



**Board of Administration Agenda**

**REGULAR MEETING**

**TUESDAY, MARCH 24, 2020**

**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).

**Important Message to the Public**

Due to the COVID-19 pandemic there are some changes to the meeting. To provide public comment telephonically, please call (669) 900-6833 or (346) 248-7799, enter Meeting ID 246 659 4692. Please refer to LACERS.org for more information. The Board Room will be available to members of the public who are unable to join the meeting telephonically. Please practice social distancing when in public.

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 Ghokassian
Legal Counsel:	City Attorney's Office Public Pensions General Counsel Division

**Notice to Paid Representatives**

If you are compensated to monitor, attend, or speak at this meeting, City law may require you to register as a lobbyist and report your activity. See Los Angeles Municipal Code §§ 48.01 *et seq.* More information is available at [ethics.lacity.org/lobbying](http://ethics.lacity.org/lobbying). For assistance, please contact the Ethics Commission at (213) 978-1960 or [ethics.commission@lacity.org](mailto:ethics.commission@lacity.org).

[CLICK HERE TO ACCESS BOARD REPORTS](#)

- I. PUBLIC COMMENTS ON MATTERS WITHIN THE BOARD'S JURISDICTION
- II. [APPROVAL OF MINUTES FOR REGULAR BOARD MEETING OF MARCH 10, 2020 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 FEBRUARY 2020](#)
- VI. COMMITTEE REPORT(S)
  - A. INVESTMENT COMMITTEE VERBAL REPORT FROM MEETING OF MARCH 10, 2020
- VII. DISABILITY RETIREMENT APPLICATION(S)
  - A. **CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54957(b) TO RECONSIDER THE DISABILITY RETIREMENT APPLICATION OF NORBERT STYLC AND POSSIBLE BOARD ACTION (HEARING)**
  - B. **CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54957(b) TO CONSIDER THE DISABILITY RETIREMENT APPLICATION OF VIVECA BUTLER AND POSSIBLE BOARD ACTION (HEARING)**
- VIII. BOARD/DEPARTMENT ADMINISTRATION
  - A. [PROPOSED BUDGET, PERSONNEL, AND ANNUAL RESOLUTIONS FOR FISCAL YEAR 2020-21 AND POSSIBLE BOARD ACTION](#)
- IX. INVESTMENTS
  - A. CHIEF INVESTMENT OFFICER VERBAL REPORT
  - B. [TEMPORARY MODIFICATIONS TO THE ASSET ALLOCATION AND REBALANCING POLICIES AND POSSIBLE BOARD ACTION](#)
  - C. [PRESENTATION BY NEPC, LLC OF THE PORTFOLIO PERFORMANCE REVIEW REPORT FOR THE QUARTER ENDING DECEMBER 31, 2019](#)
  - D. [INVESTMENT MANAGER CONTRACT WITH NEUBERGER BERMAN INVESTMENT ADVISERS LLC REGARDING THE MANAGEMENT OF AN ACTIVE CORE FIXED INCOME PORTFOLIO AND POSSIBLE BOARD ACTION](#)
  - E. [INVESTMENT MANAGER CONTRACT WITH BLACKROCK INSTITUTIONAL TRUST COMPANY, N.A. REGARDING MANAGEMENT OF MULTIPLE PASSIVE INVESTMENT MANDATES AND POSSIBLE BOARD ACTION](#)
  - F. [INVESTMENT COMMITTEE CHARTER REVIEW AND POSSIBLE BOARD ACTION](#)

X. LEGAL/LITIGATION

A. DISCUSSION OF OUTSIDE SECURITIES MONITORING COUNSEL CONTRACT WITH LABATON SUCHAROW LLP AND POSSIBLE BOARD ACTION

B. ENGAGEMENT WITH PAPA JOHN'S INTERNATIONAL, INC. REGARDING CORPORATE GOVERNANCE ISSUES

XI. OTHER BUSINESS

XII. NEXT MEETING: The next Regular meeting of the Board is scheduled for Tuesday, April 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

March 10, 2020

10:02 a.m.

**Agenda of: Mar. 24, 2020**

**Item No: II**

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PRESENT:	President:	Cynthia M. Ruiz
	Vice President:	Michael R. Wilkinson
	Commissioners:	Annie Chao Elizabeth Lee (left at 1:27 p.m.) Sandra Lee (arrived at 11:01 a.m.) Nilza R. Serrano
	Manager-Secretary:	Lita Payne
	Executive Assistant:	Ani Ghoukassian
	Legal Counsel:	Anya Freedman
ABSENT:	Commissioner:	Sung Won Sohn

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*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 FEBRUARY 25, 2020 AND POSSIBLE BOARD ACTION – Vice President Wilkinson moved approval, seconded by Commissioner Elizabeth Lee, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Sandra Lee, Vice President Wilkinson, and President Ruiz -5; Nays, None.

III

BOARD PRESIDENT VERBAL REPORT – President Ruiz reminded Commissioners to complete the online Ethics training due on March 17, 2020. President Ruiz also discussed the current economic climate.

IV



## GENERAL MANAGER VERBAL REPORT

- A. REPORT ON DEPARTMENT OPERATIONS – Lita Payne, Executive Officer, discussed the following items:
- Lakewood Extravaganza on February 26<sup>th</sup> had 151 attendees
  - Wellness Program Manager, finalizing hiring process
  - Medicare Requirements seminar scheduled for March 17<sup>th</sup> at the California Endowment
  - Air travel for staff curtailed due to current health crises
  - Active City employees will receive a retroactive pay increase on March 25<sup>th</sup>
  - On track with moving Investment Division and Member Engagement Section to new LACERS HQ this weekend
  - Update on the Member communications related to Board Assumption changes
  - Holding weekly meetings to address COVID-19 situation and discussed how LACERS is addressing this issue for staff and Members
  - Holding a future Special Board Meeting remotely
- B. UPCOMING AGENDA ITEMS – Ms. Payne stated the following items will be on an upcoming Board agenda:
- March 24, 2020 Board Meeting - Preliminary Department budget
  - June 23, 2020 Board Meeting – Experience Study

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. EDUCATION AND TRAVEL EXPENDITURE REPORT FOR THE QUARTER ENDING DECEMBER 31, 2019 – This report was received by the Board and filed.

*Items VII-B and VII-C taken out of order.*

VII

- B. RECOGNITION OF SERVICE FOR JENNIFER STEVENS OF THE TOWNSEND GROUP – The Commissioners, Rod June, Chief Investment Officer, Lita Payne, Executive Officer, Anya Freedman, Assistant City Attorney, and Carolyn Smith, Partner with NEPC, recognized Ms. Stevens contributions to LACERS.
- C. PRESENTATIONS BY STAFF ON CRYPTOCURRENCY AND PROFESSOR BHASKAR KRISHNAMACHARI, UNIVERSITY OF SOUTHERN CALIFORNIA, ON BLOCKCHAIN

TECHNOLOGY – Jimmy Wang, Investment Officer and Robert King, Investment Officer, presented this item on Cryptocurrency to the Board for 50 minutes.

Commissioner Serrano arrived at the Regular Meeting at 11:01 a.m.

Professor Bhaskar Krishnamachari with the University of Southern California, presented this item on Blockchain Technology to the Board for 20 minutes.

President Ruiz recessed the Regular Meeting at 11:39 a.m. for a break and reconvened the Regular Meeting at 11:53 a.m.

## VI

### BOARD/DEPARTMENT ADMINISTRATION

- A. 977 N. BROADWAY PROPERTY BUDGET AND POSSIBLE BOARD ACTION – Dale Wong-Nguyen, Chief Benefits Analyst with Administration Division, Isaias Cantu, Senior Management Analyst II with Administration Division, and Kristina Lewison, Director, Asset Management with Invesco US, presented this item to the Board for 18 minutes. After further discussion, Commissioner Elizabeth Lee moved approval of the following Resolution:

**APPROVAL OF THE ASSET MANAGEMENT BUDGET FOR THE PERIOD OF NOVEMBER 2019  
THROUGH JUNE 2020  
FOR 977 NORTH BROADWAY  
AND  
DELEGATION OF AUTHORITY TO THE GENERAL MANAGER TO APPROVE/TRANSFER  
BUDGETED EXPENDITURES**

**RESOLUTION 200310-A**

Whereas, in October 2019, the LACERS Board of Administration authorized and completed the purchase of an office building and underground parking structure located at 977 N. Broadway (“Broadway Building”), Los Angeles, California, at the final negotiated purchase price of \$33,750,000;

Whereas, the Broadway Building, a five-story building built in 1984, totaling 64,585 square feet with a 131-space subterranean parking structure, will serve a dual purpose as the headquarters for LACERS offices, and as a separate account holding in our Investment Trust Fund;

Whereas, as a property owner, LACERS has an ongoing legal obligation to maintain a habitable and safe environment for all occupants of the Broadway Building, including LACERS staff;

Whereas, property expenditures for capital expenses, operational expenses, and administrative expenses have been prepared by LACERS’ Asset Manager, Invesco Advisers, Inc. in collaboration with LACERS staff, for the period of November 2019 through June 2020; and the such expenditures are reasonable and consistent with LACERS’ objectives for the management of the property;

NOW, THEREFORE, BE IT RESOLVED, that the Board:

1. Authorize the General Manager to reallocate \$133,617 approved in the Fiscal Year 2019-20 *Administrative Expense Budget* for office expansion expenses at the Times building to expenses related to the move to 977 Broadway;
2. Authorize the General Manager to transfer \$133,617 to various appropriation accounts within the *Administrative Expense Budget*, and to the *Building Operating Budget* in the LACERS Trust Fund or official property account, as necessary;
3. Approve the interim *Capital Expense Budget* of \$966,323;
4. Delegate authority to the General Manager to approve the *Building Operating Budget*, prepared by LACERS' Asset Manager, Invesco, not to exceed \$550,000 per quarter beginning with the effective date of LACERS' Asset Management agreement.

Which motion was seconded by Commissioner Serrano, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Sandra Lee, Serrano, Vice President Wilkinson, and President Ruiz -6; Nays, None.

## VII

### INVESTMENTS

- A. CHIEF INVESTMENT OFFICER VERBAL REPORT – Rod June, Chief Investment Officer, reported on the portfolio value, \$17.320 Billion as of March 9, 2020. Mr. June discussed the following items:
- RFP search schedule pushed back one month due to curtailed travel
  - Lazard and Oberweis, both non-US equity investment managers, went on watch on March 2, 2020
  - Clarion Lion Industrial Trust real estate fund of which LACERS is a limited partner sustained property damage to a building located in Nashville as a result of tornado activity
  - AON, parent of Townsend Group, will buy Willis Towers Watson in a \$30 billion transaction closing in 2021
  - Investment staff travel has been halted
  - Conferences are being canceled due to pandemic concerns
  - Upcoming Agenda items: Investment Manager Contracts, Investment Policy, and Investment Committee Charter

*Item X-A, IX-B, and IX-C taken out of order*

President Ruiz recessed the Regular Meeting at 12:36 p.m. to convene in Closed Session.

## X

### LEGAL/LITIGATION

- A. **CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54956.9(D)(4) TO CONFER WITH AND RECEIVE ADVICE FROM LEGAL COUNSEL REGARDING INITIATION OF LITIGATION (ONE CASE) AND POSSIBLE BOARD ACTION**

## IX

## DISABILITY RETIREMENT APPLICATION(S)

- B. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54957(b) TO CONSIDER THE DEFERRAL REQUEST FOR DISABILITY RETIREMENT APPLICATION OF VIVECA BUTLER AND POSSIBLE BOARD ACTION**
- C. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54957(b) TO CONSIDER THE DISABILITY RETIREMENT APPLICATION OF NADINE WARREN AND POSSIBLE BOARD ACTION**

President Ruiz reconvened the Regular Meeting at 1:16 p.m. and announced that the Board unanimously approved the Deferral Request for Disability Retirement Application of Viveca Butler, the Disability Retirement Application for Nadine Warren, and conferred with legal counsel.

## VII

### INVESTMENTS

- D. IMPLEMENTATION OF PRIVATE EQUITY INVESTMENT MANAGEMENT – CO-INVESTMENT – Wilkin Ly, Investment Officer III, and Robert King, Investment Officer, presented this item to the Board. The Board provided direction and staff will bring this back to the Board at a future meeting for action.**

Commissioner Sandra Lee left the Regular Meeting 1:27 p.m.

- E. PRESENTATION BY NEPC, LLC OF THE PORTFOLIO PERFORMANCE REVIEW REPORT FOR THE QUARTER ENDING DECEMBER 31, 2019 – President Ruiz stated this item will be deferred to the March 24, 2020, Board Meeting.**

## VIII

### RETIREMENT SERVICES

- A. DELEGATION OF SUBPOENA REQUEST AUTHORITY FOR UNRECOVERED FUNDS CASES – Ferralyn Sneed, Senior Management Analyst with Retirement Services Division, presented this item to the Board. Commissioner Chao moved approval of staff's recommendation, seconded by Commissioner Serrano, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Serrano, Vice President Wilkinson, and President Ruiz - 5; Nays, None.**

## IX

## DISABILITY RETIREMENT APPLICATION(S)

- A. ADOPTION OF FINDINGS OF FACT FOR AZAR NEJAD AND POSSIBLE BOARD ACTION – Vice President Wilkinson moved approval, seconded by Commissioner Serrano, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Serrano, Vice President Wilkinson, and President Ruiz -5; Nays, None.**

XI

OTHER BUSINESS – There was no other business.

XII

NEXT MEETING – The next Regular meeting of the Board is scheduled for Tuesday, March 24, 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 – There being no further discussion before the Board, President Ruiz adjourned the meeting at 2:03 p.m.

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Cynthia M. Ruiz  
President

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Lita Payne  
Manager-Secretary

Agenda of: MAR. 24, 2020

Item No: V-A

**MONTHLY REPORT ON SEMINARS AND CONFERENCES  
ATTENDED BY BOARD MEMBERS ON BEHALF OF LACERS  
(FOR THE MONTH OF FEBRUARY 2020)**

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  
Vice President Michael R. Wilkinson

Commissioner Annie Chao  
Commissioner Elizabeth Lee  
Commissioner Sandra Lee  
Commissioner Nilza R. Serrano  
Commissioner Sung Won Sohn

<b>DATE(S) OF EVENT</b>	<b>SEMINAR / CONFERENCE TITLE</b>	<b>EVENT SPONSOR (ORGANIZATION)</b>	<b>LOCATION (CITY, STATE)</b>
	<b>NOTHING TO REPORT</b>		



**REPORT TO BOARD OF ADMINISTRATION**

**MEETING: MARCH 24, 2020**

From: Lita Payne, Executive Officer *Lita Payne*

**ITEM: VIII - A**

**SUBJECT: PROPOSED BUDGET, PERSONNEL, AND ANNUAL RESOLUTIONS FOR FISCAL YEAR 2020-21 AND POSSIBLE BOARD ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

**Recommendation**

That the Board provide input to the Proposed Budget for Fiscal Year 2020-21 (FY21); and accordingly, instruct staff to submit the Proposed Budget schedules to the City Administrative Officer and the Mayor's Office for inclusion in the Mayor's 2020-21 Proposed Budget.

**Executive Summary**

The LACERS Proposed Budget report for the fiscal year beginning July 1, 2020 and ending June 30, 2021, is provided for review and discussion. The Board's input on the department's operating budget is important to ensure that LACERS is provided with the personnel and financial resources to deliver services and execute initiatives that meet the expectations of the Board, and advance the goals outlined in our Strategic Plan. Staff will incorporate the Board's input and return in May for final adoption of the FY21 Budget.

The attached report focuses mainly on the discretionary items within the Administrative Expense Budget. Board concurrence on several proposed initiatives would provide staff the direction to move forward on soliciting vendor proposals/quotes or other research to aid in refining budget amounts, particularly in the areas of:

- Enhanced Member Engagement
- Performance & Accountability
- Organization Resiliency
- Recruitment & Retention
- ESG Investing

It is important to note that the Proposed Budget does not include the FY21 administrative costs for the new LACERS Headquarters Building at 977 N. Broadway (Broadway Building). As presented at the Board meeting of March 10, 2020, Invesco is preparing the Asset Management Plan and Budget, expected in May. When that plan is complete, staff will bring forward a comprehensive budget request for the FY21 expenses related to the Broadway Building.

Other items discussed in the report are the City contribution and Investment Management Fees and Expenses. In addition, an addendum to the report includes several requisite budget schedules for the City Administrative Office to incorporate in the Mayor's Proposed Budget and City's Final Budget.

## **Discussion**

The Proposed FY21 Budget invests in key priorities of the department focused on serving our Members. With a steady upward trend in the number of retiring Members, and an increasingly technologically savvy membership, the primary increase in this year's budget is a request for additional staffing as part of a three-year plan to improve service times and quality, along with providing more technological efficiencies and options through offering multi-channel Member services. The budget also aims to ensure we attract and retain the most talented City employees, and that we build a sound knowledge management structure that facilitates knowledge transfer to ensure continuity when talent leaves. These budget initiatives were developed to meet the outcomes associated with furthering our Strategic Plan goals.

The Proposed FY21 Administrative Expense Budget seeks \$31.2 million in funding to maintain core services at \$30.0 million, plus \$1.2 million to fund new initiatives in line with LACERS Strategic Plan. The Proposed Budget is a \$3.1 million or 11.1% increase over the current year budget. Obligatory changes to salaries and benefits, such as COLAs, account for \$1.1 million of the increase; offset by the elimination of \$1.2 million in one-time expenses primarily related to the planned expansion into leased space at the Times Building which was not realized due to the acquisition of the Broadway Building. The Proposed Budget includes 13 new authorized positions, ten of these positions have been operating as substitute authorities in FY20 and are needed on a regular basis.

The key highlights of the report are:

### **Administrative Expense Budget**

Discussion of the Administrative Expense Budget is found on pages 2 through 11 of the attached report and is summarized below:

- The Proposed Administrative Expense Budget is \$31,190,324, an increase of \$3,113,925 or 11.1% over last year.
- Obligatory cost increases of \$1,095,092 in salaries and employee benefits account for 35% of the budgetary increase.
- 13 regular positions are requested this year increasing the personnel authority from 160 to 173 positions. Additionally, the budget includes salaries for eight substitute authority positions that will be activated if needed during the fiscal year.
- \$688,724 is requested to fund part-time positions. This will be the first year part-time salaries are included in the budget. Past part-time positions have been funded through salary savings. A part-time budgetary account will strengthen the ability to plan and manage part-time usage.
- The salary savings rate currently reflected is 8%, and may be adjusted based on the actual salary experience in May.



## **Administrative Expense Budget (continued)**

- LACERS' May budget proposal will include an increase in salaries due to the transition of the department's Management Analysts and Senior Management Analysts with benefits administration duties, to the newly created Benefit Analyst and Senior Benefits Analyst classifications. Individual calculations of salary rate for these individuals are needed for each eligible staff who elects to make this transition.

## **City Contribution**

Discussion of the City contribution is found on pages 12 through 13 of the attached report and is summarized below:

- The Board adopted the actuarially determined FY21 City contributions rates on November 12, 2019.
- The FY21 City Contribution is estimated at \$656 million. Last year's City Contribution after the true-up credit was \$673 million.
- A true-up credit of \$46 million will be applied to the employer contribution. This represents the difference in the employer contribution based on the projected payroll versus the actual payroll.
- The Tier 1 contribution of \$596 million is 29.43% of \$2,024,675,040 total actuarial salary of Tier 1 members for FY21.
- The Tier 3 contribution of \$105 million is 27.45% of \$383,378,624 total actuarial salary of Tier 3 members for FY21.
- The employer cost for the Family Death Benefit Plan is \$98,000.
- The employer cost for the Excess Benefit Plan is \$1,260,000.
- The employer cost for the Limited Term Retirement Plan is \$21,000.
- The City is expected to adopt a final covered payroll prior to the May presentation of the final LACERS' budget. The City contribution for Tier 1 and Tier 3 Members will be adjusted accordingly.

## **Investment Management Fees and Expenses**

Discussion of the City contribution is found on page 14 of the attached report and is summarized below:

- The FY21 Investment Management Fees and Expenses are estimated at \$91.6 million, up \$4.4 million from the prior year.
- The Investment Management Fees are estimated for FY21 by projecting the future market value of portfolio assets, and applying the management fee rates reflected in the contracts with individual managers. Due to the market volatility beginning February 2020, the total fund portfolio value has ranged between \$15.9 B and \$18.8 B. The projected market value basis for investment management fees will be adjusted reflective of the market direction indices in May.
- The Investment Management Fee and Expenses schedule reflects adjustments for timing of the investment allocations.

The change in each of the budget areas is summarized below:

	FY20	FY21	\$ change	% change
Administrative Expense	\$28,076,399	\$31,190,324	\$3,113,925	11.1%
Investment Management Fee & Expense	\$87,121,829	\$91,557,275	\$4,435,446	5.1%
City Contribution	\$676,667,085	\$656,361,654	-\$20,305,431	-3.0%

### **Strategic Plan Impact Statement**

This budget includes funding for FY21 initiatives to meet LACERS seven strategic goals.

Prepared By: The Budget Team: Andy Chiu, Edeliza Fang, Mikyong Jang, Chhintana Kurimoto, Lin Lin, Ricky Mulawin, Jo Ann Peralta, Elizabeth Torres, and Dale Wong-Nguyen.

LP/TB/DWN

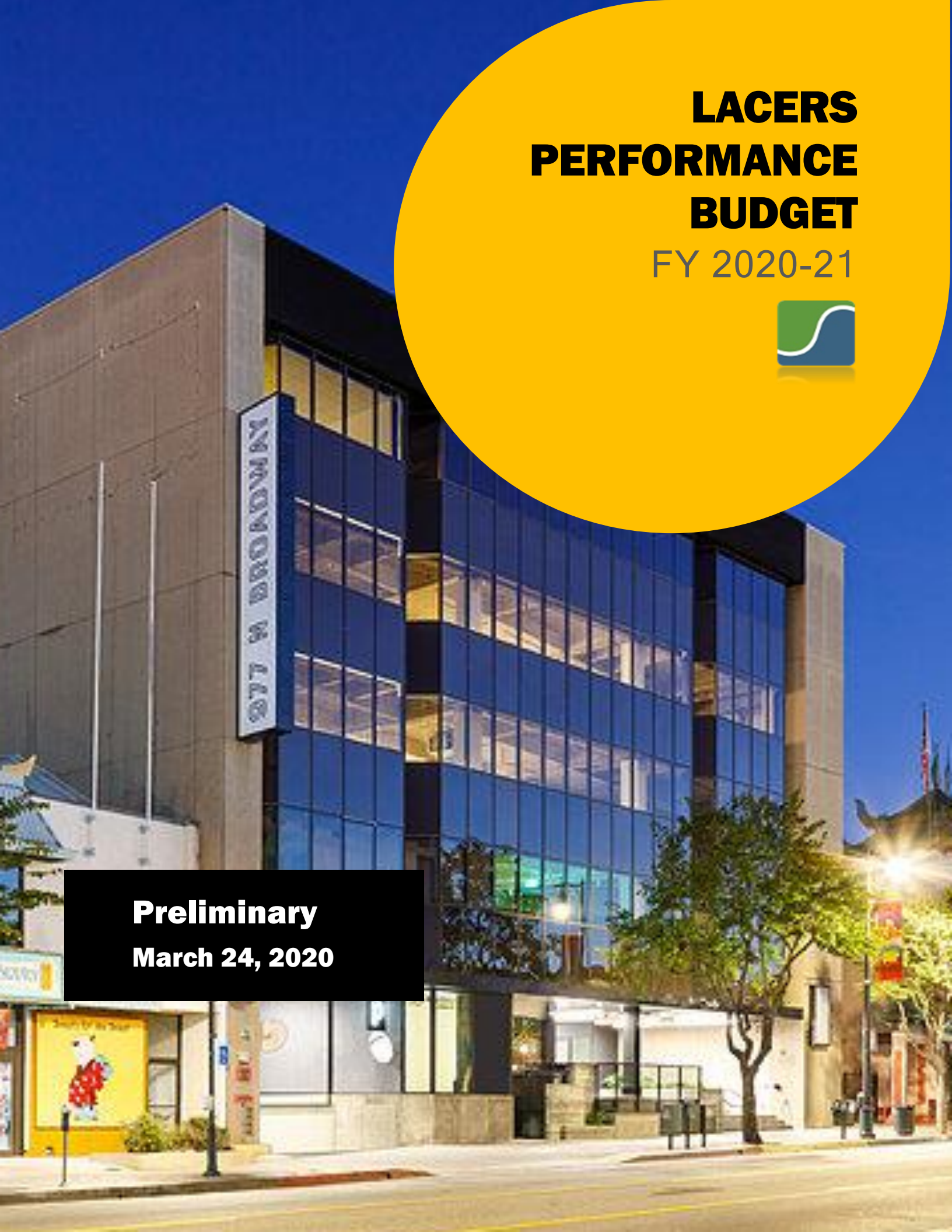
Attachments:       1. LACERS Proposed Budget Report for Fiscal Year 2020-21  
                          2. Proposed Budget, Personnel, and Annual Resolutions

# LACERS PERFORMANCE BUDGET

FY 2020-21



**Preliminary**  
**March 24, 2020**



# LACERS PERFORMANCE BUDGET FY 2020-21

## 01

### **Budget Overview**

#### **Budget Overview**

This section provides an introduction to the three major areas of LACERS' budget and the Board's role in the Administrative Expense Budget, City Contribution, and Investment Management Fees and Expenses.

## 02

### **Administrative Expense Budget**

#### **Administrative Expense Budget**

The Administrative Expense Budget is the operating budget of the department. It includes costs for LACERS' personnel, professional services, information technology infrastructure and projects, office expenses, and Board & staff training/travel.

## 12

### **City Contribution**

#### **City Contribution**

The City's Contribution to LACERS is the employer's cost of funding the retirement and other post-employment benefits. LACERS is the administrator of these benefits promised by the City to its employees who are LACERS Members.

The City Contribution includes the costs of the Members' defined benefit, LACERS health and welfare programs, the Limited Term Retirement Plan for Elected Officials, the Excess benefit for individuals exceeding Internal Revenue Code benefit limits, and the optional Family Death Benefit Program.

## 14

### **Investment Management Fees and Expenses**

#### **Investment Management Fees & Expenses**

Investment management fees are largely asset-based fees. The Investment Management Fee and Expense schedule reflects the application of fees established through contracts, against an assumed future market performance.

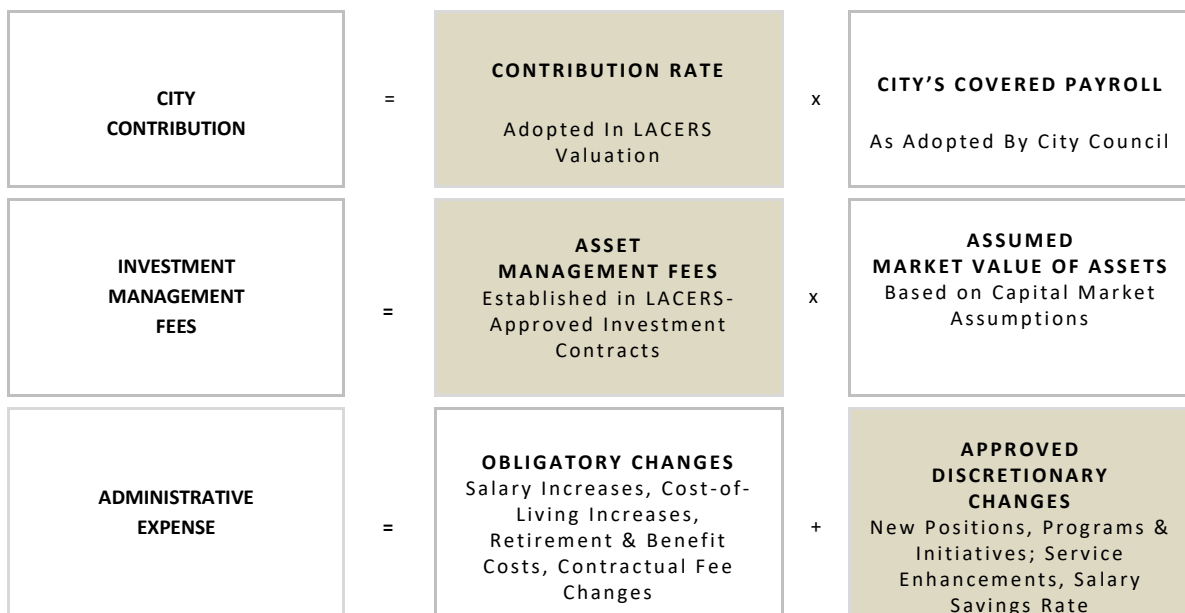
In addition, expenses essential to the management of the portfolio such research services and consulting from our general fund consultant, real estate consultant, and alternative investment consultant, are included in this schedule.

## BUDGET OVERVIEW

The LACERS Board approves an annual budget which estimates the cost of maintaining the Retirement Fund. LACERS' budget is transmitted to the Mayor for inclusion in the City's proposed budget which is due to City Council by April 20, and finalized in June for the fiscal year beginning July 1<sup>st</sup>. The Board's approval of the Administrative and Investment Expense budget also serves to establish the General Manager's expenditure authority for the fiscal year.

LACERS' budget is comprised of the City's contribution to the LACERS Trust Fund, the Investment Management Fees and Expenses Budget, and the Administrative Expense Budget. Key decisions made by the Board throughout the year will determine certain aspects of the budget. This includes the adoption of the actuarial valuation in November which sets the annual contribution rate (a percentage of City payroll) that the City will provide to LACERS for the cost of benefits for City employees; as well as approvals of various investment contracts which set fee rates used to estimate the Investment Management Fees. In March and May of each year, the Board considers programs and initiatives to undertake and fund for the coming fiscal year; this is reflected in the Administrative Expense Budget.

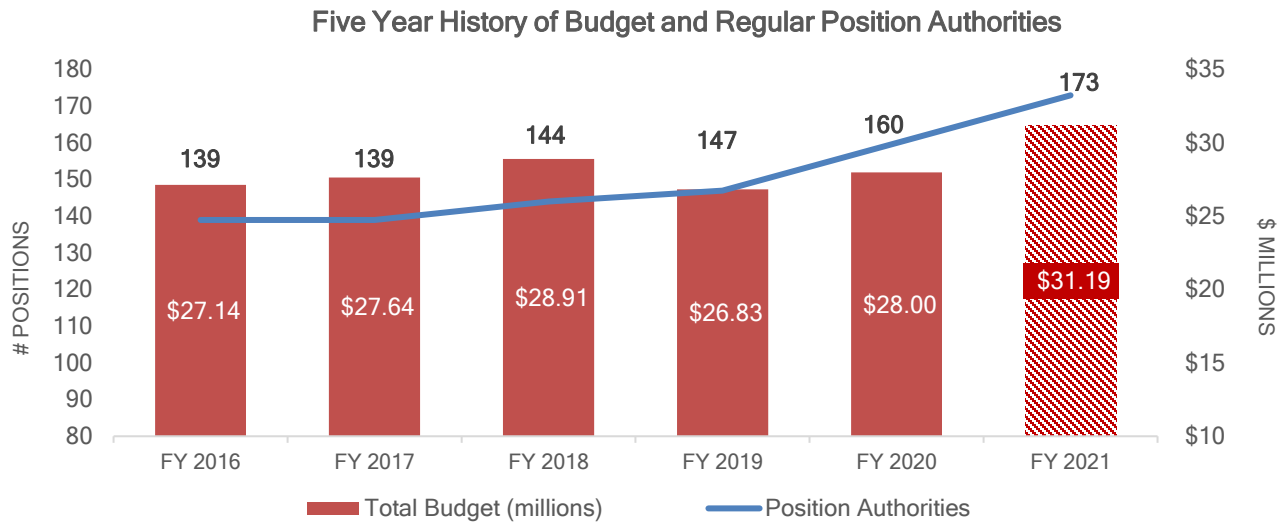
An overview of the components of the LACERS' budget, with the Board's discretionary decisions is reflected as follows:



This report provides discussion of the three major budget components and their respective changes.

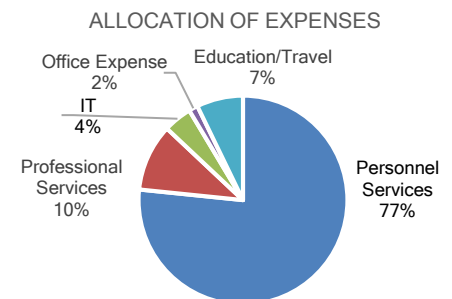
	FY20	FY21	\$ change	% change
Administrative Expense	\$28,076,399	\$31,190,324	\$3,113,925	11.1%
Investment Management Fee & Expense	\$87,121,829	\$91,557,275	\$4,435,446	5.1%
City Contribution	\$676,667,085	\$656,361,654	-\$20,305,431	-3.0%

## ADMINISTRATIVE EXPENSE BUDGET



In the past five years, LACERS' Administrative Expense Budget has fluctuated between \$27.1 million and \$28.9 million, and has averaged an annual increase of 1.3%. In FY21, to address the consistent upward trend of retirements, and the increasing demand for Member services, the budget requests 13 new positions. Additionally, we are increasingly reliant on technology in every aspect of our business, but tempered with data security as a top priority. This is a transitional time for LACERS where retirement administration must meet demands with the tools at hand, while at the same time exploring, developing and implementing the plan forward. Budget reduction strategies are incorporated such as adopting a salary savings rate, alignment of overtime and contractual services budgets to past expenditure patterns, and elimination of underutilized functions.

The Proposed 2020-21 Administrative Expense Budget seeks \$31.2 million in funding to maintain core services of \$30.0 million and \$1.2 million to fund new initiatives in line with the LACERS Strategic Plan. The Proposed Budget is a \$3.1 million or 11.1% increase over the current year budget. Obligatory changes to salaries and benefits account for \$1.1 million of the increase, offset by the elimination of \$1.2 million in one-time expenses primarily related to the anticipated expansion into leased space at the Times Building which was not realized due to the acquisition of the Broadway Building. The Proposed Budget includes 13 new authorized positions, ten of these positions have been operating as substitute authorities in FY20 and are needed on a regular basis.



		FY21 PROPOSED BUDGET	% OF TOTAL		FY20 ADJUSTED BUDGET	CHANGES	% OVER PRIOR
Personnel Services	\$	23,908,905	77%	\$	20,707,196	\$ 3,201,709	15.5%
Professional Services	\$	3,230,564	10%	\$	2,838,721	\$ 391,843	13.8%
Information Technology	\$	1,365,135	4%	\$	1,679,395	\$ -314,260	-18.7%
Office Expense	\$	2,245,260	7%	\$	2,461,757	\$ -216,497	-8.8%
Education/Training/Related Travel	\$	440,460	2%	\$	389,330	\$ 51,130	13.1%
<b>TOTAL</b>	<b>\$</b>	<b>31,190,324</b>	<b>100%</b>	<b>\$</b>	<b>28,076,399</b>	<b>\$ 3,113,925</b>	<b>11.1%</b>



## Detail of Administrative Expense

		City	Adopted	Estimated	Proposed	Budget \$	Budget %
		Account	Budget	Expenditures	Budget	Change	Change
		Number	FY2019-20	FY 2019-20	FY2020-21		
<b>Personnel Services</b>							
601	Salaries	101	\$ 14,110,952	\$ 15,276,462	\$ 15,812,614	\$ 1,701,662	12.1%
	Salaries - As Needed	107	-	-	688,724	688,724	
602	Overtime	109	473,744	360,794	563,367	89,623	18.9%
605	Employee Benefits	601	6,122,500	6,008,797	6,844,200	721,700	11.8%
	Personnel Services Total		<b>\$ 20,707,196</b>	<b>\$ 21,646,053</b>	<b>\$ 23,908,905</b>	<b>\$ 3,201,709</b>	15.5%
<b>Professional Services</b>							
611	Actuarial Service	304	\$ 425,000	\$ 415,224	\$ 551,500	\$ 126,500	29.8%
612	Audit Services	304	148,000	99,379	245,000	97,000	65.5%
613	Legal Services	304	896,721	774,315	928,404	31,683	3.5%
614	Disability Services	304	220,000	200,772	220,000	-	0.0%
615	Other Consulting	304	226,000	106,689	290,660	64,660	28.6%
616	Benefit Payroll Processing Servs.	304	235,000	230,792	245,000	10,000	4.3%
617	Retiree Health Adm. Consultant	304	667,000	667,778	750,000	83,000	12.4%
	Professional Services Total		<b>\$ 2,817,721</b>	<b>\$ 3,254,949</b>	<b>\$ 3,230,564</b>	<b>\$ 412,843</b>	14.7%
<b>Information Technology</b>							
622	Pension Adm. System Vendor	304	\$ 424,455	\$ 337,844	\$ 428,298	\$ 3,843	0.9%
623	Computer Hardware	730	249,725	230,852	237,000	(12,725)	-5.1%
624	Computer Software	601	128,417	127,573	227,652	99,235	77.3%
625	Computer Maint. & Support	601	282,480	280,644	391,185	108,705	38.5%
626	Other Computer Consulting	304	631,000	527,816	81,000	(550,000)	-87.2%
	Information Technology Total		<b>\$ 1,716,077</b>	<b>\$ 1,504,729</b>	<b>\$ 1,365,135</b>	<b>\$ (350,942)</b>	-20.5%
<b>Training &amp; Related Travel</b>							
604	Employee Development	601	\$ 143,485	\$ 103,398	\$ 135,210	\$ (8,275)	-5.8%
634	Conferences & Travel	213	245,845	170,590	305,250	59,405	24.2%
	Training & Related Travel Total		<b>\$ 389,330</b>	<b>\$ 273,988</b>	<b>\$ 440,460</b>	<b>\$ 51,130</b>	13.1%
<b>Office Expenses</b>							
631	Printing and Binding	212	\$ 124,000	\$ 145,002	\$ 175,000	\$ 51,000	41.1%
632	Postage	601	197,950	185,769	217,300	19,350	9.8%
633	Telephone and Utilities	601	15,520	10,890	15,600	80	0.5%
635	Office Lease	304	1,371,280	980,037	1,234,000	(137,280)	-10.0%
636	Office Equipment Services	304	54,000	42,538	46,000	(8,000)	-14.8%
651	Petty Cash	601	10,000	10,194	12,000	2,000	20.0%
652	Board Member Election Expense	601	30,000	30,000	-	(30,000)	-100.0%
653	Furniture and Other Equipment	730	247,000	223,029	17,000	(230,000)	-93.1%
655	Other Office Expense	601	109,400	121,576	122,360	12,960	11.8%
656	Membership Dues & Subscriptions	601	136,925	119,682	256,000	119,075	87.0%
658	Promotional Supplies	601	10,000	9,277	10,000	-	0.0%
659	Insurance Expense	304	140,000	135,000	140,000	-	0.0%
	Office Expenses Total		<b>\$ 2,446,075</b>	<b>\$ 2,012,995</b>	<b>\$ 2,245,260</b>	<b>\$ (200,815)</b>	-8.2%
<b>Grand Total</b>			<b>\$ 28,076,399</b>	<b>\$ 28,692,714</b>	<b>\$ 31,190,324</b>	<b>\$ 3,113,925</b>	11.1%

## Summary of Changes in Personnel

DIVISION/SECTION	2019-20 Adopted Budget Regular Authorities	Proposed Changes				2020-21 Proposed Budget Regular Authorities	2020-21 Proposed Substitute Authorities		
		Reallocate	Transfers	Regularize Substitute Authorities	New		Cont.	New	Total
Executive	9	-2/+2	-2			7	1		1
Investments	11			1	1	13			
Human Resources	5					5			
Internal Audit	3					3			
Retirement Services	43			5	1	49			
Health Benefits Administration & Communications	35	-1/+1	-1	1		35	2	2	4
Administration	30	-3/+3		1		31			
Fiscal Management	13					13	2		2
Systems	11	-1/+1				11			
Administrative Operations	0	-1/+1	+3	2	1	6	1		1
<b>TOTAL</b>	<b>160</b>	<b>-8/+8</b>	<b>0</b>	<b>10</b>	<b>3</b>	<b>173</b>	<b>6</b>	<b>2</b>	<b>8</b>



## Summary of Changes by Program

2020-21 PROPOSED BUDGET	\$	31,190,324
2019-20 ADOPTED BUDGET	\$	28,076,399
NET CHANGE	\$	\$3,113,925
PERCENTAGE CHANGE		11.1%

	FY20 ADOPTED BUDGET	OBLIGATORY Changes	DISCRETIONARY Changes	Changes in One- time Expenses	FY21 PROPOSED BUDGET	Changes in Regular Authorities
<b>CONTINUATION OF CORE SERVICES</b>						
<b>Benefits Administration</b>	<b>\$ 8,178,511</b>				<b>\$8,636,861</b>	<b>7</b>
Salaries - Regular	6,279,106	\$153,873	93,614			
Salaries - Temp & As-Needed	0		329,117			
Overtime	406,000	89,855	-22,000			
Expenses	1,493,405	-54,700	241,875	-265,630		
<b>Investment Administration</b>	<b>1,776,139</b>				<b>2,050,249</b>	<b>2</b>
Salaries - Regular	1,615,864	130,064				
Salaries - Temp & As-Needed	0	0	39,746			
Expenses	160,275	-18,450	27,000	95,750		
<b>General Administration &amp; Support</b>	<b>17,212,444</b>				<b>19,213,327</b>	<b>3</b>
Salaries - Regular	6,215,982	89,455	1,234,656			
Salaries - Temp & As-Needed	0	0	319,861			
Overtime	67,744	24,626	-2,858			
All Employee Benefits	6,122,500	721,700				
Expenses	4,806,218	\$626,493	50,610	-		
				1,063,660		
<b>CORE PROGRAMS TOTAL</b>	<b>\$27,167,094</b>		<b>\$2,840,997</b>		<b>\$29,900,437</b>	<b>12</b>

Note: \$1,395,300 of the amount in Gen. Admin & Support Salaries - Regular, Discretionary changes is FY20's salary savings amount. A change in budgeting methodology will eliminate the lump sum salary savings amount, instead reducing each individual's salary rate by the corresponding salary savings rate. This is a budgetary methodology and will not impact the employees' individual salary.

	FY20 ADOPTED BUDGET	DISCRETIONARY CHANGES	FY21 PROPOSED BUDGET	Changes in Regular Authorities
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## MAJOR INITIATIVES

### *Advancing the Customer Service & Benefit Delivery Goals*

<b>Member Experience</b>	\$297,000	-\$25,900	<b>\$ 271,100</b>	
Web-Based Counseling			7,100	
Website Redesign-Phase II			151,000	
Front-End Scanning			63,000	
Multi-Channel Outreach			50,000	

### *Advancing the Governance and Organizational Efficiency and Effectiveness Goals*

<b>Performance &amp; Accountability</b>		\$196,000	<b>\$ 196,000</b>	
Hosted Educational Events & Publications			55,000	
Data Analytics Tools & Services			141,000	

### *Advancing the Organizational Resiliency Goal*

<b>Organization Resiliency</b>	\$364,890	\$284,577	<b>\$ 649,467</b>	
Enterprise/Cyber Risk			385,028	
Data and Benefits Protection			107,654	1
Emergency Preparedness			156,785	

### *Advancing the Workforce Goal*

<b>Recruitment &amp; Retention</b>	\$247,415	-\$74,095	<b>\$ 173,320</b>	
Employee Training & Local & On-Site Training			100,720	
			72,600	

<b>MAJOR INITIATIVES TOTAL</b>	<b>\$909,305</b>	<b>\$272,928</b>	<b>\$ 1,182,233</b>	
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<b>TOTAL Administrative Budget</b>	<b>\$28,076,399</b>	<b>\$3,113,925</b>	<b>\$31,190,324</b>	<b>13*</b>
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### *Advancing the Investment Goal*

<b>ESG Investing</b>			<b>\$55,000</b>	
ESG Consultant			55,000	
<b>ADDITION to Investment Management Expense</b>			<b>\$55,000</b>	

\*Total FY21 Regular Position Authorities increase by 13

Major Initiatives for 2020-21

## MEMBER EXPERIENCE

FY 2020-21 BUDGET REQUEST			IMPACT
	Expense	Positions	
<b>Total Request</b>	<b>\$236,100</b>	<b>0</b>	HIGHLY SATISFIED MEMBERS THROUGH MULTI-CHANNEL SERVICE OPTIONS
Web-Based Counseling	7,100		
Website Redesign-Phase II	151,000		
Front-End Scanning	63,000		
Multi-Channel Outreach	15,000		

### TO ADVANCE THE CUSTOMER SERVICE AND BENEFIT DELIVERY GOALS:

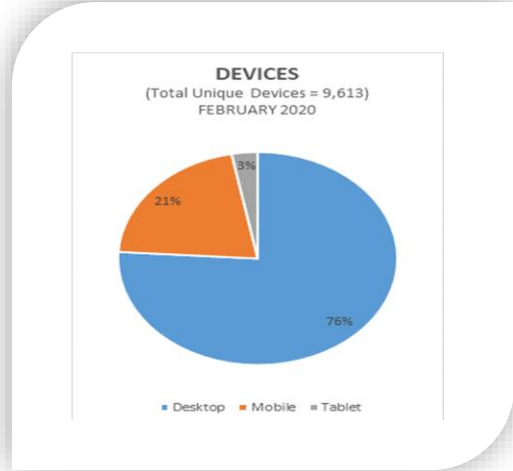
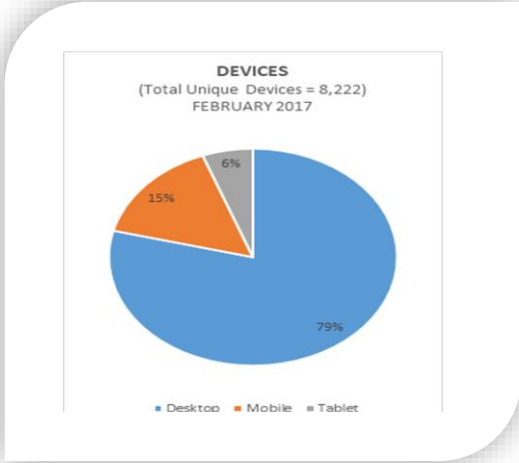
*Providing outstanding customer service & delivery of accurate and timely Member benefits.*

**INITIATIVE OBJECTIVES:** To provide Members with a better user experience; to make retirement information and planning resources more accessible to Members; to improve on the timeliness of benefit information and delivery.

**DESCRIPTION:** LACERS strives to improve the Member experience through all points of contact; whether online, by phone, or in person. In order to continue improving upon high customer satisfaction, it is important to continuously explore new ways to reach Members and provide information to help them plan for a successful retirement. This initiative aims to broaden opportunities for LACERS Members to access services with web-based counseling, benefit calculators on the LACERS' website, as well as outreaching to Members via social media and other communication media.

**DELIVERABLES:** This initiative is focused on the following key priorities:

- ❖ Providing a web-based counseling option for Members
- ❖ Increasing 24/7 services with the expansion of three benefit calculators on LACERS website
- ❖ Greater engagement with Members in various formats to reach the most Membership
- ❖ Build the capabilities for front-end scanning of Member documents and workflow capabilities to increase the timeliness of benefit delivery



## PERFORMANCE & ACCOUNTABILITY

### FY 2020-21 BUDGET REQUEST

	Expense	Positions
<b>Total Request</b>	<b>\$196,000</b>	<b>0</b>
Hosted Educational Events & Publications	55,000	
Data Analytics Tools & Services	141,000	

### IMPACT

FACT-BASED DECISION-MAKING AND TRANSPARENCY

**TO ADVANCE THE GOVERNANCE & ORGANIZATION EFFECTIVENESS GOALS:** *Upholding good governance which affirm transparency, accountability, and fiduciary duty. As well as to increase organizational effectiveness.*

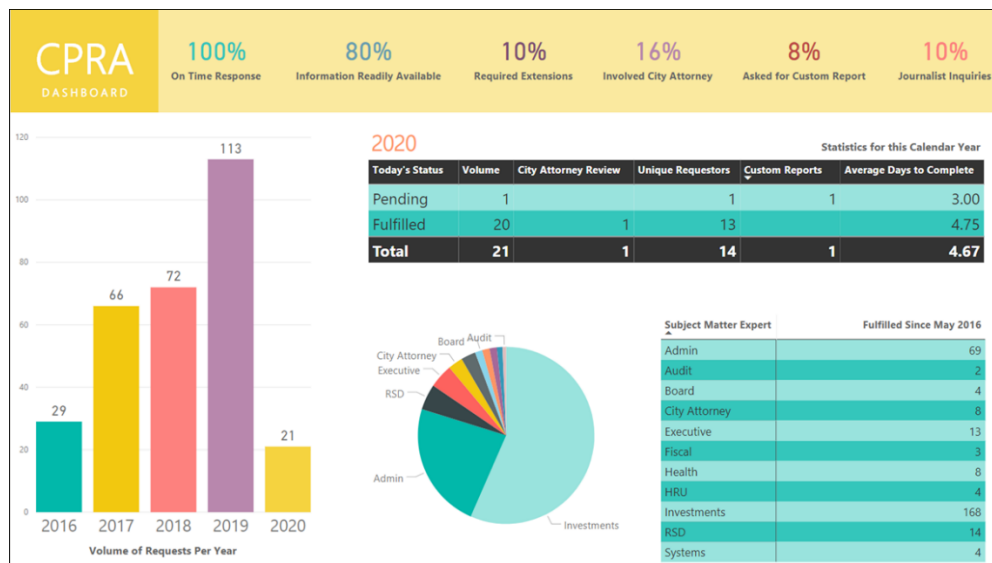
**INITIATIVE OBJECTIVES:** To increase transparency of the System and provide educational events and publications to our stakeholders. To utilize data analytic tools to present objective information about LACERS and improve fact-based decision-making by stakeholders.

**DESCRIPTION:** Data analytics tools help draw out data points and present them in user-friendly visualization that display trends and relationships. Sharing this information with stakeholders lead to stronger, fact-based decision-making that will make an impact.

**DELIVERABLES:** This initiative is focused on the following key priorities:

- ❖ Purchasing, deploying, and training staff on the use of business intelligence
- ❖ Using data points to enhance presentations that communicate directly and convincingly
- ❖ Conduct a Pension Symposium for our stakeholders to present key data
- ❖ Develop stronger performance metrics and tracking effectiveness of budgetary decisions and operational performance

**SAMPLE BUSINESS INTELLIGENCE VISUALIZATION CREATED BY LACERS STAFF**



## ORGANIZATIONAL RESILIENCY

FY 2020-21 BUDGET REQUEST			IMPACT
	<b>Expense</b>	<b>Positions</b>	CYBER PROTECTION AND CRISIS READINESS
<b>Total Request</b>	<b>\$649,467</b>	<b>1</b>	
Enterprise/Cyber Risk Management	385,028		
Data & Benefits Protection	107,654	1	
Emergency Preparedness	156,785		

**TO ADVANCE THE ORGANIZATION GOAL:** *Increasing organizational effectiveness, efficiency, and resiliency.*

**INITIATIVE OBJECTIVE:** To continue to mature an effective enterprise risk management program

**DESCRIPTION:** This initiative encompasses life safety and business continuity concerns, as well as cybersecurity and data protection projects.

**Cyber Resiliency Plan:** This effort includes development and implementation of strategies to build our organization's cyber resilience in the following key areas: Infrastructure, Governance, Preparedness, and Response. The proposed budget requests funding for cybersecurity professional services to develop security policies and protocols, cyber liability insurance to protect LACERS in the event of a data breach or cyber-attack, utilizing the cyber incident response team provided by the insurance carrier. Additional resources are also provided to fund a contract for outside legal counsel specializing in data and privacy law. With this added resource, we intend to strengthen our efforts in the area of HIPAA (Health Insurance Portability and Accountability Act of 1996) compliance and protection of personally identifiable information.

**Emergency Management Plan:** This effort drives LACERS' investment in emergency planning, disaster recovery, and staff's ongoing training and exercises of those plans. Key activities include: Emergency Preparedness and Response Training, Department Emergency Plan/Business Continuity Plan (BCP) Update, Tabletop Exercise of the BCP.

**DELIVERABLES:** This initiative is focused on the following key priorities:

- ❖ Development of the IT Security Policies and Protocols
- ❖ Implementation of security enhancements to computer hardware and software
- ❖ Review and education on HIPAA compliance standards and personally identifiable information protection
- ❖ Improvements in emergency response during the annual tabletop exercise as evidenced by the consultant's analysis

EMERGENCY PREPAREDNESS TRAINING		
MEASURES	FY 19-20	FY 20-21
New Employees Emergency Training in the First 90 Days	95%	95%
MIR3 (Call-Out System) Test Success Rate	85%	90%

## RECRUITMENT & RETENTION

FY 2020-21 BUDGET REQUEST		
	Expense	Positions
<b>Total Request</b>	<b>\$208,320</b>	<b>0</b>
Employee Training & Development	100,720	
Local & On-Site Training	72,600	
New Employee Training Tools	35,000	

IMPACT
EMPLOYEE TRAINING & DEVELOPMENT WHICH ATTRACTS AND RETAINS TALENT

**TO ADVANCE THE WORKFORCE GOAL:** *Recruiting, retaining, mentoring, empowering, and promoting a high-performing workforce.*

**INITIATIVE OBJECTIVE:** Commit and promote dedicated training and educational resources.

**DESCRIPTION:** LACERS recognizes the importance of staff development and education. A training program consisting of on-site training, conferences, and independent study through our tuition reimbursement program, provides employees with options for the professional development they seek. In FY21, the LACERS Human Resources Unit will begin oversight of all non-due diligence training budgets for all off-site conferences and training. This will allow HR to reallocate training dollars to meet identified training needs throughout the year. LACERS continues to participate in CALAPRS training and roundtables, and continues the Tuition Reimbursement Program for its employees. The proposed budget requests additional funding for the program to accommodate the reimbursement ceiling increase due to the base rate change from Cal State tuition rate to the UC tuition rate.

**DELIVERABLES:** This initiative is focused on the following key priorities:

- ❖ Four hours of annual training per staff
- ❖ Maximize usage of all budgeted training funds
- ❖ Attract and retain staff with LACERS' Tuition Reimbursement Program

STAFF AND SUPERVISOR TRAINING (Target = 90% or greater receiving at least 4 hours of education or training)			
	FY 18-19 (As of 3/31/19)	FY 19-20 (Target)	FY 20-21 (Target)
Staff	91%	>90%	>90%
Supervisors	100%	>90%	>90%

### LACERS TUITION REIMBURSEMENT PROGRAM

PARTICIPANT STATS						
FISCAL YEAR	GENERAL ED, AA, OR CERTIFICATE	UNDERGRADUATE	GRADUATE	TOTAL # OF PARTICIPANTS	COMPLETED CERTIFICATE (CER) OR DEGREE PROGRAM	TOTAL REIMBURSED
2016-17	3	3	1	7	1-AA	\$17,348.44
2017-18	1	3	3	7	1-BS/1-MBA	\$27,769.45
2018-19	2	2	2	6	1-CER/1-BS/1-MPA	\$35,253.00
2019-20*	2	2	3	7	1-MPA	\$29,741.35

\*To Date 3/17/20

## OUTPERFORM THE BENCHMARK

FY 2020-21 BUDGET REQUEST		
	Expense	Positions
Total Request	\$55,000	0
ESG Consultant	\$55,000	

IMPACT
PORTFOLIO OPTIMALLY STRUCTURED FOR ESG EFFECTIVENESS AND MEETING PERFORMANCE OBJECTIVES

**TO ADVANCE THE INVESTMENT GOAL:** *Optimizing long-term risk adjusted returns through superior investments.*

**INITIATIVE OBJECTIVE:** To maximize the return of the portfolio at a prudent level of risk to meet the obligations of the System while incorporating principles that provide a global standard for responsible investing as it relates to environmental, social, and governance factors.

**DESCRIPTION:** The LACERS' investment program minimizes risk through asset diversification with the purpose of achieving the highest likelihood of attaining the assumed actuarial rate of return of 7.25% over a long term investment horizon. The Investment Division is responsible for the management of a \$19 billion investment portfolio. As a Principles for Responsible Investment (PRI) Signatory, LACERS believes that developing an optimal Environmental, Social, and Governance (ESG) Program that conforms to the PRI Signatory requirements is essential to ensure that the LACERS' multi-billion dollars of assets are optimally programmed for an appropriate level of ESG effectiveness that also has a material positive impact on the LACERS' bottom line performance. The proposed budget requests funding for an ESG consultant to provide assistance in the development of a robust ESG Program.

ASSET CLASS BY MARKET VALUE & ALLOCATION (as of 2/29/20)						
ASSET CLASS	ACTUAL (\$ B)	ACTUAL	TARGET	ACTUAL - TARGET*	MINIMUM	MAXIMUM
U.S. EQUITY	\$4.26	23.7%	19.0%	4.7%	12.0%	26.0%
NON-U.S. EQUITY	\$5.10	28.4%	27.0%	1.4%	18.0%	36.0%
CORE FIXED INCOME	\$3.33	18.6%	13.7%	4.9%**	10.8%	16.8%
CREDIT OPPORTUNITIES	\$1.04	5.8%	12.3%	-6.5%**	8.3%	16.3%
PRIVATE EQUITY	\$2.07	11.6%	14.0%	-2.4%	N/A	N/A
PUBLIC REAL ASSETS	\$1.20	6.7%	6.0%	0.7%	4.0%	8.0%
PRIVATE REAL ESTATE	\$0.81	4.5%	7.0%	-2.5%	N/A	N/A
CASH	\$0.13	0.7%	1.0%	-0.3%	0.0%	2.0%
<b>TOTAL FUND</b>	<b>\$17.94</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>N/A</b>	<b>N/A</b>

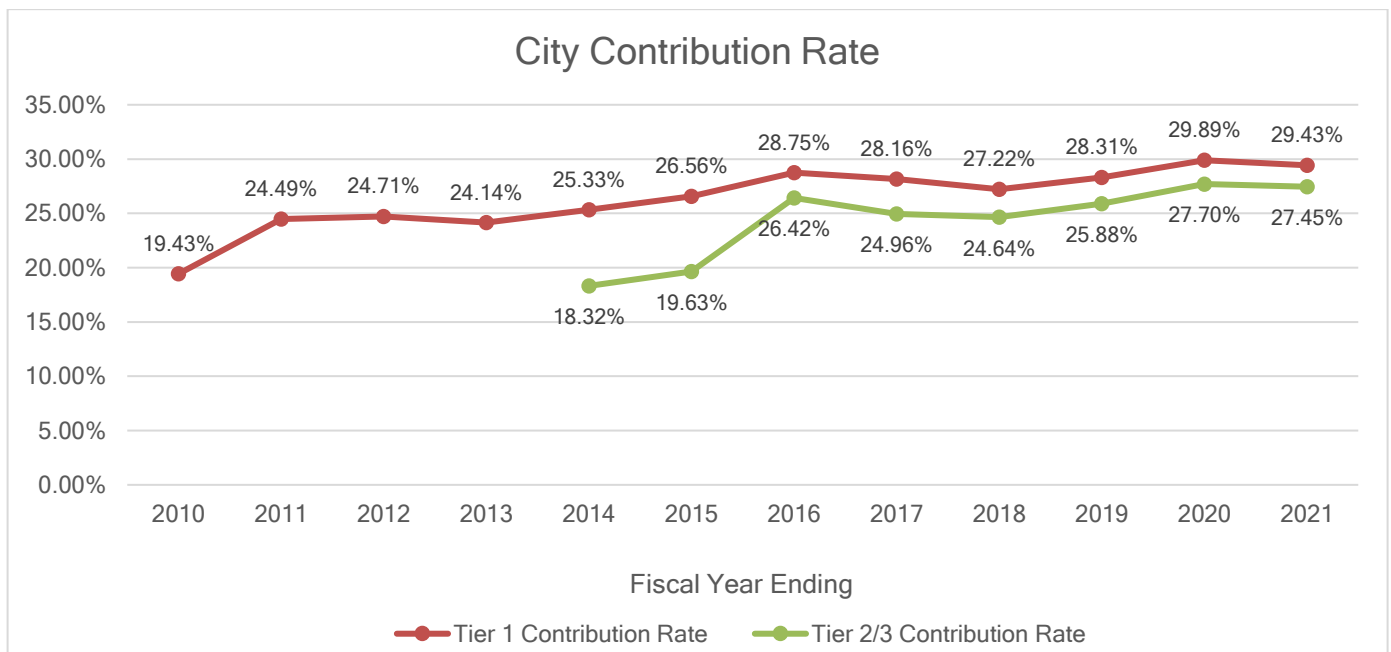
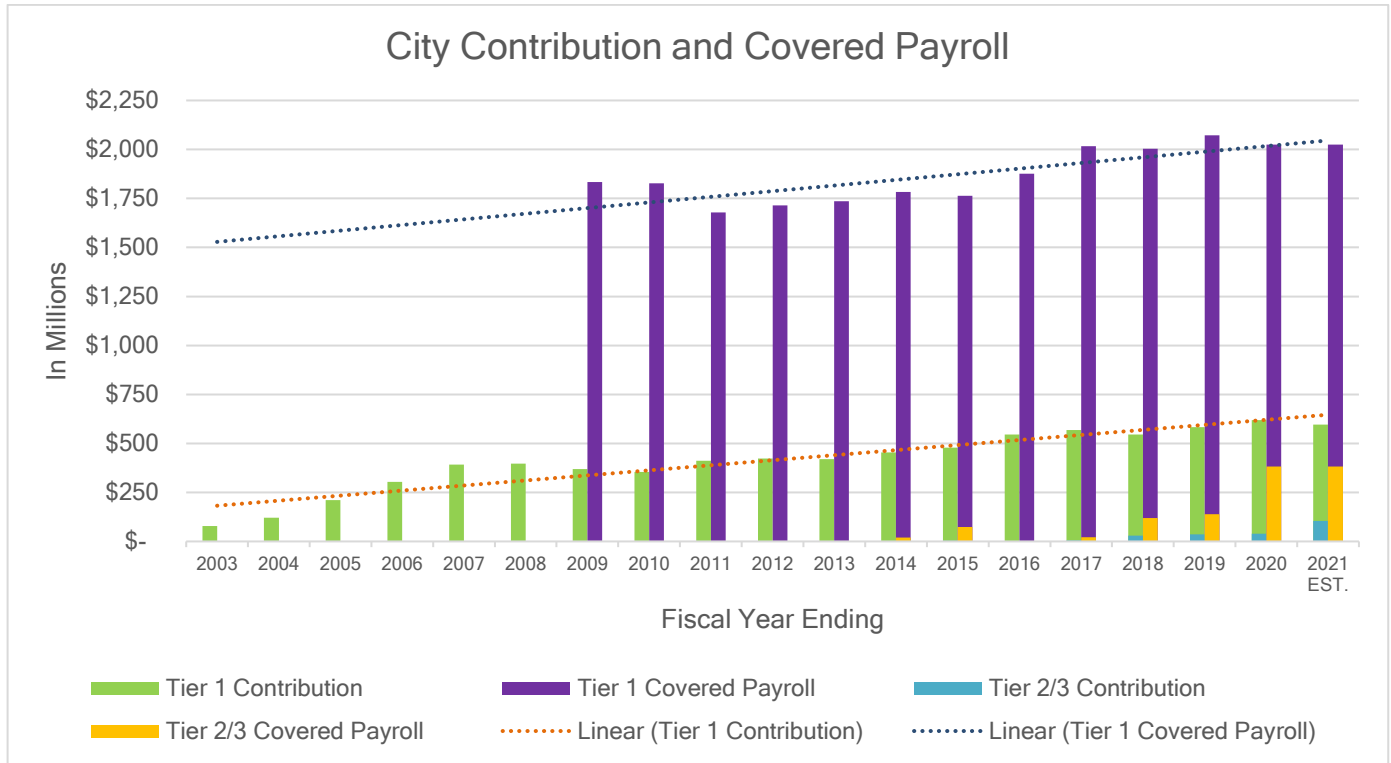
\*Current asset allocation targets approved in April 2018. Transition to new targets in process.

\*\*Difference between actual and target is rounded to the one-tenth place for this summary; actual unrounded figures do reconcile.



# CITY CONTRIBUTION

The City Contribution is a percentage of the City's covered payroll. Over a ten-year period, both factors in calculating the contribution amount, the (1) City payroll and (2) contribution rate have been on an upward trend. This corresponds to the increase in the City contribution amount.



## CITY CONTRIBUTION (continued)

The City contributes funding for four plans administered by LACERS: Retirement and Health Benefits, the Excess Benefit Plan, the Family Death Benefit Plan, and the Limited Term Retirement Plan.

Retirement and Health Benefits	\$	701,099,297
True-up Adjustment		-46,116,643
Subtotal	\$	<u>654,982,654</u>
Excess Benefit Plan		1,260,000
Family Death Benefit Plan		98,000
Limited Term Retirement Plan		21,000
TOTAL	\$	<u><u>656,361,654</u></u>

City contribution rates toward retirement and health benefits for LACERS Members are set by the Board upon adoption of the annual actuarial valuations. Stated in the form of a percentage of covered payroll, the amount of the City's contribution is determined on the final covered payroll adopted in the City's budget. The City Contribution reflected above is based on the Mayor's proposed budget, and will change when the final covered payroll is known. As of now, the estimate is based on the final FY20 covered payroll of \$2 billion for Tier 1 Members and rate of 29.43%; and a covered payroll of \$383 million and rate of 27.45% for Tier 3 Members. A credit adjustment of \$46,116,643 is applied toward the FY21 contribution to LACERS. This credit amount represents a true-up of the Fiscal Year FY20 contribution – the difference between the contributions paid based on the budgeted covered payroll amount on July 15, 2019 and the actual payroll toward the end of the Fiscal Year. The City is also required by statute to make employer contributions for the Excess Benefit Plan, the Family Death Benefit Plan, and the Limited Term Retirement Plan.

### EXCESS BENEFIT PLAN

The Excess Benefit Plan was established separate from the LACERS Trust Fund, to pay retirement benefit amounts in excess of the benefit limits established by the Internal Revenue Code (IRC), currently \$230,000<sup>1</sup> for 2020. In 2020, there are 49 LACERS Members who receive their monthly LACERS retirement benefit up to the limit allowable by the IRC, and the remainder of their benefit is paid separately by the City. The City's cost of this program is the projected amount of the benefits that will be paid from the City's account for FY21, plus reasonable administrative expenses.

### FAMILY DEATH BENEFIT PLAN

Approximately 2,600 Active Members opt into the Family Death Benefit Plan which provides an additional benefit to qualifying surviving minor children, or widow/widower over age 60 if the Member dies while an active City employee. The City's contribution to the Family Death Benefit is equivalent to a match of the Member's contribution which is currently \$3.00 per month. This monthly amount is established pursuant to a biennial study of the full actuarial costs of the benefit as required by the Los Angeles Administrative Code.

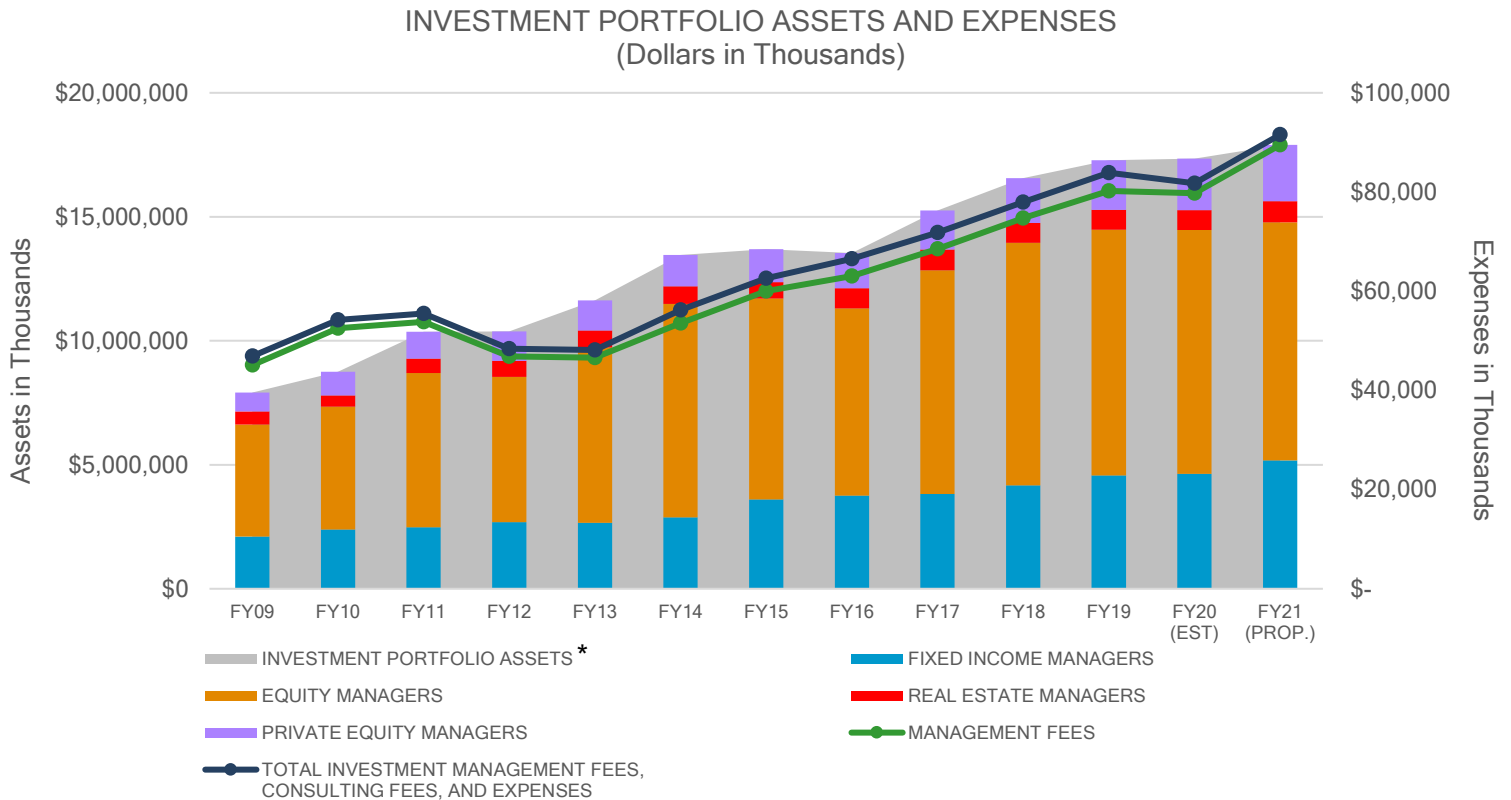
### LIMITED TERM RETIREMENT PLAN (LTRP)

The LTRP provides elected officials, who serve four-year terms, the option of participating in a defined contribution plan until they have completed the five years of City service needed to vest in the defined benefit plan. The City provides a contribution to LTRP Members at the same rate as the employer contribution to the LACERS defined benefit plan. There is currently one LTRP Member in the plan.

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<sup>1</sup>This represents the unadjusted Excess Benefit limit. The individual limit must be adjusted based on the age of the Member at retirement, years of City service, service purchases, and calculated on a single-life annuity basis.

## INVESTMENT MANAGEMENT FEES AND EXPENSES

In the past ten-year period, overall fees have increased along with the increase in portfolio value.



\* due to the market volatility beginning February 2020, the total fund portfolio value has ranged between \$15.9 B and \$18.8 B

The Investment management fees are largely asset-based fees established in the respective contracts with investment managers hired by LACERS. Investment consulting fees are flat fees paid to our General Fund consultant, our Private Equity consultant, and our Real Estate consultant. Other expenses include research and services which support administration of the investment program.

Investment Management Fees	\$ 89,482,865
Investment Consulting Fees	1,833,000
Other Investment Expense	241,410
<b>TOTAL</b>	<b>\$ 91,557,275</b>

The 2020-21 Investment Management Expense Fee budget increased by \$4.44 million or 5.1%. This includes:

- \$2.17 million from new commitments to Private Equity and Real Estate Funds.
- \$4.56 million from new active strategies pursuant to the implementation of the asset allocation policy adopted on April 10, 2018.
- (\$2.45) million in net market value changes primarily due to the recent drop in equities due to world events.
- \$0.16 million increase in other Investment Consulting Fees and Expenses. The change is mainly attributed to adding ESG Consultant and Tax Accounting Services and removing CEM Benchmarking from the budget.

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM****PROPOSED BUDGET  
AND  
PERSONNEL RESOLUTIONS****Fiscal Year 2020 - 21****Presented March 24, 2020**

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**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM**

**STATEMENT OF RECEIPTS AND EXPENDITURES**

<b>Actual 2018-19</b>	<b>Adopted Budget 2019-20<sup>1</sup></b>	<b>Estimated 2019-20</b>		<b>Budget Appropriation 2020-21<sup>2</sup></b>
<b>RECEIPTS</b>				
\$ 587,889,902	\$ 676,667,085	\$ 676,667,085	City Contributions (see Schedule 1).....	\$ 656,361,654
240,258,510	258,361,000	260,000,000	Member Contributions.....	280,000,000
98,886	104,000	102,000	Family Death Benefit Plan Member Contributions.....	98,000
6,090,036	--	10,360,000	Self-Funded Dental Insurance Premium.....	10,700,000
468,153	--	816,000	Member Insurance Premium Reserve.....	840,000
416,415,425	415,158,054	410,000,000	Earnings on Investments.....	422,300,000
315,119,217	--	284,000,000	Gain on Sale of Investments.....	--
<u>\$ 1,566,340,129</u>	<u>\$ 1,350,290,139</u>	<u>\$ 1,641,945,085</u>	Total Receipts.....	<u>\$ 1,370,299,654</u>
<b>EXPENDITURES</b>				
908,034,349	\$ 964,600,000	\$ 981,715,000	Retirement Allowances.....	\$ 1,040,920,000
1,119,276	1,156,000	1,104,000	Family Death Benefit Plan Allowance.....	1,156,000
122,766,321	134,136,000	133,015,000	Retired Medical & Dental Subsidy.....	142,991,000
13,344,880	14,100,000	14,700,000	Retired Medicare Part B Reimbursements.....	16,170,000
4,018,393	--	8,282,000	Self-Funded Dental Insurance Claims.....	8,861,000
10,629,675	11,427,000	11,170,000	Refund of Member Contributions.....	12,287,000
1,053,844	1,360,000	2,000,000	Refund of Deceased Retired Accum. Contributions.....	2,200,000
24,325,015	28,076,399	27,932,714	Administrative Expense .....	31,190,324
364,721	--	760,000	Self-Funded Insurance Administrative Fee.....	783,000
82,970,385	87,121,829	81,774,925	Investment Management Fees and Expenses.....	91,557,275
<u>\$ 1,168,626,859</u>	<u>\$ 1,241,977,228</u>	<u>\$ 1,262,453,639</u>	Total Expenditures.....	<u>\$ 1,348,115,599</u>
<u>397,713,270</u>	<u>108,312,911</u>	<u>379,491,446</u>	Increase in Fund Balance.....	<u>22,184,055</u>
<u>\$ 1,566,340,129</u>	<u>\$ 1,350,290,139</u>	<u>\$ 1,641,945,085</u>	Total Expenditures and Increase in Fund Balance.....	<u>\$ 1,370,299,654</u>

1. The City Contributions amount for the FY 2019-20 Adopted Budget was based on the City's final covered payroll of \$2,408,053,664 and included the application of a net credit adjustment for FY 2018-19 of \$36,017,160 deducted from FY 2019-20 contribution payment. The credit adjustment represents a true-up of the FY 2018-19 City contribution.

2. The preliminary City Contributions amount for FY 2020-21 is based on the Mayor's Proposed Budget City covered payroll of \$2,408,053,664 and includes a credit adjustment of \$46,116,643 for the true-up of FY 2019-20 contributions which will be deducted from the FY 2020-21 contribution payment. The preliminary City Contribution budget amount will be finalized upon the receipt of adopted City covered payroll information from the City for FY 2020-21.

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM**

**SCHEDULE 1 -- CITY CONTRIBUTIONS**

**ACTUARIAL REQUIREMENTS**

To fund the liabilities of the System for future service as required in Article XI Section 1158 and 1160 of the City Charter in accordance with the actuarial valuation of those liabilities as of June 30, 2019 as follows:

Tier 1		
29.43% of \$2,024,675,040 total actuarial salary of Tier 1 members for fiscal year 2020-21	\$	595,861,864
Tier 3		
27.45% of \$383,378,624 total actuarial salary of Tier 3 members for fiscal year 2020-21		105,237,433
Subtotal	<u>\$</u>	<u>701,099,297</u>
Family Death Benefit Plan (FDBP)		
To match the estimated total amount contributed by Family Death Benefit Plan (FDBP) members in accordance with the provisions of Section 4.1090 of the Administrative Code.		98,000
Excess Benefit Plan Fund (EBP)		
To fund retirement benefits in excess of the limits set by Internal Revenue Code Section 415 (b) in accordance with the provisions of Section 4.1800 of the Administrative Code.		1,260,000
Limited Term Retirement Plan Fund (LTRP)		
To fund the Defined Contribution Plan for elected City officials in accordance with the provisions of Section 4.1850 of the Administrative Code.		<u>21,000</u>
<b>Total City Contributions</b>	<b>\$</b>	<b><u>702,478,297</u></b>
True-up Adjustment:		
Credit of difference in City contributions for FY 2019-20 based on estimated covered payroll on July 15, 2019 and actual covered payroll up to February 29, 2020.		<u>(46,116,643)</u>
<b>Total City Contributions After True Up</b>	<b>\$</b>	<b><u><u>656,361,654</u></u></b>

**City Contributions by Funding Source:**

	Total Covered Payroll	Contributions				FY 20 True-Up Adjustments	Total
		Tier 1 (29.43%)	Tier 3 (27.45%)	Shared Cost for FDBP/EBP/LTP			
General Fund (TRAN)	\$ 1,990,820,118	\$ 483,321,353	\$ 92,529,338	\$ 1,140,066	\$ (40,110,732)	\$ 536,880,025	
Airports	306,649,000	83,024,341	10,063,067	175,606	(5,327,027)	87,935,987	
Harbor	84,860,232	22,835,889	1,856,063	48,596	(704,112)	24,036,436	
LACERS	13,972,114	3,655,286	403,378	8,002	(33,742)	4,032,924	
LAFPP	<u>11,752,200</u>	<u>3,024,995</u>	<u>385,587</u>	<u>6,730</u>	<u>58,970</u>	<u>3,476,282</u>	
Total	<u>\$ 2,408,053,664</u>	<u>\$ 595,861,864</u>	<u>\$ 105,237,433</u>	<u>\$ 1,379,000</u>	<u>\$ (46,116,643)</u>	<u>\$ 656,361,654</u>	

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM**

**SCHEDULE 2 -- ADMINISTRATIVE EXPENSE**

Expenditures 2018-19	Adopted Budget 2019-20	Estimated Expenditures 2019-20		Budget Appropriation 2020-21
			<b>SALARIES</b>	
\$ 12,852,195	\$ 14,110,952	\$ 15,276,462	General.....	\$ 15,810,214
--	--	--	As Needed.....	691,124
286,210	473,744	360,794	Overtime.....	563,367
<u>\$ 13,138,405</u>	<u>\$ 14,584,696</u>	<u>\$ 15,637,256</u>	Total Salaries.....	<u>\$ 17,064,705</u>
			<b>EXPENSE</b>	
\$ 122,460	\$ 124,000	\$ 145,002	Printing and Binding.....	\$ 175,000
96,997	245,845	170,590	Travel.....	305,250
5,348,503	6,122,500	6,008,797	Employee Benefits.....	6,844,200
5,068,771	5,438,456	5,278,184	Contracts.....	5,159,862
730,649	1,064,177	999,003	Office and Administrative.....	1,387,307
<u>\$ 11,367,380</u>	<u>\$ 12,994,978</u>	<u>\$ 12,601,577</u>	Total Expense.....	<u>\$ 13,871,619</u>
			<b>EQUIPMENT</b>	
\$ 183,951	\$ 496,725	\$ 453,881	Furniture, Office and Technical Equipment.....	\$ 254,000
<u>\$ 183,951</u>	<u>\$ 496,725</u>	<u>\$ 453,881</u>	Total Equipment.....	<u>\$ 254,000</u>
<u>\$ 24,689,736</u>	<u>\$ 28,076,399</u>	<u>\$ 28,692,714</u>	Total Administrative Expense.....	<u>\$ 31,190,324</u>

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM - 115 TRUST**

**SCHEDULE 2 -- ADMINISTRATIVE EXPENSE - 115 TRUST**

<b>Expenditures 2018-19</b>	<b>Adopted Budget 2019-20</b>	<b>Estimated Expenditures 2019-20</b>		<b>Budget Appropriation 2020-21</b>
			<b>EXPENSE</b>	
\$ 364,721	\$ -	\$ 760,000	Self Funded Insurance Administrative Fee.....	\$ 783,000
1,215	-	40,000	Office and Administrative.....	80,000
<u>\$ 365,936</u>	<u>\$ -</u>	<u>\$ 800,000</u>	Total Expense.....	<u>\$ 863,000</u>
<u>\$ 365,936</u>	<u>\$ -</u>	<u>\$ 800,000</u>	Total Administrative Expense.....	<u>\$ 863,000</u>



**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM  
INVESTMENT MANAGEMENT FEES AND EXPENSES: FY 2020-21**

	<b>ADOPTED BUDGET FY 2019-20</b>	<b>ESTIMATED EXPENSE FY 2019-20</b>	<b>PROPOSED BUDGET FY 2021-21</b>
1 Baird Advisors	\$ 623,052	\$ 371,285	\$ 418,558
2 LM Capital	505,746	382,405	389,317
3 Loomis Sayles	788,293	1,018,323	1,055,324
4 Neuberger Berman	893,704	1,085,400	1,115,561
5 State Street (Fixed Income Index)	-	387,491	-
6 AEGON USA	948,746	1,474,697	1,489,660
7 Bain Capital (formerly Sankaty)	856,589	862,751	943,729
8 Prudential	1,463,036	1,627,787	-
9 AJO LP (formerly Aronson & Partners)	451,778	15,789	-
10 EAM Investors	805,437	845,295	539,707
11 Panagora Asset Management	759,387	102,324	-
12 Principal Global	739,831	725,252	780,421
13 Rhumblin (S&P 500)	166,208	175,026	153,858
14 Rhumblin (Russell 1000 Growth)	9,400	-	-
15 Rhumblin (Russell 2000)	2,735	15,146	13,304
16 Rhumblin (Russell 2000 Growth)	1,439	8,201	-
17 Rhumblin (Russell 2000 Value)	1,081	8,829	-
18 AQR Capital Management	2,459,766	2,060,174	1,797,899
19 Axiom International	2,576,791	2,737,447	2,873,273
20 Barrow, Hanley, Mewhinney & Strauss	2,780,879	2,344,164	2,350,478
21 Dimensional Fund Advisor (Emerging Mkt)	1,752,460	2,074,726	1,902,529
22 Lazard Asset Management	2,881,909	3,058,409	3,057,679
23 MFS Institutional Advisors	2,315,846	2,600,815	2,642,075
24 Oberweis Asset Management	2,422,505	1,732,940	2,028,922
25 Quantitative Management Assoc. (QMA)	1,488,646	1,565,547	1,570,726
26 State Street Global (Non-US Index)	406,767	395,885	342,871
27 Centersquare (REITS)	858,910	802,993	986,762
28 CoreCommodity	1,280,797	1,091,560	1,230,177
29 Dimensional Fund Advisor (TIPS)	311,705	383,933	421,521
30 New Emerging Mkt Debt	720,000	-	2,130,000
31 New High Yield Bank Loans	550,000	233,100	954,778
32 New High Yield Bank Loans Blended	-	-	2,130,000
33 New Private Debt	1,291,500	37,500	228,350
34 New Active Small Cap - Copeland	682,500	-	411,250
35 New Active Small Cap Growth - Granahan	289,800	-	308,000
36 New Active Small Cap Value - Bernzott	-	-	413,000
37 New Active Small Cap Value - SBH	269,675	-	238,000
38 New Emerging Mkt Small Cap	956,250	-	1,280,000
39 New Core	-	-	1,222,000
40 Real Estate Managers	12,019,774	11,597,150	12,699,882
41 Private Equity Managers	37,873,298	37,926,479	39,363,254
<b>Subtotal - Investment Management Fee</b>	<b>\$ 85,206,239</b>	<b>\$ 79,748,822</b>	<b>\$ 89,482,865</b>
42 ESG Consulting	-	-	55,000
43 General Fund Consulting	450,000	450,000	465,000
44 Private Equity Consulting	737,500	736,694	750,000
45 Real Estate Consulting	215,000	215,000	215,000
46 Real Estate & Private Equity Legal Consulting	325,000	325,000	325,000
47 Northern Trust	23,000	23,000	23,000
<b>Subtotal - Investment Consulting Fee</b>	<b>\$ 1,750,500</b>	<b>\$ 1,749,694</b>	<b>\$ 1,833,000</b>
48 Bloomberg Financial Services	25,680	27,000	27,000
49 CEM Benchmarking	35,000	35,000	-
50 Tax Accounting Services	-	110,000	110,000
51 Institutional Shareholder Services	71,910	71,910	71,910
52 Pitchbook Subscription	22,500	22,500	22,500
53 Pacific Center for Asset Management	10,000	10,000	10,000
<b>Subtotal - Other Investment Expense</b>	<b>\$ 165,090</b>	<b>\$ 276,410</b>	<b>\$ 241,410</b>
<b>Total Investment Management Fees and Expenses</b>	<b>\$ 87,121,829</b>	<b>\$ 81,774,925</b>	<b>\$ 91,557,275</b>

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

PROPOSED PERSONNEL RESOLUTION  
FISCAL YEAR 2020-21

WHEREAS, the Board of Administration of the Los Angeles City Employees' Retirement System has the responsibility and authority to establish the number and types of positions to be utilized by the Los Angeles City Employees' Retirement System;

NOW, THEREFORE, BE IT RESOLVED, that:

1. Effective July 1, 2020, the positions listed in the attached schedule of Positions and Salaries are hereby authorized within the Los Angeles City Employees' Retirement System. The class code numbers, classifications and salaries as set forth herein are hereby determined to be appropriate in accordance with existing City laws and ordinances, and applicable Memoranda of Understanding, as appropriate. Further, the employment of the designated number of persons in each code and classification as set forth herein is hereby authorized.
2. Memoranda of Understanding approved by the City Council shall be considered to be incorporated into this Resolution where appropriate. Salaries established under approved Memoranda of Understanding shall apply to all classes of employees therein noted. The provisions of each of the Memoranda of Understanding shall take precedence over any conflicting provision contained in this Resolution, but only for those employees in classes to which the Memoranda of Understanding apply.
3. One Assistant General Manager (Class Code 9269), when designated by the General Manager to assume the additional administrative and supervisory duties of Executive Officer, shall be compensated at the fourth premium level rate above the appropriate step rate or premium level rate of the incumbent. Upon approval of the General Manager, one additional Assistant General Manager (Class Code 9269) may receive salary up to the fourth premium level rate above the appropriate step rate of the prescribed salary range. This compensation is pensionable.
4. Upon approval of the General Manager, substitute authority positions may be filled using any class approved and established by the Board of Civil Service Commissioners. This approval shall specify the period during which the position shall be filled.
5. Upon approval of the General Manager, persons may be employed in any class approved and established by the Board of Civil Service Commissioners in-lieu of a vacant position if the in-lieu employment is consistent with City policies and procedures for such employment.
6. The General Manager shall have the authority to correct any clerical or typographical errors in this document.

