

# VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

## BOARD OF RETIREMENT

### BUSINESS MEETING

NOVEMBER 18, 2019

### AGENDA

**PLACE:** Ventura County Government Center  
Hall of Administration Building, Multi-Purpose Room  
800 S. Victoria Avenue  
Ventura, CA 93009

**TIME:** 9:00 a.m.

*Members of the public may comment on any item under the Board's jurisdiction by filling out a speaker form and presenting it to the Clerk. Unless otherwise directed by the Chair, comments related to items on the agenda will be heard when the Board considers that item. Comments related to items not on the agenda will generally be heard at the time designated for Public Comment.*

### **ITEM:**

- |   |                 |
|---|-----------------|
| <b>I.     <u>CALL TO ORDER</u></b>  | Master Page No. |
| <b>II.    <u>APPROVAL OF AGENDA</u></b>   | 1 – 3           |
| <b>III.   <u>APPROVAL OF MINUTES</u></b>  |                 |
| A.   Disability Minutes of November 4, 2019.  | 4 – 13          |
| <b>IV.    <u>CONSENT AGENDA</u></b>   |                 |
| A.   Approve Regular and Deferred Retirements and Survivors Continuances for the Month of October 2019.   | 14              |
| B.   Receive and File Report of Checks Disbursed in October 2019.   | 15 – 19         |
| C.   Receive and File Budget Summary for FY 2019-20 Month Ending October 31, 2019.  | 20 – 21         |
| D.   Receive and File Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Schedule of Investments and Cash Equivalents, and Schedule of Investment Management Fees for the Period Ending September 30, 2019. | 22 – 27         |

**BOARD OF RETIREMENT  
BUSINESS MEETING****NOVEMBER 18, 2019****AGENDA  
PAGE 2****V. INVESTMENT MANAGER PRESENTATIONS**

- A. Receive Annual Investment Presentation from BlackRock, Ross Ramatici and Drew Pinson. 28 – 94

**VI. INVESTMENT INFORMATION**

- A. NEPC – Alan Martin.  
VCERA – Dan Gallagher, Chief Investment Officer.
1. Preliminary Performance Report Month Ending October 31, 2019. 95 – 108  
**RECOMMENDED ACTION: Receive and file.**
2. Quarterly Investment Performance Report for Period Ending September 30, 2019. 109 – 195  
**RECOMMENDED ACTION: Receive and file.**

**VII. OLD BUSINESS**

- A. Update on Business Plan Risk Management Regarding Data Integrity.

**VIII. NEW BUSINESS**

- A. Receive CA Govt. Code Section 7514.7 Annual Reporting – Real Estate Funds.  
**RECOMMENDED ACTION: Receive and File.**
1. Staff Letter by C.I.O., Dan Gallagher. 196
2. CA Govt. Code Section 7514.7 Annual Reports for Prudential and UBS. 197 – 199
- B. Request for Authorization for Up to Two Trustees and C.I.O., Dan Gallagher to Attend the NEPC 2020 Public Funds Workshop in Tempe, AZ on February 4 – 5, 2020.  
**RECOMMENDED ACTION: Approve.**
1. Staff Letter by C.I.O., Dan Gallagher. 200
2. NEPC 2020 Public Funds Workshop Agenda - Draft. 201 – 202
- C. Proposed Investment Manager Presentations and On-Site Due Diligence Visit Calendars for 2020.  
**RECOMMENDED ACTION: Approve.**
1. Staff Letter by C.I.O., Dan Gallagher. 203
2. Proposed Investment Manager Presentations Calendar for 2020. 204
3. Proposed On-Site Due Diligence Visit Calendar for 2020. 205

**BOARD OF RETIREMENT  
BUSINESS MEETING**

**NOVEMBER 18, 2019**

**AGENDA  
PAGE 3**

**VIII. NEW BUSINESS (continued)**

- D. Request for Authorization for Trustee Roberts to Attend the CALAPRS Overview Course on December 6, 2019 in San Mateo, CA.

**RECOMMENDED ACTION: Approve.**

1. Staff Letter.

206

**IX. INFORMATIONAL**

- A. Announcement Regarding BlueBay Private Debt Relunched as Arcmont Asset Management.

207 - 208

**X. PUBLIC COMMENT**

**XI. STAFF COMMENT**

**XII. BOARD MEMBER COMMENT**

**XIII. ADJOURNMENT**

# **VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

## **BOARD OF RETIREMENT**

### **DISABILITY MEETING**

**NOVEMBER 4, 2019**

### **MINUTES**

**TRUSTEES**  
**PRESENT:**

William W. Wilson, Vice-Chair, Public Member  
Steven Hintz, Treasurer-Tax Collector  
Mike Sedell, Public Member  
Jordan Roberts, General Member  
Robert Ashby, Safety Member  
Arthur E. Goulet, Retiree Member  
Will Hoag, Alternate Retiree Member  
Ed McCombs, Alternate Public Member

**TRUSTEES**  
**ABSENT:**

Steve Bennett, Public Member  
Craig Winter, General Member

**STAFF**  
**PRESENT:**

Linda Webb, Retirement Administrator  
Henry Solis, Chief Financial Officer  
Julie Stallings, Chief Operations Officer  
Lori Nemiroff, General Counsel  
Leah Oliver, Chief Technology Officer  
Shalini Nunna, Retirement Benefits Manager  
Donna Edwards, Disability Benefits Specialist  
Nancy Jensen, Disability Benefits Specialist  
Chris Ayala, Program Assistant

**PLACE:**

Ventura County Government Center  
Hall of Administration Building, Multi-Purpose Room  
800 S. Victoria Avenue  
Ventura, CA 93009

**TIME:**

9:00 a.m.

**BOARD OF RETIREMENT  
DISABILITY MEETING**

**NOVEMBER 4, 2019**

**MINUTES  
PAGE 2**

**ITEM:**

**I. CALL TO ORDER**

Vice-Chair Wilson called the Disability Meeting of November 4, 2019, to order at 9:00 a.m.

**II. APPROVAL OF AGENDA**

MOTION: Approve.

Moved by Sedell, seconded by McCombs.

Vote: Motion carried

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: -

**III. APPROVAL OF MINUTES**

A. Business Meeting of October 21, 2019.

Ms. Webb informed the Board that she had created and distributed a short list of minor corrections regarding the minutes.

After discussion by the Board, the following motion was made:

MOTION: Approve with Corrections.

Moved by Goulet, seconded by Ashby.

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: Sedell

**IV. RECEIVE AND FILE PENDING DISABILITY APPLICATION STATUS REPORT**

MOTION: Receive and File.

Moved by Goulet, seconded by McCombs.

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: -

**V. APPLICATIONS FOR DISABILITY RETIREMENT**

A. Application for Service-connected Disability Retirement - Strasswyk, Rachele; Case No. 15-012.

**BOARD OF RETIREMENT  
DISABILITY MEETING**

**NOVEMBER 4, 2019**

**MINUTES  
PAGE 3**

1. Proposed Findings of Fact and Conclusions of Law and Recommended Decision to deny the Application for Service-connected Disability, submitted by Hearing Officer James P. Cloninger, dated September 4, 2019.
2. Applicant's Objection to Hearing Officer's Proposed Findings of Fact and Conclusions of Law, filed by Joon Y. Kim, Attorney for Applicant, dated September 27, 2019.
3. Legal Memorandum submitted by Respondent, County of Ventura-Risk Management, in support of the decision of Hearing Officer James P. Cloninger, filed by Stephen D. Roberson, Attorney for Respondent, dated October 16, 2019.
4. Hearing Notice dated, October 18, 2019.

Stephen D. Roberson, Attorney at Law was present on behalf of Ventura County Risk Management. Joon Y. Kim, Attorney at Law was present on behalf of the applicant, who was also present.

Mr. Kim made a brief statement.

Mr. Roberson also made a brief statement.

Trustee Goulet noted that Mr. Kim cited case law which said that the employer must show that they could and would accommodate the applicant's work restrictions; however, Trustee Goulet believed the evidence supported that the County of Ventura could and would accommodate the applicant's restrictions. Also, until the applicant resigned from the County of Ventura, they had been waiting for her to return to work, so it was troublesome to him that the applicant had not tried to return to work.

Trustee Sedell said that he agreed with Trustee Goulet and had also wondered why the applicant did not try to return, as the County of Ventura had indicated they were willing to accommodate her restrictions.

After discussion by the Board, the following motion was made:

**MOTION:** Adopt the Hearing Officers Recommendation to Deny the Application for Service-Connected Disability.

Moved by Goulet, seconded by McCombs.

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: -

- B. Application for Service-connected Disability Retirement-Surwin, Zenaida C.; Case No. 16-005.

1. Proposed Findings of Fact and Conclusions of Law and Recommended Decision to deny the Application for Service-connected Disability, submitted by Hearing Officer Catherine Harris, dated August 19, 2019.

**BOARD OF RETIREMENT  
DISABILITY MEETING**

**NOVEMBER 4, 2019**

**MINUTES  
PAGE 4**

2. Applicant's Objection to Hearing Officer's Proposed Findings of Fact and Conclusions of Law, filed by Zenaida C. Surwin, Applicant, and Michael J. Surwin, Applicant's Spouse.
3. Legal Memorandum submitted by Respondent, County of Ventura-Risk Management, in support of the decision of Hearing Officer Catherine Harris, filed by Stephen D. Roberson, Attorney for Respondent, dated September 6, 2019.
4. Hearing Notice dated, October 18, 2019.

Stephen D. Roberson, Attorney at Law was present on behalf of Ventura County Risk Management. The applicant, Zenaida C. Surwin, was also present with her spouse, Michael J. Surwin.

Ms. Surwin made a brief statement.

Mr. Roberson also made a brief statement.

Trustee Wilson remarked that there were two very different stories presented regarding the applicant's condition, and after reviewing the record he believed the applicant's ailments to be unconfirmed by a physician.

After discussion by the Board, the following motion was made:

**MOTION:** Adopt the Hearing Officers Recommendation to Deny the Application for Service-Connected Disability.

Moved by Hintz, seconded by McCombs.

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: -

Mr. and Mrs. Surwin expressed their displeasure with the Board's decision.

C. Application for Nonservice and Service-connected Disability Retirement-Wise, Melissa S.; Case No. 19-005.

1. Request from Respondent, County of Ventura-Risk Management, to require Applicant, Melissa S. Wise, to attend a medical appointment with Dr. Kyle Boone, submitted by Stephen D. Roberson, Attorney for Respondent, dated September 10, 2019.
2. Correspondence between Attorney for Respondent, Stephen D. Roberson, and Applicant, Melissa S. Wise.
3. Letter from Indu Raghavan, M.D., submitted by Applicant, Melissa S. Wise, dated October 21, 2019.
4. Hearing Notice dated, October 4, 2019.

**BOARD OF RETIREMENT  
DISABILITY MEETING**

**NOVEMBER 4, 2019**

**MINUTES  
PAGE 5**

Stephen D. Roberson, Attorney at Law was present on behalf of Ventura County Risk Management. The applicant, Melissa S. Wise, was also present with her spouse, Daryl Wise.

Trustee Goulet said that this item was a request from Mr. Roberson, asking the Board of Retirement to order the applicant to require Ms. Wise to attend a medical appointment with Dr. Kyle Boone in Torrance.

Mr. Roberson also made a brief statement.

Ms. Wise said that she was willing to attend the appointment, but she was requesting that the appointment be in Oxnard, CA instead of Torrance, CA.

Mr. Roberson said that the County of Ventura had already offered to arrange and pay for transportation for the applicant so that she would not need to drive to the appointment herself.

Trustee Wilson asked Mr. Roberson if he had offered to provide a hotel for her as well.

Mr. Roberson said that the County of Ventura would be willing to provide a hotel room for Ms. Wise so that she could stay the night before her appointment the next day and then be driven back home.

Mr. Wise explained responded that a drive of that distance would be difficult because of his wife's anxiety while either driving or as a passenger of a vehicle. He and Ms. Wise suggested that the County of Ventura arrange for Dr. Boone to come down to Ventura County and rent an office space for a day so that Ms. Wise could attend the appointment within the Ventura County. Ms. Wise said previous physicians had done this in the past for her.

Mr. Roberson said that Dr. Boone prefers to do the appointment at her office in Torrance, CA.

Trustee Goulet noted that Ms. Wise had referred to a letter from her doctor which said she was unable to travel to an appointment that was two hours away from her home, but the note indicated this was because she does not drive. He said that the County of Ventura was not asking her to drive, but instead had offered to arrange transportation for her.

Ms. Wise responded that she could arrange for the doctor to revise the note.

Trustee Wilson said that if Dr. Boone was one of the few doctors qualified to do the types of assessments that were required to determine Ms. Wise's condition then she would need to go to Dr. Boone's office.

Trustee Ashby asked if it was possible to have the Mr. Wise drive his wife to her appointment with Dr. Boone, noting his remark that he drove Ms. Wise to her appointments presently.

Ms. Wise replied that it would be difficult because she would have to be medicated to avoid having anxiety or panic attacks, and because they have animals that required medication every 12 hours.

Trustee Goulet asked Ms. Nemiroff what the Board's options were if Ms. Wise did not attend the Board ordered examination.

Ms. Nemiroff replied that the Board could deny the claim regarding the psychiatric injury, but there would be no reason to dismiss the applicant's orthopedic claims.



**BOARD OF RETIREMENT  
DISABILITY MEETING**

**NOVEMBER 4, 2019**

**MINUTES  
PAGE 6**

After discussion by the Board, the following motion was made:

**MOTION:** Grant the County of Ventura's Request to Order that Ms. Wise to Attend the Neuropsychic Examination with Dr. Boone.

Moved by Hintz, seconded by Sedell.

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: -

After the vote on this item, the Board took a break at 9:55 a.m.

The Board returned from break at 10:06 a.m.

**VI. OLD BUSINESS**

- A. Updated 2019-20 Business Plan with Supplemental Risk Assessment Regarding Data Integrity Objective.

**RECOMMENDED ACTION: Approve.**

1. Updated Business Plan.
2. Supplemental Risk Assessment/Data Integrity Report.  
*To be provided.*

Ms. Webb reminded the Board that at the previous meeting, staff had provided the Board with the 2019-20 Business Plan, without an update to the previous year's supplemental risk assessment. After the Board's discussion the item had been tabled, though Trustee Goulet had asked staff to add a Business Plan objective regarding an assessment to VCERA's options for data hosting and reduced dependence on the vendor. The Business Plan was provided with that addition, as was the supplemental risk assessment.

She reviewed for the Board the ongoing data integrity issue associated with errors that were generated from the Auditor-Controller's bi-weekly payroll transmittal. The update was to show the current status, as well as the history and efforts VCERA staff had made to mitigate and/or prevent errors that came over through the biweekly payroll transmittals. She noted an increase in cooperation and effort since the arrival Deputy Director Auditor-Controller, Amy Herron; however, the scope of the problem had grown to such a degree, that it would be difficult to turn the tide with existing Auditor-Controller resources. Because trustees had asked staff to include the Board's legal options going forward, staff had added a section in the supplemental report that noted CERL sections addressing auditing, reporting and payroll. She noted that staff was not making a recommendation but providing an update to the Board. Ms. Webb expressed her concern that the main programmer at the Auditor-Controller's Office had accepted a new position and any new programmers would be unfamiliar with the existing issues and problems.

**BOARD OF RETIREMENT  
DISABILITY MEETING**

**NOVEMBER 4, 2019**

**MINUTES  
PAGE 7**

Vice-Chair Wilson asked if the Auditor-Controller received a copy of the Supplemental Risk Assessment/Data Integrity Report.

Ms. Webb replied she had corresponded with the Auditor-Controller and Ms. Herron via email that week and staff had collaborated with Ms. Herron on the numbers provided in the report, and she would send the final document to the Auditor-Controller, as he was not in attendance as she had anticipated.

Vice-Chair Wilson remarked that he could not think of another issue that was more important to the Board presently. He said that he believed that the core of the problem seemed to be in the Auditor-Controller not applying the resources needed to correct the situation.

Ms. Webb noted that although staff could not make the necessary changes for the Auditor-Controller to alleviate the situation, staff had proactively worked to eliminate any obstacles in the Auditor-Controller's path so that VCERA could get accurate data.

Trustee Sedell said that the issue seemed like it was a monetary issue for the Auditor-Controller, which meant that it may take involvement from the CEO's office to address the issue. He suggested the Board meet with the CEO's office to discuss the matter.

Trustee Ashby asked how difficult it would be for the Auditor-Controller to hire extra help for this special project.

Ms. Webb replied that staff had asked the Auditor-Controller to appropriate extra resources exclusively to the issue, but it had not happened yet.

Trustee Sedell suggested that a meeting be scheduled between some of the Board, Ms. Webb, Mr. Powers and Mr. Burgh to work on a resolution to the problem.

Trustee Goulet remarked that the statistic that frightened him was that almost a third of the active members were affected by the issue, which was a very high percentage.

Vice-Chair Wilson then directed staff to schedule a meeting with the CEO, Auditor-Controller, Trustee Bennett and the Retirement Administrator to address the issue.

After discussion by the Board, the following motion was made:

MOTION: Approve the Modified Business Plan for 2019-20.

Moved by Goulet, seconded by Ashby.

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: -

- B. Request for Authorization and Designation of Trustee On-Site Due Diligence Visit to Bridgewater and UBS.

**BOARD OF RETIREMENT  
DISABILITY MEETING**

**NOVEMBER 4, 2019**

**MINUTES  
PAGE 8**

**RECOMMENDED ACTION: Approve.**

1. Staff Letter by C.I.O., Dan Gallagher.

Ms. Webb reminded the Board that although the item was approved at the previous meeting it had also required designation of a specific Trustee to attend. She said that Mr. Gallagher had submitted a staff letter indicating that Trustee Ashby would like to attend.

After discussion by the Board, the following motion was made:

**MOTION:** Approve Authorization for Trustee Ashby and CIO to Attend an On-Site Due Diligence Visit to Bridgewater and UBS.

Moved by Goulet, seconded by Roberts.

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: -

- C. Board of Retirement Meetings Calendar (Corrected).

**RECOMMENDED ACTION: Approve.**

1. Staff Letter.
2. 2020 Meeting Calendar.

Ms. Webb informed the Board that Trustee Goulet had noticed after the previous meeting when the Board adopted the calendar, that the staff letter provided at the time stated staff recommended approval of the 2019 calendar, rather than the 2020 calendar. Therefore, staff was requesting that the Board approve the 2020 Board Meeting Calendar.

After discussion by the Board, the following motion was made:

**MOTION:** Approve

Moved by Ashby, seconded by McCombs.

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: -

**VII. NEW BUSINESS**

- A. Contract Amendment for CBRE – Project Management Services.  
**RECOMMENDED ACTION: Approve.**

**BOARD OF RETIREMENT  
DISABILITY MEETING**

**NOVEMBER 4, 2019**

**MINUTES  
PAGE 9**

1. Staff Letter.
2. First Amendment to Agreement.
3. Work Order #2.

Ms. Webb noted that the item was an amendment to extend the contract with CBRE for project management services related to the office renovation.

Trustee Sedell said that he did not understand why staff was requesting that the target completion date and schedule to be completed by May 2020, since the amendment request would be valid until December 2020.

Mr. Solis replied that after speaking to the Project Manager from CBRE, the May 2020 date was an arbitrary date and the master agreement would still be open until December 2020 in the event there was a need for additional services, though none were anticipated.

Ms. Webb reminded the Board that one of the duties of the Project Manager was to manage the vendors for a project and if a vendor's work was delayed for some reason then there could be follow up work.

Trustee Goulet noted that the work order addressed possible post construction needs, which were extended because of the extended timeline. In section 1.6 of the work order there was a list of things that would need to be done to close out the project.

After discussion by the Board, staff and consultant, the following motion was made:

**MOTION:** Authorize the Retirement Administrator to, 1) Execute First Amendment to Project Management Agreement. 2) Execute Work Order #2, for an Additional \$16,000, for a Total Contract not to Exceed \$51,000. 3) Authorize Staff to Process the Following Budgetary Adjustments: Increase - Capital Expenses by \$16,000 and Decrease - Contingency by \$16,000.

Moved by Sedell, seconded by McCombs.

Yes: Ashby, Goulet, Hintz, McCombs, Roberts, Sedell, Wilson

No: -

Absent: Bennett, Winter

Abstain: -

Trustee Goulet said that he would be voting in favor of the recommendation, however as he had said previously that he did not like using CBRE's documents and would have preferred to have VCERA draw up the necessary documents.

**VIII. INFORMATIONAL**

**IX. PUBLIC COMMENT**

None.

**X. STAFF COMMENT**

**BOARD OF RETIREMENT  
DISABILITY MEETING**

**NOVEMBER 4, 2019**

**MINUTES  
PAGE 10**

Ms. Webb reminded the Board that the State Association of County Retirement Systems (SACRS) Fall Conference was the following week and if the Board had any questions regarding it to let staff know.

**XI. BOARD MEMBER COMMENT**

Trustee Hoag notified the Board that at a previous Board meeting Mr. Towner had been designated as the primary voting proxy and Trustee Hoag was designated as the backup voting proxy. Since Mr. Towner would not be attending, and as backup he might have a schedule conflict, he suggested the Board may need an alternate voting proxy.

Ms. Webb then volunteered to act as the alternate voting proxy for Trustee Hoag, if he were unable to attend the conference.

Vice-Chair Wilson then appointed Ms. Webb as the Alternate Voting Proxy.

**XII. ADJOURNMENT**

The meeting was adjourned at 10:23 a.m.

Respectfully submitted,



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LINDA WEBB, Retirement Administrator

Approved,

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WILLIAM W. WILSON, Vice-Chairman

**VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
REPORT OF REGULAR AND DEFERRED RETIREMENTS AND SURVIVORS CONTINUANCES**

**October 2019**

FIRST NAME	LAST NAME	G/S	DATE OF MEMBERSHIP	BENEFIT SERVICE*	DEPARTMENT	EFFECTIVE DATE
<b>REGULAR RETIREMENTS:</b>						
Debra	Bell	G	7/14/1996	10.64	Child Support Services (deferred)	9/26/2019
David	Berry	G	10/13/1991	29.68	Public Works Agency	9/6/2019
Cheryl	Blake	G	3/31/2013	6.18	Health Care Agency	9/23/2019
Aurellia	Clewis	G	9/10/2006	10.04	Human Services Agency	10/1/2019
Michael	Culbert	G	11/5/1995	23.95	Human Services Agency	10/5/2019
Sandra	Fay	G	6/4/2006	5.78	Health Care Agency (deferred)	10/19/2019
Heradonnious Kelly	Featherstone Flanders	G	9/9/2007	11.87	Human Services Agency Sheriff's Office (alt-payee)	10/7/2019 7/9/2019
Virgilio	Garlejo	G	6/27/1999	20.17	General Services Agency	9/29/2019
Linda	Greene	G	9/8/1985	34.18	Assessor	9/20/2019
Chi	Hermann	G	11/25/1995	18.86	Regional Sanitation District	9/7/2019
Linda	Isaac	G	9/7/1997	20.53	Health Care Agency (deferred)	10/9/2019
Lawrence	Lee	G	3/6/1978	41.47	Clerk and Recorder	9/7/2019
Norma	Lewis	G	4/14/1991	25.92	Health Care Agency	9/7/2019
Beckie	Lubow	G	5/21/2006	1.57	Assessor (deferred)	10/3/2019
Carolyn	Moon	G	5/8/1994	25.15	Animal Services	10/1/2019
Nancy	Mount	G	7/11/1999	20.23	CEO	9/28/2019
Karl	Novak	G	10/27/2003	19.03	Public Works Agency	9/29/2019
Lysa	Plambeck	G	9/18/2000	18.92	Superior Court	9/21/2019
Kelli	Pontis	G	3/17/2002	11.52	Health Care Agency (deferred)	10/20/2019
Irma G.	Ramirez	G	9/2/1990	28.60	Human Services Agency	9/13/2019
Julie	Rego	G	10/21/2007	19.73	Public Works Agency	9/21/2019
Johnny	Richmond	G	5/7/2006	11.81	Health Care Agency	9/21/2019
James L.	Roberts	G	11/5/1995	23.86	Sheriff's Office	10/4/2019
Roxanne	Russell	G	11/19/2001	17.60	Superior Court	9/21/2019
Edward	Ryan	G	01/09/2011	8.74	Sheriff's Office (deferred)	10/9/2019
Suzanne	Sandberg-McNamara	G	4/27/2016	2.43	Health Care Agency (deferred)	10/21/2019
Anthony	Sanders	S	4/16/1989	30.53	Sheriff's Office	9/9/2019
Gloria	Trevino	G	2/1/2004	15.68	Human Services Agency	9/30/2019
Mary L.	Walker	G	11/2/1986	32.64	CEO	9/21/2019
Sharon	Westcott	G	5/13/1990	10.81	Human Services Agency	8/1/2019

**DEFERRED RETIREMENTS:**

Jennie	Almeida	G	06/16/2019	0.17	Human Services Agency	08/27/2019
Carla	Cross	G	10/09/2005	13.82	Health Care Agency	10/05/2019
Erlinda	Farala	G	11/10/2013	5.12	Health Care Agency	10/11/2019
Maria A.	Juarez-Pina	G	10/15/2018	0.93	General Services Agency	09/17/2019
Rachel A.	Kovar	G	08/14/2005	13.65	Human Services Agency	10/19/2019
Veronica A.	Lara	G	08/11/2003	14.05	Human Services Agency	10/12/2019
Deborah	Myrick	G	01/05/2014	5.67	Tax Collector	08/31/2019
Frank L.	Younce	G	01/22/2013	6.53	Health Care Agency	09/13/2019

**SURVIVORS' CONTINUANCES:**

Rosalva	Garcia
Penny	Macdonald
Mark	Pickett
Roberta	Sizemore
Julie	Tuan

\* = Excludes reciprocal service or service from any previous retirements

\*\* = Member establishing reciprocity

## Business Meeting Agenda - IV. CONSENT AGENDA

Date: Tuesday, November 05, 2019  
 Time: 12:20PM  
 User: 104164

## Ventura County Retirement Assn

Check Register - Standard

Period: 04-20 As of: 11/5/2019

Page: 1 of 5  
 Report: 03630.rpt  
 Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
<b>Company:</b>			<b>VCERA</b>							
Acct / Sub:	10300		000000							
028274	CK	10/2/2019	COMPUWAVE COMPUWAVE	04-20	001099	VO	CAPITAL PROJ	10/2/2019	0.00	21,575.62
028275	CK	10/2/2019	GOULETARTH ARTHUR E. GOULET	04-20	001100	VO	MILEAGE REIMB	10/2/2019	0.00	45.24
028276	CK	10/2/2019	INSTITUTIO INSTITUTIONAL LIMITED PARTNI	04-20	001101	VO	INVESTMENT EXP	10/2/2019	0.00	4,000.00
028277	CK	10/2/2019	NOSSAMAN NOSSAMAN LLP	04-20	001102	VO	LEGAL FEES	10/2/2019	0.00	6,319.60
028278	CK	10/9/2019	ACCESSINFO ACCESS INFORMATION PROTEC	04-20	001103	VO	ADMIN EXP	10/9/2019	0.00	412.41
028279	CK	10/9/2019	BLACKROCKI BLACKROCK INSTITUTIONAL TR	04-20	001104	VO	INVESTMENT FEES	10/9/2019	0.00	242,192.09
028280	CK	10/9/2019	BRENTWOODI BRENTWOOD IT	04-20	001105	VO	IT	10/9/2019	0.00	10,220.00
028281	CK	10/9/2019	CDWGOVERN CDW GOVERNMENT	04-20	001111	VO	IT	10/9/2019	0.00	1,018.00
028282	CK	10/9/2019	COMPUWAVE COMPUWAVE	04-20	001106	VO	IT	10/9/2019	0.00	94.82
028283	CK	10/9/2019	DIGITALDEP DIGITAL DEPLOYMENT	04-20	001107	VO	IT	10/9/2019	0.00	650.00
028284	CK	10/9/2019	HANSONBRID HANSON BRIDGETT LLP	04-20	001108	VO	LEGAL FEES	10/9/2019	0.00	1,448.55
028285	CK	10/9/2019	SEGALCONSU SEGAL CONSULTING	04-20	001109	VO	ACTUARY FEES	10/9/2019	0.00	31,000.00
028286	CK	10/9/2019	SPRUCEGROV SPRUCEGROVE INVESTMENT M	04-20	001110	VO	INVESTMENT FEES	10/9/2019	0.00	63,059.45

## Business Meeting Agenda - IV. CONSENT AGENDA

Date: Tuesday, November 05, 2019  
 Time: 12:20PM  
 User: 104164

## Ventura County Retirement Assn

Check Register - Standard

Period: 04-20 As of: 11/5/2019

Page: 2 of 5  
 Report: 03630.rpt  
 Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
028287	CK	10/16/2019	ATTMOBILIT AT&T MOBILITY	04-20	001112	VO	IT	10/16/2019	0.00	401.18
028288	CK	10/16/2019	BANKOFAMER BUSINESS CARD	04-20	001113	VO	ADMIN/IT	10/16/2019	0.00	1,912.11
028289	CK	10/16/2019	BROWARMST BROWN ARMSTRONG	04-20	001119	VO	ADMIN EXP	10/16/2019	0.00	26,677.50
028290	CK	10/16/2019	COMPUWAVE COMPUWAVE	04-20	001114	VO	IT	10/16/2019	0.00	68,792.76
028291	CK	10/16/2019	DOWNSPAUL PAUL DOWNS	04-20	001115	VO	CAPITAL PROJ	10/16/2019	0.00	19,928.00
028292	CK	10/16/2019	HARRISWATE HARRIS WATER CONDITIONING	04-20	001116	VO	ADMIN EXP	10/16/2019	0.00	19.50
028293	CK	10/16/2019	SHREDITUSA SHRED-IT USA	04-20	001117	VO	ADMIN EXP	10/16/2019	0.00	253.00
028294	CK	10/16/2019	VITECHSYST VITECH SYSTEMS GROUP, INC.	04-20	001118	VO	IT	10/16/2019	0.00	18,802.50
028295	CK	10/24/2019	ADP ADP, LLC	04-20	001120	VO	ADMIN EXP	10/24/2019	0.00	3,500.97
028296	CK	10/24/2019	FEDEX FEDEX	04-20	001121	VO	ADMIN EXP	10/24/2019	0.00	58.56
028297	CK	10/24/2019	HARTLEYDOR DOROTHEA W. HARTLEY & ASSC	04-20	001122	VO	ADMIN EXP	10/24/2019	0.00	700.00
028298	CK	10/24/2019	HEXAVEST HEXAVEST INC.	04-20	001123	VO	INVESTMENT FEES	10/24/2019	0.00	103,199.08
028299	CK	10/24/2019	LINEASOLUT LINEA SOLUTIONS	04-20	001124	VO	ADMIN EXP	10/24/2019	0.00	12,079.75



## Business Meeting Agenda - IV. CONSENT AGENDA

Date: Tuesday, November 05, 2019  
 Time: 12:20PM  
 User: 104164

## Ventura County Retirement Assn

Check Register - Standard

Period: 04-20 As of: 11/5/2019

Page: 3 of 5  
 Report: 03630.rpt  
 Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
028300	CK	10/24/2019	LOOMISSAYL LOOMIS, SAYLES & COMPANY, L	04-20	001125	VO	INVESTMENT FEES	10/24/2019	0.00	133,319.98
028301	CK	10/24/2019	MEGAPATH FUSION CLOUD COMPANY, LLC	04-20	001127	VO	IT	10/24/2019	0.00	595.57
028302	CK	10/24/2019	MFDAILYCOR M.F. DAILY CORPORATION	04-20	001126	VO	ADMIN EXP	10/24/2019	0.00	17,974.92
028303	CK	10/24/2019	NOSSAMAN NOSSAMAN LLP	04-20	001128	VO	LEGAL FEES	10/24/2019	0.00	7,880.08
028304	CK	10/24/2019	PARAMETRIC PARAMETRIC PORTFOLIO ASSO	04-20	001129	VO	INVESTMENT FEES	10/24/2019	0.00	41,825.00
028305	CK	10/24/2019	PENSIONBEN PENSION BENEFIT INFORMATIO	04-20	001130	VO	ADMIN EXP	10/24/2019	0.00	1,000.00
028306	CK	10/24/2019	REAMSASSET SCOUT INVESTMENTS, INC	04-20	001131	VO	INVESTMENT FEES	10/24/2019	0.00	142,489.00
028307	CK	10/24/2019	SBSGROUP VELOSIO	04-20	001132	VO	IT	10/24/2019	0.00	175.00
028308	CK	10/24/2019	STATESTREE STATE STREET BANK AND TRUS	04-20	001133	VO	INVESTMENT FEES	10/24/2019	0.00	113,254.87
028309	CK	10/24/2019	THOMSONREU THOMSON REUTERS- WEST	04-20	001134	VO	IT	10/24/2019	0.00	484.05
028310	CK	10/24/2019	TIMEWARNER TIME WARNER CABLE	04-20	001135	VO	IT	10/24/2019	0.00	294.99
028311	CK	10/24/2019	WALTERSCOT BNY MELLON INV MGMT CAYMA	04-20	001136	VO	INVESTMENT FEES	10/24/2019	0.00	232,241.75
028312	CK	10/30/2019	ADP ADP, LLC	04-20	001137	VO	ADMIN EXP	10/30/2019	0.00	2,999.66
028313	CK	10/30/2019	CBRE CBRE	04-20	001138	VO	CAPITAL PROJECT	10/30/2019	0.00	11,666.66

## Business Meeting Agenda - IV. CONSENT AGENDA

Date: Tuesday, November 05, 2019  
 Time: 12:20PM  
 User: 104164

## Ventura County Retirement Assn

Check Register - Standard

Period: 04-20 As of: 11/5/2019

Page: 4 of 5  
 Report: 03630.rpt  
 Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
028314	CK	10/30/2019	GOVERNMENT GOVERNMENT FINANCE	04-20	001139	VO	ADMIN EXP	10/30/2019	0.00	570.00
028315	CK	10/30/2019	HERNANDEZM MICHELLE HERNANDEZ	04-20	001140	VO	TRAVEL REIMB	10/30/2019	0.00	329.97
028316	CK	10/30/2019	REAMSASSET SCOUT INVESTMENTS, INC	04-20	001141	VO	INVESTMENT FEE	10/30/2019	0.00	2,697.00
028317	CK	10/30/2019	SOLISHENRY HENRY SOLIS	04-20	001143	VO	TRAVEL REIMB	10/30/2019	0.00	1,430.72
028318	CK	10/30/2019	SPRUCEGROV SPRUCEGROVE INVESTMENT M	04-20	001144	VO	INVESTMENT FEES	10/30/2019	0.00	64,359.93
028319	CK	10/30/2019	STAPLESADV STAPLES ADVANTAGE	04-20	001145	VO	ADMIN EXP	10/30/2019	0.00	596.87
028320	CK	10/30/2019	TORTOISECA TORTOISE CAPITAL ADVISORS,	04-20	001142	VO	INVESTMENT FEES	10/30/2019	0.00	178,992.84
028321	CK	10/30/2019	VILLALOBOS REBEKAH VILLALOBOS	04-20	001146	VO	TRAVEL REIMB	10/30/2019	0.00	261.24
028322	CK	10/30/2019	TRICOUNTYO TRI COUNTY OFFICE FURNITUR	04-20	001147	VO	CAPITAL PROJECT	10/30/2019	0.00	4,801.50

Business Meeting Agenda - IV. CONSENT AGENDA

Date: Tuesday, November 05, 2019  
 Time: 12:20PM  
 User: 104164

**Ventura County Retirement Assn**

**Check Register - Standard**

Period: 04-20 As of: 11/5/2019

Page: 5 of 5  
 Report: 03630.rpt  
 Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
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Check Count: 49

Acct Sub Total: 1,598,602.29

Check Type	Count	Amount Paid
Regular	49	1,598,602.29
Hand	0	0.00
Electronic Payment	0	0.00
Void	0	0.00
Stub	0	0.00
Zero	0	0.00
Mask	0	0.00
<b>Total:</b>	<b>49</b>	<b>1,598,602.29</b>

Company Disc Total	0.00	Company Total	1,598,602.29
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**Ventura County Employees' Retirement Association**  
**Budget Summary Fiscal Year 2019-2020**

**For the Four Months Ended October 31, 2019 and Year-To-Date - 33.33% of Fiscal Year Expended**

	<i>Adopted 2020 Budget</i>	<i>Adjusted 2020 Budget</i>	<i>October 2019</i>	<i>Expended Fiscal Year to Date</i>	<i>Available Balance</i>	<i>Percent Expended</i>
<b>Salaries and Benefits</b>						
Regular Salary	\$3,299,200.00	\$3,299,200.00	\$246,704.56	\$971,033.94	\$2,328,166.06	29.43%
Extra-Help/Temporary Services	170,900.00	170,900.00	12,079.75	34,055.00	136,845.00	19.93%
Supplemental Payments	65,400.00	65,400.00	4,606.80	18,507.85	46,892.15	28.30%
Vacation Redemption	162,200.00	162,200.00	20,404.49	87,751.69	74,448.31	54.10%
Retirement Contributions	603,400.00	603,400.00	42,923.88	167,347.20	436,052.80	27.73%
OASDI Contribution	200,400.00	200,400.00	10,136.83	44,818.24	155,581.76	22.36%
FICA-Medicare	55,300.00	55,300.00	3,927.80	15,429.75	39,870.25	27.90%
Medical Insurance	360,600.00	360,600.00	25,792.00	101,577.71	259,022.29	28.17%
Retiree Health Insurance	0.00	0.00	1,046.06	4,184.24	(4,184.24)	0.00%
Life Insurance	1,300.00	1,300.00	88.82	350.58	949.42	26.97%
Unemployment Insurance	1,700.00	1,700.00	124.97	466.43	1,233.57	27.44%
Mgmt Disability Insurance	24,400.00	24,400.00	2,600.99	7,752.44	16,647.56	31.77%
Workers Compensation Insurance	114,000.00	114,000.00	9,092.82	36,030.84	77,969.16	31.61%
401K Plan Contribution	86,600.00	86,600.00	5,879.99	23,077.00	63,523.00	26.65%
Total Salaries & Benefits	\$5,145,400.00	\$5,145,400.00	\$385,409.76	\$1,512,382.91	\$3,633,017.09	29.39%

**Services & Supplies**

Board Member Stipend	\$13,200.00	\$13,200.00	\$700.00	\$3,000.00	\$10,200.00	22.73%
Other Professional Services	93,000.00	93,000.00	11,533.63	35,200.86	57,799.14	37.85%
Auditing	101,400.00	101,400.00	26,677.50	40,178.65	61,221.35	39.62%
Hearing Officers	40,000.00	40,000.00	0.00	19,635.00	20,365.00	49.09%
Legal	425,000.00	425,000.00	15,648.23	52,063.63	372,936.37	12.25%
Actuary-Valuation	62,000.00	62,000.00	31,000.00	31,000.00	31,000.00	50.00%
Actuary-GASB 67	13,000.00	13,000.00	0.00	0.00	13,000.00	0.00%
Actuary-415 Calculation	110,000.00	110,000.00	0.00	(29.00)	110,029.00	(0.03%)
Actuary-Misc Hrly Consult	16,000.00	16,000.00	0.00	(85.00)	16,085.00	(0.53%)
Printing	40,000.00	40,000.00	0.00	11,610.62	28,389.38	29.03%
Postage	65,000.00	65,000.00	61.05	13,649.49	51,350.51	21.00%
Copy Machine	4,500.00	4,500.00	0.00	0.00	4,500.00	0.00%
General Liability	15,200.00	15,200.00	0.00	0.00	15,200.00	0.00%
Fiduciary Liability	86,000.00	86,000.00	0.00	83,629.00	2,371.00	97.24%
Cost Allocation Charges	34,400.00	34,400.00	0.00	0.00	34,400.00	0.00%
Education Allowance	6,000.00	6,000.00	0.00	305.00	5,695.00	5.08%
Training/Travel-Staff	64,600.00	64,600.00	764.58	6,318.20	58,281.80	9.78%
Training/Travel-Trustee	38,200.00	38,200.00	120.00	1,191.69	37,008.31	3.12%
Travel-Due Diligence-Staff	9,300.00	9,300.00	0.00	1,654.99	7,645.01	17.80%
Travel-Due Diligence-Trustee	13,600.00	13,600.00	0.00	786.54	12,813.46	5.78%
Mileage-Staff	4,800.00	4,800.00	137.35	360.02	4,439.98	7.50%
Mileage -Trustee	5,000.00	5,000.00	45.24	122.96	4,877.04	2.46%
Mileage-Due Diligence-Staff	1,000.00	1,000.00	0.00	79.69	920.31	7.97%
Mileage-Due Diligence-Trustee	1,000.00	1,000.00	0.00	77.72	922.28	7.77%
Auto Allowance	6,900.00	6,900.00	575.00	2,300.00	4,600.00	33.33%
Facilities-Security	2,700.00	2,700.00	256.00	1,024.00	1,676.00	37.93%
Facilities-Maint & Repairs	3,300.00	3,300.00	0.00	0.00	3,300.00	0.00%
Equipment-Maint & Repairs	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00%
General Office Expense	10,400.00	10,400.00	2,264.39	2,834.29	7,565.71	27.25%
Books & Publications	2,500.00	2,500.00	0.00	651.70	1,848.30	26.07%
Office Supplies	17,000.00	17,000.00	723.63	789.23	16,210.77	4.64%
Memberships & Dues	16,300.00	16,300.00	4,570.00	8,720.00	7,580.00	53.50%
Bank Service Charges	500.00	500.00	39.20	225.33	274.67	45.07%
Offsite Storage	5,200.00	5,200.00	412.41	1,216.33	3,983.67	23.39%
Rents/Leases-Structures	210,900.00	210,900.00	17,974.92	72,177.01	138,722.99	34.22%
Depreciation /Amortization	1,460,600.00	1,460,600.00	121,716.16	486,864.64	973,735.36	33.33%
Total Services & Supplies	\$3,000,500.00	\$3,000,500.00	\$235,219.29	\$877,552.59	\$2,122,947.41	29.25%
Total Sal, Ben, Serv & Supp	\$8,145,900.00	\$8,145,900.00	\$620,629.05	\$2,389,935.50	\$5,755,964.50	29.34%

**Ventura County Employees' Retirement Association**  
**Budget Summary Fiscal Year 2019-2020**  
**For the Four Months Ended October 31, 2019 and Year-To-Date - 33.33% of Fiscal Year Expended**

	<i>Adopted 2020 Budget</i>	<i>Adjusted 2020 Budget</i>	<i>October 2019</i>	<i>Expended Fiscal Year to Date</i>	<i>Available Balance</i>	<i>Percent Expended</i>
<b>Technology</b>						
Technology Hardware	\$118,500.00	\$118,500.00	\$69,938.97	\$69,955.13	\$48,544.87	59.03%
Technology Software Lic & Maint.	60,000.00	60,000.00	1,266.05	31,658.25	28,341.75	52.76%
Technology Software Suppt & Maint.	41,500.00	41,500.00	544.68	4,481.00	37,019.00	10.80%
Technology Systems Support	0.00	0.00	175.00	65,123.20	(65,123.20)	0.00%
Technology Cloud Services	3,600.00	3,600.00	463.60	963.60	2,636.40	26.77%
Technology Website Services	8,900.00	8,900.00	650.00	1,950.00	6,950.00	21.91%
Technology Infrastruct Support	168,100.00	168,100.00	0.00	0.00	168,100.00	0.00%
Technology V3 Software & VSG	754,900.00	754,900.00	22,627.70	68,626.30	686,273.70	9.09%
Technology Data Communication	55,700.00	55,700.00	4,171.65	15,893.42	39,806.58	28.53%
Total Technology	<u>\$1,211,200.00</u>	<u>\$1,211,200.00</u>	<u>\$99,837.65</u>	<u>\$258,650.90</u>	<u>\$952,549.10</u>	<u>21.35%</u>
<b>Capital Expenses</b>						
Capitalized Structures	1,184,000.00	1,184,000.00	69,407.36	265,041.55	918,958.45	22.39%
Total Capitalized Expenses	<u>\$1,184,000.00</u>	<u>\$1,184,000.00</u>	<u>\$69,407.36</u>	<u>\$265,041.55</u>	<u>\$918,958.45</u>	<u>22.39%</u>
Congtingency	<u>\$747,700.00</u>	<u>\$747,700.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$747,700.00</u>	<u>0.00%</u>
Total Current Year	<u><u>\$11,288,800.00</u></u>	<u><u>\$11,288,800.00</u></u>	<u><u>\$789,874.06</u></u>	<u><u>\$2,913,627.95</u></u>	<u><u>\$8,375,172.05</u></u>	<u><u>25.81%</u></u>

***Ventura County Employees' Retirement Association  
Statement of Fiduciary Net Position  
As of September 30, 2019 (Unaudited)***

**Assets**

<b>Cash &amp; Cash Equivalents</b>	<b>\$221,017,011</b>
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**Receivables**

Interest and Dividends	4,347,356	
Securities Sold	10,321,994	
Miscellaneous	28,199	
	14,697,548	
<b>Total Receivables</b>		<b>14,697,548</b>

**Investments at Fair Value**

Domestic Equity	1,645,011,841	
Non U.S. Equity	915,243,992	
Global Equity	635,952,625	
Fixed Income	1,138,128,573	
Private Equity	484,669,316	
Real Assets	884,377,275	
Cash Overlay	41,201	
	5,703,424,823	
<b>Total Investments</b>		<b>5,703,424,823</b>

<b>Capital Assets, Net of Accumulated Depreciation &amp; Amortization</b>	<b>11,278,538</b>
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<b>Total Assets</b>	<b>5,950,417,920</b>
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**Liabilities**

Securities Purchased	34,655,354	
Accounts Payable	2,019,856	
Tax Withholding Payable	3,380,329	
Deferred Revenue (PrePaid Contributions)	143,673,652	
	183,729,190	

<b>Total Liabilities</b>	<b>183,729,190</b>
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<b>Net Position Restricted for Pensions</b>	<b>\$5,766,688,730</b>
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***Ventura County Employees' Retirement Association  
Statement of Changes in Fiduciary Net Position  
For The Three Months Ending September 30, 2019 (Unaudited)***

**ADDITIONS**

Contributions		
Employer	\$47,831,689	
Employee	17,777,968	
<b>Total Contributions</b>		<b>65,609,657</b>
Investment Income		
Net Appreciation (Depreciation) in Fair Value of Investments	36,110,922	
Interest Income	6,901,138	
Dividend Income	2,309,151	
Other Investment Income	251,231	
Real Estate Operating Income, Net	5,052,989	
Security Lending Income	843,084	
<b>Total Investment Income</b>	<b>51,468,516</b>	
Less Investment Expenses		
Management & Custodial Fees	5,281,199	
Other Investment Expenses	100,609	
Securities Lending Borrower Rebates	744,090	
Securities Lending Management Fees	47,576	
<b>Total Investment Expenses</b>	<b>6,173,474</b>	
<b>Net Investment Income/(Loss)</b>		<b>45,295,043</b>
<b>Total Additions</b>		<b>110,904,699</b>

**DEDUCTIONS**

Benefit Payments	76,078,437	
Member Refunds and Death Benefit Payments	1,474,544	
Administrative Expenses	1,315,385	
Other Expenses	707,760	
<b>Total Deductions</b>		<b>79,576,126</b>
<b>Net Increase/(Decrease)</b>		<b>31,328,573</b>

**Net Position Restricted For Pensions**

Beginning of Year	<b>5,735,360,159</b>
Ending Balance	<b>\$5,766,688,732</b>

***Ventura County Employees' Retirement Association  
Investments, Cash, and Cash Equivalents  
As of September 30, 2019 (Unaudited)***

	Investments	Cash & Cash Equivalents
<b>Equity</b>		
<b>Domestic Equity</b>		
Blackrock - Russell 1000	\$1,355,717,249	\$0
Blackrock - Russell 2500	65,040,443	0
Western Asset Enhanced Equity Index Plus	224,254,148	18,067,035
<b>Total Domestic Equity</b>	<b>1,645,011,841</b>	<b>18,067,035</b>
<b>Non U.S. Equity</b>		
Blackrock - ACWI ex - US	467,397,110	0
Hexavest	91,705,172	0
Sprucegrove	218,927,679	0
Walter Scott	137,214,031	0
<b>Total Non U.S. Equity</b>	<b>915,243,992</b>	<b>0</b>
<b>Global Equity</b>		
Blackrock - ACWI Index	635,952,625	0
<b>Total Global Equity</b>	<b>635,952,625</b>	<b>0</b>
<b>Fixed Income</b>		
Blackrock - Bloomberg Barclays Aggregate Index	244,507,946	0
Loomis Sayles Multi Sector	81,755,096	7,192,046
Loomis Sayles Strategic Alpha	48,323,810	0
Reams	329,970,480	10
Reams - US Treasury	107,641,475	16,544
Western Asset Management	325,929,767	7,876,320
<b>Total Fixed Income</b>	<b>1,138,128,573</b>	<b>15,084,920</b>
<b>Private Equity</b>		
Abry Partners	1,413,997	0
Abbott Secondaries	16,439,953	0
Adams Street	188,322,974	0
Astorg	435,839	0
Battery Ventures	9,527,891	0
Blue Bay	7,114,468	0
Buenaventure One	26,460,263	0
Buenaventure Two	256,800	0
Carval Investors	19,150,146	0
Clearlake Investors	7,659,119	0
GGV Capital	2,717,843	0
Drive Capital	15,086,952	0
ECI 11 GP LP	2,657,987	0
Genstar Capital	1,185,804	0
GTCR Fund XII	6,039,013	0
Harbourvest	97,536,631	0
Insight Ventures	19,440,049	0
MC Partners	393,657	0
Monroe Capital	17,632,108	0
Pantheon	38,245,518	0
Resolute Fund IV LP	5,130,844	0
The Riverside Fund V LP	1,821,459	0
<b>Total Private Equity</b>	<b>484,669,316</b>	<b>0</b>
<b>Real Assets</b>		
Prudential Real Estate	163,568,319	0
LaSalle	0	0
UBS Realty	269,318,526	0
Bridgewater All Weather	339,831,982	0
Tortoise (MLPs)	111,658,448	2,874,436
<b>Total Real Assets</b>	<b>884,377,275</b>	<b>2,874,436</b>



*Ventura County Employees' Retirement Association  
Investments, Cash, and Cash Equivalents  
As of September 30, 2019 (Unaudited)*

	<u>Investments</u>	<u>Cash &amp; Cash Equivalents</u>
Parametric (Cash Equitization)	41,201	34,131,048
State Street Bank and Trust		148,538,249
County Treasury and Bank of America		2,321,324
Total Investments, Cash, and Cash Equivalents	<u>\$5,703,424,823</u>	<u>\$221,017,011</u>

***Ventura County Employees' Retirement Association  
Schedule of Investment Management Fees  
For the Three Months Ending September 30, 2019 (Unaudited)***

**Equity Managers****Domestic Equity**

Blackrock - Russell 1000	\$33,991
Blackrock - Russell 2500	2,464
Western Asset Enhanced Equity Index Plus	101,128
<b>Total Domestic Equity</b>	<b>137,583</b>

**Non U.S. Equity**

Blackrock - ACWI ex - US	117,040
Hexavest	103,199
Sprucegrove	193,004
Walter Scott	232,242
<b>Total Non U.S. Equity</b>	<b>645,485</b>

**Global Equity**

Blackrock - ACWI Index	63,723
<b>Total Global Equity</b>	<b>63,723</b>

**Fixed Income Managers**

Blackrock Bloomberg Barclays Aggregate Index	29,572
Loomis Sayles Multi Sector	84,665
Loomis Sayles Strategic Alpha	48,655
Reams Asset Management	142,489
Reams US Treasury	2,697
Western Asset Management	143,952
<b>Total Fixed Income</b>	<b>452,029</b>

**Private Equity**

Abbott Secondary Opportunities	57,155
Abry Partners	71,256
Adams Street	511,850
Battery Ventures	72,023
Blue Bay	85,705
Carval, CVI A Fund	45,000
Clearlake	30,073
Drive Capital	50,000
ECI 11 GP LP	(43,562)
Genstar	13,490
GGV Capital	76,625
GTCR XII/A & B	81,513
Harbourvest	426,329
Insight Venture Partners	104,645
Monroe Capital	368,326
Pantheon	135,264
Resolute Fund	48,299
Riverside	172,283
<b>Total Private Equity</b>	<b>2,306,274</b>

**Real Assets**

Prudential Real Estate Advisors	342,994
LaSalle	
UBS Realty	486,085
Bridgewater All Weather	312,245
Tortoise (MLPs)	178,993
<b>Total Real Assets</b>	<b>1,320,318</b>

**Cash Overlay (Parametric)**

41,825

***Ventura County Employees' Retirement Association  
Schedule of Investment Management Fees  
For the Three Months Ending September 30, 2019 (Unaudited)***

<b>Securities Lending</b>	
Borrower's Rebate	744,090
Management Fees	47,576
<b>Total Securities Lending</b>	<u>791,666</u>
<b>Other</b>	
Investment Consultant (NEPC)	77,500
Investment Consultant (Abbott Capital)	152,073
Investment Custodian (State Street)	84,388
<b>Total Other Fees</b>	<u>313,961</u>
<b>Total Investment Management Fees</b>	<u><u>\$6,072,865</u></u>

November 18, 2019

**BlackRock®**

# **Ventura County Employees' Retirement Association**

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# Table of contents

- 1. BlackRock Update**
- 2. Relationship Summary**
- 3. ETF & Index Investments Overview**
- 4. Fixed Income Indexing Overview**

## **Appendix**

- Presenter Biographies
- Disclosures

# **1. BlackRock Update**

# BlackRock at a glance

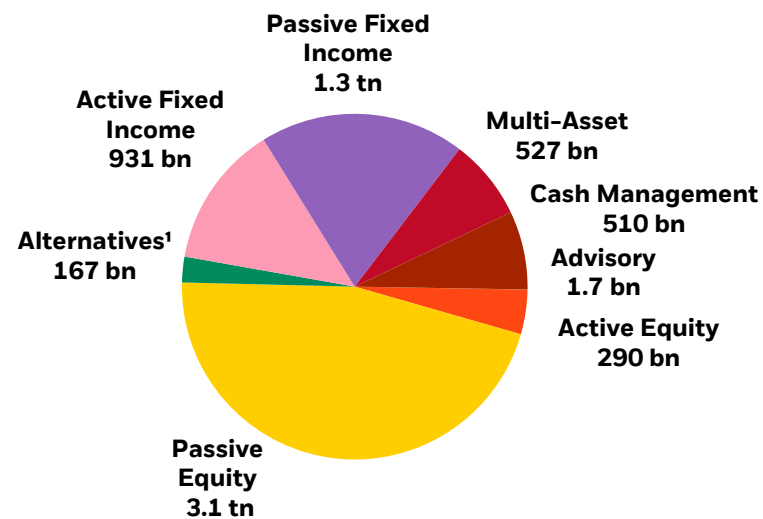
## BlackRock Purpose Statement

We help more and more people experience financial well-being

### BlackRock facts

- Established in 1988
- NYSE: BLK
- \$6.96 trillion assets under management
- Nearly 15,000 employees
- More than 2,000 investment professionals
- Offices in over 34 countries
- 25 primary investment centers globally
- Clients in over 100 countries
- Over 850 iShares® ETFs Globally
- Through BlackRock Solutions, the Firm provides risk management and enterprise investment services for over 200 clients
- Financial Markets Advisory business managed or advised on over \$8 trillion in asset and derivative portfolios
- Transition Management team partners with clients to save costs and reduce risks when changing investment exposures

### \$6.96 trillion managed across asset classes



Assets as of 30 September 2019

1 Includes commodity and currency mandates

Source: BlackRock. As of 30 September 2019. All figures are represented in USD.

## **2. Relationship Summary**



## BlackRock Relationship Team

Function	Contact	Location	Telephone	Email
Institutional Client Business - Lead	Rick Castro, Vice President	Los Angeles	310-566- 1009	<a href="mailto:rick.a.castro@blackrock.com">rick.a.castro@blackrock.com</a>
Institutional Client Business	Owen Lawrie, Analyst	San Francisco	415-670- 2170	<a href="mailto:owen.lawrie@blackrock.com">owen.lawrie@blackrock.com</a>

# Ventura County Employees' Retirement Association Relationship Summary

As of 30 September 2019

Ventura County Employees' Retirement System	AUM
<b>Russell 1000 Index Fund</b> (inception 4/21/2017)	<b>\$1,355,717,216</b>
<b>Russell 2500 Index Fund</b> (inception 4/21/2017)	<b>\$65,040,441</b>
<b>ACWI Equity Index Fund</b> (inception 6/27/2012)	<b>\$635,952,625</b>
<b>ACWI ex-US IMI Index Fund</b> (inception 5/30/2008)	<b>\$467,397,103</b>
<b>U.S. Debt Index Fund</b> (inception 12/31/1995)	<b>\$244,507,942</b>
<b>Total AUM</b>	<b>\$2,768,615,327</b>

# Ventura County Employees' Retirement Association Performance

As of 30 September 2019

Russell 1000 Index Fund (inception 4/21/2017)						
Performance	Fiscal Q1 %	Fiscal YTD %	1-yr %	3-yr %	5-yr %	Since Inception %
Russell 1000 Index Fund (gross)	1.43%	1.43%	3.93%	NA	NA	11.62%
Russell 1000 Index Fund (net)	1.43%	1.43%	3.92%	NA	NA	11.61%
Russell 1000 Index	1.42%	1.42%	3.87%	NA	NA	11.59%
<b>Difference (net)</b>	<b>0.01%</b>	<b>0.01%</b>	<b>0.05%</b>	-	-	<b>0.02%</b>

Russell 2500 Index Fund (inception 4/21/2017)						
Performance	Fiscal Q1 %	Fiscal YTD %	1-yr %	3-yr %	5-yr %	Since Inception %
Russell 2500 Index Fund (gross)	-1.24%	-1.24%	-3.97%	NA	NA	7.30%
Russell 2500 Index Fund (net)	-1.24%	-1.24%	-3.99%	NA	NA	7.28%
Russell 2500 Index	-1.28%	-1.28%	-4.04%	NA	NA	7.22%
<b>Difference (net)</b>	<b>0.04%</b>	<b>0.04%</b>	<b>0.05%</b>	-	-	<b>0.06%</b>

MSCI ACWI Equity Index Fund (inception 6/27/2012)						
Performance	Fiscal Q1 %	Fiscal YTD %	1-yr %	3-yr %	5-yr %	Since Inception %
MSCI ACWI Equity Index Fund (gross)	0.07%	0.07%	1.84%	10.21%	7.15%	9.99%
MSCI ACWI Equity Index Fund (net)	0.06%	0.06%	1.80%	10.17%	7.11%	9.94%
MSCI ACWI Net Dividend Return Index	-0.03%	-0.03%	1.38%	9.71%	6.65%	9.51%
<b>Difference (net)</b>	<b>0.09%</b>	<b>0.09%</b>	<b>0.42%</b>	<b>0.46%</b>	<b>0.46%</b>	<b>0.43%</b>

\*Net of Fees is based on an estimated annual fee calculation. Actual Fee may vary

\*Performance greater than 1 year annualized

# Ventura County Employees' Retirement Association As of 30 September 2019

## Performance

MSCI ACWI ex-US IMI Index Fund (inception 5/30/2008)						
Performance	Fiscal Q1 %	Fiscal YTD %	1-yr %	3-yr %	5-yr %	Since Inception %
MSCI ACWI ex-US IMI Index Fund (gross)	-1.67%	-1.67%	-1.54%	6.45%	3.38%	2.73%
MSCI ACWI ex-US IMI Index Fund (net)	-1.70%	-1.70%	-1.64%	6.35%	3.28%	2.63%
MSCI ACWI ex-US IMI Net Dividend Index	-1.72%	-1.72%	-1.84%	6.10%	3.05%	2.47%
<b>Difference (net)</b>	<b>0.02%</b>	<b>0.02%</b>	<b>0.20%</b>	<b>0.25%</b>	<b>0.23%</b>	<b>0.16%</b>

U.S. Debt Index Fund (inception 12/31/1995)						
Performance	Fiscal Q1 %	Fiscal YTD %	1-yr %	3-yr %	5-yr %	Since Inception %
U.S. Debt Index Fund (gross)	2.28%	2.28%	10.37%	3.02%	3.48%	5.21%
U.S. Debt Index Fund (net)	2.23%	2.23%	10.32%	2.97%	3.43%	5.16%
Bloomberg Barclays U.S. Agg Bond Index	2.27%	2.27%	10.30%	2.92%	3.38%	5.11%
<b>Difference (net)</b>	<b>-0.04%</b>	<b>-0.04%</b>	<b>0.02%</b>	<b>0.05%</b>	<b>0.05%</b>	<b>0.05%</b>

\*Net of Fees is based on an estimated annual fee calculation. Actual Fee may vary

\*Performance greater than 1 year annualized

# Historical Rolling Returns – US Debt Index Fund

As of 30 September 2019

	Annual		3 Year		5 Year		7 Year		10 Year	
	US Debt	AGG	US Debt	AGG	US Debt	AGG	US Debt	AGG	US Debt	AGG
1996	3.68%	3.63%								
1997	9.64%	9.65%								
1998	8.73%	8.69%	7.32%	7.29%						
1999	-0.88%	-0.82%	5.72%	5.73%						
2000	11.68%	11.63%	6.37%	6.36%	6.47%	6.46%				
2001	8.59%	8.44%	6.33%	6.28%	7.46%	7.43%				
2002	10.29%	10.26%	10.18%	10.10%	7.59%	7.55%	7.31%	7.27%		
2003	4.17%	4.10%	7.65%	7.57%	6.67%	6.62%	7.38%	7.34%		
2004	4.32%	4.34%	6.22%	6.20%	7.77%	7.71%	6.62%	6.59%		
2005	2.42%	2.43%	3.63%	3.62%	5.92%	5.87%	5.71%	5.69%	6.19%	6.16%
2006	4.37%	4.33%	3.70%	3.70%	5.08%	5.06%	6.50%	6.45%	6.26%	6.24%
2007	7.02%	6.97%	4.59%	4.56%	4.45%	4.42%	5.85%	5.81%	6.01%	5.97%
2008	5.36%	5.24%	5.58%	5.51%	4.69%	4.65%	5.39%	5.36%	5.67%	5.63%
2009	5.96%	5.93%	6.11%	6.04%	5.02%	4.97%	4.79%	4.75%	6.38%	6.33%
2010	6.68%	6.54%	6.00%	5.90%	5.87%	5.80%	5.15%	5.10%	5.89%	5.84%
2011	7.84%	7.84%	6.82%	6.77%	6.57%	6.50%	5.65%	5.60%	5.82%	5.78%
2012	4.29%	4.21%	6.26%	6.19%	6.02%	5.95%	5.92%	5.86%	5.23%	5.18%
2013	-1.98%	-2.02%	3.31%	3.26%	4.50%	4.44%	4.98%	4.91%	4.59%	4.55%
2014	6.19%	5.97%	2.77%	2.66%	4.55%	4.45%	4.86%	4.77%	4.78%	4.71%
2015	0.58%	0.55%	1.54%	1.44%	3.32%	3.25%	4.17%	4.09%	4.59%	4.51%
2016	2.70%	2.65%	3.13%	3.03%	2.32%	2.23%	3.71%	3.63%	4.42%	4.34%
2017	3.63%	3.54%	2.30%	2.24%	2.19%	2.10%	3.28%	3.20%	4.09%	4.01%
2018	0.03%	0.01%	2.11%	2.06%	2.61%	2.52%	2.17%	2.10%	3.55%	3.48%
2019*	8.55%	8.52%	2.97%	2.92%	3.43%	3.38%	2.79%	2.72%	3.82%	3.75%
Periods Outperformed	79%		95%		100%		100%		100%	
Number of Years	19/24		21/22		20/20		18/18		15/15	

The Fund's hypothetical net of fees return is net an annual rate of 0.05%.

