

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

BUSINESS MEETING

NOVEMBER 19, 2018

AGENDA

PLACE: Ventura County Employees' Retirement Association
Second Floor Boardroom
1190 South Victoria Avenue
Ventura, CA 93003

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:

	Master Page No.
I. <u>CALL TO ORDER</u>	
II. <u>APPROVAL OF AGENDA</u>	1 – 3
III. <u>APPROVAL OF MINUTES</u>	
A. Disability Minutes of November 5, 2018.	4 – 10
IV. <u>CONSENT AGENDA</u>	
A. Approve Regular and Deferred Retirements and Survivors Continuances for the Month of October 2018.	11
B. Receive and File Report of Checks Disbursed in October 2018.	12 – 15
C. Receive and File Budget Summary for FY 2018-19 Month Ending October 31, 2018.	16 – 17
V. <u>INVESTMENT MANAGER PRESENTATIONS</u>	
A. Receive Annual Investment Presentation from BlackRock, Anthony Freitas and Christian DeLeon.	18 – 82

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VI. INVESTMENT INFORMATION

- A. NEPC – Anthony Ferrara.
VCERA – Dan Gallagher, Chief Investment Officer.
1. Preliminary Performance Report Month Ending October 30, 2018. 83 – 93
RECOMMENDED ACTION: Receive and file.
 2. Quarterly Investment Performance Report for Period Ending September 30, 2018. 94 – 192
RECOMMENDED ACTION: Receive and file.

VII. OLD BUSINESS

- A. Recommendation to Approve 2nd Contract Amendment with Brentwood IT.
RECOMMENDED ACTION: Approve.
1. Staff Letter. 193 – 194
 2. Draft Contract Extension (Redline). 195
 3. Chronology of Staff Communication with Board Regarding CTO Position.
(To be provided)

VIII. NEW BUSINESS

- A. County Request for Reclassification of Airport Operations Officers from Safety to General Members, Based on Change in Duties and Job Class Specification.
RECOMMENDED ACTION: Approve.
1. Staff Letter. 196 – 198
 2. Airport Operations Officer Job Class Description (Redline). 199 – 201
 3. Airport Operations Officer Job Class Description (New). 202 – 204
 4. VCPPOA (Patrol) Memorandum of Agreement, Section 501D. 205
- B. Recommendation for Authorization for Disability Specialists, Donna Edwards and Nancy Jensen to Attend the Workers' Compensation Workshop on December 6 - 7, 2018, in Pasadena, CA.
RECOMMENDED ACTION: Approve.
1. Staff Letter. 206
 2. Introduction to Workers' Compensation Claims Course Overview. 207 - 210
- C. Proposed Investment Manager Presentations and On-Site Due Diligence Visit Calendars for 2019.
RECOMMENDED ACTION: Approve.

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VIII. NEW BUSINESS (continued)

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| 1. Staff Letter. | 211 |
| 2. Proposed Investment Manager Presentations Calendar for 2019. | 212 |
| 3. Proposed On-Site Due Diligence Visit Calendar for 2019. | 213 |

IX. INFORMATIONAL

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| A. RVK – Public Fund Analysis. | 214 – 286 |
| B. Letter from UBS Regarding the Labor Negotiations Between the Marriott and Unite HERE. | 287 |
| C. UBS News Flash, “California Wildfires: No Investments in Impacted Areas”. | 288 |

X. PUBLIC COMMENT

XI. STAFF COMMENT

XII. BOARD MEMBER COMMENT

XIII. ADJOURNMENT

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

DISABILITY MEETING

NOVEMBER 5, 2018

MINUTES

**TRUSTEES
PRESENT:**

William W. Wilson, Vice-Chair, Public Member
Steven Hintz, Treasurer-Tax Collector
Mike Sedell, Public Member
Robert Bianchi, Public Member
Ed McCombs, Alternate Public Member
Craig Winter, General Employee Member
Maeve Fox, General Employee Member
Arthur E. Goulet, Retiree Member
Will Hoag, Alternate Retiree Member
Chris Johnston, Safety Employee Member

**TRUSTEES
ABSENT:**

Peter C. Foy, Public Member

**STAFF
PRESENT:**

Linda Webb, Retirement Administrator
Lori Nemiroff, General Counsel
Henry Solis, Chief Financial Officer
Julie Stallings, Chief Operations Officer
Shalini Nunna, Retirement Benefits Manager
Vickie Williams, Retirement Benefits Manager
Karen Scanlan, Accounting Manager
Leah Oliver, Chief Technology Officer
Josiah Vencel, Communications Officer
Donna Edwards, Retirement Benefits Specialist
Nancy Jensen, Retirement Benefits Specialist
Chris Ayala, Program Assistant
Sierra Walsh, Office Assistant III-C

PLACE:

Ventura County Employees' Retirement Association
Second Floor Boardroom
1190 South Victoria Avenue
Ventura, CA 93003

TIME:

9:00 a.m.

**BOARD OF RETIREMENT
DISABILITY MEETING**

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ITEM:

I. CALL TO ORDER

Vice-Chair Wilson called the Disability Meeting of November 5, 2018, to order at 9:01 a.m.

II. APPROVAL OF AGENDA

MOTION: Approve.

Moved by Bianchi, seconded by Fox.

Vote: Motion carried

Yes: Bianchi, Fox, Goulet, Hintz, Johnston, McCombs, Sedell, Wilson, Winter

No: -

Absent: Foy

Abstain: -

III. APPROVAL OF MINUTES

A. Disability Meeting of October 8, 2018.

Trustee Bianchi offered a correction to the minutes for the Disability Meeting of October 8, 2018. He said on agenda item II, in the 2nd sentence, after the word "She," the word "said" was missing.

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

MOTION: Approve the Minutes of the Disability Meeting of October 8, 2018, with Corrections.

Moved by Bianchi, seconded by Fox.

Vote: Motion carried

Yes: Bianchi, Fox, Goulet, Hintz, Johnston, McCombs, Sedell, Wilson, Winter

No: -

Absent: Foy

Abstain: -

B. Business Meeting of October 22, 2018.

Trustee Goulet said he had a few corrections to the minutes of the Business Meeting of October 22, 2018. On Master Page 13, the presenter from State Street should be recorded as "Veronica" instead of "Ronnie"; on Master Page 14, in the 4th sentence, the word "Hexavest" was misspelled; and on Master Page 15, in the 1st paragraph, 2nd sentence, the word "would" was missing after the word "staff."

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

MOTION: Approve the Minutes of the Business Meeting of October 22, 2018, with Corrections.

Moved by Goulet, seconded by Winter.

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Vote: Motion carried

Yes: Bianchi, Fox, Goulet, Hintz, Johnston, McCombs, Wilson, Winter

No: -

Absent: Foy

Abstain: Sedell

Trustee Sedell abstained because he was not present at the October 22, 2018 Business Meeting.

IV. RECEIVE AND FILE PENDING DISABILITY APPLICATION STATUS REPORT

MOTION: Receive and File.

Moved by Hintz, seconded by Bianchi.

Vote: Motion carried

Yes: Bianchi, Fox, Goulet, Hintz, Johnston, McCombs, Sedell, Wilson, Winter

No: -

Absent: Foy

Abstain: -

V. APPLICATIONS FOR DISABILITY RETIREMENT

A. Application for Service-Connected Disability Retirement - Wade, Stephen H.; Case No. 18-001.

1. Application for Service-Connected Disability Retirement, filed January 11, 2018.
2. Medical Analysis and Recommendation, including Supporting Medical Documentation, submitted by County of Ventura, Risk Management, in support of the Application for Service-Connected Disability Retirement, dated October 29, 2018.
3. Hearing Notice, dated October 30, 2018.

Catherine Laveau was present on behalf of County of Ventura Risk Management. David G. Schumaker, Attorney at Law, was present on behalf of the applicant. The applicant, Stephen H. Wade, was also present.

Mr. Schumaker declined to make a statement.

Ms. Laveau declined to make a statement.

Trustee Goulet referenced the medical report which stated, "Additionally, even if the applicant were to proceed with the total knee replacement at this time, there is no indication from any of the orthopedic surgeons that his improvement would be substantial enough to allow him to return to work." Trustee Goulet then asked if there was an explicit question asked of the orthopedic surgeons as to whether the improvement would be substantial enough.

Ms. Laveau replied that she was not aware if the orthopedic surgeons received that specific question. She said, however, that physicians typically address whether the improvement could

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be significant; in this particular case, whether improvement could have been significant or not, the physician did not feel that surgery was appropriate at the time.

Trustee Goulet commented that, based on his experience, he believed the applicant was making a poor choice in not undergoing the surgery now but rather than waiting until he was older.

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

MOTION: Approve the Service-Connected Disability Retirement Application.

Moved by Sedell, seconded by Johnston.

Vote: Motion carried

Yes: Bianchi, Fox, Hintz, Johnston, McCombs, Sedell, Wilson, Winter

No: Goulet

Absent: Foy

Abstain: -

B. Application for Service-Connected Disability Retirement – Bittmann, Janeen R.; Case No. 17-014.

1. Risk Management's Request for an Extension - Amended to Submit Medical Analysis through September 2019.
2. Hearing Notice, dated November 1, 2018.

Trustee Goulet asked what would happen if the applicant's surgery was not approved in her Worker's Compensation case.

Ms. Laveau replied that it would become a decision for the applicant to make regarding her retirement.

Trustee Goulet said that it seemed to him that situation was indicative of the close link between Worker's Compensation processing and retirement processing.

Ms. Laveau said there is nothing that prohibits the applicant from seeking the approval of care under the Worker's Compensation claim. Whether or not the surgery was approved in her Worker's Compensation case was not tied to her disability retirement.

Ms. Nemiroff asked, if the applicant were to be denied under her Worker's Compensation case, if she would still be able to seek medical care to have the surgery and then proceed with the disability retirement application.

Ms. Laveau replied that the applicant could, but clarified that Worker's Compensation in California utilizes evidence-based medicine. Thus, treatment requests made under Worker's Compensation in California would be required to comply with the evidence-based medicine standard.

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Ms. Nemiroff said that although the Worker's Compensation physician had recommended the surgery, the Worker's Compensation system had not approved it.

Ms. Laveau said there was an ongoing discussion in Worker's Compensation as to whether or not it met the standard, which was not uncommon because the system requires that such decisions be supported by evidence.

Ms. Nemiroff said that from the Board of Retirement's perspective, the applicant was not yet considered permanently incapacitated because she was still exploring medical procedures. Therefore, because the applicant was not yet permanent, Risk Management had asked for the extension.

Ms. Laveau replied yes and said that the physician had indicated that if the applicant proceeded with the procedure, there would be a very good chance of substantial improvement.

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

MOTION: Approve Risk Management's Request for an Extension - Amended to Submit Medical Analysis through September 2019.

Moved by Bianchi, seconded by Fox.

Vote: Motion carried

Yes: Bianchi, Fox, Goulet, Hintz, Johnston, McCombs, Sedell, Wilson, Winter

No: -

Absent: Foy

Abstain: -

VI. OLD BUSINESS

None.

VII. NEW BUSINESS

A. Recommendation to Approve 2nd Contract Amendment with Brentwood IT.

RECOMMENDED ACTION: Approve.

1. Staff Letter.
2. Draft Contract.

Ms. Webb said that staff requested the Board table the item until the next Business Meeting, so they could gather additional information.

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

MOTION: Approve Staff's Request to Table the Item Until the Business Meeting of November 19, 2018.

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Moved by Winter, seconded by Wilson.

Vote: Motion carried

Yes: Bianchi, Fox, Goulet, Hintz, Johnston, McCombs, Sedell, Wilson, Winter

No: -

Absent: Foy

Abstain: -

- B. Recommendation for Authorization for Accounting Manager, Karen Scanlan, and Sr. Accountant, Nida Williams, to Attend the CALAPRS Advanced Course in Retirement Plan Administration in Glendale, CA, on December 5 - 7, 2018.

RECOMMENDED ACTION: Approve.

1. Staff Letter.
2. CALAPRS Advanced Course in Retirement Plan Administration Agenda.

Ms. Webb requested that the Board approve the Accounting Manager and Sr. Accountant to attend the CALAPRS Advanced Course in Retirement Plan Administration, as they had already attended the first course in the three-part series.

Trustee Goulet remarked that the Advanced Course was excellent.

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

MOTION: Approve.

Moved by Goulet, seconded by Fox.

Vote: Motion carried

Yes: Bianchi, Fox, Goulet, Hintz, Johnston, McCombs, Sedell, Wilson, Winter

No: -

Absent: Foy

Abstain: -

VIII. INFORMATIONAL

None.

IX. PUBLIC COMMENT

The Board received public comment from Catherine Laveau of Risk Management regarding investigation and causation related to disability application cases. She requested suggestions on what other information Risk Management could provide to the Board to improve future disability retirement reports.

X. STAFF COMMENT

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DISABILITY MEETING**

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Ms. Webb introduced VCERA's new Chief Technology Officer, Leah Oliver, to the Board. Ms. Webb also said that Segal Consulting had provided the draft actuarial valuation to staff and that once staff received the final report, it would be provided to the Board and stakeholders for review. Segal was scheduled to present the actuarial valuation to the Board in December.

XI. BOARD MEMBER COMMENT

Trustee Goulet asked if the Board might want to pursue legislation to have the Chief Technology Officer position included with the executive staff under VCERA's Management Employees Resolution. Trustee Goulet offered to draft legislative language and provide it to the County of Ventura for comment.

Ms. Webb offered to inform the County about the Board's interest and to bring the legislation issue back for future discussion.

Vice-Chair Wilson asked about the status of Mr. Towner's Civil Service Commission hearing and the upcoming appointment of the Board Chair and Vice-Chair for next year.

Ms. Webb replied that she was informed the Civil Service Commission would continue proceedings in November, although it could possibly extend into January. She said that the Board typically appoints a Board Chair and Vice-Chair in December of each year, and staff planned to present the Board with its options then, taking into account the current situation.

Trustee Goulet said that the District Attorney's Office referred Mr. Towner's situation to the California Attorney General for possible criminal action, but the request was refused.

XII. ADJOURNMENT

The meeting was adjourned at 9:44 a.m.

Respectfully submitted,



LINDA WEBB, Retirement Administrator

Approved,

WILLIAM W. WILSON, Vice-Chair

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

October 2018						
FIRST NAME	LAST NAME	G/S	DATE OF MEMBERSHIP	BENEFIT SERVICE*	DEPARTMENT	EFFECTIVE DATE
REGULAR RETIREMENTS:						
Julia	Amundsen	G	12/12/1999	18.73	Resource Management Agency	09/21/2018
Michael	Araiza	G	07/21/1991	27.14	General Services Agency	10/07/2018
Todd	Bell	S	02/25/1996	15.74	Sheriff's Department	09/01/2018
Torri	Boghossian	G	05/29/2002	15.16	Health Care Agency	09/05/2018
Wendy	Carlton	G	06/29/1997	15.89	Public Defender (deferred)	09/17/2018
Debora	Cross	G	10/21/2007	8.27	Health Care Agency (deferred)	10/20/2018
Suzen	Dees	G	11/30/2008	14.37	Health Care Agency	09/05/2018
Amy	Dufek	G	10/28/1990	7.25	Health Care Agency (deferred)	09/19/2018
Dee	Emami	G	09/23/2007	11.02	CEO - Human Resources	09/22/2018
Marty	Estrada	G	11/05/1995	22.70	Human Services Agency	09/29/2018
Kenneth	Evans	G	01/17/2006	0.03	General Services Agency (deferred)	09/26/2018
David	Foster	G	03/16/2000	14.42	Resource Management Agency	09/18/2018
Jacqueline	Freed	G	10/18/1999	10.04	Human Services Agency (deferred)	09/24/2018
Guadalupe	Frias	G	02/17/1991	27.07	Health Care Agency	09/01/2018
Mercedes	Garibaldi	G	10/26/2003	12.62	Human Services Agency	10/02/2018
Debbie	Godfrey	G	04/24/2005	13.45	Superior Court	09/29/2018
Josephine	Godinez	G	10/30/1988	29.71	Superior Court (deferred)	10/21/2018
Carol	Henry	G	06/24/1990	28.25	Superior Court	09/12/2018
Mercedes	Herrera	G	10/13/1991	28.35	Probation Agency	10/05/2018
Wayne	McGhee	G	08/09/2009	4.93	Superior Court (deferred)	09/29/2018
Jose T.	Mendoza	G	07/25/1972	46.16	Resource Management Agency	09/28/2018
Karen	Mendoza	G	02/22/1987	38.06	Public Works Agency	10/03/2018
Jeanne	Munesato	G	01/10/2000	19.77	Health Care Agency	10/06/2018
Ronald	Nelson	S	06/14/1987	31.31	Sheriff's Department	09/22/2018
Eric	Nishimoto	G	05/30/1999	6.67	Sheriff's Department (deferred)	09/19/2018
Karen	Piekarski	G	10/23/2005	7.80	Health Care Agency (deferred)	10/20/2018
Marc	Rachmuth	G	09/21/2008	9.66	Health Care Agency	09/29/2018
Eddie	Rivera	G	07/07/2003	12.31	Health Care Agency	09/28/2018
Kimberly	Ruic				Sheriff's Department (alt payee)	09/01/2018
Marissa	Saquilabon	G	09/05/2000	13.89	Human Services Agency	09/22/2018
Catherine	Serros-Myers	G	08/01/1993	10.43	Board of Supervisors (deferred)	10/10/2018
Thomas	Stout	G	12/27/2009	8.29	Health Care Agency	09/26/2018
Lucy	Taylor	G	03/19/1989	33.63	Public Works Agency	09/14/2018
Melinda	Uhlich	G	12/29/1985	32.63	Sheriff's Department	09/15/2018
Nancy	Vallejo	S	12/28/1986	31.11	Probation Agency	09/25/2018
Terry	Wagemann	G	06/13/1999	5.55	Health Care Agency (deferred)	10/01/2018
Gregory	Warren	G	02/14/1993	6.65	Public Works Agency (deferred)	09/01/2018
Damon	Wing	G	05/20/2007	10.07	Board of Supervisors	09/13/2018
DEFERRED RETIREMENTS:						
Gina L.	Bauer	G	11/09/2014	2.59 *	Human Services Agency	09/27/2018
Jeffrey A.	Beard	G	09/10/2006	11.78	Public Works Agency	06/29/2018
Jason A.	Claros	G	02/03/2008	10.62	Human Services Agency	10/11/2018
Roman A.	Smith	G	09/11/2005	13.06	Resource Management Agency	09/29/2018
SURVIVORS' CONTINUANCES:						
Rita	Cisneros					
Mary	Darter					
John	Fielding					
Barbara	Gerber					
Eleanor	Tauber					

* = Excludes reciprocal service or service from any previous retirements

** = Member establishing reciprocity

Business Meeting Agenda - IV. CONSENT AGENDA

Date: Wednesday, October 31, 2018
 Time: 11:41AM
 User: 104164

Ventura County Retirement Assn

Check Register - Standard

Period: 04-19 As of: 10/31/2018

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 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
Company: VCERA										
Acct / Sub:	10200		000000							
027743	CK	10/3/2018	ADP ADP, LLC	04-19	000618	VO	ADMIN EXP	10/3/2018	0.00	2,901.60
027744	CK	10/3/2018	BRENTWOODI BRENTWOOD IT	04-19	000619	VO	IT	10/3/2018	0.00	10,990.00
027745	CK	10/3/2018	DIGITALDEP DIGITAL DEPLOYMENT	04-19	000620	VO	IT	10/3/2018	0.00	650.00
027746	CK	10/3/2018	DILIGENTCO DILIGENT CORPORATION	04-19	000621	VO	IT	10/3/2018	0.00	7,430.14
027747	CK	10/3/2018	GORINSTEIN ISRAEL GORINSTEIN, M.D.	04-19	000622	VO	ADMIN EXP	10/3/2018	0.00	2,500.00
027748	CK	10/3/2018	HARRISWATE HARRIS WATER CONDITIONING	04-19	000623	VO	ADMIN EXP	10/3/2018	0.00	159.50
027749	CK	10/3/2018	LINEASOLUT LINEA SOLUTIONS	04-19	000624	VO	ADMIN EXP	10/3/2018	0.00	10,969.50
027750	CK	10/3/2018	NEMIROFFLO LORI NEMIROFF	04-19	000625	VO	TRAVEL REIMB	10/3/2018	0.00	292.40
027751	CK	10/3/2018	NOSSAMAN NOSSAMAN LLP	04-19	000626	VO	LEGAL FEES	10/3/2018	0.00	50,595.75
027752	CK	10/3/2018	SPRUCEGROV SPRUCEGROVE INVESTMENT M	04-19	000627	VO	INVESTMENT FEES	10/3/2018	0.00	66,169.89
027753	CK	10/10/2018	ACCESSINFO ACCESS INFORMATION PROTEC	04-19	000628	VO	ADMIN EXP	10/10/2018	0.00	3,070.00
027754	CK	10/10/2018	BIANCHIROB ROBERT BIANCHI	04-19	000629	VO	MILEAGE REIMB	10/10/2018	0.00	58.86
027755	CK	10/10/2018	CDWGOVERN CDW GOVERNMENT	04-19	000630	VO	IT	10/10/2018	0.00	210.00

Business Meeting Agenda - IV. CONSENT AGENDA

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Ventura County Retirement Assn

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Period: 04-19 As of: 10/31/2018

Page: 2 of 4
 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
027756	CK	10/10/2018	GOVERNMENT GOVERNMENT FINANCE	04-19	000631	VO	ADMIN EXP	10/10/2018	0.00	570.00
027757	CK	10/10/2018	HEXAVEST HEXAVEST INC.	04-19	000632	VO	INVESTMENT FEES	10/10/2018	0.00	104,364.56
027758	CK	10/10/2018	SEGALCONSU SEGAL CONSULTING	04-19	000633	VO	ACTUARY FEES	10/10/2018	0.00	30,500.00
027759	CK	10/10/2018	SUBICASSOC SUBIC & ASSOCIATES, INC	04-19	000634	VO	ADMIN EXP	10/10/2018	0.00	3,070.50
027760	CK	10/10/2018	WEBBLINDA LINDA WEBB	04-19	000635	VO	REIMBURSEMENT	10/10/2018	0.00	60.00
027761	CK	10/10/2018	WEBBLINDA LINDA WEBB	04-19	000636	VO	TRAVEL REIMB	10/10/2018	0.00	301.93
027762	CK	10/16/2018	ABUCOURTRE PERSONAL COURT REPORTERS	04-19	000641	VO	ADMIN EXP	10/16/2018	0.00	707.30
027763	CK	10/16/2018	ATTMOBILIT AT&T MOBILITY	04-19	000637	VO	IT	10/16/2018	0.00	454.74
027764	CK	10/16/2018	BANKOFAMER BUSINESS CARD	04-19	000638	VO	ADMIN/IT	10/16/2018	0.00	7,622.42
027765	CK	10/16/2018	GLOBALCAPA GTT COMMUNICATIONS	04-19	000639	VO	IT	10/16/2018	0.00	724.35
027766	CK	10/16/2018	HANSONBRID HANSON BRIDGETT LLP	04-19	000640	VO	LEGAL FEES	10/16/2018	0.00	1,121.60
027767	CK	10/16/2018	LINEASOLUT LINEA SOLUTIONS	04-19	000642	VO	ADMIN EXP	10/16/2018	0.00	11,420.13
027768	CK	10/16/2018	SHREDITUSA SHRED-IT USA	04-19	000643	VO	ADMIN EXP	10/16/2018	0.00	237.69

Business Meeting Agenda - IV. CONSENT AGENDA

Date: Wednesday, October 31, 2018
 Time: 11:41AM
 User: 104164

Ventura County Retirement Assn

Check Register - Standard

Period: 04-19 As of: 10/31/2018

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 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
027769	CK	10/16/2018	STAPLESADV STAPLES ADVANTAGE	04-19	000644	VO	ADMIN EXP	10/16/2018	0.00	848.36
027770	CK	10/16/2018	STROUDES STROUD DESIGN, INC	04-19	000645	VO	ADMIN EXP	10/16/2018	0.00	61.32
027771	CK	10/16/2018	THOMSONREU THOMSON REUTERS- WEST	04-19	000646	VO	IT	10/16/2018	0.00	461.00
027772	CK	10/16/2018	TIMEWARNER TIME WARNER CABLE	04-19	000647	VO	IT	10/16/2018	0.00	294.99
027773	CK	10/31/2018	BIANCHIROB ROBERT BIANCHI	04-19	000649	VO	TRVL/MILG REIMB	10/31/2018	0.00	578.33
027774	CK	10/31/2018	BROWARMST BROWN ARMSTRONG	04-19	000650	VO	ADMIN EXP	10/31/2018	0.00	1,172.50
027775	CK	10/31/2018	DELLMARKET DELL MARKETING L.P.	04-19	000651	VO	IT	10/31/2018	0.00	12,996.20
027776	CK	10/31/2018	FEDEX FEDEX	04-19	000652	VO	ADMIN EXP	10/31/2018	0.00	25.30
027777	CK	10/31/2018	GALLAGHERD DAN GALLAGHER	04-19	000653	VO	TRAVEL REIMB	10/31/2018	0.00	688.11
027778	CK	10/31/2018	GOULETARTH ARTHUR E. GOULET	04-19	000654	VO	MILEAGE REIMB	10/31/2018	0.00	37.06
027779	CK	10/31/2018	LOOMISSAYL LOOMIS, SAYLES & COMPANY, L	04-19	000655	VO	INVESTMENT FEES	10/31/2018	0.00	126,850.74
027780	CK	10/31/2018	MFDAILYCOR M.F. DAILY CORPORATION	04-19	000656	VO	ADMIN EXP	10/31/2018	0.00	17,884.87
027781	CK	10/31/2018	NOSSAMAN NOSSAMAN LLP	04-19	000657	VO	LEGAL FEES	10/31/2018	0.00	12,337.20
027782	CK	10/31/2018	REAMSASSET SCOUT INVESTMENTS, INC	04-19	000658	VO	INVESTMENT FEES	10/31/2018	0.00	133,986.00

Business Meeting Agenda - IV. CONSENT AGENDA

Date: Wednesday, October 31, 2018
 Time: 11:41AM
 User: 104164

Ventura County Retirement Assn

Check Register - Standard

Period: 04-19 As of: 10/31/2018

Page: 4 of 4
 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
027783	CK	10/31/2018	SCANLANKAR KAREN SCANLAN	04-19	000659	VO	TRAVEL REIMB	10/31/2018	0.00	807.16
027784	CK	10/31/2018	SPRUCEGROV SPRUCEGROVE INVESTMENT M	04-19	000660	VO	INVESTMENT FEES	10/31/2018	0.00	66,682.48
027785	CK	10/31/2018	STATESTREE STATE STREET BANK AND TRUS	04-19	000661	VO	INVESTMENT FEES	10/31/2018	0.00	27,201.60
027786	CK	10/31/2018	TORTOISECA TORTOISE CAPITAL ADVISORS,	04-19	000662	VO	INVESTMENT FEES	10/31/2018	0.00	193,482.40
027787	CK	10/31/2018	VENCELJOSI JOSIAH VENCEL	04-19	000663	VO	TRAVEL REIMB	10/31/2018	0.00	169.03
027788	CK	10/31/2018	WALTERSCOT BNY MELLON INV MGMT CAYMA	04-19	000664	VO	INVESTMENT FEES	10/31/2018	0.00	221,881.70
027789	CK	10/31/2018	WEBBLINDA LINDA WEBB	04-19	000665	VO	TRAVEL REIMB	10/31/2018	0.00	842.56
027790	CK	10/31/2018	WILLIAMSEL ELENIDA WILLIAMS	04-19	000666	VO	TRAVEL REIMB	10/31/2018	0.00	716.73

Check Count: 48

Acct Sub Total: 1,137,158.50

Check Type	Count	Amount Paid
Regular	48	1,137,158.50
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
Total:	48	1,137,158.50

Company Disc Total 0.00 Company Total 1,137,158.50

**Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2018-2019**

For the Four Months Ended October 31, 2018 and Year-To-Date - 33.33% of Fiscal Year Expended

	<i>Adopted 2019 Budget</i>	<i>Adjusted 2019 Budget</i>	<i>October 2018</i>	<i>Expended Fiscal Year to Date</i>	<i>Available Balance</i>	<i>Percent Expended</i>
Salaries and Benefits						
Regular Salary	\$3,215,800.00	\$3,215,800.00	\$235,319.11	\$917,271.02	\$2,298,528.98	28.52%
Extra-Help/Temporary Services	158,500.00	158,500.00	10,969.50	21,591.38	136,908.62	13.62%
Supplemental Payments	63,500.00	63,500.00	4,038.72	15,254.43	48,245.57	24.02%
Vacation Redemption	146,800.00	146,800.00	33,550.62	92,453.02	54,346.98	62.98%
Retirement Contributions	546,000.00	546,000.00	40,277.45	152,491.88	393,508.12	27.93%
OASDI Contribution	196,700.00	196,700.00	9,601.37	41,972.46	154,727.54	21.34%
FICA-Medicare	55,500.00	55,500.00	3,921.73	14,717.25	40,782.75	26.52%
Medical Insurance	327,600.00	327,600.00	22,194.00	86,588.00	241,012.00	26.43%
Life Insurance	1,100.00	1,100.00	89.90	353.40	746.60	32.13%
Unemployment Insurance	2,300.00	2,300.00	165.56	634.33	1,665.67	27.58%
Mgmt Disability Insurance	23,500.00	23,500.00	1,518.35	5,897.72	17,602.28	25.10%
Workers Compensation Insurance	23,600.00	23,600.00	1,946.86	7,243.17	16,356.83	30.69%
401K Plan Contribution	81,700.00	81,700.00	5,671.59	22,720.21	58,979.79	27.81%
Total Salaries & Benefits	\$4,842,600.00	\$4,842,600.00	\$369,264.76	\$1,379,188.27	\$3,463,411.73	28.82%
Services & Supplies						
Board Member Stipend	\$13,200.00	\$13,200.00	\$2,000.00	\$3,100.00	\$10,100.00	23.48%
Other Professional Services	173,800.00	173,800.00	31,827.22	57,827.95	115,972.05	33.27%
Auditing	51,400.00	51,400.00	1,172.50	24,982.94	26,417.06	48.60%
Hearing Officers	50,000.00	50,000.00	0.00	0.00	50,000.00	0.00%
Legal	275,000.00	275,000.00	64,054.55	117,725.00	157,275.00	42.81%
Election Services	12,000.00	12,000.00	0.00	0.00	12,000.00	0.00%
Actuary-Valuation	61,000.00	61,000.00	30,500.00	30,500.00	30,500.00	50.00%
Actuary-GASB 67	13,000.00	13,000.00	0.00	0.00	13,000.00	0.00%
Actuary-Misc Hrly Consult	16,000.00	16,000.00	0.00	0.00	16,000.00	0.00%
Printing	33,000.00	33,000.00	2,629.34	4,989.79	28,010.21	15.12%
Postage	70,000.00	70,000.00	4,871.09	17,016.00	52,984.00	24.31%
Copy Machine	3,000.00	3,000.00	0.00	360.36	2,639.64	12.01%
General Liability	15,100.00	15,100.00	0.00	0.00	15,100.00	0.00%
Fiduciary Liability	86,000.00	86,000.00	0.00	83,609.01	2,390.99	97.22%
Cost Allocation Charges	30,200.00	30,200.00	0.00	0.00	30,200.00	0.00%
Education Allowance	4,000.00	4,000.00	0.00	2,000.00	2,000.00	50.00%
Training/Travel-Staff	76,100.00	76,100.00	4,629.64	8,874.22	67,225.78	11.66%
Training/Travel-Trustee	53,500.00	53,500.00	1,956.30	3,367.63	50,132.37	6.29%
Travel-Due Diligence-Staff	7,800.00	7,800.00	0.00	1,537.50	6,262.50	19.71%
Travel-Due Diligence-Trustee	13,400.00	13,400.00	0.00	1,894.56	11,505.44	14.14%
Mileage-Staff	4,800.00	4,800.00	570.19	640.39	4,159.61	13.34%
Mileage -Trustee	5,000.00	5,000.00	237.95	430.12	4,569.88	8.60%
Mileage-Due Diligence-Staff	1,000.00	1,000.00	0.00	72.27	927.73	7.23%
Mileage-Due Diligence-Trustee	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00%
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	990.41	1,084.28	1,615.72	40.16%
Facilities-Maint & Repairs	2,300.00	2,300.00	0.00	75.00	2,225.00	3.26%
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	3,797.33	4,140.48	6,259.52	39.81%
Books & Publications	2,500.00	2,500.00	0.00	554.14	1,945.86	22.17%
Office Supplies	18,000.00	18,000.00	936.14	2,759.41	15,240.59	15.33%
Memberships & Dues	13,500.00	13,500.00	570.00	4,840.00	8,660.00	35.85%
Bank Service Charges	1,500.00	1,500.00	0.00	364.28	1,135.72	24.29%
Offsite Storage	4,800.00	4,800.00	3,070.00	3,070.00	1,730.00	63.96%
Rents/Leases-Structures	217,600.00	217,600.00	17,884.87	71,539.48	146,060.52	32.88%
Non-Capital Equipment	23,900.00	23,900.00	0.00	0.00	23,900.00	0.00%
Non-Capital Furniture	15,000.00	15,000.00	125.00	125.00	14,875.00	0.83%
Depreciation /Amortization	1,460,600.00	1,460,600.00	121,716.16	486,864.64	973,735.36	33.33%
Total Services & Supplies	\$2,851,000.00	\$2,851,000.00	\$294,113.69	\$936,644.45	\$1,914,355.55	32.85%
Total Sal, Ben, Serv & Supp	\$7,693,600.00	\$7,693,600.00	\$663,378.45	\$2,315,832.72	\$5,377,767.28	30.10%

**Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2018-2019**

For the Four Months Ended October 31, 2018 and Year-To-Date - 33.33% of Fiscal Year Expended

	<i>Adopted 2019 Budget</i>	<i>Adjusted 2019 Budget</i>	<i>October 2018</i>	<i>Expended Fiscal Year to Date</i>	<i>Available Balance</i>	<i>Percent Expended</i>
Technology						
Technology Hardware	\$67,100.00	\$67,100.00	\$13,050.63	\$33,336.84	\$33,763.16	49.68%
Technology Hardware Support	0.00	0.00	0.00	3,968.32	(3,968.32)	0.00%
Technology Software	214,600.00	214,600.00	9,243.39	37,595.40	177,004.60	17.52%
Technology Software Support	15,500.00	15,500.00	544.68	2,828.72	12,671.28	18.25%
Technology Systems Support	266,800.00	266,800.00	650.00	67,033.75	199,766.25	25.13%
Technology Infrastruct Support	500.00	500.00	339.98	339.98	160.02	68.00%
Technology Application Support	310,400.00	310,400.00	3,945.80	35,215.00	275,185.00	11.35%
Technology Data Communication	55,700.00	55,700.00	4,926.34	15,682.36	40,017.64	28.16%
Total Technology	\$930,600.00	\$930,600.00	\$32,700.82	\$196,000.37	\$734,599.63	21.06%
Congtingency	\$688,100.00	\$688,100.00	\$0.00	\$0.00	\$688,100.00	0.00%
Total Current Year	\$9,312,300.00	\$9,312,300.00	\$696,079.27	\$2,511,833.09	\$6,800,466.91	26.97%

Ventura County Employees' Retirement Association

Anthony Freitas, CFA, Managing Director
Christian De Leon, Vice President

19 November 2018

The BlackRock logo is positioned in the bottom right corner of the slide. It consists of the word "BLACKROCK" in a white, sans-serif font, centered within a dark blue square. The square is framed by a white border.

BLACKROCK®

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 - II. Relationship Summary
 - III. Beta Strategies Overview
 - i. Portfolio Characteristics
 - IV. Fixed Income Indexing Overview
 - i. Portfolio Characteristics
- Appendix
- i. Presenter Biographies
 - ii. Disclosures

I. BlackRock Update

BlackRock at a glance

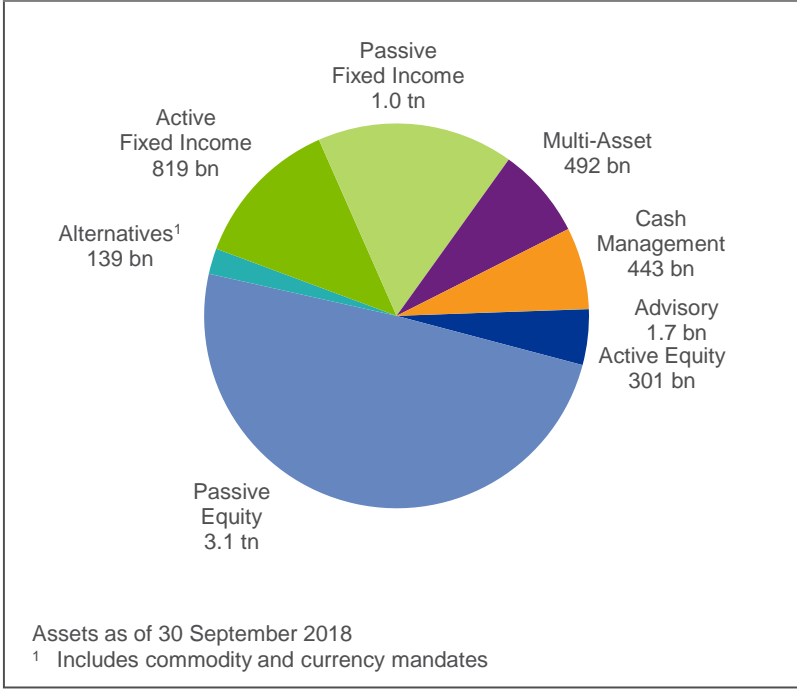
BlackRock Mission Statement

Create a better financial future for our clients by building the most respected investment and risk manager in the world

BlackRock facts

- Established in 1988
- NYSE: BLK
- \$6.44 trillion assets under management
- More than 13,500 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

\$6.44 trillion managed across asset classes



As of 30 September 2018. All figures are represented in USD.

II. Relationship Summary

BlackRock Relationship Team

Function	Contact	Location	Telephone	Email
Institutional Client Business – Lead	Anthony Freitas, CFA, Managing Director	San Francisco	415-670-6251	tony.freitas@blackrock.com
Institutional Client Business	Rick Castro, Associate	Los Angeles	213-613-3828	rick.a.castro@blackrock.com
Institutional Client Business	Tom Holmes, Associate	San Francisco	415-670-4120	tom.holmes@blackrock.com

Ventura County Employees' Retirement Association Relationship Summary

As of 30 September 2018

Ventura County Employees' Retirement System	AUM
Russell 1000 Index Fund (inception 4/21/2017)	\$1,505,409,046
Russell 2500 Index Fund (inception 4/21/2017)	\$67,729,689
ACWI Equity Index Fund (inception 6/27/2012)	\$624,455,589
ACWI ex-US IMI Index Fund (inception 5/30/2008)	\$474,689,678
U.S. Debt Index Fund (inception 12/31/1995)	\$269,705,934
Total AUM	\$2,941,989,936

Ventura County Employees' Retirement Association Performance

As of 30 September 2018

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)	7.41	7.41	17.78	NA	NA	18.26
Russell 1000 Index Fund (net)	7.41	7.41	17.77	NA	NA	18.25
Russell 1000 Index	7.42	7.42	17.76	NA	NA	18.24
Difference (net)	-0.01	-0.01	0.01	-	-	0.01

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)	4.69	4.69	16.27	NA	NA	16.58
Russell 2500 Index Fund (net)	4.69	4.69	16.24	NA	NA	16.54
Russell 2500 Index	4.70	4.70	16.19	NA	NA	16.49
Difference (net)	-0.01	-0.01	0.05	-	-	0.05

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)	4.37	4.37	10.26	13.94	9.19	11.83
MSCI ACWI Equity Index Fund (net)	4.36	4.36	10.21	13.89	9.14	11.78
MSCI ACWI Net Dividend Return Index	4.28	4.28	9.77	13.40	8.67	11.35
Difference (net)	0.08	0.08	0.44	0.49	0.47	0.43

*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 Performance

As of 30 September 2018

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)	0.44	0.44	2.14	10.52	4.72	2.28
MSCI ACWI ex-US IMI Index Fund (net)	0.42	0.42	2.04	10.41	4.61	2.18
MSCI ACWI ex-US IMI Net Dividend Index	0.39	0.39	1.79	10.14	4.39	2.02
Difference (net)	0.03	0.03	0.25	0.27	0.22	0.16

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)	0.06	0.06	-1.13	1.41	2.29	4.99
U.S. Debt Index Fund (net)	0.04	0.04	-1.18	1.36	2.24	4.93
Bloomberg Barclays U.S. Agg Bond Index	0.02	0.02	-1.22	1.31	2.16	4.88
Difference (net)	0.02	0.02	0.04	0.05	0.08	0.05

*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 2018

	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*	-1.57%	-1.60%	1.56%	1.51%	2.27%	2.19%	1.94%	1.86%	3.38%	3.31%
Periods Outperformed	78%		95%		100%		100%		100%	
Number of Years	18/23		20/21		19/19		17/17		14/14	

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

*2018 through 9/30/2018

**Returns are annualized

Historical Rolling Returns – MSCI ACWI Index Fund

As of 30 September 2018

	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	4.16%	3.83%	12.01%	11.56%	7.58%	7.14%	10.96%	10.52%		
Periods Outperformed	100%		100%		100%		100%		100%	
Number of Years	7/7		5/5		3/3		1/1		0/0	

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

*2018 through 9/30/2018

**Returns greater than 1 year are annualized

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

As of 30 September 2018

	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	-3.04%	-3.27%	9.15%	8.88%	3.65%	3.43%	7.21%	6.99%	8.48%	8.33%
Periods Outperformed	91%		89%		100%		100%		100%	
Number of Years	10/11		8/9		7/7		5/5		2/2	

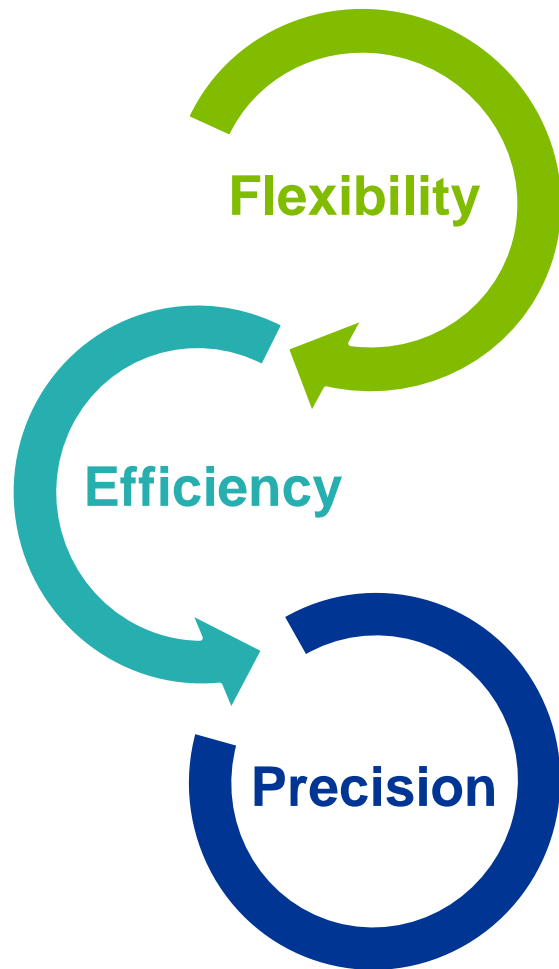
The Fund's hypothetical net of fees return is net an annual rate of 0.10%.

*2018 through 9/30/2018

**Returns greater than 1 year are annualized

III. Beta Strategies 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 solutions 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 solutions 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 \$3.5 trillion of assets under management as of 30 September 2018

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

BlackRock's Index Equity Platform

Global leader in Index Equity assets¹

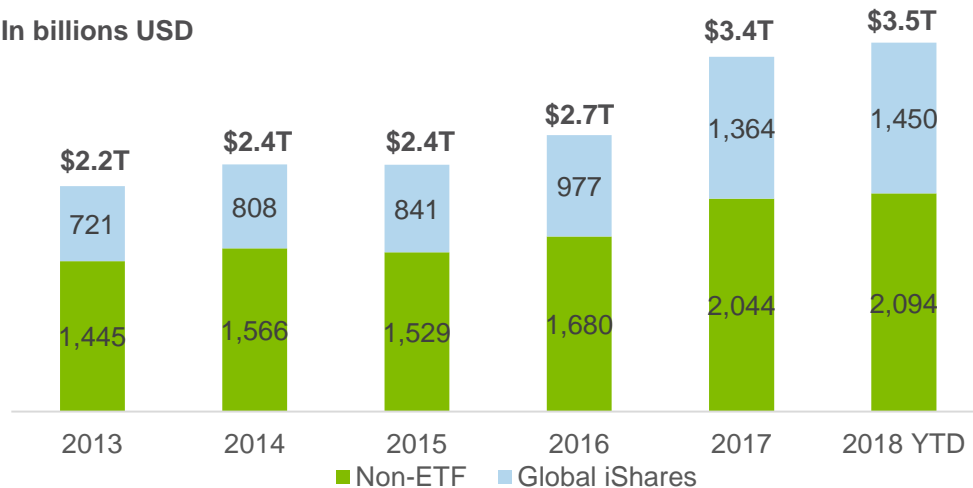
- We seek to deliver consistent performance with efficient outcomes for our clients
- Thousands of skillful and thoughtful decisions made each year for swift response to market trends and client demands

Extensive and flexible platform for index strategies

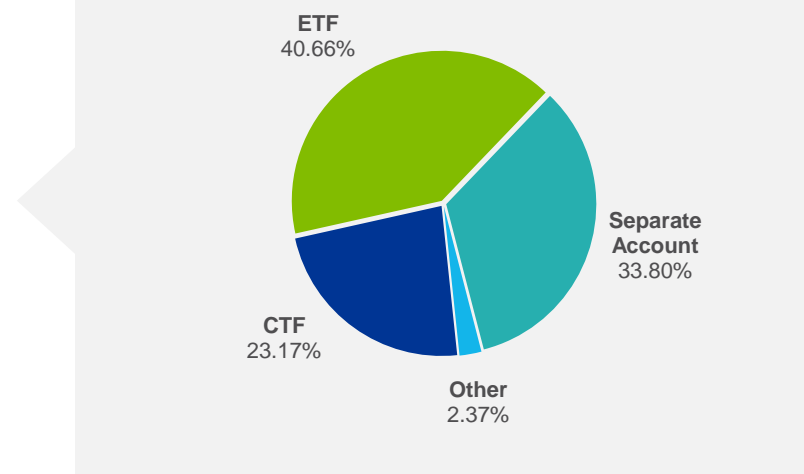
- Over 2,000 funds managed against 850+ benchmarks
- Daily liquidity with T-1 notification (for US equities) and T-2 notification (for non US equities)²
- Modular fund structure and asset allocation platform facilitates custom and outcome oriented solutions

Total index managed assets of \$3.5 trillion USD

In billions USD



Distribution of assets by vehicle type in 2018 YTD



Source: BlackRock, Inc. and its affiliates (together "BlackRock") as of 30 September 2018

¹ In terms of AUM. Source: Pensions & Investments

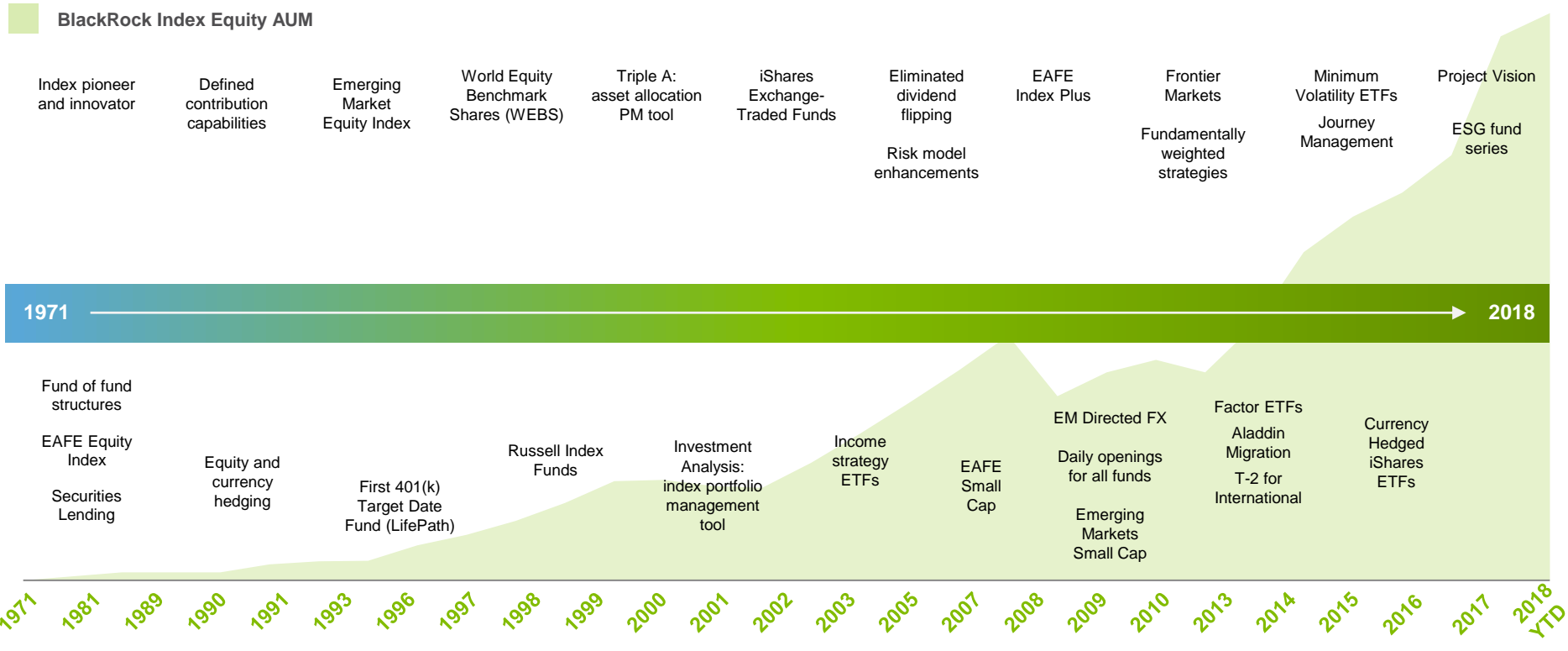
² Frontier markets commingled fund and currency hedged funds are currently open bi-monthly and monthly, respectively

47 years of experience driving index forward

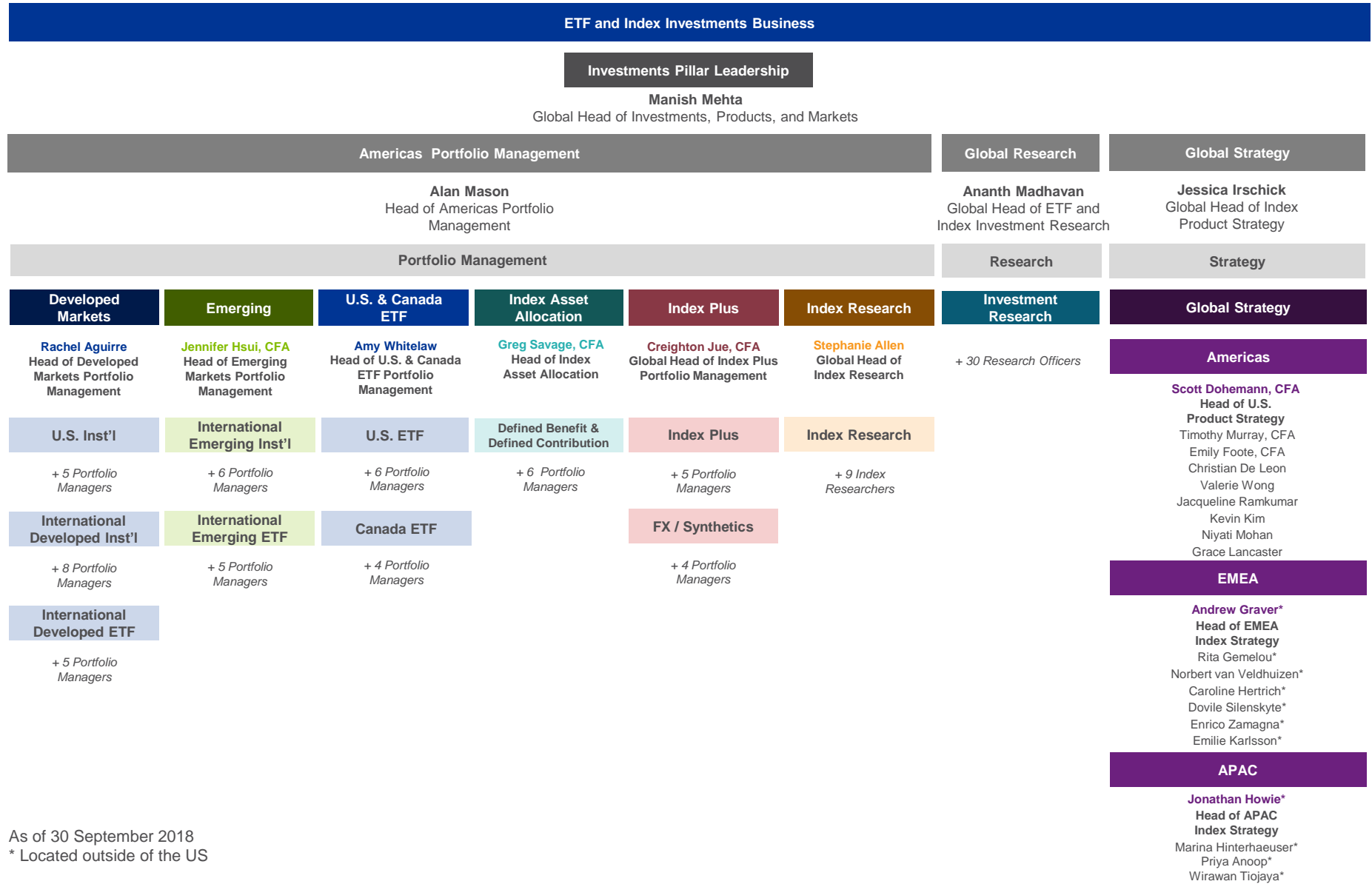
We constantly reinvest in and reinvent our business so our clients have access to high quality index solutions

- ▶ 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, emerging, and frontier markets
- ▶ Evolve capabilities to continuously deliver on emerging trends — smart beta, global benchmarking, overlay strategies
- ▶ Serve as an index advocate on behalf of clients and as a key partner to index providers seeking our practitioner knowledge

47 years of Index Equity — Continual evolution of products, technology and capabilities

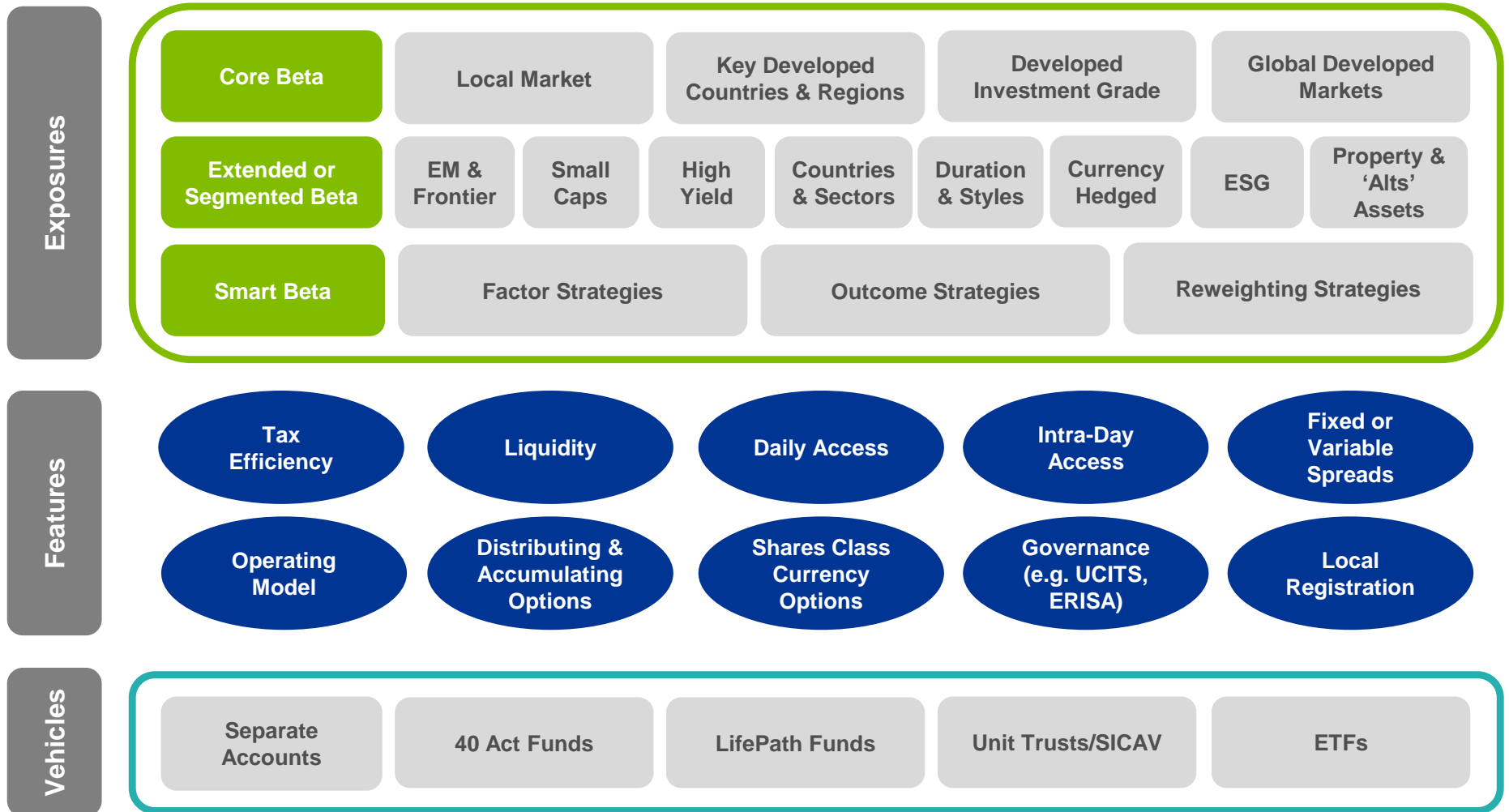


Americas – Investments Pillar



As of 30 September 2018
* Located outside of the US

An extensive and flexible range of index capabilities

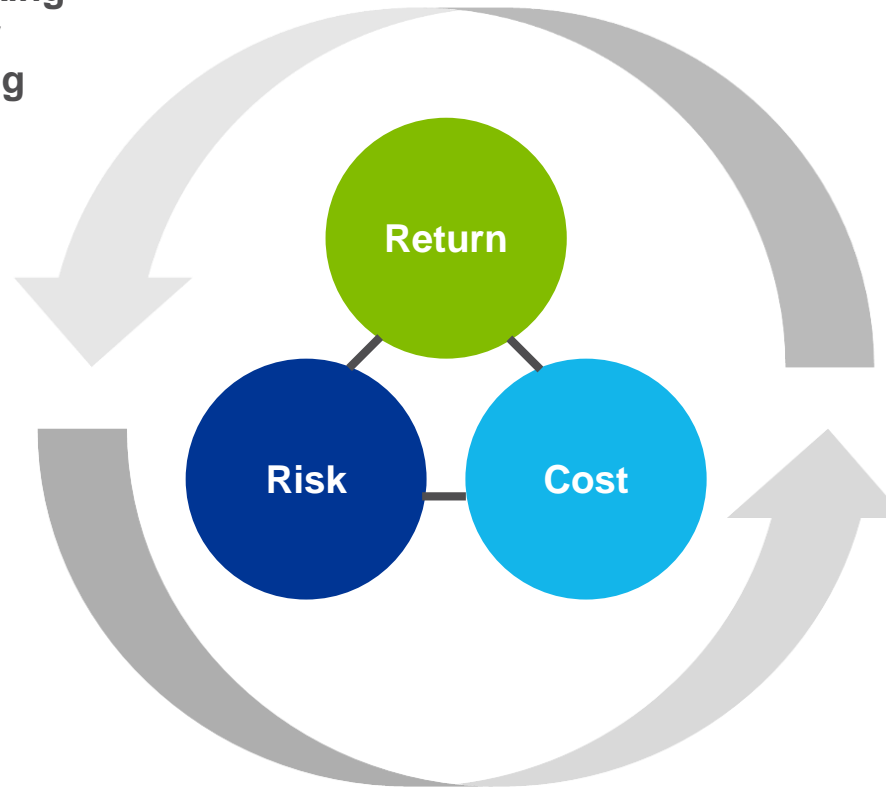


Matching the exposures you want with the features you need

BlackRock Index Investments Philosophy and Process

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 and reliable 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
- Knowledge of optimisation challenges

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

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

Port	ISNA_NRI, Various	New FTV	%Exp	PI	%Exp	New %Exp	%Exp	New %Exp	%MV	New %MV
Cash & P/E	406,722,416	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Cash & Cash Equivalents	406,722,416	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Other Fixed-Income	48,899,762	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Energy	-1,787,374	7.3999%	7.3812%	7.3999%	0.0000%	-0.0000%	-0.0000%	-0.0000%	-0.0000%	-0.0000%
Materials	2,748,410	2.2206%	2.2266%	2.2206%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Industrials	463,268	0.4020%	0.4030%	0.4020%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Consumer Discretionary	20,283,284	13.9970%	12.7437%	12.7437%	0.0442%	0.0442%	0.0442%	0.0442%	0.0442%	0.0442%
Consumer Staples	-42,294,691	9.5699%	9.4959%	9.4959%	0.0740%	-0.0740%	-0.0740%	-0.0740%	-0.0740%	-0.0740%
Health Care	2,396,682	14.1265%	14.1337%	14.1337%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Financials	88,831,628	17.0489%	17.4077%	17.4077%	0.3588%	0.3588%	0.3588%	0.3588%	0.3588%	0.3588%
Information Technology	8,424,208	0.3060%	0.3205%	0.3205%	0.0145%	0.0145%	0.0145%	0.0145%	0.0145%	0.0145%
Telecommunication Services	897,829	2.3317%	2.3329%	2.3329%	0.0012%	0.0012%	0.0012%	0.0012%	0.0012%	0.0012%
Utilities	4,488,439	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
No Sector Assigned										

Portfolio	Name	New %Exp PF (4dp)	%Exp Bench (4dp)	New %Exp Active (4dp)	New Qty	Sector Level 1 (Inmed)
RIGROW	3D SYSTEMS CORP	0.0056%	0.0037%	0.0003%	524	Technology
RIGROW	3M CO	1.0249%	1.0252%	-0.0002%	-31	Producer Durables
RIGROW	A.O. SMITH CORP.	0.0389%	0.0396%	-0.0007%	-187	Producer Durables
RIGROW	AARON'S INC.	0.0025%	0.0001%	0.0001%	123	Consumer Discretionary
RIGROW	ADVEZ INC.	0.9637%	0.9633%	0.0004%	152	Health Care
RIGROW	ACADIA HEALTHCARE CO INC	0.0348%	0.0356%	-0.0008%	-279	Health Care

Screenshots are 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

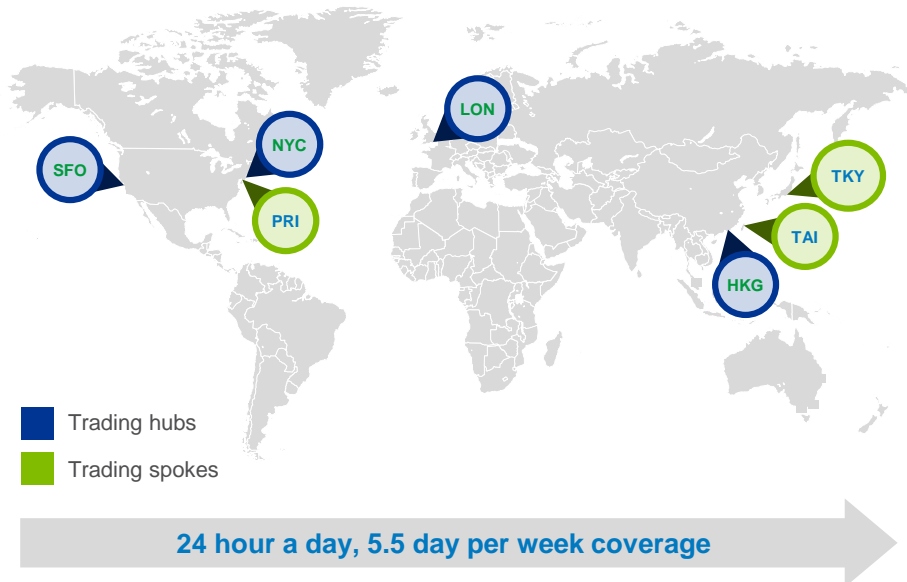
Over 60 equity traders across four trading hubs and three spokes

- 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

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 global coverage



Data as of 30 September 2018
Screenshots are for illustrative purposes only.

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

Russell Reconstitution 2018

Overall the Global Index Equity Investment Team executed orders worth approximately \$70 billion

- ▶ Overall performance of the reconstitution this year was positive
- ▶ Crossed approximately 50.36% of activity
- ▶ Turnover across passive managers was approximately \$176 billion

Methodology Changes

- ▶ This year had very limited methodology changes
- ▶ The most relevant and interesting change pertains to the SPOT IPO
 - Under the new methodology, variable or best efforts IPOs will require a company press release or company filing confirming the actual number of shares sold on or prior to rank date.
 - Under the new methodology, Spotify did not qualify to be included at this Russell Reconstitution

Buy – sell spread performance		Index change highlights													
Russell 1000	Russell 2000	Russell 1000	Russell 2000												
<ul style="list-style-type: none"> ▶ Adds: Traded down 0.35%, underperforming the Russell 1000 by 0.53% due to weakness in Jazz Pharma (JAZZ) and Ceridian (CDAY). ▶ Deletes: Delphi Technologies (DLPH) closed down 1.56%, underperforming the index by 1.74%. ▶ Overall trade moved wrong-way. 	<ul style="list-style-type: none"> ▶ Adds: Traded up 2.44%, outperforming the Russell 2000 by 2.64%. The highest contributors were Apollo medical (AMEH) and TrancEnterix (TRXC). ▶ Deletes: Traded down 0.51%, underperforming the index by 0.31%. Biggest underperformers were Horizon Global (HZN) and Globalstar (GSAT). ▶ Overall moved right way with Buys outperforming the Sells by 0.10%. 	<table border="1"> <tr> <td>Adds</td> <td>53</td> <td>212</td> </tr> <tr> <td>Deletes</td> <td>38</td> <td>152</td> </tr> <tr> <td>2018 Two-Way Turnover</td> <td>2.49%</td> <td>14.49%</td> </tr> <tr> <td>2017 Two-Way Turnover</td> <td>3.90%</td> <td>18.10%</td> </tr> </table>	Adds	53	212	Deletes	38	152	2018 Two-Way Turnover	2.49%	14.49%	2017 Two-Way Turnover	3.90%	18.10%	
Adds	53	212													
Deletes	38	152													
2018 Two-Way Turnover	2.49%	14.49%													
2017 Two-Way Turnover	3.90%	18.10%													

Source: BlackRock, as of June 2018. 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.