Tuesday, March 24, 2020

**LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM  
POSITIONS AND SALARIES: FY 2019-20**

**(a) Regular Positions**

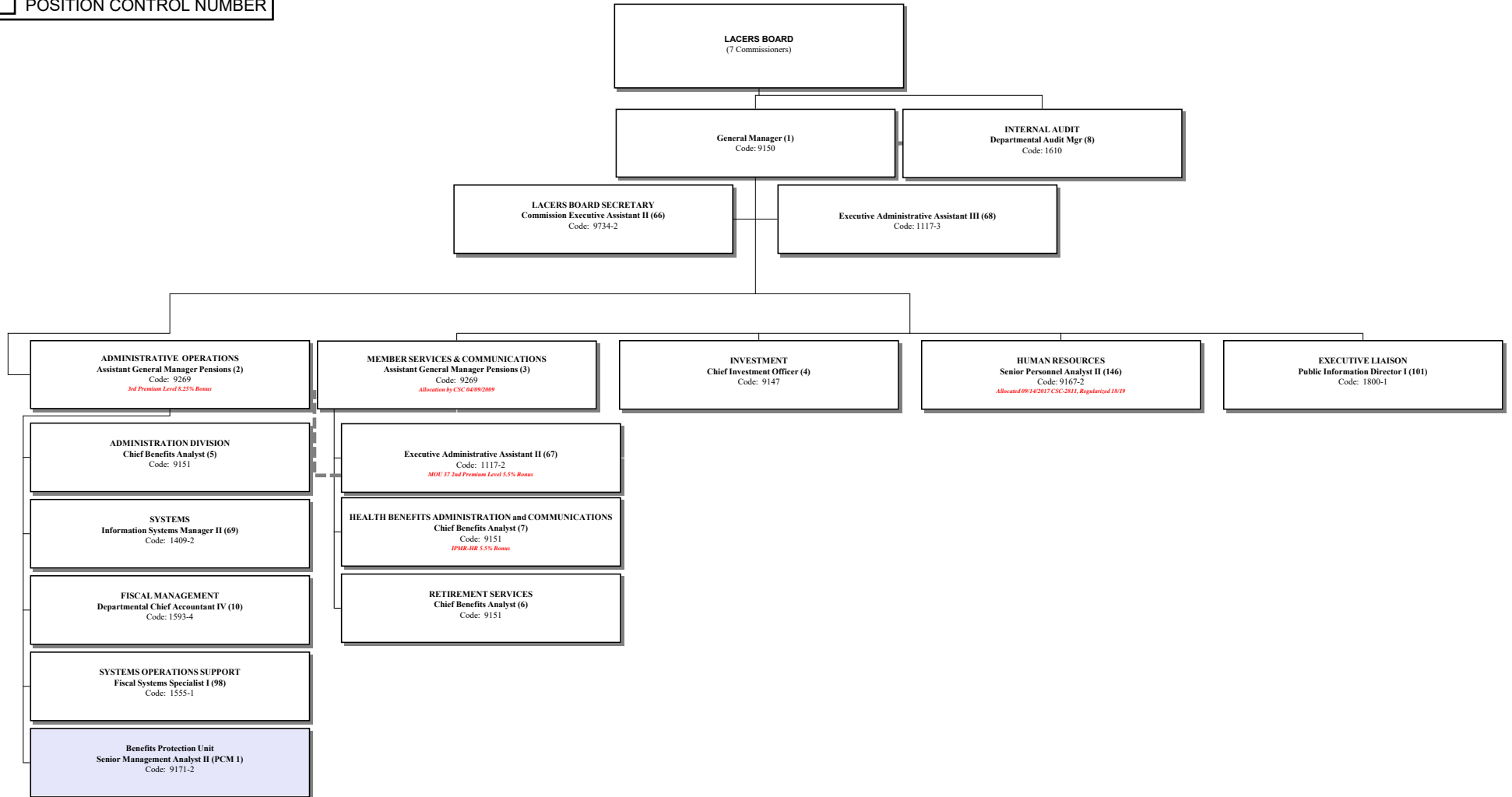
FY20	FY21	Change	MOU	Class Code	Class Title	Salary Range
4	3	-1	1	1513	ACCOUNTANT	\$ 56,647 - \$ 85,086
11	12	1	3	1223	ACCOUNTING CLERK	\$ 50,404 - \$ 75,711
1	1	0	20	1119	ACCOUNTING REC SUPVR II	\$ 67,067 - \$ 100,767
10	9	-1	3	1358	ADMINISTRATIVE CLERK	\$ 38,691 - \$ 58,088
2	0	-2	36	9414	ASST GM-LACERS	\$ 145,032 - \$ 217,862
0	2	2	0	9269	ASST GM-PENSIONS	\$ 145,596 - \$ 218,676
30	31	1	20	1203	BENEFITS SPECIALIST	\$ 56,961 - \$ 85,608
3	3	0	36	9151	CH BENEFITS ANALYST	\$ 126,679 - \$ 190,279
1	0	-1	20	1253	CH CLERK	\$ 68,006 - \$ 102,187
1	1	0	36	9147	CH INVESTMENT OFCR	\$ 184,287 - \$ 276,827
1	1	0	1	9734	COMMISSION EXEC ASST II	\$ 72,182 - \$ 108,472
1	1	0	36	1610	DEPARTMENTAL AUDIT MGR	\$ 126,679 - \$ 190,279
1	1	0	36	1593	DEPT CHIEF ACCT IV	\$ 126,679 - \$ 190,279
1	1	0	37	1117	EXEC ADMIN ASST II	\$ 62,410 - \$ 93,772
1	1	0	37	1117	EXEC ADMIN ASST III	\$ 66,920 - \$ 100,516
1	1	0	20	1555	FISCAL SYSTEMS SPEC I	\$ 90,473 - \$ 135,908
1	0	-1	20	1555	FISCAL SYSTEMS SPEC II	\$ 105,674 - \$ 158,772
1	1	0	0	9150	GM-LACERS	\$ 174,672 - \$ 322,074
1	1	0	36	1409	INFO SYSTEM MGR II	\$ 126,679 - \$ 190,279
1	1	0	1	1625	INTERNAL AUDITOR III	\$ 85,253 - \$ 128,078
1	1	0	1	1625	INTERNAL AUDITOR IV	\$ 105,674 - \$ 158,772
2	3	1	0	9146	INVESTMENT OFFICER I	\$ 98,261 - \$ 147,580
4	4	0	0	9146	INVESTMENT OFFICER II	\$ 122,399 - \$ 183,890
2	2	0	0	9146	INVESTMENT OFFICER III	\$ 153,886 - \$ 231,183
25	30	5	1	9184	MANAGEMENT ANALYST	\$ 72,182 - \$ 108,472
1	0	-1	1	1539	MANAGEMENT ASSISTANT	\$ 51,407 - \$ 77,235
1	0	-1	20	1170	PAYROLL SUPERVISOR I	\$ 69,802 - \$ 104,838
1	1	0	20	1129	PERSONNEL RECORDS SUPV	\$ 60,719 - \$ 91,225
1	1	0	1	1731	PERSONNEL ANALYST	\$ 72,182 - \$ 108,472
1	1	0	20	1525	PR ACCOUNTANT I	\$ 81,933 - \$ 123,088
1	1	0	20	1525	PR ACCOUNTANT II	\$ 86,401 - \$ 129,832
0	1	1	20	1201	PR CLERK	\$ 56,961 - \$ 85,608
2	2	0	8	1431	PROGRAMMER/ANALYST III	\$ 78,049 - \$ 117,220
1	0	-1	8	1431	PROGRAMMER/ANALYST IV	\$ 84,460 - \$ 126,867
0	1	1	8	1431	PROGRAMMER/ANALYST V	\$ 90,932 - \$ 136,618
1	1	0	36	1800	PUB INFO DIRECTOR I	\$ 89,283 - \$ 134,133
2	2	0	20	1523	SR ACCOUNTANT I	\$ 65,772 - \$ 98,804
2	3	1	20	1523	SR ACCOUNTANT II	\$ 71,263 - \$ 107,052
18	20	2	3	1368	SR ADMINISTRATIVE CLERK	\$ 56,460 - \$ 84,815
6	11	5	20	9171	SR MGMT ANALYST I	\$ 88,844 - \$ 133,423
5	7	2	20	9171	SR MGMT ANALYST II	\$ 109,954 - \$ 165,203
1	1	0	0	9167	SR PERSONNEL ANALYST I	\$ 88,844 - \$ 133,423
2	2	0	0	9167	SR PERSONNEL ANALYST II	\$ 109,933 - \$ 165,161
0	0	0	20	1538	SR PROJECT COORDINATOR	\$ 80,325 - \$ 120,624
2	1	-1	20	1597	SR SYSTEMS ANALYST I	\$ 82,977 - \$ 121,334
1	1	0	20	1597	SR SYSTEMS ANALYST II	\$ 102,667 - \$ 150,127
3	3	0	1	1596	SYSTEMS ANALYST	\$ 72,182 - \$ 108,472
0	1	1	21	1455	SYSTEMS PROGRAMMER II	\$ 96,403 - \$ 144,845
1	1	0	21	1455	SYSTEMS PROGRAMMER III	\$ 104,504 - \$ 156,976
<u>160</u>	<u>173</u>	13				

- 1133 RETIREMENT RELIEF WORKER
- 1358 ADMINISTRATIVE CLERK
- 1501 STUDENT WORKER
- 1502 STUDENT PROFESSIONAL WORKER
- 1525 PRINCIPAL ACCOUNTANT I
- 1535 ADMINISTRATIVE INTERN I
- 1535 ADMINISTRATIVE INTERN II
- 1596 SYSTEMS ANALYST
- 9167 SENIOR PERSONNEL ANALYST II
- 9269 ASSISTANT GENERAL MANAGER - PENSION







FY20	FY21	Change	MOU	Class Code	Class Title	Salary Range
<u>7</u>	<u>7</u>	<u>0</u>	N/A	0101-2	COMMISSIONER	\$50 PER MEETING
7	7	0				

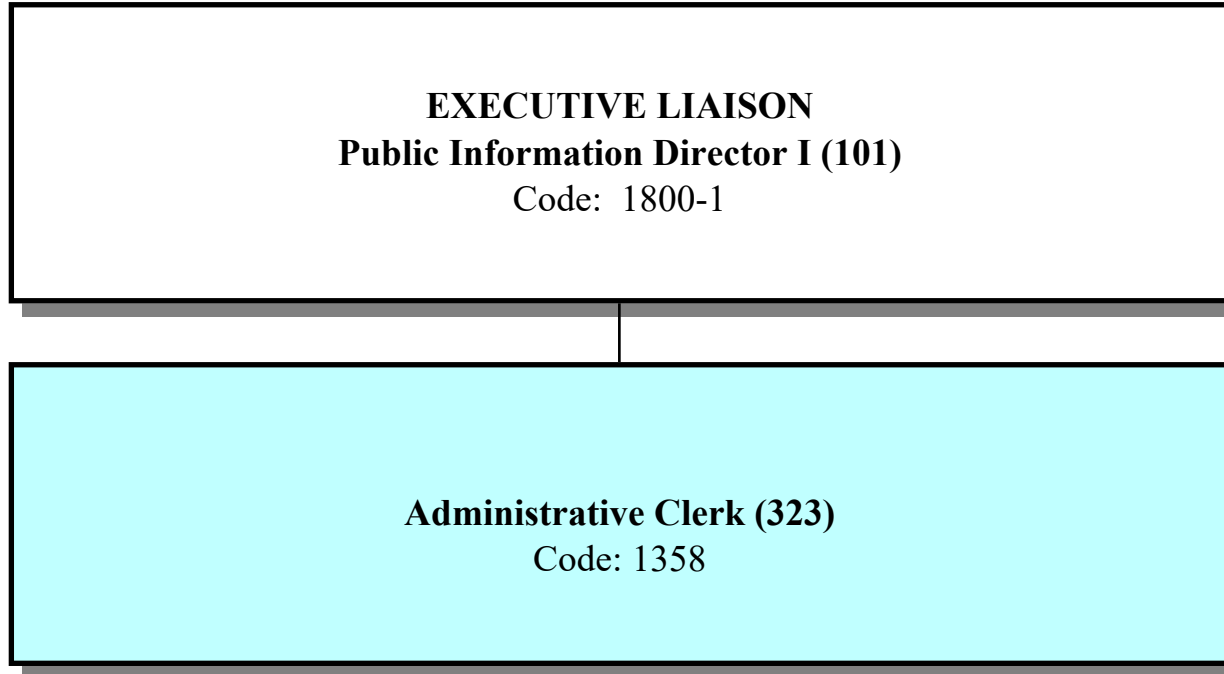
# LACERS CONCEPTUAL ORGANIZATIONAL CHART FY 2020/2021

	SUBSTITUTE AUTHORITY
	ADD POSITION
	DELETION OF POSITION
	MOVE POSITION
	REALLOCATE POSITION
	POSITION CONTROL NUMBER



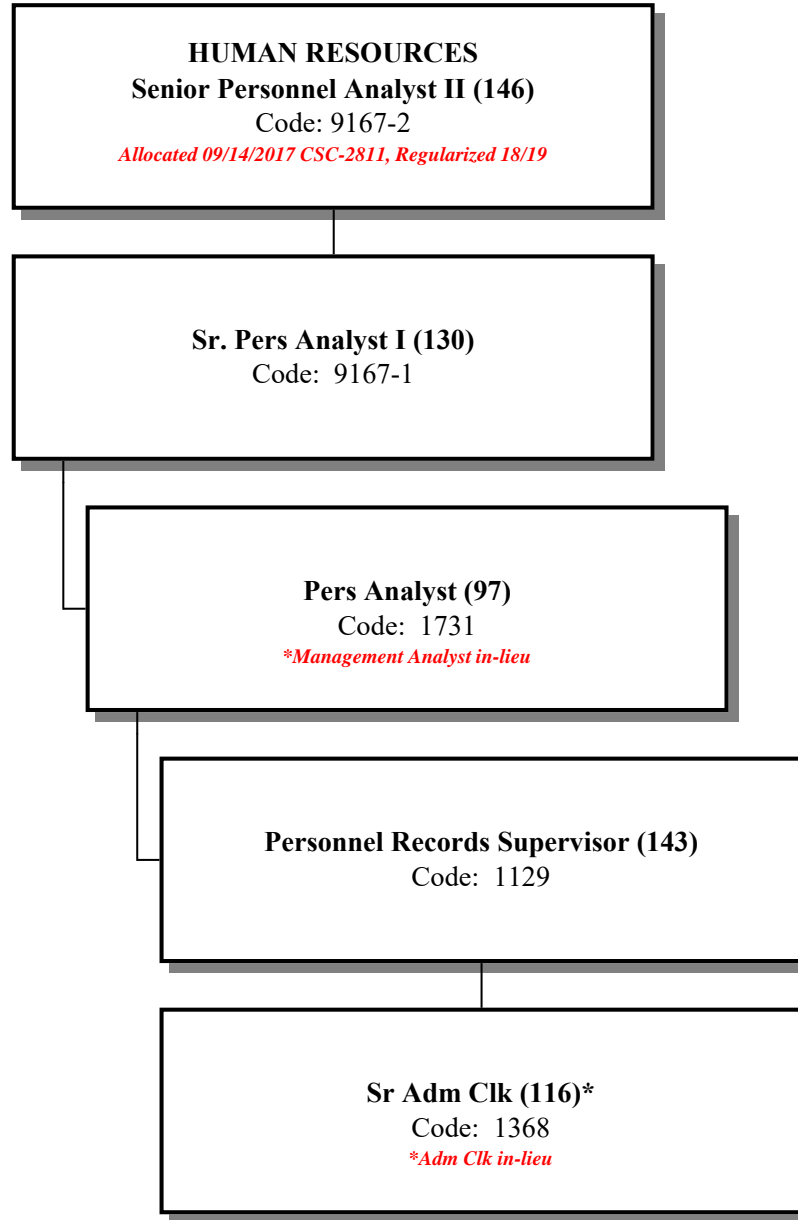
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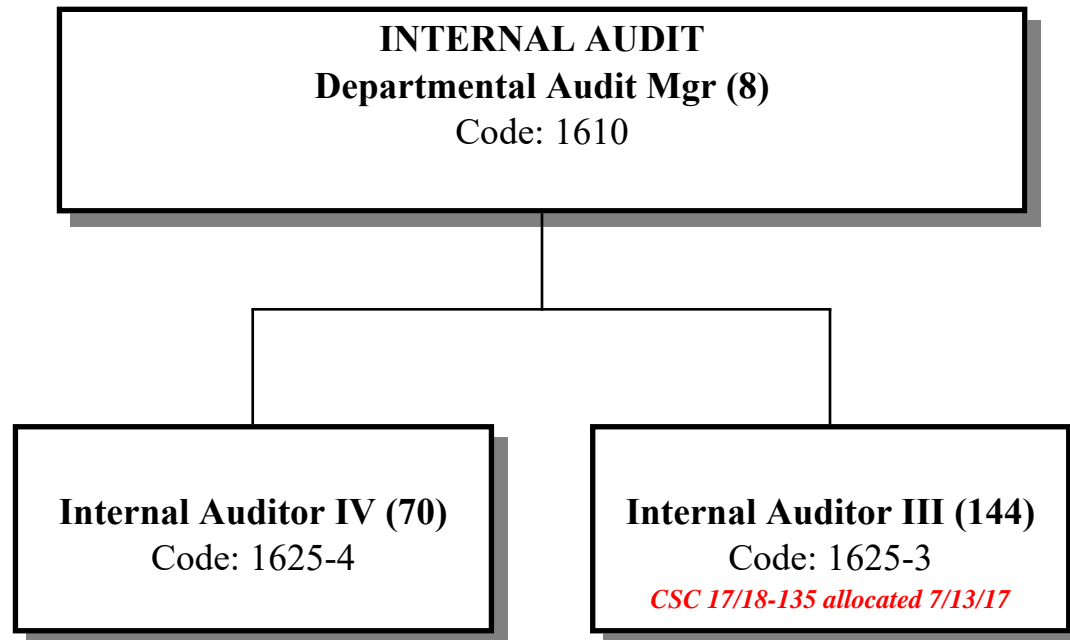
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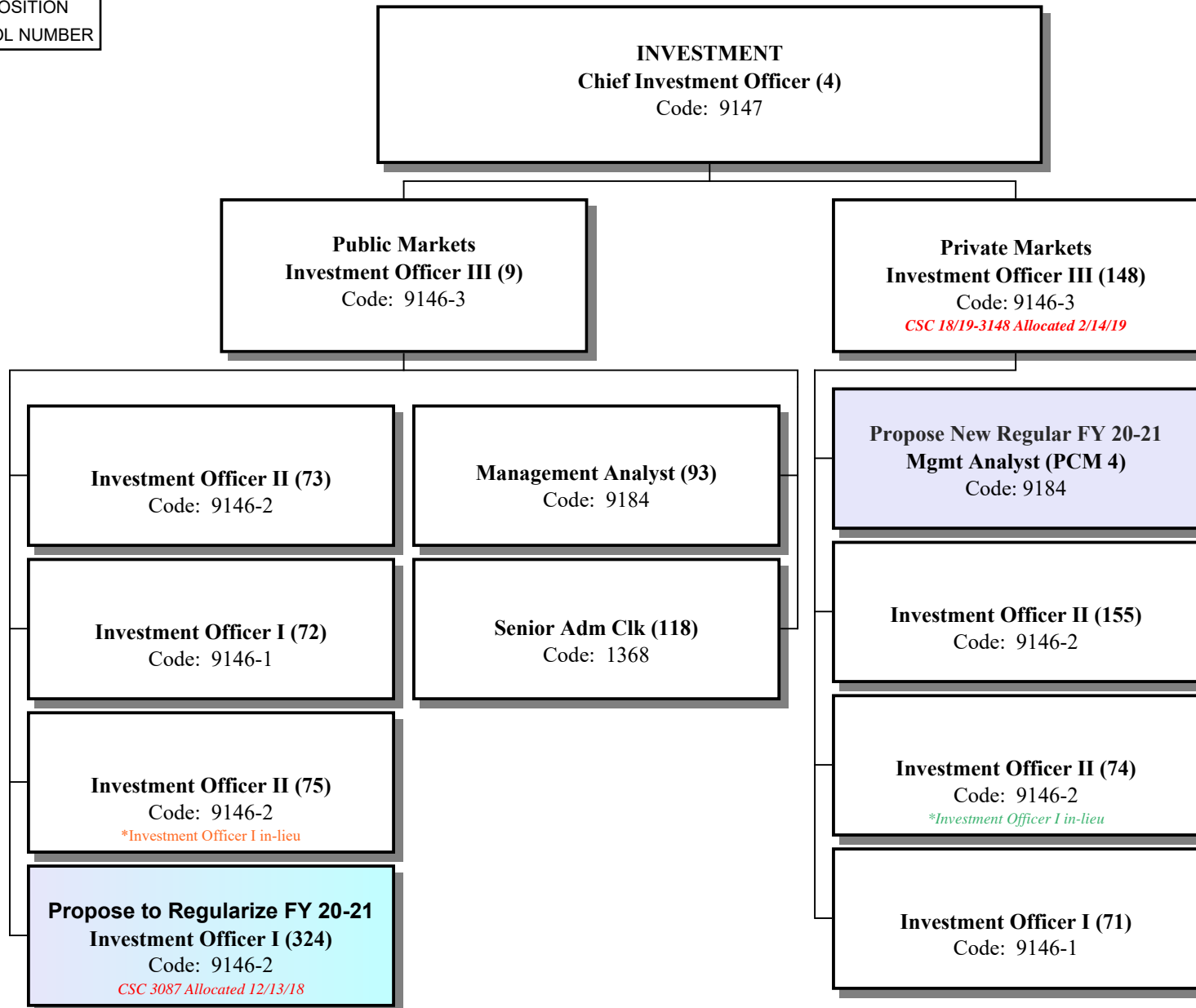
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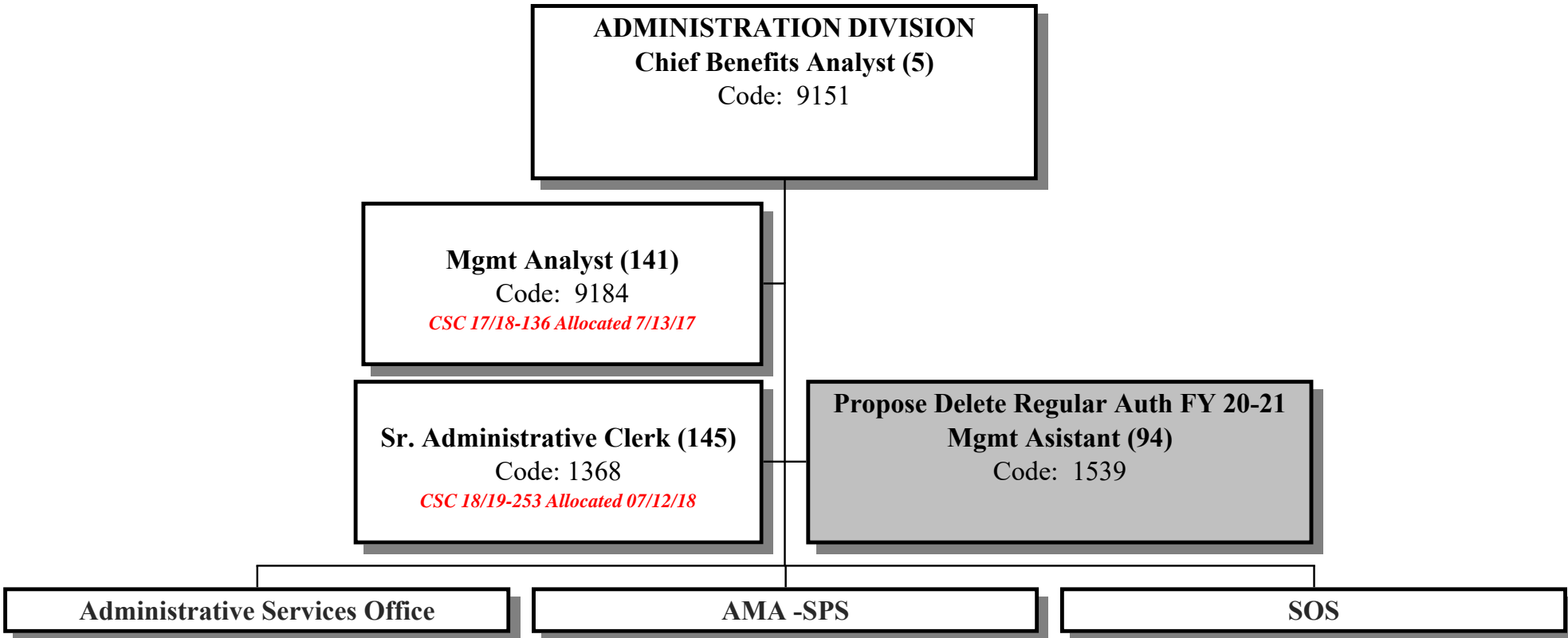
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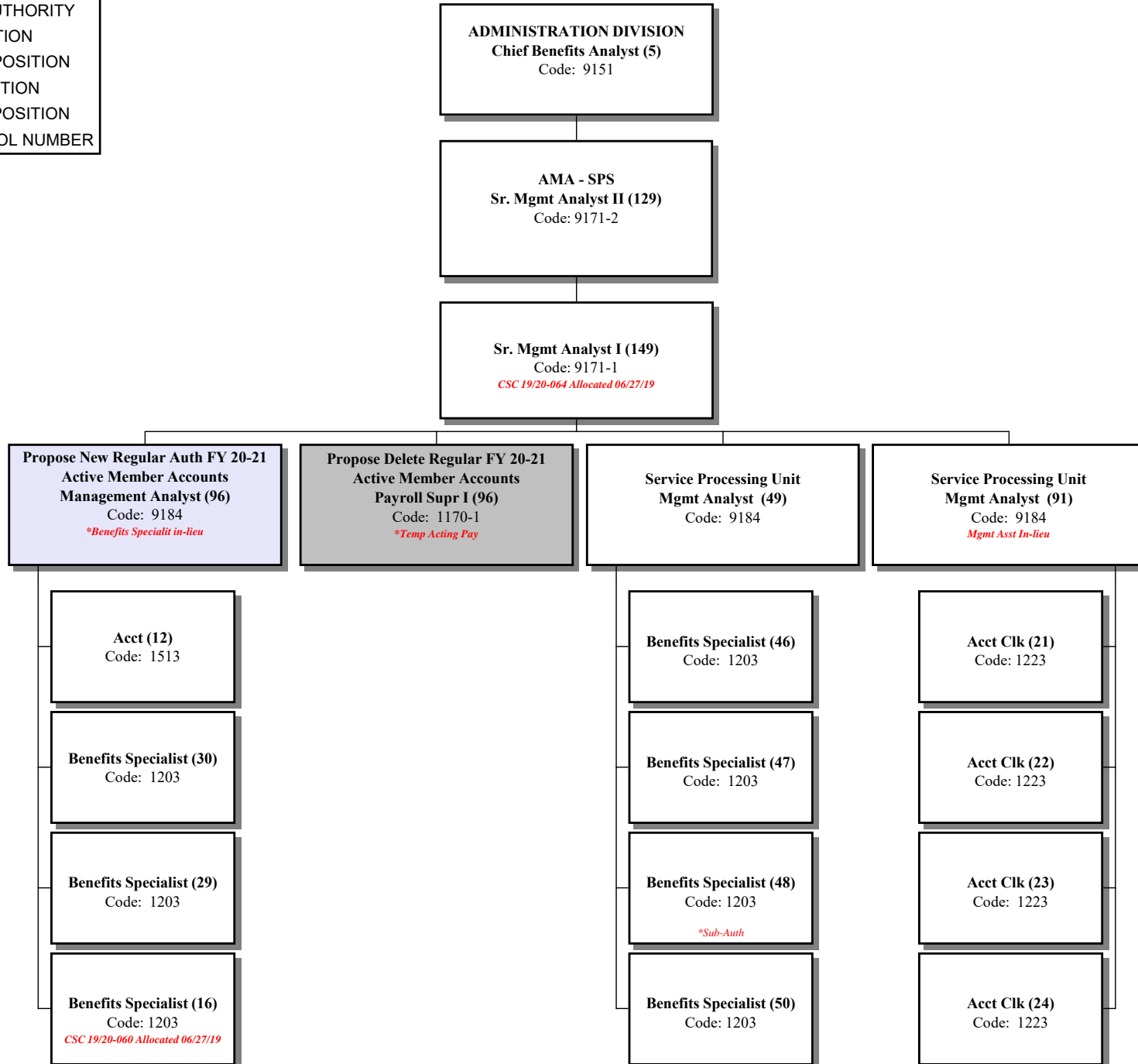
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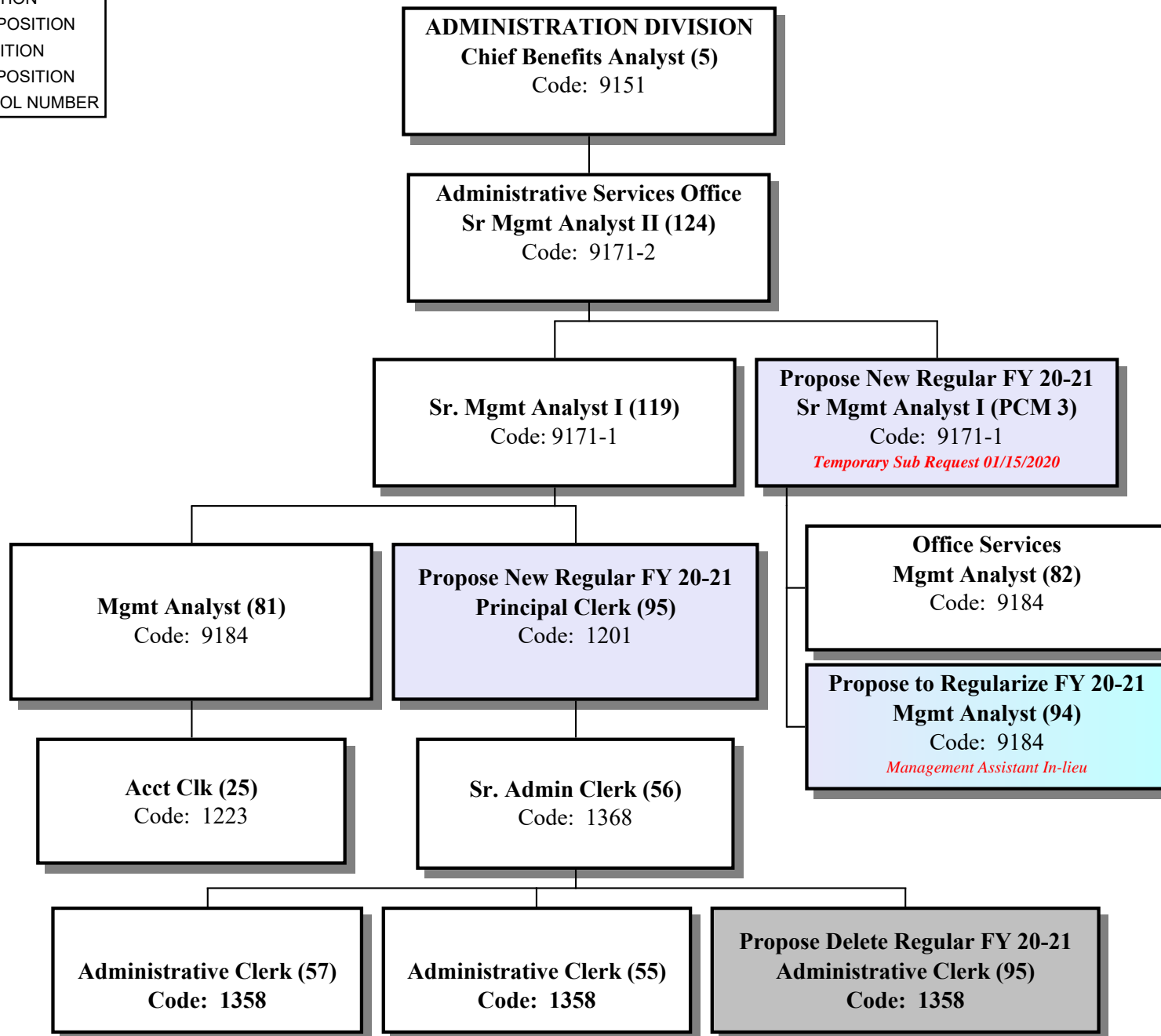
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# LACERS

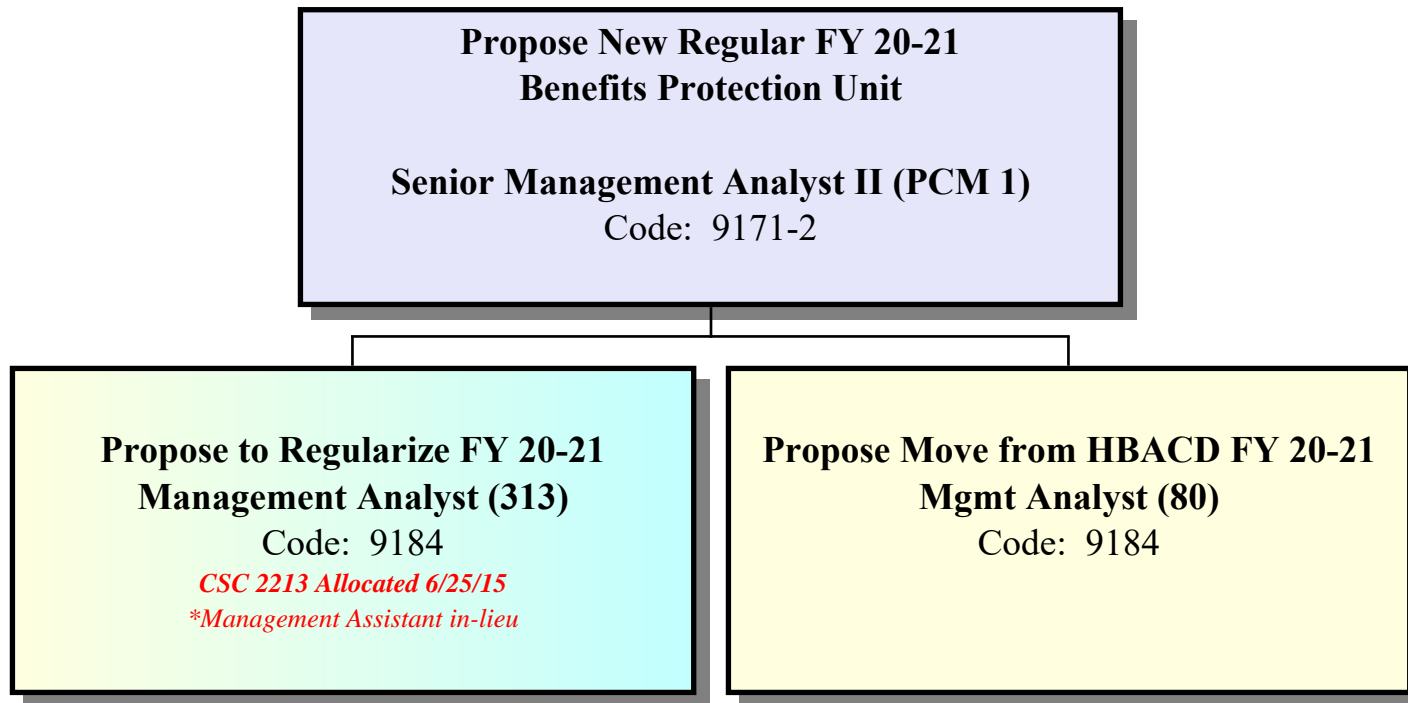
## CONCEPTUAL ORGANIZATIONAL CHART FY 2020/2021

	SUBSTITUTE AUTHORITY
	ADD POSITION
	DELETION OF POSITION
	MOVE POSITION
	REALLOCATE POSITION
	POSITION CONTROL NUMBER



**LACERS**  
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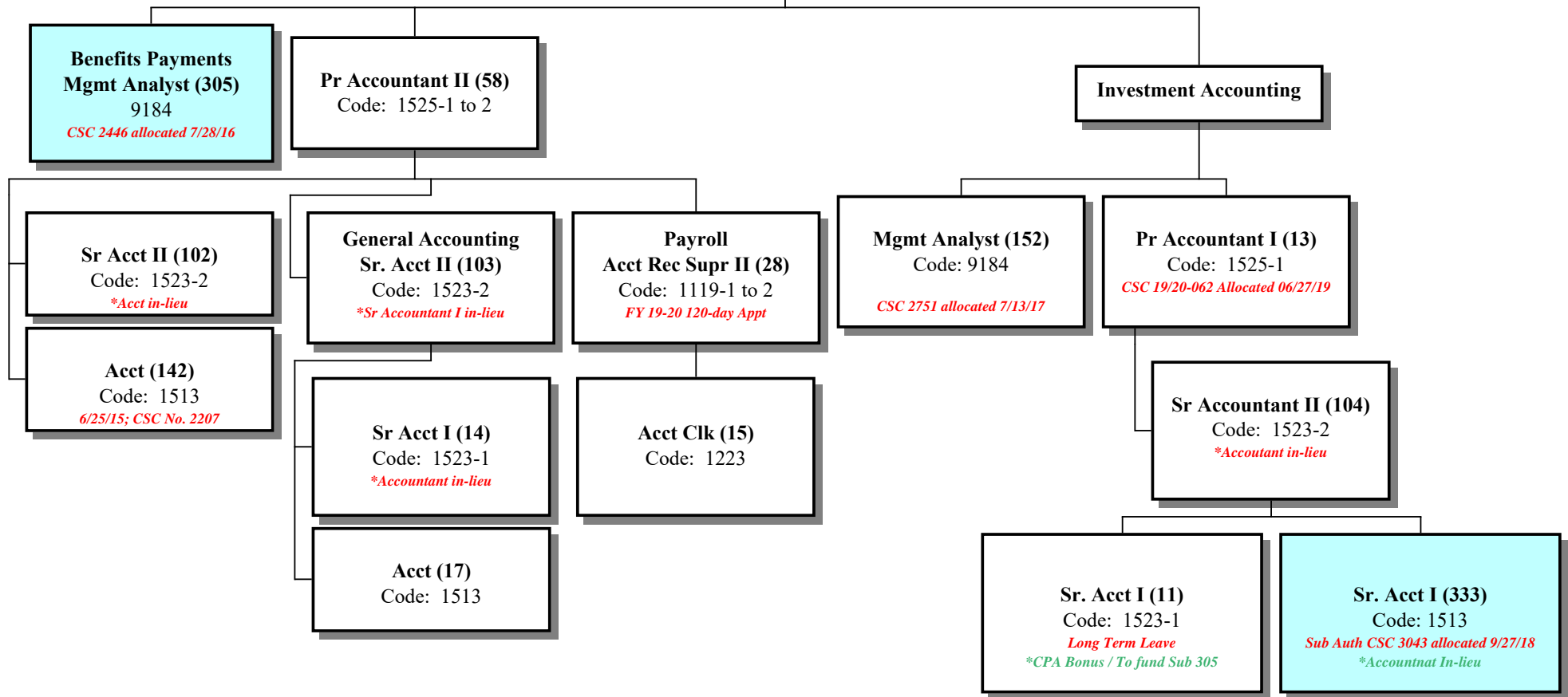


# LACERS

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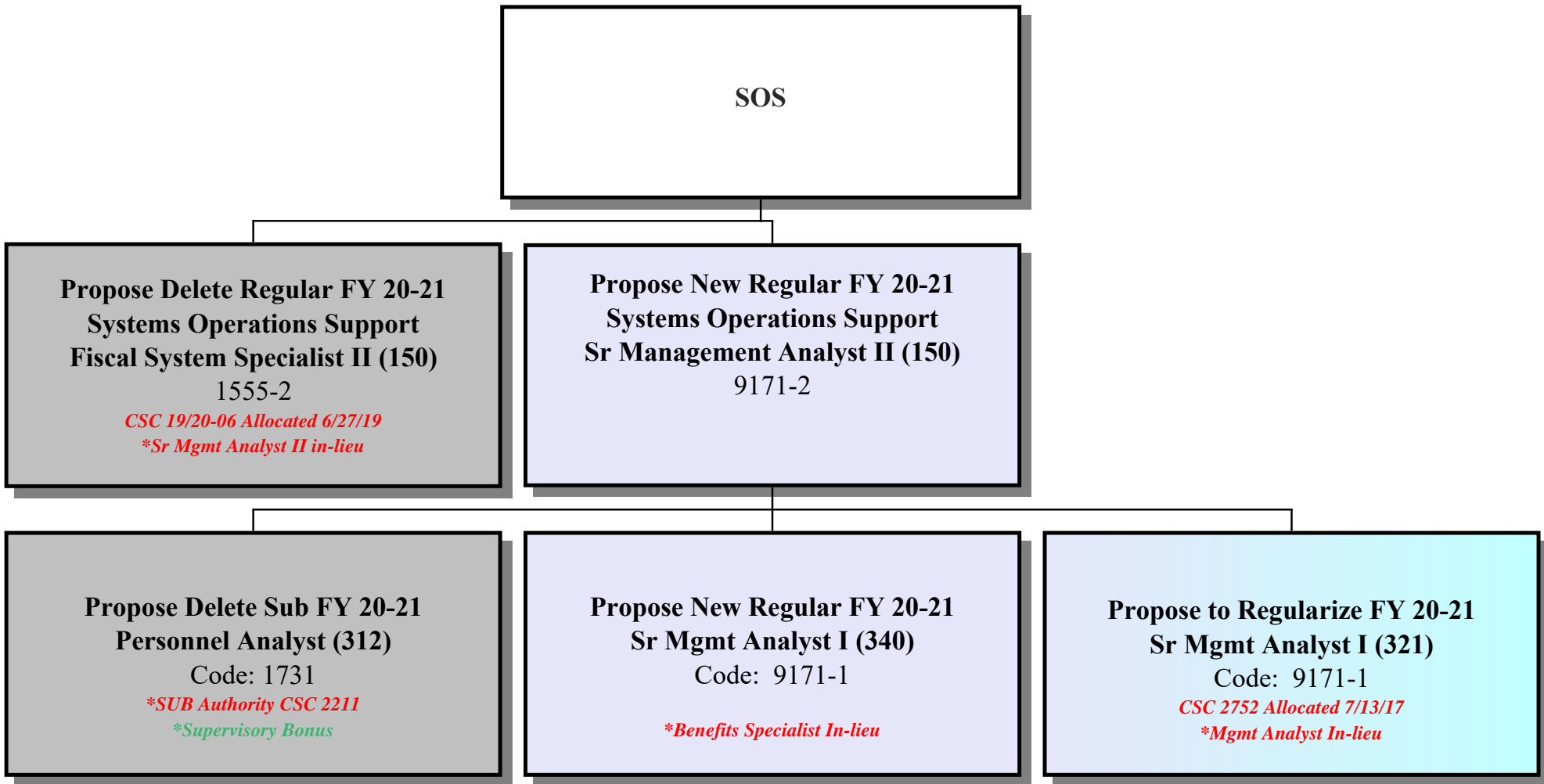
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**FISCAL MANAGEMENT**  
**Departmental Chief Accountant IV (10)**  
 Code: 1593-4



# LACERS CONCEPTUAL ORGANIZATIONAL CHART FY 2020/2021

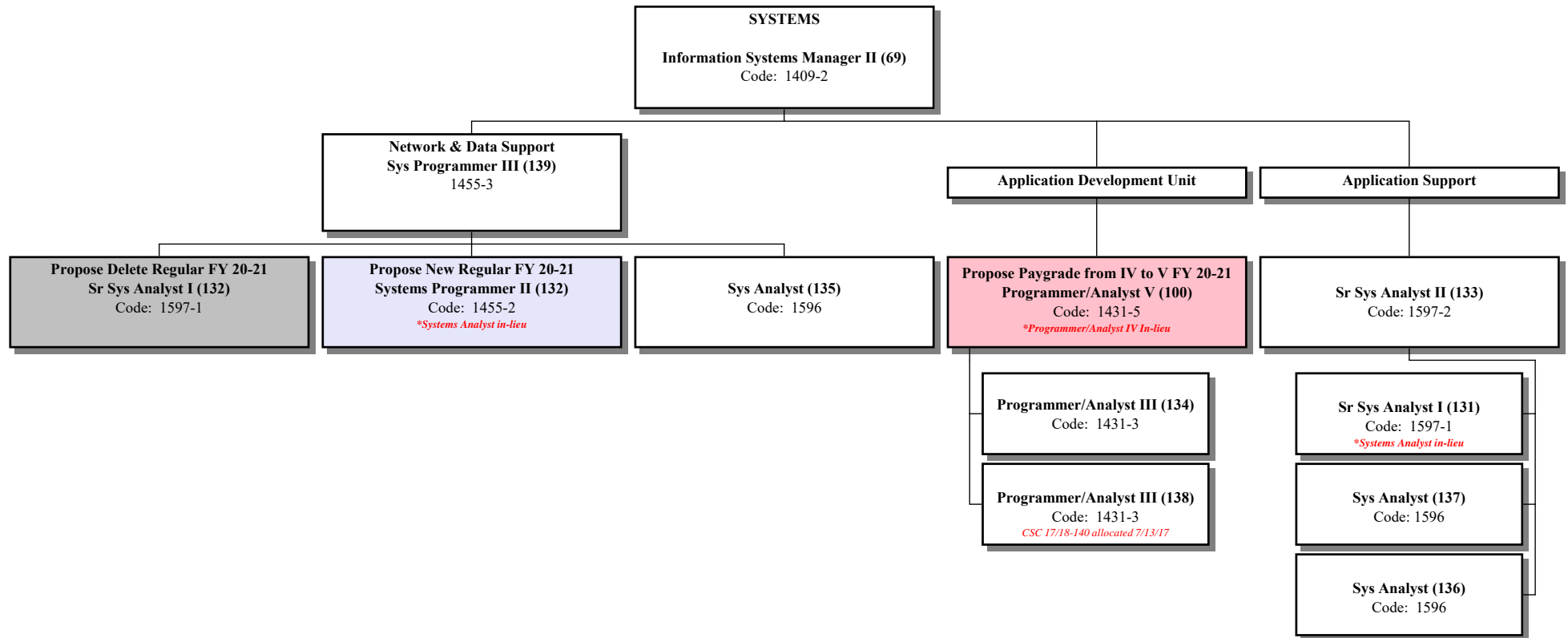
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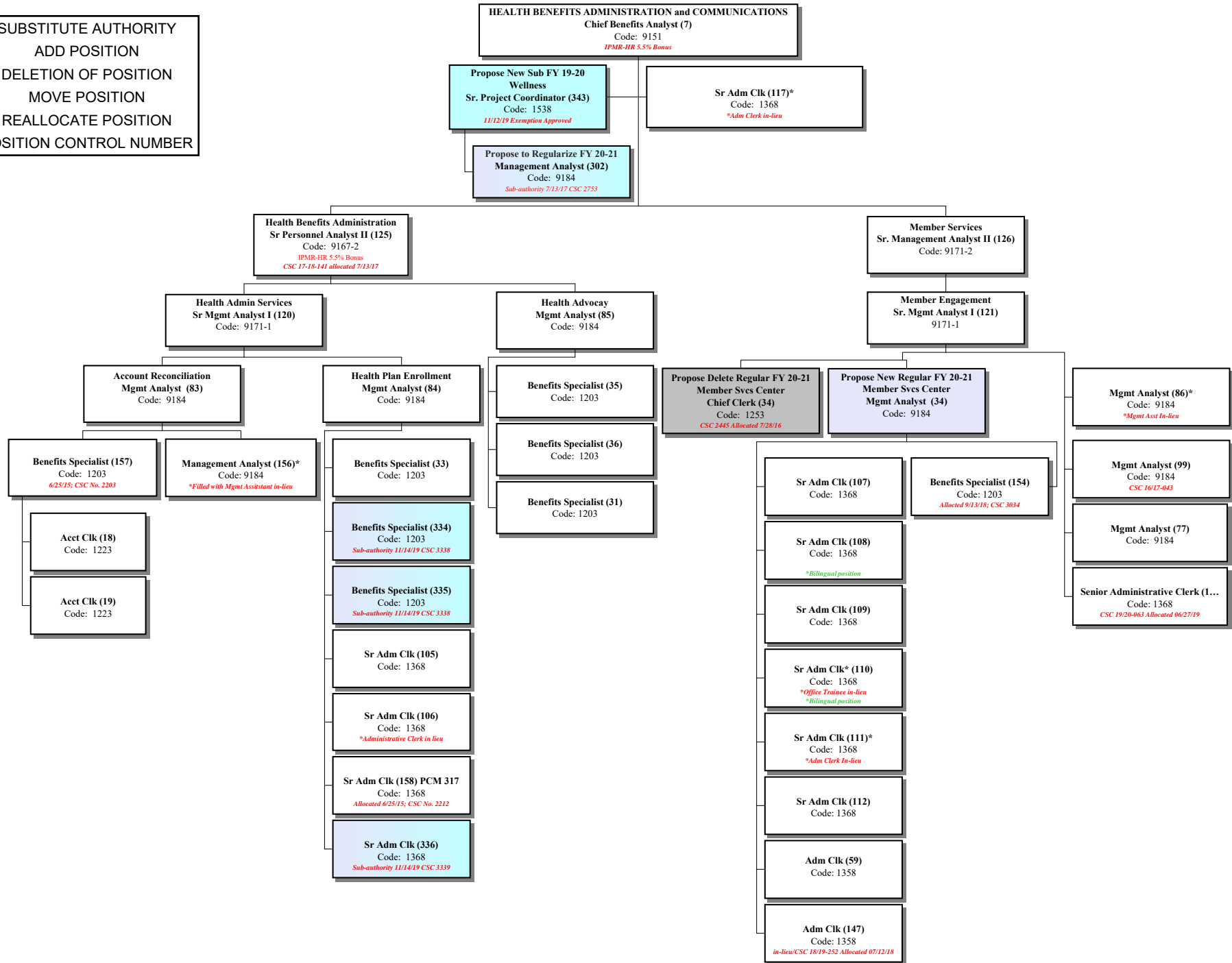
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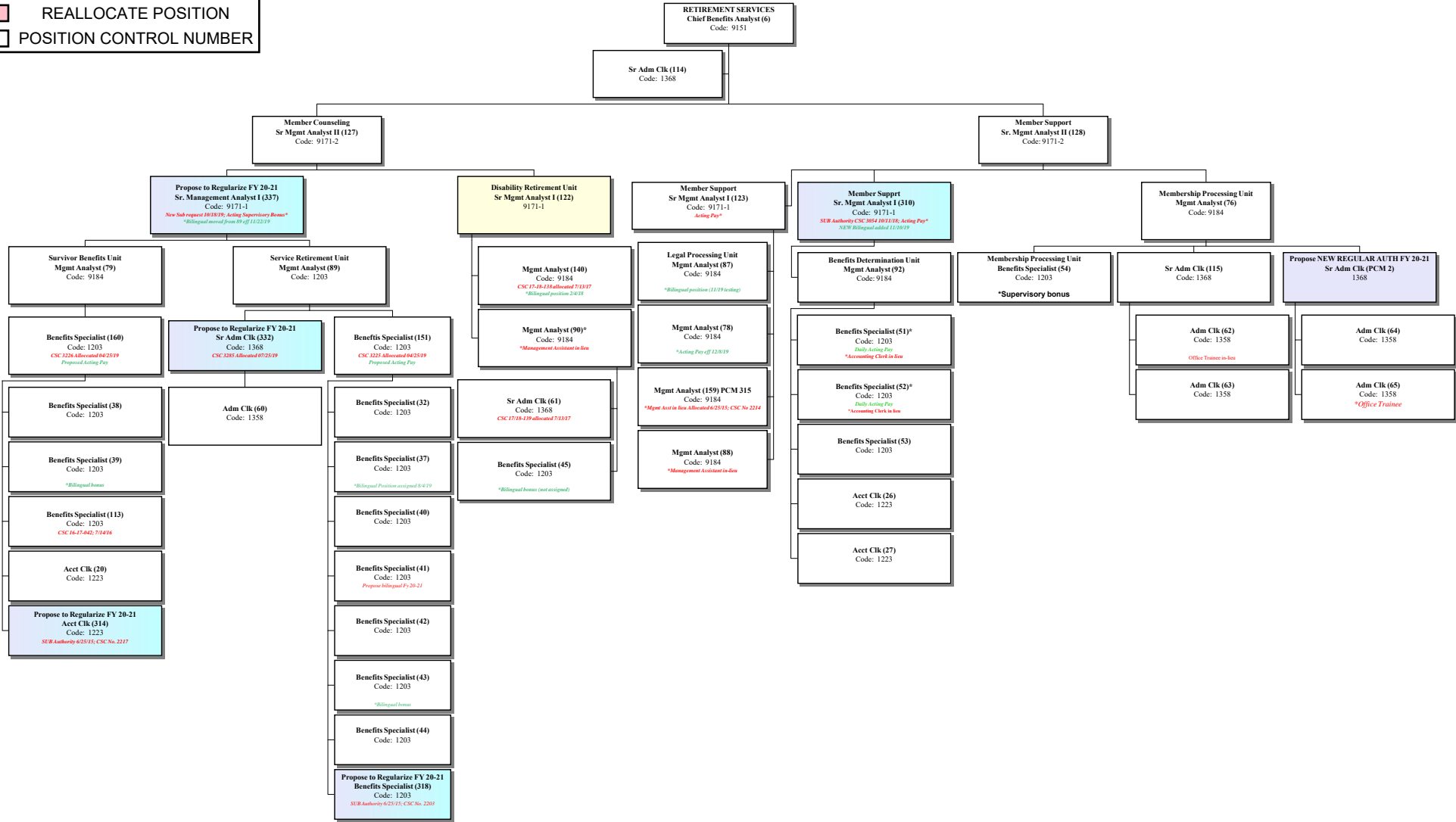
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# LACERS CONCEPTUAL ORGANIZATIONAL CHART FY 2020/2021

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LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

PROPOSED RESOLUTION

AUTHORIZATION FOR  
DEPARTMENTAL EXEMPLARY STAFF RECOGNITION PROGRAM  
FISCAL YEAR 2020-21

WHEREAS, on March 11, 2003, the Board established a departmental Exemplary Staff Recognition Program to provide a framework for team building and recognition throughout the Department;

WHEREAS, the Board endeavors to continue the program in order to recognize employees for their efforts, and to identify role models who communicate the standards established through our guiding principles;

WHEREAS, funds for program-related expenditures during the 2020-21 Fiscal Year have been included in the FY 2020-21 Departmental budget in order to continue the program; and

WHEREAS, the Controller's Office requires an annual Board Resolution confirming the establishment of the program in order to process future payments of related expenses;

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby confirms the permanent establishment of the LACERS Exemplary Staff Recognition Program, and authorizes program-related expenditures for Fiscal Year 2020-21 not to exceed \$4,000.

March 24, 2020

REPORT TO BOARD OF ADMINISTRATION

From: Lita Payne, Executive Officer

*Lita Payne*

MEETING: MARCH 24, 2020

ITEM: IX – B

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SUBJECT: **TEMPORARY MODIFICATIONS TO THE ASSET ALLOCATION AND REBALANCING POLICIES AND POSSIBLE BOARD ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

---

**Recommendation**

That the Board:

1. Authorize staff to hold up to 5% cash in the Unallocated Cash Account (UCA) to increase operational liquidity; and,
2. Authorize staff to defer rebalancing of the asset allocation if deemed appropriate; and,
3. Report to the Board in six months on the status of the Asset Allocation Policy and Rebalancing Policy waivers.

**Discussion**

LACERS' Board of Administration (Board) approves and updates an Asset Allocation Policy and a Rebalancing Policy as a part of the Investment Policy Statement (IPS), which provides staff an implementation and asset management framework to achieve performance objectives and control risk. The Board approved the current Investment Policy Statement on February 12, 2019.

The Investment Policy Statement is designed to address varying market conditions by controlling asset allocation implementation and initiating rebalancing by staff. The current market conditions are unusual and volatility is well-beyond historical averages. The VIX, a popular measure of the stock market's expected volatility, was approximately 74 on March 17, 2020, well above the historical normalized market conditions figure of approximately 20. In such volatile markets, even the best designed asset allocation model and rebalancing may need special consideration and discussion, prior to actions (that are normally part of routine implementation and rebalancing of assets) being taken.

*Cash Asset Class Weighting (Unallocated Cash Account or UCA)*

Staff believes that while extreme market volatility is present and owing to the decline in the total portfolio value to \$15.7 billion, shoring up liquidity within the UCA is important to ensure that LACERS can readily meet on-going cash flow obligations of approximately \$95 million per month that includes retirement

payroll, health insurance premiums, private market capital calls, and staffing and operational expenses while at the same time reduce risk associated with trading securities in extreme market conditions.

While staff believes that having multiples of monthly liquidity readily available during volatile market conditions is prudent to ensure a timely and possibly more cost-effective approach to cash management, there are risks of moving materially away from the established policy weightings. Staff and NEPC, LLC (NEPC), LACERS’ general fund consultant, believe holding higher cash balances in the UCA will not have a material impact on LACERS’ ability to further implement the current asset allocation initiatives under the asset allocation policy approved by the Board in April 2018. As this recommended increase above 2% is temporary, staff will report back to the Board in six months on status of the temporary increased cash (UCA) weighting and make an appropriate recommendation to either extend this recommendation (with or without weighting adjustments) or restore the current policy weighting of 2%. The table below illustrates various cash weighting scenarios and the numerical deviation away from the 2% cash policy weighting.

Cash (UCA) Weighting	Maximum Cash (millions)	Difference from 2% Policy	Multiple of monthly cash obligations
1.4%	\$220	(30%) <sup>1</sup>	2.3 x
<b>2.0%</b>	<b>\$314</b>	<b>0%</b>	<b>3.3 x</b>
3.0%	\$471	50%	4.9 x
4.0%	\$628	100%	6.6 x
5.0%	\$785	150%	8.3 x

<sup>1</sup> Difference below the 2% current cash policy weight%.

*Rebalancing*

Staff and NEPC believe that having the option to suspend rebalancing during extreme periods of volatility is prudent. As previously mentioned, the IPS is designed to address most market conditions; and history has proven that rebalancing is an effective tool to ensure compliance with expected performance and risk characteristics of the total investment portfolio. In volatile periods, there is a possibility that the asset allocation policy requires a rebalancing between or among asset classes. However, understanding that an out-of-balance asset class due to large market swings may later “self-rebalance” due to a stabilization of the market may help prevent a premature rebalancing that may incur costly market impact and transaction costs. For this reason, staff and NEPC believe that allowing staff to defer any required rebalancing during extreme market volatility will result in reducing market volatility risk and transaction costs. Staff proposes that any required rebalancing occur when market conditions are more favorable as reflected by lower volatility; staff will seek the concurrence of NEPC at that time, and report back to the Board of any deferred and actual rebalancing activities during subsequent CIO’s reports.

**Strategic Plan Impact Statement**

Temporarily modifying the LACERS asset allocation and rebalancing policies under the current unusual and volatile market conditions may assist LACERS with optimizing long-term risk adjusted investment

returns (Goal IV); upholding good governance practices which affirm transparency, accountability and fiduciary duty (Goal V); and maximizing organizational effectiveness and efficiency (Goal VI).

Prepared By: Rod June, Chief Investment Officer

RJ/BF/WL/jp

Attachments:           1. Investment Policy – Sections IV & V (pages 169 to 173)  
                                  2. Asset Allocation – March 16, 2020  
                                  3. VIX Historical Graphs (2 pages)

### Section 1 INVESTMENT POLICY

6. Report situations where accurate security pricing, valuation, and accrued income are either not possible or subject to considerable uncertainty.
7. Assist the System to complete such activities as the annual audit, transaction verification, or unique issues as required by the Board.
8. Manage a securities lending program to enhance income if directed by the Board. If the securities lending program is managed externally, full cooperation must be provided.

#### **E. Duties of the General Fund Consultant**

The General Fund Consultant shall be responsible for the following:

1. Review quarterly performance including performance attribution on the Board's managers and total assets, including a check on guideline compliance and adherence to investment style and discipline.
2. Make recommendations for Board presentation regarding investment policy and strategic asset allocation.
3. Assist the Board in the selection of qualified investment managers and in the review of existing managers, including monitoring changes in personnel, ownership and the investment process.
4. Assist the Board in the selection of a qualified custodian if necessary.
5. Provide topical research and education on investment subjects as requested by the Board or Investment Staff.

#### **F. Duties of Parties Involved in LACERS' Matters**

The Board is committed to maintaining a workplace that is free of sexual harassment and illegal discrimination. Investment managers, consultants, and other contractors assisting with the implementation of the Board's investment program shall adopt written policies prohibiting sexual harassment and illegal discrimination of any kind to ensure a safe working environment and to protect the System's assets from business risks arising from such misconduct.

Pursuant to this commitment, prior to finalizing its contract with the Board, every public markets contractor shall disclose to the Board all current, pending, and anticipated litigation concerning sexual harassment or related discrimination claims that may have a material impact on the Board's investment(s) managed by said contractor. This disclosure requirement is mandatory for such contracts or amendments dated March 1, 2019 or later.

## **IV. ASSET ALLOCATION POLICY**

The policies and procedures of the Board's investment program are designed to maximize the probability that the investment goals will be fulfilled. Investment policies will evolve as the System's conditions change and as investment conditions warrant. The Board reviews the Asset Allocation Policy strategically approximately every three years and on a tactical basis more frequently.

## Section 1 INVESTMENT POLICY

The Board adopts and implements the Asset Allocation Policy that is predicated on a number of factors, including:

- A. A projection of actuarial assets, liabilities, benefit payments, and required contributions;
- B. Historical and expected long-term capital market risk and return behavior;
- C. An assessment of future economic conditions, including inflation and interest rate levels;  
and
- D. The current and projected funding status of the System.

This policy provides for diversification of assets in an effort to maximize the investment return of the System consistent with market conditions. Asset allocation modeling identifies the asset classes the System will utilize and the percentage that each class represents of the total plan assets. Due to the fluctuation of market values, positioning within a specified range is acceptable and constitutes compliance with the policy. It is anticipated that an extended period of time may be required to fully implement the Asset Allocation Policy and that periodic revisions will occur. The Board will monitor and assess the actual asset allocation versus policy and will rebalance as appropriate.

The Board will implement the Asset Allocation Policy using investment managers to invest the assets of the System's portfolio components subject to investment guidelines. Equity managers may not hold more than 10% of the market value of their portfolios in cash without Board approval, unless otherwise specified in their manager guidelines. The long-term asset allocation targets and ranges for the investments of the System's assets are presented in the latest Board-approved Asset Liability Study and Asset Allocation Policy.

The Board will allocate segments of the System's assets to each investment manager and specify guidelines, objectives and standards of performance, which are to apply to each manager's portfolio. These decisions will encompass allocating segments of the System assets, and segments of individual asset classes, between active and passive investment management, the active risk of the portfolio and to provide broad market exposure.

### V. INVESTMENT POLICY

The Board will retain external investment managers to manage the System's assets using a specific style and methodology. Public external investment managers have been delegated authority for determining investment strategy, security selection, and timing. Public external investment managers are subject to the Board's policy and individual investment manager guidelines, legal restrictions, and other Board direction. Performance objectives will also be developed for each manager. The performance of each portfolio will be monitored and evaluated on a regular basis relative to each portfolio component's benchmark return and, if available, relative to a peer group of managers following similar investment styles. Private market investment managers shall manage the System's assets pursuant to the respective asset class policy and the partnership fund's limited partnership agreement or other applicable legal documents.

## Section 1 INVESTMENT POLICY

Investment actions are expected to comply with "prudent person" standards. Each investment manager will be expected to know the rules of the Board and comply with those rules. It is each manager's responsibility to identify policies that have an adverse impact on performance and to initiate discussion toward possible improvement of the rules of the Board.

The Board will also review each investment manager's adherence to its investment policy and any material changes in the manager's organization (e.g., personnel changes, new business developments, etc.). The investment managers retained by the Board will be responsible for informing the Board of such material changes within a reasonable timeframe as articulated within their respective investment guidelines.

Investment managers under contract to the Board shall have discretion to establish and execute transactions with securities broker/dealer(s). The investment managers will attempt to obtain best execution with respect to every portfolio transaction. The following transactions will be prohibited: net short sales; selling on margin; writing options other than covered options; "prohibited transactions" as defined under the Employee Retirement Income Security Act (ERISA); and, transactions that involve a broker acting as a "principal," where such broker is also the investment manager making the transaction. The investments of the Board's assets will be subject to the following general policies.

### A. Manager Selection

The selection of investment managers is accomplished in accordance with all applicable local, state, and federal laws and regulations. Each investment manager, consultant, and custodian functions under a formal contract that delineates responsibilities and appropriate performance expectations. Section VII describes LACERS' Manager Search and Selection Policy which articulates the process that will be employed for each public markets manager search.

### B. Manager Authority

The Board's investment managers shall direct and manage the investment and reinvestment of assets allocated to their accounts in accordance with this document; Board rules or direction, applicable local, state, and federal statutes and regulations and individual management investment plans and executed contracts.

### C. Brokerage Policy

The Board directs all investment managers trading public securities to utilize brokers who shall fulfill brokerage transactions for System assets in accordance with best execution. Subsequently, all LACERS public equity managers are to utilize commission recapture brokers on a best efforts basis. Commission recapture is a program designed to reduce fund expenses and increase cash flow by returning a portion of the commissions that external investment managers pay to brokers. Staff will provide to the Board an annual report summarizing commission and recapture activity for the fiscal year. The report will be presented within four months following the end of the fiscal year.



## Section 1 INVESTMENT POLICY

### D. Proxy Voting

Proxy voting rights will be managed with the same care, skill, diligence, and prudence as is exercised in managing other assets. Proxy voting rights will be exercised in the sole interest of the System's members and beneficiaries in accordance with all applicable statutes consistent with the Board Proxy Voting Policy, which is found in Section XIV of this policy statement.

### E. Securities Lending

The Board has authorized the execution of a "Securities Lending Program," which may be managed by the Board's custodian or delegated to a third-party provider. The Board will monitor and review the program. This program is described in the Securities Lending Policy (Section XV of this document) and in the Securities Lending Agreement of the securities lending provider. The initial collateral levels will not be less than 102% of the market value of the borrowed securities, or not less than 105% if the borrowed securities and collateral are denominated in different currencies. Marking to market is performed every business day, and the borrower is required to deliver additional collateral when necessary. Stringent cash and non-cash collateral guidelines specify eligible investments, credit quality standards, and diversification, maturity and liquidity requirements.

### F. Derivatives

The Board's investment managers may be permitted, under the terms of individual investment guidelines, to use derivative instruments as set forth in each manager's investment guidelines to control portfolio risk. Derivatives are contracts or securities whose returns are derived from the movement of the pricing of other securities. The returns are to be consistent with the manager's mandate from the returns of other securities, indices, or allowable derivative instruments that include, but are not limited to, futures and forwards. Examples of appropriate applications of derivative strategies include hedging interest rates and currency risks, maintaining exposure to a desired asset class while effecting asset allocation changes, and adjusting portfolio duration for fixed income. In no circumstances can managers borrow funds to purchase derivatives. Managers must ascertain and carefully monitor the creditworthiness of any counterparties involved in derivative transactions.

### G. Rebalancing

The investment portfolio shall, on an ongoing basis in accordance with market fluctuations, be rebalanced to remain within the range of targeted allocations and distributions among investment advisors. The Board has a long-term investment horizon and utilizes an asset allocation that encompasses a strategic, long-run perspective of capital markets. It is recognized that a strategic long-run asset allocation plan implemented in a consistent and disciplined manner will be the major determinant of the System's investment performance.

Rebalancing is not primarily intended to be used for tactical asset allocation. The Board will not attempt to time the rise or fall of the investment markets by moving away from long-term targets because (1) market timing may result in lower returns than buy-and-hold strategies; (2) there is little or no evidence that one can consistently and accurately predict market timing opportunities; and (3) rebalancing too often may result in excessive transaction costs. However,

**Section 1 INVESTMENT POLICY**

the Board may authorize staff to rebalance assets within or among asset classes without breaching Board-established asset allocation policy threshold bands. Such rebalancing would be subject to an annually approved Tactical Asset Allocation Plan (TAAP) in order to enhance incremental performance during periods of market dislocations. The Board will consider the approval of a new TAAP or renewal of an existing TAAP within three months prior to the start of each fiscal year. The approved TAAP will be effective on July 1 of each year. Should the Board choose not to renew a TAAP, the existing TAAP may continue to be implemented; however, new TAA positions may not be introduced until a new TAAP is approved by the Board.

The Board delegates the responsibility of rebalancing to the Chief Investment Officer, who will seek the concurrence of the General Fund Consultant. Rebalancing generally will occur when the market values of asset classes (e.g., equities, fixed income, etc.) or sub-asset classes (e.g., large cap value, emerging markets, etc.) exceed their respective thresholds as established by the Board's approved asset allocation and asset class risk budgets.

The portfolio will be monitored daily, but reviewed by senior investment staff (i.e., Chief Investment Officer or Chief Operating Officer) at the beginning of each month to determine the need to rebalance asset classes or sub-asset classes within approved policy bands. Rebalancing will be conducted in a timely manner, taking into consideration associated costs and operational circumstances and market conditions. Rebalancing will be accomplished by using routine cash flows, such as contributions and benefit payments, by reallocating assets across asset classes, investment mandates, and investment managers.

Asset classes temporarily may remain outside of their ranges due to operational and implementation circumstances to include, but not limited to, illiquidity that prevents immediate rebalancing of certain asset classes such as private equity and private real estate; potential asset shifts pending in the portfolio over the next 12 months such as hiring/termination of a manager(s); an asset allocation review of the entire portfolio; or a structural review of a given asset class.

The Chief Investment Officer shall inform the Board in a timely manner of all rebalancing activity.

**H. Evaluation of Policy**

The Investment Policy Statement shall be reviewed by the Board at least annually, with the assistance of the Staff and investment consultant(s), and revised as necessary.

**VI. GENERAL INVESTMENT OBJECTIVES AND GUIDELINES**

The general investment objective is to outperform the overall policy portfolio benchmark. The overall policy portfolio benchmark consists of weighted asset class benchmarks for each asset class as determined by the Board. The long term policy benchmarks are listed below:

<u>Asset Class</u>	<u>Benchmark</u>
Domestic Equity	Russell 3000
Non-U.S. Equity	MSCI ACWI ex-U.S.

**ASSET ALLOCATION**

CLASS	STYLE	BENCHMARK	CURRENT MKT VALUE \$	CURRENT MKT VALUE %	POLICY TARGET %	POLICY TARGET \$	TARGET \$ mm diff	Lower threshold %	Upper threshold %	EFFECTIVE FEES (in bps)
<b>U.S. EQUITY</b>		<b>Russell 3000</b>	<b>3,356.6</b>	<b>21.3%</b>	<b>19.0%</b>	<b>2,990.0</b>	<b>(366.5)</b>	<b>12.0%</b>	<b>26.0%</b>	
Rhumblin	Index	S&P 500	2,700.7	17.2%						0.58
Rhumblin	Index	Russell 1000 Growth	0.0	0.0%						
Principal Global	Mid Cap	Russell Mid Cap	153.2	1.0%						38.26
Rhumblin	Index	Russell 2000	175.1	1.1%						0.58
Rhumblin	Index	Russell 2000 Growth	96.8	0.6%						0.58
EAM Investors	Small Cap Growth	Russell 2000 Growth	93.7	0.6%						73.01
Rhumblin	Index	Russell 2000 Value	137.2	0.9%						0.58
<b>NON-U.S. EQUITY</b>		<b>MSCI All Country World Index</b>	<b>4,038.6</b>	<b>25.7%</b>	<b>27.0%</b>	<b>4,249.0</b>	<b>210.4</b>	<b>18.0%</b>	<b>36.0%</b>	
State Street	Index	MSCI World Ex-US	1,301.9	8.3%						2.38
Lazard	Dev Mkts Core	MSCI EAFE	451.4	2.9%						53.86
MFS	Dev Mkts Growth	MSCI World Ex-US Growth	509.4	3.2%						42.45
Barrow Hanley	Dev Mkts Value	MSCI EAFE Value	367.5	2.3%						49.78
Oberweis	Dev Mkts Small Cap	MSCI EAFE Small Cap	172.7	1.1%						88.68
AQR Capital	Dev Mkts Small Cap	MSCI EAFE Small Cap	198.5	1.3%						68.82
QMA	Emg Mkts Core	MSCI Emerging Markets	351.2	2.2%						37.12
Axiom International	Emg Mkts Growth	MSCI EM Growth	365.5	2.3%						62.74
DFA	Emg Mkts Value	MSCI Emg Mkts Value	320.3	2.0%						51.56
<b>CORE FIXED INCOME</b>		<b>BBG BC US Aggregate</b>	<b>3,295.3</b>	<b>20.9%</b>	<b>13.8%</b>	<b>2,163.8</b>	<b>(1,131.5)</b>	<b>10.8%</b>	<b>16.8%</b>	
State Street	Index	BBG BC US Aggregate	955.0	6.1%						4.16
Baird	Active Core	BBG BC Gvt/Crdt Intermediate	350.3	2.2%						11.71
Loomis	Active Core	BBG BC US Aggregate	838.6	5.3%						12.38
LM Capital	Active Core	BBG BC US Aggregate	332.1	2.1%						11.55
Neuberger Berman	Active Core	BBG BC US Aggregate	819.3	5.2%						13.39
<b>CREDIT OPPORTUNITIES</b>		<b>65% BBG BC US HY/35% JPM EMBI GD</b>	<b>928.2</b>	<b>5.9%</b>	<b>12.3%</b>	<b>1,927.8</b>	<b>999.5</b>	<b>8.3%</b>	<b>16.3%</b>	
AEGON	High Yield Bonds	BBG BC U.S. High Yield 2% Capped	333.2	2.1%						40.75
Prudential	Emerging Mkt Bonds	JPM EMBI Global Diversified	379.1	2.4%						39.62
Bain	Bank Loans	CSFB Leveraged Loan Index	215.9	1.4%						42.20
<b>PRIVATE EQUITY</b>		<b>Russell 3000 + 300 bps</b>	<b>2,063.3</b>	<b>13.1%</b>	<b>14.0%</b>	<b>2,203.2</b>	<b>139.8</b>	<b>N/A</b>	<b>N/A</b>	
<b>PUBLIC REAL ASSETS</b>			<b>1,105.7</b>	<b>7.0%</b>	<b>6.0%</b>	<b>944.2</b>	<b>(161.5)</b>	<b>4.0%</b>	<b>8.0%</b>	
DFA	TIPS	BBG BC U.S. TIPS Index	754.1	4.8%						5.33
CoreCommodities	Commodities	Bloomberg Commodities Index	180.8	1.1%						60.00
Centersquare	REITS	FTSE NAREIT All Equity REIT Index	170.9	1.1%						44.39
<b>REAL ESTATE</b>		<b>NFI + 80 bps</b>	<b>814.2</b>	<b>5.2%</b>	<b>7.0%</b>	<b>1,101.6</b>	<b>287.4</b>	<b>N/A</b>	<b>N/A</b>	
<b>TRANSITION ACCOUNT</b>			<b>0.1</b>	<b>0.0%</b>						
<b>CASH</b>			<b>134.9</b>	<b>0.9%</b>	<b>1.0%</b>	<b>157.4</b>	<b>22.4</b>	<b>0.0%</b>	<b>2.0%</b>	
<b>TOTAL PORTFOLIO</b>			<b>15,737.0</b>	<b>100.0%</b>	<b>100.0%</b>					

Holdings as of

March 16, 2020

Securities Lending

2,198.4

Util Rate

17%

# CBOE Volatility Index (VIX) 1991-March 17, 2020

Published on TradingView.com, March 17, 2020 17:29:01 UTC  
CBOE-VIX, M 76.52 ▼ -6.17 (-7.46%) O: 34.86 H: 84.83 L: 24.93 C: 76.52



# CBOE Volatility Index (VIX) May 2019-March 17, 2020

Published on TradingView.com, March 17, 2020 17:27:36 UTC  
CBOE:VIX, D 76.19 ▼ -6.50 (-7.86%) O:82.69 H:84.83 L:70.37 C:76.19



# PORTFOLIO PERFORMANCE REVIEW

## LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Quarter Ending December 31, 2019



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

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# EXECUTIVE SUMMARY













NEPC, LLC

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# PERFORMANCE OVERVIEW

## Q4 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
											
-3.0%	-2.5	24 bps	9.1%	8.2%	11.8%	0.2%	2.6%	1.8%	13.0%	3.1%	0.6%

	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	15 Yrs	Rank	Inception	Inception Date
LACERS Master Trust	\$18,867,824,935	5.34%	40	5.87%	38	18.08%	28	10.09%	15	7.56%	27	8.97%	19	7.13%	14	8.30%	Oct-94
Policy Index		6.20%	6	6.91%	7	20.88%	9	10.46%	8	7.78%	19	8.92%	20	7.08%	20	8.29%	Oct-94
InvMetrics Public DB \$1-50B Gross Median		5.08%		5.65%		16.86%		9.07%		6.98%		8.10%		6.43%		7.89%	Oct-94

Note: Performance is gross of fees

### Global risk assets rallied during the quarter as prospects of a trade deal increased and global central banks continued easing monetary policy to offset economic growth concerns

- The U.S. Equity composite under-performed due to mid and small cap manager selection. The Non-U.S. Equity composite outperformed due to manager outperformance.

### Dollar weakness provided a tailwind for international and emerging market asset returns

- The Emerging Markets composite outperformed developed markets but underperformed the benchmark due to manager underperformance.

### Increasing yields caused the spread between the 10-year and 3-month Treasuries to move into positive territory, widening to 37 basis points – marking the largest spread since January 2019

- The Core Fixed Income composite outperformed the benchmark due to manager selection.



