



**LACERS**  
LA CITY EMPLOYEES'  
RETIREMENT SYSTEM



## *Board of Administration Agenda*

**REGULAR MEETING**  
**TUESDAY, APRIL 13, 2021**  
**TIME: 10:00 A.M.**  
**MEETING LOCATION:**

In conformity with the Governor's Executive Order N-29-20 (March 17, 2020) and due to the concerns over COVID-19, the LACERS Board of Administration's April 13, 2021, meeting will be conducted via telephone and/or videoconferencing.

**Important Message to the Public**  
**Information to call-in to listen and or participate:**  
Dial: (669) 900-6833 or (253) 215-8782  
Meeting ID# 852 3848 7798

**Instructions for call-in participants:**

- 1- Dial in and enter Meeting ID
- 2- Automatically enter virtual "Waiting Room"
- 3- Automatically enter Meeting
- 4- During Public Comment, **press \*9** to raise hand
- 5- Staff will call out the last 3-digits of your phone number to make your comment

**Information to listen only:** 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).

**Disclaimer to Participants**

Please be advised that all LACERS Board and Committee Meeting proceedings are audio recorded.

President:	Cynthia M. Ruiz
Vice President:	Sung Won Sohn
Commissioners:	Annie Chao Elizabeth Lee Sandra Lee Nilza R. Serrano Michael R. Wilkinson
Manager-Secretary:	Neil M. Guglielmo
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).

**Request for Services**

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

Sign Language Interpreters, Communication Access Real-Time Transcription, Assistive Listening Devices, Telecommunication Relay Services (TRS), 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) 855-9348** and/or email at [ani.ghokassian@lacers.org](mailto:ani.ghokassian@lacers.org).

[\*\*CLICK HERE TO ACCESS BOARD REPORTS\*\*](#)

- I. PUBLIC COMMENTS AND GENERAL PUBLIC COMMENTS ON MATTERS WITHIN THE BOARD'S JURISDICTION AND COMMENTS ON ANY SPECIFIC MATTERS ON THE

AGENDA – *THIS WILL BE THE ONLY OPPORTUNITY FOR PUBLIC COMMENT* - **PRESS \*9 TO RAISE HAND DURING PUBLIC COMMENT PERIOD**

- II. [APPROVAL OF MINUTES FOR THE REGULAR MEETING OF MARCH 9, 2021 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. [MARKETING CESSATION REPORT NOTIFICATION TO THE BOARD](#)
  - B. [BENEFITS PAYMENTS APPROVED BY GENERAL MANAGER](#)
  - C. [COMMISSIONER ELIZABETH LEE BOARD EDUCATION EVALUATION ON NASP 2021 “DAY OF EDUCATION IN PRIVATE EQUITY”, VIRTUAL; MARCH 25-26, 2021](#)
- VI. INVESTMENTS
  - A. CHIEF INVESTMENT OFFICER VERBAL REPORT
  - B. [PRESENTATION BY NEPC, LLC OF THE PORTFOLIO PERFORMANCE REVIEW FOR THE QUARTER ENDING DECEMBER 31, 2020](#)
- VII. LEGAL/LITIGATION
  - A. **CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54956.9(d)(4) TO CONFER WITH COUNSEL REGARDING LITIGATION IN ONE CASE AND POSSIBLE BOARD ACTION: 1. IN RE: PROPOSED OPT-IN INVESTOR GROUP ACTION IN THE NETHERLANDS AGAINST STEINHOFF INTERNATIONAL HOLDINGS N.V.**
- VIII. OTHER BUSINESS
- IX. NEXT MEETING: The next Regular meeting of the Board is scheduled for Tuesday, April 27, 2021 at 10:00 a.m. at LACERS, 977 N. Broadway, Suite 260, Los Angeles, CA 90012, and/or via telephone and/or videoconferencing. Please continue to view the LACERS website for updated information on public access to Board meetings while response to public health concerns relating to the novel coronavirus continue.
- X. ADJOURNMENT

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

In conformity with the Governor's Executive Order N-29-20 (March 17, 2020)  
and due to the concerns over COVID-19, the  
LACERS Board of Administration's  
March 9, 2021, meeting was conducted  
via telephone and/or videoconferencing.

**Agenda of: Apr. 13, 2021**

**Item No: II**

March 9, 2021

10:00 a.m.

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PRESENT via Videoconferencing:	President	Cynthia M. Ruiz
	Vice President:	Sung Won Sohn
	Commissioners:	Annie Chao
		Elizabeth Lee
		Sandra Lee
		Nilza R. Serrano
		Michael R. Wilkinson
	Manager-Secretary:	Neil M. Guglielmo
	Legal Counselor:	Anya Freedman
PRESENT at LACERS offices:	Executive Assistant:	Ani Ghoukassian

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

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PUBLIC COMMENTS AND GENERAL PUBLIC COMMENTS ON MATTERS WITHIN THE BOARD'S JURISDICTION AND COMMENTS ON ANY SPECIFIC MATTERS ON THE AGENDA – *THIS WILL BE THE ONLY OPPORTUNITY FOR PUBLIC COMMENT* – **PRESS \*9 TO RAISE HAND DURING PUBLIC COMMENT PERIOD** – President Ruiz asked if any persons wanted to make a general public comment to which there was no response.

II

APPROVAL OF MINUTES FOR THE REGULAR MEETING OF FEBRUARY 9, 2021 AND POSSIBLE BOARD ACTION – Commissioner Serrano moved approval, seconded by Commissioner Chao, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Serrano, Wilkinson, Vice President Sohn, and President Ruiz -6; Abstain, Commissioner Sandra Lee -1.

### III

BOARD PRESIDENT VERBAL REPORT – President Ruiz stated that Ken Chenault’s presentation for this meeting has been rescheduled to a future Board Meeting.

### IV

#### GENERAL MANAGER VERBAL REPORT

A. REPORT ON DEPARTMENT OPERATIONS – Neil M. Guglielmo, General Manager, advised the Board of the following items:

- Federal Stimulus
- SIP Update
- Retirement – Ancillary Case Processing
- Delay in Service Purchases
- COVID Deaths
- Health Plan Administration
- LACERS *Well* Events
- Member Services Center Stats
- Retirement Application Portal
- Governmental Side A Insurance Policy Renewal

B. UPCOMING AGENDA ITEMS – Neil M. Guglielmo, General Manager, advised the Board of the following items:

- Presentation of the Preliminary Budget for Fiscal Year 2021-22
- 115 Trust Financial Statements for FY 2020-21

### V

#### RECEIVE AND FILE ITEMS

A. MARKETING CESSATION REPORT NOTIFICATION TO THE BOARD – This report was received by the Board and filed.

B. BENEFITS PAYMENTS APPROVED BY GENERAL MANAGER – This report was received by the Board and filed.

C. LEGISLATIVE UPDATE OF MARCH 2021 – This report was received by the Board and filed.

### VI

#### BOARD/DEPARTMENT ADMINISTRATION

A. ACTUARIAL RISK ASSESSMENT AND REVIEW OF FUNDED STATUS OF THE RETIREMENT AND HEALTH PLANS AS OF JUNE 30, 2020 – Todd Bouey, Assistant General

Manager, Paul Angelo and Andy Yeung, Actuaries with Segal, presented and discussed this item with the Board for 55 minutes. The report was received by the Board and filed.

- B. 977 N. BROADWAY PROJECT REPORT FOR THE QUARTER ENDING DECEMBER 31, 2020 AND POSSIBLE BOARD ACTION – Isaias Cantu, Senior Management Analyst II, notified the Board of an amendment to the Staff Report and Resolution for this item. Commissioner Elizabeth Lee moved approval of the following amended Resolution:

**DELEGATION OF AUTHORITY TO THE GENERAL MANAGER  
TO BIND INSURANCE POLICIES FOR  
977 NORTH BROADWAY**

**RESOLUTION 210309-A**

WHEREAS, in October 2019, the LACERS Board of Administration authorized and completed the purchase of 977 N. Broadway, Los Angeles, CA 90012;

WHEREAS, the Board has directed LACERS to prepare the building for occupancy as the new headquarters for LACERS and allotted a budget for these purposes;

WHEREAS, 977 N. Broadway is transitioning to a new property management model as the headquarters project prepares to enter the construction phase and LACERS Asset Manager Invesco has advised that the present policies for property damage and earthquake insurance will terminate on March 30, 2021;

WHEREAS, LACERS has requested insurance broker Alliant Insurance Services to recommend insurance coverage and solicit insurance quotes for property damage and earthquake policies; concurrently LACERS has enlisted the advice and assistance of the City Risk Manager, who is also soliciting insurance proposals through the City's insurance broker;

WHEREAS, time is of the essence and to ensure that insurance policies do not lapse, the Board desires to assign the General Manager to select insurance coverage for 977 North Broadway;

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby authorizes the General Manager to select, negotiate, and execute the necessary documents to purchase a property damage policy, a general liability policy, and an earthquake insurance policy subject to satisfactory business and legal terms, and make any necessary clerical, typographical, or technical corrections to this document. Further the General Manager is requested to provide a verbal report of key policy terms after binding the policy.

Which motion was seconded by Commissioner Serrano, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Sandra Lee, Serrano, Wilkinson, Vice President Sohn, and President Ruiz -7; Nays, None.

- C. COST-OF-LIVING ADJUSTMENT FOR JULY 2021 AND POSSIBLE BOARD ACTION – Commissioner Wilkinson moved approval, seconded by Commissioner Elizabeth Lee, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Sandra Lee, Serrano, Wilkinson, Vice President Sohn, and President Ruiz -7; Nays, None.

- D. REQUEST FOR PROPOSAL (RFP) FOR PRINTING, MAILING, AND GRAPHIC DESIGN SERVICES AND POSSIBLE BOARD ACTION – Commissioner Elizabeth Lee moved approval, seconded by Commissioner Serrano, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Sandra Lee, Serrano, Wilkinson, Vice President Sohn, and President Ruiz -7; Nays, None.

## VII

### RETIREMENT SERVICES

- A. PRESENTATION ON THE SURVIVOR BENEFIT PROCESS – Ferralyn Sneed, Senior Benefits Analyst II, Marina Castaneda and James Kawashima, Benefits Analysts, presented and discussed this item with the Board for 15 minutes.

## VIII

### INVESTMENTS

- A. CHIEF INVESTMENT OFFICER VERBAL REPORT – Rod June, Chief Investment Officer, reported on the portfolio value of \$21.01 billion as of March 8, 2021. Mr. June discussed the following items:
- Lazard Asset Management LLC and Oberweis Asset Management, Inc. removed from investment manager watchlist
  - Upcoming agenda items: Presentation by Mr. Ken Chenault of General Catalyst rescheduled to the May 11, 2021 Board Meeting
- B. CONSENT OF ASSIGNMENT OF SEGALL BRYANT & HAMILL, LLC CONTRACT AND POSSIBLE BOARD ACTION – Commissioner Elizabeth Lee moved approval of the following Resolution:

#### **CONSENT TO ASSIGN CONTRACT WITH SEGALL BRYANT & HAMILL, LLC**

#### **RESOLUTION 210309-B**

WHEREAS, LACERS has an existing contract with Segall Bryant & Hamill, LLC (SBH) for management of an active U.S. small cap value equities portfolio; and,

WHEREAS, SBH has entered into an acquisition agreement with CI Financial Corp. (CI Financial), a Canadian publicly traded global asset and wealth management advisory services company; and,

WHEREAS, SBH will become a wholly owned subsidiary of CI Financial; and,

WHEREAS, under the Investment Advisers Act of 1940 and pursuant to LACERS' contract with SBH, the change in control of SBH is deemed to be a contract assignment that requires written consent of the Board; and,

WHEREAS, staff has conducted appropriate due diligence on the acquisition of SBH.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby consents to the assignment of LACERS' existing contract with SBH to CI Financial; and, authorizes the General Manager to approve and execute the necessary documents, subject to satisfactory business and legal terms.

Which motion was seconded by Commissioner Serrano, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Sandra Lee, Serrano, Wilkinson, Vice President Sohn, and President Ruiz -7; Nays, None.

IX

OTHER BUSINESS – There was no other business.

X

NEXT MEETING: The next Regular meeting of the Board is scheduled for Tuesday, March 23, 2021, at 10:00 a.m. at LACERS, 977 N. Broadway, Suite 260, Los Angeles, CA 90012, and/or via telephone and/or videoconferencing. Please continue to view the LACERS website for updated information on public access to Board meetings while response to public health concerns relating to the novel coronavirus continue.

XI

ADJOURNMENT – There being no further business before the Board, President Ruiz adjourned the Meeting at 11:48 a.m.

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Cynthia M. Ruiz  
President

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Neil M. Guglielmo  
Manager-Secretary



**LACERS**  
LA CITY EMPLOYEES'  
RETIREMENT SYSTEM

**Agenda of: APRIL 13, 2021**

**Item No: V - A**

## **MARKETING CESSATION REPORT NOTIFICATION TO THE BOARD**

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

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

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



LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM CONTRACTS LIST  
FOR THE APRIL 13, 2021 BOARD MEETING

**CONTRACTS PENDING FINAL EXECUTION**

NO.	VENDOR / CONSULTANT	DESCRIPTION	EXPIRING CONTRACT		MARKETING CESSATION STATUS	RESTRICTED PERIOD*	
			START	END		START	END
<b>ADMINISTRATIVE OPERATIONS BUREAU</b>							
1.	Haworth Inc.	Furniture Layout Design, Delivery, Assembly, & Installation	New contract	N/A	Pending finalization.	11/9/2020	4/30/2021
2.	Unisource Solutions, Inc.	Office Furniture Delivery, Installation, Reconfiguration, Removal and Disposal	New contract	N/A	Pending finalization.	9/10/2020	4/30/2021
<b>HEALTH BENEFITS ADMINISTRATION</b>							
3.	Anthem 2021	Medical HMO & PPO	1/1/2020	12/31/2020	Board approved on 8/11/2020; contract renewed for 2021, pending finalization.	7/24/2020	4/30/2021
4.	Anthem Blue View Vision 2021	Vision Services Contract	1/1/2020	12/31/2020	Board approved on 8/11/2020; contract renewed for 2021, pending finalization.	7/24/2020	4/30/2021

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM CONTRACTS LIST  
FOR THE APRIL 13, 2021 BOARD MEETING

**CONTRACTS PENDING FINAL EXECUTION**

NO.	VENDOR / CONSULTANT	DESCRIPTION	EXPIRING CONTRACT		MARKETING CESSATION STATUS	RESTRICTED PERIOD*	
			START	END		START	END
5.	Delta Dental 2021	Dental PPO and HMO	1/1/2020	12/31/2020	Board approved on 8/11/2020; contract renewed for 2021, pending finalization.	7/24/2020	4/30/2021
6.	Kaiser 2021	Medical HMO	1/1/2020	12/31/2020	Board approved on 8/11/2020; contract renewed for 2021, pending finalization.	7/24/2020	4/30/2021
7.	SCAN 2021	Medical HMO	1/1/2020	12/31/2020	Board approved on 8/11/2020; contract renewed for 2021, pending finalization.	7/24/2020	4/30/2021
8.	United Healthcare 2021	Medical HMO	1/1/2020	12/31/2020	Board approved on 8/11/2020; contract renewed for 2021, pending finalization.	7/24/2020	4/30/2021
<b>INVESTMENTS</b>							
9.	Dimensional Fund Advisors, LP	Active U.S. Treasury Inflation Protected Securities (TIPS)	7/1/2020	6/30/2021	Board approved contract renewal on 2/23/2021; contract execution in progress.	2/9/2021	8/22/2021

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM CONTRACTS LIST  
FOR THE APRIL 13, 2021 BOARD MEETING

**CONTRACTS PENDING FINAL EXECUTION**

NO.	VENDOR / CONSULTANT	DESCRIPTION	EXPIRING CONTRACT		MARKETING CESSATION STATUS	RESTRICTED PERIOD*	
			START	END		START	END
10.	The Northern Trust Company	Securities Lending Services	8/1/2018	7/31/2021	Pending Investment Committee approval on 4/13/2021.	4/8/2021	10/31/2021
11.	The Northern Trust Company	Private Monitor Analytical Services (Core Services)	8/1/2018	7/31/2021	Pending Investment Committee approval on 4/13/2021.	4/8/2021	10/31/2021
12.	The Northern Trust Company	Integrated Disbursement Services	8/1/2018	7/31/2021	Pending Investment Committee approval on 4/13/2021.	4/8/2021	10/31/2021
13.	The Northern Trust Company	Risk Services	8/1/2018	7/31/2021	Pending Investment Committee approval on 4/13/2021.	4/8/2021	10/31/2021
14.	The Northern Trust Company	Compliance Analyst Service and/or Event Analyst Services	8/1/2018	7/31/2021	Pending Investment Committee approval on 4/13/2021.	4/8/2021	10/31/2021

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM CONTRACTS LIST  
FOR THE APRIL 13, 2021 BOARD MEETING

**CONTRACTS PENDING FINAL EXECUTION**

NO.	VENDOR / CONSULTANT	DESCRIPTION	EXPIRING CONTRACT		MARKETING CESSATION STATUS	RESTRICTED PERIOD*	
			START	END		START	END
15.	The Northern Trust Company	Master Custody Services	8/1/2018	7/31/2021	Pending Investment Committee approval on 4/13/2021.	4/8/2021	10/31/2021

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

**End Date** - The end date is the date of final contract execution. This date is estimated for general contracts, investment contracts, and health carrier contracts to be three (3) months, six (6) months, and twelve (12) months, respectively, following the Board approval of contract renewal.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM  
CONTRACTS LIST FOR THE APRIL 13, 2021 BOARD MEETING

**ACTIVE RFPs AND RFQs**

NO.	DESCRIPTION	MARKETING CESSATION STATUS AND VENDOR RESPONSES	
<b>INVESTMENTS</b>			
1	Core Fixed Income Mandate Search	<b>RFP Release Date:</b>	August 19, 2019
		<b>Submission Deadline:</b>	October 4, 2019
		<b>Status:</b>	On January 26, 2021, the Board awarded contracts to: Robert W. Baird & Co., Inc., Garcia Hamilton & Associates, L.P., Income Research & Management, J.P. Morgan Asset Management, and Loomis, Sayles & Company, L.P.
			Negotiations in progress.
		<b>List of Respondents:</b>	Amundi Pioneer Institutional Asset Management, Inc., Baird Advisors, BlackRock, Inc., BMO Global Asset Management, Brown Brothers Harriman & Co., C.S. McKee, L. P., Calvert Research and Management (Calvert or CRM), Conning, Dimensional Fund Advisors LP, Dodge & Cox, EARNEST Partners, LLC, FIAM LLC, Galliard Capital Management, Garcia Hamilton & Associates, L.P., Goldman Sachs Asset Management L.P., Guggenheim Partners Investment Management, LLC, Income Research & Management, Integrity Fixed Income, Management, LLC, Invesco Advisers, Inc., J.P. Morgan Asset Management, Jennison Associates LLC, Lazard Asset Management LLC, LM Capital Group, LLC, Longfellow Investment Management Co., LLC, Loomis, Sayles & Company, L.P, Manulife Investment Management, MFS Institutional Advisors, Inc., Morgan Stanley Investment Management, National Investment Services, Neuberger Berman, Nuveen, LLC, Payden & Rygel, PGIM Fixed Income, Piedmont Investment Advisors, Inc., PIMCO, Princeton Asset Management, LLC, Progress Investment Management Company, LLC, Pugh Capital Management, Inc., Quadratic Capital Management LLC, Ramirez Asset Management, Schroder Investment Management North America Inc., Securian Asset Management, Inc., Segall Bryant & Hamill, Sit Investment Associates, Inc. (Sit), SLC Management, Smith Graham & Co., Investment Advisors, L.P., Sterling Capital Management LLC, T. Rowe Price Associates, Inc., TCW Group, Inc., The Capital Group Companies, Inc., Voya Investment Management (Voya IM), Wellington Management Company LLP, Wells Fargo Asset Management, Western Asset Management Company, LLC

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM  
CONTRACTS LIST FOR THE APRIL 13, 2021 BOARD MEETING

**ACTIVE RFPs AND RFQs**

NO.	DESCRIPTION	MARKETING CESSATION STATUS AND VENDOR RESPONSES
2	Private Credit Mandate Search	<p><b>RFP Release Date:</b> December 10, 2018</p> <p><b>Submission Deadline:</b> January 18, 2019</p> <p><b>Status:</b> On July 23, 2019, the Board awarded contracts to Alcentra Limited, Benefit Street Partners L.L.C., Crescent Capital Group LP, and Monroe Capital LLC.</p> <p>On May 26, 2020, the Board rescinded the contract award to Alcentra Limited.</p> <p>Negotiations in progress.</p> <p><b>List of Respondents:</b> Alcentra Limited, Barings LLC, MB Global Partners, LLC, Backcast Partners Management LLC, BlackRock, Inc., CLSA Capital Partners (HK) Limited, Cross Ocean Adviser LLP, Clearwater Capital Partners (Fiera Capital Corporation), Guggenheim Partners, LLC, Goldman Sachs Asset Management, L.P., Pemberton Capital Advisors LLP, Kayne Anderson Capital Advisors, L.P., Maranon Capital, L.P., Bain Capital Credit, LP, Breakwater Management LP, Carlyle Global Credit Investment Management L.L.C., Crescent Capital Group LP, MV Credit Partners LLP, New Mountain Capital, LLC, Park Square Capital USA LLC, Tor Investment Management (Hong Kong) Limited, AlbaCore Capital LLP, Muzinich &amp; Co., Inc., Kartesia Management S.A., Medalist Partners, LP, NXT Capital Investment Advisers, LLC, Owl Rock Capital Partners, PennantPark Investment Advisers, PIMCO Investments LLC, Deerpath Capital Management, LP, Brightwood Capital Advisors, Magnetar Capital LLC, MC Credit Partners LP, Oaktree Capital Management, L.P., THL Credit Advisors LLC, White Oak Global Advisors, LLC, Benefit Street Partners L.L.C., EntrustPermal / Blue Ocean GP LLC, Willow Tree Credit Partners LP, Monroe Capital LLC, Runway Growth Capital LLC, Stellus Capital Management, LLC</p>

**MEMBER SERVICES**

3	Printing, Mailing, and Graphic Design	<p><b>RFP Release Date:</b> March 10, 2021</p> <p><b>Submission Deadline:</b> April 14, 2021</p> <p><b>Status:</b> In progress.</p> <p><b>List of Respondents:</b></p>
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**\*RESTRICTED PERIOD FOR REQUEST FOR PROPOSAL OR REQUEST FOR QUALIFICATIONS:**

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

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

BENEFIT PAYMENTS APPROVED BY GENERAL MANAGER: ITEM V-B

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

SERVICE RETIREMENTS

<u>Member Name</u>	<u>Service</u>	<u>Department</u>	<u>Classification</u>
James, Pearlene	48	Dept. of Transportation	Sr Traffic Supv
Roman, Angie	45	Police Dept.	Exec Admin Asst
Sparks, Fawnda G	45	Dept. of Transportation	Sr Traffic Supv
Jones, Carl W	42	Dept. of Transportation	Sr Traffic Supv
Rozier, Cornelia Ann	42	Dept. of Transportation	Sr Traffic Supv
Hernandez, Elizabeth	41	Police Dept.	Sr Administrative Clerk
Reyes, Jolene K	41	Personnel Dept.	Commission Exec Asst
Dawkins, Maurice K	40	Fire Dept.	Management Analyst
Pennyjelly, Dianna Sherry	40	ITA	Exec Admin Asst
Logan, Janette Ann	39	Police Dept.	Pr Clerk Police
Torres, Salvador R	39	PW - St. Tree Div.	Equipmnt Operator
Walker, Kathy Jeanette	39	Personnel Dept.	Pers Records Supv
Wong, Gary N	39	GSD	Heavy Duty Equip Mech
Flint, Sonya P	38	GSD	Exec Admin Asst
Jones-Hoard, Jacquelyn	38	Office of the CAO	Risk & Insurance Asst
Aguet, Francis Everaldo	37	Police Dept.	Equipmnt Mechanic
Guzman, Sergio	37	Dept. of Rec. & Parks	Sr Park Maint Supvr
Brown, Earl Keith	36	Dept. of Transportation	Traf Mark/Sign Supt
Calda, Rosemarie G	36	Police Dept.	Pr Fingprt Id Expert
Duong Pee, Mee Tin	36	Police Dept.	Sr Administrative Clerk
Garcia, Raul	36	PW - Resurf & Reconstr	St Svcs Supt
Jauregui, Victor	36	Dept. of Rec. & Parks	Sr Recreation Dir
Lee, Lily Jacqueline	36	Office of the CAO	Risk & Insurance Asst
Lee, Paul On Kwok	36	GSD	Matl Tst Technician
Lomeli, Armida O	36	Police Dept.	Exec Admin Asst
Lopez, Jose A	36	Dept. of Rec. & Parks	Sr Recreation Dir
Olate, Isabel	36	Office of the City Clerk	Project Coordinator
Ruiz, Aureliano M	36	PW - St. Maint.	Motor Sweeper Operator
Urioste, Richard L	36	GSD	Equipmnt Mechanic
Vasquez, Anthony R	36	GSD	Plumber
Alpern, Russell	35	PW - St. Maint.	Motor Sweeper Operator
Burks, James V	35	Cultural Affairs	Art Center Director
Capone, Louise M	35	Dept. of Rec. & Parks	Sr Recreation Dir
Da Silva, Robin Denise	35	Dept. of Transportation	Sr Traffic Supv
Dixon, Benita C	35	Dept. of Rec. & Parks	Sr Recreation Dir
Jenkins, Charles D	35	Dept. of Transportation	Signal System Electrcn

Maul, James Steven	35	Dept. of Transportation	Signal System Electrcn
Nicholson, Jimmie	35	PW - St. Maint.	Motor Sweeper Operator
Okazaki, Gail A	35	Dept. of Rec. & Parks	Sr Recreation Dir
Stinson, Grace Marie	35	City Attorney's Office	Pr Clerk City Atty
Stoicof, Petre Aurel	35	Police Dept.	Equipmnt Mechanic
Turnipseed, Pamela R	35	Police Dept.	Fingerprnt Iden Exp
Weitzel, Donald E	35	Fire Dept.	Heavy Duty Equip Mech
Williams, Tracy Darlene	35	City Planning Dept.	City Planning Assoc
Bato, Emmanuel Junio	34	Police Dept.	Sr Administrative Clerk
Bowers, Barbara Ann	34	Dept. of Transportation	Sr Traffic Supv
Cook, Anthony J	34	Dept. of Rec. & Parks	Astronomical Observer
Dela Cruz, Wilma E	34	Police Dept.	Personnel Analyst
Gavidia, Wilfredo R	34	Zoo Dept.	Sr Park Maint Supvr
Gibbs, Mark Emory	34	Police Dept.	Equipmnt Mechanic
Gray, Charmaine L	34	Public Accountability	Exec Legal Secretary
Grayson, Sonya Fay	34	Police Dept.	Crime & Intel Anlyst
Hernandez, Enrique	34	Zoo Dept.	Mech Repairer
Macias, Joe Michael	34	Dept. of Transportation	Signal System Electrcn
Mahaley, Theodore	34	PW - Special Proj Constr	Carpenter
Martinez, Domingo L	34	Dept. of Rec. & Parks	Air Cond Mechanic
Pedroza, Aida E	34	Police Dept.	Management Analyst
Poly, Karen Lynn	34	Zoo Dept.	Zoo Registrar
Quesada, Elizabeth Ann	34	Dept. of Transportation	Sr Traffic Supv
Rader, Dennis Lawrence	34	Office of the City Clerk	Field Engineer Aide
Small-Carroll, Donna Renee	34	Police Dept.	Pr Clerk Police
Toth, Joseph Alexander	34	Fire Dept.	Sr Hvy Duty Equip Mech
Tranchau, Jeannie	34	City Attorney's Office	Legal Assistant
Ward, Neal Patrick	34	Zoo Dept.	Graphics Designer
Yang, Mei Chi Lin	34	Police Dept.	Sr Administrative Clerk
Boswell, Troy Curtis	33	Dept. of Animal Svcs.	Sr Animal Cntrl Ofcr
Chavez, Hector E	33	GSD	Air Cond Mechanic
Gharibians, George T	33	PW - Engineering	Sr Civil Engr Draft Tec
Hughes, Jimmy C	33	GSD	Equipmnt Mechanic
Hurd, Bertha Ann	33	Dept. of Aging	Nutritionist
Jones, Alfred L	33	Dept. of Transportation	Signal System Electrcn
Laube, Fred K	33	PW - St. Maint.	Motor Sweeper Operator
Lim, Frank Winthrop	33	Personnel Dept.	Pers Records Supv
Nguyen, Cuc K	33	PW - Engineering	Engrg Designer
Reed, Terrie Lynn	33	PW - Engineering	Pr Clerk
Sarabia, Gonzalo	33	GSD	Pre-Press Operator
Scott, David Earl	33	Dept. of Transportation	Signal System Electrcn
Simpson, James Earl	33	Police Dept.	Auto Body Bldr/Repairer
Stansell, Denise Marie	33	Dept. of Rec. & Parks	Sr Recreation Dir
Tidwell, Don L	33	Dept. of Transportation	Signal System Electrcn
Wade, Velma J	33	Dept. of Transportation	Sr Traffic Supv



Walton Joseph, Carolyn Marie	33	Dept. of Transportation	Admin Hearing Ofcr
Weissman, Paula S	33	Police Dept.	Pr Clerk Police
Albino, Lindsey D	32	Dept. of Rec. & Parks	Painter Supvr
Bowie, Toni Gayle	32	Dept. of Transportation	Sr Traffic Supv
Brooks, Delvin Maurice	32	Police Dept.	Pr Property Officer
Burke, Rogelio B	32	PW - St. Maint.	Motor Sweeper Operator
Caruso, Deborah E	32	Personnel Dept.	Asst Gm Personnel Dept
Cendana, Victor Tambalque	32	LA Housing Dpt.	Management Analyst
Collins, Angela Marie	32	PW - St. Lighting	Payroll Supervisor
Cornelius, Jacqueline	32	Cultural Affairs	Exec Admin Asst
Dixon, Steven Anthony	32	Dept. of Transportation	Sr Traffic Supv
Dranow, James A	32	GSD	Equipmnt Mechanic
Dumpit, David A	32	PW - St. Lighting	Sr Civil Engr Draft Tec
Gray, Louis T	32	Dept. of Transportation	Sr Traffic Supv
Hauser, John	32	Dept. of Rec. & Parks	Machinist
Jones, Cortez Anthony	32	Dept. of Transportation	Sr Traffic Supv
Kaiser, Max E	32	PW - Special Proj Constr	Equipmnt Operator
Loftin, Dale Allen	32	Dept. of Transportation	Signal System Electrcn
Lyman, Michelle M	32	City Attorney's Office	Deputy City Atty
Maxcy, Michael James	32	Zoo Dept.	Zoo Curator
Mc Gee, Sylvia	32	Police Dept.	Pr Clerk Police
Truong, Dieu C	32	Police Dept.	Equipmnt Mechanic
Varela Gaines, Ellen C	32	Dept. of Rec. & Parks	Sr Recreation Dir
Young, Thomas Charles	32	ITA	Commun Electrician
Anderson, Mia Yvette	31	PW - Engineering	Payroll Supervisor
Arensdorff, Elsa	31	City Attorney's Office	Legal Secretary
Chavez, Edward C	31	Dept. of Rec. & Parks	Equipmnt Operator
Flores, Cain	31	GSD	Equip Specialist
Fuentes, Fernando H	31	GSD	Automotive Supervisor
Gaffney, Michael D	31	Dept. of Rec. & Parks	Equipmnt Operator
Garcia, Soledad	31	PW - Engineering	Pr Clerk
Garcia, Sophia E	31	City Attorney's Office	Legal Secretary
Ito, Laura Aiko	31	ITA	Asst Gm Info Tech Agency
Jackson, Ronnie Lee	31	PW - Street Use Inspection	Sr St Svc Invest
Libby, John Neil	31	Police Dept.	Pr Clerk Police
Love Shallowhorn, Gail L	31	City Attorney's Office	Hearing Ofcr City Atty
Pankratz, David A	31	GSD	Equipmnt Mechanic
Roberts, Staci A	31	Office of the City Clerk	Pr Clerk
Samuel, Beverly Ann	31	Dept. of Transportation	Sr Traffic Supv
Siebrandt, Penny A	31	Dept. of Rec. & Parks	Golf Starter Supvsr
Smith, Yolanda P	31	Police Dept.	Sr Property Officer
Solorzano, Rafael	31	PW - Engineering	Civil Engrg Assoc
Tidwell, Birthella	31	Police Dept.	Crime & Intel Anlyst
Tutungji, Alfred M	31	Dept. of Rec. & Parks	Sr Recreation Dir
Verduzco, Ruben M	31	GSD	Elevator Repair Supv

Brown, Gary Aaron	30	Police Dept.	Equipmnt Mechanic
Carabantes, Jose M	30	PW - St. Lighting	Civil Engrg Assoc
Escobedo, Linda	30	City Attorney's Office	Pr Clerk City Atty
Files, James Patrick	30	GSD	Equip Repair Supvr
Garcia, Aixa Lorena	30	Police Dept.	Management Analyst
Gaston, Gary W	30	PW - St. Maint.	Motor Sweeper Operator
Green, Debra Levern	30	Police Dept.	Management Analyst
Harrington, Sean Ocasey	30	Zoo Dept.	Painter
Hector, Sean D	30	Police Dept.	Pr Security Officer
Iglesias, Alejandro	30	Police Dept.	Automotive Supervisor
Kim, Jaewha Rosemary	30	Office of Finance	Cust Serv Specialist
Lopez, Guillermo	30	Dept. of Rec. & Parks	Sr Painter
McGovern, C G	30	PW - St. Maint.	Motor Sweeper Operator
Natividad, Christine Marie	30	City Attorney's Office	Sr Witness Service
Orona, Yung Hae Kim	30	City Attorney's Office	Hearing Ofcr City Atty
Roth, Howard E	30	GSD	Matl Tst Technician
Tejada, Jose Roberto	30	GSD	Heavy Duty Equip Mech
Vayner, Leonid	30	GSD	Matl Tst Engrg Assc
Wasp, Roxanne V	30	City Attorney's Office	Legal Secretary
Young, Clarence	30	PW - St. Maint.	Motor Sweeper Operator
Alvarado, George	29	Dept. of Rec. & Parks	Sr Roofer
Dixon, Don M	29	Dept. of Rec. & Parks	Graphics Designer
Lawler, John	29	Fire Dept.	Auto Body Repr Supvr
Salinas, Emilio C	29	Police Dept.	Auto Painter
Corralejo, Anthony R	28	GSD	Cement Finisher Supvr
Lee, Gregory J	28	PW - St. Lighting	Asst St Ltg Electrcn
Wright, Stanley	28	PW - St. Maint.	Motor Sweeper Operator
Bonilla, Edward J	27	Dept. of Rec. & Parks	Recreation Fac Dir
Guerrero, Alonso M	27	GSD	Heavy Duty Equip Mech
Morley, Richard Lawrence	27	Dept. of Transportation	Sr Traffic Supv
Rivera, Daniel C	27	GSD	Auto Body Bldr/Repairer
Schellinger, Robert Albert	27	PW - St. Lighting	Asst St Ltg Electrcn
Sorrell, Leland R	27	GSD	Electrician
Ulbrich, Joanne	27	Dept. of Rec. & Parks	Park Services Supvr
Acosta, Abel	26	Dept. of Rec. & Parks	Carpenter
Arceo, Benefrido S	26	PW - Accounting	Accountant
Martinez, James	26	Dept. of Transportation	Signal System Electrcn
Pittman, Mark K	26	Fire Dept.	Heavy Duty Equip Mech
Triana, Daniel	26	Fire Dept.	Heavy Duty Equip Mech
Lay, Ben	25	GSD	Equipmnt Mechanic
Olaguez, Magdalena	25	City Attorney's Office	Exec Legal Secretary
Casillas, Damaso	24	PW - St. Maint.	Motor Sweeper Operator
Lum, Donald J	24	Dept. of Transportation	Signal System Electrcn
Luna, Maria Trinidad	24	Police Dept.	Pr Clerk Police
Tharp, Charles O	24	Police Dept.	Automotive Supervisor

Andrews, Ida L	23	City Attorney's Office	Legal Secretary
Feller, John S	23	Police Dept.	Auto Body Bldr/Repairer
Okray, John W	23	GSD	Heavy Duty Equip Mech
Schultz, Kenneth D	23	ITA	Commun Electrician
Chu, Winston W	22	PW - Resurf & Reconstr Div.	Field Engineer Aide
Cisneros, Gary W	22	Fire Dept.	Equipmnt Mechanic
Hayton, Timothy Scott	22	Police Dept.	Equipmnt Mechanic
Hegedus, Janie	22	ITA	Commun Electrician
Holcolm, Wallace	22	Police Dept.	Ch Security Officer
Motoyama, Tadashi	22	Zoo Dept.	Photographer
Rodriguez, Marco Antonio	22	Police Dept.	Equipmnt Mechanic
Sanchez, Rudy	22	PW - St. Maint.	Motor Sweeper Operator
Taylor, James L	22	Fire Dept.	Equipmnt Mechanic
Campos, Jose	21	Police Dept.	Equipmnt Mechanic
Choe, Brian Y	21	ITA	Commun Electrician
Durazo, Guadalupe	21	Personnel Dept.	Hearing Reporter
Fontana, Larry A	21	Dept. of Transportation	Sign Painter
Gonzalez, Victor M	21	GSD	Heavy Duty Equip Mech
Radovicic, Antonette	21	Dept. of Rec. & Parks	Recreation Fac Dir
Stringer, Alfred L	21	PW - St. Maint.	Motor Sweeper Operator
Vaughn, Stuart R	21	Cultural Affairs	Art Center Director
Davis, Iris Louise	20	Dept. of Rec. & Parks	Commission Exec Asst
Duroy, Rose Oliva Caldito	20	City Planning Dept.	Accountant
Haas, Erich M	20	Dept. of Rec. & Parks	Sr Recreation Dir
Jenkins, Mark Edward	20	Police Dept.	Cabinet Maker
Lapp, Robert Lawrence	20	Dept. of Rec. & Parks	Painter
Panov, Cornel Mihai	20	Police Dept.	Photographer
Perez, Sylvia E	20	GSD	Sr Storekeeper
Smith, Edison Linsford	20	ITA	Commun Electrician
Tilley, Scott Brian	20	Police Dept.	Automotive Supervisor
Tso, Emelia Yeeman	20	LA Housing Dept.	Accountant
Wong Oyama, Betty	20	Neighborhood Empowerment	Neighbrhd Emp Analyst
Wu, Bill Sung Sheng	20	GSD	Matl Tst Technician
Drum, Myron David	19	Police Dept.	Auto Body Bldr/Repairer
Hudson, Danny	18	Personnel Dept.	Background Investgr
Hunter, Kimberly Jade	18	City Attorney's Office	City Atty Investgr
Lee, Helen Kyung	18	Dept. of Aging	Comnty Progrm Asst
Koretz, Gail	17	Mayor's Office	Mayoral Aide
Liu, Zizhan	17	PW - Engineering	Engrg Designer
Miller, Maryd	17	EWDD	Sr Project Assistant
Rideaux, Desiree M	17	Dept. of Rec. & Parks	Sr Park Ranger
Campbell, John Owen	15	Dept. of Rec. & Parks	Electrician
Campbell, Joy La Cheryl	15	Police Dept.	Sr Administrative Clerk
Corella, Rodrigo Landeta	15	PW - Accounting	Sr Accountant
Gharib, Jeannie Grace	15	Police Dept.	Exec Admin Asst

Gray, Don R	15	Police Dept.	Equipmnt Mechanic
Johnson, Edward Radcliffe	15	Council	Council Aide
Papa, Usha	15	Personnel Dept.	Management Analyst
Sanchez, Adrian	15	PW - Accounting	Sr Accountant
Trevino, Elizabeth Ann	15	Personnel Dept.	Sr Admin Clerk
Osorio, Wilfredo C	14	Dept. of Rec. & Parks	Mech Repairer
Clark, Richard	13	PW - Contract Administration	Constr Inspector
Mercado, Steven	12	Police Dept.	Automotive Supervisor
Schreck, Walter	12	El Pueblo	Real Estate Assoc
Wilson, Terry G	11	Personnel Dept.	Background Investgr
Miller, Roderick M	5	Police Dept.	Municipal Police Officer

BENEFIT PAYMENTS APPROVED BY GENERAL MANAGER: ITEM V-B

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

Approved Death Benefit Payments

Deceased

TIER 1

Retired

Beneficiary/Payee

Adams, Kenneth

Eugina P Burfict for the payment of the  
Accrued But Unpaid Disability Retirement Allowance  
Burial Allowance

Allman, John F

Delta Claybrook for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Arai, Joe

Flora F Arai for the payment of the  
Accrued But Unpaid Disability Retirement Allowance  
Burial Allowance

Arita, Shizue

Gary Steve Arita for the payment of the  
Burial Allowance

Asam, Allen K

Shelley T. Asam for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Baeza, Arthur G Helen Baeza for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Bautista, Juan Lee Mei San Wu Bautista for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Beasley, Inez Deborah Martinez for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Bedlion, George W Curt C Bedlion for the payment of the  
Accrued But Unpaid Continuance Allowance

Belmonte, Stella Juliet Castorena Orozco for the payment of the  
Burial Allowance  
  
Samantha V Flores for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Unused Contributions

Bermann, Peter M Hilda F Bermann for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Birl, Lawrence Argie M Birl for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Boyd, Louise Kimberly Stewart for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Bstandig, Paul Jeffrey Betty Nadine Bstandig for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Buchanan, Delores E Michael Buchanan for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Roy Buchanan for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Bulpitt, Scott T Ethel Roper Bulpitt for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Burks, Margie Rozell Marie Morgan for the payment of the  
Accrued But Unpaid Continuance Allowance

Castle, Betty R Wendy G Treat for the payment of the  
Accrued But Unpaid Continuance Allowance

Castro, Albert Cynthia Garza for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Randy Castro for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Cisneros, Isabel L	Jose M Cisneros for the payment of the Burial Allowance  Manuela Cisneros for the payment of the Accrued But Unpaid Service Retirement Allowance
Cole, William D	Ilyasah T Cole for the payment of the Accrued But Unpaid Service Retirement Allowance  Lisa L Cole for the payment of the Accrued But Unpaid Service Retirement Allowance  Monique D Cole for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Cornelius, Virginia L	Michael J Corcoran for the payment of the Accrued But Unpaid Continuance Allowance
Coutts, Gordon M	Linda M. Coutts for the payment of the Accrued But Unpaid Disability Retirement Allowance Burial Allowance
Crawford, Barbara J	Deborah Baxter for the payment of the Accrued But Unpaid Vested Retirement Allowance
Crum, Thomas L	Carolyn A Driedger for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance  Leslie Lake for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Cruz, Vilma Eduardo	Leopoldo Cruz for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance



Daniels, Ruth  
Herbert S. Daniels for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Davis, Felix W  
Cynthia Callahan Davis for the payment of the  
Accrued But Unpaid Vested Retirement Allowance  
Burial Allowance

Davis, Glenn Edward  
Alma Datai Hayes Davis for the payment of the  
Accrued But Unpaid Service Retirement Allowance

Denevan, Lester M  
David Patrick Denevan for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Dow, Douglas B  
John D Dow for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Nancy N Dow for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Richard T Dow for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Duplessis, Rudolph J  
Loretta Duplessis for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Edwards, Gary J  
Victoria E Edwards for the payment of the  
Accrued But Unpaid Disability Retirement Allowance  
Burial Allowance

Engelbach, Roger Bruce	Jennifer Engelbach for the payment of the Accrued But Unpaid Continuance Allowance Unused Contributions
	Jonathan Paul Engelbach for the payment of the Accrued But Unpaid Continuance Allowance Unused Contributions
Finneran, John Thomas	Dianne Finneran for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Flores, Joan M	Valerie Louise Flores for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Freehling, Allen Isaac	Lori Golden Freehling for the payment of the Accrued But Unpaid Vested Retirement Allowance Burial Allowance
Gerischer, Fred E	Brian D Gerischer for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Gilliam, Mary O.	Felicia Walker for the payment of the Accrued But Unpaid Continuance Allowance
Granger, Glen W	Nicholas G Granger for the payment of the Accrued But Unpaid Vested Retirement Allowance Burial Allowance

Guillory, John L	Juanita Guillory for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Hanson, Rosemary	David M Cooper for the payment of the Accrued But Unpaid Continuance Allowance
Harmon, Jean M	James Kirby Harmon for the payment of the Accrued But Unpaid Continuance Allowance
Hidalgo, Ralph F	Gilbert A Hidalgo for the payment of the Accrued But Unpaid Service Retirement Allowance  Kathryn E Hernandez for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Hodges, Jack D	Virginia A Hodges for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Hulderman, John N	Dolores H Hulderman for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Hunter, Eva M	Jack R Williams for the payment of the Accrued But Unpaid Survivorship (Retirement) Allowance
Hurt, Sarah	Angelo Hurt for the payment of the Accrued But Unpaid Continuance Allowance  Clinton T. Hurt for the payment of the Accrued But Unpaid Continuance Allowance

Ibarra, Vern	Jerry Ibarra for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Izumigawa, James Shigeru	Sally Reiko Tagawa for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Johnson, Anthony O	Dorothy Johnson for the payment of the Accrued But Unpaid Disability Retirement Allowance Burial Allowance
Johnson, Mona M	Laura Sage for the payment of the Accrued But Unpaid Continuance Allowance
Jones, Mae Ethel	Carolyn C Granger for the payment of the Burial Allowance
Jong, Monty A W	Engie C. Jong for the payment of the Accrued But Unpaid Service Retirement Allowance
Jordan, Lena A	Linda Huber for the payment of the Accrued But Unpaid Continuance Allowance
Koury, George T	Veronica Marie Dinehart for the payment of the Burial Allowance

Leonhard, Beryl G                      Leslie Norell Leonhard for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Loss, Lawrence                              Scott D Loss for the payment of the  
Accrued But Unpaid Service Retirement Allowance

Mallard, Twyla L                              Hayward L Harris for the payment of the  
Accrued But Unpaid Continuance Allowance  
  
Paula M Odume for the payment of the  
Accrued But Unpaid Continuance Allowance

Martin, Dennis E                              Antoinette M. Martin for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Matarrese, Patsy J                              Eugene P Matarrese for the payment of the  
Burial Allowance  
  
Kathy L Boisvert for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Mcafee, John J                                      Etta Faye Mcafee for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Mccormick, Barbara C                              Sherry L Rollman for the payment of the  
Accrued But Unpaid Continuance Allowance

Mcleod, Dorothy L	Grace Ernestine Byard for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Mctigue, John	Marsha Marie Mctigue for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Menjivar, Herminio	Karla Ramirez for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance Unused Contributions
Meyers, Kenneth H	Debra L Meyers for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Miniaci, Joseph	Enrichetta Miniaci for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Miyamura, Frank K	Joyce A Hernandez for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Mochedlover, Helene	Mochedlover Trust Dtd 4/10/03 for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance

Moritsugu, Roy S Carole K Moritsugu for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Morris, Angela Annette Lorraine Marie Plourde for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Moss, Mae Etta Almedia Owens for the payment of the  
Accrued But Unpaid Continuance Allowance

Munoz, Margie Esquibel Richie J Weinlood for the payment of the  
DRO Lump Sum

Murray, Kenneth J Barbara Jean Murray for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Musherraf, Sayed Nasrin Rafia Musherraf for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Newkirk, Melanee E Joann W Johnson for the payment of the  
Accrued But Unpaid Larger Annuity Allowance  
Accrued But Unpaid Service Retirement Allowance  
Unused Contributions

Ng, William Wui Jessica F Ng for the payment of the  
Accrued But Unpaid Service Retirement Allowance  
Burial Allowance

Nickerson, Theodore D	Linda Rae Mays for the payment of the Accrued But Unpaid Service Retirement Allowance
Norfleet, Donald L	Sharon M. Norfleet for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Nunes, Faaeseina	Keoni Nunes-Arroyo for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Ozawa, Lynne M	John T Ozawa for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Pyne, Cuthbert Weston	Beverley Pyne for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Rackerby, Jordan T	Monique Michelle Mateljan for the payment of the Accrued But Unpaid Service Retirement Allowance
Ramos, Julian	Maria E Ramos for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Reveles, Raul Mejia	Esperanza M Reveles for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance



Roberts, Jerry	<p>Alchawn D. Peete for the payment of the Accrued But Unpaid Service Retirement Allowance</p> <p>Alecsandra Roberts-Peete for the payment of the Burial Allowance</p> <p>Aunjale Auzrael Lincome for the payment of the Accrued But Unpaid Service Retirement Allowance</p> <p>Colette Roberts for the payment of the Burial Allowance</p>
Robertson, Michael Wayne	<p>Mattie Robertson for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance</p>
Rodriguez, Victor T	<p>Abigail H Rodriguez for the payment of the Burial Allowance</p>
Rostant, Kathryn	<p>Derek M Rostant for the payment of the Accrued But Unpaid Continuance Allowance</p>
San Juan, Del C	<p>Quyen Ngoc San Juan for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance</p>
Sanchez, Manuel	<p>Gabriella Daytona Sanchez for the payment of the Burial Allowance</p> <p>Patricia Sanchez for the payment of the Accrued But Unpaid Service Retirement Allowance</p> <p>Steven Ray Sanchez for the payment of the Burial Allowance</p>

Santoyo, Albert	Ronald Santoyo for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Schilling, Louis Steven	Cameron Michael Schilling for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance Unused Contributions
Schnaar, Betty Lynn	World Wildlife Fund for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance
Schwing, Sherrie	Susan M Sperati for the payment of the Accrued But Unpaid Service Retirement Allowance Burial Allowance

BENEFIT PAYMENTS APPROVED BY GENERAL MANAGER: ITEM V-B

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

Approved Death Benefit Payments

Deceased

Beneficiary/Payee

**TIER 1**

**Active**

Baber, Saida Q  
(Deceased Active)

Ahmed Ibrahim for the payment of the  
Accumulated Contributions

Barahona, Santos S  
(Deceased Active)

Inmir Milenia Arriaga for the payment of the  
Accumulated Contributions

Barrera, Ranferi  
(Deceased Active)

Juana Barrera for the payment of the  
Disability Retirement Survivorship Allowance

Covington, Jennifer Lynn  
(Deceased Active)

Alvin L Covington for the payment of the  
FDBP Survivor  
Limited Pension

Loll, Raymond Charles  
(Deceased Active)

Kimberly Caldwell for the payment of the  
Accumulated Contributions

Nicole M Haas for the payment of the  
Accumulated Contributions

Miramontez, Daniel Loera  
(Deceased Active)

Daniel R Miramontez for the payment of the  
Accumulated Contributions

Oshon, Melford W  
(Deceased Active)

Roy Oshon for the payment of the  
Accumulated Contributions

Rocha, Alfredo Alfonso  
(Deceased Active)

Norma Rocha for the payment of the  
Disability Retirement Survivorship Allowance

Wong, Philip  
(Deceased Active)

Holly Hawkins for the payment of the  
Accumulated Contributions

**TIER 3**

**NONE**

Disclaimer: The names of members who are deceased may appear more than once due to multiple beneficiaries being paid at different times.

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

Name of Attendee: <b>Elizabeth Lee</b>	
Title of Conference/Seminar: NASP 2021 "Day of Education in Private Equity"	
Location: <b>Virtual</b>	No. of Education Hours:
Event Sponsor: <b>NASP</b>	Date(s) Held: 3/25 to 3/26/21

Report for:

- Travel  
 Conference/Seminar Attendance Only

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

N/A

II. Significant Information Gained:

The conference covered private market strategies and opportunities, including private credit, venture capital, private assets infrastructure, and private equity.

III. Benefits to LACERS:

The education is beneficial as we complete the trust's asset allocation.

IV. Additional Comments:

# PORTFOLIO PERFORMANCE REVIEW

## LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM



Quarter Ending December 31, 2020



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

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# EXECUTIVE SUMMARY

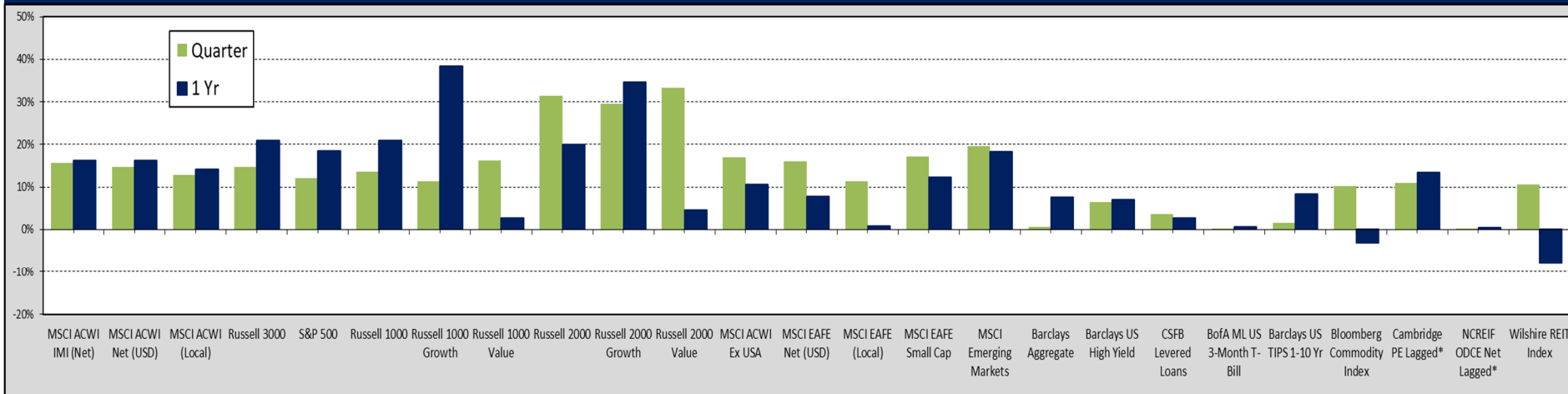
NEPC, LLC

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# PERFORMANCE OVERVIEW

## Q4 Market Summary – Risk Assets Rallied Significantly



	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	15 Yrs	Rank	Inception	Inception Date
<b>LACERS Master Trust</b>	\$20,959,422,719	10.32%	52	12.05%	43	12.05%	43	8.35%	38	9.93%	37	8.82%	26	7.34%	30	8.44%	Oct-94
Policy Index		10.84%	36	14.06%	21	14.06%	21	9.40%	21	10.74%	14	9.01%	20	7.45%	23	8.50%	Oct-94
InvMetrics Public DB \$1-50B Gross Median		10.41%		11.41%		11.41%		7.85%		9.41%		8.26%		6.91%		8.09%	Oct-94

Note: Performance is gross of fees

### Risk assets rallied significantly as global fiscal and monetary stimulus buoys markets and investors cheered vaccination projections

- The U.S. Equity composite outperformed due to manager selection and the Non-U.S. Equity composite outperformed due to manager selection.

### Credit spreads of investment-grade and high-yield debt tightened in the fourth quarter with some segments of the market reaching pre-pandemic levels

- The Core Fixed Income composite outperformed due to manager performance.

### Private Equity and Private Real Estate underperformed their benchmark and detracted from relative returns versus Policy Index



# MARKET OUTLOOK

NEPC, LLC

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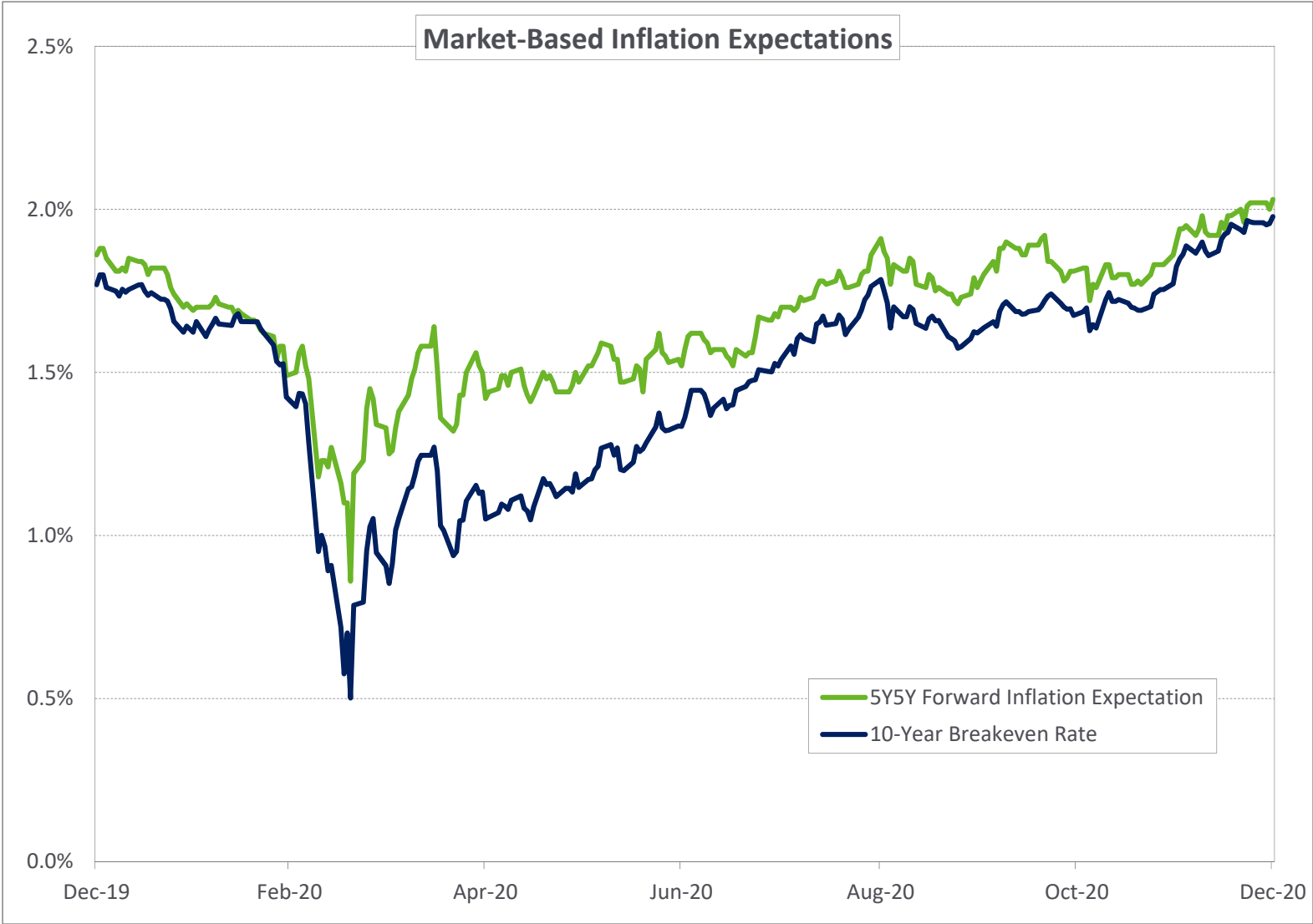
# THE WORLD ECONOMY SHRANK IN 2020



Q4 2020 real GDP figure represents IMF forecast for 2020  
GDP figures are seasonally adjusted and chained to 2005 dollars  
Source: IMF, FactSet



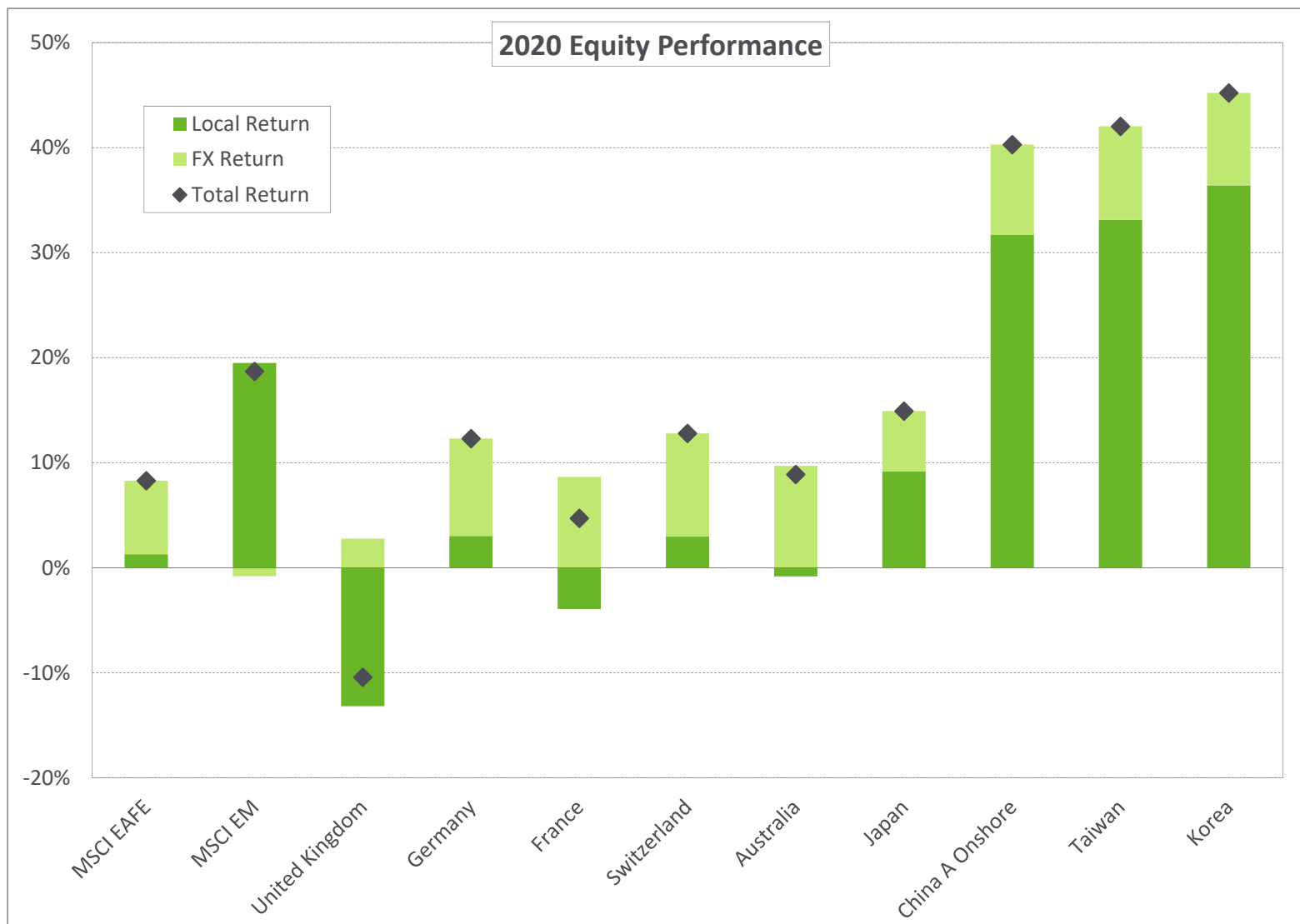
# INFLATION EXPECTATIONS RECOVERED



Source: FactSet



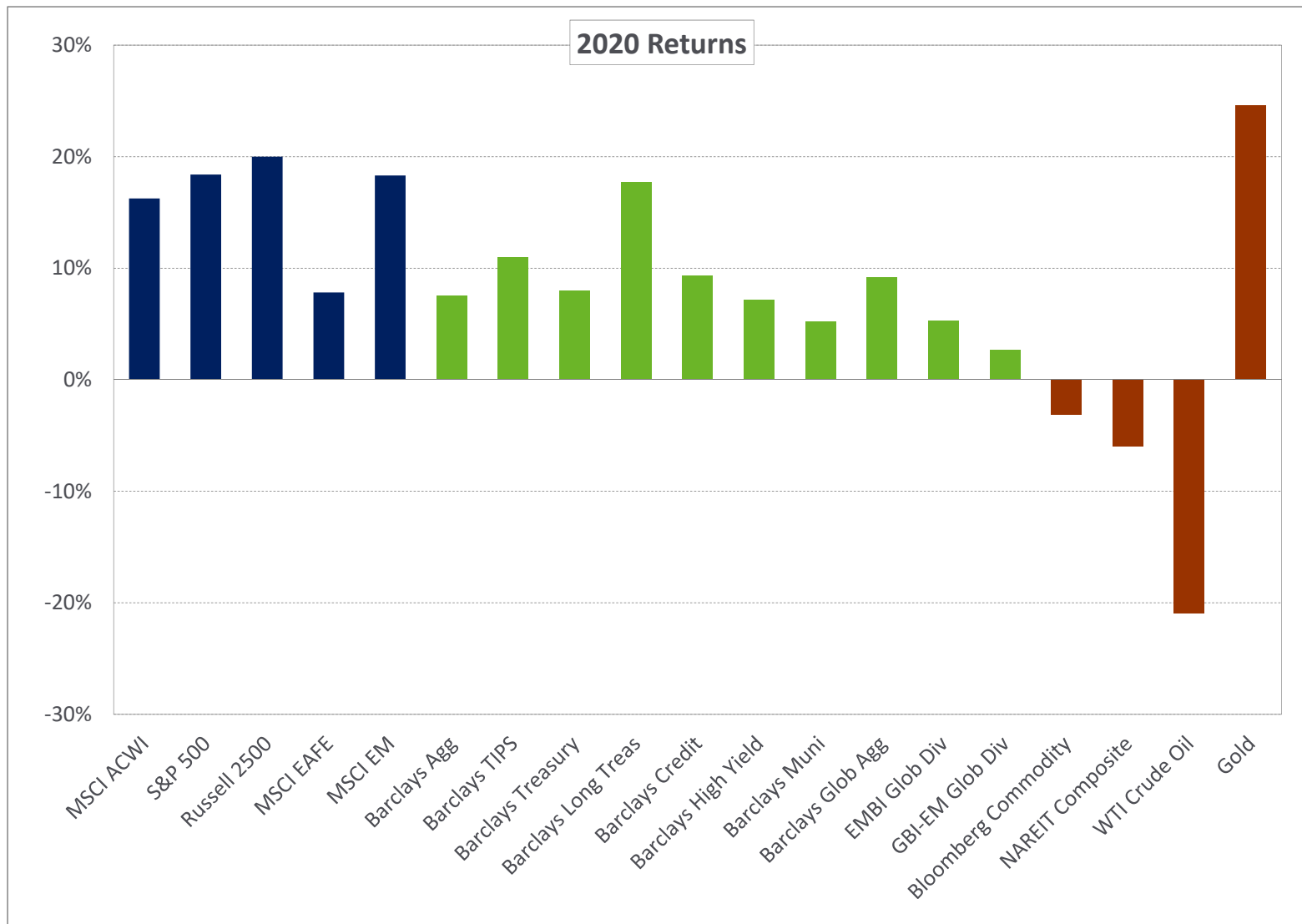
# DOLLAR WEAKNESS SUPPORTED NON-US EQUITY



