity</b>	<b>13,572,959,556</b>	<b>23.8</b>	<b>14.0</b>	<b>3.3</b>	<b>7.1</b>	<b>12.8</b>	<b>9.9</b>	<b>15.8</b>
<i>Russell 3000</i>			14.0	4.7	8.8	13.5	10.4	16.0
<b>Non-U.S. Equity</b>	<b>11,476,478,130</b>	<b>20.1</b>	<b>11.2</b>	<b>-0.6</b>	<b>-0.8</b>	<b>10.0</b>	<b>5.2</b>	<b>10.7</b>
<i>Custom MSCI ACWI IMI Net 50% Hedge</i>			10.7	-1.0	-1.8	9.1	4.5	10.1
<b>Fixed Income<sup>1</sup></b>	<b>15,366,041,871</b>	<b>27.0</b>	<b>3.5</b>	<b>4.6</b>	<b>4.6</b>	<b>4.4</b>	<b>3.7</b>	<b>6.2</b>
<i>FI Custom Index</i>			3.3	4.8	4.5	2.6	3.0	4.4
<i>BBgBarc US Universal TR</i>			3.3	4.8	4.5	2.6	3.0	4.4
<b>Real Estate<sup>2</sup></b>	<b>6,494,644,085</b>	<b>11.4</b>	<b>2.0</b>	<b>7.6</b>	<b>10.8</b>	<b>9.1</b>	<b>10.7</b>	<b>6.1</b>
<i>Real Estate Target</i>			1.6	5.6	7.8	7.7	9.8	7.8
<b>Private Equity<sup>2</sup></b>	<b>5,440,901,267</b>	<b>9.5</b>	<b>-0.1</b>	<b>8.5</b>	<b>13.1</b>	<b>14.5</b>	<b>13.6</b>	<b>14.7</b>
<i>Private Equity Target</i>			4.5	12.6	16.7	14.1	13.9	11.3
<b>Commodities</b>	<b>1,331,975,963</b>	<b>2.3</b>	<b>7.7</b>	<b>-5.3</b>	<b>-4.4</b>	<b>4.3</b>	<b>-7.3</b>	<b>0.0</b>
<i>Bloomberg Commodity Index TR USD</i>			6.3	-5.6	-5.3	2.2	-8.9	-2.6
<b>Hedge Funds<sup>3</sup></b>	<b>1,849,749,797</b>	<b>3.2</b>	<b>0.7</b>	<b>-0.4</b>	<b>0.2</b>	<b>4.5</b>	<b>2.4</b>	<b>--</b>
<i>Hedge Fund Custom Index</i>			1.8	5.4	7.1	6.2	5.7	--
<b>Cash</b>	<b>1,481,749,082</b>	<b>2.6</b>	<b>0.7</b>	<b>2.0</b>	<b>2.5</b>	<b>1.6</b>	<b>1.1</b>	<b>1.4</b>
<i>FTSE 6 Month T-Bill</i>			0.6	1.7	2.2	1.2	0.8	0.5

See Glossary for all custom index definitions. All returns over one year are annualized.

<sup>1</sup> The performance and market values of two opportunistic managers are reported with a one-month lag.<sup>2</sup> Portfolio and benchmark are reported with a one-quarter lag. Returns are preliminary.<sup>3</sup> Portfolio and benchmark are reported with a one-month lag.<sup>4</sup> Fiscal Year begins July 1.

As of March 31, 2019

## Trailing Performance

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fund (Net)</b>	<b>57,014,499,752</b>	<b>100.0</b>	<b>6.8</b>	<b>3.3</b>	<b>4.9</b>	<b>9.0</b>	<b>6.7</b>	<b>9.9</b>
<b>Total Fund (Gross)</b>			<b>6.8</b>	<b>3.5</b>	<b>5.2</b>	<b>9.3</b>	<b>7.0</b>	<b>10.1</b>
<i>Total Fund Policy Benchmark</i>			<u>7.0</u>	<u>4.5</u>	<u>5.8</u>	<u>8.5</u>	<u>6.7</u>	<u>9.7</u>
Excess Return (vs. Net)			-0.2	-1.2	-0.9	0.5	0.0	0.2
<b>U.S. Equity (Net)</b>	<b>13,572,959,556</b>	<b>23.8</b>	<b>14.0</b>	<b>3.2</b>	<b>7.0</b>	<b>12.7</b>	<b>9.8</b>	<b>15.7</b>
<b>U.S. Equity (Gross)</b>			<b>14.0</b>	<b>3.3</b>	<b>7.1</b>	<b>12.8</b>	<b>9.9</b>	<b>15.8</b>
<i>Russell 3000</i>			<u>14.0</u>	<u>4.7</u>	<u>8.8</u>	<u>13.5</u>	<u>10.4</u>	<u>16.0</u>
Excess Return (vs. Net)			0.0	-1.5	-1.8	-0.8	-0.6	-0.3
<b>Passive (Net)</b>	<b>10,324,221,925</b>	<b>18.1</b>						
<b>Passive (Gross)</b>								
BTC Russell 3000 (Net)	10,324,221,912	18.1	14.0	4.7	8.8	--	--	--
BTC Russell 3000 (Gross)			14.1	4.7	8.8	--	--	--
<i>Russell 3000</i>			<u>14.0</u>	<u>4.7</u>	<u>8.8</u>	--	--	--
Excess Return (vs. Net)			0.0	0.0	0.0			
DE Transition Account (Net)	12	0.0						
DE Transition Account (Gross)								
<b>Low Risk (Net)</b>	<b>1,469,631,624</b>	<b>2.6</b>						
<b>Low Risk (Gross)</b>								
Intech (Net)	907,531,590	1.6	14.3	3.3	4.5	11.8	10.3	15.6
Intech (Gross)			14.4	3.5	4.7	12.1	10.6	16.0
<i>S&amp;P 500</i>			<u>13.6</u>	<u>5.9</u>	<u>9.5</u>	<u>13.5</u>	<u>10.9</u>	<u>15.9</u>
Excess Return (vs. Net)			0.7	-2.6	-5.0	-1.7	-0.6	-0.3
Twin Capital (Net)	562,100,034	1.0	12.8	3.8	6.9	12.2	10.2	15.7
Twin Capital (Gross)			12.9	3.9	7.1	12.4	10.4	15.9
<i>S&amp;P 500</i>			<u>13.6</u>	<u>5.9</u>	<u>9.5</u>	<u>13.5</u>	<u>10.9</u>	<u>15.9</u>
Excess Return (vs. Net)			-0.8	-2.1	-2.6	-1.3	-0.7	-0.2

See Glossary for all custom index definitions.





As of March 31, 2019

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Moderate / High Risk (Net)</b>	<b>1,779,106,008</b>	<b>3.1</b>						
<b>Moderate / High Risk (Gross)</b>								
Eagle Asset Management (Net)	346,369,640	0.6	13.5	-5.0	1.3	12.4	8.2	14.8
Eagle Asset Management (Gross)			13.6	-4.6	1.8	13.0	8.8	15.4
<i>Russell 2500</i>			<u>15.8</u>	<u>-1.2</u>	<u>4.5</u>	<u>12.6</u>	<u>7.8</u>	<u>16.2</u>
Excess Return (vs. Net)			-2.3	-3.8	-3.2	-0.2	0.4	-1.4
Quantitative Management Associates (Net)	269,401,910	0.5	12.6	-8.5	--	--	--	--
Quantitative Management Associates (Gross)			12.7	-8.1	--	--	--	--
<i>Russell 2000</i>			<u>14.6</u>	<u>-5.3</u>	--	--	--	--
Excess Return (vs. Net)			-2.0	-3.2				
Systematic Financial Management (Net)	224,780,681	0.4	11.3	-8.3	--	--	--	--
Systematic Financial Management (Gross)			11.5	-8.0	--	--	--	--
<i>Russell 2000</i>			<u>14.6</u>	<u>-5.3</u>	--	--	--	--
Excess Return (vs. Net)			-3.3	-3.0				
Frontier Capital Management (Net)	688,427,057	1.2	15.2	-2.2	2.1	11.9	7.1	16.0
Frontier Capital Management (Gross)			15.4	-1.7	2.9	12.7	8.0	16.9
<i>Russell 2500</i>			<u>15.8</u>	<u>-1.2</u>	<u>4.5</u>	<u>12.6</u>	<u>7.8</u>	<u>16.2</u>
Excess Return (vs. Net)			-0.6	-1.0	-2.4	-0.7	-0.7	-0.2
Jana Partners (Net)	86,020,164	0.2	13.7	-4.7	7.2	--	--	--
Jana Partners (Gross)			14.2	-2.5	10.8	--	--	--
<i>S&amp;P 500</i>			<u>13.6</u>	<u>5.9</u>	<u>9.5</u>	--	--	--
Excess Return (vs. Net)			0.1	-10.6	-2.3			
CornerCap (Net)	55,168,735	0.1	13.1	--	--	--	--	--
CornerCap (Gross)			13.2	--	--	--	--	--
<i>Russell 2000</i>			<u>14.6</u>	--	--	--	--	--
Excess Return (vs. Net)			-1.5					