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

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# MACRO PERFORMANCE OVERVIEW

## Q4 Macro Market Summary

**Global central banks continued easing with the Fed cutting rates and the ECB reigniting monthly bond purchases**

**Emerging market currencies appreciated relative to the dollar as trade concerns eased**

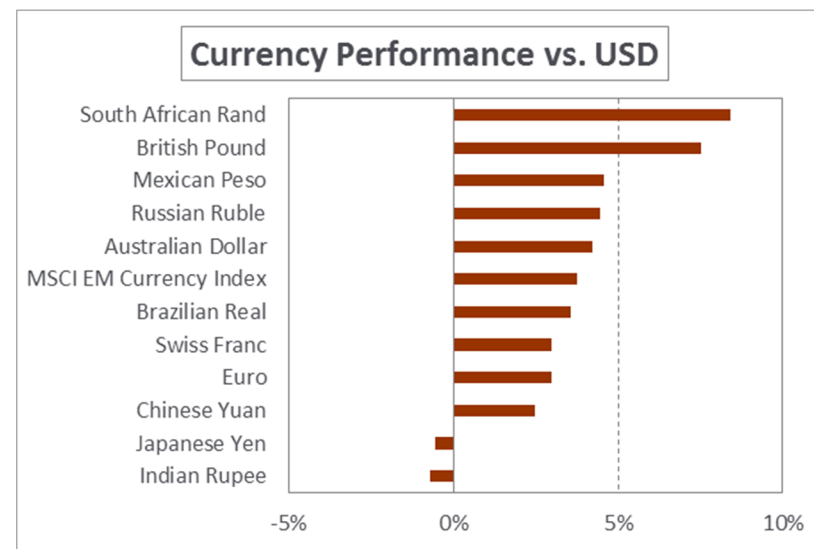
**Global government bond yields increased reflecting optimism around trade and expected growth**

	Yield 9/30/19	Yield 12/31/19	\Delta
US 10-Year	1.68%	1.92%	+0.24%
US 30-Year	2.12%	2.39%	+0.27%
US Real 10-Year	0.15%	0.15%	-
German 10-Year	-0.58%	-0.19%	+0.40%
Japan 10-Year	-0.23%	-0.02%	+0.21%
China 10-Year	3.17%	3.20%	+0.03%
EM Local Debt	5.21%	5.22%	+0.01%

Source: FactSet

Central Banks	Current Rate	CPI YOY	Notes from the Quarter
<b>Federal Reserve</b>	1.50% - 1.75%	2.0%	The Fed cut interest rates by 25 basis points in October and signaled a pause from further rate cuts
<b>European Central Bank</b>	0.00%	1.0%	The ECB maintained its current benchmark interest rates and restarted monthly bond purchases of €20 billion in November
<b>Bank of Japan</b>	-0.10%	0.5%	The BoJ will continue its ultra-easy QE program with inflation remaining well below target

Source: FactSet



Source: FactSet



# EQUITY PERFORMANCE OVERVIEW

## Q4 Equity Market Summary

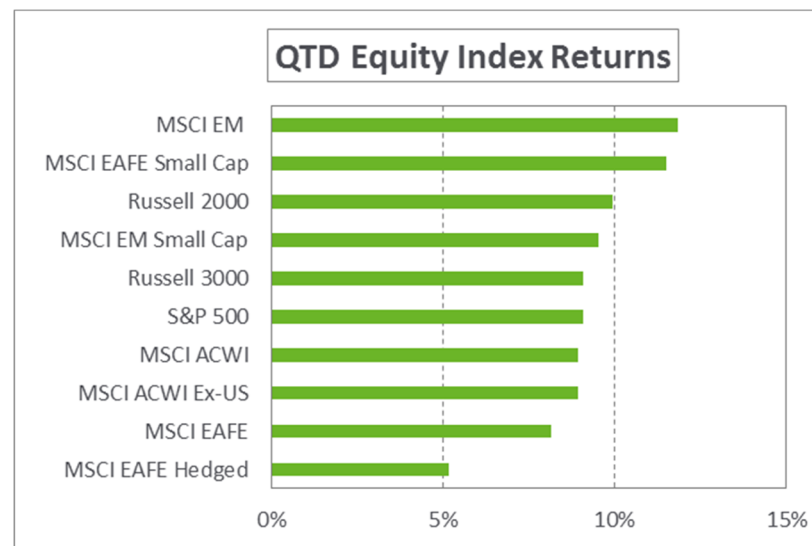
**Global equities posted stellar returns in Q4, adding to already sizable year-to-date gains**

**Dollar weakness provided a boon to international and emerging market returns**

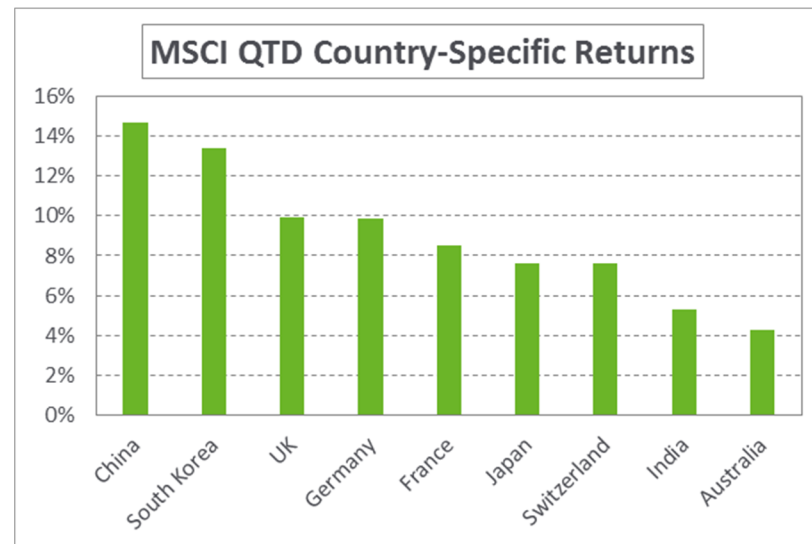
**Chinese equities outperformed broad emerging market equities – following news of a potential trade deal between the US and China**

Russell 3000 QTD Sector Returns	
Technology	+14.3%
Health Care	+14.9%
Consumer Discretionary	+6.3%
Consumer Staples	+4.7%
Energy	+5.7%
Materials & Processing	+7.0%
Producer Durables	+6.4%
Financial Services	+7.6%
Utilities	+1.5%

Source: FactSet



Source: FactSet



Source: FactSet



# CREDIT PERFORMANCE OVERVIEW

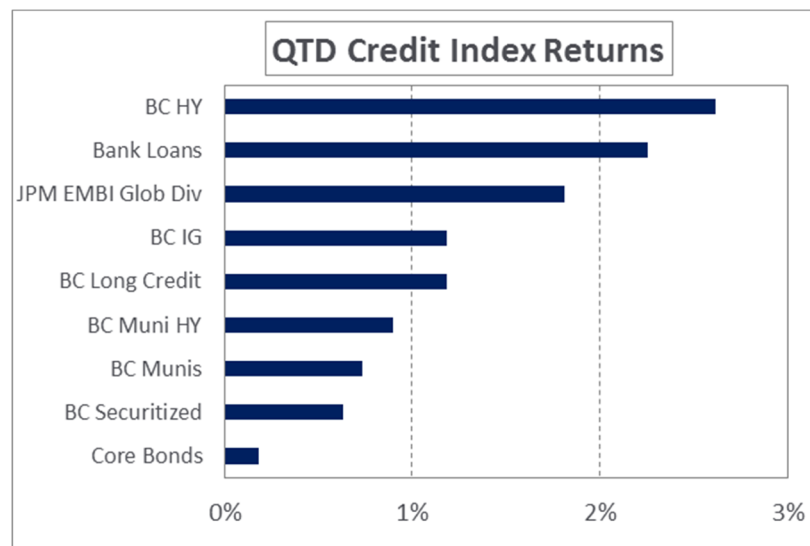
## Q4 Credit Market Summary

Return-seeking credit broadly outperformed safe-haven assets with spread tightening reflecting risk on sentiment

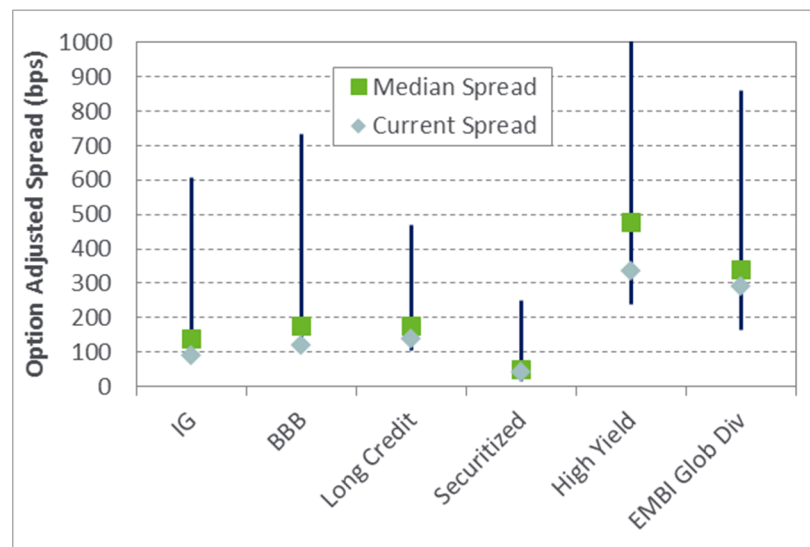
In most areas of credit, spreads moved lower and remain well below long-term median levels

Credit Spread (Basis Points)	9/30/2019	12/31/2019	Δ
BC IG Credit	115	93	-22
BC Long Credit	167	139	-28
BC Securitized	47	42	-5
BC High Yield	373	336	-37
Muni HY	250	226	-24
JPM EMBI	337	291	-46
Bank Loans - Libor	398	372	-25

Source: FactSet



Source: FactSet



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



# REAL ASSETS PERFORMANCE OVERVIEW

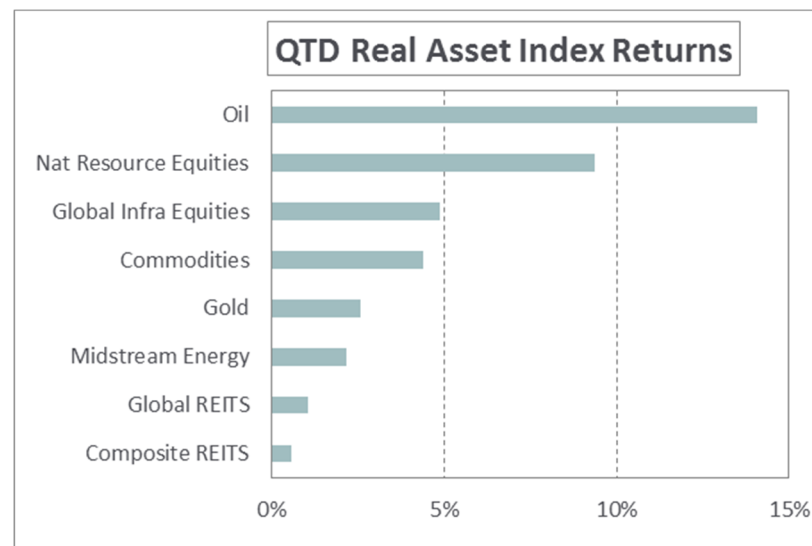
## Q4 Real Assets Market Summary

**Spot WTI crude oil increased 13.0% as a result of OPEC production cuts and easing US-China trade concerns**

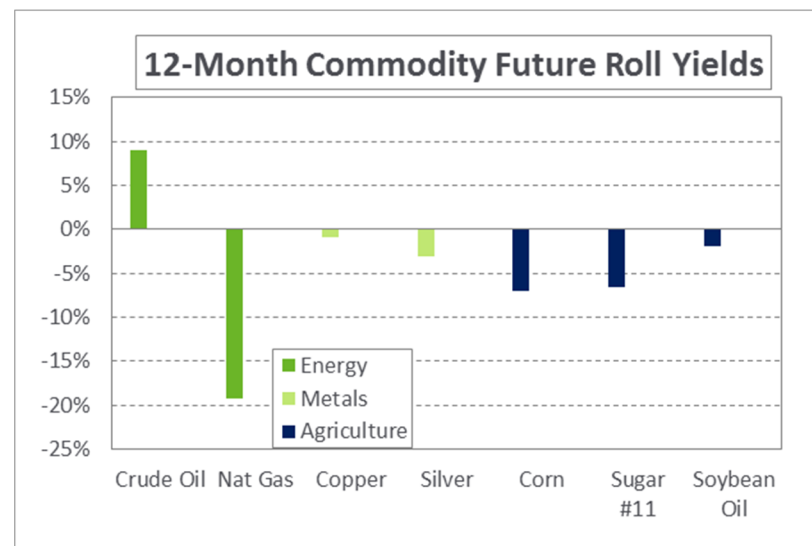
**The expectation of modestly higher inflation caused gold and other inflation-sensitive assets to rally**

Real Asset Yields	9/30/19	12/31/19
Midstream Energy	6.4%	6.4%
Core Real Estate	4.5%	4.4%
Composite REITs	4.0%	4.1%
Global REITs	4.1%	4.2%
Global Infrastructure Equities	4.2%	4.0%
Natural Resource Equities	4.3%	3.9%
US 10-Year Breakeven Inflation	1.49%	1.77%
Commodity Index Roll Yield	-3.0%	-1.7%
10-Year TIPS Real Yield	0.2%	0.2%

Source: FactSet



Source: FactSet



Source: FactSet



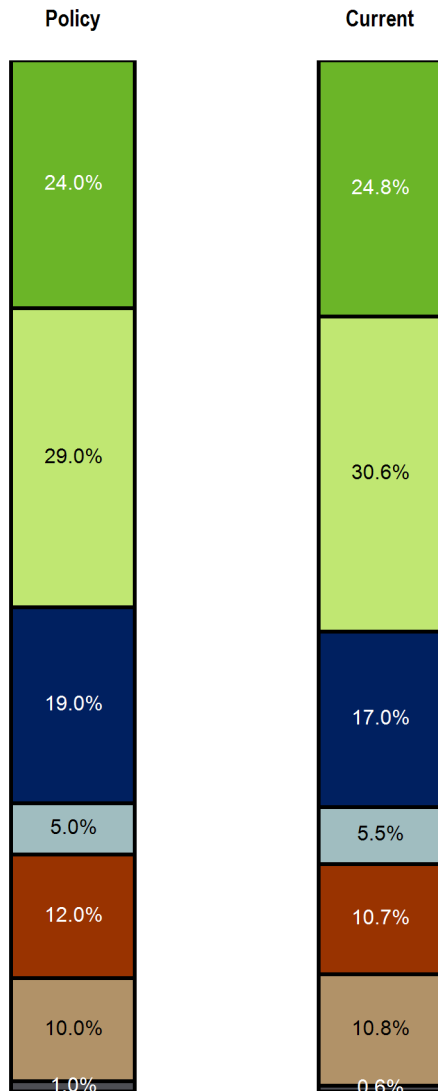
# ASSET CLASS POLICY OVERVIEW

NEPC, LLC

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## 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	\$4,671,501,921	24.00%	24.76%	0.76%	19.00% - 29.00%	Yes
Non-US Equity	\$5,770,746,991	29.00%	30.59%	1.59%	24.00% - 34.00%	Yes
Core Fixed Income	\$3,211,478,959	19.00%	17.02%	-1.98%	15.00% - 22.00%	Yes
Opportunistic Credit	\$1,044,491,951	5.00%	5.54%	0.54%	0.00% - 10.00%	Yes
Private Equity	\$2,021,711,983	12.00%	10.72%	-1.28%		Yes
Real Assets	\$2,040,951,824	10.00%	10.82%	0.82%	7.00% - 13.00%	Yes
Cash	\$106,941,305	1.00%	0.57%	-0.43%	0.00% - 2.00%	Yes
<b>Total</b>	<b>\$18,867,824,935</b>	<b>100.00%</b>	<b>100.00%</b>			

\*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.

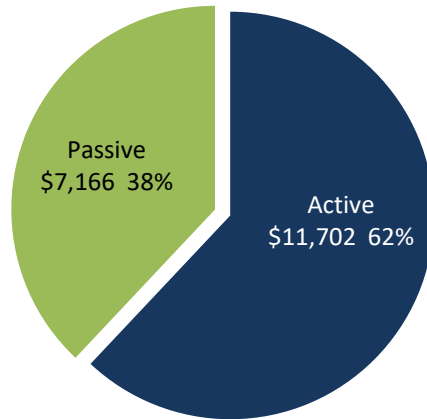




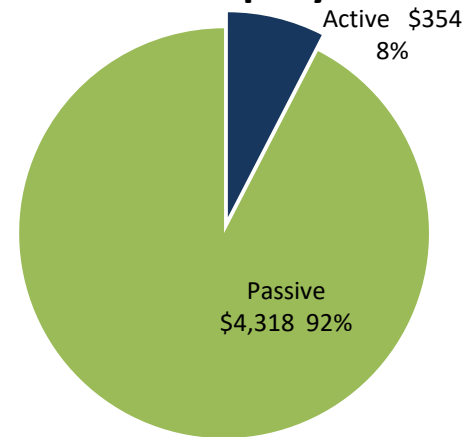
# ACTIVE VS. PASSIVE MANAGER BREAKDOWN

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

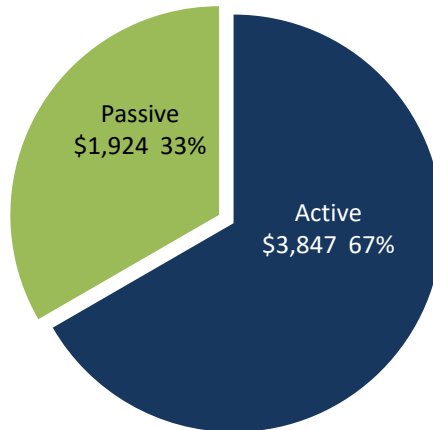
## Total Fund



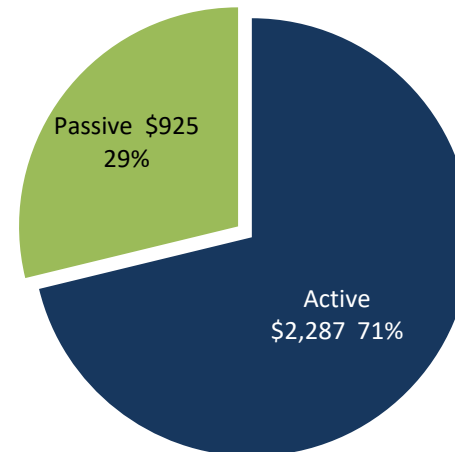
## U.S. Equity



## 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

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# TOTAL FUND PERFORMANCE SUMMARY (GROSS OF FEES)

	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	15 Yrs	Rank	Inception	Inception Date
<b>LACERS Master Trust</b>	<b>\$18,867,824,935</b>	<b>5.34%</b>	<b>40</b>	<b>5.87%</b>	<b>38</b>	<b>18.08%</b>	<b>28</b>	<b>10.09%</b>	<b>15</b>	<b>7.56%</b>	<b>27</b>	<b>8.97%</b>	<b>19</b>	<b>7.13%</b>	<b>14</b>	<b>8.30%</b>	<b>Oct-94</b>
Policy Index		6.20%	6	6.91%	7	20.88%	9	10.46%	8	7.78%	19	8.92%	20	7.08%	20	8.29%	Oct-94
InvMetrics Public DB \$1-50B Gross Median		5.08%		5.65%		16.86%		9.07%		6.98%		8.10%		6.43%		7.89%	Oct-94

Over the past five years, the Fund returned 7.56% underperforming the policy index by 0.22% and ranked in the 27<sup>th</sup> percentile in the Public Funds \$1 Billion- \$50 Billion universe. The Fund's volatility was 6.80% and ranked in the 63<sup>rd</sup> percentile over this period. The Fund's risk-adjusted performance, as measured by the Sharpe Ratio, ranks in the 33<sup>rd</sup> percentile in its peer group.

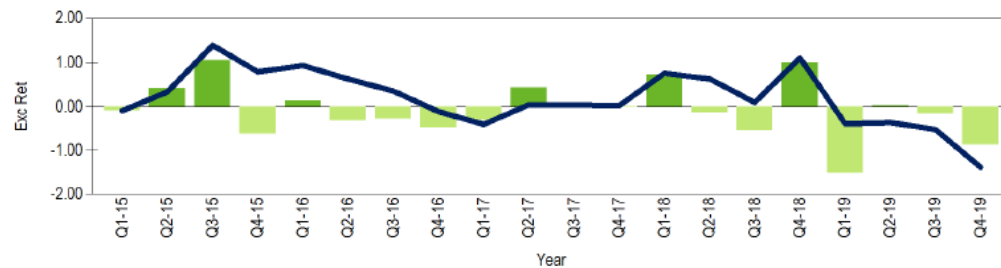
Over the past three years, the Fund returned 10.09% underperforming the policy index by 0.37% and ranked in the 15<sup>th</sup> percentile in its peer group. The Fund's volatility ranks in the 60<sup>th</sup> percentile resulting in a three-year Sharpe Ratio of 1.29 and ranked in the 28<sup>th</sup> percentile.

In the one-year ended December 31, 2019, the Fund experienced a net investment gain of \$2.92 billion, which includes a net investment gain of \$962.74 million during the fourth calendar quarter. Assets increased from \$16.27 billion twelve months ago to \$18.87 billion on December 31, 2019. The Fund returned 18.08%, underperforming the policy index by 2.80% and ranked in the 28<sup>th</sup> percentile in its peer group.

All asset classes were within policy range as of December 31, 2019.

*The InvMetrics Public Funds \$1 Billion- \$50 Billion Universe contains 62 observations for the period ending December 31, 2019.*

## Quarterly and Cumulative Excess Performance



## 5 Years Ending December 31, 2019

	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	7.56%	27	6.80%	63	0.96	33	1.29	29
Policy Index	7.78%	19	7.83%	89	0.86	61	1.16	45
InvMetrics Public DB \$1-50B Gross Median	6.98%	--	6.46%	--	0.89	--	1.12	--

## 3 Years Ending December 31, 2019

	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	10.09%	15	6.55%	60	1.29	28	1.38	33
Policy Index	10.46%	8	7.56%	88	1.17	54	1.36	37
InvMetrics Public DB \$1-50B Gross Median	9.07%	--	6.24%	--	1.19	--	1.26	--



## Los Angeles City Employees' Retirement System

# TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>LACERS Master Trust</b>	<b>18,867,824,935</b>	<b>100.00</b>	<b>5.34</b>	<b>5.87</b>	<b>18.08</b>	<b>10.09</b>	<b>7.56</b>	<b>8.97</b>	<b>8.30</b>	<b>Oct-94</b>
Policy Index			<u>6.20</u>	<u>6.91</u>	<u>20.88</u>	<u>10.46</u>	<u>7.78</u>	<u>8.92</u>	<u>8.29</u>	<u>Oct-94</u>
Over/Under			-0.86	-1.04	-2.80	-0.37	-0.22	0.05	0.01	
<b>U.S. Equity</b>	<b>4,671,501,921</b>	<b>24.76</b>	<b>9.01</b>	<b>10.02</b>	<b>30.73</b>	<b>14.20</b>	<b>11.20</b>	<b>13.41</b>	<b>10.69</b>	<b>Oct-94</b>
U.S. Equity Blend			<u>9.10</u>	<u>10.37</u>	<u>31.02</u>	<u>14.57</u>	<u>11.24</u>	<u>13.42</u>	<u>9.65</u>	<u>Oct-94</u>
Over/Under			-0.09	-0.35	-0.29	-0.37	-0.04	-0.01	1.04	
<b>Non-U.S. Equity</b>	<b>5,770,746,991</b>	<b>30.59</b>	<b>9.55</b>	<b>7.39</b>	<b>22.55</b>	<b>11.08</b>	<b>6.80</b>	<b>6.25</b>	<b>5.42</b>	<b>Nov-94</b>
MSCI ACWI ex USA			<u>8.92</u>	<u>6.96</u>	<u>21.51</u>	<u>9.87</u>	<u>5.51</u>	<u>4.97</u>	<u>5.23</u>	<u>Nov-94</u>
Over/Under			0.63	0.43	1.04	1.21	1.29	1.28	0.19	
<b>Core Fixed Income</b>	<b>3,211,478,959</b>	<b>17.02</b>	<b>0.29</b>	<b>2.46</b>	<b>9.09</b>	<b>4.22</b>	<b>3.36</b>		<b>3.49</b>	<b>Jul-12</b>
Core Fixed Income Blend			<u>0.18</u>	<u>2.45</u>	<u>8.72</u>	<u>4.03</u>	<u>3.05</u>		<u>2.90</u>	<u>Jul-12</u>
Over/Under			0.11	0.01	0.37	0.19	0.31		0.59	
<b>Credit Opportunities</b>	<b>1,044,491,951</b>	<b>5.54</b>	<b>2.19</b>	<b>3.72</b>	<b>14.20</b>	<b>6.92</b>	<b>5.86</b>		<b>5.97</b>	<b>Jun-13</b>
Credit Opportunities Blend			<u>2.33</u>	<u>3.76</u>	<u>14.58</u>	<u>6.50</u>	<u>6.20</u>		<u>6.16</u>	<u>Jun-13</u>
Over/Under			-0.14	-0.04	-0.38	0.42	-0.34		-0.19	
<b>Real Assets</b>	<b>2,040,951,824</b>	<b>10.82</b>	<b>1.49</b>	<b>2.68</b>	<b>8.80</b>	<b>5.76</b>	<b>6.12</b>	<b>6.99</b>	<b>6.32</b>	<b>Nov-94</b>
CPI + 5% (Unadjusted)			<u>1.31</u>	<u>2.80</u>	<u>7.39</u>	<u>7.20</u>	<u>6.90</u>	<u>6.83</u>	<u>7.28</u>	<u>Nov-94</u>
Over/Under			0.18	-0.12	1.41	-1.44	-0.78	0.16	-0.96	
<b>Public Real Assets</b>	<b>1,213,466,379</b>	<b>6.43</b>	<b>1.41</b>	<b>2.99</b>	<b>11.58</b>	<b>3.86</b>	<b>2.97</b>		<b>2.17</b>	<b>Jun-14</b>
Public Real Assets Blend			<u>1.02</u>	<u>1.74</u>	<u>10.23</u>	<u>2.53</u>	<u>1.14</u>		<u>-0.10</u>	<u>Jun-14</u>
Over/Under			0.39	1.25	1.35	1.33	1.83		2.27	
<b>Private Real Estate</b>	<b>809,255,880</b>	<b>4.29</b>	<b>1.64</b>	<b>2.33</b>	<b>5.67</b>	<b>7.61</b>	<b>8.81</b>	<b>8.47</b>	<b>6.89</b>	<b>Oct-94</b>
Real Estate Blend			<u>1.71</u>	<u>3.25</u>	<u>6.18</u>	<u>7.95</u>	<u>9.84</u>	<u>11.31</u>	<u>9.80</u>	<u>Oct-94</u>
Over/Under			-0.07	-0.92	-0.51	-0.34	-1.03	-2.84	-2.91	
<b>Private Equity</b>	<b>2,021,711,983</b>	<b>10.72</b>	<b>0.00</b>	<b>2.40</b>	<b>6.28</b>	<b>12.72</b>	<b>10.42</b>	<b>12.70</b>	<b>10.41</b>	<b>Nov-95</b>
Private Equity Blend			<u>9.88</u>	<u>11.98</u>	<u>34.86</u>	<u>17.97</u>	<u>14.55</u>	<u>17.06</u>	<u>13.27</u>	<u>Nov-95</u>
Over/Under			-9.88	-9.58	-28.58	-5.25	-4.13	-4.36	-2.86	
<b>Cash</b>	<b>106,941,305</b>	<b>0.57</b>								



## Los Angeles City Employees' Retirement System

# TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>LACERS Master Trust</b>	<b>18,867,824,935</b>	<b>100.00</b>	<b>5.29</b>	<b>5.78</b>	<b>17.88</b>	<b>9.89</b>	<b>7.37</b>	<b>8.77</b>		<b>Oct-94</b>
Policy Index			6.20	6.91	20.88	10.46	7.78	8.92		Oct-94
Over/Under			-0.91	-1.13	-3.00	-0.57	-0.41	-0.15		
<b>U.S. Equity</b>	<b>4,671,501,921</b>	<b>24.76</b>	<b>9.00</b>	<b>9.99</b>	<b>30.65</b>	<b>14.13</b>	<b>11.11</b>	<b>13.25</b>		<b>Oct-94</b>
U.S. Equity Blend			9.10	10.37	31.02	14.57	11.24	13.42		Oct-94
Over/Under			-0.10	-0.38	-0.37	-0.44	-0.13	-0.17		
<b>Non-U.S. Equity</b>	<b>5,770,746,991</b>	<b>30.59</b>	<b>9.46</b>	<b>7.19</b>	<b>22.11</b>	<b>10.67</b>	<b>6.42</b>	<b>5.89</b>		<b>Nov-94</b>
MSCI ACWI ex USA			8.92	6.96	21.51	9.87	5.51	4.97		Nov-94
Over/Under			0.54	0.23	0.60	0.80	0.91	0.92		
<b>Core Fixed Income</b>	<b>3,211,478,959</b>	<b>17.02</b>	<b>0.27</b>	<b>2.41</b>	<b>8.98</b>	<b>4.12</b>	<b>3.26</b>		<b>3.37</b>	<b>Jul-12</b>
Core Fixed Income Blend			0.18	2.45	8.72	4.03	3.05		2.90	Jul-12
Over/Under			0.09	-0.04	0.26	0.09	0.21		0.47	
<b>Credit Opportunities</b>	<b>1,044,491,951</b>	<b>5.54</b>	<b>2.12</b>	<b>3.57</b>	<b>13.86</b>	<b>6.57</b>	<b>5.50</b>		<b>5.62</b>	<b>Jun-13</b>
Credit Opportunities Blend			2.33	3.76	14.58	6.50	6.20		6.16	Jun-13
Over/Under			-0.21	-0.19	-0.72	0.07	-0.70		-0.54	
<b>Real Assets</b>	<b>2,040,951,824</b>	<b>10.82</b>	<b>1.45</b>	<b>2.60</b>	<b>8.63</b>	<b>5.60</b>	<b>5.96</b>	<b>6.84</b>		<b>Nov-94</b>
CPI + 5% (Unadjusted)			1.31	2.80	7.39	7.20	6.90	6.83		Nov-94
Over/Under			0.14	-0.20	1.24	-1.60	-0.94	0.01		
<b>Public Real Assets</b>	<b>1,213,466,379</b>	<b>6.43</b>	<b>1.36</b>	<b>2.89</b>	<b>11.36</b>	<b>3.61</b>	<b>2.74</b>		<b>1.96</b>	<b>Jun-14</b>
Public Real Assets Blend			1.02	1.74	10.23	2.53	1.14		-0.10	Jun-14
Over/Under			0.34	1.15	1.13	1.08	1.60		2.06	
<b>Private Real Estate</b>	<b>809,255,880</b>	<b>4.29</b>	<b>1.62</b>	<b>2.29</b>	<b>5.57</b>	<b>7.53</b>	<b>8.72</b>	<b>8.35</b>		<b>Oct-94</b>
Real Estate Blend			1.71	3.25	6.18	7.95	9.84	11.31		Oct-94
Over/Under			-0.09	-0.96	-0.61	-0.42	-1.12	-2.96		
<b>Private Equity</b>	<b>2,021,711,983</b>	<b>10.72</b>	<b>0.00</b>	<b>2.40</b>	<b>6.29</b>	<b>12.73</b>	<b>10.44</b>	<b>12.71</b>		<b>Nov-95</b>
Private Equity Blend			9.88	11.98	34.86	17.97	14.55	17.06		Nov-95
Over/Under			-9.88	-9.58	-28.57	-5.24	-4.11	-4.35		
<b>Cash</b>	<b>106,941,305</b>	<b>0.57</b>								



## Los Angeles City Employees' Retirement System

# TOTAL FUND RISK STATISTICS (NET)

3 Years Ending December 31, 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%	9.89%	25	6.56%	60	0.64%	39	-0.44	--	1.35	40	1.28%	72
Total Equity	55.34%	12.22%	32	11.52%	70	0.13%	27	0.20	22	1.00	48	0.67%	16
U.S. Equity	24.76%	14.13%	40	12.50%	46	-0.56%	32	-0.80	--	0.99	35	0.55%	3
Non-U.S. Equity	30.59%	10.67%	31	11.68%	65	0.71%	35	0.82	10	1.07	37	0.98%	12
Developed ex-U.S.	23.13%	10.55%	51	11.29%	54	0.81%	44	0.69	38	1.00	69	1.42%	19
Emerging Markets	7.46%	10.91%	27	14.27%	83	-0.55%	34	-0.53	--	1.06	32	1.25%	1
Core Fixed Income	17.02%	4.12%	71	2.75%	74	0.24%	79	0.25	39	1.86	69	0.36%	16
Credit Opportunities	5.54%	6.57%	--	3.76%	--	0.42%	--	0.10	--	3.18	--	0.80%	--
Real Assets	10.82%	5.60%	--	2.19%	--	2.05%	--	-0.71	--	3.26	--	2.24%	--
Public Real Assets	6.43%	3.61%	--	3.90%	--	1.26%	--	0.62	--	0.95	--	1.74%	--
Private Real Estate	4.29%	7.53%	25	1.78%	47	8.02%	1	-0.10	--	2.53	76	4.21%	97
Private Equity	10.72%	12.73%	58	4.62%	18	13.16%	19	-0.36	--	10.70	58	14.61%	94

5 Years Ending December 31, 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%	7.37%	30	6.81%	63	0.50%	42	-0.33	--	1.24	34	1.24%	65
Total Equity	55.34%	8.55%	37	11.80%	70	0.23%	32	0.34	11	0.83	37	0.61%	6
U.S. Equity	24.76%	11.11%	29	12.36%	43	-0.22%	21	-0.21	--	1.01	24	0.62%	3
Non-U.S. Equity	30.59%	6.42%	49	12.39%	67	0.98%	32	0.84	1	0.69	30	1.09%	7
Developed ex-U.S.	23.13%	6.45%	69	12.05%	33	0.88%	57	0.51	38	0.68	63	1.53%	19
Emerging Markets	7.46%	5.11%	17	15.94%	93	-0.53%	42	-0.43	--	0.46	17	1.17%	1
Core Fixed Income	17.02%	3.26%	64	2.91%	61	0.34%	65	0.43	46	1.29	67	0.49%	21
Real Assets	10.82%	5.96%	--	2.31%	--	2.02%	--	-0.41	--	4.84	--	2.31%	--
Private Real Estate	4.29%	8.72%	38	1.88%	25	9.51%	1	-0.22	--	3.29	82	5.01%	95
Private Equity	10.72%	10.44%	73	4.17%	13	10.41%	27	-0.30	--	9.24	49	13.78%	80

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



# PRIVATE MARKETS PERFORMANCE AS OF SEPTEMBER 30, 2019

Private Equity	10 Year IRR	Since Inception IRR	Since Inception Multiple
Aggregate Portfolio	12.8%	11.1%	1.55x
Core Portfolio	13.5%	11.7%	1.57x
Specialized Portfolio	4.8%	2.0%	1.13x
Russell 3000 + 300 bps	16.1%	13.9%	N/A

Real Estate	10 Year Return (Net)	Since Inception Return (Net)
Total Portfolio (TWR) <sup>1</sup>	7.97%	5.97%
NFI-ODCE + 80 basis points (TWR)	9.72%	7.10%

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.

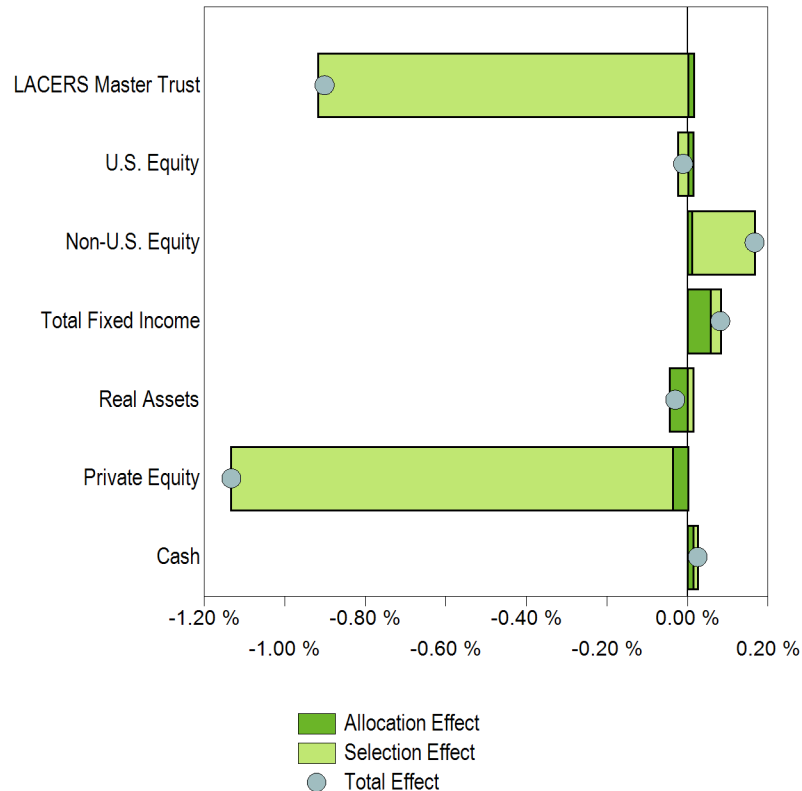
1 - IRR is not available for the Real Estate portfolio and therefore only time weighted returns (TWR) are reported.



# Los Angeles City Employees' Retirement System

## TOTAL FUND ATTRIBUTION ANALYSIS (NET)

### Attribution Effects 3 Months Ending December 31, 2019



Attribution Summary 3 Months Ending December 31, 2019							
	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	24.00%	9.00%	9.10%	-0.10%	-0.02%	0.01%	-0.01%
Non-U.S. Equity	29.00%	9.46%	8.92%	0.54%	0.15%	0.01%	0.17%
Total Fixed Income	24.00%	0.73%	0.63%	0.10%	0.02%	0.06%	0.08%
Real Assets	10.00%	1.45%	1.31%	0.14%	0.01%	-0.04%	-0.03%
Private Equity	12.00%	0.00%	9.88%	-9.88%	-1.10%	-0.04%	-1.13%
Cash	1.00%	1.76%	0.39%	1.37%	0.01%	0.02%	0.03%
<b>Total</b>	<b>100.00%</b>	<b>5.30%</b>	<b>6.20%</b>	<b>-0.90%</b>	<b>-0.92%</b>	<b>0.02%</b>	<b>-0.90%</b>

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.

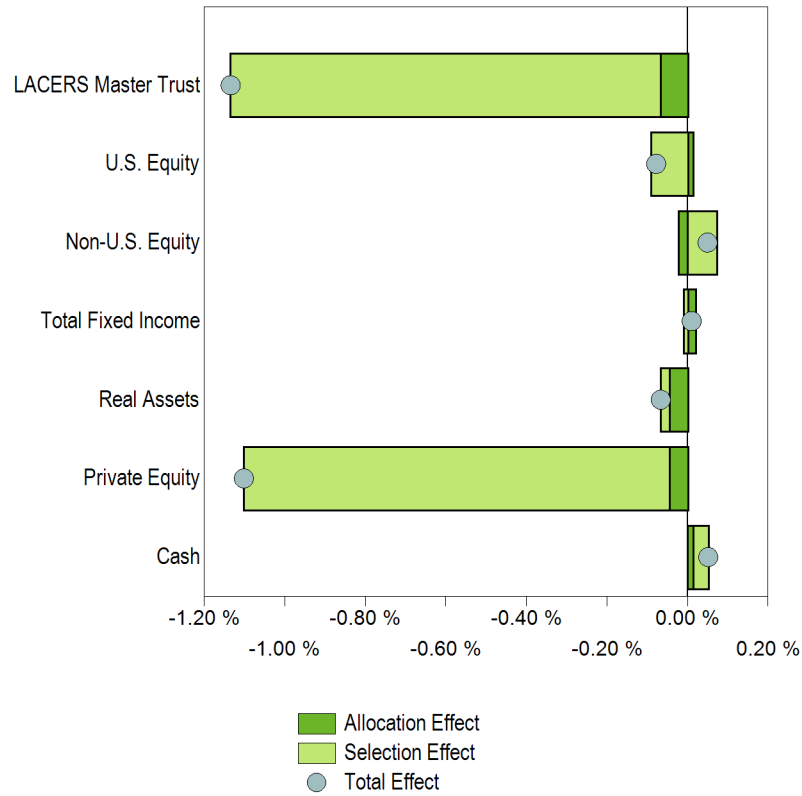




# Los Angeles City Employees' Retirement System

## TOTAL FUND ATTRIBUTION ANALYSIS (NET)

### Attribution Effects FYTD Ending December 31, 2019



Attribution Summary FYTD Ending December 31, 2019							
	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	24.00%	9.99%	10.37%	-0.37%	-0.09%	0.01%	-0.08%
Non-U.S. Equity	29.00%	7.19%	6.96%	0.23%	0.07%	-0.02%	0.05%
Total Fixed Income	24.00%	2.69%	2.73%	-0.04%	-0.01%	0.02%	0.01%
Real Assets	10.00%	2.60%	2.80%	-0.20%	-0.02%	-0.05%	-0.07%
Private Equity	12.00%	2.40%	11.98%	-9.58%	-1.06%	-0.05%	-1.10%
Cash	1.00%	4.86%	0.89%	3.97%	0.04%	0.01%	0.05%
<b>Total</b>	<b>100.00%</b>	<b>5.77%</b>	<b>6.91%</b>	<b>-1.13%</b>	<b>-1.07%</b>	<b>-0.07%</b>	<b>-1.13%</b>

Wtd. = Weighted

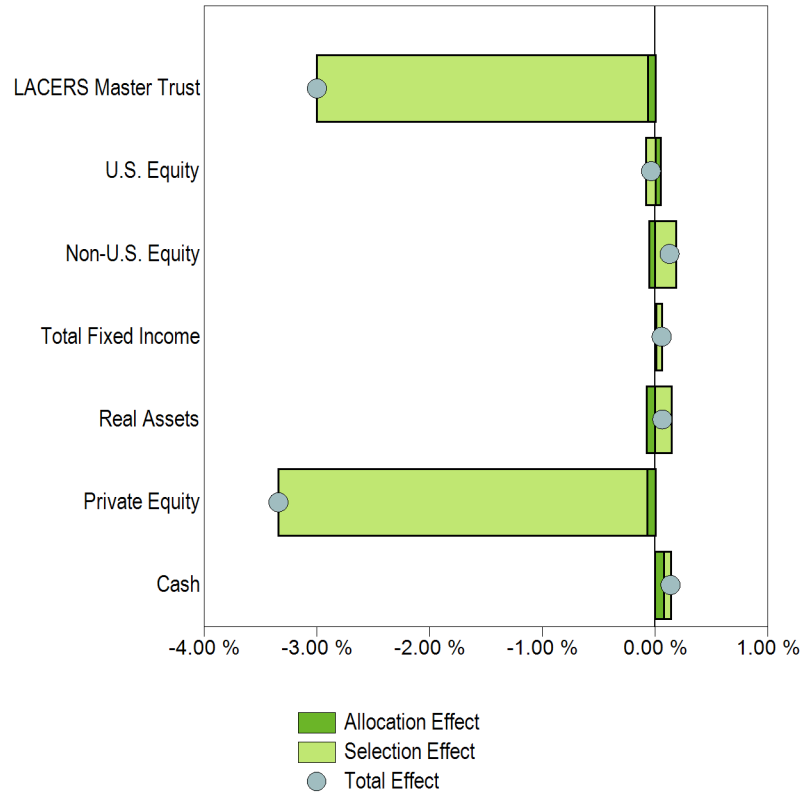
Note: Policy Target Asset Allocation does not reflect the new target asset allocation adopted on April 10, 2018. Implementation of the new asset allocation is currently in progress.



# Los Angeles City Employees' Retirement System

## TOTAL FUND ATTRIBUTION ANALYSIS (NET)

### Attribution Effects 1 Year Ending December 31, 2019



Attribution Summary 1 Year Ending December 31, 2019							
	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	24.00%	30.65%	31.02%	-0.37%	-0.08%	0.04%	-0.04%
Non-U.S. Equity	29.00%	22.11%	21.51%	0.59%	0.18%	-0.05%	0.13%
Total Fixed Income	24.00%	10.13%	9.94%	0.19%	0.04%	0.01%	0.06%
Real Assets	10.00%	8.63%	7.39%	1.24%	0.14%	-0.08%	0.06%
Private Equity	12.00%	6.29%	34.86%	-28.57%	-3.27%	-0.08%	-3.34%
Cash	1.00%	9.20%	2.07%	7.13%	0.06%	0.08%	0.14%
<b>Total</b>	<b>100.00%</b>	<b>17.88%</b>	<b>20.88%</b>	<b>-3.00%</b>	<b>-2.93%</b>	<b>-0.07%</b>	<b>-3.00%</b>

Wtd. = Weighted

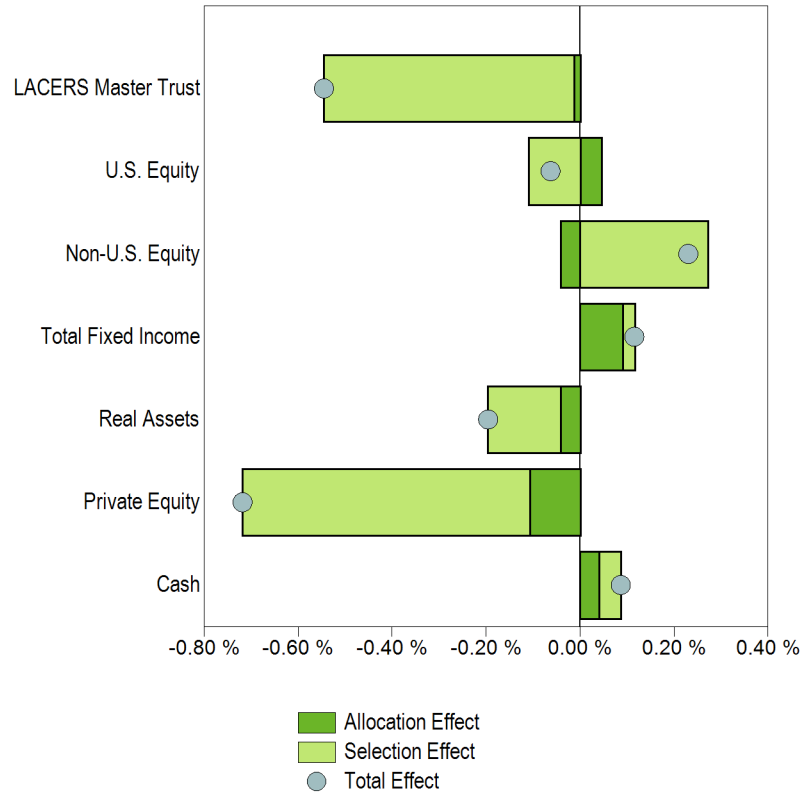
Note: Policy Target Asset Allocation does not reflect the new target asset allocation adopted on April 10, 2018. Implementation of the new asset allocation is currently in progress.



# Los Angeles City Employees' Retirement System

## TOTAL FUND ATTRIBUTION ANALYSIS (NET)

### Attribution Effects 3 Years Ending December 31, 2019



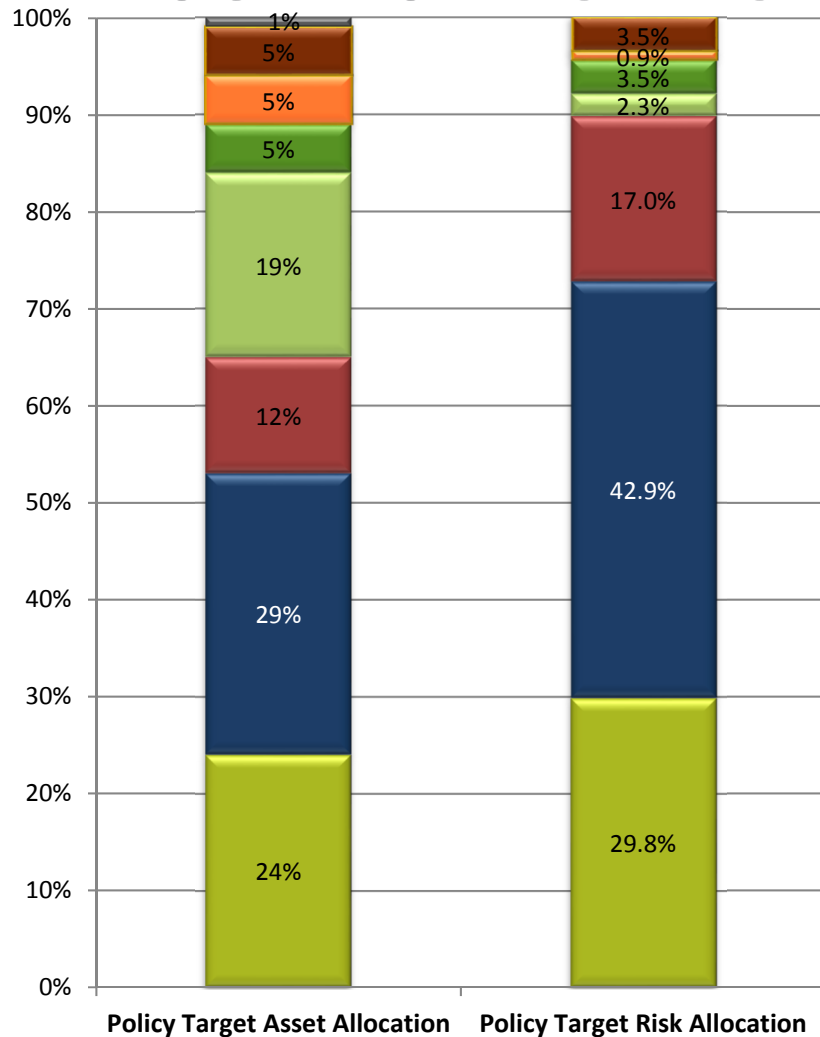
Attribution Summary 3 Years Ending December 31, 2019							
	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	24.00%	14.13%	14.57%	-0.44%	-0.11%	0.05%	-0.06%
Non-U.S. Equity	29.00%	10.67%	9.87%	0.81%	0.27%	-0.04%	0.23%
Total Fixed Income	24.00%	4.67%	4.55%	0.12%	0.02%	0.09%	0.12%
Real Assets	10.00%	5.60%	7.20%	-1.60%	-0.15%	-0.04%	-0.20%
Private Equity	12.00%	12.73%	17.97%	-5.24%	-0.61%	-0.11%	-0.72%
Cash	1.00%	8.33%	1.64%	6.68%	0.05%	0.04%	0.09%
<b>Total</b>	<b>100.00%</b>	<b>9.92%</b>	<b>10.46%</b>	<b>-0.55%</b>	<b>-0.53%</b>	<b>-0.01%</b>	<b>-0.55%</b>

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 DECEMBER 31, 2019

Public Markets Asset Class	Target Risk Budget	Actual 3 Yr Tracking Error
U.S. Equity	0.50%	0.55%
Non-U.S. Equity	1.20%	0.98%
Core Fixed Income	1.00%	0.36%
Credit Opportunities	1.50%	0.80%
Public Real Assets*	3.00%	1.74%

- Current 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 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.

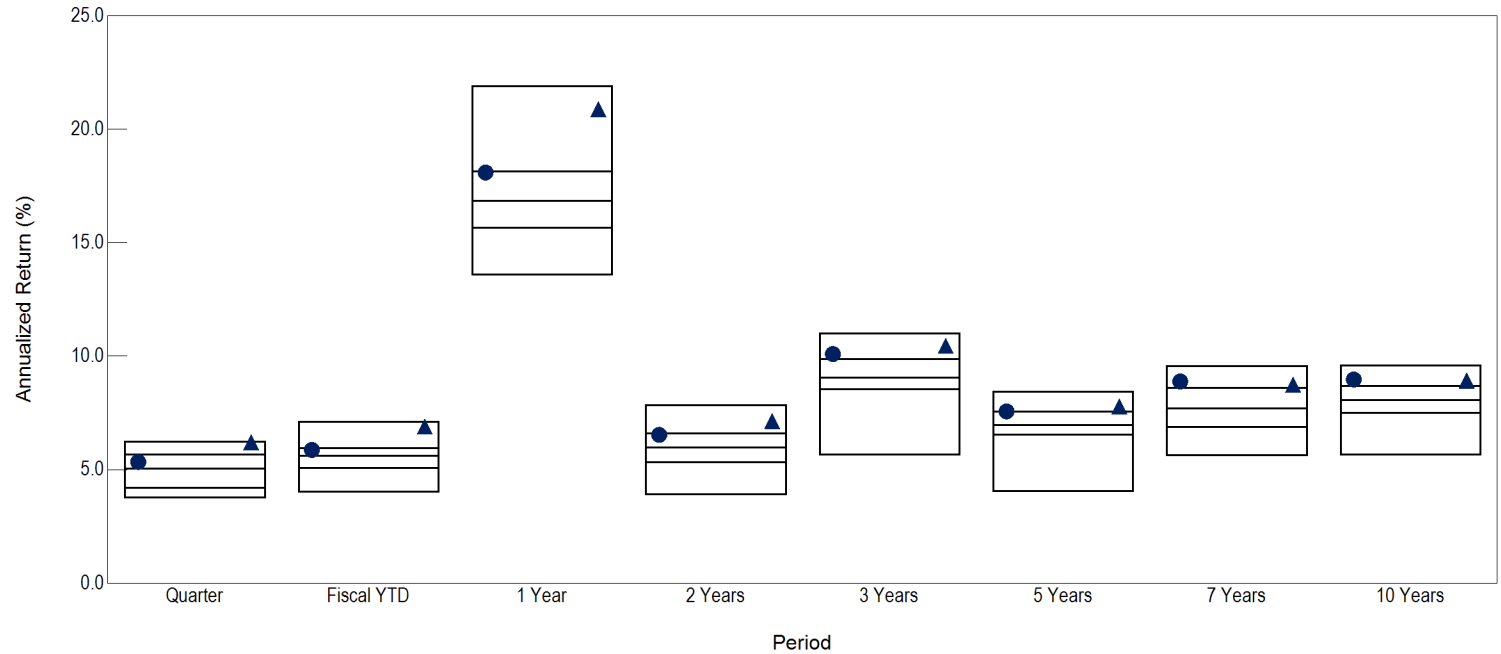
\* The benchmark for the Public Real Assets composite is a custom policy benchmark that is comprised of the target weights of the public real asset components. The public real asset benchmark weights are 60% TIPS, 20% Commodities, 10% REITs, and 10% MLPs.



# Los Angeles City Employees' Retirement System

## TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross

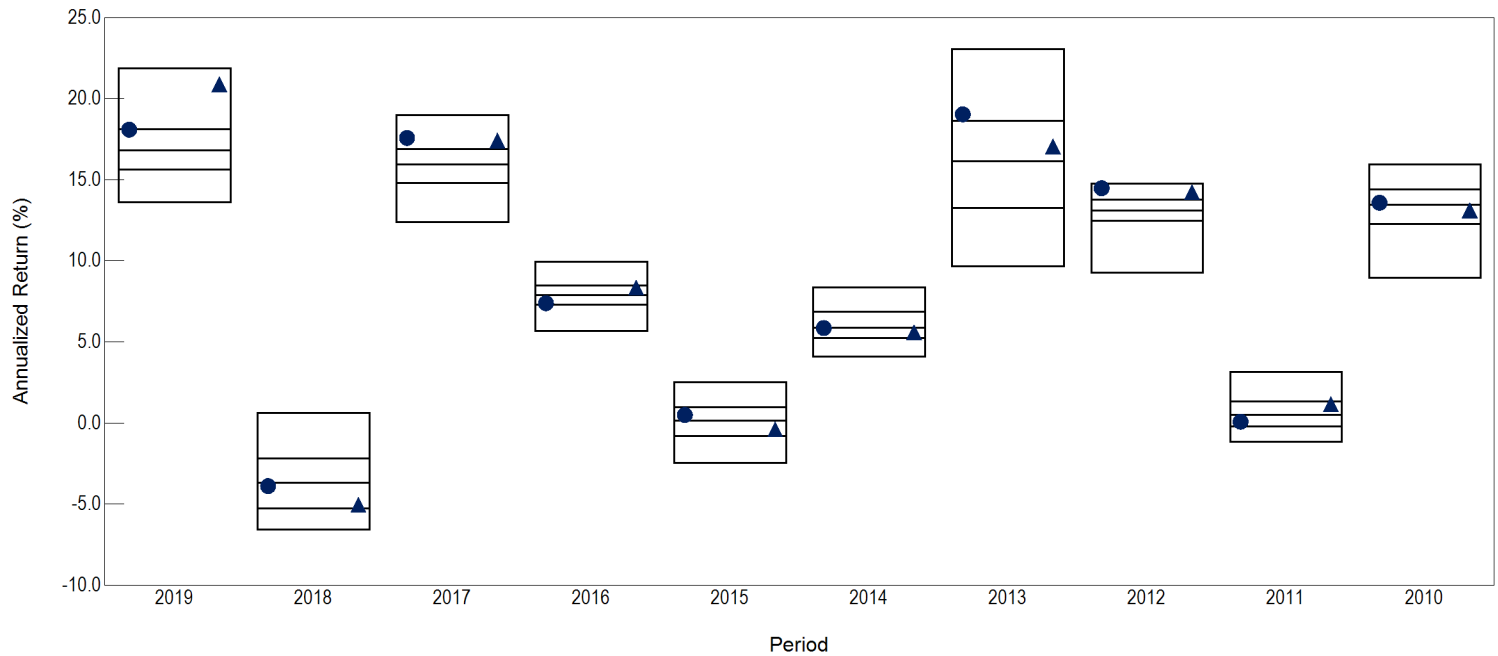


	Return (Rank)															
5th Percentile	6.24	7.10	21.88	7.83	10.99	8.42	9.56	9.60								
25th Percentile	5.69	5.97	18.16	6.61	9.89	7.57	8.62	8.71								
Median	5.08	5.65	16.86	5.99	9.07	6.98	7.73	8.10								
75th Percentile	4.23	5.09	15.68	5.35	8.56	6.56	6.90	7.53								
95th Percentile	3.79	4.05	13.63	3.96	5.69	4.08	5.67	5.69								
# of Portfolios	62	62	62	62	62	61	58	54								
● LACERS Master Trust	5.34	(40)	5.87	(38)	18.08	(28)	6.53	(30)	10.09	(15)	7.56	(27)	8.88	(18)	8.97	(19)
▲ Policy Index	6.20	(6)	6.91	(7)	20.88	(9)	7.14	(17)	10.46	(8)	7.78	(19)	8.74	(23)	8.92	(20)



# TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross



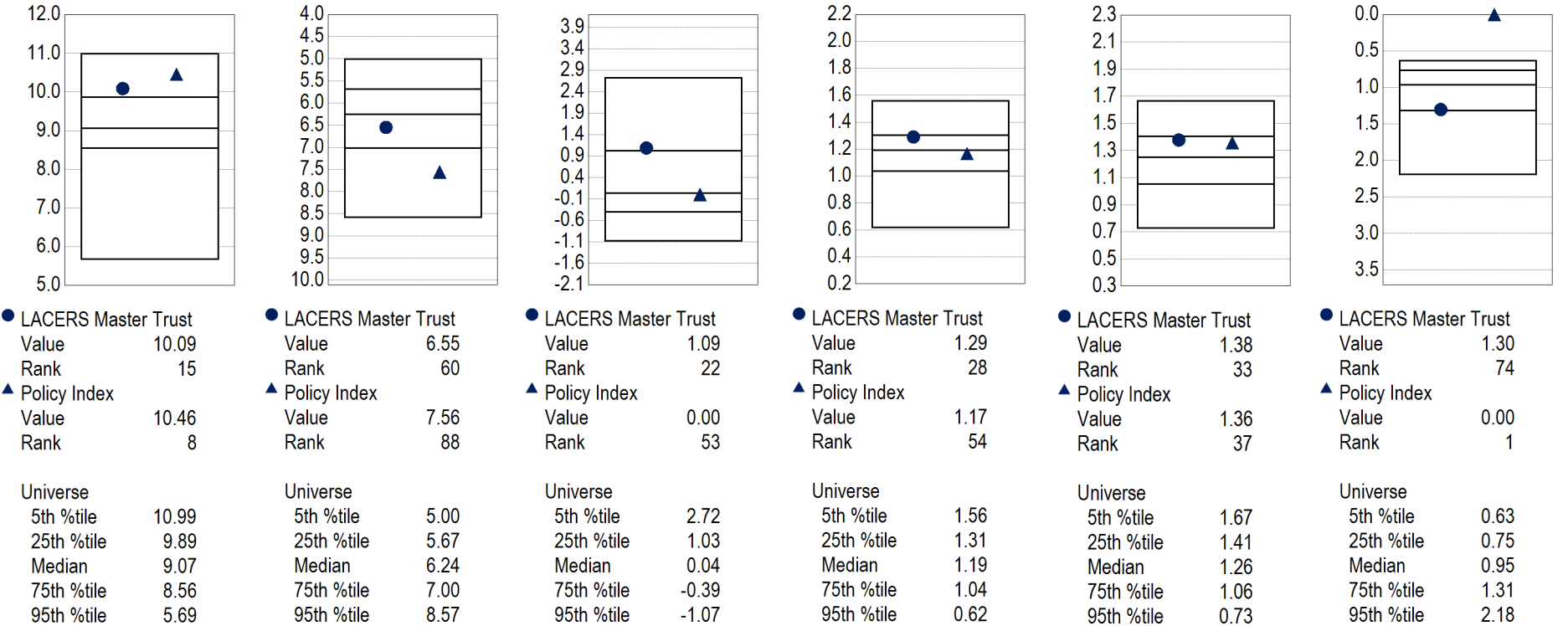
	Return (Rank)																			
5th Percentile	21.88	0.60	19.00	9.95	2.50	8.38	23.05	14.75	3.13	15.93										
25th Percentile	18.16	-2.13	16.94	8.51	1.00	6.90	18.67	13.81	1.37	14.45										
Median	16.86	-3.64	15.99	7.91	0.20	5.93	16.17	13.15	0.53	13.49										
75th Percentile	15.68	-5.22	14.83	7.34	-0.77	5.28	13.30	12.50	-0.16	12.30										
95th Percentile	13.63	-6.53	12.43	5.71	-2.43	4.12	9.70	9.31	-1.14	8.98										
# of Portfolios	62	78	78	78	77	77	76	75	74	71										
● LACERS Master Trust	18.08	(28)	-3.89	(60)	17.57	(15)	7.38	(72)	0.49	(35)	5.85	(53)	19.03	(23)	14.47	(10)	0.08	(68)	13.58	(49)
▲ Policy Index	20.88	(9)	-5.04	(71)	17.41	(16)	8.35	(35)	-0.39	(68)	5.58	(61)	17.06	(35)	14.23	(18)	1.17	(32)	13.11	(55)



# TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

## LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross 3 Years

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



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

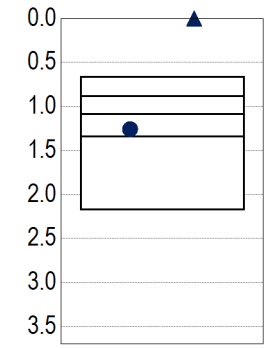
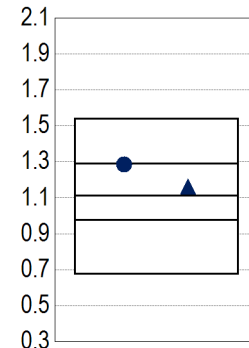
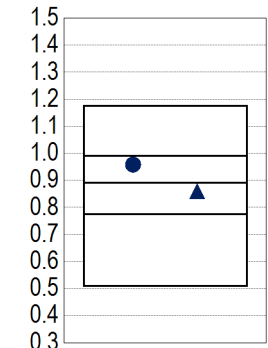
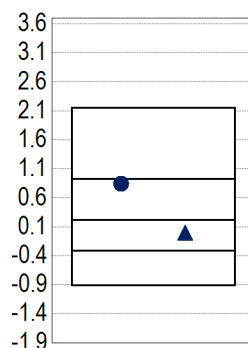
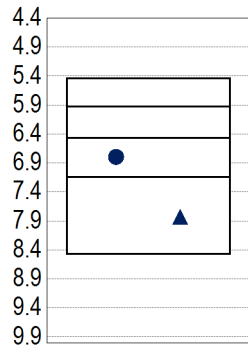
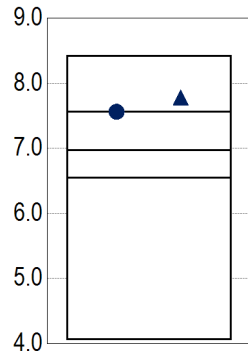




# TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

## LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross 5 Years

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



● LACERS Master Trust  
Value 7.56  
Rank 27  
▲ Policy Index  
Value 7.78  
Rank 19

● LACERS Master Trust  
Value 6.80  
Rank 63  
▲ Policy Index  
Value 7.83  
Rank 89

● LACERS Master Trust  
Value 0.84  
Rank 29  
▲ Policy Index  
Value 0.00  
Rank 59

● LACERS Master Trust  
Value 0.96  
Rank 33  
▲ Policy Index  
Value 0.86  
Rank 61

● LACERS Master Trust  
Value 1.29  
Rank 29  
▲ Policy Index  
Value 1.16  
Rank 45

● LACERS Master Trust  
Value 1.26  
Rank 72  
▲ Policy Index  
Value 0.00  
Rank 1

Universe  
5th %tile 8.42  
25th %tile 7.57  
Median 6.98  
75th %tile 6.56  
95th %tile 4.08

Universe  
5th %tile 5.44  
25th %tile 5.91  
Median 6.46  
75th %tile 7.13  
95th %tile 8.46

Universe  
5th %tile 2.15  
25th %tile 0.93  
Median 0.23  
75th %tile -0.30  
95th %tile -0.90

Universe  
5th %tile 1.17  
25th %tile 0.99  
Median 0.89  
75th %tile 0.78  
95th %tile 0.51

Universe  
5th %tile 1.54  
25th %tile 1.29  
Median 1.12  
75th %tile 0.98  
95th %tile 0.68

Universe  
5th %tile 0.66  
25th %tile 0.88  
Median 1.08  
75th %tile 1.33  
95th %tile 2.17

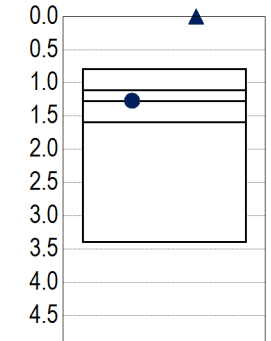
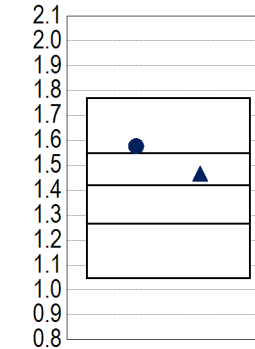
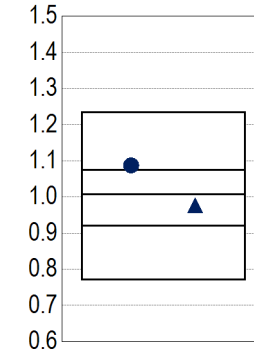
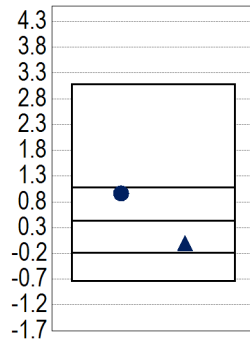
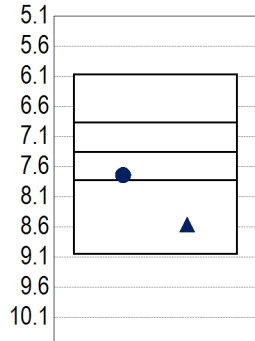
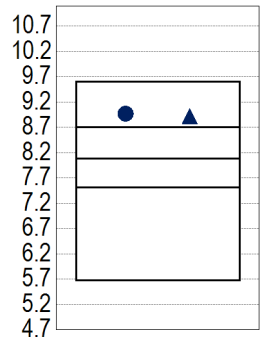
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



# TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

## LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross 10 Years

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



● LACERS Master Trust	Value	8.97
	Rank	19
▲ Policy Index	Value	8.92
	Rank	20

● LACERS Master Trust	Value	7.74
	Rank	74
▲ Policy Index	Value	8.56
	Rank	81

● LACERS Master Trust	Value	0.96
	Rank	33
▲ Policy Index	Value	0.00
	Rank	70

● LACERS Master Trust	Value	1.09
	Rank	24
▲ Policy Index	Value	0.98
	Rank	61

● LACERS Master Trust	Value	1.58
	Rank	21
▲ Policy Index	Value	1.47
	Rank	42

● LACERS Master Trust	Value	1.27
	Rank	50
▲ Policy Index	Value	0.00
	Rank	1

Universe	
5th %tile	9.60
25th %tile	8.71
Median	8.10
75th %tile	7.53
95th %tile	5.69

Universe	
5th %tile	6.06
25th %tile	6.85
Median	7.34
75th %tile	7.81
95th %tile	9.03

Universe	
5th %tile	3.09
25th %tile	1.09
Median	0.45
75th %tile	-0.17
95th %tile	-0.73

Universe	
5th %tile	1.23
25th %tile	1.08
Median	1.01
75th %tile	0.92
95th %tile	0.77

Universe	
5th %tile	1.77
25th %tile	1.55
Median	1.42
75th %tile	1.27
95th %tile	1.05

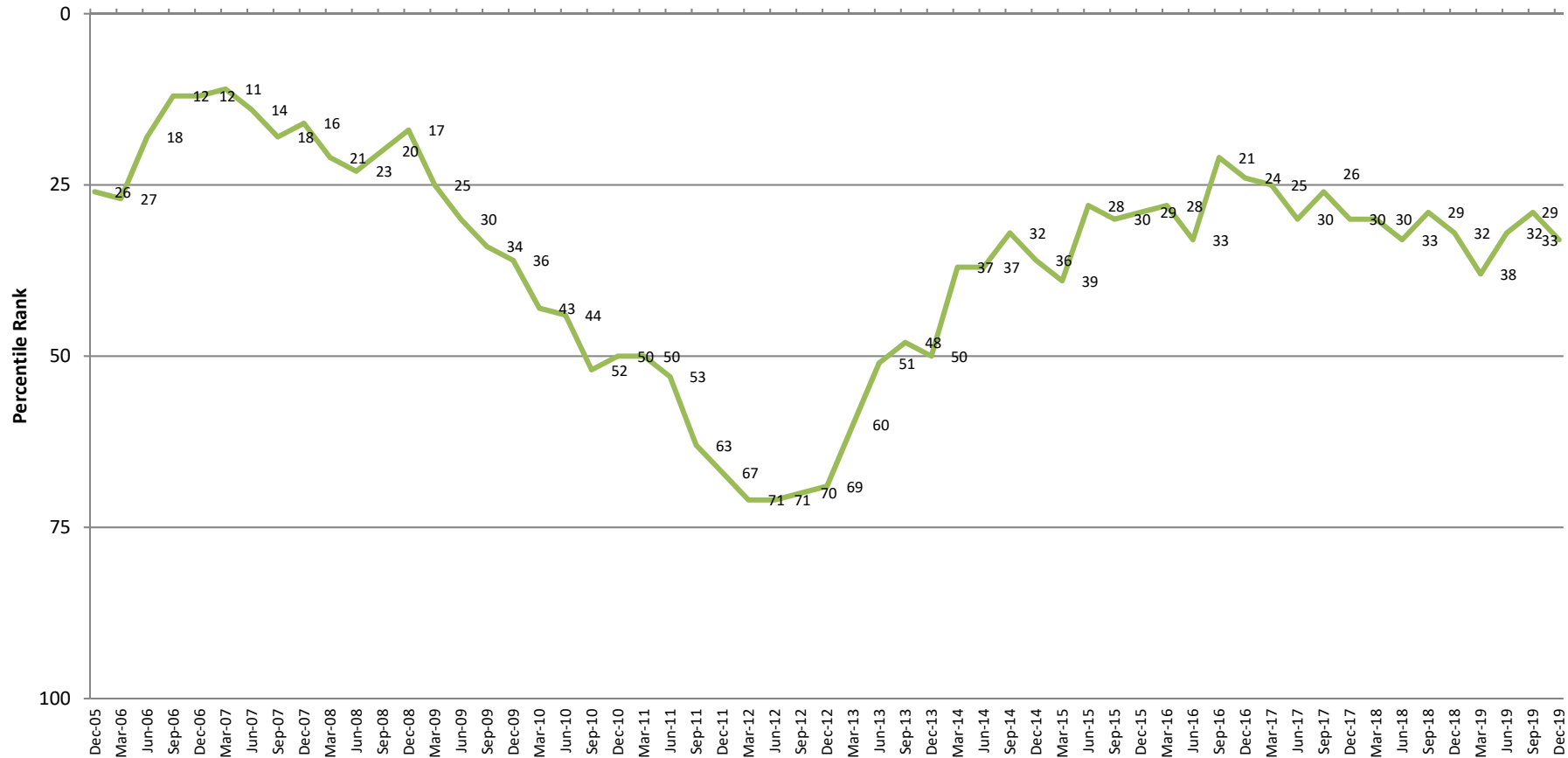
Universe	
5th %tile	0.80
25th %tile	1.10
Median	1.27
75th %tile	1.59
95th %tile	3.38

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

5 Yr Sharpe Ratio Percentile Rank  
LACERS Master Trust vs InvMetrics Public Funds \$1B-\$50B Gross of Fees

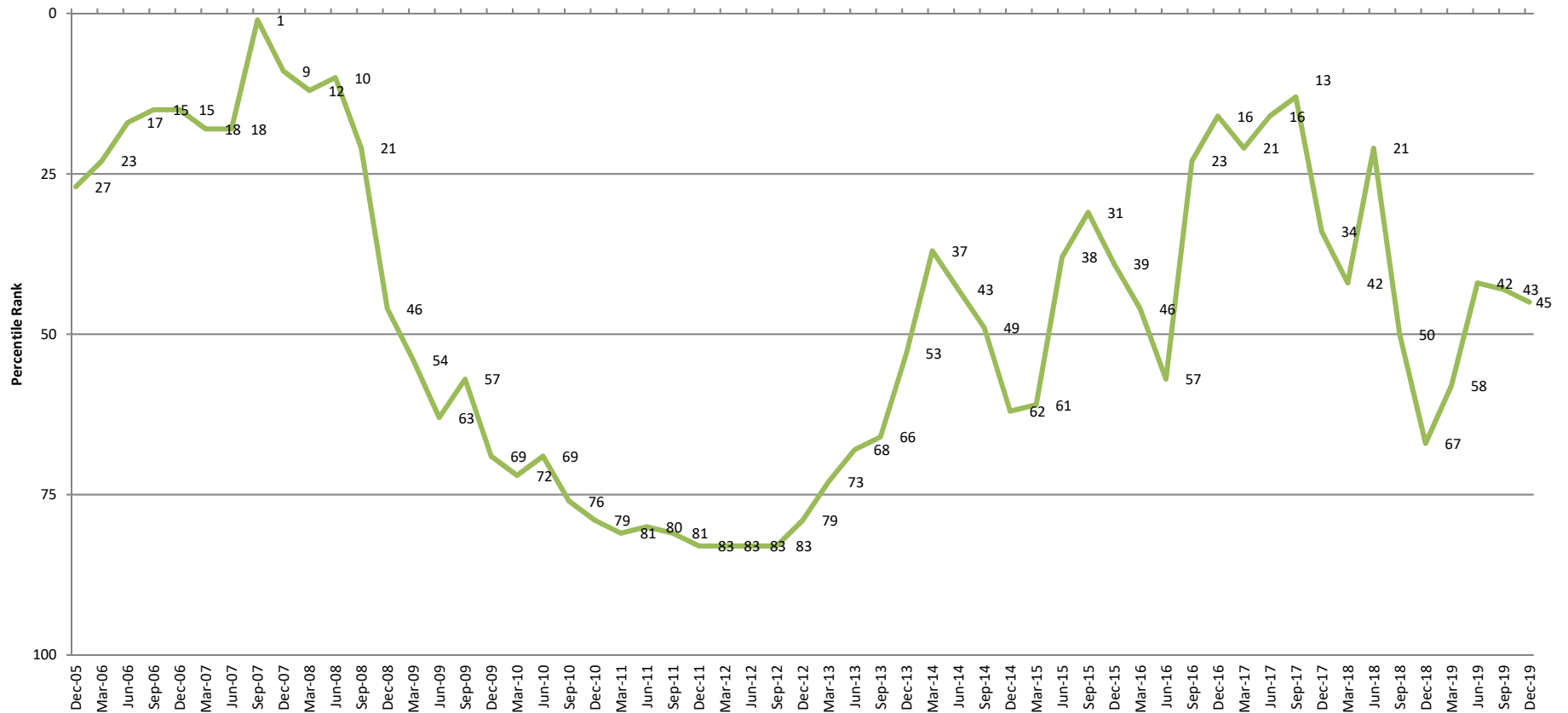


- Total Plan ranks in the 33<sup>rd</sup> percentile versus other large public plans on a Sharpe Ratio basis.
  - Overweight to non-U.S. equities with contributed positively to Sharpe Ratio rank.
  - Use of passive investment strategies within U.S. Equity has contributed to the overall Sharpe Ratio rank (higher than median).
  - Core Fixed Income contributed negatively to Sharpe Ratio rank.



# HISTORICAL RISK ADJUSTED RETURN UNIVERSE COMPARISON

5 Yr Sharpe Ratio Percentile Rank  
LACERS Master Trust vs InvestorForce Public Funds \$5B-\$50B Gross of Fees



- Total Plan ranks in the 45<sup>th</sup> percentile versus other large public plans on a Sharpe Ratio basis.
  - Overweight to non-U.S. equities with contributed positively to Sharpe Ratio rank.
  - Use of passive investment strategies within U.S. Equity has contributed to the overall Sharpe Ratio rank (higher than median).
  - Core Fixed Income contributed negatively to Sharpe Ratio rank.