Source: MSCI, FactSet



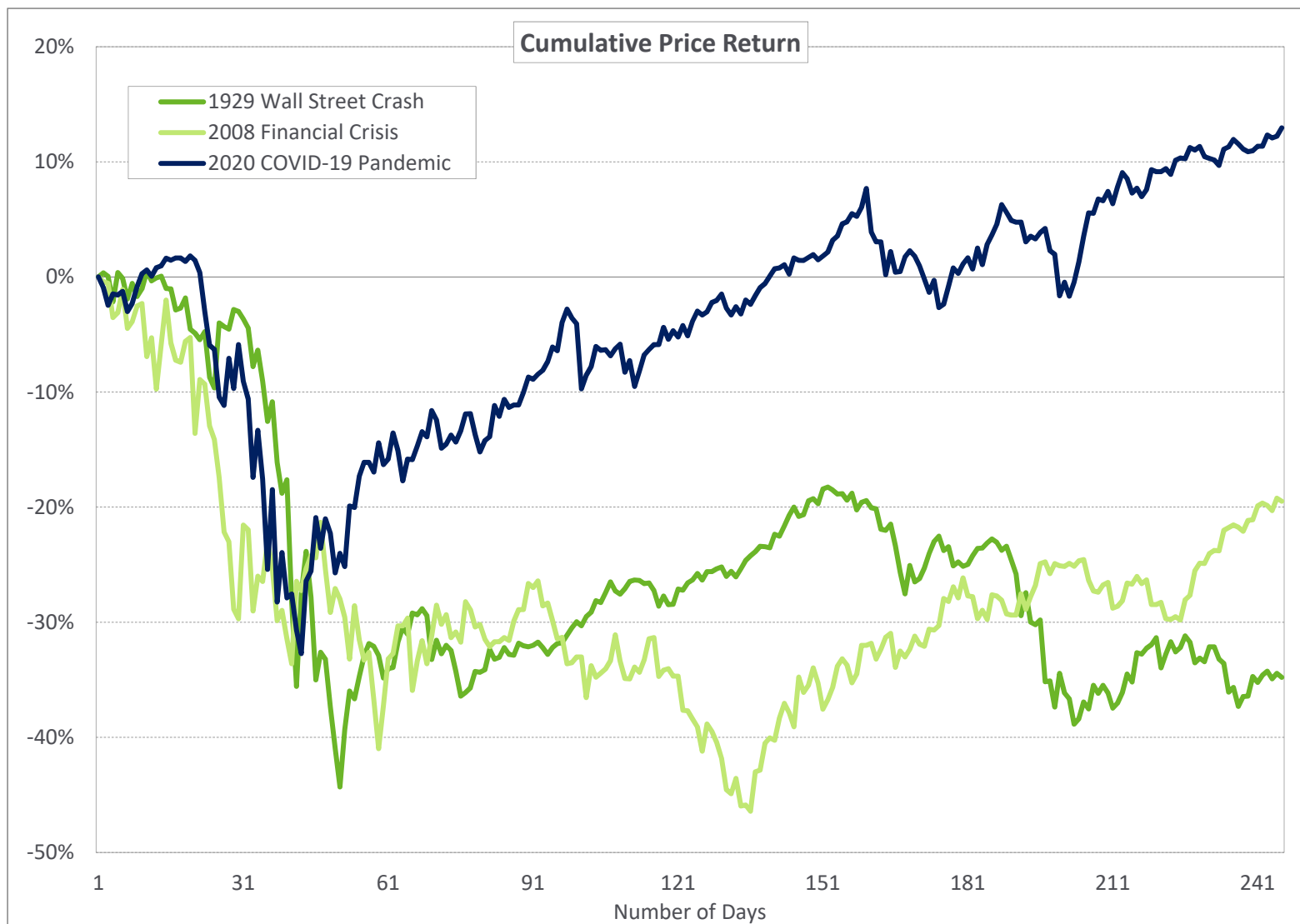
# US AND EMERGING EQUITIES OUTPERFORMED



Source: S&P, Russell, MSCI, JPM, Bloomberg, FactSet



# THE SHORTEST BEAR MARKET IN HISTORY

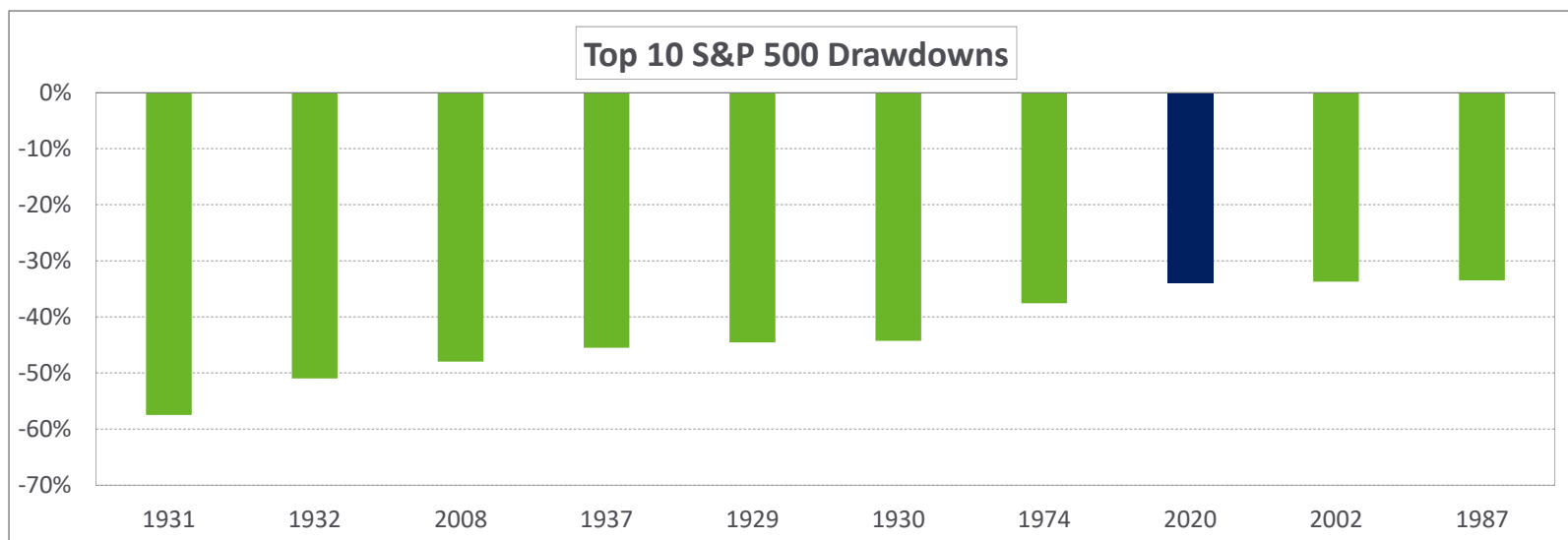
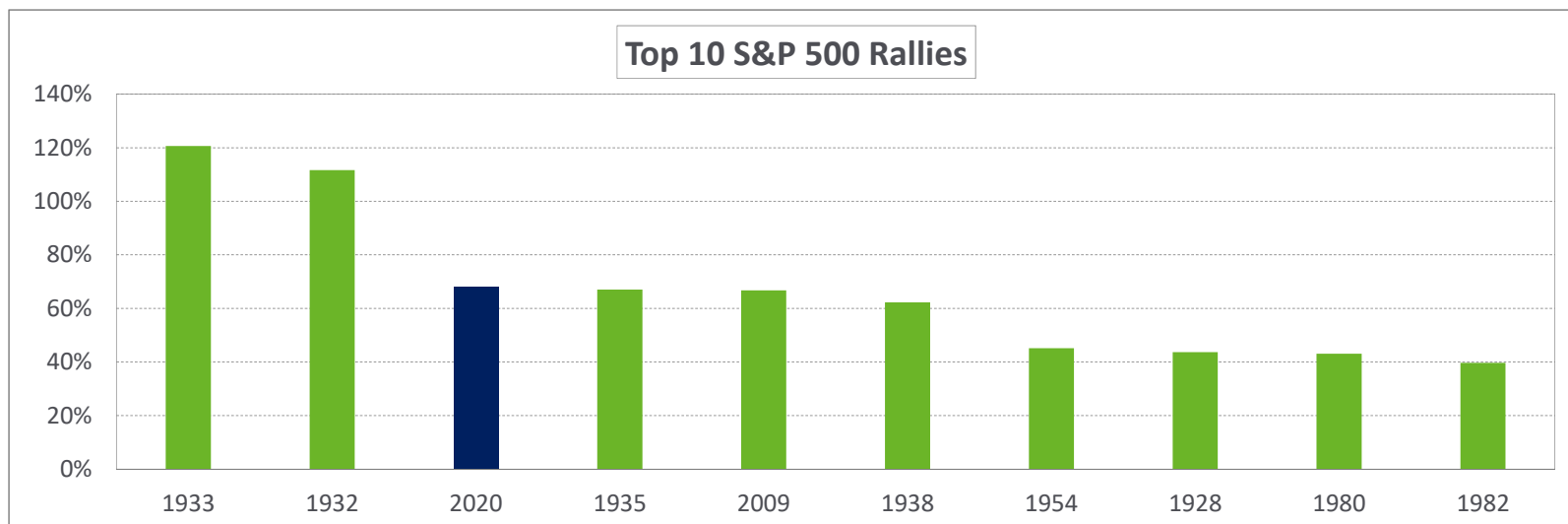


Source: S&P, FactSet

Financial Crisis represents S&P returns from 9/1/2008 – 8/10/2009; Wall Street Crash represents Dow Jones returns from 8/30/1929 – 8/25/1930; COVID-19 represents S&P returns from 1/23/2020 (representing the start of the Wuhan, China lockdown) – 12/31/2020



# THE LARGEST EQUITY SWINGS SINCE 1932



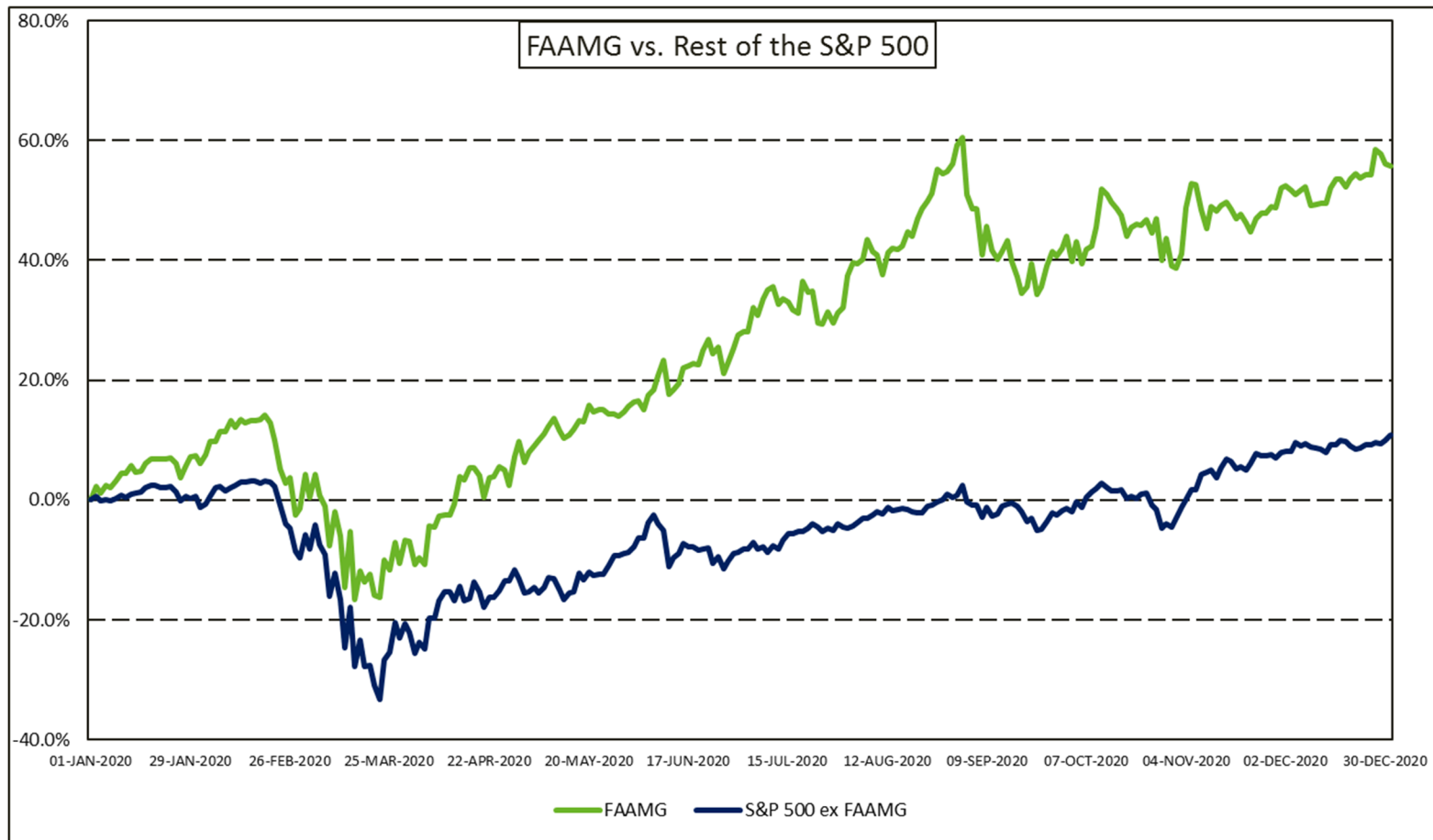
Source: S&P, FactSet

Rallies and drawdowns represent the largest trough-to-peak and peak-to-trough within a calendar year





# FAAMG DROVE US EQUITY RETURNS HIGHER



FAAMG is an acronym for Facebook, Apple, Amazon, Microsoft, Google



# QE PUSHED YIELDS INTO NEGATIVE TERRITORY

Government Bond Yields	6M	1Y	2Y	3Y	5Y	7Y	10Y	15Y	30Y
Germany	-0.7%	-0.7%	-0.7%	-0.8%	-0.7%	-0.7%	-0.6%	-0.4%	-
Netherlands	-	-0.7%	-0.7%	-0.7%	-0.7%	-0.6%	-0.5%	-0.4%	-0.1%
France	-0.7%	-0.7%	-0.7%	-0.7%	-0.7%	-0.6%	-0.3%	-0.2%	0.4%
Austria	-0.6%	-0.7%	-0.7%	-0.7%	-0.7%	-0.6%	-0.4%	-	0.1%
Switzerland	-	-0.8%	-0.8%	-0.8%	-0.7%	-0.6%	-0.5%	-	-0.3%
Belgium	-	-0.7%	-0.7%	-0.7%	-0.7%	-0.6%	-0.4%	-0.2%	0.3%
Japan	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	0.2%	0.6%
Finland	-0.7%	-0.7%	-0.7%	-0.7%	-	-0.6%	-	-	0.0%
Portugal	-0.9%	-0.8%	-0.7%	-0.5%	-0.4%	-0.2%	0.0%	-	-
Italy	-0.6%	-0.6%	-0.4%	-0.3%	-0.0%	0.2%	0.5%	0.9%	1.4%
United Kingdom	-0.0%	-0.2%	-0.2%	-0.1%	-0.1%	0.0%	0.2%	0.4%	0.7%
Sweden	-0.2%	-	-0.4%	-	-0.2%	-0.2%	0.0%	-	-
Denmark	-	-	-0.6%	-0.6%	-0.6%	-	-0.5%	-	-
Spain	-	-	-0.6%	-0.6%	-0.4%	-0.3%	0.0%	-	0.9%
Australia	-	0.0%	0.1%	0.1%	0.3%	0.6%	1.0%	1.3%	2.0%
Canada	0.1%	0.2%	0.2%	0.3%	0.4%	0.5%	0.7%	-	1.2%
Hong Kong	0.0%	0.1%	0.1%	0.2%	0.3%	0.5%	0.8%	-	-
New Zealand	0.3%	-	0.3%	0.3%	0.4%	0.7%	1.0%	-	-
Norway	0.0%	-	0.3%	-	0.7%	0.7%	0.9%	-	-
Singapore	0.3%	0.4%	0.3%	0.3%	0.5%	0.8%	0.8%	-	1.1%
United States	0.1%	0.1%	0.1%	0.2%	0.4%	0.6%	0.9%	-	1.6%

Source: FactSet



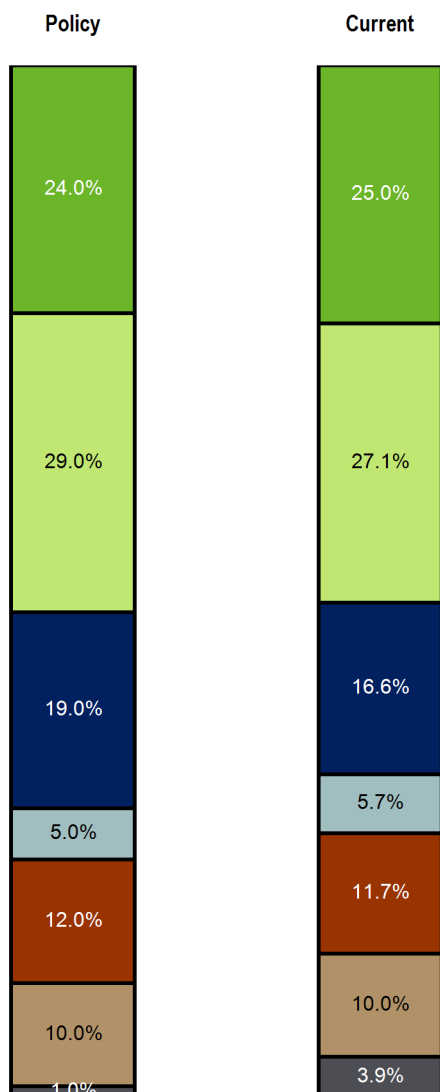
# ASSET CLASS POLICY OVERVIEW

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	\$5,232,935,095	24.00%	24.97%	0.97%	19.00% - 29.00%	Yes
Non-US Equity	\$5,678,696,863	29.00%	27.09%	-1.91%	24.00% - 34.00%	Yes
Core Fixed Income	\$3,486,448,653	19.00%	16.63%	-2.37%	15.00% - 22.00%	Yes
Credit Opportunities	\$1,198,630,373	5.00%	5.72%	0.72%	0.00% - 10.00%	Yes
Private Equity Real	\$2,449,519,629	12.00%	11.69%	-0.31%	0.00% - 100.00%	Yes
Assets	\$2,105,856,735	10.00%	10.05%	0.05%	7.00% - 13.00%	Yes
Cash <sup>1</sup>	\$807,335,371	1.00%	3.85%	2.85%	0.00% - 2.00%	No
<b>Total</b>	<b>\$20,959,422,719</b>	<b>100.00%</b>	<b>100.00%</b>			

\*Difference between Policy and Current Allocation

1 - LACERS has a temporary policy of being able to hold cash outside of the stated bound

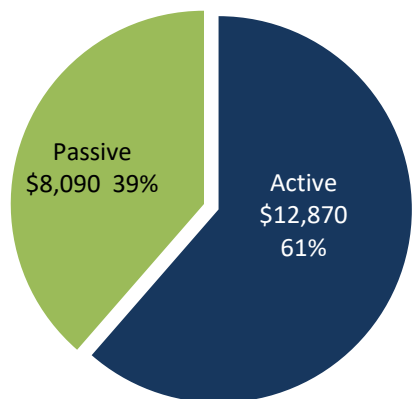
Note: Policy Target Asset Allocation does not reflect the new target asset allocation adopted on April 10, 2018. Implementation of the new asset allocation is currently in progress.



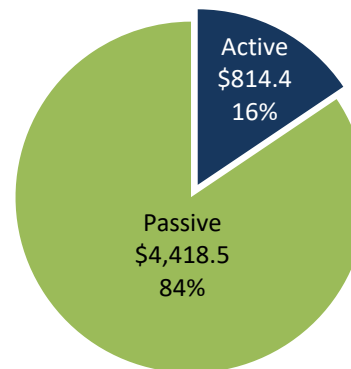
# ACTIVE VS. PASSIVE MANAGER BREAKDOWN

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

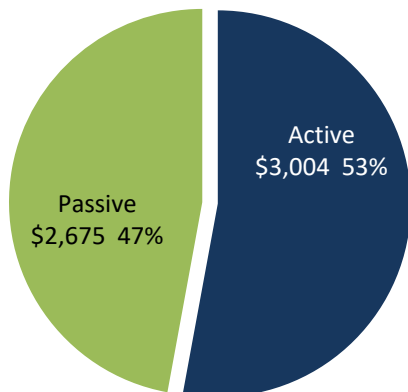
## Total Fund



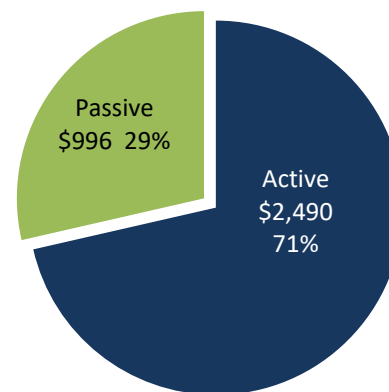
## U.S. Equity



## Non-U.S. Equity



## Core Fixed Income



- LACERS allocated 61% to active managers and 39% 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	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>\$20,959,422,719</b>	<b>10.32%</b>	<b>52</b>	<b>12.05%</b>	<b>43</b>	<b>12.05%</b>	<b>43</b>	<b>8.35%</b>	<b>38</b>	<b>9.93%</b>	<b>37</b>	<b>8.82%</b>	<b>26</b>	<b>7.34%</b>	<b>30</b>	<b>8.44%</b>	<b>Oct-94</b>
Policy Index		10.84%	36	14.06%	21	14.06%	21	9.40%	21	10.74%	14	9.01%	20	7.45%	23	8.50%	Oct-94
InvMetrics Public DB \$1-50B Gross Median		10.41%		11.41%		11.41%		7.85%		9.41%		8.26%		6.91%		8.09%	Oct-94

Over the past five years, the Fund returned 9.93% and outperformed the actuarial rate of return but underperformed the policy index by 0.81%. This return ranks in the 37<sup>th</sup> percentile within the Public Funds \$1 Billion- \$50 Billion universe. The Fund's volatility of 8.98% ranked in the 52<sup>nd</sup> percentile over this period. The Fund's risk-adjusted performance, as measured by the Sharpe Ratio, ranks in the 45<sup>th</sup> percentile and the Sortino Ratio ranks in the 33<sup>rd</sup> percentile; indicating that active management benefited the Plan.

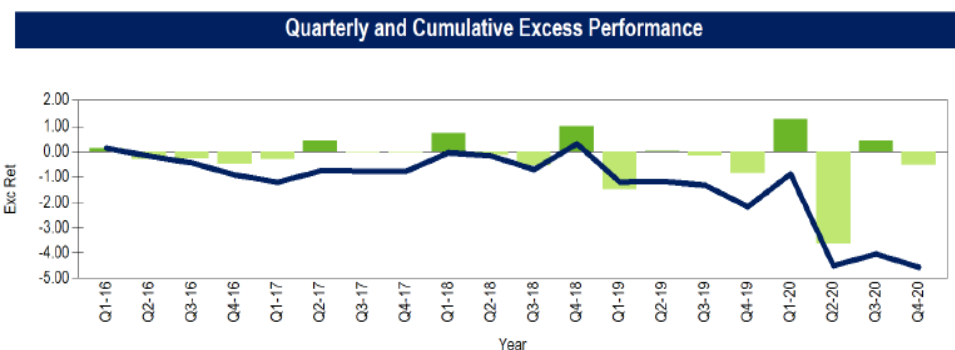
Over the past three years, the Fund return of 8.35% underperformed the policy index by 1.05% and ranked in the 38<sup>th</sup> percentile in its peer group. The Fund's volatility ranks in the 55<sup>th</sup> percentile, the Sharpe Ratio of 0.63 ranks in the 45<sup>th</sup> percentile and the Sortino Ratio of 0.80 ranks in the 34<sup>th</sup> percentile.

In the one-year ended December 31, 2020, assets increased from \$18.87 billion twelve months ago to \$20.96 billion. The Fund returned 12.05% and underperformed the policy index by 2.01%. The Fund's return ranks in the 43<sup>rd</sup> percentile in its peer group.

All asset classes were within policy range as of December 31, 2020.

The InvMetrics Public Funds \$1 Billion- \$50 Billion Universe contains 89 observations for the period ending December 31, 2020.

Please refer to page 64 in the appendix for a comparison versus InvMetrics Public Funds DB \$5-\$50B universe.



5 Years Ending December 31, 2020								
	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	9.93%	37	8.98%	52	0.98	45	1.08	33
Policy Index	10.74%	14	10.30%	86	0.93	54	1.06	37
InvMetrics Public DB \$1-50B Gross Median	9.41%	--	8.95%	--	0.96	--	0.99	--

3 Years Ending December 31, 2020								
	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	8.35%	38	10.92%	55	0.63	45	0.80	34
Policy Index	9.40%	21	12.58%	86	0.63	45	0.83	31
InvMetrics Public DB \$1-50B Gross Median	7.85%	--	10.78%	--	0.61	--	0.73	--



Los Angeles City Employees' Retirement System

# TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>LACERS Master Trust</b>	<b>20,959,422,719</b>	<b>100.00</b>	<b>10.32</b>	<b>12.05</b>	<b>12.05</b>	<b>8.35</b>	<b>9.93</b>	<b>8.82</b>	<b>7.14</b>	<b>8.44</b>	<b>Oct-94</b>
<i>Policy Index</i>			<u>10.84</u>	<u>14.06</u>	<u>14.06</u>	<u>9.40</u>	<u>10.74</u>	<u>9.01</u>	<u>6.96</u>	<u>8.50</u>	<i>Oct-94</i>
Over/Under			-0.52	-2.01	-2.01	-1.05	-0.81	-0.19	0.18	-0.06	
<b>U.S. Equity</b>	<b>5,232,935,095</b>	<b>24.97</b>	<b>15.29</b>	<b>19.07</b>	<b>19.07</b>	<b>13.74</b>	<b>14.92</b>	<b>13.42</b>	<b>8.28</b>	<b>11.00</b>	<b>Oct-94</b>
<i>U.S. Equity Blend</i>			<u>14.68</u>	<u>20.89</u>	<u>20.89</u>	<u>14.49</u>	<u>15.43</u>	<u>13.79</u>	<u>7.82</u>	<u>10.06</u>	<i>Oct-94</i>
Over/Under			0.61	-1.82	-1.82	-0.75	-0.51	-0.37	0.46	0.94	
<b>Non-U.S. Equity</b>	<b>5,678,696,863</b>	<b>27.09</b>	<b>18.44</b>	<b>14.93</b>	<b>14.93</b>	<b>6.55</b>	<b>10.35</b>	<b>6.38</b>	<b>6.24</b>	<b>5.77</b>	<b>Nov-94</b>
<i>MSCI ACWI ex USA</i>			<u>17.01</u>	<u>10.65</u>	<u>10.65</u>	<u>4.88</u>	<u>8.93</u>	<u>4.92</u>	<u>5.23</u>	<u>5.43</u>	<i>Nov-94</i>
Over/Under			1.43	4.28	4.28	1.67	1.42	1.46	1.01	0.34	
<b>Core Fixed Income</b>	<b>3,486,448,653</b>	<b>16.63</b>	<b>1.17</b>	<b>9.09</b>	<b>9.09</b>	<b>5.93</b>	<b>5.08</b>			<b>4.13</b>	<b>Jul-12</b>
<i>Core Fixed Income Blend</i>			<u>0.67</u>	<u>7.51</u>	<u>7.51</u>	<u>5.34</u>	<u>4.44</u>			<u>3.44</u>	<i>Jul-12</i>
Over/Under			0.50	1.58	1.58	0.59	0.64			0.69	
<b>Credit Opportunities</b>	<b>1,198,630,373</b>	<b>5.72</b>	<b>6.01</b>	<b>4.99</b>	<b>4.99</b>	<b>5.45</b>	<b>7.69</b>			<b>5.88</b>	<b>Jun-13</b>
<i>Credit Opportunities Blend</i>			<u>6.22</u>	<u>6.45</u>	<u>6.45</u>	<u>5.83</u>	<u>8.07</u>			<u>6.20</u>	<i>Jun-13</i>
Over/Under			-0.21	-1.46	-1.46	-0.38	-0.38			-0.32	
<b>Real Assets</b>	<b>2,105,856,735</b>	<b>10.05</b>	<b>2.94</b>	<b>2.75</b>	<b>2.75</b>	<b>4.58</b>	<b>5.59</b>	<b>7.69</b>	<b>5.16</b>	<b>6.18</b>	<b>Nov-94</b>
<i>CPI + 5% (Unadjusted)</i>			<u>1.30</u>	<u>6.42</u>	<u>6.42</u>	<u>6.94</u>	<u>7.04</u>	<u>6.82</u>	<u>7.13</u>	<u>7.25</u>	<i>Nov-94</i>
Over/Under			1.64	-3.67	-3.67	-2.36	-1.45	0.87	-1.97	-1.07	
<b>Public Real Assets</b>	<b>1,296,377,277</b>	<b>6.19</b>	<b>4.30</b>	<b>7.04</b>	<b>7.04</b>	<b>4.88</b>	<b>5.11</b>			<b>2.90</b>	<b>Jun-14</b>
<i>Public Real Assets Blend</i>			<u>6.95</u>	<u>4.74</u>	<u>4.74</u>	<u>3.31</u>	<u>4.07</u>			<u>0.63</u>	<i>Jun-14</i>
Over/Under			-2.65	2.30	2.30	1.57	1.04			2.27	
<b>Private Real Estate</b>	<b>791,188,233</b>	<b>3.77</b>	<b>0.89</b>	<b>-3.59</b>	<b>-3.59</b>	<b>3.50</b>	<b>5.53</b>	<b>8.49</b>	<b>5.54</b>	<b>6.47</b>	<b>Oct-94</b>
<i>Real Estate Blend</i>			<u>1.49</u>	<u>1.98</u>	<u>1.98</u>	<u>5.75</u>	<u>7.06</u>	<u>10.16</u>	<u>8.76</u>	<u>9.49</u>	<i>Oct-94</i>
Over/Under			-0.60	-5.57	-5.57	-2.25	-1.53	-1.67	-3.22	-3.02	
<b>Private Equity</b>	<b>2,449,519,629</b>	<b>11.69</b>	<b>9.39</b>	<b>13.71</b>	<b>13.71</b>	<b>12.63</b>	<b>11.79</b>	<b>12.43</b>	<b>9.57</b>	<b>10.54</b>	<b>Nov-95</b>
<i>Private Equity Blend</i>			<u>15.50</u>	<u>24.47</u>	<u>24.47</u>	<u>17.89</u>	<u>18.86</u>	<u>17.34</u>	<u>11.65</u>	<u>13.70</u>	<i>Nov-95</i>
Over/Under			-6.11	-10.76	-10.76	-5.26	-7.07	-4.91	-2.08	-3.16	
<b>Cash</b>	<b>807,335,371</b>	<b>3.85</b>									





Los Angeles City Employees' Retirement System

# TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>LACERS Master Trust</b>	<b>20,959,422,719</b>	<b>100.00</b>	<b>10.27</b>	<b>11.87</b>	<b>11.87</b>	<b>8.16</b>	<b>9.74</b>	<b>8.63</b>			<b>Oct-94</b>
Policy Index			<u>10.84</u>	<u>14.06</u>	<u>14.06</u>	<u>9.40</u>	<u>10.74</u>	<u>9.01</u>			Oct-94
Over/Under			-0.57	-2.19	-2.19	-1.24	-1.00	-0.38			
<b>U.S. Equity</b>	<b>5,232,935,095</b>	<b>24.97</b>	<b>15.27</b>	<b>19.02</b>	<b>19.02</b>	<b>13.68</b>	<b>14.85</b>	<b>13.28</b>			<b>Oct-94</b>
U.S. Equity Blend			<u>14.68</u>	<u>20.89</u>	<u>20.89</u>	<u>14.49</u>	<u>15.43</u>	<u>13.79</u>			Oct-94
Over/Under			0.59	-1.87	-1.87	-0.81	-0.58	-0.51			
<b>Non-U.S. Equity</b>	<b>5,678,696,863</b>	<b>27.09</b>	<b>18.34</b>	<b>14.54</b>	<b>14.54</b>	<b>6.16</b>	<b>9.96</b>	<b>6.02</b>			<b>Nov-94</b>
MSCI ACWI ex USA			<u>17.01</u>	<u>10.65</u>	<u>10.65</u>	<u>4.88</u>	<u>8.93</u>	<u>4.92</u>			Nov-94
Over/Under			1.33	3.89	3.89	1.28	1.03	1.10			
<b>Core Fixed Income</b>	<b>3,486,448,653</b>	<b>16.63</b>	<b>1.15</b>	<b>8.98</b>	<b>8.98</b>	<b>5.83</b>	<b>4.97</b>		<b>4.02</b>		<b>Jul-12</b>
Core Fixed Income Blend			<u>0.67</u>	<u>7.51</u>	<u>7.51</u>	<u>5.34</u>	<u>4.44</u>		<u>3.44</u>		Jul-12
Over/Under			0.48	1.47	1.47	0.49	0.53		0.58		
<b>Credit Opportunities</b>	<b>1,198,630,373</b>	<b>5.72</b>	<b>5.94</b>	<b>4.70</b>	<b>4.70</b>	<b>5.14</b>	<b>7.35</b>		<b>5.54</b>		<b>Jun-13</b>
Credit Opportunities Blend			<u>6.22</u>	<u>6.45</u>	<u>6.45</u>	<u>5.83</u>	<u>8.07</u>		<u>6.20</u>		Jun-13
Over/Under			-0.28	-1.75	-1.75	-0.69	-0.72		-0.66		
<b>Real Assets</b>	<b>2,105,856,735</b>	<b>10.05</b>	<b>2.90</b>	<b>2.60</b>	<b>2.60</b>	<b>4.42</b>	<b>5.42</b>	<b>7.55</b>		<b>--</b>	<b>Nov-94</b>
CPI + 5% (Unadjusted)			<u>1.30</u>	<u>6.42</u>	<u>6.42</u>	<u>6.94</u>	<u>7.04</u>	<u>6.82</u>		<u>7.25</u>	Nov-94
Over/Under			1.60	-3.82	-3.82	-2.52	-1.62	0.73			
<b>Public Real Assets</b>	<b>1,296,377,277</b>	<b>6.19</b>	<b>4.26</b>	<b>6.83</b>	<b>6.83</b>	<b>4.66</b>	<b>4.86</b>		<b>2.70</b>		<b>Jun-14</b>
Public Real Assets Blend			<u>6.95</u>	<u>4.74</u>	<u>4.74</u>	<u>3.31</u>	<u>4.07</u>		<u>0.63</u>		Jun-14
Over/Under			-2.69	2.09	2.09	1.35	0.79		2.07		
<b>Private Real Estate</b>	<b>791,188,233</b>	<b>3.77</b>	<b>0.86</b>	<b>-3.68</b>	<b>-3.68</b>	<b>3.41</b>	<b>5.45</b>	<b>8.38</b>			<b>Oct-94</b>
Real Estate Blend			<u>1.49</u>	<u>1.98</u>	<u>1.98</u>	<u>5.75</u>	<u>7.06</u>	<u>10.16</u>			Oct-94
Over/Under			-0.63	-5.66	-5.66	-2.34	-1.61	-1.78			
<b>Private Equity</b>	<b>2,449,519,629</b>	<b>11.69</b>	<b>9.39</b>	<b>13.71</b>	<b>13.71</b>	<b>12.64</b>	<b>11.81</b>	<b>12.44</b>			<b>Nov-95</b>
Private Equity Blend			<u>15.50</u>	<u>24.47</u>	<u>24.47</u>	<u>17.89</u>	<u>18.86</u>	<u>17.34</u>			Nov-95
Over/Under			-6.11	-10.76	-10.76	-5.25	-7.05	-4.90			
<b>Cash</b>	<b>807,335,371</b>	<b>3.85</b>									



Los Angeles City Employees' Retirement System

# TOTAL FUND RISK STATISTICS (NET)

## 3 Years Ending December 31, 2020

	% of Total MV (%)	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Annualized Alpha Jensen (%)	Rank	Information Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
LACERS Master Trust	100.00%	8.16%	43	10.93%	56	-0.16%	54	-0.60	85	0.78	37	2.07%	67
Total Equity	52.06%	9.53%	46	18.87%	68	-0.18%	55	-0.20	53	0.56	51	0.93%	13
U.S. Equity	24.97%	13.68%	36	19.68%	46	-0.80%	40	-0.95	58	0.80	39	0.86%	16
Non-U.S. Equity	27.09%	6.16%	33	18.78%	60	1.18%	32	0.84	26	0.35	42	1.51%	17
Developed ex-U.S.	20.08%	6.04%	51	19.02%	73	1.65%	49	0.75	49	0.34	53	2.34%	34
Emerging Markets	7.01%	5.83%	32	20.22%	66	-0.41%	30	-0.18	36	0.33	28	1.89%	18
Core Fixed Income	16.63%	5.83%	36	3.41%	11	0.55%	27	0.79	5	3.02	9	0.62%	13
Credit Opportunities	5.72%	5.14%	--	10.74%	--	-1.14%	--	-0.41	--	0.29	--	1.70%	--
Real Assets	10.05%	4.42%	47	3.76%	11	1.22%	63	-0.66	92	0.91	30	3.80%	15
Public Real Assets	6.19%	4.66%	--	6.37%	--	2.02%	--	0.33	--	0.59	--	4.12%	--
Private Real Estate	3.77%	3.41%	85	2.78%	65	2.09%	14	-0.58	89	0.81	89	4.02%	89
Private Equity	11.69%	12.64%	52	9.15%	60	11.55%	24	-0.24	67	1.65	65	22.14%	86

## 5 Years Ending December 31, 2020

	% 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%	9.74%	41	8.99%	52	0.27%	51	-0.60	88	1.06	37	1.68%	62
Total Equity	52.06%	12.17%	44	15.50%	59	0.02%	41	0.03	35	0.82	46	0.80%	8
U.S. Equity	24.97%	14.85%	44	16.08%	42	-0.62%	37	-0.74	66	0.95	32	0.79%	14
Non-U.S. Equity	27.09%	9.96%	35	15.82%	59	0.84%	32	0.77	16	0.73	47	1.34%	13
Developed ex-U.S.	20.08%	9.07%	52	15.93%	62	1.45%	46	0.81	33	0.66	55	2.00%	28
Emerging Markets	7.01%	12.68%	16	17.93%	73	-0.32%	16	-0.09	18	0.94	15	1.57%	13
Core Fixed Income	16.63%	4.97%	54	3.13%	12	0.62%	52	0.93	5	2.09	1	0.58%	17
Credit Opportunities	5.72%	7.35%	--	8.71%	--	-1.29%	--	-0.49	--	0.57	--	1.50%	--
Real Assets	10.05%	5.42%	32	3.18%	4	1.11%	72	-0.51	92	1.50	30	3.17%	6
Public Real Assets	6.19%	4.86%	--	5.56%	--	1.79%	--	0.24	--	0.85	--	3.35%	--
Private Real Estate	3.77%	5.45%	76	2.37%	34	4.62%	8	-0.41	86	1.80	74	3.97%	83
Private Equity	11.69%	11.81%	49	7.36%	48	10.94%	22	-0.40	66	1.87	73	17.85%	79

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

Peer universe: InvMetrics Public DB \$1-50B Gross (USD)

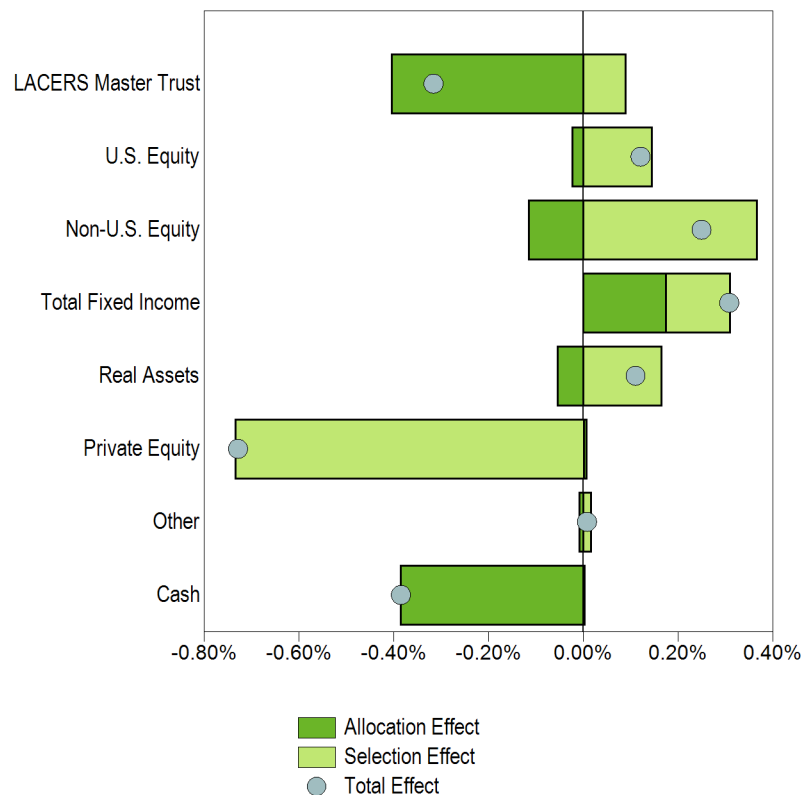
Note: Please refer to page 65 for a comparison against the InvMetrics Public Funds \$5-\$50B universe.



Los Angeles City Employees' Retirement System

# TOTAL FUND ATTRIBUTION ANALYSIS (NET)

**Attribution Effects**  
3 Months Ending December 31, 2020



Attribution Summary								
3 Months Ending December 31, 2020								
	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects	
U.S. Equity	24.00%	15.27%	14.68%	0.59%	0.14%	-0.03%	0.11%	
Non-U.S. Equity	29.00%	18.34%	17.01%	1.32%	0.33%	-0.16%	0.17%	
Total Fixed Income	24.00%	2.40%	1.81%	0.59%	0.14%	0.13%	0.27%	
Real Assets	10.00%	2.90%	1.30%	1.60%	0.16%	-0.05%	0.11%	
Private Equity	12.00%	9.39%	15.50%	-6.10%	-0.71%	0.00%	-0.71%	
Other					-0.05%	-0.06%	-0.11%	
Cash	1.00%	0.04%	0.02%	0.02%	0.00%	-0.38%	-0.38%	
<b>Total</b>	<b>100.00%</b>	<b>10.30%</b>	<b>10.84%</b>	<b>-0.54%</b>	<b>0.01%</b>	<b>-0.55%</b>	<b>-0.54%</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.

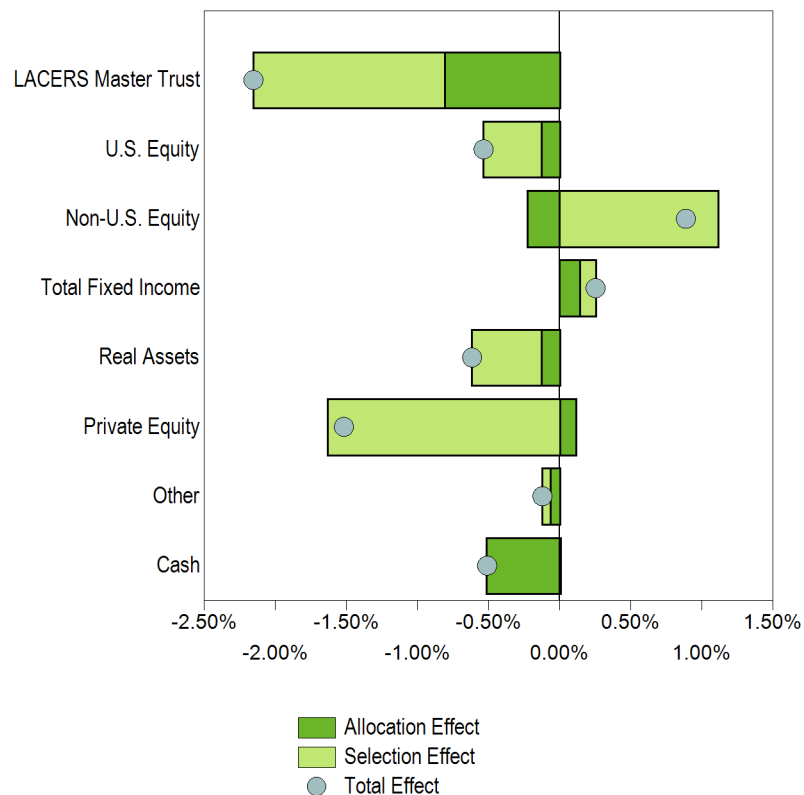
Other composite is comprised of securities lending income, tax reclaims and other miscellaneous transactions.



Los Angeles City Employees' Retirement System

# TOTAL FUND ATTRIBUTION ANALYSIS (NET)

**Attribution Effects**  
1 Year Ending December 31, 2020



Attribution Summary							
1 Year Ending December 31, 2020							
	Policy Wtd. Weight	Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	24.00%	19.02%	20.89%	-1.86%	-0.40%	-0.13%	-0.53%
Non-U.S. Equity	29.00%	14.54%	10.65%	3.89%	1.11%	-0.22%	0.89%
Total Fixed Income	24.00%	8.11%	7.47%	0.63%	0.11%	0.14%	0.25%
Real Assets	10.00%	2.60%	6.42%	-3.83%	-0.48%	-0.13%	-0.62%
Private Equity	12.00%	13.71%	24.47%	-10.75%	-1.63%	0.11%	-1.52%
Other					-0.05%	-0.07%	-0.12%
Cash	1.00%	0.61%	0.45%	0.16%	0.00%	-0.51%	-0.51%
<b>Total</b>	<b>100.00%</b>	<b>11.91%</b>	<b>14.06%</b>	<b>-2.15%</b>	<b>-1.34%</b>	<b>-0.81%</b>	<b>-2.15%</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.

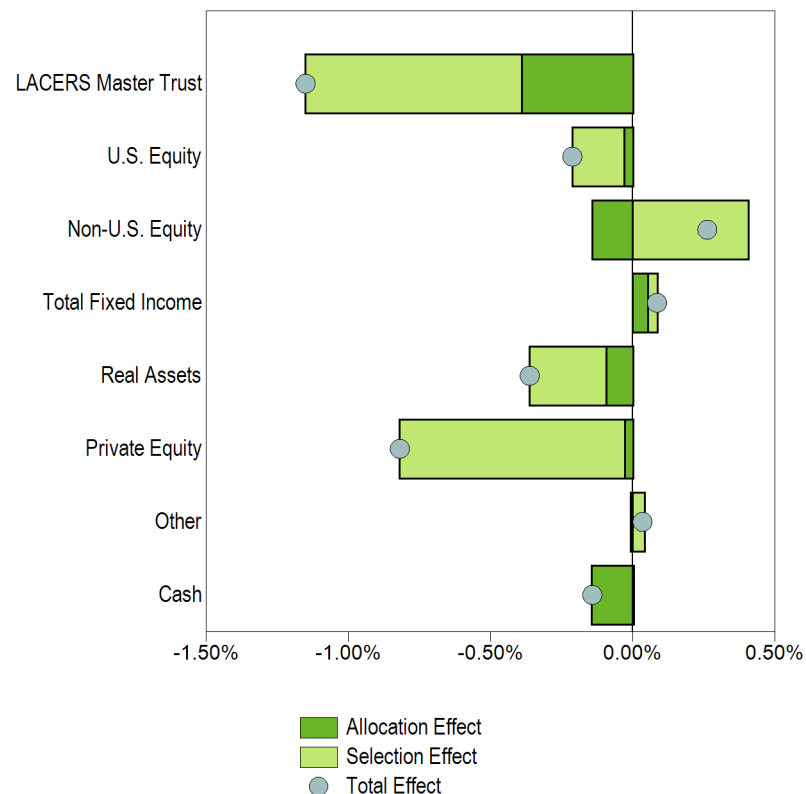
Other composite is comprised of securities lending income, tax reclaims and other miscellaneous transactions.



Los Angeles City Employees' Retirement System

# TOTAL FUND ATTRIBUTION ANALYSIS (NET)

**Attribution Effects**  
3 Years Ending December 31, 2020



Attribution Summary							
3 Years Ending December 31, 2020							
	Policy Weight	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	24.00%	13.68%	14.49%	-0.82%	-0.18%	-0.02%	-0.21%
Non-U.S. Equity	29.00%	6.16%	4.88%	1.28%	0.40%	-0.16%	0.24%
Total Fixed Income	24.00%	5.73%	5.52%	0.21%	0.03%	0.05%	0.08%
Real Assets	10.00%	4.42%	6.94%	-2.52%	-0.27%	-0.09%	-0.36%
Private Equity	12.00%	12.64%	17.89%	-5.26%	-0.79%	-0.03%	-0.82%
Other					0.02%	-0.03%	-0.01%
Cash	1.00%	1.66%	1.48%	0.18%	0.00%	-0.14%	-0.14%
<b>Total</b>	<b>100.00%</b>	<b>8.19%</b>	<b>9.40%</b>	<b>-1.21%</b>	<b>-0.79%</b>	<b>-0.42%</b>	<b>-1.21%</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.

Other composite is comprised of securities lending income, tax reclaims and other miscellaneous transactions.



# PRIVATE MARKETS PERFORMANCE AS OF SEPTEMBER 30, 2020

Private Equity	10 Year IRR	Since Inception IRR	Since Inception Multiple
Aggregate Portfolio	12.5%	11.2%	1.57x
Core Portfolio	13.2%	11.8%	1.59x
Specialized Portfolio	3.9%	1.8%	1.12x
Russell 3000 + 300 bps	16.5%	12.2%	N/A

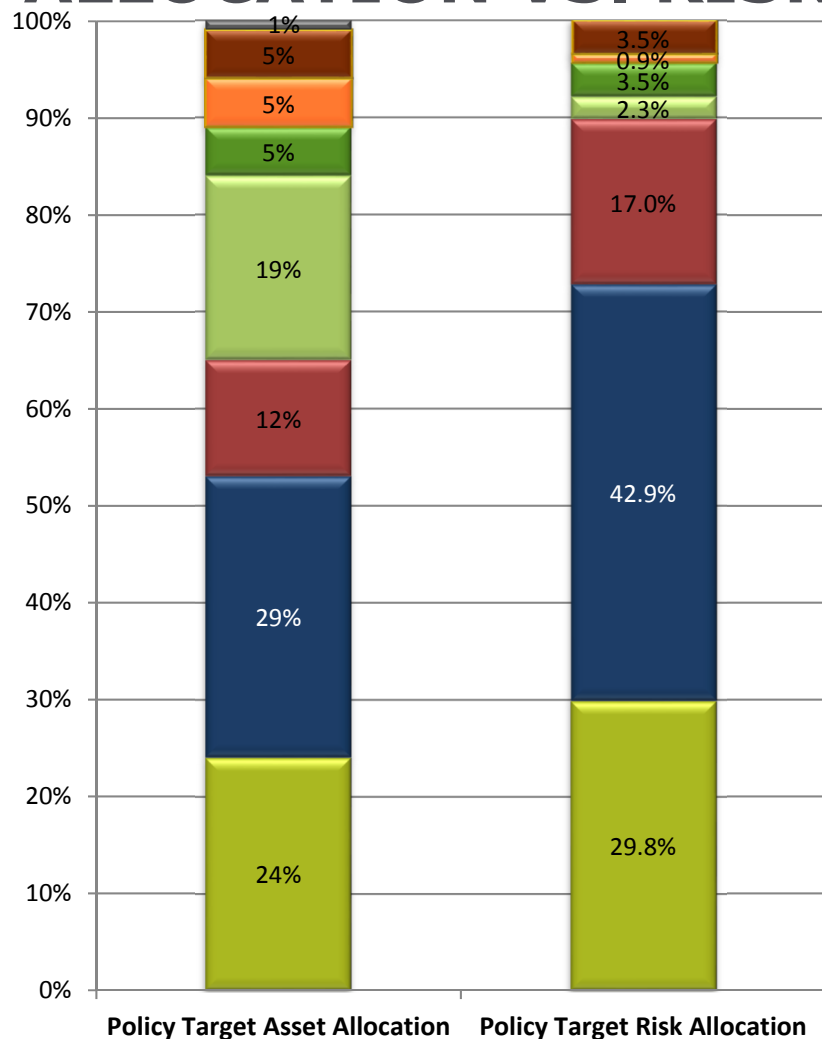
Real Estate	10 Year Return (Net)	Since Inception Return (Net)
Total Portfolio (TWR) <sup>1</sup>	8.4%	5.7%
NFI-ODCE + 80 basis points (TWR)	10.1%	6.9%

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.



# 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, 2020

Public Markets Asset Class	Target Risk Budget	Actual 3 Yr Tracking Error
U.S. Equity	0.50%	0.86%
Non-U.S. Equity	1.20%	1.51%
Core Fixed Income	1.00%	0.62%
Credit Opportunities	1.50%	1.70%
Public Real Assets*	3.00%	4.12%

- 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.

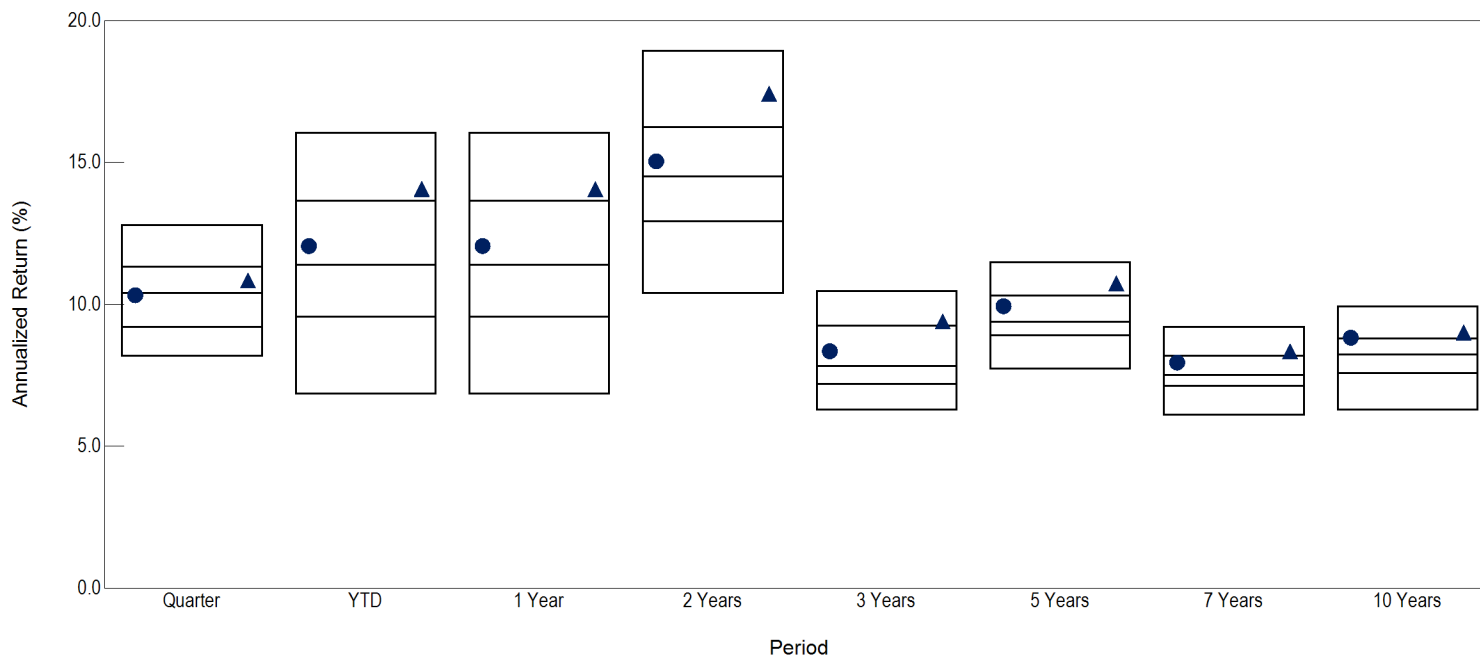




Los Angeles City Employees' Retirement System

# TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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



	Return (Rank)															
5th Percentile	12.79	16.05	16.05	18.94	10.46	11.49	9.20	9.92								
25th Percentile	11.35	13.67	13.67	16.27	9.27	10.34	8.22	8.83								
Median	10.41	11.41	11.41	14.53	7.85	9.41	7.52	8.26								
75th Percentile	9.22	9.59	9.59	12.95	7.22	8.94	7.15	7.59								
95th Percentile	8.21	6.87	6.87	10.41	6.32	7.76	6.13	6.31								
# of Portfolios	89	89	89	89	89	89	87	83								
● LACERS Master Trust	10.32	(52)	12.05	(43)	12.05	(43)	15.04	(39)	8.35	(38)	9.93	(37)	7.95	(37)	8.82	(26)
▲ Policy Index	10.84	(36)	14.06	(21)	14.06	(21)	17.42	(14)	9.40	(21)	10.74	(14)	8.34	(21)	9.01	(20)

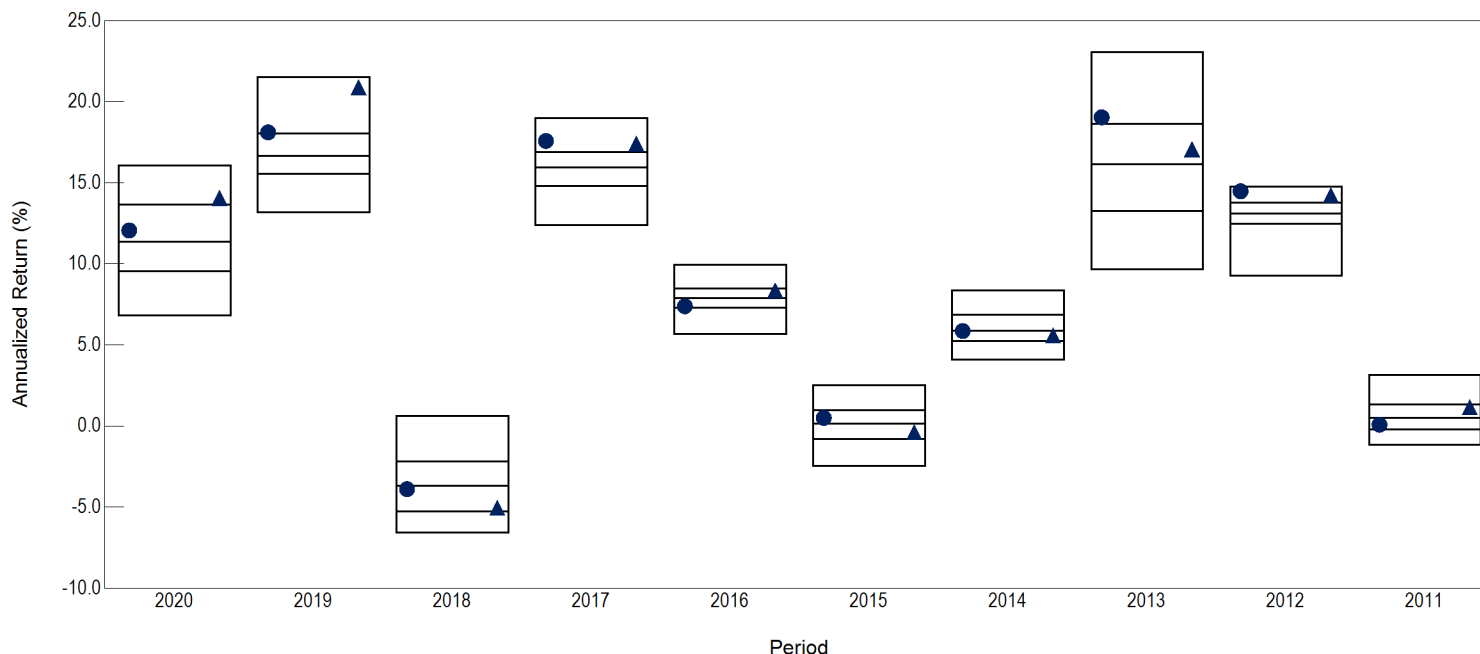


Please refer to page 66 in the appendix for a comparison versus InvMetrics Public DB \$5-50B universe.

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	16.05	21.49	0.60	19.00	9.95	2.50	8.38	23.05	14.75	3.13										
25th Percentile	13.67	18.08	-2.13	16.94	8.51	1.00	6.90	18.67	13.81	1.37										
Median	11.41	16.68	-3.64	15.99	7.91	0.20	5.93	16.17	13.15	0.53										
75th Percentile	9.59	15.61	-5.22	14.83	7.34	-0.77	5.28	13.30	12.50	-0.16										
95th Percentile	6.87	13.20	-6.53	12.43	5.71	-2.43	4.12	9.70	9.31	-1.14										
# of Portfolios	89	77	78	78	78	77	77	76	75	74										
● LACERS Master Trust	12.05	(43)	18.10	(25)	-3.89	(60)	17.57	(15)	7.38	(72)	0.49	(35)	5.85	(53)	19.03	(23)	14.47	(10)	0.08	(68)
▲ Policy Index	14.06	(21)	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)

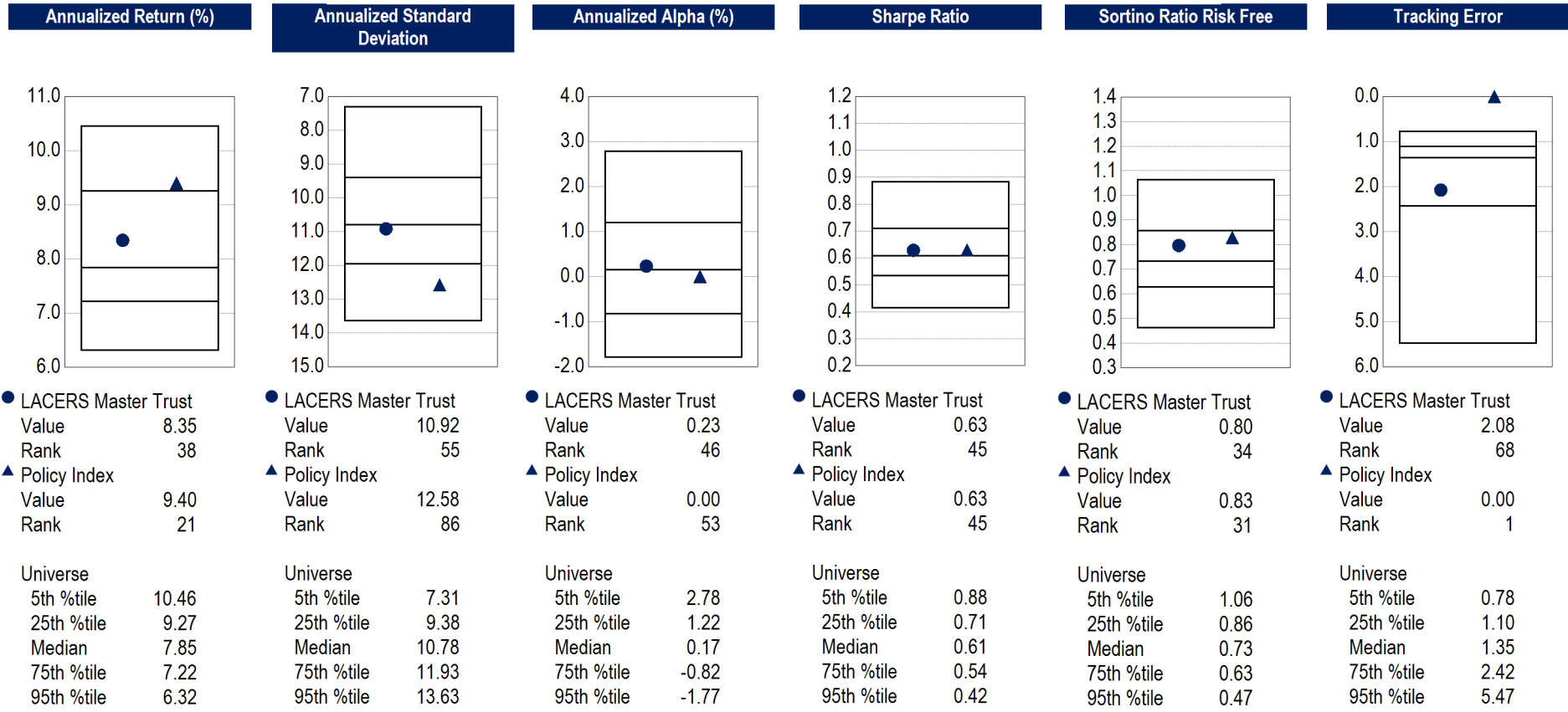


Please refer to page 67 in the appendix for a comparison versus InvMetrics Public DB \$5-50B universe.

Los Angeles City Employees' Retirement System

# TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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



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

Please refer to page 68 in the appendix for a comparison versus InvMetrics Public DB \$5-50B universe.