See Glossary for all custom index definitions.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Matarin (Net)	108,937,820	0.2	11.4	--	--	--	--	--
Matarin (Gross)			11.5	--	--	--	--	--
<i>Russell 2000</i>			<u>14.6</u>	--	--	--	--	--
Excess Return (vs. Net)			-3.2					
<b>Non-U.S. Equity (Net)</b>	<b>11,476,478,130</b>	<b>20.1</b>	<b>11.2</b>	<b>-0.7</b>	<b>-1.0</b>	<b>9.7</b>	<b>4.9</b>	<b>10.5</b>
<b>Non-U.S. Equity (Gross)</b>			<b>11.2</b>	<b>-0.6</b>	<b>-0.8</b>	<b>10.0</b>	<b>5.2</b>	<b>10.7</b>
<i>Custom MSCI ACWI IMI Net 50% Hedge</i>			<u>10.7</u>	<u>-1.0</u>	<u>-1.8</u>	<u>9.1</u>	<u>4.5</u>	<u>10.1</u>
Excess Return (vs. Net)			0.5	0.3	0.8	0.6	0.4	0.4
International Equity Transition Account (Net)	914,485	0.0						
International Equity Transition Account (Gross)								
<b>Passive (Net)</b>	<b>6,987,538,630</b>	<b>12.3</b>						
<b>Passive (Gross)</b>								
BTC Canada IMI (Net) <sup>1</sup>	705,260,286	1.2	15.4	-1.6	3.4	7.9	1.0	8.4
BTC Canada IMI (Gross)			15.4	-1.6	3.4	7.9	1.1	8.4
<i>MSCI Canada IMI Custom Index</i>			<u>15.2</u>	<u>-2.2</u>	<u>2.5</u>	<u>7.1</u>	<u>0.3</u>	<u>7.7</u>
Excess Return (vs. Net)			0.2	0.6	0.9	0.8	0.7	0.7
BTC EAFE IMI (Net) <sup>1</sup>	4,402,009,902	7.7	10.2	-3.2	-4.0	7.7	3.0	9.8
BTC EAFE IMI (Gross)			10.2	-3.2	-4.0	7.8	3.0	9.8
<i>MSCI EAFE IMI Custom Index</i>			<u>10.1</u>	<u>-3.3</u>	<u>-4.6</u>	<u>7.3</u>	<u>2.6</u>	<u>9.4</u>
Excess Return (vs. Net)			0.1	0.1	0.6	0.4	0.4	0.4
BTC EAFE Small Cap (Net)	191,562,254	0.3	10.8	-7.7	-8.7	--	--	--
BTC EAFE Small Cap (Gross)			10.8	-7.6	-8.6	--	--	--
<i>MSCI EAFE Small Cap</i>			<u>10.7</u>	<u>-7.9</u>	<u>-9.4</u>	--	--	--
Excess Return (vs. Net)			0.1	0.2	0.7			

<sup>1</sup> BTC EAFE & Canada Funds from 11/1999 - 8/2008; and BTC EAFE & Canada IMI Funds from 8/2008 - Present.  
See Glossary for all custom index definitions.

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	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
BTC Emerging Markets (Net)	1,194,230,152	2.1	9.8	0.5	-7.4	10.5	3.5	8.6
BTC Emerging Markets (Gross)			9.9	0.5	-7.3	10.6	3.6	8.8
<i>MSCI Emerging Markets</i>			<u>9.9</u>	<u>0.6</u>	<u>-7.4</u>	<u>10.7</u>	<u>3.7</u>	<u>8.9</u>
Excess Return (vs. Net)			-0.1	-0.1	0.0	-0.2	-0.2	-0.3
BTC Emerging Markets Small Cap (Net)	130,268,022	0.2	7.6	-4.1	-12.3	5.9	1.6	--
BTC Emerging Markets Small Cap (Gross)			7.7	-4.0	-12.1	6.1	1.8	--
<i>MSCI Emerging Markets Small Cap</i>			<u>7.8</u>	<u>-4.2</u>	<u>-12.4</u>	<u>5.9</u>	<u>1.8</u>	--
Excess Return (vs. Net)			-0.2	0.1	0.1	0.0	-0.2	
BTC Europe Index (Net)	364,208,014	0.6	11.0	-2.4	-3.3	7.1	1.5	9.5
BTC Europe Index (Gross)			11.0	-2.4	-3.3	7.1	1.5	9.5
<i>MSCI Europe</i>			<u>10.8</u>	<u>-2.5</u>	<u>-3.7</u>	<u>6.6</u>	<u>1.0</u>	<u>8.9</u>
Excess Return (vs. Net)			0.2	0.1	0.4	0.5	0.5	0.6
<b>Non-US Developed (Net)</b>	<b>1,413,862,289</b>	<b>2.5</b>						
<b>Non-US Developed (Gross)</b>								
Acadian Developed Markets (Net)	853,958,713	1.5	10.9	-3.7	-3.6	11.3	5.5	11.6
Acadian Developed Markets (Gross)			11.0	-3.4	-3.3	11.7	5.9	12.0
<i>EAFE Custom Benchmark</i>			<u>10.4</u>	<u>-2.4</u>	<u>-3.1</u>	<u>7.3</u>	<u>2.2</u>	<u>8.8</u>
Excess Return (vs. Net)			0.5	-1.3	-0.5	4.0	3.3	2.8
Capital Guardian (Net)	392,011,695	0.7	15.7	0.9	2.5	11.8	4.8	10.3
Capital Guardian (Gross)			15.8	1.2	2.9	12.2	5.2	10.7
<i>EAFE Custom Benchmark</i>			<u>10.4</u>	<u>-2.4</u>	<u>-3.1</u>	<u>7.3</u>	<u>2.2</u>	<u>8.8</u>
Excess Return (vs. Net)			5.3	3.3	5.6	4.5	2.6	1.5
Global Alpha IE EMP (Net)	167,891,881	0.3	11.9	--	--	--	--	--
Global Alpha IE EMP (Gross)			12.2	--	--	--	--	--
<i>MSCI EAFE Small Cap</i>			<u>10.7</u>	--	--	--	--	--
Excess Return (vs. Net)			1.2					