August 2018 MSCI Quarterly Index Rebalance results

August's MSCI Quarterly Rebalance resulted in slight outperformance on effective date

- 99% of trades were executed on trade date
- ▶ BlackRock traded **474** MSCI funds and executed **23.1k orders** worth nearly **\$7 billion**

Rebalance highlights

- ▶ The overall DM trade went wrong way with the buys underperforming the sells by -0.5% on effective date, while in EM the buy basket outperformed the sell basket by 0.85%.
- ▶ MSCI completed the second tranche of the China A shares inclusion at this quarterly rebalance resulting in higher than usual turnover in EM.
- ▶ China A moved circa 20 bps worse day over day, and all names moved < 2% vs last price pre-auction at the close on effective date. Turnover was a tepid \$36.3bn with the A-share inclusion trade closing near the day low - the exact opposite of May.

MSCI index change details

Index	# Adds	# Deletes	August 2017 Turnover	August 2018 Turnover
EAFE	1	1	0.20%	0.16%
EAFE SC	1	2	0.64%	0.35%
Emerging Standard	17	3	0.22%	0.73%
Emerging SC	3	10	0.46%	1.45%
World	1	1	0.27%	0.31%
Frontier 100	0	0	0.30%	0.00%

Source: BlackRock and MSCI as of August 2018. Past performance is not indicative of future results.

2018 FTSE & MSCI market classification summary

FTSE and MSCI announced a number of country reclassifications to their Developed and Emerging markets universes in 2018

FTSE



Poland

Poland was **promoted to Developed Market** status in September 2017's Country Classification, primarily driven by Poland's equity market between 2004 – 2017. There will be a **single tranche inclusion** occurring in **September 2018**.



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 implemented in **several tranches** due to their projected size of **2.7% in the FTSE Emerging Index** beginning **March 2019**.



Kuwait

Kuwait will be implemented as a **Secondary Emerging Market status** within the FTSE Global Equity Index Series in **two 50% tranches**. The first tranche will be implemented in **September 2018** and the second in **December 2018**.

MSCI



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**, commencing in May 2019 through to August 2019 and is projected to make up **2.6% of the MSCI Emerging Markets**.









Argentina

Argentina will be included in the MSCI Emerging Markets Index coinciding with the May 2019 Semi-Annual Index Review, and make **up 0.6% of the index**. MSCI will continue to restrict the inclusion in the index to **only foreign listings of Argentinian companies**, such as ADRs, due to liquidity conditions.

Source: MSCI and FTSE as of 6/30/18

Index strategies continue to be a growing portion of client portfolios

Investors today are enhancing their passive allocations in three strategies:

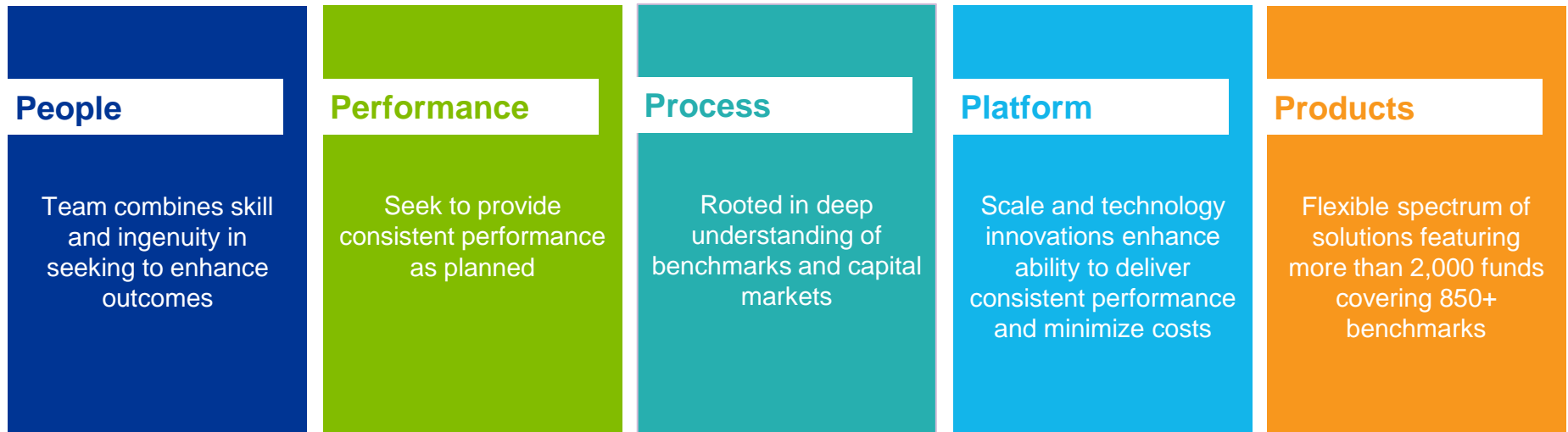
Return Enhancement Strategies	Index Plus 	<ul style="list-style-type: none"> Enhanced index strategy designed to actively seek alpha, by tactically employing event driven trading that focus on IPOs, index changes, and other corporate events that might cause price dislocation 	Factors 	<ul style="list-style-type: none"> Factor-based strategy designed to provide incremental returns over capitalization weighted indices through broad, persistent sources of return
	Securities Lending 		<ul style="list-style-type: none"> Return enhancement strategy designed to capture scarcity premium by lending securities 	
	Risk Reduction Strategies	Minimum Volatility 	<ul style="list-style-type: none"> Factor-based strategy designed to reflect the characteristics of a minimum variance strategy focused on returns as well as the lowest absolute risk 	Currency Hedged 
Alternative Index Strategies		Commodities 	<ul style="list-style-type: none"> Market cap weighted strategy designed to give exposure to commodities through the use of commodity futures 	Environmental, Social, and Governance 

Key takeaway

Our approach to Index: anything but passive

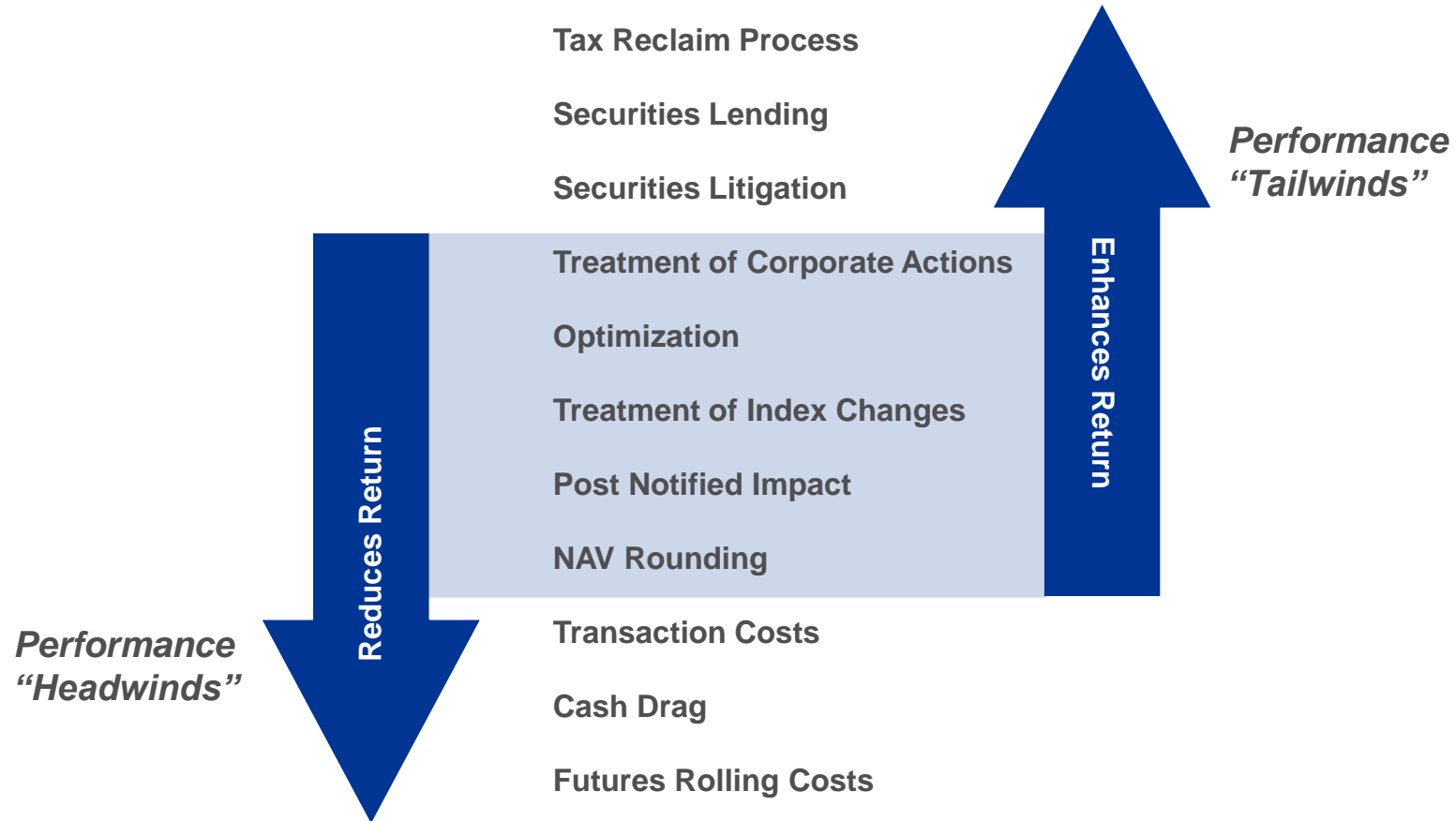
Investors today demand more efficient returns and innovative ways to use index products

BlackRock's Index approach is focused on:



Performance attribution

Major sources of tracking error: Global & domestic index funds



i. Portfolio Characteristics

Russell 1000® Index Fund Characteristics

As of 30 September 2018

Fund information	
Benchmark	Russell 1000® Index
Total fund assets	\$76.23B
Number of issues in fund	985
Number of issues in benchmark	985

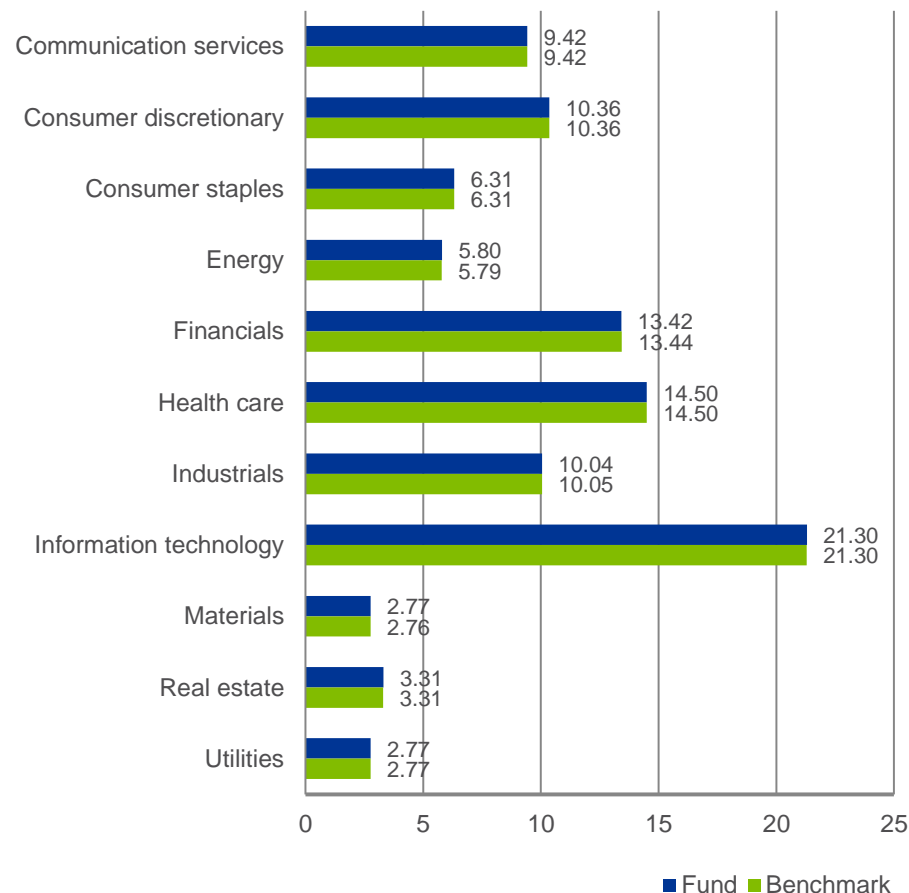
Top 10 holdings		
	Fund %	Index %
Apple Inc	3.97	3.97
Microsoft Corp	3.15	3.16
Amazon Com Inc	2.96	2.96
Berkshire Hathaway Inc Class B	1.51	1.51
Facebook Class A Inc	1.42	1.42
JPMorgan Chase & Co	1.37	1.37
Johnson & Johnson	1.35	1.35
Alphabet Inc Class C	1.32	1.32
Alphabet Inc Class A	1.31	1.31
Exxon Mobil Corp	1.31	1.31

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

Sector diversification



Russell 2500™ Index Fund Characteristics

As of 30 September 2018

Fund information	
Benchmark	Russell 2500™ Index
Total fund assets	\$7.45B
Number of issues in fund	2,474
Number of issues in benchmark	2,521

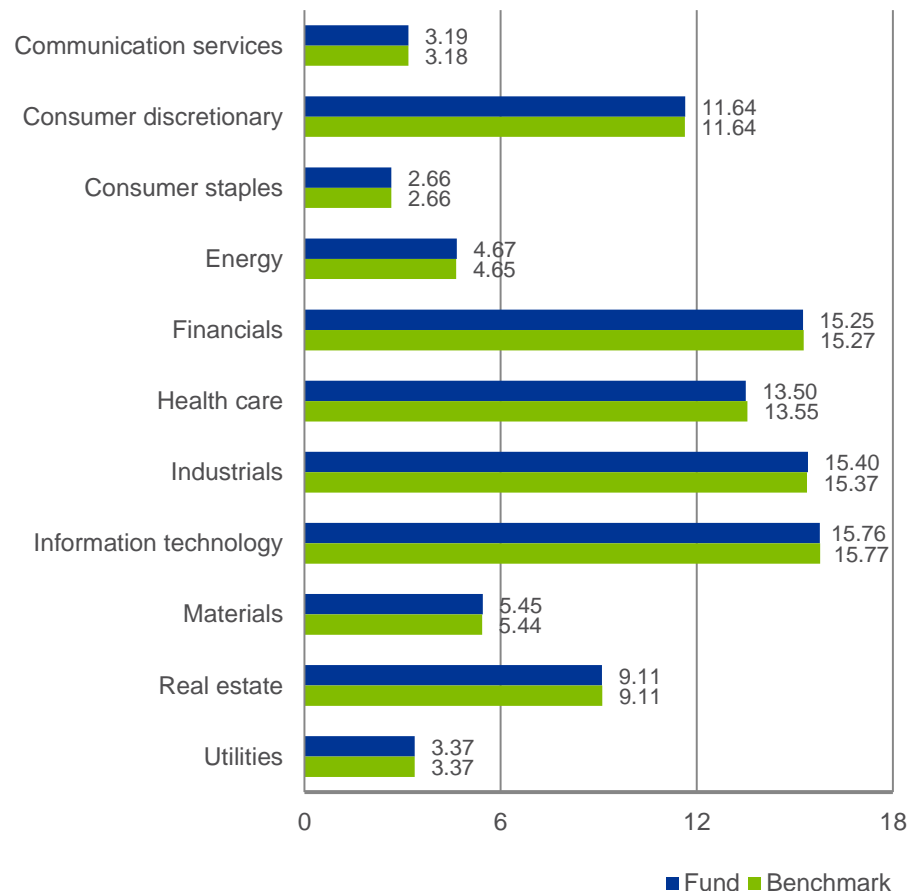
Top 10 holdings		
	Fund %	Index %
Advanced Micro Devices Inc	0.56	0.56
Wellcare Healthcare Plans Inc	0.32	0.32
Cooper Inc	0.27	0.27
Godaddy Inc Class A	0.27	0.27
CDW Corp	0.26	0.26
Veeva Systems Inc Class A	0.26	0.26
Fortinet Inc	0.26	0.26
CF Industries Holdings Inc	0.25	0.25
Cadence Design Systems Inc	0.25	0.25
Grubhub Inc	0.25	0.25

Fund inception date 28 February 2001

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Sources: BlackRock, Frank Russell Company

Sector diversification



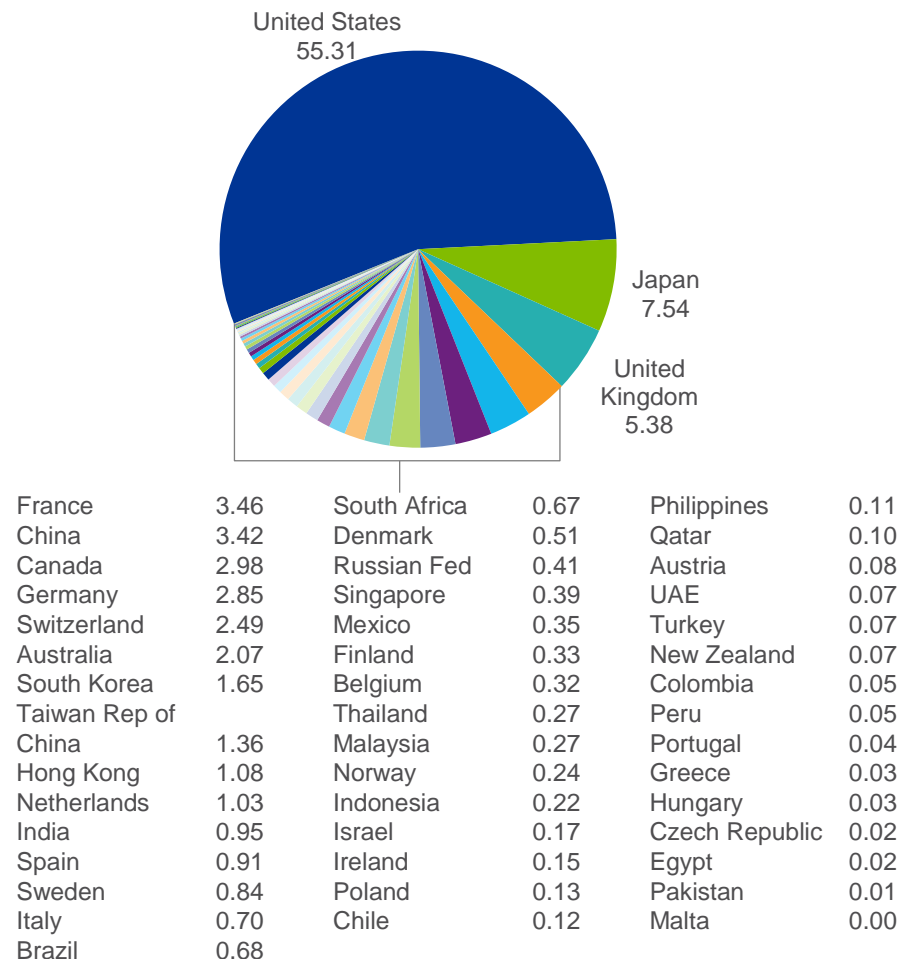
BlackRock MSCI ACWI Equity Index Fund Characteristics

As of 30 September 2018

Fund information	
Benchmark	MSCI ACWI Net Dividend Return Index
Total fund value	\$1.48B
Number of issues in fund	2,728
Number of issues in benchmark	2,792

Top 10 holdings		
	Country	Weight (%)
Apple Inc	United States	2.38
Microsoft Corp	United States	1.79
Amazon Com Inc	United States	1.77
Facebook Class A Inc	United States	0.85
JPMorgan Chase & Co	United States	0.82
Alphabet Inc Class C	United States	0.80
Johnson & Johnson	United States	0.79
Alphabet Inc Class A	United States	0.77
Exxon Mobil Corp	United States	0.77
Bank of America Corp	United States	0.61

Country allocation (%)



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.

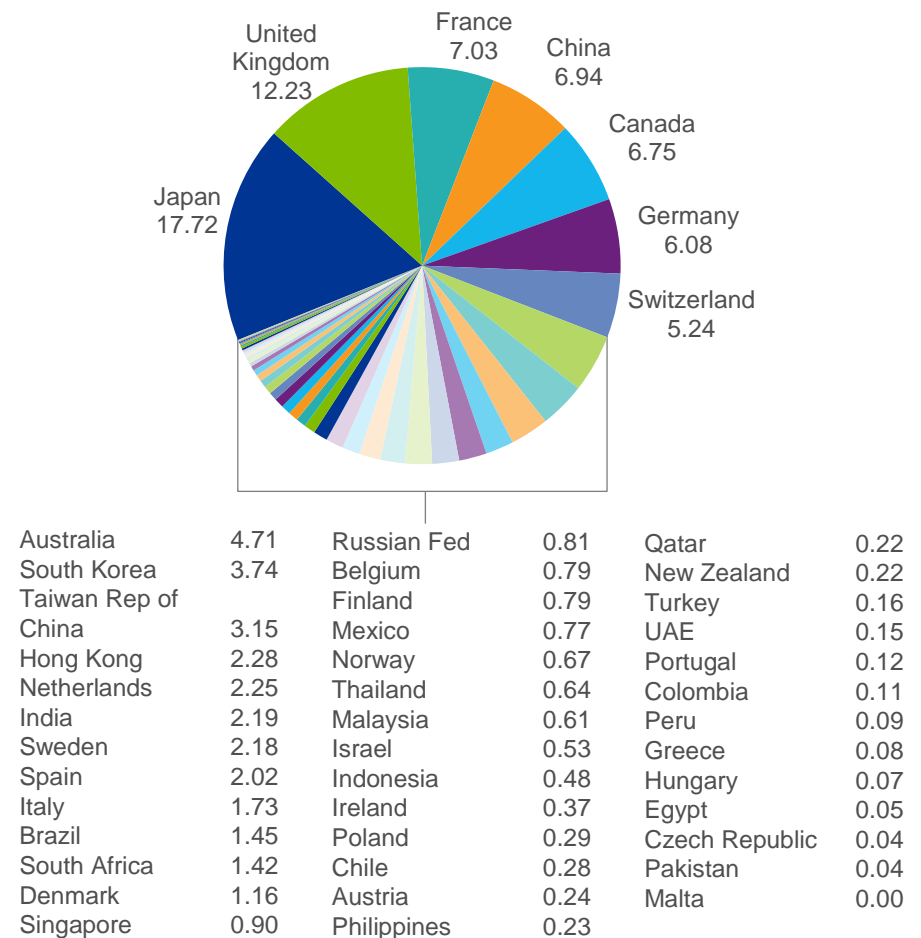
BlackRock MSCI ACWI ex-U.S. IMI Index Fund Characteristics

As of 30 September 2018

Fund information	
Benchmark	MSCI ACWI ex USA IMI Index
Total fund value	\$21.00B
Number of issues in fund	6,400
Number of issues in benchmark	6,449

Top 10 holdings		
	Country	Weight (%)
Nestle Sa	Switzerland	1.05
Tencent Holdings Ltd	China	0.97
Taiwan Semiconductor Manufacturing	Taiwan Rep of China	0.87
Samsung Electronics Ltd	South Korea	0.83
Alibaba Group Holding ADR Represen	China	0.78
Novartis Ag	Switzerland	0.75
HSBC Holdings Plc	United Kingdom	0.72
Roche Holding Par Ag	Switzerland	0.69
Royal Dutch Shell Plc Class A	United Kingdom	0.65
Total Sa	France	0.64

Country allocation (%)



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.

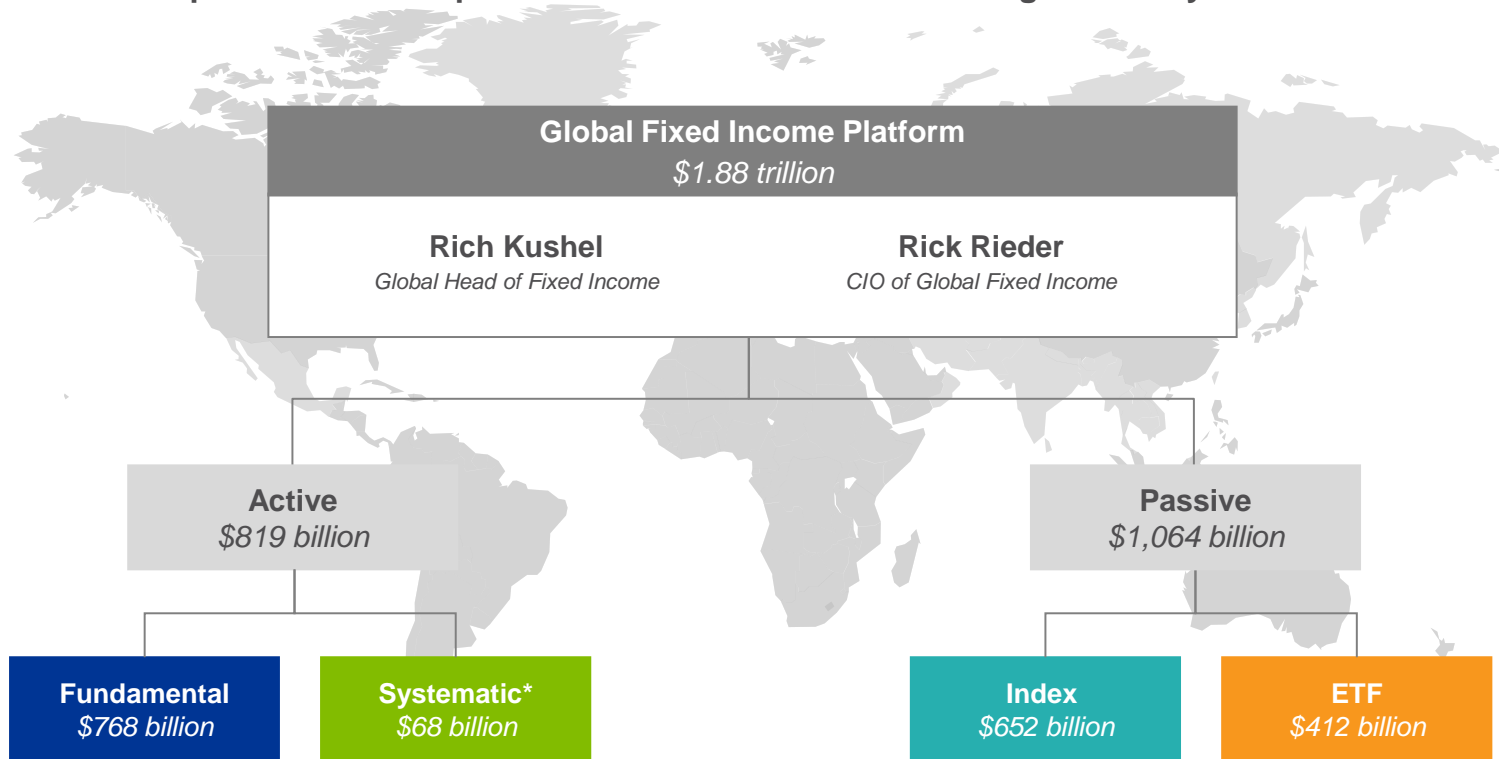
IV. Fixed Income Indexing Overview

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 September 2018. For illustrative purposes only.

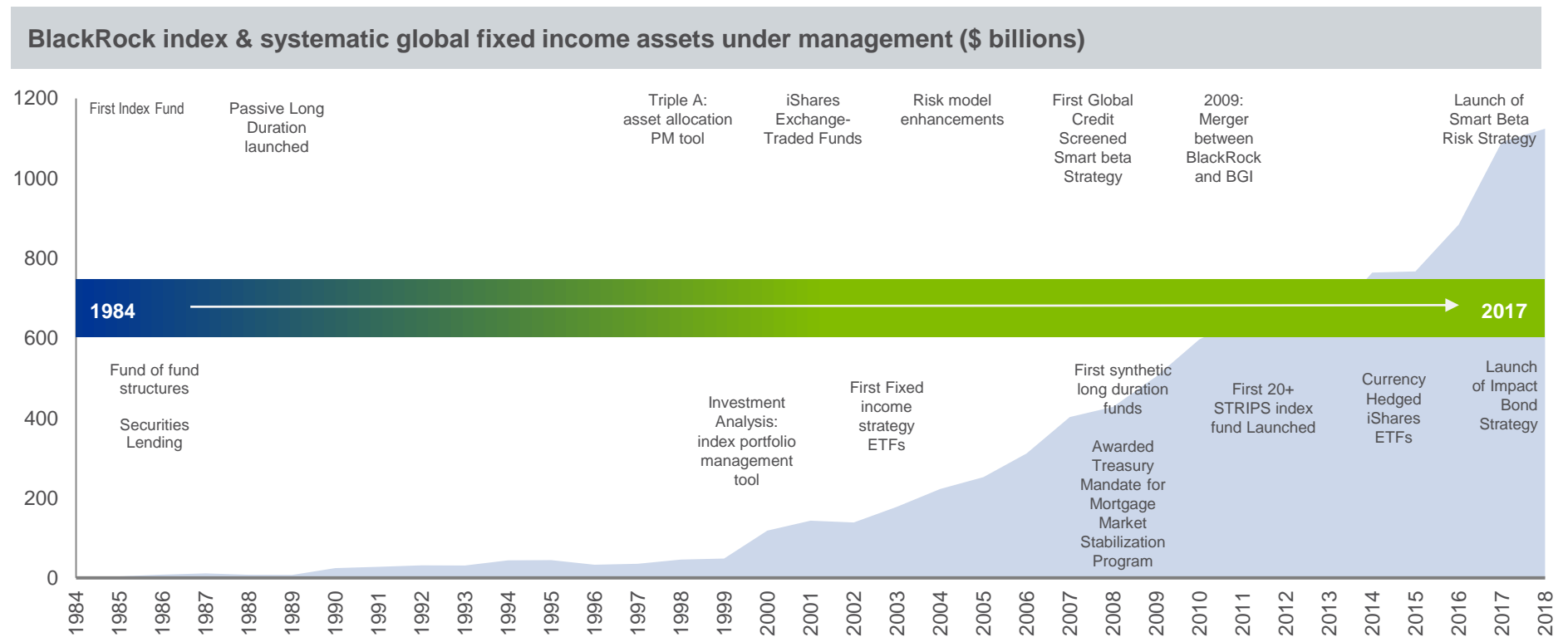
* Systematic AUM includes alternatives and fixed income sleeves of multi-asset mandates that are excluded from the "Active" GFI platform AUM to avoid double-counting.

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











Source: BlackRock, as of 30 June 2018

** Source: Pension & Investments as of 30 June 2017

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		Broader Strategy Options	
Defensive Credit 	<ul style="list-style-type: none"> ▶ Defensive, systematic strategy designed to avoid issuers that are at risk of experiencing credit deterioration 	Balanced Risk “FIBR” 	<ul style="list-style-type: none"> ▶ Factor-based strategy designed to balance interest rate and spread risk to improve risk adjusted returns
MBS Up In Coupon 	<ul style="list-style-type: none"> ▶ Factor-based strategy designed to outperform traditional MBS indices by capturing attractive risk-adjusted carry 	Systematic CorePlus 	<ul style="list-style-type: none"> ▶ Systematic strategy designed to outperform traditional indices by tilting into sectors traditionally utilized by active managers
Curve Steepener 	<ul style="list-style-type: none"> ▶ Factor-based strategy designed to outperform traditional government indices by capturing term-premia and roll down 	Capital Efficiency 	<ul style="list-style-type: none"> ▶ Systematic strategy designed to release capital through synthetic replication of traditional fixed income indices
Short Carry 	<ul style="list-style-type: none"> ▶ Systematic strategy designed to generate carry through use of US Treasury Futures and short-dated securitized holdings 	Impact Investing 	<ul style="list-style-type: none"> ▶ Systematic strategy designed to incorporate ESG factors while minimizing tracking error to traditional indices

Team, Philosophy & Process

Americas Fixed Income Index Team

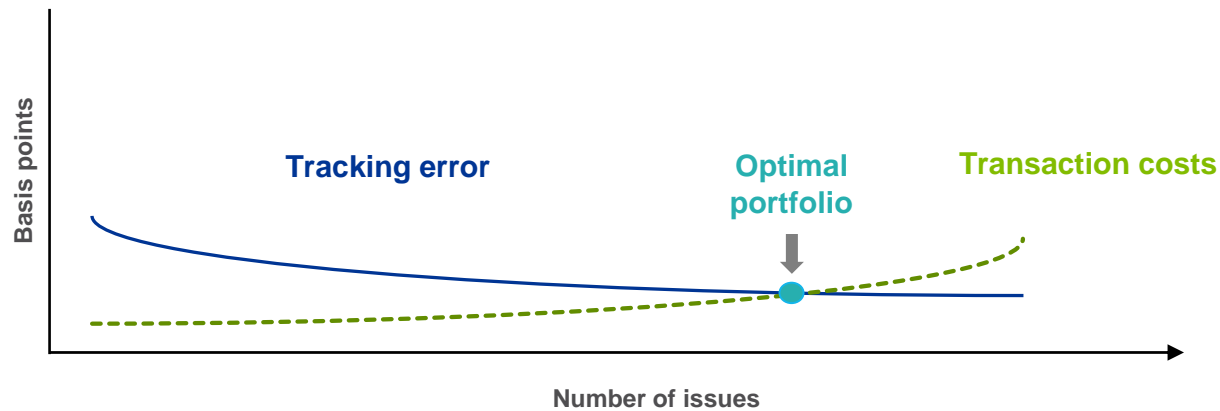
Americas Fixed Income						Research	Strategy
Portfolio Management						Global Research	Americas
Core PM						Research Group	
Scott Radell Head of San Francisco Core PM						Johnny Kang Co- Head of Systematic Fixed Income Research	Robert Stanley Head of US Product Strategy
Multi-Sector/Other		Credit		Rates / Mortgages / Emerging Markets		Research	Matt Tucker
Scott Radell Head of San Francisco Core PM	Karen Uyehara Sr. Portfolio Manager Multi-Sector	Jonathan Graves Sr. Portfolio Manager Corporate Credit	David Dulski Portfolio Manager Corporate Credit	Jay Mauro Deputy Head of SF Core PM	Mark Buell Portfolio Manager US Government Bonds		Gordon Readey
Jasmitha Mohan Portfolio Manager Multi-Sector	Joseph Maciunas Portfolio Manager Multi-Sector	Elya Schwartzman Sr. Portfolio Manager Corporate Credit	Giulia Cerardi Portfolio Manager Corporate Credit	Marcus Tom Portfolio Manager Agency Mortgages	Ryan Stone Portfolio Manager US Government Bonds	+ 9 Index researchers	Kathryn Donovan
Joel Silva Sr. Portfolio Manager Munis / Canada / ESG	Jermaine Pierre Portfolio Manager Canada	Karishma Kaul Portfolio Manger Corporate Credit	Jesse Kang Portfolio Manager Corporate Credit	Wes George Portfolio Manager Agency Mortgages	Yang He Portfolio Manager Agency Mortgages		Laura May
Rena Patel Portfolio Manager Municipals	Lip Tong Portfolio Manager Canada	Cynthia Fan Portfolio Manager Corporate Credit	Allen Kwong Portfolio Manager Corporate Credit	Daniel Ruiz Portfolio Manager Emerging Markets	Gabe Shipley Portfolio Manager Emerging Markets		Chandler Grinnell
Kent Yamane Portfolio Manager Securitized Credit	Tao Chen Portfolio Manager Municipals	Nicolas Giometti Portfolio Manager Corporate Credit / ESG	Danny Ng Portfolio Manager Corporate Credit				
Clay Armistead Portfolio Manager Securitized Credit		Sam Dreyfuss Portfolio Manager Corporate Credit	Emily Freeman Portfolio Manager Corporate Credit				

As of September 30, 2018

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
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



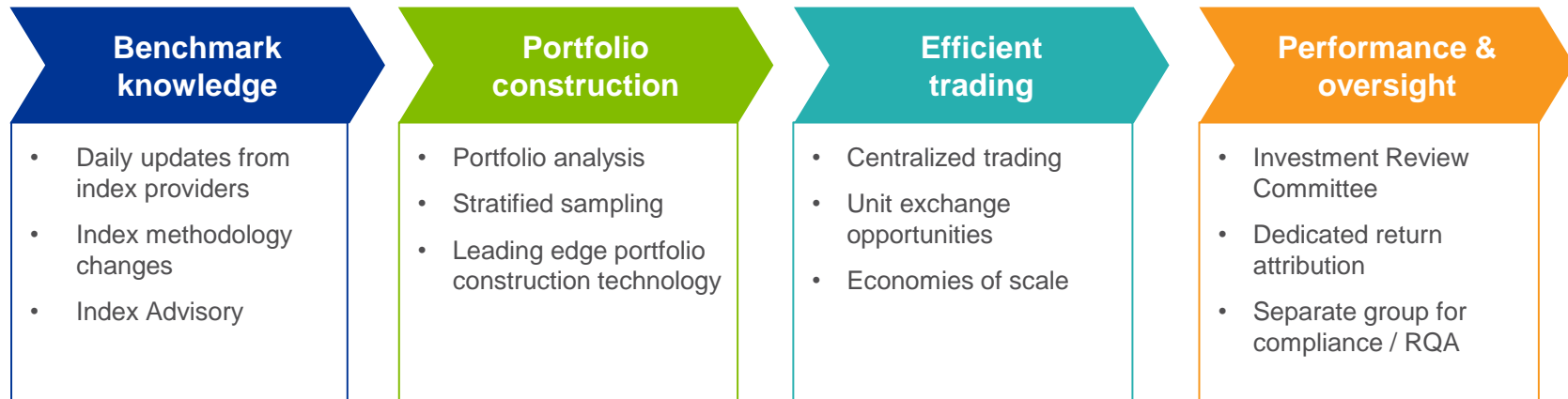
Process



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



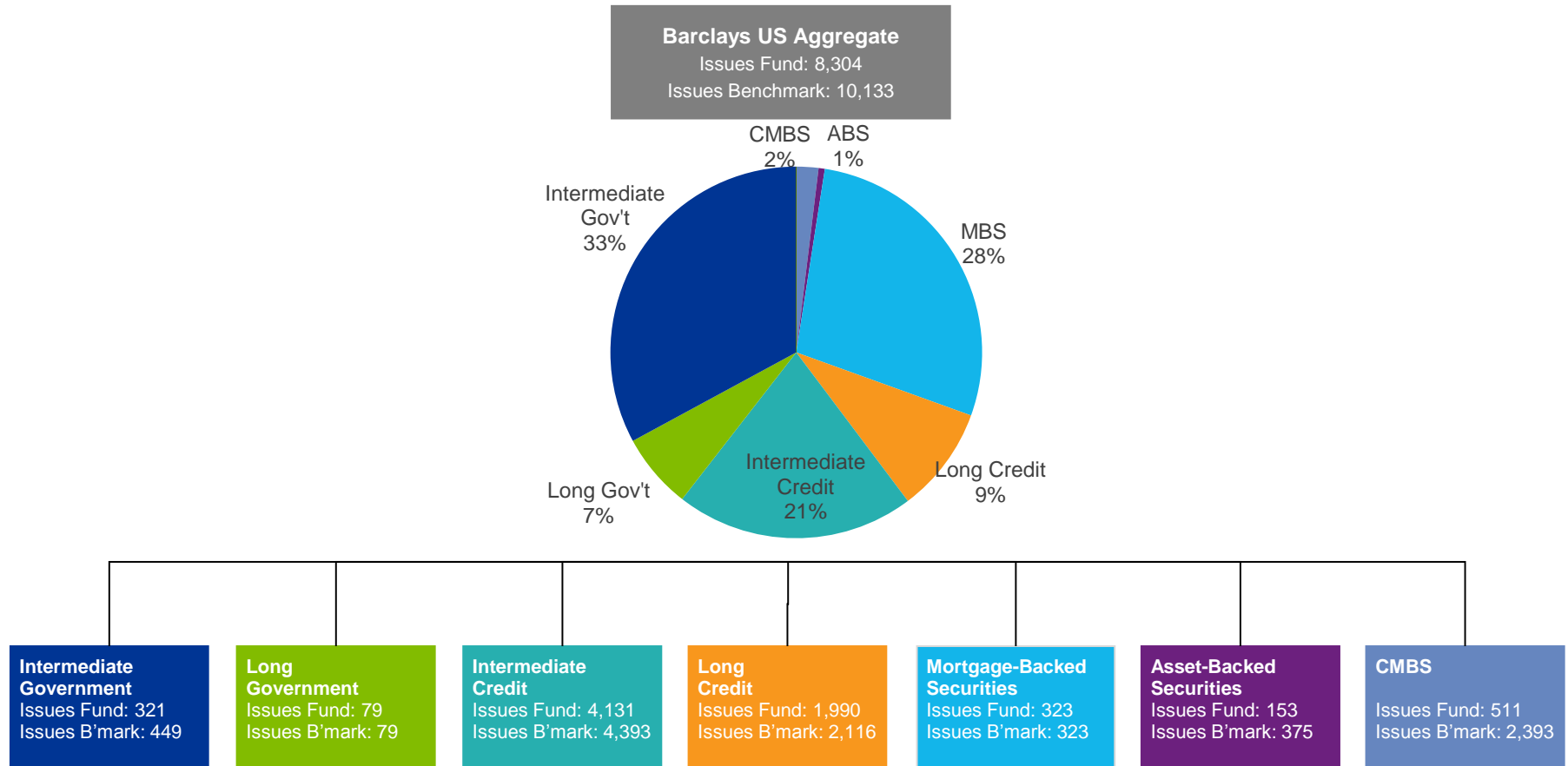
Risk Management

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

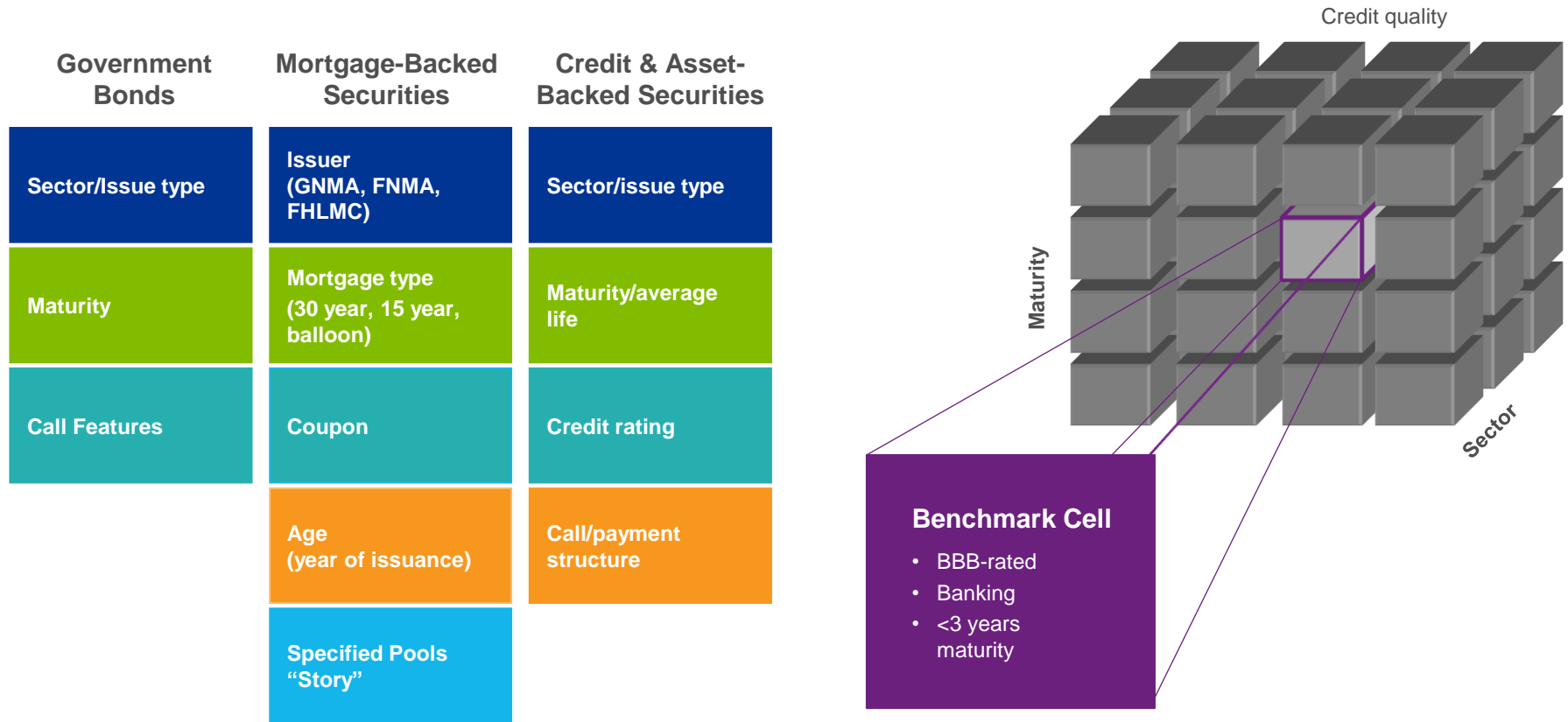


Source: Barclays as September 30, 2018
Funds are BlackRock CTFs



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

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

Index (Barclays Intermediate Credit Index)



Sector (example: Industrials)



Sub-Sector (example: Energy)



Maturity (example: 7-10 years)



Credit Rating (example: BBB)



Structure (example: Make Whole Call)



Part 2

Optimize by Risk Factors

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

Source: BlackRock; data as of 30 September 2018. Example for illustrative purposes only. And does not depict actual Collective Trust Fund data. It is shown to demonstrate the investment process.



Straight through processing with Aladdin

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

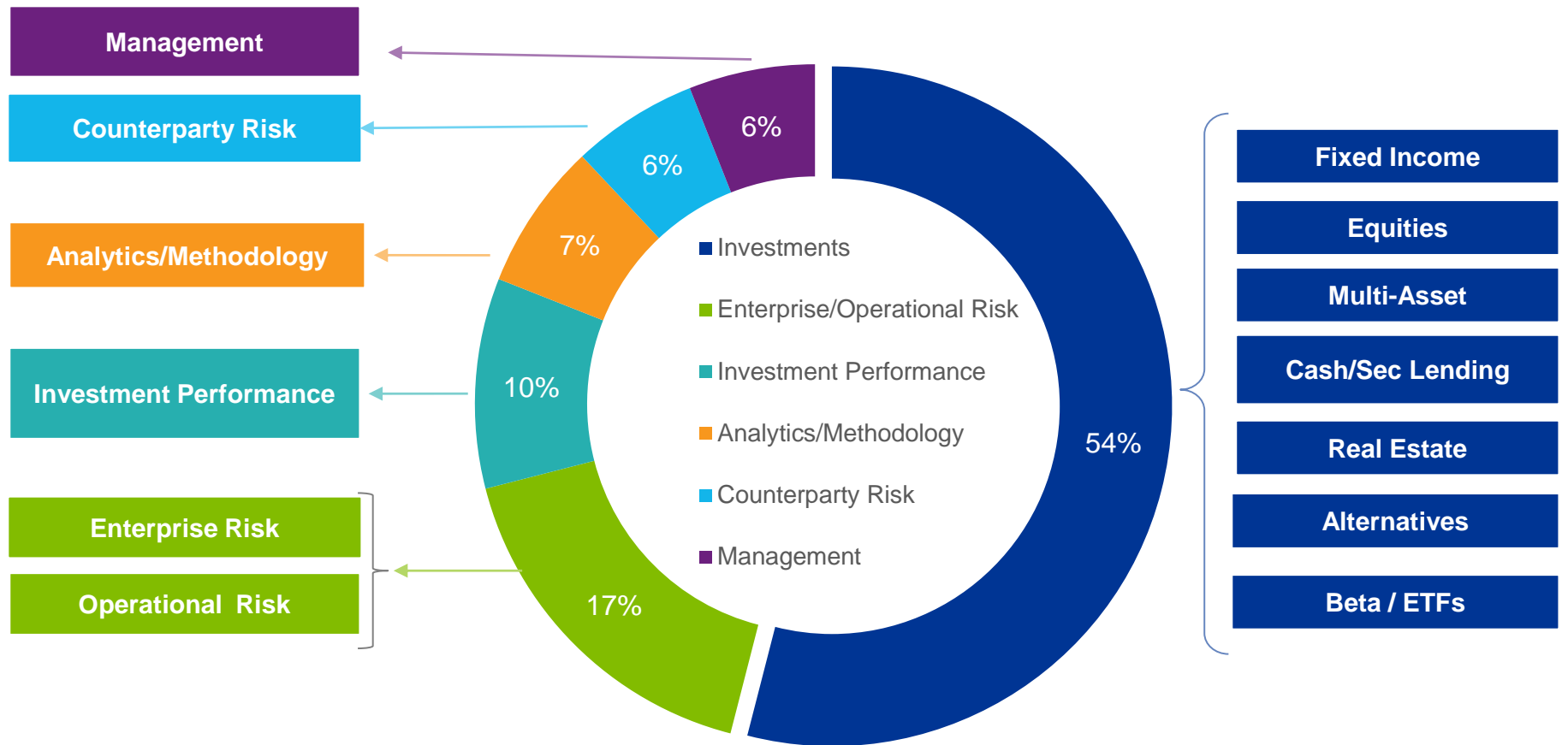
Aladdin Platform

- 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)



i. Portfolio Characteristics

U.S. Debt Index Fund

Portfolio profile

As of 30 September 2018

	U.S. Debt Index Fund	Bloomberg Barclays U.S. Aggregate Bond Index
Market value (\$B)	15.14	20,311.85
# Issues	8,304	10,133
Characteristics		
Coupon (%)	3.17	3.16
Yield to maturity (YTM) (%)	3.45	3.46
Weighted avg life (yrs)	8.19	8.24
Effective duration (yrs)	5.85	5.85
Spread duration	3.87	3.81
Option adjusted spread (bps)	39	39
Convexity	0.25	0.27
MSCI ESG Score (adjusted)*	5.44	6.23
Environment Score	6.42	6.16
Social Score	4.77	6.57
Governance Score	5.33	6.21
Quality breakdown (mkt val %)		
AAA or above	72.22	72.39
AA	3.50	3.22
A	10.79	10.84
BBB	13.47	13.52
NR	0.02	0.03

	U.S. Debt Index Fund	Bloomberg Barclays U.S. Aggregate Bond Index
Sector breakdown (mkt val %)		
Treasury	37.23	38.04
Agencies	2.39	1.48
Financials	8.15	8.19
Industrials	15.13	15.16
Utilities	1.76	1.79
Non-US credit	4.11	4.17
Taxable munis	0.62	0.65
ABS	0.54	0.51
Mortgages	27.94	28.05
Hybrid ARM	0.07	0.00
CMBS	1.88	1.92
Foreign Government	0.00	0.05
Cash	0.19	0.00
Weighted avg life breakdown (mkt val %)		
0-1	2.19	0.05
1-2	8.02	10.74
2-3	10.81	10.84
3-5	19.23	18.17
5-7	16.37	18.05
7-10	27.40	26.17
10-20	3.99	3.95
20-30	11.43	11.46
30+	0.55	0.57

* 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 correspond 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. ©2018 MSCI ESG Research Inc. Reproduced by permission.

Fund inception date 30 June 1986

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Appendix

i. Presenter Biographies

Presenter Biographies



Anthony R. Freitas, CFA, Managing Director, 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 and private pension plans, foundations and endowments.

Prior to joining BlackRock in 2004, Mr. Freitas was with Deutsche Asset Management, most recently as Managing Director and Regional Manager for client service. From 1993 to 2000, he was with Boston Partners Asset Management L.P. Initially a vice president responsible for West Coast client service, he became a Principal in 1995. Mr. Freitas began his career at Callan Associates in 1986 as a pension fund consultant.

Mr. Freitas earned a BA degree in political science from the University of California at Berkeley in 1982 and an MBA in finance from San Francisco State University in 1985.



Christian De Leon, Vice President, is an Index Equity strategist within BlackRock's ETF and Index Investments group.

Mr. De Leon's service with the firm dates back to 2010. Before transitioning to the ETF and Index Investments group, he was a product manager in the US & Canada Defined Contribution group. In this role, Mr. De Leon ensured that institutional defined contribution clients had the resources and information they needed for optimal plan design and implementation. In addition, he focused on institutional and regulatory operations. Mr. De Leon began his career as a manager of Equity Portfolio Accounting at State Street.

Mr. De Leon earned a BS degree in managerial economics from University of California, Davis, and an M.S. in Financial Analysis and Investment Management from Saint Mary's College..

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Index

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

Risk

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PRELIMINARY MONTHLY PERFORMANCE REPORT

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

October 31, 2018

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VCERA
VENTURA COUNTY EMPLOYEES'
RETIREMENT ASSOCIATION



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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
Total Fund	5,387,698,749	100.0	100.0	-4.8	-1.5	-0.7	2.1	7.2	6.2	9.4	7.9	Apr-94
<i>Policy Index</i>				<u>-4.9</u>	<u>-1.5</u>	<u>-0.3</u>	<u>2.4</u>	<u>7.5</u>	<u>6.8</u>	<u>9.3</u>	<u>7.9</u>	<i>Apr-94</i>
Over/Under				0.1	0.0	-0.4	-0.3	-0.3	-0.6	0.1	0.0	
60% MSCI ACWI (Net) / 40% FTSE WGBI				-4.9	-3.1	-3.7	-1.0	5.3	3.7	7.0	--	Apr-94
60% S&P 500 / 40% BBgBarc Aggregate				-4.4	0.0	1.0	3.7	7.3	7.6	9.7	8.2	Apr-94
Total Fund ex Parametric	5,349,133,259	99.3	--	-4.8	-1.6	-0.8	2.0	7.1	6.2	9.2	7.8	Apr-94
Total Fund ex Private Equity	5,054,529,440	93.8	--	-5.1	-1.9	-1.4	1.3	6.8	5.9	--	8.2	Jan-12
<i>Policy Index</i>				<u>-4.9</u>	<u>-1.5</u>	<u>-0.3</u>	<u>2.4</u>	<u>7.5</u>	<u>6.8</u>	<u>9.3</u>	<u>8.9</u>	<i>Jan-12</i>
Over/Under				-0.2	-0.4	-1.1	-1.1	-0.7	-0.9		-0.7	
Total US Equity	1,662,836,376	30.9	28.0	-7.2	-0.4	2.6	6.9	11.5	10.9	13.6	9.2	Dec-93
<i>Russell 3000</i>				<u>-7.4</u>	<u>-0.8</u>	<u>2.4</u>	<u>6.6</u>	<u>11.3</u>	<u>10.8</u>	<u>13.4</u>	<u>9.5</u>	<i>Dec-93</i>
Over/Under				0.2	0.4	0.2	0.3	0.2	0.1	0.2	-0.3	
Western U.S. Index Plus	203,066,054	3.8		-7.2	0.3	2.5	6.9	12.1	11.8	15.1	5.7	May-07
<i>S&P 500</i>				<u>-6.8</u>	<u>0.3</u>	<u>3.0</u>	<u>7.3</u>	<u>11.5</u>	<u>11.3</u>	<u>13.2</u>	<u>7.4</u>	<i>May-07</i>
Over/Under				-0.4	0.0	-0.5	-0.4	0.6	0.5	1.9	-1.7	
Blackrock Russell 1000 Index	1,398,903,444	26.0		-7.1	-0.2	2.7	7.0	--	--	--	10.8	May-17
<i>Russell 1000</i>				<u>-7.1</u>	<u>-0.2</u>	<u>2.7</u>	<u>7.0</u>	<u>11.3</u>	<u>11.1</u>	<u>13.4</u>	<u>10.8</u>	<i>May-17</i>
Over/Under				0.0	0.0	0.0	0.0				0.0	
Blackrock Russell 2500 Index	60,866,877	1.1		-10.1	-5.9	-0.7	2.9	--	--	--	7.2	May-17
<i>Russell 2500</i>				<u>-10.2</u>	<u>-5.9</u>	<u>-0.8</u>	<u>2.8</u>	<u>10.0</u>	<u>8.3</u>	<u>13.6</u>	<u>7.1</u>	<i>May-17</i>
Over/Under				0.1	0.0	0.1	0.1				0.1	

Policy Index: Currently, 28% Russell 3000, 20% BBgBarc US Aggregate, 15% MSCI ACWI ex U.S., 10% MSCI ACWI, 10% Russell 3000 Index + 3%, 10% CPI+4% Index, and 7% 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
Total Non-US Equity	852,742,933	15.8	15.0	-7.8	-6.9	-9.9	-7.1	5.4	2.4	7.5	6.1	Mar-94
<i>MSCI ACWI ex USA</i>				<u>-8.1</u>	<u>-7.5</u>	<u>-11.0</u>	<u>-8.2</u>	<u>4.4</u>	<u>1.6</u>	<u>6.9</u>	<u>4.9</u>	<i>Mar-94</i>
Over/Under				0.3	0.6	1.1	1.1	1.0	0.8	0.6	1.2	
<i>MSCI EAFE</i>				-8.0	-6.7	-9.3	-6.9	3.6	2.0	6.9	4.6	<i>Mar-94</i>
<i>MSCI ACWI ex USA NR LCL</i>				-6.8	-5.4	-6.6	-5.7	5.0	5.4	8.0	--	<i>Mar-94</i>
<i>MSCI EAFE NR LCL</i>				-6.5	-4.3	-5.2	-4.6	4.3	5.7	7.8	4.7	<i>Mar-94</i>
BlackRock ACWI ex-U.S. Index	435,033,007	8.1		-8.4	-8.0	-11.2	-8.2	4.8	2.1	7.5	2.0	<i>Mar-07</i>
<i>MSCI ACWI ex USA IMI</i>				<u>-8.4</u>	<u>-8.0</u>	<u>-11.4</u>	<u>-8.4</u>	<u>4.5</u>	<u>1.9</u>	<u>7.4</u>	<u>1.8</u>	<i>Mar-07</i>
Over/Under				0.0	0.0	0.2	0.2	0.3	0.2	0.1	0.2	
<i>MSCI ACWI ex USA NR LCL</i>				-6.8	-5.4	-6.6	-5.7	5.0	5.4	8.0	2.8	<i>Mar-07</i>
Sprucegrove	213,062,054	4.0		-7.4	-6.7	-10.2	-7.2	6.7	2.8	8.1	7.1	<i>Mar-02</i>
<i>MSCI ACWI ex USA</i>				<u>-8.1</u>	<u>-7.5</u>	<u>-11.0</u>	<u>-8.2</u>	<u>4.4</u>	<u>1.6</u>	<u>6.9</u>	<u>6.0</u>	<i>Mar-02</i>
Over/Under				0.7	0.8	0.8	1.0	2.3	1.2	1.2	1.1	
<i>MSCI EAFE</i>				-8.0	-6.7	-9.3	-6.9	3.6	2.0	6.9	5.5	<i>Mar-02</i>
<i>MSCI ACWI ex USA NR LCL</i>				-6.8	-5.4	-6.6	-5.7	5.0	5.4	8.0	5.0	<i>Mar-02</i>
<i>MSCI EAFE NR LCL</i>				-6.5	-4.3	-5.2	-4.6	4.3	5.7	7.8	4.3	<i>Mar-02</i>
Hexavest	87,123,637	1.6		-5.0	-4.2	-7.9	-5.9	2.9	1.5	--	3.5	<i>Dec-10</i>
<i>MSCI EAFE</i>				<u>-8.0</u>	<u>-6.7</u>	<u>-9.3</u>	<u>-6.9</u>	<u>3.6</u>	<u>2.0</u>	<u>6.9</u>	<u>4.1</u>	<i>Dec-10</i>
Over/Under				3.0	2.5	1.4	1.0	-0.7	-0.5	--	-0.6	
<i>MSCI EAFE NR LCL</i>				-6.5	-4.3	-5.2	-4.6	4.3	5.7	7.8	6.8	<i>Dec-10</i>
Walter Scott	117,524,235	2.2		-8.4	-5.5	-5.9	-3.9	7.1	3.8	--	5.0	<i>Dec-10</i>
<i>MSCI ACWI ex USA</i>				<u>-8.1</u>	<u>-7.5</u>	<u>-11.0</u>	<u>-8.2</u>	<u>4.4</u>	<u>1.6</u>	<u>6.9</u>	<u>2.9</u>	<i>Dec-10</i>
Over/Under				-0.3	2.0	5.1	4.3	2.7	2.2		2.1	
<i>MSCI ACWI ex USA NR LCL</i>				-6.8	-5.4	-6.6	-5.7	5.0	5.4	8.0	5.9	<i>Dec-10</i>
<i>MSCI EAFE</i>				-8.0	-6.7	-9.3	-6.9	3.6	2.0	6.9	4.1	<i>Dec-10</i>
Total Global Equity	577,777,574	10.7	10.0	-7.5	-3.4	-3.6	-0.1	8.2	5.7	8.3	5.7	May-05
<i>MSCI ACWI</i>				<u>-7.5</u>	<u>-3.5</u>	<u>-4.0</u>	<u>-0.5</u>	<u>7.7</u>	<u>6.1</u>	<u>9.7</u>	<u>6.5</u>	<i>May-05</i>
Over/Under				0.0	0.1	0.4	0.4	0.5	-0.4	-1.4	-0.8	
BlackRock MSCI ACWI Equity Index	577,777,574	10.7		-7.5	-3.4	-3.6	-0.1	8.2	6.6	--	9.7	<i>Aug-12</i>
<i>MSCI ACWI</i>				<u>-7.5</u>	<u>-3.5</u>	<u>-4.0</u>	<u>-0.5</u>	<u>7.7</u>	<u>6.1</u>	<u>9.7</u>	<u>9.3</u>	<i>Aug-12</i>
Over/Under				0.0	0.1	0.4	0.4	0.5	0.5		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
Total Private Equity	333,169,309	6.2	10.0	-0.1	5.0	14.7	18.2	13.8	15.6	--	14.7	Jan-12
<i>Russell 3000 + 3%</i>				<i>-7.1</i>	<i>0.2</i>	<i>5.0</i>	<i>9.8</i>	<i>14.6</i>	<i>14.1</i>	<i>16.7</i>	<i>17.5</i>	<i>Jan-12</i>
Over/Under				7.0	4.8	9.7	8.4	-0.8	1.5		-2.8	
<i>Cambridge Associates Global All PE (Qtr Lag)</i>				<i>0.0</i>	<i>4.4</i>	<i>12.7</i>	<i>17.3</i>	<i>11.7</i>	<i>13.2</i>	<i>9.6</i>	<i>13.0</i>	<i>Jan-12</i>
Adams Street Global Fund Series	162,441,613	3.0		0.0	4.8	14.6	19.7	12.6	13.8	--	13.3	Jan-12
<i>Russell 3000 + 3%</i>				<i>-7.1</i>	<i>0.2</i>	<i>5.0</i>	<i>9.8</i>	<i>14.6</i>	<i>14.1</i>	<i>16.7</i>	<i>17.5</i>	<i>Jan-12</i>
Over/Under				7.1	4.6	9.6	9.9	-2.0	-0.3		-4.2	
Harbourvest	78,658,853	1.5		-0.2	7.0	19.2	20.2	17.1	21.1	--	19.9	Aug-13
<i>Russell 3000 + 3%</i>				<i>-7.1</i>	<i>0.2</i>	<i>5.0</i>	<i>9.8</i>	<i>14.6</i>	<i>14.1</i>	<i>16.7</i>	<i>14.6</i>	<i>Aug-13</i>
Over/Under				6.9	6.8	14.2	10.4	2.5	7.0		5.3	
Pantheon Global Secondary Funds	38,465,959	0.7		0.0	5.6	13.9	16.9	17.2	15.8	--	13.3	Jan-12
<i>Russell 3000 + 3%</i>				<i>-7.1</i>	<i>0.2</i>	<i>5.0</i>	<i>9.8</i>	<i>14.6</i>	<i>14.1</i>	<i>16.7</i>	<i>17.5</i>	<i>Jan-12</i>
Over/Under				7.1	5.4	8.9	7.1	2.6	1.7		-4.2	
Drive Capital Fund	5,900,662	0.1		0.0	3.1	-1.0	-3.9	--	--	--	-29.8	Sep-16
<i>Russell 3000 + 3%</i>				<i>-7.1</i>	<i>0.2</i>	<i>5.0</i>	<i>9.8</i>	<i>14.6</i>	<i>14.1</i>	<i>16.7</i>	<i>16.0</i>	<i>Sep-16</i>
Over/Under				7.1	2.9	-6.0	-13.7				-45.8	
Abbott Secondary Opportunities	12,359,251	0.2		0.0	21.3	21.3	--	--	--	--	21.3	Jan-18
<i>Russell 3000 + 3%</i>				<i>-7.1</i>	<i>0.2</i>	<i>5.0</i>	<i>9.8</i>	<i>14.6</i>	<i>14.1</i>	<i>16.7</i>	<i>5.0</i>	<i>Jan-18</i>
Over/Under				7.1	21.1	16.3					16.3	
CVI Credit Value Fund	7,776,776	0.1		1.6	2.9	5.3	--	--	--	--	5.3	Jan-18
<i>Russell 3000 + 3%</i>				<i>-7.1</i>	<i>0.2</i>	<i>5.0</i>	<i>9.8</i>	<i>14.6</i>	<i>14.1</i>	<i>16.7</i>	<i>5.0</i>	<i>Jan-18</i>
Over/Under				8.7	2.7	0.3					0.3	
Clearlake Capital Partners V	2,432,220	0.0		0.0	13.0	--	--	--	--	--	10.3	Mar-18
<i>Russell 3000 + 3%</i>				<i>-7.1</i>	<i>0.2</i>	<i>5.0</i>	<i>9.8</i>	<i>14.6</i>	<i>14.1</i>	<i>16.7</i>	<i>3.0</i>	<i>Mar-18</i>
Over/Under				7.1	12.8						7.3	
Battery Ventures XII	2,221,898	0.0		0.0	-5.9	--	--	--	--	--	-5.9	Apr-18
<i>Russell 3000 + 3%</i>				<i>-7.1</i>	<i>0.2</i>	<i>5.0</i>	<i>9.8</i>	<i>14.6</i>	<i>14.1</i>	<i>16.7</i>	<i>4.9</i>	<i>Apr-18</i>
Over/Under				7.1	-6.1						-10.8	