\*2019 through 9/30/2019

\*\*Returns are annualized

# Historical Rolling Returns – MSCI ACWI Index Fund

As of 30 September 2019

	Annual		3 Year		5 Year		7 Year		10 Year	
	ACWI Fund	ACWI Index	ACWI Fund	ACWI Index	ACWI Fund	ACWI Index	ACWI Fund	ACWI Index	ACWI Fund	ACWI Index
2012	16.61%	16.13%								
2013	23.22%	22.80%								
2014	4.56%	4.16%	14.54%	14.10%						
2015	-1.96%	-2.36%	8.10%	7.69%						
2016	8.38%	7.86%	3.57%	3.13%	9.81%	9.36%				
2017	24.50%	23.97%	9.78%	9.30%	11.25%	10.80%				
2018	-9.05%	-9.41%	7.06%	6.60%	4.70%	4.26%	8.83%	8.38%		
2019*	16.57%	16.20%	10.17%	9.71%	7.11%	6.65%	9.27%	8.83%		
Periods Outperformed	100%		100%		100%		100%		100%	
Number of Years	8/8		6/6		4/4		2/2		0/0	

The Fund's hypothetical net of fees return is net an annual rate of 0.04%.

\*2019 through 9/30/2019

\*\*Returns greater than 1 year are annualized

# Historical Rolling Returns – MSCI ACWI ex-US IMI Index Fund

As of 30 September 2019

	Annual		3 Year		5 Year		7 Year		10 Year	
	ACWI ex-US IMI	ACWI ex-US IMI Index	ACWI ex-US IMI	ACWI ex-US IMI Index	ACWI ex-US IMI	ACWI ex-US IMI Index	ACWI ex-US IMI	ACWI ex-US IMI Index	ACWI ex-US IMI	ACWI ex-US IMI Index
2008	-37.17%	-37.48%								
2009	43.17%	43.60%								
2010	12.80%	12.73%	0.49%	0.40%						
2011	-14.15%	-14.31%	11.51%	11.53%						
2012	17.26%	17.04%	4.33%	4.18%	0.43%	0.30%				
2013	16.05%	15.82%	5.32%	5.12%	13.54%	13.46%				
2014	-3.75%	-3.89%	9.41%	9.22%	4.87%	4.71%	1.90%	1.76%		
2015	-4.45%	-4.60%	2.19%	2.02%	1.44%	1.27%	8.19%	8.09%		
2016	4.69%	4.41%	-1.26%	-1.44%	5.55%	5.35%	3.46%	3.28%		
2017	28.12%	27.81%	8.62%	8.38%	7.44%	7.22%	5.36%	5.15%	3.87%	3.70%
2018	-14.56%	-14.76%	4.65%	4.39%	1.06%	0.85%	5.29%	5.07%	7.12%	6.97%
2019*	11.59%	11.38%	6.35%	6.10%	3.28%	3.05%	5.39%	5.17%	4.85%	4.66%
Periods Outperformed	92%		90%		100%		100%		100%	
Number of Years	11/12		9/10		8/8		6/6		3/3	

The Fund's hypothetical net of fees return is net an annual rate of 0.10%.

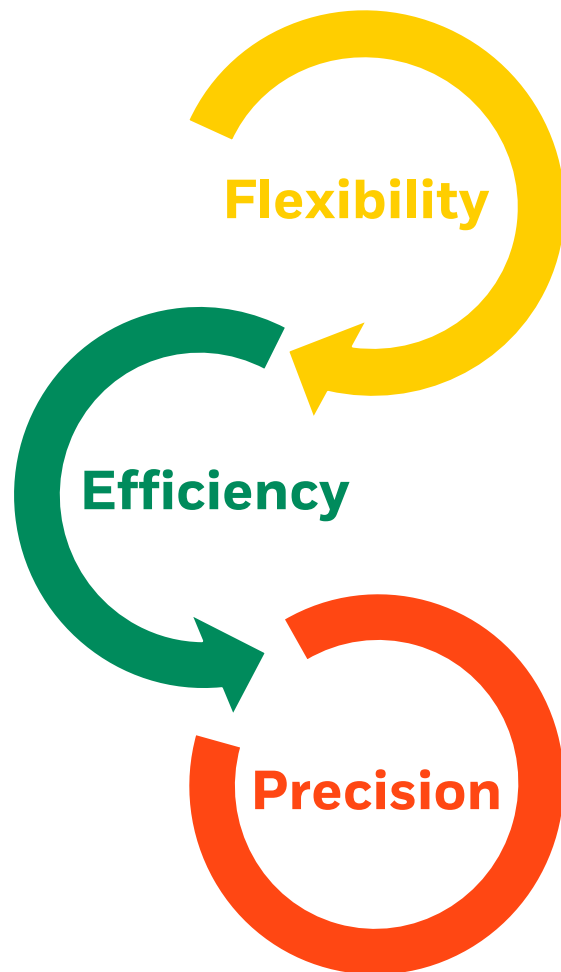
\*2019 through 9/30/2019

\*\*Returns greater than 1 year are annualized

# **3. ETF & Index Investments Overview**



# BlackRock's Index proposition



- ▶ Provide you with a broad range of market exposures together with a flexible range of product features
- ▶ An evolving range of products and strategies designed to help meet your needs today and in the future
- ▶ Partner with you to address your unique investment challenges through our customisation and solutions capabilities
- ▶ Disciplined investment approach focused on delivering optimal tracking, consistent returns and lowering the total cost of ownership
- ▶ Scale, breadth and diversity of our clients and strategies helps us to minimize transaction costs and seek to preserve the value of your investments
- ▶ Design products and strategies that consider the factors that impact your investment results from tax-efficiency to access and liquidity
- ▶ Our investment professionals are focused on delivering performance and efficient outcomes
- ▶ Extensive trading, risk and operational platform positioned to seek efficient tracking as well as enhanced returns
- ▶ Investment track record spanning four decades that has seen investors entrust us with \$4.5 trillion of assets under management as of 30 September 2019

**Seeking to deliver high quality, cost-effective access to a broad range of market opportunities**

# BlackRock's global index investment platform

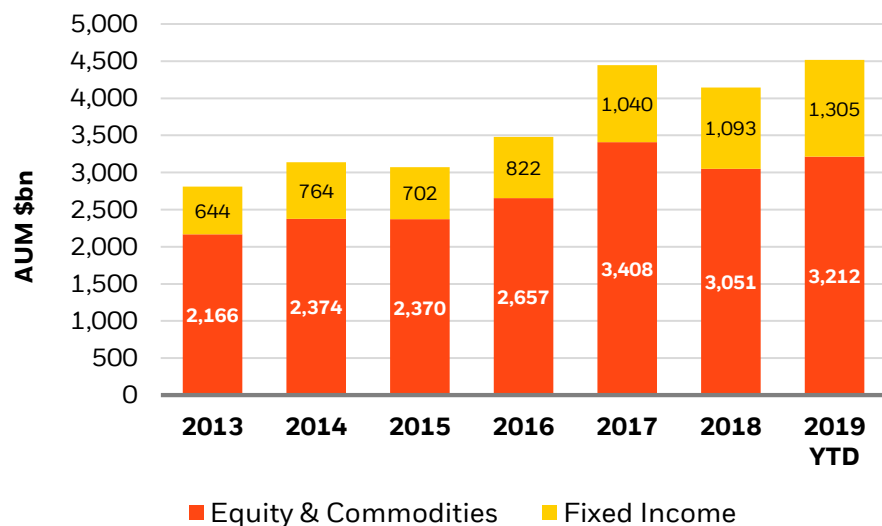
**With \$4.5 trillion in indexed assets BlackRock is a global leader in index investing<sup>1</sup>**

- ▶ Seek to deliver consistent performance with efficient outcomes for our clients
- ▶ Provide clients with access to a broad range of market opportunities

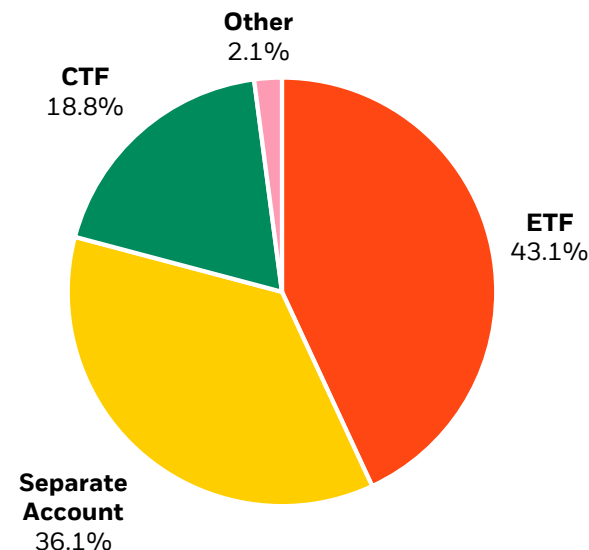
## Extensive and flexible platform for index strategies

- ▶ Over 2,500 funds managed against 850+ benchmarks
- ▶ Investment teams in San Francisco, London, Hong Kong and Tokyo

### Total indexed assets of \$4.5 trillion 2019 YTD



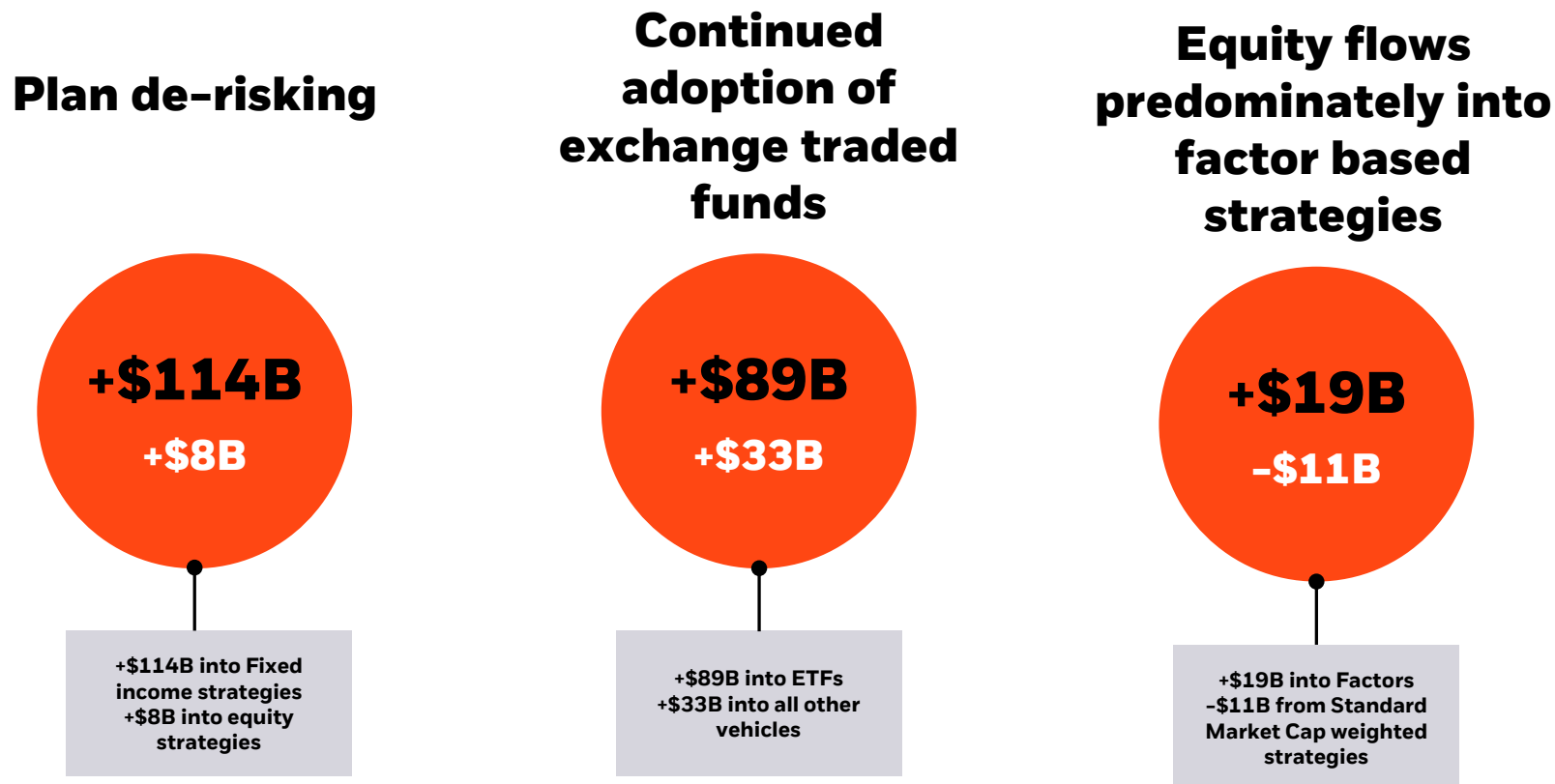
### Distribution of assets by vehicle type in 2019 YTD



Source: BlackRock as of 30 September 2019

<sup>1</sup> In terms of AUM. Source: Pensions & Investments

## What is driving our flows?



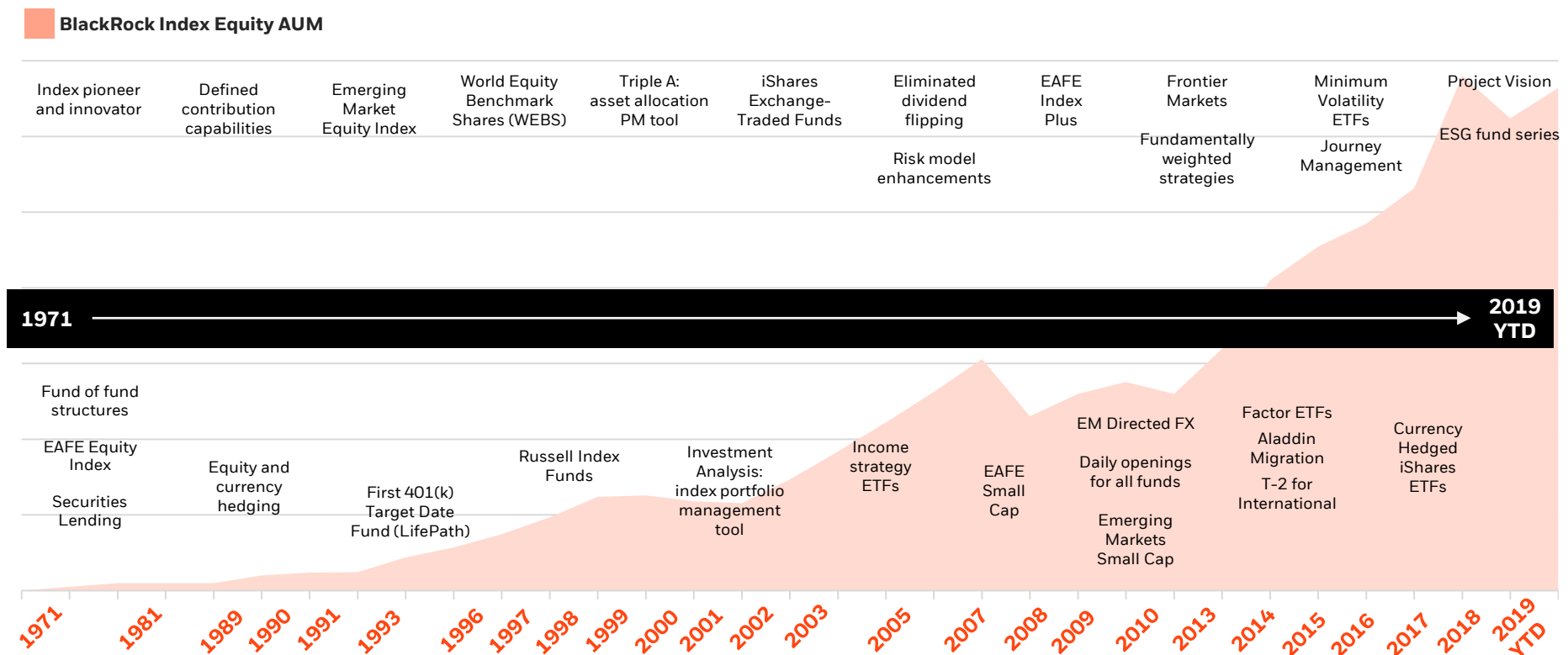
Source: BlackRock. Flows are from January 1, 2019 - August 30, 2019. Data includes BlackRock institutional index equity and ETF asset flows.

# 48 years of experience driving index forward

## We constantly reinvest in and reinvent our business so our clients have access to high quality index solutions

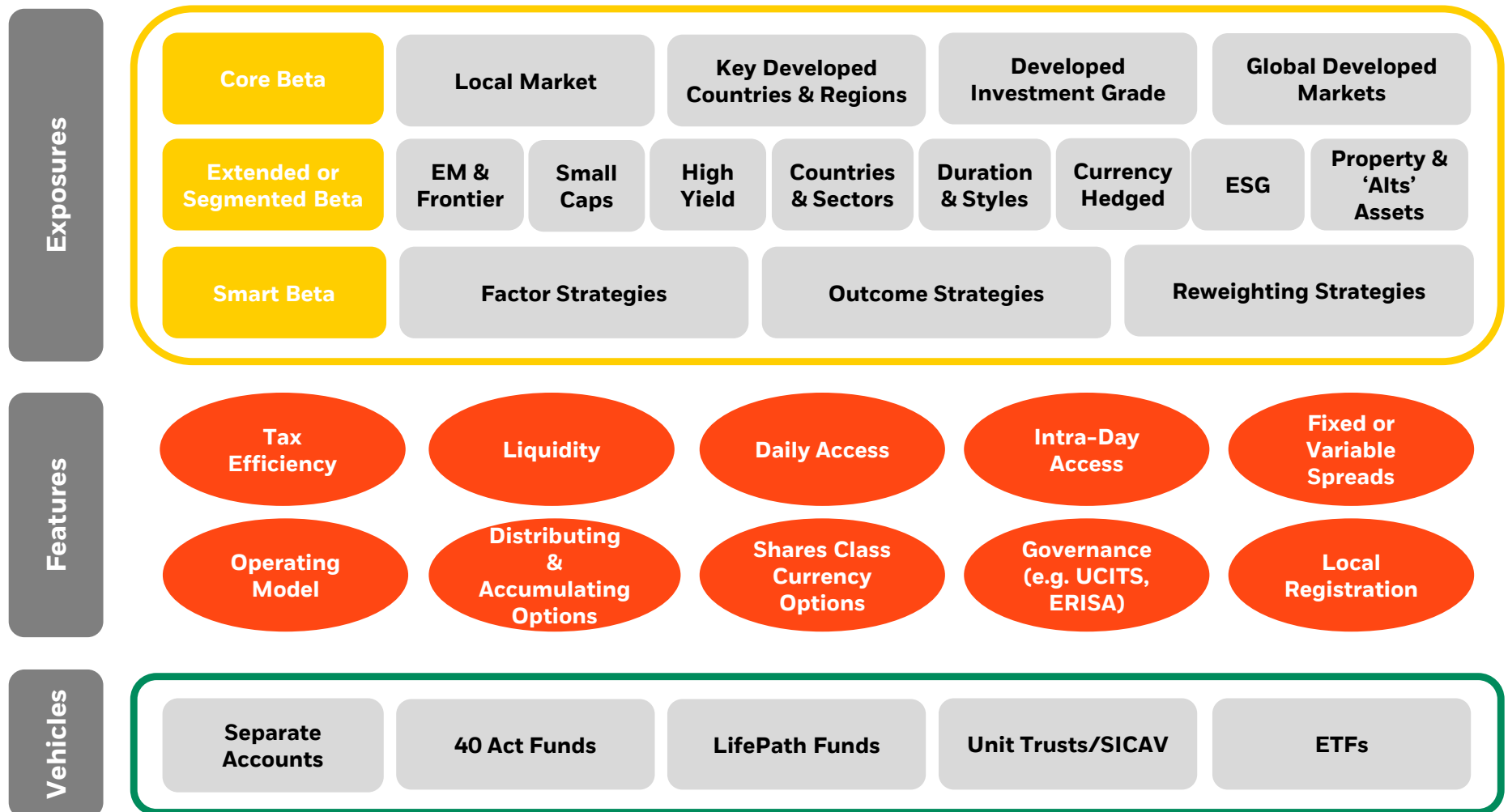
- ▶ Drive the industry forward through our ability to create specialized, innovative investments afforded by our scale and depth of expertise
- ▶ Forge new ground for clients — first manager to offer opportunities in equity index developed and emerging markets
- ▶ Evolve capabilities to continuously deliver on emerging trends — smart beta, global benchmarking, liquidity/completion strategies
- ▶ Serve as an index advocate on behalf of clients and as a key partner to index providers seeking our practitioner knowledge

## 48 years of Index Equity – Continual evolution of products, technology and capabilities



## MASTER PAGE NO. 45 of 208

## An extensive and flexible range of index capabilities



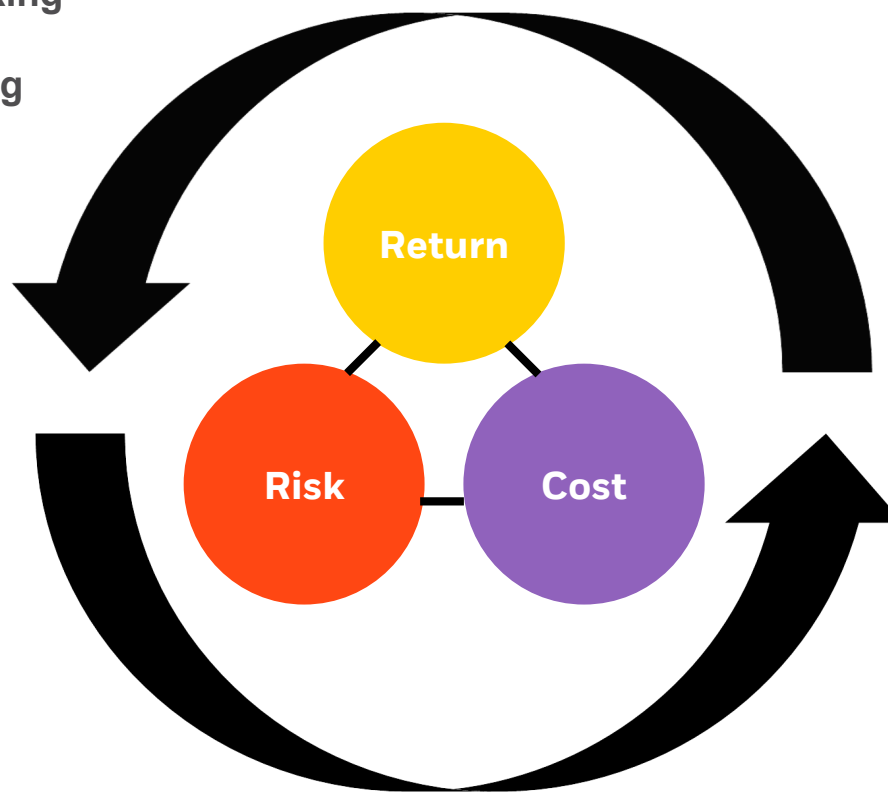
*Aligning the exposures you want with the features you need*

# **BlackRock Index Investments Philosophy and Process**

RETAH100-984101-039

# An approach that seeks to deliver efficient investment outcomes

BlackRock's disciplined, pragmatic and adaptable approach to index tracking is focused on optimally managing and balancing return, risk and cost



**Total Performance Management**

## Risk Management

- ▶ Risk managed process that seeks to consistently deliver optimal tracking outcomes
- ▶ Market leading risk analytics and investment tools provided by our Aladdin® platform

## Consistent Returns

- ▶ Seeks to deliver consistent returns in line with the benchmark
- ▶ Deep knowledge of financial markets and indices
- ▶ Track record of enhanced returns from securities lending

## Cost Efficiency

- ▶ Preserve value for clients through our intelligent approach to index events
- ▶ Extensive global trading platform helps ensure cost are low and we have optimal access to liquidity



# Index investment management cycle – dedicated expertise and resources

## Performance & Oversight

- Review cumulative effect of investment decisions to help identify factors contributing to/subtracting from portfolio performance
- Risk & Quantitative Analysis Team (RQA) monitors dozens of risk factors globally on a continuous basis

## Benchmark Knowledge

- Detailed knowledge of index methodologies
- Experience with predicting and projecting index changes
- Focused on optimal treatment of corporate actions
- Continual research into index events



## Efficient Trading

- Building smart trading strategies designed to access optimal liquidity
- Industry's largest internal market place for potential netting of client flows
- Focused trading research and systems

## Portfolio Construction

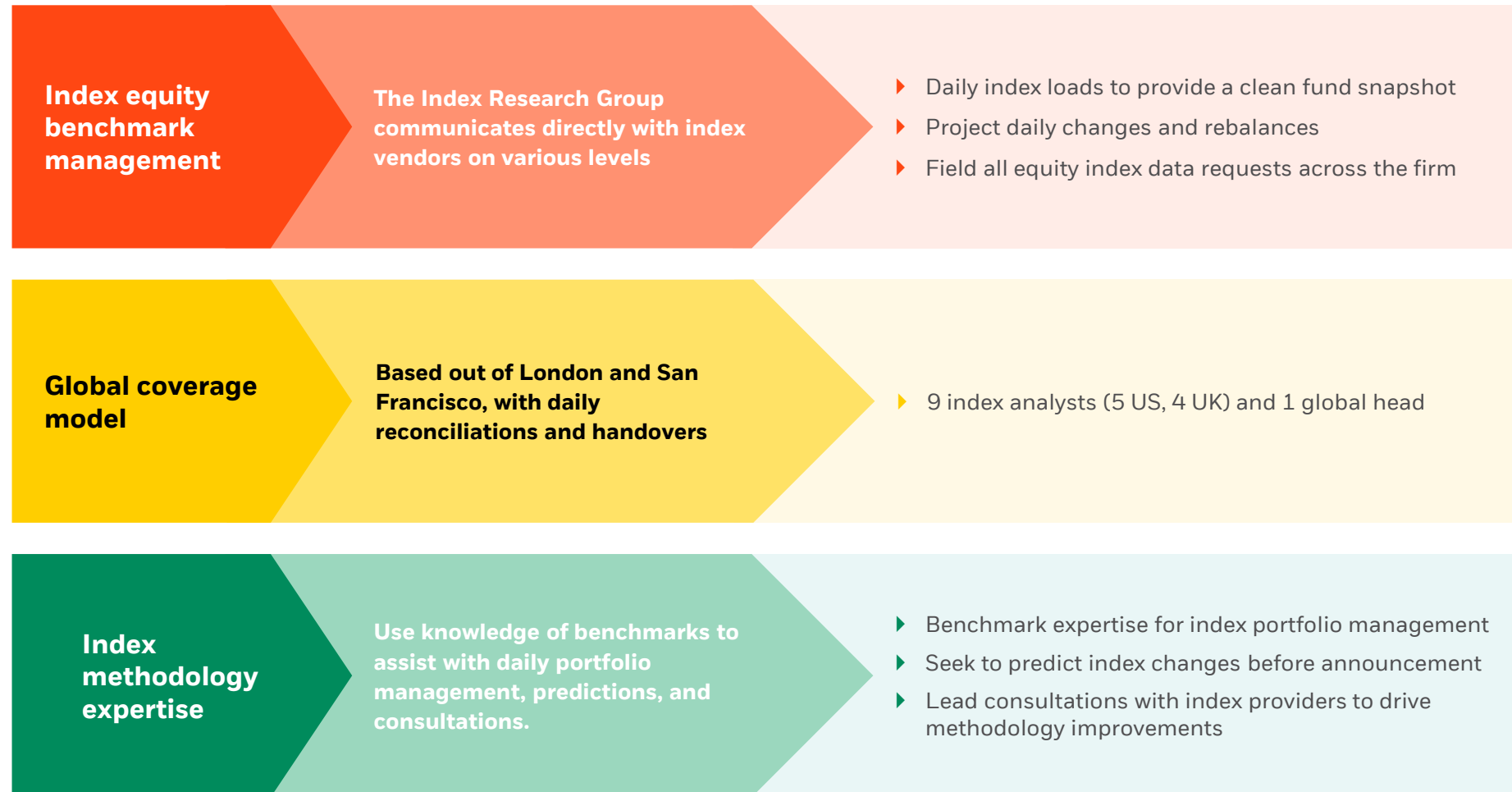
- Significant investment in technology
- Market leading portfolio and risk tools provided by our Aladdin® platform
- Integrated cost and liquidity analysis
- Sophisticated optimization tools

# Index investment management cycle

## *Benchmark knowledge*

Benchmark knowledge

**EII Strategies has a dedicated Index Research team**



# Index investment management cycle

## Portfolio construction

Portfolio construction

**Over 160+ Investment professionals dedicated to overseeing 2,000 Funds managed against 850+ benchmarks. Thousands of investment decisions made every year around:**

- Optimizing versus full replication
- Equitizing cash
- Trading around periodic index changes
- Corporate action elections
- Investing / divesting based on client and participant instruction

The screenshot displays the 'PortfolioConstruction-IE' application window. At the top, there's a menu bar with 'File', 'Options', 'View', 'Action', 'History', 'Format', and 'Help'. Below the menu, a status bar shows '09-JUN-2016 - 9:45:51AM As Ordered and Traded w/Proposed - 21 pfs 14502 pos, 54 trd, no ord, no cf 8 distinct benches 5093 pos, no trd, no ord, no cf'. The main interface has several tabs: 'Main Window', 'Adjustments & Projections', 'Stocks', 'Targets', 'Sectors', and 'Order View'. The 'Stocks' tab is active, showing a table with 642 items. The table has columns: 'Portfolio', 'Name', 'New %Exp Pf (4dps)', '%Exp Bench (4dps)', 'New %Exp Active (4dps)', 'New Qty Active', and 'Sector Level 1 (Immed) Bench'. The table lists various companies and their corresponding metrics.

Portfolio	Name	New %Exp Pf (4dps)	%Exp Bench (4dps)	New %Exp Active (4dps)	New Qty Active	Sector Level 1 (Immed) Bench
R1GROWB	3D SYSTEMS CORP	0.0056%	0.0053%	0.0003%	524	Technology
R1GROWB	3M CO	1.0249%	1.0252%	-0.0002%	-31	Producer Durables
R1GROWB	A.O. SMITH CORP.	0.0589%	0.0596%	-0.0007%	-187	Producer Durables
R1GROWB	AARONS INC.	0.0025%	0.0023%	0.0001%	123	Consumer Discretionary
R1GROWB	ABBVIE INC	0.9637%	0.9633%	0.0004%	152	Health Care
R1GROWB	ACADIA HEALTHCARE CO INC	0.0348%	0.0356%	-0.0008%	-279	Health Care
R1GROWB	ACCENTURE PLC	0.7065%	0.7066%	-0.0001%	-23	Producer Durables
R1GROWB	ACUTY BRANDS INC.	0.1067%	0.1062%	0.0005%	41	Materials & Processing
R1GROWB	ADOBE SYSTEM INC	0.4654%	0.4654%	0.0000%	7	Technology
R1GROWB	ADVANCE AUTO PARTS INC.	0.1061%	0.1059%	0.0002%	34	Consumer Discretionary
R1GROWB	AECOM	0.0066%	0.0062%	0.0004%	254	Producer Durables
R1GROWB	AETNA INC	0.0982%	0.0994%	-0.0012%	-217	Health Care

BlackRock's proprietary portfolio management applications, Portfolio Construction and Index Pro, provide a seamless platform, where by every step of the investment process is handled electronically from the time a client order is placed to the time any required trades go out to market.

*Screenshot for illustrative purposes only. References to specific companies are included solely to help illustrate the portfolio construction process and should not be construed as a recommendation to buy or sell any securities. Actual BlackRock portfolios may or may not currently hold positions in the securities mentioned.*

# Index investment management cycle

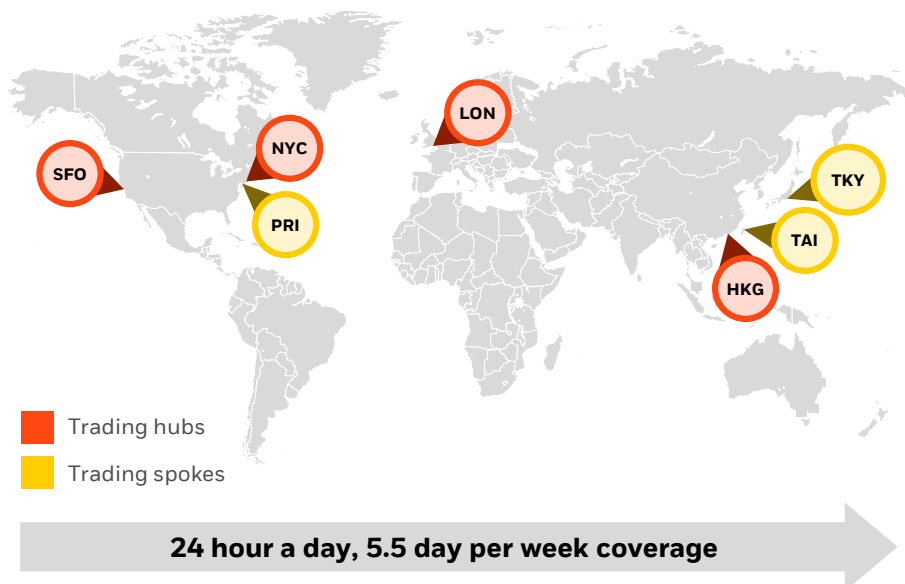
## Efficient trading

Efficient trading

### Over 60 equity traders across four trading hubs and three spokes

- Leverage traders' local market expertise
- Benefit from execution in appropriate time zone
- Common technology enables us to pass the book with embedded business continuity plan

#### BlackRock's global coverage

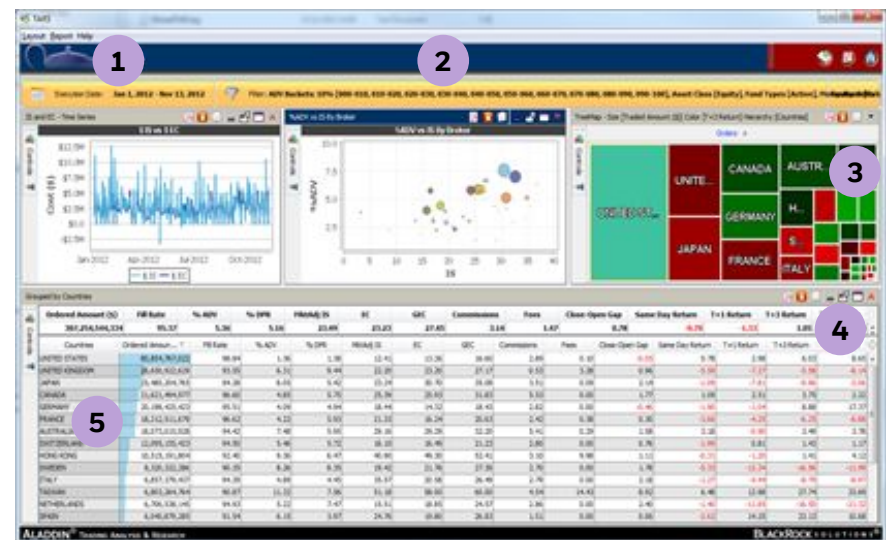


Data as of 30 September 2019  
Screenshots are for illustrative purposes only.

### Proprietary applications are used to monitor expected trading costs and actual trading costs

1. Ability to specify date range
2. Custom filters to drill into specific trading activity
3. Data visualization provides intuitive execution insights
4. Extensive library of metrics and analytics for evaluating trading performance
5. Enable breakdown of TCA across order, execution, broker, or asset-level characteristics and dimensions

#### BlackRock's proprietary applications



# Index investment management cycle

## *Performance & oversight*

Performance & oversight

### Performance and oversight of portfolios occurs through the following steps

- Daily Portfolio Management review
- Monthly IRC review with senior management
- Independent review from BlackRock's Risk and Quantitative Analysis Group

### The following additional systematic checks occur for all portfolios and accounts



# Index events, trends, and themes

## August 2019 MSCI Quarterly Index Rebalance Results

- ▶ **August's MSCI Quarterly Rebalance had relatively high turnover due to the continuing changes to the Emerging Markets universe**
- ▶ **The overall trade resulted in a gain of \$6.8 million**
- ▶ **602 MSCI funds were traded globally representing total AUM of approximately \$1.2 trillion**
- ▶ **46,558 orders were executed worth approximately \$18.4 billion**
- ▶ **99% of trades were executed on effective date across all regions. Some orders were placed prior to effective date for liquidity management**

### Rebalance highlights

#### **Saudi Arabia** – final inclusion tranche:

- ▶ Upweight from 1.5% to 2.8% in Emerging Markets
- ▶ Trade date saw increased volatility but resulted in right way performance of 0.6%

#### **China A** – second of three tranches of weight increases:

- ▶ Inclusion factor increased from 10% to 15% impacting 259 securities
- ▶ 8 new China-A additions
- ▶ Strong performance of the buy basket resulted in trade date performance of 1.46%

**Developed Markets** – the rebalance trades in North America and Developed Europe had relatively low turnover and went right way on trade date. The rebalance trade in Japan went wrong way.

### MSCI index change details

Index	# Adds	# Deletes	Aug 2018 One-Way Turnover	Aug 2019 One-Way Turnover
<b>EAFE</b>	1	1	0.16%	0.17%
<b>EAFE SC</b>	1	1	0.35%	0.30%
<b>Emerging Standard</b>	11	1	0.73%	2.45%
<b>Emerging SC</b>	1	8	1.45%	1.42%
<b>World</b>	4	3	0.31%	0.36%
<b>Frontier 100</b>	1	0	0.00%	1.60%

Source: BlackRock and MSCI as of August 2019. Past performance is not indicative of future results.

## Russell Reconstitution 2019

**Overall the EII Team executed 178,880 orders worth approximately \$67 billion**

- ▶ Overall performance of the reconstitution in 2019 was slightly negative
- ▶ Crossed approximately 48% of activity
- ▶ Turnover across passive managers was approximately \$173 billion

### Methodology Changes

- ▶ This year had very limited methodology changes
- ▶ The most impactful change was one to Russell's criteria for country of domicile
  - Under the new methodology, where both country and regional information are published, the regional reporting will be considered inconclusive and assets/revenue for a country must be an absolute 20% greater than a single region to be considered conclusive
  - Under the new methodology, NXP Semiconductors and Garrett Motion were no longer considered eligible to remain constituents of the Russell 1000

### Buy – sell spread performance

#### Russell 1000

- ▶ **Adds** – Were up 1.39%, outperforming the Russell 1000 by 0.77%. This was mainly driven by Spotify (SPOT) and Uber Technologies (UBER).
- ▶ **Deletes** – Were down 1.61%, underperforming the index by 2.23%. The biggest underperformer was NXP Semiconductors (NXPI).
- ▶ Overall trade moved wrong-way

#### Russell 2000

- ▶ **Adds** – Closed up 2.72%, outperforming the Russell 2000 by 1.43%. The highest contributors were Stitch Fix (SFIX), UroGen Pharma (URGN) and Verra Mobility (VRRM).
- ▶ **Deletes** – Ended up 1.31% for the day, performing in line with the index. Financials and Industrials outperformed while Energy and Real Estate underperformed.
- ▶ Overall moved right way

### Index change highlights

	Russell 1000	Russell 2000
<b>Adds</b>	47	189
<b>Deletes</b>	21	157
<b>2018 Two-Way Turnover</b>	3.00%	22.10%
<b>2019 Two-Way Turnover</b>	2.89%	18.16%

Source: BlackRock, as of June 2019. Past performance is not indicative of future results. It is not possible to invest directly in an index. References to specific securities and their issuers are for illustrative purposes only and are not intended and should not be interpreted as recommendations to purchase or sell such securities.



## September 2019 S&P Dow Jones / FTSE Russell Index Rebalance Results

- ▶ There were five major index rebalances in September – S&P Dow Jones, FTSE Russell, STOXX, DAX and Swiss
- ▶ Globally, EII executed 94,675 orders worth \$47.2 billion
- ▶ 18% of this notional trade volume was from client flows and other corporate events
- ▶ The index rebalances accounted for 77,922 orders totaling \$42.0 billion across 70 markets
- ▶ 99% of trades were executed on effective date across all regions

### Rebalance highlights

#### Developed Markets:

- ▶ **US** – Spreads for the S&P 500, 400 and 600 rebalance trades closed up 0.25%, 0.27% and 1.62% respectively. Float decreases in Apple, Bank of America, and Northrop Grumman had the highest contributions to the outperformance of the spread in the S&P 500.
- ▶ **EMEA** – The DM Europe buy-sell spread was up 0.55% on trade date, mainly driven by Nestle (a down weight at this rebalance).
- ▶ **APAC** – The DM APAC trade went right way driven by right way performance in Australia and offset slightly by wrong way performance in Japan.

#### Emerging Markets:

- ▶ **Saudi Arabia**
  - FTSE 4<sup>th</sup> inclusion tranche saw increased weight of Saudi Arabia in EM from 1.6% to 2.3%.
  - Final inclusion tranche in the S&P Global indexes, with a weight of 2.1% in EM.
- ▶ **China A**
  - FTSE 2<sup>nd</sup> inclusion tranche saw increased weight of China A in EM from 1.7% to 3.5%.
  - SPDJ added China A to the Global composite at 5.5%.
- ▶ **Kuwait** – SPDJ added Kuwait to the Global Composite at 0.4%.

### S&P Dow Jones / FTSE Russell index change details

Index	# Adds	# Deletes	September 2018 Two-Way Turnover	September 2019 Two-Way Turnover
<b>S&amp;P 500</b>	1	1	1.4%	1.4%
<b>S&amp;P 400</b>	5	5	2.0%	5.1%
<b>S&amp;P 600</b>	3	3	2.6%	5.2%
<b>S&amp;P/TSX Composite</b>	5	11	1.7%	1.8%
<b>S&amp;P Dow Jones Completion</b>	77	2	4.7%	6.3%
<b>FTSE All World</b>	96	64	1.7%	2.0%

Source: BlackRock, S&P Dow Jones, and FTSE Russell as of September 2019. Past performance is not indicative of future results.

# MSCI market classification summary

**So far in 2019, MSCI continues to implement several country reclassifications to their Emerging markets universe. 2019 will also bring changes to China A Shares.**



## Saudi Arabia

**Saudi Arabia** was officially added to the 2018 Annual Market Classification Review in 2017. The country will be implemented in a **two-step inclusion process**, which commenced in May 2019 and will continue through to August 2019. Saudi is projected to make up **2.6% of the MSCI Emerging Markets** upon completion.

## Kuwait

MSCI will reclassify **Kuwait** to Emerging Markets status, subject to availability of omnibus account structures and same National Investor Number (NIN) cross trades for international investors. This will occur in one step coinciding with the May 2020 Semi-Annual Index Review. This will lead to an inclusion of nine stocks in the MSCI Emerging Market Index having a pro forma index weight of approximately **0.5% of the MSCI Emerging Markets**.

## China A-shares

MSCI will increase the weight of **China A shares** in the MSCI Indexes by increasing the inclusion factor (IF) from 5% to 20% in **three steps**. The process began in May 2019 and will end in November 2019. MSCI increased/will increase the inclusion factor of all China A Large Cap shares in the MSCI Indexes:

1. from 5% to 10% and added ChiNext Large Cap shares with a 10% inclusion factor coinciding with the May 2019 Semi-Annual Index Review (SAIR).
2. from 10% to 15% coinciding with the August 2019 Quarterly Index Review
3. from 15% to 20% and will add China A Mid Cap shares, including eligible ChiNext shares, with a 20% inclusion factor to the MSCI Indexes coinciding with the Nov 2019 SAIR.

On completion of this three-step implementation, there will be 253 Large and 168 Mid Cap China A shares, including 27 ChiNext shares, on a pro forma basis in the **MSCI Emerging Markets Index, representing a weight of 3.3%** in the pro forma index.

Source: MSCI as of 6/30/2019

## 2019 FTSE market classification summary

**FTSE has continued to review and implement several country reclassifications to their Emerging markets universe in 2019.**

### FTSE

#### Argentina

**Argentina** is retained on the Watch List as a Frontier market and will be reviewed for possible reclassification as a Secondary Emerging market, within the FTSE Country Classification scheme at the Annual Review in **September 2019**.

#### Saudi Arabia

**Saudi Arabia** has been on the Watch List since 2015 and **made a number of improvements** to the market infrastructure during 2017. The country will be included in **five tranches** to **the FTSE Emerging Index** continuing from the first tranche inclusion in **March 2019** to the final tranche in **March 2020**. FTSE Russell commends the Saudi Arabia Capital Market Authority and the Tadawul on the effectiveness of the market reforms introduced ahead of the decision to include Saudi Arabian securities in the FTSE Global Equity Index Series (GEIS).

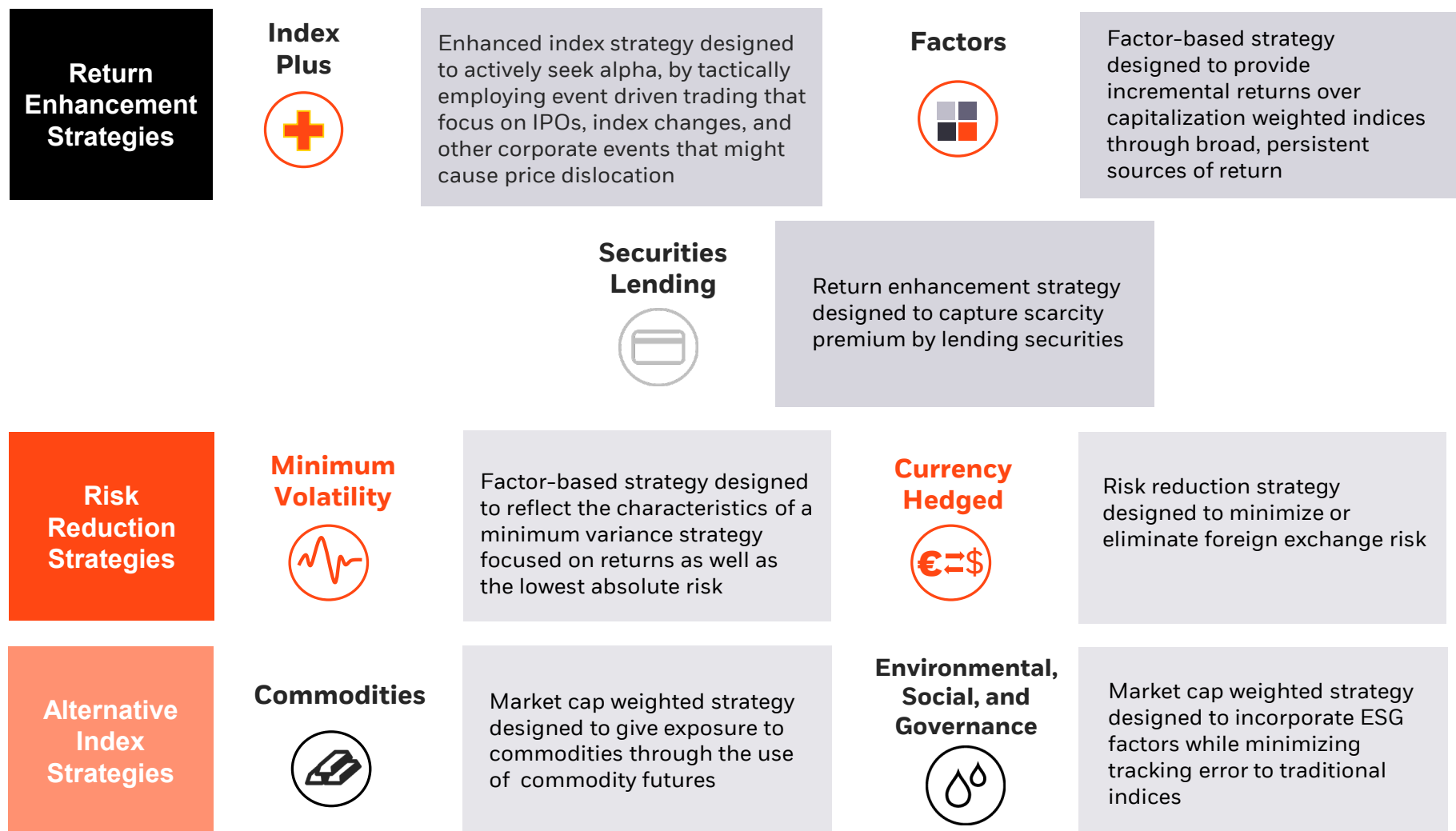
#### China A-shares

**China A Shares** (available via the Northbound Stock Connect Scheme Buy-and-Sell-List) will undergo Phase 1 reclassification from Unclassified to Secondary Emerging market status, effective in **three tranches** commencing from **June 2019** to completion by **March 2020**.

Source: FTSE as of 3/29/2019

# Index strategies continue to be a growing portion of client portfolios

Investors today are enhancing their passive allocations in three strategies:

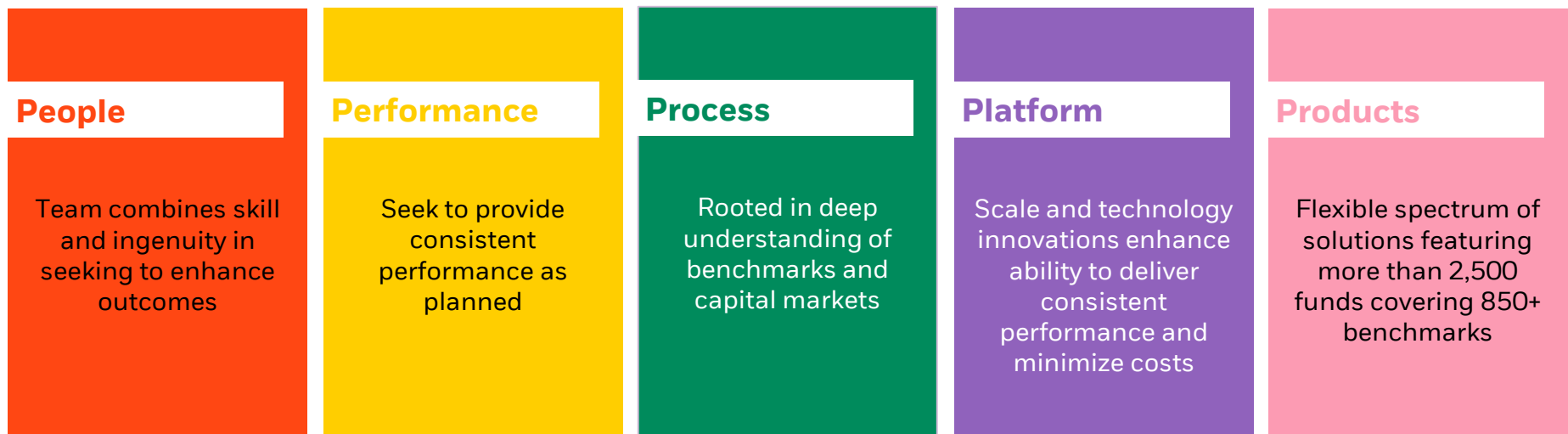


# Key takeaway

## Our approach to Index: anything but passive

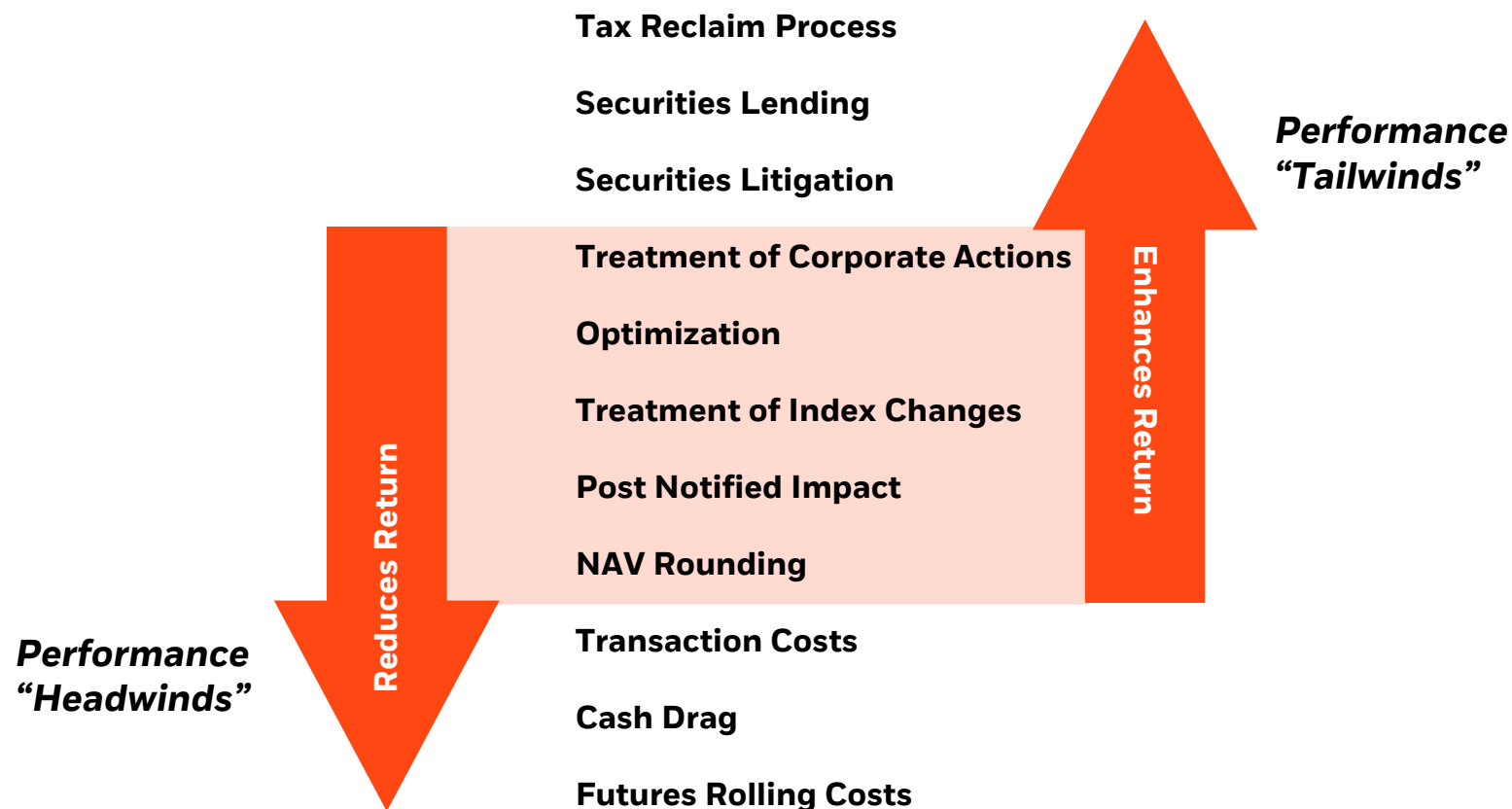
Investors today demand more efficient returns and innovative ways to use index products

BlackRock's Index approach is focused on:



# Performance attribution

## Major sources of tracking error: Global & domestic index funds



# **Index Equity Portfolio Characteristics**

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As of 30 September 2019

# Russell 1000® Index Fund Characteristics

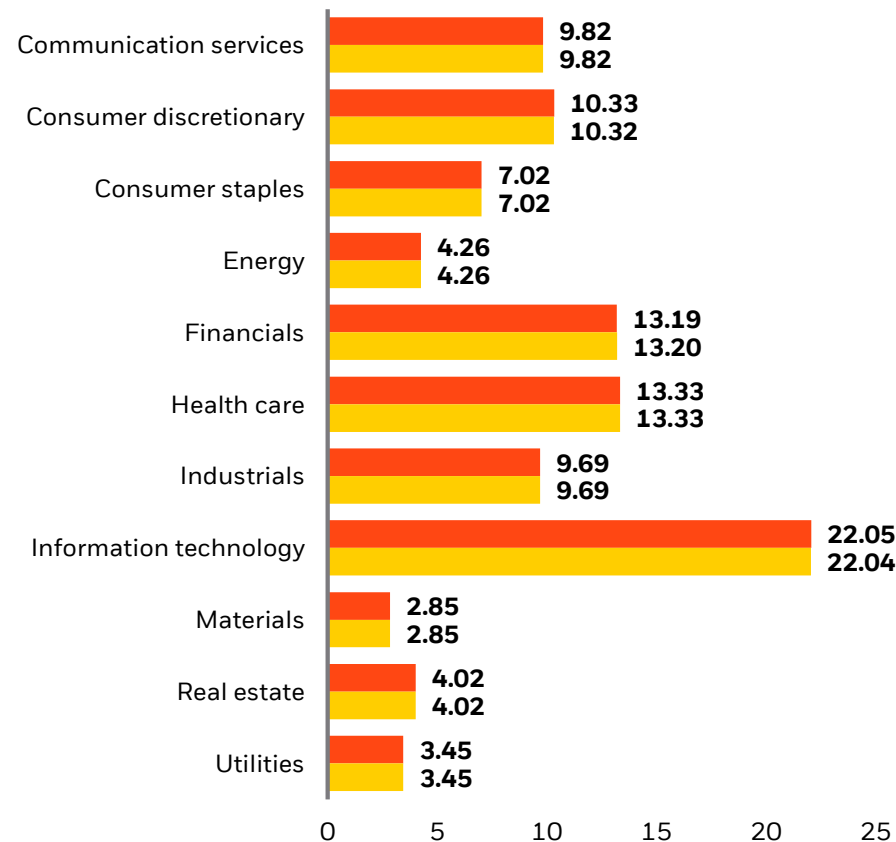
## Fund information

Benchmark	Russell 1000® Index
Total fund assets	\$81.25B
Number of issues in fund	1,000
Number of issues in benchmark	1,002

## Top 10 holdings

	Fund %	Index %
Microsoft Corp	3.80	3.82
Apple Inc	3.66	3.68
Amazon Com Inc	2.59	2.61
Facebook Class A Inc	1.54	1.55
Berkshire Hathaway Inc Class B	1.47	1.48
JPMorgan Chase & Co	1.35	1.36
Alphabet Inc Class C	1.34	1.35
Alphabet Inc Class A	1.32	1.33
Johnson & Johnson	1.24	1.25
Procter & Gamble	1.11	1.12

## Sector diversification



Fund inception date 31 January 1987

Data is used for analytical purposes only. Index data may differ to those published by the index due to calculation methods. Breakdowns may not sum to 100 percent due to rounding, exclusion of cash, STIF and statistically immaterial factors. Portfolio holdings are subject to change and are not intended as a recommendation of individual securities.

Sources: BlackRock, Frank Russell Company

As of 30 September 2019

# Russell 2500™ Index Fund

## Characteristics

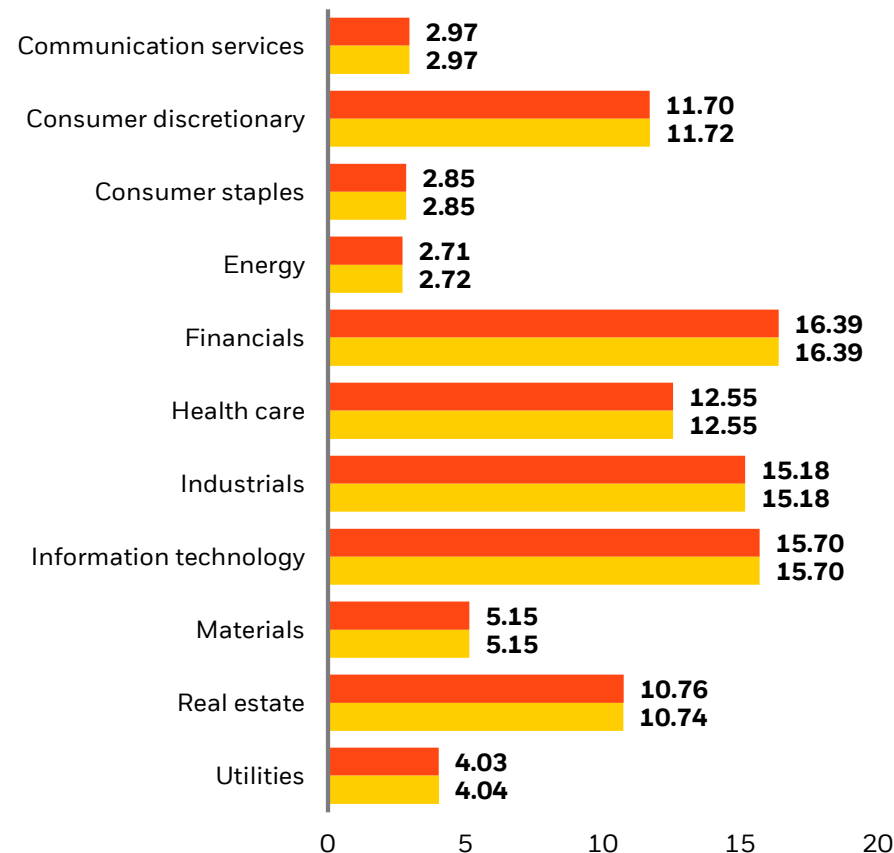
### Fund information

Benchmark	Russell 2500™ Index
Total fund assets	\$6.86B
Number of issues in fund	2,469
Number of issues in benchmark	2,509

### Top 10 holdings

	Fund %	Index %
Dexcom Inc	0.29	0.29
Atmos Energy Corp	0.28	0.29
Burlington Stores Inc	0.28	0.28
Sun Communities REIT Inc	0.28	0.28
Alliant Energy Corp	0.27	0.28
IDEX Corp	0.26	0.27
Steris PLC	0.26	0.26
Duke Realty REIT Corp	0.26	0.26
MarketAxess Holdings Inc	0.26	0.26
Jacobs Engineering Group Inc	0.26	0.26

### Sector diversification



Fund inception date 28 February 2001.