# U.S. EQUITY

NEPC, LLC

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## Los Angeles City Employees' Retirement System

# U.S. EQUITY (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>U.S. Equity</b>	<b>4,671,501,921</b>	<b>100.00</b>	<b>9.01</b>	<b>10.02</b>	<b>30.73</b>	<b>14.20</b>	<b>11.20</b>	<b>13.41</b>	<b>10.69</b>	<b>Oct-94</b>
U.S. Equity Blend			<u>9.10</u>	<u>10.37</u>	<u>31.02</u>	<u>14.57</u>	<u>11.24</u>	<u>13.42</u>	<u>9.65</u>	Oct-94
Over/Under			-0.09	-0.35	-0.29	-0.37	-0.04	-0.01	1.04	
Rhumblin Advisors Russell 2000 <sup>1</sup>	281,400,483	6.02	9.90	7.29	25.49	8.63			7.63	Apr-15
Russell 2000			<u>9.94</u>	<u>7.30</u>	<u>25.52</u>	<u>8.59</u>			<u>7.72</u>	Apr-15
Over/Under			-0.04	-0.01	-0.03	0.04			-0.09	
Rhumblin Advisors Russell 2000 Growth <sup>1</sup>	149,594,680	3.20	11.36	6.74	28.44	12.50	9.28		9.28	Jan-15
Russell 2000 Growth			<u>11.39</u>	<u>6.75</u>	<u>28.48</u>	<u>12.49</u>	<u>9.34</u>		<u>9.34</u>	Jan-15
Over/Under			-0.03	-0.01	-0.04	0.01	-0.06		-0.06	
Rhumblin Advisors Russell 2000 Value <sup>1</sup>	229,976,111	4.92	8.45	7.57	22.03	4.71			13.19	Mar-16
Russell 2000 Value			<u>8.49</u>	<u>7.87</u>	<u>22.39</u>	<u>4.77</u>			<u>13.29</u>	Mar-16
Over/Under			-0.04	-0.30	-0.36	-0.06			-0.10	
EAM Investors	142,393,066	3.05	10.52	4.95	33.28	17.83			14.15	Sep-15
Russell 2000 Growth			<u>11.39</u>	<u>6.75</u>	<u>28.48</u>	<u>12.49</u>			<u>12.55</u>	Sep-15
Over/Under			-0.87	-1.80	4.80	5.34			1.60	
Principal Global Investors	211,245,061	4.52	6.43	9.84	44.47	19.96	14.59		15.16	Aug-14
Russell MidCap			<u>7.06</u>	<u>7.58</u>	<u>30.54</u>	<u>12.05</u>	<u>9.33</u>		<u>10.01</u>	Aug-14
Over/Under			-0.63	2.26	13.93	7.91	5.26		5.15	
Rhumblin Advisors S&P 500	3,656,886,128	78.28	8.98	10.68	31.14	15.18	11.62	13.58	10.00	Feb-93
S&P 500			<u>9.07</u>	<u>10.92</u>	<u>31.49</u>	<u>15.27</u>	<u>11.70</u>	<u>13.56</u>	<u>9.84</u>	Feb-93
Over/Under			-0.09	-0.24	-0.35	-0.09	-0.08	0.02	0.16	
Rhumblin Advisors Russell 1000 Growth Escrow Account	78 6,315	0.00 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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>U.S. Equity</b>	<b>4,671,501,921</b>	<b>100.00</b>	<b>9.00</b>	<b>34</b>	<b>9.99</b>	<b>37</b>	<b>30.65</b>	<b>26</b>	<b>14.13</b>	<b>40</b>	<b>11.11</b>	<b>29</b>	<b>13.25</b>	<b>33</b>		<b>Oct-94</b>
<i>U.S. Equity Blend</i>			<u>9.10</u>	23	<u>10.37</u>	12	<u>31.02</u>	20	<u>14.57</u>	21	<u>11.24</u>	19	<u>13.42</u>	24		Oct-94
<i>Over/Under</i>			-0.10		-0.38		-0.37		-0.44		-0.13		-0.17			
<i>InvMetrics Public DB &gt; \$1 Billion US Equity Net Median</i>			8.78		9.37		29.90		13.78		10.46		12.81			Oct-94
Rhumblin Advisors Russell 2000 <sup>1</sup>	281,400,483	6.02	9.90	25	7.29	41	25.48	45	8.62	46					7.63	Apr-15
<i>Russell 2000</i>			<u>9.94</u>	25	<u>7.30</u>	41	<u>25.52</u>	45	<u>8.59</u>	46					<u>7.72</u>	Apr-15
<i>Over/Under</i>			-0.04		-0.01		-0.04		0.03						-0.09	
<i>eV US Small Cap Equity Net Median</i>			8.26		6.50		24.68		7.78						7.78	Apr-15
Rhumblin Advisors Russell 2000 Growth <sup>1</sup>	149,594,680	3.20	11.35	26	6.74	25	28.43	49	12.49	73	9.27	75			9.27	Jan-15
<i>Russell 2000 Growth</i>			<u>11.39</u>	26	<u>6.75</u>	25	<u>28.48</u>	49	<u>12.49</u>	73	<u>9.34</u>	75			<u>9.34</u>	Jan-15
<i>Over/Under</i>			-0.04		-0.01		-0.05		0.00		-0.07				-0.07	
<i>eV US Small Cap Growth Equity Net Median</i>			9.26		4.51		28.09		15.46		10.87				10.87	Jan-15
Rhumblin Advisors Russell 2000 Value <sup>1</sup>	229,976,111	4.92	8.45	33	7.57	49	22.02	64	4.70	48					13.18	Mar-16
<i>Russell 2000 Value</i>			<u>8.49</u>	33	<u>7.87</u>	41	<u>22.39</u>	60	<u>4.77</u>	48					<u>13.29</u>	Mar-16
<i>Over/Under</i>			-0.04		-0.30		-0.37		-0.07						-0.11	
<i>eV US Small Cap Value Equity Net Median</i>			7.80		7.48		23.79		4.63						11.96	Mar-16
EAM Investors	142,393,066	3.05	10.33	19	4.60	74	32.39	15	16.99	14					13.35	Sep-15
<i>Russell 2000 Growth</i>			<u>11.39</u>	12	<u>6.75</u>	47	<u>28.48</u>	26	<u>12.49</u>	26					<u>12.55</u>	Sep-15
<i>Over/Under</i>			-1.06		-2.15		3.91		4.50						0.80	
<i>eV US Small Cap Equity Net Median</i>			8.26		6.50		24.68		7.78						11.56	Sep-15

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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Principal Global Investors <sup>1</sup>	211,245,061	4.52	6.33	67	9.65	18	43.96	2	19.51	11	14.16	5			14.75	Aug-14
<i>Russell MidCap</i>			<u>7.06</u>	51	<u>7.58</u>	45	<u>30.54</u>	44	<u>12.05</u>	48	<u>9.33</u>	49			<u>10.01</u>	Aug-14
Over/Under			-0.73		2.07		13.42		7.46		4.83				4.74	
<i>eV US Mid Cap Equity Net Median</i>			7.17		7.22		29.61		11.66		9.23				9.63	Aug-14
Rhumblin Advisors S&P 500	3,656,886,128	78.28	8.98	37	10.68	27	31.14	37	15.17	36	11.61	29	13.57	25		Feb-93
<i>S&amp;P 500</i>			<u>9.07</u>	37	<u>10.92</u>	23	<u>31.49</u>	35	<u>15.27</u>	36	<u>11.70</u>	28	<u>13.56</u>	25		Feb-93
Over/Under			-0.09		-0.24		-0.35		-0.10		-0.09		0.01			
<i>eV US Large Cap Equity Net Median</i>			8.27		9.61		28.89		13.30		10.10		12.57			Feb-93
Rhumblin Advisors Russell 1000 Growth	78	0.00														
Escrow Account	6,315	0.00														

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

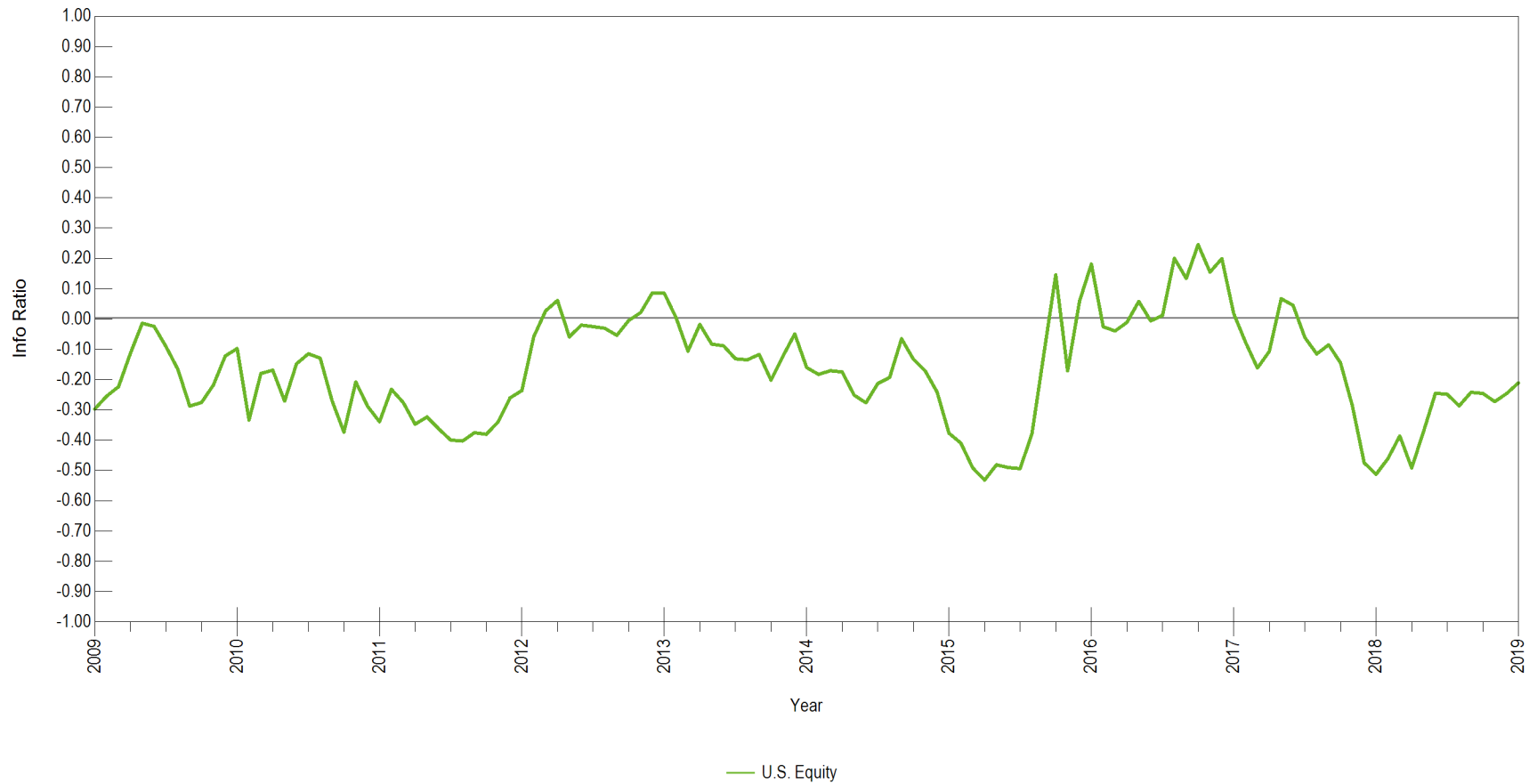
eA = eVestment Alliance





# 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			
Principal Global Investors	Jul-14	Mid Cap	* *	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓	616.9	Performance compliant with LACERS' Manager Monitoring Policy	
EAM Investors	Sep-15	Small Cap Growth	* ✓	✓ ✓	✓ ✓	✓ ✓	N/A N/A	N/A N/A	✓	✓	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-15	R2000	* ✓	* ✓	✓ ✓	✓ ✓	N/A N/A	N/A N/A	*	*	14.6	Performance compliant with LACERS' Manager Monitoring Policy	
Rhumblin (Passive)	Jun-15	R2000 Growth	* ✓	* ✓	= *	* *	* *	* *	*	*	7.7	Performance compliant with LACERS' Manager Monitoring Policy	
Rhumblin (Passive)	Feb-16	R2000 Value	* ✓	* *	* ✓	* ✓	N/A N/A	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

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## Los Angeles City Employees' Retirement System

# NON-U.S. EQUITY (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Non-U.S. Equity</b>	<b>5,770,746,991</b>	<b>100.00</b>	<b>9.55</b>	<b>7.39</b>	<b>22.55</b>	<b>11.08</b>	<b>6.80</b>	<b>6.25</b>	<b>5.42</b>	<b>Nov-94</b>
MSCI ACWI ex USA			<u>8.92</u>	<u>6.96</u>	<u>21.51</u>	<u>9.87</u>	<u>5.51</u>	<u>4.97</u>	<u>5.23</u>	Nov-94
Over/Under			0.63	0.43	1.04	1.21	1.29	1.28	0.19	
<b>Developed ex-U.S.</b>	<b>4,363,730,372</b>	<b>75.62</b>	<b>8.91</b>	<b>7.69</b>	<b>24.12</b>	<b>10.90</b>	<b>6.78</b>		<b>8.80</b>	<b>Jun-12</b>
MSCI EAFE			<u>8.17</u>	<u>7.01</u>	<u>22.01</u>	<u>9.56</u>	<u>5.67</u>		<u>7.77</u>	Jun-12
Over/Under			0.74	0.68	2.11	1.34	1.11		1.03	
AQR Capital (On Watch)	298,055,931	5.16	12.87	12.20	23.00	10.14	8.67		5.92	Feb-14
MSCI EAFE Small Cap			<u>11.52</u>	<u>11.03</u>	<u>24.96</u>	<u>10.92</u>	<u>8.85</u>		<u>5.91</u>	Feb-14
Over/Under			1.35	1.17	-1.96	-0.78	-0.18		0.01	
Barrow Hanley (On Watch)	577,704,244	10.01	10.31	10.59	26.76	8.88	4.70		3.95	Nov-13
MSCI EAFE Value			<u>7.82</u>	<u>5.94</u>	<u>16.09</u>	<u>6.31</u>	<u>3.54</u>		<u>2.19</u>	Nov-13
Over/Under			2.49	4.65	10.67	2.57	1.16		1.76	
Lazard Asset Management <sup>1</sup>	636,252,465	11.03	7.24	4.90	21.17	11.65	6.07		5.42	Nov-13
MSCI EAFE			<u>8.17</u>	<u>7.01</u>	<u>22.01</u>	<u>9.56</u>	<u>5.67</u>		<u>4.03</u>	Nov-13
Over/Under			-0.93	-2.11	-0.84	2.09	0.40		1.39	
MFS Institutional Advisors	675,065,175	11.70	9.32	7.89	28.22	15.90	10.32		7.91	Oct-13
MSCI World ex USA Growth NR USD			<u>8.09</u>	<u>7.60</u>	<u>27.92</u>	<u>12.34</u>	<u>7.18</u>		<u>5.62</u>	Oct-13
Over/Under			1.23	0.29	0.30	3.56	3.14		2.29	
Oberweis Asset Mgmt <sup>1</sup>	253,069,813	4.39	8.61	4.34	26.60	11.59	9.23		7.45	Jan-14
MSCI EAFE Small Cap			<u>11.52</u>	<u>11.03</u>	<u>24.96</u>	<u>10.92</u>	<u>8.85</u>		<u>6.79</u>	Jan-14
Over/Under			-2.91	-6.69	1.64	0.67	0.38		0.66	
SSgA World ex US IMI	1,923,582,745	33.33	8.36	7.56	23.39	9.95	6.24	6.06	5.89	Aug-93
MSCI World ex USA IMI NR USD <sup>2</sup>			<u>8.36</u>	<u>7.45</u>	<u>22.91</u>	<u>9.49</u>	<u>5.79</u>	<u>5.66</u>	<u>5.62</u>	Aug-93
Over/Under			0.00	0.11	0.48	0.46	0.45	0.40	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 (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Markets</b>	<b>1,407,016,618</b>	<b>24.38</b>	<b>11.60</b>	<b>6.44</b>	<b>17.93</b>	<b>11.49</b>	<b>5.68</b>		<b>4.71</b>	<b>Jun-12</b>
<i>MSCI Emerging Markets</i>			<u>11.84</u>	<u>7.09</u>	<u>18.44</u>	<u>11.57</u>	<u>5.61</u>		<u>4.82</u>	<i>Jun-12</i>
Over/Under			-0.24	-0.65	-0.51	-0.08	0.07		-0.11	
Axiom Emerging Markets (On Watch)	479,513,849	8.31	12.42	10.14	25.55	13.80	7.25		5.95	Mar-14
<i>MSCI Emerging Markets Growth NR USD</i>			<u>13.68</u>	<u>11.37</u>	<u>25.10</u>	<u>14.50</u>	<u>7.45</u>		<u>6.39</u>	<i>Mar-14</i>
Over/Under			-1.26	-1.23	0.45	-0.70	-0.20		-0.44	
DFA Emerging Markets <sup>1</sup>	456,711,564	7.91	10.63	3.16	10.70	9.07	4.53		1.58	Aug-14
<i>MSCI Emerging Markets Value NR USD</i>			<u>9.94</u>	<u>2.82</u>	<u>11.96</u>	<u>8.57</u>	<u>3.67</u>		<u>0.95</u>	<i>Aug-14</i>
Over/Under			0.69	0.34	-1.26	0.50	0.86		0.63	
QMA Emerging Markets <sup>1</sup>	470,791,205	8.16	11.71	6.08	18.10	11.49	5.32		4.85	May-14
<i>MSCI Emerging Markets</i>			<u>11.84</u>	<u>7.09</u>	<u>18.44</u>	<u>11.57</u>	<u>5.61</u>		<u>4.54</u>	<i>May-14</i>
Over/Under			-0.13	-1.01	-0.34	-0.08	-0.29		0.31	

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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Non-U.S. Equity</b>	<b>5,770,746,991</b>	<b>100.00</b>	<b>9.46</b>	<b>70</b>	<b>7.19</b>	<b>85</b>	<b>22.11</b>	<b>61</b>	<b>10.67</b>	<b>31</b>	<b>6.42</b>	<b>49</b>	<b>5.89</b>	<b>40</b>		<b>Nov-94</b>
MSCI ACWI ex USA			8.92	87	6.96	89	21.51	64	9.87	58	5.51	79	4.97	95		Nov-94
Over/Under			0.54		0.23		0.60		0.80		0.91		0.92			
<b>Developed ex-U.S.</b>	<b>4,363,730,372</b>	<b>75.62</b>	<b>8.83</b>	<b>71</b>	<b>7.53</b>	<b>71</b>	<b>23.73</b>	<b>53</b>	<b>10.55</b>	<b>51</b>	<b>6.45</b>	<b>69</b>			<b>8.50</b>	<b>Jun-12</b>
MSCI EAFE			8.17	95	7.01	91	22.01	83	9.56	84	5.67	84			7.77	Jun-12
Over/Under			0.66		0.52		1.72		0.99		0.78				0.73	
InvMetrics Public DB > \$1 Billion Dev Mkt ex-US Eq Net Median			9.36		8.16		23.91		10.55		6.56				8.65	Jun-12
AQR Capital <sup>1</sup> (On Watch)	298,055,931	5.16	12.67	32	11.77	18	22.06	69	9.30	63	7.86	63			5.19	Feb-14
MSCI EAFE Small Cap			11.52	61	11.03	25	24.96	39	10.92	47	8.85	42			5.91	Feb-14
Over/Under			1.15		0.74		-2.90		-1.62		-0.99				-0.72	
eV EAFE Small Cap Equity Net Median			12.10		9.81		23.76		10.62		8.38				5.75	Feb-14
Barrow Hanley <sup>1</sup> (On Watch)	577,704,244	10.01	10.18	30	10.31	12	26.12	10	8.33	36	4.17	72			3.44	Nov-13
MSCI EAFE Value			7.82	75	5.94	87	16.09	86	6.31	71	3.54	83			2.19	Nov-13
Over/Under			2.36		4.37		10.03		2.02		0.63				1.25	
eV EAFE Value Equity Net Median			9.04		7.58		20.15		7.53		5.02				3.48	Nov-13
Lazard Asset Management <sup>1</sup>	636,252,465	11.03	7.11	88	4.63	94	20.56	65	11.03	31	5.51	63			4.87	Nov-13
MSCI EAFE			8.17	69	7.01	63	22.01	51	9.56	50	5.67	59			4.03	Nov-13
Over/Under			-1.06		-2.38		-1.45		1.47		-0.16				0.84	
eV All EAFE Equity Net Median			9.03		7.57		22.07		9.53		6.22				4.71	Nov-13
MFS Institutional Advisors	675,065,175	11.70	9.21	53	7.67	78	27.69	64	15.36	32	9.78	1			7.39	Oct-13
MSCI World ex USA Growth NR USD			8.09	96	7.60	79	27.92	64	12.34	76	7.18	69			5.62	Oct-13
Over/Under			1.12		0.07		-0.23		3.02		2.60				1.77	
eV EAFE All Cap Growth Net Median			9.27		8.48		29.56		14.14		8.32				6.27	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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Oberweis Asset Mgmt <sup>1</sup>	253,069,813	4.39	8.41	97	3.98	98	25.64	36	10.66	50	8.31	52			6.56	Jan-14
MSCI EAFE Small Cap			<u>11.52</u>	61	<u>11.03</u>	25	<u>24.96</u>	39	<u>10.92</u>	47	<u>8.85</u>	42			<u>6.79</u>	Jan-14
Over/Under			<b>-3.11</b>		<b>-7.05</b>		0.68		<b>-0.26</b>		<b>-0.54</b>				<b>-0.23</b>	
eV EAFE Small Cap Equity Net Median			12.10		9.81		23.76		10.62		8.38				6.52	Jan-14
SSgA World ex US IMI	1,923,582,745	33.33	8.35	65	7.55	49	23.36	40	9.93	47	6.21	54	6.04	72	5.89	Aug-93
MSCI World ex USA IMI NR USD <sup>2</sup>			<u>8.36</u>	65	<u>7.45</u>	49	<u>22.91</u>	45	<u>9.49</u>	52	<u>5.79</u>	62	<u>5.66</u>	80	<u>5.62</u>	Aug-93
Over/Under			<b>-0.01</b>		0.10		0.45		0.44		0.42		0.38		0.27	
eV EAFE Core Equity Net Median			9.06		7.37		22.15		9.56		6.35		7.06		7.27	Aug-93
<b>Emerging Markets</b>	<b>1,407,016,618</b>	<b>24.38</b>	<b>11.46</b>	<b>26</b>	<b>6.16</b>	<b>36</b>	<b>17.31</b>	<b>26</b>	<b>10.91</b>	<b>27</b>	<b>5.11</b>	<b>17</b>			<b>4.08</b>	<b>Jun-12</b>
MSCI Emerging Markets			<u>11.84</u>	10	<u>7.09</u>	15	<u>18.44</u>	18	<u>11.57</u>	17	<u>5.61</u>	12			<u>4.82</u>	Jun-12
Over/Under			<b>-0.38</b>		<b>-0.93</b>		<b>-1.13</b>		<b>-0.66</b>		<b>-0.50</b>				<b>-0.74</b>	
InvMetrics Public DB > \$1 Billion Emg Mkt Eq Net Median			10.33		5.65		16.11		9.55		4.17				3.62	Jun-12
Axiom Emerging Markets (On Watch)	479,513,849	8.31	12.24	27	9.77	16	24.70	21	13.02	27	6.50	32			5.26	Mar-14
MSCI Emerging Markets Growth NR USD			<u>13.68</u>	9	<u>11.37</u>	5	<u>25.10</u>	20	<u>14.50</u>	14	<u>7.45</u>	19			<u>6.39</u>	Mar-14
Over/Under			<b>-1.44</b>		<b>-1.60</b>		<b>-0.40</b>		<b>-1.48</b>		<b>-0.95</b>				<b>-1.13</b>	
eV Emg Mkts Equity Net Median			11.37		7.00		19.28		10.66		5.45				4.71	Mar-14
DFA Emerging Markets <sup>1</sup>	456,711,564	7.91	10.50	67	2.89	89	10.13	95	8.53	82	4.00	80			1.09	Aug-14
MSCI Emerging Markets Value NR USD			<u>9.94</u>	73	<u>2.82</u>	90	<u>11.96</u>	91	<u>8.57</u>	82	<u>3.67</u>	84			<u>0.95</u>	Aug-14
Over/Under			0.56		0.07		<b>-1.83</b>		<b>-0.04</b>		0.33				0.14	
eV Emg Mkts Equity Net Median			11.37		7.00		19.28		10.66		5.45				3.35	Aug-14
QMA Emerging Markets <sup>1</sup> (On Watch)	470,791,205	8.16	11.61	44	5.88	65	17.66	64	11.05	47	4.87	64			4.41	May-14
MSCI Emerging Markets			<u>11.84</u>	36	<u>7.09</u>	49	<u>18.44</u>	57	<u>11.57</u>	43	<u>5.61</u>	46			<u>4.54</u>	May-14
Over/Under			<b>-0.23</b>		<b>-1.21</b>		<b>-0.78</b>		<b>-0.52</b>		<b>-0.74</b>				<b>-0.13</b>	
eV Emg Mkts Equity Net Median			11.37		7.00		19.28		10.66		5.45				4.72	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 December 31, 2019		
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Europe</b>		
Austria	0.2%	0.1%
Belgium	0.6%	0.7%
Croatia**	0.0%	0.0%
Czech Republic*	0.0%	0.0%
Denmark	1.3%	1.2%
Estonia**	0.0%	0.0%
Finland	1.1%	0.6%
France	9.5%	7.5%
Germany	5.9%	5.7%
Greece*	0.2%	0.1%
Hungary*	0.1%	0.1%
Ireland	0.5%	0.4%
Italy	1.6%	1.5%
Lithuania**	0.0%	0.0%
Luxembourg	0.0%	0.0%
Netherlands	2.2%	2.6%
Norway	0.8%	0.4%
Poland*	0.2%	0.2%
Portugal	0.1%	0.1%
Romania**	0.0%	0.0%
Russia*	0.9%	1.1%
Serbia**	0.0%	0.0%
Slovenia**	0.0%	0.0%
Spain	1.1%	1.9%
Sweden	1.6%	1.8%
Switzerland	6.0%	6.2%
United Kingdom	10.4%	10.9%
<b>Total-Europe</b>	<b>44.2%</b>	<b>43.1%</b>

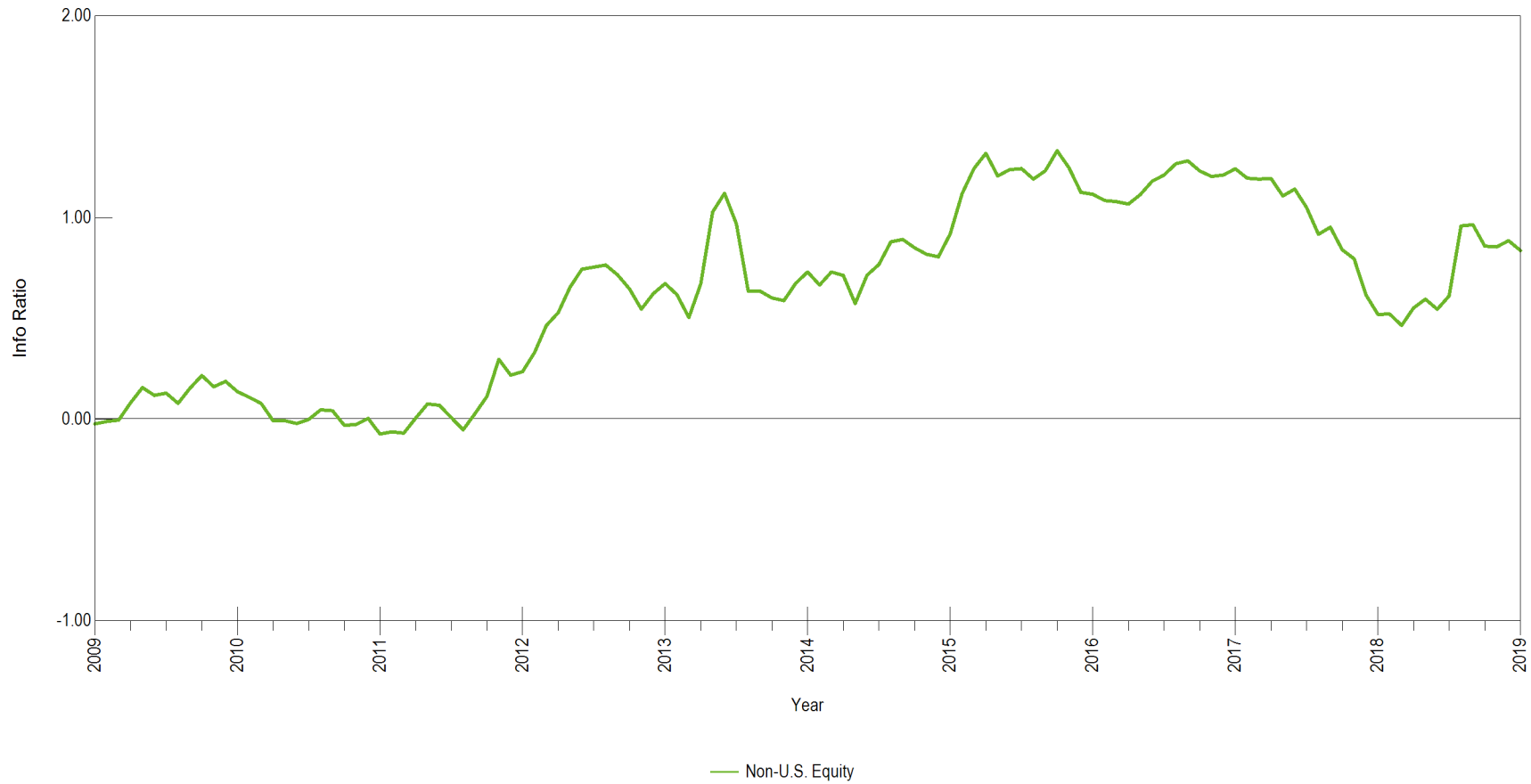
Versus MSCI ACWI ex USA - Quarter Ending December 31, 2019		
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Americas</b>		
Brazil*	2.1%	2.1%
Canada	5.0%	6.7%
Chile*	0.1%	0.2%
Colombia*	0.3%	0.1%
Mexico*	0.8%	0.6%
Peru*	0.1%	0.1%
United States	2.8%	0.0%
<b>Total-Americas</b>	<b>11.2%</b>	<b>9.8%</b>
<b>AsiaPacific</b>		
Australia	3.1%	4.5%
China*	5.3%	9.3%
Hong Kong	5.3%	2.3%
India*	2.3%	2.4%
Indonesia*	0.4%	0.5%
Japan	15.1%	16.2%
Korea*	3.3%	3.2%
Malaysia*	0.3%	0.5%
New Zealand	0.1%	0.2%
Philippines*	0.3%	0.3%
Singapore	1.4%	0.8%
Taiwan*	3.7%	3.2%
Thailand*	0.6%	0.7%
<b>Total-AsiaPacific</b>	<b>41.3%</b>	<b>44.1%</b>
<b>Other</b>		
Egypt*	0.1%	0.0%
Israel	0.6%	0.4%
Other Countries	0.2%	0.0%
Qatar*	0.0%	0.3%
South Africa*	1.1%	1.3%
Turkey*	0.2%	0.1%
United Arab Emirates*	0.0%	0.2%
<b>Total-Other</b>	<b>2.2%</b>	<b>2.9%</b>
<b>Totals</b>		
Developed	76.2%	72.7%
Emerging*	22.5%	27.3%
Other	0.2%	
Cash	1.0%	





# NON-U.S. EQUITY ROLLING 5 YEAR INFORMATION

Rolling 5 Year Information Ratio



\*Returns are net of fees



# 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			
Axiom International	Mar-14	Emerging Markets	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	1,632.8	On Watch since July 2019 due to performance
DFA Emerging Markets	Jul-14	Emerging Markets	✓	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	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	x	x	✓	✓	x	x	✓	3,003.5	Performance compliant with LACERS' Manager Monitoring Policy
MFS Institutional Advisors	Oct-13	Non-U.S. Developed	✓	x	x	x	✓	✓	✓	✓	✓	2,662.1	Performance compliant with LACERS' Manager Monitoring Policy
SsgA (Passive)	Aug-93	Non-U.S. Developed	x	x	✓	✓	✓	✓	✓	x	✓✓	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

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## Los Angeles City Employees' Retirement System

# CORE FIXED INCOME (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Core Fixed Income</b>	<b>3,211,478,959</b>	<b>100.00</b>	<b>0.29</b>	<b>2.46</b>	<b>9.09</b>	<b>4.22</b>	<b>3.36</b>		<b>3.49</b>	<b>Jul-12</b>
Core Fixed Income Blend			0.18	2.45	8.72	4.03	3.05		2.90	Jul-12
Over/Under			0.11	0.01	0.37	0.19	0.31		0.59	
Baird Advisors	345,116,832	10.75	0.51	1.96	7.52	3.69	3.15	4.07	4.36	Mar-05
BBgBarc US Govt/Credit Int TR			0.37	1.75	6.80	3.24	2.57	3.05	3.71	Mar-05
Over/Under			0.14	0.21	0.72	0.45	0.58	1.02	0.65	
LM Capital (On Watch)	328,203,357	10.22	0.50	2.54	9.41	4.07	3.31	4.11	4.65	Mar-05
Core Fixed Income Blend			0.18	2.45	8.72	4.03	3.05	3.91	4.39	Mar-05
Over/Under			0.32	0.09	0.69	0.04	0.26	0.20	0.26	
Loomis Sayles	811,671,270	25.27	0.21	2.56	9.70	4.75	3.89	4.91	9.03	Jul-80
BC US Agg LACERS custom			0.18	2.45	8.72	4.03	3.05	3.75	7.55	Jul-80
Over/Under			0.03	0.11	0.98	0.72	0.84	1.16	1.48	
Neuberger Berman (On Watch)	801,758,828	24.97	0.35	2.48	9.33	4.14	3.27	4.68	5.72	Sep-01
Core Fixed Income Blend			0.18	2.45	8.72	4.03	3.05	3.91	4.65	Sep-01
Over/Under			0.17	0.03	0.61	0.11	0.22	0.77	1.07	
SSgA U.S. Aggregate Bond <sup>1</sup>	924,728,673	28.79	0.17	2.46	8.71	4.04	3.07		3.25	Jul-14
BBgBarc US Aggregate TR			0.18	2.45	8.72	4.03	3.05		3.23	Jul-14
Over/Under			-0.01	0.01	-0.01	0.01	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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Core Fixed Income</b>	<b>3,211,478,959</b>	<b>100.00</b>	<b>0.27</b>	<b>62</b>	<b>2.41</b>	<b>61</b>	<b>8.98</b>	<b>39</b>	<b>4.12</b>	<b>71</b>	<b>3.26</b>	<b>64</b>			<b>3.37</b>	<b>Jul-12</b>
Core Fixed Income Blend			<u>0.18</u>	72	<u>2.45</u>	54	<u>8.72</u>	58	<u>4.03</u>	79	<u>3.05</u>	73			<u>2.90</u>	Jul-12
Over/Under			0.09		-0.04		0.26		0.09		0.21				0.47	
InvMetrics Public DB > \$1 Billion US Fixed Income Net Median			0.65		2.49		8.81		4.31		3.49				3.36	Jul-12
Baird Advisors	345,116,832	10.75	0.49	28	1.91	25	7.40	16	3.56	16	3.02	14	3.94	10	4.23	Mar-05
BBgBarc US Govt/Credit Int TR			<u>0.37</u>	51	<u>1.75</u>	51	<u>6.80</u>	45	<u>3.24</u>	42	<u>2.57</u>	47	<u>3.05</u>	65	<u>3.71</u>	Mar-05
Over/Under			0.12		0.16		0.60		0.32		0.45		0.89		0.52	
eV US Interm Duration Fixed Inc Net Median			0.37		1.75		6.74		3.19		2.56		3.16		3.88	Mar-05
LM Capital (On Watch)	328,203,357	10.22	0.48	10	2.49	46	9.30	36	3.96	69	3.20	46	3.98	51	4.51	Mar-05
Core Fixed Income Blend			<u>0.18</u>	43	<u>2.45</u>	53	<u>8.72</u>	69	<u>4.03</u>	57	<u>3.05</u>	66	<u>3.91</u>	60	<u>4.39</u>	Mar-05
Over/Under			0.30		0.04		0.58		-0.07		0.15		0.07		0.12	
eV US Core Fixed Inc Net Median			0.14		2.46		9.07		4.09		3.15		3.98		4.43	Mar-05
Loomis Sayles	811,671,270	25.27	0.18	44	2.50	42	9.56	19	4.61	10	3.76	10	4.78	11		Jul-80
BC US Agg LACERS custom			<u>0.18</u>	43	<u>2.45</u>	53	<u>8.72</u>	69	<u>4.03</u>	57	<u>3.05</u>	66	<u>3.75</u>	72		Jul-80
Over/Under			0.00		0.05		0.84		0.58		0.71		1.03			
eV US Core Fixed Inc Net Median			0.14		2.46		9.07		4.09		3.15		3.98			Jul-80
Neuberger Berman (On Watch)	801,758,828	24.97	0.32	16	2.42	58	9.19	43	3.99	64	3.12	55	4.51	17	5.57	Sep-01
Core Fixed Income Blend			<u>0.18</u>	43	<u>2.45</u>	53	<u>8.72</u>	69	<u>4.03</u>	57	<u>3.05</u>	66	<u>3.91</u>	60	<u>4.65</u>	Sep-01
Over/Under			0.14		-0.03		0.47		-0.04		0.07		0.60		0.92	
eV US Core Fixed Inc Net Median			0.14		2.46		9.07		4.09		3.15		3.98		4.59	Sep-01
SSgA U.S. Aggregate Bond <sup>1</sup>	924,728,673	28.79	0.17	45	2.45	54	8.67	71	4.01	60	3.03	68			3.21	Jul-14
BBgBarc US Aggregate TR			<u>0.18</u>	43	<u>2.45</u>	53	<u>8.72</u>	69	<u>4.03</u>	57	<u>3.05</u>	66			<u>3.23</u>	Jul-14
Over/Under			-0.01		0.00		-0.05		-0.02		-0.02				-0.02	
eV US Core Fixed Inc Net Median			0.14		2.46		9.07		4.09		3.15				3.29	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

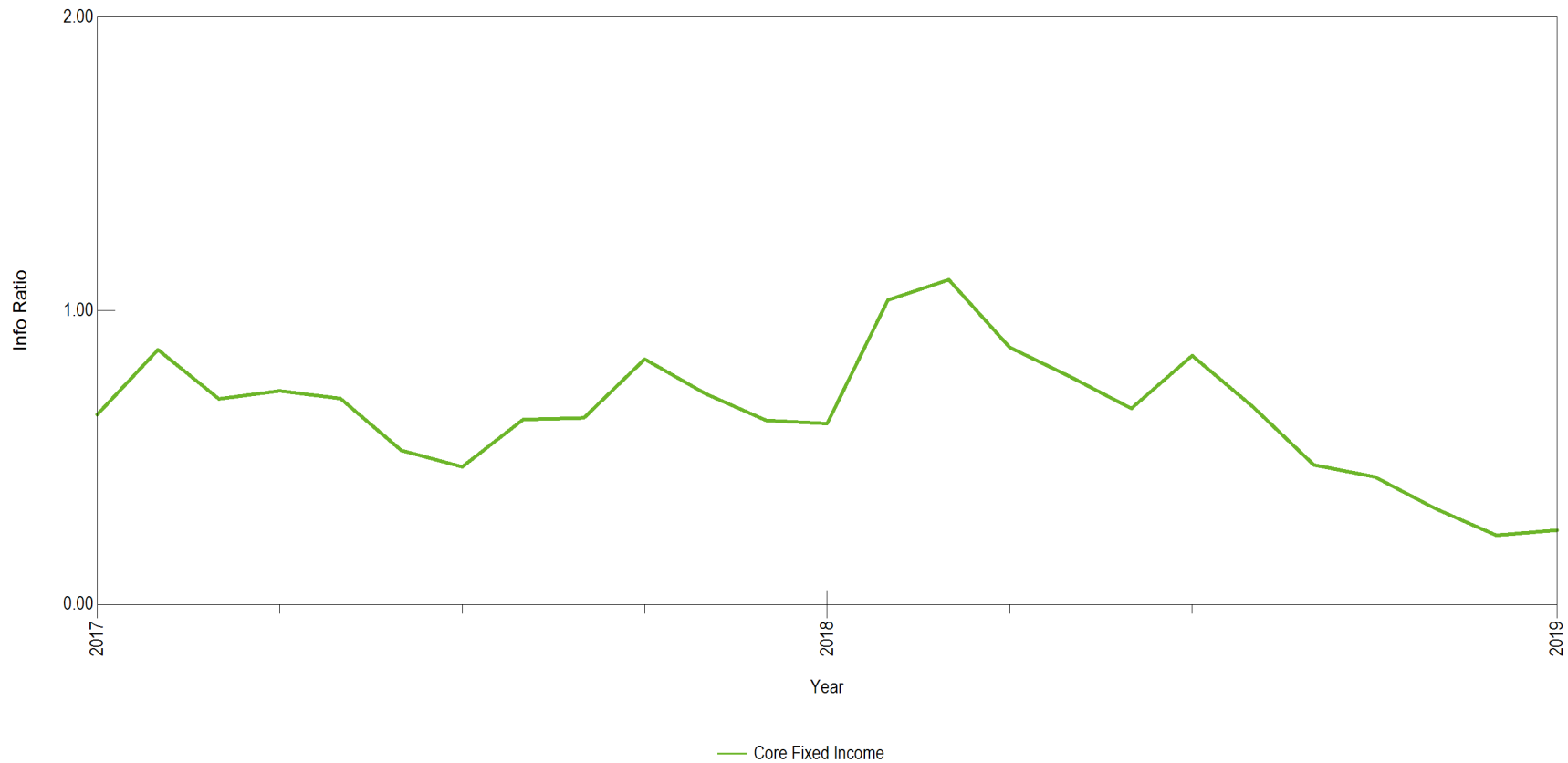
eV = eVestment



## Los Angeles City Employees' Retirement System

# CORE FIXED INCOME 3 YEAR INFORMATION RATIO

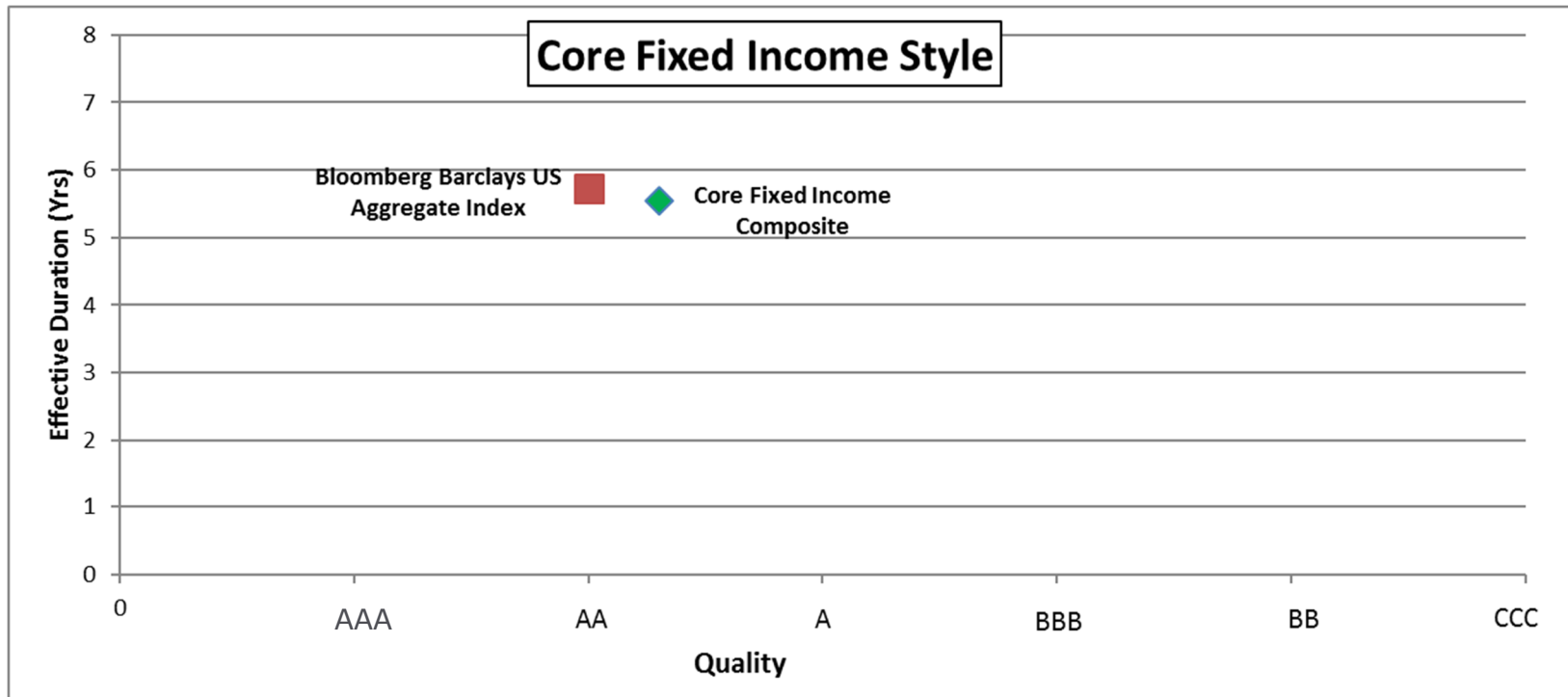
Rolling 3 Year Information Ratio



\*Returns are net of fees



# 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	✓	✓	✓	✓	✗	✗		
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	✓	✓	✓	✓	✗	✗	✓	✓	✓	314.7	On Watch since March 2019 due to performance
SSgA (Passive)	Jul-14	Core	✗	✓	✗	✗	✗	✗	✗	✗	✗	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
✗	Underperformed
=	Equal to
✓✓	Gross Return





# CREDIT OPPORTUNITIES

NEPC, LLC

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## Los Angeles City Employees' Retirement System

# CREDIT OPPORTUNITIES (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Credit Opportunities</b>	<b>1,044,491,951</b>	<b>100.00</b>	<b>2.19</b>	<b>3.72</b>	<b>14.20</b>	<b>6.92</b>	<b>5.86</b>		<b>5.97</b>	<b>Jun-13</b>
<i>Credit Opportunities Blend</i>			2.33	3.76	14.58	6.50	6.20		6.16	Jun-13
Over/Under			-0.14	-0.04	-0.38	0.42	-0.34		-0.19	
AEGON USA (ON Watch)	394,220,945	37.74	3.08	4.65	15.18	6.96	6.45		6.46	Jun-13
<i>BBgBarc US High Yield 2% Issuer Cap TR</i>			2.61	3.98	14.32	6.36	6.14		6.02	Jun-13
Over/Under			0.47	0.67	0.86	0.60	0.31		0.44	
Prudential Emerging Markets	435,565,443	41.70	2.60	4.54	17.48	8.28	7.15		6.31	May-14
<i>JP Morgan EMBI Global Diversified</i>			1.81	3.34	15.04	6.69	6.24		5.42	May-14
Over/Under			0.79	1.20	2.44	1.59	0.91		0.89	
Bain Capital Senior Loan Fund, LP*	214,692,345	20.55	-0.20	0.48	6.22	3.81			3.73	Jun-15
<i>Credit Suisse Leveraged Loans</i>			1.68	2.61	8.17	4.48			4.40	Jun-15
Over/Under			-1.88	-2.13	-1.95	-0.67			-0.67	

- 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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Credit Opportunities</b>	<b>1,044,491,951</b>	<b>100.00</b>	<b>2.12</b>		<b>3.57</b>		<b>13.86</b>		<b>6.57</b>		<b>5.50</b>				<b>5.62</b>	<b>Jun-13</b>
<i>Credit Opportunities Blend</i>			<u>2.33</u>		<u>3.76</u>		<u>14.58</u>		<u>6.50</u>		<u>6.20</u>				<u>6.16</u>	<i>Jun-13</i>
Over/Under			-0.21		-0.19		-0.72		0.07		-0.70				-0.54	
AEGON USA (On Watch)	394,220,945	37.74	2.98	14	4.46	18	14.75	29	6.56	13	6.05	21			6.09	Jun-13
<i>BBgBarc US High Yield 2% Issuer Cap TR</i>			<u>2.61</u>	35	<u>3.98</u>	40	<u>14.32</u>	36	<u>6.36</u>	21	<u>6.14</u>	18			<u>6.02</u>	<i>Jun-13</i>
Over/Under			0.37		0.48		0.43		0.20		-0.09				0.07	
<i>eV US High Yield Fixed Inc Net Median</i>			2.40		3.75		13.51		5.86		5.54				5.38	<i>Jun-13</i>
Prudential Emerging Markets	435,565,443	41.70	2.51	55	4.34	14	17.04	11	7.86	9	6.73	10			5.91	May-14
<i>JP Morgan EMBI Global Diversified</i>			<u>1.81</u>	96	<u>3.34</u>	41	<u>15.04</u>	36	<u>6.69</u>	35	<u>6.24</u>	27			<u>5.42</u>	<i>May-14</i>
Over/Under			0.70		1.00		2.00		1.17		0.49				0.49	
<i>eV Emg Mkts Fixed Inc - Hard Currency Net Median</i>			2.55		3.16		14.55		6.38		5.84				4.60	<i>May-14</i>
Bain Capital Senior Loan Fund, LP	214,692,345	20.55	-0.20	99	0.48	95	6.22	87	3.81	66					3.73	Jun-15
<i>Credit Suisse Leveraged Loans</i>			<u>1.68</u>	37	<u>2.61</u>	61	<u>8.17</u>	45	<u>4.48</u>	11					<u>4.40</u>	<i>Jun-15</i>
Over/Under			-1.88		-2.13		-1.95		-0.67						-0.67	
<i>eV US Float-Rate Bank Loan Fixed Inc Net Median</i>			1.63		2.68		8.05		3.96						3.99	<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	✓	✓	✓	✓	✓	✓	✗	✓	✓	1,428.4	On Watch since October 2017 due to organizational reasons
Prudential	May-14	Emerging Market Debt	✓	✗	✓	✓	✓	✓	✓	✓	✓	1,432.7	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

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## Los Angeles City Employees' Retirement System

# REAL ASSETS (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Real Assets</b>	<b>2,040,951,824</b>	<b>100.00</b>	<b>1.49</b>	<b>2.68</b>	<b>8.80</b>	<b>5.76</b>	<b>6.12</b>	<b>6.99</b>	<b>6.32</b>	<b>Nov-94</b>
<i>CPI + 5% (Unadjusted)</i>			<u>1.31</u>	<u>2.80</u>	<u>7.39</u>	<u>7.20</u>	<u>6.90</u>	<u>6.83</u>	<u>7.28</u>	<i>Nov-94</i>
Over/Under			0.18	-0.12	1.41	-1.44	-0.78	0.16	-0.96	
<b>Public Real Assets</b>	<b>1,213,466,379</b>	<b>59.46</b>	<b>1.41</b>	<b>2.99</b>	<b>11.58</b>	<b>3.86</b>	<b>2.97</b>		<b>2.17</b>	<b>Jun-14</b>
<i>Public Real Assets Blend</i>			<u>1.02</u>	<u>1.74</u>	<u>10.23</u>	<u>2.53</u>	<u>1.14</u>		<u>-0.10</u>	<i>Jun-14</i>
Over/Under			0.39	1.25	1.35	1.33	1.83		2.27	
<b>TIPS</b>	<b>757,292,768</b>	<b>37.10</b>	<b>0.80</b>	<b>1.61</b>	<b>8.60</b>	<b>3.52</b>	<b>2.78</b>		<b>2.02</b>	<b>Jul-14</b>
<i>BBgBarc US TIPS TR</i>			<u>0.79</u>	<u>2.14</u>	<u>8.43</u>	<u>3.31</u>	<u>2.62</u>		<u>2.01</u>	<i>Jul-14</i>
Over/Under			0.01	-0.53	0.17	0.21	0.16		0.01	
DFA US TIPS <sup>1</sup>	757,292,768	37.10	0.80	1.61	8.60	3.52	2.95		2.15	Aug-14
<i>BBgBarc US TIPS TR</i>			<u>0.79</u>	<u>2.14</u>	<u>8.43</u>	<u>3.31</u>	<u>2.62</u>		<u>2.01</u>	<i>Aug-14</i>
Over/Under			0.01	-0.53	0.17	0.21	0.33		0.14	
<b>REITS</b>	<b>233,580,919</b>	<b>11.44</b>	<b>0.21</b>	<b>8.07</b>	<b>30.24</b>	<b>10.93</b>			<b>9.38</b>	<b>Mar-15</b>
<i>FTSE NAREIT All Equity REIT</i>			<u>0.13</u>	<u>7.87</u>	<u>28.66</u>	<u>10.16</u>			<u>7.92</u>	<i>Mar-15</i>
Over/Under			0.08	0.20	1.58	0.77			1.46	
CenterSquare US Real Estate <sup>1</sup>	233,580,919	11.44	0.21	8.07	30.24	10.93			10.28	May-15
<i>FTSE NAREIT All Equity REIT</i>			<u>0.13</u>	<u>7.87</u>	<u>28.66</u>	<u>10.16</u>			<u>9.24</u>	<i>May-15</i>
Over/Under			0.08	0.20	1.58	0.77			1.04	
<b>Commodities</b>	<b>222,592,691</b>	<b>10.91</b>	<b>4.72</b>	<b>2.33</b>	<b>7.21</b>	<b>-0.25</b>			<b>-3.51</b>	<b>Jun-15</b>
<i>Bloomberg Commodity Index TR USD</i>			<u>4.42</u>	<u>2.50</u>	<u>7.69</u>	<u>-0.94</u>			<u>-4.02</u>	<i>Jun-15</i>
Over/Under			0.30	-0.17	-0.48	0.69			0.51	
CoreCommodity Mgmt <sup>1</sup>	222,592,691	10.91	4.72	2.33	7.21	-0.25			-3.51	Jul-15
<i>Bloomberg Commodity Index TR USD</i>			<u>4.42</u>	<u>2.50</u>	<u>7.69</u>	<u>-0.94</u>			<u>-4.02</u>	<i>Jul-15</i>
Over/Under			0.30	-0.17	-0.48	0.69			0.51	
<b>Private Real Estate</b>	<b>809,255,880</b>	<b>39.65</b>	<b>1.64</b>	<b>2.33</b>	<b>5.67</b>	<b>7.61</b>	<b>8.81</b>	<b>8.47</b>	<b>6.89</b>	<b>Oct-94</b>
<i>Real Estate Blend</i>			<u>1.71</u>	<u>3.25</u>	<u>6.18</u>	<u>7.95</u>	<u>9.84</u>	<u>11.31</u>	<u>9.80</u>	<i>Oct-94</i>
Over/Under			-0.07	-0.92	-0.51	-0.34	-1.03	-2.84	-2.91	
<b>Timber</b>	<b>18,229,566</b>	<b>0.89</b>	<b>-0.05</b>	<b>-0.54</b>	<b>2.74</b>	<b>2.61</b>	<b>2.92</b>	<b>4.45</b>	<b>9.14</b>	<b>Sep-99</b>

<sup>1</sup> 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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Real Assets</b>	<b>2,040,951,824</b>	<b>100.00</b>	<b>1.45</b>		<b>2.60</b>		<b>8.63</b>		<b>5.60</b>		<b>5.96</b>		<b>6.84</b>			<b>Nov-94</b>
<i>CPI + 5% (Unadjusted)</i>			<u>1.31</u>		<u>2.80</u>		<u>7.39</u>		<u>7.20</u>		<u>6.90</u>		<u>6.83</u>			<i>Nov-94</i>
Over/Under			0.14		-0.20		1.24		-1.60		-0.94		0.01			
<b>Public Real Assets</b>	<b>1,213,466,379</b>	<b>59.46</b>	<b>1.36</b>		<b>2.89</b>		<b>11.36</b>		<b>3.61</b>		<b>2.74</b>				<b>1.96</b>	<b>Jun-14</b>
<i>Public Real Assets Blend</i>			<u>1.02</u>		<u>1.74</u>		<u>10.23</u>		<u>2.53</u>		<u>1.14</u>				<u>-0.10</u>	<i>Jun-14</i>
Over/Under			0.34		1.15		1.13		1.08		1.60				2.06	
<b>TIPS</b>	<b>757,292,768</b>	<b>37.10</b>	<b>0.79</b>		<b>1.58</b>		<b>8.55</b>		<b>3.46</b>		<b>2.72</b>				<b>1.96</b>	<b>Jul-14</b>
<i>BBgBarc US TIPS TR</i>			<u>0.79</u>		<u>2.14</u>		<u>8.43</u>		<u>3.31</u>		<u>2.62</u>				<u>2.01</u>	<i>Jul-14</i>
Over/Under			0.00		-0.56		0.12		0.15		0.10				-0.05	
<b>DFA US TIPS<sup>1</sup></b>	<b>757,292,768</b>	<b>37.10</b>	<b>0.79</b>	<b>50</b>	<b>1.58</b>	<b>84</b>	<b>8.55</b>	<b>48</b>	<b>3.46</b>	<b>29</b>	<b>2.89</b>	<b>16</b>			<b>2.10</b>	<b>Aug-14</b>
<i>BBgBarc US TIPS TR</i>			<u>0.79</u>	<u>50</u>	<u>2.14</u>	<u>42</u>	<u>8.43</u>	<u>54</u>	<u>3.31</u>	<u>52</u>	<u>2.62</u>	<u>42</u>			<u>2.01</u>	<i>Aug-14</i>
Over/Under			0.00		-0.56		0.12		0.15		0.27				0.09	
<i>eV US TIPS / Inflation Fixed Inc Net Median</i>			<u>0.79</u>		<u>2.11</u>		<u>8.55</u>		<u>3.33</u>		<u>2.53</u>				<u>1.76</u>	<i>Aug-14</i>
<b>REITS</b>	<b>233,580,919</b>	<b>11.44</b>	<b>0.11</b>		<b>7.88</b>		<b>29.74</b>		<b>10.46</b>						<b>8.93</b>	<b>Mar-15</b>
<i>FTSE NAREIT All Equity REIT</i>			<u>0.13</u>		<u>7.87</u>		<u>28.66</u>		<u>10.16</u>						<u>7.92</u>	<i>Mar-15</i>
Over/Under			-0.02		0.01		1.08		0.30						1.01	
<b>CenterSquare US Real Estate<sup>1</sup></b>	<b>233,580,919</b>	<b>11.44</b>	<b>0.11</b>	<b>54</b>	<b>7.88</b>	<b>51</b>	<b>29.74</b>	<b>32</b>	<b>10.46</b>	<b>27</b>					<b>9.81</b>	<b>May-15</b>
<i>FTSE NAREIT All Equity REIT</i>			<u>0.13</u>	<u>53</u>	<u>7.87</u>	<u>51</u>	<u>28.66</u>	<u>41</u>	<u>10.16</u>	<u>32</u>					<u>9.24</u>	<i>May-15</i>
Over/Under			-0.02		0.01		1.08		0.30						0.57	
<i>eV US REIT Net Median</i>			<u>0.31</u>		<u>7.89</u>		<u>27.88</u>		<u>8.55</u>						<u>8.01</u>	<i>May-15</i>
<b>Commodities</b>	<b>222,592,691</b>	<b>10.91</b>	<b>4.57</b>		<b>2.06</b>		<b>6.62</b>		<b>-0.97</b>						<b>-4.19</b>	<b>Jun-15</b>
<i>Bloomberg Commodity Index TR USD</i>			<u>4.42</u>		<u>2.50</u>		<u>7.69</u>		<u>-0.94</u>						<u>-4.02</u>	<i>Jun-15</i>
Over/Under			0.15		-0.44		-1.07		-0.03						-0.17	
<b>CoreCommodity Mgmt<sup>1</sup></b>	<b>222,592,691</b>	<b>10.91</b>	<b>4.57</b>		<b>2.06</b>		<b>6.62</b>		<b>-0.97</b>						<b>-4.19</b>	<b>Jul-15</b>
<i>Bloomberg Commodity Index TR USD</i>			<u>4.42</u>		<u>2.50</u>		<u>7.69</u>		<u>-0.94</u>						<u>-4.02</u>	<i>Jul-15</i>
Over/Under			0.15		-0.44		-1.07		-0.03						-0.17	

<sup>1</sup> 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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Private Real Estate</b>	<b>809,255,880</b>	<b>39.65</b>	<b>1.62</b>	<b>20</b>	<b>2.29</b>	<b>62</b>	<b>5.57</b>	<b>58</b>	<b>7.53</b>	<b>25</b>	<b>8.72</b>	<b>38</b>	<b>8.35</b>	<b>79</b>		<b>Oct-94</b>
<i>Real Estate Blend</i>			<u>1.71</u>	18	<u>3.25</u>	14	<u>6.18</u>	28	<u>7.95</u>	14	<u>9.84</u>	3	<u>11.31</u>	4		Oct-94
Over/Under			-0.09		-0.96		-0.61		-0.42		-1.12		-2.96			
<i>InvMetrics Public DB Real Estate Priv Net Median</i>			1.28		2.86		5.84		7.23		8.51		9.96			Oct-94
<b>Timber</b>	<b>18,229,566</b>	<b>0.89</b>	<b>-0.05</b>		<b>-0.54</b>		<b>2.74</b>		<b>2.61</b>		<b>2.92</b>		<b>5.06</b>			<b>Sep-99</b>

- 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

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# U.S. EQUITY MANAGER PERFORMANCE

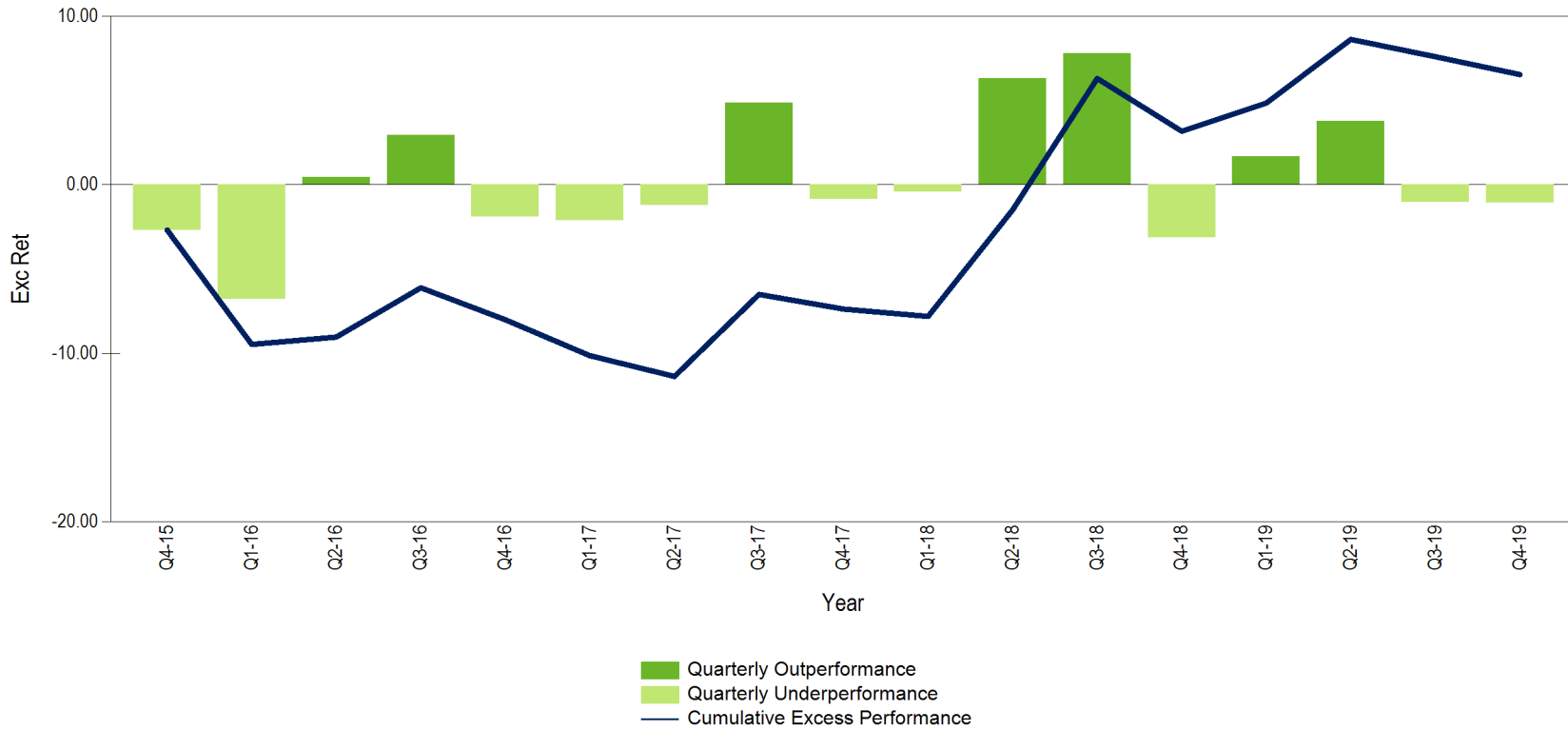
NEPC, LLC

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# Los Angeles City Employees' Retirement System

## EAM INVESTORS

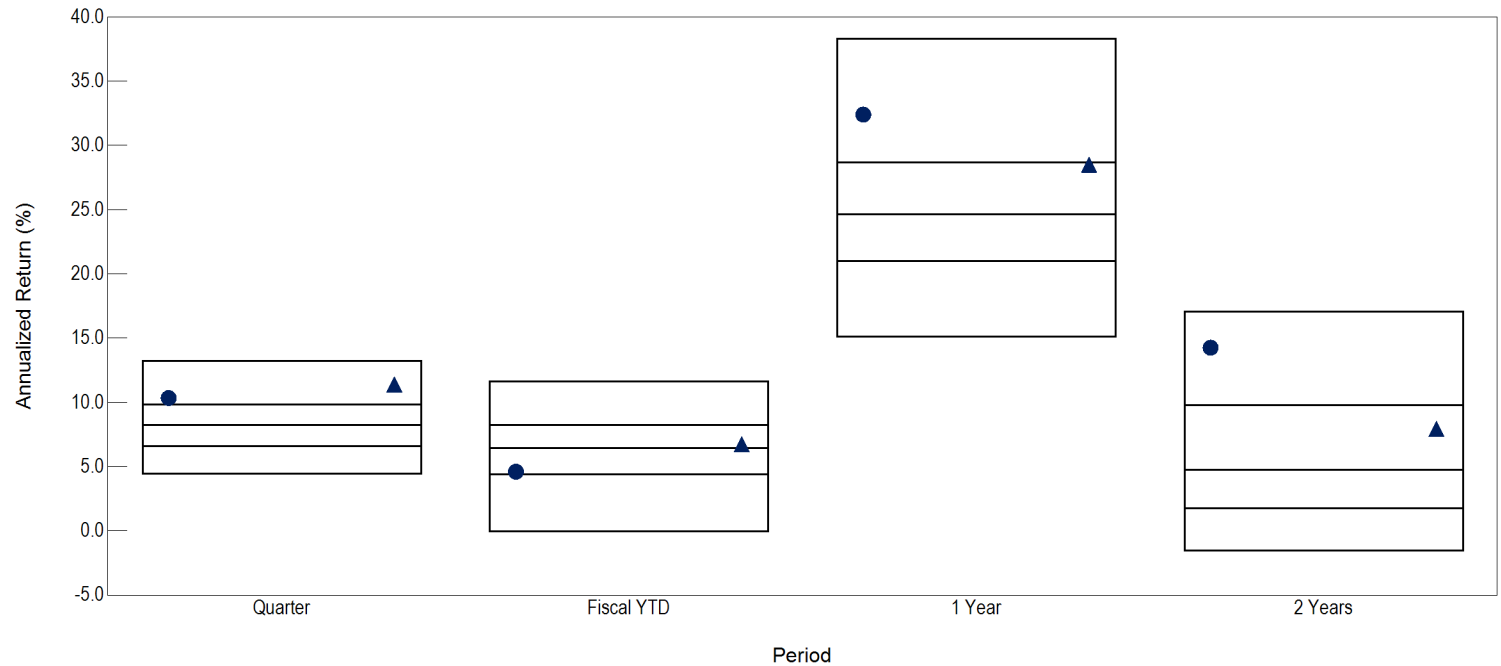
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## EAM INVESTORS

EAM Investors vs. eV US Small Cap Equity Net



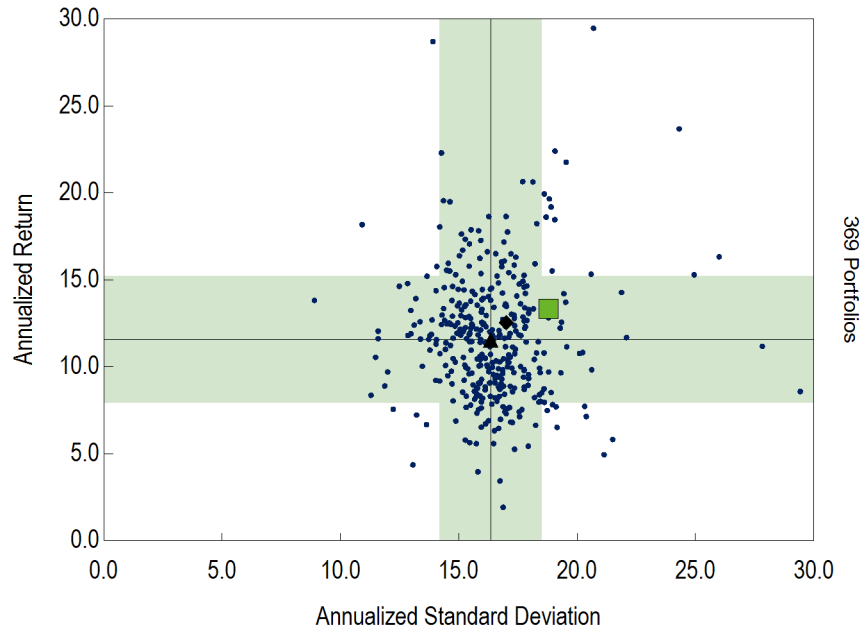
	Return (Rank)		Quarter		Fiscal YTD		1 Year		2 Years	
5th Percentile			13.20		11.64		38.30		17.05	
25th Percentile			9.89		8.27		28.73		9.84	
Median			8.26		6.50		24.68		4.82	
75th Percentile			6.65		4.47		21.03		1.81	
95th Percentile			4.47		0.00		15.14		-1.48	
# of Portfolios			395		395		395		392	
● EAM Investors			10.33	(19)	4.60	(74)	32.39	(15)	14.25	(11)
▲ Russell 2000 Growth			11.39	(12)	6.75	(47)	28.48	(26)	7.95	(33)



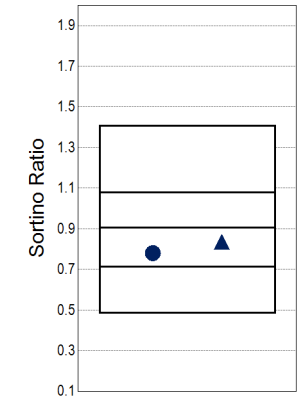
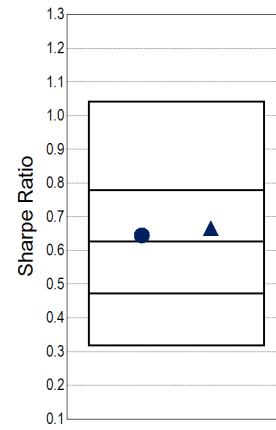
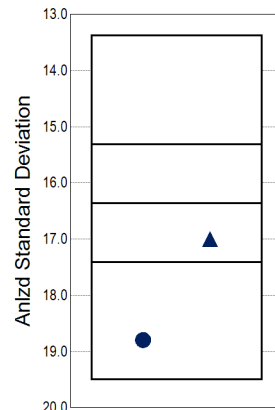
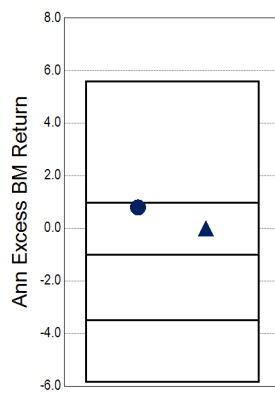
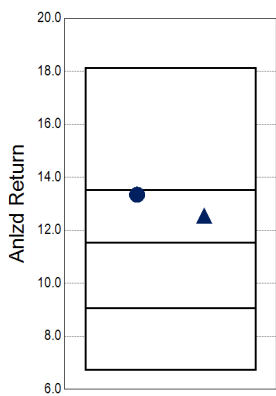
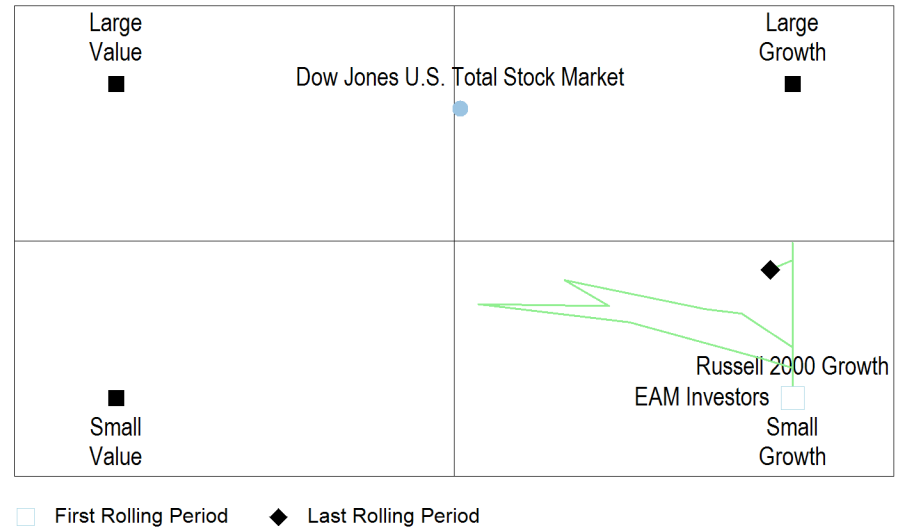
# Los Angeles City Employees' Retirement System

## EAM INVESTORS

Since Inception Risk Return



Since Inception Style Map

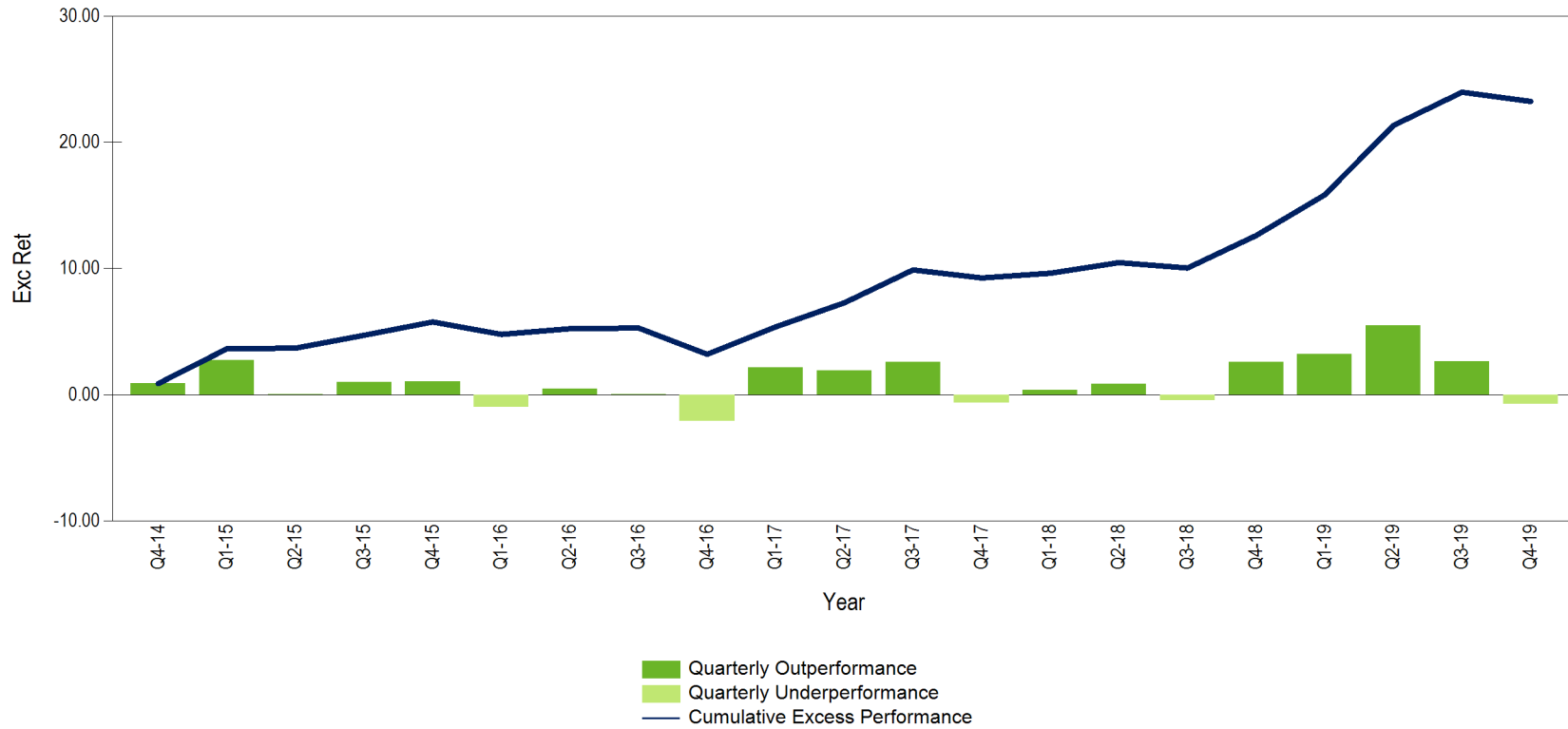


- EAM Investors
- ▲ Russell 2000 Growth
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# PRINCIPAL GLOBAL INVESTORS

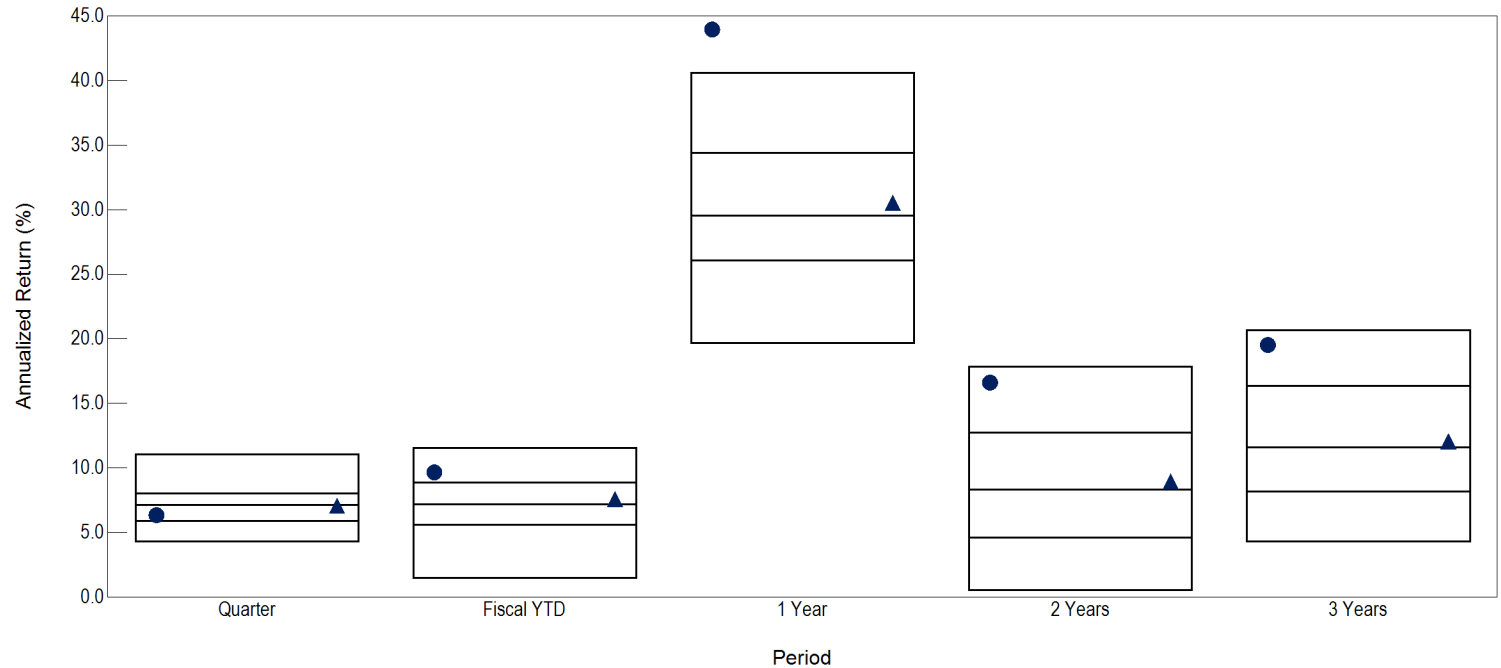
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## PRINCIPAL GLOBAL INVESTORS

Principal Global Investors vs. eV US Mid Cap Equity Net



	Return (Rank)									
5th Percentile	11.04		11.54		40.61		17.86		20.65	
25th Percentile	8.07		8.93		34.43		12.79		16.39	
Median	7.17		7.22		29.61		8.36		11.66	
75th Percentile	5.92		5.61		26.11		4.67		8.22	
95th Percentile	4.36		1.53		19.73		0.56		4.34	
# of Portfolios	157		156		156		155		154	
● Principal Global Investors	6.33	(67)	9.65	(18)	43.96	(2)	16.60	(10)	19.51	(11)
▲ Russell MidCap	7.06	(51)	7.58	(45)	30.54	(44)	8.96	(47)	12.05	(48)

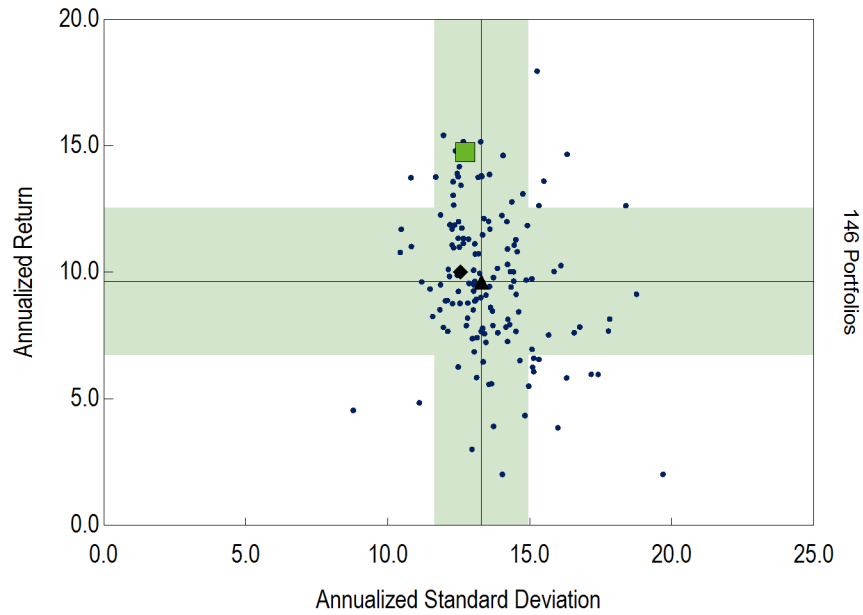




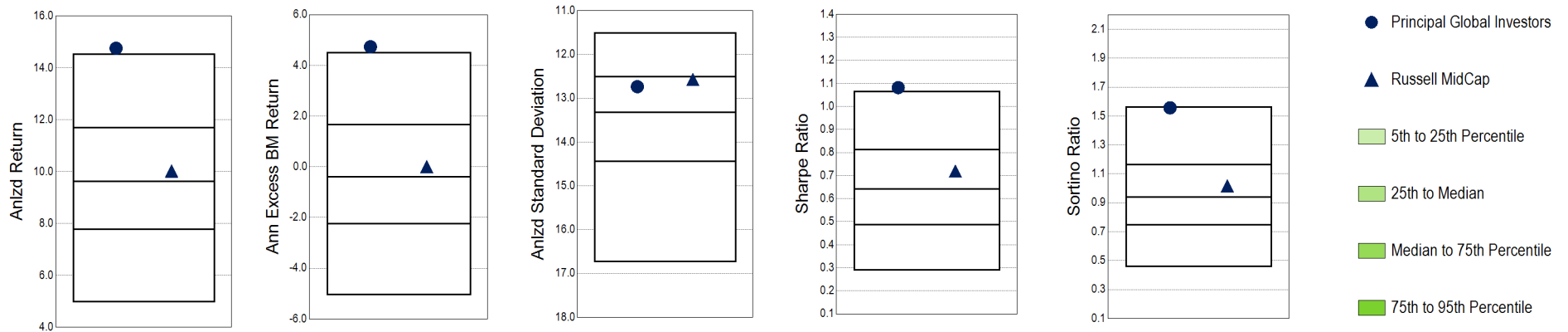
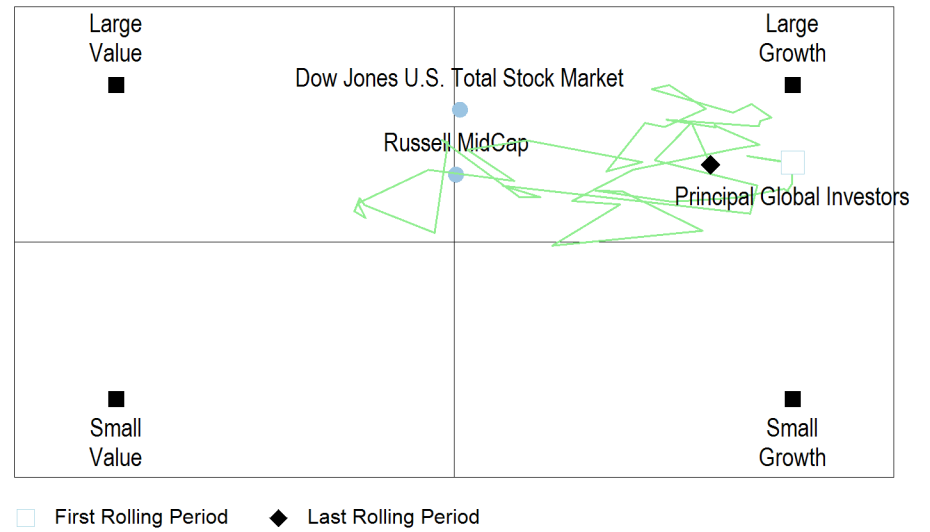
# Los Angeles City Employees' Retirement System