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
Insight Venture Partners X	6,733,611	0.1		-3.8	-9.7	--	--	--	--	--	-9.7	May-18
<i>Russell 3000 + 3%</i>				<u>-7.1</u>	<u>0.2</u>	<u>5.0</u>	<u>9.8</u>	<u>14.6</u>	<u>14.1</u>	<u>16.7</u>	<u>4.2</u>	<i>May-18</i>
Over/Under				3.3	-9.9						-13.9	
GTCR Fund XII	3,783,933	0.1		0.0	-38.7	--	--	--	--	--	-38.7	Jun-18
<i>Russell 3000 + 3%</i>				<u>-7.1</u>	<u>0.2</u>	<u>5.0</u>	<u>9.8</u>	<u>14.6</u>	<u>14.1</u>	<u>16.7</u>	<u>1.1</u>	<i>Jun-18</i>
Over/Under				7.1	-38.9						-39.8	
Buenaventure One, LLC	12,394,533	0.2		-0.2	-0.2	--	--	--	--	--	-0.2	Jul-18
<i>Russell 3000 + 3%</i>				<u>-7.1</u>	<u>0.2</u>	<u>5.0</u>	<u>9.8</u>	<u>14.6</u>	<u>14.1</u>	<u>16.7</u>	<u>0.2</u>	<i>Jul-18</i>
Over/Under				6.9	-0.4						-0.4	

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 PRIVATE EQUITY LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date ¹	Outstanding Commitment ¹	Call Ratio	Add'l Fees ²	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	\$13,348,706	\$12,014,011	53%	--	\$2,000,000	\$12,359,249	\$14,359,249	\$1,010,543	22.3%	0.15x	1.08x
Adams Street 2010 U.S. Fund	2010	5/21/2010	\$42,500,000	\$37,442,500	\$5,057,500	88%	\$15,213	\$24,264,925	\$37,219,346	\$61,484,271	\$24,026,558	13.9%	0.65x	1.64x
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	\$15,702,344	\$17,074,957	\$32,777,301	\$10,450,463	11.3%	0.7x	1.47x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	\$8,500,000	\$7,633,000	\$867,000	90%	\$0	\$2,030,308	\$9,942,102	\$11,972,410	\$4,339,410	11.6%	0.27x	1.57x
Adams Street 2010 Direct Fund	2010	5/21/2010	\$8,500,000	\$8,046,100	\$453,900	95%	\$6,697	\$8,862,974	\$5,084,280	\$13,947,254	\$5,894,457	12.9%	1.1x	1.73x
Adams Street 2013 Global Fund	2013	6/27/2013	\$75,000,000	\$56,625,000	\$18,375,000	76%	\$10,728	\$8,075,792	\$66,678,199	\$74,753,991	\$18,118,263	10.3%	0.14x	1.32x
Adams Street 2016 Global Fund	2016	12/22/2016	\$60,000,000	\$21,150,000	\$38,850,000	35%	\$0	\$2,082,389	\$22,082,443	\$24,164,832	\$3,014,832	18.6%	0.1x	1.14x
Adams Street Co-Investment Fund IV A	2018	9/24/2018	\$30,000,000	\$4,567,808	\$25,500,000	15%	\$67,808	--	\$4,500,000	\$4,500,000	-\$67,808	-18.3%	--	0.99x
Battery Ventures XI	2018	2/1/2018	\$9,050,000	\$1,429,900	\$7,620,100	16%	\$0	\$0	\$1,346,440	\$1,346,440	-\$83,460	-17.7%	0x	0.94x
Battery Ventures XII Side Fund	2018	2/1/2018	\$5,050,000	\$888,800	\$4,161,200	18%	\$0	\$0	\$875,458	\$875,458	-\$13,342	-6.7%	0x	0.98x
Buenaventure One, LLC	2018	1/5/2018	\$57,172,500	\$12,415,590	\$44,756,910	22%	--	--	\$12,394,537	\$12,394,537	--	-0.9%	--	1x
CapVest Equity Partners IV	2018	7/11/2018	\$12,527,267	--	\$12,527,267	0%	--	--	--	--	--	--	--	--
Clearlake Capital Partners V	2017	12/22/2017	\$9,950,000	\$2,189,963	\$7,760,847	22%	\$46,158	\$2,397	\$2,432,220	\$2,434,617	\$198,496	21.6%	0x	1.11x
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$7,500,000	\$22,500,000	25%	--	\$6,147	\$7,776,778	\$7,782,925	\$282,925	8.4%	0x	1.04x
Drive Capital Fund II	2016	9/1/2016	\$15,000,000	\$6,355,302	\$8,647,908	42%	\$3,210	\$0	\$5,900,660	\$5,900,660	-\$457,852	-7.7%	0x	0.93x
ECI 11	2018	7/5/2018	\$9,566,175	--	\$9,566,175	0%	--	--	(\$69,495)	(\$69,495)	--	-100.0%	--	--
GGV Capital VII	2018	8/15/2018	\$10,160,000	--	\$10,160,000	0%	--	--	--	--	--	--	--	--
GGV Capital VII Plus	2018	8/15/2018	\$2,540,000	--	\$2,540,000	0%	--	--	--	--	--	--	--	--
GGV Discovery II	2018	8/15/2018	\$2,100,000	--	\$2,100,000	0%	--	--	--	--	--	--	--	--
GTCR Fund XII	2017	9/29/2017	\$30,000,000	\$4,548,000	\$25,547,792	15%	--	\$264,502	\$3,256,910	\$3,521,412	-\$1,026,588	-87.5%	0.06x	0.77x
Insight Venture Partners X	2017	10/13/2017	\$25,000,000	\$7,250,000	\$17,750,000	29%	--	\$8,561	\$6,733,613	\$6,742,174	-\$507,826	-20.2%	0x	0.93x
HarbourVest - Dover Street VIII	2013	5/30/2013	\$67,500,000	\$60,834,954	\$6,750,000	90%	\$84,954	\$64,366,660	\$29,161,527	\$93,528,187	\$32,608,279	21.7%	1.06x	1.54x
HarbourVest - Dover Street IX	2016	12/16/2016	\$60,000,000	\$25,200,000	\$34,800,000	42%	\$0	\$6,528,406	\$25,962,331	\$32,490,737	\$7,290,737	40.9%	0.26x	1.29x
HarbourVest - PRTNS CO INVEST IV L.P.	2017	6/2/2017	\$30,000,000	\$21,156,100	\$9,040,640	71%	\$0	\$0	\$23,534,996	\$23,534,996	\$2,378,896	10.4%	0x	1.11x
HarbourVest - PRTNS CO INVEST V L.P.	2018	7/31/2018	\$35,000,000	--	\$35,000,000	0%	--	--	--	--	--	--	--	--
Hellman & Friedman Capital Partners IX	2018	9/28/2018	\$19,800,000	--	\$19,800,000	0%	--	--	--	--	--	--	--	--
M/C Partners VIII	2018	4/2/2018	\$10,000,000	--	\$10,000,000	0%	--	--	--	--	--	--	--	--
Monroe Capital Private Credit Fund III	2018	9/5/2018	\$25,000,000	--	\$25,000,000	0%	--	--	--	--	--	--	--	--
Pantheon Global Secondary Fund IV	2010	8/20/2010	\$15,000,000	\$9,960,000	\$5,040,000	66%	\$0	\$12,450,001	\$3,354,279	\$15,804,280	\$5,844,280	14.2%	1.25x	1.59x
Pantheon Global Secondary Fund V	2015	2/26/2015	\$50,000,000	\$32,141,509	\$17,858,491	64%	(\$162,514)	\$8,412,603	\$35,099,082	\$43,511,685	\$11,532,690	20.1%	0.26x	1.35x
The Resolute Fund IV	2018	5/2/2018	\$20,000,000	--	\$20,000,000	0%	--	--	\$75,113	\$75,113	--	--	--	--
Riverside Micro-Cap Fund V	2018	8/21/2018	\$10,000,000	--	\$10,000,000	0%	--	--	--	--	--	--	--	--
Total VCERA Private Equity Program	--	5/21/2010	\$835,415,942	\$363,008,481	\$473,219,492	43%	\$73,843	\$155,058,009	\$332,775,025	\$487,833,034	\$124,833,953	14.6%	0.43x	1.34x

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 10/31/2018 recent 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
Total US Fixed Income	990,871,092	18.4	20.0	-0.9	-0.8	-2.1	-1.8	1.9	2.0	6.4	5.6	Feb-94
BBgBarc US Aggregate TR				-0.8	-0.8	-2.4	-2.1	1.0	1.8	3.9	5.1	Feb-94
Over/Under				-0.1	0.0	0.3	0.3	0.9	0.2	2.5	0.5	
BlackRock U.S. Debt Fund	267,562,193	5.0		-0.8	-0.8	-2.4	-2.0	1.1	1.9	4.0	4.9	Nov-95
BBgBarc US Aggregate TR				-0.8	-0.8	-2.4	-2.1	1.0	1.8	3.9	4.9	Nov-95
Over/Under				0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	
Western	288,809,991	5.4		-1.3	-1.3	-3.4	-2.8	1.9	2.8	6.2	5.8	Dec-96
BBgBarc US Aggregate TR				-0.8	-0.8	-2.4	-2.1	1.0	1.8	3.9	4.9	Dec-96
Over/Under				-0.5	-0.5	-1.0	-0.7	0.9	1.0	2.3	0.9	
Reams	305,145,082	5.7		-0.7	-0.9	-1.4	-1.4	1.7	0.9	6.6	5.0	Sep-01
Reams Custom Index				0.2	0.8	1.9	2.2	1.3	0.9	3.5	3.8	Sep-01
Over/Under				-0.9	-1.7	-3.3	-3.6	0.4	0.0	3.1	1.2	
BBgBarc US Aggregate TR				-0.8	-0.8	-2.4	-2.1	1.0	1.8	3.9	4.1	Sep-01
3-Month LIBOR + 3%				0.5	1.8	4.4	5.2	4.4	3.9	3.7	4.8	Sep-01
Loomis Strategic Alpha	47,001,422	0.9		0.0	0.7	1.6	2.1	3.1	2.7	--	2.6	Jul-13
BBgBarc US Aggregate TR				-0.8	-0.8	-2.4	-2.1	1.0	1.8	3.9	2.0	Jul-13
Over/Under				0.8	1.5	4.0	4.2	2.1	0.9		0.6	
3-Month LIBOR + 3%				0.5	1.8	4.4	5.2	4.4	3.9	3.7	3.9	Jul-13
Loomis Sayles Multi Strategy	82,352,404	1.5		-0.6	0.4	-1.3	-0.7	4.0	3.8	9.7	6.1	Jul-05
Loomis Custom Index				-1.0	-0.3	-1.3	-1.0	2.7	2.6	6.0	4.7	Jul-05
Over/Under				0.4	0.7	0.0	0.3	1.3	1.2	3.7	1.4	
BBgBarc US Govt/Credit TR				-0.9	-0.8	-2.7	-2.3	1.2	1.9	4.1	3.7	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
Total Real Estate	426,285,321	7.9	7.0	0.0	1.6	5.2	7.4	7.0	9.0	3.4	7.8	Mar-94
<i>NCREIF ODCE Net</i>				<i>0.0</i>	<i>1.9</i>	<i>5.8</i>	<i>7.7</i>	<i>7.8</i>	<i>9.7</i>	<i>4.6</i>	<i>8.1</i>	<i>Mar-94</i>
Over/Under				0.0	-0.3	-0.6	-0.3	-0.8	-0.7	-1.2	-0.3	
Prudential Real Estate	153,766,356	2.9		0.0	2.3	6.4	8.3	8.2	10.4	4.2	6.3	Jun-04
<i>NCREIF ODCE Net</i>				<i>0.0</i>	<i>1.9</i>	<i>5.8</i>	<i>7.7</i>	<i>7.8</i>	<i>9.7</i>	<i>4.6</i>	<i>7.1</i>	<i>Jun-04</i>
Over/Under				0.0	0.4	0.6	0.6	0.4	0.7	-0.4	-0.8	
<i>NCREIF ODCE</i>				<i>0.0</i>	<i>2.1</i>	<i>6.5</i>	<i>8.7</i>	<i>8.8</i>	<i>10.7</i>	<i>5.6</i>	<i>8.1</i>	<i>Jun-04</i>
UBS Real Estate	272,518,965	5.1		0.0	1.2	4.6	6.8	6.3	8.1	4.6	7.3	Mar-03
<i>NCREIF ODCE Net</i>				<i>0.0</i>	<i>1.9</i>	<i>5.8</i>	<i>7.7</i>	<i>7.8</i>	<i>9.7</i>	<i>4.6</i>	<i>7.3</i>	<i>Mar-03</i>
Over/Under				0.0	-0.7	-1.2	-0.9	-1.5	-1.6	0.0	0.0	
<i>NCREIF ODCE</i>				<i>0.0</i>	<i>2.1</i>	<i>6.5</i>	<i>8.7</i>	<i>8.8</i>	<i>10.7</i>	<i>5.6</i>	<i>8.3</i>	<i>Mar-03</i>
Total Real Assets	418,845,242	7.8	10.0	-4.1	-3.6	-3.5	-1.0	3.1	2.0	--	3.7	Apr-13
<i>CPI + 4% (Unadjusted)</i>				<i>0.5</i>	<i>1.7</i>	<i>6.0</i>	<i>6.6</i>	<i>6.1</i>	<i>6.2</i>	<i>--</i>	<i>6.3</i>	<i>Apr-13</i>
Over/Under				-4.6	-5.3	-9.5	-7.6	-3.0	-4.2	--	-2.6	
Bridgewater All Weather Fund	304,011,242	5.6		-2.8	-3.1	-3.4	-1.2	4.5	3.3	--	4.1	Aug-13
<i>CPI + 5% (Unadjusted)</i>				<i>0.6</i>	<i>2.0</i>	<i>6.8</i>	<i>7.6</i>	<i>7.2</i>	<i>6.7</i>	<i>--</i>	<i>6.6</i>	<i>Aug-13</i>
Over/Under				-3.4	-5.1	-10.2	-8.8	-2.7	-3.4	--	-2.5	
Tortoise Energy Infrastructure	114,834,001	2.1		-7.3	-4.7	-4.0	-0.5	-0.1	-0.9	--	0.3	Apr-13
<i>Wells Fargo MLP Index</i>				<i>-7.3</i>	<i>-2.5</i>	<i>-3.9</i>	<i>-1.2</i>	<i>-1.9</i>	<i>-4.2</i>	<i>--</i>	<i>-3.2</i>	<i>Apr-13</i>
Over/Under				0.0	-2.2	-0.1	0.7	1.8	3.3	--	3.5	
Overlay	125,170,901	2.3	0.0									
Parametric	38,700,721	0.7										
Abbott Capital Cash	86,470,180	1.6										

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

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.

Real Estate Valuation is as of 9/30/2018.

Ventura County Employees' Retirement Association

TOTAL FUND

Cash Flow Summary							
Month Ending October 31, 2018							
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Abbott Capital Cash	\$115,136,707	\$1,238,888	-\$30,106,240	-\$28,867,352	\$0	\$200,826	\$86,470,180
Abbott Secondary Opportunities	\$12,359,251	\$0	\$0	\$0	\$0	\$0	\$12,359,251
Adams Street Global Fund Series	\$158,857,692	\$4,822,808	-\$1,238,887	\$3,583,921	\$0	\$0	\$162,441,613
Battery Ventures XII	\$1,623,398	\$598,500	\$0	\$598,500	\$0	\$0	\$2,221,898
BlackRock ACWI ex-U.S. Index	\$474,689,679	\$0	\$0	\$0	-\$37,919	-\$39,656,672	\$435,033,007
BlackRock MSCI ACWI Equity Index	\$624,455,589	\$0	\$0	\$0	-\$20,926	-\$46,678,015	\$577,777,574
Blackrock Russell 1000 Index	\$1,505,409,046	\$0	\$0	\$0	-\$12,074	-\$106,505,602	\$1,398,903,444
Blackrock Russell 2500 Index	\$67,729,691	\$0	\$0	\$0	-\$1,014	-\$6,862,813	\$60,866,877
BlackRock U.S. Debt Fund	\$269,705,929	\$0	\$0	\$0	-\$12,252	-\$2,143,737	\$267,562,193
Bridgewater All Weather Fund	\$312,911,975	\$0	\$0	\$0	-\$96,669	-\$8,900,734	\$304,011,242
Buenaventure One, LLC	\$12,415,590	\$0	\$0	\$0	\$0	-\$21,057	\$12,394,533
Clearlake Capital Partners V	\$2,432,220	\$0	\$0	\$0	\$0	\$0	\$2,432,220
CVI Credit Value Fund	\$7,652,303	\$0	\$0	\$0	\$0	\$124,473	\$7,776,776
Drive Capital Fund	\$5,207,167	\$693,493	\$0	\$693,493	\$0	\$1	\$5,900,662
GTCR Fund XII	\$783,932	\$3,000,000	\$0	\$3,000,000	\$0	\$1	\$3,783,933
Harbourvest	\$78,794,085	\$0	\$0	\$0	\$0	-\$135,231	\$78,658,853
Hexavest	\$91,686,105	\$0	\$0	\$0	-\$33,208	-\$4,562,467	\$87,123,637
Insight Venture Partners X	\$5,002,174	\$1,991,439	\$0	\$1,991,439	\$0	-\$260,001	\$6,733,611
Loomis Sayles Multi Strategy	\$82,806,312	\$0	\$0	\$0	-\$26,421	-\$453,908	\$82,352,404
Loomis Strategic Alpha	\$47,001,422	\$0	\$0	\$0	-\$15,667	\$0	\$47,001,422
Pantheon Global Secondary Funds	\$38,465,959	\$0	\$0	\$0	\$0	\$0	\$38,465,959
Parametric	\$39,293,629	\$12,603	\$0	\$12,603	-\$4,267	-\$605,511	\$38,700,721



Ventura County Employees' Retirement Association

TOTAL FUND

	Month Ending October 31, 2018							Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change		
Prudential Real Estate	\$153,766,357	\$0	-\$1	-\$1	\$0	\$0	\$153,766,356	
Reams	\$307,299,976	\$0	\$0	\$0	-\$44,393	-\$2,154,894	\$305,145,082	
Sprucegrove	\$230,075,924	\$0	\$0	\$0	-\$63,971	-\$17,013,871	\$213,062,054	
Tortoise Energy Infrastructure	\$123,831,231	\$0	\$0	\$0	-\$59,809	-\$8,997,230	\$114,834,001	
UBS Real Estate	\$272,518,965	\$0	\$0	\$0	\$0	\$0	\$272,518,965	
Walter Scott	\$128,247,564	\$0	\$0	\$0	-\$80,637	-\$10,723,329	\$117,524,235	
Western	\$292,447,760	\$0	\$0	\$0	-\$48,601	-\$3,637,769	\$288,809,991	
Western U.S. Index Plus	\$218,737,707	\$0	\$0	\$0	-\$37,883	-\$15,671,652	\$203,066,054	
Total	\$5,681,345,338	\$12,357,730	-\$31,345,127	-\$18,987,397	-\$595,714	-\$274,659,192	\$5,387,698,749	



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.
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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

September 30, 2018

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

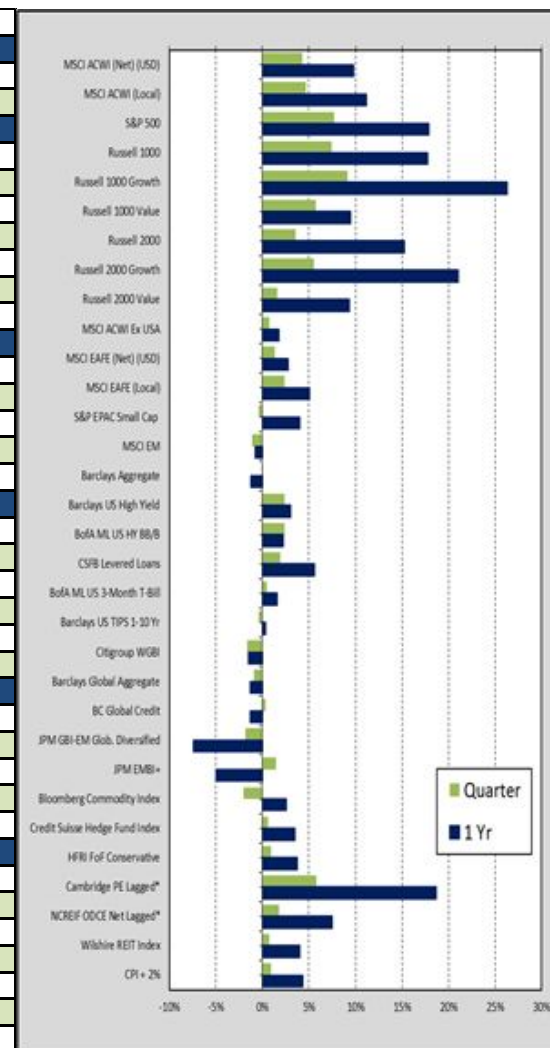
ECONOMIC ENVIRONMENT

- **Real GDP (third quarter) increased at an annual rate of 3.5% (advance estimate).**
 - Retail sales ended August at +4.0% on a YoY basis. In the same period last year the YoY growth rate was 3.6%.
 - Corporate profits (ended April) as a percent of GDP increased to 9.6% from 9.5% (in January) and remain elevated relative to historical levels.
 - The inventory-to-sales ratio ended August flat at 1.3 and has remained relatively constant since early 2010.
 - The U.S. trade deficit widened 6.4% as exports fell.
- **The unemployment rate decreased to 3.7% from 4.0% ended Q3; U-6, a broader measure of unemployment, decreased to 7.5% from 7.8% during the third quarter.**
- **The Case-Shiller Home Price Index (ended July) increased to 205.4 from 200.9 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 2.3% from 2.9% ended September; Capacity Utilization increased to 78.1% from 78.0% in Q3.**
- **Fed Funds rate was increased 0.25% to a targeted range of 2.00% - to – 2.25%. The 10-year Treasury Yield (constant maturity) finished Q3 at 3.0% up from 2.9%.**
- **The Fed balance sheet decreased slightly during Q3 2018, while the European Central Bank balance sheet continues to increase.**
 - ECB held its benchmark refinance rate at 0%, deposit rates -0.4% and reaffirmed that asset purchases may end in December.
- **S&P valuations increased slightly in Q2, remaining above the 10-year and long-term averages.**
 - Cyclically adjusted Shiller PE ratio (32.8x) is above the long-term average of 16.6x and above the 10-year average of 23.95x.



MARKET ENVIRONMENT – Q3 2018 OVERVIEW

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI ACWI (Net) (USD)	World	4.3%	9.8%	13.4%	8.7%	8.2%
MSCI ACWI (Local)	World (Local Currency)	4.7%	11.2%	13.3%	10.4%	8.9%
Domestic Equity Benchmarks						
S&P 500	Large Core	7.7%	17.9%	17.3%	14.0%	12.0%
Russell 1000	Large Core	7.4%	17.8%	17.1%	13.7%	12.1%
Russell 1000 Growth	Large Growth	9.2%	26.3%	20.6%	16.6%	14.3%
Russell 1000 Value	Large Value	5.7%	9.5%	13.6%	10.7%	9.8%
Russell 2000	Small Core	3.6%	15.2%	17.1%	11.1%	11.1%
Russell 2000 Growth	Small Growth	5.5%	21.1%	18.0%	12.1%	12.7%
Russell 2000 Value	Small Value	1.6%	9.3%	16.1%	9.9%	9.5%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	0.7%	1.8%	10.0%	4.1%	5.2%
MSCI EAFE (Net) (USD)	Int'l Developed	1.4%	2.7%	9.2%	4.4%	5.4%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	2.4%	5.1%	9.4%	7.9%	6.7%
S&P EPAC Small Cap	Small Cap Int'l	-0.4%	4.0%	12.2%	8.3%	9.3%
MSCI EM	Emerging Equity	-1.1%	-0.8%	12.4%	3.6%	5.4%
Domestic Fixed Income Benchmarks						
Barclays Aggregate	Core Bonds	0.0%	-1.2%	1.3%	2.2%	3.8%
Barclays US High Yield	High Yield	2.4%	3.1%	8.2%	5.5%	9.5%
BofA ML US HY BB/B	High Yield	2.4%	2.3%	7.3%	5.4%	8.6%
CSFB Levered Loans	Bank Loans	1.9%	5.6%	5.4%	4.4%	5.9%
BofA ML US 3-Month T-Bill	Cash	0.5%	1.6%	0.8%	0.5%	0.3%
Barclays US TIPS 1-10 Yr	Inflation	-0.4%	0.3%	1.7%	0.9%	2.5%
Global Fixed Income Benchmarks						
Citigroup WGBI	World Gov. Bonds	-1.6%	-1.5%	1.7%	0.2%	2.2%
Barclays Global Aggregate	Global Core Bonds	-0.9%	-1.3%	2.0%	0.8%	2.9%
BC Global Credit	Global Bonds	0.3%	-1.3%	2.9%	2.0%	4.5%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	-1.8%	-7.4%	5.2%	-1.7%	2.7%
JPM EMBI+	Em. Mkt. Bonds	1.5%	-5.0%	4.8%	4.2%	6.8%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodities	-2.0%	2.6%	-0.1%	-7.2%	-6.2%
Credit Suisse Hedge Fund Index	Hedge Fund	0.6%	3.5%	3.1%	3.4%	4.5%
HFRI FoF Conservative	Fund of Hedge Funds	0.9%	3.8%	2.9%	3.0%	2.2%
Cambridge PE Lagged*	Private Equity	5.8%	18.7%	12.7%	13.8%	10.8%
NCREIF ODCE Net Lagged*	Real Estate	1.8%	7.5%	8.4%	10.0%	4.3%
Wilshire REIT Index	REIT	0.7%	4.0%	7.1%	9.3%	7.4%
CPI + 2%	Inflation/Real Assets	1.0%	4.3%	4.0%	3.6%	3.5%















* As of 6/30/2018



PERFORMANCE OVERVIEW

Q3 Market Summary

Macro			Equity			Credit			Real Assets		
US Dollar	VIX	US 10-Yr	S&P 500	MSCI EAFE	MSCI EM	US Agg.	High Yield	Dollar EMD	Oil	Gold	REITS
											
0.7%	-4.0	20 bps	7.7%	1.4%	-1.1%	0.0%	2.4%	1.9%	-1.2%	-4.8%	0.7%

- **US equities increased during the quarter, supported by strong macroeconomic data and a tight labor market**
- **Emerging market equities broadly declined with ongoing currency weakness and trade tensions weighing on sentiment**
- **The Federal Reserve hiked rates for the third time this year and is expected to hike rates again in December**

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



MACRO PERFORMANCE OVERVIEW

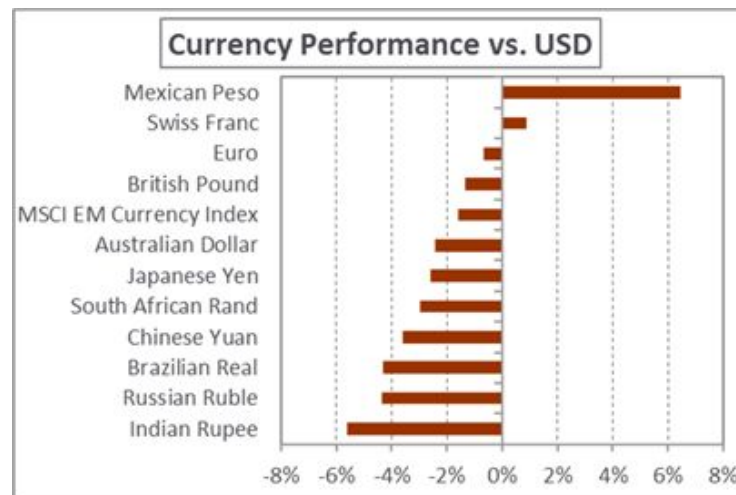
Q3 Macro Market Summary

- **The global growth outlook remains in tact, despite trade policy issues**
- **Global bond yields increased as central banks transition toward tighter monetary policy**
- **Higher rates in the US supported the dollar – adding further pressure to emerging market currencies**

	Yield 06/30/18	Yield 09/30/18	Δ
US 10-Yr	2.86%	3.06%	0.20%
US 30-Yr	2.99%	3.21%	0.22%
US Real 10-Yr	0.74%	0.92%	0.18%
German 10-Yr	0.30%	0.47%	0.17%
Japan 10-Yr	0.04%	0.13%	0.09%
China 10-Yr	3.48%	3.63%	0.15%
EM Local Debt	6.59%	6.62%	0.03%

Source: Bloomberg

Central Banks	Current Rate	CPI YOY	Notes from the Quarter
Federal Reserve	2.00% - 2.25%	2.7%	The Fed increased its benchmark interest rate to 2.00% - 2.25% in September and is expected to hike rates one more time in 2018
European Central Bank	0.0%	2.1%	The ECB maintained its current benchmark interest rate, but continues its plan to scale back its QE Program
Bank of Japan	-0.1%	1.3%	The BoJ will continue its ultra-easy QE program with inflation remaining well below target



Source: Bloomberg



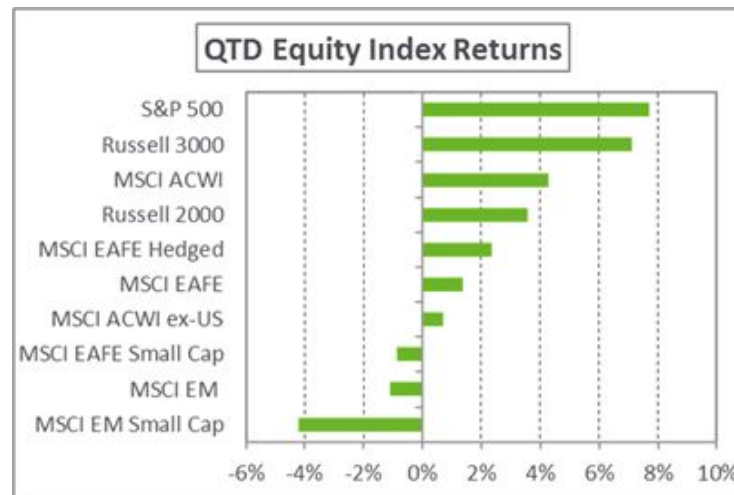
EQUITY PERFORMANCE OVERVIEW

Q3 Equity Market Summary

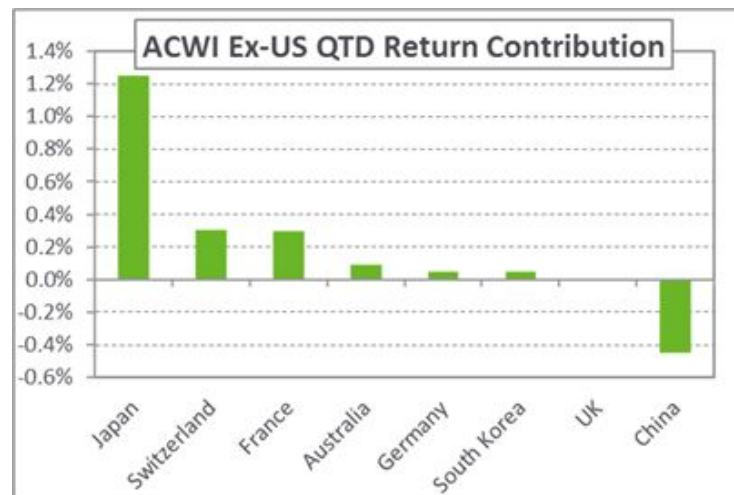
- **Strong economic data and positive sentiment helped US equities to outperform global equities**
- **Trade-sensitive economies disproportionately declined as escalating trade tensions and currency weakness weighed on returns**

Russell 3000 QTD Sector Return Contribution	
Information Technology	1.7%
Consumer Discretionary	0.3%
Financials	0.5%
Industrials	1.4%
Consumer Staples	0.0%
Energy	0.4%
Materials	0.0%
Health Care	0.5%
Real Estate	0.6%
Communication Services	-1.0%
Utilities	0.1%

Source: Russell, Bloomberg



Source: MSCI, Russell, S&P, Bloomberg



Source: MSCI, Bloomberg. QTD top country contributors to index return



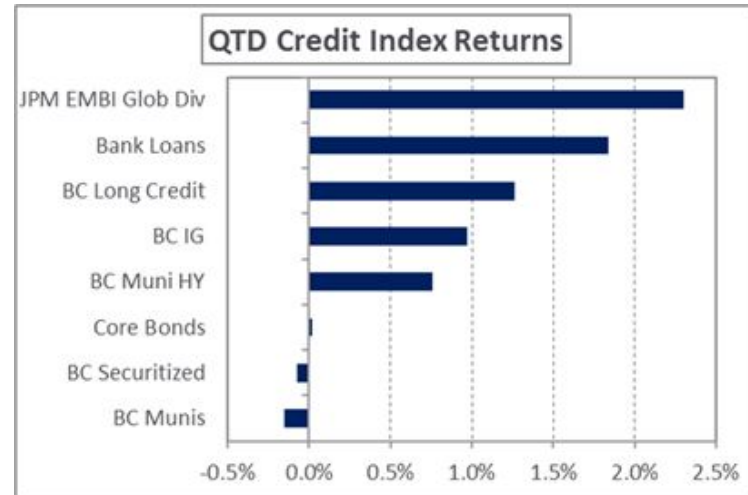
CREDIT PERFORMANCE OVERVIEW

Q3 Credit Market Summary

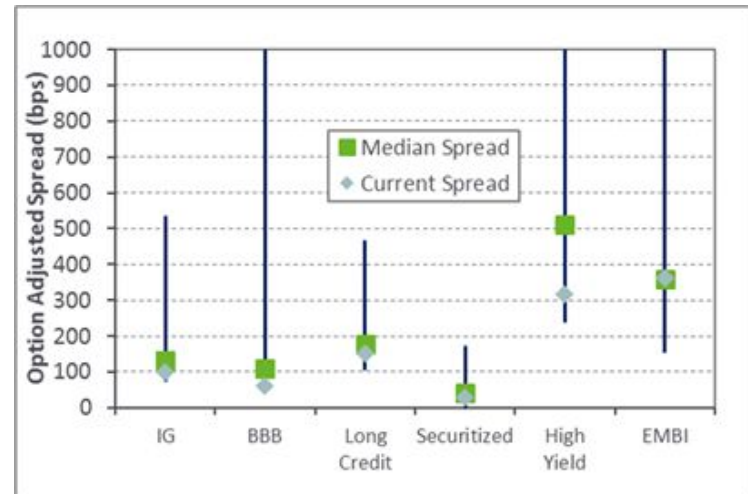
- **Credit spreads broadly declined and remain below medians in most areas of the credit market**
- **Dollar-denominated emerging market debt increased by 2.3% as spreads tightened**

Credit Spread (Basis Points)	06/30/18	09/30/18	Δ
BC IG Credit	116	100	-16
BC Long Credit	174	153	-21
BC Securitized	28	28	0
BC High Yield	363	316	-47
Muni HY	253	198	-55
JPM EMBI	388	362	-26
Bank Loans - Libor	303	281	-22

Source: Barclays, Merrill Lynch, JPM, Bloomberg, NEPC



Source: Barclays, JPM, S&P, Bloomberg



Source: Barclays, JPM, S&P, Bloomberg; as of 01/31/2000



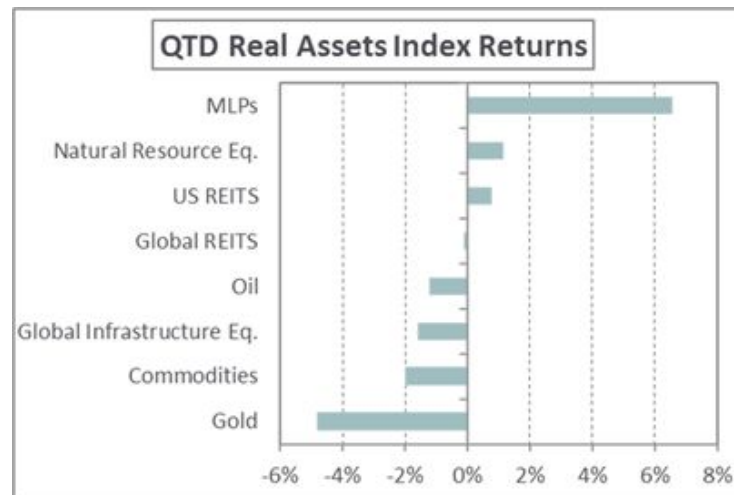
REAL ASSETS PERFORMANCE OVERVIEW

Q3 Real Assets Market Summary

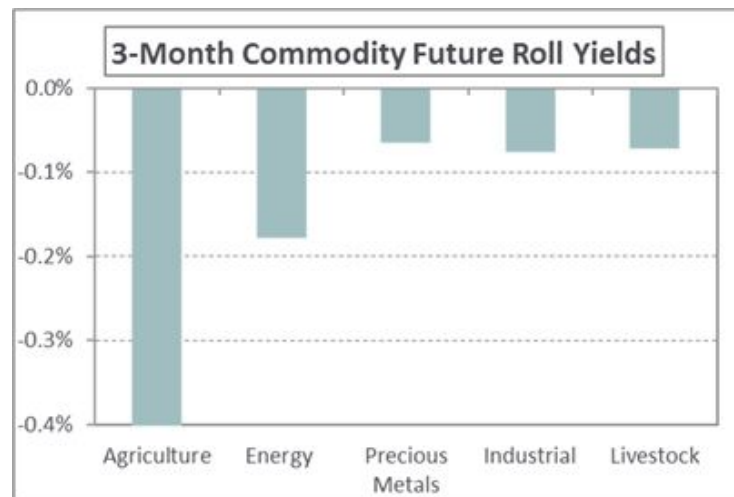
- **Oil declined 1.2% for the quarter, but is up 41.8% for the year**
- **Agricultural commodities declined substantially due to robust supply and trade war-related concerns**
- **MLP's increased 6.6%, supported by rising commodity prices and ongoing industry simplification**

Real Asset Yields	06/30/18	09/30/18
MLPs	8.1%	8.0%
Core Real Estate	4.2%	4.4%
US REITs	4.4%	4.2%
Global REITs	3.7%	3.7%
Global Infrastructure Equities	4.4%	4.5%
Natural Resource Equities	3.5%	3.5%
US 10-Yr Breakeven Inflation	2.1%	2.1%
Commodity Index Roll Yield	0.1%	-1.2%

Source: NCREIF, Alerian, NAREIT, S&P, Bloomberg



Source: S&P, NAREIT, Alerian, Bloomberg



Source: Bloomberg, NEPC Calculated as of 09/28/2018



THE END OF FEDERAL RESERVE GRADUALISM

Key Market Themes Change

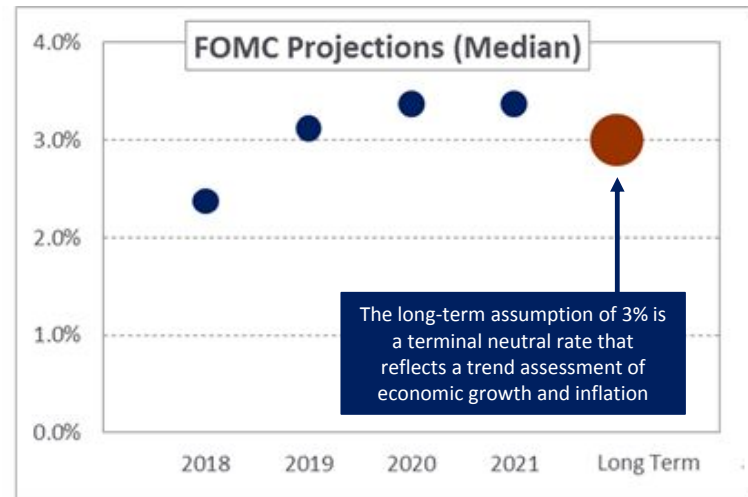
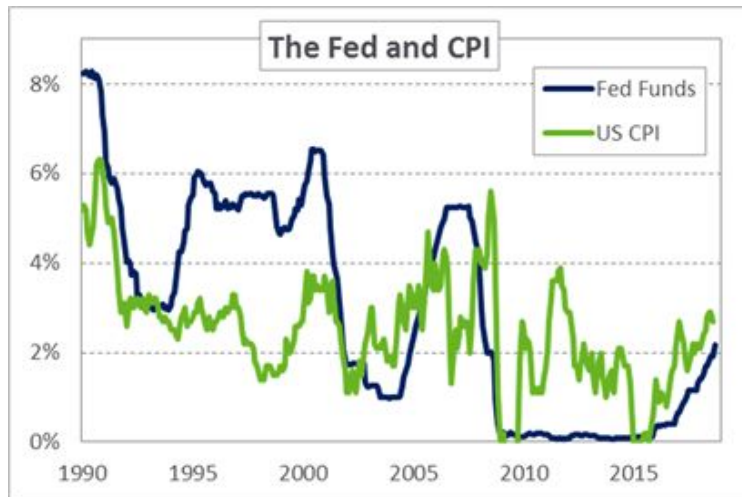
The end of Fed Gradualism: The Fed has shifted from a “lower for longer” policy to a more balanced posture of raising rates in-line with higher inflation

The Fed appears less willing to accept some inflation to repair the past deflationary impact of the 2008 financial crisis and is now looking to manage inflation closer to its target range

Based on the FOMC projections, the Fed is communicating a tightening path as their forecast for interest rate hikes moves beyond the long-term neutral rate

Markets are discounting a more muted pace of rate hikes relative to Fed projections, which increases the potential of a “Fed surprise” disrupting equity, fixed income, and currency markets

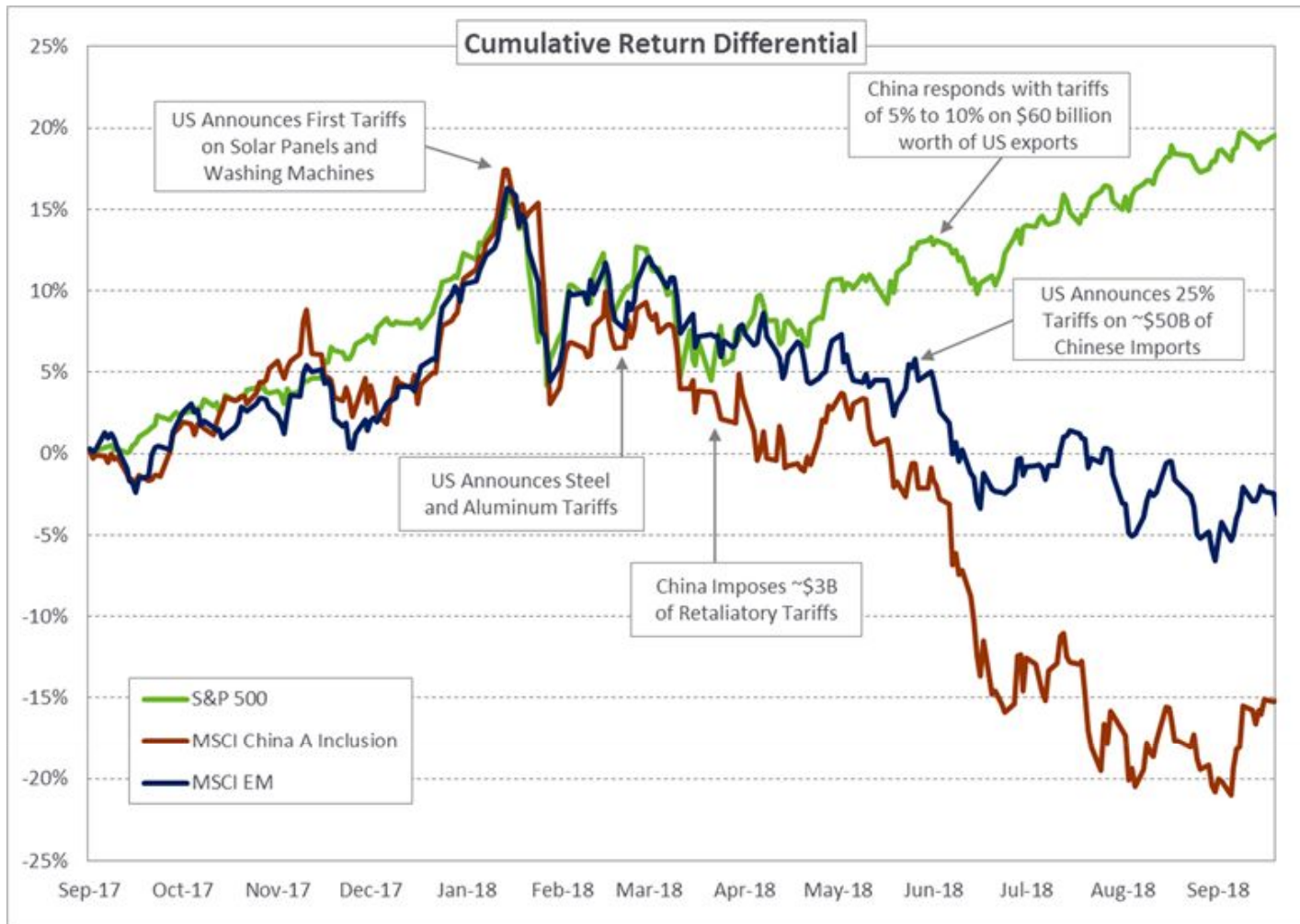
Fed is expected to be careful and data dependent when assessing the timing of interest rate increases relative to changes in inflation levels



Source: (Left) Bloomberg
Source: (Right) FOMC



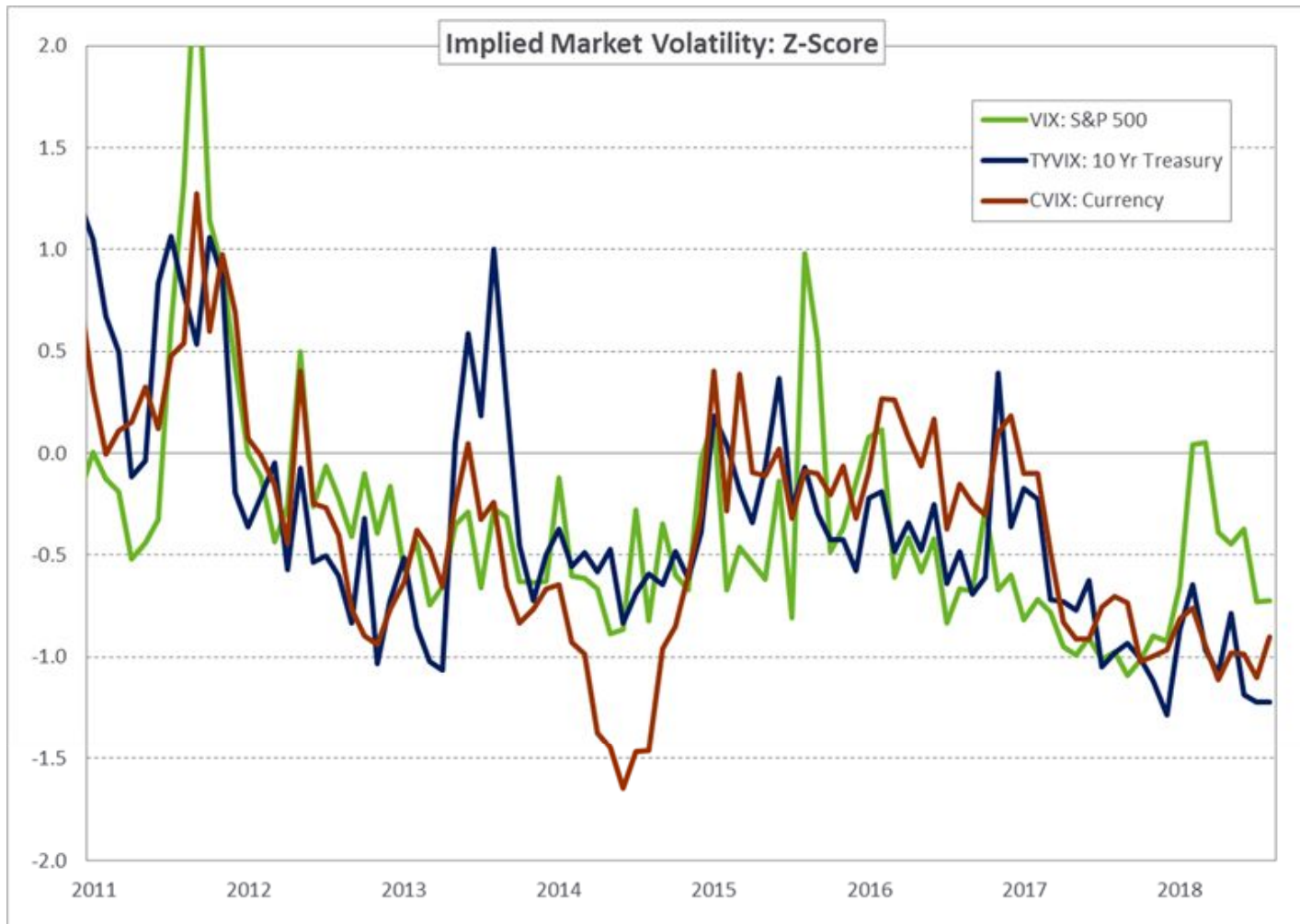
TRADE TENSIONS WEIGHED ON RETURNS



Source: S&P, MSCI, Bloomberg, NEPC



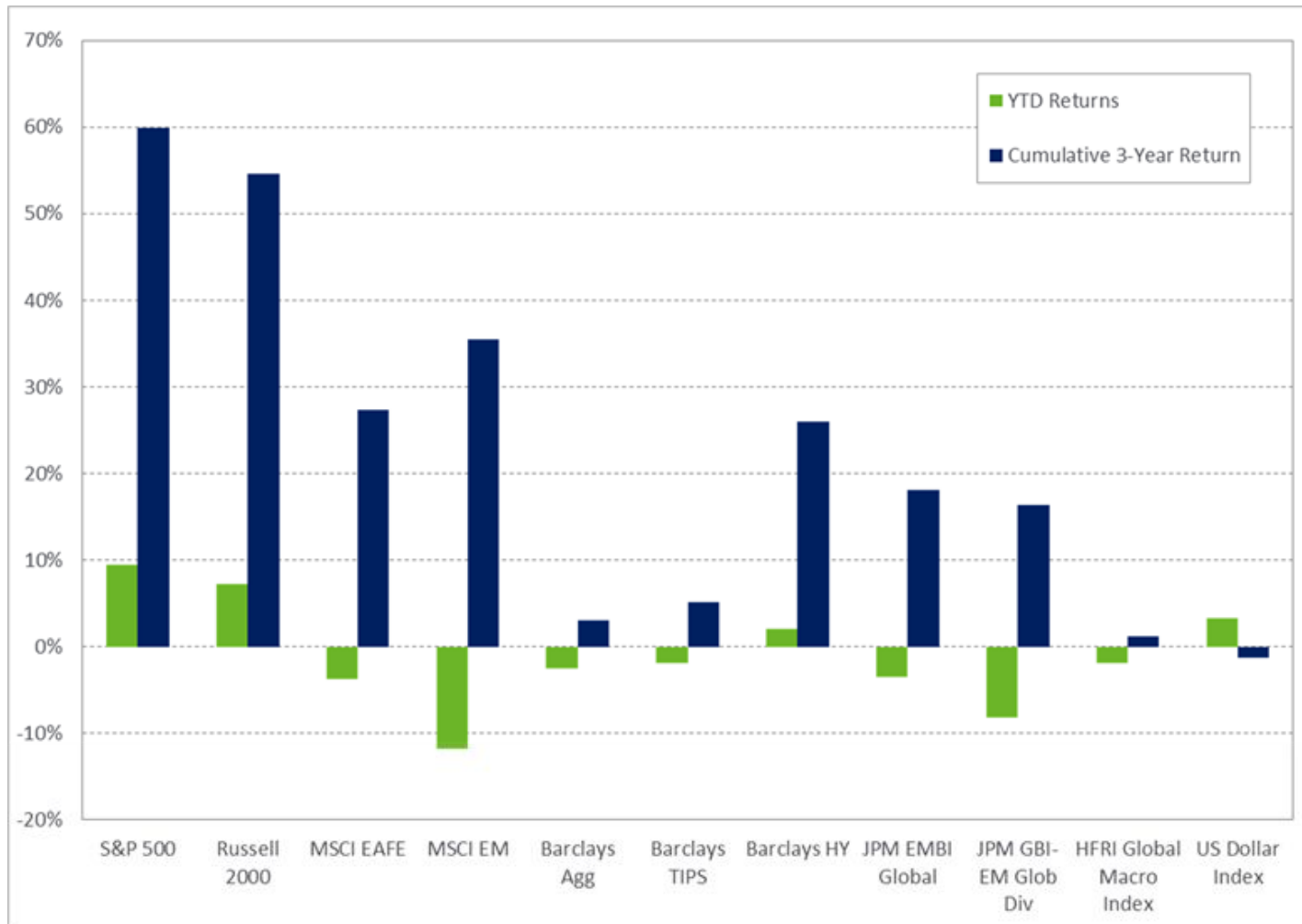
MARKET VOLATILITY IS WELL BELOW AVERAGE



Source: Bloomberg



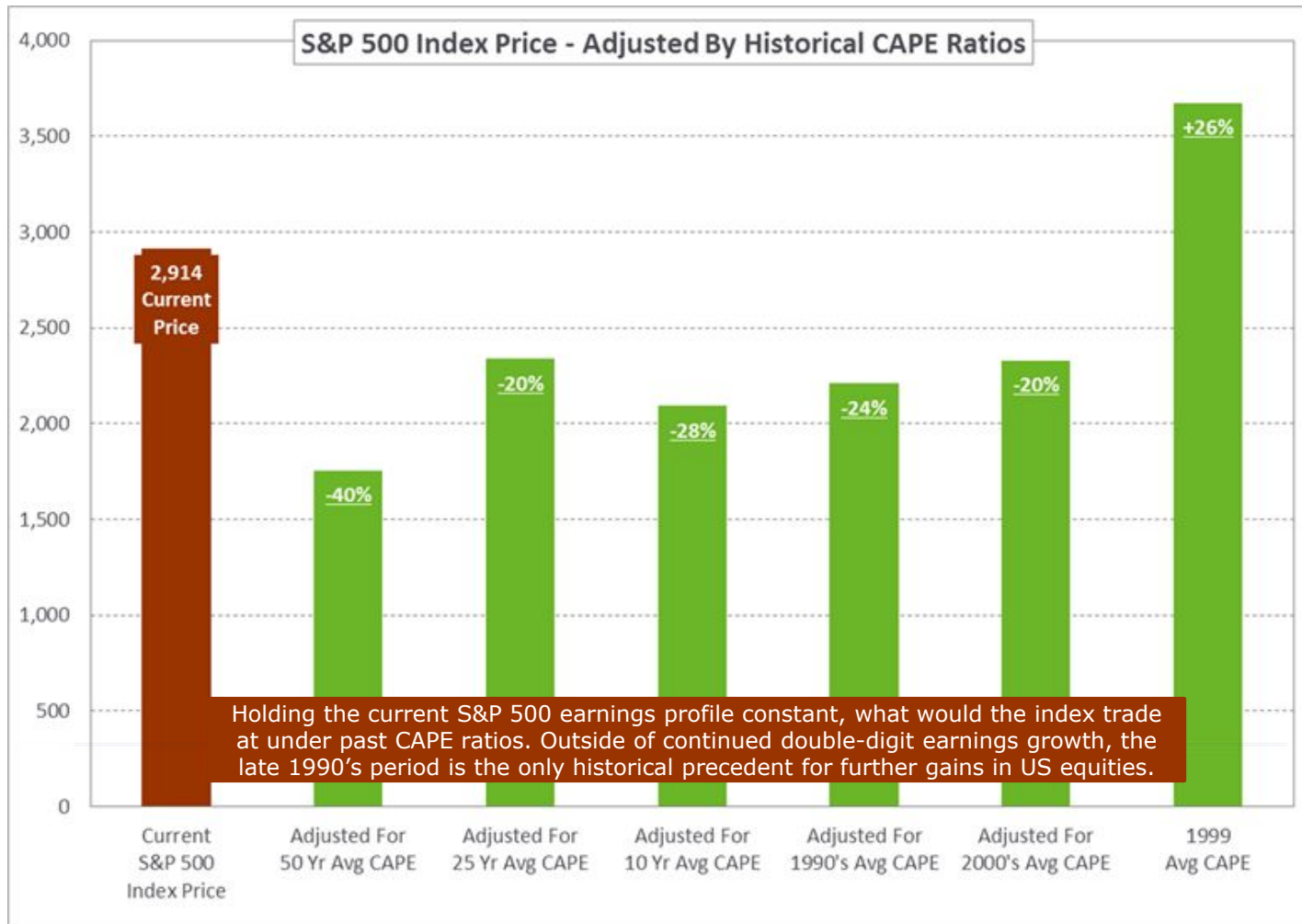
US EQUITIES ARE THE OUTLIER IN 2018



Source: Bloomberg



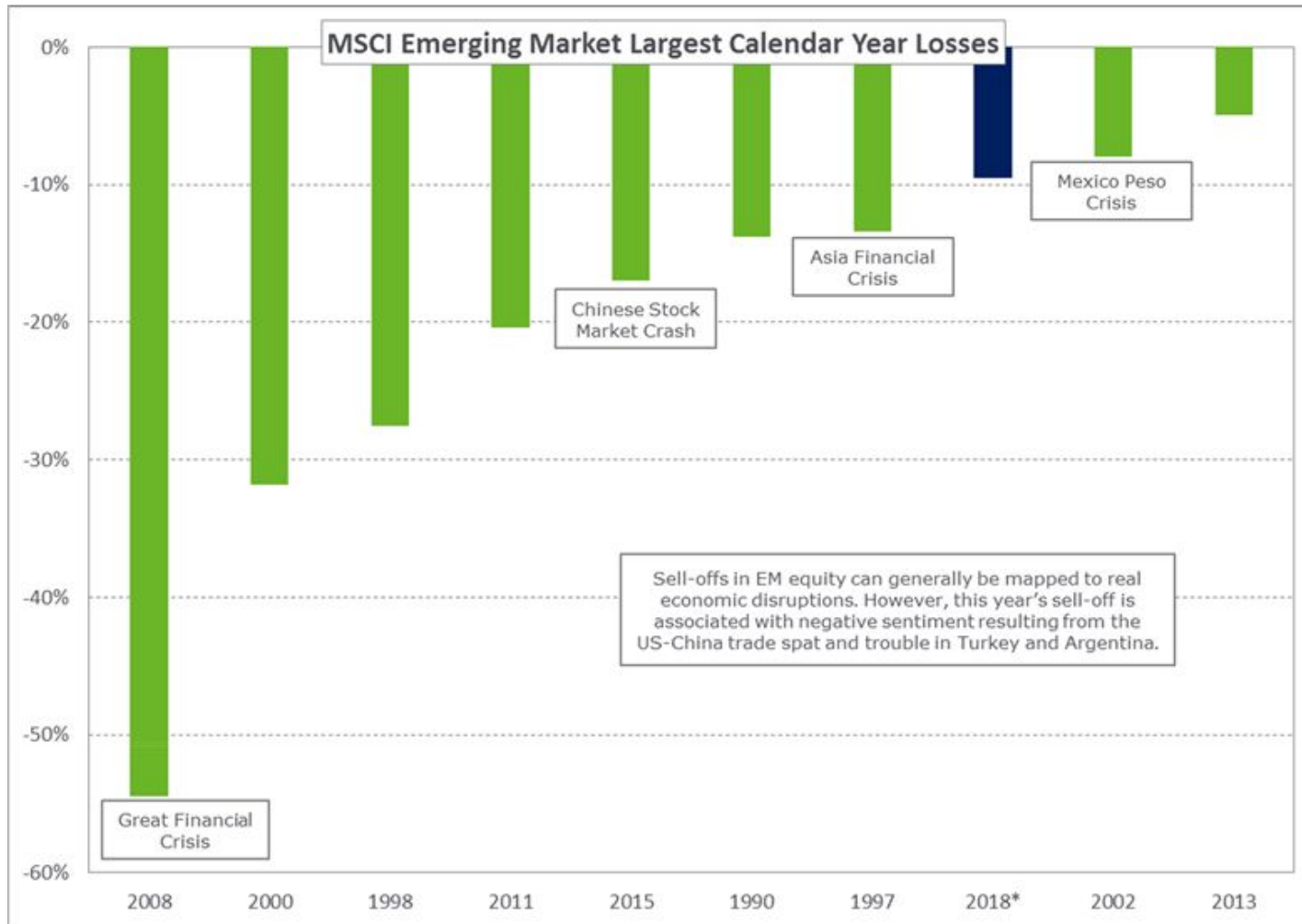
CAN VALUATIONS SUPPORT FURTHER GAINS?



Source: Bloomberg, Yale, Robert Shiller



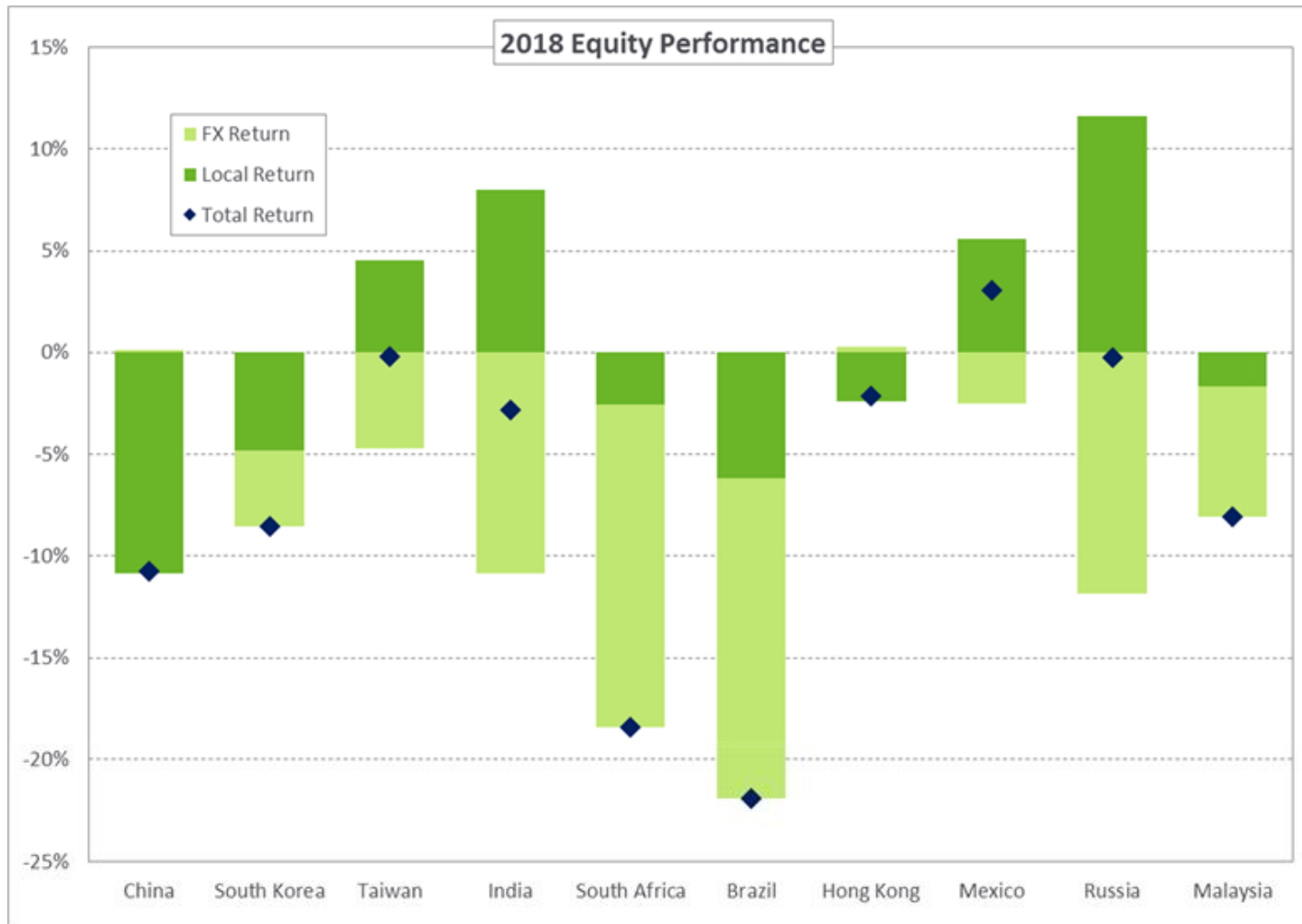
EM HAS DECLINED, BUT IT COULD BE WORSE



Data Source: MSCI, Bloomberg, NEPC
 2018 represents returns for 12/29/2017-09/30/2018



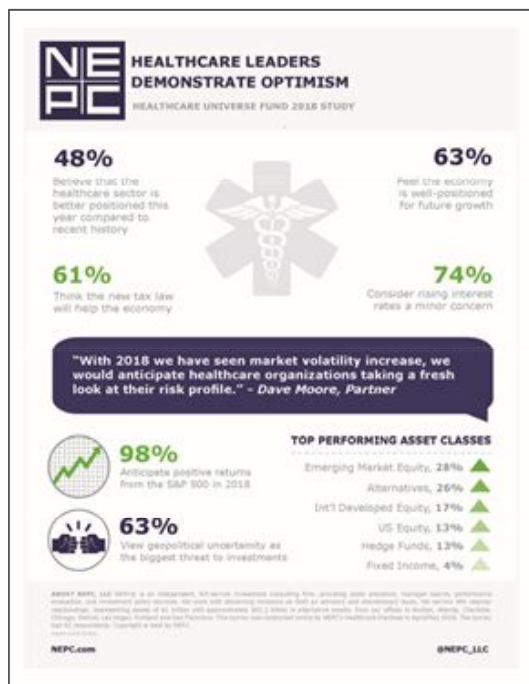
CURRENCY DETRACTED FROM TOTAL RETURNS



Source: MSCI, Bloomberg, NEPC



HIGHLIGHTS OF THIRD QUARTER HAPPENINGS AT NEPC



RECENT UPDATES

- **SAVE THE DATE!** NEPC will host our 10th annual Public Funds Workshop on January 31st and February 1st, 2019 at the Tempe Mission Palms in Tempe Arizona.
- **SAVE THE DATE!** NEPC will host our 24th Annual Investment Conference on May 7th and 8th, 2019 at the Boston Park Plaza. More details to come!

