



Board of Administration Agenda

REGULAR MEETING

TUESDAY, DECEMBER 10, 2019

TIME: 10:00 A.M.

MEETING LOCATION:

LACERS Ken Spiker Boardroom
202 West First Street, Suite 500
Los Angeles, California 90012-4401

Live Board Meetings can be heard at: (213) 621-CITY (Metro), (818) 904-9450 (Valley), (310) 471-CITY (Westside), and (310) 547-CITY (San Pedro Area).

Sign Language Interpreters, Communication Access Real-Time Transcription, Assistive Listening Devices, or other auxiliary aids and/or services may be provided upon request. To ensure availability, you are advised to make your request at least 72 hours prior to the meeting you wish to attend. Due to difficulties in securing Sign Language Interpreters, five or more business days' notice is strongly recommended. For additional information, please contact: Board of Administration Office at (213) 473-7169.

| | |
|----------------------|--|
| President: | Cynthia M. Ruiz |
| Vice President: | Michael R. Wilkinson |
| Commissioners: | Annie Chao Elizabeth Lee Sandra Lee Nilza R. Serrano Sung Won Sohn |
| Manager-Secretary: | Lita Payne |
| Executive Assistant: | Ani Ghoukassian |
| Legal Counsel: | City Attorney's Office Public Pensions General Counsel Division |

- I. PUBLIC COMMENTS ON MATTERS WITHIN THE BOARD'S JURISDICTION
- II. [APPROVAL OF MINUTES FOR REGULAR BOARD MEETING OF NOVEMBER 12, 2019 AND POSSIBLE BOARD ACTION](#)
- III. BOARD PRESIDENT VERBAL REPORT
- IV. GENERAL MANAGER VERBAL REPORT
 - A. REPORT ON DEPARTMENT OPERATIONS
 - B. UPCOMING AGENDA ITEMS
- V. RECEIVE AND FILE ITEMS
 - A. [MONTHLY REPORT ON SEMINARS AND CONFERENCES FOR OCTOBER 2019](#)

- B. [COMMISSIONER WILKINSON BOARD EDUCATION EVALUATION ON SACRS FALL CONFERENCE, MONTEREY, CA; NOVEMBER 12-15, 2019](#)
- C. [MARKETING CESSATION NOTIFICATION](#)
- D. [BENEFIT PAYMENTS APPROVED BY GENERAL MANAGER](#)

VI. BENEFITS ADMINISTRATION

- A. OPEN ENROLLMENT UPDATE – VERBAL REPORT
- B. CONSIDERATION OF RETIREE AZAR NEJAD REQUEST TO MAKE MONTHLY DISABILITY LOAN DEDUCTIONS AND POSSIBLE BOARD ACTION

VII. COMMITTEE REPORT(S)

- A. INVESTMENT COMMITTEE VERBAL REPORT ON THE MEETING OF NOVEMBER 12, 2019
- B. INVESTMENT COMMITTEE VERBAL REPORT ON THE SPECIAL MEETING OF DECEMBER 2, 2019
- C. GOVERNANCE COMMITTEE VERBAL REPORT ON THE MEETING OF DECEMBER 10, 2019

VIII. BOARD/DEPARTMENT ADMINISTRATION

- A. [EDUCATION AND TRAVEL EXPENDITURE REPORT FOR THE QUARTER ENDING SEPTEMBER 30, 2019](#)
- B. [PRESENTATION OF LACERS AUDITED FINANCIAL STATEMENTS FOR FISCAL YEAR ENDING JUNE 30, 2019](#)

IX. INVESTMENTS

- A. CHIEF INVESTMENT OFFICER VERBAL REPORT
- B. [PRESENTATION BY NEPC, LLC OF THE PORTFOLIO PERFORMANCE REVIEW REPORT FOR THE QUARTER ENDING SEPTEMBER 30, 2019](#)
- C. [PRESENTATION BY TORREYCOVE CAPITAL PARTNERS LLC OF THE PRIVATE EQUITY PORTFOLIO PERFORMANCE REVIEW FOR THE PERIOD ENDING JUNE 30, 2019](#)
- D. [PRIVATE EQUITY PROGRAM 2020 STRATEGIC PLAN AND POSSIBLE BOARD ACTION](#)
- E. [NOTIFICATION OF COMMITMENT OF UP TO \\$10 MILLION IN P4G CAPITAL PARTNERS I, L.P.](#)

- F. [NOTIFICATION OF COMMITMENT OF UP TO €35.4 MILLION \(APPROXIMATELY \\$40 MILLION\) IN MONTAGU VI, L.P.](#)
 - G. [NOTIFICATION OF COMMITMENT OF UP TO \\$25 MILLION IN OAK HC/FT PARTNERS III, L.P.](#)
 - H. [NOTIFICATION OF COMMITMENT OF UP TO \\$10 MILLION IN SUNSTONE PARTNERS II, L.P.](#)
 - I. [DISCLOSURE REPORT OF FEES, EXPENSES, CARRIED INTEREST OF ALTERNATIVE INVESTMENT VEHICLES FOR THE FISCAL YEAR ENDING JUNE 30, 2019 PURSUANT TO GOVERNMENT CODE SECTION 7514.7](#)
- X. DISABILITY RETIREMENT APPLICATION(S)
- A. CONSIDER THE DISABILITY RETIREMENT APPLICATION OF VERONICA REYES TORKAMANI AND POSSIBLE BOARD ACTION
 - B. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54957(b) TO CONSIDER THE DISABILITY RETIREMENT APPLICATION OF ANNETTE JACKSON TURNER AND POSSIBLE BOARD ACTION**
 - C. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54957(b) TO CONSIDER THE DISABILITY RETIREMENT APPLICATION OF VIRGINIA PEREZ AND POSSIBLE BOARD ACTION**
- XI. OTHER BUSINESS
- XII. NEXT MEETING: The next Regular meeting of the Board is scheduled for Tuesday, January 14, 2020 at 10:00 a.m. in the LACERS Ken Spiker Boardroom, 202 West First Street, Suite 500, Los Angeles, CA 90012-4401.
- XIII. ADJOURNMENT

MINUTES OF THE REGULAR MEETING
BOARD OF ADMINISTRATION
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

LACERS Ken Spiker Boardroom
202 West First Street, Fifth Floor
Los Angeles, California

November 12, 2019

10:09 a.m.

| |
|--|
| Agenda of: <u>Dec. 10, 2019</u> |
|--|

| |
|---------------------------|
| Item No: <u>II</u> |
|---------------------------|

| | | |
|----------|----------------------|--|
| PRESENT: | President: | Cynthia M. Ruiz |
| | Commissioners: | Annie Chao Elizabeth Lee Sandra Lee Nilza R. Serrano Sung Won Sohn |
| | Manager-Secretary: | Lita Payne |
| | Executive Assistant: | Ani Ghoukassian |
| | Legal Counsel: | Anya Freedman |
| ABSENT: | Vice President: | Michael R. Wilkinson |

The Items in the Minutes are numbered to correspond with the Agenda.

I

PUBLIC COMMENTS ON MATTERS WITHIN THE BOARD'S JURISDICTION – President Ruiz asked if there were any persons who wished to speak on matters within the Board's jurisdiction, to which there was no response and no public comment cards were received.

II

APPROVAL OF MINUTES FOR REGULAR BOARD MEETING OF OCTOBER 22, 2019 AND SPECIAL BOARD MEETING OF OCTOBER 31, 2019 AND POSSIBLE BOARD ACTION – Commissioner Chao amended the Board Meeting Minutes of October 22, 2019 and October 31, 2019 to correct the title on the signature block for the Board President. A motion to approve the Regular Board Meeting minutes of October 22, 2019 and Special Board Meeting Minutes of October 31, 2019, as amended, was moved by Commissioner Elizabeth Lee, seconded by Commissioner Chao, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Sandra Lee, Serrano, Sohn, and President Ruiz -6; Nays, None.

III

BOARD PRESIDENT VERBAL REPORT – President Ruiz stated her support for transfer of her Board education budget to cover any overage in Commissioner Elizabeth Lee’s travel budget to attend the IFEBP Wharton School in April 2019.

IV

GENERAL MANAGER VERBAL REPORT

- A. REPORT ON DEPARTMENT OPERATIONS – Lita Payne, Executive Officer, discussed the following items:
- Request for Commissioner follow-up questions and assignments for staff on non-agendized items during “Other Business” portion of Board Agenda
 - Wellness Program Manager status
 - Management Audit status
 - Status update on the City’s Revenue Generation Committee
 - LACERS 2019 Holiday Party
 - CAO Analyst change – Ms. Jennifer Lopez of the CAO, introduced herself to the Board as new CAO liaison to LACERS
- B. UPCOMING AGENDA ITEMS – Ms. Payne stated the following items will be on an upcoming Board agenda:
- Early part of 2020 calendar year, legal counsel staff will present Board fiduciary training

V

RECEIVE AND FILE ITEMS

- A. BENEFITS PAYMENTS APPROVED BY GENERAL MANAGER – This report was received by the Board and filed.
- B. MARKETING CESSATION NOTIFICATION – This report was received by the Board and filed.
- C. JANUARY – JUNE 2020 PRE-APPROVED LIST OF BOARD EDUCATIONAL OPPORTUNITIES – This report was received by the Board and filed.

VI

Deputy City Attorney James Napier was present during Items VI-A and VI-B

DISABILITY RETIREMENT APPLICATION(S)

- A. CONSIDER THE RETURN TO WORK REQUEST OF RETIREE SHARON DOUGLAS AND POSSIBLE BOARD ACTION (HEARING) – Retiree Sharon Douglas, Anna Ingram, Management Analyst with Retirement Services Division, Keylaundra McClelland, Management Analyst with LAWA, and the Board discussed this item for 7 minutes. Commissioner Chao moved approval, seconded by Commissioner Serrano, and adopted by the following vote: Ayes,

Commissioners Chao, Elizabeth Lee, Sandra Lee, Serrano, Sohn, and President Ruiz -6; Nays, None.

President Ruiz recessed the Regular Meeting at 10:33 a.m. to convene in Closed Session.

B. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54957(b) TO CONSIDER THE DISABILITY RETIREMENT APPLICATION OF HENRY CUARON AND POSSIBLE BOARD ACTION

President Ruiz reconvened the Regular Meeting at 10:37 a.m. and announced that the Board unanimously approved the Disability Retirement Application of Henry Cuaron.

VII

Commissioner Chao left the Regular Meeting at 10:38 a.m.

CONSENT AGENDA

- A. TRAVEL AUTHORITY – COMMISSIONER SUNG WON SOHN; 89TH INTERNATIONAL ATLANTIC ECONOMIC CONFERENCE, ROME, ITALY; MARCH 25-28, 2020 AND POSSIBLE BOARD ACTION – Commissioner Serrano moved approval of the following Resolution:

**TRAVEL AUTHORITY
INTERNATIONAL ATLANTIC ECONOMIC SOCIETY
89TH INTERNATIONAL ATLANTIC SOCIETY CONFERENCE
MARCH 25-28, 2020
ROME, ITALY**

RESOLUTION 191112-C

WHEREAS, Board approval is required for all international travel requests and travel not included in the Approved List of Educational Seminars;

WHEREAS, the International Atlantic Economic Society (IAES) 89th International Atlantic Economic Conference in Rome, Italy is an international travel request and therefore requires individual approval;

WHEREAS, the sound management of the assets and liabilities of a trust fund imposes a continuing need for all Board Members to attend professional and educational conferences, seminars, and other educational events that will better prepare them to perform their fiduciary duties;

THEREFORE, BE IT RESOLVED, that Commissioner Sohn is hereby authorized to attend the IAES 89th International Atlantic Economic Conference from March 25-28, 2020 in Rome, Italy;

BE IT FURTHER RESOLVED, that the reimbursement of up to \$4,500 is hereby authorized for reasonable expenses in connection with participation.

Which motion was seconded by Commissioner Sandra Lee, and adopted by the following vote: Ayes, Commissioners Elizabeth Lee, Sandra Lee, Serrano, Sohn, and President Ruiz -5; Nays, None.

Commissioner Chao returned to the Regular Meeting at 10:44 a.m.

VIII

INVESTMENTS

- A. CHIEF INVESTMENT OFFICER VERBAL REPORT – Rod June, Chief Investment Officer, reported on the portfolio value, \$18.38 Billion as of November 8, 2019. Mr. June discussed the following items:
- Staff is rebalancing the portfolio pursuant to the Rebalancing Policy.
 - Mr. June and Robert King, Investment Officer I attending GCM Grosvenor Small and Emerging Manager Conference on November 14-15, 2019.
 - Mr. June speaking on CIO panel at the Toigo Foundation.
 - Three new Investment Officer I's starting on November 25, 2019.
 - Future Board Items: December 10, 2019 – Total Fund Portfolio Performance Review, Private Equity 2020 Strategic Plan, Private Equity Notifications, Disclosure Report of Fees, Expenses, Carried Interest of Alternative Investment Vehicles, and presentation by one of the General Partners from LACERS Private Equity Program.
- B. PRI ACTION PLAN – Rod June, Chief Investment Officer and Saira Gandhi, Management Analyst presented this report included in the packet. After a 43-minute discussion, the report was received by the Board and filed.
- C. PRI BALLOT MEASURES AND BOARD ELECTION AND POSSIBLE BOARD ACTION – Rod June, Chief Investment Officer and Saira Gandhi, Management Analyst presented this report included in the packet. For Item 1 on the recommendation, Commissioner Chao moved to accept staff's recommendation, seconded by Commissioner Elizabeth Lee, by the following vote, Ayes, Commissioners Chao and Elizabeth Lee -2, Nays, Commissioners Sandra Lee, Serrano, Sohn, and President Ruiz -4. This motion did not pass. Commissioner Serrano moved to vote for Eva Halvarsson and Rafael Soares Rebeiro de Castro, seconded by Commissioner Sandra Lee, and adopted by the following vote: Ayes, Commissioners Sandra Lee, Serrano, Sohn, and President Ruiz -4; Nays, Commissioners Chao and Elizabeth Lee. This motion passed. Commissioner Chao moved approval of Items 2 & 3 on the recommendation, seconded by Commissioner Serrano, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Sandra Lee, Serrano, Sohn, and President Ruiz -6; Nays, None.

Commissioner Elizabeth Lee left the Regular Meeting at 11:40 a.m.

- D. REVISION TO RESOLUTION FOR QUANTITATIVE MANAGEMENT ASSOCIATES, LLC AND POSSIBLE BOARD ACTION – Commissioner Chao moved approval of the following Resolution that rescinds Resolution 191022-C:

**CONTRACT EXTENSION
QUANTITATIVE MANAGEMENT ASSOCIATES, LLC
ACTIVE EMERGING MARKETS CORE EQUITIES
PORTFOLIO MANAGEMENT**

RESOLUTION 191112-D

WHEREAS, LACERS current three-year contract with Quantitative Management Associates, LLC (QMA) for active emerging markets core equities portfolio management expires on December 31, 2019; and,

WHEREAS, on July 29, 2019, QMA was placed on “On Watch” status pursuant to the LACERS Manager Monitoring Policy; and,

WHEREAS, a contract extension with QMA will allow the fund to maintain a diversified exposure to non-U.S. equities emerging markets; and,

WHEREAS, on August 27, 2019, the Board approved the Investment Committee’s recommendation to approve a one-year contract extension with QMA; and,

NOW, THEREFORE, BE IT RESOLVED, that the General Manager is hereby authorized to approve and execute a contract subject to satisfactory business and legal terms and consistent with the following services and terms:

| | |
|-------------------|---|
| Company Name: | Quantitative Management Associates, LLC |
| Service Provided: | Active Emerging Markets Core Equities Portfolio Management |
| Effective Dates: | January 1, 2020 through December 31, 2020 |
| Duration: | One year |
| Benchmark: | MSCI Emerging Markets Index |

Allocation as of July 31, 2019: \$436 million

Which motion was seconded by Commissioner Sohn, and adopted by the following vote: Ayes, Commissioners Chao, Sandra Lee, Serrano, Sohn, and President Ruiz -5; Nays, None.

Commissioner Elizabeth Lee returned to the Regular Meeting at 11:41 a.m.

E. NOTIFICATION OF COMMITMENT OF UP TO \$35 MILLION IN LBA LOGISTICS VALUE FUND VII, L.P. – There was no discussion on this item and the report was received by the Board and filed.

President Ruiz recessed the Regular Meeting at 11:41 a.m. for a break and reconvened the Regular Meeting at 11:47 a.m.

IX

BOARD/DEPARTMENT ADMINISTRATION

- A. PRESENTATION BY CEM BENCHMARKING INC. OF INVESTMENT BENCHMARKING FOR THE FIVE-YEAR PERIOD ENDING DECEMBER 31, 2018 AND PENSION ADMINISTRATION BENCHMARKING FOR THE FISCAL YEAR ENDING JUNE 30, 2018 – Todd Bouey, Assistant General Manager, Kam Mangat, Vice President with CEM Benchmarking, Inc, Carolyn Smith, Partner with NEPC, and Rod June, Chief Investment Officer, presented this report to the Board included in the packet. Members of the Board asked questions of the consultant and staff. After 1 hour and 17 minutes of discussion, the report was received by the Board and filed.
- B. ACTUARIAL VALUATIONS AS OF JUNE 30, 2019 INCLUDING PROPOSED CITY CONTRIBUTION RATES FOR FISCAL YEAR 2020-21 AND POSSIBLE BOARD ACTION – Todd Bouey, Assistant General Manager and Paul Angelo, Actuary with Segal Consulting presented and discussed this report with the Board. After 28 minutes of discussion, Commissioner Chao moved approval, seconded by Commissioner Elizabeth Lee, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Sandra Lee, Serrano, Sohn, and President Ruiz -6; Nays, None.

X

OTHER BUSINESS – There was no other business.

XI

NEXT MEETING – The next Regular meeting of the Board is scheduled for Tuesday, November 26, 2019 at 10:00 a.m. in the LACERS Ken Spiker Boardroom, 202 West First Street, Suite 500, Los Angeles, CA 90012-4401.

XII

ADJOURNMENT – There being no further discussion before the Board, President Ruiz adjourned the meeting at 1:35 p.m.

Cynthia M. Ruiz
President

Lita Payne
Manager-Secretary

Agenda of: DEC. 10, 2019

Item No: V-A

**MONTHLY REPORT ON SEMINARS AND CONFERENCES
ATTENDED BY BOARD MEMBERS ON BEHALF OF LACERS
(FOR THE MONTH OF OCTOBER 2019)**

In accordance with Section V.H.2 of the approved Board Education and Travel Policy, Board Members are required to report to the Board, on a monthly basis at the last Board meeting of each month, seminars and conferences they attended as a LACERS representative or in the capacity of a LACERS Board Member which are either complimentary (no cost involved) or with expenses fully covered by the Board Member. This monthly report shall include all seminars and conferences attended during the 4-week period preceding the Board meeting wherein the report is to be presented.

BOARD MEMBER:

President Cynthia M. Ruiz

| DATE(S) OF EVENT | SEMINAR / CONFERENCE TITLE | EVENT SPONSOR (ORGANIZATION) | LOCATION (CITY, STATE) |
|-------------------------|--|---|-----------------------------------|
| October 24, 2019 | 2019 Western North American PRI Symposium | PRI | Los Angeles, CA |

Agenda of: DEC. 10, 2019

Item No: V-A

**MONTHLY REPORT ON SEMINARS AND CONFERENCES
ATTENDED BY BOARD MEMBERS ON BEHALF OF LACERS
(FOR THE MONTH OF OCTOBER 2019)**

In accordance with Section V.H.2 of the approved Board Education and Travel Policy, Board Members are required to report to the Board, on a monthly basis at the last Board meeting of each month, seminars and conferences they attended as a LACERS representative or in the capacity of a LACERS Board Member which are either complimentary (no cost involved) or with expenses fully covered by the Board Member. This monthly report shall include all seminars and conferences attended during the 4-week period preceding the Board meeting wherein the report is to be presented.

BOARD MEMBER:

Commissioner Nilza R. Serrano

| DATE(S) OF EVENT | SEMINAR / CONFERENCE TITLE | EVENT SPONSOR (ORGANIZATION) | LOCATION (CITY, STATE) |
|-------------------------|---|---|-----------------------------------|
| October 29, 2019 | RFK Human Rights Compass 2019 Conference | RFK Human Rights | Los Angeles, CA |

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM (LACERS)
TRAVEL/CONFERENCE EVALUATION REPORT**

| | |
|--|------------------------------------|
| Name of Attendee: Michael R. Wilkinson | |
| Title of Conference/Seminar: State Association of County Retirement Systems (SACRS) Fall Conference | |
| Location: Monterey, CA | |
| Event Sponsor: SACRS | Date(s) Held: November 12-15, 2019 |

Report for:

- Travel
 Conference/Seminar Attendance Only

I. Nature/Purpose of Travel (if applicable):

To get information on challenges of administering public retirement plans in California.

II. Significant Information Gained:

The conference provided excellent session on investment as well as legal developments involving public pension plans. It was very helpful to share ideas with trustee and administrators from other plans.

III. Benefits to LACERS:

This was very beneficial to add to my education on demographic changes and by new trends in actuarial practice.

IV. Additional Comments:

SUBMIT TO THE LACERS COMMISSION EXECUTIVE ASSISTANT, 202 W. FIRST STREET, SUITE 500 WITHIN 30 DAYS AFTER ATTENDING THE CONFERENCE/SEMINAR



Securing Your Tomorrows

Agenda of: DECEMBER 10, 2019

Item No: V-C

MARKETING CESSATION REPORT NOTIFICATION TO THE BOARD

The Board's Marketing Cessation Policy was adopted in order to prevent and avoid the appearance of undue influence on the Board or any of its Members in the award of investment-related and other service contracts. Pursuant to this Policy, this notification procedure has been developed to ensure that Board Members and staff are regularly apprised of firms for which there shall be no direct marketing discussions about the contract or the process to award it; or for contracts in consideration of renewal, no discussions regarding the renewal of the existing contract.

Firms listed in Attachments 1 and 2 are subject to limited communications with Board Members and staff pursuant to the Policy and will appear and remain on the list, along with the status, from the first publicized intention to contract for services through the award of the contract. Lists of current LACERS contracts are on file in the Board office and are available upon request.

Attachments: 1) Contracts Under Consideration for Renewal
2) Active RFPs and RFQs

CONTRACTS UNDER CONSIDERATION FOR RENEWAL

| NO. | VENDOR / CONSULTANT | DESCRIPTION | INCEPTION DATE | EXPIRATION DATE | MARKETING CESSATION STATUS | RESTRICTED PERIOD* | |
|---------------------------------------|------------------------------|--------------------------|----------------|-----------------|---|--------------------|------------|
| | | | | | | START | END |
| HEALTH BENEFITS ADMINISTRATION | | | | | | | |
| 1 | Kaiser 2019 | Medical HMO | 1/1/2019 | 12/31/2019 | Board approved on 8/28/2018; Contract under review for execution. | 1/1/2019 | 12/31/2019 |
| 2 | SCAN 2019 | Medical HMO | 1/1/2019 | 12/31/2019 | Board approved on 8/28/2018; Contract under review for execution. | 1/1/2019 | 12/31/2019 |
| 3 | United Healthcare 2019 | Medical HMO | 1/1/2019 | 12/31/2019 | Board approved on 8/28/2018; Contract under review for execution. | 1/1/2019 | 12/31/2019 |
| 4 | Delta Dental 2019 | Dental PPO and HMO | 1/1/2019 | 12/31/2019 | Board approved on 8/28/2018; Contract under review for execution. | 1/1/2019 | 12/31/2019 |
| 5 | Anthem Blue View Vision 2019 | Vision Services Contract | 1/1/2019 | 12/31/2019 | Board approved on 8/28/2018; Contract under review for execution. | 1/1/2019 | 12/31/2019 |
| 6 | Anthem 2019 | Medical HMO & PPO | 1/1/2019 | 12/31/2019 | Board approved on 8/28/2018; Contract under review for execution. | 1/1/2019 | 12/31/2019 |

CONTRACTS UNDER CONSIDERATION FOR RENEWAL

| NO. | VENDOR / CONSULTANT | DESCRIPTION | INCEPTION DATE | EXPIRATION DATE | MARKETING CESSATION STATUS | RESTRICTED PERIOD* | |
|-------------------------------------|------------------------------------|--|----------------|-----------------|---|--------------------|------------|
| | | | | | | START | END |
| RETIREMENT SERVICES DIVISION | | | | | | | |
| 7 | QTC Medical Group, Inc. | Disability Medical Evaluation Services | Pending | Pending | Board approved on 8/13/19; Contract under review for execution. | 5/1/2019 | 12/31/2019 |
| 8 | Mitchell International dba MCN | Disability Medical Evaluation Services | Pending | Pending | Board approved on 8/13/2019; Contract under review for execution. | 5/1/2019 | 12/31/2019 |
| CITY ATTORNEY | | | | | | | |
| 9 | Foley & Lardner LLP | Legal Services - Health & Data Privacy Law | Pending | Pending | Board approved on 8/27/2019; Contract under review for execution. | 5/27/2019 | 12/27/2019 |
| 10 | Polsinelli LLP | Legal Services - Health & Data Privacy Law | Pending | Pending | Board approved on 8/27/2019; Contract under review for execution. | 5/27/2019 | 12/27/2019 |
| 11 | Orrick, Herrington & Sutcliffe LLP | Legal Services - Health & Data Privacy Law | Pending | Pending | Board approved on 8/27/2019; Contract under review for execution. | 5/27/2019 | 12/27/2019 |
| 12 | Hogan Marren Babbo & Rose, Ltd | Legal Services - Health & Data Privacy Law | Pending | Pending | Board approved on 8/27/2019; Contract under review for execution. | 5/27/2019 | 12/27/2019 |

CONTRACTS UNDER CONSIDERATION FOR RENEWAL

| NO. | VENDOR / CONSULTANT | DESCRIPTION | INCEPTION DATE | EXPIRATION DATE | MARKETING CESSATION STATUS | RESTRICTED PERIOD* | |
|-----|------------------------|-------------|-------------------|--------------------|----------------------------------|--------------------|-----|
| | | | | | | START | END |

Start Date - The estimated start date of the restricted period is three (3) months prior to the expiration date of the current contract. No entertainment or gifts of any kind should be accepted from the restricted source as of this date. Firms intending to participate in the Request for Proposal process are also subject to restricted marketing and communications.

End Date - The estimated end date of the restricted period is three (3) months following the expiration date of the current contract. For investment-related contracts, the estimated end date is normally six (6) months following the expiration of the current contract. For health carrier contracts, the estimated end date is normally one (1) year following the expiration of the current contract. Estimated dates are based on contract negotiation periods from prior years.

ACTIVE RFPs AND RFQs*

| NO. | DESCRIPTION | MARKETING CESSATION STATUS AND VENDOR RESPONSES |
|--------------------|-------------------------------|--|
| INVESTMENTS | | |
| 1 | Private Credit Mandate Search | <p>RFP Release Date: December 10, 2018</p> |
| | | <p>Submission Deadline: January 18, 2019</p> |
| | | <p>Status: On July 23, 2019, Board awarded contracts to Alcentra Limited; Benefit Street Partners L.L.C.; Crescent Capital Group LP; and Monroe Capital LLC. Negotiations in process.</p> |
| | | <p>List of Respondents: Alcentra Limited, Barings LLC, MB Global Partners, LLC, Backcast Partners Management LLC, BlackRock, Inc., CLSA Capital Partners (HK) Limited, Cross Ocean Adviser LLP, Clearwater Capital Partners (Fiera Capital Corporation), Guggenheim Partners, LLC, Goldman Sachs Asset Management, L.P., Pemberton Capital Advisors LLP, Kayne Anderson Capital Advisors, L.P., Maranon Capital, L.P., Bain Capital Credit, LP, Breakwater Management LP, Carlyle Global Credit Investment Management L.L.C., Crescent Capital Group LP, MV Credit Partners LLP, New Mountain Capital, LLC, Park Square Capital USA LLC, Tor Investment Management (Hong Kong) Limited, AlbaCore Capital LLP, Muzinich & Co., Inc., Kartesia Management S.A., Medalist Partners, LP, NXT Capital Investment Advisers, LLC, Owl Rock Capital Partners, PennantPark Investment Advisers, PIMCO Investments LLC, Deerpath Capital Management, LP, Brightwood Capital Advisors, Magnetar Capital LLC, MC Credit Partners LP, Oaktree Capital Management, L.P., THL Credit Advisors LLC, White Oak Global Advisors, LLC, Benefit Street Partners L.L.C., EntrustPermal / Blue Ocean GP LLC, Willow Tree Credit Partners LP, Monroe Capital LLC, Runway Growth Capital LLC, Stellus Capital Management, LLC</p> |

ACTIVE RFPs AND RFQs*

| NO. | DESCRIPTION | MARKETING CESSATION STATUS AND VENDOR RESPONSES |
|-----|--|--|
| 2 | U.S. Small Cap Equities Mandate Search | <p>RFP Release Date: February 25, 2019</p> |
| | | <p>Submission Deadline: April 12, 2019</p> |
| | | <p>Status: On July 9, 2019, Investment Committee advanced the following firms as semi-finalists for further due diligence: Core: ClearBridge Investments, LLC; Copeland Capital Management, LLC; Legato Capital Management, LLC; PIMCO; QMA LLC; Rothschild & Co Asset Management US Growth: EAM Investors, LLC; Goldman Sachs Asset Management; Granahan Investment Management; Lisanti Capital Growth, LLC; Westfield Capital Management Co, L.P.; William Blair Investment Management, LLC. Value: Ariel Investments, LLC; Bernzott Capital Advisors; Dimensional Fund Advisors LP; Hotchkis & Wiley Capital Management, LLC; Investment Counselors of Maryland, LLC; Segall Bryant & Hamill.</p> <p>List of Respondents: 361 Capital, LLC, Aberdeen Standard Investments Inc., Acuitas Investments, LLC, Alliance Bernstein AB, Allianz Global Investors AllianzGI, AltraVue Capital, LLC, American Century Investment Management, Inc., AMI Asset Management Corporation, Anchor Capital Advisors LLC, Ariel Investments, LLC, Aristotle Capital Boston, LLC, Axiom Investors, Baron Capital, Barrow, Hanley, Mewhinney, Strauss, LLC, Bernzott Capital Advisors, Bivium Capital Partners, LLC, BlackRock, Inc., BMO Global Asset Management, BNP Paribas Asset Management USA Inc., Boston Advisors, LLC, Boston Partners Global Investors, Inc., Bridge City Capital, LLC, Cadence Capital Management LLC, Capital Impact Advisors, LLC, Capital Prospects LLC, Ceredex Value Advisors LLC, ClearBridge Investments, LLC, Copeland Capital Management, LLC, Dimensional Fund Advisors LP, Driehaus Capital Management LLC, Eagle Asset Management, EAM Investors, LLC, EARNEST Partners, LLC, Eastern Shore Capital Management, a Division of Moody Aldrich Partners, LLC, Eaton Vance Management, Elk Creek Partners LLC, Falcon Point Capital, LLC, Federated MDTA, LLC, FIAM LLC, Fisher Investments, Franklin Advisers, Inc., Frontier Capital Management Company, LLC, Goldman Sachs Asset Management, Granahan Investment Management, Granite Investment Partners, LLC, Great Lakes Advisors, LLC, GW&K Investment Management, LLC</p> |

ACTIVE RFPs AND RFQs*

| NO. | DESCRIPTION | MARKETING CESSATION STATUS AND VENDOR RESPONSES |
|-----|-------------|--|
| | | <p>Hotchkis and Wiley Capital Management, LLC, Investment Counselors of Maryland, LLC, Jacobs Levy Equity Management, Inc., Jennison Associates, JP Morgan, Kayne Anderson Rudnick Investment Management, LLC, Legato Capital Management, LLC, Legion Partners Asset Management, LLC, Lisanti Capital Growth, LLC, LMCG Investments, Loomis, Sayles & Company, L.P., Los Angeles Capital Management and Equity Research, Inc., Macquarie Investment Management, Manulife Asset Management, Matarin Capital Management, Mellon Investments Corporation, MFS Institutional Advisors, Inc., Monarch Partners Asset Management, LLC, Morgan Stanley Investment Management, Neuberger Berman, NewSouth Capital Management, Inc., Next Century Growth Investors, LLC, Northern Trust Investments, Inc., OFI Global Institutions, Inc., Pacific Ridge Capital Partners, LLC, Pacific View Asset Management, LLC, Palisade Capital Management, LLC, PanAgora Asset Management, Inc., Peregrine Capital Management, LLC, Perkins Investment Management LLC, Pier Capital, LLC, PiMCO, Portolan Capital Management LLC, Principal Global, Pzena Investment Management, QMA LLC, Ranger Investment Management, LP, Riverbridge Partners, LLC, RockCreek, Rothschild & Co Asset Management, Sapiient Investments, LLC, Schroder Investment Management North America Inc., Segall Bryant & Hamill, Seizert Capital Partners, Smith Asset Management Group, Snyder Capital Management, L.P., Summit Creek Advisors, LLC, Systematic Financial Management, L.P., T. Rowe Price Associates, Inc., Teton Advisors, Inc., THB Asset Management, Tygh Capital Management, Vantagepoint Discovery, Victory Capital Management Inc., Voya Investment Management, Walkthausen & Co., LLC, Wasatch Advisors, Weatherbie Capital, LLC, Wedge Capital Management, Wellington Management Company LLP, Wells Fargo Asset Management, Westfield Capital Management Company, L.P., William Blair Investment Management, LLC, WisdomTree Asset Management, Inc., Zacks Investment Management</p> |

ACTIVE RFPs AND RFQs*

| NO. | DESCRIPTION | MARKETING CESSATION STATUS AND VENDOR RESPONSES |
|-----|--|--|
| 3 | High Yield Fixed Income and Hybrid High Yield Fixed Income / U.S. Floating Rate Bank Loan Mandate Search | <p>RFP Release Date: February 25, 2019</p> <p>Submission Deadline: April 12, 2019</p> <p>Status: On August 13, 2019, the Investment Committee advanced the following firms as semi-finalists for further due diligence: High Yield Fixed Income - Aegon USA Investment Management, LLC, Loomis, Sayles & Company, L.P., and Morgan Stanley Investment Management; Hybrid Fixed Income/Bank Loans - DDJ Capital Management, LLC, and KKR Credit</p> <p>List of Respondents: Ares Management LLC, Arena Capital Advisors, LLC, Guggenheim Partners Investment Management, LLC, Aegon Asset Management US, MacKay Shields LLC, Post Advisory Group, LLC, Diamond Hill Capital Management, Inc., AXA Investment Managers, Pacific Asset Management, Mesirow Financial Investment Management, Inc., DDJ Capital Management, LLC, Par-Four Investment Management, LLC, PGIM Fixed Income, Beach Point Capital Management LP, KKR Credit, Barrings LLC, Eaton Vance Management, Brigade Capital Management, LP, Morgan Stanley Investment Management, Lord, Abnett & Co. LLC, BlackRock, Inc., L & S Advisors, Inc., Mellon Investments Corporation, Seix Investment Advisors LLC, Legal & General Investment Management, Principal Global, Bain Capital Credit, LP, Princeton Asset Management, LLC, Symphony Asset Management, LLC, PIMCO, The Capital Group Companies, Inc., Loomis, Sayles & Company, L.P., Credit Suisse Asset Management, LLC, J.P. Morgan Asset Management, Hotchkis and Wiley Capital Management, LLC, Northern Trust, CVC Credit Partners, LLC</p> |
| 4 | Emerging Market Small Cap Equities Mandate Search | <p>RFP Release Date: June 10, 2019</p> <p>Submission Deadline: July 22, 2019</p> <p>Status: In progress</p> <p>List of Respondents: LMCG Investments, LLC, AQR Capital Management, LLC, Dimensional Fund Advisors LP, EAM Investors, LLC, Ashmore, Cedar Street Asset Management LLC, Copper Rock Capital Partners, LLC, FIAM LLC, Macquarie Investment Management, RBC Global Management, Inc., Capital, River and Mercantile LLC, Schroder Investment Management North America Inc., Somerset Capital Management LLP, Wasatch Advisors, Inc., Kayne Anderson Rudnick Investment Management, Franklin Templeton Investments, Globeflex Capital, LP, Quantitative Management Associates, LLC, State Street Global Advisors Distributor, LLC</p> |
| 5 | Emerging Market Debt Mandate Search | <p>RFP Release Date: June 10, 2019</p> <p>Submission Deadline: July 22, 2019</p> <p>Status: In progress</p> <p>List of Respondents: Eaton Vance Management, Ashmore Investment Management, Capital Group, Fidelity Institutional Asset Management, GAM USA, INC., Northwest Passage Capital Advisors LLC, Payden & Rygel, PGIM Fixed Income, Schroder Investment Management North America Inc., Stone Harbor Investment Partners LP, LM Capital Group, Wellington Management Company LLP, Manulife Investment Management, Global Evolution USA LLC, GoldenTree Asset Management LP, Goldman Sachs Asset Management L.P., Investec Asset Management, Nuveen, A TIAA Company</p> |

ACTIVE RFPs AND RFQs*

| NO. | DESCRIPTION | MARKETING CESSATION STATUS AND VENDOR RESPONSES |
|-----|---|---|
| 6 | Core Fixed Income RFP | RFP Release Date: August 19, 2019 |
| | | Submission Deadline: October 4, 2019 |
| | | Status: In progress |
| | | <p>List of Respondents: Amundi Pioneer Institutional Asset Management, Inc., Baird Advisors, BlackRock, Inc., BMO Global Asset Management, Brown Brothers Harriman & Co., C.S. McKee, L. P., Calvert Research and Management (Calvert or CRM), Conning, Dimensional Fund Advisors LP, Dodge & Cox, EARNEST Partners, LLC, FIAM LLC, Galliard Capital Management, Garcia Hamilton & Associates, L.P., Goldman Sachs Asset Management L.P., Guggenheim Partners Investment Management, LLC, Income Research & Management, Intergrity Fixed Income, Management, LLC, Invesco Advisers, Inc., J.P. Morgan Asset Management, Jennison Associates LLC, Lazard Asset Management LLC, LM Capital Group, LLC, Longfellow Investment Management Co., LLC, Loomis, Sayles & Company, L.P, Manulife Investment Management, MFS Institutional Advisors, Inc., Morgan Stanley Investment Management, National Investment Services, Neuberger Berman, Nuveen, LLC, Payden & Rygel, PGIM Fixed Income, Piedmont Investment Advisors, Inc., PIMCO, Princeton Asset Management, LLC, Progress Investment Management Company, LLC, Pugh Capital Management, Inc., Quadratic Capital Management LLC, Ramirez Asset Management, Schroder Investment Management North America Inc., Securian Asset Management, Inc., Segall Bryant & Hamill, Sit Investment Associates, Inc. (Sit), SLC Management, Smith Graham & Co., Investment Advisors, L.P., Sterling Capital Management LLC, T. Rowe Price Associates, Inc., TCW Group, Inc., The Capital Group Companies, Inc., Voya Investment Management (Voya IM), Wellington Management Company LLP, Wells Fargo Asset Management, Western Asset Management Company, LLC</p> |
| 7 | Asset Management Real Estate Services RFQ | RFQ Release Date: October 8, 2019 |
| | | Submission Deadline: October 22, 2019 |
| | | Status: On October 31, 2019, Board awarded contract to Invesco Real Estate. Negotiations in process. |
| | | List of Respondents: CIM Group, LLC; Invesco Real Estate; Jamestown LP |

*RESTRICTED PERIOD FOR REQUEST FOR PROPOSAL OR REQUEST FOR QUALIFICATIONS:

Start Date - The restricted period commences on the day the Request for Proposal is released.

End Date - The restricted period ends on the day the contract is executed.

BENEFIT PAYMENTS APPROVED BY GENERAL MANAGER: ITEM V-D

Pursuant to the authority delegated to the General Manager under Board Rule GMA 1, General Manager Authorization, adopted by the Board of Administration on June 14, 2016, the following benefit payments have been approved by the General Manager:

SERVICE RETIREMENTS

| <u>Member Name</u> | <u>Service</u> | <u>Department</u> | <u>Classification</u> |
|--|----------------|-------------------------------|-------------------------|
| Belcher, Patricia Diana | 41 | PW - Sanitation | Administrative Clerk |
| Cash, Glynnis Jean | 36 | Dept. of Airports | Sr Personnel Analyst |
| Couch, Ace D | 31 | PW - Sanitation | Ref Coll Truck Oper |
| De Nunez, Kenneth | 31 | Dept. of Bldg. & Safety | Sr Electrcl Inspector |
| Delacruz, Eliazar S | 37 | Dept. of Airports | Sr Build Operating Eng |
| Eastenson, Shannon | 27 | PW - St. Improv Div. | Sr Mgmt Analyst |
| Edwards, Brad G | 19 | Dept. of Rec. & Parks | Gardener Caretaker |
| Edmiston, Donna M | 27 | City Attorney's Office | Assistant City Attorney |
| Garikian, George | 11 | City Attorney's Office | Deputy City Atty |
| Gibson, Ernest Lorenzo | 32 | PW - St. Maint. | Truck Operator |
| Godinez, Maria H | 35 | Dept. of Animal Svcs. | Administrative Clerk |
| Gonzalez, Miguel A | 31 | Dept. of Animal Svcs. | Animal Control Ofcr |
| Gonzalez, Sonia P | 29 | Library Dept. | Administrative Clerk |
| Harris, Richard B | 32 | Dept. of Rec. & Parks | Golf Starter |
| Hartono, Tony | 20 | Dept. of Bldg. & Safety | Sr Build Inspector |
| Kantor, Leah H | 31 | GSD | Sr Systems Analyst |
| Kim, Steve S | 30 | City Planning Dept. | City Planner |
| Kung, Gregory Kin | 30 | LA Housing Dept. | Dir Of Systems |
| Leawprasert, Nantaporn | 29 | Information Technology Agency | Programmer/Analyst |
| Lien, Frank M | 4 | Zoo Dept. | Special Prog Asst |
| Lucas, Lee J | 30 | PW - Solid Resource Div | Ref Coll Truck Oper |
| Luong, Cu An | 34 | GSD | Matl Tst Engrg Assc |
| Mastro, Edwin J | 35 | Dept. of Rec. & Parks | Marine Aquar Exh Dir |
| Mcgrath, Terrence | 28 | Police Dept. - Civilian | Accounting Clerk |
| Meda, Socorro C | 7 | Dept. of Transportation | Crossing Guard |
| Megliorino, Debbie M | 28 | LACERS | Systems Analyst |
| Miller, Ron D | 25 | PW - Resurf & Reconstr Div. | Equipmnt Operator |
| Montagu, Valentina D | 7 | Dept. of Airports | Airport Guide |
| Nejad, Azar | 13 | Dept. of Transportation | Transport Eng Assoc |
| Nguyen, Clara P | 21 | Personnel Dept. | Physician |
| Pendergrass Ametu, Cynthia Michelle | 22 | Police Dept. | Police Service Rep |
| Perez, Ben | 35 | GSD | Sr Storekeeper |

| | | | |
|-----------------------|----|------------------------------|-------------------------|
| Petty, Linda Evette | 30 | Dept. of Transportation | Traf Officer |
| Phillips, Eric S | 17 | Dept. of Rec. & Parks | Gardener Caretaker |
| Ramadan, Suhair B | 10 | Dept. of Airports | Airport Guide |
| Ramirez, Gustavo | 29 | PW - Sanitation | Ref Coll Truck Oper |
| Ramos, Romulo V | 7 | Dept. of Airports | Airport Guide |
| Raudales, Fernando | 19 | PW - Resurf & Reconstr Div. | Maintenance Laborer |
| Scott, Carl | 31 | PW - Sanitation | Maintenance Laborer |
| Sherman, Kevin Luther | 26 | PW - Solid Resource Coll Div | Ref Coll Truck Opr |
| Smith, Leslie E | 30 | Police Dept. | Sr Police Serv Rep |
| Solaiman Tehrani, | 30 | City Planning Dept. | Planning Assistant |
| Thompson, Henry | 31 | PW - St. Maint. | St Svcs Supvr |
| Tung, Louisa O | 9 | Dept. of Rec. & Parks 2 | Administrative Clerk |
| Tyler, Mary Frances | 10 | Library Dept. | Librarian |
| Valenzuela, Arturo | 35 | Dept. of Bldg. & Safety | Build Mech Inspector |
| Van Gerpen, James A | 31 | City Planning Dept. | Dir Of Systems |
| Ward Wallace, Joseph | 11 | Fire Dept. | Sr Administrative Clerk |
| Wax, Nancy E | 13 | City Attorney's Office | Deputy City Atty |
| Wells, Pamela Sue | 33 | Police Dept. | Police Service Rep |
| Yoon, Robert Y | 16 | Dept. of Bldg. & Safety | Sr Safety Eng Press Ves |

BENEFIT PAYMENTS APPROVED BY GENERAL MANAGER: ITEM V-D

Pursuant to the authority delegated to the General Manager under Board Rule GMA 1, General Manager Authorization, adopted by the Board of Administration on June 14, 2016, the following benefit payments have been approved by the General Manager:

Approved Death Benefit Payments

Deceased

TIER 1

Beneficiary/Payee

Abney, George

Joye Aniece Abney for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Alexander, Shirley Mae

Eric Donald Alexander for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Axelrad, Audrey

Julie Diane Leichtle for the payment of the
Accrued But Unpaid Continuance Allowance
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Kathy Nora Memmott for the payment of the
Accrued But Unpaid Continuance Allowance
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Beasley, Hubbert

Delois Beasley for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Belmarch, Ron C Teresita B Belmarch for the payment of the
Accrued But Unpaid Disability Retirement Allowance
Burial Allowance

Bibo, Valfried J Christina Raelyn L Wood for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Laura Ann Taylor for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Bowen, Paul C Christopher Cassin Bowen for the payment of the
Accrued But Unpaid Continuance Allowance
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Brand, Lester
(Deceased Active) Chelsea Raelynn Brand for the payment of the
Accumulated Contributions

Lester Donald Brand for the payment of the
Accumulated Contributions

Caraveo, Sofia Olga Fernandez for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance
Unused Contributions

Carpenter, Gordon R Irene Olivia Stewart-Carpenter for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

| | |
|-------------------------------------|---|
| Cassidy, Joseph John | Muriel Susan Sin for the payment of the Accrued But Unpaid Disability Retirement Allowance Burial Allowance |
| Cerule, Joseph (Deceased Active) | Dominick Cerulle for the payment of the Accumulated Contributions |
| Coffelt, Dwight D | Carol J Morgan for the payment of the Accrued But Unpaid Disability Retirement Allowance Burial Allowance |
| Corral, Efren | Belia Avalos for the payment of the Accrued But Unpaid Service Retirement Allowance Unused Contributions |
| Curtis, Roger L | Barbara L Curtis for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| D'agostino, Patricia Ann | Robert Raymond Herrick for the payment of the Accrued But Unpaid Continuance Allowance |
| Davis, Jennie E | Duane Orlando Davis for the payment of the Accrued But Unpaid Service Retirement Allowance |
| Davis, Joseph | Laura Davis for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |

| | |
|--|--|
| Douglas, T | Barbara J Douglas for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Drohan, Rosalinda | Michael J Drohan Sr for the payment of the Accrued But Unpaid Vested Retirement Allowance Burial Allowance |
| Duffy, Michael J | Mary Teresa Duffy for the payment of the Accrued But Unpaid Vested Retirement Allowance Burial Allowance |
| Duhart, Lougenia | Jerry Avon Dixon for the payment of the Accrued But Unpaid Vested Retirement Allowance Burial Allowance |
| Earnest, Thomas James (Deceased Active) | Cheyenne A-Lyise Earnest for the payment of the Accumulated Contributions |
| Ebro, Romanita P | Diane Carole Ebro for the payment of the Accrued But Unpaid Service Retirement Allowance Lea Luisa Ebro for the payment of the Accrued But Unpaid Service Retirement Allowance Rosario Patino Delola for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Finkle, Anna M | Donna Henrietta Mc Cormack for the payment of the Accrued But Unpaid Continuance Allowance |

| | |
|-----------------------|--|
| Fischer, Harvey M | Denise Lorine Fischer for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Francisco, Fernando C | Brian Joseph E Francisco for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance Unused Contributions |
| Fung, Parky Chik Man | Polly Au Fung for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Gantt, Lynnda Dianne | Brian E Smith for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance Unused Contributions |
| Granger, Nancy | Charlotte Jean Carter for the payment of the Accrued But Unpaid Survivorship (Disability) Allowance |
| Grant, Mary R | Mary Rita Grant Trust for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Gute, Duane J | Keith M Gute for the payment of the Accrued But Unpaid Service Retirement Allowance |

| | |
|--|--|
| Harvey, Lelila | Rosa Anna Meitzenheimer for the payment of the Accrued But Unpaid Continuance Allowance |
| Hazyme, Rose D | Laura Ann Hinton for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Henderson, Sara L | Karen Merchell Williams for the payment of the Accrued But Unpaid Survivorship (Disability) Allowance |
| Hooker, Robert V | Deborah E Hiscott for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance Dennis M Hooker for the payment of the Accrued But Unpaid Service Retirement Allowance |
| Jack, Denise Victoria | Evan J Jack for the payment of the DRO Lump Sum |
| Jackson, Charlotte | Paula D Katal for the payment of the Accrued But Unpaid Service Retirement Allowance |
| Jones, Marlo Denise (Deceased Active) | Betty Jean Calhoun for the payment of the Accumulated Contributions |
| Kent, Kikumon | Alexander Holmes for the payment of the Accrued But Unpaid Disability Retirement Allowance |

| | |
|--|--|
| Kotoff, Bettie A | Kristine Ann Quart for the payment of the Accrued But Unpaid Continuance Allowance |
| Lucero, Eugene P | Jean L Lucero for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Lukasiak, Stephanie | Mark J Lukasiak for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance Valerie Daphne Williams for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Manalo, Purificaci T | Manuel T Manalo for the payment of the Burial Allowance |
| Matthews, Mary K | Deborah Ann Kramm for the payment of the Accrued But Unpaid Continuance Allowance |
| Mcmillan, Rodrick (Deceased Active) | Alice Kathleen Mcmillan for the payment of the Accumulated Contributions |
| Meaglia, Catherine L | James Paul Meaglia for the payment of the Burial Allowance Meaglia Family Trust for the payment of the Accrued But Unpaid Service Retirement Allowance Richard W Meaglia for the payment of the Accrued But Unpaid Service Retirement Allowance Thomas Meaglia for the payment of the Accrued But Unpaid Service Retirement Allowance |

Miles, Catherine M

Anthony K Miles for the payment of the
Accrued But Unpaid Service Retirement Allowance

Wrenis S Miles for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Mines, Oren E

Jeannette C Mines for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Mosley, Gladys J

Gregory Doyle Mosley for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Moten, Gwendolyn D

Juanas S Moten for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Murphy, Mary A

Patrick B Murphy for the payment of the
Burial Allowance

Neff, Joy E

Judith Olivia Neff for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

Newman, Gary J

Travis William Newman for the payment of the
Accrued But Unpaid Service Retirement Allowance
Unused Contributions

| | |
|--------------------|---|
| Noble, Morris | Morris Noble for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Payne, Robert | Katherine Smith for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Platte, William J | Virginia H Platte for the payment of the Accrued But Unpaid Vested Retirement Allowance Burial Allowance |
| Rabins, Florence T | Karen Franke Lewis for the payment of the Accrued But Unpaid Continuance Allowance |
| Reeser, Merle W | Jo Ann Reeser for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Renteria, Raymond | Connie G Renteria for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Rios, Eduardo | Alba Ruth Rios for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |

| | |
|---|--|
| Roberts, Syble | Jana K Nelson for the payment of the Accrued But Unpaid Continuance Allowance |
| Rocha, Crystal Christine (Deceased Active) | Felix Vincent Padilla for the payment of the Disability Retirement Survivorship Allowance |
| Roche, Richard D | Jo Ann K Roche for the payment of the Accrued But Unpaid Service Retirement Allowance Robert Doyle Roche for the payment of the Burial Allowance |
| Ronquillo, Ramon M | Norman A Ronquillo for the payment of the Burial Allowance |
| Schmidl, Herbert Martin | Linda Marie Schmidl for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Sibley, Marsha Lynn | Patrice Darlena Spencer-Harvin for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance Unused Contributions William Love Black for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance Unused Contributions |
| Slagle, Gerald D | Kathleen Marie Slagle for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |

| | |
|--------------------------------------|--|
| Smith, Rubye L | Leslie V Smith for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Snelling, George | John Leslie Snelling for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Snyder, Scott A (Deceased Active) | Travis A Snyder for the payment of the Accumulated Contributions |
| Sofra, Joseph B | Joseph B & Gloria M Sofra Living Trust for the payment of the Burial Allowance |
| Steele, Timothy L | Amy Ilene Steele for the payment of the Accrued But Unpaid Vested Retirement Allowance Melissa L Steele for the payment of the Accrued But Unpaid Vested Retirement Allowance Burial Allowance |
| Stinnett, Byron E | Dravidi Subreen Stinnett for the payment of the Burial Allowance Jalzalla Inas Stinnett for the payment of the Burial Allowance |
| Tanori, Edward S | Denise Rossi Jones for the payment of the Accrued But Unpaid Service Retirement Allowance |

| | |
|-------------------|--|
| Torio, Steve I | Taye Mary Torio for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Tosti, Glenda J | Robert Blair Tosti for the payment of the Accrued But Unpaid Vested Retirement Allowance Burial Allowance |
| Toy, Henry | Mabel W Toy for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Ventura, Joseph M | Joseph S Ventura for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |
| Walt, Charles B | Quinn Payton Walt for the payment of the Accrued But Unpaid Service Retirement Allowance |
| Wigert, Annette M | Terry Lynn Bedilion for the payment of the Accrued But Unpaid Continuance Allowance |
| Williams, Roger F | Stephen B Williams for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance |

Zamora, Frank

Dale A Zamora for the payment of the
Accrued But Unpaid Service Retirement Allowance
Burial Allowance

TIER 3
NONE



REPORT TO BOARD OF ADMINISTRATION

MEETING: DECEMBER 10, 2019

From: Lita Payne, Executive Officer *Lita Payne*

ITEM: VIII-A

SUBJECT: EDUCATION AND TRAVEL EXPENDITURE REPORT FOR THE QUARTER ENDING SEPTEMBER 30, 2019

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board receive and file this report.

Executive Summary

A report of Board and staff travel expenditures is provided to the Board on a quarterly basis pursuant to the Board Education and Travel Policy. The total travel expenditure for the quarter ending September 30, 2019 was \$39,000.61 or 15.9% of the \$245,845.00 total budget for Fiscal Year 2019-20.

| | FY 2019-20 Budget | Quarter Ending 09/30/19 | | Year-to-Date | |
|------------------------------|----------------------|-------------------------|--------------|---------------------|--------------|
| | | Amount | Budget % | Amount | Budget % |
| Board | \$ 30,000.00 | \$ 11,324.16 | 37.7% | \$ 11,324.16 | 37.7% |
| Staff | \$126,695.00 | \$ 20,864.81 | 16.5% | \$ 20,864.81 | 16.5% |
| Investment Administration | \$ 89,150.00 | \$ 6,811.64 | 7.6% | \$ 6,811.64 | 7.6% |
| Total | \$245,845.00 | \$ 39,000.61 | 15.9% | \$ 39,000.61 | 15.9% |

Discussion

The attached report details the travel expenses for educational conferences attended by Board Members; investment due diligence visits conducted by Investment Division staff; and educational conferences and training courses attended by Los Angeles City Employees' Retirement System (LACERS) staff during the Fiscal Year 2019-20. The reported costs include registration and airfare expenditures paid directly by LACERS, as well as the amount reimbursed to Board Members and staff.

This report was prepared by Mikyong Jang, Departmental Chief Accountant IV.

LP:TB:MJ:LB

Attachment: 1) LACERS Board and Staff Education, Training, Investment Administration Related
Travel Quarterly Expenditure Report

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
STAFF EDUCATION AND RELATED TRAVEL EXPENDITURE REPORT
FOR THE PERIOD JULY 1, 2019 TO SEPTEMBER 30, 2019**

| NAME | ORGANIZATION | CONFERENCE TITLE | LOCATION | START DATE | END DATE | REGISTRATION | AIRFARE | LODGING | OTHER TRAVEL EXP. | TOTAL EXPENSE |
|--|---|---|-----------------|------------|----------|--------------------|--------------------|---------------------|--------------------|---------------------|
| MIGUEL BAHAMON* | INSTITUTIONAL LIMITED PARTNERS ASSOCIATION (ILPA) | THE ILPA INSTITUTE LEVEL II MODULE 1 | CHICAGO, IL | 07/14/19 | 07/16/19 | \$ 1,499.00 | \$ 487.60 | \$ 467.26 | \$ 235.85 | \$ 2,689.71 |
| BRIAN CHA* | INTERNATIONAL FOUNDATION OF EMPLOYEE BENEFIT PLANS (IFEBP) | FRAUD PREVENTION INSTITUTE FOR EMPLOYEE BENEFIT PLANS | CHICAGO, IL | 07/14/19 | 07/16/19 | - | 462.60 | 97.78 | 244.34 | 804.72 |
| JULIE GUAN | HYLAND | HYLAND COMMUNITY LIVE | CLEVELAND, OH | 09/14/19 | 09/19/19 | 2,395.00 | 420.60 | 1,042.70 | 454.56 | 4,312.86 |
| LAURIE TRAN** | HYLAND | HYLAND COMMUNITY LIVE | CLEVELAND, OH | 09/14/19 | 09/20/19 | 2,395.00 | 440.60 | 1,251.24 | 383.96 | 4,470.80 |
| BRIAN CHA | LRS RETIREMENT SOLUTIONS | PENSIONGOLD TEAMING CONFERENCE 2019 | SPRINGFIELD, IL | 09/16/19 | 09/19/19 | - | 495.83 | 369.51 | 265.75 | 1,131.09 |
| TODD BOUEY | LRS RETIREMENT SOLUTIONS | PENSIONGOLD TEAMING CONFERENCE 2019 | SPRINGFIELD, IL | 09/16/19 | 09/19/19 | - | 671.04 | 369.51 | 416.78 | 1,457.33 |
| LIN LIN | INTERNATIONAL PUBLIC MANAGEMENT ASSOCIATION FOR HUMAN RESOURCES (IPMA-HR) | 2019 IPMA-HR INTERNATIONAL TRAINING CONFERENCE & EXPO | MIAMI, FL | 09/22/19 | 09/25/19 | 669.00 | 537.00 | 505.11 | 213.33 | 1,924.44 |
| CHARLENA FREEMAN | INTERNATIONAL PUBLIC MANAGEMENT ASSOCIATION FOR HUMAN RESOURCES (IPMA-HR) | 2019 IPMA-HR INTERNATIONAL TRAINING CONFERENCE & EXPO | MIAMI, FL | 09/22/19 | 09/25/19 | 669.00 | 537.00 | - | 199.00 | 1,405.00 |
| JOHN KOONTZ | DISASTER RECOVERY JOURNAL (DRJ) | DRJ FALL 2019 | PHOENIX, AZ | 09/29/19 | 10/02/19 | 1,345.50 | - | 790.23 | 533.13 | 2,668.86 |
| TOTAL STAFF TRAVEL EXPENDITURES FOR THE 1ST QUARTER ENDING 09/30/19: | | | | | | \$ 8,972.50 | \$ 4,052.27 | \$ 4,893.34 | \$ 2,946.70 | \$ 20,864.81 |
| YTD TRAVEL EXPENDITURES / ANNUAL BUDGET FOR STAFF TRAVEL (AMOUNT & %): | | | | | | \$20,864.81 | | \$126,695.00 | | 16.5% |
| YTD STAFF TRAVEL EXPENDITURES / ANNUAL BUDGET FOR ALL DEPARTMENT TRAVEL (AMOUNT & %): | | | | | | \$20,864.81 | | \$245,845.00 | | 8.5% |

*Funded by the Travel Budget of Fiscal Year 2018-19.

**Includes \$12 service fees erroneously charged by the travel agency which was credited later.

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
BOARD MEMBERS' EDUCATION AND RELATED TRAVEL REPORT
FOR THE PERIOD JULY 1, 2019 TO SEPTEMBER 30, 2019**

| BOARD MEMBER | TRAVEL EXPENDITURES | | ANNUAL MAX. AMT./TRUSTEE* | BALANCE TO ANNUAL MAX. LIMIT |
|--|---------------------|---------------------|---------------------------|------------------------------|
| | QE 09/30/19 | YTD AS OF 09/30/19 | | |
| CYNTHIA RUIZ | \$ 4,722.26 | \$ 4,722.26 | \$ 10,000.00 | \$ 5,277.74 |
| ANNIE CHAO | 2,537.79 | 2,537.79 | 10,000.00 | 7,462.21 |
| ELIZABETH LEE | 4,064.11 | 4,064.11 | 10,000.00 | 5,935.89 |
| SANDRA LEE | - | - | 10,000.00 | 10,000.00 |
| NILZA SERRANO | - | - | 10,000.00 | 10,000.00 |
| SUNG WON SOHN | - | - | 10,000.00 | 10,000.00 |
| MICHAEL WILKINSON | - | - | 10,000.00 | 10,000.00 |
| TOTAL BOARD MEMBERS' TRAVEL EXP. & ANNUAL LIMIT | \$ 11,324.16 | \$ 11,324.16 | \$ 70,000.00 | N/A |
| TOTAL BOARD MEMBERS' TRAVEL EXPENSE BUDGET (%)** | 37.7% | 37.7% | | |

*Annual maximum travel expenditures limit per trustee is set at \$10,000.

**Calculated as a percentage of the \$30,000 FY20 budget allocation for Board travel.

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
INVESTMENT ADMINISTRATION AND RELATED TRAVEL EXPENDITURE REPORT
FOR THE PERIOD JULY 1, 2019 TO SEPTEMBER 30, 2019**

| NAME | ORGANIZATION | CONFERENCE TITLE | LOCATION | START DATE | END DATE | REGISTRATION | AIRFARE | LODGING | OTHER TRAVEL EXP. | TOTAL EXPENSE |
|--|--|---|----------------------------|------------|----------|-------------------|--------------------|---------------------|--------------------|--------------------|
| EDUARDO PARK | THE PENSION BRIDGE | THE PRIVATE EQUITY EXCLUSIVE | CHICAGO, IL | 07/22/19 | 07/24/19 | \$ - | \$ 438.61 | \$ 716.16 | \$ 229.12 | \$ 1,383.89 |
| RODNEY JUNE | THE ASSOCIATION OF ASIAN AMERICAN INVESTMENT MANAGERS (AAAIM) | AAAIM NATIONAL CONFERENCE 2019 | NEW YORK, NY | 09/03/19 | 09/05/19 | - | 461.60 | 299.90 | 227.00 | 988.50 |
| WILKIN LY | NOSSAMAN LLP / INSTITUTIONAL LIMITED PARTNERS ASSOCIATION (ILPA) | NOSSAMAN'S 2019 PUBLIC PENSIONS AND INVESTMENTS FIDUCIARIES' FORUM / ILPA MEETING | BERKELEY, CA / OAKLAND, CA | 09/04/19 | 09/06/19 | 395.00 | 206.60 | 359.34 | 219.78 | 1,180.72 |
| BARBARA SANDOVAL | EAM INVESTORS, LLC | DUE DILIGENCE | CARDIFF-BY-THE-SEA, CA | 09/11/19 | 09/11/19 | - | - | - | 78.50 | 78.50 |
| BRYAN FUJITA | EAM INVESTORS, LLC | DUE DILIGENCE | CARDIFF-BY-THE-SEA, CA | 09/11/19 | 09/11/19 | - | - | - | 60.67 | 60.67 |
| ROBERT KING | EAM INVESTORS, LLC | DUE DILIGENCE | CARDIFF-BY-THE-SEA, CA | 09/11/19 | 09/11/19 | - | - | - | 85.25 | 85.25 |
| BARBARA SANDOVAL | WILLIAM BLAIR INVESTMENT MANAGEMENT / SEGALL BRYANT & HAMILL | DUE DILIGENCE | CHICAGO, IL | 09/23/19 | 09/25/19 | - | 358.61 | 990.91 | 257.89 | 1,607.41 |
| RODNEY JUNE | INSTITUTIONAL LIMITED PARTNERS ASSOCIATION (ILPA) | 3RD ANNUAL CIO SYMPOSIUM | CAMBRIDGE, MA | 09/24/19 | 09/25/19 | - | 315.30 | - | 195.77 | 511.07 |
| EDUARDO PARK* | ASANA PARTNERS | 2019 ASANA PARTNERS ANNUAL MEETING | DALLAS, TX | 09/25/19 | 09/26/19 | - | 393.61 | 356.15 | 165.87 | 915.63 |
| INVESTMENT ADMINISTRATION TRAVEL EXPENDITURES FOR THE 1ST QUARTER ENDING 09/30/19: | | | | | | \$ 395.00 | \$ 2,174.33 | \$ 2,722.46 | \$ 1,519.85 | \$ 6,811.64 |
| YTD TRAVEL EXPENDITURES / ANNUAL BUDGET FOR INVESTMENT ADMINISTRATION TRAVEL EXPENDITURES (AMOUNT & %): | | | | | | \$6,811.64 | | \$89,150.00 | | 7.6% |
| YTD INVESTMENT ADMIN. TRAVEL EXPENDITURES / ANNUAL BUDGET FOR ALL DEPARTMENT TRAVEL (AMOUNT & %): | | | | | | \$6,811.64 | | \$245,845.00 | | 2.8% |

* Airfare, lodging, and ground transportation costs for \$828.63 are billed to Asana Partners on 11/13/19 for reimbursement.

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
BOARD MEMBERS' EDUCATION AND RELATED TRAVEL EXPENDITURE REPORT
FOR THE PERIOD JULY 1, 2019 TO SEPTEMBER 30, 2019**

| NAME | ORGANIZATION | CONFERENCE TITLE | LOCATION | START DATE | END DATE | REGISTRATION | AIRFARE | LODGING | OTHER TRAVEL EXP. | TOTAL EXPENSE |
|---|--|--|---------------|------------|----------|--------------------|---------------------|--------------------|--------------------|---------------------|
| ELIZABETH LEE | STATE ASSOCIATION OF COUNTY RETIREMENT SYSTEMS (SACRS) | MODERN INVESTMENT THEORY & PRACTICE FOR RETIREMENT SYSTEMS | BERKELEY, CA | 07/21/19 | 07/24/19 | \$ 2,500.00 | \$ 186.96 | \$ 1,093.74 | \$ 283.41 | \$ 4,064.11 |
| CYNTHIA RUIZ | PRINCIPLES FOR RESPONSIBLE INVESTMENT (PRI) ASSOCIATION | PRI IN PERSON 2019 | PARIS, FRANCE | 09/08/19 | 09/13/19 | 1,302.45 | 1,449.03 | 1,343.90 | 626.88 | 4,722.26 |
| ANNIE CHAO | NATIONAL CONFERENCE ON PUBLIC EMPLOYEE RETIREMENT SYSTEMS (NCPERS) | 2019 PUBLIC PENSION FUNDING FORUM | NEW YORK, NY | 09/10/19 | 09/13/19 | 685.00 | 296.60 | 1,177.47 | 378.72 | 2,537.79 |
| BOARD MEMBERS' EDUCATION AND RELATED TRAVEL EXPENDITURES FOR THE 1ST QUARTER ENDING 09/30/19: | | | | | | \$ 4,487.45 | \$ 1,932.59 | \$ 3,615.11 | \$ 1,289.01 | \$ 11,324.16 |
| YTD TRAVEL EXPENDITURES / ANNUAL BUDGET FOR BOARD EDUCATION AND TRAVEL (AMOUNT & %): | | | | | | \$11,324.16 | \$30,000.00 | | 37.7% | |
| YTD BOARD MEMBERS' TRAVEL EXPENDITURES / ANNUAL BUDGET FOR ALL DEPARTMENT TRAVEL (AMOUNT & %): | | | | | | \$11,324.16 | \$245,845.00 | | 4.6% | |



REPORT TO BOARD OF ADMINISTRATION
From: Rahoof "Wally" Oyewole, Dept. Audit Manager

MEETING: DECEMBER 10, 2019
ITEM: VIII – B

Rahoof Oyewole

SUBJECT: PRESENTATION OF LACERS' AUDITED FINANCIAL STATEMENTS FOR FISCAL YEAR ENDING JUNE 30, 2019

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board receive and file the audited financial statements for Fiscal Year end June 30, 2019.

Executive Summary

The auditors from Brown Armstrong Accountancy Corporation (Brown Armstrong) have completed the audit of LACERS' financial statements for the Fiscal Year ended June 30, 2019. Brown Armstrong has issued an unmodified ("clean") opinion, indicating that the financial statements fairly present LACERS' fiduciary net position, and changes in fiduciary net position for the year ended June 30, 2019, in conformity with generally accepted accounting principles. The Engagement Partner from Brown Armstrong will present their audit results to the Board.

Discussion

In addition to the primary opinion report, Brown Armstrong also issued two additional reports, as required by professional standards:

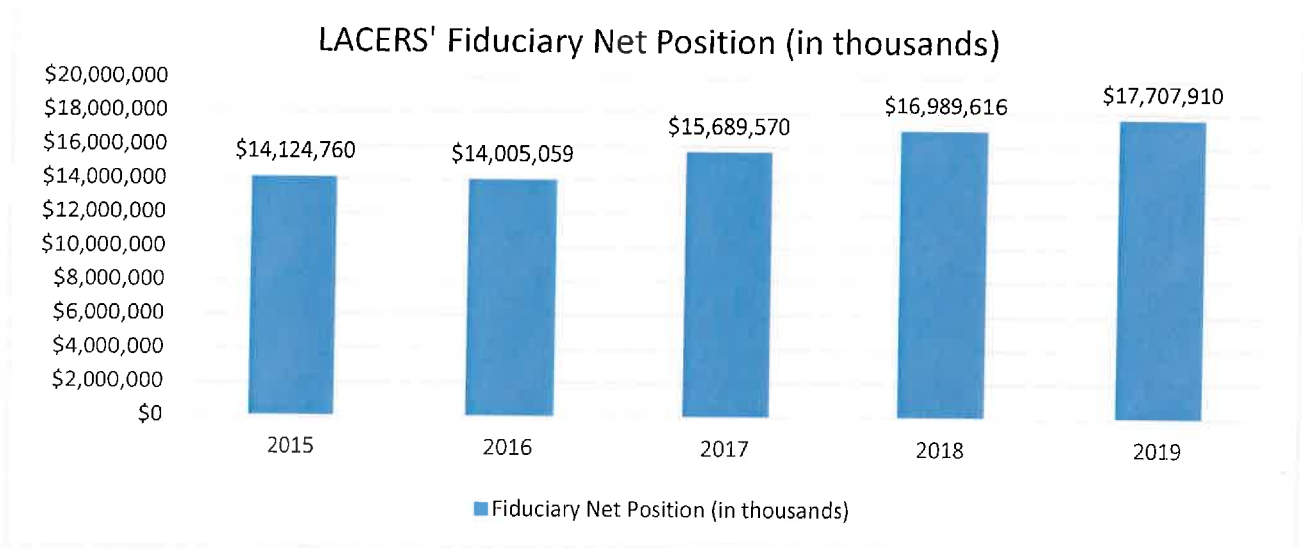
1. Independent Auditor's Report on Internal Control over Financial Reporting and on Compliance on Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*.
 - o The results of the auditors' tests did not identify any deficiencies in internal control that they consider to be material weaknesses. Their tests also disclosed no instances of noncompliance or other matters that are reportable under Government Auditing Standards.

2. Required Communication to the Audit Committee and the Board of Administration in Accordance with Professional Standards stating that:
 - o Key factors and assumptions used to estimate fair market values of investments, Net Pension Liability, and Net OPEB Liability are reasonable.
 - o The auditors did not encounter difficulties or other matters warranting communication to the Audit Committee or the Board.

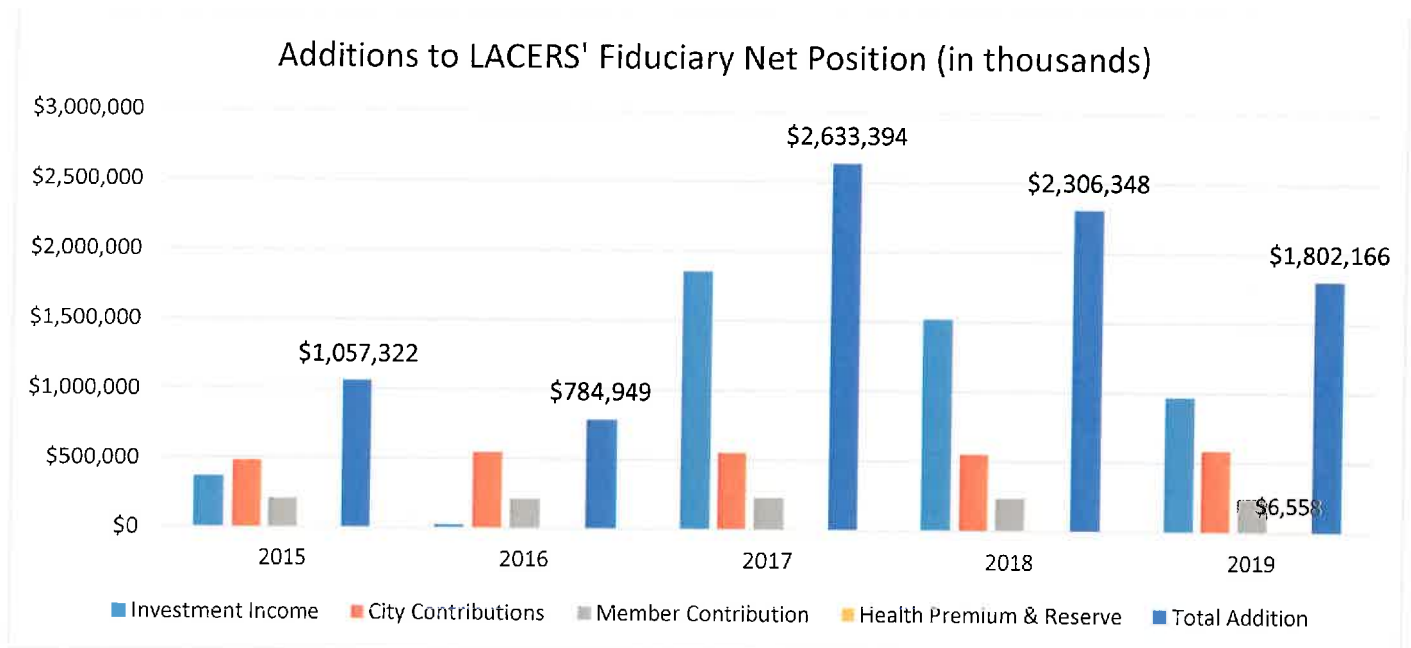
Financial Highlights

The following are the highlights from the LACERS' financial statements as of June 30, 2019:

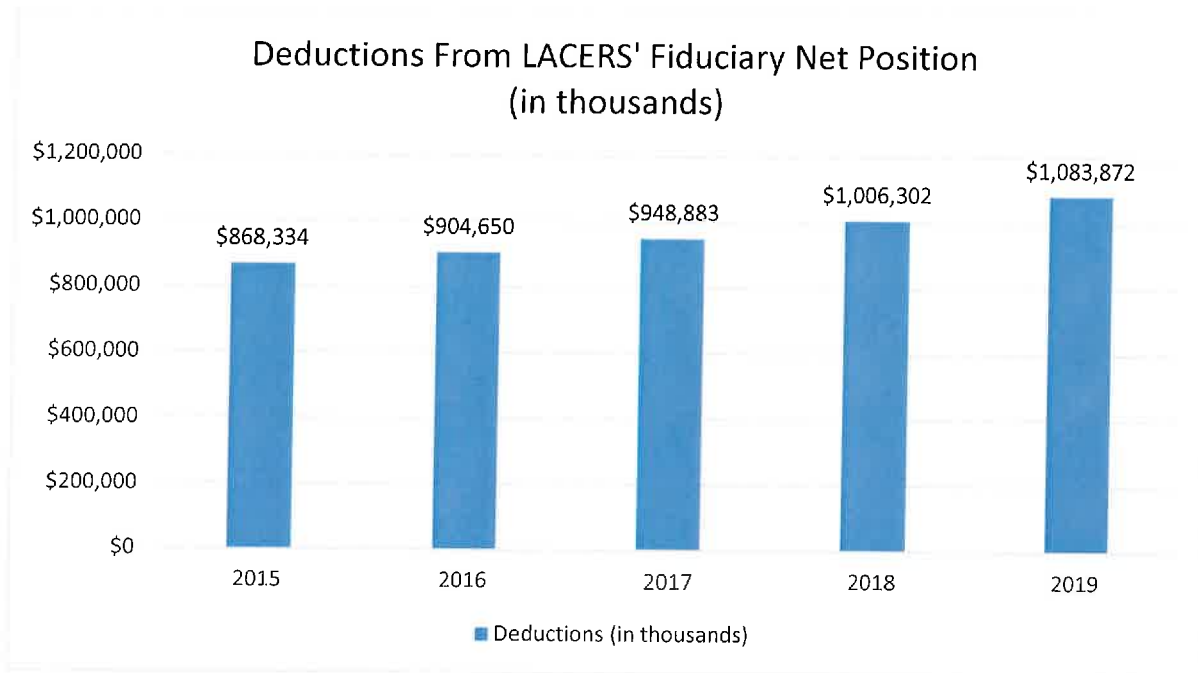
- LACERS' Fiduciary Net Position as of June 30, 2019 was approximately \$17.7 billion, representing an increase of approximately \$718.3 million (4.2%) over the prior fiscal year. As indicated in the chart below, Fiduciary Net Position has increased \$3.6 billion (25.5%) since 2015.



- Additions to the fiduciary net position during the fiscal year totaled \$1.8 billion, comprising \$968.5 million in investment income, \$586.8 million in City contributions, \$240.4 million in Member contributions and \$6.6 million in Health Insurance Premium and Reserve.



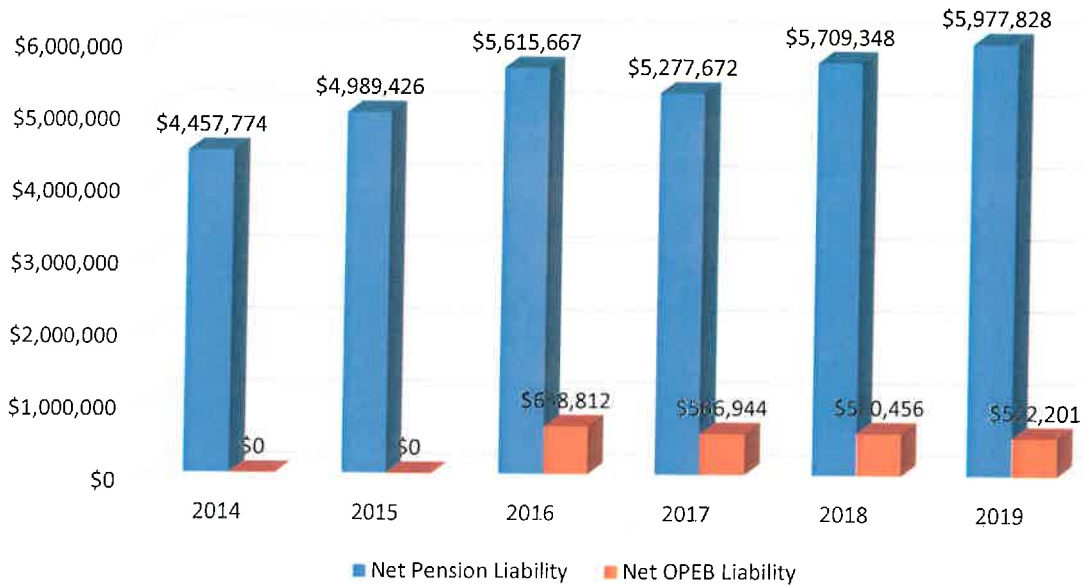
- Deductions from the fiduciary net position during the fiscal year for the payment of retirement and postemployment health care benefits, refunds of Member contributions, and administrative expenses totaled \$1.1 billion. The increase in deductions is primarily due to an increase in benefit payments.



- LACERS' Net Pension Liability (NPL) for the Retirement Plan was \$6 billion as of June 30, 2019. NPL is the difference between the Total Pension Liability (TPL) and the Plan Fiduciary Net Position. Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, requires pension plans to measure and disclose NPL in the notes to the financial statements. Compared with the previous fiscal year, the NPL increased by \$268.5 million.
- GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, requires pension plans to also measure and disclose Net Other Postemployment Benefits (OPEB) Plan Liability in the notes to the financial statements. Similar to NPL, Net OPEB Liability (NOL) is determined on a market value basis, and is the difference between Total OPEB Liability and the Plan Fiduciary Net Position. LACERS' NOL for the Postemployment Health Care Plan was \$522.2 million as of June 30, 2019, a decrease of \$58.3 million from previous fiscal year.

The chart on the next page shows the NPL and NOL trend from 2014-2019.

LACERS' Net Pension and Net OPEB Liability (in thousands)



- Finally, based on actuarial valuations as of June 30, 2019, the funded ratios based on market values of assets were 71.3% and 84.3% for the Retirement Plan and Postemployment Health Care Plan, respectively.

Strategic Plan Impact Statement

LACERS' audited financial statements provide transparent information on the Plan's income and expenses as well as its assets, liabilities and fiduciary net position, as of June 30, 2019. Discussion of the Plan's financial results is consistent with the Board's Governance Goal to "uphold good governance practices which affirm transparency, accountability and fiduciary duty."

Prepared By: Rahoof "Wally" Oyewole, Departmental Audit Manager

RO

- Attachments:
1. Brown Armstrong Presentation Agenda
 2. Brown Armstrong Reports to Audit Committee and the Board
 3. LACERS' Audited Financial Statements for Fiscal Year Ended June 30, 2019



Los Angeles City Employees' Retirement System

Results of the Financial Statement Audit for the Fiscal Year Ended June 30, 2019

Brown Armstrong

Accountancy Corporation

4200 Truxtun Avenue, Suite 300 | Bakersfield, CA 93309 | 661.324.4971 | Fax 661.324.4997

www.bacpas.com

Presented By: Rosalva Flores, CPA
Partner

Brooke Baird, CPA
Manager and Shareholder in Training

BROWN
ARMSTRONG
—
CERTIFIED
PUBLIC
ACCOUNTANTS



December 10, 2019

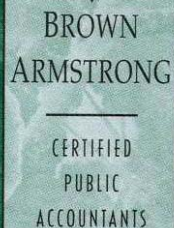
Board of Administration
Los Angeles City Employees' Retirement System
202 W. First Street, Suite 500
Los Angeles, California 90012-4401

We are pleased to have the opportunity to present to you the results of our audit of the Los Angeles City Employees' Retirement System (LACERS) financial statements for the fiscal year ended June 30, 2019.

We look forward to presenting this information and addressing your questions.

Sincerely,

Rosalva Flores, *Partner*
Brooke Decuir- Baird, Manager and Shareholder-in-Training
Brown Armstrong Accountancy Corporation



BROWN
ARMSTRONG
—
CERTIFIED
PUBLIC
ACCOUNTANTS

Agenda

| | Page |
|--------------------------------------|------|
| ➤ Scope of Services Recap | 4 |
| ➤ Audit Timeline/Critical Dates | 5 |
| ➤ Audit Areas of Focus | |
| ◦ Significant Risk Areas | 6 |
| ◦ Significant Audit Areas | 7 |
| ➤ Results of the Audit | |
| ◦ Audit Opinions Issued | 8 |
| ◦ Required Communication | 8 |
| ➤ Financial Statement Review Process | 9 |
| ➤ Thank Staff/Questions? | 10 |

Scope of Services

- ❖ Audit of LACERS financial statements in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States
- ❖ Other communications required by professional standards including:
 - Report on Internal Control Over Financial Reporting and on Compliance and Other Matters (Yellow Book)
 - Required Communication to the Audit Committee and Board of Administration (SAS 114)

Audit Timeline/Critical Dates

- Planning/Population and Information Requests – June 2019
- Interim Procedures– Fieldwork – July 29, 2019
 - On-site Testing of Internal Controls
 - Walkthroughs and Understanding of Key Accounting Areas
 - Update Minutes and Agreements
 - Participant Testing
- Final Procedures – Fieldwork – September 9, 2019
 - Substantiate all Accounts and Balances
 - Review Confirmation Responses
- Audit Wrap Up conference call with Management to Discuss Results of Fieldwork and Release Numbers to Actuary – September 27, 2019
- Audit Status Meeting with Audit Committee – September/October 2019
- Draft Financial Statements, Funding Valuation and GASB Statement No. 67 and No. 74 Reports Review – November 2019
- Draft Reports and Recommendations and Assist Management with Review of the Financial Statements – November 2019
- Audit Opinions Issued – November 26, 2019 – Issued Timely
- CAFR Review – December 2019

BROWN
ARMSTRONG

CERTIFIED
PUBLIC
ACCOUNTANTS

Audit Areas of Focus

| Significant Risk Areas | Brown Armstrong's Response |
|---------------------------------|---|
| Revenue Recognition | <ul style="list-style-type: none">•Test of controls was performed over contribution amounts as part of participant data•Substantive analytics were performed |
| Management Override of Controls | <ul style="list-style-type: none">•An understanding of controls over journal entries was obtained and a detailed testing of journal entries was performed•Inquiries performed with individual(s) involved in the financial reporting process and ensuring no inappropriate or unusual activity was noted relating to the processing of journal entries•Performed walkthroughs of significant areas and adequate segregation of duties |
| Information Technology (IT) | <ul style="list-style-type: none">•Walkthrough performed over General Controls•Limited scope was performed in the current year as full scope was performed in prior year•We retested some areas performed in prior year•We reviewed the status of prior year comments |

Audit Areas of Focus (Continued)

| Significant Audit Areas | Brown Armstrong's Response |
|-------------------------------------|--|
| Investments and Related Earnings | <ul style="list-style-type: none"> •Walkthrough of controls performed •High level analytics performed on investment income •Confirmation with custodian, managers, and consultants •Reviewed GASB Statement No. 72 valuation inputs and level determinations •Obtained audited financial statements and SOC reports for traditional investments and valuation methodologies, appraisals, for private equity and real estate |
| Participant Data and Actuary | <ul style="list-style-type: none"> •Walkthrough and test of controls •Confirmed with the actuary •Testing of participant data, including active and terminated members, and employer payroll •Testing of OPEB participant data including determining eligibility of benefits •GASB Statements No. 67/74 |
| Employer and Employee Contributions | <ul style="list-style-type: none"> •Walkthrough and test of controls •High level analytics |
| Benefit Payments | <ul style="list-style-type: none"> •Walkthrough and test of controls •High level analytics |



Results of the Audit

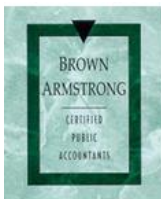
| Report | Summary of Opinion / Required Communication |
|--|--|
| Report on Financial Statements (Opinion) | Unmodified (Clean) |
| Report on Internal Control Structure and Compliance with Laws and Regulations Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With <i>Government Auditing Standards</i> | <ul style="list-style-type: none"> •No noncompliance noted •No material weaknesses, significant deficiencies, or control deficiencies identified |
| Required Communication to the Audit Committee and Board of Administration in Accordance with Statement on Auditing Standards (SAS) 114 | <ul style="list-style-type: none"> •Significant estimates and Sensitive Disclosures Reviewed <ul style="list-style-type: none"> • Fair Value of Investments • Contributions and Net Pension and OPEB Liability Estimates <ul style="list-style-type: none"> ✓ Based on actuary assumptions •Proposed Audit Adjustments – None •Disagreements with Management – None •New Accounting Standards – None that had an impact |



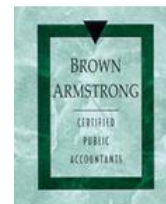
Financial Statement Review Process

- Review Process
- Quality Control
- GFOA Award

Thank Staff/ Questions?



Rosalva Flores | Principal
Brown Armstrong Accountancy Corporation
4200 Truxtun Avenue, Suite 300
Bakersfield, California 93309
Tel: 661-324-4971 | Email: rflores@bacpas.com



Brooke DeCuir-Baird, CPA | Audit Manager
Brown Armstrong Accountancy Corporation
4200 Truxtun Avenue, Suite 300
Bakersfield, California 93309
T: 661-324-4971 | Email: bbaird@bacpas.com



BOARD Meeting: 12/10/19
Item VIII-B
Attachment 2

**LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM
(A DEPARTMENT OF THE MUNICIPALITY OF
THE CITY OF LOS ANGELES, CALIFORNIA)**

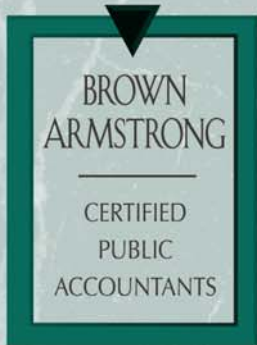
**REPORT TO THE AUDIT COMMITTEE
AND BOARD OF ADMINISTRATION**

**FOR THE FISCAL YEAR ENDED
JUNE 30, 2019**

**LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM
(A DEPARTMENT OF THE MUNICIPALITY OF
THE CITY OF LOS ANGELES, CALIFORNIA)**

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| I. Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Auditing Standards</i> | 1 |
| II. Required Communication to the Audit Committee and Board of Administration in Accordance with Professional Standards (SAS 114) | 3 |



BROWN ARMSTRONG

Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

To the Audit Committee and Board of Administration of
Los Angeles City Employees' Retirement System
Los Angeles, California

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Los Angeles City Employees' Retirement System (LACERS), as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise LACERS' basic financial statements, and have issued our report thereon dated November 25, 2019.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered LACERS' internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of LACERS' internal control. Accordingly, we do not express an opinion on the effectiveness of LACERS' internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. *A material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of LACERS' financial statements will not be prevented, or detected and corrected on a timely basis. *A significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

BAKERSFIELD OFFICE (MAIN OFFICE)

4200 TRUXTUN AVENUE
SUITE 300
BAKERSFIELD, CA 93309
TEL 661.324.4971
FAX 661.324.4997
EMAIL info@bacpas.com

FRESNO OFFICE

10 RIVER PARK PLACE EAST
SUITE 208
FRESNO, CA 93720
TEL 559.476.3592

STOCKTON OFFICE

1919 GRAND CANAL BLVD
SUITE C6
STOCKTON, CA 95207
TEL 888.565.1040

WWW.BACPAS.COM

Compliance and Other Matters

As part of obtaining reasonable assurance about whether LACERS' financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, and contracts, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

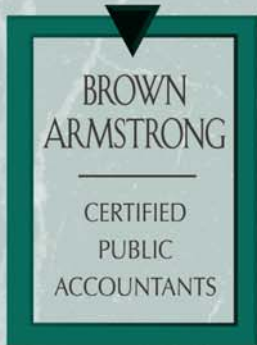
Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of LACERS' internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering LACERS' internal control and compliance. Accordingly, this report is not suitable for any other purpose.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

*Brown Armstrong
Accountancy Corporation*

Bakersfield, California
November 25, 2019



BROWN ARMSTRONG

Certified Public Accountants

REQUIRED COMMUNICATION TO THE AUDIT COMMITTEE AND BOARD OF ADMINISTRATION IN ACCORDANCE WITH PROFESSIONAL STANDARDS (SAS 114)

To the Audit Committee and Board of Administration of
Los Angeles City Employees' Retirement System
Los Angeles, California

We have audited the financial statements of the Los Angeles City Employees' Retirement System (LACERS) for the fiscal year ended June 30, 2019. Professional standards require that we provide you with information about our responsibilities under auditing standards generally accepted in the United States of America and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our scope of services outline to you dated September 24, 2019. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Matters

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by LACERS are described in Note 1 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during the year. We noted no transactions entered into by LACERS during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting LACERS' basic financial statements were:

- Management's estimate of the fair value of investments which is derived by various methods as explained in the notes to the basic financial statements. We evaluated the key factors and assumptions used to develop the estimate of the fair value of investments in determining that it is reasonable in relation to the financial statements taken as a whole.
- The recommended rates for employer contributions and net pension and net postemployment healthcare (OPEB) liabilities are based on the actuarial valuations including actuarially-presumed interest rate and assumptions which involve estimates of the value of reported amounts and probabilities about the occurrence of future events far into the future. We evaluated the key factors and assumptions used to develop the employer contribution amounts and net pension and net OPEB liabilities in determining that they are reasonable in relation to the financial statements taken as a whole.

BAKERSFIELD OFFICE (MAIN OFFICE)

4200 TRUXTUN AVENUE
SUITE 300
BAKERSFIELD, CA 93309
TEL 661.324.4971
FAX 661.324.4997
EMAIL info@bacpas.com

FRESNO OFFICE

10 RIVER PARK PLACE EAST
SUITE 208
FRESNO, CA 93720
TEL 559.476.3592

STOCKTON OFFICE

1919 GRAND CANAL BLVD
SUITE C6
STOCKTON, CA 95207
TEL 888.565.1040

WWW.BACPAS.COM

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

- The disclosures for deposits and investments in Note 1 – *Description of LACERS and Significant Accounting Policies* and Note 6 – *Cash and Short-Term Investments and Investments* were derived from LACERS’ investment policy. The estimated fair value of investments was derived by various methods as detailed in the notes to the basic financial statements.
- Additionally, the disclosures related to the net pension and net OPEB liabilities and actuarial methods and assumptions in Note 2 – *Retirement Plan Description* and Note 3 – *Postemployment Health Care Plan Description* were derived from actuarial valuations, which involved estimates of the value of reported amounts and probabilities about the occurrence of future events far into the future.

The financial statement disclosures are neutral, consistent, and clear.

Audit Management Issues

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Professional standards require us to accumulate all misstatements identified during the audit, if any, other than those that are clearly trivial, and communicate them to the appropriate level of management. No such misstatements were noted during our audit.

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor’s report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the Management Representation Letter dated November 25, 2019.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a “second opinion” on certain situations. If a consultation involves application of an accounting principle to the LACERS’ financial statements or a determination of the type of auditor’s opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as LACERS’ auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to the Management Discussion and Analysis (MD&A); the Retirement Plan’s Schedule of Net Pension Liability, Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Contribution History, and Schedule of Investment Returns; and the Postemployment Health Care Plan’s Schedule of Net OPEB Liability, Schedule of Changes in Net OPEB Liability and Related Ratios, Schedule of Contribution History, and Schedule of Investment Returns, which are required supplementary information (RSI) that supplement the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and

comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during the audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the Schedule of Administrative Expenses and Schedule of Investment Fees and Expenses, which accompany the financial statements but are not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

We were not engaged to report on the introductory, investment, actuarial, and statistical sections, which accompany the financial statements but are not RSI. We did not audit or perform other procedures on this other information and we do not express an opinion or provide any assurance on it.

This report is intended solely for the information and use of the Audit Committee, Board of Administration, and management of LACERS, and is not intended to be, and should not be, used by anyone other than these specified parties.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

Brown Armstrong
Accountancy Corporation

Bakersfield, California
November 25, 2019

BOARD Meeting: 12/10/19
Item VIII-B
Attachment 3

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
(A DEPARTMENT OF THE MUNICIPALITY OF
THE CITY OF LOS ANGELES, CALIFORNIA)

ANNUAL FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 2019

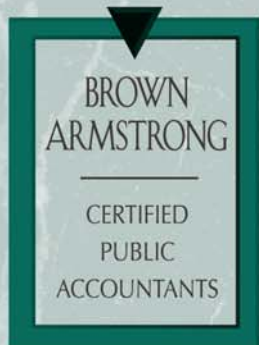
**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
(A DEPARTMENT OF THE MUNICIPALITY OF THE CITY OF LOS ANGELES, CALIFORNIA)**

ANNUAL FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 2019

Table of Contents

| | <u>Page</u> |
|---|-------------|
| Independent Auditor's Report | 1 |
| Management's Discussion and Analysis | 4 |
| <u>Basic Financial Statements</u> | |
| Statement of Fiduciary Net Position | 12 |
| Statement of Changes in Fiduciary Net Position | 13 |
| Notes to the Basic Financial Statements | 14 |
| <u>Required Supplementary Information</u> | |
| Retirement Plan | |
| Schedule of Net Pension Liability | 37 |
| Schedule of Changes in Net Pension Liability and Related Ratios | 38 |
| Schedule of Contribution History | 40 |
| Schedule of Investment Returns | 41 |
| Postemployment Health Care Plan | |
| Schedule of Net OPEB Liability | 42 |
| Schedule of Changes in Net OPEB Liability and Related Ratios | 43 |
| Schedule of Contribution History | 45 |
| Schedule of Investment Returns | 46 |
| <u>Supplemental Schedules</u> | |
| Schedule of Administrative Expenses | 47 |
| Schedule of Investment Fees and Expenses | 48 |



BROWN ARMSTRONG

Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

Board of Administration
Los Angeles City Employees' Retirement System
Los Angeles, California

Report on the Financial Statements

We have audited the accompanying Retirement Plan and Postemployment Health Care Plan Statement of Fiduciary Net Position of the Los Angeles City Employees' Retirement System (LACERS), a department of the Municipality of the City of Los Angeles, California, as of June 30, 2019, and the related Retirement Plan and Postemployment Health Care Plan Statement of Changes in Fiduciary Net Position for the year then ended, and the related notes to the financial statements, which collectively comprise LACERS basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to LACERS preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of LACERS internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

BAKERSFIELD OFFICE

(MAIN OFFICE)

4200 TRUXTUN AVENUE
SUITE 300
BAKERSFIELD, CA 93309
TEL 661.324.4971
FAX 661.324.4997
EMAIL info@bacpas.com

FRESNO OFFICE

10 RIVER PARK PLACE EAST
SUITE 208
FRESNO, CA 93720
TEL 559.476.3592

STOCKTON OFFICE

1919 GRAND CANAL BLVD
SUITE C6
STOCKTON, CA 95207
TEL 888.565.1040

WWW.BACPAS.COM

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement Plan and Postemployment Health Care Plan of LACERS as of June 30, 2019, and the changes in fiduciary net position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and required supplementary information, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the GASB who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements of LACERS that collectively comprise LACERS basic financial statements. The supplemental schedules, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supplemental schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used in the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

Report on Summarized Comparative Information

We have previously audited LACERS June 30, 2018 financial statements, and our report dated November 27, 2018, expressed an unmodified opinion on those audited financial statements. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2018, is consistent in all material respects, with the audited financial statements from which it has been derived.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 25, 2019, on our consideration of LACERS internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering LACERS internal control over financial reporting and compliance.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

*Brown Armstrong
Accountancy Corporation*

Bakersfield, California
November 25, 2019

MANAGEMENT'S DISCUSSION AND ANALYSIS

Management's Discussion and Analysis

Financial Highlights

- The Los Angeles City Employees' Retirement System (LACERS or the System) fiduciary net position as of June 30, 2019 was \$17,707,910,000, an increase of \$718,294,000 or 4.2% over the prior fiscal year.
- The total additions to the fiduciary net position of LACERS, from employer contributions made by the City of Los Angeles (the City), Member contributions, self-funded dental insurance premium, Members' portion of premium reserve, and net investment income were \$1,802,166,000, a 21.9% decrease from the prior fiscal year. Self-funded dental insurance premium and Members' portion of premium reserve are two new funding sources for the newly established 115 Trust fund (refer to Note 3 – Postemployment Health Care Plan Description on page 22).
- The employer contributions to the Retirement Plan represented 100% of the Actuarially Determined Contribution of the employer as defined by the Governmental Accounting Standards Board (GASB) Statements No. 67, *Financial Reporting for Pension Plans*, and No. 68, *Accounting and Financial Reporting for Pensions*.
- The employer contributions to the Postemployment Health Care Plan represented 100% of the Actuarially Determined Contribution of the employer as defined by GASB Statements No. 74, *Financial Reporting for Postemployment Benefit Plans Other than Pension Plans*, and No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*.
- Net investment income for this fiscal year was \$968,497,000, representing a 36.2% decrease compared with an investment income of \$1,518,879,000 for the previous fiscal year.
- The total deductions from the fiduciary net position were \$1,083,872,000, a 7.7% increase from the prior fiscal year, for the payment of retirement and postemployment health care benefits, refunds of Member contributions, and administrative expenses.
- The System's Net Pension Liability (NPL) for the retirement benefits was \$5,977,828,000 as of June 30, 2019. NPL, a measure required by GASB Statement No. 67 to disclose in the financial notes of a pension plan, is the difference between the Total Pension Liability (TPL) and the plan fiduciary net position. As the plan fiduciary net position is equal to the market value (also referred to as the "fair value") of the

plan's assets, NPL is determined on a market value basis, and it fully reflects the plan's investment performance (6.2% rate of return, gross of fees) of this fiscal year. Compared with the previous fiscal year, the NPL increased by \$268,480,000.

- The System's Net Other Postemployment Benefits (OPEB) Plan Liability for the postemployment health care benefits was \$522,201,000 as of June 30, 2019. Net OPEB Liability (NOL) is a measure required by GASB Statement No. 74. NOL is determined on a market value basis, and is the difference between the Total OPEB Liability (TOL) and the plan fiduciary net position (market value of the plan's assets). NOL reflects the plan's investment performance (6.2% rate of return, gross of fees) for this fiscal year. As compared with the previous fiscal year, the NOL decreased by \$58,255,000.
- The plan fiduciary net position as a percentage of TPL for the Retirement Plan, another required disclosure of GASB Statement No. 67, was 71.3%, which is the same as the funded ratio on a market value basis reported in the actuarial valuation for the retirement benefits.
- The plan fiduciary net position as a percentage of TOL for the Postemployment Health Care Plan, another required disclosure of GASB Statement No. 74, was 84.3%, which is the same as the funded ratio on a market value basis reported in the actuarial valuation for the postemployment health care benefits.

Overview of the Financial Statements

The following discussion and analysis are intended to serve as an introduction to LACERS financial statements and the accompanying notes thereto. The required supplementary information and supplemental schedules provide additional financial data on LACERS operations.

Financial Statements

There are two financial statements presented by LACERS. The Statement of Fiduciary Net Position on page 12 gives a snapshot of the account balances at year-end and shows the amount of the fiduciary net position (the difference between the assets plus deferred outflows of resources, and liabilities plus deferred inflows of resources) available to pay future benefits. Over time, increases or decreases in fiduciary net position may serve as a useful indicator of whether the fiduciary net position of LACERS is improving or deteriorating. The Statement of

Management's Discussion and Analysis

Overview of the Financial Statements (Continued)

Financial Statements (Continued)

Changes in Fiduciary Net Position on page 13 provides a view of current year additions to, and deductions from, the fiduciary net position.

Notes to the Basic Financial Statements

The notes to the basic financial statements (Notes) provide additional information that is essential for a full understanding of the data provided in the financial statements. The notes to the basic financial statements can be found on pages 14 - 36 of this report.

Required Supplementary Information

In addition to the Management's Discussion and Analysis, other required supplementary information consists of the Schedule of Net Pension Liability, Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Contribution History, and Schedule of Investment Returns for the Retirement Plan, and the Schedule of Net OPEB Liability, Schedule of Changes in Net OPEB Liability and Related Ratios, Schedule of Contribution History, and Schedule of Investment Returns for the Postemployment Health Care Plan. These schedules and notes primarily present multi-year information as required by the applicable financial reporting standards of GASB Statements No. 67 and No. 74. This required supplementary information can be found on pages 37 - 46 of this report.

Supplemental Schedules

The supplemental schedules, including a Schedule of Administrative Expenses and a Schedule of Investment Fees and Expenses, are presented to provide additional financial information on LACERS operations for the current year. These can be found on pages 47 and 48 of this report.

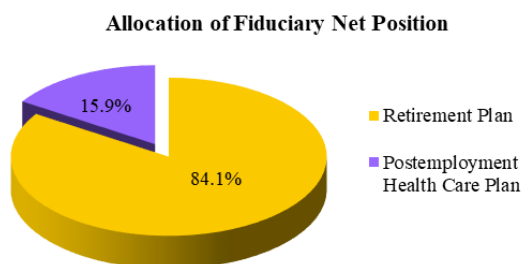
Management's Discussion and Analysis

Financial Analysis

Allocation of Fiduciary Net Position

Fiduciary net position may serve as a useful indicator of a plan's financial position. The total fiduciary net position is allocated between the Retirement Plan and Postemployment Health Care Plan, as required by the existing reporting standards. The following information provides a brief description of the asset allocation between the Retirement Plan and the Postemployment Health Care Plan as of June 30, 2019 (dollars in thousands):

| | Fiduciary Net Position | Percent |
|------------------------------------|---------------------------|---------------|
| Retirement Plan | \$ 14,895,812 | 84.1% |
| Postemployment Health Care Plan | 2,812,098 | 15.9 |
| Fiduciary Net Position | \$ 17,707,910 | 100.0% |



Fiduciary Net Position

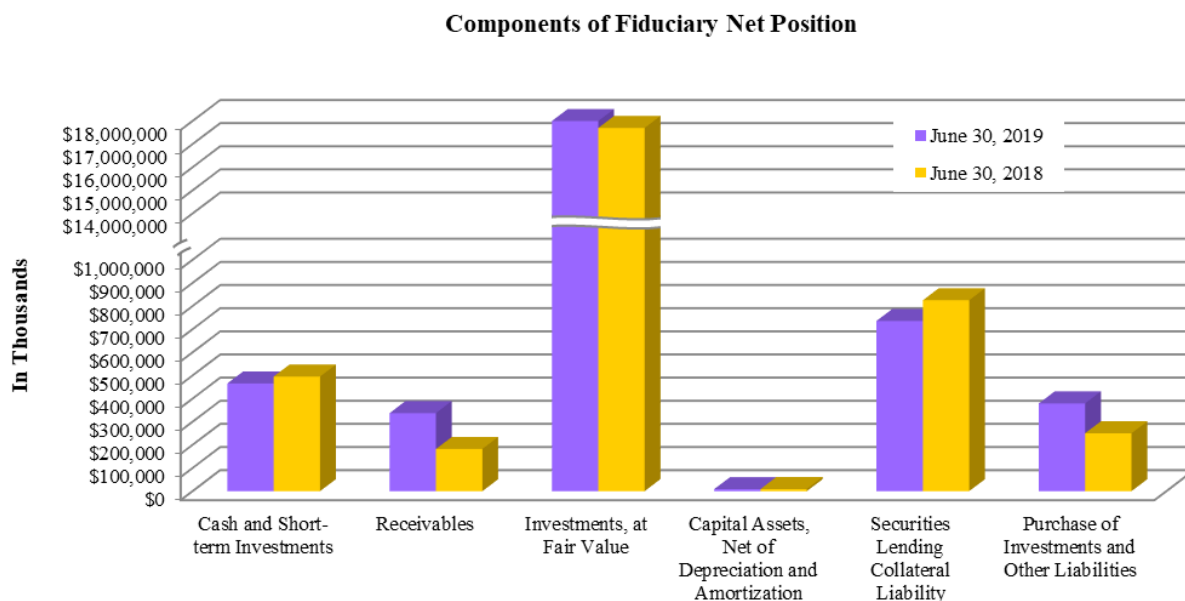
The following table and graph detail the components of the fiduciary net position of LACERS as of June 30, 2019 and 2018 (dollars in thousands):

| | June 30, 2019 | June 30, 2018 | Change | |
|--|----------------------|----------------------|-------------------|--------------|
| Cash and Short-Term Investments | \$ 440,455 | \$ 470,390 | \$ (29,935) | (6.4) % |
| Receivables | 312,505 | 157,483 | 155,022 | 98.4 |
| Investments, at Fair Value | 17,990,214 | 17,357,845 | 632,369 | 3.6 |
| Capital Assets, Net of Depreciation and Amortization | 8,789 | 9,185 | (396) | (4.3) |
| Total Assets | 18,751,963 | 17,994,903 | 757,060 | 4.2 |
| Securities Lending Collateral Liability | 705,535 | 795,076 | (89,541) | (11.3) |
| Purchase of Investments and Other Liabilities | 338,518 | 210,211 | 128,307 | 61.0 |
| Total Liabilities | 1,044,053 | 1,005,287 | 38,766 | 3.9 |
| Fiduciary Net Position Restricted for Pension Benefits and Postemployment Health Care Benefits | \$ 17,707,910 | \$ 16,989,616 | \$ 718,294 | 4.2 % |

Management's Discussion and Analysis

Financial Analysis (Continued)

Fiduciary Net Position (Continued)



The majority of LACERS fiduciary net position is contained in its investment portfolio, which consists of cash and short-term investments, receivables, fixed income, equities, and other asset classes. Fiduciary net position increased by \$718,294,000, or 4.2%, during this fiscal year.

Net Increase in Fiduciary Net Position

The increase in fiduciary net position during the reporting period was the net effect of factors that either added to or deducted from the fiduciary net position. The following table summarizes the changes in fiduciary net position during the report year, as compared with the prior year (dollars in thousands):

| | June 30, 2019 | June 30, 2018 | Change | |
|---|----------------------|----------------------|-------------------|----------|
| Additions | \$ 1,802,166 | \$ 2,306,348 | \$ (504,182) | (21.9) % |
| Deductions | 1,083,872 | 1,006,302 | 77,570 | 7.7 |
| Net Increase in Fiduciary Net Position | 718,294 | 1,300,046 | (581,752) | (44.7) |
| Fiduciary Net Position, Beginning of Year | 16,989,616 | 15,689,570 | 1,300,046 | 8.3 |
| Fiduciary Net Position, End of Year | <u>\$ 17,707,910</u> | <u>\$ 16,989,616</u> | <u>\$ 718,294</u> | 4.2 % |

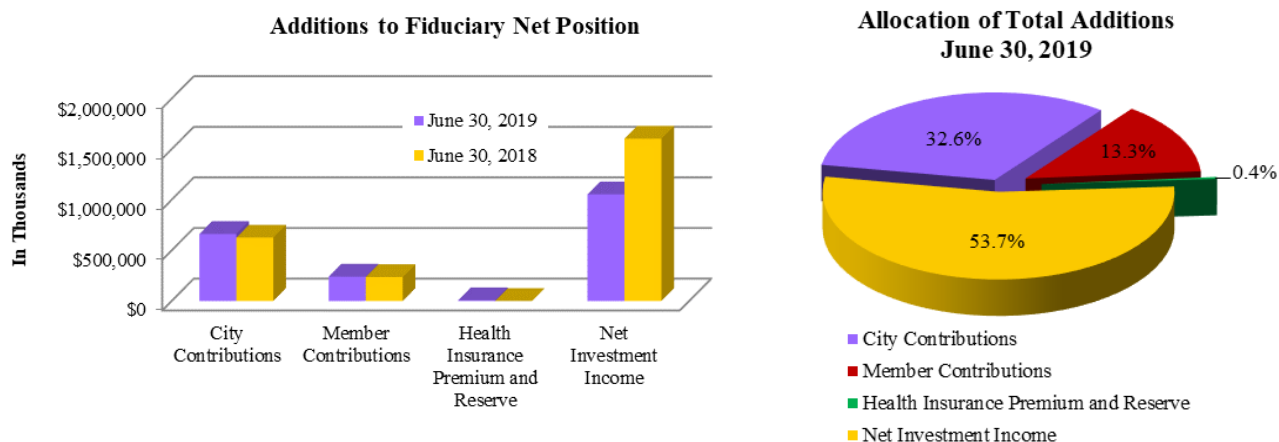
Management's Discussion and Analysis

Financial Analysis (Continued)

Net Increase in Fiduciary Net Position – Additions to Fiduciary Net Position

The following table and graph represent the components that make up the additions to fiduciary net position for LACERS for the fiscal years ended June 30, 2019 and 2018 (dollars in thousands):

| | June 30, 2019 | June 30, 2018 | Change |
|--------------------------------------|---------------------|---------------------|----------|
| City Contributions | \$ 586,754 | \$ 551,247 | 6.4 % |
| Member Contributions | 240,357 | 236,222 | 1.8 |
| Health Insurance Premium and Reserve | 6,558 | - | N/A |
| Net Investment Income | 968,497 | 1,518,879 | (36.2) |
| Additions to Fiduciary Net Position | <u>\$ 1,802,166</u> | <u>\$ 2,306,348</u> | (21.9) % |



The additions to LACERS fiduciary net position that constitute the funding sources of LACERS benefits are City Contributions, Member Contributions, Health Insurance Premium and Reserve, and Net Investment Income.

City contributions to the Retirement Plan, the Postemployment Health Care Plan, and the Family Death Benefit Plan were \$586,754,000 during the fiscal year. The total increase of \$35,507,000 or 6.4% over the prior fiscal year was due to a higher payroll base (approximately 2.5% increase in payroll) and higher contribution rate recommended by the actuary for the reporting year. The total City contributions include a \$36,017,000 true-up credit adjustment, a reduction from the City's advanced contribution payment, to reconcile the difference of the City's contributions based on projected payroll against actual payroll. This true-up amount, which included accrued interest at 7.25%, was recognized as liability as of the end of the reporting period. After reflecting the true-up adjustment, the aggregate employer contribution rate for this fiscal year was 27.83% (22.71% for the Retirement Plan and 5.12% for the Postemployment Health Care Plan), which is 1.04% higher than the prior fiscal year at 26.79%. \$478,717,000 of actual contribution to the Retirement Plan was equal to 100% of the Actuarially Determined Contribution (ADC) of the employer, as defined by GASB Statement No. 67. \$107,927,000 of actual contribution to the Postemployment Health Care Plan was equal to 100% of the ADC, as defined by GASB Statement No. 74.

In fiscal year 2018-19, Member contributions were \$240,357,000, which was \$4,135,000 or 1.8% greater than the prior year. The increase in Member contributions was primarily attributable to the increase in the number of Members and their salaries but lessened by decreased voluntary Larger Annuity contributions received by LACERS during the fiscal year.

Management's Discussion and Analysis

Financial Analysis (Continued)

Net Increase in Fiduciary Net Position – Additions to Fiduciary Net Position (Continued)

LACERS established a Postemployment Health Care 115 Trust fund (the "115 Trust fund") in late December 2018, and replaced the existing Delta Dental PPO Plan with a self-funded Dental Plan under the 115 Trust fund effective January 1, 2019. Accordingly, LACERS recognized revenue of \$5,034,000 representing monthly dental insurance premium and \$1,056,000 one-time payment received from existing 401 (h) Health Care fund to prepay a reserve for self-funded Dental Plan. Additionally, \$468,000 of Members' portion from the health insurance premium reserve amount was also recognized as revenue (refer to Note 1 – Description of LACERS and Significant Accounting Policies, subheading Reserves on pages 15-16).

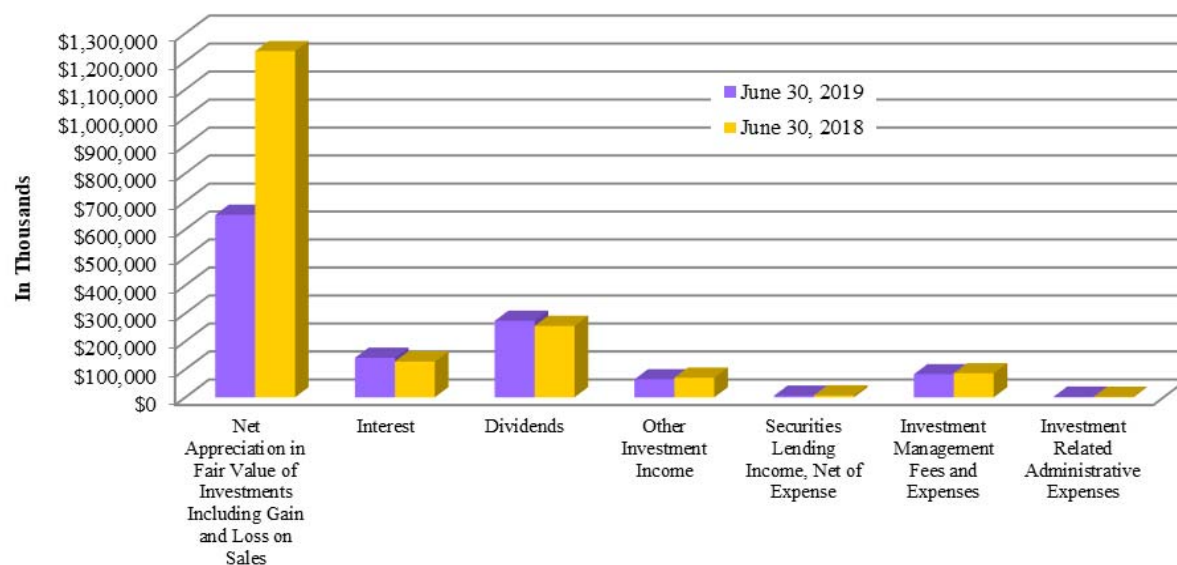
The net investment income was \$968,497,000, which included \$637,092,000 of net appreciation in the fair value of investments. This is discussed in more detail in the next section.

Investment Income

The following table and graph present the detail of investment income, net of investment management fees and expenses for the fiscal years ended June 30, 2019 and 2018 (dollars in thousands):

| | June 30, 2019 | June 30, 2018 | Change |
|--|-------------------|---------------------|----------|
| Net Appreciation in Fair Value of Investments, Including Gain and Loss on Sales | \$ 637,092 | \$ 1,206,714 | (47.2) % |
| Interest | 121,215 | 107,942 | 12.3 |
| Dividends | 238,458 | 220,106 | 8.3 |
| Other Investment Income | 49,475 | 55,094 | (10.2) |
| Securities Lending Income, Net of Expense | 6,179 | 6,959 | (11.2) |
| Sub-Total | 1,052,419 | 1,596,815 | (34.1) |
| Less: Investment Management Fees and Expenses | (81,582) | (76,213) | 7.0 |
| Investment Related Administrative Expenses | (2,340) | (1,723) | 35.8 |
| Net Investment Income | <u>\$ 968,497</u> | <u>\$ 1,518,879</u> | (36.2) % |

Investment Income and Expenses



Management's Discussion and Analysis

Financial Analysis (Continued)

Investment Income (Continued)

The net investment income for the current fiscal year was \$968,497,000, as compared with the income of \$1,518,879,000 for the previous fiscal year (36.2% decrease). This decrease was due primarily to a lower net appreciation in the fair value of investments of \$637,092,000, compared with the previous fiscal year's amount of \$1,206,714,000 (47.2% decrease). In general, public equity market returns were positive for the current year, but lower relative to the previous fiscal year. The Russell 3000 Index, which tracks U.S. broad market equities, returned 9.0% compared with 14.8% for the previous year. The MSCI All Country World ex-U.S. Index, which tracks non-U.S. equities in developed and emerging markets, returned 1.3% compared with 7.3% for the previous year. Fixed income markets, as represented by the Bloomberg Barclays U.S. Aggregate Bond Index, experienced a strong rally during the current fiscal year, returning 7.9% compared with -0.4% for the previous year. The net appreciation as reported reflects a deduction for carried interest in the amount of \$35,136,000, which represents a profit share that the general partners of these funds received as a compensation after the performance of the funds achieved agreed-upon return level.

Interest income derived from fixed income securities and dividend income derived from equities increased

by \$13,273,000 or 12.3%, and \$18,352,000 or 8.3%, respectively. The increase in income from these sources resulted primarily from an increase in LACERS fixed income and equity holdings relative to the previous fiscal year.

Other investment income, primarily derived from private equity and private real estate partnership investments, decreased by \$5,619,000 or 10.2%, as the rate of partnership distributions slowed during the current fiscal year.

LACERS earns additional investment income by lending its securities to borrowers through its custodian bank. To earn income for LACERS, the custodian bank invests cash collateral pledged by borrowers on behalf of LACERS in short term fixed income securities. LACERS also generates income from fees paid by borrowers that pledge non-cash collateral. In the current fiscal year, LACERS securities lending income (net of expense) decreased by \$780,000 or 11.2%, from a year ago due to lower borrower demand for securities held in LACERS portfolio.

Total investment management fees, expenses, and investment related administrative expenses increased by \$5,986,000 or 7.7% from the prior year. This increase corresponded with the increase in the fair value of LACERS investments over the fiscal year.

Net Increase in Fiduciary Net Position – Deductions from Fiduciary Net Position

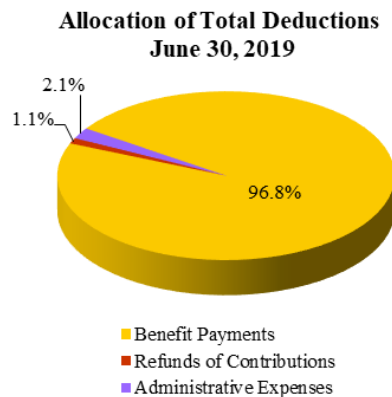
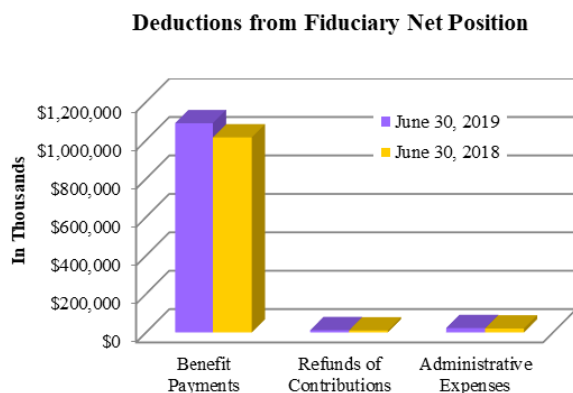
The following table and graphs provide information related to the deductions from fiduciary net position for the fiscal years ended June 30, 2019 and 2018 (dollars in thousands):

| | June 30, 2019 | June 30, 2018 | Change |
|--|---------------|---------------|--------|
| Benefit Payments | \$ 1,049,283 | \$ 975,112 | 7.6% |
| Refunds of Contributions | 11,684 | 10,412 | 12.2 |
| Administrative Expenses | 22,905 | 20,778 | 10.2 |
| Deductions from Fiduciary Net Position | \$ 1,083,872 | \$ 1,006,302 | 7.7% |

Management’s Discussion and Analysis

Financial Analysis (Continued)

Net Increase in Fiduciary Net Position – Deductions from Fiduciary Net Position (Continued)



LACERS deductions from fiduciary net position in this reporting period can be summarized as Benefit Payments, Refunds of Member Contributions, and Administrative Expenses. These deductions represent the types of benefit delivery operations undertaken by LACERS and the costs associated with them. Total deductions increased by \$77,570,000 or 7.7% from the prior fiscal year.

Compared to the prior fiscal year, benefit payments increased by \$74,171,000 or 7.6%. The benefit payments for the Retirement Plan increased by \$62,123,000 or 7.3% mainly due to the annual cost of living adjustments (COLA) (approximately 2.8% increase on average with a maximum of 3.0%); increased number of retirees and beneficiaries; and the average retirement allowance of newly retired Members being higher than those of the deceased Members who were removed from the retirement payroll. Payments for Postemployment Health Care Plan benefits also increased by \$12,048,000 or 9.4%. This increase was mainly due to the increased number of retirees and their dependents eligible for medical subsidy; increased reimbursement of Medicare Part B premium; and inclusion of \$1,056,000 one-time prepaid reserve for LACERS self-funded Dental Plan and \$4,018,000 dental benefit claims paid from the self-funded Plan for January through June 2019 which were additions to the health expense incurred by LACERS to cover subsidy portion of the self-funded Dental Plan premium payment made to the 115 Trust fund.

The refunds of Member contributions increased by \$1,272,000 or 12.2% from the prior fiscal year’s \$10,412,000. It was mainly due to the increase in contribution refunds upon Members leaving the City service.

LACERS administrative expenses also increased by \$2,127,000 or 10.2% from the prior fiscal year. There was an increase in personnel cost, which was mainly due to the mandatory COLA increases as well as increase in employee health and retirement benefit costs. In addition, LACERS recorded full-year amortization for the cost of Pension Administration System (PAS) that went live in March 2018, resulting in an increased depreciation and amortization expense compared to prior fiscal year. Post PAS implementation consulting fees were also incurred and recorded under administrative expense of the current fiscal year. In this reporting period, administrative expenses included certain expenses associated with the 115 Trust fund: \$365,000 of third party administrative fees charged for the self-funded Dental Plan claims and some legal counsel cost for legal advice and guidance needed for the establishment of 115 Trust fund (refer to Note 3 – Postemployment Health Care Plan Description on page 22).

Requests for Information

This financial report is designed to provide a general overview of LACERS finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

LACERS
Fiscal Management Division
PO Box 512218
Los Angeles, CA 90051-0218

BASIC FINANCIAL STATEMENTS

Statement of Fiduciary Net Position
Retirement Plan and Postemployment Health Care Plan
As of June 30, 2019, with Comparative Totals
(In Thousands)

| | <u>Retirement Plan</u> | <u>Postemployment Health Care Plan</u> | <u>2019 Total</u> | <u>2018 Total</u> |
|---|-----------------------------|--|-----------------------------|-----------------------------|
| Assets | | | | |
| Cash and Short-Term Investments | \$ 370,509 | \$ 69,946 | \$ 440,455 | \$ 470,390 |
| Receivables | | | | |
| Accrued Investment Income | 52,854 | 9,978 | 62,832 | 57,237 |
| Proceeds from Sales of Investments | 197,133 | 37,216 | 234,349 | 86,261 |
| Other | 12,891 | 2,433 | 15,324 | 13,985 |
| Total Receivables | <u>262,878</u> | <u>49,627</u> | <u>312,505</u> | <u>157,483</u> |
| Investments, at Fair Value | | | | |
| U.S. Government Obligations | 1,192,407 | 225,108 | 1,417,515 | 1,173,467 |
| Municipal Bonds | - | - | - | 2,527 |
| Domestic Corporate Bonds | 742,127 | 140,102 | 882,229 | 831,555 |
| International Bonds | 504,459 | 95,234 | 599,693 | 546,920 |
| Other Fixed Income | 759,252 | 143,335 | 902,587 | 1,033,950 |
| Bank Loans | 7,460 | 1,408 | 8,868 | 5,397 |
| Opportunistic Debts | 171,352 | 32,349 | 203,701 | 109,931 |
| Domestic Stocks | 3,930,485 | 742,015 | 4,672,500 | 4,704,733 |
| International Stocks | 4,407,841 | 832,132 | 5,239,973 | 5,078,641 |
| Mortgages | 442,796 | 83,593 | 526,389 | 424,614 |
| Government Agencies | 26,032 | 4,915 | 30,947 | 41,062 |
| Derivative Instruments | (670) | (127) | (797) | 1,000 |
| Real Estate | 666,661 | 125,855 | 792,516 | 801,634 |
| Private Equity | 1,689,590 | 318,968 | 2,008,558 | 1,807,338 |
| Securities Lending Collateral | 593,493 | 112,042 | 705,535 | 795,076 |
| Total Investments, at Fair Value | <u>15,133,285</u> | <u>2,856,929</u> | <u>17,990,214</u> | <u>17,357,845</u> |
| Capital Assets | | | | |
| Furniture, Computer Hardware and Software (Net of Depreciation and Amortization) | 7,393 | 1,396 | 8,789 | 9,185 |
| Total Assets | <u>15,774,065</u> | <u>2,977,898</u> | <u>18,751,963</u> | <u>17,994,903</u> |
| Liabilities | | | | |
| Accounts Payable and Accrued Expenses | 45,776 | 8,642 | 54,418 | 40,967 |
| Accrued Investment Expenses | 8,130 | 1,534 | 9,664 | 10,455 |
| Purchases of Investments | 230,854 | 43,582 | 274,436 | 158,789 |
| Securities Lending Collateral | 593,493 | 112,042 | 705,535 | 795,076 |
| Total Liabilities | <u>878,253</u> | <u>165,800</u> | <u>1,044,053</u> | <u>1,005,287</u> |
| Fiduciary Net Position Restricted for Pension Benefits and Postemployment Health Care Benefits | <u><u>\$ 14,895,812</u></u> | <u><u>\$ 2,812,098</u></u> | <u><u>\$ 17,707,910</u></u> | <u><u>\$ 16,989,616</u></u> |

The accompanying notes are an integral part of these financial statements.

Statement of Changes in Fiduciary Net Position
Retirement Plan and Postemployment Health Care Plan
For the Fiscal Year Ended June 30, 2019, with Comparative Totals
(In Thousands)

| | Retirement Plan | Postemployment Health Care Plan | 2019 Total | 2018 Total |
|---|----------------------------|--|-----------------------|-----------------------|
| Additions | | | | |
| Contributions | | | | |
| City Contributions | \$ 478,827 | \$ 107,927 | \$ 586,754 | \$ 551,247 |
| Member Contributions | 240,357 | - | 240,357 | 236,222 |
| Total Contributions | 719,184 | 107,927 | 827,111 | 787,469 |
| Self-Funded Insurance Premium | - | 6,090 | 6,090 | - |
| Health Insurance Premium Reserve | - | 468 | 468 | - |
| Investment Income | | | | |
| Net Appreciation in Fair Value of | | | | |
| Investments, Including Gain and Loss on Sales | 519,661 | 117,431 | 637,092 | 1,206,714 |
| Interest | 102,364 | 18,851 | 121,215 | 107,942 |
| Dividends | 201,415 | 37,043 | 238,458 | 220,106 |
| Other Investment Income | 41,789 | 7,686 | 49,475 | 55,094 |
| Securities Lending Income | 6,139 | 1,129 | 7,268 | 8,185 |
| Less: Securities Lending Expense | (888) | (201) | (1,089) | (1,226) |
| Sub-Total | 870,480 | 181,939 | 1,052,419 | 1,596,815 |
| Less: Investment Management Fees and Expenses | (66,544) | (15,038) | (81,582) | (76,213) |
| Investment Related Administrative Expenses | (1,909) | (431) | (2,340) | (1,723) |
| Net Investment Income | 802,027 | 166,470 | 968,497 | 1,518,879 |
| Total Additions | 1,521,211 | 280,955 | 1,802,166 | 2,306,348 |
| Deductions | | | | |
| Benefit Payments | 909,154 | 140,129 | 1,049,283 | 975,112 |
| Refunds of Contributions | 11,684 | - | 11,684 | 10,412 |
| Administrative Expenses | 17,806 | 5,099 | 22,905 | 20,778 |
| Total Deductions | 938,644 | 145,228 | 1,083,872 | 1,006,302 |
| Net Increase in Fiduciary Net Position | 582,567 | 135,727 | 718,294 | 1,300,046 |
| Fiduciary Net Position Restricted for Pension Benefits and Postemployment Health Care Benefits | | | | |
| Beginning of Year | 14,313,245 | 2,676,371 | 16,989,616 | 15,689,570 |
| End of Year | \$ 4,895,812 | \$ 2,812,098 | \$ 17,707,910 | \$ 16,989,616 |

The accompanying notes are an integral part of these financial statements.