See Glossary for all custom index definitions.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Regional Developed (Net)</b>	<b>1,390,336,344</b>	<b>2.4</b>						
<b>Regional Developed (Gross)</b>								
BTC Euro Tilts (Net)	945,973,809	1.7	11.2	-3.1	-5.3	6.4	2.3	10.2
BTC Euro Tilts (Gross)			11.3	-2.9	-5.0	6.9	2.7	10.7
<i>MSCI Europe</i>			<u>10.8</u>	<u>-2.5</u>	<u>-3.7</u>	<u>6.6</u>	<u>1.0</u>	<u>8.9</u>
Excess Return (vs. Net)			0.4	-0.6	-1.6	-0.2	1.3	1.3
Cevian Capital (Net)	284,558,418	0.5	6.2	-5.5	-1.3	--	--	--
Cevian Capital (Gross)			6.6	-4.4	0.2	--	--	--
<i>MSCI Europe</i>			<u>10.8</u>	<u>-2.5</u>	<u>-3.7</u>	--	--	--
Excess Return (vs. Net)			-4.6	-3.0	2.4			
GAM Pacific Basin (Net)	4,967,553	0.0						
GAM Pacific Basin (Gross)								
Symphony Financial Partners (Net)	154,836,564	0.3	14.1	2.5	12.0	--	--	--
Symphony Financial Partners (Gross)			14.3	3.0	12.8	--	--	--
<i>MSCI Japan Small Cap NR USD</i>			<u>7.1</u>	<u>-9.0</u>	<u>-11.9</u>	--	--	--
Excess Return (vs. Net)			7.0	11.5	23.9			
<b>Emerging Markets (Net)</b>	<b>1,663,958,511</b>	<b>2.9</b>						
<b>Emerging Markets (Gross)</b>								
Acadian Emerging Markets (Net)	373,968,030	0.7	8.8	-2.6	-13.6	9.4	3.0	--
Acadian Emerging Markets (Gross)			8.9	-2.2	-13.2	10.0	3.5	--
<i>MSCI Emerging Markets</i>			<u>9.9</u>	<u>0.6</u>	<u>-7.4</u>	<u>10.7</u>	<u>3.7</u>	--
Excess Return (vs. Net)			-1.1	-3.2	-6.2	-1.3	-0.7	
AQR Emerging Markets (Net)	242,192,206	0.4	10.0	-3.1	-12.5	9.7	2.8	--
AQR Emerging Markets (Gross)			10.2	-2.6	-11.8	10.4	3.5	--
<i>MSCI Emerging Markets</i>			<u>9.9</u>	<u>0.6</u>	<u>-7.4</u>	<u>10.7</u>	<u>3.7</u>	--
Excess Return (vs. Net)			0.1	-3.7	-5.1	-1.0	-0.9	

See Glossary for all custom index definitions.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Genesis (Net)	695,853,836	1.2	15.6	2.9	-4.1	11.0	4.0	11.9
Genesis (Gross)			15.8	3.4	-3.4	11.7	4.7	12.7
<i>MSCI EM IMI Custom Index</i>			<u>9.7</u>	<u>0.0</u>	<u>-8.0</u>	<u>10.1</u>	<u>3.4</u>	<u>9.1</u>
Excess Return (vs. Net)			5.9	2.9	3.9	0.9	0.6	2.8
Lazard Emerging Markets (Net)	351,944,439	0.6	12.1	1.2	-5.3	10.7	4.7	--
Lazard Emerging Markets (Gross)			12.3	1.8	-4.5	11.6	5.6	--
<i>MSCI Emerging Markets</i>			<u>9.9</u>	<u>0.6</u>	<u>-7.4</u>	<u>10.7</u>	<u>3.7</u>	--
Excess Return (vs. Net)			2.2	0.6	2.1	0.0	1.0	
<b>Passive Hedge (Net)</b>	<b>19,852,303</b>	<b>0.0</b>						
<b>Passive Hedge (Gross)</b>								
BTC Passive Currency Hedge (Net)	19,852,303	0.0	0.4	1.7	4.2	1.2	2.0	--
BTC Passive Currency Hedge (Gross)			0.4	1.7	4.3	1.2	2.1	--
<i>50% FX Hedge Index</i>			<u>0.4</u>	<u>1.8</u>	<u>4.3</u>	<u>1.2</u>	<u>2.1</u>	--
Excess Return (vs. Net)			0.0	-0.1	-0.1	0.0	-0.1	
<b>Fixed Income (Net)<sup>1</sup></b>	<b>15,366,041,871</b>	<b>27.0</b>	<b>3.5</b>	<b>4.5</b>	<b>4.4</b>	<b>4.1</b>	<b>3.5</b>	<b>6.0</b>
<b>Fixed Income (Gross)</b>			<b>3.5</b>	<b>4.6</b>	<b>4.6</b>	<b>4.4</b>	<b>3.7</b>	<b>6.2</b>
<i>FI Custom Index</i>			<u>3.3</u>	<u>4.8</u>	<u>4.5</u>	<u>2.6</u>	<u>3.0</u>	<u>4.4</u>
Excess Return (vs. Net)			0.2	-0.3	-0.1	1.5	0.5	1.6
<i>BBgBarc US Universal TR</i>			3.3	4.8	4.5	2.6	3.0	4.4
Credit Transition Account (Net)	2,303,321	0.0						
Credit Transition Account (Gross)								
Investment Grade Transition Account (Net)	3,978,445	0.0						
Investment Grade Transition Account (Gross)								

<sup>1</sup> Does not include cash. The performance and market values of two opportunistic managers are reported with a one-month lag.  
See Glossary for all custom index definitions.

As of March 31, 2019

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Core (Net)</b>	<b>8,941,113,785</b>	<b>15.7</b>						
<b>Core (Gross)</b>								
BTC US Debt Index (Net)	5,851,496,060	10.3	3.0	4.7	4.6	2.1	2.9	3.9
BTC US Debt Index (Gross)			3.0	4.7	4.6	2.1	2.9	3.9
<i>BBgBarc US Aggregate TR</i>			<u>2.9</u>	<u>4.6</u>	<u>4.5</u>	<u>2.0</u>	<u>2.7</u>	<u>3.8</u>
Excess Return (vs. Net)			0.1	0.1	0.1	0.1	0.2	0.1
Dodge & Cox (Net)	1,344,482,226	2.4	3.6	4.8	4.6	3.8	3.5	5.9
Dodge & Cox (Gross)			3.6	4.9	4.7	3.9	3.6	6.0
<i>BBgBarc US Aggregate TR</i>			<u>2.9</u>	<u>4.6</u>	<u>4.5</u>	<u>2.0</u>	<u>2.7</u>	<u>3.8</u>
Excess Return (vs. Net)			0.7	0.2	0.1	1.8	0.8	2.1
Pugh Capital Management (Net)	345,015,814	0.6	3.1	4.7	4.5	2.0	2.7	4.2
Pugh Capital Management (Gross)			3.1	4.8	4.7	2.2	2.9	4.4
<i>BBgBarc US Aggregate TR</i>			<u>2.9</u>	<u>4.6</u>	<u>4.5</u>	<u>2.0</u>	<u>2.7</u>	<u>3.8</u>
Excess Return (vs. Net)			0.2	0.1	0.0	0.0	0.0	0.4
Wells Capital Management (Net)	1,400,119,684	2.5	3.0	4.6	4.5	2.3	3.0	4.8
Wells Capital Management (Gross)			3.0	4.7	4.6	2.4	3.1	4.9
<i>BBgBarc US Aggregate TR</i>			<u>2.9</u>	<u>4.6</u>	<u>4.5</u>	<u>2.0</u>	<u>2.7</u>	<u>3.8</u>
Excess Return (vs. Net)			0.1	0.0	0.0	0.3	0.3	1.0
<b>Core Plus (Net)</b>	<b>2,292,711,608</b>	<b>4.0</b>						
<b>Core Plus (Gross)</b>								
Dolan McEniry Capital Management (Net)	62,585	0.0						
Dolan McEniry Capital Management (Gross)								
Loomis, Sayles & Co. (Net)	9,629,989	0.0						
Loomis, Sayles & Co. (Gross)								