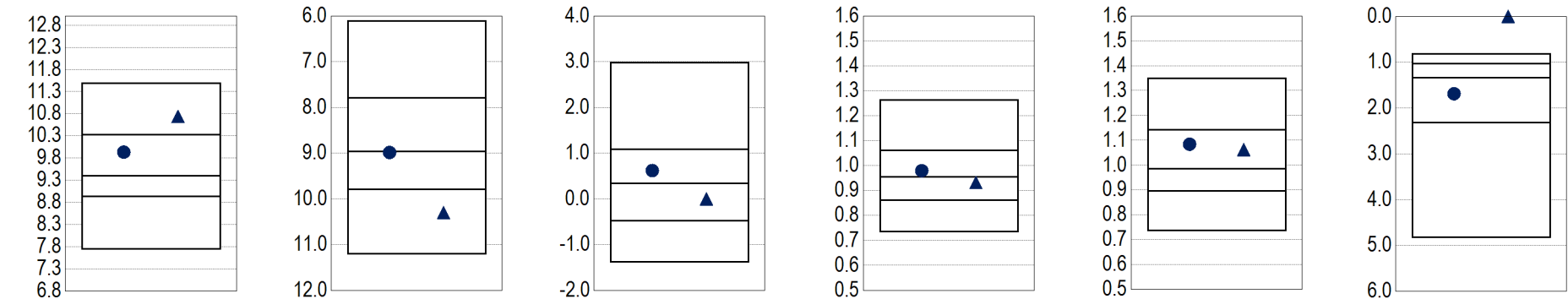


Los Angeles City Employees' Retirement System

# 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
-----------------------	-------------------------------	----------------------	--------------	-------------------------	----------------



Annualized Return (%)		Annualized Standard Deviation		Annualized Alpha (%)		Sharpe Ratio		Sortino Ratio Risk Free		Tracking Error	
● LACERS Master Trust	Value 9.93	● LACERS Master Trust	Value 8.98	● LACERS Master Trust	Value 0.62	● LACERS Master Trust	Value 0.98	● LACERS Master Trust	Value 1.08	● LACERS Master Trust	Value 1.69
	Rank 37		Rank 52		Rank 40		Rank 45		Rank 33		Rank 62
▲ Policy Index	Value 10.74	▲ Policy Index	Value 10.30	▲ Policy Index	Value 0.00	▲ Policy Index	Value 0.93	▲ Policy Index	Value 1.06	▲ Policy Index	Value 0.00
	Rank 14		Rank 86		Rank 56		Rank 54		Rank 37		Rank 1
Universe		Universe		Universe		Universe		Universe		Universe	
5th %tile	11.49	5th %tile	6.11	5th %tile	2.98	5th %tile	1.26	5th %tile	1.35	5th %tile	0.82
25th %tile	10.34	25th %tile	7.77	25th %tile	1.10	25th %tile	1.06	25th %tile	1.14	25th %tile	1.02
Median	9.41	Median	8.95	Median	0.35	Median	0.96	Median	0.99	Median	1.32
75th %tile	8.94	75th %tile	9.78	75th %tile	-0.46	75th %tile	0.86	75th %tile	0.90	75th %tile	2.31
95th %tile	7.76	95th %tile	11.19	95th %tile	-1.36	95th %tile	0.74	95th %tile	0.74	95th %tile	4.80

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

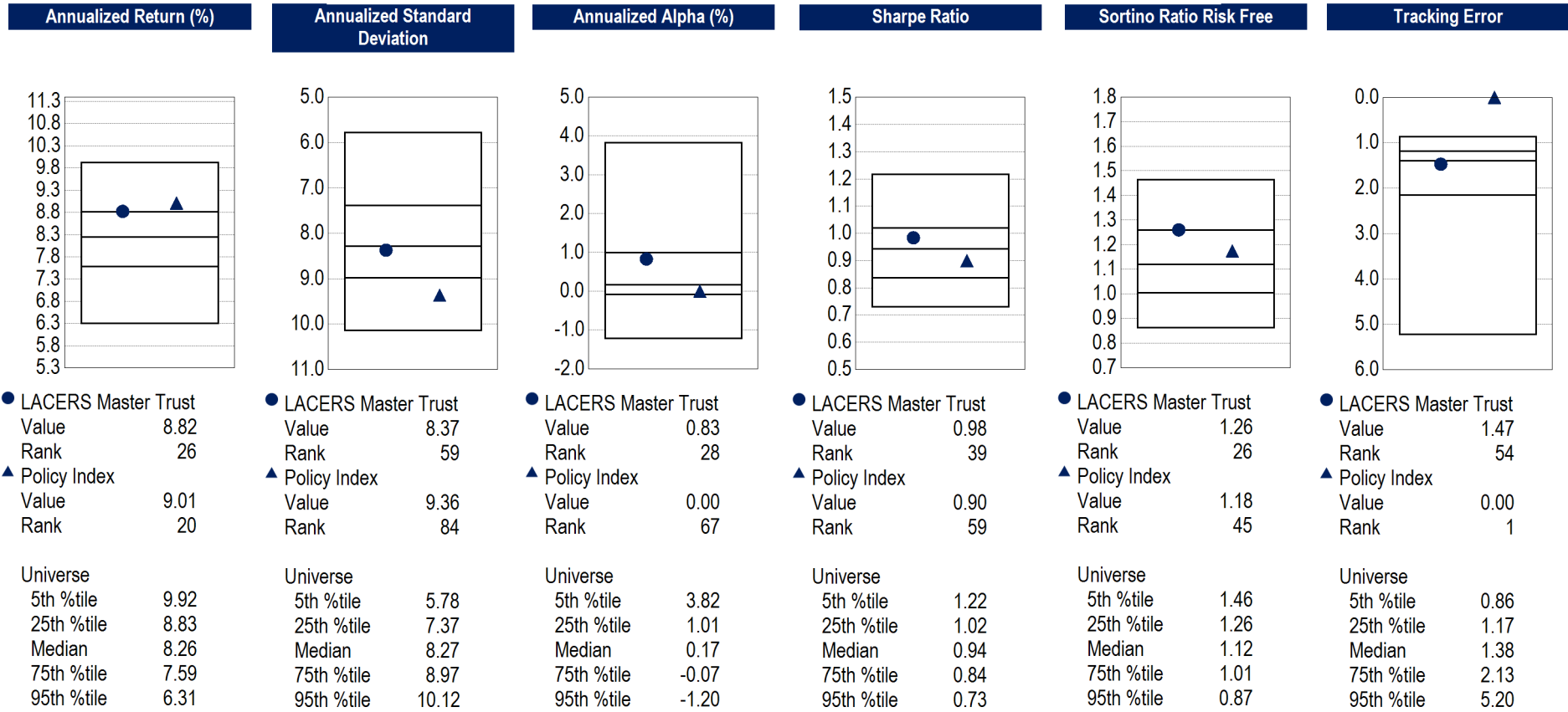
Please refer to page 69 in the appendix for a comparison versus InvMetrics Public DB \$5-50B universe.



Los Angeles City Employees' Retirement System

# TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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

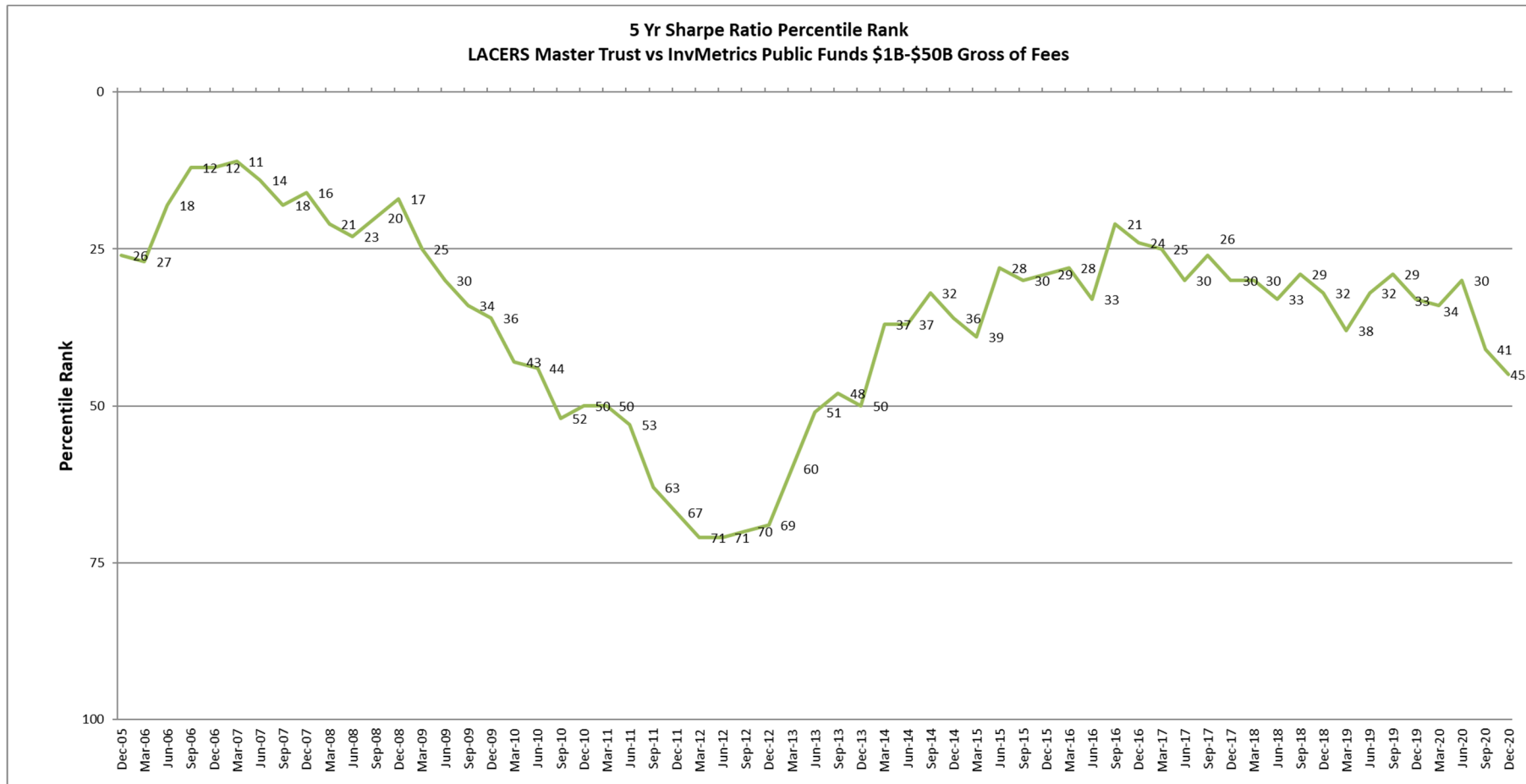


Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.

Please refer to page 70 in the appendix for a comparison versus InvMetrics Public DB \$5-50B universe.



# HISTORICAL RISK ADJUSTED RETURN UNIVERSE COMPARISON

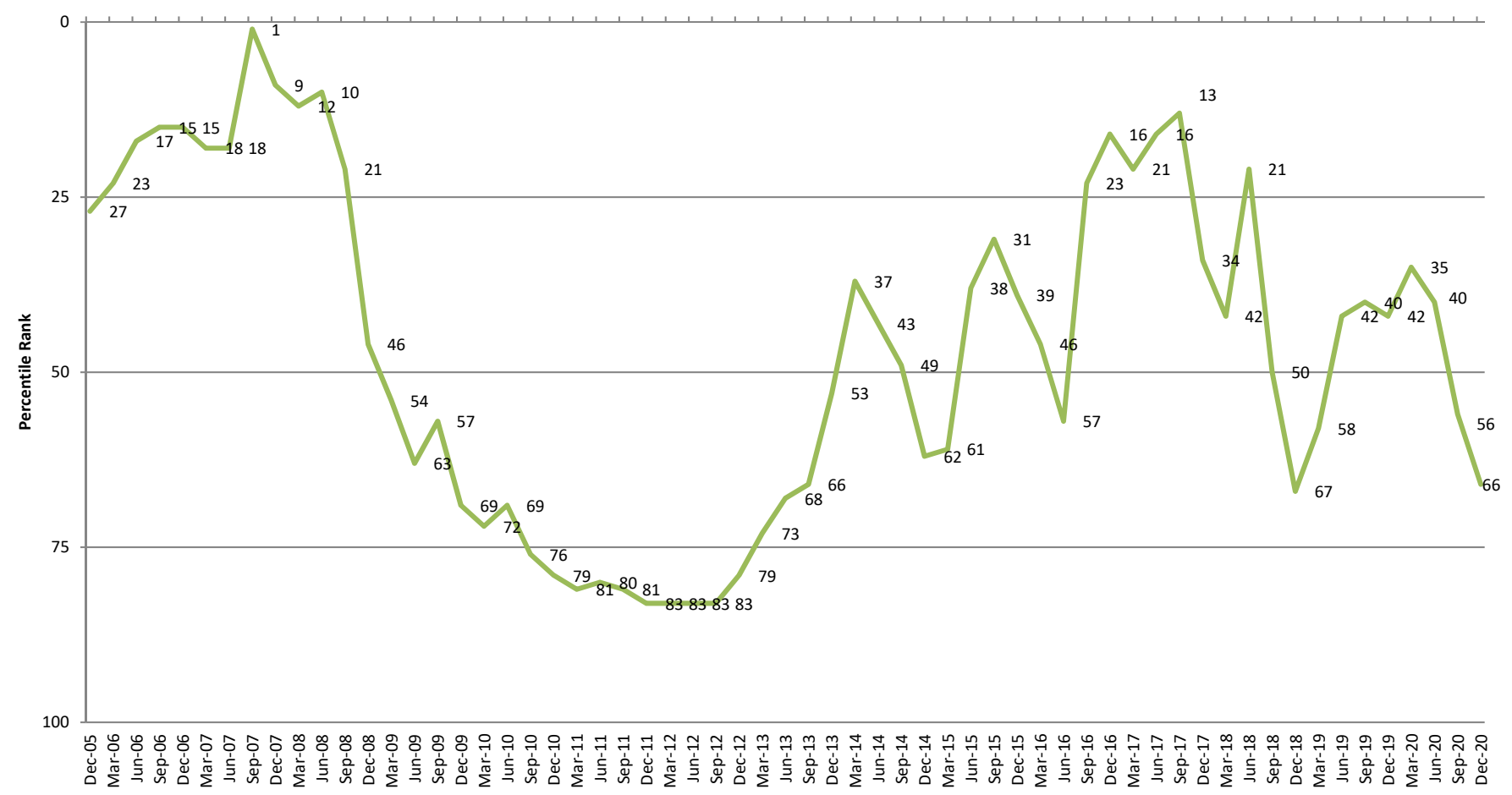


- Total Plan ranks in the 45<sup>th</sup> percentile versus other large public plans on a Sharpe Ratio basis.
  - Use of passive investment strategies within U.S. Equity has contributed to the overall Sharpe Ratio rank (38<sup>th</sup> percentile rank is higher than median).
  - Non-U.S. Equity contributed positively to Sharpe Ratio Rank on a relative basis.
  - Core Fixed Income detracted from Sharpe Ratio rank due to passive exposure.



# HISTORICAL RISK ADJUSTED RETURN UNIVERSE COMPARISON

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



# 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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>U.S. Equity</b>	<b>5,232,935,095</b>	<b>100.00</b>	<b>15.29</b>	<b>19.07</b>	<b>19.07</b>	<b>13.74</b>	<b>14.92</b>	<b>13.42</b>	<b>11.00</b>	<b>Oct-94</b>
<i>U.S. Equity Blend<sup>1</sup></i>			<u>14.68</u>	<u>20.89</u>	<u>20.89</u>	<u>14.49</u>	<u>15.43</u>	<u>13.79</u>	<u>10.06</u>	<i>Oct-94</i>
Over/Under			0.61	-1.82	-1.82	-0.75	-0.51	-0.37	0.94	
RhumbLine Advisers Russell 2000 <sup>2</sup>	240,094,713	4.59	31.32	20.06	20.06	10.31	13.27	--	9.70	Apr-15
<i>Russell 2000</i>			<u>31.37</u>	<u>19.96</u>	<u>19.96</u>	<u>10.25</u>	<u>13.26</u>	<u>11.20</u>	<u>9.75</u>	<i>Apr-15</i>
Over/Under			-0.05	0.10	0.10	0.06	0.01		-0.05	
Rhumblne Advisers Russell 2000 Value	164,134,783	3.14								Dec-20
<i>Russell 2000 Value</i>										<i>Dec-20</i>
Over/Under										
EAM Investors	141,577,006	2.71	28.17	45.07	45.07	24.29	20.16		19.48	Sep-15
<i>Russell 2000 Growth</i>			<u>29.61</u>	<u>34.63</u>	<u>34.63</u>	<u>16.19</u>	<u>16.36</u>		<u>16.46</u>	<i>Sep-15</i>
Over/Under			-1.44	10.44	10.44	8.10	3.80		3.02	
Principal Global Investors <sup>2</sup>	250,696,022	4.79	15.50	19.06	19.06	17.70	18.03		15.76	Aug-14
<i>Russell MidCap</i>			<u>19.91</u>	<u>17.10</u>	<u>17.10</u>	<u>11.61</u>	<u>13.40</u>		<u>11.09</u>	<i>Aug-14</i>
Over/Under			-4.41	1.96	1.96	6.09	4.63		4.67	
RhumbLine Advisers S&P 500	4,014,289,320	76.71	12.24	18.23	18.23	14.05	15.10	13.84	10.28	Feb-93
<i>S&amp;P 500</i>			<u>12.15</u>	<u>18.40</u>	<u>18.40</u>	<u>14.18</u>	<u>15.22</u>	<u>13.88</u>	<u>10.14</u>	<i>Feb-93</i>
Over/Under			0.09	-0.17	-0.17	-0.13	-0.12	-0.04	0.14	
Copeland Capital Management <sup>2</sup>	217,656,704	4.16	21.12						21.12	Oct-20
<i>Russell 2000</i>			<u>31.37</u>						<u>31.37</u>	<i>Oct-20</i>
Over/Under			-10.25						-10.25	
Granahan Investment Management <sup>2</sup>	111,279,479	2.13	37.35						37.35	Oct-20
<i>Russell 2000 Growth</i>			<u>29.61</u>						<u>29.61</u>	<i>Oct-20</i>
Over/Under			7.74						7.74	
Segall, Bryant & Hamill <sup>2</sup>	92,983,586	1.78	28.20						28.20	Oct-20
<i>Russell 2000 Value</i>			<u>33.36</u>						<u>33.36</u>	<i>Oct-20</i>
Over/Under			-5.16						-5.16	

1 - 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 1/1/2000.

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

eA = eVestment Alliance



Los Angeles City Employees' Retirement System

**U.S. EQUITY (NET)**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>U.S. Equity</b>	<b>5,232,935,095</b>	<b>100.00</b>	<b>15.27</b>	<b>65</b>	<b>19.02</b>	<b>43</b>	<b>19.02</b>	<b>43</b>	<b>13.68</b>	<b>36</b>	<b>14.85</b>	<b>44</b>	<b>13.28</b>	<b>39</b>		<b>Oct-94</b>
U.S. Equity Blend <sup>1</sup>			<u>14.68</u>	81	<u>20.89</u>	19	<u>20.89</u>	19	<u>14.49</u>	16	<u>15.43</u>	19	<u>13.79</u>	12		Oct-94
Over/Under			0.59		-1.87		-1.87		-0.81		-0.58		-0.51			
InvMetrics Public DB > \$1 Billion US Equity Net Median			16.06		18.93		18.93		13.33		14.76		13.09			Oct-94
RhumbLine Advisers Russell 2000 <sup>2</sup>	240,094,713	4.59	31.32	24	20.05	40	20.05	40	10.31	41	13.26	42			9.69	Apr-15
Russell 2000			<u>31.37</u>	24	<u>19.96</u>	40	<u>19.96</u>	40	<u>10.25</u>	41	<u>13.26</u>	42			<u>9.75</u>	Apr-15
Over/Under			-0.05		0.09		0.09		0.06		0.00				-0.06	
eV US Small Cap Equity Net Median			27.81		14.22		14.22		7.92		11.93				8.87	Apr-15
Rhumbline Advisers Russell 2000 Value	164,134,783	3.14														Dec-20
Russell 2000 Value																
Over/Under																
eV US Small Cap Value Equity Net Median																
EAM Investors	141,577,006	2.71	27.95	39	44.11	45	44.11	45	23.44	39	19.28	49			18.65	Sep-15
Russell 2000 Growth			<u>29.61</u>	24	<u>34.63</u>	66	<u>34.63</u>	66	<u>16.19</u>	73	<u>16.36</u>	73			<u>16.46</u>	Sep-15
Over/Under			-1.66		9.48		9.48		7.25		2.92				2.19	
eV US Small Cap Growth Equity Net Median			26.70		41.25		41.25		20.92		19.20				18.99	Sep-15
Principal Global Investors <sup>2</sup>	250,696,022	4.79	15.41	87	18.68	47	18.68	47	17.29	34	17.59	28			15.35	Aug-14
Russell MidCap			<u>19.91</u>	49	<u>17.10</u>	49	<u>17.10</u>	49	<u>11.61</u>	50	<u>13.40</u>	48			<u>11.09</u>	Aug-14
Over/Under			-4.50		1.58		1.58		5.68		4.19				4.26	
eV US Mid Cap Equity Net Median			19.69		16.68		16.68		11.23		12.80		12.00		10.19	Aug-14
RhumbLine Advisers S&P 500	4,014,289,320	76.71	12.24	53	18.23	40	18.23	40	14.05	36	15.09	32	13.83	33		Feb-93
S&P 500			<u>12.15</u>	55	<u>18.40</u>	39	<u>18.40</u>	39	<u>14.18</u>	36	<u>15.22</u>	32	<u>13.88</u>	32		Feb-93
Over/Under			0.09		-0.17		-0.17		-0.13		-0.13		-0.05			
eV US Large Cap Equity Net Median			12.49		13.96		13.96		11.25		13.03		12.52			Feb-93

1 - 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 1/1/2000.

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

eA = eVestment Alliance



Los Angeles City Employees' Retirement System

**U.S. EQUITY (NET)**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Copeland Capital Management <sup>1</sup>	217,656,704	4.16	21.12	92											21.12	Oct-20
<i>Russell 2000</i>			<u>31.37</u>	24											<u>31.37</u>	Oct-20
Over/Under <i>eV US Small Cap Equity Net Median</i>			-10.25												-10.25	
27.81			27.81												27.81	Oct-20
Granahan Investment Management <sup>1</sup>	111,279,479	2.13	37.35	3											37.35	Oct-20
<i>Russell 2000 Growth</i>			<u>29.61</u>	24											<u>29.61</u>	Oct-20
Over/Under <i>eV US Small Cap Growth Equity Net Median</i>			7.74												7.74	
26.70			26.70												26.70	Oct-20
Segall, Bryant & Hamill <sup>1</sup>	92,983,586	1.78	28.20	60											28.20	Oct-20
<i>Russell 2000 Value</i>			<u>33.36</u>	25											<u>33.36</u>	Oct-20
Over/Under <i>eV US Small Cap Value Equity Net Median</i>			-5.16												-5.16	
29.79			29.79												29.79	Oct-20

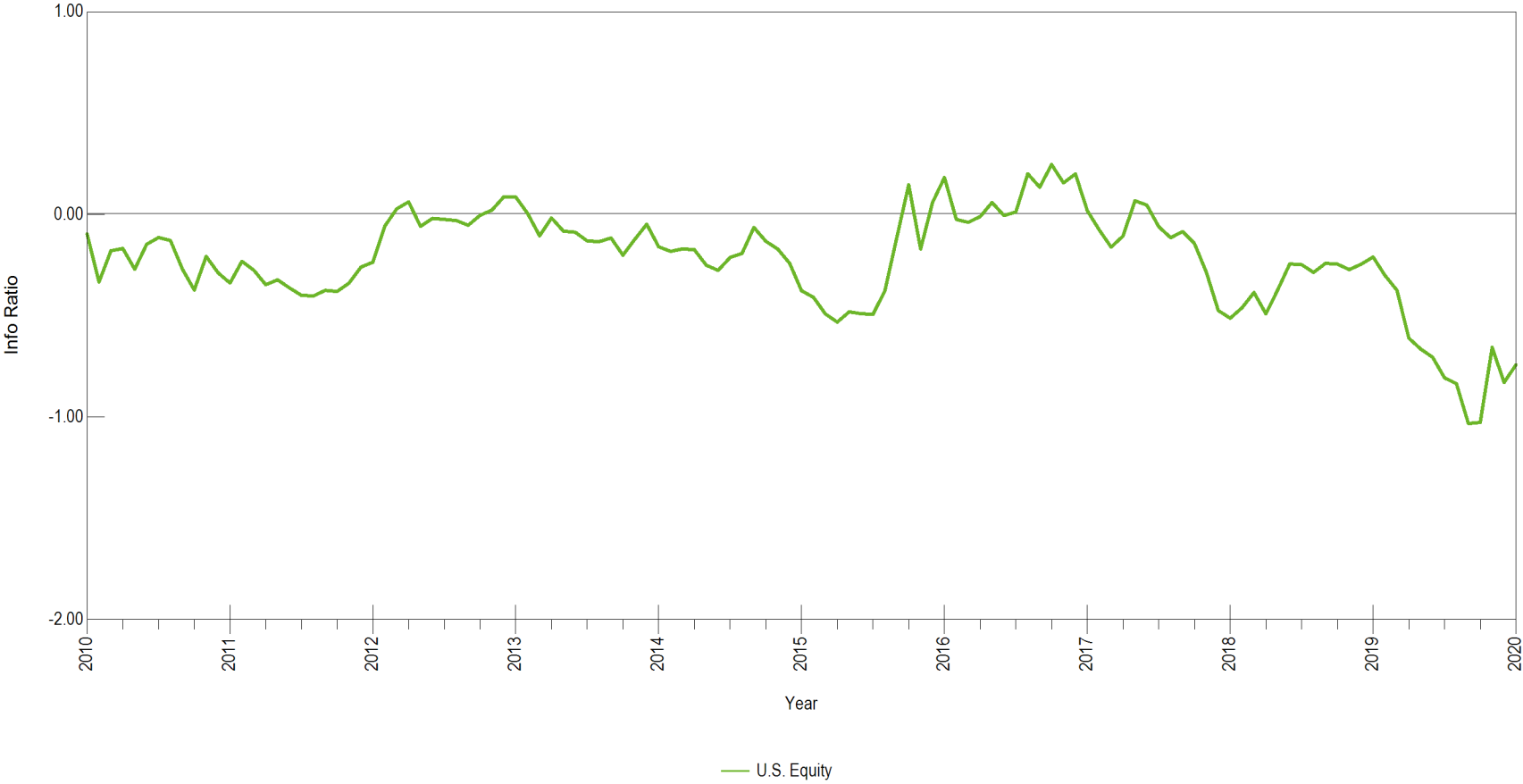
1- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.  
eA = eVestment Alliance



Los Angeles City Employees' Retirement System

# U.S. EQUITY ROLLING 5 YEAR INFORMATION RATIO

Rolling 5 Year Information Ratio



\*Returns are net of fees.



# MANAGER REPORT CARD

U.S. Equity Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
Principal Global Investors	Jul-14	Mid Cap	* *	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓	703.0	Performance compliant with LACERS' Manager Monitoring Policy	
EAM Investors	Sep-15	Small Cap Growth	* ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓	908.5	Performance compliant with LACERS' Manager Monitoring Policy	
Copeland	Oct-20	Small Cap Core	* *	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A		
Granahan	Oct-20	Small Cap Growth	✓ ✓	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A		
Segall Byrant & Hamill	Oct-20	Small Cap Value	* ✓	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A	N/A		
Rhumblin (Passive)	Feb-93	S&P 500	✓ *	* ✓	* ✓	* ✓	* ✓	* ✓	* ✓	✓✓	186.9	Performance compliant with LACERS' Manager Monitoring Policy	
Rhumblin (Passive)	Jun-15	R2000	* ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	*	13.5	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, 2020.
- \* 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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Non-U.S. Equity</b>	<b>5,678,696,863</b>	<b>100.00</b>	<b>18.44</b>	<b>14.93</b>	<b>14.93</b>	<b>6.55</b>	<b>10.35</b>	<b>6.38</b>	<b>5.77</b>	<b>Nov-94</b>
MSCI ACWI ex USA			<u>17.01</u>	<u>10.65</u>	<u>10.65</u>	<u>4.88</u>	<u>8.93</u>	<u>4.92</u>	<u>5.43</u>	Nov-94
Over/Under			1.43	4.28	4.28	1.67	1.42	1.46	0.34	
<b>Developed ex-U.S.</b>	<b>4,208,787,629</b>	<b>74.12</b>	<b>16.84</b>	<b>13.05</b>	<b>13.05</b>	<b>6.38</b>	<b>9.41</b>		<b>9.29</b>	<b>Jun-12</b>
MSCI EAFE			<u>16.05</u>	<u>7.81</u>	<u>7.81</u>	<u>4.28</u>	<u>7.45</u>		<u>7.78</u>	Jun-12
Over/Under			0.79	5.24	5.24	2.10	1.96		1.51	
AQR Capital	2,275,492	0.04								
Barrow Hanley <sup>1</sup>	448,268,592	7.89	20.71	4.21	4.21	2.82	6.90		3.99	Nov-13
MSCI EAFE Value			<u>19.20</u>	<u>-2.63</u>	<u>-2.63</u>	<u>-1.24</u>	<u>4.20</u>		<u>1.50</u>	Nov-13
Over/Under			1.51	6.84	6.84	4.06	2.70		2.49	
Lazard Asset Management <sup>1</sup>	575,937,225	10.14	16.24	12.03	12.03	6.79	8.28		6.33	Nov-13
MSCI EAFE			<u>16.05</u>	<u>7.81</u>	<u>7.81</u>	<u>4.28</u>	<u>7.45</u>		<u>4.56</u>	Nov-13
Over/Under			0.19	4.22	4.22	2.51	0.83		1.77	
MFS Institutional Advisors	565,585,459	9.96	11.05	14.57	14.57	10.38	12.82		8.81	Oct-13
MSCI World ex USA Growth NR USD			<u>12.63</u>	<u>18.41</u>	<u>18.41</u>	<u>9.57</u>	<u>10.50</u>		<u>7.32</u>	Oct-13
Over/Under			-1.58	-3.84	-3.84	0.81	2.32		1.49	
Oberweis Asset Mgmt <sup>1</sup>	318,909,187	5.62	22.69	65.81	65.81	17.33	17.14		14.41	Jan-14
MSCI EAFE Small Cap			<u>17.27</u>	<u>12.34</u>	<u>12.34</u>	<u>4.85</u>	<u>9.40</u>		<u>7.58</u>	Jan-14
Over/Under			5.42	53.47	53.47	12.48	7.74		6.83	
SSgA World ex US IMI	1,986,807,450	34.99	16.96	9.46	9.46	5.04	8.51	5.94	6.02	Aug-93
MSCI World ex USA IMI NR USD <sup>2</sup>			<u>16.10</u>	<u>8.32</u>	<u>8.32</u>	<u>4.34</u>	<u>7.92</u>	<u>5.43</u>	<u>5.71</u>	Aug-93
Over/Under			0.86	1.14	1.14	0.70	0.59	0.51	0.31	
State Street EAFE SC	311,004,224	5.48								Dec-20
MSCI EAFE Small Cap										Dec-20
Over/Under										

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

2 Since inception return sourced from SSgA



Los Angeles City Employees' Retirement System

# NON-U.S. EQUITY (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Markets</b>	<b>1,469,909,234</b>	<b>25.88</b>	<b>22.14</b>	<b>19.48</b>	<b>19.48</b>	<b>6.36</b>	<b>13.24</b>		<b>6.35</b>	<b>Jun-12</b>
<i>MSCI Emerging Markets</i>			<u>19.70</u>	<u>18.31</u>	<u>18.31</u>	<u>6.17</u>	<u>12.81</u>		<u>6.33</u>	<i>Jun-12</i>
Over/Under			2.44	1.17	1.17	0.19	0.43		0.02	
Axiom Emerging Markets	412,043,196	7.26	21.33	33.20	33.20	11.52	16.47		9.95	May-14
<i>MSCI Emerging Markets</i>			<u>19.70</u>	<u>18.31</u>	<u>18.31</u>	<u>6.17</u>	<u>12.81</u>		<u>6.50</u>	<i>May-14</i>
Over/Under			1.63	14.89	14.89	5.35	3.66		3.45	
<i>MSCI Emerging Markets Growth NR USD</i>			16.83	31.33	31.33	10.33	16.23		9.88	<i>May-14</i>
DFA Emerging Markets <sup>1</sup>	409,844,102	7.22	22.80	4.98	4.98	0.74	10.01		2.10	Aug-14
<i>MSCI Emerging Markets Value NR USD</i>			<u>22.98</u>	<u>5.47</u>	<u>5.47</u>	<u>1.77</u>	<u>9.18</u>		<u>1.64</u>	<i>Aug-14</i>
Over/Under			-0.18	-0.49	-0.49	-1.03	0.83		0.46	
QMA Emerging Markets	750,071	0.01								
State Street Emerging Markets	377,356,152	6.65								Dec-20
<i>MSCI Emerging Markets</i>										<i>Dec-20</i>
Over/Under										
Wasatch Global Investors	269,915,713	4.75								Dec-20
<i>MSCI Emerging Markets Small Cap</i>										<i>Dec-20</i>
Over/Under										

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

eA = eVestment





# Los Angeles City Employees' Retirement System

## NON-U.S. EQUITY (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Non-U.S. Equity</b>	<b>5,678,696,863</b>	<b>100.00</b>	<b>18.34</b>	<b>22</b>	<b>14.54</b>	<b>26</b>	<b>14.54</b>	<b>26</b>	<b>6.16</b>	<b>33</b>	<b>9.96</b>	<b>35</b>	<b>6.02</b>	<b>38</b>		<b>Nov-94</b>
MSCI ACWI ex USA			<u>17.01</u>	56	<u>10.65</u>	67	<u>10.65</u>	67	<u>4.88</u>	71	<u>8.93</u>	75	<u>4.92</u>	94		Nov-94
Over/Under			1.33		3.89		3.89		1.28		1.03		1.10			
<b>Developed ex-U.S.</b>	<b>4,208,787,629</b>	<b>74.12</b>	<b>16.75</b>	<b>31</b>	<b>12.72</b>	<b>35</b>	<b>12.72</b>	<b>35</b>	<b>6.04</b>	<b>51</b>	<b>9.07</b>	<b>52</b>			<b>8.99</b>	<b>Jun-12</b>
MSCI EAFE			<u>16.05</u>	72	<u>7.81</u>	88	<u>7.81</u>	88	<u>4.28</u>	80	<u>7.45</u>	85			<u>7.78</u>	Jun-12
Over/Under			0.70		4.91		4.91		1.76		1.62				1.21	
InvMetrics Public DB > \$1 Billion Dev Mkt ex-US Eq Net Median			16.38		11.98		11.98		6.05		9.18				9.61	Jun-12
AQR Capital	2,275,492	0.04														
eV EAFE Small Cap Equity Net Median															6.57	Feb-14
Barrow Hanley <sup>1</sup>	448,268,592	7.89	20.60	37	3.75	46	3.75	46	2.33	21	6.37	34			3.48	Nov-13
MSCI EAFE Value			<u>19.20</u>	49	<u>-2.63</u>	91	<u>-2.63</u>	91	<u>-1.24</u>	78	<u>4.20</u>	75			<u>1.50</u>	Nov-13
Over/Under			1.40		6.38		6.38		3.57		2.17				1.98	
eV EAFE Value Equity Net Median			19.15		3.47		3.47		0.77		5.57				3.18	Nov-13
Lazard Asset Management <sup>1</sup>	575,937,225	10.14	16.11	36	11.50	34	11.50	34	6.25	27	7.72	48			5.78	Nov-13
MSCI EAFE			<u>16.05</u>	37	<u>7.81</u>	53	<u>7.81</u>	53	<u>4.28</u>	52	<u>7.45</u>	54			<u>4.56</u>	Nov-13
Over/Under			0.06		3.69		3.69		1.97		0.27				1.22	
eV All EAFE Equity Net Median			14.95		8.02		8.02		4.40		7.60				5.28	Nov-13
MFS Institutional Advisors	565,585,459	9.96	10.96	96	14.13	87	14.13	87	9.90	57	12.30	41			8.31	Oct-13
MSCI World ex USA Growth NR USD			<u>12.63</u>	78	<u>18.41</u>	72	<u>18.41</u>	72	<u>9.57</u>	58	<u>10.50</u>	56			<u>7.32</u>	Oct-13
Over/Under			-1.67		-4.28		-4.28		0.33		1.80				0.99	
eV EAFE All Cap Growth Net Median			14.17		22.14		22.14		10.92		12.07				7.99	Oct-13

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

eA = eVestment



# Los Angeles City Employees' Retirement System

## NON-U.S. EQUITY (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Oberweis Asset Mgmt <sup>1</sup>	318,909,187	5.62	22.47	9	64.55	1	64.55	1	16.37	1	16.21	4			13.47	Jan-14
MSCI EAFE Small Cap			<u>17.27</u>	34	<u>12.34</u>	40	<u>12.34</u>	40	<u>4.85</u>	40	<u>9.40</u>	43			<u>7.58</u>	Jan-14
Over/Under			5.20		52.21		52.21		11.52		6.81				5.89	
eV EAFE Small Cap Equity Net Median			15.19		9.28		9.28		3.31		8.75				7.20	Jan-14
SSgA World ex US IMI	1,986,807,450	34.99	16.96	19	9.43	47	9.43	47	5.02	41	8.49	35	5.91	73	6.02	Aug-93
MSCI World ex USA IMI NR USD <sup>2</sup>			<u>16.10</u>	28	<u>8.32</u>	54	<u>8.32</u>	54	<u>4.34</u>	54	<u>7.92</u>	49	<u>5.43</u>	83	<u>5.71</u>	Aug-93
Over/Under			0.86		1.11		1.11		0.68		0.57		0.48		0.31	
eV EAFE Core Equity Net Median			14.77		8.85		8.85		4.49		7.74		6.64		7.00	Aug-93
State Street EAFE SC	311,004,224	5.48														Dec-20
MSCI EAFE Small Cap																Dec-20
Over/Under																
eV EAFE Small Cap Equity Net Median																
<b>Emerging Markets</b>	<b>1,469,909,234</b>	<b>25.88</b>	<b>22.04</b>	<b>12</b>	<b>18.96</b>	<b>14</b>	<b>18.96</b>	<b>14</b>	<b>5.83</b>	<b>32</b>	<b>12.68</b>	<b>16</b>			<b>5.73</b>	<b>Jun-12</b>
MSCI Emerging Markets			<u>19.70</u>	37	<u>18.31</u>	21	<u>18.31</u>	21	<u>6.17</u>	17	<u>12.81</u>	14			<u>6.33</u>	Jun-12
Over/Under			2.34		0.65		0.65		-0.34		-0.13				-0.60	
InvMetrics Public DB > \$1 Billion Emg Mkt Eq Net Median			19.44		15.90		15.90		4.92		10.63				5.01	Jun-12
Axiom Emerging Markets	412,043,196	7.26	21.18	38	32.46	14	32.46	14	10.80	14	15.69	17			9.25	May-14
MSCI Emerging Markets			<u>19.70</u>	53	<u>18.31</u>	49	<u>18.31</u>	49	<u>6.17</u>	46	<u>12.81</u>	44			<u>6.50</u>	May-14
Over/Under			1.48		14.15		14.15		4.63		2.88				2.75	
MSCI Emerging Markets Growth NR USD			16.83	84	31.33	15	31.33	15	10.33	17	16.23	14			9.88	May-14
eV Emg Mkts Equity Net Median			19.88		18.05		18.05		5.85		12.37				6.68	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 and is gross of fees.

eA = eVestment



## Los Angeles City Employees' Retirement System

# NON-U.S. EQUITY (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
DFA Emerging Markets <sup>1</sup>	409,844,102	7.22	22.68	23	4.48	92	4.48	92	0.24	93	9.50	81			1.61	Aug-14
MSCI Emerging Markets Value NR USD			<u>22.98</u>	21	<u>5.47</u>	90	<u>5.47</u>	90	<u>1.77</u>	85	<u>9.18</u>	82			<u>1.64</u>	Aug-14
Over/Under			<b>-0.30</b>		<b>-0.99</b>		<b>-0.99</b>		<b>-1.53</b>		0.32				<b>-0.03</b>	
eV Emg Mkts Equity Net Median			19.88		18.05		18.05		5.85		12.37				5.68	Aug-14
QMA Emerging Markets	750,071	0.01														
eV Emg Mkts Equity Net Median																May-14
State Street Emerging Markets	377,356,152	6.65														Dec-20
MSCI Emerging Markets																Dec-20
Over/Under																
eV Emg Mkts Equity Net Median																
Wasatch Global Investors	269,915,713	4.75														Dec-20
MSCI Emerging Markets Small Cap																Dec-20
Over/Under																
eV Emg Mkts Small Cap Equity Net Median																Dec-20

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, 2020		
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Europe</b>		
Austria	0.0%	0.1%
Belgium	0.0%	0.6%
Croatia**	0.0%	0.0%
Czech Republic*	0.0%	0.0%
Denmark	1.3%	1.6%
Estonia**	0.0%	0.0%
Finland	2.0%	0.7%
France	12.3%	6.9%
Germany	6.7%	5.9%
Greece*	0.0%	0.0%
Hungary*	0.1%	0.1%
Ireland	2.0%	0.4%
Italy	1.6%	1.5%
Lithuania**	0.0%	0.0%
Luxembourg	0.3%	0.0%
Netherlands	2.2%	2.4%
Norway	0.5%	0.4%
Poland*	0.0%	0.2%
Portugal	0.2%	0.1%
Romania**	0.0%	0.0%
Russia*	0.4%	0.8%
Serbia**	0.0%	0.0%
Slovenia**	0.0%	0.0%
Spain	1.8%	1.5%
Sweden	2.5%	2.1%
Switzerland	5.9%	6.0%
United Kingdom	11.2%	8.8%
<b>Total-Europe</b>	<b>51.0%</b>	<b>40.2%</b>

Versus MSCI ACWI ex USA - Quarter Ending December 31, 2020		
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Americas</b>		
Argentina*	0.2%	0.0%
Brazil*	0.9%	1.6%
Canada	4.6%	6.3%
Colombia*	0.4%	0.1%
Mexico*	1.1%	0.5%
United States	1.8%	0.0%
<b>Total-Americas</b>	<b>9.0%</b>	<b>8.8%</b>
<b>AsiaPacific</b>		
Australia	0.5%	4.4%
China*	6.2%	12.2%
Hong Kong	3.5%	2.0%
India*	2.0%	2.9%
Indonesia*	0.3%	0.4%
Japan	13.8%	15.9%
Korea*	3.5%	4.2%
Philippines*	0.2%	0.2%
Singapore	1.1%	0.7%
Taiwan*	3.3%	4.0%
Thailand*	0.2%	0.6%
<b>Total-AsiaPacific</b>	<b>34.6%</b>	<b>48.1%</b>
<b>Other</b>		
Israel	1.0%	0.4%
Other Countries	1.6%	0.0%
South Africa*	0.6%	1.1%
Turkey*	0.1%	0.1%
<b>Total-Other</b>	<b>3.4%</b>	<b>2.9%</b>
<b>Totals</b>		
Developed	76.9%	68.9%
Emerging*	19.5%	31.1%
Other	1.6%	
Cash	2.1%	

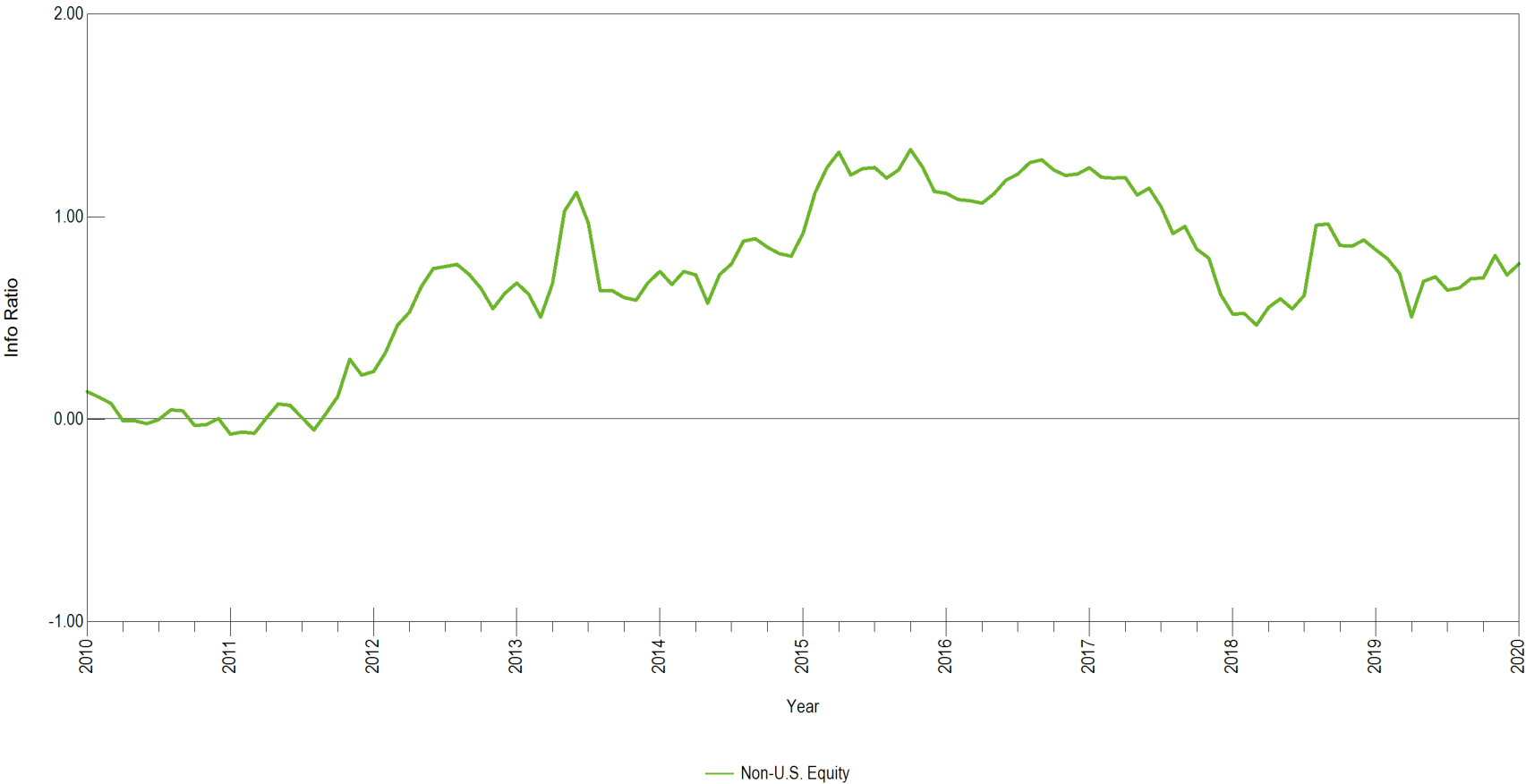
\* = Emerging Market  
\*\* = Frontier Market



Los Angeles City Employees' Retirement System

# 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			
SsgA (Passive)	Dec-20	Emerging Markets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Axiom International	Mar-14	Emerging Markets	✓	✓	✓	✓	✓	✓	✓	✓	✓	2,645.8	On watch on August 2020 due to benchmark change
DFA Emerging Markets	Jul-14	Emerging Markets	✗	✓	✗	✗	✗	✗	✓	✗	✗	1,931.9	Performance compliant with LACERS' Manager Monitoring Policy
Oberweis Asset Mgt.	Jan-14	Non-U.S. Developed	✓	✓	✓	✓	✓	✓	✓	✓	✓	2,015.3	Performance compliant with LACERS' Manager Monitoring Policy
Barrow, Hanley, Mewhinney & Strauss	Nov-13	Non-U.S. Developed	✓	✓	✓	✓	✓	✓	✓	✓	✓	2,308.5	On Watch since August 2020 due to organizational change
Lazard Asset Mgt.	Nov-13	Non-U.S. Developed	✓	✓	✓	✓	✓	✓	✓	✓	✓	2,929.5	Performance compliant with LACERS' Manager Monitoring Policy
MFS Institutional Advisors	Oct-13	Non-U.S. Developed	✗	✗	✗	✗	✗	✗	✓	✓	✓	2,535.9	Performance compliant with LACERS' Manager Monitoring Policy
Wasatch	Dec-20	Emerging Markets Small Cap	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SsgA (Passive)	Dec-20	Non-U.S. Developed Small Cap	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SsgA (Passive)	Aug-93	Non-U.S. Developed	✗	✗	✓	✗	✓	=	✓	✓	✓✓	380.5	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, 2020.
- \* Where net of fees performance is not available gross of fee returns are evaluated.

Legend	
✓	Outperformed
✗	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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Core Fixed Income</b>	<b>3,486,448,653</b>	<b>100.00</b>	<b>1.17</b>	<b>9.09</b>	<b>9.09</b>	<b>5.93</b>	<b>5.08</b>		<b>4.13</b>	<b>Jul-12</b>
Core Fixed Income Blend			<u>0.67</u>	<u>7.51</u>	<u>7.51</u>	<u>5.34</u>	<u>4.44</u>		<u>3.44</u>	Jul-12
Over/Under			0.50	1.58	1.58	0.59	0.64		0.69	
Baird Advisors	360,030,658	10.33	0.76	7.30	7.30	5.20	4.37	3.95	4.55	Mar-05
BBgBarc US Govt/Credit Int TR			<u>0.48</u>	<u>6.43</u>	<u>6.43</u>	<u>4.67</u>	<u>3.64</u>	<u>3.11</u>	<u>3.88</u>	Mar-05
Over/Under			0.28	0.87	0.87	0.53	0.73	0.84	0.67	
LM Capital <sup>1</sup>	359,490,214	10.31	1.65	9.63	9.63	5.80	4.99	4.32	4.96	Mar-05
LM Custom Benchmark			<u>0.67</u>	<u>7.51</u>	<u>7.51</u>	<u>5.34</u>	<u>4.44</u>	<u>3.85</u>	<u>4.35</u>	Mar-05
Over/Under			0.98	2.12	2.12	0.46	0.55	0.47	0.61	
Loomis Sayles & Co. Core Fixed Income	895,770,227	25.69	1.37	10.49	10.49	6.64	6.06	5.07	9.07	Jul-80
Loomis Custom Benchmark			<u>0.67</u>	<u>7.51</u>	<u>7.51</u>	<u>5.34</u>	<u>4.44</u>	<u>3.94</u>	<u>7.58</u>	Jul-80
Over/Under			0.70	2.98	2.98	1.30	1.62	1.13	1.49	
Neuberger Berman	874,977,219	25.10	1.27	9.26	9.26	5.93	4.97	4.52	5.91	Sep-01
Core Fixed Income Blend			<u>0.67</u>	<u>7.51</u>	<u>7.51</u>	<u>5.34</u>	<u>4.44</u>	<u>3.94</u>	<u>4.79</u>	Sep-01
Over/Under			0.60	1.75	1.75	0.59	0.53	0.58	1.12	
SSgA U.S. Aggregate Bond <sup>1</sup>	996,180,334	28.57	0.69	7.57	7.57	5.39	4.46	--	3.91	Jul-14
BBgBarc US Aggregate TR			<u>0.67</u>	<u>7.51</u>	<u>7.51</u>	<u>5.34</u>	<u>4.44</u>	<u>3.84</u>	<u>3.88</u>	Jul-14
Over/Under			0.02	0.06	0.06	0.05	0.02		0.03	

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





Los Angeles City Employees' Retirement System

CORE FIXED INCOME (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Core Fixed Income</b>	<b>3,486,448,653</b>	<b>100.00</b>	<b>1.15</b>	<b>71</b>	<b>8.98</b>	<b>32</b>	<b>8.98</b>	<b>32</b>	<b>5.82</b>	<b>36</b>	<b>4.97</b>	<b>54</b>			<b>4.02</b>	<b>Jul-12</b>
<i>Core Fixed Income Blend</i>			<u>0.67</u>	89	<u>7.51</u>	68	<u>7.51</u>	68	<u>5.34</u>	62	<u>4.44</u>	92			<u>3.44</u>	<i>Jul-12</i>
<i>Over/Under</i>			0.48		1.47		1.47		0.48		0.53				0.58	
<i>InvMetrics Public DB &gt; \$1 Billion US Fixed Income Net Median</i>			1.87		8.16		8.16		5.46		5.07				3.94	<i>Jul-12</i>
<b>Baird Advisors</b>	<b>360,030,658</b>	<b>10.33</b>	<b>0.74</b>	<b>47</b>	<b>7.19</b>	<b>28</b>	<b>7.19</b>	<b>28</b>	<b>5.08</b>	<b>13</b>	<b>4.24</b>	<b>15</b>	<b>3.83</b>	<b>15</b>	<b>4.41</b>	<b>Mar-05</b>
<i>BBgBarc US Govt/Credit Int TR</i>			<u>0.48</u>	77	<u>6.43</u>	56	<u>6.43</u>	56	<u>4.67</u>	44	<u>3.64</u>	54	<u>3.11</u>	62	<u>3.88</u>	<i>Mar-05</i>
<i>Over/Under</i>			0.26		0.76		0.76		0.41		0.60		0.72		0.53	
<i>eV US Interm Duration Fixed Inc Net Median</i>			0.68		6.55		6.55		4.62		3.66		3.19		4.04	<i>Mar-05</i>
<b>LM Capital<sup>1</sup></b>	<b>359,490,214</b>	<b>10.31</b>	<b>1.63</b>	<b>10</b>	<b>9.53</b>	<b>13</b>	<b>9.53</b>	<b>13</b>	<b>5.70</b>	<b>36</b>	<b>4.89</b>	<b>37</b>	<b>4.19</b>	<b>45</b>	<b>4.82</b>	<b>Mar-05</b>
<i>LM Custom Benchmark</i>			<u>0.67</u>	81	<u>7.51</u>	75	<u>7.51</u>	75	<u>5.34</u>	70	<u>4.44</u>	75	<u>3.85</u>	73	<u>4.35</u>	<i>Mar-05</i>
<i>Over/Under</i>			0.96		2.02		2.02		0.36		0.45		0.34		0.47	
<i>eV US Core Fixed Inc Net Median</i>			1.03		8.15		8.15		5.56		4.72		4.11		4.70	<i>Mar-05</i>
<b>Loomis Sayles &amp; Co. Core Fixed Income</b>	<b>895,770,227</b>	<b>25.69</b>	<b>1.34</b>	<b>26</b>	<b>10.36</b>	<b>5</b>	<b>10.36</b>	<b>5</b>	<b>6.52</b>	<b>3</b>	<b>5.93</b>	<b>3</b>	<b>4.94</b>	<b>6</b>		<b>Jul-80</b>
<i>Loomis Custom Benchmark</i>			<u>0.67</u>	81	<u>7.51</u>	75	<u>7.51</u>	75	<u>5.34</u>	70	<u>4.44</u>	75	<u>3.94</u>	65		<i>Jul-80</i>
<i>Over/Under</i>			0.67		2.85		2.85		1.18		1.49		1.00			
<i>eV US Core Fixed Inc Net Median</i>			1.03		8.15		8.15		5.56		4.72		4.11			<i>Jul-80</i>
<b>Neuberger Berman</b>	<b>874,977,219</b>	<b>25.10</b>	<b>1.24</b>	<b>32</b>	<b>9.13</b>	<b>23</b>	<b>9.13</b>	<b>23</b>	<b>5.79</b>	<b>32</b>	<b>4.82</b>	<b>42</b>	<b>4.35</b>	<b>35</b>	<b>5.75</b>	<b>Sep-01</b>
<i>Core Fixed Income Blend</i>			<u>0.67</u>	81	<u>7.51</u>	75	<u>7.51</u>	75	<u>5.34</u>	70	<u>4.44</u>	75	<u>3.94</u>	65	<u>4.79</u>	<i>Sep-01</i>
<i>Over/Under</i>			0.57		1.62		1.62		0.45		0.38		0.41		0.96	
<i>eV US Core Fixed Inc Net Median</i>			1.03		8.15		8.15		5.56		4.72		4.11		4.80	<i>Sep-01</i>
<b>SSgA U.S. Aggregate Bond<sup>1</sup></b>	<b>996,180,334</b>	<b>28.57</b>	<b>0.68</b>	<b>79</b>	<b>7.52</b>	<b>74</b>	<b>7.52</b>	<b>74</b>	<b>5.34</b>	<b>71</b>	<b>4.42</b>	<b>76</b>			<b>3.87</b>	<b>Jul-14</b>
<i>BBgBarc US Aggregate TR</i>			<u>0.67</u>	81	<u>7.51</u>	75	<u>7.51</u>	75	<u>5.34</u>	70	<u>4.44</u>	75			<u>3.88</u>	<i>Jul-14</i>
<i>Over/Under</i>			0.01		0.01		0.01		0.00		-0.02				-0.01	
<i>eV US Core Fixed Inc Net Median</i>			1.03		8.15		8.15		5.56		4.72				4.05	<i>Jul-14</i>

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

BBgBarc = Bloomberg Barclays

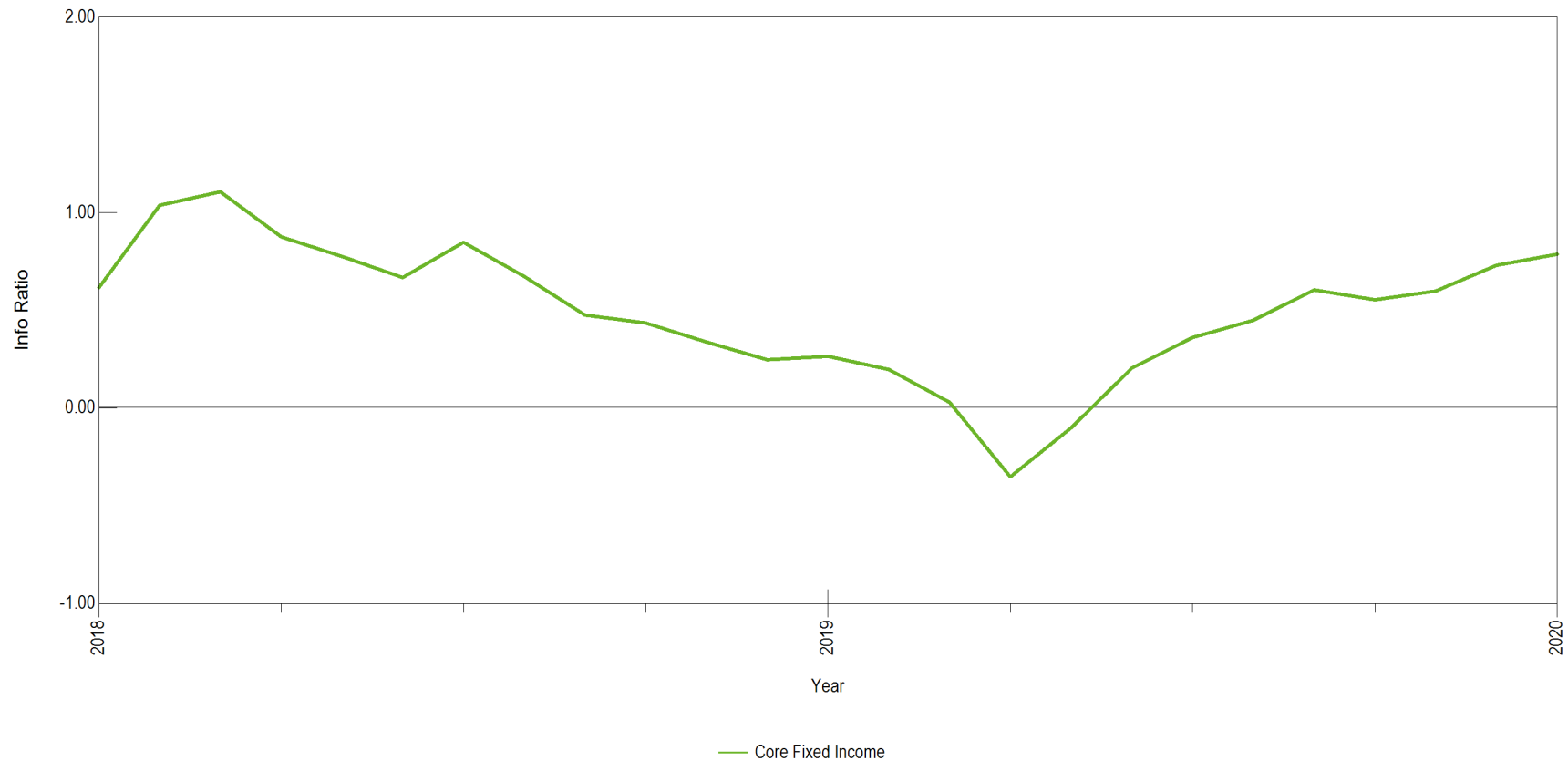
eV = eVestment



## Los Angeles City Employees' Retirement System

# CORE FIXED INCOME 3 YEAR INFORMATION RATIO

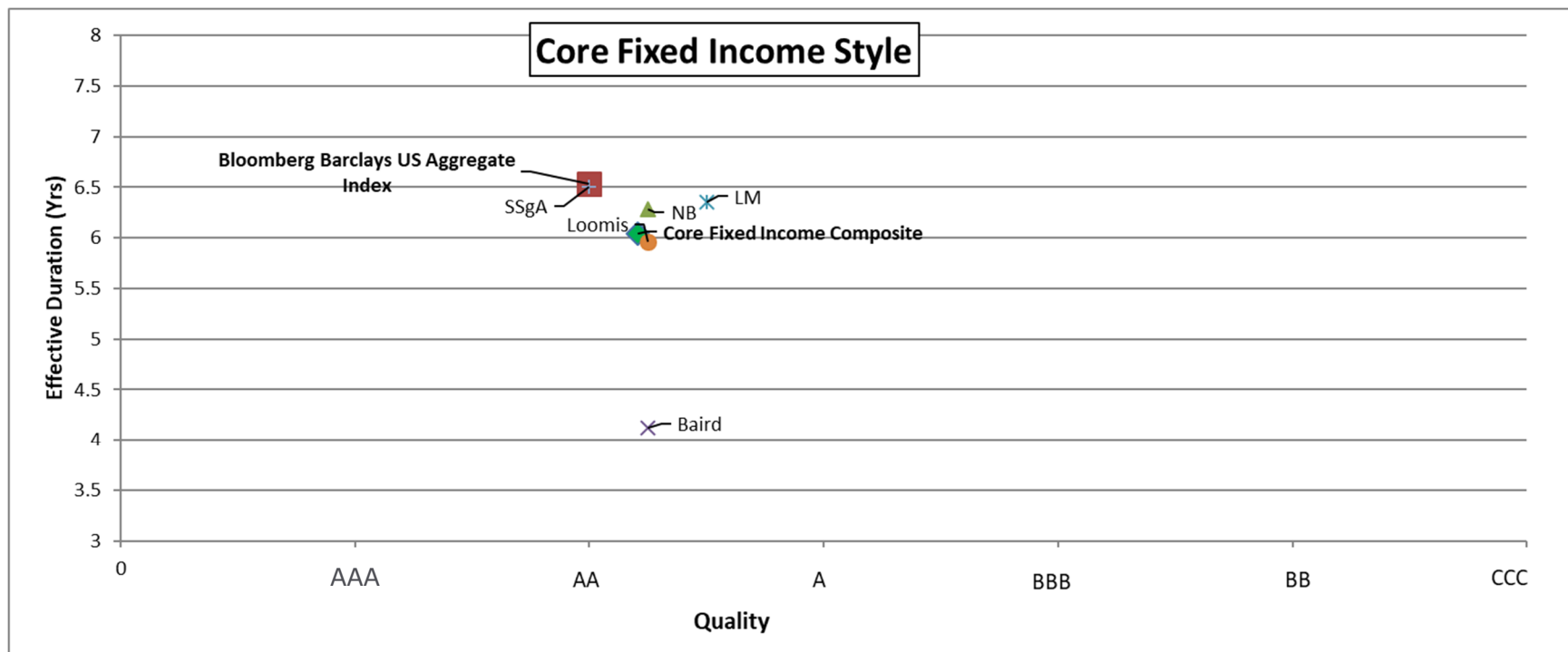
Rolling 3 Year Information Ratio



\*Returns are net of fees



# CORE FIXED INCOME STYLE ANALYSIS



- LACERS Core Fixed Income Composite 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
			Inde Univer	x se	x se	x se	x se	x se	Index				
Neuberger Berman	Sep-01	Core	✓	✓	✓	✓	✓	✓	✓	✓	1,093.7	On Watch since May 2019 due to performance; Watch extended in April 2020	
Loomis Sayles	Jul-80	Core	✓	✓	✓	✓	✓	✓	✓	✓✓	1,029.2	Performance compliant with LACERS' Manager Monitoring Policy	
Baird Advisors	Mar-05	Intermediate	✓	✓	✓	✓	✓	✓	✓	✓	372.7	Performance compliant with LACERS' Manager Monitoring Policy	
LM Capital Group	Mar-05	Core	✓	✓	✓	✓	✗	✓	✓	✓	317.4	On Watch since May 2019 due to performance; Watch extended in April 2020	
SSgA (Passive)	Jul-14	Core	✓	✗	✓	✗	✗	✗	✗	✗	347.4	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, 2020.
- \* 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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Credit Opportunities</b>	<b>1,198,630,373</b>	<b>100.00</b>	<b>6.01</b>	<b>4.99</b>	<b>4.99</b>	<b>5.45</b>	<b>7.69</b>		<b>5.88</b>	<b>Jun-13</b>
<i>Credit Opportunities Blend</i>			<u>6.22</u>	<u>6.45</u>	<u>6.45</u>	<u>5.83</u>	<u>8.07</u>		<u>6.20</u>	<i>Jun-13</i>
Over/Under			-0.21	-1.46	-1.46	-0.38	-0.38		-0.32	
Prudential Emerging Markets	463,616,299	38.68	8.03	6.83	6.83	6.21	8.42		6.42	May-14
<i>JP Morgan EMBI Global Diversified</i>			<u>5.80</u>	<u>5.26</u>	<u>5.26</u>	<u>5.05</u>	<u>7.08</u>		<u>5.41</u>	<i>May-14</i>
Over/Under			2.23	1.57	1.57	1.16	1.34		1.01	
Bain Capital Senior Loan Fund, LP*	228,551,152	19.07	4.62	4.95	4.95	4.42	5.45		4.22	Jun-15
<i>Credit Suisse Leveraged Loans</i>			<u>3.64</u>	<u>2.78</u>	<u>2.78</u>	<u>3.99</u>	<u>5.19</u>		<u>4.10</u>	<i>Jun-15</i>
Over/Under			0.98	2.17	2.17	0.43	0.26		0.12	
SLC Mgmt Talf	12,439,077	1.04							-0.28	Jun-20
<i>Credit Suisse Leveraged Loan</i>									<u>9.37</u>	<i>Jun-20</i>
Over/Under									-9.65	
DDJ Capital Management <sup>1</sup>	237,578,641	19.82							4.14	Nov-20
<i>50% BBgBarc US High Yield 2% Issuer Cap / 50% Credit Suisse</i>									<u>4.69</u>	<i>Nov-20</i>
Leveraged Loan Index										
Over/Under									-0.55	
Loomis Sayles & Co. High Yield <sup>1</sup>	251,495,043	20.98							6.80	Nov-20
<i>BBgBarc US High Yield 2% Issuer Cap TR</i>									<u>5.92</u>	<i>Nov-20</i>
Over/Under									0.88	
Benefit Street Partners LLC	4,950,005	0.41							0.00	Dec-20

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

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

eA = eVestment Alliance

BBgBarc = Bloomberg Barclays

\*Net of fee return since vehicle is commingled.