Notes to the Basic Financial Statements

1. Description of LACERS and Significant Accounting Policies

General Description

The Los Angeles City Employees' Retirement System (LACERS or the System) is under the exclusive management and control of its Board of Administration (the Board), whose authority is granted by statute in Article XVI, Section 17 of the California State Constitution, and Article XI of the Los Angeles City Charter. The Board has seven members. Four members, one of whom shall be a retired Member of the System, shall be appointed by the Mayor subject to the approval of the City Council. Two members shall be active employee Members of the System elected by active employee Members. One shall be a retired Member of the System elected by retired Members of the System. Elected Board members serve five-year terms in office, with no term limits. The System is a Department of the Municipality of the City of Los Angeles (the City). The System's financial statements are included in the City of Los Angeles Annual Financial Report as a pension trust fund.

The System operates a single-employer defined benefit plan (the Retirement Plan) and a single-employer Postemployment Health Care Plan. Benefits and benefit changes are established by ordinance and approved by the City Council and the Mayor. A description of each plan is located in Note 2 and Note 3 on pages 17 - 27 of this report. All Notes to the Basic Financial Statements apply to both plans unless indicated otherwise.

Members who entered the System prior to February 21, 2016 are Tier 1 Members of LACERS. On or after February 21, 2016, new Members become Members of LACERS Tier 3 (refer to Note 2 – Retirement Plan Description on pages 17 - 18, and Note 3 – Postemployment Health Care Plan Description on pages 22 - 23 for each tier's eligibility requirements and benefits provided).

Basis of Accounting and Presentation

The financial statements have been prepared in accordance with the accounting principles generally accepted in the United States of America (US GAAP) as outlined by the Governmental Accounting Standards Board (GASB). The financial statements are maintained on the accrual basis of accounting. Contributions from the employer and Members were recognized when due pursuant to formal commitments and contractual requirements. Benefits, refunds, and other expenses are recognized when due and payable. The accompanying financial statements

include information from the prior year summarized for comparative purpose only. Such information does not include sufficient detail to constitute a presentation in accordance with US GAAP.

Investments

Investment Policies

Funds of the System are invested pursuant to the System's investment policy, established by the Board, in compliance with Article XI Section 1106(d) of the City Charter. The System has a long-term investment horizon, and utilizes an asset allocation that encompasses a strategic, long run perspective of capital markets. The System's investment portfolio is composed of domestic and international equities, domestic and international bonds, bank loans, derivative instruments, real assets, private equity, and short-term investments. During the reporting period, there were no significant investment policy changes.

As of June 30, 2019, the Board's adopted asset allocation policy was as follows:

| Asset Class | Target Allocation |
|-------------------------------------|-------------------|
| Domestic and International Equities | 46.00% |
| Domestic and International Bonds | 13.75 |
| Private Equity | 14.00 |
| Real Assets | 13.00 |
| Short-Term Investments | 1.00 |
| Credit Opportunities | 12.25 |
| Total | <u>100.00%</u> |

Fair Value of Investments

Securities traded on national or international exchanges are valued at the last reported sales price at the current exchange rates. Short-term investments, bonds, bank loans, stocks, and private equities are reported at fair value. The fair values of real estate investment funds are provided by the individual real estate fund managers based on periodic appraisals, in the form of either annual in-house appraisals or longer-term appraisals by outside professionals, in accordance with industry practice. The fair value determined as such is also reviewed and evaluated by the Board's real estate consultant. The private equity funds ("partnership investment"), which are managed by third party investment managers, are valued on a quarterly and/or annual basis at their net asset value as reported by the investment managers under US GAAP. US GAAP requires that assets be reported at fair value in accordance with Accounting Standards Codification Topic 820 – *Fair Value Measurement and Disclosures*. The fair values of derivative instruments are determined using available market

Notes to the Basic Financial Statements

1. Description of LACERS and Significant Accounting Policies (Continued)

Investments (Continued)

Fair Value of Investments (Continued)

information. Debt rewrites are valued based on yields currently available on comparable securities of issuers with similar credit ratings. LACERS investment strategy, as it relates to the debt portfolio, is mainly to achieve market appreciation and not to hold bonds to their maturities.

The provisions of the GASB Statement No. 72, *Fair Value Measurement and Application*, require investments to be measured at fair value as well as to classify the inputs used to determine fair value based on a three-level fair value hierarchy. This information is presented in Note 6 on pages 32 - 34.

Investment transactions are accounted for on the date the securities are purchased or sold (trade date). Unsettled investment trades as of fiscal year-end are reported in the financial statements on an accrual basis. The corresponding proceeds due from sales are reported on the Statement of Fiduciary Net Position under Receivables and labeled as Proceeds from Sales of Investments, and amounts payable for purchases are reported under Liabilities and labeled as Purchases of Investments. Dividend income is recorded on the ex-dividend date. Interest income is reported at the stated interest rate as earned, and any premiums or discounts on debt securities are not amortized. The calculation of realized gains and losses is independent of the calculation of the net change in the fair value of LACERS pension plan investment. Realized gains and losses on investments that had been held in more than one reporting period and sold in the current period were included as a change in the fair value reported in the prior period(s) and the current period.

For the future contracts, an initial margin is required to open a position and maintain the collateral requirement until the position is closed. LACERS reports the collateral for the future contracts in the short-term investments.

Concentrations

The investment portfolio as of June 30, 2019, contained no concentration of investments in any one entity that represented 5% or more of the total investment portfolio.

Rate of Return on Investments

For the fiscal year ended June 30, 2019, the aggregate annual money-weighted rate of return for the Retirement Plan and the Postemployment Health Care Plan on LACERS investments, net of

investment expenses, was 5.62%. The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. Separate schedules for the money-weighted rate of return for Retirement Plan and Postemployment Health Care Plan are presented in the Required Supplementary Information (RSI) on pages 41 and 46, respectively.

Receivables

As of June 30, 2019, LACERS held no long-term contracts for contributions receivable from the City.

Capital Assets

Prior to July 1, 2001, purchases of capital assets, consisting primarily of office furniture and computer equipment, were recorded and expensed in the year acquired. Effective July 1, 2001, these purchases were capitalized upon acquisition if the cost of purchase was \$5,000 or more, and depreciated over five years using the straight-line method.

In order to comply with the requirements of GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets*, certain costs for developing LACERS new Pension Administration System (PAS), a customized software solution critical to LACERS core operations, had been capitalized. The capitalized cost for the PAS project up to its completion in February 2018 was \$9,098,000. In addition, certain post-implementation costs of \$315,000 were capitalized during this fiscal year. The total capitalized cost for the PAS of \$9,413,000 is being amortized over 15 years using the straight-line method.

Administrative Expenses

All administrative expenses are funded from LACERS fiduciary net position, which represents accumulated investment earnings and contributions from the City and the Members net of payments.

Reserves

As provided in the Los Angeles City Charter, LACERS is maintained on a reserve basis, determined in accordance with recognized actuarial methods. The Los Angeles City Charter establishes reserves for the following:

Reserves for the Retirement Plan

Member Contributions (Mandatory) – To provide for individual accounts of Members consisting of Active Member mandatory contributions to the Retirement Plan and interest credited to Members accounts, less refunds of Members contributions and transfers to the Annuity reserve.

Notes to the Basic Financial Statements

1. Description of LACERS and Significant Accounting Policies (Continued)

Reserves (Continued)

Reserves for the Retirement Plan (Continued)

Member Contributions (Voluntary) – To provide for individual accounts of Members participating in the larger annuity program of Active Member voluntary contributions and interest/investment return credited to Members’ accounts, less refunds of Member contributions (voluntary) and transfers to the Larger Annuity reserve.

Basic Pensions – To provide for the City’s guaranteed portion of retirement benefits consisting of City contributions; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to retired Members and beneficiaries, and allocated investment and administrative expenses.

Annuity – To provide for the Members’ share of retirement benefits consisting of Members’ mandatory contribution balances transferred at retirement; investment earnings (losses) excluding net appreciation (depreciation) in fair value of investments; less payments to retired Members and beneficiaries, and allocated investment and administrative expenses.

Larger Annuity – To provide for the Larger Annuity benefit consisting of Members’ voluntary contribution balances transferred at retirement including Internal Revenue Service (IRS) Section 457 deferred compensation and other rollovers; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to participating retired Members and beneficiaries, and allocated investment and administrative expenses.

Family Death Benefit Plan (FDBP) – To pay benefits under the Family Death Benefit Plan administered by LACERS consisting of Active Member voluntary contributions; matching City contributions; and investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to beneficiaries and allocated investment and administrative expenses.

Reserves for the Postemployment Health Care Plan

401(h) Account- To provide health care benefits for retirees consisting of City contributions; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to insurance providers, including payment to the 115 Trust fund for the self-funded dental insurance premium and Members’ portion of insurance premium reserve.

115 Trust Account – This new Health Care fund is currently limited to pay the benefit claims from LACERS self-funded Dental Plan, but ultimately will fund all health care benefits for retirees upon depletion of the existing 401(h) account reserves. The 115 Trust account currently consists of dental plan premium and prepayment; certain retired Members’ health insurance premium deductions; and short-term investment earnings; less payments to the dental plan claims and for administration fees to the third party contractor who administered the dental plan claims for the System; and certain allocated administrative expenses. During this reporting year, funds from this reserve account were separately invested, thus they were not in LACERS investment pool, and therefore, investment earnings (losses) including net appreciation (depreciation) in fair value of investments were not distributed (refer to Note 3 – Postemployment Health Care Plan Description on page 22).

Reserve balances as of June 30, 2019, were as follows (in thousands):

| | | | |
|---|----|---------------|----------------------|
| Reserves for the Retirement Plan | | | |
| Member Contributions: | | | |
| - Mandatory | \$ | 2,504,742 | |
| - Voluntary | | 7,101 | |
| Basic Pensions | | 11,732,697 | |
| Annuity | | 578,154 | |
| Larger Annuity | | 56,435 | |
| FDBP | | <u>16,683</u> | \$ 14,895,812 |
| Reserve for the Postemployment Health Care Plan | | | |
| 401 (h) Account | | 2,809,909 | |
| 115 Trust Account | | <u>2,189</u> | <u>2,812,098</u> |
| Total Reserves | | | <u>\$ 17,707,910</u> |

Notes to the Basic Financial Statements

1. Description of LACERS and Significant Accounting Policies (Continued)

Estimates

The preparation of the financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting years. Actual results could differ from those estimates.

2. Retirement Plan Description

Plan Administration and Membership

LACERS administers a defined benefit pension plan that provides for service and disability retirement benefits, as well as death benefits.

The Retirement Plan covers all full-time personnel and department-certified part-time employees of the City, except for sworn employees of the Fire and Police departments, Department of Water and Power employees, elected officials who elected to participate in an alternative Defined Contribution Plan, certain Port Police officers of the Harbor, and certain Airport Peace Officers of the Airports who elected to opt out of LACERS. Upon transferring all active Tier 2 Members to Tier 1 as of February 21, 2016, Membership to Tier 1 is now closed to new entrants unless a Member meets one of the exceptions allowed in the Ordinance (No. 184134). Eligible employees hired on or after February 21, 2016, become Members of Tier 3.

As of June 30, 2019, the components of LACERS membership in both tiers (Tier 1 and Tier 3) were as follows:

| | |
|--|---------------|
| Active: | |
| Vested | 17,812 |
| Non-vested | 8,820 |
| | <hr/> |
| | 26,632 |
| Inactive: | |
| Non-vested | 6,149 |
| Terminated Entitled to Benefits, Not Yet Receiving Benefits | 2,439 |
| Retired | 20,034 |
| | <hr/> |
| Total | <u>55,254</u> |

Plan Members have a vested right to their own contributions and accumulated interest posted to their accounts. Generally, after five years of employment, Members are eligible for future retirement benefits, which increase with length of service. If a Member who has five or more years of continuous City service terminates employment, the Member has the option of receiving retirement benefits when eligible or having his or her contributions and accumulated interest refunded. Benefits are based upon age, length of service, and compensation.

Eligibility Requirement and Benefits Provided

Tier 1

Plan Members are eligible to retire with unreduced benefits if they have 10 or more years of continuous City service at age 60, or at least 30 years of City service at age 55, or with any years of City service at age 70 or older. Plan Members also are eligible to retire with age-based reduced benefits after reaching age 55 with 10 or more years of continuous City service, or at any age with 30 or more years of City service. Full (unreduced) retirement benefits are determined as 2.16% of the Member's average monthly pensionable salary during the Member's last 12 months of service, or during any other 12 consecutive months of service designated by the Member, multiplied by the Member's years of service credit. Plan Members with five years of continuous service are eligible for disability retirement, and the benefits are determined as 1/70 of the Member's final average monthly salary for each year of service or 1/3 of the Member's final average monthly salary, if greater. Upon an active Member's death, a refund of the Member's contributions and, depending on the Member's years of service, a limited pension benefit equal to 50% of monthly salary may be paid up to 12 months. Or, if such Member was eligible to retire, survivor benefits may be paid to an eligible spouse or qualified domestic partner. Upon a retired Member's death, a \$2,500 funeral allowance is paid, and a modified or unmodified allowance is continued to an eligible spouse or qualified domestic partner.

Tier 1 – Enhanced Benefits

In November 2016, voters approved a ballot measure resulting in approximately 550 sworn Airport peace officers provided an election to opt-out of the LACERS Plan and transfer to the Los Angeles Fire and Police Pension (LAFPP) Plan as its Tier 6 Members.

Notes to the Basic Financial Statements

2. Retirement Plan Description (Continued)

Eligibility Requirement and Benefits Provided (Continued)

Tier 1 – Enhanced Benefits (Continued)

On March 28, 2017, the City Council adopted an ordinance (No. 184853) to amend the Los Angeles Administrative Code (LAAC) authorizing certain sworn Airport Peace Officers (APO) at LACERS to elect to transfer into Tier 6 of LAFPP Plan or to remain in LACERS Plan with enhanced benefits. All new APO hired after that date would be enrolled in LAFPP Tier 6. Under the ordinance, APO Members who elect to remain in LACERS would be Tier 1 Members, and be eligible for enhanced benefits including more favorable disability benefits, death benefits, and a higher retirement factor of 2.30% (versus 2.16% for all other Tier 1 Members), contingent upon a mandatory additional contribution payment of \$5,700 required by LAAC Section 4.1002(e)(2) to LACERS before January 8, 2019, or prior to the Member's retirement date, whichever is earlier. Among 503 APO Members who elected to remain Members of LACERS on January 7, 2018, 469 APO Members, inclusive of 43 APO Members who retired with the enhanced benefits, paid their mandatory additional contribution.

Tier 3

Plan Members are eligible to retire with unreduced benefits if they have at least 10 or more years of City service at age 60 or at least 30 years of City service at age 55, provided that five years of service must be continuous. Full unreduced retirement benefits at age 60 with 10 years of City service are determined with a 1.5% retirement factor. Plan Members also are eligible to retire with an age-based reduced benefit before reaching age 60 with 30 or more years of City service with a retirement factor of 2.0%. If the Member is age 55 or older with 30 years of service at the time of retirement, his or her retirement allowance will not be subject to reduction on account of age. However, if the Member is younger than age 55 with 30 years of service at the time of retirement, his or her retirement allowance will be reduced by the applicable early retirement reduction factor. In addition, the System also provides Tier 3 Members enhanced retirement benefits with a 2.0% retirement factor if the Member retires at age 63 with at least 10 years of service, or a retirement factor of 2.1% if the Member retires at age 63 with 30 years of service. Tier 3 retirement benefits are determined by multiplying the Member's retirement factor (1.5% - 2.1%), with the Member's Final Average Compensation (FAC) based on the Member's

pensionable salary for the last 36 months or any other 36 consecutive months designated by the Member, and by the Member's years of service credit (SC) as follows:

| Age at Retirement | Required Years of Service | Retirement Benefit ⁽¹⁾ |
|-------------------|---------------------------|--|
| Under 55 | 30 Years | 2.0% x FAC x Yrs. of SC ⁽²⁾ |
| 55 and Over | 30 Years | 2.0% x FAC x Yrs. of SC |
| 60 and Over | 10 Years | 1.5% x FAC x Yrs. of SC |
| 63 and Over | 10 Years | 2.0% x FAC x Yrs. of SC |
| 63 and Over | 30 Years | 2.1% x FAC x Yrs. of SC |

(1) Retirement allowance may not exceed 80% of final compensation except when benefit is based solely on the annuity component funded by the Member's contributions.

(2) A reduction factor will be applied based on age at retirement.

Plan Members with five years of continuous service are eligible for disability retirement, and the benefits are determined as 1/70 of the Member's final average monthly salary for each year of service or 1/3 of the Member's final average monthly salary, if greater. Upon an active Member's death, a refund of the Member's contributions and, depending on the Member's years of service, a limited pension benefit equal to 50% of monthly salary may be paid up to 12 months. Or, if such Member was eligible to retire, survivor benefits may be paid to an eligible spouse or qualified domestic partner. Upon a retired Member's death, a \$2,500 funeral allowance is paid, and a modified or unmodified allowance is continued to an eligible spouse or qualified domestic partner.

There were no Tier 3 Members who retired during this reporting period.

Cost of Living Adjustment

Retirement allowances are indexed annually for inflation. The Board has authority to determine, no later than May 1st of each year, the average annual percentage change in the Consumer Price Index (CPI) for the purpose of providing a Cost of Living Adjustment (COLA) to the benefits of eligible Members and beneficiaries in July. The adjustment is based on the prior year's change of Los Angeles area CPI subject to a maximum of 3.0% for Tier 1 Members or 2.0% for Tier 3 Members. For Tier 1 Members, the COLA percentage greater than 3.0% is banked for future use.

Notes to the Basic Financial Statements

2. Retirement Plan Description (Continued)

Employer Contributions

The Los Angeles City Charter Sections 1158 and 1160 provide for periodic actuarially-determined employer contribution rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate the required assets to pay benefits when due. For the fiscal year ended June 30, 2019, the actuarially-determined aggregate employer contribution rate to the Retirement Plan by the City was 23.06% of projected payroll, based on the June 30, 2017 actuarial valuation.

Upon closing the fiscal year 2018-19, LACERS recalculated the employer contribution rate using actual payroll incurred during the fiscal year, which was smaller than projected covered payroll used by the City to make the advance payment on July 15, 2018. As a result, employer contributions received for the Retirement Plan were \$31,179,000 more than required, and this amount was credited to the employer toward employer contributions for fiscal year 2019-20. Based on actual payroll, the effective rate of employer contribution for Retirement Plan was 22.71% for fiscal year 2018-19.

Member Contributions

Tier 1

The current contribution rate for Tier 1 Members is 11% of their pensionable salary including: 1) a 1% increase in the Member contribution rate pursuant to 2009 Early Retirement Incentive Program (ERIP) ordinance for all employees for a period of 15 years (or until the ERIP Cost obligation is fully recovered, whichever comes first); and 2) 4% additional contributions in exchange for a vested right to future increases in the maximum retiree medical subsidy pursuant to a 2011 City Council ordinance.

Tier 3

The contribution rate for Tier 3 Members is 11% of their pensionable salary including 4% additional contributions in exchange for a vested right to future increases in the maximum retiree medical subsidy. Unlike Tier 1, Tier 3 Members do not pay ERIP contribution, therefore, Tier 3 Members' contribution rate will not drop down when Tier 1 Members cease to pay the 1% ERIP contribution.

Notes to the Basic Financial Statements

2. Retirement Plan Description (Continued)

Net Pension Liability

In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude amounts associated with Family Death and Larger Annuity Benefits. As of June 30, 2019, the components of the net pension liability were as follows (in thousands):

| | |
|---|---------------------|
| Total Pension Liability | \$ 20,793,421 |
| Plan Fiduciary Net Position ⁽¹⁾ | <u>14,815,593</u> |
| Plan's Net Pension Liability | <u>\$ 5,977,828</u> |
| Plan Fiduciary Net Position as a percentage of the Total Pension Liability | 71.3% |

(1) Plan fiduciary net position was \$14,895,812,000 as of June 30, 2019 without excluding amounts associated with Family Death and Larger Annuity Benefits.

Significant Assumptions

Projections of benefits for financial reporting purposes are based on the types of benefits provided to active, inactive, and retired Members at the time of each valuation, including expected future COLAs. The attribution method and significant assumptions used in the valuation year of June 30, 2019, are summarized below:

| | |
|--|--|
| Valuation Date | June 30, 2019 |
| Actuarial Cost Method | Entry Age Method – assuming a closed group (individual basis). |
| Amortization Method | Level Percent of Payroll |
| Actuarial Assumptions: | |
| Date of Experience Study | June 30, 2017 (July 1, 2014 through June 30, 2017) |
| Long-Term Expected Rate of Return | 7.25% |
| Inflation | 3.00% |
| Real Across-the-Board Salary Increase | 0.50% |
| Projected Salary Increases | Ranges from 3.90% to 10.00% based on years of service, including inflation assumption at 3.00% and the real across-the-board salary increase assumption of 0.50%. |
| Annual COLAs | 3.00% maximum for Tier 1 and 2.00% maximum for Tier 3. |
| Mortality Table for Retirees and Beneficiaries | Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| Mortality Table for Disabled Retirees | Headcount-Weighted RP-2014 Disabled Retiree Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| Percent Married / Domestic Partner | 76% of male participants and 50% of female participants are assumed to be married or have a qualified domestic partner. |
| Spouse Age Difference | Male retirees are assumed to be three years older than their female spouses. Female retirees are assumed to be two years younger than their male spouses. |

Notes to the Basic Financial Statements

2. Retirement Plan Description (Continued)

Net Pension Liability (Continued)

Discount Rate

The discount rate used to measure the total pension liability was 7.25% as of June 30, 2019 and June 30, 2018.

The projection of cash flows used to determine the discount rate assumed Plan Member contributions will be made at the current contribution rates and that employer contributions will be made at rates equal to the actuarially-determined contribution rates. For this purpose, only employee and employer contributions that are intended to fund benefits for current Plan Members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future Plan Members and their beneficiaries, as well as projected contributions from future Plan Members, are not included.

Based on those assumptions, the retirement plan's fiduciary net position was projected to be available to make all projected future benefit payments for current Plan Members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability as of both June 30, 2019 and June 30, 2018.

The long-term expected rate of return on retirement plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, are summarized in the following table. These values were used in the derivation of the long-term expected investment rate of return assumption that was used in the actuarial valuation as of June 30, 2019. This information is subject to change every three years based on the actuarial experience study. The last experience study was for July 1, 2014 through June 30, 2017. The next experience study will be conducted in 2020.

| Asset Class | Target Allocation | Arithmetic Long-Term Expected Real Rate of Return |
|--|-------------------|---|
| U.S. Large Cap Equity | 14.00% | 5.3% |
| U.S. Small Cap Equity | 5.00 | 6.1 |
| Developed Int'l Large Cap Equity | 17.00 | 6.7 |
| Developed Int'l Small Cap Equity | 3.00 | 7.1 |
| Emerging Market Equity | 7.00 | 8.9 |
| Core Bonds | 13.75 | 1.0 |
| High Yield Bonds | 2.00 | 3.1 |
| Bank Loans | 2.00 | 3.0 |
| Emerging Market Debt | 4.50 | 3.4 |
| Private Debt | 3.75 | 5.5 |
| Private Real Estate | 7.00 | 4.7 |
| Real Estate Investment Trust (REIT) | 0.50 | 5.9 |
| Treasury Inflation Protected Securities (TIPS) | 3.50 | 1.0 |
| Commodities | 1.00 | 3.4 |
| Public Real Assets | 1.00 | 4.8 |
| Private Equity | 14.00 | 9.0 |
| Cash | 1.00 | 0.0 |
| Total | 100.00% | |

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of LACERS as of June 30, 2019, calculated using the discount rate of 7.25%, as well as what LACERS net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.25%) or one percentage point higher (8.25%) than the current rate (dollar in thousands):

| 1% Decrease (6.25%) | Current Discount Rate (7.25%) | 1% Increase (8.25%) |
|---------------------|-------------------------------|---------------------|
| \$8,797,246 | \$5,977,828 | \$3,652,816 |

Notes to the Basic Financial Statements

3. Postemployment Health Care Plan Description

Plan Administration and Membership

LACERS administers, and provides single-employer postemployment healthcare benefits to eligible retirees and their eligible spouses/domestic partners who participate in the Retirement Plan regardless of their membership tiers. These benefits consist of subsidies which may also apply to the coverage of other eligible dependent(s).

On November 9, 2018, the City Council approved Ordinance No. 185829 to amend Article 1 of Chapter 11, Division 4 of the Los Angeles Administrative Code to establish the LACERS Health Care Fund (115 Trust Account) for the sole purpose of funding the retiree healthcare benefits for eligible LACERS retirees and beneficiaries as well as to help stabilize premium rates over time.

The City and the Board of LACERS entered into a written trust agreement for the LACERS Health Care Fund which shall provide an alternative funding mechanism, in addition to or in lieu of the existing 401 (h) account described in LAAC Section 4.1102 for funding benefits under the health and welfare programs. The LACERS Health Care Fund is intended to qualify for federal tax exemption under Section 115 of the Internal Revenue Code. Because health benefits paid out of the LACERS Health Care Fund are not required to be subordinate to the Plan retirement benefits, the LACERS Health Care Fund would not become taxable if the Plan health benefits surpass the 25% threshold. Second, the LACERS Health Care Fund gives LACERS more flexibility to invest premium surpluses to provide for smoothing should healthcare premiums increase considerably in the future. Currently, the Health Care Coverage Account (401 (h) account) cannot receive full refunds of excess premiums from insurance providers. However, the LACERS Health Care Fund can receive full premium surplus refunds from insurance providers; therefore, the System can invest these funds at a higher rate of return than the insurance providers' reserve account interest rate.

Effective January 1, 2019, LACERS fully-insured Delta Dental PPO Plan was replaced with LACERS self-funded Delta Dental PPO Plan. Although Delta continues to administer the plan for a fee, LACERS sets and collects premiums from enrolled Members and pays billed claims to Delta. With this arrangement, LACERS bears financial risk if claims cost exceed collected premiums. This change does not affect the maximum dental subsidy amount to the eligible retired Members.

As of June 30, 2019, the components of Membership, excluding non-participating retirees and surviving spouses of LACERS postemployment healthcare benefits were as follows:

| | |
|--|---------------|
| Retired Members/Surviving Spouses ⁽¹⁾ | 15,791 |
| Vested terminated Members entitled to, but not yet receiving benefits ⁽²⁾ | 1,474 |
| Active Members | <u>26,632</u> |
| Total | <u>43,897</u> |

- (1) Total participants including married dependents and dependent children currently receiving benefits are 21,115.
- (2) Includes terminated Members due a refund of employee contributions.

Eligibility Requirement and Benefits Provided

To be eligible for LACERS postemployment healthcare benefits, Member must: 1) be at least age 55; 2) have at least 10 whole years of service with LACERS; and 3) be enrolled in a System-sponsored medical or dental plan or are a participant in the Medical Premium Reimbursement Program (MPRP). Retirees and surviving spouses/domestic partners can choose from the health plans that are available, which include medical, dental, and vision benefits, or participate in the MPRP if he/she resides in an area not covered by the available medical plans. Retirees and surviving spouses/domestic partners receive medical subsidies based on service years and service credit. The dental subsidies are provided to the retirees only, based on service years and service credit.

The maximum subsidies are set annually by the Board. Effective February 21, 2016, healthcare benefit eligibility requirements have changed for the Members who have periods of part-time service. Such Members are now eligible to participate in the LACERS retiree medical programs with a 10 whole years of service, even if some or all of that service was part-time, provided that the Member meets the eligibility requirements. Both Tier 1 and Tier 3 Members will be eligible for 40% of maximum medical plan premium subsidy for 1 – 10 whole years of service credit, and eligible Members earn 4% per year of service credit for their annual medical subsidy accrual after 10 years of service. Eligible spouses/domestic partners of Plan Members are entitled to the System's postemployment healthcare benefits after the retired Member's death. During the 2011 fiscal year, the City adopted an ordinance ("Subsidy Cap Ordinance") to limit the maximum medical subsidy at \$1,190 for those Members who retire on or after July 1, 2011; however, Members who at any time prior to retirement made additional

Notes to the Basic Financial Statements

3. Postemployment Health Care Plan Description (Continued)

Eligibility Requirement and Benefits Provided (Continued)

contributions are exempted from the subsidy cap and obtain a vested right to future increases in the maximum medical subsidy at an amount not less than the dollar increase in the Kaiser two-party non-Medicare Part A and Part B premium. As of June 30, 2019, all active Tier 1 and Tier 3 Members were making the additional contributions, and therefore will not be subject to the medical subsidy cap (refer to Member Contributions of Note 2 – Retirement Plan Description on page 19).

Employer Contributions

The Los Angeles City Charter Sections 1158 and 1160 require periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate the required assets to pay benefits when due. The required contribution rate for the Postemployment Health Care Plan for the fiscal year ended June 30, 2019, was 5.10% of projected payroll, based on the June 30, 2017 actuarial valuation.

Upon closing the fiscal year 2018-19, LACERS recalculated employer contribution rate using actual payroll incurred during the fiscal year which was smaller than projected covered payroll used by the City to make the advance payment on July 15, 2018. As a result, employer contributions for Postemployment Health Care Plan were \$4,838,000 more than required, and this amount was returned to the employer as a credit toward employer contribution for fiscal year 2019-20. Based on the actual payroll, the effective rate of employer contribution for Postemployment Health Care Plan was 5.12%.

Notes to the Basic Financial Statements

3. Postemployment Health Care Plan Description (Continued)

Net OPEB Liability

As of June 30, 2019, the components of the net OPEB liability were as follows (in thousands):

| | |
|-----------------------------|-------------------|
| Total OPEB Liability | \$ 3,334,299 |
| Plan Fiduciary Net Position | <u>2,812,098</u> |
| Plan's Net OPEB Liability | <u>\$ 522,201</u> |

| | |
|--|-------|
| Plan Fiduciary Net Position as a percentage of the Total OPEB Liability | 84.3% |
|--|-------|

Significant Assumptions

The total OPEB liability as of June 30, 2019 was determined by actuarial valuation as of June 30, 2019. The attribution method and significant assumptions used to measure the total OPEB liability, including assumptions about inflation, and healthcare cost trend rates in the valuation year of June 30, 2019, are summarized below:

| | |
|--|--|
| Valuation Date | June 30, 2019 |
| Actuarial Cost Method | Entry Age Cost Method – level percent of salary. |
| Amortization Method: | Level Percent of Payroll – assuming a 3.50% increase in total covered payroll. |
| Actuarial Assumptions: | |
| Date of Experience Study | June 30, 2017 (July 1, 2014 through June 30, 2017) |
| Long-Term Expected Rate of Return | 7.25% |
| Inflation | 3.00% |
| Salary Increase | Range from 3.90% to 10.00% based on years of service, including inflation assumption at 3.00%. |
| Mortality Table for Retirees and Beneficiaries | Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| Mortality Table for Disabled Retirees | Headcount-Weighted RP-2014 Disabled Retiree Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017. |
| Marital Status | 60% of male and 35% of female retirees who receive a subsidy are assumed to be married or have a qualified domestic partner and elect dependent coverage. |
| Spouse Age Difference | Male retirees are assumed to be four years older than their female spouses. Female retirees are assumed to be two years younger than their male spouses. |
| Surviving Spouse Coverage | With regard to Members who are currently alive, 100% of eligible spouses or domestic partners are assumed to elect continued health coverage after the Member's death. |
| Participation | 100% of retirees becoming eligible for Medicare are assumed to be covered by both Parts A and B. |

Notes to the Basic Financial Statements

3. Postemployment Health Care Plan Description (Continued)

Net OPEB Liability (Continued)

Significant Assumptions (Continued)

Healthcare Cost Trend Rates

Medical Premium Trend Rates to be applied in the following fiscal years, to all health plans. Trend Rate is to be applied to the premium for shown fiscal year to calculate next fiscal year's projected premium.

Medical Premium Trend Rates to be applied to fiscal year 2019-2020 and later years are:

| First Fiscal Year (July 1, 2019 through June 30, 2020) | | |
|--|--------------|---------------|
| Carrier | Under Age 65 | Age 65 & Over |
| Kaiser HMO | 3.37% | 3.12% |
| Anthem Blue Cross HMO | 7.89% | N/A |
| Anthem Blue Cross PPO | 3.40% | 3.88% |
| UHC Medicare HMO | N/A | 3.96% |

| Fiscal Year 2020 - 2021 and later | |
|-----------------------------------|-----------------|
| Fiscal Year | Trend (Approx.) |
| 2020 - 2021 | 6.62% |
| 2021 - 2022 | 6.37% |
| 2022 - 2023 | 6.12% |
| 2023 - 2024 | 5.87% |
| 2024 - 2025 | 5.62% |
| 2025 - 2026 | 5.37% |
| 2026 - 2027 | 5.12% |
| 2027 - 2028 | 4.87% |
| 2028 - 2029 | 4.62% |
| 2029 - 2030 and later | 4.50% |

Dental Premium Trend to be applied is 4.00% for all years.

Medicare Part B Premium Trend is 4.50% for all years.

Notes to the Basic Financial Statements

3. Postemployment Health Care Plan Description (Continued)

Net OPEB Liability (Continued)

Discount Rate

The discount rate used to measure the total OPEB liability was 7.25% as of June 30, 2019 and June 30, 2018.

The projection of cash flows used to determine the discount rate assumed that employer contributions will be made at rates equal to the actuarially-determined contribution rates. For this purpose, employer contributions that are intended to fund benefits only for current Plan Members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future Plan Members and their beneficiaries, as well as projected contributions from future Plan Members, are not included.

Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments for current Plan Members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the Total OPEB Liability as of June 30, 2019 and June 30, 2018.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, are summarized in the following table. These values were used in the derivation of the long-term expected investment rate of return assumption for the actuarial valuation as of June 30, 2019. This information is subject to change every three years based on the actuarial experience study. The last experience study was for July 1, 2014 through June 30, 2017. The next experience study will be conducted in 2020.

| Asset Class | Target Allocation | Arithmetic Long-Term Expected Real Rate of Return |
|--|-------------------|---|
| U.S. Large Cap Equity | 14.00% | 5.3% |
| U.S. Small Cap Equity | 5.00 | 6.1 |
| Developed Int'l Large Cap Equity | 17.00 | 6.7 |
| Developed Int'l Small Cap Equity | 3.00 | 7.1 |
| Emerging Market Equity | 7.00 | 8.9 |
| Core Bonds | 13.75 | 1.0 |
| High Yield Bonds | 2.00 | 3.1 |
| Bank Loans | 2.00 | 3.0 |
| Emerging Market Debt | 4.50 | 3.4 |
| Private Debt | 3.75 | 5.5 |
| Private Real Estate | 7.00 | 4.7 |
| Real Estate Investment Trust (REIT) | 0.50 | 5.9 |
| Treasury Inflation Protected Securities (TIPS) | 3.50 | 1.0 |
| Commodities | 1.00 | 3.4 |
| Public Real Assets | 1.00 | 4.8 |
| Private Equity | 14.00 | 9.0 |
| Cash | 1.00 | 0.0 |
| Total | 100.00% | |

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

The following presents the net OPEB liability of LACERS as of June 30, 2019, calculated using the discount rate of 7.25%, as well as what LACERS net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (6.25%) or one percentage point higher (8.25%) than the current rate (dollar in thousands):

| 1% Decrease (6.25%) | Current Discount Rate (7.25%) | 1% Increase (8.25%) |
|---------------------|-------------------------------|---------------------|
| \$1,000,088 | \$ 522,201 | \$ 131,811 |

Notes to the Basic Financial Statements

3. Postemployment Health Care Plan Description (Continued)

Net OPEB Liability (Continued)

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following presents the net OPEB liability of LACERS as of June 30, 2019, calculated using the healthcare cost trend rates as well as what LACERS net OPEB liability would be if it were calculated using trend rates that are one percentage point lower or one percentage point higher than the current rates (dollar in thousands):

| 1% Decrease | Current Healthcare Cost Trend Rates ⁽¹⁾ | 1% Increase |
|----------------|---|----------------|
| \$ 80,855 | \$ 522,201 | \$1,101,307 |

- (1) Current healthcare cost trend rates: 6.62% graded down to 4.50% over 9 years for Non-Medicare medical plan costs, and 6.12% graded down to 4.50% over 7 years for Medicare medical plan costs. 4.00% for all years for Dental and 4.50% for all years for Medicare Part B subsidy cost.

4. Contributions Required and Contributions Made

LACERS switched to the Entry Age cost method beginning from the June 30, 2012 actuarial valuation to determine the required annual contribution amount for the Retirement Plan and the Postemployment Health Care Plan. The required annual contribution amount is composed of two components: normal cost, which is the cost of the portion of the benefit that is allocated to a given year, and the payment to amortize the Unfunded Actuarial Accrued Liability (UAAL) which is the difference between LACERS actuarial liabilities and actuarial assets. The components of the UAAL are amortized as a level percent of pay. Based on LACERS funding policy, increases or decreases in the UAAL due to assumption changes are amortized over 20 years, except that healthcare cost trend and premium assumption changes are amortized over 15 years. Plan changes and experience gains and losses are amortized over 15 years, subject to adjustments to comply with GASB requirements on maximum amortization period of 30 years for all layers combined. The amortization periods are “closed” as each layer of the UAAL is systematically amortized over a “fixed” period.

The total contributions to LACERS for the fiscal year ended June 30, 2019, in the amount of \$827,111,000 (\$719,184,000 for the Retirement Plan and \$107,927,000 for the Postemployment Health Care Plan), consisted of the following (in thousands):

| | Retirement Plan | Postemployment Health Care Plan |
|--------------------------|--------------------|---------------------------------------|
| City Contributions: | | |
| Required Contributions | \$ 478,717 | \$ 107,927 |
| FDBP | 110 | - |
| Total City Contributions | 478,827 | 107,927 |
| Member Contributions | 240,357 | - |
| Total Contributions | \$ 719,184 | \$ 107,927 |

The City contributions made for the Retirement Plan under the Required Contributions category in the amount of \$478,717,000 were equal to 100% of the actuarially determined contribution of the employer. The City contributions made for the Postemployment Health Care Plan, in the amount of \$107,927,000, represents 100% of the actuarially determined contribution of the employer as defined by GASB Statement No. 74. Member contributions in the amount of \$240,357,000 were made toward the Retirement Plan, the voluntary Larger Annuity Plan and Family Death Benefit Plan.

5. Historical Trend Information

Historical trend information, designed to provide information about LACERS progress made in accumulating sufficient assets to pay benefits when due, is presented on pages 37 - 41 for the Retirement Plan and pages 42 - 46 for the Postemployment Health Care Plan.

Notes to the Basic Financial Statements

6. Cash and Short-Term Investments and Investments

The Board has the responsibility for the investment of LACERS funds, and should discharge its duties 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, as prescribed by Article XI Section 1106(c) of the City Charter.

LACERS considers investments with a maturity of 12 months or less to be short-term investments. The carrying value of cash and short-term investments at June 30, 2019, for the Retirement Plan and Postemployment Health Care Plan included approximately \$2,375,000 held in LACERS general operating accounts with the City Treasurer and short-term investments funds (STIF) of \$438,080,000 for a total of \$440,455,000. The amounts held by the City Treasurer are pooled with the monies of other City agencies and invested by the City Treasurer's office. These assets are not individually identifiable. At June 30, 2019, short-term investments included collective STIF of \$82,922,000, international STIF of \$146,133,000, and future contracts initial margin and collaterals of \$209,025,000.

The fair value of derivative instruments, including equity index, commodity, currency, and interest rate future contracts, currency forward contracts and options, and rights and warrants, are recorded in the Statement of Fiduciary Net Position with a net negative value of \$797,000. The changes in fair value of the derivative instruments during the fiscal year are recorded in the Statement of Changes in Fiduciary Net Position as Investment Income. LACERS enters into derivative contracts for investment purposes and to manage risks associated with its investment portfolio. For financial reporting purposes, all of LACERS derivatives for the current and previous fiscal years are classified as investment derivatives.

The notional amount and the fair value of derivative instruments as of June 30, 2019, are as follows (in thousands):

| Derivative Type | Notional Amount | Fair Value | Change in Fair Value |
|--------------------|-----------------|-----------------|----------------------|
| Future Contracts - | | | |
| Commodities | \$ 165,913 | \$(1,001) | \$ (2,058) |
| Equity Index | 16,856 | 58 | (53) |
| Foreign Exchange | (4,667) | (2) | 297 |
| Interest Rate | (24,978) | 38 | 211 |
| Currency Forward | | | |
| Contracts | 269,031 | (87) | (22) |
| Currency Options | N/A | - | (198) |
| Right / Warrants | N/A | 197 | 26 |
| Total Value | | <u>\$ (797)</u> | <u>\$ (1,797)</u> |

Credit Risk – Investments

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. LACERS seeks to maintain a diversified portfolio of fixed income instruments in order to obtain the highest total return for the fund at an acceptable level of risk within this asset class. The credit quality ratings of investments in fixed income securities by Standard and Poor's (S&P), a nationally-recognized statistical rating organization, as of June 30, 2019, are as follows (dollars in thousands):

| S & P Ratings | Fair Value | Percentage |
|--------------------------------------|---------------------|----------------|
| AAA | \$ 59,686 | 1.94% |
| AA | 1,365,523 | 44.40 |
| A | 195,599 | 6.36 |
| BBB | 523,906 | 17.04 |
| BB | 268,067 | 8.72 |
| B | 447,403 | 14.55 |
| CCC | 30,097 | 0.98 |
| CC | - | 0.00 |
| C | 112 | 0.00 |
| D | 2,622 | 0.09 |
| Not Rated | 182,140 | 5.92 |
| | 3,075,155 | <u>100.00%</u> |
| U.S. Government | | |
| Guaranteed Securities ⁽¹⁾ | <u>1,496,813</u> | |
| Total Fixed Income | | |
| Securities ⁽²⁾ | <u>\$ 4,571,968</u> | |

(1) Consists of U.S. Government Bonds and GNMA Mortgage-Backed Securities which had the AA+ rating.

(2) Derivatives instrument of \$38,000 are included.

Notes to the Basic Financial Statements

6. Cash and Short-Term Investments and Investments (Continued)

Credit Risk – Derivatives

Derivatives are subject to credit risk that the counterparty to a contract will default. LACERS is exposed to credit risk on reported assets of the investment derivatives that are traded over the counter. The credit risk of exchange traded derivatives for future contracts is considered minimal because the exchange clearing house is the counterparty and guarantees the performance.

LACERS permits investment managers, under the terms of individual guidelines, to use derivative instruments as set forth in each manager's investment guidelines to control portfolio risk. It is the responsibility of these investment managers to actively monitor counterparties on their financial safety and ensure compliance with the investment restrictions. LACERS has no general investment policy with respect to netting arrangements or collateral requirements. However, these individual investment managers have set up the arrangements with the counterparties to net off the positive and negative contracts with the same counterparty in case of the counterparty's default.

As of June 30, 2019, without respect to netting arrangements, LACERS maximum loss on derivative instruments subject to credit risk, namely currency forward contracts, is \$2,010,000. All counterparties of these investment derivatives had the credit rating of "A" or "AA" assigned by S&P.

Custodial Credit Risk

Custodial credit risk for deposits is the risk that, in the event of a financial institution's failure of depository financial institution, LACERS would not be able to recover its deposits or would not be able to recover collateral securities that are in the possession of an outside party. Deposits are exposed to custodial credit risk if they are not insured or not collateralized. As of June 30, 2019, LACERS has exposure to such risk in the amount of \$24,510,000 or 0.4% of the fair value of total international investments. The amount represents non-invested cash denominated in foreign currencies, managed by 13 different investment managers, and held outside of LACERS custodial bank. LACERS policy requires each individual publicly traded equities investment manager to hold no more than 10% of their portfolios in the form of cash. LACERS is in compliance with the policy.

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, LACERS would not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are not insured, are not registered in LACERS name, and are held by the counterparty, or the counterparty's trust department or agent but not in LACERS name. As of June 30, 2019, LACERS investments were not exposed to custodial credit risk because all securities were registered in the name of the System.

Concentration of Credit Risk

The investment portfolio as of June 30, 2019, contained no concentration of investments in any one entity that represented 5% or more of the total investment portfolio.

Notes to the Basic Financial Statements

6. Cash and Short-Term Investments and Investments (Continued)

Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. One of the ways LACERS manages its exposure to interest rate risk is by requiring the fixed income investment managers to maintain their portfolio effective duration within a specified range of the BC U.S. High Yield 2% Capped Index, the BC Intermediate Government Credit Index, the BC Aggregate Bond Index, or the J.P. Morgan EMBI Global Diversified Index, depending on the Board's mandates. The effective duration is a measure, in years, of interest-rate sensitivity in debt investments. The longer the effective duration, the greater the sensitivity to interest rate changes. Information about the sensitivity of the fair values of LACERS investments to market interest rate fluctuations as of June 30, 2019 is provided by the following table that shows the weighted average effective duration of LACERS fixed income securities by investment type (dollars in thousands):

| Investment Type | Fair Value | Weighted Average Duration (in Years) |
|---|---------------------|--------------------------------------|
| Asset-Backed Securities | \$ 61,691 | 0.89 |
| Bank Loans | 8,869 | 0.06 |
| Commercial Mortgage-Backed Securities | 72,771 | 4.36 |
| Corporate Bonds | 1,096,737 | 5.51 |
| Government Agencies | 61,833 | 6.72 |
| Government Bonds | 977,249 | 7.65 |
| Government Mortgage-Backed Securities | 453,618 | 3.80 |
| Index Linked Government Bonds | 722,329 | 7.04 |
| Municipal/Provincial Bonds | 5,570 | 3.09 |
| Non-Government Backed Collateralized Mortgage Obligations (C.M.O.s) | 4,975 | 2.18 |
| Opportunistic Debts | 203,701 | 0.20 |
| Other Fixed Income (Funds) | 902,587 | 5.73 |
| Derivative Instruments | 38 | 13.96 |
| Total Fixed Income Securities | <u>\$ 4,571,968</u> | |

Highly-Sensitive Investments

Highly-sensitive investments are certain debt investments whose terms may cause their fair value to be highly-sensitive to market interest rate changes. Terms include embedded options, coupon multipliers, benchmark indexes, and reset dates. LACERS asset-backed investments have embedded prepayment options that will typically cause prepayments by the obligees of the underlying investments when interest rates fall. Prepayments eliminate the stream of future interest payments and, therefore, diminish the fair value of the asset-backed investment. The following table shows the fair value of LACERS asset-backed investments by investment type (in thousands):

| Investment Type | Fair Value |
|---------------------------------------|-------------------|
| Asset-Backed Securities | \$ 61,691 |
| Commercial Mortgage-Backed Securities | 72,771 |
| Government Agencies | 61,833 |
| Government Mortgage-Backed Securities | 453,618 |
| Non-Government Backed C.M.O.s | 4,975 |
| Total Asset-Backed Investments | <u>\$ 654,888</u> |

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. LACERS Asset Allocation policy sets a target of 27% of the total portfolio for non-U.S. investments in equities. In addition, fixed income, real estate, and private equity managers may hold non-U.S. investments depending on their individual mandates. Forward currency contracts are permitted primarily to reduce the foreign currency risk.

Notes to the Basic Financial Statements

6. Cash and Short-Term Investments and Investments (Continued)

Foreign Currency Risk (Continued)

LACERS non-U.S. currency investment holdings as of June 30, 2019, which represent 28.1% of the fair value of total investments, are as follows (in thousands):

| Foreign Currency Type | Cash and Adjustments to Cash | Equity | Fixed Income | Derivative Instruments | Other Investments | Total Fair Value in USD |
|---|------------------------------------|---------------------|------------------|---------------------------|----------------------|-------------------------------|
| Argentine peso | \$ 1,350 | \$ - | \$ - | \$ - | \$ - | \$ 1,350 |
| Australian dollar | 1,154 | 175,457 | - | (21) | - | 176,590 |
| Brazilian real | (2,666) | 96,683 | 215 | (180) | - | 94,052 |
| British pound sterling | 822 | 583,513 | - | 22 | - | 584,357 |
| Canadian dollar | (735) | 219,928 | - | (16) | - | 219,177 |
| Chilean peso | (5,118) | 6,623 | - | (73) | - | 1,432 |
| Chinese yuan renminbi | (1,828) | 27,592 | - | 44 | - | 25,808 |
| Colombian peso | (1,874) | 4,281 | - | (126) | - | 2,281 |
| Czech koruna | 1,927 | 2,737 | - | (47) | - | 4,617 |
| Danish krone | 53 | 67,747 | - | - | - | 67,800 |
| Egyptian pound | 1,925 | 4,421 | - | (16) | - | 6,330 |
| Euro | (5,924) | 1,236,144 | 21,014 | 83 | 87,943 | 1,339,260 |
| Hong Kong dollar | 1,401 | 465,427 | - | (2) | - | 466,826 |
| Hungarian forint | 190 | 5,226 | - | (31) | - | 5,385 |
| Indian rupee | 11,124 | 130,769 | - | (5) | - | 141,888 |
| Indonesian rupiah | (1,087) | 28,971 | - | (63) | - | 27,821 |
| Israeli new shekel | (1,776) | 18,784 | - | (18) | - | 16,990 |
| Japanese yen | 4,308 | 759,309 | - | (33) | - | 763,584 |
| Malaysian ringgit | 1,151 | 14,575 | - | - | - | 15,726 |
| Mexican peso | 4,475 | 38,323 | 581 | - | - | 43,379 |
| New Romanian Leu | - | - | - | - | - | - |
| New Taiwan dollar | (4,979) | 147,990 | - | (72) | - | 142,939 |
| New Zealand dollar | 109 | 5,562 | - | (7) | - | 5,664 |
| Norwegian krone | 97 | 51,156 | - | - | - | 51,253 |
| Peruvian nuevo sol | 2,123 | - | - | (32) | - | 2,019 |
| Philippine peso | (2,744) | 17,706 | - | (35) | - | 14,927 |
| Polish zloty | 934 | 12,165 | - | (57) | - | 13,042 |
| Qatari riyal | - | 2,413 | - | - | - | 2,413 |
| Russian ruble | 5,971 | 16,471 | - | - | - | 22,442 |
| Singapore dollar | 3,065 | 76,107 | - | (57) | - | 79,115 |
| South African rand | 150 | 76,755 | - | (140) | - | 76,765 |
| South Korean won | 1,637 | 172,525 | - | (22) | - | 174,140 |
| Swedish krona | 74 | 108,389 | - | - | - | 108,463 |
| Swiss franc | (1,705) | 309,567 | - | (11) | - | 307,851 |
| Thai baht | (23) | 41,375 | - | (246) | - | 41,106 |
| Turkish lira | (2,132) | 10,771 | - | (489) | - | 8,150 |
| United Arab Emirates dirham | 825 | 3,006 | - | - | - | 3,831 |
| Total Investments Held in Foreign Currency | \$ 12,274 | \$ 4,938,468 | \$ 21,810 | \$ (1,650) | \$ 87,943 | \$ 5,058,845 |

Notes to the Basic Financial Statements

6. Cash and Short-Term Investments and Investments (Continued)

Fair Value Measurements

LACERS follows GASB Statement No. 72 (GASB 72), *Fair Value Measurements and Application*. GASB 72 addresses accounting and financial reporting issues related to fair value measurements and disclosures. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in either a government's principal or the most advantageous market at the measurement date.

The System's investments are measured and reported within the fair value hierarchy established by US GAAP. The fair value hierarchy, which has three levels, is based on the valuation inputs used to measure an asset's fair value and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

Level 1 inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly. Inputs to the valuation include: 1) quoted prices for similar assets or liabilities in active markets; 2) quoted prices for identical or similar assets or liabilities in markets that are not active; 3) inputs other than quoted prices that are observable for the asset or liability; and 4) market-corroborated inputs.

Level 3 inputs are unobservable inputs for an asset or liability where there are little market activities. The inputs into the determination of fair value are based upon the best information in the circumstances and may require management judgment or estimation.

Schedule of Investments by Fair Value Hierarchy

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt and equity securities classified in Level 2 or 3 of the fair value hierarchy are valued using a matrix pricing technique based on the availability of the market price, the pricing source and type, and the country of incorporation of the securities. The hierarchy levels are determined based on the level of corroborative information obtained from other market sources to assert that the prices provided represent observable data.

Private equity funds classified in Level 3 of the fair value hierarchy are valued based on the availability of market price of the underlying assets, and using either a discounted cash flow or Comparable Company Analysis with internal assumptions. Real estate funds classified in Level 2 or 3 of the fair value hierarchy are valued based on periodic appraisals in accordance with industry practice.

The exchange traded Future Contracts classified in Level 1 of the fair value hierarchy are valued using a daily settlement when available or as a daily mark to market. The Foreign Exchange Contracts classified in Level 2 of the fair value hierarchy are valued using independent pricing services including London Close mid-evaluation, WM/Reuters Company, Bloomberg, and Thomson Reuters.

Certain investments which do not have a readily determinable fair value have been valued at the Net Asset Value (NAV) per share (or its equivalent) provided that the NAV is calculated and used as a practical expedient to estimate fair value in accordance with US GAAP requirements. These investments are not categorized within the fair value hierarchy but disclosed in the Investments Measured at the NAV on page 34.

Notes to the Basic Financial Statements

6. Cash and Short-Term Investments and Investments (Continued)

Fair Value Measurements (Continued)

Schedule of Investments by Fair Value Hierarchy (Continued)

The System has the following recurring fair value measurements as of June 30, 2019 (in thousands):

| | Total | Fair Value Measurements Using | | |
|---|----------------------|--|---|---|
| | | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Other Unobservable Inputs (Level 3) |
| Investments by Fair Value Level: | | | | |
| Debt securities: | | | | |
| Government Bonds | \$ 1,699,578 | \$ - | \$ 1,699,578 | \$ - |
| Government Agencies | 61,833 | - | 61,833 | - |
| Municipal/Provincial Bonds | 5,570 | - | 5,570 | - |
| Corporate Bonds | 1,163,404 | - | 1,163,189 | 215 |
| Bank Loans | 8,868 | - | 8,868 | - |
| Government Mortgage Bonds | 453,618 | - | 453,618 | - |
| Commercial Mortgage Bonds | 72,771 | - | 72,771 | - |
| Opportunistic Debts | 14,167 | - | - | 14,167 |
| Total Debt Securities | <u>3,479,809</u> | <u>-</u> | <u>3,465,427</u> | <u>14,382</u> |
| Equity Securities: | | | | |
| Common Stock: | | | | |
| Basic Industries | 1,313,489 | 1,313,368 | - | 121 |
| Capital Goods Industries | 507,655 | 507,637 | 9 | 9 |
| Consumer & Services | 2,544,498 | 2,543,516 | - | 982 |
| Energy | 818,263 | 818,183 | - | 80 |
| Financial Services | 1,689,279 | 1,689,207 | - | 72 |
| Health Care | 1,052,003 | 1,051,818 | - | 185 |
| Information Technology | 1,407,988 | 1,407,943 | - | 45 |
| Real Estate | 501,487 | 501,418 | - | 69 |
| Miscellaneous | 10,594 | 8,947 | - | 1,647 |
| Total Common Stock | <u>9,845,256</u> | <u>9,842,037</u> | <u>9</u> | <u>3,210</u> |
| Preferred Stock | 54,402 | 54,402 | - | - |
| Stapled Securities | 12,814 | 12,814 | - | - |
| Total Equity Securities | <u>9,912,472</u> | <u>9,909,253</u> | <u>9</u> | <u>3,210</u> |
| Private Equity Funds | 258,834 | - | - | 258,834 |
| Real Estate Funds | 120,996 | - | 118,344 | 2,652 |
| Total Investments by Fair Value Level | <u>\$ 13,772,111</u> | <u>\$ 9,909,253</u> | <u>\$ 3,583,780</u> | <u>\$ 279,078</u> |
| Investments Measured at the NAV: | | | | |
| Common Fund Assets | 902,587 | | | |
| Private Equity Funds | 1,749,724 | | | |
| Real Estate Funds | 671,520 | | | |
| Opportunistic Debts | 189,534 | | | |
| Total Investments Measured at the NAV | <u>3,513,365</u> | | | |
| Total Investments Measured at Fair Value ⁽¹⁾ | <u>\$ 17,285,476</u> | | | |
| Investment Derivative Instruments: | | | | |
| Future Contracts (liabilities) | \$ (907) | \$ (907) | \$ - | \$ - |
| Foreign Exchange Contracts (liabilities) | (87) | - | (87) | - |
| Rights/Warrants | 197 | 195 | - | 2 |
| Total Investment Derivative Instruments | <u>\$ (797)</u> | <u>\$ (712)</u> | <u>\$ (87)</u> | <u>\$ 2</u> |

(1) Excluded \$(797,000) of investment derivative instruments (shown separately) and 705,535,000 of securities lending collateral.

Notes to the Basic Financial Statements

6. Cash and Short-Term Investments and Investments (Continued)

Fair Value Measurements (Continued)

Investments Measured at the NAV: (in thousands)

| | Fair Value | Unfunded Commitments | Redemption Frequency | Redemption Notice Period |
|--|---------------------|-------------------------|-------------------------|--------------------------------|
| Common Fund Assets ⁽¹⁾ | \$ 902,587 | \$ - | Daily | 2 days |
| Private Equity Funds ⁽²⁾ | 1,749,724 | 761,307 | N/A | N/A |
| Real Estate Funds ⁽³⁾ | 671,520 | 63,049 | Daily, Quarterly | 1-90 days |
| Opportunistic Debts ⁽⁴⁾ | 189,534 | - | Monthly | 30 days |
| Total Investments Measured at the NAV | <u>\$ 3,513,365</u> | <u>\$ 824,356</u> | | |

- (1) Common fund assets - This investment type includes one fund that primarily invests in U.S. bonds. The fair value of the investment has been determined using a practical expedient based on the investments' NAV per share (or its equivalent). This investment can be redeemed daily, with a two-day advance redemption notice period.
- (2) Private equity funds - This investment type includes 183 closed-end commingled private equity funds that invest primarily in securities of privately held U.S. and non-U.S. companies. The fair values of these investments have been determined using a practical expedient based on the investments' NAV per share (or its equivalent). These investments are not redeemable. It is expected that these investments will be held for the entire lives of the funds and will not be sold in the secondary market. Distributions from each fund will be received as the underlying assets are liquidated by the fund managers. It is expected that the underlying assets of these funds will be liquidated over the next one to 13 years, depending on the vintage year of each fund.
- (3) Real estate funds - This investment type includes 26 commingled real estate funds that invest primarily in U.S. commercial real estate. The fair values of these investments have been determined using a practical expedient based on the investments' NAV per share (or its equivalent). Ten investments, representing approximately 84.3% of the value of this investment type, are in open-end funds, which may be redeemed according to terms specific to each fund. Redemptions generally are subject to the funds' available cash and redemption queues. There is no intention to redeem any of these ten investments in the near future. Sixteen investments, representing approximately 15.7% of the value of this investment type, are in closed-end funds and are not redeemable. It is expected that these investments will be held for the entire lives of the funds and will not be sold in the secondary market. Distributions from each fund will be received as underlying assets are liquidated by the fund managers. It is expected that the underlying assets of these funds will be liquidated over the next one to 12 years, depending on the vintage year of each fund.
- (4) Opportunistic debts - This investment type includes two commingled funds: one that invests primarily in senior loans of non-investment grade companies (senior loan fund) and another one invests primarily in the securities and obligations of companies experiencing operational or financial distress (distressed investment fund). The fair values of these investments have been determined using a practical expedient based on the investments' NAV per share (or its equivalent). The senior loan fund, representing approximately 99% of the value of this investment type, can be redeemed monthly. The distressed investment fund, representing approximately 1% of the value of this investment type, is being dissolved and is no longer making new underlying investments. Distributions from this fund will be received as underlying investments are liquidated by the fund manager. It is expected that this fund will be liquidated fully over the next two years.

Notes to the Basic Financial Statements

7. Securities Lending Agreement

Under authority granted by the City Charter, LACERS has entered into various short-term arrangements with its custodian to lend securities to various brokers. There are no restrictions on the amount of securities that may be lent, and the custodian determines which lenders' accounts to lend securities from by using an impartial sequential system that matches loan requests with various lenders' accounts. All lenders are deemed to have relatively equal opportunity to profit from the lending of securities. Therefore, should a collateral deficiency occur beyond the custodian's responsibilities, the deficiency is allocated pro rata among all lenders.

Minimum collateralization is 102% of the fair value of the borrowed U.S. securities and 105% for international securities. Collateral consists of cash, government and corporate securities, and commercial bank obligations. Cash collateral is invested in a separate account comprised of money market or high quality short-term investments. It is the responsibility of the custodian to monitor the collateralization on a daily basis. If the collateral is below the minimum collateralization level, additional collateral will be requested from the borrower to meet the requirement. Collateral requested each morning is required to be received on the same day. If the borrower fails to deliver additional collateral, the custodian would notify the borrower that they are in default under the securities lending agreement. If the borrower does not provide the necessary collateral after receiving notification, the legal agreement allows the custodian to close the contract with the borrower and buy-in the securities on behalf of LACERS.

The borrower has all incidents of ownership with respect to borrowed securities and collateral, including the right to vote and transfer or loan borrowed securities to others. LACERS is entitled to receive all distributions, which are made by the issuer of the borrowed securities, directly from the borrower. Under the agreement, the custodian will indemnify LACERS as a result of the custodian's failure to: 1) make a reasoned determination of the creditworthiness of a potential borrower before lending and, during the term of the loan or loans, the borrower files a petition of bankruptcy or similar action; 2) demand adequate collateral; or 3) otherwise maintain the securities lending program in compliance with the Federal Financial Institutions Examination Council Supervisory Policy on Securities Lending.

These agreements provide for the return of the securities and revenue determined by the type of collateral received. The cash collateral values of securities on loan to brokers are shown at their fair values on the Statement of Fiduciary Net Position.

As of June 30, 2019, LACERS had no losses on securities lending transactions resulting from default of a borrower or lending agent. Due to the nature of the securities lending program and the custodian bank's collateralization of loans at amounts greater than the fair value of the loaned securities, it is deemed that there were no material credit risks to LACERS as defined in GASB Statement No. 28 and GASB Statement No. 40 by its participation in the securities lending program. However, similar to any other investment portfolio, there is risk associated with investing cash collateral in securities. The value of the invested collateral may fall below the value of the cash collateral pledged by the borrowers, and may impair LACERS ability to return cash collateral to the borrowers upon the redemption of loans. In this event, LACERS would be required to make up the deficiency in collateral and would incur a loss.

All securities loans can be terminated on demand by either LACERS or the borrower. Because of this nature, their duration did not generally match the duration of the investment made with the cash collateral. LACERS cannot pledge or sell non-cash collateral unless the borrower defaults.

The following table represents the fair value of securities on loan and cash/non-cash collateral received as of June 30, 2019 (in thousands):

| | Fair Value of Securities on Loan | Cash/Non- Cash Collateral Received |
|--|--|---|
| U.S. Government and Agency Securities | \$ 405,669 | \$ 413,572 |
| Domestic Corporate Fixed Income Securities | 151,779 | 154,583 |
| International Fixed Income Securities | 274,664 | 289,919 |
| Domestic Stocks | 370,266 | 375,642 |
| International Stocks | 650,727 | 694,322 |
| Total | <u>\$ 1,853,105</u> | <u>\$ 1,928,038</u> |

Notes to the Basic Financial Statements

7. Securities Lending Agreement (Continued)

As of June 30, 2019, the fair value of the securities on loan was \$1,853,105,000. The fair value of associated collateral was \$1,928,038,000 (\$705,535,000 of cash collateral and \$1,222,503,000 of non-cash collateral). Non-cash collateral, which LACERS does not have the ability to sell unless the borrower defaults, is not reported in the Statement of Fiduciary Net Position. LACERS income and expenses related to securities lending were \$7,268,000 and \$1,089,000, respectively, for the fiscal year ended June 30, 2019.

8. Future and Forward Contracts

LACERS uses derivative financial instruments, primarily to manage portfolio risk. Future and forward contracts are marked to market and are recorded in the Statement of Fiduciary Net Position at fair value. Future contracts have little credit risk, as organized exchanges are the guarantors. Forward agreements are subject to the creditworthiness of the counterparties, which are principally large financial institutions (refer to Note 6 – Credit Risk - Derivatives on page 29).

As of June 30, 2019, LACERS had outstanding commodities, equity index, and interest rate future contracts with an aggregate notional amount of \$157,792,000, and foreign exchange future contract with a negative notional amount of \$4,667,000 due to its short position. In addition, at June 30, 2019, LACERS had outstanding forward purchase commitments with a notional amount of \$269,031,000 and offsetting forward sales commitments with notional amounts of \$269,031,000, which expire in September 2019. LACERS maintains margin collateral on the positions with brokers, consisting of cash and U.S. Treasury Bills. The total collateral margin was \$209,025,000 as of June 30, 2019.

9. Operating Lease

The System leases building facilities under a non-cancelable operating lease that expires in March 2023, at which time a three-year renewal option is available.

The future minimum lease commitments are as follows as of June 30, 2019:

| | |
|------------------|------------|
| Fiscal Year 2020 | \$ 806,000 |
| Fiscal Year 2021 | 1,003,000 |
| Fiscal Year 2022 | 1,043,000 |
| Fiscal Year 2023 | 813,000 |

10. Commitments and Contingencies

As of June 30, 2019, LACERS was committed to future purchases of real estate and private equity investments at an aggregate cost of approximately \$1,168,724,000, including agreements for acquisition not yet initiated.

The federal Patient Protection and Affordable Care Act (PPACA, also referred to as the Affordable Care Act) of 2010 contains a provision that would impose a 40% excise tax on the annual value of high-cost health plans that exceed certain dollar thresholds beginning in 2022 (deferred from year 2020). If there is no change in the law or LACERS plan provisions between now and 2022, and if the current medical cost trend stays substantially the same during the same period, some of LACERS postemployment health care benefits will be subject to the excise tax in 2022 and thereafter. GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, requires the inclusion of the excise tax in the liability. The impact of potential excise tax imposed by the Affordable Care Act (ACA) and related statutes on certain health plans in calculating the contribution rates for the employer was reflected in the valuation for fiscal year June 30, 2019.

11. Subsequent Events

Date of Management's Review

The potential for subsequent events was evaluated through November 25, 2019, which was the date of management's review.

Purchase of a Real Estate Property

On October 9, 2019, LACERS Board approved the purchase of a commercial office building and underground parking structure located at 977 N. Broadway in Los Angeles, California to serve as LACERS future headquarters building with the purchase price not to exceed \$34,000,000. The purchase was settled at \$33,750,000 on October 23, 2019.

REQUIRED SUPPLEMENTARY INFORMATION

Required Supplementary Information

Retirement Plan

The schedules included in the Required Supplementary Information for the Retirement Plan are intended to show information for 10 years. However, the following schedules do not have a full 10-year trend, and therefore, Los Angeles City Employees' Retirement System (LACERS or the System) presented information only for those years for which information is available:

- 1) Schedule of Net Pension Liability
- 2) Schedule of Changes in Net Pension Liability and Related Ratios
- 3) Schedule of Investment Returns

Additional years will be displayed in the future as they become available.

Schedule of Net Pension Liability ⁽¹⁾ As of June 30 (Dollars in Thousands)

| | <u>2019</u> | <u>2018</u> | <u>2017</u> | <u>2016</u> | <u>2015</u> | <u>2014</u> | <u>2013</u> |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Total Pension Liability | \$20,793,421 | \$19,944,578 | \$18,458,188 | \$17,424,996 | \$16,909,996 | \$16,248,853 | \$14,881,663 |
| Plan Fiduciary Net Position | <u>14,815,593</u> | <u>14,235,230</u> | <u>13,180,516</u> | <u>11,809,329</u> | <u>11,920,570</u> | <u>11,791,079</u> | <u>10,154,486</u> |
| Plan's Net Pension Liability | <u>\$ 5,977,828</u> | <u>\$ 5,709,348</u> | <u>\$ 5,277,672</u> | <u>\$ 5,615,667</u> | <u>\$ 4,989,426</u> | <u>\$ 4,457,774</u> | <u>\$ 4,727,177</u> |
| Plan Fiduciary Net Position as a percentage of the Total Pension Liability | 71.3% | 71.4% | 71.4% | 67.8% | 70.5% | 72.6% | 68.2% |

(1) In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits).

Note to Schedule:

Refer to the notes to the Schedule of Changes in Net Pension Liability and Related Ratios.

Required Supplementary Information
Retirement Plan

Schedule of Changes in Net Pension Liability and Related Ratios ⁽¹⁾
For the Fiscal Years Ended June 30
(Dollars in Thousands)

| | <u>2019</u> | <u>2018</u> | <u>2017</u> | <u>2016</u> |
|---|----------------------|----------------------|----------------------|----------------------|
| Total Pension Liability | | | | |
| Service cost ⁽²⁾ | \$ 370,409 | \$ 352,283 | \$ 340,759 | \$ 322,574 |
| Interest | 1,439,661 | 1,332,878 | 1,302,278 | 1,263,556 |
| Changes of benefit terms | - | 25,173 | - | - |
| Differences of expected and actual experience | (46,035) | 144,224 | (146,474) | (300,813) |
| Changes of assumptions | - | 483,717 | 340,718 | - |
| Benefit payments, including refunds of Member contributions | (915,192) | (851,885) | (804,089) | (770,317) |
| Net change in total pension liability | <u>848,843</u> | <u>1,486,390</u> | <u>1,033,192</u> | <u>515,000</u> |
| Total pension liability-beginning | <u>19,944,578</u> | <u>18,458,188</u> | <u>17,424,996</u> | <u>16,909,996</u> |
| Total pension liability-ending (a) | <u>\$ 20,793,421</u> | <u>\$ 19,944,578</u> | <u>\$ 18,458,188</u> | <u>\$ 17,424,996</u> |
| Plan fiduciary net position | | | | |
| Contributions-employer | \$ 478,717 | \$ 450,195 | \$ 453,356 | \$ 440,546 |
| Contributions-Member | 237,087 | 230,757 | 221,829 | 206,377 |
| Net investment income | 799,351 | 1,243,817 | 1,517,545 | 29,358 |
| Benefit payments, including refunds of Member contributions | (915,192) | (851,885) | (804,089) | (770,318) |
| Administrative expenses | (19,600) | (17,699) | (17,454) | (17,204) |
| Others ⁽³⁾ | - | (471) | - | - |
| Net change in Plan fiduciary net position | <u>580,363</u> | <u>1,054,714</u> | <u>1,371,187</u> | <u>(111,241)</u> |
| Plan fiduciary net position-beginning | <u>14,235,230</u> | <u>13,180,516</u> | <u>11,809,329</u> | <u>11,920,570</u> |
| Plan fiduciary net position-ending (b) | <u>\$ 14,815,593</u> | <u>\$ 14,235,230</u> | <u>\$ 13,180,516</u> | <u>\$ 11,809,329</u> |
| Plan's net pension liability-ending (a)-(b) | <u>\$ 5,977,828</u> | <u>\$ 5,709,348</u> | <u>\$ 5,277,672</u> | <u>\$ 5,615,667</u> |
| Plan fiduciary net position as a percentage of the total pension liability (b)/(a) | 71.3% | 71.4% | 71.4% | 67.8% |
| Covered payroll | \$ 2,108,171 | \$ 2,057,565 | \$ 1,973,049 | \$ 1,876,946 |
| Plan's net pension liability as a percentage of covered payroll | 283.6% | 277.5% | 267.5% | 299.2% |

(1) In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits).

(2) The service cost is based on the previous year's valuation.

(3) On July 1, 2015, the System segregated Members' voluntary larger annuity contributions into the (non-pension related) Reserve for Larger Annuity Contributions pursuant to a suggestion made by the System's actuarial consultant. The Reserve balance for Larger Annuity Contributions as of June 30, 2015 was \$5,200,000. On July 1, 2017, the System reallocated \$471,000 of interest from the Reserve for Mandatory Member Contributions into the Reserve for Voluntary Member Contributions.

Required Supplementary Information
Retirement Plan

Schedule of Changes in Net Pension Liability and Related Ratios ⁽¹⁾ (Continued)
For the Fiscal Years Ended June 30
(Dollars in Thousands)

| | <u>2015</u> | <u>2014</u> | <u>2013</u> |
|---|----------------------|----------------------|----------------------|
| Total Pension Liability | | | |
| Service cost ⁽²⁾ | \$ 322,380 | \$ 317,185 | \$ 312,372 |
| Interest | 1,215,151 | 1,149,966 | 1,112,561 |
| Changes of benefit terms | - | - | - |
| Differences of expected and actual experience | (135,821) | (164,247) | (235,829) |
| Changes of assumptions | - | 785,439 | - |
| Benefit payments, including refunds of Member contributions | (740,567) | (721,153) | (701,400) |
| Net change in total pension liability | <u>661,143</u> | <u>1,367,190</u> | <u>487,704</u> |
| Total pension liability-beginning | <u>16,248,853</u> | <u>14,881,663</u> | <u>14,393,959</u> |
| Total pension liability-ending (a) | <u>\$ 6,909,996</u> | <u>\$ 16,248,853</u> | <u>\$ 14,881,663</u> |
| Plan fiduciary net position | | | |
| Contributions-employer | \$ 381,141 | \$ 357,649 | \$ 346,181 |
| Contributions-Member | 202,463 | 203,975 | 197,722 |
| Net investment income | 306,980 | 1,810,782 | 1,268,939 |
| Benefit payments, including refunds of Member contributions | (740,567) | (721,153) | (701,400) |
| Administrative expenses | (15,860) | (12,372) | (13,281) |
| Others ⁽³⁾ | (4,666) | (2,288) | (2,514) |
| Net change in Plan fiduciary net position | <u>129,491</u> | <u>1,636,593</u> | <u>1,095,647</u> |
| Plan fiduciary net position-beginning | <u>11,791,079</u> | <u>10,154,486</u> | <u>9,058,839</u> |
| Plan fiduciary net position-ending (b) | <u>\$ 11,920,570</u> | <u>\$ 11,791,079</u> | <u>\$ 10,154,486</u> |
| Plan's net pension liability-ending (a)-(b) | <u>\$ 4,989,426</u> | <u>\$ 4,457,774</u> | <u>\$ 4,727,177</u> |
| Plan fiduciary net position as a percentage of the total pension liability (b)/(a) | 70.5% | 72.6% | 68.2% |
| Covered payroll | \$ 1,835,637 | \$ 1,802,931 | \$ 1,736,113 |
| Plan's net pension liability as a percentage of covered payroll | 271.8% | 247.3% | 272.3% |

(1) In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits).

(2) The service cost is based on the previous year's valuation.

(3) On July 1, 2015, the System segregated Members' voluntary larger annuity contributions into the (non-pension related) Reserve for Larger Annuity Contributions pursuant to a suggestion made by the System's actuarial consultant. The Reserve balance for Larger Annuity Contributions as of June 30, 2015 was \$5,200,000. On July 1, 2017, the System reallocated \$471,000 of interest from the Reserve for Mandatory Member Contributions into the Reserve for Voluntary Member Contributions.

Required Supplementary Information

Retirement Plan

Schedule of Changes in Net Pension Liability and Related Ratios (Continued)

Notes to Schedule:

Changes of Benefit Terms: The June 30, 2018 calculation reflected the newly adopted enhanced benefits for Airport Peace Officers (APO) who elected to stay at LACERS Plan (refer to Note 2 – Retirement Plan Description, Tier 1 – Enhanced Benefits on page 17). Enhanced benefits became effective as of January 7, 2018.

Change of Assumptions: The June 30, 2014 calculations reflected various assumption changes based on the triennial experience study for the period from July 1, 2011 through June 30, 2014. The increase of total pension liability for fiscal years ended on June 30, 2014 is primarily due to the lowered assumed investment rate of return from 7.75% to 7.50%, and longer assumed life expectancies for Members and beneficiaries while the June 30, 2017 increase is primarily due to the lowered assumed investment rate of return from 7.50% to 7.25%.

The June 30, 2018 calculations reflected changes in the actuarial assumptions adopted by the Board on August 14, 2018 based on the triennial experience study for the period from July 1, 2014 through June 30, 2017, including revising the mortality tables from static to generational to reflect future mortality improvement, contributing to increased total pension liability.

Schedule of Contribution History (Dollars in Thousands)

| Fiscal Year | Actuarially Determined Contributions (ADC) | Contributions in Relation to ADC | Contribution Deficiency | Covered Payroll | Contributions as a Percentage of Covered Payroll |
|-------------|--|----------------------------------|-------------------------|-----------------|--|
| 2010 | \$ 258,643 | \$ 258,643 | \$ - | \$ 1,827,864 | 14.2% |
| 2011 | 303,561 | 303,561 | - | 1,678,059 | 18.1 |
| 2012 | 308,540 | 308,540 | - | 1,715,197 | 18.0 |
| 2013 | 346,181 | 346,181 | - | 1,736,113 | 19.9 |
| 2014 | 357,649 | 357,649 | - | 1,802,931 | 19.8 |
| 2015 | 381,141 | 381,141 | - | 1,835,637 | 20.8 |
| 2016 | 440,546 | 440,546 | - | 1,876,946 | 23.5 |
| 2017 | 453,356 | 453,356 | - | 1,973,049 | 23.0 |
| 2018 | 450,195 | 450,195 | - | 2,057,565 | 21.9 |
| 2019 | 478,717 | 478,717 | - | 2,108,171 | 22.7 |

Notes to Schedule:

Valuation Date Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which the contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method Entry Age Actuarial Cost Method (individual basis).

Amortization Method Level Percent of Payroll.

Amortization Period Multiple layers – closed amortization period. Actuarial gains/losses are amortized over 15 years. Assumption or method changes are amortized over 20 years. Plan changes, including the 2009 Early Retirement Incentive Program (ERIP), are amortized over 15 years. Future ERIPs will be amortized over five years. Any actuarial surplus is amortized over 30 years. The existing layers on June 30, 2012, except those arising from the 2009 ERIP and the two Governmental Accounting Standards Board (GASB) Statements No. 25/27 layers, were combined and amortized over 30 years.

Required Supplementary Information

Retirement Plan

Schedule of Contribution History (Continued)

Notes to Schedule (Continued)

Methods and Assumptions Used to Determine Contribution Rates (Continued)

Asset Valuation Method Fair value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a seven-year period. The actuarial value of assets cannot be less than 60% or greater than 140% of the market value of assets. An Ad Hoc change was made in 2018 to combine the unrecognized returns and losses of prior years as of June 30, 2017 into one layer and recognize it evenly over six years from fiscal year 2017-18 through fiscal year 2022-23.

Actuarial Assumptions:

| | |
|---------------------------------------|-------|
| Investment Rate of Return | 7.25% |
| Inflation | 3.00% |
| Real Across-the-Board Salary Increase | 0.50% |

Projected Salary Increases⁽¹⁾ Ranges from 3.90% to 10.00% based on years of service.

Cost of Living Adjustment⁽²⁾ Tier 1: 3.00%
Tier 3: 2.00%

Mortality Healthy: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017.

Disabled: Headcount-Weighted RP-2014 Disabled Retiree Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017.

- (1) Includes inflation at 3.00% as of June 30, 2019, plus across-the-board salary increase of 0.50% plus merit and promotional increases.
- (2) Actual increases are contingent upon Consumer Price Index (CPI) increases with a 3.00% maximum for Tier 1 and a 2.00% maximum for Tier 3.

Schedule of Investment Returns For the Fiscal Years Ended June 30

| | <u>2019</u> | <u>2018</u> | <u>2017</u> | <u>2016</u> | <u>2015</u> | <u>2014</u> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Annual money-weighted rate of return, net of investment expenses | 5.5% | 9.3% | 12.6% | 0.2% | 2.6% | 18.2% |

Note to Schedule:

The rates of investment returns for the fiscal years 2015 and 2016 were much lower compared to other fiscal years. It reflected the impact of divergent and volatile global markets on LACERS investment portfolio over these reporting periods.

Required Supplementary Information

Postemployment Health Care Plan

The schedules included in the Required Supplementary Information for the Postemployment Health Care Plan are intended to show information for 10 years. However, the following schedules do not have a full 10-year trend, and therefore, Los Angeles City Employees' Retirement System (LACERS or the System) presented information only for those years for which information is available:

- 1) Schedule of Net OPEB Liability
- 2) Schedule of Changes in Net OPEB Liability and Related Ratios
- 3) Schedule of Investment Returns

Additional years will be displayed in the future as they become available.

Schedule of Net OPEB Liability As of June 30 (Dollars in Thousands)

| | <u>2019</u> | <u>2018</u> | <u>2017</u> | <u>2016</u> |
|---|-------------------|-------------------|-------------------|-------------------|
| Total OPEB Liability | \$ 3,334,299 | \$ 3,256,827 | \$ 3,005,806 | \$ 2,793,689 |
| Plan Fiduciary Net Position | <u>2,812,098</u> | <u>2,676,371</u> | <u>2,438,862</u> | <u>2,134,877</u> |
| Plan's Net OPEB Liability | <u>\$ 522,201</u> | <u>\$ 580,456</u> | <u>\$ 566,944</u> | <u>\$ 658,812</u> |
| Plan Fiduciary Net Position as a percentage of the Total OPEB Liability | 84.3% | 82.2% | 81.1% | 76.4% |

Note to Schedule:

Refer to the notes to the Schedule of Changes in Net OPEB Liability and Related Ratios.

Required Supplementary Information
Postemployment Health Care Plan

Schedule of Changes in Net OPEB Liability and Related Ratios
For the Fiscal Years Ended June 30
(Dollars in Thousands)

| | <u>2019</u> | <u>2018</u> | <u>2017</u> | <u>2016</u> |
|--|---------------------|---------------------|---------------------|---------------------|
| Total OPEB Liability | | | | |
| Service cost ⁽¹⁾ | \$ 74,478 | \$ 74,611 | \$ 68,385 | \$ 62,360 |
| Interest | 236,678 | 218,686 | 210,170 | 199,078 |
| Changes of benefit terms | - | 948 | - | 17,215 |
| Differences between expected and actual experience ⁽²⁾ | (134,053) | (7,321) | 19,666 | (22,013) |
| Changes of assumptions | 33,940 | 92,178 | 33,512 | - |
| Benefit payments ⁽³⁾ | (133,571) | (128,081) | (119,616) | (109,940) |
| Net change in total OPEB liability | <u>77,472</u> | <u>251,021</u> | <u>212,117</u> | <u>146,700</u> |
| Total OPEB liability-beginning | <u>3,256,827</u> | <u>3,005,806</u> | <u>2,793,689</u> | <u>2,646,989</u> |
| Total OPEB liability-ending (a) | <u>\$ 3,334,299</u> | <u>\$ 3,256,827</u> | <u>\$ 3,005,806</u> | <u>\$ 2,793,689</u> |
| | | | | |
| Plan fiduciary net position | | | | |
| Contributions-employer | \$ 107,927 | \$ 100,909 | \$ 97,457 | 105,983 |
| Net investment income (loss) | 166,470 | 269,380 | 330,708 | (344) |
| Benefit payments ⁽³⁾ | (133,571) | (128,081) | (119,616) | (109,940) |
| Administrative expense | (5,099) | (4,699) | (4,564) | (4,528) |
| Net change in Plan fiduciary net position | <u>135,727</u> | <u>237,509</u> | <u>303,985</u> | <u>8,829</u> |
| | | | | |
| Plan fiduciary net position-beginning | <u>2,676,371</u> | <u>2,438,862</u> | <u>2,134,877</u> | <u>2,143,706</u> |
| Plan fiduciary net position-ending (b) | <u>\$ 2,812,098</u> | <u>\$ 2,676,371</u> | <u>\$ 2,438,862</u> | <u>\$ 2,134,877</u> |
| | | | | |
| Plan's net OPEB liability-ending (a)-(b) | <u>\$ 522,201</u> | <u>\$ 580,456</u> | <u>\$ 566,944</u> | <u>\$ 658,812</u> |
| | | | | |
| Plan fiduciary net position as a percentage of the total OPEB liability (b)/(a) | 84.3% | 82.2% | 81.1% | 76.4% |
| Covered payroll | \$ 2,108,171 | \$ 2,057,565 | \$ 1,973,049 | \$ 1,876,946 |
| | | | | |
| Plan's net OPEB liability as a percentage of covered payroll | 24.8% | 28.2% | 28.7% | 35.1% |

(1) The service cost is based on the previous year's valuation.

(2) After the GASB Statement No. 74 valuation report was issued for the fiscal year June 30, 2017, the System's consulting actuary reclassified \$12,450,000 of OPEB liability from the *Changes of Assumption* (revised from \$45,962,000 to \$33,512,000) to the *Differences Between Expected and Actual Experience* (revised from \$7,216,000 to \$19,666,000). However, this reclassification did not affect the recommended employer contribution rates or results of the OPEB valuation in total.

(3) Benefit payments associated with the self-funded insurance premium of \$6,090,000 and Member's health insurance premium reserve of \$468,000 that were reported as both additions and deductions in fiduciary net position for the fiscal year 2019 were excluded from the above schedule.

Required Supplementary Information

Postemployment Health Care Plan

Schedule of Changes in Net OPEB Liability and Related Ratios (Continued)

Notes to Schedule:

Changes of Benefit Terms: The OPEB liability from the changes of benefit terms for the fiscal year ended June 30, 2016 is primarily due to providing retiree healthcare benefits to part-time employees who retired with 10 years of service but less than 10 years of service credit (refer to Note 3 – Postemployment Health Care Plan Description, Eligibility Requirement and Benefits Provided on pages 22 - 23) while the June 30, 2018 increase is primarily as a result of the newly adopted enhanced benefits for Airport Peace Officers (APO) who elected to stay at LACERS Plan (refer to Note 2 – Retirement Plan Description, Tier 1 – Enhanced Benefits on page 17) as some APO Members may retire earlier than expected. Enhanced benefits became effective as of January 7, 2018.

Changes of Assumptions: The OPEB liability from the changes of assumptions for the fiscal year ended June 30, 2017 is primarily due to the lowered assumed investment rate of return, from 7.50% to 7.25%, and the June 30, 2018 increase is primarily due to the new actuarial assumptions adopted in the triennial experience study (July 1, 2014 through June 30, 2017), including revising the mortality tables from static to generational, while the June 30, 2019 increase is mainly due to the increased Medicare Part B Premium Trend Rate from 4.0% to 4.5%.

Required Supplementary Information
Postemployment Health Care Plan

Schedule of Contribution History
(Dollars in Thousands)

| Fiscal Year | Actuarially Determined Contributions (ADC) | Contributions in Relation to ADC | Contribution Deficiency | Covered Payroll | Contributions as a Percentage of Covered Payroll |
|-------------|--|----------------------------------|-------------------------|-----------------|--|
| 2010 | \$ 96,511 | \$ 96,511 | \$ - | \$ 1,827,864 | 5.3% |
| 2011 | 107,396 | 107,396 | - | 1,678,059 | 6.4 |
| 2012 | 115,209 | 115,209 | - | 1,715,197 | 6.7 |
| 2013 | 72,916 | 72,916 | - | 1,736,113 | 4.2 |
| 2014 | 97,841 | 97,841 | - | 1,802,931 | 5.4 |
| 2015 | 100,467 | 100,467 | - | 1,835,637 | 5.5 |
| 2016 | 105,983 | 105,983 | - | 1,876,946 | 5.7 |
| 2017 | 97,457 | 97,457 | - | 1,973,049 | 4.9 |
| 2018 | 100,909 | 100,909 | - | 2,057,565 | 4.9 |
| 2019 | 107,927 | 107,927 | - | 2,108,171 | 5.1 |

Notes to Schedule:

Valuation Date Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which the contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method Entry Age Actuarial Cost Method (level percent of payroll).

Amortization Method Level Percent of Payroll.

Amortization Period Multiple layers – closed amortization period. Actuarial gains/losses are amortized over 15 years. Non-health related assumptions or method changes are amortized over 20 years. Health related assumptions or method changes are amortized over 15 years. Plan changes, including the 2009 Early Retirement Incentive Program (ERIP), are amortized over 15 years. Future ERIPs will be amortized over five years. Any actuarial surplus is amortized over 30 years. The existing layers on June 30, 2012, except those arising from the 2009 ERIP and the two Governmental Accounting Standards Board (GASB) Statements No. 25/27 layers, were combined and amortized over 30 years.

Asset Valuation Method Fair value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a seven-year period. The actuarial value of assets cannot be less than 60% or greater than 140% of the market value of assets. An Ad Hoc change was made in 2018 to combine the unrecognized returns and losses of prior years as of June 30, 2017 into one layer and recognize it evenly over six years from fiscal year 2017-18 through fiscal year 2022-23.

Actuarial Assumptions:

Investment Rate of Return 7.25%

Inflation 3.00%

Real Across-the-Board Salary Increase 0.50%

Required Supplementary Information Postemployment Health Care Plan

Schedule of Contribution History (Continued)

Notes to Schedule (Continued)

Methods and Assumptions Used to Determine Contribution Rates (Continued)

| | |
|---|---|
| Projected Salary Increases ⁽¹⁾ | Ranges from 3.90% to 10.00% based on years of service. |
| Mortality | <p>Healthy: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017.</p> <p>Disabled: Headcount-Weighted RP-2014 Disabled Retiree Mortality Table (separate tables for males and females) with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017.</p> |

- (1) Includes inflation at 3.00% as of June 30, 2019, plus across-the-board salary increase of 0.50% plus merit and promotional increases.

Schedule of Investment Returns For the Fiscal Years Ended June 30

| | <u>2019</u> | <u>2018</u> | <u>2017</u> |
|---|-------------|-------------|-------------|
| Annual money-weighted rate of return, net of investment expenses | 6.1% | 10.8% | 15.2% |

Note to Schedule:

The required disclosure about factors that significantly affect trends in the money-weighted rate of return is not provided as only three years' rates are available. As additional years' money-weighted rate of return become available, the System will disclose factors that significantly affect trends in the rate of return.

SUPPLEMENTAL SCHEDULES

Schedule of Administrative Expenses
For the Fiscal Year Ended June 30, 2019
(In Thousands)

| | <u>Retirement Plan</u> | <u>Postemployment Health Care Plan</u> | <u>Total</u> |
|--------------------------------------|------------------------|--|------------------|
| Personnel Services: | | | |
| Salaries | \$ 9,506 | \$ 2,148 | \$ 11,654 |
| Employee Benefits and Development | <u>4,008</u> | <u>906</u> | <u>4,914</u> |
| Total Personnel Services | <u>13,514</u> | <u>3,054</u> | <u>16,568</u> |
| Professional Services: | | | |
| Actuarial | 261 | 59 | 320 |
| Audit | 76 | 17 | 93 |
| Legal Counsel | 562 | 133 | 695 |
| Disability Evaluation | 179 | 41 | 220 |
| Retirees' Health Admin Consulting | - | 704 | 704 |
| Benefit Payroll Processing | 192 | 43 | 235 |
| Self-Funded Dental Plan Admin Fees | - | 365 | 365 |
| Other Consulting | <u>101</u> | <u>23</u> | <u>124</u> |
| Total Professional Services | <u>1,371</u> | <u>1,385</u> | <u>2,756</u> |
| Information Technology: | | | |
| Computer Hardware and Software | 526 | 119 | 645 |
| Computer Maintenance and Support | <u>635</u> | <u>143</u> | <u>778</u> |
| Total Information Technology | <u>1,161</u> | <u>262</u> | <u>1,423</u> |
| Leases: | | | |
| Office Space | 750 | 170 | 920 |
| Office Equipment | <u>34</u> | <u>8</u> | <u>42</u> |
| Total Leases | <u>784</u> | <u>178</u> | <u>962</u> |
| Other Expenses: | | | |
| Fiduciary Insurance | 28 | 6 | 34 |
| Educational and Due Diligence Travel | 46 | 10 | 56 |
| Office Expenses | 313 | 71 | 384 |
| Depreciation and Amortization | <u>589</u> | <u>133</u> | <u>722</u> |
| Total Other Expenses | <u>976</u> | <u>220</u> | <u>1,196</u> |
| Total Administrative Expenses | <u>\$ 17,806</u> | <u>\$ 5,099</u> | <u>\$ 22,905</u> |

Schedule of Investment Fees and Expenses
For the Fiscal Year Ended June 30, 2019
(In Thousands)

| | Assets Under Management | Fees and Expenses |
|--|------------------------------|--------------------------|
| <u>Retirement Plan</u> | | |
| Investment Management Fees: | | |
| Fixed Income Managers | \$ 3,845,917 | \$ 5,062 |
| Equity Managers | 8,337,624 | 20,041 |
| Subtotal | 12,183,541 | 25,103 |
| Other Investment Fees and Expenses: | | |
| Private Equity Consulting Fees | N/A | 599 |
| Real Estate Consulting Fees | N/A | 175 |
| Other Consulting Fees | N/A | 367 |
| Investment Related Administrative Expenses | N/A | 1,909 |
| Subtotal | N/A | 3,050 |
| <u>Postemployment Health Care Plan</u> | | |
| Investment Management Fees: | | |
| Fixed Income Managers | 726,050 | 1,144 |
| Equity Managers | 1,574,014 | 4,529 |
| Subtotal | 2,300,064 | 5,673 |
| Other Investment Fees and Expenses: | | |
| Private Equity Consulting Fees | N/A | 135 |
| Real Estate Consulting Fees | N/A | 40 |
| Other Consulting Fees | N/A | 83 |
| Investment Related Administrative Expenses | N/A | 431 |
| Subtotal | N/A | 689 |
| Total Investment Fees and Expenses excluding Private Equity and Real Estate | \$ 14,483,605 | \$ 34,515 |
| Private Equity Managers' Fees and Expenses: | | |
| Retirement Plan | \$ 1,689,590 | \$ 32,289 |
| Postemployment Health Care Plan | 318,968 | 7,297 |
| Total Private Equity Managers' Fees and Expenses | \$ 2,008,558 | \$ 39,586 |
| Real Estate Managers' Fees and Expenses: | | |
| Retirement Plan | \$ 666,661 | \$ 8,011 |
| Postemployment Health Care Plan | 125,855 | 1,810 |
| Total Real Estate Managers' Fees and Expenses | \$ 792,516 | \$ 83,922 |
| Total Assets Under Management and Fees and Expenses | \$ 17,284,679 ⁽¹⁾ | \$ 83,922 ⁽²⁾ |

(1) Excluding Security Lending Collateral assets of \$705,535,000. Total Investments including Security Lending Collateral was \$17,990,214,000.

(2) Including Investment Management Fees and Expenses of \$81,582,000 and Investment Related Administrative Expenses of \$2,340,000.

PORTFOLIO PERFORMANCE REVIEW

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Quarter Ending September 30, 2019



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

TABLE OF CONTENTS

| | <u>Tab</u> |
|---|------------|
| Executive Summary | 1 |
| Market Outlook | 2 |
| Asset Class Policy Overview | 3 |
| Performance Overview | 4 |
| U.S. Equity Performance | 5 |
| Non-U.S. Equity Performance | 6 |
| Core Fixed Income Performance | 7 |
| Credit Opportunities Performance | 8 |
| Real Assets Performance | 9 |
| Appendix | |
| U.S. Equity Manager Performance | 10 |
| Non-U.S. Manager Performance | 11 |
| Core Fixed Income Manager Performance | 12 |
| Credit Opportunities Manager Performance | 13 |
| Real Assets Manager Performance | 14 |
| Market Environment | 15 |
| Definitions | 16 |
| Disclosures | 17 |



EXECUTIVE SUMMARY

NEPC, LLC

PERFORMANCE OVERVIEW

Q3 Market Summary

| Macro | | | Equity | | | Credit | | | Real Assets | | |
|-----------|-----|----------|---------|-----------|---------|---------|------------|------------|-------------|------|-------|
| US Dollar | VIX | US 10-Yr | S&P 500 | MSCI EAFE | MSCI EM | US Agg. | High Yield | Dollar EMD | Oil | Gold | REITS |
| | | | | | | | | | | | |
| 3.4% | 1.4 | -32 bps | 1.7% | -1.1% | -4.2% | 2.3% | 1.3% | 1.5% | -7.0% | 4.4% | 7.4% |

| | Market Value | 3 Mo | Rank | YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 10 Yrs | Rank | 15 Yrs | Rank | Inception | Inception Date |
|--|------------------|-------|------|--------|------|-------|------|-------|------|-------|------|--------|------|--------|------|-----------|----------------|
| LACERS Master Trust | \$18,129,828,729 | 0.50% | 75 | 12.10% | 43 | 4.00% | 50 | 8.32% | 36 | 6.69% | 45 | 8.78% | 34 | 7.35% | 32 | 8.16% | Oct-94 |
| Policy Index | | 0.66% | 60 | 13.82% | 11 | 4.43% | 40 | 8.56% | 28 | 6.73% | 36 | 8.64% | 42 | 7.21% | 44 | 8.11% | Oct-94 |
| InvMetrics Public DB \$5-50B Gross Median | | 0.82% | | 11.52% | | 4.00% | | 8.26% | | 6.66% | | 8.58% | | 7.09% | | 8.10% | Oct-94 |

Note: Performance is gross of fees

Global central banks shifted toward easier monetary policy, providing support for risk-assets, even as uncertainty around trade and slowing global growth continue to temper returns

- The U.S. Equity and Non-U.S. Equity composites under-performed. U.S. Equity composite under-performance was driven by small cap performance and the Non-U.S. Equity under-performance was driven by developed markets.

The decline in global yields also reflected these concerns – leading to positive returns across safe-haven fixed income. Within credit, spreads were relatively flat, but broadly remain below medians

- The Core Fixed Income composite under-performed as active management detracted versus the benchmark. The Credit Opportunities Composite outperformed its benchmarks as Emerging Market Debt and High Yield outperformed bank loans.

Oil experienced a volatile month as geopolitical concerns influenced spot prices following a bombing of Saudi Arabia's oil infrastructure



Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index), High Yield (Barclays US High Yield Index), Dollar EMD (JPM EMBI Global Diversified Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index). Source: FactSet

MARKET OUTLOOK

NEPC, LLC

MACRO PERFORMANCE OVERVIEW

Q3 Macro Market Summary

The Fed and ECB enacted easier monetary policy programs in an attempt to counter growing downside risks

The market value of negative-yielding debt increased to over \$18T

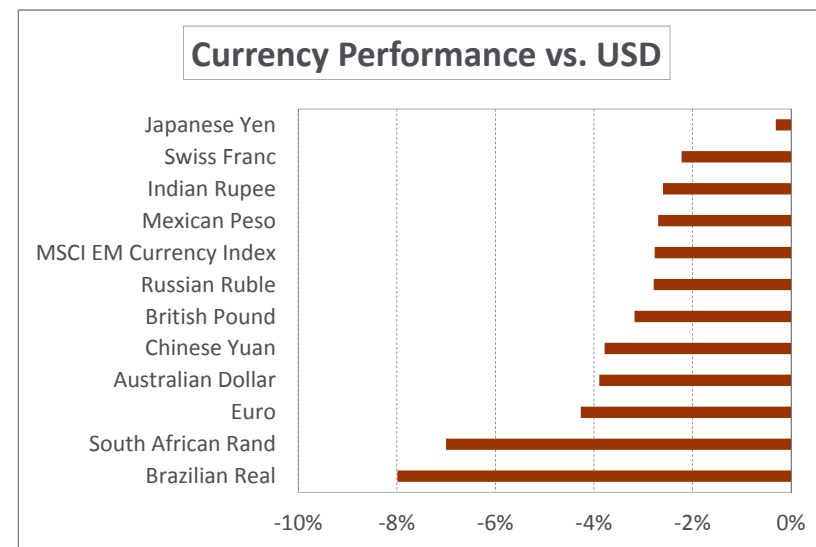
The dollar strengthened, reflecting a flight-to-quality amid ongoing growth concerns

| | Yield 6/30/19 | Yield 9/30/19 | Δ |
|---------------|---------------|---------------|--------|
| US 10-Yr | 2.00% | 1.68% | -0.32% |
| US 30-Yr | 2.53% | 2.12% | -0.40% |
| US Real 10-Yr | 0.31% | 0.15% | -0.16% |
| German 10-Yr | -0.31% | -0.58% | -0.27% |
| Japan 10-Yr | -0.16% | -0.23% | -0.07% |
| China 10-Yr | 3.30% | 3.17% | -0.13% |
| EM Local Debt | 5.69% | 5.21% | -0.48% |

Source: FactSet

| Central Banks | Current Rate | CPI YOY | Notes from the Quarter |
|-----------------------|---------------|---------|---|
| Federal Reserve | 1.75% - 2.00% | 1.8% | The Fed cut interest rates twice this quarter to a range of 1.75% - 2.00% |
| European Central Bank | 0.00% | 1.0% | The ECB cut its deposit rate to -0.50% from -0.40% and announced it would restart bond purchases in November. |
| Bank of Japan | -0.10% | 0.3% | The BoJ will continue its ultra-easy QE program with inflation remaining well below target |

Source: FactSet



Source: FactSet



EQUITY PERFORMANCE OVERVIEW

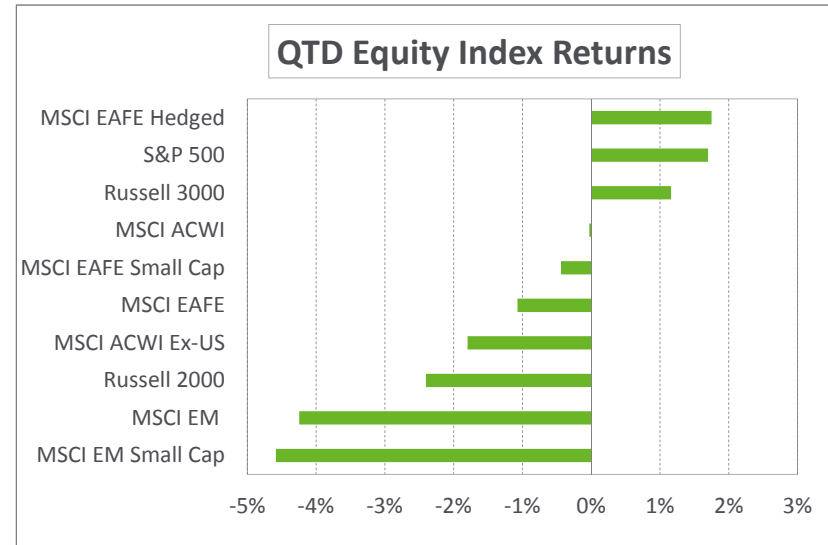
Q3 Equity Market Summary

U.S. equities ended the quarter modestly higher on the back of more accommodative monetary policy

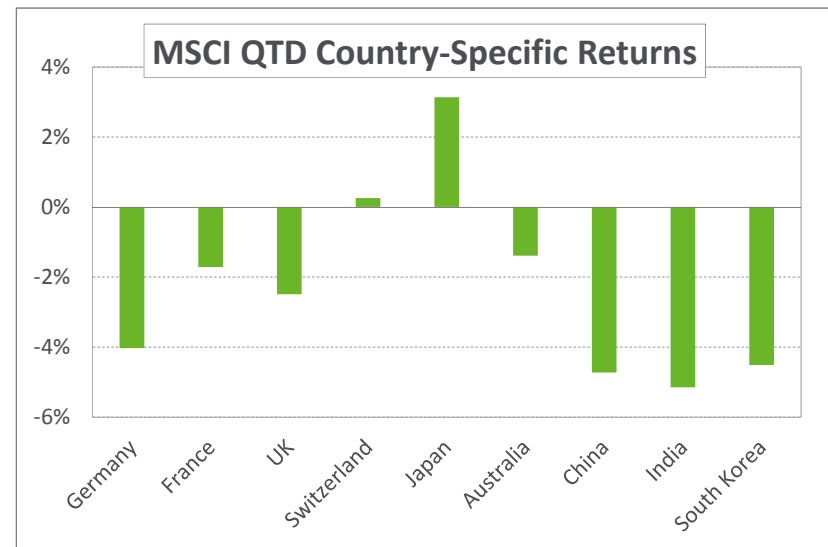
Trade concerns and currency weakness versus the dollar broadly weighed on international and emerging market local equity returns

| Russell 3000 QTD Sector Returns | |
|---------------------------------|-------|
| Technology | 3.4% |
| Health Care | -3.6% |
| Consumer Discretionary | -0.4% |
| Consumer Staples | 5.7% |
| Energy | -7.6% |
| Materials & Processing | -0.3% |
| Producer Durables | 0.5% |
| Financial Services | 2.6% |
| Utilities | 8.5% |

Source: FactSet



Source: FactSet



Source: FactSet



CREDIT PERFORMANCE OVERVIEW

Q3 Credit Market Summary

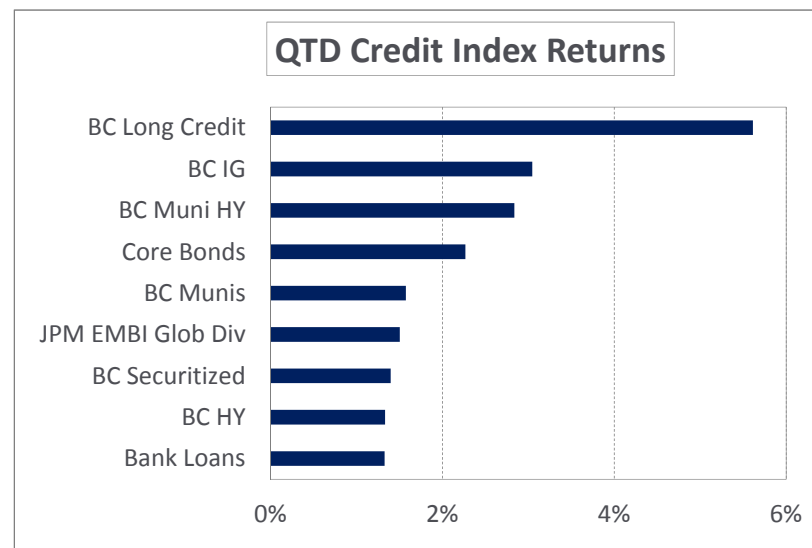
Demand for safe-haven assets increased with ongoing trade and global growth uncertainties

Spreads across the credit complex remained relatively flat during the quarter, but remain below medians

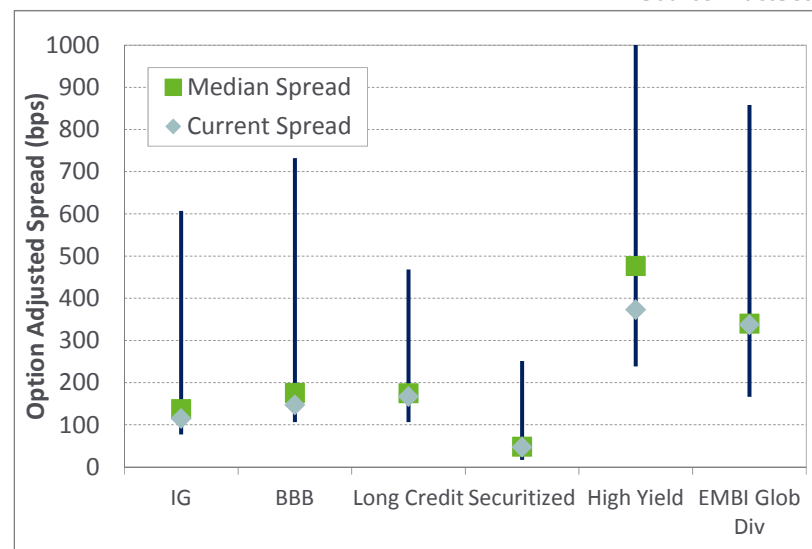
Long duration assets benefitted from a significant decline in rates on the long-end of the yield curve

| Credit Spread (Basis Points) | 6/30/2019 | 9/30/2019 | Δ |
|------------------------------|-----------|-----------|----|
| BC IG Credit | 113 | 115 | +2 |
| BC Long Credit | 159 | 167 | +8 |
| BC Securitized | 48 | 47 | -1 |
| BC High Yield | 367 | 373 | +6 |
| Muni HY | 255 | 246 | -9 |
| JPM EMBI | 337 | 337 | - |
| Bank Loans - Libor | 391 | 398 | +7 |

Source: FactSet



Source: FactSet



Source: FactSet; Ranges calculated since 11/30/2000



REAL ASSETS PERFORMANCE OVERVIEW

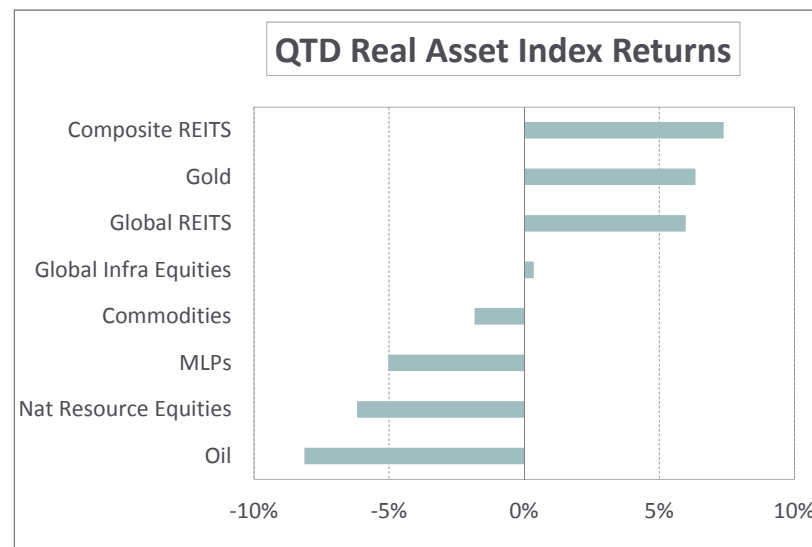
Q3 Real Assets Market Summary

Oil experienced a negative quarter with an attack on Saudi Arabia's oil facilities coupled with global growth concerns pushing volatility higher

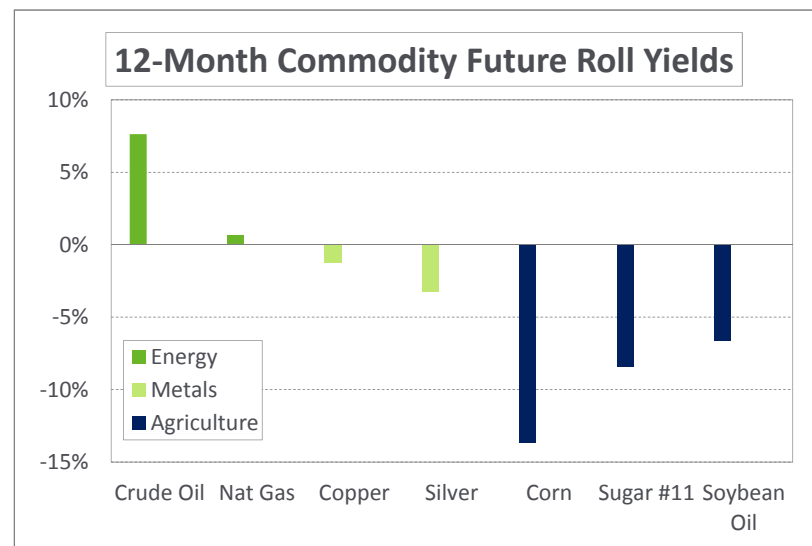
Gold increased 4.4% during the quarter reflecting concerns around global growth and a lower-yield environment

| Real Asset Yields | 6/30/19 | 9/30/19 |
|--------------------------------|---------|---------|
| MLPs | 7.7% | 7.8% |
| Core Real Estate | 4.6% | 4.5% |
| Composite REITs | 4.2% | 3.9% |
| Global REITs | 4.2% | 4.1% |
| Global Infrastructure Equities | 4.3% | 4.2% |
| Natural Resource Equities | 4.2% | 4.3% |
| US 10-Year Breakeven Inflation | 1.73% | 1.53% |
| Commodity Index Roll Yield | -2.0% | -3.0% |
| 10-Year TIPS Real Yield | 0.3% | 0.2% |

Source: FactSet



Source: FactSet



Source: FactSet

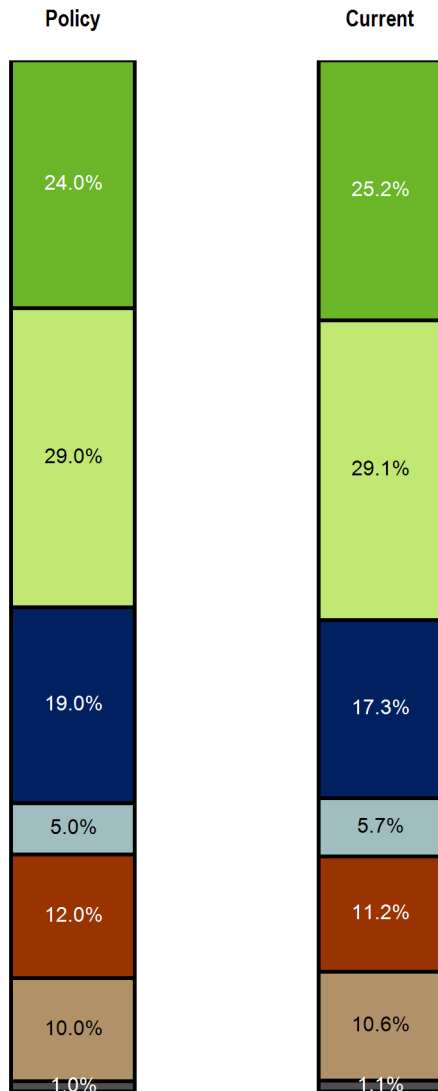


ASSET CLASS POLICY OVERVIEW

NEPC, LLC

Los Angeles City Employees' Retirement System

TOTAL FUND ASSET ALLOCATION VS. POLICY



| Asset Allocation vs. Target | | | | | | |
|-----------------------------|-------------------------|----------------|---------------------|--------------|-----------------|-----|
| | Current | Policy | Current Difference* | Policy Range | Within Range | |
| U.S. Equity | \$4,561,717,344 | 24.00% | 25.16% | 1.16% | 19.00% - 29.00% | Yes |
| Non-US Equity | \$5,272,087,646 | 29.00% | 29.08% | 0.08% | 24.00% - 34.00% | Yes |
| Core Fixed Income | \$3,130,040,275 | 19.00% | 17.26% | -1.74% | 15.00% - 22.00% | Yes |
| Opportunistic Credit | \$1,029,053,732 | 5.00% | 5.68% | 0.68% | 0.00% - 10.00% | Yes |
| Private Equity | \$2,022,557,588 | 12.00% | 11.16% | -0.84% | | Yes |
| Real Assets | \$1,914,717,557 | 10.00% | 10.56% | 0.56% | 7.00% - 13.00% | Yes |
| Cash | \$199,654,588 | 1.00% | 1.10% | 0.10% | 0.00% - 2.00% | Yes |
| Total | \$18,129,828,729 | 100.00% | 100.00% | | | |

*Difference between Policy and Current Allocation

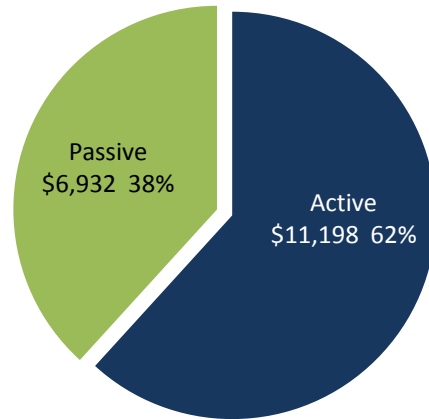
Note: Policy Target Asset Allocation does not reflect the new target asset allocation adopted on April 10, 2018. Implementation of the new asset allocation is currently in progress.



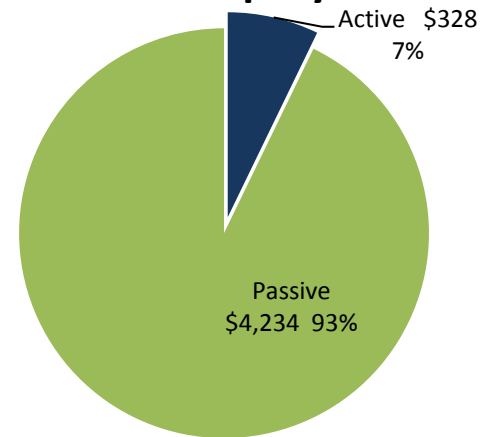
ACTIVE VS. PASSIVE MANAGER BREAKDOWN

Note: Market values shown in millions \$(000).

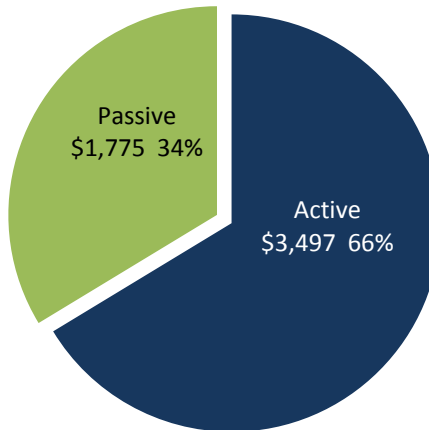
Total Fund



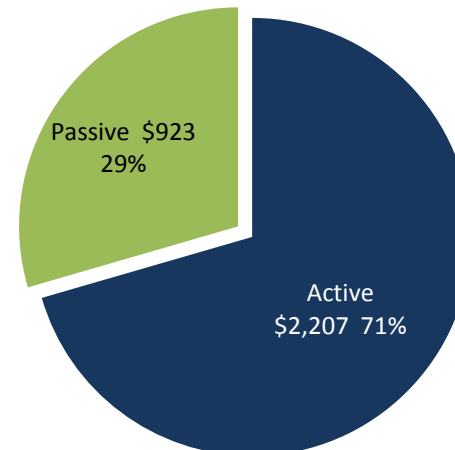
U.S. Equity



Non-U.S. Equity



Core Fixed Income



- Of the Total Fund, LACERS allocated 62% to active managers and 38% to passive managers.

- Credit Opportunities, Private Equity, and Real Assets programs are active and therefore are not shown.



PERFORMANCE OVERVIEW

NEPC, LLC

TOTAL FUND PERFORMANCE SUMMARY (GROSS OF FEES)

| | Market Value | 3 Mo | Rank | YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 10 Yrs | Rank | 15 Yrs | Rank | Inception | Inception Date |
|--|-------------------------|--------------|-----------|---------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|----------------|
| LACERS Master Trust | \$18,129,828,729 | 0.50% | 75 | 12.10% | 43 | 4.00% | 50 | 8.32% | 36 | 6.69% | 45 | 8.78% | 34 | 7.35% | 32 | 8.16% | Oct-94 |
| Policy Index | | 0.66% | 60 | 13.82% | 11 | 4.43% | 40 | 8.56% | 28 | 6.73% | 36 | 8.64% | 42 | 7.21% | 44 | 8.11% | Oct-94 |
| InvMetrics Public DB \$5-50B Gross Median | | 0.82% | | 11.52% | | 4.00% | | 8.26% | | 6.66% | | 8.58% | | 7.09% | | 8.10% | Oct-94 |

Over the past five years, the Fund returned 6.69% underperforming the policy index by 0.04% and ranked in the 45th percentile in the Public Funds \$5 Billion- \$50 Billion universe. The Fund's volatility was 6.77% and ranked in the 64th percentile over this period. The Fund's risk-adjusted performance, as measured by the Sharpe Ratio, ranks in the 64th percentile in its peer group.

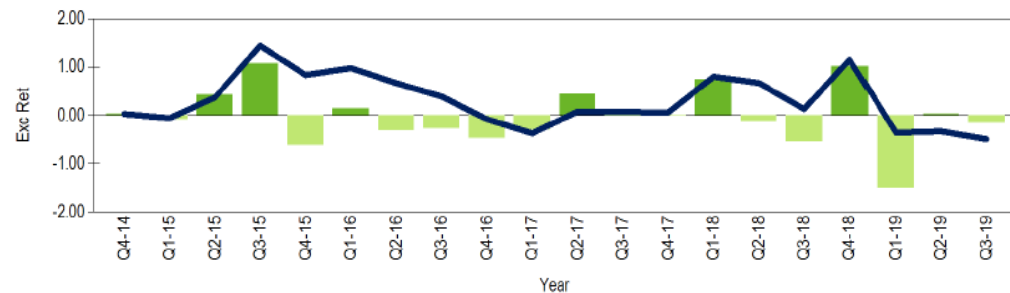
Over the past three years, the Fund returned 8.32% per year, underperforming the policy index by 0.24% and ranked in the 36th percentile in its peer group. The Fund's volatility ranks in the 54th percentile resulting in a three-year Sharpe Ratio of 1.03 and ranked in the 64th percentile.

In the one-year ended September 30, 2019, the Fund experienced a net investment gain of \$673.3 million, which includes a net investment gain of \$89.8 million during the third calendar quarter. Assets increased from \$17.8 billion twelve months ago to \$18.1 billion on September 30, 2019. The Fund returned 4.00%, underperforming the policy index by 0.43% and ranked in the 50th percentile in its peer group.

All asset classes were within policy range as of September 30, 2019.

The InvMetrics Public Funds \$5 Billion- \$50 Billion Universe contains 29 observations for the period ending September 30, 2019.