■ Fund ■ Benchmark

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Sources: BlackRock, Frank Russell Company

As of 30 September 2019

# BlackRock MSCI ACWI Equity Index Fund

## Characteristics

### Fund information

Benchmark	MSCI ACWI Net Dividend Return Index
Total fund value	\$1.38B
Number of issues in fund	2,869
Number of issues in benchmark	2,852

### Top 10 holdings

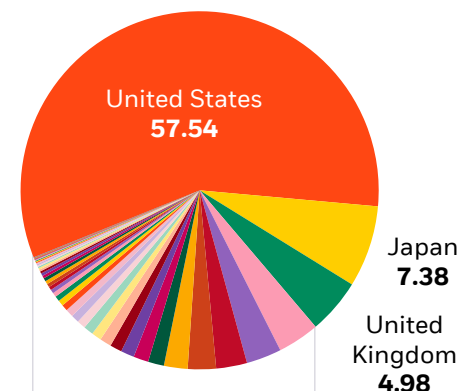
	Country	Weight (%)
Apple Inc	United States	2.20
Microsoft Corp	United States	2.17
Amazon Com Inc	United States	1.55
Facebook Class A Inc	United States	0.92
Alphabet Inc Class C	United States	0.82
JPMorgan Chase & Co	United States	0.82
Alphabet Inc Class A	United States	0.78
Johnson & Johnson	United States	0.73
Nestle Sa	Switzerland	0.69
Procter & Gamble	United States	0.67

Fund inception date 22 April 2010

Data is used for analytical purposes only. Breakdowns may not sum to 100 percent due to rounding, exclusion of cash, STIF and statistically immaterial factors. Portfolio holdings are subject to change and are not intended as a recommendation of individual securities.

Sources: BlackRock, MSCI Inc.

### Country allocation (%)



China	3.77	South Africa	0.56	Poland	0.12
Canada	3.17	Denmark	0.52	Chile	0.11
Switzerland	2.79	Russian Fed	0.47	UAE	0.09
Germany	2.55	Singapore	0.39	New Zealand	0.07
Australia	2.14	Thailand	0.34	Turkey	0.07
South Korea	1.44	Belgium	0.31	Austria	0.07
Taiwan Rep of	1.44	Saudi Arabia	0.31	Colombia	0.05
China	1.36	Finland	0.30	Peru	0.05
Netherlands	1.21	Mexico	0.30	Portugal	0.04
Hong Kong	1.08	Indonesia	0.25	Greece	0.04
India	1.05	Malaysia	0.24	Hungary	0.03
Brazil	0.89	Norway	0.20	Argentina	0.02
Spain	0.89	Israel	0.17	Egypt	0.02
Sweden	0.78	Ireland	0.16	Czech Republic	0.02
Italy	0.72	Philippines	0.13	Pakistan	0.00
France	0.71	Qatar	0.12	Luxembourg	0.00
				Malta	0.00

As of 30 September 2019

# BlackRock MSCI ACWI ex-U.S. IMI Index Fund Characteristics

## Fund information

Benchmark	MSCI ACWI ex USA IMI Index
Total fund value	\$21.09B
Number of issues in fund	6,427
Number of issues in benchmark	6,389

## Top 10 holdings

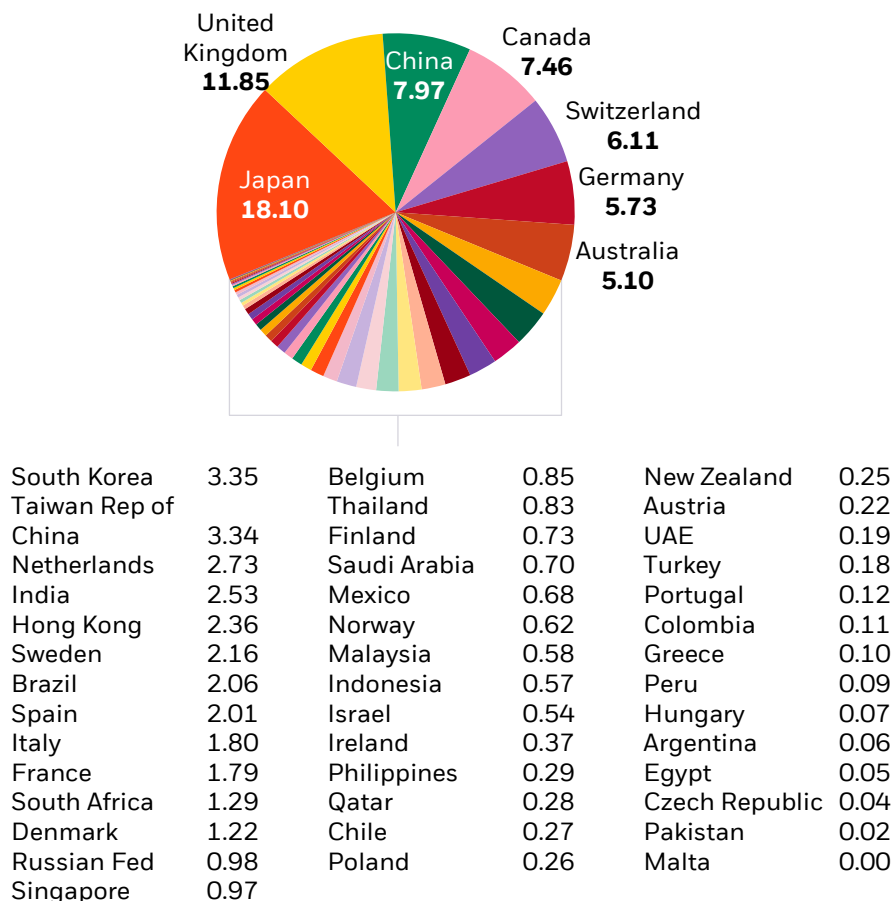
	Country	Weight (%)
Nestle SA	Switzerland	1.35
Tencent Holdings Ltd	China	1.01
Alibaba Group Holding ADR Represen	China	1.00
Taiwan Semiconductor Manufacturing	Taiwan Rep of China	0.91
Roche Holding Par AG	Switzerland	0.83
Samsung Electronics Ltd	South Korea	0.82
Novartis AG	Switzerland	0.76
HSBC Holdings PLC	United Kingdom	0.65
Toyota Motor Corp	Japan	0.63
BP PLC	United Kingdom	0.54

Fund inception date 20 March 2008

Data is used for analytical purposes only. Breakdowns may not sum to 100 percent due to rounding, exclusion of cash, STIF and statistically immaterial factors. Portfolio holdings are subject to change and are not intended as a recommendation of individual securities.

Sources: BlackRock, MSCI Inc.

## Country allocation (%)



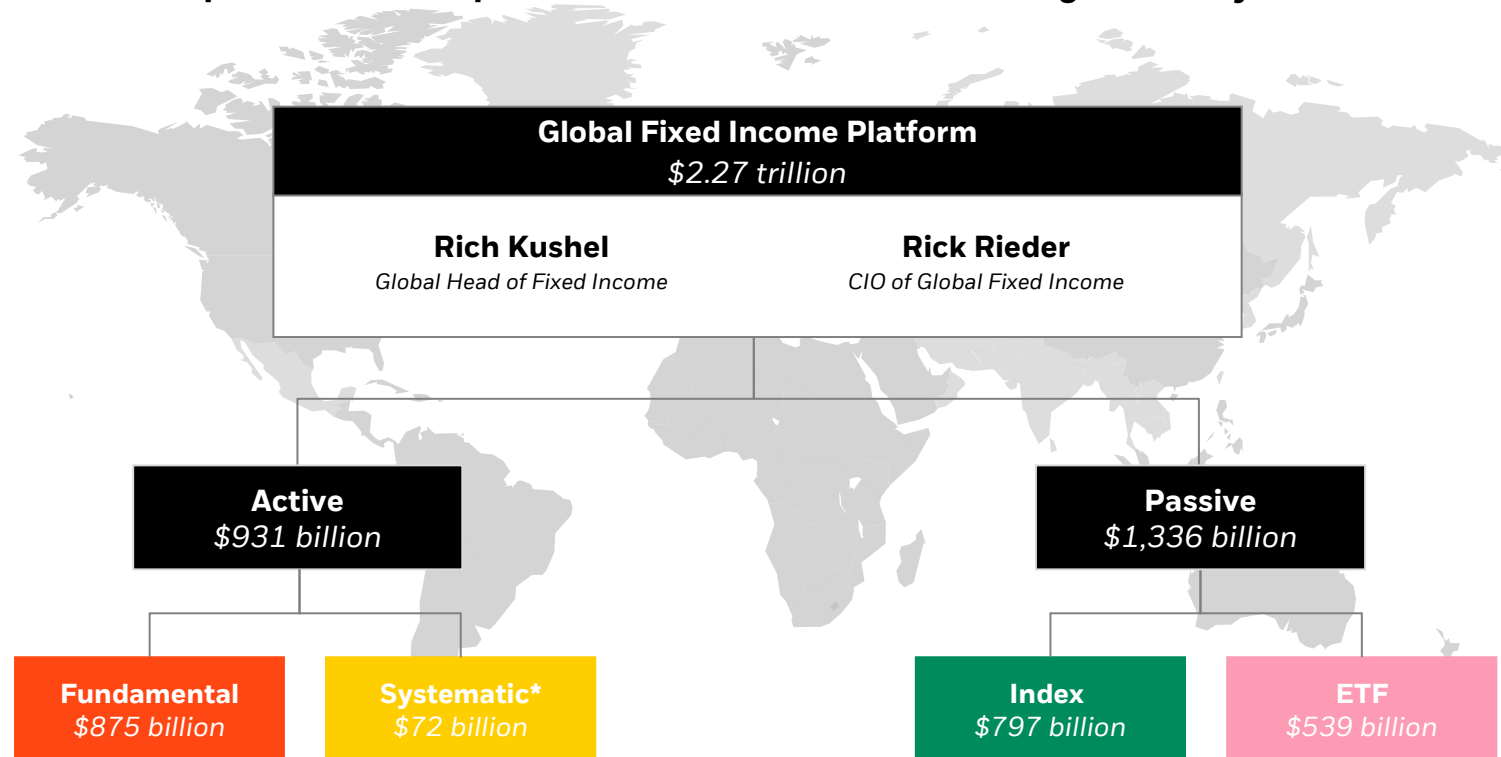
# **4. Fixed Income Indexing Overview**

# Global fixed income platform provides greater access to investment opportunities

## Benefits of BlackRock's breadth and depth

- **Talent:** 400+ fixed income professionals generate ideas and identify insights to create alpha opportunities
- **Trading:** Global execution platform provides deep market access
- **Technology:** *Sophisticated analytics and risk management enables us to better understand and take risk in pursuit of alpha*
- **Culture:** Fiduciary commitment to advising and serving clients drives our investment culture

## Experienced leadership team oversees portfolio teams with decision-making autonomy



AUM in USD and data as of 30 Sept 2019. For illustrative purposes only.

\* Systematic AUM includes alternatives and fixed income sleeves of multi-asset mandates that are excluded from the "Active" GFI platform AUM to avoid double-counting.

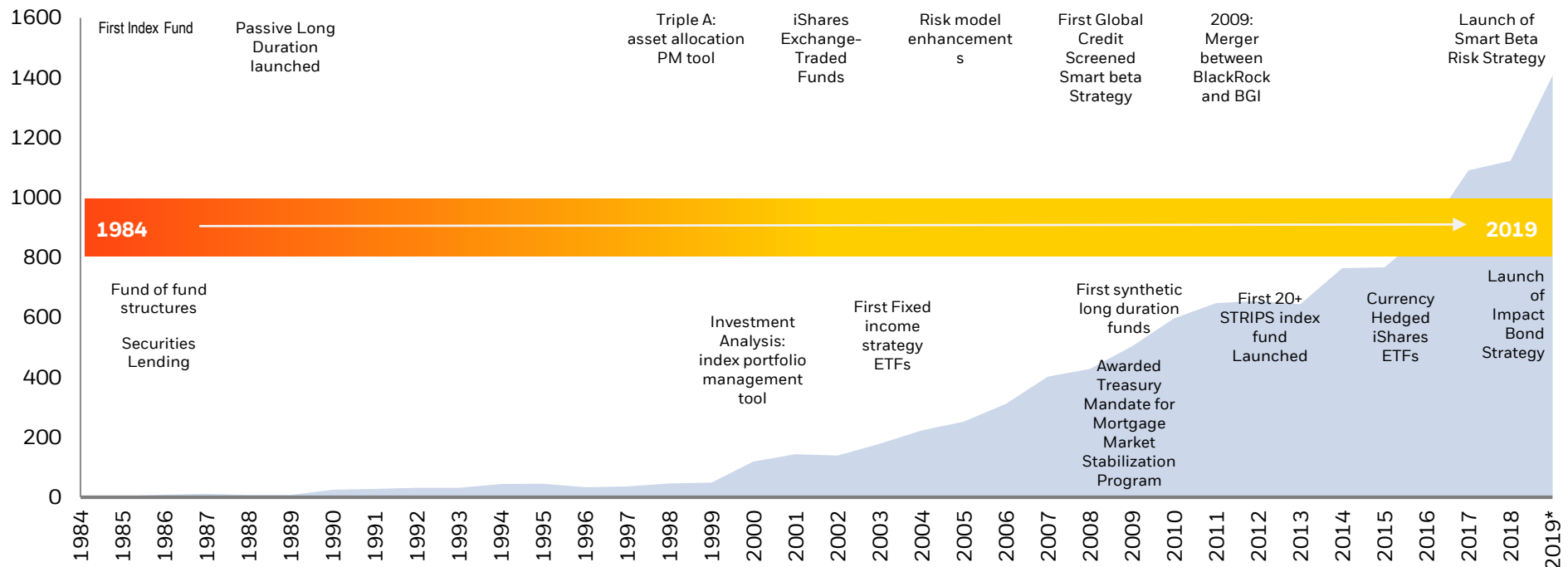
## Over 30 years of index innovation

**First fixed income index fund**

**Largest fixed income index and ETF manager globally\*\***

**Innovative provider of synthetic, smart beta/factor based and ESG solutions**

### BlackRock Index & Systematic Global Fixed Income assets under management (\$ billions)



Source: BlackRock, as of 30 September, 2019





\*\* Source: Pension & Investments as of 30 June 2018

Note: Some Innovations developed by predecessor firms



# Clients Seeking Alternatives to Traditional Index Returns

Factor-based strategies and other systematic solutions offer alternatives to traditional index returns

## U.S. Aggregate Strategies

<b>Defensive Credit</b> 	<p>▶ Defensive, systematic strategy designed to avoid issuers that are at risk of experiencing credit deterioration</p>
<b>MBS Up In Coupon</b> 	<p>▶ Factor-based strategy designed to outperform traditional MBS indices by capturing attractive risk-adjusted carry</p>
<b>Curve Steepener</b> 	<p>▶ Factor-based strategy designed to outperform traditional government indices by capturing term-premia and roll down</p>
<b>Short Carry</b> 	<p>▶ Systematic strategy designed to generate carry through use of US Treasury Futures and short-dated securitized holdings</p>

## Broader Strategy Options

<b>Balanced Risk "FIBR"</b> 	<p>▶ Factor-based strategy designed to balance interest rate and spread risk to improve risk adjusted returns</p>
<b>Systematic CorePlus</b> 	<p>▶ Systematic strategy designed to outperform traditional indices by tilting into sectors traditionally utilized by active managers</p>
<b>Capital Efficiency</b> 	<p>▶ Systematic strategy designed to release capital through synthetic replication of traditional fixed income indices</p>
<b>Impact Investing</b> 	<p>▶ Systematic strategy designed to incorporate ESG factors while minimizing tracking error to traditional indices</p>

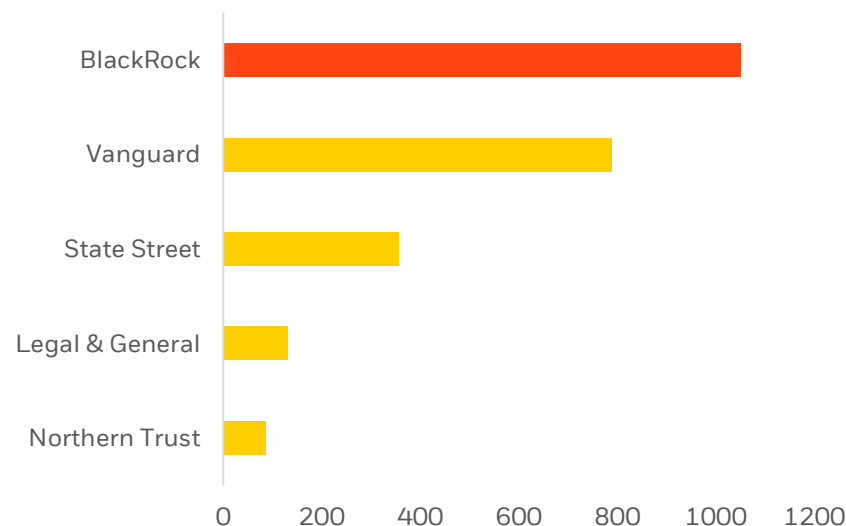


# BlackRock is a global leader in fixed income indexing

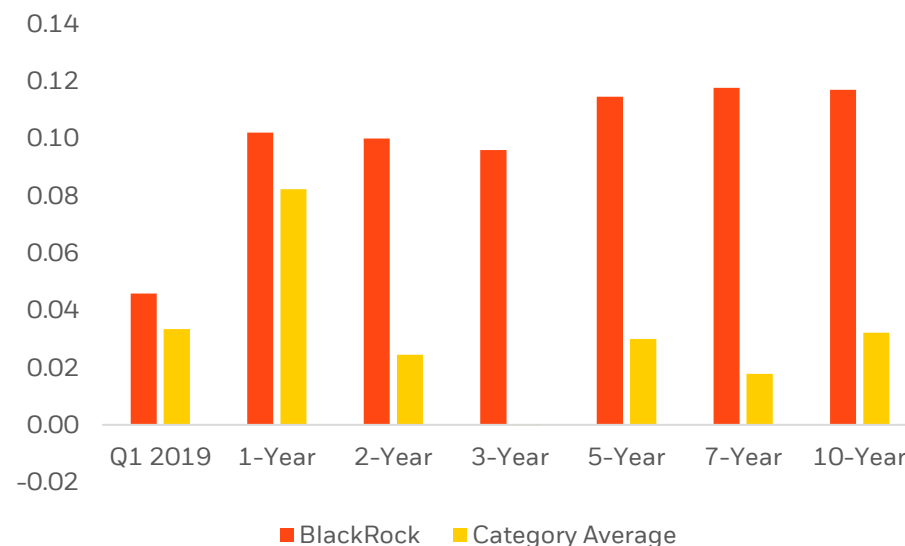
## There are four key reasons to pick BlackRock over any other index provider:

- Low historical tracking error across fixed income index strategies
- An experienced, stable team
- Potential for Low transaction costs from size and scale
- Transparent pricing and no cross subsidization as BlackRock has no custody business

**Global Fixed Income Index Market AUM (\$bn)<sup>1</sup>**



**Gross Tracking Difference vs. BBG Barclays US Aggregate Index<sup>2</sup>**



1 Source: Pension & Investments. All dollar values are in \$ billions.; data as of 30 June 2018. Managers included based on largest global fixed income index market AUM per Pension & Investments.

2 Source: eVestment; data as of 31 March 2019. Periods less than a year are not annualized. Indexes are unmanaged and one cannot invest directly in an index. Managers on the right are different from those with the largest Index AUM due to product availability or missing data. The Category Average includes all passive index funds available on eVestment managed against the Bloomberg Barclays US Aggregate Index. Category Average depicts tracking difference, defined as risk in excess of the benchmark, vs. the Bloomberg Barclays US Aggregate Index. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** All periods contain 5 managers in the universe except the 10-Year period, which contains 4.

BlackRock is included in the universe. Please see slide 19 for the Fund's full performance track record.

# **Team, Philosophy & Process**

# Americas Fixed Income Index Team

Americas Fixed Income						Research	Strategy
Portfolio Management						Global Research	Americas
Core PM						Research Group	
<b>Scott Radell</b> Head of San Francisco Core PM						<b>Ignacio Blanch</b> Head of Systematic Fixed Income Research	<b>Robert Stanley</b> Head of US Product Strategy
Multi-Sector/Other	Credit	Rates / Mortgages / Emerging Markets				Research	
<b>Scott Radell</b> Head of San Francisco Core PM	<b>Karen Uyehara</b> Sr. Portfolio Manager Multi-Sector	<b>Jonathan Graves</b> Sr. Portfolio Manager Corporate Credit	<b>David Dulski</b> Portfolio Manager Corporate Credit	<b>Jay Mauro</b> Deputy Head of SF Core PM	<b>Mark Buell</b> Portfolio Manager US Government Bonds	+ 8 Index researchers	Matt Tucker Gordon Readey Kathryn Donovan Laura May Chandler Grinnell
<b>Jasmita Mohan</b> Portfolio Manager Multi-Sector	<b>Joseph Maciunas</b> Portfolio Manager Multi-Sector / Rates	<b>Elya Schwartzman</b> Sr. Portfolio Manager Corporate Credit	<b>Giulia Cerardi</b> Portfolio Manager Corporate Credit	<b>Marcus Tom</b> Portfolio Manager Agency Mortgages	<b>Yang He</b> Portfolio Manager Agency Mortgages		
<b>Joel Silva</b> Sr. Portfolio Manager Munis / Canada / ESG	<b>Jermaine Pierre</b> Portfolio Manager Canada	<b>Christina Hanlon</b> Portfolio Manager Corporate Credit	<b>Jesse Kang</b> Portfolio Manager Corporate Credit	<b>Wes George</b> Portfolio Manager Agency Mortgages	<b>Gabe Shipley</b> Portfolio Manager Emerging Markets		
<b>Rena Patel</b> Portfolio Manager Municipals	<b>Lip Tong</b> Portfolio Manager Canada	<b>Cynthia Fan</b> Portfolio Manager Corporate Credit	<b>Allen Kwong</b> Portfolio Manager Corporate Credit	<b>Emily Freeman</b> Portfolio Manager Emerging Markets			
<b>Kent Yamane</b> Portfolio Manager Securitized Credit	<b>Tao Chen</b> Portfolio Manager Municipals	<b>Sam Dreyfuss</b> Portfolio Manager Corporate Credit	<b>Cole Bushman</b> Portfolio Manager Corporate Credit				
<b>Clay Armistead</b> Portfolio Manager Securitized Credit		<b>Paige Whistler</b> Portfolio Manager Corporate Credit	<b>Danny Ng</b> Portfolio Manager Corporate Credit				

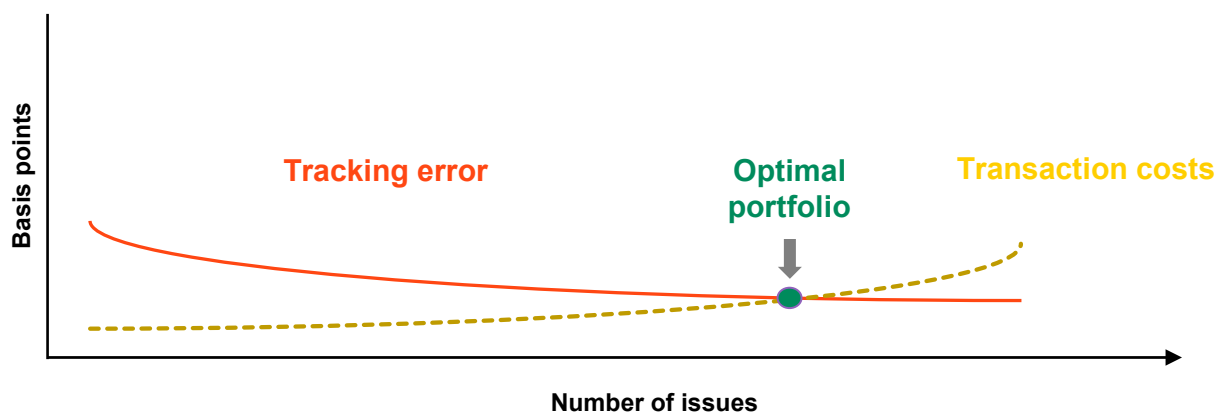
As of September 30, 2019

# Passive management

## OTC markets require different strategies vs. exchange traded markets

### Quantitative process balances tracking error & transaction costs

- Unlike most stocks, bonds trade “Over the Counter”
- Prohibitive costs, uncertain liquidity, and issue scarcity often makes perfect replication infeasible
- Index process optimizes marginal contribution to tracking error with T-Costs



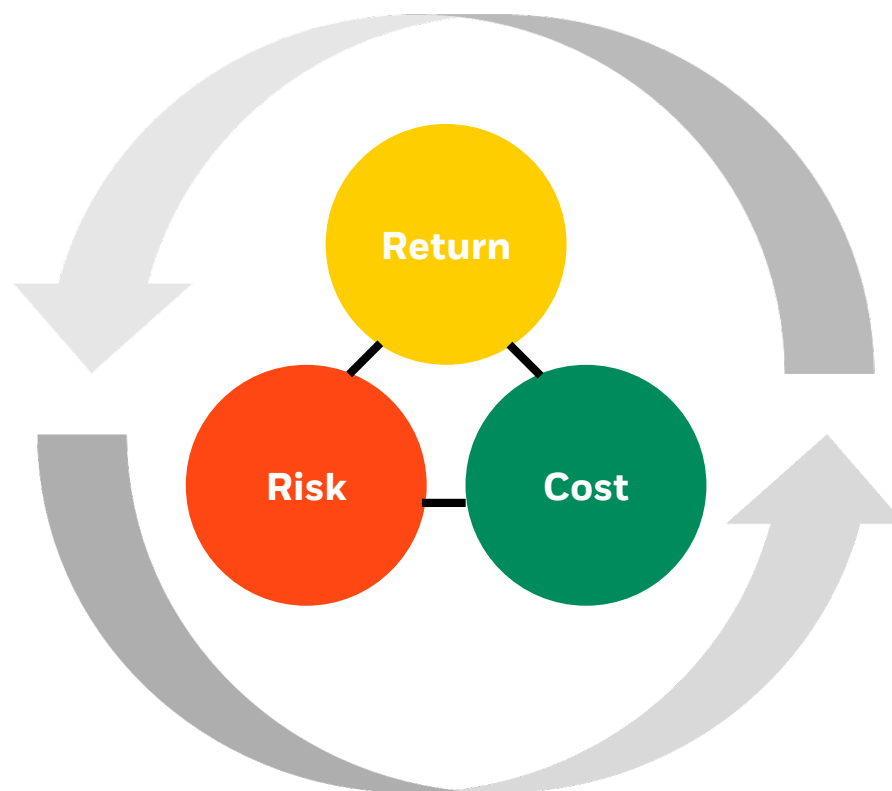
For illustrative purpose only and subject to change.  
Source: BlackRock

# Philosophy

## Total performance management

**Superior investment outcomes may be best achieved through a disciplined, objective process for managing return, risk and cost**

- **Return** — Performance as planned with value-added portfolio management
- **Risk** — Proprietary portfolio & risk management system helps manage investment and operational risk
- **Cost** — Trading cost integrated into portfolio construction using proprietary transaction cost models



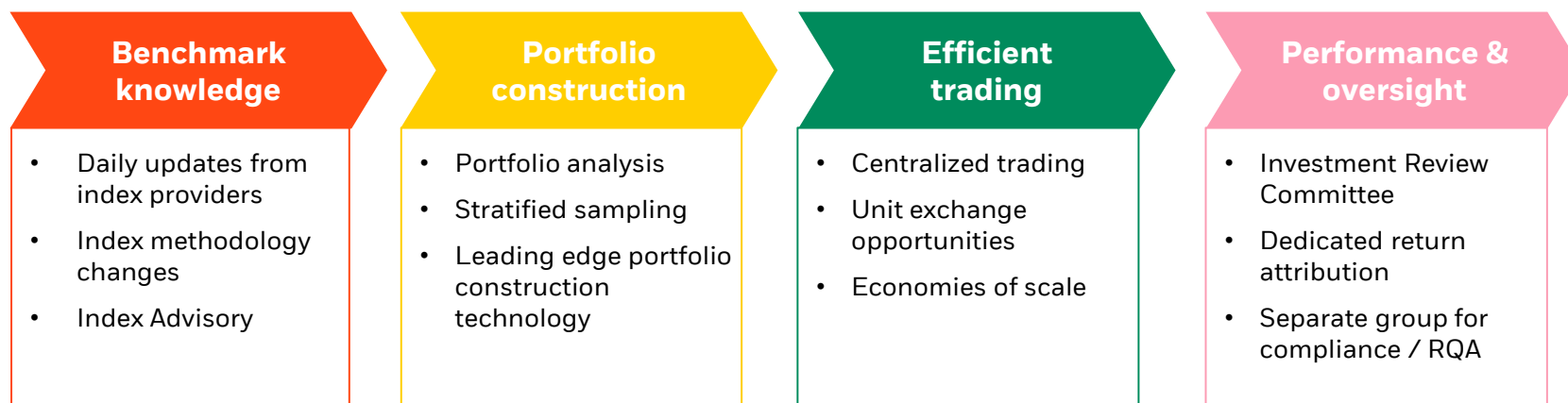
# Process



## Disciplined process within a scalable, risk-managed framework underpin consistent historical performance

- BlackRock's index portfolios are managed using a team approach for research, portfolio management, trading, and risk oversight

### Portfolio Management Process

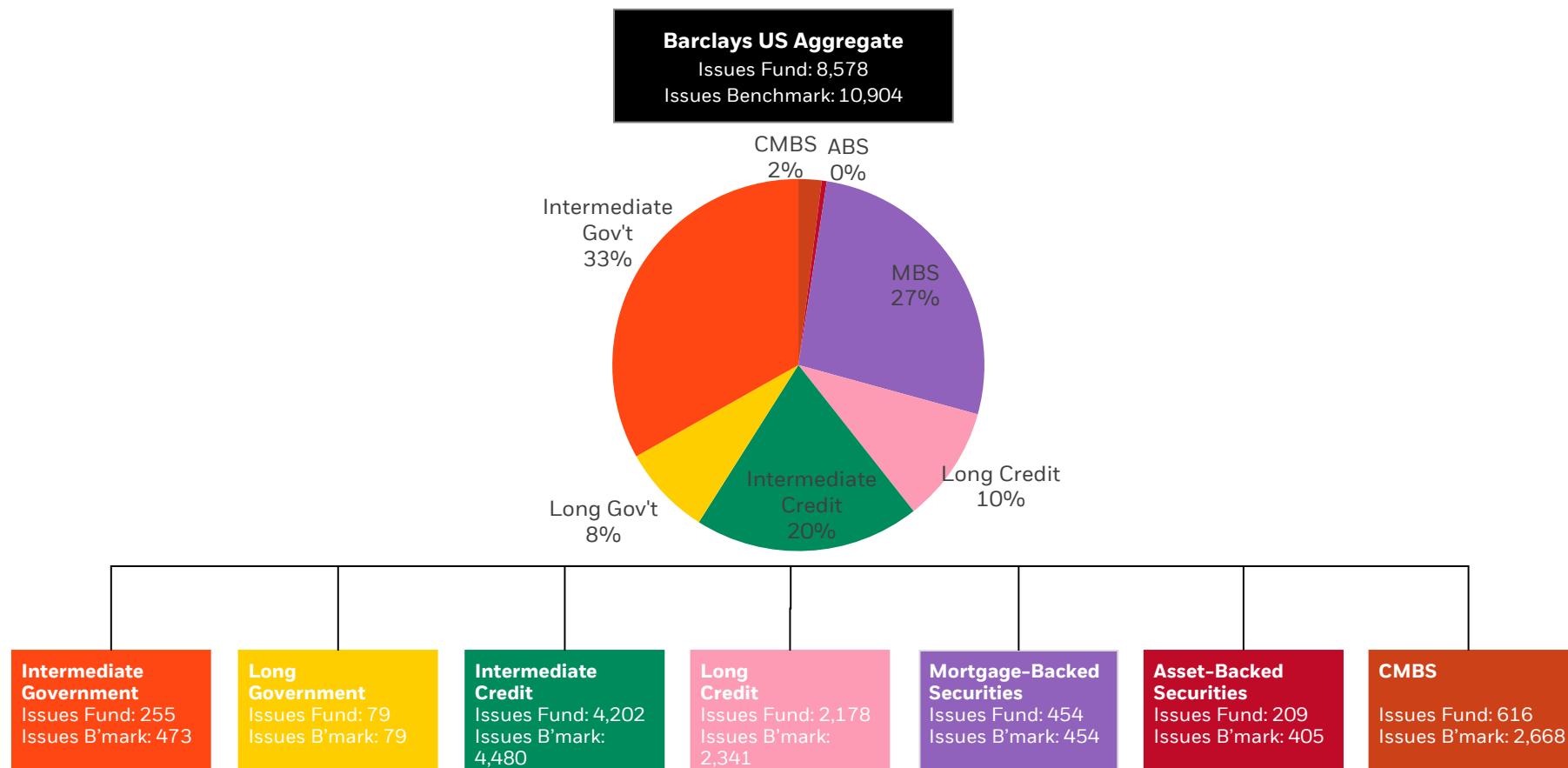


### Risk Management

Leverage RQA and BlackRock's proprietary Aladdin® system to help identify, monitor and minimize risk

# Benchmark knowledge & modular fund design

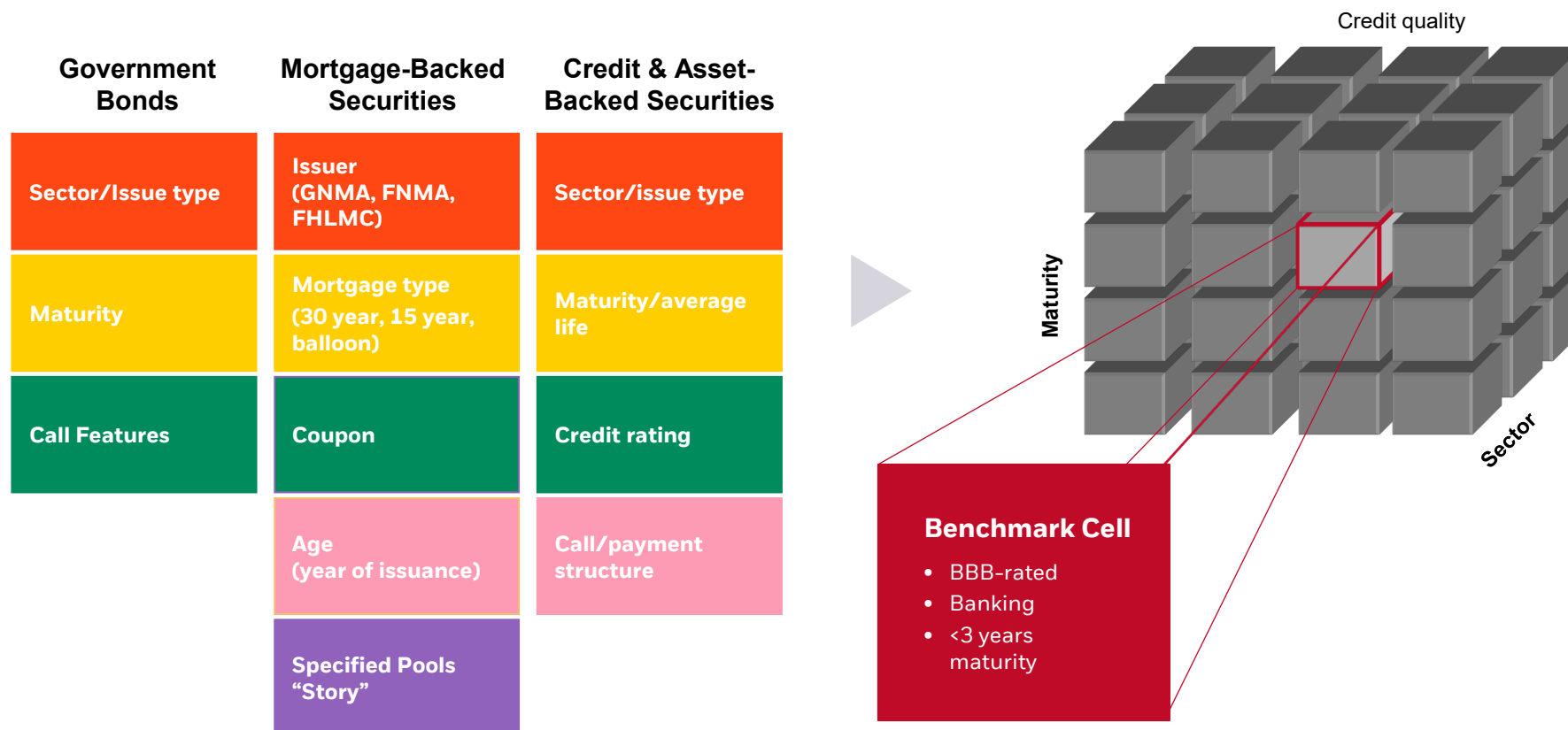
**BlackRock's modular fund design leverages scale and facilitates crossing opportunities**



Source: Barclays as September 30, 2019  
Funds are BlackRock CTFs

# Portfolio construction

**Stratified sampling: Dividing the various indexes into subsets (cells) based upon relative parameters**



**Portfolios are constructed by sampling bonds from each index cell**

For illustrative purpose only



# Portfolio construction

## Building a corporate bond index portfolio

### Construction process

#### Part 1

##### Stratify Universe by Risk Cells

- Sector
- Industry / sub-sector
- Maturity
- Credit
- Structure

#### Part 2

##### Optimize by Risk Factors

- Key Rate Duration
- Convexity
- Duration Times Spread
- T-Cost

### Example: US Intermediate Investment Grade Corporate Bond Index Fund (illustrative)

#### Index (*Barclays Intermediate Credit Index*)

Index (4,424 bonds)

BLK (4,208 bonds)

#### Sector (example: *Industrials*)

Index (2,236 bonds)

BLK (2,157 bonds)

#### Sub-Sector (example: *Energy*)

Index (324 bonds)

BLK (313 bonds)

#### Maturity (example: *7-10 years*)

Index (77 bonds)

BLK (73 bonds)

#### Credit Rating (example: *BBB*)

Index (64 bonds)

BLK (61 bonds)

#### Structure (example: *Make Whole Call*)

Index (2 bonds)

BLK (1 bonds)

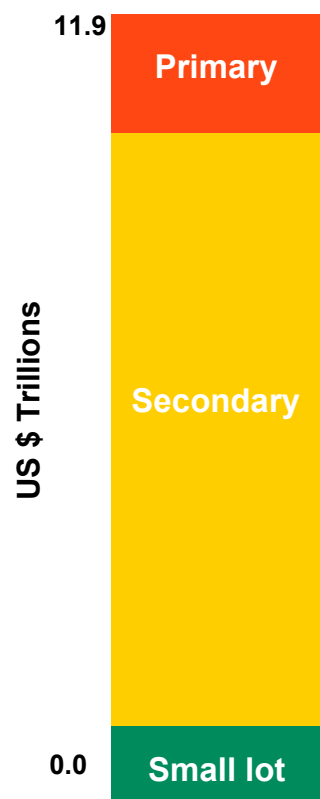
Source: BlackRock; data as of 30 June 2019. Example for illustrative purposes only. And does not depict actual Collective Trust Fund data. It is shown to demonstrate the investment process.

# BlackRock is the largest counterparty to Wall Street



## Size and scale are clear competitive advantages in the fixed income marketplace

- BlackRock traded \$11.9 trillion of fixed income in 2018
- Globally coordinated trading business leveraging scale across all investment activity for pricing power
- The uniqueness of our breadth and depth helps benefit our trading experience at all levels of execution



### Primary issuance

- BLK Global Capital Markets/Syndicate manages deal structure as well as optimizes allocations
- BLK drives many “issued to manage” deals which have the potential to result in reduced fees and increased allocations

### Secondary trading

- Pricing power of world's largest asset manager\*
- Managed trade distribution and optimized execution leverages price discovery, has the potential to reduce bid/offer spread

### Small lot trading

- Dedicated unit aggregates firm-wide small lot orders
- Potential execution benefits from round-lot price improvement

Source: BlackRock; Data as of 31 December 2018

\* Per Pensions & Investments rankings as of 12/31/2017. Report published as of 5/28/2018.

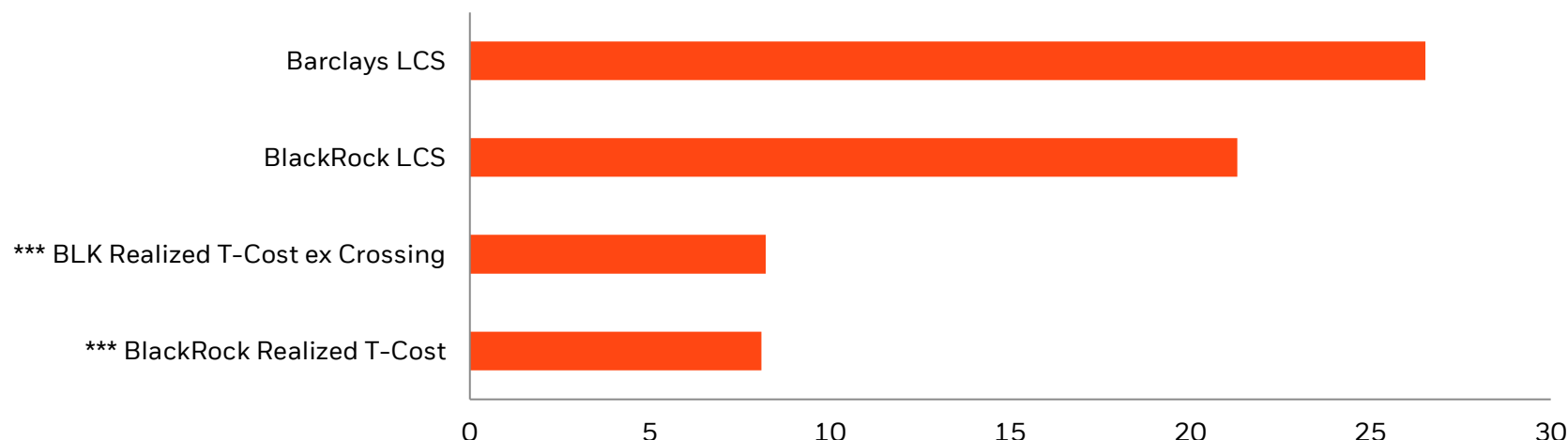


## Seeking to deliver execution for our clients

**In 2016, clients experienced an average transaction cost of 8 bps to subscribe to invest in the BlackRock US Aggregate Index Funds compared to the costs of buying every underlying security within the BBG Barclays Index.**

- The BBG Barclays Liquidity Cost Score\* (“LCS”) estimates the transaction cost required to purchase every underlying security at their benchmark weights.
- BlackRock has also created its own LCS based on a proprietary liquidity model\*\* as shown below

### 2016 Transaction cost comparison: Barclays US Aggregate Index (Illustrative)



Source: BlackRock, BBG, Barclays. Data as of 31 December 2016. For illustrative purposes only. Past results are not necessarily indicative of future results. \*As described in Barclays Liquidity Cost Scores Factsheet, which is available upon request, BBG Barclays LCS is computed using bid-ask spread indications provided by Barclays Capital traders. It represents the transaction cost estimated to execute an instantaneous round trip institutional trade.

\*\*BlackRock receives bid-ask indications from 10 broker dealers to determine average trading costs for fixed income assets within the Bloomberg Barclays US Aggregate.

\*\*\* BlackRock Realized T-Costs ex Crossing is the weighted average transaction costs of all subscriptions to the funds managed by BlackRock against the Bloomberg Barclays US Aggregate Index for the trailing 12-months ending 12/31/2016.

\*\*\* BlackRock Realized T-Costs is the weighted average transaction costs of all subscriptions to the funds managed by BlackRock against the Bloomberg Barclays US Aggregate Index for the trailing 12-months ending 12/31/2016 and included subscriptions netted by crossing activities.

# Performance analysis and review

## Aladdin® Enterprise System: “One Database, One System, One Process”\*

- 25,000+ Aladdin users across 45 countries
- 5,000 Stress tests performed each week
- 1000+ developers working to continually evolve the platform

**Green Package**

Risk Country Bloc Summ

### Risk Country Bloc Summary Exposure Report

Market Index	1Yr GOVT	2Yr GOVT	3Yr GOVT	5Yr GOVT	10Yr GOVT	30Yr GOVT	1M Libor	3M Libor	FGPC Yld	FNPC Yld	5Y SwSp	10Y SwSp	3X5 SwVol
USD	0.7770	1.1110	1.3700	1.8010	2.3200	2.9820	0.6056	0.9351	3.0299	3.0018	-1.5	-16.3	0.84
EUR	-0.7560	-0.7580	-0.7450	-0.4710	0.2030	0.8455	-0.3740	-0.3140	3.0299	3.0018			0.42
JPY	-0.2430	-0.1520	-0.1210	-0.0910	0.0120	0.5665	-0.0826	-0.0760	3.0299	3.0018			0.24

Fund/ Sector	Market Value (m)	Count	%NAV			Duration			Duration Contribution			Convexity			Spread Duration			Port
			Port	Bench	Active	Port	Bench	Active	Port	Bench	Active	Port	Bench	Active	Port	Bench	Active	
	2,766,001	2,739	100.00	100.00		5.56	5.54	0.03	5.56	5.54	0.03	0.11	0.09	0.02	3.80	3.84	-0.03	2.49

**PortfolioRiskTools**

aladdin by BLACKROCK

Report: Contribution to Analytical Risk Using: Portfolio

	Risk	Beta
Portfolio:	- 481 bps	1.01
Benchmark:	- 477 bps	1.00
Active:	- 4 bps	0.01

Economy Date: T-1B Exposure Date: T-1B Calendar: New York Banks Time Zone: Los Angeles

Risk Options Exposure Mapping: ^^WRLDB,DEFAULT, What-if: Personal, Shared, Weighting: DLY, Horizon: One Year, Confidence Level: 84% (1σ)

\* As of 30 December 2016  
Sample screenshots are for illustrative purpose only and do not depict actual data.

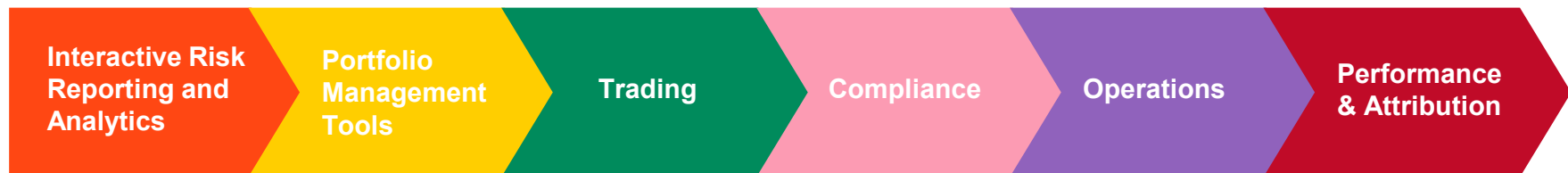
# Straight through processing with Aladdin

**Aladdin connects the information, people and technology needed to manage money in real time**

## Aladdin Platform

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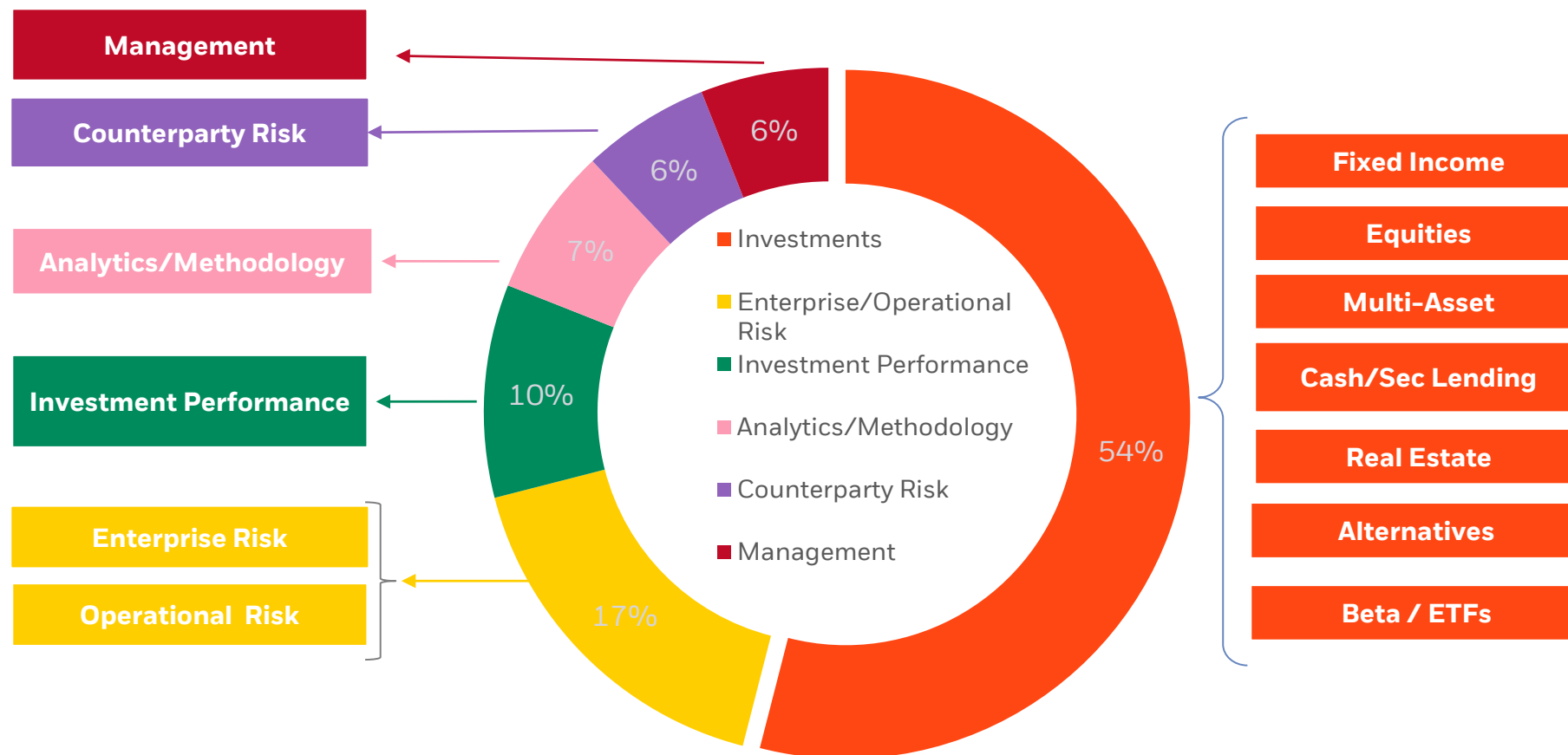
- Combines sophisticated risk, exposure and performance analyses with comprehensive portfolio management, trading, compliance and operations tools on a single platform
- Provides transparency and powers informed decision-making, effective risk management, efficient trading and operational scale





# Risk Management Resources and Functions

## RQA (Risk & Quantitative Analytics)



# **Fixed Income Index Portfolio Characteristics**

As of 30 September 2019

# U.S. Debt Index Fund

## Portfolio profile

	U.S. Debt Index Fund	Bloomberg Barclays U.S. Aggregate Bond Index
Market value (\$B)	15.25	23,150.29
# Issues	8,604	10,904
<b>Characteristics</b>		
Coupon (%)	3.34	3.20
Yield to maturity (YTM) (%)	2.29	2.30
Weighted avg life (yrs)	7.88	7.95
Effective duration (yrs)	5.60	5.61
Spread duration	3.51	3.49
Option adjusted spread (bps)	47	48
Convexity	0.24	0.23
MSCI ESG Score (adjusted)*	6.10	6.12
Environment Score	6.11	6.11
Social Score	6.55	6.59
Governance Score	6.08	6.12
<b>Quality breakdown (mkt val %)</b>		
AAA or above	72.26	72.38
AA	3.45	3.04
A	10.70	10.69
BBB	13.60	13.87
Other	0.00	0.01

	U.S. Debt Index Fund	Bloomberg Barclays U.S. Aggregate Bond Index
<b>Sector breakdown (mkt val %)</b>		
Treasury	38.44	39.74
Agencies	2.54	1.24
Financials	7.84	7.95
Industrials	15.15	15.34
Utilities	1.87	1.87
Non-US credit	3.76	3.88
Taxable munis	0.64	0.65
ABS	0.43	0.45
Mortgages	26.79	26.81
Hybrid ARM	0.04	0.00
CMBS	2.00	2.03
Foreign Government	0.00	0.03
Cash	0.49	0.00
<b>Weighted avg life breakdown (mkt val %)</b>		
0-1	2.60	0.26
1-2	9.20	11.11
2-3	12.50	11.25
3-5	26.46	26.90
5-7	20.82	23.35
7-10	10.74	9.26
10-20	3.87	4.12
20-30	13.34	13.25
30+	0.46	0.50

\* MSCI ESG Scores assess companies' ability to manage their exposure to the most relevant ESG risks and opportunities, relative to industry peers. A score of 6.68 or higher corresponds to an industry leader, 3.34-6.67 corresponds to an average score, and scores of 3.33 and lower corresponds to a laggard vs. industry peers. The credit quality of a particular security or group of securities may be based upon a rating from a nationally recognized statistical rating organization or, if unrated by a ratings organization, assigned an internal rating by BlackRock, neither of which ensures the stability or safety of an overall portfolio. Although BlackRock's information providers, including without limitation, MSCI ESG Research Inc. and its affiliates (the "ESG Parties"), obtain information from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness of any data herein. None of the ESG Parties makes any express or implied warranties of any kind, and the ESG Parties hereby expressly disclaim all warranties of merchantability and fitness for a particular purpose, with respect to any data herein. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein. Further, without limiting any of the foregoing, in no event shall any of the ESG Parties have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. ©2019 MSCI ESG Research Inc. Reproduced by permission.

Fund inception date 30 June 1986

Data is for analytical purposes only. Index data points may differ to those published by the Index due to different calculation criteria. The credit quality of a particular security or group of securities may be based upon a rating from a nationally recognized statistical rating organization or, if unrated by a ratings organization, assigned an internal rating by BlackRock, neither of which ensures the stability or safety of an overall portfolio. Breakdowns may not sum to total due to rounding, exclusion of cash, STIF, and statistically immaterial factors. Sources: BlackRock, Bloomberg Finance L.P.



# Appendix

# Presenter Biographies

## Presenter Biographies



**Ross Ramatici, CFA**, Vice President, is a member of the US and Canada Institutional team within BlackRock's Institutional Client Business. He is responsible for developing and maintaining relationships with institutional investors, including public, private and multiemployer pension plans.

Mr. Ramatici's service with the firm began in 2013. Prior to joining BlackRock, he was a Senior Client Service Representative at Mellon Capital Management where he was responsible for developing and maintaining relationship with institutional investors.

Mr. Ramatici earned a BS degree in Finance from Santa Clara University and a MS degree in Financial Analysis from the University of San Francisco. He holds the Chartered Financial Analyst designation.



**Drew Pinson, CFA**, Vice President and Index Equity Strategist within the ETF & Index Investments group.

Before his current role, he was a Senior Portfolio Manager on the Index Asset Allocation team within the ETF & Index Investments group. Prior to joining the ETF & Index Investments group, he held roles as an Investment Strategist and Portfolio Manager within the Transition Management team, which is part of BlackRock's Trading and Liquidity Strategies group.

Prior to joining BlackRock, Mr. Pinson worked at two consulting firms, specializing in security valuation for private market investments and public equity research.

Mr. Pinson earned a BS in Business Administration from the University of Oregon. He holds the Chartered Financial Analyst designation and is a member of the CFA Institute.

# Disclosures

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### Index

It is not possible to directly invest in an unmanaged index.

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Investing in the bond market is subject to certain risks including market, interest-rate, issuer, credit, and inflation risk; investments may be worth more or less than the original cost when redeemed. The credit quality of a particular security or group of securities does not ensure the stability or safety of the overall portfolio. Mortgage and asset-backed securities may be sensitive to changes in interest rates, subject to early repayment risk, and while generally backed by a government, government-agency or private guarantor there is no assurance that the guarantor will meet its obligations. Investors will, at times, incur a tax liability.

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# PRELIMINARY MONTHLY PERFORMANCE REPORT

## Ventura County Employees' Retirement Association



**VCERA**  
VENTURA COUNTY EMPLOYEES'  
RETIREMENT ASSOCIATION

**October 31, 2019**

**Anthony Ferrara, CAIA, Consultant**  
**Allan Martin, Partner**  
**Michael Miranda, CFA, Sr. Analyst**



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

## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund</b>	<b>5,971,099,978</b>	<b>100.0</b>	<b>100.0</b>	<b>1.5</b>	<b>2.3</b>	<b>14.6</b>	<b>11.3</b>	<b>9.5</b>	<b>6.7</b>	<b>9.1</b>	<b>8.0</b>	<b>Apr-94</b>
Policy Index				<u>1.8</u>	<u>2.7</u>	<u>15.7</u>	<u>11.9</u>	<u>10.0</u>	<u>7.4</u>	<u>9.1</u>	<u>8.1</u>	<i>Apr-94</i>
Over/Under				-0.3	-0.4	-1.1	-0.6	-0.5	-0.7	0.0	-0.1	
60% MSCI ACWI (Net) / 40% FTSE WGBI				1.9	2.2	14.4	11.9	7.9	5.2	6.1	6.4	<i>Apr-94</i>
60% S&P 500 / 40% BBgBarc Aggregate				1.4	3.4	17.5	13.6	10.3	7.9	9.8	8.4	<i>Apr-94</i>
<b>Total Fund ex Parametric</b>	<b>5,934,296,727</b>	<b>99.4</b>	<b>--</b>	<b>1.4</b>	<b>2.2</b>	<b>14.3</b>	<b>10.8</b>	<b>9.4</b>	<b>6.6</b>	<b>9.0</b>	<b>8.0</b>	<b>Apr-94</b>
<b>Total Fund ex Private Equity</b>	<b>5,523,622,302</b>	<b>92.5</b>	<b>--</b>	<b>1.7</b>	<b>2.2</b>	<b>14.9</b>	<b>11.2</b>	<b>9.2</b>	<b>6.4</b>	<b>--</b>	<b>8.5</b>	<b>Jan-12</b>
Policy Index				<u>1.8</u>	<u>2.7</u>	<u>15.7</u>	<u>11.9</u>	<u>10.0</u>	<u>7.4</u>	<u>9.1</u>	<u>9.3</u>	<i>Jan-12</i>
Over/Under				-0.1	-0.5	-0.8	-0.7	-0.8	-1.0		-0.8	
<b>Total US Equity</b>	<b>1,685,186,166</b>	<b>28.2</b>	<b>26.0</b>	<b>2.1</b>	<b>3.5</b>	<b>23.2</b>	<b>14.1</b>	<b>14.8</b>	<b>10.6</b>	<b>14.0</b>	<b>9.4</b>	<b>Dec-93</b>
Russell 3000				<u>2.2</u>	<u>3.3</u>	<u>22.7</u>	<u>13.5</u>	<u>14.5</u>	<u>10.3</u>	<u>13.6</u>	<u>9.6</u>	<i>Dec-93</i>
Over/Under				-0.1	0.2	0.5	0.6	0.3	0.3	0.4	-0.2	
Western U.S. Index Plus	234,431,395	3.9		2.2	4.0	24.7	15.2	15.4	11.3	15.4	6.4	<i>May-07</i>
S&P 500				<u>2.2</u>	<u>3.9</u>	<u>23.2</u>	<u>14.3</u>	<u>14.9</u>	<u>10.8</u>	<u>13.7</u>	<u>7.9</u>	<i>May-07</i>
Over/Under				0.0	0.1	1.5	0.9	0.5	0.5	1.7	-1.5	
Blackrock Russell 1000 Index	1,384,461,453	23.2		2.1	3.6	23.1	14.2	--	--	--	12.2	<i>May-17</i>
Russell 1000				<u>2.1</u>	<u>3.6</u>	<u>23.1</u>	<u>14.2</u>	<u>14.7</u>	<u>10.5</u>	<u>13.7</u>	<u>12.1</u>	<i>May-17</i>
Over/Under				0.0	0.0	0.0	0.0				0.1	
Blackrock Russell 2500 Index	66,293,318	1.1		1.9	0.7	20.0	8.9	--	--	--	7.8	<i>May-17</i>
Russell 2500				<u>1.9</u>	<u>0.6</u>	<u>20.0</u>	<u>8.8</u>	<u>11.7</u>	<u>8.0</u>	<u>13.1</u>	<u>7.8</u>	<i>May-17</i>
Over/Under				0.0	0.1	0.0	0.1				0.0	

Policy Index: Currently, 26% Russell 3000, 19% BBgBarc US Aggregate, 17% MSCI ACWI ex U.S., 10% MSCI ACWI, 13% Russell 3000 Index + 3%, 7% CPI+2%, and 8% NCREIF ODCE Real Estate Index.