See Glossary for all custom index definitions.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
PIMCO (Net)	1,104,526,784	1.9	3.4	4.9	5.5	3.8	3.6	5.4
PIMCO (Gross)			3.4	5.1	5.7	4.1	3.8	5.7
<i>BBgBarc US Aggregate TR</i>			<u>2.9</u>	<u>4.6</u>	<u>4.5</u>	<u>2.0</u>	<u>2.7</u>	<u>3.8</u>
Excess Return (vs. Net)			0.5	0.3	1.0	1.8	0.9	1.6
Western Asset Management (Net)	1,178,492,250	2.1	4.0	5.3	4.0	3.2	3.6	7.0
Western Asset Management (Gross)			4.1	5.4	4.1	3.4	3.8	7.1
<i>BBgBarc US Aggregate TR</i>			<u>2.9</u>	<u>4.6</u>	<u>4.5</u>	<u>2.0</u>	<u>2.7</u>	<u>3.8</u>
Excess Return (vs. Net)			1.1	0.7	-0.5	1.2	0.9	3.2
<b>High Yield (Net)</b>	<b>428,111,270</b>	<b>0.8</b>						
<b>High Yield (Gross)</b>								
Oaktree Capital Management (Net)	426,598,571	0.7	7.0	5.2	5.6	6.5	3.7	9.2
Oaktree Capital Management (Gross)			7.1	5.5	6.0	6.9	4.2	9.7
<i>BBG BARC Ba to B US HY</i>			<u>7.2</u>	<u>5.7</u>	<u>6.4</u>	<u>7.6</u>	<u>4.6</u>	<u>10.0</u>
Excess Return (vs. Net)			-0.2	-0.5	-0.8	-1.1	-0.9	-0.8
PENN Capital Management (Net)	1,512,699	0.0						
PENN Capital Management (Gross)								
<b>Opportunistic (Net)</b>	<b>3,669,321,405</b>	<b>6.4</b>						
<b>Opportunistic (Gross)</b>								
Aberdeen Asset Management (Net)	407,770,473	0.7	7.3	7.0	0.4	--	--	--
Aberdeen Asset Management (Gross)			7.4	7.2	0.8	--	--	--
<i>Opportunistic EMD Custom</i>			<u>5.5</u>	<u>6.5</u>	<u>1.3</u>	--	--	--
Excess Return (vs. Net)			1.8	0.5	-0.9			
Ashmore Investment Management (Net)	410,812,835	0.7	5.6	6.9	-1.0	--	--	--
Ashmore Investment Management (Gross)			5.8	7.3	-0.4	--	--	--
<i>Opportunistic EMD Custom</i>			<u>5.5</u>	<u>6.5</u>	<u>1.3</u>	--	--	--
Excess Return (vs. Net)			0.1	0.4	-2.3			

See Glossary for all custom index definitions.



As of March 31, 2019

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Bain Capital (Net)	364,953,455	0.6	4.4	3.3	4.6	7.8	--	--
Bain Capital (Gross)			4.6	3.8	5.3	8.6	--	--
<i>Opportunistic Custom Index</i>			<u>5.5</u>	<u>3.7</u>	<u>4.6</u>	<u>7.2</u>	--	--
Excess Return (vs. Net)			-1.1	-0.4	0.0	0.6		
Beach Point Capital (Net)	462,113,606	0.8	5.9	5.9	6.9	9.0	6.5	--
Beach Point Capital (Gross)			4.9	5.5	6.6	10.7	7.8	--
<i>Opportunistic Custom Index</i>			<u>5.5</u>	<u>3.7</u>	<u>4.6</u>	<u>7.2</u>	<u>4.3</u>	--
Excess Return (vs. Net)			0.4	2.2	2.3	1.8	2.2	
Brigade Capital Management (Net)	578,364,456	1.0	4.0	1.0	2.5	9.5	3.9	--
Brigade Capital Management (Gross)			4.2	1.6	3.2	10.3	4.7	--
<i>Brigade Custom Index</i>			<u>5.5</u>	<u>4.1</u>	<u>4.9</u>	<u>6.7</u>	<u>4.2</u>	--
Excess Return (vs. Net)			-1.5	-3.1	-2.4	2.8	-0.3	
Crescent Capital Group (Net)	432,749,150	0.8	2.9	2.7	3.3	7.0	--	--
Crescent Capital Group (Gross)			3.1	3.1	3.9	7.6	--	--
<i>Opportunistic Custom Index</i>			<u>5.5</u>	<u>3.7</u>	<u>4.6</u>	<u>7.2</u>	--	--
Excess Return (vs. Net)			-2.6	-1.0	-1.3	-0.2		
Doubleline Capital (Net)	329,013,482	0.6	2.2	3.8	4.5	4.2	--	--
Doubleline Capital (Gross)			2.3	4.4	5.3	5.0	--	--
<i>Securitized Custom Index</i>			<u>3.2</u>	<u>7.3</u>	<u>8.6</u>	<u>5.9</u>	--	--
Excess Return (vs. Net)			-1.0	-3.5	-4.1	-1.7		
Principal Opportunistic (Net)	13,852,302	0.0						
Principal Opportunistic (Gross)								
TCW (Net)	332,524,274	0.6	1.6	3.0	3.7	4.5	--	--
TCW (Gross)			1.8	3.4	4.3	5.1	--	--
<i>Securitized Custom Index</i>			<u>3.2</u>	<u>7.3</u>	<u>8.6</u>	<u>5.9</u>	--	--
Excess Return (vs. Net)			-1.6	-4.3	-4.9	-1.4		

See Glossary for all custom index definitions.





			As of March 31, 2019					
	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Tennenbaum Capital (Net) <sup>1</sup>	330,773,883	0.6	1.8	5.8	7.5	9.8	--	--
Tennenbaum Capital (Gross)			2.0	6.4	8.4	10.8	--	--
<i>Credit Suisse Leveraged Loan (1 month lagged)</i>			<u>1.5</u>	<u>2.8</u>	<u>3.8</u>	<u>6.9</u>	--	--
Excess Return (vs. Net)			0.3	3.0	3.7	2.9		
Western Opportunistic (Net)	6,393,489	0.0						
Western Opportunistic (Gross)								
<b>Mortgage Program (Net)</b>	<b>28,502,038</b>	<b>0.0</b>						
<b>Mortgage Program (Gross)</b>								
Member Home Loan Program (MHLP) (Net)	28,502,038	0.0	1.3	3.9	8.9	7.9	6.2	5.4
Member Home Loan Program (MHLP) (Gross)			1.3	4.1	9.1	8.2	6.5	5.6
<b>Real Estate (Net)<sup>2</sup></b>	<b>6,494,644,085</b>	<b>11.4</b>	<b>1.8</b>	<b>7.0</b>	<b>9.9</b>	<b>8.3</b>	<b>9.8</b>	<b>5.2</b>
<b>Real Estate (Gross)</b>			<b>2.0</b>	<b>7.6</b>	<b>10.8</b>	<b>9.1</b>	<b>10.7</b>	<b>6.1</b>
<i>Real Estate Target</i>			<u>1.6</u>	<u>5.6</u>	<u>7.8</u>	<u>7.7</u>	<u>9.8</u>	<u>7.8</u>
Excess Return (vs. Net)			0.2	1.4	2.1	0.6	0.0	-2.6
<b>Private Equity (Net)</b>	<b>5,440,901,267</b>	<b>9.5</b>	<b>-0.2</b>	<b>8.4</b>	<b>13.0</b>	<b>14.5</b>	<b>13.5</b>	<b>14.7</b>
<b>Private Equity (Gross)</b>			<b>-0.1</b>	<b>8.5</b>	<b>13.1</b>	<b>14.5</b>	<b>13.6</b>	<b>14.7</b>
<i>Private Equity Target</i>			<u>4.5</u>	<u>12.6</u>	<u>16.7</u>	<u>14.1</u>	<u>13.9</u>	<u>11.3</u>
Excess Return (vs. Net)			-4.7	-4.2	-3.7	0.4	-0.4	3.4
<b>Commodities (Net)</b>	<b>1,331,975,963</b>	<b>2.3</b>	<b>7.6</b>	<b>-5.6</b>	<b>-4.7</b>	<b>4.0</b>	<b>-7.6</b>	<b>-0.5</b>
<b>Commodities (Gross)</b>			<b>7.7</b>	<b>-5.3</b>	<b>-4.4</b>	<b>4.3</b>	<b>-7.3</b>	<b>0.0</b>
<i>Bloomberg Commodity Index TR USD</i>			<u>6.3</u>	<u>-5.6</u>	<u>-5.3</u>	<u>2.2</u>	<u>-8.9</u>	<u>-2.6</u>
Excess Return (vs. Net)			1.3	0.0	0.6	1.8	1.3	2.1

<sup>1</sup> Portfolio and benchmark are reported with a one-month lag.