Quarterly and Cumulative Excess Performance



5 Years Ending September 30, 2019

| | Annualized Return (%) | Rank | Annualized Standard Deviation | Rank | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
|--|-----------------------|------|-------------------------------|------|--------------|------|------------------|------|
| LACERS Master Trust | 6.69% | 45 | 6.77% | 64 | 0.84 | 64 | 1.15 | 49 |
| Policy Index | 6.73% | 36 | 7.79% | 88 | 0.74 | 76 | 1.01 | 70 |
| InvMetrics Public DB \$5-50B Gross Median | 6.66% | -- | 6.62% | -- | 0.89 | -- | 1.15 | -- |

3 Years Ending September 30, 2019

| | Annualized Return (%) | Rank | Annualized Standard Deviation | Rank | Sharpe Ratio | Rank | Sortino Ratio RF | Rank |
|--|-----------------------|------|-------------------------------|------|--------------|------|------------------|------|
| LACERS Master Trust | 8.32% | 36 | 6.58% | 54 | 1.03 | 64 | 1.16 | 61 |
| Policy Index | 8.56% | 28 | 7.56% | 88 | 0.93 | 78 | 1.12 | 72 |
| InvMetrics Public DB \$5-50B Gross Median | 8.26% | -- | 6.49% | -- | 1.09 | -- | 1.22 | -- |



Los Angeles City Employees' Retirement System

TOTAL FUND PERFORMANCE DETAIL (GROSS)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|-----------------------------------|-----------------------|-------------------|--------------|--------------|--------------|--------------|--------------|---------------|------------------|-------------------|
| LACERS Master Trust | 18,129,828,729 | 100.00 | 0.50 | 12.10 | 4.00 | 8.32 | 6.69 | 8.78 | 8.16 | Oct-94 |
| <i>Policy Index</i> | | | <u>0.66</u> | <u>13.82</u> | <u>4.43</u> | <u>8.56</u> | <u>6.73</u> | <u>8.64</u> | <u>8.11</u> | <i>Oct-94</i> |
| Over/Under | | | -0.16 | -1.72 | -0.43 | -0.24 | -0.04 | 0.14 | 0.05 | |
| U.S. Equity | 4,561,717,344 | 25.16 | 0.93 | 19.92 | 2.09 | 12.69 | 10.38 | 13.03 | 10.42 | Oct-94 |
| <i>U.S. Equity Blend</i> | | | <u>1.16</u> | <u>20.09</u> | <u>2.92</u> | <u>12.83</u> | <u>10.44</u> | <u>13.08</u> | <u>9.37</u> | <i>Oct-94</i> |
| Over/Under | | | -0.23 | -0.17 | -0.83 | -0.14 | -0.06 | -0.05 | 1.05 | |
| Non-U.S. Equity | 5,272,087,646 | 29.08 | -1.98 | 11.87 | -1.79 | 6.89 | 4.22 | 5.67 | 5.09 | Nov-94 |
| <i>MSCI ACWI ex USA</i> | | | <u>-1.80</u> | <u>11.56</u> | <u>-1.23</u> | <u>6.33</u> | <u>2.90</u> | <u>4.46</u> | <u>4.92</u> | <i>Nov-94</i> |
| Over/Under | | | -0.18 | 0.31 | -0.56 | 0.56 | 1.32 | 1.21 | 0.17 | |
| Core Fixed Income | 3,130,040,275 | 17.26 | 2.16 | 8.77 | 10.21 | 3.19 | 3.62 | | 3.57 | Jul-12 |
| <i>Core Fixed Income Blend</i> | | | <u>2.27</u> | <u>8.52</u> | <u>10.30</u> | <u>2.92</u> | <u>3.38</u> | | <u>2.98</u> | <i>Jul-12</i> |
| Over/Under | | | -0.11 | 0.25 | -0.09 | 0.27 | 0.24 | | 0.59 | |
| Credit Opportunities | 1,029,053,732 | 5.68 | 1.49 | 11.75 | 8.65 | 5.99 | 5.28 | | 5.85 | Jun-13 |
| <i>Credit Opportunities Blend</i> | | | <u>1.39</u> | <u>11.97</u> | <u>8.17</u> | <u>5.58</u> | <u>5.53</u> | | <u>6.02</u> | <i>Jun-13</i> |
| Over/Under | | | 0.10 | -0.22 | 0.48 | 0.41 | -0.25 | | -0.17 | |
| Real Assets | 1,914,717,557 | 10.56 | 1.17 | 7.20 | 6.59 | 5.30 | 6.28 | 6.09 | 6.32 | Nov-94 |
| <i>CPI + 5% (Unadjusted)</i> | | | <u>1.47</u> | <u>6.00</u> | <u>6.79</u> | <u>7.17</u> | <u>6.60</u> | <u>6.82</u> | <u>7.30</u> | <i>Nov-94</i> |
| Over/Under | | | -0.30 | 1.20 | -0.20 | -1.87 | -0.32 | -0.73 | -0.98 | |
| Public Real Assets | 1,122,751,107 | 6.19 | 1.56 | 10.03 | 7.10 | 2.76 | 2.57 | | 2.00 | Jun-14 |
| <i>Public Real Assets Blend</i> | | | <u>0.71</u> | <u>9.12</u> | <u>4.18</u> | <u>1.84</u> | <u>0.42</u> | | <u>-0.30</u> | <i>Jun-14</i> |
| Over/Under | | | 0.85 | 0.91 | 2.92 | 0.92 | 2.15 | | 2.30 | |
| Private Real Estate | 771,613,807 | 4.26 | 0.68 | 3.96 | 5.96 | 7.68 | 9.09 | 7.55 | 6.89 | Oct-94 |
| <i>Real Estate Blend</i> | | | <u>1.51</u> | <u>4.39</u> | <u>6.43</u> | <u>8.16</u> | <u>10.21</u> | <u>10.88</u> | <u>9.83</u> | <i>Oct-94</i> |
| Over/Under | | | -0.83 | -0.43 | -0.47 | -0.48 | -1.12 | -3.33 | -2.94 | |
| Private Equity | 2,022,557,588 | 11.16 | 2.40 | 6.28 | 10.66 | 13.97 | 10.47 | 13.34 | 10.53 | Nov-95 |
| <i>Private Equity Blend</i> | | | <u>1.91</u> | <u>22.73</u> | <u>6.00</u> | <u>16.18</u> | <u>13.73</u> | <u>16.75</u> | <u>12.97</u> | <i>Nov-95</i> |
| Over/Under | | | 0.49 | -16.45 | 4.66 | -2.21 | -3.26 | -3.41 | -2.44 | |
| Cash | 199,654,588 | 1.10 | | | | | | | | |



Los Angeles City Employees' Retirement System

TOTAL FUND PERFORMANCE DETAIL (NET)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|-----------------------------|-----------------------|-------------------|--------------|--------------|--------------|--------------|--------------|---------------|------------------|-------------------|
| LACERS Master Trust | 18,129,828,729 | 100.00 | 0.46 | 11.96 | 3.81 | 8.12 | 6.50 | 8.58 | | Oct-94 |
| Policy Index | | | <u>0.66</u> | <u>13.82</u> | <u>4.43</u> | <u>8.56</u> | <u>6.73</u> | <u>8.64</u> | | Oct-94 |
| Over/Under | | | -0.20 | -1.86 | -0.62 | -0.44 | -0.23 | -0.06 | | |
| U.S. Equity | 4,561,717,344 | 25.16 | 0.91 | 19.87 | 2.02 | 12.61 | 10.29 | 12.87 | | Oct-94 |
| U.S. Equity Blend | | | <u>1.16</u> | <u>20.09</u> | <u>2.92</u> | <u>12.83</u> | <u>10.44</u> | <u>13.08</u> | | Oct-94 |
| Over/Under | | | -0.25 | -0.22 | -0.90 | -0.22 | -0.15 | -0.21 | | |
| Non-U.S. Equity | 5,272,087,646 | 29.08 | -2.07 | 11.56 | -2.16 | 6.50 | 3.85 | 5.31 | | Nov-94 |
| MSCI ACWI ex USA | | | <u>-1.80</u> | <u>11.56</u> | <u>-1.23</u> | <u>6.33</u> | <u>2.90</u> | <u>4.46</u> | | Nov-94 |
| Over/Under | | | -0.27 | 0.00 | -0.93 | 0.17 | 0.95 | 0.85 | | |
| Core Fixed Income | 3,130,040,275 | 17.26 | 2.14 | 8.69 | 10.10 | 3.09 | 3.51 | | 3.45 | Jul-12 |
| Core Fixed Income Blend | | | <u>2.27</u> | <u>8.52</u> | <u>10.30</u> | <u>2.92</u> | <u>3.38</u> | | <u>2.98</u> | Jul-12 |
| Over/Under | | | -0.13 | 0.17 | -0.20 | 0.17 | 0.13 | | 0.47 | |
| Credit Opportunities | 1,029,053,732 | 5.68 | 1.42 | 11.50 | 8.33 | 5.64 | 4.92 | | 5.50 | Jun-13 |
| Credit Opportunities Blend | | | <u>1.39</u> | <u>11.97</u> | <u>8.17</u> | <u>5.58</u> | <u>5.53</u> | | <u>6.02</u> | Jun-13 |
| Over/Under | | | 0.03 | -0.47 | 0.16 | 0.06 | -0.61 | | -0.52 | |
| Real Assets | 1,914,717,557 | 10.56 | 1.14 | 7.08 | 6.43 | 5.13 | 6.12 | 5.95 | | Nov-94 |
| CPI + 5% (Unadjusted) | | | <u>1.47</u> | <u>6.00</u> | <u>6.79</u> | <u>7.17</u> | <u>6.60</u> | <u>6.82</u> | | Nov-94 |
| Over/Under | | | -0.33 | 1.08 | -0.36 | -2.04 | -0.48 | -0.87 | | |
| Public Real Assets | 1,122,751,107 | 6.19 | 1.51 | 9.87 | 6.89 | 2.51 | 2.36 | | 1.80 | Jun-14 |
| Public Real Assets Blend | | | <u>0.71</u> | <u>9.12</u> | <u>4.18</u> | <u>1.84</u> | <u>0.42</u> | | <u>-0.30</u> | Jun-14 |
| Over/Under | | | 0.80 | 0.75 | 2.71 | 0.67 | 1.94 | | 2.10 | |
| Private Real Estate | 771,613,807 | 4.26 | 0.66 | 3.89 | 5.86 | 7.60 | 8.99 | 7.43 | | Oct-94 |
| Real Estate Blend | | | <u>1.51</u> | <u>4.39</u> | <u>6.43</u> | <u>8.16</u> | <u>10.21</u> | <u>10.88</u> | | Oct-94 |
| Over/Under | | | -0.85 | -0.50 | -0.57 | -0.56 | -1.22 | -3.45 | | |
| Private Equity | 2,022,557,588 | 11.16 | 2.40 | 6.29 | 10.67 | 13.98 | 10.49 | 13.35 | | Nov-95 |
| Private Equity Blend | | | <u>1.91</u> | <u>22.73</u> | <u>6.00</u> | <u>16.18</u> | <u>13.73</u> | <u>16.75</u> | | Nov-95 |
| Over/Under | | | 0.49 | -16.44 | 4.67 | -2.20 | -3.24 | -3.40 | | |
| Cash | 199,654,588 | 1.10 | | | | | | | | |



Los Angeles City Employees' Retirement System

TOTAL FUND RISK STATISTICS (NET)

3 Years Ending September 30, 2019

| | % of Total MV (%) | Annualized Return (%) | Rank | Annualized Standard Deviation | Rank | Annualized Alpha Jensen (%) | Rank | Information Ratio | Rank | Sortino Ratio RF | Rank | Tracking Error | Rank |
|----------------------|-------------------|-----------------------|------|-------------------------------|------|-----------------------------|------|-------------------|------|------------------|------|----------------|------|
| LACERS Master Trust | 100.00% | 8.12% | 58 | 6.59% | 54 | 0.51% | 57 | -0.34 | -- | 1.13 | 67 | 1.28% | 50 |
| Total Equity | 54.24% | 9.28% | 44 | 11.47% | 51 | -0.08% | 37 | -0.11 | -- | 0.76 | 40 | 0.67% | 8 |
| U.S. Equity | 25.16% | 12.61% | 38 | 12.74% | 44 | -0.39% | 36 | -0.33 | -- | 0.93 | 38 | 0.65% | 12 |
| Non-U.S. Equity | 29.08% | 6.50% | 37 | 11.68% | 67 | 0.09% | 34 | 0.16 | 30 | 0.63 | 39 | 1.07% | 19 |
| Developed ex-U.S. | 22.12% | 6.74% | 36 | 11.41% | 50 | 0.15% | 42 | 0.18 | 42 | 0.64 | 42 | 1.47% | 24 |
| Emerging Markets | 6.96% | 5.55% | 26 | 14.03% | 84 | -0.40% | 28 | -0.34 | -- | 0.48 | 26 | 1.25% | 1 |
| Core Fixed Income | 17.26% | 3.09% | 78 | 3.16% | 66 | 0.24% | 73 | 0.43 | 47 | 0.77 | 70 | 0.37% | 11 |
| Credit Opportunities | 5.68% | 5.64% | -- | 4.15% | -- | 0.15% | -- | 0.07 | -- | 1.90 | -- | 0.88% | -- |
| Real Assets | 10.56% | 5.13% | -- | 2.18% | -- | 1.14% | -- | -0.92 | -- | 2.91 | -- | 2.20% | -- |
| Public Real Assets | 6.19% | 2.51% | -- | 4.02% | -- | 0.72% | -- | 0.40 | -- | 0.46 | -- | 1.67% | -- |
| Private Real Estate | 4.26% | 7.60% | 45 | 1.80% | 40 | 8.32% | 2 | -0.13 | 71 | 2.60 | 74 | 4.33% | 94 |
| Private Equity | 11.16% | 13.98% | 52 | 4.59% | 15 | 14.00% | 13 | -0.15 | 49 | 11.30 | 60 | 14.56% | 90 |

5 Years Ending September 30, 2019

| | % of Total MV (%) | Annualized Return (%) | Rank | Annualized Standard Deviation | Rank | Annualized Alpha Jensen (%) | Rank | Information Ratio | Rank | Sortino Ratio RF | Rank | Tracking Error | Rank |
|---------------------|-------------------|-----------------------|------|-------------------------------|------|-----------------------------|------|-------------------|------|------------------|------|----------------|------|
| LACERS Master Trust | 100.00% | 6.50% | 63 | 6.78% | 64 | 0.54% | 47 | -0.19 | -- | 1.11 | 61 | 1.23% | 43 |
| Total Equity | 54.24% | 6.88% | 40 | 11.70% | 54 | 0.30% | 32 | 0.45 | 13 | 0.67 | 35 | 0.61% | 3 |
| U.S. Equity | 25.16% | 10.29% | 34 | 12.30% | 39 | -0.24% | 34 | -0.25 | -- | 0.93 | 32 | 0.62% | 5 |
| Non-U.S. Equity | 29.08% | 3.85% | 40 | 12.30% | 71 | 0.98% | 33 | 0.86 | 3 | 0.38 | 36 | 1.11% | 10 |
| Developed ex-U.S. | 22.12% | 4.05% | 48 | 12.01% | 33 | 0.84% | 42 | 0.51 | 42 | 0.40 | 53 | 1.53% | 24 |
| Emerging Markets | 6.96% | 1.98% | 43 | 15.72% | 92 | -0.36% | 42 | -0.30 | -- | 0.12 | 43 | 1.16% | 1 |
| Core Fixed Income | 17.26% | 3.51% | 56 | 2.92% | 52 | 0.29% | 64 | 0.27 | 49 | 1.46 | 53 | 0.50% | 21 |
| Real Assets | 10.56% | 6.12% | -- | 2.35% | -- | 3.41% | -- | -0.20 | -- | 5.06 | -- | 2.43% | -- |
| Private Real Estate | 4.26% | 8.99% | 62 | 1.95% | 21 | 10.09% | 4 | -0.23 | -- | 3.44 | 84 | 5.24% | 92 |
| Private Equity | 11.16% | 10.49% | 62 | 4.15% | 10 | 10.44% | 29 | -0.24 | -- | 8.95 | 44 | 13.68% | 82 |

Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



PRIVATE MARKETS PERFORMANCE AS OF JUNE 30, 2019

| Private Equity | 10 Year IRR | Since Inception IRR | Since Inception Multiple |
|------------------------|-------------|---------------------|--------------------------|
| Aggregate Portfolio | 13.5% | 11.2% | 1.56x |
| Core Portfolio | 14.3% | 11.8% | 1.59x |
| Specialized Portfolio | 4.6% | 2.1% | 1.13x |
| Russell 3000 + 300 bps | 17.7% | 13.9% | N/A |

| Real Estate | 10 Year Return (Net) | Since Inception Return (Net) |
|------------------------------------|----------------------|------------------------------|
| Total Portfolio (TWR) ¹ | 7.24% | 5.98% |
| NFI-ODCE + 80 basis points (TWR) | 9.67% | 7.12% |

Note: The Total Value to Paid-In Ratio (TVPI) is a multiple that relates the current value of the private equity portfolio plus all distributions received to date with the total amount of capital contributed.

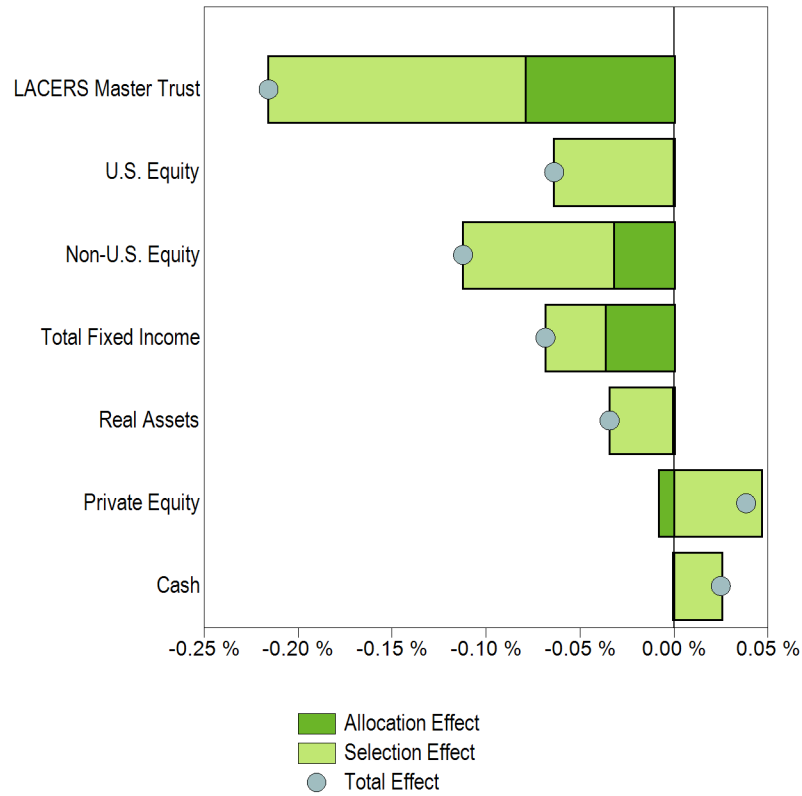
1 - IRR is not available for the Real Estate portfolio and therefore only time weighted returns (TWR) are reported.



Los Angeles City Employees' Retirement System

TOTAL FUND ATTRIBUTION ANALYSIS (NET)

Attribution Effects 3 Months Ending September 30, 2019



| Attribution Summary 3 Months Ending September 30, 2019 | | | | | | | |
|---|----------------|--------------------|-------------------|---------------|------------------|-------------------|---------------|
| | Policy Weight | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Total Effects |
| U.S. Equity | 24.00% | 0.91% | 1.16% | -0.25% | -0.06% | 0.00% | -0.06% |
| Non-U.S. Equity | 29.00% | -2.07% | -1.80% | -0.27% | -0.08% | -0.03% | -0.11% |
| Total Fixed Income | 24.00% | 1.95% | 2.09% | -0.14% | -0.03% | -0.04% | -0.07% |
| Real Assets | 10.00% | 1.14% | 1.47% | -0.33% | -0.03% | 0.00% | -0.03% |
| Private Equity | 12.00% | 2.40% | 1.91% | 0.49% | 0.05% | -0.01% | 0.04% |
| Cash | 1.00% | 3.05% | 0.50% | 2.55% | 0.03% | 0.00% | 0.02% |
| Total | 100.00% | 0.45% | 0.66% | -0.22% | -0.14% | -0.08% | -0.22% |

Wtd. = Weighted

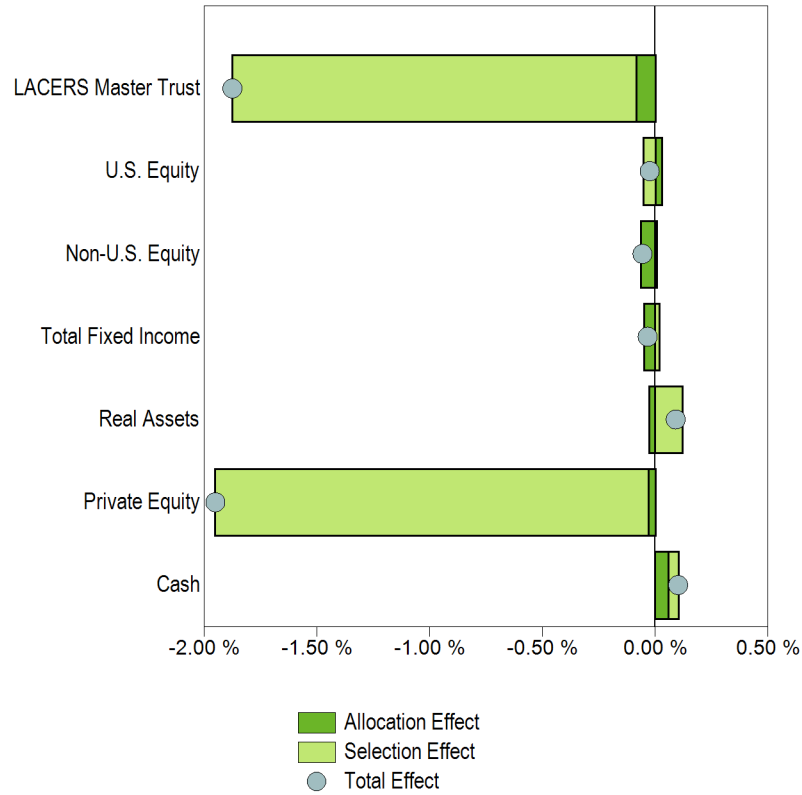
Note: Policy Target Asset Allocation does not reflect the new target asset allocation adopted on April 10, 2018. Implementation of the new asset allocation is currently in progress.



Los Angeles City Employees' Retirement System

TOTAL FUND ATTRIBUTION ANALYSIS (NET)

Attribution Effects YTD Ending September 30, 2019



| Attribution Summary YTD Ending September 30, 2019 | | | | | | | |
|--|----------------|--------------------|-------------------|---------------|------------------|-------------------|---------------|
| | Policy Weight | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Total Effects |
| U.S. Equity | 24.00% | 19.87% | 20.09% | -0.22% | -0.05% | 0.03% | -0.03% |
| Non-U.S. Equity | 29.00% | 11.56% | 11.56% | 0.00% | 0.01% | -0.06% | -0.06% |
| Total Fixed Income | 24.00% | 9.33% | 9.25% | 0.08% | 0.02% | -0.05% | -0.03% |
| Real Assets | 10.00% | 7.08% | 6.00% | 1.08% | 0.12% | -0.03% | 0.09% |
| Private Equity | 12.00% | 6.29% | 22.73% | -16.44% | -1.92% | -0.03% | -1.95% |
| Cash | 1.00% | 7.31% | 1.68% | 5.63% | 0.04% | 0.06% | 0.10% |
| Total | 100.00% | 11.95% | 13.82% | -1.87% | -1.79% | -0.09% | -1.87% |

Wtd. = Weighted

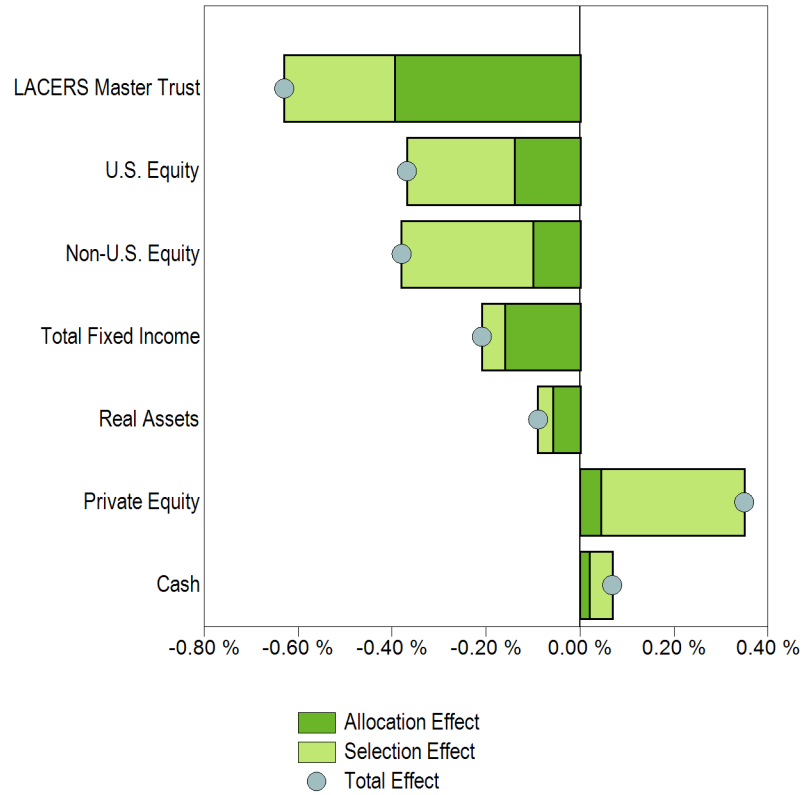
Note: Policy Target Asset Allocation does not reflect the new target asset allocation adopted on April 10, 2018. Implementation of the new asset allocation is currently in progress.



Los Angeles City Employees' Retirement System

TOTAL FUND ATTRIBUTION ANALYSIS (NET)

Attribution Effects 1 Year Ending September 30, 2019



| Attribution Summary 1 Year Ending September 30, 2019 | | | | | | | |
|---|----------------|--------------------|-------------------|---------------|------------------|-------------------|---------------|
| | Policy Weight | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Total Effects |
| U.S. Equity | 24.00% | 2.02% | 2.92% | -0.90% | -0.23% | -0.14% | -0.37% |
| Non-U.S. Equity | 29.00% | -2.16% | -1.23% | -0.94% | -0.28% | -0.10% | -0.38% |
| Total Fixed Income | 24.00% | 9.70% | 9.88% | -0.19% | -0.05% | -0.16% | -0.21% |
| Real Assets | 10.00% | 6.43% | 6.79% | -0.36% | -0.03% | -0.06% | -0.09% |
| Private Equity | 12.00% | 10.67% | 6.00% | 4.67% | 0.30% | 0.05% | 0.35% |
| Cash | 1.00% | 9.43% | 2.26% | 7.17% | 0.05% | 0.02% | 0.07% |
| Total | 100.00% | 3.80% | 4.43% | -0.63% | -0.23% | -0.40% | -0.63% |

Wtd. = Weighted

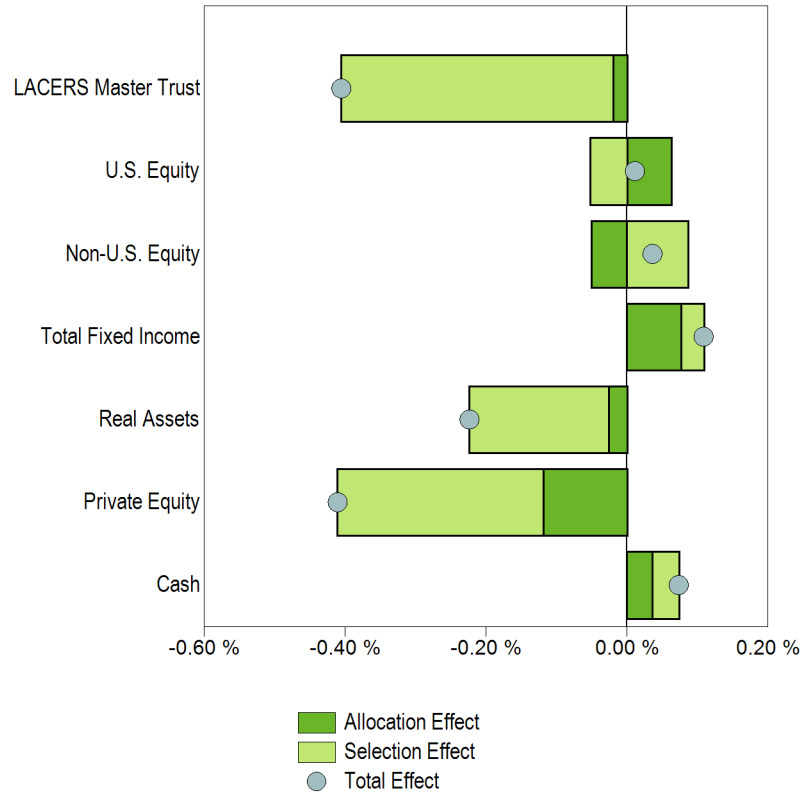
Note: Policy Target Asset Allocation does not reflect the new target asset allocation adopted on April 10, 2018. Implementation of the new asset allocation is currently in progress.



Los Angeles City Employees' Retirement System

TOTAL FUND ATTRIBUTION ANALYSIS (NET)

Attribution Effects 3 Years Ending September 30, 2019



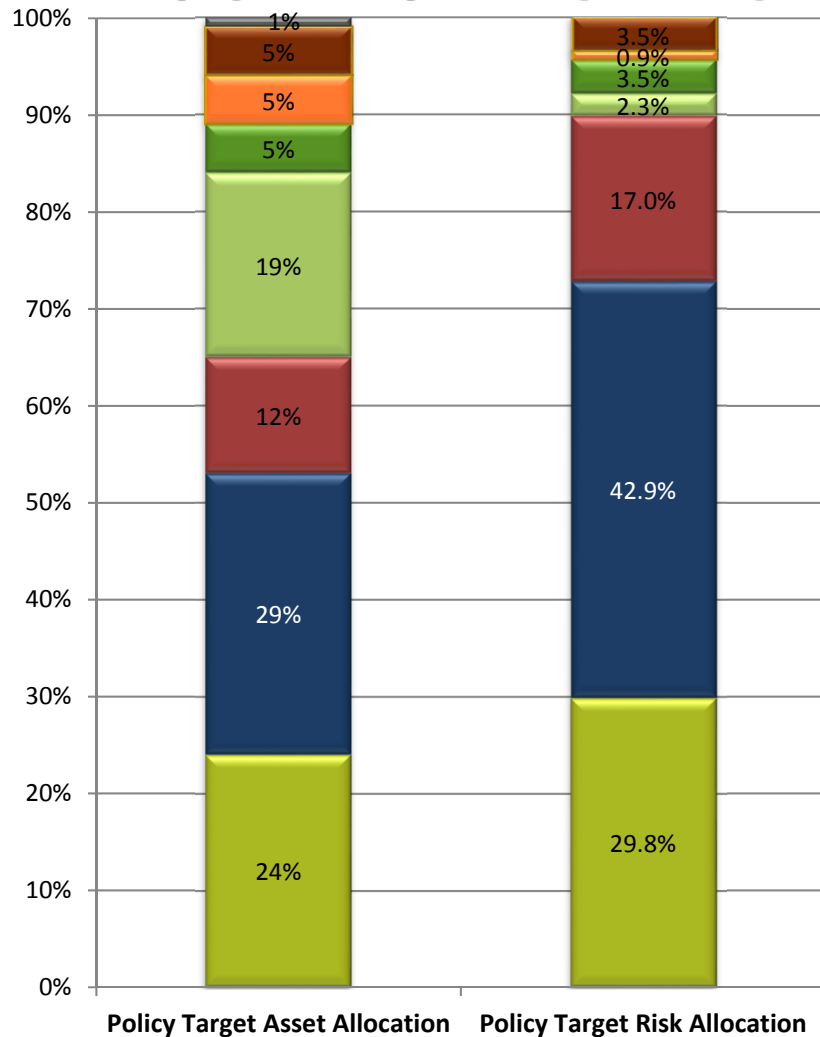
| Attribution Summary 3 Years Ending September 30, 2019 | | | | | | | |
|--|----------------|--------------------|-------------------|---------------|------------------|-------------------|---------------|
| | Policy Weight | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Total Effects |
| U.S. Equity | 24.00% | 12.61% | 12.83% | -0.22% | -0.05% | 0.06% | 0.01% |
| Non-U.S. Equity | 29.00% | 6.50% | 6.33% | 0.17% | 0.09% | -0.05% | 0.04% |
| Total Fixed Income | 24.00% | 3.64% | 3.49% | 0.15% | 0.03% | 0.08% | 0.11% |
| Real Assets | 10.00% | 5.13% | 7.17% | -2.03% | -0.20% | -0.03% | -0.22% |
| Private Equity | 12.00% | 13.98% | 16.18% | -2.20% | -0.29% | -0.12% | -0.41% |
| Cash | 1.00% | 7.22% | 1.54% | 5.67% | 0.04% | 0.04% | 0.07% |
| Total | 100.00% | 8.15% | 8.56% | -0.41% | -0.39% | -0.02% | -0.41% |

Wtd. = Weighted

Note: Policy Target Asset Allocation does not reflect the new target asset allocation adopted on April 10, 2018. Implementation of the new asset allocation is currently in progress.



TOTAL FUND RISK ALLOCATION – ASSET ALLOCATION VS. RISK ALLOCATION



- Cash
- Private Real Estate
- Public Real Assets
- Credit Opportunities
- Core Fixed Income
- Private Equity
- Non-U.S. Equity
- U.S. Equity

- Public and Private Equity policy target asset allocation is 65%; accounts for 89.7% of the policy target portfolio risk.
- Core Fixed Income and Credit Opportunities policy allocation is 24%, accounting for 5.8% of the policy target portfolio risk.
- Real Assets (Private Real Estate and Public Real Assets) policy allocation is 10%, accounting for 4.4% of policy target portfolio risk.

Note: Policy Target Asset Allocation does not reflect the new target asset allocation adopted on April 10, 2018. Implementation of the new asset allocation is currently in progress.



PUBLIC MARKETS RISK BUDGET COMPARISON AS OF SEPTEMBER 30, 2019

| Public Markets Asset Class | Target Risk Budget | Actual 3 Yr Tracking Error |
|----------------------------|--------------------|----------------------------|
| U.S. Equity | 0.50% | 0.65% |
| Non-U.S. Equity | 1.20% | 1.07% |
| Core Fixed Income | 1.00% | 0.37% |
| Credit Opportunities | 1.50% | 0.88% |
| Public Real Assets* | 3.00% | 1.67% |

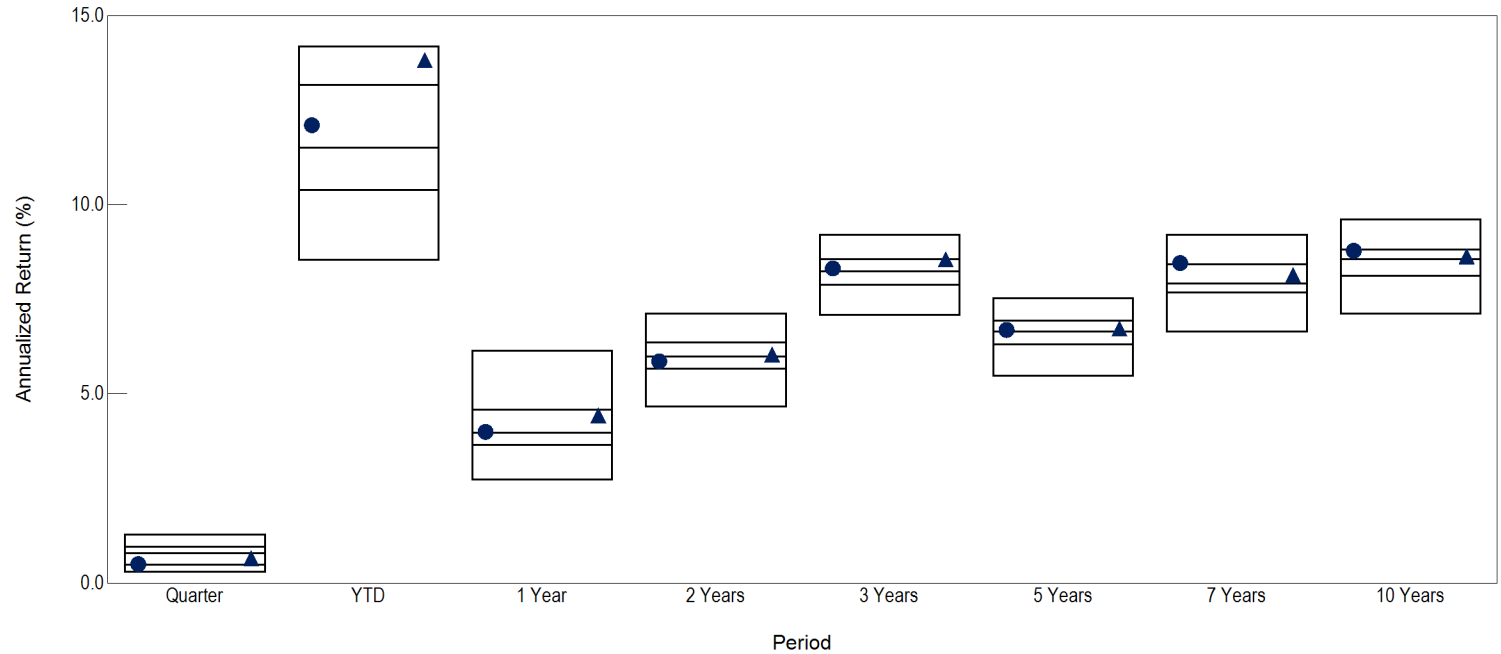
- Current LACERS public market asset class composite tracking error statistics are compared to asset class target risk budgets to ensure active risks are within expectations.
- Risk budgets are to be evaluated over three-year periods, at minimum, to reflect a full market cycle.
- All equity public markets asset classes are within an appropriately narrow range of their respective risk budgets.
- Both Core Fixed Income and Credit Opportunities have exhibited lower than expected active risk.
- The LACERS Public Real Assets composite is not at its target strategy allocation.
- Note: A new Target Risk Budget was approved by the Board on August 14, 2018, and is not reflected in the table above. Implementation of the new asset allocation is in progress.

* The benchmark for the Public Real Assets composite is a custom policy benchmark that is comprised of the target weights of the public real asset components. The public real asset benchmark weights are 60% TIPS, 20% Commodities, 10% REITs, and 10% MLPs.



TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$5-50B Gross



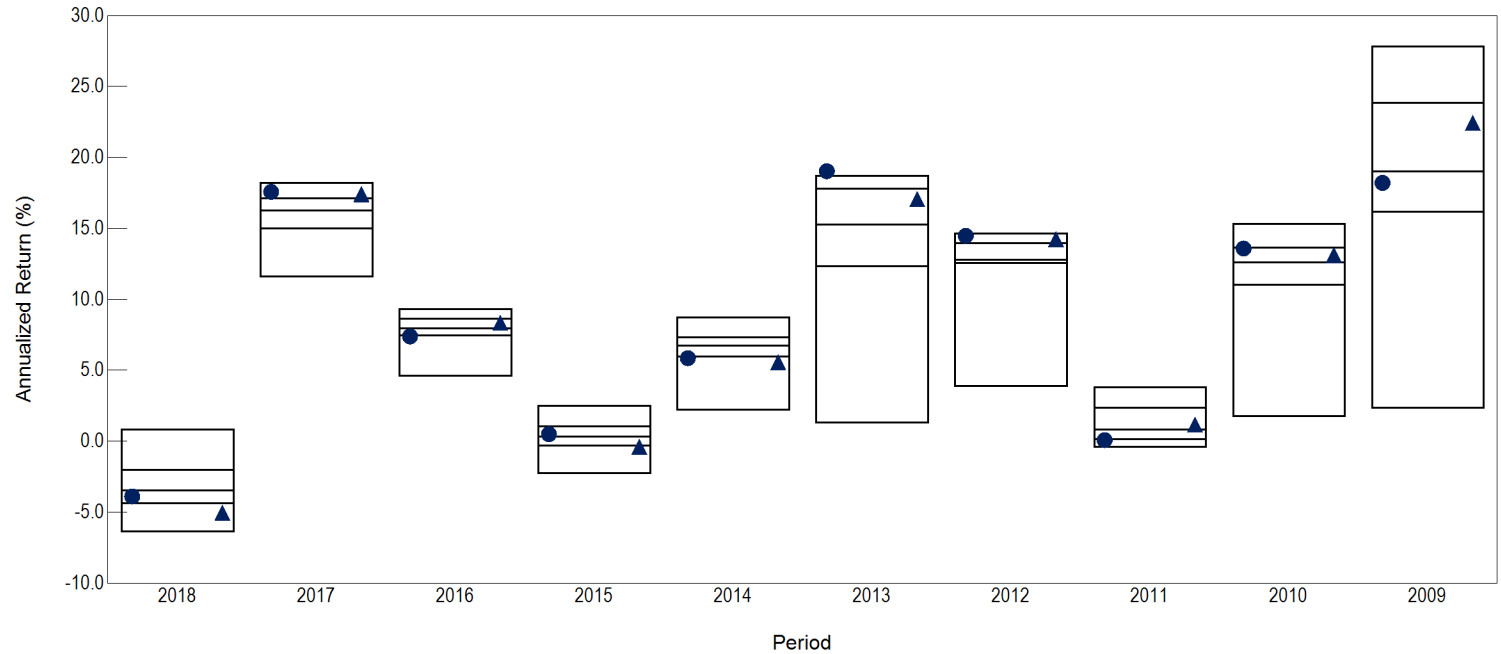
| | Return (Rank) | | | | | | | | | | | | | | | |
|-----------------------|---------------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 5th Percentile | 1.28 | 14.18 | 6.15 | 7.12 | 9.20 | 7.53 | 9.21 | 9.62 | | | | | | | | |
| 25th Percentile | 0.97 | 13.18 | 4.59 | 6.38 | 8.58 | 6.96 | 8.44 | 8.84 | | | | | | | | |
| Median | 0.82 | 11.52 | 4.00 | 6.00 | 8.26 | 6.66 | 7.94 | 8.58 | | | | | | | | |
| 75th Percentile | 0.50 | 10.41 | 3.67 | 5.68 | 7.91 | 6.32 | 7.70 | 8.15 | | | | | | | | |
| 95th Percentile | 0.33 | 8.56 | 2.76 | 4.68 | 7.11 | 5.50 | 6.66 | 7.14 | | | | | | | | |
| # of Portfolios | 29 | 29 | 29 | 29 | 29 | 28 | 27 | 25 | | | | | | | | |
| ● LACERS Master Trust | 0.50 | (75) | 12.10 | (43) | 4.00 | (50) | 5.86 | (58) | 8.32 | (36) | 6.69 | (45) | 8.46 | (24) | 8.78 | (34) |
| ▲ Policy Index | 0.66 | (60) | 13.82 | (11) | 4.43 | (40) | 6.04 | (39) | 8.56 | (28) | 6.73 | (36) | 8.14 | (43) | 8.64 | (42) |



Los Angeles City Employees' Retirement System

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$5-50B Gross



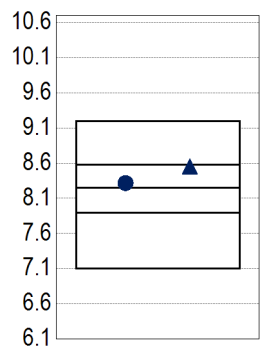
| | Return (Rank) | | | | | | | | | | | | | | | | | | | |
|-----------------------|---------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|-------|------|------|------|-------|------|-------|------|
| 5th Percentile | 0.81 | 18.21 | 9.30 | 2.50 | 8.72 | 18.69 | 14.65 | 3.83 | 15.32 | 27.83 | | | | | | | | | | |
| 25th Percentile | -1.99 | 17.15 | 8.68 | 1.12 | 7.38 | 17.86 | 14.01 | 2.41 | 13.67 | 23.91 | | | | | | | | | | |
| Median | -3.40 | 16.29 | 7.99 | 0.35 | 6.79 | 15.31 | 12.83 | 0.86 | 12.66 | 19.07 | | | | | | | | | | |
| 75th Percentile | -4.32 | 15.05 | 7.51 | -0.24 | 6.04 | 12.36 | 12.58 | 0.21 | 11.06 | 16.24 | | | | | | | | | | |
| 95th Percentile | -6.33 | 11.68 | 4.65 | -2.20 | 2.25 | 1.36 | 3.92 | -0.37 | 1.83 | 2.42 | | | | | | | | | | |
| # of Portfolios | 25 | 46 | 30 | 24 | 24 | 23 | 16 | 16 | 15 | 15 | | | | | | | | | | |
| ● LACERS Master Trust | -3.89 | (67) | 17.57 | (12) | 7.38 | (78) | 0.49 | (41) | 5.85 | (81) | 19.03 | (4) | 14.47 | (7) | 0.08 | (89) | 13.58 | (29) | 18.21 | (67) |
| ▲ Policy Index | -5.04 | (84) | 17.41 | (14) | 8.35 | (41) | -0.39 | (77) | 5.58 | (87) | 17.06 | (31) | 14.23 | (21) | 1.17 | (44) | 13.11 | (34) | 22.44 | (38) |



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

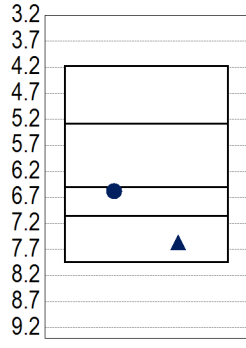
LACERS Master Trust vs. InvestorForce Public DB \$5-50B Gross 3 Years

| Annualized Return (%) | Annualized Standard Deviation | Annualized Alpha (%) | Sharpe Ratio | Sortino Ratio Risk Free | Tracking Error |
|-----------------------|-------------------------------|----------------------|--------------|-------------------------|----------------|
|-----------------------|-------------------------------|----------------------|--------------|-------------------------|----------------|



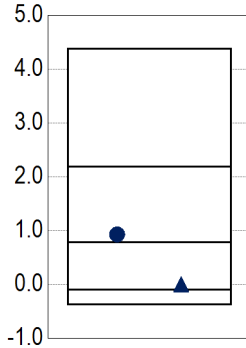
| | | |
|-----------------------|-------|------|
| ● LACERS Master Trust | Value | 8.32 |
| | Rank | 36 |
| ▲ Policy Index | Value | 8.56 |
| | Rank | 28 |

| | |
|------------|------|
| Universe | |
| 5th %tile | 9.20 |
| 25th %tile | 8.58 |
| Median | 8.26 |
| 75th %tile | 7.91 |
| 95th %tile | 7.11 |



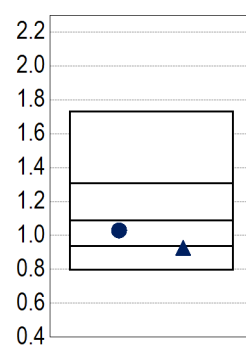
| | | |
|-----------------------|-------|------|
| ● LACERS Master Trust | Value | 6.58 |
| | Rank | 54 |
| ▲ Policy Index | Value | 7.56 |
| | Rank | 88 |

| | |
|------------|------|
| Universe | |
| 5th %tile | 4.18 |
| 25th %tile | 5.27 |
| Median | 6.49 |
| 75th %tile | 7.04 |
| 95th %tile | 7.93 |



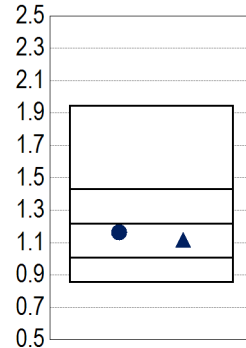
| | | |
|-----------------------|-------|------|
| ● LACERS Master Trust | Value | 0.93 |
| | Rank | 36 |
| ▲ Policy Index | Value | 0.00 |
| | Rank | 73 |

| | |
|------------|-------|
| Universe | |
| 5th %tile | 4.38 |
| 25th %tile | 2.20 |
| Median | 0.79 |
| 75th %tile | -0.09 |
| 95th %tile | -0.37 |



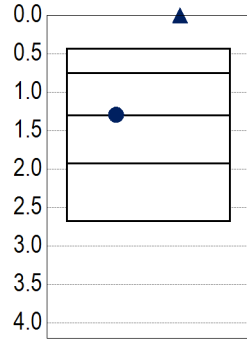
| | | |
|-----------------------|-------|------|
| ● LACERS Master Trust | Value | 1.03 |
| | Rank | 64 |
| ▲ Policy Index | Value | 0.93 |
| | Rank | 78 |

| | |
|------------|------|
| Universe | |
| 5th %tile | 1.73 |
| 25th %tile | 1.31 |
| Median | 1.09 |
| 75th %tile | 0.94 |
| 95th %tile | 0.80 |



| | | |
|-----------------------|-------|------|
| ● LACERS Master Trust | Value | 1.16 |
| | Rank | 61 |
| ▲ Policy Index | Value | 1.12 |
| | Rank | 72 |

| | |
|------------|------|
| Universe | |
| 5th %tile | 1.95 |
| 25th %tile | 1.44 |
| Median | 1.22 |
| 75th %tile | 1.01 |
| 95th %tile | 0.86 |



| | | |
|-----------------------|-------|------|
| ● LACERS Master Trust | Value | 1.29 |
| | Rank | 51 |
| ▲ Policy Index | Value | 0.00 |
| | Rank | 1 |

| | |
|------------|------|
| Universe | |
| 5th %tile | 0.44 |
| 25th %tile | 0.74 |
| Median | 1.29 |
| 75th %tile | 1.92 |
| 95th %tile | 2.67 |

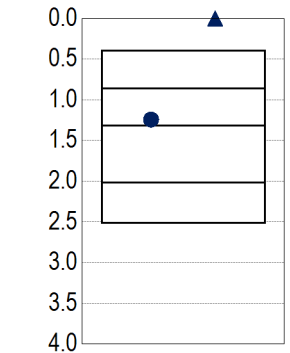
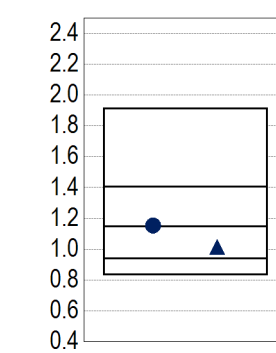
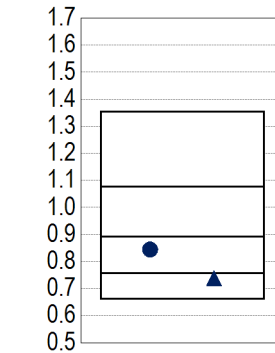
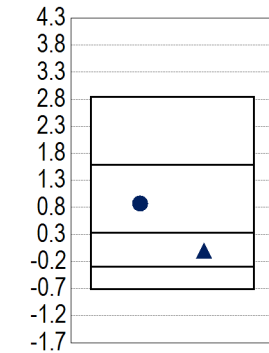
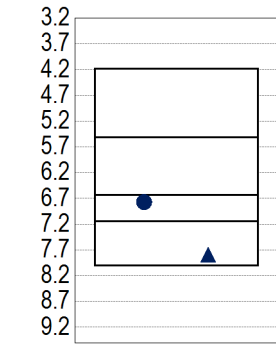
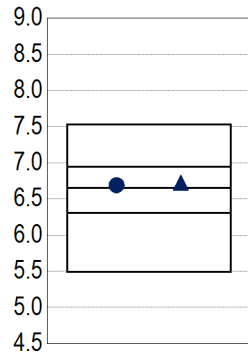
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

LACERS Master Trust vs. InvestorForce Public DB \$5-50B Gross 5 Years

| Annualized Return (%) | Annualized Standard Deviation | Annualized Alpha (%) | Sharpe Ratio | Sortino Ratio Risk Free | Tracking Error |
|-----------------------|-------------------------------|----------------------|--------------|-------------------------|----------------|
|-----------------------|-------------------------------|----------------------|--------------|-------------------------|----------------|



● LACERS Master Trust
Value 6.69
Rank 45
▲ Policy Index
Value 6.73
Rank 36

● LACERS Master Trust
Value 6.77
Rank 64
▲ Policy Index
Value 7.79
Rank 88

● LACERS Master Trust
Value 0.87
Rank 43
▲ Policy Index
Value 0.00
Rank 57

● LACERS Master Trust
Value 0.84
Rank 64
▲ Policy Index
Value 0.74
Rank 76

● LACERS Master Trust
Value 1.15
Rank 49
▲ Policy Index
Value 1.01
Rank 70

● LACERS Master Trust
Value 1.24
Rank 43
▲ Policy Index
Value 0.00
Rank 1

Universe
5th %tile 7.53
25th %tile 6.96
Median 6.66
75th %tile 6.32
95th %tile 5.50

Universe
5th %tile 4.18
25th %tile 5.50
Median 6.62
75th %tile 7.13
95th %tile 7.99

Universe
5th %tile 2.85
25th %tile 1.59
Median 0.34
75th %tile -0.28
95th %tile -0.70

Universe
5th %tile 1.35
25th %tile 1.08
Median 0.89
75th %tile 0.76
95th %tile 0.66

Universe
5th %tile 1.91
25th %tile 1.41
Median 1.15
75th %tile 0.94
95th %tile 0.84

Universe
5th %tile 0.40
25th %tile 0.85
Median 1.31
75th %tile 2.01
95th %tile 2.50

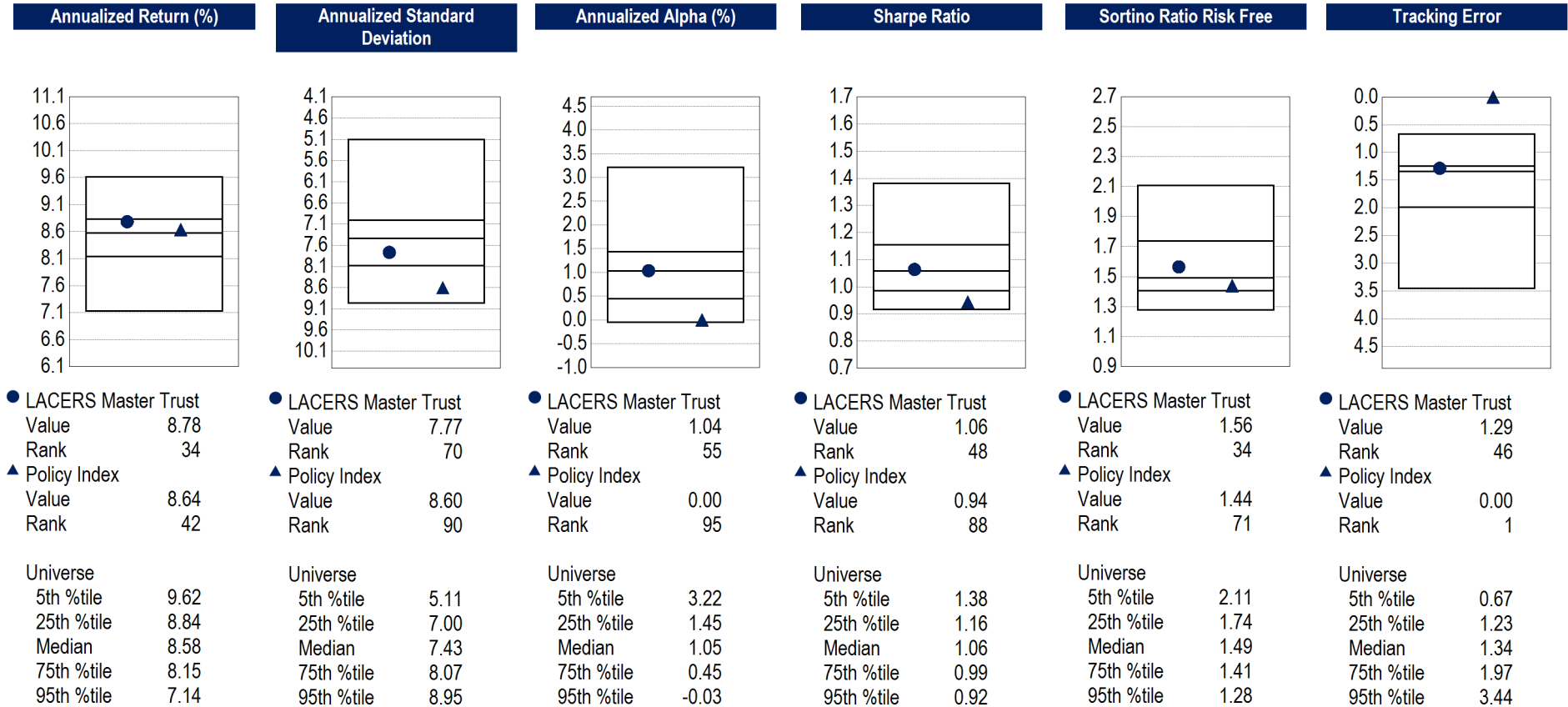
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



Los Angeles City Employees' Retirement System

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

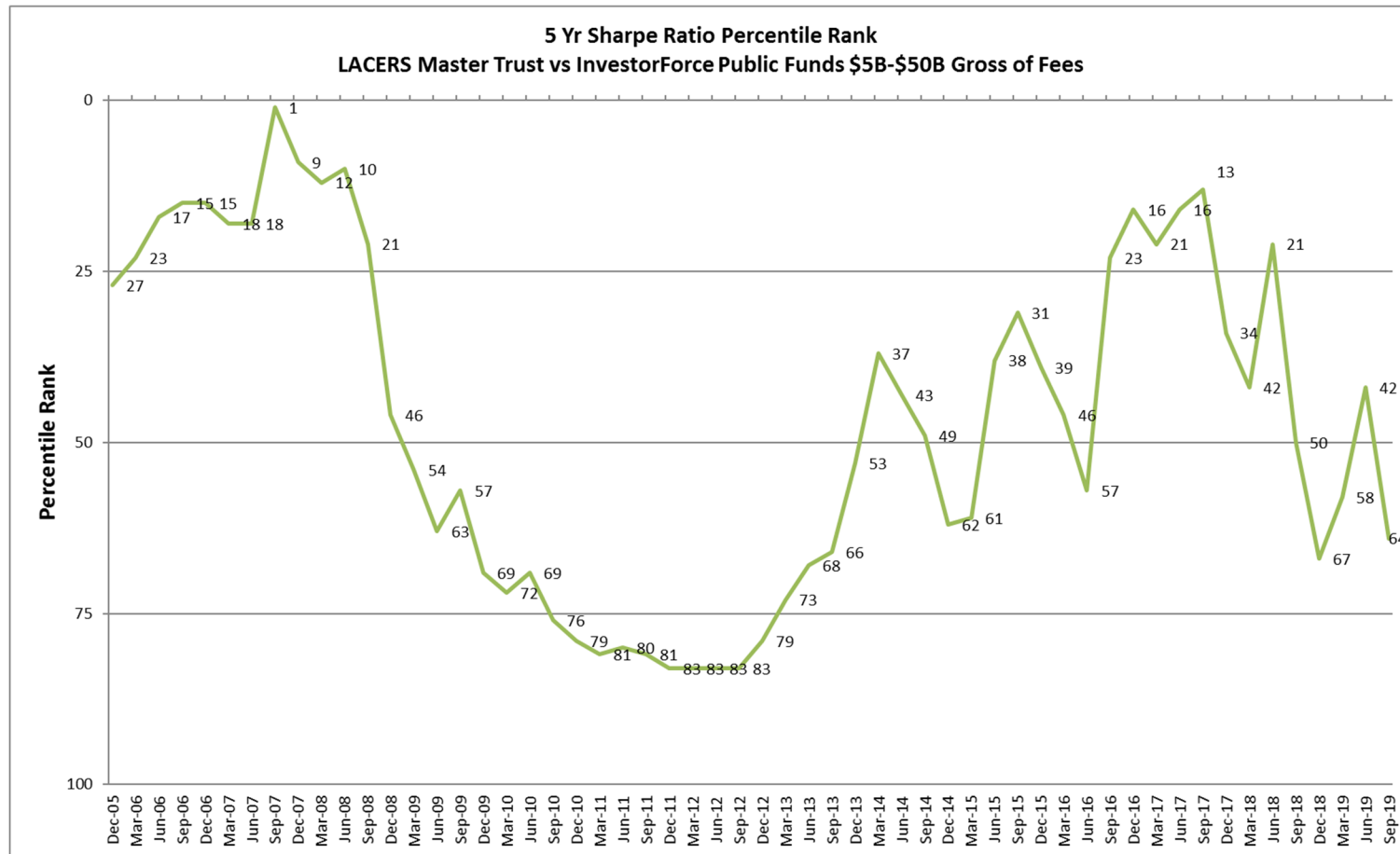
LACERS Master Trust vs. InvestorForce Public DB \$5-50B Gross 10 Years



Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



HISTORICAL RISK ADJUSTED RETURN UNIVERSE COMPARISON



- Total Plan ranks in the 64th percentile versus other large public plans on a Sharpe Ratio basis.
 - Use of passive investment strategies within U.S. Equity has contributed positively to the overall Sharpe Ratio rank.
 - Core Fixed Income contributed negatively to Sharpe Ratio rank.



U.S. EQUITY

NEPC, LLC

Los Angeles City Employees' Retirement System

U.S. EQUITY (GROSS)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|--|----------------------|-------------------|--------------|--------------|--------------|--------------|--------------|---------------|------------------|-------------------|
| U.S. Equity | 4,561,717,344 | 100.00 | 0.93 | 19.92 | 2.09 | 12.69 | 10.38 | 13.03 | 10.42 | Oct-94 |
| U.S. Equity Blend | | | <u>1.16</u> | <u>20.09</u> | <u>2.92</u> | <u>12.83</u> | <u>10.44</u> | <u>13.08</u> | <u>9.37</u> | Oct-94 |
| Over/Under | | | -0.23 | -0.17 | -0.83 | -0.14 | -0.06 | -0.05 | 1.05 | |
| Rhumblin Advisors Russell 2000 ¹ | 256,974,630 | 5.63 | -2.38 | 14.18 | -8.79 | 8.25 | | | 5.83 | Apr-15 |
| Russell 2000 | | | <u>-2.40</u> | <u>14.18</u> | <u>-8.89</u> | <u>8.23</u> | <u>8.19</u> | <u>11.19</u> | <u>5.91</u> | Apr-15 |
| Over/Under | | | 0.02 | 0.00 | 0.10 | 0.02 | | | -0.08 | |
| Rhumblin Advisors Russell 2000 Growth ¹ | 134,580,630 | 2.95 | -4.14 | 15.34 | -9.57 | 9.79 | | | 7.33 | Jan-15 |
| Russell 2000 Growth | | | <u>-4.17</u> | <u>15.34</u> | <u>-9.63</u> | <u>9.79</u> | <u>9.08</u> | <u>12.25</u> | <u>7.39</u> | Jan-15 |
| Over/Under | | | 0.03 | 0.00 | 0.06 | 0.00 | | | -0.06 | |
| Rhumblin Advisors Russell 2000 Value ¹ | 213,082,186 | 4.67 | -0.82 | 12.52 | -8.35 | 6.48 | | | 11.61 | Mar-16 |
| Russell 2000 Value | | | <u>-0.57</u> | <u>12.82</u> | <u>-8.24</u> | <u>6.54</u> | <u>7.17</u> | <u>10.06</u> | <u>11.71</u> | Mar-16 |
| Over/Under | | | -0.25 | -0.30 | -0.11 | -0.06 | | | -0.10 | |
| EAM Investors | 129,254,738 | 2.83 | -5.04 | 20.60 | -9.08 | 14.68 | | | 12.25 | Sep-15 |
| Russell 2000 Growth | | | <u>-4.17</u> | <u>15.34</u> | <u>-9.63</u> | <u>9.79</u> | <u>9.08</u> | <u>12.25</u> | <u>10.37</u> | Sep-15 |
| Over/Under | | | -0.87 | 5.26 | 0.55 | 4.89 | | | 1.88 | |
| PanAgora* | 64 | 0.00 | | | | | | | | |
| Principal Global Investors | 198,660,578 | 4.35 | 3.21 | 35.74 | 18.49 | 17.97 | 14.69 | | 14.56 | Aug-14 |
| Russell MidCap | | | <u>0.48</u> | <u>21.93</u> | <u>3.19</u> | <u>10.69</u> | <u>9.10</u> | <u>13.07</u> | <u>9.07</u> | Aug-14 |
| Over/Under | | | 2.73 | 13.81 | 15.30 | 7.28 | 5.59 | | 5.49 | |
| Rhumblin Advisors S&P 500 | 3,629,086,424 | 79.56 | 1.56 | 20.34 | 4.10 | 13.35 | 10.77 | 13.27 | 9.74 | Feb-93 |
| S&P 500 | | | <u>1.70</u> | <u>20.55</u> | <u>4.25</u> | <u>13.39</u> | <u>10.84</u> | <u>13.24</u> | <u>9.58</u> | Feb-93 |
| Over/Under | | | -0.14 | -0.21 | -0.15 | -0.04 | -0.07 | 0.03 | 0.16 | |
| Rhumblin Advisors Russell 1000 Growth Escrow Account | 72,859 | 0.00 | | | | | | | | |
| | 5,235 | 0.00 | | | | | | | | |

* Liquidated on August 23, 2019

1- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

- U.S. Equity Blend = Russell 3000 from 1/1/2000 to present; 33.75% S&P 500/ 35% Russell 1000 Value/ 12.50% Russell 1000 Growth/ 12.50% Russell 2000 Value/ 6.25% Russell 2000 Growth prior to

eA = eVestment Alliance



Los Angeles City Employees' Retirement System

U.S. EQUITY (NET)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|--|----------------------|-------------------|-------------|-----------|--------------|-----------|-------------|-----------|--------------|-----------|--------------|-----------|---------------|-----------|------------------|-------------------|
| U.S. Equity | 4,561,717,344 | 100.00 | 0.91 | 48 | 19.87 | 37 | 2.02 | 40 | 12.61 | 38 | 10.29 | 34 | 12.87 | 32 | | Oct-94 |
| U.S. Equity Blend | | | 1.16 | 30 | 20.09 | 24 | 2.92 | 21 | 12.83 | 32 | 10.44 | 26 | 13.08 | 22 | | Oct-94 |
| Over/Under | | | -0.25 | | -0.22 | | -0.90 | | -0.22 | | -0.15 | | -0.21 | | | |
| InvMetrics Public DB > \$1 Billion US Equity Net Median | | | 0.82 | | 19.56 | | 1.18 | | 12.35 | | 9.84 | | 12.64 | | | Oct-94 |
| Rhumblin Advisors Russell 2000 ¹ | 256,974,630 | 5.63 | -2.38 | 60 | 14.18 | 59 | -8.79 | 61 | 8.24 | 48 | | | | | 5.82 | Apr-15 |
| Russell 2000 | | | -2.40 | 60 | 14.18 | 60 | -8.89 | 61 | 8.23 | 48 | | | | | 5.91 | Apr-15 |
| Over/Under | | | 0.02 | | 0.00 | | 0.10 | | 0.01 | | | | | | -0.09 | |
| eV US Small Cap Equity Net Median | | | -1.66 | | 15.54 | | -7.46 | | 8.10 | | | | | | 6.02 | Apr-15 |
| Rhumblin Advisors Russell 2000 ¹ Growth | 134,580,630 | 2.95 | -4.14 | 45 | 15.34 | 63 | -9.58 | 65 | 9.78 | 74 | | | | | 7.33 | Jan-15 |
| Russell 2000 Growth | | | -4.17 | 46 | 15.34 | 63 | -9.63 | 65 | 9.79 | 74 | | | | | 7.39 | Jan-15 |
| Over/Under | | | 0.03 | | 0.00 | | 0.05 | | -0.01 | | | | | | -0.06 | |
| eV US Small Cap Growth Equity Net Median | | | -4.57 | | 18.10 | | -7.25 | | 12.62 | | | | | | 9.17 | Jan-15 |
| Rhumblin Advisors Russell 2000 ¹ Value | 213,082,186 | 4.67 | -0.82 | 63 | 12.51 | 72 | -8.36 | 60 | 6.47 | 44 | | | | | 11.61 | Mar-16 |
| Russell 2000 Value | | | -0.57 | 57 | 12.82 | 69 | -8.24 | 60 | 6.54 | 43 | | | | | 11.71 | Mar-16 |
| Over/Under | | | -0.25 | | -0.31 | | -0.12 | | -0.07 | | | | | | -0.10 | |
| eV US Small Cap Value Equity Net Median | | | -0.27 | | 14.87 | | -6.83 | | 6.18 | | | | | | 10.29 | Mar-16 |
| EAM Investors | 129,254,738 | 2.83 | -5.20 | 86 | 19.99 | 21 | -9.75 | 68 | 13.85 | 16 | | | | | 11.46 | Sep-15 |
| Russell 2000 Growth | | | -4.17 | 78 | 15.34 | 52 | -9.63 | 67 | 9.79 | 36 | | | | | 10.37 | Sep-15 |
| Over/Under | | | -1.03 | | 4.65 | | -0.12 | | 4.06 | | | | | | 1.09 | |
| eV US Small Cap Equity Net Median | | | -1.66 | | 15.54 | | -7.46 | | 8.10 | | | | | | 9.91 | Sep-15 |
| PanAgora | 64 | 0.00 | | | | | | | | | | | | | | |

1- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

- U.S. Equity Blend = Russell 3000 from 1/1/2000 to present; 33.75% S&P 500/ 35% Russell 1000 Value/ 12.50% Russell 1000 Growth/ 12.50% Russell 2000 Value/ 6.25% Russell 2000 Growth prior to

eA = eVestment Alliance



Los Angeles City Employees' Retirement System

U.S. EQUITY (NET)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|--|----------------------|-------------------|-------------|------|--------------|------|-------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Principal Global Investors ¹ | 198,660,578 | 4.35 | 3.12 | 7 | 35.38 | 1 | 18.06 | 1 | 17.53 | 7 | 14.26 | 3 | | | 14.15 | Aug-14 |
| <i>Russell MidCap</i> | | | <u>0.48</u> | 46 | <u>21.93</u> | 49 | <u>3.19</u> | 41 | <u>10.69</u> | 55 | <u>9.10</u> | 48 | | | <u>9.07</u> | <i>Aug-14</i> |
| Over/Under | | | 2.64 | | 13.45 | | 14.87 | | 6.84 | | 5.16 | | | | 5.08 | |
| <i>eV US Mid Cap Equity Net Median</i> | | | 0.27 | | 21.59 | | 1.79 | | 11.28 | | 8.89 | | 12.55 | | 8.83 | <i>Aug-14</i> |
| Rhumblin Advisors S&P 500 | 3,629,086,424 | 79.56 | 1.56 | 42 | 20.33 | 40 | 4.10 | 38 | 13.34 | 35 | 10.77 | 30 | 13.26 | 29 | | Feb-93 |
| <i>S&P 500</i> | | | <u>1.70</u> | 40 | <u>20.55</u> | 37 | <u>4.25</u> | 36 | <u>13.39</u> | 34 | <u>10.84</u> | 29 | <u>13.24</u> | 29 | | <i>Feb-93</i> |
| Over/Under | | | -0.14 | | -0.22 | | -0.15 | | -0.05 | | -0.07 | | 0.02 | | | |
| <i>eV US Large Cap Equity Net Median</i> | | | 1.28 | | 19.31 | | 2.56 | | 12.01 | | 9.43 | | 12.32 | | | <i>Feb-93</i> |
| Rhumblin Advisors Russell 1000 Growth | 72,859 | 0.00 | | | | | | | | | | | | | | |
| Escrow Account | 5,235 | 0.00 | | | | | | | | | | | | | | |

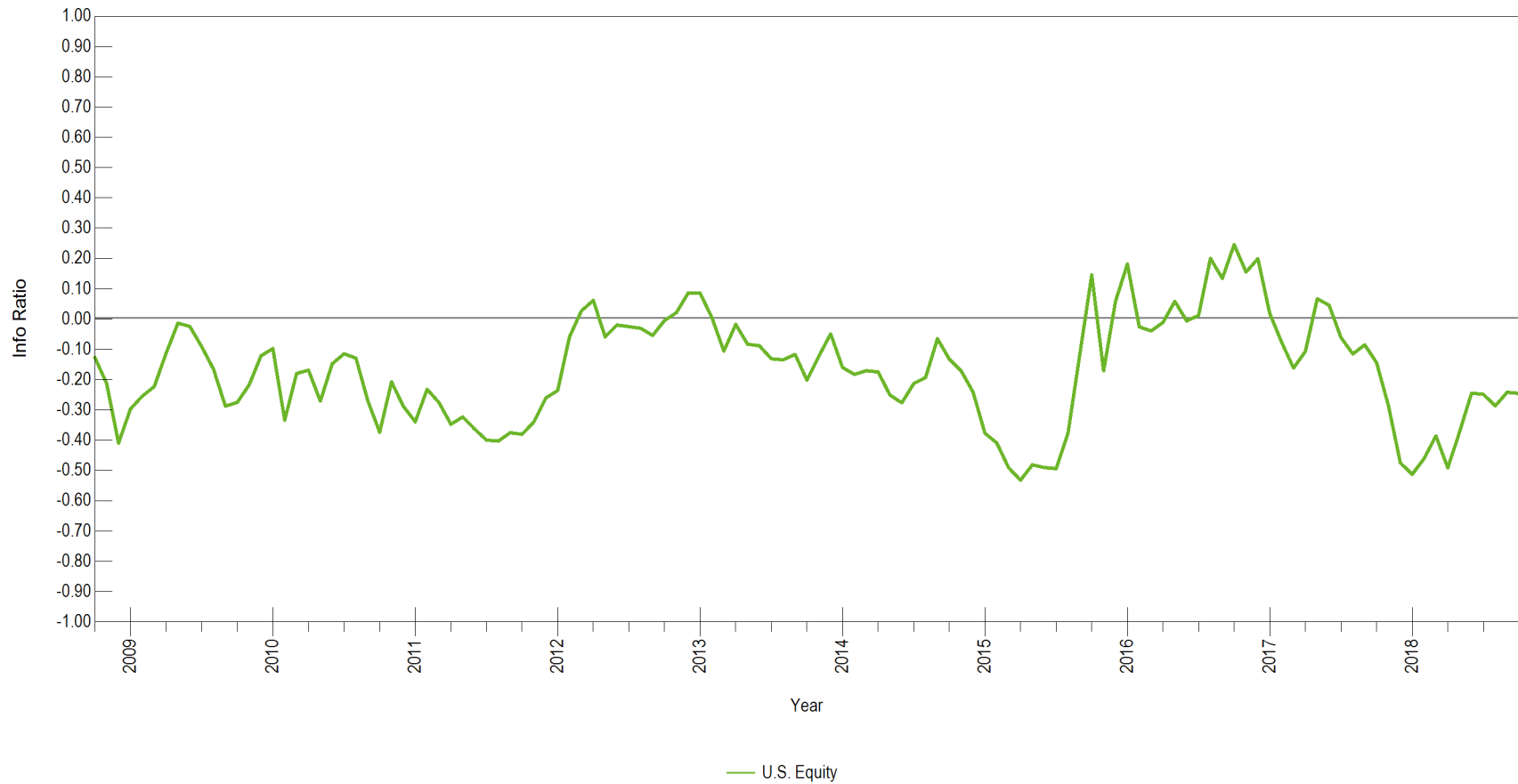
1- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

eA = eVestment Alliance



U.S. EQUITY ROLLING 5 YEAR INFORMATION RATIO

Rolling 5 Year Information Ratio



*Returns are net of fees.



MANAGER REPORT CARD

| U.S. Equity Managers | Inception Date | Mandate | Current Quarter (Net) | | One Year (Net) | | Three Years (Net) | | Five Years (Net) | | Since Inception (Net) | Annual Mgt Fee Paid \$ (000) | Comments |
|----------------------------|----------------|------------------|-----------------------|----------|----------------|----------|-------------------|----------|------------------|----------|-----------------------|------------------------------|--|
| | | | Index | Universe | Index | Universe | Index | Universe | Index | Universe | Index | | |
| Principal Global Investors | Jul-14 | Mid Cap | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 616.9 | Performance compliant with LACERS' Manager Monitoring Policy |
| EAM Investors | Sep-15 | Small Cap Growth | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 913.9 | Performance compliant with LACERS' Manager Monitoring Policy |
| Rhumblin (Passive) | Feb-93 | S&P 500 | ✗ | ✓ | ✗ | ✓ | ✗ | ✓ | ✗ | ✓ | ✓✓ | 178.2 | Performance compliant with LACERS' Manager Monitoring Policy |
| Rhumblin (Passive) | Jun-13 | R1000 Growth | ✗ | ✗ | ✗ | ✓ | ✗ | ✓ | ✗ | ✓ | ✗ | 11.5 | Performance compliant with LACERS' Manager Monitoring Policy |
| Rhumblin (Passive) | Jun-15 | R2000 | ✓ | ✗ | ✓ | ✗ | ✓ | ✓ | N/A | N/A | ✗ | 14.6 | Performance compliant with LACERS' Manager Monitoring Policy |
| Rhumblin (Passive) | Jun-15 | R2000 Growth | ✓ | ✓ | ✓ | ✗ | ✗ | ✗ | N/A | N/A | ✗ | 7.7 | Performance compliant with LACERS' Manager Monitoring Policy |
| Rhumblin (Passive) | Feb-16 | R2000 Value | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ | N/A | N/A | ✗ | 5.8 | Performance compliant with LACERS' Manager Monitoring Policy |

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2019.
- * Where net of fees performance is not available gross of fee returns are evaluated.

| Legend | |
|--------|----------------|
| ✓ | Outperformed |
| ✗ | Underperformed |
| = | Equal to |
| ✓✓ | Gross Return |



NON-U.S. EQUITY

NEPC, LLC

Los Angeles City Employees' Retirement System

NON-U.S. EQUITY (GROSS)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|----------------------|-------------------|--------------|--------------|--------------|--------------|--------------|---------------|------------------|-------------------|
| Non-U.S. Equity | 5,272,087,646 | 100.00 | -1.98 | 11.87 | -1.79 | 6.89 | 4.22 | 5.67 | 5.09 | Nov-94 |
| MSCI ACWI ex USA | | | -1.80 | 11.56 | -1.23 | 6.33 | 2.90 | 4.46 | 4.92 | Nov-94 |
| Over/Under | | | -0.18 | 0.31 | -0.56 | 0.56 | 1.32 | 1.21 | 0.17 | |
| Developed ex-U.S. | 4,009,747,291 | 76.06 | -1.12 | 13.96 | -1.56 | 7.08 | 4.37 | | 7.84 | Jun-12 |
| MSCI EAFE | | | -1.07 | 12.80 | -1.34 | 6.48 | 3.27 | | 6.89 | Jun-12 |
| Over/Under | | | -0.05 | 1.16 | -0.22 | 0.60 | 1.10 | | 0.95 | |
| AQR Capital (On Watch) | 264,534,012 | 5.02 | -0.60 | 8.97 | -8.31 | 4.30 | 5.90 | | 3.91 | Feb-14 |
| MSCI EAFE Small Cap | | | -0.44 | 12.05 | -5.93 | 5.94 | 6.02 | | 4.13 | Feb-14 |
| Over/Under | | | -0.16 | -3.08 | -2.38 | -1.64 | -0.12 | | -0.22 | |
| Barrow Hanley (On Watch) | 524,347,706 | 9.95 | 0.25 | 14.91 | -2.38 | 6.21 | 1.84 | | 2.39 | Nov-13 |
| MSCI EAFE Value | | | -1.74 | 7.67 | -4.92 | 5.10 | 0.99 | | 0.98 | Nov-13 |
| Over/Under | | | 1.99 | 7.24 | 2.54 | 1.11 | 0.85 | | 1.41 | |
| Lazard Asset Management ¹ | 594,017,356 | 11.27 | -2.19 | 12.99 | -0.21 | 7.32 | 4.46 | | 4.40 | Nov-13 |
| MSCI EAFE | | | -1.07 | 12.80 | -1.34 | 6.48 | 3.27 | | 2.81 | Nov-13 |
| Over/Under | | | -1.12 | 0.19 | 1.13 | 0.84 | 1.19 | | 1.59 | |
| MFS Institutional Advisors | 618,131,182 | 11.72 | -1.30 | 17.29 | 3.58 | 10.67 | 7.99 | | 6.64 | Oct-13 |
| MSCI World ex USA Growth NR USD | | | -0.45 | 18.35 | 2.39 | 7.50 | 5.05 | | 4.48 | Oct-13 |
| Over/Under | | | -0.85 | -1.06 | 1.19 | 3.17 | 2.94 | | 2.16 | |
| Oberweis Asset Mgmt ¹ | 233,446,042 | 4.43 | -3.93 | 16.57 | -9.13 | 5.77 | 7.05 | | 6.24 | Jan-14 |
| MSCI EAFE Small Cap | | | -0.44 | 12.05 | -5.93 | 5.94 | 6.02 | | 5.06 | Jan-14 |
| Over/Under | | | -3.49 | 4.52 | -3.20 | -0.17 | 1.03 | | 1.18 | |
| SSgA World ex US IMI | 1,775,270,994 | 33.67 | -0.74 | 13.87 | -1.15 | 6.81 | 3.78 | 5.46 | 5.62 | Aug-93 |
| MSCI World ex USA IMI NR USD ² | | | -0.84 | 13.43 | -1.64 | 6.35 | 3.33 | 5.04 | 5.35 | Aug-93 |
| Over/Under | | | 0.10 | 0.44 | 0.49 | 0.46 | 0.45 | 0.42 | 0.27 | |

1 Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

2 Since inception index return sourced from SSgA.

eA = eVestment



Los Angeles City Employees' Retirement System

NON-U.S. EQUITY (GROSS)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|--|----------------------|-------------------|--------------|--------------|--------------|--------------|--------------|---------------|------------------|-------------------|
| Emerging Markets | 1,262,340,355 | 23.94 | -4.62 | 5.68 | -2.53 | 6.11 | 2.53 | | 3.31 | Jun-12 |
| <i>MSCI Emerging Markets</i> | | | <u>-4.25</u> | <u>5.90</u> | <u>-2.02</u> | <u>5.97</u> | <u>2.33</u> | | <u>3.39</u> | <i>Jun-12</i> |
| Over/Under | | | -0.37 | -0.22 | -0.51 | 0.14 | 0.20 | | -0.08 | |
| Axiom Emerging Markets (On Watch) | 427,205,814 | 8.10 | -2.03 | 11.68 | 1.73 | 7.11 | 4.41 | | 3.99 | Mar-14 |
| <i>MSCI Emerging Markets Growth NR USD</i> | | | <u>-2.04</u> | <u>10.05</u> | <u>1.01</u> | <u>7.04</u> | <u>4.17</u> | | <u>4.23</u> | <i>Mar-14</i> |
| Over/Under | | | 0.01 | 1.63 | 0.72 | 0.07 | 0.24 | | -0.24 | |
| DFA Emerging Markets ¹ | 413,323,814 | 7.84 | -6.75 | 0.06 | -6.33 | 5.13 | 1.27 | | -0.31 | Aug-14 |
| <i>MSCI Emerging Markets Value NR USD</i> | | | <u>-6.48</u> | <u>1.84</u> | <u>-5.03</u> | <u>4.81</u> | <u>0.38</u> | | <u>-0.84</u> | <i>Aug-14</i> |
| Over/Under | | | -0.27 | -1.78 | -1.30 | 0.32 | 0.89 | | 0.53 | |
| QMA Emerging Markets ¹ | 421,810,726 | 8.00 | -5.04 | 5.73 | -2.80 | 5.95 | 2.19 | | 2.95 | May-14 |
| <i>MSCI Emerging Markets</i> | | | <u>-4.25</u> | <u>5.90</u> | <u>-2.02</u> | <u>5.97</u> | <u>2.33</u> | | <u>2.62</u> | <i>May-14</i> |
| Over/Under | | | -0.79 | -0.17 | -0.78 | -0.02 | -0.14 | | 0.33 | |

¹ Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.
eA = eVestment



Los Angeles City Employees' Retirement System

NON-U.S. EQUITY (NET)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|-------------|-----------|---------------|----------------|
| Non-U.S. Equity | 5,272,087,646 | 100.00 | -2.07 | 73 | 11.56 | 55 | -2.16 | 57 | 6.50 | 37 | 3.85 | 40 | 5.31 | 40 | | Nov-94 |
| MSCI ACWI ex USA | | | <u>-1.80</u> | 53 | <u>11.56</u> | 55 | <u>-1.23</u> | 49 | <u>6.33</u> | 45 | <u>2.90</u> | 74 | <u>4.46</u> | 85 | | Nov-94 |
| Over/Under | | | -0.27 | | 0.00 | | -0.93 | | 0.17 | | 0.95 | | 0.85 | | | |
| Developed ex-U.S. | 4,009,747,291 | 76.06 | -1.20 | 34 | 13.70 | 39 | -1.88 | 45 | 6.74 | 36 | 4.05 | 48 | | | 7.54 | Jun-12 |
| MSCI EAFE | | | <u>-1.07</u> | 28 | <u>12.80</u> | 73 | <u>-1.34</u> | 30 | <u>6.48</u> | 51 | <u>3.27</u> | 70 | | | <u>6.89</u> | Jun-12 |
| Over/Under | | | -0.13 | | 0.90 | | -0.54 | | 0.26 | | 0.78 | | | | 0.65 | |
| InvMetrics Public DB > \$1 Billion Dev Mkt ex-US Eq Net Median | | | -1.30 | | 13.31 | | -1.89 | | 6.49 | | 3.95 | | | | 7.54 | Jun-12 |
| AQR Capital ¹ (On Watch) | 264,534,012 | 5.02 | -0.80 | 22 | 8.33 | 73 | -9.04 | 62 | 3.49 | 81 | 5.12 | 64 | | | 3.20 | Feb-14 |
| MSCI EAFE Small Cap | | | <u>-0.44</u> | 17 | <u>12.05</u> | 40 | <u>-5.93</u> | 24 | <u>5.94</u> | 48 | <u>6.02</u> | 40 | | | <u>4.13</u> | Feb-14 |
| Over/Under | | | -0.36 | | -3.72 | | -3.11 | | -2.45 | | -0.90 | | | | -0.93 | |
| eV EAFE Small Cap Equity Net Median | | | -1.80 | | 10.91 | | -7.87 | | 5.51 | | 5.71 | | | | 4.20 | Feb-14 |
| Barrow Hanley ¹ (On Watch) | 524,347,706 | 9.95 | 0.12 | 14 | 14.47 | 9 | -2.88 | 36 | 5.67 | 36 | 1.32 | 78 | | | 1.88 | Nov-13 |
| MSCI EAFE Value | | | <u>-1.74</u> | 72 | <u>7.67</u> | 86 | <u>-4.92</u> | 48 | <u>5.10</u> | 54 | <u>0.99</u> | 85 | | | <u>0.98</u> | Nov-13 |
| Over/Under | | | 1.86 | | 6.80 | | 2.04 | | 0.57 | | 0.33 | | | | 0.90 | |
| eV EAFE Value Equity Net Median | | | -1.05 | | 9.39 | | -5.26 | | 5.18 | | 2.29 | | | | 1.89 | Nov-13 |
| Lazard Asset Management ¹ | 594,017,356 | 11.27 | -2.32 | 79 | 12.55 | 45 | -0.73 | 23 | 6.76 | 31 | 3.88 | 51 | | | 3.85 | Nov-13 |
| MSCI EAFE | | | <u>-1.07</u> | 41 | <u>12.80</u> | 43 | <u>-1.34</u> | 27 | <u>6.48</u> | 36 | <u>3.27</u> | 63 | | | <u>2.81</u> | Nov-13 |
| Over/Under | | | -1.25 | | -0.25 | | 0.61 | | 0.28 | | 0.61 | | | | 1.04 | |
| eV All EAFE Equity Net Median | | | -1.38 | | 12.13 | | -4.13 | | 5.81 | | 3.91 | | | | 3.42 | Nov-13 |
| MFS Institutional Advisors | 618,131,182 | 11.72 | -1.41 | 37 | 16.92 | 62 | 3.11 | 18 | 10.14 | 40 | 7.45 | 1 | | | 6.13 | Oct-13 |
| MSCI World ex USA Growth NR USD | | | <u>-0.45</u> | 13 | <u>18.35</u> | 43 | <u>2.39</u> | 22 | <u>7.50</u> | 57 | <u>5.05</u> | 61 | | | <u>4.48</u> | Oct-13 |
| Over/Under | | | -0.96 | | -1.43 | | 0.72 | | 2.64 | | 2.40 | | | | 1.65 | |
| eV EAFE All Cap Growth Net Median | | | -1.66 | | 18.14 | | -2.28 | | 8.49 | | 5.39 | | | | 4.72 | Oct-13 |

1 Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

eA = eVestment



Los Angeles City Employees' Retirement System

NON-U.S. EQUITY (NET)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|--|----------------------|----------------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|--------------|-----------|-------------|------|---------------|----------------|
| Oberweis Asset Mgmt ¹ | 233,446,042 | 4.43 | -4.09 | 96 | 15.89 | 13 | -9.89 | 72 | 4.87 | 59 | 6.14 | 39 | | | 5.35 | Jan-14 |
| MSCI EAFE Small Cap | | | <u>-0.44</u> | 17 | <u>12.05</u> | 40 | <u>-5.93</u> | 24 | <u>5.94</u> | 48 | <u>6.02</u> | 40 | | | <u>5.06</u> | Jan-14 |
| Over/Under | | | -3.65 | | 3.84 | | -3.96 | | -1.07 | | 0.12 | | | | 0.29 | |
| eV EAFE Small Cap Equity Net Median | | | -1.80 | | 10.91 | | -7.87 | | 5.51 | | 5.71 | | | | 5.06 | Jan-14 |
| SSgA World ex US IMI | 1,775,270,994 | 33.67 | -0.75 | 31 | 13.85 | 25 | -1.17 | 22 | 6.79 | 30 | 3.75 | 55 | 5.44 | 70 | 5.62 | Aug-93 |
| MSCI World ex USA IMI NR USD ² | | | <u>-0.84</u> | 33 | <u>13.43</u> | 33 | <u>-1.64</u> | 27 | <u>6.35</u> | 36 | <u>3.33</u> | 63 | <u>5.04</u> | 77 | 5.35 | Aug-93 |
| Over/Under | | | 0.09 | | 0.42 | | 0.47 | | 0.44 | | 0.42 | | 0.40 | | 0.27 | |
| eV EAFE Core Equity Net Median | | | -1.44 | | 11.98 | | -4.51 | | 5.71 | | 3.93 | | 6.53 | | 6.86 | Aug-93 |
| Emerging Markets | 1,262,340,355 | 23.94 | -4.75 | 81 | 5.25 | 67 | -3.06 | 77 | 5.55 | 26 | 1.98 | 43 | | | 2.68 | Jun-12 |
| MSCI Emerging Markets | | | <u>-4.25</u> | 57 | <u>5.90</u> | 44 | <u>-2.02</u> | 56 | <u>5.97</u> | 21 | <u>2.33</u> | 35 | | | <u>3.39</u> | Jun-12 |
| Over/Under | | | -0.50 | | -0.65 | | -1.04 | | -0.42 | | -0.35 | | | | -0.71 | |
| InvMetrics Public DB > \$1 Billion Emg Mkt Eq Net Median | | | -3.91 | | 5.68 | | -1.78 | | 4.65 | | 1.65 | | | | 2.71 | Jun-12 |
| Axiom Emerging Markets (On Watch) | 427,205,814 | 8.10 | -2.21 | 18 | 11.10 | 26 | 1.01 | 38 | 6.37 | 38 | 3.68 | 23 | | | 3.31 | Mar-14 |
| MSCI Emerging Markets Growth NR USD | | | <u>-2.04</u> | 16 | <u>10.05</u> | 31 | <u>1.01</u> | 38 | <u>7.04</u> | 30 | <u>4.17</u> | 20 | | | <u>4.23</u> | Mar-14 |
| Over/Under | | | -0.17 | | 1.05 | | 0.00 | | -0.67 | | -0.49 | | | | -0.92 | |
| eV Emg Mkts Equity Net Median | | | -3.81 | | 7.68 | | -0.56 | | 5.71 | | 2.47 | | | | 3.03 | Mar-14 |
| DFA Emerging Markets ¹ | 413,323,814 | 7.84 | -6.88 | 99 | -0.33 | 99 | -6.82 | 98 | 4.60 | 66 | 0.76 | 88 | | | -0.80 | Aug-14 |
| MSCI Emerging Markets Value NR USD | | | <u>-6.48</u> | 98 | <u>1.84</u> | 96 | <u>-5.03</u> | 90 | <u>4.81</u> | 62 | <u>0.38</u> | 91 | | | <u>-0.84</u> | Aug-14 |
| Over/Under | | | -0.40 | | -2.17 | | -1.79 | | -0.21 | | 0.38 | | | | 0.04 | |
| eV Emg Mkts Equity Net Median | | | -3.81 | | 7.68 | | -0.56 | | 5.71 | | 2.47 | | | | 1.77 | Aug-14 |
| QMA Emerging Markets ¹ (On Watch) | 421,810,726 | 8.00 | -5.13 | 82 | 5.42 | 71 | -3.18 | 73 | 5.53 | 52 | 1.75 | 66 | | | 2.51 | May-14 |
| MSCI Emerging Markets | | | <u>-4.25</u> | 61 | <u>5.90</u> | 67 | <u>-2.02</u> | 64 | <u>5.97</u> | 44 | <u>2.33</u> | 53 | | | <u>2.62</u> | May-14 |
| Over/Under | | | -0.88 | | -0.48 | | -1.16 | | -0.44 | | -0.58 | | | | -0.11 | |
| eV Emg Mkts Equity Net Median | | | -3.81 | | 7.68 | | -0.56 | | 5.71 | | 2.47 | | | | 2.95 | May-14 |

1 Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

2 Since inception index return sourced from SSgA.

eA = eVestment



Los Angeles City Employees' Retirement System

NON-U.S. EQUITY COUNTRY ALLOCATION

| Versus MSCI ACWI ex USA - Quarter Ending September 30, 2019 | | |
|---|------------------------------------|----------------------------------|
| | Manager Ending Allocation (USD) | Index Ending Allocation (USD) |
| Europe | | |
| Austria | 0.2% | 0.2% |
| Belgium | 0.6% | 0.7% |
| Croatia** | 0.0% | 0.0% |
| Czech Republic* | 0.0% | 0.0% |
| Denmark | 1.1% | 1.2% |
| Estonia** | 0.0% | 0.0% |
| Finland | 0.9% | 0.7% |
| France | 9.3% | 7.5% |
| Germany | 5.7% | 5.7% |
| Greece* | 0.1% | 0.1% |
| Hungary* | 0.1% | 0.1% |
| Ireland | 0.4% | 0.4% |
| Italy | 1.6% | 1.6% |
| Lithuania** | 0.0% | 0.0% |
| Luxembourg | 0.0% | 0.0% |
| Netherlands | 2.9% | 2.5% |
| Norway | 0.9% | 0.4% |
| Poland* | 0.2% | 0.3% |
| Portugal | 0.1% | 0.1% |
| Romania** | 0.0% | 0.0% |
| Russia* | 0.9% | 1.0% |
| Serbia** | 0.0% | 0.0% |
| Slovenia** | 0.0% | 0.0% |
| Spain | 1.0% | 1.9% |
| Sweden | 1.8% | 1.7% |
| Switzerland | 6.1% | 6.2% |
| United Kingdom | 10.3% | 10.8% |
| Total-Europe | 44.2% | 43.0% |

| Versus MSCI ACWI ex USA - Quarter Ending September 30, 2019 | | |
|---|------------------------------------|----------------------------------|
| | Manager Ending Allocation (USD) | Index Ending Allocation (USD) |
| Americas | | |
| Argentina* | 0.0% | 0.0% |
| Brazil* | 2.2% | 2.0% |
| Canada | 4.9% | 7.0% |
| Chile* | 0.2% | 0.3% |
| Colombia* | 0.3% | 0.1% |
| Mexico* | 0.9% | 0.6% |
| Peru* | 0.1% | 0.1% |
| United States | 2.9% | 0.0% |
| Total-Americas | 11.5% | 10.1% |
| AsiaPacific | | |
| Australia | 3.4% | 4.7% |
| China* | 4.6% | 8.6% |
| Hong Kong | 5.3% | 2.5% |
| India* | 2.4% | 2.2% |
| Indonesia* | 0.5% | 0.5% |
| Japan | 14.7% | 16.6% |
| Korea* | 3.1% | 3.2% |
| Malaysia* | 0.3% | 0.5% |
| New Zealand | 0.1% | 0.2% |
| Philippines* | 0.3% | 0.3% |
| Singapore | 1.4% | 0.9% |
| Taiwan* | 3.4% | 3.0% |
| Thailand* | 0.8% | 0.8% |
| Total-AsiaPacific | 40.3% | 43.9% |
| Other | | |
| Egypt* | 0.1% | 0.0% |
| Israel | 0.6% | 0.4% |
| Other Countries | 0.3% | 0.0% |
| Qatar* | 0.0% | 0.3% |
| South Africa* | 1.2% | 1.4% |
| Turkey* | 0.2% | 0.1% |
| United Arab Emirates* | 0.1% | 0.2% |
| Total-Other | 2.4% | 3.0% |
| Totals | | |
| Developed | 76.2% | 73.6% |
| Emerging* | 21.9% | 26.4% |
| Other | 0.3% | |
| Cash | 1.7% | |



MANAGER REPORT CARD

| Non-U.S. Equity Managers | Inception Date | Mandate | Current Quarter (Net) | | One Year (Net) | | Three Years (Net) | | Five Years (Net) | | Since Inception (Net) | Annual Mgt Fee Paid \$ (000) | Comments |
|-------------------------------------|----------------|--------------------|-----------------------|----------|----------------|----------|-------------------|----------|------------------|----------|-----------------------|------------------------------|--|
| | | | Index | Universe | Index | Universe | Index | Universe | Index | Universe | Index | | |
| Axiom International | Mar-14 | Emerging Markets | x | x | x | x | x | ✓ | x | ✓ | x | 2,905.3 | On Watch since April 2019 due to performance |
| Q.M.A. | Apr-14 | Emerging Markets | x | x | x | x | x | x | x | ✓ | x | 1,632.8 | On Watch since July 2019 due to performance |
| DFA Emerging Markets | Jul-14 | Emerging Markets | x | x | x | x | x | x | ✓ | x | ✓ | 2,208.6 | Performance compliant with LACERS' Manager Monitoring Policy |
| AQR | Feb-14 | Non-U.S. Developed | x | ✓ | x | x | x | x | x | x | x | 2,522.4 | On Watch since May 2019 due to performance. |
| Oberweis Asset Mgt. | Jan-14 | Non-U.S. Developed | x | x | x | x | x | x | ✓ | ✓ | ✓ | 1,434.9 | Performance compliant with LACERS' Manager Monitoring Policy |
| Barrow, Hanley, Mewhinney & Strauss | Nov-13 | Non-U.S. Developed | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | x | ✓ | 2,574.2 | On Watch since April 2019 due to performance |
| Lazard Asset Mgt. | Nov-13 | Non-U.S. Developed | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 3,003.5 | Performance compliant with LACERS' Manager Monitoring Policy |
| MFS Institutional Advisors | Oct-13 | Non-U.S. Developed | x | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 2,662.1 | Performance compliant with LACERS' Manager Monitoring Policy |
| SsgA (Passive) | Aug-93 | Non-U.S. Developed | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓✓ | 391.2 | Performance compliant with LACERS' Manager Monitoring Policy |

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2019.
- * Where net of fees performance is not available gross of fee returns are evaluated.

| Legend | |
|--------|----------------|
| ✓ | Outperformed |
| x | Underperformed |
| = | Equal to |
| ✓✓ | Gross Return |



CORE FIXED INCOME

NEPC, LLC

Los Angeles City Employees' Retirement System

CORE FIXED INCOME (GROSS)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---------------------------------------|----------------------|-------------------|-------------|-------------|--------------|--------------|--------------|---------------|------------------|-------------------|
| Core Fixed Income | 3,130,040,275 | 100.00 | 2.16 | 8.77 | 10.21 | 3.19 | 3.62 | | 3.57 | Jul-12 |
| Core Fixed Income Blend | | | <u>2.27</u> | <u>8.52</u> | <u>10.30</u> | <u>2.92</u> | <u>3.38</u> | | <u>2.98</u> | <i>Jul-12</i> |
| Over/Under | | | -0.11 | 0.25 | -0.09 | 0.27 | 0.24 | | 0.59 | |
| Baird Advisors | 270,816,891 | 8.65 | 1.44 | 6.97 | 8.54 | 2.84 | 3.23 | 4.12 | 4.40 | Mar-05 |
| BBgBarc US Govt/Credit Int TR | | | <u>1.37</u> | <u>6.41</u> | <u>8.17</u> | <u>2.40</u> | <u>2.68</u> | <u>3.05</u> | <u>3.75</u> | <i>Mar-05</i> |
| Over/Under | | | 0.07 | 0.56 | 0.37 | 0.44 | 0.55 | 1.07 | 0.65 | |
| LM Capital (On Watch) | 326,647,513 | 10.44 | 2.03 | 8.86 | 9.10 | 2.97 | 3.54 | 4.21 | 4.70 | Mar-05 |
| Core Fixed Income Blend | | | <u>2.27</u> | <u>8.52</u> | <u>10.30</u> | <u>2.92</u> | <u>3.38</u> | <u>3.95</u> | <u>4.45</u> | <i>Mar-05</i> |
| Over/Under | | | -0.24 | 0.34 | -1.20 | 0.05 | 0.16 | 0.26 | 0.25 | |
| Loomis Sayles | 810,242,962 | 25.89 | 2.35 | 9.47 | 11.01 | 3.81 | 4.13 | 4.99 | 9.09 | Jul-80 |
| BC US Agg LACERS custom | | | <u>2.27</u> | <u>8.52</u> | <u>10.30</u> | <u>2.92</u> | <u>3.38</u> | <u>3.75</u> | <u>7.60</u> | <i>Jul-80</i> |
| Over/Under | | | 0.08 | 0.95 | 0.71 | 0.89 | 0.75 | 1.24 | 1.49 | |
| Neuberger Berman (On Watch) | 799,202,311 | 25.53 | 2.12 | 8.95 | 10.22 | 3.06 | 3.52 | 4.94 | 5.79 | Sep-01 |
| Core Fixed Income Blend | | | <u>2.27</u> | <u>8.52</u> | <u>10.30</u> | <u>2.92</u> | <u>3.38</u> | <u>3.95</u> | <u>4.70</u> | <i>Sep-01</i> |
| Over/Under | | | -0.15 | 0.43 | -0.08 | 0.14 | 0.14 | 0.99 | 1.09 | |
| SSgA U.S. Aggregate Bond ¹ | 923,130,598 | 29.49 | 2.29 | 8.52 | 10.34 | 2.94 | 3.40 | | 3.37 | Jul-14 |
| BBgBarc US Aggregate TR | | | <u>2.27</u> | <u>8.52</u> | <u>10.30</u> | <u>2.92</u> | <u>3.38</u> | | <u>3.35</u> | <i>Jul-14</i> |
| Over/Under | | | 0.02 | 0.00 | 0.04 | 0.02 | 0.02 | | 0.02 | |

1 Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.
BBgBarc = Bloomberg Barclays



Los Angeles City Employees' Retirement System

CORE FIXED INCOME (NET)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|----------------|-------------|-----------|-------------|-----------|--------------|-----------|-------------|-----------|-------------|-----------|-------------|------|---------------|----------------|
| Core Fixed Income | 3,130,040,275 | 100.00 | 2.14 | 43 | 8.69 | 33 | 10.10 | 25 | 3.09 | 78 | 3.51 | 56 | | | 3.45 | Jul-12 |
| Core Fixed Income Blend | | | <u>2.27</u> | 33 | <u>8.52</u> | 41 | <u>10.30</u> | 19 | <u>2.92</u> | 85 | <u>3.38</u> | 69 | | | <u>2.98</u> | Jul-12 |
| Over/Under | | | -0.13 | | 0.17 | | -0.20 | | 0.17 | | 0.13 | | | | 0.47 | |
| InvMetrics Public DB > \$1 Billion US Fixed Income Net Median | | | 1.86 | | 7.91 | | 9.14 | | 3.35 | | 3.56 | | | | 3.36 | Jul-12 |
| Baird Advisors | 270,816,891 | 8.65 | 1.41 | 35 | 6.88 | 15 | 8.41 | 13 | 2.72 | 22 | 3.10 | 14 | 3.99 | 12 | 4.27 | Mar-05 |
| BBgBarc US Govt/Credit Int TR | | | <u>1.37</u> | 50 | <u>6.41</u> | 46 | <u>8.17</u> | 19 | <u>2.40</u> | 53 | <u>2.68</u> | 46 | <u>3.05</u> | 65 | <u>3.75</u> | Mar-05 |
| Over/Under | | | 0.04 | | 0.47 | | 0.24 | | 0.32 | | 0.42 | | 0.94 | | 0.52 | |
| eV US Interm Duration Fixed Inc Net Median | | | 1.37 | | 6.37 | | 7.81 | | 2.43 | | 2.65 | | 3.21 | | 3.97 | Mar-05 |
| LM Capital (On Watch) | 326,647,513 | 10.44 | 2.00 | 88 | 8.78 | 54 | 8.99 | 93 | 2.86 | 74 | 3.43 | 53 | 4.07 | 44 | 4.55 | Mar-05 |
| Core Fixed Income Blend | | | <u>2.27</u> | 55 | <u>8.52</u> | 73 | <u>10.30</u> | 49 | <u>2.92</u> | 66 | <u>3.38</u> | 63 | <u>3.95</u> | 61 | <u>4.45</u> | Mar-05 |
| Over/Under | | | -0.27 | | 0.26 | | -1.31 | | -0.06 | | 0.05 | | 0.12 | | 0.10 | |
| eV US Core Fixed Inc Net Median | | | 2.29 | | 8.88 | | 10.27 | | 3.07 | | 3.45 | | 4.04 | | 4.53 | Mar-05 |
| Loomis Sayles | 810,242,962 | 25.89 | 2.32 | 43 | 9.37 | 22 | 10.87 | 20 | 3.68 | 9 | 4.00 | 12 | 4.86 | 15 | | Jul-80 |
| BC US Agg LACERS custom | | | <u>2.27</u> | 55 | <u>8.52</u> | 73 | <u>10.30</u> | 49 | <u>2.92</u> | 66 | <u>3.38</u> | 63 | <u>3.75</u> | 73 | | Jul-80 |
| Over/Under | | | 0.05 | | 0.85 | | 0.57 | | 0.76 | | 0.62 | | 1.11 | | | |
| eV US Core Fixed Inc Net Median | | | 2.29 | | 8.88 | | 10.27 | | 3.07 | | 3.45 | | 4.04 | | | Jul-80 |
| Neuberger Berman (On Watch) | 799,202,311 | 25.53 | 2.09 | 85 | 8.84 | 51 | 10.07 | 61 | 2.92 | 67 | 3.36 | 63 | 4.76 | 16 | | Sep-01 |
| Core Fixed Income Blend | | | <u>2.27</u> | 55 | <u>8.52</u> | 73 | <u>10.30</u> | 49 | <u>2.92</u> | 66 | <u>3.38</u> | 63 | <u>3.95</u> | 61 | <u>4.70</u> | Sep-01 |
| Over/Under | | | -0.18 | | 0.32 | | -0.23 | | 0.00 | | -0.02 | | 0.81 | | 0.93 | |
| eV US Core Fixed Inc Net Median | | | 2.29 | | 8.88 | | 10.27 | | 3.07 | | 3.45 | | 4.04 | | 4.66 | Sep-01 |
| SSgA U.S. Aggregate Bond ¹ | 923,130,598 | 29.49 | 2.28 | 54 | 8.48 | 74 | 10.29 | 49 | 2.90 | 69 | 3.36 | 64 | | | 3.33 | Jul-14 |
| BBgBarc US Aggregate TR | | | <u>2.27</u> | 55 | <u>8.52</u> | 73 | <u>10.30</u> | 49 | <u>2.92</u> | 66 | <u>3.38</u> | 63 | | | <u>3.35</u> | Jul-14 |
| Over/Under | | | 0.01 | | -0.04 | | -0.01 | | -0.02 | | -0.02 | | | | -0.02 | |
| eV US Core Fixed Inc Net Median | | | 2.29 | | 8.88 | | 10.27 | | 3.07 | | 3.45 | | | | 3.43 | Jul-14 |

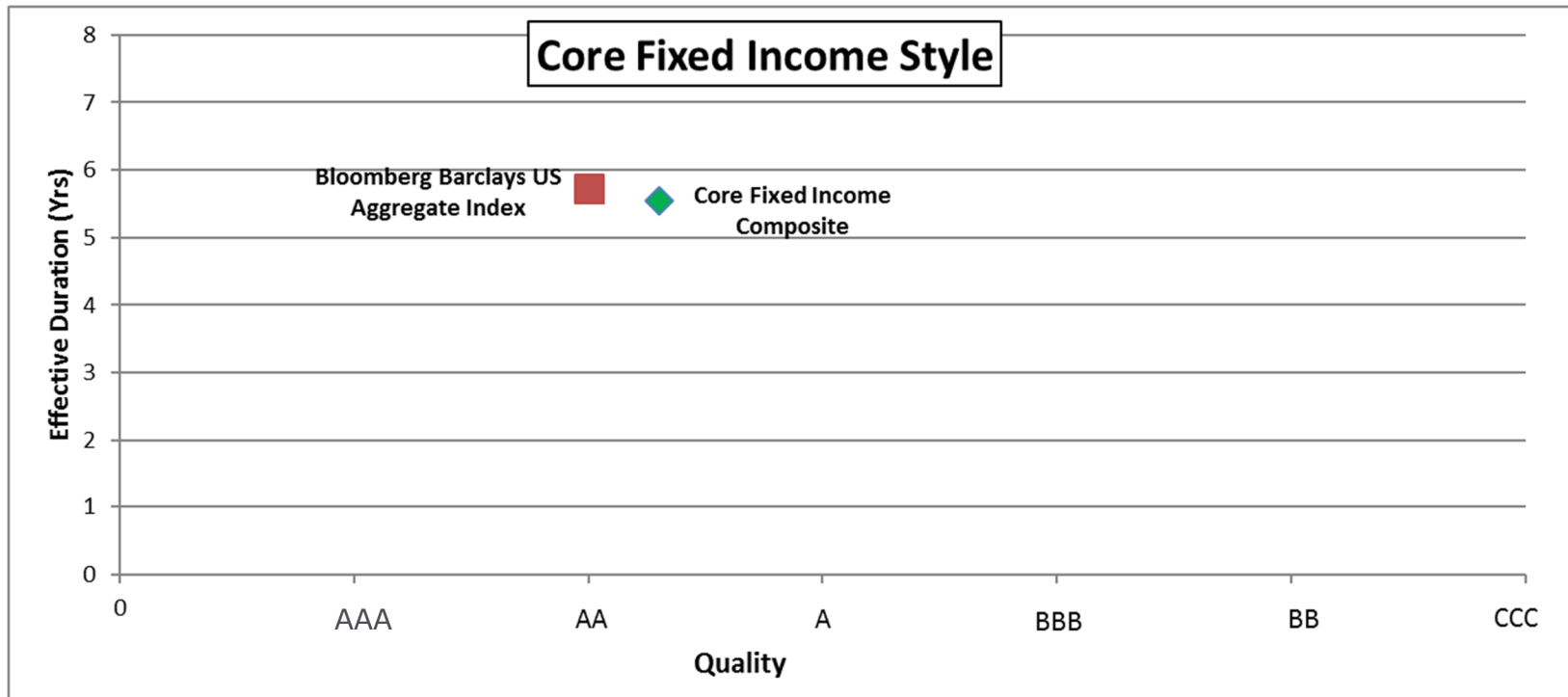
1 Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

BBgBarc = Bloomberg Barclays

eV = eVestment



CORE FIXED INCOME STYLE ANALYSIS



- LACERS has a slightly lower duration (interest rate risk) than its benchmark.
- The Core Fixed Income Composite has slightly lower average quality rating than its benchmark.



MANAGER REPORT CARD

| Core Fixed Income Managers | Inception Date | Mandate | Current Quarter (Net) | | One Year (Net) | | Three Years (Net) | | Five Years (Net) | | Since Inception (Net) | Annual Mgt Fee Paid \$ (000) | Comments |
|----------------------------|----------------|--------------|-----------------------|----------|----------------|----------|-------------------|----------|------------------|----------|-----------------------|------------------------------|--|
| | | | Index | Universe | Index | Universe | Index | Universe | Index | Universe | Index | | |
| Neuberger Berman | Sep-01 | Core | x | x | x | x | = | x | x | x | ✓✓ | 1031.6 | On Watch since March 2019 due to performance |
| Loomis Sayles | Jul-80 | Core | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓✓ | 952.5 | Performance compliant with LACERS' Manager Monitoring Policy |
| Baird Advisors | Mar-05 | Intermediate | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 317.7 | Performance compliant with LACERS' Manager Monitoring Policy |
| LM Capital Group | Mar-05 | Core | x | x | x | x | x | x | ✓ | x | ✓ | 314.7 | On Watch since March 2019 due to performance |
| SSgA (Passive) | Jul-14 | Core | ✓ | x | x | ✓ | x | x | x | x | x | 394.4 | Performance compliant with LACERS' Manager Monitoring Policy |

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2019.
- * Where net of fees performance is not available gross of fee returns are evaluated.

| Legend | |
|--------|----------------|
| ✓ | Outperformed |
| x | Underperformed |
| = | Equal to |
| ✓✓ | Gross Return |



CREDIT OPPORTUNITIES

NEPC, LLC

Los Angeles City Employees' Retirement System

CREDIT OPPORTUNITIES (GROSS)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|----------------------|-------------------|-------------|--------------|--------------|--------------|--------------|---------------|------------------|-------------------|
| Credit Opportunities | 1,029,053,732 | 100.00 | 1.49 | 11.75 | 8.65 | 5.99 | 5.28 | | 5.85 | Jun-13 |
| <i>Credit Opportunities Blend</i> | | | <u>1.39</u> | <u>11.97</u> | <u>8.17</u> | <u>5.58</u> | <u>5.53</u> | | <u>6.02</u> | <i>Jun-13</i> |
| Over/Under | | | 0.10 | -0.22 | 0.48 | 0.41 | -0.25 | | -0.17 | |
| AEGON USA (On Watch) | 389,013,178 | 37.80 | 1.53 | 11.74 | 6.88 | 6.47 | 5.90 | | 6.21 | Jun-13 |
| <i>BBgBarc US High Yield 2% Issuer Cap TR</i> | | | <u>1.33</u> | <u>11.41</u> | <u>6.35</u> | <u>6.07</u> | <u>5.38</u> | | <u>5.83</u> | <i>Jun-13</i> |
| Over/Under | | | 0.20 | 0.33 | 0.53 | 0.40 | 0.52 | | 0.38 | |
| Prudential Emerging Markets | 424,910,221 | 41.29 | 1.88 | 14.50 | 13.39 | 5.99 | 6.59 | | 6.10 | May-14 |
| <i>JP Morgan EMBI Global Diversified</i> | | | <u>1.50</u> | <u>12.99</u> | <u>11.57</u> | <u>4.61</u> | <u>5.74</u> | | <u>5.33</u> | <i>May-14</i> |
| Over/Under | | | 0.38 | 1.51 | 1.82 | 1.38 | 0.85 | | 0.77 | |
| Bain Capital Senior Loan Fund, LP* | 215,117,177 | 20.90 | 0.68 | 6.43 | 3.31 | 4.65 | | | 4.01 | Jun-15 |
| <i>Credit Suisse Leveraged Loans</i> | | | <u>0.92</u> | <u>6.39</u> | <u>3.11</u> | <u>4.68</u> | | | <u>4.25</u> | <i>Jun-15</i> |
| Over/Under | | | -0.24 | 0.04 | 0.20 | -0.03 | | | -0.24 | |

- Credit Opportunities Blend = 65% BBgBarc US High Yield 2% Issuer Cap TR / 35% JP Morgan EMBI Global Diversified 7/01/2014 to present; BBgBarc US High Yield 2% Issuer Cap TR prior to

eA = eVestment Alliance

BBgBarc = Bloomberg Barclays

*Net of fee return since vehicle is commingled.



Los Angeles City Employees' Retirement System

CREDIT OPPORTUNITIES (NET)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|--|----------------------|-------------------|-------------|------|--------------|------|--------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Credit Opportunities | 1,029,053,732 | 100.00 | 1.42 | | 11.50 | | 8.33 | | 5.64 | | 4.92 | | | | 5.50 | Jun-13 |
| <i>Credit Opportunities Blend</i> | | | <u>1.39</u> | | <u>11.97</u> | | <u>8.17</u> | | <u>5.58</u> | | <u>5.53</u> | | | | <u>6.02</u> | <i>Jun-13</i> |
| Over/Under | | | 0.03 | | -0.47 | | 0.16 | | 0.06 | | -0.61 | | | | -0.52 | |
| AEGON USA (On Watch) | 389,013,178 | 37.80 | 1.43 | 42 | 11.43 | 38 | 6.48 | 38 | 6.07 | 27 | 5.50 | 15 | | | 5.84 | Jun-13 |
| <i>BBgBarc US High Yield 2% Issuer Cap TR</i> | | | <u>1.33</u> | 49 | <u>11.41</u> | 39 | <u>6.35</u> | 39 | <u>6.07</u> | 27 | <u>5.38</u> | 21 | | | <u>5.83</u> | <i>Jun-13</i> |
| Over/Under | | | 0.10 | | 0.02 | | 0.13 | | 0.00 | | 0.12 | | | | 0.01 | |
| <i>eV US High Yield Fixed Inc Net Median</i> | | | 1.32 | | 10.97 | | 5.97 | | 5.60 | | 4.75 | | | | 5.25 | <i>Jun-13</i> |
| Prudential Emerging Markets | 424,910,221 | 41.29 | 1.79 | 5 | 14.18 | 4 | 12.96 | 3 | 5.56 | 17 | 6.18 | 3 | | | 5.71 | May-14 |
| <i>JP Morgan EMBI Global Diversified</i> | | | <u>1.50</u> | 13 | <u>12.99</u> | 8 | <u>11.57</u> | 13 | <u>4.61</u> | 39 | <u>5.74</u> | 6 | | | <u>5.33</u> | <i>May-14</i> |
| Over/Under | | | 0.29 | | 1.19 | | 1.39 | | 0.95 | | 0.44 | | | | 0.38 | |
| <i>eV Emg Mkt Fixed Inc Hedged Net Median</i> | | | -0.42 | | 10.06 | | 10.10 | | 4.18 | | 4.05 | | | | 3.41 | <i>May-14</i> |
| Bain Capital Senior Loan Fund, LP | 215,117,177 | 20.90 | 0.68 | 83 | 6.43 | 52 | 3.31 | 32 | 4.65 | 11 | | | | | 4.01 | Jun-15 |
| <i>Credit Suisse Leveraged Loans</i> | | | <u>0.92</u> | 64 | <u>6.39</u> | 53 | <u>3.11</u> | 38 | <u>4.68</u> | 11 | | | | | <u>4.25</u> | <i>Jun-15</i> |
| Over/Under | | | -0.24 | | 0.04 | | 0.20 | | -0.03 | | | | | | -0.24 | |
| <i>eV US Float-Rate Bank Loan Fixed Inc Net Median</i> | | | 1.01 | | 6.54 | | 2.87 | | 4.09 | | | | | | 3.81 | <i>Jun-15</i> |

- Credit Opportunities Blend = 65% BBgBarc US High Yield 2% Issuer Cap TR / 35% JP Morgan EMBI Global Diversified 7/01/2014 to present; BBgBarc US High Yield 2% Issuer Cap TR prior to

eA = eVestment Alliance

BBgBarc = Bloomberg Barclays



MANAGER REPORT CARD

| Credit Opportunities Managers | Inception Date | Mandate | Current Quarter (Net) | | One Year (Net) | | Three Years (Net) | | Five Years (Net) | | Since Inception (Net) | Annual Mgt Fee Paid \$ (000) | Comments |
|-------------------------------|----------------|----------------------|-----------------------|----------|----------------|----------|-------------------|----------|------------------|----------|-----------------------|------------------------------|--|
| | | | Index | Universe | Index | Universe | Index | Universe | Index | Universe | Index | | |
| AEGON USA | Jun-13 | High Yield Bonds | ✓ | ✓ | ✓ | ✓ | = | ✓ | ✓ | ✓ | ✓ | 1428.4 | On Watch since October 2017 due to organizational reasons |
| Prudential | May-14 | Emerging Market Debt | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 1432.7 | Performance compliant with LACERS' Manager Monitoring Policy |
| Bain | Jun-15 | Bank Loans | ✗ | ✗ | ✓ | ✓ | ✗ | ✓ | N/A | N/A | ✗ | 754.3 | Performance compliant with LACERS' Manager Monitoring Policy |

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2019.
- * Where net of fees performance is not available gross of fee returns are evaluated.

| Legend | |
|--------|----------------|
| ✓ | Outperformed |
| ✗ | Underperformed |
| = | Equal to |
| ✓✓ | Gross Return |



REAL ASSETS

NEPC, LLC

Los Angeles City Employees' Retirement System

REAL ASSETS (GROSS)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|--|----------------------|-------------------|--------------|--------------|--------------|--------------|--------------|---------------|------------------|-------------------|
| Real Assets | 1,914,717,557 | 100.00 | 1.17 | 7.20 | 6.59 | 5.30 | 6.28 | 6.09 | 6.32 | Nov-94 |
| <i>CPI + 5% (Unadjusted)</i> | | | <u>1.47</u> | <u>6.00</u> | <u>6.79</u> | <u>7.17</u> | <u>6.60</u> | <u>6.82</u> | <u>7.30</u> | <i>Nov-94</i> |
| Over/Under | | | -0.30 | 1.20 | -0.20 | -1.87 | -0.32 | -0.73 | -0.98 | |
| Public Real Assets | 1,122,751,107 | 58.64 | 1.56 | 10.03 | 7.10 | 2.76 | 2.57 | | 2.00 | Jun-14 |
| <i>Public Real Assets Blend</i> | | | <u>0.71</u> | <u>9.12</u> | <u>4.18</u> | <u>1.84</u> | <u>0.42</u> | | <u>-0.30</u> | <i>Jun-14</i> |
| Over/Under | | | 0.85 | 0.91 | 2.92 | 0.92 | 2.15 | | 2.30 | |
| TIPS | 676,555,603 | 35.33 | 0.80 | 7.74 | 7.74 | 2.27 | 2.51 | | 1.96 | Jul-14 |
| <i>BBgBarc US TIPS TR</i> | | | <u>1.34</u> | <u>7.58</u> | <u>7.13</u> | <u>2.21</u> | <u>2.45</u> | | <u>1.95</u> | <i>Jul-14</i> |
| Over/Under | | | -0.54 | 0.16 | 0.61 | 0.06 | 0.06 | | 0.01 | |
| DFA US TIPS ¹ | 676,555,603 | 35.33 | 0.80 | 7.74 | 7.74 | 2.27 | 2.65 | | 2.10 | Aug-14 |
| <i>BBgBarc US TIPS TR</i> | | | <u>1.34</u> | <u>7.58</u> | <u>7.13</u> | <u>2.21</u> | <u>2.45</u> | | <u>1.95</u> | <i>Aug-14</i> |
| Over/Under | | | -0.54 | 0.16 | 0.61 | 0.06 | 0.20 | | 0.15 | |
| REITS | 233,334,852 | 12.19 | 7.84 | 29.97 | 21.34 | 9.53 | | | 9.88 | Mar-15 |
| <i>FTSE NAREIT All Equity REIT</i> | | | <u>7.73</u> | <u>28.49</u> | <u>20.70</u> | <u>8.89</u> | | | <u>8.34</u> | <i>Mar-15</i> |
| Over/Under | | | 0.11 | 1.48 | 0.64 | 0.64 | | | 1.54 | |
| CenterSquare US Real Estate ¹ | 233,334,852 | 12.19 | 7.84 | 29.97 | 21.34 | 9.53 | | | 10.84 | May-15 |
| <i>FTSE NAREIT All Equity REIT</i> | | | <u>7.73</u> | <u>28.49</u> | <u>20.70</u> | <u>8.89</u> | | | <u>9.76</u> | <i>May-15</i> |
| Over/Under | | | 0.11 | 1.48 | 0.64 | 0.64 | | | 1.08 | |
| Commodities | 212,860,652 | 11.12 | -2.29 | 2.38 | -7.00 | -0.95 | | | -4.75 | Jun-15 |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>-1.84</u> | <u>3.13</u> | <u>-6.58</u> | <u>-1.50</u> | | | <u>-5.22</u> | <i>Jun-15</i> |
| Over/Under | | | -0.45 | -0.75 | -0.42 | 0.55 | | | 0.47 | |
| CoreCommodity Mgmt ¹ | 212,860,652 | 11.12 | -2.29 | 2.38 | -7.00 | -0.95 | | | -4.75 | Jul-15 |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>-1.84</u> | <u>3.13</u> | <u>-6.58</u> | <u>-1.50</u> | | | <u>-5.22</u> | <i>Jul-15</i> |
| Over/Under | | | -0.45 | -0.75 | -0.42 | 0.55 | | | 0.47 | |
| Private Real Estate | 771,613,807 | 40.30 | 0.68 | 3.96 | 5.96 | 7.68 | 9.09 | 7.55 | 6.89 | Oct-94 |
| <i>Real Estate Blend</i> | | | <u>1.51</u> | <u>4.39</u> | <u>6.43</u> | <u>8.16</u> | <u>10.21</u> | <u>10.88</u> | <u>9.83</u> | <i>Oct-94</i> |
| Over/Under | | | -0.83 | -0.43 | -0.47 | -0.48 | -1.12 | -3.33 | -2.94 | |
| Timber | 20,352,642 | 1.06 | -0.50 | 2.79 | 2.77 | 2.44 | 2.90 | 4.51 | 9.26 | Sep-99 |

¹ Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

- Public Real Assets Custom Benchmark = 60% BBgBarc US TIPS TR / 20% Bloomberg Commodity Index TR USD / 10% Alerian MLP TR USD / 10% FTSE NAREIT All REIT

- Real Estate Blend = NCREIF-ODCE + 80bps 7/1/2014 to present; NCREIF Property Index 1 Qtr Lag plus 100bps 7/1/2012 - 6/30/2014; NCREIF Property Index prior to

eA = eVestment Alliance



Los Angeles City Employees' Retirement System

REAL ASSETS (NET)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|--|----------------------|-------------------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|------|---------------|------|------------------|-------------------|
| Real Assets | 1,914,717,557 | 100.00 | 1.14 | | 7.08 | | 6.43 | | 5.13 | | 6.12 | | 5.95 | | | Nov-94 |
| <i>CPI + 5% (Unadjusted)</i> | | | <u>1.47</u> | | <u>6.00</u> | | <u>6.79</u> | | <u>7.17</u> | | <u>6.60</u> | | <u>6.82</u> | | | <i>Nov-94</i> |
| Over/Under | | | -0.33 | | 1.08 | | -0.36 | | -2.04 | | -0.48 | | -0.87 | | | |
| Public Real Assets | 1,122,751,107 | 58.64 | 1.51 | | 9.87 | | 6.89 | | 2.51 | | 2.36 | | | | 1.80 | Jun-14 |
| <i>Public Real Assets Blend</i> | | | <u>0.71</u> | | <u>9.12</u> | | <u>4.18</u> | | <u>1.84</u> | | <u>0.42</u> | | | | <u>-0.30</u> | <i>Jun-14</i> |
| Over/Under | | | 0.80 | | 0.75 | | 2.71 | | 0.67 | | 1.94 | | | | 2.10 | |
| TIPS | 676,555,603 | 35.33 | 0.78 | | 7.70 | | 7.69 | | 2.21 | | 2.45 | | | | 1.90 | Jul-14 |
| <i>BBgBarc US TIPS TR</i> | | | <u>1.34</u> | | <u>7.58</u> | | <u>7.13</u> | | <u>2.21</u> | | <u>2.45</u> | | | | <u>1.95</u> | <i>Jul-14</i> |
| Over/Under | | | -0.56 | | 0.12 | | 0.56 | | 0.00 | | 0.00 | | | | -0.05 | |
| DFA US TIPS¹ | 676,555,603 | 35.33 | 0.78 | 68 | 7.70 | 35 | 7.69 | 15 | 2.21 | 41 | 2.60 | 17 | | | 2.05 | Aug-14 |
| <i>BBgBarc US TIPS TR</i> | | | <u>1.34</u> | 38 | <u>7.58</u> | 47 | <u>7.13</u> | 34 | <u>2.21</u> | 41 | <u>2.45</u> | 25 | | | <u>1.95</u> | <i>Aug-14</i> |
| Over/Under | | | -0.56 | | 0.12 | | 0.56 | | 0.00 | | 0.15 | | | | 0.10 | |
| <i>eV US TIPS / Inflation Fixed Inc Net Median</i> | | | 1.18 | | 7.55 | | 6.50 | | 2.16 | | 2.26 | | | | 1.63 | <i>Aug-14</i> |
| REITS | 233,334,852 | 12.19 | 7.77 | | 29.60 | | 20.85 | | 9.05 | | | | | | 9.42 | Mar-15 |
| <i>FTSE NAREIT All Equity REIT</i> | | | <u>7.73</u> | | <u>28.49</u> | | <u>20.70</u> | | <u>8.89</u> | | | | | | <u>8.34</u> | <i>Mar-15</i> |
| Over/Under | | | 0.04 | | 1.11 | | 0.15 | | 0.16 | | | | | | 1.08 | |
| CenterSquare US Real Estate¹ | 233,334,852 | 12.19 | 7.77 | 45 | 29.60 | 27 | 20.85 | 25 | 9.05 | 25 | | | | | 10.37 | May-15 |
| <i>FTSE NAREIT All Equity REIT</i> | | | <u>7.73</u> | 45 | <u>28.49</u> | 46 | <u>20.70</u> | 25 | <u>8.89</u> | 26 | | | | | <u>9.76</u> | <i>May-15</i> |
| Over/Under | | | 0.04 | | 1.11 | | 0.15 | | 0.16 | | | | | | 0.61 | |
| <i>eV US REIT Net Median</i> | | | 7.62 | | 28.06 | | 18.57 | | 7.65 | | | | | | 8.37 | <i>May-15</i> |
| Commodities | 212,860,652 | 11.12 | -2.40 | | 1.96 | | -7.53 | | -1.69 | | | | | | -5.43 | Jun-15 |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>-1.84</u> | | <u>3.13</u> | | <u>-6.58</u> | | <u>-1.50</u> | | | | | | <u>-5.22</u> | <i>Jun-15</i> |
| Over/Under | | | -0.56 | | -1.17 | | -0.95 | | -0.19 | | | | | | -0.21 | |
| CoreCommodity Mgmt¹ | 212,860,652 | 11.12 | -2.40 | | 1.96 | | -7.53 | | -1.69 | | | | | | -5.43 | Jul-15 |
| <i>Bloomberg Commodity Index TR USD</i> | | | <u>-1.84</u> | | <u>3.13</u> | | <u>-6.58</u> | | <u>-1.50</u> | | | | | | <u>-5.22</u> | <i>Jul-15</i> |
| Over/Under | | | -0.56 | | -1.17 | | -0.95 | | -0.19 | | | | | | -0.21 | |

1 Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance. No universe is available.