NEPC INSIGHTS

- Taking Stock: Is Technology Driving Low Inflation?
- Taking Stock: Increasing Pension Contributions and Improving Corporate Pension Funding Ratios: Now What?
- NEPC 2018 ESG Flash Poll Results and Infographic
- NEPC 2018 ESG Flash Poll – Healthcare Highlights
- 2018 Second Quarter Market Thoughts
- The Evaluation of Tax Liabilities
- Healthcare Optimistic About Economy But Wary of Volatility and Geopolitical Risks (Healthcare Operating Fund Universe Results/ Infographic)
- Taking Stock: Trouble in Turkey Creates Opportunity in Emerging Markets
- State of the Union: A Look Back on 2018 and What to Expect Moving Forward
- Opportunity Zones: Doing Good in a Tax-Advantaged Way
- Taking Stock: Globalization Backlash: US-China Tariffs are Here to Stay
- Taking Stock: Total Enterprise Management: a 360 View of Investment Strategy
- Market Chatter: Potential End Game for US-China Trade Spat: The Good, the Bad, the Ugly

WEBINAR REPLAYS

- NEPC's Second Quarter 2018 Quarterly Markets Call



To download NEPC's recent insights and webinar replays, visit: www.NEPC.com/insights

TOTAL FUND PERFORMANCE SUMMARY

NEPC, LLC

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE SUMMARY (NET)

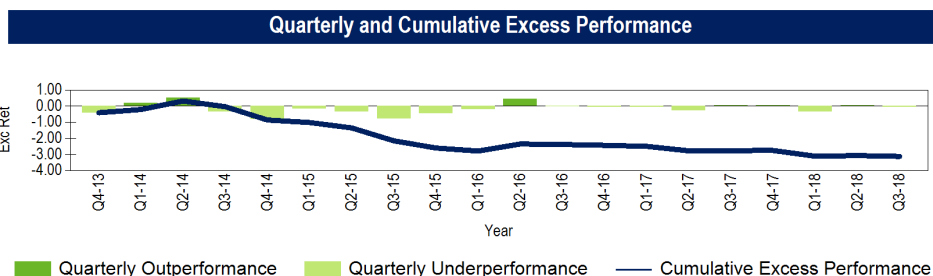
	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	Inception	Inception Date
Total Fund	\$5,681,345,338	3.5%	2	4.4%	13	8.7%	8	10.6%	8	7.8%	28	8.3%	13	8.1%	Apr-94
Policy Index		3.6%	2	4.8%	9	9.1%	7	10.9%	7	8.5%	5	8.3%	14	8.2%	Apr-94
60% MSCI ACWI (Net) / 40% FTSE WGBI		1.9%	68	1.3%	99	5.2%	94	8.7%	83	5.3%	97	6.0%	95	--	Apr-94
60% S&P 500 / 40% BBgBarc Aggregate		4.6%	1	5.6%	5	10.0%	5	10.8%	7	9.2%	2	8.9%	2	8.4%	Apr-94
InvestorForce Public DB > \$1B Net Median		2.1%		2.9%		6.5%		9.3%		7.1%		7.3%		7.4%	Apr-94

- For the five year period ending September 30, 2018, the Fund returned 7.8% trailing the policy index by 0.7% and ranking in the 28th percentile of its peers and outperforming the actuarial assumed rate of 7.5%. The Fund's volatility, as measured by standard deviation, ranked in the 80th percentile of its peers, and the risk-adjusted return, or Sharpe Ratio, ranks in the 44th percentile. This means that the Fund has earned more return per unit of volatility taken than 56% of its peers.

- For the three-year period, the Fund returned 10.6%, trailing the policy index by 0.3% and ranking in the 8th percentile of its peers. The Fund's volatility ranks in the 84th percentile of its peers over this period, with the Fund's Sharpe Ratio ranking in the 50th percentile.

- For the one-year period, the Fund returned 8.7%, underperforming the policy index by 0.4% and ranking in the 8th percentile of the InvestorForce Public Funds > \$1 Billion Universe (Net of fees).

- For the one-year period, the Fund experienced a net investment gain of \$458.2 million which includes a net investment gain of \$185.4 million in the quarter. Assets increased from \$5.26 billion one year ago to \$5.68 billion.



3 Years Ending September 30, 2018								
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	10.6%	8	5.8%	84	1.7	50	2.2	58
Policy Index	10.9%	7	5.7%	81	1.8	33	2.3	38
InvestorForce Public DB > \$1B Net Median	9.3%	--	5.0%	--	1.7	--	2.3	--

5 Years Ending September 30, 2018								
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	7.8%	28	6.0%	80	1.2	44	1.9	33
Policy Index	8.5%	5	5.8%	75	1.4	25	2.1	19
InvestorForce Public DB > \$1B Net Median	7.1%	--	5.4%	--	1.2	--	1.7	--

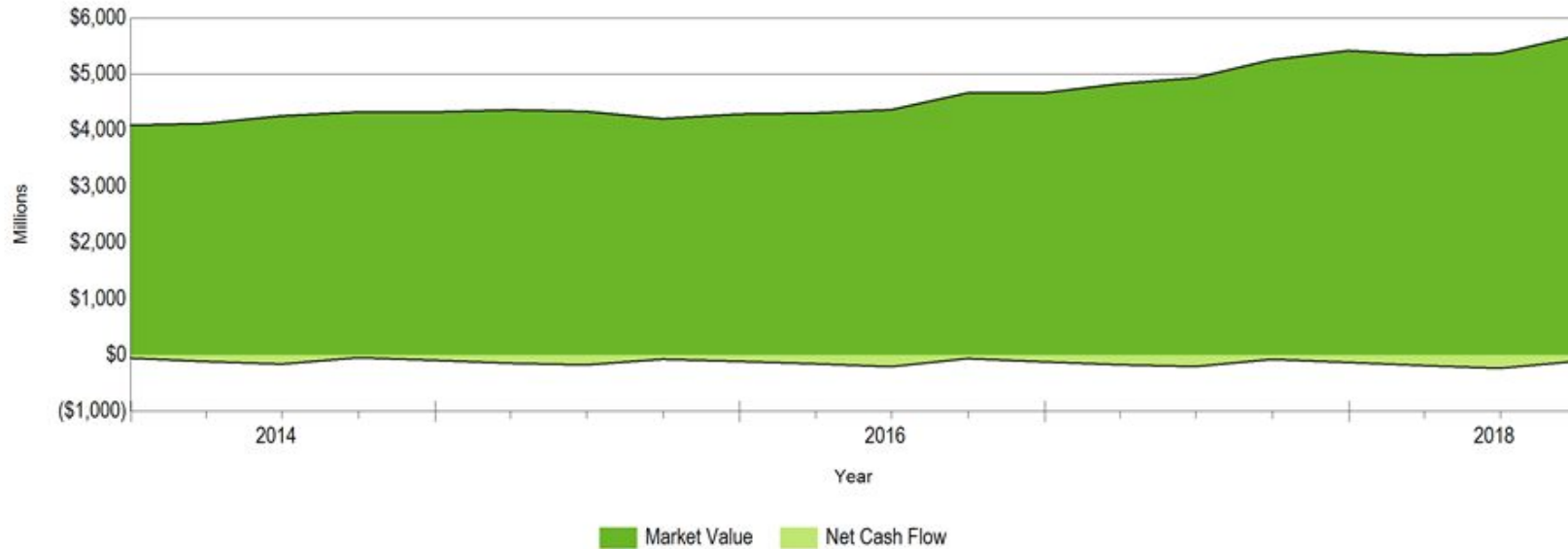
Policy Index as of January 2016: 28% Russell 3000 Index, 20% Barclays Aggregate, 15% MSCI ACWI ex U.S., 10% MSCI ACWI, 10% Russell 3000 Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index.



Ventura County Employees' Retirement Association

TOTAL FUND ASSET GROWTH SUMMARY

Market Value History
5 Years Ending September 30, 2018

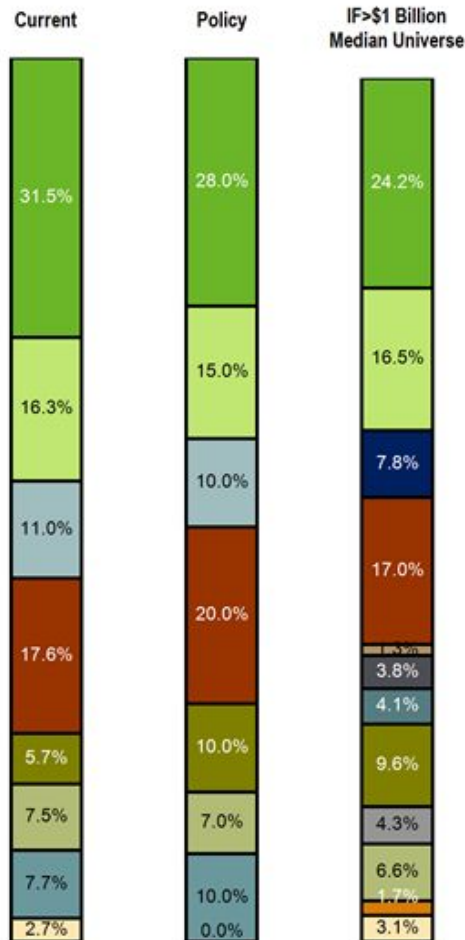


Summary of Cash Flows				
	Last Three Months	One Year	Three Years	Five Years
Beginning Market Value	\$5,370,442,517	\$5,257,900,164	\$4,208,105,148	\$3,944,521,428
Net Cash Flow	\$125,489,979	-\$34,797,706	-\$36,662,232	-\$109,724,968
Net Investment Change	\$185,412,842	\$458,242,881	\$1,509,902,422	\$1,846,548,879
Ending Market Value	\$5,681,345,338	\$5,681,345,338	\$5,681,345,338	\$5,681,345,338



Ventura County Employees' Retirement Association

TOTAL FUND ASSET ALLOCATION VS. POLICY TARGETS



Asset Allocation vs. Target							
	Current	Current	Policy	Difference*	Policy Range	Within Range	
U.S. Equity	\$1,791,876,444	31.5%	28.0%	3.5%	24.0% - 32.0%	Yes	
Non-US Equity	\$924,699,272	16.3%	15.0%	1.3%	12.0% - 18.0%	Yes	
Emerging Markets Equity	--	--	--	0.0%			
Global Equity	\$624,455,589	11.0%	10.0%	1.0%	7.0% - 13.0%	Yes	
U.S. Fixed Income	\$999,261,399	17.6%	20.0%	-2.4%	16.0% - 24.0%	Yes	
Fixed Income - Emerging	--	--	--	0.0%			
Fixed Income - Global	--	--	--	0.0%			
GTA	--	--	--	0.0%			
Private Equity	\$323,593,771	5.7%	10.0%	-4.3%	0.0% - 12.0%	Yes	
Hedge Funds	--	--	--	0.0%			
Real Estate	\$426,285,322	7.5%	7.0%	0.5%	4.0% - 10.0%	Yes	
Real Assets	\$436,743,206	7.7%	10.0%	-2.3%	5.0% - 15.0%	Yes	
Commodities/ Real Assets	--	--	--	0.0%			
Cash	\$154,430,335	2.7%	0.0%	2.7%	0.0% - 3.0%	Yes	
Total	\$5,681,345,338	100.0%	100.0%				

*Difference between Policy and Current Allocation

Cash represents assets in Parametric Overlay.

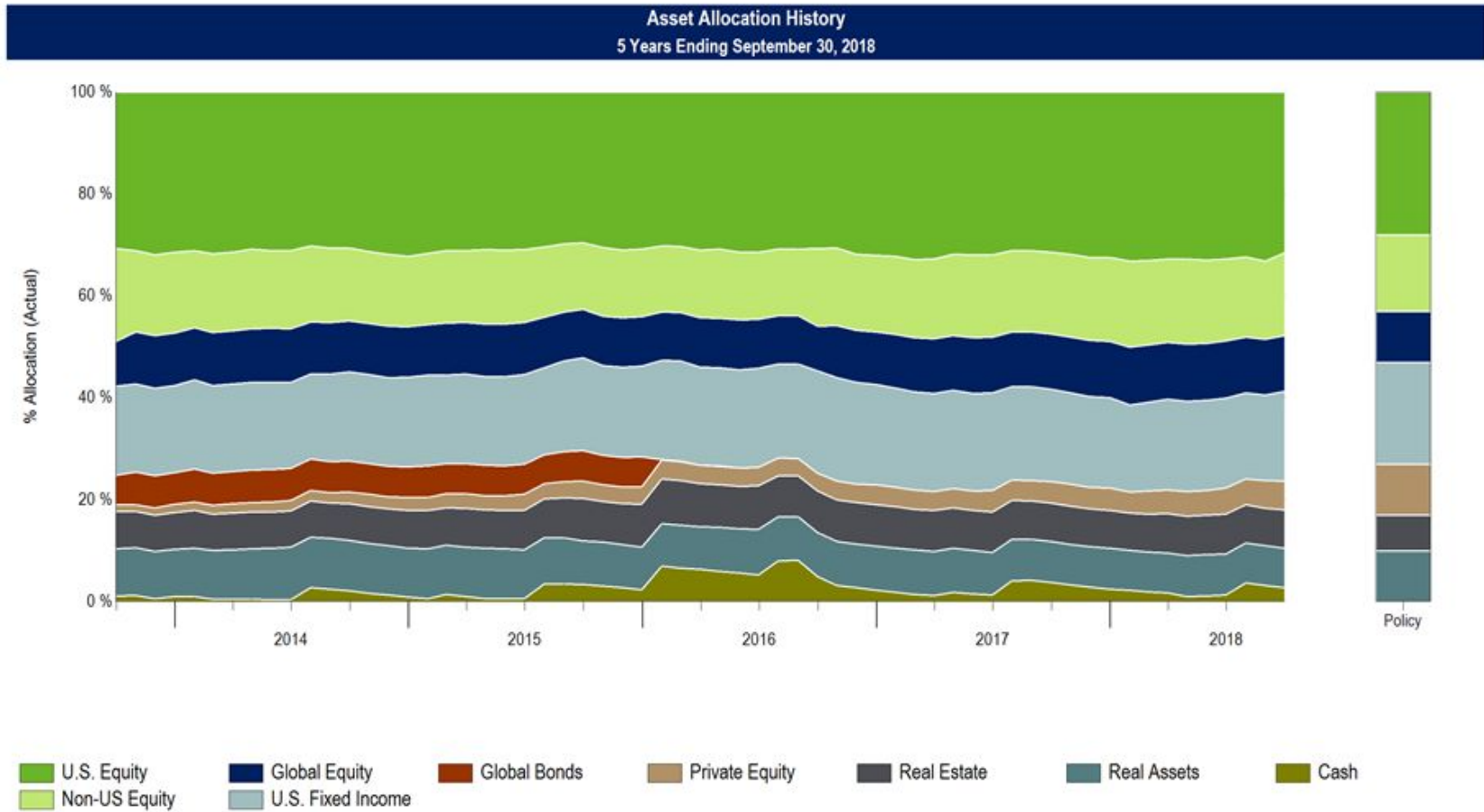
Policy Index as of January 2016: 28% Russell 3000 Index, 20% Barclays Aggregate, 15% MSCI ACWI ex U.S., 10% MSCI ACWI, 10% Russell 3000 Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index.

Asset Allocation vs. Policy Targets chart does not reflect Overlay adjusted weights.



Ventura County Employees' Retirement Association

TOTAL FUND ALLOCATION HISTORY



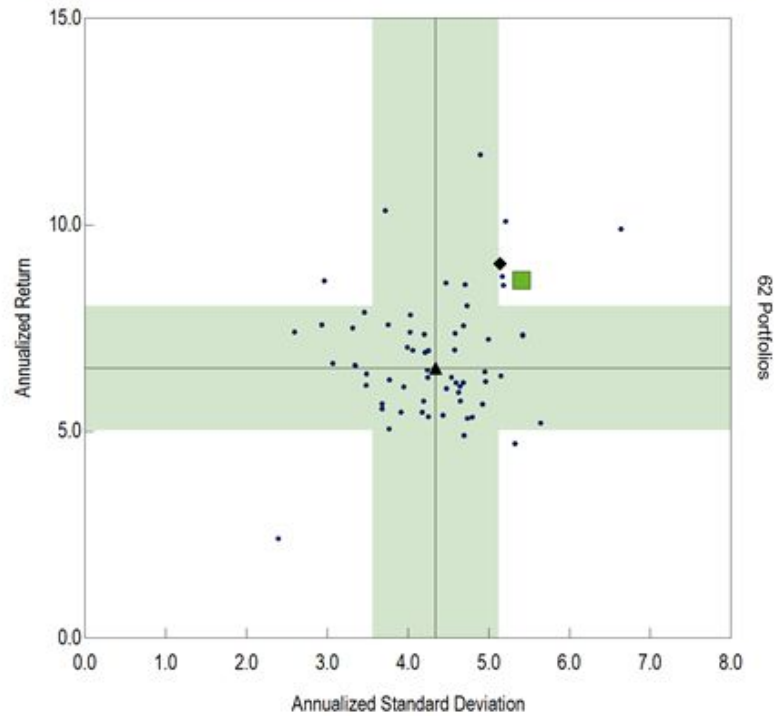
Policy Index shown is most recently approved index



Ventura County Employees' Retirement Association

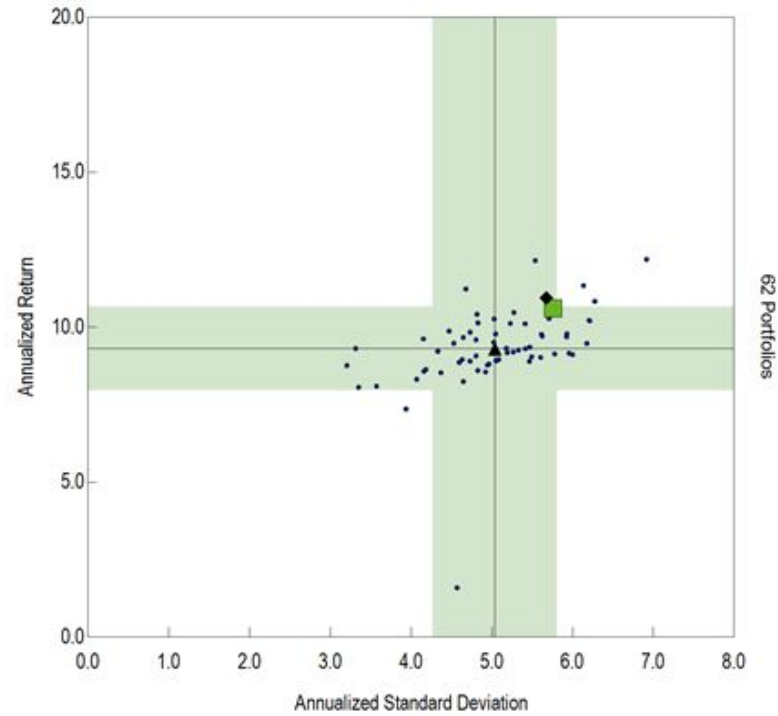
TOTAL FUND RISK/RETURN

1 Years Ending September 30, 2018



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

3 Years Ending September 30, 2018



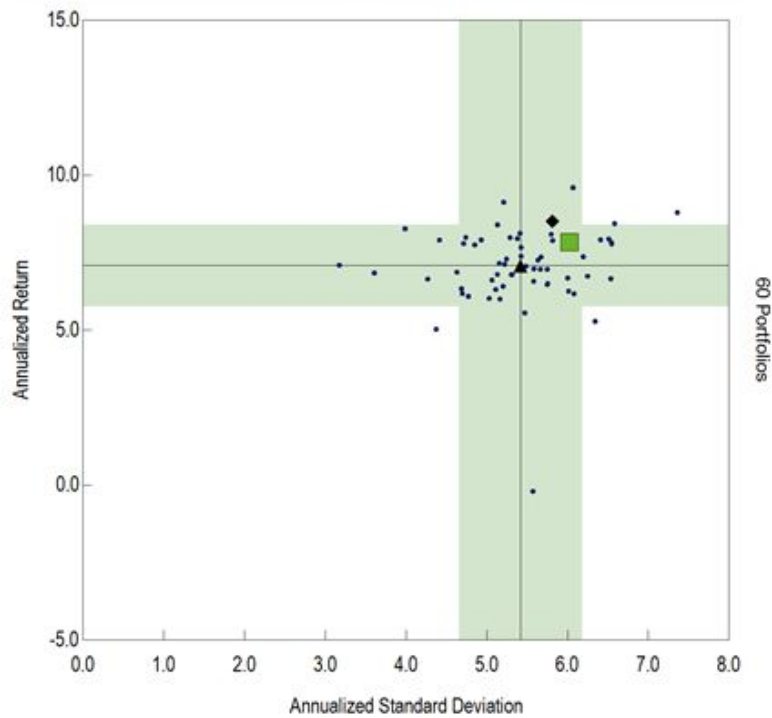
- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Net



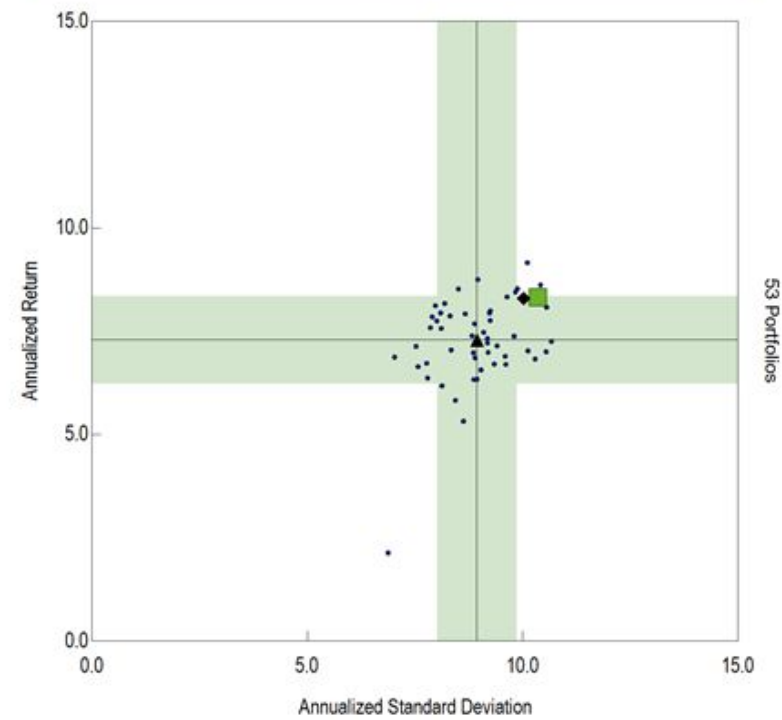
Ventura County Employees' Retirement Association

TOTAL FUND RISK/RETURN

5 Years Ending September 30, 2018



10 Years Ending September 30, 2018



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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



Ventura County Employees' Retirement Association

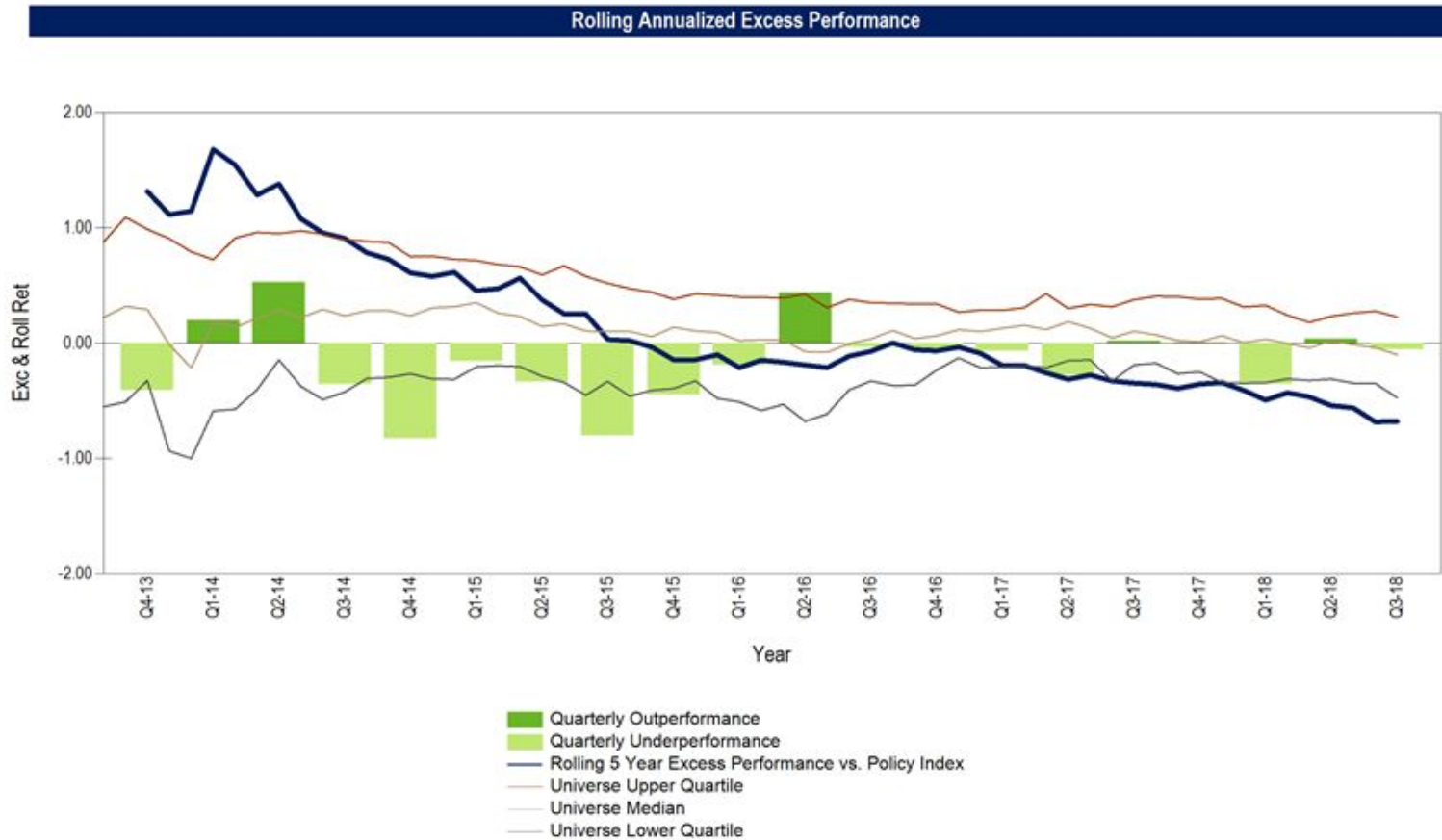
TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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



Ventura County Employees' Retirement Association

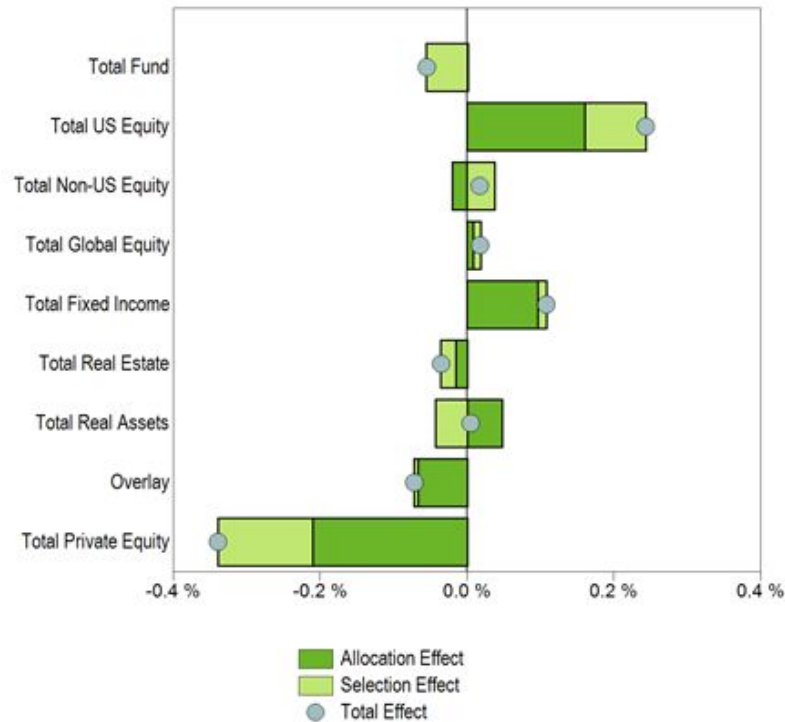
ROLLING 5 YEAR EXCESS RETURNS- NET OF FEES



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
3 Months Ending September 30, 2018



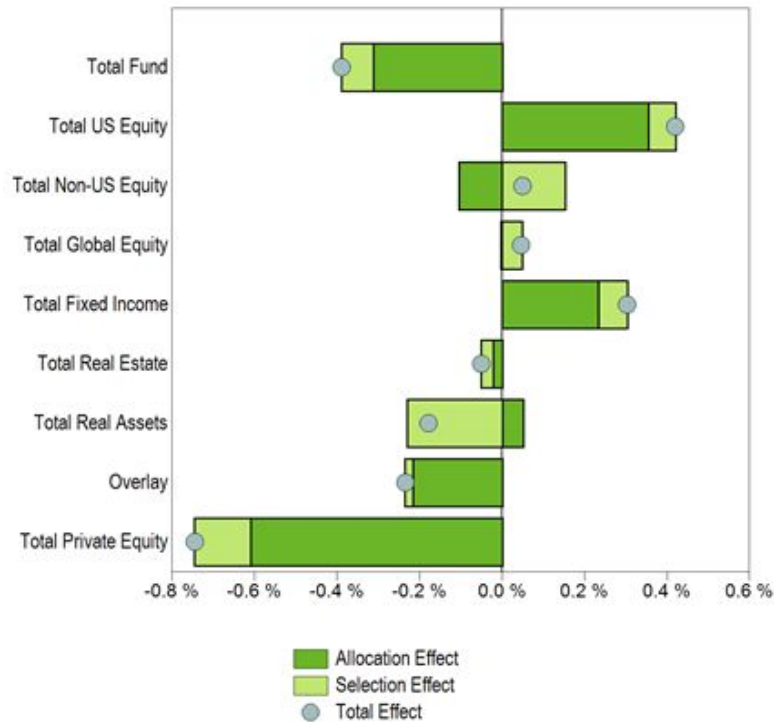
Attribution Summary						
3 Months Ending September 30, 2018						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	7.4%	7.1%	0.3%	0.1%	0.2%	0.2%
Total Non-US Equity	1.0%	0.7%	0.3%	0.0%	0.0%	0.0%
Total Global Equity	4.4%	4.3%	0.1%	0.0%	0.0%	0.0%
Total Fixed Income	0.1%	0.0%	0.1%	0.0%	0.1%	0.1%
Total Real Estate	1.6%	1.9%	-0.3%	0.0%	0.0%	0.0%
Total Real Assets	0.6%	1.2%	-0.6%	0.0%	0.0%	0.0%
Overlay	0.4%	0.5%	-0.1%	0.0%	-0.1%	-0.1%
Total Private Equity	5.1%	7.9%	-2.8%	-0.1%	-0.2%	-0.3%
Total	3.5%	3.6%	-0.1%	-0.1%	0.0%	-0.1%



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
1 Year Ending September 30, 2018



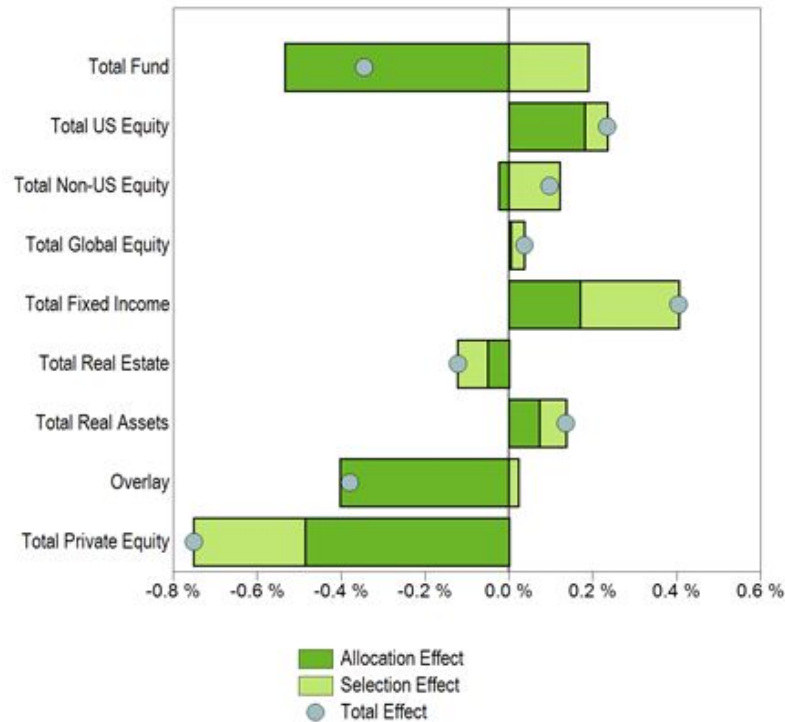
Attribution Summary						
1 Year Ending September 30, 2018						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	17.8%	17.6%	0.2%	0.1%	0.4%	0.4%
Total Non-US Equity	2.7%	1.8%	0.9%	0.2%	-0.1%	0.0%
Total Global Equity	10.2%	9.8%	0.4%	0.0%	0.0%	0.0%
Total Fixed Income	-0.9%	-1.2%	0.4%	0.1%	0.2%	0.3%
Total Real Estate	7.4%	7.7%	-0.4%	0.0%	0.0%	-0.1%
Total Real Assets	3.4%	6.4%	-3.0%	-0.2%	0.1%	-0.2%
Overlay	1.1%	1.6%	-0.5%	0.0%	-0.2%	-0.2%
Total Private Equity	18.3%	21.1%	-2.7%	-0.1%	-0.6%	-0.7%
Total	8.7%	9.1%	-0.4%	-0.1%	-0.3%	-0.4%



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
3 Years Ending September 30, 2018



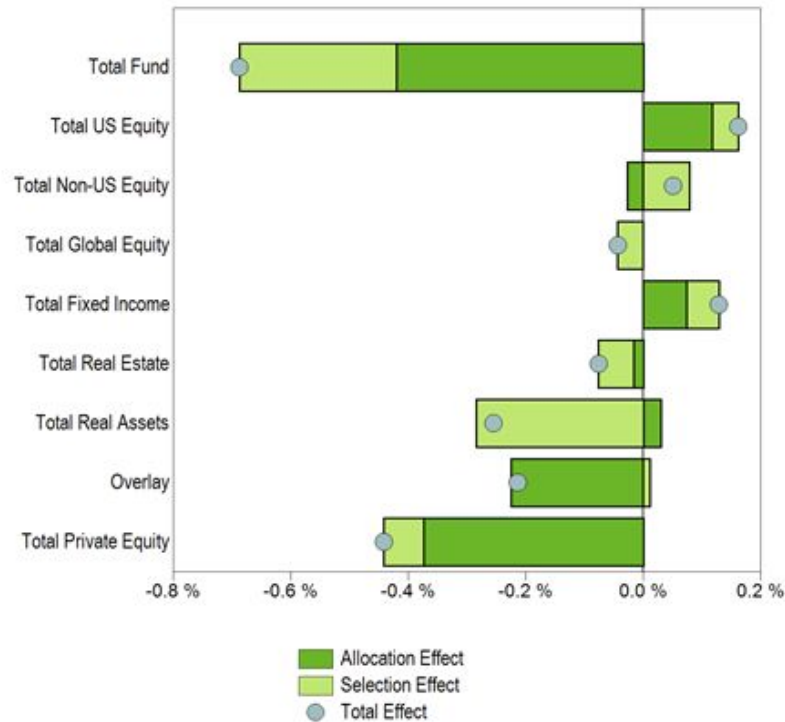
Attribution Summary						
3 Years Ending September 30, 2018						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	17.2%	17.1%	0.2%	0.1%	0.2%	0.2%
Total Non-US Equity	10.9%	10.0%	0.9%	0.1%	0.0%	0.1%
Total Global Equity	13.7%	13.4%	0.3%	0.0%	0.0%	0.0%
Total Fixed Income	2.5%	1.3%	1.2%	0.2%	0.2%	0.4%
Total Real Estate	7.0%	7.8%	-0.9%	-0.1%	-0.1%	-0.1%
Total Real Assets	6.4%	6.1%	0.3%	0.1%	0.1%	0.1%
Overlay	2.0%	0.9%	1.1%	0.0%	-0.4%	-0.4%
Total Private Equity	13.9%	20.5%	-6.7%	-0.3%	-0.5%	-0.8%
Total	10.6%	10.9%	-0.3%	0.2%	-0.5%	-0.3%



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
5 Years Ending September 30, 2018



Attribution Summary						
5 Years Ending September 30, 2018						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	13.6%	13.4%	0.1%	0.0%	0.1%	0.2%
Total Non-US Equity	4.8%	4.1%	0.6%	0.1%	0.0%	0.1%
Total Global Equity	8.3%	8.7%	-0.4%	0.0%	0.0%	0.0%
Total Fixed Income	2.1%	1.8%	0.4%	0.1%	0.1%	0.1%
Total Real Estate	9.0%	9.7%	-0.8%	-0.1%	0.0%	-0.1%
Total Real Assets	3.4%	6.7%	-3.3%	-0.3%	0.0%	-0.3%
Overlay	1.1%	0.5%	0.6%	0.0%	-0.2%	-0.2%
Total Private Equity	15.5%	16.8%	-1.3%	-0.1%	-0.4%	-0.4%
Total	7.8%	8.5%	-0.7%	-0.3%	-0.4%	-0.7%



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

1 Year Ending September 30, 2018												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	58.8%	12.1%	36	8.3%	92	2.7%	13	1.1%	46	2.1	2	1.0
MSCI ACWI	--	9.8%	70	8.6%	99	0.0%	47	0.0%	1	--	--	1.0
Total US Equity	31.5%	17.8%	23	8.8%	97	0.0%	45	0.4%	5	0.5	17	1.0
Russell 3000	--	17.6%	26	8.7%	95	0.0%	43	0.0%	1	--	--	1.0
Total Non-US Equity	16.3%	2.7%	23	9.2%	53	0.9%	19	0.8%	10	1.1	5	0.9
MSCI ACWI ex USA	--	1.8%	39	9.7%	80	0.0%	34	0.0%	1	--	--	1.0
Total Global Equity	11.0%	10.2%	34	8.6%	77	0.4%	41	0.1%	1	3.5	1	1.0
MSCI ACWI	--	9.8%	37	8.6%	77	0.0%	52	0.0%	1	--	--	1.0
Total Fixed Income	17.6%	-0.9%	62	1.7%	72	-0.4%	73	0.8%	42	0.5	54	0.7
Total Fixed Income Policy Index	--	-1.2%	94	2.3%	91	0.0%	54	0.0%	1	--	--	1.0
Total US Fixed Income	17.6%	-0.9%	70	1.7%	70	-0.4%	83	0.8%	64	0.5	72	0.7
BBgBarc US Aggregate TR	--	-1.2%	91	2.3%	92	0.0%	62	0.0%	1	--	--	1.0
Total Real Assets	7.7%	3.4%	--	7.0%	--	5.0%	--	7.1%	--	-0.4	--	-0.7
CPI + 4% (Unadjusted)	--	6.4%	--	0.7%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.5%	7.4%	67	3.1%	58
NCREIF ODCE Net	--	7.7%	57	3.2%	61
Total Private Equity	5.7%	18.3%	23	5.3%	28
Russell 3000 + 3%	--	21.1%	13	8.7%	82

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 (InvestorForce Public DB Total Eq consists of 86 portfolios), Total US Equity (InvestorForce Public DB US Eq consists of 175 portfolios), Total Non-US Equity (InvestorForce Public DB ex-US Eq consists of 118 portfolios), Total Global Equity (InvestorForce Public DB Gbl Eq consists of 43 portfolios), Total Fixed Income (InvestorForce Public DB Total Fix Inc consists of 87 portfolios), Total US Fixed Income (InvestorForce Public DB US Fix Inc consists of 105 portfolios), Total Real Estate (InvestorForce Public DB Real Estate Pub+Priv consists of 63 portfolios) and Total Private Equity (InvestorForce Public DB Private Eq consists of 41 portfolios).



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

3 Years Ending September 30, 2018												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	58.8%	14.9%	6	9.1%	64	1.9%	11	1.2%	39	1.2	1	1.0
MSCI ACWI	--	13.4%	84	9.4%	91	0.0%	73	0.0%	1	--	--	1.0
Total US Equity	31.5%	17.2%	11	9.4%	63	0.0%	18	0.4%	3	0.5	5	1.0
Russell 3000	--	17.1%	17	9.3%	53	0.0%	21	0.0%	1	--	--	1.0
Total Non-US Equity	16.3%	10.9%	23	10.4%	45	1.3%	27	1.1%	8	0.8	6	1.0
MSCI ACWI ex USA	--	10.0%	53	10.9%	77	0.0%	62	0.0%	1	--	--	1.0
Total Global Equity	11.0%	13.7%	6	9.3%	70	0.5%	62	0.6%	1	0.5	6	1.0
MSCI ACWI	--	13.4%	15	9.4%	71	0.0%	81	0.0%	1	--	--	1.0
Total Fixed Income	17.6%	2.5%	57	2.5%	49	1.3%	47	1.5%	57	0.8	44	0.8
Total Fixed Income Policy Index	--	1.3%	70	2.7%	63	0.0%	84	0.0%	1	--	--	1.0
Total US Fixed Income	17.6%	2.5%	31	2.5%	69	1.3%	30	1.5%	75	0.8	40	0.8
BBgBarc US Aggregate TR	--	1.3%	56	2.7%	75	0.0%	84	0.0%	1	--	--	1.0
Total Real Assets	7.7%	6.4%	--	7.8%	--	-6.6%	--	7.6%	--	0.0	--	2.3
CPI + 4% (Unadjusted)	--	6.1%	--	0.8%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.5%	7.0%	89	2.9%	40
NCREIF ODCE Net	--	7.8%	65	3.3%	45
Total Private Equity	5.7%	13.9%	26	5.2%	37
Russell 3000 + 3%	--	20.5%	7	9.3%	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 (InvestorForce Public DB Total Eq consists of 80 portfolios), Total US Equity (InvestorForce Public DB US Eq consists of 164 portfolios), Total Non-US Equity (InvestorForce Public DB ex-US Eq consists of 109 portfolios), Total Global Equity (InvestorForce Public DB Gbl Eq consists of 37 portfolios), Total Fixed Income (InvestorForce Public DB Total Fix Inc consists of 81 portfolios), Total US Fixed Income (InvestorForce Public DB US Fix Inc consists of 104 portfolios), Total Real Estate (InvestorForce Public DB Real Estate Pub+Priv consists of 62 portfolios) and Total Private Equity (InvestorForce Public DB Private Eq consists of 40 portfolios).



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

5 Years Ending September 30, 2018												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	58.8%	10.2%	41	9.5%	63	1.8%	10	1.2%	36	1.3	1	1.0
MSCI ACWI	--	8.7%	78	9.8%	90	0.0%	66	0.0%	1	--	--	1.0
Total US Equity	31.5%	13.6%	6	9.7%	55	0.1%	14	0.3%	1	0.5	1	1.0
Russell 3000	--	13.4%	12	9.7%	48	0.0%	17	0.0%	1	--	--	1.0
Total Non-US Equity	16.3%	4.8%	42	10.6%	38	0.8%	38	1.1%	6	0.6	13	0.9
MSCI ACWI ex USA	--	4.1%	67	11.2%	76	0.0%	62	0.0%	1	--	--	1.0
Total Global Equity	11.0%	8.3%	64	9.9%	61	-0.5%	96	1.0%	1	-0.4	99	1.0
MSCI ACWI	--	8.7%	61	9.8%	53	0.0%	84	0.0%	1	--	--	1.0
Total Fixed Income	17.6%	2.1%	60	2.2%	28	0.8%	40	1.6%	55	0.2	50	0.7
Total Fixed Income Policy Index	--	1.8%	78	2.6%	46	0.0%	83	0.0%	1	--	--	1.0
Total US Fixed Income	17.6%	2.4%	48	2.2%	45	0.9%	25	1.8%	85	0.2	63	0.6
BBgBarc US Aggregate TR	--	2.2%	53	2.7%	74	0.0%	82	0.0%	1	--	--	1.0
Total Real Assets	7.7%	3.4%	--	8.7%	--	-5.0%	--	8.4%	--	-0.4	--	1.3
CPI + 4% (Unadjusted)	--	6.7%	--	1.6%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.5%	9.0%	82	3.8%	47
NCREIF ODCE Net	--	9.7%	65	4.1%	52
Total Private Equity	5.7%	15.5%	26	6.4%	54
Russell 3000 + 3%	--	16.8%	17	9.7%	86

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 (InvestorForce Public DB Total Eq consists of 61 portfolios), Total US Equity (InvestorForce Public DB US Eq consists of 140 portfolios), Total Non-US Equity (InvestorForce Public DB ex-US Eq consists of 99 portfolios), Total Global Equity (InvestorForce Public DB Gbl Eq consists of 23 portfolios), Total Fixed Income (InvestorForce Public DB Total Fix Inc consists of 68 portfolios), Total US Fixed Income (InvestorForce Public DB US Fix Inc consists of 93 portfolios), Total Real Estate (InvestorForce Public DB Real Estate Pub+Priv consists of 55 portfolios) and Total Private Equity (InvestorForce Public DB Private Eq consists of 36 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
Total Fund	5,681,345,338	100.0	100.0	3.5	2	4.4	13	8.7	8	10.6	8	7.8	28	8.3	13	8.1	Apr-94
Policy Index				3.6	2	4.8	9	9.1	7	10.9	7	8.5	5	8.3	14	8.2	Apr-94
Over/Under				-0.1		-0.4		-0.4		-0.3		-0.7		0.0		-0.1	
60% MSCI ACWI (Net) / 40% FTSE WGBI				1.9	68	1.3	99	5.2	94	8.7	83	5.3	97	6.0	95	--	Apr-94
60% S&P 500 / 40% BBgBarc Aggregate				4.6	1	5.6	5	10.0	5	10.8	7	9.2	2	8.9	2	8.4	Apr-94
InvestorForce Public DB > \$1B Net Median				2.1		2.9		6.5		9.3		7.1		7.3		7.4	Apr-94
Total Fund ex Parametric*	5,635,279,979	99.2	--	3.4	--	4.3	--	8.6	--	10.5	--	7.8	--	8.2	--	8.1	Apr-94
Total Fund ex Private Equity	5,357,751,568	94.3	--	3.4	2	3.9	25	8.2	15	10.4	12	7.6	37	--	--	9.1	Jan-12
Policy Index				3.6	2	4.8	9	9.1	7	10.9	7	8.5	5	8.3	14	9.8	Jan-12
Over/Under				-0.2		-0.9		-0.9		-0.5		-0.9				-0.7	
InvestorForce Public DB > \$1B Net Median				2.1		2.9		6.5		9.3		7.1		7.3		8.7	Jan-12
Total US Equity	1,791,876,444	31.5	28.0	7.4	6	10.5	32	17.8	23	17.2	11	13.6	6	12.2	12	9.6	Dec-93
Russell 3000				7.1	12	10.6	32	17.6	26	17.1	17	13.4	12	12.0	23	9.9	Dec-93
Over/Under				0.3		-0.1		0.2		0.1		0.2		0.2		-0.3	
InvestorForce Public DB US Eq Net Median				6.6		9.8		16.7		16.4		12.8		11.6		9.6	Dec-93
Western U.S. Index Plus	218,737,707	3.9		8.0	19	10.4	39	18.0	34	18.1	21	14.5	13	12.7	27	6.5	May-07
S&P 500				7.7	23	10.6	39	17.9	34	17.3	28	13.9	17	12.0	42	8.1	May-07
Over/Under				0.3		-0.2		0.1		0.8		0.6		0.7		-1.6	
eV All US Equity Net Median				5.6		8.4		14.6		15.1		11.6		11.5		8.0	May-07
Blackrock Russell 1000 Index	1,505,409,046	26.5		7.4	34	10.5	36	17.8	36	--	--	--	--	--	--	17.4	May-17
Russell 1000				7.4	34	10.5	36	17.8	37	17.1	27	13.7	31	12.1	34	17.4	May-17
Over/Under				0.0		0.0		0.0								0.0	
eV US Large Cap Equity Net Median				6.7		8.3		15.3		15.1		12.2		11.2		15.4	May-17
Blackrock Russell 2500 Index	67,729,691	1.2		4.7	51	10.5	46	16.3	45	--	--	--	--	--	--	16.0	May-17
Russell 2500				4.7	51	10.4	46	16.2	46	16.1	38	11.4	37	12.0	42	16.0	May-17
Over/Under				0.0		0.1		0.1								0.0	
eV US Small-Mid Cap Equity Net Median				4.7		9.0		14.9		14.8		10.6		11.7		14.5	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: Currently, 28% Russell 3000 Index, 20% Barclays Aggregate, 15% MSCI ACWI ex U.S., 10% MSCI ACWI, 10% Russell 3000 Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index.

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
Total Non-US Equity	924,699,272	16.3	15.0	1.0	23	-2.2	22	2.7	23	10.9	23	4.8	42	5.8	46	6.5	Mar-94
MSCI ACWI ex USA				0.7	33	-3.1	42	1.8	39	10.0	53	4.1	67	5.2	71	5.3	Mar-94
Over/Under				0.3		0.9		0.9		0.9		0.7		0.6		1.2	
MSCI EAFE				1.4	12	-1.4	15	2.7	22	9.2	79	4.4	57	5.4	65	4.9	Mar-94
MSCI ACWI ex USA NR LCL				1.5	7	0.3	5	4.5	9	10.0	53	7.7	1	6.7	19	--	Mar-94
MSCI EAFE NR LCL				2.4	5	1.4	2	5.1	5	9.4	75	7.9	1	6.7	20	5.0	Mar-94
InvestorForce Public DB ex-US Eq Net Median				0.3		-3.3		1.3		10.0		4.5		5.7		5.8	Mar-94
BlackRock ACWI ex-U.S. Index	474,689,679	8.4		0.4	50	-3.1	65	2.0	63	10.4	43	4.6	65	5.7	70	2.8	Mar-07
MSCI ACWI ex USA IMI				0.4	50	-3.3	74	1.8	64	10.1	46	4.4	69	5.6	70	2.6	Mar-07
Over/Under				0.0		0.2		0.2		0.3		0.2		0.1		0.2	
MSCI ACWI ex USA NR LCL				1.5	21	0.3	23	4.5	33	10.0	47	7.7	18	6.7	51	3.5	Mar-07
eV ACWI ex-US All Cap Equity Net Median				0.4		-2.2		2.6		9.8		5.9		6.8		3.7	Mar-07
Sprucegrove	230,075,924	4.0		0.8	37	-3.0	62	2.7	50	12.2	30	5.0	60	6.5	55	7.6	Mar-02
MSCI ACWI ex USA				0.7	40	-3.1	66	1.8	64	10.0	47	4.1	73	5.2	75	6.6	Mar-02
Over/Under				0.1		0.1		0.9		2.2		0.9		1.3		1.0	
MSCI EAFE				1.4	22	-1.4	38	2.7	50	9.2	65	4.4	69	5.4	71	6.1	Mar-02
MSCI ACWI ex USA NR LCL				1.5	21	0.3	23	4.5	33	10.0	47	7.7	18	6.7	51	5.5	Mar-02
MSCI EAFE NR LCL				2.4	10	1.4	17	5.1	28	9.4	60	7.9	17	6.7	51	4.7	Mar-02
eV ACWI ex-US All Cap Equity Net Median				0.4		-2.2		2.6		9.8		5.9		6.8		7.3	Mar-02
Hexavest	91,686,105	1.6		0.9	51	-3.1	72	-0.7	82	6.5	92	3.1	89	--	--	4.2	Dec-10
MSCI EAFE				1.4	36	-1.4	55	2.7	52	9.2	47	4.4	67	5.4	70	5.2	Dec-10
Over/Under				-0.5		-1.7		-3.4		-2.7		-1.3		--		-1.0	
MSCI EAFE NR LCL				2.4	16	1.4	23	5.1	29	9.4	44	7.9	11	6.7	38	7.8	Dec-10
eV EAFE All Cap Equity Net Median				0.9		-0.7		3.2		9.1		5.6		6.2		6.0	Dec-10
Walter Scott	128,247,564	2.3		3.2	6	2.7	10	7.8	10	13.4	21	6.1	44	--	--	6.3	Dec-10
MSCI ACWI ex USA				0.7	40	-3.1	66	1.8	64	10.0	47	4.1	73	5.2	75	4.0	Dec-10
Over/Under				2.5		5.8		6.0		3.4		2.0		--		2.3	
MSCI ACWI ex USA NR LCL				1.5	21	0.3	23	4.5	33	10.0	47	7.7	18	6.7	51	6.9	Dec-10
MSCI EAFE				1.4	22	-1.4	38	2.7	50	9.2	65	4.4	69	5.4	71	5.2	Dec-10
eV ACWI ex-US All Cap Equity Net Median				0.4		-2.2		2.6		9.8		5.9		6.8		6.0	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
Total Global Equity	624,455,589	11.0	10.0	4.4	12	4.2	60	10.2	34	13.7	6	8.3	64	7.3	17	6.4	May-05
MSCI ACWI				4.3	22	3.8	66	9.8	37	13.4	15	8.7	61	8.2	9	7.2	May-05
Over/Under				0.1		0.4		0.4		0.3		-0.4		-0.9		-0.8	
InvestorForce Public DB Gbl Eq Net Median				4.2		4.3		9.0		12.3		9.2		5.4		5.9	May-05
BlackRock MSCI ACWI Equity Index	624,455,589	11.0		4.4	36	4.2	45	10.2	42	13.9	31	9.1	44	--	--	11.2	Aug-12
MSCI ACWI				4.3	38	3.8	48	9.8	45	13.4	37	8.7	51	8.2	59	10.8	Aug-12
Over/Under				0.1		0.4		0.4		0.5		0.4				0.4	
eV All Global Equity Net Median				3.6		3.6		9.0		12.4		8.7		8.6		11.2	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
Total Private Equity	323,593,771	5.7	10.0	5.1	27	14.8	25	18.3	23	13.9	26	15.5	26	--	--	14.9	Jan-12
Russell 3000 + 3%				7.9	3	13.0	44	21.1	13	20.5	7	16.8	17	15.3	1	19.0	Jan-12
Over/Under				-2.8		1.8		-2.8		-6.6		-1.3				-4.1	
Cambridge Associates Global All PE (Qtr Lag)				4.4	39	12.7	48	17.3	32	11.7	54	13.2	50	9.6	56	13.2	Jan-12
InvestorForce Public DB Private Eq Net Median				3.9		12.3		15.7		12.4		13.1		10.0		13.3	Jan-12
Adams Street Global Fund Series	158,857,692	2.8		4.8	--	14.6	--	19.7	--	12.6	--	13.7	--	--	--	13.5	Jan-12
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	19.0	Jan-12
Over/Under				-3.1		1.6		-1.4		-7.9		-3.1				-5.5	
Harbourvest	78,794,085	1.4		7.2	--	19.4	--	20.4	--	17.2	--	21.1	--	--	--	20.3	Aug-13
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	16.5	Aug-13
Over/Under				-0.7		6.4		-0.7		-3.3		4.3				3.8	
Pantheon Global Secondary Funds	38,465,959	0.7		5.6	--	13.9	--	16.9	--	17.2	--	15.8	--	--	--	13.5	Jan-12
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	19.0	Jan-12
Over/Under				-2.3		0.9		-4.2		-3.3		-1.0				-5.5	
Drive Capital Fund	5,207,167	0.1		3.1	--	-1.0	--	-3.9	--	--	--	--	--	--	--	-30.8	Sep-16
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	20.9	Sep-16
Over/Under				-4.8		-14.0		-25.0								-51.7	
Abbott Secondary Opportunities	12,359,251	0.2		21.3	--	21.3	--	--	--	--	--	--	--	--	--	21.3	Jan-18
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	13.0	Jan-18
Over/Under				13.4		8.3										8.3	
CVI Credit Value Fund	7,652,303	0.1		1.3	--	3.6	--	--	--	--	--	--	--	--	--	3.6	Jan-18
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	13.0	Jan-18
Over/Under				-6.6		-9.4										-9.4	
Clearlake Capital Partners V	2,432,220	0.0		13.0	--	--	--	--	--	--	--	--	--	--	--	10.3	Mar-18
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	10.9	Mar-18
Over/Under				5.1												-0.6	
Battery Ventures XII	1,623,398	0.0		-5.9	--	--	--	--	--	--	--	--	--	--	--	-5.9	Apr-18
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	12.9	Apr-18
Over/Under				-13.8												-18.8	

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
Insight Venture Partners X	5,002,174	0.1		-6.2	--	--	--	--	--	--	--	--	--	--	--	-6.2	May-18
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	12.2	May-18
Over/Under				-14.1												-18.4	
GTCR Fund XII	783,932	0.0		-38.7	--	--	--	--	--	--	--	--	--	--	--	-38.7	Jun-18
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	8.9	Jun-18
Over/Under				-46.6												-47.6	
Buenaventure One, LLC	12,415,590	0.2		0.0	--	--	--	--	--	--	--	--	--	--	--	0.0	Jul-18
Russell 3000 + 3%				7.9	--	13.0	--	21.1	--	20.5	--	16.8	--	15.3	--	7.9	Jul-18
Over/Under				-7.9												-7.9	

*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.



VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION PRIVATE EQUITY LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date ¹	Outstanding Commitment ¹	Call Ratio	Add'l Fees ²	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	\$13,348,706	\$12,014,011	53%	--	\$2,000,000	\$12,359,249	\$14,359,249	\$1,010,543	28.5%	0.15x	1.08x
Adams Street 2010 U.S. Fund	2010	5/21/2010	\$42,500,000	\$37,442,500	\$5,057,500	88%	\$15,213	\$24,284,925	\$37,219,348	\$61,484,271	\$24,026,558	14.1%	0.65x	1.64x
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	\$14,463,457	\$18,313,844	\$32,777,301	\$10,450,463	11.5%	0.65x	1.47x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	\$8,500,000	\$7,378,000	\$1,122,000	87%	\$0	\$2,030,308	\$9,687,102	\$11,717,410	\$4,339,410	11.8%	0.28x	1.59x
Adams Street 2010 Direct Fund	2010	5/21/2010	\$8,500,000	\$8,046,100	\$453,900	95%	\$6,697	\$8,862,974	\$5,084,280	\$13,947,254	\$5,894,457	13.0%	1.1x	1.73x
Adams Street 2013 Global Fund	2013	6/27/2013	\$75,000,000	\$56,625,000	\$18,375,000	76%	\$10,728	\$8,075,792	\$66,678,199	\$74,753,991	\$18,118,263	10.6%	0.14x	1.32x
Adams Street 2016 Global Fund	2016	12/22/2016	\$60,000,000	\$21,150,000	\$38,850,000	35%	\$0	\$2,082,389	\$22,082,443	\$24,164,832	\$3,014,832	20.8%	0.1x	1.14x
Battery Ventures XI	2018	2/1/2018	\$9,050,000	\$1,104,100	\$7,945,900	12%	\$0	\$0	\$1,020,640	\$1,020,640	-\$83,460	-22.3%	0x	0.92x
Battery Ventures XII Side Fund	2018	2/1/2018	\$5,050,000	\$616,100	\$4,433,900	12%	\$0	\$0	\$602,758	\$602,758	-\$13,342	-9.3%	0x	0.98x
Buenaventura One, LLC	2018	1/5/2018	\$57,250,000	\$12,415,590	\$44,834,410	22%	--	--	\$12,415,590	\$12,415,590	--	0.0%	--	1x
CapVest Equity Partners IV	2018	7/11/2018	\$12,790,323	--	\$12,790,323	0%	--	--	--	--	--	--	--	--
Clearlake Capital Partners V	2017	12/22/2017	\$9,950,000	\$2,189,963	\$7,760,847	22%	\$46,158	\$2,397	\$2,432,220	\$2,434,617	\$198,496	26.1%	0x	1.11x
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$7,500,000	\$22,500,000	25%	--	\$6,147	\$7,618,286	\$7,624,433	\$124,433	4.5%	0x	1.02x
Drive Capital Fund II	2016	9/1/2016	\$15,000,000	\$5,661,809	\$9,341,401	38%	\$3,210	\$0	\$5,207,167	\$5,207,167	-\$457,852	-8.5%	0x	0.92x
ECl 11	2018	7/5/2018	\$9,788,000	--	\$9,788,000	0%	--	--	--	--	--	--	--	--
GGV Capital VII	2018	8/15/2018	\$10,160,000	--	\$10,160,000	0%	--	--	--	--	--	--	--	--
GGV Capital VII Plus	2018	8/15/2018	\$2,540,000	--	\$2,540,000	0%	--	--	--	--	--	--	--	--
GGV Discovery II	2018	8/15/2018	\$2,100,000	--	\$2,100,000	0%	--	--	--	--	--	--	--	--
GTCR Fund XII	2017	9/29/2017	\$30,000,000	\$1,548,000	\$28,547,792	5%	--	\$264,502	\$493,991	\$758,483	-\$789,507	-97.3%	0.17x	0.49x
Insight Venture Partners X	2017	10/13/2017	\$25,000,000	\$5,250,000	\$19,750,000	21%	--	--	\$5,002,175	\$5,002,175	-\$247,825	-17.5%	--	0.95x
HarbourVest - Dover Street VIII	2013	5/30/2013	\$67,500,000	\$60,834,954	\$6,750,000	90%	\$84,954	\$64,366,660	\$26,586,014	\$90,952,674	\$30,032,766	20.7%	1.06x	1.5x
HarbourVest - Dover Street IX	2016	12/16/2016	\$60,000,000	\$25,200,000	\$34,800,000	42%	\$0	\$6,528,406	\$23,984,067	\$30,512,473	\$5,312,473	33.5%	0.26x	1.21x
HarbourVest - PRTNS CO INVEST IV L.P.	2017	6/2/2017	\$30,000,000	\$21,156,100	\$9,040,640	71%	\$0	\$0	\$23,621,904	\$23,621,904	\$2,465,804	11.8%	0x	1.12x
HarbourVest - PRTNS CO INVEST V L.P.	2018	7/31/2018	\$35,000,000	--	\$35,000,000	0%	--	--	--	--	--	--	--	--
Hellman & Friedman Capital Partners IX	2018	9/28/2018	\$19,800,000	--	\$19,800,000	0%	--	--	--	--	--	--	--	--
M/C Partners VIII	2018	4/2/2018	\$10,000,000	--	\$10,000,000	0%	--	--	--	--	--	--	--	--
Pantheon Global Secondary Fund IV	2010	8/20/2010	\$15,000,000	\$9,960,000	\$5,040,000	66%	\$0	\$12,450,001	\$3,194,820	\$15,644,821	\$5,684,821	14.0%	1.25x	1.57x
Pantheon Global Secondary Fund V	2015	2/26/2015	\$50,000,000	\$32,141,509	\$17,858,491	64%	(\$162,514)	\$8,412,603	\$33,234,322	\$41,646,925	\$9,667,930	18.0%	0.26x	1.3x
The Resolute Fund IV	2018	5/2/2018	\$20,000,000	--	\$20,000,000	0%	--	--	\$75,113	\$75,113	--	--	--	--
Riverside Micro-Cap Fund V	2018	8/21/2018	\$10,000,000	--	\$10,000,000	0%	--	--	--	--	--	--	--	--
Total VCERA Private Equity Program	--	5/21/2010	\$780,958,323	\$351,893,680	\$429,808,866	45%	\$6,035	\$153,810,561	\$316,913,530	\$470,724,091	\$118,749,263	14.4%	0.44x	1.34x

1. Includes recycled/recallable distributions received to date.

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

3. 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 9/30/2018 recent 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
Total US Fixed Income	999,261,399	17.6	20.0	0.1	74	-1.3	81	-0.9	70	2.5	31	2.4	48	5.8	10	5.7	Feb-94
<i>BBgBarc US Aggregate TR</i>				<i>0.0</i>	<i>86</i>	<i>-1.6</i>	<i>90</i>	<i>-1.2</i>	<i>91</i>	<i>1.3</i>	<i>56</i>	<i>2.2</i>	<i>53</i>	<i>3.8</i>	<i>59</i>	<i>5.1</i>	<i>Feb-94</i>
<i>Over/Under</i>				<i>0.1</i>		<i>0.3</i>		<i>0.3</i>		<i>1.2</i>		<i>0.2</i>		<i>2.0</i>		<i>0.6</i>	
<i>InvestorForce Public DB US Fix Inc Net Median</i>				<i>0.2</i>		<i>-0.7</i>		<i>-0.7</i>		<i>1.6</i>		<i>2.4</i>		<i>4.1</i>		<i>5.4</i>	<i>Feb-94</i>
BlackRock U.S. Debt Fund	269,705,929	4.7		0.0	77	-1.6	80	-1.2	82	1.4	67	2.2	56	3.9	59	5.0	Nov-95
<i>BBgBarc US Aggregate TR</i>				<i>0.0</i>	<i>78</i>	<i>-1.6</i>	<i>80</i>	<i>-1.2</i>	<i>83</i>	<i>1.3</i>	<i>68</i>	<i>2.2</i>	<i>58</i>	<i>3.8</i>	<i>60</i>	<i>4.9</i>	<i>Nov-95</i>
<i>Over/Under</i>				<i>0.0</i>		<i>0.0</i>		<i>0.0</i>		<i>0.1</i>		<i>0.0</i>		<i>0.1</i>		<i>0.1</i>	
<i>eV All US Fixed Inc Net Median</i>				<i>0.4</i>		<i>-0.3</i>		<i>-0.1</i>		<i>2.0</i>		<i>2.4</i>		<i>4.3</i>		<i>4.8</i>	<i>Nov-95</i>
Western	292,447,760	5.1		0.0	81	-2.1	88	-1.4	88	2.6	42	3.3	39	5.7	31	5.9	Dec-96
<i>BBgBarc US Aggregate TR</i>				<i>0.0</i>	<i>78</i>	<i>-1.6</i>	<i>80</i>	<i>-1.2</i>	<i>83</i>	<i>1.3</i>	<i>68</i>	<i>2.2</i>	<i>58</i>	<i>3.8</i>	<i>60</i>	<i>4.9</i>	<i>Dec-96</i>
<i>Over/Under</i>				<i>0.0</i>		<i>-0.5</i>		<i>-0.2</i>		<i>1.3</i>		<i>1.1</i>		<i>1.9</i>		<i>1.0</i>	
<i>eV All US Fixed Inc Net Median</i>				<i>0.4</i>		<i>-0.3</i>		<i>-0.1</i>		<i>2.0</i>		<i>2.4</i>		<i>4.3</i>		<i>4.9</i>	<i>Dec-96</i>
Reams	307,299,976	5.4		-0.1	87	-0.7	60	-0.7	66	2.4	44	1.2	84	5.9	29	5.1	Sep-01
<i>Reams Custom Index</i>				<i>0.6</i>	<i>37</i>	<i>1.7</i>	<i>18</i>	<i>2.1</i>	<i>19</i>	<i>1.3</i>	<i>69</i>	<i>0.9</i>	<i>91</i>	<i>3.3</i>	<i>70</i>	<i>3.8</i>	<i>Sep-01</i>
<i>Over/Under</i>				<i>-0.7</i>		<i>-2.4</i>		<i>-2.8</i>		<i>1.1</i>		<i>0.3</i>		<i>2.6</i>		<i>1.3</i>	
<i>BBgBarc US Aggregate TR</i>				<i>0.0</i>	<i>78</i>	<i>-1.6</i>	<i>80</i>	<i>-1.2</i>	<i>83</i>	<i>1.3</i>	<i>68</i>	<i>2.2</i>	<i>58</i>	<i>3.8</i>	<i>60</i>	<i>4.1</i>	<i>Sep-01</i>
<i>3-Month LIBOR + 3%</i>				<i>1.3</i>	<i>20</i>	<i>3.9</i>	<i>5</i>	<i>5.1</i>	<i>5</i>	<i>4.3</i>	<i>25</i>	<i>3.9</i>	<i>30</i>	<i>3.7</i>	<i>61</i>	<i>4.8</i>	<i>Sep-01</i>
<i>eV All US Fixed Inc Net Median</i>				<i>0.4</i>		<i>-0.3</i>		<i>-0.1</i>		<i>2.0</i>		<i>2.4</i>		<i>4.3</i>		<i>4.3</i>	<i>Sep-01</i>
Loomis Strategic Alpha	47,001,422	0.8		0.7	32	1.7	18	2.3	17	3.4	33	2.8	43	--	--	2.7	Jul-13
<i>BBgBarc US Aggregate TR</i>				<i>0.0</i>	<i>78</i>	<i>-1.6</i>	<i>80</i>	<i>-1.2</i>	<i>83</i>	<i>1.3</i>	<i>68</i>	<i>2.2</i>	<i>58</i>	<i>3.8</i>	<i>60</i>	<i>4.2</i>	<i>Jul-13</i>
<i>Over/Under</i>				<i>0.7</i>		<i>3.3</i>		<i>3.5</i>		<i>2.1</i>		<i>0.6</i>		<i>0.5</i>		<i>0.5</i>	
<i>3-Month LIBOR + 3%</i>				<i>1.3</i>	<i>20</i>	<i>3.9</i>	<i>5</i>	<i>5.1</i>	<i>5</i>	<i>4.3</i>	<i>25</i>	<i>3.9</i>	<i>30</i>	<i>3.7</i>	<i>61</i>	<i>3.9</i>	<i>Jul-13</i>
<i>eV All US Fixed Inc Net Median</i>				<i>0.4</i>		<i>-0.3</i>		<i>-0.1</i>		<i>2.0</i>		<i>2.4</i>		<i>4.3</i>		<i>2.5</i>	<i>Jul-13</i>
Loomis Sayles Multi Strategy	82,806,312	1.5		1.0	25	-0.8	61	0.0	49	4.8	21	4.4	23	8.1	13	6.2	Jul-05
<i>Loomis Custom Index</i>				<i>0.7</i>	<i>32</i>	<i>-0.3</i>	<i>50</i>	<i>0.1</i>	<i>47</i>	<i>3.3</i>	<i>35</i>	<i>3.1</i>	<i>41</i>	<i>5.4</i>	<i>34</i>	<i>4.8</i>	<i>Jul-05</i>
<i>Over/Under</i>				<i>0.3</i>		<i>-0.5</i>		<i>-0.1</i>		<i>1.5</i>		<i>1.3</i>		<i>2.7</i>		<i>1.4</i>	
<i>BBgBarc US Govt/Credit TR</i>				<i>0.1</i>	<i>76</i>	<i>-1.8</i>	<i>84</i>	<i>-1.4</i>	<i>86</i>	<i>1.4</i>	<i>63</i>	<i>2.2</i>	<i>56</i>	<i>4.0</i>	<i>57</i>	<i>3.8</i>	<i>Jul-05</i>
<i>eV All US Fixed Inc Net Median</i>				<i>0.4</i>		<i>-0.3</i>		<i>-0.1</i>		<i>2.0</i>		<i>2.4</i>		<i>4.3</i>		<i>3.9</i>	<i>Jul-05</i>

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
Total Real Estate	426,285,322	7.5	7.0	1.6	59	5.2	70	7.4	67	7.0	89	9.0	82	3.4	86	7.8	Mar-94
<i>NCREIF ODCE Net</i>				<i>1.9</i>	<i>47</i>	<i>5.8</i>	<i>51</i>	<i>7.7</i>	<i>57</i>	<i>7.8</i>	<i>65</i>	<i>9.7</i>	<i>65</i>	<i>4.6</i>	<i>66</i>	<i>8.1</i>	<i>Mar-94</i>
<i>Over/Under</i>				<i>-0.3</i>		<i>-0.6</i>		<i>-0.3</i>		<i>-0.8</i>		<i>-0.7</i>		<i>-1.2</i>		<i>-0.3</i>	
<i>InvestorForce Public DB Real Estate Pub+Priv Net Median</i>				<i>1.8</i>		<i>5.8</i>		<i>7.9</i>		<i>8.6</i>		<i>10.1</i>		<i>5.2</i>		<i>8.9</i>	<i>Mar-94</i>
Prudential Real Estate	153,766,357	2.7		2.3	--	6.4	--	8.3	--	8.2	--	10.4	--	4.2	--	6.3	Jun-04
<i>NCREIF ODCE Net</i>				<i>1.9</i>	<i>--</i>	<i>5.8</i>	<i>--</i>	<i>7.7</i>	<i>--</i>	<i>7.8</i>	<i>--</i>	<i>9.7</i>	<i>--</i>	<i>4.6</i>	<i>--</i>	<i>7.1</i>	<i>Jun-04</i>
<i>Over/Under</i>				<i>0.4</i>		<i>0.6</i>		<i>0.6</i>		<i>0.4</i>		<i>0.7</i>		<i>-0.4</i>		<i>-0.8</i>	
<i>NCREIF ODCE</i>				<i>2.1</i>	<i>--</i>	<i>6.5</i>	<i>--</i>	<i>8.7</i>	<i>--</i>	<i>8.8</i>	<i>--</i>	<i>10.7</i>	<i>--</i>	<i>5.6</i>	<i>--</i>	<i>8.1</i>	<i>Jun-04</i>
UBS Real Estate	272,518,965	4.8		1.2	--	4.6	--	6.8	--	6.3	--	8.1	--	4.6	--	7.4	Mar-03
<i>NCREIF ODCE Net</i>				<i>1.9</i>	<i>--</i>	<i>5.8</i>	<i>--</i>	<i>7.7</i>	<i>--</i>	<i>7.8</i>	<i>--</i>	<i>9.7</i>	<i>--</i>	<i>4.6</i>	<i>--</i>	<i>7.3</i>	<i>Mar-03</i>
<i>Over/Under</i>				<i>-0.7</i>		<i>-1.2</i>		<i>-0.9</i>		<i>-1.5</i>		<i>-1.6</i>		<i>0.0</i>		<i>0.1</i>	
<i>NCREIF ODCE</i>				<i>2.1</i>	<i>--</i>	<i>6.5</i>	<i>--</i>	<i>8.7</i>	<i>--</i>	<i>8.8</i>	<i>--</i>	<i>10.7</i>	<i>--</i>	<i>5.6</i>	<i>--</i>	<i>8.3</i>	<i>Mar-03</i>

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
Total Real Assets	436,743,206	7.7	10.0	0.6	--	0.6	--	3.4	--	6.4	--	3.4	--	--	--	4.5	Apr-13
<i>CPI + 4% (Unadjusted)</i>				<i>1.2</i>	--	<i>5.4</i>	--	<i>6.4</i>	--	<i>6.1</i>	--	<i>6.7</i>	--	--	--	<i>6.3</i>	<i>Apr-13</i>
Over/Under				-0.6		-4.8		-3.0		0.3		-3.3				-1.8	
Bridgewater All Weather Fund	312,911,975	5.5		-0.3	--	-0.5	--	3.6	--	6.6	--	4.4	--	--	--	4.8	Aug-13
<i>CPI + 5% (Unadjusted)</i>				<i>1.4</i>	--	<i>6.2</i>	--	<i>7.4</i>	--	<i>7.1</i>	--	<i>6.6</i>	--	--	--	<i>6.6</i>	<i>Aug-13</i>
Over/Under				-1.7		-6.7		-3.8		-0.5		-2.2				-1.8	
Tortoise Energy Infrastructure	123,831,231	2.2		2.8	--	3.6	--	2.8	--	5.8	--	1.2	--	--	--	1.8	Apr-13
<i>Wells Fargo MLP Index</i>				<i>5.2</i>	--	<i>3.6</i>	--	<i>2.9</i>	--	<i>3.4</i>	--	<i>-2.2</i>	--	--	--	<i>-1.9</i>	<i>Apr-13</i>
Over/Under				-2.4		0.0		-0.1		2.4		3.4				3.7	
Overlay	154,430,335	2.7	0.0														
Parametric	39,293,629	0.7															
Abbott Capital Cash	115,136,707	2.0															

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

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	Top Quartile	-	-	-		6/2014
BlackRock Russell 2500 Index	-	-	-	-		10/2013
BlackRock MSCI ACWI ex-U.S. Index	-	-	-	-		10/2013
Sprucegrove	-	-	-	-		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	Bottom Quartile	-	-	-		10/2013
Western	Bottom Quartile	-	-	-		6/2014
Reams	Bottom Quartile	-	-	-		11/2013



DUE DILIGENCE MONITOR

	Performance (Recent Quarter)	Changes/ Announcements (Recent Quarter)	NEPC DD Committee Rec.	Plan Rec.	Comments	Last Onsite Conducted
Loomis Sayles Strategic Alpha	-	-	-	-		11/2013
Loomis Sayles Multi-Sector Full Discretion	Top Quartile	-	-	-		11/2013
Prudential	N/A	-	-	-		7/2014
RREEF	N/A	-	-	-		7/2013
UBS	N/A	-	-	-		8/2011
Bridgewater	N/A	-	-	-		9/2012
Tortoise	N/A	-	-	-		8/2013
Parametric/Clifton	N/A	-	-	-		7/2013

NEPC Due Diligence Committee Recommendation Key	
No Action	Informational items have surfaced; no action is recommended.
Watch	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.
Hold	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.
Client Review	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.
Terminate	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.



Ventura County Employees' Retirement Association

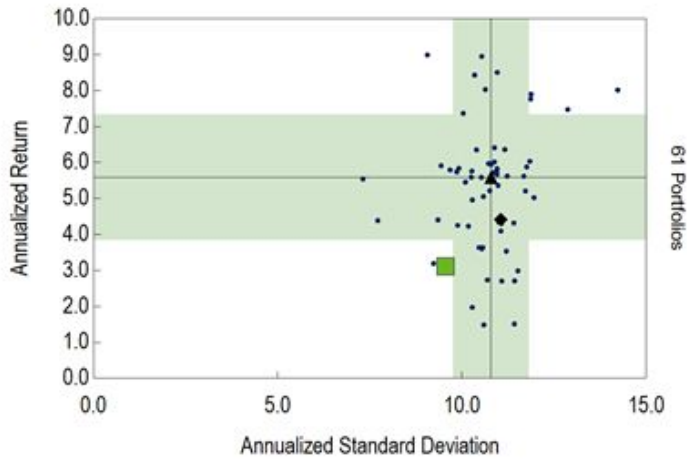
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Ventura County Employees' Retirement Association

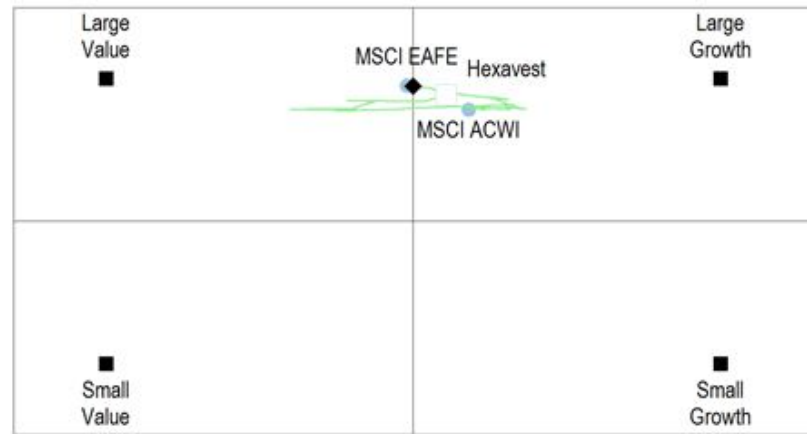
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5 Year Risk Return

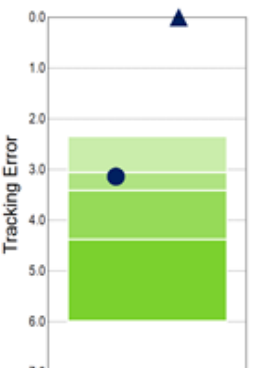
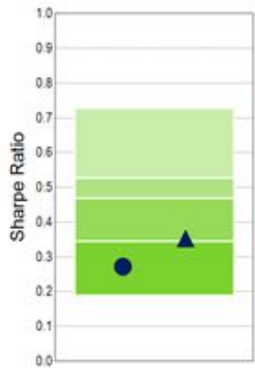
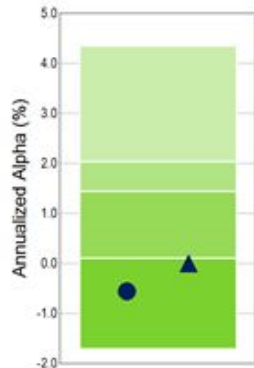
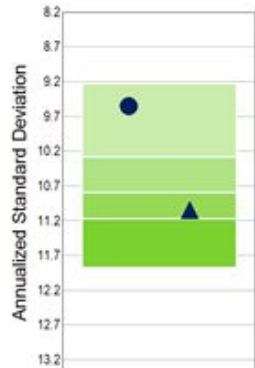
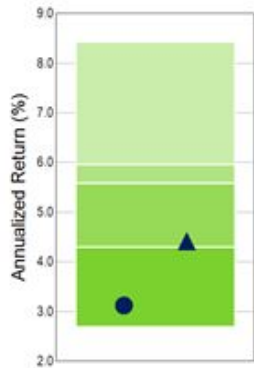


- Hexavest
- ◆ MSCI EAFE
- ▲ Universe Median
- 68% Confidence Interval
- eV EAFE All Cap Equity Net

5 Year Style Map



- First Rolling Period
- ◆ Last Rolling Period



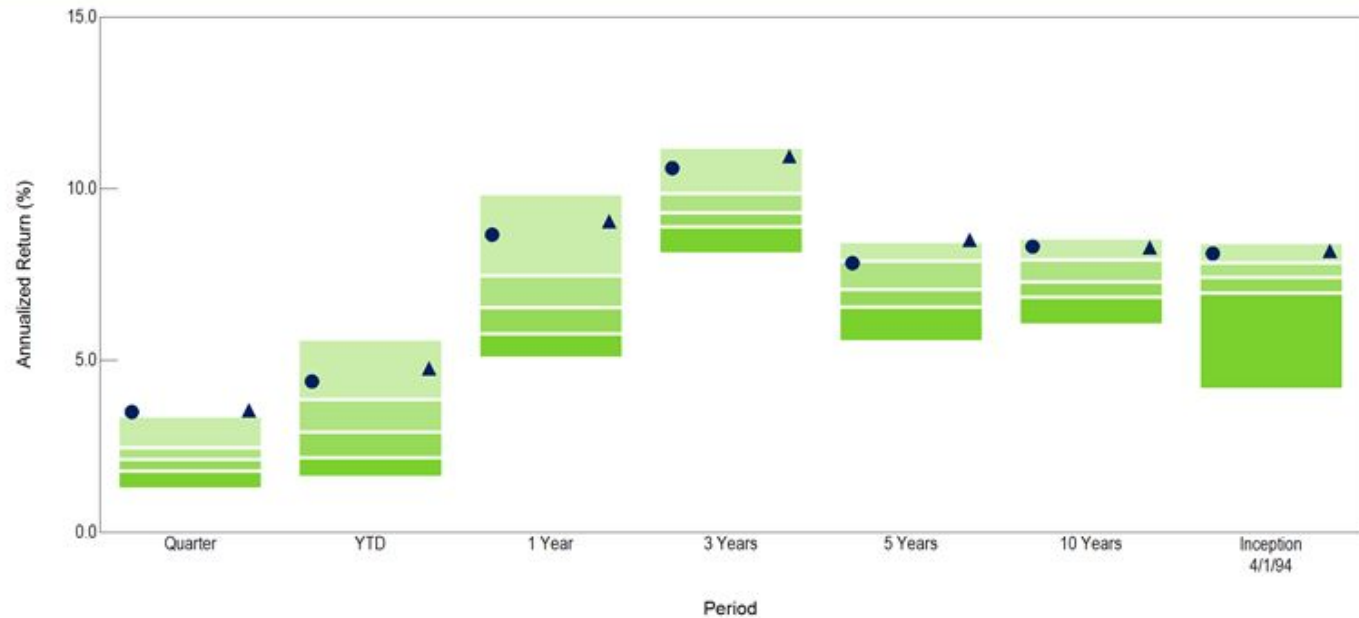
- Hexavest
- ▲ MSCI EAFE
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Ventura County Employees' Retirement Association

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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



	Return (Rank)													
5th Percentile	3.4	5.6	9.8	11.2	8.5	8.6	8.4							
25th Percentile	2.5	3.9	7.5	9.9	7.9	7.9	7.9							
Median	2.1	2.9	6.5	9.3	7.1	7.3	7.4							
75th Percentile	1.8	2.2	5.8	8.9	6.6	6.9	7.0							
95th Percentile	1.3	1.6	5.1	8.1	5.5	6.0	4.2							
# of Portfolios	63	62	62	62	60	53	34							
● Total Fund	3.5	(2)	4.4	(13)	8.7	(8)	10.6	(8)	7.8	(28)	8.3	(13)	8.1	(18)
▲ Policy Index	3.6	(2)	4.8	(9)	9.1	(7)	10.9	(7)	8.5	(5)	8.3	(14)	8.2	(16)



Ventura County Employees' Retirement Association

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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



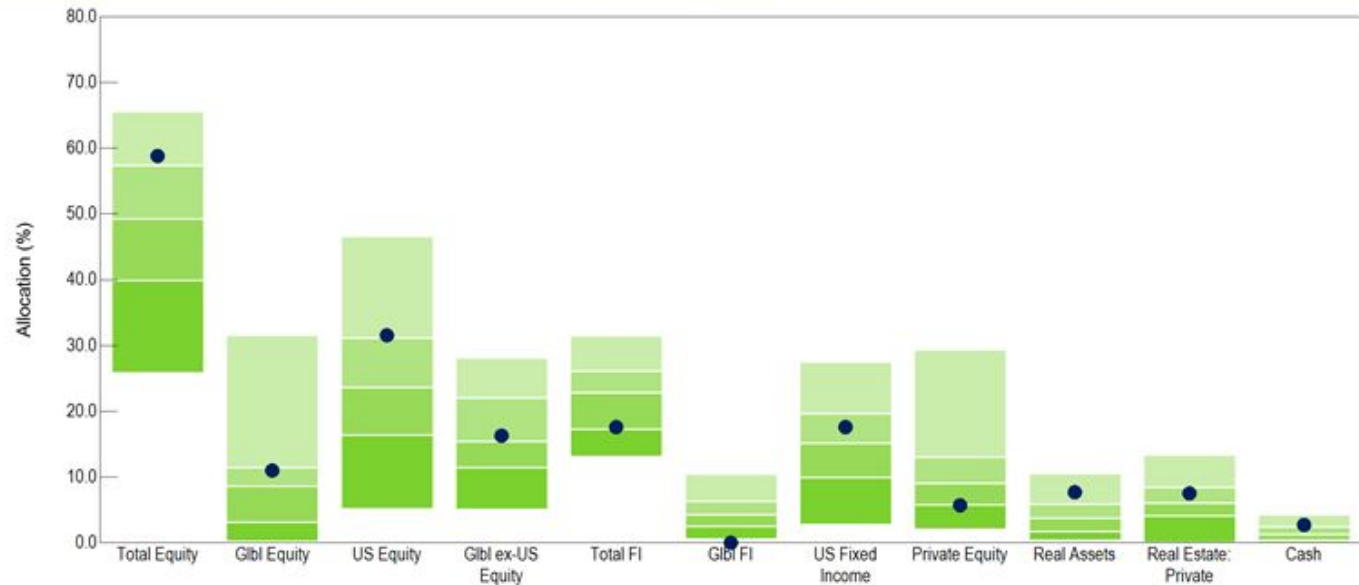
	Return (Rank)											
5th Percentile	10.5		14.9		2.7		4.3		18.7		9.3	
25th Percentile	8.8		13.7		0.8		3.3		17.2		8.3	
Median	8.0		12.7		-0.5		2.6		16.1		7.5	
75th Percentile	7.3		11.9		-1.2		1.6		14.7		7.0	
95th Percentile	6.5		9.2		-2.4		-0.9		13.6		6.2	
# of Portfolios	51		65		55		53		43		51	
● Total Fund	8.9	(23)	12.6	(53)	0.8	(26)	1.7	(71)	18.8	(4)	8.3	(23)
▲ Policy Index	9.2	(13)	13.1	(37)	1.8	(9)	3.4	(25)	17.7	(19)	8.9	(8)



Ventura County Employees' Retirement Association

TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE

Total Plan Allocation vs. InvestorForce Public DB > \$1B Net



	Allocation (Rank)																						
5th Percentile	65.6	31.6	46.6	28.1	31.5	10.5	27.5	29.4	10.6	13.3	4.3	--											
25th Percentile	57.4	11.5	31.2	22.2	26.1	6.4	19.7	13.1	5.9	8.5	2.5	--											
Median	49.3	8.6	23.7	15.5	22.9	4.4	15.2	9.1	3.9	6.1	1.3	--											
75th Percentile	40.0	3.2	16.5	11.5	17.3	2.6	10.1	5.9	1.8	4.2	0.5	--											
95th Percentile	25.9	0.3	5.2	5.1	13.2	0.6	2.8	2.2	0.4	0.2	0.1	--											
# of Portfolios	58	22	48	53	59	26	49	51	31	48	59	--											
• Total Fund	58.8	(18)	11.0	(27)	31.5	(24)	16.3	(48)	17.6	(73)	0.0	(99)	17.6	(36)	5.7	(77)	7.7	(13)	7.5	(38)	2.7	(24)	--



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
Total Fund	16.0	8.6	-0.9	6.3	18.1	14.0	0.3	15.1	24.2	-30.9	7.0
Policy Index	16.3	8.4	0.8	6.8	17.2	12.9	0.5	13.2	21.0	-27.1	8.5
Over/Under	-0.3	0.2	-1.7	-0.5	0.9	1.1	-0.2	1.9	3.2	-3.8	-1.5
60% MSCI ACWI (Net) / 40% FTSE WGBI	17.1	5.5	-2.6	2.3	11.4	10.3	-1.8	10.0	21.3	-24.1	11.6
60% S&P 500 / 40% BBgBarc Aggregate	14.2	8.3	1.3	10.6	17.6	11.3	4.7	12.1	18.4	-22.1	6.2
Total Fund ex Parametric*	15.9	8.6	-0.9	6.3	17.8	13.7	0.6	14.5	23.3	-30.3	6.9
Total Fund ex Private Equity	15.9	8.6	-1.4	6.1	16.2	13.3	--	--	--	--	--
Policy Index	16.3	8.4	0.8	6.8	17.2	12.9	0.5	13.2	21.0	-27.1	8.5
Over/Under	-0.4	0.2	-2.2	-0.7	-1.0	0.4	--	--	--	--	--
Total US Equity	21.4	13.0	0.5	12.5	34.0	16.9	0.9	18.5	29.2	-40.0	4.3
Russell 3000	21.1	12.7	0.4	12.4	33.5	16.4	1.1	17.5	28.6	-37.2	5.5
Over/Under	0.3	0.3	0.1	0.1	0.5	0.5	-0.2	1.0	0.6	-2.8	-1.2
Western U.S. Index Plus	22.7	13.8	1.1	14.2	32.9	20.7	1.0	24.7	42.6	-56.3	--
S&P 500	21.8	12.0	1.4	13.7	32.4	16.0	2.1	15.1	26.5	-37.0	5.5
Over/Under	0.9	1.8	-0.3	0.5	0.5	4.7	-1.1	9.6	16.1	-19.3	--
Blackrock Russell 1000 Index	--	--	--	--	--	--	--	--	--	--	--
Russell 1000	21.7	12.1	0.9	13.2	33.1	16.4	1.5	16.1	28.4	-37.6	5.8
Over/Under	--	--	--	--	--	--	--	--	--	--	--
Blackrock Russell 2500 Index	--	--	--	--	--	--	--	--	--	--	--
Russell 2500	16.8	17.6	-2.9	7.1	36.8	17.9	-2.5	26.7	34.4	-36.8	1.4
Over/Under	--	--	--	--	--	--	--	--	--	--	--



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
Total Non-US Equity	26.5	6.6	-4.8	-3.6	16.3	17.9	-13.6	13.5	37.4	-44.1	11.7
MSCI ACWI ex USA	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4	-45.5	16.7
Over/Under	-0.7	2.1	0.9	0.3	1.0	1.1	0.1	2.3	-4.0	1.4	-5.0
MSCI EAFE	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4	11.2
MSCI ACWI ex USA NR LCL	18.2	7.0	1.9	6.0	20.1	16.3	-12.2	7.6	31.7	-40.9	8.5
MSCI EAFE NR LCL	15.2	5.3	5.3	5.9	26.9	17.3	-12.2	4.8	24.7	-40.3	3.5
BlackRock ACWI ex-U.S. Index	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	27.8	4.4	-4.6	-3.9	15.8	17.0	-14.3	12.7	43.6	-46.0	16.1
Over/Under	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	18.2	7.0	1.9	6.0	20.1	16.3	-12.2	7.6	31.7	-40.9	8.5
Sprucegrove	27.5	11.9	-9.1	-3.2	17.1	17.2	-10.7	18.8	36.2	-42.4	5.8
MSCI ACWI ex USA	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4	-45.5	16.7
Over/Under	0.3	7.4	-3.4	0.7	1.8	0.4	3.0	7.6	-5.2	3.1	-10.9
MSCI EAFE	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4	11.2
MSCI ACWI ex USA NR LCL	18.2	7.0	1.9	6.0	20.1	16.3	-12.2	7.6	31.7	-40.9	8.5
MSCI EAFE NR LCL	15.2	5.3	5.3	5.9	26.9	17.3	-12.2	4.8	24.7	-40.3	3.5
Hexavest	17.4	3.8	-1.4	-4.3	20.2	13.7	-9.6	--	--	--	--
MSCI EAFE	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4	11.2
Over/Under	-7.6	2.8	-0.6	0.6	-2.6	-3.6	2.5				
MSCI EAFE NR LCL	15.2	5.3	5.3	5.9	26.9	17.3	-12.2	4.8	24.7	-40.3	3.5
Walter Scott	26.6	5.1	-0.4	-3.5	11.8	20.4	-9.3	--	--	--	--
MSCI ACWI ex USA	27.2	4.5	-5.7	-3.9	15.3	16.8	-13.7	11.2	41.4	-45.5	16.7
Over/Under	-0.6	0.6	5.3	0.4	-3.5	3.6	4.4				
MSCI ACWI ex USA NR LCL	18.2	7.0	1.9	6.0	20.1	16.3	-12.2	7.6	31.7	-40.9	8.5
MSCI EAFE	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1	7.8	31.8	-43.4	11.2
Total Global Equity	24.5	9.0	-3.8	1.9	22.0	14.4	-3.9	11.4	17.8	-37.3	11.3
MSCI ACWI	24.0	7.9	-2.4	4.2	22.8	16.1	-7.3	12.7	34.6	-42.2	11.7
Over/Under	0.5	1.1	-1.4	-2.3	-0.8	-1.7	3.4	-1.3	-16.8	4.9	-0.4
BlackRock MSCI ACWI Equity Index	24.5	8.4	-2.0	4.6	23.2	--	--	--	--	--	--
MSCI ACWI	24.0	7.9	-2.4	4.2	22.8	16.1	-7.3	12.7	34.6	-42.2	11.7
Over/Under	0.5	0.5	0.4	0.4	0.4						



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
Total Private Equity	16.9	7.6	14.7	19.0	17.9	10.3	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under	-7.8	-8.5	11.2	3.1	-19.6	-9.6					
<i>Cambridge Associates Global All PE (Qtr Lag)</i>	15.9	8.5	7.0	16.3	15.9	13.0	12.6	17.1	-9.3	-7.2	34.8
Adams Street Global Fund Series	13.4	7.1	10.3	19.6	15.7	10.8	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under	-11.3	-9.0	6.8	3.7	-21.8	-9.1					
Harbourvest	23.2	6.7	28.5	18.5	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under	-1.5	-9.4	25.0	2.6							
Pantheon Global Secondary Funds	24.1	15.5	6.4	16.7	14.9	0.9	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under	-0.6	-0.6	2.9	0.8	-22.6	-19.0					
Drive Capital Fund	-33.7	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under	-58.4										
Abbott Secondary Opportunities	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under											
CVI Credit Value Fund	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under											
Clearlake Capital Partners V	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under											
Battery Ventures XII	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under											
Insight Venture Partners X	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under											
GTCR Fund XII	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under											
Buenaventure One, LLC	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>	<u>8.3</u>
Over/Under											



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
Total US Fixed Income	4.4	4.9	0.3	3.0	-0.1	9.6	7.3	10.6	25.6	-8.7	6.3
BBgBarc US Aggregate TR	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0
Over/Under	0.9	2.3	-0.2	-3.0	1.9	5.4	-0.5	4.1	19.7	-13.9	-0.7
BlackRock U.S. Debt Fund	3.6	2.7	0.6	6.2	-2.0	4.3	7.9	6.7	6.0	5.4	7.0
BBgBarc US Aggregate TR	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0
Over/Under	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.1	0.2	0.0
Western	6.0	4.1	0.9	7.4	-1.2	9.7	7.3	11.3	18.9	-8.9	4.8
BBgBarc US Aggregate TR	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0
Over/Under	2.5	1.5	0.4	1.4	0.8	5.5	-0.5	4.8	13.0	-14.1	-2.2
Reams	2.5	6.0	0.3	-3.6	2.5	10.0	8.4	10.0	33.6	-11.0	7.4
Reams Custom Index	1.3	0.7	0.3	0.2	-0.5	4.2	7.8	6.5	5.9	5.2	7.0
Over/Under	1.2	5.3	0.0	-3.8	3.0	5.8	0.6	3.5	27.7	-16.2	0.4
BBgBarc US Aggregate TR	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0
3-Month LIBOR + 3%	4.4	3.8	3.3	3.2	3.3	3.5	3.3	3.4	3.8	6.2	8.7
Loomis Strategic Alpha	3.3	6.1	-1.0	2.4	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0
Over/Under	-0.2	3.5	-1.5	-3.6							
3-Month LIBOR + 3%	4.4	3.8	3.3	3.2	3.3	3.5	3.3	3.4	3.8	6.2	8.7
Loomis Sayles Multi Strategy	8.4	8.2	-2.3	6.8	1.4	16.7	4.2	13.6	37.6	-19.7	6.4
Loomis Custom Index	4.5	7.0	-1.2	4.6	0.8	7.5	7.1	8.7	18.8	-4.6	5.1
Over/Under	3.9	1.2	-1.1	2.2	0.6	9.2	-2.9	4.9	18.8	-15.1	1.3
BBgBarc US Govt/Credit TR	4.0	3.0	0.1	6.0	-2.4	4.8	8.7	6.6	4.5	5.7	7.2
Total Real Estate	5.9	6.8	12.8	11.6	10.6	9.1	14.4	15.4	-31.2	-16.0	12.8
NCREIF ODCE Net	6.7	7.8	14.0	11.5	12.9	9.8	15.0	15.3	-30.4	-10.7	14.8
Over/Under	-0.8	-1.0	-1.2	0.1	-2.3	-0.7	-0.6	0.1	-0.8	-5.3	-2.0
Prudential Real Estate	7.0	8.2	14.5	12.5	13.8	8.8	18.0	17.2	-34.8	-13.6	16.7
NCREIF ODCE Net	6.7	7.8	14.0	11.5	12.9	9.8	15.0	15.3	-30.4	-10.7	14.8
Over/Under	0.3	0.4	0.5	1.0	0.9	-1.0	3.0	1.9	-4.4	-2.9	1.9
NCREIF ODCE	7.6	8.8	15.0	12.5	13.9	10.9	16.0	16.4	-29.8	-10.0	16.0
UBS Real Estate	5.4	6.2	11.9	10.6	9.3	9.0	12.1	15.9	-22.9	-8.3	12.8
NCREIF ODCE Net	6.7	7.8	14.0	11.5	12.9	9.8	15.0	15.3	-30.4	-10.7	14.8
Over/Under	-1.3	-1.6	-2.1	-0.9	-3.6	-0.8	-2.9	0.6	7.5	2.4	-2.0
NCREIF ODCE	7.6	8.8	15.0	12.5	13.9	10.9	16.0	16.4	-29.8	-10.0	16.0



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
Total Real Assets	7.2	11.7	-13.8	10.2	--	--	--	--	--	--	--
<i>CPI + 4% (Unadjusted)</i>	6.2	6.2	4.8	4.8	28.8	5.4	13.5	--	--	--	--
Over/Under	1.0	5.5	-18.6	5.4							
Bridgewater All Weather Fund	11.9	10.0	-6.8	7.6	--	--	--	--	--	--	--
<i>CPI + 5% (Unadjusted)</i>	7.2	7.2	5.8	5.8	--	--	--	--	--	--	--
Over/Under	4.7	2.8	-12.6	1.8							
Tortoise Energy Infrastructure	-3.5	15.9	-27.1	15.7	--	--	--	--	--	--	--
<i>Wells Fargo MLP Index</i>	-5.7	21.0	-34.1	8.0	28.8	5.4	13.5	--	--	--	--
Over/Under	2.2	-5.1	7.0	7.7							
Overlay											
Parametric											
Abbott Capital Cash											



APPENDIX: MARKET ENVIRONMENT

NEPC, LLC

LONG-TERM PERFORMANCE SUMMARY



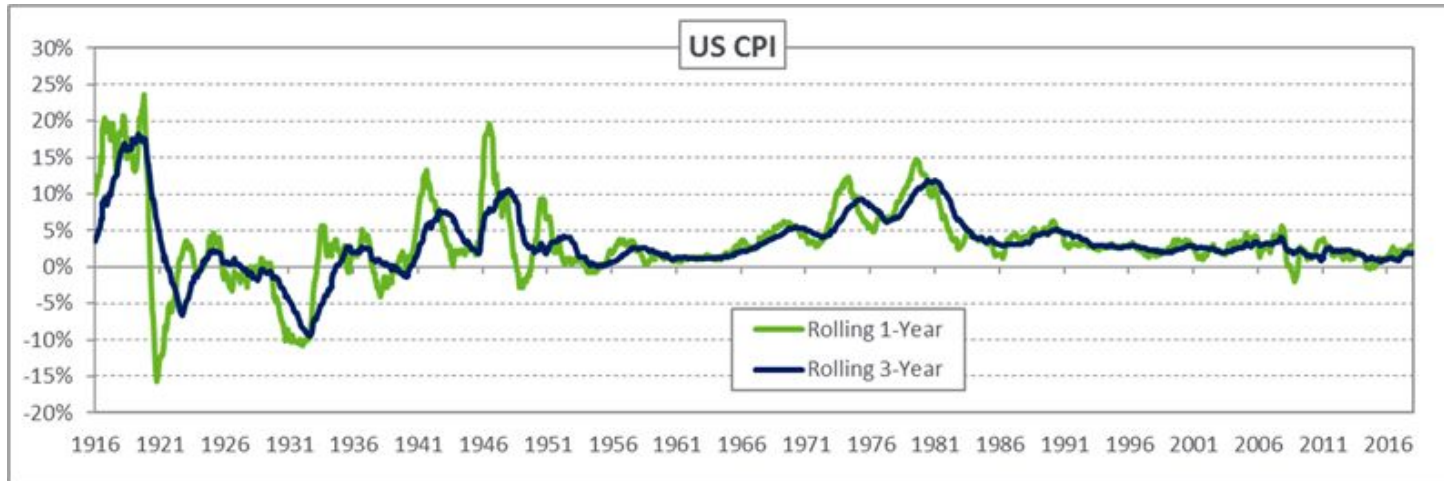
Source: Bloomberg, Standard and Poor's, Russell, MSCI, Barclays, JP Morgan



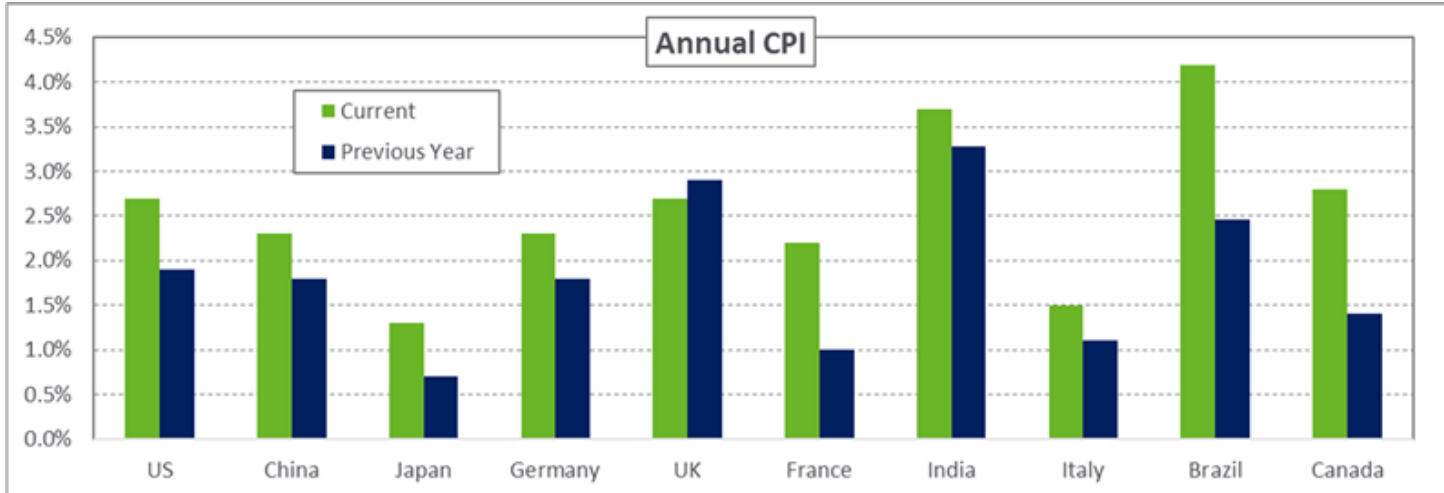
MACRO

NEPC, LLC

INFLATION



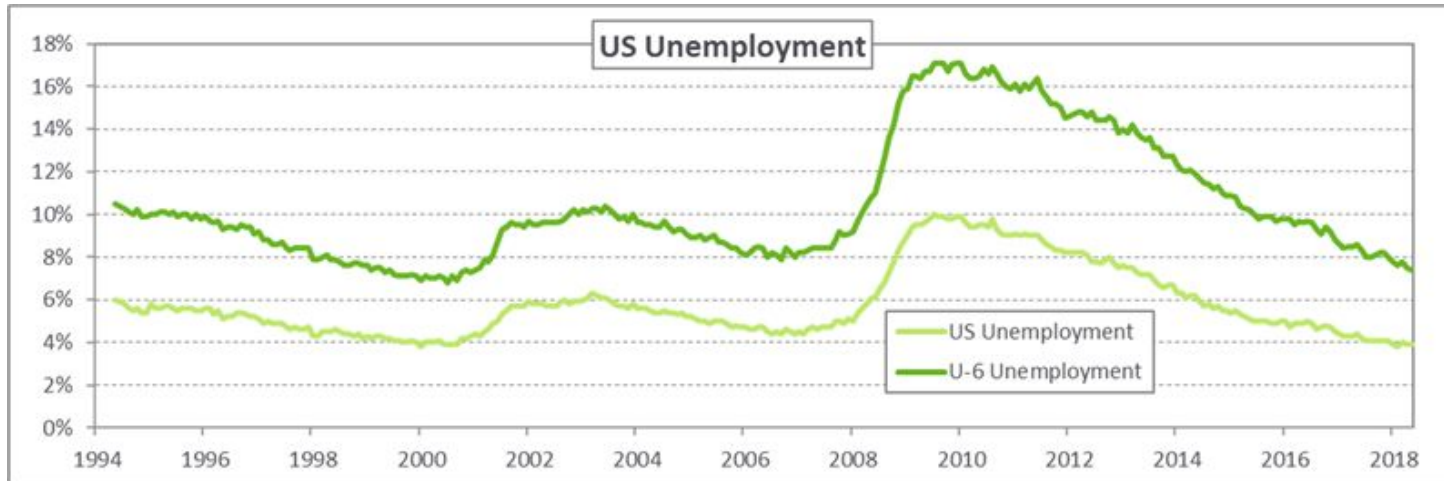
Source: Bureau of Labor Statistics, Bloomberg, NEPC



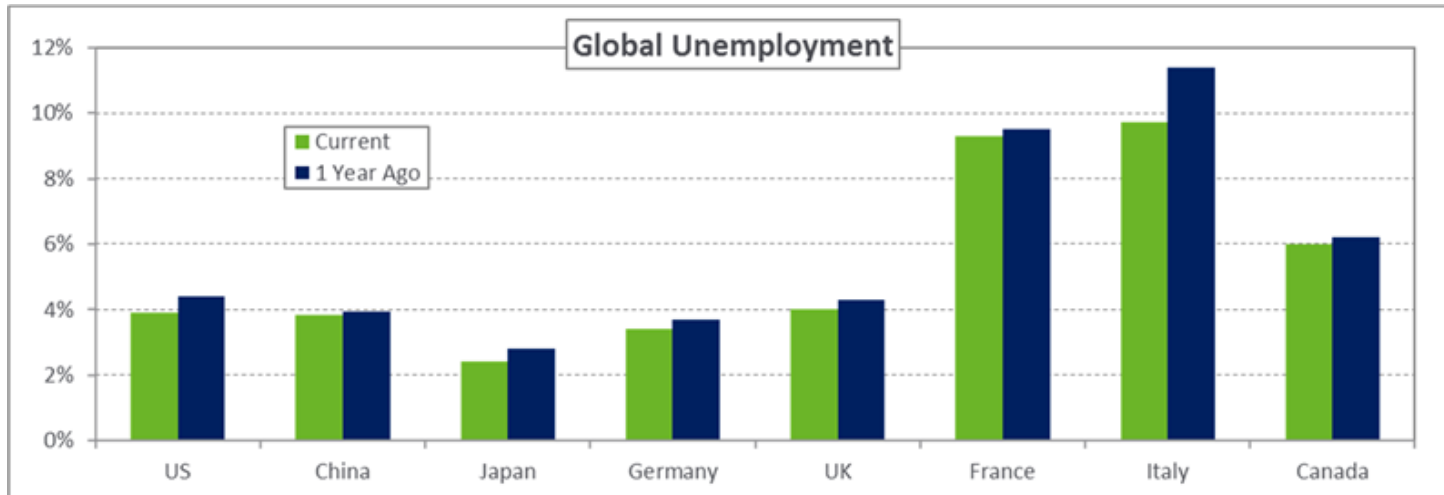
Source: Bureau of Labor Statistics, National Bureau of Statistics of China, Ministry of Internal Affairs and Communications (Japan), German Federal Statistics Office, UK Office for National Statistics, National Statistics Office of France, India Central Statistical Organization, ISTAT, IBGE, STCA, Bloomberg



UNEMPLOYMENT



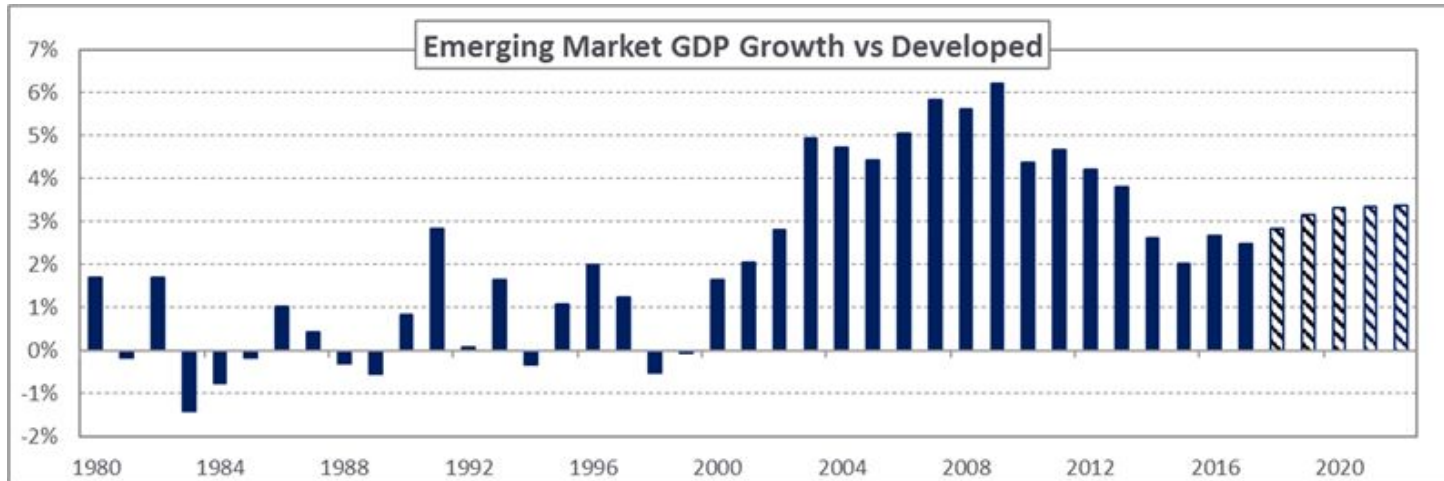
Source: Bureau of Labor Statistics, Bloomberg



Source: Bureau of Labor Statistics, STA, National Bureau of Statistics of China, Ministry of Internal Affairs and Communications (Japan), German Federal Statistics Office, UK Office for National Statistics, National Statistics Office of France, ISTAT, IBGE, Bloomberg



ECONOMIC INDICATORS



Source: IMF



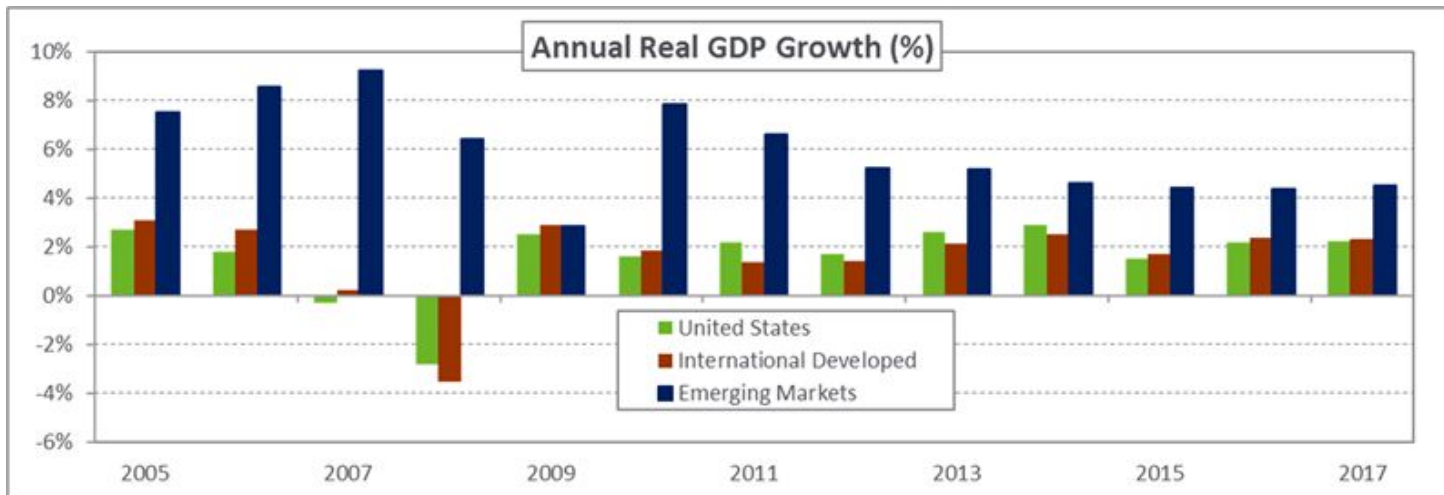
Source: OECD, Bloomberg



GROSS DOMESTIC PRODUCT



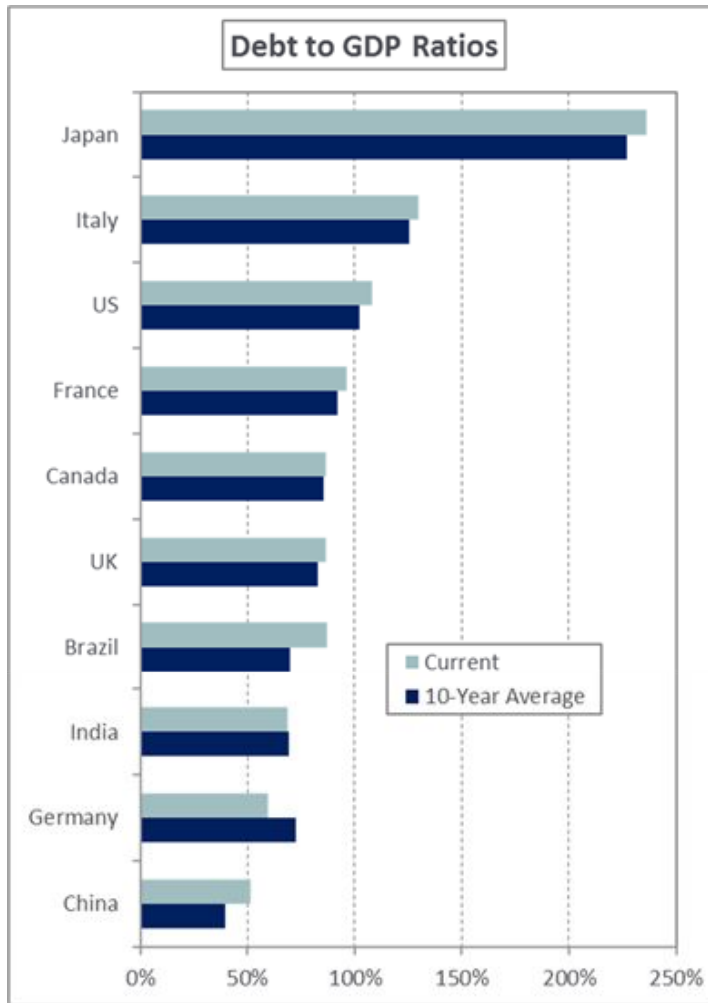
Source: Bloomberg



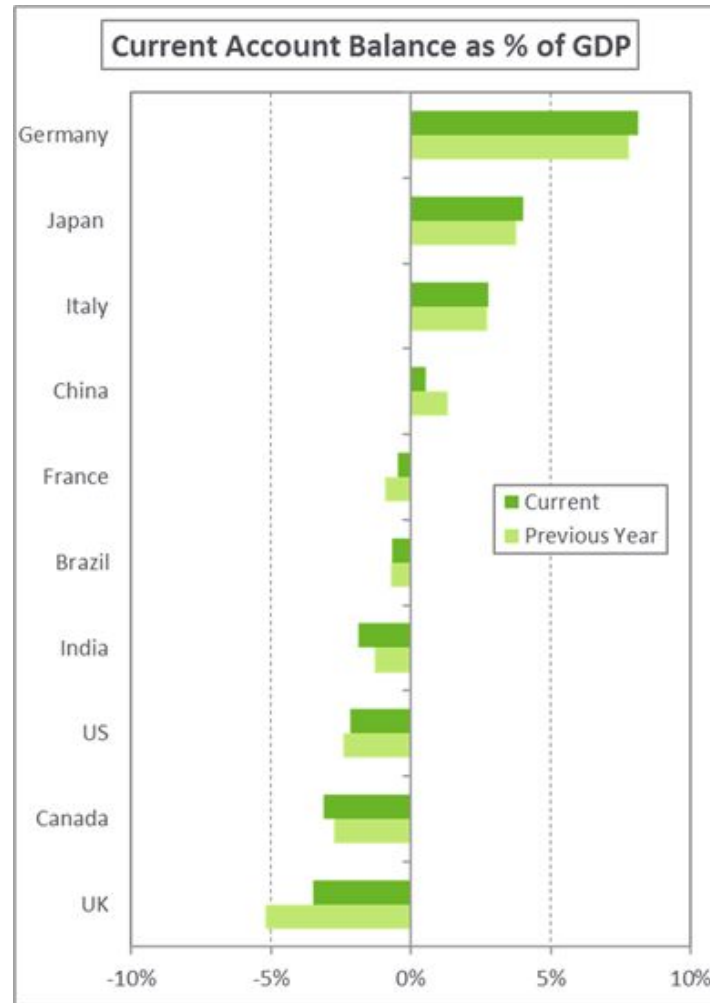
Source: Bloomberg



GROSS DOMESTIC PRODUCT METRICS



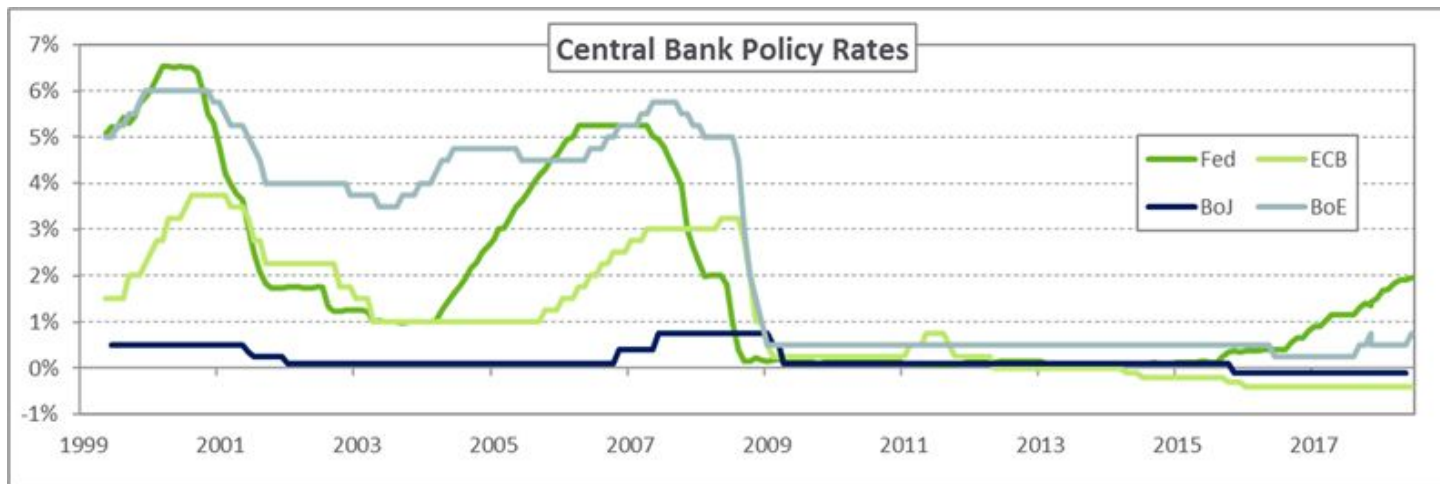
Source: IMF, Bloomberg



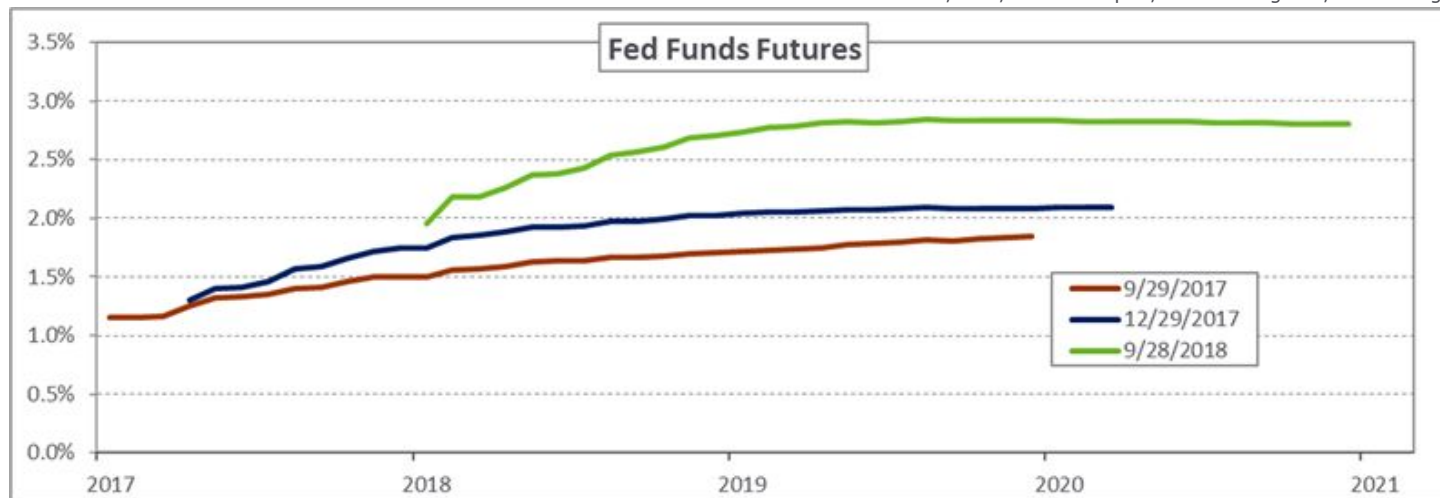
Source: Bloomberg



CENTRAL BANK RATES



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



Source: Bloomberg



CENTRAL BANK BALANCE SHEETS



Source: Federal Reserve, Bank of Japan, ECB, Bloomberg, NEPC



CURRENCIES

% Change Relative to USD				
Currencies	Spot	1 Month	YTD	1 Year
Euro	1.16	0.0%	-3.9%	-1.8%
British Pound	1.30	0.5%	-5.3%	-2.8%
Japanese Yen	113.70	-2.4%	-3.8%	-1.0%
Swiss Franc	0.98	-1.3%	0.9%	-1.3%
Australian Dollar	0.72	0.4%	-4.1%	-7.8%
Chinese Yuan	6.87	-0.5%	-7.8%	-3.4%
Brazilian Real	4.05	0.1%	-13.5%	-21.9%
Russian Ruble	65.61	2.8%	-4.0%	-12.3%
Indian Rupee	72.54	-2.4%	-8.4%	-9.9%
Mexican Peso	18.72	1.9%	0.0%	-2.5%
South African Rand	14.15	3.8%	-12.0%	-4.1%

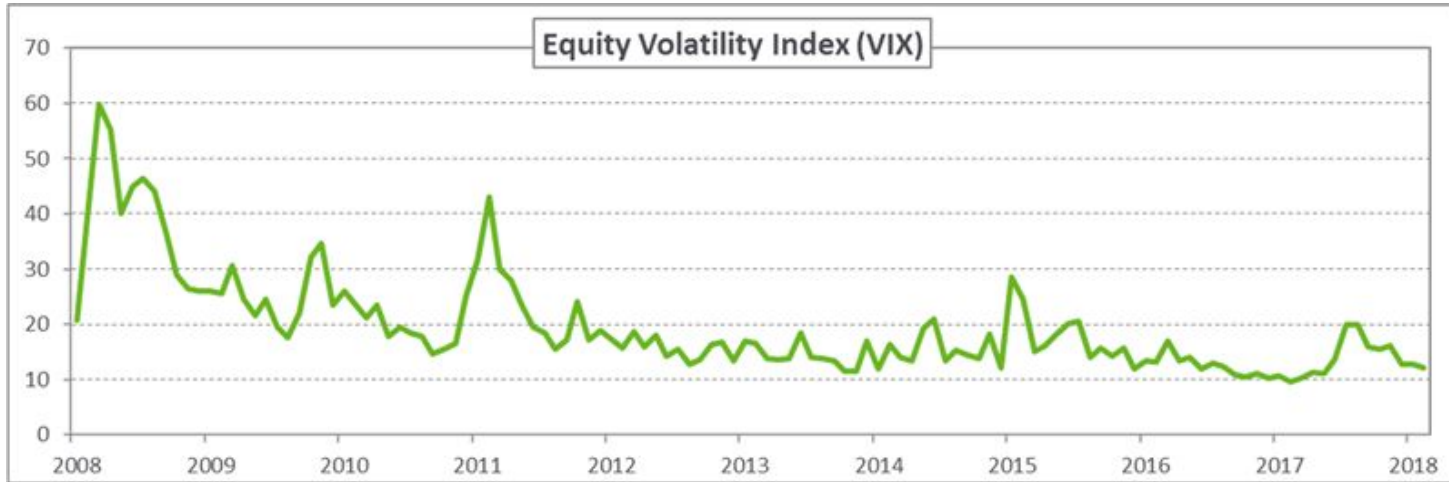
Source: Bloomberg



Source: Bloomberg



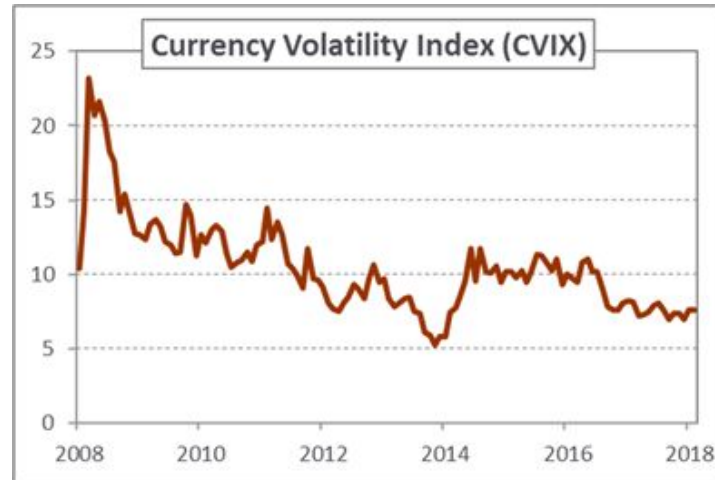
VOLATILITY



Source: CBOE, Bloomberg



Source: Merrill Lynch, Bloomberg



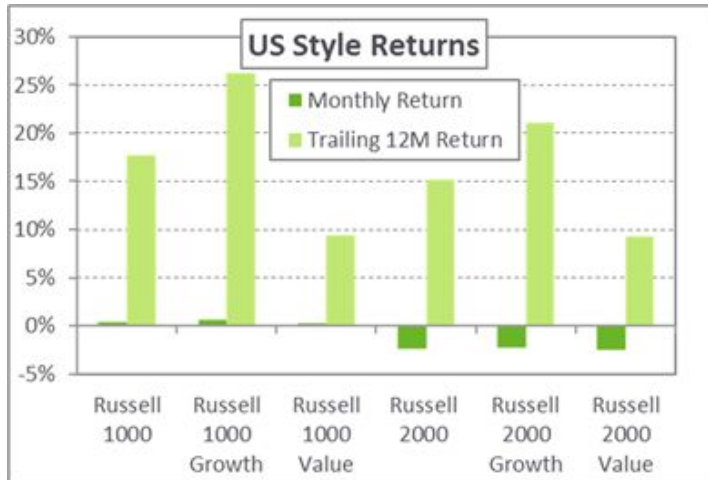
Source: Deutsche Bank, Bloomberg



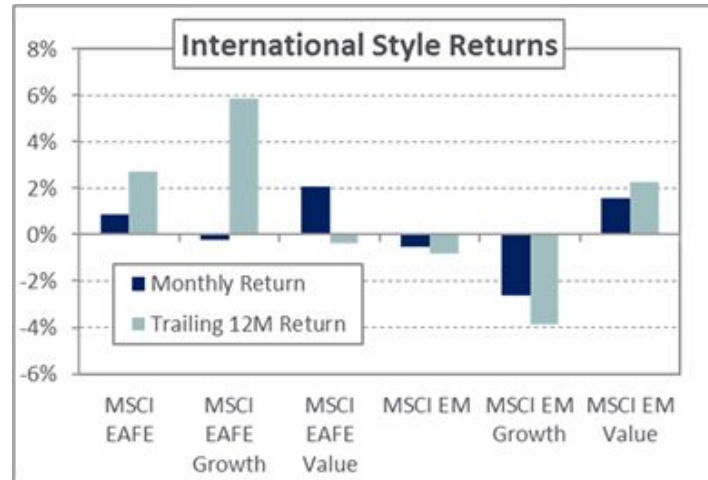
EQUITY

NEPC, LLC

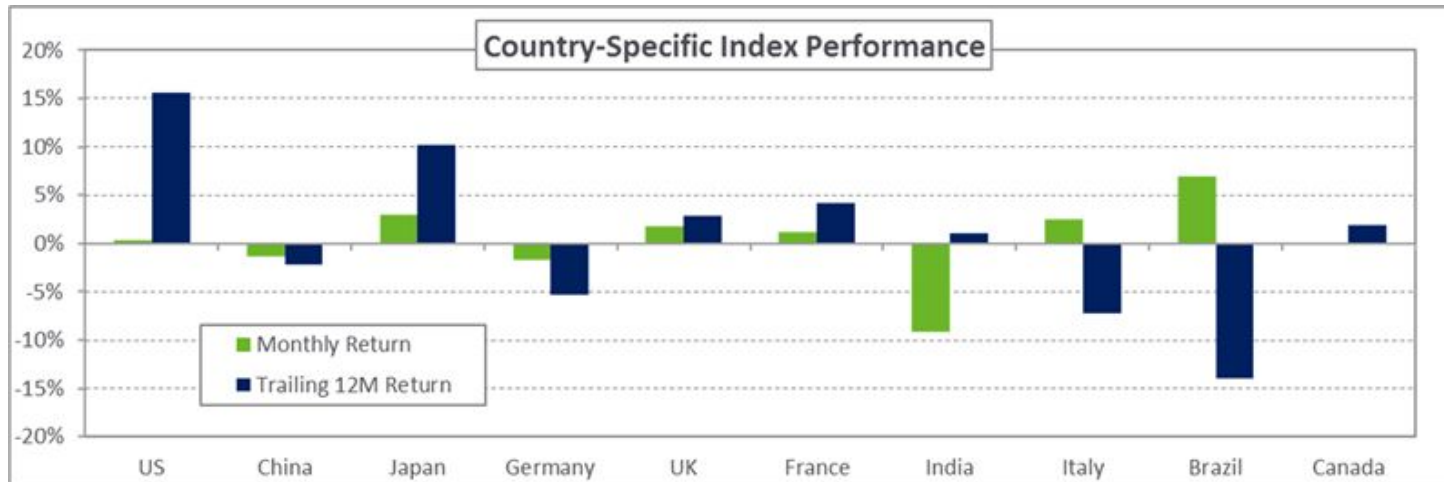
EQUITY INDEX PERFORMANCE



Source: Russell, Bloomberg



Source: MSCI, Bloomberg



Source: MSCI, Bloomberg
Represents returns in USD

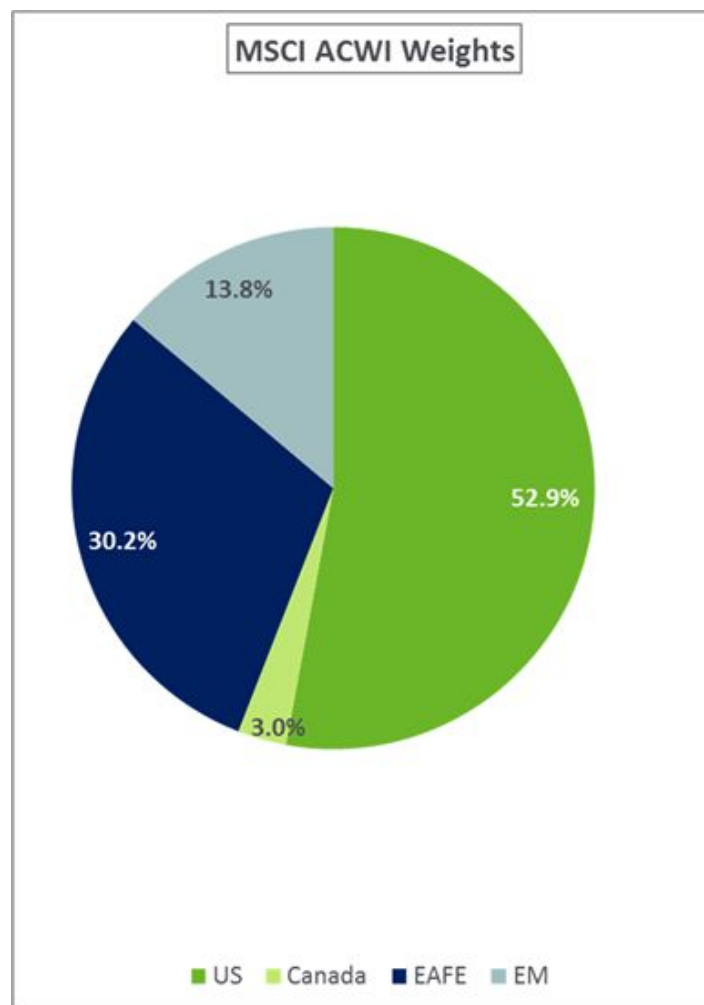


INDEX COMPOSITION

	MTD	QTD	YTD	Index Weight
S&P 500	0.6%	7.7%	10.6%	100%
Cons Disc	1.0%	8.1%	20.3%	10.4%
Cons Staples	0.9%	5.5%	-4.0%	6.8%
Energy	2.5%	0.4%	6.8%	6.1%
Financials	-2.3%	4.2%	-0.3%	12.8%
Health Care	2.9%	14.4%	16.2%	15.3%
Industrials	2.1%	9.8%	4.4%	9.8%
Info Tech	-0.4%	8.7%	20.3%	20.8%
Materials	-2.1%	0.2%	-3.2%	2.5%
Real Estate	-2.8%	0.6%	0.9%	2.7%
Telecom	4.3%	9.5%	-0.5%	10.1%
Utilities	-0.7%	2.1%	1.9%	2.9%