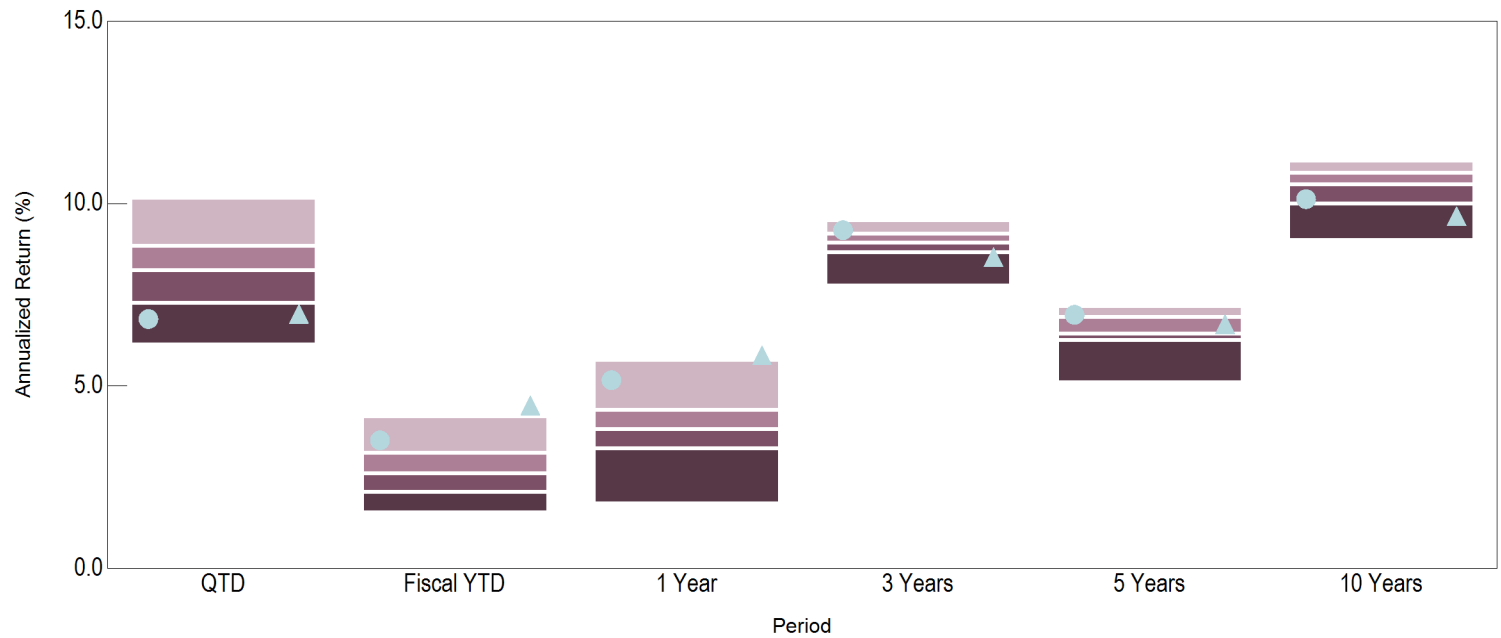
<sup>2</sup> Portfolio reported on a quarterly basis with a one quarter lag. Benchmark is reported with a one quarter lag.  
See Glossary for all custom index definitions.

As of March 31, 2019

	Market Value (\$)	% of Portfolio	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Credit Suisse (Net)	427,805,598	0.8	6.5	-6.1	-5.9	2.4	-8.6	--
Credit Suisse (Gross)			6.5	-5.9	-5.7	2.7	-8.3	--
<i>Bloomberg Commodity Index TR USD</i>			<u>6.3</u>	<u>-5.6</u>	<u>-5.3</u>	<u>2.2</u>	<u>-8.9</u>	--
Excess Return (vs. Net)			0.2	-0.5	-0.6	0.2	0.3	
Neuberger Berman/Gresham (Net)	453,872,806	0.8	8.1	-5.9	-3.8	4.5	-7.6	-0.1
Neuberger Berman/Gresham (Gross)			8.2	-5.6	-3.4	4.9	-7.2	0.2
<i>Bloomberg Commodity Index TR USD</i>			<u>6.3</u>	<u>-5.6</u>	<u>-5.3</u>	<u>2.2</u>	<u>-8.9</u>	<u>-2.6</u>
Excess Return (vs. Net)			1.8	-0.3	1.5	2.3	1.3	2.5
PIMCO Commodities (Net)	450,297,560	0.8	8.1	-4.7	-4.5	4.7	-6.8	-0.3
PIMCO Commodities (Gross)			8.2	-4.5	-4.1	5.1	-6.4	0.2
<i>Bloomberg Commodity Index TR USD</i>			<u>6.3</u>	<u>-5.6</u>	<u>-5.3</u>	<u>2.2</u>	<u>-8.9</u>	<u>-2.6</u>
Excess Return (vs. Net)			1.8	0.9	0.8	2.5	2.1	2.3
<b>Hedge Funds (Net)<sup>1</sup></b>	<b>1,849,749,797</b>	<b>3.2</b>	<b>0.7</b>	<b>-0.5</b>	<b>0.1</b>	<b>4.4</b>	<b>2.3</b>	<b>--</b>
<b>Hedge Funds (Gross)</b>			<b>0.7</b>	<b>-0.4</b>	<b>0.2</b>	<b>4.5</b>	<b>2.4</b>	<b>--</b>
<i>Hedge Fund Custom Index</i>			<u>1.8</u>	<u>5.4</u>	<u>7.1</u>	<u>6.2</u>	<u>5.7</u>	--
Excess Return (vs. Net)			-1.1	-5.9	-7.0	-1.8	-3.4	
<b>Cash (Net)</b>	<b>1,481,749,082</b>	<b>2.6</b>	<b>0.7</b>	<b>2.0</b>	<b>2.5</b>	<b>1.5</b>	<b>1.1</b>	<b>1.4</b>
<b>Cash (Gross)</b>			<b>0.7</b>	<b>2.0</b>	<b>2.5</b>	<b>1.6</b>	<b>1.1</b>	<b>1.4</b>
<i>FTSE 6 Month T-Bill</i>			<u>0.6</u>	<u>1.7</u>	<u>2.2</u>	<u>1.2</u>	<u>0.8</u>	<u>0.5</u>
Excess Return (vs. Net)			0.1	0.3	0.3	0.3	0.3	0.9

<sup>1</sup> Portfolio and benchmark are reported with a one-month lag.  
See Glossary for all custom index definitions. Yearly returns are annualized.

InvestorForce Public DB > \$5B Gross Return Comparison



	Return (Rank)											
5th Percentile	10.2		4.2		5.7		9.5		7.2		11.2	
25th Percentile	8.9		3.2		4.4		9.2		6.9		10.9	
Median	8.2		2.6		3.8		8.9		6.4		10.5	
75th Percentile	7.3		2.1		3.3		8.7		6.3		10.0	
95th Percentile	6.1		1.5		1.8		7.8		5.1		9.0	
# of Portfolios	17		16		16		16		16		14	
● Total Fund	6.8	(79)	3.5	(18)	5.2	(16)	9.3	(13)	7.0	(23)	10.1	(72)
▲ Total Fund Policy Benchmark	7.0	(78)	4.5	(2)	5.8	(2)	8.5	(81)	6.7	(32)	9.7	(81)



**Benchmark History**

As of March 31, 2019

Total Fund		
7/1/2018	Present	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)
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

As of March 31, 2019

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**

May 6, 2019

TO: Each Member  
Board of InvestmentsFROM: Michael D. Herrera   
Senior Staff Counsel

FOR: Board of Investments Meeting of May 15, 2019

**SUBJECT: Securities Litigation Report For Calendar Year 2018****Securities Litigation Policy**

In March 2001, the Board of Investments adopted a Securities Litigation Policy to formalize the Legal Office's securities class action monitoring and evaluation function, and implement procedures designed to enhance LACERA's recovery of damages from corporate wrongdoers. As a result of its efforts and success over the years, LACERA is widely viewed as a leader in this area and its Policy has served as a model for public pension funds throughout the country. A copy of the current Policy is attached for ease of reference.