- Public Real Assets Custom Benchmark = 60% BBgBarc US TIPS TR / 20% Bloomberg Commodity Index TR USD / 10% Alerian MLP TR USD / 10% FTSE NAREIT All REIT

eA = eVestment Alliance



Los Angeles City Employees' Retirement System

REAL ASSETS (NET)

| | Market Value (\$) | % of Portfolio | 3 Mo (%) | Rank | YTD (%) | Rank | 1 Yr (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank | Inception (%) | Inception Date |
|---|----------------------|-------------------|--------------|-----------|-------------|-----------|-------------|-----------|--------------|-----------|--------------|-----------|---------------|-----------|------------------|-------------------|
| Private Real Estate | 771,613,807 | 40.30 | 0.66 | 74 | 3.89 | 61 | 5.86 | 39 | 7.60 | 45 | 8.99 | 62 | 7.43 | 93 | | Oct-94 |
| <i>Real Estate Blend</i> | | | <u>1.51</u> | 43 | <u>4.39</u> | 58 | <u>6.43</u> | 19 | <u>8.16</u> | 10 | <u>10.21</u> | 14 | <u>10.88</u> | 17 | | Oct-94 |
| Over/Under | | | -0.85 | | -0.50 | | -0.57 | | -0.56 | | -1.22 | | -3.45 | | | |
| <i>InvMetrics Public DB Real Estate Priv Net Median</i> | | | 1.42 | | 4.54 | | 5.80 | | 7.45 | | 9.34 | | 9.83 | | | Oct-94 |
| Timber | 20,352,642 | 1.06 | -0.50 | | 2.79 | | 2.77 | | 2.44 | | 2.89 | | 4.45 | | | Sep-99 |

- Real Estate Blend = NCREIF-ODCE + 80bps 7/1/2014 to present; NCREIF Property Index 1 Qtr Lag plus 100bps 7/1/2012 - 6/30/2014; NCREIF Property Index prior to eA = eVestment Alliance



MANAGER REPORT CARD

| Real Assets Managers | Inception Date | Mandate | Current Quarter (Net) | | One Year (Net) | | Three Years (Net) | | Five Years (Net) | | Since Inception (Net) | Annual Mgt Fee Paid \$ (000) | Comments |
|----------------------|----------------|-------------|-----------------------|----------|----------------|----------|-------------------|----------|------------------|----------|-----------------------|------------------------------|--|
| | | | Index | Universe | Index | Universe | Index | Universe | Index | Universe | Index | | |
| DFA | Jul-14 | U.S. TIPS | * | * | ✓ | ✓ | = | ✓ | ✓ | ✓ | ✓ | 333.9 | Performance compliant with LACERS' Manager Monitoring Policy |
| CenterSquare | Apr-15 | REITS | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | N/A | N/A | ✓ | 592.3 | Performance compliant with LACERS' Manager Monitoring Policy |
| CoreCommodity Mgt. | Jul-15 | Commodities | * | N/A | * | N/A | * | N/A | N/A | N/A | * | 983.9 | Performance compliant with LACERS' Manager Monitoring Policy |

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2019.
- * Where net of fees performance is not available gross of fee returns are evaluated.

| Legend | |
|--------|----------------|
| ✓ | Outperformed |
| * | Underperformed |
| = | Equal to |
| ✓✓ | Gross Return |



APPENDIX

NEPC, LLC

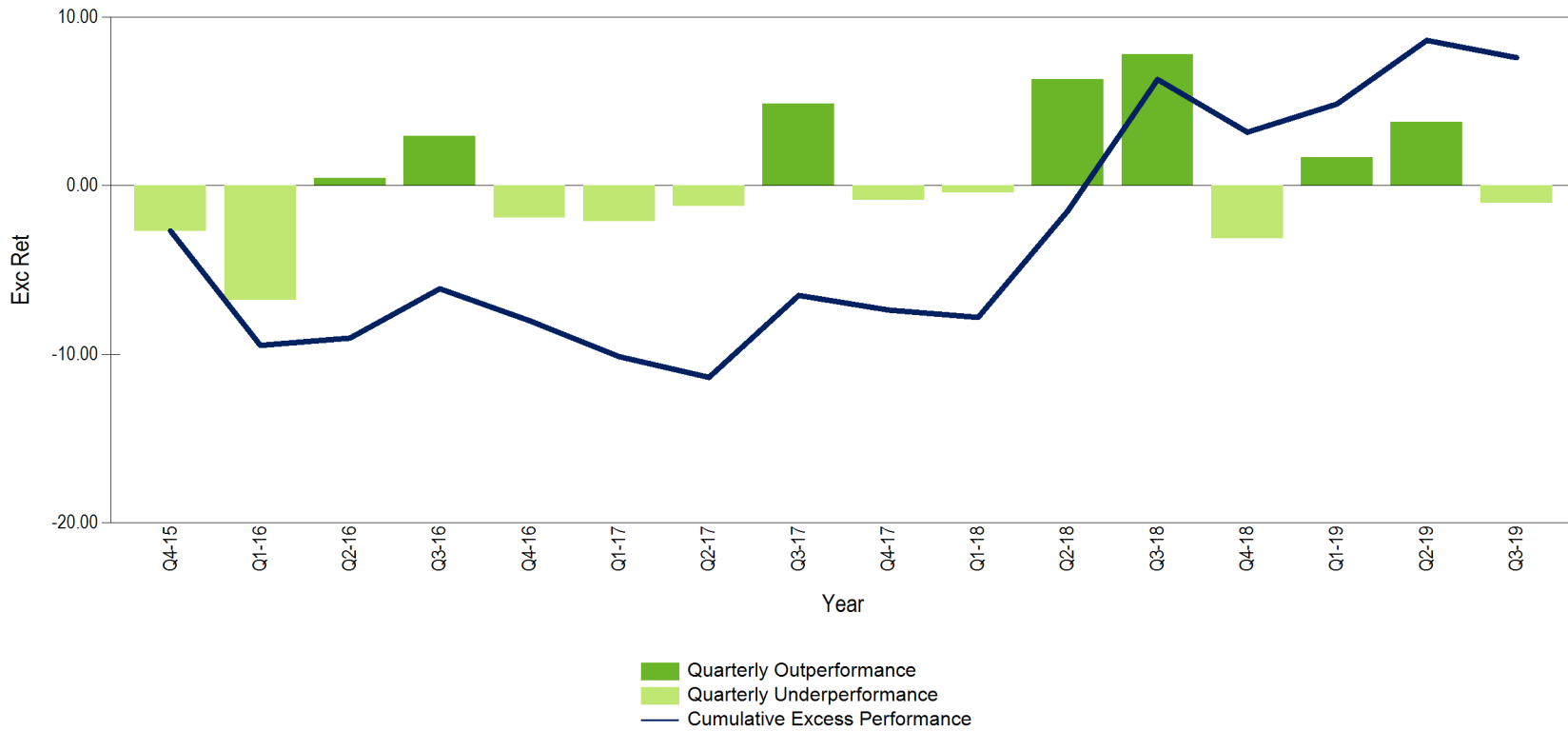
U.S. EQUITY MANAGER PERFORMANCE

NEPC, LLC

Los Angeles City Employees' Retirement System

EAM INVESTORS

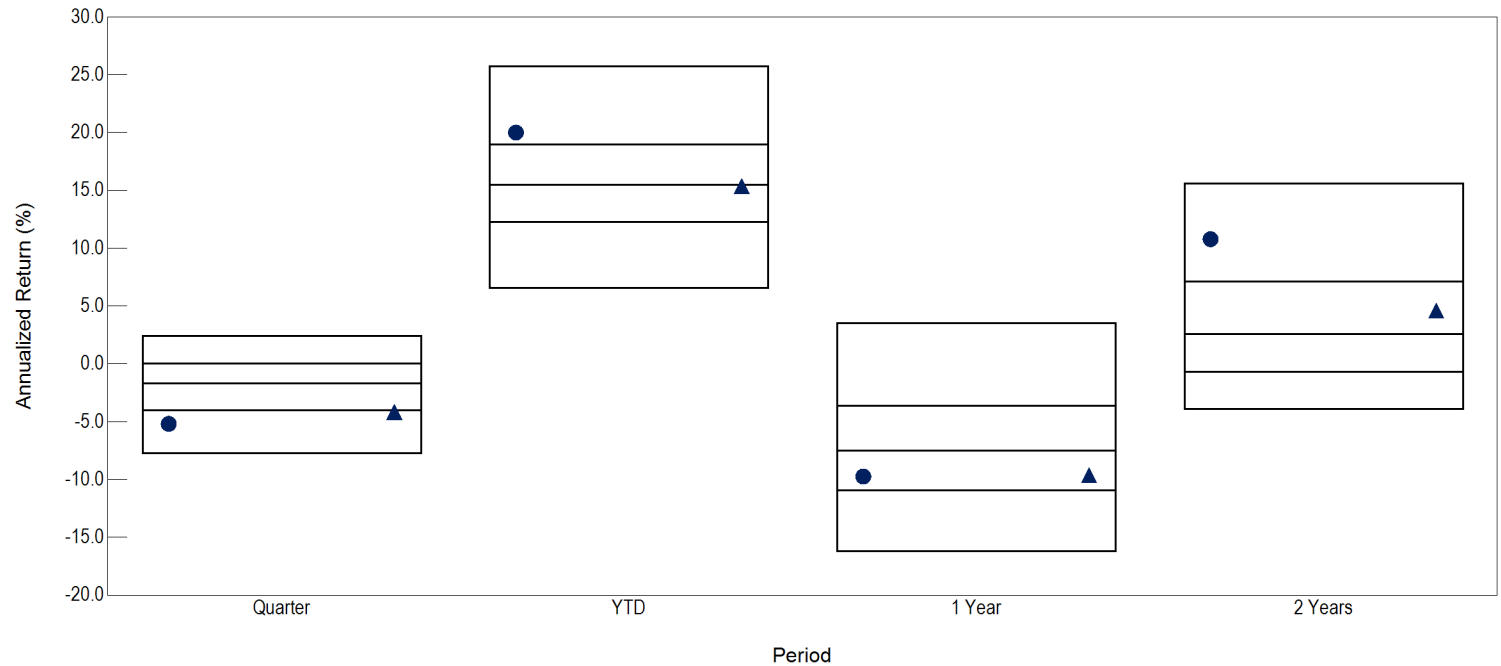
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

EAM INVESTORS

EAM Investors vs. eV US Small Cap Equity Net



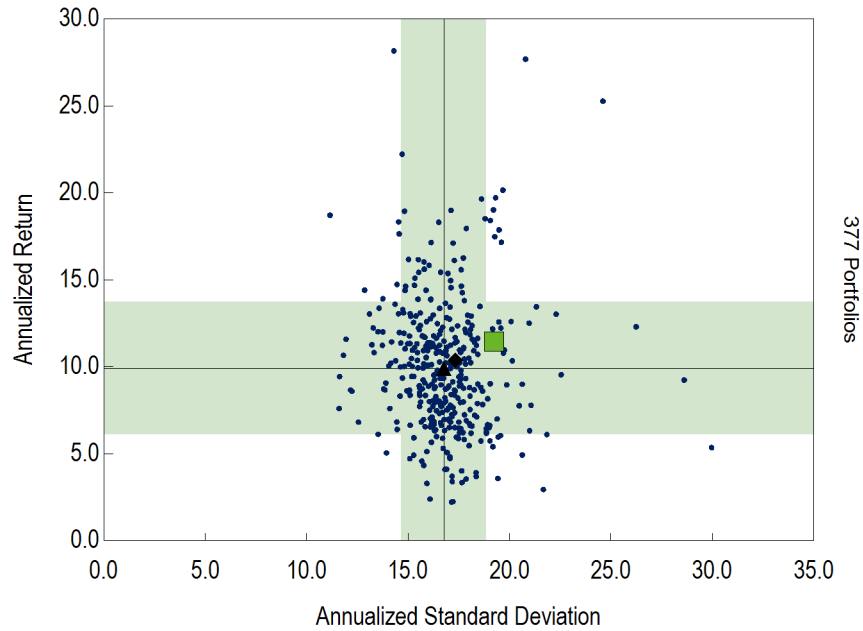
| | Return (Rank) | | Quarter | | YTD | | 1 Year | | 2 Years | |
|-----------------------|---------------|------|---------|------|--------|------|--------|------|---------|--|
| 5th Percentile | 2.40 | | 25.69 | | 3.50 | | 15.56 | | | |
| 25th Percentile | 0.09 | | 19.00 | | -3.55 | | 7.18 | | | |
| Median | -1.66 | | 15.54 | | -7.46 | | 2.61 | | | |
| 75th Percentile | -3.94 | | 12.30 | | -10.87 | | -0.66 | | | |
| 95th Percentile | -7.68 | | 6.60 | | -16.15 | | -3.85 | | | |
| # of Portfolios | 404 | | 404 | | 401 | | 398 | | | |
| ● EAM Investors | -5.20 | (86) | 19.99 | (21) | -9.75 | (68) | 10.77 | (14) | | |
| ▲ Russell 2000 Growth | -4.17 | (78) | 15.34 | (52) | -9.63 | (67) | 4.59 | (39) | | |



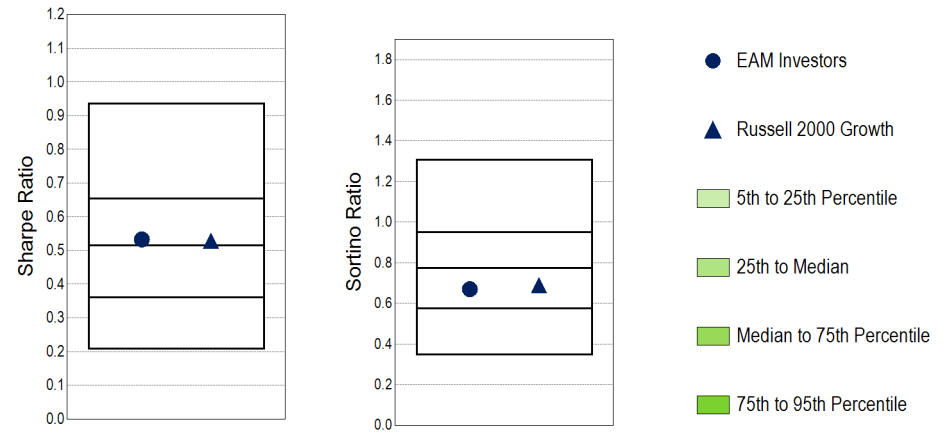
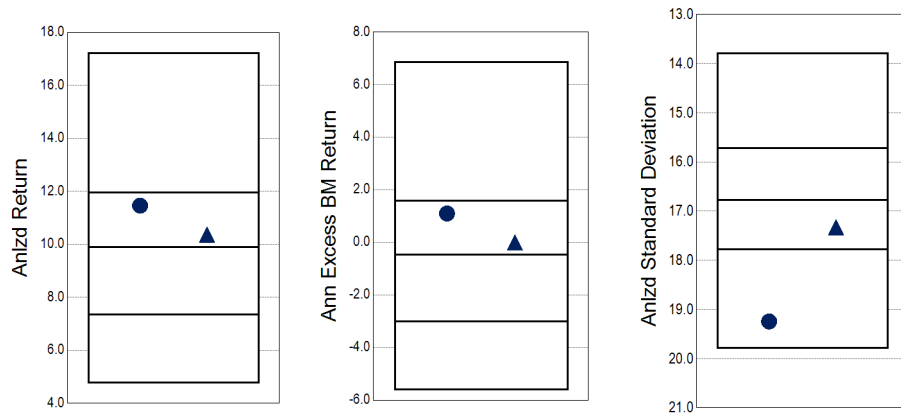
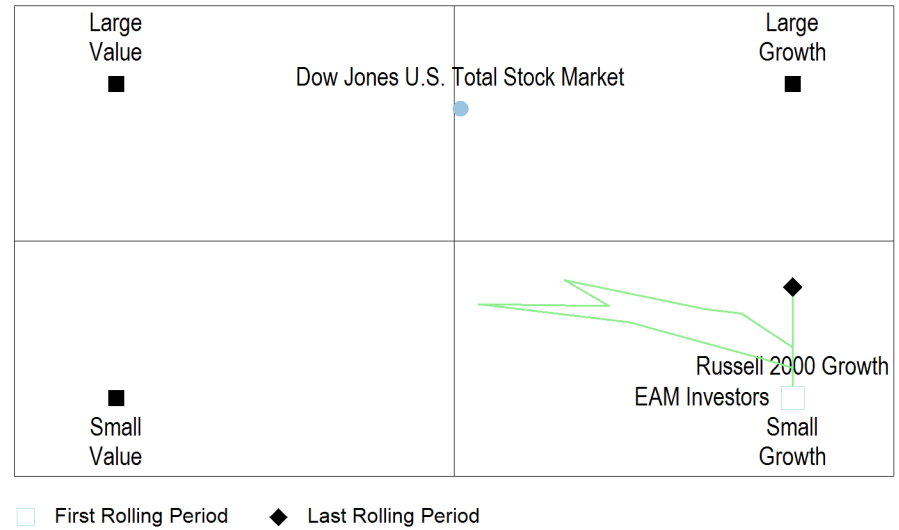
Los Angeles City Employees' Retirement System

EAM INVESTORS

Since Inception Risk Return

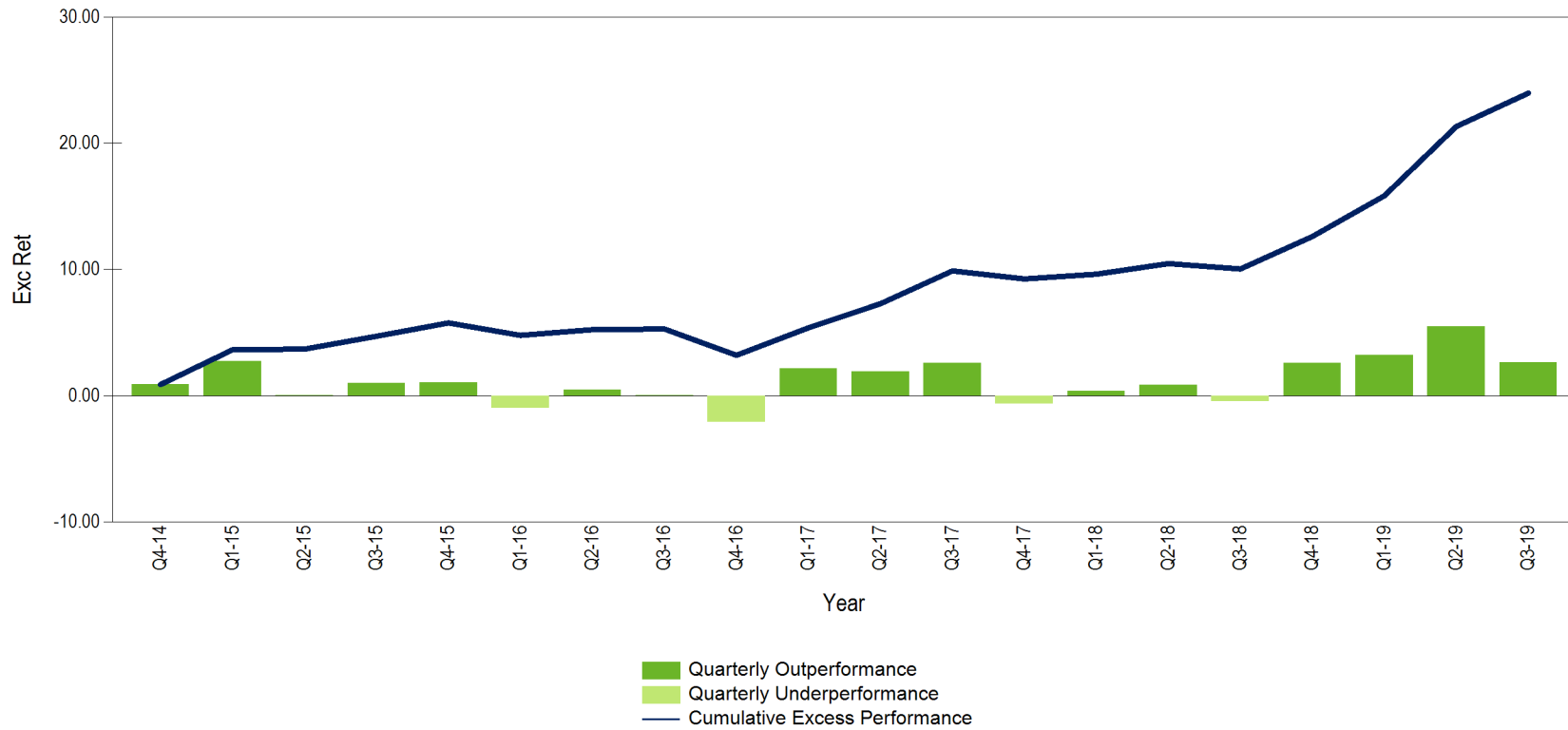


Since Inception Style Map



PRINCIPAL GLOBAL INVESTORS

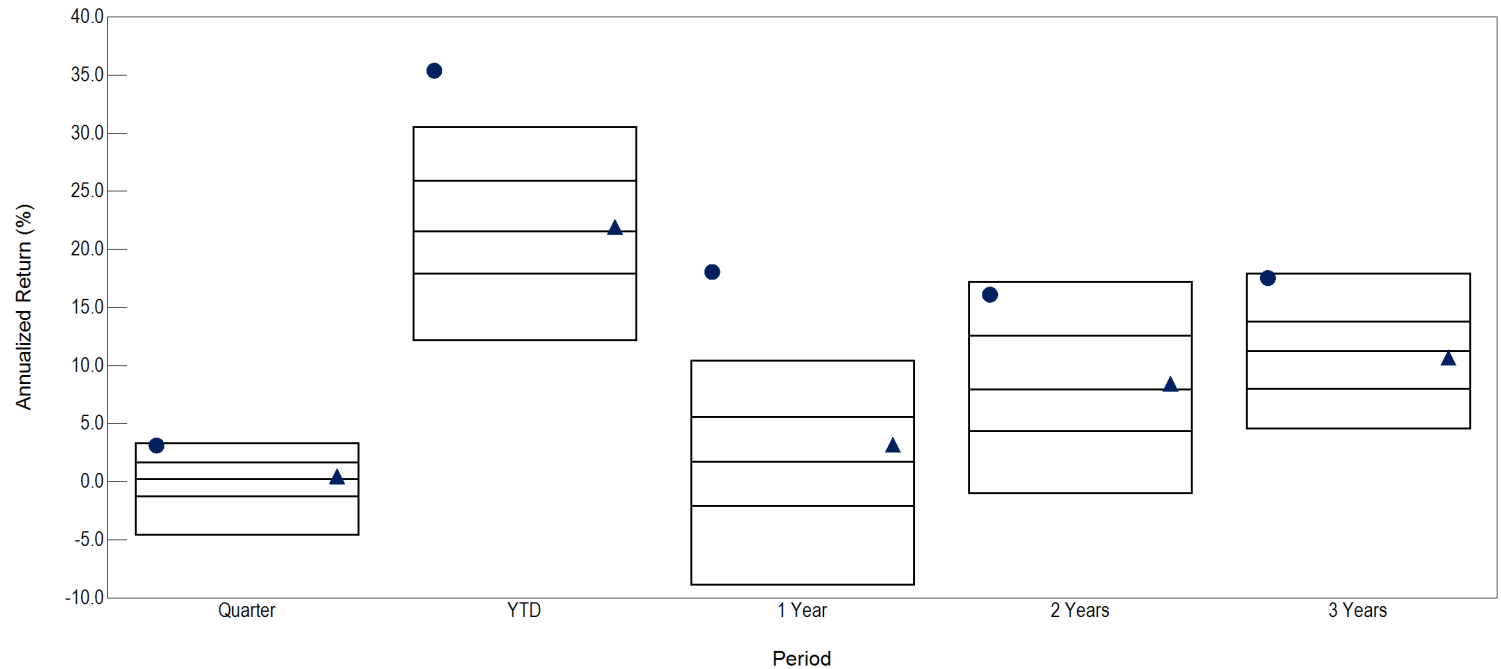
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

PRINCIPAL GLOBAL INVESTORS

Principal Global Investors vs. eV US Mid Cap Equity Net

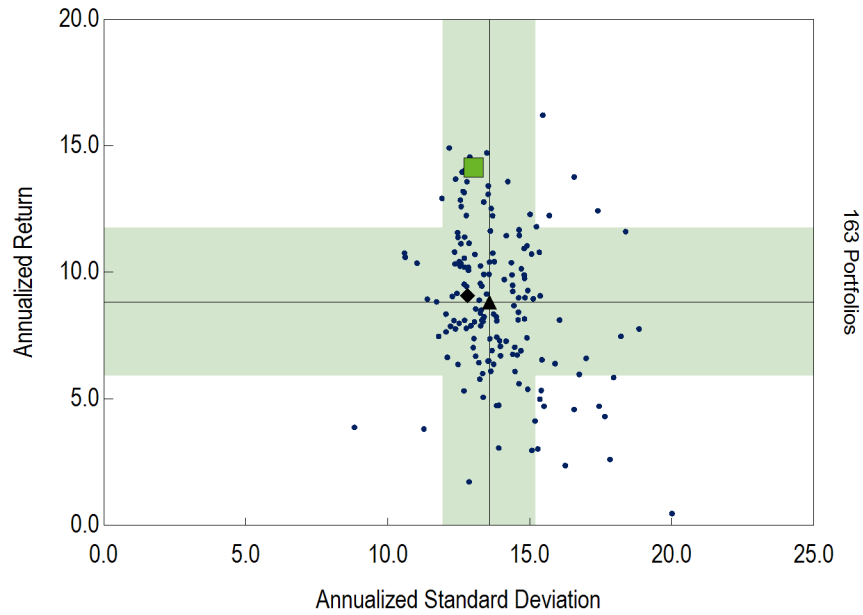


| | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | |
|------------------------------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|
| 5th Percentile | 3.31 | | 30.52 | | 10.44 | | 17.18 | | 17.90 | |
| 25th Percentile | 1.69 | | 25.96 | | 5.61 | | 12.65 | | 13.83 | |
| Median | 0.27 | | 21.59 | | 1.79 | | 8.00 | | 11.28 | |
| 75th Percentile | -1.18 | | 17.98 | | -2.04 | | 4.39 | | 8.03 | |
| 95th Percentile | -4.52 | | 12.26 | | -8.79 | | -0.91 | | 4.63 | |
| # of Portfolios | 175 | | 175 | | 173 | | 172 | | 170 | |
| ● Principal Global Investors | 3.12 | (7) | 35.38 | (1) | 18.06 | (1) | 16.10 | (8) | 17.53 | (7) |
| ▲ Russell MidCap | 0.48 | (46) | 21.93 | (49) | 3.19 | (41) | 8.45 | (48) | 10.69 | (55) |

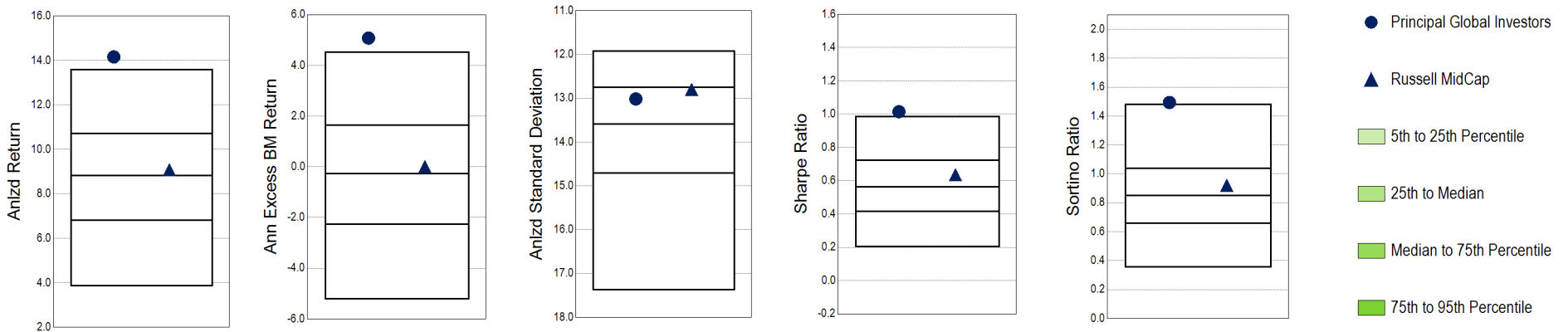
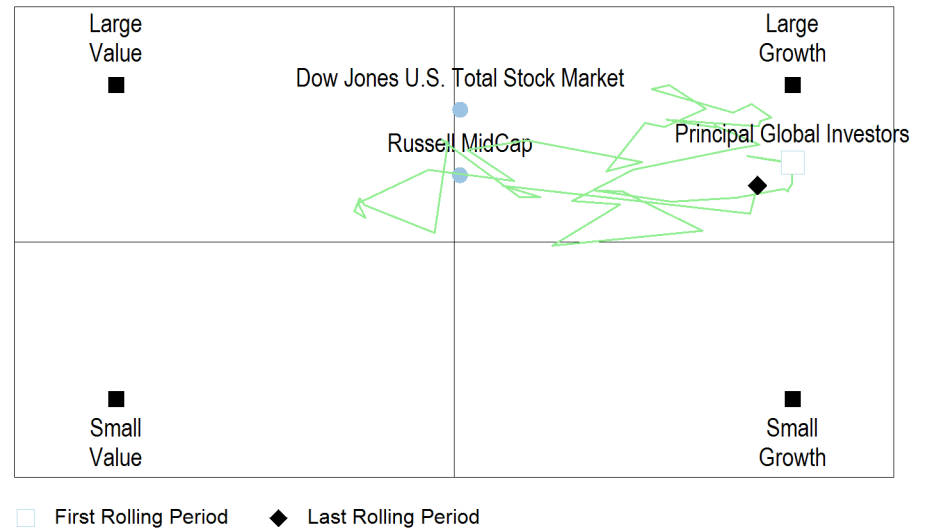


PRINCIPAL GLOBAL INVESTORS

Since Inception Risk Return

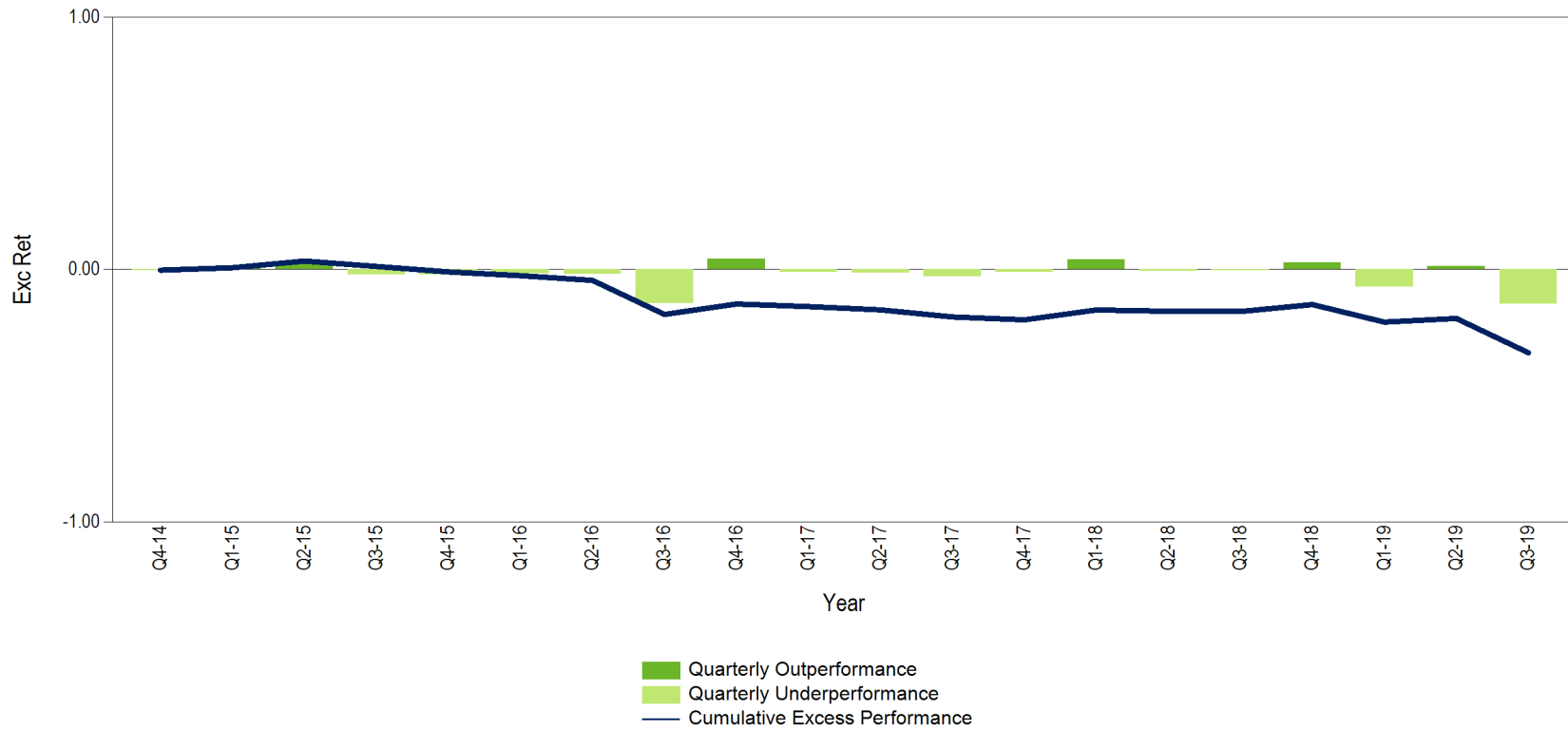


Since Inception Style Map



RHUMBLINE ADVISORS S&P 500

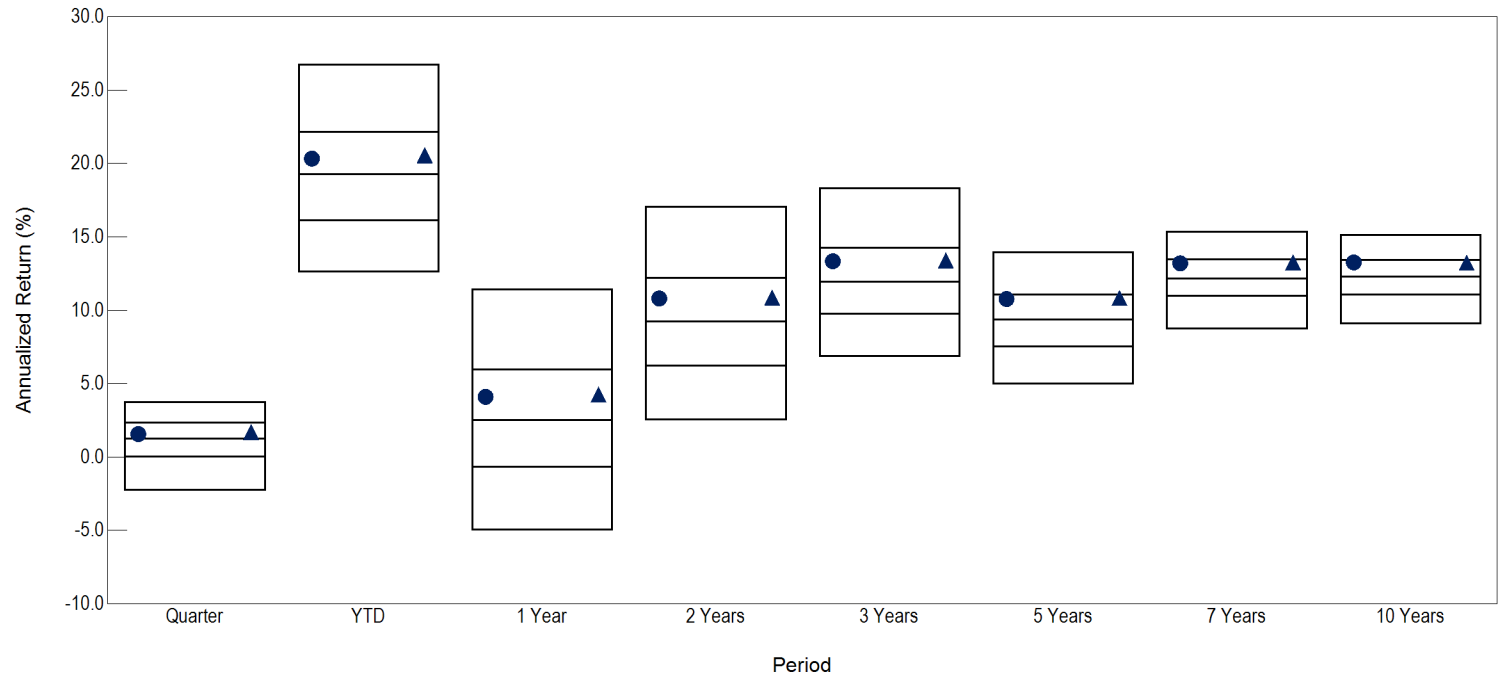
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

RHUMBLINE ADVISORS S&P 500

Rhumbline Advisors S&P 500 vs. eV US Large Cap Equity Net

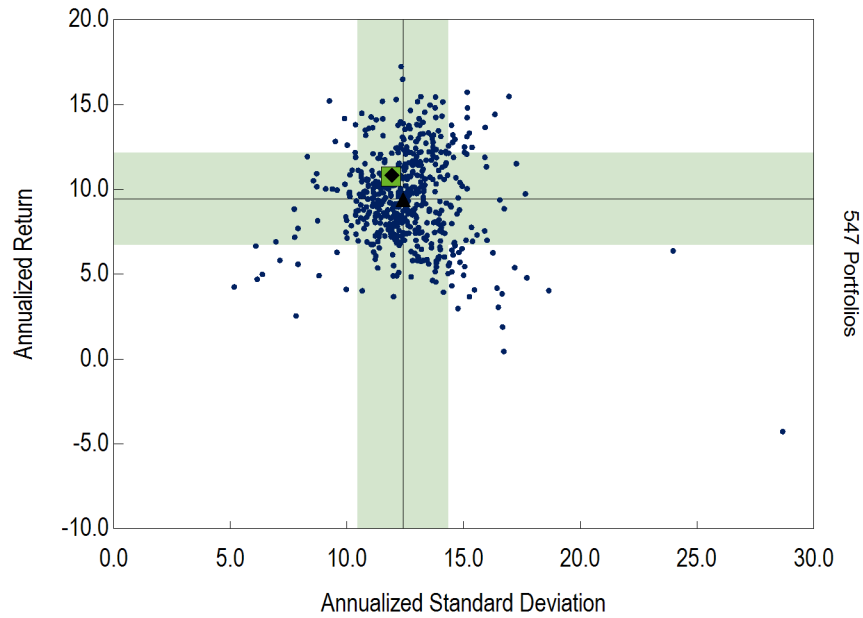


| | Return (Rank) | | | | | | | | | | | | | | | |
|------------------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|------|-------|------|
| 5th Percentile | 3.75 | 26.76 | 11.44 | 17.05 | 18.33 | 13.93 | 15.37 | 15.14 | | | | | | | | |
| 25th Percentile | 2.40 | 22.20 | 6.03 | 12.25 | 14.28 | 11.12 | 13.52 | 13.49 | | | | | | | | |
| Median | 1.28 | 19.31 | 2.56 | 9.27 | 12.01 | 9.43 | 12.22 | 12.32 | | | | | | | | |
| 75th Percentile | 0.06 | 16.18 | -0.64 | 6.28 | 9.82 | 7.58 | 11.01 | 11.10 | | | | | | | | |
| 95th Percentile | -2.20 | 12.71 | -4.92 | 2.62 | 6.95 | 5.06 | 8.80 | 9.17 | | | | | | | | |
| # of Portfolios | 606 | 606 | 597 | 591 | 578 | 547 | 498 | 435 | | | | | | | | |
| ● Rhumbline Advisors S&P 500 | 1.56 | (42) | 20.33 | (40) | 4.10 | (38) | 10.80 | (36) | 13.34 | (35) | 10.77 | (30) | 13.20 | (30) | 13.26 | (29) |
| ▲ S&P 500 | 1.70 | (40) | 20.55 | (37) | 4.25 | (36) | 10.87 | (35) | 13.39 | (34) | 10.84 | (29) | 13.26 | (29) | 13.24 | (29) |

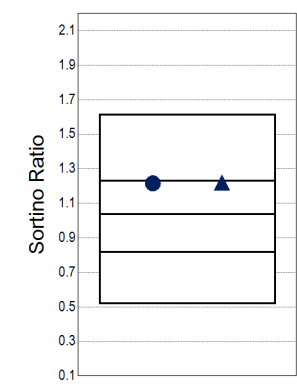
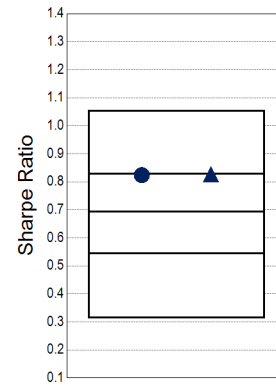
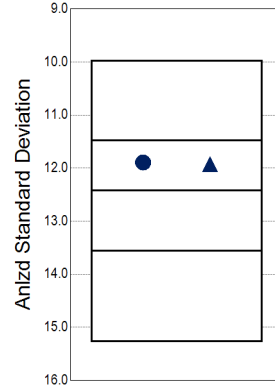
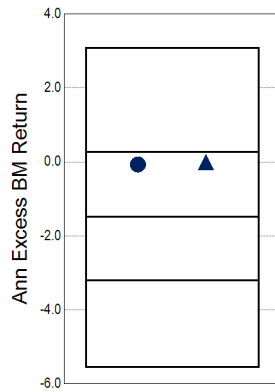
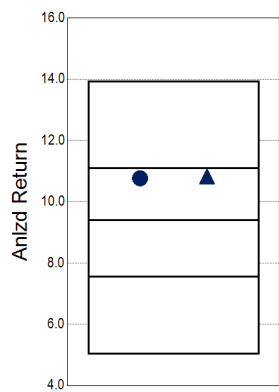
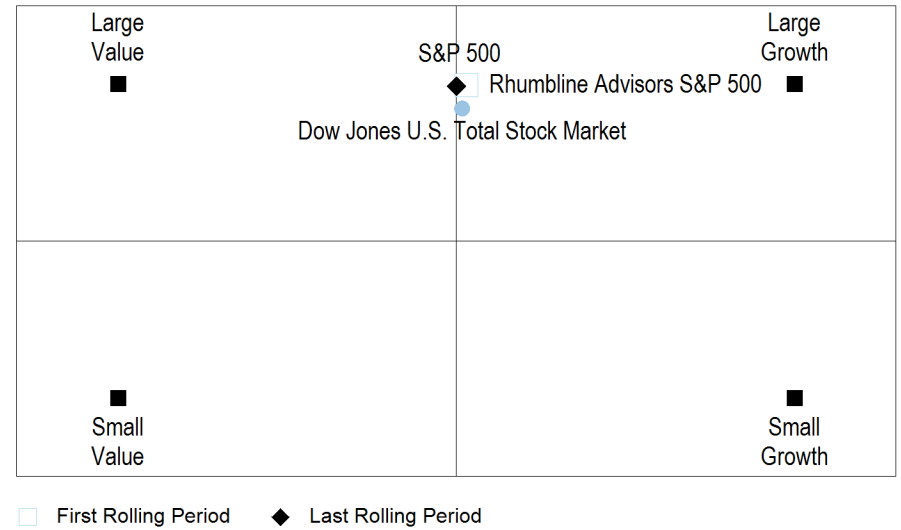


RHUMBLINE ADVISORS S&P 500

5 Year Risk Return



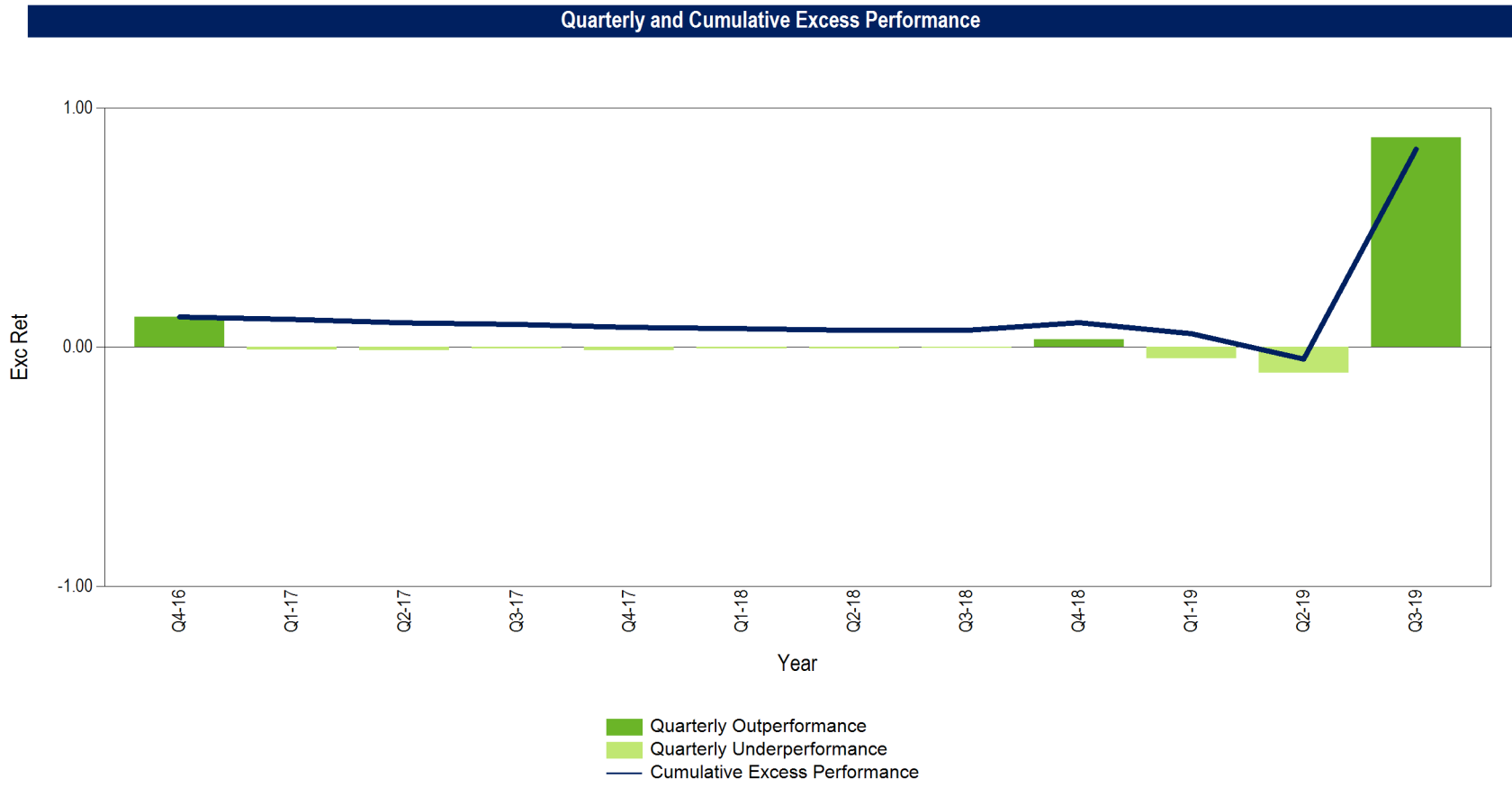
5 Year Style Map



- Rhumbline Advisors S&P 500
- ▲ S&P 500
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

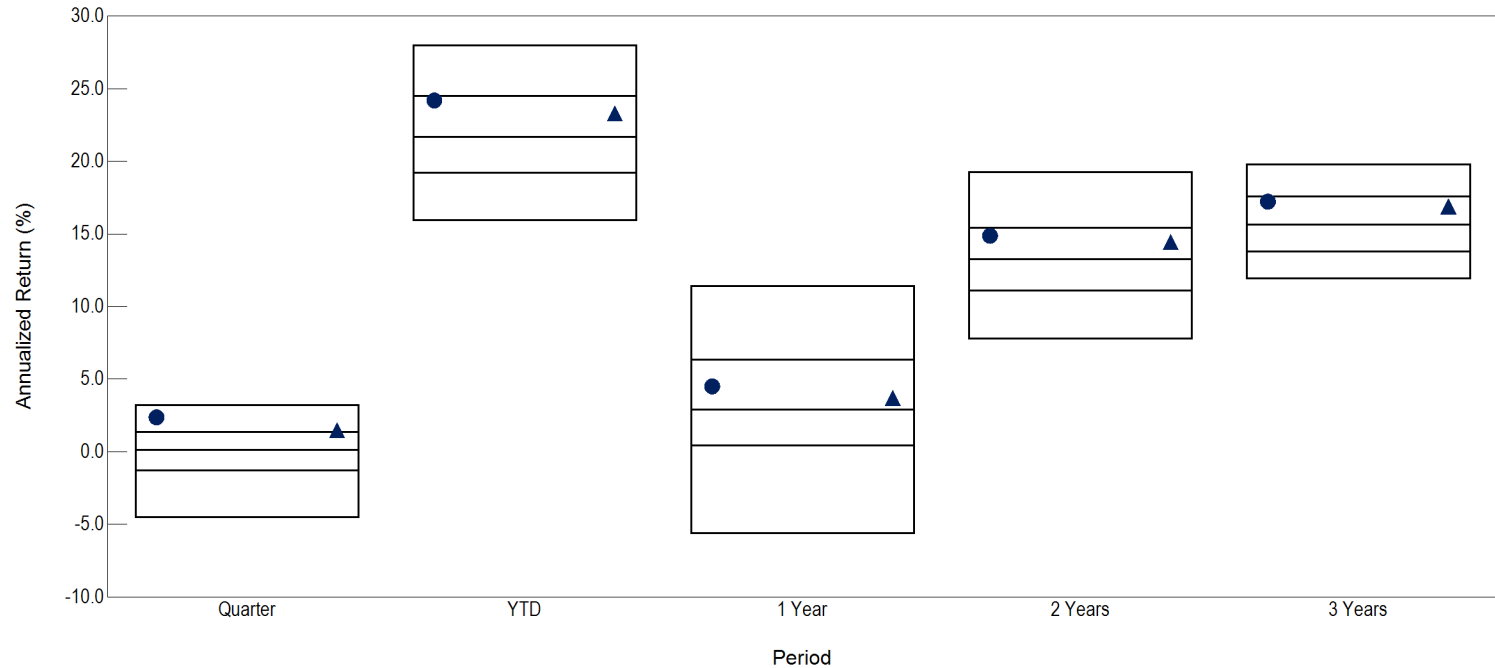


RHUMBLINE ADVISORS RUSSELL 1000 GROWTH



RHUMBLINE ADVISORS RUSSELL 1000 GROWTH

Rhumbline Advisors Russell 1000 Growth vs. eV US Large Cap Growth Equity Net

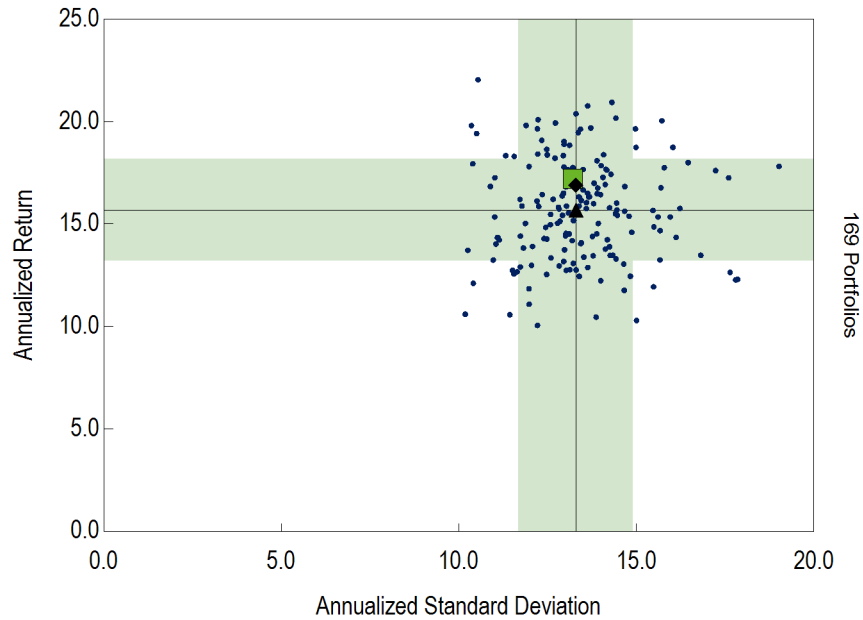


| | Return (Rank) | | | | | | | | | |
|--|---------------|------|-------|------|-------|------|-------|------|-------|------|
| 5th Percentile | 3.20 | | 27.99 | | 11.41 | | 19.26 | | 19.80 | |
| 25th Percentile | 1.39 | | 24.53 | | 6.40 | | 15.45 | | 17.63 | |
| Median | 0.19 | | 21.74 | | 2.95 | | 13.31 | | 15.68 | |
| 75th Percentile | -1.25 | | 19.24 | | 0.49 | | 11.14 | | 13.82 | |
| 95th Percentile | -4.47 | | 15.97 | | -5.57 | | 7.84 | | 12.00 | |
| # of Portfolios | 179 | | 179 | | 176 | | 174 | | 169 | |
| ● Rhumbline Advisors Russell 1000 Growth | 2.37 | (15) | 24.19 | (27) | 4.50 | (38) | 14.87 | (30) | 17.22 | (29) |
| ▲ Russell 1000 Growth | 1.49 | (23) | 23.30 | (33) | 3.71 | (44) | 14.45 | (34) | 16.89 | (31) |

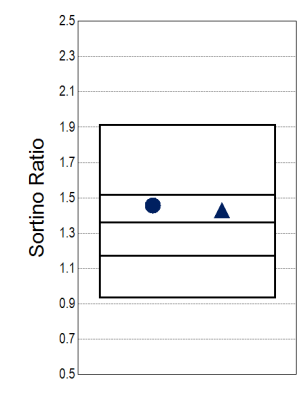
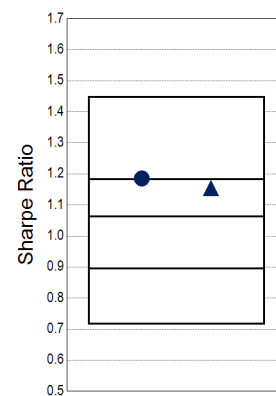
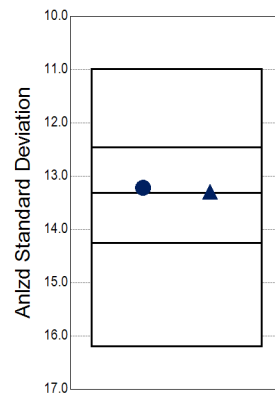
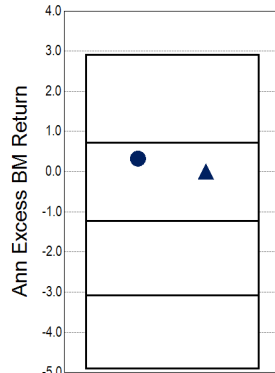
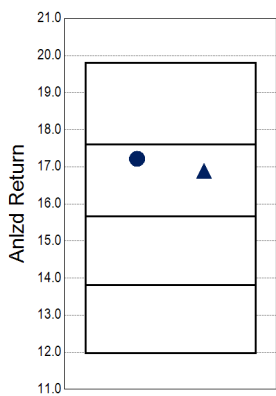
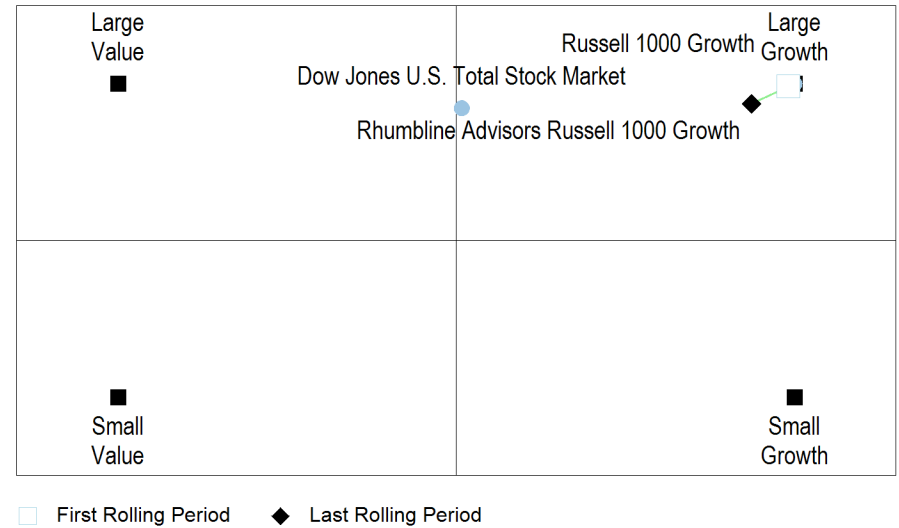


RHUMBLINE ADVISORS RUSSELL 1000 GROWTH

3 Year Risk Return



3 Year Style Map

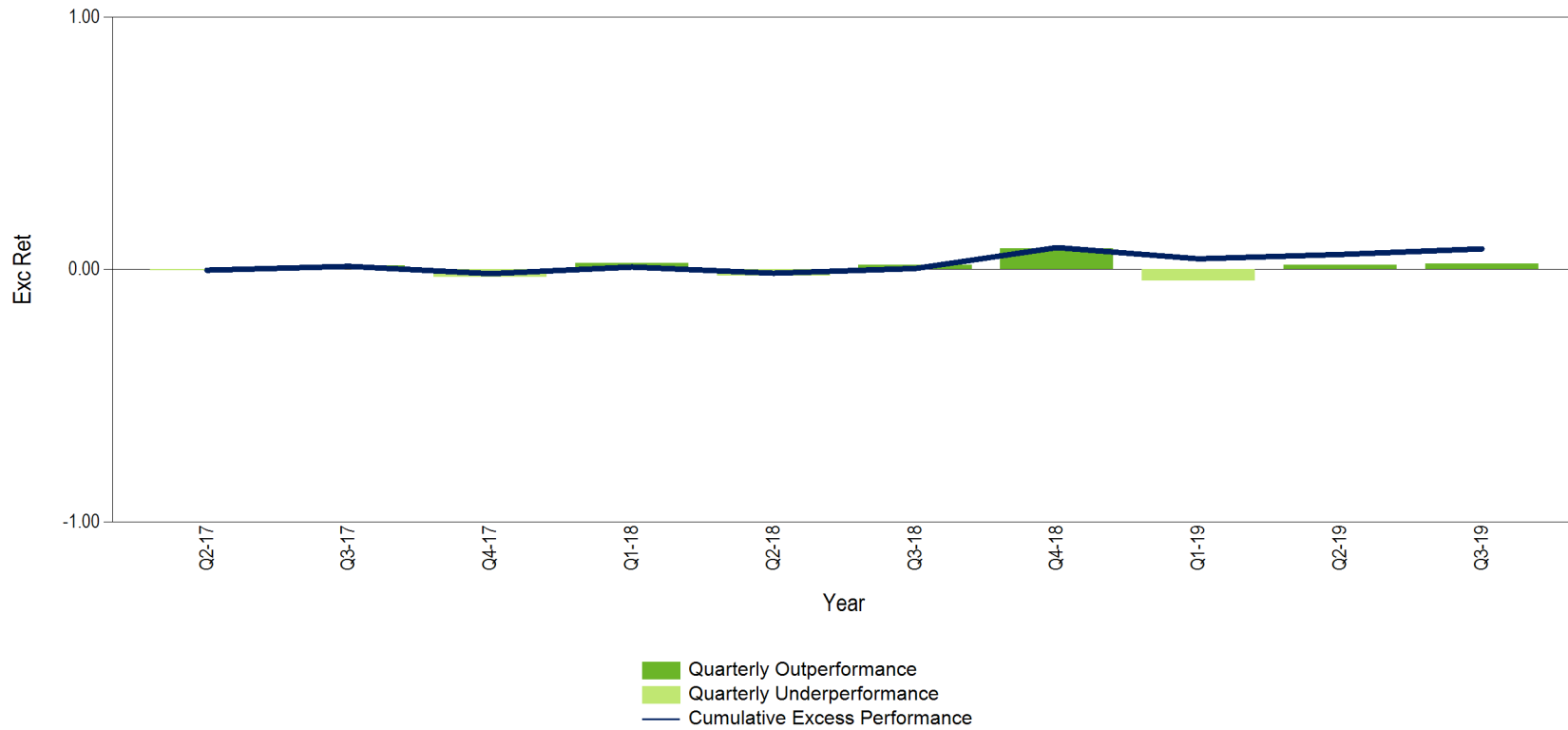


- Rhumbline Advisors Russell 1000 Growth
- ▲ Russell 1000 Growth
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



RHUMBLINE ADVISORS RUSSELL 2000

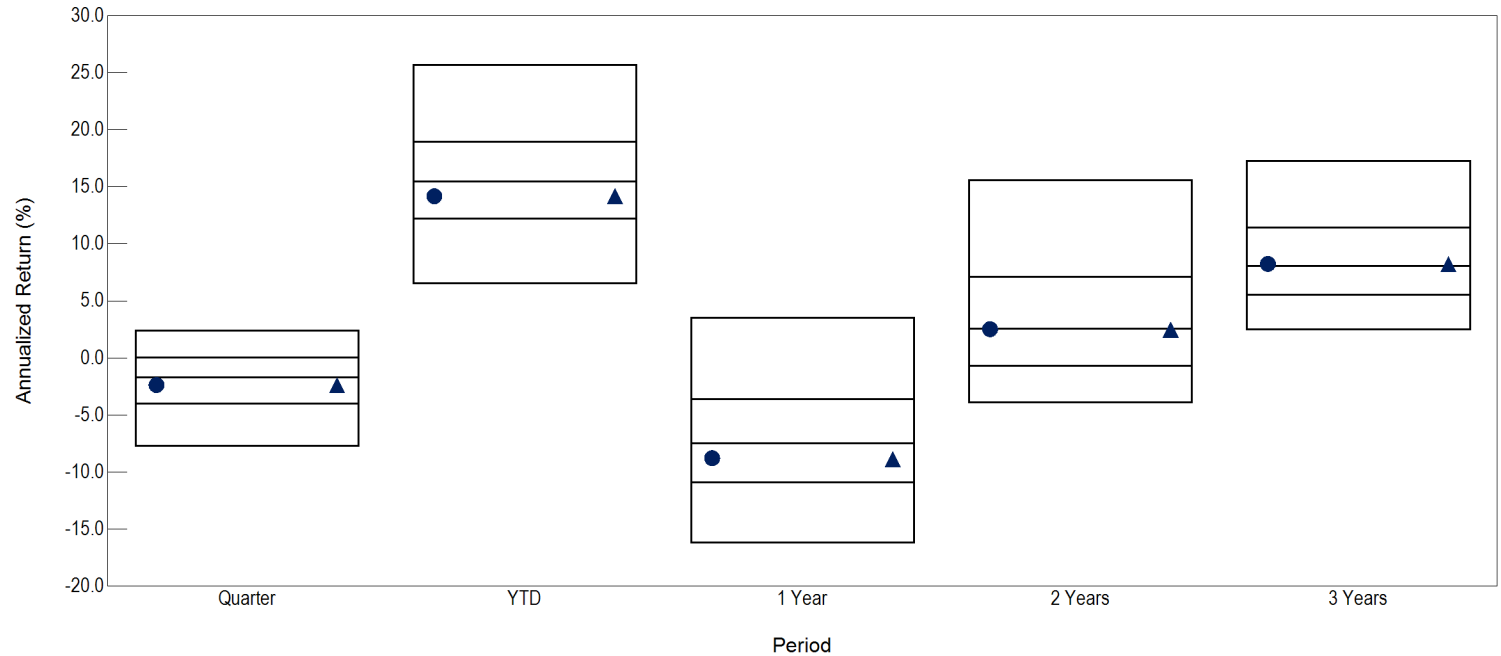
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

RHUMBLINE ADVISORS RUSSELL 2000

Rhumbline Advisors Russell 2000 vs. eV US Small Cap Equity Net

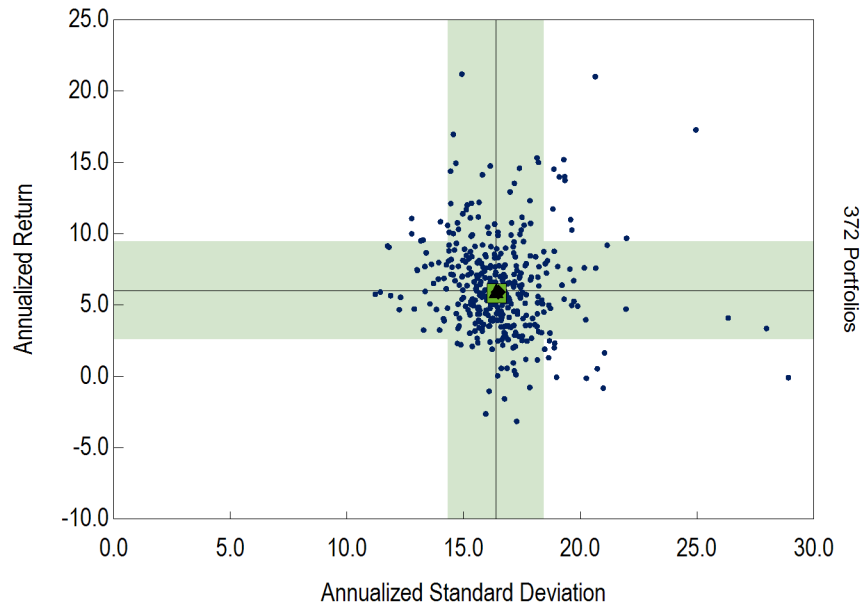


| | Return (Rank) | | | | | | | | | |
|-----------------------------------|---------------|------|-------|------|--------|------|-------|------|-------|------|
| 5th Percentile | 2.40 | | 25.69 | | 3.50 | | 15.56 | | 17.28 | |
| 25th Percentile | 0.09 | | 19.00 | | -3.55 | | 7.18 | | 11.46 | |
| Median | -1.66 | | 15.54 | | -7.46 | | 2.61 | | 8.10 | |
| 75th Percentile | -3.94 | | 12.30 | | -10.87 | | -0.66 | | 5.57 | |
| 95th Percentile | -7.68 | | 6.60 | | -16.15 | | -3.85 | | 2.56 | |
| # of Portfolios | 404 | | 404 | | 401 | | 398 | | 389 | |
| ● Rhumbline Advisors Russell 2000 | -2.38 | (60) | 14.18 | (59) | -8.79 | (61) | 2.52 | (51) | 8.24 | (48) |
| ▲ Russell 2000 | -2.40 | (60) | 14.18 | (60) | -8.89 | (61) | 2.47 | (52) | 8.23 | (48) |

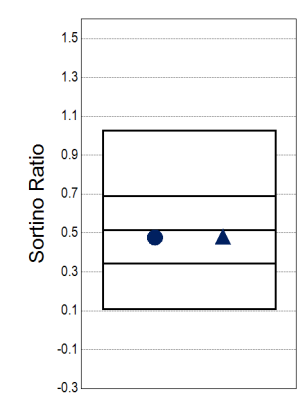
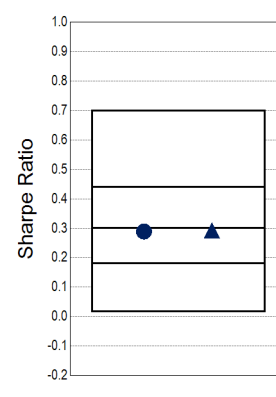
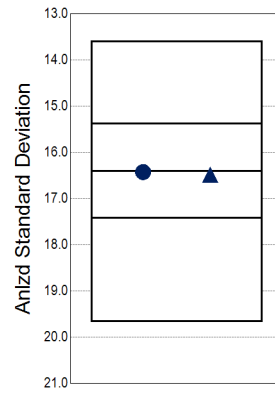
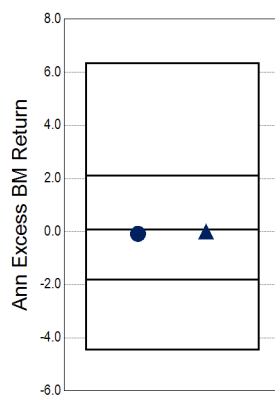
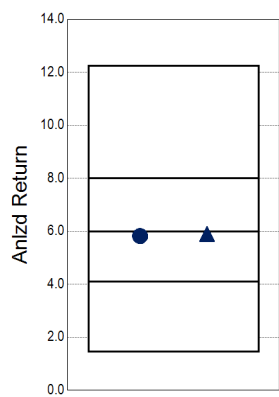
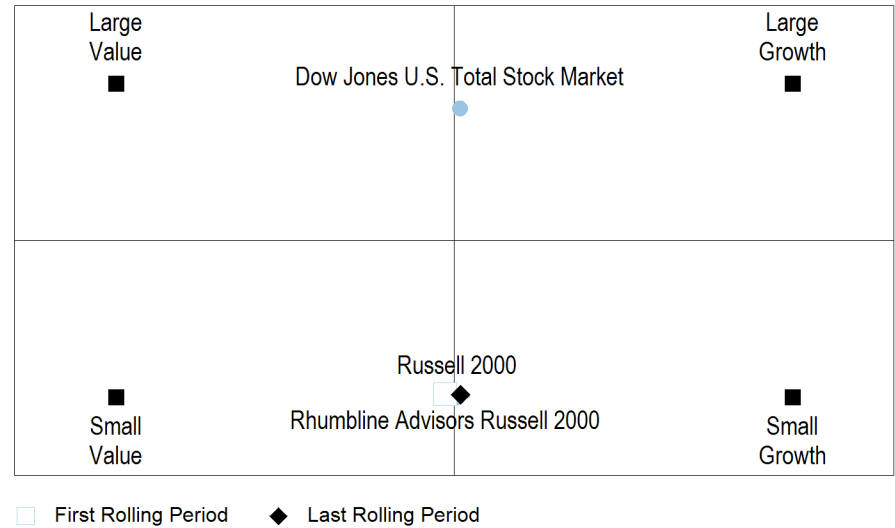


RHUMBLINE ADVISORS RUSSELL 2000

Since Inception Risk Return



Since Inception Style Map

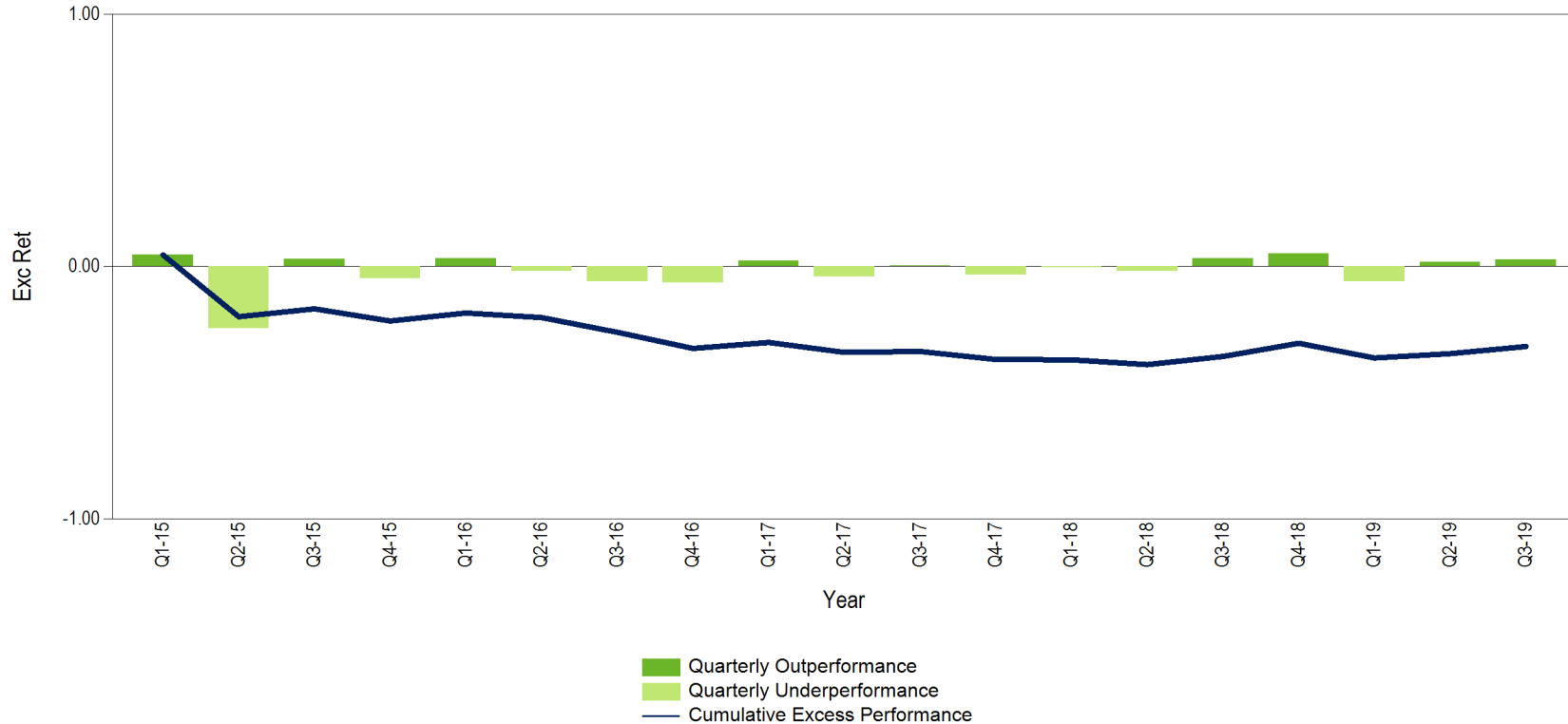


- Rhumbline Advisors Russell 2000
- ▲ Russell 2000
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



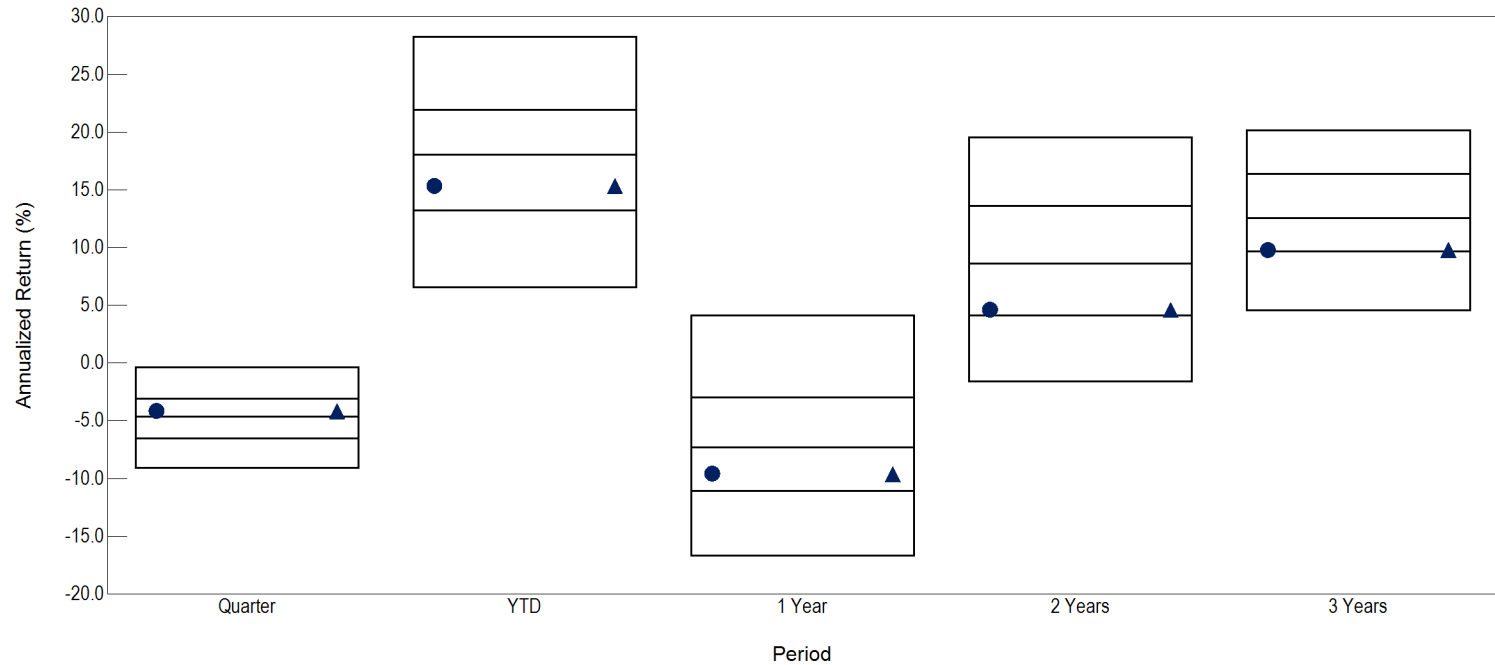
RHUMBLINE ADVISORS RUSSELL 2000 GROWTH

Quarterly and Cumulative Excess Performance



RHUMBLINE ADVISORS RUSSELL 2000 GROWTH

Rhumbline Advisors Russell 2000 Growth vs. eV US Small Cap Growth Equity Net

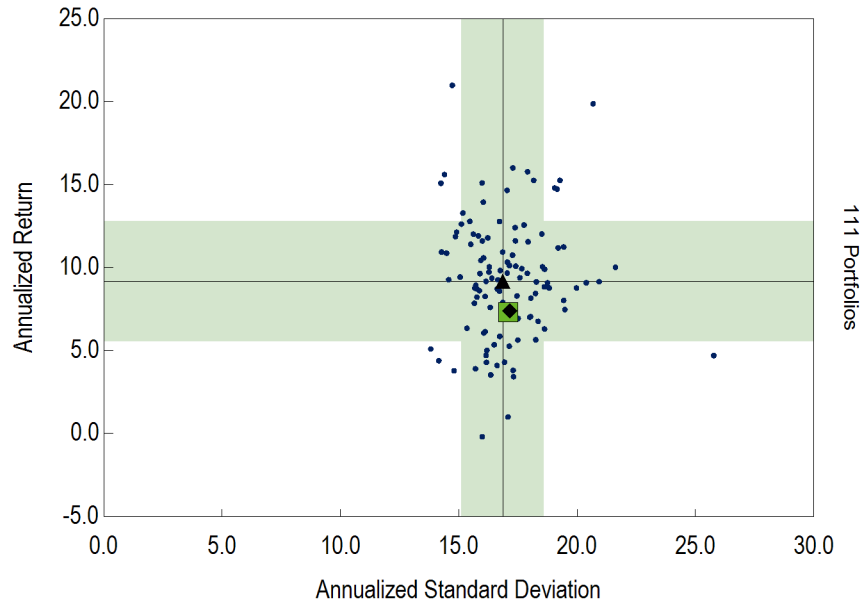


| | Return (Rank) | | | | | | | | | |
|--|---------------|------|-------|------|--------|------|-------|------|-------|------|
| 5th Percentile | -0.37 | | 28.27 | | 4.10 | | 19.55 | | 20.17 | |
| 25th Percentile | -3.02 | | 21.98 | | -2.95 | | 13.67 | | 16.43 | |
| Median | -4.57 | | 18.10 | | -7.25 | | 8.66 | | 12.62 | |
| 75th Percentile | -6.47 | | 13.27 | | -11.01 | | 4.16 | | 9.72 | |
| 95th Percentile | -9.00 | | 6.60 | | -16.63 | | -1.53 | | 4.60 | |
| # of Portfolios | 125 | | 125 | | 123 | | 123 | | 120 | |
| ● Rhumbline Advisors Russell 2000 Growth | -4.14 | (45) | 15.34 | (63) | -9.58 | (65) | 4.62 | (74) | 9.78 | (74) |
| ▲ Russell 2000 Growth | -4.17 | (46) | 15.34 | (63) | -9.63 | (65) | 4.59 | (74) | 9.79 | (74) |

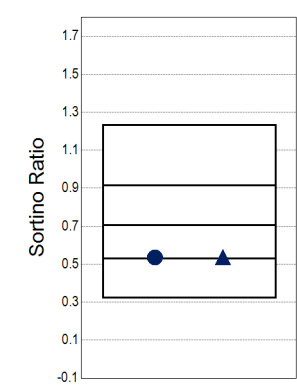
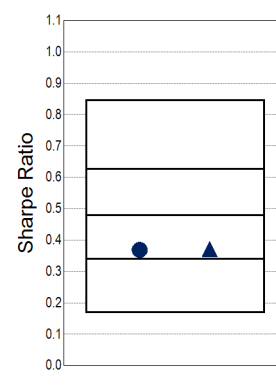
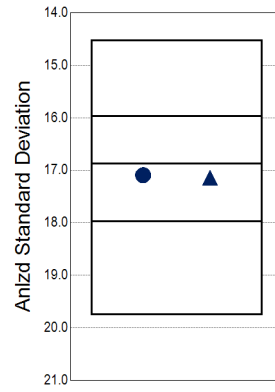
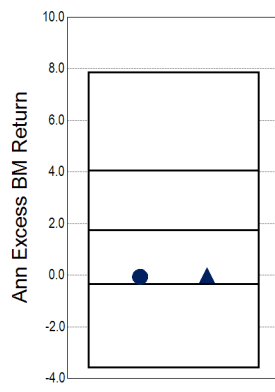
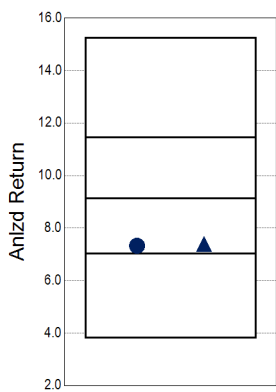
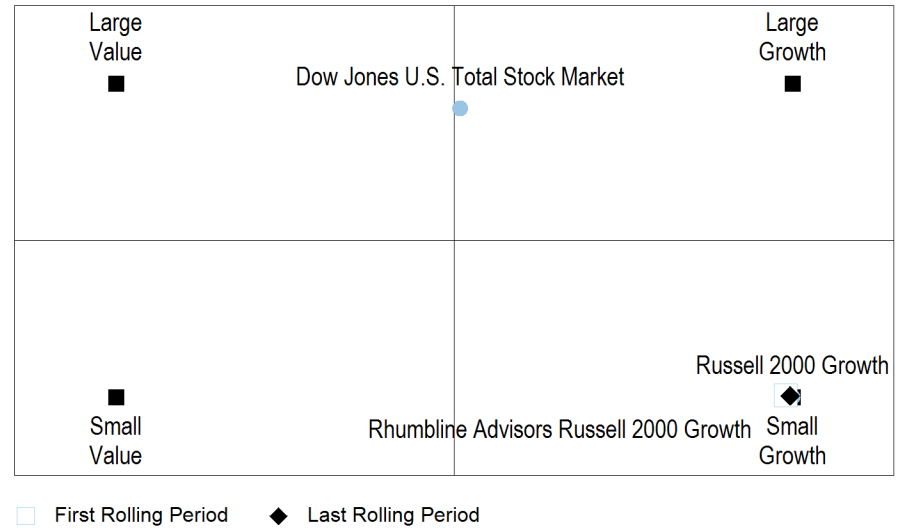


RHUMBLINE ADVISORS RUSSELL 2000 GROWTH

Since Inception Risk Return



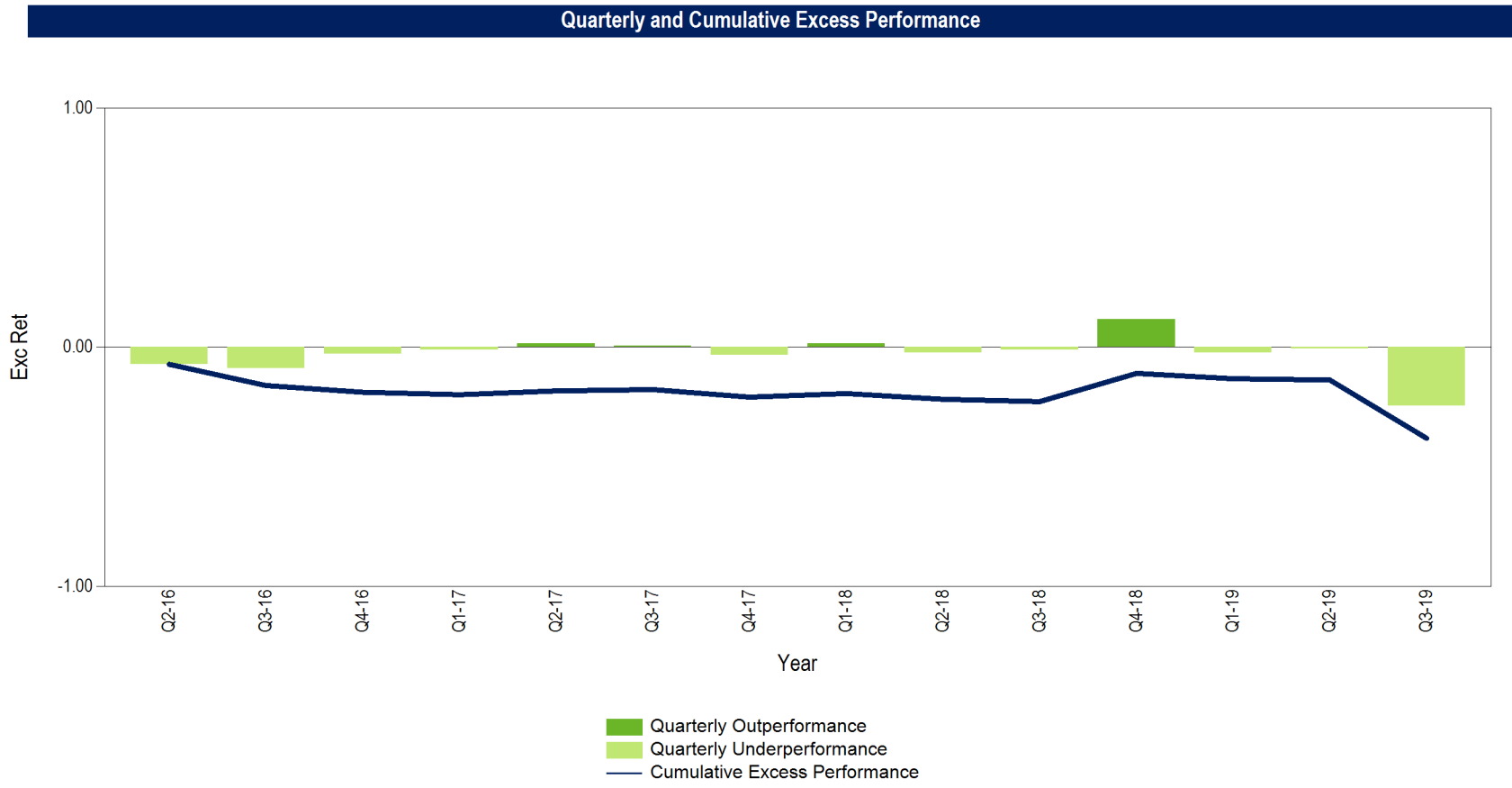
Since Inception Style Map



- Rhumbline Advisors Russell 2000 Growth
- ▲ Russell 2000 Growth
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



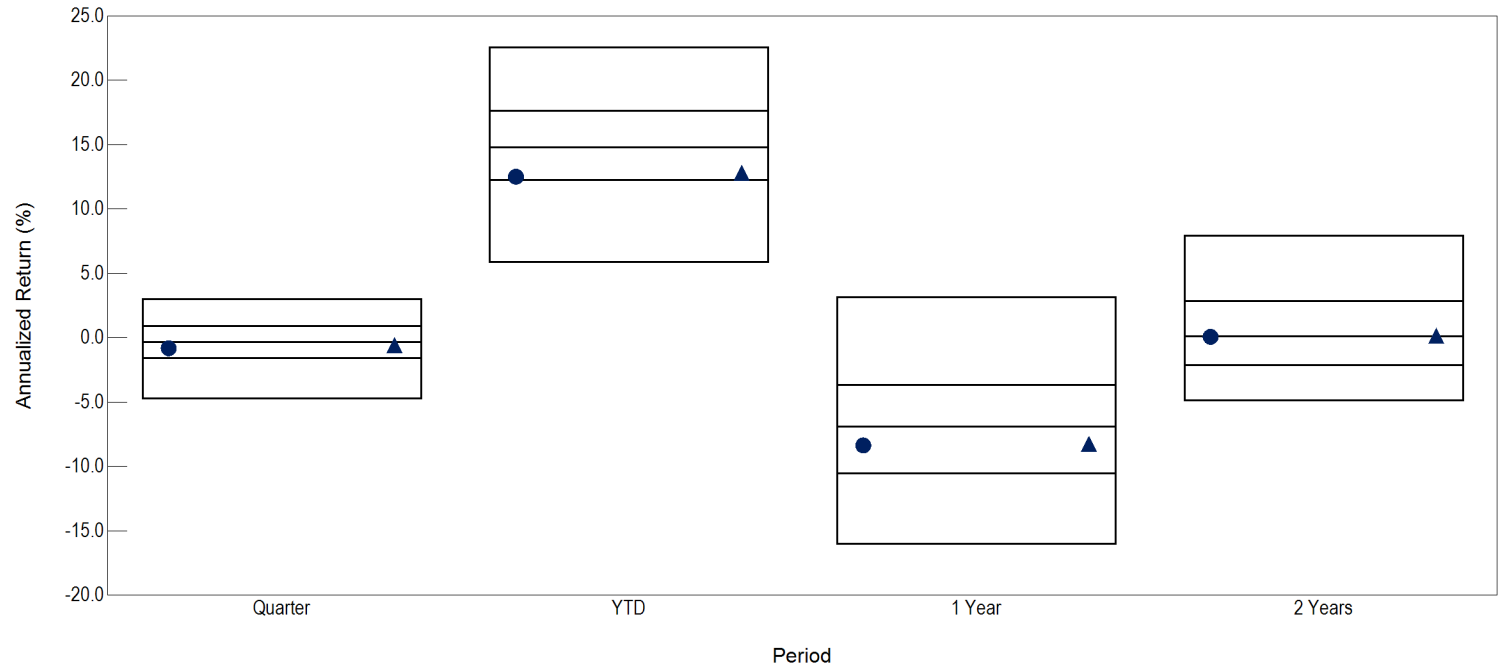
RHUMBLINE ADVISORS RUSSELL 2000 VALUE



Los Angeles City Employees' Retirement System

RHUMBLINE ADVISORS RUSSELL 2000 VALUE

Rhumbline Advisors Russell 2000 Value vs. eV US Small Cap Value Equity Net

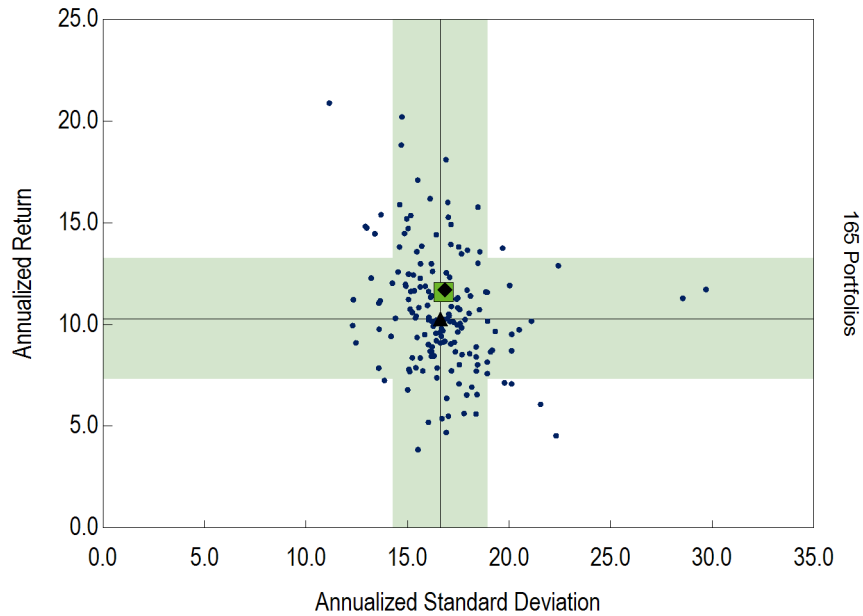


| | Return (Rank) | | Quarter | | YTD | | 1 Year | | 2 Years | |
|---|---------------|--|---------|------|-------|------|--------|------|---------|------|
| 5th Percentile | | | 3.01 | | 22.55 | | 3.16 | | 7.93 | |
| 25th Percentile | | | 0.98 | | 17.70 | | -3.62 | | 2.92 | |
| Median | | | -0.27 | | 14.87 | | -6.83 | | 0.19 | |
| 75th Percentile | | | -1.51 | | 12.31 | | -10.49 | | -2.09 | |
| 95th Percentile | | | -4.68 | | 5.95 | | -15.94 | | -4.80 | |
| # of Portfolios | | | 172 | | 172 | | 171 | | 171 | |
| ● Rhumbline Advisors Russell 2000 Value | | | -0.82 | (63) | 12.51 | (72) | -8.36 | (60) | 0.07 | (52) |
| ▲ Russell 2000 Value | | | -0.57 | (57) | 12.82 | (69) | -8.24 | (60) | 0.16 | (51) |

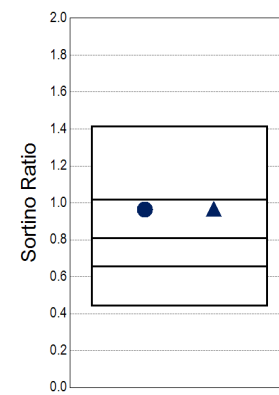
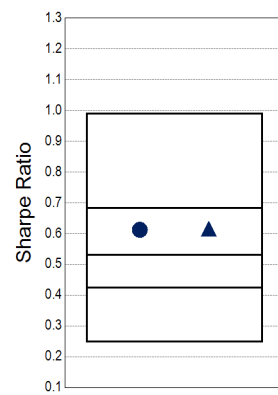
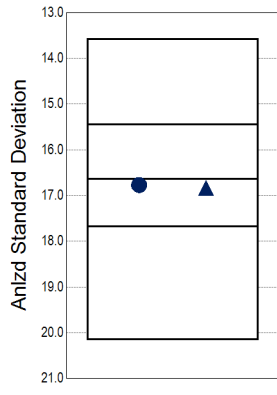
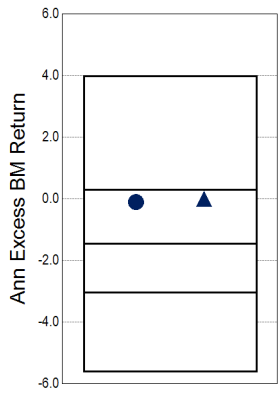
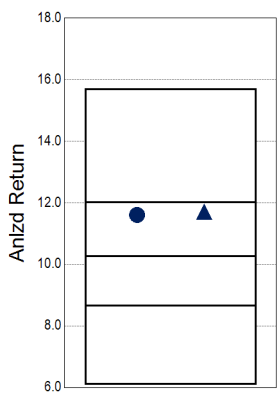
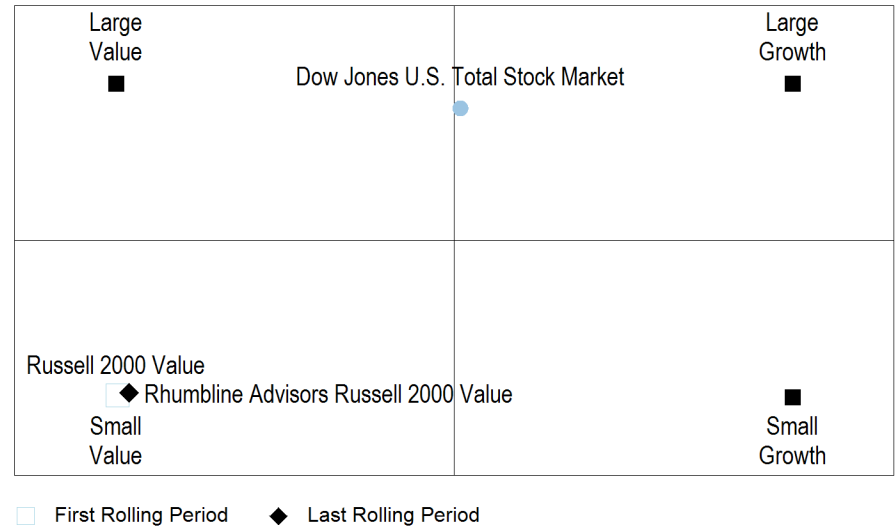


RHUMBLINE ADVISORS RUSSELL 2000 VALUE

Since Inception Risk Return



Since Inception Style Map



- Rhumbline Advisors Russell 2000 Value
- ▲ Russell 2000 Value
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

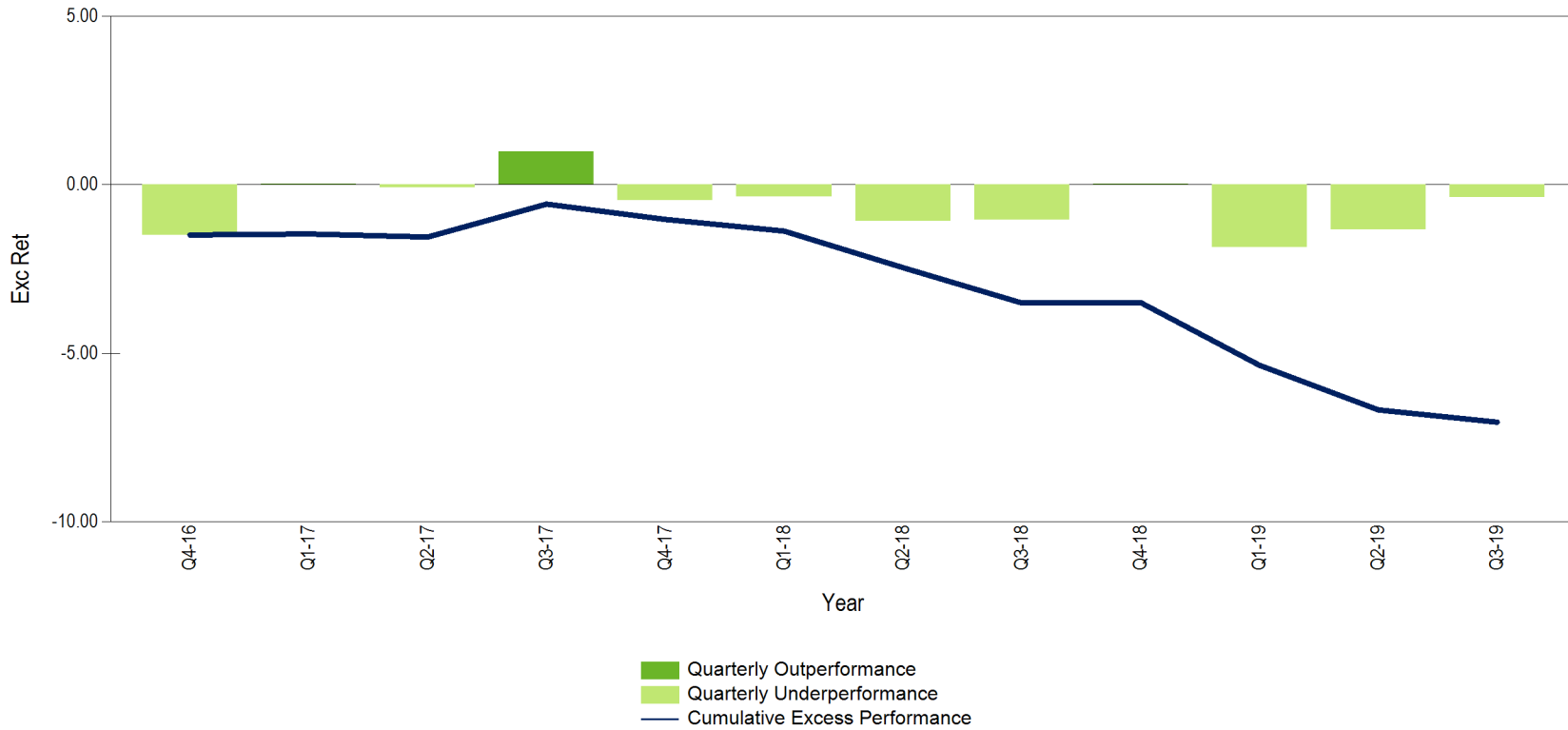


NON-U.S. EQUITY MANAGER PERFORMANCE

NEPC, LLC

AQR CAPITAL

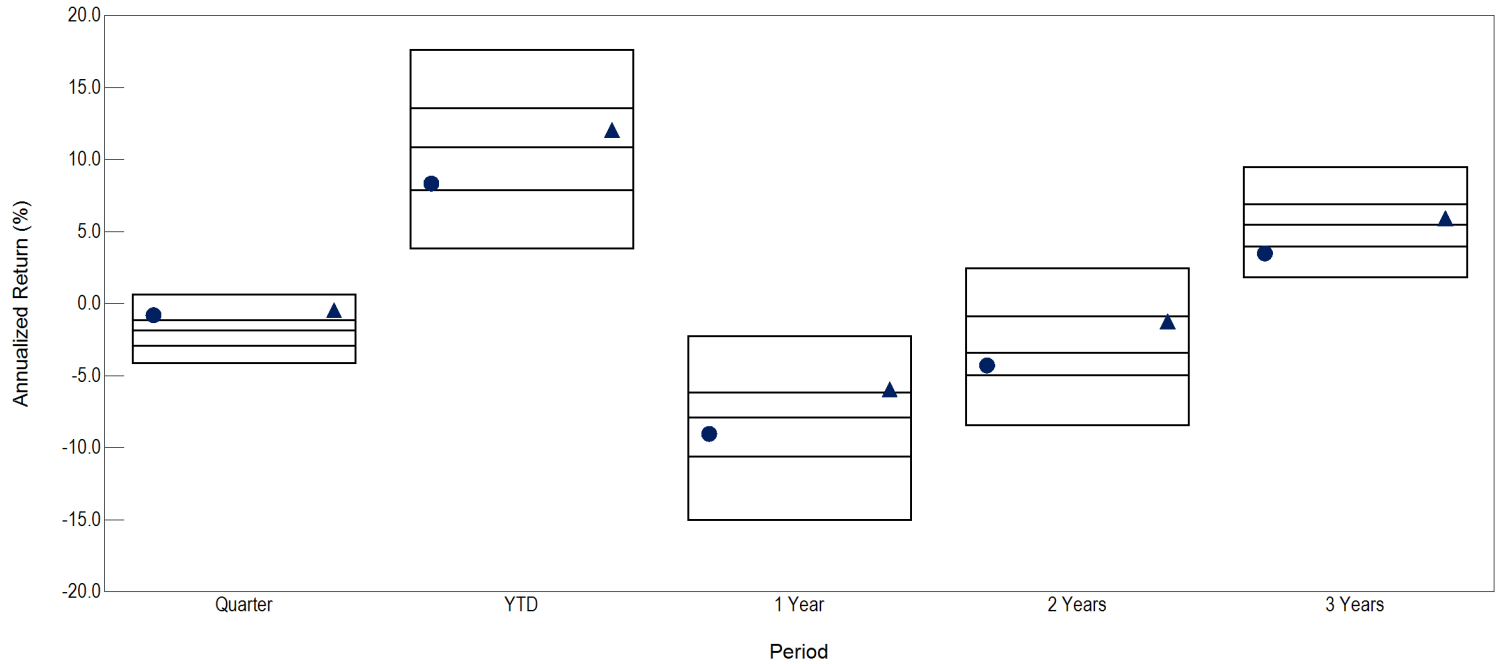
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

AQR CAPITAL

AQR Capital vs. eV EAFE Small Cap Equity Net



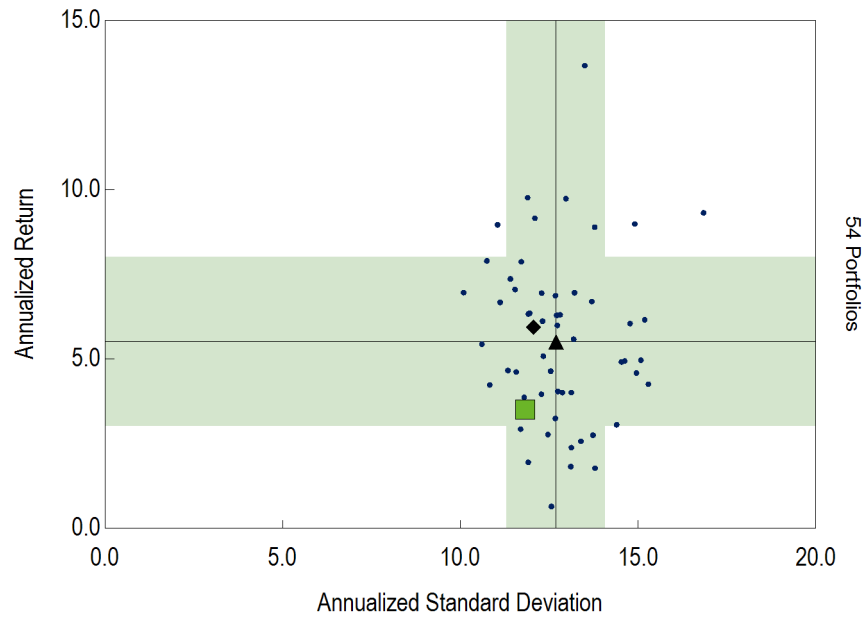
| | Return (Rank) | | | | | | | | | |
|-----------------------|---------------|------|-------|------|--------|------|-------|------|------|------|
| 5th Percentile | 0.64 | | 17.63 | | -2.26 | | 2.44 | | 9.46 | |
| 25th Percentile | -1.10 | | 13.60 | | -6.13 | | -0.84 | | 6.95 | |
| Median | -1.80 | | 10.91 | | -7.87 | | -3.37 | | 5.51 | |
| 75th Percentile | -2.89 | | 7.92 | | -10.58 | | -4.94 | | 4.00 | |
| 95th Percentile | -4.08 | | 3.89 | | -14.96 | | -8.41 | | 1.90 | |
| # of Portfolios | 57 | | 57 | | 57 | | 54 | | 54 | |
| ● AQR Capital | -0.80 | (22) | 8.33 | (73) | -9.04 | (62) | -4.29 | (63) | 3.49 | (81) |
| ▲ MSCI EAFE Small Cap | -0.44 | (17) | 12.05 | (40) | -5.93 | (24) | -1.22 | (31) | 5.94 | (48) |



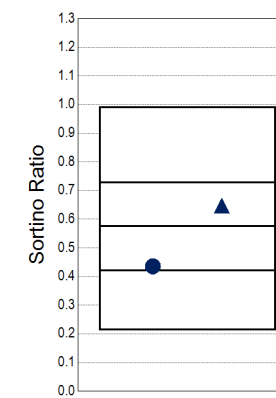
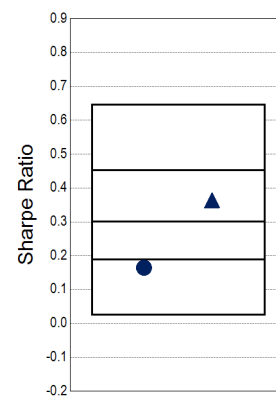
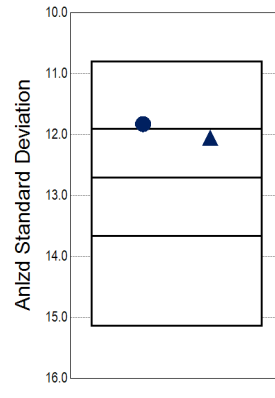
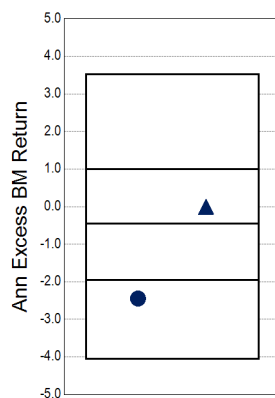
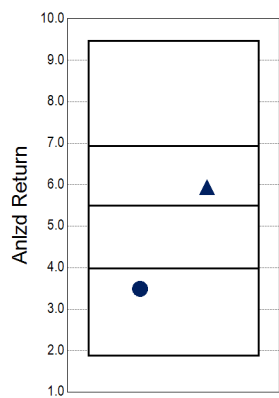
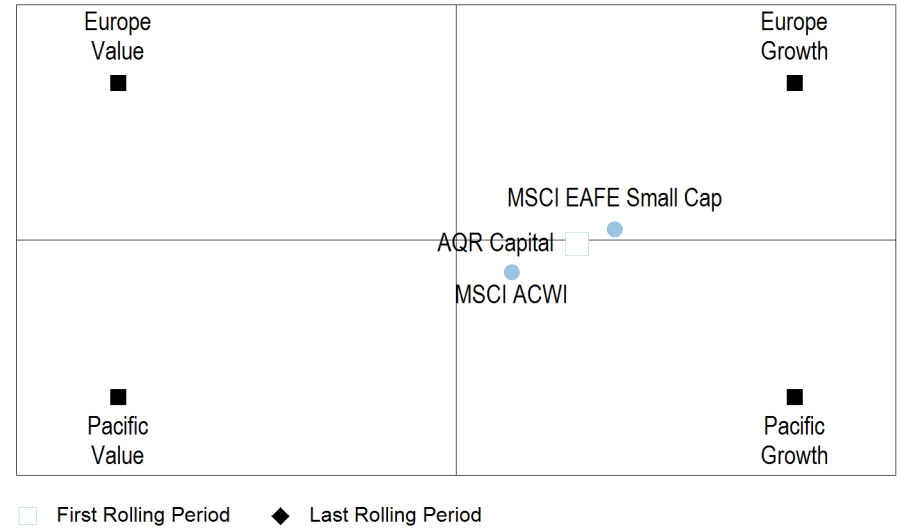
Los Angeles City Employees' Retirement System

AQR CAPITAL

3 Year Risk Return



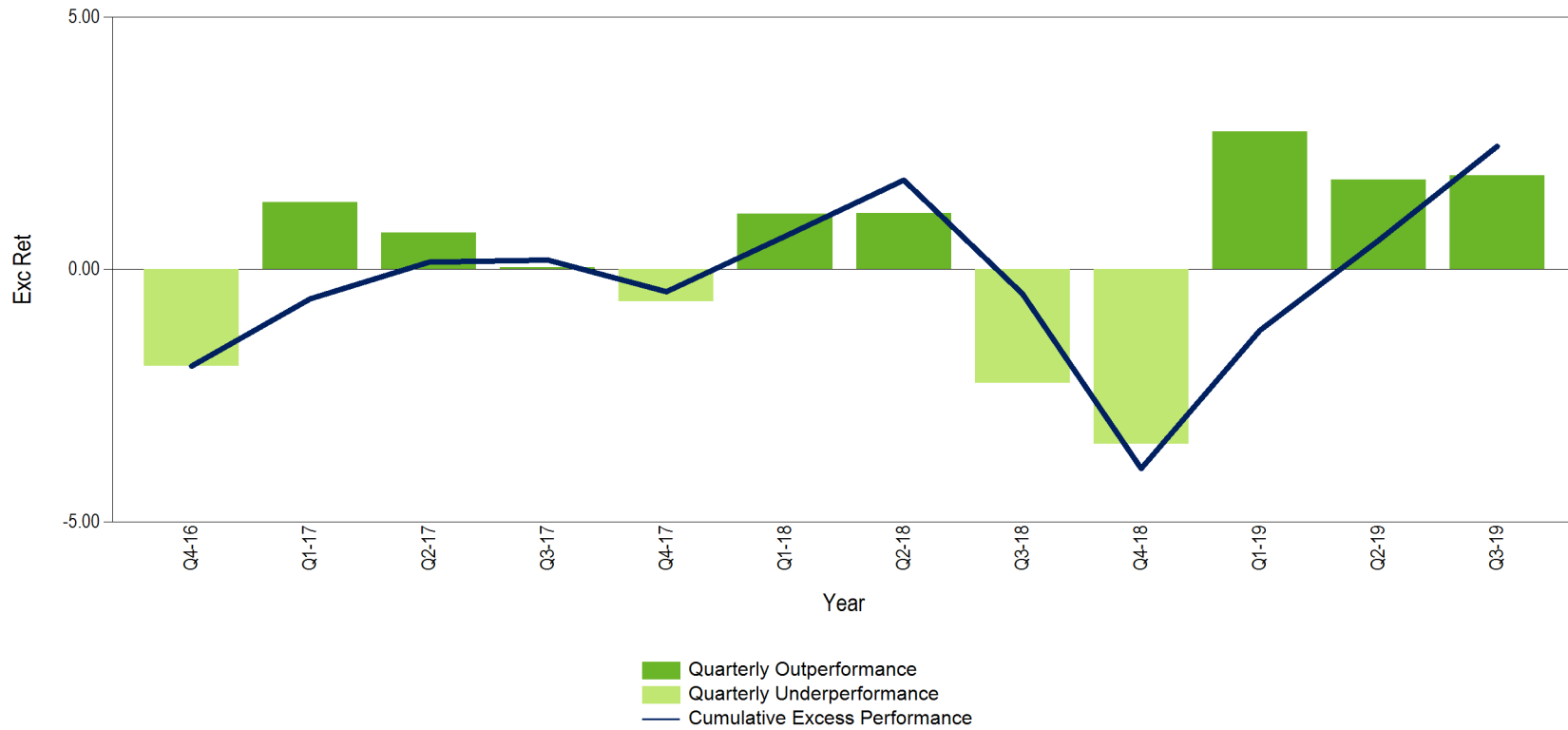
3 Year Style Map



- AQR Capital
- ▲ MSCI EAFE Small Cap
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



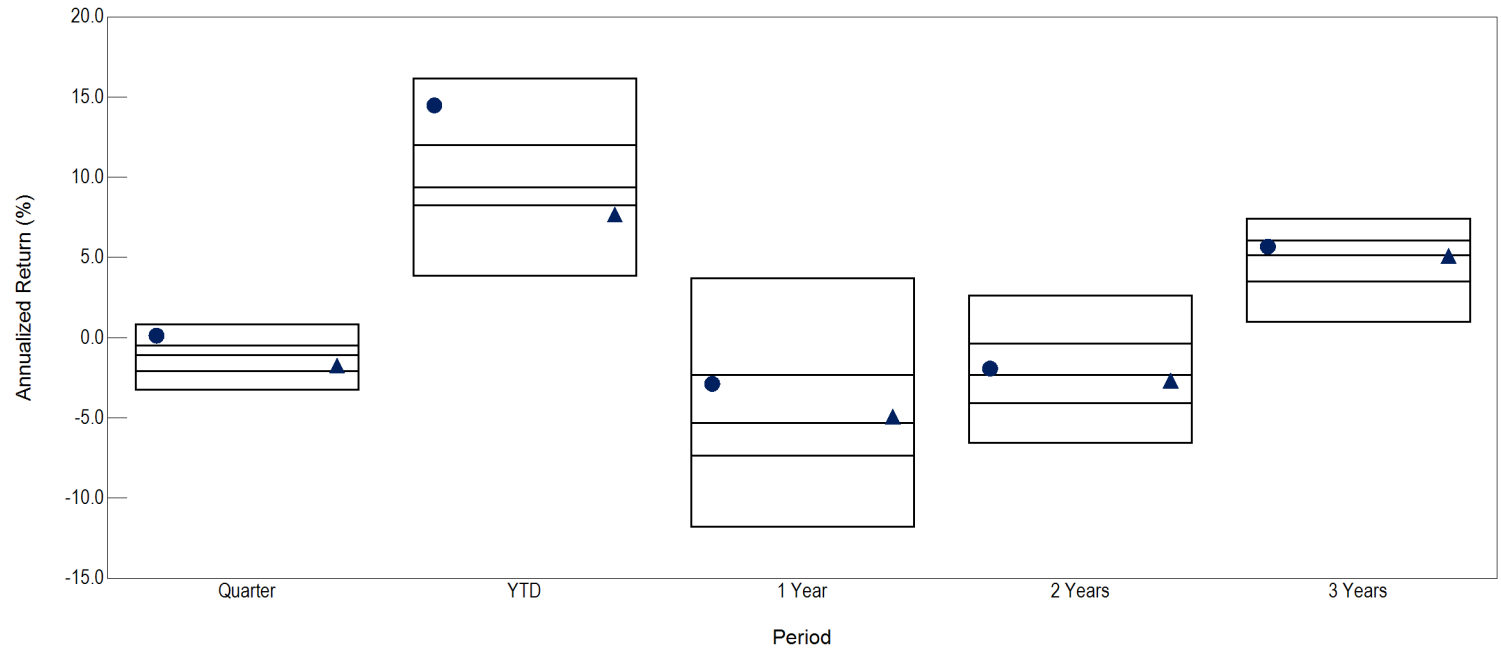
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

BARROW HANLEY

Barrow Hanley vs. eV EAFE Value Equity Net



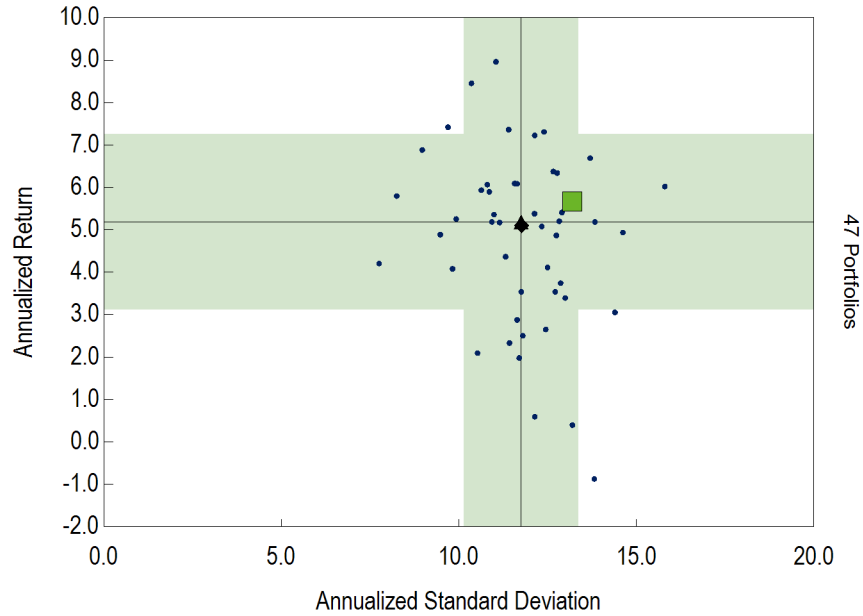
| | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | |
|-------------------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|
| 5th Percentile | 0.83 | | 16.16 | | 3.71 | | 2.61 | | 7.40 | |
| 25th Percentile | -0.44 | | 12.03 | | -2.27 | | -0.33 | | 6.08 | |
| Median | -1.05 | | 9.39 | | -5.26 | | -2.29 | | 5.18 | |
| 75th Percentile | -2.03 | | 8.31 | | -7.33 | | -4.04 | | 3.54 | |
| 95th Percentile | -3.22 | | 3.91 | | -11.74 | | -6.52 | | 1.01 | |
| # of Portfolios | 54 | | 54 | | 52 | | 48 | | 47 | |
| ● Barrow Hanley | 0.12 | (14) | 14.47 | (9) | -2.88 | (36) | -1.93 | (46) | 5.67 | (36) |
| ▲ MSCI EAFE Value | -1.74 | (72) | 7.67 | (86) | -4.92 | (48) | -2.67 | (58) | 5.10 | (54) |



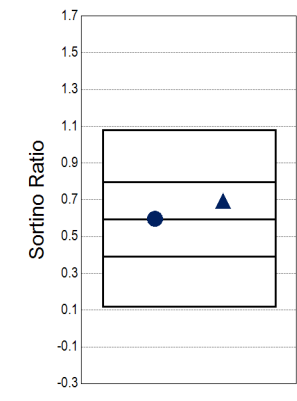
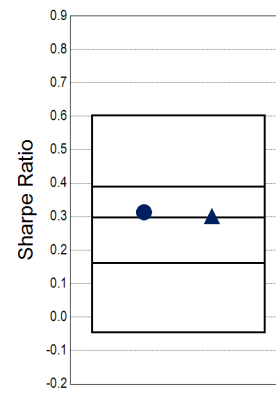
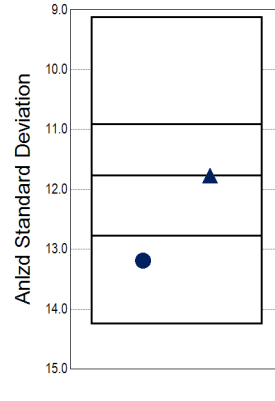
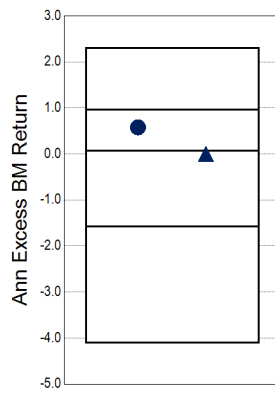
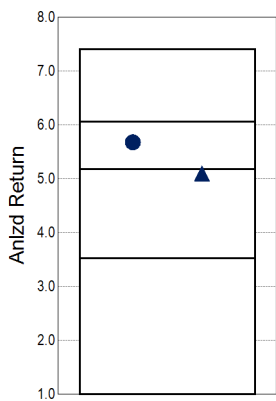
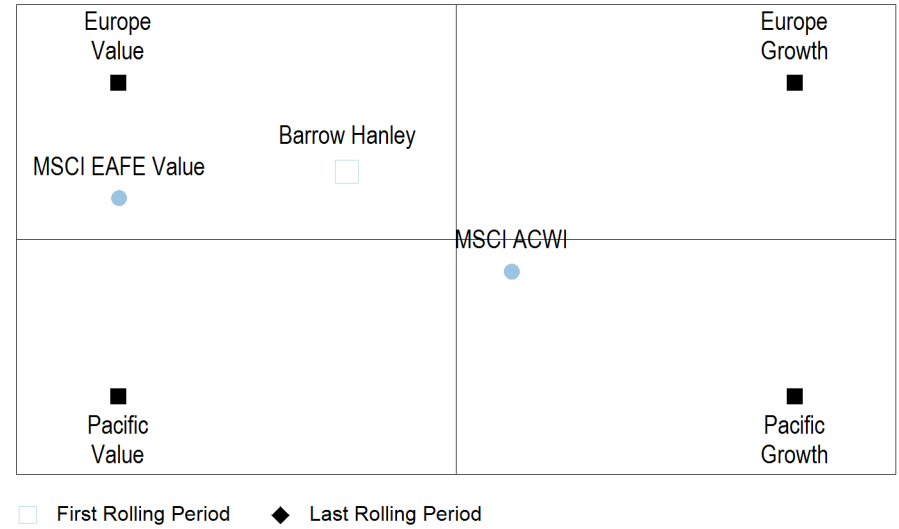
Los Angeles City Employees' Retirement System

BARROW HANLEY

3 Year Risk Return



3 Year Style Map

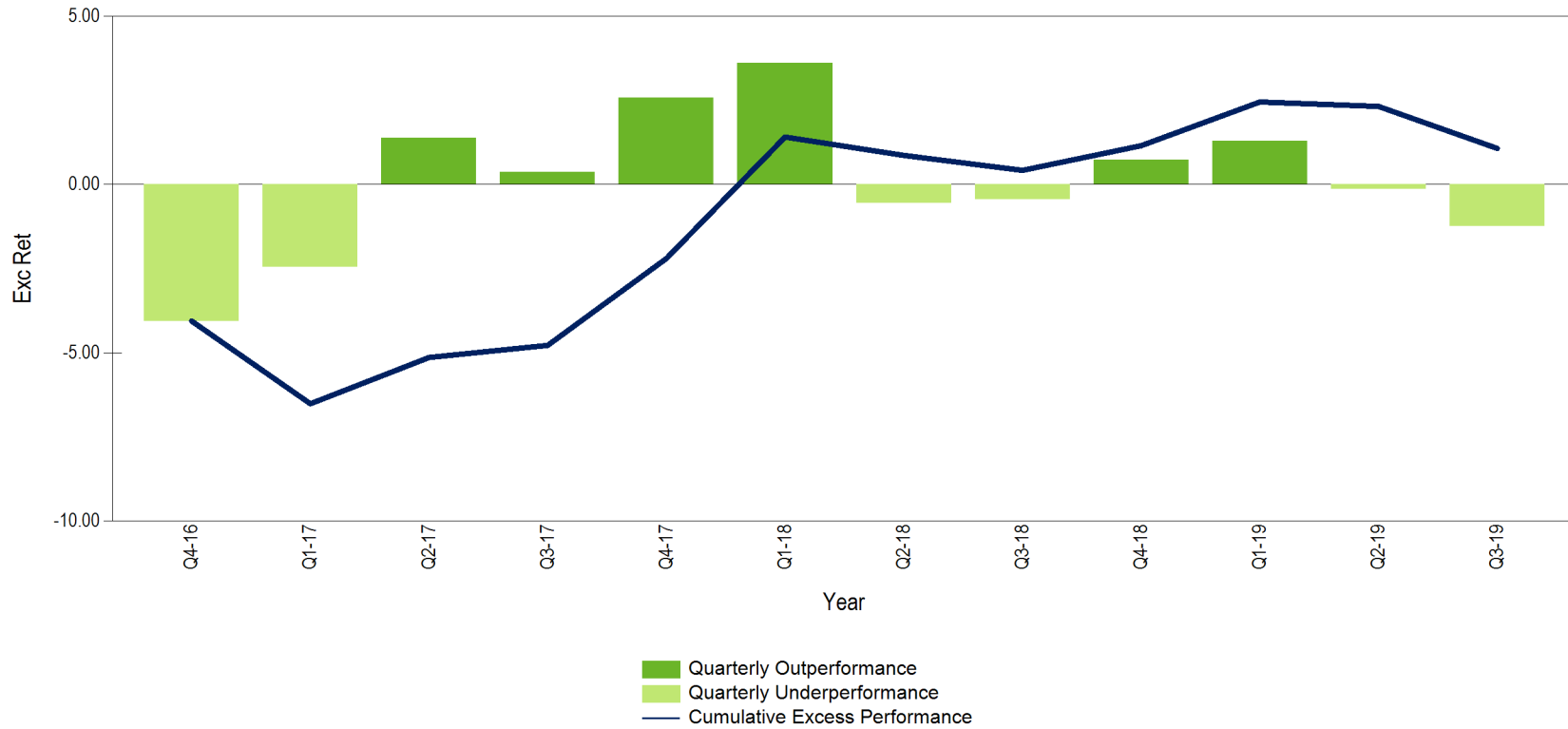


- Barrow Hanley
- ▲ MSCI EAFE Value
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



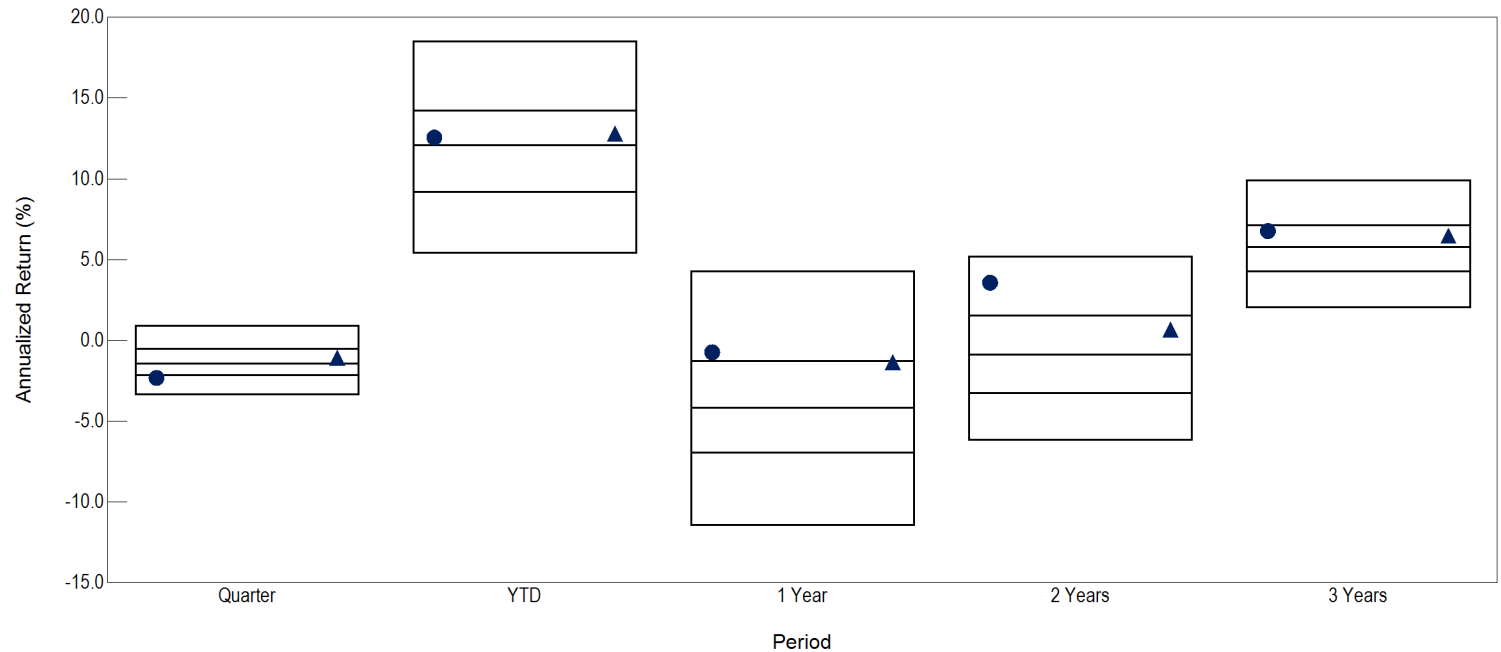
LAZARD ASSET MANAGEMENT

Quarterly and Cumulative Excess Performance



LAZARD ASSET MANAGEMENT

Lazard Asset Management vs. eV All EAFE Equity Net

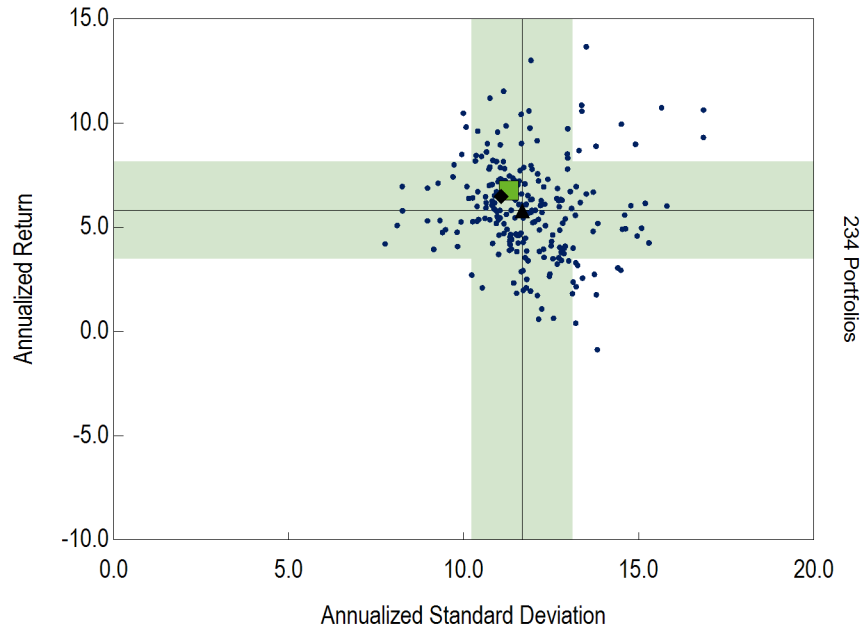


| | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | |
|---------------------------|---------------|-------|---------------|-------|---------------|------|---------------|------|---------------|------|
| 5th Percentile | 0.89 | 18.50 | 4.29 | 5.20 | 9.90 | | | | | |
| 25th Percentile | -0.49 | 14.27 | -1.22 | 1.59 | 7.17 | | | | | |
| Median | -1.38 | 12.13 | -4.13 | -0.84 | 5.81 | | | | | |
| 75th Percentile | -2.12 | 9.23 | -6.90 | -3.21 | 4.31 | | | | | |
| 95th Percentile | -3.31 | 5.45 | -11.36 | -6.10 | 2.09 | | | | | |
| # of Portfolios | 248 | 247 | 244 | 238 | 234 | | | | | |
| ● Lazard Asset Management | -2.32 | (79) | 12.55 | (45) | -0.73 | (23) | 3.57 | (10) | 6.76 | (31) |
| ▲ MSCI EAFE | -1.07 | (41) | 12.80 | (43) | -1.34 | (27) | 0.68 | (35) | 6.48 | (36) |

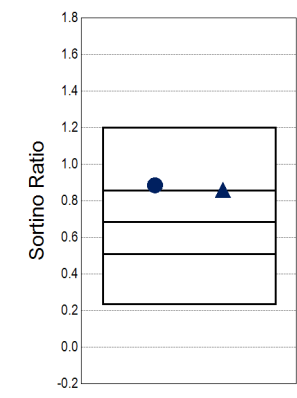
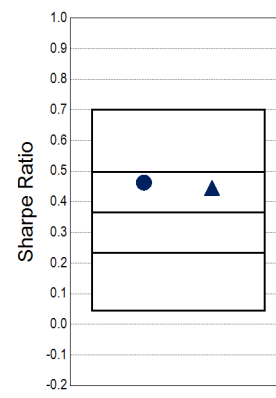
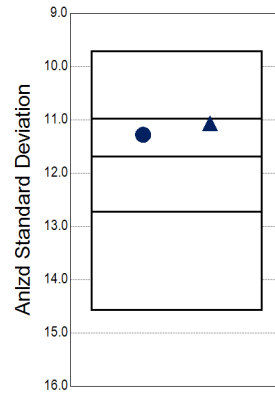
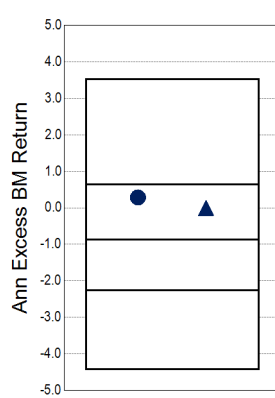
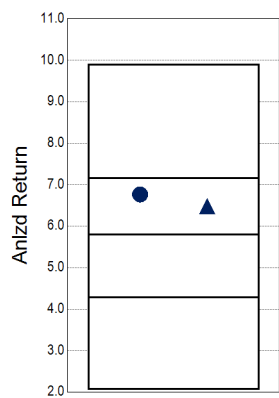
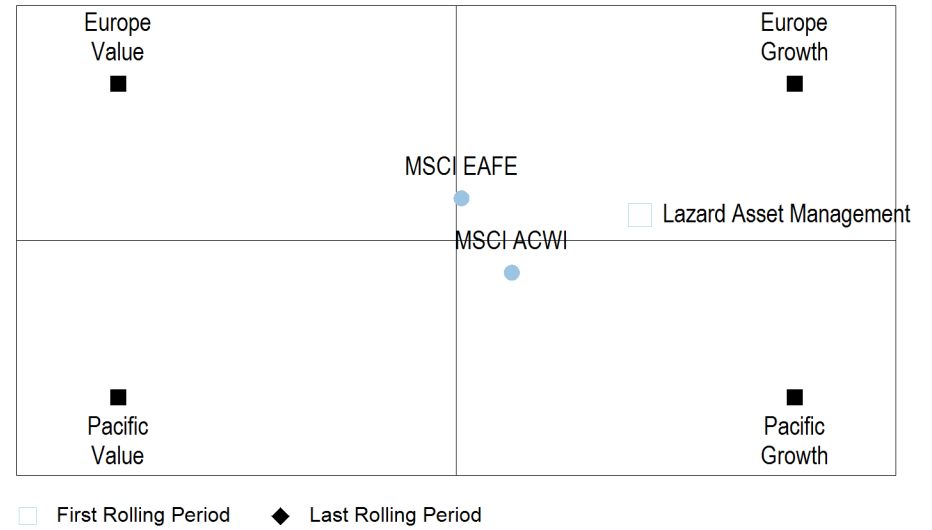