Prior to January 2016 the Total U.S. Equity Benchmark was a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Non-US Equity</b>	<b>949,052,993</b>	<b>15.9</b>	<b>17.0</b>	<b>3.7</b>	<b>1.3</b>	<b>15.0</b>	<b>11.0</b>	<b>8.4</b>	<b>4.7</b>	<b>5.7</b>	<b>6.3</b>	<b>Mar-94</b>
MSCI ACWI ex USA				3.5	1.6	15.5	11.3	8.1	3.8	4.9	5.1	Mar-94
Over/Under				0.2	-0.3	-0.5	-0.3	0.3	0.9	0.8	1.2	
MSCI EAFE				3.6	2.5	16.9	11.0	8.5	4.3	5.4	4.8	Mar-94
MSCI ACWI ex USA NR LCL				1.8	3.6	17.2	12.1	8.7	6.4	7.2	--	Mar-94
MSCI EAFE NR LCL				1.7	3.5	17.6	10.5	8.5	6.4	7.5	4.9	Mar-94
BlackRock ACWI ex-U.S. Index	484,074,348	8.1		3.6	1.8	15.6	11.2	8.2	4.2	5.3	2.7	Mar-07
MSCI ACWI ex USA IMI				3.6	1.8	15.4	10.9	7.9	4.0	5.2	2.5	Mar-07
Over/Under				0.0	0.0	0.2	0.3	0.3	0.2	0.1	0.2	
MSCI ACWI ex USA NR LCL				1.8	3.6	17.2	12.1	8.7	6.4	7.2	3.5	Mar-07
Sprucegrove	227,680,140	3.8		4.0	-1.7	10.9	6.5	7.8	4.2	6.2	7.0	Mar-02
MSCI ACWI ex USA				3.5	1.6	15.5	11.3	8.1	3.8	4.9	6.3	Mar-02
Over/Under				0.5	-3.3	-4.6	-4.8	-0.3	0.4	1.3	0.7	
MSCI EAFE				3.6	2.5	16.9	11.0	8.5	4.3	5.4	5.8	Mar-02
MSCI ACWI ex USA NR LCL				1.8	3.6	17.2	12.1	8.7	6.4	7.2	5.4	Mar-02
MSCI EAFE NR LCL				1.7	3.5	17.6	10.5	8.5	6.4	7.5	4.6	Mar-02
Hexavest	94,793,690	1.6		3.3	2.3	12.4	8.3	6.2	3.1	--	4.0	Dec-10
MSCI EAFE				3.6	2.5	16.9	11.0	8.5	4.3	5.4	4.8	Dec-10
Over/Under				-0.3	-0.2	-4.5	-2.7	-2.3	-1.2		-0.8	
MSCI EAFE NR LCL				1.7	3.5	17.6	10.5	8.5	6.4	7.5	7.2	Dec-10
Walter Scott	142,504,814	2.4		3.8	3.7	21.8	20.3	11.9	8.1	--	6.7	Dec-10
MSCI ACWI ex USA				3.5	1.6	15.5	11.3	8.1	3.8	4.9	3.8	Dec-10
Over/Under				0.3	2.1	6.3	9.0	3.8	4.3		2.9	
MSCI ACWI ex USA NR LCL				1.8	3.6	17.2	12.1	8.7	6.4	7.2	6.6	Dec-10
MSCI EAFE				3.6	2.5	16.9	11.0	8.5	4.3	5.4	4.8	Dec-10
<b>Total Global Equity</b>	<b>653,503,362</b>	<b>10.9</b>	<b>10.0</b>	<b>2.8</b>	<b>2.8</b>	<b>19.8</b>	<b>13.1</b>	<b>11.8</b>	<b>7.1</b>	<b>8.7</b>	<b>6.2</b>	<b>May-05</b>
MSCI ACWI				2.7	2.7	19.4	12.6	11.3	7.1	8.8	6.9	May-05
Over/Under				0.1	0.1	0.4	0.5	0.5	0.0	-0.1	-0.7	
BlackRock MSCI ACWI Equity Index	653,503,362	10.9		2.8	2.8	19.8	13.1	11.8	7.5	--	10.1	Aug-12
MSCI ACWI				2.7	2.7	19.4	12.6	11.3	7.1	8.8	9.7	Aug-12
Over/Under				0.1	0.1	0.4	0.5	0.5	0.4		0.4	



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Private Equity</b>	<b>447,477,676</b>	<b>7.5</b>	<b>13.0</b>	<b>-0.2</b>	<b>4.4</b>	<b>9.9</b>	<b>13.6</b>	<b>16.4</b>	<b>13.8</b>	<b>--</b>	<b>14.6</b>	<b>Jan-12</b>
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	17.4	Jan-12
Over/Under				-2.6	0.0	-15.8	-3.3	-1.5	0.2		-2.8	
Cambridge Associates Global All PE (Qtr Lag)				0.0	3.5	7.0	10.5	14.5	10.9	13.7	12.7	Jan-12
Adams Street Global Fund Series	186,168,951	3.1		0.0	4.9	10.2	15.0	15.5	12.6	--	13.5	Jan-12
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	17.4	Jan-12
Over/Under				-2.4	0.5	-15.5	-1.9	-2.4	-1.0		-3.9	
Harbourvest	95,618,180	1.6		-0.2	5.6	12.3	15.6	20.6	18.4	--	19.2	Aug-13
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	15.0	Aug-13
Over/Under				-2.6	1.2	-13.4	-1.3	2.7	4.8		4.2	
Pantheon Global Secondary Funds	38,832,910	0.7		0.0	3.7	-0.9	2.1	15.1	11.6	--	11.8	Jan-12
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	17.4	Jan-12
Over/Under				-2.4	-0.7	-26.6	-14.8	-2.8	-2.0		-5.6	
Drive Capital Fund II	15,348,286	0.3		0.0	12.0	49.7	47.5	-11.9	--	--	-11.3	Sep-16
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	16.3	Sep-16
Over/Under				-2.4	7.6	24.0	30.6	-29.8			-27.6	
Abbott Secondary Opportunities	16,439,950	0.3		0.0	2.6	10.9	15.3	--	--	--	20.0	Jan-18
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	11.8	Jan-18
Over/Under				-2.4	-1.8	-14.8	-1.6				8.2	
Clearlake Capital Partners V	7,659,117	0.1		0.0	8.4	32.0	55.2	--	--	--	38.0	Mar-18
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	11.8	Mar-18
Over/Under				-2.4	4.0	6.3	38.3				26.2	
Battery Ventures XII	9,527,891	0.2		0.0	6.6	4.6	2.3	--	--	--	-2.4	Apr-18
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	13.7	Apr-18
Over/Under				-2.4	2.2	-21.1	-14.6				-16.1	
Insight Venture Partners X	21,190,040	0.4		0.0	5.0	13.0	18.1	--	--	--	4.4	May-18
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	14.1	May-18
Over/Under				-2.4	0.6	-12.7	1.2				-9.7	

Please Note: Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current month cash flows.



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GTCR Fund XII	6,702,509	0.1		-13.9	-13.9	-18.8	-23.4	--	--	--	-41.4	Jun-18
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	12.5	Jun-18
Over/Under				-16.3	-18.3	-44.5	-40.3				-53.9	
Buenaventure One, LLC	28,935,253	0.5		0.0	-0.3	6.4	5.8	--	--	--	4.2	Jul-18
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	12.6	Jul-18
Over/Under				-2.4	-4.7	-19.3	-11.1				-8.4	
ECI 11	3,450,594	0.1		10.1	19.7	30.7	--	--	--	--	27.4	Dec-18
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	14.3	Dec-18
Over/Under				7.7	15.3	5.0					13.1	
The Resolute Fund IV L.P.	5,073,813	0.1		0.0	6.2	50.8	--	--	--	--	50.8	Jan-19
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	25.7	Jan-19
Over/Under				-2.4	1.8	25.1					25.1	
GGV Capital VII L.P.	1,862,516	0.0		0.0	-6.3	--	--	--	--	--	-6.3	Feb-19
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	15.5	Feb-19
Over/Under				-2.4	-10.7						-21.8	
GGV Discovery II, L.P.	410,826	0.0		0.0	-5.9	--	--	--	--	--	-5.9	Feb-19
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	15.5	Feb-19
Over/Under				-2.4	-10.3						-21.4	
Drive Capital Overdrive Fund I	2,795,767	0.0		0.0	0.0	--	--	--	--	--	0.0	May-19
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	5.0	May-19
Over/Under				-2.4	-4.4						-5.0	
Riverside Micro Cap Fund V, LP	1,763,440	0.0		0.0	21.3	--	--	--	--	--	-29.2	May-19
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	5.0	May-19
Over/Under				-2.4	16.9						-34.2	
GGV Capital VII Plus, LP	546,100	0.0		0.0	0.0	--	--	--	--	--	0.0	Jun-19
Russell 3000 + 3%				2.4	4.4	25.7	16.9	17.9	13.6	17.0	11.9	Jun-19
Over/Under				-2.4	-4.4						-11.9	

Please Note: Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current month cash flows.  
Private Equity composite includes an additional \$268,037 from custodian pass through value.

## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Astorg VII L.P.	385,747	0.0		13.4	-22.6	--	--	--	--	--	-22.6	Jul-19
Russell 3000 + 3%				<u>2.4</u>	<u>4.4</u>	<u>25.7</u>	<u>16.9</u>	<u>17.9</u>	<u>13.6</u>	<u>17.0</u>	<u>4.4</u>	Jul-19
Over/Under				11.0	-27.0						-27.0	
M/C Partners Fund VIII LP. Limited Partnership	781,921	0.0		-9.9	-13.3	--	--	--	--	--	-13.3	Jul-19
Russell 3000 + 3%				<u>2.4</u>	<u>4.4</u>	<u>25.7</u>	<u>16.9</u>	<u>17.9</u>	<u>13.6</u>	<u>17.0</u>	<u>4.4</u>	Jul-19
Over/Under				-12.3	-17.7						-17.7	
Genstar Capital Partners IX	1,047,446	0.0		0.0	--	--	--	--	--	--	--	Aug-19
Russell 3000 + 3%				<u>2.4</u>	<u>4.4</u>	<u>25.7</u>	<u>16.9</u>	<u>17.9</u>	<u>13.6</u>	<u>17.0</u>	<u>2.6</u>	Aug-19
Over/Under				-2.4								
Genstar IX Opportunities Fund I	367,807	0.0		0.0	--	--	--	--	--	--	0.0	Aug-19
Russell 3000 + 3%				<u>2.4</u>	<u>4.4</u>	<u>25.7</u>	<u>16.9</u>	<u>17.9</u>	<u>13.6</u>	<u>17.0</u>	<u>2.6</u>	Aug-19
Over/Under				-2.4							-2.6	
ABRY Partners IX, LP	1,254,257	0.0		0.0	--	--	--	--	--	--	-20.6	Sep-19
Russell 3000 + 3%				<u>2.4</u>	<u>4.4</u>	<u>25.7</u>	<u>16.9</u>	<u>17.9</u>	<u>13.6</u>	<u>17.0</u>	<u>4.4</u>	Sep-19
Over/Under				-2.4							-25.0	
Advent International GPE IX LP	1,022,081	0.0		-31.3	--	--	--	--	--	--	--	Nov-19
Russell 3000 + 3%				<u>2.4</u>	<u>4.4</u>	<u>25.7</u>	<u>16.9</u>	<u>17.9</u>	<u>13.6</u>	<u>17.0</u>	--	Nov-19
Over/Under				-33.7								



# VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

## PRIVATE EQUITY LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment <sup>1</sup>	Call Ratio	Add'l Fees <sup>2</sup>	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Since Inception	
													Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
Abbott Secondary Opportunities, LP.	2017	12/21/2017	\$25,000,000	\$15,937,843	\$9,424,874	64%	—	\$2,625,000	\$16,439,952	\$19,064,952	\$3,127,109	17.7%	0.16x	1.2x
ABRY Partners IX	2019	12/6/2018	\$10,600,000	\$1,579,565	\$9,020,435	0%	—	—	\$1,254,256	\$1,254,256	(\$325,309)	-63.3%	—	0.79x
Adams Street 2010 U.S. Fund	2010	5/21/2010	\$42,500,000	\$37,442,500	\$5,057,500	88%	\$15,213	\$31,251,031	\$36,719,458	\$67,970,489	\$30,512,776	14.4%	0.83x	1.82x
Adams Street 2010 Non-U.S. Dev. Mkts Fund	2010	5/21/2010	\$25,500,000	\$22,325,249	\$3,174,751	88%	\$1,589	\$19,382,964	\$16,409,737	\$35,792,701	\$13,465,863	12.1%	0.87x	1.6x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	\$8,500,000	\$7,633,000	\$867,000	90%	—	\$2,514,266	\$10,156,556	\$12,670,822	\$5,037,822	10.9%	0.33x	1.66x
Adams Street 2010 Direct Fund	2010	5/21/2010	\$8,500,000	\$8,066,500	\$433,500	95%	\$6,697	\$9,611,317	\$4,599,676	\$14,210,993	\$6,137,796	12.4%	1.19x	1.76x
Adams Street 2013 Global Fund	2013	6/27/2013	\$75,000,000	\$61,350,000	\$13,650,000	82%	\$10,728	\$13,610,624	\$76,965,453	\$90,576,077	\$29,215,349	11.7%	0.22x	1.48x
Adams Street 2016 Global Fund	2016	12/22/2016	\$60,000,000	\$31,620,000	\$28,380,000	53%	—	\$3,621,043	\$34,470,696	\$38,091,739	\$6,471,739	14.8%	0.11x	1.2x
Adams Street Co-Investment Fund IV A	2018	9/24/2018	\$30,000,000	\$6,967,808	\$23,100,000	23%	\$67,808	\$0	\$7,168,225	\$7,168,225	\$132,609	3.4%	0x	1.03x
Advent International GPE IX	2019	5/23/2019	\$10,000,000	\$1,150,000	\$8,850,000	—	—	—	\$1,022,081	\$1,022,081	(\$127,919)	-98.7%	—	0.89x
Astorg VII	2019	12/17/2018	\$8,572,425	\$437,999	\$8,134,426	5%	—	\$0	\$345,760	\$345,760	(\$92,239)	-48.0%	0x	0.79x
Battery Ventures XII	2018	2/1/2018	\$9,050,000	\$5,658,965	\$3,391,035	63%	—	\$0	\$5,734,624	\$5,734,624	\$75,659	1.8%	0x	1.01x
Battery Ventures XII Side Fund	2018	2/1/2018	\$5,050,000	\$3,540,555	\$1,509,445	70%	—	\$0	\$3,793,267	\$3,793,267	\$252,712	9.8%	0x	1.07x
Buenaventure One, LLC	2018	1/5/2018	\$91,426,500	\$28,255,590	\$63,170,910	31%	—	\$403,156	\$28,935,263	\$29,338,419	\$1,082,829	4.8%	0.01x	1.04x
CapVest Equity Partners IV	2019	7/11/2018	\$12,260,021	\$12,260,021	\$0	0%	—	—	(\$51,960)	(\$51,960)	—	—	—	—
Clearlake Capital Partners V	2017	12/22/2017	\$9,950,000	\$6,420,101	\$4,137,237	65%	\$46,158	\$1,241,050	\$7,611,075	\$8,852,125	\$2,385,866	41.5%	0.19x	1.38x
Drive Capital Fund II	2016	9/1/2016	\$15,000,000	\$11,682,584	\$3,320,626	78%	\$3,210	\$0	\$15,348,290	\$15,348,290	\$3,662,496	23.2%	0x	1.31x
Drive Capital Fund III	2019	4/5/2019	\$7,500,000	—	\$7,500,000	—	—	—	—	—	—	—	—	—
Drive Capital Overdrive Fund I	2019	4/5/2019	\$7,500,000	\$2,795,767	\$4,704,233	37%	—	\$0	\$2,741,877	\$2,741,877	(\$53,890)	-9.0%	0x	0.98x
ECI 11	2018	7/5/2018	\$9,614,909	\$2,853,854	\$6,761,055	30%	—	\$0	\$2,666,612	\$2,666,612	(\$187,242)	-11.8%	0x	0.93x
Flexpoint Fund IV-A	2019	7/2/2019	\$10,650,000	—	\$10,650,000	—	—	—	—	—	—	—	—	—
Flexpoint Overage Fund IV-A	2019	7/2/2019	\$3,550,000	—	\$3,550,000	—	—	—	—	—	—	—	—	—
Genstar Capital Partners IX	2019	2/21/2019	\$7,500,000	\$1,119,556	\$6,380,444	15%	—	—	\$1,047,445	\$1,047,445	(\$72,111)	-49.2%	—	0.94x
Genstar Capital Partners IX Opportunities Program	2019	2/21/2019	\$2,500,000	\$367,807	\$2,132,193	0%	—	\$0	\$367,807	\$367,807	\$0	0.0%	0x	1x
GGV Capital VII	2019	8/15/2018	\$10,160,000	\$1,981,200	\$8,178,800	20%	—	\$0	\$1,862,516	\$1,862,516	(\$118,684)	-11.5%	0x	0.94x
GGV Capital VII Plus	2019	8/15/2018	\$2,540,000	\$546,100	\$1,993,900	22%	—	\$0	\$546,100	\$546,100	\$0	0.0%	0x	1x
GGV Discovery II	2019	8/15/2018	\$2,100,000	\$430,500	\$1,669,500	21%	—	\$0	\$410,826	\$410,826	(\$19,674)	-10.9%	0x	0.95x
Great Hill Equity Partners VII	2019	6/28/2019	\$8,900,000	—	\$8,900,000	—	—	—	—	—	—	—	—	—
Green Equity Investors VIII	2019	10/18/2019	\$15,000,000	—	\$15,000,000	—	—	—	—	—	—	—	—	—
GTCR Fund XII	2017	9/29/2017	\$30,000,000	\$9,303,000	\$20,792,792	31%	—	\$540,067	\$7,195,894	\$7,735,961	(\$1,567,039)	-21.9%	0.06x	0.83x
HarbourVest - Dover Street VIII	2013	5/30/2013	\$67,500,000	\$61,509,954	\$6,070,000	91%	\$84,954	\$71,696,542	\$25,656,949	\$97,353,491	\$35,758,583	20.8%	1.17x	1.58x
HarbourVest - Dover Street IX	2016	12/16/2016	\$60,000,000	\$40,800,000	\$19,200,000	68%	—	\$11,992,086	\$41,859,773	\$53,851,859	\$13,051,859	27.8%	0.29x	1.32x
HarbourVest - Dover Street X	2019	5/31/2019	\$40,000,000	—	\$40,000,000	—	—	—	\$186,467	\$186,467	—	—	—	—
HarbourVest - PRINS CO INVEST IV L.P.	2017	6/2/2017	\$30,000,000	\$24,464,388	\$5,732,352	82%	—	\$4,951,347	\$26,882,551	\$31,833,898	\$7,369,510	15.5%	0.2x	1.3x
HarbourVest - PRINS CO INVEST V L.P.	2019	7/31/2018	\$35,000,000	—	\$35,000,000	—	—	\$0	\$2,950,891	\$2,950,891	—	—	—	—
Hellman & Friedman Capital Partners IX	2019	9/28/2018	\$19,800,000	—	\$19,800,000	0%	—	—	(\$99,871)	(\$99,871)	—	—	—	—
Insight Venture Partners X	2017	10/13/2017	\$25,000,000	\$19,500,000	\$5,500,000	78%	—	\$8,561	\$21,190,049	\$21,198,610	\$1,698,610	10.4%	0x	1.09x
M/C Partners VIII	2019	4/2/2018	\$10,000,000	\$955,984	\$9,044,016	0%	—	\$0	\$781,921	\$781,921	(\$174,063)	-64.6%	0x	0.82x
Oak HC/FT Partners III	2019	7/31/2019	\$15,000,000	—	\$15,000,000	—	—	—	—	—	—	—	—	—
Pantheon Global Secondary Fund IV	2010	8/20/2010	\$15,000,000	\$9,960,000	\$5,040,000	66%	—	\$12,843,543	\$2,845,529	\$15,689,072	\$5,729,072	13.4%	1.29x	1.58x
Pantheon Global Secondary Fund V	2015	2/26/2015	\$50,000,000	\$34,166,509	\$15,833,491	68%	(\$162,514)	\$10,437,534	\$35,999,989	\$46,437,523	\$12,433,528	14.4%	0.31x	1.36x
The Resolute Fund IV	2018	5/2/2018	\$20,000,000	\$5,775,291	\$15,341,927	29%	—	\$1,974,204	\$5,073,812	\$7,048,016	\$1,272,725	55.5%	0.34x	1.22x
Riverside Micro-Cap Fund V	2018	8/21/2018	\$10,000,000	\$2,020,662	\$7,979,338	20%	—	\$0	\$1,763,440	\$1,763,440	(\$257,222)	-36.8%	0x	0.87x
TA XIII	2019	5/2/2019	\$10,000,000	—	\$10,000,000	—	—	—	—	—	—	—	—	—
<b>Total VCERA Private Equity Program</b>	<b>—</b>	<b>5/21/2010</b>	<b>\$971,723,855</b>	<b>\$468,618,831</b>	<b>\$505,640,801</b>	<b>48%</b>	<b>\$73,843</b>	<b>\$198,704,335</b>	<b>\$448,852,986</b>	<b>\$647,557,321</b>	<b>\$175,879,120</b>	<b>14.7%</b>	<b>0.42x</b>	<b>1.38x</b>

1. Includes recycled/recallable distributions received to date.

2. Add'l Fees represents notional interest paid/(received).

2. Add'l Fees for Pantheon Global Secondary Fund V includes notional interest paid/(received) and management fee rebates paid to VCERA.

Note: Private equity performance data is reported net of fees.

Performance shown is based on 10/31/2019 statement of investments produced by Abbott Capital.



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total US Fixed Income</b>	<b>1,044,028,910</b>	<b>17.5</b>	<b>14.0</b>	<b>0.4</b>	<b>2.2</b>	<b>8.2</b>	<b>10.5</b>	<b>3.6</b>	<b>3.4</b>	<b>4.8</b>	<b>5.8</b>	<b>Feb-94</b>
BBgBarc US Aggregate TR				0.3	2.6	8.8	11.5	3.3	3.2	3.7	5.3	Feb-94
Over/Under				0.1	-0.4	-0.6	-1.0	0.3	0.2	1.1	0.5	
BlackRock U.S. Debt Fund	245,224,393	4.1		0.3	2.6	8.9	11.5	3.3	3.3	3.8	5.2	Nov-95
BBgBarc US Aggregate TR				0.3	2.6	8.8	11.5	3.3	3.2	3.7	5.1	Nov-95
Over/Under				0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	
Western	328,776,225	5.5		0.4	3.0	10.5	13.6	4.3	4.2	5.5	6.1	Dec-96
BBgBarc US Aggregate TR				0.3	2.6	8.8	11.5	3.3	3.2	3.7	5.2	Dec-96
Over/Under				0.1	0.4	1.7	2.1	1.0	1.0	1.8	0.9	
Reams	331,740,268	5.6		0.5	1.8	6.2	8.5	3.0	2.8	4.2	5.2	Sep-01
Reams Custom Index				0.2	0.7	2.0	2.5	2.0	1.4	2.5	3.8	Sep-01
Over/Under				0.3	1.1	4.2	6.0	1.0	1.4	1.7	1.4	
BBgBarc US Aggregate TR				0.3	2.6	8.8	11.5	3.3	3.2	3.7	4.5	Sep-01
3-Month LIBOR + 3%				0.4	1.7	4.6	5.6	5.0	4.4	3.9	4.8	Sep-01
Loomis Strategic Alpha	48,286,027	0.8		-0.1	-0.2	3.4	2.3	2.7	2.5	--	2.6	Jul-13
BBgBarc US Aggregate TR				0.3	2.6	8.8	11.5	3.3	3.2	3.7	3.5	Jul-13
Over/Under				-0.4	-2.8	-5.4	-9.2	-0.6	-0.7		-0.9	
3-Month LIBOR + 3%				0.4	1.7	4.6	5.6	5.0	4.4	3.9	4.2	Jul-13
Loomis Sayles Multi Strategy	90,001,998	1.5		0.4	1.4	8.3	8.9	4.7	4.1	6.5	6.3	Jul-05
Loomis Custom Index				0.3	2.1	9.5	10.3	4.0	3.7	4.8	5.1	Jul-05
Over/Under				0.1	-0.7	-1.2	-1.4	0.7	0.4	1.7	1.2	
BBgBarc US Govt/Credit TR				0.3	2.9	10.0	12.6	3.6	3.5	3.9	4.3	Jul-05

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Barclays Aggregate.

Loomis Custom Index: 65% BBgBarc US Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index.



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Private Debt</b>	<b>52,132,285</b>	<b>0.9</b>	<b>3.0</b>	<b>0.4</b>	<b>2.1</b>	<b>6.5</b>	<b>5.9</b>	--	--	--	<b>6.1</b>	<b>Jan-18</b>
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				<u>0.0</u>	<u>1.7</u>	<u>10.6</u>	<u>7.8</u>	--	--	--	<u>6.2</u>	Jan-18
Over/Under				0.4	0.4	-4.1	-1.9				-0.1	
CVI Credit Value Fund	19,135,707	0.3		1.0	2.4	6.1	5.4	--	--	--	5.8	Jan-18
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				<u>0.0</u>	<u>1.7</u>	<u>10.6</u>	<u>7.8</u>	--	--	--	<u>6.2</u>	Jan-18
Over/Under				1.0	0.7	-4.5	-2.4				-0.4	
Monroe Capital Private Credit Fund III	17,632,109	0.3		0.0	2.1	8.2	--	--	--	--	8.2	Dec-18
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				<u>0.0</u>	<u>1.7</u>	<u>10.6</u>	<u>7.8</u>	--	--	--	<u>8.4</u>	Dec-18
Over/Under				0.0	0.4	-2.4					-0.2	
Bluebay Direct Lending Fund III	7,114,469	0.1		0.0	1.9	--	--	--	--	--	3.6	Apr-19
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				<u>0.0</u>	<u>1.7</u>	<u>10.6</u>	<u>7.8</u>	--	--	--	<u>4.4</u>	Apr-19
Over/Under				0.0	0.2						-0.8	
Pimco Private Income Fund	8,250,000	0.1		0.0	--	--	--	--	--	--	--	Nov-19
Russell 3000 + 3%				<u>2.4</u>	<u>4.4</u>	<u>25.7</u>	<u>16.9</u>	<u>17.9</u>	<u>13.6</u>	<u>17.0</u>	--	Nov-19
Over/Under				-2.4								
<b>Treasuries</b>	<b>107,882,938</b>	<b>1.8</b>	<b>2.0</b>	<b>0.0</b>	<b>4.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>7.8</b>	<b>Apr-19</b>
Reams 10-Year Treasuries	107,882,938	1.8		0.0	4.2	--	--	--	--	--	7.8	Apr-19
BBgBarc US Treasury 7-10 Yr TR				<u>0.2</u>	<u>2.9</u>	<u>10.0</u>	<u>14.6</u>	<u>2.9</u>	<u>3.5</u>	<u>4.4</u>	<u>7.0</u>	Apr-19
Over/Under				-0.2	1.3						0.8	

## VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

### PRIVATE DEBT LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment <sup>1</sup>	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Since Inception	
												Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
BlueBay Direct Lending III	2019	2/12/2019	\$25,000,000	\$6,887,418	\$18,112,582	28%	\$0	\$7,114,468	\$7,114,468	\$227,049	4.0%	0x	1.03x
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$18,000,000	\$12,000,000	60%	\$6,147	\$18,953,232	\$18,959,379	\$959,379	5.6%	0x	1.05x
Monroe Capital Private Credit Fund III	2018	9/5/2018	\$25,000,000	\$17,652,142	\$7,347,858	71%	\$878,524	\$17,632,109	\$18,510,633	\$858,491	10.1%	0.05x	1.05x
PIMCO Private Income Fund	2019	3/25/2019	\$55,000,000	\$8,250,000	\$46,750,000	15%	\$0	\$8,250,000	\$8,250,000	\$0	0.0%	0x	1x
<b>Total VCERA Private Debt Program</b>	--		<b>\$135,000,000</b>	<b>\$50,789,560</b>	<b>\$84,210,440</b>	<b>38%</b>	<b>\$884,671</b>	<b>\$51,949,809</b>	<b>\$52,834,480</b>	<b>\$2,044,919</b>	<b>7.0%</b>	<b>0.02x</b>	<b>1.04x</b>

1. Includes recycled/recallable distributions received to date.

Note: Private debt performance data is reported net of fees.

Performance shown is based on 10/31/2019 cash-adjusted market values.





## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Real Estate</b>	<b>432,886,846</b>	<b>7.2</b>	<b>8.0</b>	<b>0.0</b>	<b>1.0</b>	<b>-0.1</b>	<b>1.5</b>	<b>4.8</b>	<b>7.0</b>	<b>8.9</b>	<b>7.5</b>	<b>Mar-94</b>
NCREIF ODCE Net				0.0	1.1	3.1	4.6	6.3	8.4	9.8	7.9	Mar-94
Over/Under				0.0	-0.1	-3.2	-3.1	-1.5	-1.4	-0.9	-0.4	
Prudential Real Estate	163,568,319	2.7		0.0	1.4	4.6	6.4	7.4	9.2	10.9	6.3	Jun-04
NCREIF ODCE Net				0.0	1.1	3.1	4.6	6.3	8.4	9.8	6.9	Jun-04
Over/Under				0.0	0.3	1.5	1.8	1.1	0.8	1.1	-0.6	
NCREIF ODCE				0.0	1.3	3.8	5.6	7.3	9.3	10.9	7.9	Jun-04
UBS Real Estate	269,318,526	4.5		0.0	0.7	-2.7	-1.2	3.3	5.9	7.9	6.8	Mar-03
NCREIF ODCE Net				0.0	1.1	3.1	4.6	6.3	8.4	9.8	7.1	Mar-03
Over/Under				0.0	-0.4	-5.8	-5.8	-3.0	-2.5	-1.9	-0.3	
NCREIF ODCE				0.0	1.3	3.8	5.6	7.3	9.3	10.9	8.1	Mar-03
<b>Total Real Assets</b>	<b>450,777,001</b>	<b>7.5</b>	<b>7.0</b>	<b>-0.8</b>	<b>-1.3</b>	<b>11.8</b>	<b>7.4</b>	<b>4.3</b>	<b>1.0</b>	<b>--</b>	<b>4.2</b>	<b>Apr-13</b>
Real Assets Index				0.4	1.1	5.1	5.1	6.0	5.5	--	6.2	Apr-13
Over/Under				-1.2	-2.4	6.7	2.3	-1.7	-4.5	--	-2.0	
Bridgewater All Weather Fund	342,353,800	5.7		0.7	2.3	14.6	12.6	6.7	4.3	--	5.5	Aug-13
CPI + 5% (Unadjusted)				0.6	2.1	6.7	6.8	7.2	6.7	--	6.6	Aug-13
Over/Under				0.1	0.2	7.9	5.8	-0.5	-2.4	--	-1.1	
Tortoise Energy Infrastructure	108,423,201	1.8		-5.4	-11.3	4.0	-6.2	-2.3	-6.8	--	-0.7	Apr-13
Tortoise MLP Index				-4.9	-8.9	8.7	-2.3	-1.4	-8.1	--	-3.1	Apr-13
Over/Under				-0.5	-2.4	-4.7	-3.9	-0.9	1.3	--	2.4	
<b>Overlay</b>	<b>148,171,802</b>	<b>2.5</b>	<b>0.0</b>									
Parametric	36,803,251	0.6										
Abbott Capital Cash	111,368,551	1.9										

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index.

Total Real Assets Benchmark CPI + 4% from inception until 6/30/2019; CPI +2% from 6/30/2019 to present.

Real Estate managers and NCREIF ODCE are valued on a quarterly basis. Performance is not applicable in mid-quarter months, therefore 0% return is shown.

## Ventura County Employees' Retirement Association

**TOTAL FUND**

Cash Flow Summary							
	Month Ending October 31, 2019						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Abbott Capital Cash	\$148,876,595	\$9,007,951	-\$46,733,168	-\$37,725,218	\$0	\$217,174	\$111,368,551
Abbott Secondary Opportunities	\$16,439,950	\$0	\$0	\$0	\$0	\$0	\$16,439,950
ABRY Partners IX, LP	\$1,254,257	\$0	\$0	\$0	\$0	\$0	\$1,254,257
Adams Street Global Fund Series	\$188,002,128	\$0	-\$1,833,174	-\$1,833,174	\$0	-\$3	\$186,168,951
Advent International GPE IX LP	\$0	\$1,150,000	\$0	\$1,150,000	\$0	-\$127,919	\$1,022,081
Astorg VII L.P.	\$340,057	\$0	\$0	\$0	\$0	\$45,690	\$385,747
Battery Ventures XII	\$9,527,891	\$0	\$0	\$0	\$0	\$0	\$9,527,891
BlackRock ACWI ex-U.S. Index	\$467,397,110	\$0	\$0	\$0	-\$42,006	\$16,677,239	\$484,074,348
BlackRock MSCI ACWI Equity Index	\$635,952,625	\$0	\$0	\$0	-\$23,450	\$17,550,737	\$653,503,362
Blackrock Russell 1000 Index	\$1,355,717,249	\$0	\$0	\$0	-\$11,954	\$28,744,203	\$1,384,461,453
Blackrock Russell 2500 Index	\$65,040,443	\$0	\$0	\$0	-\$1,105	\$1,252,875	\$66,293,318
BlackRock U.S. Debt Fund	\$244,507,946	\$0	\$0	\$0	-\$11,507	\$716,447	\$245,224,393
Bluebay Direct Lending Fund III	\$7,114,469	\$0	\$0	\$0	\$0	\$0	\$7,114,469
Bridgewater All Weather Fund	\$339,831,982	\$0	\$0	\$0	-\$104,657	\$2,521,818	\$342,353,800
Buenaventure One, LLC	\$26,460,264	\$2,475,000	\$0	\$2,475,000	\$0	-\$11	\$28,935,253
Buenaventure Two, LLC	\$267,275	\$0	\$0	\$0	\$0	\$25,000	\$292,275
Clearlake Capital Partners V	\$7,659,117	\$0	\$0	\$0	\$0	\$0	\$7,659,117
CVI Credit Value Fund	\$18,953,232	\$0	\$0	\$0	\$0	\$182,476	\$19,135,707
Drive Capital Fund II	\$13,073,592	\$2,274,697	\$0	\$2,274,697	\$0	-\$3	\$15,348,286
Drive Capital Overdrive Fund I	\$2,013,359	\$782,408	\$0	\$782,408	\$0	\$0	\$2,795,767
ECI 11	\$3,134,735	\$0	\$0	\$0	\$0	\$315,859	\$3,450,594
Genstar Capital Partners IX	\$778,621	\$268,825	\$0	\$268,825	\$0	\$0	\$1,047,446
Genstar IX Opportunities Fund I	\$366,591	\$1,216	\$0	\$1,216	\$0	\$0	\$367,807
GGV Capital VII L.P.	\$1,760,916	\$101,600	\$0	\$101,600	\$0	\$0	\$1,862,516



## Ventura County Employees' Retirement Association

**TOTAL FUND**

	Month Ending October 31, 2019						
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
GGV Capital VII Plus, LP	\$546,100	\$0	\$0	\$0	\$0	\$0	\$546,100
GGV Discovery II, L.P.	\$410,826	\$0	\$0	\$0	\$0	\$0	\$410,826
GTCR Fund XII	\$6,132,507	\$1,575,000	\$0	\$1,575,000	\$0	-\$1,004,998	\$6,702,509
Harbourvest	\$97,349,703	\$0	-\$1,570,023	-\$1,570,023	\$0	-\$161,500	\$95,618,180
Hexavest	\$91,705,172	\$0	\$0	\$0	-\$35,765	\$3,088,518	\$94,793,690
Insight Venture Partners X	\$19,440,057	\$1,750,000	\$0	\$1,750,000	\$0	-\$18	\$21,190,040
Loomis Sayles Multi Strategy	\$89,576,210	\$0	\$0	\$0	-\$28,334	\$425,788	\$90,001,998
Loomis Strategic Alpha	\$48,323,810	\$0	\$0	\$0	-\$16,095	-\$37,783	\$48,286,027
M/C Partners Fund VIII LP. Limited Partnership	\$393,657	\$451,470	\$0	\$451,470	\$0	-\$63,206	\$781,921
Monroe Capital Private Credit Fund III	\$17,632,109	\$0	\$0	\$0	\$0	\$0	\$17,632,109
Pantheon Global Secondary Funds	\$38,232,925	\$600,000	\$0	\$600,000	\$0	-\$16	\$38,832,910
Parametric	\$32,373,491	\$0	\$0	\$0	-\$4,109	\$4,429,761	\$36,803,251
Pimco Private Income Fund	\$0	\$8,250,000	\$0	\$8,250,000	\$0	\$0	\$8,250,000
Prudential Real Estate	\$163,568,319	\$0	\$0	\$0	\$0	\$0	\$163,568,319
Reams	\$329,970,489	\$0	\$0	\$0	-\$47,718	\$1,769,778	\$331,740,268
Reams 10-Year Treasuries	\$107,883,030	\$0	\$0	\$0	\$0	-\$92	\$107,882,938
Riverside Micro Cap Fund V, LP	\$1,763,440	\$0	\$0	\$0	\$0	\$0	\$1,763,440
Sprucegrove	\$218,927,679	\$0	\$0	\$0	-\$67,017	\$8,752,460	\$227,680,140
The Resolute Fund IV L.P	\$5,076,223	\$0	-\$2,410	-\$2,410	\$0	-\$1	\$5,073,813
Tortoise Energy Infrastructure	\$114,563,110	\$0	\$0	\$0	-\$56,470	-\$6,139,909	\$108,423,201
UBS Real Estate	\$269,318,526	\$0	\$0	\$0	\$0	\$0	\$269,318,526
Walter Scott	\$137,214,031	\$0	\$0	\$0	-\$93,127	\$5,290,783	\$142,504,814
Western	\$327,361,716	\$0	\$0	\$0	-\$53,597	\$1,414,509	\$328,776,225
Western U.S. Index Plus	\$229,398,461	\$0	\$0	\$0	-\$41,804	\$5,032,934	\$234,431,395
<b>Total</b>	<b>\$5,901,631,997</b>	<b>\$28,688,166</b>	<b>-\$50,138,775</b>	<b>-\$21,450,609</b>	<b>-\$638,715</b>	<b>\$90,918,589</b>	<b>\$5,971,099,978</b>



### **Information Disclaimer**

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

### **Reporting Methodology**

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



## QUARTERLY PERFORMANCE REPORT

### VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

**November 18, 2019**

**Allan Martin, Partner**

**Anthony Ferrara, CAIA, Consultant**

**Michael Miranda, CFA, Senior Analyst**



**VCERA**  
VENTURA COUNTY EMPLOYEES'  
RETIREMENT ASSOCIATION



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

# **MARKET ENVIRONMENT UPDATE AND OUTLOOK**

NEPC, LLC

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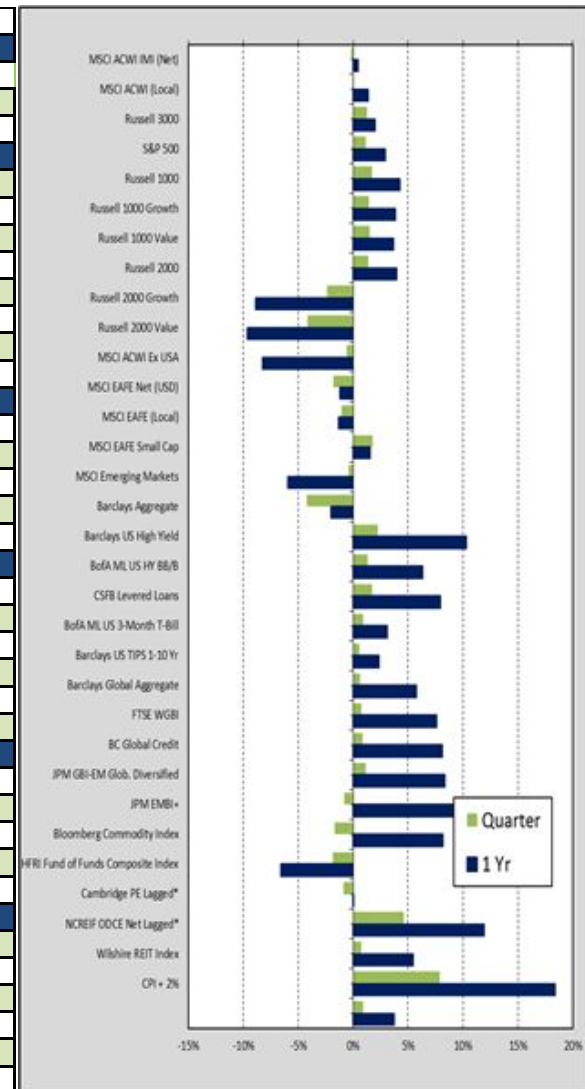
## ECONOMIC ENVIRONMENT

- **Q3 Real GDP (advance estimate) increased at an annual rate of 1.9%.**
  - Retail sales ended August at +4.4% on a YoY basis. In the same period last year the YoY growth rate was 3.3%.
  - Corporate profits (ended April) as a percent of GDP increased to 8.7% from 8.5% (in January) and remain elevated relative to historical levels.
  - The inventory-to-sales ratio ended August flat at 1.4 from June levels and has remained relatively constant since early 2010.
  - The U.S. trade deficit widened ended August as imports increased at a faster pace than exports. The trade deficit with China declined sharply (3.1%).
- **The unemployment rate decreased to 3.5% in Q3 from 3.7% in Q2; U-6, a broader measure of unemployment, decreased to 6.9% from 7.2% during the third quarter.**
- **The Case-Shiller Home Price Index (ended August) increased to 212.1 from 210.9 (in June) and remains at levels higher than that of pre-financial crisis levels of 150.9.**
- **Rolling 12-month seasonally-adjusted CPI saw a down-tick to 1.74% from 1.78% ended Q2; Capacity Utilization decreased to 77.5% from 77.7% in Q3.**
- **Fed Funds rate was decreased by 0.50% in Q3 to a targeted range of 1.75%-to-2.00%. The 10-year Treasury Yield (constant maturity) finished Q3 down to 1.7% from 2.1%.**
- **The Fed balance sheet increased in size ended Q3, while the European Central Bank balance sheet continues to grow.**
  - The Fed voted to end (as of July 31), two months earlier than planned, the reduction of bonds held on its balance sheet.
  - ECB held its benchmark refinancing rate at 0%, deposit rates were cut to -0.5% from -0.4%.
- **S&P valuations decreased in Q3, remaining above the 10-year and long-term averages.**
  - Cyclically adjusted Shiller PE ratio (28.91x) is above the long-term average of 16.6x and above the 10-year average of 25.3x.



# MARKET ENVIRONMENT – Q3 2019 OVERVIEW

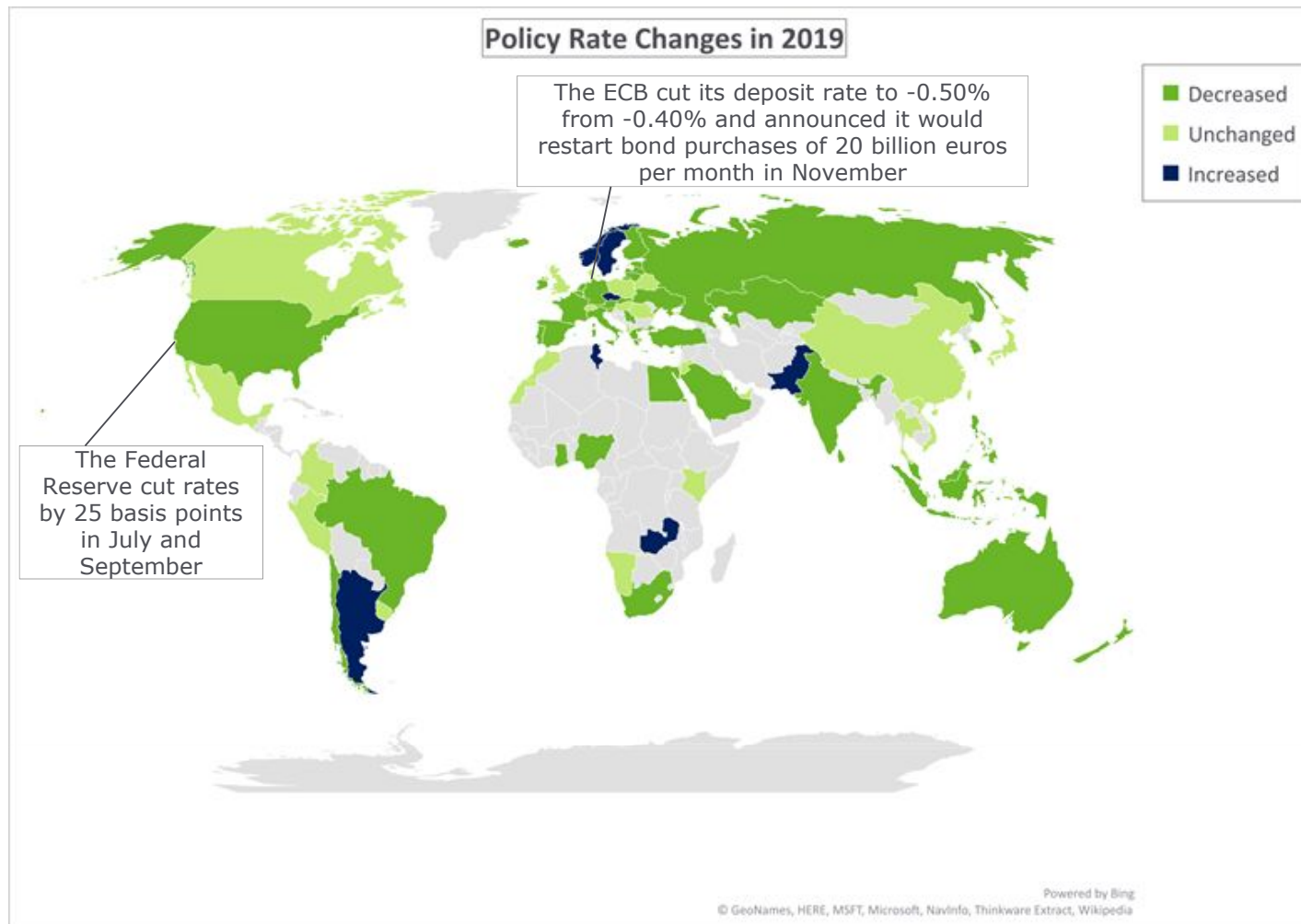
		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
<b>World Equity Benchmarks</b>						
MSCI ACWI IMI (Net)	World with Small Cap	-0.18%	0.48%	9.36%	6.61%	8.45%
MSCI ACWI Net (USD)	World W/O Small Cap	-0.03%	1.38%	9.71%	6.65%	8.35%
MSCI ACWI (Local)	World (Local Currency)	1.27%	1.99%	10.29%	7.88%	9.36%
<b>Domestic Equity Benchmarks</b>						
Russell 3000	Domestic All Cap	1.16%	2.92%	12.83%	10.44%	13.08%
S&P 500	Large Core	1.70%	4.25%	13.39%	10.84%	13.24%
Russell 1000	Large Core	1.42%	3.87%	13.19%	10.62%	13.23%
Russell 1000 Growth	Large Growth	1.49%	3.71%	16.89%	13.39%	14.94%
Russell 1000 Value	Large Value	1.36%	4.00%	9.43%	7.79%	11.46%
Russell 2000	Small Core	-2.40%	-8.89%	8.23%	8.19%	11.19%
Russell 2000 Growth	Small Growth	-4.17%	-9.63%	9.79%	9.08%	12.25%
Russell 2000 Value	Small Value	-0.57%	-8.24%	6.54%	7.17%	10.06%
<b>International Equity Benchmarks</b>						
MSCI ACWI Ex USA	World ex-US	-1.80%	-1.23%	6.33%	2.90%	4.46%
MSCI EAFE Net (USD)	Int'l Developed	-1.07%	-1.34%	6.48%	3.27%	4.90%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	1.75%	1.56%	8.30%	6.02%	7.04%
MSCI EAFE Small Cap	Small Cap Int'l	-0.44%	-5.93%	5.94%	6.02%	7.45%
MSCI Emerging Markets	Emerging Equity	-4.25%	-2.02%	5.97%	2.33%	3.37%
<b>Domestic Fixed Income Benchmarks</b>						
Barclays Aggregate	Core Bonds	2.27%	10.30%	2.92%	3.38%	3.75%
Barclays US High Yield	High Yield	1.33%	6.36%	6.07%	5.37%	7.94%
BofA ML US HY BB/B	High Yield	1.71%	7.95%	6.02%	5.50%	7.65%
CSFB Levered Loans	Bank Loans	0.92%	3.11%	4.68%	4.11%	5.38%
BofA ML US 3-Month T-Bill	Cash	0.56%	2.39%	1.54%	0.98%	0.54%
Barclays US TIPS 1-10 Yr	Inflation	0.60%	5.75%	1.94%	1.95%	2.69%
<b>Global Fixed Income Benchmarks</b>						
Barclays Global Aggregate	Global Core Bonds	0.71%	7.60%	1.59%	1.99%	2.34%
FTSE WGBI	World Gov. Bonds	0.85%	8.13%	1.19%	1.80%	1.69%
BC Global Credit	Global Bonds	1.15%	8.36%	3.20%	2.81%	3.82%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	-0.79%	10.13%	3.06%	0.55%	2.47%
JPM EMBI+	Em. Mkt. Bonds	-1.68%	8.20%	1.87%	4.31%	5.89%
<b>Alternative Benchmarks</b>						
Bloomberg Commodity Index	Commodities	-1.84%	-6.58%	-1.50%	-7.18%	-4.32%
HFRI Fund of Funds Composite Index	Fund of Hedge Funds	-0.90%	0.01%	3.16%	1.95%	2.67%
Cambridge PE Lagged*	Private Equity	4.62%	11.93%	15.63%	11.70%	14.67%
NCREIF ODCE Net Lagged*	Real Estate	0.77%	5.47%	6.61%	8.77%	8.87%
Wilshire REIT Index	REIT	7.88%	18.39%	7.21%	10.17%	13.06%
CPI + 2%	Inflation/Real Assets	0.91%	3.76%	4.12%	3.57%	3.77%



\* As of 6/30/2019



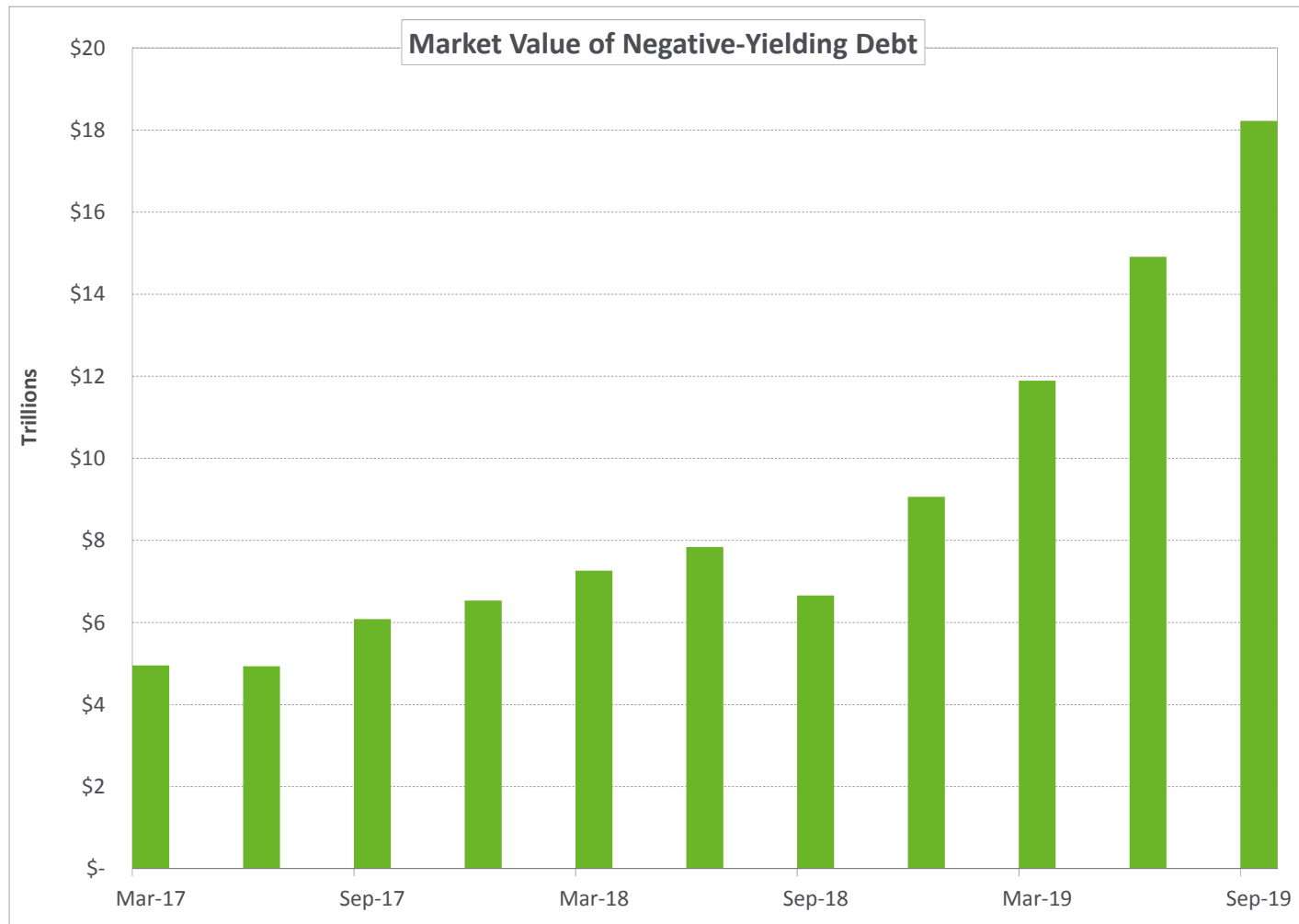
## A SHIFT TOWARD EASIER MONETARY POLICY



Source: FactSet



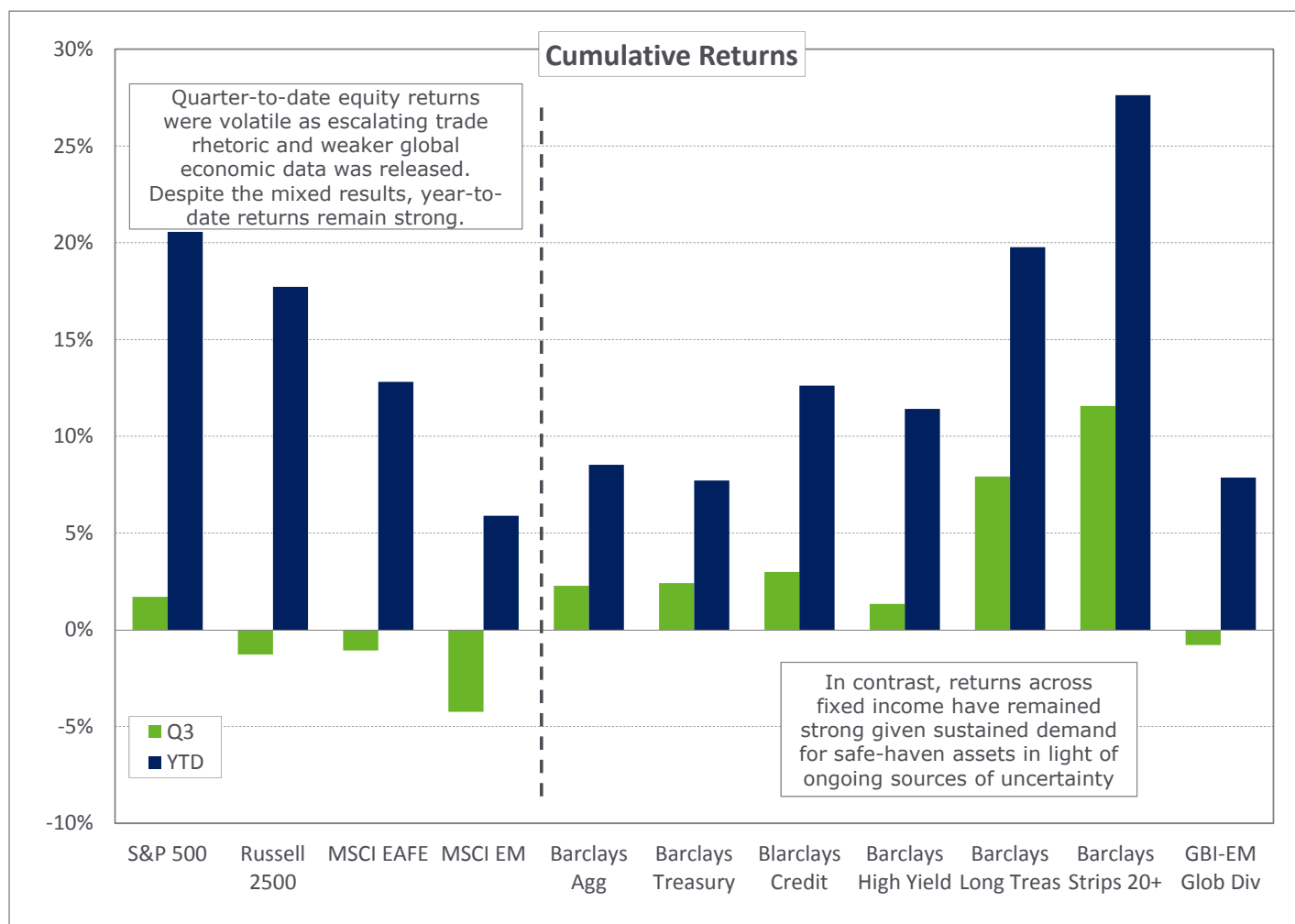
## NEGATIVE YIELDS CONTINUE TO SPREAD



Source: FactSet



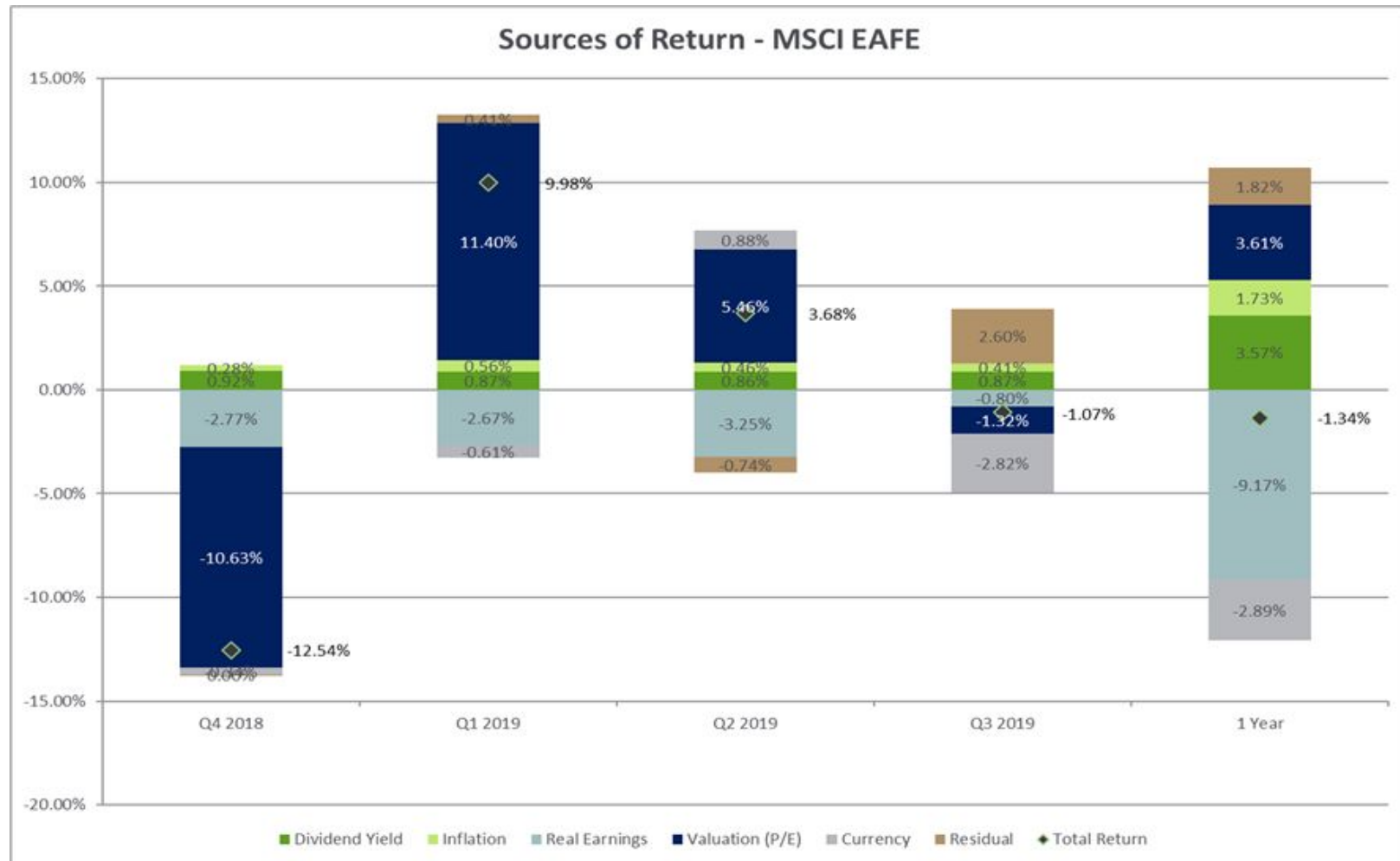
## YTD RETURNS HAVE BEEN STRONG, QTD MIXED