We are pleased to report that LACERA recovered over \$1.18 million in securities class action settlement proceeds in calendar year 2018. Significantly, this now brings the total amount recovered by the Legal Office on behalf of the fund to over \$72 million since the Board first adopted its Policy in 2001. This includes recoveries obtained through the successful prosecution of securities cases, and our ongoing securities claims filing efforts. The following is a breakdown of the amounts recovered on an annual basis since 2001:

<b>Year</b>	<b>Recovery</b>	<b>Year</b>	<b>Recovery</b>
2001	\$ 4,517,547.94	2010	\$ 3,722,892.78
2002	\$ 2,261,807.59	2011	\$ 3,389,833.73
2003	\$ 4,169,433.87	2012	\$ 1,674,197.34
2004	\$ 2,864,029.34	2013	\$ 3,734,841.01
2005	\$ 1,684,734.35	2014	\$ 2,427,465.00
2006	\$ 20,734,575.09	2015	\$ 2,127,080.76
2007	\$ 6,335,155.06	2016	\$ 2,189,274.71
2008	\$ 3,513,037.39	2017	\$ 2,306,483.22
2009	\$ 3,437,147.76	2018	\$ 1,188,585.75
		<b>Total</b>	<b>\$ 72,278,122.72</b>

**Background**

Congress passed the Private Securities Litigation Reform Act (the "PSLRA") in 1995 to address concerns about the influence of "professional plaintiffs" and class action attorneys. To this end, the PSLRA contains provisions intended to encourage participation by sophisticated institutional investors. For example, the PSLRA contains a "lead plaintiff" provision and class notification process aimed at giving the plaintiff(s) with the largest financial interest at stake (presumably, institutional investors) the right to control the course of the litigation and to select, subject to court approval, lead counsel for the class.

Although Congress intended to encourage institutional investors to serve as lead plaintiff, the PSLRA itself does not create any such duty. However, the United States Department of Labor has since stated that “not only is a fiduciary not prohibited from serving as lead plaintiff, the Secretary believes that a fiduciary has an affirmative duty to determine whether it would be in the interest of the plan participants to do so.” The Secretary also affirmed its earlier position that “it may not only be prudent to initiate litigation, but also a breach of a fiduciary’s duty to not pursue a valid claim.”<sup>1</sup>

### **Global Coverage**

In 2010, the United States Supreme Court decided a case that significantly changed the securities litigation landscape. In *Morrison v. National Australia Bank Ltd.*, 130 S.Ct. 2869 (2010), the Supreme Court for the first time held that investors can only bring federal securities fraud claims in U.S. courts if the securities were purchased or sold in the U.S. and/or listed on a domestic exchange, regardless of where the fraud or wrongdoing occurred. As a result, investors like LACERA who purchase securities outside the U.S. and/or on a foreign exchange can no longer rely on U.S. courts to protect their interests. The Board acted quickly to adopt a “global” policy to ensure LACERA continues to meet its fiduciary duty by identifying, monitoring and evaluating securities actions in which the fund has an interest, *both foreign and domestic*, and pursuing such claims when and in a manner the Board determines is in the best interest of the fund.

### **Identification and Evaluation of Securities Cases**

With a significant portion of its portfolio invested in equity and debt securities, LACERA is in a position to seek recovery from issuers and others who engage in wrongful acts that diminish the value of these securities. Accordingly, the Policy provides that the Legal Office shall actively identify, evaluate, and monitor securities cases on behalf of LACERA, *both foreign and domestic*, and recommend to the Board of Investments that the fund take an active role in those cases where: (i) LACERA’s estimated loss is \$2 million or more, or \$1 million if LACERA will join with one or more other public retirement funds in pursuing such action, and; (ii) the Legal Office has determined the case to be meritorious and the best interest of the fund will be served through active involvement.

We accomplish the herculean task of identifying, monitoring and evaluating securities actions in which the fund has an interest, *both foreign and domestic*, by engaging U.S. law firms with significant securities litigation experience and expertise to serve as monitoring counsel. Through an arrangement with LACERA’s custodian, the law firms obtain LACERA’s trading and holdings data directly from the custodian. In cases where LACERA has suffered a significant loss, the firms will report these cases to us.

Once the Legal Office determines that a case satisfies the initial loss threshold, we will then evaluate the case to determine whether the case has merit and the best interest of LACERA will be served through active involvement. Since the Board first adopted the Policy, the Legal Office has evaluated or conducted formal requests for proposals in connection with hundreds of significant securities cases.

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<sup>1</sup> Secretary of Laborer’s Memorandum of Law as Amicus Curiae in Support of the Florida State Board of Administration’s Appointment as lead plaintiff in In re Telxon Corp. Securities Litigation, 67 F.Supp.2d 803 (N.D. Ohio, 1999).



### **Active Participation**

Since the Board adopted the Policy, LACERA has taken and continues to take an active role in securities cases, either as court-appointed lead or named plaintiff in a class action, or by opting out and bringing an individual action. We will continue to keep the Board apprised of significant developments in LACERA's pending cases under separate cover.

Additionally, in cases where LACERA is a putative class member and the outcome of the case or ruling on a significant issue could adversely impact LACERA, the Legal Office will recommend that the Board authorize LACERA to file an amicus curiae ("friend of the court") brief in support of the shareholder plaintiff(s).

### **Asset Recovery**

Virtually every public pension fund with significant funds invested in the securities markets is a passive member of the numerous securities class actions filed every year on behalf of defrauded investors. With a significant portion of its portfolio invested in equity and debt securities, LACERA is eligible to seek recovery of its losses stemming from corporate wrongdoing. Failing to timely and accurately file a claim in these actions after they settle can result in the fund missing out on its share of the millions of dollars recovered every year in these actions. Under the Board's Securities Litigation Policy, the Legal Office therefore implements and oversees procedures designed to ensure LACERA obtains its share of recoveries from these lawsuits, which includes active participation as a lead or named plaintiff, or by filing proofs of claim to share in the resulting settlements.

LACERA has historically relied on its custodians to perform this claims filing function. As discussed in our separate memo regarding our recent search for a new claims filing agent, the Legal Office retained Institutional Investor Services (ISS) to perform this service for LACERA. LACERA's agreement with ISS provides that the firm will identify and review all class action settlements in which LACERA has an interest, provide timely notice of those settlements to the Legal Office, submit correct and timely claims on LACERA's behalf, and provide reports regarding its efforts.

As noted above, these efforts have resulted in the recovery by the fund of over \$1.18 million in securities class action claims in 2018, and over \$72 million total since the Board adopted its Policy in 2001.

Reviewed and Approved:



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Steven P. Rice  
Chief Counsel

Attachment

cc: Lou Lazatin  
JJ Popowich  
Jonathan Gabel

# **ATTACHMENT A**



## BOARD OF INVESTMENTS SECURITIES LITIGATION POLICY

### PURPOSE

The Board of Investments adopts this policy to establish procedures and guidelines for monitoring and participating in securities class actions as appropriate to protect LACERA's interests. For purposes of this policy, a securities class action includes, but is not limited to, an action alleging claims under state and/or federal securities and antitrust laws and regulations, as well as similar claims arising under the laws and/or regulations of foreign jurisdictions.

### PRINCIPLES

As a large institutional shareholder, LACERA is frequently a class member in securities class actions that seek to recover damages resulting from alleged wrongful acts or omissions of others.

The enactment by Congress of the Private Securities Litigation Reform Act ("PSLRA") in 1995 allows institutional investors and other large shareholders to seek appointment as lead or named plaintiff in a securities class action pending within the United States under U.S. federal securities laws. The lead or named plaintiff in a securities class action gains the right to supervise and control, or assist in the supervision or control, of the prosecution of such case.

Since enactment of the PSLRA, it has been demonstrated that active participation in a securities class action by large, sophisticated shareholders, particularly institutional shareholders, has resulted in lower attorney's fees and significantly larger recoveries on behalf of shareholders. The United States Securities and Exchange Commission and leaders in the legal community have commented that the governing board of a public pension system has a fiduciary duty to monitor securities class actions in which the system has an interest, and to participate as lead plaintiff where such participation is likely to enhance the recovery by members of the class.

In 2010, the United States Supreme Court in *Morrison v. National Australia Bank* ("Morrison") held that certain investor losses stemming from corporate wrongdoing cannot be pursued under federal securities laws. Specifically, the Supreme Court held that investors cannot bring or participate in a U.S. securities class action if their claims are based on securities they purchased outside the United States. As a result, investors must now identify and evaluate foreign securities actions in order to fully protect their interests, including the right to participate in such actions and share in any recovery.