## PRINCIPAL GLOBAL INVESTORS

Since Inception Risk Return



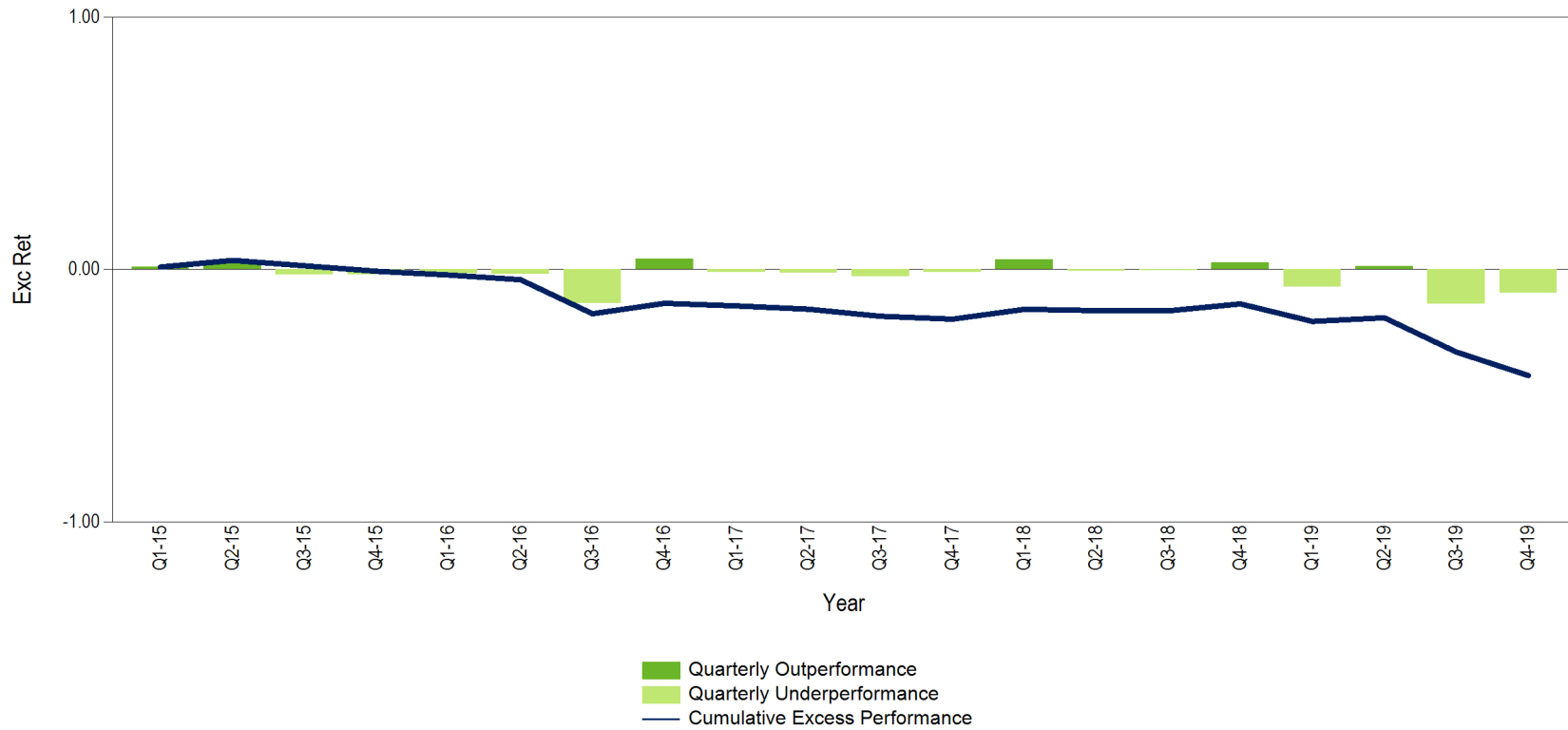
Since Inception Style Map



# Los Angeles City Employees' Retirement System

## RHUMBLINE ADVISORS S&P 500

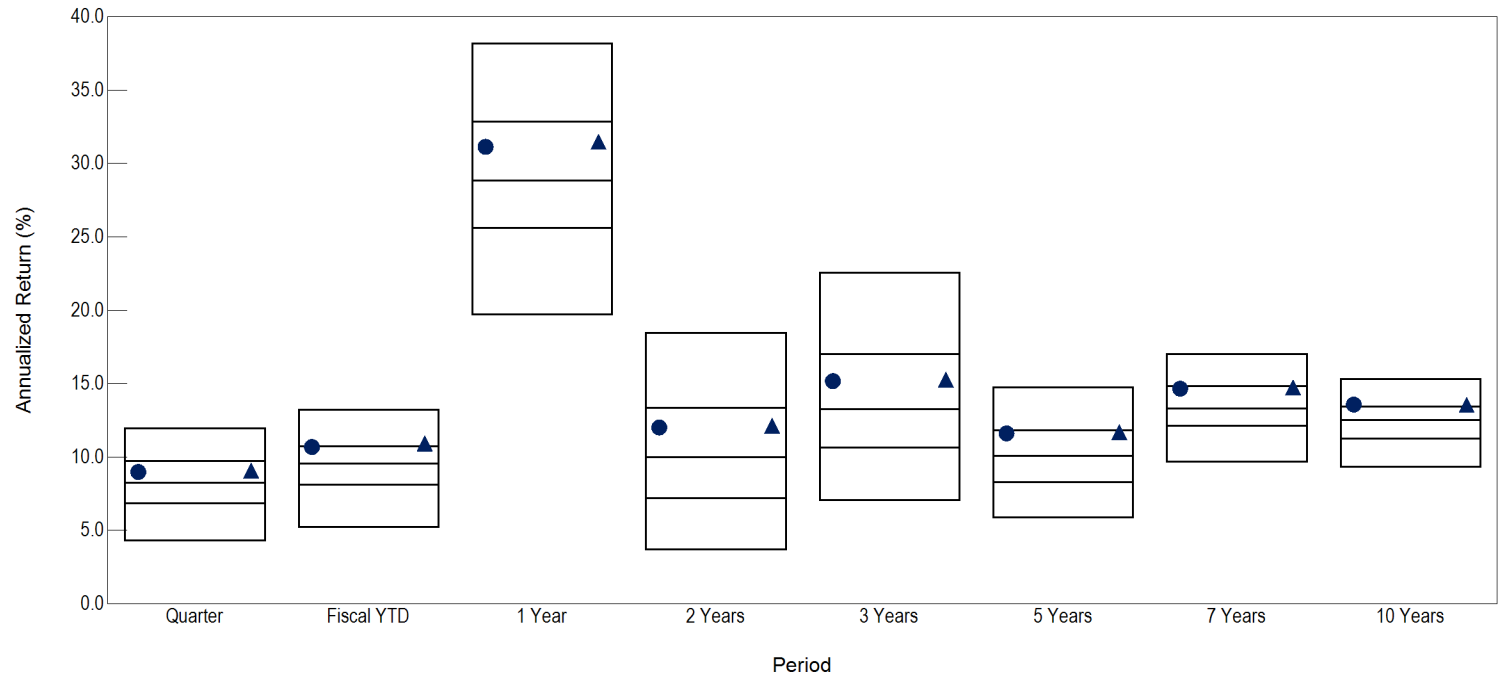
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## RHUMBLINE ADVISORS S&P 500

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



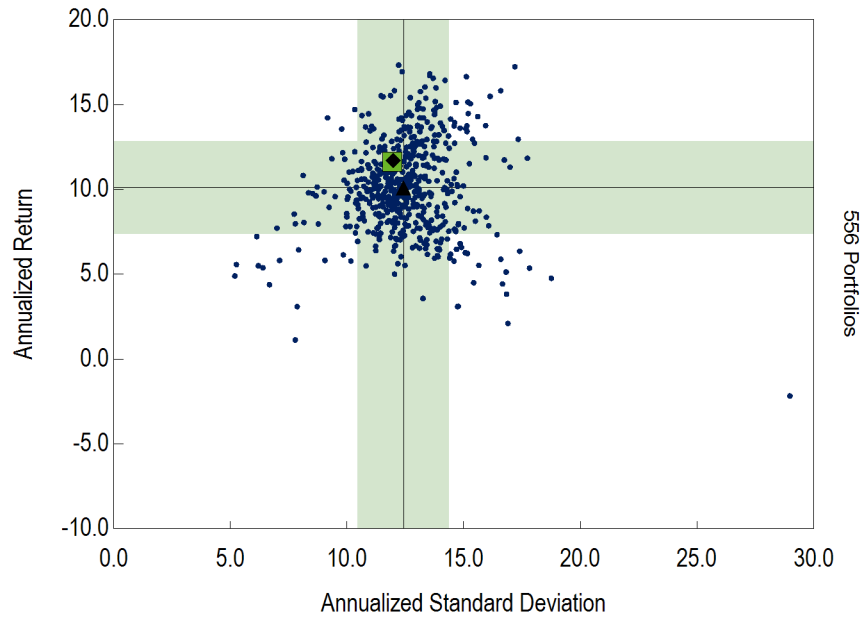
Return (Rank)

5th Percentile	11.94	13.23	38.19	18.46	22.56	14.75	17.04	15.32
25th Percentile	9.77	10.77	32.92	13.39	17.08	11.85	14.88	13.49
Median	8.27	9.61	28.89	10.02	13.30	10.10	13.34	12.57
75th Percentile	6.89	8.17	25.65	7.26	10.68	8.32	12.19	11.31
95th Percentile	4.38	5.29	19.77	3.76	7.12	5.93	9.73	9.36
# of Portfolios	607	607	607	602	591	556	518	442
● Rhumbline Advisors S&P 500	8.98 (37)	10.68 (27)	31.14 (37)	12.01 (33)	15.17 (36)	11.61 (29)	14.66 (29)	13.57 (25)
▲ S&P 500	9.07 (37)	10.92 (23)	31.49 (35)	12.13 (32)	15.27 (36)	11.70 (28)	14.73 (28)	13.56 (25)

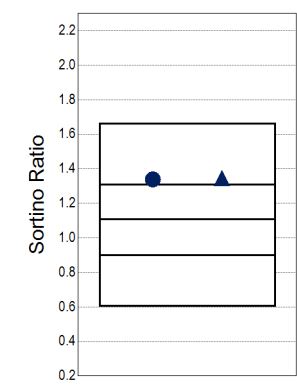
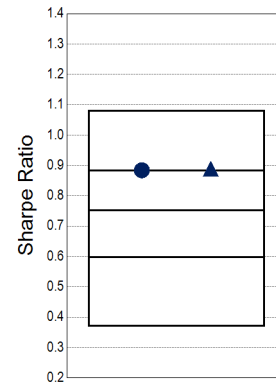
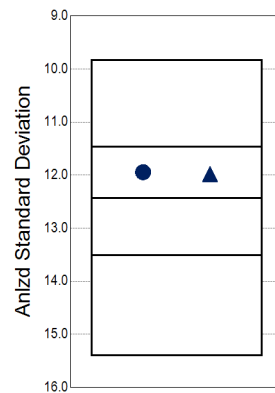
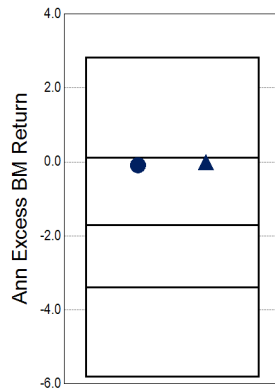
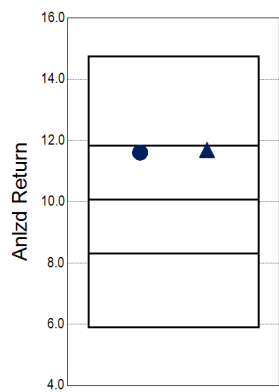
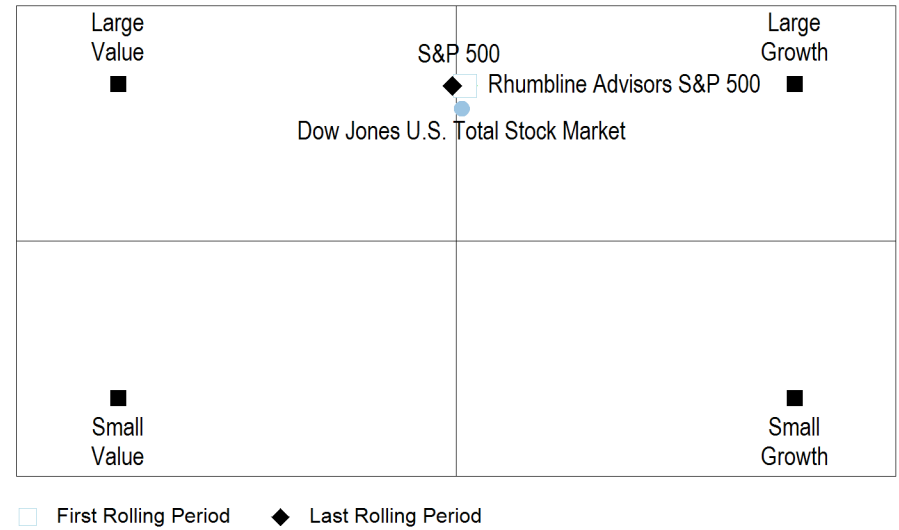


# RHUMBLINE ADVISORS S&P 500

5 Year Risk Return



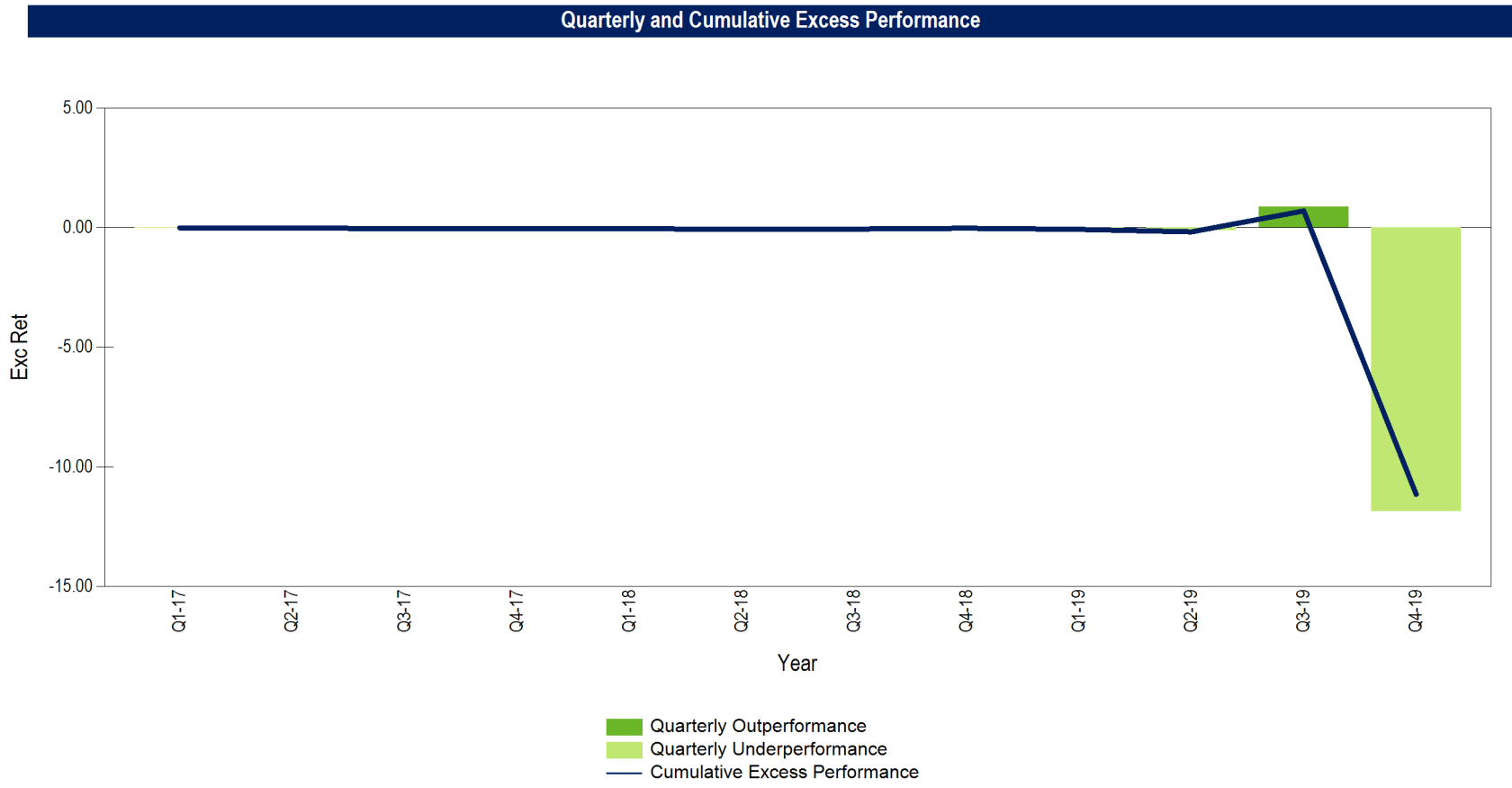
5 Year Style Map



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

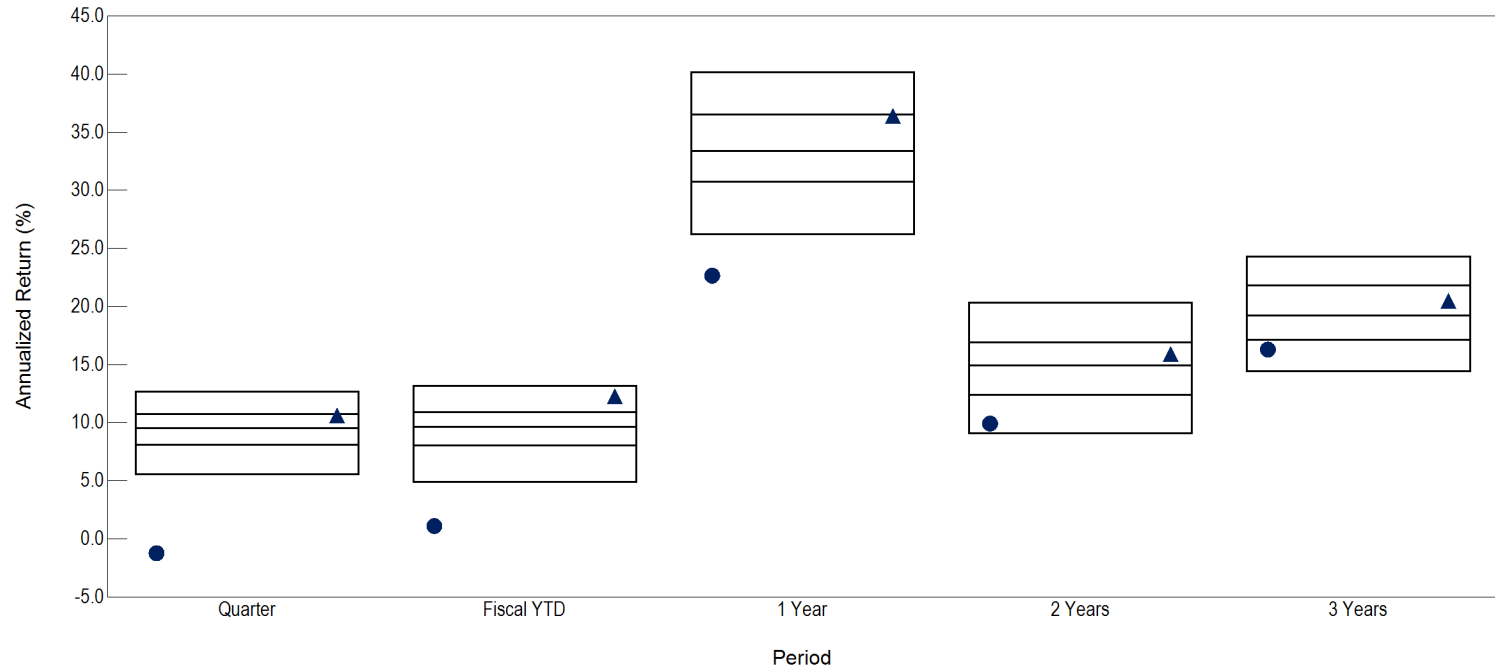


# RHUMBLINE ADVISORS RUSSELL 1000 GROWTH



# RHUMBLINE ADVISORS RUSSELL 1000 GROWTH

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

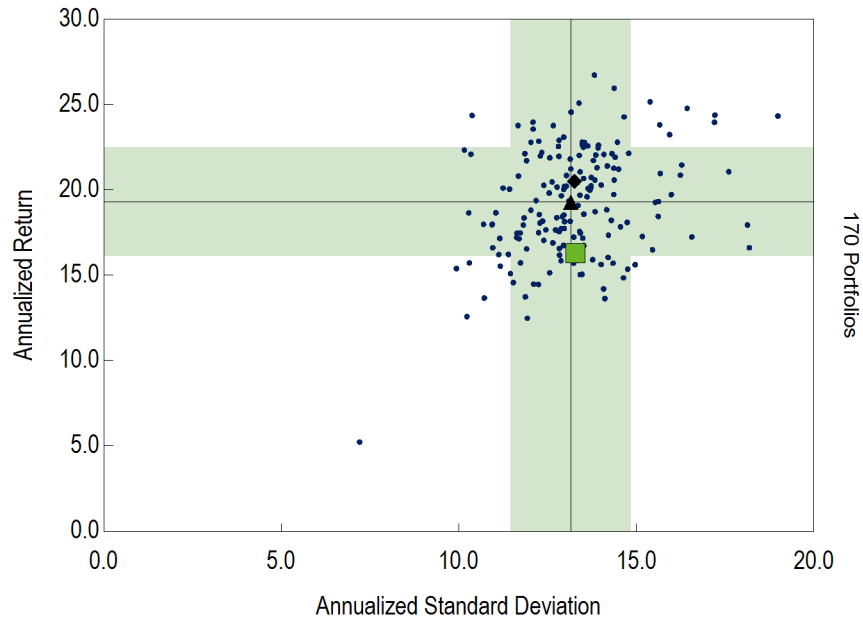


	Return (Rank)									
5th Percentile	12.69		13.18		40.15		20.34		24.30	
25th Percentile	10.81		10.96		36.56		16.97		21.85	
Median	9.58		9.70		33.43		14.98		19.29	
75th Percentile	8.13		8.11		30.77		12.42		17.16	
95th Percentile	5.60		4.94		26.25		9.12		14.51	
# of Portfolios	176		176		176		174		170	
● Rhumbline Advisors Russell 1000 Growth	-1.24	(99)	1.10	(99)	22.65	(99)	9.92	(94)	16.29	(83)
▲ Russell 1000 Growth	10.62	(29)	12.27	(11)	36.39	(28)	15.90	(36)	20.49	(37)

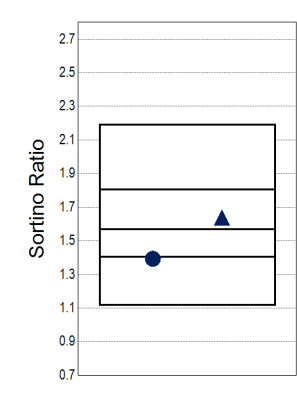
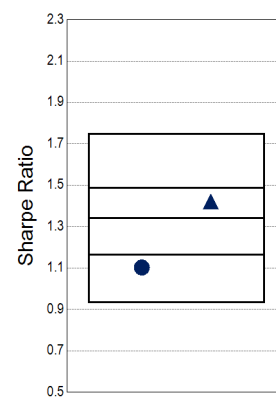
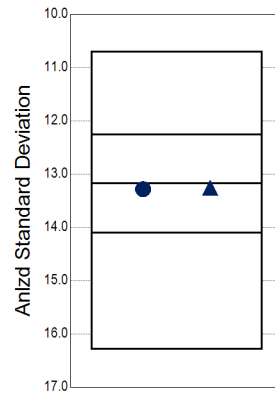
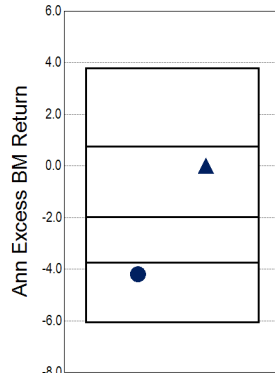
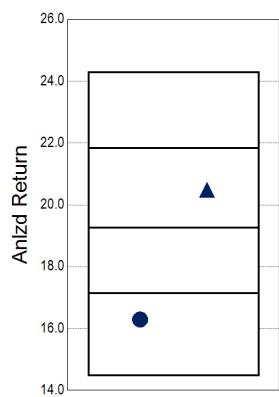
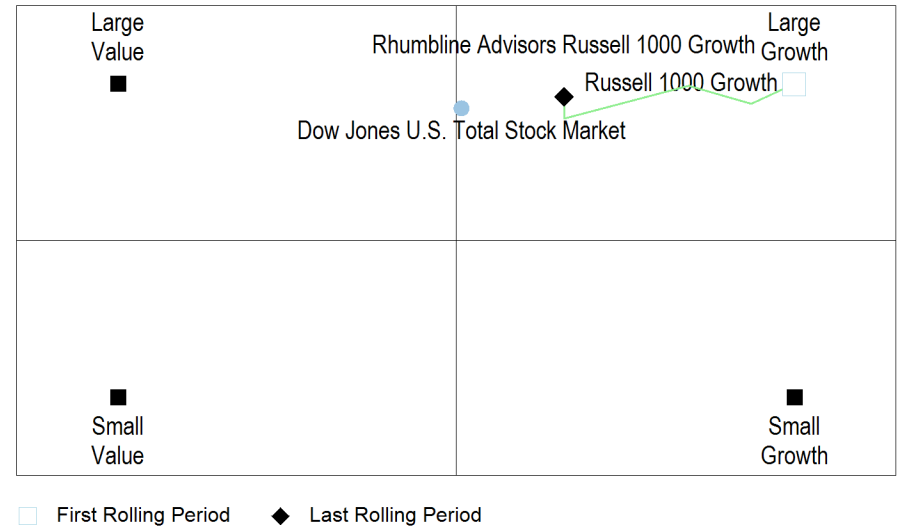


# RHUMBLINE ADVISORS RUSSELL 1000 GROWTH

3 Year Risk Return



3 Year Style Map

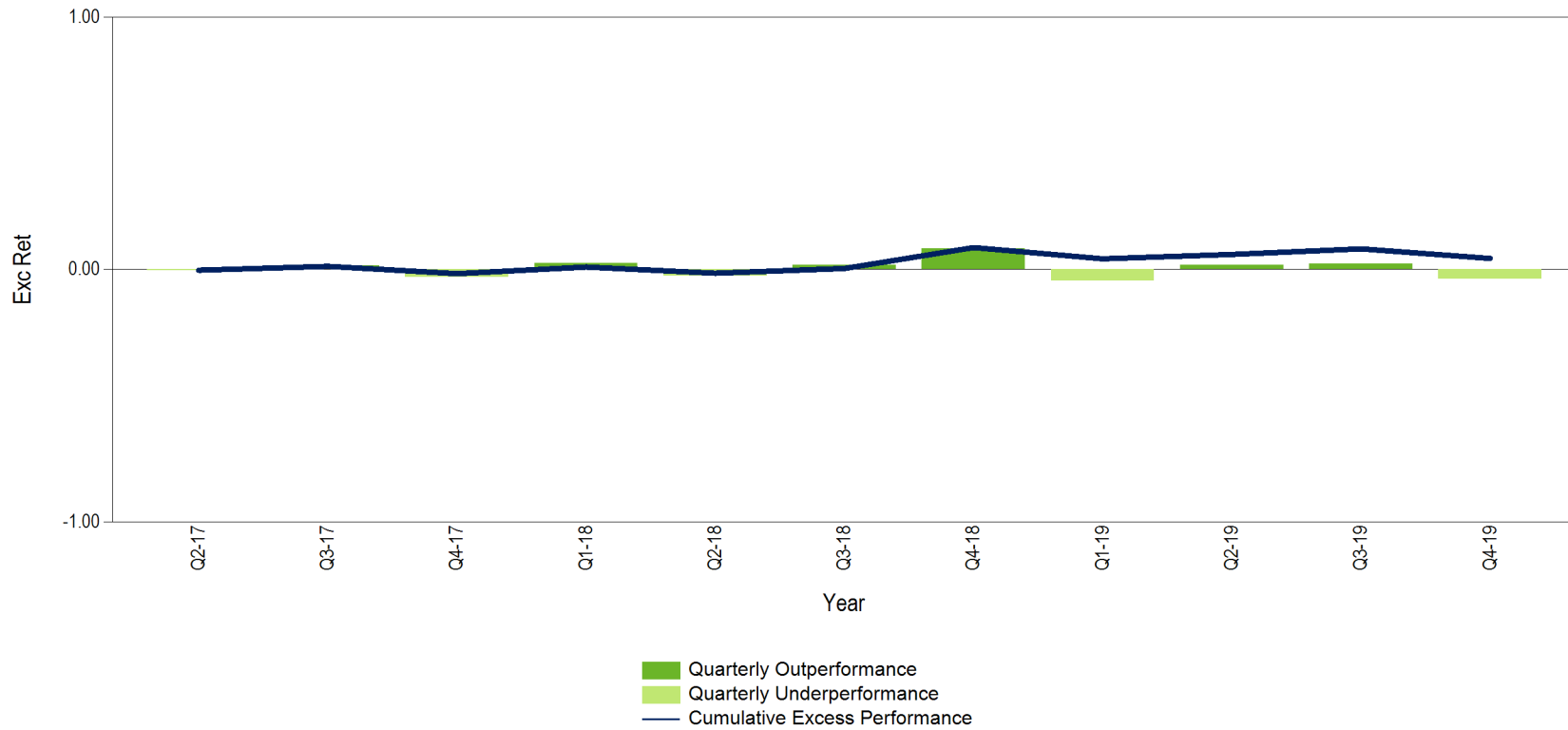


- Rhumbline Advisors Russell 1000 Growth
- ▲ Russell 1000 Growth
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# RHUMBLINE ADVISORS RUSSELL 2000

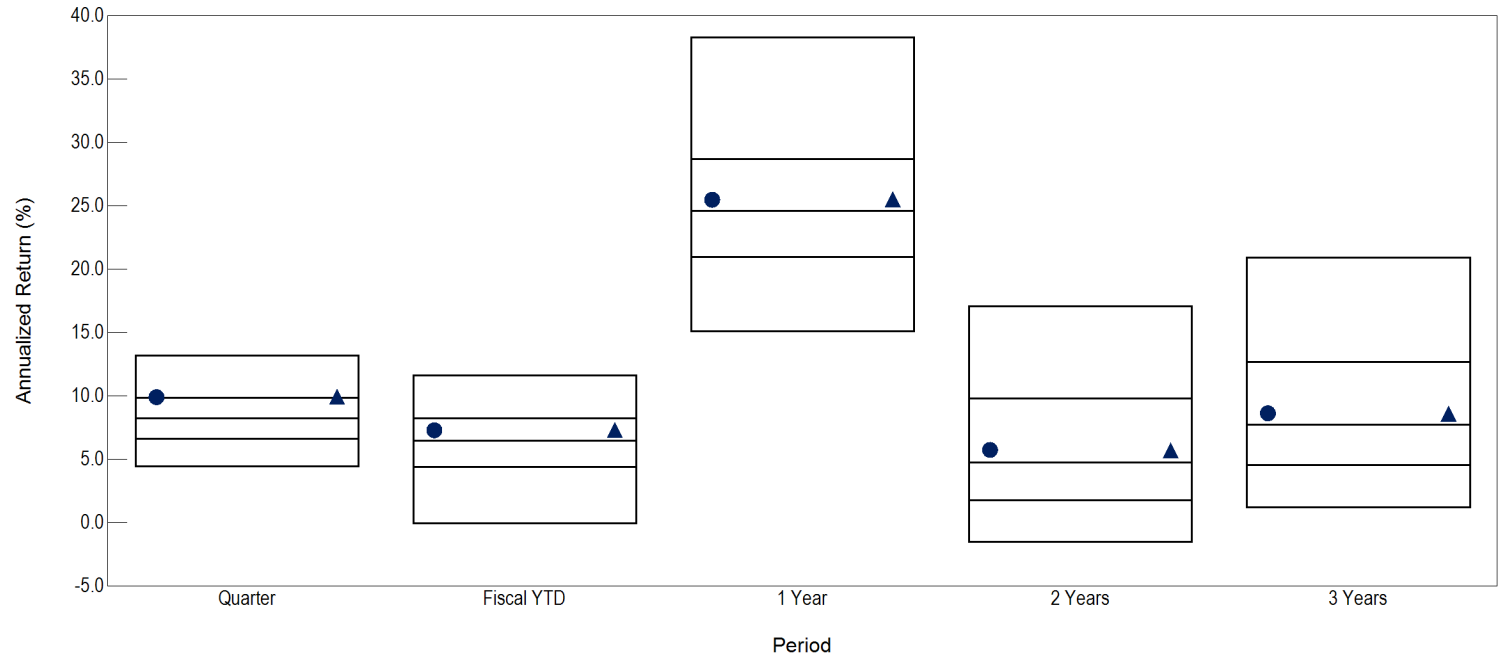
Quarterly and Cumulative Excess Performance





# RHUMBLINE ADVISORS RUSSELL 2000

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

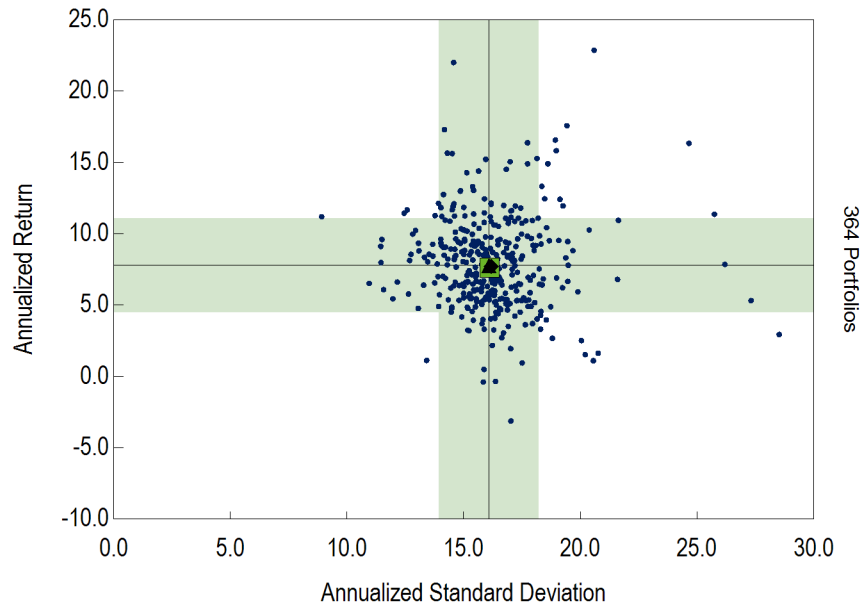


	Return (Rank)									
5th Percentile	13.20		11.64		38.30		17.05		20.89	
25th Percentile	9.89		8.27		28.73		9.84		12.73	
Median	8.26		6.50		24.68		4.82		7.78	
75th Percentile	6.65		4.47		21.03		1.81		4.58	
95th Percentile	4.47		0.00		15.14		-1.48		1.25	
# of Portfolios	395		395		395		392		385	
● Rhumbline Advisors Russell 2000	9.90	(25)	7.29	(41)	25.48	(45)	5.74	(45)	8.62	(46)
▲ Russell 2000	9.94	(25)	7.30	(41)	25.52	(45)	5.69	(45)	8.59	(46)

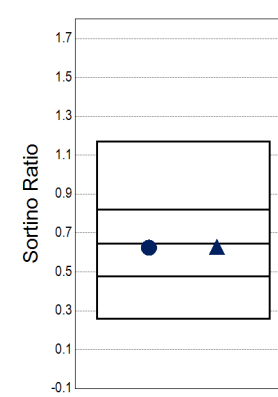
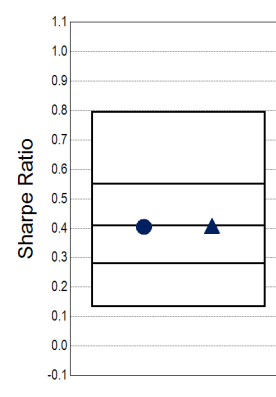
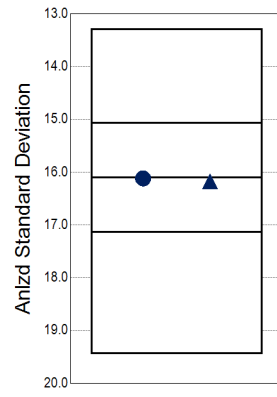
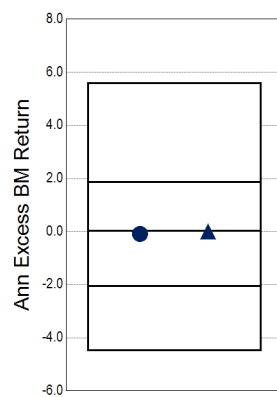
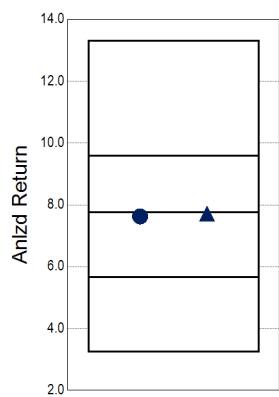
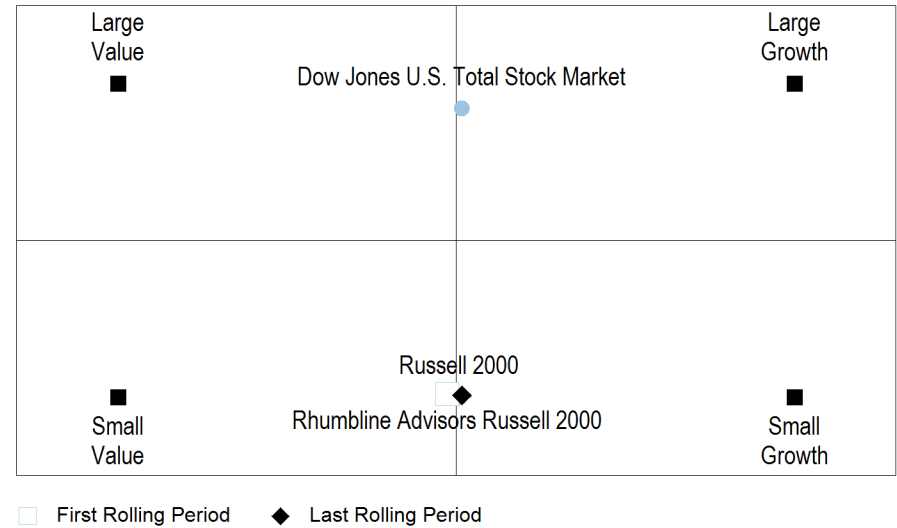


# RHUMBLINE ADVISORS RUSSELL 2000

Since Inception Risk Return



Since Inception Style Map

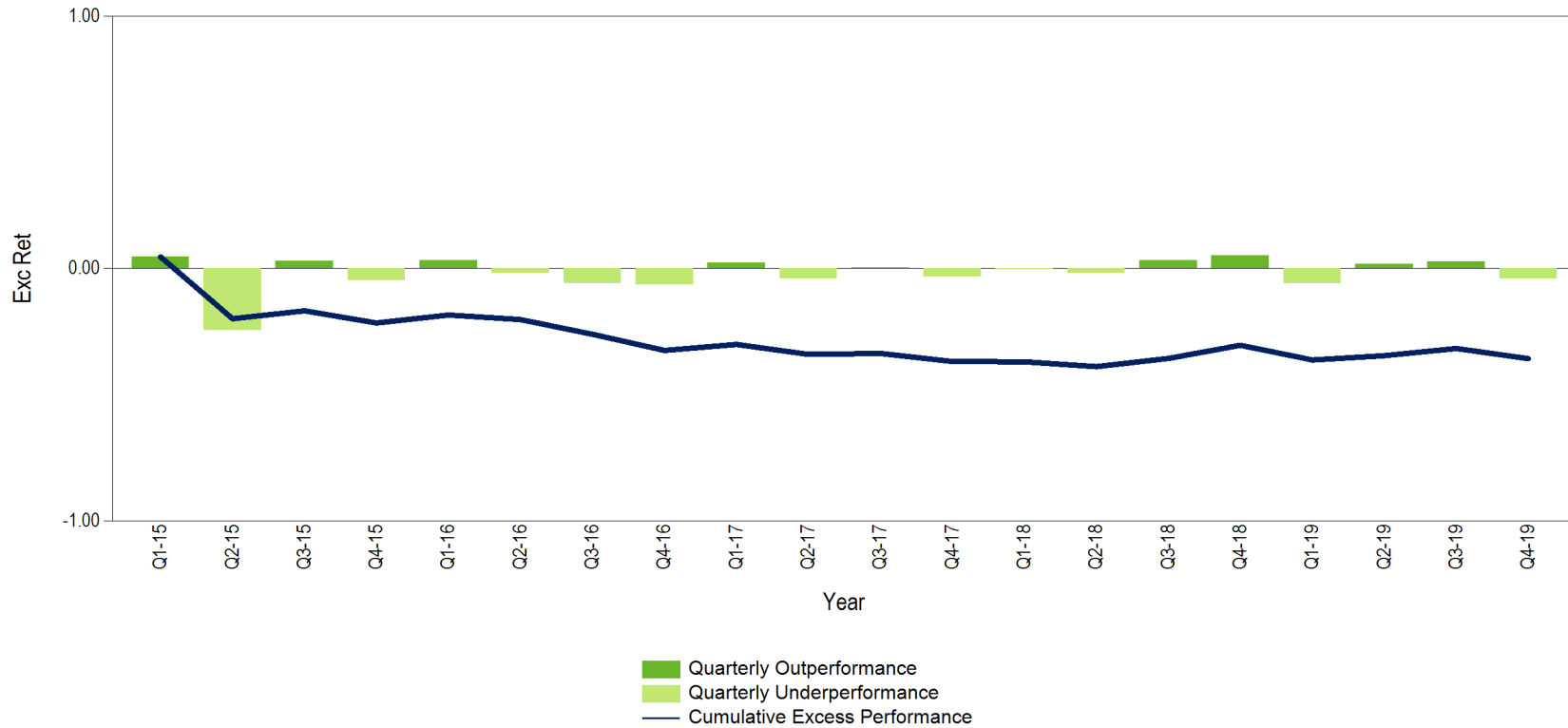


- Rhumblin Advisors Russell 2000
- ▲ Russell 2000
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



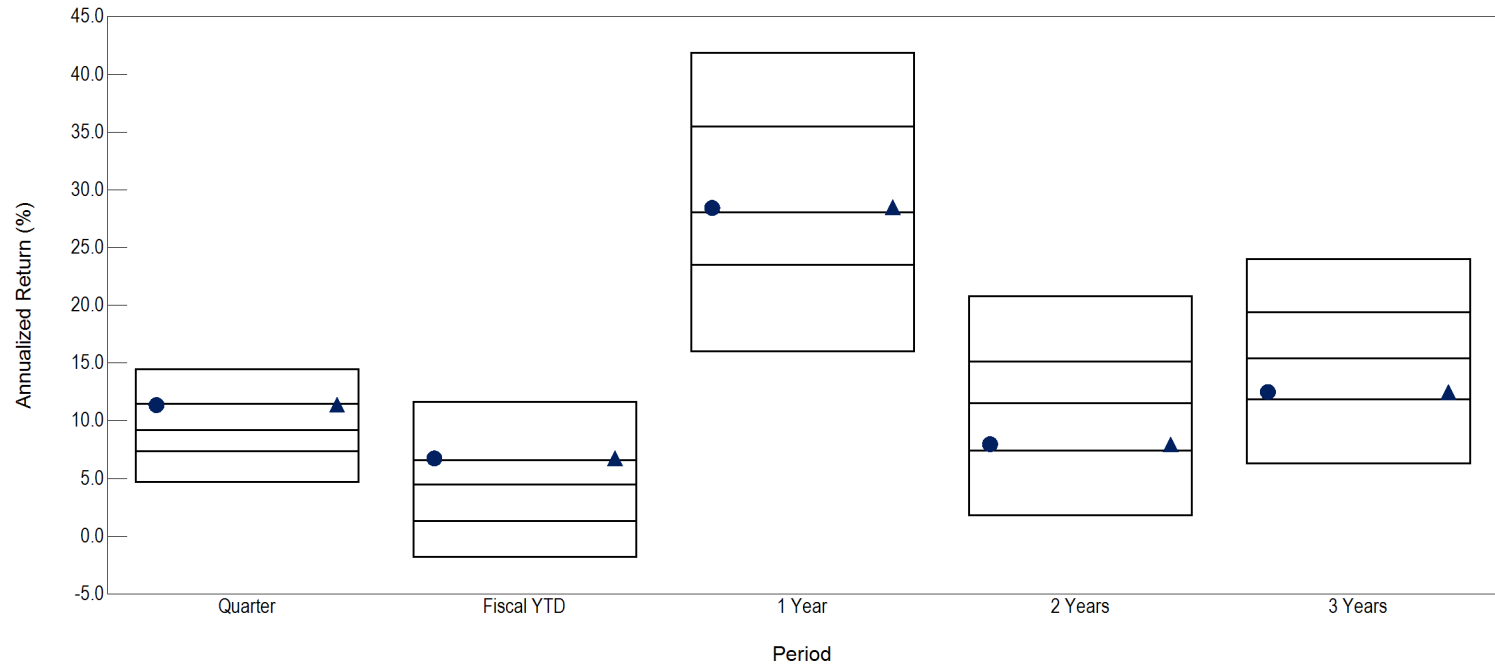
# RHUMBLINE ADVISORS RUSSELL 2000 GROWTH

Quarterly and Cumulative Excess Performance



# RHUMBLINE ADVISORS RUSSELL 2000 GROWTH

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

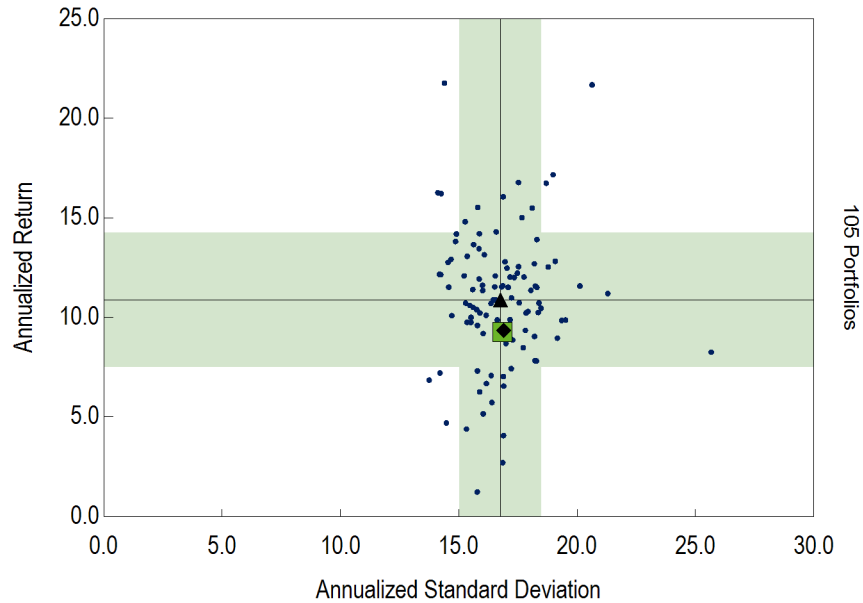


	Return (Rank)									
5th Percentile	14.48		11.64		41.88		20.76		24.02	
25th Percentile	11.52		6.62		35.52		15.20		19.45	
Median	9.26		4.51		28.09		11.58		15.46	
75th Percentile	7.42		1.36		23.54		7.45		11.91	
95th Percentile	4.73		-1.73		16.06		1.90		6.36	
# of Portfolios	117		117		117		116		115	
● Rhumbline Advisors Russell 2000 Growth	11.35	(26)	6.74	(25)	28.43	(49)	7.97	(74)	12.49	(73)
▲ Russell 2000 Growth	11.39	(26)	6.75	(25)	28.48	(49)	7.95	(74)	12.49	(73)

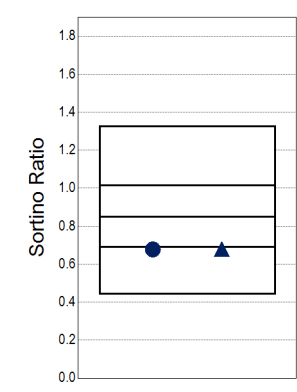
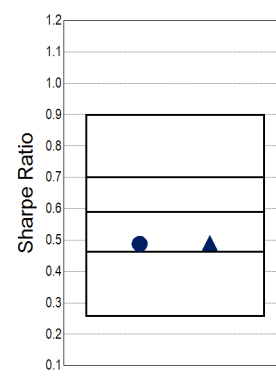
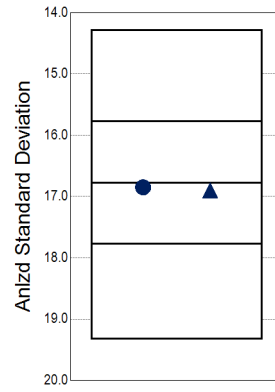
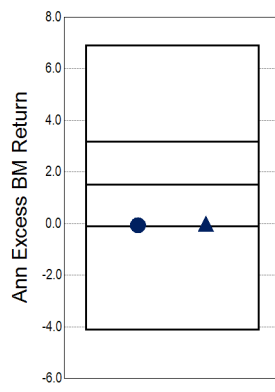
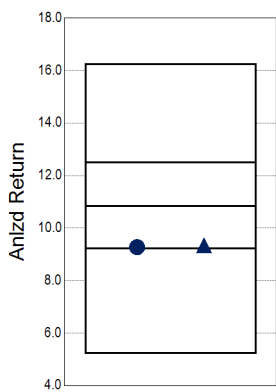
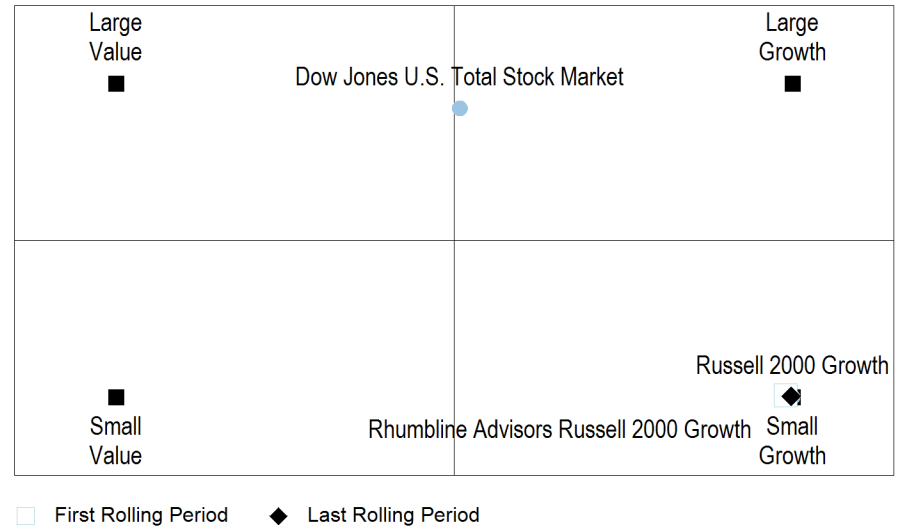


# RHUMBLINE ADVISORS RUSSELL 2000 GROWTH

Since Inception Risk Return



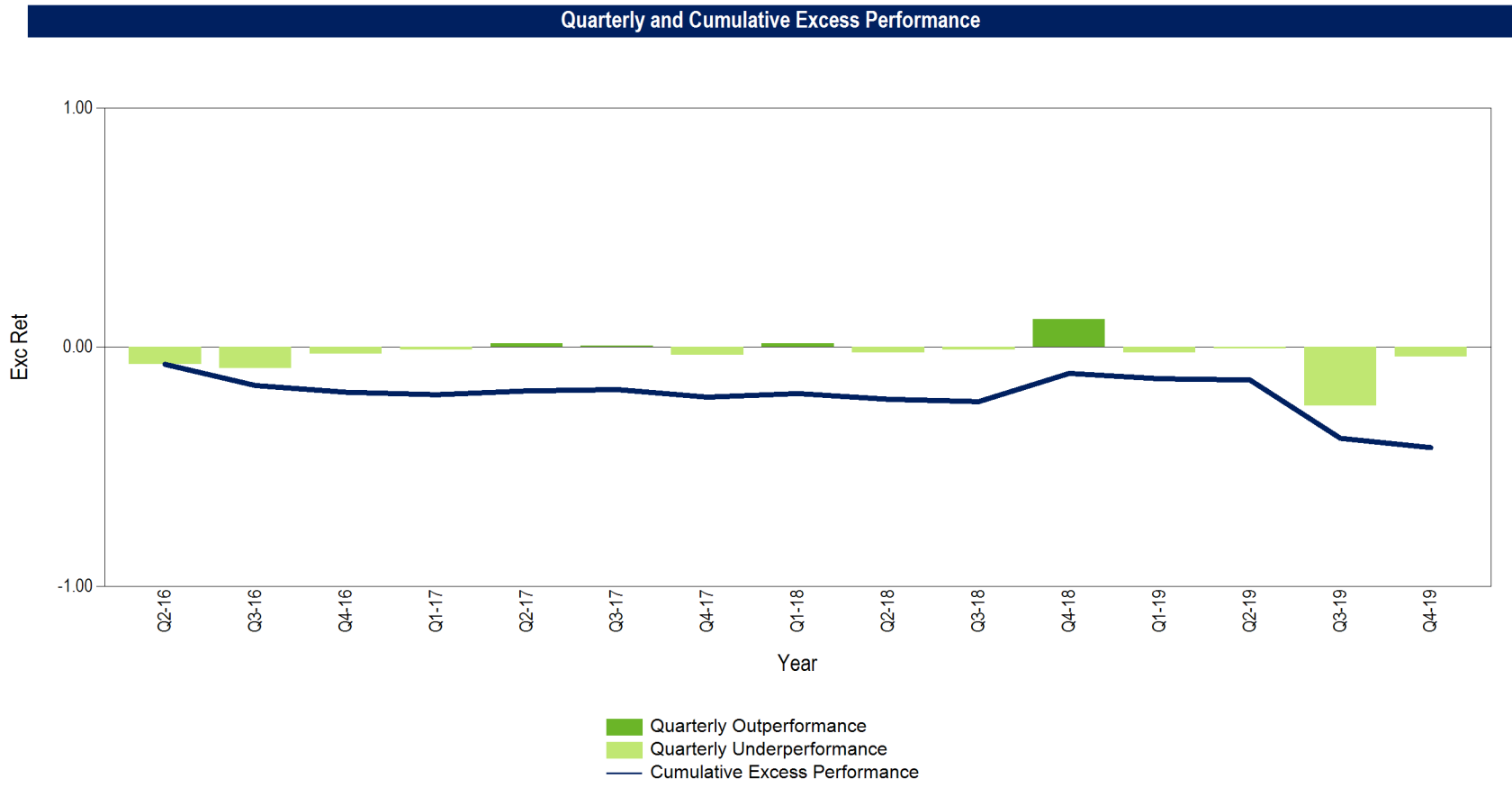
Since Inception Style Map



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

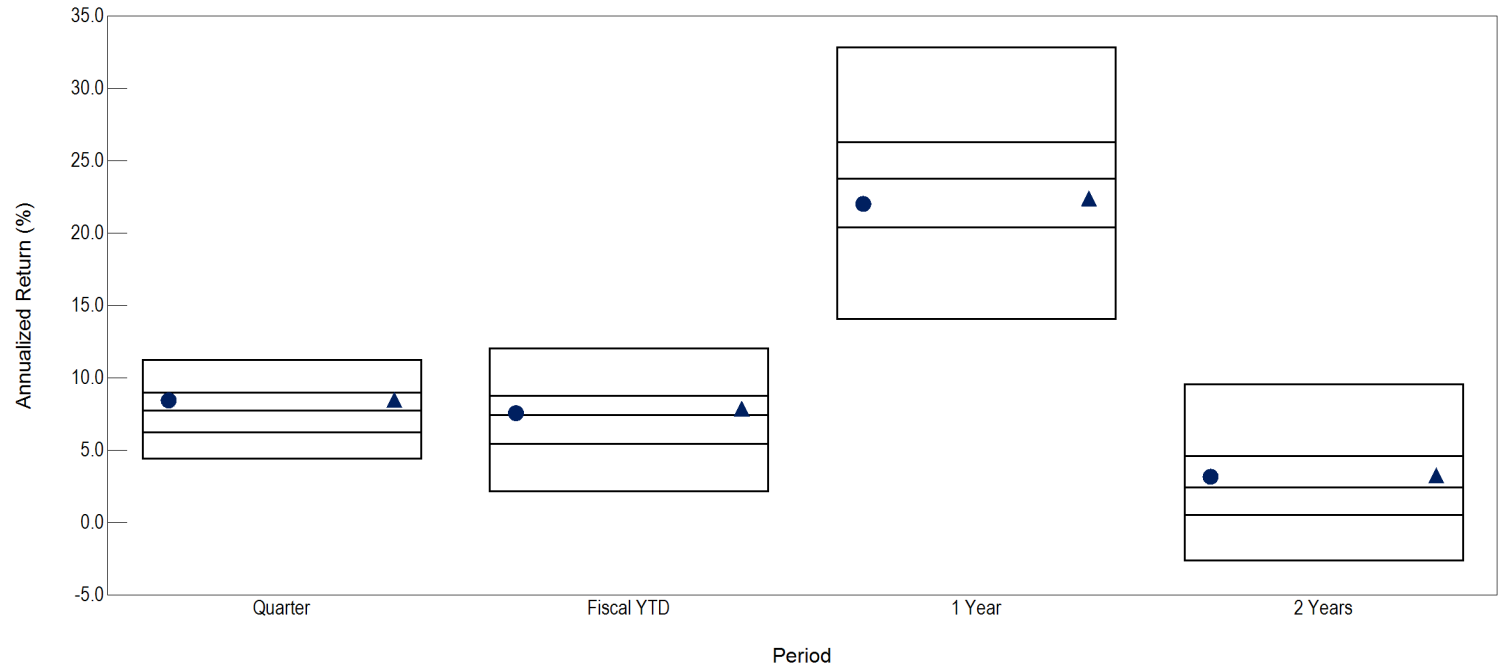


# RHUMBLINE ADVISORS RUSSELL 2000 VALUE



# RHUMBLINE ADVISORS RUSSELL 2000 VALUE

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

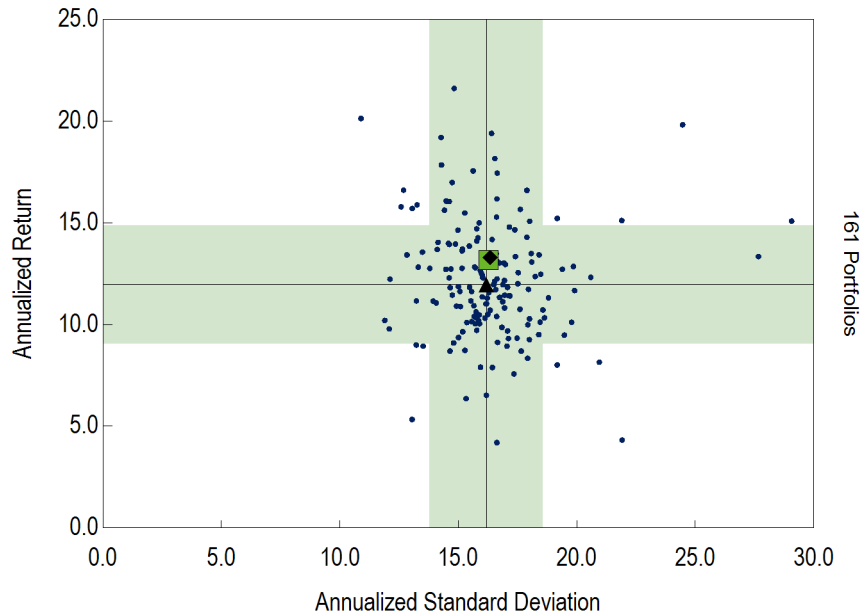


	Return (Rank)							
5th Percentile	11.24	12.05	32.83	9.54				
25th Percentile	9.01	8.81	26.33	4.64				
Median	7.80	7.48	23.79	2.48				
75th Percentile	6.31	5.51	20.44	0.57				
95th Percentile	4.47	2.23	14.11	-2.56				
# of Portfolios	169	169	169	167				
● Rhumbline Advisors Russell 2000 Value	8.45	(33)	7.57	(49)	22.02	(64)	3.18	(39)
▲ Russell 2000 Value	8.49	(33)	7.87	(41)	22.39	(60)	3.27	(38)

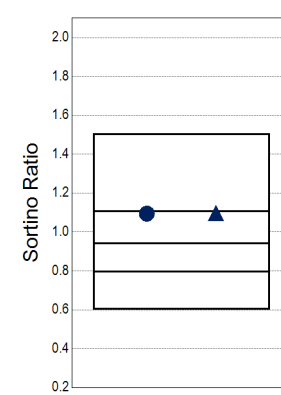
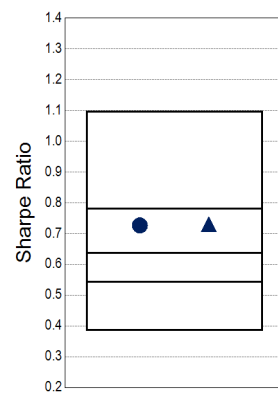
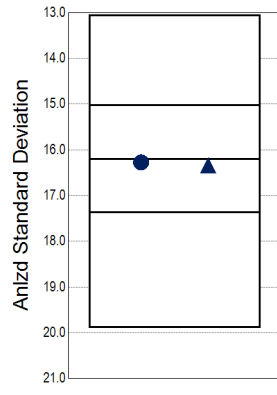
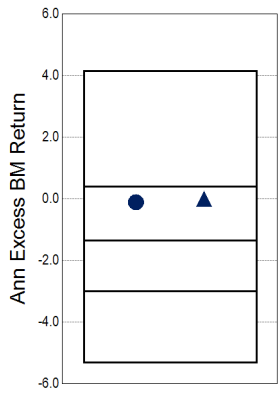
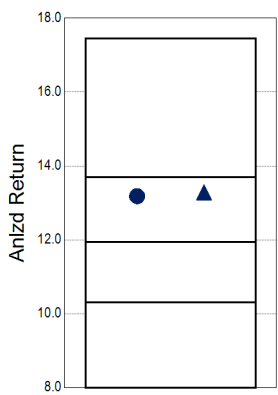
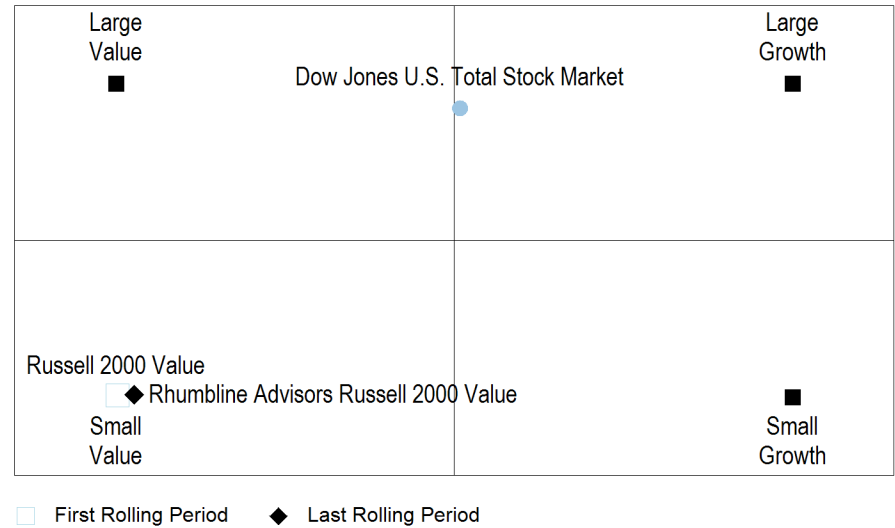


# RHUMBLINE ADVISORS RUSSELL 2000 VALUE

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





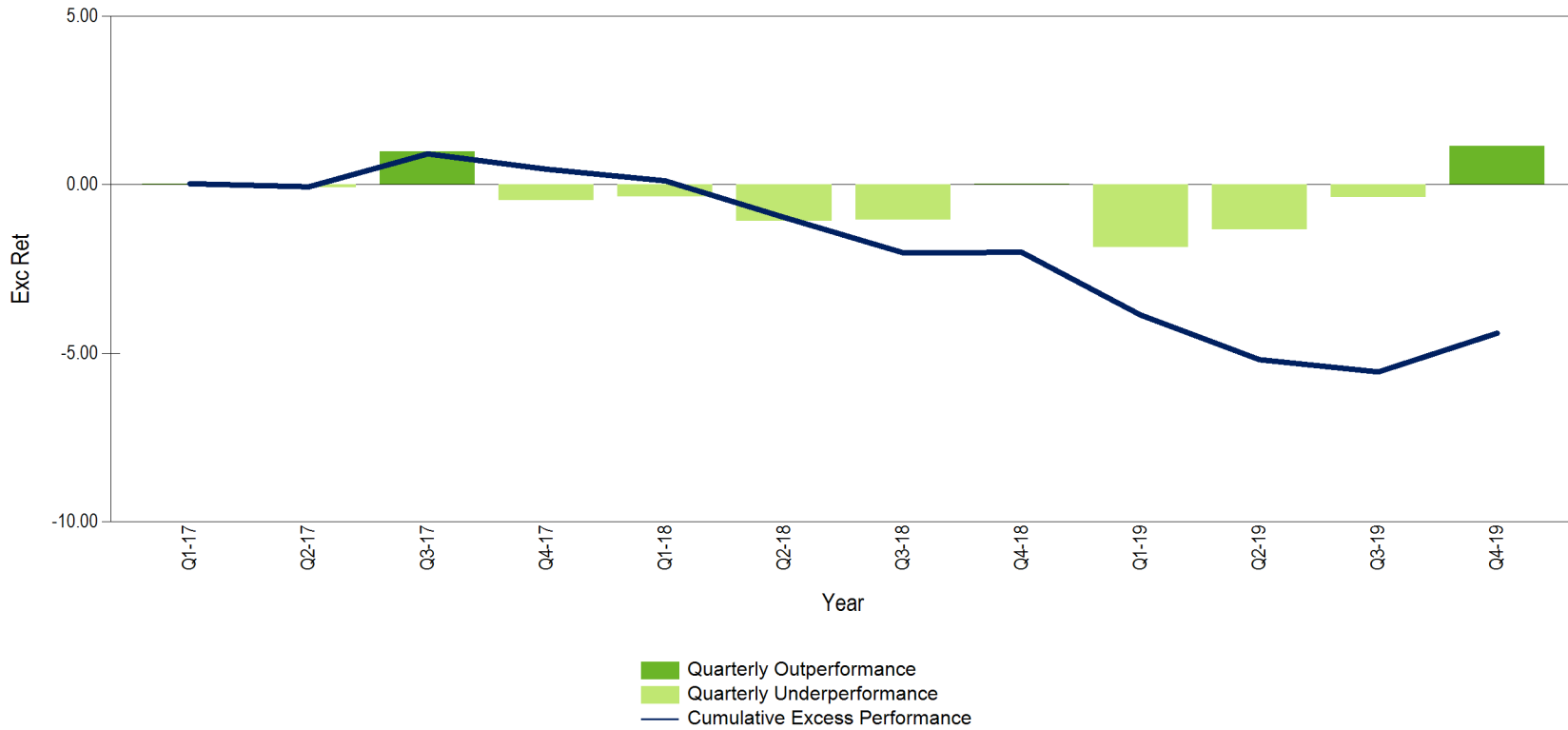
# **NON-U.S. EQUITY MANAGER PERFORMANCE**

NEPC, LLC

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# AQR CAPITAL

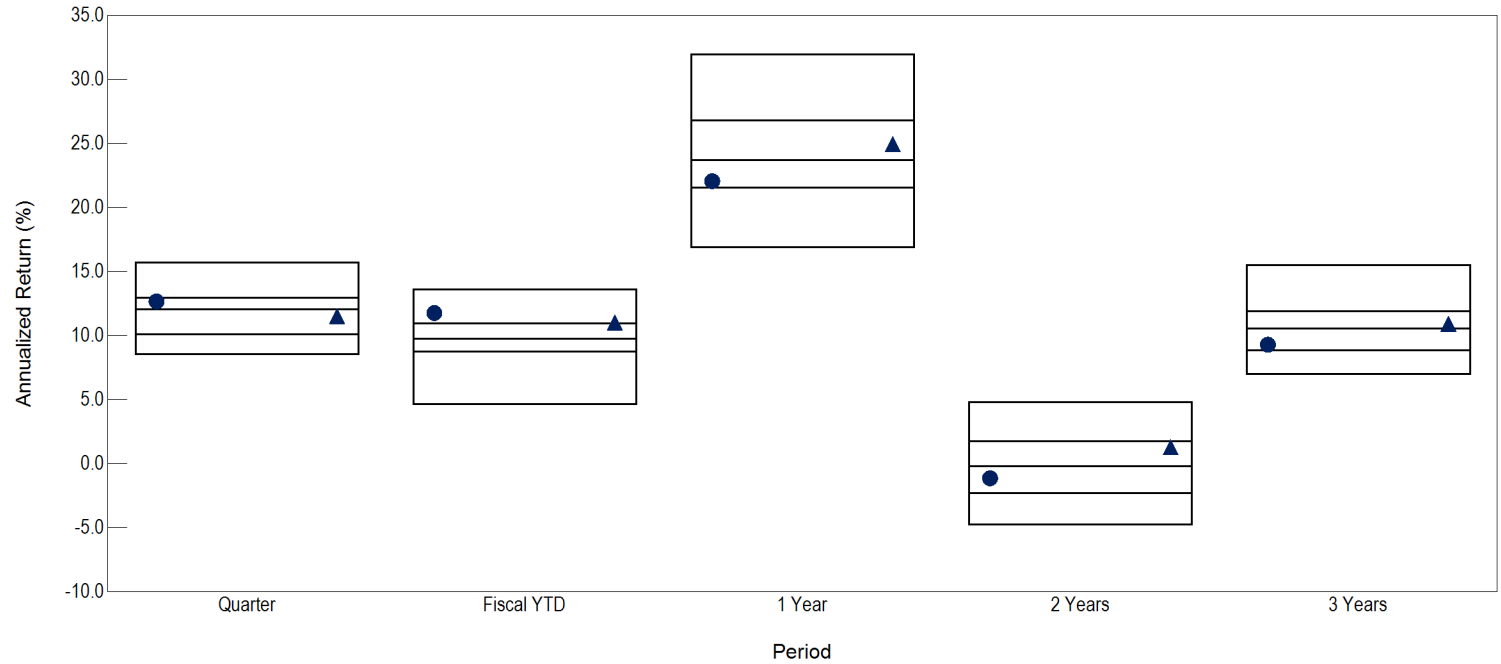
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## AQR CAPITAL

AQR Capital vs. eV EAFE Small Cap Equity Net



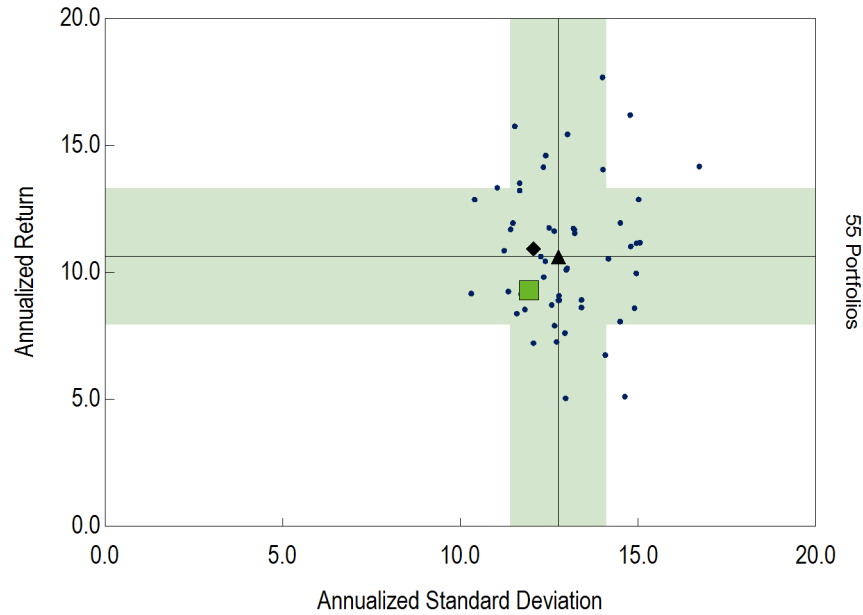
	Return (Rank)									
5th Percentile	15.72		13.60		31.99		4.82		15.53	
25th Percentile	13.00		11.02		26.87		1.81		11.94	
Median	12.10		9.81		23.76		-0.16		10.62	
75th Percentile	10.14		8.79		21.61		-2.22		8.89	
95th Percentile	8.59		4.72		16.97		-4.68		7.06	
# of Portfolios	58		57		57		55		55	
● AQR Capital	12.67	(32)	11.77	(18)	22.06	(69)	-1.13	(60)	9.30	(63)
▲ MSCI EAFE Small Cap	11.52	(61)	11.03	(25)	24.96	(39)	1.30	(28)	10.92	(47)



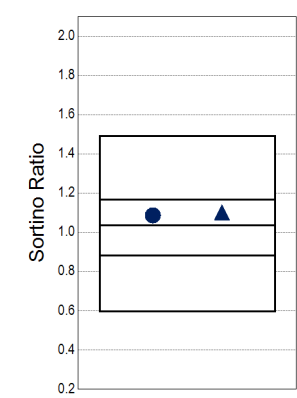
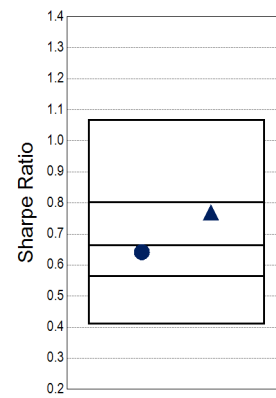
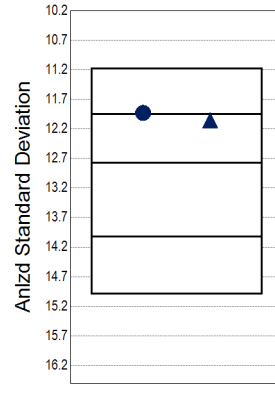
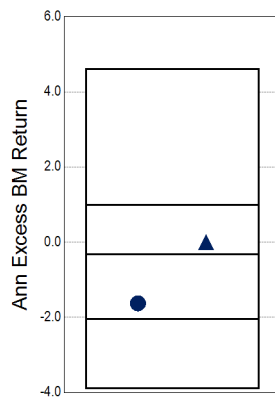
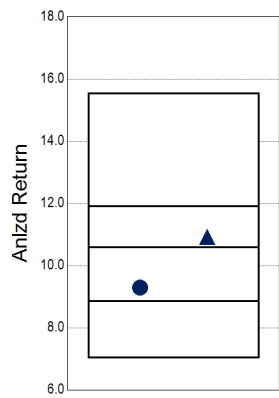
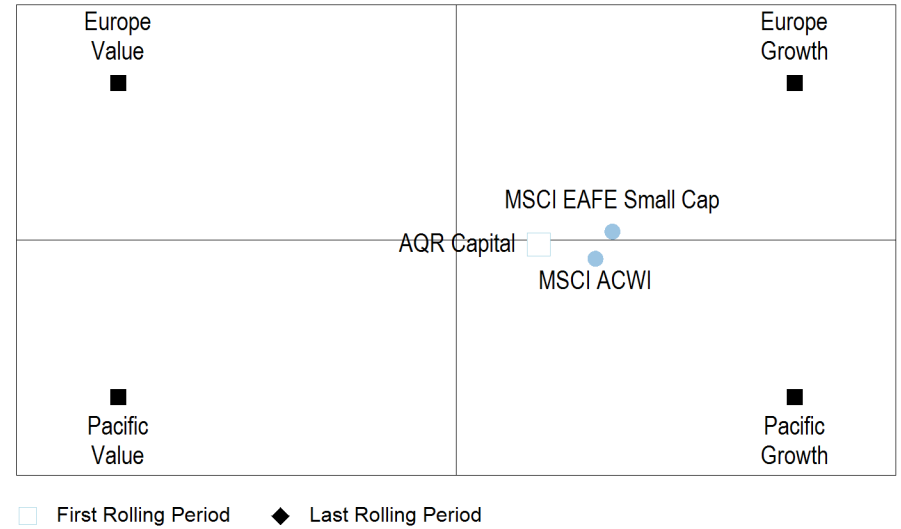
# Los Angeles City Employees' Retirement System

## AQR CAPITAL

3 Year Risk Return



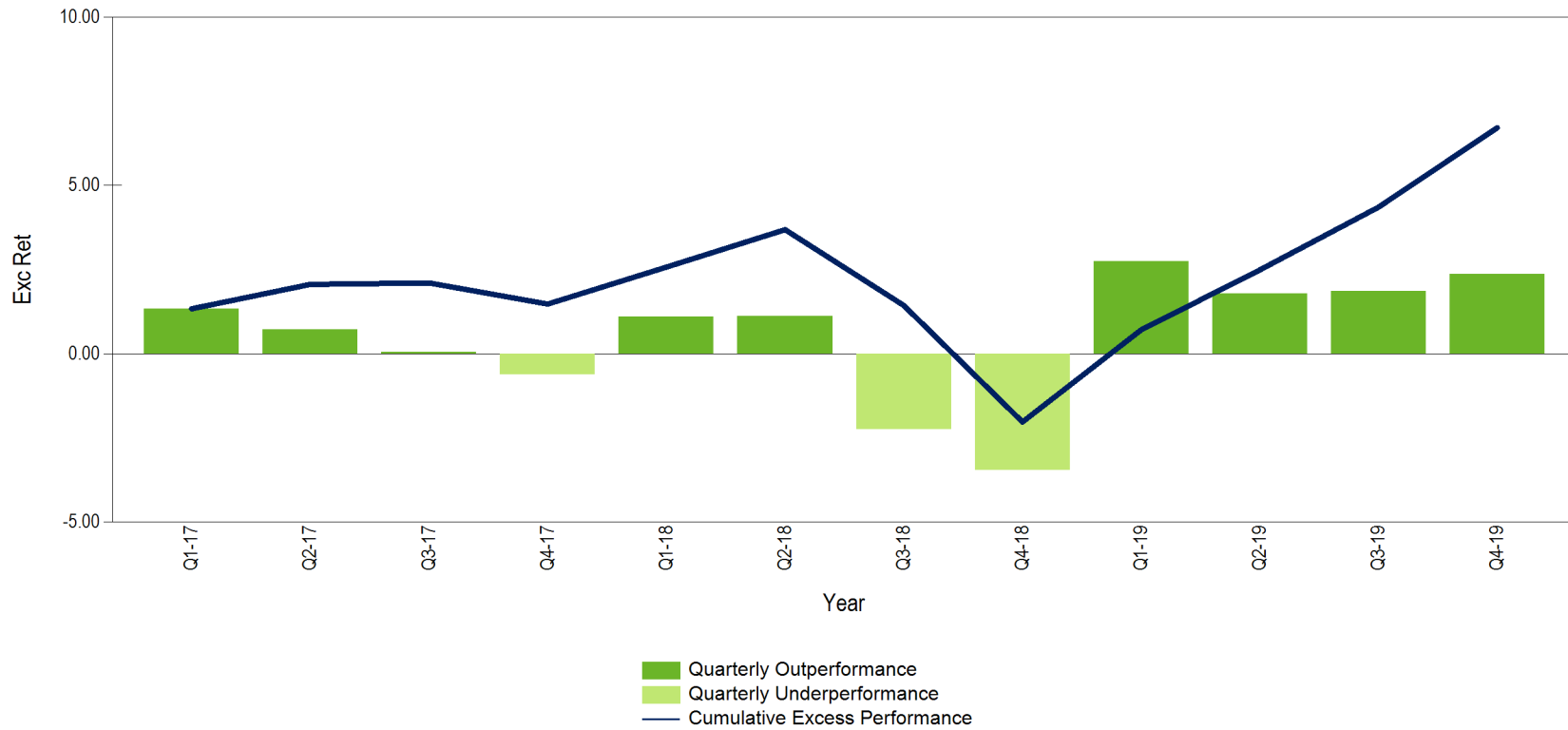
3 Year Style Map



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



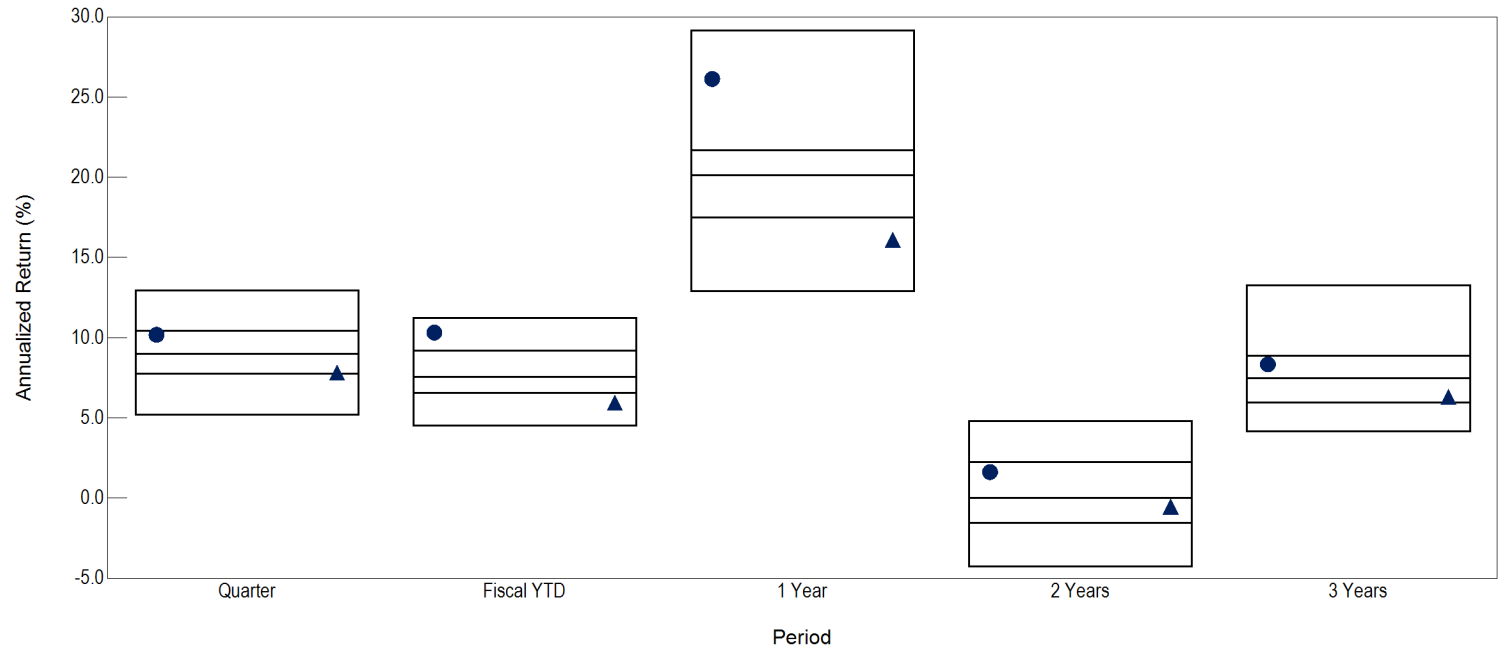
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## BARROW HANLEY