	MTD	QTD	YTD	Index Weight
MSCI ACWI	0.5%	4.4%	4.2%	100%
Cons Disc	0.1%	3.0%	7.1%	12.0%
Cons Staples	0.3%	2.1%	-4.2%	7.9%
Energy	3.5%	2.4%	8.6%	6.6%
Financials	-0.4%	2.5%	-4.3%	17.6%
Health Care	1.8%	10.9%	12.5%	11.6%
Industrials	1.6%	6.0%	1.4%	11.0%
Info Tech	-0.8%	6.0%	13.6%	19.6%
Materials	0.8%	0.2%	-3.1%	5.1%
Real Estate	-2.6%	-1.6%	-3.9%	2.9%
Telecom	2.0%	4.9%	-5.0%	2.9%
Utilities	-0.4%	0.6%	0.6%	2.9%

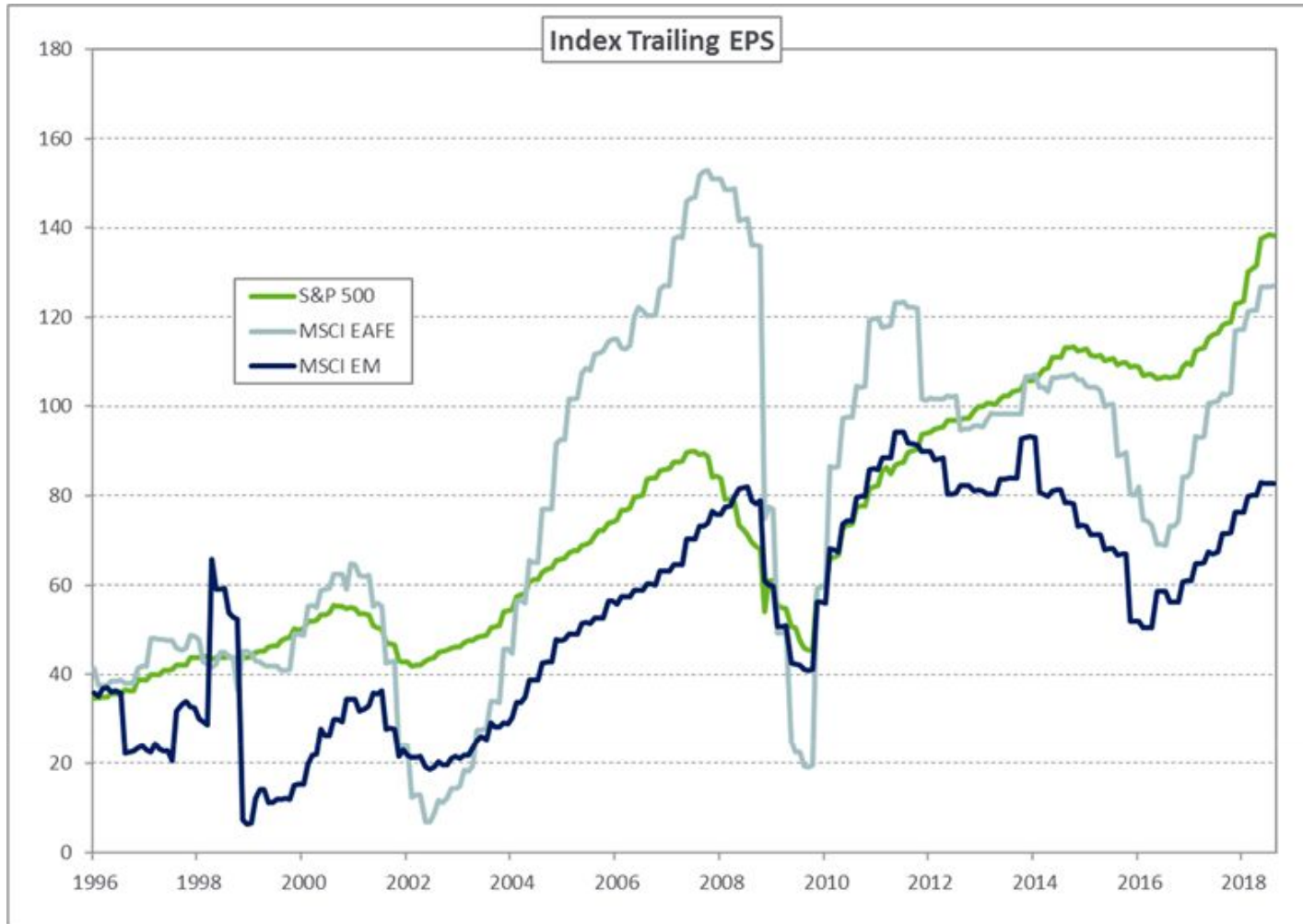
Source: S&P, MSCI, Bloomberg



Source: MSCI, Bloomberg



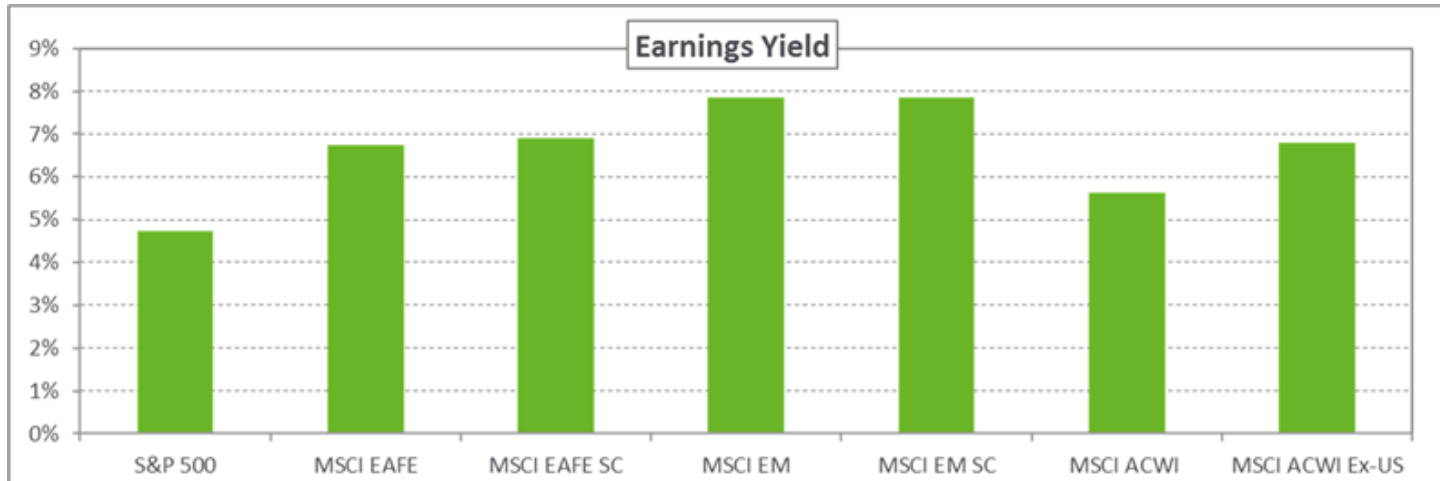
EARNINGS



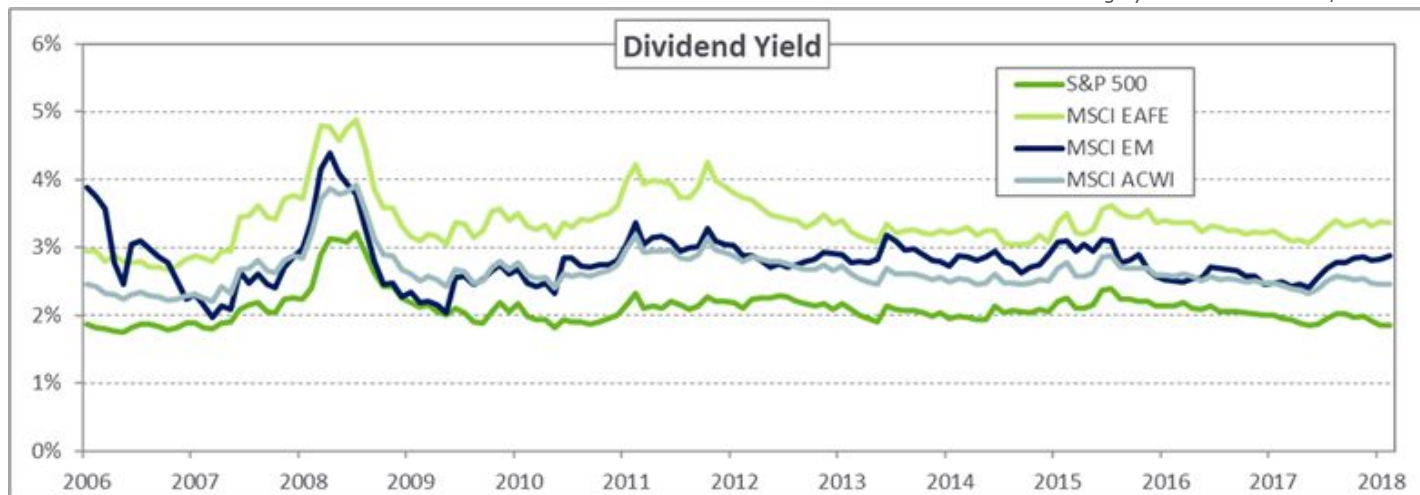
Source: S&P, MSCI, Bloomberg



YIELDS



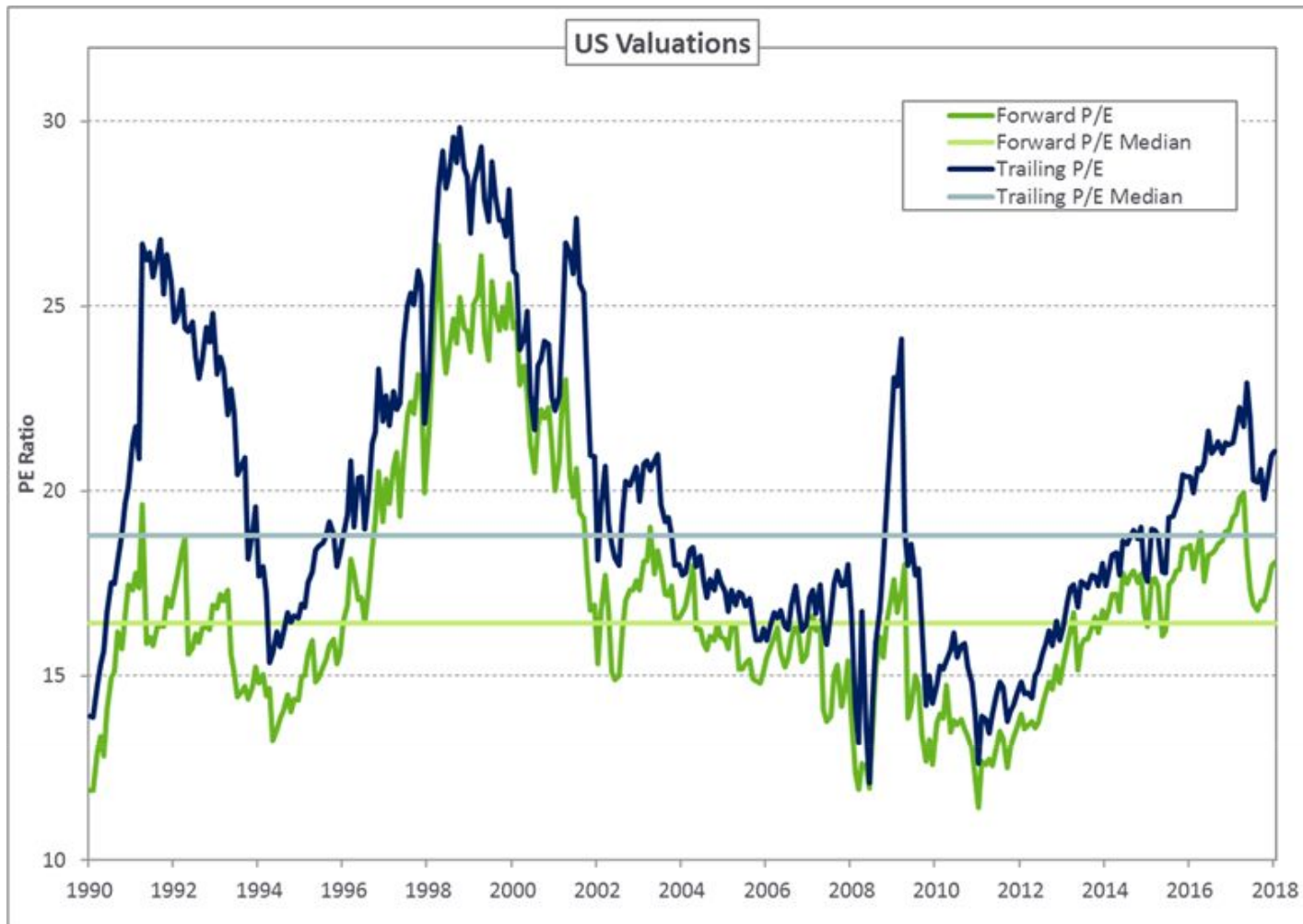
Source: S&P, MSCI, Bloomberg
Earnings yield calculated as 1/PE Ratio



Source: S&P, MSCI, Bloomberg



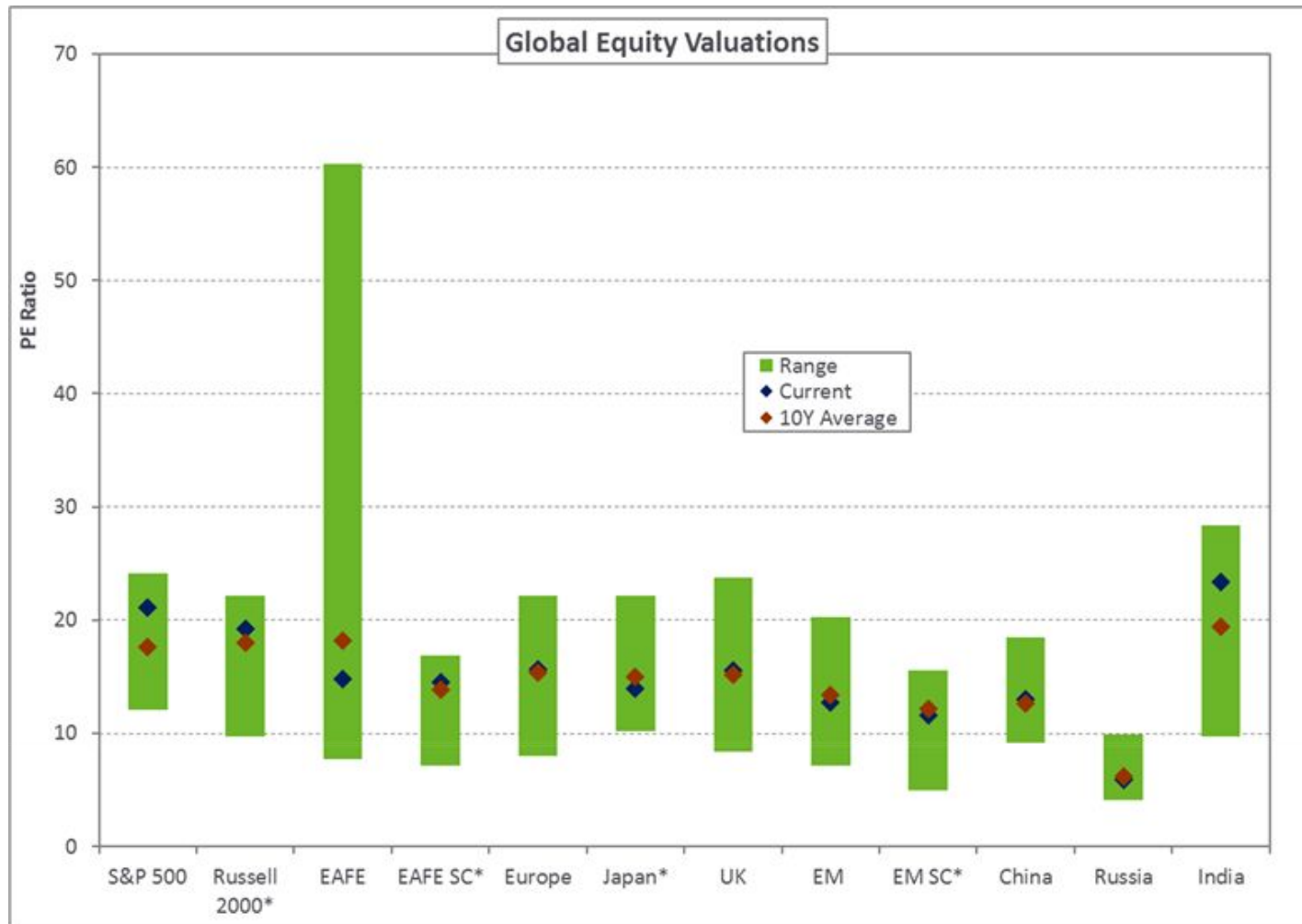
US EQUITY VALUATIONS



Source: S&P, Bloomberg
Medians calculated as of 01/31/1990



GLOBAL EQUITY VALUATIONS



Source: S&P, Russell, MSCI, Bloomberg, NEPC
 *Denotes the use of index-adjusted positive PE ratio
 Ranges calculated using trailing 10-year figures



CREDIT

NEPC, LLC

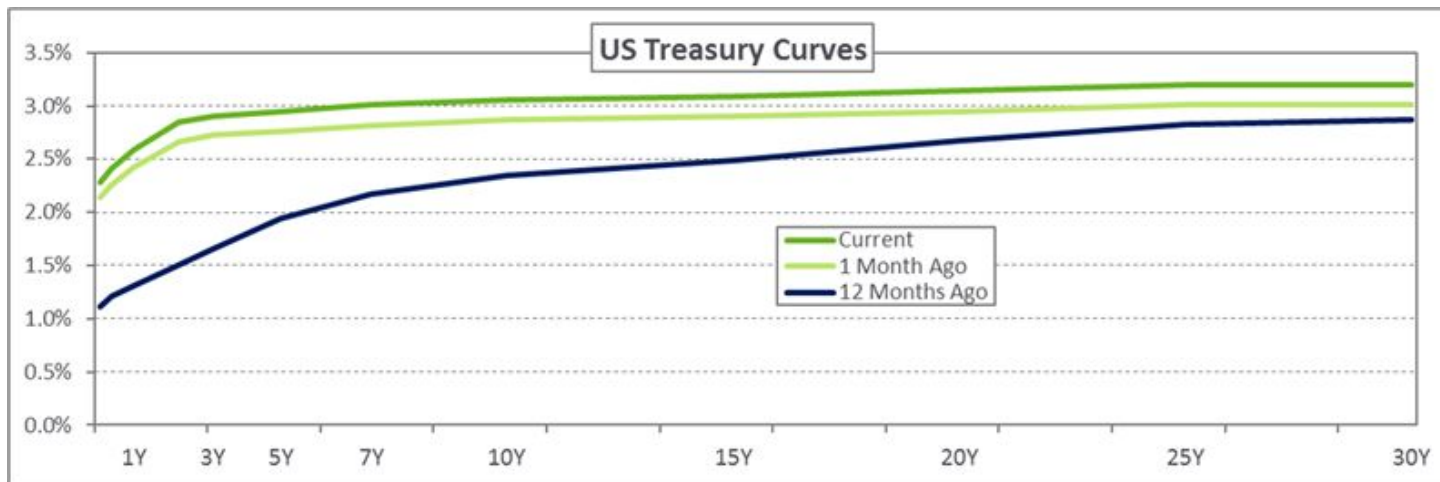
FIXED INCOME CHARACTERISTICS

	Averages			Total Returns (%)		
	Yield to Worst	Spread (bps)	Duration (Years)	1-Month	YTD	1-Year
Barclays Aggregate	3.5%	39	6.0	-0.6%	0.0%	-1.2%
Barclays Treasury	3.0%	-	6.0	-0.9%	-0.6%	-1.6%
Barclays Agency	3.0%	12	3.9	-0.4%	0.0%	-0.6%
Barclays MBS	3.6%	28	5.3	-0.6%	-0.1%	-0.9%
Barclays ABS	3.2%	33	2.3	-0.1%	0.5%	0.2%
Barclays CMBS	3.6%	60	5.3	-0.5%	0.5%	-0.6%
Barclays Corp IG	4.1%	106	7.2	-0.4%	1.0%	-1.2%
Barclays Muni	2.9%	-	6.2	-0.6%	-0.2%	0.3%
Barclays HY Muni	4.9%	-	8.0	-0.4%	0.8%	6.4%
Barclays TIPS	3.2%	-	5.4	-1.1%	-0.8%	0.4%
Barclays HY	6.2%	316	3.8	0.6%	2.4%	3.0%
Barclays Global Agg	2.2%	45	7.0	-0.9%	-0.9%	-1.3%
JPM EMBI Glob Div	6.5%	361.73	7.2	1.5%	2.3%	-1.9%
JPM CEMBI Broad	5.3%	286.26	4.5	0.9%	1.3%	-0.9%
JPM GBI - EM	6.6%	-	5.1	2.6%	-1.8%	-7.4%

Source: Barclays, JPM, Bloomberg



TREASURIES



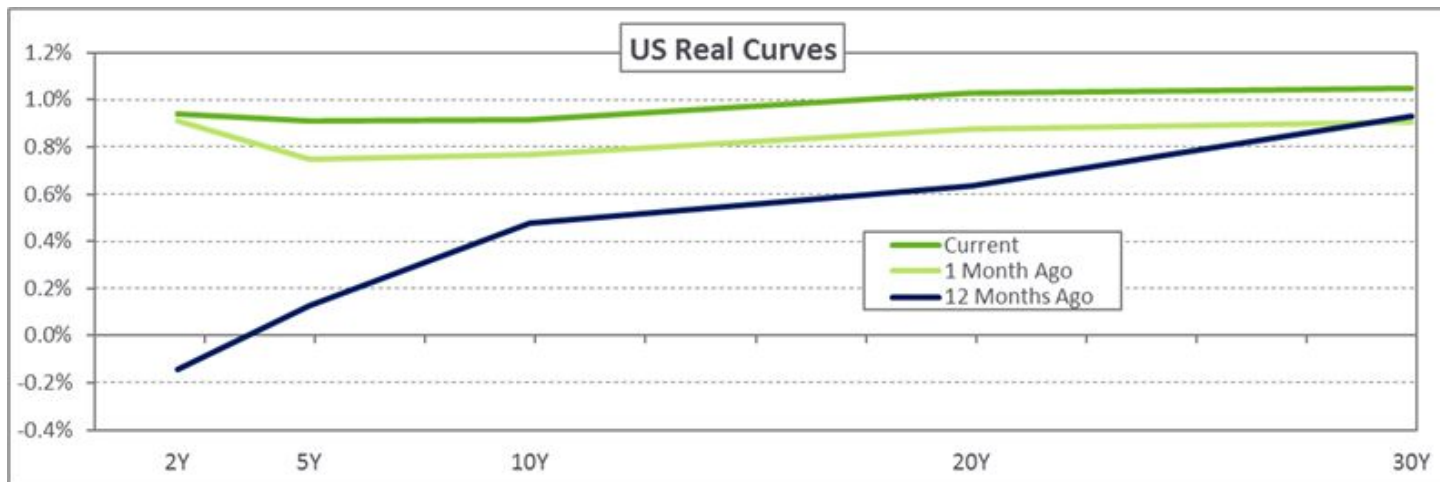
Source: Bloomberg

	Yield (%)			Total Return (%)	
	Current	1 Month Ago	12 Months Ago	1 Month	12 Months
3M Treasury	2.28%	2.14%	1.11%	0.16%	1.52%
6M Treasury	2.41%	2.26%	1.21%	0.17%	1.57%
2Y Treasury	2.84%	2.66%	1.51%	-0.12%	-0.21%
5Y Treasury	2.95%	2.76%	1.95%	-0.72%	-2.05%
10Y Treasury	3.06%	2.87%	2.34%	-1.48%	-3.97%
30Y Treasury	3.20%	3.01%	2.87%	-3.34%	-3.75%

Source: Barclays, Bloomberg



REAL YIELDS



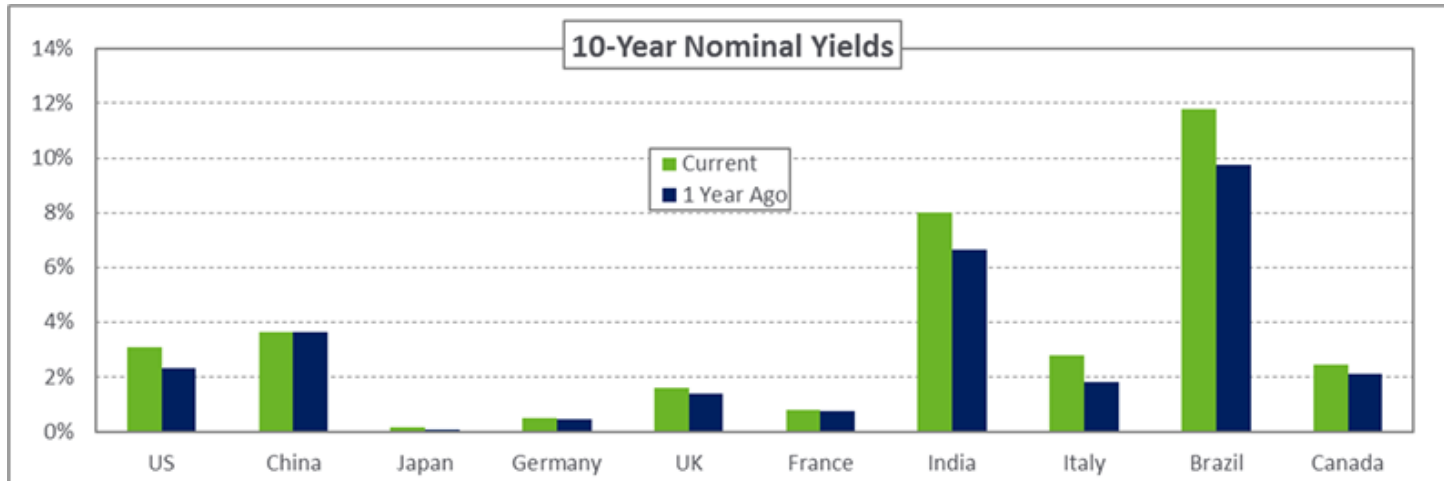
Source: Bloomberg

	Real Rates			Breakeven Rates	
	Current	1 Month Ago	12 Months Ago	Current	12 Months Ago
2Y Treasury	0.94%	0.91%	-0.14%	1.81%	1.56%
5Y Treasury	0.91%	0.75%	0.13%	2.03%	1.78%
10Y Treasury	0.91%	0.77%	0.48%	2.14%	1.85%
20Y Treasury	1.03%	0.88%	0.64%	2.08%	1.76%
30Y Treasury	1.05%	0.90%	0.93%	2.16%	1.93%

Source: Barclays, Bloomberg



NOMINAL YIELDS



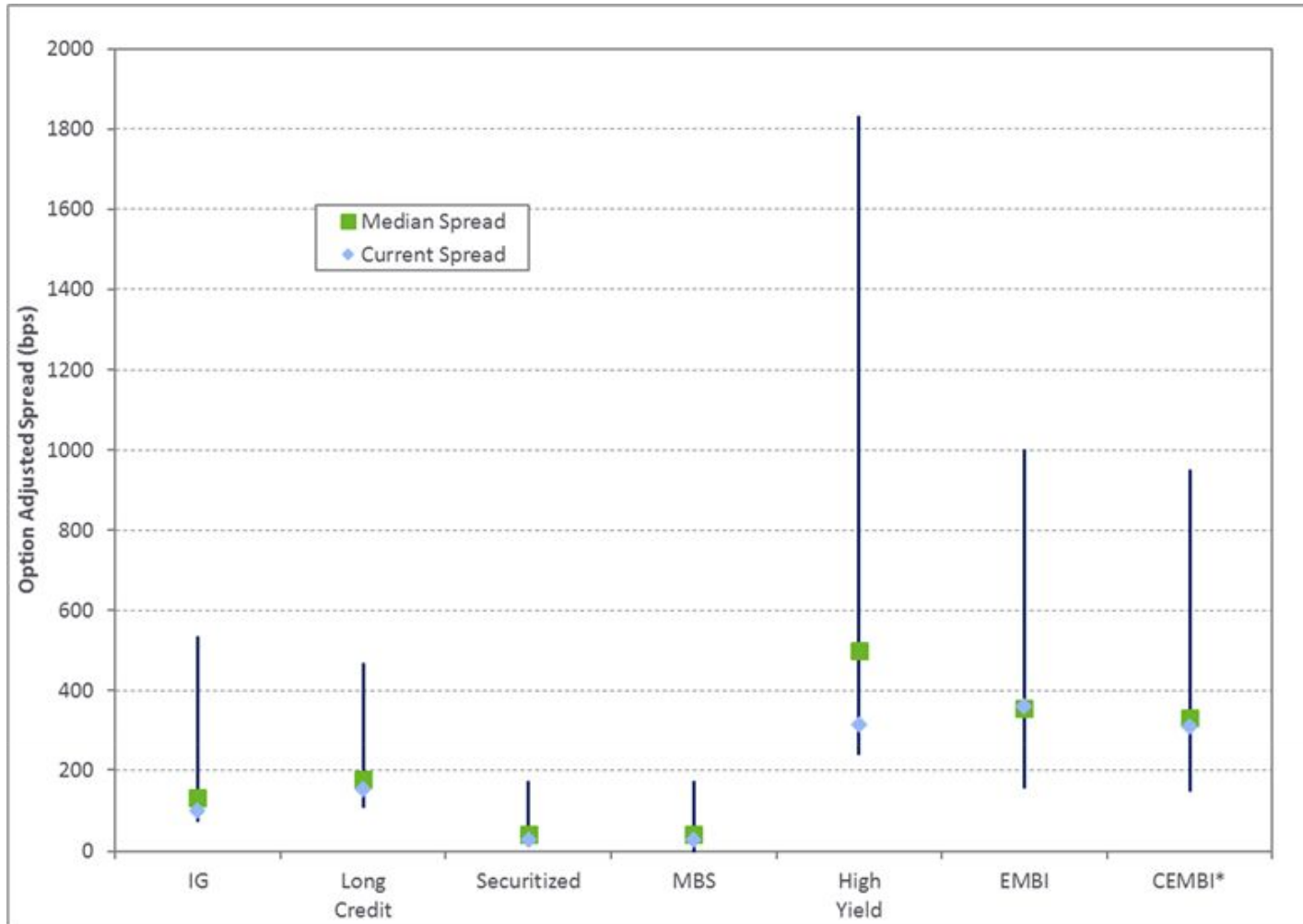
Source: Bloomberg



Source: Bloomberg



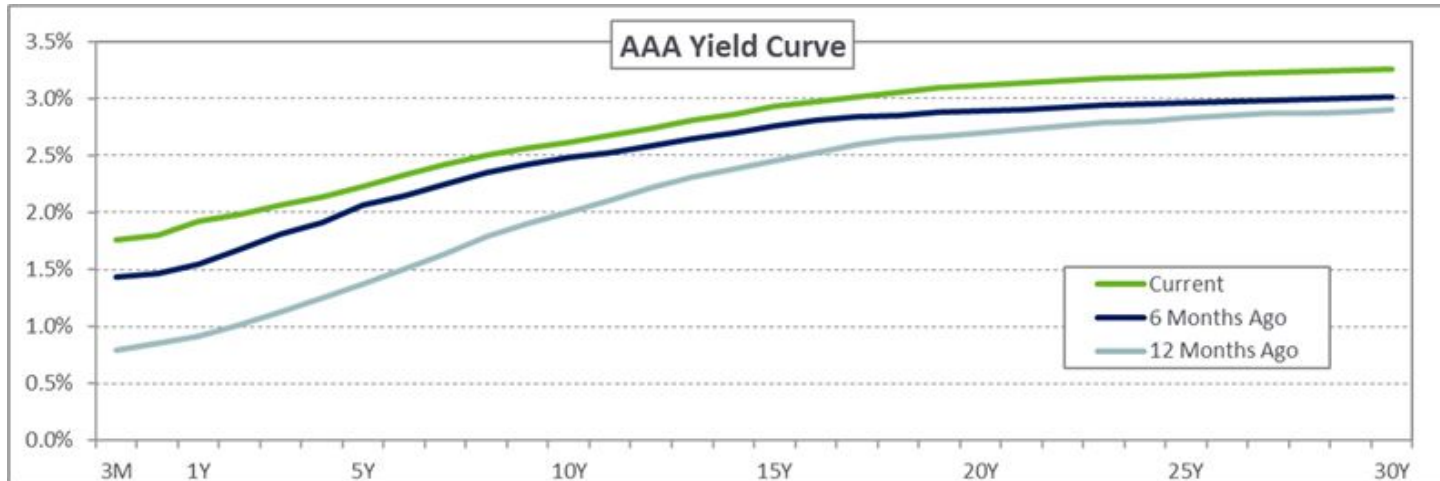
CREDIT SPREADS



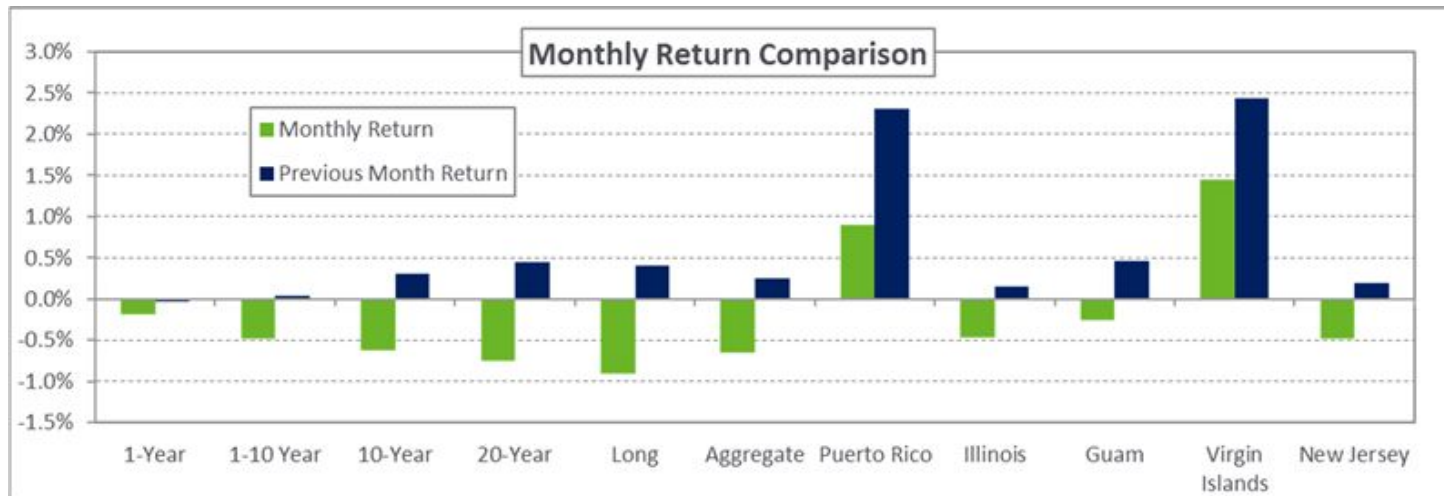
Source: Barclays, JPM, Bloomberg
 Data range: 01/31/2000 through month-end
 *JPM CEMBI calculated since 12/31/2001



MUNICIPAL BONDS



Source: Bloomberg



Source: Barclays, Bloomberg



MUNICIPAL BOND YIELDS



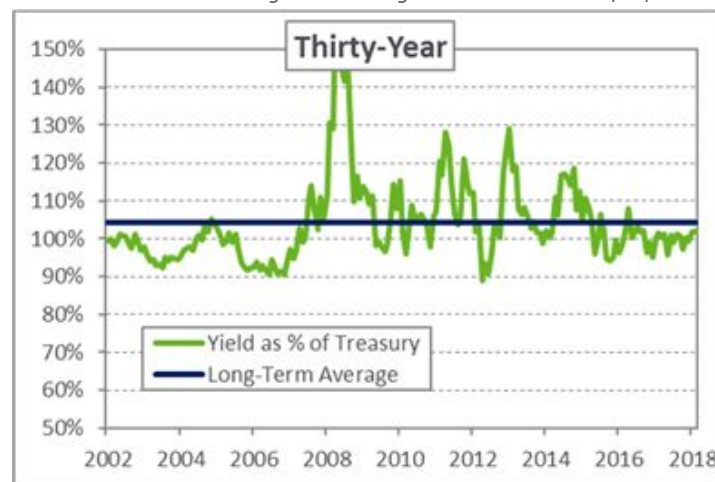
Source: Bloomberg
Long-term average calculated since 08/30/2002



Source: Bloomberg
Long-term average calculated since 08/30/2002



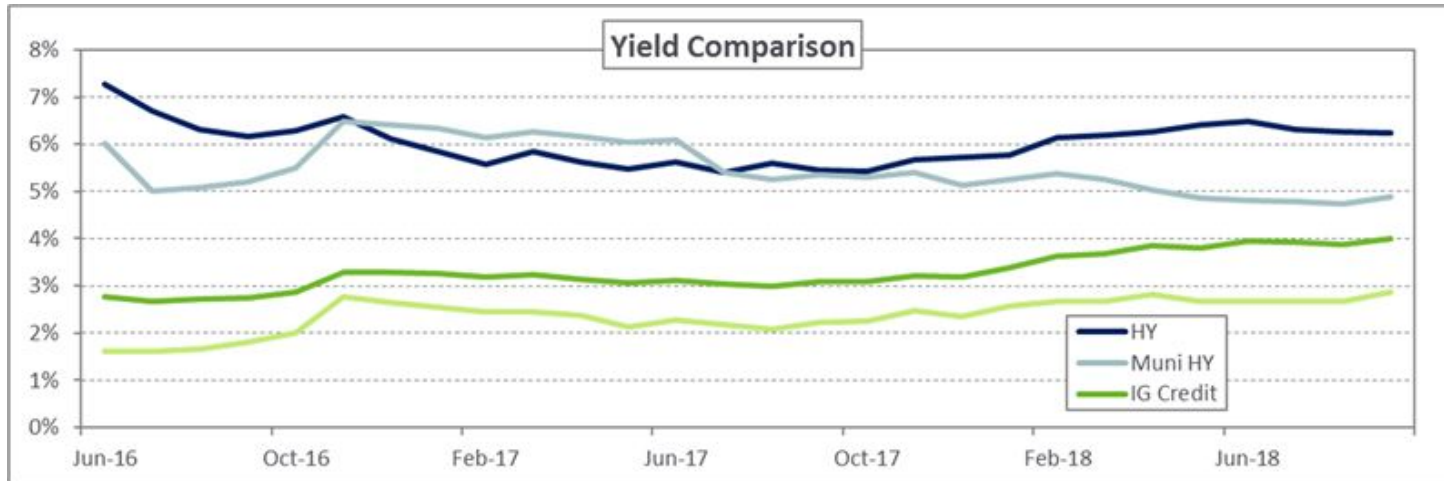
Source: Bloomberg
Long-term average calculated since 08/30/2002



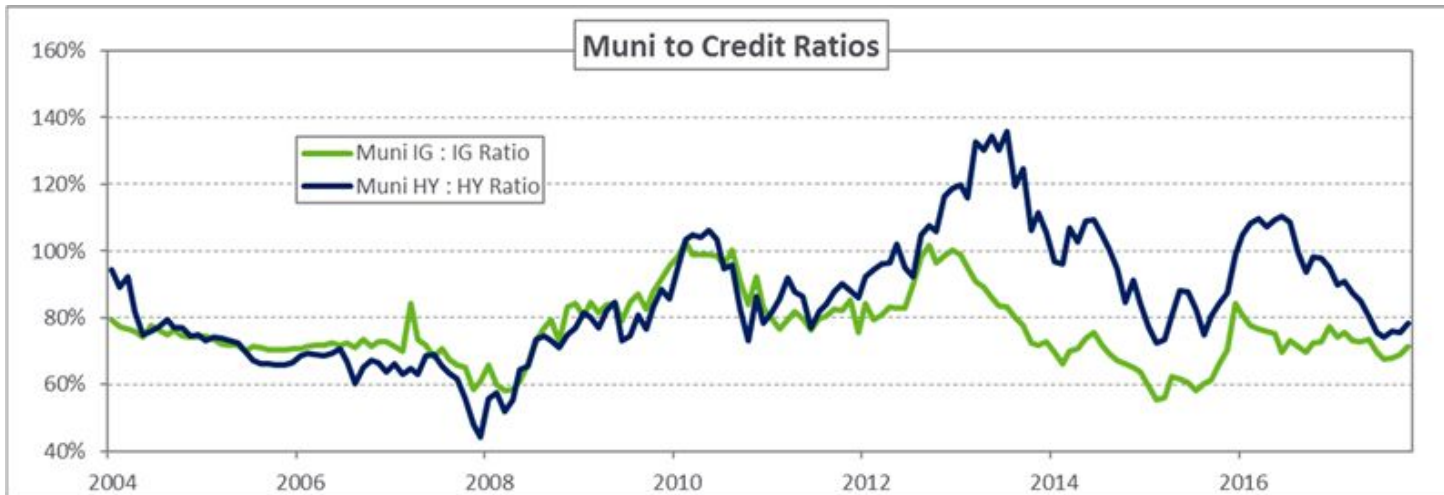
Source: Bloomberg
Long-term average calculated since 08/30/2002



MUNICIPAL BOND RATIOS



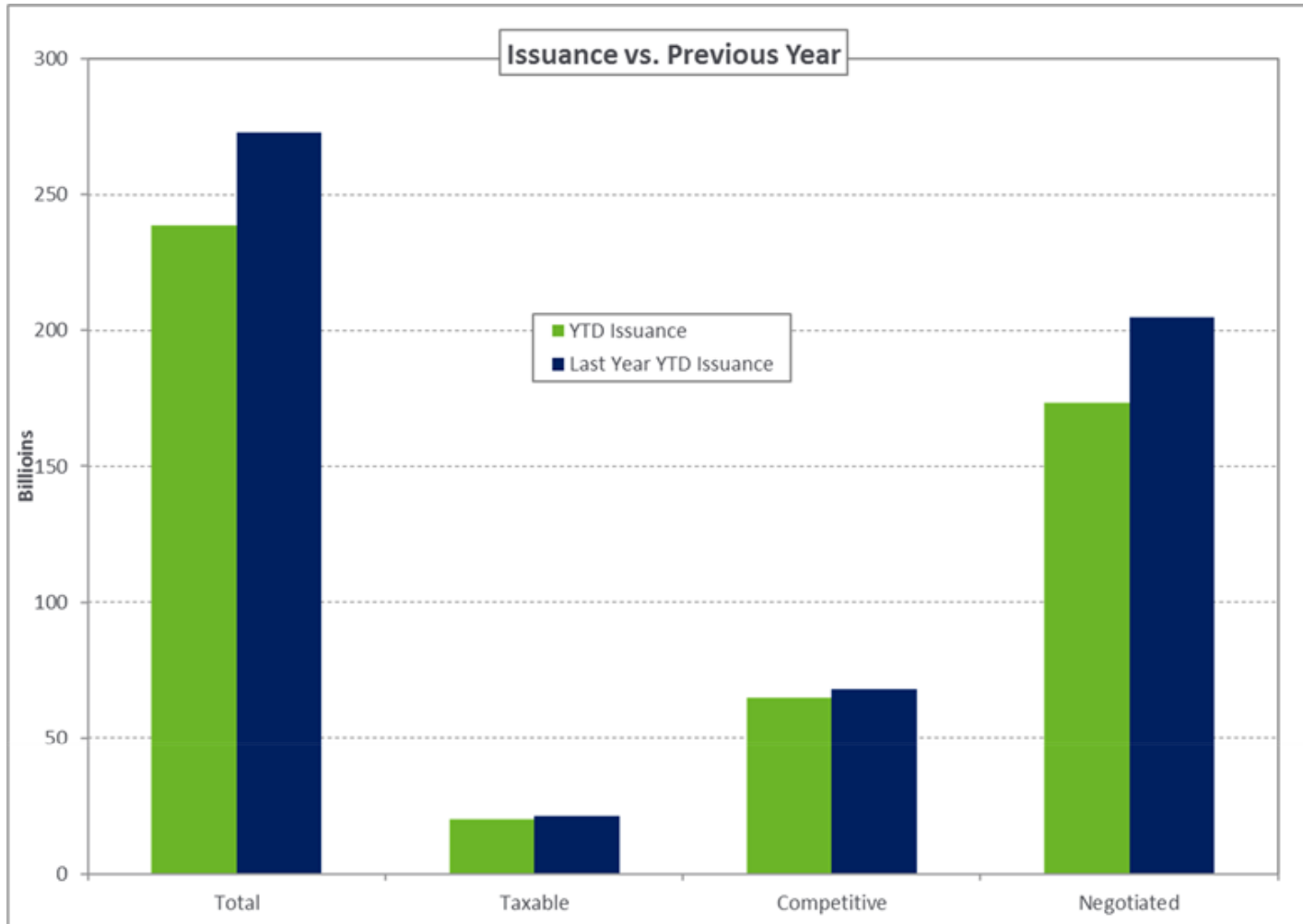
Source: Barclays, Bloomberg



Source: Barclays, Bloomberg, NEPC



MUNICIPAL BOND ISSUANCE



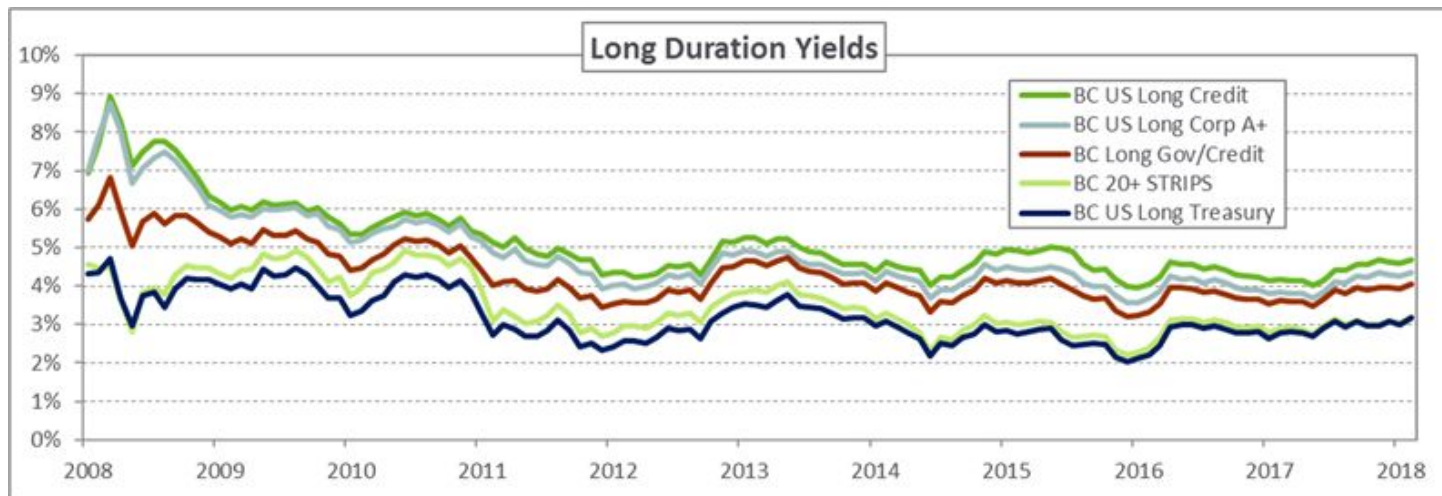
Source: Bloomberg



LONG DURATION

Index	Month-End Yield	1 Month Prior Yield	1 Year Prior Yield	Duration
Barclays Long Treasury	3.2%	3.0%	2.8%	17.0
Barclays 20+ STRIPS	3.2%	3.0%	2.9%	25.3
Barclays Long Gov/Credit	4.1%	3.9%	3.6%	14.8
Barclays Long Credit	4.7%	4.6%	4.2%	13.4
Barclays Long Corp A+	4.4%	4.3%	3.8%	14.1

Source: Barclays, Bloomberg



Source: Barclays, Bloomberg



REAL ASSETS

NEPC, LLC

REAL ASSETS INDEX PERFORMANCE

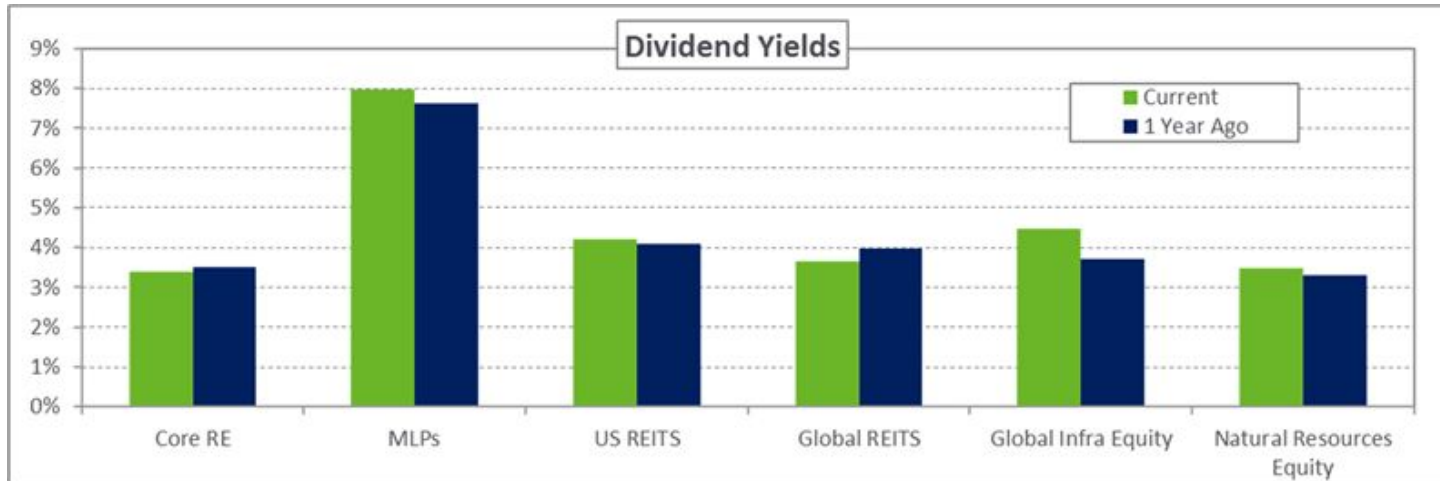
Index	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
Bloomberg Commodity Index	1.9%	-2.0%	-2.0%	2.6%	-0.1%	-7.2%
Bloomberg Sub Agriculture Index	-2.1%	-5.4%	-10.9%	-12.7%	-7.5%	-10.0%
Coffee	0.8%	-13.0%	-24.1%	-26.9%	-13.9%	-10.9%
Corn	-2.2%	-4.0%	-7.1%	-11.4%	-12.6%	-13.6%
Cotton	-7.0%	-8.5%	-0.4%	14.4%	9.0%	-0.8%
Soybean	0.2%	-3.9%	-15.8%	-18.2%	-5.5%	-6.3%
Soybean Oil	0.8%	-2.5%	-16.2%	-15.9%	-3.0%	-10.8%
Sugar	-1.0%	-14.1%	-31.6%	-26.2%	-9.5%	-17.9%
Wheat	-6.5%	-1.7%	6.2%	-2.5%	-13.7%	-15.3%
Bloomberg Sub Energy	5.2%	4.4%	17.6%	28.1%	0.4%	-12.7%
Brent Crude	7.3%	5.8%	30.1%	55.1%	11.1%	-11.1%
Heating Oil	4.7%	6.2%	17.0%	33.2%	7.4%	-8.3%
Natural Gas	2.5%	2.9%	-0.1%	-11.9%	-18.2%	-20.2%
Unleaded Gas	5.6%	5.5%	14.6%	30.3%	4.6%	-8.2%
WTI Crude Oil	5.8%	3.3%	27.2%	47.6%	3.1%	-14.8%
Bloomberg Sub Industrial Metals	2.2%	-6.9%	-11.8%	-2.4%	7.9%	-1.4%
Aluminum	-2.5%	-2.5%	-6.8%	0.3%	8.3%	-0.9%
Copper	5.2%	-5.7%	-16.0%	-6.5%	4.5%	-4.4%
Nickel	-1.6%	-15.6%	-1.5%	19.5%	5.3%	-3.3%
Zinc	7.8%	-6.2%	-18.2%	-13.4%	16.3%	5.7%
Bloomberg Sub Precious Metals	-0.3%	-6.0%	-10.7%	-8.8%	1.0%	-4.2%
Gold	-0.7%	-5.0%	-9.4%	-7.7%	1.5%	-2.7%
Silver	1.2%	-9.3%	-14.8%	-12.6%	-0.8%	-8.7%
Bloomberg Sub Livestock	7.9%	2.9%	-2.4%	0.8%	-1.8%	-2.7%
Lean Hogs	15.1%	-0.9%	-8.8%	-1.7%	-7.8%	-9.5%
Live Cattle	5.2%	5.1%	0.6%	1.6%	1.5%	1.4%

Source: Bloomberg

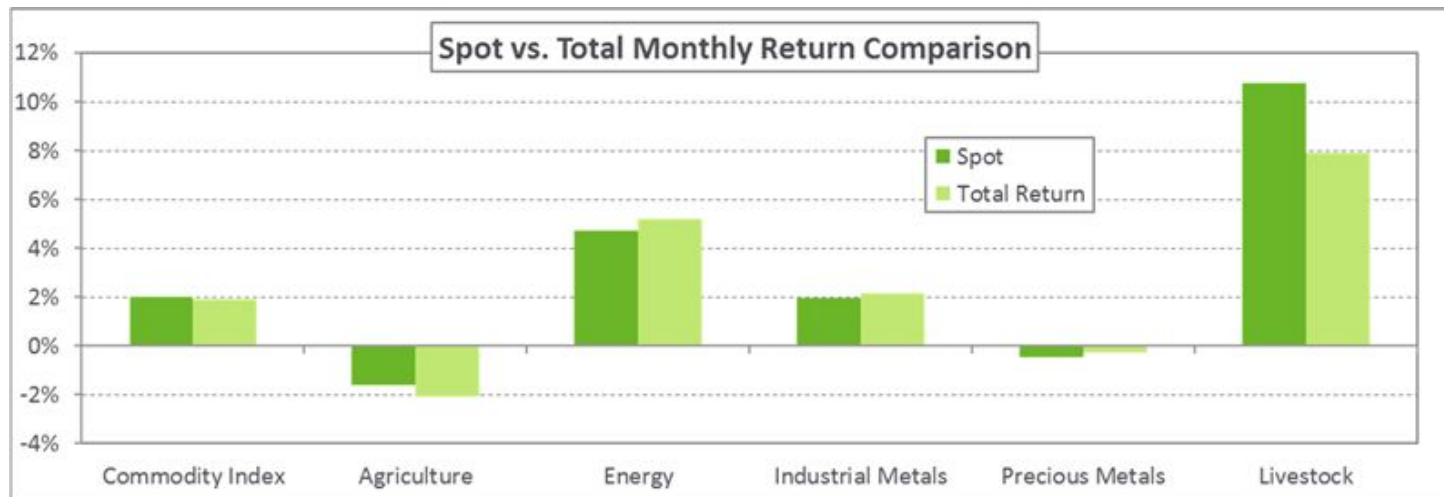
Bloomberg subindex total return indices reflects the return of the underlying one month commodity futures price movements



INCOME YIELD



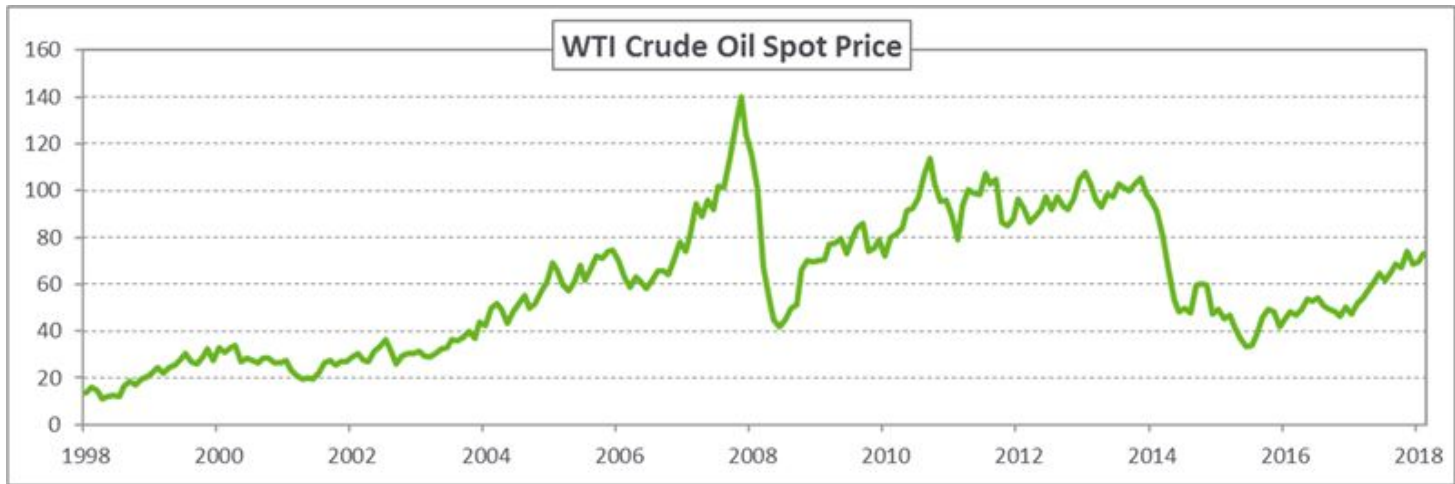
Source: Alerian, NAREIT, S&P, Bloomberg



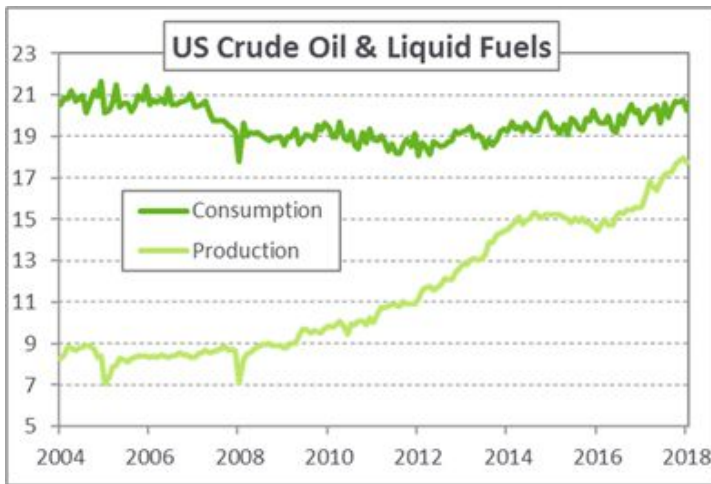
Source: Bloomberg, NEPC



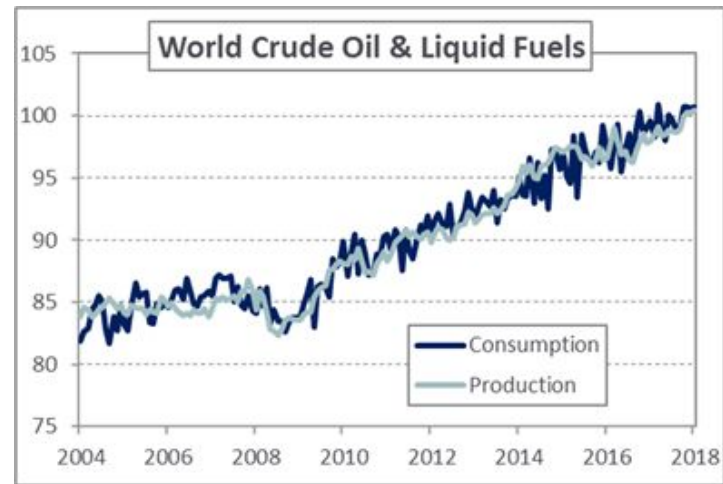
OIL MARKETS



Source: New York Mercantile Exchange, Bloomberg



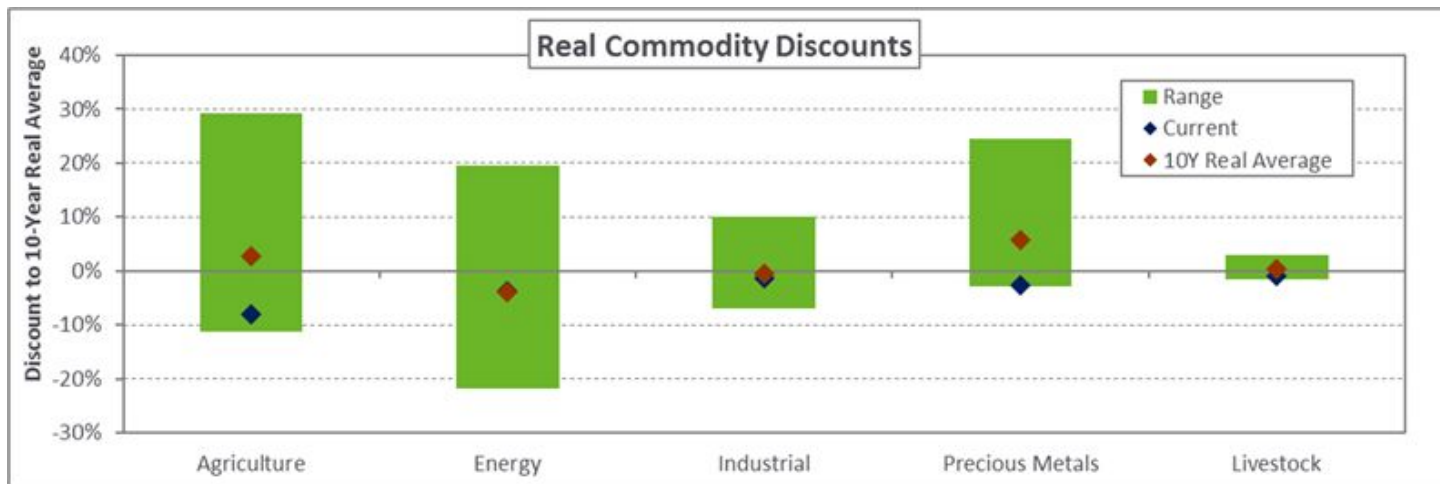
Source: US Department of Energy, Bloomberg



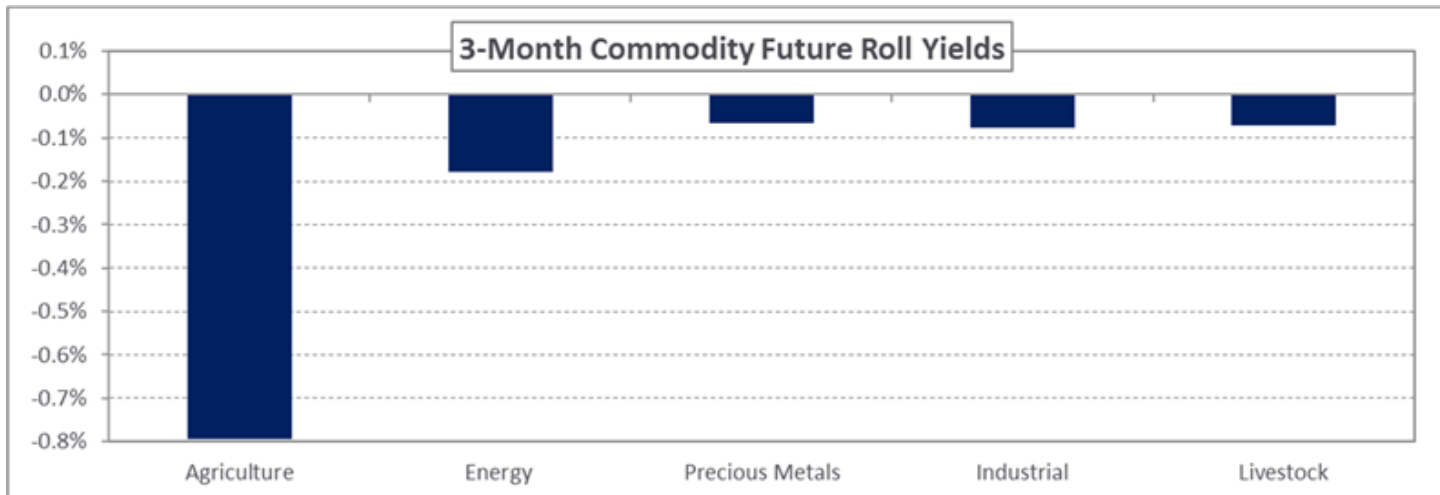
Source: OECD, Bloomberg



VALUATIONS



Source: Bloomberg, NEPC



Source: Bloomberg



GLOSSARY OF INVESTMENT TERMINOLOGY

Alpha - Measures the relationship between the fund performance and the performance of another fund or benchmark index and equals the excess return while the other fund or benchmark index is zero.