Los Angeles City Employees' Retirement System

# CREDIT OPPORTUNITIES (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Credit Opportunities</b>	<b>1,198,630,373</b>	<b>100.00</b>	<b>5.94</b>		<b>4.70</b>		<b>4.70</b>		<b>5.14</b>		<b>7.35</b>				<b>5.54</b>	<b>Jun-13</b>
<i>Credit Opportunities Blend</i>			<u>6.22</u>		<u>6.45</u>		<u>6.45</u>		<u>5.83</u>		<u>8.07</u>				<u>6.20</u>	<i>Jun-13</i>
Over/Under			-0.28		-1.75		-1.75		-0.69		-0.72				-0.66	
Prudential Emerging Markets	463,616,299	38.68	7.95	29	6.44	57	6.44	57	5.82	21	7.99	18			5.99	May-14
<i>JP Morgan EMBI Global Diversified</i>			<u>5.80</u>	90	<u>5.26</u>	68	<u>5.26</u>	68	<u>5.05</u>	46	<u>7.08</u>	64			<u>5.40</u>	<i>May-14</i>
Over/Under			2.15		1.18		1.18		0.77		0.91				0.59	
<i>eV Emg Mkts Fixed Inc - Hard Currency Net Median</i>			7.19		6.57		6.57		4.87		7.29				4.95	<i>May-14</i>
Bain Capital Senior Loan Fund, LP*	228,551,152	19.07	4.62	8	4.95	4	4.95	4	4.42	4	5.45	5			4.22	Jun-15
<i>Credit Suisse Leveraged Loans</i>			<u>3.64</u>	34	<u>2.78</u>	25	<u>2.78</u>	25	<u>3.99</u>	18	<u>5.19</u>	8			<u>4.10</u>	<i>Jun-15</i>
Over/Under			0.98		2.17		2.17		0.43		0.26				0.12	
<i>eV US Float-Rate Bank Loan Fixed Inc Net Median</i>			3.36		1.99		1.99		3.36		4.47				3.58	<i>Jun-15</i>
SLC Mgmt Talf	12,439,077	1.04													-0.28	Jun-20
<i>Credit Suisse Leveraged Loan</i>																
Over/Under																
DDJ Capital Management <sup>1</sup>	237,578,641	19.82													4.14	Nov-20
<i>50% BBgBarc US High Yield 2% Issuer Cap / 50% Credit Suisse Leveraged Loan Index</i>															<u>4.69</u>	<i>Nov-20</i>
Over/Under															-0.55	
Loomis Sayles & Co. High Yield <sup>1</sup>	251,495,043	20.98													6.80	Nov-20
<i>BBgBarc US High Yield 2% Issuer Cap TR</i>															<u>5.92</u>	<i>Nov-20</i>
Over/Under															0.88	
Benefit Street Partners LLC	4,950,005	0.41													0.00	Dec-20

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

- 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

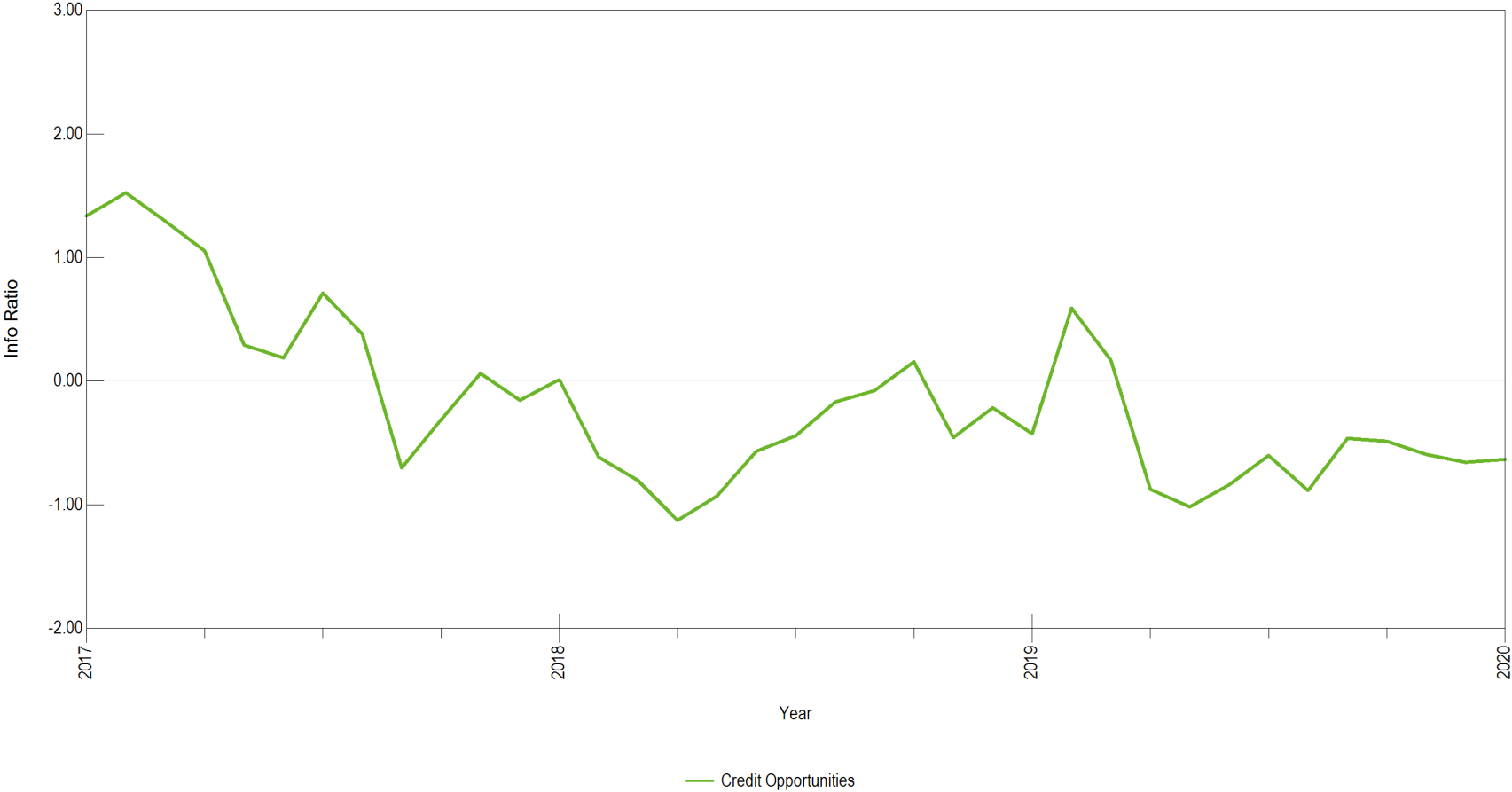
BBgBarc = Bloomberg Barclays



Los Angeles City Employees' Retirement System

# CREDIT OPPORTUNITIES ROLLING 1 YEAR

Rolling 1 Year Information Ratio



\*Returns are net of fees





# 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	Index	Index	Index	Index	Index	Index				
Prudential	May-14	Emerging Market Debt	✓	✓	✓	✓	✓	✓	✓	✓	✓	1,538.5	On Watch since May 2020 due to performance
Bain	Jun-15	Bank Loans	✓	✓	✓	✓	✓	✓	✓	✓	✓	885.4	On Watch since July 2020 due to performance
Benefit Street Partners	Dec-20	Private Credit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Loomis Sayles	Nov-20	High Yield	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DDJ	Nov-20	High Yield/Bank Loan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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, 2020.
- \* 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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Real Assets</b>	<b>2,105,856,735</b>	<b>100.00</b>	<b>2.94</b>	<b>2.75</b>	<b>2.75</b>	<b>4.58</b>	<b>5.59</b>	<b>7.69</b>	<b>6.18</b>	<b>Nov-94</b>
<i>CPI + 5% (Unadjusted)</i>			<u>1.30</u>	<u>6.42</u>	<u>6.42</u>	<u>6.94</u>	<u>7.04</u>	<u>6.82</u>	<u>7.25</u>	<i>Nov-94</i>
Over/Under			1.64	-3.67	-3.67	-2.36	-1.45	0.87	-1.07	
<b>Public Real Assets</b>	<b>1,296,377,277</b>	<b>61.56</b>	<b>4.30</b>	<b>7.04</b>	<b>7.04</b>	<b>4.88</b>	<b>5.11</b>		<b>2.90</b>	<b>Jun-14</b>
<i>Public Real Assets Blend</i>			<u>6.95</u>	<u>4.74</u>	<u>4.74</u>	<u>3.31</u>	<u>4.07</u>		<u>0.63</u>	<i>Jun-14</i>
Over/Under			-2.65	2.30	2.30	1.57	1.04		2.27	
<b>TIPS</b>	<b>847,921,562</b>	<b>40.26</b>	<b>1.68</b>	<b>12.02</b>	<b>12.02</b>	<b>6.36</b>	<b>5.38</b>		<b>3.52</b>	<b>Jul-14</b>
<i>BBgBarc US TIPS TR</i>			<u>1.62</u>	<u>10.99</u>	<u>10.99</u>	<u>5.92</u>	<u>5.08</u>		<u>3.36</u>	<i>Jul-14</i>
Over/Under			0.06	1.03	1.03	0.44	0.30		0.16	
DFA US TIPS <sup>1</sup>	847,921,562	40.26	1.68	12.02	12.02	6.36	5.50		3.63	Aug-14
<i>BBgBarc US TIPS TR</i>			<u>1.62</u>	<u>10.99</u>	<u>10.99</u>	<u>5.92</u>	<u>5.08</u>		<u>3.36</u>	<i>Aug-14</i>
Over/Under			0.06	1.03	1.03	0.44	0.42		0.27	
<b>REITS</b>	<b>232,223,596</b>	<b>11.03</b>	<b>8.90</b>	<b>-0.16</b>	<b>-0.16</b>	<b>7.53</b>	<b>8.22</b>		<b>7.66</b>	<b>Mar-15</b>
<i>FTSE NAREIT All Equity REIT</i>			<u>8.14</u>	<u>-5.12</u>	<u>-5.12</u>	<u>5.29</u>	<u>6.62</u>		<u>5.53</u>	<i>Mar-15</i>
Over/Under			0.76	4.96	4.96	2.24	1.60		2.13	
CenterSquare US Real Estate <sup>1</sup>	232,223,596	11.03	8.90	-0.16	-0.16	7.53	8.22		8.36	May-15
<i>FTSE NAREIT All Equity REIT</i>			<u>8.14</u>	<u>-5.12</u>	<u>-5.12</u>	<u>5.29</u>	<u>6.62</u>		<u>6.56</u>	<i>May-15</i>
Over/Under			0.76	4.96	4.96	2.24	1.60		1.80	
<b>Commodities</b>	<b>216,232,118</b>	<b>10.27</b>	<b>10.45</b>	<b>-2.30</b>	<b>-2.30</b>	<b>-2.00</b>	<b>1.78</b>		<b>-3.29</b>	<b>Jun-15</b>
<i>Bloomberg Commodity Index TR USD</i>			<u>10.19</u>	<u>-3.12</u>	<u>-3.12</u>	<u>-2.53</u>	<u>1.03</u>		<u>-3.85</u>	<i>Jun-15</i>
Over/Under			0.26	0.82	0.82	0.53	0.75		0.56	
CoreCommodity Mgmt <sup>1</sup>	216,232,118	10.27	10.45	-2.30	-2.30	-2.00	1.78		-3.29	Jul-15
<i>Bloomberg Commodity Index TR USD</i>			<u>10.19</u>	<u>-3.12</u>	<u>-3.12</u>	<u>-2.53</u>	<u>1.03</u>		<u>-3.85</u>	<i>Jul-15</i>
Over/Under			0.26	0.82	0.82	0.53	0.75		0.56	
<b>Private Real Estate</b>	<b>791,188,233</b>	<b>37.57</b>	<b>0.89</b>	<b>-3.59</b>	<b>-3.59</b>	<b>3.50</b>	<b>5.53</b>	<b>8.49</b>	<b>6.47</b>	<b>Oct-94</b>
<i>Real Estate Blend</i>			<u>1.49</u>	<u>1.98</u>	<u>1.98</u>	<u>5.75</u>	<u>7.06</u>	<u>10.16</u>	<u>9.49</u>	<i>Oct-94</i>
Over/Under			-0.60	-5.57	-5.57	-2.25	-1.53	-1.67	-3.02	
<b>Timber</b>	<b>18,291,225</b>	<b>0.87</b>	<b>-1.81</b>	<b>2.55</b>	<b>2.55</b>	<b>2.26</b>	<b>2.68</b>	<b>5.26</b>	<b>8.82</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	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Real Assets</b>	<b>2,105,856,735</b>	<b>100.00</b>	<b>2.90</b>	<b>56</b>	<b>2.60</b>	<b>47</b>	<b>2.60</b>	<b>47</b>	<b>4.42</b>	<b>47</b>	<b>5.42</b>	<b>32</b>	<b>7.55</b>	<b>29</b>		<b>Nov-94</b>
<i>CPI + 5% (Unadjusted)</i>			<u>1.30</u>	79	<u>6.42</u>	24	<u>6.42</u>	24	<u>6.94</u>	22	<u>7.04</u>	19	<u>6.82</u>	32		Nov-94
Over/Under			1.60		-3.82		-3.82		-2.52		-1.62		0.73			
<i>InvMetrics Public DB &gt; \$1 Billion Real Assets/Commodities Gross Median</i>			3.50		0.97		0.97		3.06		5.08		4.86			Nov-94
<b>Public Real Assets</b>	<b>1,296,377,277</b>	<b>61.56</b>	<b>4.26</b>		<b>6.83</b>		<b>6.83</b>		<b>4.66</b>		<b>4.86</b>				<b>2.70</b>	<b>Jun-14</b>
<i>Public Real Assets Blend</i>			<u>6.95</u>		<u>4.74</u>		<u>4.74</u>		<u>3.31</u>		<u>4.07</u>				<u>0.63</u>	Jun-14
Over/Under			-2.69		2.09		2.09		1.35		0.79				2.07	
<b>TIPS</b>	<b>847,921,562</b>	<b>40.26</b>	<b>1.67</b>		<b>11.97</b>		<b>11.97</b>		<b>6.31</b>		<b>5.32</b>				<b>3.46</b>	<b>Jul-14</b>
<i>BBgBarc US TIPS TR</i>			<u>1.62</u>		<u>10.99</u>		<u>10.99</u>		<u>5.92</u>		<u>5.08</u>				<u>3.36</u>	Jul-14
Over/Under			0.05		0.98		0.98		0.39		0.24				0.10	
DFA US TIPS <sup>1</sup>	847,921,562	40.26	1.67	64	11.97	16	11.97	16	6.31	15	5.45	20			3.58	Aug-14
<i>BBgBarc US TIPS TR</i>			<u>1.62</u>	69	<u>10.99</u>	37	<u>10.99</u>	37	<u>5.92</u>	45	<u>5.08</u>	49			<u>3.36</u>	Aug-14
Over/Under			0.05		0.98		0.98		0.39		0.37				0.22	
<i>eV US TIPS / Inflation Fixed Inc Net Median</i>			1.85		10.61		10.61		5.87		5.06				3.23	Aug-14
<b>REITS</b>	<b>232,223,596</b>	<b>11.03</b>	<b>8.79</b>		<b>-0.58</b>		<b>-0.58</b>		<b>7.08</b>		<b>7.74</b>				<b>7.21</b>	<b>Mar-15</b>
<i>FTSE NAREIT All Equity REIT</i>			<u>8.14</u>		<u>-5.12</u>		<u>-5.12</u>		<u>5.29</u>		<u>6.62</u>				<u>5.53</u>	Mar-15
Over/Under			0.65		4.54		4.54		1.79		1.12				1.68	
CenterSquare US Real Estate <sup>1</sup>	232,223,596	11.03	8.79	75	-0.58	26	-0.58	26	7.08	35	7.74	20			7.90	May-15
<i>FTSE NAREIT All Equity REIT</i>			<u>8.14</u>	87	<u>-5.12</u>	70	<u>-5.12</u>	70	<u>5.29</u>	49	<u>6.62</u>	38			<u>6.56</u>	May-15
Over/Under			0.65		4.54		4.54		1.79		1.12				1.34	
<i>eV US REIT Net Median</i>			10.67		-3.55		-3.55		5.20		5.86				6.03	May-15
<b>Commodities</b>	<b>216,232,118</b>	<b>10.27</b>	<b>10.31</b>		<b>-2.86</b>		<b>-2.86</b>		<b>-2.61</b>		<b>1.07</b>				<b>-3.95</b>	<b>Jun-15</b>
<i>Bloomberg Commodity Index TR USD</i>			<u>10.19</u>		<u>-3.12</u>		<u>-3.12</u>		<u>-2.53</u>		<u>1.03</u>				<u>-3.85</u>	Jun-15
Over/Under			0.12		0.26		0.26		-0.08		0.04				-0.10	
CoreCommodity Mgmt <sup>1</sup>	216,232,118	10.27	10.31		-2.86		-2.86		-2.61		1.07				-3.95	Jul-15
<i>Bloomberg Commodity Index TR USD</i>			<u>10.19</u>		<u>-3.12</u>		<u>-3.12</u>		<u>-2.53</u>		<u>1.03</u>				<u>-3.85</u>	Jul-15
Over/Under			0.12		0.26		0.26		-0.08		0.04				-0.10	

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

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

eA = eVestment Alliance



Los Angeles City Employees' Retirement System

**REAL ASSETS (NET)**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Private Real Estate</b>	<b>791,188,233</b>	<b>37.57</b>	<b>0.86</b>	<b>66</b>	<b>-3.68</b>	<b>95</b>	<b>-3.68</b>	<b>95</b>	<b>3.41</b>	<b>85</b>	<b>5.45</b>	<b>76</b>	<b>8.38</b>	<b>64</b>		<b>Oct-94</b>
<i>Real Estate Blend</i>			<u>1.49</u>	61	<u>1.98</u>	4	<u>1.98</u>	4	<u>5.75</u>	9	<u>7.06</u>	9	<u>10.16</u>	11		Oct-94
<i>Over/Under</i>			-0.63		-5.66		-5.66		-2.34		-1.61		-1.78			
<i>InvMetrics Public DB Real Estate</i>			1.64		0.45		0.45		4.70		6.15		8.79			Oct-94
<i>Priv Net Median</i>																
<b>Timber</b>	<b>18,291,225</b>	<b>0.87</b>	<b>-1.81</b>		<b>2.55</b>		<b>2.55</b>		<b>2.26</b>		<b>2.68</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	✓	✘	✓	✓	✓	✓	✓	✓	✓	383.6	Performance compliant with LACERS' Manager Monitoring Policy
CenterSquare	Apr-15	REITS	✓	✘	✓	✓	✓	✓	✓	✓	✓	923.6	Performance compliant with LACERS' Manager Monitoring Policy
CoreCommodity Mgt.	Jul-15	Commodities	✓	N/A	✓	N/A	✘	N/A	✓	N/A	✘	1,141.2	On Watch since September 2020 due to performance

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, 2020.
- \* Where net of fees performance is not available gross of fee returns are evaluated.

Legend	
✓	Outperformed
✘	Underperformed
=	Equal to
✓✓	Gross Return



# APPENDIX

NEPC, LLC

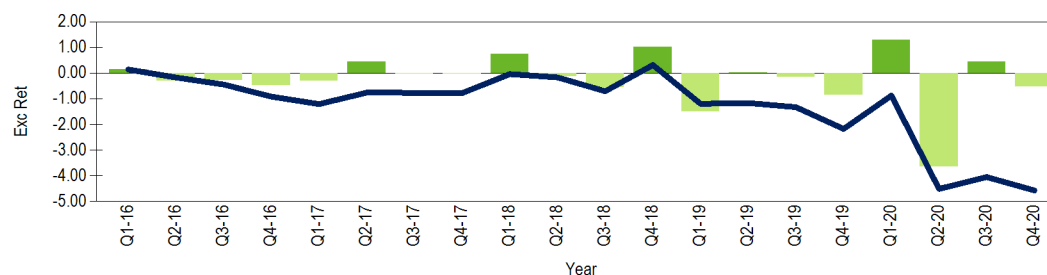
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## Los Angeles City Employees' Retirement System

# TOTAL FUND PERFORMANCE SUMMARY (GROSS)

	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	15 Yrs	Rank	Inception	Inception Date
<b>LACERS Master Trust</b>	<b>\$20,959,422,719</b>	<b>10.32%</b>	<b>53</b>	<b>12.05%</b>	<b>44</b>	<b>12.05%</b>	<b>44</b>	<b>8.35%</b>	<b>42</b>	<b>9.93%</b>	<b>41</b>	<b>8.82%</b>	<b>24</b>	<b>7.34%</b>	<b>28</b>	<b>8.44%</b>	<b>Oct-94</b>
Policy Index		10.84%	33	14.06%	19	14.06%	19	9.40%	21	10.74%	9	9.01%	17	7.45%	16	8.50%	Oct-94
InvMetrics Public DB \$5-50B Gross Median		10.42%		11.01%		11.01%		7.90%		9.47%		8.43%		6.91%		8.23%	Oct-94

### Quarterly and Cumulative Excess Performance



### 5 Years Ending December 31, 2020

	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	9.93%	41	8.98%	59	0.98	66	1.08	55
Policy Index	10.74%	9	10.30%	93	0.93	76	1.06	62
InvMetrics Public DB \$5-50B Gross Median	9.47%	--	8.62%	--	1.01	--	1.11	--

### 3 Years Ending December 31, 2020

	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	8.35%	42	10.92%	60	0.63	63	0.80	51
Policy Index	9.40%	21	12.58%	93	0.63	63	0.83	44
InvMetrics Public DB \$5-50B Gross Median	7.90%	--	10.54%	--	0.68	--	0.80	--





Los Angeles City Employees' Retirement System

# TOTAL FUND RISK STATISTICS (NET)

## 3 Years Ending December 31, 2020

	% of Total MV (%)	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Annualized Alpha Jensen (%)	Rank	Information Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
LACERS Master Trust	100.00%	8.16%	44	10.93%	60	-0.16%	56	-0.60	87	0.78	56	2.07%	46
Total Equity	52.06%	9.53%	46	18.87%	68	-0.18%	55	-0.20	53	0.56	51	0.93%	13
U.S. Equity	24.97%	13.68%	36	19.68%	46	-0.80%	40	-0.95	58	0.80	39	0.86%	16
Non-U.S. Equity	27.09%	6.16%	33	18.78%	60	1.18%	32	0.84	26	0.35	42	1.51%	17
Developed ex-U.S.	20.08%	6.04%	51	19.02%	73	1.65%	49	0.75	49	0.34	53	2.34%	34
Emerging Markets	7.01%	5.83%	32	20.22%	66	-0.41%	30	-0.18	36	0.33	28	1.89%	18
Core Fixed Income	16.63%	5.83%	36	3.41%	11	0.55%	27	0.79	5	3.02	9	0.62%	13
Credit Opportunities	5.72%	5.14%	--	10.74%	--	-1.14%	--	-0.41	--	0.29	--	1.70%	--
Real Assets	10.05%	4.42%	47	3.76%	11	1.22%	63	-0.66	92	0.91	30	3.80%	15
Public Real Assets	6.19%	4.66%	--	6.37%	--	2.02%	--	0.33	--	0.59	--	4.12%	--
Private Real Estate	3.77%	3.41%	85	2.78%	65	2.09%	14	-0.58	89	0.81	89	4.02%	89
Private Equity	11.69%	12.64%	52	9.15%	60	11.55%	24	-0.24	67	1.65	65	22.14%	86

## 5 Years Ending December 31, 2020

	% 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%	9.74%	46	8.99%	59	0.27%	50	-0.60	91	1.06	62	1.68%	40
Total Equity	52.06%	12.17%	44	15.50%	59	0.02%	41	0.03	35	0.82	46	0.80%	8
U.S. Equity	24.97%	14.85%	44	16.08%	42	-0.62%	37	-0.74	66	0.95	32	0.79%	14
Non-U.S. Equity	27.09%	9.96%	35	15.82%	59	0.84%	32	0.77	16	0.73	47	1.34%	13
Developed ex-U.S.	20.08%	9.07%	52	15.93%	62	1.45%	46	0.81	33	0.66	55	2.00%	28
Emerging Markets	7.01%	12.68%	16	17.93%	73	-0.32%	16	-0.09	18	0.94	15	1.57%	13
Core Fixed Income	16.63%	4.97%	54	3.13%	12	0.62%	52	0.93	5	2.09	1	0.58%	17
Credit Opportunities	5.72%	7.35%	--	8.71%	--	-1.29%	--	-0.49	--	0.57	--	1.50%	--
Real Assets	10.05%	5.42%	32	3.18%	4	1.11%	72	-0.51	92	1.50	30	3.17%	6
Public Real Assets	6.19%	4.86%	--	5.56%	--	1.79%	--	0.24	--	0.85	--	3.35%	--
Private Real Estate	3.77%	5.45%	76	2.37%	34	4.62%	8	-0.41	86	1.80	74	3.97%	83
Private Equity	11.69%	11.81%	49	7.36%	48	10.94%	22	-0.40	66	1.87	73	17.85%	79

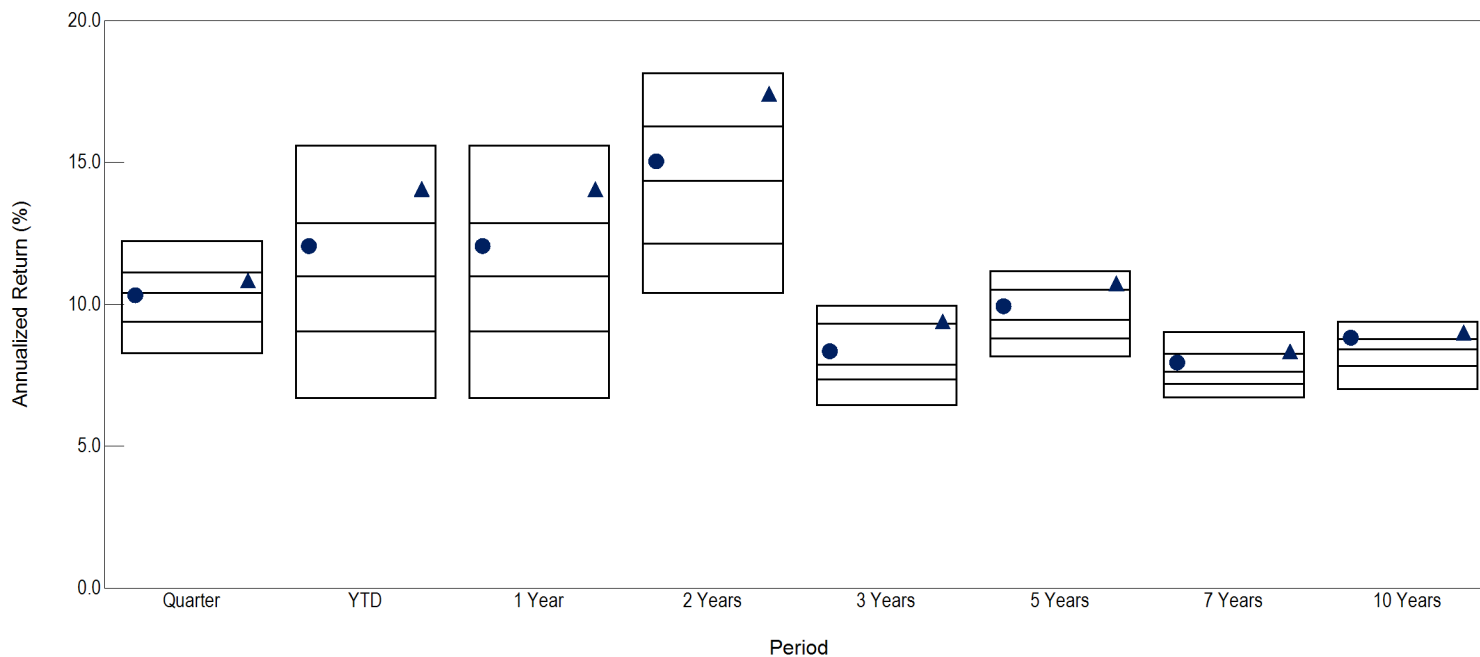
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.  
Peer universe: InvMetrics Public DB \$5-50B Gross (USD)



Los Angeles City Employees' Retirement System

# TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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



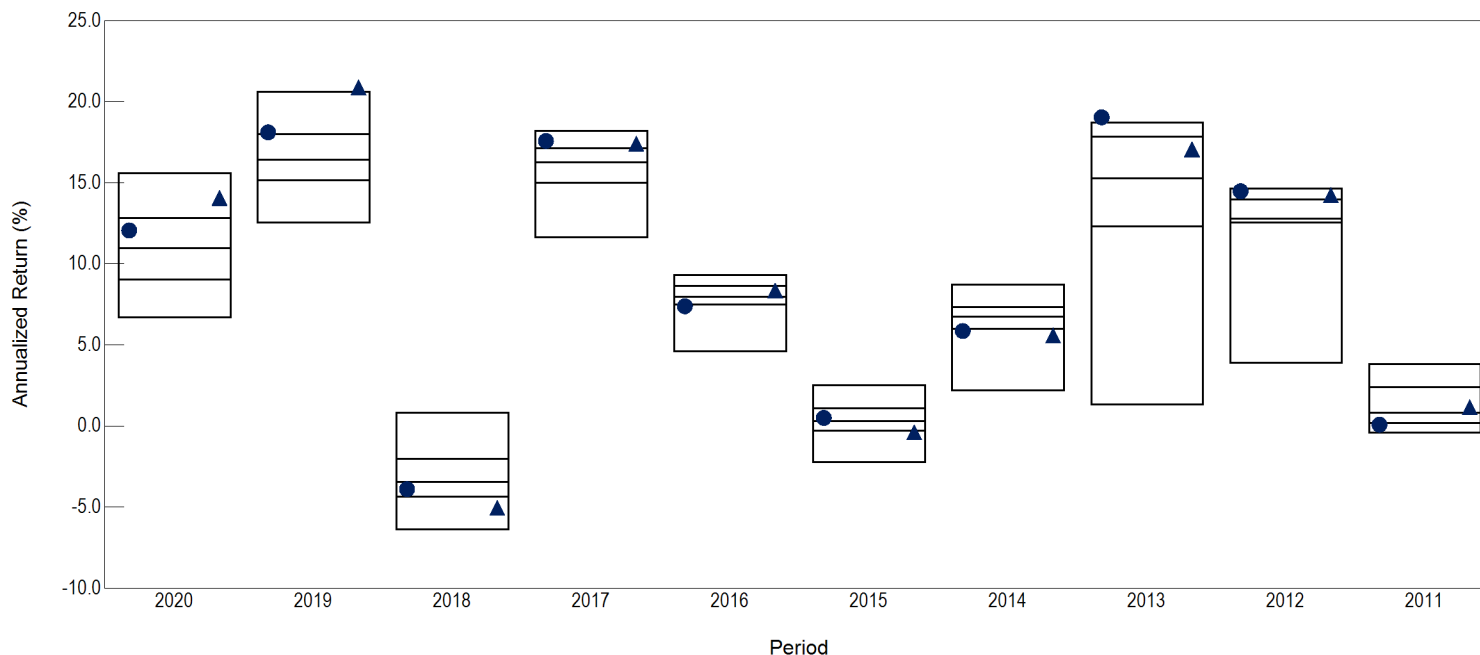
	Return (Rank)															
5th Percentile	12.24	15.58	15.58	18.14	9.95	11.16	9.03	9.38								
25th Percentile	11.15	12.88	12.88	16.28	9.33	10.53	8.28	8.81								
Median	10.42	11.01	11.01	14.38	7.90	9.47	7.65	8.43								
75th Percentile	9.41	9.06	9.06	12.15	7.36	8.82	7.21	7.84								
95th Percentile	8.29	6.73	6.73	10.42	6.46	8.18	6.74	7.04								
# of Portfolios	32	32	32	32	32	32	30	29								
● LACERS Master Trust	10.32	(53)	12.05	(44)	12.05	(44)	15.04	(36)	8.35	(42)	9.93	(41)	7.95	(43)	8.82	(24)
▲ Policy Index	10.84	(33)	14.06	(19)	14.06	(19)	17.42	(14)	9.40	(21)	10.74	(9)	8.34	(24)	9.01	(17)



Los Angeles City Employees' Retirement System

# TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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



	Return (Rank)																			
5th Percentile	15.58	20.62	0.81	18.21	9.30	2.50	8.72	18.69	14.65	3.83										
25th Percentile	12.88	18.02	-1.99	17.15	8.68	1.12	7.38	17.86	14.01	2.41										
Median	11.01	16.46	-3.40	16.29	7.99	0.35	6.79	15.31	12.83	0.86										
75th Percentile	9.06	15.18	-4.32	15.05	7.51	-0.24	6.04	12.36	12.58	0.21										
95th Percentile	6.73	12.57	-6.33	11.68	4.65	-2.20	2.25	1.36	3.92	-0.37										
# of Portfolios	32	27	25	46	30	24	24	23	16	16										
● LACERS Master Trust	12.05	(44)	18.10	(23)	-3.89	(67)	17.57	(12)	7.38	(78)	0.49	(41)	5.85	(81)	19.03	(4)	14.47	(7)	0.08	(89)
▲ Policy Index	14.06	(19)	20.88	(5)	-5.04	(84)	17.41	(14)	8.35	(41)	-0.39	(77)	5.58	(87)	17.06	(31)	14.23	(21)	1.17	(44)

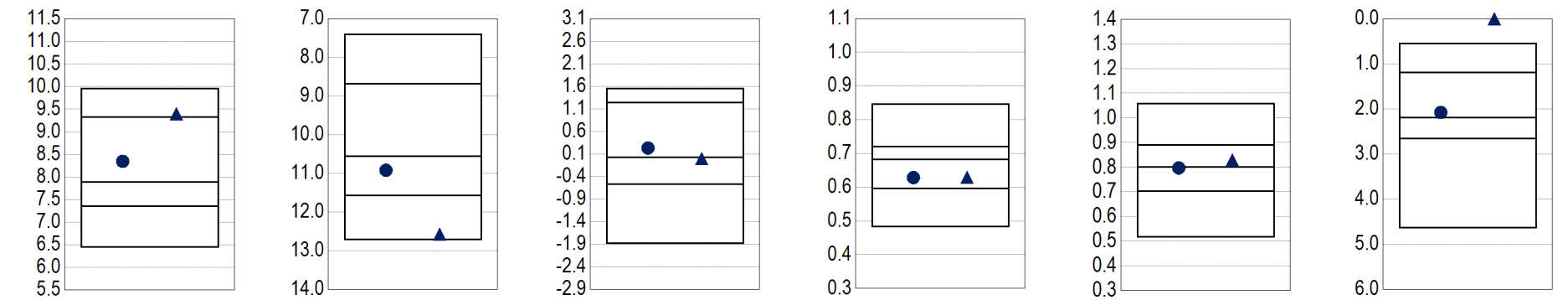


Los Angeles City Employees' Retirement System

# TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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

Annualized Return (%)	Annualized Standard Deviation	Annualized Alpha (%)	Sharpe Ratio	Sortino Ratio Risk Free	Tracking Error
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Metric	LACERS Master Trust Value	LACERS Master Trust Rank	Policy Index Value	Policy Index Rank	Universe 5th %tile	Universe 25th %tile	Universe Median	Universe 75th %tile	Universe 95th %tile
Annualized Return (%)	8.35	42	9.40	21	9.95	9.33	7.90	7.36	6.46
Annualized Standard Deviation	10.92	60	12.58	93	7.40	8.67	10.54	11.56	12.70
Annualized Alpha (%)	0.23	46	0.00	51	1.56	1.25	0.04	-0.56	-1.87
Sharpe Ratio	0.63	63	0.63	63	0.85	0.72	0.68	0.60	0.48
Sortino Ratio Risk Free	0.80	51	0.83	44	1.06	0.89	0.80	0.70	0.52
Tracking Error	2.08	47	0.00	1	0.55	1.18	2.18	2.65	4.63

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

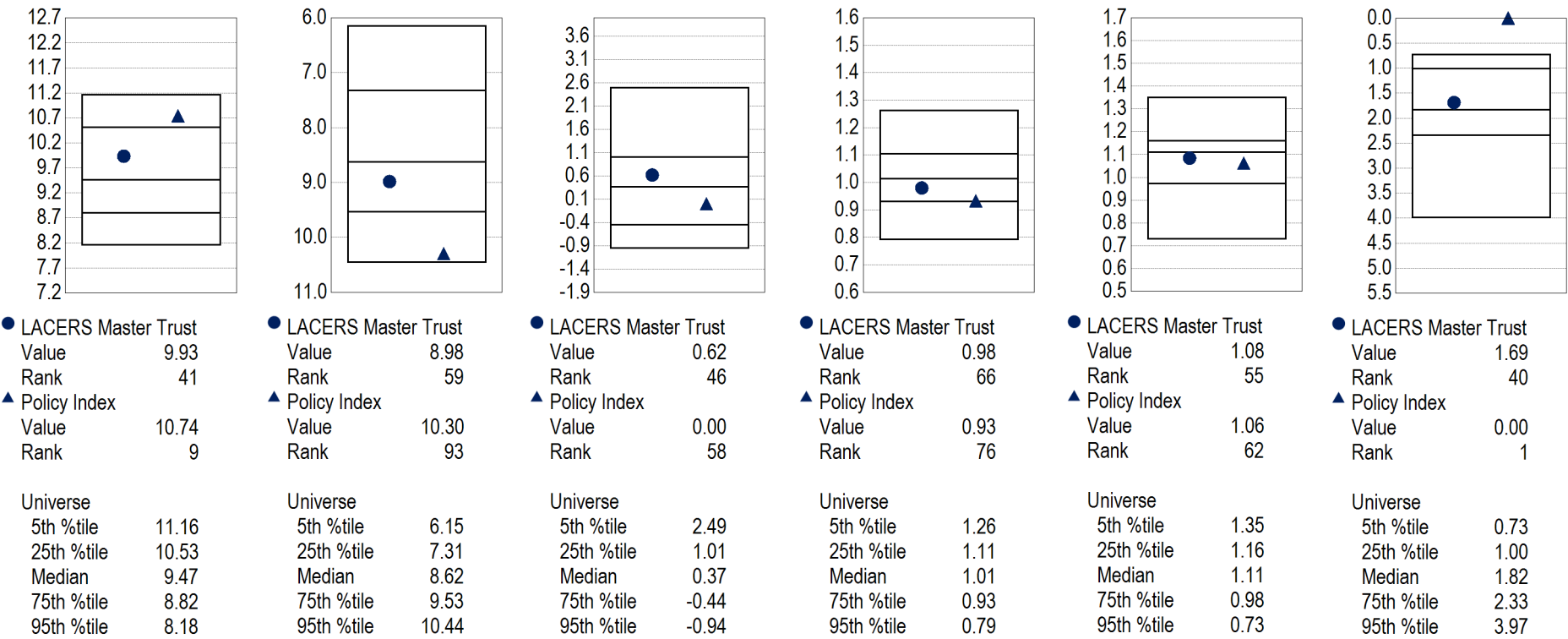


Los Angeles City Employees' Retirement System

# TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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

Annualized Return (%)	Annualized Standard Deviation	Annualized Alpha (%)	Sharpe Ratio	Sortino Ratio Risk Free	Tracking Error
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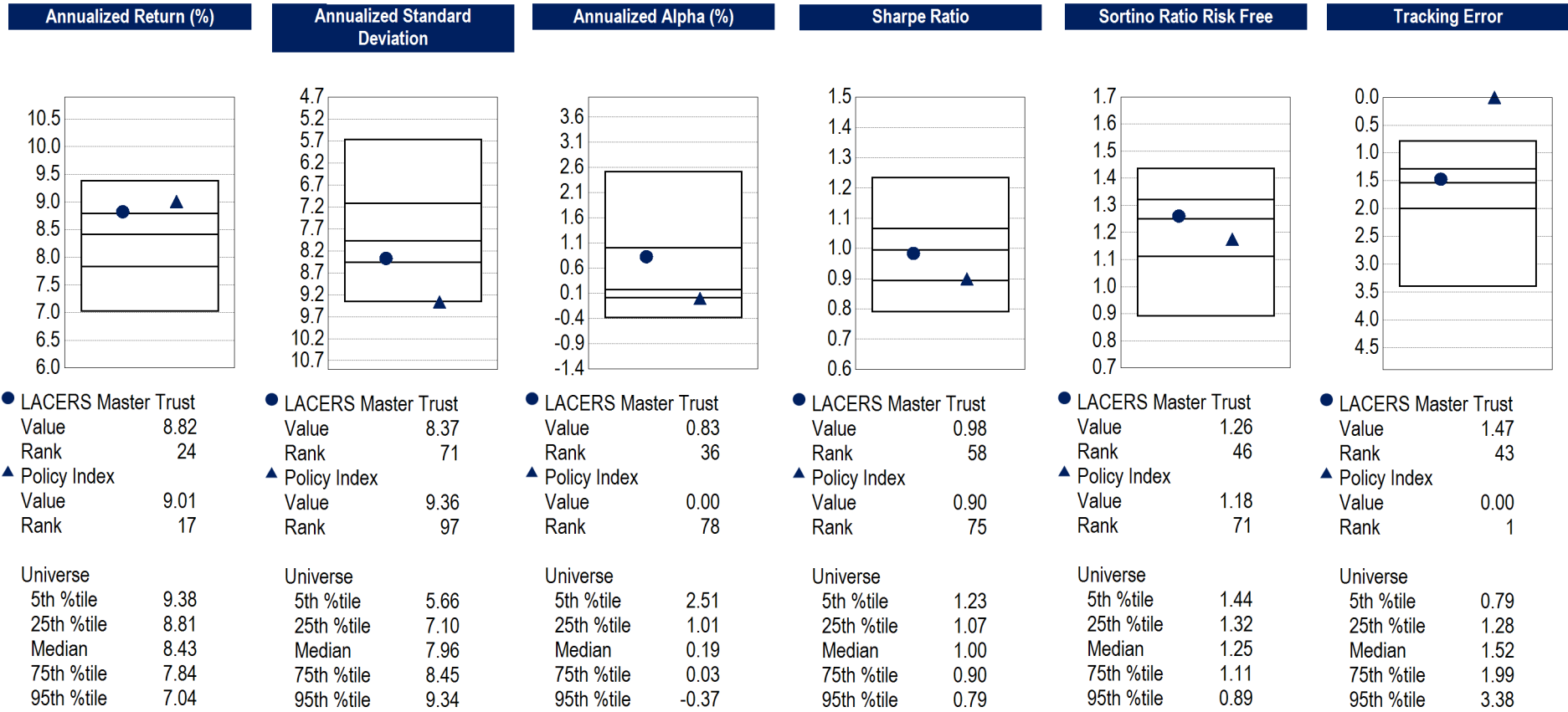
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



Los Angeles City Employees' Retirement System

# TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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



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



# U.S. EQUITY MANAGER PERFORMANCE

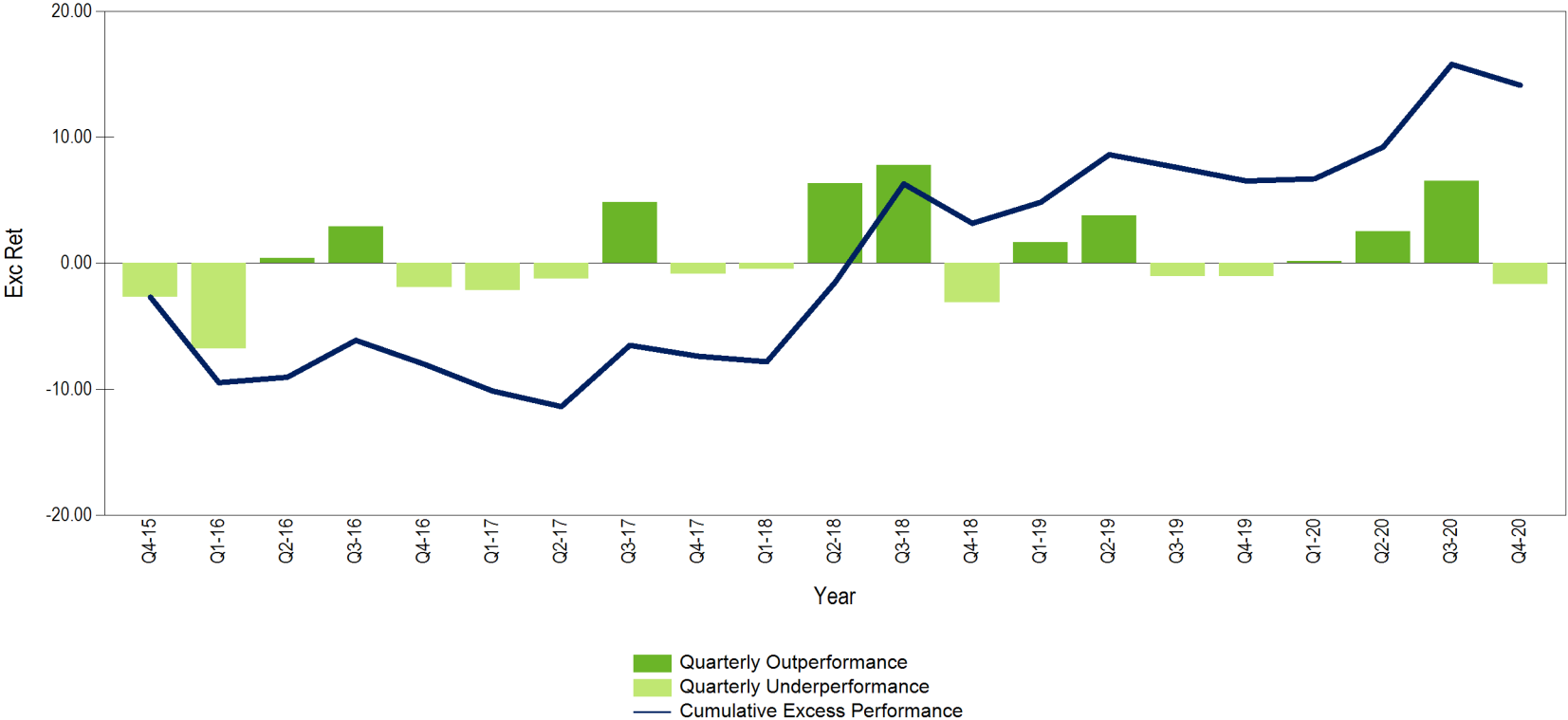
NEPC, LLC

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Los Angeles City Employees' Retirement System

# EAM INVESTORS

Quarterly and Cumulative Excess Performance

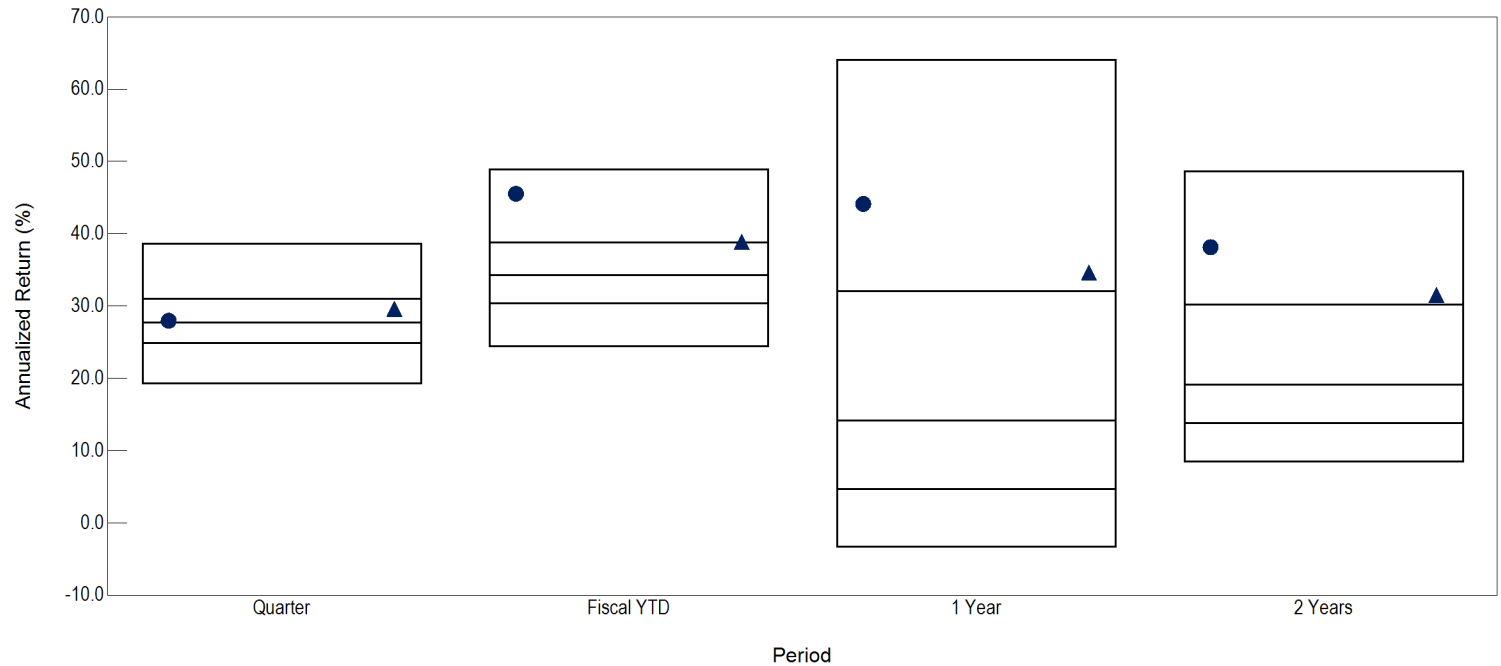




Los Angeles City Employees' Retirement System

# EAM INVESTORS

EAM Investors vs. eV US Small Cap Equity Net



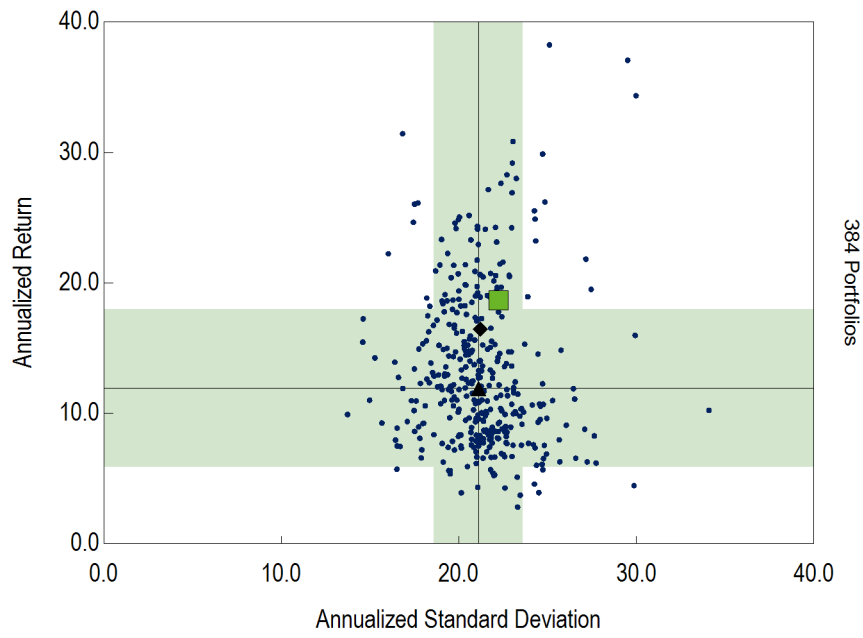
	Return (Rank)							
5th Percentile	38.59		48.85		64.04		48.65	
25th Percentile	31.05		38.91		32.16		30.29	
Median	27.81		34.39		14.22		19.19	
75th Percentile	24.93		30.50		4.72		13.90	
95th Percentile	19.34		24.48		-3.21		8.53	
# of Portfolios	421		421		421		415	
● EAM Investors	27.95	(49)	45.50	(10)	44.11	(15)	38.13	(14)
▲ Russell 2000 Growth	29.61	(38)	38.88	(26)	34.63	(23)	31.52	(22)



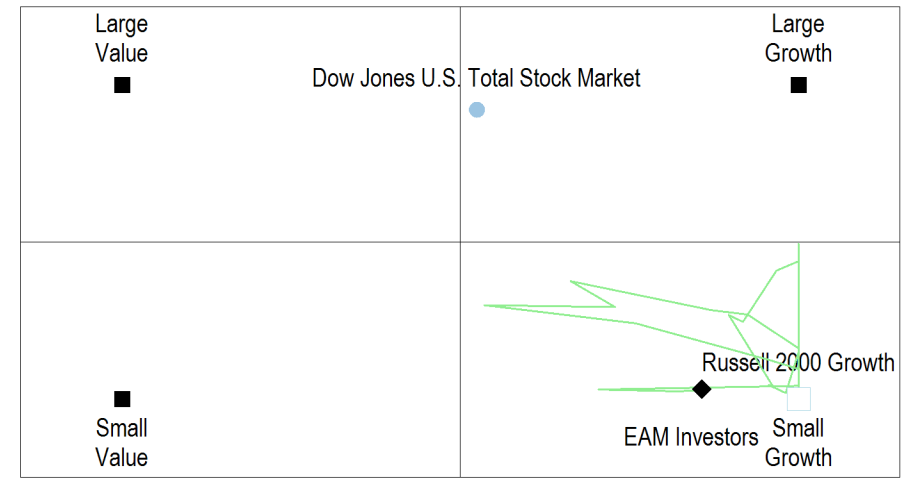
# Los Angeles City Employees' Retirement System

## EAM INVESTORS

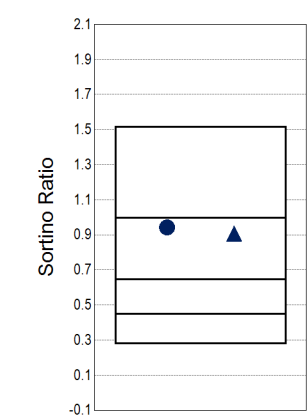
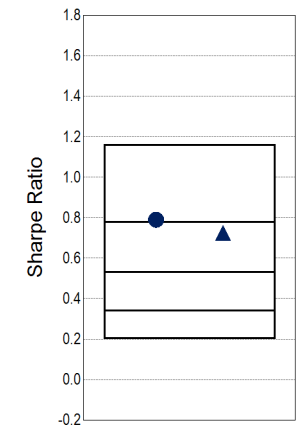
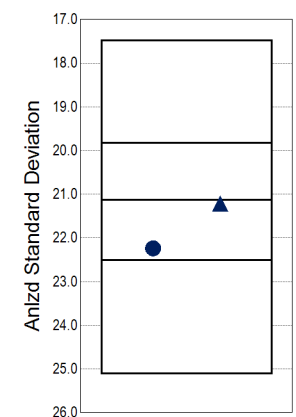
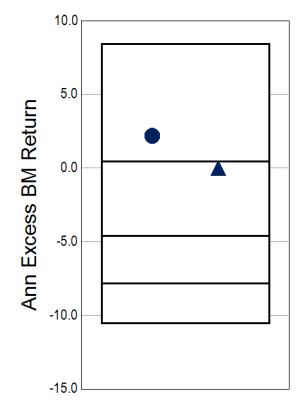
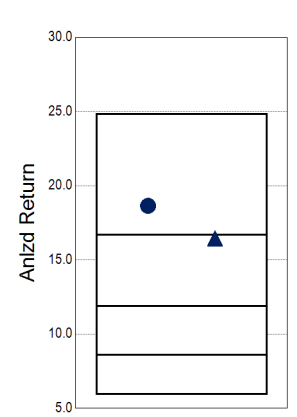
Since Inception Risk Return



Since Inception Style Map



□ First Rolling Period    ◆ Last Rolling Period



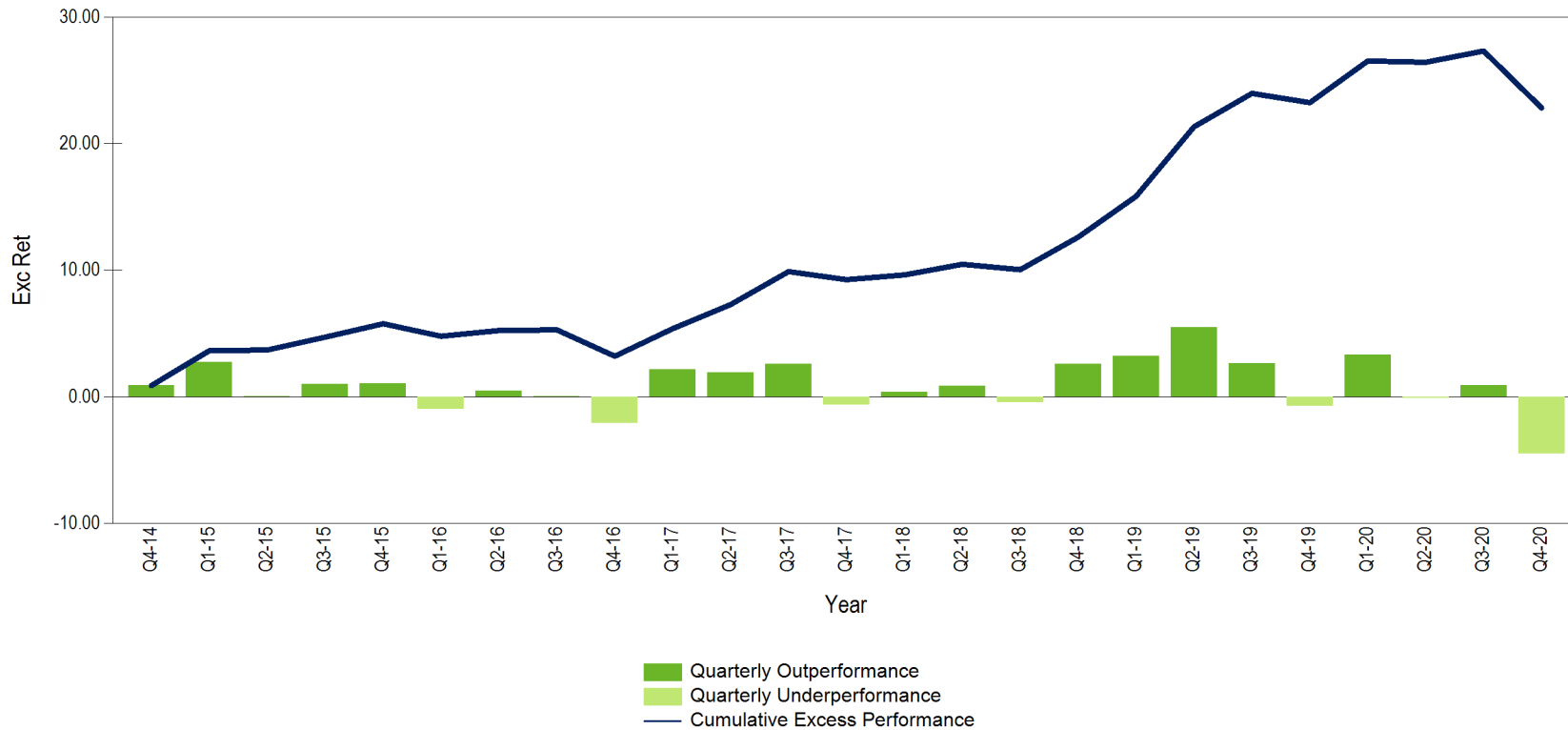
- EAM Investors
- ▲ Russell 2000 Growth
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

# PRINCIPAL GLOBAL INVESTORS

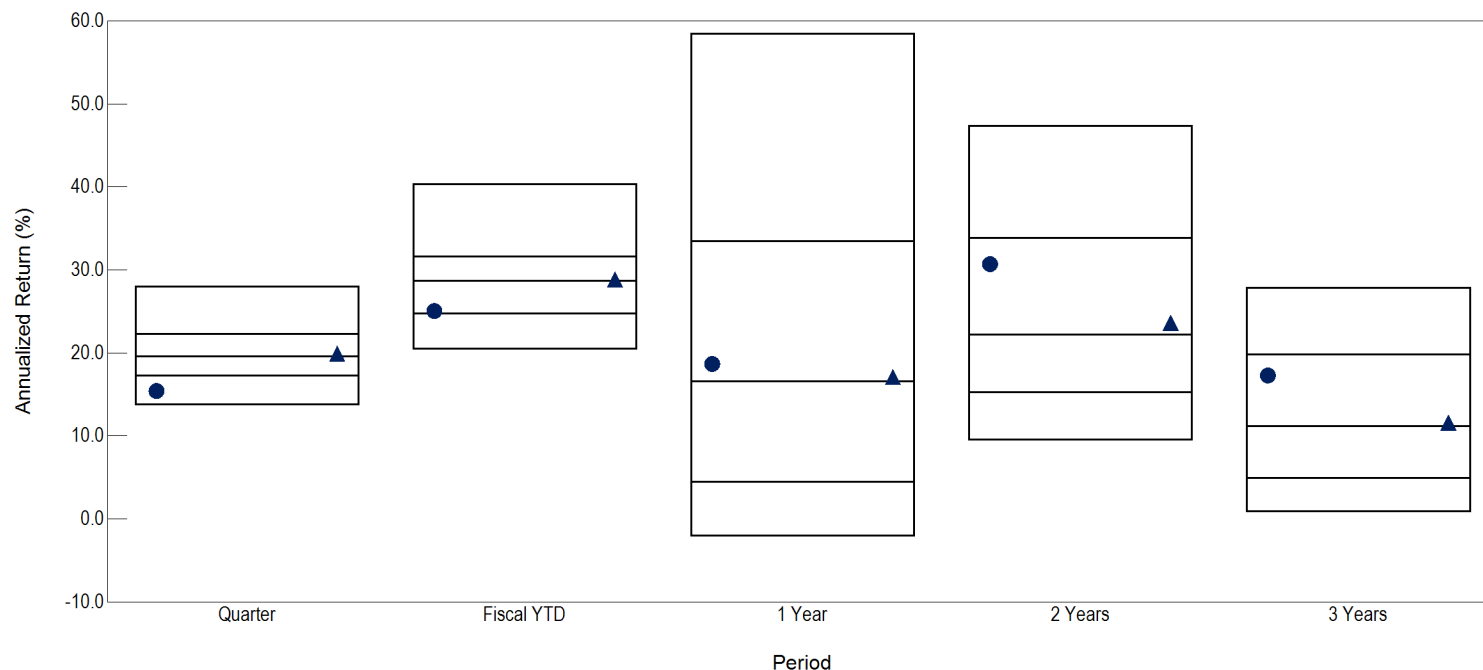
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# PRINCIPAL GLOBAL INVESTORS

Principal Global Investors vs. eV US Mid Cap Equity Net



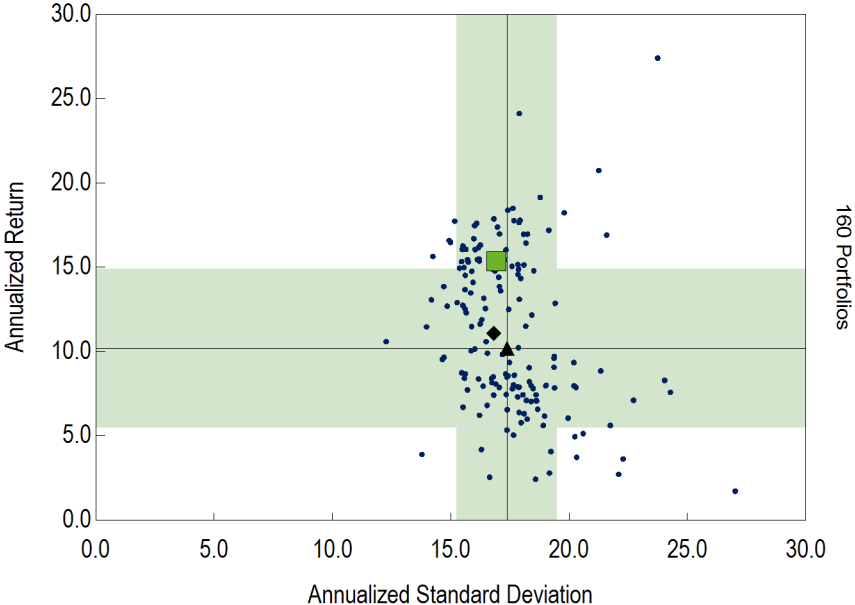
	Return (Rank)									
5th Percentile	28.01		40.34		58.47		47.38		27.83	
25th Percentile	22.35		31.70		33.54		33.96		19.93	
Median	19.69		28.78		16.68		22.26		11.23	
75th Percentile	17.36		24.88		4.55		15.34		5.05	
95th Percentile	13.92		20.62		-1.94		9.68		1.01	
# of Portfolios	179		179		178		176		175	
● Principal Global Investors	15.41	(87)	25.05	(74)	18.68	(47)	30.71	(36)	17.29	(34)
▲ Russell MidCap	19.91	(49)	28.86	(49)	17.10	(49)	23.64	(49)	11.61	(50)



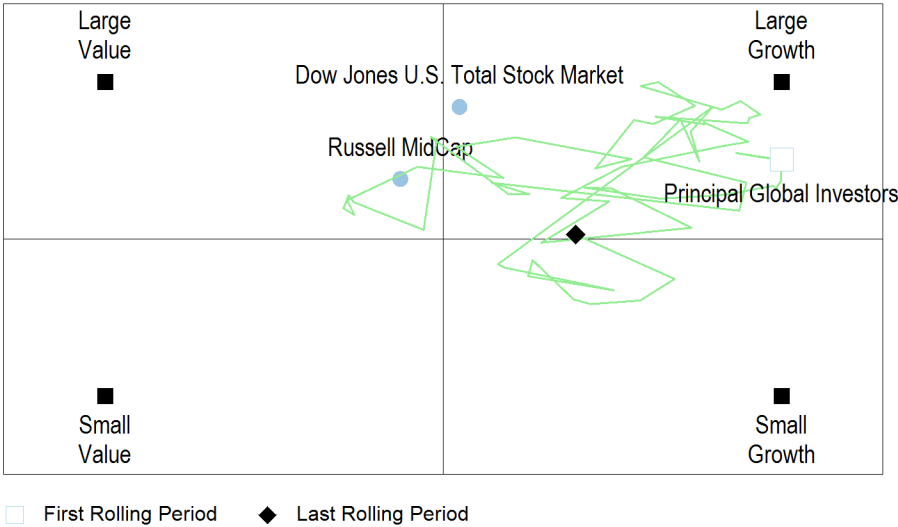
Los Angeles City Employees' Retirement System

# PRINCIPAL GLOBAL INVESTORS

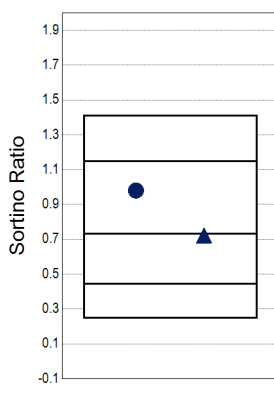
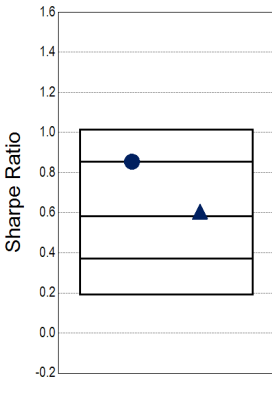
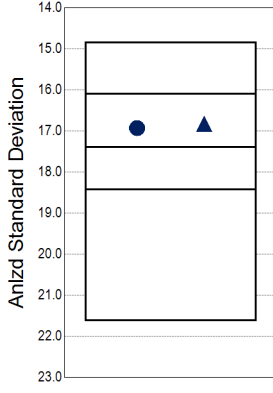
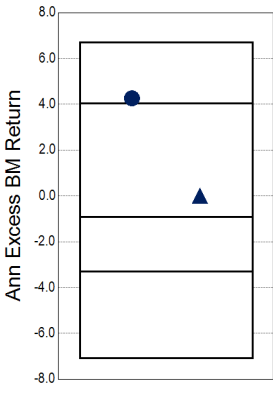
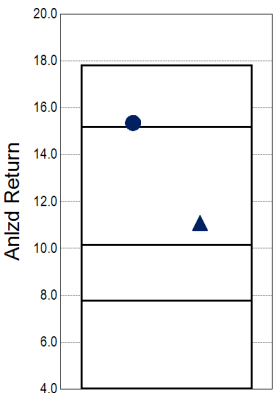
Since Inception Risk Return