Source: S&P, Russell, MSCI, Barclays, JP Morgan, FactSet; as of 09/30/2019



# 1 YEAR ATTRIBUTION OF MSCI EAFE RETURNS



**Spot Rates**

1 USD = 0.871 Euro

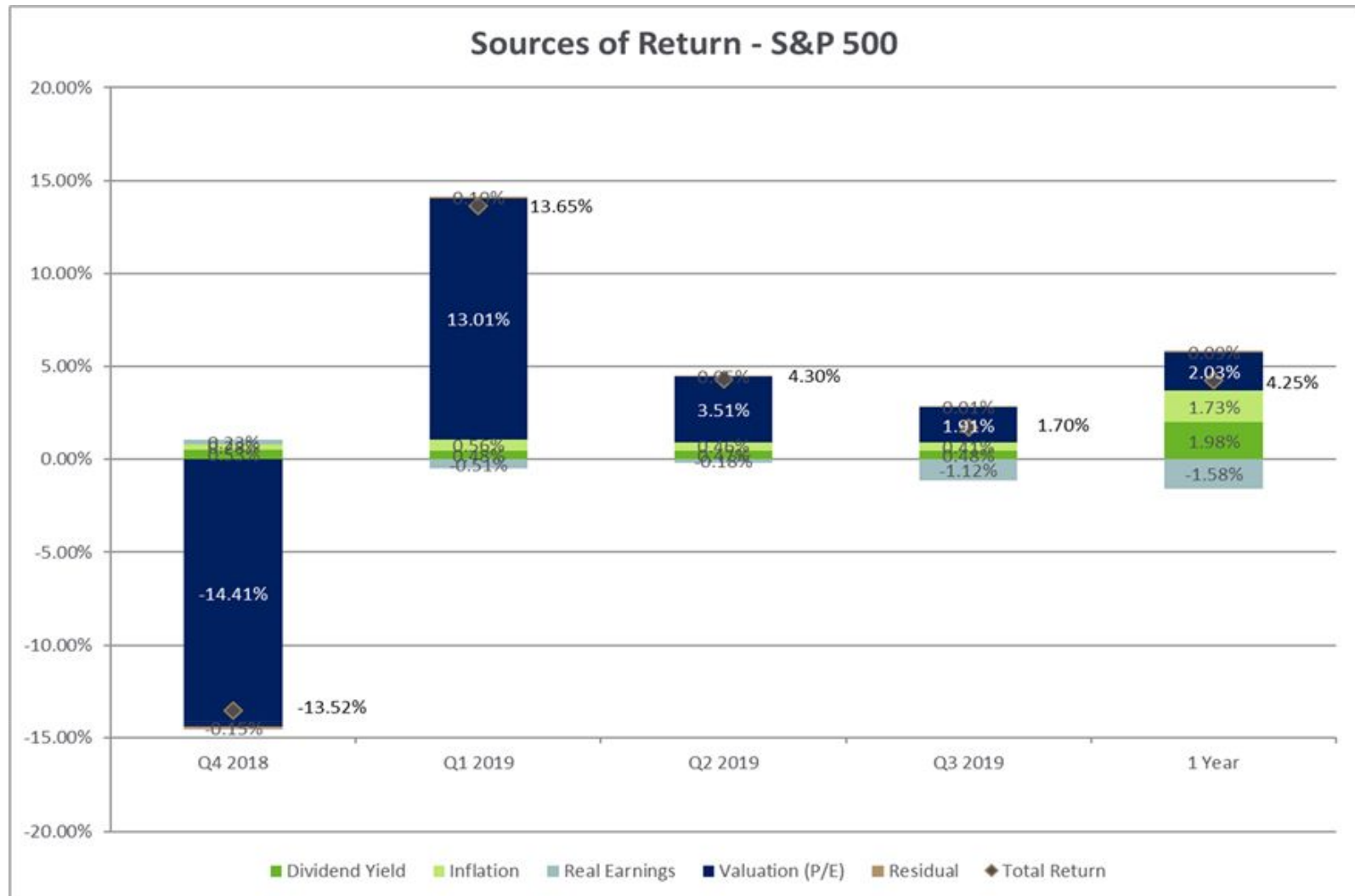
1 USD = 0.890 Euro

1 USD = 0.880 Euro

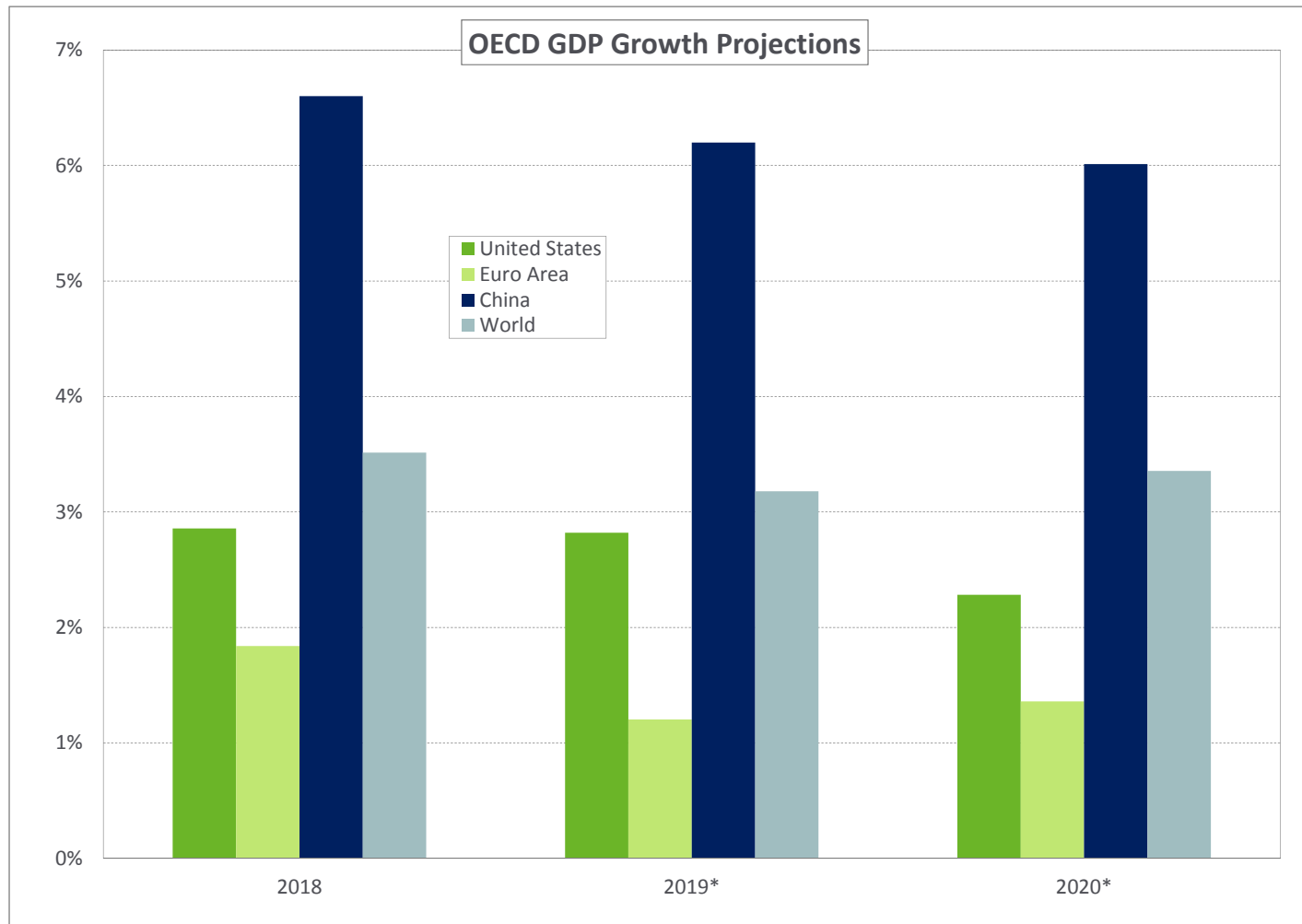
1 USD = 0.912 Euro



# 1 YEAR ATTRIBUTION OF S&P 500 RETURNS



## THE ECONOMIC OUTLOOK HAS DETERIORATED



Source: OECD  
2019 and 2020 data represents forecasted data as of 10/7/2019



## 2019 TRADE TIMELINE



# **TOTAL FUND PERFORMANCE SUMMARY**

NEPC, LLC

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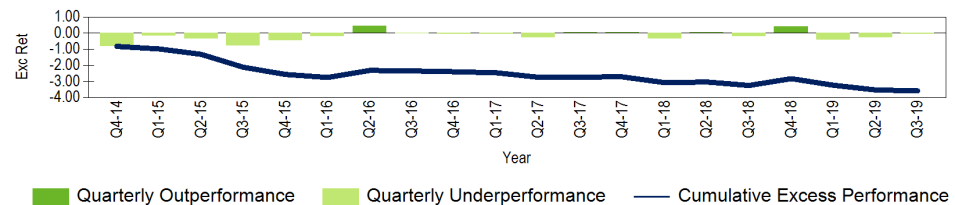


## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE SUMMARY (NET)

	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	Inception	Inception Date
<b>Total Fund</b>	<b>\$5,901,631,997</b>	<b>0.8%</b>	<b>34</b>	<b>12.9%</b>	<b>22</b>	<b>4.3%</b>	<b>25</b>	<b>8.5%</b>	<b>15</b>	<b>6.5%</b>	<b>32</b>	<b>8.8%</b>	<b>18</b>	<b>8.0%</b>	<b>Apr-94</b>
Policy Index		0.8%	30	13.7%	11	4.6%	21	8.9%	10	7.3%	10	8.7%	21	8.0%	Apr-94
60% MSCI ACWI (Net) / 40% FTSE WGBI		0.4%	64	12.4%	24	4.4%	23	6.4%	97	4.9%	97	5.9%	97	6.4%	Apr-94
60% S&P 500 / 40% BBgBarc Aggregate		2.0%	2	15.9%	1	7.1%	1	9.3%	6	8.0%	3	9.6%	1	8.4%	Apr-94
InvMetrics Public DB > \$1B Net Median		0.5%		10.8%		3.6%		7.7%		6.1%		8.0%		7.5%	Apr-94

## Quarterly and Cumulative Excess Performance



- For the five year period ending September 30, 2019, the Fund returned 6.5% trailing the policy index by 0.8% and ranking in the 32nd percentile of its peers and underperforming the actuarial assumed rate of 7.25%. The Fund's volatility, as measured by standard deviation, ranked in the 74th percentile of its peers, and the risk-adjusted return, or Sharpe Ratio, ranks in the 57th percentile. This means that the Fund has earned more return per unit of volatility taken than 43% of its peers.

- For the three-year period, the Fund returned 8.5%, underperforming the policy index and ranking in the 15th percentile of its peers. The Fund's volatility ranks in the 75th percentile of its peers over this period, with the Fund's Sharpe Ratio ranking in the 49th percentile.

- For the one-year period, the Fund returned 4.3%, underperforming the policy index by 0.3% and ranking in the 25th percentile of the Investment Metrics Public Funds > \$1 Billion Universe (Net of fees).

- For the one-year period, the Fund experienced a net investment gain of \$386.4 million which includes a net investment gain of \$250.1 million in the quarter. Assets increased from \$5.68 billion one year ago to \$5.90 billion.

3 Years Ending September 30, 2019							
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF
Total Fund	8.5%	15	7.0%	75	1.0	49	1.2
Policy Index	8.9%	10	7.3%	82	1.0	40	1.2
InvMetrics Public DB > \$1B Net Median	7.7%	--	6.1%	--	1.0	--	1.1

5 Years Ending September 30, 2019							
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF
Total Fund	6.5%	32	7.1%	74	0.8	57	1.1
Policy Index	7.3%	10	7.2%	75	0.9	33	1.1
InvMetrics Public DB > \$1B Net Median	6.1%	--	6.3%	--	0.8	--	1.0

Policy Index as of July 2019: 26% Russell 3000 Index, 17% MSCI ACWI ex U.S., 10% MSCI ACWI, 13% Russell 3000 +3%, 19% BBgBarc US Aggregate, 8% NCREIF ODCE, 7% CPI +2%.

## Ventura County Employees' Retirement Association

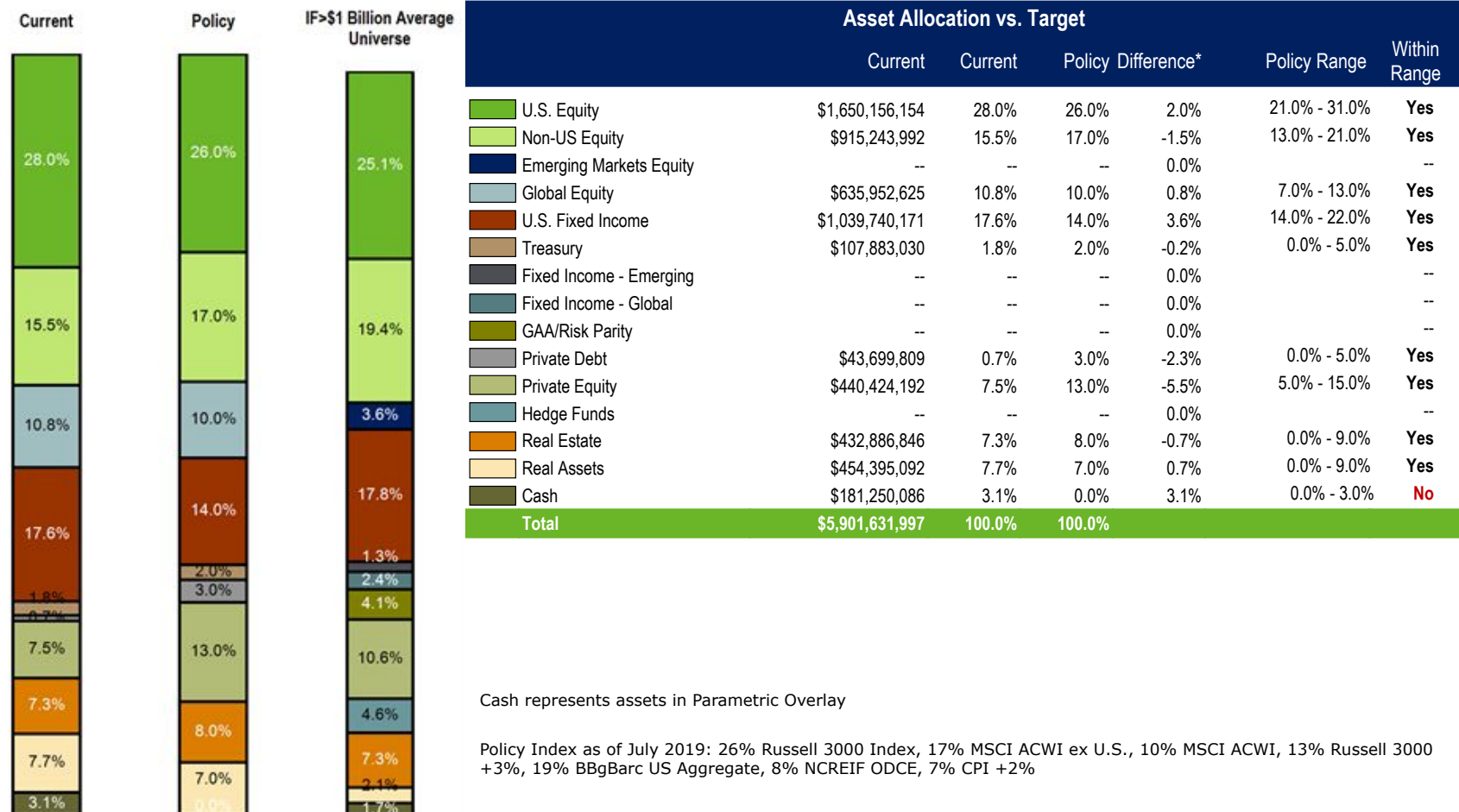
**TOTAL FUND ASSET GROWTH SUMMARY**

Summary of Cash Flows				
	Last Three Months	One Year	Three Years	Five Years
Beginning Market Value	\$5,716,158,441	\$5,681,345,338	\$4,666,540,419	\$4,328,104,648
Net Cash Flow	\$136,368,619	-\$29,843,537	-\$78,470,031	-\$93,938,648
Net Investment Change	\$49,104,937	\$250,130,196	\$1,313,561,609	\$1,667,465,998
Ending Market Value	\$5,901,631,997	\$5,901,631,997	\$5,901,631,997	\$5,901,631,997



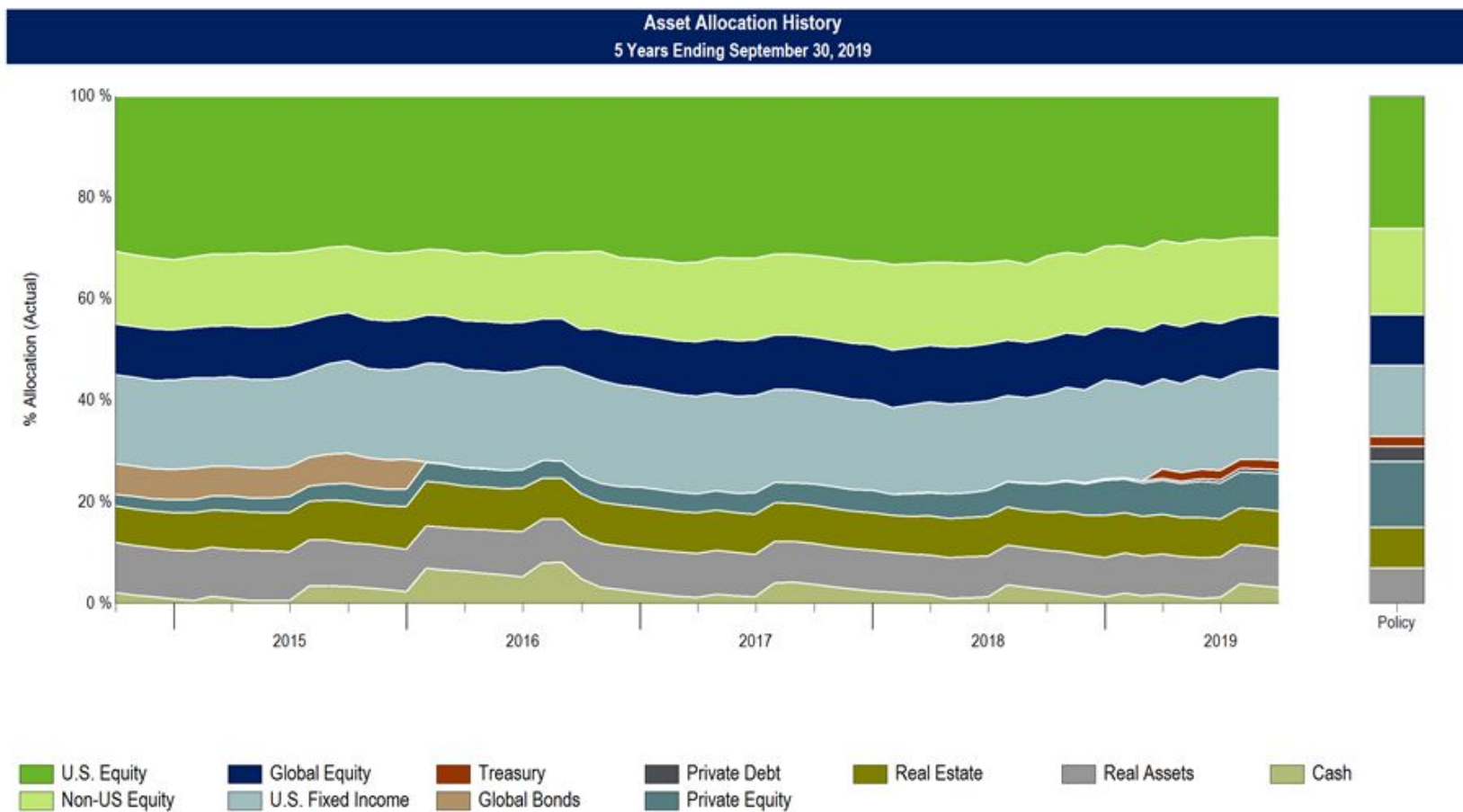
## Ventura County Employees' Retirement Association

# TOTAL FUND ASSET ALLOCATION VS. POLICY TARGETS



## Ventura County Employees' Retirement Association

# TOTAL FUND ALLOCATION HISTORY



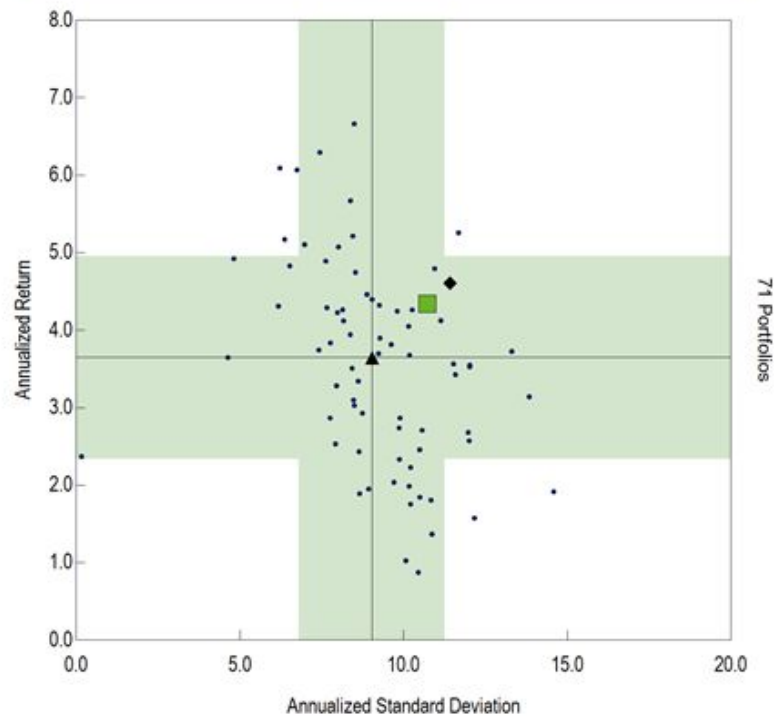
Policy Index shown is most recently approved index



## Ventura County Employees' Retirement Association

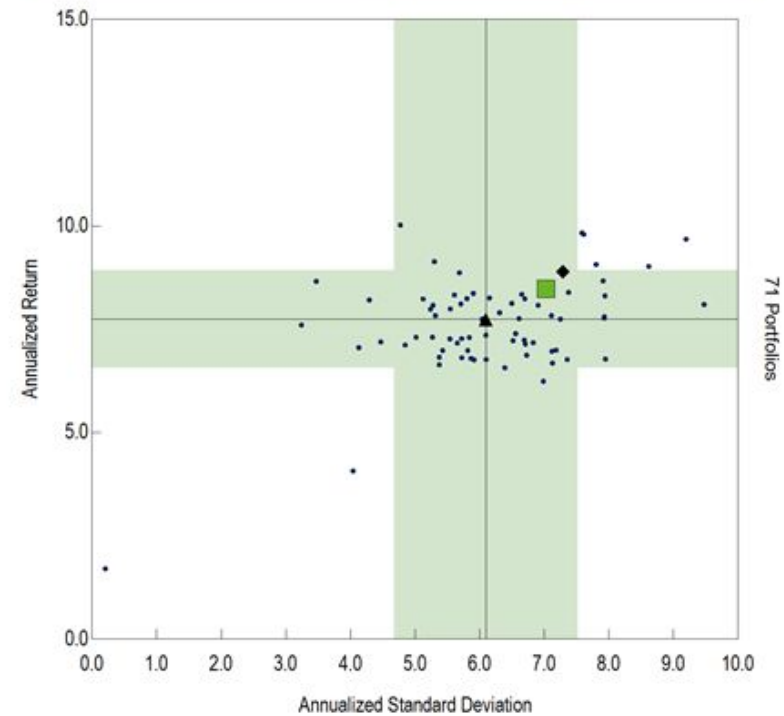
# TOTAL FUND RISK/RETURN

1 Years Ending September 30, 2019



- Total Fund
- Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net

3 Years Ending September 30, 2019



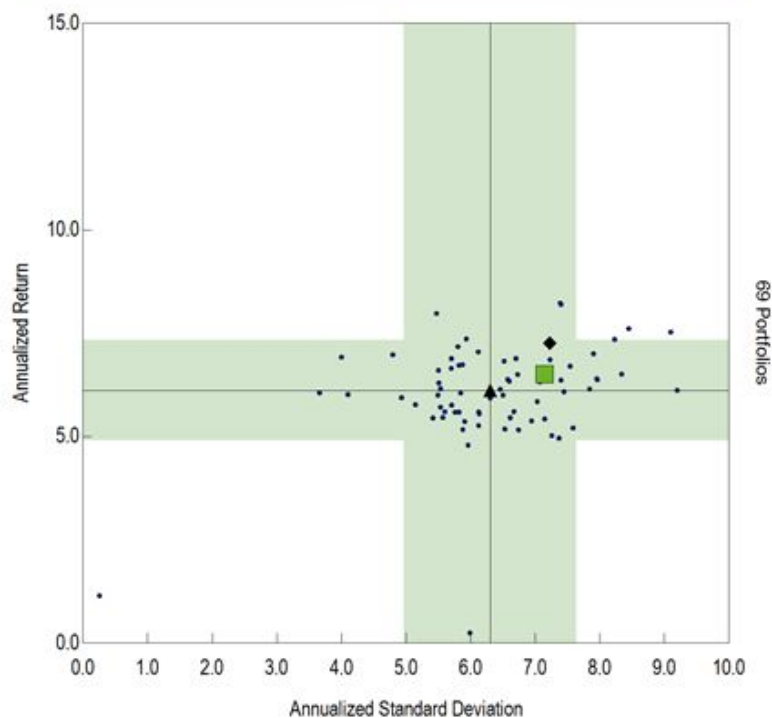
- Total Fund
- Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



## Ventura County Employees' Retirement Association

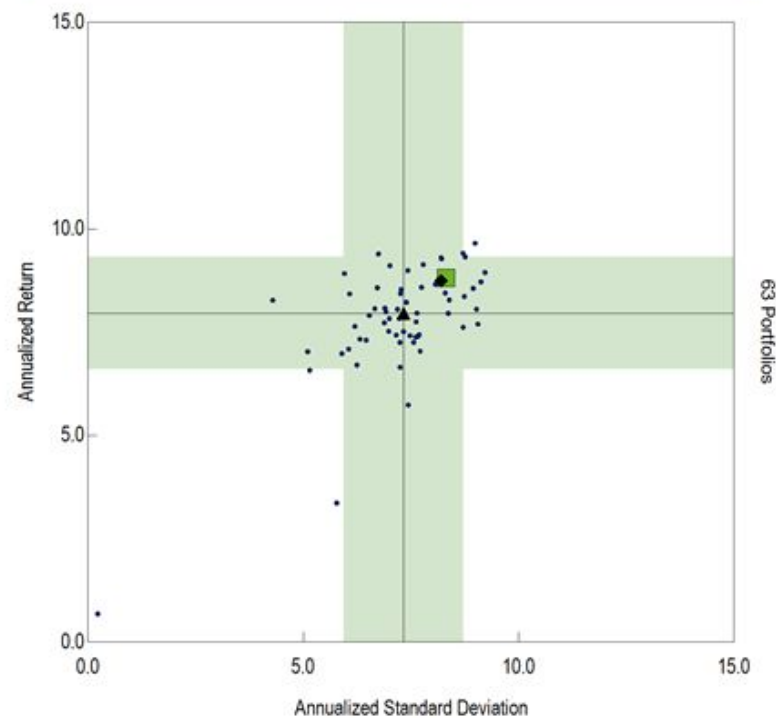
# TOTAL FUND RISK/RETURN

5 Years Ending September 30, 2019



- Total Fund
- Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net

10 Years Ending September 30, 2019



- Total Fund
- Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



## Ventura County Employees' Retirement Association

**TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE**

Total Fund vs. InvMetrics Public DB > \$1B Net  
1 Year



## Ventura County Employees' Retirement Association

**TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE**

Total Fund vs. InvMetrics Public DB > \$1B Net  
3 Years

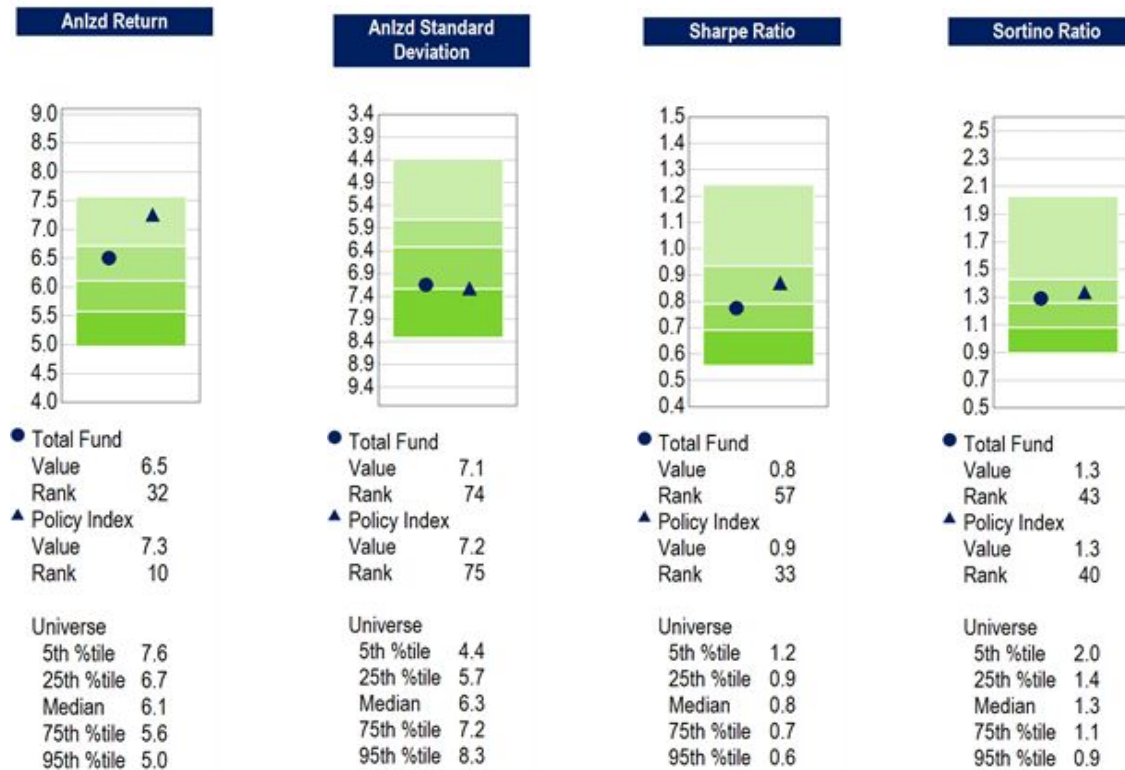




## Ventura County Employees' Retirement Association

**TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE**

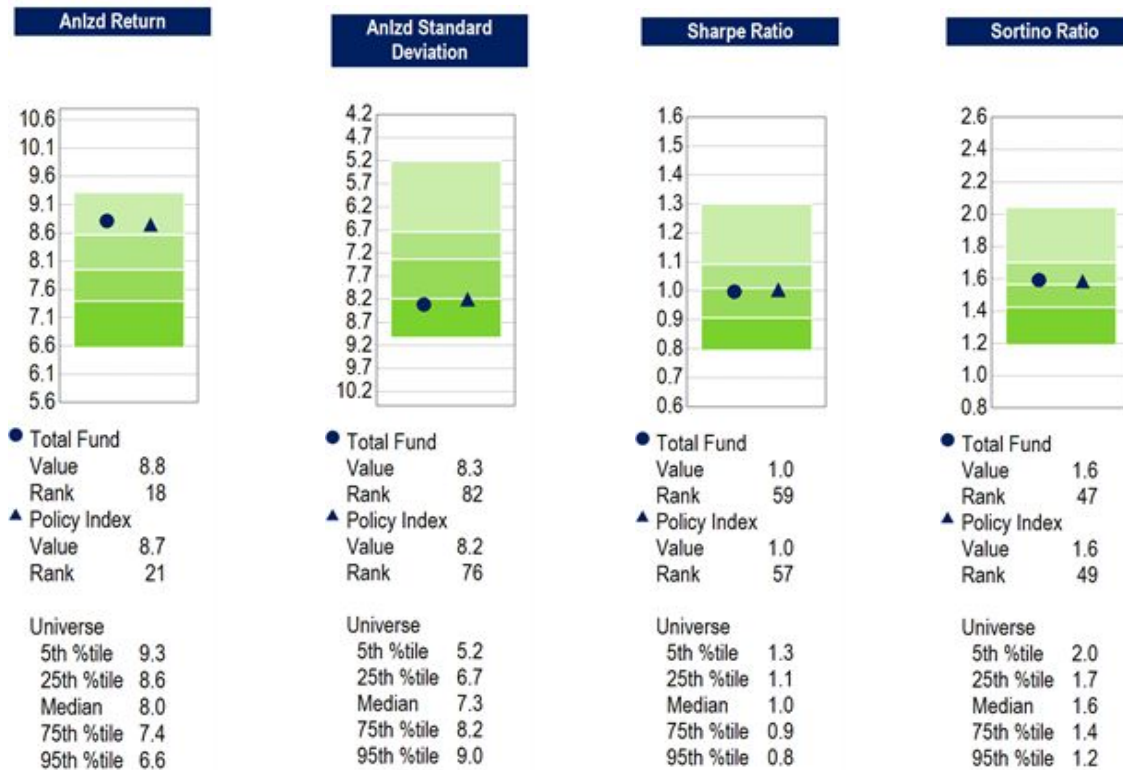
Total Fund vs. InvMetrics Public DB > \$1B Net  
5 Years



## Ventura County Employees' Retirement Association

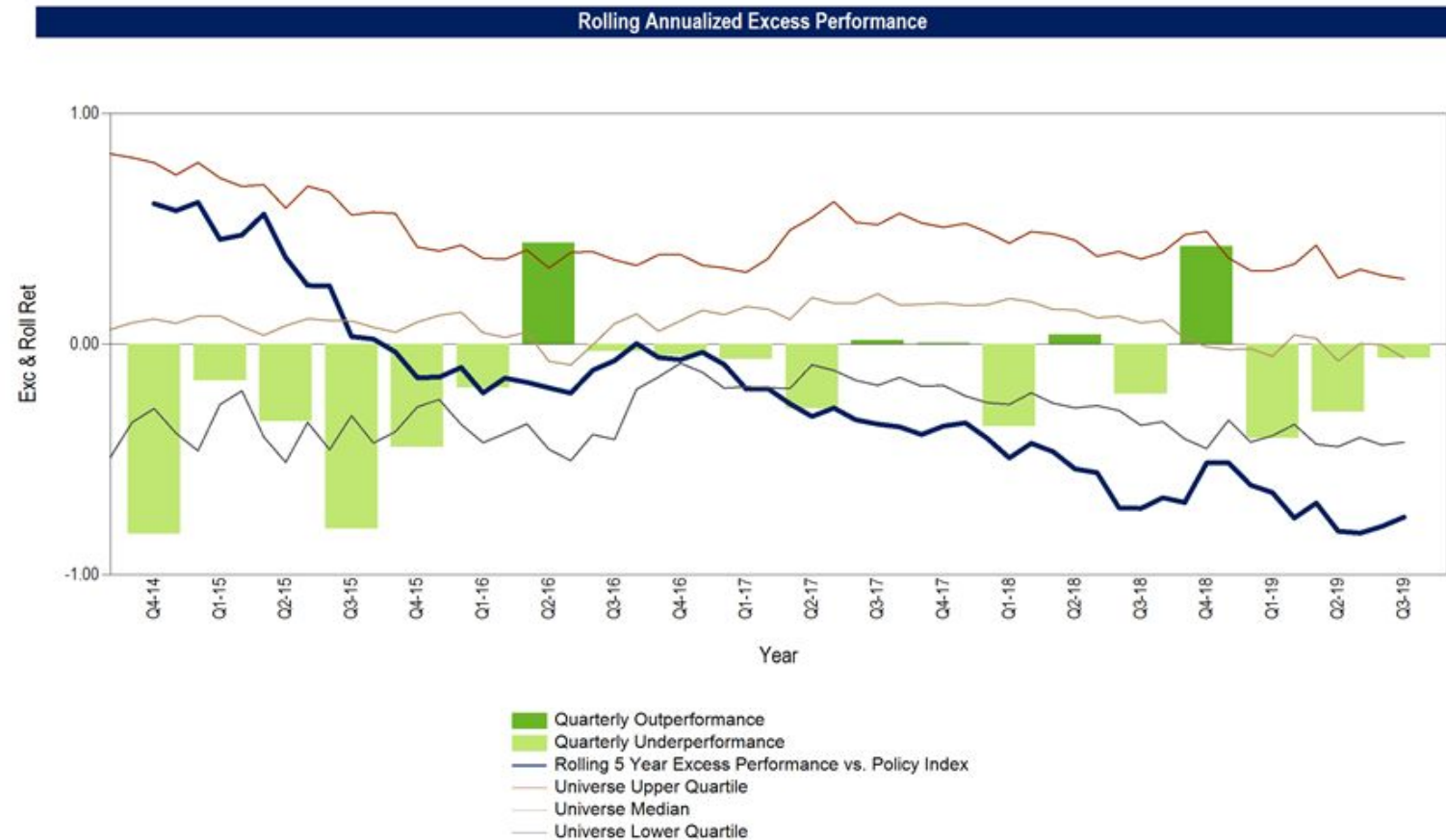
**TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE**

Total Fund vs. InvMetrics Public DB > \$1B Net  
10 Years



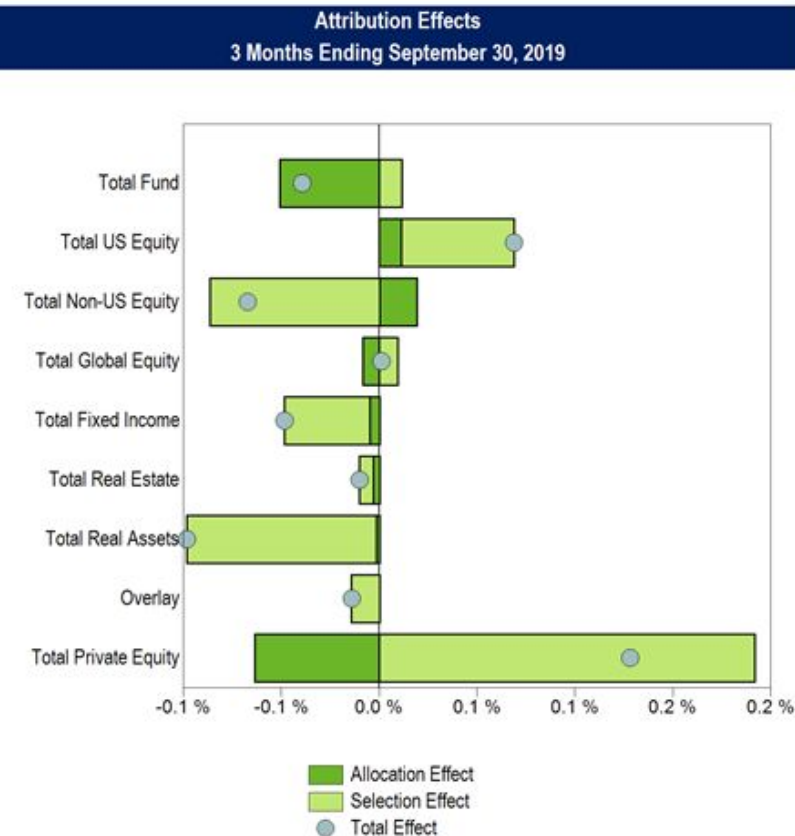
## Ventura County Employees' Retirement Association

# ROLLING 5 YEAR EXCESS RETURNS- NET OF FEES



## Ventura County Employees' Retirement Association

## TOTAL FUND ATTRIBUTION ANALYSIS

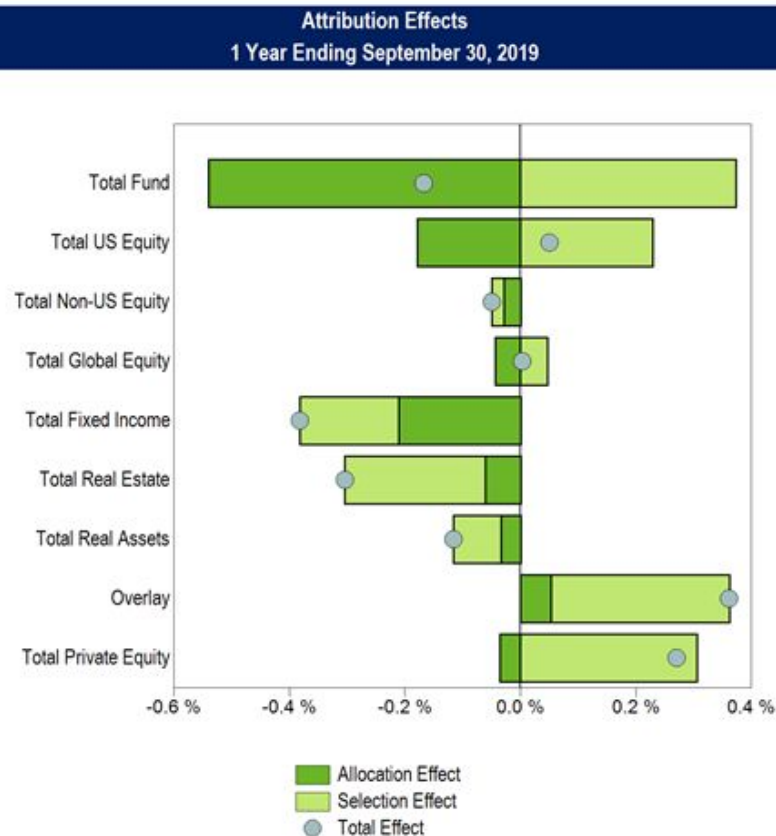


Attribution Summary						
3 Months Ending September 30, 2019						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	1.4%	1.2%	0.2%	0.1%	0.0%	0.1%
Total Non-US Equity	-2.3%	-1.8%	-0.5%	-0.1%	0.0%	-0.1%
Total Global Equity	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%
Total Fixed Income	2.1%	2.3%	-0.2%	0.0%	0.0%	0.0%
Total Real Estate	1.0%	1.1%	-0.1%	0.0%	0.0%	0.0%
Total Real Assets	-0.5%	0.7%	-1.2%	-0.1%	0.0%	-0.1%
Overlay	-2.6%	0.5%	-3.1%	0.0%	0.0%	0.0%
Total Private Equity	4.6%	1.9%	2.7%	0.2%	-0.1%	0.1%
<b>Total</b>	<b>0.8%</b>	<b>0.8%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>-0.1%</b>	<b>0.0%</b>



## Ventura County Employees' Retirement Association

## TOTAL FUND ATTRIBUTION ANALYSIS

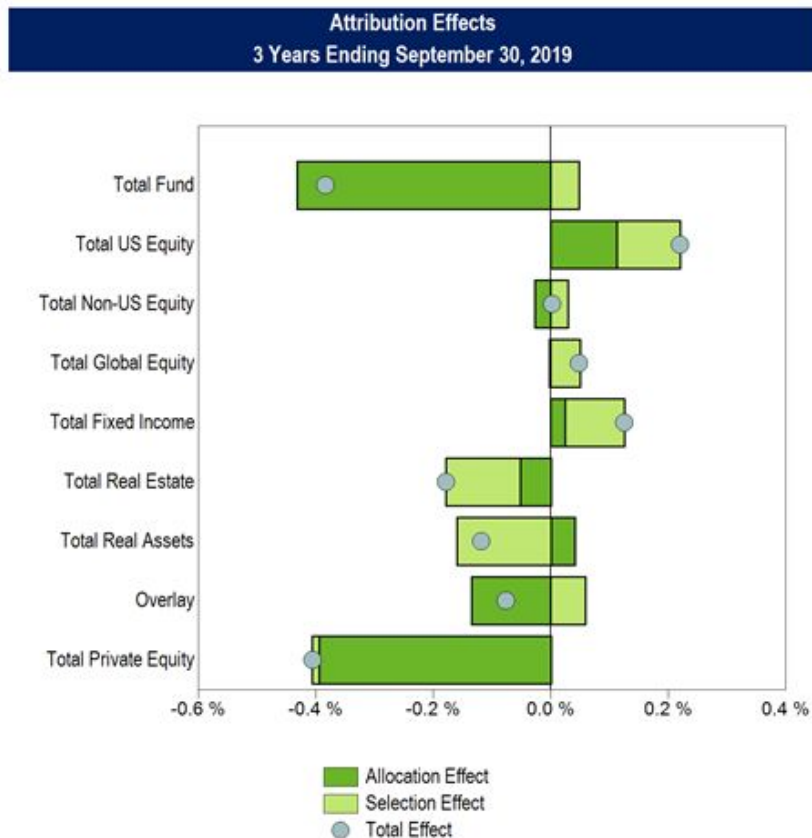


Attribution Summary						
1 Year Ending September 30, 2019						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	3.7%	2.9%	0.8%	0.2%	-0.2%	0.1%
Total Non-US Equity	-1.3%	-1.2%	-0.1%	0.0%	0.0%	0.0%
Total Global Equity	1.8%	1.4%	0.4%	0.0%	0.0%	0.0%
Total Fixed Income	9.4%	10.3%	-0.9%	-0.2%	-0.2%	-0.4%
Total Real Estate	1.5%	4.6%	-3.1%	-0.2%	-0.1%	-0.3%
Total Real Assets	3.9%	5.3%	-1.4%	-0.1%	0.0%	-0.1%
Overlay	20.7%	2.3%	18.5%	0.3%	0.1%	0.4%
Total Private Equity	13.7%	6.0%	7.7%	0.3%	0.0%	0.3%
<b>Total</b>	<b>4.4%</b>	<b>4.6%</b>	<b>-0.2%</b>	<b>0.4%</b>	<b>-0.5%</b>	<b>-0.2%</b>



## Ventura County Employees' Retirement Association

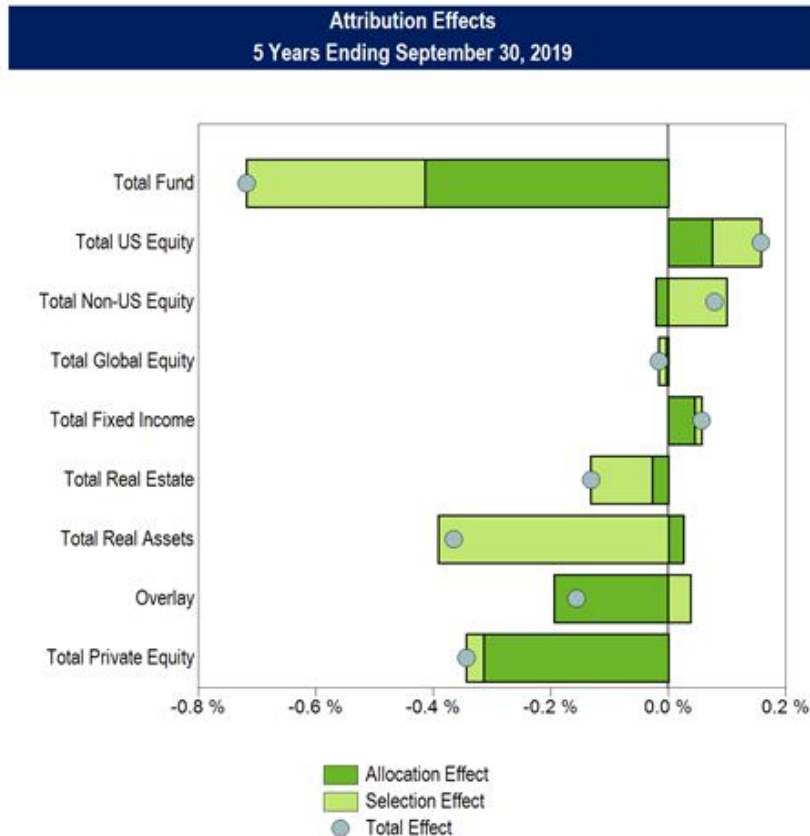
## TOTAL FUND ATTRIBUTION ANALYSIS



Attribution Summary 3 Years Ending September 30, 2019						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	13.2%	12.8%	0.4%	0.1%	0.1%	0.2%
Total Non-US Equity	6.6%	6.3%	0.2%	0.0%	0.0%	0.0%
Total Global Equity	10.2%	9.7%	0.5%	0.0%	0.0%	0.0%
Total Fixed Income	3.4%	2.9%	0.5%	0.1%	0.0%	0.1%
Total Real Estate	4.8%	6.3%	-1.6%	-0.1%	-0.1%	-0.2%
Total Real Assets	3.7%	6.0%	-2.2%	-0.2%	0.0%	-0.1%
Overlay	7.0%	1.5%	5.5%	0.1%	-0.1%	-0.1%
Total Private Equity	16.5%	16.2%	0.3%	0.0%	-0.4%	-0.4%
<b>Total</b>	<b>8.5%</b>	<b>8.9%</b>	<b>-0.4%</b>	<b>0.0%</b>	<b>-0.4%</b>	<b>-0.4%</b>

## Ventura County Employees' Retirement Association

## TOTAL FUND ATTRIBUTION ANALYSIS



Attribution Summary						
5 Years Ending September 30, 2019						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	10.7%	10.4%	0.3%	0.1%	0.1%	0.1%
Total Non-US Equity	3.7%	2.9%	0.8%	0.1%	0.0%	0.1%
Total Global Equity	6.5%	6.7%	-0.1%	0.0%	0.0%	0.0%
Total Fixed Income	3.3%	3.1%	0.2%	0.0%	0.0%	0.1%
Total Real Estate	7.0%	8.4%	-1.3%	-0.1%	0.0%	-0.1%
Total Real Assets	0.9%	5.5%	-4.6%	-0.4%	0.0%	-0.4%
Overlay	4.3%	1.0%	3.3%	0.0%	-0.2%	-0.2%
Total Private Equity	13.9%	13.7%	0.1%	0.0%	-0.3%	-0.3%
<b>Total</b>	<b>6.5%</b>	<b>7.3%</b>	<b>-0.7%</b>	<b>-0.3%</b>	<b>-0.4%</b>	<b>-0.7%</b>



## Ventura County Employees' Retirement Association

## TOTAL FUND RISK STATISTICS

1 Year Ending September 30, 2019												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	54.2%	1.8%	51	17.7%	71	0.5%	48	0.5%	2	0.9	23	1.0
MSCI ACWI	--	1.4%	62	17.4%	60	0.0%	60	0.0%	1	--	--	1.0
Total US Equity	28.0%	3.7%	25	19.3%	61	0.8%	23	0.3%	4	2.5	1	1.0
Russell 3000	--	2.9%	40	19.5%	68	0.0%	42	0.0%	1	--	--	1.0
Total Non-US Equity	15.5%	-1.3%	40	15.6%	31	-0.2%	45	1.0%	8	-0.1	--	1.0
MSCI ACWI ex USA	--	-1.2%	37	16.1%	60	0.0%	42	0.0%	1	--	--	1.0
Total Global Equity	10.8%	1.8%	62	17.4%	89	0.4%	60	0.0%	1	9.1	1	1.0
MSCI ACWI	--	1.4%	64	17.4%	89	0.0%	65	0.0%	1	--	--	1.0
Total Fixed Income	20.2%	9.4%	21	3.2%	69	0.2%	46	0.7%	37	-1.3	--	0.9
Total Fixed Income Policy Index	--	10.3%	11	3.7%	84	0.0%	70	0.0%	1	--	--	1.0
Total US Fixed Income	17.6%	9.1%	30	3.0%	65	0.5%	38	1.0%	60	-1.2	--	0.8
BBgBarc US Aggregate TR	--	10.3%	10	3.7%	86	0.0%	66	0.0%	1	--	--	1.0
Total Real Assets	7.7%	3.9%	--	10.6%	--	-7.8%	--	10.3%	--	-0.1	--	3.1
Real Assets Index	--	5.3%	--	1.1%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.3%	1.5%	90	3.0%	72
NCREIF ODCE Net	--	4.6%	69	2.0%	49
Total Private Equity	7.5%	13.7%	39	5.3%	58
Russell 3000 + 3%	--	6.0%	84	19.5%	99

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE.

Composite rankings are used for Total Equity (InvMetrics Public DB Total Eq consists of 69 portfolios), Total US Equity (InvMetrics Public DB US Eq consists of 145 portfolios), Total Non-US Equity (InvMetrics Public DB ex-US Eq consists of 91 portfolios), Total Global Equity (InvMetrics Public DB Gbl Eq consists of 40 portfolios), Total Fixed Income (InvMetrics Public DB Total Fix Inc consists of 69 portfolios), Total US Fixed Income (InvMetrics Public DB US Fix Inc consists of 89 portfolios), Total Real Estate (InvMetrics Public DB Real Estate Pub+Priv consists of 51 portfolios) and Total Private Equity (InvMetrics Public DB Private Eq consists of 20 portfolios).





## Ventura County Employees' Retirement Association

**TOTAL FUND RISK STATISTICS**

3 Years Ending September 30, 2019												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	54.2%	10.8%	24	11.4%	56	1.0%	13	1.1%	32	0.9	4	1.0
MSCI ACWI	--	9.7%	65	11.3%	52	0.0%	42	0.0%	1	--	--	1.0
Total US Equity	28.0%	13.2%	15	12.5%	40	0.4%	16	0.4%	4	0.9	5	1.0
Russell 3000	--	12.8%	27	12.5%	44	0.0%	20	0.0%	1	--	--	1.0
Total Non-US Equity	15.5%	6.6%	25	11.1%	14	0.4%	17	1.0%	6	0.2	19	1.0
MSCI ACWI ex USA	--	6.3%	33	11.4%	33	0.0%	27	0.0%	1	--	--	1.0
Total Global Equity	10.8%	10.2%	29	11.3%	75	0.5%	60	0.1%	1	5.6	1	1.0
MSCI ACWI	--	9.7%	56	11.3%	76	0.0%	63	0.0%	1	--	--	1.0
Total Fixed Income	20.2%	3.4%	43	2.7%	58	0.8%	43	0.8%	41	0.6	16	0.8
Total Fixed Income Policy Index	--	2.9%	60	3.3%	85	0.0%	77	0.0%	1	--	--	1.0
Total US Fixed Income	17.6%	3.3%	29	2.7%	63	0.7%	27	0.9%	63	0.5	26	0.8
BBgBarc US Aggregate TR	--	2.9%	50	3.3%	91	0.0%	81	0.0%	1	--	--	1.0
Total Real Assets	7.7%	3.7%	--	7.7%	--	-5.8%	--	7.5%	--	-0.3	--	1.8
Real Assets Index	--	6.0%	--	0.9%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.3%	4.8%	92	2.8%	58
NCREIF ODCE Net	--	6.3%	66	2.7%	54
Total Private Equity	7.5%	16.5%	27	5.5%	46
Russell 3000 + 3%	--	16.2%	28	12.5%	89

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE.

Composite rankings are used for Total Equity (InvMetrics Public DB Total Eq consists of 67 portfolios), Total US Equity (InvMetrics Public DB US Eq consists of 138 portfolios), Total Non-US Equity (InvMetrics Public DB ex-US Eq consists of 86 portfolios), Total Global Equity (InvMetrics Public DB Gbl Eq consists of 35 portfolios), Total Fixed Income (InvMetrics Public DB Total Fix Inc consists of 67 portfolios), Total US Fixed Income (InvMetrics Public DB US Fix Inc consists of 88 portfolios), Total Real Estate (InvMetrics Public DB Real Estate Pub+Priv consists of 50 portfolios) and Total Private Equity (InvMetrics Public DB Private Eq consists of 19 portfolios).



## Ventura County Employees' Retirement Association

## TOTAL FUND RISK STATISTICS

5 Years Ending September 30, 2019												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	54.2%	8.0%	40	11.6%	54	1.5%	13	1.1%	24	1.2	1	1.0
MSCI ACWI	--	6.7%	75	11.7%	64	0.0%	60	0.0%	1	--	--	1.0
Total US Equity	28.0%	10.7%	17	12.2%	42	0.3%	19	0.3%	2	0.9	1	1.0
Russell 3000	--	10.4%	27	12.2%	43	0.0%	27	0.0%	1	--	--	1.0
Total Non-US Equity	15.5%	3.7%	37	11.9%	26	0.9%	32	1.1%	4	0.7	12	1.0
MSCI ACWI ex USA	--	2.9%	61	12.5%	74	0.0%	57	0.0%	1	--	--	1.0
Total Global Equity	10.8%	6.5%	65	11.8%	68	-0.2%	76	0.8%	1	-0.2	--	1.0
MSCI ACWI	--	6.7%	61	11.7%	66	0.0%	74	0.0%	1	--	--	1.0
Total Fixed Income	20.2%	3.3%	43	2.6%	39	0.7%	29	1.5%	53	0.1	32	0.8
Total Fixed Income Policy Index	--	3.1%	53	3.0%	65	0.0%	81	0.0%	1	--	--	1.0
Total US Fixed Income	17.6%	3.4%	41	2.6%	52	0.8%	25	1.7%	77	0.0	51	0.7
BBgBarc US Aggregate TR	--	3.4%	44	3.1%	83	0.0%	76	0.0%	1	--	--	1.0
Total Real Assets	7.7%	0.9%	--	9.0%	--	-10.2%	--	8.8%	--	-0.5	--	2.3
Real Assets Index	--	5.5%	--	1.0%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.3%	7.0%	92	3.6%	51
NCREIF ODCE Net	--	8.4%	66	3.7%	53
Total Private Equity	7.5%	13.9%	32	5.7%	53
Russell 3000 + 3%	--	13.7%	34	12.2%	90

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE.

Composite rankings are used for Total Equity (InvMetrics Public DB Total Eq consists of 50 portfolios), Total US Equity (InvMetrics Public DB US Eq consists of 118 portfolios), Total Non-US Equity (InvMetrics Public DB ex-US Eq consists of 79 portfolios), Total Global Equity (InvMetrics Public DB Gbl Eq consists of 22 portfolios), Total Fixed Income (InvMetrics Public DB Total Fix Inc consists of 54 portfolios), Total US Fixed Income (InvMetrics Public DB US Fix Inc consists of 79 portfolios), Total Real Estate (InvMetrics Public DB Real Estate Pub+Priv consists of 45 portfolios) and Total Private Equity (InvMetrics Public DB Private Eq consists of 17 portfolios).



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Total Fund</b>	<b>5,901,631,997</b>	<b>100.0</b>	<b>100.0</b>	<b>0.8</b>	<b>34</b>	<b>12.9</b>	<b>22</b>	<b>4.3</b>	<b>25</b>	<b>8.5</b>	<b>15</b>	<b>6.5</b>	<b>32</b>	<b>8.8</b>	<b>18</b>	<b>8.0</b>	<b>Apr-94</b>
Policy Index				<u>0.8</u>	30	<u>13.7</u>	11	<u>4.6</u>	21	<u>8.9</u>	10	<u>7.3</u>	10	<u>8.7</u>	21	<u>8.0</u>	Apr-94
Over/Under				0.0		-0.8		-0.3		-0.4		-0.8		0.1		0.0	
60% MSCI ACWI (Net) / 40% FTSE WGBI				0.4	64	12.4	24	4.4	23	6.4	97	4.9	97	5.9	97	6.4	Apr-94
60% S&P 500 / 40% BBgBarc Aggregate				2.0	2	15.9	1	7.1	1	9.3	6	8.0	3	9.6	1	8.4	Apr-94
InvMetrics Public DB > \$1B Net Median				0.5		10.8		3.6		7.7		6.1		8.0		7.5	Apr-94
<b>Total Fund ex Parametric</b>	<b>5,865,021,230</b>	<b>99.4</b>	<b>--</b>	<b>0.7</b>	<b>--</b>	<b>12.7</b>	<b>--</b>	<b>3.9</b>	<b>--</b>	<b>8.4</b>	<b>--</b>	<b>6.4</b>	<b>--</b>	<b>8.7</b>	<b>--</b>	<b>7.9</b>	<b>Apr-94</b>
<b>Total Fund ex Private Equity</b>	<b>5,461,207,805</b>	<b>92.5</b>	<b>--</b>	<b>0.5</b>	<b>56</b>	<b>13.0</b>	<b>21</b>	<b>3.7</b>	<b>46</b>	<b>8.0</b>	<b>37</b>	<b>6.2</b>	<b>46</b>	<b>--</b>	<b>--</b>	<b>8.4</b>	<b>Jan-12</b>
Policy Index				<u>0.8</u>	30	<u>13.7</u>	11	<u>4.6</u>	21	<u>8.9</u>	10	<u>7.3</u>	10	<u>8.7</u>	21	<u>9.1</u>	Jan-12
Over/Under				-0.3		-0.7		-0.9		-0.9		-1.1				-0.7	
InvMetrics Public DB > \$1B Net Median				0.5		10.8		3.6		7.7		6.1		8.0		8.2	Jan-12
<b>Total US Equity</b>	<b>1,650,156,154</b>	<b>28.0</b>	<b>26.0</b>	<b>1.4</b>	<b>24</b>	<b>20.6</b>	<b>26</b>	<b>3.7</b>	<b>25</b>	<b>13.2</b>	<b>15</b>	<b>10.7</b>	<b>17</b>	<b>13.5</b>	<b>4</b>	<b>9.3</b>	<b>Dec-93</b>
Russell 3000				<u>1.2</u>	36	<u>20.1</u>	37	<u>2.9</u>	40	<u>12.8</u>	27	<u>10.4</u>	27	<u>13.1</u>	16	<u>9.6</u>	Dec-93
Over/Under				0.2		0.5		0.8		0.4		0.3		0.4		-0.3	
InvMetrics Public DB US Eq Net Median				1.0		19.9		2.4		12.2		10.0		12.5		9.2	Dec-93
Western U.S. Index Plus	229,398,461	3.9		<b>1.8</b>	<b>38</b>	<b>22.1</b>	<b>27</b>	<b>4.6</b>	<b>34</b>	<b>13.9</b>	<b>29</b>	<b>11.3</b>	<b>25</b>	<b>15.2</b>	<b>4</b>	<b>6.3</b>	May-07
S&P 500				<u>1.7</u>	40	<u>20.6</u>	37	<u>4.3</u>	36	<u>13.4</u>	34	<u>10.8</u>	29	<u>13.2</u>	29	<u>7.8</u>	May-07
Over/Under				0.1		1.5		0.3		0.5		0.5		2.0		-1.5	
eV US Large Cap Equity Net Median				1.3		19.3		2.6		12.0		9.4		12.3		7.6	May-07
Blackrock Russell 1000 Index	1,355,717,249	23.0		<b>1.4</b>	<b>45</b>	<b>20.5</b>	<b>38</b>	<b>3.9</b>	<b>39</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>11.6</b>	May-17
Russell 1000				<u>1.4</u>	45	<u>20.5</u>	38	<u>3.9</u>	39	<u>13.2</u>	36	<u>10.6</u>	32	<u>13.2</u>	30	<u>11.6</u>	May-17
Over/Under				0.0		0.0		0.0								0.0	
eV US Large Cap Equity Net Median				1.3		19.3		2.6		12.0		9.4		12.3		10.5	May-17
Blackrock Russell 2500 Index	65,040,443	1.1		<b>-1.2</b>	<b>56</b>	<b>17.8</b>	<b>55</b>	<b>-4.0</b>	<b>57</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>7.3</b>	May-17
Russell 2500				<u>-1.3</u>	57	<u>17.7</u>	56	<u>-4.0</u>	57	<u>9.5</u>	50	<u>8.6</u>	40	<u>12.2</u>	38	<u>7.2</u>	May-17
Over/Under				0.1		0.1		0.0								0.1	
eV US Small-Mid Cap Equity Net Median				-0.6		18.2		-3.4		9.5		8.0		11.8		7.0	May-17

Color Coding: PERFORMANCE: Green-Over performance, Red-Under performance / Color Coding: RANKS: 1 - 25 Green - Positive Result, 26 - 50 Yellow, 50 - 75 Orange, 76 - 100 Red - Negative Result.