LAZARD ASSET MANAGEMENT

3 Year Risk Return



3 Year Style Map

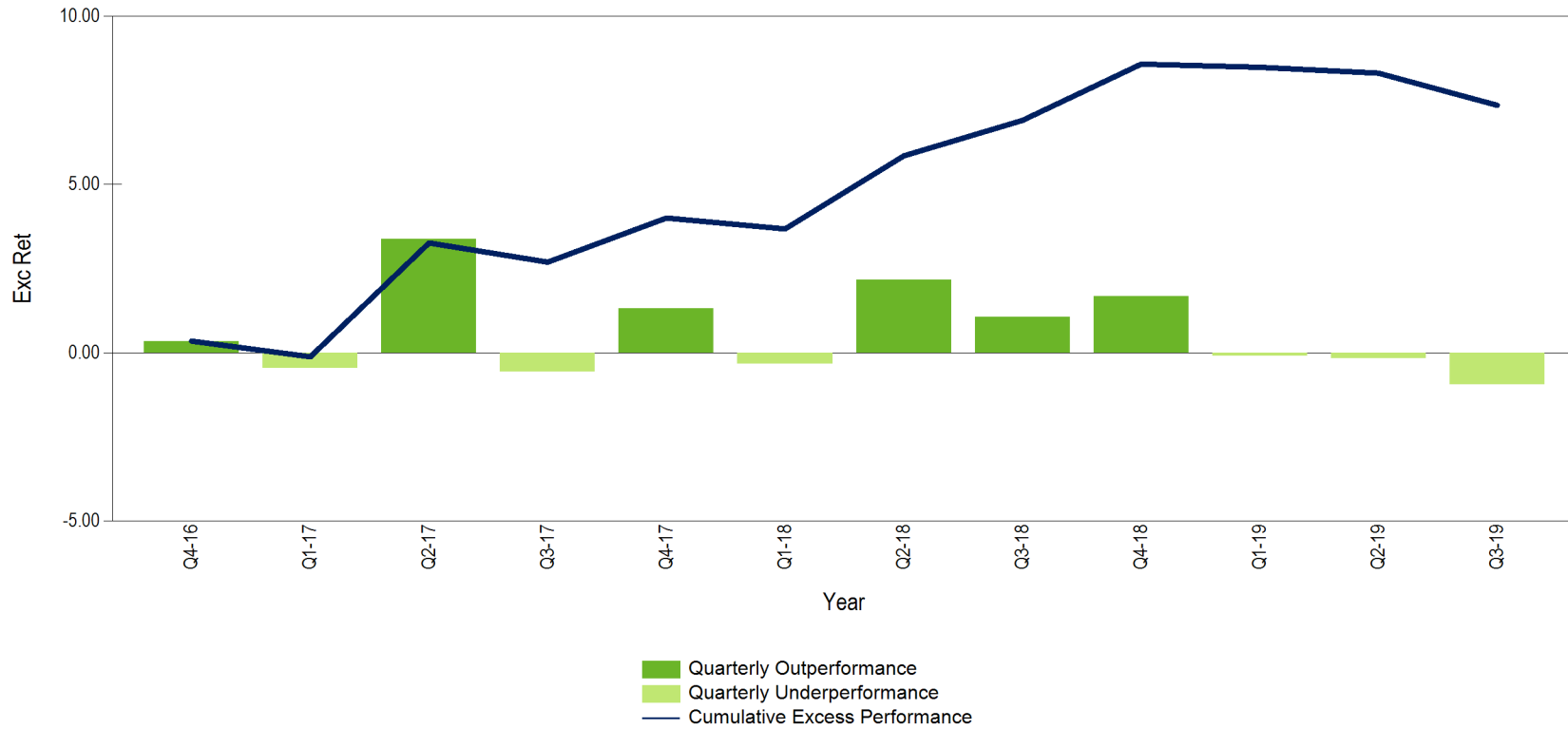


- Lazard Asset Management
- ▲ MSCI EAFE
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



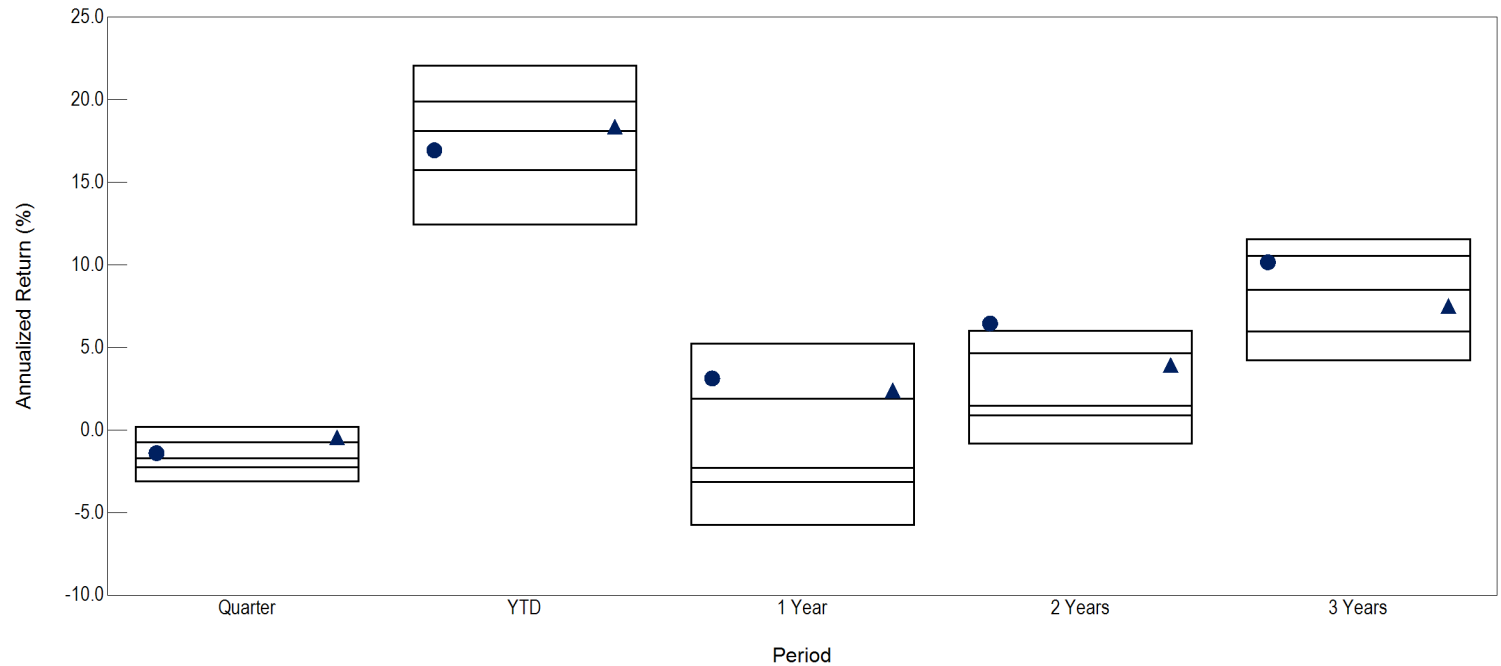
MFS INSTITUTIONAL ADVISORS

Quarterly and Cumulative Excess Performance



MFS INSTITUTIONAL ADVISORS

MFS Institutional Advisors vs. eV EAFE All Cap Growth Net

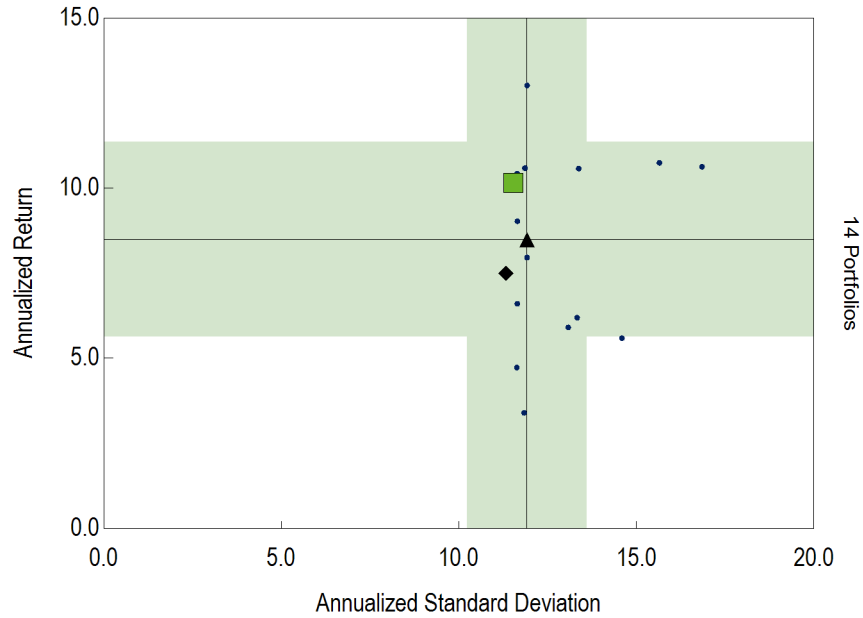


| | Return (Rank) | | Quarter | | YTD | | 1 Year | | 2 Years | | 3 Years | |
|-----------------------------------|---------------|------|---------|------|-------|------|--------|------|---------|------|---------|--|
| 5th Percentile | 0.20 | | 22.03 | | 5.22 | | 5.98 | | 11.54 | | | |
| 25th Percentile | -0.72 | | 19.92 | | 1.94 | | 4.66 | | 10.58 | | | |
| Median | -1.66 | | 18.14 | | -2.28 | | 1.50 | | 8.49 | | | |
| 75th Percentile | -2.21 | | 15.77 | | -3.11 | | 0.93 | | 5.98 | | | |
| 95th Percentile | -3.07 | | 12.48 | | -5.73 | | -0.79 | | 4.26 | | | |
| # of Portfolios | 15 | | 15 | | 15 | | 15 | | 14 | | | |
| ● MFS Institutional Advisors | -1.41 | (37) | 16.92 | (62) | 3.11 | (18) | 6.43 | (2) | 10.14 | (40) | | |
| ▲ MSCI World ex USA Growth NR USD | -0.45 | (13) | 18.35 | (43) | 2.39 | (22) | 3.92 | (32) | 7.50 | (57) | | |

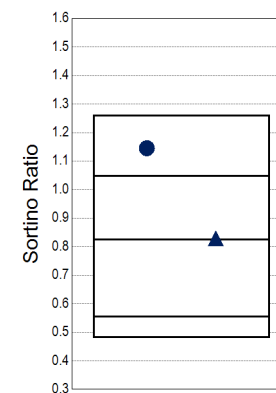
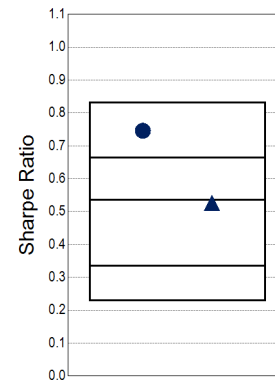
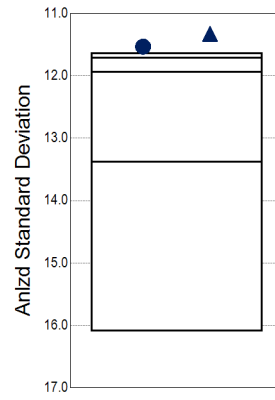
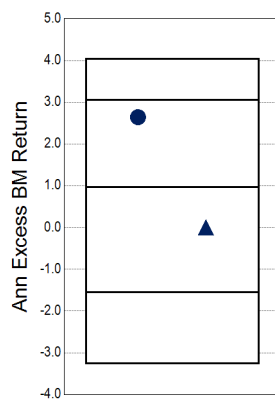
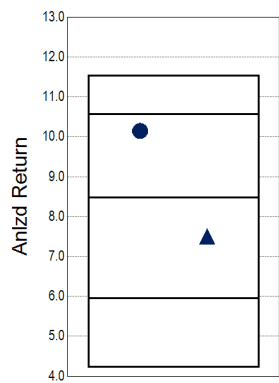
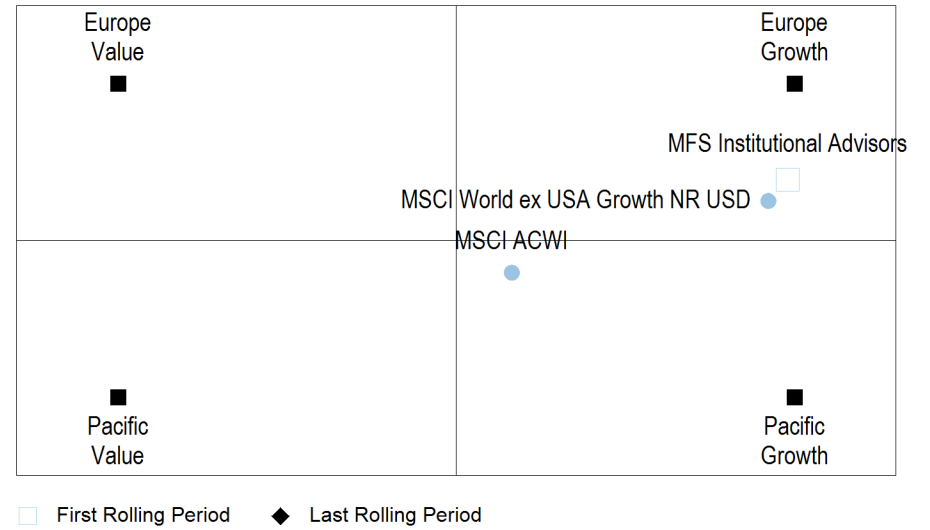


MFS INSTITUTIONAL ADVISORS

3 Year Risk Return



3 Year Style Map



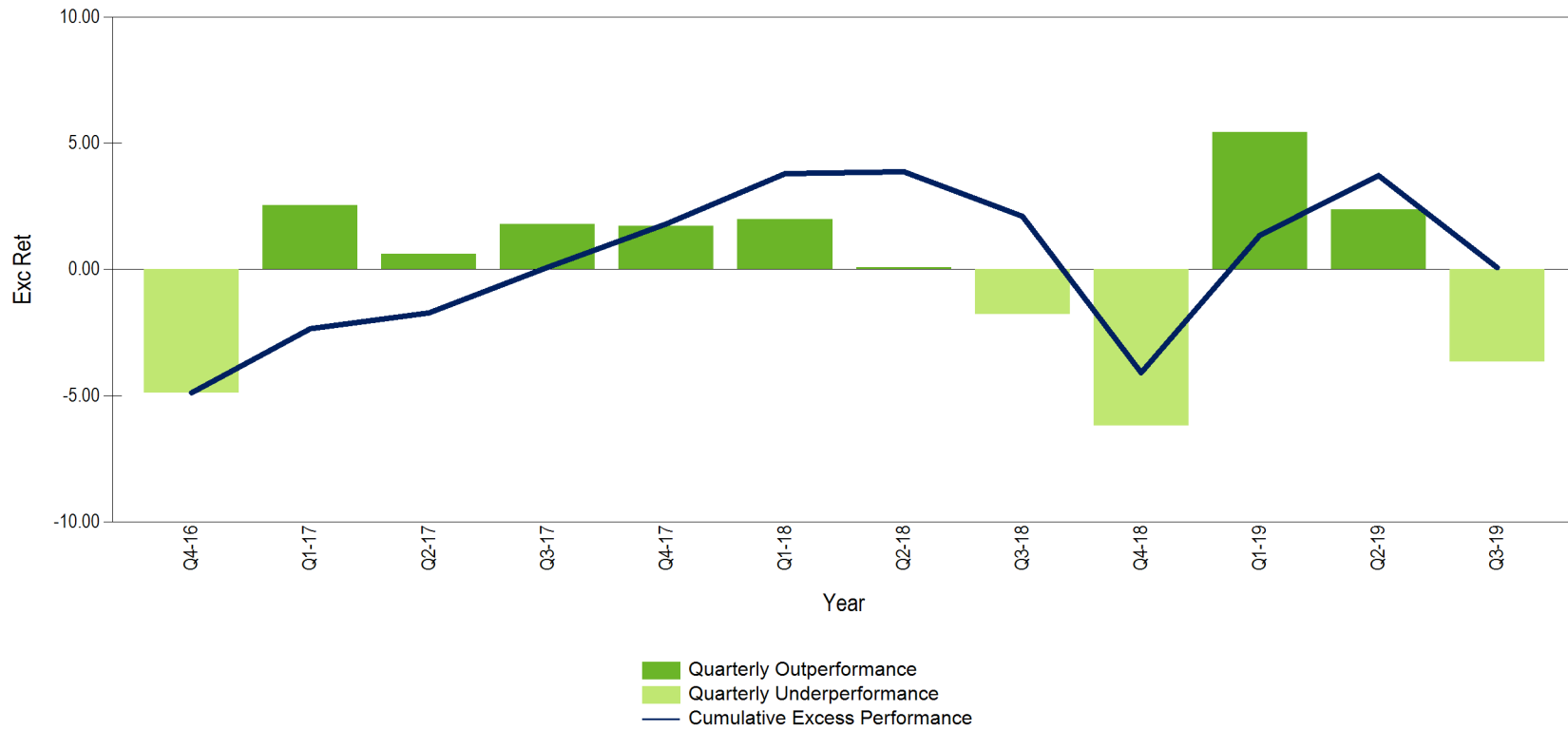
- MFS Institutional Advisors
- ▲ MSCI World ex USA Growth NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

OBERWEIS ASSET MGMT

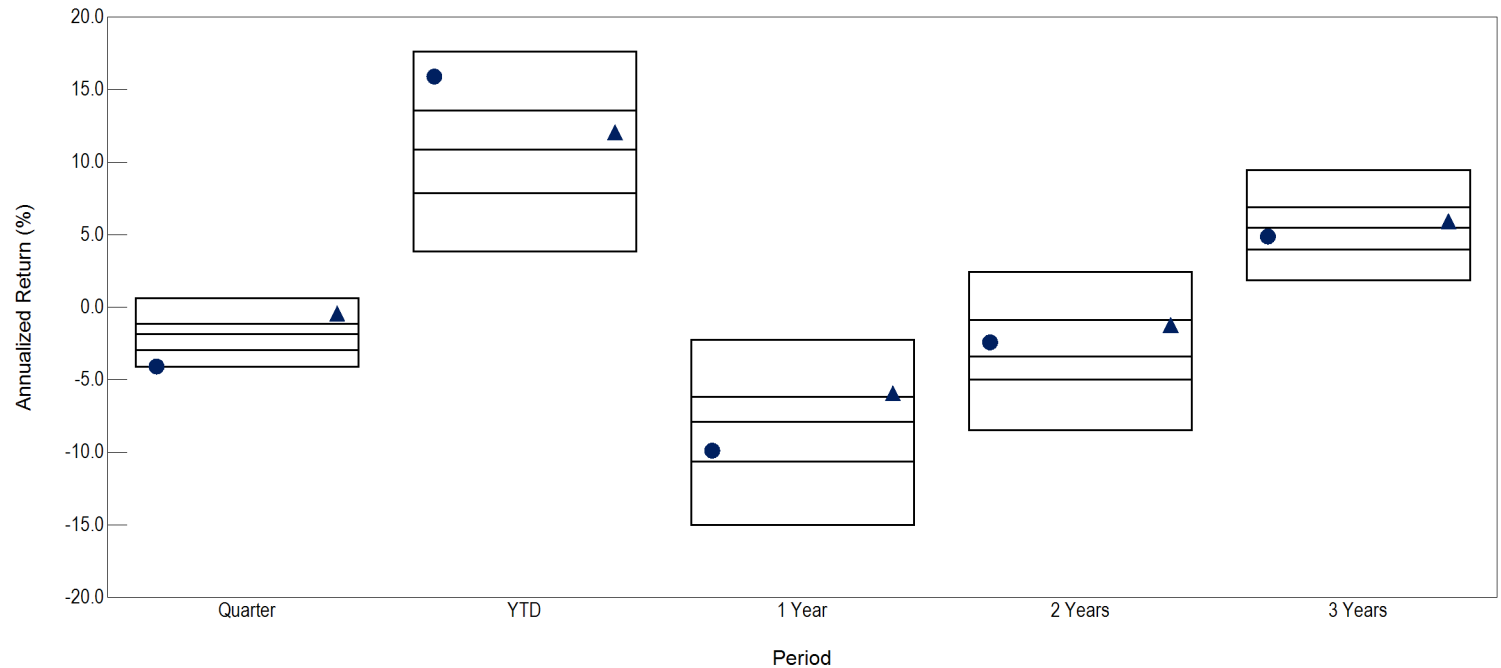
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

OBERWEIS ASSET MGMT

Oberweis Asset Mgmt vs. eV EAFE Small Cap Equity Net



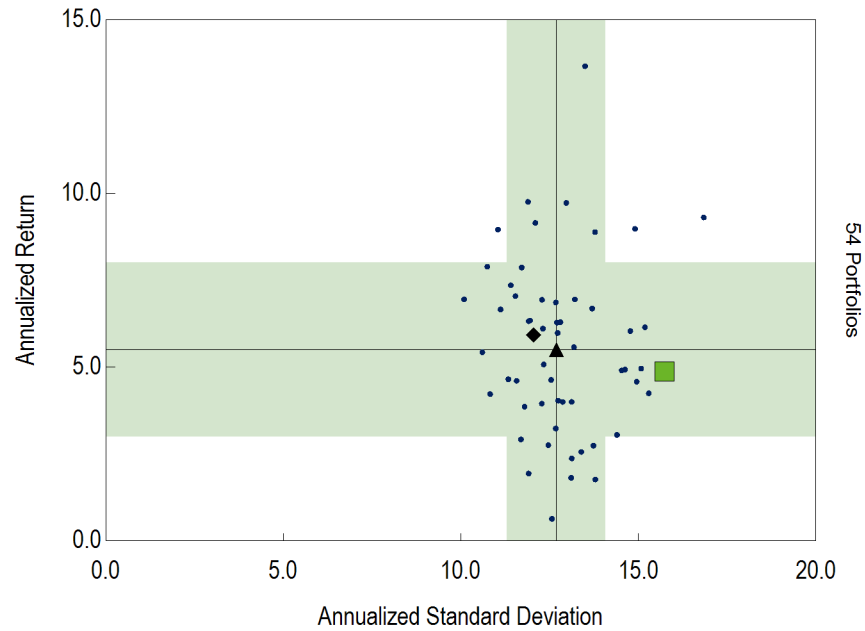
| | Return (Rank) | | | | | | | | | |
|-----------------------|---------------|------|-------|------|--------|------|-------|------|------|------|
| 5th Percentile | 0.64 | | 17.63 | | -2.26 | | 2.44 | | 9.46 | |
| 25th Percentile | -1.10 | | 13.60 | | -6.13 | | -0.84 | | 6.95 | |
| Median | -1.80 | | 10.91 | | -7.87 | | -3.37 | | 5.51 | |
| 75th Percentile | -2.89 | | 7.92 | | -10.58 | | -4.94 | | 4.00 | |
| 95th Percentile | -4.08 | | 3.89 | | -14.96 | | -8.41 | | 1.90 | |
| # of Portfolios | 57 | | 57 | | 57 | | 54 | | 54 | |
| ● Oberweis Asset Mgmt | -4.09 | (96) | 15.89 | (13) | -9.89 | (72) | -2.42 | (39) | 4.87 | (59) |
| ▲ MSCI EAFE Small Cap | -0.44 | (17) | 12.05 | (40) | -5.93 | (24) | -1.22 | (31) | 5.94 | (48) |



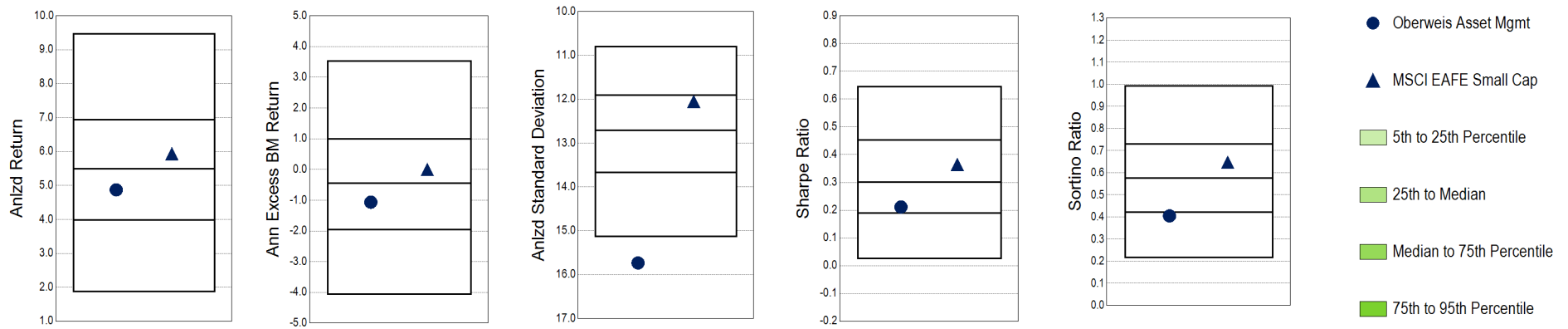
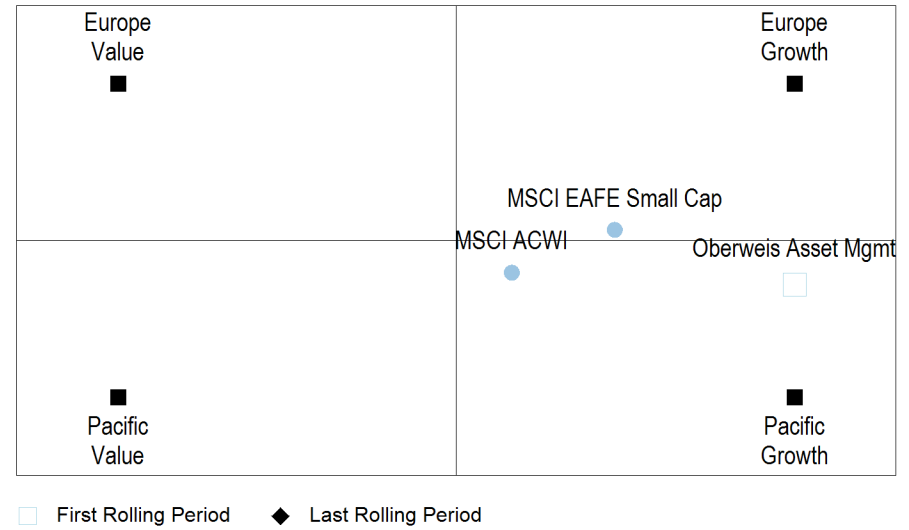
Los Angeles City Employees' Retirement System

OBERWEIS ASSET MGMT

3 Year Risk Return



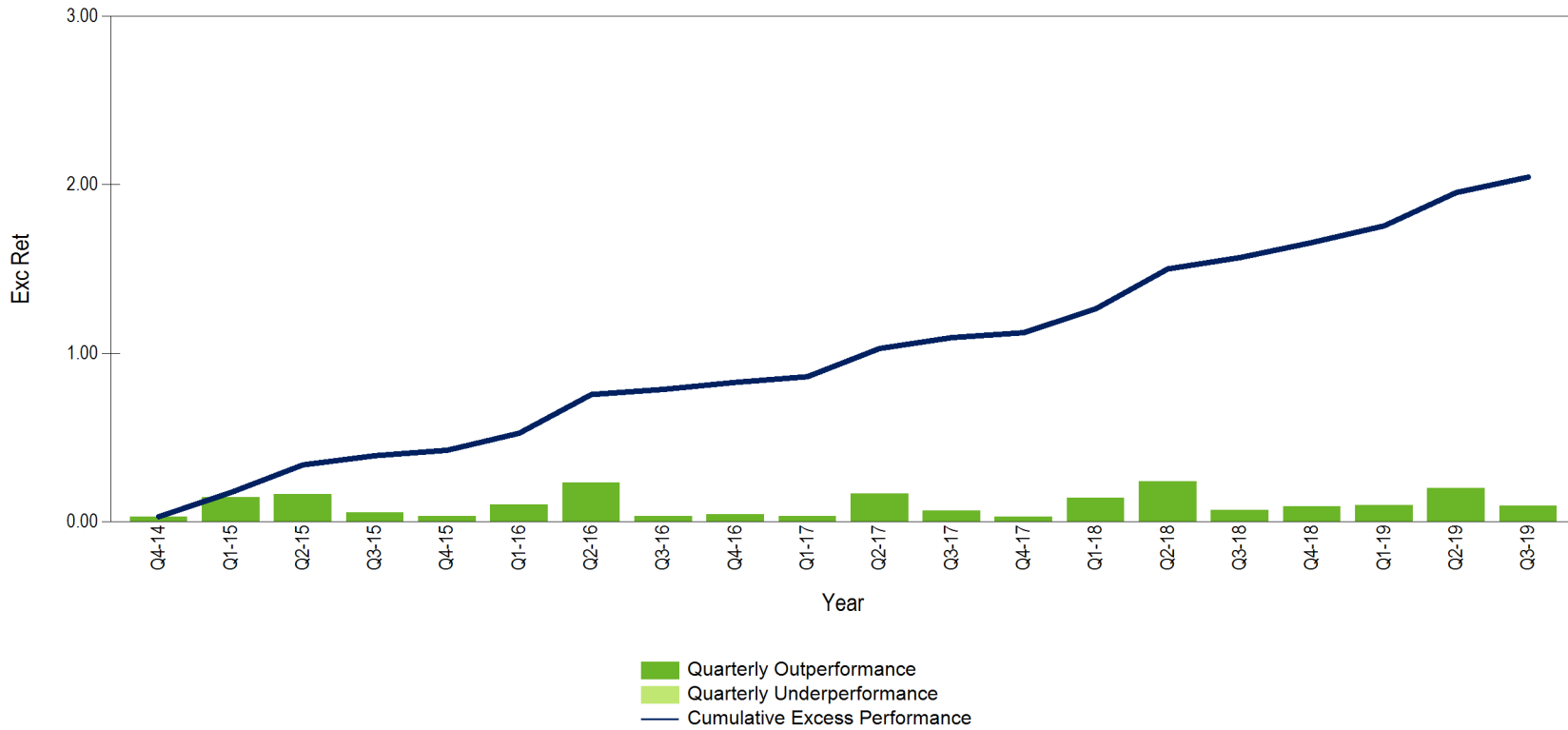
3 Year Style Map



Los Angeles City Employees' Retirement System

SSGA WORLD EX US IMI

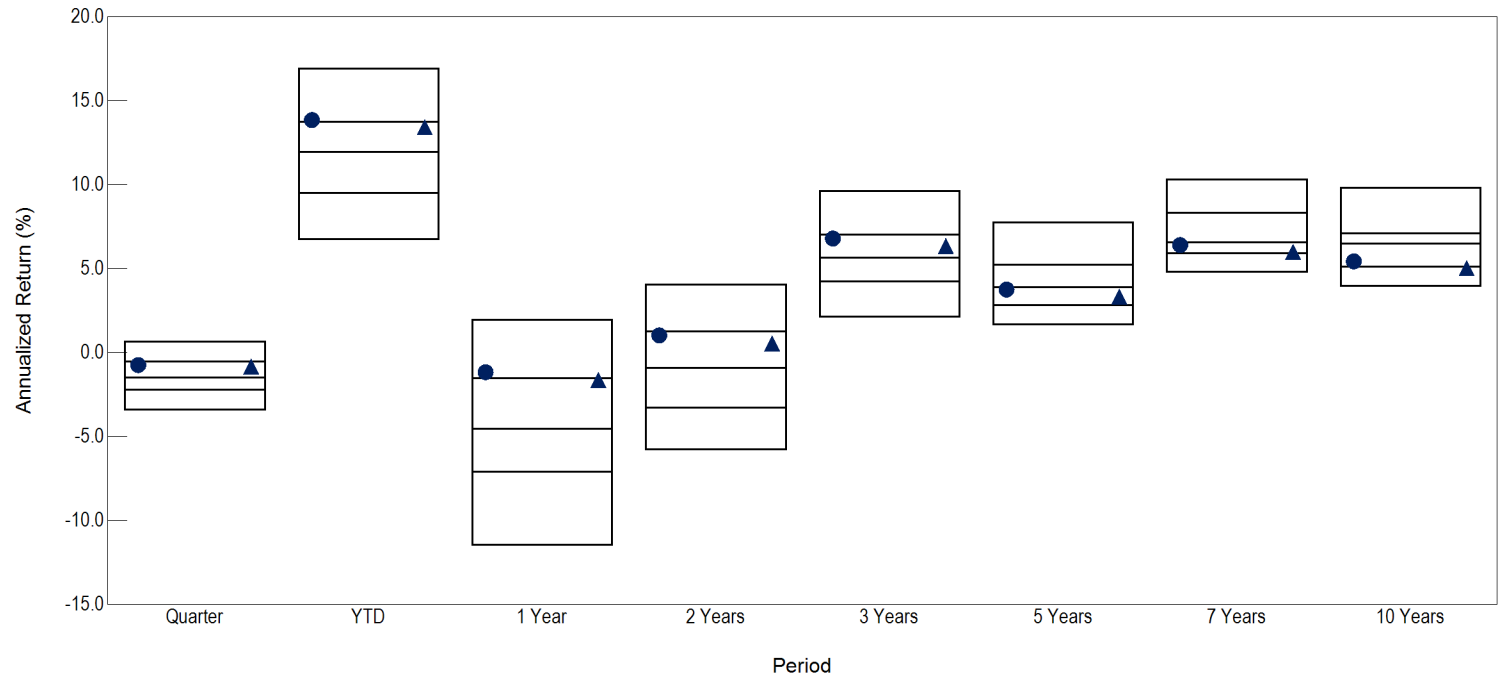
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

SSGA WORLD EX US IMI

SSgA World ex US IMI vs. eV EAFE Core Equity Net



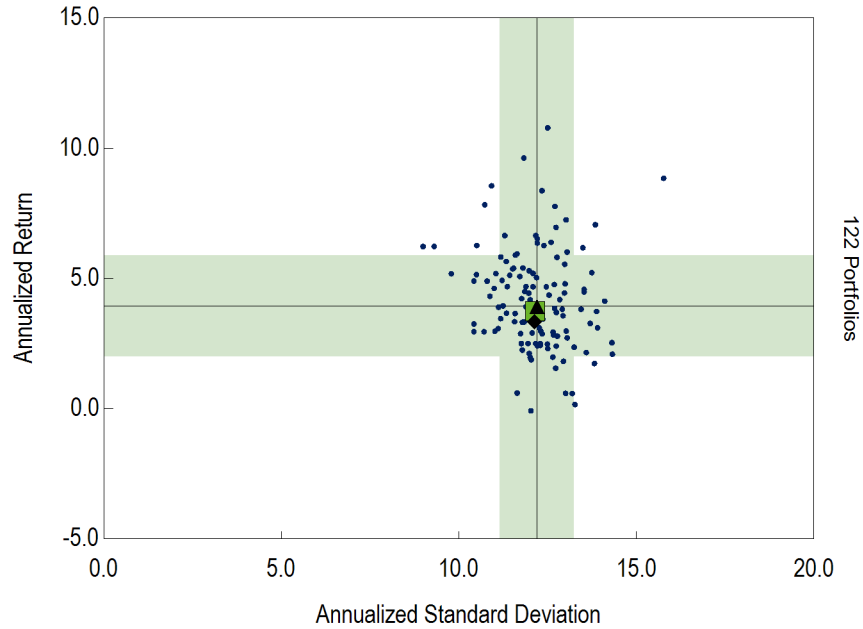
| | Return (Rank) | | | | | | | | | | | | | | | |
|--------------------------------|---------------|-------|--------|-------|-------|------|-------|------|------|------|------|------|------|------|------|------|
| 5th Percentile | 0.65 | 16.90 | 1.96 | 4.06 | 9.61 | 7.74 | 10.30 | 9.81 | | | | | | | | |
| 25th Percentile | -0.51 | 13.78 | -1.47 | 1.30 | 7.07 | 5.28 | 8.35 | 7.13 | | | | | | | | |
| Median | -1.44 | 11.98 | -4.51 | -0.89 | 5.71 | 3.93 | 6.59 | 6.53 | | | | | | | | |
| 75th Percentile | -2.19 | 9.54 | -7.07 | -3.22 | 4.29 | 2.87 | 5.96 | 5.16 | | | | | | | | |
| 95th Percentile | -3.37 | 6.79 | -11.40 | -5.72 | 2.17 | 1.74 | 4.86 | 4.00 | | | | | | | | |
| # of Portfolios | 146 | 146 | 146 | 144 | 143 | 122 | 104 | 86 | | | | | | | | |
| ● SSGA World ex US IMI | -0.75 | (31) | 13.85 | (25) | -1.17 | (22) | 1.02 | (28) | 6.79 | (30) | 3.75 | (55) | 6.41 | (62) | 5.44 | (70) |
| ▲ MSCI World ex USA IMI NR USD | -0.84 | (33) | 13.43 | (33) | -1.64 | (27) | 0.54 | (31) | 6.35 | (36) | 3.33 | (63) | 5.99 | (75) | 5.04 | (77) |



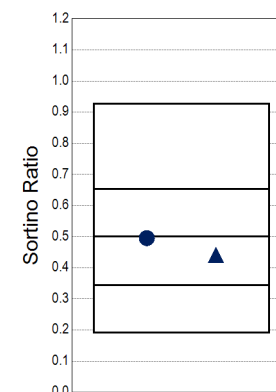
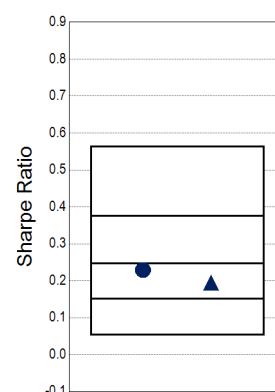
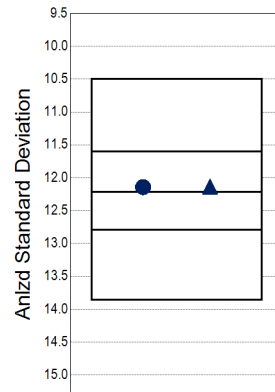
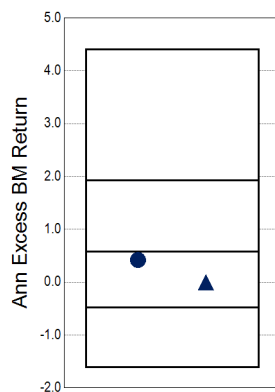
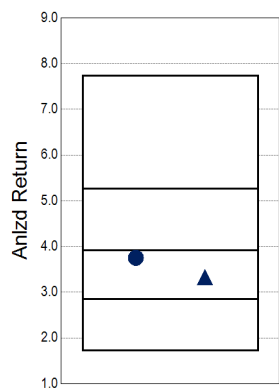
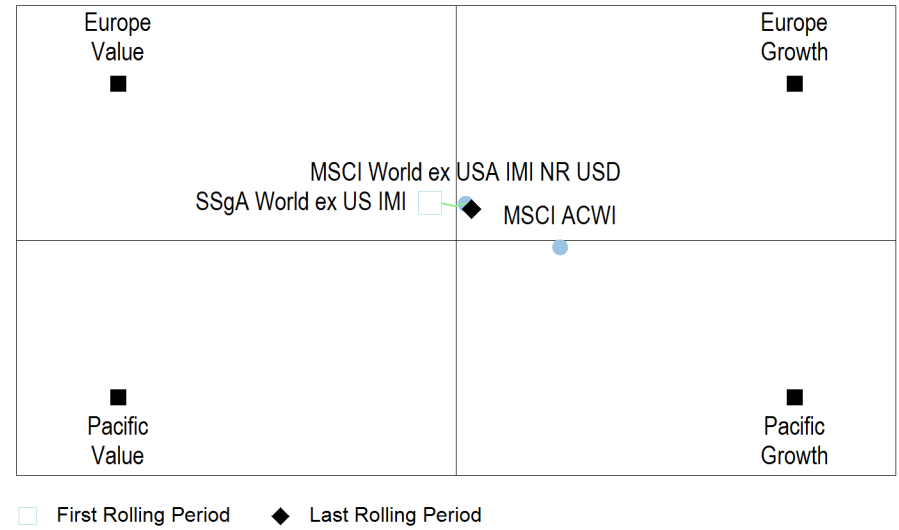
Los Angeles City Employees' Retirement System

SSGA WORLD EX US IMI

5 Year Risk Return



5 Year Style Map

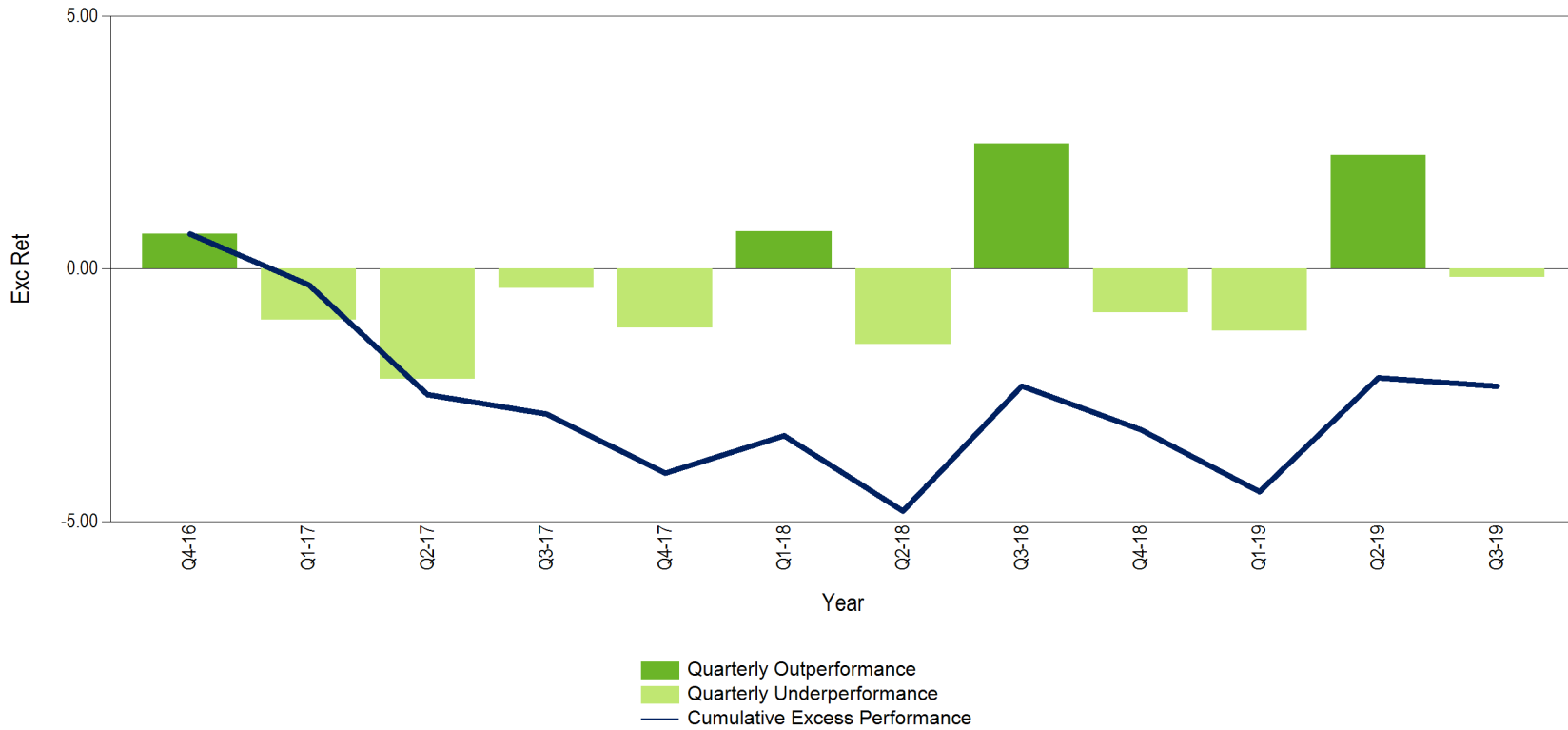


- SSGA World ex US IMI
- ▲ MSCI World ex USA IMI NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



AXIOM EMERGING MARKETS

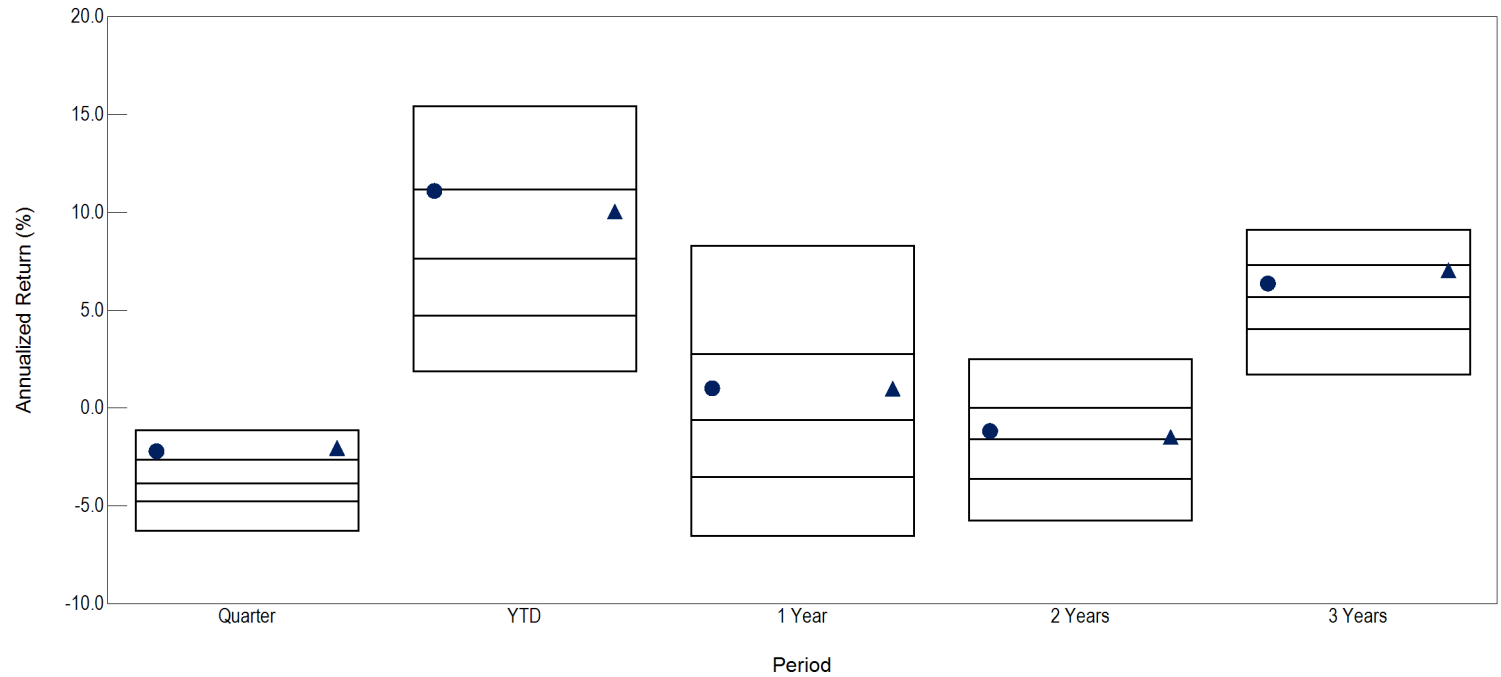
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

AXIOM EMERGING MARKETS

Axiom Emerging Markets vs. eV Emg Mkts Equity Net

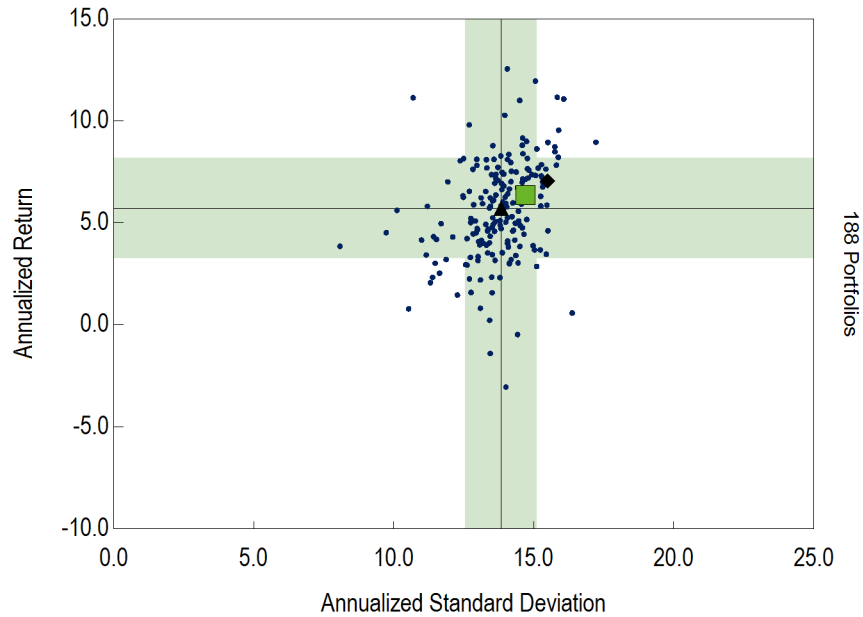


| | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | |
|---------------------------------------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|
| 5th Percentile | -1.12 | (18) | 15.44 | (26) | 8.30 | (38) | 2.51 | (45) | 9.10 | (38) |
| 25th Percentile | -2.61 | (16) | 11.22 | (31) | 2.78 | (38) | 0.05 | (50) | 7.33 | (30) |
| Median | -3.81 | (16) | 7.68 | (31) | -0.56 | (38) | -1.55 | (50) | 5.71 | (30) |
| 75th Percentile | -4.72 | (16) | 4.76 | (31) | -3.49 | (38) | -3.57 | (50) | 4.06 | (30) |
| 95th Percentile | -6.24 | (16) | 1.91 | (31) | -6.49 | (38) | -5.71 | (50) | 1.74 | (30) |
| # of Portfolios | 209 | | 208 | | 201 | | 197 | | 188 | |
| ● Axiom Emerging Markets | -2.21 | (18) | 11.10 | (26) | 1.01 | (38) | -1.17 | (45) | 6.37 | (38) |
| ▲ MSCI Emerging Markets Growth NR USD | -2.04 | (16) | 10.05 | (31) | 1.01 | (38) | -1.47 | (50) | 7.04 | (30) |

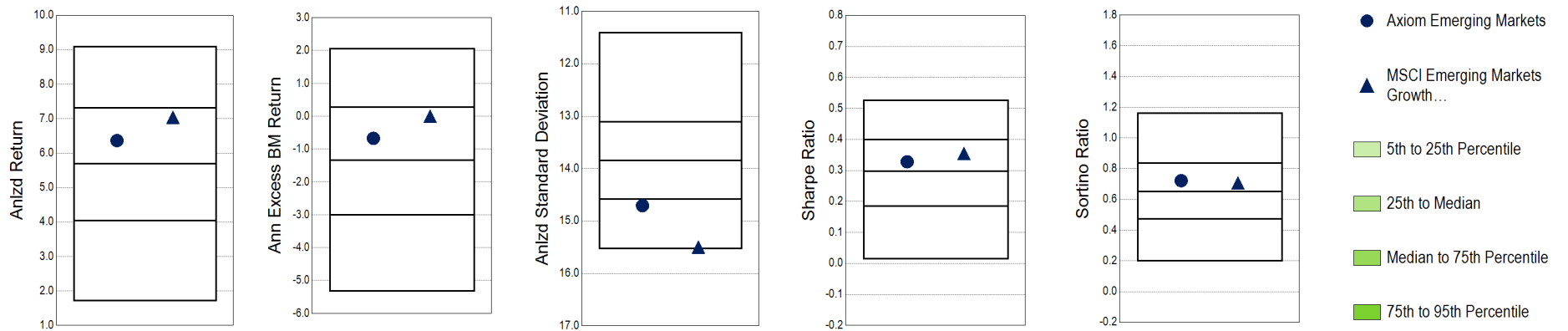
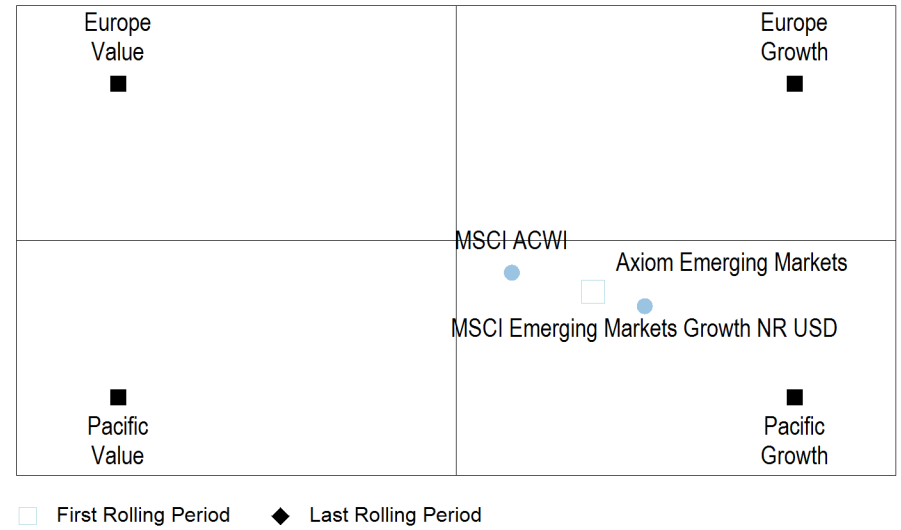


AXIOM EMERGING MARKETS

3 Year Risk Return



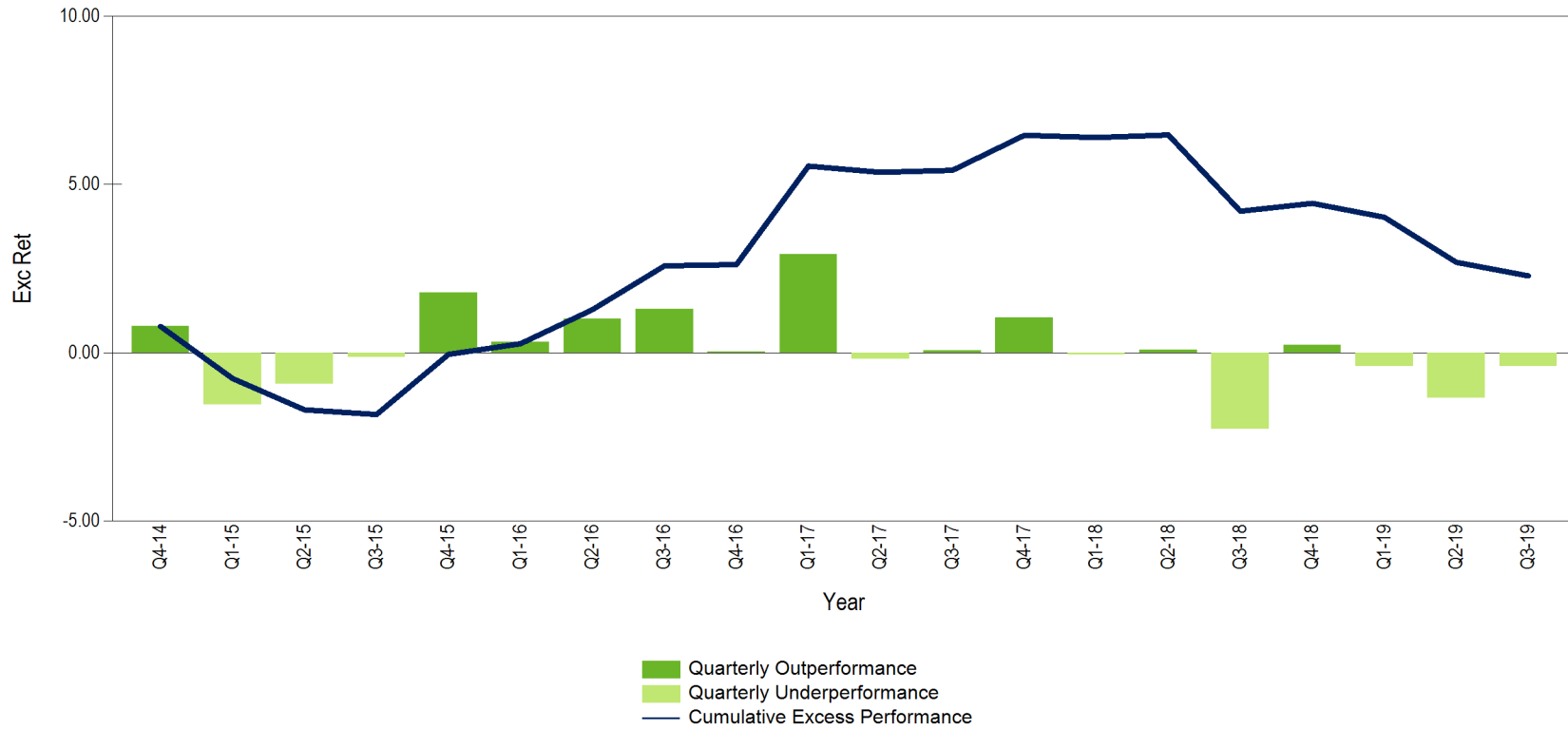
3 Year Style Map



Los Angeles City Employees' Retirement System

DFA EMERGING MARKETS

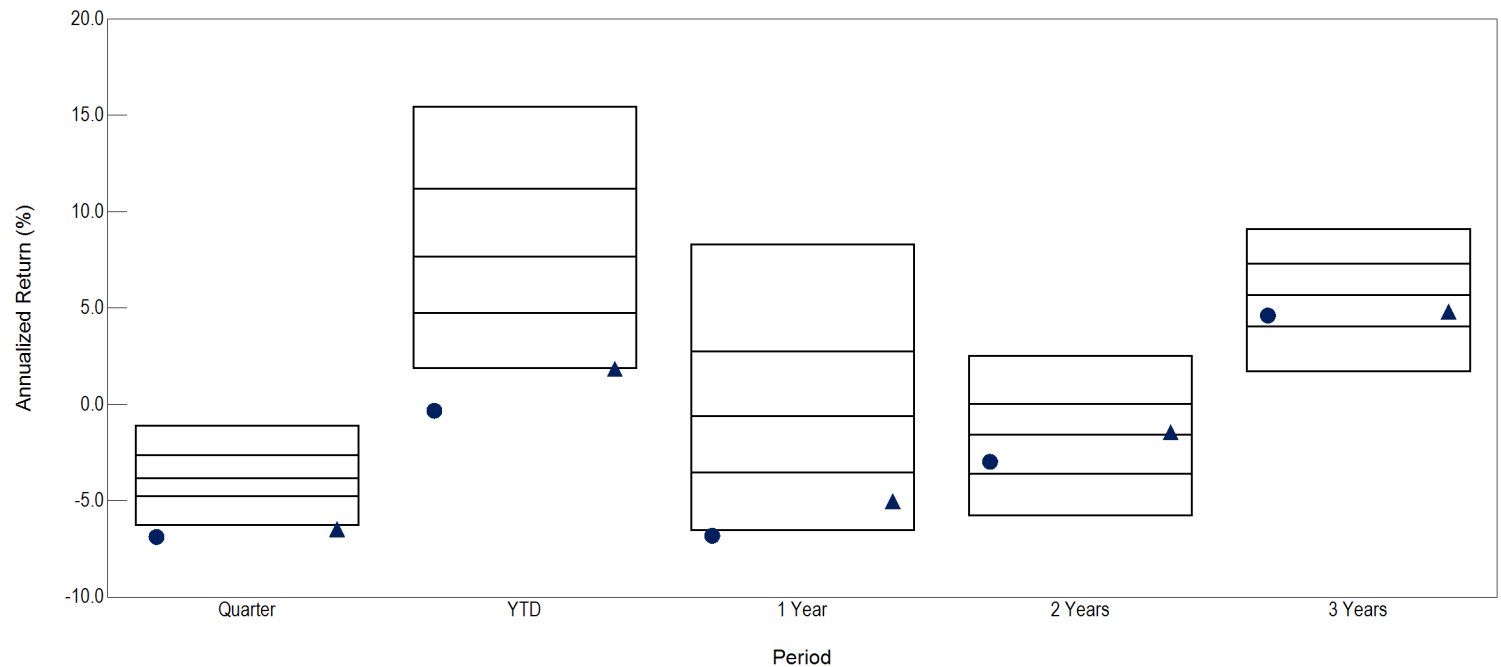
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

DFA EMERGING MARKETS

DFA Emerging Markets vs. eV Emg Mkts Equity Net



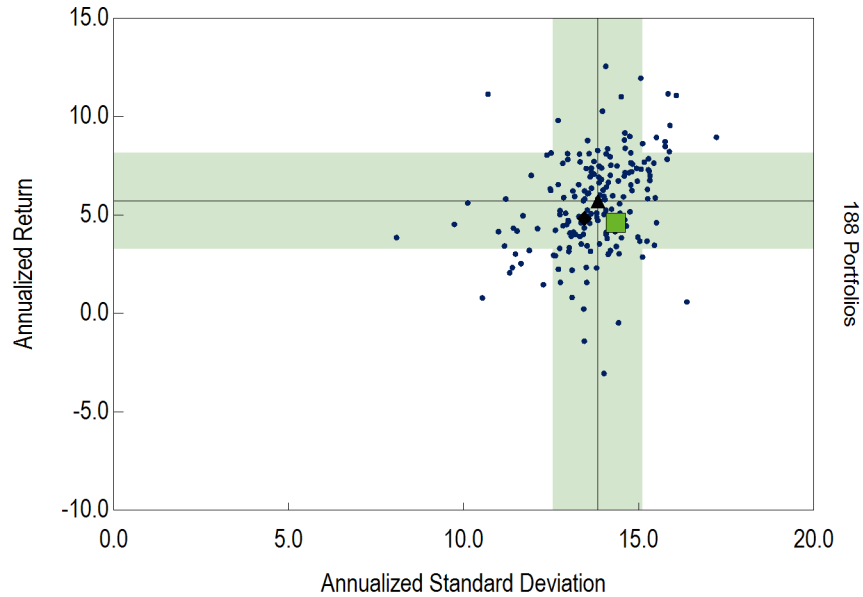
| | Return (Rank) | | | | | | | | | |
|--------------------------------------|---------------|------|-------|------|-------|------|-------|------|------|------|
| 5th Percentile | -1.12 | | 15.44 | | 8.30 | | 2.51 | | 9.10 | |
| 25th Percentile | -2.61 | | 11.22 | | 2.78 | | 0.05 | | 7.33 | |
| Median | -3.81 | | 7.68 | | -0.56 | | -1.55 | | 5.71 | |
| 75th Percentile | -4.72 | | 4.76 | | -3.49 | | -3.57 | | 4.06 | |
| 95th Percentile | -6.24 | | 1.91 | | -6.49 | | -5.71 | | 1.74 | |
| # of Portfolios | 209 | | 208 | | 201 | | 197 | | 188 | |
| ● DFA Emerging Markets | -6.88 | (99) | -0.33 | (99) | -6.82 | (98) | -2.98 | (71) | 4.60 | (66) |
| ▲ MSCI Emerging Markets Value NR USD | -6.48 | (98) | 1.84 | (96) | -5.03 | (90) | -1.45 | (50) | 4.81 | (62) |



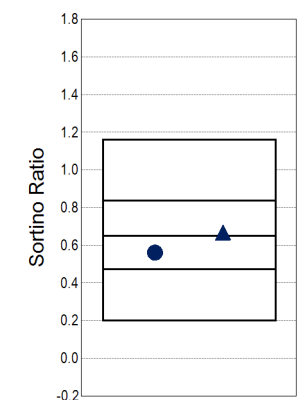
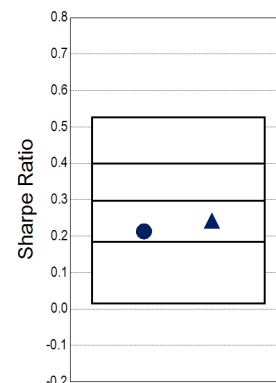
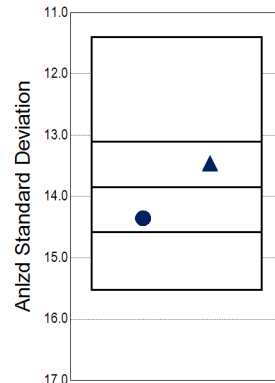
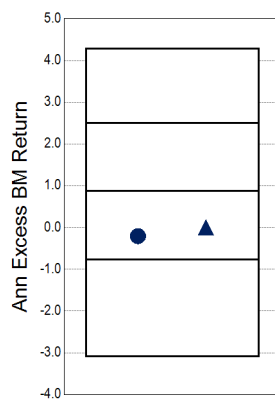
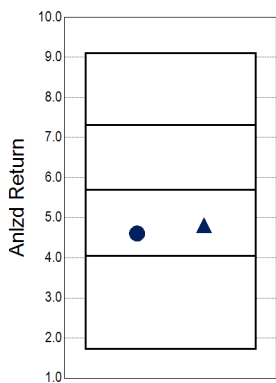
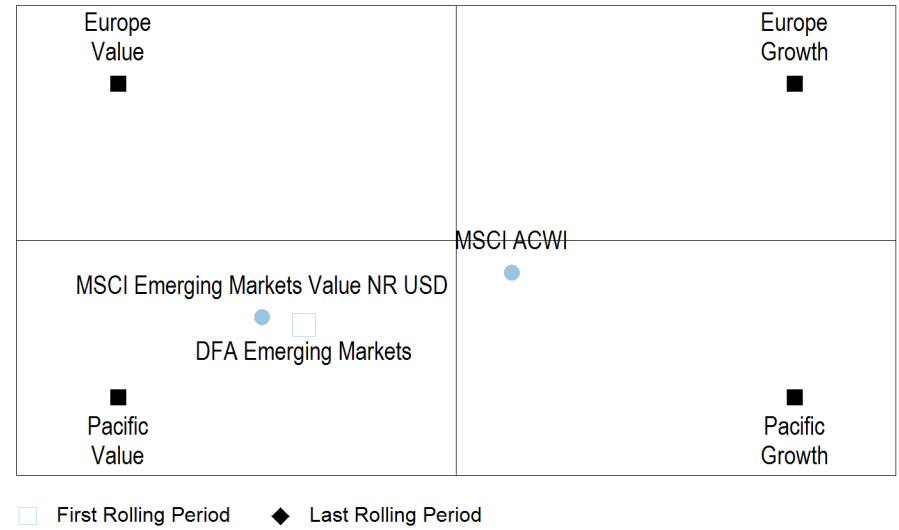
Los Angeles City Employees' Retirement System

DFA EMERGING MARKETS

3 Year Risk Return



3 Year Style Map



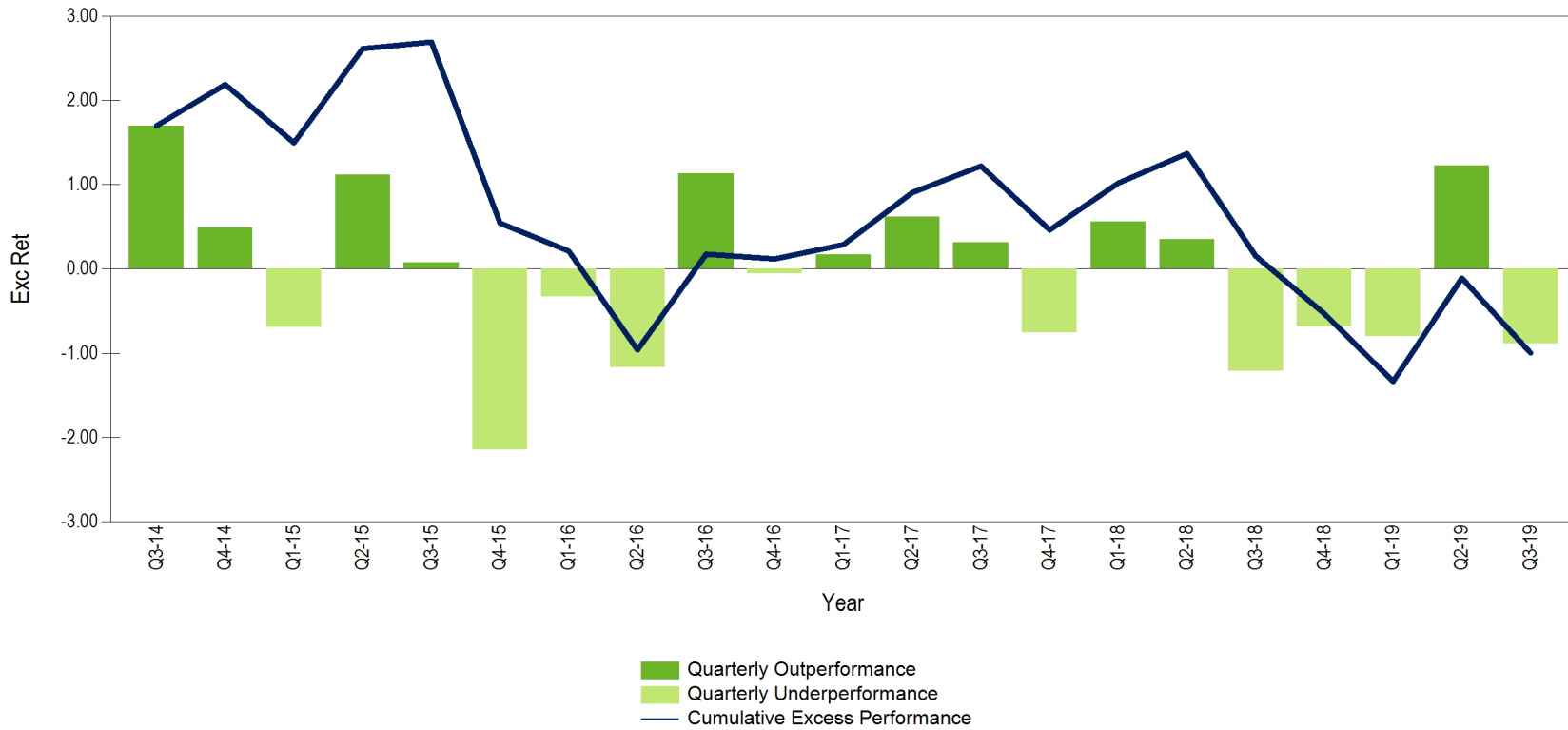
- DFA Emerging Markets
- ▲ MSCI Emerging Markets Value NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

QMA EMERGING MARKETS

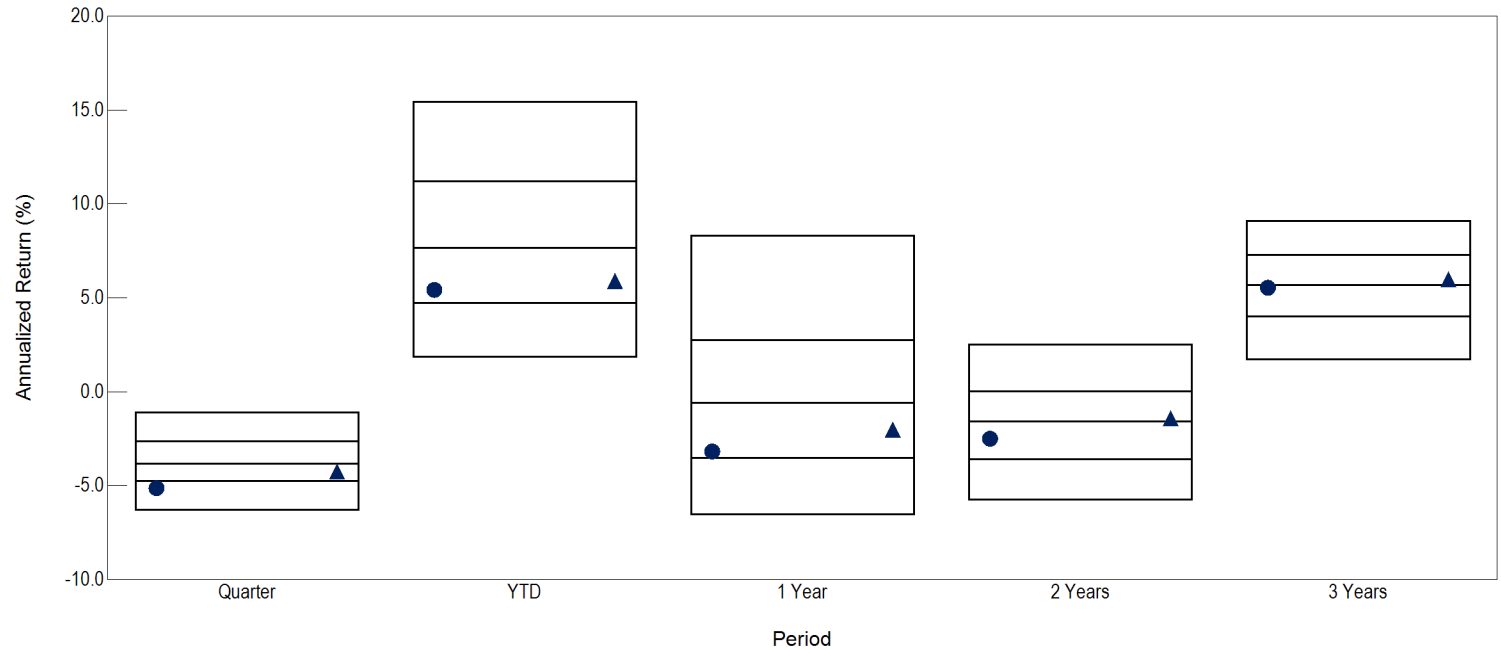
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

QMA EMERGING MARKETS

QMA Emerging Markets vs. eV Emg Mkts Equity Net



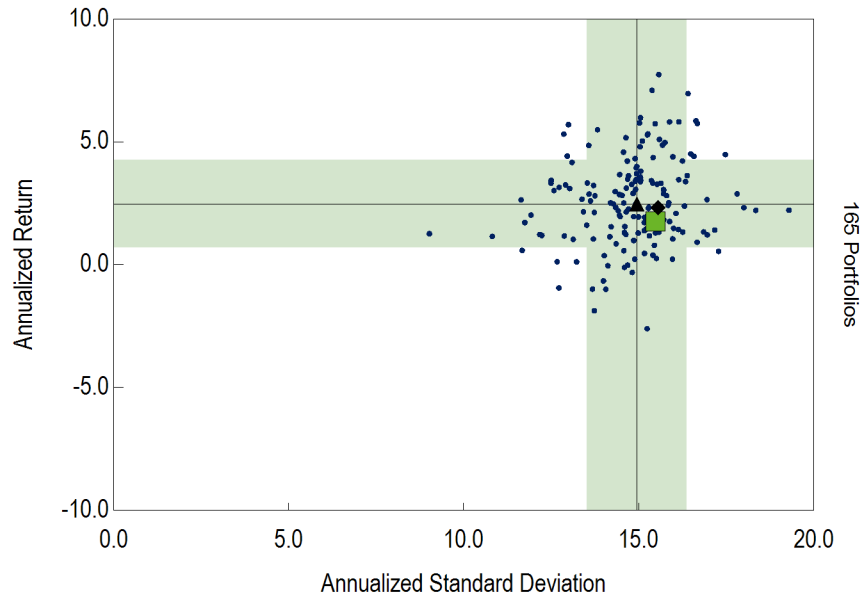
| | Return (Rank) | | | | | | | | | |
|-------------------------|---------------|------|-------|------|-------|------|-------|------|------|------|
| 5th Percentile | -1.12 | | 15.44 | | 8.30 | | 2.51 | | 9.10 | |
| 25th Percentile | -2.61 | | 11.22 | | 2.78 | | 0.05 | | 7.33 | |
| Median | -3.81 | | 7.68 | | -0.56 | | -1.55 | | 5.71 | |
| 75th Percentile | -4.72 | | 4.76 | | -3.49 | | -3.57 | | 4.06 | |
| 95th Percentile | -6.24 | | 1.91 | | -6.49 | | -5.71 | | 1.74 | |
| # of Portfolios | 209 | | 208 | | 201 | | 197 | | 188 | |
| ● QMA Emerging Markets | -5.13 | (82) | 5.42 | (71) | -3.18 | (73) | -2.50 | (61) | 5.53 | (52) |
| ▲ MSCI Emerging Markets | -4.25 | (61) | 5.90 | (67) | -2.02 | (64) | -1.42 | (49) | 5.97 | (44) |



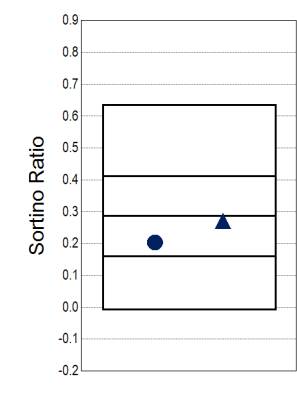
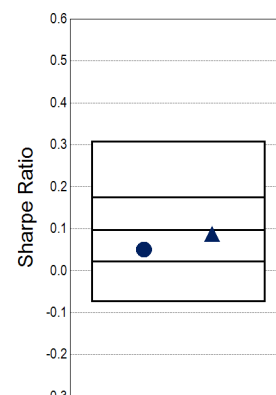
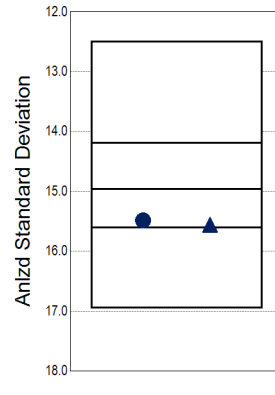
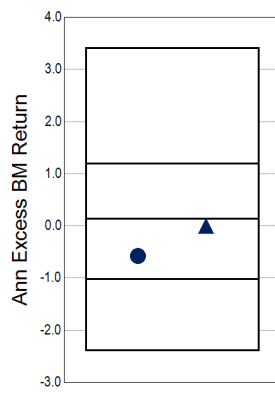
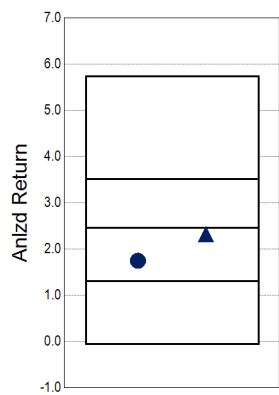
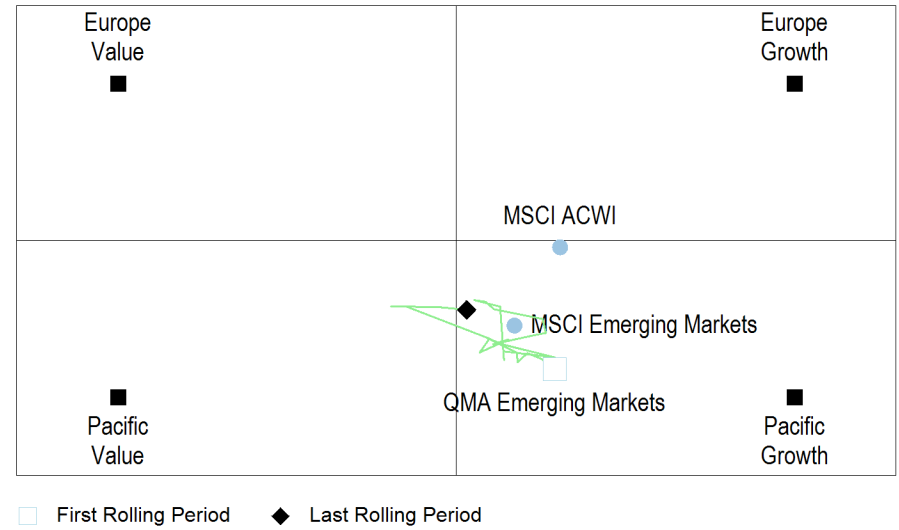
Los Angeles City Employees' Retirement System

QMA EMERGING MARKETS

5 Year Risk Return



5 Year Style Map



- QMA Emerging Markets
- ▲ MSCI Emerging Markets
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



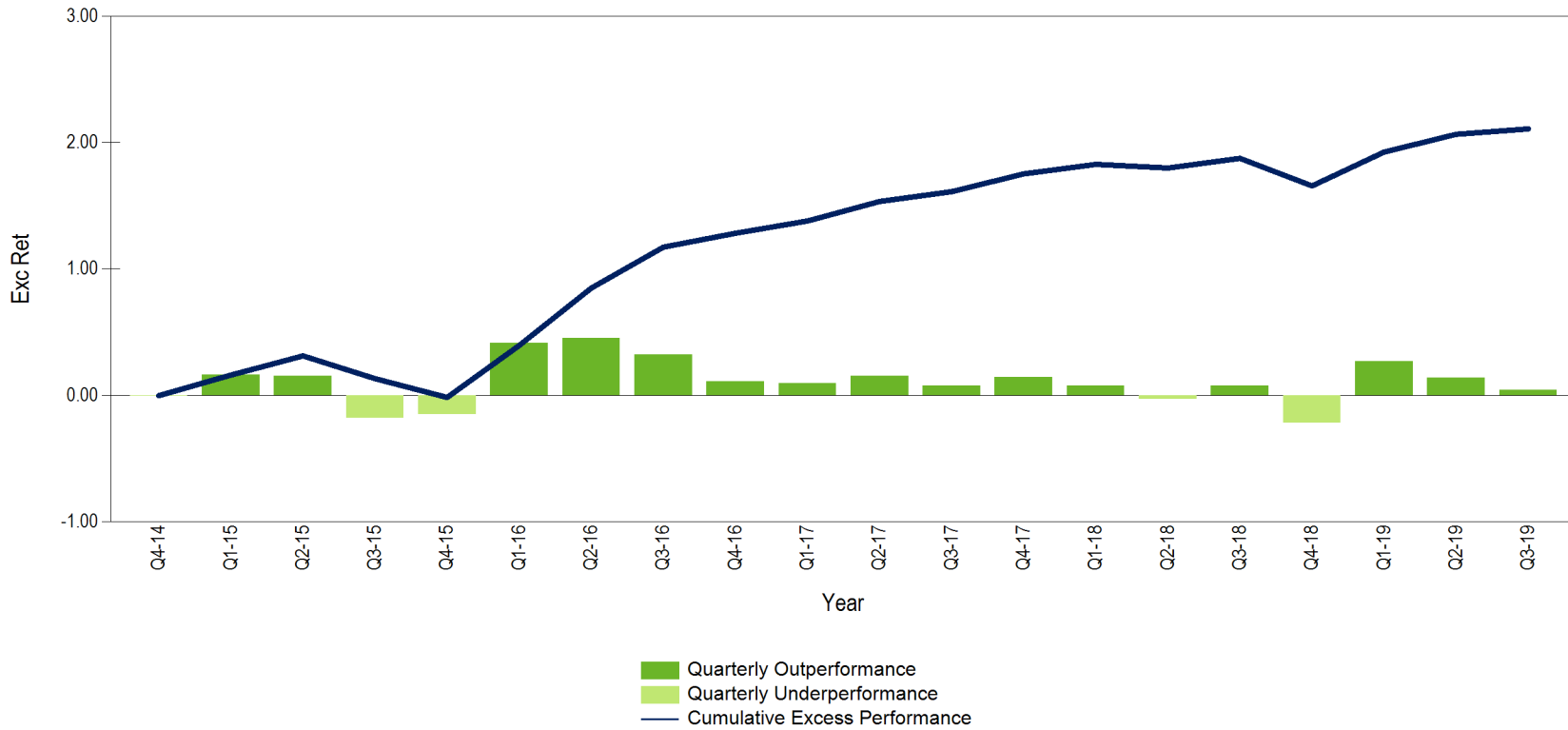
CORE FIXED INCOME MANAGER PERFORMANCE

NEPC, LLC

Los Angeles City Employees' Retirement System

BAIRD ADVISORS

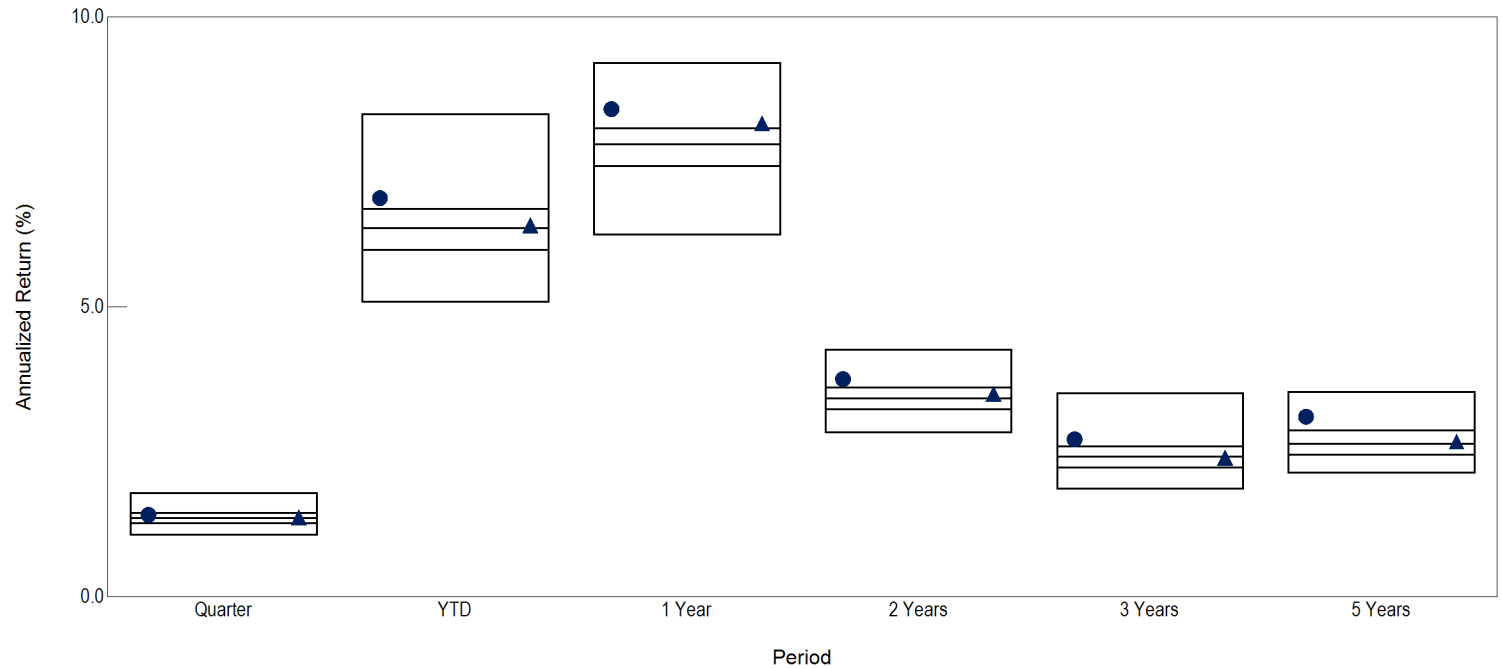
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

BAIRD ADVISORS

Baird Advisors vs. eV US Interm Duration Fixed Inc Net



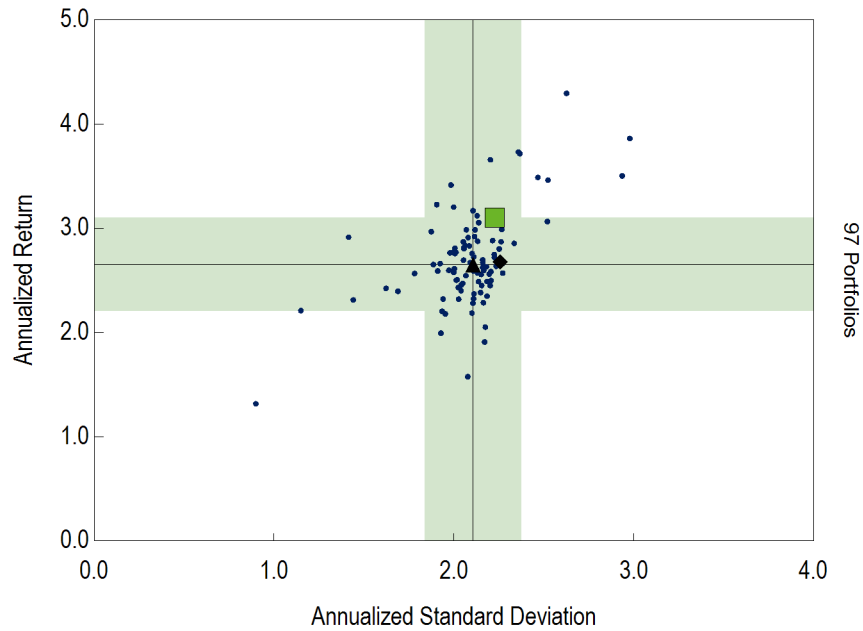
| | Return (Rank) | | Quarter | | YTD | | 1 Year | | 2 Years | | 3 Years | | 5 Years | |
|---------------------------------|---------------|------|---------|------|------|------|--------|------|---------|------|---------|------|---------|------|
| 5th Percentile | 1.79 | | 1.46 | 8.33 | 1.28 | 6.70 | 1.09 | 9.20 | 1.28 | 3.25 | 2.24 | 1.88 | 2.15 | 3.53 |
| 25th Percentile | 1.46 | | 1.28 | 6.70 | 1.09 | 5.99 | 1.09 | 8.09 | 1.28 | 3.43 | 2.43 | 1.88 | 2.15 | 2.88 |
| Median | 1.37 | | 1.09 | 6.37 | 1.09 | 6.37 | 1.09 | 7.81 | 1.09 | 3.43 | 2.43 | 1.88 | 2.15 | 2.65 |
| 75th Percentile | 1.28 | | 1.09 | 5.99 | 1.09 | 5.99 | 1.09 | 7.44 | 1.28 | 3.25 | 2.24 | 1.88 | 2.15 | 2.46 |
| 95th Percentile | 1.09 | | 1.09 | 5.10 | 1.09 | 5.10 | 1.09 | 6.25 | 1.09 | 2.85 | 1.88 | 1.88 | 2.15 | 2.15 |
| # of Portfolios | 103 | | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 100 | 100 | 97 | 97 |
| ● Baird Advisors | 1.41 | (35) | 6.88 | (15) | 8.41 | (13) | 3.75 | (19) | 2.72 | (22) | 3.10 | (14) | | |
| ▲ BBgBarc US Govt/Credit Int TR | 1.37 | (50) | 6.41 | (46) | 8.17 | (19) | 3.50 | (43) | 2.40 | (53) | 2.68 | (46) | | |



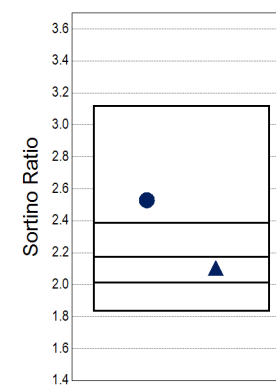
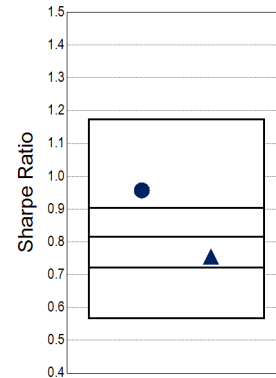
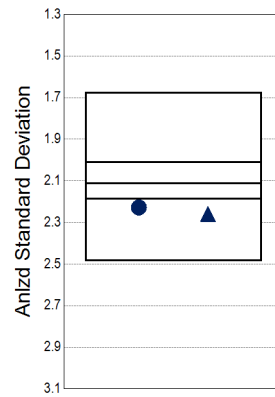
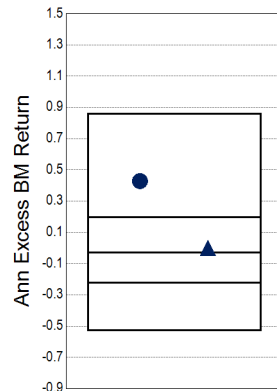
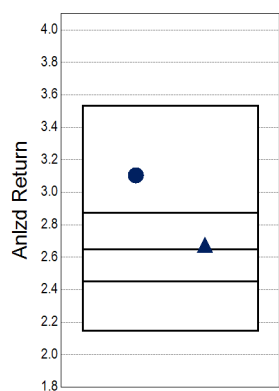
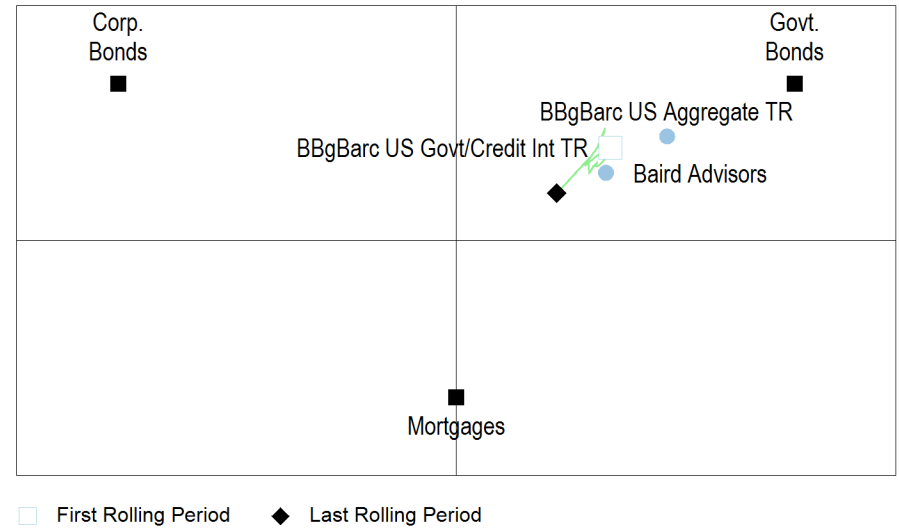
Los Angeles City Employees' Retirement System

BAIRD ADVISORS

5 Year Risk Return



5 Year Style Map



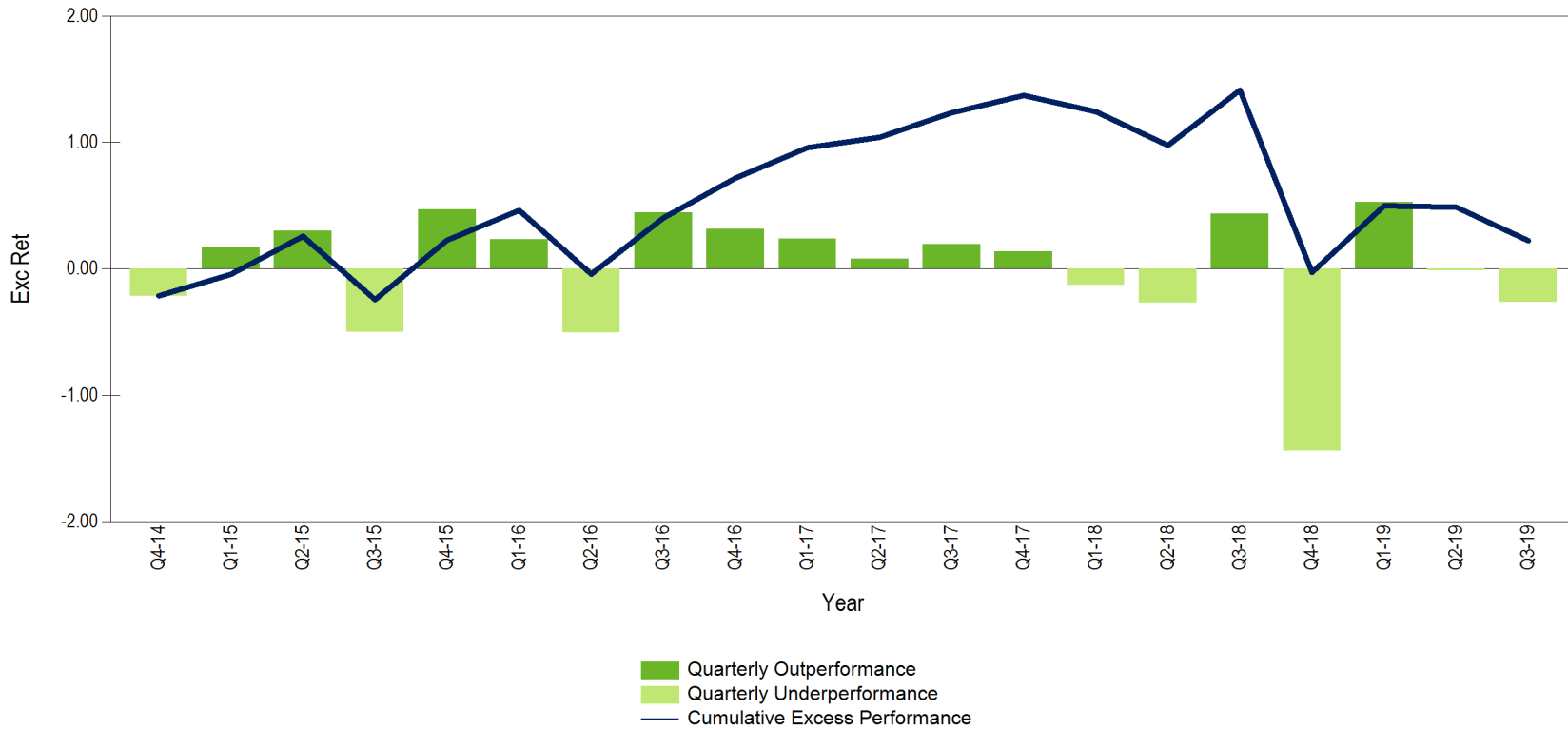
- Baird Advisors
- ▲ BBgBarc US Govt/Credit Int TR
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

LM CAPITAL

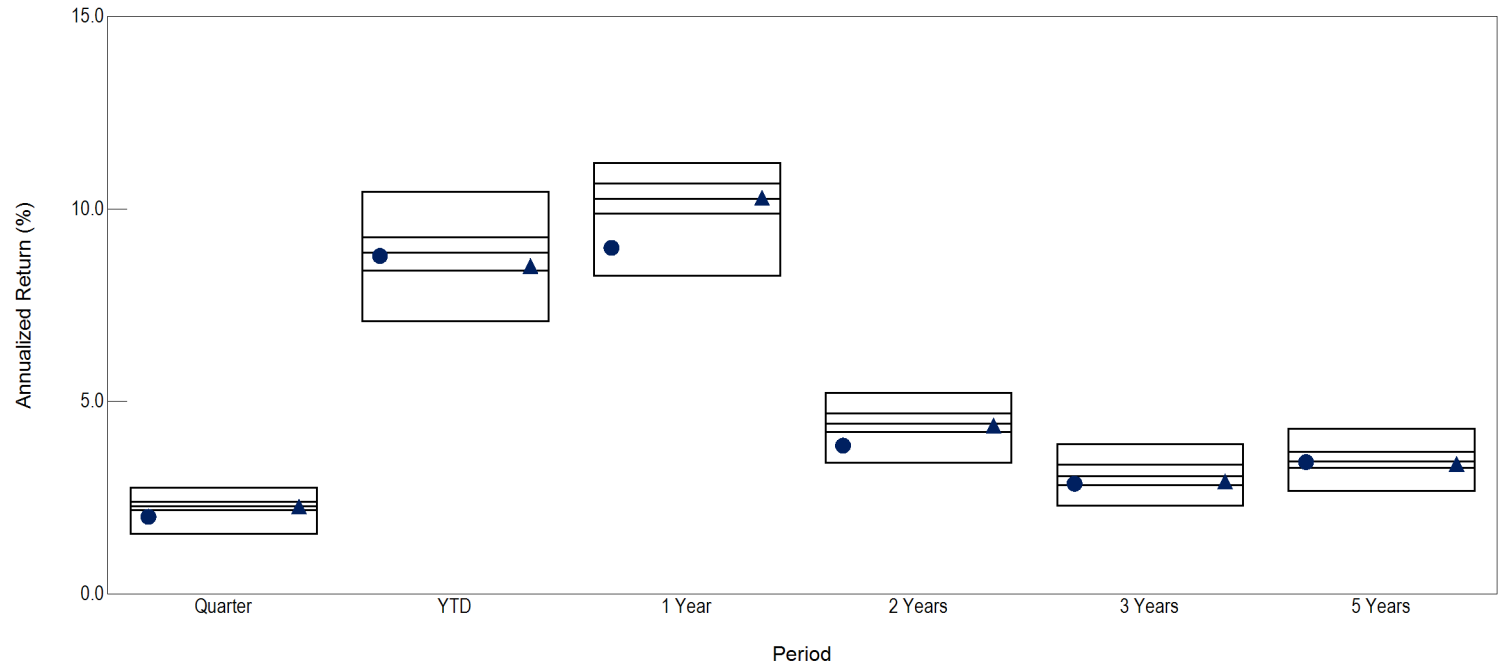
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

LM CAPITAL

Core Fixed Income Managers vs. eV US Core Fixed Inc Net



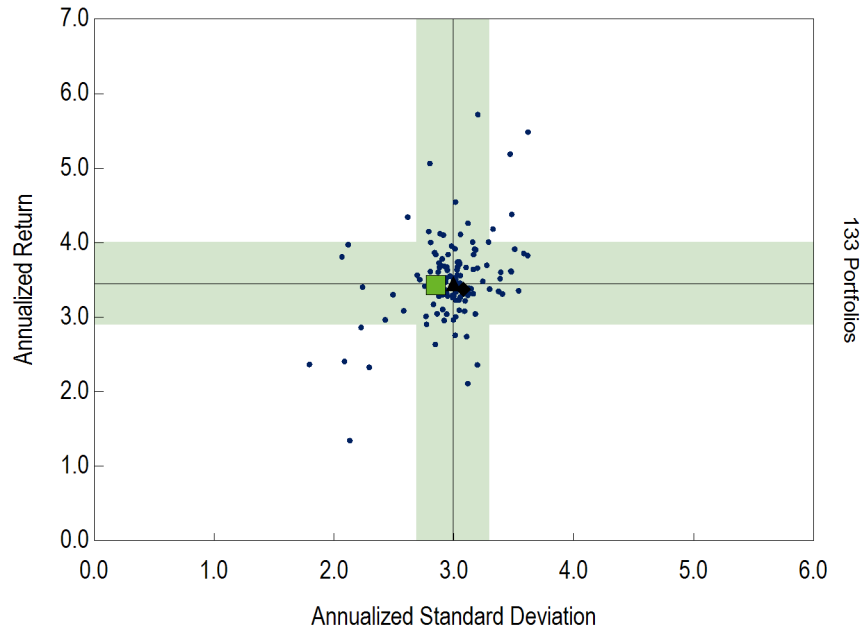
| | Return (Rank) | | | | | | | | | | | |
|---------------------------|---------------|------|-------|------|-------|------|------|------|------|------|------|------|
| 5th Percentile | 2.77 | | 10.44 | | 11.20 | | 5.23 | | 3.89 | | 4.29 | |
| 25th Percentile | 2.41 | | 9.29 | | 10.67 | | 4.71 | | 3.38 | | 3.71 | |
| Median | 2.29 | | 8.88 | | 10.27 | | 4.44 | | 3.07 | | 3.45 | |
| 75th Percentile | 2.20 | | 8.42 | | 9.90 | | 4.22 | | 2.84 | | 3.29 | |
| 95th Percentile | 1.58 | | 7.11 | | 8.29 | | 3.42 | | 2.31 | | 2.70 | |
| # of Portfolios | 138 | | 138 | | 137 | | 136 | | 135 | | 133 | |
| ● LM Capital | 2.00 | (88) | 8.78 | (54) | 8.99 | (93) | 3.85 | (92) | 2.86 | (74) | 3.43 | (53) |
| ▲ Core Fixed Income Blend | 2.27 | (55) | 8.52 | (73) | 10.30 | (49) | 4.38 | (54) | 2.92 | (66) | 3.38 | (63) |



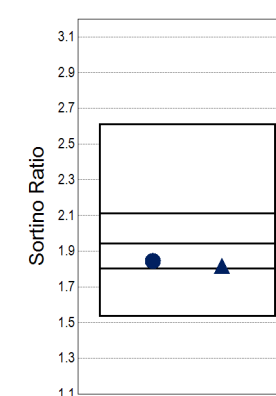
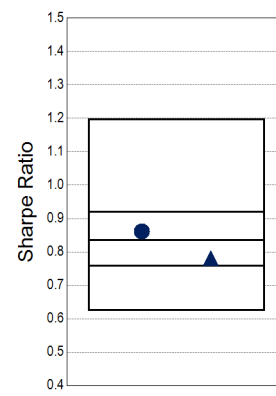
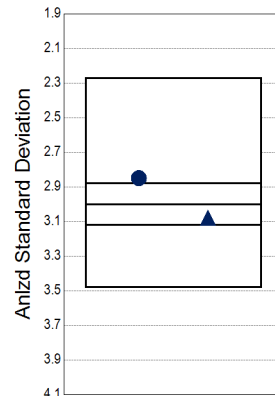
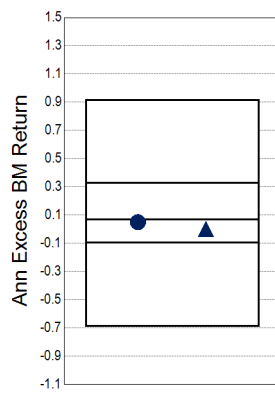
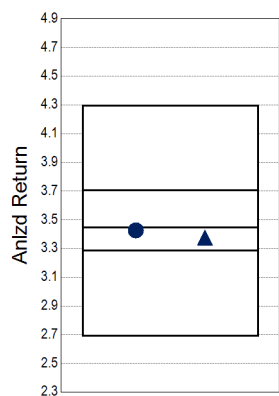
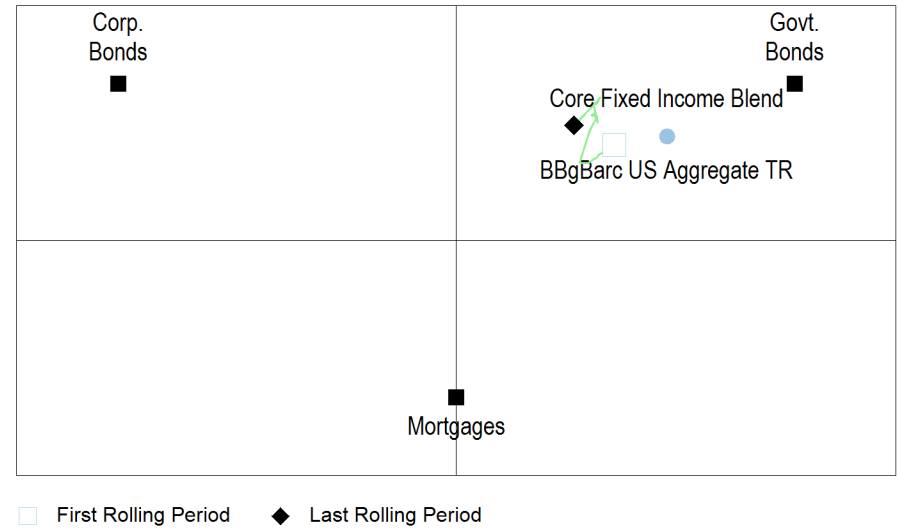
Los Angeles City Employees' Retirement System

LM CAPITAL

5 Year Risk Return



5 Year Style Map



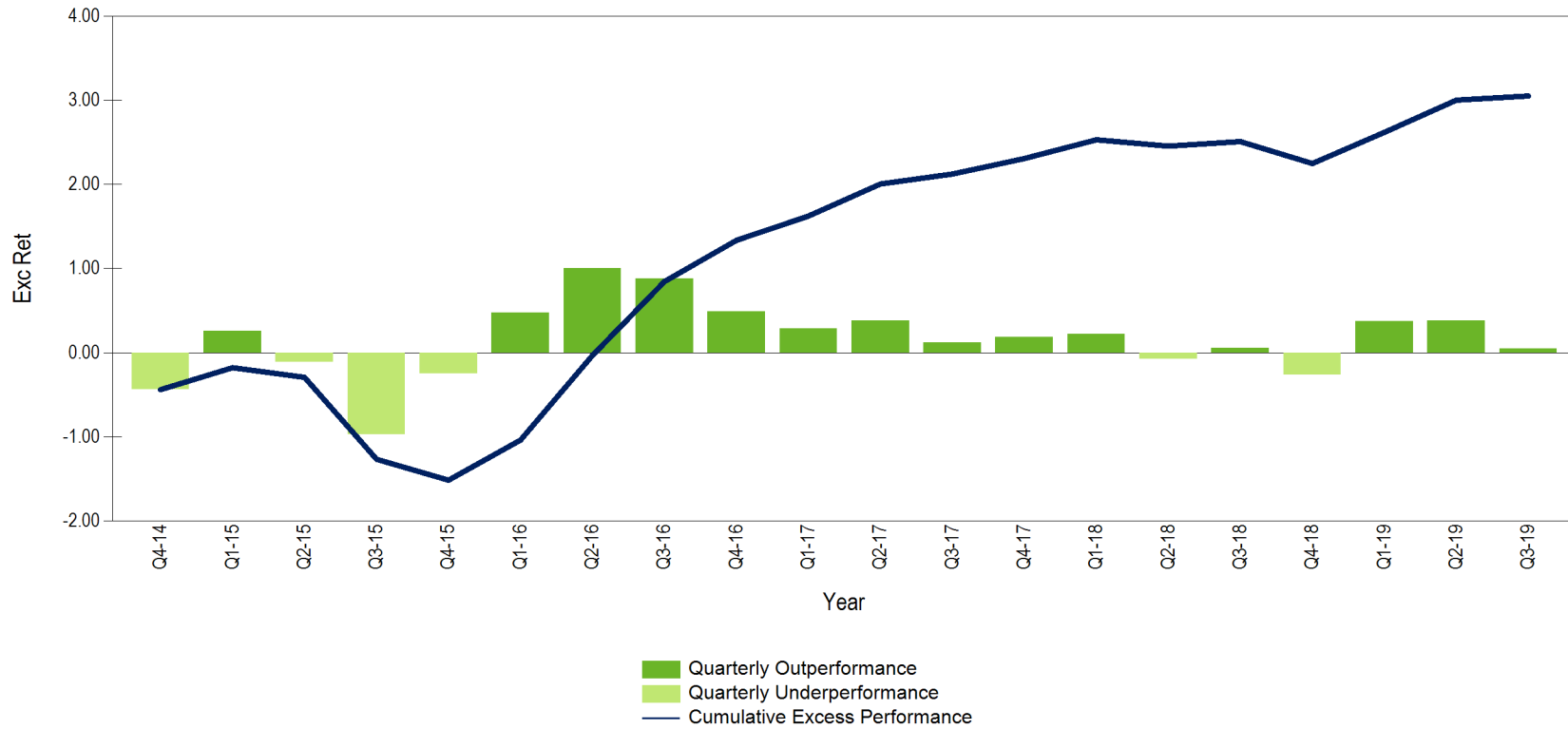
- LM Capital
- ▲ Core Fixed Income Blend
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

LOOMIS SAYLES

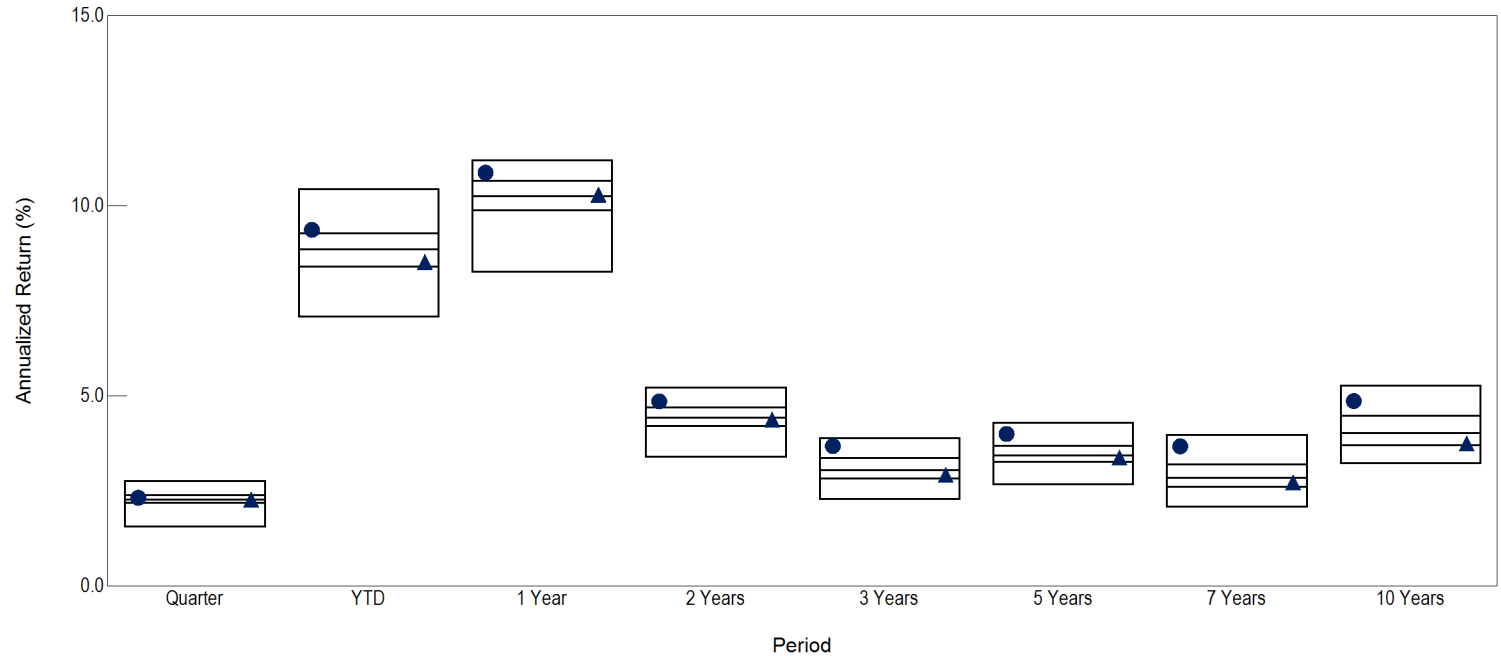
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

LOOMIS SAYLES

Loomis Sayles vs. eV US Core Fixed Inc Net



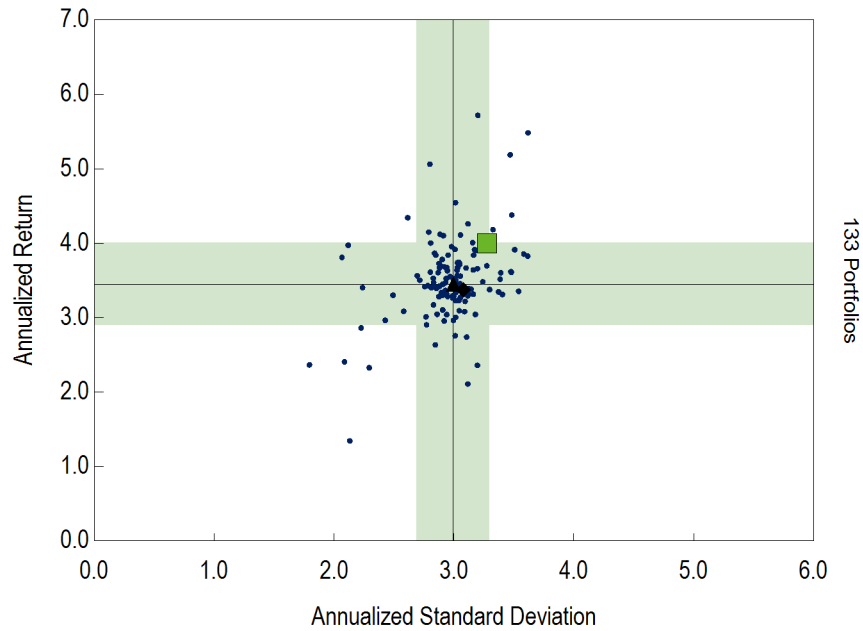
| | Return (Rank) | | | | | | | | | | | | | | | |
|---------------------------|---------------|-------|-------|------|-------|------|------|------|------|------|------|------|------|------|------|------|
| 5th Percentile | 2.77 | 10.44 | 11.20 | 5.23 | 3.89 | 4.29 | 3.97 | 5.27 | | | | | | | | |
| 25th Percentile | 2.41 | 9.29 | 10.67 | 4.71 | 3.38 | 3.71 | 3.21 | 4.49 | | | | | | | | |
| Median | 2.29 | 8.88 | 10.27 | 4.44 | 3.07 | 3.45 | 2.85 | 4.04 | | | | | | | | |
| 75th Percentile | 2.20 | 8.42 | 9.90 | 4.22 | 2.84 | 3.29 | 2.62 | 3.73 | | | | | | | | |
| 95th Percentile | 1.58 | 7.11 | 8.29 | 3.42 | 2.31 | 2.70 | 2.10 | 3.25 | | | | | | | | |
| # of Portfolios | 138 | 138 | 137 | 136 | 135 | 133 | 131 | 119 | | | | | | | | |
| ● Loomis Sayles | 2.32 | (43) | 9.37 | (22) | 10.87 | (20) | 4.86 | (14) | 3.68 | (9) | 4.00 | (12) | 3.67 | (8) | 4.86 | (15) |
| ▲ BC US Agg LACERS custom | 2.27 | (55) | 8.52 | (73) | 10.30 | (49) | 4.38 | (54) | 2.92 | (66) | 3.38 | (63) | 2.72 | (66) | 3.75 | (73) |



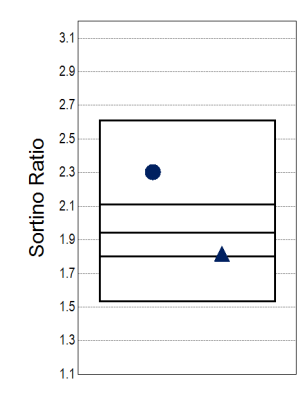
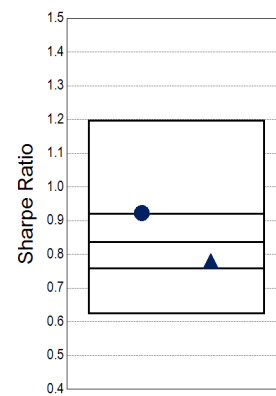
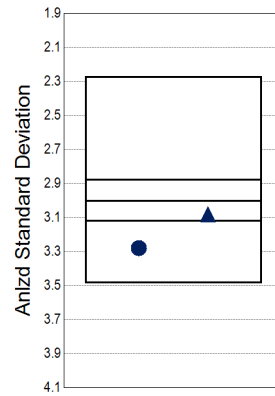
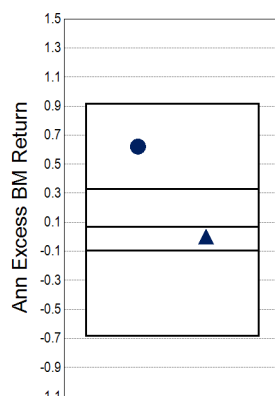
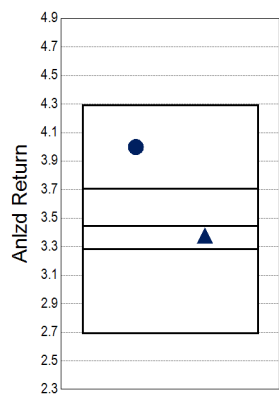
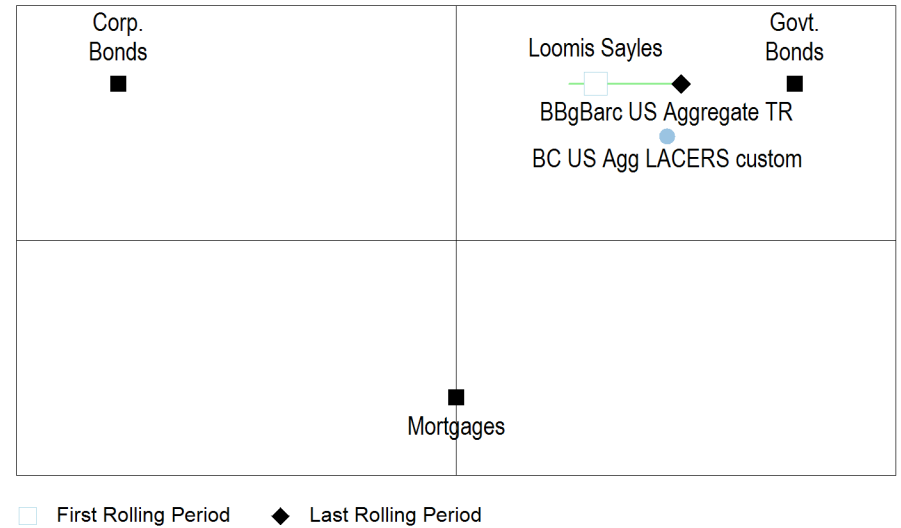
Los Angeles City Employees' Retirement System

LOOMIS SAYLES

5 Year Risk Return



5 Year Style Map



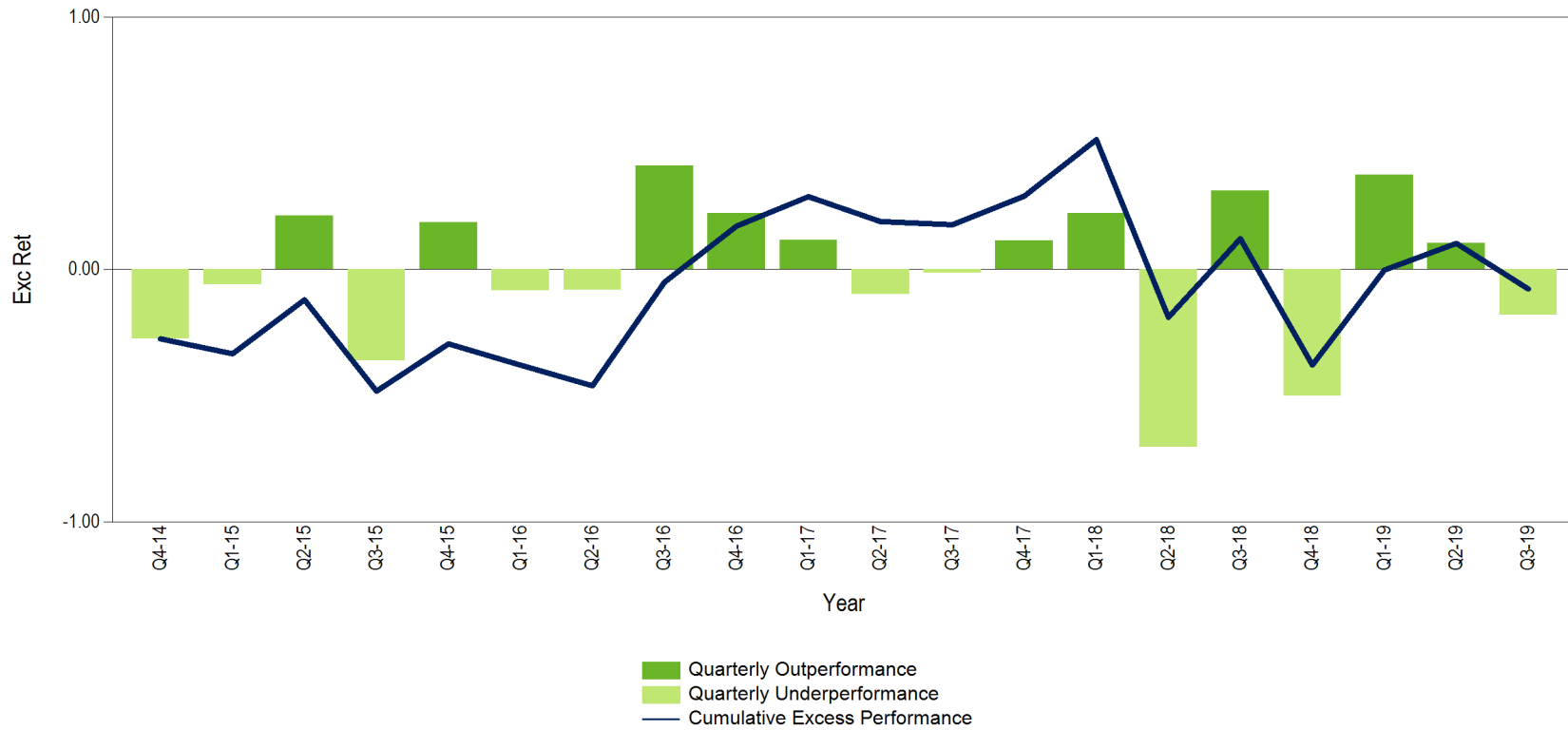
- Loomis Sayles
- ▲ BC US Agg LACERS custom
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

NEUBERGER BERMAN

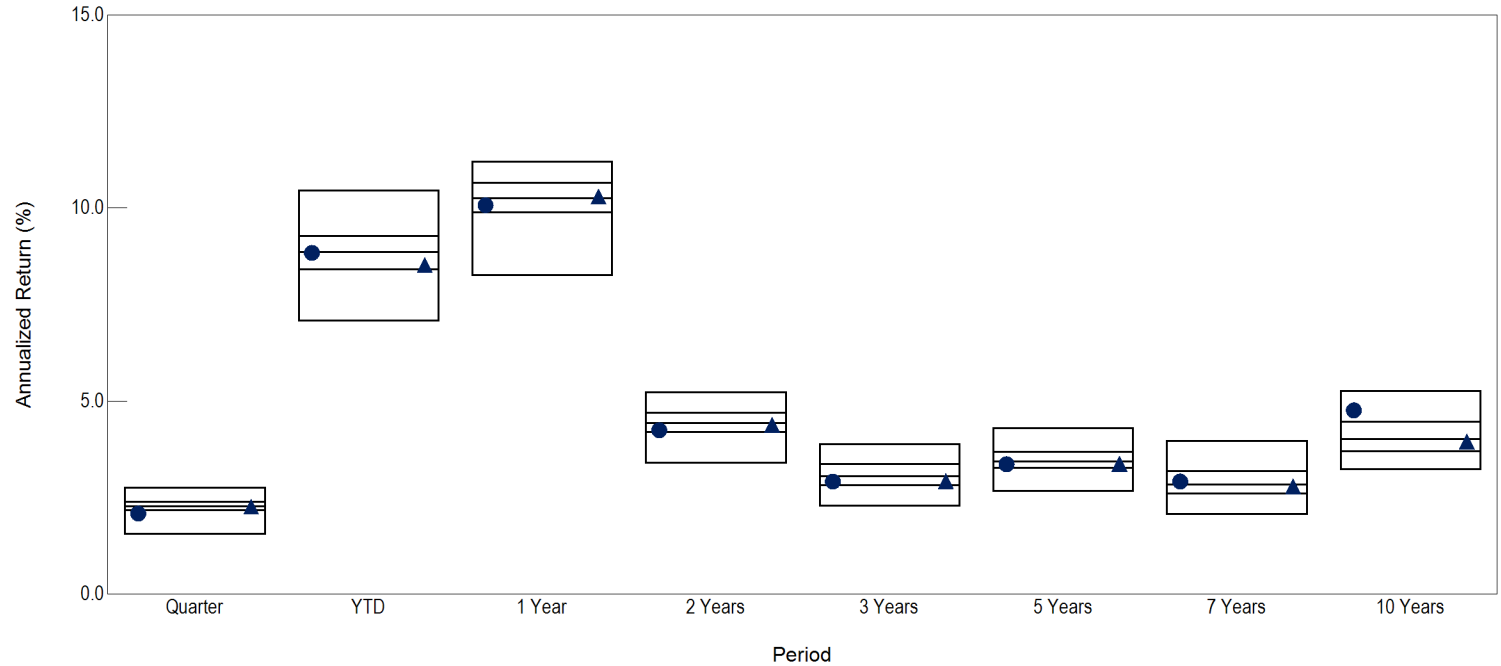
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

NEUBERGER BERMAN

Neuberger Berman vs. eV US Core Fixed Inc Net



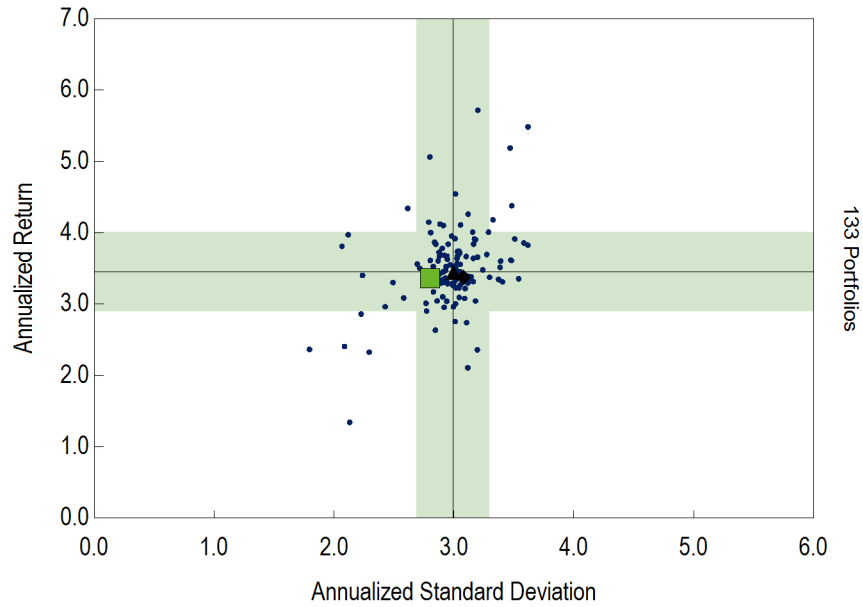
| | Return (Rank) | | | | | | | | | | | | | | | |
|---------------------------|---------------|-------|-------|------|-------|------|------|------|------|------|------|------|------|------|------|------|
| 5th Percentile | 2.77 | 10.44 | 11.20 | 5.23 | 3.89 | 4.29 | 3.97 | 5.27 | | | | | | | | |
| 25th Percentile | 2.41 | 9.29 | 10.67 | 4.71 | 3.38 | 3.71 | 3.21 | 4.49 | | | | | | | | |
| Median | 2.29 | 8.88 | 10.27 | 4.44 | 3.07 | 3.45 | 2.85 | 4.04 | | | | | | | | |
| 75th Percentile | 2.20 | 8.42 | 9.90 | 4.22 | 2.84 | 3.29 | 2.62 | 3.73 | | | | | | | | |
| 95th Percentile | 1.58 | 7.11 | 8.29 | 3.42 | 2.31 | 2.70 | 2.10 | 3.25 | | | | | | | | |
| # of Portfolios | 138 | 138 | 137 | 136 | 135 | 133 | 131 | 119 | | | | | | | | |
| ● Neuberger Berman | 2.09 | (85) | 8.84 | (51) | 10.07 | (61) | 4.25 | (71) | 2.92 | (67) | 3.36 | (63) | 2.92 | (46) | 4.76 | (16) |
| ▲ Core Fixed Income Blend | 2.27 | (55) | 8.52 | (73) | 10.30 | (49) | 4.38 | (54) | 2.92 | (66) | 3.38 | (63) | 2.80 | (58) | 3.95 | (61) |