Since Inception Style Map



□ First Rolling Period    ◆ Last Rolling Period



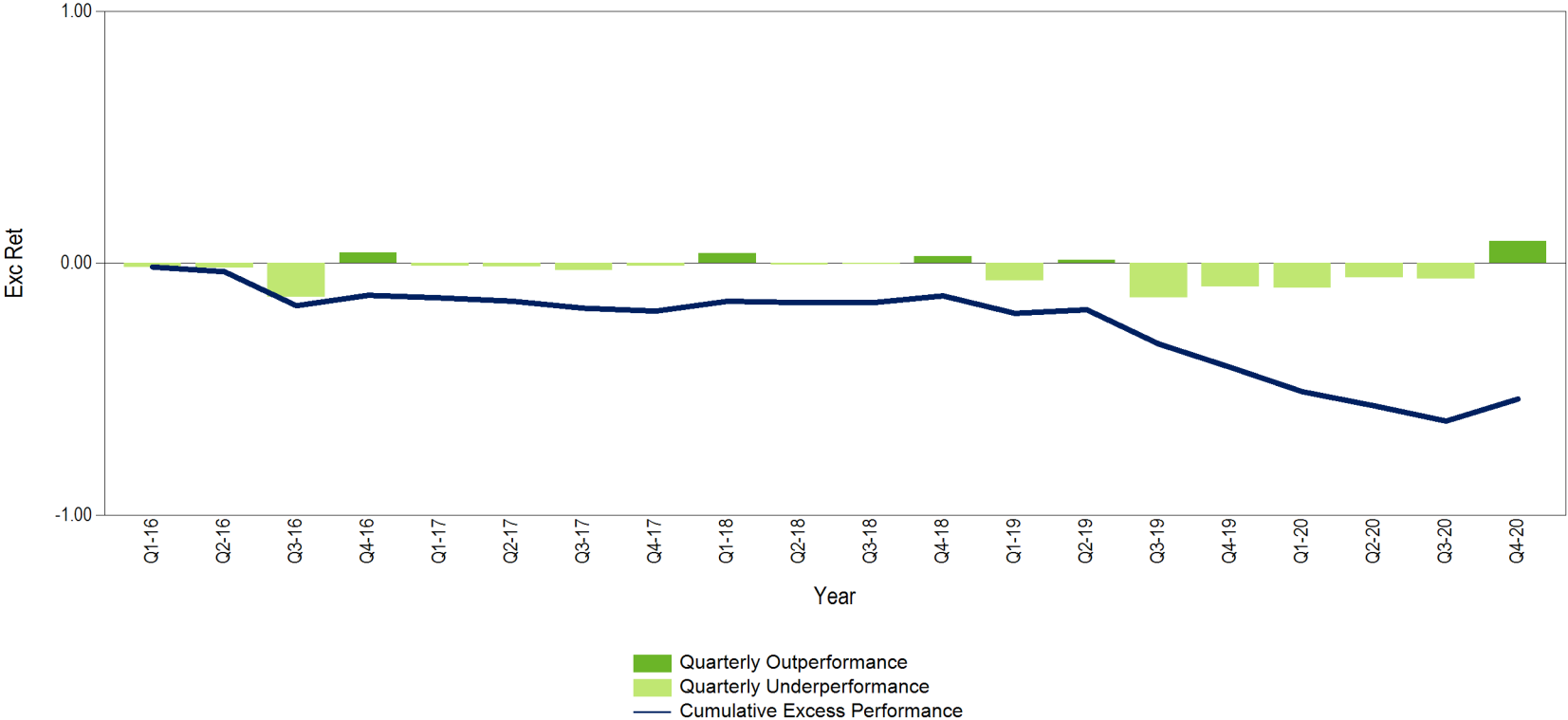
- Principal Global Investors
- ▲ Russell MidCap
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

# RHUMBLINE ADVISORS S&P 500

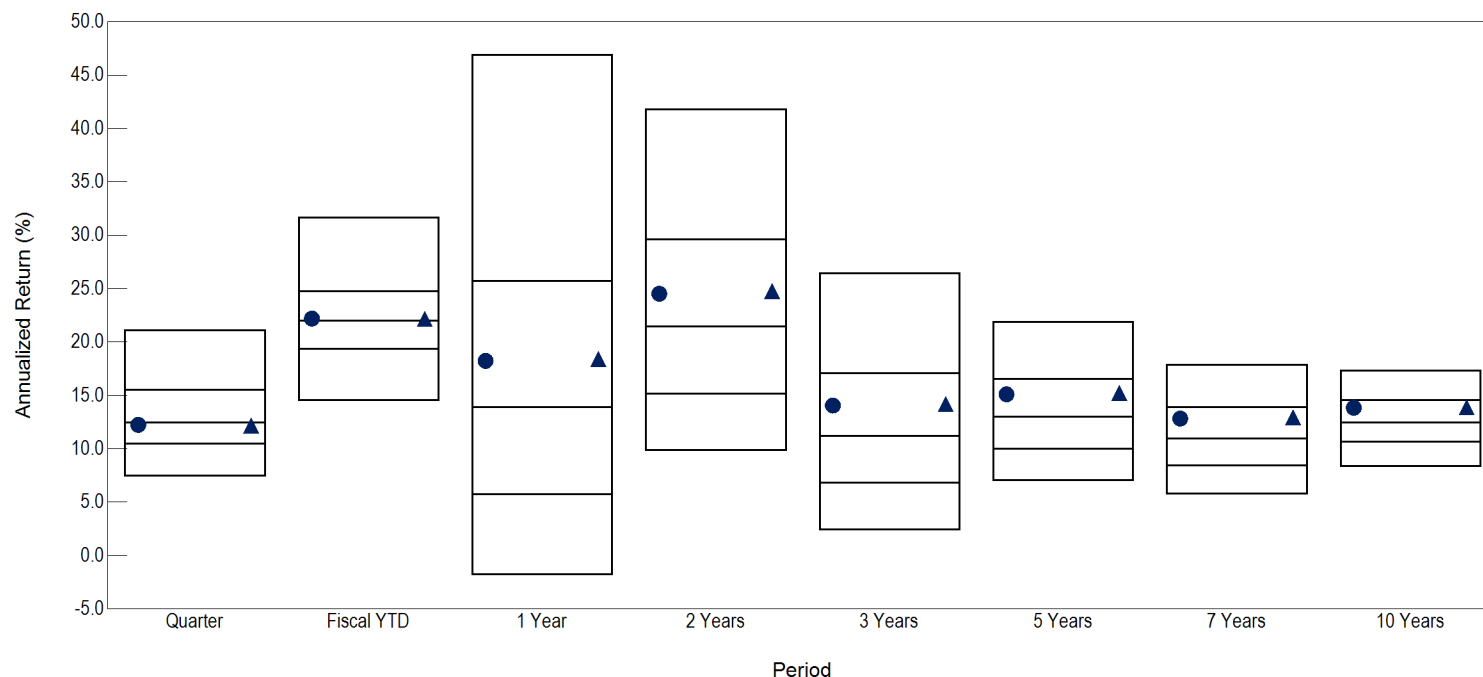
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# RHUMBLINE ADVISORS S&P 500

RhumbLine Advisers S&P 500 vs. eV US Large Cap Equity Net



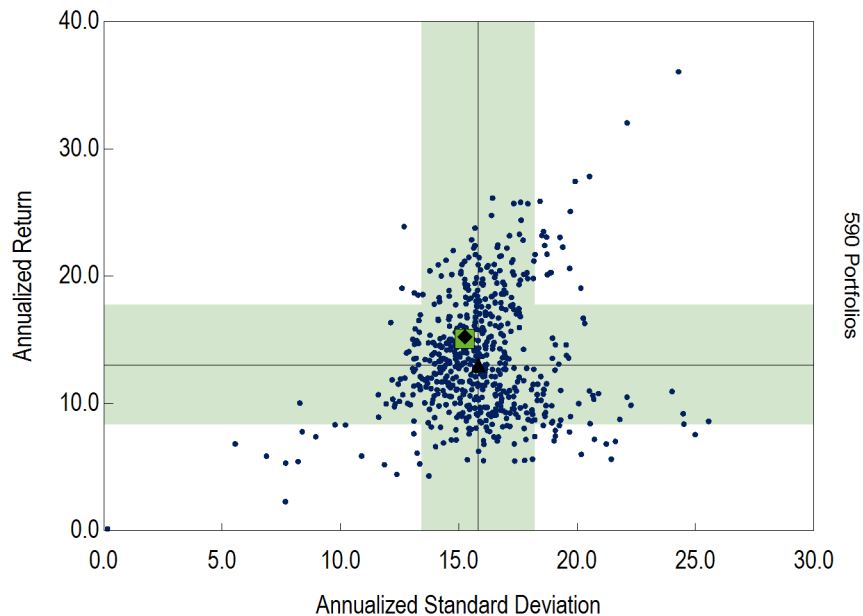
	Return (Rank)															
5th Percentile	21.09	31.67	46.90	41.78	26.41	21.88	17.85	17.32								
25th Percentile	15.57	24.80	25.80	29.70	17.11	16.59	13.97	14.61								
Median	12.49	22.07	13.96	21.49	11.25	13.03	11.04	12.52								
75th Percentile	10.52	19.42	5.77	15.19	6.88	10.03	8.51	10.71								
95th Percentile	7.52	14.64	-1.73	9.92	2.47	7.13	5.87	8.46								
# of Portfolios	654	654	653	641	629	590	551	473								
● RhumbLine Advisers S&P 500	12.24	(53)	22.19	(49)	18.23	(40)	24.51	(39)	14.05	(36)	15.09	(32)	12.82	(31)	13.83	(33)
▲ S&P 500	12.15	(55)	22.16	(49)	18.40	(39)	24.77	(38)	14.18	(36)	15.22	(32)	12.91	(31)	13.88	(32)



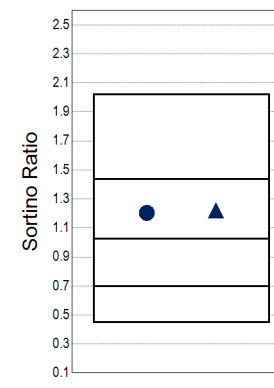
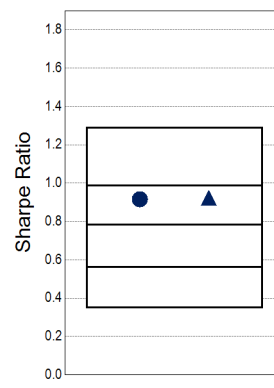
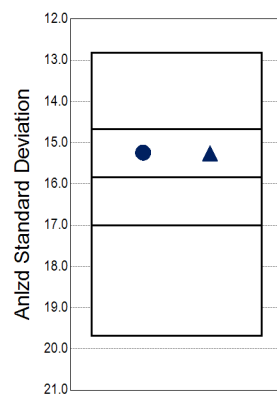
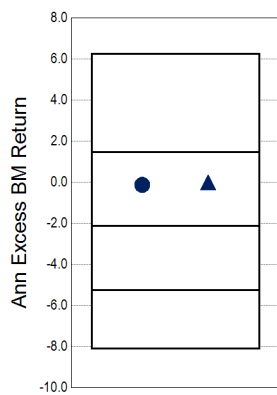
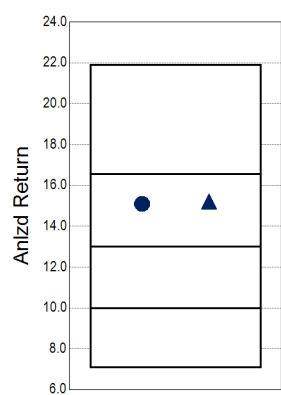
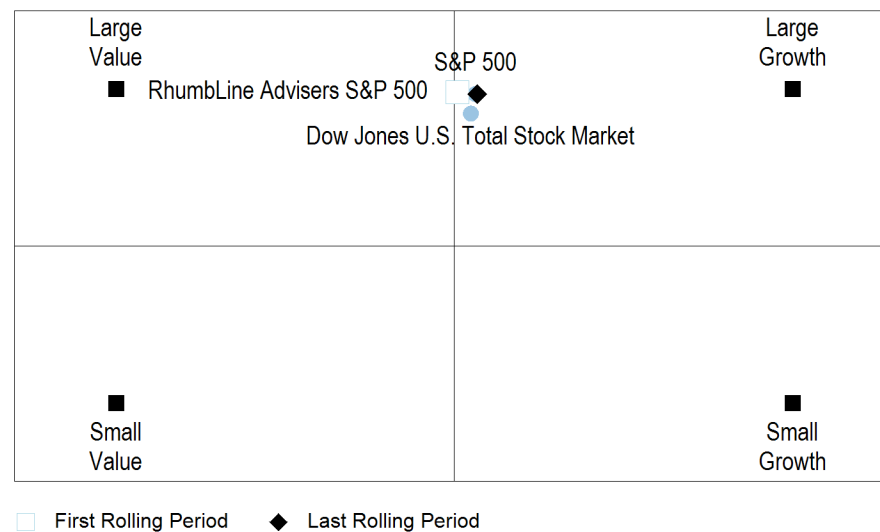
Los Angeles City Employees' Retirement System

# RHUMBLINE ADVISORS S&P 500

5 Year Risk Return



5 Year Style Map



- RhumbLine Advisers S&P 500
- ▲ S&P 500
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

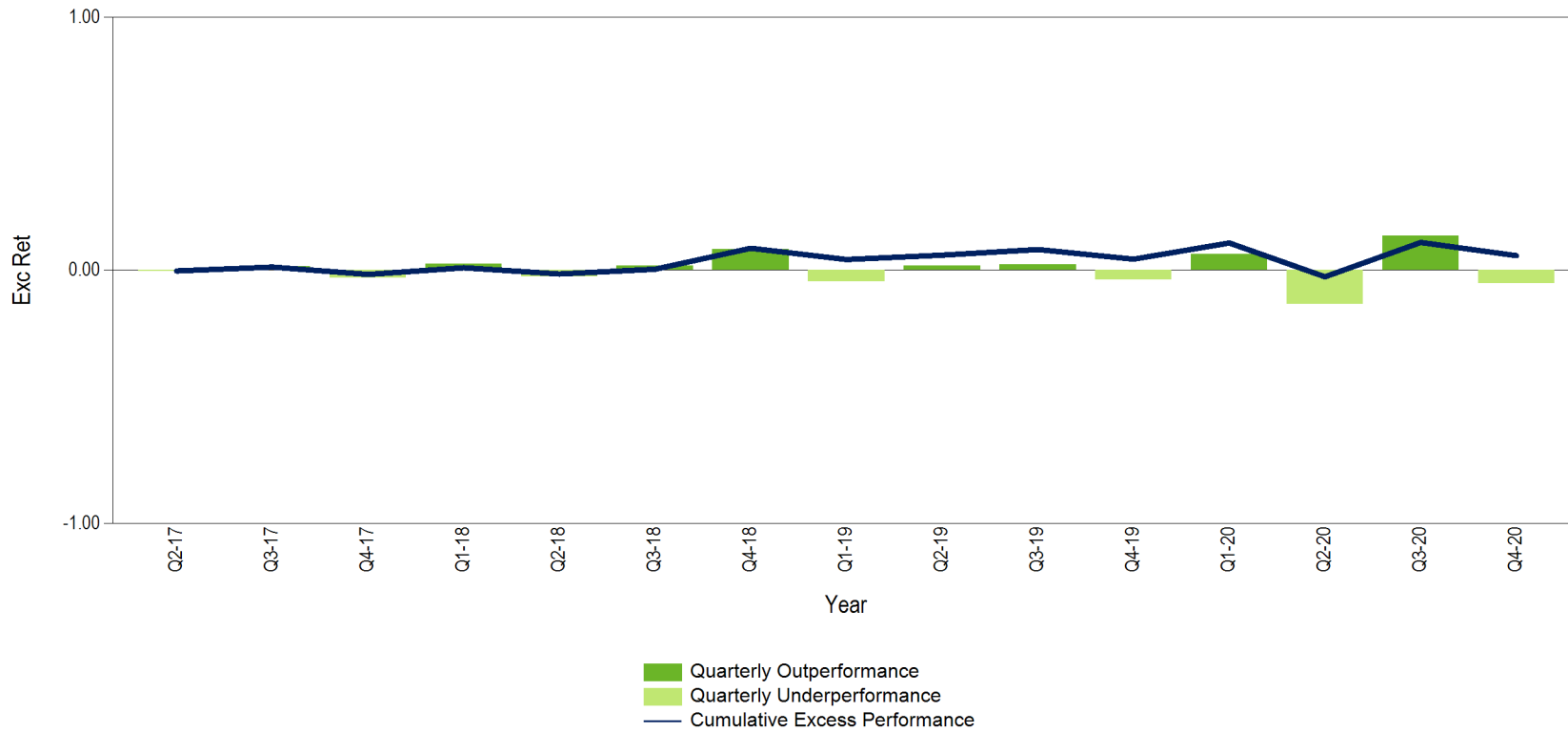




# Los Angeles City Employees' Retirement System

## RHUMBLINE ADVISORS RUSSELL 2000

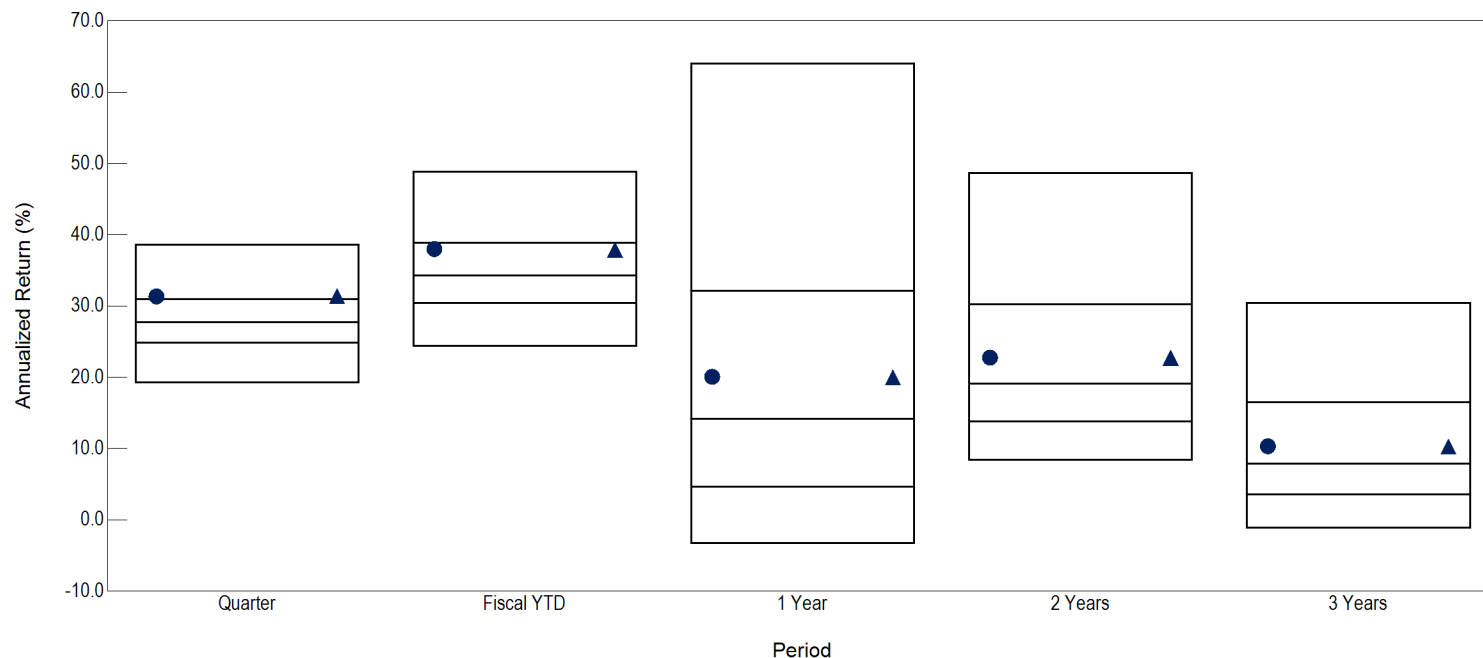
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# RHUMBLINE ADVISORS RUSSELL 2000

RhumbLine Advisers Russell 2000 vs. eV US Small Cap Equity Net



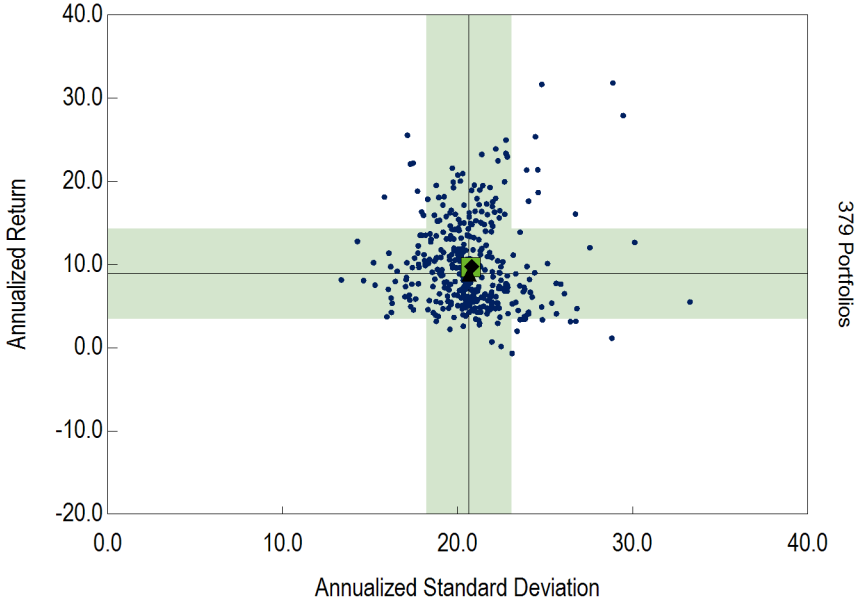
	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	38.59		48.85		64.04		48.65		30.42	
25th Percentile	31.05		38.91		32.16		30.29		16.58	
Median	27.81		34.39		14.22		19.19		7.92	
75th Percentile	24.93		30.50		4.72		13.90		3.65	
95th Percentile	19.34		24.48		-3.21		8.53		-1.06	
# of Portfolios	421		421		421		415		412	
● RhumbLine Advisers Russell 2000	31.32	(24)	37.97	(31)	20.05	(40)	22.74	(40)	10.31	(41)
▲ Russell 2000	31.37	(24)	37.85	(31)	19.96	(40)	22.71	(40)	10.25	(41)



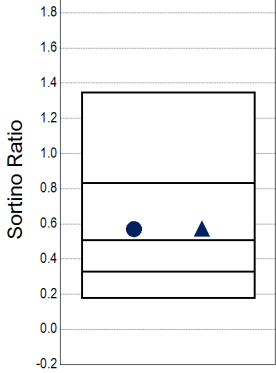
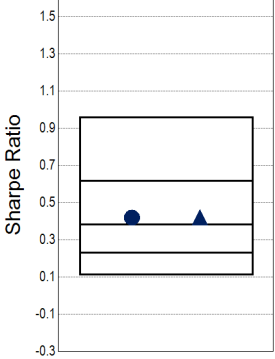
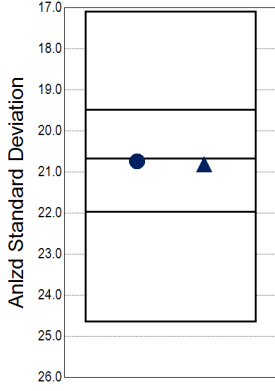
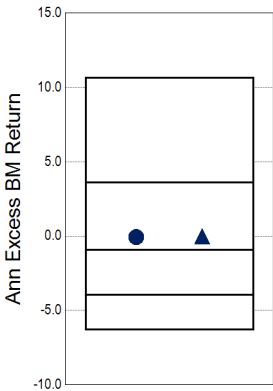
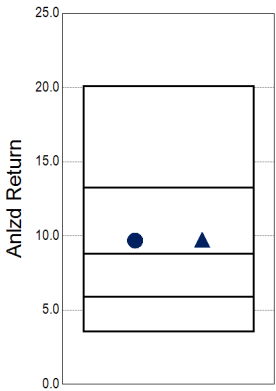
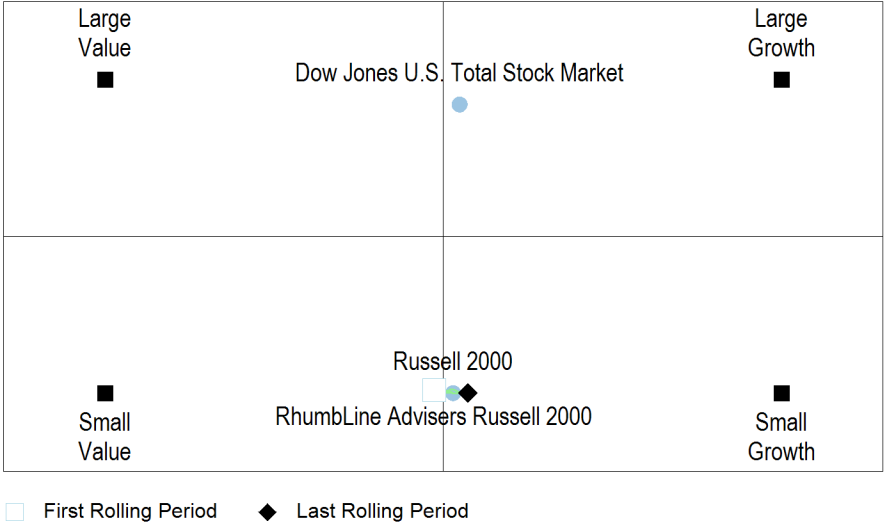
Los Angeles City Employees' Retirement System

# RHUMBLINE ADVISORS RUSSELL 2000

Since Inception Risk Return



Since Inception Style Map



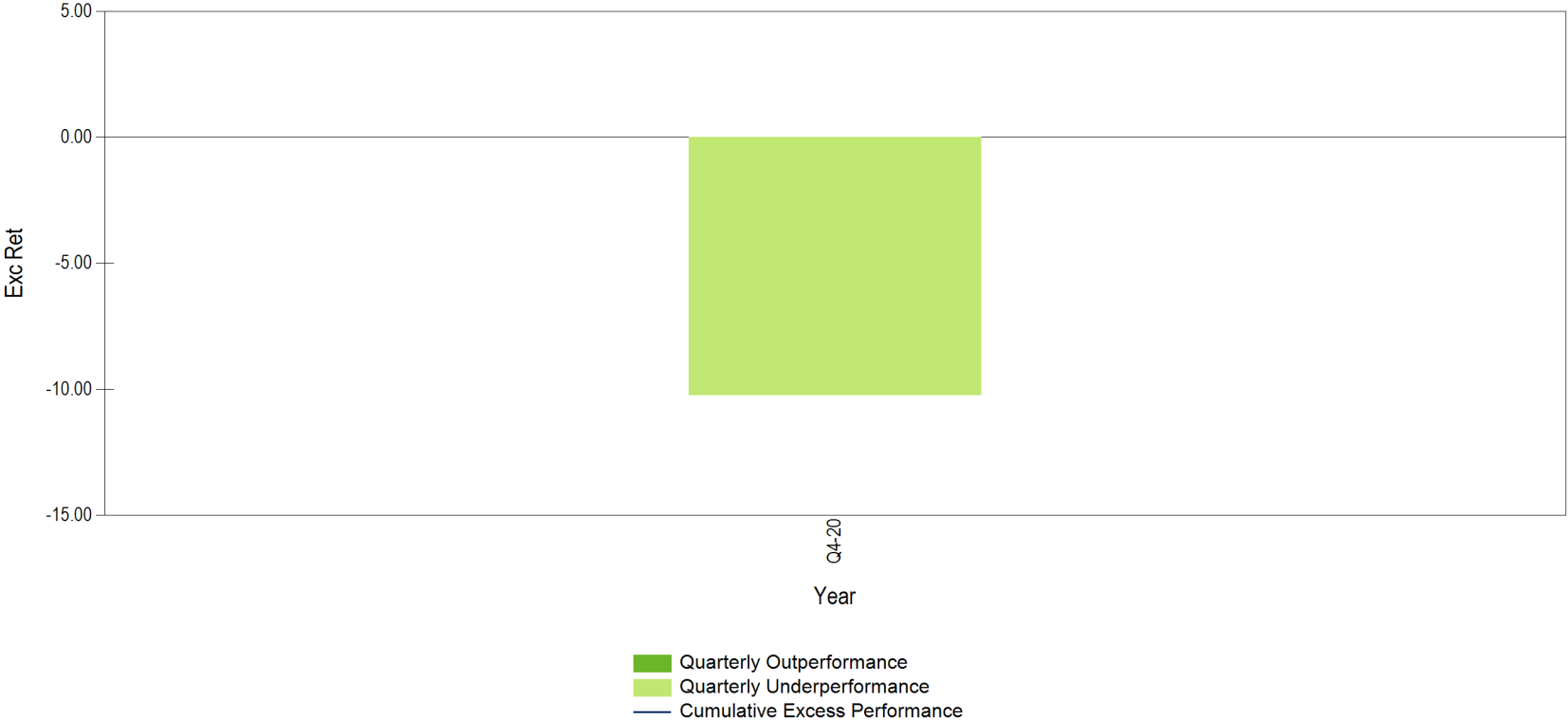
- RhumbLine Advisers Russell 2000
- ▲ Russell 2000
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

# COPELAND CAPITAL MANAGEMENT

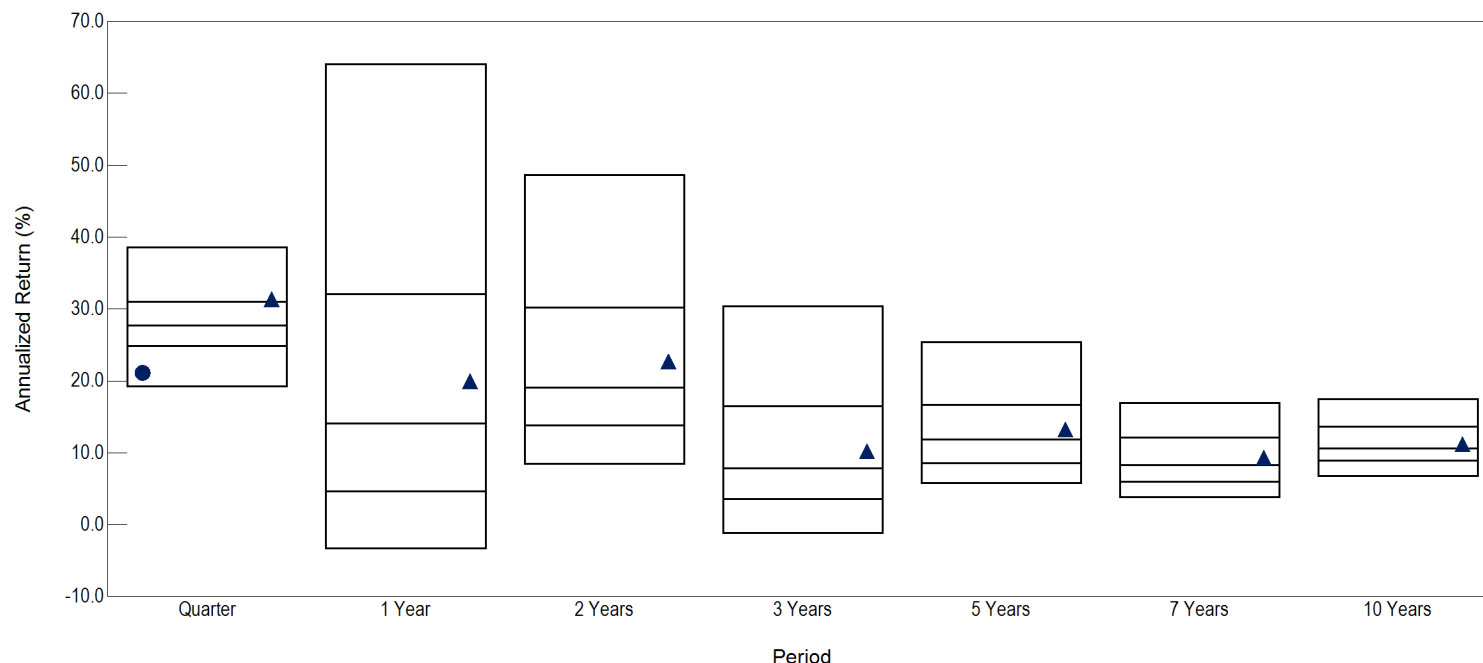
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# COPELAND CAPITAL MANAGEMENT

Copeland Capital Management vs. eV US Small Cap Equity Net



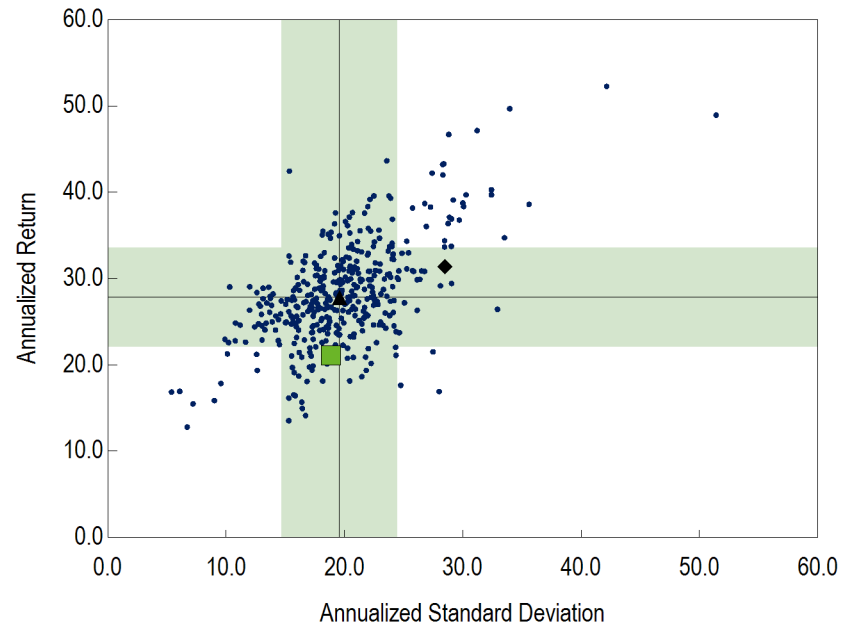
	Return (Rank)													
5th Percentile	38.59	64.04	48.65	30.42	25.41	16.93	17.46							
25th Percentile	31.05	32.16	30.29	16.58	16.76	12.23	13.74							
Median	27.81	14.22	19.19	7.92	11.93	8.35	10.67							
75th Percentile	24.93	4.72	13.90	3.65	8.62	6.05	9.03							
95th Percentile	19.34	-3.21	8.53	-1.06	5.90	3.98	6.83							
# of Portfolios	421	421	415	412	391	365	329							
● Copeland Capital Management	21.12	(92)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Russell 2000	31.37	(24)	19.96	(40)	22.71	(40)	10.25	(41)	13.26	(42)	9.34	(43)	11.20	(45)



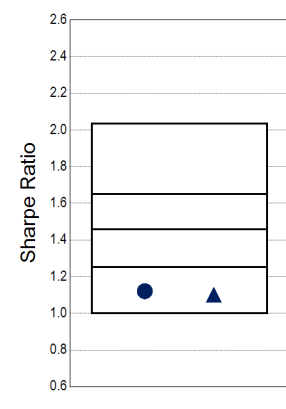
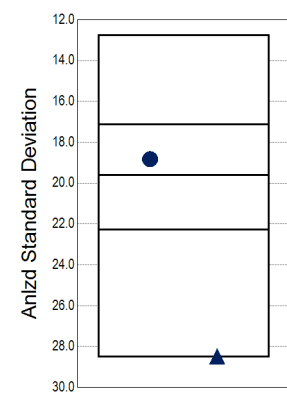
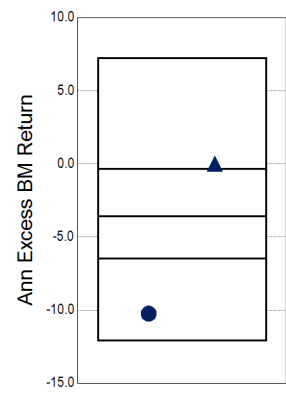
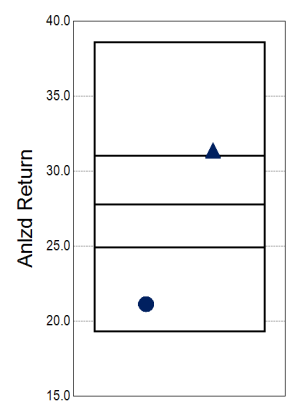
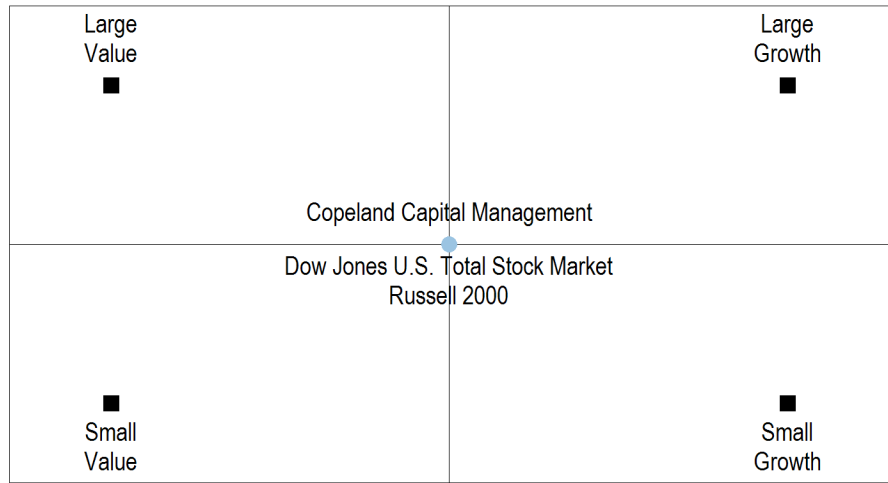
Los Angeles City Employees' Retirement System

# COPELAND CAPITAL MANAGEMENT

Since Inception Risk Return



U.S. Effective Style Map  
3 Months Ending December 31, 2020



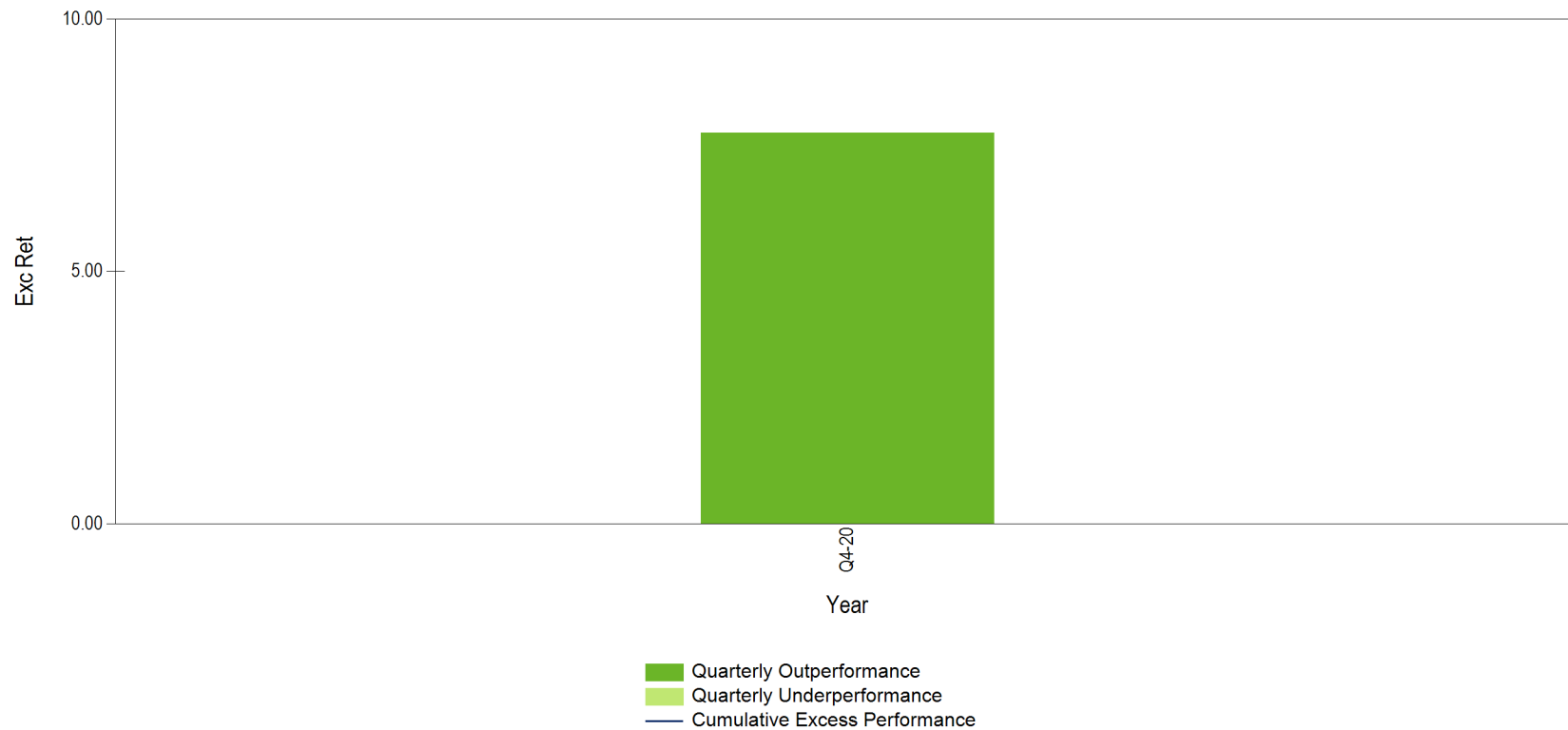
- Copeland Capital Management
- ▲ Russell 2000
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



## Los Angeles City Employees' Retirement System

# GRANAHAN INVESTMENT MANAGEMENT

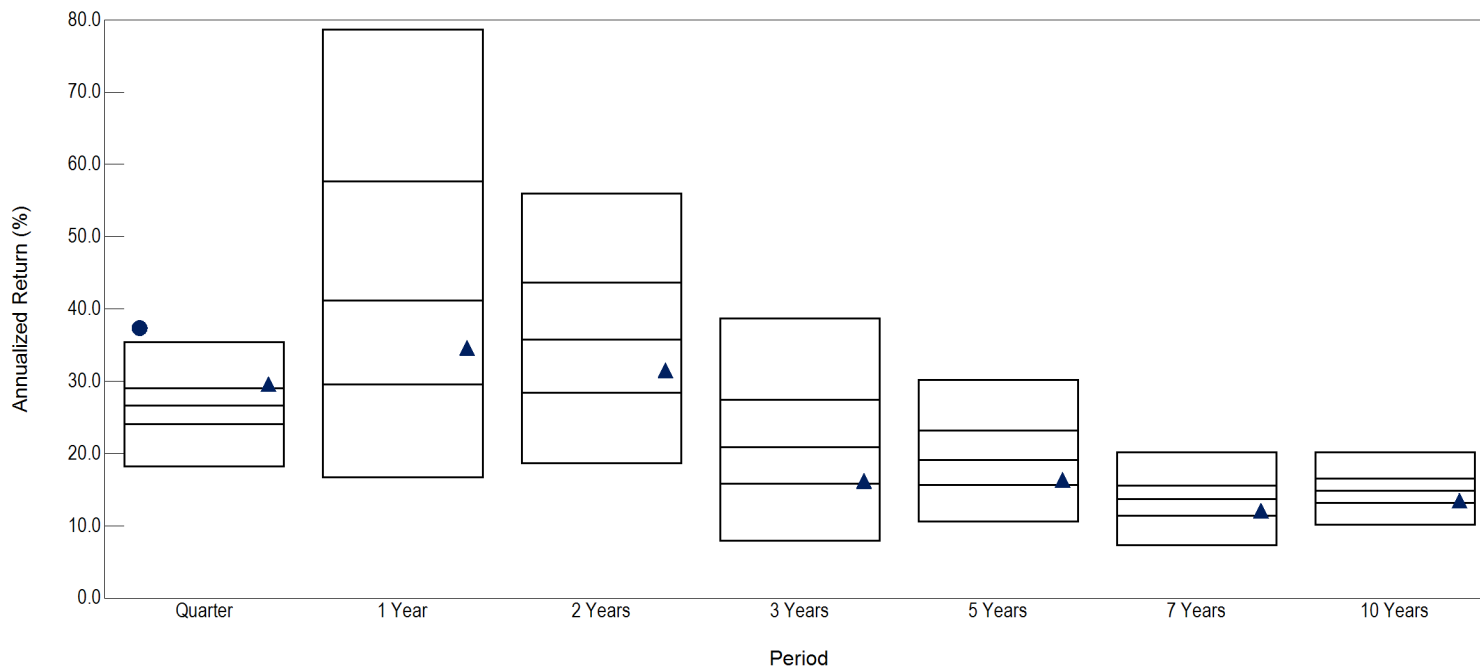
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# GRANAHAN INVESTMENT MANAGEMENT

Granahan Investment Management vs. eV US Small Cap Growth Equity Net



	Return (Rank)													
5th Percentile	35.44		78.62		55.98		38.67		30.18		20.18		20.15	
25th Percentile	29.15		57.70		43.75		27.49		23.31		15.67		16.63	
Median	26.70		41.25		35.83		20.92		19.20		13.76		14.94	
75th Percentile	24.11		29.63		28.53		15.90		15.72		11.50		13.26	
95th Percentile	18.32		16.83		18.77		8.02		10.68		7.39		10.24	
# of Portfolios	130		130		130		130		122		112		105	
● Granahan Investment Management	37.35	(3)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Russell 2000 Growth	29.61	(24)	34.63	(66)	31.52	(63)	16.19	(73)	16.36	(73)	12.08	(71)	13.48	(73)

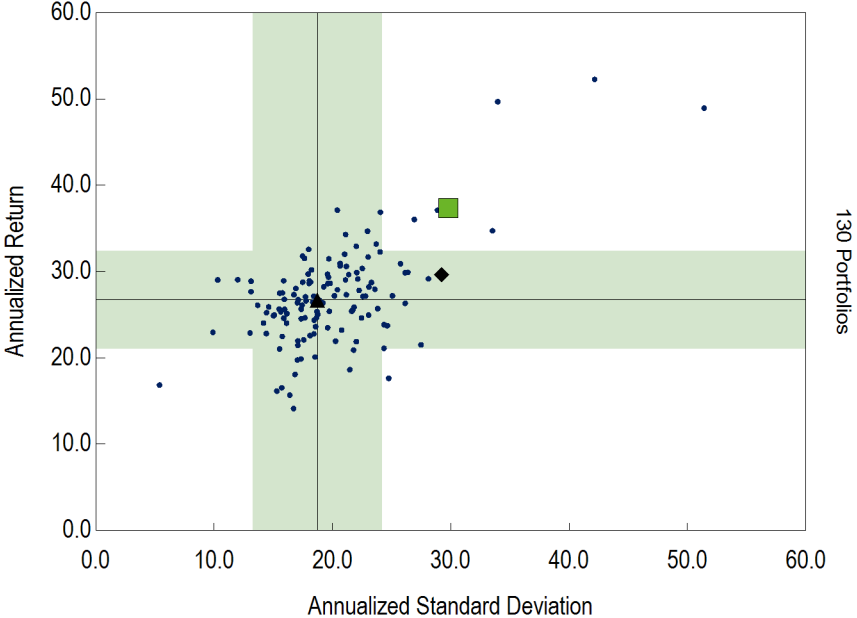




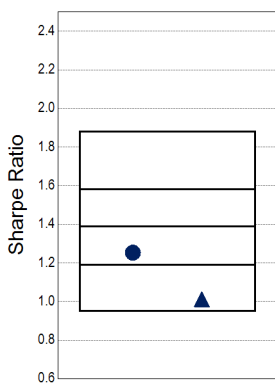
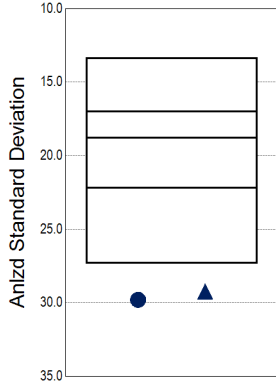
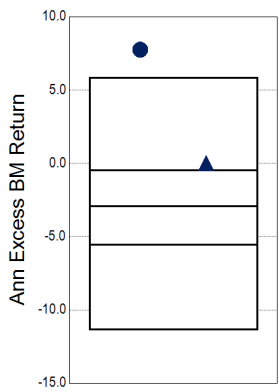
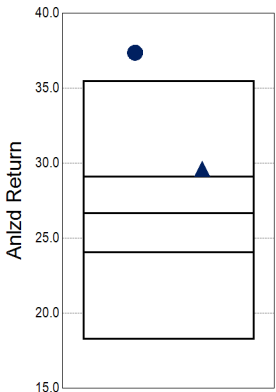
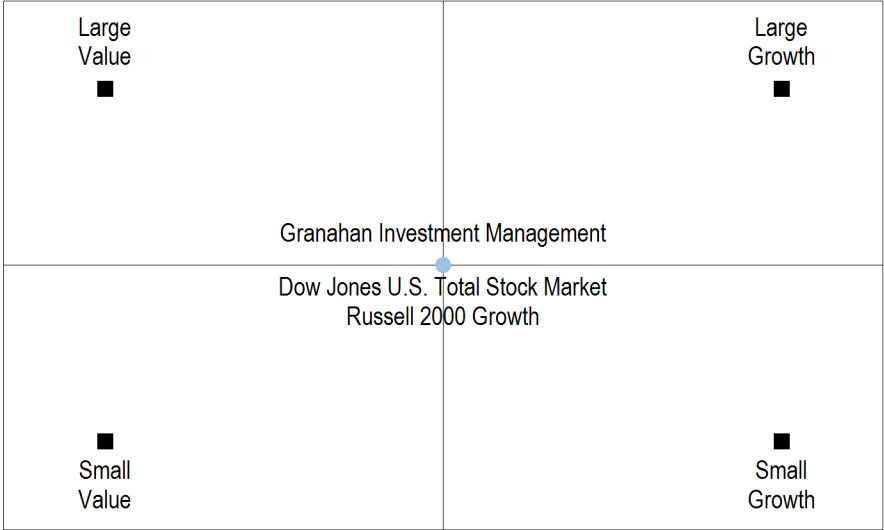
Los Angeles City Employees' Retirement System

# GRANAHAN INVESTMENT MANAGEMENT

Since Inception Risk Return



U.S. Effective Style Map



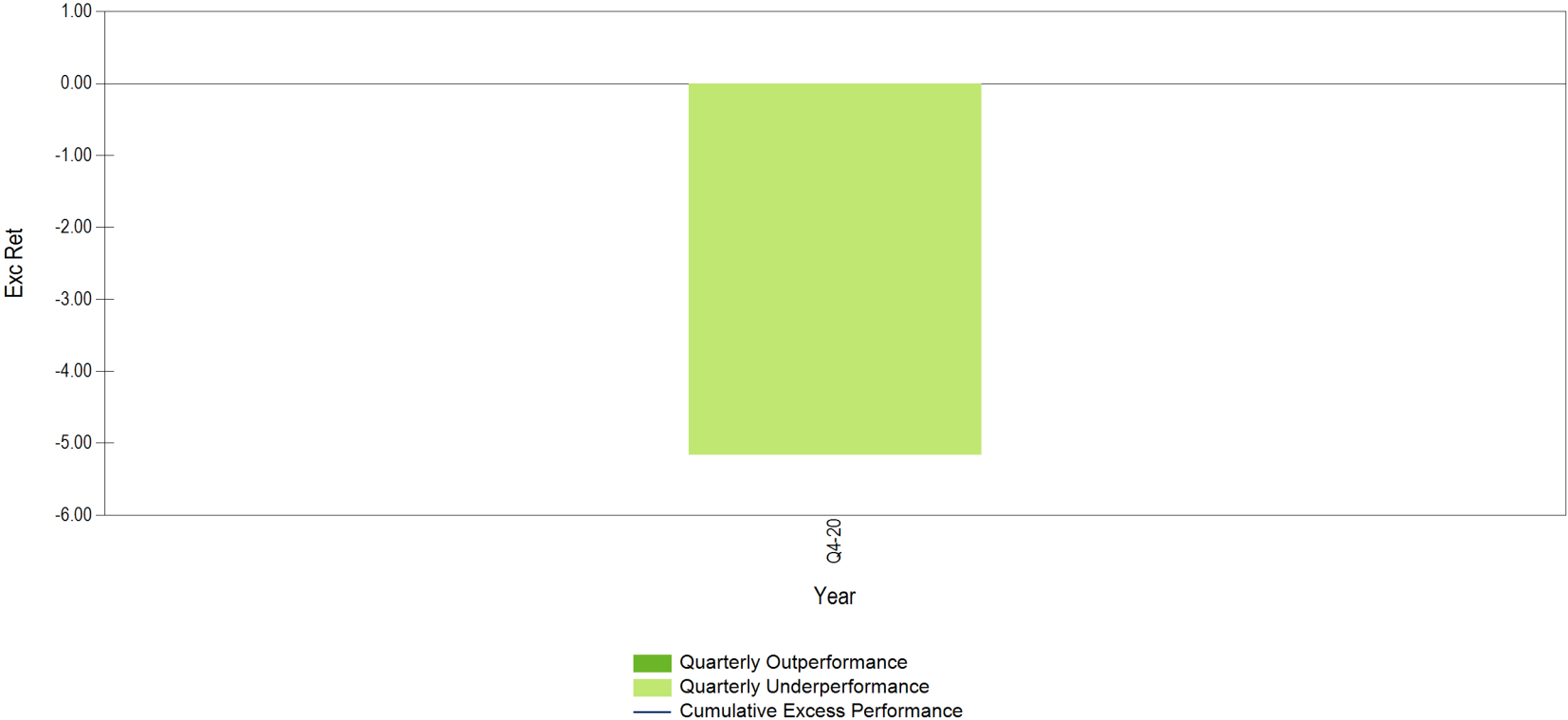
- Granahan Investment Mana...
- ▲ Russell 2000 Growth
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## SEGALL, BRYANT & HAMILL

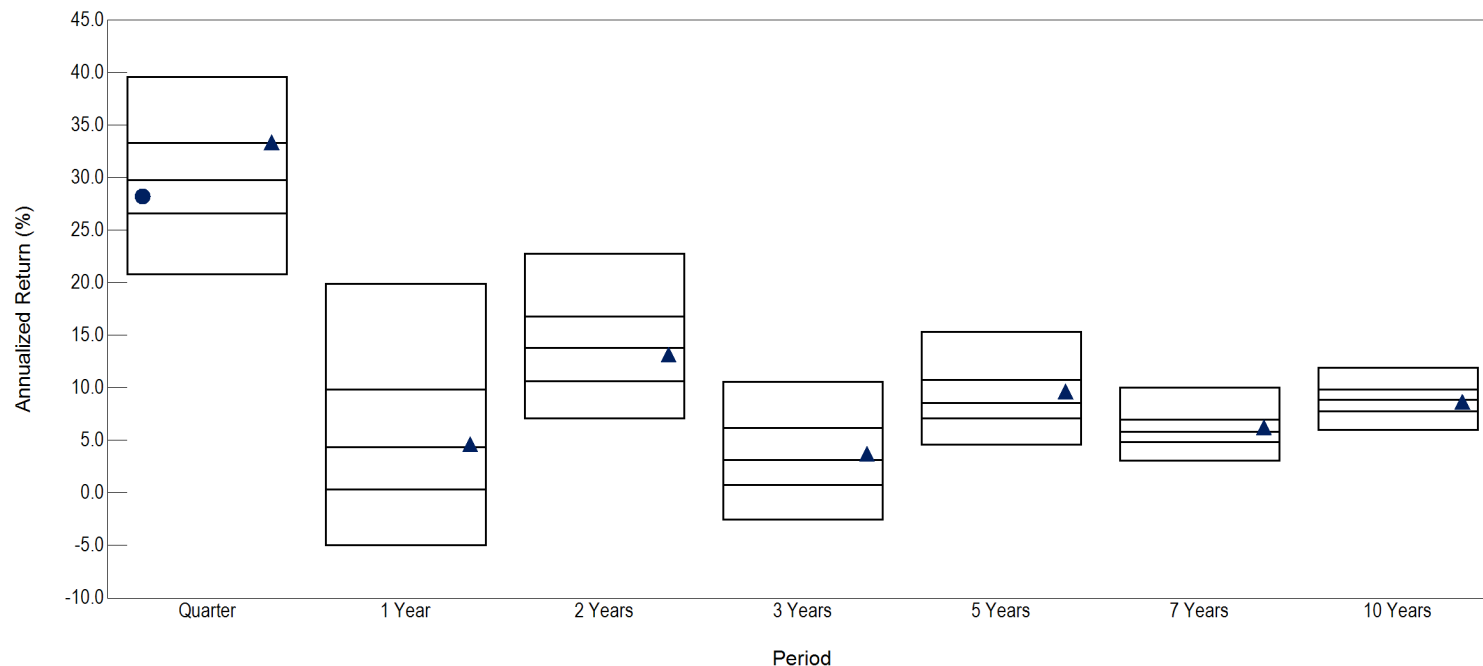
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

SEGALL, BRYANT & HAMILL

Segall, Bryant & Hamill vs. eV US Small Cap Value Equity Net



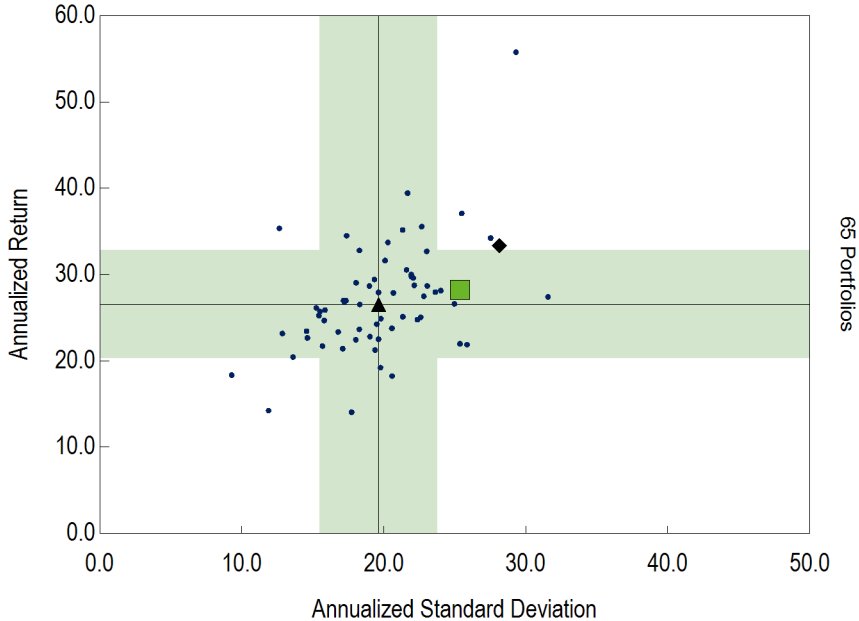
	Return (Rank)													
5th Percentile	39.59	19.88	22.72	10.56	15.32	9.99	11.92							
25th Percentile	33.33	9.89	16.84	6.25	10.79	7.05	9.87							
Median	29.79	4.42	13.86	3.19	8.62	5.90	8.93							
75th Percentile	26.67	0.41	10.70	0.80	7.17	4.89	7.84							
95th Percentile	20.87	-4.93	7.14	-2.49	4.68	3.16	6.07							
# of Portfolios	178	178	174	171	165	155	142							
● Segall, Bryant & Hamill	28.20	(60)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Russell 2000 Value	33.36	(25)	4.63	(50)	13.17	(57)	3.72	(47)	9.65	(37)	6.25	(43)	8.66	(56)



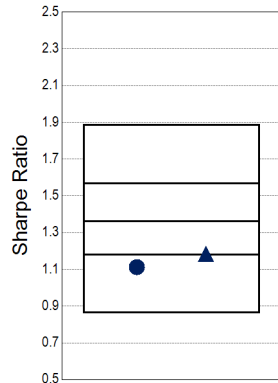
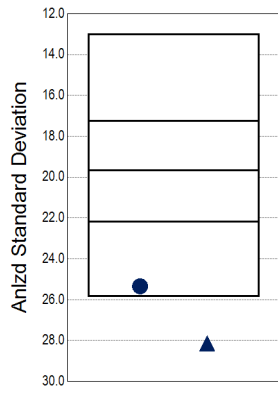
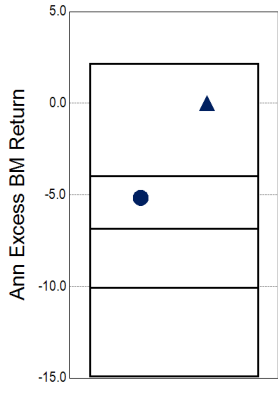
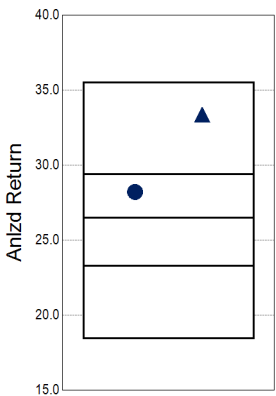
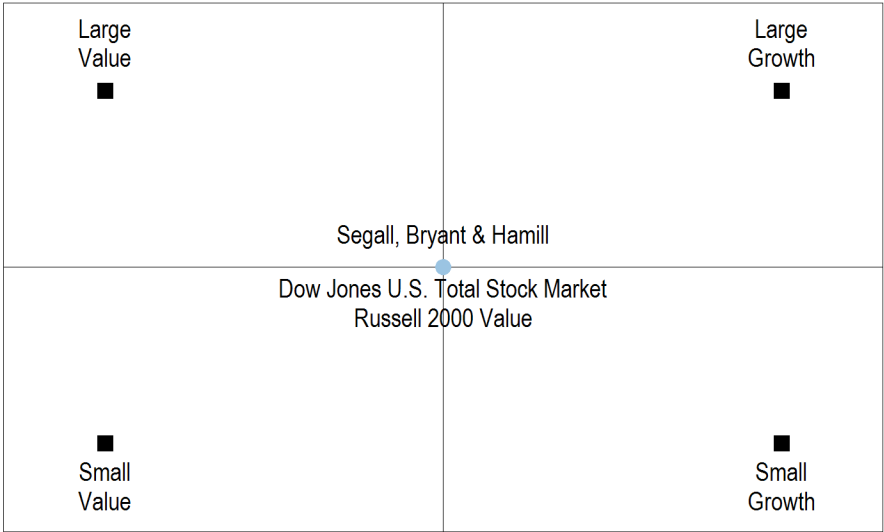
# Los Angeles City Employees' Retirement System

## SEGALL, BRYANT & HAMILL

Since Inception Risk Return



U.S. Effective Style Map



- Segall, Bryant & Hamill
- ▲ Russell 2000 Value
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# NON-U.S. EQUITY MANAGER PERFORMANCE

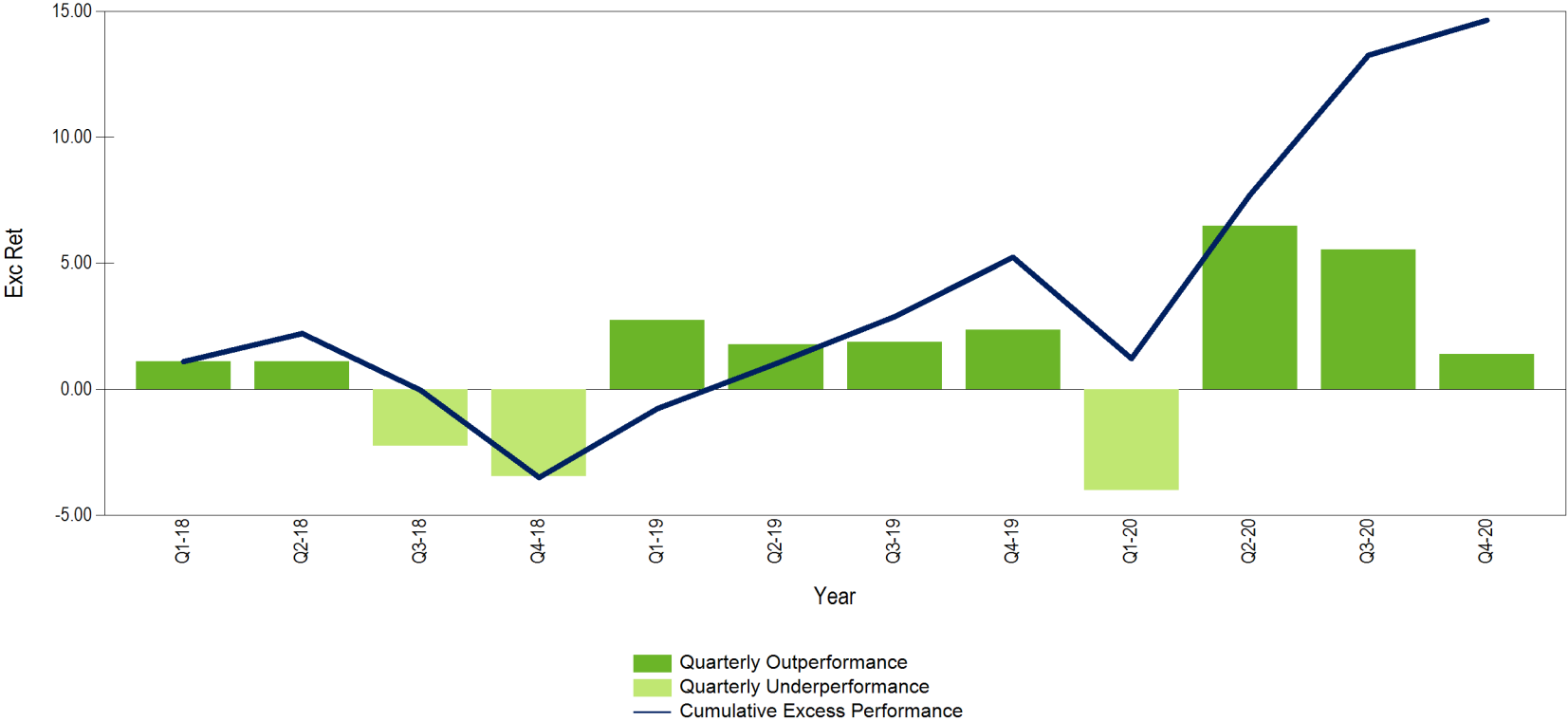
NEPC, LLC

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Los Angeles City Employees' Retirement System