Alpha Jensen - The average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. Also known as the abnormal return or the risk adjusted excess return.

Annualized Excess Return over Benchmark - Annualized fund return minus the annualized benchmark return for the calculated return.

Annualized Return - A statistical technique whereby returns covering periods greater than one year are converted to cover a 12 month time span.

Beta - Measures the volatility or systematic risk and is equal to the change in the fund's performance in relation to the change in the assigned index's performance.

Information Ratio - A measure of the risk adjusted return of a financial security, asset, or portfolio.

Formula:

(Annualized Return of Portfolio - Annualized Return of Benchmark)/Annualized Standard Deviation(Period Portfolio Return - Period Benchmark Return). To annualize standard deviation, multiply the deviation by the square root of the number of periods per year where monthly returns per year equals 12 and quarterly returns is four periods per year.

R-Squared - Represents the percentage of a fund's movements that can be explained by movements in an index. R-Squared values range from 0 to 100. An R-Squared of 100 denotes that all movements of a fund are completely explained by movements in the index.

Sharpe Ratio - A measure of the excess return or risk premium per unit of risk in an investment asset or trading strategy.

Sortino Ratio - A method to differentiate between good and bad volatility in the Sharpe Ratio. The differentiation of up and down volatility allows the calculation to provide a risk adjusted measure of a security or fund's performance without upward price change penalties.

Formula:

*Calculation Average (X-Y)/Downside Deviation (X-Y) * 2
Where X=Return Series X Y = Return Series Y which is the risk free return (91 day T-bills)*

Standard Deviation - The standard deviation is a statistical term that describes the distribution of results. It is a commonly used measure of volatility of returns of a portfolio, asset class, or security. The higher the standard deviation the more volatile the returns are.

Formula:

(Annualized Return of Portfolio - Annualized Return of Risk Free) / Annualized Standard Deviation (Portfolio Returns)

Tracking Error - Tracking error, also known as residual risk, is a measure of the degree to which a portfolio tracks its benchmark. It is also a measure of consistency of excess returns. Tracking error is computed as the annualized standard deviation of the difference between a portfolio's return and that of its benchmark.

Formula:

*Tracking Error = Standard Deviation (X-Y) * $\sqrt{(\# \text{ of periods per year})}$
Where X = periods portfolio return and Y = the period's benchmark return
For monthly returns, the periods per year = 12
For quarterly returns, the periods per year = 4*

Treynor Ratio - A risk-adjusted measure of return based on systematic risk. Similar to the Sharpe ratio with the difference being the Treynor ratio uses beta as the measurement of volatility.

Formula:

(Portfolio Average Return - Average Return of Risk-Free Rate)/Portfolio Beta

Up/Down Capture Ratio - A measure of what percentage of a market's returns is "captured" by a portfolio. For example, if the market declines 10% over some period, and the manager declines only 9%, then his or her capture ratio is 90%. In down markets, it is advantageous for a manager to have as low a capture ratio as possible. For up markets, the higher the capture ratio the better. Looking at capture ratios can provide insight into how a manager achieves excess returns. A value manager might typically have a lower capture ratio in both up and down markets, achieving excess returns by protecting on the downside, whereas a growth manager might fall more than the overall market in down markets, but achieve above-market returns in a rising market.

UpsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Period Benchmark Return is > = 0

DownsideCapture = TotalReturn(FundReturns)/TotalReturns(BMReturn) when Benchmark < 0

Data Source: InvestorForce



GLOSSARY OF INVESTMENT TERMINOLOGY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



GLOSSARY OF INVESTMENT TERMINOLOGY

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

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

Derivative Instrument³ - A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.

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

Formula:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



GLOSSARY OF INVESTMENT TERMINOLOGY

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

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

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

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

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

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

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

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

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

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

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

Upside Deviation¹ - Standard Deviation of Positive Returns

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

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

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

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



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- 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 19, 2018

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

SUBJECT: RECOMMENDATION TO EXTEND AGREEMENT WITH BRENWOOD IT DURING I.T. TRANSITION AND THROUGH FISCAL YEAR END, RETROACTIVE TO JANUARY 1, 2018

Dear Board Members:

As the Board is aware, VCERA recently welcomed our new Chief Technology Officer (CTO), Leah Oliver. We are pleased to reach this milestone and to have an in-house dedicated CTO going forward.

For the past several years, Brentwood IT staff has been performing vital functions for VCERA, and has done an outstanding job attending to VCERA's security, networking, and other needs. As staff explained when the 2018-2019 budget was adopted, it is important for a certain "overlap" to take place to help transition the responsibilities fully to Ms. Oliver, and for key knowledge transfer to be successful.

Staff recommends that VCERA continue to engage Jo Ford of Brentwood IT for 1-2 days per week on a part time basis through the end of the 2018 calendar year. After that time, we recommend that the contract remain open through the end of the fiscal year as a means for VCERA staff to consult on an as-needed basis.

The contract with Brentwood I.T. expired on December 31, 2017, and though continued engagement with Brentwood IT was discussed during the budget process, staff did not return to the board to request an approval and an extension past that time. Staff requests that the board approve the contract extension retroactively for this reason.

The services rendered to VCERA by Brentwood I.T. are performed by Jo Ford. Mr. Ford's work began through a contract with Linea, and in 2016, staff arranged to contract directly with Mr. Ford's company, Brentwood I.T. VCERA executed an extension of that contract to the end of 2017 as the delay of CTO hiring continued. Though the budgetary expenditures for outsourced I.T. services were approved by the Board, when the process became prolonged past the term of the extended agreement, staff should then have brought a second extension to the Board for approval. The amount paid from January – September 2018 to Brentwood I.T. is \$94,640 and an additional invoice for \$14,385 for October has been approved for payment. (Note that Mr. Ford helped extensively with the drafting of interview materials and assisting in interviews of the applicants during the hiring process in September and October.)

The expiration of the last contract extension was a staff oversight. Though staff provided the Board with regular updates regarding the progress of filling the I.T. position through the budget process, the business plan and quarterly reports (and staff comment in meetings), staff neglected to bring a contract extension back to the

November 19, 2018

Page 2 of 2

Board for approval at the proper time. As Retirement Administrator, I take responsibility for this and am working with the CFO to update invoice approval procedures to prevent such a circumstance in the future.

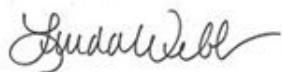
Provided is a chronology of staff communication with the Board regarding the filling of the vacant CTO position to help illustrate the progression.

The cost of such an extension will be covered by salary savings, as well as already budgeted I.T. expenses.

RECOMMENDATION: AUTHORIZE RETIREMENT ADMINISTRATOR TO EXECUTE EXTENSION OF I.T. SERVICES AGREEMENT WITH BRENTWOOD I.T. THROUGH JUNE 30, 2019, RETROACTIVE TO JAN. 1, 2018.

Staff will be pleased to answer any questions at the November 19, 2018 business meeting.

Sincerely,

A handwritten signature in cursive script, appearing to read "Linda Webb".

Linda Webb
Retirement Administrator

AMENDMENT TO THE PROFESSIONAL SERVICES CONTRACT
BY AND BETWEEN
VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
AND
BRENTWOOD IT

This Amendment to the Professional Services Contract effective as of January 1, 201~~8~~⁷ by and between Ventura County Employees' Retirement Association ("Client") and Brentwood IT ("CONTRACTOR") is effective as of J~~anuary~~^{anuary} 1, 201~~8~~⁷.

WHEREAS, the parties to the Agreement desire to amend the Agreement as provided herein;

1. The single sentence in the "Performance Period" section on page 1 of the Agreement is replaced with the following:

This contract will be effective as of January 1, 2017 and will be for the period January 1, 2017 through ~~December-June 30~~^{June 30}, 201~~7~~⁷.

This Amendment shall amend and is incorporated into and made part of the Agreement.

IN WITNESS WHEREOF the parties have caused this Amendment to be executed in duplicate by their duly authorized officers, who represent that they have the authority sufficient to do so, as of the Effective Date.

Brentwood IT

Ventura County Employees' Retirement Association

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____



November 19, 2018

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

SUBJECT: COUNTY REQUEST FOR RECLASSIFICATION OF AIRPORT OPERATIONS OFFICERS FROM SAFETY TO GENERAL MEMBERS, BASED ON CHANGE IN DUTIES AND JOB CLASS SPECIFICATION

Dear Board Members:

Recommended Action: Approve Staff's Recommendation to Reclassify Airport Operations Officers from Safety to General Members, Effective upon County's Adoption of Revised Job Class Specification that Removes Fire Suppression Duties.

Executive Summary

On January 26, 2004, your board took action to reclassify Airport Operations Officers (AOO) from general to safety members, in response to a petition filed by the Ventura County Professional Peace Officers' Association (VCPPOA). At that time, the County desired to maintain Federal Aviation Administration ("FAA") certification for the Oxnard Airport, which required that personnel be prepared to provide initial response to aircraft fires. The board's decision was based on a recent Court of Appeal decision which held that airport personnel whose duties included emergency fire response satisfy the criteria for safety membership, even though such personnel are rarely called upon to exercise those duties. The County prefers to no longer maintain FAA certification for the Oxnard Airport and has proposed a revised Class Specification for the AOO position to remove fire suppression duties. The County has asked VCERA to confirm that the job duties under the proposed Job Specification would no longer meet the criteria for safety member status upon the removal of these specific responsibilities. County HR's proposed revised Job Class Specification indicates that the AOO position would no longer include fire suppression duties and, in the absence of those duties, would not meet the safety member criteria. On that basis, upon County adoption of the new Class Specification, staff recommends that the Board reclassify members in the AOO position as general members at such time as the County adopts the revised Job Class Specification.

Background

In 1993, your board considered a request by VCPPOA to have the AOO position reclassified from general to safety membership in VCERA. At that time, the request was denied because it was determined that the duties of the position did not satisfy the criteria for safety membership, as the AOO positions were not part of the fire department and rarely, if ever, were called upon to respond to fires. In 2002, the California Court of Appeal issued a decision in the case of *City of Oakland v. Public Employees' Retirement System* (2002) 95 Cal.App.4th 29 ("*City of Oakland*") holding that Airport Servicemen, who were not part of the Oakland Fire Department but whose duties required them to respond to fires and provide fire rescue services, are deemed to be principally engaged in fire suppression and, therefore, entitled to safety membership, even though such personnel may rarely, or never, be called upon to act in case of an aircraft fire. The court explained that the term "principal duties" means important duties, not frequent duties.

November 19, 2018
AOO Reclass Request
Page 2 of 3

On September 9, 2003, following this court decision, VCPPOA submitted to your board a petition for reclassification of AOOs to safety membership. At that time, the job duties of the AOO position included initial aircraft rescue and firefighting response duties at the Oxnard Airport until the Oxnard Fire Department arrives on the scene to assume primary fire suppression duties and rescue services.¹ The AOO fire suppression duties satisfied the Federal Aviation Rule ("FAR") part 139 requirement for aircraft rescue and firefighting ("ARFF") response for aircraft accidents as required by the Federal Aviation Administration ("FAA") for airline carrier incidents. The County of Ventura then engaged in discussions with VCPPOA and on December 17, 2003, submitted to your board a letter indicating no objection to the petition and requesting that the AOOs be reclassified as safety members, retroactive to eight years. Based on the reasoning in the court's decision in *City of Oakland*, your board granted the petition, and applied the reclassification retroactive to eight years.

Recently, the County of Ventura has indicated that it no longer desires to maintain its FAA certification at the Oxnard Airport, and will no longer require that AOOs be prepared to respond to fires or provide fire rescue services. Accordingly, the County Human Resources division has proposed a revised Job Class Specification for the AOO position to remove fire suppression duties, and has asked VCERA to advise as to whether the proposed AOO duties would result in a reclassification of the position from safety to general membership. As explained in the analysis below, and in consultation with its General Counsel, VCERA staff believe that the duties in the proposed Job Specification for the AOO position would no longer meet the criteria for safety membership and, therefore recommend reclassification to general membership at such time as the proposed Job Description is made final.

Discussion

Eligibility for safety membership is determined under the criteria set forth in the County Employees Retirement Law of 1937 ("CERL"), Government Code section 31450, et seq. (All further statutory references are to the Government Code, unless otherwise noted.) Pursuant to section 31470.8, "In cases of doubt as to whether a person is eligible to become a safety member, the board shall decide."

Section 31469.3 defines the term "safety member" and provides, in pertinent part, "Safety member" means any person who is any of the following:

...

(b) Any person employed by a county, subject to Section 31676.1 or 31695.1 or by a district or court organized or existing within such a county, whose principal duties consist of active law enforcement or active fire suppression as described in Section 31470.2 and 31470.4"

Section 31470.4 identifies the persons eligible for safety membership based on firefighting duties, and provides:

"All county foresters, county firewardens, deputies or assistant county foresters, deputies or assistant county firewardens, firefighters, fire apparatus engineers, fire prevention inspectors, forest firemen, fire patrolmen, aircraft pilots, and foremen assigned to fire suppression crews, all other personnel assigned to active fire suppression in any county forester's or county firewarden's department and all officers, engineers, and firemen of any county fire protection district, and all other personnel assigned to active fire suppression in any county fire protection district are eligible."

¹ The AOOs have been trained to provide ARFF response at Oxnard Airport only. However, due to shift flexibility considerations, the ARFF training requirement was extended to all AOO positions and any of the AOOs were subject to assignment at either the Oxnard or Camarillo airport.

November 19, 2018
AOO Reclass Request
Page 3 of 3

Section 31470.5 identifies the persons who are employed in positions related to firefighting but who are deemed ineligible for safety membership. This section provides:

“Bookkeepers, stenographers, cooks, laborers, county fire protection district fire foremen, call firemen, and firefighters whose principal duties clearly do not fall within the scope of active fire suppression, even though the person is subject to occasional call, or is occasionally called upon, to perform duties within the scope of active fire suppression, and volunteer employees, honorary deputy county foresters, honorary deputy county firewardens, and voluntary firewardens holding appointments as such who receive no compensation therefor and who do not regularly perform official duties, are ineligible.”

Under the revised proposed Job Specification for the AOO position, the AOOs will continue to provide assistance in emergencies, including aircraft incidents/accidents, but will no longer have any responsibility for providing firefighting services. County Human Resources has confirmed that the AOOs will neither go through firefighter training or drills, nor be required to provide initial firefighter response for aircraft incidents or accidents. VCPPOA has agreed not to oppose the County’s proposed revisions to remove first responder responsibilities for firefighting duties from the AOO classification specification. This agreement has been memorialized in the most recent labor agreement between the County and VCPPOA. The agreement provides that in the event VCERA reclassifies the AOO position to general member status, the base salary range for the AOO will be increased by 17%. (See Section 501 D.)

Staff believes that the revised proposed Job Specification, as supplemented by County Human Resources confirmation that the AOO position would no longer include training for or engagement in first responder firefighting duties, would result in ineligibility for safety member status. Under the proposed Job Class Specification, the AOOs would no longer be engaged in “active fire suppression” as described in Section 31470.4, as firefighting would no longer be one of their principal duties. Accordingly, staff recommends that your board reclassify Airport Operations Officers from safety to general members, effective upon County’s adoption of revised job class specification that removes fire suppression duties.

Staff will be happy to answer any questions at the November 19, 2018 disability meeting.

Sincerely,



Linda Webb
Retirement Administrator



AIRPORT OPERATIONS OFFICER

Class Code:
01656

Bargaining Unit: Ventura County
Professional Peace Officers Association

VENTURA COUNTY
Established Date: Feb 25, 1996
Revision Date: ~~TBD~~ ~~Mar 13, 2015~~

SALARY RANGE

\$20.50 - \$26.22 Hourly
\$1,640.27 - \$2,097.72 Biweekly
\$3,553.91 - \$4,545.07 Monthly
\$42,646.91 - \$54,540.84 Annually

DEFINITION:

Under supervision, patrols at both County airports (Camarillo & Oxnard); monitors operations; provides security, safety, and emergency assistance when needed; greets, assists and provides information to the public in the performance of routine duties and special assignments; assures compliance with airport rules, regulations and ordinances and performs related work as required.

EXAMPLES OF DUTIES:

Duties may include, but are not limited to the following:

- Performs daily operations activities at either one of two county-operated **general aviation** airports. ~~(a general aviation airport and a non-hub commercial service airport.)~~
- Conducts airfield inspections.
- Responds to **and assists with** aircraft incidents/accidents.
- Coordinates and monitors various activities of ~~commuter airlines~~, Fixed-Based Operators (FBOs), hangar owner/renters, leasing tenants, FAA, and the general public.

- Maintains familiarity with federal, state, and local aviation rules and regulations.
- Issues Notices to Airmen (NOTAMs).
- Monitors airfield security.
- Administers vehicle paid parking lot and parking regulations.
- Assists callers/visitors and promotes good public relations.
- Completes airport research/administrative projects as assigned.

QUALIFICATION GUIDELINES:

Knowledge, Skills, and Abilities:

Working knowledge of: County ordinances and state and federal codes governing airport operations; security regulations; safety, first aid, and life saving techniques; basic ~~firefighting techniques and~~ law enforcement; and specialized equipment and its use.

Working ability to: read and follow written and/or oral instructions; effectively communicate orally and in writing; make decisions quickly and independently in emergency situations; collect and account for facility use fees; establish and maintain effective relationships with fellow employees and the public; perform with maximum exertion in an emergency.

Supplemental Information:

May be required to work rotating shifts, including nights, weekends and holidays. May be required to wear a uniform during working hours.

RECRUITING STANDARDS:

Education/Experience:

To qualify for this classification, an individual must possess any combination of experience and education that would likely produce the required knowledge, skills and abilities. An example of a qualifying education/experience is:

A minimum of six months experience working at a general aviation, military or commercial service airport. The following may be substituted for the requisite experience: one (1) year experience working at an airport aviation business that provides services such as aircraft maintenance, fueling of aircraft, aircraft charter or flight training; or completion of an airport internship, or one year of college-level course work (30 units) in airport/aviation administration (or equivalent).

Knowledge of Federal Aviation Regulations (FAR) required.

A degree in airport/aviation administration/management is highly desirable.

OTHER REQUIREMENTS:

Special Requirements:

Within the first six months of employment, the following must be completed/obtained:

- FAA approved private pilot ground school course
- ~~Part 139 ARFF training (within the first six months, or as needed)~~
- Basic First Aid Certificate
- Certificate in cardiopulmonary resuscitation (CPR) issued by the American Red Cross.
- Possession and maintenance of a valid California driver license is required at time of hire.



AIRPORT OPERATIONS OFFICER

Class Code:
01656

Bargaining Unit: Ventura County
Professional Peace Officers Association

VENTURA COUNTY
Established Date: Feb 25, 1996
Revision Date: TBD

SALARY RANGE

\$20.50 - \$26.22 Hourly
\$1,640.27 - \$2,097.72 Biweekly
\$3,553.91 - \$4,545.07 Monthly
\$42,646.91 - \$54,540.84 Annually

DEFINITION:

Under supervision, patrols at both County airports (Camarillo & Oxnard); monitors operations; provides security, safety, and emergency assistance when needed; greets, assists and provides information to the public in the performance of routine duties and special assignments; assures compliance with airport rules, regulations and ordinances and performs related work as required.

EXAMPLES OF DUTIES:

Duties may include, but are not limited to the following:

- Performs daily operations activities at either one of two county-operated general aviation airports.
- Conducts airfield inspections.
- Responds to and assists with aircraft incidents/accidents.
- Coordinates and monitors various activities of Fixed-Based Operators (FBOs), hangar owner/renters, leasing tenants, FAA, and the general public.
- Maintains familiarity with federal, state, and local aviation rules and regulations.

- Issues Notices to Airmen (NOTAMs).
- Monitors airfield security.
- Administers vehicle paid parking lot and parking regulations.
- Assists callers/visitors and promotes good public relations.
- Completes airport research/administrative projects as assigned.

QUALIFICATION GUIDELINES:

Knowledge, Skills, and Abilities:

Working knowledge of: County ordinances and state and federal codes governing airport operations; security regulations; safety, first aid, and life saving techniques; law enforcement; and specialized equipment and its use.

Working ability to: read and follow written and/or oral instructions; effectively communicate orally and in writing; make decisions quickly and independently in emergency situations; collect and account for facility use fees; establish and maintain effective relationships with fellow employees and the public; perform with maximum exertion in an emergency.

Supplemental Information:

May be required to work rotating shifts, including nights, weekends and holidays. May be required to wear a uniform during working hours.

RECRUITING STANDARDS:

Education/Experience:

To qualify for this classification, an individual must possess any combination of experience and education that would likely produce the required knowledge, skills and abilities. An example of a qualifying education/experience is:

A minimum of six months experience working at a general aviation, military or commercial service airport. The following may be substituted for the requisite experience: one (1) year experience working at an airport aviation business that provides services such as aircraft maintenance, fueling of aircraft, aircraft charter or flight training; or completion of an airport internship, or one year of college-level course work (30 units) in airport/aviation administration (or equivalent).

Knowledge of Federal Aviation Regulations (FAR) required.

A degree in airport/aviation administration/management is highly desirable.

OTHER REQUIREMENTS:

Special Requirements:

Within the first six months of employment, the following must be completed/obtained:

- FAA approved private pilot ground school course
- Basic First Aid Certificate
- Certificate in cardiopulmonary resuscitation (CPR) issued by the American Red Cross.
- Possession and maintenance of a valid California driver license is required at time of hire.

Said increase to the salary range shall be effective before any other increases to the salary range that may occur on this date.

D. Airport Operations Officers (Class Code 01656)

VCPPOA shall not oppose the County's proposed revisions to remove first responder responsibilities concerning firefighting duties from the Airport Operations Officer classification (class code 01656). In the event VCERA reclassifies the Airport Operations Officer classification, and its incumbents, to general member status of the Ventura County retirement system as a result of the removal of first responder responsibilities, the base pay/salary range of the Airport Operations Officer classification and the base pay/salary range of each individual employed in said classification at the time of the change, shall be increased by seventeen percent (17%), effective the same pay period the County's Auditor-Controller's office implements VCERA's decision/change to general member status. In the event VCERA subsequently reverses such a decision and reclassifies the Airport Operations Officer classification to safety member status, the seventeen percent (17%) increase shall be removed from the base pay/salary range of the Airport Operations Officer classification and the base pay/salary of each individual employed in said classification, effective the same pay period the County's Auditor-Controller's office implements VCERA's decision/change.

- Sec. 502 COMPENSATION SCHEDULE: Except as otherwise provided herein, employees shall be compensated within the pay range assigned to the classification of the position in which they are employed and in accordance with the pertinent conditions of employment enumerated in this Agreement.
- Sec. 503 REGULAR PAY DAY: Employees shall be paid on or about the Friday following the end of the biweekly payroll period.
- Sec. 504 PAY ON TERMINATION: Upon certification of the Director-Human Resources that the employment of any employee is terminated, the compensation for such persons shall become due and shall be paid the regular pay day of the pay period following the pay period in which the termination date occurred.
- Sec. 505 PAY FOR LESS THAN FULL TIME SERVICES OF REGULAR EMPLOYEES: Premium pay will also be paid to regular less than full time employees on the same basis as full time employees except that when



November 19, 2018

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

SUBJECT: AUTHORIZATION FOR DISABILITY SPECIALISTS DONNA EDWARDS AND NANCY JENSEN TO ATTEND A WORKERS' COMPENSATION WORKSHOP ON DECEMBER 6 - 7, 2018, IN PASADENA, CALIFORNIA

Dear Board Members:

Staff requests authorization for Disability Specialists, Donna Edwards and Nancy Jensen, to attend a Workers' Compensation workshop on December 6-7, 2018. The estimated cost for both employees to attend is approximately \$2,000, including, registration, hotel, meals and other related expenses.

VCERA staff will be pleased to respond to any questions you may have on this matter at the November 19, 2018 business meeting.

Sincerely,

Linda Webb
Retirement Administrator



WC 006 INTRODUCTION TO WORKERS' COMPENSATION CL

WORKSHOP

In this Introduction to Workers's Compensation, you will gain a basic understanding of the tenets of workers' compensation. It is recommended for individuals planning to enroll in IEA's Workers' Compensation Claims Administration (WCCA) Certificate program or for anyone wanting a general overview of the California workers' compensation system. This program provides an overview of the basic principles and terminology of workers' compensation.

This is a live and in person 2 day workshop. Prior to the workshop you will need to login to your learning dashboard to access download your course materials to bring to the class. After the course is finished, you will need to again login to complete the course survey. Once this is done, you can download your certificate of attendance.

2

Key Takeaways:

- Exploring history of the California workers' compensation claims system
- Understanding benefits provided
- Learning workers' compensation claims terminology
- Comprehend concepts and processes of AOE/COE, medical treatment, temporary and permanent disability, and the litigation process

Who should attend:

- Anyone new to the workers' compensation claims field
- Insurance company and producer staff
- Self-insured or TPA claims staff
- Health providers/HR
- Anyone needing general knowledge of the current California workers' compensation claims system

Course Credit Hours

Fire/Casualty – CA – 15 Hours

CA-WC-CERT – 15 Hours

CPCU – 15 Hours

CPDM – 12 Hours

10/24/2018

WC 006 - Intro to Workers' Compensation Claims - IEA Training

CCMP – 12 Hours

MCLE: Recommended Hours 15 Available by individual submission by student to State Bar Association.

Prerequisite

Required Materials

Materials Included but must be downloaded from your student dashboard prior to the class



CLASSROOM COURSE

Instructor

Robert Cornelow

Course Type

Workshop

Dates & Times

12/6/2018,

12/7/2018

8:30am to 5:00 pm

2

Location

University of Phoenix

299 N Euclid Ave, Room 301

Pasadena CA 91101

[+ Google Map](#)

WC006 FA18 GV CORNELOW

Price

\$423.00

Paying by check? Hit "Enroll", then "Check" then for payment method select "Pay by check"

ENROLL

[Pay by Check](#)

10/24/2018

WC 006 - Intro to Workers' Compensation Claims - IEA Training

Instructor

Carmen Angeles

Course Type

Workshop

Dates & Times

12/6/2018,

12/7/2018

8:30 am to 5:00 pm

Location

Cal State University East Bay Oakland

1000 Broadway, Suite 109

Oakland, CA 94607

[+ Google Map](#)

FA18: WCo06 OAK ANGELES

Price

2

\$423.00

Paying by check? Hit "Enroll", then "Check" then for payment method select "Pay by check"

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10/24/2018

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News

Santa Ana, CA 92704

About

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November 19, 2018

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

SUBJECT: 2019 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 2019 annual investment presentations. The other is a proposed calendar of 2019 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 FY2019-2020 Budget.

IT IS RECOMMENDED THAT THE BOARD APPROVE:

- 1. THE PROPOSED 2019 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

Meeting Date	Material Deadline	Meeting	Presentations	Items
1/7/2019	12/28/2018	Disability		PAS Monthly Report
1/28/2019	1/18/2019	Business	Prudential - PRISA	November and December 2018 <i>Monthly</i> Investment Performance Reports - NEPC
2/11/2019	2/1/2019	Disability		
2/25/2019	2/15/2019	Business	Adams Street	Q4 Investment Performance Report - NEPC January <i>Monthly</i> Investment Performance Report - NEPC
3/11/2019	3/1/2019	Disability		
3/25/2019	3/15/2019	Business	Pantheon HarbourVest UBS Real Estate	February <i>Monthly</i> Investment Performance Report - NEPC
4/15/2019	4/5/2019	Disability & Business	Sprucegrove State Street Abbott	March <i>Monthly</i> Investment Performance Reports - NEPC Private Equity Report- Abbott
5/6/2019	4/26/2019	Disability		
5/20/2019	5/10/2019	Business	Tortoise Bridgewater	April <i>Monthly</i> Investment Performance Reports - NEPC Q1 Investment Performance Report - NEPC
6/3/2019	5/24/2019	Disability		
6/17/2019	6/7/2019	Business	Parametric	May <i>Monthly</i> Investment Performance Report- NEPC
7/1/2019	6/21/2019	Disability		
7/15/2019	7/5/2019	Business	Walter Scott Hexavest	June <i>Monthly</i> Investment Performance Report - NEPC
9/9/2019	8/30/2019	Disability		
9/23/2019	9/13/2019	Business	Board Retreat	Q2 Performance Report - NEPC July & August <i>Monthly</i> Performance - NEPC
10/7/2019	9/27/2019	Disability		
10/21/2019	10/11/2019	Business	Reams Western Abbott	September <i>Monthly</i> Investment Performance Report - NEPC
11/4/2019	10/25/2019	Disability		
11/18/2019	11/8/2019	Business	Blackrock	Q3 Performance Report - NEPC; Annual Private Investments report - Abbott October <i>Monthly</i> Investment Performance Report - NEPC
12/9/2019	11/29/2019	Disability & Business	Loomis Sayles	

DATE	FIRM	LOCATION
1Q2019	Pantheon	San Francisco
1Q2019	NEPC	San Francisco
1Q2019	Nossaman	San Francisco
2Q2019	State Street	Boston, MA
3Q2019	Adams Street	Chicago
3Q2019	Parametric	Minneapolis, MN
4Q2019	UBS	CT
4Q2019	Bridgewater	CT

Public Fund Universe Analysis

Ventura County Employees' Retirement Association

Period Ending June 30, 2018

Fund Number: 52



RVK Honored to Receive *Greenwich Quality Leader Award*

- **Greenwich Associates* conducted interviews with over 1,000 senior professionals of large plan sponsors and ranked opinions of their investment consulting relationships on a series of key metrics, including, but not limited to:**
 - Understanding Clients' Goals and Objectives
 - Advice on Long-term Asset Allocation
 - Proactive Advice and Innovative Ideas
 - Credibility with the Board and/or Investment Committee
 - Knowledge of Investment Managers
 - Advice on DC Plan Structure and Design
 - Client Satisfaction with Manager Recommendations
 - Responsiveness to Client Requests and Needs
 - Competitive Fees
- **RVK is grateful to be 1 of 3 firms among large US consultants to receive this award for 2017**



As a valued client, we are humbled by your continued confidence and thankful for your support. From all of us here at RVK, thank you for the opportunity to serve you!

*Greenwich Associates is the leading provider of global market intelligence and advisory services to the financial services industry. They conduct an annual survey to institutional investors whereby approx. 1,200 respondents rank their respective investment consulting relationships on key metrics on a scale from 1 (poor) to 5 (excellent). The award is based upon Greenwich Associates' 2017 US Institutional Investors study.

Firm Overview



OVERVIEW

RVK, Inc. ("RVK") was founded in 1985 and is one of the largest independent and employee-owned investment consulting firms in the US, providing world-class investment advice to institutional investors. We serve over 400 plans, including pension plans, defined contribution plans, endowments & foundations, insurance pools, and special purpose funds. In May 2018, RVK received a Greenwich *Quality Leader Award*, demonstrating our high level of client service.

MISSION STATEMENT

To provide best-in-class investment consulting services to a wide array of sophisticated investors.

STRATEGIC INVESTMENT ADVICE WITH NO CONFLICTS OF INTEREST

RVK built its investment consulting practice on the principles of integrity, investment knowledge, client service, and our no conflicts of interest policy. We are exclusively focused on strategic investment consulting services and solely owned by active employees, enabling us to offer advice that is not influenced by other business activities. As a privately-held firm with no affiliates or parent company, we are in control of our business policy, providing firm stability for clients. We offer an extensive slate of consulting services and produce deliverables fully customized to meet each client's needs.

KEY TENETS OF OUR CULTURE





RVK BY THE NUMBERS

- **30+** years of business
- **3** offices - Portland, Chicago, New York
- **\$900+** billion Full-Retainer AUA
- **90+** Investment Professionals
- **60+** Advanced Degrees and Certifications
- **100%** Employee Ownership
- **100%** Revenue Derived from Client Fees
- **100%** Non-Discretionary Services

GENERAL CONSULTING SERVICES

-
- | | |
|--|----------------------------------|
| • Plan Evaluation | • Manager Structure Analysis |
| • Strategic Asset Allocation | • Risk Monitoring and Management |
| • Investment Policy Development & Review | • Client Education |
| • Investment Manager Search & Selection | • Special Projects |
| • Performance Analysis & Reporting | |

SPECIALTY CONSULTING SERVICES

-
- | | |
|--|--|
| • Real Estate Consulting Services | • Outsourced CIO (“OCIO”) Searches, Evaluation, and Ongoing Monitoring |
| • Custody, Record keeper, Third-Party Administrator Searches | • Directed Consulting Services |
| • Asset/Liability Studies | • Fee Reviews |
| • Endowment Spending Policy Studies | • Defined Contribution Solutions Services |
| • Securities Lending Reviews | • Investment Operations Solutions |
| • Pacing Studies | • Board and Investment Program Operational Reviews |
| • Strategic Planning Reviews | |

FOR MORE INFORMATION ABOUT OUR SERVICES, PLEASE CONTACT:

**Business.Development@RVKInc.com
503-221-4200**

Participants

As of June 30, 2018

-
- | | |
|---|---|
| Alameda County Employees' Retirement Association | Anchorage Police & Fire Retirement System |
| Arlington County Employees' Retirement System | California State Teachers' Retirement System |
| Chicago Teachers' Pension Fund | City of Austin Employees' Retirement System |
| City of Fresno Retirement Systems | City of Milwaukee Employees' Retirement System |
| City of Plano Other Post-Employment Benefits Trust | City of Plano Retirement Security Plan |
| Civilian Employees' Retirement System of the Police Department of Kansas City, Missouri | Colorado Public Employees' Retirement Association |
| Confederated Tribes of the Warm Springs Tribal Council Pension Fund | Contra Costa County Employees' Retirement Association |
| County Employees' Annuity & Benefit Fund of Cook County | District of Columbia Retirement Board |
| Employees Retirement System of Texas | Fire & Police Employees' Retirement System of Baltimore |
| Fire and Police Pension Association of Colorado | Fort Worth Employees' Retirement Fund |
| Fresno County Employees' Retirement Association | Georgia Division of Investment Services |
| Gila River Indian Community Retirement Plan | Illinois Municipal Retirement Fund |
| Imperial County Employees' Retirement System | Iowa Public Employees' Retirement System |
| Kansas City, Missouri Employees' Retirement System | Kansas Public Employees' Retirement System |
| Kern County Employees' Retirement Association | Los Angeles City Employees' Retirement System |
| Los Angeles County Employees Retirement Association | Los Angeles Fire and Police Pension System |
| Los Angeles Water & Power Employees Retirement Plan | Marin County Employees' Retirement Association |
| Mendocino County Employees' Retirement Association | Merced County Employees' Retirement Association |
| Montana Public Employees' Retirement System | Montana Teachers' Retirement System |
| Municipal Employees' Annuity and Benefit Fund of Chicago | Municipality of Anchorage Pre-Funding Program |
| Nevada Public Employees' Retirement System | New York State Common Retirement Fund |
| Newport News Employees' Retirement Fund | North Carolina Retirement System |
| Ohio Public Employees' Retirement System | Orange County Employees' Retirement System |
| Pennsylvania Public School Employees' Retirement System | Pennsylvania State Employees' Retirement System |
| Police Retirement System of Kansas City, Missouri | Public Employees Retirement Association of New Mexico |
| Public School and Education ERS of Missouri | Sacramento County Employees' Retirement System |
| San Bernardino County Employees' Retirement Association | San Diego City Employees' Retirement System |
| San Diego County Employees Retirement Association | San Diego Transit Corporation Employees Retirement |
| San Mateo County Employees' Retirement Association | |



Participants

As of June 30, 2018

Sonoma County Employees' Retirement Association
Spokane Employees' Retirement System
State of Michigan Retirement Systems
State Teachers Retirement System of Ohio
Teachers' Retirement System of Louisiana
Texas Municipal Retirement System
Tulare County Employees' Retirement Association
Virginia Retirement System
Wyoming Retirement System

Santa Barbara County Employees' Retirement System
South Dakota Retirement System
Stanislaus County Employees' Retirement Association
State of New Jersey Pension Fund
State Universities Retirement System of Illinois
Teachers' Retirement System of the State of Illinois
The Navajo Nation Retirement Plan
Ventura County Employees' Retirement Association (Fund No. 52)
West Virginia Investment Management Board



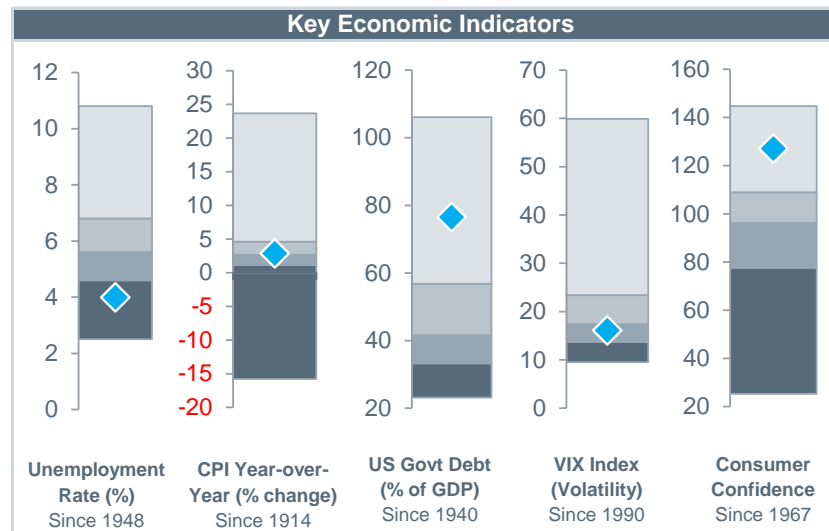
Capital Markets Review

As of June 30, 2018

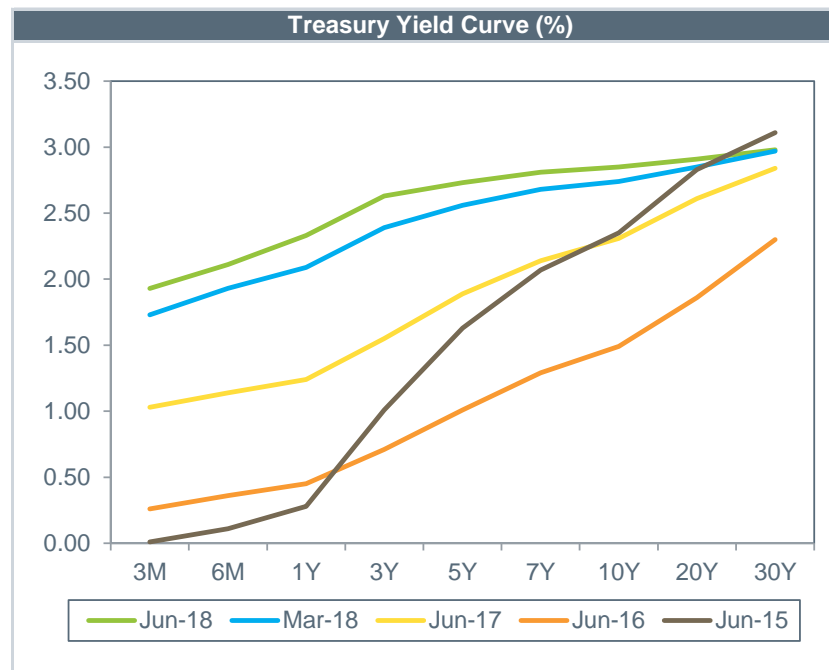
Second Quarter Economic Environment

Key Economic Indicators

The US dollar strengthened significantly relative to a trade weighted basket of currencies during the second quarter of 2018, reversing a trend of weakening that began over a year earlier. This tightening dollar liquidity environment and the escalating trade tensions between the United States and its global trading partners put significant pressure on non-US assets. Economic data released during the quarter continue to indicate a strong economic expansion in the United States. According to the Bureau of Economic Analysis, first quarter GDP grew at an annual rate of 2.0%. The heightened equity market volatility that characterized the first quarter of 2018 softened to a degree during Q2, as the S&P 500 produced three straight months of positive returns. Despite what appear to be relatively tight labor market conditions, wage growth has remained subdued. With this backdrop, the Federal Open Market Committee raised the Federal Funds rate to a range between 1.75% and 2.00% during its June meeting. The continued robust US economic activity also flowed through to heightened expectations for additional interest rate increases.



Economic Indicators	Jun-18	Mar-18	Jun-17	Jun-15	20 Yr
Federal Funds Rate (%)	1.91 ▲	1.68	1.06	0.08	2.02
Breakeven Infl. - 1 Yr (%)	1.42 ▼	2.23	0.72	0.73	N/A
Breakeven Infl. - 10 Yr (%)	2.13 ▲	2.06	1.74	1.89	N/A
CPI YoY (Headline) (%)	2.9 ▲	2.4	1.6	0.1	2.2
Unemployment Rate (%)	4.0 ▼	4.1	4.3	5.3	5.9
Real GDP YoY (%)	2.9 ▲	2.6	2.1	3.4	2.3
PMI - Manufacturing	60.2 ▲	59.3	56.7	52.3	52.5
USD Total Wtd Idx	89.97 ▲	86.37	90.49	89.82	86.45
WTI Crude Oil per Barrel (\$)	74.2 ▲	64.9	46.0	59.5	58.8
Gold Spot per Oz (\$)	1,253 ▼	1,326	1,242	1,172	856



Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	3.43	2.65	14.37	13.42	10.17
Russell 2000	7.75	7.66	17.57	12.46	10.60
MSCI EAFE (Net)	-1.24	-2.75	6.84	6.44	2.84
MSCI EAFE SC (Net)	-1.57	-1.33	12.45	11.32	6.81
MSCI Emg Mkts (Net)	-7.96	-6.66	8.20	5.01	2.26
Bloomberg US Agg Bond	-0.16	-1.62	-0.40	2.27	3.72
ICE BofAML 3 Mo US T-Bill	0.45	0.81	1.36	0.42	0.35
NCREIF ODCE (Gross)	2.05	4.30	8.44	11.04	5.29
Wilshire US REIT	9.73	1.52	3.88	8.42	7.81
HFRI FOF Comp	0.41	0.68	5.13	3.45	1.40
Bloomberg Cmddy (TR)	0.40	0.00	7.35	-6.40	-9.04

Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. Breakeven Inflation does not have 20 years of history; therefore, its 20-year average is shown as N/A.



US Equity Review

As of June 30, 2018

Second Quarter Review

Broad Market

US equity markets delivered positive results across all market caps and styles for the quarter. The S&P 500 Index returned 3.4%, buoyed by strong performance in the energy sector as oil prices continued to rise throughout the quarter. Continuing a first quarter trend, technology and consumer discretionary sectors drove market performance as the S&P 500 Technology and Consumer Discretionary Indices returned 7.1% and 8.2%, respectively.

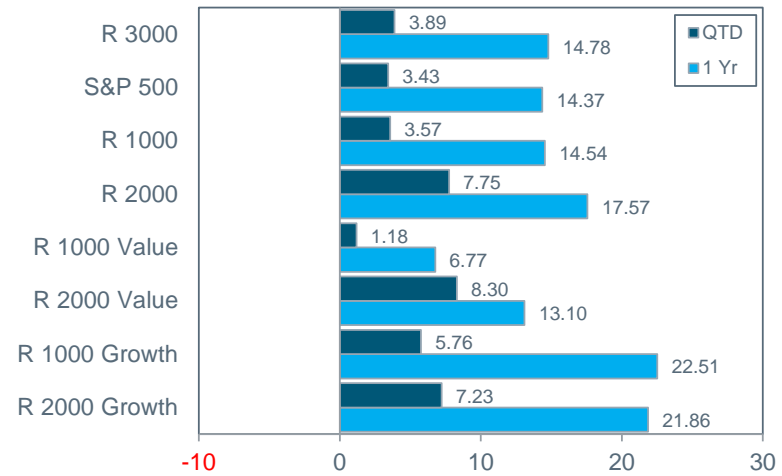
Market Cap

Increasing global trade tension pushed investors toward the more domestically-oriented small and micro cap segments of US equity markets and away from larger cap, multinational companies.

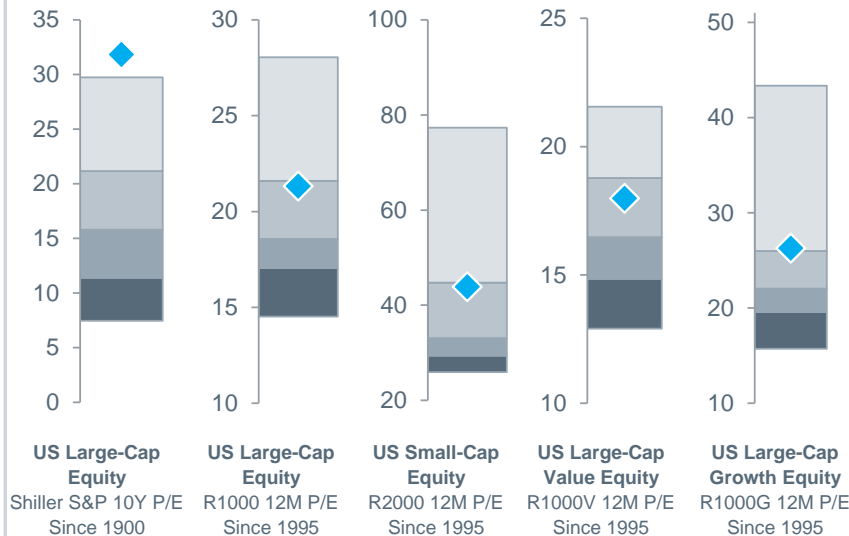
Style and Sector

Active large cap growth and value managers generally fared well as secular growth trends and continued strong corporate earnings provided a positive stock-picking environment.

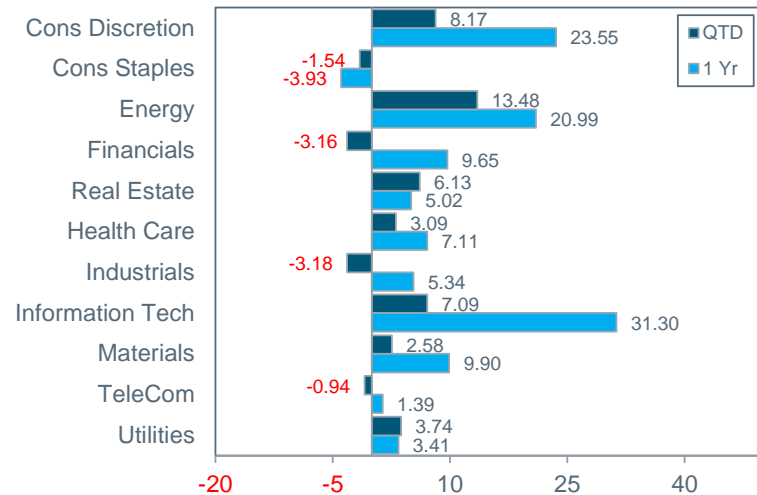
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)



Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, Irrational Exuberance, Second Edition. P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.



Non-US Equity Review

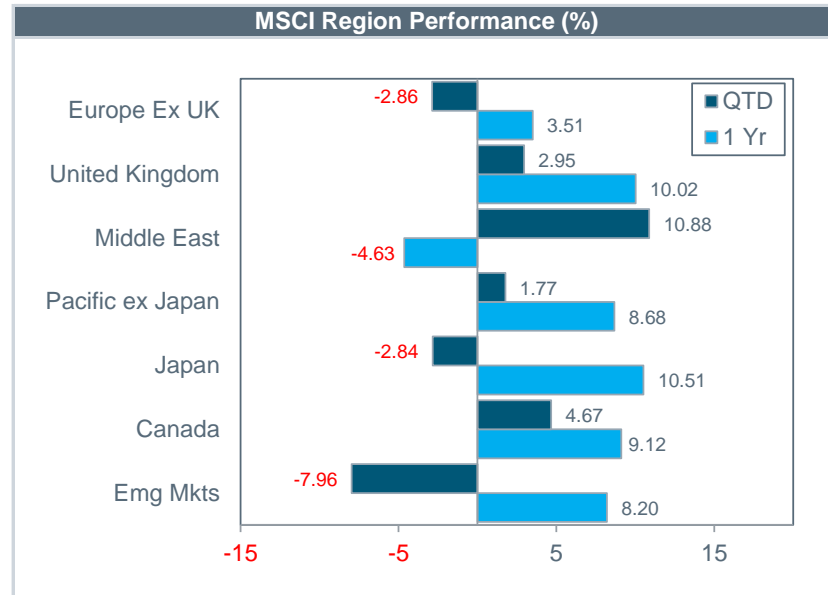
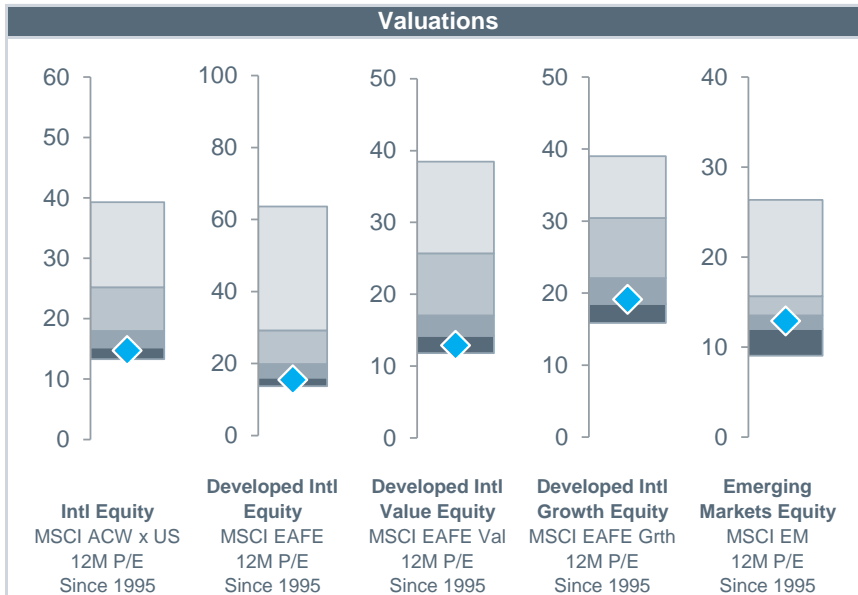
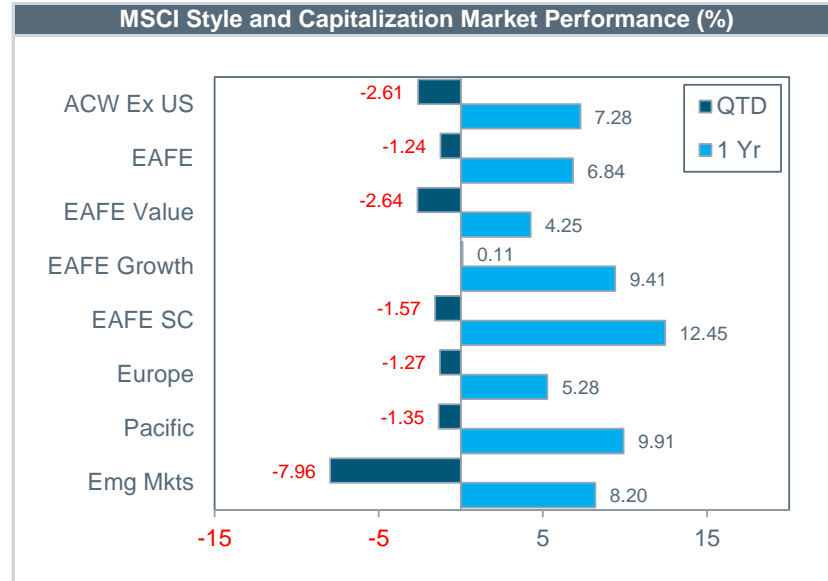
As of June 30, 2018

Second Quarter Review

Developed Markets
 The tightening dollar liquidity environment and the escalating trade tensions between the US and its global trading partners put significant pressure on non-US assets. Emerging market equities fell 7.96% during the quarter. Developed international equities also declined, further exacerbating losses experienced in Q1.

Emerging Markets
 Emerging markets had a challenging quarter, making it by far the worst performing equity class this year. The MSCI Emerging Markets Index trailed the MSCI EAFE Index by 672 basis points during the quarter.

Market Cap & Style
 While developed international growth stocks were slightly positive, value stocks brought down the overall market during the quarter. Small cap stocks fared worse than large cap stocks. Emerging markets growth stocks outperformed value stocks and large cap stocks outperformed small cap stocks.



Valuation data courtesy of Bloomberg Professional Service.
 P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.
 All returns are shown net of foreign taxes on dividends.



Fixed Income Review

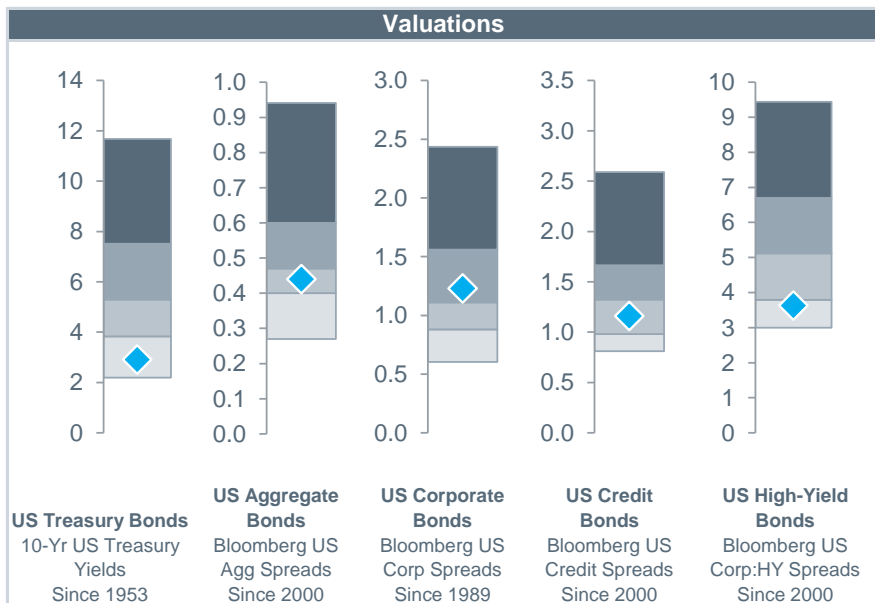
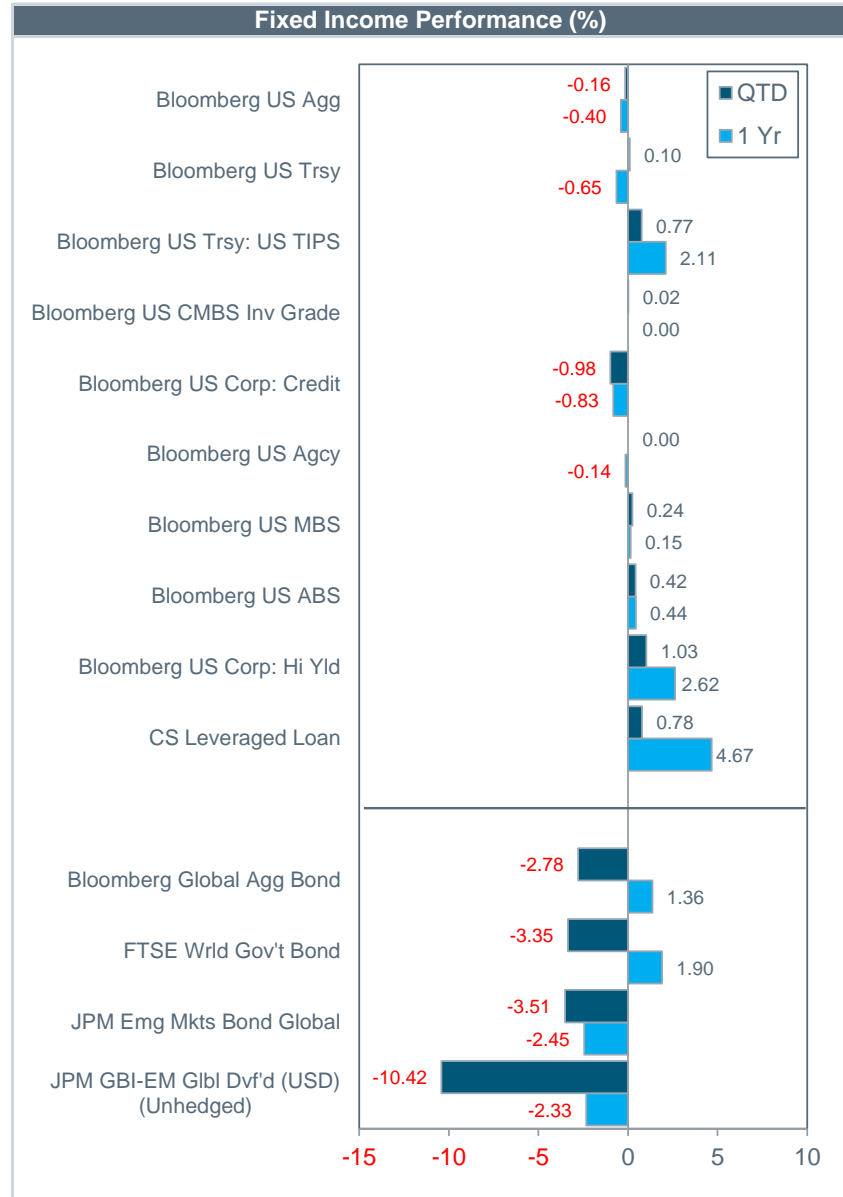
As of June 30, 2018

Second Quarter Review

Broad Market
 The Federal Open Market Committee raised the Federal Funds rate to a range between 1.75% and 2.00% during its June meeting. The Bloomberg Barclays US Aggregate Bond Index posted a return of -0.16% as interest rates slightly increased and the Treasury yield curve flattened during the quarter.

Credit Market
 The option-adjusted spread on investment grade corporate bonds increased from 1.17% to 1.30%. The Bloomberg Barclays US Corporate Credit returned -0.98% for the quarter and underperformed the Bloomberg Barclays Corporate High Yield Index which returned 1.03%.

Emerging Market Debt
 The JP Morgan GBI-EM Global Diversified Index returned -10.42% for the quarter. Strengthening of the US dollar, turmoil in Turkey and Argentina, and escalating trade wars are all factors leading to a large loss in emerging market debt.



Valuation data courtesy of Bloomberg Professional Service. Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.



Alternatives Review

As of June 30, 2018

Second Quarter Review - Absolute Return

General Market - Hedge Funds

Hedge funds produced marginally positive returns during the second quarter, building on the gains realized in Q1. Most FoHF managers have lowered net exposures and rotated away from traditional strategies such as long/short equity in favor of more diversifying exposures. Managers that have significant systematic macro or managed futures exposure have suffered as those strategies remain largely negative year-to-date.

General Market - Global Tactical Asset Allocation (GTAA)

GTAA managers mostly provided negative returns in the second quarter and most dramatically underperformed a static, US-centric 60/40 portfolio of stocks and bonds. Globally-oriented managers that rely on fundamental value based investment processes have increasingly allocated to emerging markets exposures, which are believed to be undervalued across asset classes. This positioning was a significant detractor during the quarter, as strong gains in the US dollar resulted in added pressure to certain emerging economies, leading to a difficult quarter for emerging markets equities and currencies.

Second Quarter Review - Real Assets

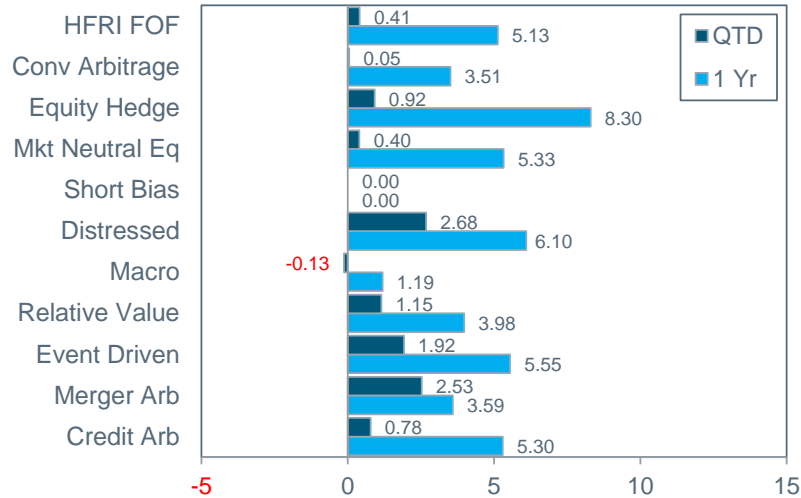
General Market - Diversified Inflation Strategies (DIS)

DIS portfolios mostly provided strong returns in Q2 as inflationary pressures persisted. Headline CPI increased to 2.90% YoY, and the spot price for West Texas Intermediate crude oil rose nearly 14% to \$74 per barrel over the quarter. In response, most other inflation-sensitive asset classes provided strong performance led by asset classes such as US REITs, energy related exposures in commodities, natural resources equities, MLPs, and global listed infrastructure.

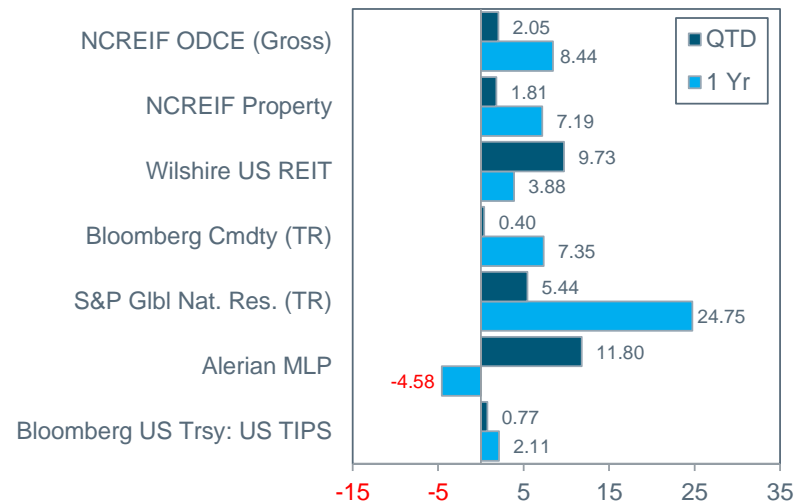
General Market - Real Estate

The core private real estate index, NCREIF-ODCE, returned 2.1% during Q2, with income and appreciation returns being about equal. This represented a slight decrease compared to last quarter's appreciation component of total return. Real estate valuations remain elevated, supported by continued strength in the overall economy with increases from personal consumption and business investment. The potential for increased discretionary spending by consumers due to the recent tax reform provides additional support for current valuations.