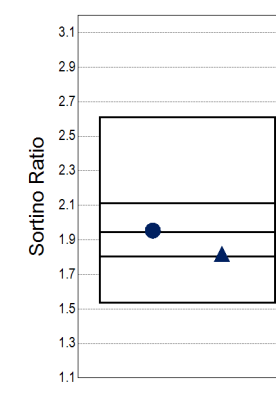
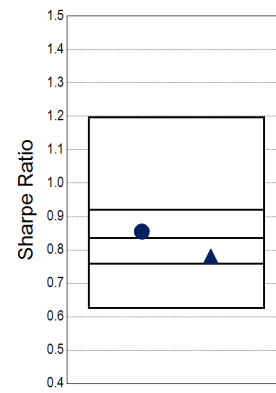
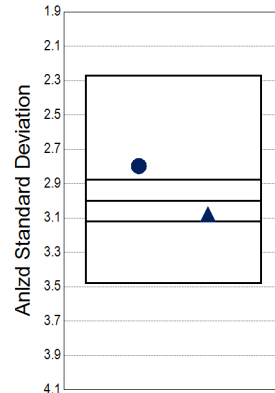
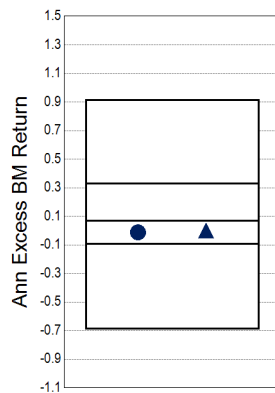
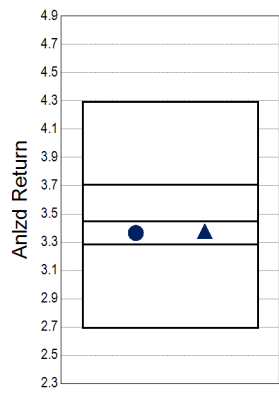
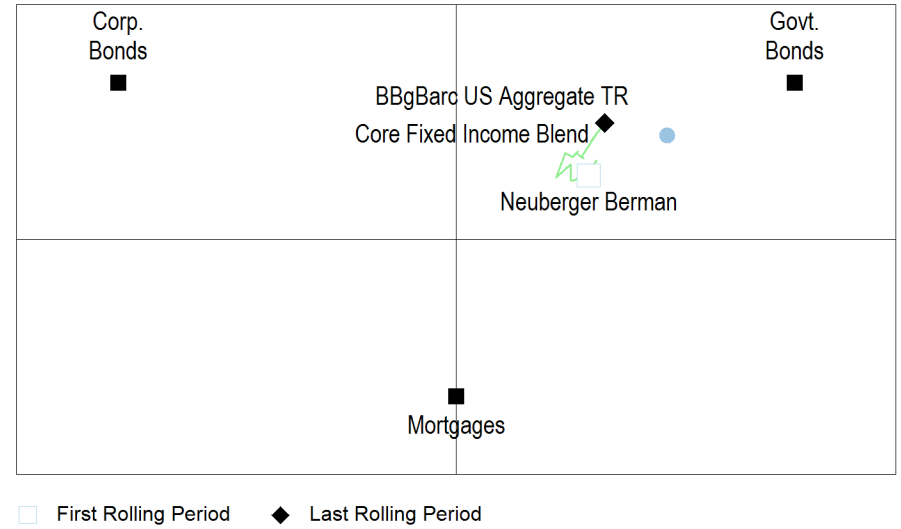
Los Angeles City Employees' Retirement System

NEUBERGER BERMAN

5 Year Risk Return



5 Year Style Map



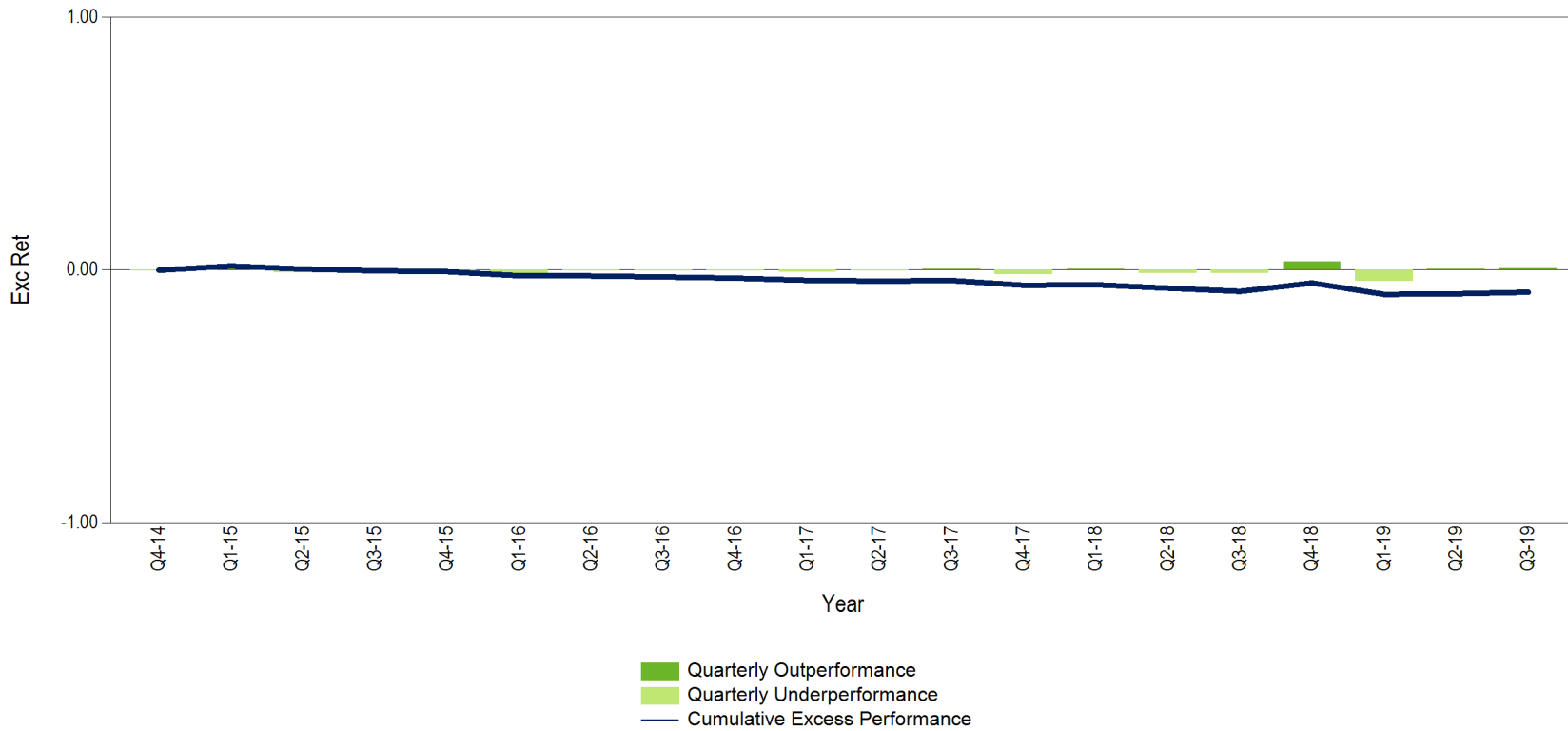
- Neuberger Berman
- ▲ Core Fixed Income Blend
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

SSGA U.S. AGGREGATE BOND

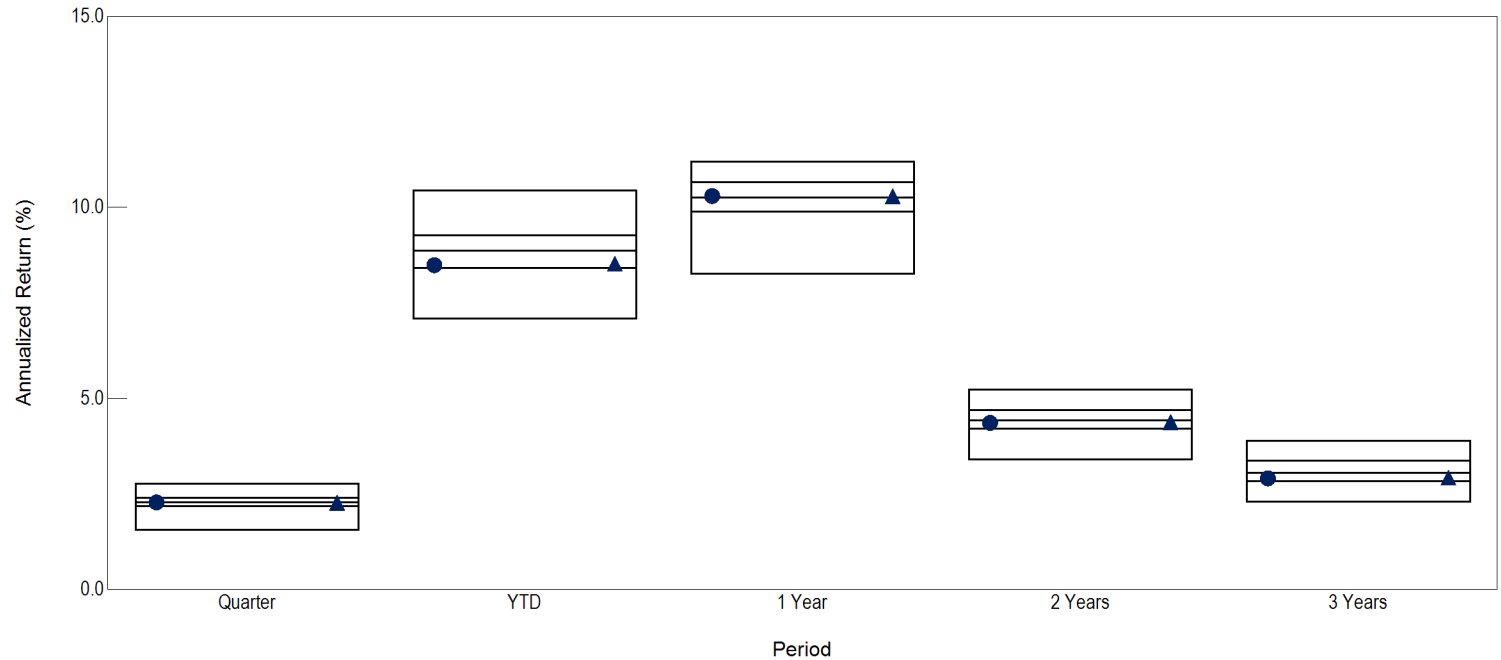
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

SSGA U.S. AGGREGATE BOND

SSgA U.S. Aggregate Bond vs. eV US Core Fixed Inc Net



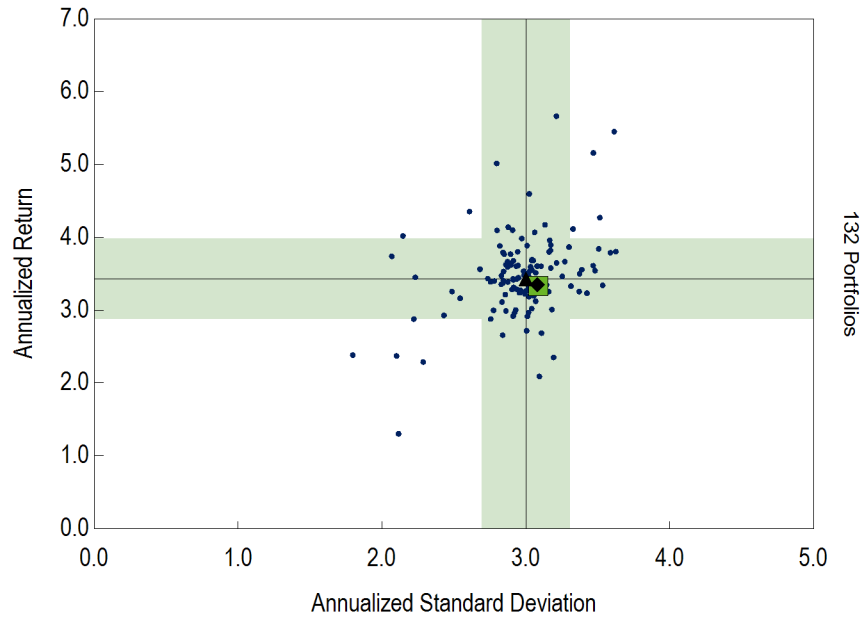
| | Return (Rank) | | | | | | | | | |
|----------------------------|---------------|------|-------|------|-------|------|------|------|------|------|
| 5th Percentile | 2.77 | | 10.44 | | 11.20 | | 5.23 | | 3.89 | |
| 25th Percentile | 2.41 | | 9.29 | | 10.67 | | 4.71 | | 3.38 | |
| Median | 2.29 | | 8.88 | | 10.27 | | 4.44 | | 3.07 | |
| 75th Percentile | 2.20 | | 8.42 | | 9.90 | | 4.22 | | 2.84 | |
| 95th Percentile | 1.58 | | 7.11 | | 8.29 | | 3.42 | | 2.31 | |
| # of Portfolios | 138 | | 138 | | 137 | | 136 | | 135 | |
| ● SSGA U.S. Aggregate Bond | 2.28 | (54) | 8.48 | (74) | 10.29 | (49) | 4.36 | (56) | 2.90 | (69) |
| ▲ BBgBarc US Aggregate TR | 2.27 | (55) | 8.52 | (73) | 10.30 | (49) | 4.38 | (54) | 2.92 | (66) |



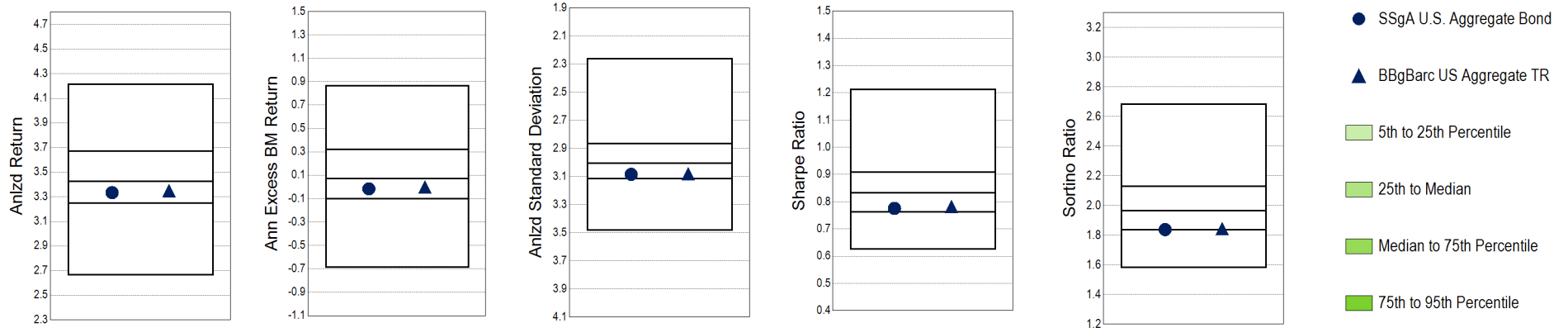
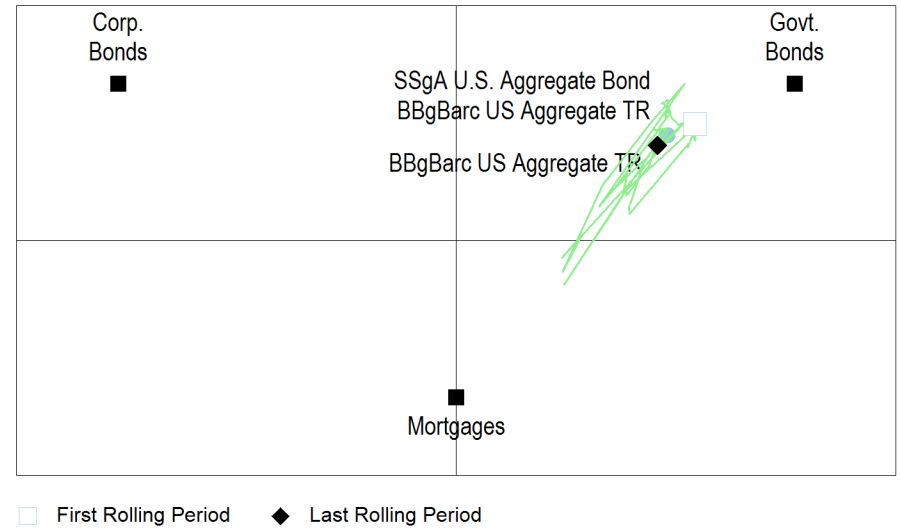
Los Angeles City Employees' Retirement System

SSGA U.S. AGGREGATE BOND

Since Inception Risk Return



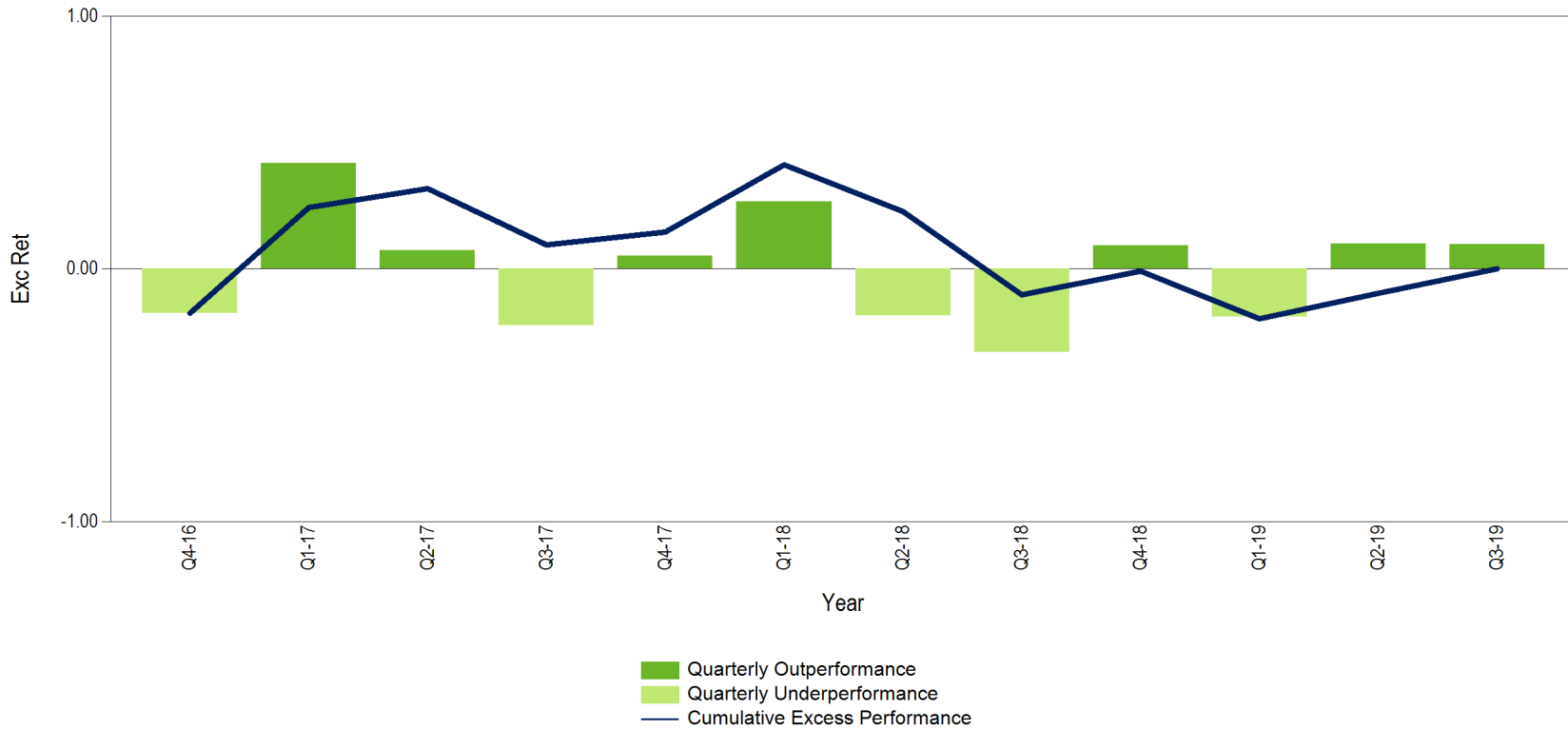
Since Inception Style Map



CREDIT OPPORTUNITIES MANAGER PERFORMANCE

NEPC, LLC

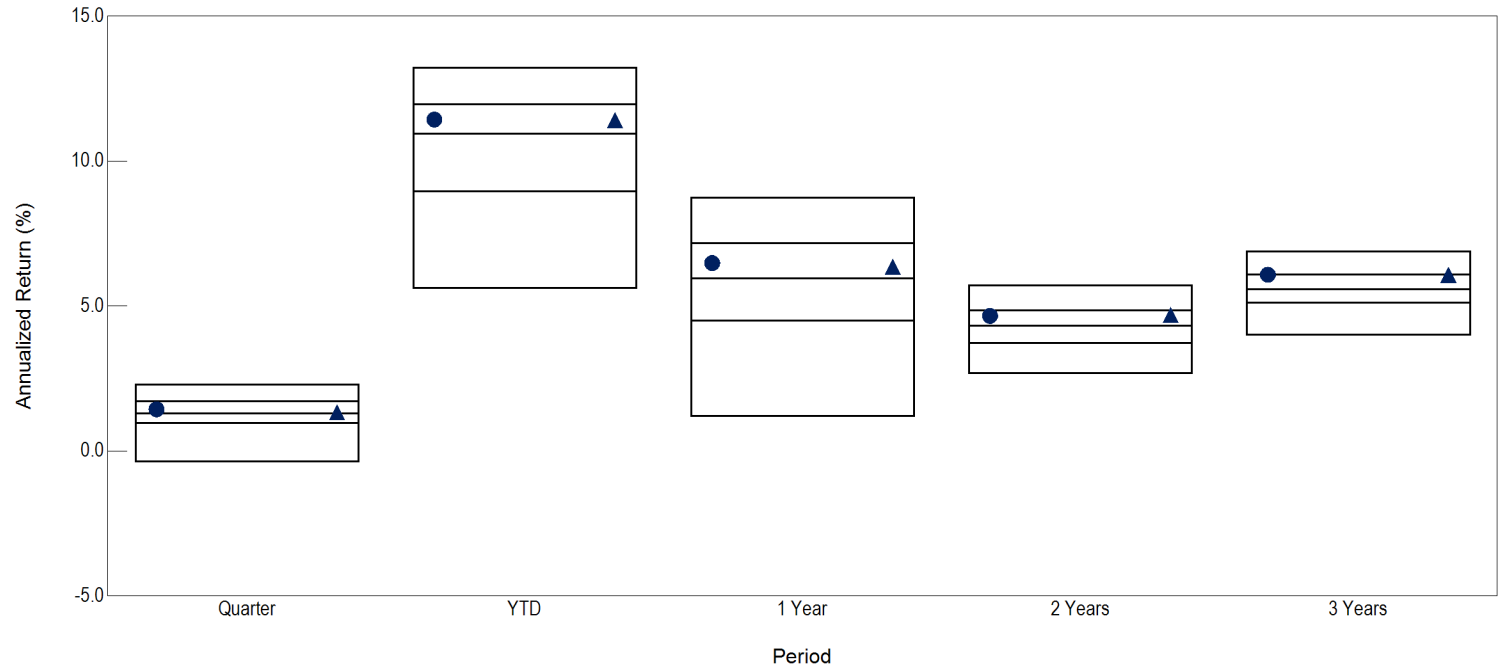
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

AEGON USA

AEGON USA vs. eV US High Yield Fixed Inc Net



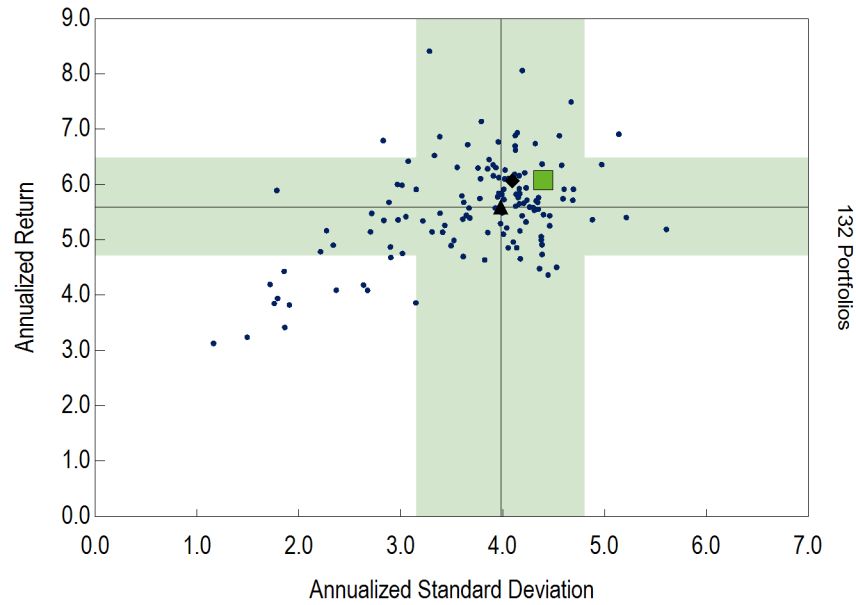
| | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | | Return (Rank) | |
|--|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|
| 5th Percentile | 2.29 | (13) | 2.29 | (13) | 2.29 | (13) | 2.29 | (13) | 2.29 | (13) |
| 25th Percentile | 1.74 | (42) | 1.74 | (42) | 1.74 | (42) | 1.74 | (42) | 1.74 | (42) |
| Median | 1.32 | (42) | 1.32 | (42) | 1.32 | (42) | 1.32 | (42) | 1.32 | (42) |
| 75th Percentile | 0.99 | (42) | 0.99 | (42) | 0.99 | (42) | 0.99 | (42) | 0.99 | (42) |
| 95th Percentile | -0.33 | (49) | -0.33 | (49) | -0.33 | (49) | -0.33 | (49) | -0.33 | (49) |
| # of Portfolios | 137 | | 137 | | 137 | | 136 | | 132 | |
| ● AEGON USA | 1.43 | (42) | 11.43 | (38) | 6.48 | (38) | 4.65 | (36) | 6.07 | (27) |
| ▲ BBgBarc US High Yield 2% Issuer Cap TR | 1.33 | (49) | 11.41 | (39) | 6.35 | (39) | 4.69 | (35) | 6.07 | (27) |



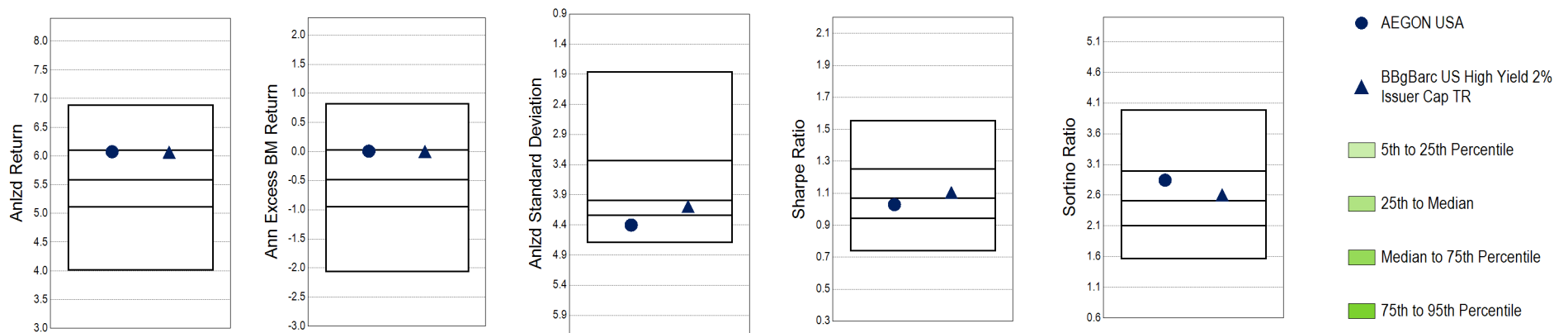
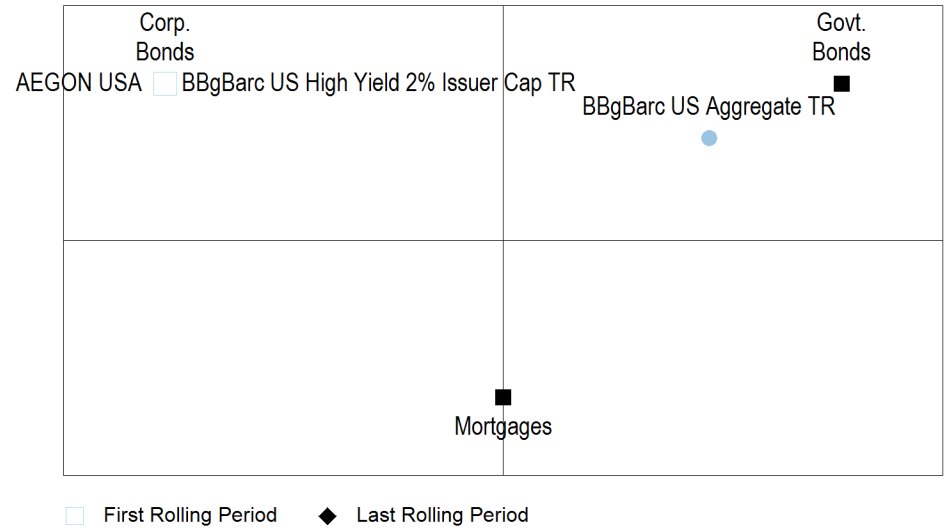
Los Angeles City Employees' Retirement System

AEGON USA

3 Year Risk Return

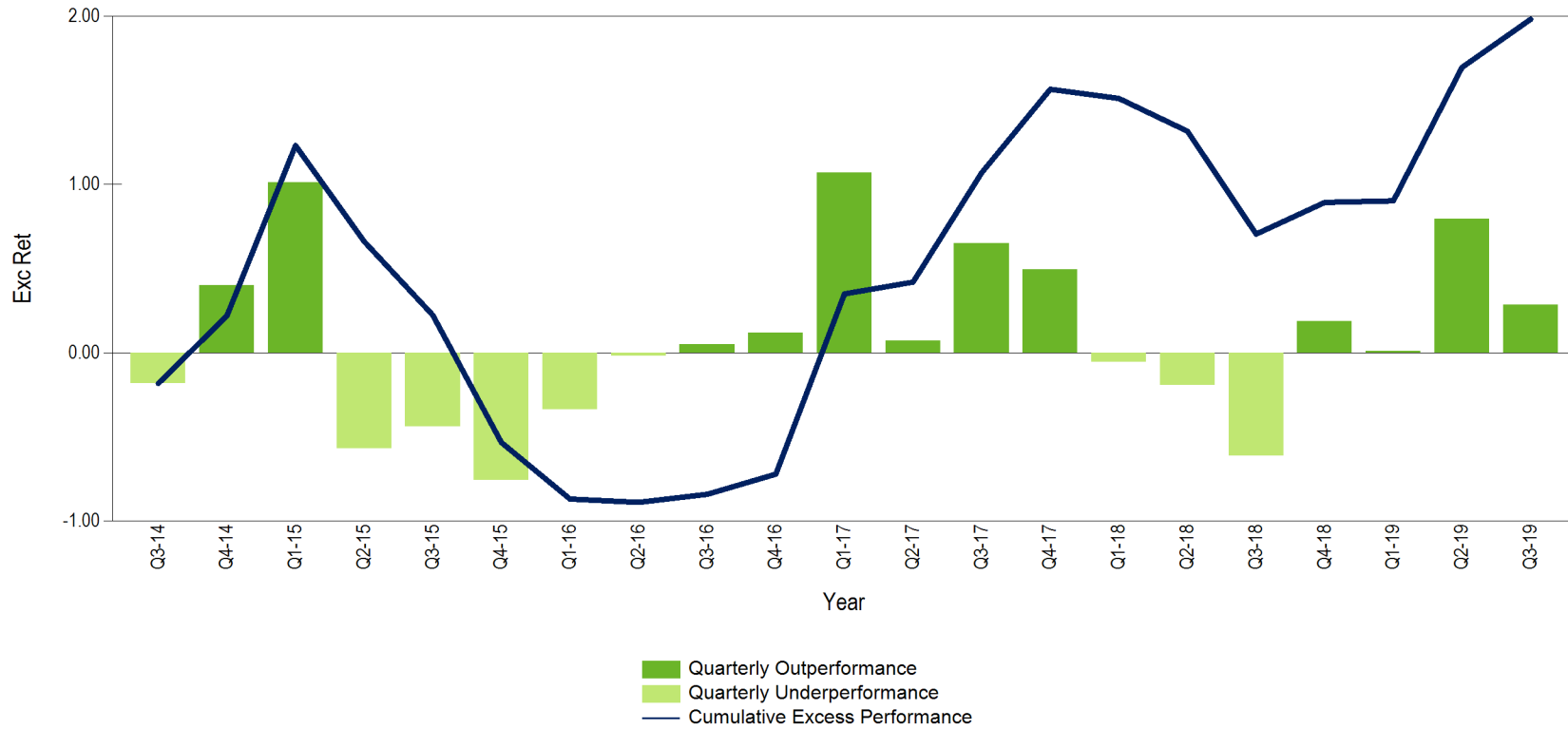


3 Year Style Map



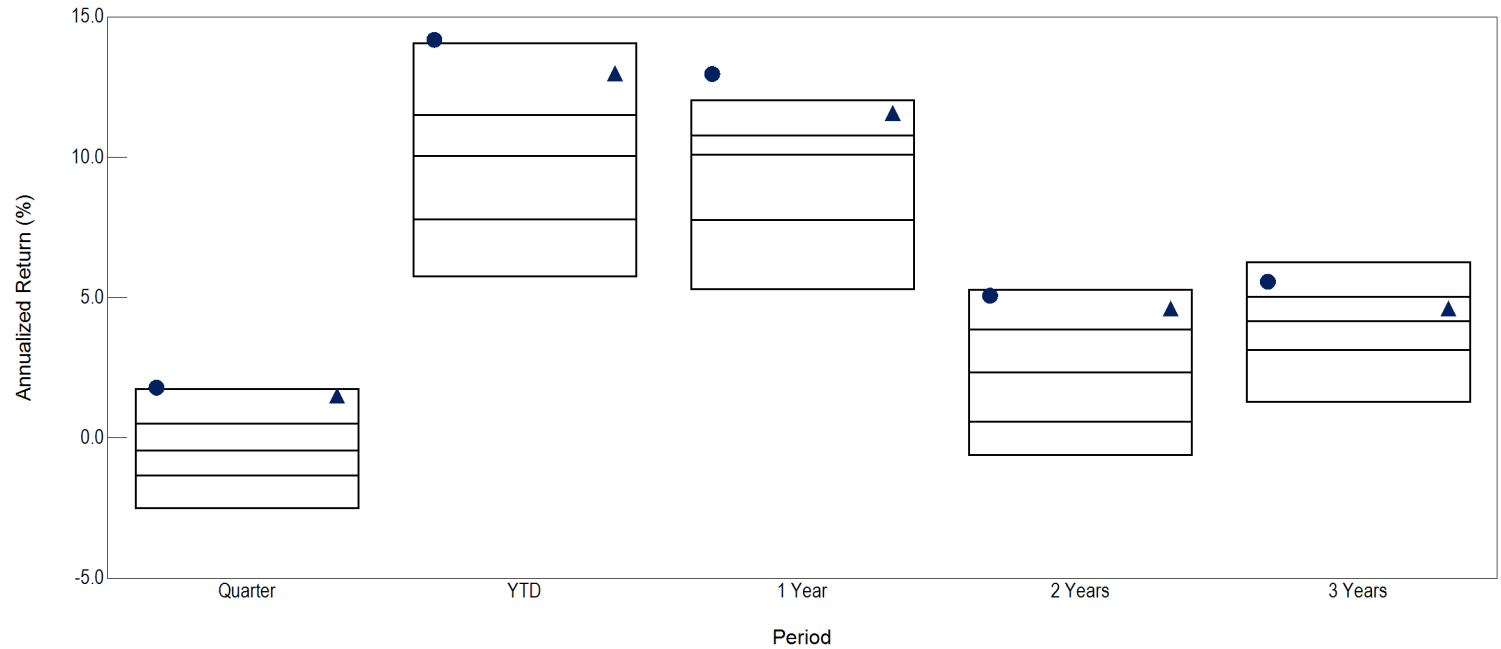
PRUDENTIAL EMERGING MARKETS

Quarterly and Cumulative Excess Performance



PRUDENTIAL EMERGING MARKETS

Prudential Emerging Markets vs. eV Emg Mkt Fixed Inc Hedged Net

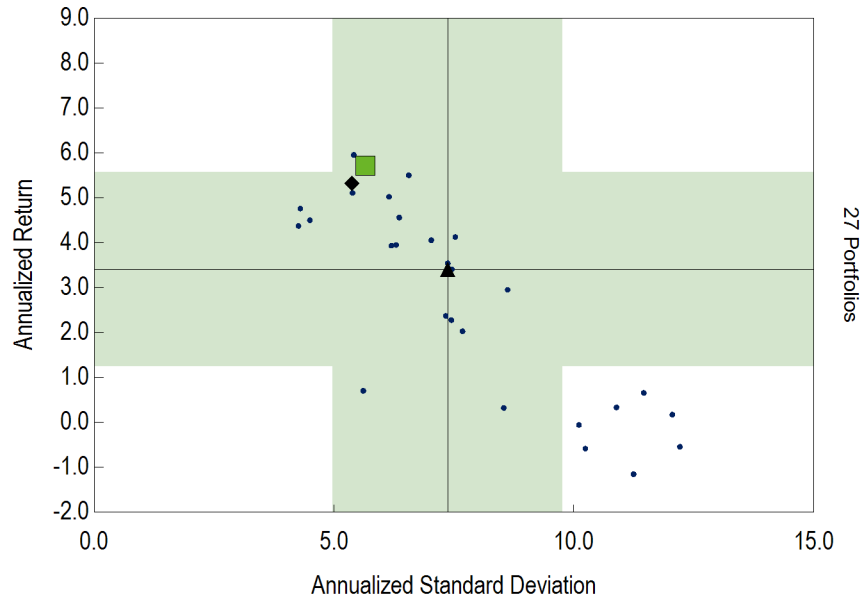


| | Return (Rank) | | YTD | | 1 Year | | 2 Years | | 3 Years | |
|-------------------------------------|---------------|------|-------|-----|--------|------|---------|------|---------|------|
| 5th Percentile | 1.74 | | 14.06 | | 12.02 | | 5.28 | | 6.26 | |
| 25th Percentile | 0.54 | | 11.52 | | 10.79 | | 3.90 | | 5.05 | |
| Median | -0.42 | | 10.06 | | 10.10 | | 2.37 | | 4.18 | |
| 75th Percentile | -1.31 | | 7.80 | | 7.79 | | 0.59 | | 3.15 | |
| 95th Percentile | -2.48 | | 5.78 | | 5.33 | | -0.59 | | 1.30 | |
| # of Portfolios | 38 | | 38 | | 37 | | 35 | | 35 | |
| ● Prudential Emerging Markets | 1.79 | (5) | 14.18 | (4) | 12.96 | (3) | 5.07 | (8) | 5.56 | (17) |
| ▲ JP Morgan EMBI Global Diversified | 1.50 | (13) | 12.99 | (8) | 11.57 | (13) | 4.61 | (12) | 4.61 | (39) |

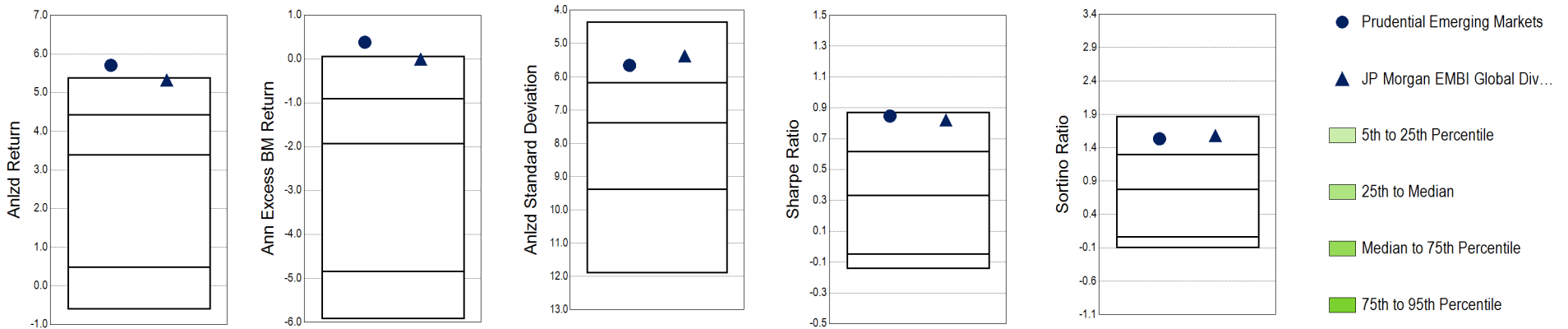
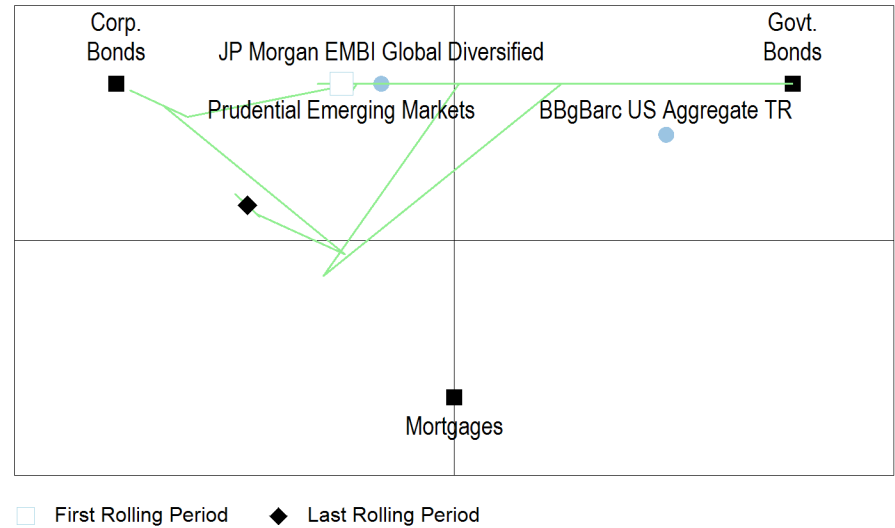


PRUDENTIAL EMERGING MARKETS

Since Inception Risk Return

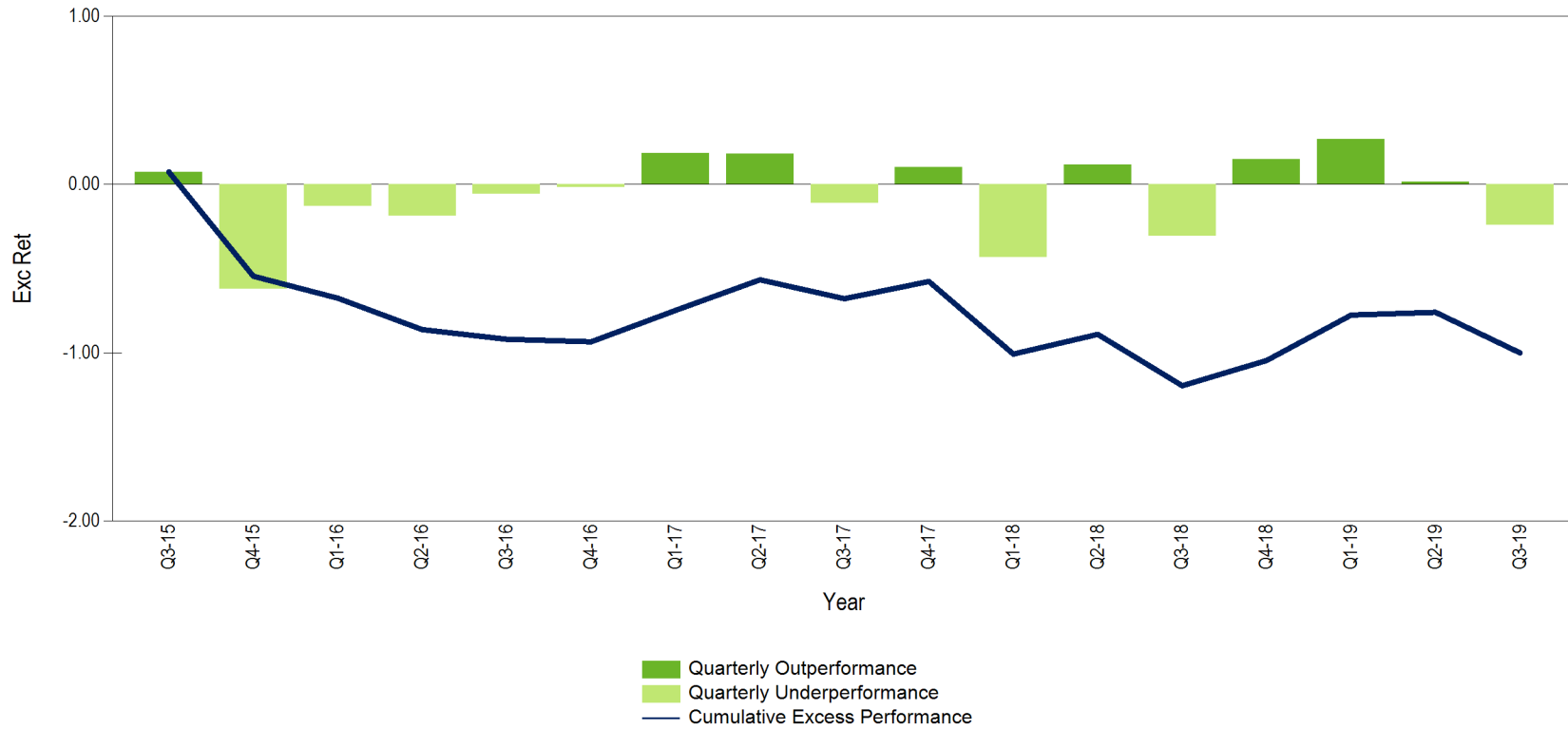


Since Inception Style Map



BAIN CAPITAL SENIOR LOAN FUND, LP

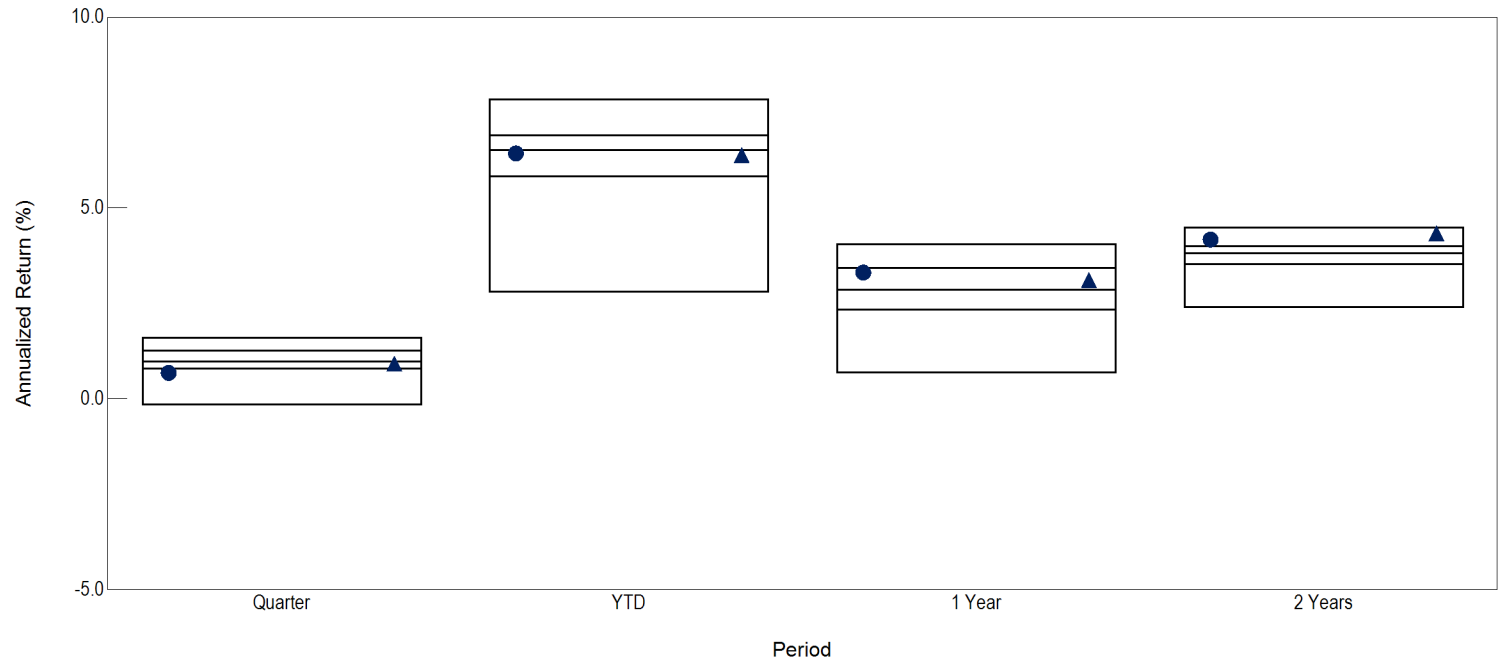
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

BAIN CAPITAL SENIOR LOAN FUND, LP

Bain Capital Senior Loan Fund, LP vs. eV US Float-Rate Bank Loan Fixed Inc Net

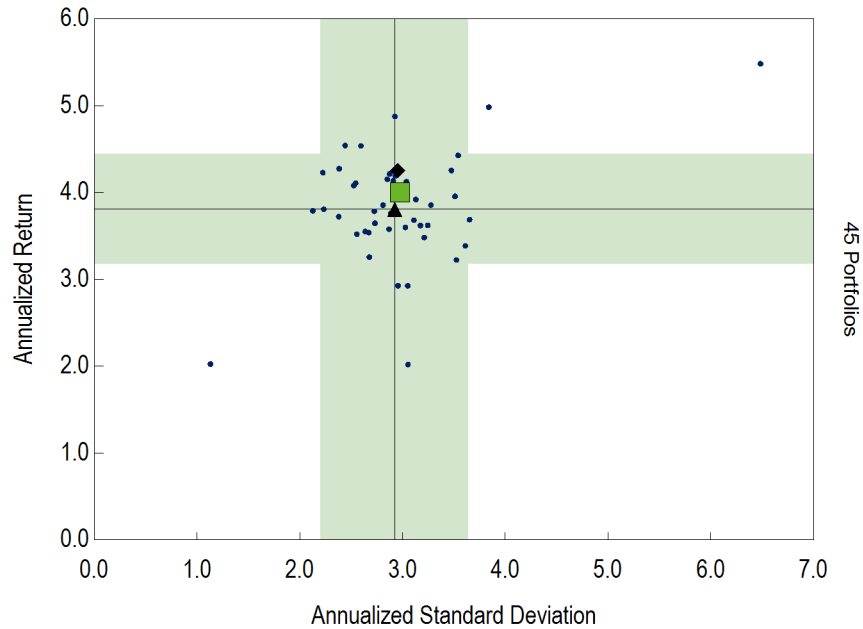


| | Return (Rank) | | | | | | | |
|-------------------------------------|---------------|------|------|------|------|------|------|------|
| 5th Percentile | 1.59 | 7.85 | 4.05 | 4.48 | | | | |
| 25th Percentile | 1.27 | 6.92 | 3.45 | 4.03 | | | | |
| Median | 1.01 | 6.54 | 2.87 | 3.83 | | | | |
| 75th Percentile | 0.81 | 5.85 | 2.35 | 3.55 | | | | |
| 95th Percentile | -0.12 | 2.83 | 0.71 | 2.42 | | | | |
| # of Portfolios | 48 | 48 | 48 | 47 | | | | |
| ● Bain Capital Senior Loan Fund, LP | 0.68 | (83) | 6.43 | (52) | 3.31 | (32) | 4.17 | (17) |
| ▲ Credit Suisse Leveraged Loans | 0.92 | (64) | 6.39 | (53) | 3.11 | (38) | 4.34 | (12) |

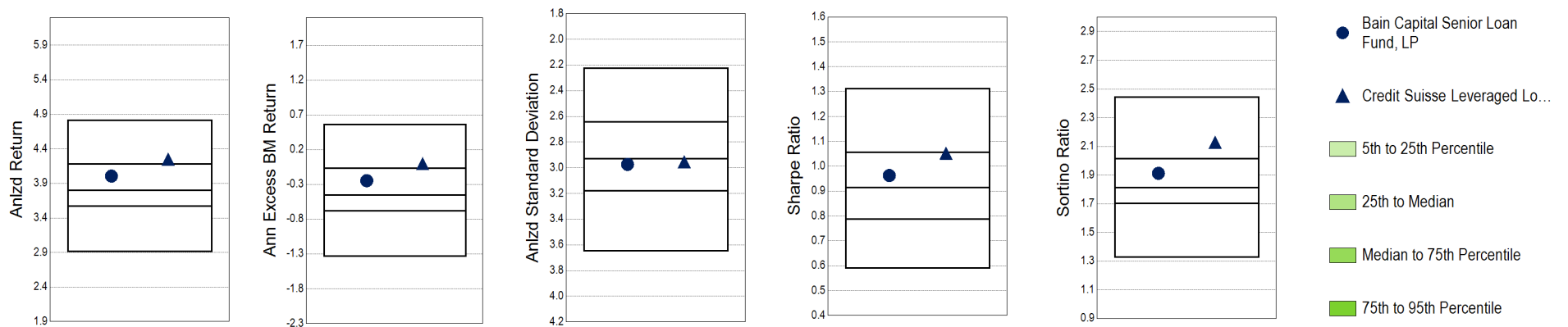
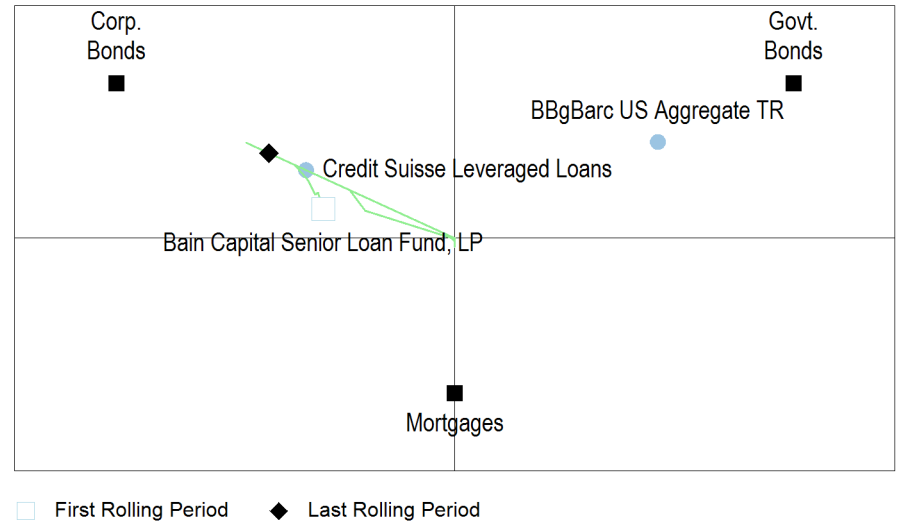


BAIN CAPITAL SENIOR LOAN FUND, LP

Since Inception Risk Return



Since Inception Style Map



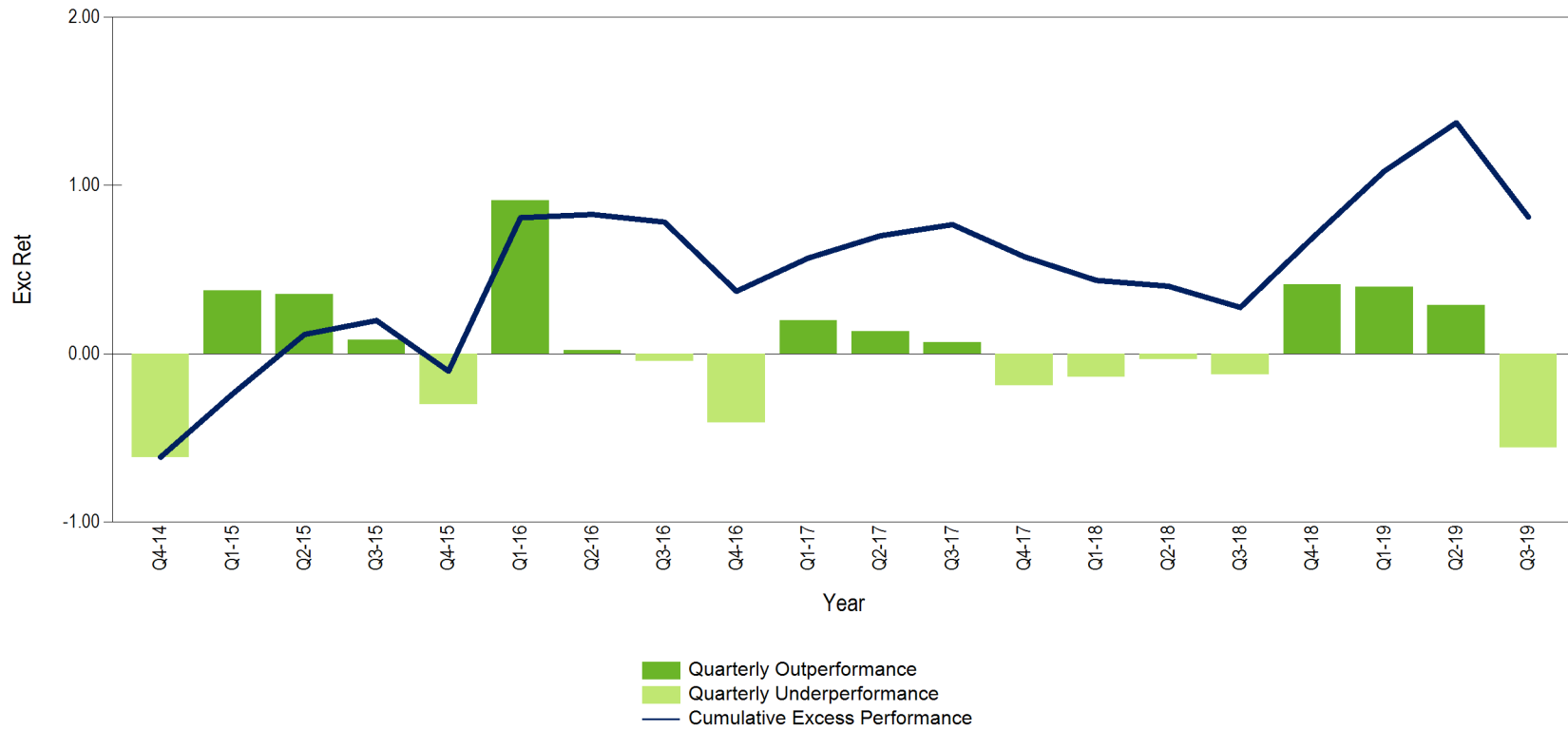
REAL ASSETS MANAGER PERFORMANCE

NEPC, LLC

Los Angeles City Employees' Retirement System

DFA US TIPS

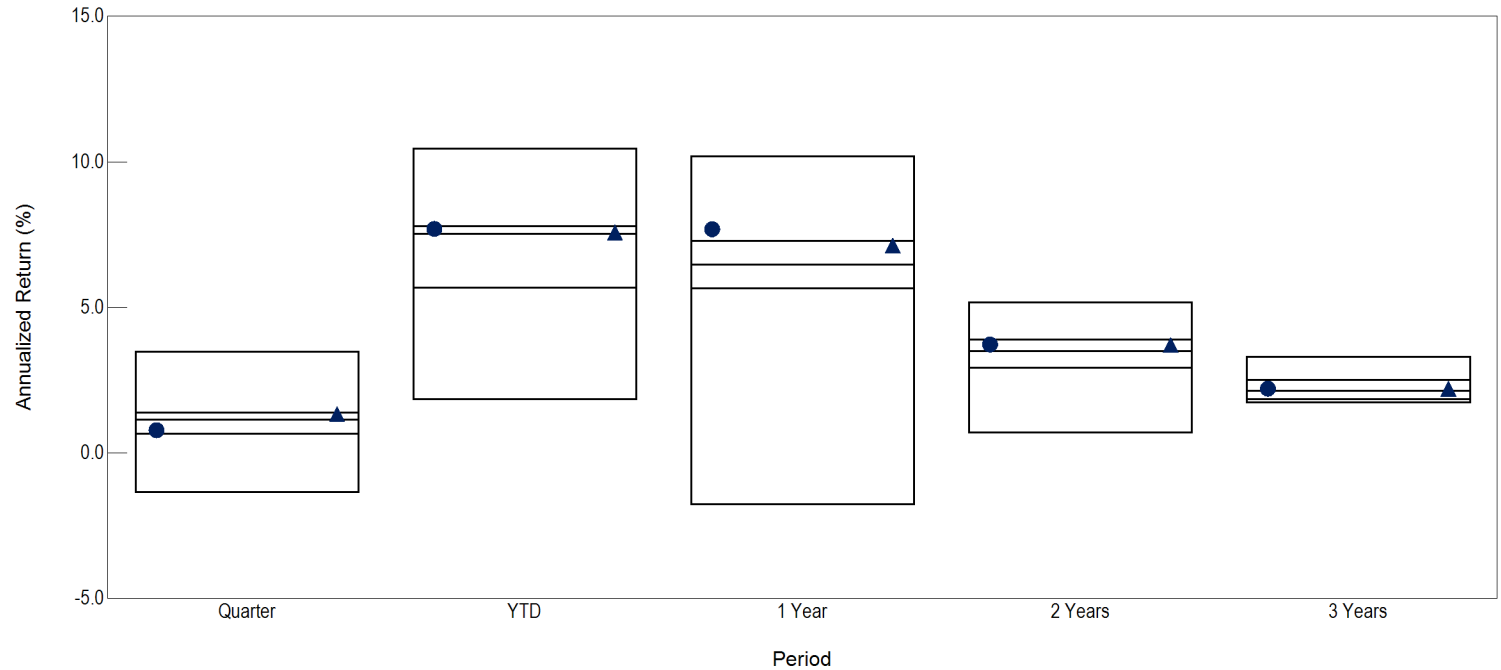
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

DFA US TIPS

DFA US TIPS vs. eV US TIPS / Inflation Fixed Inc Net



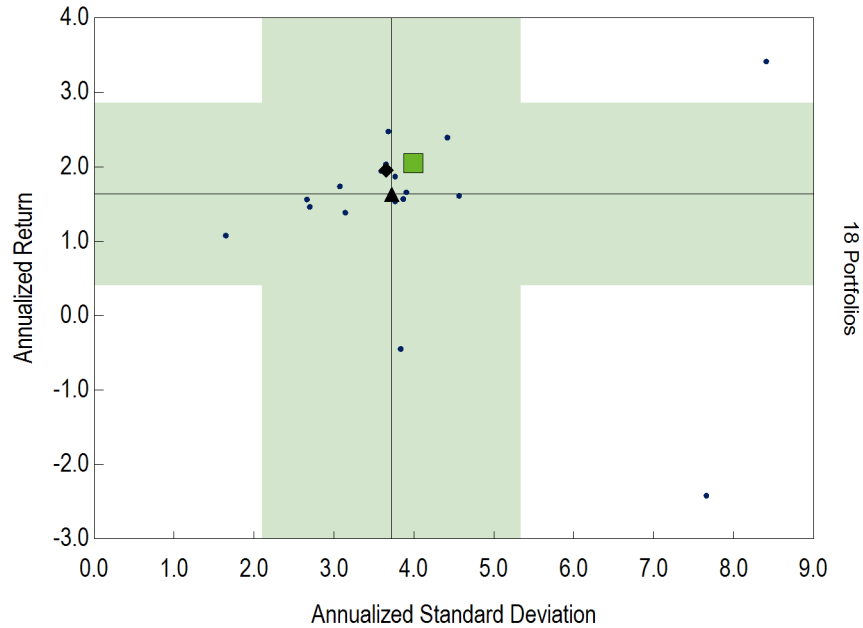
| | Return (Rank) | | | | | | | | | |
|----------------------|---------------|------|-------|------|-------|------|------|------|------|------|
| 5th Percentile | 3.48 | | 10.46 | | 10.20 | | 5.18 | | 3.30 | |
| 25th Percentile | 1.41 | | 7.81 | | 7.31 | | 3.92 | | 2.54 | |
| Median | 1.18 | | 7.55 | | 6.50 | | 3.52 | | 2.16 | |
| 75th Percentile | 0.69 | | 5.71 | | 5.69 | | 2.95 | | 1.87 | |
| 95th Percentile | -1.32 | | 1.88 | | -1.74 | | 0.74 | | 1.76 | |
| # of Portfolios | 20 | | 20 | | 19 | | 19 | | 19 | |
| ● DFA US TIPS | 0.78 | (68) | 7.70 | (35) | 7.69 | (15) | 3.73 | (30) | 2.21 | (41) |
| ▲ BbgBarc US TIPS TR | 1.34 | (38) | 7.58 | (47) | 7.13 | (34) | 3.71 | (31) | 2.21 | (41) |



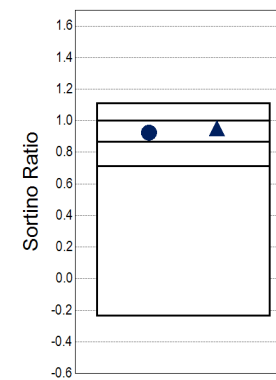
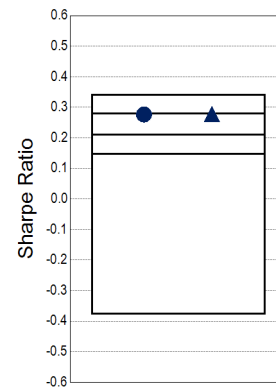
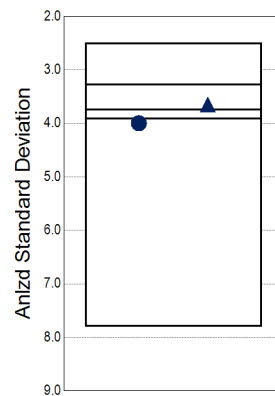
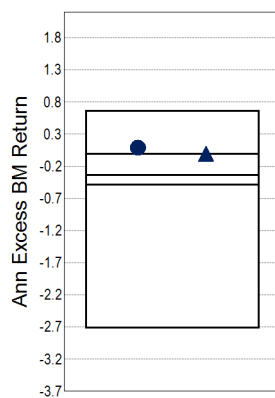
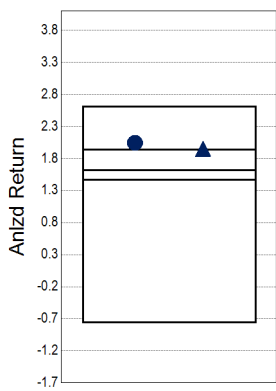
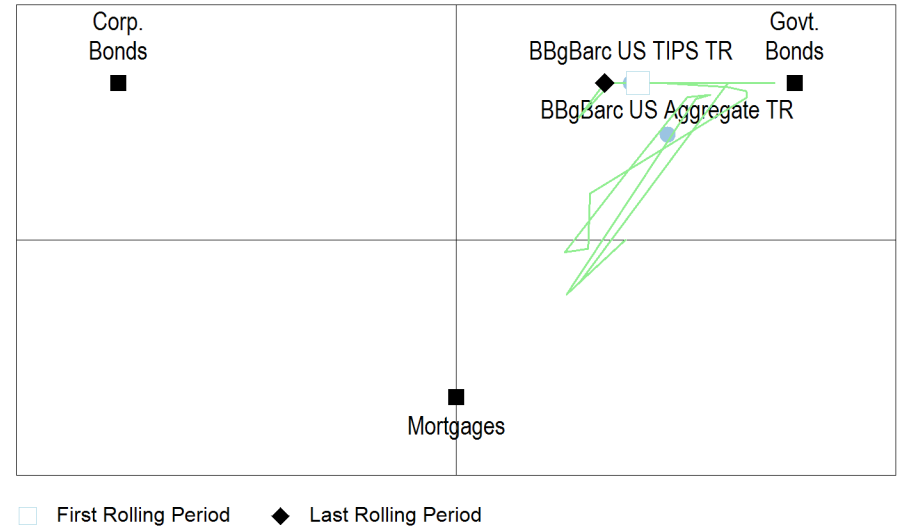
Los Angeles City Employees' Retirement System

DFA US TIPS

Since Inception Risk Return



Since Inception Style Map

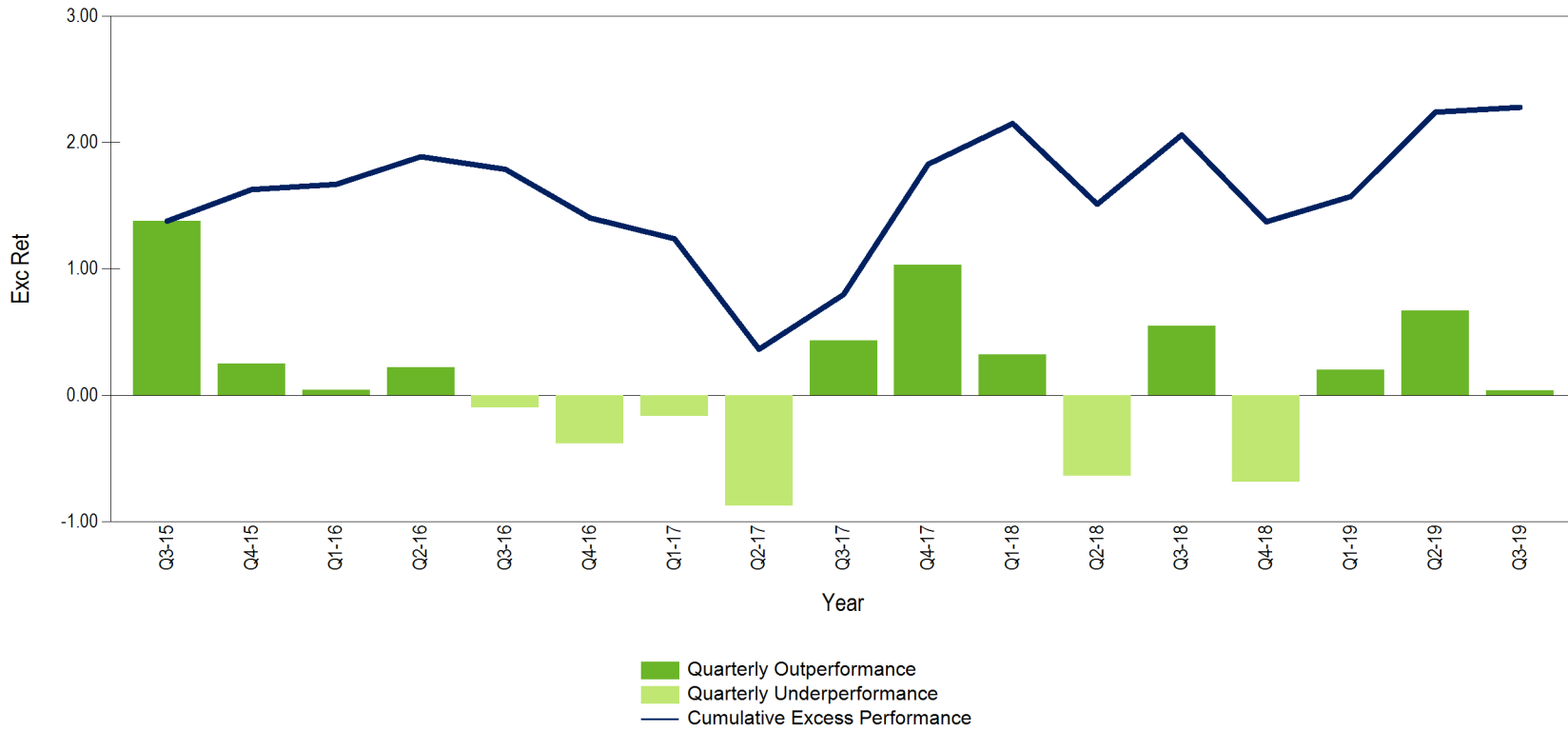


- DFA US TIPS
- ▲ BBgBarc US TIPS TR
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



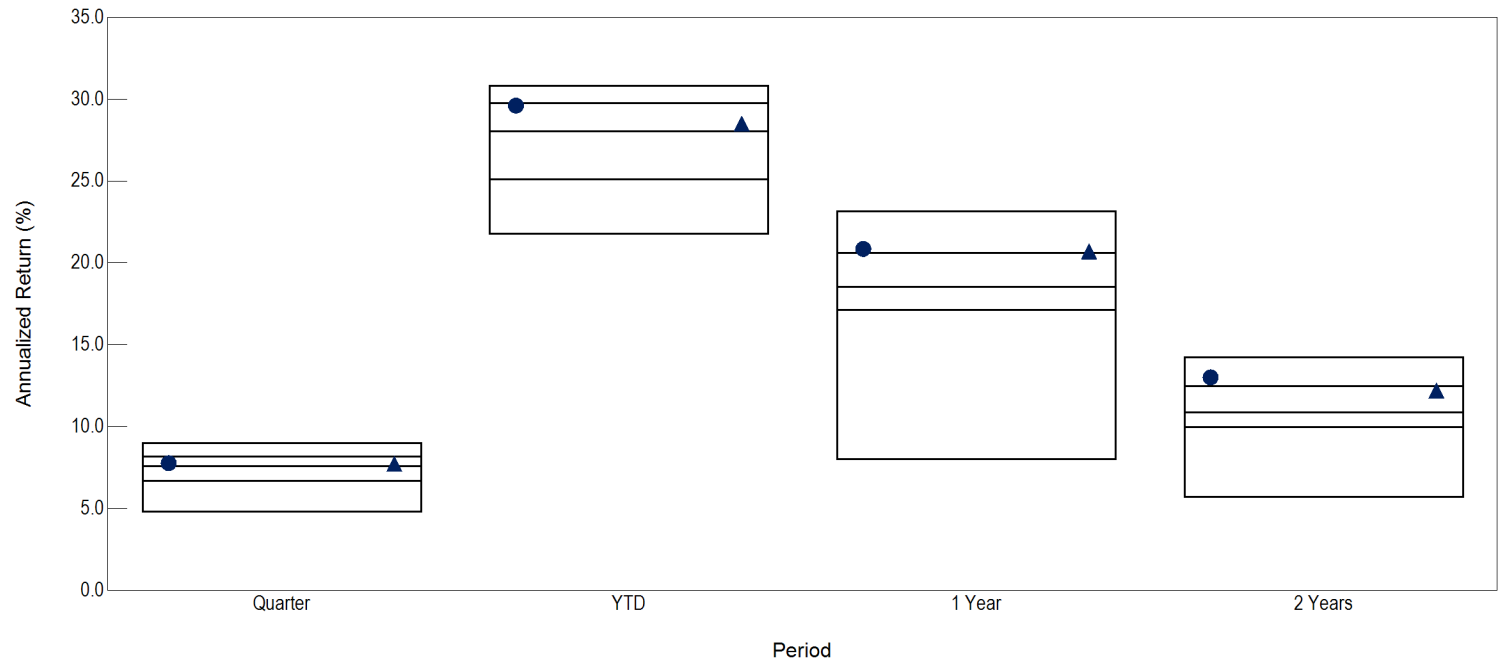
CENTERSQUARE US REAL ESTATE

Quarterly and Cumulative Excess Performance



CENTERSQUARE US REAL ESTATE

CenterSquare US Real Estate vs. eV US REIT Net

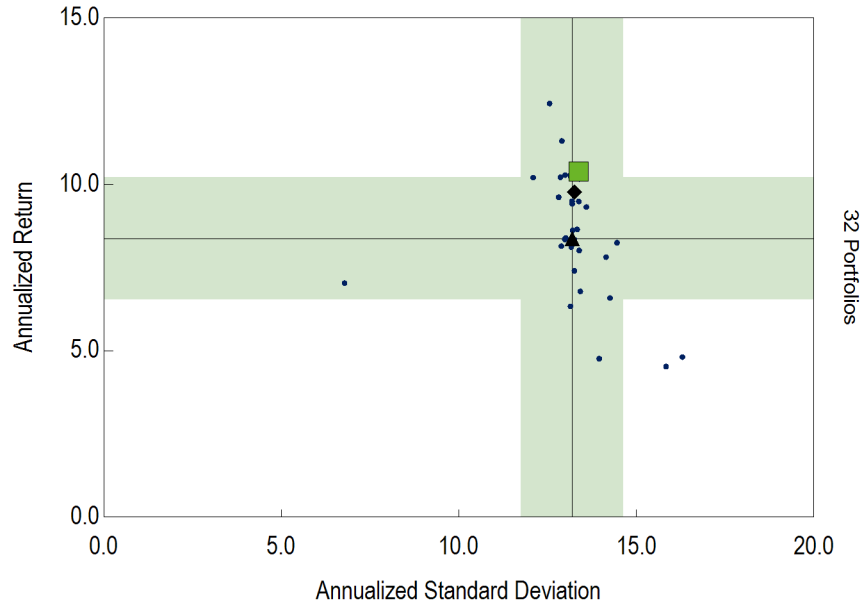


| | Return (Rank) | | | | | | | |
|-------------------------------|---------------|-------|--------|---------|---------|------|--------|---------|
| | Quarter | YTD | 1 Year | 2 Years | Quarter | YTD | 1 Year | 2 Years |
| 5th Percentile | 8.99 | 30.82 | 23.13 | 14.24 | | | | |
| 25th Percentile | 8.21 | 29.81 | 20.66 | 12.53 | | | | |
| Median | 7.62 | 28.06 | 18.57 | 10.89 | | | | |
| 75th Percentile | 6.71 | 25.15 | 17.16 | 10.00 | | | | |
| 95th Percentile | 4.83 | 21.81 | 8.05 | 5.76 | | | | |
| # of Portfolios | 35 | 33 | 33 | 33 | | | | |
| ● CenterSquare US Real Estate | 7.77 | (45) | 29.60 | (27) | 20.85 | (25) | 13.01 | (18) |
| ▲ FTSE NAREIT All Equity REIT | 7.73 | (45) | 28.49 | (46) | 20.70 | (25) | 12.20 | (27) |

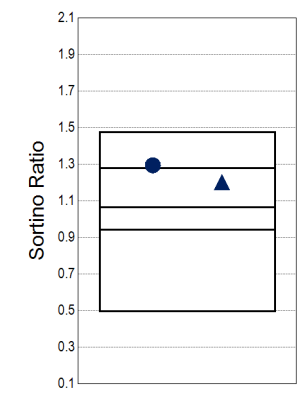
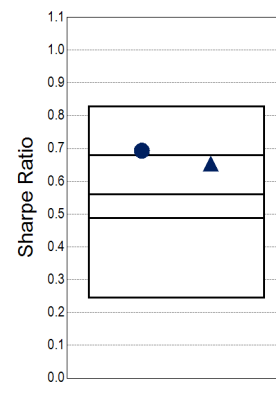
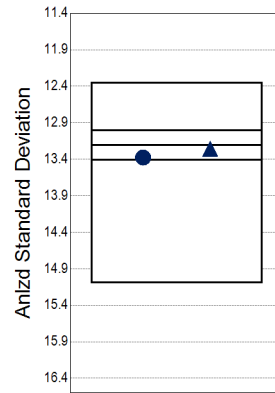
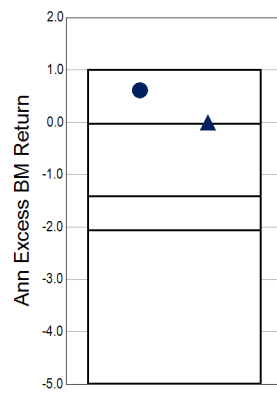
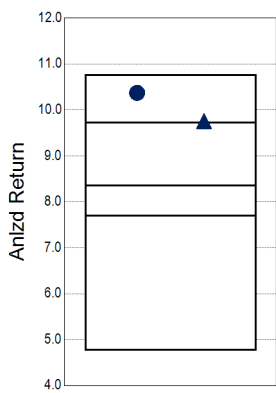
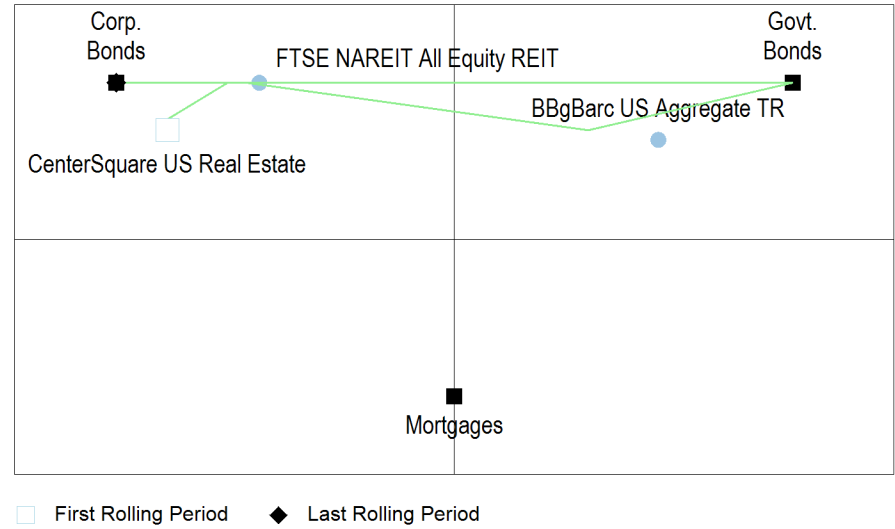


CENTERSQUARE US REAL ESTATE

Since Inception Risk Return



Since Inception Style Map



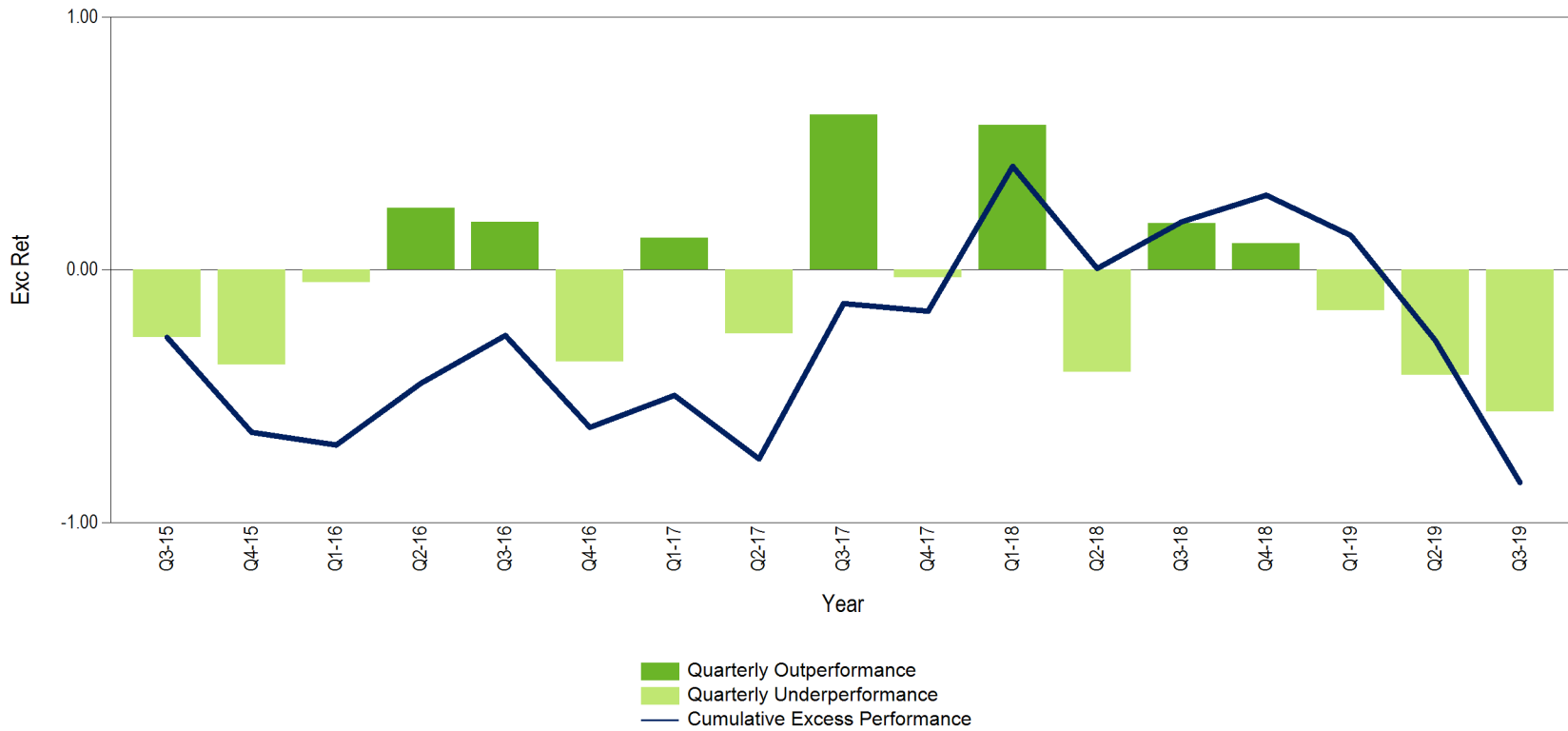
- CenterSquare US Real Estate
- ▲ FTSE NAREIT All Equity REIT
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

CORE COMMODITY MGMT

Quarterly and Cumulative Excess Performance



DEFINITIONS

NEPC, LLC

POLICY INDEX DEFINITIONS

Policy Index: Current (adopted January 10, 2012) 24% Russell 3000 Index, 29% MSCI ACWI ex USA Net Index, 19% Bbg Barclays U.S. Aggregate Bond Index, 5% Credit Opportunities Blend, 10% Real Assets Blend, 12% Private Equity Blend, 1% Citi 3 Month T-Bill Index

U.S. Equity Blend: July 1, 2011 - Current: Russell 3000 Index; September 30, 1994 - December 31, 1999 S&P 500 Index 33.75, Russell 1000 Value Index 35%, Russell 1000 Growth 12.5%, Russell 2000 Value 12.5%, Russell 2000 Growth 6.25%

Core Fixed Income Blend: July 1, 2013 – Current: Bbg Barclays U.S. Aggregate Bond Index

Credit Opportunities Blend: 65% Bbg Barclays U.S. HY 2% Cap Index, 35% JPM EMBIGD Index

Public Real Assets Blend: 60% Bbg Barclays U.S. TIPS Index, 20% Bbg Commodity Index, 10% FTSE NAREIT All Equity Index, 10% Alerian MLP Index

Real Estate Blend: July 1, 2014 - Current NCREIF ODCE + 0.80%; July 1, 2012 - June 30, 2014 NCREIF Property Index Lagged +1%; October 1, 1994 - June 30, 2012 NCREIF Property Index Lagged

Private Equity Blend: February 1, 2012 – current: Russell 3000 + 3%; Inception – January 31, 2012: Russell 3000 + 4%

Note: Policy index definitions do not reflect the updated target asset allocation adopted on April 10, 2018.

Note: See Investment Policy for a full description of the indices listed.



GLOSSARY OF INVESTMENT TERMINOLOGY

Of Portfolios/Observations¹ - The total number of data points that make up a specified universe

Allocation Index³ - The allocation index measures the value added (or subtracted) to each portfolio by active management. It is calculated monthly: The portfolio asset allocation to each category from the prior month-end is multiplied by a specified market index.

Asset Allocation Effect² - Measures an investment manager's ability to effectively allocate their portfolio's assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark and underweighted in a sector that underperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and under weighted in a sector that outperforms the benchmark.

Agency Bonds (Agencies)³ - The full faith and credit of the United States government is normally not pledged to payment of principal and interest on the majority of government agencies issuing these bonds, with maturities of up to ten years. Their yields, therefore, are normally higher than government and their marketability is good, thereby qualifying them as a low risk-high liquidity type of investment. They are eligible as security for advances to the member banks by the Federal Reserve, which attests to their standing.

Asset Backed Securities (ABS)³ - Bonds which are similar to mortgage-backed securities but are collateralized by assets other than mortgages; commonly backed by credit card receivables, auto loans, or other types of consumer financing.

Attribution³ - Attribution is an analytical technique that allows us to evaluate the performance of the portfolio relative to the benchmark. A proper attribution tells us where value was added or subtracted as a result of the manager's decisions.

Average Effective Maturity⁴ - For a single bond, it is a measure of maturity that takes into account the possibility that a bond might be called back to the issuer.

For a portfolio of bonds, average effective maturity is the weighted average of the maturities of the underlying bonds. The measure is computed by weighing each bond's maturity by its market value with respect to the portfolio and the likelihood of any of the bonds being called. In a pool of mortgages, this would also account for the likelihood of prepayments on the mortgages.

Batting Average¹ - A measurement representing an investment manager's ability to meet or beat an index.

Formula: Divide the number of days (or months, quarters, etc.) in which the manager beats or matches the index by the total number of days (or months, quarters, etc.) in the period of question and multiply that factor by 100.

Brinson Fachler (BF) Attribution¹ - The BF methodology is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance. The main advantage of the BF methodology is that rather than using the overall return of the benchmark, it goes a level deeper than BHB and measures whether the benchmark sector, country, etc. outperformed/or underperformed the overall benchmark.

Brinson Hood Beebower (BHB) Attribution¹ - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.

Corporate Bond (Corp)⁴ - A debt security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds.

Correlation¹ - A range of statistical relationships between two or more random variables or observed data values. A correlation is a single number that describes the degree of relationship between variables.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net



GLOSSARY OF INVESTMENT TERMINOLOGY

Coupon⁴ – The interest rate stated on a bond when it is issued. The coupon is typically paid semiannually. This is also referred to as the “coupon rate” or “coupon percent rate.”

Currency Effect¹ – Is the effect that changes in currency exchange rates over time affect excess performance.

Derivative Instrument² – A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.

Downside Deviation¹ – Equals the standard deviation of negative return or the measure of downside risk focusing on the standard deviation of negative returns.

Formula:

Annualized Standard Deviation (Fund Return - Average Fund Return) where average fund return is greater than individual fund returns, monthly or quarterly.

Duration³ – Duration is a measure of interest rate risk. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates. A bond’s duration is inversely related to interest rates and directly related to time to maturity.

Equity/Debt/Cash Ratio¹ – The percentage of an investment or portfolio that is in Equity, Debt, and/or Cash (i.e. A 7/89/4 ratio represents an investment that is made up of 7% Equity, 89% Debt, and 4% Cash).

Foreign Bond³ – A bond that is issued in a domestic market by a foreign entity, in the domestic market’s currency. A foreign bond is most often issued by a foreign firm to raise capital in a domestic market that would be most interested in purchasing the firm’s debt. For foreign firms doing a large amount of business in the domestic market, issuing foreign bonds is a common practice.

Hard Hurdle⁵ – is a hurdle rate that once beaten allows a fund manager to charge a performance fee on only the funds above the specified hurdle rate.

High-Water Mark⁴ – The highest peak in value that an investment fund/account has reached. This term is often used in the context of fund manager compensation, which is performance based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.

Hurdle Rate⁴ – The minimum rate of return on an investment required, in order for a manager to collect incentive fees from the investor, which is usually tied to a benchmark.

Interaction Effects² – The interaction effect measures the combined impact of an investment manager’s selection and allocation decisions within a sector. For example, if an investment manager had superior selection and over weighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with the either effect.

Median³ – The value (rate of return, market sensitivity, etc.) that exceeds one-half of the values in the population and that is exceeded by one-half of the values. The median has a percentile rank of 50.

Modified Duration³ – The percentage change in the price of a fixed income security that results from a change in yield.

Mortgage Backed Securities (MBS)³ – Bonds which are a general obligation of the issuing institution but are also collateralized by a pool of mortgages.

Municipal Bond (Muni)⁴ – A debt security issued by a state, municipality or county to finance its capital expenditures.

Net Investment Change¹ – Is the change in an investment after accounting for all Net Cash Flows.

Performance Fee⁴ – A payment made to a fund manager for generating positive returns. The performance fee is generally calculated as a percentage of investment profits, often both realized and unrealized.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgeco.net



GLOSSARY OF INVESTMENT TERMINOLOGY

Policy Index³ - A custom benchmark designed to indicate the returns that a passive investor would earn by consistently following the asset allocation targets set forth in this investment policy statement.

Price to Book (P/B)⁴ - A ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share, also known as the "price-equity ratio".

Price to Earnings (P/E)³ - The weighted equity P/E is based on current price and trailing 12 months earnings per share (EPS).

Price to Sales (P/S)⁴ - A ratio for valuing a stock relative to its own past performance, other companies, or the market itself. Price to sales is calculated by dividing a stock's current price by its revenue per share for the trailing 12 months.

Return on Equity (ROE)⁴ - The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Selection (or Manager) Effect² - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the sector in the portfolio determines the size of the effect—the larger the sector, the larger the effect is, positive or negative.

Soft Hurdle rate⁵ - is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

Tiered Fee¹ - A fee structure that is paid to fund managers based on the size of the investment (i.e. 1.00% fee on the first \$10M invested, 0.90% on the next \$10M, and 0.80% on the remaining balance).

Total Effects² - The active management (total) effect is the sum of the selection, allocation, and interaction effects. It is also the difference between the total portfolio return and the total benchmark return. You can use the active management effect to determine the amount the investment manager has added to a portfolio's return.

Total Return¹ - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over a defined time period.

Universe³ - The list of all assets eligible for inclusion in a portfolio.

Upside Deviation¹ - Standard Deviation of Positive Returns

Weighted Avg. Market Cap.⁴ - A stock market index weighted by the market capitalization of each stock in the index. In such a weighting scheme, larger companies account for a greater portion of the index. Most indexes are constructed in this manner, with the best example being the S&P 500.

Yield (%)³ - The current yield of a security is the current indicated annual dividend rate divided by current price.

Yield to Maturity³ - The discount rate that equates the present value of cash flows, both principal and interest, to market price.

Data Source: ¹InvestorForce, ²Interaction Effect Performance Attribution, ³NEPC, LLC, ⁴Investopedia, ⁵Hedgero.net



DISCLOSURES

NEPC, LLC

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.





TORREYCOVE
CAPITAL PARTNERS

CALIFORNIA

10180 Barnes Canyon Road
Suite 200
San Diego, CA 92121

MASSACHUSETTS

222 Rosewood Drive
3rd Floor
Danvers, MA 01923

Private Equity Portfolio Performance Report As of June 30, 2019





- Summary Of Activity (2016 – 2018)
- Private Equity Portfolio Overview
- New Investment Activity - 2019
- Private Equity Portfolio Cash Flow Profile
- Private Equity Performance Drilldown
- Appendix – Fund By Fund Returns
 - Active Core Portfolio
 - Inactive Core Portfolio
 - Active Specialized Portfolio
 - Inactive Specialized Portfolio



- From 2016 to 2018, LACERS committed approximately \$1.1 billion to 52 different private equity funds
- Commitments have largely been focused on the Buyouts sub-sector, followed by Growth Equity and Venture Capital

❖ 2016 - Summary of Activity

- LACERS committed a total of \$327.4 million to 19 different funds
 - Approximately 70% dedicated to Buyouts
 - Approximately 10% dedicated to Growth Equity
 - Approximately 10% dedicated to Venture Capital
 - Approximately 5% dedicated to Credit/Distressed
 - Approximately 5% dedicated to Other

❖ 2017 - Summary of Activity

- LACERS committed a total of \$321.8 million to 16 different funds
 - Approximately 60% dedicated to Buyouts
 - Approximately 10% dedicated to Growth Equity
 - Approximately 20% dedicated to Venture Capital
 - Approximately 10% dedicated to Natural Resources

❖ 2018 - Summary of Activity

- LACERS committed a total of \$418.5 million to 17 different funds
 - Approximately 74% dedicated to Buyouts
 - Approximately 8% dedicated to Growth Equity
 - Approximately 2% dedicated to Venture Capital
 - Approximately 16% dedicated to Distressed



❖ Aggregate Portfolio Summary as of June 30, 2019¹

- In 2018, LACERS increased its private equity exposure target from 12.0% to 14.0%
- As of June 30, 2019 the aggregate portfolio's fair market value of \$2.0 billion represents 11.5% of Total Plan Assets

Aggregate Portfolio Private Equity Exposure Summary

| | |
|-------------------------------------|------------------|
| Total Plan Market Value | \$17,693,115,347 |
| Private Equity Exposure Target (%) | 14.0% |
| Private Equity Exposure Target (\$) | \$2,477,036,149 |
| Current Private Equity Exposure (%) | 11.5% |
| Fair Market Value | \$2,027,094,727 |

1. June 30, 2019 fund-level data was not made available for four funds as of the date of this report. In such instances, the prior available valuation is used.

❖ Aggregate Portfolio Summary

- LACERS has committed \$5.0 billion to 270 partnerships managed by 125 sponsors since the inception of its private equity program in 1995
- Contributions to and distributions from the aggregate portfolio since inception totaled \$3.6 billion each
- The aggregate portfolio has generated a total value multiple of 1.56x and a Net IRR since inception of 11.2%

| Aggregate Portfolio Snapshot | | | |
|-----------------------------------|------------|------------|------------|
| \$'s in millions | | | |
| Portfolio Since Inception | 06/30/2019 | 06/30/2018 | Net Change |
| Partnerships | 270 | 247 | 23 |
| Active | 223 | 209 | 14 |
| Inactive | 47 | 38 | 9 |
| Sponsors | 125 | 121 | 4 |
| Investment To Date Contributions | \$3,630 | \$3,280 | \$350 |
| Investment To Date Distributions | \$3,591 | \$3,231 | \$360 |
| Fair Market Value | \$2,027 | \$1,844 | \$183 |
| Fair Market Value + Distributions | \$5,618 | \$5,075 | \$543 |
| TVPI ¹ | 1.56x | 1.55x | 0.01x |
| Net IRR | 11.24% | 11.30% | -0.06% |

1. Total Value / Paid In Capital (Cumulative Distributions + Fair Market Value) / (Cumulative Contributions)

❖ Ten Largest Sponsors by Exposure

- The top ten sponsors by exposure account for 34.7% of aggregate portfolio exposure and 26.9% of aggregate portfolio commitments

| Firm | Number of Funds | Commitment | % Total Comm | Exposure (FMV + Unfunded) | % Exposure | TVPI ¹ | Net IRR |
|-------------------------------|-----------------|------------------------|--------------|---------------------------|--------------|-------------------|--------------|
| Vista Equity Partners | 7 | \$185,000,000 | 4.3% | \$202,003,162 | 5.9% | 2.11x | 23.0% |
| ABRY Partners | 6 | \$145,000,000 | 3.3% | \$149,188,406 | 4.4% | 1.24x | 8.6% |
| Advent International | 5 | \$145,000,000 | 3.3% | \$132,218,225 | 3.9% | 1.66x | 16.5% |
| Thoma Bravo | 5 | \$90,000,000 | 2.1% | \$113,360,920 | 3.3% | 1.58x | 20.8% |
| Platinum Equity | 4 | \$112,500,000 | 2.6% | \$104,726,497 | 3.1% | 1.68x | 29.5% |
| EnCap Investments | 4 | \$120,000,000 | 2.8% | \$102,864,503 | 3.0% | 1.17x | 6.4% |
| New Enterprise Associates | 4 | \$95,000,000 | 2.2% | \$101,312,730 | 2.9% | 1.62x | 16.1% |
| Spark Capital | 7 | \$93,750,000 | 2.2% | \$96,647,469 | 2.8% | 2.28x | 27.4% |
| Technology Crossover Ventures | 5 | \$104,500,000 | 2.4% | \$95,481,878 | 2.8% | 1.96x | 14.9% |
| Polaris Partners | 5 | \$75,000,000 | 1.7% | \$90,190,085 | 2.6% | 1.72x | 12.9% |
| Total | 52 | \$1,165,750,000 | 26.9% | \$1,187,993,875 | 34.7% | 1.73x | 17.8% |

1. Total Value / Paid In Capital (Cumulative Distributions + Fair Market Value) / (Cumulative Contributions)



Commitments – 1/1/2019 – 11/30/2019

| Closing Date | Sponsor | Partnership | Fund Size (mn) ¹ | New or Existing | Investment Strategy | Commitment Amount (mn) |
|-----------------------|-------------------------------|------------------------------------|-----------------------------|-----------------|---------------------------------|------------------------|
| 2/14/2019 | Spark Capital | Spark Capital Partners VI | \$400 | Existing | VC-Early Stage Growth Equity | \$13.3 |
| | | Spark Capital Growth Fund III | \$800 | | | \$26.7 |
| 2/21/2019 | Genstar Partners | Genstar Capital Partners IX | \$5,000 | New | Medium Buyouts | \$50.0 |
| 2/28/2019 | Gilde Buyout Partners | Gilde Buyout Fund VI | €1,500 | Existing | Medium Buyouts | €34.9 ³ |
| 3/7/2019 | Harvest Partners | Harvest Partners VIII | \$3,250 | Existing | Medium Buyouts | \$50.0 |
| 3/22/2019 | DEFY² | DEFY Partners II | \$225 | Existing | VC-Early Stage | \$18.0 |
| 5/2/2019 | TA Associates | TA XIII | \$7,500 | Existing | Growth Equity | \$35.0 |
| 5/2/2019 6/25/2019 | Advent International | Advent International GPE IX | \$17,500 | Existing | Large Buyouts Medium Buyouts | \$45.0 |
| | | Advent Global Technology Fund | \$1,750 | | | \$15.0 |
| 5/3/2019 | Freeman Spogli | FS Equity Partners VIII | \$1,500 | New | Medium Buyouts | \$25.0 |
| 5/23/2019 | Platinum Equity | Platinum Equity Capital Partners V | \$8,000 | Existing | Large Buyouts | \$50.0 |
| 6/6/2019 | NEA | New Enterprise Associates 17 | \$3,600 | Existing | VC-Multi-Stage | \$35.0 |
| 7/30/19 | P4G² | P4G Capital Fund I | \$300 | New | Small Buyouts | \$10.0 |
| 7/31/19 | Oak HC-FT | Oak HC- FT III | \$700 | Existing | VC- Multi-Stage | \$25.0 |
| 8/16/19 | Sunstone² | Sunstone Partners II | \$375 | Existing | Growth Equity | \$10.0 |
| 7/30/2019 | Montagu Private Equity | Montagu Fund VI | €3,500 | New | Medium Buyouts | €35.4 ⁴ |
| 10/10/2019 | TBA | TBA | \$5,000 | ND | Large Buyouts Medium Buyouts | \$40.0 |
| | | TBA | \$750 | | | \$10.0 |
| Total: | 15 | 18 | | | | ~\$538.0 |

¹ Based on target fund size.

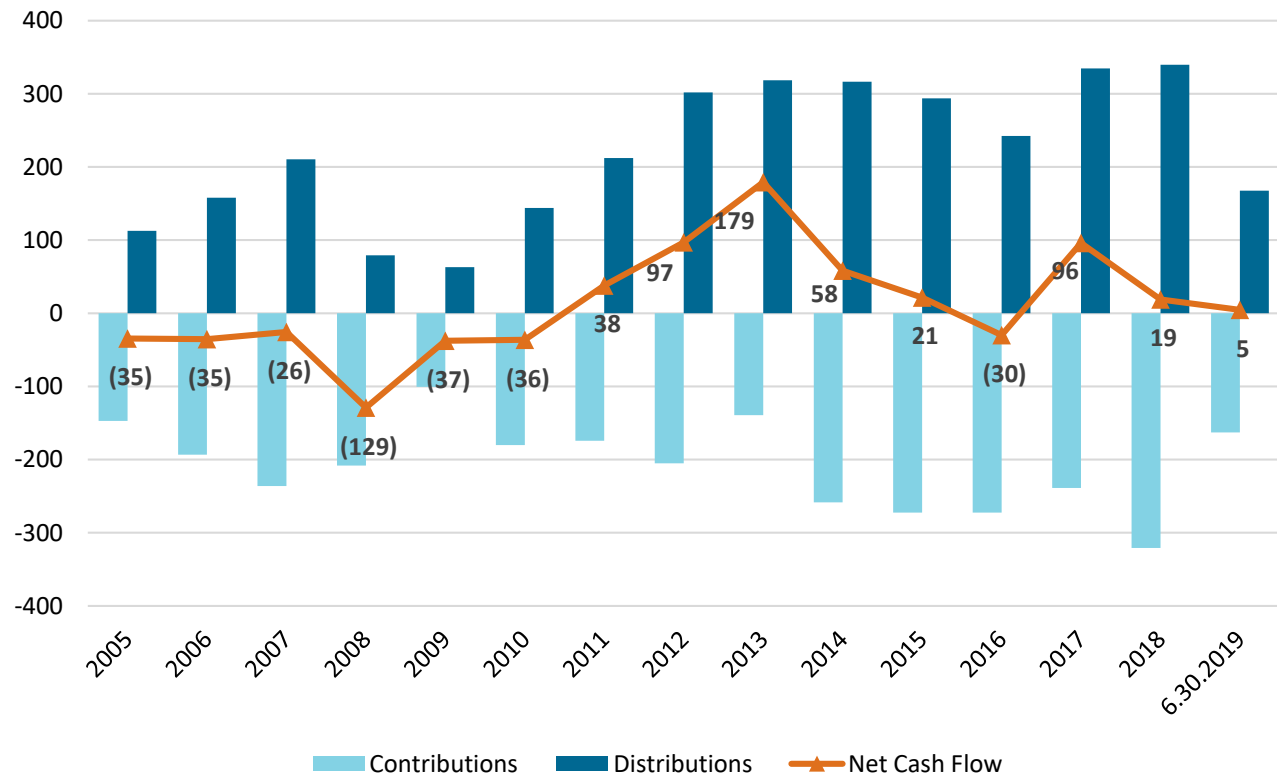
² Qualifies as an Emerging Manager based on LACERS' definition.

³ Commitment made in Euros – translates into roughly \$40.0 million based on 1/14/19 Fx rate.

⁴ Commitment made in Euros – translates into roughly \$40.0 million based on 7/3/19 Fx rate.

- LACERS PE programs has been largely cash flow positive since 2011.

❖ LACERS PE Program - Cash Flow Profile

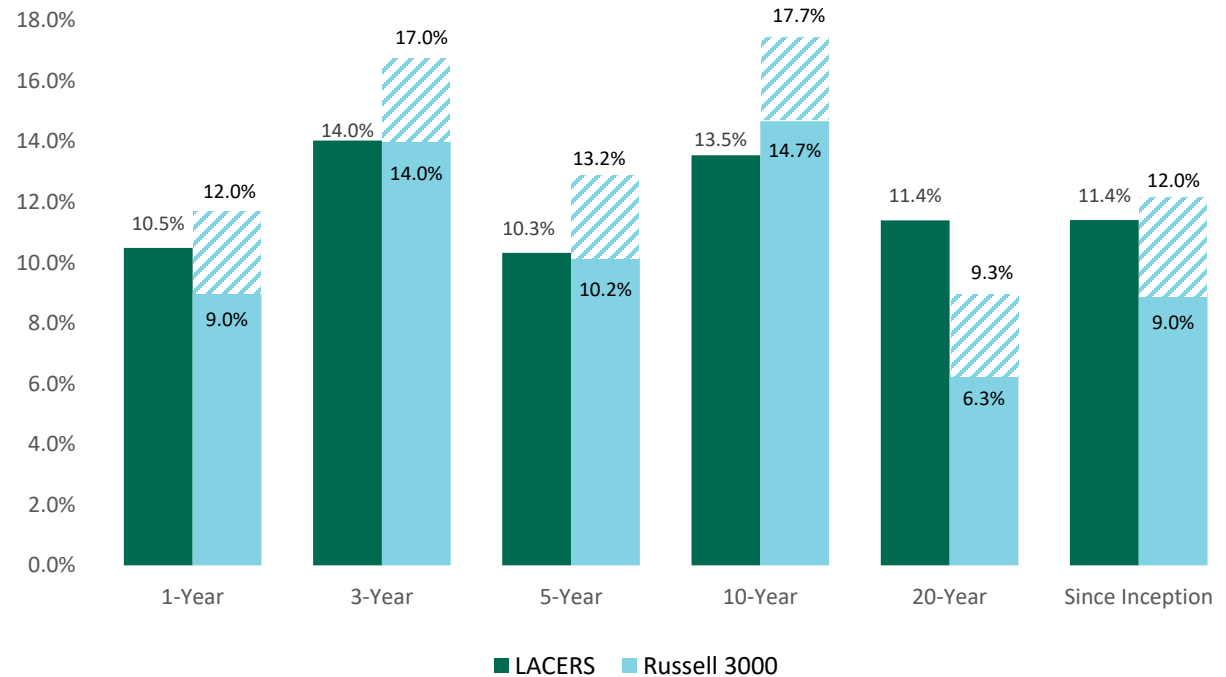




- Over the long term, LACERS' PE program has generated a net IRR of 11.4%.
- Over shorter time periods, net IRRs for the portfolio have fluctuated between 10.3% and 14.0%

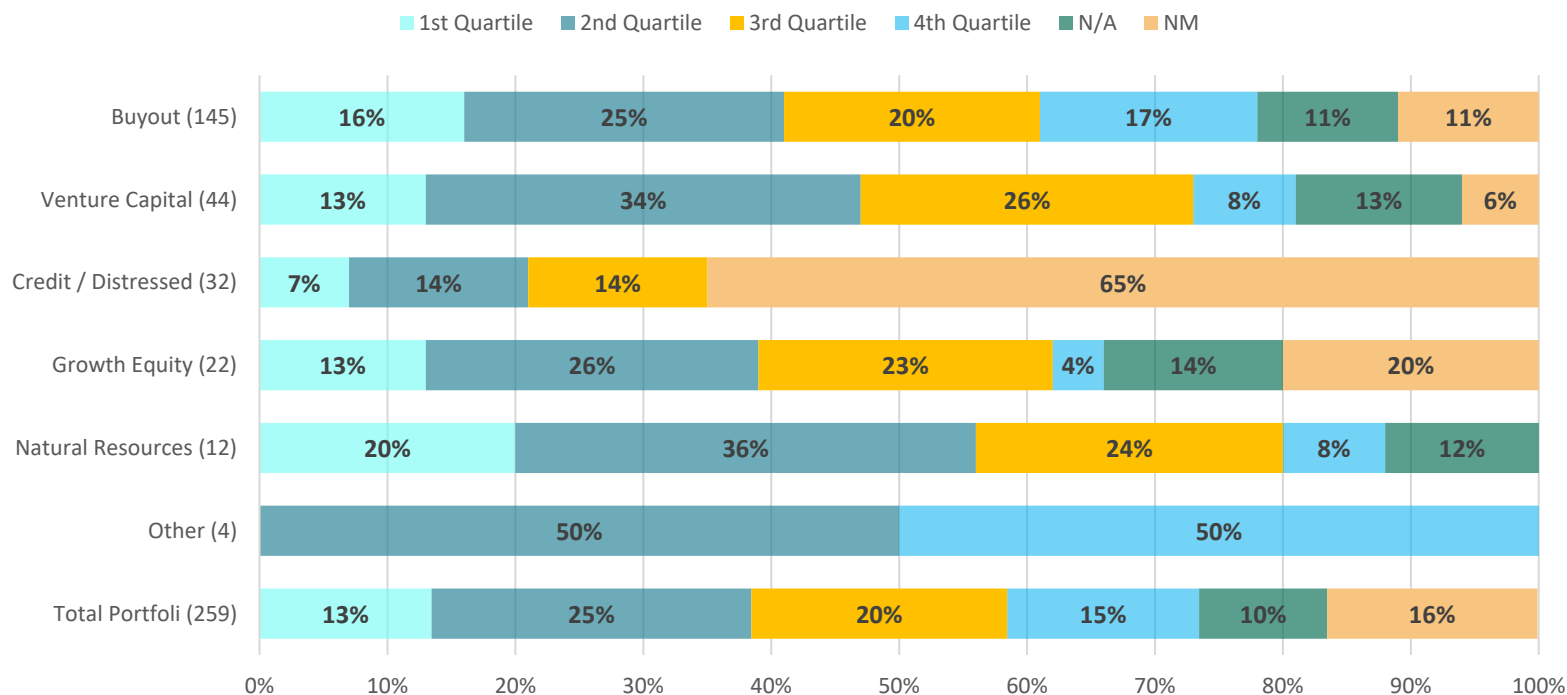
PE Program Objective

Earn 300bps Premium Over the Russell 3000 Over the Long Term



❖ Portfolio Strategy vs. Cambridge Associates¹

As a % of contributed capital | March 31, 2019

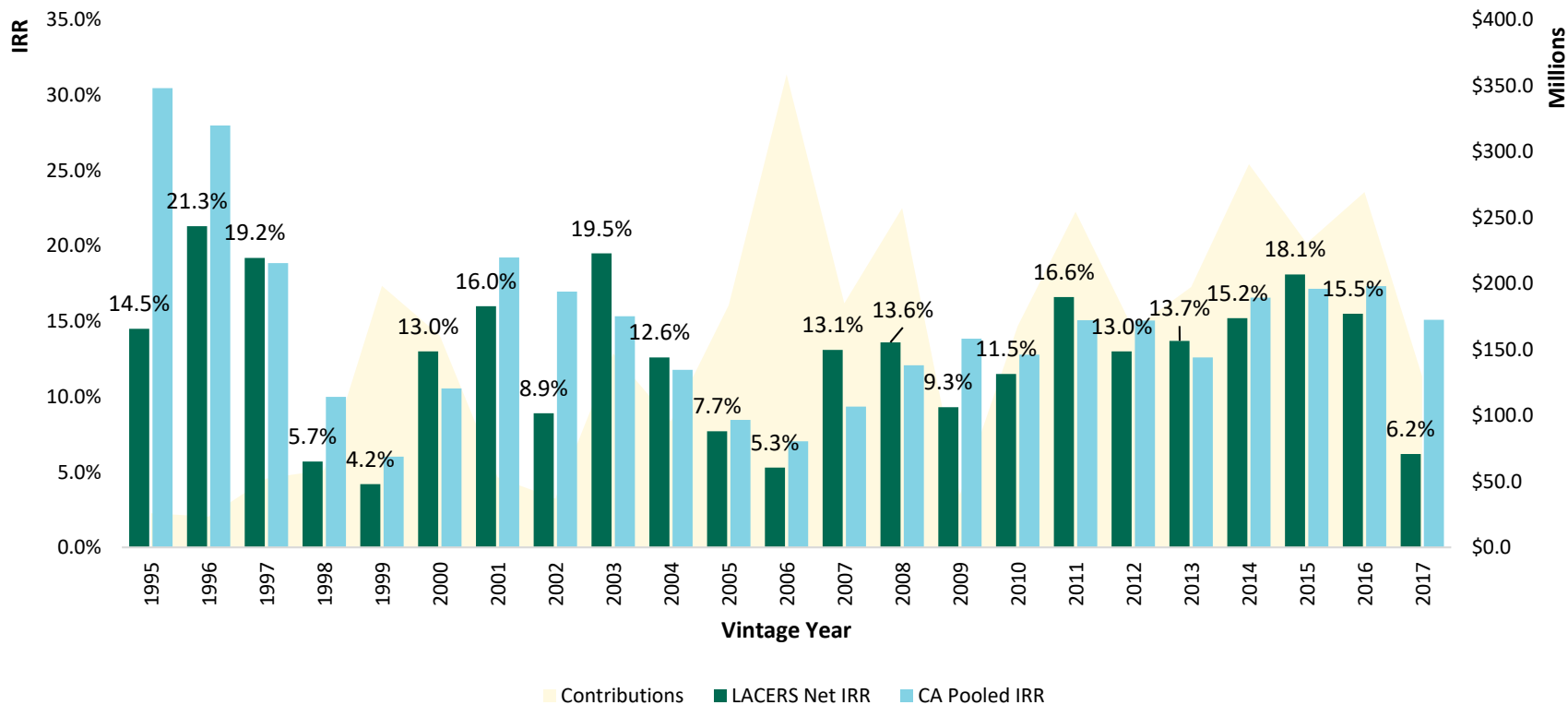


Note: All quartiles are based on Cambridge Associates data as of March 31, 2019. Funds where corresponding benchmark data is not available from Cambridge Associates are categorized as "N/A" and funds where the first capital call date is younger than two years are categorized as "NM". Funds with total commitments equal to zero are excluded from the calculation. Cambridge Associates data is continually updated and subject to change



❖ Portfolio Vintage Year vs. Cambridge Associates¹

June 30, 2019



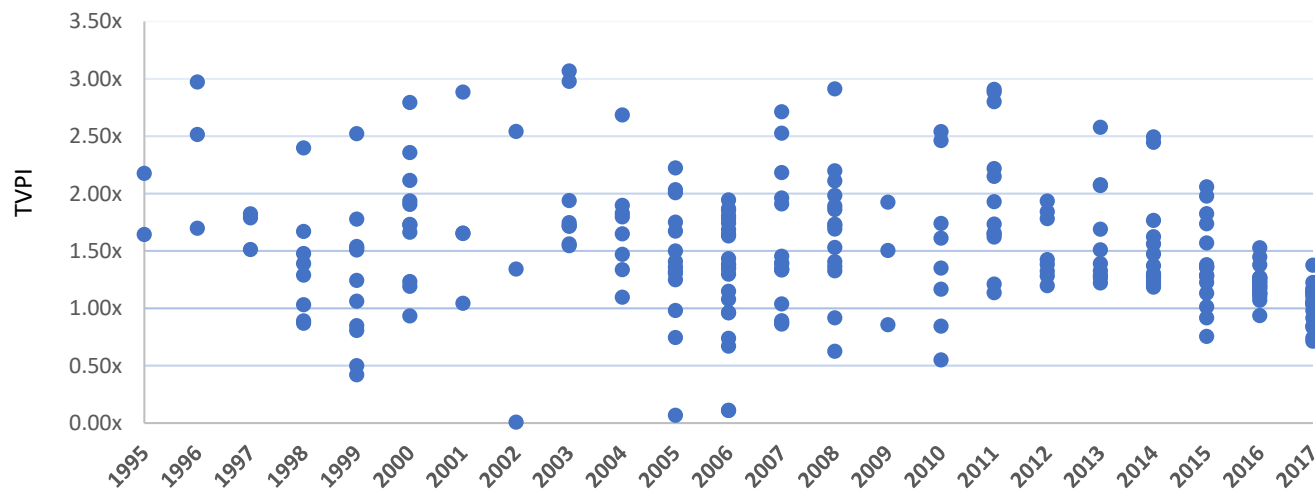
¹Cambridge Associates pooled IRRs as of June 30, 2019. Pooled IRRs comprised of similar regions and strategies in the LACERS portfolio. IRRs of funds younger than two years is not considered meaningful and have been excluded.

- More than half of LACERS' historical commitments – by fund count and committed capital – have gone to fund's that have generated net IRRs below 12.0%.

LACERS' PE Portfolio - Dispersion of Returns

| Net IRR | Number of Funds | Committed Capital | Contributed Capital | Distributed Capital | Market Value | TVPI |
|-------------------|-----------------|-------------------|---------------------|---------------------|------------------|--------------|
| > 20.0% IRR | 44 | \$711.8 | \$608.3 | \$850.9 | \$490.6 | 2.21x |
| 16.0% - 20.0% IRR | 25 | \$494.0 | \$448.5 | \$503.3 | \$361.7 | 1.93x |
| 12.0% - 16.0% IRR | 37 | \$717.7 | \$637.5 | \$614.4 | \$414.6 | 1.61x |
| Sub-Total | 106 | \$1,923.5 | \$1,694.3 | \$1,968.6 | \$1,266.9 | 1.91x |
| 8.0% - 12.0% IRR | 51 | \$876.0 | \$811.5 | \$764.4 | \$403.1 | 1.44x |
| 0.0% - 8.0% IRR | 47 | \$753.9 | \$696.5 | \$663.5 | \$224.9 | 1.28x |
| < 0.0% IRR | 34 | \$524.4 | \$378.8 | \$193.9 | \$85.3 | 0.74x |
| Sub-Total | 132 | \$2,154.3 | \$1,886.8 | \$1,621.8 | \$713.3 | 1.24x |

*Excludes funds with 2018 and 2019 VY funds because they are too early to be meaningful.



*Excludes funds with 2018 and 2019 VY funds because they are too early to be meaningful.

The Aggregate Portfolio (Core & Specialized Managers) of closed commitments has been grouped into vintage year buckets

- “Mature” bucket (\$240.7 million of fair market value with vintage years ranging from 1995-2009)
 - There was minimal change year over year with respect to Net TVPI and Net IRR and there is little potential for growth or decline to occur in these investments given the small fair market value relative to other buckets
- “Maturing” bucket (\$1,305.2 million of fair market value with vintage years ranging from 2010-2015)
 - There was change year over year with respect to Net TVPI and Net IRR and there is still potential for growth or decline to occur in these investments
 - The bulk of the near-term distributions are expected to come from the “Maturing” bucket
- “Developing” bucket (\$481.2 million of fair market value with vintage years ranging from 2016-2019)
 - Year over year, there was change with respect to Net TVPI and significant change with respect to Net IRR; there is still potential for growth or decline to occur in these investments
 - The bulk of the near-term contributions are expected to come from the “Developing” bucket

| \$'s in millions | | | | | | | | | | |
|------------------------|------------------|-------------------|------------------|-------------------|-------------------|--------------|--------------|--------------|--------------|-------------|
| Vintage Years | LTM ¹ | ITD ² | LTM ¹ | ITD ² | Fair Market Value | 6/30/2019 | Year Over | 6/30/2019 | Year Over | |
| | Contributions | Contributions | Distributions | Distributions | | Net TVPI | Year Change | Net TVPI | Net IRR | Year Change |
| | | | | | | | Net TVPI | Net IRR | Net IRR | |
| Mature (1995-2009) | \$3.51 | \$1,876.06 | \$127.75 | \$2,809.01 | \$240.65 | 1.63X | 0.00x | 10.5% | -0.1% | |
| Maturing (2010-2015) | \$116.50 | \$1,306.28 | \$202.88 | \$748.74 | \$1,305.23 | 1.61x | 0.08x | 14.7% | -0.5% | |
| Developing (2016-2019) | \$225.75 | \$447.97 | \$24.15 | \$32.77 | \$481.21 | 1.15x | 0.07x | 12.7% | 2.8% | |
| Total Portfolio | \$345.76 | \$3,630.31 | \$354.78 | \$3,590.52 | \$2,027.09 | 1.56x | 0.01x | 11.2% | -0.1% | |

¹ LTM stands for “Last 12 Months”

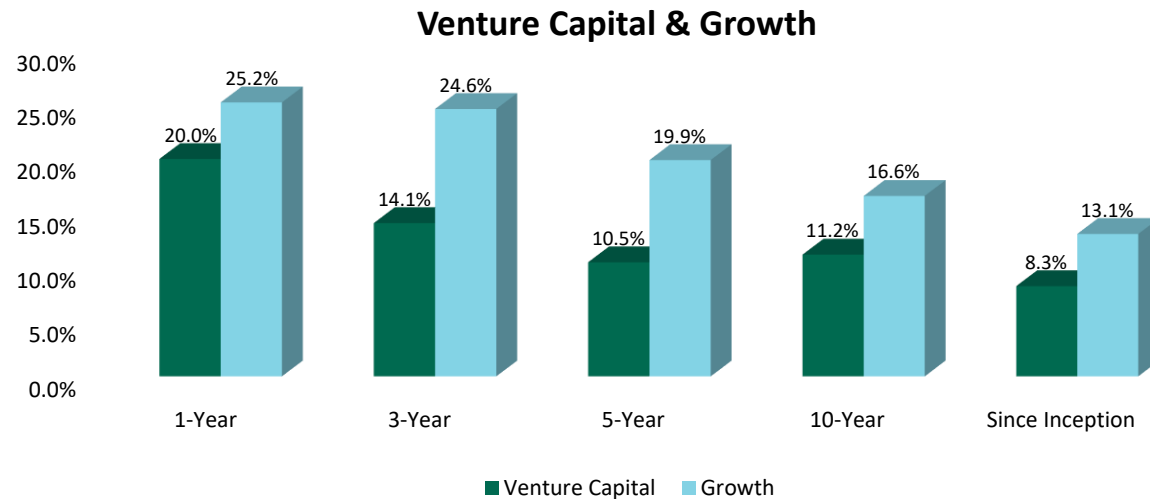
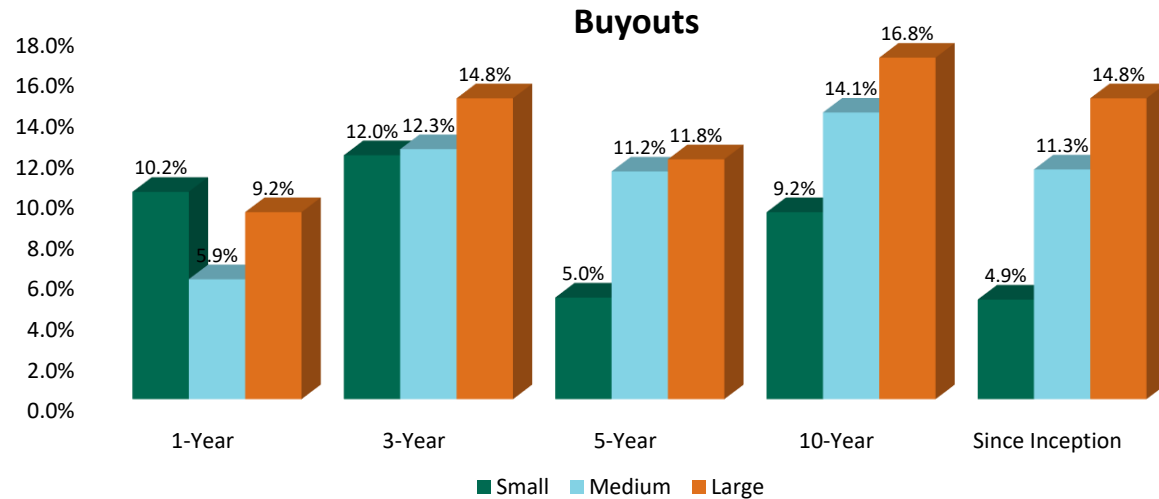
² ITD stands for “Inception To Date”

❖ Performance by Strategy and Sub-Strategy

| Strategy | Sub-Strategy | Commitment | Contributions | Percent Called | Distributions | Percent Distributed | Fair Market Value | TVPI | IRR |
|--------------------------|-----------------|------------------------|------------------------|----------------|------------------------|---------------------|------------------------|--------------|--------------|
| Buyout | Large | \$1,312,624,162 | \$958,700,863 | 73.0% | \$1,167,262,873 | 88.9% | \$461,876,818 | 1.71x | 14.8% |
| | Medium | \$1,486,976,600 | \$1,047,696,309 | 70.5% | \$1,176,410,918 | 79.1% | \$527,869,079 | 1.64x | 11.3% |
| | Small | \$210,600,561 | \$137,849,552 | 65.5% | \$96,250,302 | 45.7% | \$73,220,020 | 1.23x | 4.9% |
| Buyout | Total | \$3,010,201,323 | \$2,144,246,724 | 71.2% | \$2,439,924,093 | 81.1% | \$1,062,965,917 | 1.65x | 12.2% |
| Growth Equity | Growth Equity | \$388,290,488 | \$265,776,568 | 68.4% | \$153,072,368 | 39.4% | \$299,911,193 | 1.71x | 13.1% |
| Growth Equity | Total | \$388,290,488 | \$265,776,568 | 68.4% | \$153,072,368 | 39.4% | \$299,911,193 | 1.71x | 13.1% |
| Venture Capital | Early Stage | \$145,010,000 | \$94,923,289 | 65.5% | \$112,433,817 | 77.5% | \$98,755,876 | 2.22x | 43.1% |
| | Late Stage | \$135,000,000 | \$113,133,700 | 83.8% | \$60,891,014 | 45.1% | \$78,327,150 | 1.23x | 4.3% |
| | Multi-Stage | \$318,550,702 | \$260,033,287 | 81.6% | \$207,851,197 | 65.2% | \$146,168,851 | 1.36x | 5.8% |
| Venture Capital | Total | \$598,560,702 | \$468,090,275 | 78.2% | \$381,176,028 | 63.7% | \$323,251,877 | 1.51x | 8.3% |
| Credit/Distressed | Credit | \$80,000,000 | \$36,019,603 | 45.0% | \$10,292,711 | 12.9% | \$32,676,822 | 1.22x | 8.6% |
| | Distressed | \$444,531,007 | \$362,042,961 | 81.4% | \$365,466,469 | 82.2% | \$105,944,381 | 1.34x | 9.9% |
| | Mezzanine | \$35,000,000 | \$26,586,732 | 76.0% | \$27,604,436 | 78.9% | \$3,124,318 | 1.16x | 4.0% |
| Credit/Distressed | Total | \$559,531,007 | \$424,649,296 | 75.9% | \$403,363,616 | 72.1% | \$141,745,521 | 1.32x | 9.4% |
| Natural Resources | Energy | \$330,000,000 | \$268,514,314 | 81.4% | \$157,391,752 | 47.7% | \$167,500,483 | 1.21x | 6.2% |
| Natural Resources | Total | \$330,000,000 | \$268,514,314 | 81.4% | \$157,391,752 | 47.7% | \$167,500,483 | 1.21x | 6.2% |
| Other | Fund of Funds | \$20,000,000 | \$19,179,059 | 95.9% | \$28,892,499 | 144.5% | \$2,419,477 | 1.63x | 7.4% |
| | Secondary Funds | \$50,000,000 | \$39,853,106 | 79.7% | \$26,702,241 | 53.4% | \$29,300,258 | 1.47x | 15.8% |
| Other | Total | \$70,000,000 | \$59,032,165 | 84.3% | \$55,594,740 | 79.4% | \$31,719,735 | 1.53x | 9.8% |
| Total | Total | \$4,956,583,520 | \$3,630,309,343 | 73.2% | \$3,590,522,597 | 72.4% | \$2,027,094,727 | 1.56x | 11.2% |



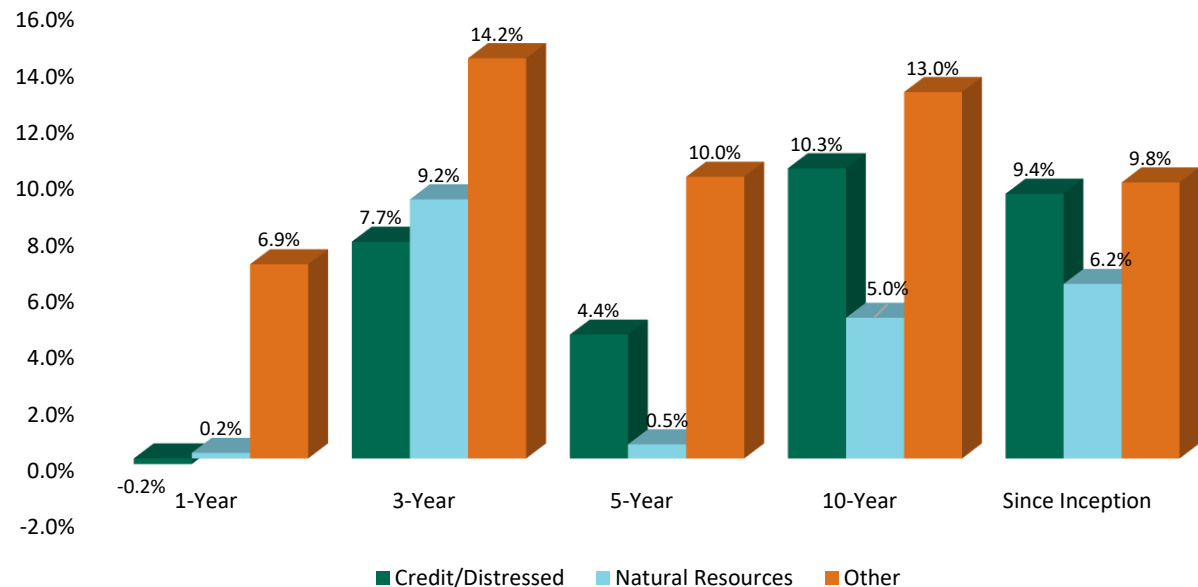
- The Buyouts Sub-Sector represents 60.7% of total commitments made by LACERS and 52.4% of FMV as of June 30, 2019.
- The Venture Capital and Growth Sub-Sectors represent 19.9% of total commitments made by LACERS and 30.7% of FMV as of June 30, 2019.