### STATEMENT OF FUNCTIONS AND RESPONSIBILITIES

#### 1. Review of Class Action Filings

The Legal Office shall identify and evaluate securities class actions, brought or pending within the United States and in foreign jurisdictions, in which LACERA may have recognized losses. In this connection, the Legal Office may retain a vendor specializing in identifying and analyzing securities cases to perform this function, and to report its findings to the

Legal Office on a timely basis. The Legal Office may also select and retain one or more private law firms to identify and evaluate class action filings and, if the firm determines that LACERA's estimated loss meets the thresholds for Active Participation set forth below in Section 3(b), to report its findings to the Legal Office with a recommendation as to whether the case would be meritorious and worthy of further investigation or Active Participation by LACERA.

## 2. Active Case Monitoring

The Legal Office shall actively monitor each case in which the Legal Office has determined the case has merit and LACERA's estimated loss is \$2 million or more. Active monitoring may include participation by the Legal Office in significant motions and in settlement discussions when permitted by the parties or the court.

## 3. Active Participation

The Legal Office shall recommend to the Board of Investments that LACERA take an active role in a securities class action beyond monitoring, which may include, but is not limited to, seeking appointment as a lead or named plaintiff, or opting out of the class action and pursuing an individual action, in cases where:

(a) the Legal Office, after consulting with outside counsel, has determined the case has merit and the best interests of LACERA will be served by taking such action, and;

(b) LACERA's estimated loss is \$2 million or more, or LACERA's estimated loss exceeds \$1 million and LACERA will join with one or more other public retirement funds in pursuing such action.

In addition, the Legal Office shall recommend to the Board of Investments that LACERA take an active role in a securities class action by filing an amicus curiae (friend-of-the-court) brief in those cases where the criteria set forth in Section 3(a) is satisfied.

Recommendations on whether to take an active role in a securities class action shall be submitted for approval, in advance, to the Board of Investments at a regularly-scheduled meeting or, where immediate approval is necessary, at a specially-called meeting. However, where the Chief Executive Officer determines that immediate approval is required in order to preserve LACERA's rights and/or interests by taking such action, and the matter cannot be timely presented for approval at a regularly-scheduled or special meeting of the Board, or where a quorum cannot be reached at such meeting, the Chief Executive Officer is authorized, after consultation with the Chief Counsel, Chief Investments Officer, and Chair of the Board of Investments, to make the decision. In the event such authority is exercised, the Chief Executive Officer shall instruct the Legal Office to concurrently notify the Board of Investments, and provide a summary of the action at the next regularly-scheduled meeting of the Board. Notwithstanding the foregoing, recommendations on whether to commence new litigation, as in the case of opting out of an existing securities class action and pursuing an individual action, shall be submitted to the Board of Investments for approval.

For purposes of this policy, a foreign securities action is defined as a lawsuit brought or pending outside the United States involving securities purchased on a foreign securities exchange by LACERA or on its behalf. Participation as a class member in a foreign

securities action, if participation in such foreign action requires registration or other affirmative action by LACERA, shall be considered “Active Participation” and shall be submitted to the Board of Investments for approval.

#### 4. Asset Recovery

LACERA’s claims filing agent shall be responsible for filing all proofs of claim, including the necessary supporting documents and information, necessary to recover assets in every securities class action brought or pending within the United States and in foreign jurisdictions in which LACERA has suffered losses. In this connection, the Legal Office shall prepare, and revise as necessary, a retainer agreement and statement of work setting forth formalized claims filing procedures for the claims filing agent to follow, which shall include identifying and reviewing all class action settlements, providing timely notice of each settlement to LACERA, filing claims correctly and timely on LACERA’s behalf, and providing quarterly reports regarding its efforts. The Legal Office, in consultation with the Financial Accounting and Services Division, shall monitor the performance of the claims filing agent in that regard. The claims filing agent shall submit quarterly reports on the securities litigation proceeds recovered, which information shall be shared with the Board.

#### 5. Reports to the Board

The Legal Office shall provide the Board of Investments with annual reports covering its responsibilities under this policy. In addition, the Legal Office shall provide the Board with status reports as needed to keep the Board apprised of major developments in cases in which LACERA is a party.

#### 6. Retention of Outside Counsel

The Legal Office shall retain one or more private law firms with demonstrated expertise and experience in prosecuting securities class actions (the “Securities Litigation Counsel”) to advise and/or represent LACERA in securities actions. All retainer agreements shall be negotiated by the Legal Office and submitted for approval, in advance, to the Board of Investments at a regularly-scheduled meeting or, where immediate approval is necessary, at a specially-called meeting. However, where it is determined that immediate approval is required in order to preserve LACERA’s rights and/or interests by retaining such counsel, and the matter cannot be timely presented for approval at a regularly-scheduled or special meeting of the Board, or where a quorum cannot be reached at such meeting, the Chief Executive Officer is authorized, after consultation with the Chief Counsel, Chief Investments Officer, and Chair of the Board of Investments, to make the decision. In the event such authority is exercised, the Chief Executive Officer shall instruct the Legal Office to concurrently notify the Board of Investments, and provide a summary of the action at the next regularly-scheduled meeting of the Board.

### CHANGES TO CURRENT PRACTICE

The Legal Office has been monitoring securities class actions since passage by Congress of the PSLRA and has been evaluating the merits of LACERA taking an active role in such actions in which LACERA has a significant financial interest. The adoption of this policy will formalize the monitoring function being carried out by the Legal Office, and will create additional responsibilities for the Board of Investments and the Legal Office.

No additional staffing requirements or significant expense will result from the implementation of this policy.

Legal/SecuritiesLit/Securities Lit Policy\_Revised\_102217\_FINAL

Policy Revised: November 2, 2017

Policy Revised: November 9, 2011

Policy Revised: April 29, 2010

Policy Adopted: March 28, 2001

**FOR INFORMATION ONLY**

April 20, 2019

TO: Each Member  
Board of Retirement  
Board of Investments

FROM: Barry W. Lew  
Legislative Affairs Officer

FOR: May 1, 2019 Board of Retirement Meeting  
May 15, 2019 Board of Investments Meeting

SUBJECT: **Monthly Status Report on Legislation**

Attached is the monthly report on the status of legislation that staff is monitoring or on which LACERA has adopted a position.

**Reviewed and Approved:**



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**Steven P. Rice, Chief Counsel**

**Attachment**

LACERA Legislative Report

cc: Lou Lazatin  
John Popowich  
Steven P. Rice  
Jon Gabel  
Anthony J. Roda, Williams & Jensen  
Joe Ackler, Ackler & Associates

LACERA Legislative Report  
2019-2020 Legislative Session  
Status as of April 20, 2019

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File name: CERL-PEPRA-2019

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CA AB 472	<b>AUTHOR:</b> Voepel [R] <b>TITLE:</b> Public Employees' Retirement <b>INTRODUCED:</b> 02/11/2019 <b>SUMMARY:</b> Makes nonsubstantive changes to existing law which prescribes limits on service after retirement without reinstatement into the applicable retirement system. <b>STATUS:</b> 02/11/2019 INTRODUCED. <b>Staff_Action:</b> Monitoring
CA AB 664	<b>AUTHOR:</b> Cooper [D] <b>TITLE:</b> County Employees' Retirement: Permanent Incapacity <b>INTRODUCED:</b> 02/15/2019 <b>LAST AMEND:</b> 03/13/2019 <b>SUMMARY:</b> Requires, for purposes of determining permanent incapacity of certain members employed as peace officers in Sacramento County, that those members be evaluated by the retirement system to determine if they can perform all of the usual and customary duties of a peace officer. Requires the Board of Retirement to develop a method of tracking the costs of providing permanent disability retirement to the members who become eligible for disability retirement. <b>STATUS:</b> 04/03/2019 In ASSEMBLY Committee on PUBLIC EMPLOYMENT AND RETIREMENT: Not heard. <b>Comments:</b> In 2017, the Board of Retirement adopted a Neutral position on AB 283 (Cooper), a similar bill by the same author. <b>IBLC_Recommendation:</b> Support 04/11/2019 <b>Staff_Recommendation:</b> Watch
CA AB 979	<b>AUTHOR:</b> Reyes [D] <b>TITLE:</b> Judge's Retirement System II: Deferred Retirement <b>INTRODUCED:</b> 02/21/2019 <b>SUMMARY:</b> Authorizes a judge who is a member of the Judge's Retirement system to retire upon attaining both 63 years of age and 15 or more years of service, or when a judge who has accrued at least 5 years of service and who has not received specified discipline is defeated for reelection. <b>STATUS:</b> 03/04/2019 To ASSEMBLY Committee on PUBLIC EMPLOYMENT AND RETIREMENT. <b>Comments:</b> AB 979 proposes structural changes to the retirement eligibility provisions for judges and a different employee contribution percentage than that which is currently prescribed in PEPRA. <b>Staff_Action:</b> Monitoring
CA AB 1198	<b>AUTHOR:</b> Stone [D] <b>TITLE:</b> Public Employees' Retirement: Pension Reform



**INTRODUCED:** 02/21/2019

**LAST AMEND:** 03/21/2019

**SUMMARY:**

Excepts transit workers hired before a specified date, from the Public Employees' Pension Reform Act, or PEPRA, by removing the federal district court contingency language from the provision excepting certain transit workers from PEPRA.