# BARROW HANLEY

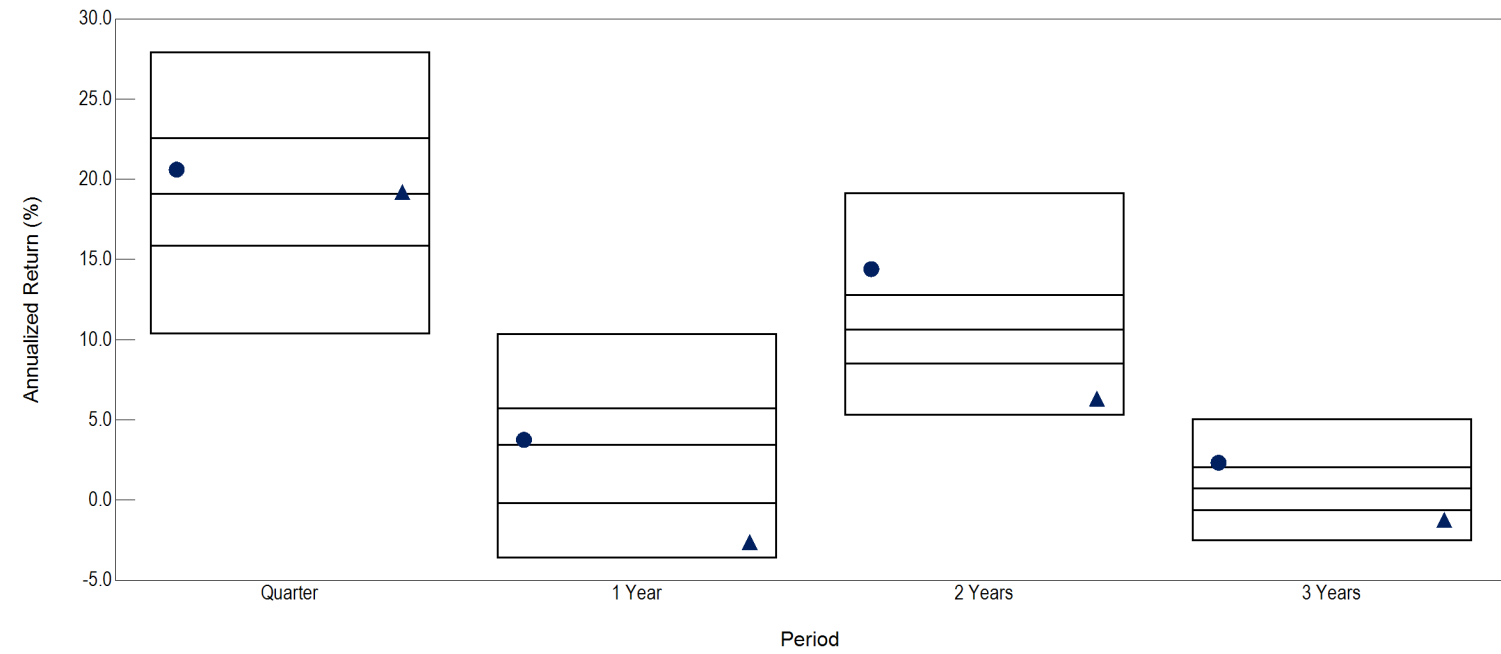
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# BARROW HANLEY

Barrow Hanley vs. eV EAFE Value Equity Net



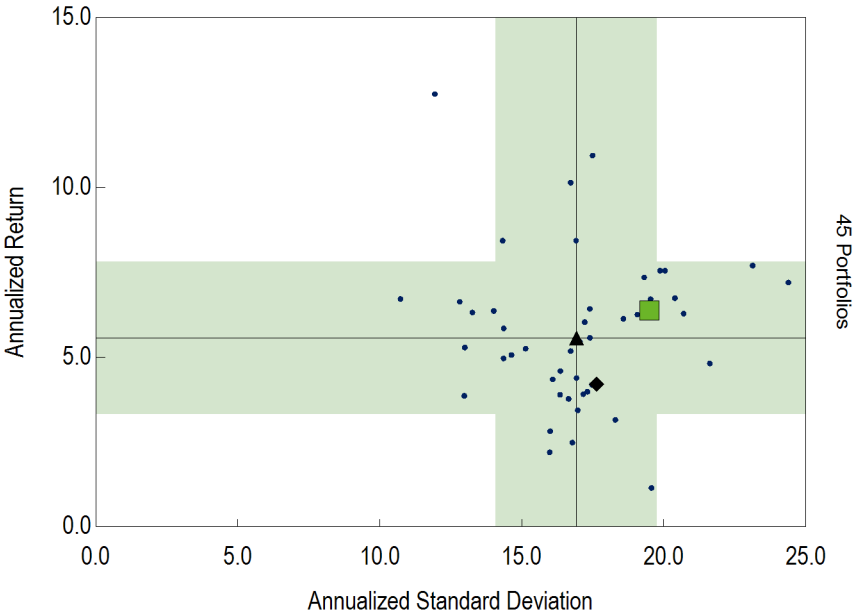
	Quarter		1 Year		2 Years		3 Years	
	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)
5th Percentile	27.91		10.35		19.14		5.06	
25th Percentile	22.59		5.74		12.82		2.08	
Median	19.15		3.47		10.66		0.77	
75th Percentile	15.91		-0.13		8.56		-0.59	
95th Percentile	10.42		-3.55		5.38		-2.45	
# of Portfolios	59		59		54		51	
● Barrow Hanley	20.60	(37)	3.75	(46)	14.39	(16)	2.33	(21)
▲ MSCI EAFE Value	19.20	(49)	-2.63	(91)	6.32	(91)	-1.24	(78)



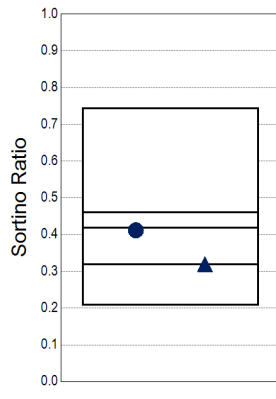
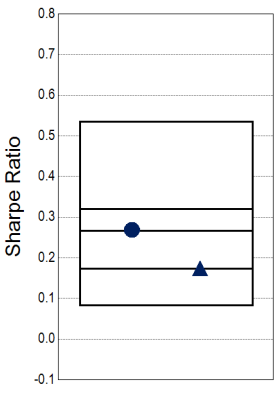
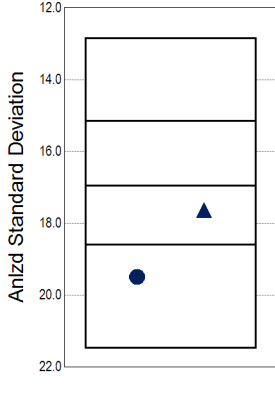
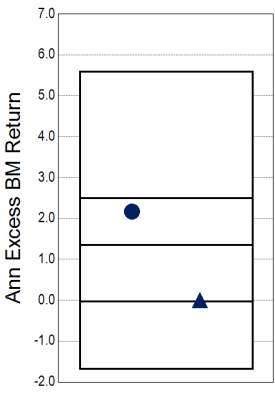
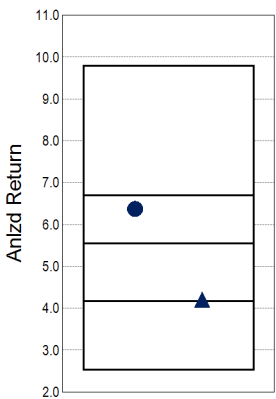
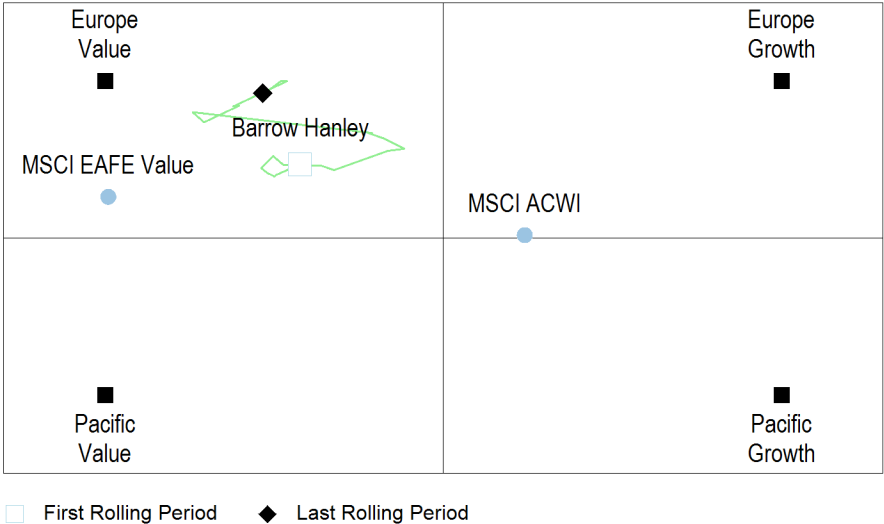
Los Angeles City Employees' Retirement System

**BARROW HANLEY**

**5 Year Risk Return**



**5 Year Style Map**



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

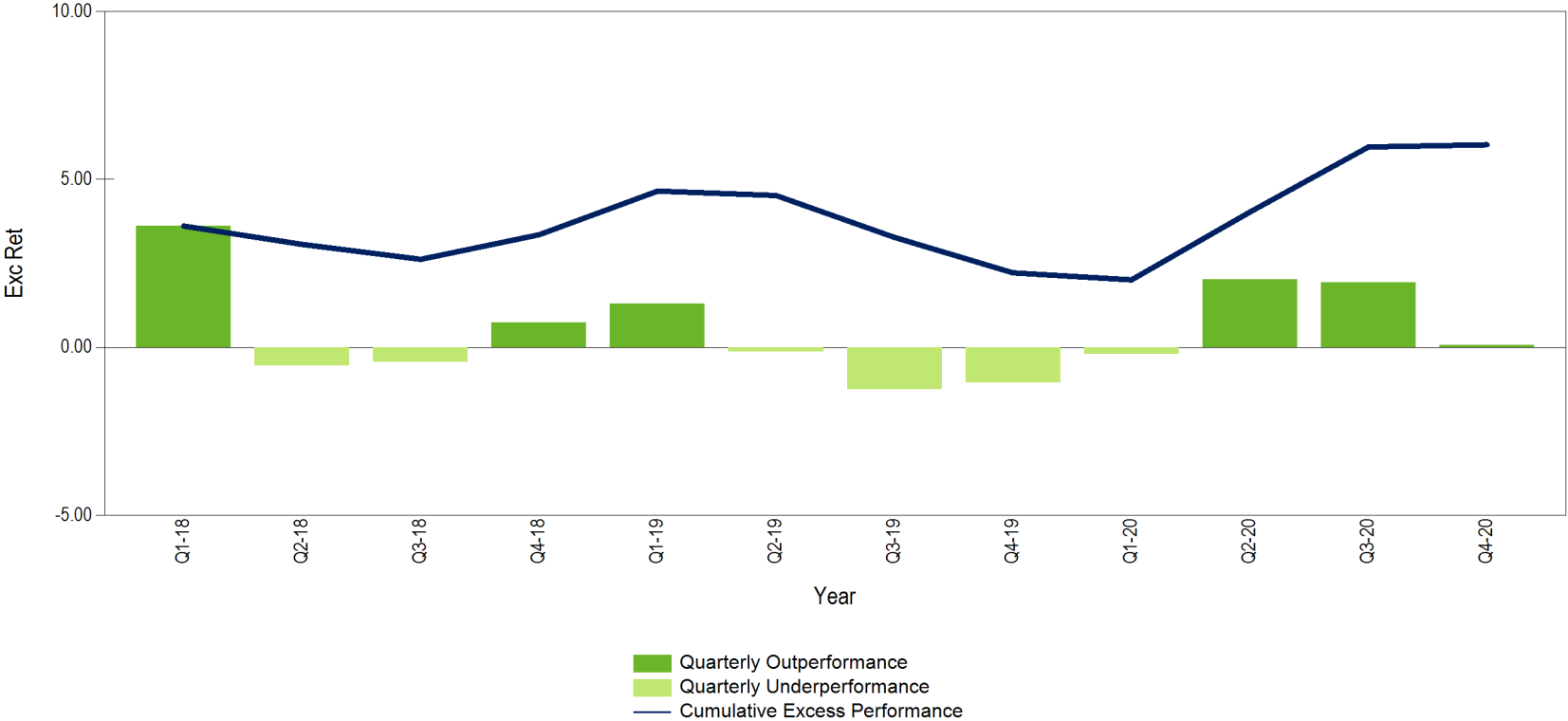




Los Angeles City Employees' Retirement System

# LAZARD ASSET MANAGEMENT

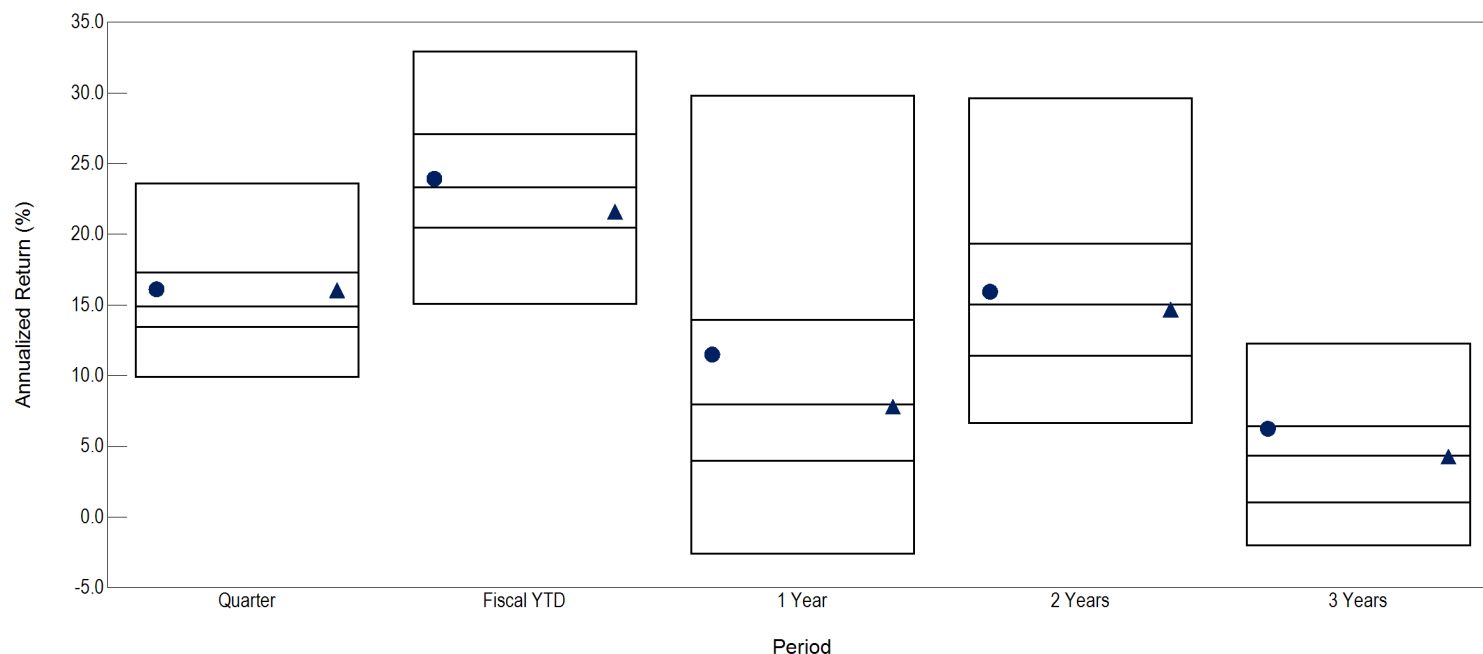
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# LAZARD ASSET MANAGEMENT

Lazard Asset Management vs. eV All EAFE Equity Net



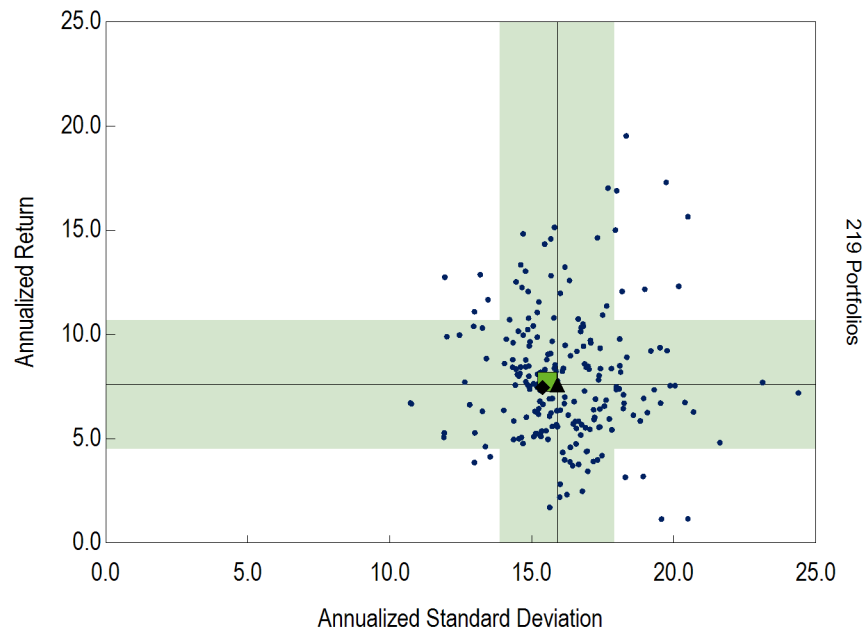
	Return (Rank)									
5th Percentile	23.60		32.94		29.81		29.62		12.27	
25th Percentile	17.36		27.11		14.00		19.38		6.48	
Median	14.95		23.36		8.02		15.07		4.40	
75th Percentile	13.51		20.50		4.02		11.45		1.07	
95th Percentile	9.97		15.12		-2.56		6.70		-1.95	
# of Portfolios	255		255		255		248		243	
● Lazard Asset Management	16.11	(36)	23.93	(46)	11.50	(34)	15.94	(43)	6.25	(27)
▲ MSCI EAFE	16.05	(37)	21.61	(64)	7.81	(53)	14.70	(56)	4.28	(52)



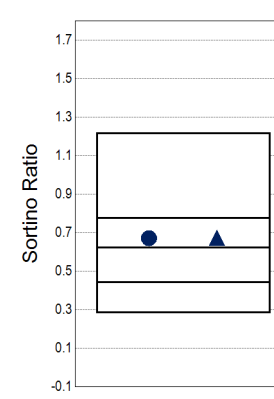
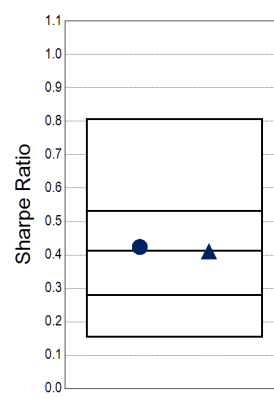
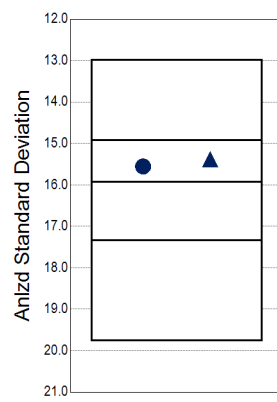
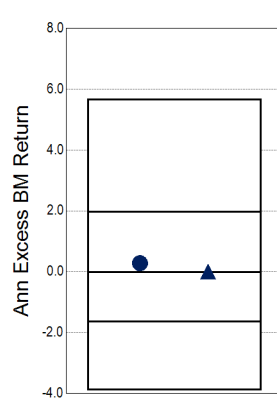
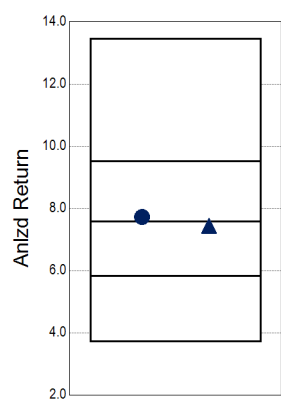
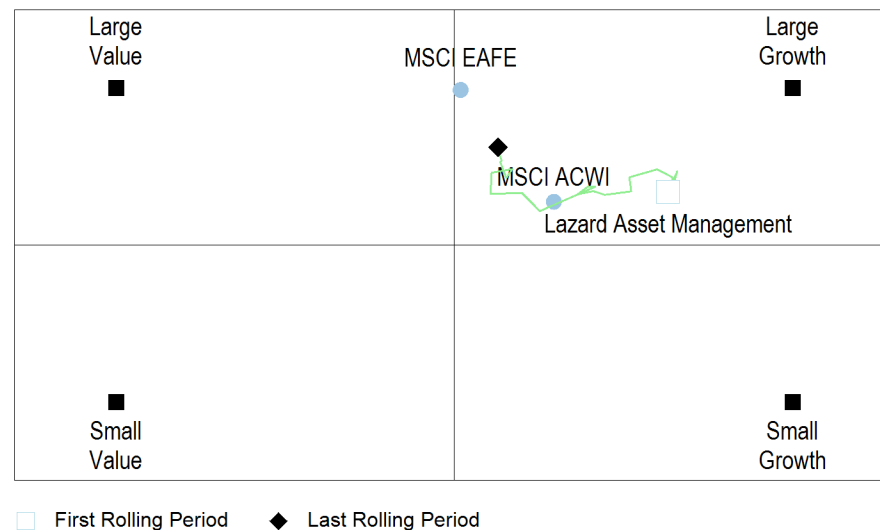
Los Angeles City Employees' Retirement System

# LAZARD ASSET MANAGEMENT

5 Year Risk Return



5 Year Style Map

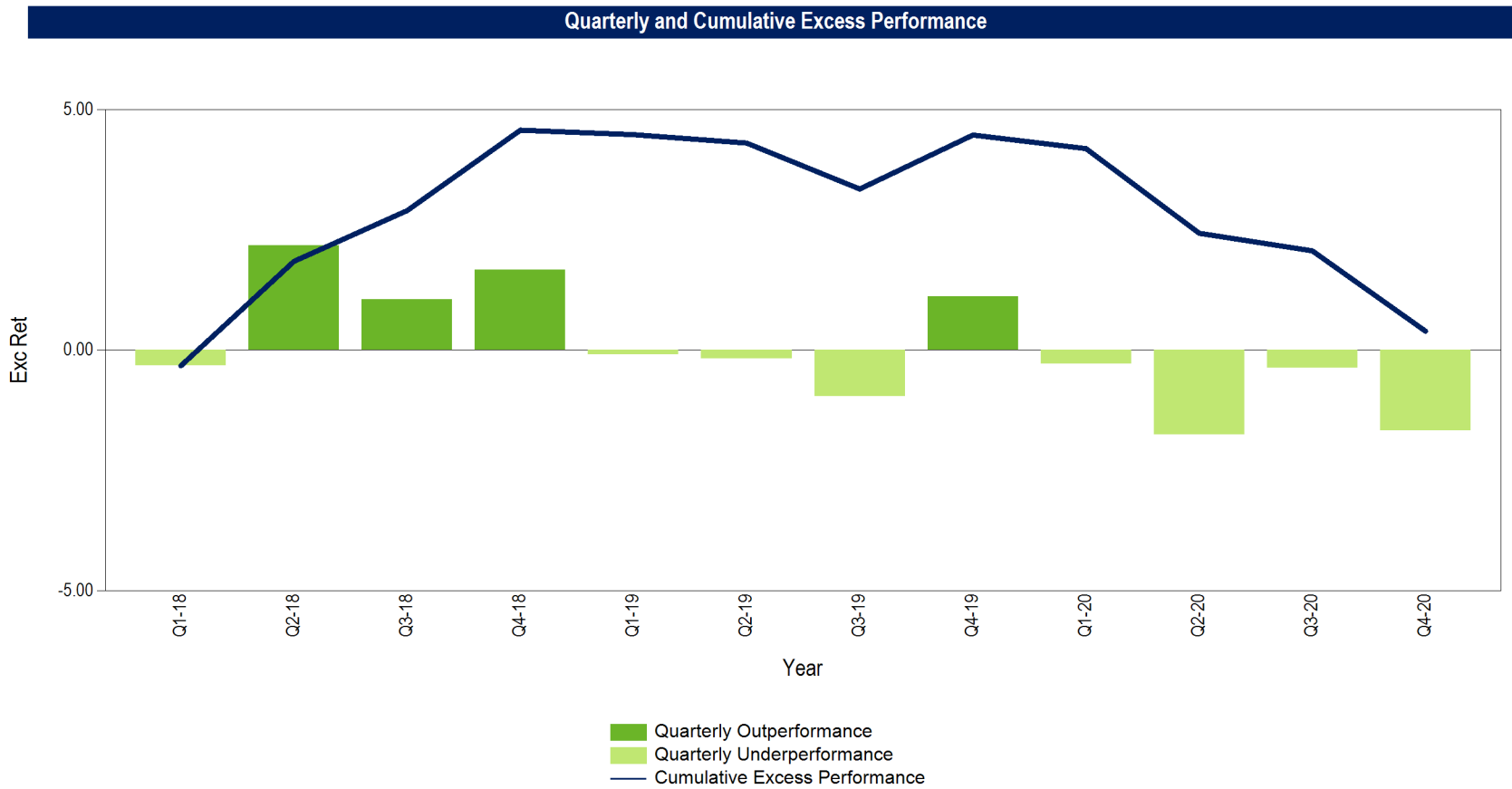


- Lazard Asset Management
- ▲ MSCI EAFE
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

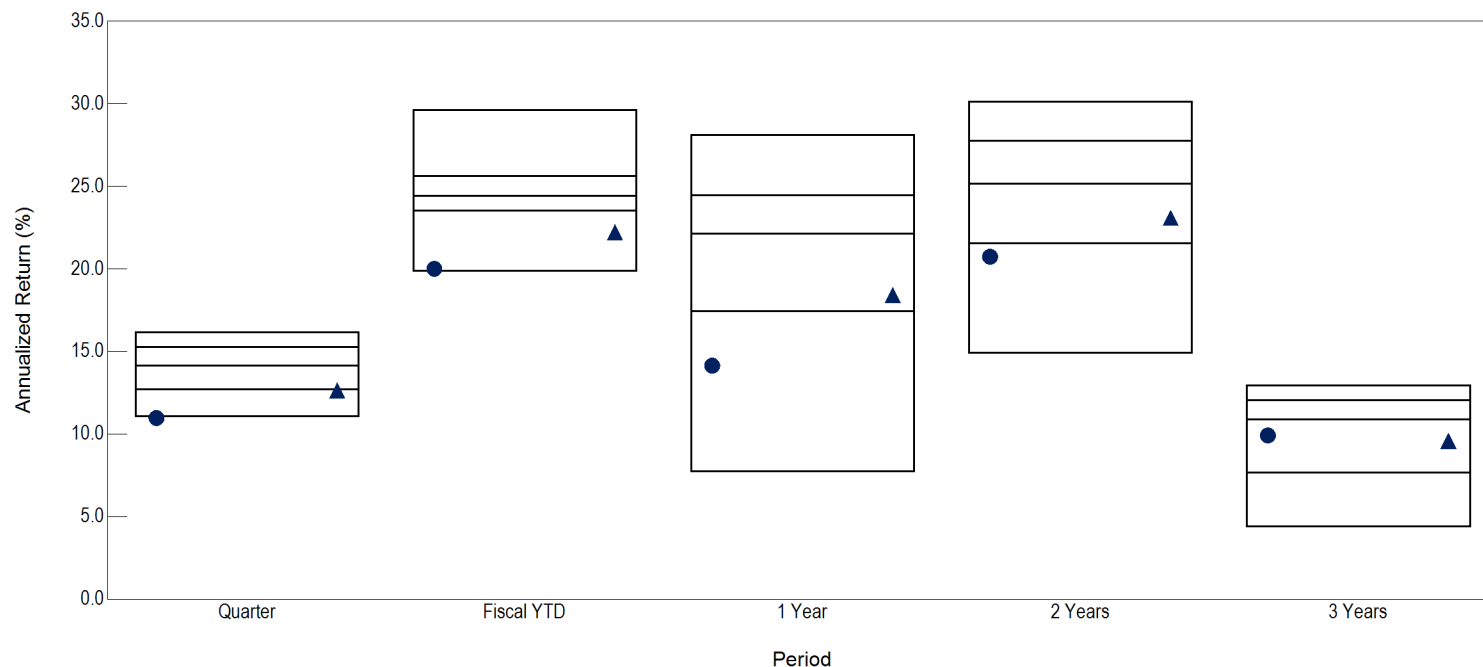
## MFS INSTITUTIONAL ADVISORS



Los Angeles City Employees' Retirement System

# MFS INSTITUTIONAL ADVISORS

MFS Institutional Advisors vs. eV EAFE All Cap Growth Net



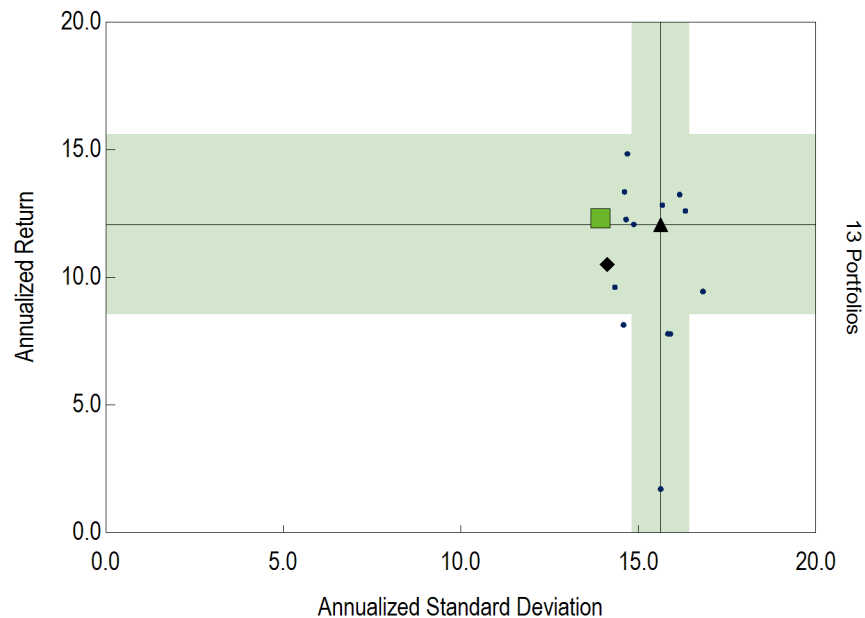
	Return (Rank)									
5th Percentile	16.16		29.59		28.09		30.09		12.95	
25th Percentile	15.30		25.64		24.47		27.76		12.07	
Median	14.17		24.44		22.14		25.18		10.92	
75th Percentile	12.75		23.55		17.48		21.56		7.68	
95th Percentile	11.12		19.92		7.79		14.93		4.46	
# of Portfolios	14		14		14		14		14	
● MFS Institutional Advisors	10.96	(96)	19.99	(95)	14.13	(87)	20.72	(85)	9.90	(57)
▲ MSCI World ex USA Growth NR USD	12.63	(78)	22.21	(90)	18.41	(72)	23.07	(67)	9.57	(58)



# Los Angeles City Employees' Retirement System

## MFS INSTITUTIONAL ADVISORS

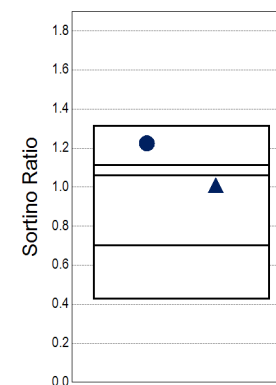
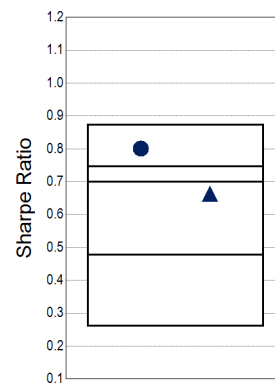
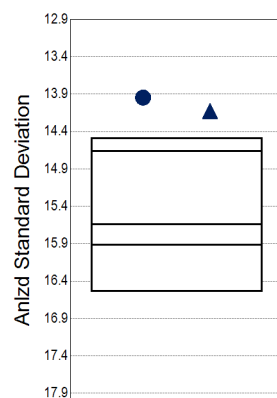
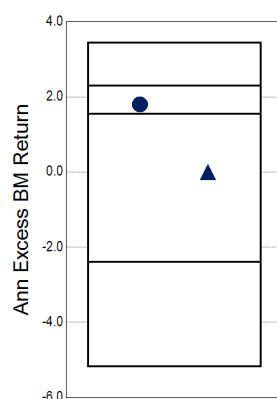
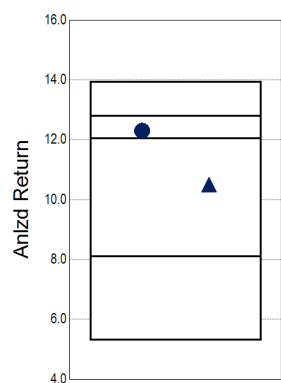
5 Year Risk Return



5 Year Style Map



□ First Rolling Period    ◆ Last Rolling Period



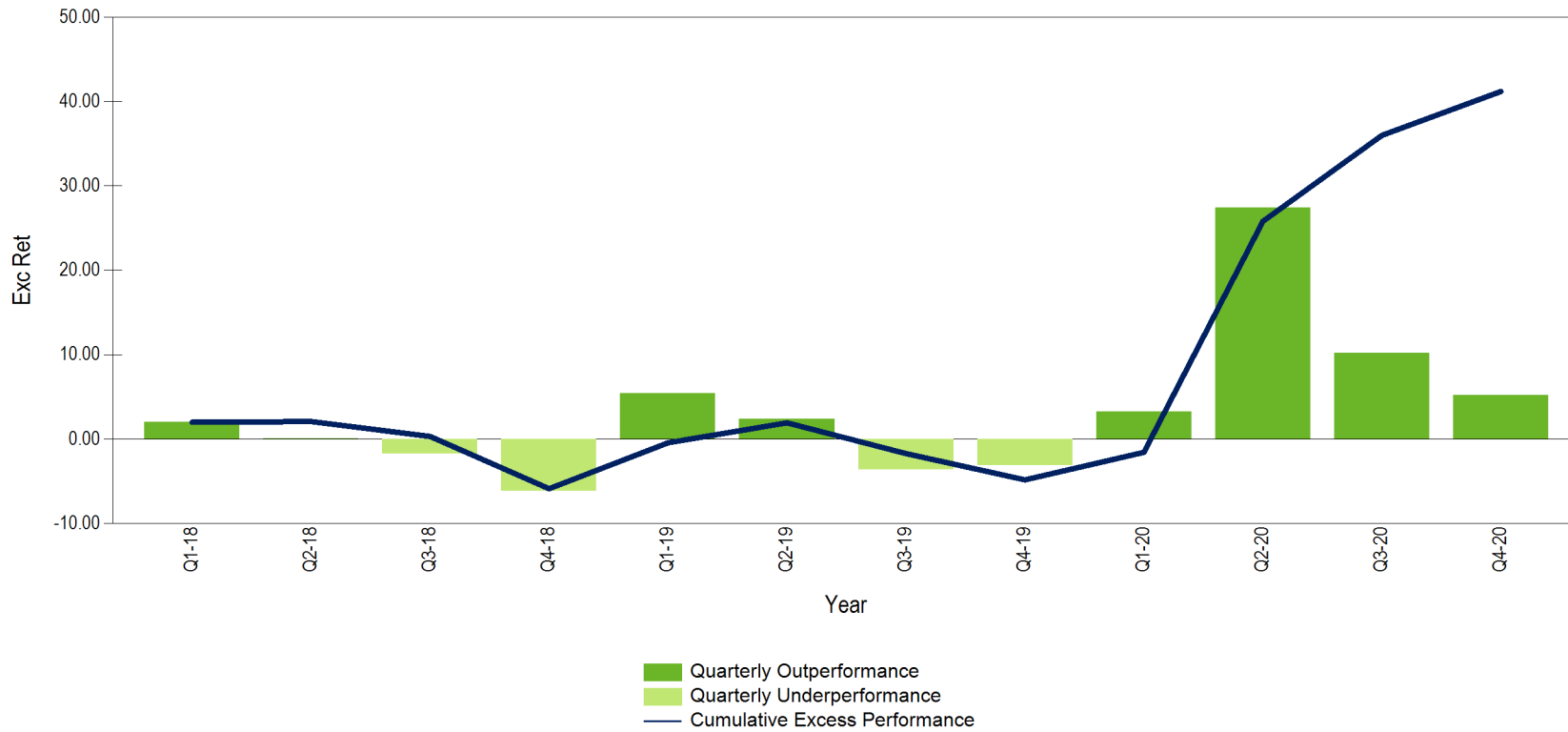
- MFS Institutional Advisors
- ▲ MSCI World ex USA Growth NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## OBERWEIS ASSET MGMT

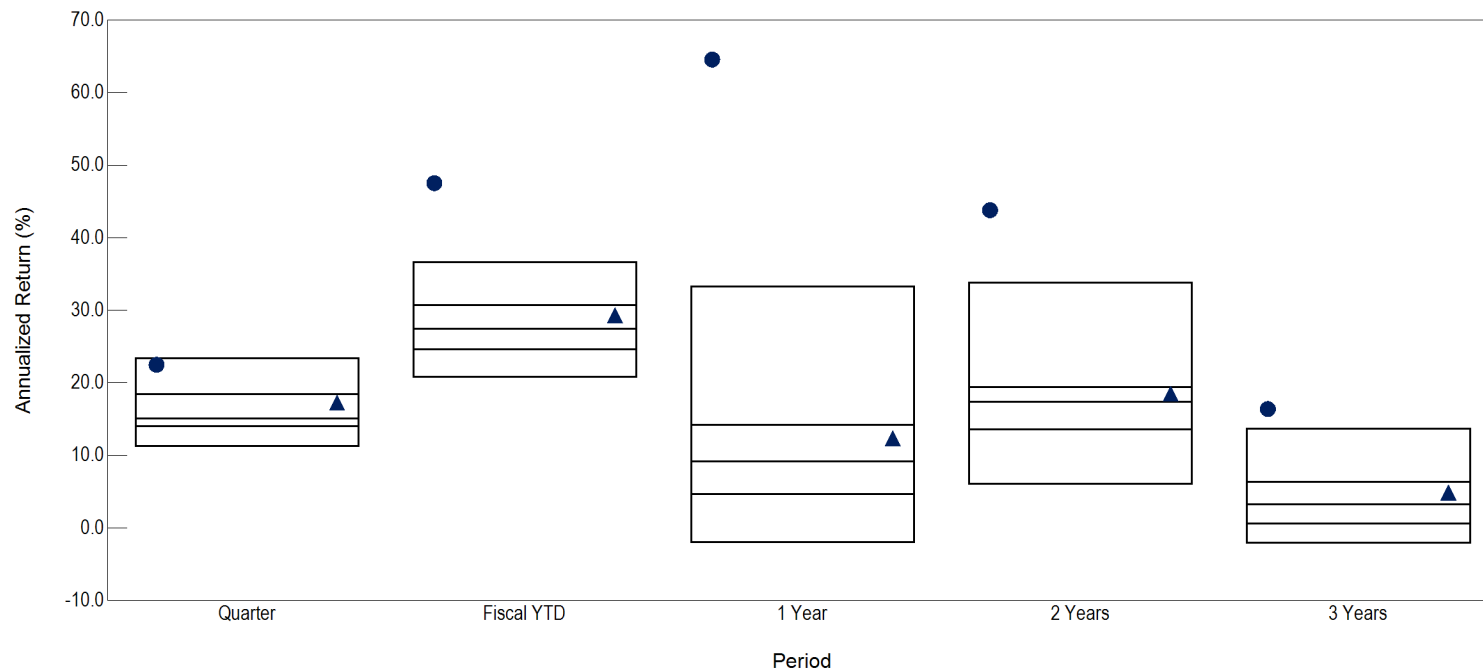
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## OBERWEIS ASSET MGMT

Oberweis Asset Mgmt vs. eV EAFE Small Cap Equity Net



	Return (Rank)									
5th Percentile	23.41		36.62		33.28		33.79		13.68	
25th Percentile	18.55		30.77		14.29		19.52		6.47	
Median	15.19		27.55		9.28		17.48		3.31	
75th Percentile	14.11		24.72		4.73		13.64		0.67	
95th Percentile	11.40		20.95		-1.91		6.14		-1.99	
# of Portfolios	63		63		63		61		59	
● Oberweis Asset Mgmt	22.47	(9)	47.51	(1)	64.55	(1)	43.78	(1)	16.37	(1)
▲ MSCI EAFE Small Cap	17.27	(34)	29.29	(37)	12.34	(40)	18.49	(37)	4.85	(40)

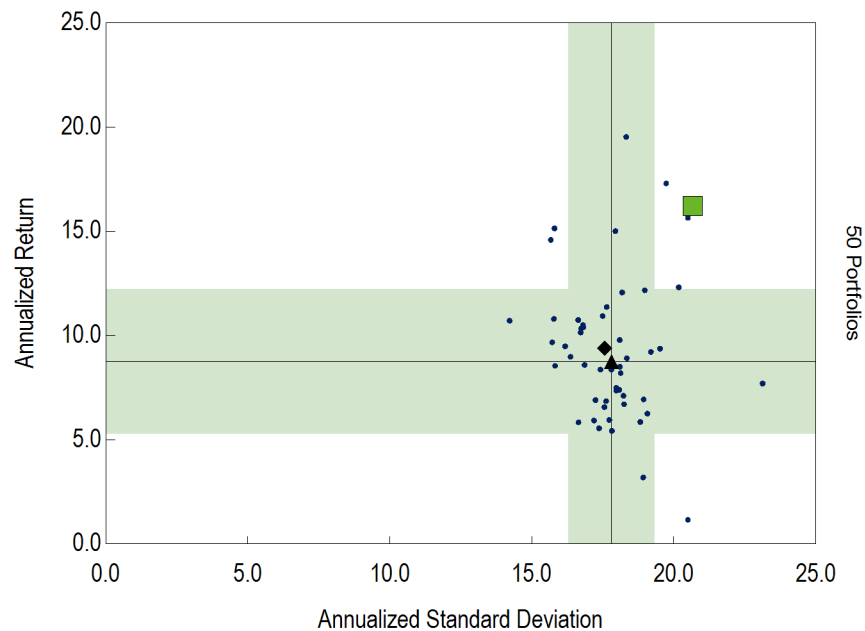




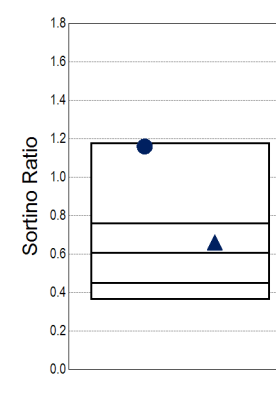
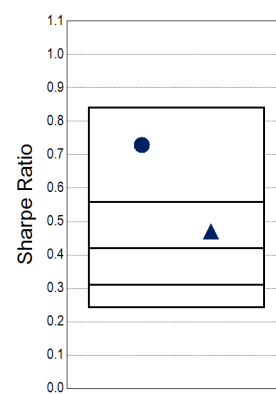
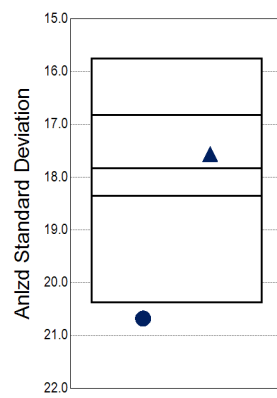
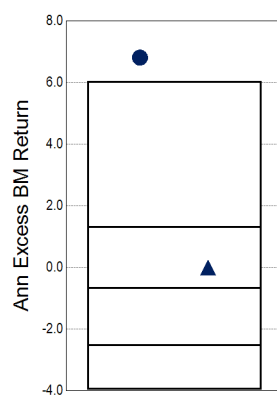
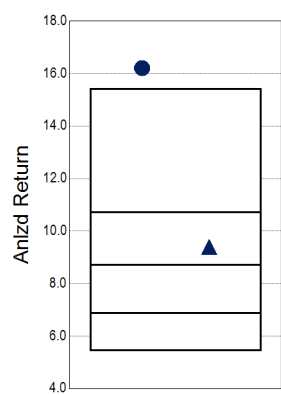
# Los Angeles City Employees' Retirement System

## OBERWEIS ASSET MGMT

5 Year Risk Return



5 Year Style Map



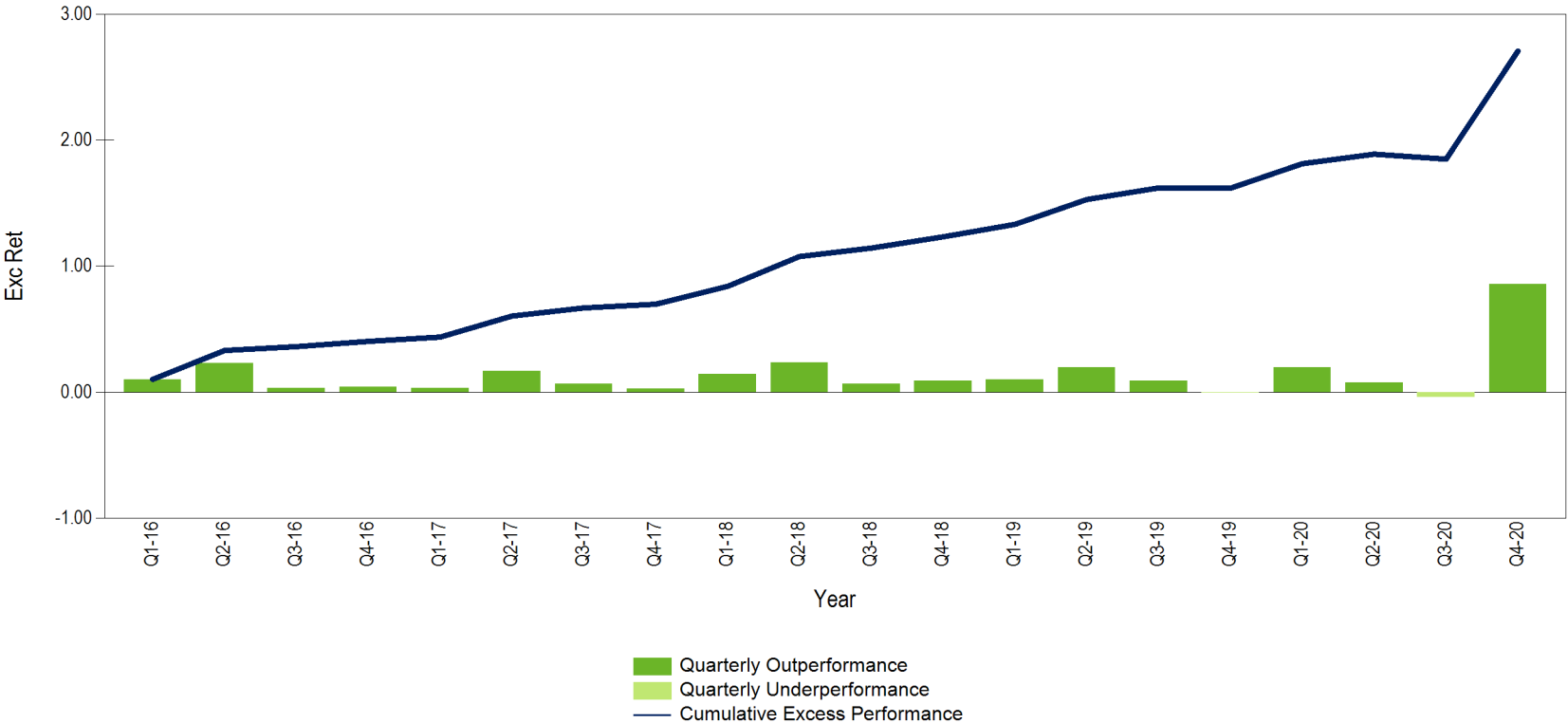
- Oberweis Asset Mgmt
- ▲ MSCI EAFE Small Cap
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## SSGA WORLD EX US IMI

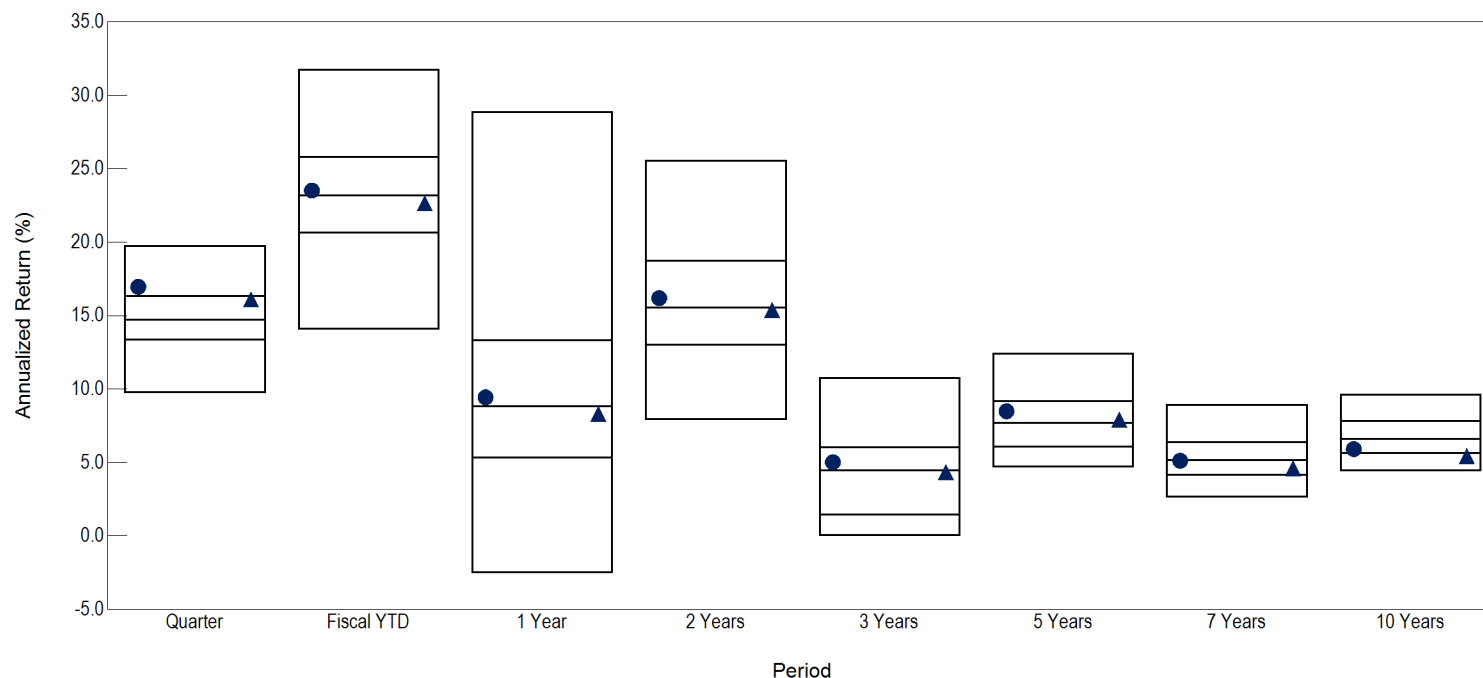
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## SSGA WORLD EX US IMI

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



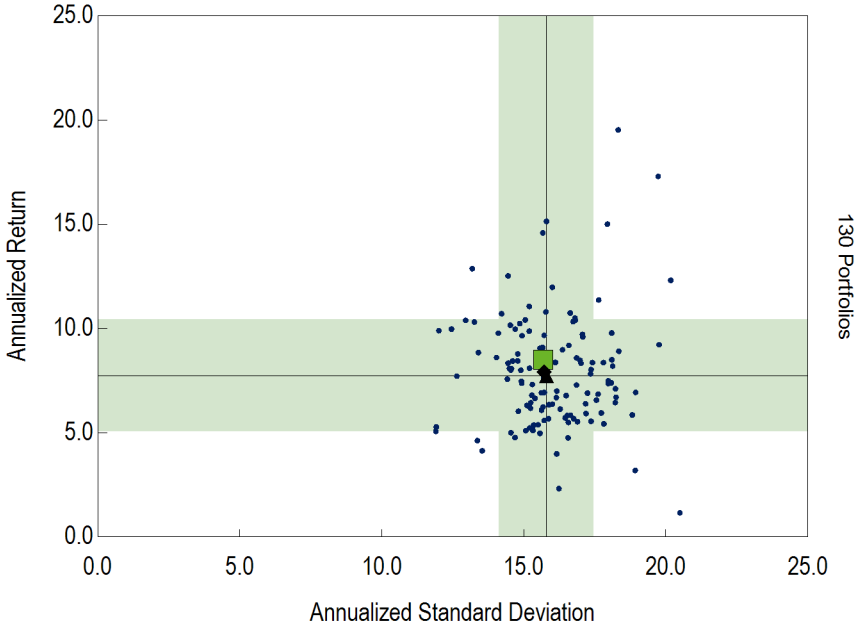
	Return (Rank)															
5th Percentile	19.74	(19)	31.72	(47)	28.87	(47)	25.54	(41)	10.73	(41)	12.43	(35)	8.93	(54)	9.61	(73)
25th Percentile	16.37	(28)	25.84	(54)	13.36	(54)	18.79	(53)	6.10	(54)	9.21	(49)	6.45	(64)	7.88	(83)
Median	14.77		23.22		8.85		15.61		4.49		7.74		5.20		6.64	
75th Percentile	13.39		20.69		5.38		13.05		1.51		6.14		4.21		5.71	
95th Percentile	9.83		14.16		-2.43		8.00		0.09		4.76		2.74		4.53	
# of Portfolios	145		145		145		144		142		130		111		83	
● SSGA World ex US IMI	16.96	(19)	23.51	(47)	9.43	(47)	16.19	(41)	5.02	(41)	8.49	(35)	5.12	(54)	5.91	(73)
▲ MSCI World ex USA IMI NR USD	16.10	(28)	22.65	(54)	8.32	(54)	15.38	(53)	4.34	(54)	7.92	(49)	4.61	(64)	5.43	(83)



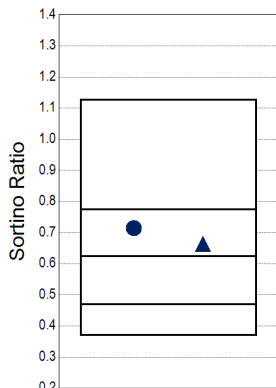
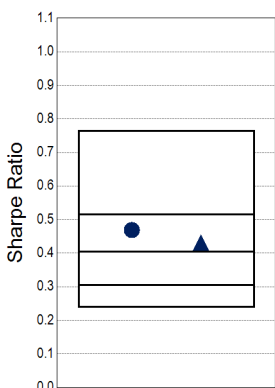
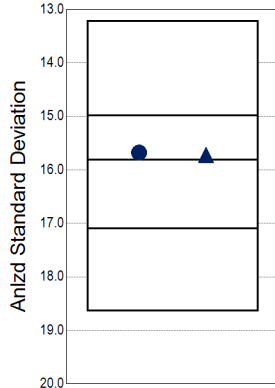
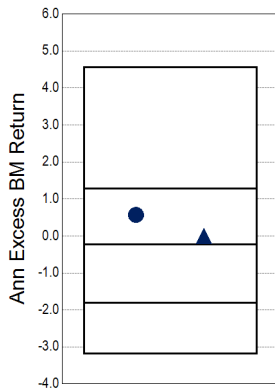
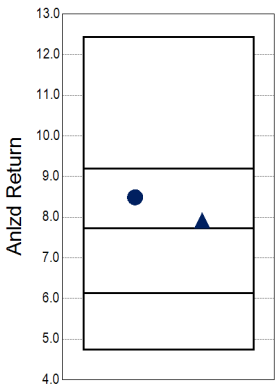
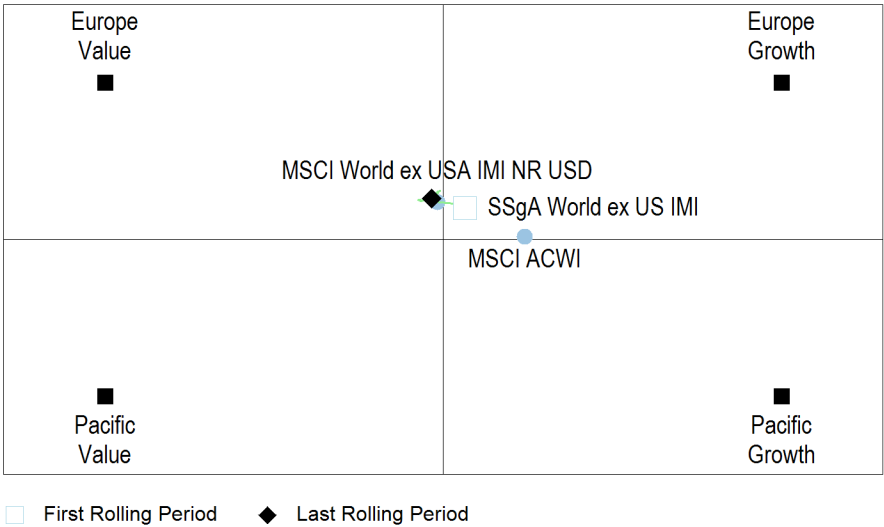
# Los Angeles City Employees' Retirement System

## SSGA WORLD EX US IMI

5 Year Risk Return



5 Year Style Map



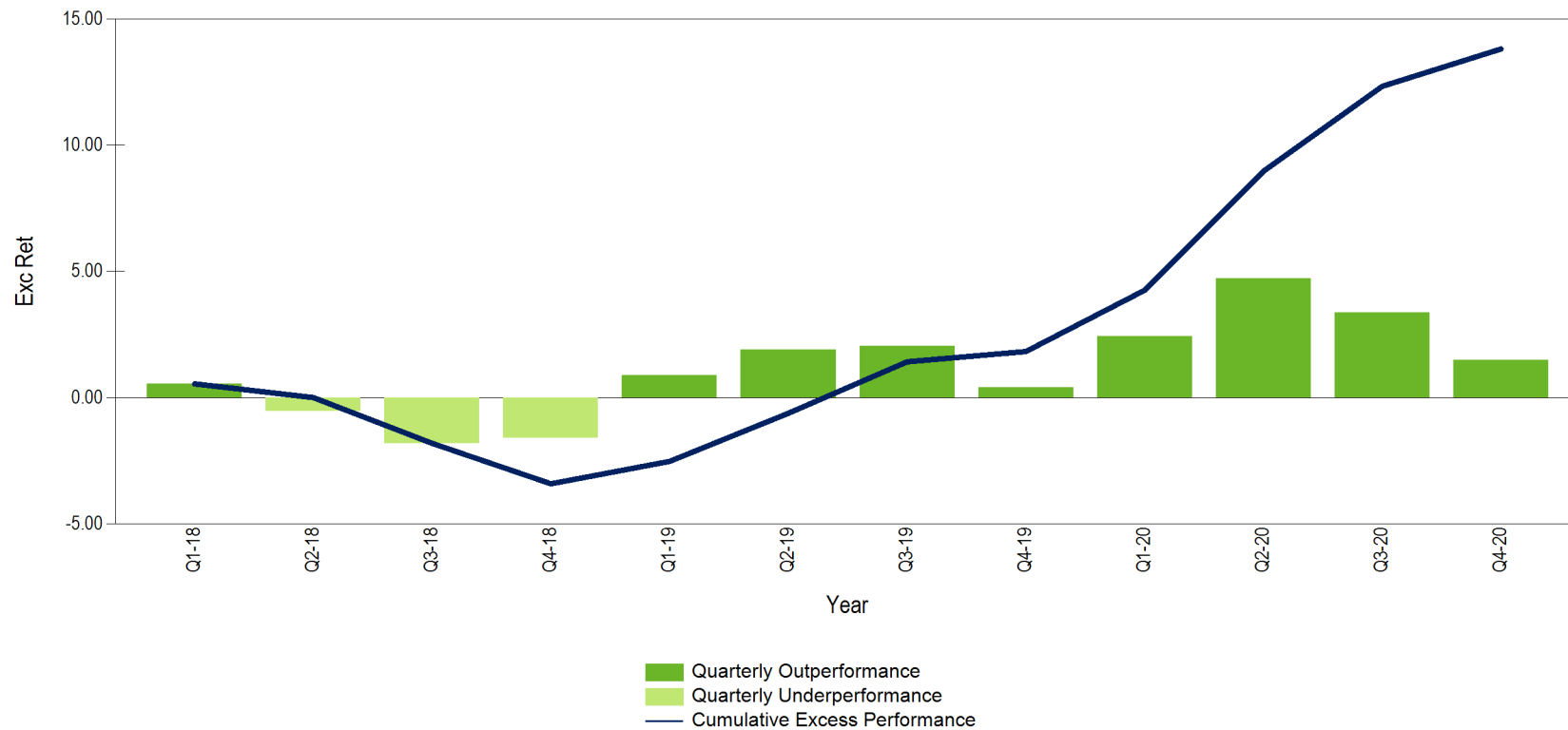
- SSGA World ex US IMI
- ▲ MSCI World ex USA IMI NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## AXIOM EMERGING MARKETS

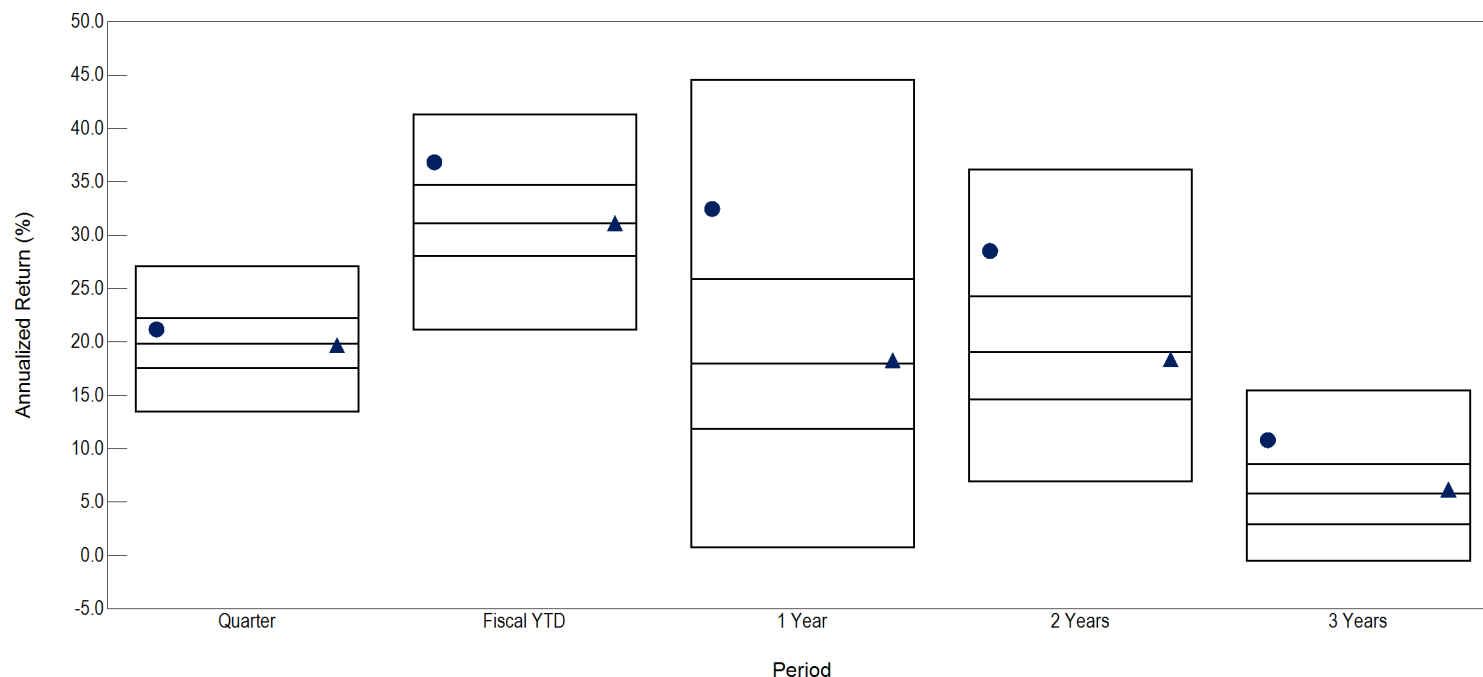
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# AXIOM EMERGING MARKETS

Axiom Emerging Markets vs. eV Emg Mkts Equity Net



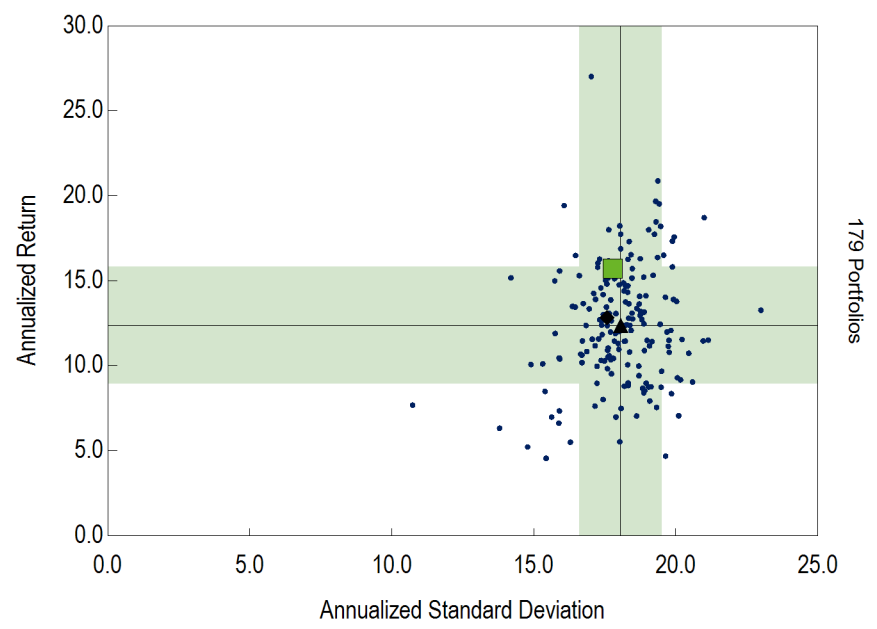
	Return (Rank)									
5th Percentile	27.10		41.34		44.57		36.15		15.47	
25th Percentile	22.31		34.80		25.94		24.35		8.60	
Median	19.88		31.18		18.05		19.12		5.85	
75th Percentile	17.62		28.12		11.94		14.67		2.98	
95th Percentile	13.53		21.20		0.83		6.99		-0.43	
# of Portfolios	231		231		231		220		206	
● Axiom Emerging Markets	21.18	(38)	36.84	(15)	32.46	(14)	28.52	(15)	10.80	(14)
▲ MSCI Emerging Markets	19.70	(53)	31.14	(52)	18.31	(49)	18.37	(56)	6.17	(46)