- The Credit / Distressed sector represents 11.3% of total commitments made by LACERS and 7.0% of FMV as of June 30, 2019.
- The Natural Resources sector represent 6.7% of total commitments made by LACERS and 8.3% of FMV as of June 30, 2019.
- The 'Other' sector represent 1.4% of total commitments made by LACERS and 1.6% of FMV as of June 30, 2019.

Credit/Distressed, Natural Resources, & Other



*The 'Other' category includes LACERS' investments in Secondary Funds and Fund of Funds..



- LACERS private equity program is underweight compared to its 14.0% target and has largely been cash flow positive over the past few years
- Overall, LACERS has a relatively well diversified private equity portfolio that is diversified by geography, industry, and vintage year

❖ Overall Exposure

- Private Equity exposure was 11.5% as of June 30, 2019
- Private Equity exposure target is currently 14.0%

❖ Performance Since Inception

- The Aggregate Portfolio has generated a Net IRR of 11.2% and a TVPI¹ of 1.56x
 - The Core Portfolio has generated a Net IRR of 11.8% and a TVPI¹ of 1.57x
 - The Specialized Portfolio has generated a Net IRR of 2.1% and a TVPI¹ of 1.12x

❖ Diversification

- Geographic Diversification: Diversified across geographies with a bias towards North America
- Sector Diversification: Diversified across sectors, with Information Technology representing the largest exposure
- Vintage Year Diversification: Well diversified across vintage years

❖ Cash Flow Profile

- The Private Equity Portfolio has been cash flow positive every year since 2011, with the exception of 2016

1. *Total Value / Paid In Capital (Cumulative Distributions + Fair Market Value) / (Cumulative Contributions)*



Appendix – Fund By Fund Returns

- Active Core Portfolio
- Inactive Core Portfolio
- Active Specialized Portfolio
- Inactive Specialized Portfolio

CORE PORTFOLIO SUMMARY

AS OF 6/30/2019 - ACTIVE



| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | USD Fair Market Value | Net IRR | Recommended by |
|-----------------------------------|-------------------|--------------|--------------|----------------|-----------------------|-----------------------|-----------------------|---------|--------------------|
| 1315 Capital Fund | Venture Capital | Late Stage | 2015 | 10,000,000 | 8,385,869 | 2,172,807 | 8,322,502 | 12.8% | Portfolio Advisors |
| 1315 Capital Fund II | Venture Capital | Late Stage | 2018 | 10,000,000 | 1,230,530 | 0 | 1,114,910 | -26.3% | Portfolio Advisors |
| ABRY Advanced Securities Fund III | Credit/Distressed | Credit | 2014 | 20,000,000 | 15,035,722 | 4,699,964 | 14,162,548 | 9.3% | Portfolio Advisors |
| ABRY Advanced Securities Fund IV | Credit/Distressed | Credit | 2018 | 40,000,000 | 3,238,391 | 0 | 2,934,568 | -38.8% | Portfolio Advisors |
| ABRY Heritage Partners | Buyout | Small | 2016 | 10,000,000 | 4,416,241 | 672,110 | 4,430,170 | 11.1% | Portfolio Advisors |
| ABRY Partners IX | Buyout | Medium | 2019 | 40,000,000 | 0 | 0 | -624,784 | 0.0% | TorreyCove |
| ABRY Partners VIII | Buyout | Medium | 2014 | 25,000,000 | 27,695,221 | 10,476,651 | 23,512,869 | 8.9% | Portfolio Advisors |
| ABRY Senior Equity V | Credit/Distressed | Mezzanine | 2016 | 10,000,000 | 3,259,831 | 984,377 | 2,724,659 | 13.5% | Portfolio Advisors |
| ACON Equity Partners III | Buyout | Medium | 2012 | 20,000,000 | 18,089,374 | 4,877,150 | 19,049,178 | 7.0% | Hamilton Lane |
| Acon-Bastion Partners II | Buyout | Medium | 2006 | 5,000,000 | 4,721,150 | 8,004,396 | 225,161 | 12.3% | Hamilton Lane |
| Advent Global Technology Fund | Buyout | Medium | 2019 | 15,000,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| Advent International GPE IX | Buyout | Large | 2019 | 45,000,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| Advent International GPE VI A | Buyout | Medium | 2008 | 20,000,000 | 20,000,000 | 38,449,837 | 3,755,323 | 16.9% | Hamilton Lane |
| Advent International GPE VII B | Buyout | Large | 2012 | 30,000,000 | 28,200,000 | 25,344,682 | 24,855,974 | 16.0% | Hamilton Lane |
| Advent International GPE VIII B-2 | Buyout | Large | 2016 | 35,000,000 | 29,435,000 | 0 | 36,241,928 | 15.7% | Portfolio Advisors |
| AION Capital Partners | Credit/Distressed | Credit | 2012 | 20,000,000 | 17,745,490 | 5,592,747 | 15,579,707 | 8.6% | Hamilton Lane |
| American Securities Partners VII | Buyout | Medium | 2016 | 25,000,000 | 19,908,999 | 2,732,029 | 15,909,542 | -4.2% | Portfolio Advisors |
| American Securities Partners VIII | Buyout | Large | 2019 | 40,000,000 | 13,550 | 0 | -290,232 | -100.0% | Portfolio Advisors |
| Angeles Equity Partners I | Credit/Distressed | Distressed | 2015 | 10,000,000 | 2,815,412 | 304,741 | 1,818,917 | -15.3% | Portfolio Advisors |
| Apollo Investment Fund IV | Buyout | Large | 1998 | 5,000,000 | 4,989,241 | 8,320,973 | 5,696 | 8.5% | Pathway |
| Apollo Investment Fund VI | Buyout | Large | 2006 | 15,000,000 | 14,372,999 | 23,957,457 | 279,686 | 8.7% | Hamilton Lane |
| Apollo Investment Fund VII | Buyout | Large | 2008 | 20,000,000 | 17,508,373 | 31,453,821 | 3,267,981 | 22.7% | Hamilton Lane |
| Apollo Investment Fund VIII | Buyout | Large | 2013 | 40,000,000 | 33,349,580 | 8,287,599 | 35,917,484 | 10.8% | Hamilton Lane |
| Ascribe Opportunities Fund II | Credit/Distressed | Distressed | 2010 | 20,000,000 | 30,342,833 | 29,379,076 | 7,441,684 | 6.8% | Hamilton Lane |
| Ascribe Opportunities Fund III | Credit/Distressed | Distressed | 2014 | 30,000,000 | 44,797,834 | 35,702,754 | 12,607,848 | 8.5% | Hamilton Lane |
| Ascribe Opportunities Fund IV | Credit/Distressed | Distressed | 2018 | 25,000,000 | 0 | 0 | 0 | 0.0% | Portfolio Advisors |
| Astorg VI | Buyout | Medium | 2015 | 25,625,875 | 19,513,357 | 0 | 22,064,963 | 9.2% | Portfolio Advisors |
| Astorg VII | Buyout | Medium | 2019 | 36,123,864 | 1,802,044 | 0 | 1,465,915 | -100.0% | TorreyCove |
| Astra Partners I | Buyout | Small | 2017 | 10,000,000 | 1,432,885 | -47,972 | 1,704,878 | 20.9% | Portfolio Advisors |
| Austin Ventures VII | Venture Capital | Multi-Stage | 1999 | 17,000,000 | 17,000,000 | 13,696,505 | 12,672 | -2.8% | Pathway |
| Austin Ventures VIII | Venture Capital | Multi-Stage | 2001 | 8,300,000 | 8,300,000 | 13,438,900 | 295,642 | 6.9% | Pathway |

CORE PORTFOLIO SUMMARY

AS OF 6/30/2019 - ACTIVE



| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | USD Fair Market Value | Net IRR | Recommended by |
|---|-------------------|---------------|--------------|----------------|-----------------------|-----------------------|-----------------------|---------|--------------------|
| Bain Capital Asia Fund III | Buyout | Large | 2016 | 15,000,000 | 9,743,222 | 2,863,820 | 9,453,103 | 23.2% | Portfolio Advisors |
| Bain Capital Double Impact Fund | Buyout | Small | 2016 | 10,000,000 | 5,144,016 | 1,262,838 | 4,152,757 | 6.1% | Portfolio Advisors |
| Baring Asia Private Equity Fund VI (LP 1) | Buyout | Medium | 2015 | 25,000,000 | 23,874,044 | 3,258,771 | 28,518,233 | 15.6% | Portfolio Advisors |
| Baring Asia Private Equity Fund VII | Buyout | Medium | 2018 | 25,000,000 | 2,577,978 | 0 | 2,041,221 | -83.7% | Portfolio Advisors |
| BC European Capital IX | Buyout | Large | 2011 | 18,146,966 | 18,332,986 | 15,720,429 | 13,822,470 | 12.8% | Hamilton Lane |
| BC European Capital X | Buyout | Large | 2017 | 31,651,237 | 15,053,038 | 0 | 15,750,120 | 4.4% | Portfolio Advisors |
| BDCM Opportunity Fund IV | Credit/Distressed | Distressed | 2015 | 25,000,000 | 24,981,365 | 6,036,732 | 24,471,732 | 11.3% | Portfolio Advisors |
| Blackstone Capital Partners V & V-S | Buyout | Large | 2005 | 20,000,000 | 19,263,727 | 31,350,054 | 869,360 | 7.9% | Hamilton Lane |
| Blackstone Capital Partners VI | Buyout | Large | 2011 | 20,000,000 | 18,700,290 | 13,655,037 | 17,272,896 | 12.8% | Hamilton Lane |
| Blackstone Energy Partners | Natural Resources | Energy | 2011 | 25,000,000 | 23,561,768 | 18,145,653 | 22,672,687 | 13.5% | Hamilton Lane |
| Blue Sea Capital Fund I | Buyout | Small | 2013 | 10,000,000 | 8,311,730 | 313,495 | 10,194,614 | 9.3% | Portfolio Advisors |
| Brentwood Associates Private Equity VI | Buyout | Medium | 2017 | 25,000,000 | 3,100,793 | 83,922 | 2,211,093 | -48.8% | Portfolio Advisors |
| Carlyle Partners IV | Buyout | Large | 2005 | 20,000,000 | 19,633,655 | 39,379,389 | 521,321 | 13.0% | Pathway |
| Carlyle Partners V | Buyout | Large | 2007 | 30,000,000 | 26,610,702 | 46,743,254 | 4,051,614 | 13.8% | Hamilton Lane |
| CenterGate Capital Partners I | Buyout | Small | 2015 | 10,000,000 | 2,932,504 | 62,277 | 2,622,706 | -5.0% | Portfolio Advisors |
| Charterhouse Capital Partners IX | Buyout | Large | 2008 | 18,105,408 | 16,963,349 | 20,030,057 | 2,437,721 | 9.7% | Hamilton Lane |
| Charterhouse Capital Partners VIII | Buyout | Large | 2006 | 19,706,859 | 19,639,870 | 18,827,486 | 37,837 | -0.6% | Hamilton Lane |
| CHP III | Venture Capital | Early Stage | 2006 | 15,000,000 | 15,000,000 | 18,371,658 | 9,422,480 | 8.5% | Hamilton Lane |
| CHS Private Equity V | Buyout | Medium | 2005 | 20,000,000 | 20,145,530 | 35,206,573 | 39,051 | 9.8% | Pathway |
| Collier International Partners VI | Other | Secondaries | 2011 | 25,000,000 | 18,290,837 | 21,381,224 | 8,600,262 | 15.7% | Hamilton Lane |
| CVC Capital Partners VII | Buyout | Large | 2017 | 28,567,140 | 4,291,821 | 92,598 | 5,138,776 | 41.8% | Portfolio Advisors |
| CVC European Equity Partners III | Buyout | Large | 2001 | 15,000,000 | 14,776,341 | 41,619,578 | 982,825 | 41.0% | Pathway |
| CVC European Equity Partners IV | Buyout | Large | 2005 | 26,008,211 | 23,210,339 | 46,514,557 | 22,122 | 16.8% | Hamilton Lane |
| CVC European Equity Partners V | Buyout | Large | 2008 | 18,815,039 | 18,345,439 | 33,375,699 | 4,067,864 | 16.6% | Hamilton Lane |
| DEFY Partners I | Venture Capital | Early Stage | 2017 | 10,000,000 | 5,100,000 | 0 | 5,258,066 | 3.7% | Portfolio Advisors |
| DEFY Partners II | Venture Capital | Early Stage | 2019 | 18,010,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| DFJ Growth 2013 | Growth Equity | Growth Equity | 2013 | 25,000,000 | 24,701,311 | 5,069,645 | 46,040,068 | 19.9% | Portfolio Advisors |
| DFJ Growth III | Growth Equity | Growth Equity | 2017 | 15,000,000 | 8,970,000 | 0 | 10,188,019 | 13.4% | Portfolio Advisors |
| EIG Energy Fund XVI | Natural Resources | Energy | 2013 | 25,000,000 | 22,009,905 | 9,109,524 | 17,716,333 | 8.0% | Hamilton Lane |
| EnCap Energy Capital Fund IX | Natural Resources | Energy | 2012 | 30,000,000 | 28,323,152 | 19,738,148 | 19,314,637 | 12.0% | Hamilton Lane |
| EnCap Energy Capital Fund VIII | Natural Resources | Energy | 2010 | 15,000,000 | 14,283,277 | 7,498,377 | 4,543,609 | -4.8% | Hamilton Lane |

CORE PORTFOLIO SUMMARY

AS OF 6/30/2019 - ACTIVE



| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | USD Fair Market Value | Net IRR | Recommended by |
|---|-------------------|--------------|--------------|----------------|-----------------------|-----------------------|-----------------------|---------|--------------------|
| EnCap Energy Capital Fund X | Natural Resources | Energy | 2015 | 35,000,000 | 27,304,246 | 3,554,031 | 29,868,307 | 10.4% | Portfolio Advisors |
| EnCap Energy Capital Fund XI | Natural Resources | Energy | 2017 | 40,000,000 | 7,252,973 | 0 | 6,046,699 | -19.8% | Portfolio Advisors |
| Energy Capital Partners II | Natural Resources | Energy | 2009 | 20,000,000 | 14,900,099 | 20,262,875 | 2,104,427 | 10.2% | Hamilton Lane |
| Energy Capital Partners III | Natural Resources | Energy | 2014 | 40,000,000 | 32,878,301 | 6,184,054 | 36,409,533 | 10.1% | Hamilton Lane |
| Essex Woodlands Health Ventures Fund IV | Venture Capital | Late Stage | 1998 | 4,000,000 | 4,000,000 | 5,184,021 | 722,633 | 7.7% | Pathway |
| Essex Woodlands Health Ventures Fund V | Venture Capital | Late Stage | 2000 | 10,000,000 | 10,000,000 | 10,591,086 | 1,737,099 | 4.2% | Pathway |
| Essex Woodlands Health Ventures Fund VI | Venture Capital | Multi-Stage | 2004 | 15,000,000 | 14,587,500 | 15,696,666 | 5,743,027 | 4.4% | Pathway |
| FIMI Opportunity V | Buyout | Medium | 2012 | 20,000,000 | 18,194,334 | 6,129,864 | 29,062,000 | 18.0% | Hamilton Lane |
| First Reserve Fund X | Natural Resources | Energy | 2004 | 20,000,000 | 20,000,000 | 36,485,800 | 69,171 | 31.1% | Pathway |
| First Reserve Fund XI | Natural Resources | Energy | 2006 | 30,000,000 | 30,000,000 | 20,620,169 | 1,523,014 | -6.5% | Hamilton Lane |
| First Reserve Fund XII | Natural Resources | Energy | 2008 | 25,000,000 | 25,990,474 | 11,964,923 | 4,285,289 | -9.9% | Hamilton Lane |
| FS Equity Partners VIII | Buyout | Medium | 2019 | 25,000,000 | 2,463,470 | 0 | 2,316,453 | -80.8% | TorreyCove |
| Genstar Capital Partners IX | Buyout | Medium | 2019 | 25,000,000 | 0 | 0 | -105,065 | 0.0% | TorreyCove |
| Genstar IX Opportunities Fund I | Buyout | Large | 2019 | 25,000,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| Gilde Buy-Out Fund V | Buyout | Medium | 2016 | 27,121,713 | 18,632,706 | 1,071,333 | 19,840,825 | 8.0% | Portfolio Advisors |
| Gilde Buy-Out Fund VI | Buyout | Medium | 2019 | 39,684,790 | 0 | 0 | 0 | 0.0% | TorreyCove |
| Glendon Opportunities Fund | Credit/Distressed | Distressed | 2014 | 20,000,000 | 16,990,996 | 0 | 21,124,287 | 6.2% | Portfolio Advisors |
| Glendon Opportunities Fund II | Credit/Distressed | Distressed | 2019 | 40,000,000 | 0 | 0 | 0 | 0.0% | Portfolio Advisors |
| Green Equity Investors V | Buyout | Large | 2007 | 20,000,000 | 18,268,906 | 35,975,980 | 10,164,794 | 19.9% | Hamilton Lane |
| Green Equity Investors VI | Buyout | Large | 2012 | 20,000,000 | 18,016,531 | 10,806,144 | 22,291,874 | 16.4% | Hamilton Lane |
| Green Equity Investors VII | Buyout | Large | 2017 | 25,000,000 | 14,769,381 | 98,997 | 17,214,357 | 13.5% | Portfolio Advisors |
| GTCR Fund IX-A | Buyout | Medium | 2006 | 15,000,000 | 14,288,203 | 25,758,367 | 40,859 | 13.8% | Hamilton Lane |
| GTCR Fund VIII | Buyout | Medium | 2003 | 20,000,000 | 18,520,960 | 32,142,142 | 187,421 | 22.3% | Pathway |
| GTCR Fund XII-AB | Buyout | Medium | 2017 | 40,000,000 | 9,904,000 | 352,669 | 8,019,438 | -23.9% | Portfolio Advisors |
| H&F Spock 1 | Buyout | Large | 2018 | 0 | 3,257,917 | 0 | 5,360,484 | 50.3% | Hamilton Lane |
| Halifax Capital Partners II | Buyout | Small | 2005 | 10,000,000 | 8,098,600 | 10,703,687 | -993 | 7.3% | Hamilton Lane |
| Harvest Partners VII | Buyout | Medium | 2016 | 20,000,000 | 14,957,017 | 379,083 | 16,076,950 | 7.4% | Portfolio Advisors |
| Harvest Partners VIII | Buyout | Medium | 2019 | 50,000,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| Hellman & Friedman Capital Partners IX | Buyout | Large | 2019 | 30,000,000 | 0 | 0 | -151,318 | 0.0% | Portfolio Advisors |
| Hellman & Friedman Capital Partners VI | Buyout | Large | 2006 | 20,000,000 | 19,344,481 | 35,127,803 | 980,551 | 12.9% | Hamilton Lane |
| Hellman & Friedman Capital Partners VII | Buyout | Large | 2011 | 20,000,000 | 19,062,781 | 24,348,797 | 29,027,978 | 25.4% | Hamilton Lane |

*H&F Spock 1 represents a Special Purpose Vehicle that was spun out of Hellman & Friedman VI. As such, there is no commitment amount attached to the investment.

CORE PORTFOLIO SUMMARY

AS OF 6/30/2019 - ACTIVE

| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | USD Fair Market Value | Net IRR | Recommended by |
|--|-----------------|---------------|--------------|----------------|-----------------------|-----------------------|-----------------------|---------|--------------------|
| Hellman & Friedman Capital Partners VIII | Buyout | Large | 2016 | 20,000,000 | 18,972,849 | 1,230,728 | 21,448,821 | 15.9% | Portfolio Advisors |
| High Road Capital Partners II | Buyout | Small | 2013 | 25,000,000 | 16,926,337 | 4,215,237 | 24,363,275 | 18.2% | Hamilton Lane |
| Hony Capital Fund V | Buyout | Large | 2011 | 25,000,000 | 25,084,013 | 477,782 | 29,780,089 | 4.0% | Hamilton Lane |
| Incline Equity Partners IV | Buyout | Small | 2017 | 10,000,000 | 4,565,086 | 11,705 | 4,736,050 | 6.6% | Portfolio Advisors |
| Insight Venture Partners IX | Growth Equity | Growth Equity | 2015 | 25,000,000 | 24,620,088 | 4,246,620 | 45,813,574 | 29.4% | Portfolio Advisors |
| Insight Venture Partners VIII | Growth Equity | Growth Equity | 2013 | 20,000,000 | 19,585,777 | 20,341,621 | 19,997,762 | 16.7% | Hamilton Lane |
| Institutional Venture Partners XV | Venture Capital | Late Stage | 2015 | 20,000,000 | 19,000,000 | 3,280,068 | 26,519,588 | 21.9% | Portfolio Advisors |
| J.H. Whitney VII | Buyout | Medium | 2010 | 25,000,000 | 23,655,162 | 18,640,073 | 22,482,149 | 13.3% | Hamilton Lane |
| Kelso Investment Associates VII | Buyout | Medium | 2003 | 18,000,000 | 17,131,163 | 29,092,678 | 345,372 | 12.6% | Pathway |
| Kelso Investment Associates VIII | Buyout | Medium | 2007 | 20,000,000 | 18,936,725 | 21,305,971 | 4,103,916 | 6.2% | Hamilton Lane |
| Khosla Ventures IV | Venture Capital | Early Stage | 2011 | 20,000,000 | 19,620,000 | 16,896,278 | 39,671,363 | 23.0% | Hamilton Lane |
| KKR 2006 Fund | Buyout | Large | 2006 | 30,000,000 | 30,277,374 | 44,630,604 | 9,384,308 | 9.2% | Hamilton Lane |
| KKR European Fund II | Buyout | Large | 2005 | 15,000,000 | 15,497,844 | 20,902,207 | 158,819 | 4.7% | Hamilton Lane |
| KPS Special Situations Fund IV | Buyout | Medium | 2014 | 25,000,000 | 13,542,040 | 4,827,804 | 12,725,182 | 20.2% | Hamilton Lane |
| Levine Leichtman Capital Partners III | Buyout | Medium | 2003 | 20,000,000 | 21,392,254 | 33,239,814 | 138,637 | 10.0% | Hamilton Lane |
| Levine Leichtman Capital Partners IV | Buyout | Medium | 2008 | 20,000,000 | 16,448,126 | 28,893,633 | 2,110,462 | 18.1% | Hamilton Lane |
| Levine Leichtman Capital Partners V | Buyout | Medium | 2013 | 30,000,000 | 25,943,237 | 12,466,108 | 25,925,192 | 11.7% | Hamilton Lane |
| Lindsay Goldberg & Bessemer II | Buyout | Large | 2006 | 20,000,000 | 18,909,974 | 27,052,664 | 23,039 | 7.1% | Hamilton Lane |
| Lindsay Goldberg III | Buyout | Large | 2008 | 20,000,000 | 19,161,442 | 25,750,731 | 351,868 | 8.1% | Hamilton Lane |
| Longitude Venture Partners III | Venture Capital | Late Stage | 2016 | 10,000,000 | 5,522,146 | 0 | 6,735,024 | 20.9% | Portfolio Advisors |
| Madison Dearborn Capital Partners IV | Buyout | Medium | 2000 | 25,000,000 | 25,174,337 | 47,037,524 | 919,596 | 14.2% | Pathway |
| Menlo Ventures IX | Venture Capital | Multi-Stage | 2001 | 20,000,000 | 20,000,000 | 20,095,204 | 756,224 | 0.7% | Pathway |
| Mill Point Capital Partners | Buyout | Small | 2017 | 10,000,000 | 4,213,814 | 20,732 | 4,459,969 | 7.3% | Portfolio Advisors |
| Nautic Partners V | Buyout | Medium | 2000 | 15,000,000 | 14,426,866 | 29,627,940 | 879,297 | 17.0% | Pathway |
| New Enterprise Associates 13 | Venture Capital | Multi-Stage | 2009 | 15,000,000 | 14,775,000 | 17,684,045 | 10,740,944 | 13.9% | Hamilton Lane |
| New Enterprise Associates 15 | Venture Capital | Multi-Stage | 2015 | 20,000,000 | 17,700,000 | 4,260,628 | 26,479,388 | 22.8% | Portfolio Advisors |
| New Enterprise Associates 16 | Venture Capital | Multi-Stage | 2017 | 25,000,000 | 12,937,500 | 0 | 14,504,898 | 12.4% | Portfolio Advisors |
| New Enterprise Associates 17 | Venture Capital | Multi-Stage | 2019 | 35,000,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| New Mountain Partners III | Buyout | Large | 2007 | 20,000,000 | 18,661,525 | 25,412,053 | 15,313,361 | 13.7% | Hamilton Lane |
| New Water Capital | Buyout | Small | 2015 | 10,000,000 | 6,573,459 | 90,505 | 6,564,695 | 0.8% | Portfolio Advisors |
| Newbridge Asia IV | Buyout | Medium | 2005 | 10,000,000 | 9,846,880 | 21,717,152 | 173,171 | 16.8% | Hamilton Lane |

CORE PORTFOLIO SUMMARY

AS OF 6/30/2019 - ACTIVE

| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | USD Fair Market Value | Net IRR | Recommended by |
|---|-------------------|---------------|--------------|----------------|-----------------------|-----------------------|-----------------------|---------|--------------------|
| NGP Natural Resources XI | Natural Resources | Energy | 2014 | 25,000,000 | 22,010,119 | 3,828,198 | 22,946,778 | 9.3% | Portfolio Advisors |
| NMS Fund III | Buyout | Small | 2017 | 10,000,000 | 2,278,240 | 317,008 | 1,791,402 | -9.8% | Portfolio Advisors |
| Nordic Capital V | Buyout | Medium | 2003 | 14,043,460 | 14,304,054 | 42,229,277 | 352,893 | 20.8% | Pathway |
| Oak HC-FT Partners | Venture Capital | Late Stage | 2014 | 10,000,000 | 9,150,175 | 4,549,787 | 10,296,489 | 20.3% | Portfolio Advisors |
| Oak HC-FT Partners II | Venture Capital | Late Stage | 2017 | 10,000,000 | 5,321,218 | 0 | 6,058,856 | 22.6% | Portfolio Advisors |
| Oak Investment Partners XII | Venture Capital | Multi-Stage | 2006 | 15,000,000 | 14,999,762 | 11,424,357 | 2,983,618 | -0.7% | Hamilton Lane |
| Oaktree Opportunities Fund X | Credit/Distressed | Distressed | 2015 | 7,500,000 | 6,225,000 | 917,949 | 7,048,738 | 13.4% | Portfolio Advisors |
| Oaktree Opportunities Fund Xb | Credit/Distressed | Distressed | 2018 | 17,500,000 | 2,187,500 | 0 | 2,064,604 | -7.6% | Portfolio Advisors |
| OCM Opportunities Fund V | Credit/Distressed | Distressed | 2004 | 7,100,000 | 7,100,000 | 11,699,250 | 3,969 | 14.1% | Pathway |
| OCM Opportunities Fund VII | Credit/Distressed | Distressed | 2007 | 10,000,000 | 10,000,000 | 13,378,024 | 489,891 | 7.4% | Hamilton Lane |
| OCM Opportunities Fund VIIb | Credit/Distressed | Distressed | 2008 | 10,000,000 | 9,000,000 | 15,372,009 | 217,120 | 16.6% | Hamilton Lane |
| Onex Partners | Buyout | Large | 2003 | 20,000,000 | 19,048,408 | 58,335,236 | 99,873 | 38.4% | Pathway |
| P4G Capital Partners I | Buyout | Small | 2019 | 10,000,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| Palladium Equity Partners IV | Buyout | Medium | 2012 | 25,000,000 | 21,792,161 | 11,567,298 | 19,469,003 | 13.4% | Portfolio Advisors |
| Palladium Equity Partners V | Buyout | Medium | 2017 | 25,000,000 | 4,075,423 | 21,179 | 2,884,639 | -36.7% | Portfolio Advisors |
| Permira Europe III | Buyout | Large | 2003 | 21,506,160 | 21,515,354 | 36,794,711 | 85,914 | 26.1% | Pathway |
| Permira Europe IV | Buyout | Large | 2006 | 14,935,115 | 14,854,754 | 22,196,515 | 2,020,709 | 8.8% | Hamilton Lane |
| Pharos Capital Partners II-A | Buyout | Medium | 2004 | 5,000,000 | 5,000,000 | 3,192,707 | 2,289,649 | 1.4% | Hamilton Lane |
| Platinum Equity Capital Partners III | Buyout | Large | 2011 | 25,000,000 | 19,159,823 | 27,347,258 | 9,449,975 | 29.9% | Hamilton Lane |
| Platinum Equity Capital Partners IV | Buyout | Large | 2016 | 15,000,000 | 11,768,367 | 3,023,993 | 12,819,180 | 31.6% | Portfolio Advisors |
| Platinum Equity Capital Partners V | Buyout | Large | 2019 | 50,000,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| Platinum Equity Small Cap Fund | Buyout | Medium | 2018 | 22,500,000 | 1,798,070 | 86,400 | 1,315,506 | -30.6% | Portfolio Advisors |
| Polaris Growth Fund | Growth Equity | Growth Equity | 2018 | 10,000,000 | 1,400,000 | 0 | 1,138,695 | -59.7% | Portfolio Advisors |
| Polaris Partners VII | Venture Capital | Multi-Stage | 2014 | 25,000,000 | 22,500,000 | 2,557,033 | 30,559,464 | 14.5% | Portfolio Advisors |
| Polaris Venture Partners V | Venture Capital | Multi-Stage | 2006 | 15,000,000 | 14,700,000 | 14,756,377 | 9,424,072 | 7.8% | Hamilton Lane |
| Polaris Venture Partners VI | Venture Capital | Multi-Stage | 2010 | 15,000,000 | 13,125,000 | 8,569,894 | 24,761,898 | 22.3% | Hamilton Lane |
| Polaris Venture Partners VIII | Venture Capital | Multi-Stage | 2016 | 10,000,000 | 5,600,000 | 0 | 6,630,956 | 14.1% | Portfolio Advisors |
| Providence Debt Fund III | Credit/Distressed | Distressed | 2013 | 30,000,000 | 28,765,436 | 14,719,532 | 22,124,948 | 7.3% | Hamilton Lane |
| Providence Equity Partners V | Buyout | Large | 2005 | 18,000,000 | 16,415,524 | 20,190,547 | 295,959 | 3.2% | Pathway |
| Providence Equity Partners VI | Buyout | Large | 2006 | 30,000,000 | 28,569,939 | 30,942,695 | 7,677,810 | 4.9% | Hamilton Lane |
| Providence TMT Debt Opportunity Fund II | Credit/Distressed | Distressed | 2010 | 20,000,000 | 16,319,772 | 25,752,915 | 147,344 | 10.5% | Hamilton Lane |

CORE PORTFOLIO SUMMARY

AS OF 6/30/2019 - ACTIVE



| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | USD Fair Market Value | Net IRR | Recommended by |
|---------------------------------------|-------------------|---------------|--------------|----------------|-----------------------|-----------------------|-----------------------|---------|--------------------|
| Roark Capital Partners II Side Car | Buyout | Medium | 2018 | 10,000,000 | 6,105,398 | 0 | 5,930,386 | -5.4% | TorreyCove |
| Roark Capital Partners V | Buyout | Large | 2018 | 15,000,000 | 3,221,893 | 0 | 3,633,634 | 27.5% | TorreyCove |
| Searchlight Capital II | Buyout | Medium | 2015 | 25,000,000 | 15,573,455 | 2,566,138 | 18,836,770 | 18.3% | Portfolio Advisors |
| SG Growth Partners III | Growth Equity | Growth Equity | 2015 | 10,000,000 | 10,141,159 | 1,225,677 | 16,273,513 | 21.5% | Portfolio Advisors |
| SG Growth Partners IV | Growth Equity | Growth Equity | 2017 | 10,000,000 | 6,439,118 | 0 | 8,851,752 | 52.1% | Portfolio Advisors |
| Spark Capital | Venture Capital | Early Stage | 2005 | 9,000,000 | 8,820,000 | 11,937,038 | 469,237 | 8.3% | Hamilton Lane |
| Spark Capital Growth Fund | Growth Equity | Growth Equity | 2014 | 10,000,000 | 10,000,000 | 0 | 17,653,844 | 17.7% | Portfolio Advisors |
| Spark Capital Growth Fund II | Growth Equity | Growth Equity | 2017 | 15,000,000 | 10,800,000 | 0 | 11,920,115 | 11.8% | Portfolio Advisors |
| Spark Capital Growth Fund III | Growth Equity | Growth Equity | 2019 | 26,750,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| Spark Capital II | Venture Capital | Early Stage | 2008 | 9,750,000 | 9,750,000 | 35,120,689 | 6,609,226 | 51.6% | Hamilton Lane |
| Spark Capital III | Venture Capital | Early Stage | 2011 | 10,000,000 | 10,000,000 | 13,458,856 | 15,615,047 | 31.3% | Hamilton Lane |
| Spark Capital Partners VI | Venture Capital | Early Stage | 2019 | 13,250,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| Spire Capital Partners III | Buyout | Small | 2013 | 10,000,000 | 9,138,942 | 4,353,848 | 8,200,497 | 12.5% | Portfolio Advisors |
| SSG Capital Partners II | Credit/Distressed | Distressed | 2012 | 15,914,286 | 15,048,980 | 14,731,278 | 4,494,508 | 6.6% | Hamilton Lane |
| StepStone Secondary Opportunities III | Other | Secondaries | 2016 | 25,000,000 | 21,562,269 | 5,321,017 | 20,699,996 | 16.0% | Portfolio Advisors |
| Sunstone Partners I | Growth Equity | Growth Equity | 2015 | 7,500,000 | 5,396,491 | 122,436 | 7,181,954 | 26.5% | Portfolio Advisors |
| TA X | Growth Equity | Growth Equity | 2006 | 6,000,000 | 6,186,689 | 7,956,689 | 66,164 | 5.2% | Hamilton Lane |
| TA XI | Growth Equity | Growth Equity | 2010 | 20,000,000 | 19,650,000 | 33,255,855 | 15,093,050 | 23.1% | Hamilton Lane |
| TA XII-A | Growth Equity | Growth Equity | 2016 | 25,000,000 | 22,880,059 | 4,191,456 | 30,724,144 | 34.7% | Portfolio Advisors |
| TA XIII | Growth Equity | Growth Equity | 2019 | 35,000,000 | 0 | 0 | 0 | 0.0% | TorreyCove |
| TCV IX | Growth Equity | Growth Equity | 2016 | 10,000,000 | 7,356,000 | 549,489 | 7,767,497 | 11.8% | Portfolio Advisors |
| TCV X | Growth Equity | Growth Equity | 2019 | 25,000,000 | 1,250,000 | 0 | 993,328 | -83.5% | Portfolio Advisors |
| TCW Crescent Mezzanine Partners IV | Credit/Distressed | Mezzanine | 2006 | 10,000,000 | 8,712,805 | 9,974,965 | 21,911 | 2.9% | Hamilton Lane |
| TCW Crescent Mezzanine Partners V | Credit/Distressed | Mezzanine | 2007 | 10,000,000 | 9,625,012 | 12,467,522 | 258,859 | 9.0% | Hamilton Lane |
| Technology Crossover Ventures V | Venture Capital | Multi-Stage | 2004 | 19,500,000 | 19,334,250 | 34,013,383 | 2,643,962 | 10.9% | Pathway |
| Technology Crossover Ventures VII | Growth Equity | Growth Equity | 2008 | 20,000,000 | 19,680,000 | 40,425,375 | 16,866,341 | 23.4% | Hamilton Lane |
| Technology Crossover Ventures VIII | Growth Equity | Growth Equity | 2014 | 30,000,000 | 25,443,410 | 3,927,420 | 35,774,410 | 13.0% | Hamilton Lane |
| Thoma Bravo Discover Fund II | Buyout | Medium | 2018 | 10,000,000 | 2,333,942 | 0 | 2,202,248 | -12.3% | Portfolio Advisors |
| Thoma Bravo Fund XI | Buyout | Medium | 2014 | 15,000,000 | 13,287,170 | 8,263,010 | 24,230,876 | 25.5% | Portfolio Advisors |
| Thoma Bravo Fund XII | Buyout | Large | 2016 | 25,000,000 | 23,264,290 | 1,795 | 29,460,746 | 13.9% | Portfolio Advisors |
| Thoma Bravo Fund XIII | Buyout | Large | 2018 | 30,000,000 | 10,717,375 | 0 | 10,592,993 | -4.9% | Portfolio Advisors |

CORE PORTFOLIO SUMMARY AS OF 6/30/2019 - ACTIVE



| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | USD Fair Market Value | Net IRR | Recommended by |
|--|-----------------|--------------|--------------|----------------------|-----------------------|-----------------------|-----------------------|--------------|--------------------|
| Thoma Bravo Special Opportunities Fund II Buyout | | Medium | 2015 | 10,000,000 | 9,040,274 | 2,362,959 | 15,512,645 | 20.4% | Portfolio Advisors |
| Threshold Ventures II | Venture Capital | Early Stage | 2016 | 10,000,000 | 7,625,000 | 0 | 9,499,771 | 16.4% | Portfolio Advisors |
| TPG Growth II | Buyout | Medium | 2011 | 30,000,000 | 29,239,986 | 23,207,276 | 39,495,770 | 18.9% | Hamilton Lane |
| TPG Partners III | Buyout | Large | 1999 | 25,000,000 | 22,442,286 | 56,548,095 | 44,854 | 24.4% | Pathway |
| TPG Partners IV | Buyout | Large | 2003 | 25,000,000 | 27,436,973 | 52,452,451 | 724,982 | 15.3% | Pathway |
| TPG Partners V | Buyout | Large | 2006 | 30,000,000 | 31,415,182 | 41,182,009 | 2,115,279 | 5.0% | Hamilton Lane |
| TPG Partners VI | Buyout | Large | 2008 | 22,500,000 | 24,339,134 | 31,529,047 | 5,624,089 | 10.3% | Hamilton Lane |
| TPG Star | Buyout | Medium | 2006 | 20,000,000 | 21,635,099 | 24,896,346 | 4,149,855 | 7.2% | Hamilton Lane |
| Trident Capital Fund-V | Buyout | Medium | 2000 | 14,369,679 | 14,001,728 | 23,857,029 | 365,661 | 8.6% | Pathway |
| Trident Capital Fund-VI | Buyout | Medium | 2005 | 8,500,000 | 8,500,000 | 7,529,896 | 5,209,258 | 4.5% | Pathway |
| Upfront VI | Venture Capital | Early Stage | 2017 | 20,000,000 | 9,005,506 | 0 | 8,813,963 | -3.1% | Portfolio Advisors |
| VantagePoint Venture Partners IV | Venture Capital | Multi-Stage | 2000 | 15,000,000 | 15,000,000 | 13,092,215 | 911,637 | -1.0% | Pathway |
| Vestar Capital Partners IV | Buyout | Medium | 1999 | 17,000,000 | 16,585,106 | 29,285,920 | 186,156 | 13.5% | Pathway |
| Vista Equity Partners Fund III | Buyout | Medium | 2007 | 25,000,000 | 23,206,112 | 60,172,877 | 2,516,999 | 26.8% | Hamilton Lane |
| Vista Equity Partners Fund IV | Buyout | Medium | 2011 | 30,000,000 | 25,140,829 | 34,187,218 | 21,260,828 | 17.7% | Hamilton Lane |
| Vista Equity Partners Fund V | Buyout | Medium | 2014 | 40,000,000 | 37,149,685 | 27,126,670 | 51,931,918 | 23.9% | Portfolio Advisors |
| Vista Equity Partners Fund VI | Buyout | Large | 2016 | 30,000,000 | 32,282,023 | 7,415,849 | 35,945,925 | 18.5% | Portfolio Advisors |
| Vista Equity Partners Fund VII | Buyout | Large | 2018 | 40,000,000 | 5,506,729 | 32,091 | 5,229,328 | -17.3% | Portfolio Advisors |
| Vista Foundation Fund II | Buyout | Medium | 2013 | 10,000,000 | 8,678,860 | 5,809,970 | 10,329,518 | 17.1% | Hamilton Lane |
| Vista Foundation Fund III | Buyout | Medium | 2016 | 10,000,000 | 7,023,114 | 0 | 7,931,826 | 9.0% | Portfolio Advisors |
| Wynnchurch Capital Partners IV | Buyout | Medium | 2015 | 10,000,000 | 6,571,319 | 1,631,421 | 7,310,175 | 21.7% | Portfolio Advisors |
| Yucaipa American Alliance Fund II | Buyout | Medium | 2008 | 20,000,000 | 20,000,936 | 17,939,659 | 19,274,216 | 9.1% | Hamilton Lane |
| Total - Active | | | | 4,207,985,802 | 2,896,786,494 | 2,608,991,082 | 1,983,690,723 | 12.6% | |
| Total - Inactive | | | | 557,336,051 | 545,527,907 | 812,959,152 | | 10.2% | |
| Total – Core Portfolio | | | | 4,765,321,853 | 3,442,314,401 | 3,421,950,234 | 1,983,690,723 | 11.8% | |

CORE PORTFOLIO SUMMARY AS OF 6/30/2019 - LIQUIDATED



| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | Net IRR | Recommended by |
|--|-------------------|--------------|--------------|----------------|-----------------------|-----------------------|---------|----------------|
| Alchemy Plan (City of Angels) | Buyout | Medium | 1999 | 38,194,245 | 40,196,637 | 49,938,751 | 5.5% | Pathway |
| Avenue Europe Special Situations Fund II | Credit/Distressed | Distressed | 2011 | 28,323,908 | 28,305,005 | 32,200,618 | 3.5% | Hamilton Lane |
| Avenue Special Situations Fund IV | Credit/Distressed | Distressed | 2006 | 10,000,000 | 10,000,000 | 13,828,999 | 8.3% | Hamilton Lane |
| Avenue Special Situations Fund V | Credit/Distressed | Distressed | 2007 | 10,000,000 | 9,950,262 | 13,312,819 | 11.5% | Hamilton Lane |
| CGW Southeast Partners III | Buyout | Small | 1996 | 8,680,144 | 8,680,144 | 14,736,448 | 9.2% | Pathway |
| CGW Southeast Partners IV | Buyout | Medium | 1999 | 10,000,000 | 8,707,914 | 13,398,877 | 8.3% | Pathway |
| Chisholm Partners IV | Buyout | Small | 1999 | 9,000,000 | 8,841,055 | 9,376,669 | 0.7% | Pathway |
| CVC European Equity Partners | Buyout | Large | 1996 | 10,000,000 | 9,686,071 | 24,345,254 | 23.2% | Pathway |
| CVC European Equity Partners II | Buyout | Large | 1998 | 9,218,055 | 9,212,371 | 22,076,376 | 18.9% | Pathway |
| Enhanced Equity Fund | Buyout | Small | 2006 | 10,000,000 | 10,000,000 | 10,776,209 | 1.1% | Hamilton Lane |
| Enhanced Equity Fund II | Buyout | Small | 2010 | 10,000,000 | 9,570,165 | 5,253,831 | -21.7% | Hamilton Lane |
| Golder, Thoma, Cressey, Rauner Fund V | Buyout | Medium | 1997 | 10,000,000 | 10,000,000 | 18,226,074 | 11.0% | Pathway |
| GTCR Fund VI | Buyout | Medium | 1998 | 10,000,000 | 10,000,000 | 8,890,791 | -3.8% | Pathway |
| GTCR Fund VII | Buyout | Medium | 2000 | 18,750,000 | 18,609,375 | 43,841,047 | 21.8% | Pathway |
| GTCR Fund VII-A | Buyout | Medium | 2000 | 6,250,000 | 4,140,625 | 11,565,815 | 83.1% | Pathway |
| Hellman & Friedman Capital Partners V | Buyout | Large | 2004 | 10,463,972 | 9,931,388 | 26,659,657 | 27.8% | Pathway |
| Highbridge Principal Strategies Senior Loan II | Credit/Distressed | Distressed | 2010 | 50,000,000 | 40,883,273 | 47,651,965 | 7.9% | Pathway |
| InterWest VI | Venture Capital | Early Stage | 1996 | 5,000,000 | 5,000,000 | 14,858,749 | 49.0% | Pathway |
| J.H. Whitney IV | Buyout | Medium | 1999 | 22,448,463 | 22,448,463 | 9,422,111 | -10.9% | Pathway |
| J.H. Whitney V | Buyout | Medium | 2000 | 9,957,358 | 11,558,159 | 22,375,756 | 23.3% | Pathway |
| J.H. Whitney VI | Buyout | Medium | 2005 | 15,000,000 | 14,884,557 | 14,590,780 | -0.4% | Hamilton Lane |
| Kelso Investment Associates VI | Buyout | Medium | 1998 | 4,309,418 | 4,309,418 | 5,982,794 | 9.3% | Pathway |
| KKR 1996 Fund | Buyout | Large | 1997 | 25,000,000 | 26,194,438 | 46,838,314 | 13.2% | Pathway |
| Madison Dearborn Capital Partners III | Buyout | Medium | 1999 | 16,000,000 | 16,000,000 | 24,398,778 | 8.6% | Pathway |
| Menlo Ventures VII | Venture Capital | Multi-Stage | 1997 | 5,000,000 | 5,000,000 | 23,552,033 | 135.8% | Pathway |
| Menlo Ventures VIII | Venture Capital | Multi-Stage | 1999 | 18,000,000 | 18,000,000 | 8,980,234 | -8.9% | Pathway |
| OCM Opportunities Fund | Credit/Distressed | Distressed | 1995 | 11,000,000 | 10,972,896 | 18,030,431 | 10.3% | Pathway |
| OCM Opportunities Fund II | Credit/Distressed | Distressed | 1997 | 11,000,000 | 11,000,000 | 16,628,641 | 8.5% | Pathway |
| OCM Opportunities Fund III | Credit/Distressed | Distressed | 1999 | 10,000,000 | 10,000,000 | 15,071,474 | 11.9% | Pathway |
| OCM Opportunities Fund IV | Credit/Distressed | Distressed | 2001 | 10,000,000 | 10,000,000 | 16,503,319 | 28.4% | Pathway |
| Olympus Growth Fund IV | Buyout | Medium | 2003 | 7,700,000 | 7,660,045 | 11,831,606 | 8.5% | Pathway |

CORE PORTFOLIO SUMMARY AS OF 6/30/2019 - LIQUIDATED



| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | Net IRR | Recommended by |
|--------------------------------------|-----------------|---------------|--------------|----------------------|-----------------------|-----------------------|--------------|----------------|
| Richland Ventures III | Venture Capital | Late Stage | 1999 | 18,000,000 | 18,000,000 | 15,261,276 | -3.0% | Pathway |
| The Resolute Fund | Buyout | Medium | 2002 | 20,000,000 | 18,978,049 | 48,217,383 | 17.0% | Pathway |
| Thoma Cressey Fund VI | Buyout | Medium | 1998 | 5,000,000 | 4,845,000 | 4,995,064 | 0.4% | Pathway |
| Thomas H. Lee Equity Fund V | Buyout | Medium | 2000 | 15,000,000 | 15,260,867 | 26,333,190 | 14.2% | Pathway |
| Tibbar Holdings, LLC (FKA TH Lee IV) | Buyout | Medium | 1998 | 7,000,000 | 6,314,197 | 5,484,109 | -2.6% | Pathway |
| Welsh, Carson, Anderson & Stowe IX | Buyout | Medium | 2000 | 15,000,000 | 14,850,000 | 24,680,230 | 11.2% | Pathway |
| Welsh, Carson, Anderson & Stowe VII | Buyout | Medium | 1995 | 15,000,000 | 15,000,000 | 32,633,357 | 17.7% | Pathway |
| Welsh, Carson, Anderson & Stowe VIII | Buyout | Medium | 1998 | 15,000,000 | 15,000,000 | 19,322,526 | 3.1% | Pathway |
| Weston Presidio Capital IV | Growth Equity | Growth Equity | 2000 | 18,040,488 | 17,537,531 | 20,886,797 | 3.3% | Pathway |
| Total - Inactive | | | | 557,336,051 | 545,527,907 | 812,959,152 | 10.2% | |
| Total - Active | | | | 4,207,985,802 | 2,896,786,494 | 2,608,991,082 | 12.6% | |
| Total – Core Portfolio | | | | 4,765,321,853 | 3,442,314,401 | 3,421,950,234 | 11.8% | |

SPECIALIZED PORTFOLIO SUMMARY

AS OF 6/30/2019 - ACTIVE



| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | USD Fair Market Value | Net IRR | Recommended by |
|---|-------------------|---------------|--------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|----------------|
| Angeleno Investors III | Venture Capital | Late Stage | 2009 | 10,000,000 | 10,190,193 | 917,370 | 7,828,984 | -3.2% | PCA |
| Craton Equity Investors I | Growth Equity | Growth Equity | 2006 | 10,000,000 | 9,973,980 | 1,067,621 | 19,970 | -32.9% | PCA |
| DFJ Element | Venture Capital | Multi-Stage | 2006 | 8,000,000 | 7,846,106 | 3,032,976 | 2,215,706 | -4.7% | PCA |
| DFJ Frontier Fund II | Venture Capital | Early Stage | 2007 | 5,000,000 | 5,002,783 | 1,790,549 | 3,396,723 | 0.5% | PCA |
| Element Partners Fund II | Venture Capital | Late Stage | 2008 | 10,000,000 | 9,361,465 | 8,631,085 | 4,524,039 | 5.4% | PCA |
| NGEN Partners III | Venture Capital | Multi-Stage | 2008 | 10,000,000 | 10,877,467 | 2,485,621 | 7,504,743 | -1.4% | PCA |
| Palladium Equity Partners III | Buyout | Medium | 2004 | 10,000,000 | 9,898,432 | 17,260,905 | 515,884 | 11.2% | PCA |
| Rustic Canyon/Fontis Partners | Growth Equity | Growth Equity | 2005 | 5,000,000 | 3,671,248 | 1,927,182 | 805,916 | -4.3% | PCA |
| Saybrook Corporate Opportunity Fund | Credit/Distressed | Distressed | 2007 | 6,192,813 | 6,190,231 | 6,746,700 | 1,888,791 | 9.1% | PCA |
| St. Cloud Capital Partners II | Credit/Distressed | Mezzanine | 2007 | 5,000,000 | 4,989,085 | 4,177,572 | 118,889 | -3.5% | PCA |
| StarVest Partners II | Venture Capital | Late Stage | 2007 | 5,000,000 | 4,965,849 | 1,945,989 | 2,382,467 | -2.0% | PCA |
| Stepstone Pioneer Capital I | Other | Fund of Funds | 2004 | 10,000,000 | 9,751,911 | 13,033,244 | 331 | 5.1% | PCA |
| StepStone Pioneer Capital II | Other | Fund of Funds | 2006 | 10,000,000 | 9,427,148 | 15,859,255 | 2,419,146 | 9.2% | PCA |
| Sterling Venture Partners II | Venture Capital | Late Stage | 2005 | 8,000,000 | 8,006,256 | 8,357,525 | 2,084,559 | 3.9% | PCA |
| Vicente Capital Partners Growth Equity Fund | Growth Equity | Growth Equity | 2007 | 10,000,000 | 10,093,708 | 7,878,485 | 6,741,077 | 6.6% | PCA |
| Yucaipa American Alliance Fund I | Buyout | Medium | 2002 | 10,000,000 | 10,000,000 | 12,451,100 | 956,779 | 4.8% | PCA |
| Total - Active | | | | 132,192,813 | 130,245,860 | 107,563,178 | 43,404,004 | 2.5% | |
| Total - Inactive | | | | 59,068,854 | 57,749,082 | 61,009,185 | | 1.0% | |
| Total - Specialized Portfolio | | | | 191,261,667 | 187,994,942 | 168,572,363 | 43,404,004 | 2.1% | |

SPECIALIZED PORTFOLIO SUMMARY AS OF 6/30/2019 - LIQUIDATED



| Fund | Strategy | Sub-Strategy | Vintage Year | USD Commitment | USD ITD Contributions | USD ITD Distributions | Net IRR | Recommended by |
|--------------------------------------|-------------------|--------------|--------------|--------------------|-----------------------|-----------------------|-------------|----------------|
| Ares Special Situations Fund | Credit/Distressed | Distressed | 2008 | 10,000,000 | 10,166,166 | 17,497,244 | 13.1% | PCA |
| Carpenter Community BancFund-A | Buyout | Small | 2008 | 10,000,000 | 9,692,231 | 16,376,097 | 8.2% | PCA |
| NGEN Partners II | Venture Capital | Multi-Stage | 2005 | 7,750,702 | 7,750,702 | 515,126 | -49.0% | PCA |
| Nogales Investors Fund II | Buyout | Medium | 2006 | 4,100,000 | 3,603,436 | 398,586 | -24.1% | PCA |
| Reliant Equity Partners | Buyout | Small | 2002 | 7,920,417 | 8,008,449 | 55,772 | -100.0% | PCA |
| Sector Performance Fund | Buyout | Medium | 2007 | 9,297,735 | 9,502,443 | 8,466,553 | -2.9% | PCA |
| Spire Capital Partners II | Buyout | Small | 2007 | 10,000,000 | 9,025,654 | 17,699,807 | 15.6% | PCA |
| Total - Inactive | | | | 59,068,854 | 57,749,082 | 61,009,185 | 1.0% | |
| Total - Active | | | | 132,192,813 | 130,245,860 | 107,563,178 | 2.5% | |
| Total - Specialized Portfolio | | | | 191,261,667 | 187,994,942 | 168,572,363 | 2.1% | |



REPORT TO BOARD OF ADMINISTRATION

From: Investment Committee
Sung Won Sohn, Chair
Elizabeth Lee
Nilza R. Serrano

MEETING: DECEMBER 10, 2019
ITEM: IX – D

SUBJECT: PRIVATE EQUITY PROGRAM 2020 STRATEGIC PLAN AND POSSIBLE BOARD ACTION

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board adopt the Private Equity Program 2020 Strategic Plan.

Discussion

On November 12, 2019, the Committee considered the attached report regarding the Private Equity Program 2020 Strategic Plan. The Committee heard a presentation from David Fann, Jeffrey Goldberger, and Heidi Poon of TorreyCove Capital Partners LLC (TorreyCove), LACERS' Private Equity Consultant. The plan, developed by TorreyCove with input from staff, establishes strategic objectives and investment plan recommendations for the next calendar year. TorreyCove will be present at the Board meeting of December 10, 2019, should the Board desire to hear a presentation of the proposed plan.

Strategic Plan Impact Statement

The annual private equity strategic plan assists the Board in building a diversified private equity and total fund portfolio with an optimal long-term risk-adjusted return profile (Goal IV). Development and adoption of such a plan also promotes good governance practices (Goal V).

Prepared By: Wilkin Ly, Investment Officer III, Investment Division

RJ/BF/WL:sg

Attachment: 1. LACERS Private Equity Program 2020 Strategic Plan – TorreyCove Capital Partners LLC



CALIFORNIA

10180 Barnes Canyon Road
Suite 200
San Diego, CA 92121

MASSACHUSETTS

222 Rosewood Drive
3rd Floor
Danvers, MA 01923

LACERS Private Equity Program 2020 Strategic Plan

Agenda

- Overview of the Current Private Equity Market
- Private Equity Exposure
- Return Objectives and Drivers
- Strengths, Weaknesses, Opportunities, Threats
- 2019 and 2020 Goals and Objectives
- Rationale for Recommendations

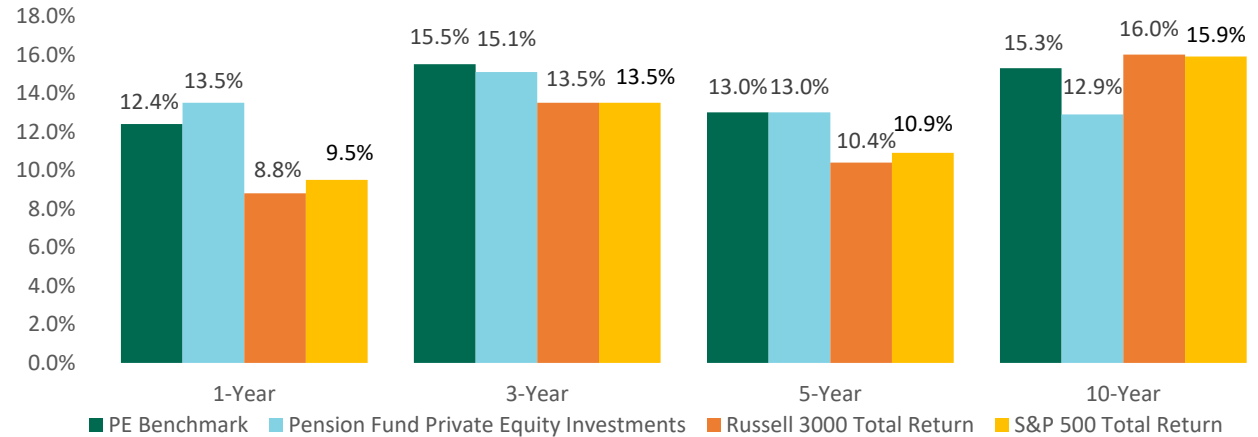
Private Equity - Benefits vs Public Markets

- No Public Market Pressures: Ability to take a longer-term focus, no quarterly earnings, fewer reporting and regulatory requirements.
- Larger Universe of Potential Investments⁽¹⁾: From 2006 to 2017, the number of U.S. publicly traded firms fell from ~5,100 to ~4,300.
 - The number of U.S. publicly traded firms has fallen by ~43% since 1996.
 - There were ~4,000 U.S.-based PE-backed companies in 2006. By 2017, that figure rose to ~8,000.
- Alignment of Interests: Large U.S. pensions typically have a greater alignment of interests with private equity fund managers, due to the amount of capital being invested. This degree of alignment is difficult to achieve in public equities.
- Returns Over Time Relative to Public Equities: While debate rages over the risk/reward profile of private equity, most investors agree that private equity has outperformed public equities over the long term.
- Ability to Better Tailor Exposures: Private equity offers the ability to tailor portfolio exposures by sector, company size, and strategy while maintaining appropriate diversification.
- Lower Volatility: Offers some value insulation in times of severe market corrections.

(1) McKinsey Global Private Markets Review 2019

- The American Investment Council reports that private equity has been the best returning asset class for public pensions.

Private Equity Returns - Public Pensions (as of March 31, 2019)

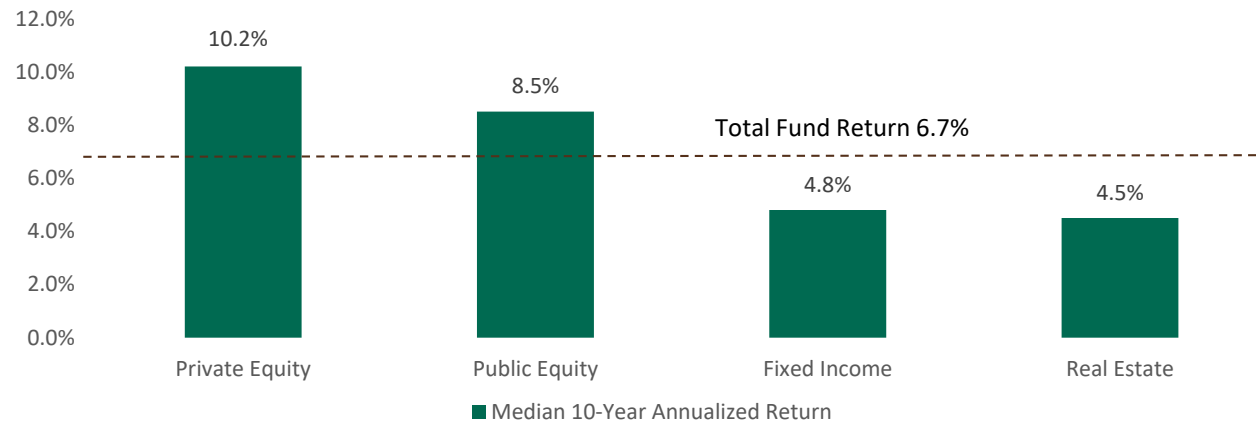


American Investment Council

Note: PE Benchmark represents the median return across 4 industry benchmarks (Cambridge, Cepres, ILPA, and State Street), excluding VC.

Note: Pension Fund returns represent the median return of U.S. pension fund private equity investments.

Median 10-Year Annualized Return for Public Pensions (as of June 30, 2018)



American Investment Council – Pension Funds with Returns as of June 30, 2018

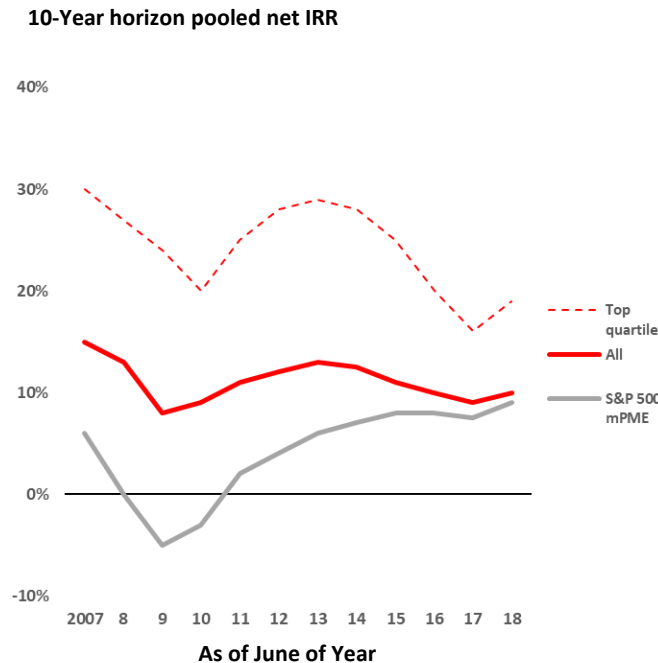
- Private Equity returns have, on average, performed well compared with public equities over time.
- But manager selection remains a key element in ensuring outperformance in a private equity portfolio.

“If private equity has demonstrated anything over the past several years, it’s that the asset class produces steadier, more reliable returns than public equities. After a period of heavy stock market volatility around the world, buyout funds have continued to outperform public equity markets in all major regions, over both short and long time horizons.”

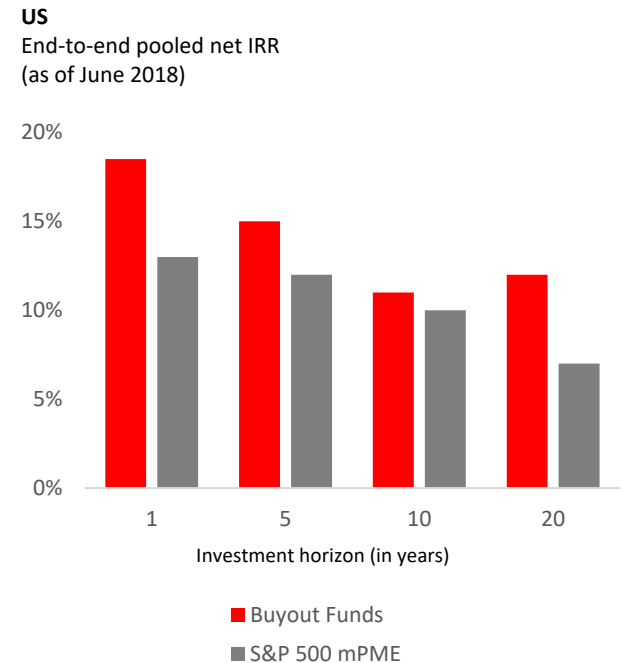
- Bain & Company: Global Private Equity Report 2019

“While average industry returns have declined, it is important to recognize that top-performing funds still exceed the average by a relatively wide margin. Moreover, private equity has demonstrated an unusual persistence of performance, as measured by the likelihood of successor funds to deliver the same quartile performance as their predecessors.”

- Bain & Company: Global Private Equity Report 2019



*Bain & Company: Global Private Equity Report 2019

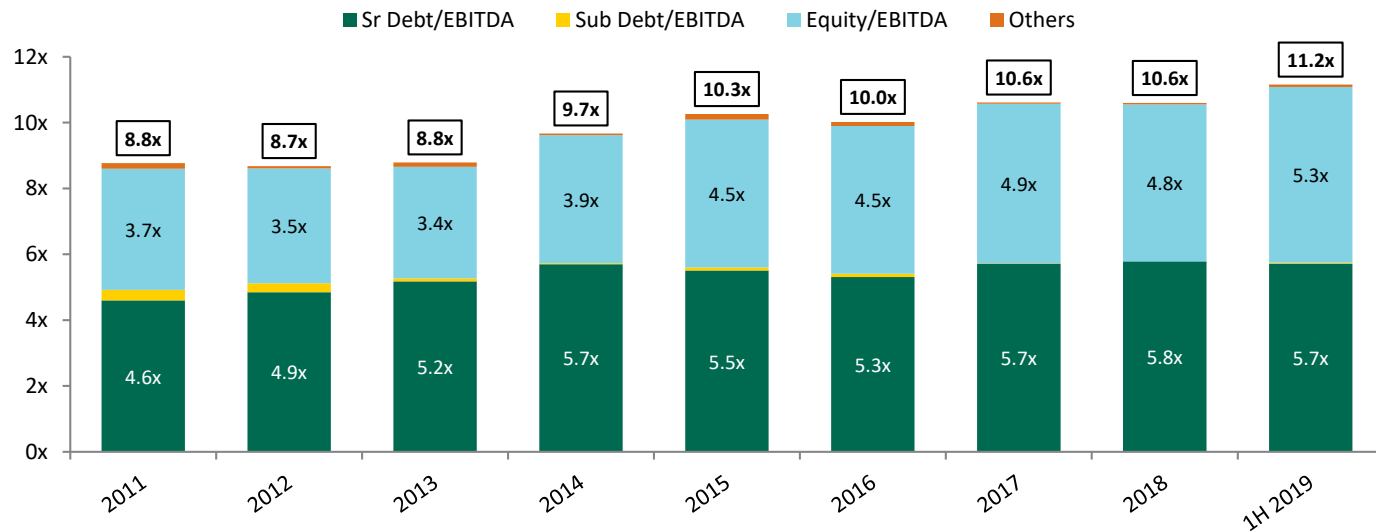


*Bain & Company: Global Private Equity Report 2019

There are a number of signals that point to an overheated private equity market today.

- High Prices: Leverage levels have reached all time highs in private equity. Transactions at purchase multiples above 11x EBITDA are not uncommon today.
 - Competition, ample funding, and robust public markets have driven up prices across the private equity industry.

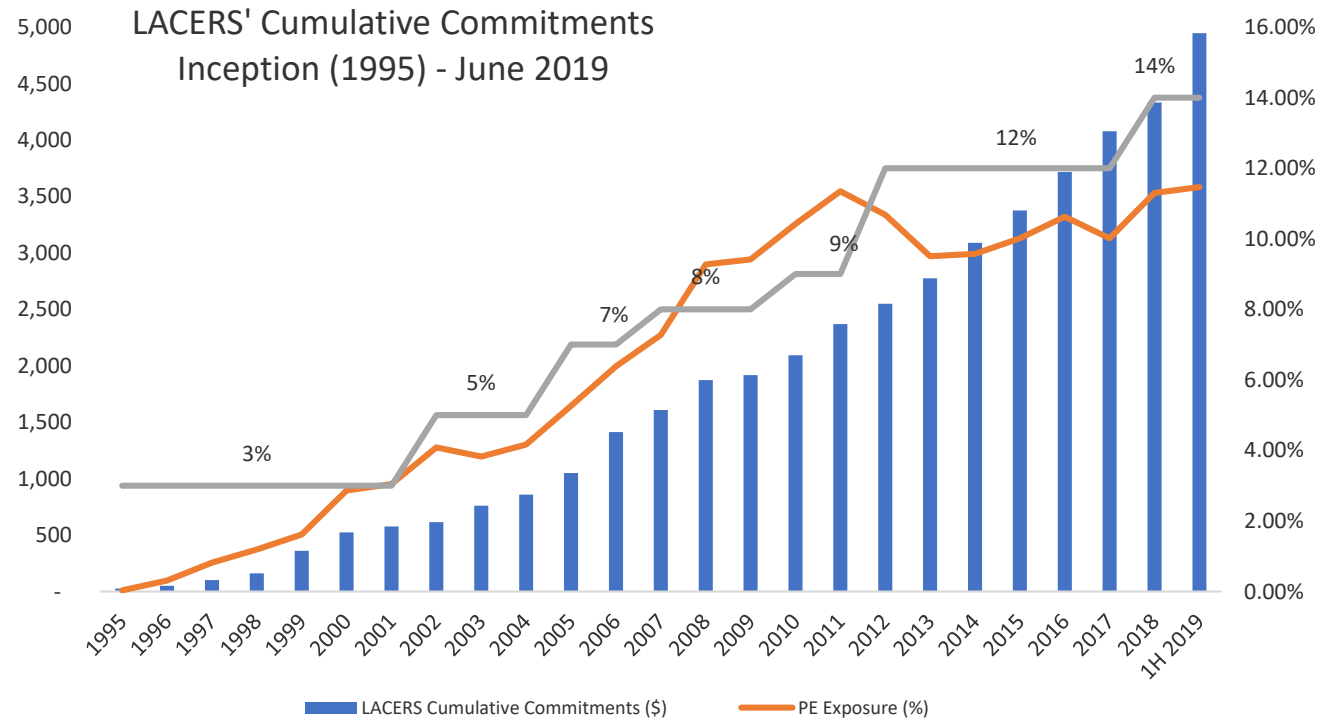
- High Levels and Availability of Leverage: Leverage levels have reached all time highs in private equity. Buyout transactions with 5-6x leverage are not uncommon today.
 - Pricing and covenant light mentality have been favorable to private equity.
 - Banks remain relatively healthy today.
 - Non-traditional lending sources have become a bigger share of the pie.



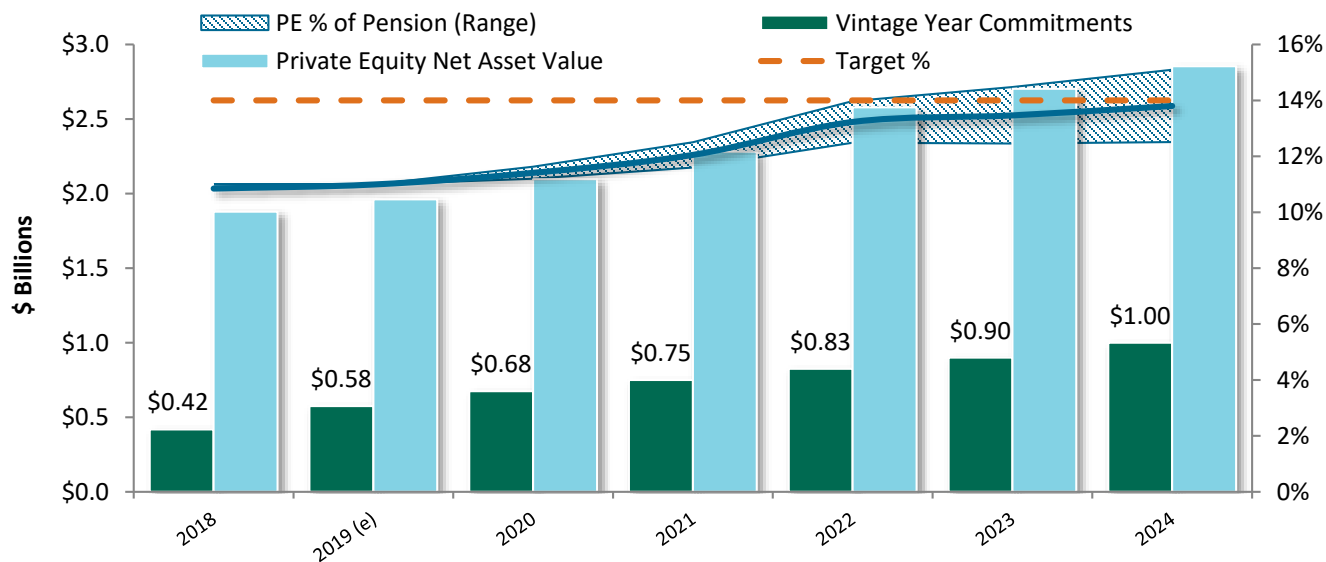
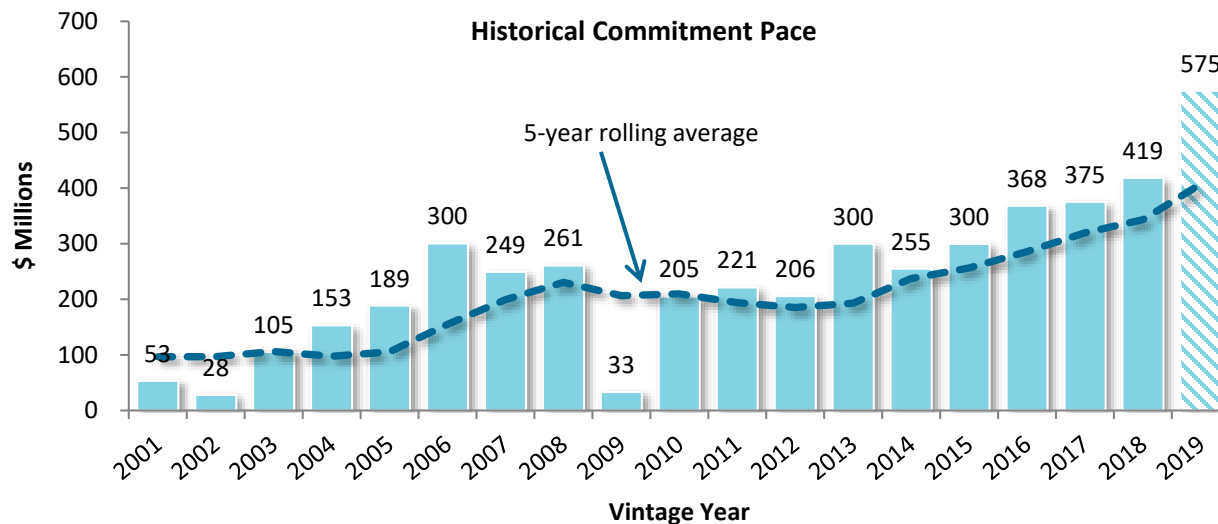
Source: S&P

- At the current target of 14.0%, the desired exposure to private equity is ~\$2.5 billion.

- ❖ Since Inception, LACERS has committed more than \$4.9 billion to private equity.
- ❖ As of June 30, 2019, the Private Equity Program had a Fair Market Value of \$2.0 billion, approximately 11.5% of total Plan Assets.



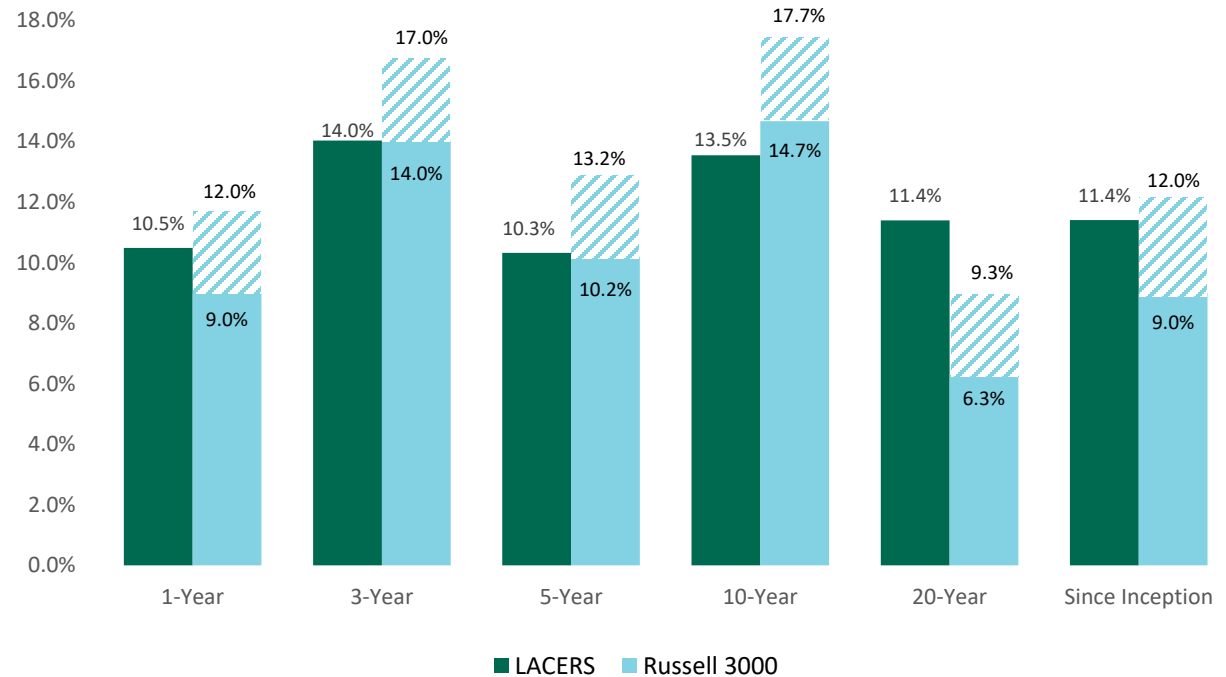
- LACERS commitments over the last 10 years have varied from a low of \$33 million in 2009 to a high of \$419 million in 2018.
- Preliminary commitment plan of \$625 - \$675 million proposed for 2020.



- Over the long term, LACERS' PE program has generated a net IRR of 11.4%.
- Over shorter time periods, net IRRs for the portfolio have fluctuated between 10.3% and 14.0%

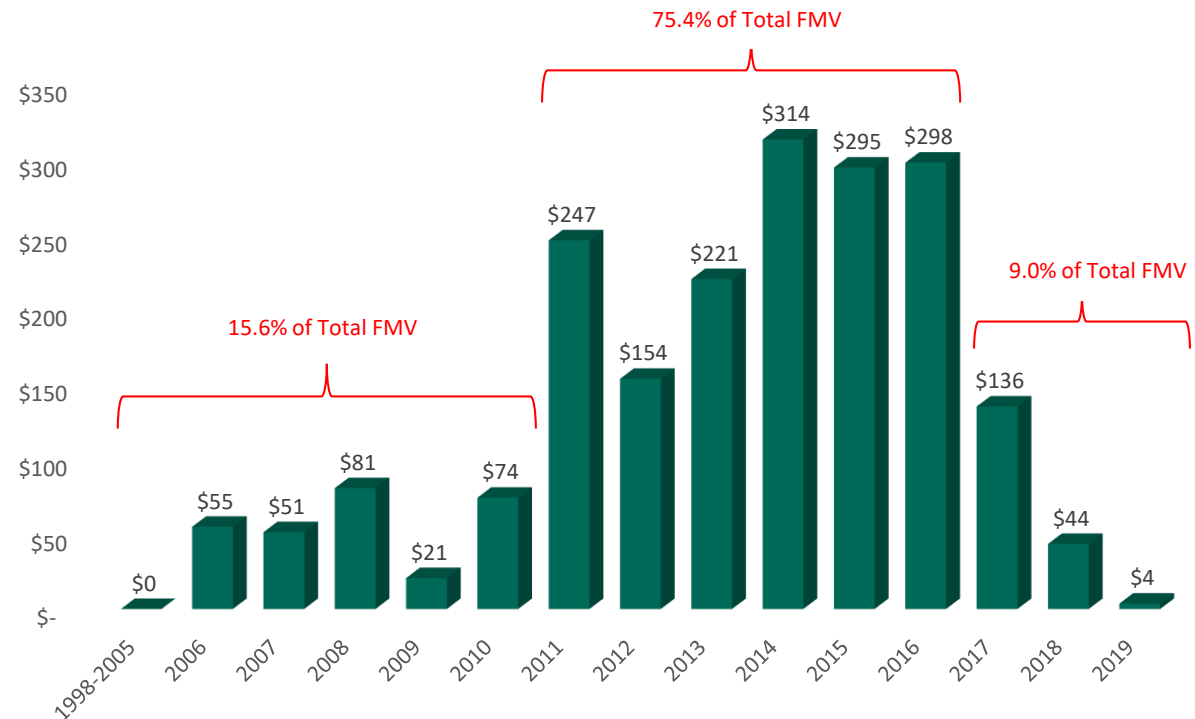
PE Program Objective

Earn 300bps Premium Over the Russell 3000 Over the Long Term



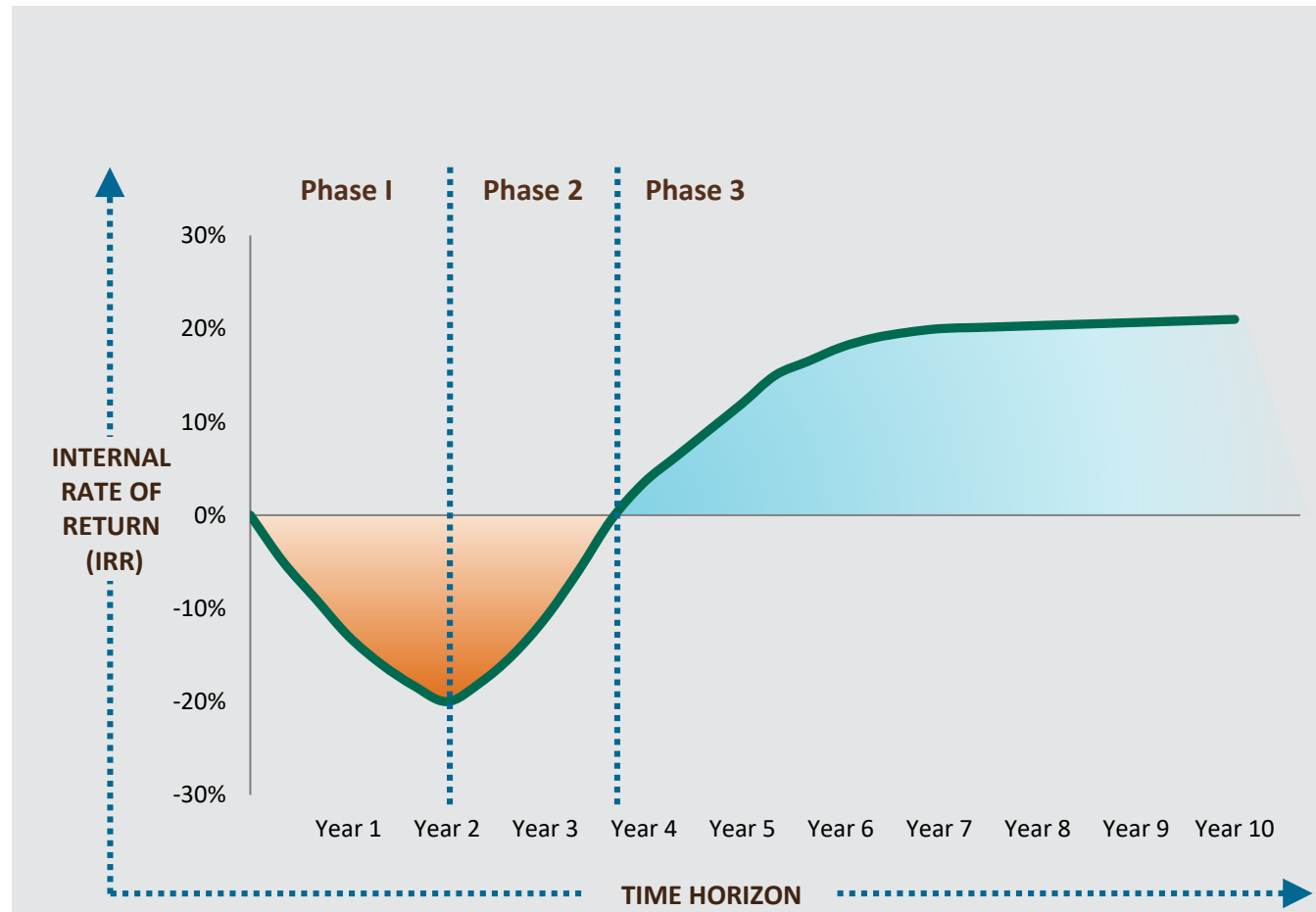
Fair Market Value of LACERS' PE Portfolio By Vintage Year – as of 6/30/19

- The majority of the FMV in LACERS' PE program is from investments with Vintage Years between 2011 and 2016.
- Capital from the commitments made in 2018 and 2019 represent a very small portion of FMV today and will have their maximum impact on the portfolio in 4 – 8 years.



- Generally, private equity funds less than three years old tend to have low or negative returns because management fees are charged from inception while growth in value occurs over a number of years.
- Early negative returns are not predictive of the ultimate fund performance as growth in value over time typically offsets fees and generates investor profits.

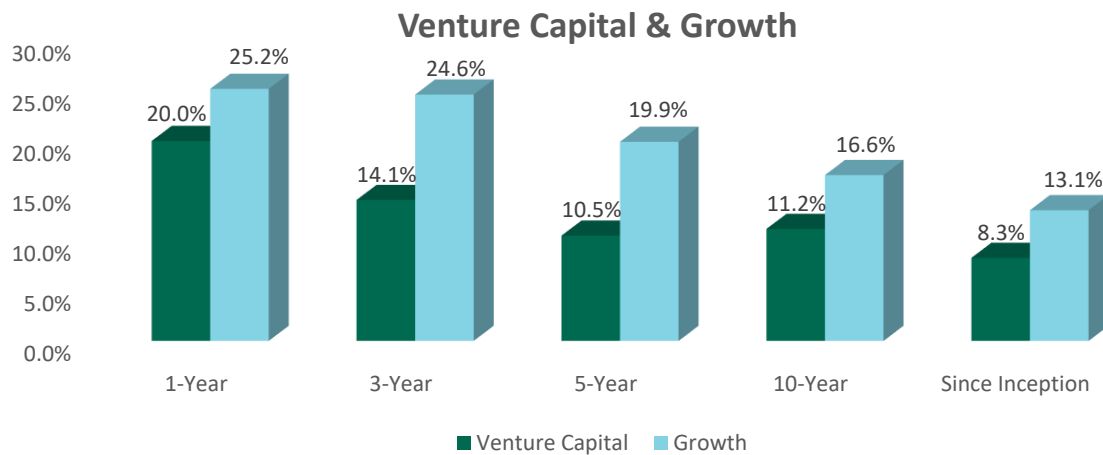
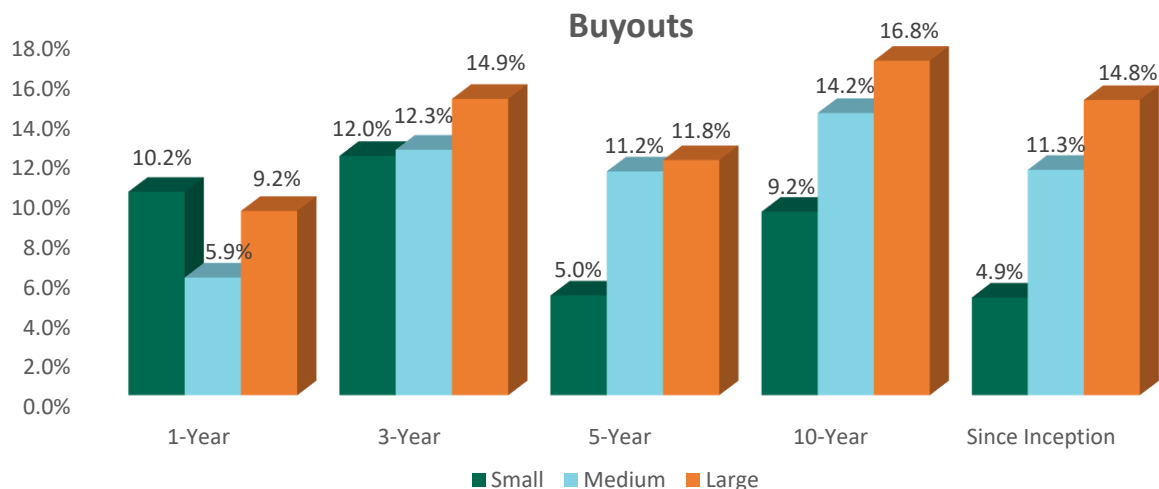
2018 / 2019 Investments Have Limited or Negative Impact on Returns Due to the J-Curve



- The Buyouts Sub-Sector represents 60.7% of total commitments made by LACERS and 52.4% of FMV as of June 30, 2019.
- The Venture Capital and Growth Sub-Sectors represent 20.0% of total commitments made by LACERS and 30.7% of FMV as of June 30, 2019.

Sub-Asset Class Objective

Generate Top Quartile Returns Across Sub-Asset Classes (vs Relevant Indices)

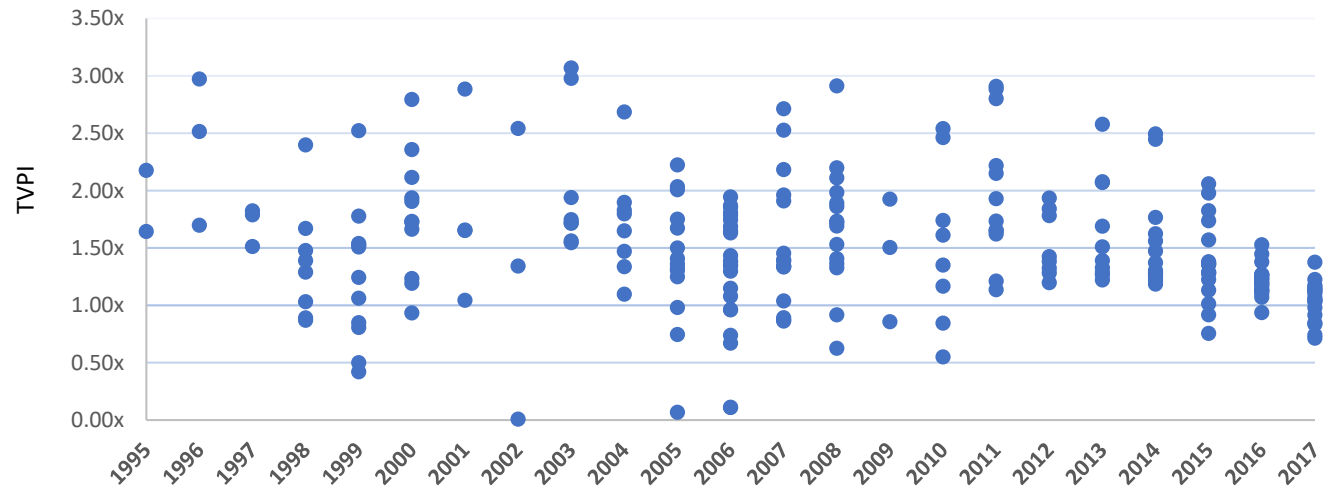


- More than half of LACERS' historical commitments – by fund count and committed capital – have gone to fund's that have generated net IRRs below 12.0%.

LACERS' PE Portfolio - Dispersion of Returns

| Net IRR | Number of Funds | Committed Capital | Contributed Capital | Distributed Capital | Market Value | TVPI |
|-------------------|-----------------|-------------------|---------------------|---------------------|------------------|--------------|
| > 20.0% IRR | 44 | \$711.8 | \$608.3 | \$850.9 | \$490.6 | 2.21x |
| 16.0% - 20.0% IRR | 25 | \$494.0 | \$448.5 | \$503.3 | \$361.7 | 1.93x |
| 12.0% - 16.0% IRR | 37 | \$717.7 | \$637.5 | \$614.4 | \$414.6 | 1.61x |
| Sub-Total | 106 | \$1,923.5 | \$1,694.3 | \$1,968.6 | \$1,266.9 | 1.91x |
| 8.0% - 12.0% IRR | 51 | \$876.0 | \$811.5 | \$764.4 | \$403.1 | 1.44x |
| 0.0% - 8.0% IRR | 47 | \$753.9 | \$696.5 | \$663.5 | \$224.9 | 1.28x |
| < 0.0% IRR | 34 | \$524.4 | \$378.8 | \$193.9 | \$85.3 | 0.74x |
| Sub-Total | 132 | \$2,154.3 | \$1,886.8 | \$1,621.8 | \$713.3 | 1.24x |

*Excludes funds with 2018 and 2019 VY funds because they are too early to be meaningful.



*Excludes funds with 2018 and 2019 VY funds because they are too early to be meaningful.

❖ LACERS PE Program – Strengths

- Positive investment returns in select sub-asset classes
 - Large and Medium Buyouts have performed well over time for LACERS
 - Growth Equity has performed well over time for LACERS
- Reputation of LACERS
 - Ability to deploy sizable commitments - up to \$50mm for new and \$100mm for follow-ons
 - Engaged LACERS professional staff
 - Long term investor
- Strong relationships with a number of high-quality GPs
- Ability to focus on a limited and select number of commitments per year
- Significant amount of dry powder to allow for investing even in a market downturn
- Ability to invest selectively in Emerging Managers



❖ LACERS PE Program – Weaknesses

- Underwhelming investment returns in select sub-asset classes
 - Small Buyouts have underperformed for LACERS over time
 - Over the longer term, Venture Capital investments have underperformed
- Inconsistent manager selection over time
 - Negatively impacted performance and led to a significant number of non-core managers
- Overly diversified portfolio has led to reversion to the mean
- The legacy portfolio will continue to be a drag on performance, including Specialized Carve Out Program
- There are limited options for materially impacting returns in the near term
 - Current policy allows for a secondary portfolio sale; however, the mechanism for implementation is still being developed
 - Current policy allows for direct co-investments; however, the mechanism for implementation is still being developed

❖ LACERS PE Program – Opportunities

- Co-Investments: The co-investment market has matured significantly over the last decade
 - The number of firms offering co-investment has increased significantly
 - The ability for LPs to average down fees has driven demand and usage
- Secondaries: The secondary market has matured significantly over the last decade
 - The ability to sell portfolios on the secondary market has increased significantly
 - Discount rates have fallen dramatically
 - The ability to purchase individual positions on the secondary market have increased significantly
- Increase International Exposure: Investing internationally can increase diversification in the portfolio without sacrificing returns, pushing the portfolio further out on the efficient frontier
 - Europe and Asia have large economies with hundreds of million of consumers
 - Europe and Asia offer relatively deep and mature private equity markets
- Consolidate Capital with Best Performing Managers: LACERS is a sought-after Limited Partner that has the ability to put meaningful dollars to work with best performing managers
- Emerging Managers: Today's emerging managers may very well be the new generation of top-tier performers. The ability to invest in these managers early on in their life will help with long-term access to the outperforming emerging managers

❖ LACERS PE Program – Threats

- Pricing Levels Across the Industry
 - Entry Multiples in 2018 recently surpassed 2007 highs
- Leverage Levels Across the Buyout Sub-Sector
 - Leverage Levels in 2018 recently surpassed 2007 highs
 - Covenant light loans are the norm again
- Potential for a Market Correction
- Demand for private equity co-investment vastly outstrips opportunities provided by GPs
 - Flexibility and first mover advantage rewarded in co-investing
- AB2833 reporting may be disagreeable to certain top-quartile General Partners
 - Potentially a bigger issue in Venture Capital vs Buyouts sub-sector

❖ Pacing Recommendations

- Commitment plan of \$625 - \$675 million proposed for 2020.
- 10 -14 commitments with a target size of \$40 - \$60 million per commitment.
 - Long term goal of making \$50 - \$100 million per commitment.

❖ Long Term Investment Recommendations

- Develop a framework for the implementation of a co-investment program – from both from an investment and policy perspective.
- Develop a framework for a potential Secondary sale – from both from an investment and policy perspective.

❖ Tactical Investment Recommendations

- Selectively add exposure internationally – primarily to Europe and Asia.
- Increase exposure to Buyouts relative to other sub-asset classes and decrease Venture Capital exposure.
- Consolidate commitments with top performing managers.
- Continue to manage underlying sector exposures.
- Add exposure to strategies designed to outperform in down markets – i.e. Value-Oriented Managers, Turnaround Managers, Distressed Managers.

THE FINANCIAL BENEFITS OF CO-INVESTMENTS

Illustrative example

| | FUND INVESTMENT | CO- INVESTMENT |
|--|--------------------|-------------------|
| Committed Capital (fund)/Invested Capital (co-investments) | \$ 100.0 | \$ 100.0 |
| Management Fees: 1.5% per year for five years | (7.5) | 0.0 |
| Capital for Investment | \$ 92.5 | \$ 100.0 |
| Gross Return: 2.0x invested capital | \$ 185.0 | \$ 200.0 |
| Carried interest (20% of profits after repayment of all contributed capital) | (17.0) | 0.0 |
| Cash returned from investment | \$ 168.0 | \$ 200.0 |

Total Gain

\$ 68.0 \$ 100.0

| | ① Comingled Co-Investment Funds | ② SMA Co-investment Vehicle | ③ Consultant Approach: Full Underwriting | ④ Consultant Approach: Abbreviated Diligence | ⑤ In-House Approach |
|--|---|---|--|--|---|
| Examples / Description: | Neuberger Berman, HarbourVest, AlpInvest, Adams Street, Abbott, Pantheon, Brooke, Pathway, Hamilton Lane, Franklin Park, Grovenor, Capital Dynamics, Constitution Capital, GoldPoint, RCP, Black Rock, Private Advisors | Many of the comingled fund providers offer SMAs above a certain commitment threshold (typically >\$100M) | <ul style="list-style-type: none"> - Deal flow generated from Clients current GPs and potential future GPs - Each deal thoroughly evaluated on its merits based on information provided by the GP - Consultant provides a full diligence report and a formal IC recommendation | <ul style="list-style-type: none"> - Deal flow generated from a select group of Client's current GPs only - Pre-established investment parameters are verified - All deals that meet specified parameters are executed - Consultant provides summary investment report | <ul style="list-style-type: none"> - Develop internal program with dedicated staff resources to source and evaluate co-investments |
| Key Benefits | <ul style="list-style-type: none"> - Few LP resource requirements - More diversified - Can commit set amount of capital | <ul style="list-style-type: none"> - Tailored to Client's specifications - Typically includes a veto right - Single fund structure, with LPA customized to Client's requirements | <ul style="list-style-type: none"> - Staff evaluates each opportunity, assisted by Consultant - No Mgmt. Fee - Consultants interest are directly aligned with Client | <ul style="list-style-type: none"> - This strategy focuses on a core group of Client's high conviction managers that have been re-underwritten within last few years - Effectively gains additional exposure to deals already in Client's portfolio, at the lowest price point | <ul style="list-style-type: none"> - Control over process and decisions - Dedicated staff - May attract and incentivize staff |
| Key Drawbacks | <ul style="list-style-type: none"> - Change in LACERS' PE Policy Required - Additional layer of fees - Risk of allocation issues and adverse selection | <ul style="list-style-type: none"> - Change in LACERS' PE Policy Required - Additional layer of fees - Size requirements | <ul style="list-style-type: none"> - Change in LACERS' PE Policy Required - Client resource requirements (more opportunities to review) - Different type of review (direct investments vs. funds) - Fewer deals than a comingled vehicle, however, more control over the diversification | <ul style="list-style-type: none"> - Change in LACERS' PE Policy Required - Relying primarily on the initial fund-level diligence; no 'second layer' of due diligence | <ul style="list-style-type: none"> - Change in LACERS' PE Policy Required - Significant resources required to develop internal processes, policies, and controls - Added expense of a dedicated team |
| Discretion: | Co-Inv Fund GP | SMA Fund GP (some provide veto right) | Client | Consultant w/ Client Veto Right | Client |
| Annual Mgmt. Fee (%) | 1.00% | 0.85% | 0.00% | 0.00% | 0% |
| Annual Mgmt. Fee (\$): \$20M Invested Capital | \$200,000 | \$170,000 | \$0 | \$0 | \$0 |
| Carried Interest: (Over 8% Pref. Return) | 10% | 10% | 10% | 5% | 0% |

The firms identified will not necessarily provide co-investments or be recommended to TorreyCove clients in the future. Any recommendation to invest in a private equity partnership is subject to the sole discretion of TorreyCove.

- Secondary transactions can be mutually beneficial for both sellers and buyers.

Why Limited Partners Sell Their Fund Interests

Manage Portfolio Exposure Proactively

- Realign sub-asset class exposure
- Realign underlying geographic or industry exposure
- Reduce vintage year risk
- Proactively manage exposure to regulatory, strategic or other unexpected changes

Refocus on Best GPs

- Increase exposure to core relationships
- Exit poorly performing managers

Lock In Returns

- Capture returns achieved through existing portfolios
- Redeploy capital into more productive assets

Increase Liquidity

- Immediate liquidity rather than orderly sell down of portfolio

Reduce Administrative Burden

- Reduce the number of GP relationships that must be managed

- For many limited partners, the benefits of a secondary sale outweigh the costs associated with the transaction.

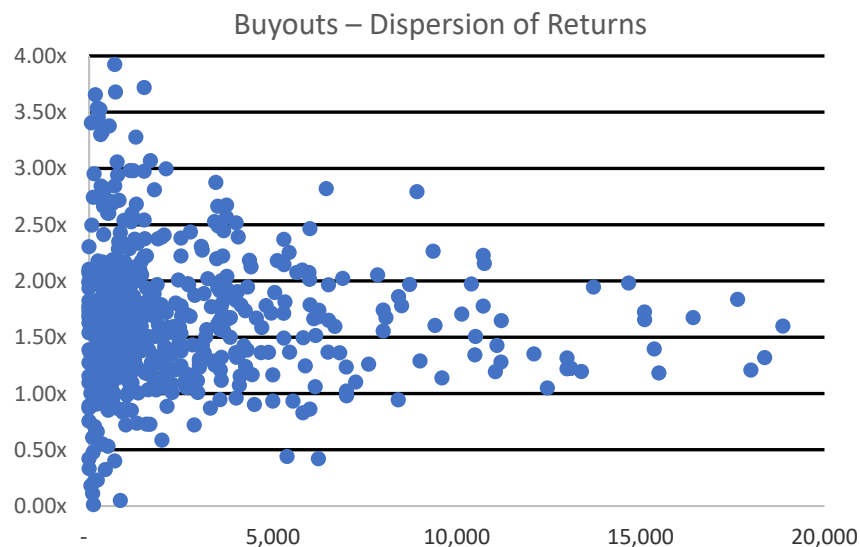
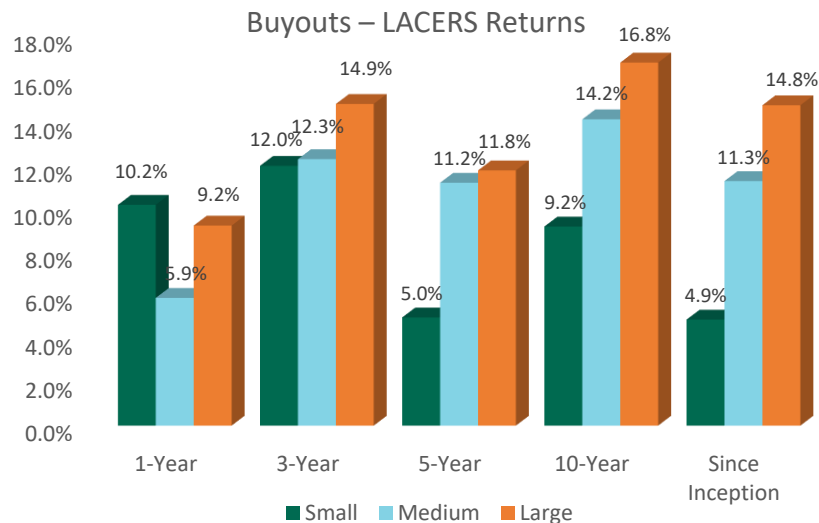
General Considerations and Costs of a Secondary Sale

Benefits

- Secondary sales are a useful tool to rebalance exposures and optimize the portfolio from a Return on Equity (“ROE”) standpoint.
 - The ROE is not static over the life of a private equity fund.
 - An optimal portfolio reduces exposure to low ROE opportunities and increases exposure to higher ROE opportunities (considering risk related to ROE as well).
 - Even successful investments, as measured by IRR, can be strong candidates for sale consideration if their recent incremental return is not satisfactory.
- Portfolio sales are a useful tool to manage legacy relationships in an effort to manage staff’s time and resources.

Costs

- The transaction will require a significant time commitment from staff and the process can last for several months. The board needs to review and approve the sale process, which will add on to the time commitment.
- The eventual sale price will likely be at a discount to recent fair market value.
- Secondary sales usually involve an intermediary to help market the portfolio and coordinate the transaction and these services have a fee related to them.

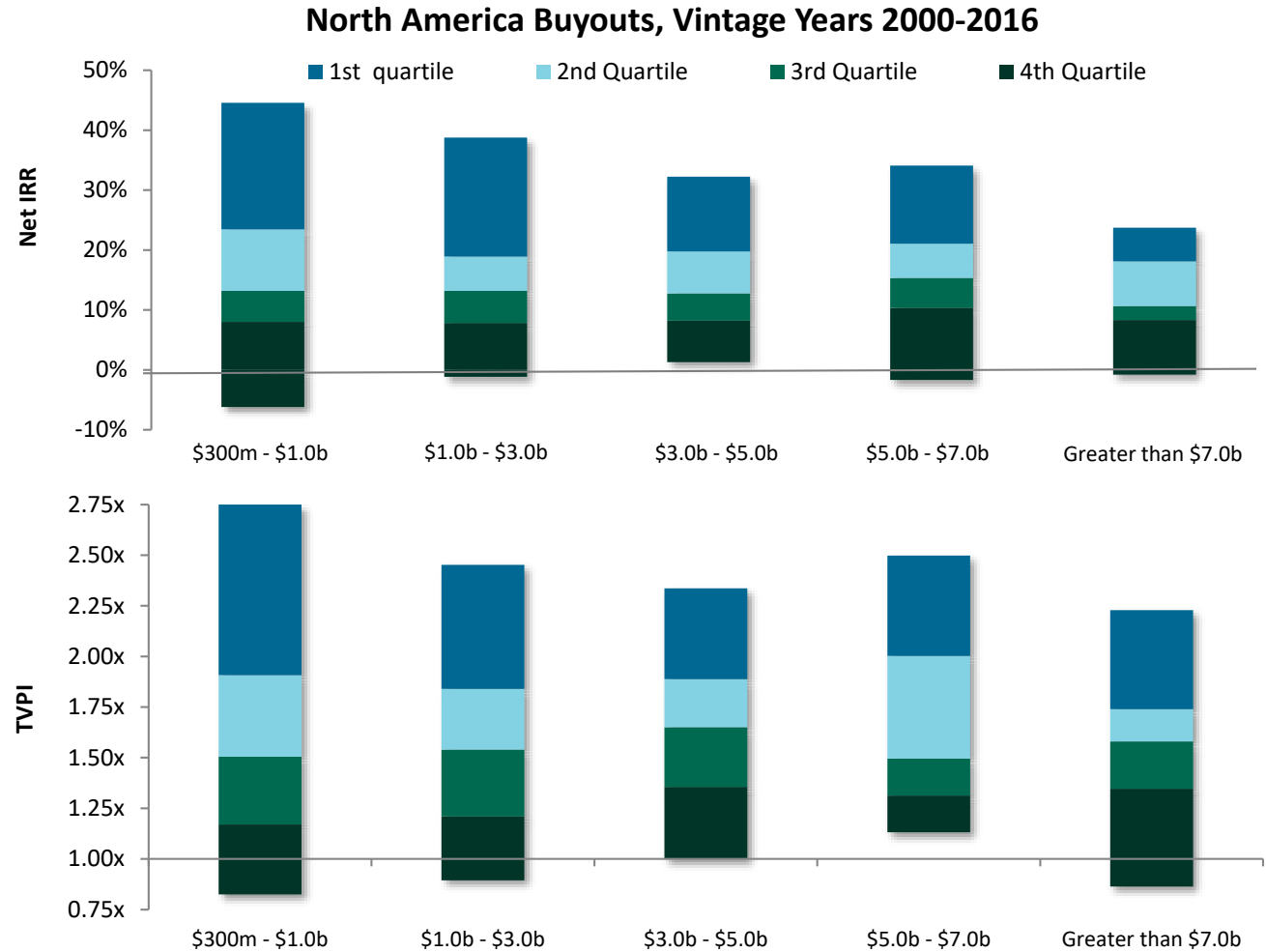


*TorreyCove research

❖ Buyouts – Rationale for Overweight vs Other Sub-Asset Classes

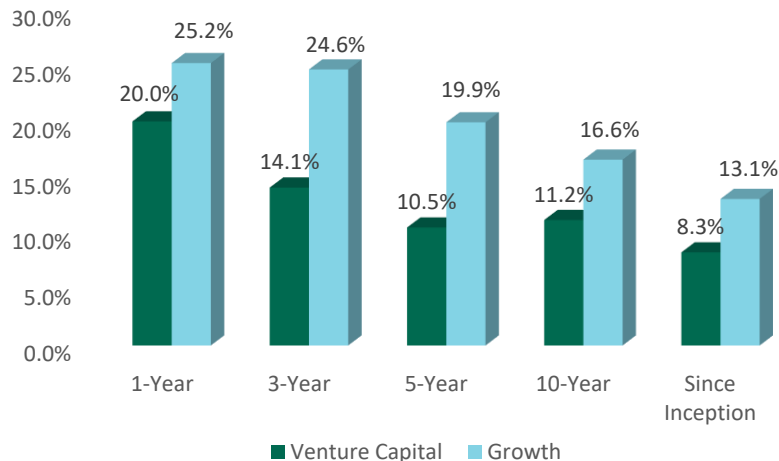
- **Control:** (i) ability to change senior management quickly and efficiently if needed; (ii) ability to control the cash flows of the business; (iii) ability to monetize the investment efficiently at the time of choosing; (iv) ability to pursue M&A transactions more efficiently.
- **Ability to Access Top Managers at Scale:** Leading buyout managers typically raise multi-billion dollar funds, which allows larger investors the ability to put meaningful capital to work.
- **Competition for Capabilities:** GPs are constantly competing with each other to hire the best talent, create the most robust platform, and generate the best risk adjusted returns.
 - 25 largest GPs all have dedicated operating teams, and most plan to expand them.⁽¹⁾
 - Leading firms have pioneered several digital techniques to drive greater efficiencies in deal sourcing, due diligence, and post-investment management.⁽¹⁾
- **Cycle Risk:** Some of the best returns to buyout funds have come from vintages raised when public markets were at their peak, because those commitments were put to work during the ensuing downturn.

- Generally speaking, a lower dispersion of returns appears to be somewhat correlated with fund size.
- Funds sized between \$3.0 billion and \$7.0 billion appear to have the best risk/reward profile, with limited downside and compelling upside potential.

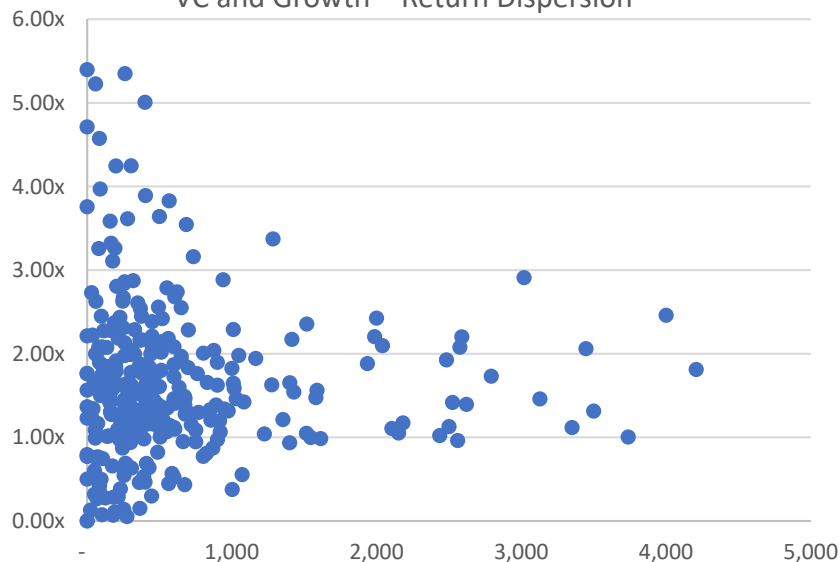


*TorreyCove Research

Venture Capital & Growth



VC and Growth – Return Dispersion

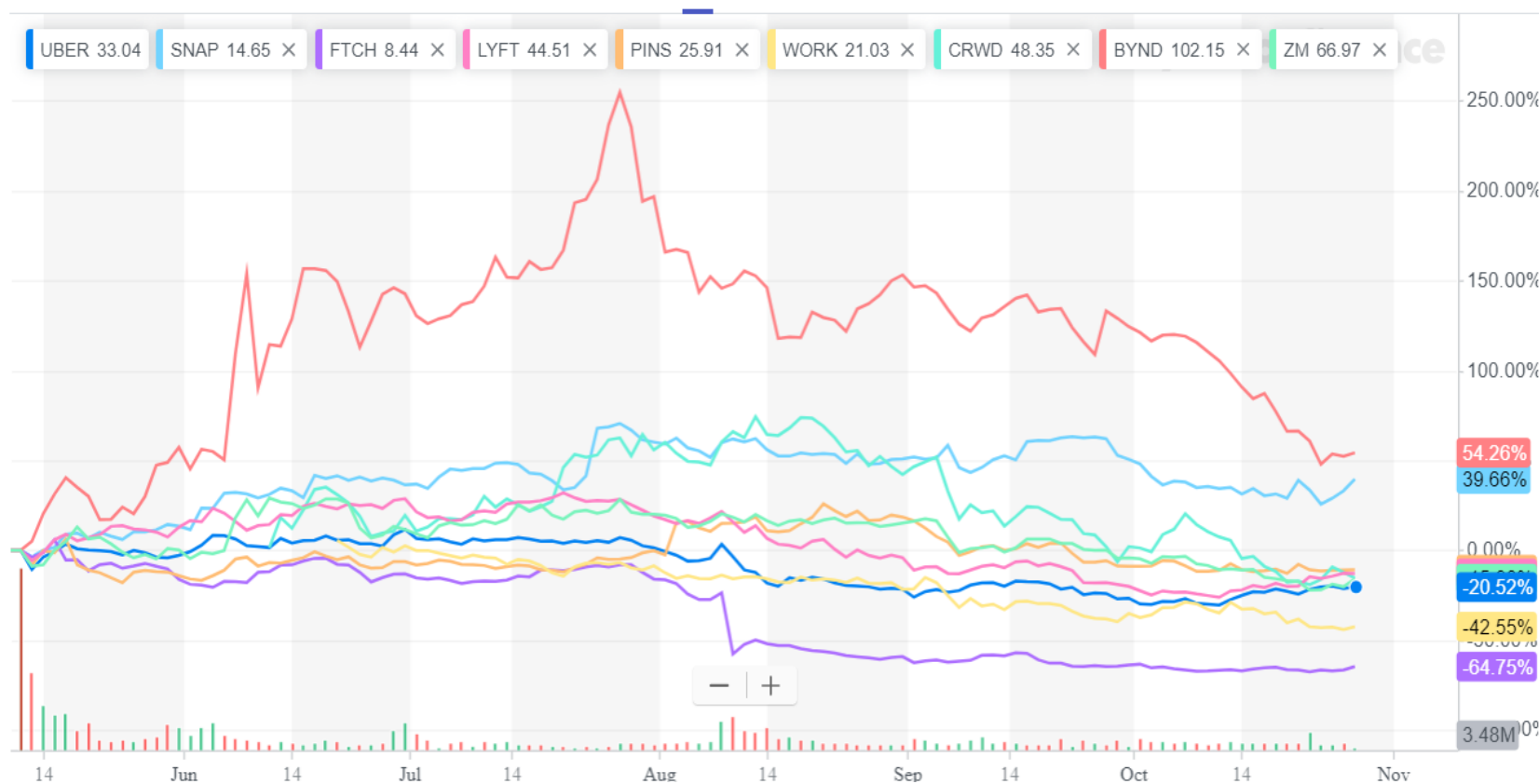


*TorreyCove research

❖ Venture – Rationale for Underweight vs Other Sub-Asset Classes

- Dispersion of Returns: “As measured by pooled returns, VC outperformed buyouts in every vintage from 2005 to 2015, though pooled returns are disproportionately affected by a few stellar deals. At the same time, the wider dispersion within VC means that the median VC fund has underperformed the median buyout fund in almost every vintage since 2005.”
--- *McKinsey Global Private Markets Review 2019*
- Difficult to Access Best in Class Managers: “Persistence of outperformance has long been observed in VC: top funds tend to beget top performing successors, due to privileged deal flow and years of experience picking and growing winners. As a consequence, accessing the best ‘brand-name’ funds has long been challenging.”
--- *McKinsey Global Private Markets Review 2019*
- Industry Growth: Over the past five years, VC fundraising has grown at 18 percent per annum, versus just 4 percent for buyouts. Since 2010, over 2,000 new VC firms have been founded. To put this into context, in 2010 there were only about 800 managers in the entire VC industry.
--- *McKinsey Global Private Markets Review 2019*
- Cycle Risk: The run-up in valuations for many venture backed companies over the last ten years is likely unsustainable. Furthermore, most investors believe we are nearing the end of a long-term bull market. Adding exposure at these elevated valuations at this point in the cycle should be done cautiously.

Recent IPOs of venture backed companies have been disappointing. This has led many investors to question the lofty valuations of late-stage private companies ahead of their public debuts.



- Europe and Asia offer the most compelling opportunities to invest in private equity outside of the U.S.

There are a number of benefits to investing in private equity internationally.

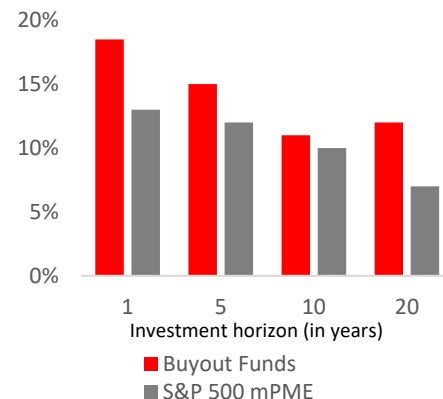
Diversification

- Investing internationally can increase diversification in the portfolio without sacrificing returns, pushing the portfolio further out on the efficient frontier.
 - Different regions appear to be at different points in their cycles
 - Europe appears to be in the early stages of a slowdown
 - Asia still poised to offer outsized growth compared to both Europe and the U.S.

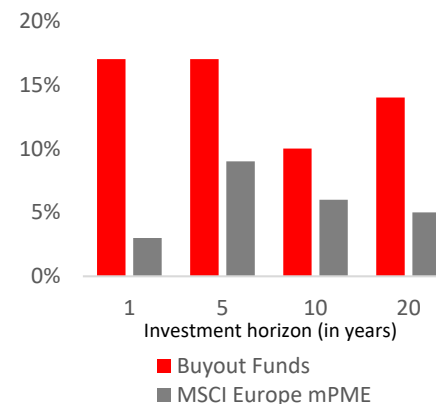
Potential for Return Enhancement

- Generally speaking, returns in European private equity have been on par with returns in the U.S.
 - Western European funds were on top with an IRR of 14.32% since 1991, compared with 12.17% for U.S. funds. That equates to an overall return of 1.68x for Western European funds, vs. 1.56x for U.S. funds.
 - *PI Online (May 2018 Article)*
 - The most recent five-year net internal rate of return for private equity investments was 12.5% in developed Europe, vs. 11.6% for the U.S. The gap was even wider for the 15-year horizon.
 - *Forbes (March 2017 Article)*

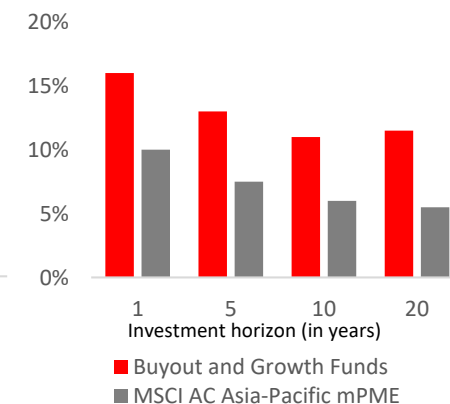
US
End-to-end pooled net IRR
(as of June 2018)



Europe
End-to-end pooled net IRR
(as of June 2018)



Asia-Pacific
End-to-end pooled net IRR
(as of June 2018)



❖ Emerging Manager Goals and Objectives

- Continue to aggressively and proactively source potential Emerging Manager candidates.
- Continue to support the Emerging Manager Community through conference participation, fundraising support, and networking.
- Focus on investing with firms that have prior experience and a proven track record of success.
- Themes: First- and Second-time funds, diversity, inclusion.

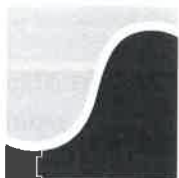
❖ Emerging Manager Policy - Strengths

- Ability to invest meaningful amounts of capital in first- and second-time funds.

❖ Emerging Manager Policy - Weaknesses

- LACERS PE Policy Limits Emerging Managers to AUM of \$1.0 billion
 - First time funds over \$1.0 billion were raised fairly often in North America and Europe before the global financial crisis (including 10 between 2004–07) but almost entirely disappeared after 2009.⁽¹⁾
 - They have now returned, with 7 First Time Funds raising \$1.0 billion+ in North America and Europe since 2015.⁽¹⁾
 - Even if the first-time fund is less than \$1.0 billion, successful first-time funds have a much better chance of raising over \$1.0 billion for their second funds.
 - These limitations may cause adverse selection over time.

(1) Bain & Company: Global Private Equity Report 2019



REPORT TO BOARD OF ADMINISTRATION

MEETING: DECEMBER 10, 2019

From: Lita Payne, Executive Officer *Lita Payne*

ITEM: IX - E

SUBJECT: NOTIFICATION OF COMMITMENT OF UP TO \$10 MILLION IN P4G CAPITAL PARTNERS I, L.P.

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board receive and file this notice of the commitment of up to \$10 million in P4G Capital Partners I, L.P.

Executive Summary

P4G Capital Partners I, L.P. focuses on North American buyout investments in the manufacturing, infrastructure, industrial, and business services industries.

Discussion

Consultant Recommendation

TorreyCove Capital Partners LLC (TorreyCove), LACERS' Private Equity Consultant, recommended a commitment of up to \$10 million in P4G Capital Partners I, L.P. (the Fund), a buyout strategy managed by P4G Capital Management, LLC (the GP or P4G). Fund management and incentive fees are comparable to similar strategies and the GP will invest alongside limited partners, providing alignment of interests. This recommendation is consistent with the Private Equity Program 2019 Strategic Plan adopted by the Board on October 23, 2018.

Background

P4G was founded in 2014 by Rachel Lehman and Hugh Browne. Prior to founding the firm, Ms. Lehman was a Partner at Sorensen Capital; Mr. Browne was a Partner at Rho Ventures. The firm is based in San Francisco and consists of 9 employees.

P4G is a new general partner relationship for LACERS and meets the criteria as an Emerging Investment Manager pursuant to the LACERS Emerging Investment Manager Policy.

Investment Thesis

P4G focuses on manufacturing, infrastructure, industrial, and business service companies primarily in North America. These companies typically have between \$3 million to \$15 million of EBITDA (earnings before interest, taxes, depreciation, and amortization). P4G engages in founder recapitalizations and shareholder/management-led buyouts. The GP's Portfolio Resource Group, a group of seasoned operating professionals, adds further value by working alongside portfolio company management teams to execute the strategy. The GP intends to add value by leveraging its network of entrepreneurs and operators to generate proprietary deal flow, conduct due diligence, and assist portfolio companies.

Placement Agent

The GP does not outsource its fundraising and does not use placement agents.

Staff Recommendation

Staff concurred with TorreyCove's recommendation. The commitment has been consummated pursuant to the Discretion in a Box (Roles and Responsibilities) section of the Private Equity Investment Policy; no Board action is required.

Strategic Plan Impact Statement

Investment in P4G Capital Partners I, L.P. will allow LACERS to maintain exposure to private equity, pursuant to the Private Equity Program 2019 Strategic Plan, which is expected to help LACERS optimize long-term risk adjusted investment returns (Goal IV).

Prepared By: Wilkin Ly, Investment Officer III, Investment Division

RJ/BF/WL:sg

Attachments: 1. TorreyCove Investment Notification
 2. Workforce Composition
 3. Discretion in a Box



CALIFORNIA

10180 Barnes Canyon Road
Suite 200
San Diego, CA 92121

MASSACHUSETTS

222 Rosewood Drive
3rd Floor
Danvers, MA 01923

P4G Capital Partners I, L.P. Investment Notification

Fund Information

- **General Partner:** P4G Capital Management, LLC (“P4G” or the “Firm”)
- **Fund:** P4G Capital Partners I, L.P. (the “Fund”)
- **Firm Founded:** 2014
- **Strategy:** Buyouts
- **Sub-Strategy:** Small Buyouts
- **Geography:** North America
- **Team:** ~10 investment and operating professionals
- **Senior Partners:** Rachel Lehman, Hugh Browne, Ben Siebach
- **Office Locations:** San Francisco
- **Industries:** Manufacturing, industrials, and business services
- **Recommendation:** \$10 million

Investment Highlights

- Experienced and cohesive senior team that worked together prior to founding P4G
- Rachel Lehman’s track record of strong returns pursuing a similar investment strategy at her prior firm
- Attractive value-oriented strategy that emphasizes operational improvements

P4G Capital Partners I, L.P.

■ Firm and Background

- Prior to forming P4G in 2014, Rachel Lehman was a Partner at Sorenson Capital where she pursued a similar investment strategy targeting controlling stakes in manufacturing and industrials companies.
- Lehman is joined by Managing Directors Ben Siebach and Hugh Browne. Siebach worked with Lehman at Sorenson and oversees P4G’s operating group. Browne was formally a Partner at Rho Ventures.
- P4G’s investment team also includes one additional Managing Director, Lee Rowe, and two Vice Presidents, Mason Duke and Nathaniel Bacon, that operate out of the Firm’s office in San Francisco, CA.
- The investment team at P4G is augmented by a group of dedicated operating professionals that includes seasoned industry veterans from relevant sectors and backgrounds.

■ Investment Strategy

- The Fund will focus on control-oriented investments in manufacturing, industrials, and business services companies headquartered primarily in the Western United States.
- The Firm will typically target niche subsectors and has identified aerospace and defense, logistics, and packaging as areas of interest expected to be represented in the Fund.
- P4G will target 10 to 12 small companies that have enterprise values below \$100.0 million and EBITDA of approximately \$7.5 million.

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE PERFORMANCE.

THESE MATERIALS ARE NOT INTENDED AS AN OFFER TO SELL, OR THE SOLICITATION OF AN OFFER TO PURCHASE, ANY SECURITY. THIS PRESENTATION HAS BEEN PREPARED SOLELY FOR INFORMATIONAL AND DISCUSSION PURPOSES ONLY. THE INFORMATION HEREIN IS NOT INTENDED TO BE COMPLETE AND THE DESCRIPTION OF THE FUND IN THESE MATERIALS IS QUALIFIED IN ITS ENTIRETY BY THE TERMS AND INFORMATION CONTAINED IN THE FUND'S OFFERING DOCUMENTS, INCLUDING, WITHOUT LIMITATION, THE FUND'S PRIVATE PLACEMENT MEMORANDUM, PARTNERSHIP AGREEMENT AND SUBSCRIPTION AGREEMENT ("GOVERNING DOCUMENTS"). NOTHING HEREIN CONSTITUTES OR SHOULD NOT BE CONSTRUED AS INVESTMENT ADVICE.