Policy Index as of July 2019: 26% Russell 3000 Index, 17% MSCI ACWI ex U.S., 10% MSCI ACWI, 13% Russell 3000 +3%, 19% BBgBarc US Aggregate, 8% NCREIF ODCE, 7% CPI +2%.

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Total Non-US Equity</b>	<b>915,243,992</b>	<b>15.5</b>	<b>17.0</b>	<b>-2.3</b>	<b>81</b>	<b>10.9</b>	<b>70</b>	<b>-1.3</b>	<b>40</b>	<b>6.6</b>	<b>25</b>	<b>3.7</b>	<b>37</b>	<b>5.2</b>	<b>46</b>	<b>6.2</b>	<b>Mar-94</b>
MSCI ACWI ex USA				-1.8	41	11.6	59	-1.2	37	6.3	33	2.9	61	4.5	77	5.0	Mar-94
Over/Under				-0.5		-0.7		-0.1		0.3		0.8		0.7		1.2	
MSCI EAFE				-1.1	12	12.8	27	-1.3	41	6.5	27	3.3	50	4.9	56	4.7	Mar-94
MSCI ACWI ex USA NR LCL				1.7	1	15.1	8	2.6	5	8.5	6	6.0	4	6.8	5	--	Mar-94
MSCI EAFE NR LCL				1.8	1	15.7	7	1.6	8	8.3	7	6.0	4	7.0	4	4.9	Mar-94
InvMetrics Public DB ex-US Eq Net Median				-1.9		11.8		-1.9		5.9		3.2		5.0		5.5	Mar-94
<b>BlackRock ACWI ex-U.S. Index</b>	<b>467,397,110</b>	<b>7.9</b>		<b>-1.7</b>	<b>37</b>	<b>11.6</b>	<b>67</b>	<b>-1.6</b>	<b>50</b>	<b>6.3</b>	<b>58</b>	<b>3.3</b>	<b>72</b>	<b>4.8</b>	<b>83</b>	<b>2.5</b>	<b>Mar-07</b>
MSCI ACWI ex USA IMI				-1.7	38	11.4	68	-1.8	51	6.1	60	3.0	76	4.7	83	2.2	Mar-07
Over/Under				0.0		0.2		0.2		0.2		0.3		0.1		0.3	
MSCI ACWI ex USA NR LCL				1.7	2	15.1	38	2.6	14	8.5	21	6.0	24	6.8	43	3.4	Mar-07
eV ACWI ex-US All Cap Equity Net Median				-1.9		13.5		-1.8		6.7		4.1		6.5		3.3	Mar-07
<b>Sprucegrove</b>	<b>218,927,679</b>	<b>3.7</b>		<b>-5.5</b>	<b>99</b>	<b>6.7</b>	<b>89</b>	<b>-5.2</b>	<b>80</b>	<b>6.4</b>	<b>58</b>	<b>3.0</b>	<b>76</b>	<b>5.5</b>	<b>79</b>	<b>6.8</b>	<b>Mar-02</b>
MSCI ACWI ex USA				-1.8	42	11.6	68	-1.2	47	6.3	58	2.9	76	4.5	84	6.1	Mar-02
Over/Under				-3.7		-4.9		-4.0		0.1		0.1		1.0		0.7	
MSCI EAFE				-1.1	19	12.8	58	-1.3	47	6.5	55	3.3	72	4.9	82	5.7	Mar-02
MSCI ACWI ex USA NR LCL				1.7	2	15.1	38	2.6	14	8.5	21	6.0	24	6.8	43	5.3	Mar-02
MSCI EAFE NR LCL				1.8	2	15.7	36	1.6	19	8.3	24	6.0	24	7.0	37	4.5	Mar-02
eV ACWI ex-US All Cap Equity Net Median				-1.9		13.5		-1.8		6.7		4.1		6.5		6.7	Mar-02
<b>Hexavest</b>	<b>91,705,172</b>	<b>1.6</b>		<b>-1.0</b>	<b>36</b>	<b>8.7</b>	<b>82</b>	<b>-0.4</b>	<b>27</b>	<b>4.0</b>	<b>79</b>	<b>2.1</b>	<b>76</b>	<b>--</b>	<b>--</b>	<b>3.7</b>	<b>Dec-10</b>
MSCI EAFE				-1.1	38	12.8	49	-1.3	30	6.5	35	3.3	62	4.9	71	4.5	Dec-10
Over/Under				0.1		-4.1		0.9		-2.5		-1.2		--		-0.8	
MSCI EAFE NR LCL				1.8	4	15.7	19	1.6	13	8.3	21	6.0	11	7.0	28	7.1	Dec-10
eV EAFE All Cap Equity Net Median				-1.5		12.6		-2.9		5.9		4.2		6.1		5.3	Dec-10
<b>Walter Scott</b>	<b>137,214,031</b>	<b>2.3</b>		<b>-0.1</b>	<b>10</b>	<b>17.4</b>	<b>29</b>	<b>6.1</b>	<b>4</b>	<b>9.5</b>	<b>10</b>	<b>7.2</b>	<b>12</b>	<b>--</b>	<b>--</b>	<b>6.3</b>	<b>Dec-10</b>
MSCI ACWI ex USA				-1.8	42	11.6	68	-1.2	47	6.3	58	2.9	76	4.5	84	3.4	Dec-10
Over/Under				1.7		5.8		7.3		3.2		4.3		6.8		2.9	
MSCI ACWI ex USA NR LCL				1.7	2	15.1	38	2.6	14	8.5	21	6.0	24	6.8	43	6.4	Dec-10
MSCI EAFE				-1.1	19	12.8	58	-1.3	47	6.5	55	3.3	72	4.9	82	4.5	Dec-10
eV ACWI ex-US All Cap Equity Net Median				-1.9		13.5		-1.8		6.7		4.1		6.5		5.0	Dec-10



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Total Global Equity</b>	<b>635,952,625</b>	<b>10.8</b>	<b>10.0</b>	<b>0.1</b>	<b>67</b>	<b>16.6</b>	<b>24</b>	<b>1.8</b>	<b>62</b>	<b>10.2</b>	<b>29</b>	<b>6.5</b>	<b>65</b>	<b>8.2</b>	<b>29</b>	<b>6.0</b>	<b>May-05</b>
MSCI ACWI				<u>0.0</u>	68	<u>16.2</u>	33	<u>1.4</u>	64	<u>9.7</u>	56	<u>6.7</u>	61	<u>8.3</u>	27	<u>6.7</u>	May-05
Over/Under				0.1		0.4		0.4		0.5		-0.2		-0.1		-0.7	
InvMetrics Public DB Gbl Eq Net Median				0.8		15.8		2.4		9.8		7.0		5.3		5.6	May-05
<b>BlackRock MSCI ACWI Equity Index</b>	<b>635,952,625</b>	<b>10.8</b>		<b>0.1</b>	<b>44</b>	<b>16.6</b>	<b>49</b>	<b>1.8</b>	<b>43</b>	<b>10.2</b>	<b>34</b>	<b>7.1</b>	<b>45</b>	--	--	<b>9.8</b>	<b>Aug-12</b>
MSCI ACWI				<u>0.0</u>	46	<u>16.2</u>	53	<u>1.4</u>	46	<u>9.7</u>	39	<u>6.7</u>	55	<u>8.3</u>	61	<u>9.4</u>	Aug-12
Over/Under				0.1		0.4		0.4		0.5		0.4		0.4		0.4	
eV All Global Equity Net Median				-0.2		16.5		0.8		8.9		6.9		9.0		9.6	Aug-12



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Total Private Equity</b>	<b>440,424,192</b>	<b>7.5</b>	<b>13.0</b>	<b>4.6</b>	<b>15</b>	<b>10.2</b>	<b>32</b>	<b>13.7</b>	<b>39</b>	<b>16.5</b>	<b>27</b>	<b>13.9</b>	<b>32</b>	<b>--</b>	<b>--</b>	<b>14.8</b>	<b>Jan-12</b>
Russell 3000 + 3%				<u>1.9</u>	67	<u>22.7</u>	1	<u>6.0</u>	84	<u>16.2</u>	28	<u>13.7</u>	34	<u>16.4</u>	1	<u>17.2</u>	Jan-12
Over/Under				2.7		-12.5		7.7		0.3		0.2		16.4		-2.4	
Cambridge Associates Global All PE (Qtr Lag)				3.5	36	7.0	48	10.5	59	14.5	48	10.9	57	13.7	35	12.9	Jan-12
InvMetrics Public DB Private Eq Net Median				2.7		6.6		11.4		14.1		12.1		12.7		13.1	Jan-12
<b>Adams Street Global Fund Series</b>	<b>188,002,128</b>	<b>3.2</b>		<b>4.9</b>	<b>--</b>	<b>10.2</b>	<b>--</b>	<b>15.0</b>	<b>--</b>	<b>15.5</b>	<b>--</b>	<b>12.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>13.7</b>	<b>Jan-12</b>
Russell 3000 + 3%				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>17.2</u>	Jan-12
Over/Under				3.0		-12.5		9.0		-0.7		-1.1		16.4		-3.5	
<b>Harbourvest</b>	<b>97,349,703</b>	<b>1.6</b>		<b>5.8</b>	<b>--</b>	<b>12.5</b>	<b>--</b>	<b>15.6</b>	<b>--</b>	<b>20.6</b>	<b>--</b>	<b>18.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>19.5</b>	<b>Aug-13</b>
Russell 3000 + 3%				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>14.8</u>	Aug-13
Over/Under				3.9		-10.2		9.6		4.4		4.7		16.4		4.7	
<b>Pantheon Global Secondary Funds</b>	<b>38,232,925</b>	<b>0.6</b>		<b>3.7</b>	<b>--</b>	<b>-0.9</b>	<b>--</b>	<b>2.1</b>	<b>--</b>	<b>15.1</b>	<b>--</b>	<b>11.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>11.9</b>	<b>Jan-12</b>
Russell 3000 + 3%				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>17.2</u>	Jan-12
Over/Under				1.8		-23.6		-3.9		-1.1		-2.1		16.4		-5.3	
<b>Drive Capital Fund II</b>	<b>13,073,592</b>	<b>0.2</b>		<b>12.0</b>	<b>--</b>	<b>49.7</b>	<b>--</b>	<b>47.5</b>	<b>--</b>	<b>-11.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-11.6</b>	<b>Sep-16</b>
Russell 3000 + 3%				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>15.9</u>	Sep-16
Over/Under				10.1		27.0		41.5		-28.1		--		16.4		-27.5	
<b>Abbott Secondary Opportunities</b>	<b>16,439,950</b>	<b>0.3</b>		<b>2.6</b>	<b>--</b>	<b>10.9</b>	<b>--</b>	<b>15.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>21.1</b>	<b>Jan-18</b>
Russell 3000 + 3%				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>10.9</u>	Jan-18
Over/Under				0.7		-11.8		9.3		--		--		16.4		10.2	
<b>Clearlake Capital Partners V</b>	<b>7,659,117</b>	<b>0.1</b>		<b>8.4</b>	<b>--</b>	<b>32.0</b>	<b>--</b>	<b>55.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>40.4</b>	<b>Mar-18</b>
Russell 3000 + 3%				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>10.8</u>	Mar-18
Over/Under				6.5		9.3		49.2		--		--		16.4		29.6	

Private equity performance shown above is calculated using a time-weighted return methodology. Market values shown are cash-adjusted based on the current period's cash flows.

Adams Street Global Fund Series includes Adams Street 2010 U.S. Fund, 2010 Non-U.S. Developed Markets Fund, 2010 Non-U.S. Emerging Markets Fund, 2010 Direct Fund, 2013, and 2016 Global Fund.

Pantheon Global Secondary Funds includes Pantheon Global Secondary Fund IV and Global Secondary Fund V.

## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Battery Ventures XII	9,527,891	0.2		6.6	--	4.6	--	2.3	--	--	--	--	--	--	--	-2.5	Apr-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	12.7	Apr-18
Over/Under				4.7		-18.1		-3.7								-15.2	
Insight Venture Partners X	19,440,057	0.3		5.0	--	13.0	--	13.7	--	--	--	--	--	--	--	4.6	May-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	13.0	May-18
Over/Under				3.1		-9.7		7.7								-8.4	
GTCR Fund XII	6,132,507	0.1		0.0	--	-5.8	--	-11.1	--	--	--	--	--	--	--	-36.6	Jun-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	11.3	Jun-18
Over/Under				-1.9		-28.5		-17.1								-47.9	
Buenaventure One, LLC	26,460,264	0.4		-0.3	--	6.4	--	5.6	--	--	--	--	--	--	--	4.5	Jul-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	11.3	Jul-18
Over/Under				-2.2		-16.3		-0.4								-6.8	
ECI 11	3,134,735	0.1		8.7	--	18.8	--	--	--	--	--	--	--	--	--	15.7	Dec-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	11.6	Dec-18
Over/Under				6.8		-3.9										4.1	
The Resolute Fund IV L.P.	5,076,223	0.1		6.2	--	50.8	--	--	--	--	--	--	--	--	--	50.8	Jan-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	22.7	Jan-19
Over/Under				4.3		28.1										28.1	
GGV Capital VII L.P.	1,760,916	0.0		-6.3	--	--	--	--	--	--	--	--	--	--	--	-6.3	Feb-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	12.8	Feb-19
Over/Under				-8.2												-19.1	
GGV Discovery II, L.P.	410,826	0.0		-5.9	--	--	--	--	--	--	--	--	--	--	--	-5.9	Feb-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	12.8	Feb-19
Over/Under				-7.8												-18.7	
Drive Capital Overdrive Fund I	2,013,359	0.0		0.0	--	--	--	--	--	--	--	--	--	--	--	0.0	May-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	2.5	May-19
Over/Under				-1.9												-2.5	

Private equity performance shown above is calculated using a time-weighted return methodology. Market values shown are cash-adjusted based on the current period's cash flows.

Adams Street Global Fund Series includes Adams Street 2010 U.S. Fund, 2010 Non-U.S. Developed Markets Fund, 2010 Non-U.S. Emerging Markets Fund, 2010 Direct Fund, 2013, and 2016 Global Fund.

Pantheon Global Secondary Funds includes Pantheon Global Secondary Fund IV and Global Secondary Fund V.

## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Riverside Micro Cap Fund V, LP	1,763,440	0.0		21.3		--		--		--		--		--		-29.2	May-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	2.5	May-19
Over/Under				19.4												-31.7	
GGV Capital VII Plus, LP	546,100	0.0		0.0		--		--		--		--		--		0.0	Jun-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	9.3	Jun-19
Over/Under				-1.9												-9.3	
Astorg VII L.P.	340,057	0.0		-31.8		--		--		--		--		--		-31.8	Jul-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	1.9	Jul-19
Over/Under				-33.7												-33.7	
M/C Partners Fund VIII LP. Limited Partnership	393,657	0.0		-3.8		--		--		--		--		--		-3.8	Jul-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	1.9	Jul-19
Over/Under				-5.7												-5.7	
Genstar Capital Partners IX	778,621	0.0		--		--		--		--		--		--		--	Aug-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	0.2	Aug-19
Over/Under																	
Genstar IX Opportunities Fund I	366,591	0.0		--		--		--		--		--		--		0.0	Aug-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	0.2	Aug-19
Over/Under																-0.2	
ABRY Partners IX, LP	1,254,257	0.0		--		--		--		--		--		--		-20.6	Sep-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	2.0	Sep-19
Over/Under																-22.6	





# VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

## PRIVATE EQUITY LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment <sup>1</sup>	Call Ratio	Add'l Fees <sup>2</sup>	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Since Inception	
													Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
Abbott Secondary Opportunities, LP.	2017	12/21/2017	\$25,000,000	\$15,937,843	\$9,424,874	64%	--	\$2,625,000	\$16,439,952	\$19,064,952	\$3,127,109	19.0%	0.16x	1.2x
ABRY Partners IX	2019	12/6/2018	\$10,600,000	\$1,579,565	\$9,020,435	0%	--	--	\$1,254,256	\$1,254,256	(\$325,309)	-79.6%	--	0.79x
Adams Street 2010 U.S. Fund	2010	5/21/2010	\$42,500,000	\$37,442,500	\$5,057,500	88%	\$15,213	\$29,417,857	\$38,552,632	\$67,970,489	\$30,512,776	14.6%	0.79x	1.82x
Adams Street 2010 Non-U.S. Dev. Mkts Fund	2010	5/21/2010	\$25,500,000	\$22,325,249	\$3,174,751	88%	\$1,589	\$19,382,964	\$16,409,737	\$35,792,701	\$13,465,863	12.2%	0.87x	1.6x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	\$8,500,000	\$7,633,000	\$867,000	90%	--	\$2,514,266	\$10,156,556	\$12,670,822	\$5,037,822	11.1%	0.33x	1.66x
Adams Street 2010 Direct Fund	2010	5/21/2010	\$8,500,000	\$8,066,500	\$433,500	95%	\$6,697	\$9,611,317	\$4,599,676	\$14,210,993	\$6,137,796	12.5%	1.19x	1.76x
Adams Street 2013 Global Fund	2013	6/27/2013	\$75,000,000	\$61,350,000	\$13,650,000	82%	\$10,728	\$13,610,624	\$76,965,453	\$90,576,077	\$29,215,349	11.9%	0.22x	1.48x
Adams Street 2016 Global Fund	2016	12/22/2016	\$60,000,000	\$31,620,000	\$28,380,000	53%	--	\$3,621,043	\$34,470,696	\$38,091,739	\$6,471,739	15.8%	0.11x	1.2x
Adams Street Co-Investment Fund IV A	2018	9/24/2018	\$30,000,000	\$6,967,808	\$23,100,000	23%	\$67,808	\$0	\$7,168,225	\$7,168,225	\$132,609	3.8%	0x	1.03x
Advent International GPE IX	2019	5/23/2019	\$10,000,000	--	\$10,000,000	--	--	--	--	--	--	--	--	--
Astorg VII	2019	12/17/2018	\$8,438,268	\$437,999	\$8,000,269	5%	--	\$0	\$340,057	\$340,057	(\$97,942)	-59.9%	0x	0.78x
Battery Ventures XII	2018	2/1/2018	\$9,050,000	\$5,658,965	\$3,391,035	63%	--	\$0	\$5,734,624	\$5,734,624	\$75,659	2.1%	0x	1.01x
Battery Ventures XII Side Fund	2018	2/1/2018	\$5,050,000	\$3,540,555	\$1,509,445	70%	--	\$0	\$3,793,267	\$3,793,267	\$252,712	11.1%	0x	1.07x
Buenaventure One, LLC	2018	1/5/2018	\$91,426,500	\$25,780,590	\$65,645,910	28%	--	\$403,156	\$26,460,263	\$26,863,419	\$1,082,829	5.3%	0.02x	1.04x
CapVest Equity Partners IV	2019	7/11/2018	\$12,057,822	--	\$12,057,822	0%	--	--	(\$51,103)	(\$51,103)	--	--	--	--
Clearlake Capital Partners V	2017	12/22/2017	\$9,950,000	\$6,420,101	\$4,137,237	65%	\$46,158	\$1,241,050	\$7,611,075	\$8,852,125	\$2,385,866	45.5%	0.19x	1.38x
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$18,000,000	\$12,000,000	60%	--	\$6,147	\$18,953,238	\$18,959,385	\$959,385	6.2%	0x	1.05x
Drive Capital Fund II	2016	9/1/2016	\$15,000,000	\$9,407,887	\$5,595,323	63%	\$3,210	\$0	\$13,073,593	\$13,073,593	\$3,662,496	24.8%	0x	1.39x
Drive Capital Fund III	2019	4/5/2019	\$7,500,000	--	\$7,500,000	--	--	--	--	--	--	--	--	--
Drive Capital Overdrive Fund I	2019	4/5/2019	\$7,500,000	\$2,013,359	\$5,486,641	27%	--	\$0	\$1,959,469	\$1,959,469	(\$53,890)	-13.9%	0x	0.97x
ECI 11	2018	7/5/2018	\$9,302,954	\$2,853,854	\$6,449,100	31%	--	\$0	\$2,543,810	\$2,543,810	(\$310,044)	-22.6%	0x	0.89x
Flexpoint Fund IV-A	2019	7/2/2019	\$10,650,000	--	\$10,650,000	--	--	--	--	--	--	--	--	--
Flexpoint Overage Fund IV-A	2019	7/2/2019	\$3,550,000	--	\$3,550,000	--	--	--	--	--	--	--	--	--
Genstar Capital Partners IX	2019	2/21/2019	\$7,500,000	\$850,731	\$6,649,269	11%	--	--	\$778,621	\$778,621	(\$72,110)	-87.4%	--	0.92x
Genstar Capital Partners IX Opportunities Program	2019	2/21/2019	\$2,500,000	\$366,591	\$2,133,409	0%	--	\$0	\$366,591	\$366,591	\$0	0.0%	0x	1x
GGV Capital VII	2019	8/15/2018	\$10,160,000	\$1,879,600	\$8,280,400	19%	--	\$0	\$1,760,916	\$1,760,916	(\$118,684)	-13.6%	0x	0.94x
GGV Capital VII Plus	2019	8/15/2018	\$2,540,000	\$546,100	\$1,993,900	22%	--	\$0	\$546,100	\$546,100	\$0	0.0%	0x	1x
GGV Discovery II	2019	8/15/2018	\$2,100,000	\$430,500	\$1,669,500	21%	--	\$0	\$410,826	\$410,826	(\$19,674)	-13.6%	0x	0.95x
Great Hill Equity Partners VII	2019	6/28/2019	\$8,900,000	--	\$8,900,000	--	--	--	--	--	--	--	--	--
GTCR Fund XII	2017	9/29/2017	\$30,000,000	\$7,728,000	\$22,367,792	26%	--	\$540,067	\$5,823,243	\$6,363,310	(\$1,364,690)	-21.0%	0.07x	0.82x
HarbourVest - Dover Street VIII	2013	5/30/2013	\$67,500,000	\$61,509,954	\$6,075,000	91%	\$84,954	\$71,696,542	\$25,656,949	\$97,353,491	\$35,758,583	20.9%	1.17x	1.58x
HarbourVest - Dover Street IX	2016	12/16/2016	\$60,000,000	\$40,800,000	\$19,200,000	68%	--	\$11,992,086	\$41,859,773	\$53,851,859	\$13,051,859	29.6%	0.29x	1.32x
HarbourVest - Dover Street X	2019	5/31/2019	\$40,000,000	--	\$40,000,000	--	--	--	\$186,467	\$186,467	--	--	--	--
HarbourVest - PRINS CO INVEST IV L.P.	2017	6/2/2017	\$30,000,000	\$24,464,388	\$5,732,352	82%	--	\$4,951,347	\$26,882,551	\$31,833,898	\$7,369,510	16.2%	0.2x	1.3x
HarbourVest - PRINS CO INVEST V L.P.	2019	7/31/2018	\$35,000,000	--	\$35,000,000	--	--	\$0	\$2,950,891	\$2,950,891	--	--	--	--
Hellman & Friedman Capital Partners IX	2019	9/28/2018	\$19,800,000	--	\$19,800,000	0%	--	--	(\$99,871)	(\$99,871)	--	--	--	--
Insight Venture Partners X	2017	10/13/2017	\$25,000,000	\$17,750,000	\$7,250,000	71%	--	\$8,561	\$19,440,049	\$19,448,610	\$1,698,610	11.5%	0x	1.1x
M/C Partners VIII	2019	4/2/2018	\$10,000,000	\$504,514	\$9,495,486	0%	--	\$0	\$393,657	\$393,657	(\$110,857)	-60.7%	0x	0.78x
Monroe Capital Private Credit Fund III	2018	9/5/2018	\$25,000,000	\$17,652,142	\$7,347,858	71%	--	\$878,524	\$17,632,108	\$18,510,632	\$858,490	11.0%	0.05x	1.05x
Oak HC/FT Partners III	2019	7/31/2019	\$15,000,000	--	\$15,000,000	--	--	--	--	--	--	--	--	--
Pantheon Global Secondary Fund IV	2010	8/20/2010	\$15,000,000	\$9,960,000	\$5,040,000	66%	--	\$12,843,543	\$2,845,529	\$15,689,072	\$5,729,072	13.5%	1.29x	1.58x
Pantheon Global Secondary Fund V	2015	2/26/2015	\$50,000,000	\$33,566,509	\$16,433,491	67%	(\$162,514)	\$10,437,534	\$35,399,989	\$45,837,523	\$12,433,528	14.8%	0.31x	1.37x
The Resolute Fund IV	2018	5/2/2018	\$20,000,000	\$5,775,291	\$15,341,927	29%	--	\$1,971,794	\$5,076,222	\$7,048,016	\$1,272,725	65.7%	0.34x	1.22x
Riverside Micro-Cap Fund V	2018	8/21/2018	\$10,000,000	\$2,020,662	\$7,979,338	20%	--	\$0	\$1,763,440	\$1,763,440	(\$257,222)	-47.9%	0x	0.87x
TA XIII	2019	5/2/2019	\$10,000,000	--	\$10,000,000	--	--	--	--	--	--	--	--	--
<b>Total VCERA Private Equity Program</b>	--	<b>5/21/2010</b>	<b>\$1,011,075,544</b>	<b>\$492,840,757</b>	<b>\$520,770,564</b>	<b>49%</b>	<b>\$73,843</b>	<b>\$197,753,422</b>	<b>\$476,109,527</b>	<b>\$673,862,949</b>	<b>\$177,961,965</b>	<b>14.9%</b>	<b>0.4x</b>	<b>1.37x</b>

1. Includes recycled/recallable distributions received to date.

2. Add'l Fees represents notional interest paid/(received).

2. Add'l Fees for Pantheon Global Secondary Fund V includes notional interest paid/(received) and management fee rebates paid to VCERA.

Note: Private equity performance data is reported net of fees.

Performance shown is based on 9/30/2019 statement of investments produced by Abbott Capital.



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Total US Fixed Income</b>	<b>1,039,740,171</b>	<b>17.6</b>	<b>14.0</b>	<b>1.8</b>	<b>37</b>	<b>7.8</b>	<b>41</b>	<b>9.1</b>	<b>30</b>	<b>3.3</b>	<b>29</b>	<b>3.4</b>	<b>41</b>	<b>4.9</b>	<b>17</b>	<b>5.8</b>	<b>Feb-94</b>
BBgBarc US Aggregate TR				<u>2.3</u>	20	<u>8.5</u>	21	<u>10.3</u>	10	<u>2.9</u>	50	<u>3.4</u>	44	<u>3.7</u>	52	<u>5.3</u>	Feb-94
Over/Under				-0.5		-0.7		-1.2		0.4		0.0		1.2		0.5	
InvMetrics Public DB US Fix Inc Net Median				1.6		7.3		8.1		2.9		3.2		3.8		5.3	Feb-94
<b>BlackRock U.S. Debt Fund</b>	<b>244,507,946</b>	<b>4.1</b>		<b>2.3</b>	<b>27</b>	<b>8.6</b>	<b>42</b>	<b>10.3</b>	<b>22</b>	<b>3.0</b>	<b>55</b>	<b>3.4</b>	<b>50</b>	<b>3.8</b>	<b>56</b>	<b>5.2</b>	<b>Nov-95</b>
BBgBarc US Aggregate TR				<u>2.3</u>	26	<u>8.5</u>	43	<u>10.3</u>	22	<u>2.9</u>	56	<u>3.4</u>	51	<u>3.7</u>	58	<u>5.1</u>	Nov-95
Over/Under				0.0		0.1		0.0		0.1		0.0		0.1		0.1	
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		5.0	Nov-95
<b>Western</b>	<b>327,361,716</b>	<b>5.5</b>		<b>2.6</b>	<b>16</b>	<b>10.0</b>	<b>27</b>	<b>11.7</b>	<b>13</b>	<b>3.9</b>	<b>36</b>	<b>4.3</b>	<b>27</b>	<b>5.6</b>	<b>29</b>	<b>6.1</b>	<b>Dec-96</b>
BBgBarc US Aggregate TR				<u>2.3</u>	26	<u>8.5</u>	43	<u>10.3</u>	22	<u>2.9</u>	56	<u>3.4</u>	51	<u>3.7</u>	58	<u>5.2</u>	Dec-96
Over/Under				0.3		1.5		1.4		1.0		0.9		1.9		0.9	
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		5.0	Dec-96
<b>Reams</b>	<b>329,970,489</b>	<b>5.6</b>		<b>1.3</b>	<b>56</b>	<b>5.7</b>	<b>69</b>	<b>7.2</b>	<b>54</b>	<b>2.8</b>	<b>59</b>	<b>2.6</b>	<b>69</b>	<b>4.3</b>	<b>46</b>	<b>5.2</b>	<b>Sep-01</b>
Reams Custom Index				<u>0.6</u>	92	<u>1.9</u>	97	<u>2.6</u>	94	<u>1.9</u>	85	<u>1.3</u>	93	<u>2.5</u>	79	<u>3.8</u>	Sep-01
Over/Under				0.7		3.8		4.6		0.9		1.3		1.8		1.4	
BBgBarc US Aggregate TR				<u>2.3</u>	26	<u>8.5</u>	43	<u>10.3</u>	22	<u>2.9</u>	56	<u>3.4</u>	51	<u>3.7</u>	58	<u>4.5</u>	Sep-01
3-Month LIBOR + 3%				<u>1.3</u>	56	<u>4.1</u>	80	<u>5.6</u>	66	<u>5.0</u>	22	<u>4.4</u>	27	<u>3.9</u>	55	<u>4.8</u>	Sep-01
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		4.5	Sep-01
<b>Loomis Strategic Alpha</b>	<b>48,323,810</b>	<b>0.8</b>		<b>-0.1</b>	<b>98</b>	<b>3.5</b>	<b>85</b>	<b>2.4</b>	<b>95</b>	<b>3.0</b>	<b>53</b>	<b>2.5</b>	<b>72</b>	<b>--</b>	<b>--</b>	<b>2.6</b>	<b>Jul-13</b>
BBgBarc US Aggregate TR				<u>2.3</u>	26	<u>8.5</u>	43	<u>10.3</u>	22	<u>2.9</u>	56	<u>3.4</u>	51	<u>3.7</u>	58	<u>3.5</u>	Jul-13
Over/Under				-2.4		-5.0		-7.9		0.1		-0.9				-0.9	
3-Month LIBOR + 3%				<u>1.3</u>	56	<u>4.1</u>	80	<u>5.6</u>	66	<u>5.0</u>	22	<u>4.4</u>	27	<u>3.9</u>	55	<u>4.2</u>	Jul-13
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		3.5	Jul-13
<b>Loomis Sayles Multi Strategy</b>	<b>89,576,210</b>	<b>1.5</b>		<b>1.0</b>	<b>69</b>	<b>7.8</b>	<b>48</b>	<b>7.8</b>	<b>47</b>	<b>4.3</b>	<b>30</b>	<b>4.1</b>	<b>30</b>	<b>6.6</b>	<b>21</b>	<b>6.3</b>	<b>Jul-05</b>
Loomis Custom Index				<u>1.8</u>	38	<u>9.2</u>	34	<u>8.9</u>	36	<u>3.8</u>	38	<u>3.9</u>	35	<u>4.9</u>	38	<u>5.1</u>	Jul-05
Over/Under				-0.8		-1.4		-1.1		0.5		0.2		1.7		1.2	
BBgBarc US Govt/Credit TR				<u>2.6</u>	16	<u>9.7</u>	29	<u>11.3</u>	14	<u>3.2</u>	50	<u>3.6</u>	44	<u>3.9</u>	54	<u>4.3</u>	Jul-05
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		4.2	Jul-05

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Barclays Aggregate

Loomis Custom Index: 65% Barclays Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index

As of January 2016, Loomis Strategic Alpha was moved from the Total Global Fixed Income composite to the Total US Fixed Income composite.



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Private Debt</b>	<b>43,699,809</b>	<b>0.7</b>	<b>3.0</b>	<b>1.7</b>	--	<b>6.1</b>	--	<b>7.2</b>	--	--	--	--	--	--	--	<b>6.2</b>	<b>Jan-18</b>
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				<u>1.7</u>	--	<u>10.5</u>	--	<u>7.1</u>	--	--	--	--	--	--	--	<u>6.5</u>	<i>Jan-18</i>
Over/Under				0.0		-4.4		0.1								-0.3	
CVI Credit Value Fund	18,953,232	0.3		<b>1.4</b>	--	<b>5.1</b>	--	<b>6.1</b>	--	--	--	--	--	--	--	<b>5.6</b>	<b>Jan-18</b>
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				<u>1.7</u>	--	<u>10.5</u>	--	<u>7.1</u>	--	--	--	--	--	--	--	<u>6.5</u>	<i>Jan-18</i>
Over/Under				-0.3		-5.4		-1.0								-0.9	
Monroe Capital Private Credit Fund III	17,632,109	0.3		<b>2.1</b>	--	<b>8.2</b>	--	--	--	--	--	--	--	--	--	<b>8.2</b>	<b>Dec-18</b>
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				<u>1.7</u>	--	<u>10.5</u>	--	<u>7.1</u>	--	--	--	--	--	--	--	<u>8.3</u>	<i>Dec-18</i>
Over/Under				0.4		-2.3										-0.1	
Bluebay Direct Lending Fund III	7,114,469	0.1		<b>1.9</b>	--	--	--	--	--	--	--	--	--	--	--	<b>3.6</b>	<b>Apr-19</b>
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				<u>1.7</u>	--	<u>10.5</u>	--	<u>7.1</u>	--	--	--	--	--	--	--	<u>4.3</u>	<i>Apr-19</i>
Over/Under				0.2												-0.7	
<b>Treasuries</b>	<b>107,883,030</b>	<b>1.8</b>	<b>2.0</b>	<b>4.2</b>	--	--	--	--	--	--	--	--	--	--	--	<b>7.8</b>	<b>Apr-19</b>
Reams 10-Year Treasuries	107,883,030	1.8		<b>4.2</b>	--	--	--	--	--	--	--	--	--	--	--	<b>7.8</b>	<b>Apr-19</b>
BBgBarc US Treasury 7-10 Yr TR				<u>2.7</u>	--	<u>9.8</u>	--	<u>14.0</u>	--	<u>2.4</u>	--	<u>3.8</u>	--	<u>4.4</u>	--	<u>6.8</u>	<i>Apr-19</i>
Over/Under				1.5												1.0	

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index.



## VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

### PRIVATE DEBT LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment <sup>1</sup>	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Since Inception	
												Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
BlueBay Direct Lending III	2017	2/12/2019	\$25,000,000	\$6,887,418	\$18,112,582	28%	\$0	\$7,114,468	\$7,114,468	\$227,049	4.2%	0x	1.03x
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$18,000,000	\$12,000,000	60%	\$6,147	\$18,953,232	\$18,959,379	\$959,379	6.2%	0x	1.05x
Monroe Capital Private Credit Fund III	2018	9/5/2018	\$25,000,000	\$17,652,142	\$7,347,858	71%	\$878,524	\$17,632,109	\$18,510,633	\$858,491	10.9%	0.05x	1.05x
<b>Total VCERA Private Debt Program</b>	<b>-</b>		<b>\$80,000,000</b>	<b>\$42,539,560</b>	<b>\$37,460,440</b>	<b>53%</b>	<b>\$884,671</b>	<b>\$43,699,809</b>	<b>\$44,584,480</b>	<b>\$2,044,919</b>	<b>8.2%</b>	<b>0.02x</b>	<b>1.05x</b>

1. Includes recycled/recallable distributions received to date.

Note: Private debt performance data is reported net of fees.

Performance shown is based on 9/30/2019 cash-adjusted market values.



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Total Real Estate</b>	<b>432,886,846</b>	<b>7.3</b>	<b>8.0</b>	<b>1.0</b>	<b>68</b>	<b>-0.1</b>	<b>93</b>	<b>1.5</b>	<b>90</b>	<b>4.8</b>	<b>92</b>	<b>7.0</b>	<b>92</b>	<b>8.9</b>	<b>73</b>	<b>7.6</b>	<b>Mar-94</b>
NCREIF ODCE Net				<u>1.1</u>	67	<u>3.1</u>	68	<u>4.6</u>	69	<u>6.3</u>	66	<u>8.4</u>	66	<u>9.8</u>	68	<u>8.0</u>	Mar-94
Over/Under				-0.1		-3.2		-3.1		-1.5		-1.4		-0.9		-0.4	
InvMetrics Public DB Real Estate				1.5		4.5		5.8		7.0		9.0		10.7		8.4	Mar-94
Pub+Priv Net Median																	
<b>Prudential Real Estate</b>	<b>163,568,319</b>	<b>2.8</b>		<b>1.4</b>	--	<b>4.6</b>	--	<b>6.4</b>	--	<b>7.4</b>	--	<b>9.2</b>	--	<b>10.9</b>	--	<b>6.3</b>	<b>Jun-04</b>
NCREIF ODCE Net				<u>1.1</u>	--	<u>3.1</u>	--	<u>4.6</u>	--	<u>6.3</u>	--	<u>8.4</u>	--	<u>9.8</u>	--	<u>7.0</u>	Jun-04
Over/Under				0.3		1.5		1.8		1.1		0.8		1.1		-0.7	
NCREIF ODCE				1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	10.9	--	8.0	Jun-04
<b>UBS Real Estate</b>	<b>269,318,526</b>	<b>4.6</b>		<b>0.7</b>	--	<b>-2.7</b>	--	<b>-1.2</b>	--	<b>3.3</b>	--	<b>5.9</b>	--	<b>7.9</b>	--	<b>6.8</b>	<b>Mar-03</b>
NCREIF ODCE Net				<u>1.1</u>	--	<u>3.1</u>	--	<u>4.6</u>	--	<u>6.3</u>	--	<u>8.4</u>	--	<u>9.8</u>	--	<u>7.2</u>	Mar-03
Over/Under				-0.4		-5.8		-5.8		-3.0		-2.5		-1.9		-0.4	
NCREIF ODCE				1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	10.9	--	8.2	Mar-03

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index.



## Ventura County Employees' Retirement Association

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Total Real Assets</b>	<b>454,395,092</b>	<b>7.7</b>	<b>7.0</b>	<b>-0.5</b>	--	<b>12.7</b>	--	<b>3.9</b>	--	<b>3.7</b>	--	<b>0.9</b>	--	--	--	<b>4.4</b>	<b>Apr-13</b>
Real Assets Index				<u>0.7</u>	--	<u>4.7</u>	--	<u>5.3</u>	--	<u>6.0</u>	--	<u>5.5</u>	--	--	--	<u>6.2</u>	<i>Apr-13</i>
Over/Under				<b>-1.2</b>		8.0		<b>-1.4</b>		<b>-2.3</b>		<b>-4.6</b>				<b>-1.8</b>	
Bridgewater All Weather Fund	339,831,982	5.8		<b>1.6</b>	--	<b>13.7</b>	--	<b>8.6</b>	--	<b>5.9</b>	--	<b>4.4</b>	--	--	--	<b>5.4</b>	Aug-13
CPI + 5% (Unadjusted)				<u>1.5</u>	--	<u>6.0</u>	--	<u>6.8</u>	--	<u>7.2</u>	--	<u>6.6</u>	--	--	--	<u>6.6</u>	<i>Aug-13</i>
Over/Under				0.1		7.7		1.8		<b>-1.3</b>		<b>-2.2</b>				<b>-1.2</b>	
Tortoise Energy Infrastructure	114,563,110	1.9		<b>-6.2</b>	--	<b>9.9</b>	--	<b>-8.1</b>	--	<b>-1.8</b>	--	<b>-6.6</b>	--	--	--	<b>0.2</b>	Apr-13
Tortoise MLP Index				<u>-4.2</u>	--	<u>14.3</u>	--	<u>-4.8</u>	--	<u>-1.2</u>	--	<u>-8.0</u>	--	--	--	<u>-2.4</u>	<i>Apr-13</i>
Over/Under				<b>-2.0</b>		<b>-4.4</b>		<b>-3.3</b>		<b>-0.6</b>		1.4				2.6	
<b>Overlay</b>	<b>181,250,086</b>	<b>3.1</b>	<b>0.0</b>														
Parametric	32,373,491	0.5															
Abbott Capital Cash	148,876,595	2.5															

Overlay performance is not applicable on an individual account level.

Color Coding: PERFORMANCE: Green-Over performance, Red-Under performance

Color Coding: RANKS: 1 - 25 Green - Positive Result, 26 - 50 Yellow, 50 - 75 Orange, 76 - 100 Red - Negative Result

# MANAGER DUE DILIGENCE

NEPC, LLC

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## DUE DILIGENCE MONITOR

The items below summarize the recent quarter's performance and any changes or announcements from the Plan's managers/products. A "-" indicates there were no material announcements. A "Yes" indicates there was an announcement and a brief summary is provided on the following pages. NEPC's Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determine if any action should be taken (by NEPC and/or by our clients). Events are rated: No Action, Watch, Hold, Client Review or Terminate. NEPC's recommendation in view of the recent quarter's developments (performance, manager events, and any of the longer-term trending data) is refreshed quarterly.

Investment Options	Performance (Recent Quarter)	Changes/ Announcements (Recent Quarter)	NEPC DD Committee Rec.	Plan Rec.	Comments	Last Onsite Conducted
BlackRock Russell 1000 Index	-	-	-	-		10/2013
Western U.S. Index Plus	-	-	-	-		6/2014
BlackRock Russell 2500 Index	-	-	-	-		10/2013
BlackRock MSCI ACWI ex-U.S. Index	-	-	-	-		10/2013
Sprucegrove	Bottom Quartile	-	-	-		N/A
Hexavest	-	-	-	Watch (Board Driven)	On Watch for Performance Issues	1/2013
Walter Scott	Top Quartile	-	-	-		10/2012
BlackRock MSCI ACWI Index	-	-	-	-		10/2013
Adams Street	N/A	-	-	-		11/2013
HarbourVest	N/A	-	-	-		3/2014
Pantheon	N/A	-	-	-		1/2015
Drive	N/A	-	-	-		
Abbott Secondary Opps.	N/A	-	-	-		
Carval Credit Value	N/A	-	-	-		
Battery Ventures	N/A	-	-	-		
Buenaventure One	N/A	-	-	-		
Clearlake Capital	N/A	-	-	-		
BlackRock U.S. Debt Fund	-	-	-	-		10/2013
Western	Top Quartile	-	-	-		6/2014
Reams	-	-	-	-		11/2013





# DUE DILIGENCE MONITOR

	Performance (Recent Quarter)	Changes/ Announcements (Recent Quarter)	NEPC DD Committee Rec.	Plan Rec.	Comments	Last Onsite Conducted
<b>Loomis Sayles Strategic Alpha</b>	Bottom Quartile	-	-	-		11/2013
<b>Loomis Sayles Multi-Sector Full Discretion</b>	-	-	-	-		11/2013
<b>Reams 10-Year Treasuries</b>	-	-	-	-		11/2013
<b>Monroe</b>	-	-	-	-		12/2018
<b>BlueBay</b>	-	-	-	-		11/2016
<b>Prudential</b>	N/A	-	-	-		7/2014
<b>RREEF</b>	N/A	-	-	-		7/2013
<b>UBS</b>	N/A	-	-	Watch		8/2011
<b>Bridgewater</b>	N/A	-	-	-		9/2012
<b>Tortoise</b>	N/A	Yes	Watch	-	Acquisition of Advisory Research Team	8/2013
<b>Parametric/Clifton</b>	N/A	-	-	-		7/2013

NEPC Due Diligence Committee Recommendation Key	
<b>No Action</b>	Informational items have surfaced; no action is recommended.
<b>Watch</b>	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
<b>Hold</b>	Serious issues have surfaced to be concerned over; manager cannot participate in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.
<b>Client Review</b>	Very serious issues have surfaced with an Investment Manager; manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to review the manager.
<b>Terminate</b>	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to replace the manager.



# DUE DILIGENCE MONITOR

The items below summarize any changes or announcements from your Plan managers/funds. A “Yes” indicates there was an announcement and a brief summary is provided separately. NEPC’s Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determines if any action should be taken by NEPC and/or by our clients. They rate events: No Action, Watch, Hold, Client Review or Terminate. NEPC considers ourselves to be a fiduciary, as ERISA defines the term in Section 3(21).

Investment Manager	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
Tortoise – Energy Infrastructure	Yes	Watch at the Firm Level

## Manager Changes/Announcements

Below is a summary of manager changes, announcements and due diligence events since the issuance of our last quarterly report.

NEPC Research was notified by Tortoise Capital Advisors (“Tortoise” or “the Firm”) that the Firm had reached a definitive agreement to acquire the midstream energy asset management business of Advisory Research Inc. (“Advisory”), from Piper Jaffray Companies. Piper Jaffray had acquired Advisory in 2010. The entire 6-person Advisory midstream energy infrastructure investment team, led by Senior Portfolio Managers Jim Cunnane, Jr. and Quinn Kiley, will join Tortoise. Advisory will maintain oversight of their current midstream energy offerings and client relationships. With the acquisition, Tortoise will gain Advisory’s private client focused, yield-oriented open end and closed end offerings, which Tortoise views as complimentary to their total return (albeit income leaning) focus. The investment teams of Tortoise and Advisory are expected to work independently of each other, while sharing macro views and distribution resources. The Advisory team will remain in their St. Louis, Missouri offices, and have signed 12-month employment contracts. The transaction is expected to close during the second half of 2019, subject to customary regulatory and closing conditions, including fund board/shareholder approval.

NEPC Research recommends Watch status at the firm level.

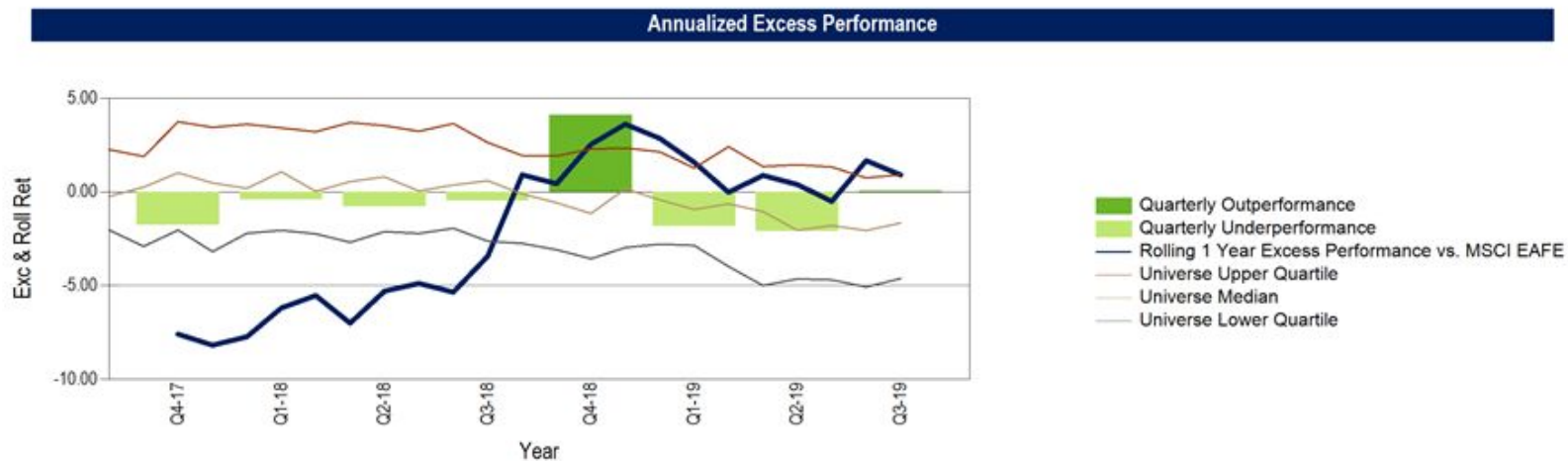
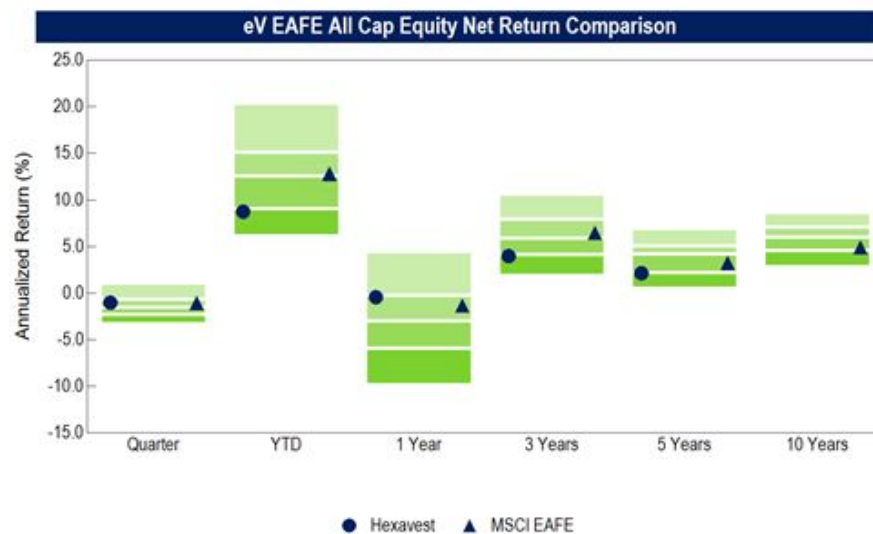
A legend key to our recommendations is provided below.

NEPC Due Diligence Committee Recommendation Key	
<b>No Action</b>	Informational items have surfaced; no action is recommended.
<b>Watch</b>	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
<b>Hold</b>	Serious issues have surfaced to be concerned over; manager cannot be in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.
<b>Client Review</b>	Very serious issues have surfaced with a manager; manager cannot be in future searches unless a client specifically requests. Current clients must be advised to review the manager.
<b>Terminate</b>	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot be in future searches unless a client specifically requests. Current clients must be advised to replace the manager.



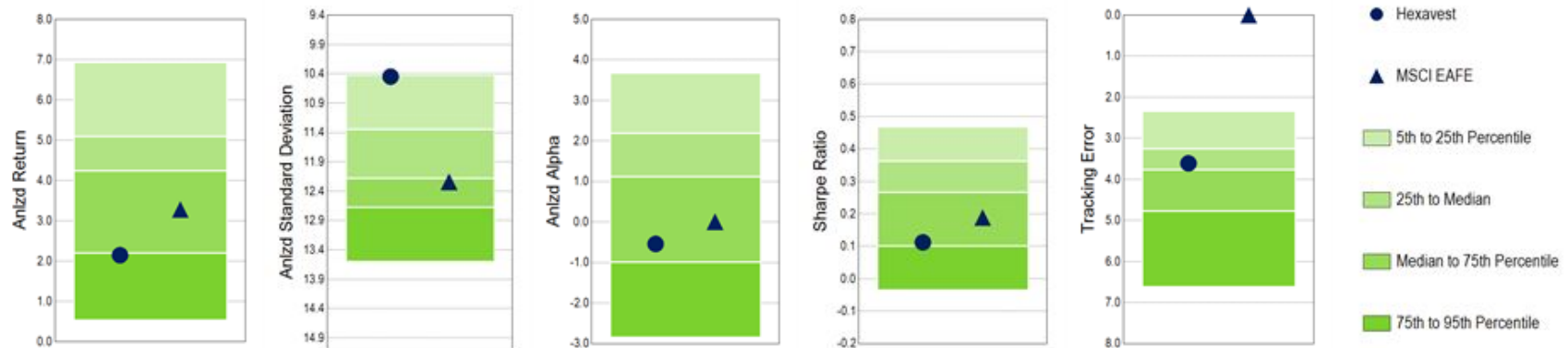
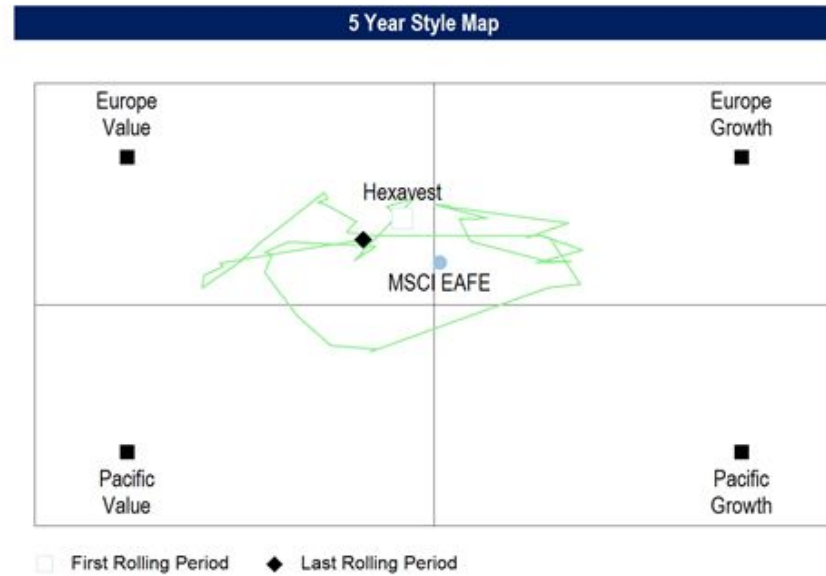
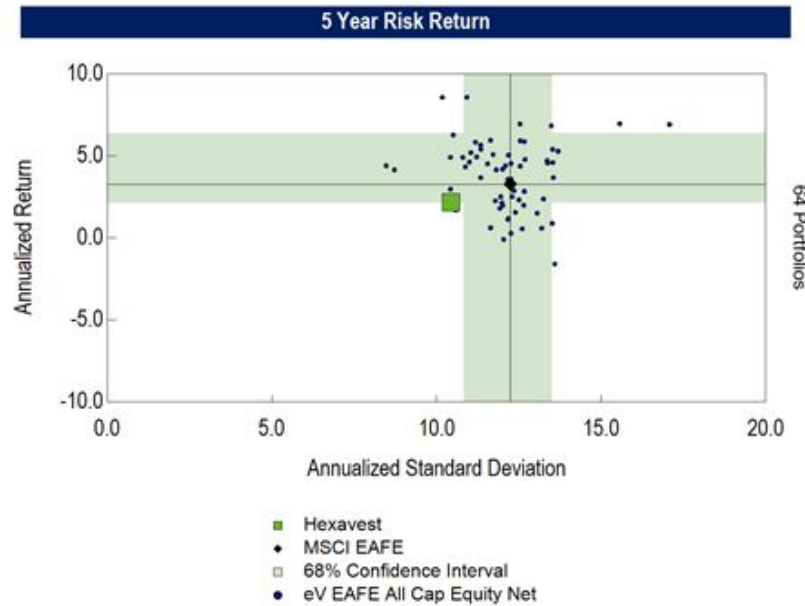
## Ventura County Employees' Retirement Association

# HEXAVEST



## Ventura County Employees' Retirement Association

# HEXAVEST



## Ventura County Employees' Retirement Association

**TOTAL FUND CALENDAR YEAR RETURN SUMMARY**

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
<b>Total Fund</b>	<b>-3.6</b>	<b>16.0</b>	<b>8.6</b>	<b>-0.9</b>	<b>6.3</b>	<b>18.1</b>	<b>14.0</b>	<b>0.3</b>	<b>15.1</b>	<b>24.2</b>	<b>-30.9</b>
Policy Index	-3.6	16.3	8.4	0.8	6.8	17.2	12.9	0.5	13.2	21.0	-27.1
Over/Under	0.0	-0.3	0.2	-1.7	-0.5	0.9	1.1	-0.2	1.9	3.2	-3.8
60% MSCI ACWI (Net) / 40% FTSE WGBI	-5.8	17.1	5.5	-2.6	2.3	11.4	10.3	-1.8	10.0	21.3	-24.1
60% S&P 500 / 40% BBgBarc Aggregate	-2.3	14.2	8.3	1.3	10.6	17.6	11.3	4.7	12.1	18.4	-22.1
<b>Total Fund ex Parametric*</b>	<b>-3.7</b>	<b>15.9</b>	<b>8.6</b>	<b>-0.9</b>	<b>6.3</b>	<b>17.8</b>	<b>13.7</b>	<b>0.6</b>	<b>14.5</b>	<b>23.3</b>	<b>-30.3</b>
<b>Total Fund ex Private Equity</b>	<b>-4.8</b>	<b>15.9</b>	<b>8.6</b>	<b>-1.4</b>	<b>6.1</b>	<b>16.2</b>	<b>13.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Policy Index	-3.6	16.3	8.4	0.8	6.8	17.2	12.9	0.5	13.2	21.0	-27.1
Over/Under	-1.2	-0.4	0.2	-2.2	-0.7	-1.0	0.4				
<b>Total US Equity</b>	<b>-5.0</b>	<b>21.4</b>	<b>13.0</b>	<b>0.5</b>	<b>12.5</b>	<b>34.0</b>	<b>16.9</b>	<b>0.9</b>	<b>18.5</b>	<b>29.2</b>	<b>-40.0</b>
Russell 3000	-5.2	21.1	12.7	0.4	12.4	33.5	16.4	1.1	17.5	28.6	-37.2
Over/Under	0.2	0.3	0.3	0.1	0.1	0.5	0.5	-0.2	1.0	0.6	-2.8
Western U.S. Index Plus	-5.3	22.7	13.8	1.1	14.2	32.9	20.7	1.0	24.7	42.6	-56.3
S&P 500	-4.4	21.8	12.0	1.4	13.7	32.4	16.0	2.1	15.1	26.5	-37.0
Over/Under	-0.9	0.9	1.8	-0.3	0.5	0.5	4.7	-1.1	9.6	16.1	-19.3
Blackrock Russell 1000 Index	-4.7	--	--	--	--	--	--	--	--	--	--
Russell 1000	-4.8	21.7	12.1	0.9	13.2	33.1	16.4	1.5	16.1	28.4	-37.6
Over/Under	0.1										
Blackrock Russell 2500 Index	-9.9	--	--	--	--	--	--	--	--	--	--
Russell 2500	-10.0	16.8	17.6	-2.9	7.1	36.8	17.9	-2.5	26.7	34.4	-36.8
Over/Under	0.1										



## Ventura County Employees' Retirement Association

## TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
<b>Total Non-US Equity</b>	<b>-13.0</b>	<b>26.5</b>	<b>6.6</b>	<b>-4.8</b>	<b>-3.6</b>	<b>16.3</b>	<b>17.9</b>	<b>-13.6</b>	<b>13.5</b>	<b>37.4</b>	<b>-44.1</b>
MSCI ACWI ex USA	-14.2	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4	-45.5
Over/Under	1.2	-0.7	2.1	0.9	0.3	1.0	1.1	0.1	2.3	-4.0	1.4
MSCI EAFE	-13.8	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4
MSCI ACWI ex USA NR LCL	-10.6	18.2	7.0	1.9	6.0	20.1	16.3	-12.2	7.6	31.7	-40.9
MSCI EAFE NR LCL	-11.0	15.2	5.3	5.3	5.9	26.9	17.3	-12.2	4.8	24.7	-40.3
BlackRock ACWI ex-U.S. Index	-14.6	28.1	4.7	-4.5	-3.8	16.0	17.2	-14.1	12.8	43.1	-45.6
MSCI ACWI ex USA IMI	-14.8	27.8	4.4	-4.6	-3.9	15.8	17.0	-14.3	12.7	43.6	-46.0
Over/Under	0.2	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.1	-0.5	0.4
MSCI ACWI ex USA NR LCL	-10.6	18.2	7.0	1.9	6.0	20.1	16.3	-12.2	7.6	31.7	-40.9
Sprucegrove	-13.8	27.5	11.9	-9.1	-3.2	17.1	17.2	-10.7	18.8	36.2	-42.4
MSCI ACWI ex USA	-14.2	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4	-45.5
Over/Under	0.4	0.3	7.4	-3.4	0.7	1.8	0.4	3.0	7.6	-5.2	3.1
MSCI EAFE	-13.8	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4
MSCI ACWI ex USA NR LCL	-10.6	18.2	7.0	1.9	6.0	20.1	16.3	-12.2	7.6	31.7	-40.9
MSCI EAFE NR LCL	-11.0	15.2	5.3	5.3	5.9	26.9	17.3	-12.2	4.8	24.7	-40.3
Hexavest	-11.3	17.4	3.8	-1.4	-4.3	20.2	13.7	-9.6	--	--	--
MSCI EAFE	-13.8	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4
Over/Under	2.5	-7.6	2.8	-0.6	0.6	-2.6	-3.6	2.5	--	--	--
MSCI EAFE NR LCL	-11.0	15.2	5.3	5.3	5.9	26.9	17.3	-12.2	4.8	24.7	-40.3
Walter Scott	-7.1	26.6	5.1	-0.4	-3.5	11.8	20.4	-9.3	--	--	--
MSCI ACWI ex USA	-14.2	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4	-45.5
Over/Under	7.1	-0.6	0.6	5.3	0.4	-3.5	3.6	4.4	--	--	--
MSCI ACWI ex USA NR LCL	-10.6	18.2	7.0	1.9	6.0	20.1	16.3	-12.2	7.6	31.7	-40.9
MSCI EAFE	-13.8	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4
<b>Total Global Equity</b>	<b>-9.0</b>	<b>24.5</b>	<b>9.0</b>	<b>-3.8</b>	<b>1.9</b>	<b>22.0</b>	<b>14.4</b>	<b>-3.9</b>	<b>11.4</b>	<b>17.8</b>	<b>-37.3</b>
MSCI ACWI	-9.4	24.0	7.9	-2.4	4.2	22.8	16.1	-7.3	12.7	34.6	-42.2
Over/Under	0.4	0.5	1.1	-1.4	-2.3	-0.8	-1.7	3.4	-1.3	-16.8	4.9
BlackRock MSCI ACWI Equity Index	-9.0	24.5	8.4	-2.0	4.6	23.2	--	--	--	--	--
MSCI ACWI	-9.4	24.0	7.9	-2.4	4.2	22.8	16.1	-7.3	12.7	34.6	-42.2
Over/Under	0.4	0.5	0.5	0.4	0.4	0.4	--	--	--	--	--