Barrow Hanley vs. eV EAFE Value Equity Net



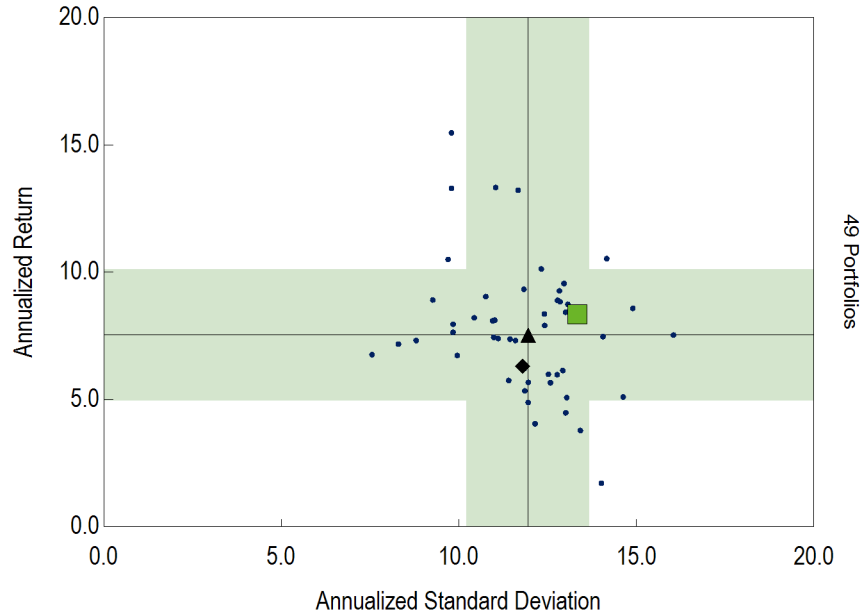
	Return (Rank)									
5th Percentile	12.94		11.24		29.16		4.80		13.27	
25th Percentile	10.45		9.22		21.73		2.30		8.89	
Median	9.04		7.58		20.15		0.05		7.53	
75th Percentile	7.78		6.61		17.53		-1.49		5.99	
95th Percentile	5.23		4.54		12.96		-4.21		4.21	
# of Portfolios	54		54		54		51		49	
● Barrow Hanley	10.18	(30)	10.31	(12)	26.12	(10)	1.62	(34)	8.33	(36)
▲ MSCI EAFE Value	7.82	(75)	5.94	(87)	16.09	(86)	-0.54	(64)	6.31	(71)



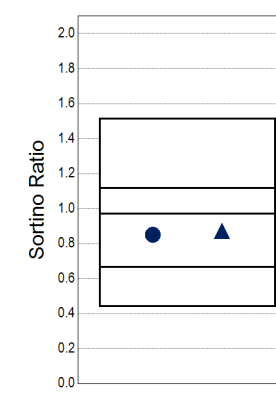
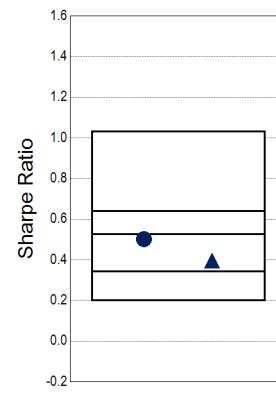
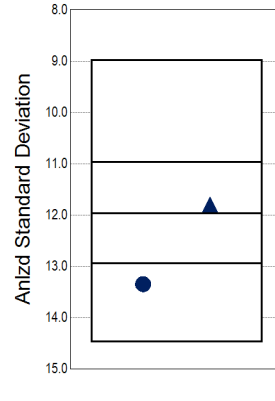
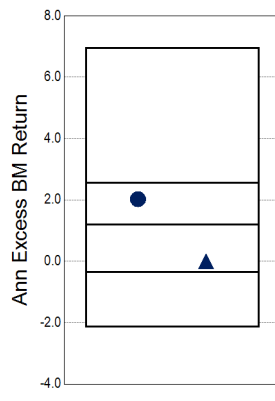
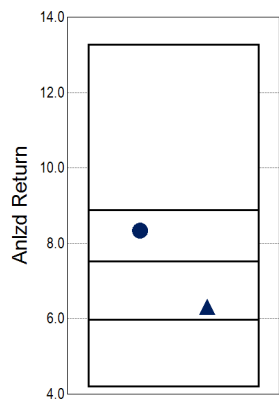
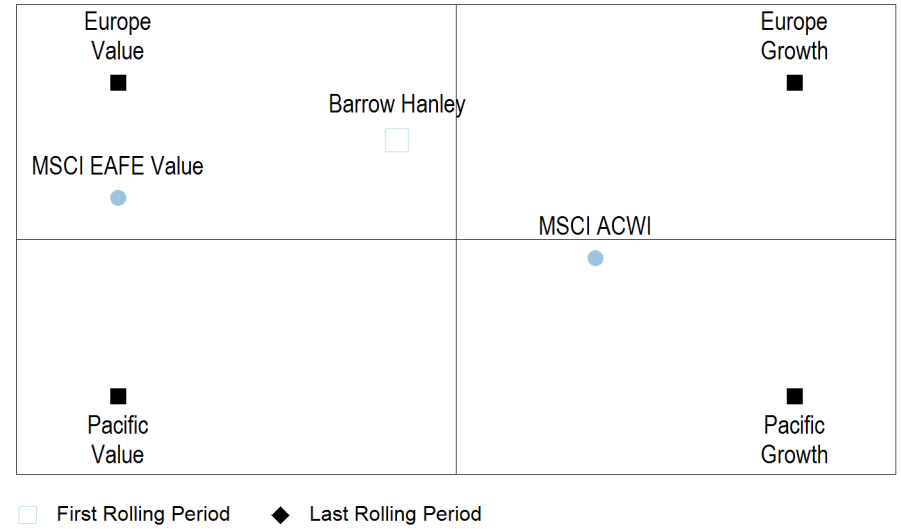
# Los Angeles City Employees' Retirement System

## BARROW HANLEY

3 Year Risk Return



3 Year Style Map

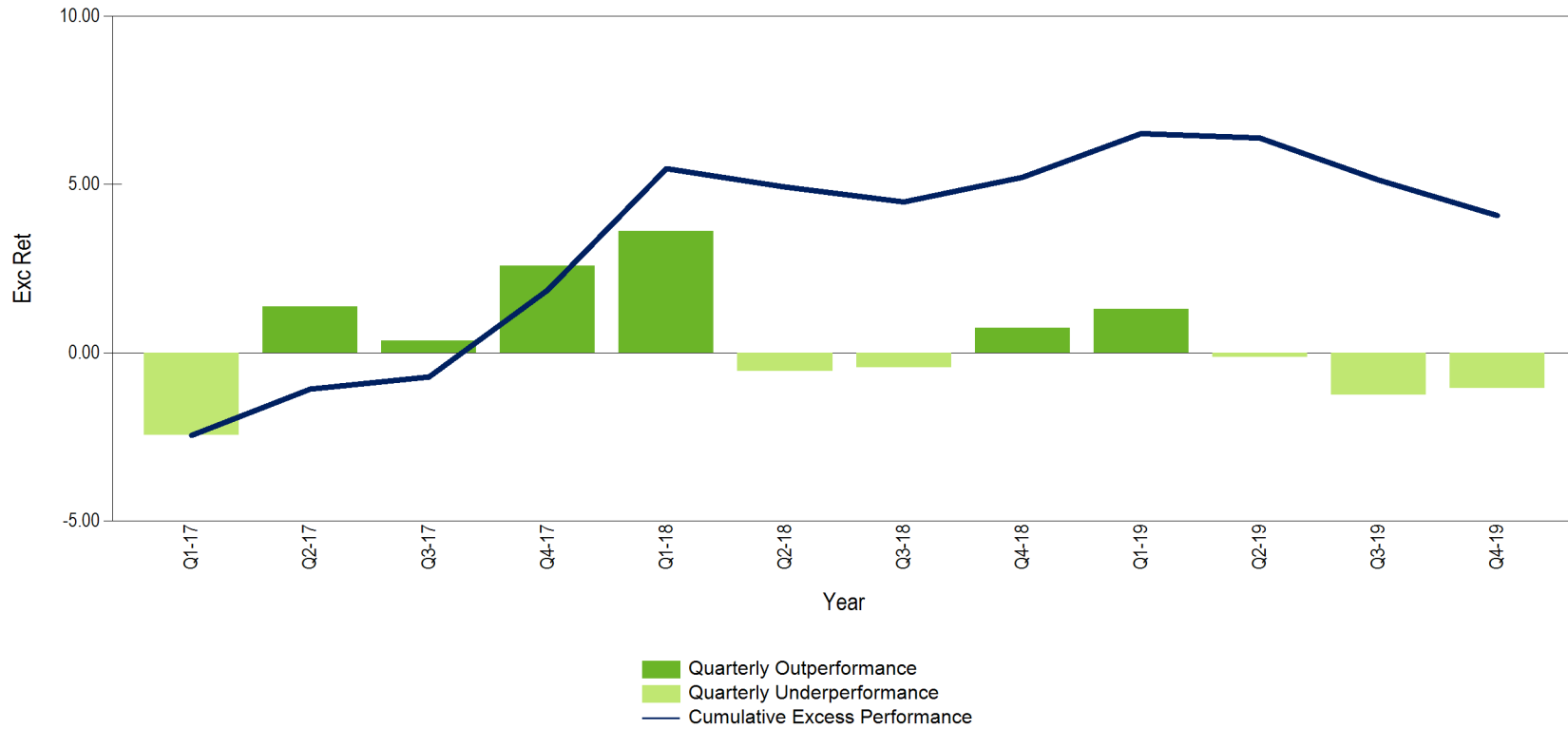


- Barrow Hanley
- ▲ MSCI EAFE Value
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# LAZARD ASSET MANAGEMENT

Quarterly and Cumulative Excess Performance

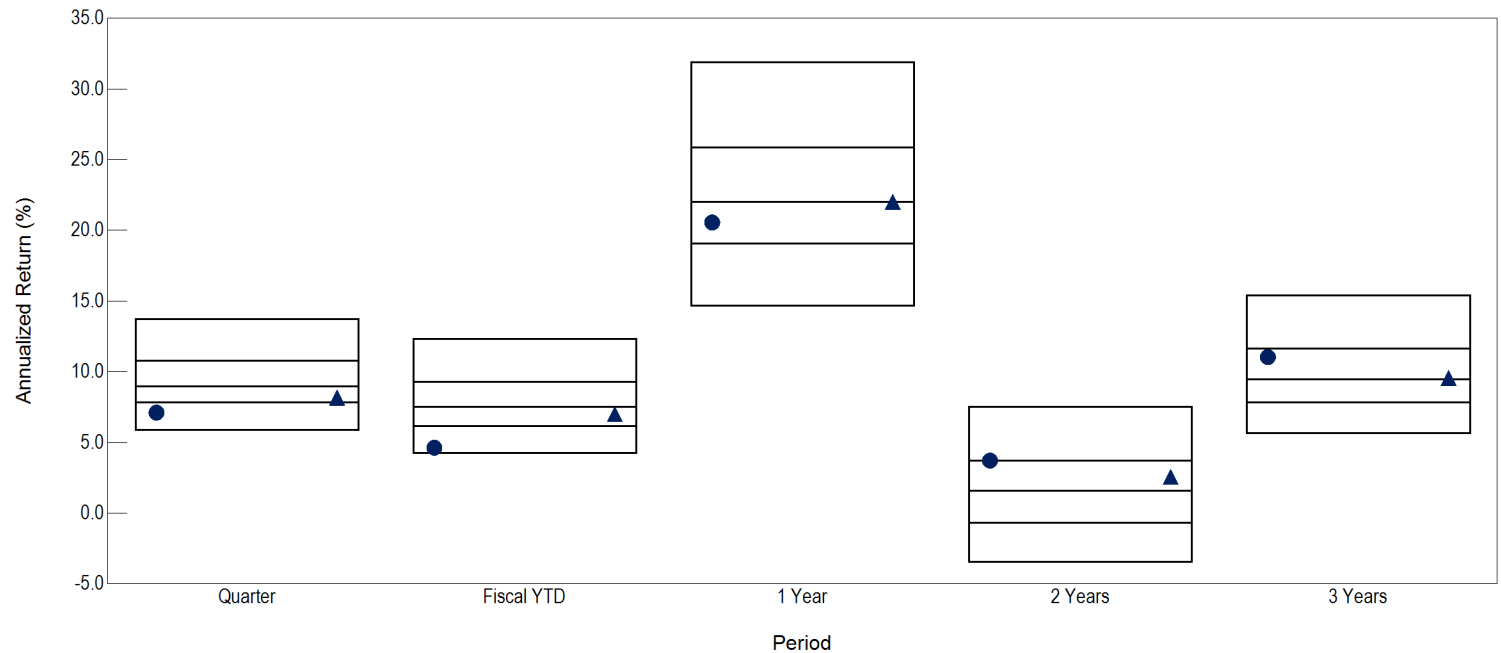




# Los Angeles City Employees' Retirement System

## LAZARD ASSET MANAGEMENT

Lazard Asset Management vs. eV All EAFE Equity Net

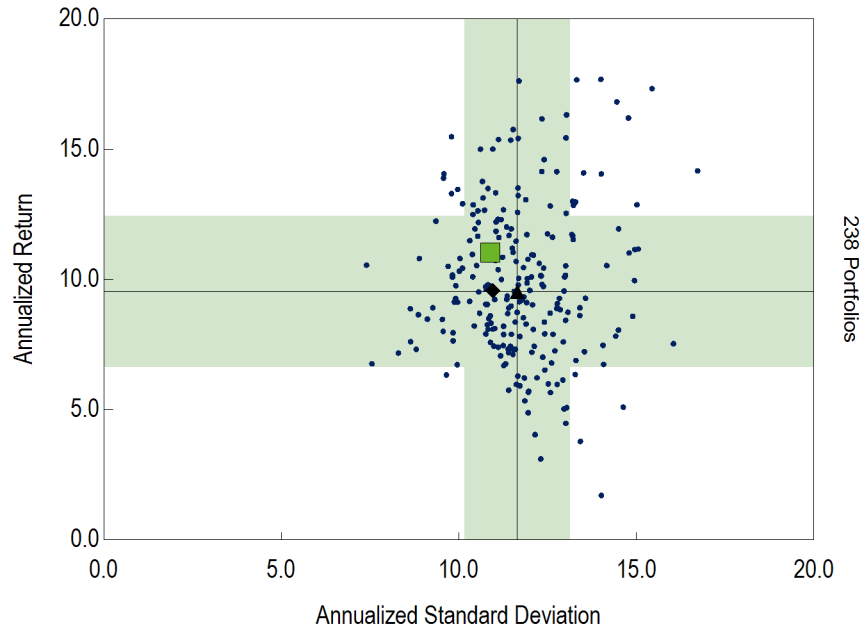


	Return (Rank)									
5th Percentile	13.71		12.34		31.88		7.52		15.38	
25th Percentile	10.82		9.31		25.90		3.76		11.69	
Median	9.03		7.57		22.07		1.65		9.53	
75th Percentile	7.89		6.20		19.10		-0.61		7.89	
95th Percentile	5.92		4.28		14.74		-3.40		5.70	
# of Portfolios	249		247		247		242		238	
● Lazard Asset Management	7.11	(88)	4.63	(94)	20.56	(65)	3.72	(26)	11.03	(31)
▲ MSCI EAFE	8.17	(69)	7.01	(63)	22.01	(51)	2.56	(40)	9.56	(50)

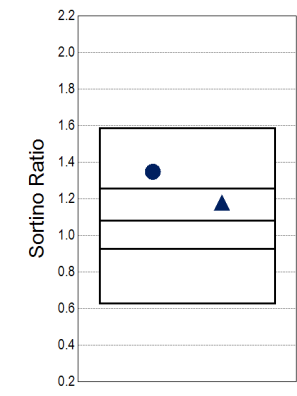
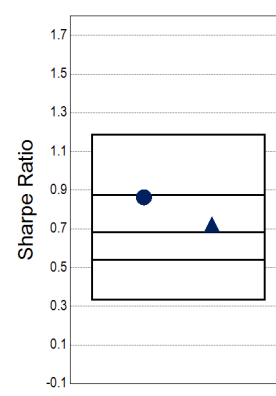
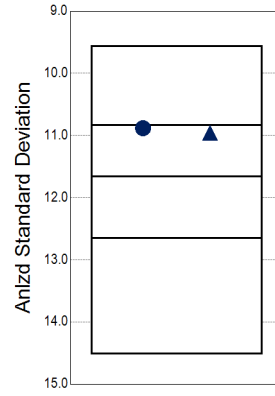
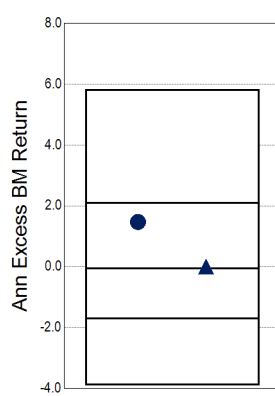
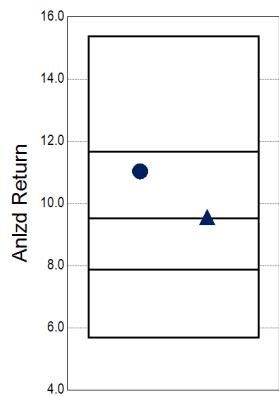
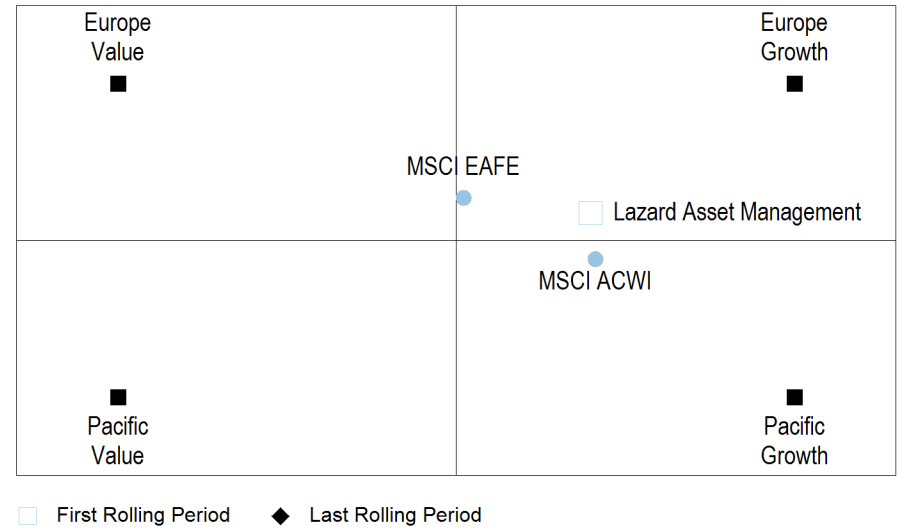


# LAZARD ASSET MANAGEMENT

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

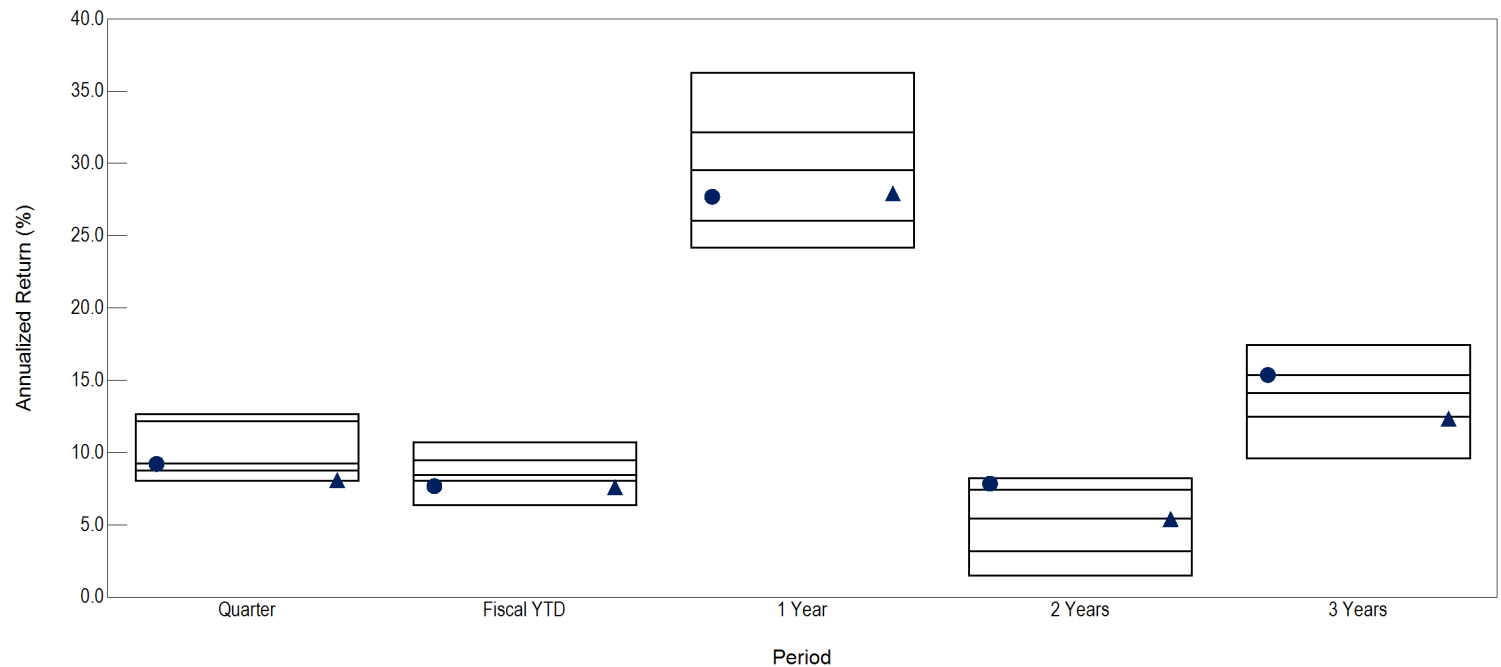
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## MFS INSTITUTIONAL ADVISORS

MFS Institutional Advisors vs. eV EAFE All Cap Growth Net

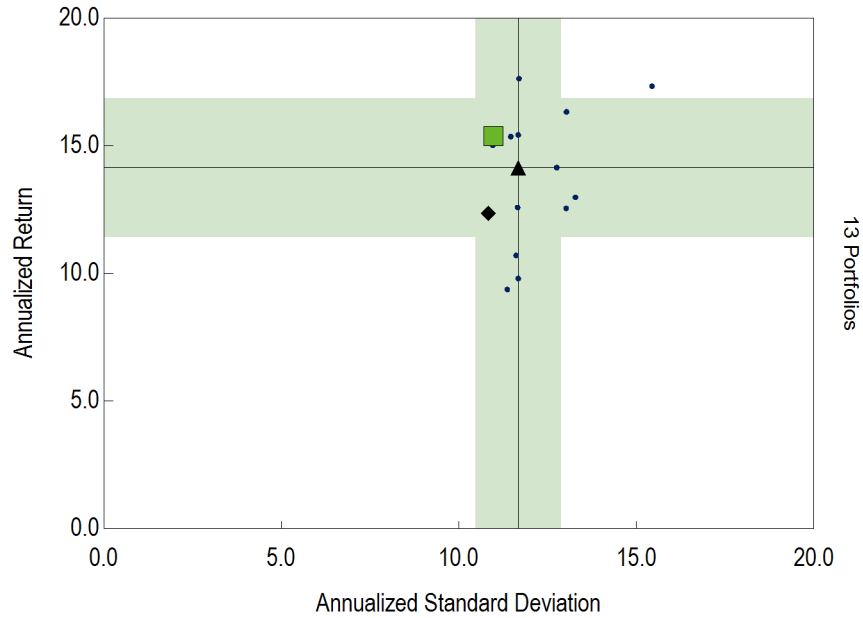


	Return (Rank)									
5th Percentile	12.66		10.70		36.28		8.23		17.44	
25th Percentile	12.19		9.49		32.20		7.45		15.42	
Median	9.27		8.48		29.56		5.47		14.14	
75th Percentile	8.81		8.07		26.09		3.22		12.54	
95th Percentile	8.10		6.41		24.19		1.53		9.62	
# of Portfolios	13		13		13		13		13	
● MFS Institutional Advisors	9.21	(53)	7.67	(78)	27.69	(64)	7.85	(8)	15.36	(32)
▲ MSCI World ex USA Growth NR USD	8.09	(96)	7.60	(79)	27.92	(64)	5.41	(53)	12.34	(76)

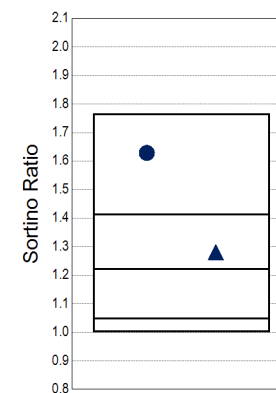
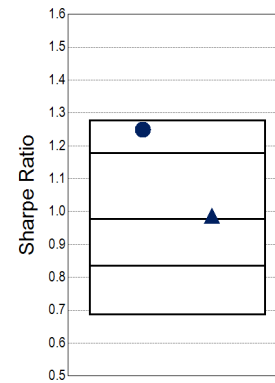
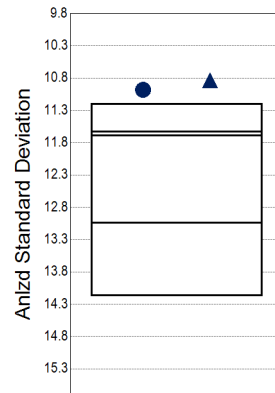
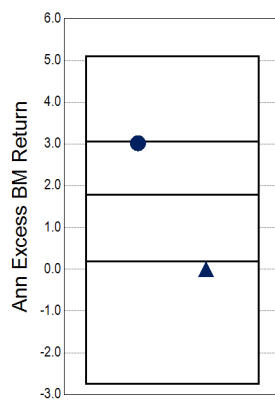
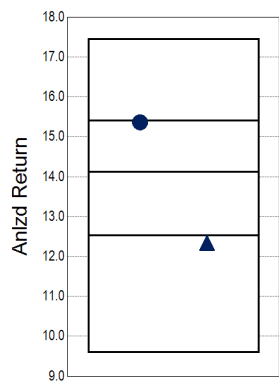
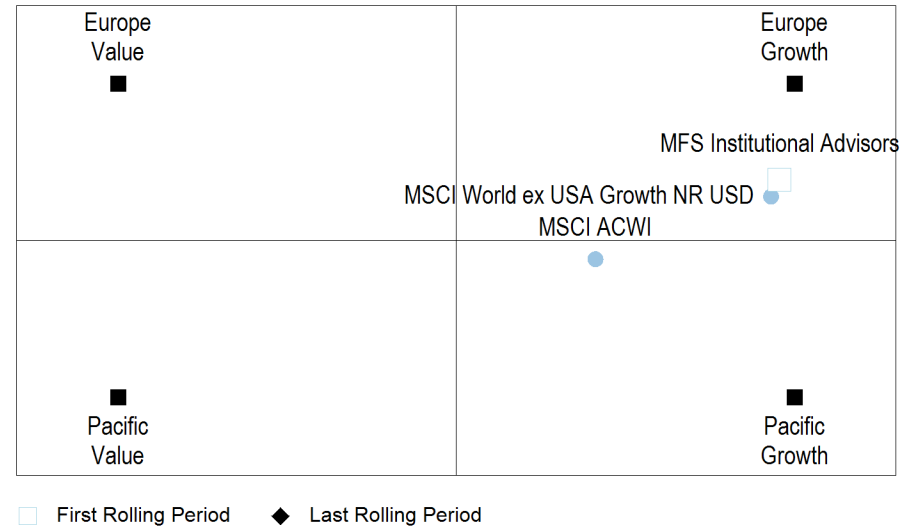


# MFS INSTITUTIONAL ADVISORS

3 Year Risk Return



3 Year Style Map



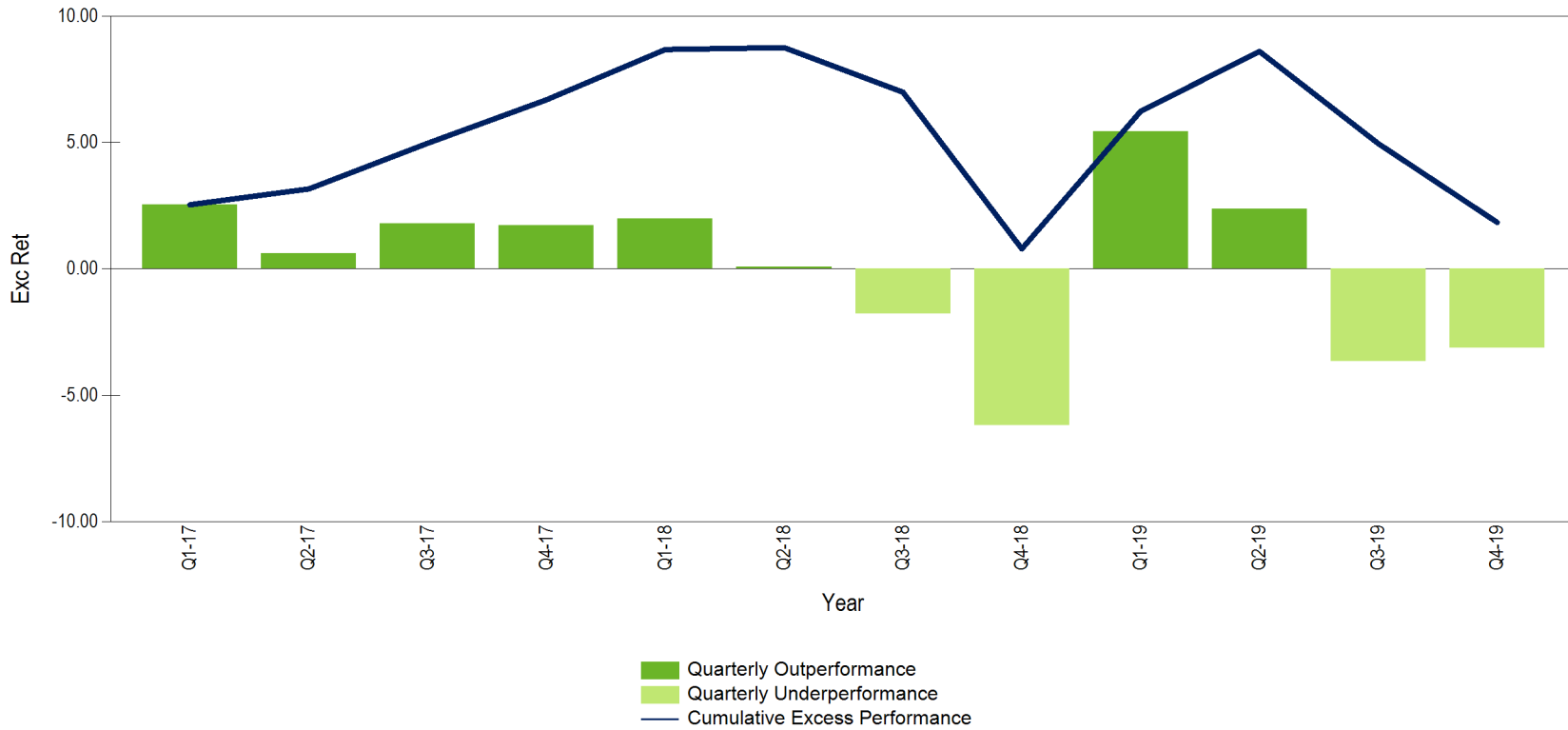
- MFS Institutional Advisors
- ▲ MSCI World ex USA Growth NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## OBERWEIS ASSET MGMT

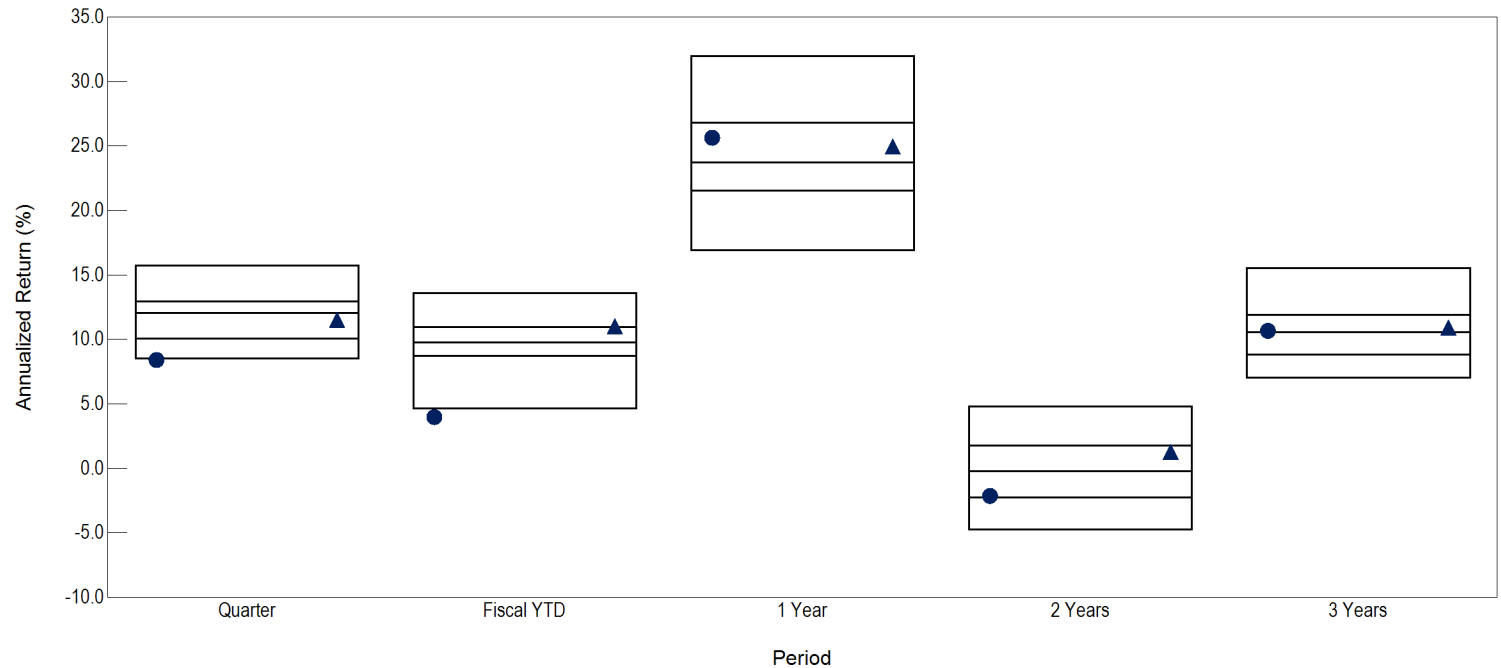
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## OBERWEIS ASSET MGMT

Oberweis Asset Mgmt vs. eV EAFE Small Cap Equity Net



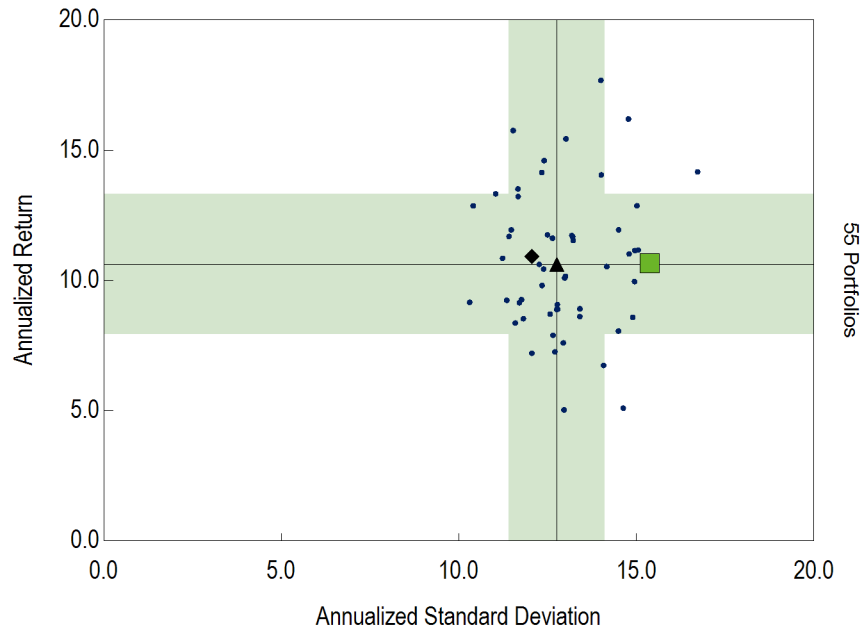
	Return (Rank)									
5th Percentile	15.72		13.60		31.99		4.82		15.53	
25th Percentile	13.00		11.02		26.87		1.81		11.94	
Median	12.10		9.81		23.76		-0.16		10.62	
75th Percentile	10.14		8.79		21.61		-2.22		8.89	
95th Percentile	8.59		4.72		16.97		-4.68		7.06	
# of Portfolios	58		57		57		55		55	
● Oberweis Asset Mgmt	8.41	(97)	3.98	(98)	25.64	(36)	-2.13	(74)	10.66	(50)
▲ MSCI EAFE Small Cap	11.52	(61)	11.03	(25)	24.96	(39)	1.30	(28)	10.92	(47)



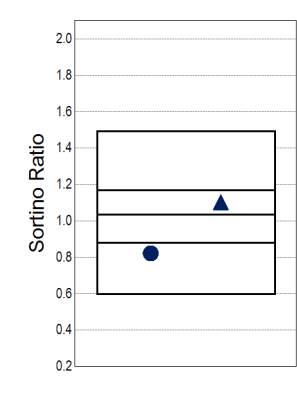
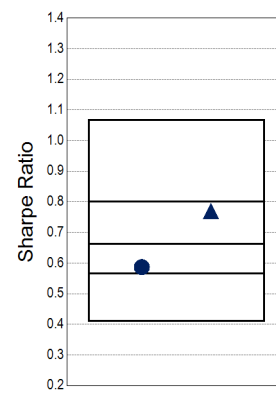
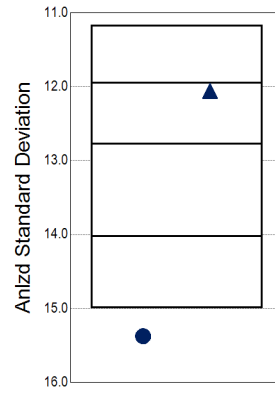
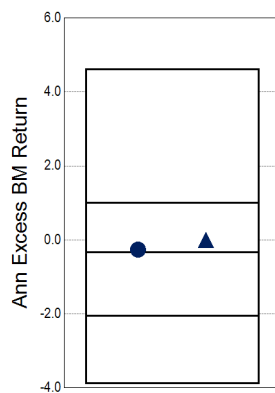
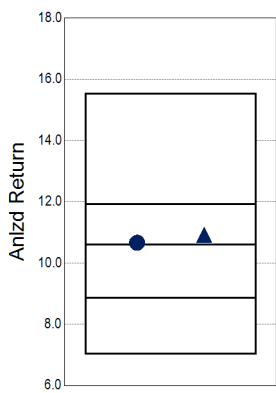
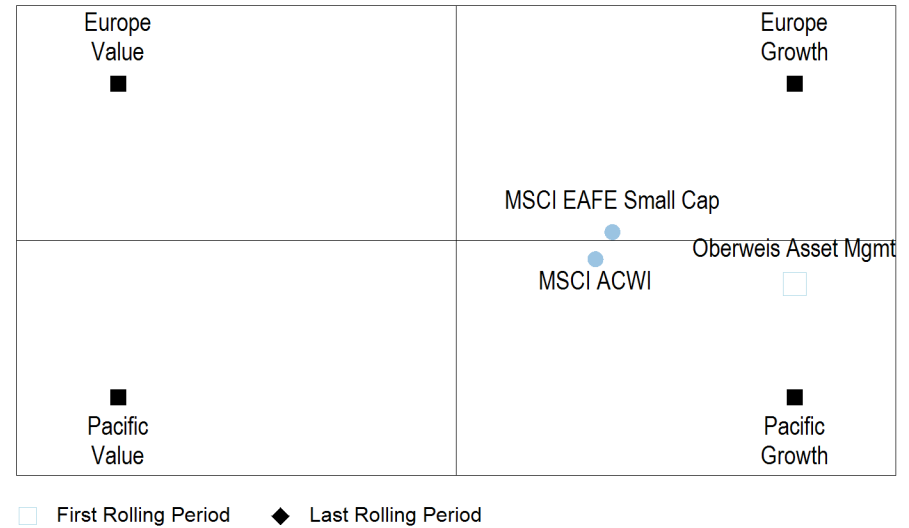
# Los Angeles City Employees' Retirement System

## OBERWEIS ASSET MGMT

3 Year Risk Return



3 Year Style Map



- Oberweis Asset Mgmt
- ▲ MSCI EAFE Small Cap
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile





# Los Angeles City Employees' Retirement System

## SSGA WORLD EX US IMI

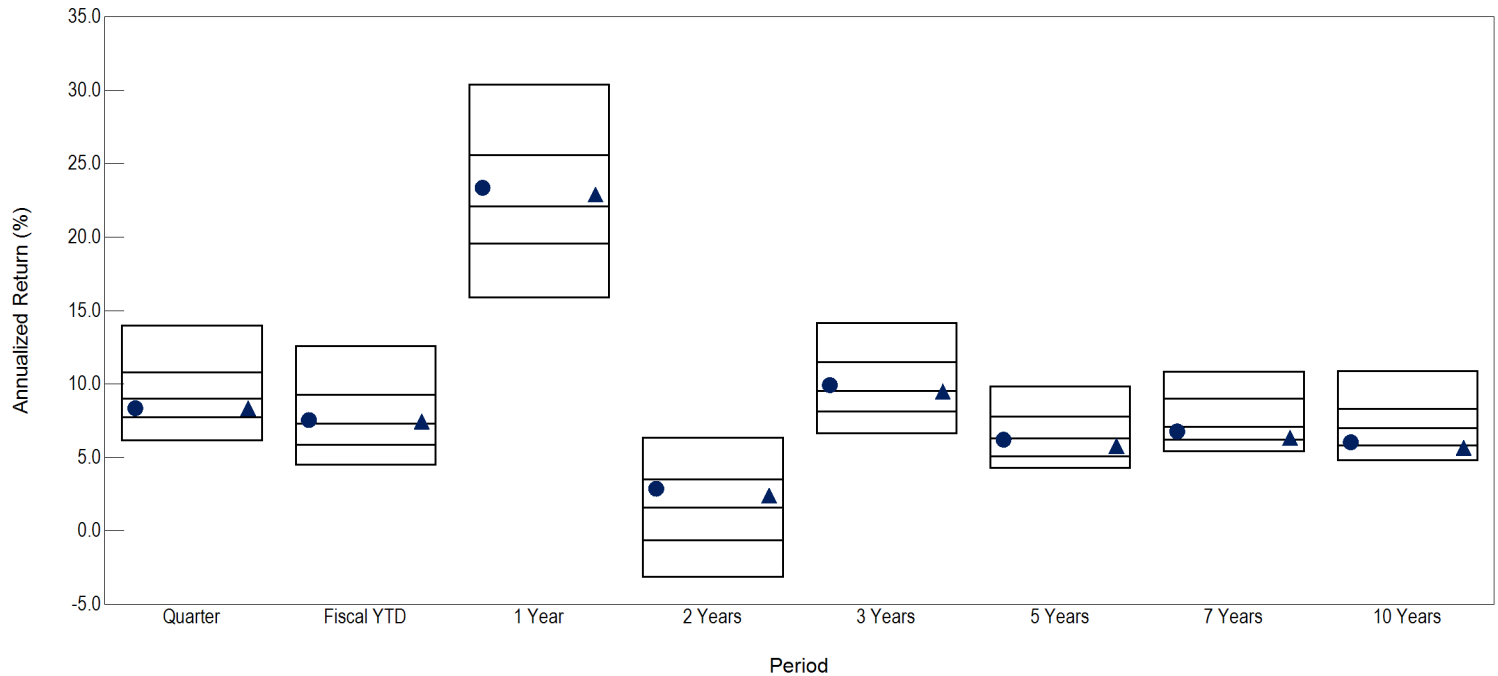
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## SSGA WORLD EX US IMI

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



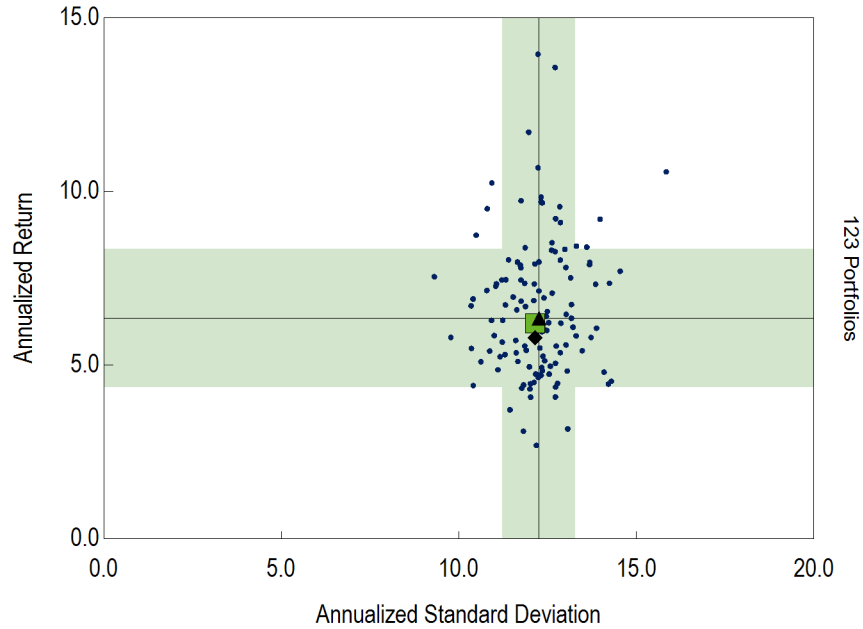
	Return (Rank)															
5th Percentile	13.98	12.58	30.39	6.36	14.14	9.83	10.85	10.89								
25th Percentile	10.83	9.33	25.62	3.56	11.55	7.85	9.06	8.34								
Median	9.06	7.37	22.15	1.64	9.56	6.35	7.14	7.06								
75th Percentile	7.79	5.89	19.60	-0.60	8.17	5.12	6.28	5.86								
95th Percentile	6.23	4.57	15.94	-3.09	6.70	4.32	5.48	4.85								
# of Portfolios	149	147	147	145	144	123	106	86								
● SSGA World ex US IMI	8.35	(65)	7.55	(49)	23.36	(40)	2.87	(34)	9.93	(47)	6.21	(54)	6.77	(61)	6.04	(72)
▲ MSCI World ex USA IMI NR USD	8.36	(65)	7.45	(49)	22.91	(45)	2.40	(38)	9.49	(52)	5.79	(62)	6.35	(73)	5.66	(80)



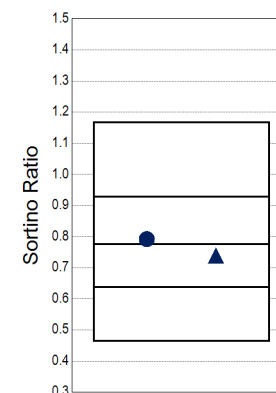
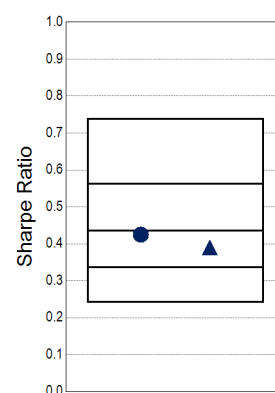
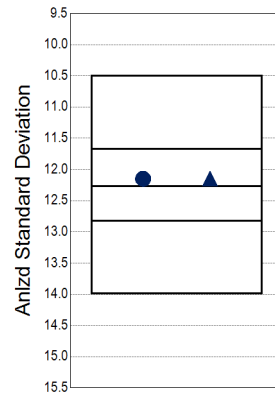
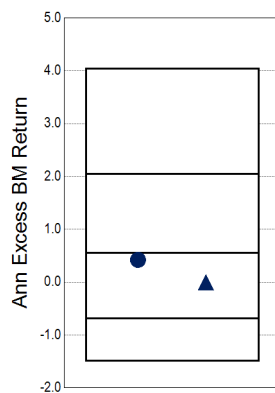
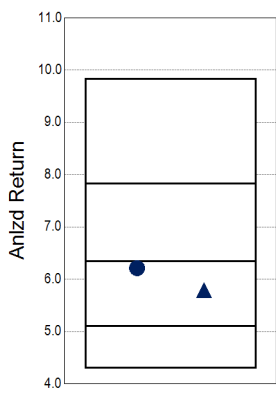
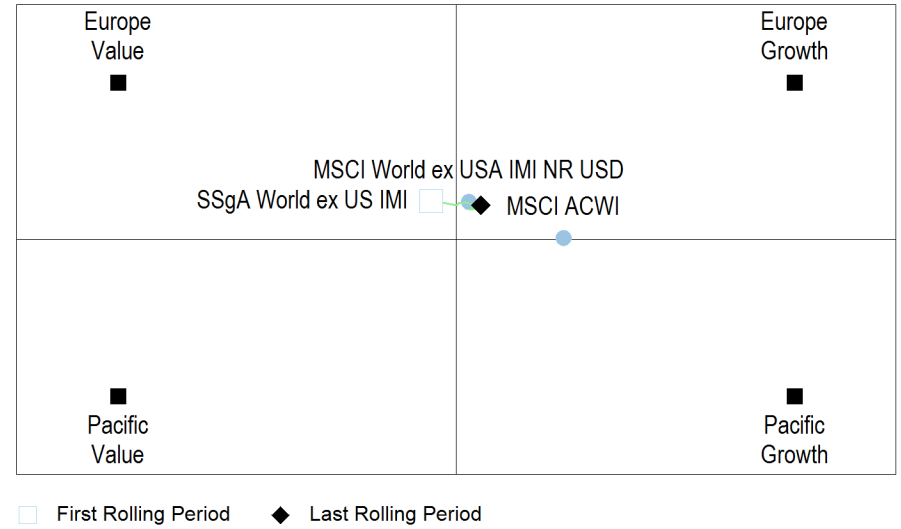
# Los Angeles City Employees' Retirement System

## SSGA WORLD EX US IMI

### 5 Year Risk Return



### 5 Year Style Map

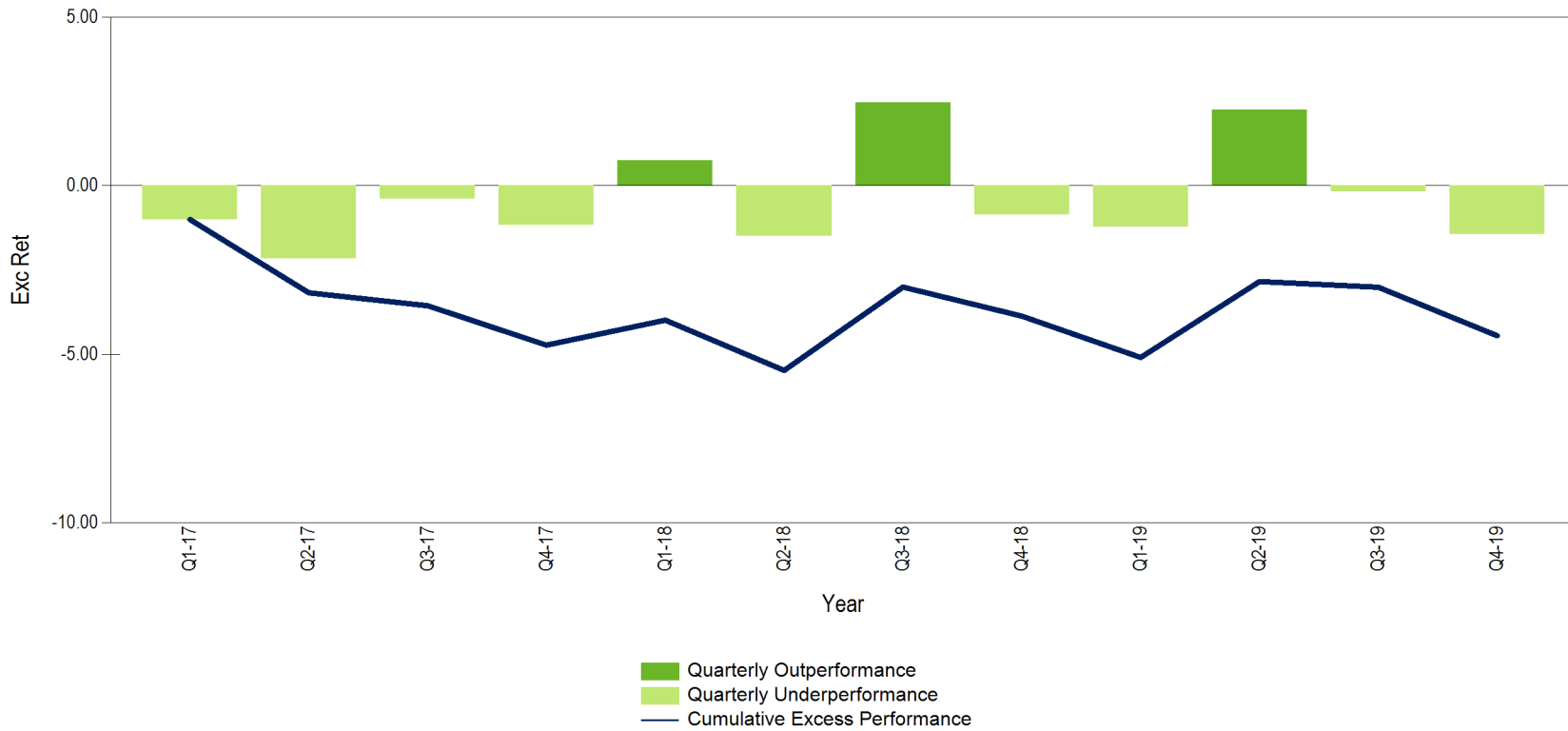


- SSGA World ex US IMI
- ▲ MSCI World ex USA IMI NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# AXIOM EMERGING MARKETS

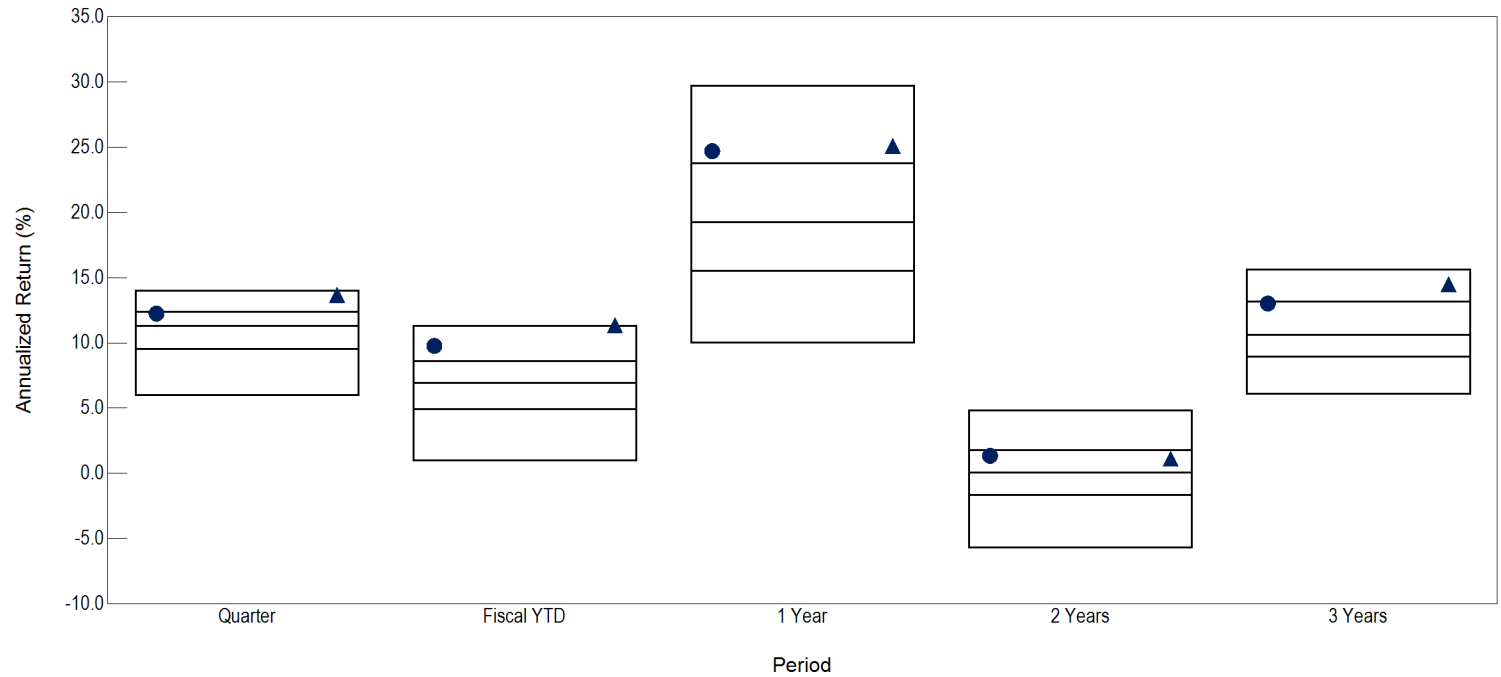
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## AXIOM EMERGING MARKETS

Axiom Emerging Markets vs. eV Emg Mkts Equity Net

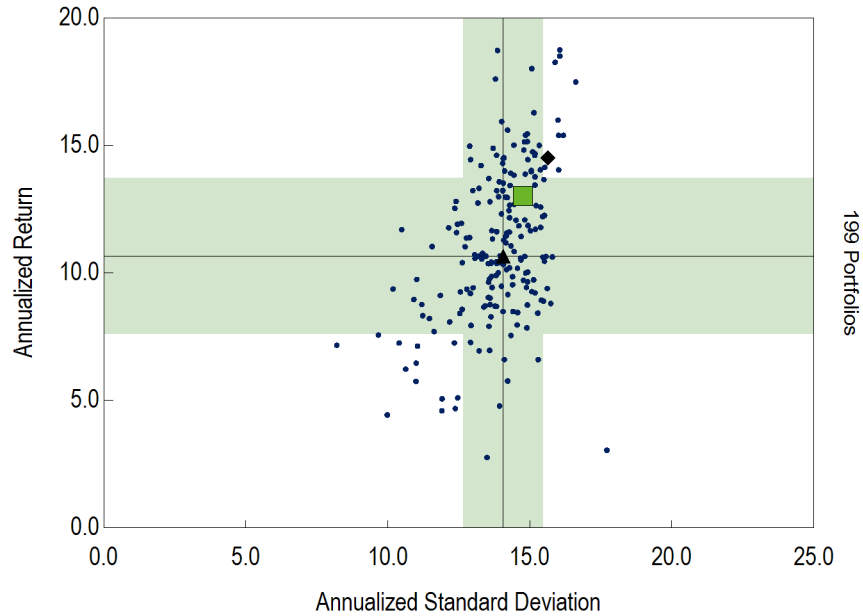


	Return (Rank)									
5th Percentile	14.00		11.32		29.70		4.81		15.63	
25th Percentile	12.43		8.66		23.82		1.83		13.22	
Median	11.37		7.00		19.28		0.09		10.66	
75th Percentile	9.60		4.98		15.56		-1.62		9.01	
95th Percentile	6.03		1.03		10.05		-5.64		6.17	
# of Portfolios	218		217		216		207		199	
● Axiom Emerging Markets	12.24	(27)	9.77	(16)	24.70	(21)	1.34	(32)	13.02	(27)
▲ MSCI Emerging Markets Growth NR USD	13.68	(9)	11.37	(5)	25.10	(20)	1.12	(34)	14.50	(14)

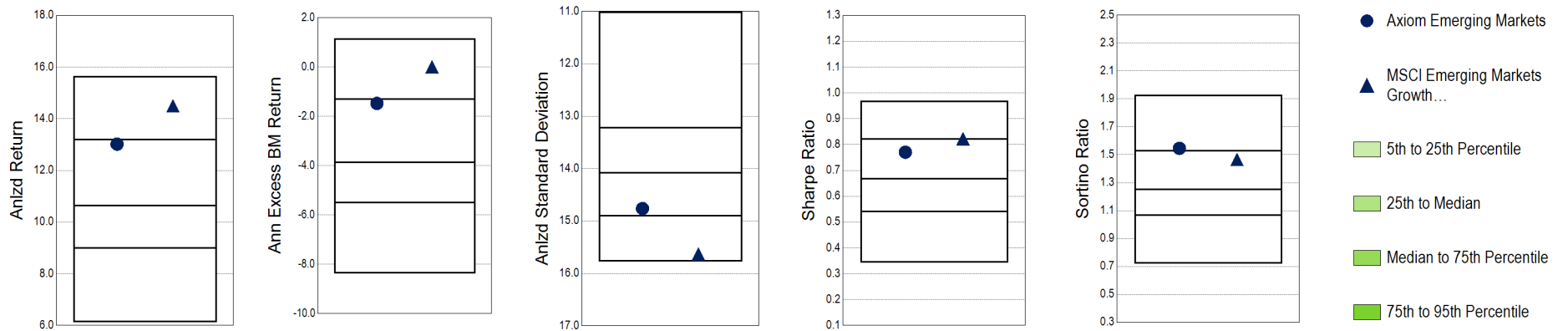
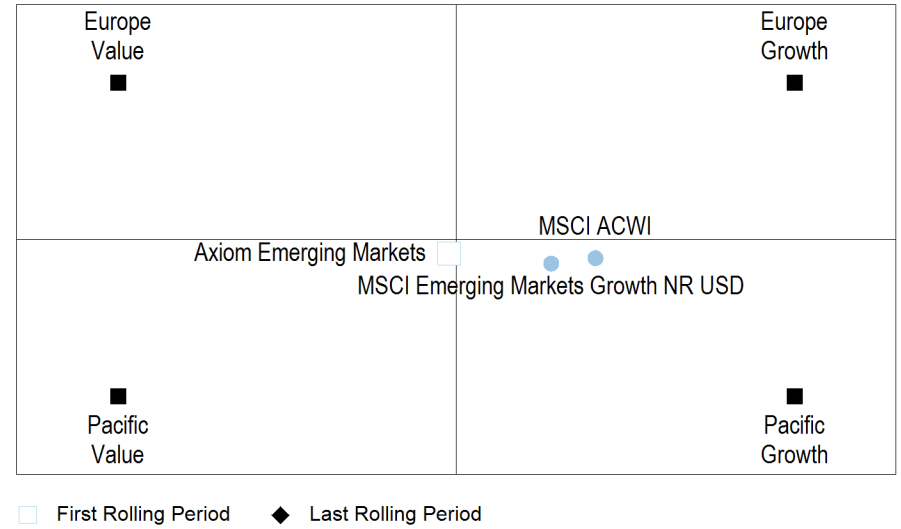


# AXIOM EMERGING MARKETS

3 Year Risk Return



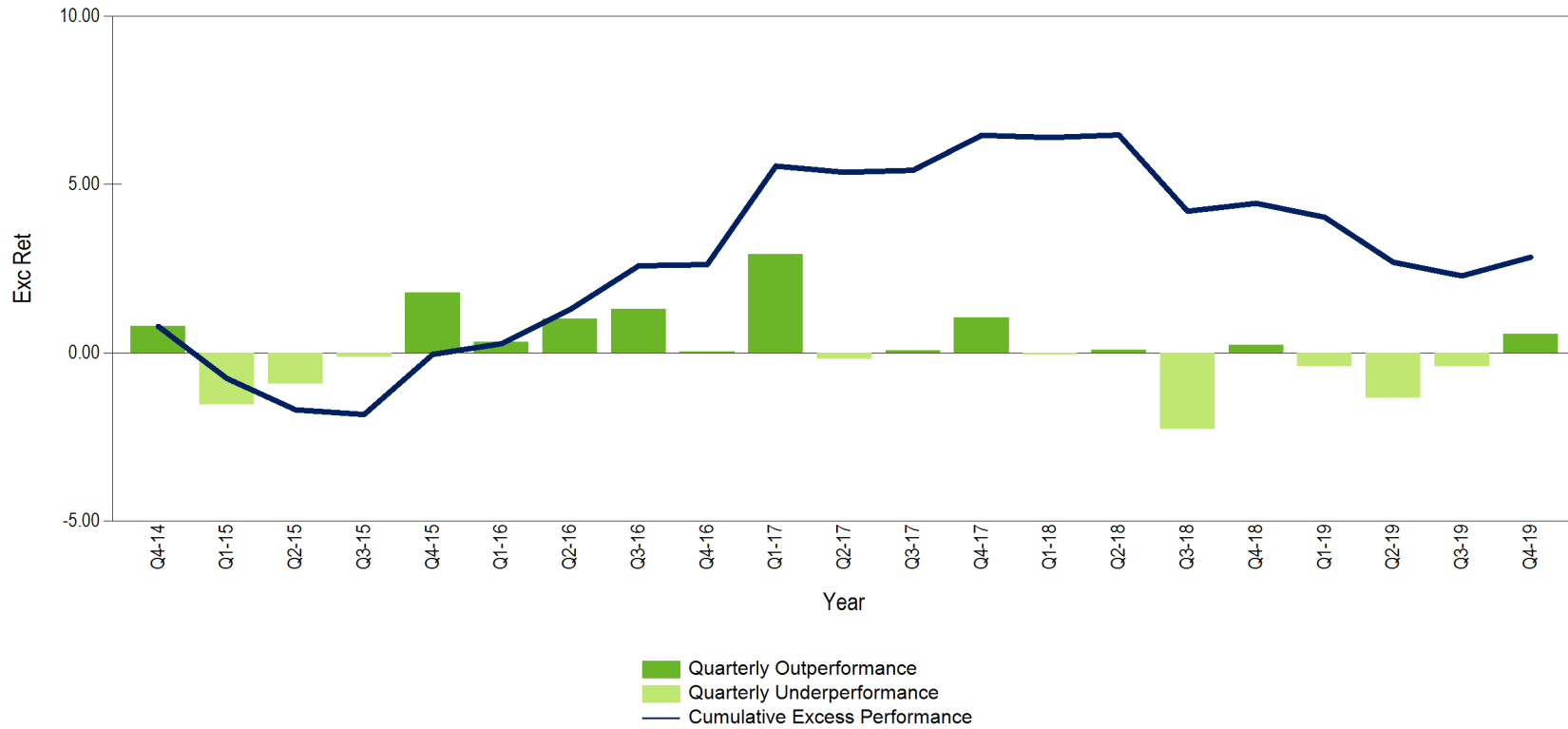
3 Year Style Map



# Los Angeles City Employees' Retirement System

## DFA EMERGING MARKETS

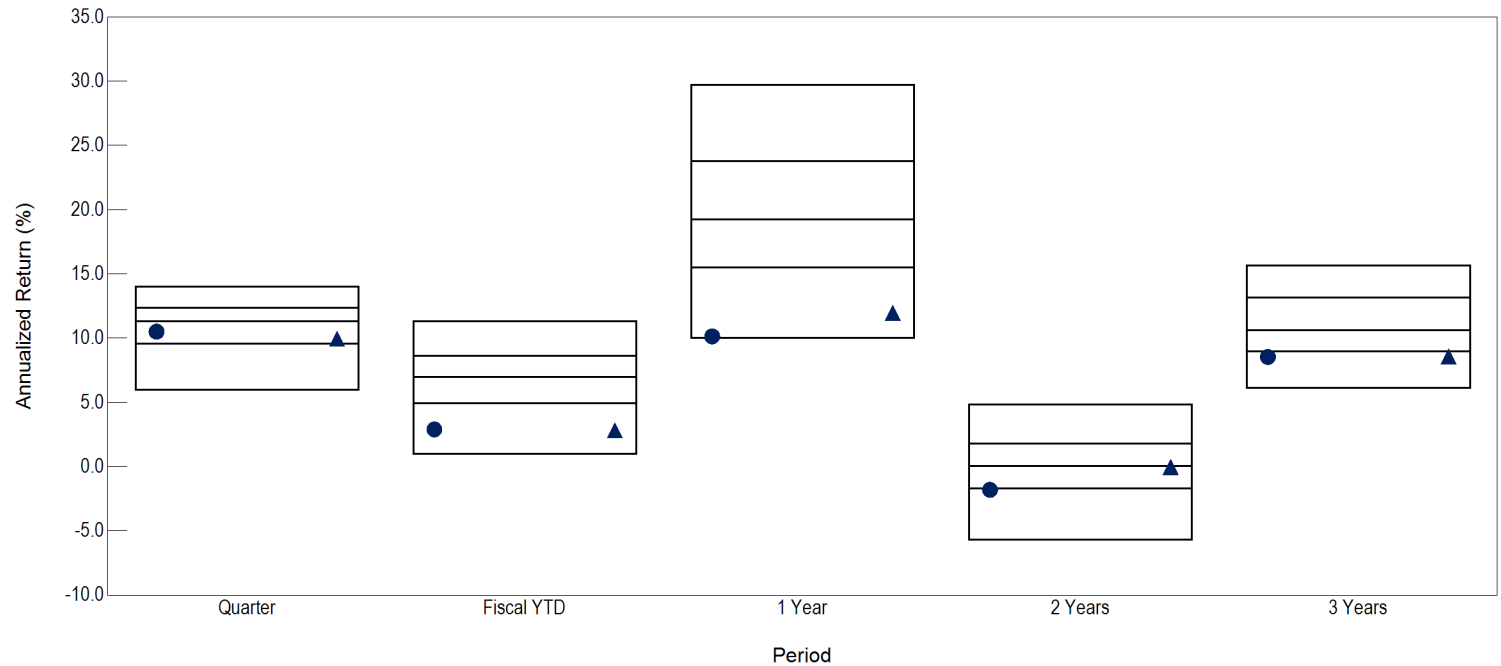
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## DFA EMERGING MARKETS

DFA Emerging Markets vs. eV Emg Mkts Equity Net



	Return (Rank)									
5th Percentile	14.00		11.32		29.70		4.81		15.63	
25th Percentile	12.43		8.66		23.82		1.83		13.22	
Median	11.37		7.00		19.28		0.09		10.66	
75th Percentile	9.60		4.98		15.56		-1.62		9.01	
95th Percentile	6.03		1.03		10.05		-5.64		6.17	
# of Portfolios	218		217		216		207		199	
● DFA Emerging Markets	10.50	(67)	2.89	(89)	10.13	(95)	-1.81	(77)	8.53	(82)
▲ MSCI Emerging Markets Value NR USD	9.94	(73)	2.82	(90)	11.96	(91)	-0.03	(52)	8.57	(82)

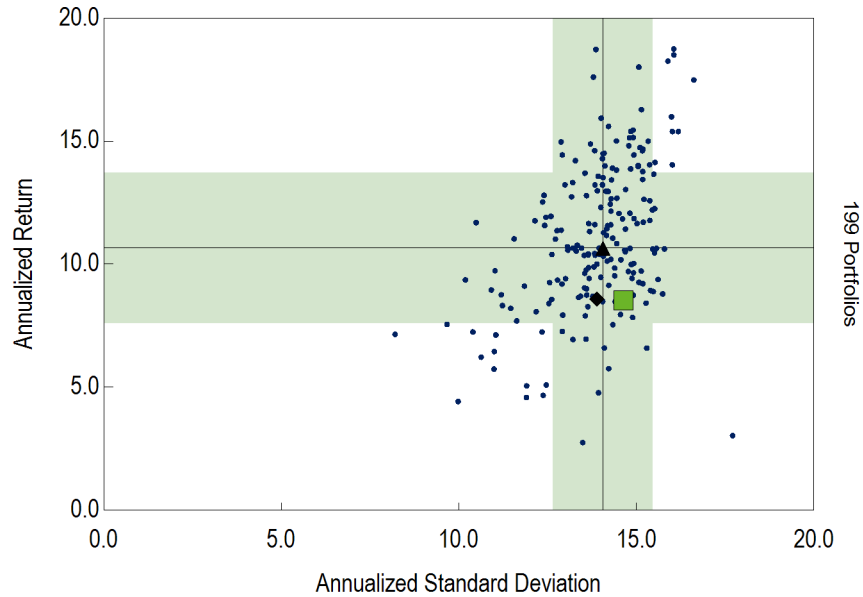




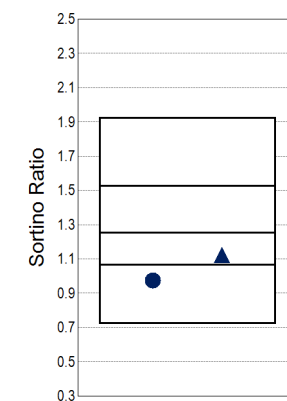
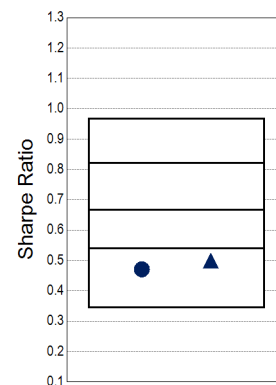
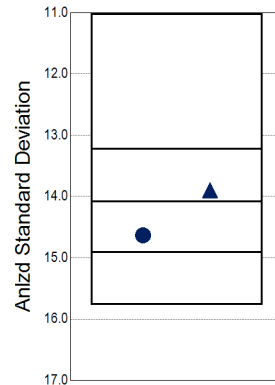
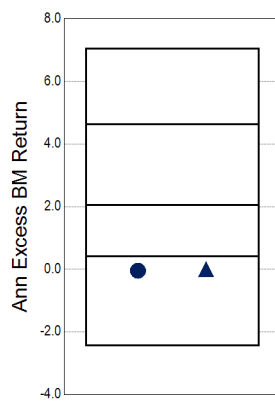
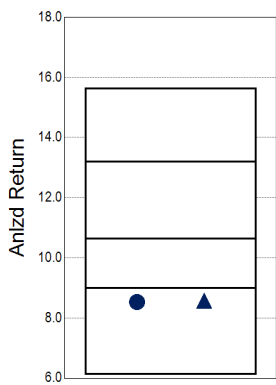
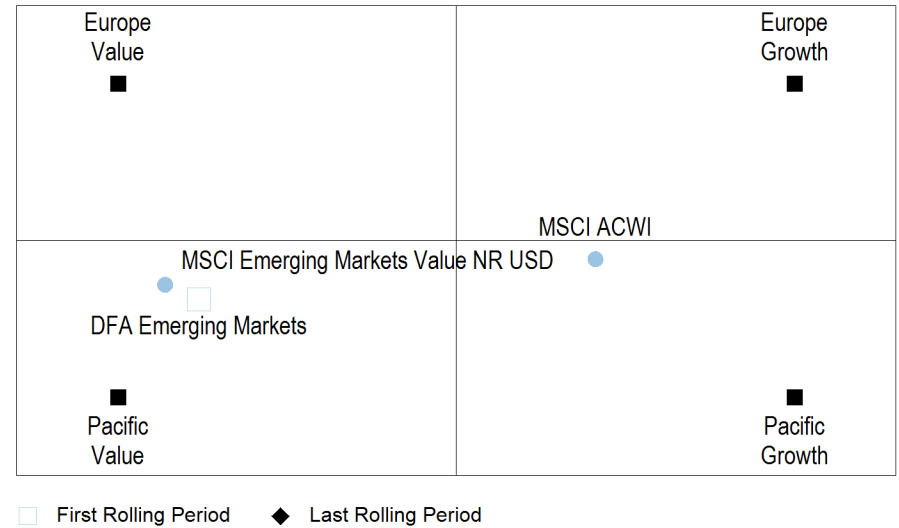
# Los Angeles City Employees' Retirement System

## DFA EMERGING MARKETS

3 Year Risk Return



3 Year Style Map



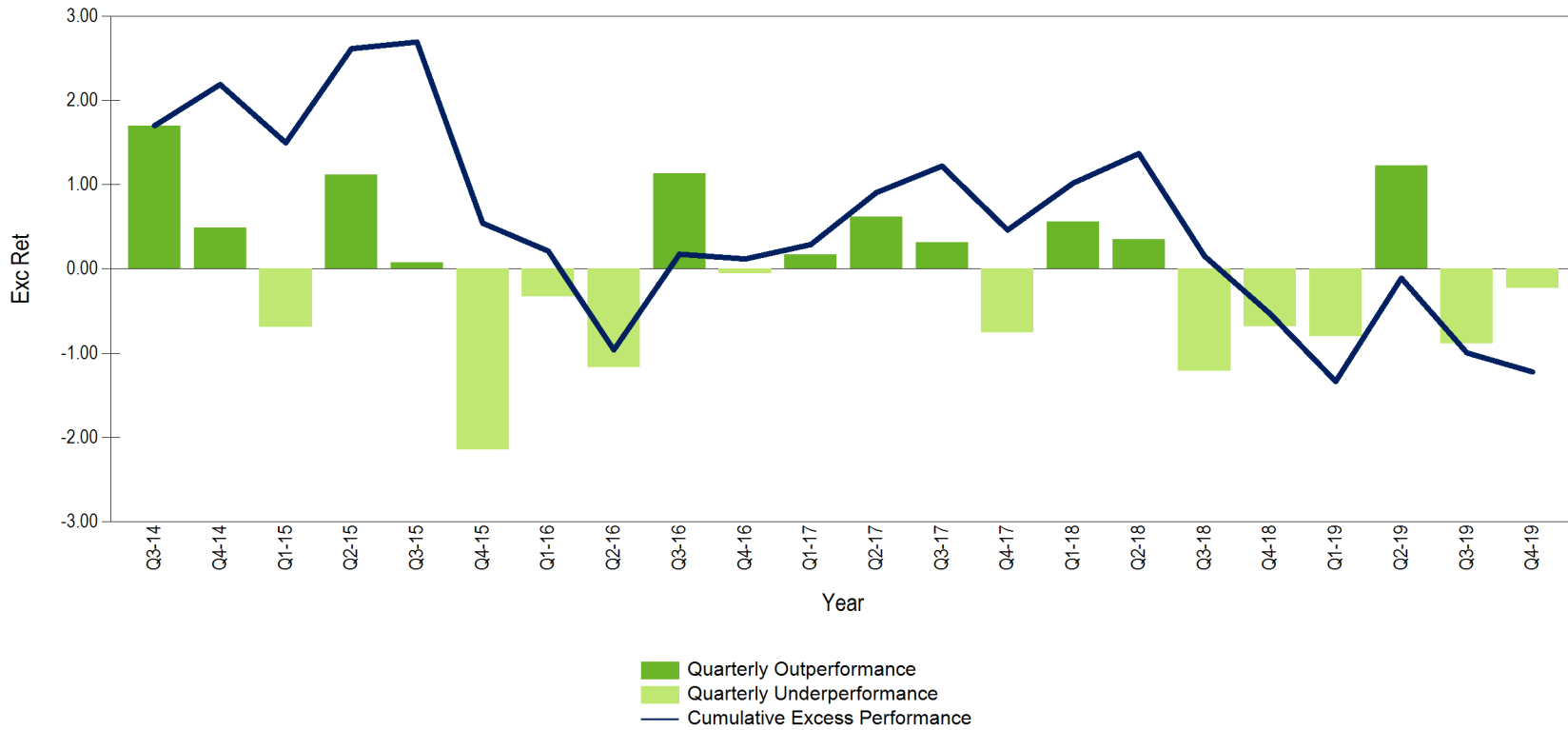
- DFA Emerging Markets
- ▲ MSCI Emerging Markets Value NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## QMA EMERGING MARKETS

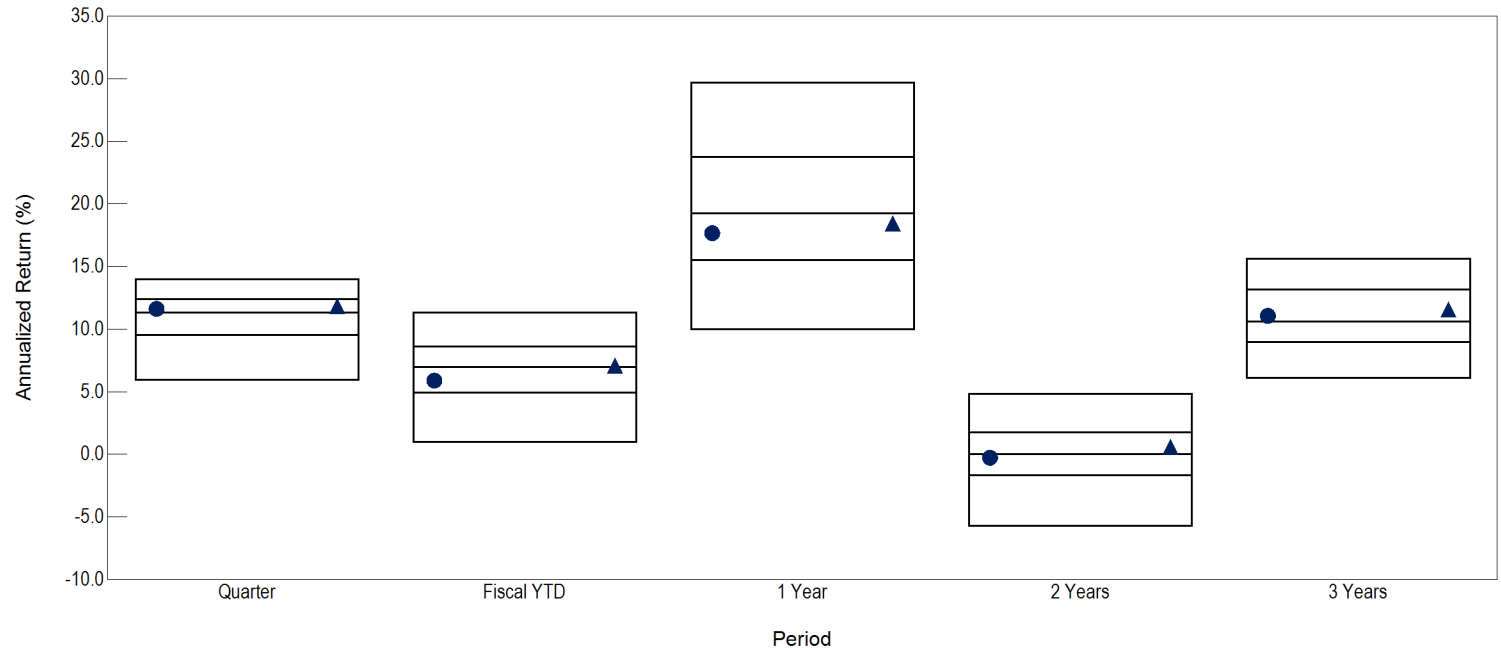
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## QMA EMERGING MARKETS