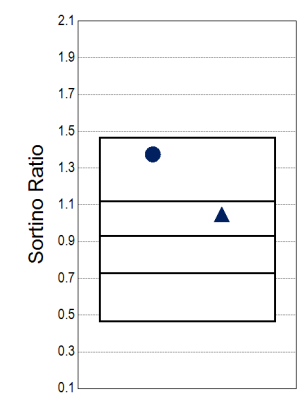
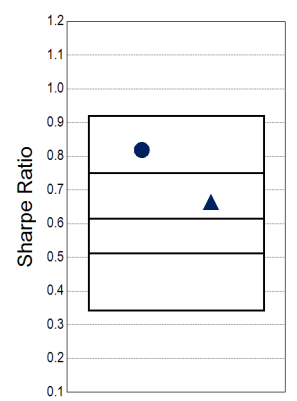
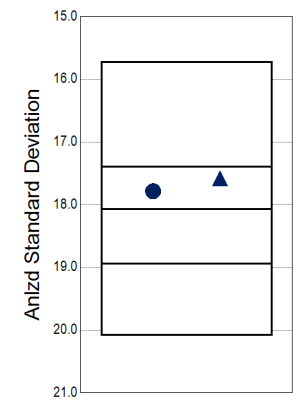
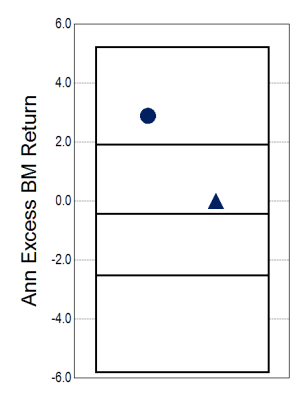
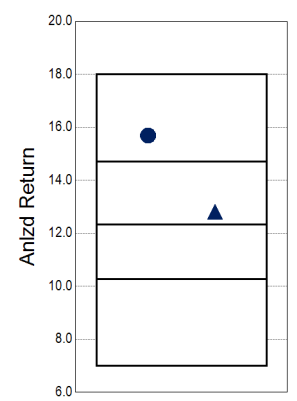
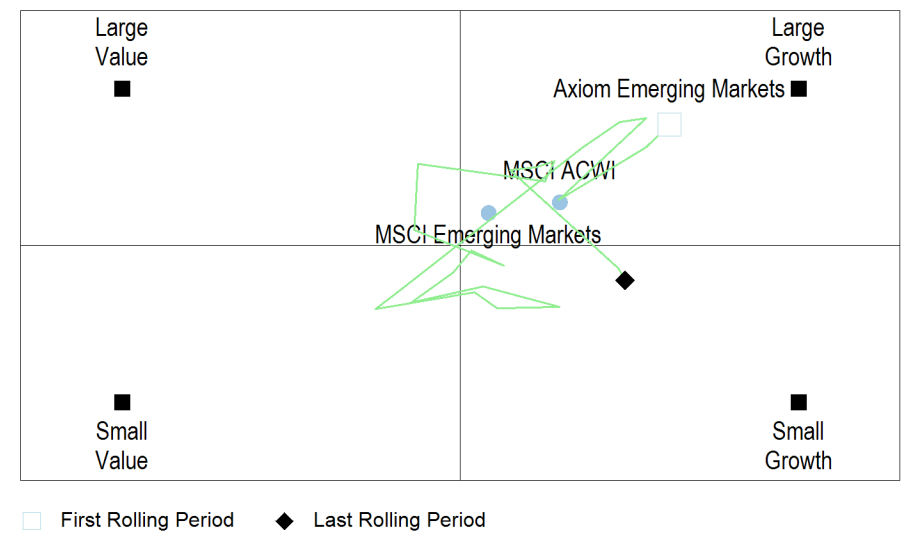
Los Angeles City Employees' Retirement System

# AXIOM EMERGING MARKETS

5 Year Risk Return



5 Year Style Map



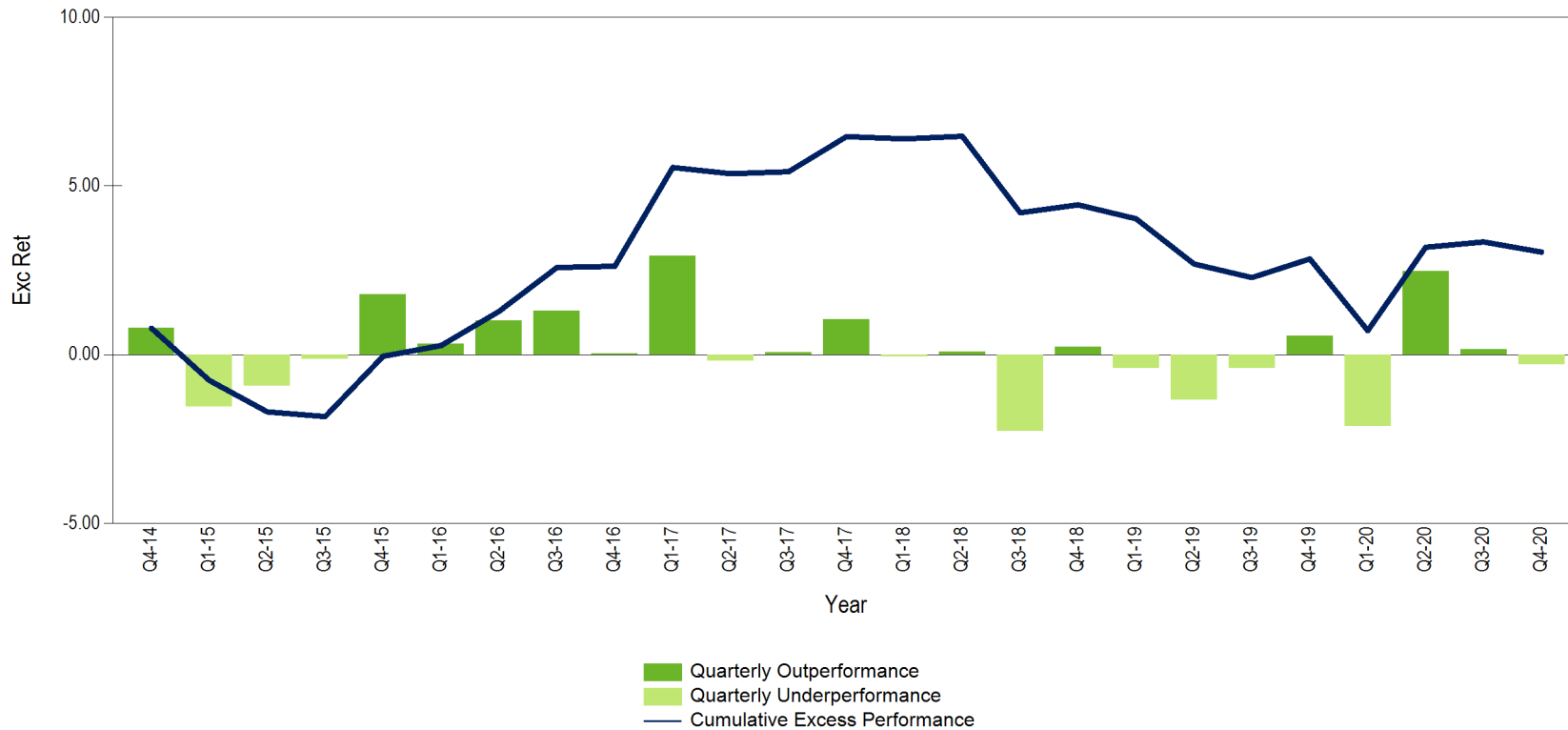
- Axiom Emerging Markets
- ▲ MSCI Emerging Markets
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## DFA EMERGING MARKETS

Quarterly and Cumulative Excess Performance

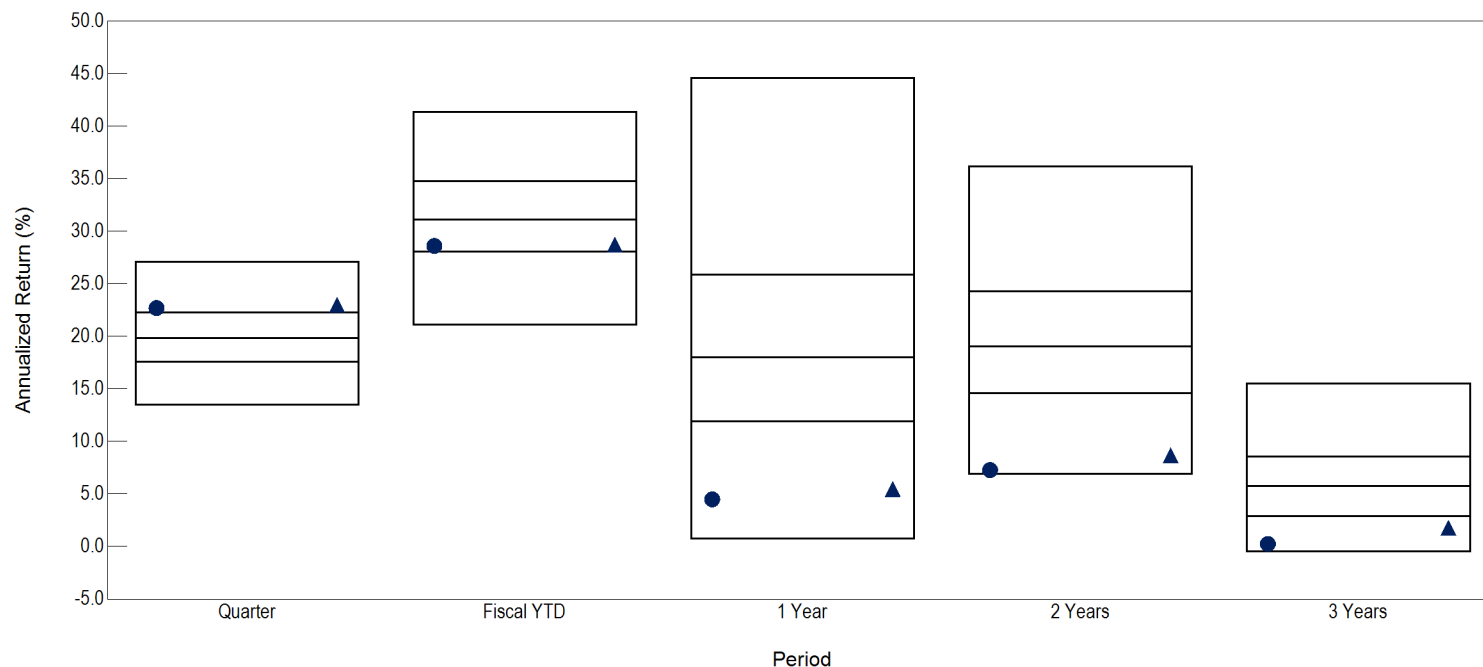




# Los Angeles City Employees' Retirement System

## DFA EMERGING MARKETS

DFA Emerging Markets vs. eV Emg Mkts Equity Net

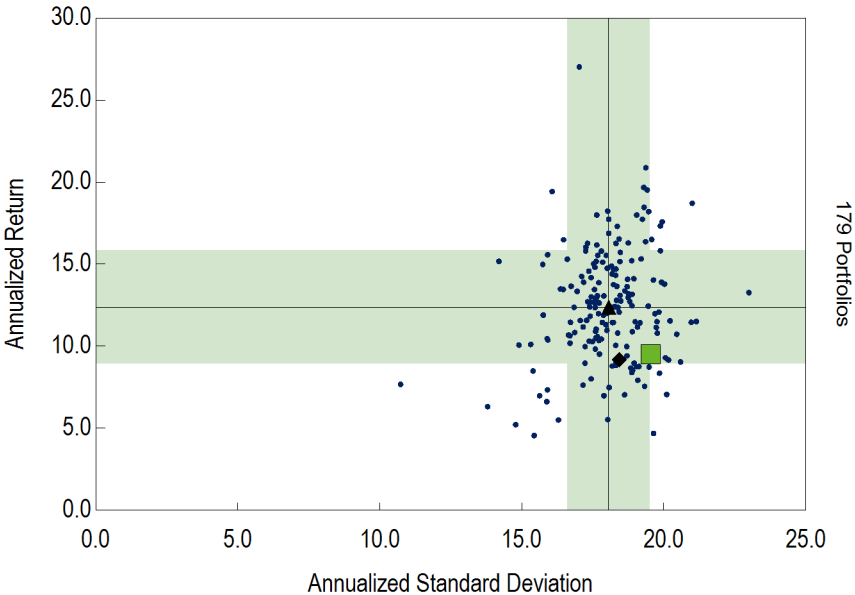


	Return (Rank)									
5th Percentile	27.10		41.34		44.57		36.15		15.47	
25th Percentile	22.31		34.80		25.94		24.35		8.60	
Median	19.88		31.18		18.05		19.12		5.85	
75th Percentile	17.62		28.12		11.94		14.67		2.98	
95th Percentile	13.53		21.20		0.83		6.99		-0.43	
# of Portfolios	231		231		231		220		206	
● DFA Emerging Markets	22.68	(23)	28.58	(73)	4.48	(92)	7.27	(94)	0.24	(93)
▲ MSCI Emerging Markets Value NR USD	22.98	(21)	28.70	(73)	5.47	(90)	8.67	(91)	1.77	(85)

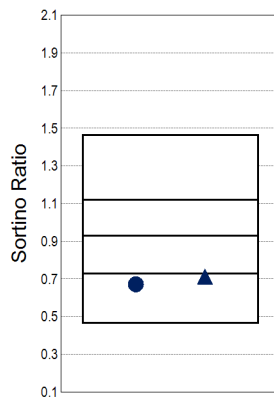
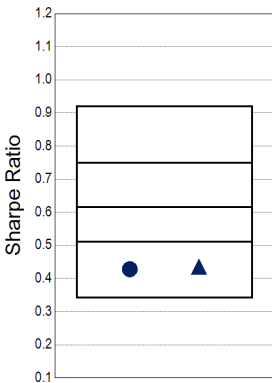
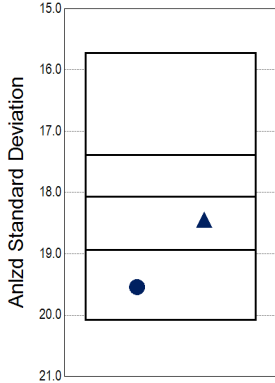
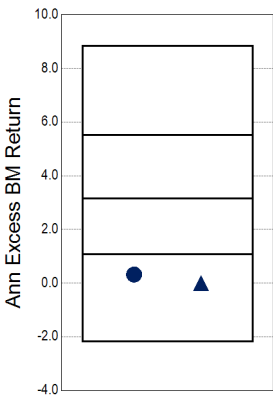
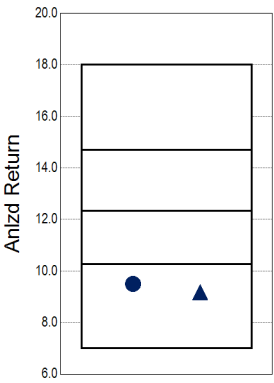
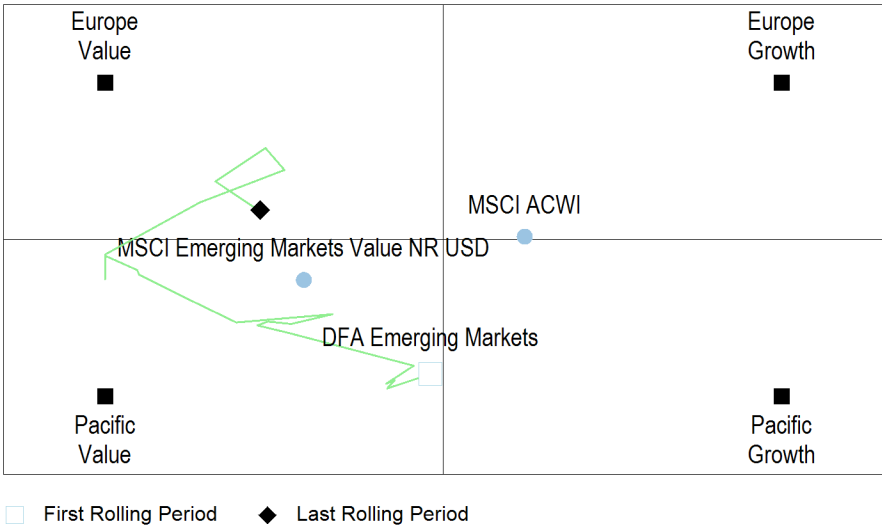


# Los Angeles City Employees' Retirement System DFA EMERGING MARKETS

5 Year Risk Return



5 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



# CORE FIXED INCOME MANAGER PERFORMANCE

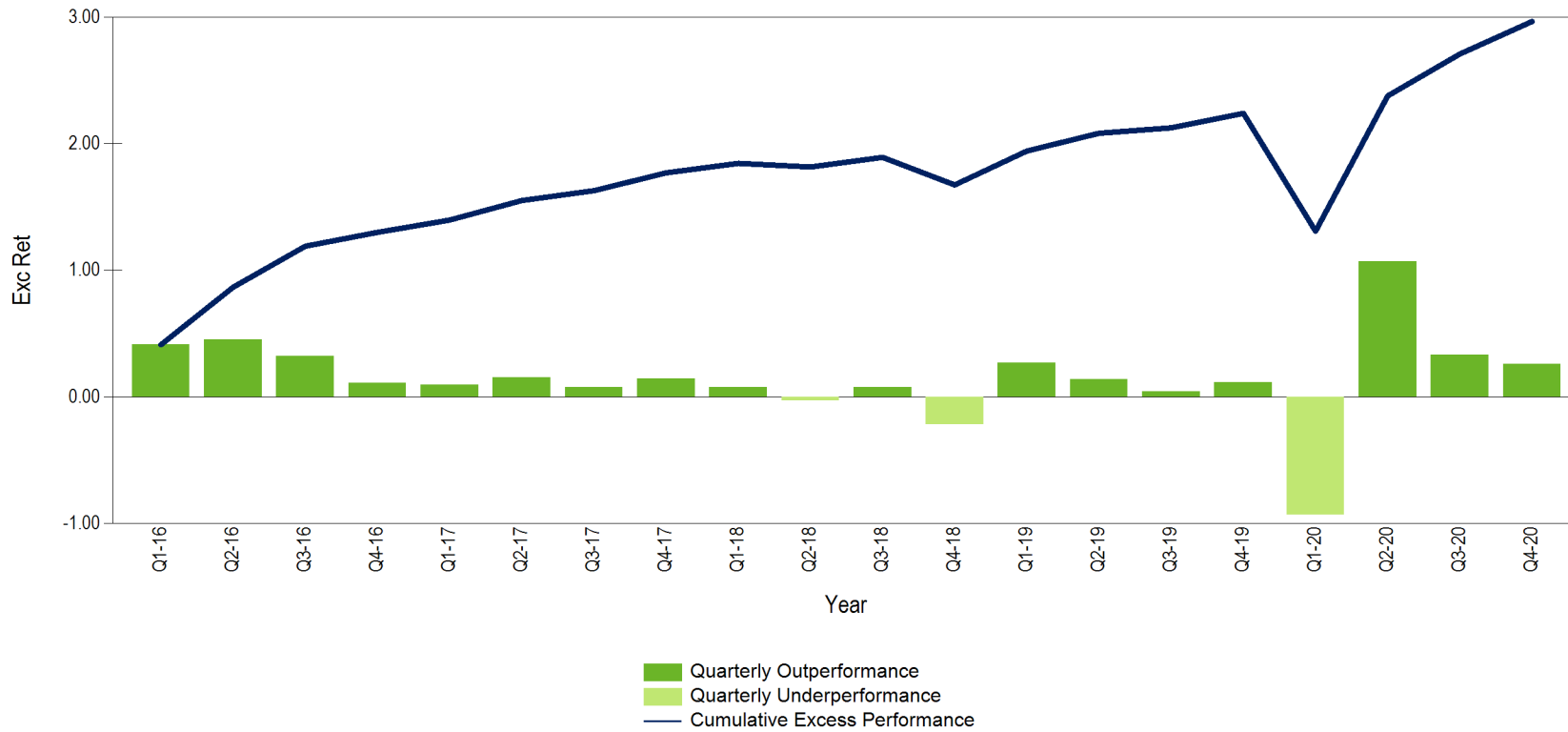
NEPC, LLC

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Los Angeles City Employees' Retirement System

# BAIRD ADVISORS

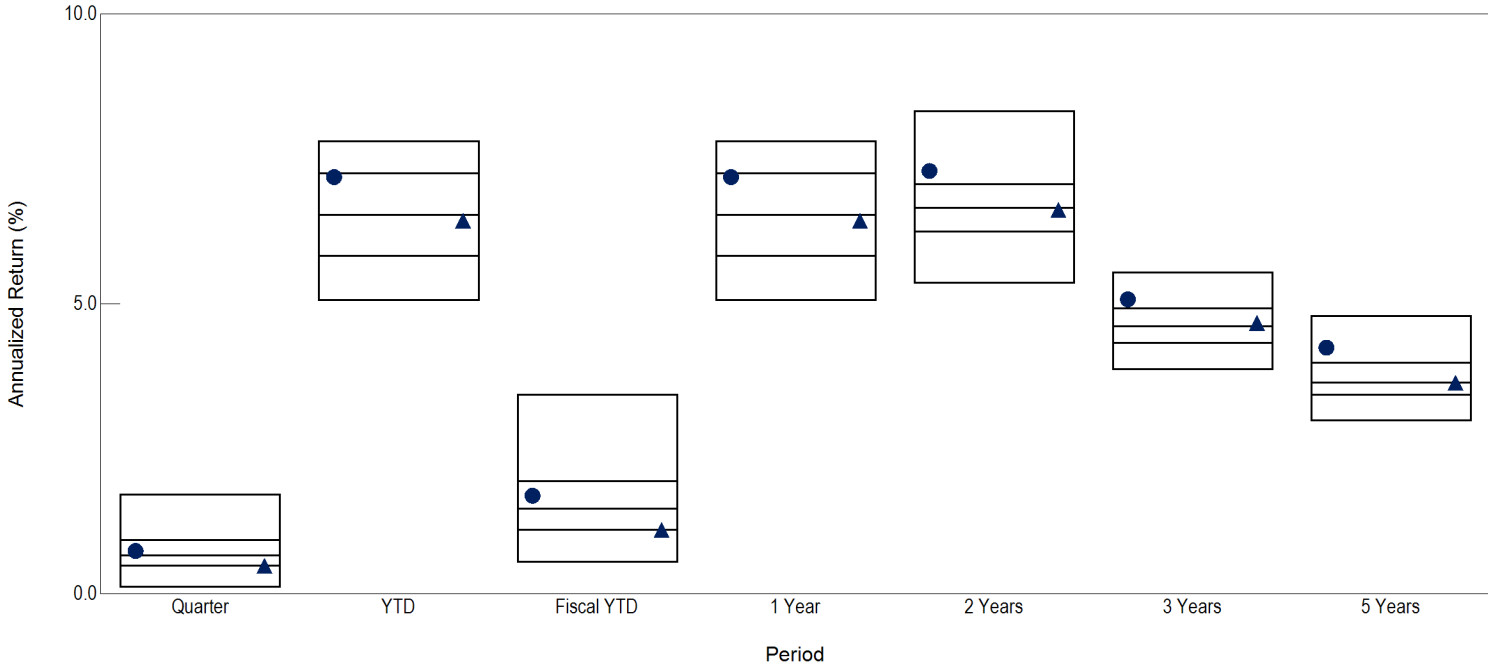
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# BAIRD ADVISORS

Baird Advisors vs. eV US Interm Duration Fixed Inc Net



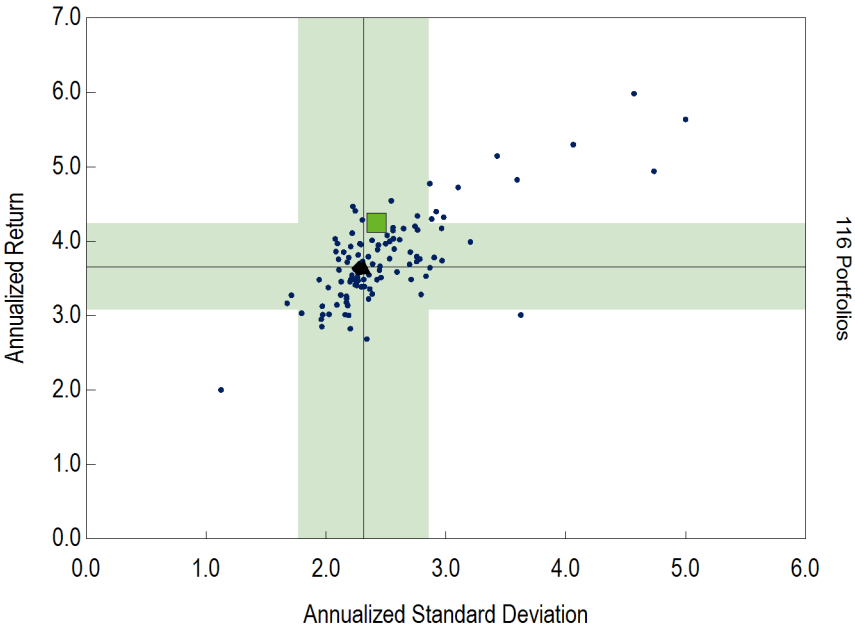
	Return (Rank)													
5th Percentile	1.71	7.81	3.43	7.81	8.32	5.54	4.79							
25th Percentile	0.94	7.26	1.96	7.26	7.08	4.93	4.00							
Median	0.68	6.55	1.48	6.55	6.67	4.62	3.66							
75th Percentile	0.50	5.84	1.11	5.84	6.26	4.34	3.45							
95th Percentile	0.13	5.08	0.56	5.08	5.38	3.89	3.01							
# of Portfolios	122	122	122	122	119	118	116							
● Baird Advisors	0.74	(47)	7.19	(28)	1.69	(43)	7.19	(28)	7.29	(18)	5.08	(13)	4.24	(15)
▲ BBgBarc US Govt/Credit Int TR	0.48	(77)	6.43	(56)	1.10	(78)	6.43	(56)	6.62	(56)	4.67	(44)	3.64	(54)



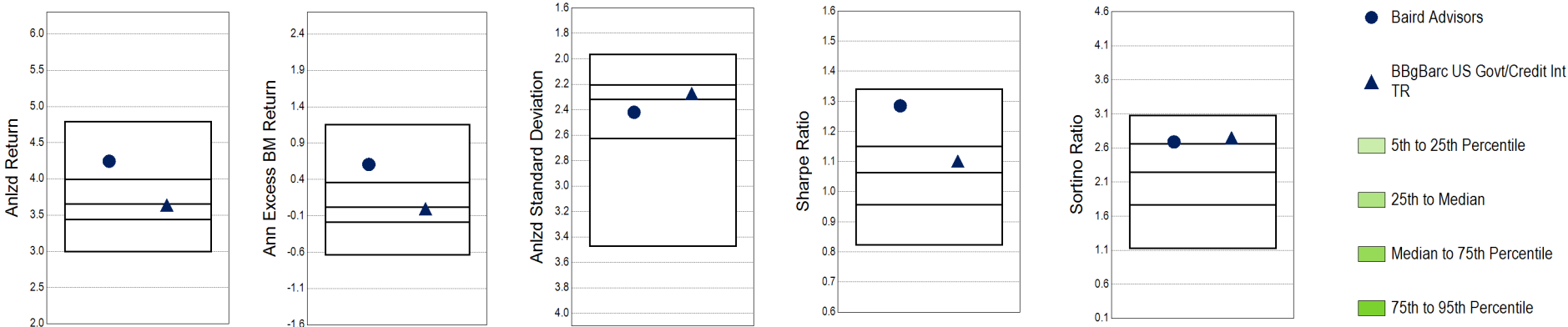
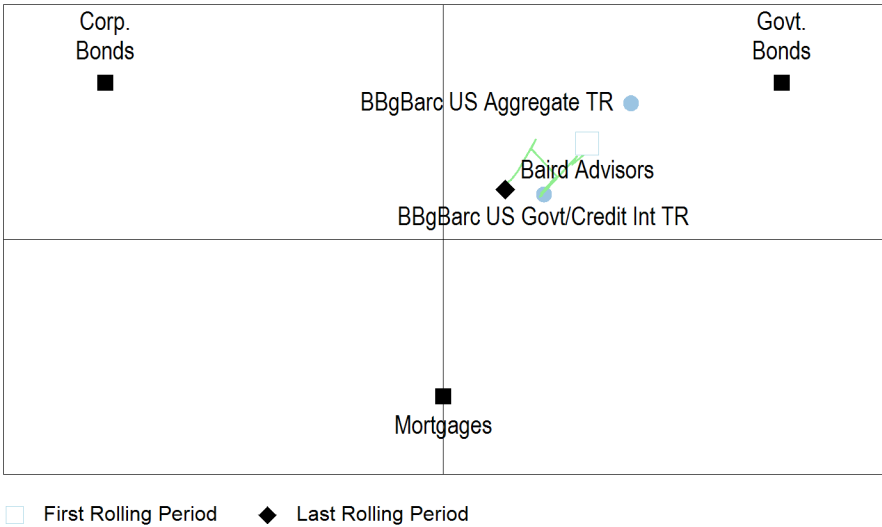
Los Angeles City Employees' Retirement System

# BAIRD ADVISORS

5 Year Risk Return



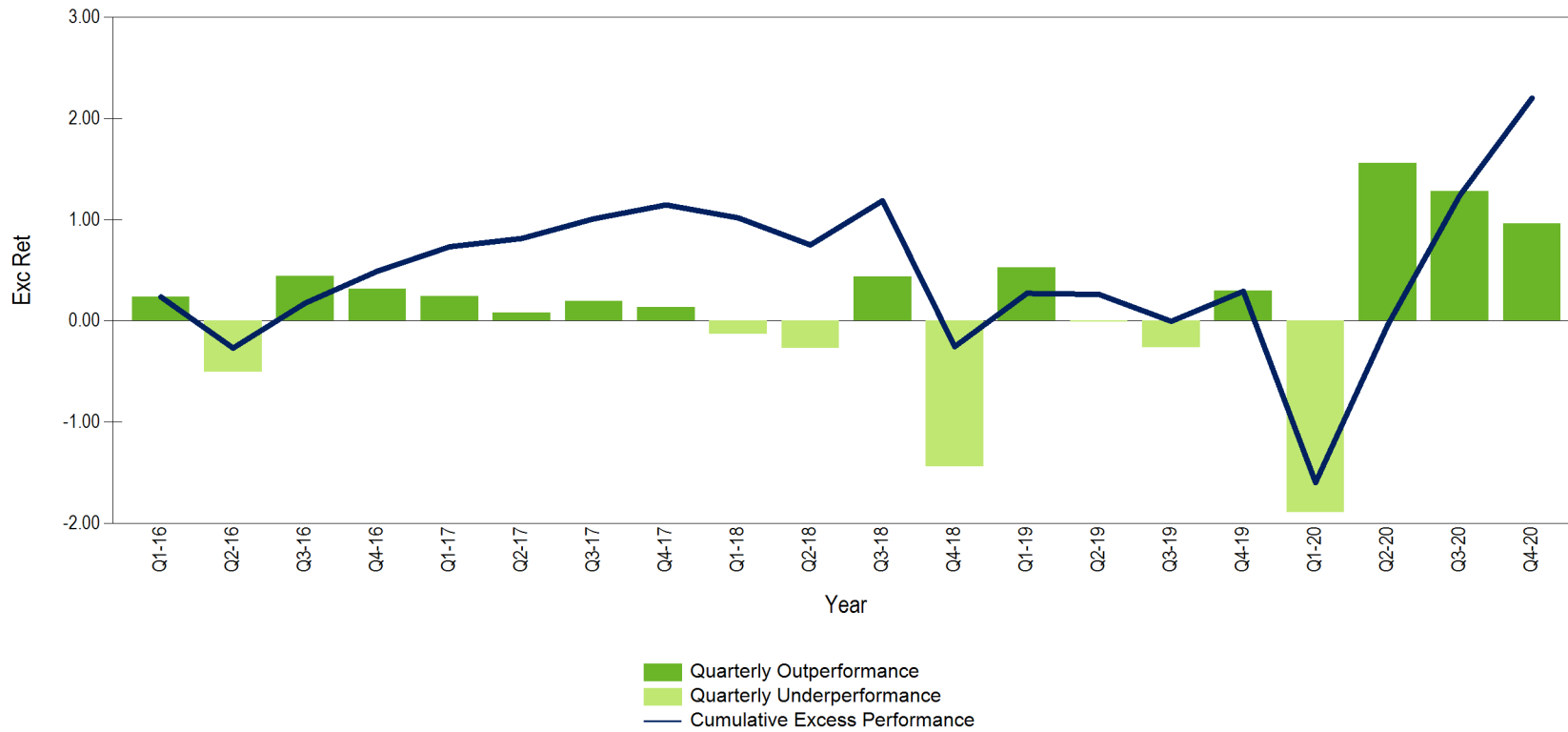
5 Year Style Map



Los Angeles City Employees' Retirement System

LM CAPITAL

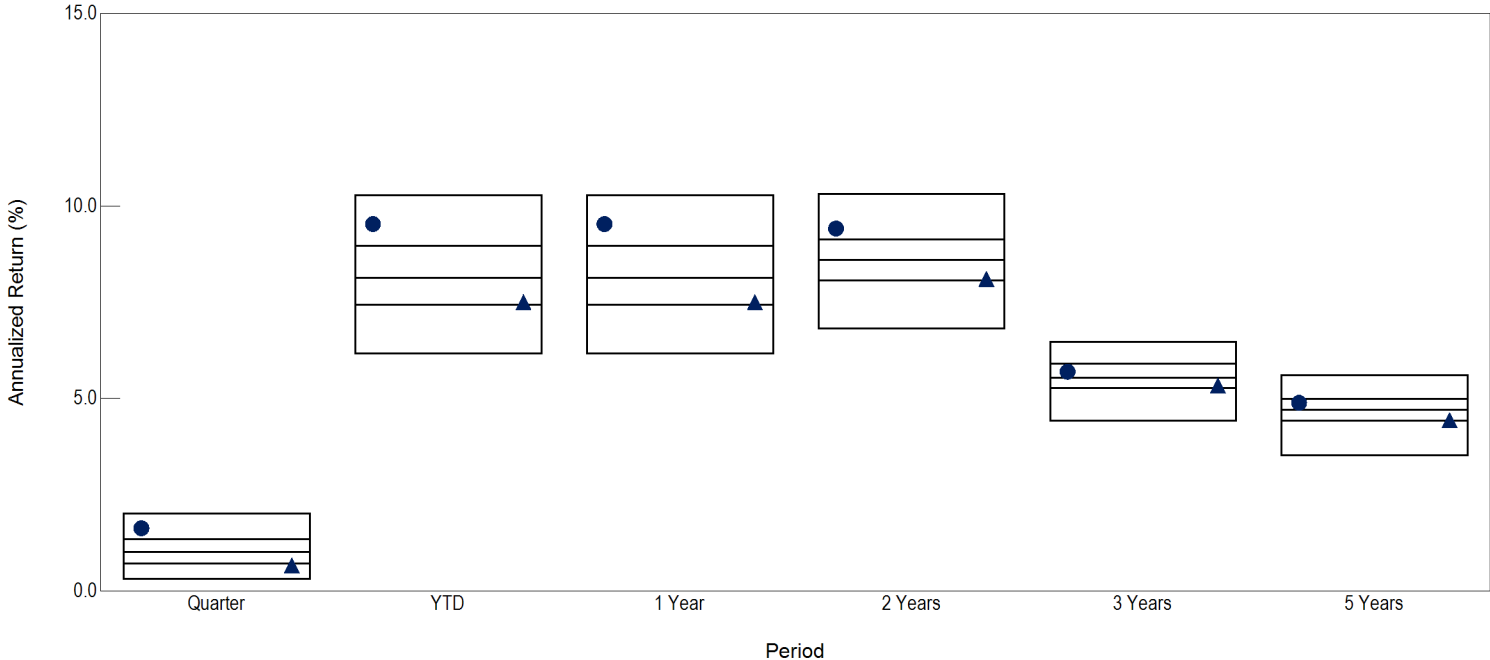
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

LM CAPITAL

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



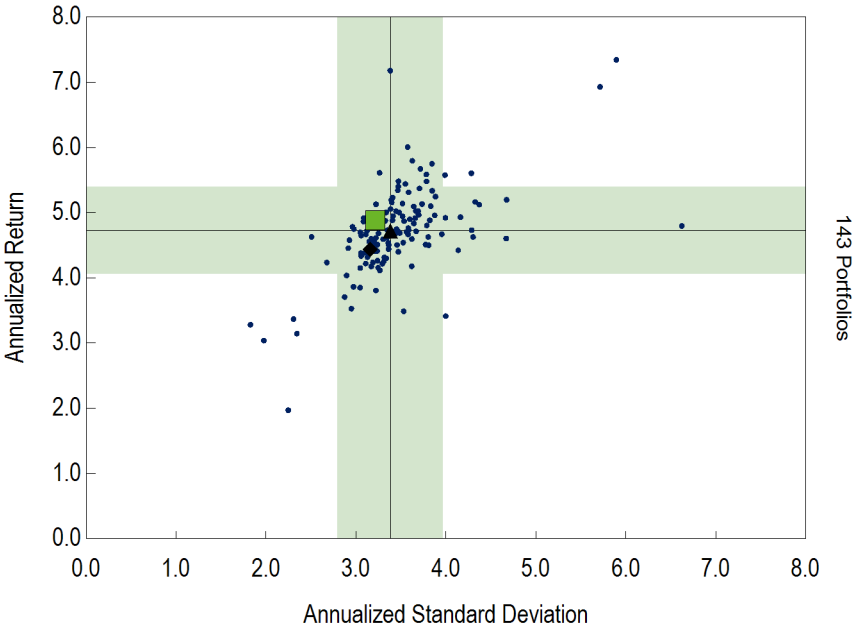
	Return (Rank)		YTD		1 Year		2 Years		3 Years		5 Years	
5th Percentile	2.02		10.28		10.28		10.32		6.46		5.61	
25th Percentile	1.36		8.98		8.98		9.16		5.92		5.00	
Median	1.03		8.15		8.15		8.62		5.56		4.72	
75th Percentile	0.73		7.45		7.45		8.09		5.29		4.43	
95th Percentile	0.34		6.19		6.19		6.83		4.44		3.55	
# of Portfolios	150		149		149		147		145		143	
● LM Capital	1.63	(10)	9.53	(13)	9.53	(13)	9.42	(18)	5.70	(36)	4.89	(37)
▲ LM Custom Benchmark	0.67	(81)	7.51	(75)	7.51	(75)	8.11	(74)	5.34	(70)	4.44	(75)



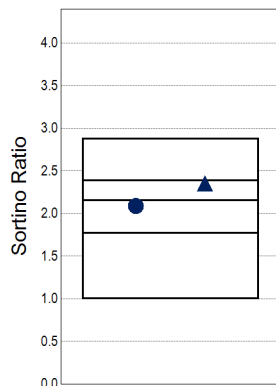
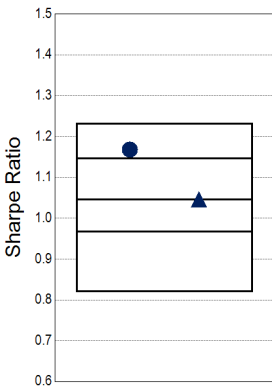
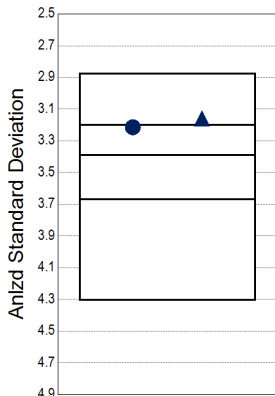
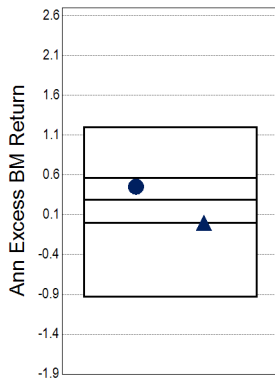
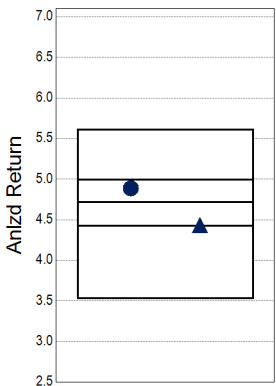
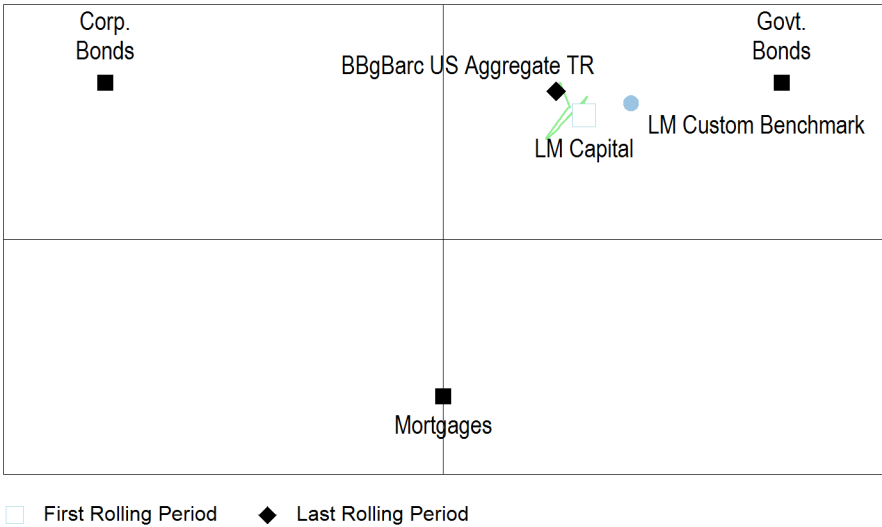


# Los Angeles City Employees' Retirement System LM CAPITAL

## 5 Year Risk Return



## 5 Year Style Map



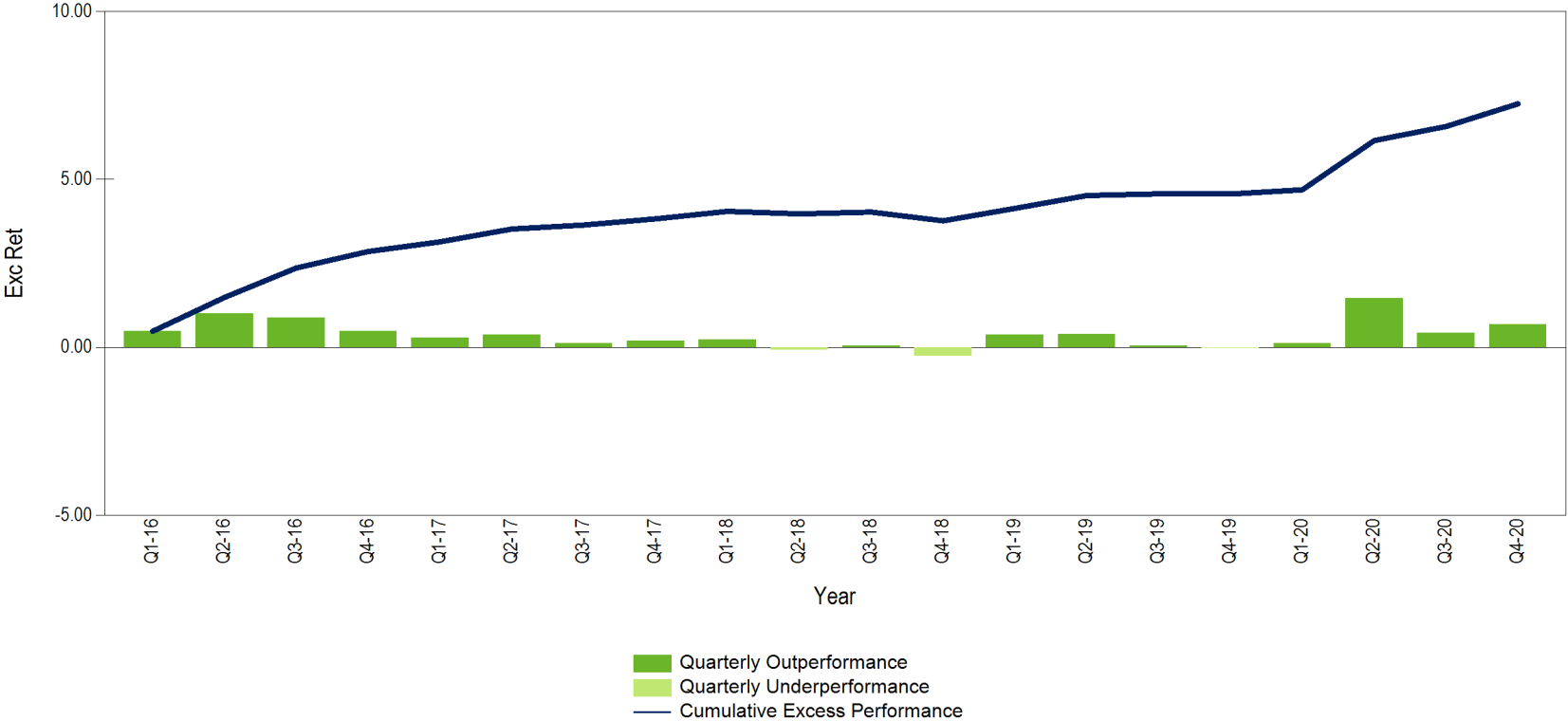
- LM Capital
- ▲ LM Custom Benchmark
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

# LOOMIS SAYLES

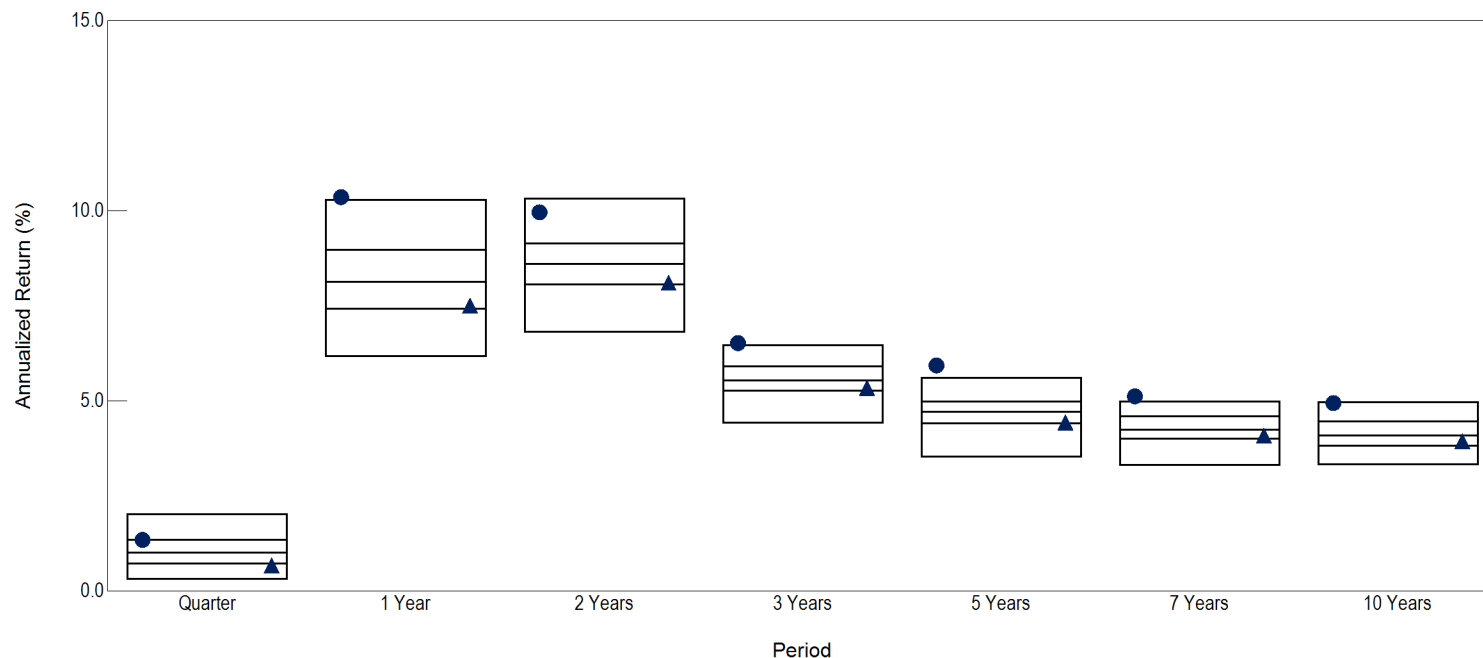
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# LOOMIS SAYLES

Loomis Sayles vs. eV US Core Fixed Inc Net



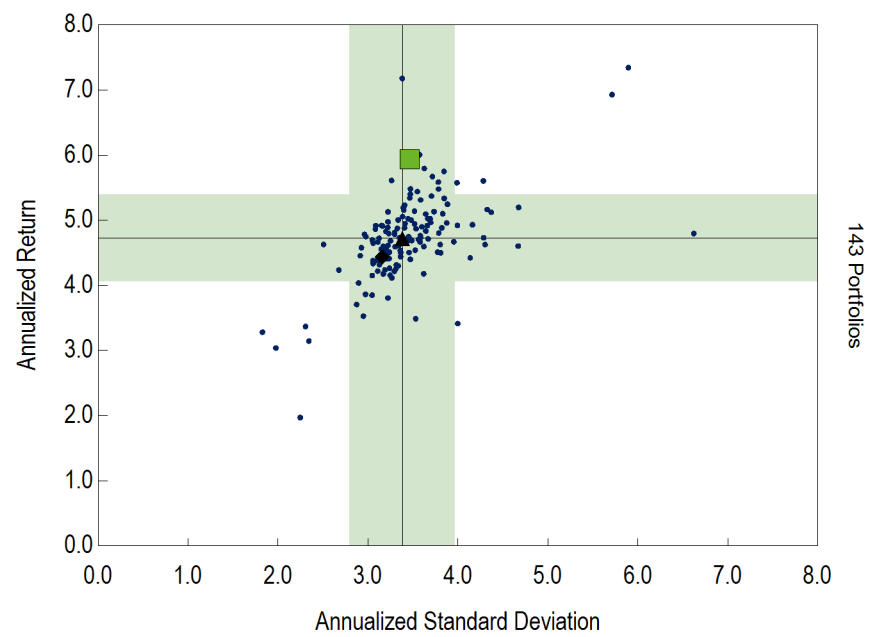
	Return (Rank)													
5th Percentile	2.02	10.28	10.32	6.46	5.61	4.98	4.97							
25th Percentile	1.36	8.98	9.16	5.92	5.00	4.62	4.48							
Median	1.03	8.15	8.62	5.56	4.72	4.25	4.11							
75th Percentile	0.73	7.45	8.09	5.29	4.43	4.03	3.83							
95th Percentile	0.34	6.19	6.83	4.44	3.55	3.33	3.34							
# of Portfolios	150	149	147	145	143	139	128							
● Loomis Sayles	1.34	(26)	10.36	(5)	9.96	(7)	6.52	(3)	5.93	(3)	5.12	(3)	4.94	(6)
▲ Loomis Custom Benchmark	0.67	(81)	7.51	(75)	8.11	(74)	5.34	(70)	4.44	(75)	4.09	(71)	3.94	(65)



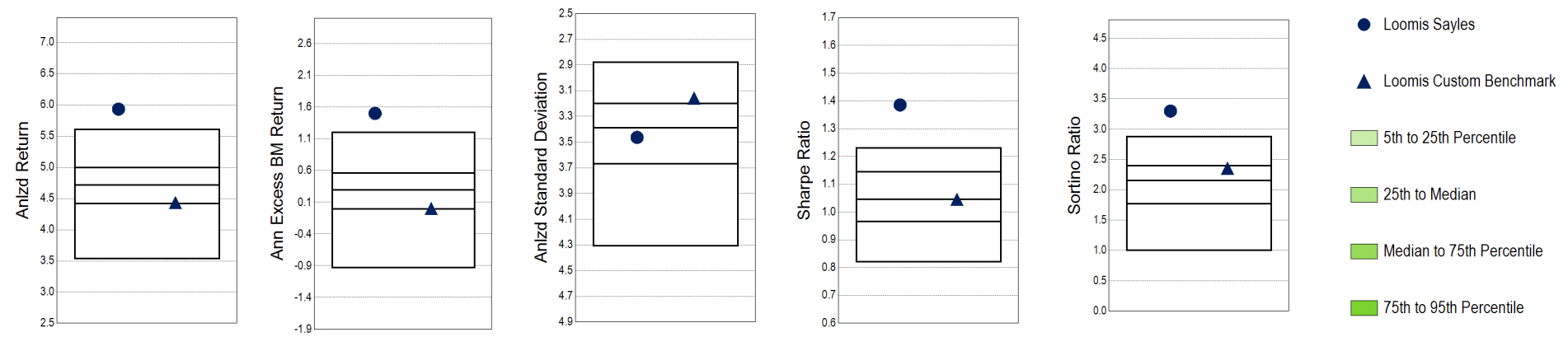
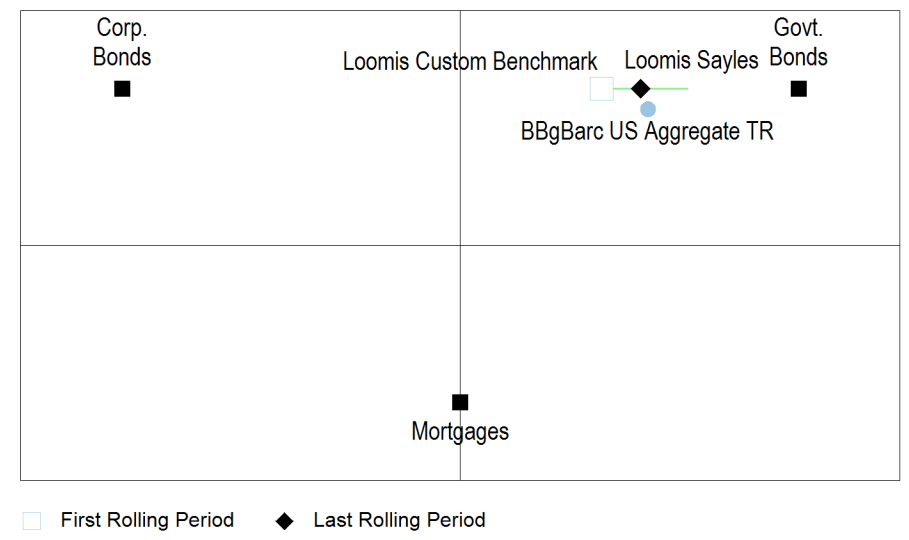
Los Angeles City Employees' Retirement System

# LOOMIS SAYLES

5 Year Risk Return



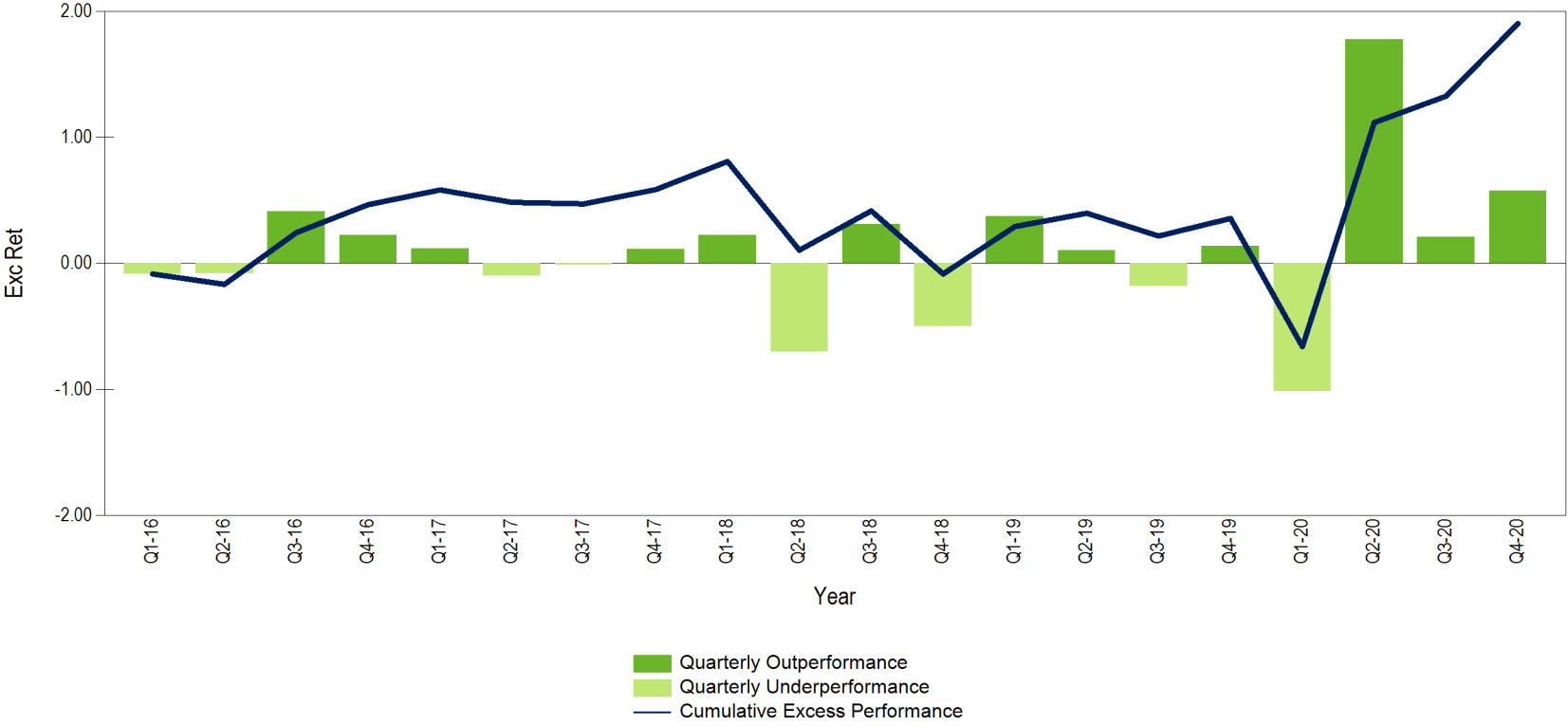
5 Year Style Map



Los Angeles City Employees' Retirement System

# NEUBERGER BERMAN

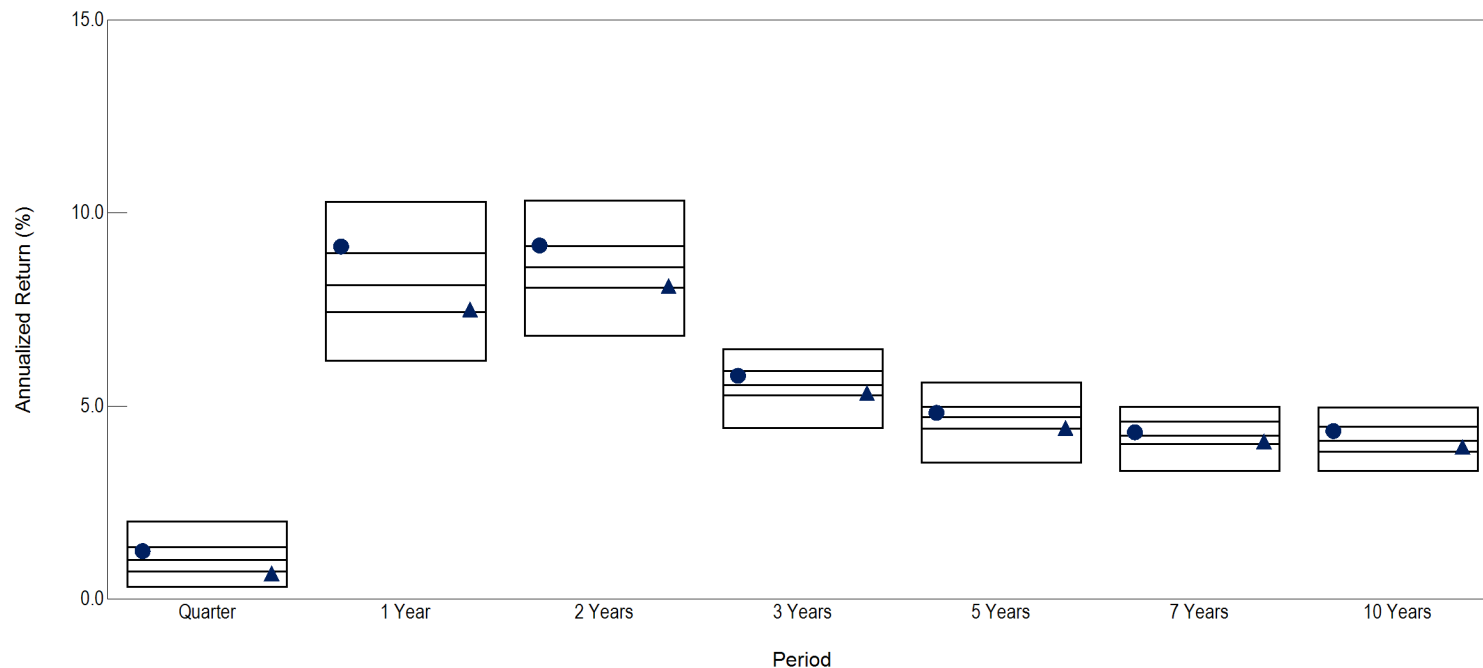
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# NEUBERGER BERMAN

Neuberger Berman vs. eV US Core Fixed Inc Net



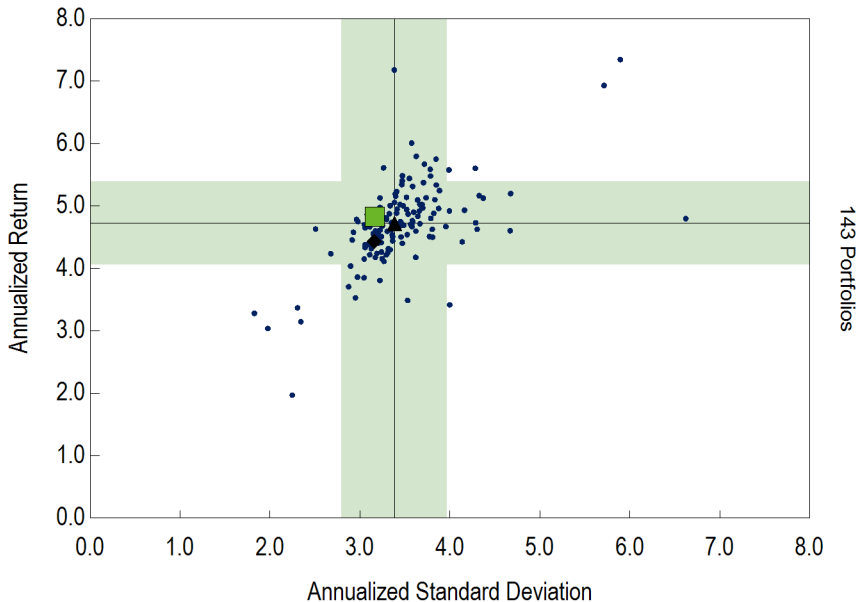
	Return (Rank)													
5th Percentile	2.02	10.28	10.32	6.46	5.61	4.98	4.97							
25th Percentile	1.36	8.98	9.16	5.92	5.00	4.62	4.48							
Median	1.03	8.15	8.62	5.56	4.72	4.25	4.11							
75th Percentile	0.73	7.45	8.09	5.29	4.43	4.03	3.83							
95th Percentile	0.34	6.19	6.83	4.44	3.55	3.33	3.34							
# of Portfolios	150	149	147	145	143	139	128							
● Neuberger Berman	1.24	(32)	9.13	(23)	9.16	(25)	5.79	(32)	4.82	(42)	4.32	(46)	4.35	(35)
▲ Core Fixed Income Blend	0.67	(81)	7.51	(75)	8.11	(74)	5.34	(70)	4.44	(75)	4.09	(71)	3.94	(65)



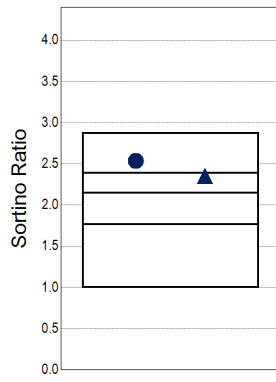
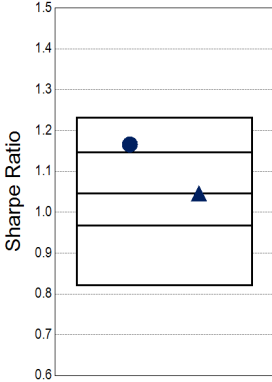
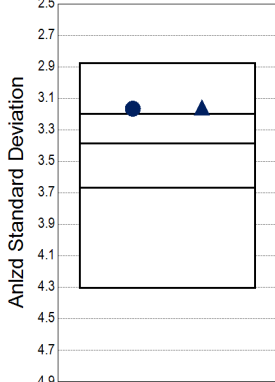
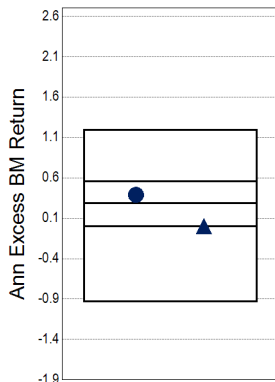
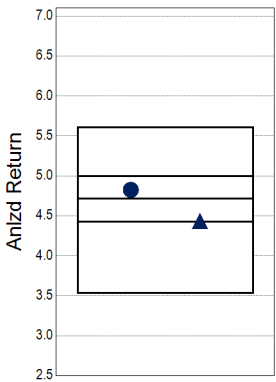
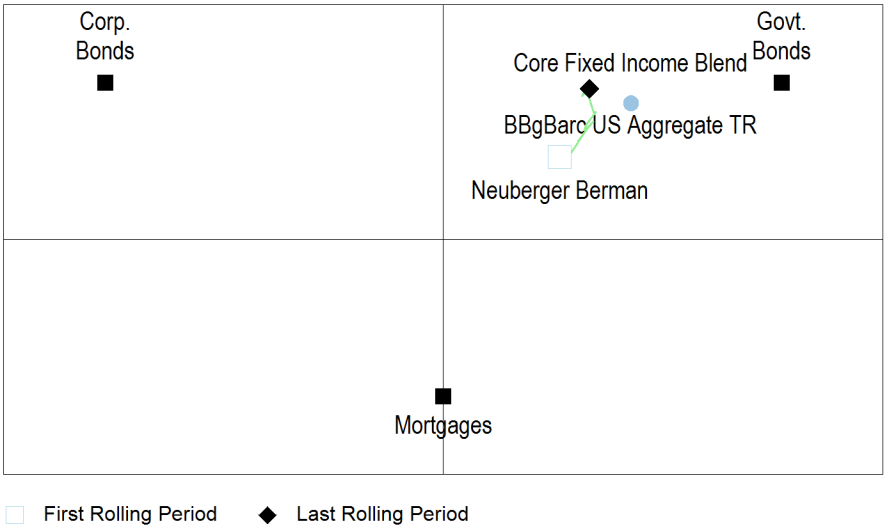
# Los Angeles City Employees' Retirement System