## Ventura County Employees' Retirement Association

## TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
<b>Total Private Equity</b>	<b>18.7</b>	<b>16.9</b>	<b>7.6</b>	<b>14.7</b>	<b>19.0</b>	<b>17.9</b>	<b>10.3</b>	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under	21.1	-7.8	-8.5	11.2	3.1	-19.6	-9.6				
Cambridge Associates Global All PE (Qtr Lag)	16.4	15.9	8.5	7.0	16.3	15.9	13.0	12.6	17.1	-9.3	-7.2
<b>Adams Street Global Fund Series</b>	<b>19.6</b>	<b>13.4</b>	<b>7.1</b>	<b>10.3</b>	<b>19.6</b>	<b>15.7</b>	<b>10.8</b>	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under	22.0	-11.3	-9.0	6.8	3.7	-21.8	-9.1				
<b>Harbourvest</b>	<b>22.7</b>	<b>23.2</b>	<b>6.7</b>	<b>28.5</b>	<b>18.5</b>	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under	25.1	-1.5	-9.4	25.0	2.6						
<b>Pantheon Global Secondary Funds</b>	<b>17.3</b>	<b>24.1</b>	<b>15.5</b>	<b>6.4</b>	<b>16.7</b>	<b>14.9</b>	<b>0.9</b>	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under	19.7	-0.6	-0.6	2.9	0.8	-22.6	-19.0				
<b>Drive Capital Fund II</b>	<b>-2.5</b>	<b>-33.7</b>	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under	-0.1	-58.4									
<b>Abbott Secondary Opportunities</b>	<b>26.0</b>	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under	28.4										
<b>Clearlake Capital Partners V</b>	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
<b>Battery Ventures XII</b>	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
<b>Insight Venture Partners X</b>	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
<b>GTCR Fund XII</b>	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
<b>Buenaventure One, LLC</b>	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											



## Ventura County Employees' Retirement Association

## TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
ECI 11	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
The Resolute Fund IV L.P.	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
GGV Capital VII L.P.	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
GGV Discovery II, L.P.	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
Drive Capital Overdrive Fund I	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
Riverside Micro Cap Fund V, LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
GGV Capital VII Plus, LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
Astorg VII L.P.	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
M/C Partners Fund VIII LP, Limited Partnership	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
Genstar Capital Partners IX	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
Genstar IX Opportunities Fund I	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											
ABRY Partners IX, LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1	-35.3
Over/Under											





## Ventura County Employees' Retirement Association

## TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
<b>Total US Fixed Income</b>	<b>0.0</b>	<b>4.4</b>	<b>4.9</b>	<b>0.3</b>	<b>3.0</b>	<b>-0.1</b>	<b>9.6</b>	<b>7.3</b>	<b>10.6</b>	<b>25.6</b>	<b>-8.7</b>
BBgBarc US Aggregate TR	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2
Over/Under	0.0	0.9	2.3	-0.2	-3.0	1.9	5.4	-0.5	4.1	19.7	-13.9
<b>BlackRock U.S. Debt Fund</b>	<b>0.0</b>	<b>3.6</b>	<b>2.7</b>	<b>0.6</b>	<b>6.2</b>	<b>-2.0</b>	<b>4.3</b>	<b>7.9</b>	<b>6.7</b>	<b>6.0</b>	<b>5.4</b>
BBgBarc US Aggregate TR	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2
Over/Under	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.1	0.2
<b>Western</b>	<b>-0.6</b>	<b>6.0</b>	<b>4.1</b>	<b>0.9</b>	<b>7.4</b>	<b>-1.2</b>	<b>9.7</b>	<b>7.3</b>	<b>11.3</b>	<b>18.9</b>	<b>-8.9</b>
BBgBarc US Aggregate TR	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2
Over/Under	-0.6	2.5	1.5	0.4	1.4	0.8	5.5	-0.5	4.8	13.0	-14.1
<b>Reams</b>	<b>0.7</b>	<b>2.5</b>	<b>6.0</b>	<b>0.3</b>	<b>-3.6</b>	<b>2.5</b>	<b>10.0</b>	<b>8.4</b>	<b>10.0</b>	<b>33.6</b>	<b>-11.0</b>
Reams Custom Index	2.4	1.3	0.7	0.3	0.2	-0.5	4.2	7.8	6.5	5.9	5.2
Over/Under	-1.7	1.2	5.3	0.0	-3.8	3.0	5.8	0.6	3.5	27.7	-16.2
BBgBarc US Aggregate TR	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2
3-Month LIBOR + 3%	5.4	4.4	3.8	3.3	3.2	3.3	3.5	3.3	3.4	3.8	6.2
<b>Loomis Strategic Alpha</b>	<b>0.6</b>	<b>3.3</b>	<b>6.1</b>	<b>-1.0</b>	<b>2.4</b>	--	--	--	--	--	--
BBgBarc US Aggregate TR	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2
Over/Under	0.6	-0.2	3.5	-1.5	-3.6	--	--	--	--	--	--
3-Month LIBOR + 3%	5.4	4.4	3.8	3.3	3.2	3.3	3.5	3.3	3.4	3.8	6.2
<b>Loomis Sayles Multi Strategy</b>	<b>-0.8</b>	<b>8.4</b>	<b>8.2</b>	<b>-2.3</b>	<b>6.8</b>	<b>1.4</b>	<b>16.7</b>	<b>4.2</b>	<b>13.6</b>	<b>37.6</b>	<b>-19.7</b>
Loomis Custom Index	-0.6	4.5	7.0	-1.2	4.6	0.8	7.5	7.1	8.7	18.8	-4.6
Over/Under	-0.2	3.9	1.2	-1.1	2.2	0.6	9.2	-2.9	4.9	18.8	-15.1
BBgBarc US Govt/Credit TR	-0.4	4.0	3.0	0.1	6.0	-2.4	4.8	8.7	6.6	4.5	5.7



## Ventura County Employees' Retirement Association

## TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
<b>Private Debt</b>	<b>4.7</b>	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	<u>1.1</u>	--	--	--	--	--	--	--	--	--	--
Over/Under	3.6										
<b>CVI Credit Value Fund</b>	<b>4.6</b>	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	<u>1.1</u>	--	--	--	--	--	--	--	--	--	--
Over/Under	3.5										
<b>Monroe Capital Private Credit Fund III</b>	--	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	<u>1.1</u>	--	--	--	--	--	--	--	--	--	--
Over/Under											
<b>Bluebay Direct Lending Fund III</b>	--	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	<u>1.1</u>	--	--	--	--	--	--	--	--	--	--
Over/Under											
<b>Treasuries</b>	--	--	--	--	--	--	--	--	--	--	--
<b>Reams 10-Year Treasuries</b>	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Treasury 7-10 Yr TR	<u>0.9</u>	<u>2.6</u>	<u>1.1</u>	<u>1.6</u>	<u>9.0</u>	<u>-6.0</u>	<u>4.2</u>	<u>15.6</u>	<u>9.4</u>	<u>-6.0</u>	<u>18.0</u>
Over/Under											



## Ventura County Employees' Retirement Association

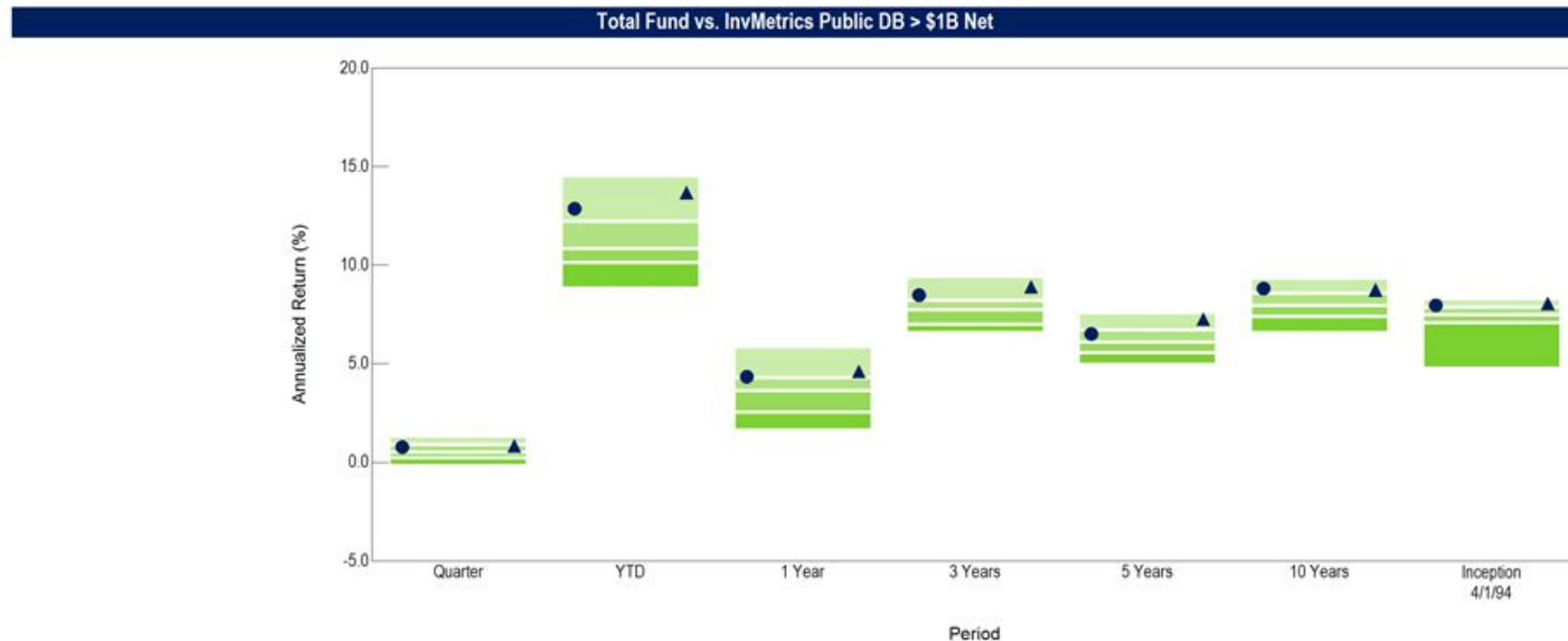
## TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
<b>Total Real Estate</b>	<b>6.9</b>	<b>5.9</b>	<b>6.8</b>	<b>12.8</b>	<b>11.6</b>	<b>10.6</b>	<b>9.1</b>	<b>14.4</b>	<b>15.4</b>	<b>-31.2</b>	<b>-16.0</b>
NCREIF ODCE Net	<u>7.4</u>	<u>6.7</u>	<u>7.8</u>	<u>14.0</u>	<u>11.5</u>	<u>12.9</u>	<u>9.8</u>	<u>15.0</u>	<u>15.3</u>	<u>-30.4</u>	<u>-10.7</u>
Over/Under	-0.5	-0.8	-1.0	-1.2	0.1	-2.3	-0.7	-0.6	0.1	-0.8	-5.3
Prudential Real Estate	8.2	7.0	8.2	14.5	12.5	13.8	8.8	18.0	17.2	-34.8	-13.6
NCREIF ODCE Net	<u>7.4</u>	<u>6.7</u>	<u>7.8</u>	<u>14.0</u>	<u>11.5</u>	<u>12.9</u>	<u>9.8</u>	<u>15.0</u>	<u>15.3</u>	<u>-30.4</u>	<u>-10.7</u>
Over/Under	0.8	0.3	0.4	0.5	1.0	0.9	-1.0	3.0	1.9	-4.4	-2.9
NCREIF ODCE	8.3	7.6	8.8	15.0	12.5	13.9	10.9	16.0	16.4	-29.8	-10.0
UBS Real Estate	6.2	5.4	6.2	11.9	10.6	9.3	9.0	12.1	15.9	-22.9	-8.3
NCREIF ODCE Net	<u>7.4</u>	<u>6.7</u>	<u>7.8</u>	<u>14.0</u>	<u>11.5</u>	<u>12.9</u>	<u>9.8</u>	<u>15.0</u>	<u>15.3</u>	<u>-30.4</u>	<u>-10.7</u>
Over/Under	-1.2	-1.3	-1.6	-2.1	-0.9	-3.6	-0.8	-2.9	0.6	7.5	2.4
NCREIF ODCE	8.3	7.6	8.8	15.0	12.5	13.9	10.9	16.0	16.4	-29.8	-10.0
<b>Total Real Assets</b>	<b>-7.3</b>	<b>7.2</b>	<b>11.7</b>	<b>-13.8</b>	<b>10.2</b>	--	--	--	--	--	--
Real Assets Index	<u>6.0</u>	<u>6.2</u>	<u>6.2</u>	<u>4.8</u>	<u>4.8</u>	<u>28.8</u>	<u>5.4</u>	<u>8.8</u>	--	--	--
Over/Under	-13.3	1.0	5.5	-18.6	5.4	--	--	--	--	--	--
Bridgewater All Weather Fund	-5.0	11.9	10.0	-6.8	7.6	--	--	--	--	--	--
CPI + 5% (Unadjusted)	<u>7.0</u>	<u>7.2</u>	<u>7.2</u>	<u>5.8</u>	<u>5.8</u>	--	--	--	--	--	--
Over/Under	-12.0	4.7	2.8	-12.6	1.8	--	--	--	--	--	--
Tortoise Energy Infrastructure	-13.3	-3.5	15.9	-27.1	15.7	--	--	--	--	--	--
Tortoise MLP Index	<u>-13.7</u>	<u>-5.7</u>	<u>21.0</u>	<u>-34.1</u>	<u>8.0</u>	<u>28.8</u>	<u>5.4</u>	<u>8.8</u>	--	--	--
Over/Under	0.4	2.2	-5.1	7.0	7.7	--	--	--	--	--	--
<b>Overlay</b>											
Parametric											
Abbott Capital Cash											



## Ventura County Employees' Retirement Association

## TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

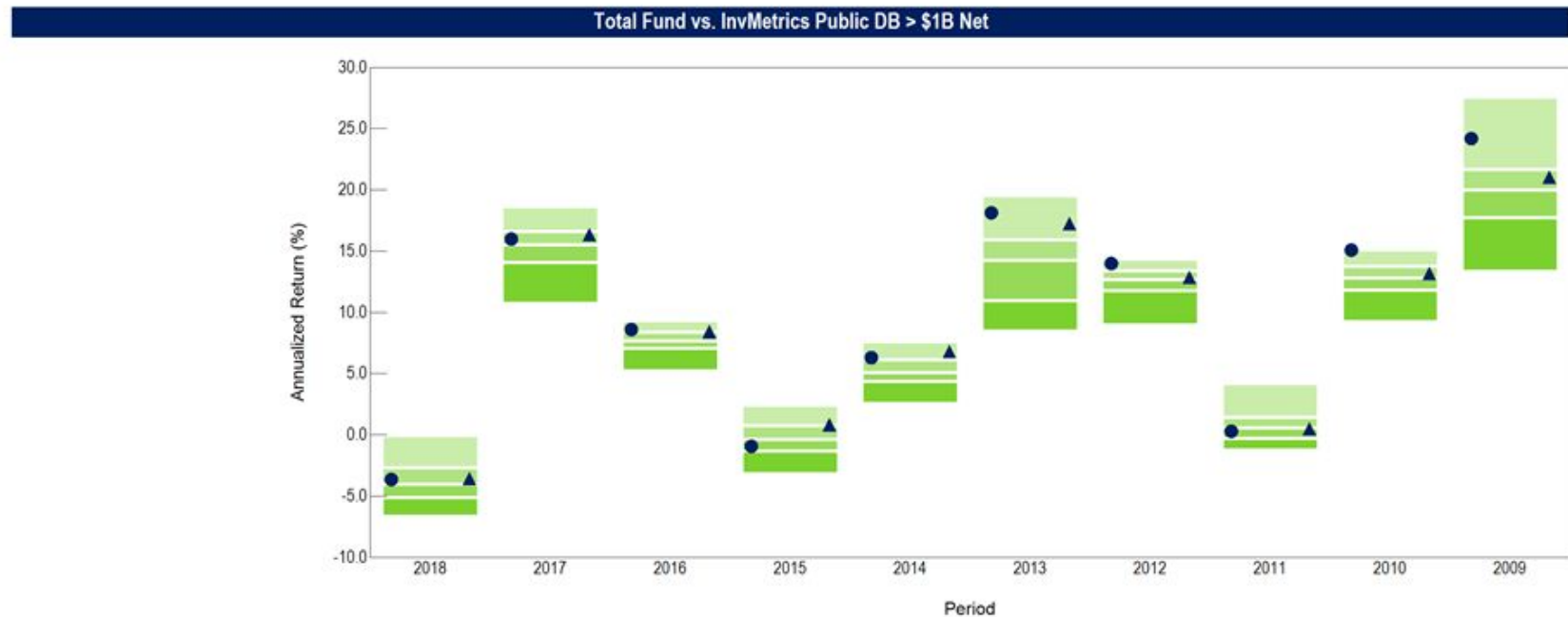


	Return (Rank)													
5th Percentile	1.3		14.5		5.9		9.4		7.6		9.3		8.3	
25th Percentile	0.9		12.2		4.3		8.2		6.7		8.6		7.9	
Median	0.5		10.8		3.6		7.7		6.1		8.0		7.5	
75th Percentile	0.2		10.1		2.6		7.0		5.6		7.4		7.1	
95th Percentile	-0.2		8.9		1.7		6.6		5.0		6.6		4.8	
# of Portfolios	71		71		71		71		69		63		35	
● Total Fund	0.8	(34)	12.9	(22)	4.3	(25)	8.5	(15)	6.5	(32)	8.8	(18)	8.0	(21)
▲ Policy Index	0.8	(30)	13.7	(11)	4.6	(21)	8.9	(10)	7.3	(10)	8.7	(21)	8.0	(15)



## Ventura County Employees' Retirement Association

## TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

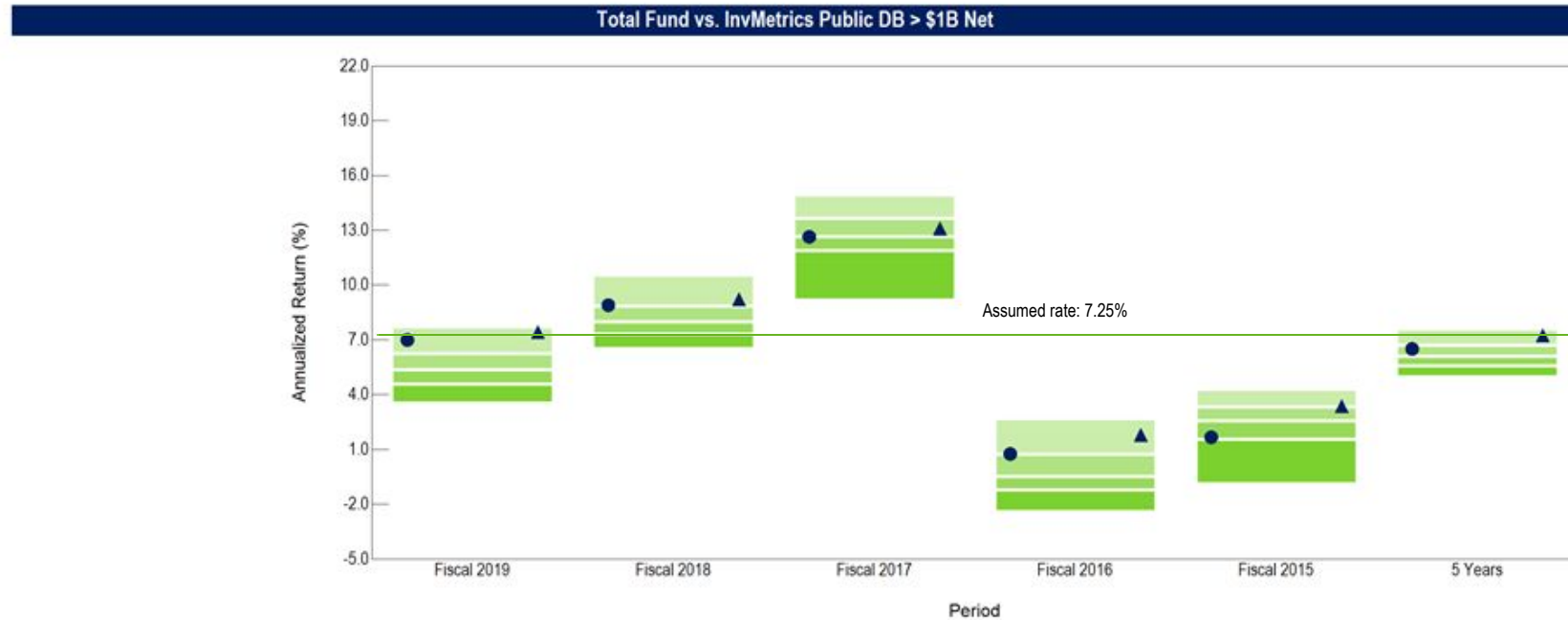


	Return (Rank)									
5th Percentile	-0.1	18.6	9.3	2.4	7.6	19.5	14.3	4.2	15.1	27.5
25th Percentile	-2.7	16.6	8.4	0.8	6.1	16.0	13.4	1.5	13.8	21.7
Median	-4.0	15.6	7.7	-0.4	5.1	14.3	12.7	0.6	12.8	20.0
75th Percentile	-5.1	14.1	7.1	-1.3	4.4	11.0	11.8	-0.3	11.8	17.7
95th Percentile	-6.6	10.7	5.3	-3.2	2.6	8.5	9.0	-1.2	9.3	13.4
# of Portfolios	63	61	62	57	55	48	44	42	41	40
● Total Fund	-3.6 (42)	16.0 (37)	8.6 (15)	-0.9 (65)	6.3 (20)	18.1 (10)	14.0 (15)	0.3 (61)	15.1 (6)	24.2 (16)
▲ Policy Index	-3.6 (41)	16.3 (29)	8.4 (25)	0.8 (25)	6.8 (12)	17.2 (14)	12.9 (41)	0.5 (55)	13.2 (44)	21.0 (33)



## Ventura County Employees' Retirement Association

## TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE



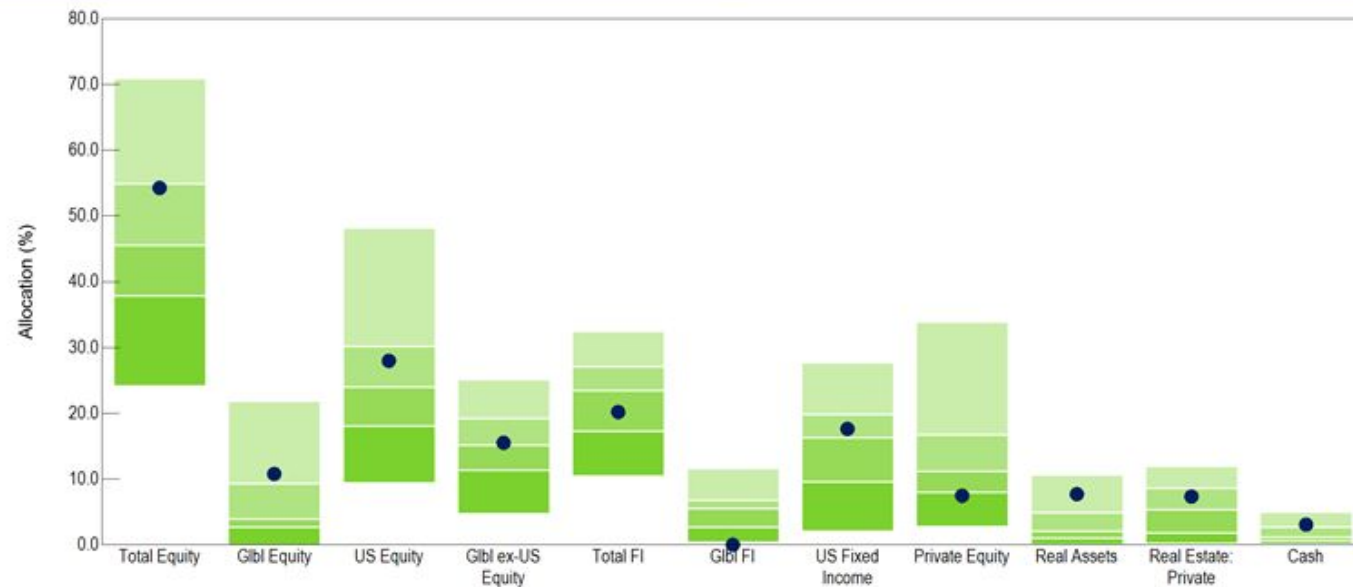
	Return (Rank)											
5th Percentile	7.7		10.5		14.9		2.7		4.3		7.6	
25th Percentile	6.3		8.8		13.7		0.8		3.3		6.7	
Median	5.4		8.0		12.7		-0.5		2.6		6.1	
75th Percentile	4.6		7.3		11.9		-1.2		1.6		5.6	
95th Percentile	3.5		6.5		9.2		-2.4		-0.9		5.0	
# of Portfolios	77		51		65		55		53		69	
● Total Fund	7.0	(15)	8.9	(23)	12.6	(53)	0.8	(26)	1.7	(71)	6.5	(32)
▲ Policy Index	7.4	(7)	9.2	(13)	13.1	(37)	1.8	(9)	3.4	(25)	7.3	(10)



## Ventura County Employees' Retirement Association

## TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE

Total Plan Allocation vs. InvMetrics Public DB &gt; \$1B Net



	Allocation (Rank)										
5th Percentile	70.9	21.9	48.2	25.1	32.4	11.6	27.7	33.9	10.6	12.0	4.9
25th Percentile	55.0	9.4	30.2	19.3	27.2	6.8	19.9	16.8	5.0	8.7	2.7
Median	45.6	4.0	24.1	15.2	23.5	5.6	16.3	11.2	2.2	5.4	1.3
75th Percentile	37.9	2.8	18.1	11.4	17.3	2.8	9.6	8.0	1.1	1.8	0.7
95th Percentile	24.2	0.1	9.5	4.8	10.6	0.4	2.2	2.8	0.2	0.3	0.2
# of Portfolios	54	24	43	52	54	23	42	48	24	46	54
• Total Fund	54.2 (29)	10.8 (18)	28.0 (35)	15.5 (50)	20.2 (66)	0.0 (99)	17.6 (45)	7.5 (82)	7.7 (12)	7.3 (38)	3.1 (19)



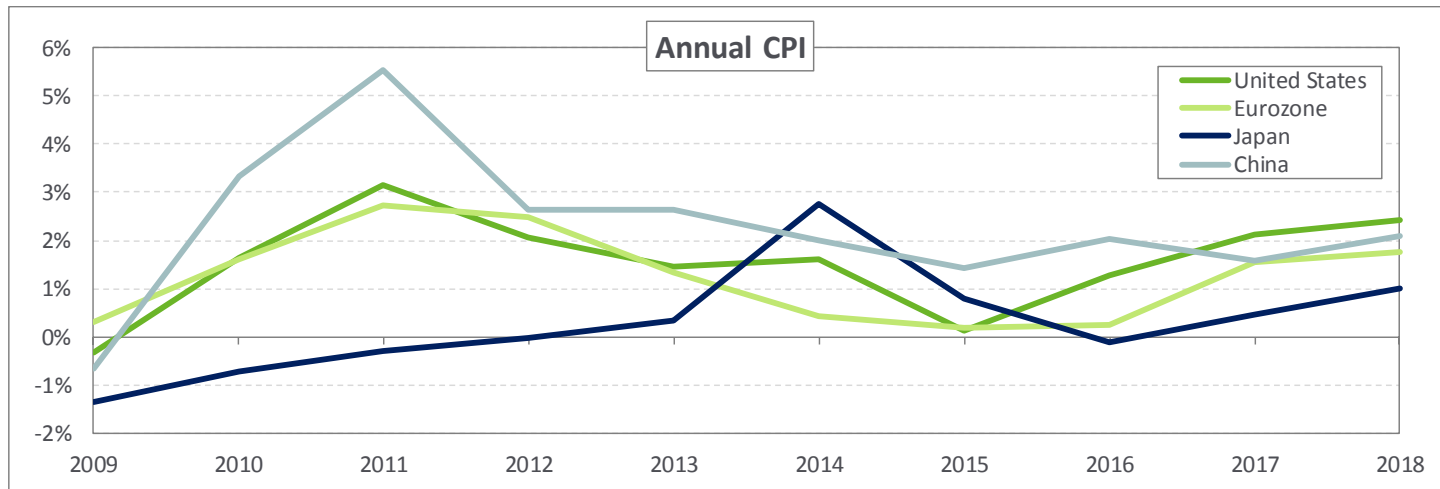
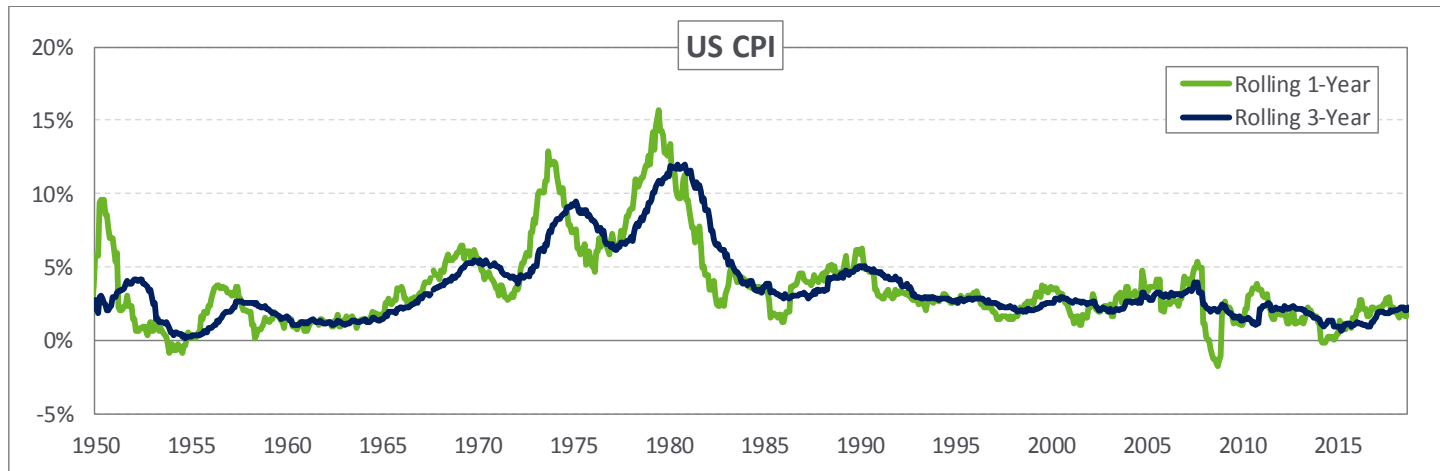
# MACRO

NEPC, LLC

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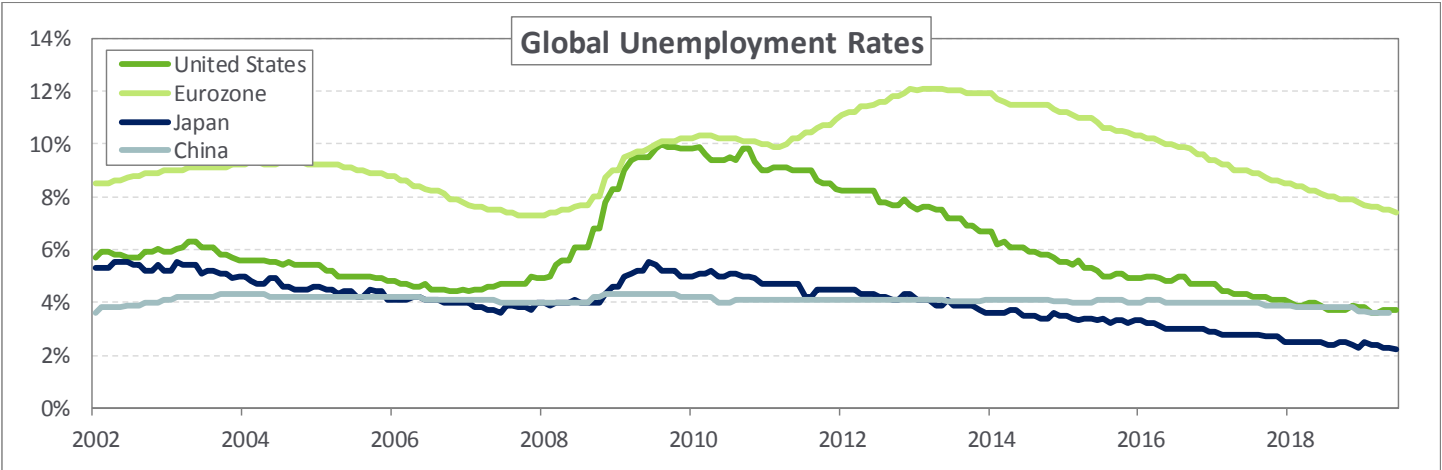
# INFLATION



# UNEMPLOYMENT



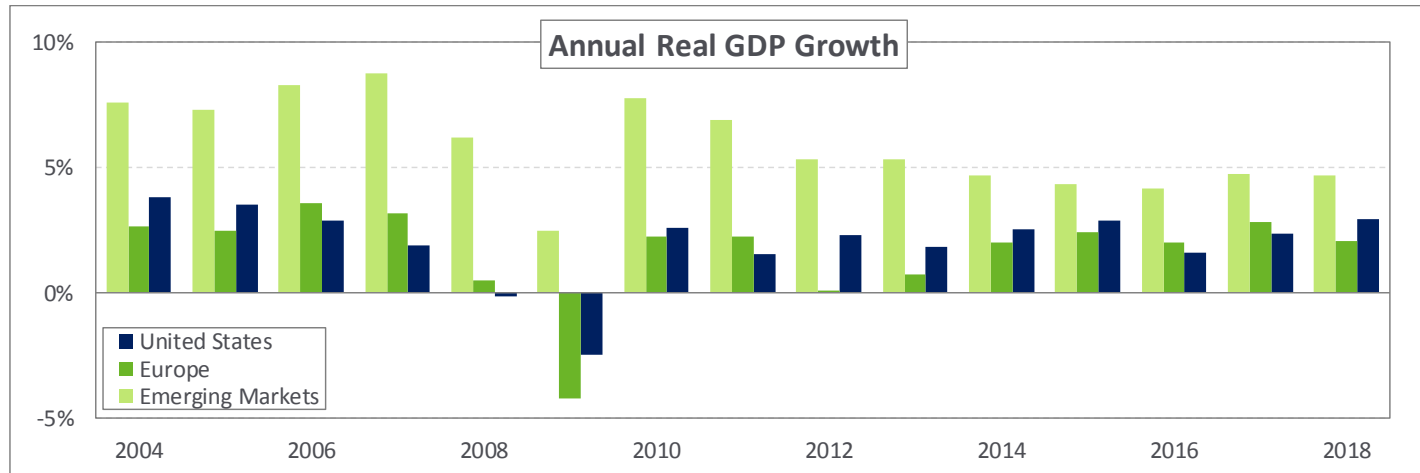
Source: FactSet



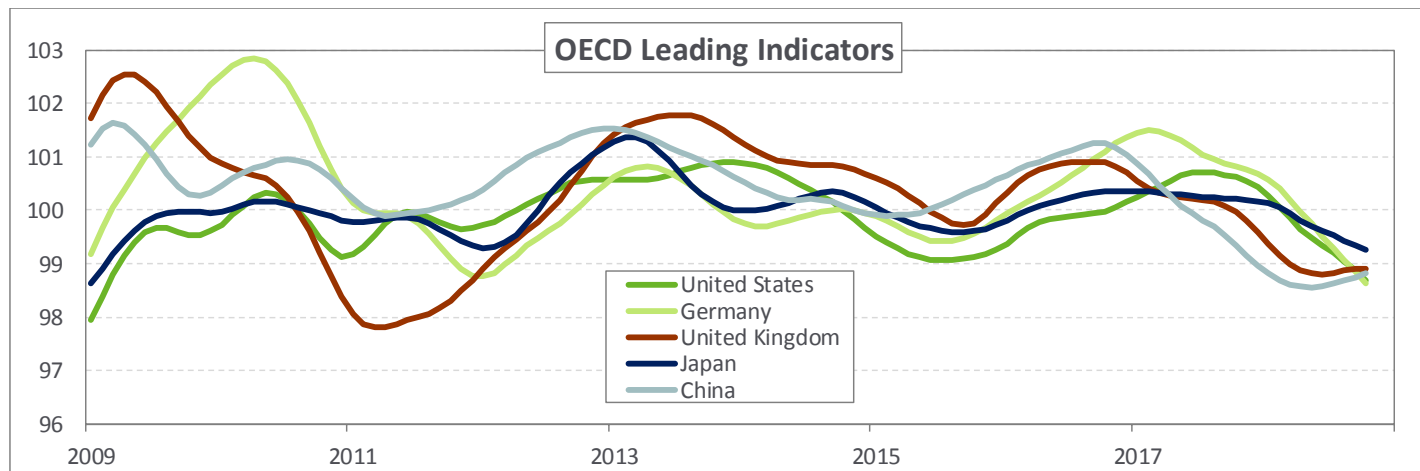
Source: FactSet



# ECONOMIC INDICATORS



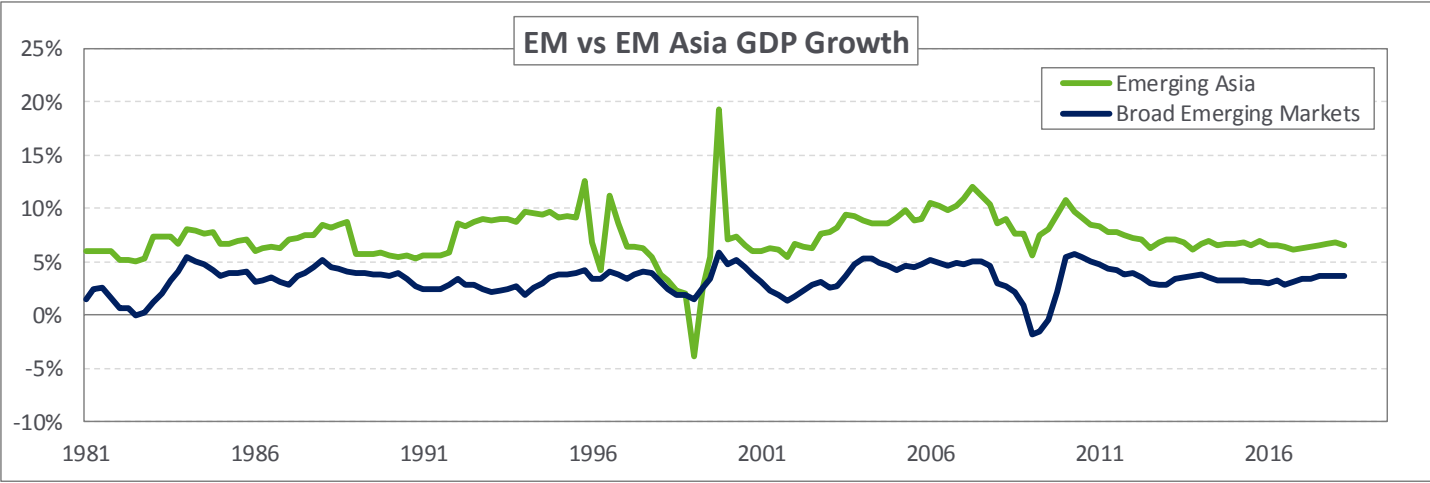
Source: Bureau of Economic Analysis, Oxford Economics, FactSet



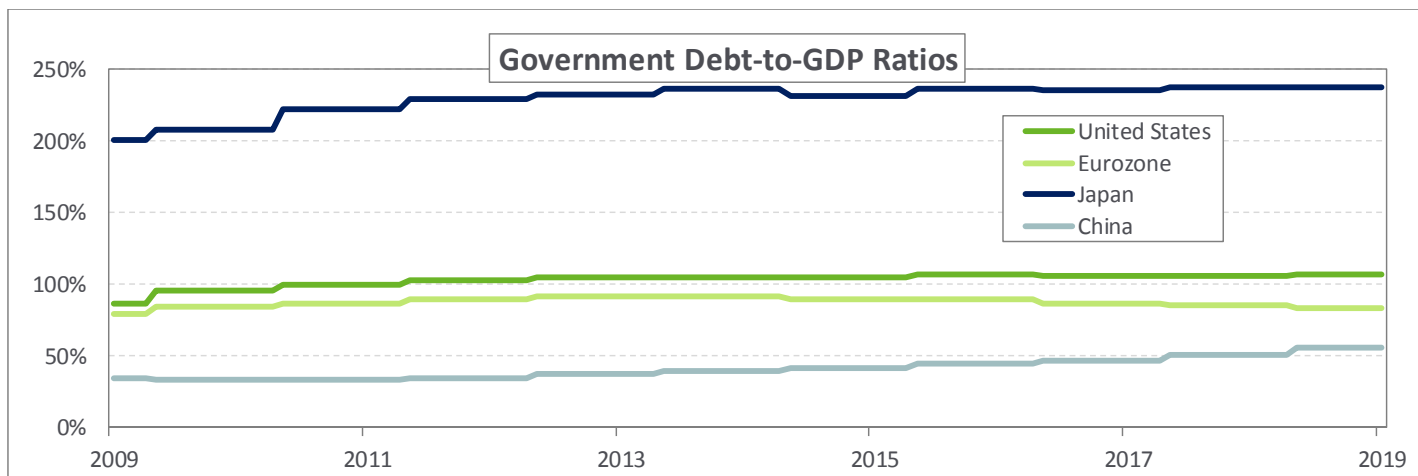
Source: OECD, FactSet



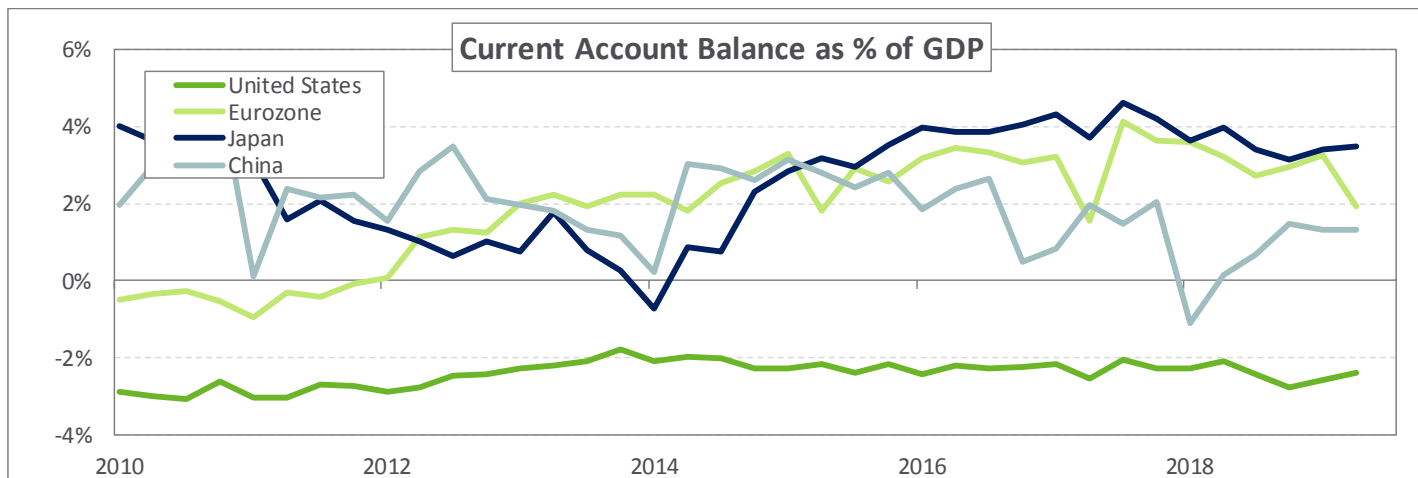
# GROSS DOMESTIC PRODUCT



# GROSS DOMESTIC PRODUCT METRICS



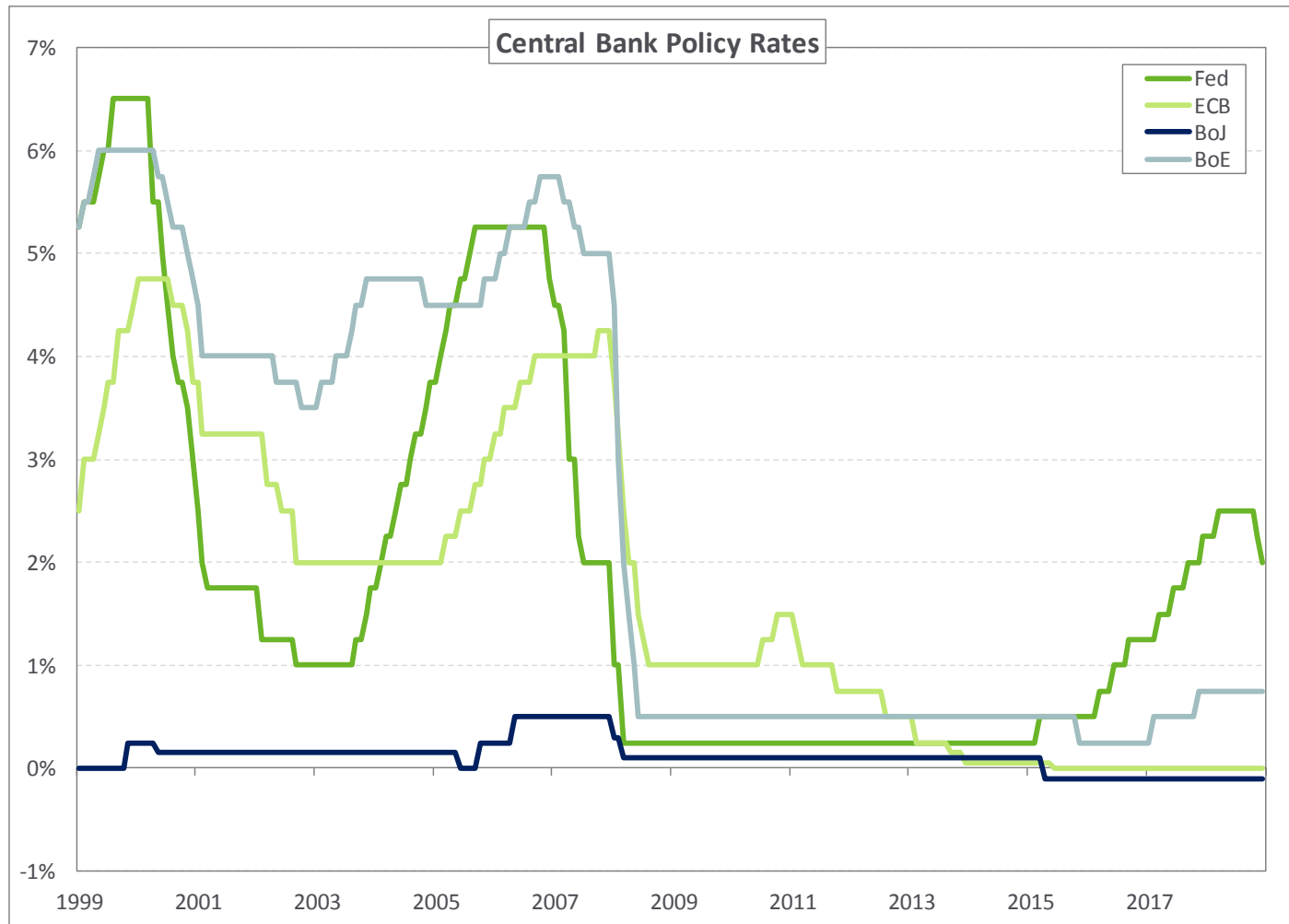
Source: IMF, FactSet



Source: FactSet



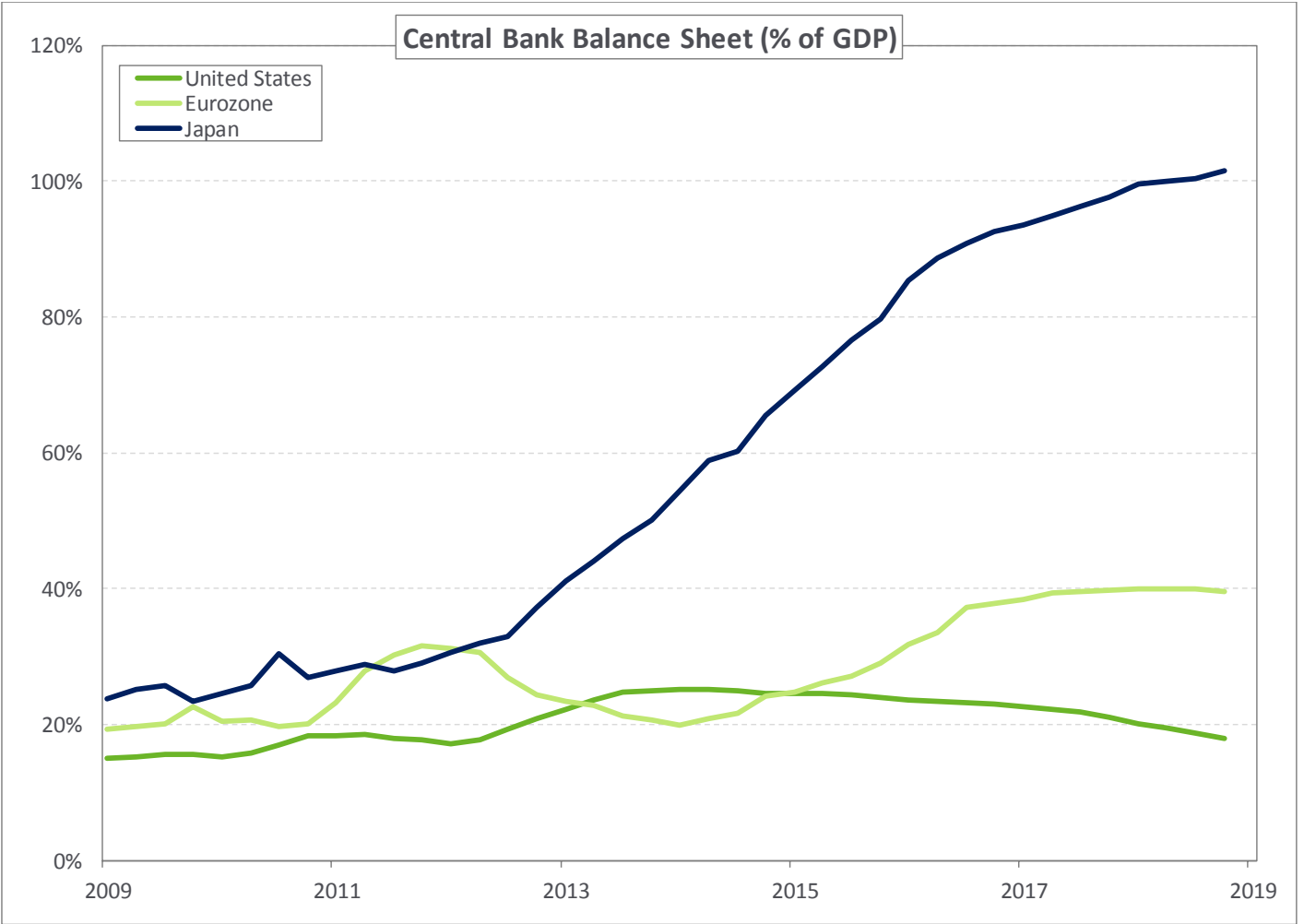
# CENTRAL BANK RATES



Source: Federal Reserve, ECB, Bank of Japan, Bank of England, FactSet



# CENTRAL BANK BALANCE SHEETS



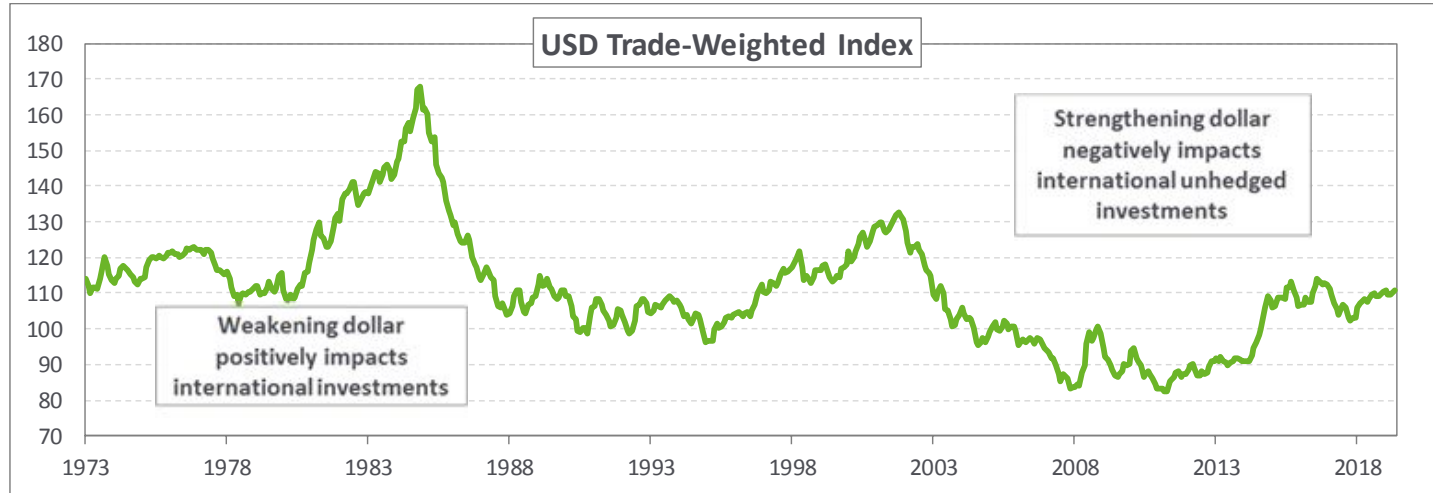
Source: FactSet



# CURRENCIES

Currencies	% Change Relative to USD			
	Spot	1 Month	YTD	1 Year
<b>Euro</b>	<b>1.09</b>	-1.00%	-4.63%	-5.89%
<b>British Pound</b>	<b>1.23</b>	1.19%	-3.24%	-5.53%
<b>Japanese Yen</b>	<b>108.08</b>	1.82%	-1.49%	-5.16%
<b>Swiss Franc</b>	<b>1.00</b>	0.78%	1.15%	1.38%
<b>Australian Dollar</b>	<b>0.67</b>	0.10%	-4.20%	-6.58%
<b>Chinese Yuan</b>	<b>7.14</b>	-0.10%	3.97%	3.75%
<b>Brazilian Real</b>	<b>4.17</b>	0.80%	7.47%	3.40%
<b>Russian Ruble</b>	<b>64.88</b>	-2.60%	-6.47%	-0.98%
<b>Indian Rupee</b>	<b>70.87</b>	-0.75%	1.51%	-2.74%
<b>Mexican Peso</b>	<b>19.74</b>	-1.61%	0.26%	5.78%
<b>South African Rand</b>	<b>15.16</b>	-0.14%	5.40%	6.76%

Source: FactSet

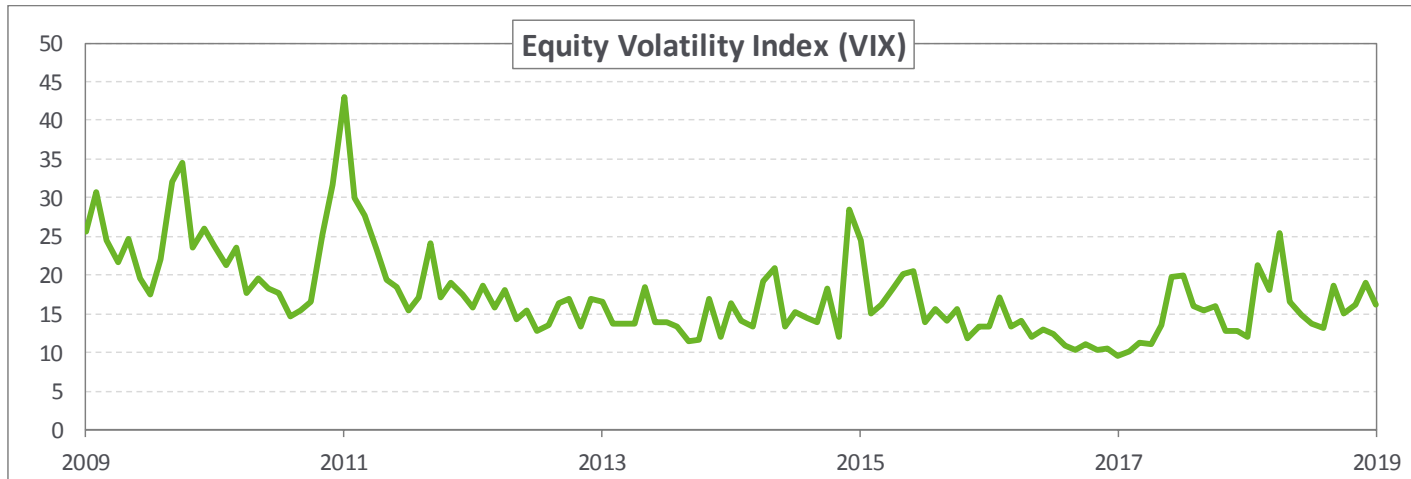


Source: FactSet

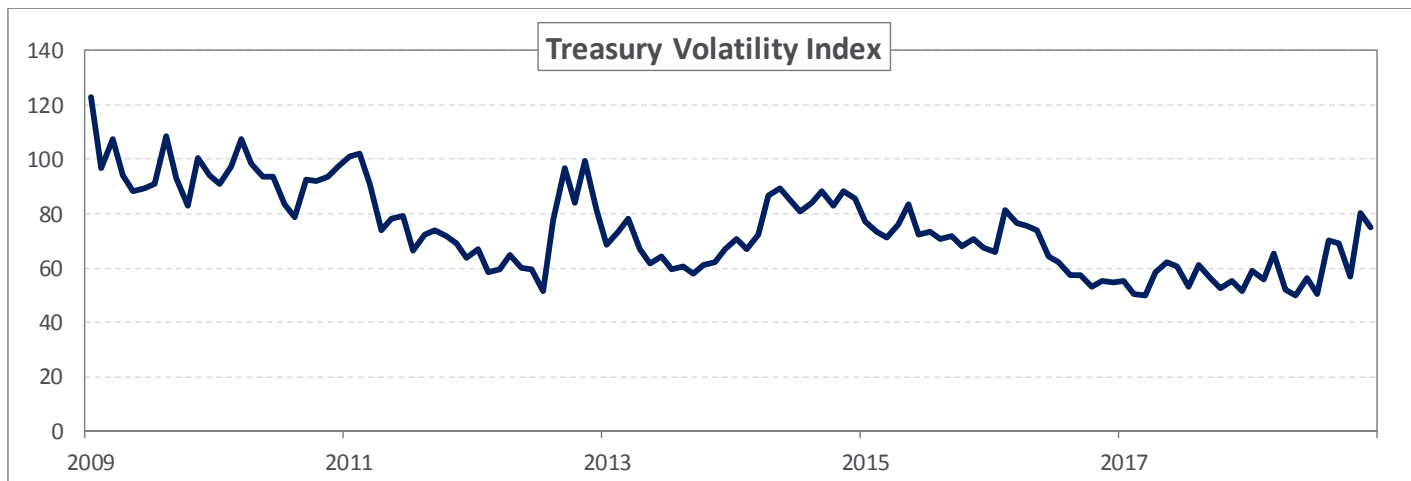




# VOLATILITY



Source: CBOE, FactSet



Source: Merrill Lynch, FactSet

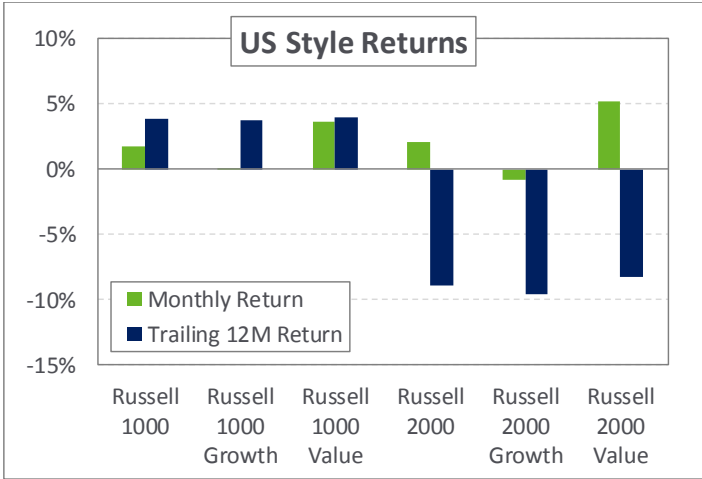


# EQUITY

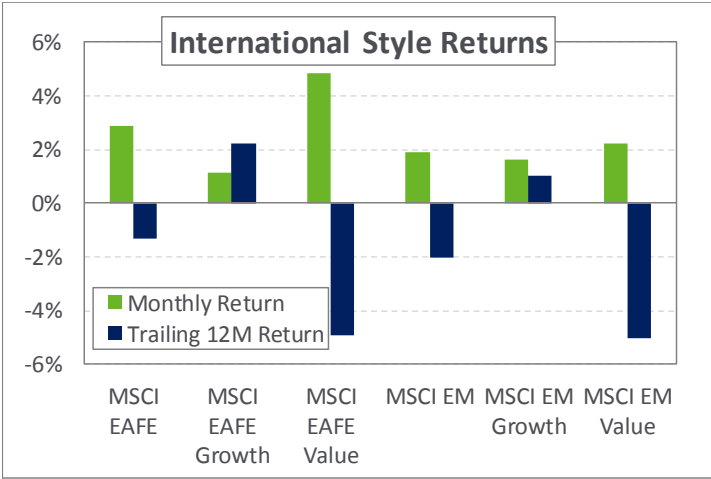
NEPC, LLC

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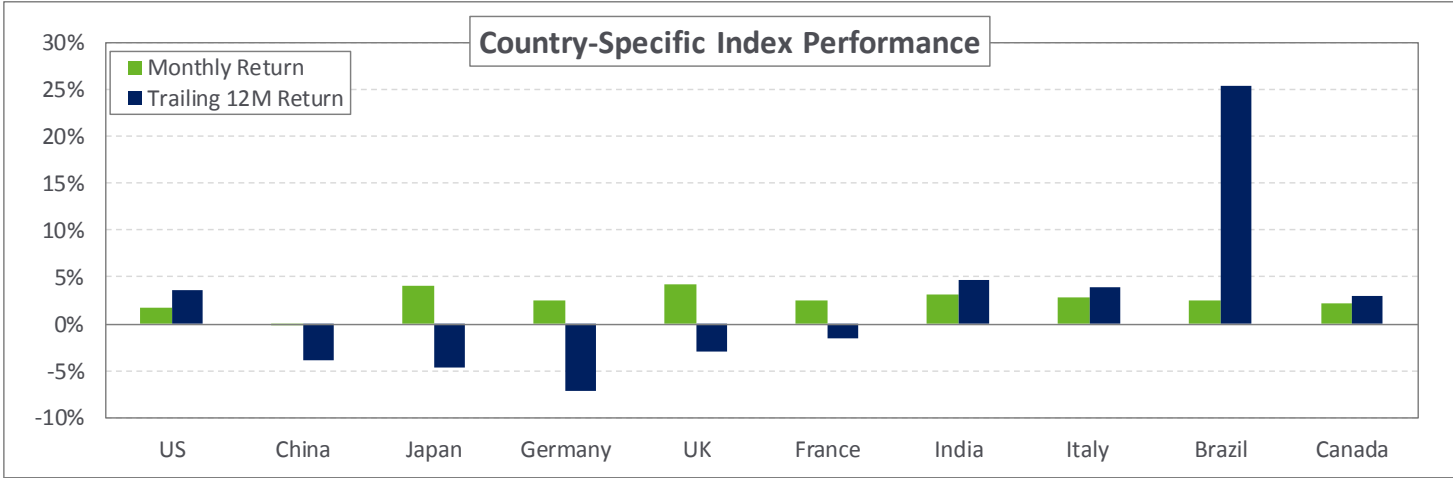
# EQUITY INDEX PERFORMANCE