QMA Emerging Markets vs. eV Emg Mkts Equity Net



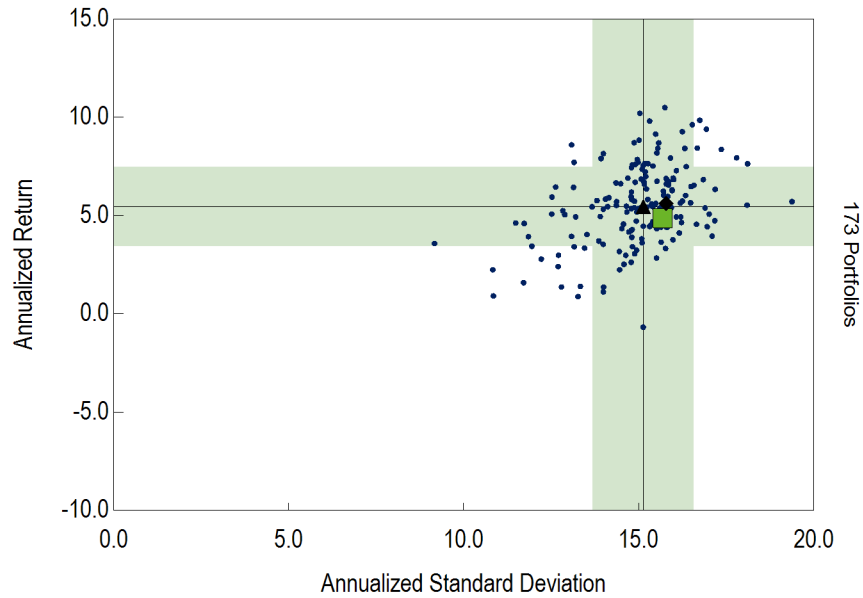
	Return (Rank)									
5th Percentile	14.00		11.32		29.70		4.81		15.63	
25th Percentile	12.43		8.66		23.82		1.83		13.22	
Median	11.37		7.00		19.28		0.09		10.66	
75th Percentile	9.60		4.98		15.56		-1.62		9.01	
95th Percentile	6.03		1.03		10.05		-5.64		6.17	
# of Portfolios	218		217		216		207		199	
● QMA Emerging Markets	11.61	(44)	5.88	(65)	17.66	(64)	-0.27	(56)	11.05	(47)
▲ MSCI Emerging Markets	11.84	(36)	7.09	(49)	18.44	(57)	0.58	(41)	11.57	(43)



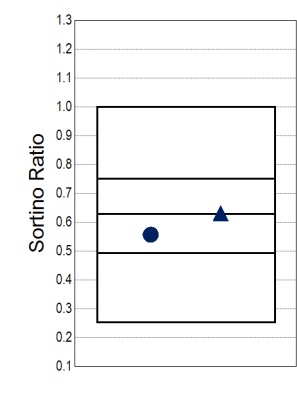
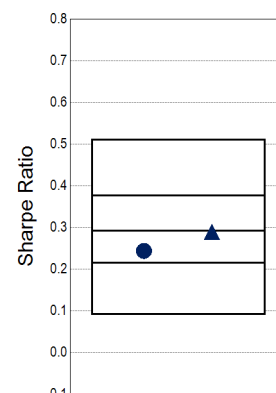
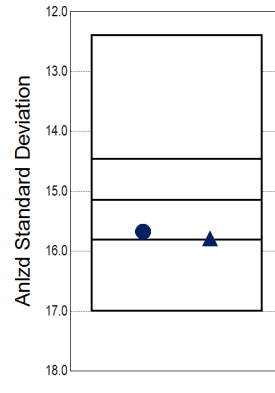
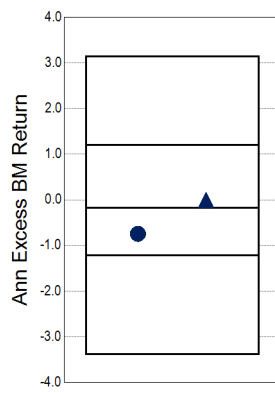
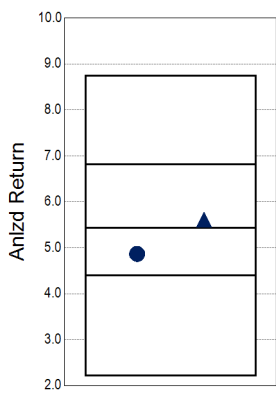
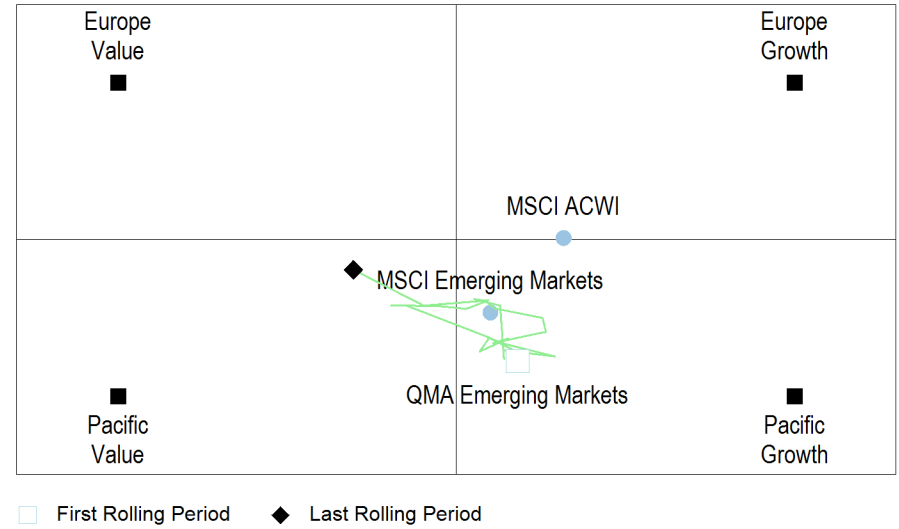
# Los Angeles City Employees' Retirement System

## 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**

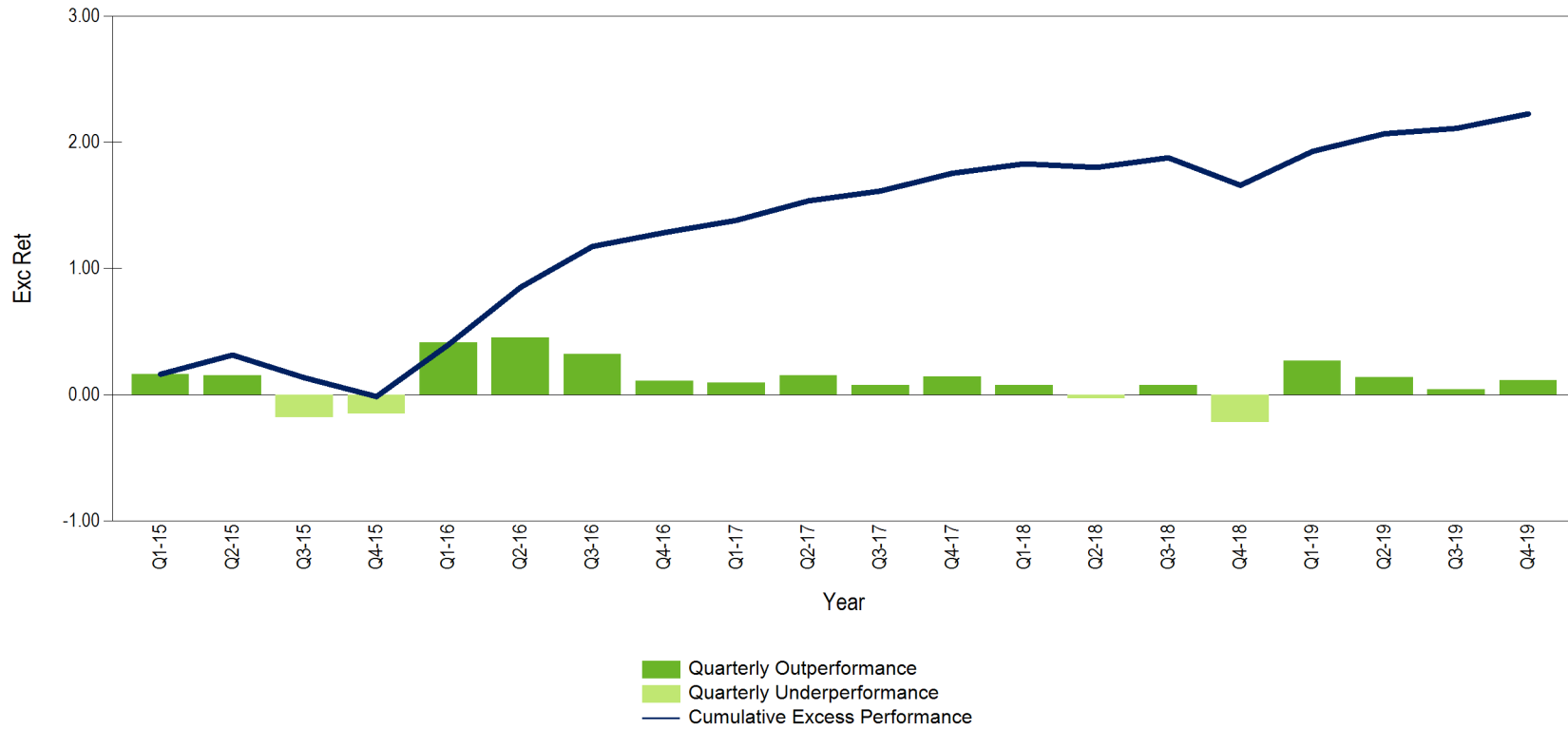
NEPC, LLC

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# Los Angeles City Employees' Retirement System

## BAIRD ADVISORS

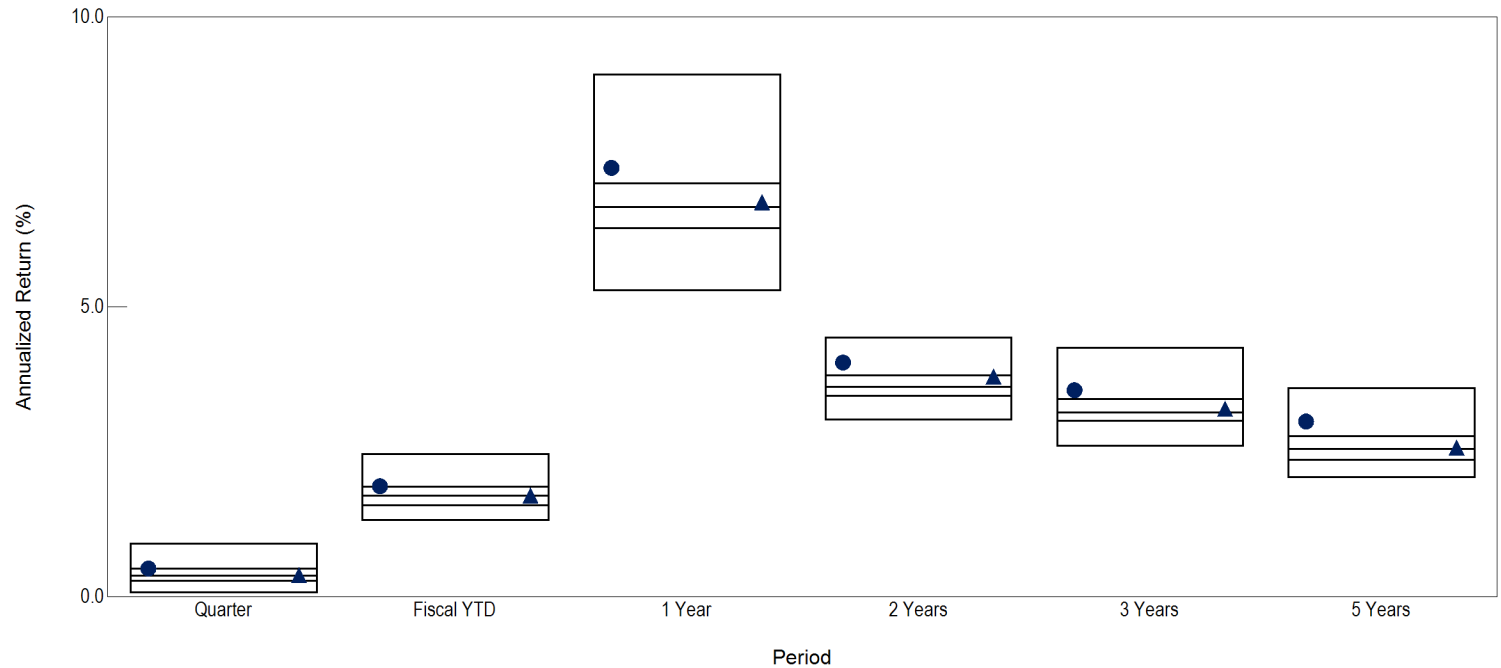
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## BAIRD ADVISORS

Baird Advisors vs. eV US Interm Duration Fixed Inc Net



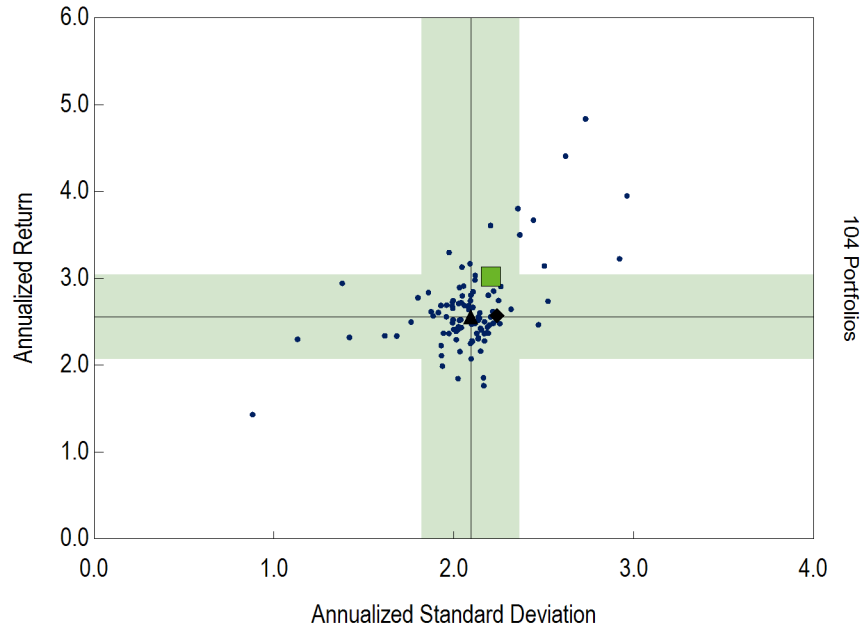
	Return (Rank)											
5th Percentile	0.92		2.47		9.01		4.47		4.29		3.59	
25th Percentile	0.50		1.91		7.14		3.83		3.42		2.78	
Median	0.37		1.75		6.74		3.63		3.19		2.56	
75th Percentile	0.29		1.59		6.37		3.48		3.05		2.37	
95th Percentile	0.09		1.33		5.30		3.07		2.62		2.08	
# of Portfolios	109		109		109		109		106		104	
● Baird Advisors	0.49	(28)	1.91	(25)	7.40	(16)	4.04	(13)	3.56	(16)	3.02	(14)
▲ BBgBarc US Govt/Credit Int TR	0.37	(51)	1.75	(51)	6.80	(45)	3.80	(31)	3.24	(42)	2.57	(47)



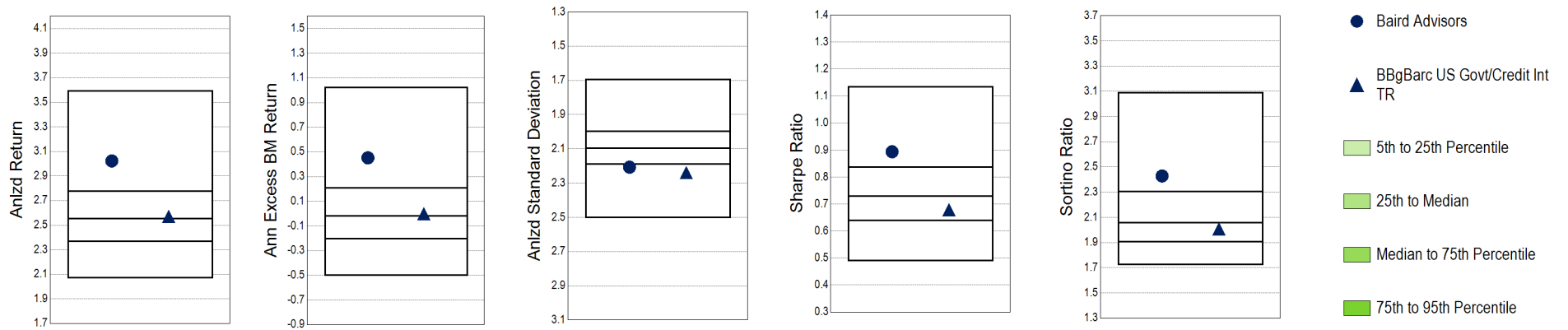
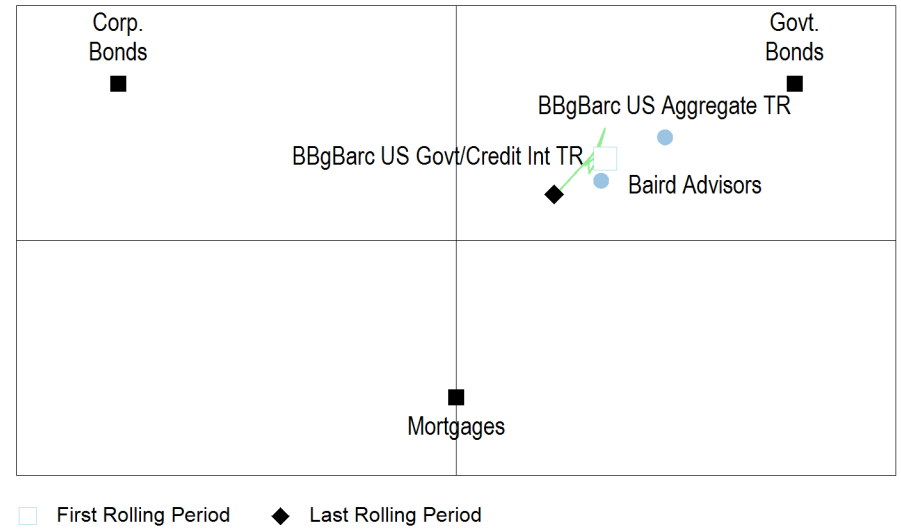
# Los Angeles City Employees' Retirement System

## BAIRD ADVISORS

5 Year Risk Return



5 Year Style Map

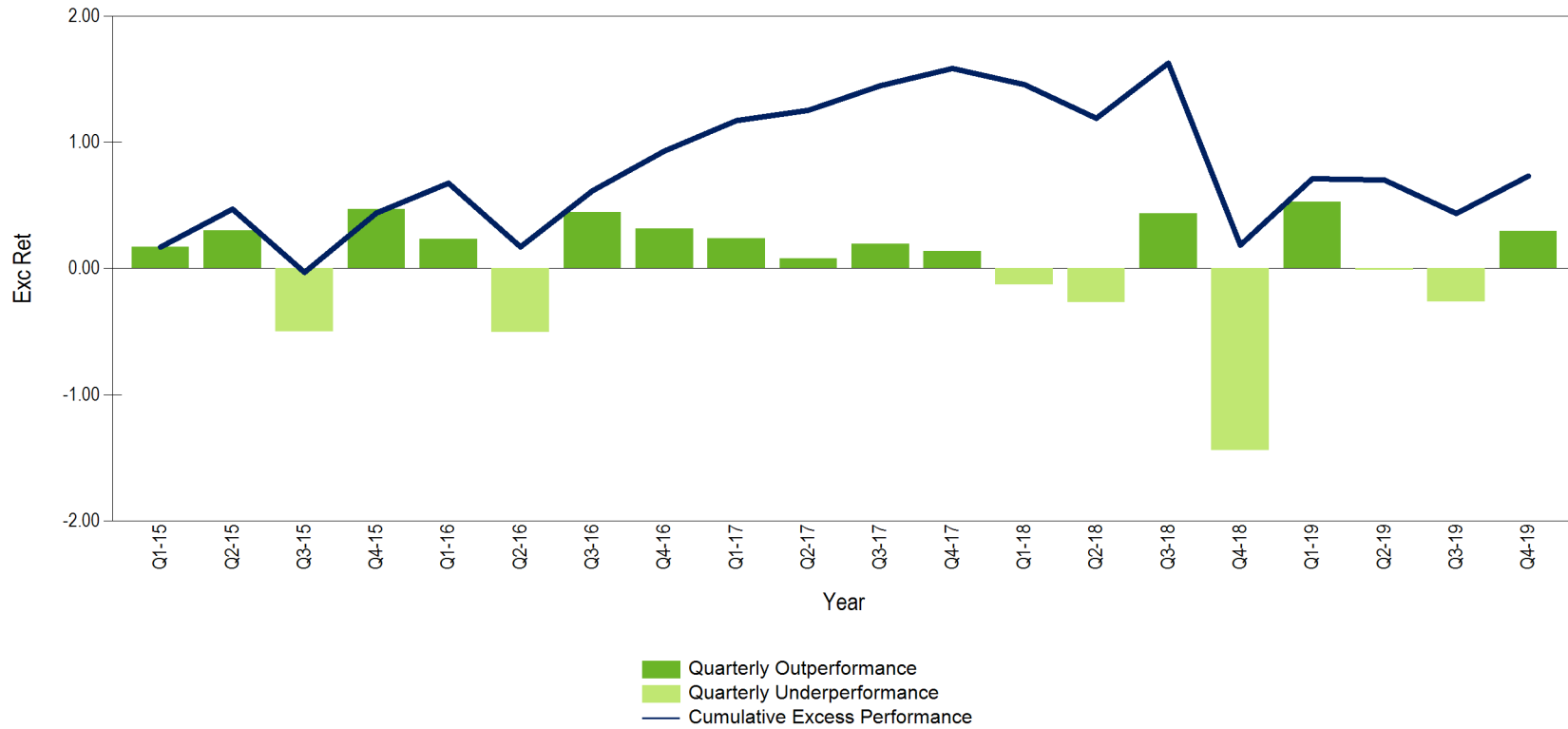




# Los Angeles City Employees' Retirement System

## LM CAPITAL

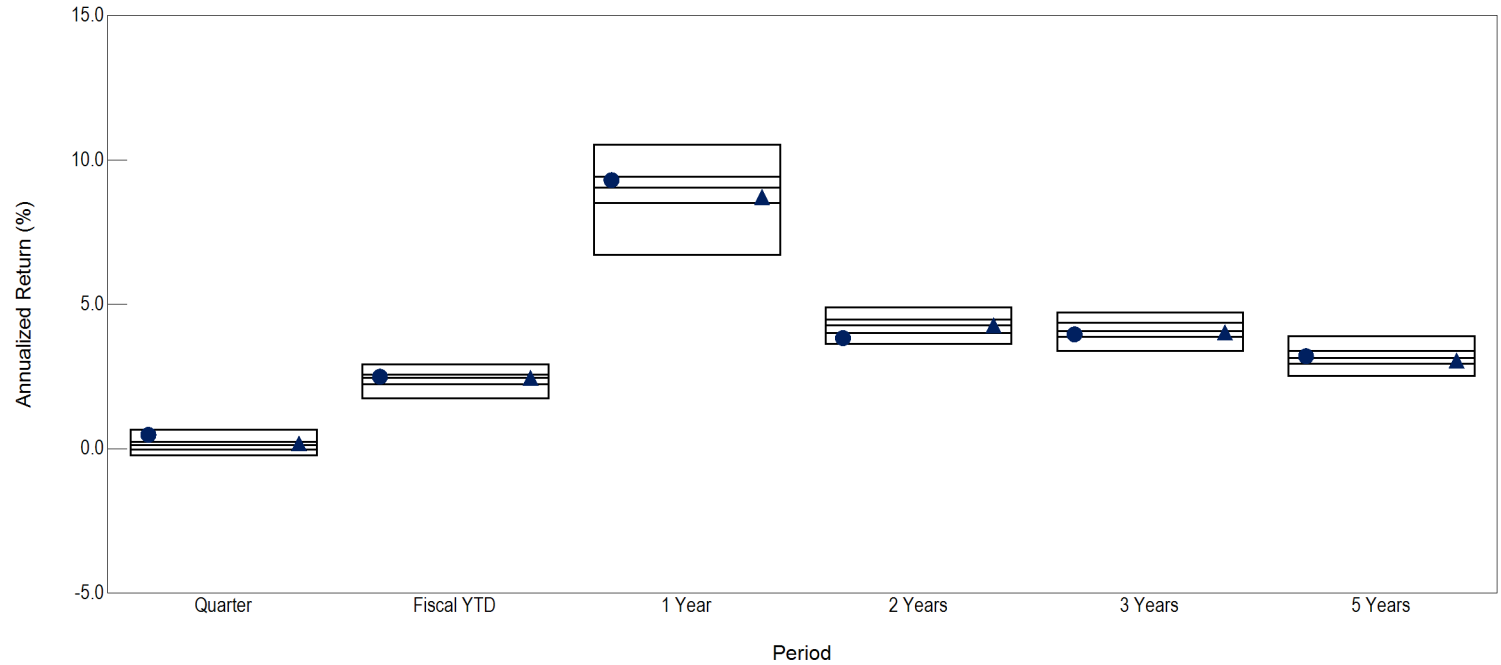
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## LM CAPITAL

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



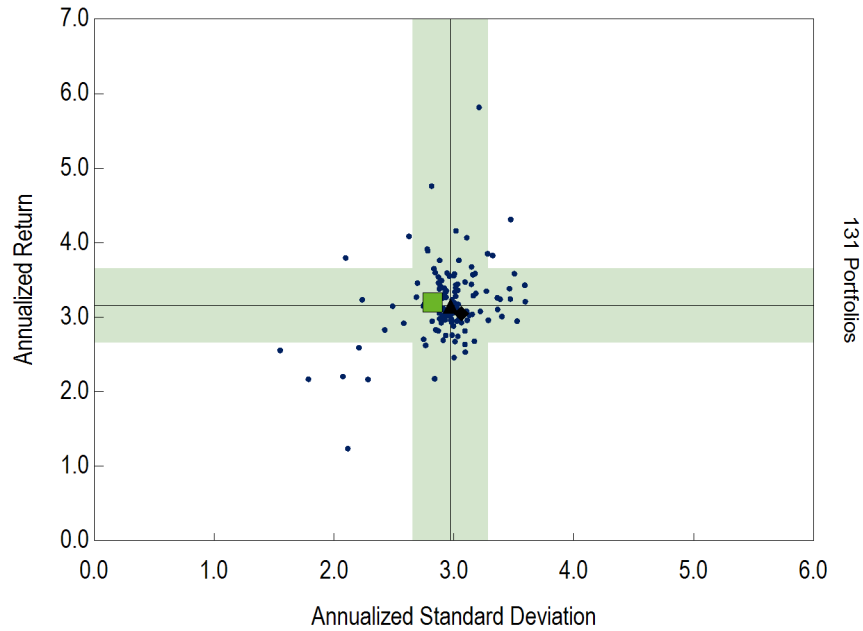
	Return (Rank)		Quarter		Fiscal YTD		1 Year		2 Years		3 Years		5 Years	
5th Percentile	0.66		2.91		10.53		4.90		4.72		3.90			
25th Percentile	0.26		2.58		9.44		4.49		4.38		3.41			
Median	0.14		2.46		9.07		4.29		4.09		3.15			
75th Percentile	0.00		2.26		8.52		4.03		3.90		2.96			
95th Percentile	-0.21		1.76		6.73		3.66		3.40		2.54			
# of Portfolios	137		137		137		136		135		131			
● LM Capital	0.48	(10)	2.49	(46)	9.30	(36)	3.83	(93)	3.96	(69)	3.20	(46)		
▲ Core Fixed Income Blend	0.18	(43)	2.45	(53)	8.72	(69)	4.27	(53)	4.03	(57)	3.05	(66)		



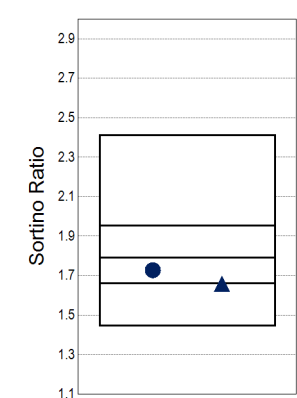
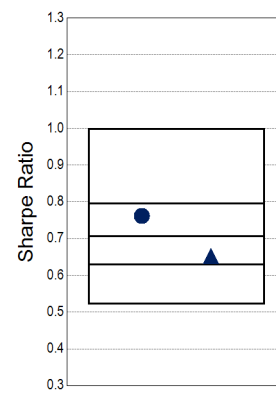
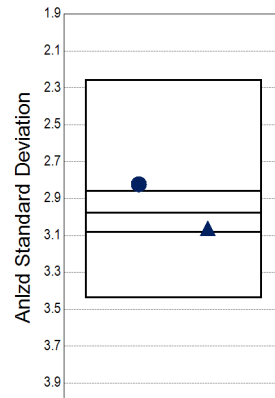
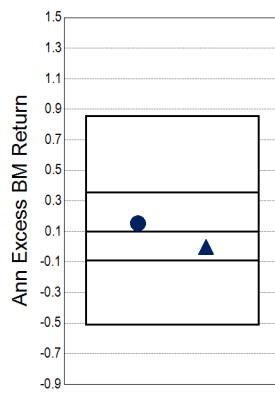
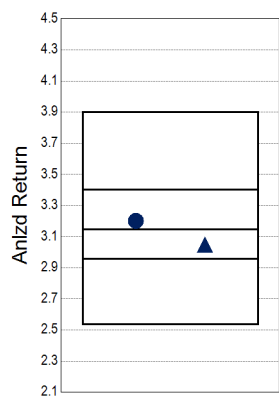
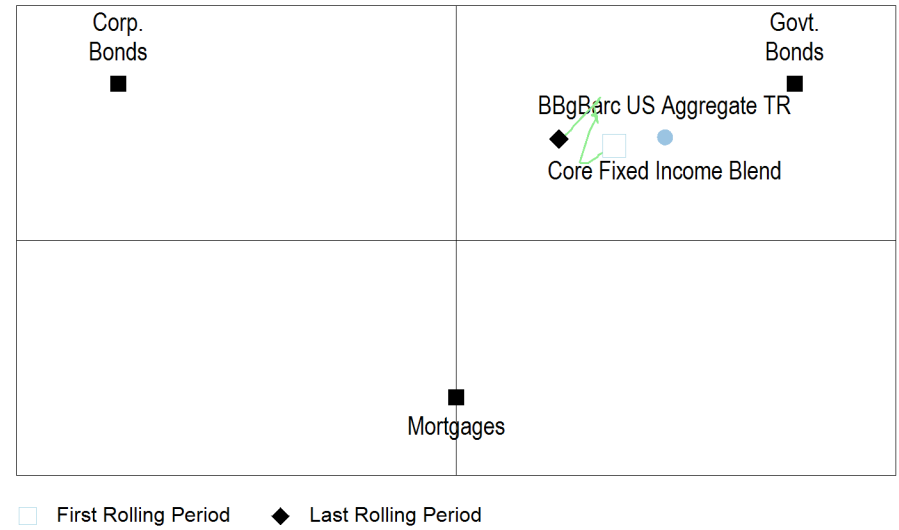
# Los Angeles City Employees' Retirement System

## LM CAPITAL

5 Year Risk Return



5 Year Style Map



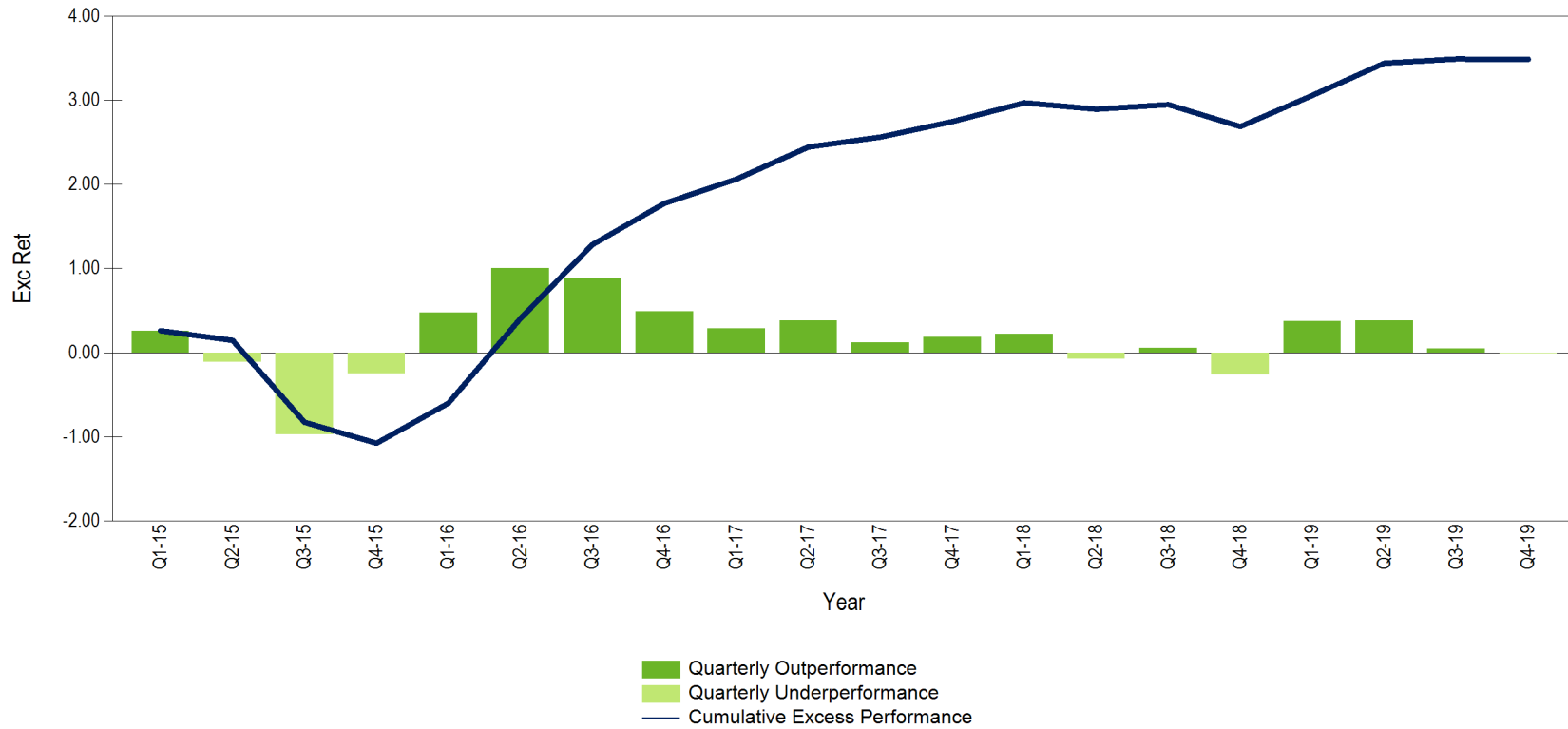
- LM Capital
- ▲ Core Fixed Income Blend
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## LOOMIS SAYLES

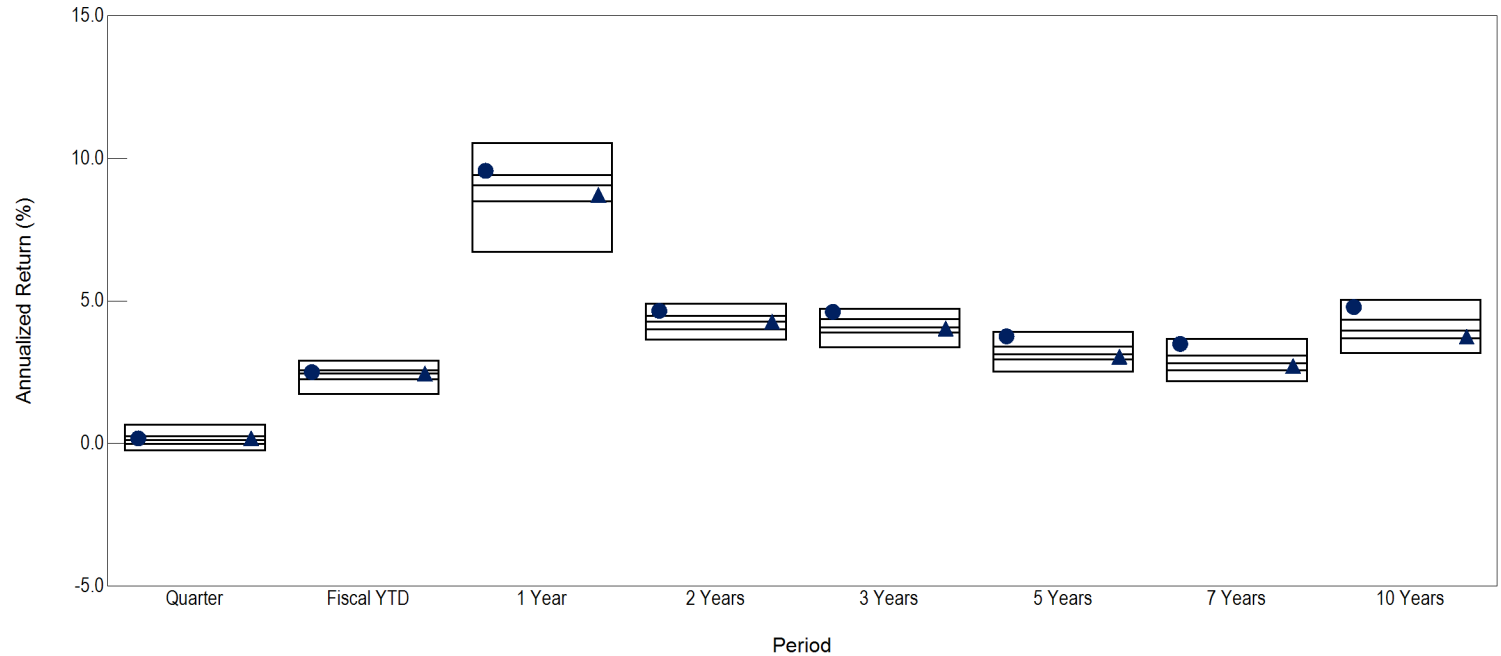
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## LOOMIS SAYLES

Loomis Sayles vs. eV US Core Fixed Inc Net



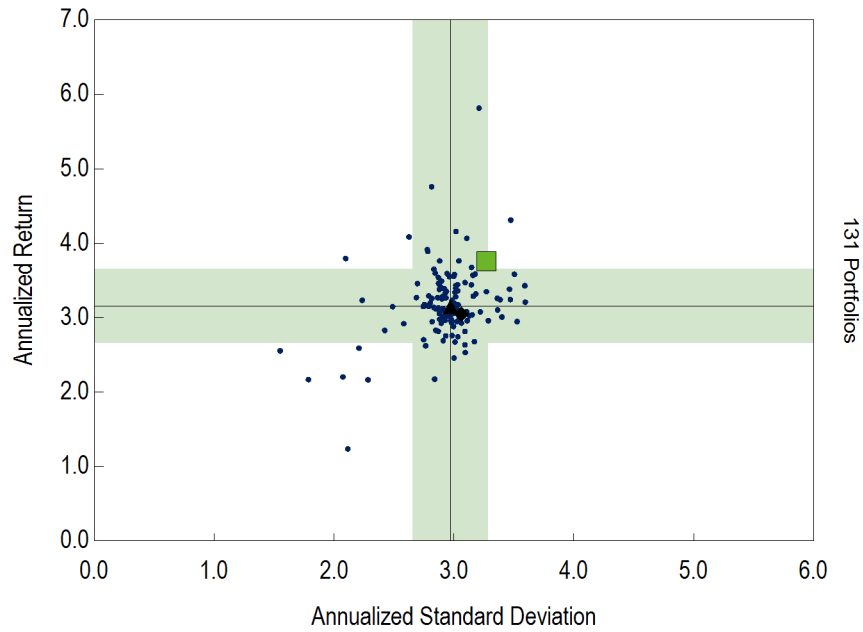
	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)			
5th Percentile	0.66	2.91	10.53	4.90	4.72	3.90	3.66	5.04								
25th Percentile	0.26	2.58	9.44	4.49	4.38	3.41	3.11	4.37								
Median	0.14	2.46	9.07	4.29	4.09	3.15	2.83	3.98								
75th Percentile	0.00	2.26	8.52	4.03	3.90	2.96	2.59	3.70								
95th Percentile	-0.21	1.76	6.73	3.66	3.40	2.54	2.21	3.19								
# of Portfolios	137	137	137	136	135	131	129	118								
● Loomis Sayles	0.18	(44)	2.50	(42)	9.56	(19)	4.65	(15)	4.61	(10)	3.76	(10)	3.49	(8)	4.78	(11)
▲ BC US Agg LACERS custom	0.18	(43)	2.45	(53)	8.72	(69)	4.27	(53)	4.03	(57)	3.05	(66)	2.72	(60)	3.75	(72)



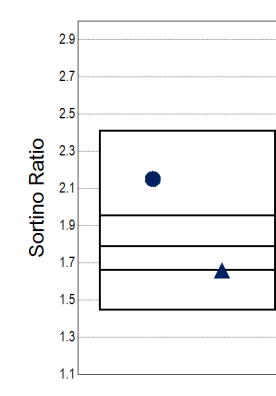
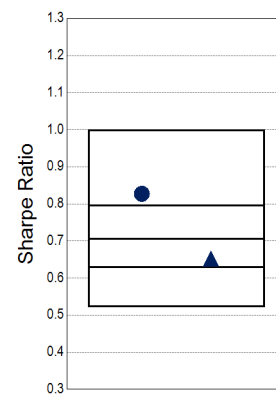
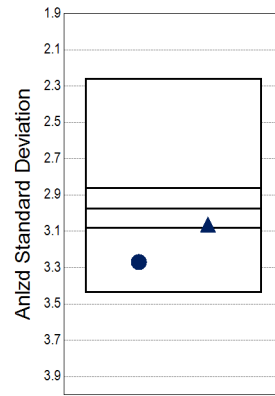
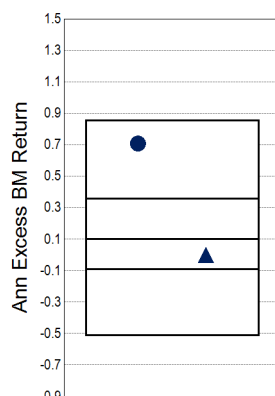
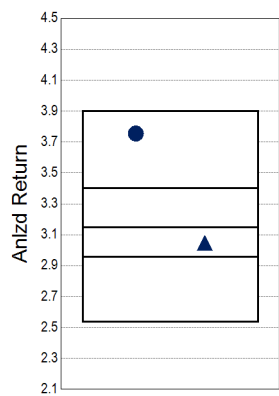
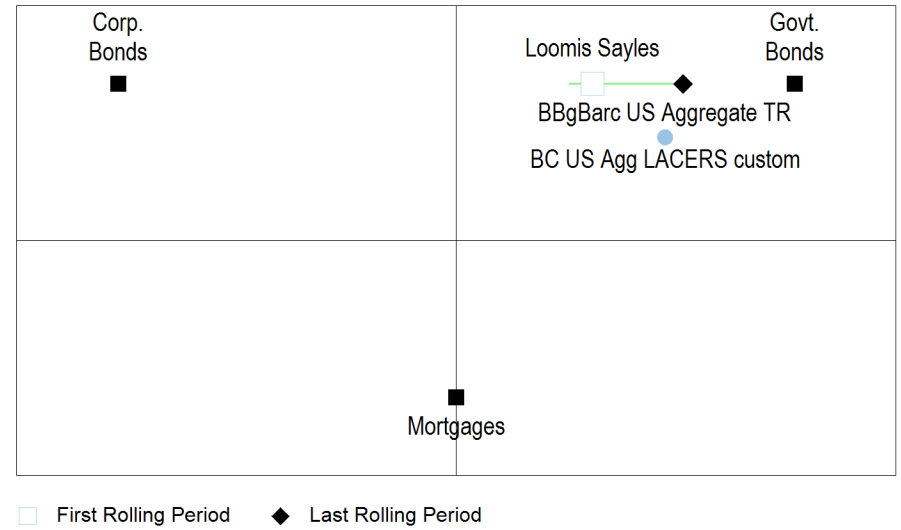
# Los Angeles City Employees' Retirement System

## LOOMIS SAYLES

### 5 Year Risk Return



### 5 Year Style Map



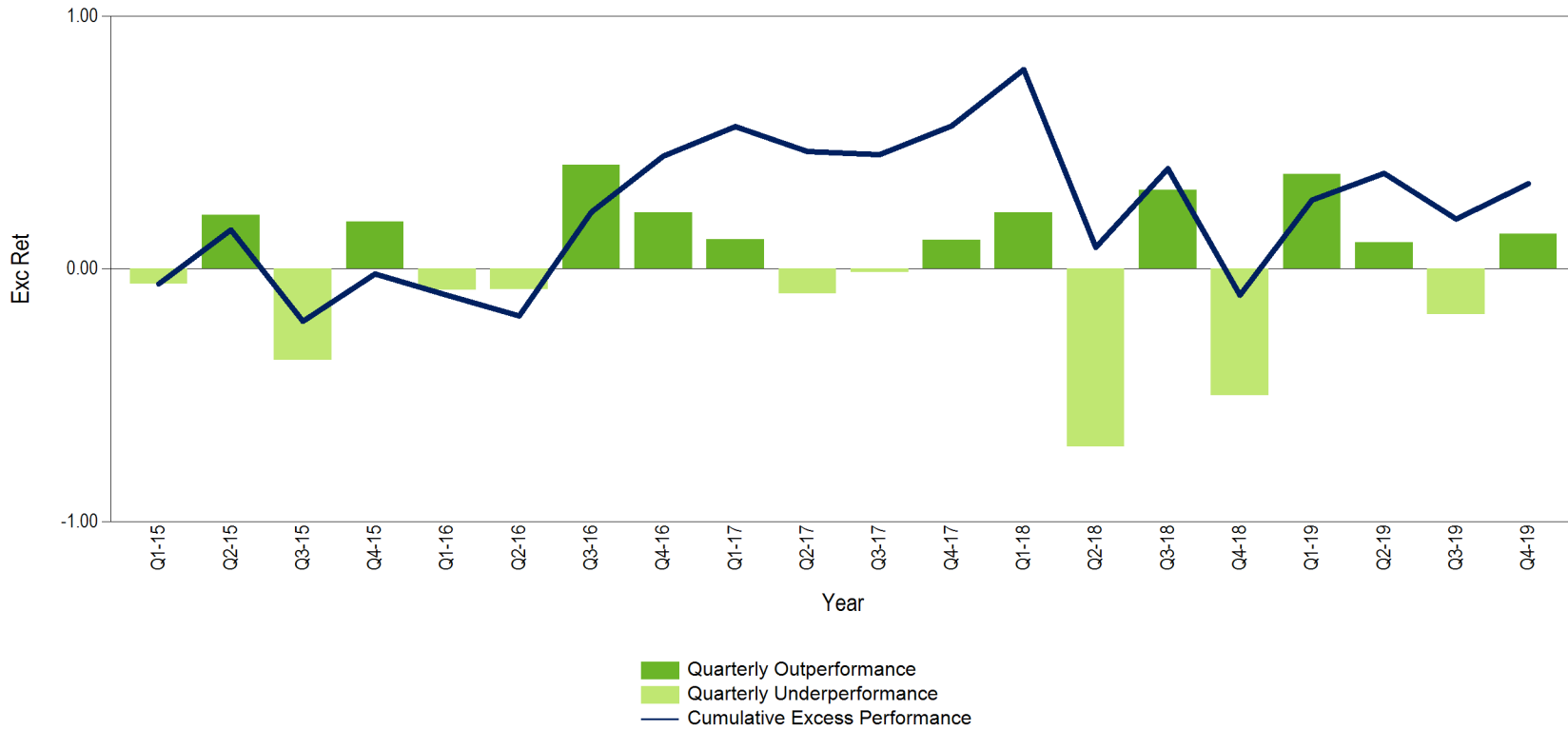
- Loomis Sayles
- ▲ BC US Agg LACERS custom
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## NEUBERGER BERMAN

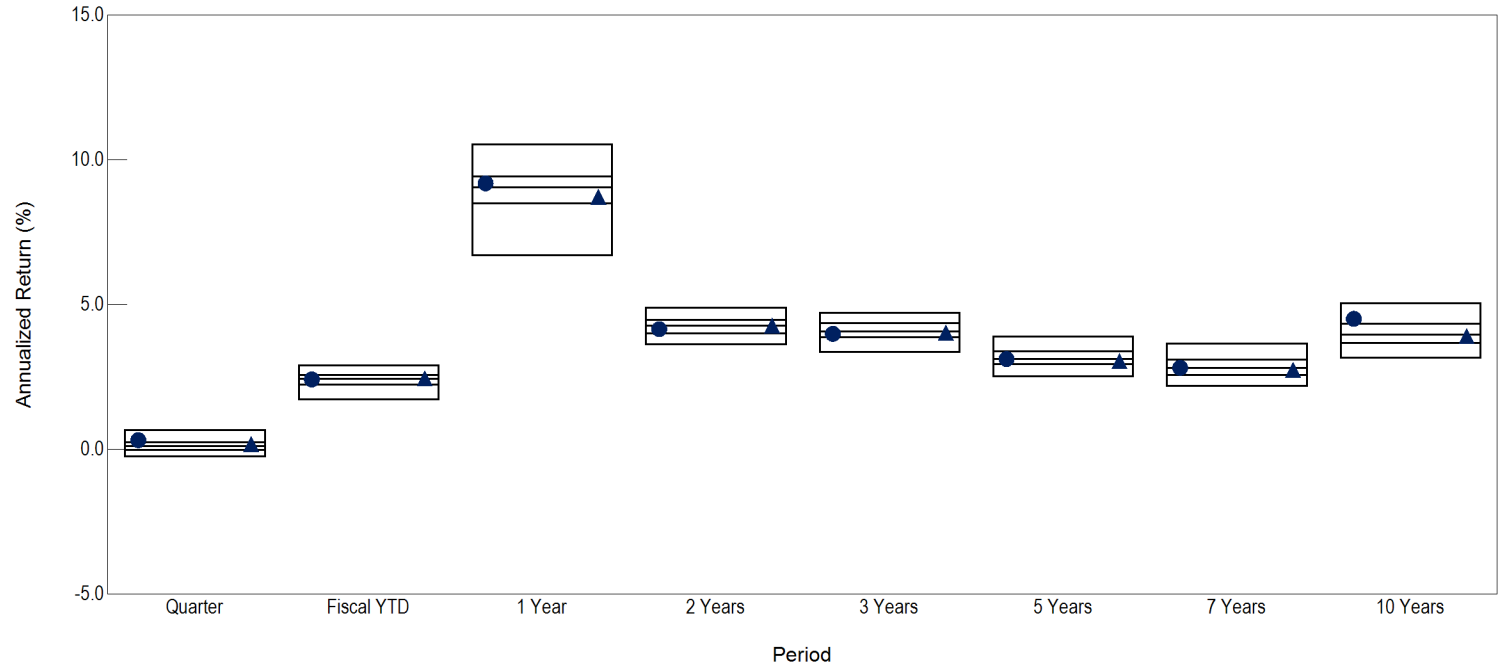
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## NEUBERGER BERMAN

Neuberger Berman vs. eV US Core Fixed Inc Net



	Return (Rank)											
5th Percentile	0.66		2.91		10.53		4.90		4.72		3.90	
25th Percentile	0.26		2.58		9.44		4.49		4.38		3.41	
Median	0.14		2.46		9.07		4.29		4.09		3.15	
75th Percentile	0.00		2.26		8.52		4.03		3.90		2.96	
95th Percentile	-0.21		1.76		6.73		3.66		3.40		2.54	
# of Portfolios	137		137		137		136		135		131	
● Neuberger Berman	0.32	(16)	2.42	(58)	9.19	(43)	4.15	(66)	3.99	(64)	3.12	(55)
▲ Core Fixed Income Blend	0.18	(43)	2.45	(53)	8.72	(69)	4.27	(53)	4.03	(57)	3.05	(66)

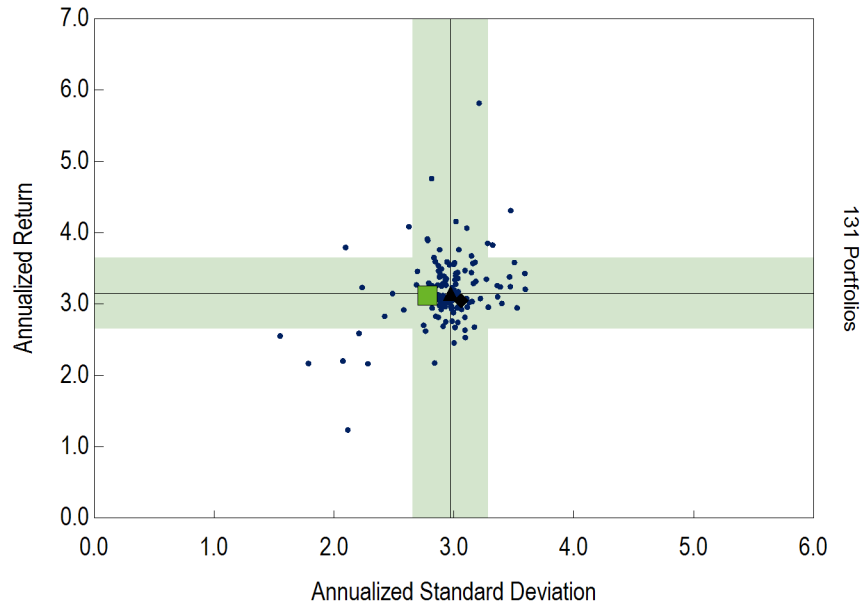




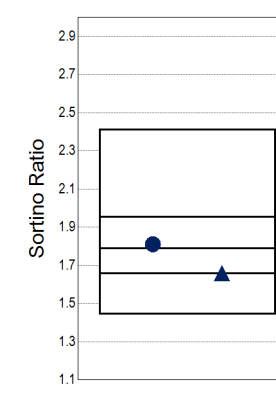
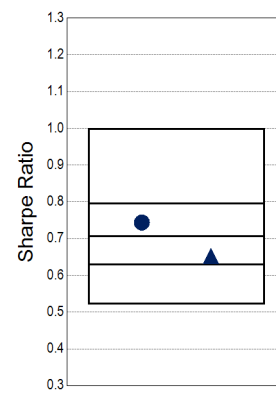
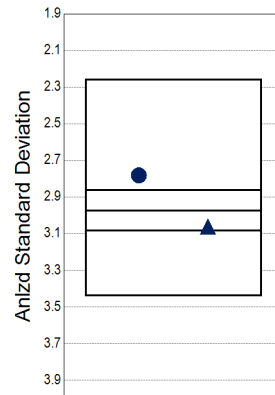
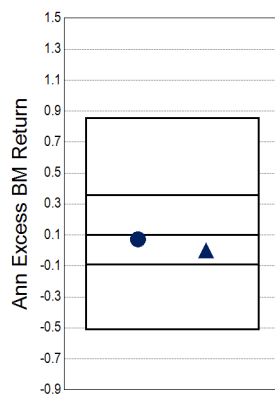
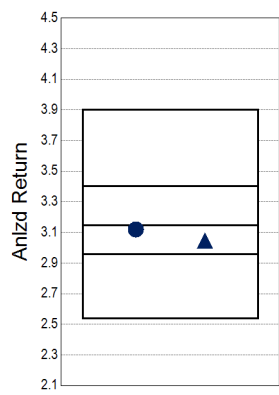
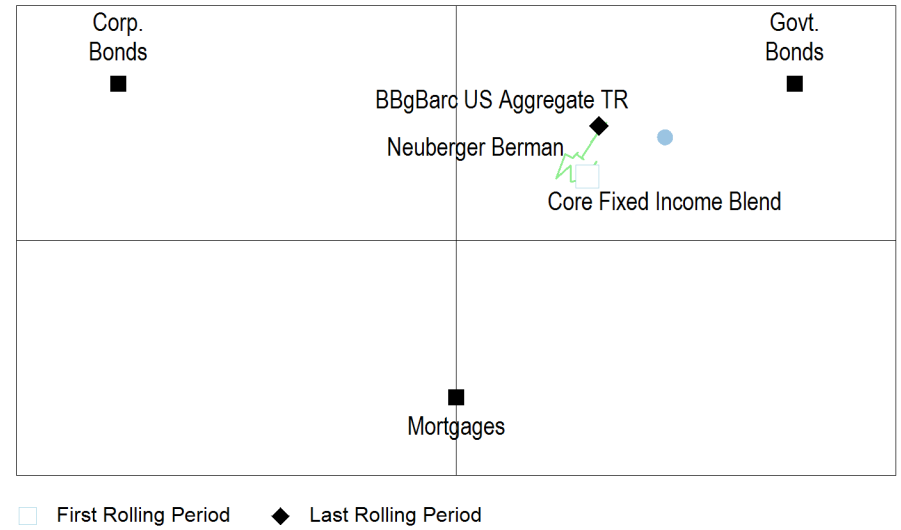
# Los Angeles City Employees' Retirement System

## NEUBERGER BERMAN

5 Year Risk Return



5 Year Style Map



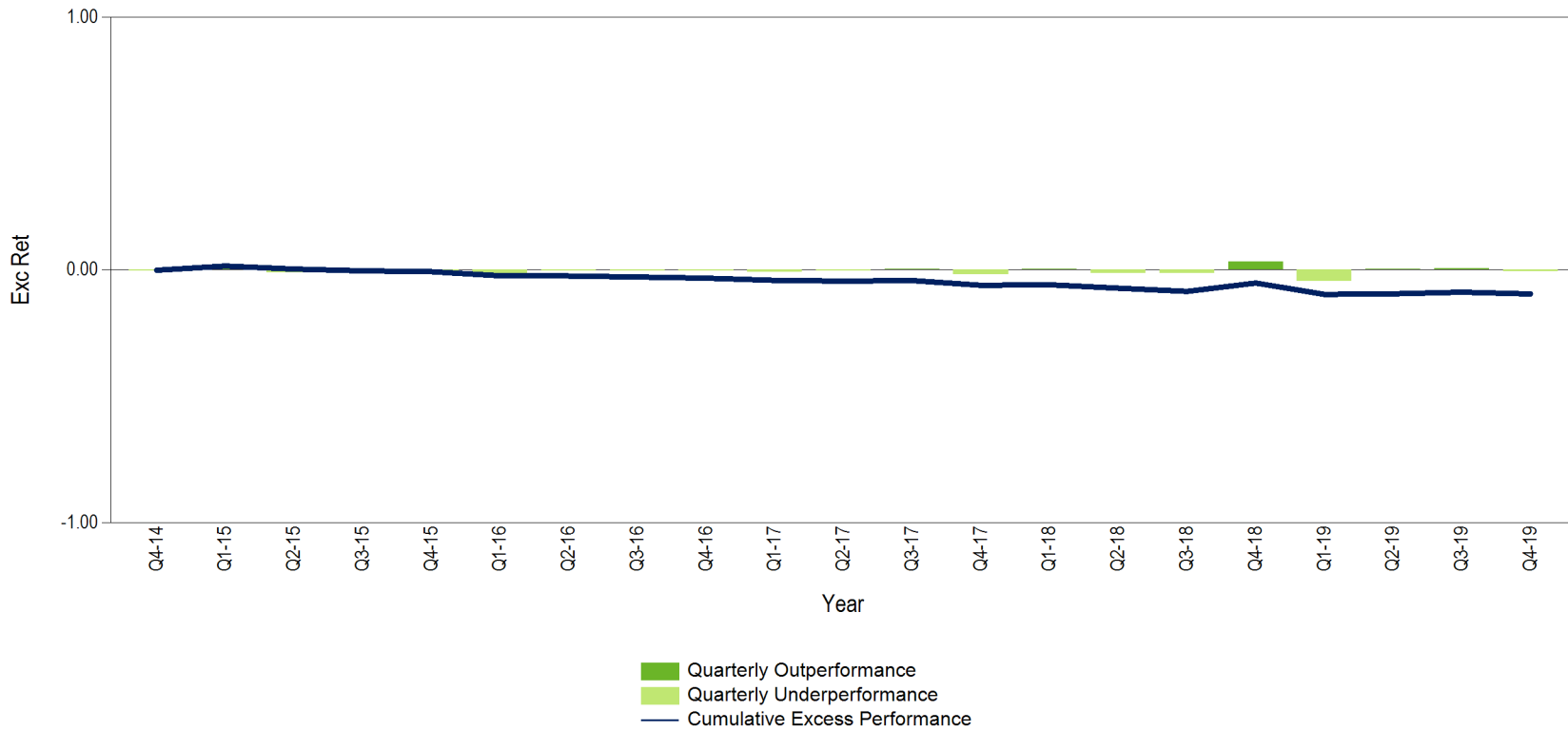
- Neuberger Berman
- ▲ Core Fixed Income Blend
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## SSGA U.S. AGGREGATE BOND

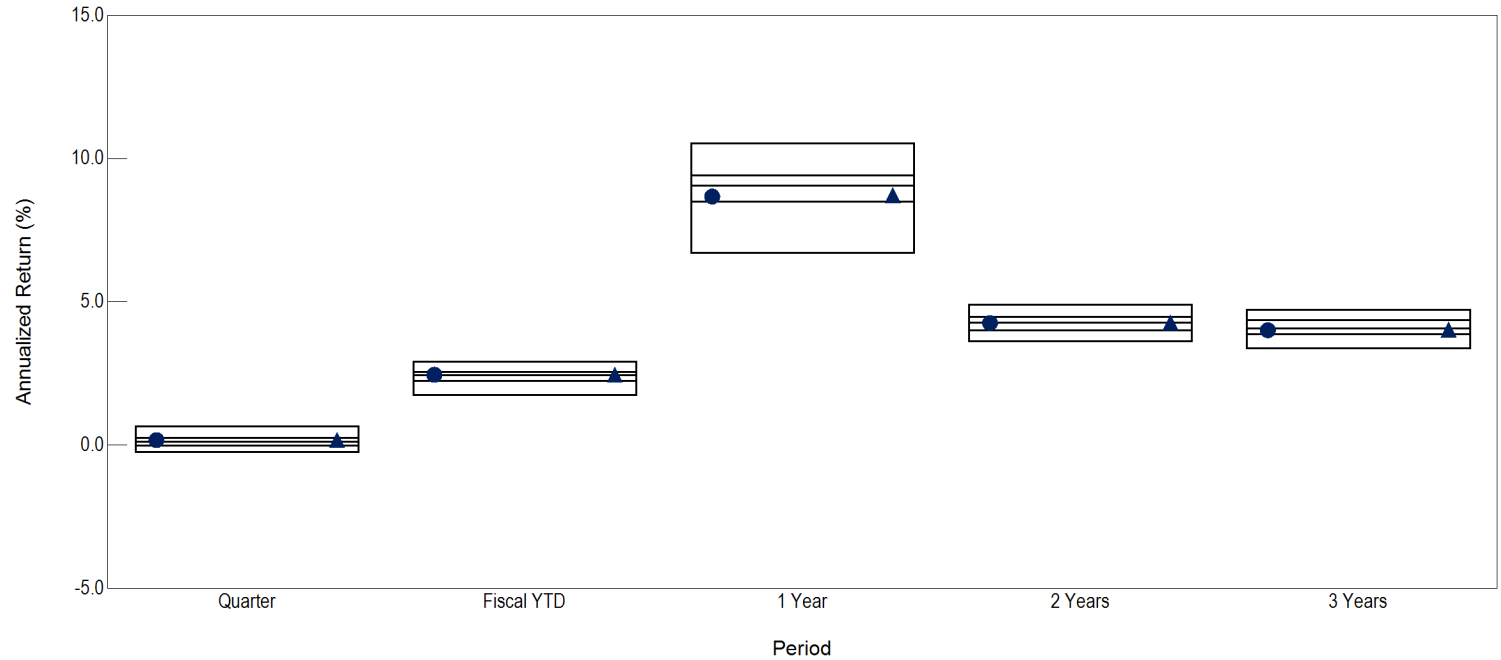
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## SSGA U.S. AGGREGATE BOND

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



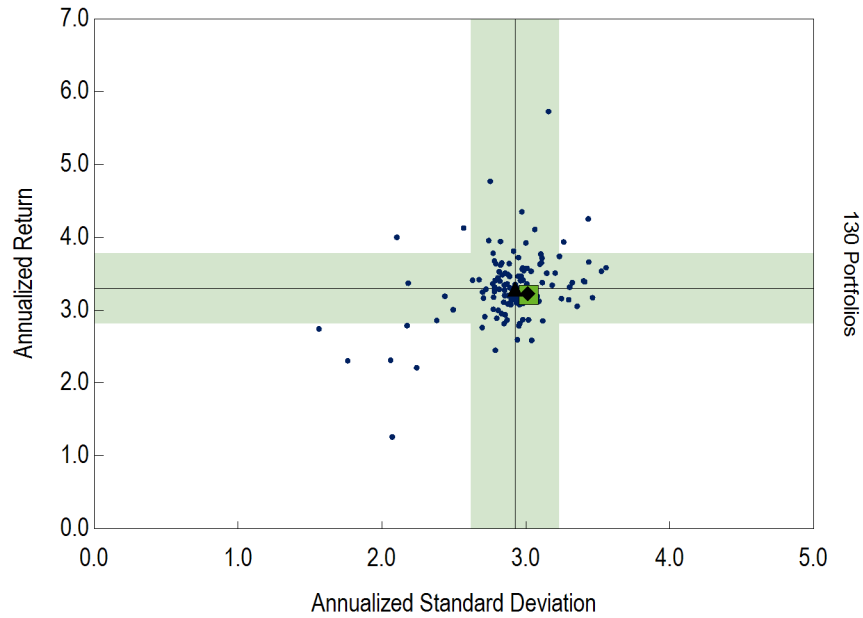
	Return (Rank)									
5th Percentile	0.66		2.91		10.53		4.90		4.72	
25th Percentile	0.26		2.58		9.44		4.49		4.38	
Median	0.14		2.46		9.07		4.29		4.09	
75th Percentile	0.00		2.26		8.52		4.03		3.90	
95th Percentile	-0.21		1.76		6.73		3.66		3.40	
# of Portfolios	137		137		137		136		135	
● SSGA U.S. Aggregate Bond	0.17	(45)	2.45	(54)	8.67	(71)	4.26	(54)	4.01	(60)
▲ BBgBarc US Aggregate TR	0.18	(43)	2.45	(53)	8.72	(69)	4.27	(53)	4.03	(57)



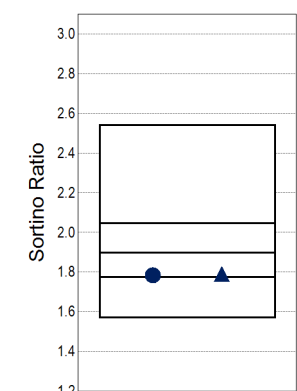
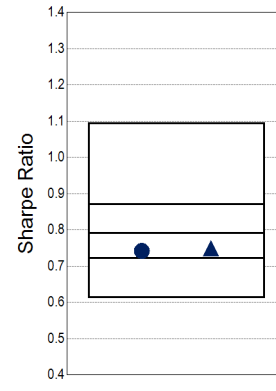
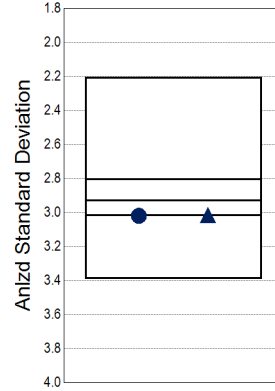
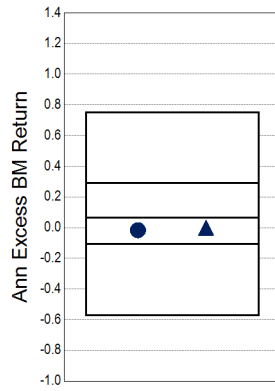
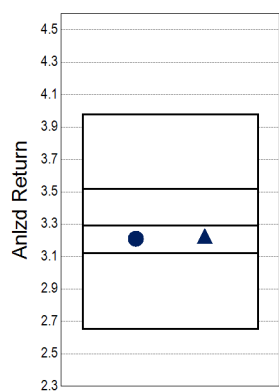
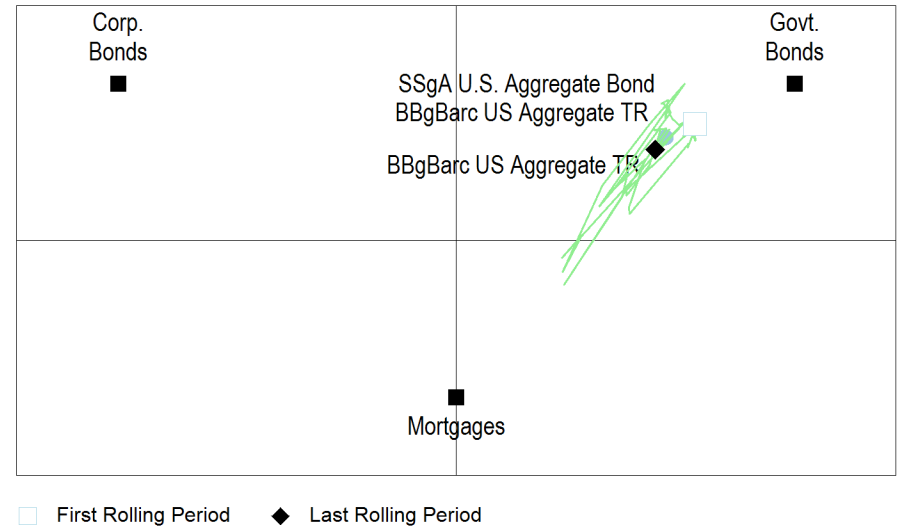
# Los Angeles City Employees' Retirement System

## SSGA U.S. AGGREGATE BOND

Since Inception Risk Return



Since Inception Style Map



- SSGA U.S. Aggregate Bond
- ▲ BBgBarc US Aggregate TR
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# **CREDIT OPPORTUNITIES MANAGER PERFORMANCE**

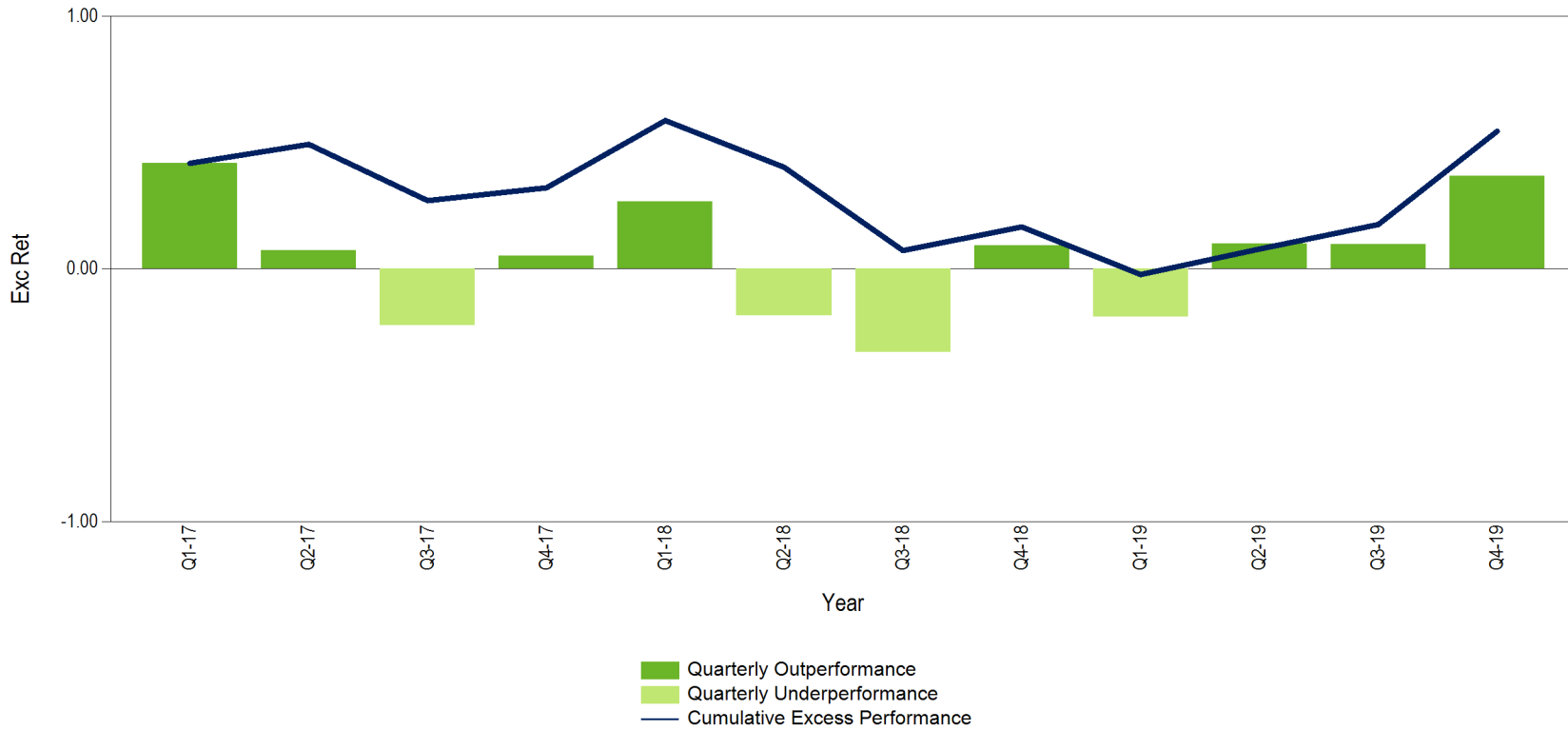
NEPC, LLC

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# Los Angeles City Employees' Retirement System

## AEGON USA

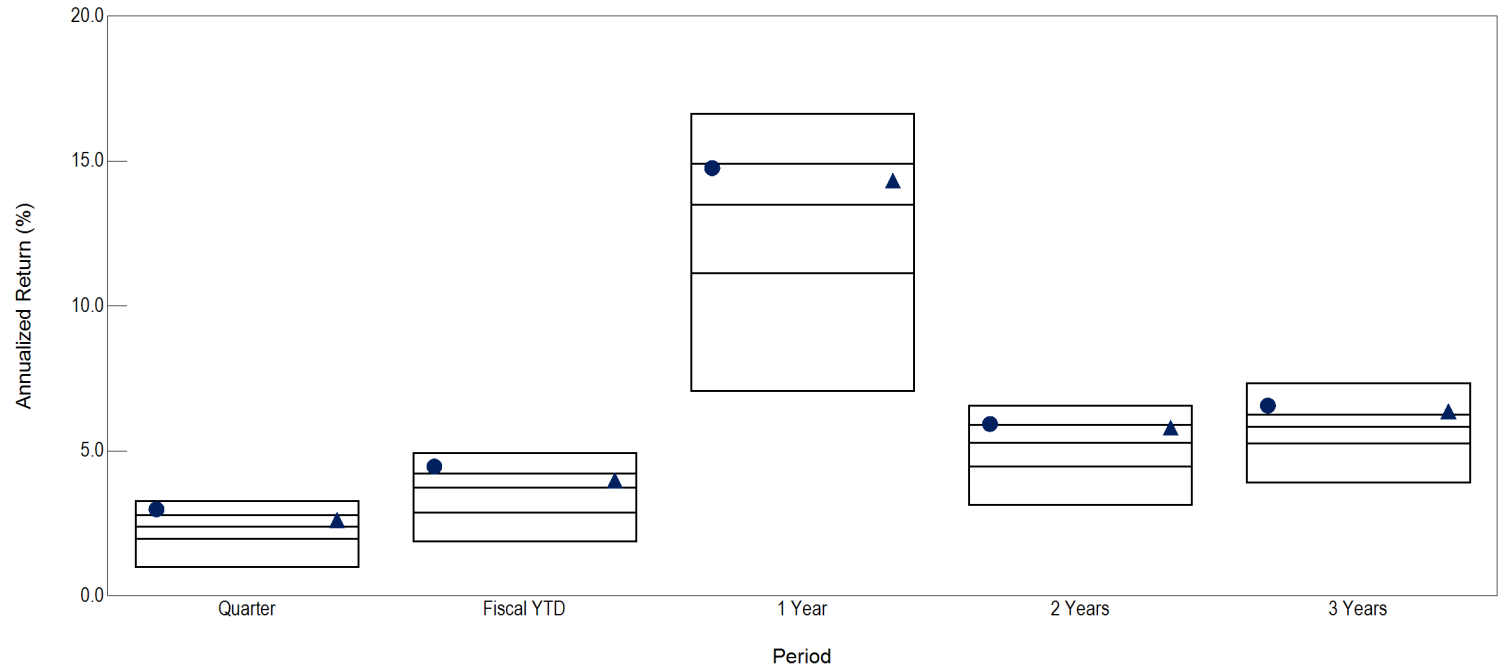
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## AEGON USA

AEGON USA vs. eV US High Yield Fixed Inc Net



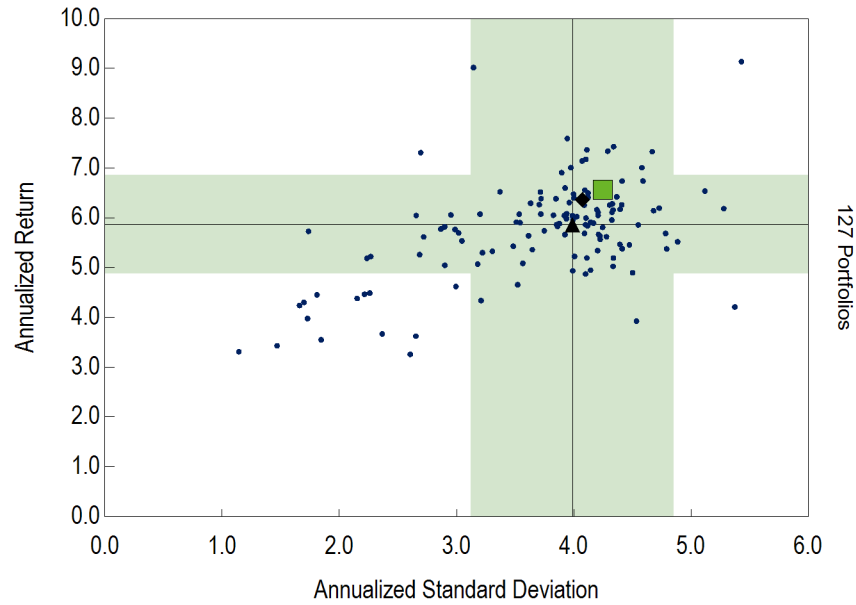
	Return (Rank)									
5th Percentile	3.27		4.92		16.61		6.56		7.32	
25th Percentile	2.81		4.24		14.93		5.91		6.26	
Median	2.40		3.75		13.51		5.31		5.86	
75th Percentile	1.98		2.90		11.15		4.48		5.28	
95th Percentile	1.02		1.90		7.09		3.15		3.94	
# of Portfolios	131		131		131		131		127	
● AEGON USA	2.98	(14)	4.46	(18)	14.75	(29)	5.93	(25)	6.56	(13)
▲ BBgBarc US High Yield 2% Issuer Cap TR	2.61	(35)	3.98	(40)	14.32	(36)	5.80	(30)	6.36	(21)



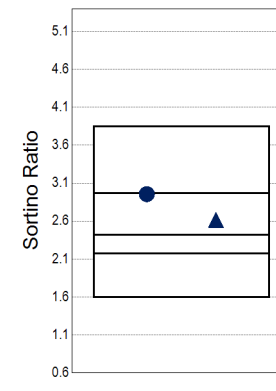
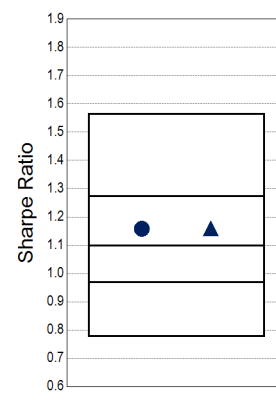
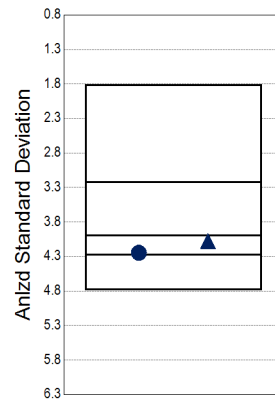
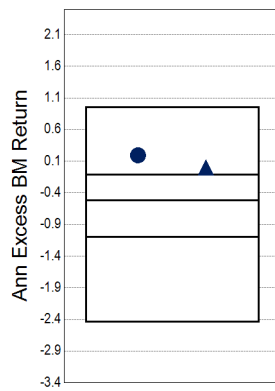
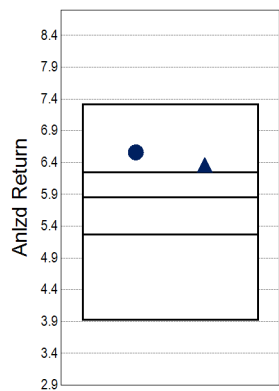
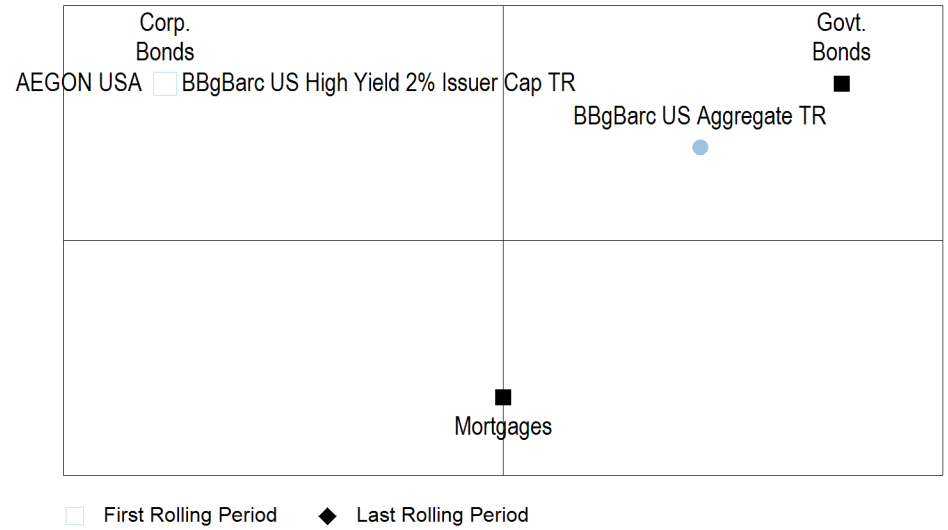
# Los Angeles City Employees' Retirement System