## NEUBERGER BERMAN

5 Year Risk Return



5 Year Style Map



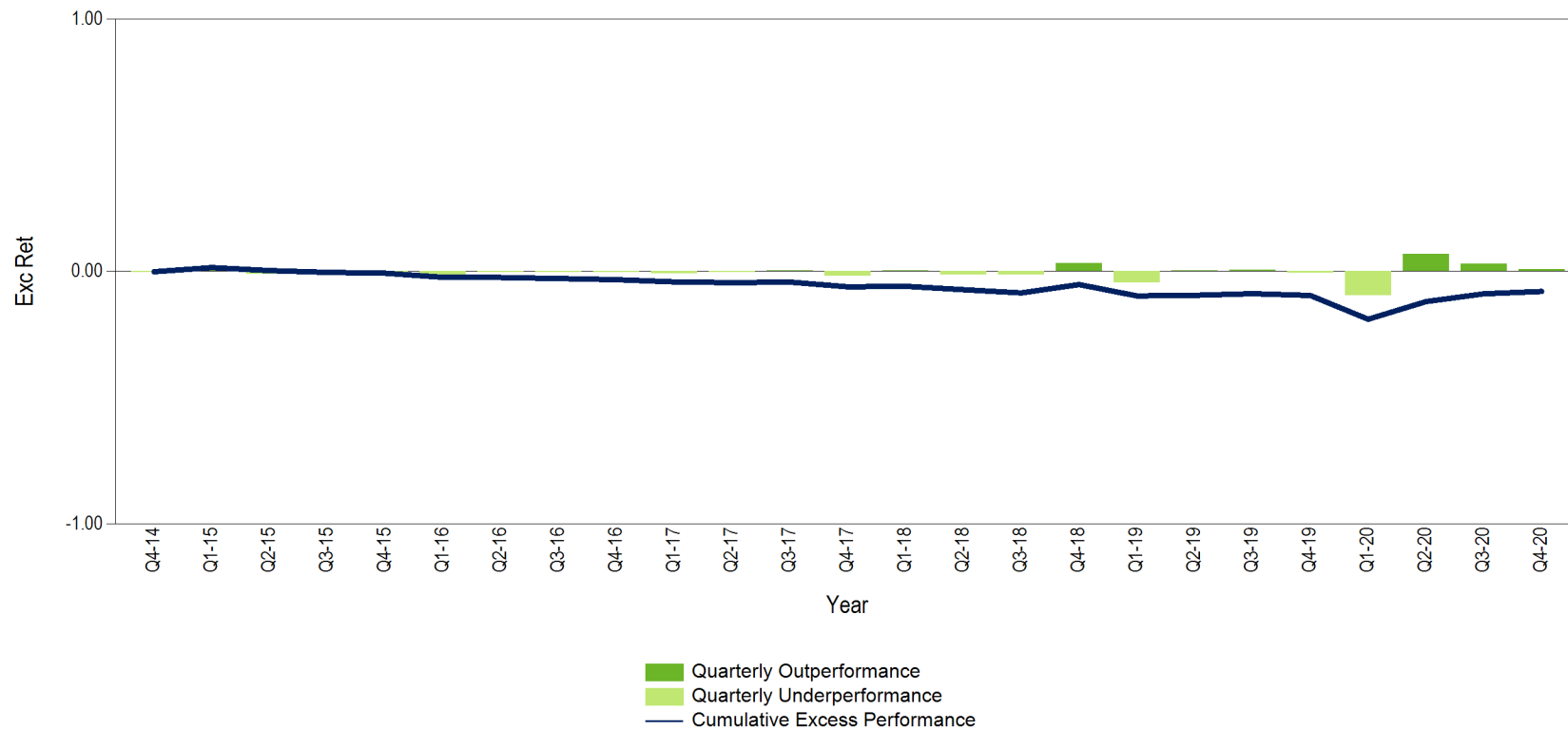
- Neuberger Berman
- ▲ Core Fixed Income Blend
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## SSGA U.S. AGGREGATE BOND

Quarterly and Cumulative Excess Performance

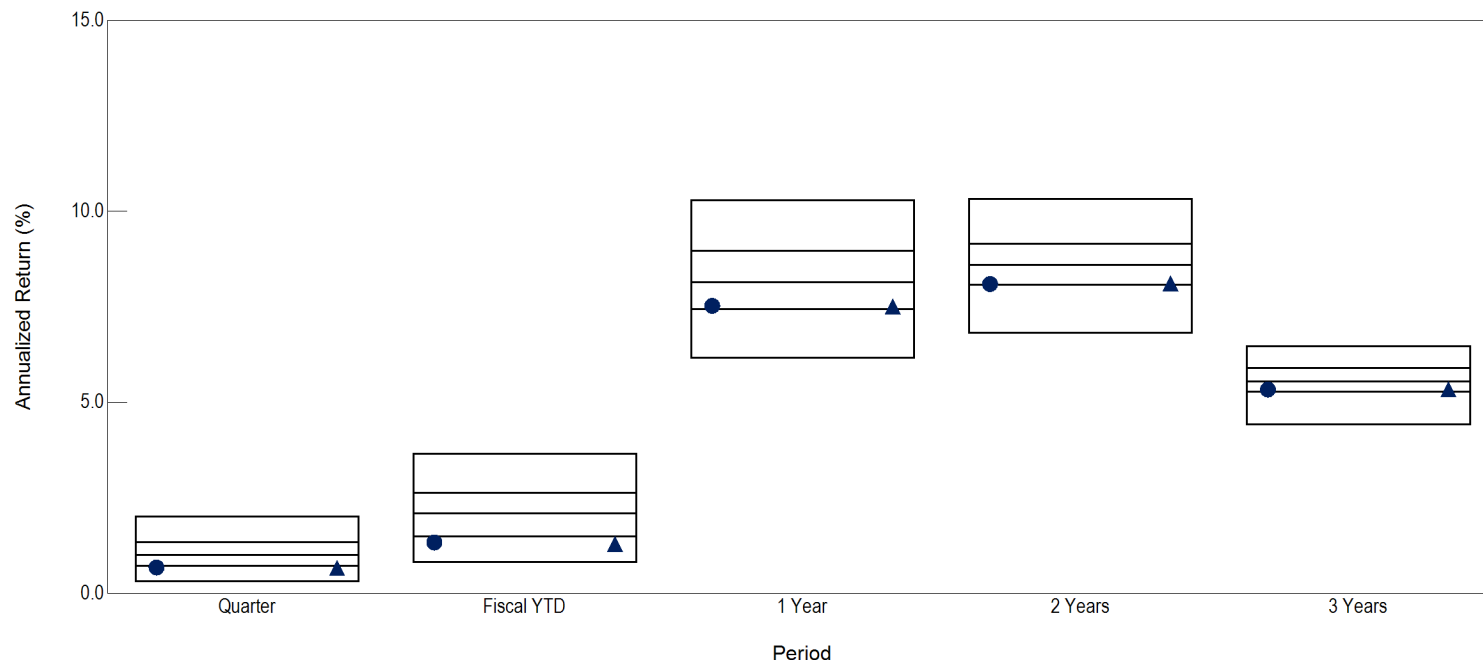




# Los Angeles City Employees' Retirement System

## SSGA U.S. AGGREGATE BOND

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



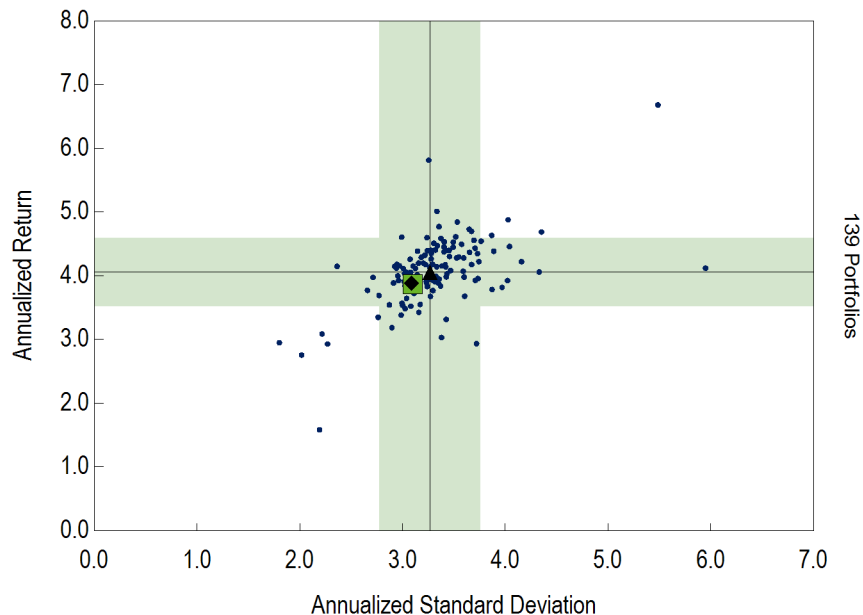
	Return (Rank)									
5th Percentile	2.02		3.66		10.28		10.32		6.46	
25th Percentile	1.36		2.64		8.98		9.16		5.92	
Median	1.03		2.10		8.15		8.62		5.56	
75th Percentile	0.73		1.52		7.45		8.09		5.29	
95th Percentile	0.34		0.84		6.19		6.83		4.44	
# of Portfolios	150		149		149		147		145	
● SSGA U.S. Aggregate Bond	0.68	(79)	1.33	(84)	7.52	(74)	8.10	(75)	5.33	(71)
▲ BBgBarc US Aggregate TR	0.67	(81)	1.29	(86)	7.51	(75)	8.11	(74)	5.34	(70)



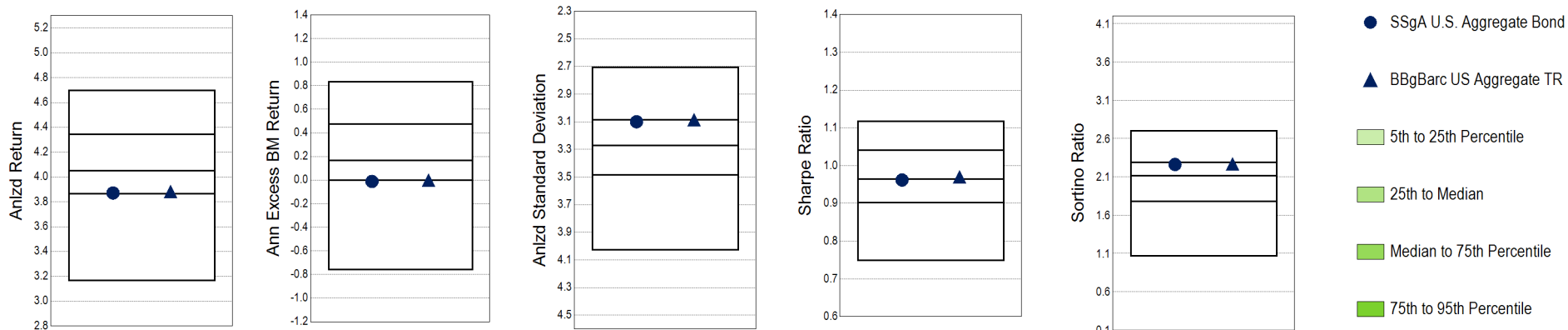
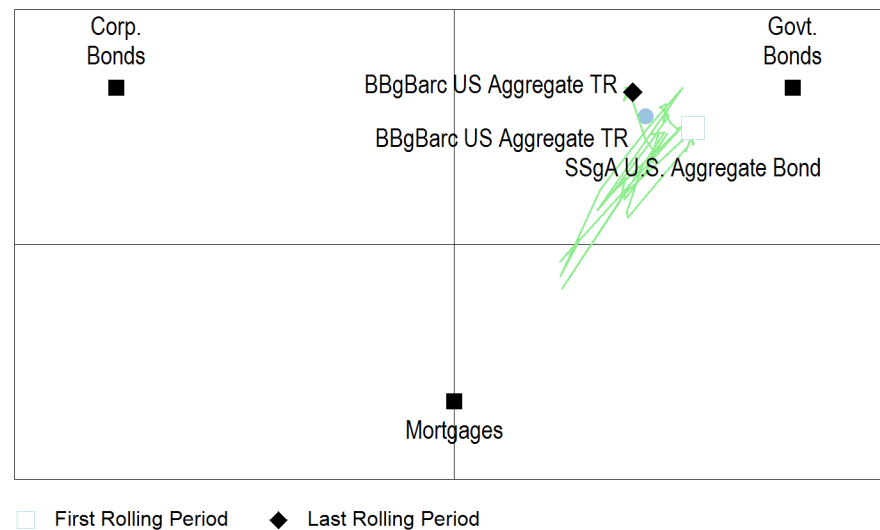
# Los Angeles City Employees' Retirement System

## SSGA U.S. AGGREGATE BOND

Since Inception Risk Return



Since Inception Style Map



# CREDIT OPPORTUNITIES MANAGER PERFORMANCE

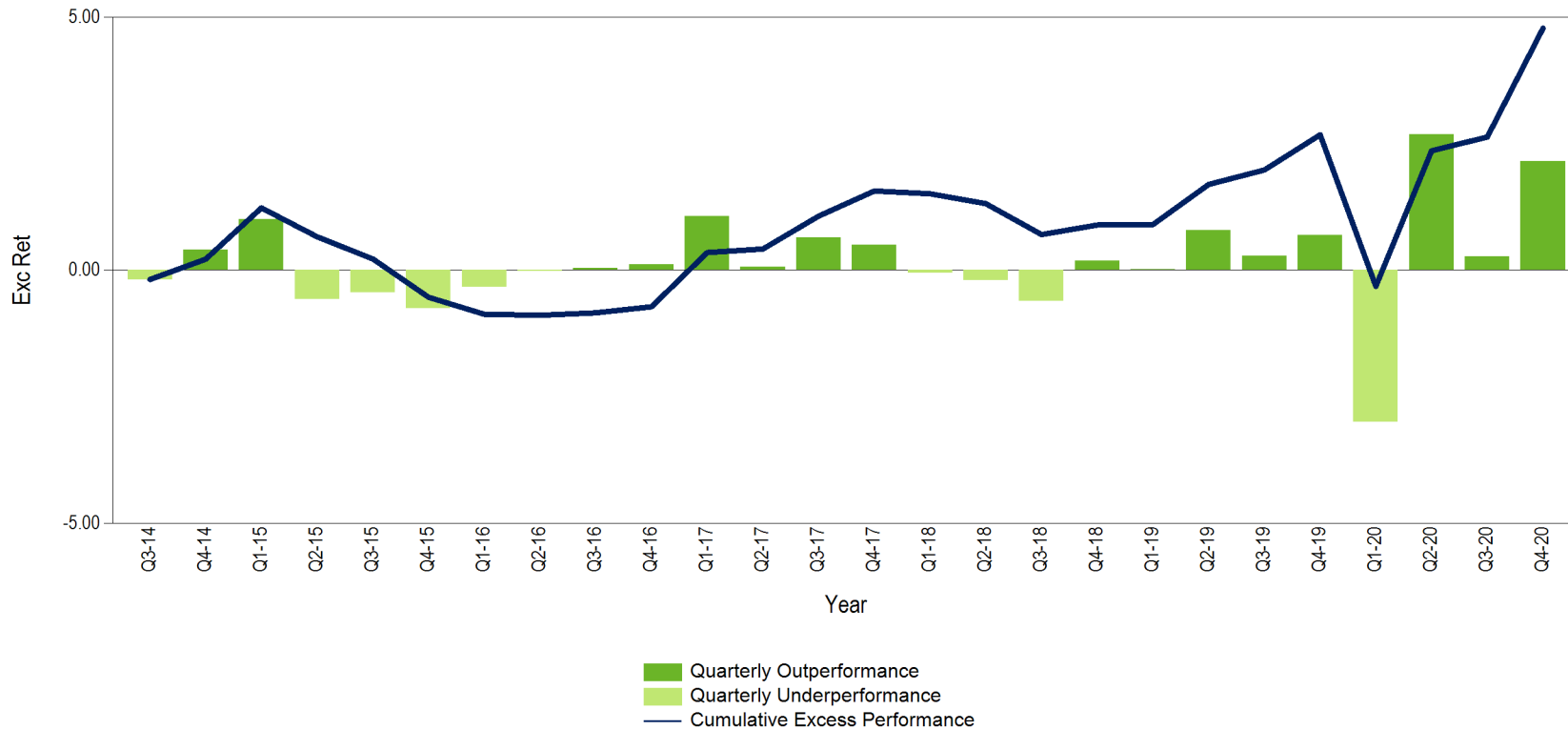
NEPC, LLC

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Los Angeles City Employees' Retirement System

# PRUDENTIAL EMERGING MARKETS

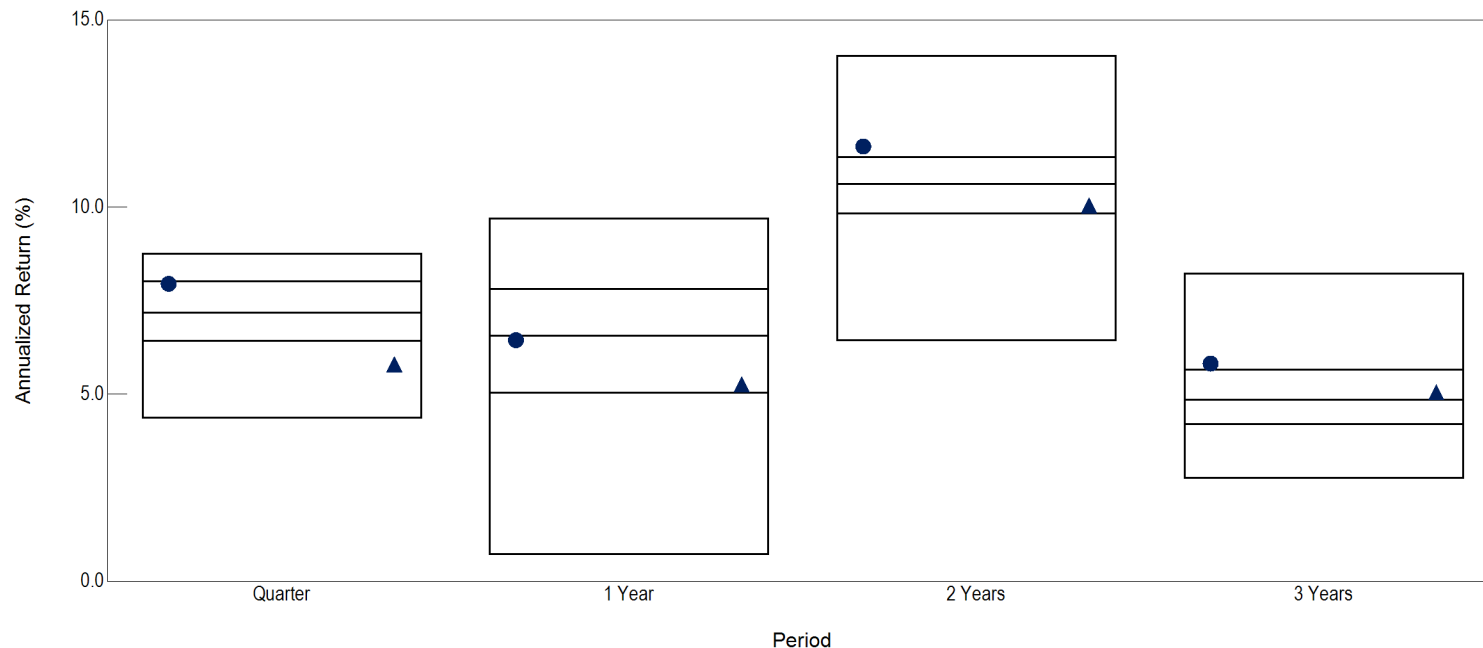
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# PRUDENTIAL EMERGING MARKETS

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



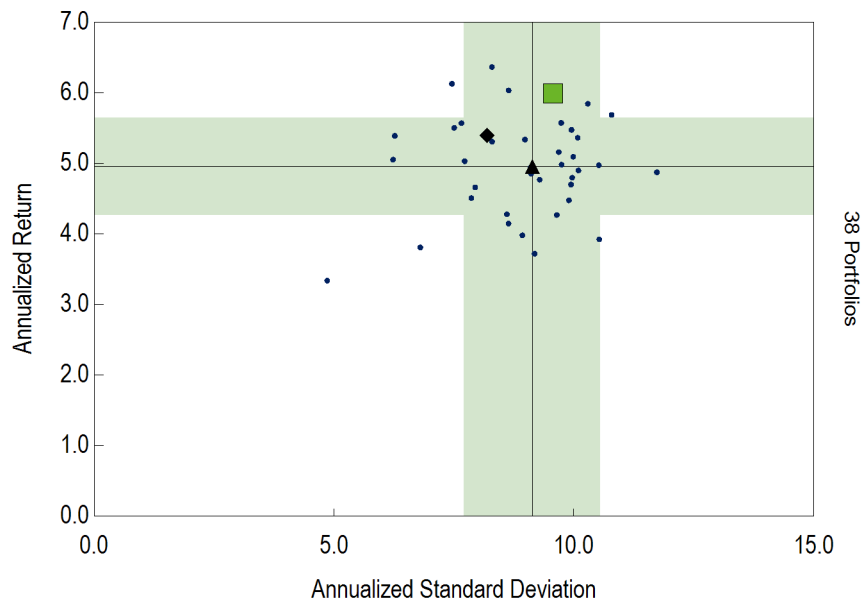
	Return (Rank)			
	Quarter	1 Year	2 Years	3 Years
5th Percentile	8.76	9.69	14.03	8.23
25th Percentile	8.03	7.83	11.35	5.66
Median	7.19	6.57	10.64	4.87
75th Percentile	6.45	5.05	9.85	4.21
95th Percentile	4.38	0.75	6.46	2.78
# of Portfolios	48	47	45	43
● Prudential Emerging Markets	7.95 (29)	6.44 (57)	11.62 (21)	5.82 (21)
▲ JP Morgan EMBI Global Diversified	5.80 (90)	5.26 (68)	10.04 (65)	5.05 (46)



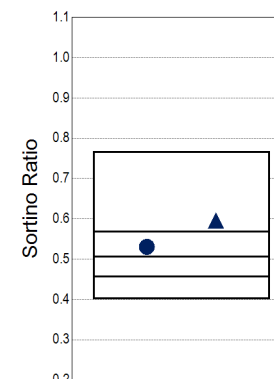
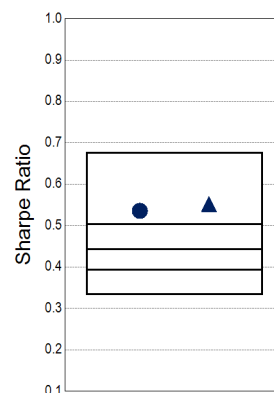
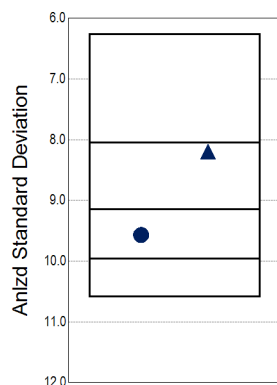
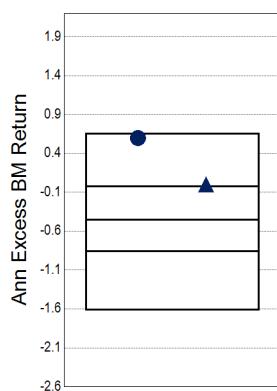
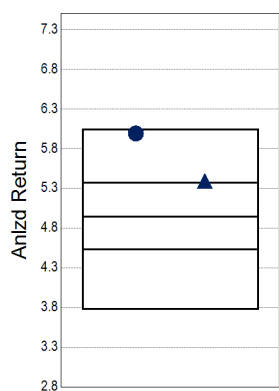
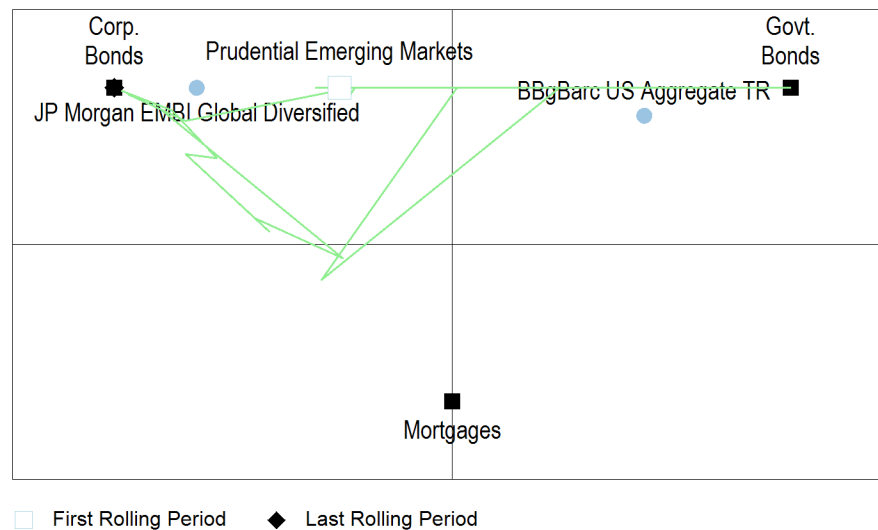
Los Angeles City Employees' Retirement System

# PRUDENTIAL EMERGING MARKETS

Since Inception Risk Return



Since Inception Style Map



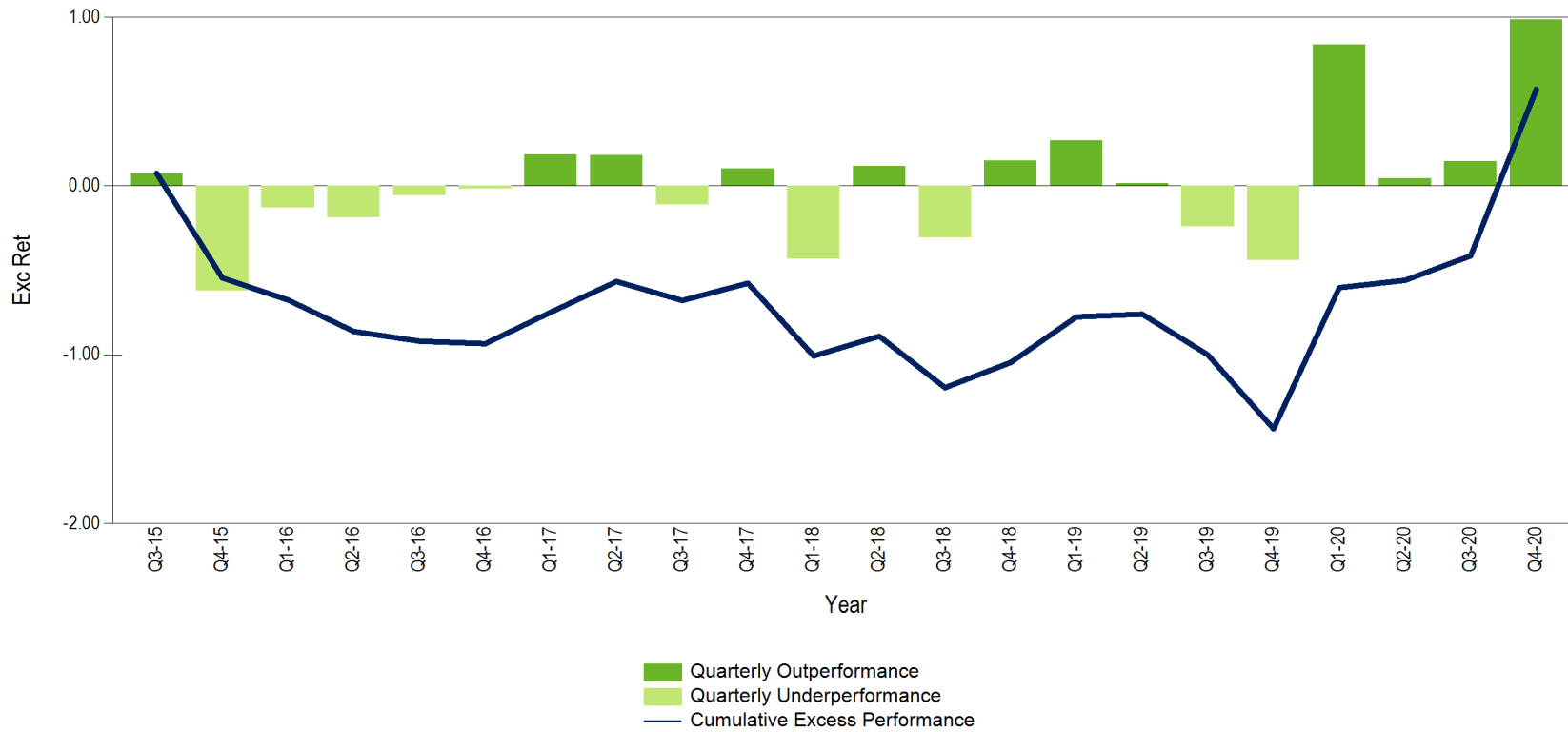
- Prudential Emerging Markets
- ▲ JP Morgan EMBI Global Div...
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Los Angeles City Employees' Retirement System

# BAIN CAPITAL SENIOR LOAN FUND, LP

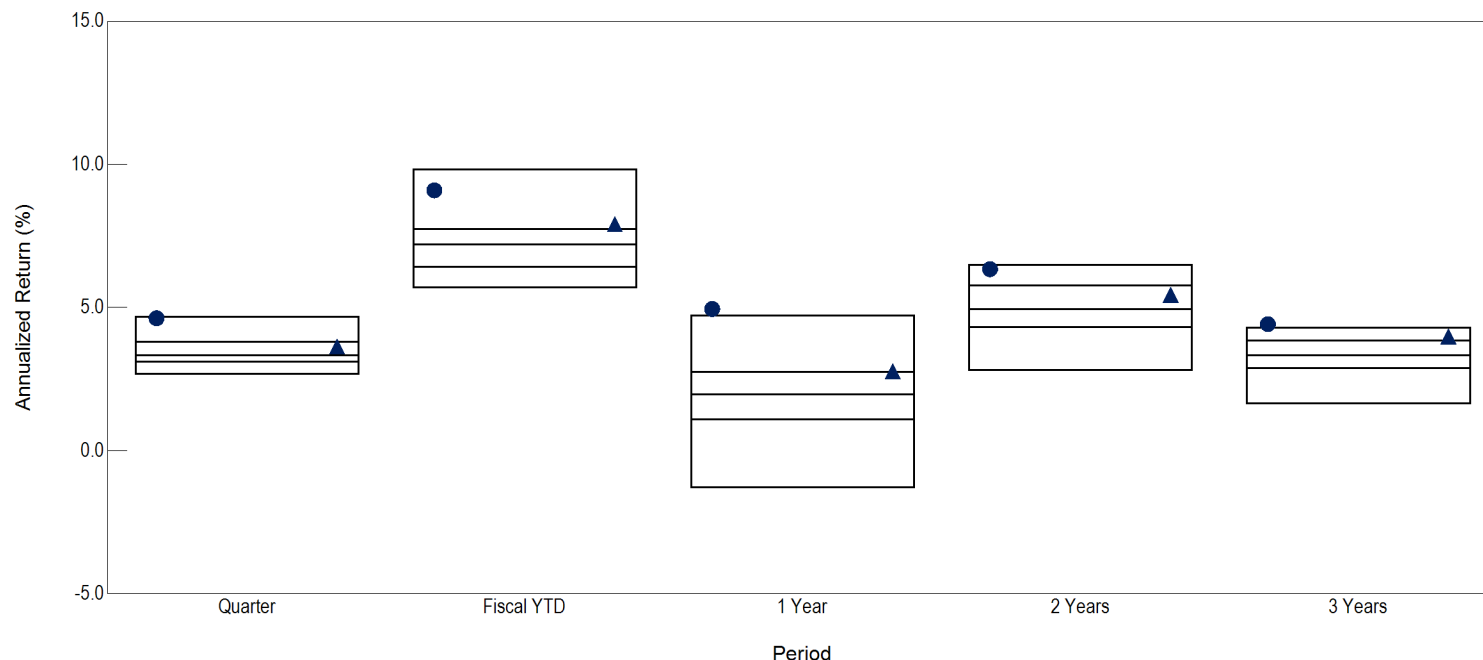
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# BAIN CAPITAL SENIOR LOAN FUND, LP

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



	Return (Rank)									
5th Percentile	4.69		9.83		4.72		6.48		4.29	
25th Percentile	3.82		7.77		2.77		5.80		3.87	
Median	3.36		7.22		1.99		4.96		3.36	
75th Percentile	3.12		6.45		1.12		4.34		2.91	
95th Percentile	2.70		5.72		-1.25		2.85		1.68	
# of Portfolios	54		54		54		54		53	
● Bain Capital Senior Loan Fund, LP	4.62	(8)	9.09	(13)	4.95	(4)	6.34	(10)	4.42	(4)
▲ Credit Suisse Leveraged Loans	3.64	(34)	7.91	(23)	2.78	(25)	5.44	(39)	3.99	(18)

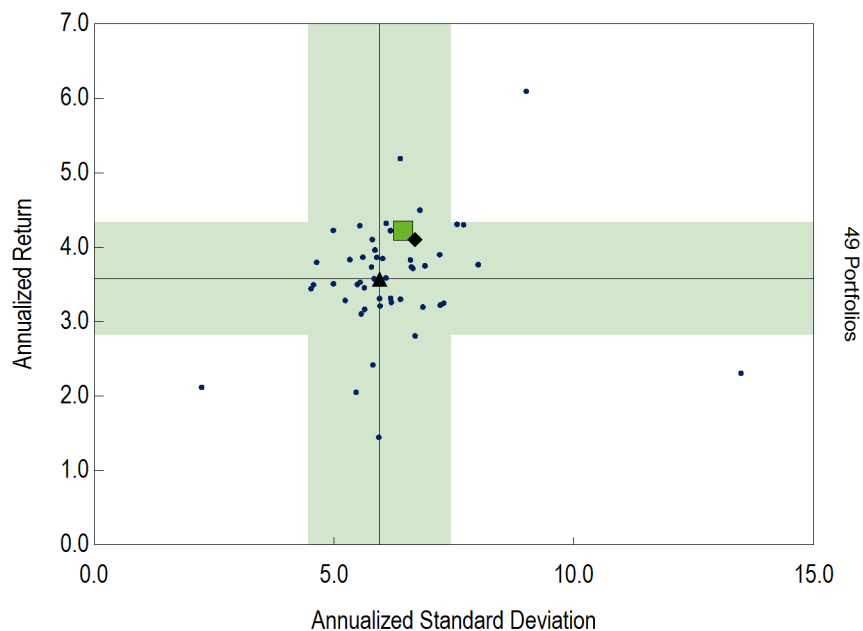




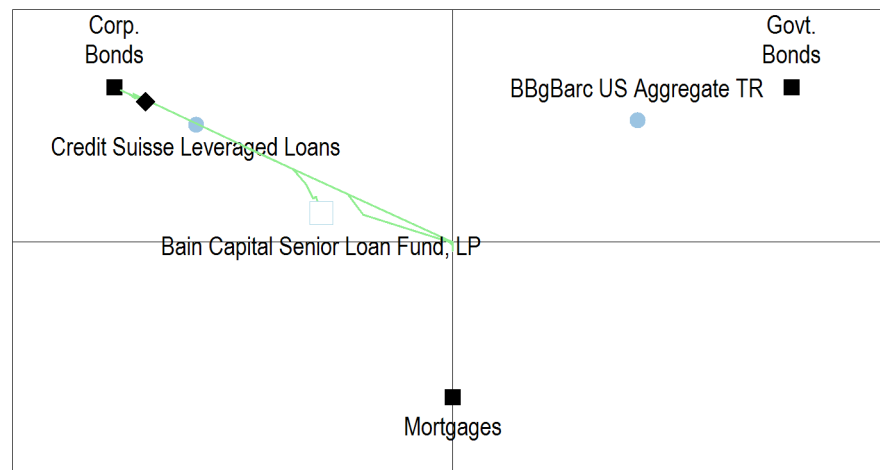
Los Angeles City Employees' Retirement System

# BAIN CAPITAL SENIOR LOAN FUND, LP

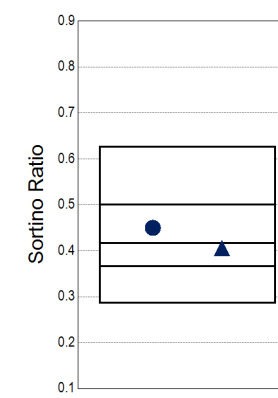
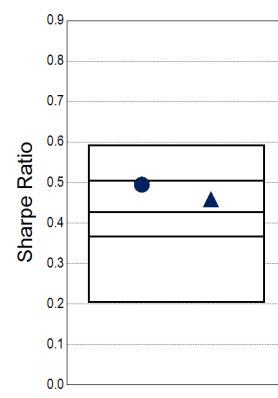
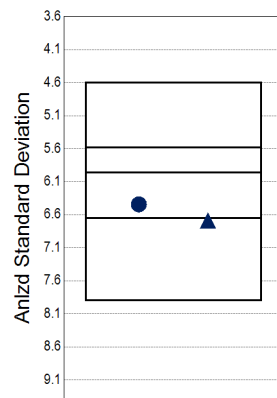
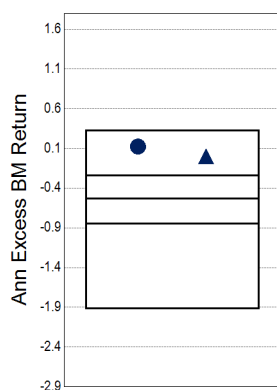
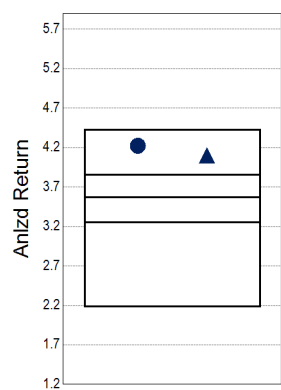
Since Inception Risk Return



Since Inception Style Map



□ First Rolling Period    ◆ Last Rolling Period



- Bain Capital Senior Loan Fund, LP
- ▲ Credit Suisse Leveraged Lo...
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# REAL ASSETS MANAGER PERFORMANCE

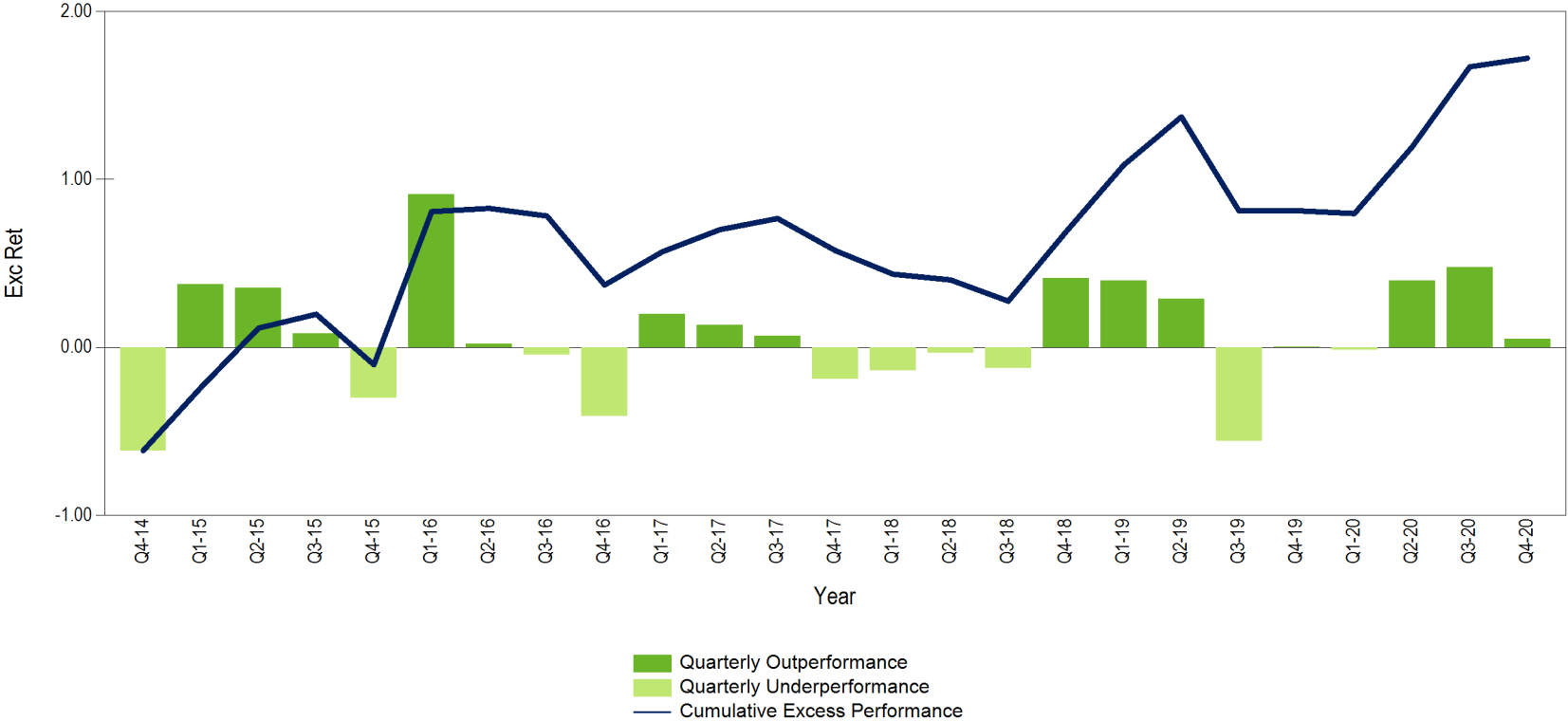
NEPC, LLC

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# Los Angeles City Employees' Retirement System

## DFA US TIPS

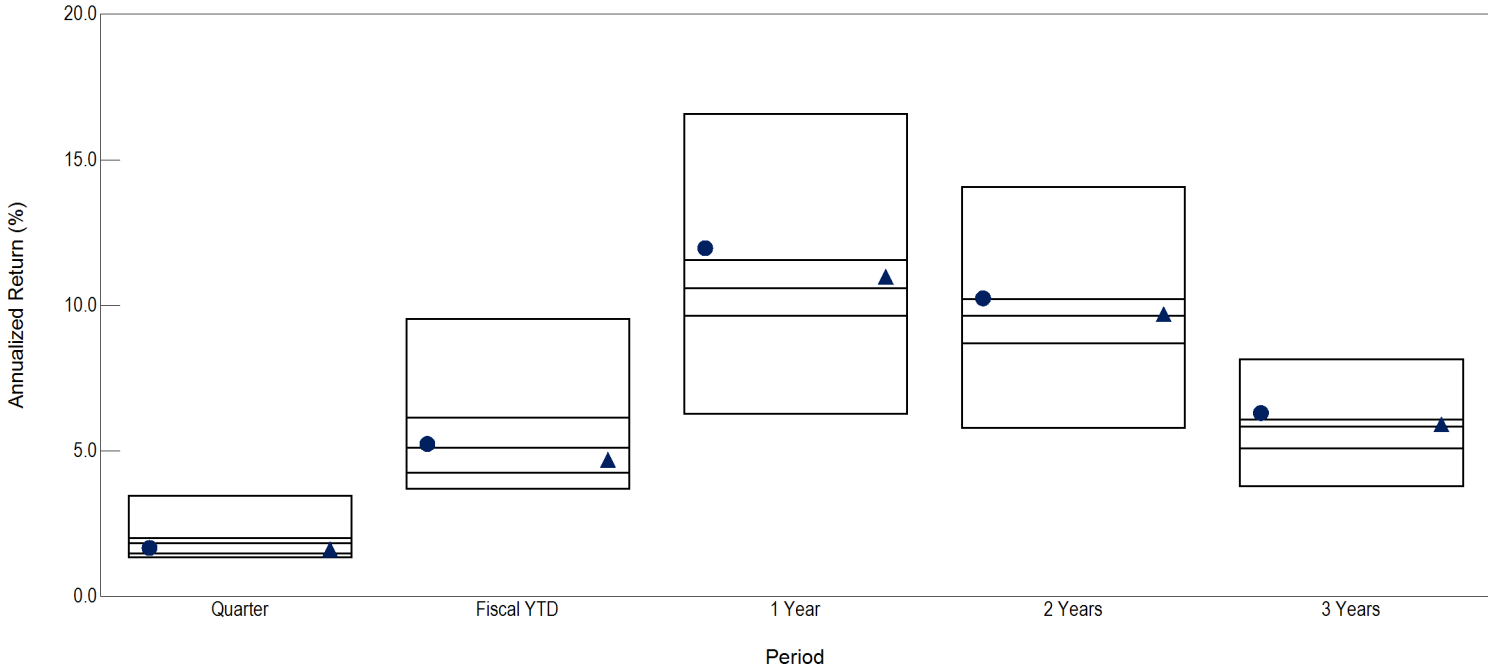
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## DFA US TIPS

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



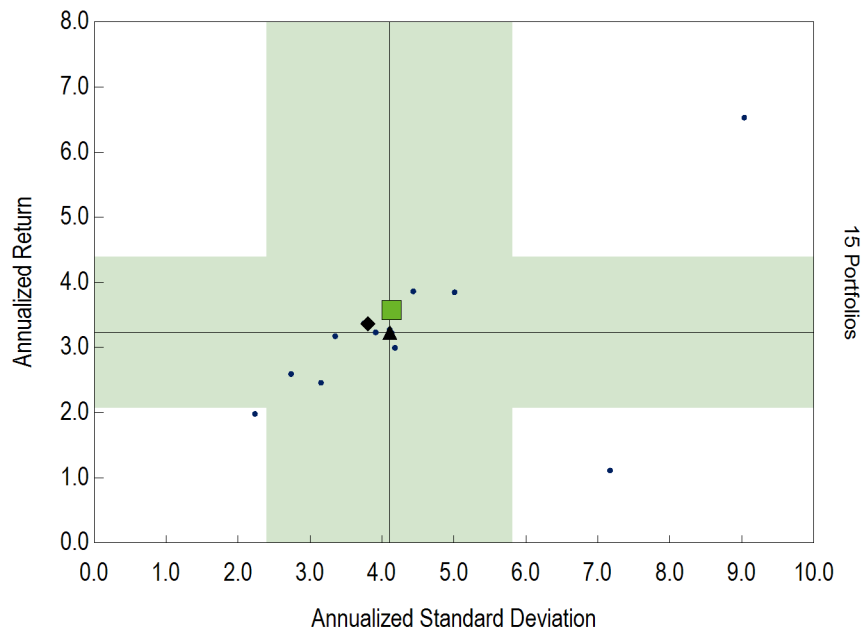
	Return (Rank)									
5th Percentile	3.46		9.55		16.58		14.07		8.15	
25th Percentile	2.02		6.18		11.58		10.25		6.11	
Median	1.85		5.13		10.61		9.68		5.87	
75th Percentile	1.51		4.28		9.66		8.72		5.11	
95th Percentile	1.37		3.73		6.31		5.81		3.82	
# of Portfolios	17		17		17		16		16	
● DFA US TIPS	1.67	(64)	5.24	(44)	11.97	(16)	10.24	(26)	6.31	(15)
▲ BBgBarc US TIPS TR	1.62	(69)	4.70	(62)	10.99	(37)	9.70	(46)	5.92	(45)



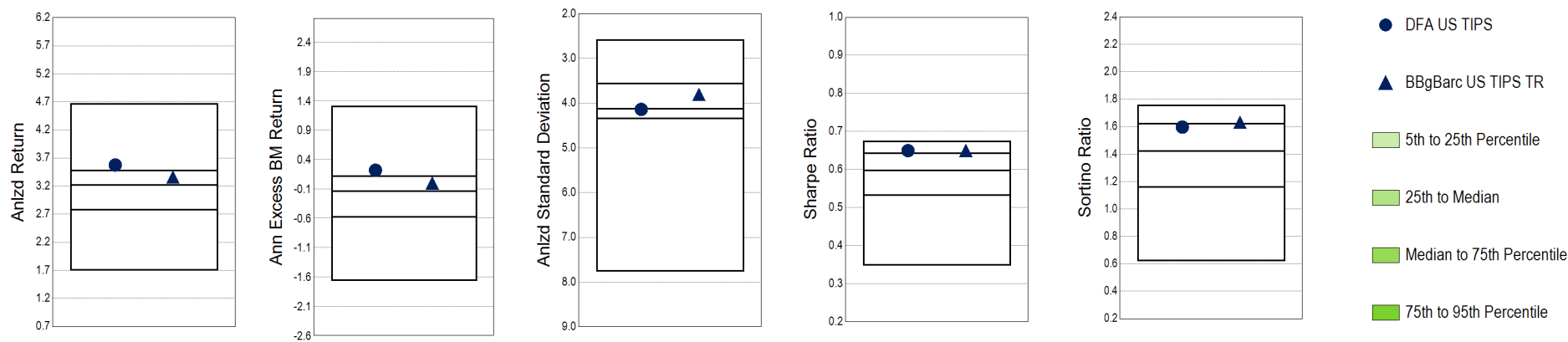
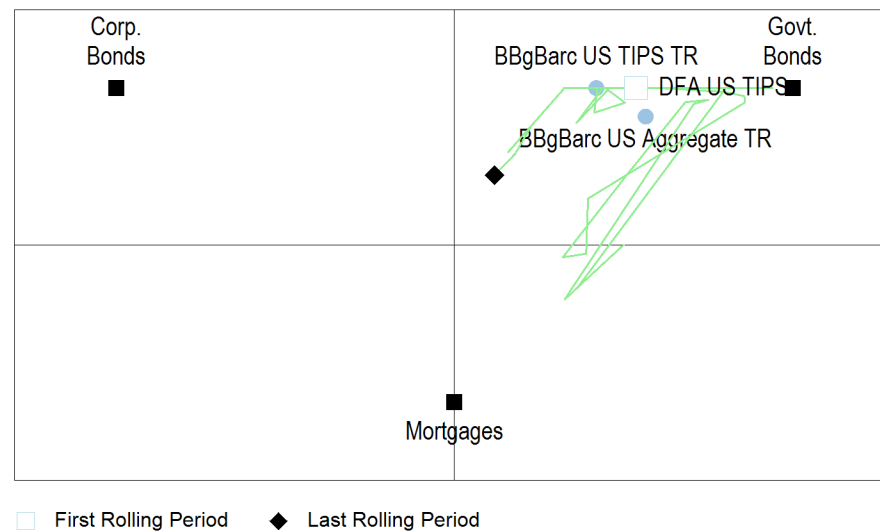
# Los Angeles City Employees' Retirement System

## DFA US TIPS

Since Inception Risk Return



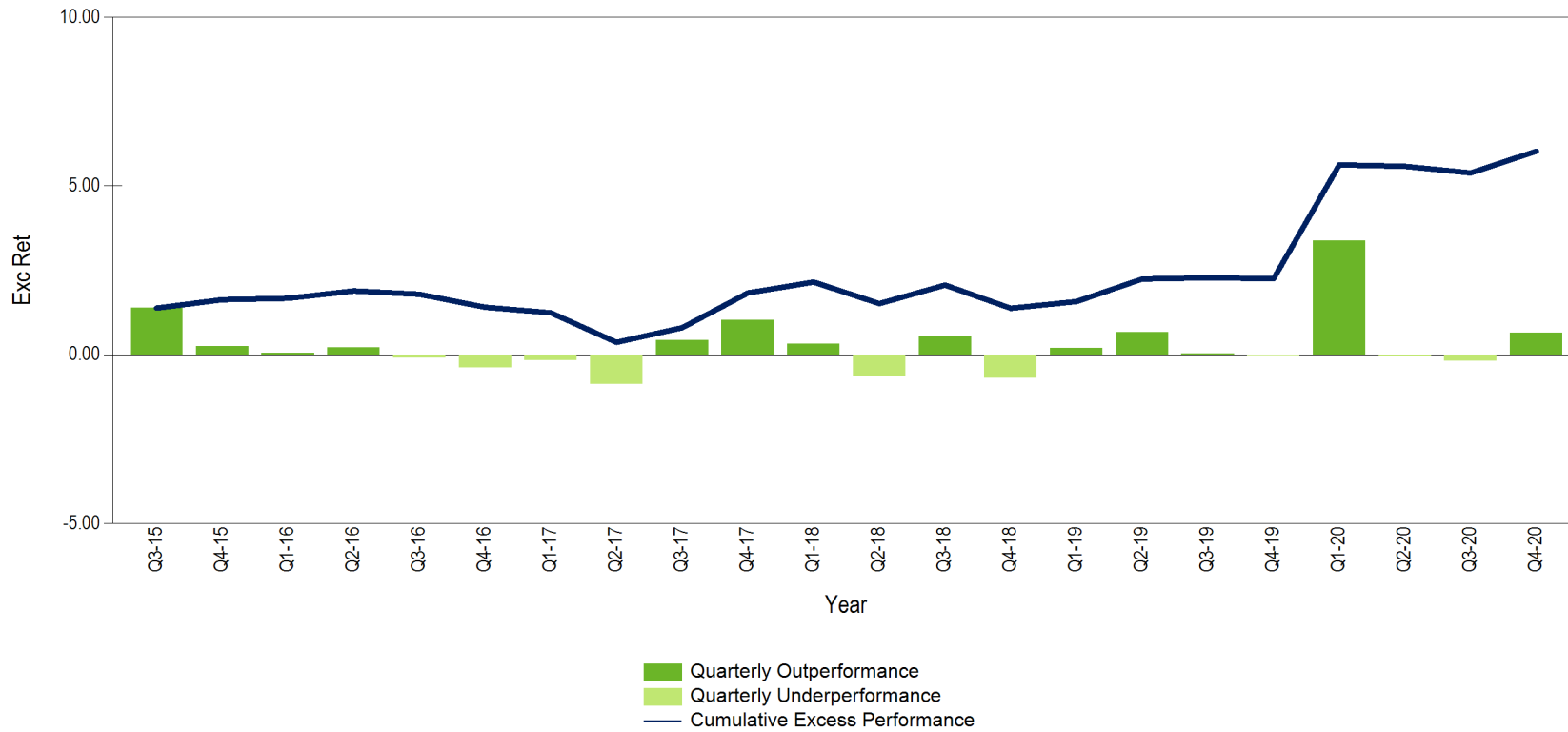
Since Inception Style Map



Los Angeles City Employees' Retirement System

# CENTERSQUARE US REAL ESTATE

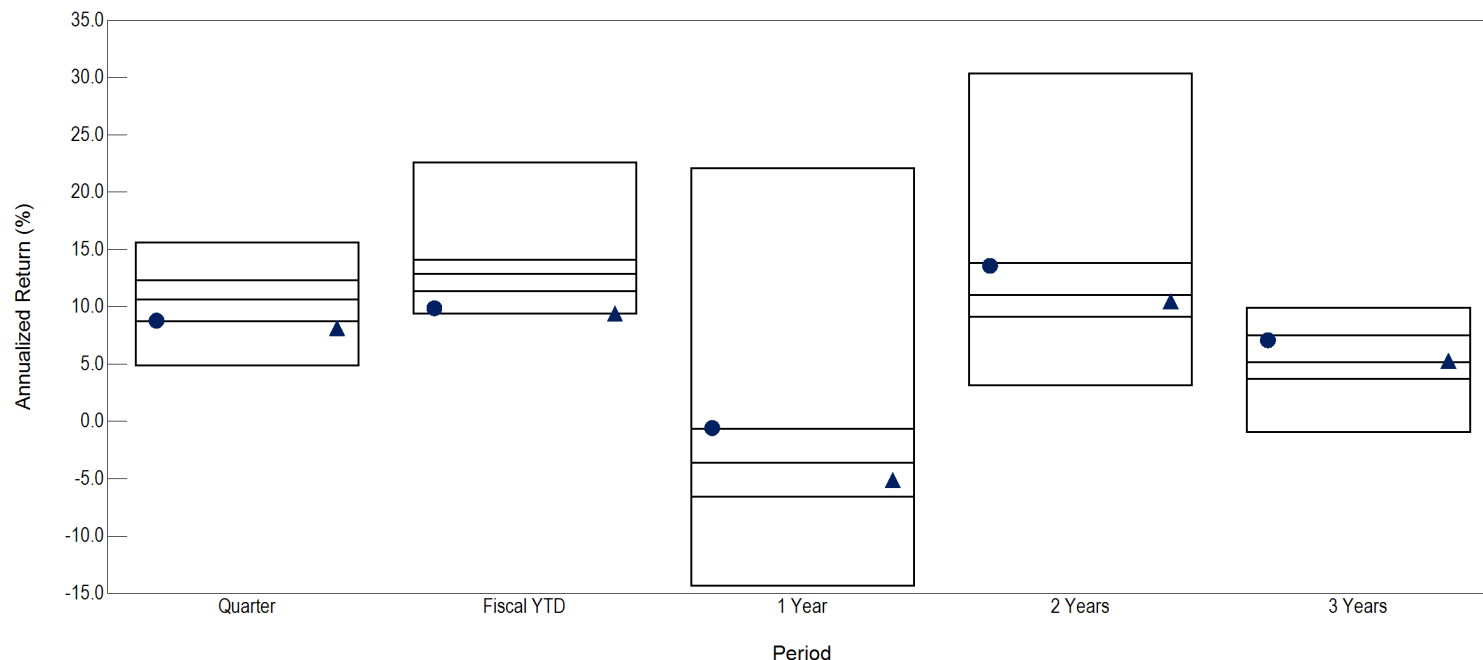
Quarterly and Cumulative Excess Performance



Los Angeles City Employees' Retirement System

# CENTERSQUARE US REAL ESTATE

CenterSquare US Real Estate vs. eV US REIT Net



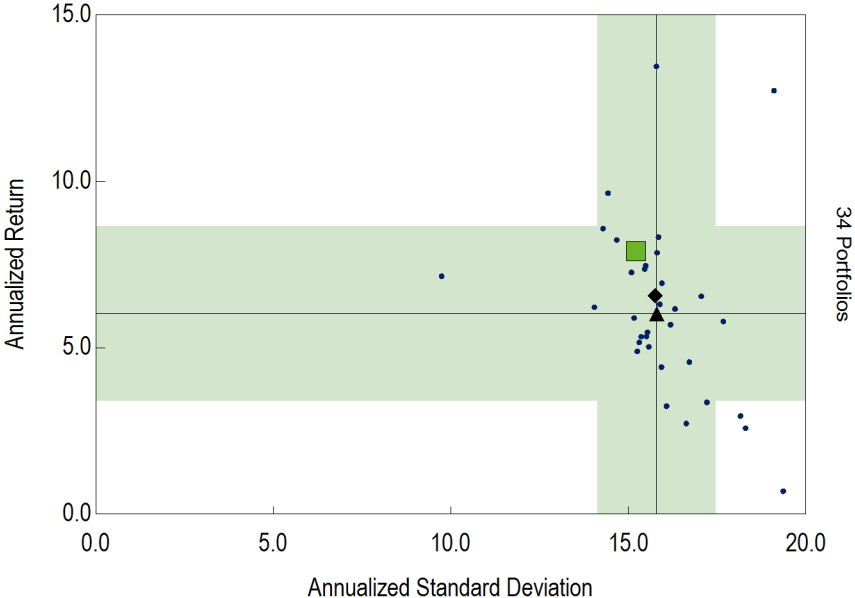
	Return (Rank)									
5th Percentile	15.59		22.60		22.06		30.35		9.92	
25th Percentile	12.39		14.15		-0.58		13.89		7.58	
Median	10.67		12.90		-3.55		11.10		5.20	
75th Percentile	8.78		11.41		-6.53		9.16		3.75	
95th Percentile	4.93		9.47		-14.28		3.23		-0.88	
# of Portfolios	37		37		37		36		35	
● CenterSquare US Real Estate	8.79	(75)	9.87	(95)	-0.58	(26)	13.57	(30)	7.08	(35)
▲ FTSE NAREIT All Equity REIT	8.14	(87)	9.43	(96)	-5.12	(70)	10.49	(56)	5.29	(49)



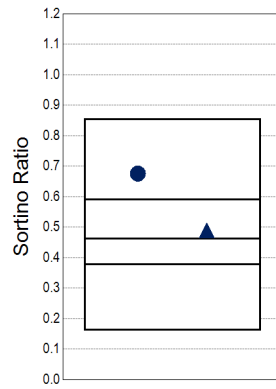
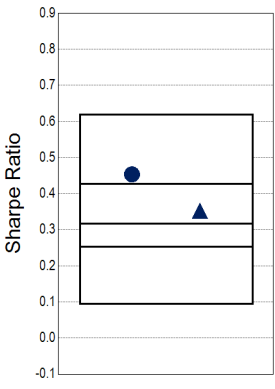
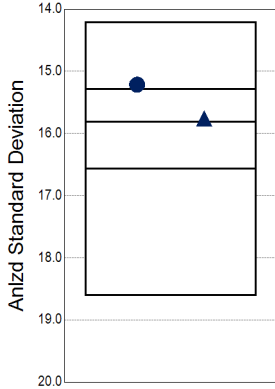
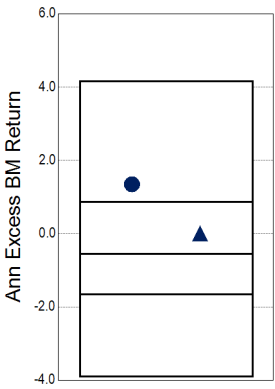
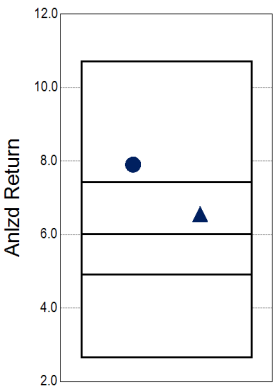
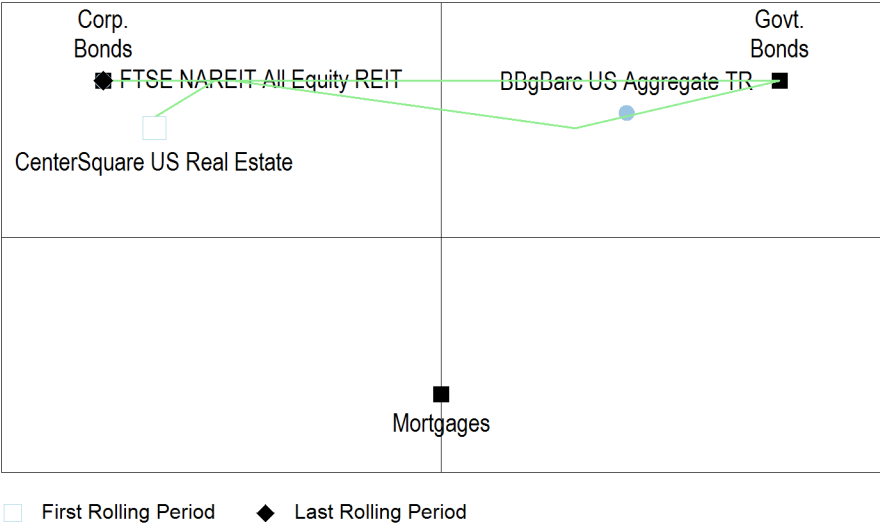
Los Angeles City Employees' Retirement System

# 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

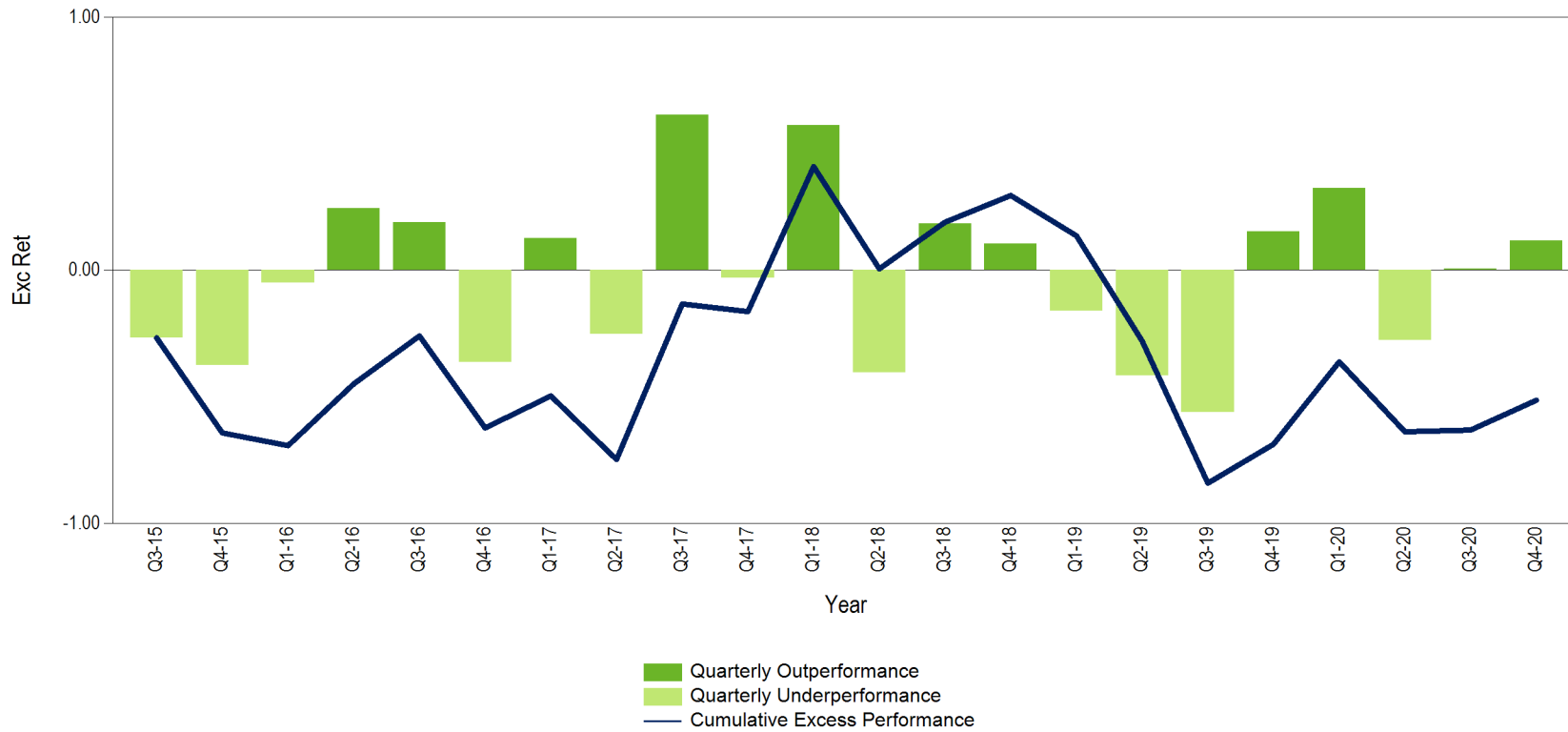




# Los Angeles City Employees' Retirement System

## 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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- Past performance is no guarantee of future results.
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- 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.
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