THE INFORMATION HEREIN IS NOT INTENDED TO PROVIDE, AND SHOULD NOT BE RELIED UPON FOR, ACCOUNTING, TAX OR LEGAL ADVICE. YOU SHOULD CONSULT YOUR TAX, LEGAL AND/OR ACCOUNTING ADVISERS ABOUT ANY MATTERS DISCUSSED HEREIN.

INTERESTS IN THE FUND HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER ANY STATE OR OTHER SECURITIES LAWS OR THE LAWS OF ANY NON-U.S. JURISDICTION. THE INTERESTS WILL BE OFFERED AND SOLD FOR INVESTMENT ONLY TO QUALIFYING INVESTORS PURSUANT TO THE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN COMPLIANCE WITH THE APPLICABLE SECURITIES LAWS OF THE STATES AND OTHER JURISDICTIONS (INCLUDING NON-U.S. JURISDICTIONS) WHERE THE OFFERING WILL BE MADE. THERE WILL BE NO PUBLIC MARKET FOR INTERESTS IN THE FUND, AND THERE IS NO OBLIGATION ON THE PART OF ANY PERSON TO REGISTER THE INTERESTS UNDER THE SECURITIES ACT. INTERESTS IN THE FUND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE SECURITIES ACT AND ANY APPLICABLE NON-U.S. SECURITIES LAWS, PURSUANT TO REGISTRATION OR AN EXEMPTION THEREFROM. THE TRANSFERABILITY OF THE INTERESTS WILL BE FURTHER RESTRICTED BY THE TERMS OF THE FUND'S GOVERNING DOCUMENTS. INVESTORS SHOULD BE AWARE THAT THEY MAY BE REQUIRED TO BEAR THE FINANCIAL RISKS OF AN INVESTMENT IN THE FUND FOR AN INDEFINITE PERIOD OF TIME.

NONE OF THE INFORMATION CONTAINED HEREIN WAS PREPARED BY THE FUND OR ANY UNDERLYING PORTFOLIO FUNDS IDENTIFIED HEREIN, IF ANY, THE GENERAL PARTNERS THEREOF OR ANY OF THEIR RESPECTIVE AFFILIATES. BY ACCEPTING THESE MATERIALS, YOU HEREBY ACKNOWLEDGE AND AGREE TO ALL OF THE TERMS AND CONDITIONS IN THESE DISCLOSURES.

P4G Capital Partners
 455 Market Street, Suite
 San Francisco, CA 94102

Category

TOTAL COMPOSITION OF WORK FORCE

| Occupation | African American Full Time | Hispanic Full Time | Asian or Pacific Islander Full Time | American Indian/Alaskan Native Full Time | Caucasian (Non Hispanic) Full Time | Total Employees Full Time | Percent (%) Minority Full Time | Gender | |
|----------------------|-----------------------------------|---------------------------|--|---|---|----------------------------------|---------------------------------------|-----------------------|-------------------------|
| | | | | | | | | Male Full Time | Female Full Time |
| Officials & Managers | 1 | 0 | 0 | 0 | 1 | 2 | 50.00% | 1 | 1 |
| Professionals | 0 | 0 | 0 | 0 | 4 | 4 | 0.00% | 3 | 1 |
| Technicians | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Sales Workers | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Office/Clerical | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Semi-Skilled | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Unskilled | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Service Workers | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Total | 1 | 0 | 0 | 0 | 5 | 6 | 16.7% | 4 | 2 |

PRIVATE EQUITY INVESTMENT POLICY

Discretion in a Box (Roles and Responsibilities)

| | Role of the Board | Role of Staff | Role of the Private Equity Consultant |
|------------------------------|---|--|--|
| Strategy/Policy | <ul style="list-style-type: none"> Select Private Equity Consultant. Approve asset class funding level. Review and approve the Private Equity Annual Strategic Plan which includes allocation targets and ranges. | <ul style="list-style-type: none"> With Private Equity Consultant and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. | <ul style="list-style-type: none"> With staff and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. |
| Investment Selection | <ul style="list-style-type: none"> Review investment analysis reports. Review and approve investments in new management groups of amounts greater than \$50 million prior to investment. Review and approve investments in follow-on partnerships of amounts greater than \$100 million prior to investment. | <ul style="list-style-type: none"> Refer investments and forward to Private Equity Consultant for preliminary screening. Conduct meetings with potential new investments prior to recommending to the Board, if practical. In conjunction with Private Equity Consultant, invest up to \$50 million for new partnerships, and up to \$100 million for follow-on funds without Board approval. If staff opposes, refer to Board for decision. In conjunction with Private Equity Consultant, make recommendations to Board for approval for investments over \$50 million in new partnerships, or over \$100 million in follow-on funds. Execute agreements. | <ul style="list-style-type: none"> Conduct extensive analysis and due diligence on investments. Recommend for Board approval investments over \$50 million for new managers, or over \$100 million in follow-on funds. With staff concurrence, approve investment of up to \$50 million for new partnerships, and up to \$100 million in follow-on funds. Provide investment analysis report for each new investment and sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s). Communicate with staff regarding potential opportunities undergoing extensive analysis and due diligence. Coordinate meetings between staff, Board, and general partner upon request. Negotiate legal documents. |
| Investment Monitoring | <ul style="list-style-type: none"> Review quarterly, annual, and other periodic monitoring reports. Approve sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s) | <ul style="list-style-type: none"> Review quarterly, annual and other periodic monitoring reports prepared by the Private Equity Consultant. Conduct meetings with existing managers periodically. Attend annual partnership meetings when appropriate. Fund capital calls and distributions. Review Private Equity Consultant's recommendations on amendments and consents. Execute amendments to agreements and consents. Manage and approve the wind-down and/or dissolve private equity fund investment(s) with private equity consultant's concurrence. Manage and execute the sale of partnership interest on the secondary market or to other limited partner(s) or potential buyer(s). | <ul style="list-style-type: none"> Maintain regular contact with existing managers in the portfolio to ascertain significant events within the portfolio. Recommend amendments and consents to staff for approval. Provide quarterly, annual, and other periodic monitoring reports. |



REPORT TO BOARD OF ADMINISTRATION

From: Lita Payne, Executive Officer *Lita Payne*

MEETING: DECEMBER 10, 2019

ITEM: IX – F

SUBJECT: NOTIFICATION OF COMMITMENT OF UP TO €35.4 MILLION (APPROXIMATELY \$40 MILLION) IN MONTAGU VI, L.P.

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board receive and file this notice of the commitment of up to €35.4 million (approximately \$40 million) in Montagu VI, L.P.

Executive Summary

Montagu VI, L.P. will focus on medium-sized buyout investments in Northern Europe. The GP was founded in 1968 and invests in multiple sectors.

Discussion

Consultant Recommendation

TorreyCove Capital Partners LLC (TorreyCove), LACERS' Private Equity Consultant, recommended a commitment of up to €35.4 million (approximately \$40 million at the time of staff concurrence) in Montagu Fund VI, L.P. (the Fund), a European buyout strategy managed by Montagu Private Equity LLP (the GP or Montagu). Fund management and incentive fees are comparable to similar strategies and the GP will invest alongside limited partners, providing alignment of interests. This recommendation is consistent with the Private Equity Program 2019 Strategic Plan adopted by the Board on October 23, 2018.

Background

Montagu was founded in 1968 and is led by Jason Gatenby and Chris Masterson. Mr. Gatenby joined the firm in 2000 and was appointed Chief Executive Officer in 2010. Mr. Masterson joined the firm in 1991 and was appointed Chairman in 2010. The firm has €5 billion in assets under management, 107 employees, and offices in London (headquarters), Frankfurt, Luxembourg, Paris, and Warsaw. Montagu is a new general partner relationship for LACERS.

Investment Thesis

Montagu invests in businesses headquartered in Northern Europe with enterprise values from €200 million to €1 billion. The GP does not pursue target sectors, but has invested in multiple areas such as manufacturing, transport, logistics, healthcare, waste management, business services, and web-hosting. After making an investment, the GP will assist the portfolio company with achieving growth objectives by augmenting management personnel and compensation, optimizing capital structure, and assisting with growth and acquisition strategies. Exit strategies include initial public offerings and sales to financial institutions or strategic partners, such as other private equity firms or large enterprise firms.

Placement Agent

The GP does not outsource its fundraising and does not use placement agents.

Staff Recommendation

Staff concurred with TorreyCove's recommendation. The commitment has been consummated pursuant to the Discretion in a Box (Roles and Responsibilities) section of the Private Equity Investment Policy; no Board action is required.

Strategic Plan Impact Statement

Investment in Montagu VI, L.P. will allow LACERS to maintain exposure to private equity, pursuant to the Private Equity Program 2019 Strategic Plan, which is expected to help LACERS optimize long-term risk adjusted investment returns (Goal IV).

Prepared By: Wilkin Ly, Investment Officer III, Investment Division

RJ/BF/WL:sg

Attachments: 1. TorreyCove Investment Notification
 2. Workforce Composition
 3. Discretion in a Box



CALIFORNIA

10180 Barnes Canyon Road
Suite 200
San Diego, CA 92121

MASSACHUSETTS

222 Rosewood Drive
3rd Floor
Danvers, MA 01923

Montagu VI, L.P. Investment Notification

Montagu VI, L.P.

- **General Partner:** Montagu Private Equity LLP (the “Firm” or “Montagu”)
- **Fund:** Montagu VI, L.P. (the “Fund” or “Fund VI”)
- **Firm Founded:** 1968
- **Strategy:** Buyouts
- **Sub-Strategy:** Medium Buyouts
- **Geography:** Europe
- **Team:** 40+ investment professionals
- **Senior Partners:** Jason Gatenby (CEO) and Chris Masterson (Chairman)
- **Office Locations:** London, Paris, Frankfurt, Warsaw, Luxembourg
- **Industries:** Diversified
- **Recommendation:** \$40.0 million

Investment Highlights

- Large and experienced senior team
- Significant experience investing in Northern Europe
- Consistent investment strategy that has been successfully implemented across prior funds
- Strong returns from healthcare and information technology investments

Montagu VI, L.P.

■ Firm and Background

- The Firm was formally established in 1968 as the industrial finance division of Midland Bank plc. In 1987, HSBC acquired a minority stake in the bank.
- Montagu’s management team ultimately acquired the Firm from HSBC. Today, the Firm is wholly owned by its existing Partners.
- Jason Gatenby has been the CEO of Montagu since 2010 and is the leader of the organization.
- Chris Masterson, the former CEO of Montagu, continues to be involved at a relatively high level and remains active in Montagu’s investment decision making process as Chair of the Investment Committee.
- Jason Gattenby is supported by a team of 20+ senior investment professionals with the title of Director as well as 24 junior investment professionals, including: (i) 11 Investment Directors; (ii) 6 Investment Managers; and (iii) 7 Associates.

■ Investment Strategy

- The Fund will focus on control buyouts in medium-sized companies that operate within large, stable Northern European markets.
- The strategy is sector agnostic; however, the majority of invested capital across the last three funds was deployed across healthcare, information technology, industrial, and consumer-oriented opportunities.
- Targeted companies typically have an enterprise value of €200.0 million to €1.0 billion at entry.
- The Firm expects to build a portfolio of 16 to 19 companies with equity checks ranging from €150.0 million to €250.0 million per transaction.

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE PERFORMANCE.

THESE MATERIALS ARE NOT INTENDED AS AN OFFER TO SELL, OR THE SOLICITATION OF AN OFFER TO PURCHASE, ANY SECURITY. THIS PRESENTATION HAS BEEN PREPARED SOLELY FOR INFORMATIONAL AND DISCUSSION PURPOSES ONLY. THE INFORMATION HEREIN IS NOT INTENDED TO BE COMPLETE AND THE DESCRIPTION OF THE FUND IN THESE MATERIALS IS QUALIFIED IN ITS ENTIRETY BY THE TERMS AND INFORMATION CONTAINED IN THE FUND'S OFFERING DOCUMENTS, INCLUDING, WITHOUT LIMITATION, THE FUND'S PRIVATE PLACEMENT MEMORANDUM, PARTNERSHIP AGREEMENT AND SUBSCRIPTION AGREEMENT ("GOVERNING DOCUMENTS"). NOTHING HEREIN CONSTITUTES OR SHOULD NOT BE CONSTRUED AS INVESTMENT ADVICE.

THE INFORMATION HEREIN IS NOT INTENDED TO PROVIDE, AND SHOULD NOT BE RELIED UPON FOR, ACCOUNTING, TAX OR LEGAL ADVICE. YOU SHOULD CONSULT YOUR TAX, LEGAL AND/OR ACCOUNTING ADVISERS ABOUT ANY MATTERS DISCUSSED HEREIN.

INTERESTS IN THE FUND HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER ANY STATE OR OTHER SECURITIES LAWS OR THE LAWS OF ANY NON-U.S. JURISDICTION. THE INTERESTS WILL BE OFFERED AND SOLD FOR INVESTMENT ONLY TO QUALIFYING INVESTORS PURSUANT TO THE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN COMPLIANCE WITH THE APPLICABLE SECURITIES LAWS OF THE STATES AND OTHER JURISDICTIONS (INCLUDING NON-U.S. JURISDICTIONS) WHERE THE OFFERING WILL BE MADE. THERE WILL BE NO PUBLIC MARKET FOR INTERESTS IN THE FUND, AND THERE IS NO OBLIGATION ON THE PART OF ANY PERSON TO REGISTER THE INTERESTS UNDER THE SECURITIES ACT. INTERESTS IN THE FUND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE SECURITIES ACT AND ANY APPLICABLE NON-U.S. SECURITIES LAWS, PURSUANT TO REGISTRATION OR AN EXEMPTION THEREFROM. THE TRANSFERABILITY OF THE INTERESTS WILL BE FURTHER RESTRICTED BY THE TERMS OF THE FUND'S GOVERNING DOCUMENTS. INVESTORS SHOULD BE AWARE THAT THEY MAY BE REQUIRED TO BEAR THE FINANCIAL RISKS OF AN INVESTMENT IN THE FUND FOR AN INDEFINITE PERIOD OF TIME.

NONE OF THE INFORMATION CONTAINED HEREIN WAS PREPARED BY THE FUND OR ANY UNDERLYING PORTFOLIO FUNDS IDENTIFIED HEREIN, IF ANY, THE GENERAL PARTNERS THEREOF OR ANY OF THEIR RESPECTIVE AFFILIATES. BY ACCEPTING THESE MATERIALS, YOU HEREBY ACKNOWLEDGE AND AGREE TO ALL OF THE TERMS AND CONDITIONS IN THESE DISCLOSURES.

Vendor Montagu Private Equity LLP
 Address 2 More London Riverside
 SE1 2AP London

Date Completed: July 10, 2019

Category Private Equity - Buyout

| TOTAL COMPOSITION OF WORK FORCE (DATA AS AT 30 APRIL 2019) | | | | | | | | | |
|---|---------------------------|-------------------|------------------------------------|--|-----------------------------------|------------------------|-------------------------------|---------------|---------------|
| Occupation | African American * | Hispanic * | Asian or Pacific Islander * | American Indian/ Alaskan Native * | Caucasian (Non Hispanic) * | Total Employees | Percent (%) Minority * | Gender | |
| | Full Time | Full Time | Full Time | Full Time | Full Time | Full Time | Full Time | Male | Female |
| Investment professionals | 0 | 0 | 0 | 0 | 0 | 47 | 0.00% | 41 | 6 |
| Montagu Full Potential Partners team | 0 | 0 | 0 | 0 | 0 | 10 | 0.00% | 8 | 2 |
| Finance/Accounting/Operations | 0 | 0 | 0 | 0 | 0 | 22 | 0.00% | 11 | 11 |
| Compliance | 0 | 0 | 0 | 0 | 0 | 7 | 0.00% | 2 | 5 |
| Technology | 0 | 0 | 0 | 0 | 0 | 5 | 0.00% | 3 | 2 |
| Marketing / Investor Relations | 0 | 0 | 0 | 0 | 0 | 3 | 0.00% | 2 | 1 |
| Administrative | 0 | 0 | 0 | 0 | 0 | 13 | 0.00% | 0 | 13 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 107 | 0.00% | 67 | 40 |

Notes:

* Montagu is committed to promoting equal opportunities in employment and its staff receive equal treatment regardless of age, disability, gender, gender reassignment, marital or civil partner status, pregnancy or maternity, race, colour, nationality, ethnic or national origin, religion or belief, sex or sexual orientation.

Personal data revealing employee's racial or ethnic origin is categorised as special category personal data pursuant to the GDPR and Montagu takes steps to ensure that this data is processed in accordance with the GDPR. On this basis, Montagu does not share its staff's data relating to race or ethnicity with third parties.

PRIVATE EQUITY INVESTMENT POLICY

Discretion in a Box (Roles and Responsibilities)

| | Role of the Board | Role of Staff | Role of the Private Equity Consultant |
|------------------------------|---|--|--|
| Strategy/Policy | <ul style="list-style-type: none"> Select Private Equity Consultant. Approve asset class funding level. Review and approve the Private Equity Annual Strategic Plan which includes allocation targets and ranges. | <ul style="list-style-type: none"> With Private Equity Consultant and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. | <ul style="list-style-type: none"> With staff and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. |
| Investment Selection | <ul style="list-style-type: none"> Review investment analysis reports. Review and approve investments in new management groups of amounts greater than \$50 million prior to investment. Review and approve investments in follow-on partnerships of amounts greater than \$100 million prior to investment. | <ul style="list-style-type: none"> Refer investments and forward to Private Equity Consultant for preliminary screening. Conduct meetings with potential new investments prior to recommending to the Board, if practical. In conjunction with Private Equity Consultant, invest up to \$50 million for new partnerships, and up to \$100 million for follow-on funds without Board approval. If staff opposes, refer to Board for decision. In conjunction with Private Equity Consultant, make recommendations to Board for approval for investments over \$50 million in new partnerships, or over \$100 million in follow-on funds. Execute agreements. | <ul style="list-style-type: none"> Conduct extensive analysis and due diligence on investments. Recommend for Board approval investments over \$50 million for new managers, or over \$100 million in follow-on funds. With staff concurrence, approve investment of up to \$50 million for new partnerships, and up to \$100 million in follow-on funds. Provide investment analysis report for each new investment and sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s). Communicate with staff regarding potential opportunities undergoing extensive analysis and due diligence. Coordinate meetings between staff, Board, and general partner upon request. Negotiate legal documents. |
| Investment Monitoring | <ul style="list-style-type: none"> Review quarterly, annual, and other periodic monitoring reports. Approve sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s) | <ul style="list-style-type: none"> Review quarterly, annual and other periodic monitoring reports prepared by the Private Equity Consultant. Conduct meetings with existing managers periodically. Attend annual partnership meetings when appropriate. Fund capital calls and distributions. Review Private Equity Consultant's recommendations on amendments and consents. Execute amendments to agreements and consents. Manage and approve the wind-down and/or dissolve private equity fund investment(s) with private equity consultant's concurrence. Manage and execute the sale of partnership interest on the secondary market or to other limited partner(s) or potential buyer(s). | <ul style="list-style-type: none"> Maintain regular contact with existing managers in the portfolio to ascertain significant events within the portfolio. Recommend amendments and consents to staff for approval. Provide quarterly, annual, and other periodic monitoring reports. |



REPORT TO BOARD OF ADMINISTRATION

From: Lita Payne, Executive Officer *Lita Payne*

MEETING: DECEMBER 10, 2019

ITEM: IX – G

SUBJECT: NOTIFICATION OF COMMITMENT OF UP TO \$25 MILLION IN OAK HC/FT PARTNERS III, L.P.

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board receive and file this notice of the commitment of up to \$25 million in Oak HC/FT Partners III, L.P.

Executive Summary

Oak HC/FT Partners III, L.P. will focus on venture capital and growth-stage investments in the healthcare services and financial technology industries.

Discussion

Consultant Recommendation

TorreyCove Capital Partners LLC (TorreyCove), LACERS' Private Equity Consultant, recommended a commitment of up to \$25 million in Oak HC/FT Partners III, L.P. (the Fund), a multi-stage venture capital strategy managed by Oak HC/FT (the GP or Oak HC/FT). Fund management and incentive fees are comparable to similar strategies and the GP will invest alongside limited partners, providing alignment of interests. This recommendation is consistent with the Private Equity Program 2019 Strategic Plan adopted by the Board on October 23, 2018.

Background

Oak HC/FT was founded in 2014 by Annie Lamont, Andrew Adams, and Tricia Kemp. Prior to forming Oak HC/FT, Ms. Lamont, Mr. Adams, and Ms. Kemp were responsible for leading healthcare and financial technology investment activities at Oak Investment Partners, a multi-stage and multi-sector venture firm. The GP has \$1.9 billion of assets under management, 20 employees, and offices in Greenwich (headquarters), Boston, and San Francisco.

LACERS has an existing general partner relationship with Oak HC/FT and previously committed a total of \$20 million to the following Oak HC/FT-sponsored funds:

| Fund | Vintage Year | Commitment Amount | Net IRR ^{1,2} |
|--|--------------|-------------------|------------------------|
| Oak HC-FT Partners (Emerging Manager) | 2014 | \$10 million | 20.3% |
| Oak HC-FT Partners II (Emerging Manager) | 2017 | \$10 million | 22.6% |

Investment Thesis

Oak HC/FT focuses on venture capital and growth-stage investments in the healthcare and financial technology sectors. The GP seeks market-leading companies that provide technology-enabled solutions, data and analytics, outsourced services, and alternative drug delivery models. Target firms typically have strong management teams, good financial metrics, and positive cash flow. The GP will leverage its industry expertise and operating partners to guide the growth of the portfolio companies.

Placement Agent

The GP does not outsource its fundraising and does not use placement agents.

Staff Recommendation

Staff concurred with TorreyCove's recommendation. The commitment has been consummated pursuant to the Discretion in a Box (Roles and Responsibilities) section of the Private Equity Investment Policy; no Board action is required.

Strategic Plan Impact Statement

Investment in Oak HC/FT Partners III, L.P. will allow LACERS to maintain exposure to private equity, pursuant to the Private Equity Program 2019 Strategic Plan, which is expected to help LACERS optimize long-term risk adjusted investment returns (Goal IV).

Prepared By: Wilkin Ly, Investment Officer III, Investment Division

RJ/BF/WL:sg

Attachments: 1. TorreyCove Investment Notification
 2. Workforce Composition
 3. Discretion in a Box

¹Net Internal Rate of Return as of June 30, 2019.

²Performance data (1) does not necessarily accurately reflect the current or expected future performance of the Fund(s) or the fair value of LACERS' interest in the Fund(s), (2) should not be used to compare returns among multiple private equity funds, and (3) has not been calculated, reviewed, verified or in any way sanctioned or approved by the general partner(s) or manager(s).



CALIFORNIA

10180 Barnes Canyon Road
Suite 200
San Diego, CA 92121

MASSACHUSETTS

222 Rosewood Drive
3rd Floor
Danvers, MA 01923

Oak HC/FT Partners III, L.P. Investment Notification

Fund Information

- **General Partner:** Oak HC/FT (the “Firm” or “Oak”)
- **Fund:** Oak HC/FT Partners III, L.P. (the “Fund”)
- **Firm Founded:** 2014
- **Strategy:** Venture Capital
- **Sub-Strategy:** Multi-Stage
- **Geography:** Primarily North America
- **Team:** ~15 investment professionals
- **Senior Partners:** Annie Lamont, Andrew Adams, Tricia Kemp
- **Office Locations:** Greenwich, Boston, San Francisco
- **Industries:** (i) Healthcare information technology & services and (ii) financial services technology
- **Recommendation:** \$25.0 million

Investment Highlights

- Experienced and cohesive senior team that worked together for a number of years prior to forming Oak HC/FT
- Specialized in growth and early-stage deals in healthcare IT and fintech companies
- Strong performance with minimal losses across the portfolio

Oak HC/FT Partners III, L.P.

■ Firm and Background

- Oak HC/FT was established in 2014 as a spin-out of the healthcare IT and fin-tech verticals at Oak Investment Partners.
- The Firm is led by three Managing Partners, who have worked together investing in their respective spaces since 2003.
- The Managing Partners are supported by a General Partner, three Partners, two Principals, four Associates, five Venture Partners, and three Senior Advisors.

■ Investment Strategy

- The Fund will invest in early-stage venture and growth-stage healthcare and fin-tech companies.
- Investments will be made primarily in the U.S. and opportunistically in fin-tech companies in Europe and Israel.
- The Fund will seek to make 20 investments with an average deal size ranging from \$20.0 million to \$40.0 million.
- Oak anticipates investing about 75.0% of capital in growth equity deals and 25.0% in early-stage opportunities, with a target investment size of \$40.0 million in growth companies and \$20.0 million in early-stage companies.
- The team is supported by five Venture Partners and three Senior Advisors, who provide assistance across the entire investment and portfolio management process.

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE PERFORMANCE.

THESE MATERIALS ARE NOT INTENDED AS AN OFFER TO SELL, OR THE SOLICITATION OF AN OFFER TO PURCHASE, ANY SECURITY. THIS PRESENTATION HAS BEEN PREPARED SOLELY FOR INFORMATIONAL AND DISCUSSION PURPOSES ONLY. THE INFORMATION HEREIN IS NOT INTENDED TO BE COMPLETE AND THE DESCRIPTION OF THE FUND IN THESE MATERIALS IS QUALIFIED IN ITS ENTIRETY BY THE TERMS AND INFORMATION CONTAINED IN THE FUND'S OFFERING DOCUMENTS, INCLUDING, WITHOUT LIMITATION, THE FUND'S PRIVATE PLACEMENT MEMORANDUM, PARTNERSHIP AGREEMENT AND SUBSCRIPTION AGREEMENT ("GOVERNING DOCUMENTS"). NOTHING HEREIN CONSTITUTES OR SHOULD NOT BE CONSTRUED AS INVESTMENT ADVICE.

THE INFORMATION HEREIN IS NOT INTENDED TO PROVIDE, AND SHOULD NOT BE RELIED UPON FOR, ACCOUNTING, TAX OR LEGAL ADVICE. YOU SHOULD CONSULT YOUR TAX, LEGAL AND/OR ACCOUNTING ADVISERS ABOUT ANY MATTERS DISCUSSED HEREIN.

INTERESTS IN THE FUND HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER ANY STATE OR OTHER SECURITIES LAWS OR THE LAWS OF ANY NON-U.S. JURISDICTION. THE INTERESTS WILL BE OFFERED AND SOLD FOR INVESTMENT ONLY TO QUALIFYING INVESTORS PURSUANT TO THE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN COMPLIANCE WITH THE APPLICABLE SECURITIES LAWS OF THE STATES AND OTHER JURISDICTIONS (INCLUDING NON-U.S. JURISDICTIONS) WHERE THE OFFERING WILL BE MADE. THERE WILL BE NO PUBLIC MARKET FOR INTERESTS IN THE FUND, AND THERE IS NO OBLIGATION ON THE PART OF ANY PERSON TO REGISTER THE INTERESTS UNDER THE SECURITIES ACT. INTERESTS IN THE FUND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE SECURITIES ACT AND ANY APPLICABLE NON-U.S. SECURITIES LAWS, PURSUANT TO REGISTRATION OR AN EXEMPTION THEREFROM. THE TRANSFERABILITY OF THE INTERESTS WILL BE FURTHER RESTRICTED BY THE TERMS OF THE FUND'S GOVERNING DOCUMENTS. INVESTORS SHOULD BE AWARE THAT THEY MAY BE REQUIRED TO BEAR THE FINANCIAL RISKS OF AN INVESTMENT IN THE FUND FOR AN INDEFINITE PERIOD OF TIME.

NONE OF THE INFORMATION CONTAINED HEREIN WAS PREPARED BY THE FUND OR ANY UNDERLYING PORTFOLIO FUNDS IDENTIFIED HEREIN, IF ANY, THE GENERAL PARTNERS THEREOF OR ANY OF THEIR RESPECTIVE AFFILIATES. BY ACCEPTING THESE MATERIALS, YOU HEREBY ACKNOWLEDGE AND AGREE TO ALL OF THE TERMS AND CONDITIONS IN THESE DISCLOSURES.

Vendor **Oak HC/FT**
 Address **3 Pickwick Plaze, Suite 302 Greenwich, CT 06830**

Date Completed: **April 15, 2019**

Category **Asset Class: Private Equity**

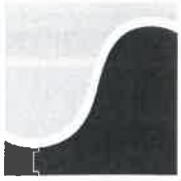
| TOTAL COMPOSITION OF WORK FORCE | | | | | | | | | |
|--|-----------------------------------|---------------------------|--|--|---|----------------------------------|---------------------------------------|-------------------------|---------------|
| Occupation | African American Full Time | Hispanic Full Time | Asian or Pacific Islander Full Time | American Indian/ Alaskan Native Full Time | Caucasian (Non Hispanic) Full Time | Total Employees Full Time | Percent (%) Minority Full Time | Gender Full Time | |
| | | | | | | | | Male | Female |
| Officials & Managers | 0 | 0 | 0 | 0 | 3 | 3 | 0.00% | 1 | 2 |
| Professionals | 0 | 1 | 2 | 0 | 9 | 12 | 25.00% | 9 | 3 |
| Technicians | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Sales Workers | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Office/Clerical | 0 | 1 | 0 | 0 | 4 | 5 | 20.00% | 0 | 5 |
| Semi-Skilled | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Unskilled | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Service Workers | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Total | 0 | 2 | 2 | 0 | 16 | 20 | 20.00% | 10 | 10 |

BOARD Meeting: 12/10/19
Item IX-G
Attachment 3

PRIVATE EQUITY INVESTMENT POLICY

Discretion in a Box (Roles and Responsibilities)

| | Role of the Board | Role of Staff | Role of the Private Equity Consultant |
|------------------------------|---|--|--|
| Strategy/Policy | <ul style="list-style-type: none"> Select Private Equity Consultant. Approve asset class funding level. Review and approve the Private Equity Annual Strategic Plan which includes allocation targets and ranges. | <ul style="list-style-type: none"> With Private Equity Consultant and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. | <ul style="list-style-type: none"> With staff and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. |
| Investment Selection | <ul style="list-style-type: none"> Review investment analysis reports. Review and approve investments in new management groups of amounts greater than \$50 million prior to investment. Review and approve investments in follow-on partnerships of amounts greater than \$100 million prior to investment. | <ul style="list-style-type: none"> Refer investments and forward to Private Equity Consultant for preliminary screening. Conduct meetings with potential new investments prior to recommending to the Board, if practical. In conjunction with Private Equity Consultant, invest up to \$50 million for new partnerships, and up to \$100 million for follow-on funds without Board approval. If staff opposes, refer to Board for decision. In conjunction with Private Equity Consultant, make recommendations to Board for approval for investments over \$50 million in new partnerships, or over \$100 million in follow-on funds. Execute agreements. | <ul style="list-style-type: none"> Conduct extensive analysis and due diligence on investments. Recommend for Board approval investments over \$50 million for new managers, or over \$100 million in follow-on funds. With staff concurrence, approve investment of up to \$50 million for new partnerships, and up to \$100 million in follow-on funds. Provide investment analysis report for each new investment and sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s). Communicate with staff regarding potential opportunities undergoing extensive analysis and due diligence. Coordinate meetings between staff, Board, and general partner upon request. Negotiate legal documents. |
| Investment Monitoring | <ul style="list-style-type: none"> Review quarterly, annual, and other periodic monitoring reports. Approve sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s) | <ul style="list-style-type: none"> Review quarterly, annual and other periodic monitoring reports prepared by the Private Equity Consultant. Conduct meetings with existing managers periodically. Attend annual partnership meetings when appropriate. Fund capital calls and distributions. Review Private Equity Consultant's recommendations on amendments and consents. Execute amendments to agreements and consents. Manage and approve the wind-down and/or dissolve private equity fund investment(s) with private equity consultant's concurrence. Manage and execute the sale of partnership interest on the secondary market or to other limited partner(s) or potential buyer(s). | <ul style="list-style-type: none"> Maintain regular contact with existing managers in the portfolio to ascertain significant events within the portfolio. Recommend amendments and consents to staff for approval. Provide quarterly, annual, and other periodic monitoring reports. |



REPORT TO BOARD OF ADMINISTRATION

MEETING: DECEMBER 10, 2019

From: Lita Payne, Executive Officer

Lita Payne

ITEM: IX – H

SUBJECT: NOTIFICATION OF COMMITMENT OF UP TO \$10 MILLION IN SUNSTONE PARTNERS II, L.P.

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board receive and file this notice of the commitment of up to \$10 million in Sunstone Partners II, L.P.

Executive Summary

Sunstone Partners II, L.P. will focus on growth equity investments in technology-enabled services and software companies in North America.

Discussion

Consultant Recommendation

TorreyCove Capital Partners LLC (TorreyCove), LACERS' Private Equity Consultant, recommended a commitment of up to \$10 million in Sunstone Partners II, L.P. (the Fund), a growth equity strategy managed by Sunstone Partners Management, LLC (the GP or Sunstone). Fund management and incentive fees are comparable to similar strategies and the GP will invest alongside limited partners, providing alignment of interests. This recommendation is consistent with the Private Equity Program 2019 Strategic Plan adopted by the Board on October 23, 2018.

Background

Sunstone Partners (formerly known as TC Growth Partners) was founded in 2015 by Gustavo Alberelli, Michael Biggee, John Moragne, and Arneek Multani (collectively, the Partners). The Partners previously worked together as the growth equity team at Trident Capital, a multi-stage venture capital firm. The firm has 19 employees and is located in San Mateo, California.

Sunstone Partners is an existing general partner relationship for LACERS and meets the criteria as an Emerging Investment Manager pursuant to the LACERS Emerging Investment Manager Policy.

LACERS previously committed \$7.5 million to Sunstone Partners I (2015 vintage), which has earned a net internal rate of return (IRR) of 26.5%.^{1, 2}

Investment Thesis

Sunstone Partners will target growth equity investments in lower-middle market, technology-enabled services companies based in North America. The GP will focus on companies providing enterprise solutions in the healthcare information technology, marketing services, enterprise information technology, and cyber security sectors. These companies typically will be profitable with more than \$10 million in annual revenue and 20% in year-over-year annual revenue growth. The GP adds value to portfolio companies by providing capital as well as strategic and operational guidance to achieve growth in revenues, profitability, and market share. The portfolio operations team adds further value by working alongside portfolio company management teams to execute the strategy. Exit strategies include sales to financial institutions or strategic partners, such as other private equity firms or large enterprise firms.

Placement Agent

The GP does not outsource its fundraising and does not use placement agents.

Staff Recommendation

Staff concurred with TorreyCove's recommendation. The commitment has been consummated pursuant to the Discretion in a Box (Roles and Responsibilities) section of the Private Equity Investment Policy; no Board action is required.

Strategic Plan Impact Statement

Investment in Sunstone Partners II, L.P. will allow LACERS to maintain exposure to private equity, pursuant to the Private Equity Program 2019 Strategic Plan, which is expected to help LACERS optimize long-term risk adjusted investment returns (Goal IV).

Prepared By: Wilkin Ly, Investment Officer III, Investment Division

RJ/BF/WL:sg

Attachments: 1. TorreyCove Investment Notification
 2. Workforce Composition
 3. Discretion in a Box

¹Performance as of June 30, 2019

²Performance data (1) does not necessarily accurately reflect the current or expected future performance of the Fund(s) or the fair value of LACERS' interest in the Fund(s), (2) should not be used to compare returns among multiple private equity funds, and (3) has not been calculated, reviewed, verified or in any way sanctioned or approved by the general partner(s) or manager(s).



BOARD Meeting: 12/10/19
Item IX-H
Attachment 1

CALIFORNIA

10180 Barnes Canyon Road
Suite 200
San Diego, CA 92121

MASSACHUSETTS

222 Rosewood Drive
3rd Floor
Danvers, MA 01923

Sunstone Partners II, L.P. Investment Notification

Fund Information

- **General Partner:** Sunstone Partners Management, LLC (the “Firm” or “Sunstone”)
- **Fund:** Sunstone Partners II, L.P. (the “Fund”)
- **Firm Founded:** 2015
- **Strategy:** Growth Equity
- **Sub-Strategy:** Growth Equity
- **Geography:** North America
- **Team:** ~15 investment professionals
- **Senior Partners:** Mike Biggee, Arneek Multani, Gus Alberelli, John Moragne
- **Office Locations:** San Mateo
- **Industries:** Technology enabled services: (i) cybersecurity, (ii) healthcare IT, (iii) cloud, (iv) marketing services
- **Recommendation:** \$10.0 million

Investment Highlights

- Experienced and cohesive senior team that worked together for a number of years prior to forming Sunstone
- Specialized in a narrow set of tech-enabled services subsectors
- Strong prior track record with few losses

Sunstone Partners II, L.P.

■ Firm and Background

- Sunstone was founded in 2015 as a spin-out of the growth equity team from Trident Capital.
- The Firm is currently led by four Managing Directors, who have been with Sunstone since its founding and have prior experience working together at Trident Capital.
- Leadership is supported by a fast-growing team currently consisting of one Principal, three Vice Presidents, five Associates, and two additional Operating Partners.

■ Investment Strategy

- The Fund will pursue majority and significant minority investments in companies that offer technology-enabled services to enterprises within the cloud, cybersecurity, healthcare IT, and marketing services segments in North America.
- Targeted companies will be profitable or breakeven with demonstrated annual revenue run rates of at least \$10.0 million per year and a growth rate of 20.0% or greater.
- The Fund will seek to make 8 to 12 investments with an average investment size between \$25.0 million and \$45.0 million.
- Ideal companies will be those that leverage proprietary software to automate business processes and improve operational efficiencies, particularly those with a recurring subscription model.

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE PERFORMANCE.

THESE MATERIALS ARE NOT INTENDED AS AN OFFER TO SELL, OR THE SOLICITATION OF AN OFFER TO PURCHASE, ANY SECURITY. THIS PRESENTATION HAS BEEN PREPARED SOLELY FOR INFORMATIONAL AND DISCUSSION PURPOSES ONLY. THE INFORMATION HEREIN IS NOT INTENDED TO BE COMPLETE AND THE DESCRIPTION OF THE FUND IN THESE MATERIALS IS QUALIFIED IN ITS ENTIRETY BY THE TERMS AND INFORMATION CONTAINED IN THE FUND'S OFFERING DOCUMENTS, INCLUDING, WITHOUT LIMITATION, THE FUND'S PRIVATE PLACEMENT MEMORANDUM, PARTNERSHIP AGREEMENT AND SUBSCRIPTION AGREEMENT ("GOVERNING DOCUMENTS"). NOTHING HEREIN CONSTITUTES OR SHOULD NOT BE CONSTRUED AS INVESTMENT ADVICE.

THE INFORMATION HEREIN IS NOT INTENDED TO PROVIDE, AND SHOULD NOT BE RELIED UPON FOR, ACCOUNTING, TAX OR LEGAL ADVICE. YOU SHOULD CONSULT YOUR TAX, LEGAL AND/OR ACCOUNTING ADVISERS ABOUT ANY MATTERS DISCUSSED HEREIN.

INTERESTS IN THE FUND HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER ANY STATE OR OTHER SECURITIES LAWS OR THE LAWS OF ANY NON-U.S. JURISDICTION. THE INTERESTS WILL BE OFFERED AND SOLD FOR INVESTMENT ONLY TO QUALIFYING INVESTORS PURSUANT TO THE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN COMPLIANCE WITH THE APPLICABLE SECURITIES LAWS OF THE STATES AND OTHER JURISDICTIONS (INCLUDING NON-U.S. JURISDICTIONS) WHERE THE OFFERING WILL BE MADE. THERE WILL BE NO PUBLIC MARKET FOR INTERESTS IN THE FUND, AND THERE IS NO OBLIGATION ON THE PART OF ANY PERSON TO REGISTER THE INTERESTS UNDER THE SECURITIES ACT. INTERESTS IN THE FUND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE SECURITIES ACT AND ANY APPLICABLE NON-U.S. SECURITIES LAWS, PURSUANT TO REGISTRATION OR AN EXEMPTION THEREFROM. THE TRANSFERABILITY OF THE INTERESTS WILL BE FURTHER RESTRICTED BY THE TERMS OF THE FUND'S GOVERNING DOCUMENTS. INVESTORS SHOULD BE AWARE THAT THEY MAY BE REQUIRED TO BEAR THE FINANCIAL RISKS OF AN INVESTMENT IN THE FUND FOR AN INDEFINITE PERIOD OF TIME.

NONE OF THE INFORMATION CONTAINED HEREIN WAS PREPARED BY THE FUND OR ANY UNDERLYING PORTFOLIO FUNDS IDENTIFIED HEREIN, IF ANY, THE GENERAL PARTNERS THEREOF OR ANY OF THEIR RESPECTIVE AFFILIATES. BY ACCEPTING THESE MATERIALS, YOU HEREBY ACKNOWLEDGE AND AGREE TO ALL OF THE TERMS AND CONDITIONS IN THESE DISCLOSURES.

Name: Sunstone Partners

Date Completed: June 20, 2019

Asset Class: Private Equity

| TOTAL COMPOSITION OF WORK FORCE | | | | | | | | | |
|---------------------------------|-----------------------------------|---------------------------|--|--|---|----------------------------------|---------------------------------------|-------------------------|---------------|
| <u>Occupation</u> | <u>African American Full Time</u> | <u>Hispanic Full Time</u> | <u>Asian or Pacific Islander Full Time</u> | <u>American Indian/ Alaskan Native Full Time</u> | <u>Caucasian (Non Hispanic) Full Time</u> | <u>Total Employees Full Time</u> | <u>Percent (%) Minority Full Time</u> | <u>Gender Full Time</u> | |
| | | | | | | | | <u>Male</u> | <u>Female</u> |
| Officials & Managers | 0 | 1 | 1 | 0 | 2 | 4 | 50.00% | 4 | 0 |
| Professionals | 0 | 1 | 5 | 0 | 4 | 10 | 60.00% | 7 | 3 |
| Technicians | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Sales Workers | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Office/Clerical | 0 | 1 | 0 | 0 | 4 | 5 | 20.00% | 2 | 3 |
| Semi-Skilled | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Unskilled | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Service Workers | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0 |
| Total | 0 | 3 | 6 | 0 | 10 | 19 | 47.37% | 13 | 6 |

BOARD Meeting: 12/10/19
Item IX-H
Attachment 3

PRIVATE EQUITY INVESTMENT POLICY

Discretion in a Box (Roles and Responsibilities)

| | Role of the Board | Role of Staff | Role of the Private Equity Consultant |
|------------------------------|---|--|--|
| Strategy/Policy | <ul style="list-style-type: none"> Select Private Equity Consultant. Approve asset class funding level. Review and approve the Private Equity Annual Strategic Plan which includes allocation targets and ranges. | <ul style="list-style-type: none"> With Private Equity Consultant and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. | <ul style="list-style-type: none"> With staff and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. |
| Investment Selection | <ul style="list-style-type: none"> Review investment analysis reports. Review and approve investments in new management groups of amounts greater than \$50 million prior to investment. Review and approve investments in follow-on partnerships of amounts greater than \$100 million prior to investment. | <ul style="list-style-type: none"> Refer investments and forward to Private Equity Consultant for preliminary screening. Conduct meetings with potential new investments prior to recommending to the Board, if practical. In conjunction with Private Equity Consultant, invest up to \$50 million for new partnerships, and up to \$100 million for follow-on funds without Board approval. If staff opposes, refer to Board for decision. In conjunction with Private Equity Consultant, make recommendations to Board for approval for investments over \$50 million in new partnerships, or over \$100 million in follow-on funds. Execute agreements. | <ul style="list-style-type: none"> Conduct extensive analysis and due diligence on investments. Recommend for Board approval investments over \$50 million for new managers, or over \$100 million in follow-on funds. With staff concurrence, approve investment of up to \$50 million for new partnerships, and up to \$100 million in follow-on funds. Provide investment analysis report for each new investment and sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s). Communicate with staff regarding potential opportunities undergoing extensive analysis and due diligence. Coordinate meetings between staff, Board, and general partner upon request. Negotiate legal documents. |
| Investment Monitoring | <ul style="list-style-type: none"> Review quarterly, annual, and other periodic monitoring reports. Approve sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s) | <ul style="list-style-type: none"> Review quarterly, annual and other periodic monitoring reports prepared by the Private Equity Consultant. Conduct meetings with existing managers periodically. Attend annual partnership meetings when appropriate. Fund capital calls and distributions. Review Private Equity Consultant's recommendations on amendments and consents. Execute amendments to agreements and consents. Manage and approve the wind-down and/or dissolve private equity fund investment(s) with private equity consultant's concurrence. Manage and execute the sale of partnership interest on the secondary market or to other limited partner(s) or potential buyer(s). | <ul style="list-style-type: none"> Maintain regular contact with existing managers in the portfolio to ascertain significant events within the portfolio. Recommend amendments and consents to staff for approval. Provide quarterly, annual, and other periodic monitoring reports. |



REPORT TO BOARD OF ADMINISTRATION

From: Lita Payne, Executive Officer *Lita Payne*

MEETING: DECEMBER 10, 2019

ITEM: IX - I

SUBJECT: DISCLOSURE REPORT OF FEES, EXPENSES, AND CARRIED INTEREST OF ALTERNATIVE INVESTMENT VEHICLES FOR THE FISCAL YEAR ENDING JUNE 30, 2019 PURSUANT TO GOVERNMENT CODE SECTION 7514.7

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board receive and file this report.

Executive Summary

California Government Code Section 7514.7 requires LACERS to disclose specific fee, expense, and other information for private markets funds committed to on and after January 1, 2017. Funds that LACERS committed to prior to January 1, 2017, are not required to disclose this information but may do so on a voluntary basis. The attachments to this report provide the appropriate disclosures.

Discussion

Background

California Government Code Section 7514.7 (enacted into law by the passage of Assembly Bill 2833) requires LACERS to obtain and disclose specific fee, expense, and other information relating to alternative investment vehicles within the LACERS investment portfolio. The disclosure must be made at least annually at a meeting open to the public. The law defines an alternative investment vehicle as a private equity fund, venture fund, hedge fund, or absolute return fund; LACERS considers private real estate funds to fall within the scope of the alternative investment vehicles definition. Pursuant to Section 7514.7, alternative investment vehicles must provide the following information for public disclosure by LACERS:

1. The fees and expenses that LACERS pays directly to the alternative investment vehicle, the management company or related parties.
2. LACERS' pro rata share of fees and expenses not included in (1) that are paid from the alternative investment vehicle to the management company or related parties.

3. LACERS' pro rata share of carried interest distributed by the alternative investment vehicle to the management company or related parties.
4. LACERS' pro rata share of aggregate fees and expenses paid by all of the portfolio companies held by the alternative investment vehicle to the fund manager or related parties.
5. The gross and net internal rate of return of the fund, since inception.
6. Any additional information described in the California Public Records Act [Government Code Section 6254.26 (b)]:
 - i. The name, address, and vintage year of each alternative investment vehicle.
 - ii. The dollar amount of the commitment made by LACERS to each alternative investment vehicle since inception.
 - iii. The dollar amount of cash contributions made by LACERS to each alternative investment vehicle since inception.
 - iv. The dollar amount, on a fiscal year-end basis, of cash distributions received by LACERS from each alternative investment vehicle.
 - v. The dollar amount, on a fiscal year-end basis, of cash distributions received by LACERS plus remaining value of partnership assets attributable to LACERS investment in each alternative investment vehicle.
 - vi. The net internal rate of return of each alternative investment vehicle since inception.
 - vii. The investment multiple of each alternative investment vehicle since inception.
 - viii. The dollar amount of the total management fees and costs paid on an annual fiscal year-end basis, by LACERS to each alternative investment vehicle.
 - ix. The dollar amount of cash profit received by LACERS from each alternative investment vehicle on a fiscal year-end basis.

The law applies mandatorily to funds committed to on and after January 1, 2017. Through the fiscal year ending June 30, 2019, 45 private equity funds and three real estate funds within the LACERS portfolio were required by contract to comply with Section 7514.7.

The law is voluntary for funds committed to prior to January 1, 2017, and for which no new capital commitments have been made (pre-2017 funds), subject to LACERS using reasonable effort to acquire the information. LACERS' private equity and real estate consultants, TorreyCove Capital Partners, LLC and The Townsend Group, respectively, contacted all pre-2017 private equity funds (193 funds) and real estate funds (45 funds) requesting information in accordance with Section 7514.7. Of these funds, 189 private equity funds and 40 real estate funds provided the data.

The attached report contains LACERS alternative investments disclosures for the fiscal year ending June 30, 2019, pursuant to Section 7514.7.

Strategic Plan Impact Statement

The annual reporting of specific fees, expense and other information of LACERS private market funds promotes good governance practices (Goal V).

Prepared by: Eduardo Park, Investment Officer I, Investment Division

RJ/BF/EP:sg

- Attachments:
1. Mandatory Disclosure Report for Private Equity Funds
 2. Voluntary Disclosure Report for Private Equity Funds
 3. Mandatory Disclosure Report for Real Estate Funds
 4. Voluntary Disclosure Report for Real Estate Funds

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

MANDATORY DISCLOSURE BY FUNDS COMMITTED TO ON AND AFTER JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|-----------------------------------|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| 1315 Capital Fund II | 2929 Walnut Street Philadelphia, PA 19104 | 2018 | USD | 125,308 | - | - | - | 10,000,000 | 1,230,530 | 8,769,470 | - | 8,769,470 | - | 2.8% | (26.3)% | 0.91x |
| ABRY Advanced Securities Fund IV | 888 Boylston St Boston, MA 02199 | 2018 | USD | 328,706 | - | - | N/A | 40,000,000 | 3,238,391 | 36,761,609 | - | 36,761,609 | - | 47.3% | (38.8)% | 0.91x |
| ABRY Partners IX | 888 Boylston St Boston, MA 02199 | 2019 | USD | - | - | - | N/A | 40,000,000 | - | 40,000,000 | - | 40,000,000 | - | N/A | N/A | N/A |
| ABRY Senior Equity V | 888 Boylston St Boston, MA 02199 | 2016 | USD | 134,633 | - | - | N/A | 10,000,000 | 3,259,831 | 7,231,321 | 977,503 | 8,208,824 | 454,248 | 30.9% | 13.5% | 1.16x |
| Advent Global Technology Fund | 800 Boylston Street Boston, MA 02199 | 2019 | USD | - | - | - | - | 15,000,000 | - | 15,000,000 | - | 15,000,000 | - | N/A | N/A | N/A |
| Advent International GPE IX | 800 Boylston Street Boston, MA 02199 | 2019 | USD | - | - | - | - | 45,000,000 | - | 45,000,000 | - | 45,000,000 | - | N/A | N/A | N/A |
| American Securities Partners VIII | 299 Park Avenue New York, NY 10171 | 2019 | USD | 13,550 | 330,453 | - | - | 40,000,000 | 13,550 | 39,986,450 | - | 39,986,450 | - | (100.0)% | (100.0)% | 0.00x |
| Ascribe Opportunities Fund IV | 299 Park Avenue New York, NY 10171 | 2018 | USD | - | - | - | - | 25,000,000 | - | 25,000,000 | - | 25,000,000 | - | N/A | N/A | N/A |
| Astorg VII | 68 rue du Faubourg Saint-Honore, Paris, 75008 | 2019 | EUR | 349,216 | - | - | - | 36,123,864 | 1,802,044 | 34,487,485 | - | 34,487,485 | - | (100.0)% | (100.0)% | 0.81x |
| Astra Partners I | 2099 Pennsylvania Avenue Washington, D.C., 20006 | 2017 | USD | 225,665 | 2,701 | - | - | 10,000,000 | 1,432,885 | 8,567,116 | (47,972) | 8,519,143 | - | 19.1% | 11.2% | 1.08x |

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

MANDATORY DISCLOSURE BY FUNDS COMMITTED TO ON AND AFTER JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|--|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Baring Asia Private Equity Fund VII | 8 Finance Street Central Hong Kong | 2018 | USD | - | 628,372 | - | - | 25,000,000 | 2,577,978 | 22,422,022 | - | 22,422,022 | - | 5.0% | (83.7)% | 0.79x |
| Brentwood Associates Private Equity VI | 11150 Santa Monica Blvd Los Angeles, CA 90025 | 2017 | USD | - | 649,908 | - | 120,384 | 25,000,000 | 3,100,793 | 21,899,207 | 83,922 | 21,983,129 | - | 6.2% | (48.8)% | 0.74x |
| CVC Capital Partners VII | 111 Strand London, WC2R 0AG | 2017 | EUR | 564,306 | 564,306 | - | 229 | 28,567,140 | 4,291,821 | 22,858,837 | 92,598 | 22,951,435 | 48,400 | 36.3% | 41.8% | 1.22x |
| DEFY Partners I | 2973 Woodside Road Woodside, CA 94062 | 2017 | USD | - | 270,168 | - | - | 10,000,000 | 5,100,000 | 4,900,000 | - | 4,900,000 | - | 19.3% | 3.7% | 1.03x |
| DEFY Partners II | 2973 Woodside Road Woodside, CA 94062 | 2019 | USD | - | - | - | - | 18,010,000 | - | 18,010,000 | - | 18,010,000 | - | N/A | N/A | N/A |
| Encap Energy Capital Fund XI | 1100 Louisiana Street Houston, TX 77002 | 2017 | USD | 602,460 | - | - | - | 40,000,000 | 7,252,973 | 32,747,027 | - | 32,747,027 | - | 1.1% | (19.8)% | 0.83x |
| FS Equity Partners VIII | 11100 Santa Monica Blvd Los Angeles, CA 90025 | 2019 | USD | 147,676 | - | - | - | 25,000,000 | 2,463,470 | 22,536,530 | - | 22,536,530 | - | 0.0% | (80.8)% | 0.94x |
| Genstar Capital Partners IX | Four Embarcadero Center San Francisco, CA 94111 | 2019 | USD | - | - | - | - | 25,000,000 | - | 25,000,000 | - | 25,000,000 | - | N/A | N/A | N/A |
| Genstar IX Opportunities Fund I | Four Embarcadero Center San Francisco, CA 94111 | 2019 | USD | - | - | - | - | 25,000,000 | - | 25,000,000 | - | 25,000,000 | - | N/A | N/A | N/A |
| Gilde Buy-Out Fund VI | Herculesplein 104 - 3584 AA Utrecht, Netherlands | 2019 | EUR | - | - | - | - | 39,684,790 | - | 39,691,770 | - | 39,691,770 | - | N/A | N/A | N/A |

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

MANDATORY DISCLOSURE BY FUNDS COMMITTED TO ON AND AFTER JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|--|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Glendon Opportunities Fund II | 1620 26th Street Santa Monica, CA 90404 | 2019 | USD | - | - | - | - | 40,000,000 | - | 40,000,000 | - | 40,000,000 | - | N/A | N/A | N/A |
| GTCR Fund XII-AB | 300 N. LaSalle St., Suite 5600 Chicago, IL 60654 | 2017 | USD | 943,619 | 68,470 | - | 50,629 | 40,000,000 | 9,904,000 | 30,096,000 | - | 30,096,000 | - | (11.2)% | (23.9)% | 0.85x |
| H&F Spock 1 | 415 Mission Street San Francisco, CA 94105 | 2018 | USD | - | - | - | - | - | 3,257,917 | - | - | - | - | 50.4% | 50.3% | 1.65x |
| Harvest Partners VIII | 280 Park Avenue New York, NY 10017 | 2019 | USD | - | - | - | - | 50,000,000 | - | 50,000,000 | - | 50,000,000 | - | N/A | N/A | N/A |
| Hellman & Friedman Capital Partners IX | 415 Mission Street San Francisco, CA 94105 | 2019 | USD | - | - | - | - | 30,000,000 | - | 30,000,000 | - | 30,000,000 | - | N/A | N/A | N/A |
| Mill Point Capital Partners | 555 Madison Avenue 16th Floor New York, NY 10022 | 2017 | USD | 202,720 | - | - | 45,380 | 10,000,000 | 4,213,814 | 5,803,199 | 23,024 | 5,826,223 | - | 17.6% | 7.3% | 1.06x |
| New Enterprise Associates 16 | 5425 Wisconsin Ave Chevy Chase, MD 20815 | 2017 | USD | - | 250,982 | - | - | 25,000,000 | 12,937,500 | 12,062,500 | - | 12,062,500 | - | 17.9% | 12.4% | 1.12x |
| New Enterprise Associates 17 | 5425 Wisconsin Ave Chevy Chase, MD 20815 | 2019 | USD | - | - | - | - | 35,000,000 | - | 35,000,000 | - | 35,000,000 | - | N/A | N/A | N/A |
| NMS Fund III | 32 Old Slip New York, NY 10005 | 2017 | USD | 229,101 | 5,026 | - | 4,432 | 10,000,000 | 2,278,240 | 8,005,869 | 317,008 | 8,322,878 | - | 11.0% | (9.8)% | 0.91x |
| Oak HC-FT Partners II | Three Pickwick Plaza Greenwich, CT 06830 | 2017 | USD | 218,144 | - | - | - | 10,000,000 | 5,321,218 | 4,678,782 | - | 4,678,782 | - | 33.6% | 22.6% | 1.14x |

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

MANDATORY DISCLOSURE BY FUNDS COMMITTED TO ON AND AFTER JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|------------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Palladium Equity Partners V | Rockefeller Center New York, NY 10020 | 2017 | USD | 748,399 | 618,911 | - | 6,781 | 25,000,000 | 4,075,423 | 20,924,577 | 21,179 | 20,945,756 | 21,179 | (16.2)% | (36.7)% | 0.71x |
| Platinum Equity Capital Partners V | 360 N. Crescent Dr. Beverly Hills, CA 90210 | 2019 | USD | - | - | - | - | 50,000,000 | - | 50,000,000 | - | 50,000,000 | - | N/A | N/A | N/A |
| Platinum Equity Small Cap Fund | 360 N. Crescent Dr. Beverly Hills, CA 90210 | 2018 | USD | 246,262 | - | - | - | 22,500,000 | 1,798,070 | 20,788,330 | 86,400 | 20,874,730 | - | (16.2)% | (30.6)% | 0.77x |
| Polaris Growth Fund | One Marina Park Drive Boston, MA 02210 | 2018 | USD | 183,333 | - | - | - | 10,000,000 | 1,400,000 | 8,600,000 | - | 8,600,000 | - | (59.7)% | (59.7)% | 0.81x |
| Roark Capital Partners II Side Car | 1180 Peachtree Street NE Atlanta, GA 30309 | 2018 | USD | 51,608 | - | - | N/A | 10,000,000 | 6,105,398 | 4,018,609 | - | 4,018,609 | - | (1.0)% | (5.4)% | 0.97x |
| Roark Capital Partners V | 1180 Peachtree Street NE Atlanta, GA 30309 | 2018 | USD | 140,125 | 260,512 | - | N/A | 15,000,000 | 3,221,893 | 11,724,133 | - | 11,724,133 | - | 28.0% | 27.5% | 1.13x |
| SG Growth Partners IV | 402 West 13th Street New York, NY 10014 | 2017 | USD | 116,097 | 40,712 | - | - | 10,000,000 | 6,439,118 | 3,560,882 | - | 3,560,882 | - | 73.0% | 52.1% | 1.37x |
| Spark Capital Growth Fund III | 137 Newbury St. #8 Boston, MA 02116 | 2019 | USD | - | - | - | - | 26,750,000 | - | 26,750,000 | - | 26,750,000 | - | N/A | N/A | N/A |
| Spark Capital Partners VI | 137 Newbury St. #8 Boston, MA 02116 | 2019 | USD | - | - | - | - | 13,250,000 | - | 13,250,000 | - | 13,250,000 | - | N/A | N/A | N/A |
| TA XIII | 200 Clarendon Street Boston, MA 02116 | 2019 | USD | - | - | - | - | 35,000,000 | - | 35,000,000 | - | 35,000,000 | - | N/A | N/A | N/A |

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
 CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
 FOR FISCAL YEAR ENDING JUNE 30, 2019

MANDATORY DISCLOSURE BY FUNDS COMMITTED TO ON AND AFTER JANUARY 1, 2017
 PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|--------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| TCV X | 250 Middlefield Road Menlo Park, CA 94025 | 2019 | USD | 232,273 | - | - | N/A | 25,000,000 | 1,250,000 | 23,750,000 | - | 23,750,000 | - | (63.5)% | (83.5)% | 0.79x |
| Thoma Bravo Discover Fund II | 150 N. Riverside Plaza Chicago, IL 60606 | 2018 | USD | 255,346 | 4,979 | - | 4,246 | 10,000,000 | 2,333,942 | 7,666,058 | - | 7,666,058 | - | 18.8% | (12.3)% | 0.94x |
| Thoma Bravo Fund XIII | 150 N. Riverside Plaza Chicago, IL 60606 | 2018 | USD | 124,382 | 226,223 | - | 103,672 | 30,000,000 | 10,717,375 | 19,282,625 | - | 19,282,625 | - | 37.5% | (4.9)% | 0.99x |
| Upfront VI | 1314 7th Street Santa Monica, CA 90401 | 2017 | USD | 416,064 | - | - | - | 20,000,000 | 9,005,506 | 10,994,494 | - | 10,994,494 | - | 11.3% | (3.1)% | 0.98x |
| Vista Equity Partners Fund VII | 401 Congress Avenue Austin, TX 78701 | 2018 | USD | 257,093 | - | - | - | 40,000,000 | 5,506,729 | 34,519,447 | 32,091 | 34,551,538 | - | 0.4% | (17.3)% | 0.96x |

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|-----------------------------------|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| 1315 Capital Fund | 2929 Walnut Street Philadelphia, PA 19104 | 2015 | USD | 220,608 | - | - | N/A | 10,000,000 | 8,385,869 | 2,542,617 | 2,172,807 | 4,715,424 | - | 23.0% | 12.8% | 1.28x |
| ABRY Advanced Securities Fund III | 888 Boylston St Boston, MA 02199 | 2014 | USD | 395,695 | - | 137,742 | N/A | 20,000,000 | 15,035,722 | 9,664,242 | 3,496,956 | 13,161,199 | - | 17.9% | 9.3% | 1.37x |
| ABRY Heritage Partners | 888 Boylston St Boston, MA 02199 | 2016 | USD | 236,914 | - | - | N/A | 10,000,000 | 4,416,241 | 6,262,460 | - | 6,262,460 | - | 26.6% | 11.1% | 1.18x |
| ABRY Partners VIII | 888 Boylston St Boston, MA 02199 | 2014 | USD | 411,694 | - | - | N/A | 25,000,000 | 27,695,221 | 2,128,744 | 3,935,656 | 6,064,399 | - | 13.8% | 8.9% | 1.28x |
| ACON Equity Partners III | 1133 Connecticut Avenue NW Washington, D.C., 20036 | 2012 | USD | 265,499 | 96,839 | - | N/A | 20,000,000 | 18,089,374 | 2,062,549 | 298,166 | 2,360,715 | - | 10.2% | 7.0% | 1.32x |
| Acon-Bastion Partners II | 1133 Connecticut Avenue NW Washington, D.C., 20036 | 2006 | USD | 3,612 | - | - | N/A | 5,000,000 | 4,721,150 | 352,035 | - | 352,035 | - | 14.7% | 12.3% | 1.74x |
| Advent International GPE VI A | 800 Boylston Street Boston, MA 02199 | 2008 | USD | 56,981 | 5,672 | 116,519 | N/A | 20,000,000 | 20,000,000 | - | 5,992,936 | 5,992,936 | 48,400 | 24.0% | 16.9% | 2.11x |
| Advent International GPE VII B | 800 Boylston Street Boston, MA 02199 | 2012 | GBP | 273,311 | 29,451 | 490,065 | N/A | 30,000,000 | 28,200,000 | 1,800,000 | 8,484,654 | 10,284,654 | - | 23.0% | 16.0% | 1.78x |
| Advent International GPE VIII B-2 | 800 Boylston Street Boston, MA 02199 | 2016 | USD | 508,913 | 222,466 | 1,306,923 | N/A | 35,000,000 | 29,435,000 | 5,565,000 | - | 5,565,000 | - | 24.0% | 15.7% | 1.23x |
| AION Capital Partners | 9 West 57th Street New York, NY 10019 | 2012 | USD | 236,438 | (22,093) | N/A | N/A | 20,000,000 | 17,745,490 | 2,572,520 | 1,169,008 | 3,741,527 | - | 13.9% | 8.6% | 1.20x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|----------------------------------|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Alchemy Plan (City of Angels) | 21 Palmer Street London, SW1H 0AD | 1999 | USD | N/A | N/A | N/A | N/A | 38,194,245 | 40,196,637 | - | 240,584 | 240,583 | - | 6.8% | 5.5% | 1.24x |
| American Securities Partners VII | 299 Park Avenue New York, NY 10171 | 2016 | USD | 487,708 | N/A | (5,477) | N/A | 25,000,000 | 19,908,999 | 5,091,001 | 2,628,906 | 7,719,907 | - | 0.5% | (4.2)% | 0.94x |
| Angeleno Investors III | 2029 Century Park East Los Angeles, CA 90067 | 2009 | USD | 172,396 | 736 | - | N/A | 10,000,000 | 10,190,193 | - | 83,358 | 83,358 | - | 2.2% | (3.2)% | 0.86x |
| Angeles Equity Partners I | 2425 Olympic Blvd Suite 660E Santa Monica, CA 90404 | 2015 | USD | 274,370 | 33,465 | - | 16,794 | 10,000,000 | 2,815,412 | 7,193,917 | 197,409 | 7,391,326 | - | 5.0% | (15.3)% | 0.75x |
| Apollo Investment Fund IV | 9 West 57th Street New York, NY 10019 | 1998 | USD | N/A | N/A | N/A | N/A | 5,000,000 | 4,989,241 | 10,759 | - | 10,759 | - | 9.3% | 8.5% | 1.67x |
| Apollo Investment Fund VI | 9 West 57th Street New York, NY 10019 | 2006 | USD | 6,238 | 370 | - | 533 | 15,000,000 | 14,372,999 | 627,001 | 2,937,404 | 3,564,405 | - | 12.0% | 8.7% | 1.69x |
| Apollo Investment Fund VII | 9 West 57th Street New York, NY 10019 | 2008 | EUR | 39,565 | 4,828 | - | 7,131 | 20,000,000 | 17,508,373 | 2,487,157 | 882,140 | 3,369,296 | - | 33.0% | 22.7% | 1.98x |
| Apollo Investment Fund VIII | 9 West 57th Street New York, NY 10019 | 2013 | USD | 148,125 | 151,431 | 357,518 | 151,431 | 40,000,000 | 33,349,580 | 6,692,697 | 2,549,474 | 9,242,171 | - | 17.0% | 10.8% | 1.33x |
| Ascribe Opportunities Fund II | 299 Park Avenue New York, NY 10171 | 2010 | USD | 110,416 | N/A | (588,341) | N/A | 20,000,000 | 30,342,833 | 3,180,317 | 998,939 | 4,179,255 | - | 11.9% | 6.8% | 1.35x |
| Ascribe Opportunities Fund III | 299 Park Avenue New York, NY 10171 | 2014 | USD | 507,030 | N/A | - | N/A | 30,000,000 | 44,797,834 | 10,841,086 | 4,244,965 | 15,086,051 | - | 15.4% | 8.5% | 1.18x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Astorg VI | 68 rue du Faubourg Saint-Honore Paris, 75008 | 2015 | USD | 560,307 | 59,573 | - | - | 25,625,875 | 19,513,357 | 5,254,326 | - | 5,254,326 | - | 14.0% | 9.2% | 1.13x |
| Austin Ventures VII | 835 West 6th Street Austin, TX 78703-5421 | 1999 | USD | N/A | N/A | N/A | N/A | 17,000,000 | 17,000,000 | - | 158,667 | 158,667 | - | (2.8)% | (2.8)% | 0.81x |
| Austin Ventures VIII | 835 West 6th Street Austin, TX 78703-5421 | 2001 | USD | N/A | N/A | N/A | N/A | 8,300,000 | 8,300,000 | - | 71,250 | 71,250 | - | 8.5% | 6.9% | 1.65x |
| Avenue Europe Special Situations Fund II | 11 West 42nd Street New York, NY 10036 | 2011 | USD | 40,795 | N/A | 1,166,998 | N/A | 28,323,908 | 28,305,005 | - | 5,480,881 | 5,480,881 | - | 3.5% | 3.4% | 1.13x |
| Bain Capital Asia Fund III | 200 Clarendon Street Boston, MA 02116 | 2016 | USD | 509,150 | - | - | N/A | 15,000,000 | 9,743,222 | 5,256,778 | - | 5,256,778 | - | 46.2% | 23.2% | 1.26x |
| Bain Capital Double Impact Fund | 200 Clarendon Street Boston, MA 02116 | 2016 | USD | 395,188 | - | - | - | 10,000,000 | 5,144,016 | 6,063,216 | 1,262,838 | 7,326,054 | - | 8.5% | 6.1% | 1.07x |
| Baring Asia Private Equity Fund VI (LP 1) | 8 Finance Street Central Hong Kong | 2015 | USD | 584,709 | N/A | N/A | N/A | 25,000,000 | 23,874,044 | 3,199,932 | 1,181,126 | 4,381,058 | - | 22.1% | 15.6% | 1.36x |
| BC European Capital IX | 40 Portman Square London, W1H 6DA | 2011 | USD | 144,857 | 11,470 | 6 | 1,538 | 18,146,966 | 18,247,214 | 376,140 | 5,027,211 | 5,403,351 | - | 18.3% | 12.9% | 1.62x |
| BC European Capital X | 40 Portman Square London, W1H 6DA | 2017 | EUR | 491,486 | 51,450 | - | 2,959 | 31,651,237 | 15,053,038 | 15,310,423 | - | 15,310,423 | - | 9.1% | 4.4% | 1.05x |
| BDCM Opportunity Fund IV | One Sound Shore Drive Greenwich, CT 06830 | 2015 | USD | 450,889 | - | 37,730 | - | 25,000,000 | 24,981,365 | 5,728,261 | 2,434,164 | 8,162,425 | - | 19.1% | 11.3% | 1.29x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|-------------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Blackstone Capital Partners V & V-S | 345 Park Avenue New York, NY 10154 | 2005 | USD | 6,488 | - | 178,726 | 6,488 | 20,000,000 | 19,263,727 | 1,199,655 | 784,720 | 1,984,375 | - | 8.5% | 7.9% | 1.67x |
| Blackstone Capital Partners VI | 345 Park Avenue New York, NY 10154 | 2011 | USD | 94,180 | - | 538,780 | 25,530 | 20,000,000 | 18,700,290 | 2,639,920 | 4,756,955 | 7,396,875 | - | 17.8% | 12.8% | 1.66x |
| Blackstone Energy Partners | 345 Park Avenue New York, NY 10154 | 2011 | USD | 122,694 | - | 644,803 | 140,541 | 25,000,000 | 23,561,768 | 2,337,402 | 7,147,202 | 9,484,604 | - | 17.2% | 13.5% | 1.73x |
| Blue Sea Capital Fund I | 222 Lakeview Avenue Ste 1700 West Palm Beach, FL 33401 | 2013 | USD | 165,284 | 67,901 | - | 188,220 | 10,000,000 | 8,311,730 | 1,688,992 | 313,495 | 2,002,488 | - | 18.1% | 9.3% | 1.26x |
| Carlyle Partners IV | 1001 Pennsylvania Ave, NW Washington, D.C., 20004 | 2005 | USD | 2,386 | N/A | 10,977 | N/A | 20,000,000 | 19,633,655 | 1,600,767 | 49,209 | 1,649,976 | - | 14.0% | 13.0% | 2.03x |
| Carlyle Partners V | 1001 Pennsylvania Ave, NW Washington, D.C., 20004 | 2007 | USD | 3,458 | 20,651 | 165,434 | 30,997 | 30,000,000 | 26,610,702 | 5,426,106 | 2,008,663 | 7,434,769 | - | 15.8% | 13.8% | 1.91x |
| Carpenter Community BancFund-A | 5 Park Plaza Irvine, CA 92614 | 2008 | USD | N/A | N/A | N/A | N/A | 10,000,000 | 9,692,231 | - | 1,692,211 | 1,692,211 | - | 9.9% | 8.2% | 1.69x |
| CenterGate Capital Partners I | 900 South Capital of Texas Highway, Austin, TX 78746 | 2015 | USD | - | 145,021 | - | 64,557 | 10,000,000 | 2,932,504 | 7,067,496 | - | 7,067,496 | - | 4.0% | (5.0)% | 0.92x |
| Charterhouse Capital Partners IX | 7th Floor, Warwick Court London, EC4M 7DX | 2008 | USD | - | 54,883 | 248,161 | - | 18,105,408 | 16,939,330 | 1,097,441 | 1,257,260 | 2,354,701 | - | 22.0% | 9.8% | 1.33x |
| Charterhouse Capital Partners VIII | 7th Floor, Warwick Court London, EC4M 7DX | 2006 | USD | - | 1,179 | - | N/A | 19,706,859 | 19,639,870 | 1 | - | 1 | - | 2.0% | (0.6)% | 0.96x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|----------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| CHP III | 230 Nassau Street Princeton, NJ 08542 | 2006 | USD | - | 135,427 | 596,252 | 36,946 | 15,000,000 | 15,000,000 | - | 8,074,345 | 8,074,345 | - | 15.3% | 7.2% | 1.68x |
| CHS Private Equity V | 10 South Wacker Drive Chicago, IL 60606 | 2005 | USD | - | 23,758 | - | N/A | 20,000,000 | 20,145,530 | - | - | - | - | 9.9% | 9.8% | 1.75x |
| Coller International Partners VI | Park House London, WiK 6AF | 2011 | EUR | 216,332 | 12,119 | - | - | 25,000,000 | 18,290,837 | 7,430,817 | 2,508,466 | 9,939,282 | - | 19.0% | 15.7% | 1.65x |
| Craton Equity Investors I | 865 South Figueroa Street Los Angeles, CA 90017 | 2006 | USD | N/A | N/A | N/A | N/A | 10,000,000 | 9,973,980 | 547 | - | 547 | - | (31.2)% | (32.9)% | 0.11x |
| CVC European Equity Partners III | 111 Strand London, WC2R 0AG | 2001 | USD | (20,819) | N/A | (141,836) | N/A | 15,000,000 | 14,776,341 | 222,957 | - | 222,957 | - | 40.0% | 41.0% | 2.88x |
| CVC European Equity Partners IV | 111 Strand London, WC2R 0AG | 2005 | USD | 3,230 | - | 2,694 | N/A | 26,008,211 | 23,210,339 | 2,674,639 | 11,263 | 2,685,902 | - | 22.6% | 16.8% | 2.01x |
| CVC European Equity Partners V | 111 Strand London, WC2R 0AG | 2008 | USD | 5,864 | 5,864 | 1,267,674 | 7,672 | 18,815,039 | 18,345,439 | 2,252,739 | 5,236,882 | 7,489,621 | - | 18.5% | 16.6% | 2.20x |
| DFJ Element | 565 E. Swedesford Road Wayne, PA 19087 | 2006 | USD | 41,981 | N/A | N/A | N/A | 8,000,000 | 7,846,106 | 164,000 | 203,625 | 367,625 | - | (4.3)% | (4.7)% | 0.67x |
| DFJ Frontier Fund II | 9785 South Monroe Street Sandy, UT 84070 | 2007 | USD | 8,904 | N/A | N/A | N/A | 5,000,000 | 5,002,783 | - | 448,234 | 448,234 | - | 0.5% | 0.5% | 1.04x |
| DFJ Growth 2013 | 2882 Sand Hill Road Menlo Park, CA 94025 | 2013 | USD | 86,009 | (714,719) | 399,325 | N/A | 25,000,000 | 24,701,311 | 425,000 | 3,819,645 | 4,244,645 | - | 29.8% | 19.9% | 2.07x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|--------------------------------|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| DFJ Growth III | 2882 Sand Hill Road Menlo Park, CA 94025 | 2017 | USD | N/A | N/A | N/A | N/A | 15,000,000 | 8,970,000 | 6,030,000 | - | 6,030,000 | - | 13.4% | 13.4% | 1.14x |
| EIG Energy Fund XVI | 1700 Pennsylvania Ave NW Washington, D.C., 20006 | 2013 | USD | - | 258,523 | - | - | 25,000,000 | 22,009,905 | 7,660,610 | 2,326,637 | 9,987,246 | - | 11.2% | 8.0% | 1.22x |
| Element Partners Fund II | 565 E. Swedesford Road Wayne, PA 19087 | 2008 | EUR | 123,684 | N/A | N/A | N/A | 10,000,000 | 9,361,465 | 636,905 | 7,198,729 | 7,835,633 | - | 7.3% | 5.4% | 1.41x |
| EnCap Energy Capital Fund IX | 1100 Louisiana Street Houston, TX 77002 | 2012 | EUR | 347,789 | - | - | - | 30,000,000 | 28,323,152 | 1,892,288 | 4,256,328 | 6,148,616 | - | 17.9% | 12.0% | 1.38x |
| EnCap Energy Capital Fund VIII | 1100 Louisiana Street Houston, TX 77002 | 2010 | USD | 81,684 | - | - | - | 15,000,000 | 14,283,277 | 720,348 | 172,018 | 892,367 | - | (2.2)% | (4.8)% | 0.84x |
| Encap Energy Capital Fund X | 1100 Louisiana Street Houston, TX 77002 | 2015 | USD | 364,280 | - | - | - | 35,000,000 | 27,304,246 | 7,731,588 | 410,193 | 8,141,781 | - | 14.1% | 10.4% | 1.22x |
| Energy Capital Partners II | 51 John F. Kennedy Parkway Short Hills, NJ 07078 | 2009 | USD | 69,075 | 12,790 | - | - | 20,000,000 | 14,900,099 | 5,949,821 | 1,871,647 | 7,821,468 | - | 17.0% | 10.2% | 1.50x |
| Energy Capital Partners III | 51 John F. Kennedy Parkway Short Hills, NJ 07078 | 2014 | USD | 500,253 | 169,829 | - | N/A | 40,000,000 | 32,878,301 | 6,726,517 | 5,443,123 | 12,169,640 | - | 18.0% | 10.1% | 1.28x |
| Enhanced Equity Fund | 600 Lexington Avenue New York, NY 10022 | 2006 | USD | - | 32,259 | - | - | 10,000,000 | 10,000,000 | - | 50,915 | 50,915 | - | 2.9% | 1.1% | 1.08x |
| Enhanced Equity Fund II | 600 Lexington Avenue New York, NY 10022 | 2010 | USD | N/A | N/A | N/A | N/A | 10,000,000 | 9,570,165 | - | 481,117 | 481,117 | - | (17.6)% | (21.7)% | 0.55x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Essex Woodlands Health Ventures Fund IV | 335 Bryant Street Palo Alto, CA 94301 | 1998 | USD | N/A | N/A | N/A | N/A | 4,000,000 | 4,000,000 | - | 63,325 | 63,325 | - | 7.7% | 7.7% | 1.48x |
| Essex Woodlands Health Ventures Fund V | 335 Bryant Street Palo Alto, CA 94301 | 2000 | USD | N/A | N/A | N/A | N/A | 10,000,000 | 10,000,000 | - | - | - | - | 11.8% | 4.2% | 1.23x |
| Essex Woodlands Health Ventures Fund VI | 335 Bryant Street Palo Alto, CA 94301 | 2004 | USD | N/A | N/A | N/A | N/A | 15,000,000 | 14,587,500 | - | 445,744 | 445,744 | - | 4.5% | 4.4% | 1.47x |
| FIMI Opportunity V | 98 Yigal Alon Street Tel Aviv, 6789141 | 2012 | USD | N/A | N/A | N/A | N/A | 20,000,000 | 18,194,334 | 1,805,666 | 2,468,941 | 4,274,607 | - | 19.7% | 18.3% | 1.96x |
| First Reserve Fund X | First Reserve Greenwich, CT 06902 | 2004 | USD | 2,427 | N/A | N/A | N/A | 20,000,000 | 20,000,000 | - | - | - | - | 48.0% | 31.1% | 1.83x |
| First Reserve Fund XI | First Reserve Greenwich, CT 06902 | 2006 | USD | 396,181 | (380,248) | - | - | 30,000,000 | 30,000,000 | - | 747,140 | 747,140 | - | (6.3)% | (6.5)% | 0.74x |
| First Reserve Fund XII | First Reserve Greenwich, CT 06902 | 2008 | USD | 43,419 | 610 | - | 796 | 25,000,000 | 25,990,474 | - | 47,051 | 47,051 | - | (7.6)% | (9.9)% | 0.63x |
| Gilde Buy-Out Fund V | Herculesplein 104 - 3584 AA Utrecht, Netherlands | 2016 | USD | 520,292 | 5,641 | - | 5,641 | 27,121,713 | 18,549,502 | 7,831,294 | 1,071,333 | 8,902,627 | - | 13.9% | 8.5% | 1.13x |
| Glendon Opportunities Fund | 1620 26th Street Santa Monica, CA 90404 | 2014 | USD | 477,319 | - | - | (7,305) | 20,000,000 | 16,990,996 | 3,000,000 | - | 3,000,000 | - | 6.2% | 6.2% | 1.24x |
| Green Equity Investors V | 11111 Santa Monica Blvd Los Angeles, CA 90025 | 2007 | USD | - | 14,507 | - | N/A | 20,000,000 | 18,268,906 | 1,731,094 | 5,961,969 | 7,693,063 | - | 24.7% | 19.9% | 2.53x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|--|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Green Equity Investors VI | 11111 Santa Monica Blvd Los Angeles, CA 90025 | 2012 | USD | 132,072 | 162,630 | 195,517 | - | 20,000,000 | 18,016,531 | 2,057,436 | 1,898,404 | 3,955,840 | - | 22.6% | 16.4% | 1.84x |
| Green Equity Investors VII | 11111 Santa Monica Blvd Los Angeles, CA 90025 | 2017 | USD | 73,626 | 212,233 | - | - | 25,000,000 | 14,769,381 | 10,329,616 | - | 10,329,616 | - | 17.5% | 13.5% | 1.17x |
| GTCR Fund IX-A | 300 N. LaSalle St., Suite 5600 Chicago, IL 60654 | 2006 | USD | 3,503 | 1,372 | 60,381 | 526 | 15,000,000 | 14,288,203 | 711,797 | 1,924,030 | 2,635,827 | - | 13.8% | 13.8% | 1.81x |
| GTCR Fund VIII | 300 N. LaSalle St., Suite 5600 Chicago, IL 60654 | 2003 | USD | 6,668 | - | - | - | 20,000,000 | 18,520,960 | 1,495,040 | 1,546,799 | 3,041,839 | - | 22.3% | 22.3% | 1.75x |
| Halifax Capital Partners II | 1133 Connecticut Avenue, NW Suite 300 Washington, 20036 | 2005 | USD | 19,398 | N/A | N/A | N/A | 10,000,000 | 8,098,600 | 1,901,400 | 41,490 | 1,942,890 | - | 18.0% | 7.3% | 1.32x |
| Harvest Partners VII | 280 Park Avenue New York, NY 10017 | 2016 | USD | 27,449 | N/A | N/A | N/A | 20,000,000 | 14,957,017 | 5,422,066 | 379,083 | 5,801,149 | - | 10.1% | 7.4% | 1.10x |
| Hellman & Friedman Capital Partners V | 415 Mission Street San Francisco, CA 94105 | 2004 | USD | N/A | N/A | N/A | N/A | 10,463,972 | 9,931,388 | - | 160,108 | 160,108 | - | 28.5% | 27.8% | 2.68x |
| Hellman & Friedman Capital Partners VI | 415 Mission Street San Francisco, CA 94105 | 2006 | USD | N/A | N/A | N/A | N/A | 20,000,000 | 19,344,481 | 578,558 | 243,428 | 821,986 | - | 18.0% | 12.9% | 1.87x |
| Hellman & Friedman Capital Partners VII | 415 Mission Street San Francisco, CA 94105 | 2011 | USD | 49,199 | 3,432 | 1,143,539 | 3,432 | 20,000,000 | 19,062,781 | 935,870 | 5,990,976 | 6,926,846 | - | 32.0% | 25.4% | 2.80x |
| Hellman & Friedman Capital Partners VIII | 415 Mission Street San Francisco, CA 94105 | 2016 | USD | 363,374 | 2,474 | - | 2,474 | 20,000,000 | 18,972,849 | 1,450,910 | 423,759 | 1,874,669 | - | 19.0% | 15.9% | 1.20x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|-----------------------------------|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| High Road Capital Partners II | 1251 6th Avenue New York, NY 10020 | 2013 | USD | 271,386 | - | - | 597,697 | 25,000,000 | 16,926,337 | 8,073,663 | - | 8,073,663 | - | 26.3% | 18.2% | 1.69x |
| Hony Capital Fund V | 6th floor, South Tower C, Raycom InfoTech Park, No. 2, Ke Xue Yuan Nan Lu, Haidian District, Beijing, 100190 | 2011 | USD | N/A | N/A | N/A | N/A | 25,000,000 | 25,084,013 | 393,769 | 477,782 | 871,551 | - | 7.0% | 4.0% | 1.21x |
| Incline Equity Partners IV | EQT Plaza – Suite 2300 Pittsburgh, PA 15222 | 2017 | USD | 210,687 | 57,751 | - | 34,150 | 10,000,000 | 4,565,086 | 5,434,914 | 11,705 | 5,446,618 | - | 27.7% | 6.6% | 1.04x |
| Insight Venture Partners IX | 1114 Avenue of the Americas New York, NY 10036 | 2015 | USD | 471,198 | 4,094 | 712,232 | - | 25,000,000 | 24,620,088 | 961,394 | 2,372,190 | 3,333,584 | - | 37.0% | 29.4% | 2.06x |
| Insight Venture Partners VIII | 1114 Avenue of the Americas New York, NY 10036 | 2013 | USD | 291,126 | 3,842 | 3,027,027 | - | 20,000,000 | 19,585,777 | 718,147 | 15,662,135 | 16,380,282 | - | 22.0% | 16.7% | 2.08x |
| Institutional Venture Partners XV | 3000 Sand Hill Rd Menlo Park, CA 94025 | 2015 | USD | 468,620 | 63,002 | N/A | N/A | 20,000,000 | 19,000,000 | 1,000,000 | 1,091,021 | 2,091,021 | - | 21.9% | 21.9% | 1.57x |
| J.H. Whitney VI | 130 Main Street New Canaan, CT 06840 | 2005 | USD | - | 35,297 | - | N/A | 15,000,000 | 14,884,557 | 142,355 | 1,691,632 | 1,833,987 | - | 0.9% | -0.4% | 0.98x |
| J.H. Whitney VII | 130 Main Street New Canaan, CT 06840 | 2010 | USD | - | 35,297 | - | 105,952 | 25,000,000 | 23,655,162 | 1,344,838 | - | 1,344,838 | - | 14.0% | 13.3% | 1.74x |
| Kelso Investment Associates VII | 320 Park Avenue, 24th floor New York, NY 10022 | 2003 | USD | 9,037 | - | 13,555 | N/A | 18,000,000 | 17,131,163 | - | 65,298 | 65,298 | - | 17.3% | 12.6% | 1.72x |
| Kelso Investment Associates VIII | 320 Park Avenue, 24th floor New York, NY 10022 | 2007 | USD | 40,190 | N/A | 245,156 | 16,541 | 20,000,000 | 18,936,725 | 2,982,730 | 5,042,701 | 8,025,431 | - | 11.0% | 6.2% | 1.34x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---------------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Khosla Ventures IV | 2128 Sand Hill Road Menlo Park, CA 94025 | 2011 | USD | 300,000 | N/A | N/A | N/A | 20,000,000 | 19,620,000 | 380,000 | 5,385,744 | 5,765,744 | - | 33.7% | 23.0% | 2.88x |
| KKR 2006 Fund | 9 West 57th Street New York, NY 10019 | 2006 | USD | 27,927 | N/A | 457,004 | N/A | 30,000,000 | 30,277,374 | 503,462 | 2,011,934 | 2,515,396 | - | 11.8% | 9.2% | 1.78x |
| KKR European Fund II | 9 West 57th Street New York, NY 10019 | 2005 | USD | (9,825) | N/A | N/A | N/A | 15,000,000 | 15,497,844 | - | 19,262 | 19,262 | - | 6.1% | 4.7% | 1.36x |
| KPS Special Situations Fund IV | 485 Lexington Avenue, 31st Floor New York, NY 10017 | 2014 | USD | 183,841 | - | - | N/A | 25,000,000 | 13,542,040 | 11,041,203 | 1,377,416 | 12,418,619 | - | 47.3% | 20.2% | 1.30x |
| Levine Leichtman Capital Partners III | 335 North Maple Drive Beverly Hills, CA 90210 | 2003 | USD | N/A | N/A | N/A | N/A | 20,000,000 | 21,392,254 | - | - | - | - | 13.9% | 10.0% | 1.56x |
| Levine Leichtman Capital Partners IV | 335 North Maple Drive Beverly Hills, CA 90210 | 2008 | USD | N/A | N/A | N/A | N/A | 20,000,000 | 16,448,126 | 3,652,523 | 3,656,620 | 7,309,143 | - | 18.8% | 18.1% | 1.89x |
| Levine Leichtman Capital Partners V | 335 North Maple Drive Beverly Hills, CA 90210 | 2013 | USD | N/A | N/A | N/A | N/A | 30,000,000 | 25,943,237 | 5,526,403 | 6,828,646 | 12,355,049 | - | 15.0% | 11.7% | 1.51x |
| Lindsay Goldberg & Bessemer II | 630 Fifth Avenue New York, NY 10111 | 2006 | USD | - | 6,550 | - | N/A | 20,000,000 | 18,909,974 | 1,089,685 | 591,046 | 1,680,731 | - | 8.5% | 7.1% | 1.43x |
| Lindsay Goldberg III | 630 Fifth Avenue New York, NY 10111 | 2008 | USD | - | N/A | 86,354 | N/A | 20,000,000 | 19,161,442 | 898,214 | 4,414,981 | 5,313,195 | - | 11.8% | 8.1% | 1.36x |
| Longitude Venture Partners III | 2740 Sand Hill Road Menlo Park, CA 94025 | 2016 | USD | 231,765 | 3,034 | - | 3,034 | 10,000,000 | 5,522,146 | 4,477,854 | - | 4,477,854 | - | 38.7% | 20.9% | 1.22x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|--------------------------------------|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Madison Dearborn Capital Partners IV | 70 W. Madison Street Chicago, IL 60602 | 2000 | USD | 25,000 | - | 62 | - | 25,000,000 | 25,174,337 | 676,116 | - | 676,116 | - | 19.2% | 14.2% | 1.91x |
| Menlo Ventures IX | 2884 Sand Hill Road Menlo Park, CA 94025 | 2001 | USD | - | 1,468 | 407,160 | - | 20,000,000 | 20,000,000 | - | 1,221,473 | 1,221,473 | - | 0.7% | 0.8% | 1.05x |
| Nautic Partners V | 50 Kennedy Plaza Providence, RI 02903 | 2000 | USD | - | 1,071 | 14,460 | - | 15,000,000 | 14,426,866 | 477,187 | 59,791 | 536,978 | - | 27.8% | 17.0% | 2.11x |
| New Enterprise Associates 13 | 5425 Wisconsin Ave Chevy Chase, MD 20815 | 2009 | USD | 110,630 | 84,695 | 1,234,274 | 38,685 | 15,000,000 | 14,775,000 | 225,000 | 5,874,860 | 6,099,860 | - | 17.0% | 13.9% | 1.92x |
| New Enterprise Associates 15 | 5425 Wisconsin Ave Chevy Chase, MD 20815 | 2015 | USD | 180,965 | 86,176 | - | 56,055 | 20,000,000 | 17,700,000 | 2,300,000 | 2,487,677 | 4,787,677 | - | 32.0% | 22.8% | 1.74x |
| New Mountain Partners III | 787 7th Avenue New York, NY 10019 | 2007 | USD | 4,362 | - | 230,103 | 404,946 | 20,000,000 | 18,661,525 | 1,371,772 | 1,020,667 | 2,392,439 | - | 16.0% | 13.7% | 2.18x |
| New Water Capital | 2424 N Federal Hwy #418 Boca Raton, FL 33431 | 2015 | USD | 91,236 | 57,757 | - | 23,286 | 10,000,000 | 6,573,459 | 3,517,046 | 90,505 | 3,607,551 | - | 6.9% | 0.8% | 1.01x |
| Newbridge Asia IV | Two International Place Boston, MA 02110 | 2005 | USD | - | 10,071 | 7,343 | N/A | 10,000,000 | 9,846,880 | 655,734 | 42,164 | 697,898 | - | 23.0% | 16.8% | 2.22x |
| NGEN Partners III | 733 Third Avenue New York, NY 10017 | 2008 | USD | N/A | N/A | N/A | N/A | 10,000,000 | 10,877,467 | 308,108 | 20,971 | 329,079 | - | (1.0)% | (1.4)% | 0.92x |
| NGP Natural Resources XI | 5221 N. O'Connor Boulevard Irving, TX 75039 | 2014 | USD | 342,084 | 16,558 | - | 4,895 | 25,000,000 | 22,010,119 | 2,995,436 | 1,591,144 | 4,586,580 | - | 12.9% | 9.3% | 1.22x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|-------------------------------|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Nogales Investors Fund II | 9229 West Sunset Boulevard Los Angeles, CA 90069 | 2006 | USD | N/A | N/A | N/A | N/A | 4,100,000 | 3,603,436 | - | 8,410 | 8,410 | - | (20.5)% | (24.1)% | 0.11x |
| Nordic Capital V | Mäster Samuelsgatan 21 Stockholm, SE - 111 44 | 2003 | EUR | N/A | N/A | N/A | N/A | 14,043,460 | 14,304,054 | - | - | - | - | 21.7% | 20.8% | 2.98x |
| Oak HC/FT Partners | Three Pickwick Plaza Greenwich, CT 06830 | 2014 | USD | 127,127 | - | - | - | 10,000,000 | 9,150,175 | 849,825 | - | 849,825 | - | 29.2% | 20.3% | 1.62x |
| Oak Investment Partners XII | Three Pickwick Plaza Greenwich, CT 06830 | 2006 | USD | 18,358 | N/A | N/A | N/A | 15,000,000 | 14,999,762 | - | 327,966 | 327,966 | - | (0.7)% | (0.7)% | 0.96x |
| Oaktree Opportunities Fund X | 333 South Grand Avenue Los Angeles, CA 90071 | 2015 | USD | 171,125 | 936 | 155,817 | 1 | 7,500,000 | 6,225,000 | 1,275,000 | 825,000 | 2,100,000 | - | 22.3% | 13.4% | 1.28x |
| Oaktree Opportunities Fund Xb | 333 South Grand Avenue Los Angeles, CA 90071 | 2018 | USD | 117,804 | 4,755 | - | - | 17,500,000 | 2,187,500 | 15,312,500 | - | 15,312,500 | - | (4.6)% | (7.6)% | 0.94x |
| OCM Opportunities Fund V | 333 South Grand Avenue Los Angeles, CA 90071 | 2004 | USD | 1,122 | - | 28,841 | - | 7,100,000 | 7,100,000 | - | 93,462 | 93,462 | - | 18.4% | 14.1% | 1.65x |
| OCM Opportunities Fund VII | 333 South Grand Avenue Los Angeles, CA 90071 | 2007 | USD | 3,273 | 260 | - | 260 | 10,000,000 | 10,000,000 | - | 233,439 | 233,439 | - | 10.2% | 7.4% | 1.39x |
| OCM Opportunities Fund VIIb | 333 South Grand Avenue Los Angeles, CA 90071 | 2008 | USD | 7,789 | 663 | 100,958 | 663 | 10,000,000 | 9,000,000 | 1,000,000 | 403,828 | 1,403,828 | - | 21.8% | 16.6% | 1.73x |
| Onex Partners | 161 Bay Street Toronto, M5J2S1 | 2003 | USD | N/A | N/A | N/A | N/A | 20,000,000 | 19,048,408 | 935,344 | 3,740,835 | 4,676,179 | - | 41.4% | 38.4% | 3.07x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|--------------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Palladium Equity Partners III | Rockefeller Center New York, NY 10020 | 2004 | USD | 2,679 | 1,925 | 7,747 | N/A | 10,000,000 | 9,898,432 | 92,691 | 553,497 | 646,187 | - | 21.6% | 11.2% | 1.80x |
| Palladium Equity Partners IV | Rockefeller Center New York, NY 10020 | 2012 | USD | 51,783 | 323,293 | - | 72,021 | 25,000,000 | 21,792,161 | 3,523,061 | 669,438 | 4,192,499 | - | 21.1% | 13.4% | 1.42x |
| Permira Europe III | 80 Pall Mall London, SW1Y5ES | 2003 | EUR | 2,289 | - | - | - | 21,506,160 | 21,515,354 | - | - | - | - | 26.1% | 26.1% | 1.71x |
| Permira Europe IV | 80 Pall Mall London, SW1Y5ES | 2006 | EUR | 1,148 | 432 | 40,541 | 853 | 14,935,115 | 14,854,754 | 69,771 | 166,702 | 236,473 | - | 8.8% | 8.8% | 1.63x |
| Pharos Capital Partners II-A | 8 Cadillac Drive Brentwood, TN 37027 | 2004 | USD | - | 127,961 | - | - | 5,000,000 | 5,000,000 | - | - | - | - | 7.6% | 1.4% | 1.10x |
| Platinum Equity Capital Partners III | 360 N. Crescent Dr. Beverly Hills, CA 90210 | 2011 | USD | N/A | N/A | N/A | N/A | 25,000,000 | 19,159,823 | 6,141,672 | 7,651,379 | 13,793,050 | - | 32.9% | 29.9% | 1.93x |
| Platinum Equity Capital Partners IV | 360 N. Crescent Dr. Beverly Hills, CA 90210 | 2016 | USD | 124,069 | - | 345,064 | - | 15,000,000 | 11,768,367 | 4,211,834 | 2,586,473 | 6,798,307 | - | 35.4% | 31.6% | 1.38x |
| Polaris Partners VII | One Marina Park Drive Boston, MA 02210 | 2014 | USD | 622,177 | N/A | N/A | N/A | 25,000,000 | 22,500,000 | 2,500,000 | 0 | 2,500,000 | - | 18.3% | 14.5% | 1.47x |
| Polaris Venture Partners V | One Marina Park Drive Boston, MA 02210 | 2006 | USD | 175,394 | N/A | N/A | N/A | 15,000,000 | 14,700,000 | 300,000 | 1,037,155 | 1,337,155 | - | 7.8% | 7.8% | 1.64x |
| Polaris Venture Partners VI | One Marina Park Drive Boston, MA 02210 | 2010 | USD | 301,998 | N/A | N/A | N/A | 15,000,000 | 13,125,000 | 1,875,000 | 4,082,755 | 5,957,755 | - | 27.1% | 22.3% | 2.54x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Polaris Venture Partners VIII | One Marina Park Drive Boston, MA 02210 | 2016 | USD | 234,555 | N/A | N/A | N/A | 10,000,000 | 5,600,000 | 4,400,000 | - | 4,400,000 | - | 17.6% | 14.1% | 1.18x |
| Providence Debt Fund III | 9 West 57th Street New York, NY 10019 | 2013 | USD | 266,694 | N/A | - | N/A | 30,000,000 | 28,765,436 | 1,542,775 | 8,121,368 | 9,664,143 | - | 9.8% | 7.3% | 1.28x |
| Providence Equity Partners V | 50 Kennedy Plaza, 18th Floor Providence, RI 02903 | 2005 | USD | 4,054 | - | - | - | 18,000,000 | 16,415,524 | 1,584,476 | - | 1,584,476 | - | 5.0% | 3.2% | 1.25x |
| Providence Equity Partners VI | 50 Kennedy Plaza, 18th Floor Providence, RI 02903 | 2006 | USD | 11,359 | N/A | - | - | 30,000,000 | 28,569,939 | 1,442,089 | 1,082,379 | 2,524,468 | - | 5.1% | 4.9% | 1.35x |
| Providence TMT Debt Opportunity Fund II | 9 West 57th Street New York, NY 10019 | 2010 | USD | N/A | N/A | N/A | N/A | 20,000,000 | 16,319,772 | 4,128,635 | 1,538,262 | 5,666,897 | - | 11.4% | 10.5% | 1.60x |
| Rustic Canyon/Fontis Partners | 1025 Westwood Blvd. Los Angeles, CA 90024 | 2005 | USD | - | 8,047 | - | 706 | 5,000,000 | 3,671,248 | 1,328,752 | - | 1,328,752 | - | (4.2)% | (4.3)% | 0.74x |
| Saybrook Corporate Opportunity Fund | 85 Indian Rock Road New Canaan, CT 06840 | 2007 | USD | - | 48,650 | - | N/A | 6,192,813 | 6,190,231 | 2,581 | - | 2,581 | - | 11.3% | 9.1% | 1.40x |
| Searchlight Capital II | 745 Fifth Avenue New York, NY 10151 | 2015 | USD | 550,797 | 53,096 | - | 73,113 | 25,000,000 | 15,573,455 | 9,613,476 | 214,157 | 9,827,633 | - | 31.2% | 18.3% | 1.38x |
| SG Growth Partners III | 402 West 13th Street New York, NY 10014 | 2015 | USD | 217,017 | - | 21,701 | N/A | 10,000,000 | 10,141,159 | 1,064,488 | 602,392 | 1,666,880 | - | 29.2% | 21.5% | 1.82x |
| Spark Capital | 137 Newbury St. #8 Boston, MA 02116 | 2005 | USD | - | - | - | N/A | 9,000,000 | 8,820,000 | 180,000 | - | 180,000 | - | 8.7% | 8.3% | 1.41x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|-------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Spark Capital Growth Fund | 137 Newbury St. #8 Boston, MA 02116 | 2014 | USD | 204,531 | N/A | - | N/A | 10,000,000 | 10,000,000 | - | - | - | - | 22.9% | 17.7% | 1.77x |
| Spark Capital Growth Fund II | 137 Newbury St. #8 Boston, MA 02116 | 2017 | USD | 375,000 | N/A | N/A | N/A | 15,000,000 | 10,800,000 | 4,200,000 | - | 4,200,000 | - | 18.2% | 11.8% | 1.10x |
| Spark Capital II | 137 Newbury St. #8 Boston, MA 02116 | 2008 | USD | 18,572 | N/A | 161,339 | N/A | 9,750,000 | 9,750,000 | - | 484,018 | 484,018 | - | 52.3% | 51.6% | 4.28x |
| Spark Capital III | 137 Newbury St. #8 Boston, MA 02116 | 2011 | USD | 149,114 | N/A | 125,372 | N/A | 10,000,000 | 10,000,000 | - | 574,005 | 574,005 | - | 34.4% | 31.3% | 2.91x |
| Spire Capital Partners III | 1500 Broadway #1811 New York, NY 10036 | 2013 | USD | 231,636 | N/A | 582,880 | N/A | 10,000,000 | 9,138,942 | 1,231,792 | 3,544,838 | 4,776,630 | - | 19.2% | 12.5% | 1.39x |
| SSG Capital Partners II | 15 Queen's Road Hong Kong | 2012 | USD | 237,210 | - | - | N/A | 15,914,286 | 15,048,980 | 1,271,800 | 2,608,669 | 3,880,469 | - | 9.2% | 6.6% | 1.28x |
| St. Cloud Capital Partners II | 10866 Wilshire Blvd Suite 1450 Los Angeles, CA 90024 | 2007 | USD | 13,190 | - | - | - | 5,000,000 | 4,989,085 | 10,915 | 256,219 | 267,135 | - | 1.5% | (3.5)% | 0.86x |
| StarVest Partners II | 750 Lexington Avenue New York, NY 10022 | 2007 | USD | 40,442 | - | - | - | 5,000,000 | 4,965,849 | 52,266 | 953,856 | 1,006,122 | - | 0.8% | (2.0)% | 0.87x |
| Stepstone Pioneer Capital I | 4275 Executive Square La Jolla, CA 92037 | 2004 | USD | N/A | N/A | N/A | N/A | 10,000,000 | 9,751,911 | 248,186 | 6,141 | 254,327 | - | 5.8% | 5.1% | 1.34x |
| StepStone Pioneer Capital II | 4275 Executive Square La Jolla, CA 92037 | 2006 | USD | 47,525 | 47,601 | 319,843 | - | 10,000,000 | 9,427,148 | 630,391 | 4,702,165 | 5,332,556 | - | 12.3% | 9.2% | 1.94x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---------------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| StepStone Secondary Opportunities III | 4275 Executive Square La Jolla, CA 92037 | 2016 | USD | 284,719 | N/A | N/A | N/A | 25,000,000 | 21,562,269 | 8,362,322 | 5,293,489 | 13,655,811 | - | 19.9% | 16.0% | 1.27x |
| Sterling Venture Partners II | 401 N. Michigan Ave Chicago, IL 60611 | 2005 | USD | 48,944 | N/A | N/A | N/A | 8,000,000 | 8,006,256 | - | 1,603,552 | 1,603,552 | - | 9.0% | 3.9% | 1.30x |
| Sunstone Partners I | 400 S El Camino Real San Mateo, CA 94402 | 2015 | USD | - | 161,233 | - | 161,233 | 7,500,000 | 5,396,491 | 2,103,509 | 122,436 | 2,225,945 | - | 34.5% | 26.5% | 1.35x |
| TA X | 200 Clarendon Street Boston, MA 02116 | 2006 | USD | 434 | - | - | - | 6,000,000 | 6,186,689 | 210,000 | 60,000 | 270,000 | - | 10.3% | 5.2% | 1.30x |
| TA XI | 200 Clarendon Street Boston, MA 02116 | 2010 | USD | 266,155 | 1,871 | 560,460 | 1,872 | 20,000,000 | 19,650,000 | 350,000 | 3,495,275 | 3,845,275 | - | 33.0% | 23.1% | 2.46x |
| TA XII-A | 200 Clarendon Street Boston, MA 02116 | 2016 | USD | N/A | N/A | N/A | N/A | 25,000,000 | 22,880,059 | 2,187,500 | 941,456 | 3,128,956 | - | 37.1% | 34.7% | 1.53x |
| TCV IX | 250 Middlefield Road Menlo Park, CA 94025 | 2016 | USD | 261,425 | 8,660 | - | N/A | 10,000,000 | 7,356,000 | 2,644,000 | 549,489 | 3,193,489 | - | 18.2% | 11.8% | 1.13x |
| TCW Crescent Mezzanine Partners IV | 865 South Figueroa Street Los Angeles, CA 90017 | 2006 | USD | 1,669 | N/A | N/A | N/A | 10,000,000 | 8,712,805 | 1,363,777 | - | 1,363,777 | - | 3.1% | 2.9% | 1.15x |
| TCW Crescent Mezzanine Partners V | 865 South Figueroa Street Los Angeles, CA 90017 | 2007 | USD | 11,267 | N/A | N/A | N/A | 10,000,000 | 9,625,012 | 708,323 | 451,944 | 1,160,267 | - | 9.2% | 9.0% | 1.33x |
| Technology Crossover Ventures V | 250 Middlefield Road Menlo Park, CA 94025 | 2004 | USD | 2,926 | N/A | N/A | N/A | 19,500,000 | 19,334,250 | 165,750 | 5,255,247 | 5,420,997 | - | 15.0% | 10.9% | 1.90x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Technology Crossover Ventures VII | 250 Middlefield Road Menlo Park, CA 94025 | 2008 | USD | 72,463 | N/A | N/A | N/A | 20,000,000 | 19,680,000 | 320,000 | 2,961,289 | 3,281,289 | - | 31.9% | 23.4% | 2.91x |
| Technology Crossover Ventures VIII | 250 Middlefield Road Menlo Park, CA 94025 | 2014 | USD | 662,876 | - | - | N/A | 30,000,000 | 25,443,410 | 4,556,590 | 1,606,939 | 6,163,529 | - | 18.5% | 10.6% | 1.44x |
| Thoma Bravo Fund XI | 150 N. Riverside Plaza Chicago, IL 60606 | 2014 | USD | 146,224 | 104,278 | 730,688 | 36,544 | 15,000,000 | 13,287,170 | 1,714,957 | 3,736,341 | 5,451,298 | - | 30.0% | 25.5% | 2.45x |
| Thoma Bravo Fund XII | 150 N. Riverside Plaza Chicago, IL 60606 | 2016 | USD | 297,204 | 86,623 | - | 48,839 | 25,000,000 | 23,264,290 | 1,735,983 | - | 1,735,983 | - | 19.7% | 13.9% | 1.27x |
| Thoma Bravo Special Opportunities Fund II | 150 N. Riverside Plaza Chicago, IL 60606 | 2015 | USD | 2,165 | 92,145 | 72,102 | N/A | 10,000,000 | 9,040,274 | 961,789 | 626,030 | 1,587,819 | - | 24.3% | 20.4% | 1.98x |
| Threshold Ventures II | 2882 Sand Hill Road Menlo Park, CA 94025 | 2016 | USD | 269,645 | - | - | N/A | 10,000,000 | 7,625,000 | 2,375,000 | - | 2,375,000 | - | 28.1% | 16.4% | 1.25x |
| TPG Growth II | Two International Place Boston, MA 02110 | 2011 | USD | 399,465 | (711) | 76,813 | N/A | 30,000,000 | 29,239,986 | 1,403,525 | 3,038,752 | 4,442,277 | - | 24.0% | 18.9% | 2.15x |
| TPG Partners III | Two International Place Boston, MA 02110 | 1999 | USD | - | 1,978 | - | - | 25,000,000 | 22,442,286 | 173,905 | - | 173,905 | - | 32.0% | 24.4% | 2.52x |
| TPG Partners IV | Two International Place Boston, MA 02110 | 2003 | USD | 8,102 | - | 80,638 | N/A | 25,000,000 | 27,436,973 | 106,723 | 110,593 | 217,316 | - | 21.0% | 15.3% | 1.94x |
| TPG Partners V | Two International Place Boston, MA 02110 | 2006 | USD | 6,439 | - | - | N/A | 30,000,000 | 31,415,182 | 584,242 | 3,014,280 | 3,598,522 | - | 6.0% | 5.0% | 1.38x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| TPG Partners VI | Two International Place Boston, MA 02110 | 2008 | USD | 36,411 | (291) | 256,670 | N/A | 22,500,000 | 24,339,134 | 871,357 | 4,240,651 | 5,112,008 | - | 11.3% | 10.3% | 1.53x |
| TPG Star | Two International Place Boston, MA 02110 | 2006 | USD | 14,073 | - | - | N/A | 20,000,000 | 21,635,099 | 1,711 | - | 1,711 | - | 7.4% | 7.2% | 1.34x |
| Trident Capital Fund-V | 400 S. El Camino Real San Mateo, CA 94402 | 2000 | USD | - | 8,885 | - | - | 14,369,679 | 14,001,728 | 119,703 | 185,443 | 305,146 | - | 8.3% | 8.6% | 1.73x |
| Trident Capital Fund-V | 400 S. El Camino Real San Mateo, CA 94402 | 2000 | USD | - | 8,885 | - | - | 14,369,679 | 14,001,728 | 119,703 | 185,443 | 305,146 | - | 8.3% | 8.6% | 1.73x |
| Trident Capital Fund-VI | 400 S. El Camino Real San Mateo, CA 94402 | 2005 | USD | N/A | N/A | N/A | N/A | 8,500,000 | 8,500,000 | - | 1,658,293 | 1,658,293 | - | 5.0% | 4.3% | 1.46x |
| VantagePoint Venture Partners IV | 111 Bayhill Drive San Bruno, CA 94066 | 2000 | USD | N/A | N/A | N/A | N/A | 15,000,000 | 15,000,000 | - | - | - | - | (1.0)% | (1.0)% | 0.93x |
| Vestar Capital Partners IV | 245 Park Avenue New York, NY 10167 | 1999 | USD | - | - | 321 | - | 17,000,000 | 16,585,106 | 18,108 | 7,504 | 25,612 | - | 20.0% | 13.5% | 1.78x |
| Vicente Capital Partners Growth Equity Fund | 11726 San Vicente Boulevard Los Angeles, CA 90049 | 2007 | USD | N/A | N/A | N/A | N/A | 10,000,000 | 10,093,708 | - | 1,959,871 | 1,959,871 | - | 9.0% | 6.6% | 1.45x |
| Vista Equity Partners Fund III | 401 Congress Avenue Austin, TX 78701 | 2007 | USD | 27,106 | 9,921 | N/A | N/A | 25,000,000 | 23,206,112 | 2,010,816 | 2,246,984 | 4,257,800 | - | 0.0% | 26.8% | 2.71x |
| Vista Equity Partners Fund IV | 401 Congress Avenue Austin, TX 78701 | 2011 | USD | 237,457 | - | N/A | N/A | 30,000,000 | 25,140,829 | 5,104,261 | 5,663,744 | 10,768,005 | - | 0.0% | 17.7% | 2.22x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
PRIVATE EQUITY FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|-----------------------------------|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Vista Equity Partners Fund V | 401 Congress Avenue Austin, TX 78701 | 2014 | USD | 542,058 | 78,683 | 2,998,000 | - | 40,000,000 | 37,149,685 | 11,906,289 | 27,126,670 | 39,032,959 | - | 0.0% | 23.9% | 2.49x |
| Vista Equity Partners Fund VI | 401 Congress Avenue Austin, TX 78701 | 2016 | USD | 397,081 | 93,205 | - | - | 30,000,000 | 32,282,023 | 5,061,928 | 7,415,849 | 12,477,777 | - | 0.0% | 18.5% | 1.45x |
| Vista Foundation Fund II | 401 Congress Avenue Austin, TX 78701 | 2013 | USD | 209,241 | - | 402,232 | - | 10,000,000 | 8,678,860 | 5,283,969 | 4,380,848 | 9,664,817 | - | 22.4% | 17.1% | 2.58x |
| Vista Foundation Fund III | 401 Congress Avenue Austin, TX 78701 | 2016 | USD | 200,429 | 18,712 | - | - | 10,000,000 | 7,023,114 | 2,970,110 | - | 2,970,110 | - | 0.0% | 9.0% | 1.13x |
| Weston Presidio Capital IV | One Harbor Drive, Suite 300 Sausalito, CA 94965 | 2000 | USD | N/A | N/A | N/A | N/A | 18,040,488 | 17,537,531 | - | 101,284 | 101,284 | - | 2.7% | 3.3% | 1.19x |
| Weston Presidio Capital IV | One Harbor Drive, Suite 300 Sausalito, CA 94965 | 2000 | USD | N/A | N/A | N/A | N/A | 18,040,488 | 17,537,531 | - | 101,284 | 101,284 | - | 2.7% | 3.3% | 1.19x |
| Wynnchurch Capital Partners IV | 6250 North River Road Rosemont, IL 60018 | 2015 | USD | 188,218 | 36,268 | 257,200 | 94,384 | 10,000,000 | 6,571,319 | 3,393,137 | 1,617,855 | 5,010,992 | - | 36.0% | 21.7% | 1.36x |
| Yucaipa American Alliance Fund I | 9130 West Sunset Boulevard Los Angeles, CA 90069 | 2002 | USD | 62,372 | - | N/A | N/A | 10,000,000 | 10,000,000 | - | 4,613,716 | 4,613,716 | - | 4.8% | 4.8% | 1.34x |
| Yucaipa American Alliance Fund II | 9130 West Sunset Boulevard Los Angeles, CA 90069 | 2008 | USD | 172,180 | N/A | N/A | N/A | 20,000,000 | 20,000,936 | 20 | 9,061,669 | 9,061,689 | - | 13.0% | 9.2% | 1.88x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

MANDATORY DISCLOSURE BY FUNDS COMMITTED TO ON AND AFTER JANUARY 1, 2017
REAL ESTATE FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Heitman Asia-Pacific Property Investors | Cayman Corporate Centre, 27 Hospital Road, George Town, Grand Cayman KY1-9008, Cayman Islands | 2017 | USD | 62,230 | - | - | - | 25,000,000 | 13,010,050 | 12,149,562 | - | 12,149,562 | - | - | (11.2)% | 0.93x |
| Kayne Anderson Core Real Estate Fund | 1800 Ave of the Stars, 3rd Fl Los Angeles, CA 90067 | 2019 | USD | 8,412 | - | - | - | 35,000,000 | 2,970,168 | 3,049,124 | 72,220 | 3,121,344 | - | - | 10.8% | 1.05x |
| Asana Partners Fund II | 1616 Camden, Suite 210 Charlotte, NC 28203 | 2019 | USD | 277,004 | - | - | - | 35,000,000 | 262,500 | (121,791) | - | (121,791) | (384,806) | - | - | - |

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
REAL ESTATE FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---|---|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Almanac Realty Securities VI | 1140 Avenue of the Americas 17th Floor New York, NY 10036 | 2012 | USD | 50,897 | - | - | - | 25,000,000 | 15,475,571 | 6,726,551 | 14,735,392 | 21,461,943 | N/A | N/A | 12.2% | 1.39x |
| Asana Partners Fund I | 1616 Camden, Suite 210 Charlotte, NC 28203 | 2016 | USD | 262,155 | 918,509 | - | - | 20,000,000 | 15,610,965 | 20,765,006 | - | 20,765,006 | (413,185) | 28.9% | 20.9% | 1.33x |
| Berkshire Core Fund | One Beacon Street Suite 2400 Boston, MA 02108 | 2015 | USD | 158,960 | - | - | - | 20,000,000 | 20,000,000 | 24,366,691 | 2,542,427 | 26,909,118 | (22,368) | N/A | 8.9% | 1.35x |
| Bristol Value II, L.P. | 400 Montgomery St. Suite 400 San Francisco, CA 94104 | 2011 | USD | 205,744 | 4,976 | - | - | 20,000,000 | 22,920,181 | 16,690,224 | 10,699,878 | 27,390,102 | 912,762 | 10.7% | 8.8% | 1.20x |
| Bryanston Retail Opportunity Fund | 35 E. Wacker Drive, Suite 2900 Chicago, IL 60601 | 2004 | USD | 16,076 | - | - | 9,380 | 10,000,000 | 4,271,584 | 4,244,664 | 9,569,780 | 13,814,444 | N/A | 10.7% | 79.7% | 3.23x |
| California Smart Growth Fund IV | 10100 Santa Monica Blvd Suite 1000 Los Angeles, CA 90067 | 2005 | USD | - | - | - | - | 30,000,000 | 31,522,663 | 3,802,187 | 32,810,109 | 36,612,296 | 1,434,060 | 5.4% | 2.4% | 1.16x |
| Canyon - Johnson Urban Fund II | 2000 Avenue of the Stars 11th Floor Los Angeles, CA 90067 | 2005 | USD | - | - | - | - | 10,000,000 | 8,988,718 | 33,602 | 3,974,652 | 4,008,254 | (4,197,932) | (9.1)% | (10.5)% | 0.45x |
| Cornerstone Enhanced Mortgage Fund I | One Financial Plaza Suite 1700 Hartford, CT 06103-2604 | 2011 | USD | 924 | - | 104,559 | - | 25,000,000 | 13,436,224 | 70,327 | 17,238,663 | 17,308,990 | 3,875,192 | 10.7% | 9.2% | 1.29x |
| CIM Commercial Trust Corporation (CMCT) | 4700 Wilshire Boulevard Los Angeles, CA 90010 | 2014 | USD | - | 8,340 | - | 890,404 | 40,000,000 | 46,417,723 | 22,330,815 | 33,465,895 | 55,796,710 | 5,208,278 | 7.3% | 4.7% | 1.20x |
| CIM Real Estate Fund III | 4700 Wilshire Boulevard Los Angeles, CA 90010 | 2007 | USD | 108,216 | - | - | 43,606 | 15,000,000 | 16,674,075 | 7,911,741 | 20,690,536 | 28,602,277 | 5,151,888 | 12.5% | 10.1% | 1.72x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
REAL ESTATE FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|-----------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| CIM Urban REIT | 4700 Wilshire Boulevard Los Angeles, CA 90010 | 2006 | USD | 421,285 | - | - | 176,143 | 25,000,000 | 25,000,000 | 31,568,141 | 5,391,013 | 36,959,154 | 78,199 | 9.0% | 7.4% | 1.48x |
| Cityview LA Urban Fund I | 1901 Avenue of the Stars Ste. 1950 Los Angeles, CA 90067 | 2007 | USD | - | - | - | - | 25,000,000 | 61,482,527 | 36,182 | 73,781,337 | 73,817,519 | N/A | N/A | 11.8% | 1.20x |
| Colony Investors VIII | 515 South Flower Street 44th Floor Los Angeles, CA 90071 | 2006 | USD | - | 7,250 | - | - | 30,000,000 | 28,963,224 | 550,897 | 12,378,404 | 12,929,301 | (16,047,384) | N/A | (11.7)% | 0.45x |
| DRA Growth and Income Fund VI | 220 East 42nd Street, 27th Floor New York, NY 10017 | 2007 | USD | 211,241 | - | 1,611,016 | 12,642 | 25,000,000 | 16,788,945 | 985,156 | 27,449,518 | 28,434,674 | 5,639,694 | 24.1% | 10.8% | 1.69x |
| DRA Growth and Income Fund VII | 220 East 42nd Street, 27th Floor New York, NY 10017 | 2011 | USD | 211,241 | - | 1,611,016 | 12,642 | 25,000,000 | 26,640,000 | 13,657,181 | 42,950,043 | 56,607,224 | 5,639,694 | 24.1% | 20.9% | 2.12x |
| DRA Growth and Income Fund VIII | 220 East 42nd Street, 27th Floor New York, NY 10017 | 2014 | USD | 394,112 | - | - | - | 25,000,000 | 29,113,108 | 19,842,267 | 18,052,030 | 37,894,297 | 142,744 | 14.5% | 11.4% | 1.30x |
| Gerrity Retail Fund II | 973 Lomas Santa Fe Drive Solana Beach, CA 92075 | 2015 | USD | 234,814 | 136,210 | - | 112,860 | 20,000,000 | 16,857,641 | 17,413,441 | 3,524,128 | 20,937,569 | 164,002 | 11.7% | 8.8% | 1.24x |
| Hancock Timberland XI | 197 Clarendon St., C-08-99 Boston, MA 02116-5010 | 2012 | USD | 188,217 | 174,927 | - | 4,689 | 20,000,000 | 18,601,851 | 20,522,668 | 2,059,752 | 22,582,420 | N/A | N/A | 3.9% | 1.21x |
| IC Hospitality Fund | 11150 Santa Monica Blvd Suite 1680 Los Angeles, CA 90025 | 2009 | USD | 51,025 | - | - | - | 10,000,000 | 6,006,797 | 2,166,808 | 2,728,129 | 4,894,937 | N/A | N/A | (4.6)% | 0.81x |
| Invesco Core Real Estate - U.S.A. | 2001 Ross Ave, Suite 3400 Dallas, TX 75201 | 2004 | USD | 617,972 | - | - | - | 63,867,553 | 117,669,783 | 181,739,482 | 59,054,005 | 240,793,487 | N/A | N/A | 7.7% | 2.05x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
REAL ESTATE FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|---------------------------------------|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| Jamestown Premier Property Fund | 675 Ponce de Leon Ave NE 7th Floor Atlanta, GA 30308 | 2011 | USD | 236,951 | 18,930 | 194,767 | 395,010 | 50,000,000 | 50,920,331 | 39,212,915 | 25,147,644 | 64,360,559 | 10,646,140 | N/A | 9.2% | 1.26x |
| JPMCB Strategic Property Fund | 270 Park Avenue New York, NY 10017 | 2005 | USD | 668,695 | - | - | - | 30,000,000 | 30,421,882 | 69,679,646 | 2,858,499 | 72,538,145 | 1,458,948 | 7.8% | 6.7% | 2.38x |
| LaSalle Asia Fund II | 1 Front Street, Suite 1100 San Francisco, CA 94111 | 2005 | USD | - | - | - | - | 25,000,000 | 24,016,560 | 234,642 | 25,752,817 | 25,987,459 | 1,736,258 | 6.2% | 1.8% | 1.08x |
| Latin America Investor III | 10880 Wilshire Blvd, #950 Los Angeles, CA 90024 | 2008 | USD | 333,316 | - | - | - | 20,000,000 | 20,686,689 | (530,797) | 3,886,924 | 3,356,127 | N/A | N/A | 0.0% | 0.16x |
| Lion Industrial Trust | 1717 McKinney Avenue Suite 1900 Dallas, TX 75202 | 2002 | USD | 846,675 | - | - | - | 50,000,000 | 51,883,777 | 72,350,683 | 6,212,642 | 78,563,325 | 31,126,945 | 16.4% | 14.0% | 1.51x |
| Lone Star Fund VII (U.S.) | 888 7th Avenue 11th Floor New York, New York 10019 | 2010 | USD | - | 2,354 | - | - | 15,000,000 | 14,075,468 | 151,074 | 24,557,560 | 24,708,634 | 10,633,161 | 71.2% | 50.2% | 1.76x |
| Lone Star Real Estate Fund II (U.S.) | 888 7th Avenue 11th Floor New York, New York 10019 | 2010 | USD | 486 | 2,689 | 13,587 | - | 15,000,000 | 13,291,475 | 618,304 | 19,978,366 | 20,596,670 | 7,305,194 | 38.1% | 26.6% | 1.55x |
| Mesa West Real Estate Income Fund III | 11755 Wilshire Blvd Suite 2100 Los Angeles, CA 90025 | 2013 | USD | 59,812 | 6,124 | 46,502 | - | 25,000,000 | 18,939,181 | 2,896,168 | 21,541,012 | 24,437,180 | N/A | N/A | 8.6% | 1.29x |
| Prime Property Fund | 1585 Broadway Avenue New York, NY 10036 | 2015 | USD | 473,057 | 158,515 | - | - | 50,000,000 | 50,000,000 | 57,321,831 | 7,097,624 | 64,419,455 | N/A | N/A | 8.3% | 1.29x |
| Principal U.S. Property Account | 801 Grand Ave Des Moines, IA 50392 | 2015 | USD | 607,566 | - | - | - | 50,000,000 | 50,000,000 | 65,877,379 | - | 65,877,379 | 17,805,183 | N/A | 8.2% | 1.32x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
CA GOVERNMENT CODE §7514.7 DISCLOSURE REPORT FOR ALTERNATIVE INVESTMENT VEHICLES
FOR FISCAL YEAR ENDING JUNE 30, 2019

VOLUNTARY DISCLOSURE BY FUNDS COMMITTED TO PRIOR TO JANUARY 1, 2017
REAL ESTATE FUNDS

| Fund | Address | Vintage Year | Local Currency | Fees and expenses paid directly by LACERS Fiscal Year End | Fees and expenses paid from the Fund Fiscal Year End | Carried interest paid Fiscal Year End | Fees and expenses paid by all portfolio companies Fiscal Year End | \$ Commitment | \$ Contributions Since Inception | \$ Remaining Value of LACERS Investment | \$ Distributions Fiscal Year End | \$ Distributions + Remaining Value of Partnership Fiscal Year End | \$ Profit (Realized Gain/Loss) Fiscal Year End | Gross Internal Rate of Return Since Inception | Net Internal Rate of Return Since Inception | Investment Multiple Since Inception |
|--|--|--------------|----------------|---|--|---------------------------------------|---|---------------|----------------------------------|---|----------------------------------|---|--|---|---|-------------------------------------|
| RECP Fund IV, L.P. | 1123 Broadway Second Floor New York, NY 10010 | 2008 | USD | 82,189 | - | - | - | 40,000,000 | 50,938,548 | 31,641,043 | 31,381,728 | 63,022,771 | N/A | N/A | 3.9% | 1.24x |
| Southern California Smart Growth Fund I | 10100 Santa Monica Blvd Suite 1000 Los Angeles, CA 90067 | 2004 | USD | 21,813 | 5,601 | - | - | 10,000,000 | 18,836,734 | 121,759 | 18,686,955 | 18,808,714 | N/A | 3.5% | 0.0% | 1.00x |
| Standard Life Investments European Real Estate Club II | Bow Bells House 1 Bread Street London EC4M 9HH | 2015 | EUR | 146,954 | - | - | - | 28,531,885 | 28,134,410 | 6,297,177 | 31,660,268 | 37,957,445 | N/A | N/A | 13.6% | 1.35x |
| Stockbridge Real Estate Fund II | Four Embarcadero Center Suite 33 San Francisco, CA 94111 | 2005 | USD | 34,945 | 14,885 | - | - | 30,000,000 | 30,000,000 | 10,316,307 | 4,049,560 | 14,365,867 | N/A | (7.1)% | (7.2)% | 0.48x |
| The Buchanan Fund V | 3501 Jamboree Road Suite 4200 Newport Beach, CA 92660 | 2006 | USD | - | - | - | - | 30,000,000 | 27,000,000 | 206,208 | 25,794,507 | 26,000,715 | (999,285) | 1.0% | (0.6)% | 0.96x |
| Torchlight Debt Opportunity Fund II | 280 Park Avenue New York, NY 10017 | 2006 | USD | 3,826 | 20,233 | - | - | 25,000,000 | 24,703,453 | 235,268 | 22,096,295 | 22,331,563 | (11,611,897) | (0.3)% | (1.3)% | 0.90x |
| Torchlight Debt Opportunity Fund III | 280 Park Avenue New York, NY 10017 | 2008 | USD | 129,999 | 70,424 | - | - | 24,474,342 | 24,483,106 | 7,783,424 | 27,461,748 | 35,245,172 | 5,713,212 | 13.3% | 10.3% | 1.44x |
| Torchlight Debt Opportunity Fund IV | 280 Park Avenue New York, NY 10017 | 2012 | USD | 1,937 | - | - | - | 25,000,000 | 26,542,525 | 448,261 | 25,874,723 | 26,322,984 | N/A | N/A | (0.1)% | 0.99x |
| Tuckerman Group Residential Income & Value Added | 4 International Drive, Suite 230 Arlington, TX 76006 | 2004 | USD | 26,058 | - | - | - | 25,000,000 | 25,000,001 | 3,683,455 | 15,408,657 | 19,092,112 | (4,850,461) | N/A | (3.0)% | 0.76x |
| Walton Street Real Estate Fund VI | 900 N. Michigan Ave., Ste 1900 Chicago, IL 60611 | 2009 | USD | 104,441 | - | - | - | 25,000,000 | 22,161,966 | 9,434,976 | 24,712,322 | 34,147,298 | 13,124,669 | 11.0% | 8.9% | 1.54x |

Note: Report excludes funds that are not required to comply with Section 7514.7 and have opted not to provide such information upon request.