Source: Russell, FactSet



Source: MSCI, FactSet



Source: MSCI, FactSet  
Represents returns in USD



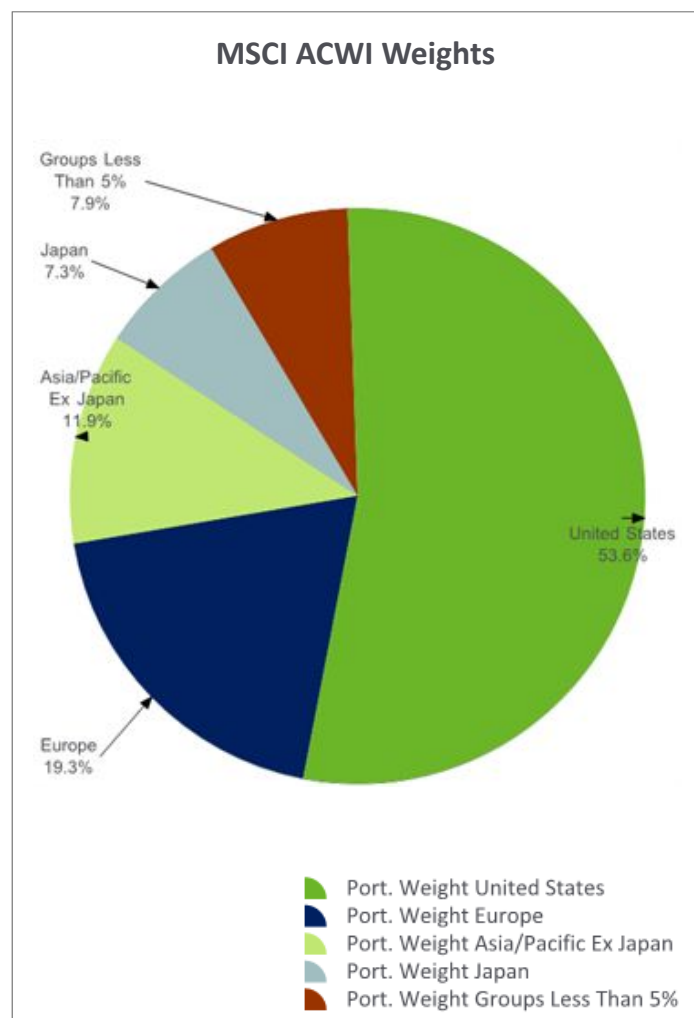
# INDEX COMPOSITION

	MTD	QTD	YTD	Index Weight
<b>S&amp;P 500</b>	<b>1.9%</b>	<b>1.7%</b>	<b>20.6%</b>	<b>100.0%</b>
Communication Services	0.0%	0.2%	2.2%	10.4%
Consumer Discretionary	0.1%	0.1%	2.3%	10.1%
Consumer Staples	0.1%	0.5%	1.7%	7.6%
Energy	0.2%	-0.3%	0.4%	4.5%
Financials	0.6%	0.2%	2.6%	12.9%
Health Care	0.0%	-0.3%	1.0%	13.7%
Industrials	0.3%	0.1%	2.1%	9.3%
Information Technology	0.3%	0.7%	6.0%	21.9%
Materials	0.1%	0.0%	0.5%	2.7%
Real Estate	0.0%	0.2%	0.9%	3.2%
Utilities	0.1%	0.3%	0.9%	3.6%

Source: S&amp;P, FactSet

	MTD	QTD	YTD	Index Weight
<b>MSCI ACWI</b>	<b>2.1%</b>	<b>0.0%</b>	<b>16.2%</b>	<b>100.0%</b>
Communication Services	0.0%	0.0%	1.3%	8.8%
Consumer Discretionary	0.1%	0.0%	1.9%	10.8%
Consumer Staples	0.1%	0.3%	1.5%	8.6%
Energy	0.2%	-0.3%	0.5%	5.5%
Financials	0.8%	-0.2%	2.3%	16.7%
Health Care	0.0%	-0.2%	1.0%	11.3%
Industrials	0.3%	-0.1%	1.8%	10.5%
Information Technology	0.3%	0.4%	3.9%	16.3%
Materials	0.1%	-0.2%	0.5%	4.7%
Real Estate	0.0%	0.1%	0.6%	3.3%
Utilities	0.1%	0.2%	0.6%	3.5%

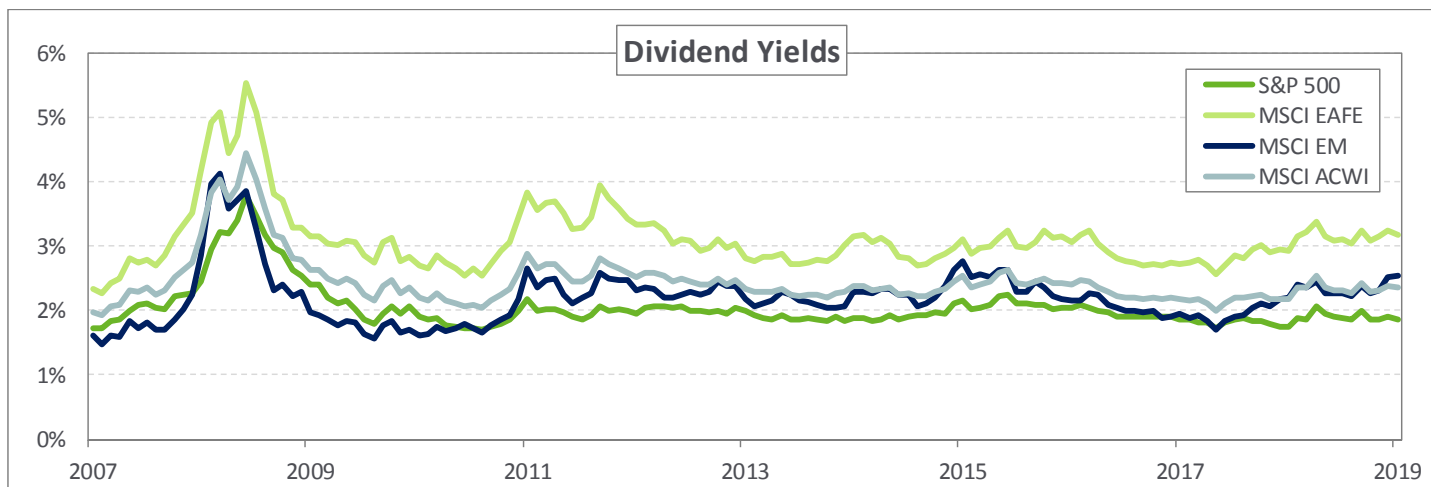
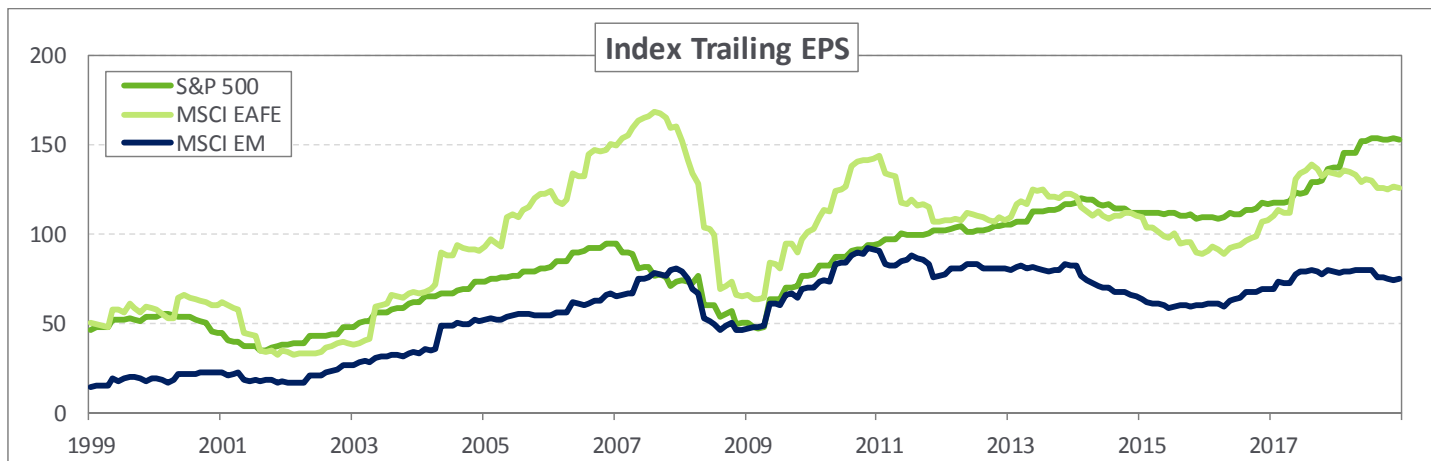
Source: MSCI, FactSet



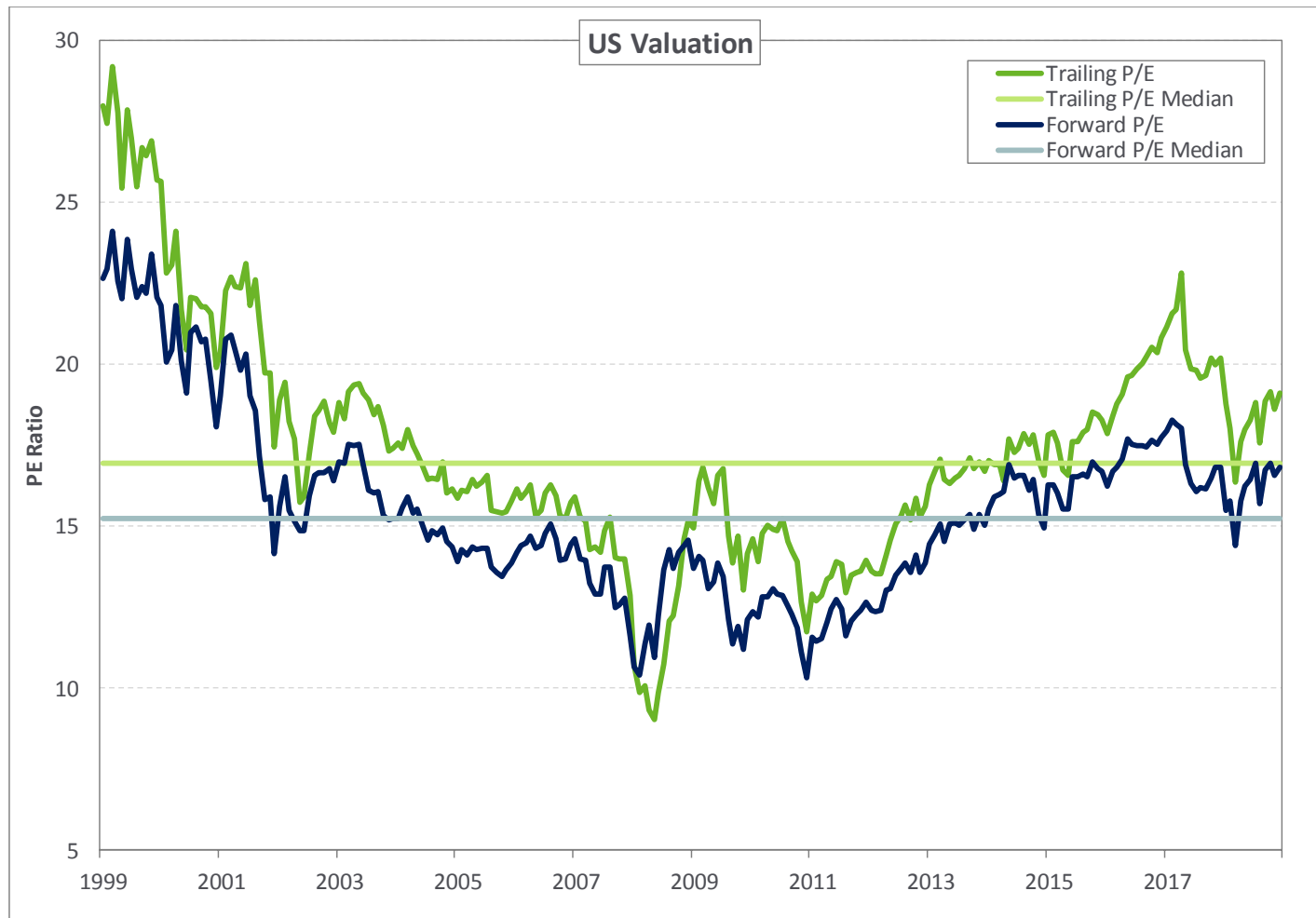
Source: MSCI, FactSet



## EARNINGS & YIELDS



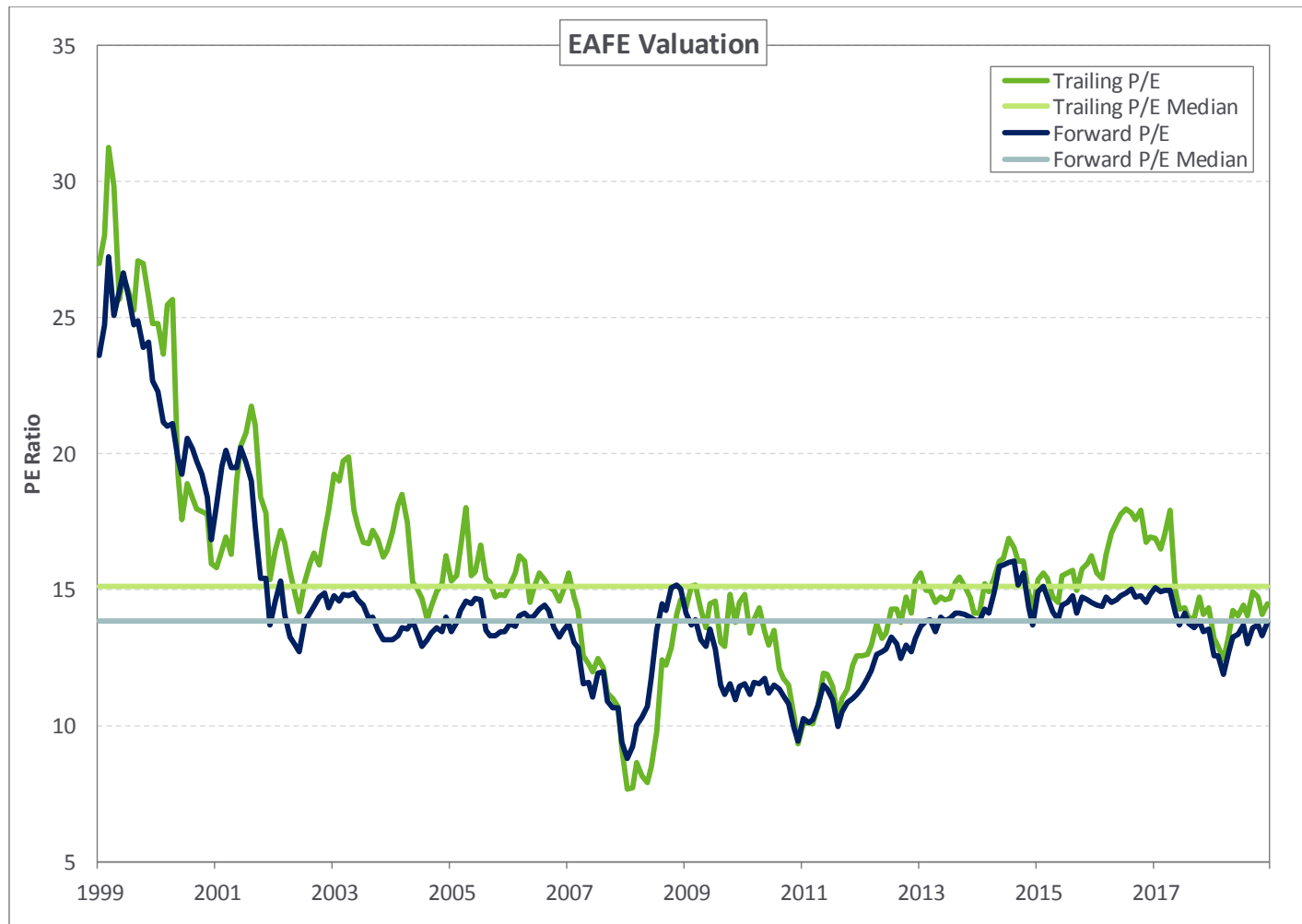
# US EQUITY VALUATIONS



Source: S&P, FactSet



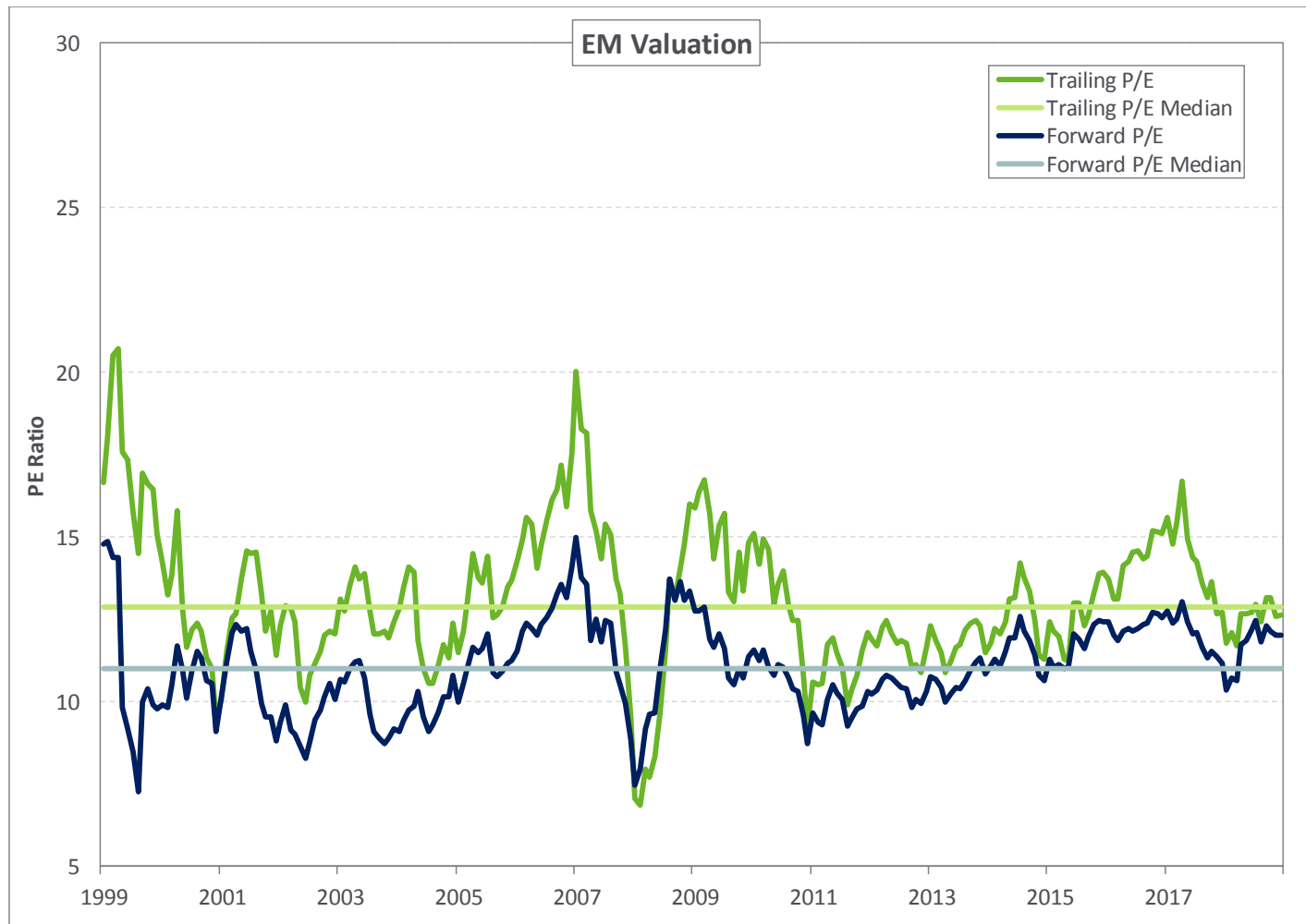
# EAFE EQUITY VALUATIONS



Source: MSCI, FactSet



# EM EQUITY VALUATIONS



Source: MSCI, FactSet





# CREDIT

NEPC, LLC

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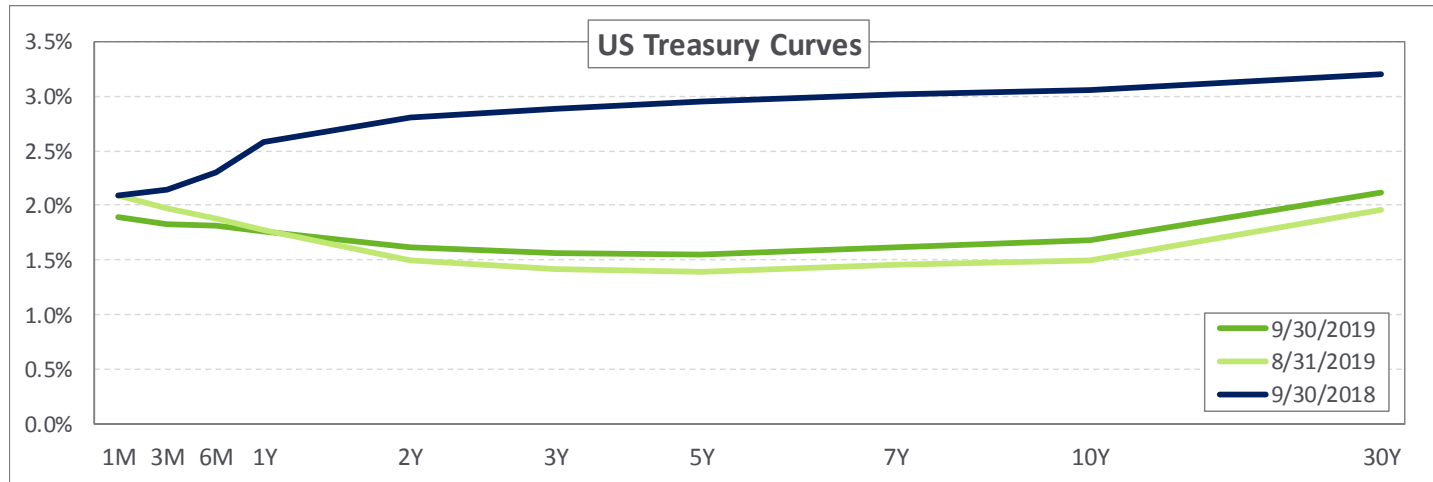
# FIXED INCOME CHARACTERISTICS

	Averages			Total Returns (%)		
	Yield to Worst	Spread (bps)	Duration (Years)	1-Month	YTD	1-Year
<b>Barclays Aggregate</b>	2.26%	46	5.8	-0.5%	8.5%	10.3%
<b>Barclays Treasury</b>	1.72%	-	6.6	-0.8%	7.7%	10.4%
<b>Barclays Agency</b>	1.87%	11	4.1	-0.5%	6.0%	8.0%
<b>Barclays MBS</b>	2.45%	46	2.7	0.1%	5.6%	7.8%
<b>Barclays ABS</b>	2.04%	37	2.2	-0.1%	4.1%	5.4%
<b>Barclays CMBS</b>	2.19%	56	5.4	-0.7%	8.0%	10.3%
<b>Barclays Corp IG</b>	2.91%	115	7.8	-0.7%	13.2%	12.9%
<b>Barclays Muni</b>	1.86%	-	5.2	-0.8%	6.7%	8.5%
<b>Barclays HY Muni</b>	4.06%	-	6.7	-0.2%	9.7%	10.0%
<b>Barclays TIPS</b>	1.88%	-	4.9	-1.4%	7.6%	7.1%
<b>Barclays HY</b>	5.65%	373	3.1	0.4%	11.4%	6.3%
<b>Barclays Global Agg</b>	1.30%	44	7.2	-1.0%	6.3%	7.6%
<b>JPM EMBI Glob Div</b>	-	336	7.3	-0.5%	13.0%	11.5%
<b>JPM GBI - EM</b>	4.94%	-	5.4	1.0%	7.9%	10.1%

Source: Barclays, JP Morgan, FactSet



# TREASURIES



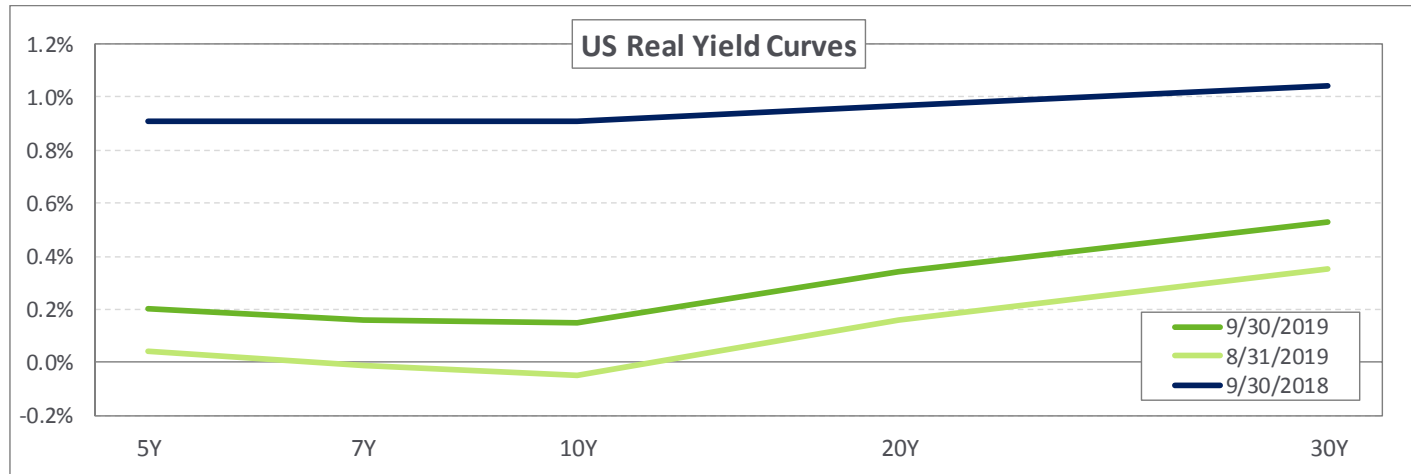
Source: FactSet

	Yield (%)			Total Return (%)	
	Current	1 Month Ago	12 Months Ago	1 Month	12 Months
<b>3M Treasury</b>	1.82%	1.98%	2.15%	0.17%	2.39%
<b>6M Treasury</b>	1.82%	1.87%	2.30%	0.17%	2.64%
<b>2Y Treasury</b>	1.62%	1.50%	2.81%	-0.13%	4.37%
<b>5Y Treasury</b>	1.55%	1.39%	2.95%	-0.62%	9.16%
<b>10Y Treasury</b>	1.68%	1.50%	3.05%	-1.41%	15.15%
<b>30Y Treasury</b>	2.12%	1.96%	3.20%	-3.08%	27.40%

Source: FactSet



## REAL YIELDS



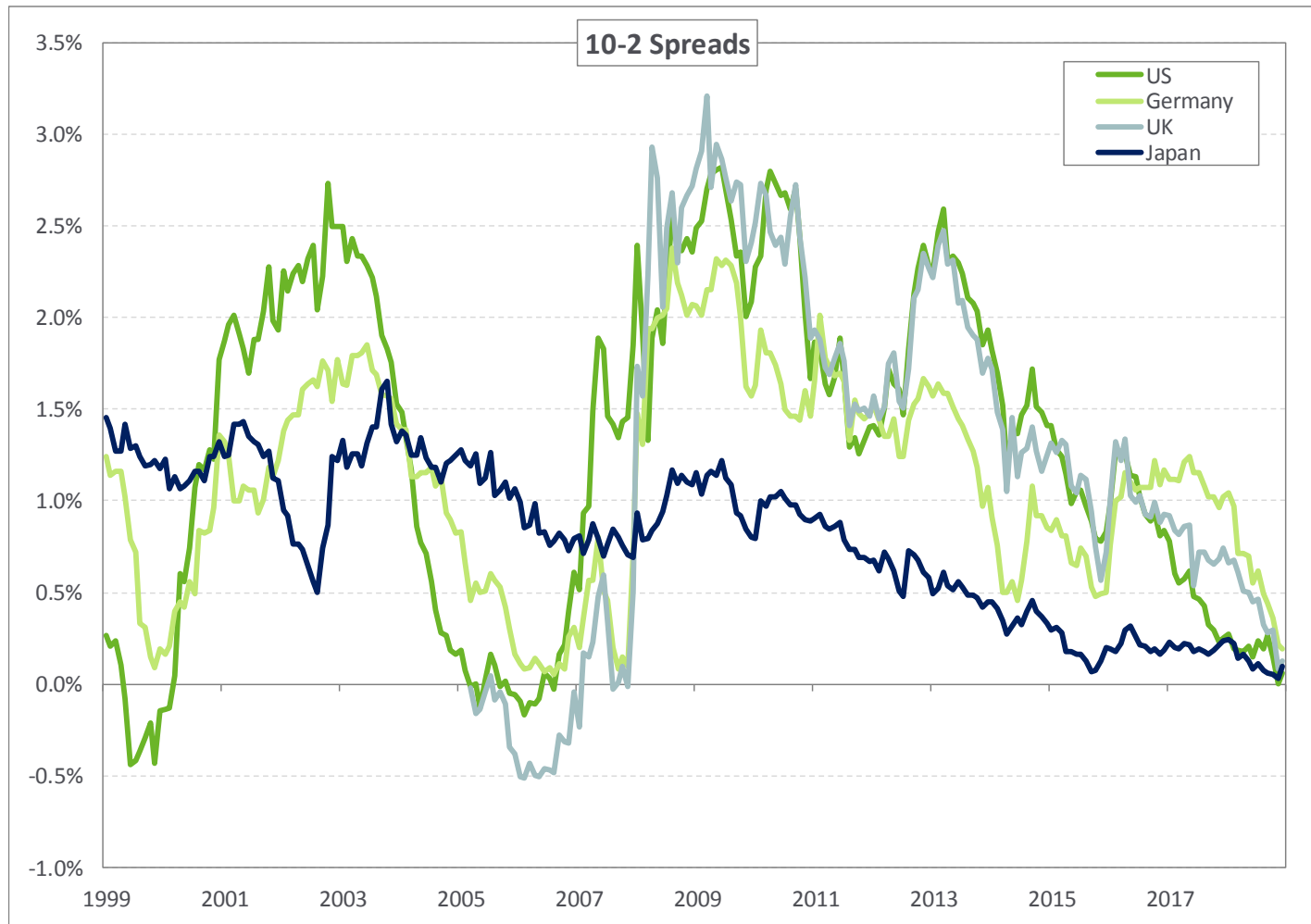
Source: FactSet

	Real Rates			Breakeven Rates	
	Current	1 Month Ago	12 Months Ago	Current	12 Months Ago
<b>2-Year</b>	-0.21%	-0.26%	0.30%	1.34%	3.11%
<b>5-Year</b>	-0.26%	-0.33%	0.37%	1.23%	3.25%
<b>10-Year</b>	-0.26%	-0.37%	0.44%	1.23%	3.40%
<b>20-Year</b>	-0.18%	-0.30%	0.52%	1.40%	3.56%
<b>30-Year</b>	-0.11%	-0.25%	0.56%	1.53%	3.64%

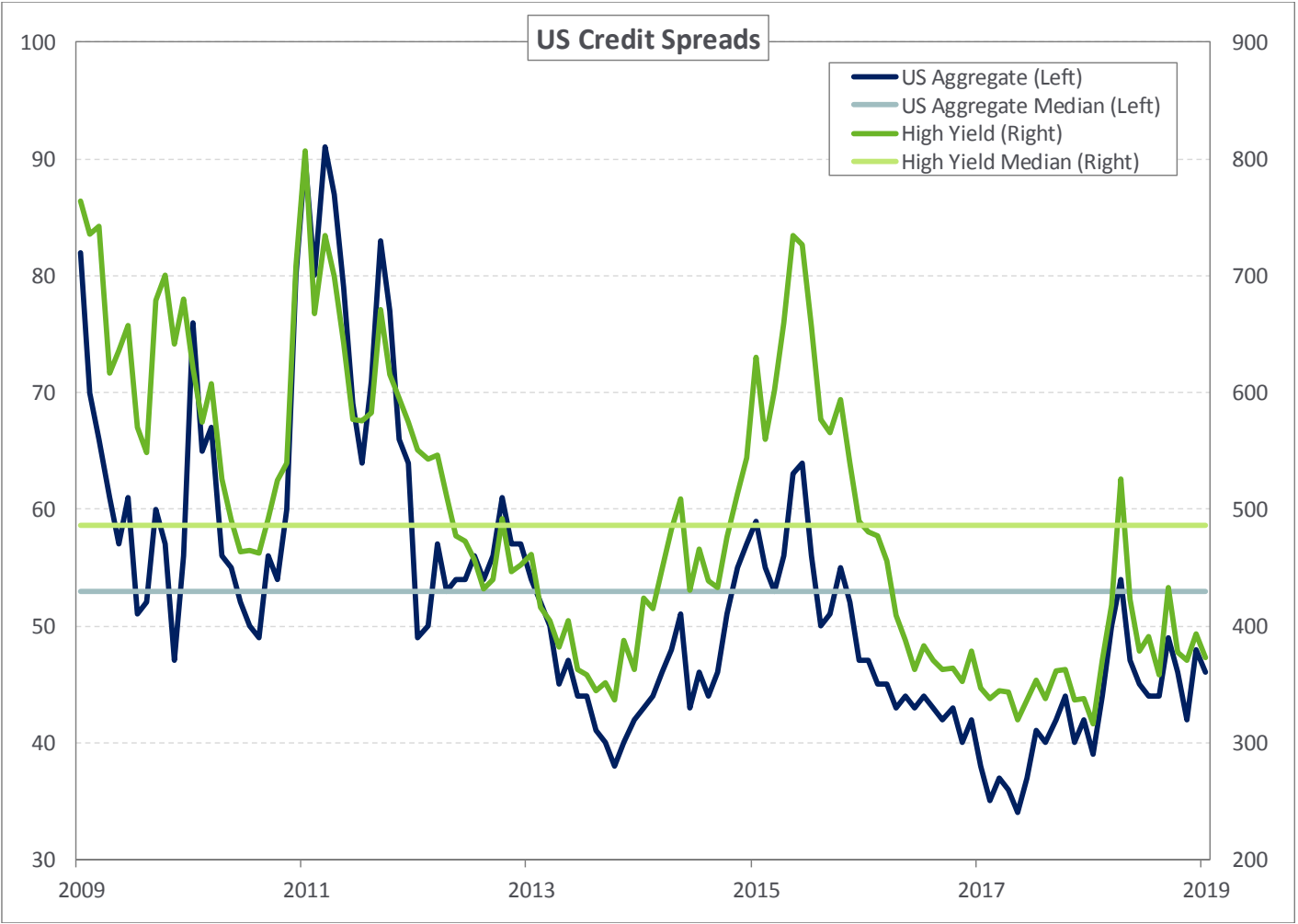
Source: FactSet



## NOMINAL YIELDS



# CREDIT SPREADS



Source: Barclays, FactSet



# REAL ASSETS

NEPC, LLC

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# REAL ASSETS INDEX PERFORMANCE

Index	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
<b>Bloomberg Commodity Index</b>	<b>1.2%</b>	<b>-1.8%</b>	<b>3.1%</b>	<b>-6.5%</b>	<b>-1.5%</b>	<b>-7.2%</b>
<b>Bloomberg Sub Agriculture Index</b>	<b>4.2%</b>	<b>-6.1%</b>	<b>-5.0%</b>	<b>-4.9%</b>	<b>-9.6%</b>	<b>-7.2%</b>
Coffee	4.6%	-10.3%	-10.1%	-12.9%	-21.1%	-20.5%
Corn	5.1%	-10.2%	-3.3%	-0.7%	-6.1%	-6.7%
Cotton	3.6%	-7.5%	-15.7%	-21.4%	-3.2%	0.1%
Soybean	4.4%	-1.3%	-3.1%	0.1%	-6.7%	-3.2%
Soybean Oil	1.1%	1.4%	1.5%	-3.5%	-8.0%	-5.9%
Sugar	3.9%	-8.0%	-4.3%	3.4%	-23.4%	-11.4%
Wheat	7.4%	-6.1%	-2.5%	-4.9%	-4.9%	-8.6%
<b>Bloomberg Sub Energy</b>	<b>1.1%</b>	<b>-4.5%</b>	<b>5.6%</b>	<b>-21.5%</b>	<b>-0.8%</b>	<b>-16.8%</b>
Brent Crude	1.4%	-6.0%	16.7%	-23.6%	6.8%	-14.2%
Heating Oil	3.3%	-2.6%	14.1%	-17.7%	6.4%	-10.0%
Natural Gas	0.4%	-1.7%	-24.2%	-24.1%	-17.4%	-26.4%
Unleaded Gas	4.4%	-4.4%	27.4%	-20.2%	1.9%	-11.7%
WTI Crude Oil	-1.3%	-6.6%	18.1%	-26.1%	1.9%	-18.9%
<b>Bloomberg Sub Industrial Metals</b>	<b>0.5%</b>	<b>2.4%</b>	<b>7.2%</b>	<b>-2.1%</b>	<b>5.8%</b>	<b>-1.7%</b>
Aluminum	-1.5%	-4.7%	-8.4%	-18.3%	0.3%	-4.6%
Copper	1.2%	-4.8%	-1.1%	-7.2%	4.3%	-3.9%
Nickel	-4.5%	35.5%	60.9%	36.4%	16.8%	0.0%
Zinc	9.4%	-3.0%	3.0%	-0.9%	4.2%	2.4%
<b>Bloomberg Sub Precious Metals</b>	<b>-4.4%</b>	<b>5.3%</b>	<b>12.8%</b>	<b>20.4%</b>	<b>0.9%</b>	<b>2.2%</b>
Gold	-3.5%	3.8%	14.2%	22.4%	3.0%	3.3%
Silver	-7.2%	10.5%	8.5%	14.2%	-5.1%	-1.3%
<b>Bloomberg Sub Livestock</b>	<b>7.5%</b>	<b>0.8%</b>	<b>-6.1%</b>	<b>-5.5%</b>	<b>5.8%</b>	<b>-6.6%</b>
Lean Hogs	10.8%	3.3%	-5.0%	-7.2%	4.3%	-11.7%
Live Cattle	5.7%	-0.7%	-7.4%	-5.6%	6.0%	-4.0%

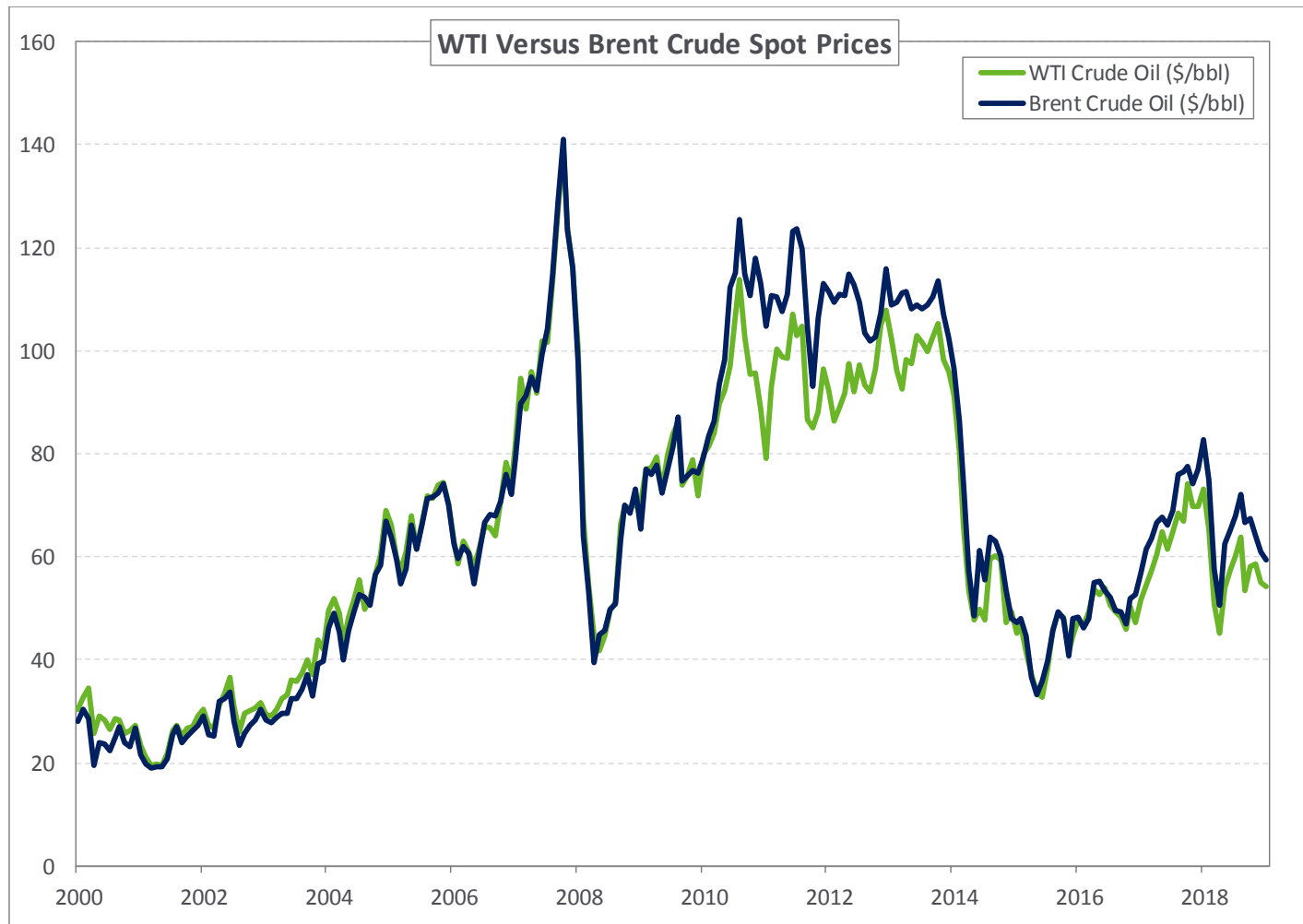
Source: Bloomberg, FactSet

Bloomberg subindex total return indices reflects the return of the underlying one month commodity futures price movements





## OIL MARKETS



Source: FactSet



## **INFORMATION DISCLAIMER**

**Past performance is no guarantee of future results.**

**The goal of this report is to provide a basis for monitoring financial markets. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**

**Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**

**All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.**

**This report is provided as a management aid for the client's internal use only. This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.**



### **Information Disclaimer**

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

### **Reporting Methodology**

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





November 18, 2019

Board of Retirement  
Ventura County Employees' Retirement Association  
1190 South Victoria Avenue, Suite 200  
Ventura, CA 93003

**SUBJECT: CALIFORNIA GOVERNMENT CODE SECTION 7514.7 ANNUAL  
REPORTING- REAL ESTATE FUNDS**

Dear Board Members:

Presented to the Board are reports meeting the public disclosure requirements for alternative investments under California Government Code Section 7514.7 for real estate funds managed by Prudential and by UBS.

Note that public disclosure requirements were met for private equity and for private credit investments via reports by Abbott and NEPC respectively, presented in open session to the Board at its meeting of October 21, 2019.

**RECOMMENDATION: RECEIVE AND FILE THE ATTACHED ALTERNATIVE  
INVESTMENT DISCLOSURE REPORTS FOR REAL ESTATE FUNDS**

Respectfully submitted,

Dan Gallagher  
Chief Investment Officer

**CALIFORNIA REPORTING TEMPLATE**

Reporting Period: 12/31/2018 1

**CPRA Disclosures (Cal. Govt. Code § 6254.26(b)):**

1. Name, address and vintage year of Partnership- Name: PGIM Real Estate Address: 7 Giralda Farms Madison, NJ 07940; Vintage Year: 1970
2. Date the investment in Partnership was made by Investor- Investors inception- 3/31/2005
3. Dollar amount of cash contributions made by Investor to Partnership since inception- \$60,000,000
4. Dollar amount of Investor's Distributions from Partnership since inception- \$42,694,948
5. Dollar amount on a fiscal year-end basis of cash distributions received by Investor, and remaining value of Partnership assets attributable to Investor's investment in Partnership- \$42,694,948
6. Net internal rate of return ("IRR") of Investor's investment in Partnership since inception- Net IRR 6.54%<sup>1</sup>
7. The investment multiple of Investor's investment in Partnership since inception- N/A, PRISA SA is an open end fund
8. Dollar amount of the total management fees and costs paid on an annual fiscal year-end basis by Investor to Partnership- Annual period ending 12/31/2016 is \$999,503.83.
9. Dollar amount of cash profit received by Investor from Partnership on a fiscal year-end basis- Not applicable, Investor is invested in an insurance company separate account not a limited partnership construct.

**Additional Disclosures (Cal. Govt. Code § 7514.7):**

- a. Fees and expenses that Investor pays directly to Partnership, General Partner or related parties: n/a
- b. Investor's pro rata share of fees and expenses, not included in (a) above, that are paid from Partnership to General Partner or related parties: n/a
- c. Investor's pro rata share of carried interest distributed to General Partner or related parties: n/a
- d. Investor's pro rata share of aggregate fees and expenses paid by all of the portfolio companies held by Partnership to General Partner or related parties: .73%
- e. Gross and net IRR of investment of Partnership since inception: Investment Net IRR 6.54%; Fund Gross IRR 7.59%

This investor has elected to reinvest all quarterly distributions since inception as of 12/31/18. As of 12/31/18, the total amount of reinvested capital since inception was: \$ 53,216,686.01

**CALIFORNIA REPORTING TEMPLATE**

**Reporting Period:** 12/31/2018

**CPRA Disclosures (Cal. Govt. Code § 6254.26(b)):**

1. Name, address and vintage year of Partnership

Name: Trumbull Property Fund LP (TPF)

Address: 10 State House Square, 15<sup>th</sup> Floor, Hartford CT 06103

Vintage Year: 1978, converted to partnership structure in 2008

2. Date the investment in Partnership was made by Investor. 03/31/2003

3. Dollar amount of cash contributions made by Investor to Partnership since inception: \$124,000,000

4. Dollar amount of Investor's Distributions from Partnership since inception: \$17,789,760

5. Dollar amount on a fiscal year-end basis of cash distributions received by Investor, and remaining value of Partnership assets attributable to Investor's investment in Partnership

\$ 17,789,760 Distributions and redemptions from inception

\$276,240,596 Account value after fee payable at Dec 31, 2018

\$294,030,356

6. Net internal rate of return ("IRR") of Investor's investment in Partnership since inception:

The Investor's net IRR (after fees) is 7.77%

7. The investment multiple of Investor's investment in Partnership since inception

$(\$294,030,356 / \$124,000,000) = 2.37$

8. Dollar amount of the total management fees and costs paid on an annual fiscal year-end basis by Investor to Partnership \$21,716,857 from inception to December 31, 2018

9. Dollar amount of cash profit received by Investor from Partnership on a fiscal year-end basis

\$120,222,304 of earnings

\$ 72,021,348 of Unrealized and realized gains

\$192,243,653 Total investment earnings

**Additional Disclosures (Cal. Govt. Code § 7514.7):**

a. Fees and expenses that Investor pays directly to Partnership, General Partner or related parties: For calendar year 2018, advisory fees of \$1,974,586 were deducted and paid from the investor's account to the partnership.

b. Investor's pro rata share of fees and expenses, not included in (a) above, that are paid from Partnership to General Partner or related parties:

The Fund will pay all costs, expenses and fees incurred in operating the Fund (including amounts paid to third parties unaffiliated with the Fund or the Advisor), including costs, expenses and fees incurred for legal, accounting, audit, appraisal and other third-party valuation services, insurance and indemnification, tax and other consulting services (including engineering and environmental consulting), and other costs, expenses and fees incurred in the evaluation, acquisition, financing, leasing, development, management, operation, monitoring and disposition of investments (including such expenses incurred in connection with transactions that are not consummated for any reason). Costs and expenses related to quarterly offerings of Units will be operating expenses paid by the Fund. Operating expenses will include costs incurred in connection with formation of underlying subsidiaries for acquisition of assets. The Advisor will not be reimbursed by the Fund for the Advisor's overhead or employee compensation or for any fees or expenses paid to sub-advisors. In addition, the Fund will reimburse reasonable expenses incurred by members of the Advisory Council. The investor is allocated its pro rata share of the expenses above.

c. Investor's pro rata share of carried interest distributed to General Partner or related parties: **Not applicable.** There is no carried interest.

d. Investor's pro rata share of aggregate fees and expenses paid by all of the portfolio companies held by Partnership to General Partner or related parties: For calendar year 2018, the investors share of advisory fees paid to the general partner and related parties was \$1,974,586. For calendar year 2018 the investor's share of the Funds general & administrative costs was \$104,636.

e. Gross and net IRR of investment of Partnership since inception:

TPF is an open-end commingled real estate fund with an inception date of January 13, 1978. The TPF gross and net returns from inception to December 31, 2018 are 8.95% and 7.96%, respectively. These returns are time-weighted, leveraged, and include reinvestment of income.

**Notes:**

The Trumbull Property Fund LP ("TPF" or the "Fund") is an open-end, commingled private real estate portfolio advised by UBS Realty Investors LLC. The REIT-based fund is structured as a limited partnership.

All information furnished in this report is confidential and proprietary information of TPF, its general and limited partners and UBS Realty Investors LLC. This material should not be shared with third parties without the prior written permission of UBS Realty Investors LLC.

Past performance is not indicative of future results. Actual results may be materially different. The material content of this response is based upon information obtained by UBS Realty Investors LLC through December 31, 2018.



November 18, 2019

Board of Retirement  
Ventura County Employees' Retirement Association  
1190 South Victoria Avenue, Suite 200  
Ventura, CA 93003

**SUBJECT: AUTHORIZATION OF UP TO 2 VCERA TRUSTEES AND CIO TO ATTEND  
NEPC'S 2020 PUBLIC FUNDS WORKSHOP IN TEMPE, ARIZONA ON  
FEBRUARY 4- 5, 2020**

Dear Board Members:

NEPC's 2019 Public Funds Workshop in Tempe, Arizona is scheduled for February 4 – 5, 2020. Attached is the most recent Workshop agenda draft. The estimated cost to attend is approximately \$1,000 per person including airfare, hotel, meals, and other related expenses.

Allan Martin of NEPC and I are available to respond to any questions you may have on this matter.

**RECOMMENDATION: AUTHORIZE UP TO 2 VCERA TRUSTEES AND CIO TO  
ATTEND NEPC'S 2020 PUBLIC FUNDS WORKSHOP IN TEMPE,  
ARIZONA ON FEBRUARY 4- 5, 2020**

Respectfully submitted,

Dan Gallagher  
Chief Investment Officer



## Workshop Agenda – February 4-5, 2020

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### 2020 Public Funds Workshop Tuesday and Wednesday, February 4-5

Tempe Mission Palms  
60 East Fifth Street  
Tempe, AZ 85281

#### **Tuesday, February 4**

- 6:30a-7:45a: Buffet breakfast at the Cloister (at your leisure)  
7:45a: Adjourn to the Palm C/F meeting rooms
- 8:00a-9:00a: **Opening Remarks/Fund Introductions**  
Kevin Leonard of NEPC to provide opening remarks, followed by Allan Martin of NEPC and participants discussing Impactful actions from 2019 and key initiatives for 2020.
- 9:00–10:30a: **NEPC 2020 Capital Markets Update and Asset Allocation Thoughts**  
Presentation and discussion of NEPC’s 2020 Capital Markets and outlook  
Phill Nelson, NEPC
- 10:30a–10:45a: Break
- 10:45a–11:30a: **Economic Discussion (what is going on with global economics)**  
*Speaker TBD*
- 11:30a–12:15p: **Public Fund Panel on Capital Markets**  
What are clients doing with their asset allocation?  
*Panel participants TBD*
- 12:15p-1:00p: Lunch (in the Cloister)
- 1:00p–2:00p: **Equity Structure**  
Active/Passive—Passive isn’t active—investing in equity when it is so easy to do index funds  
Tim O’Connell from NEPC to moderate—*panelists TBD*
- 2:00p-3:00p: **Investing in a Negative Rate Environment**  
Tim McCusker from NEPC

**Tuesday, February 4 (cont.)**

3:00p-4:00p: **Leverage Panel**  
*Participants TBD*

4:00p-5:00p: **Private Debt Panel**  
Neil Sheth of NEPC to host—*Participants TBD*

5:00p: End of day one

5:30p: Cocktails (Mission Grille)

6:00p: Dinner—Speaker will be David Bridges from Fidelity

**Wednesday, February 5**

6:30a-7:45a: Buffet breakfast at the Cloister (at your leisure)

7:45a: Adjourn to the Palm C/F meeting room

8:00a-9:00a: **Applying an Allocators Perspective to Consultant's Research View**  
A fireside chat with Sam Austin and Sarah Samuels of NEPC

9:00a-10:00a: **Governance Panel**  
*Participants TBD*

10:00a-10:15a: Break

10:15a-11:00a: **The Debate over ESG**  
Panel hosted by Dulari Pancholi of NEPC. Panelists to include Jason Malinowski (SCERS), *others TBD*

11:00a-11:45a: **Technology is Eating the World and Your Investment Portfolio!**  
*This session is not yet confirmed.*

11:45a: Concluding Remarks

12:00p: Box lunch





November 18, 2019

Board of Retirement  
Ventura County Employees' Retirement Association  
1190 South Victoria Avenue, Suite 200  
Ventura, CA 93003

**SUBJECT: 2020 CALENDARS OF INVESTMENT MANAGER PRESENTATIONS AND OF INVESTMENT  
ON-SITE DUE DILIGENCE VISITS**

Dear Board Members:

Attached for your consideration and adoption are two calendars. One is a proposed calendar of 2020 annual investment presentations. The other is a proposed calendar of 2020 investment on-site due diligence visits.

Please approve both calendars, and authorize expenditures for investment on-site due diligence travel in accordance with the Board adopted Education and Travel Policy. Appropriations for on-site due diligence travel are included in the current year Board adopted budget, and for the remainder of the calendar year, will be included in the FY2020-2021 Budget.

**IT IS RECOMMENDED THAT THE BOARD APPROVE:**

- 1. THE PROPOSED 2020 CALENDARS FOR INVESTMENT PRESENTATIONS AND FOR INVESTMENT ON-SITE DUE DILIGENCE TRAVEL AND,**
- 2. AUTHORIZE NECESSARY EXPENDITURES, IN ACCORDANCE WITH THE BOARD'S ADOPTED TRAVEL POLICY AND BUDGET.**

Sincerely,

Dan Gallagher  
Chief Investment Officer

## VCERA 2020 INVESTMENT PRESENTATIONS CALENDAR

Meeting Date	Material Deadline	Meeting	Presentations	Items
1/6/2020	12/27/2019	Disability		
1/27/2020	1/17/2020	Business	Prudential – PRISA	November and December 2019 <i>Monthly</i> Investment Performance Reports - NEPC
2/10/2020	1/31/2020	Disability		
2/24/2020	2/14/2020	Business	Adams Street UBS Real Estate	Q4 Investment Performance Report - NEPC January <i>Monthly</i> Investment Performance Report - NEPC
3/9/2020	2/28/2020	Disability		
3/30/2020	3/20/2020	Business	Pantheon HarbourVest	February <i>Monthly</i> Investment Performance Report - NEPC
4/20/2020	4/10/2020	Disability & Business	Sprucegrove State Street Abbott	March <i>Monthly</i> Investment Performance Reports - NEPC Private Equity Report- Abbott
5/4/2020	4/24/2020	Disability		
5/18/2020	5/8/2020	Business	Tortoise Bridgewater	Q1 Investment Performance Report - NEPC
6/8/2020	5/29/2020	Disability		
6/22/2020	6/12/2020	Business	Parametric	April <i>Monthly</i> Investment Performance Reports - NEPC May <i>Monthly</i> Investment Performance Report - NEPC
7/13/2020	7/3/2020	Disability		
7/27/2020	7/17/2020	Business	Walter Scott Hexavest	June <i>Monthly</i> Investment Performance Report - NEPC
9/14/2020	9/4/2020	Disability		
9/28/2020	9/18/2020	Business	Board Retreat	Q2 Performance Report - NEPC July & August <i>Monthly</i> Performance - NEPC
10/12/2020	10/2/2020	Disability		
10/26/2020	10/16/2020	Business	Reams Western Abbott	September <i>Monthly</i> Investment Performance Report - NEPC Private Equity Report- Abbott CA Code Sect 7514.7 Annual Reports
11/9/2020	10/30/2020	Disability		
11/23/2020	11/13/2020	Business	Blackrock	Q3 Performance Report - NEPC; Annual Private Investments report - Abbott October <i>Monthly</i> Investment Performance Report - NEPC
12/14/2020	12/4/2020	Disability & Business	Loomis	

**VCERA 2020 INVESTMENT ON-SITE DUE DILIGENCE CALENDAR**

DATE	INVESTMENT MANAGER / SERVICE PROVIDER	LOCATION
1Q2020	Western Asset Management	Pasadena
2Q2020	Prudential	San Francisco
2Q2020	BlackRock	San Francisco
3Q2020	Walter Scott	Edinburgh
4Q2020	Abbott	New York



November 18, 2019

Board of Retirement  
Ventura County Employees' Retirement Association  
1190 South Victoria Avenue, Suite 200  
Ventura, CA 93003

**SUBJECT: AUTHORIZATION FOR TRUSTEE ROBERTS TO ATTEND THE CALAPRS OVERVIEW COURSE  
ON DECEMBER 6, 2019 IN SAN MATEO, CA.**

Dear Board Members:

Trustee Roberts has requested approval to attend the CALAPRS Overview Course being held on December 6, 2019 at Marriott San Mateo in San Mateo, CA. This course would fulfill a portion of the 24 hours of required education in a trustee's first two years, per the Education Policy.

The registration cost of \$250.00 includes lodging and meals. Staff estimates the cost to be approximately \$1,200 including registration, airfare, hotel, mileage and other expenses..

VCERA staff will be pleased to respond to any questions you may have at the November 18, 2019 business meeting.

Sincerely,

Linda Webb  
Retirement Administrator



Dear Investors,

Further to our communication in June this year, I am pleased to announce that our market-leading Private Debt business has finalised its independence from BlueBay Asset Management (“BlueBay”) and formally relaunched as Arcmont Asset Management (“Arcmont”).

Arcmont has now become an independent, employee-owned and managed business, with the strong backing of our partner, Dyal Capital Partners, a market leader in investments in alternative asset managers globally. There will be a one-year transition period to ensure a smooth handover of any remaining shared functions between BlueBay and Arcmont. The status of existing funds and current fund-raising plans are not impacted by the separation and all client relationships will be transitioned over to Arcmont’s investor relations team smoothly over the next twelve months.

With a highly experienced investment team, a strong track record and over 50 employees managing approximately €13 billion of assets under management across different investment strategies, Arcmont is a leading private debt manager in Europe. Our focus will continue to be on delivering attractive absolute and risk-adjusted returns to our global investor base through offering flexible capital solutions to businesses across Europe.

I am also delighted to announce that David Brooks and Alice Cavalier have agreed to join Arcmont as Partners from Bain Capital Credit and PIMCO respectively. They will lead our newly-formed Capital Solutions strategy that will seek to provide flexible capital to companies requiring constructive solutions as we look ahead to the next cyclical downturn. David and Alice will be leveraging their extensive restructuring expertise and our excellent ongoing relationships with private equity sponsors, management teams and advisers.

I believe this move will reinforce our position as a leading provider of bespoke Private Debt financing solutions across the entire capital structure in all economic environments.

I would like to thank you for your great support of our business over many years and the confidence you have placed in us.

Further information on Arcmont can be found online at [www.arcmont-am.com](http://www.arcmont-am.com) and [here](#) for a copy of the press release.

Should you have any questions, please don’t hesitate to get in touch with me directly or our investor relations team at [Investor.Relations@arcmont-am.com](mailto:Investor.Relations@arcmont-am.com).

Kind regards,

**Anthony Fobel**  
*Chief Executive Officer*  
Arcmont Asset Management



This email was sent by:  
Arcmont Asset Management LLP

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United Kingdom

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