## AEGON USA

3 Year Risk Return



3 Year Style Map



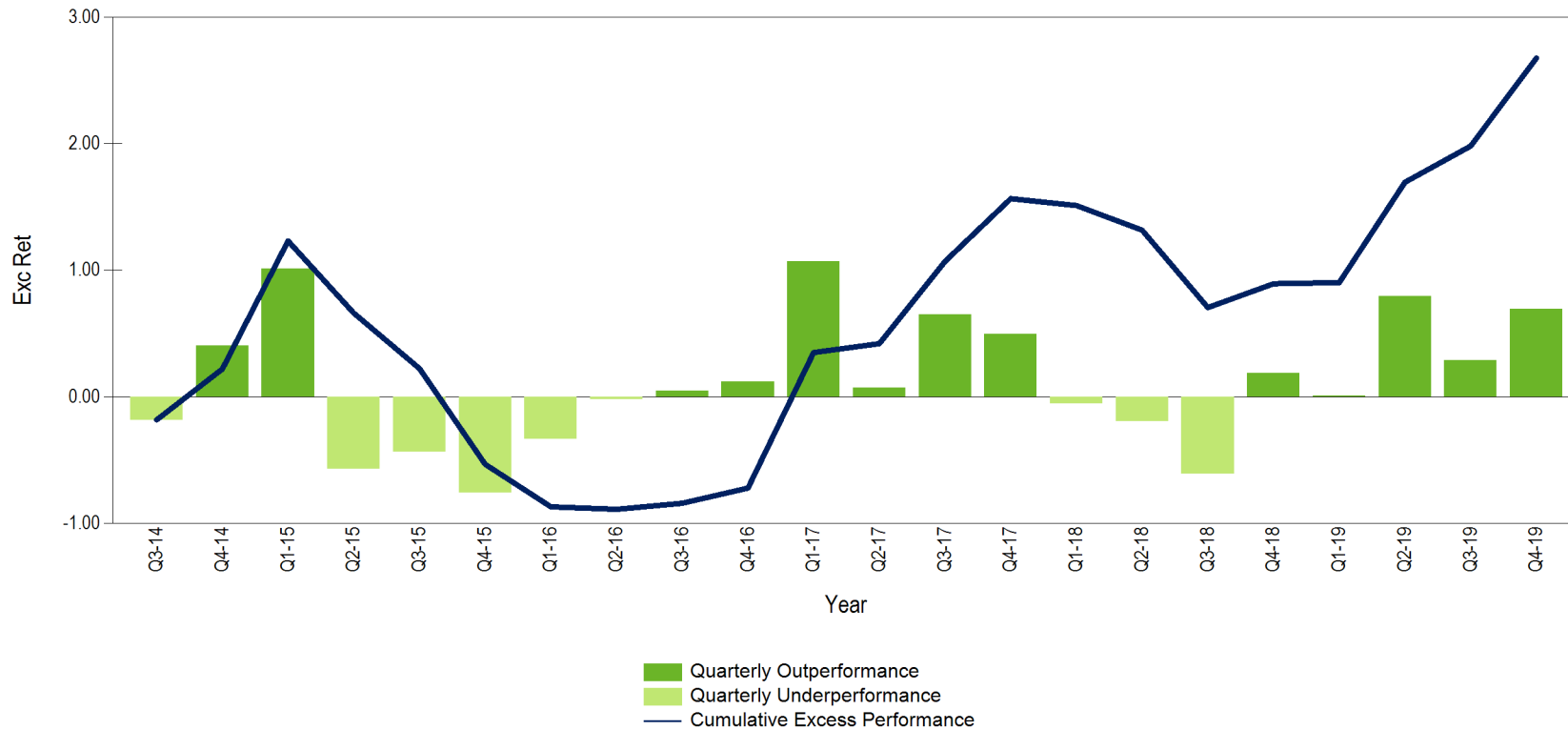
- AEGON USA
- ▲ BBgBarc US High Yield 2% Issuer Cap TR
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile





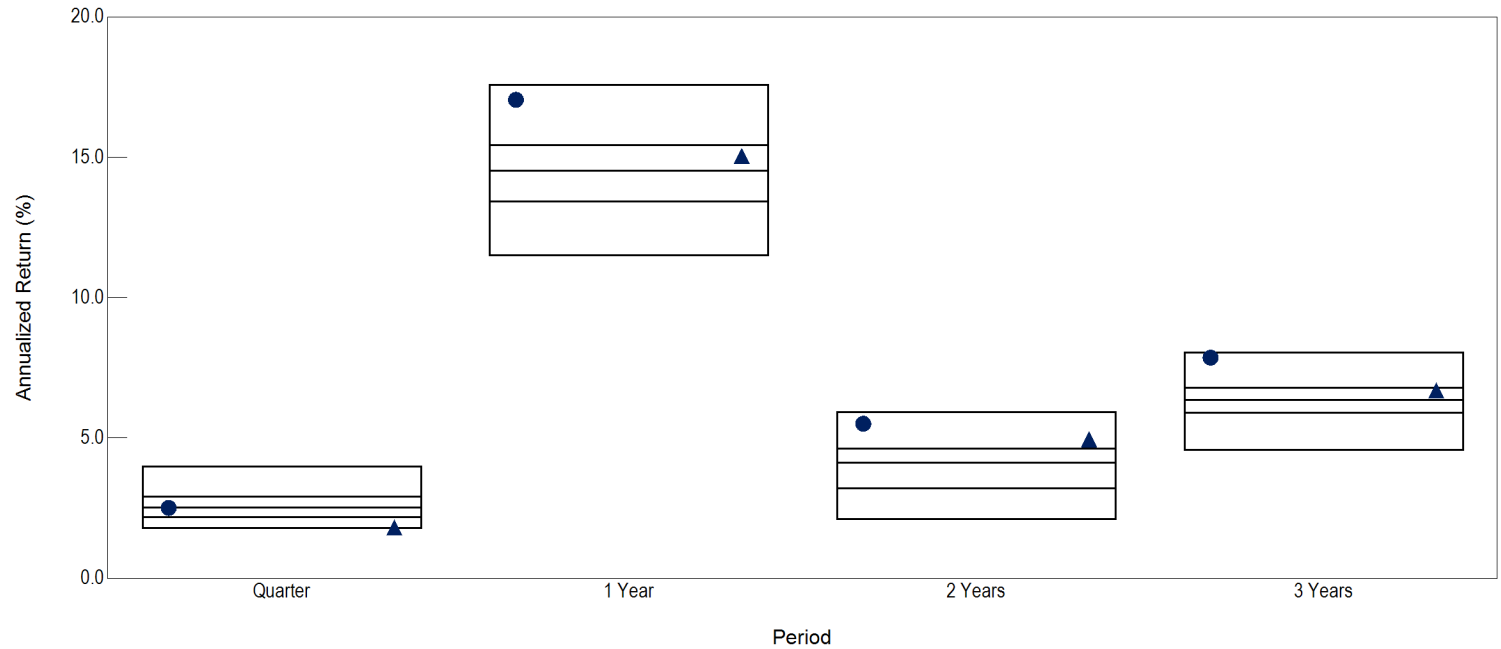
# PRUDENTIAL EMERGING MARKETS

Quarterly and Cumulative Excess Performance



# PRUDENTIAL EMERGING MARKETS

Prudential Emerging Markets vs. eV Emg Mkts Fixed Inc - Hard Currency Net

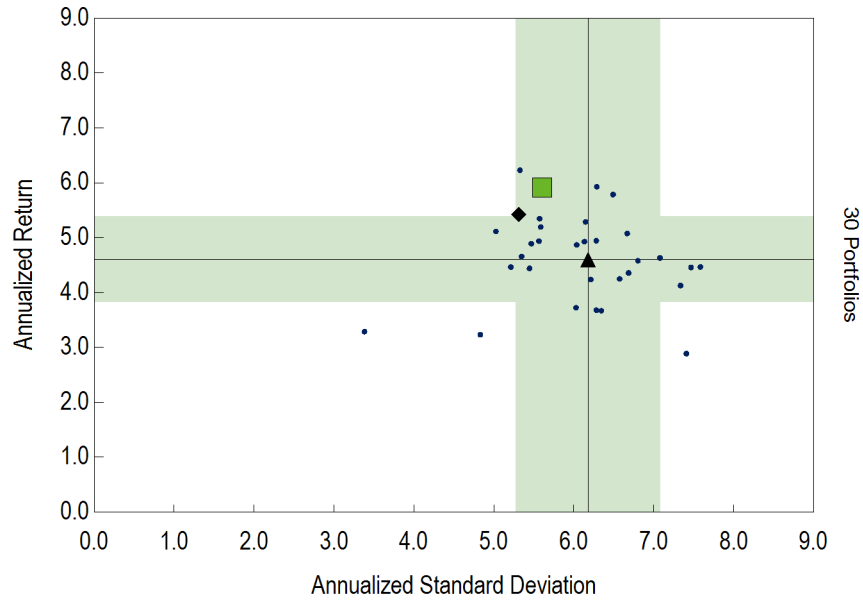


	Return (Rank)							
5th Percentile	3.99		17.58		5.92		8.04	
25th Percentile	2.93		15.45		4.65		6.80	
Median	2.55		14.55		4.14		6.38	
75th Percentile	2.21		13.45		3.23		5.91	
95th Percentile	1.81		11.53		2.13		4.60	
# of Portfolios	39		39		34		34	
● Prudential Emerging Markets	2.51	(55)	17.04	(11)	5.50	(6)	7.86	(9)
▲ JP Morgan EMBI Global Diversified	1.81	(96)	15.04	(36)	4.95	(18)	6.69	(35)

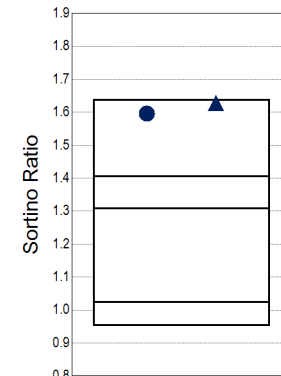
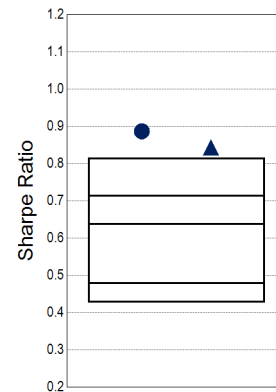
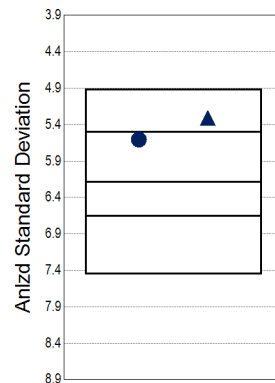
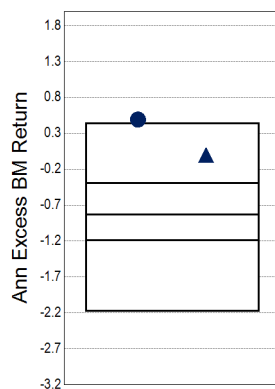
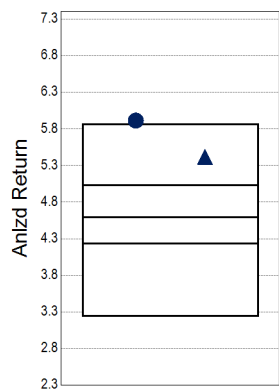
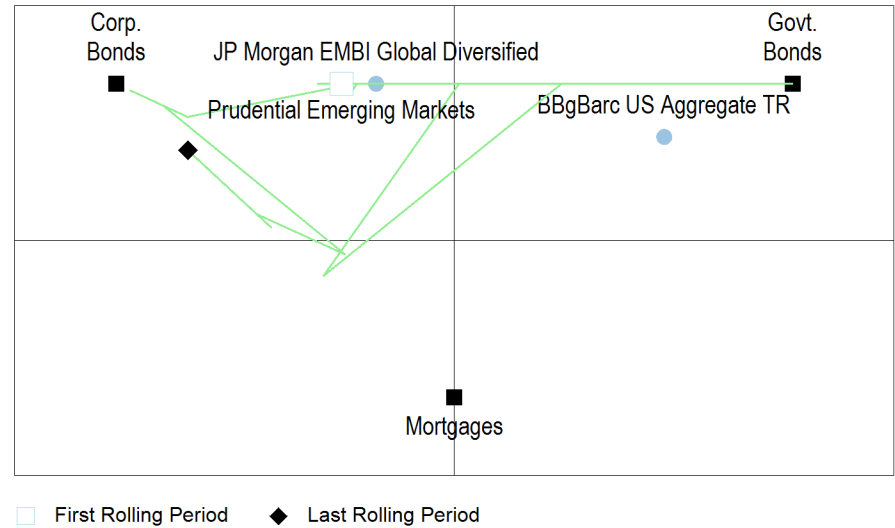


# PRUDENTIAL EMERGING MARKETS

Since Inception Risk Return



Since Inception Style Map

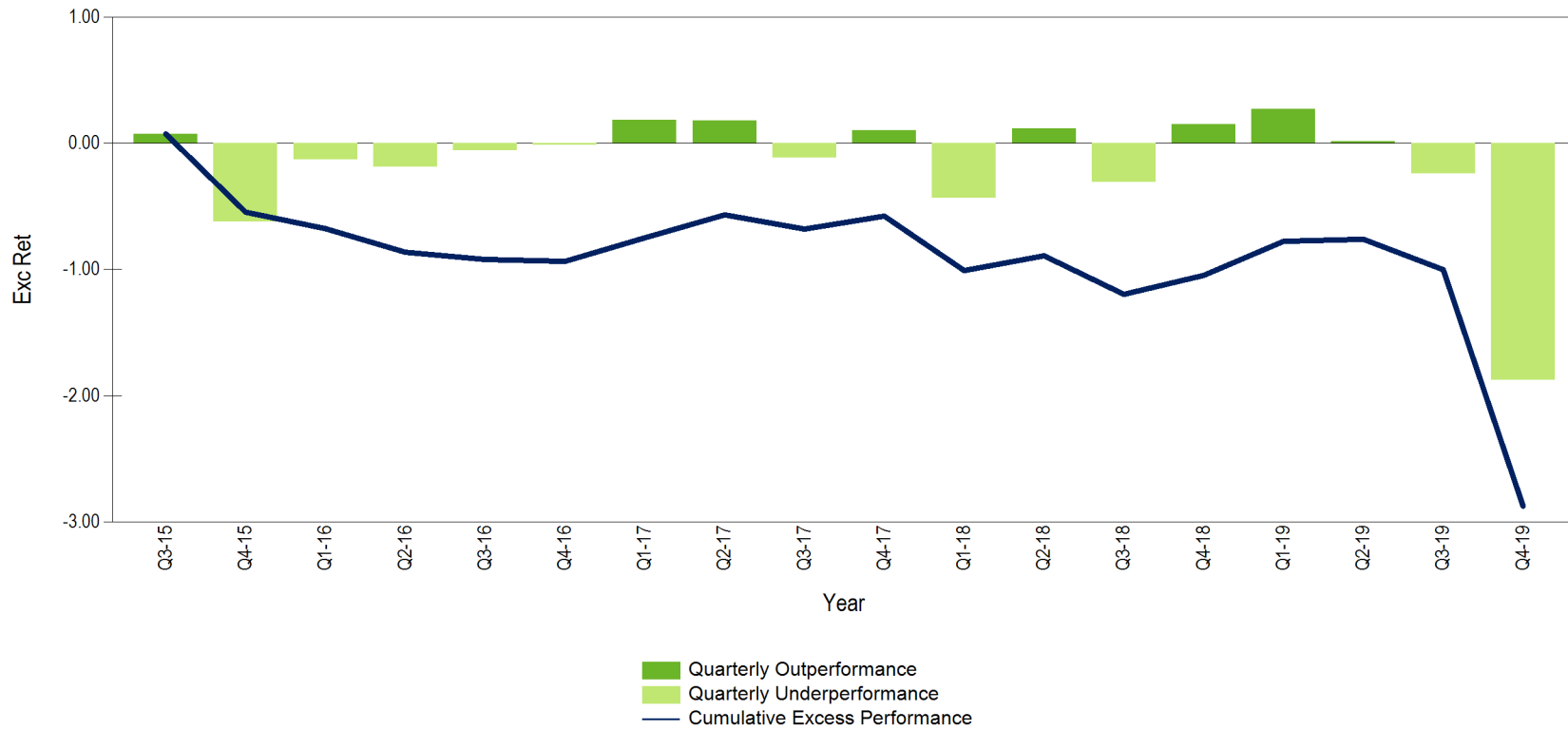


- Prudential Emerging Markets
- ▲ JP Morgan EMBI Global Div...
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# BAIN CAPITAL SENIOR LOAN FUND, LP

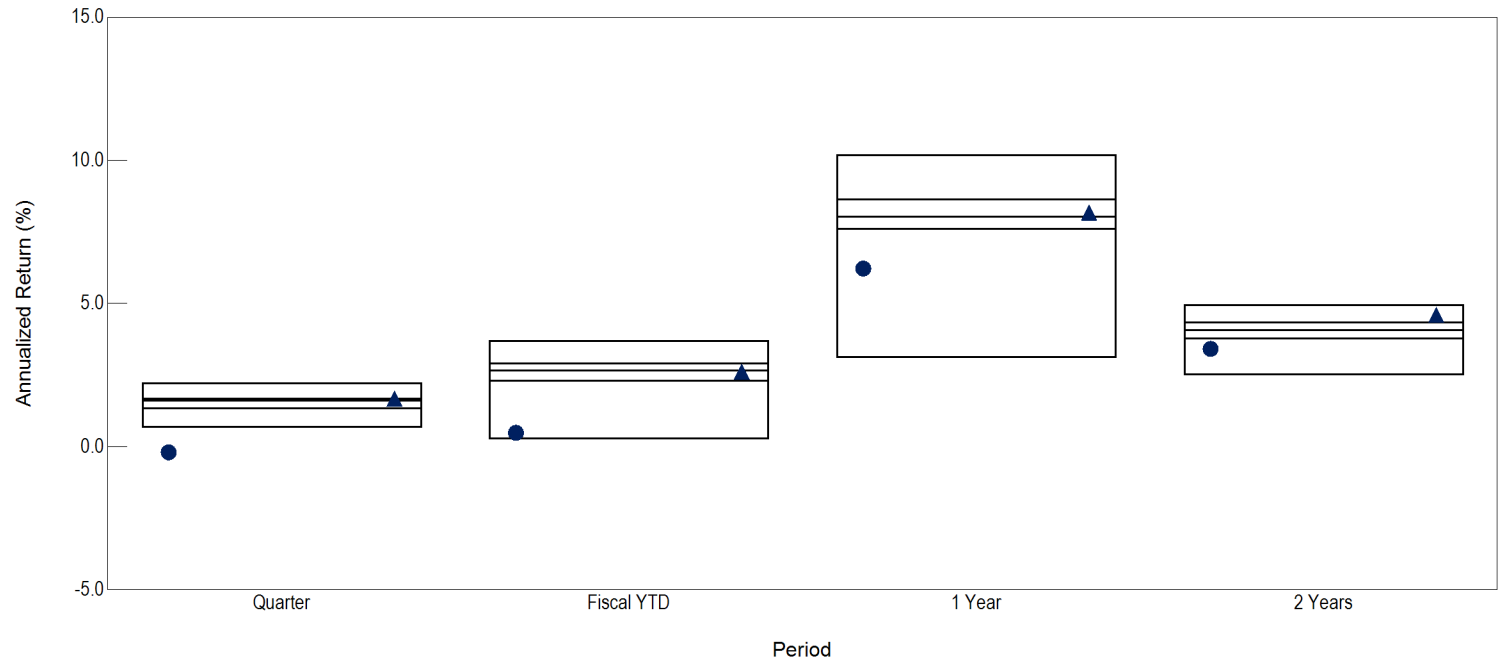
Quarterly and Cumulative Excess Performance



# 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

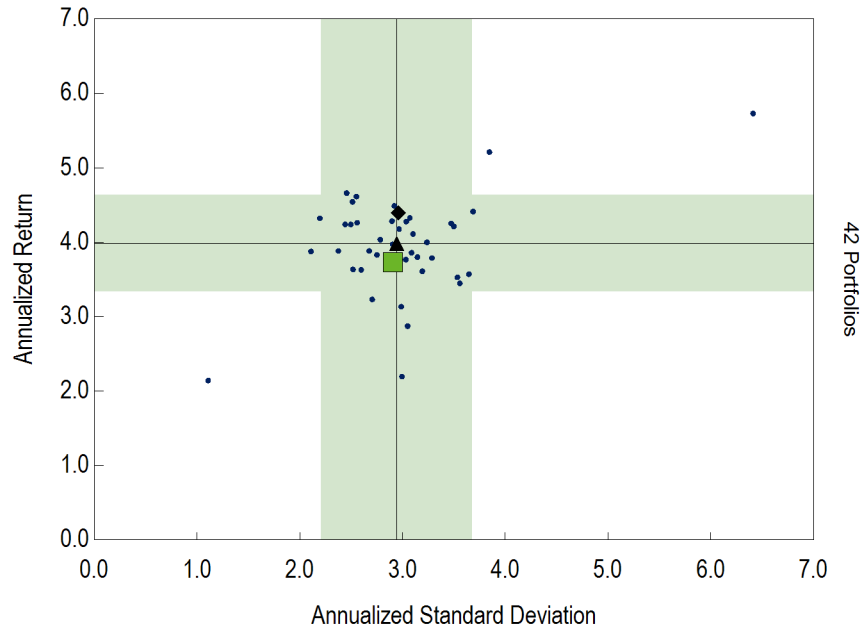


	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	2.20		3.70		10.17		4.94	
25th Percentile	1.71		2.94		8.67		4.36	
Median	1.63		2.68		8.05		4.09	
75th Percentile	1.35		2.34		7.63		3.80	
95th Percentile	0.72		0.30		3.15		2.54	
# of Portfolios	44		44		44		44	
● Bain Capital Senior Loan Fund, LP	-0.20	(99)	0.48	(95)	6.22	(87)	3.41	(87)
▲ Credit Suisse Leveraged Loans	1.68	(37)	2.61	(61)	8.17	(45)	4.60	(12)

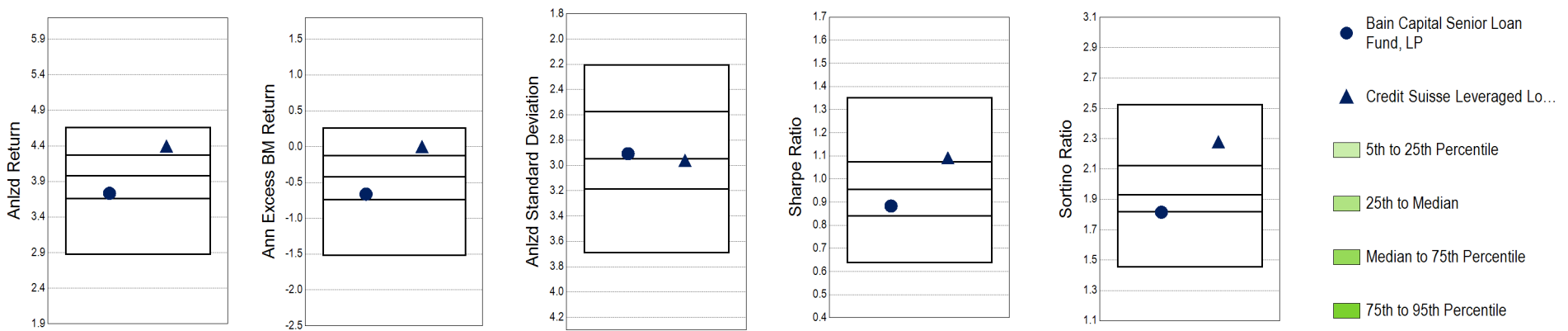
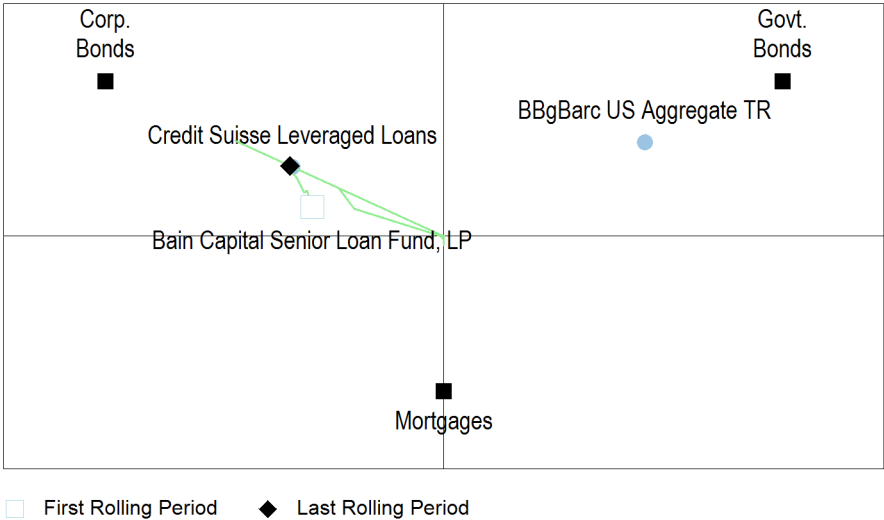


# BAIN CAPITAL SENIOR LOAN FUND, LP

Since Inception Risk Return



Since Inception Style Map



# **REAL ASSETS MANAGER PERFORMANCE**

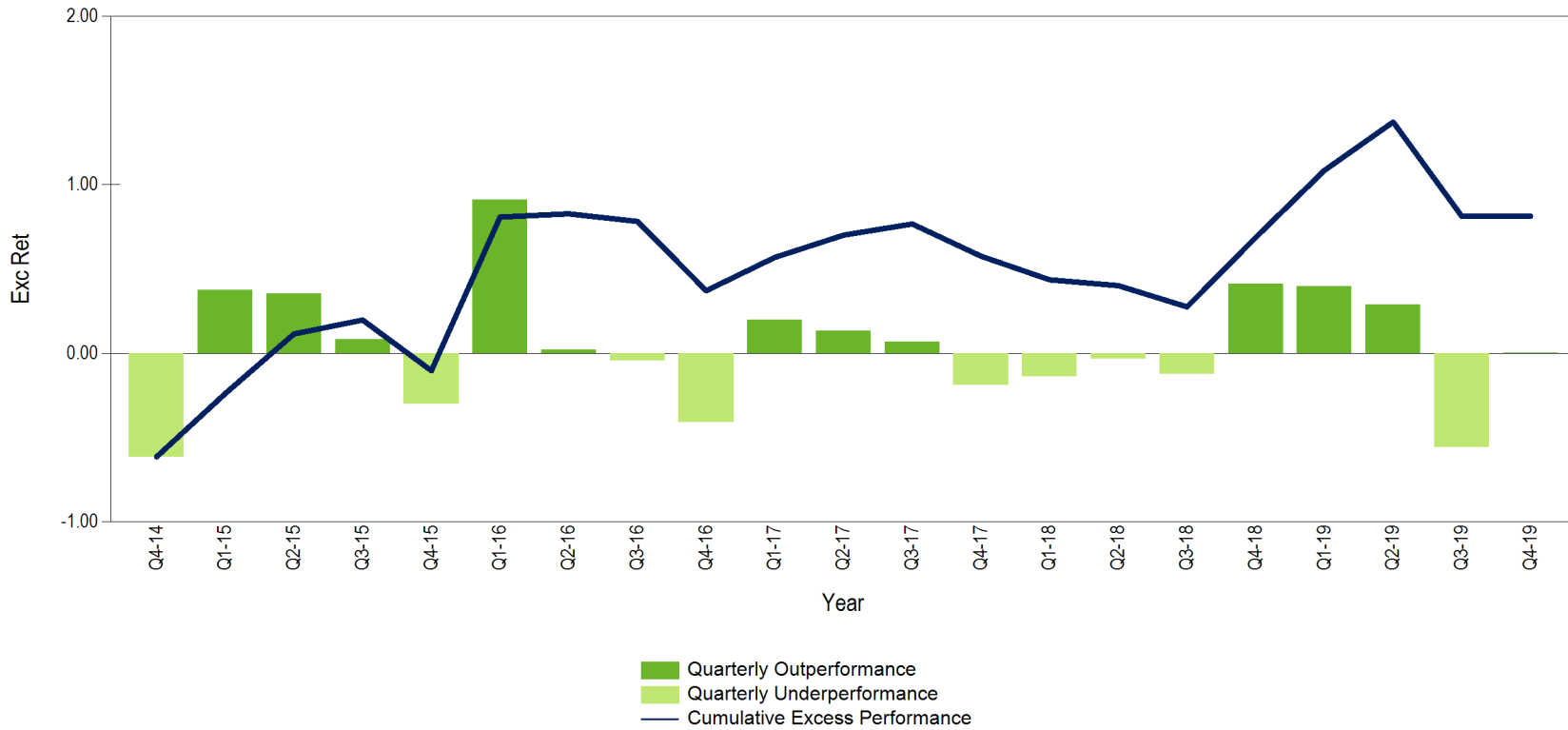
NEPC, LLC

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# Los Angeles City Employees' Retirement System

## DFA US TIPS

Quarterly and Cumulative Excess Performance

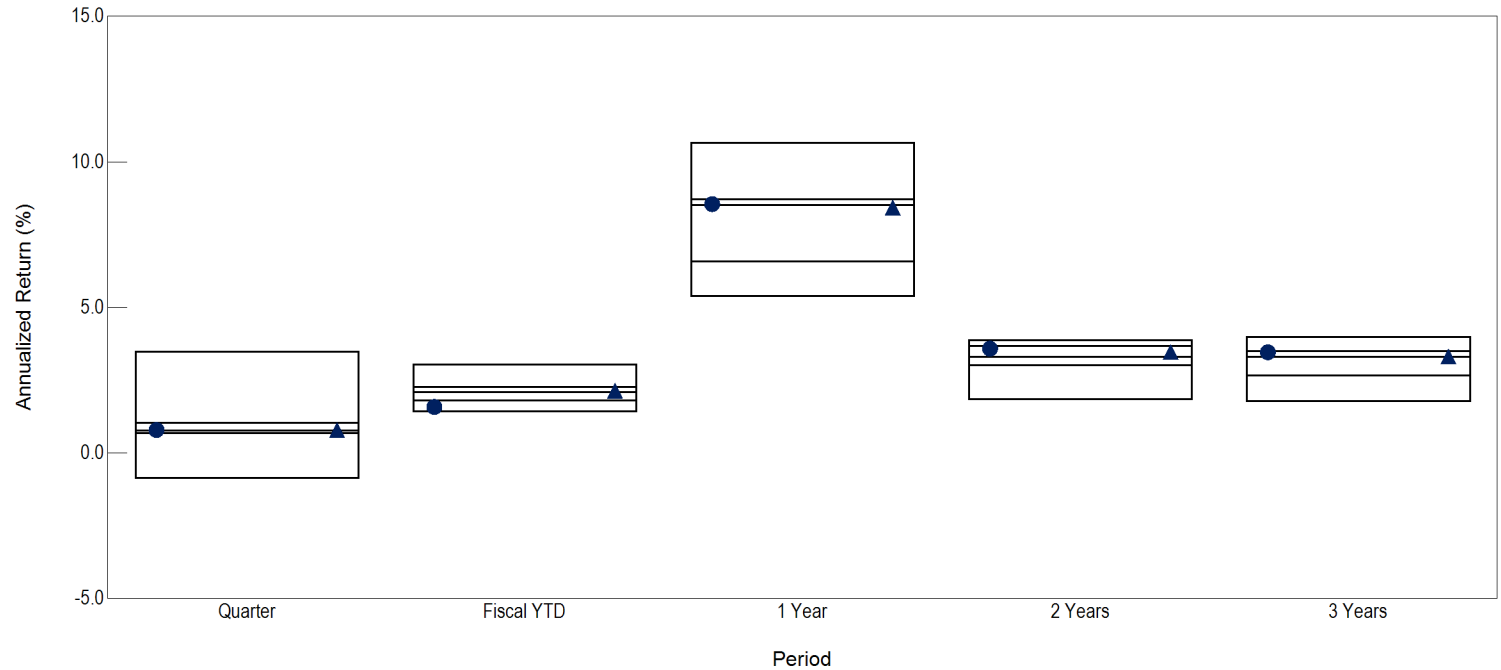




# Los Angeles City Employees' Retirement System

## DFA US TIPS

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



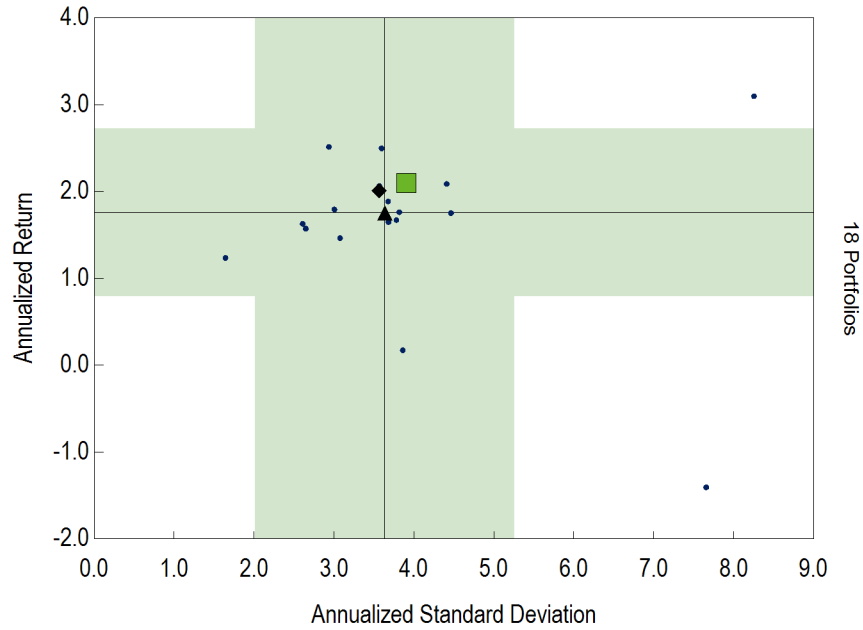
	Return (Rank)									
5th Percentile	3.48		3.04		10.65		3.88		3.99	
25th Percentile	1.06		2.29		8.74		3.69		3.53	
Median	0.79		2.11		8.55		3.33		3.33	
75th Percentile	0.71		1.82		6.61		3.04		2.70	
95th Percentile	-0.83		1.45		5.42		1.87		1.81	
# of Portfolios	19		19		19		19		19	
● DFA US TIPS	0.79	(50)	1.58	(84)	8.55	(48)	3.58	(30)	3.46	(29)
▲ BbgBarc US TIPS TR	0.79	(50)	2.14	(42)	8.43	(54)	3.47	(33)	3.31	(52)



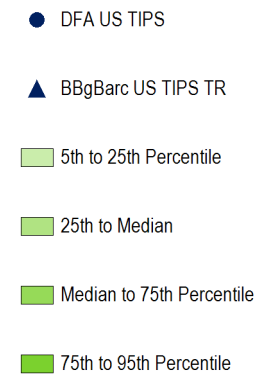
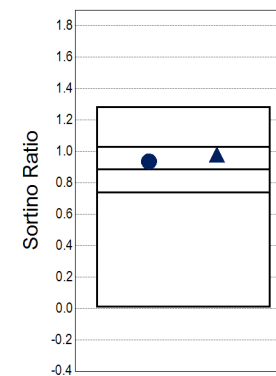
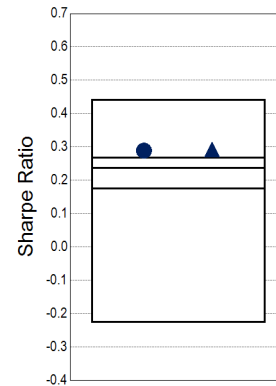
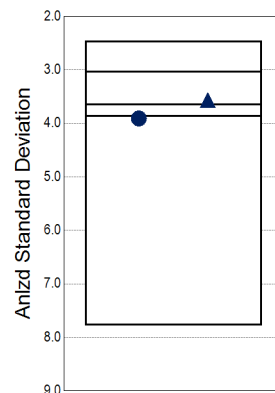
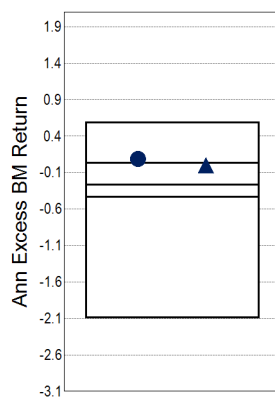
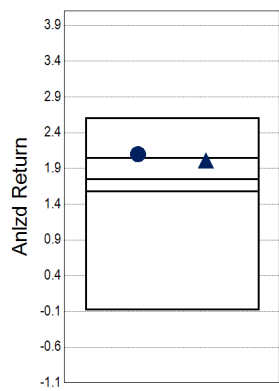
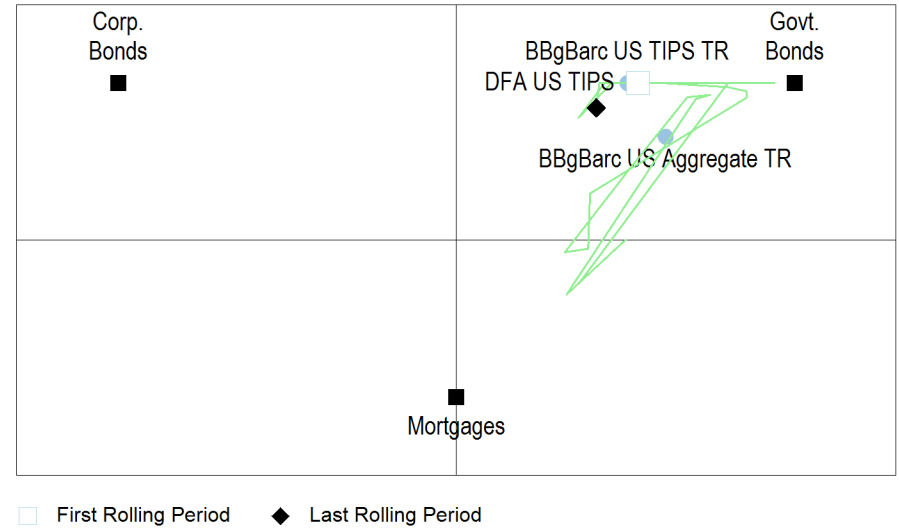
# Los Angeles City Employees' Retirement System

## DFA US TIPS

Since Inception Risk Return

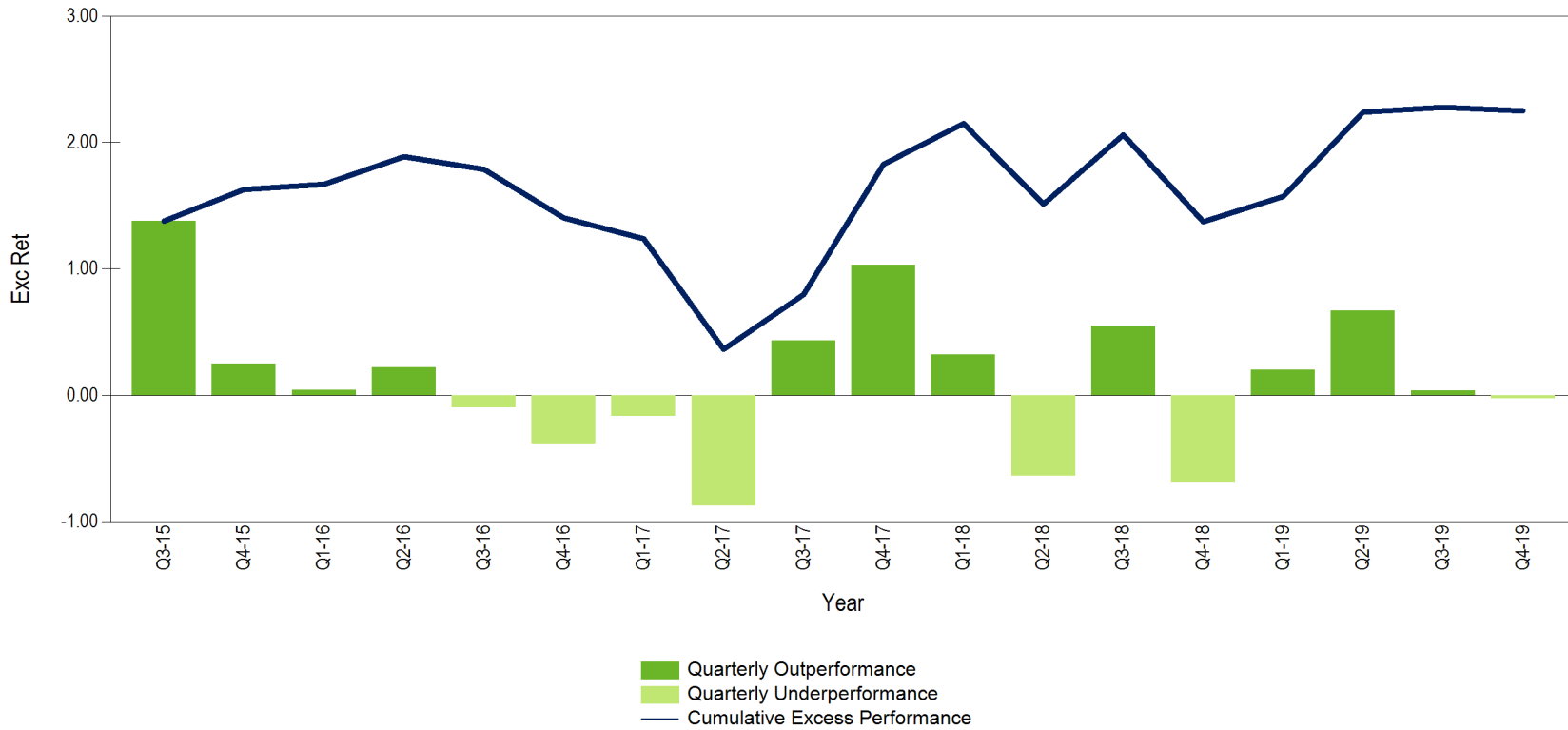


Since Inception Style Map



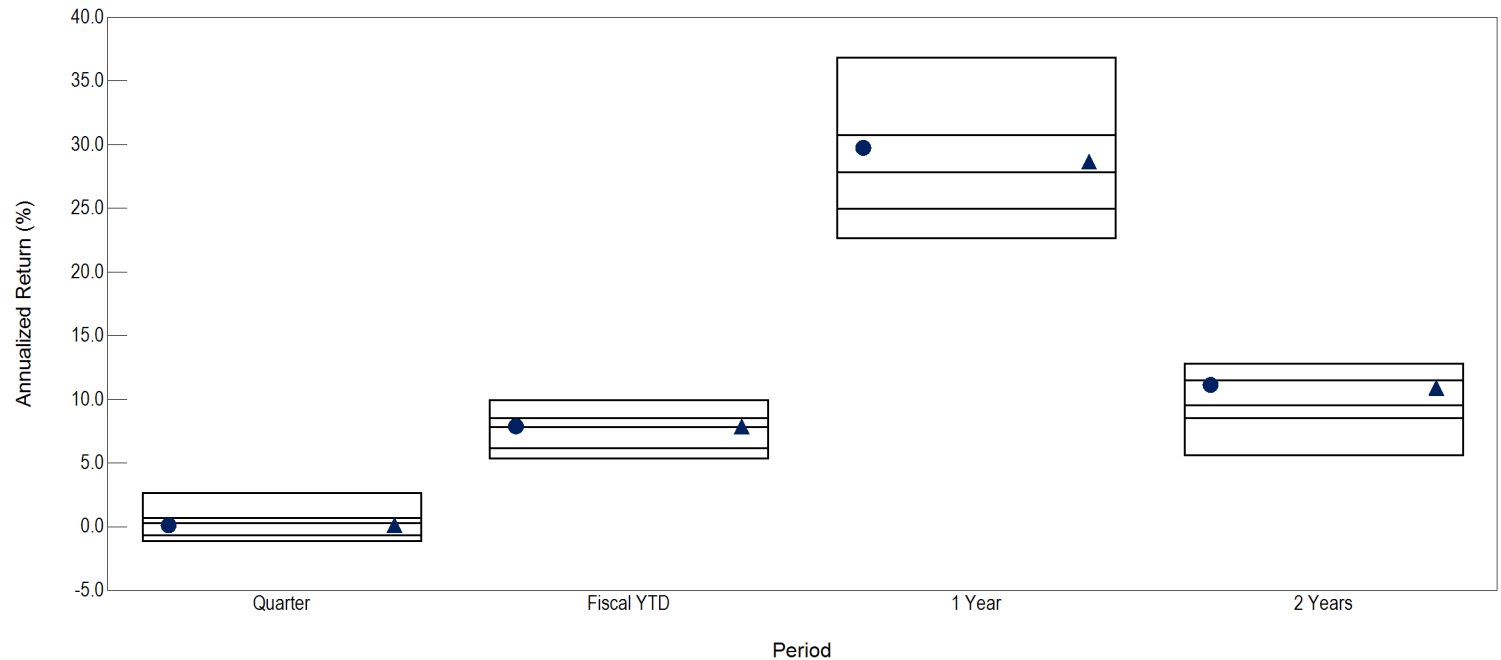
# CENTERSQUARE US REAL ESTATE

Quarterly and Cumulative Excess Performance



# CENTERSQUARE US REAL ESTATE

CenterSquare US Real Estate vs. eV US REIT Net

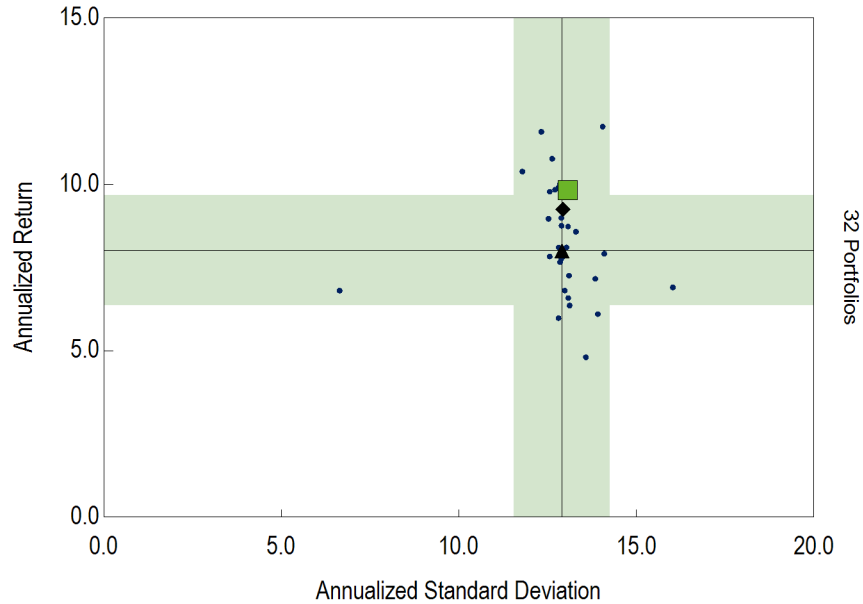


	Return (Rank)							
5th Percentile	2.65		9.93		36.83		12.80	
25th Percentile	0.75		8.57		30.81		11.56	
Median	0.31		7.89		27.88		9.57	
75th Percentile	-0.65		6.23		25.03		8.60	
95th Percentile	-1.08		5.40		22.70		5.64	
# of Portfolios	35		35		33		33	
● CenterSquare US Real Estate	0.11	(54)	7.88	(51)	29.74	(32)	11.13	(29)
▲ FTSE NAREIT All Equity REIT	0.13	(53)	7.87	(51)	28.66	(41)	10.91	(29)

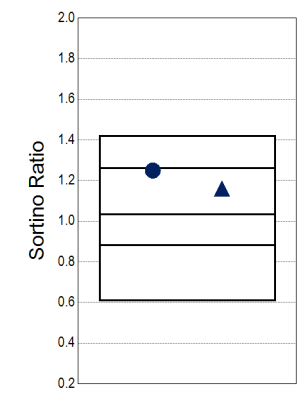
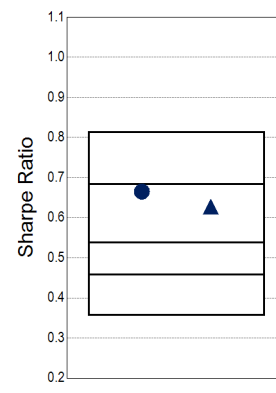
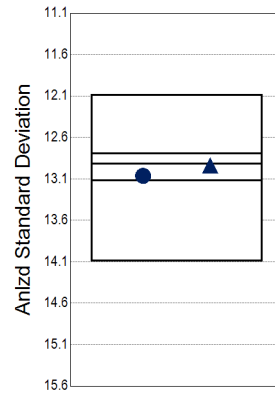
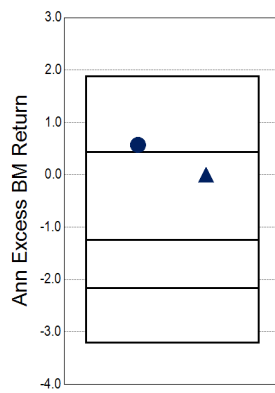
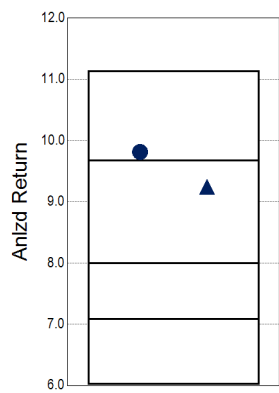
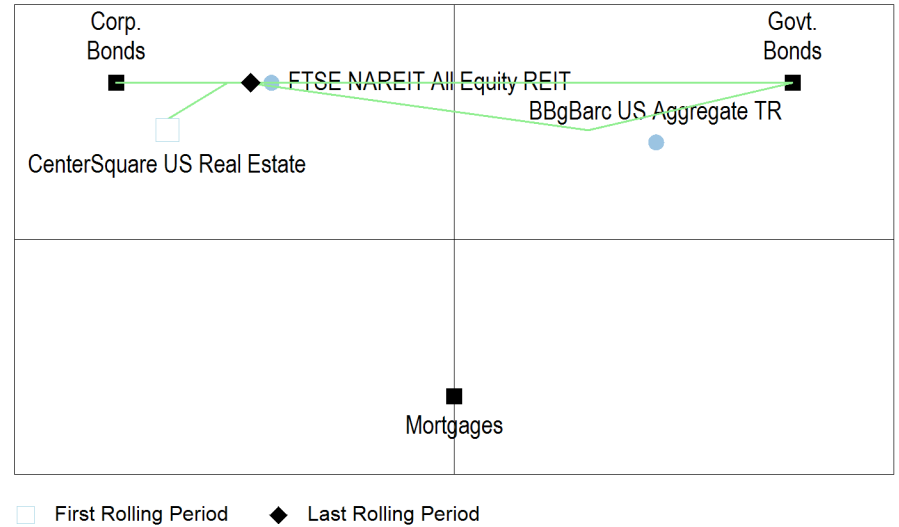


# CENTERSQUARE US REAL ESTATE

Since Inception Risk Return



Since Inception Style Map



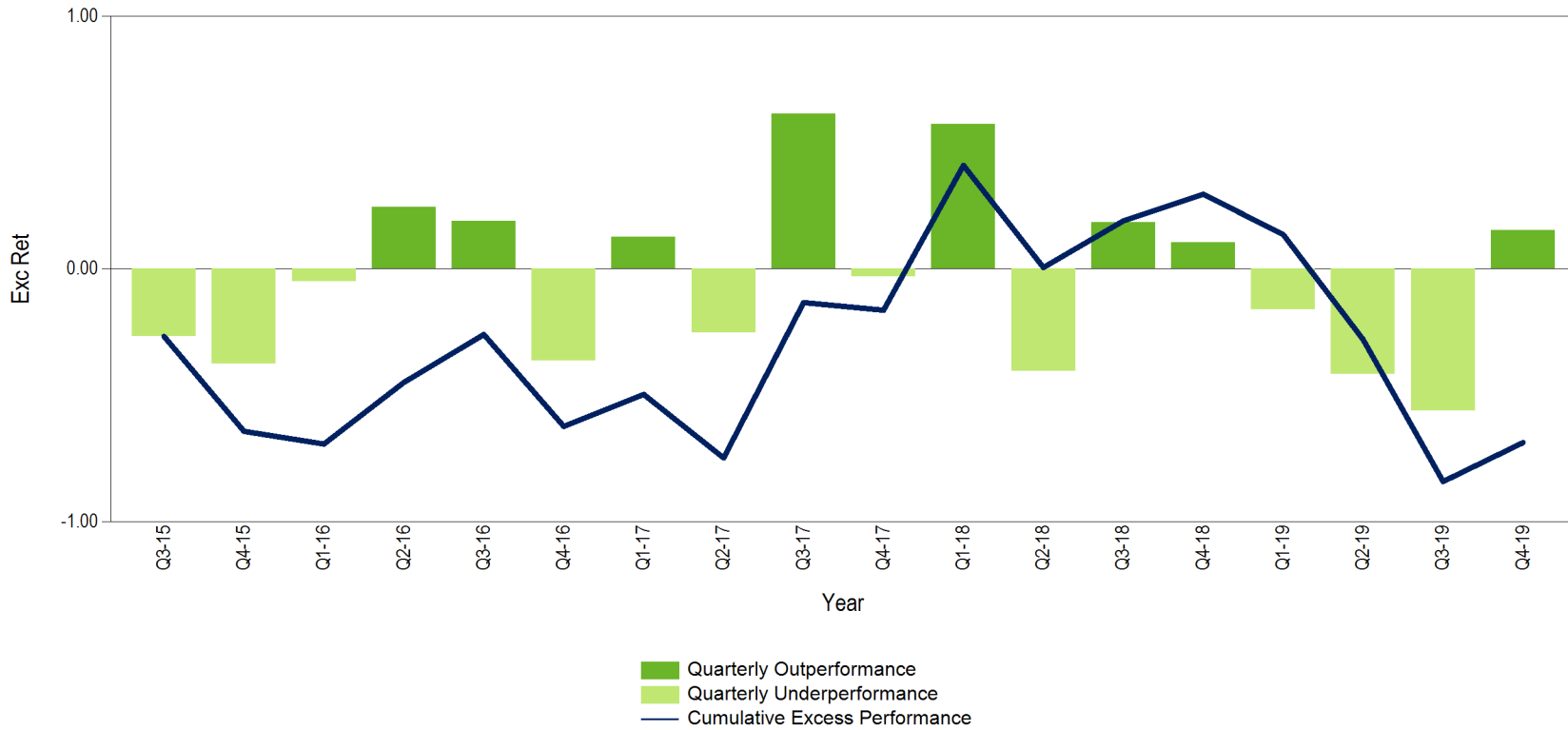
- CenterSquare US Real Estate
- ▲ FTSE NAREIT All Equity REIT
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## CORE COMMODITY MGMT

Quarterly and Cumulative Excess Performance



# DEFINITIONS

NEPC, LLC

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# 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/Observations<sup>1</sup>** - The total number of data points that make up a specified universe

**Allocation Index<sup>3</sup>** - 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 Effect<sup>2</sup>** - 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)<sup>3</sup>** - 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)<sup>3</sup>** - 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.

**Attribution<sup>3</sup>** - 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 Maturity<sup>4</sup>** - 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 Average<sup>1</sup>** - 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) Attribution<sup>1</sup>** - 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) Attribution<sup>1</sup>** - 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)<sup>4</sup>** - 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.

**Correlation<sup>1</sup>** - 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: <sup>1</sup>InvestorForce, <sup>2</sup>Interaction Effect Performance Attribution, <sup>3</sup>NEPC, LLC, <sup>4</sup>Investopedia, <sup>5</sup>Hedgeco.net



# GLOSSARY OF INVESTMENT TERMINOLOGY

**Coupon<sup>4</sup>** – 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 Effect<sup>1</sup>** – Is the effect that changes in currency exchange rates over time affect excess performance.

**Derivative Instrument<sup>2</sup>** – 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 Deviation<sup>1</sup>** – 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.*

**Duration<sup>3</sup>** – 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 Ratio<sup>1</sup>** – 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 Bond<sup>3</sup>** – 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 Hurdle<sup>5</sup>** – 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 Mark<sup>4</sup>** – 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 Rate<sup>4</sup>** – 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 Effects<sup>2</sup>** – 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.

**Median<sup>3</sup>** – 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 Duration<sup>3</sup>** – The percentage change in the price of a fixed income security that results from a change in yield.

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

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

**Net Investment Change<sup>1</sup>** – Is the change in an investment after accounting for all Net Cash Flows.

**Performance Fee<sup>4</sup>** – 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: <sup>1</sup>InvestorForce, <sup>2</sup>Interaction Effect Performance Attribution, <sup>3</sup>NEPC, LLC, <sup>4</sup>Investopedia, <sup>5</sup>Hedgeco.net*



# GLOSSARY OF INVESTMENT TERMINOLOGY

**Policy Index<sup>3</sup>** - 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)<sup>4</sup>** - 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)<sup>3</sup>** - The weighted equity P/E is based on current price and trailing 12 months earnings per share (EPS).

**Price to Sales (P/S)<sup>4</sup>** - 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)<sup>4</sup>** - 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) Effect<sup>2</sup>** - 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 rate<sup>5</sup>** - is a hurdle rate that once beaten allows a fund manager to charge a performance fee based on the entire annualized return.

**Tiered Fee<sup>1</sup>** - 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 Effects<sup>2</sup>** - 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 Return<sup>1</sup>** - 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.

**Universe<sup>3</sup>** - The list of all assets eligible for inclusion in a portfolio.

**Upside Deviation<sup>1</sup>** - Standard Deviation of Positive Returns

**Weighted Avg. Market Cap.<sup>4</sup>** - 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 (%)<sup>3</sup>** - The current yield of a security is the current indicated annual dividend rate divided by current price.

**Yield to Maturity<sup>3</sup>** - The discount rate that equates the present value of cash flows, both principal and interest, to market price.

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



# DISCLOSURES

NEPC, LLC

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### **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.





**REPORT TO BOARD OF ADMINISTRATION**

**From: Investment Committee**  
Sung Won Sohn, Chair  
Elizabeth Lee  
Nilza R. Serrano

**MEETING: MARCH 24, 2020**  
**ITEM: IX – D**

**SUBJECT: INVESTMENT MANAGER CONTRACT WITH NEUBERGER BERMAN INVESTMENT ADVISERS LLC REGARDING THE MANAGEMENT OF AN ACTIVE CORE FIXED INCOME PORTFOLIO AND POSSIBLE BOARD ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

**Recommendation**

That the Board:

1. Approve a one-year contract extension with Neuberger Berman Investment Advisers LLC for the management of an active core fixed income portfolio.
2. Authorize the Executive Officer to approve and execute the necessary documents, subject to satisfactory business and legal terms.

**Discussion**

On March 10, 2020, the Committee considered the attached staff report (Attachment 1) recommending a one-year contract extension with Neuberger Berman Investment Advisers LLC (Neuberger Berman). Neuberger Berman has managed an active core fixed income portfolio for LACERS since November 1990, and the current contract expires on June 30, 2020. Neuberger Berman rebid for its mandate in the 2019-2020 active core fixed income investment manager search that is currently in progress. The Committee discussed the organization, performance, and investment management fees. Neuberger Berman was placed "On Watch" for an initial one-year period effective March 21, 2019 pursuant to LACERS Manager Monitoring Policy. Staff, in concurrence with NEPC, LLC, LACERS' General Fund Consultant, have determined to maintain Neuberger Berman's current "On Watch" status for an additional one-year period based on Neuberger Berman's performance as of February 29, 2020. The Committee concurs with the staff recommendation for a one-year contract extension with Neuberger Berman to allow time to complete the current search and execute contracts with the firms hired by the Board.



## **Strategic Plan Impact Statement**

A contract extension with Neuberger Berman Investment Advisers LLC will allow LACERS to maintain a diversified exposure to the active core fixed income market. This is expected to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure is consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Jeremiah Paras, Investment Officer I, Investment Division

RJ/BF/JP

Attachments:   1. Investment Committee Recommendation Report dated March 10, 2020  
                  2. Proposed Resolution



**REPORT TO INVESTMENT COMMITTEE**

From: Lita Payne, Executive Officer

*Lita Payne*

**MEETING: MARCH 10, 2020**

**ITEM: IV**

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**SUBJECT: INVESTMENT MANAGER CONTRACT WITH NEUBERGER BERMAN INVESTMENT ADVISERS LLC REGARDING THE MANAGEMENT OF AN ACTIVE CORE FIXED INCOME PORTFOLIO AND POSSIBLE COMMITTEE ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

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**Recommendation**

That the Committee recommend to the Board a one-year contract extension with Neuberger Berman Investment Advisers LLC for the management of an active core fixed income portfolio.

**Executive Summary**

Neuberger Berman Investment Advisers LLC (Neuberger Berman) has managed an active core fixed income portfolio for LACERS since November 1990. LACERS' portfolio was valued at \$829 million as of February 29, 2020. Neuberger Berman rebid for its mandate in the 2019-2020 active core fixed income investment manager search that is currently in progress. Neuberger Berman's current contract expires on June 30, 2020. Staff recommends a one-year contract extension with Neuberger Berman to allow time to complete the current search and execute contracts with the firms hired by the Board.

**Discussion**

*Background*

Neuberger Berman has managed an active core fixed income portfolio for LACERS since November 1990, and is currently benchmarked against the Barclays Capital U.S. Aggregate Bond Index. Neuberger Berman incorporates fundamental and quantitative analysis to develop a diversified, high-quality fixed income portfolio. The manager seeks to add value with security selection and variations in duration and sectors relative to the benchmark. The strategy is part of Neuberger Berman's Global Investment Grade Fixed Income business, which is co-headed by David Brown and Thanos Bardas. The two, together with Nathan Kush, are the lead portfolio managers for the Core Bond strategy. They are supported by several portfolio managers implementing the firm's sector specialist investment model. LACERS' portfolio was valued at \$829 million as of February 29, 2020. The Board most recently approved an extension of Neuberger Berman's contract on January 23, 2018; the current contract expires on June 30, 2020.



On October 23, 2018, the Board approved an active core fixed income manager search to assess the competitiveness of LACERS' four active core fixed income managers currently under contract; Neuberger Berman rebid for its mandate and is a candidate in this search. Staff anticipates bringing forth finalists for contract awards during the fourth quarter of fiscal year 2019-2020 and executing contracts in the first quarter of fiscal year 2020-2021, should firms be hired by the Board. In light of the expiration of Neuberger Berman's current contract on June 30, 2020, staff recommends a one-year extension to allow time to complete the search.

**Organization**

Neuberger Berman is a private, employee-owned global asset management firm headquartered in New York City, with approximately 2,197 employees in 35 cities across the globe. As of December 31, 2019, the firm had over \$356 billion in total assets under management, \$160 billion in fixed income strategies, and \$7.7 billion in the Core Bond strategy.

**Due Diligence**

As previously discussed with the Board and Committee, Andrew Johnson, former Co-head of Global Investment Grade Fixed Income and portfolio manager, retired at the end of calendar year 2018. Thanos Bardas, a member of the portfolio management team, was subsequently promoted to Co-head of Global Investment Grade Fixed Income alongside David Brown. Staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, consider this personnel transition to have no material impact to the strategy. Neuberger Berman's investment philosophy, strategy, and process have not changed since the last contract extension in 2018.

**Performance**

As of February 29, 2020, Neuberger Berman underperformed its benchmark over all time periods except since inception based on unaudited performance data. This information is presented in the table below.

<b>Annualized Performance, Unaudited as of 2/29/20 (Net-of-Fees)</b>						
	3-Month	1-Year	2-Year	3-Year	5-Year	Since 9/30/01 <sup>1</sup>
Neuberger Berman	3.45	11.25	6.85	4.80	3.56	5.71
Bloomberg Barclays Capital U.S. Aggregate Bond Index <sup>2</sup>	3.69	11.68	7.34	5.01	3.58	4.81
<i>% of Excess Return</i>	<i>-0.24</i>	<i>-0.43</i>	<i>-0.49</i>	<i>-0.21</i>	<i>-0.02</i>	<i>0.90</i>

<sup>1</sup>Neuberger Berman began managing assets for LACERS in November 1990. However, LACERS' custodian records only date back to September 30, 2001 due to a change in account numbers for this strategy.

<sup>2</sup>Changed from BC Universal Index on 7/1/13. Performance presented is a blend of the two indices.

Calendar year performance is presented in the table below as supplemental information.

<b>Calendar Year Performance, Unaudited as of 2/29/20 (Net-of-Fees)</b>						
	1/1/20- 2/29/20	2019	2018	2017	2016	2015
Neuberger Berman	3.41	9.19	-0.65	3.67	3.14	0.54
Bloomberg Barclays Capital U.S. Aggregate Bond Index	3.76	8.72	0.01	3.54	2.65	0.55
<i>% of Excess Return</i>	<i>-0.35</i>	<i>0.47</i>	<i>-0.66</i>	<i>0.13</i>	<i>0.49</i>	<i>-.01</i>

Pursuant to LACERS Manager Monitoring Policy, Neuberger Berman was placed “On Watch” for an initial one-year period effective March 21, 2019 for triggering the following Policy watch list criteria as of December 31, 2018:

1. Annualized net performance is below benchmark for trailing 5 years
2. Annualized net Information Ratio trailing 5 years relative to its benchmark is below 0.20

As of February 29, 2020, Neuberger Berman’s unaudited performance continues to breach these Policy criteria. Therefore, staff and NEPC have determined to maintain Neuberger Berman’s “On Watch” status for an additional one-year period.

**Fees**

LACERS pays Neuberger Berman an effective fee of 13.41 basis points (0.13%), which is approximately \$1.1 million annually based on the value of LACERS’ assets as of February 29, 2020. The fee ranks in the 11<sup>th</sup> percentile of fees charged by similar managers in the eVestment U.S. Core Fixed Income Universe (i.e., 89% of like-managers have higher fees).

**General Fund Consultant Opinion**

NEPC concurs with this recommendation.

**Strategic Plan Impact Statement**

A contract extension with Neuberger Berman Investment Advisers LLC will allow the fund to maintain a diversified exposure to the active core fixed income market. This is expected to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager’s profile, strategy, performance, and management fee structure is consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Jeremiah Paras, Investment Officer I, Investment Division

RJ/BF/JP

Attachment: 1. Consultant Recommendation – NEPC

CONTRACT EXTENSION  
NEUBERGER BERMAN INVESTMENT ADVISERS LLC  
ACTIVE CORE FIXED INCOME  
PORTFOLIO MANAGEMENT

PROPOSED RESOLUTION

WHEREAS, LACERS' current two-year contract extension with Neuberger Berman Investment Advisers LLC (Neuberger Berman) for active core fixed income portfolio management expires on June 30, 2020; and,

WHEREAS, Neuberger Berman was placed "On Watch" for an initial one-year period effective March 21, 2019 pursuant to LACERS' Manager Monitoring Policy; and,

WHEREAS, staff, in concurrence with NEPC, LLC, LACERS' General Fund Consultant, have determined to maintain Neuberger Berman's current "On Watch" status for an additional one-year period based on Neuberger Berman's performance as of February 29, 2020; and,

WHEREAS, a one-year contract extension will provide the necessary time to complete an ongoing investment manager search to evaluate the marketplace of active core fixed income strategies in which Neuberger Berman is a participant; and,

WHEREAS, a contract extension with Neuberger Berman will allow the fund to maintain a diversified exposure to the active core fixed income market; and,

WHEREAS, on March 24, 2020, the Board approved the Investment Committee's recommendation to approve a one-year contract extension with Neuberger Berman.

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

<u>Company Name:</u>	Neuberger Berman Investment Advisers LLC
<u>Service Provided:</u>	Active Core Fixed Income Portfolio Management
<u>Effective Dates:</u>	July 1, 2020 through June 30, 2021
<u>Duration:</u>	One year
<u>Benchmark:</u>	Bloomberg Barclays Capital U.S. Aggregate Bond Index
<u>Allocation as of February 29, 2020:</u>	\$829 million

March 24, 2020



**REPORT TO BOARD OF ADMINISTRATION**

**From: Investment Committee**  
Sung Won Sohn, Chair  
Elizabeth Lee  
Nilza R. Serrano

**MEETING: MARCH 24, 2020**  
**ITEM: IX – E**

**SUBJECT: INVESTMENT MANAGER CONTRACT WITH BLACKROCK INSTITUTIONAL TRUST COMPANY, N.A. REGARDING MANAGEMENT OF MULTIPLE PASSIVE INVESTMENT MANDATES AND POSSIBLE BOARD ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

**Recommendation**

That the Board:

1. Approve a three-year contract renewal with BlackRock Institutional Trust Company, N.A. for passive management of multiple index strategies.
2. Authorize the Executive Officer to approve and execute the necessary documents, subject to satisfactory business and legal terms.

**Discussion**

On March 10, 2020, the Committee considered the attached staff report (Attachment 1) recommending a three-year contract renewal with BlackRock Institutional Trust Company, N.A. (BlackRock). BlackRock provides LACERS, under a single contract, access to multiple passive investment strategies on an as-needed basis via commingled fund vehicles. BlackRock’s investment objective is to fully replicate the risk and return characteristics of various equity and fixed income benchmark indices using quantitative techniques. The current contract expires on May 31, 2020. LACERS currently has no assets invested in any of BlackRock’s funds. The Committee discussed the organization, performance, and investment management fees. The Committee was specifically informed that BlackRock offered LACERS a revised fee schedule significantly lowering Blackrock’s management fees for the strategies covered under LACERS’ current contract with BlackRock. The Committee concurs with the staff recommendation for a three-year contract renewal with BlackRock to allow LACERS to gain exposure expediently to various passive strategies when needed.

## **Strategic Plan Impact Statement**

A contract renewal with BlackRock will allow LACERS to maintain investment options in passive strategies as needed, which is expected to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure is consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Barbara Sandoval, Investment Officer II, Investment Division

RJ/BF/BS/jp

Attachments:   1. Investment Committee Recommendation Report dated March 10, 2020  
                  2. Proposed Resolution



**REPORT TO INVESTMENT COMMITTEE**

From: Lita Payne, Executive Officer *Lita Payne*

**MEETING: MARCH 10, 2020**

**ITEM: V**

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**SUBJECT: INVESTMENT MANAGER CONTRACT WITH BLACKROCK INSTITUTIONAL TRUST COMPANY, N.A. REGARDING MANAGEMENT OF MULTIPLE PASSIVE INVESTMENT MANDATES AND POSSIBLE COMMITTEE ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

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**Recommendation**

That the Committee recommend to the Board a three-year contract renewal with BlackRock Institutional Trust Company, N.A. for passive management of multiple index strategies.

**Executive Summary**

BlackRock Institutional Trust Company, N.A. (BlackRock) provides LACERS access to multiple passive investment strategies under a single contract; this contract expires on May 31, 2020. The contract provides LACERS access to various passive public equities and fixed income commingled funds as needed. LACERS currently has no assets invested in any of BlackRock's funds.

**Discussion**

*Background*

In April 2012, the Board authorized a search for investment managers to provide multiple passive investment strategies under a single contract. This type of contract allows LACERS to gain exposure quickly to various passive strategies in cases such as asset allocation changes, portfolio rebalancings, or manager terminations. It also reduces the number of contracts administered for passive investment mandates. As a result of the search, the Board awarded contracts to BlackRock Institutional Trust Company, N.A. (BlackRock), RhumbLine Limited Partnership (RhumbLine), and State Street Global Advisors (State Street).

Under the multiple passive strategies contract, BlackRock provides equity and fixed income strategies on an as-needed basis for the indices listed in the following table via commingled fund vehicles. BlackRock's investment objective is to fully replicate the risk and return characteristics of the respective benchmarks using quantitative techniques. Currently, LACERS does not have assets invested in any BlackRock funds.



Strategy	BlackRock's AUM (in billions)*
BlackRock S&P 500	\$ 714.4
BlackRock Russell 1000 Growth Index	63.6
BlackRock Russell 1000 Value Index	50.6
BlackRock Russell 2000 Index	67.0
BlackRock Russell 2000 Growth Index	11.3
BlackRock Russell 2000 Value Index	12.1
BlackRock MSCI World ex-U.S. Index	20.2
BlackRock MSCI EAFE Growth Index	4.5
BlackRock MSCI EAFE Value Index	6.2
BlackRock MSCI Emerging Markets Index	68.4
BlackRock MSCI EAFE Small Cap Index	13.3
BlackRock Barclay's U.S. Aggregate Bond Index	230.3
<b>Total AUM of Strategies Under Contract</b>	<b>\$ 1,261.9</b>

\*AUM numbers as of 12/31/19

On May 10, 2016, the Board approved a two-year contract extension with BlackRock. On January 9, 2018, the Board approved a subsequent two-year contract extension that expires on May 31, 2020. The Board recognized the benefit of retaining BlackRock as a contractor due to its passive MSCI EAFE Growth and Value equities strategies, which are not available from LACERS' other passive contractors, RhumbLine and State Street; these strategies may become useful for future portfolio restructurings.

Further, the Board approved the most recent two-year contract extension with the expectation that a Request for Proposal (RFP) or Request for Information (RFI) would be launched to assess the competitiveness of BlackRock's strategies and fees. In light of other high priority investment RFPs currently in progress, staff has deferred seeking authorization from the Board to issue this RFP or RFI. Staff anticipates seeking Board approval to release this search subsequent to the completion of all RFPs currently in progress.

At this time, staff is seeking concurrence from the Committee for a recommendation to the Board for a three-year contract renewal. Such a contract renewal will provide LACERS options to place assets with BlackRock when the need may occur, such as in the event of future portfolio restructurings, and allow time to conduct an RFP or RFI.

#### *Due Diligence*

BlackRock is a publicly traded company (NYSE: BLK) headquartered in New York, and employs approximately 15,000 employees in more than 34 countries. As of December 31, 2019, BlackRock had approximately \$7.4 trillion of assets under management. The firm's organizational structure, key personnel, investment philosophy, strategy, and process have not changed over the contract period. Performance of the BlackRock passive strategies under contract is presented in the attached memo from NEPC, LLC (NEPC), LACERS' General Fund Consultant.



*General Fund Consultant Opinion*  
NEPC concurs with this recommendation.

**Strategic Plan Impact Statement**

A contract renewal with BlackRock will allow the fund to maintain investment options in passive strategies as needed, which is expected to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure is consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Barbara Sandoval, Investment Officer II, Investment Division

RJ/BF/BS/jp

Attachment:           1. Consultant Recommendation – NEPC

CONTRACT RENEWAL  
BLACKROCK INSTITUTIONAL TRUST COMPANY, N.A.  
MULTIPLE PASSIVE INDEX  
PORTOFOLIO MANAGEMENT

PROPOSED RESOLUTION

WHEREAS, LACERS' current two-year contract extension with BlackRock Institutional Trust Company, N.A. (BlackRock) for passive management of multiple index strategies expires on May 31, 2020; and,

WHEREAS, a contract renewal with BlackRock will allow LACERS to maintain a diversified passive exposure in various equity and fixed income markets; and,

WHEREAS, on March 24, 2020, the Board approved the Investment Committee's recommendation for a three-year contract renewal with BlackRock.

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

<u>Company Name:</u>	BlackRock Institutional Trust Company, N.A.
<u>Service Provided:</u>	Multiple Passive Index Portfolio Management
<u>Effective Dates:</u>	June 1, 2020 through May 31, 2023
<u>Duration:</u>	Three years
<u>Benchmark:</u>	S&P 500 Index Russell 1000 Growth Index Russell 1000 Value Index Russell 2000 Index Russell 2000 Growth Index Russell 2000 Value Index MSCI World ex-U.S. Index MSCI EAFE Growth Index MSCI EAFE Value Index MSCI Emerging Markets Index MSCI EAFE Small Cap Index Barclay's U.S. Aggregate Bond Index

March 24, 2020



**REPORT TO BOARD OF ADMINISTRATION**

**From: Investment Committee**  
Sung Won Sohn, Chair  
Elizabeth Lee  
Nilza R. Serrano

**MEETING: MARCH 24, 2020**  
**ITEM: IX – F**

**SUBJECT: INVESTMENT COMMITTEE CHARTER REVIEW AND POSSIBLE BOARD ACTION**

ACTION:  CLOSED:  CONSENT:  RECEIVE & FILE:

**Recommendation**

That the Board approve the Investment Committee Charter.

**Discussion**

The Investment Committee Charter (Charter), approved by the Board on March 28, 2017, establishes the Committee’s governance framework and outlines its responsibilities. Section V of the Charter requires the Committee and the Board to conduct a review of the Charter at least once every three years to ensure it remains appropriate. On March 10, 2020, the Committee reviewed the Charter; no changes are recommended to the Board.

**Strategic Plan Impact Statement**

Review of the Charter will allow the Board and the Committee to uphold good governance practices which affirm transparency, accountability, and fiduciary duty (Goal V).

Prepared By: Ellen Chen, Investment Officer I, Investment Division

RJ/BF/EC/jp

Attachment: 1. Investment Committee Charter, Adopted March 28, 2017

ARTICLE I. BOARD GOVERNANCE STATEMENT

Section 3.0 DUTIES AND RESPONSIBILITIES

**3.9 Investment Committee Charter**

*Adoption: March 28, 2017*

**I. PURPOSE/ROLE**

The purpose of the Investment Committee (Committee) is to provide assistance to the Board in fulfilling its fiduciary oversight of the LACERS Investment Program.

**II. AUTHORITY**

The Committee is authorized by this Investment Committee Charter to:

- Present investment recommendations to the Board for consideration and action.
- Seek information from readily-available research resources to include (but not limited to) LACERS' investment staff, investment consultants, investment managers, master trust custodian, and proxy voting agent.
- Render opinions on investment matters that are either delegated by the Board or delineated in the Investment Policy Statement.

**III. COMMITTEE MEETINGS**

The Committee shall meet no less than four times a year, and more often as needed. Through the General Manager, the Chief Investment Officer will support the Committee's designated duties and responsibilities. Coordinating through the Commission Assistant, the Chief Investment Officer will assist the Chair of the Committee with administrative tasks, as follows:

- Establish dates and times of the Committee meetings.
- Develop the Committee agenda.
- Review the minutes.
- Draft Committee reports.
- Provide other assistance to prepare for future Committee meetings.

**IV. DUTIES AND RESPONSIBILITIES**

The Committee's primary duty is to consider investment matters and make appropriate recommendations to the Board for further consideration and action. The Committee's oversight duties and responsibilities extends to three broad but distinct investment functions:

1. Policy and Strategy

- Review the Investment Policy Statement at least annually; propose revisions and amendments as necessary.
- Review and monitor the asset allocation policy on a periodic basis.
- Review investment benchmarks as needed.

## ARTICLE I. BOARD GOVERNANCE STATEMENT

### Section 3.0 DUTIES AND RESPONSIBILITIES

- Consider other investment matters that are consistent with the Committee Charter.

#### 2. Operations

- Oversee the selection processes for hiring public market investment managers, investment consultants, and third-party investment support providers; make contracting recommendations consistent with the Investment Policy Statement and/or Board direction.
- Monitor public market investment managers, private market funds, investment consultants, and third-party investment support providers.
- Consider the termination of public market investment managers, consultants, and third-party investment support providers consistent with the Investment Policy Statement.
- Review investment activity reports including (but not limited to) the Emerging Investment Manager Program, Securities Lending Program, Proxy Voting, and Brokerage Commissions.
- Provide advisory input to the General Manager regarding the selection of the Chief Investment Officer.
- Consider investment opportunities and strategies as recommended by staff and consultant.
- Refer investment opportunities to staff for further review and consideration.

#### 3. Education

- Request investment education.
- Hear investment manager presentations.
- Receive off-site investment education as necessary.

## V. CHARTER REVIEW

The Committee and the Board will review this Charter at least once every three years to ensure it remains appropriate. The Committee will recommend any changes to the Board for review and approval. The Board may amend the Charter at any time.

## LACERS Public Statement Re Papa John's Settlement

In closed session on March 10, 2020, the LACERS Board of Administration unanimously approved an agreement to resolve concerns regarding the publicly reported conduct of certain current and former directors and officers of Papa John's International, Inc. This agreement is now final and we are proud today to be able to share its substance with all of our stakeholders.

This agreement is the result of constructive engagement between LACERS, the Los Angeles City Attorney's Office, and the Company. Moving forward, this agreement further aligns the Company's policies and practices concerning diversity, equity, and inclusion with LACERS' core *values* concerning diversity, equity, and inclusion, while also promoting the Company's *value* for the benefit of all shareholders.

Papa John's has agreed to enact new procedures to promote diversity, equity, and inclusion initiatives. The Company also agreed to revise its Code of Ethics, Corporate Governance Guidelines, Corporate Governance and Nominating Committee Charter and other human resources policies and procedures. These changes will further strengthen its anti-discrimination, anti-harassment, and anti-retaliation policies, and reinforce its human resources compliance program. Specifically, Papa John's will:

- 1) Retain a nationally-recognized consultant or law firm with experience in anti-harassment, anti-discrimination, and sensitivity matters to provide a training program for the Senior Management Team and the Human Resources Department annually for the next two years. This consultant or law firm will also provide recommendations to the Company on steps that could be taken to improve diversity and inclusion.
- 2) Prepare annual progress reports on improving its workplace culture and its diversity, equity, and inclusion initiatives for the next two years, and post them publicly on its website.
- 3) Revise Company policies to:
  - a. Clarify and emphasize Papa John's commitment to providing a safe and respectful workplace, including a zero tolerance stance against harassment, discrimination, retaliation, or violence;

- b. Reinforce the *requirement* that managers and supervisors to report any discrimination, retaliation or harassment they become aware of;
  - c. Clarify how team members can confidentially report policy violations and direct them to where they can find additional information on reporting;
  - d. Strengthen language prohibiting retaliation;
  - e. Remove potentially chilling language regarding “false reporting” of policy violations; and
  - f. Expand the prohibited bases for discrimination against team members to include maternity, gender identity, and gender reassignment.
- 4) Revise its “Corporate Governance and Nominating Committee Charter” to require annual Committee-level review of the relevant policies and reports from the CEO, Chief Legal Officer, and Chief People and Diversity Officer on progress in corporate culture and human resources practices.

In developing these changes, LACERS’s relied on guidance from its expert consultant on diversity and inclusion issues, Ms. Brande Stellings of Vestry Laight LLC. Ms. Stellings is a leading expert on strategies to promote women’s advancement and inclusion in the workplace. Importantly, LACERS’ involvement in this matter came at no cost to the Plan.

As a multi-billion dollar Los Angeles public pension plan, LACERS is committed to taking a leadership role on the important governance issues of diversity, equity, and inclusion, and to making all investment decisions in a manner consistent with its fiduciary duties. This agreement demonstrates the value and effectiveness of working collaboratively with investment partners like Papa John’s towards these shared governance goals.