**STATUS:**

03/21/2019 To ASSEMBLY Committee on PUBLIC EMPLOYMENT AND RETIREMENT.

03/21/2019 From ASSEMBLY Committee on PUBLIC EMPLOYMENT AND RETIREMENT With author's amendments.

03/21/2019 In ASSEMBLY. Read second time and amended.  
Re-referred to Committee on PUBLIC EMPLOYMENT AND RETIREMENT.

**Comments:**

The bill affects those retirement systems whose members include transit workers and whether they are subject to PEPRA.

**Staff\_Action:** Monitoring

CA SB 430

**AUTHOR:** Wieckowski [D]

**TITLE:** Public Employees Retirement Benefits: Judges

**INTRODUCED:** 02/21/2019

**SUMMARY:**

Relates to the State Public Employees' Pension Reform Act of 2013. Excludes from the definition of "new member" a judge, as defined in specified existing law, elected to office before a certain date.

**STATUS:**

04/10/2019 From SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT: Do pass to Committee on APPROPRIATIONS. (3-0)

**Staff\_Action:** Monitoring

CA SB 783

**AUTHOR:** Labor, Public Employment & Retirement Cmt

**TITLE:** County Employees Retirement Law of 1937

**INTRODUCED:** 03/07/2019

**SUMMARY:**

Corrects several erroneous and obsolete cross references within the County Employees Retirement Law of 1937.

**STATUS:**

03/20/2019 To SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT.

**Staff\_Action:** Monitoring

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File name: Federal-2019

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US HR 141

**SPONSOR:** Davis R [R]

**TITLE:** Government Pension Offset Repeal

**INTRODUCED:** 01/03/2019

**SUMMARY:**

Amends Title II of the Social Security Act; repeals the Government pension offset and windfall elimination provisions.

**STATUS:**

01/31/2019 In HOUSE Committee on WAYS AND MEANS: Referred to

**BOR\_Position:** Subcommittee on SOCIAL SECURITY.  
Support 04/11/2019  
**IBLC\_Recommendation:** Support 03/14/2019  
**Staff\_Recommendation:** Support

US S 521

**SPONSOR:** Brown S [D]  
**TITLE:** Government Pension Offset Repeal  
**INTRODUCED:** 02/14/2019  
**SUMMARY:**

Amends Title II of the Social Security Act; repeals the Government pension offset and windfall elimination provisions.

**STATUS:**

02/14/2019 INTRODUCED.  
02/14/2019 In SENATE. Read second time.  
02/14/2019 To SENATE Committee on FINANCE.  
**BOR\_Position:** Support 04/11/2019  
**IBLC\_Recommendation:** Support 03/14/2019  
**Staff\_Recommendation:** Support

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File name: Other-2019

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CA AB 287

**AUTHOR:** Voepel [R]  
**TITLE:** Public Employees' Retirement: Annual Audits  
**INTRODUCED:** 01/28/2019  
**SUMMARY:**

Requires each state and local pension or retirement system to post a concise annual audit of the investments and earnings of the system on that system's internet website no later than the ninetieth day following the audit's completion.

**STATUS:**

02/07/2019 To ASSEMBLY Committee on PUBLIC EMPLOYMENT AND RETIREMENT.  
**IBLC\_Recommendation:** Support 04/11/2019  
**Staff\_Recommendation:** Neutral

CA AB 1212

**AUTHOR:** Levine [D]  
**TITLE:** Public Employees' Retirement: Pension Fund  
**INTRODUCED:** 02/21/2019  
**SUMMARY:**

Requires a state agency that is responsible for infrastructure projects to produce a list of priority infrastructure projects for funding consideration by the retirement boards, as described, and to provide it to them. Requires a state agency also to provide further project information to a board upon request.

**STATUS:**

03/11/2019 To ASSEMBLY Committee on PUBLIC EMPLOYMENT AND RETIREMENT.  
**Staff\_Action:** Monitoring

CA AB 1332

**AUTHOR:** Bonta [D]  
**TITLE:** Sanctuary State Contracting and Investment Act  
**INTRODUCED:** 02/22/2019  
**LAST AMEND:** 04/10/2019  
**SUMMARY:**

Enacts the Sanctuary State Contracting and Investment Act, which would, among other things, prohibit a state or local agency from entering into a new,

amended, or extended contract or agreement with any person or entity that provides a federal immigration agency with any data broker, extreme vetting, or detention facilities services, unless state or local agency has made a finding that no reasonable alternative exists.

**STATUS:**

04/11/2019 In ASSEMBLY. Suspend Assembly Rule 96.

04/11/2019 Re-referred to ASSEMBLY Committee on JUDICIARY.

**Staff\_Action:** Monitoring

CA SJR 3

**AUTHOR:** Wilk [R]

**TITLE:** Social Security Act

**INTRODUCED:** 03/04/2019

**SUMMARY:**

Requests the Congress of the United States to enact, and the President to sign, legislation that would repeal the Government Pension Offset and the Windfall Elimination Provision from the Social Security Act.

**STATUS:**

03/14/2019 Re-referred to SENATE Committee on LABOR, PUBLIC EMPLOYMENT AND RETIREMENT.

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**FOR INFORMATION ONLY**

May 3, 2019

TO: Each Member  
Board of Investments

FROM: Steven P. Rice *SPR*  
Chief Counsel

FOR: May 15, 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 May 3, 2019.

Attachment

c: Lou Lazatin  
JJ Popowich  
Jonathan Gabel  
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 May 3, 2019



Project/ Investment	Description	Amount	Board Approval Date	Completion Status	% Complete	Notes
<b>EQUITIES</b> FIXED INCOME	BlackRock Institutional Trust Company, N.A. Treasury Inflation Protected Securities (TIPS) Separate Account Investment Management Agreement	\$1,500,000,000.00	December 12, 2018	Complete	100%	Completed.
<b>PORTFOLIO ANALYTICS</b>	Parametric Portfolio Associates, LLC Investment Management Agreement	Varies depending on cash reserves	April 10, 2019	In Progress	25%	Legal review in process.
<b>PRIVATE EQUITY</b>	Vinci Capital Partners III, L.P. Subscription	\$75,000,000.00	February 13, 2019	Complete	100%	Completed.
	Advent International GPE IX, L.P. Subscription	\$100,000,000.00	March 13, 2019	Complete	100%	Completed.
	TA Associates XIII, L.P. Subscription	\$75,000,000.00	April 10, 2019	Complete	100%	Completed.
<b>REAL ASSETS</b> HEDGE FUNDS	DWS Completion Portfolio Equity Manager Investment Management Agreement	\$1,300,000,000.00	February 13, 2019	In Progress	75%	Legal review and negotiations in process.
	Albourne America, LLC Investment Consulting Services Agreement	\$747,200.00	March 13, 2019	In Progress	50%	Legal review in process.
<b>REAL ESTATE</b>	Core Property Index Trust Fund Subscription	\$250,000,000.00	February 13, 2019	In Progress	75%	Legal review and 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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Attention: Public Records Act Requests  
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Pasadena, CA 91101**