HFRI Hedge Fund Performance (%)



Real Asset Performance (%)



Annual Asset Class Performance

As of June 30, 2018

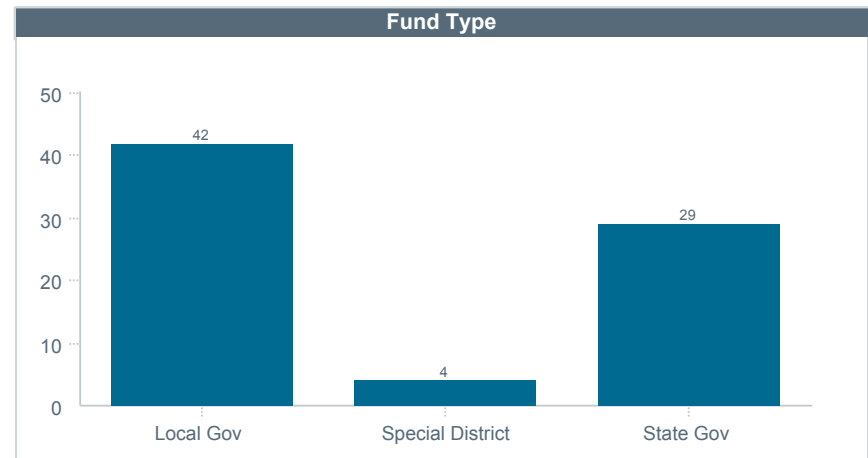
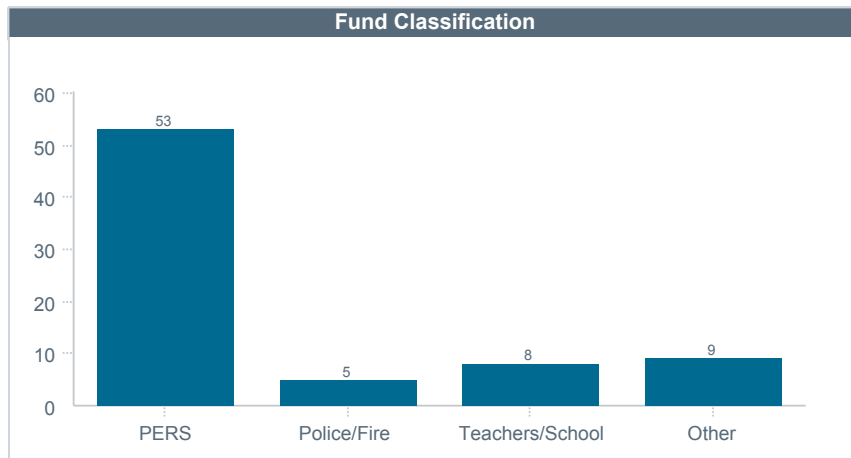
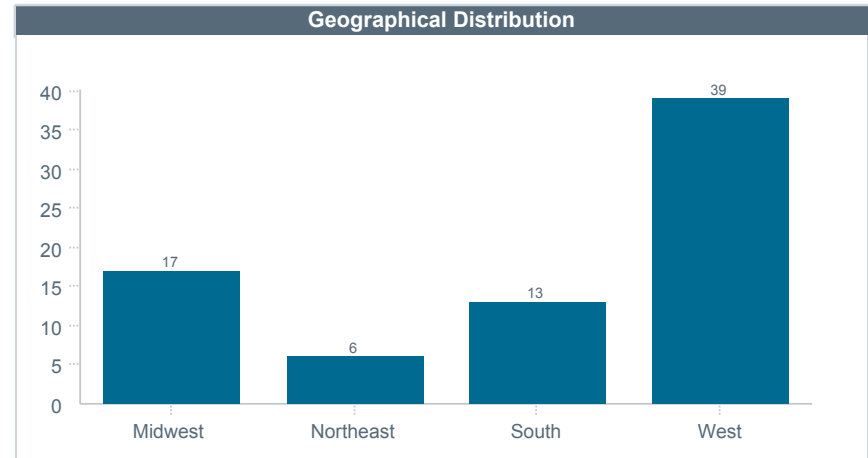
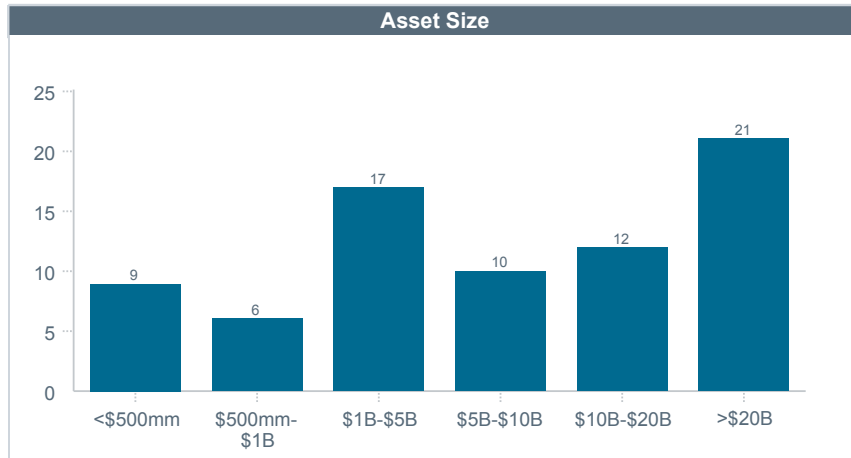
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD
Best	33.16	34.00	35.97	39.38	8.44	78.51	28.60	22.49	20.00	38.82	31.78	15.02	21.31	37.28	7.66
	31.45	26.19	32.18	16.23	5.24	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	4.30
	25.55	21.39	26.34	15.97	2.06	46.78	22.04	13.56	17.59	29.30	13.69	4.23	11.96	25.03	2.65
	20.25	21.36	19.31	11.63	-2.35	31.78	18.88	9.24	17.32	22.78	12.50	1.38	11.77	21.83	1.52
	18.33	13.82	18.37	11.17	-10.01	28.60	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	0.81
	13.06	13.54	16.32	10.25	-21.37	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	0.68
	11.14	7.49	15.79	6.97	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	7.24	7.77	0.16
	10.88	5.34	11.86	6.60	-33.79	18.91	15.06	0.10	10.94	1.86	3.37	-0.81	6.67	7.62	0.00
	9.15	4.91	10.39	5.49	-35.65	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-0.02
	8.56	4.55	4.85	5.00	-37.00	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	4.18	-1.33
	8.46	3.07	4.34	1.87	-39.20	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-1.62
	6.86	2.84	2.72	1.45	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.00	-4.47	1.00	3.01	-2.75
	4.34	2.74	2.07	-1.57	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-4.98
Worst	1.33	2.43	0.49	-17.55	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-6.66
	S&P 500 - US Large Cap	R 2000 - US Small Cap	MSCI EAFE (Net) - Int'l Dev.	MSCI EAFE SC (Net) - Int'l SC	MSCI EM (Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - FI	Bloombrg US Corp: Hi Yield - FI	Bloombrg US Trsy: US TIPS - FI	Bloombrg US Gov/Credit: Lng - FI	NCREIF ODCE (Gross) - Real Estate	Wilshire US REIT - REITs	HFRI FOF Comp Index - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv	

NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.



Universe Characteristics

As of June 30, 2018

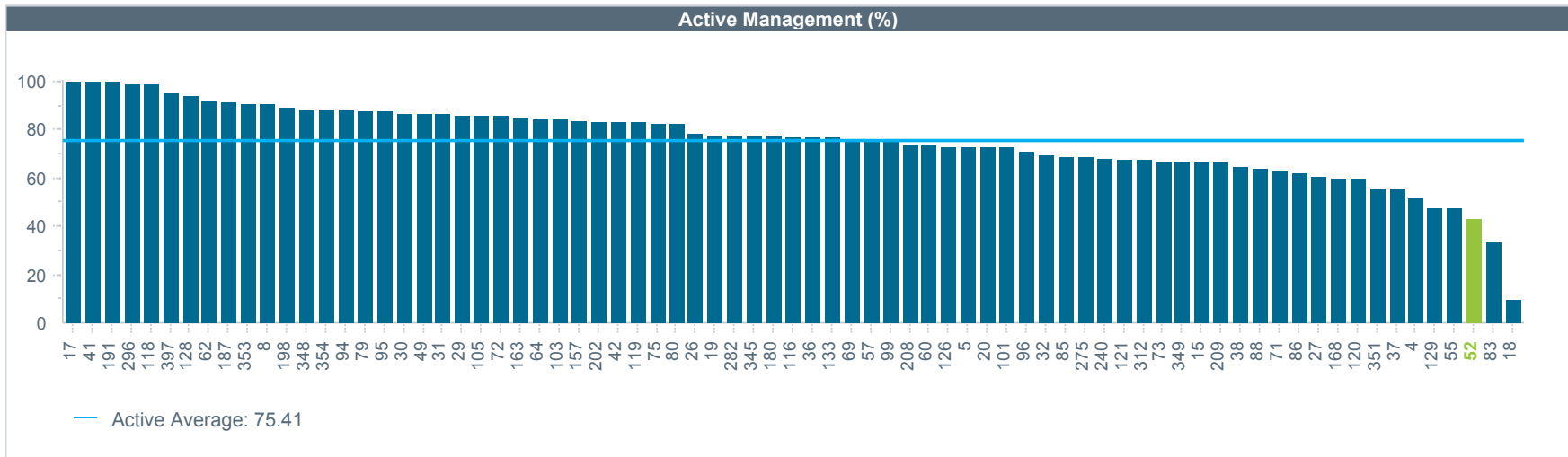
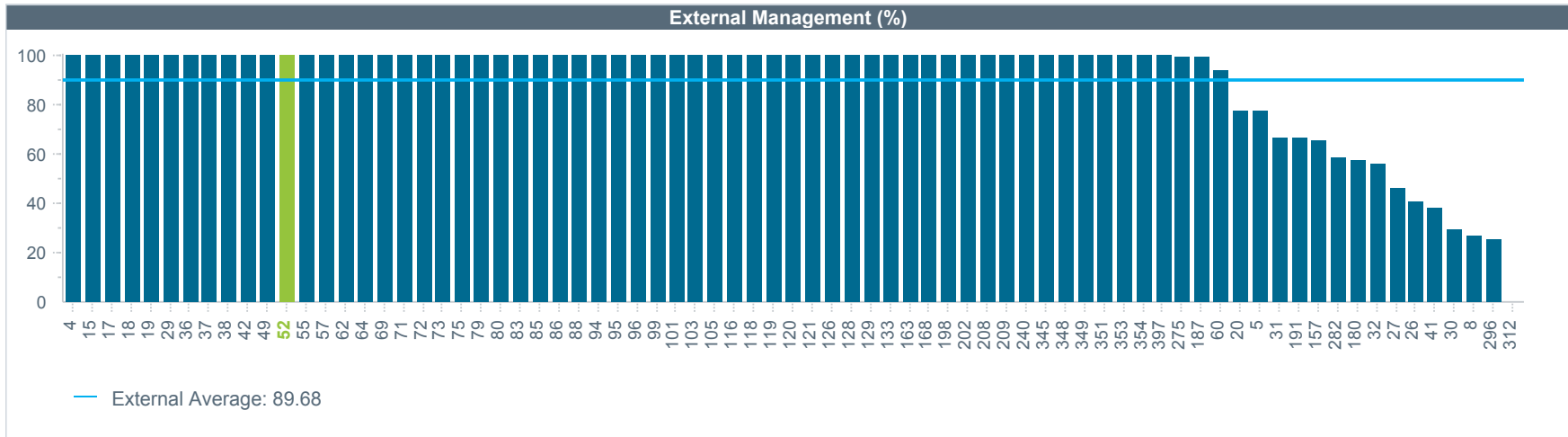


■ Universe: 75 funds



Portfolio Management
Percentage Externally Managed & Percentage Actively Managed

As of June 30, 2018



Fund No. 52



Portfolio Management Statistics

As of June 30, 2018

Asset Range	Actively Managed (%)	Passively Managed (%)	Externally Managed (%)	Internally Managed (%)
Over \$20B	76.10	23.90	73.89	26.11
\$10B-\$20B	70.01	29.99	85.43	14.57
\$5B-\$10B	72.93	27.07	97.18	2.82
\$1B-\$5B	77.21	22.79	98.68	1.32
\$500mm-\$1B	73.15	26.85	99.94	0.06
Under \$500mm	81.84	18.16	100.00	0.00
Fund No. 52	42.85	57.15	100.00	0.00

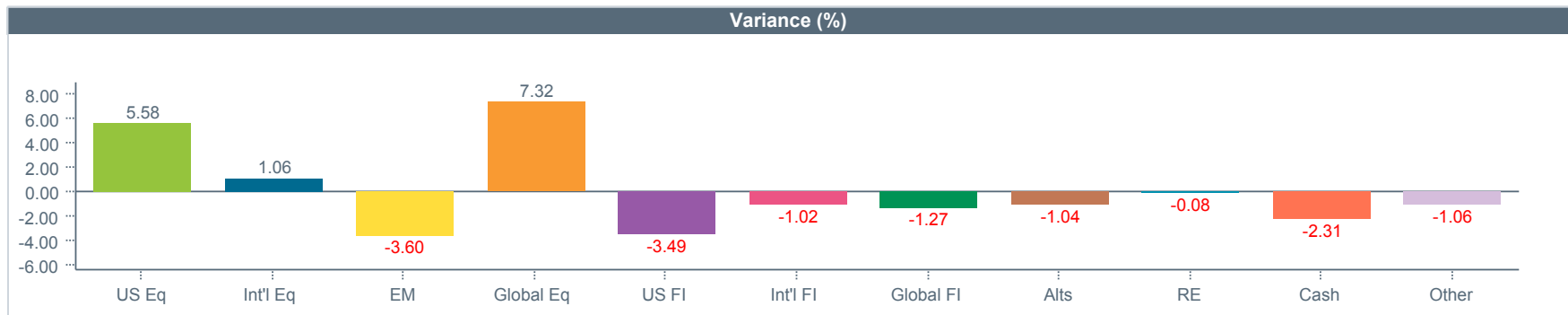
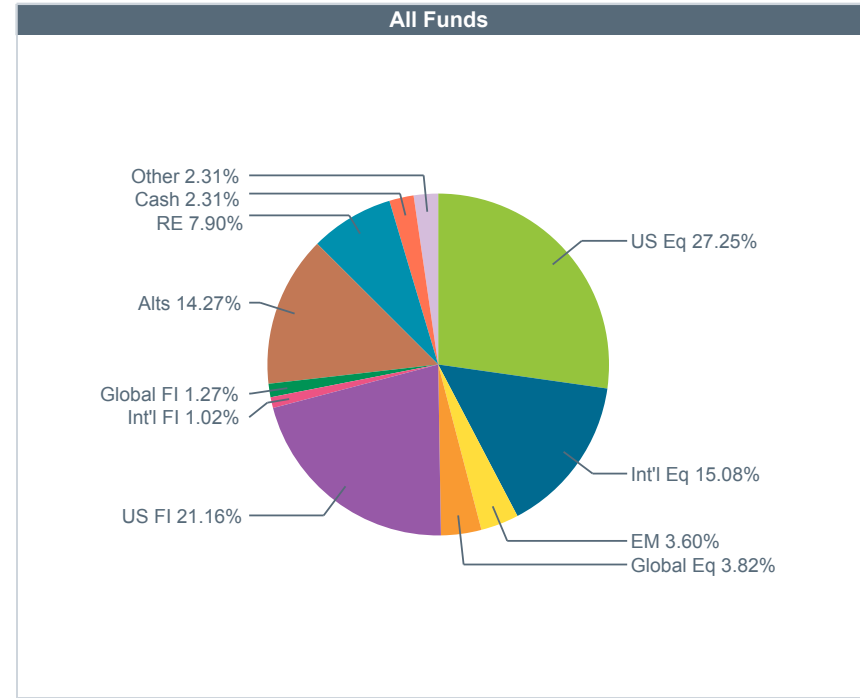
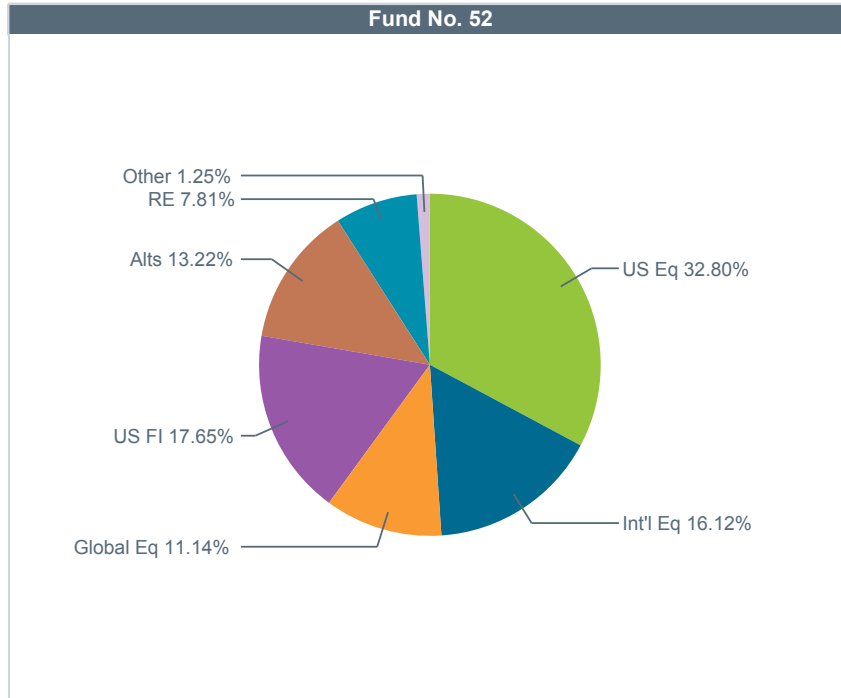
Percentages shown for asset ranges are representative of the average allocation.

Portfolio (%)	Active Management		External Management	
	Public Fund Universe	Fund No. 52	Public Fund Universe	Fund No. 52
90 to 100	11	0	60	1
50 to 89	59	0	8	0
10 to 49	4	1	6	0
Less than 10	1	0	1	0
Total Funds Reporting	75	1	75	1



Asset Allocation
Fund No. 52 vs. Average of All Funds

As of June 30, 2018



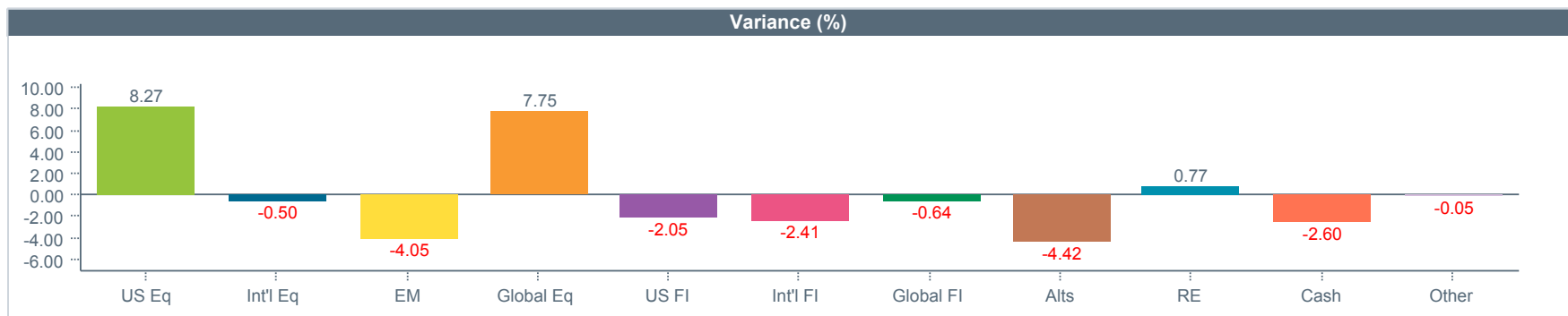
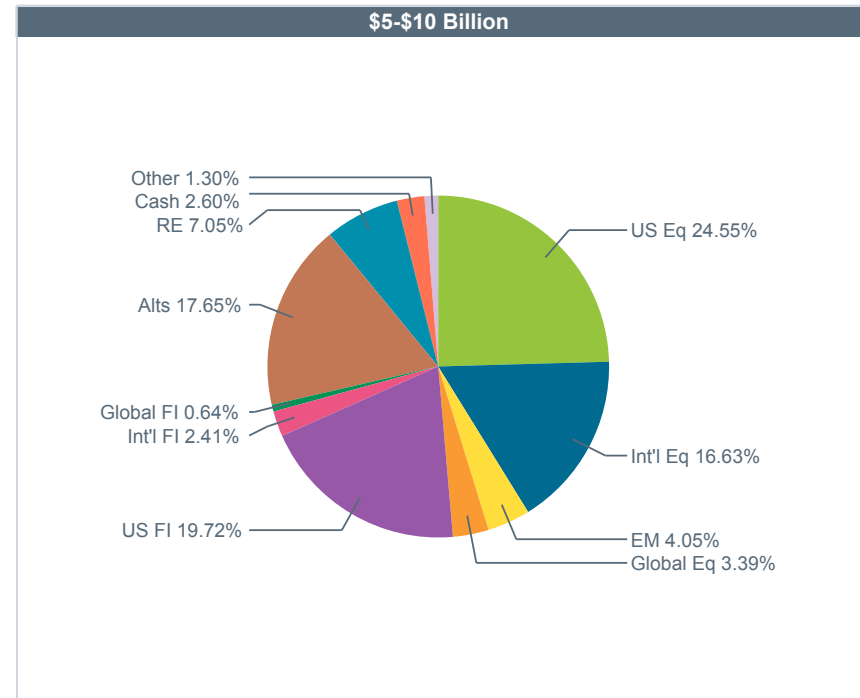
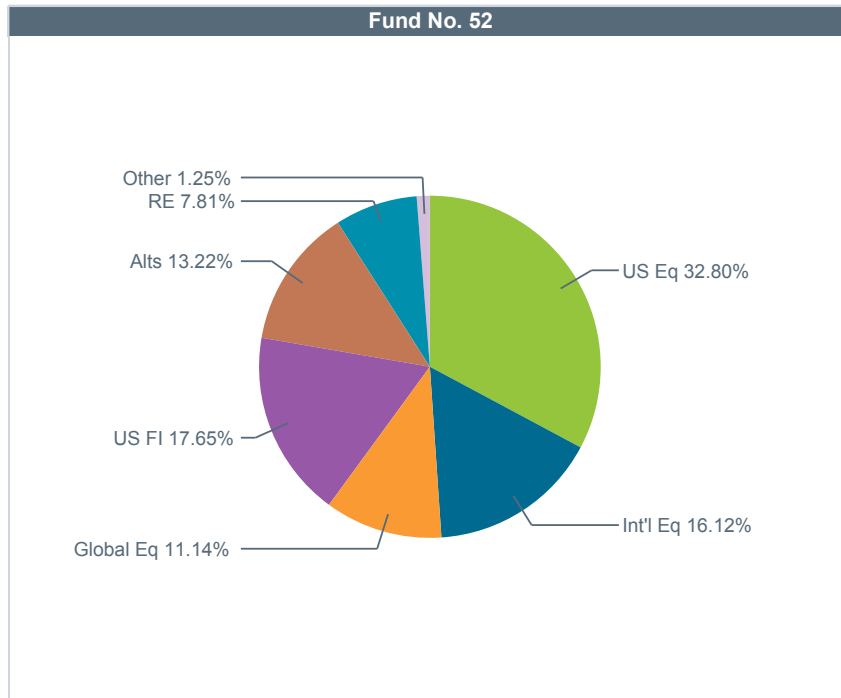
Allocations shown may not sum up to 100% exactly due to rounding.



Asset Allocation

As of June 30, 2018

Fund No. 52 vs. Average of Similar Size Funds

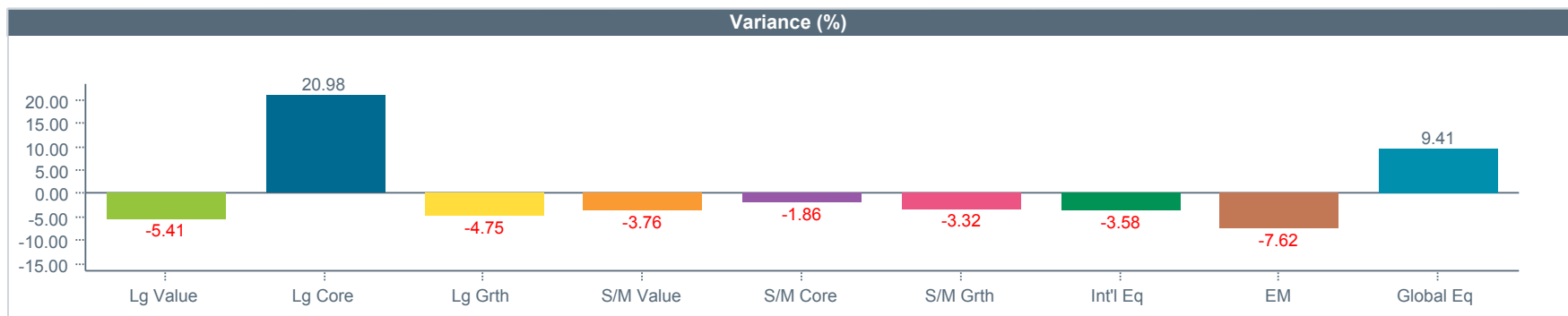
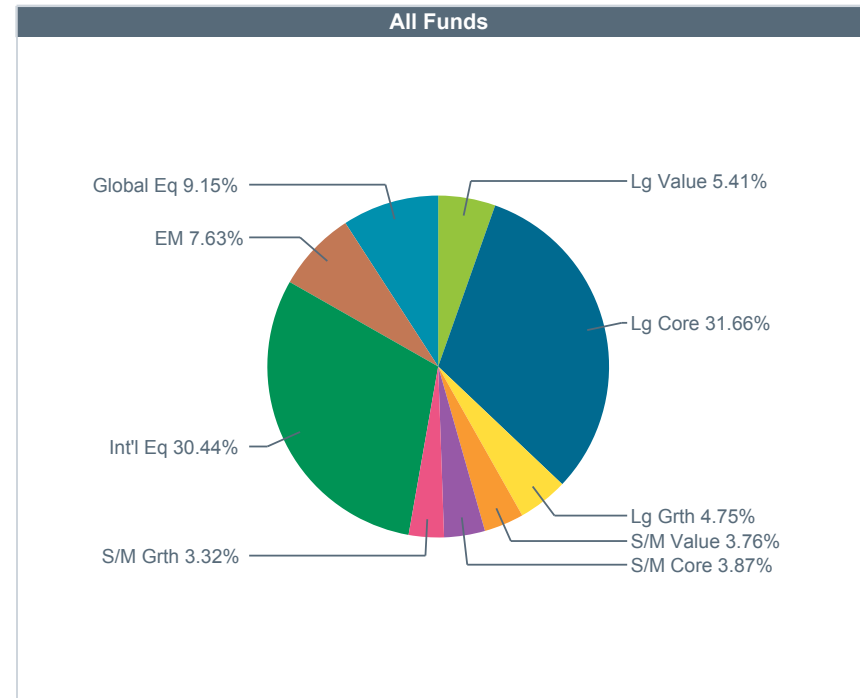
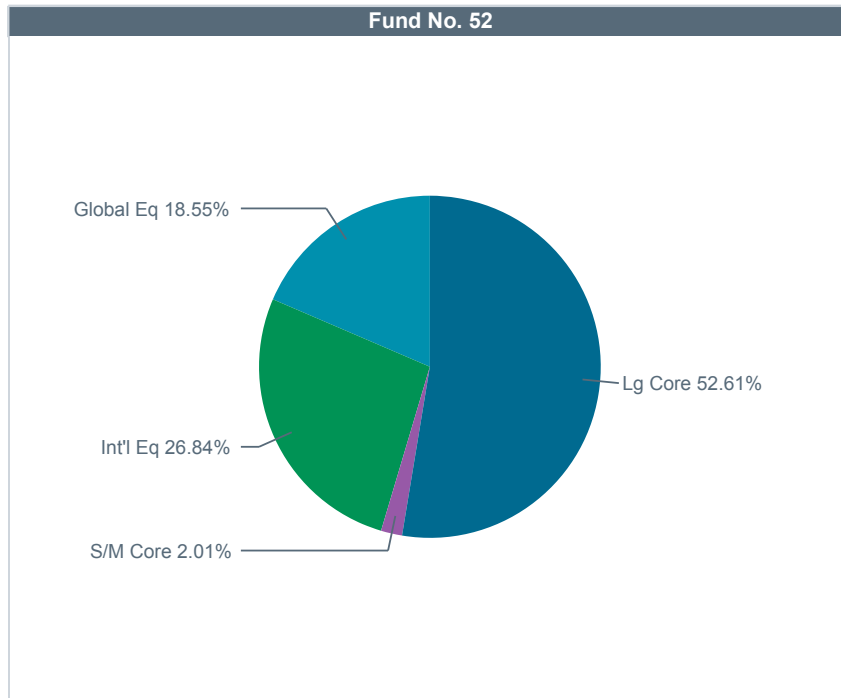


Allocations shown may not sum up to 100% exactly due to rounding.



Equity Style Allocation
Fund No. 52 vs. Average of All Funds

As of June 30, 2018

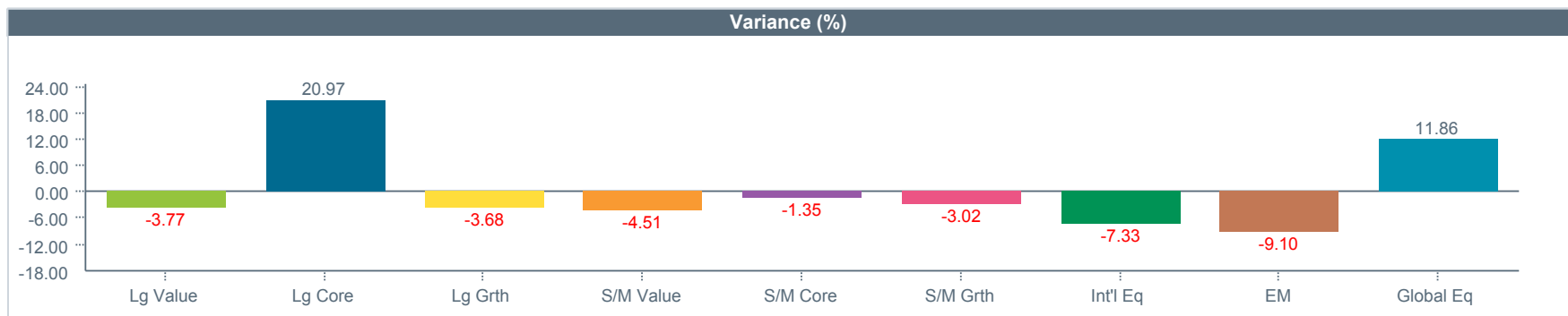
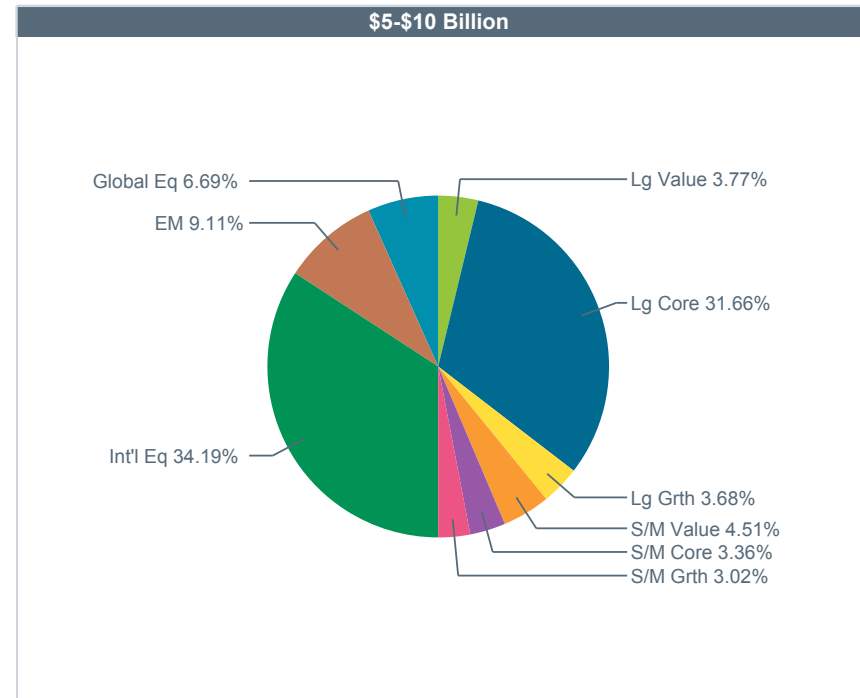
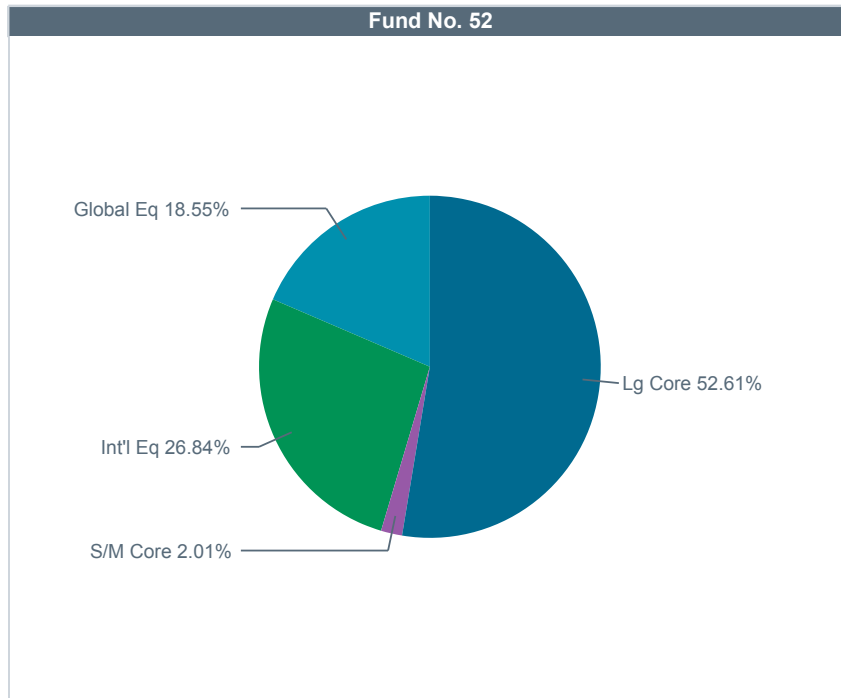


Allocations shown may not sum up to 100% exactly due to rounding.



Equity Style Allocation
Fund No. 52 vs. Average of Similar Size Funds

As of June 30, 2018

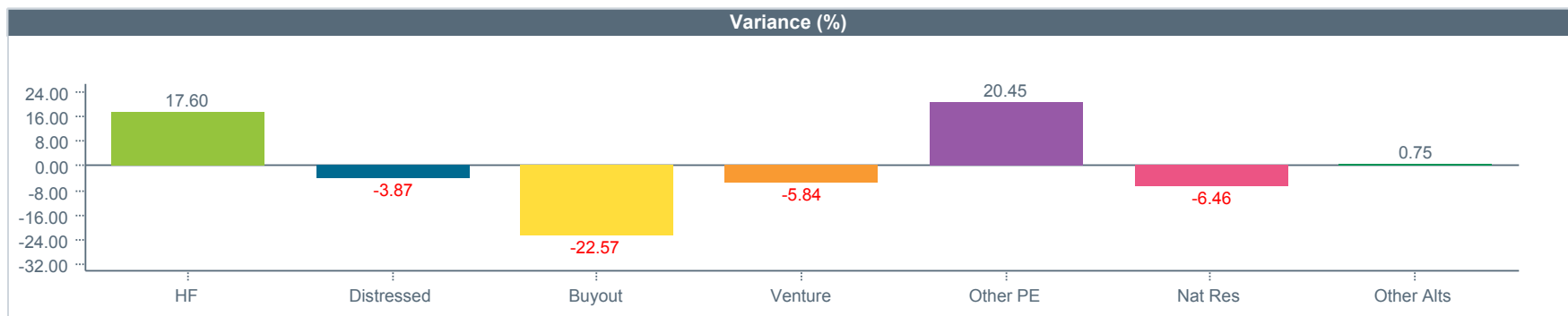
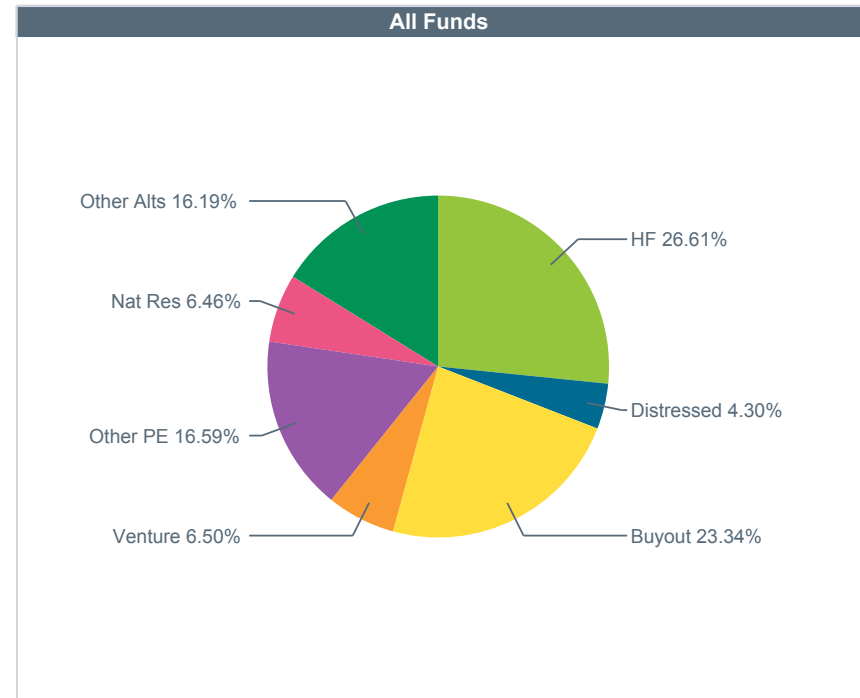
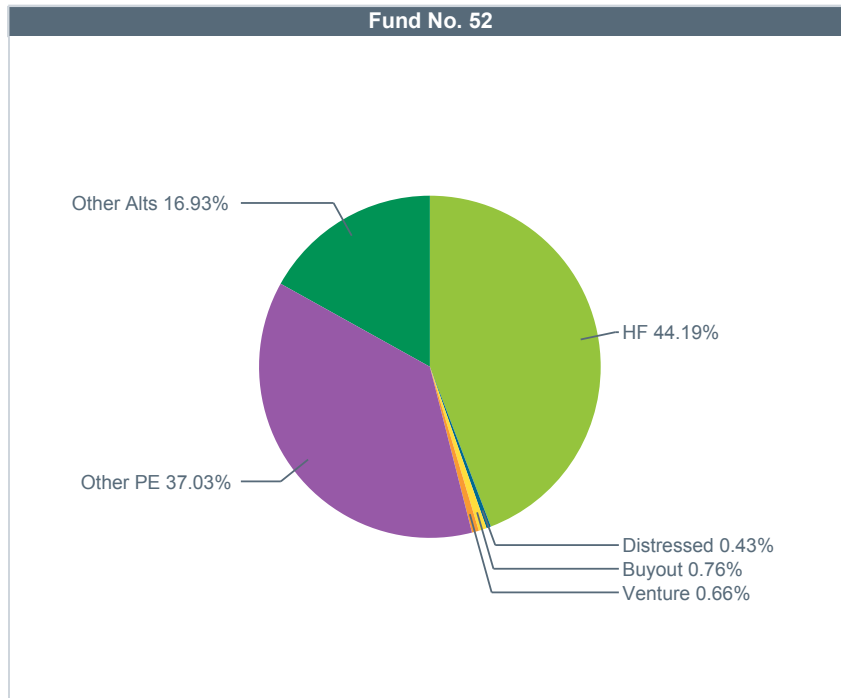


Allocations shown may not sum up to 100% exactly due to rounding.



Alternatives Style Allocation
Fund No. 52 vs. Average of All Funds

As of June 30, 2018

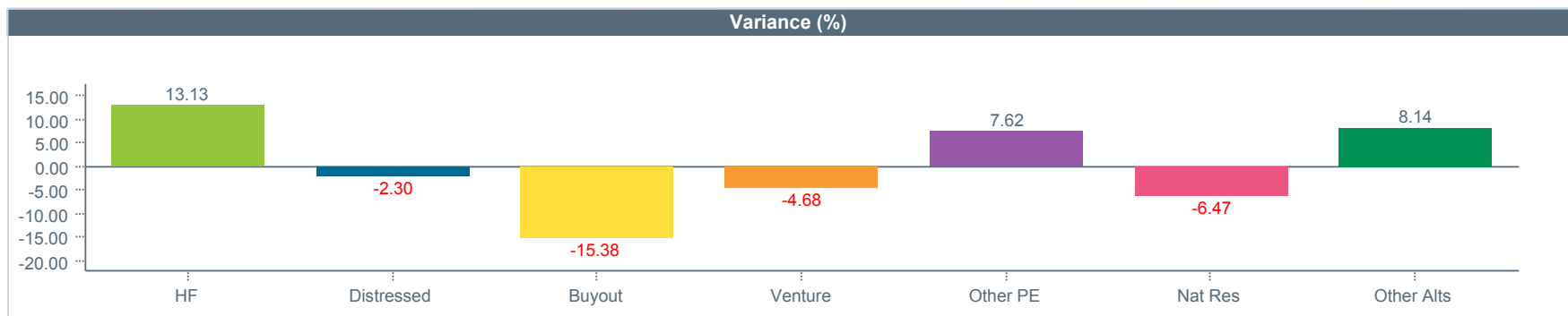
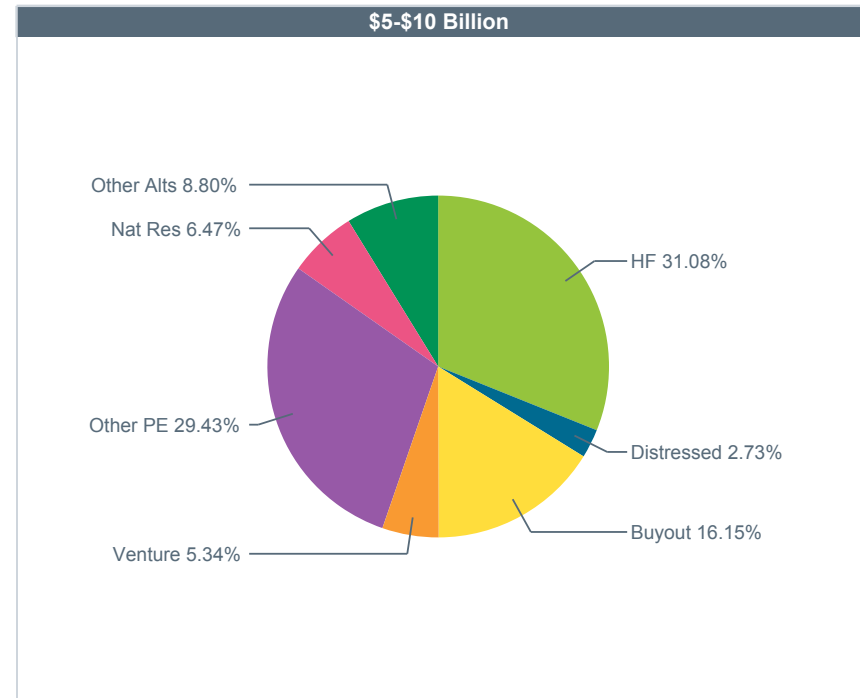
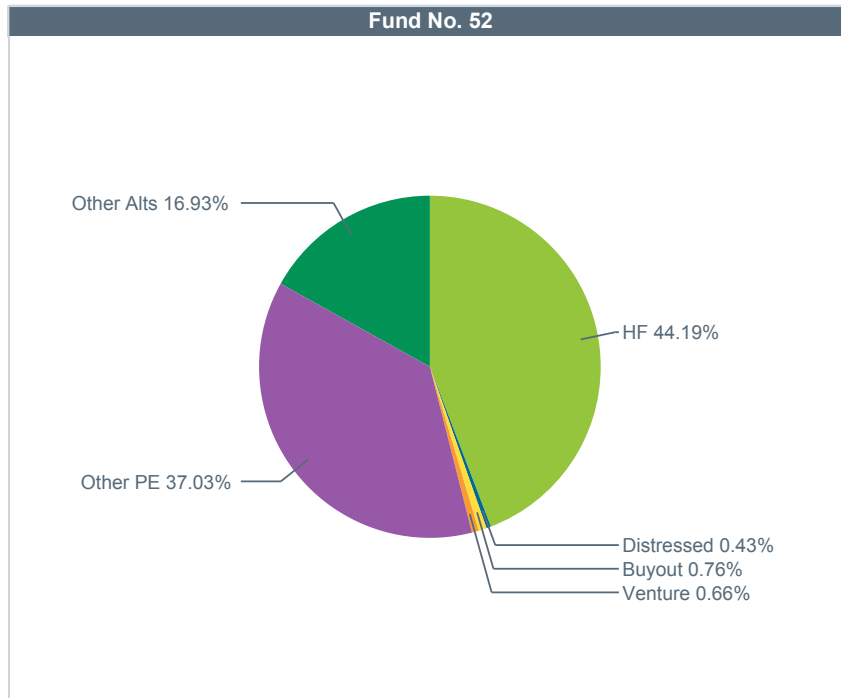


Allocations shown may not sum up to 100% exactly due to rounding.



Alternatives Style Allocation
Fund No. 52 vs. Average of Similar Size Funds

As of June 30, 2018

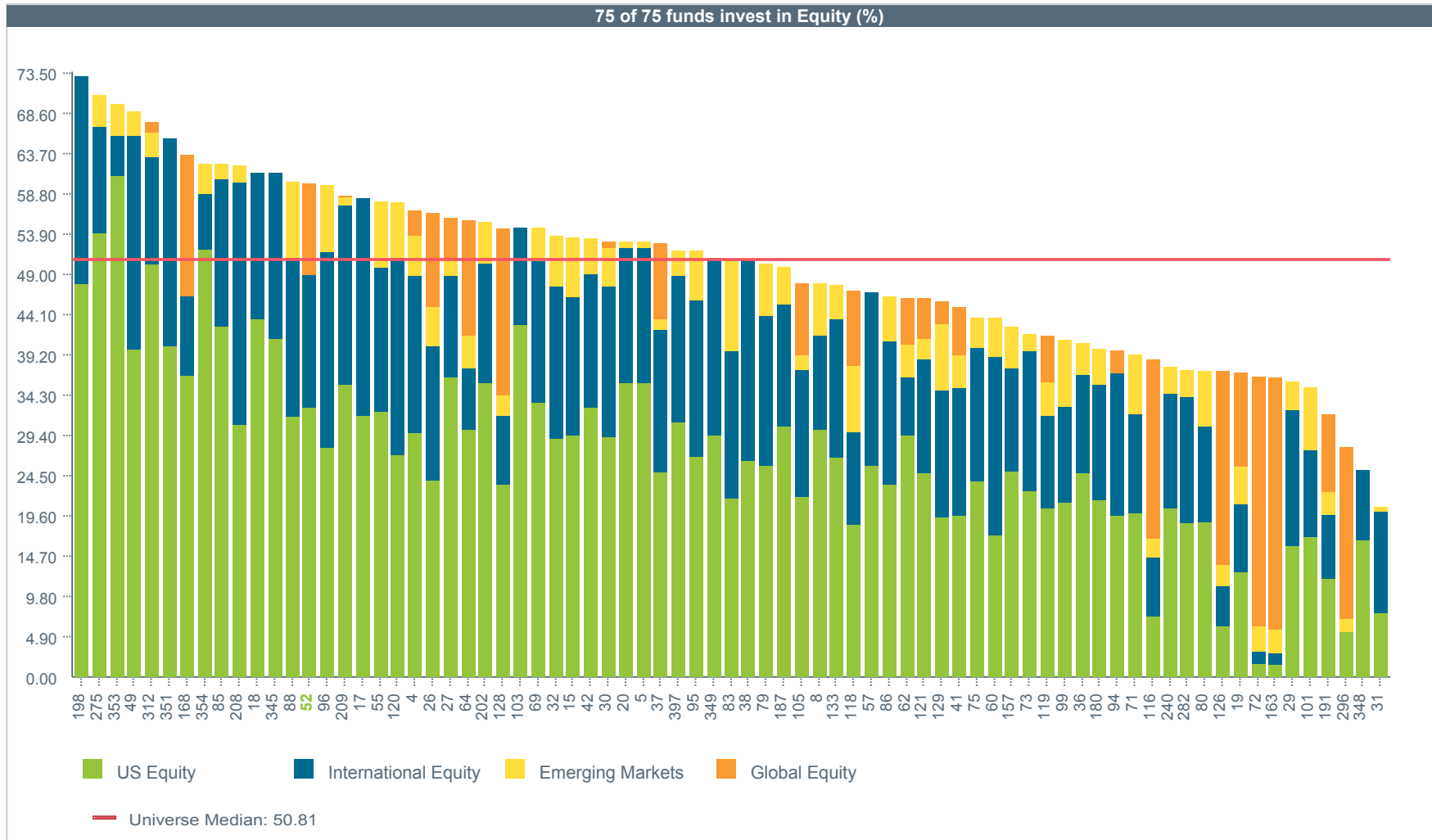


Allocations shown may not sum up to 100% exactly due to rounding.



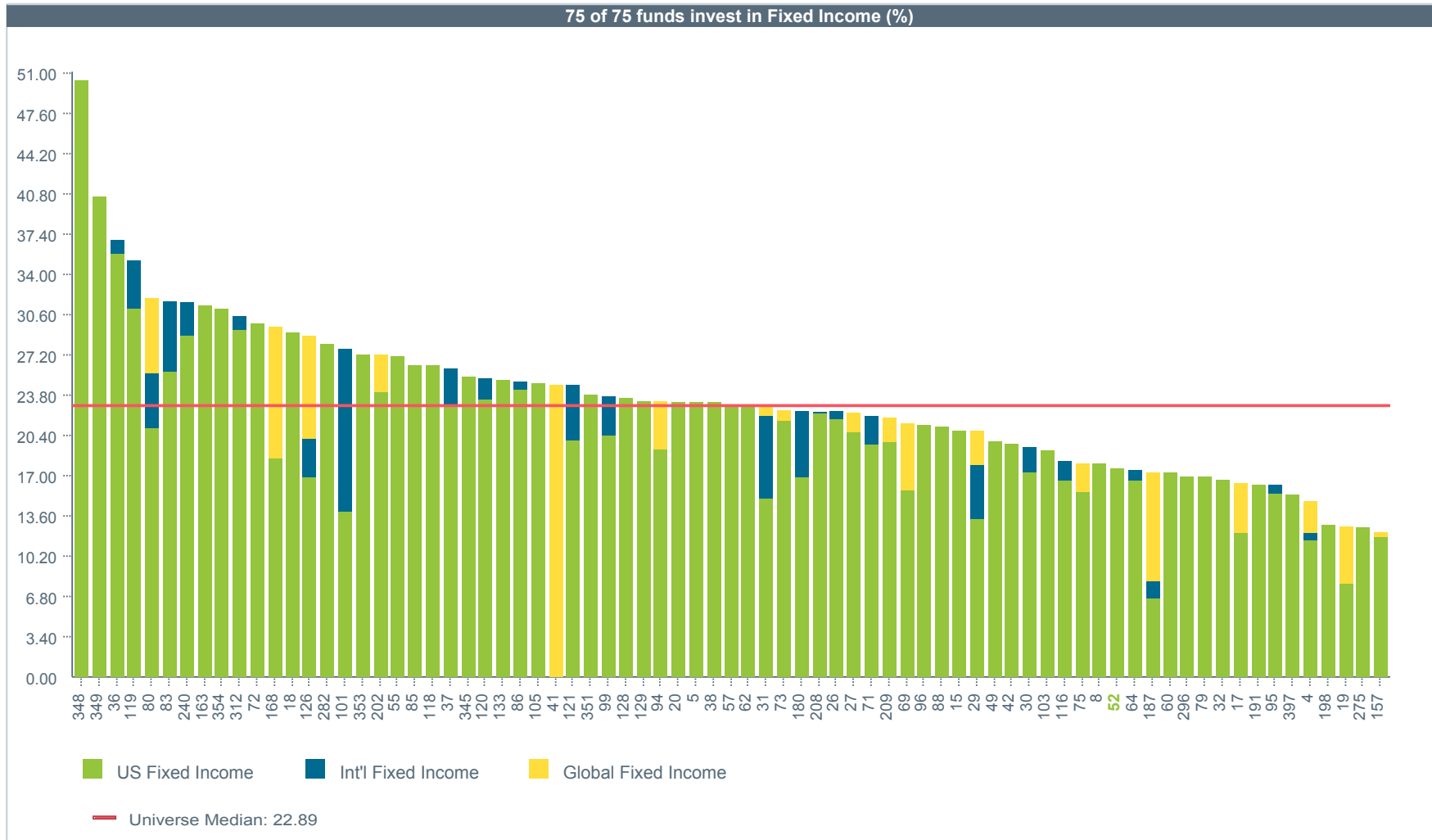
Equity Style Allocation

As of June 30, 2018



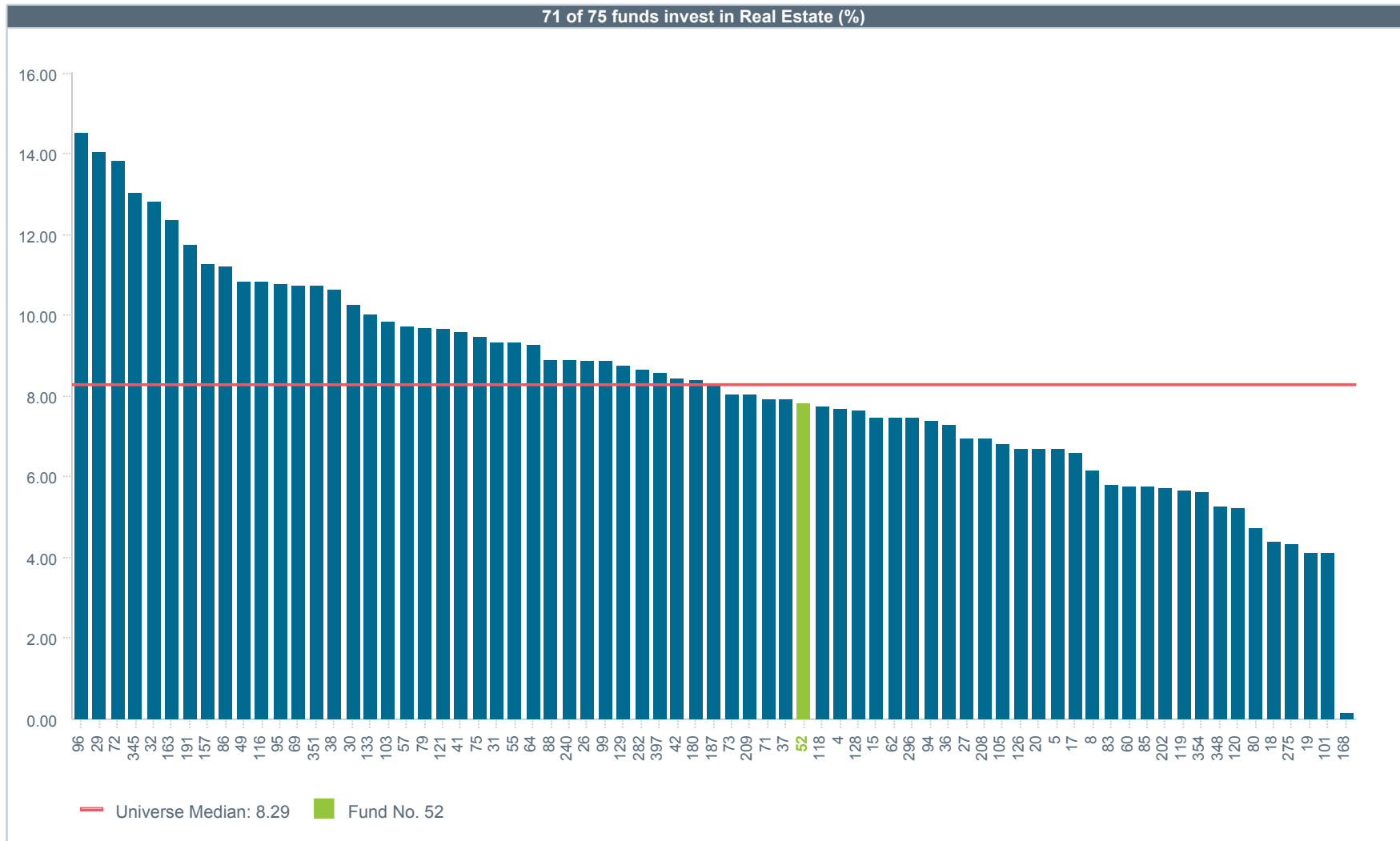
Fixed Income Style Allocation

As of June 30, 2018



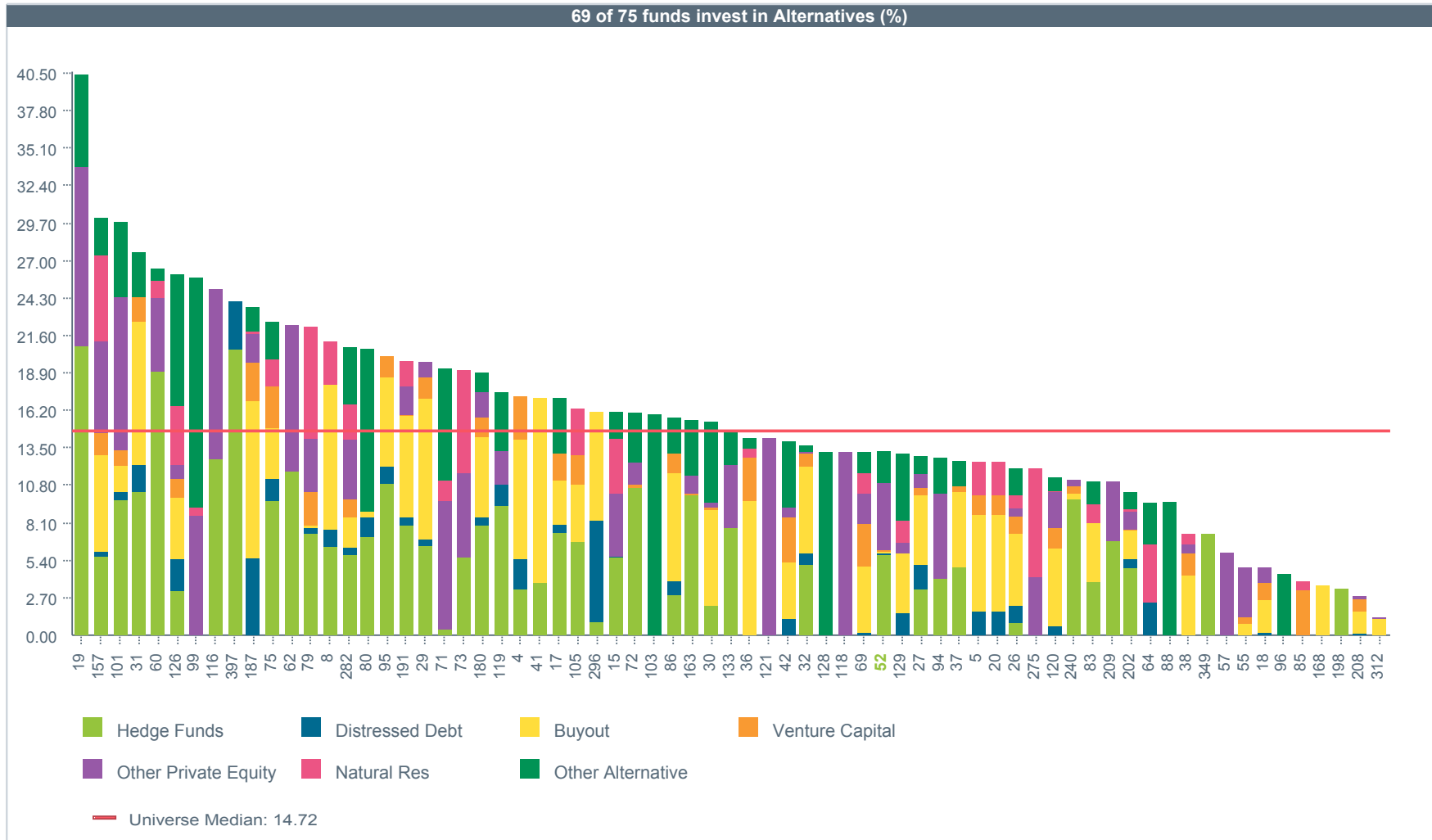
Real Estate Allocation

As of June 30, 2018



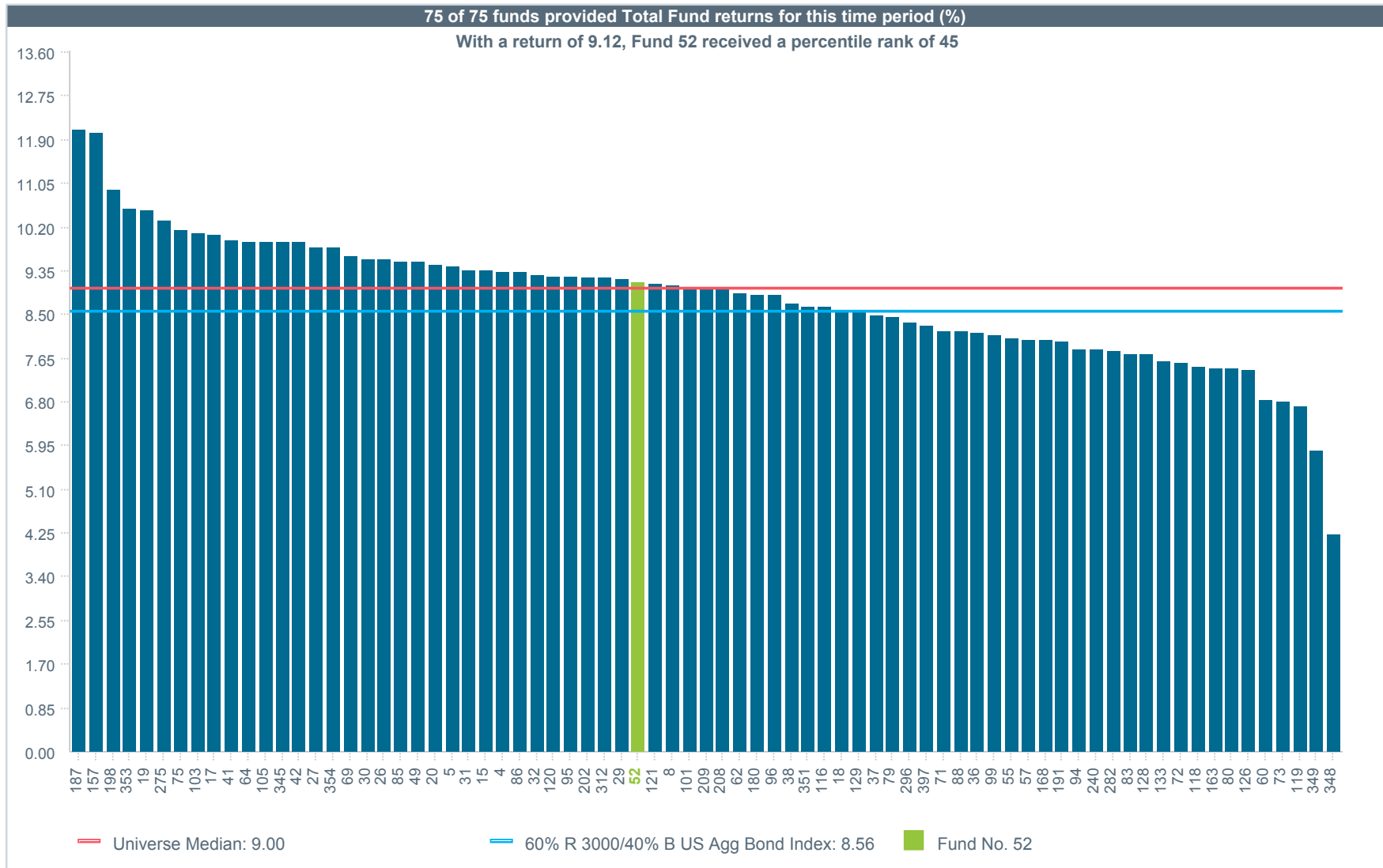
Alternatives Style Allocation

As of June 30, 2018



1 Year Annualized Total Fund Returns

As of June 30, 2018

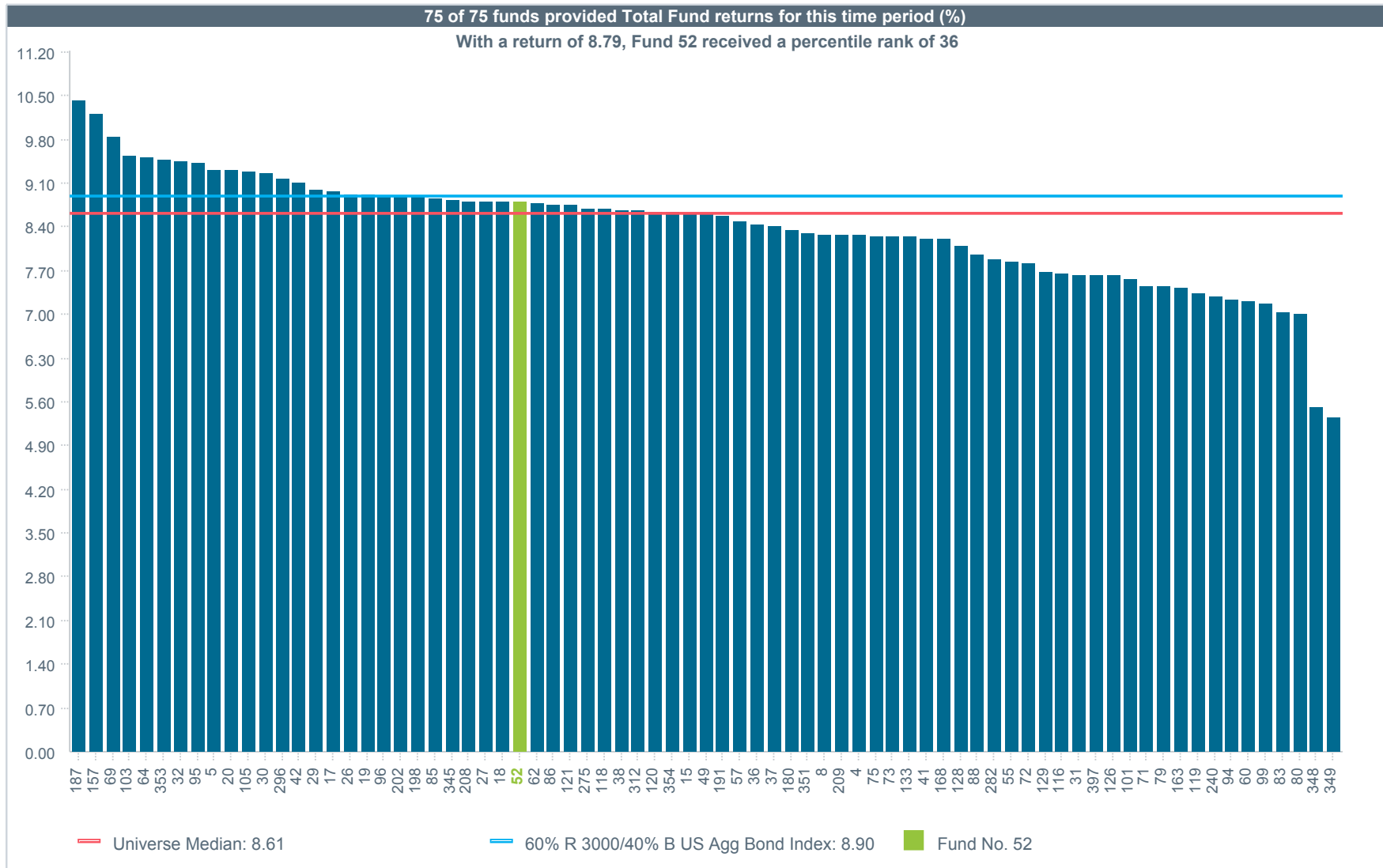


Funds with less history than the specified time period will not appear in the chart.



5 Year Annualized Total Fund Returns

As of June 30, 2018

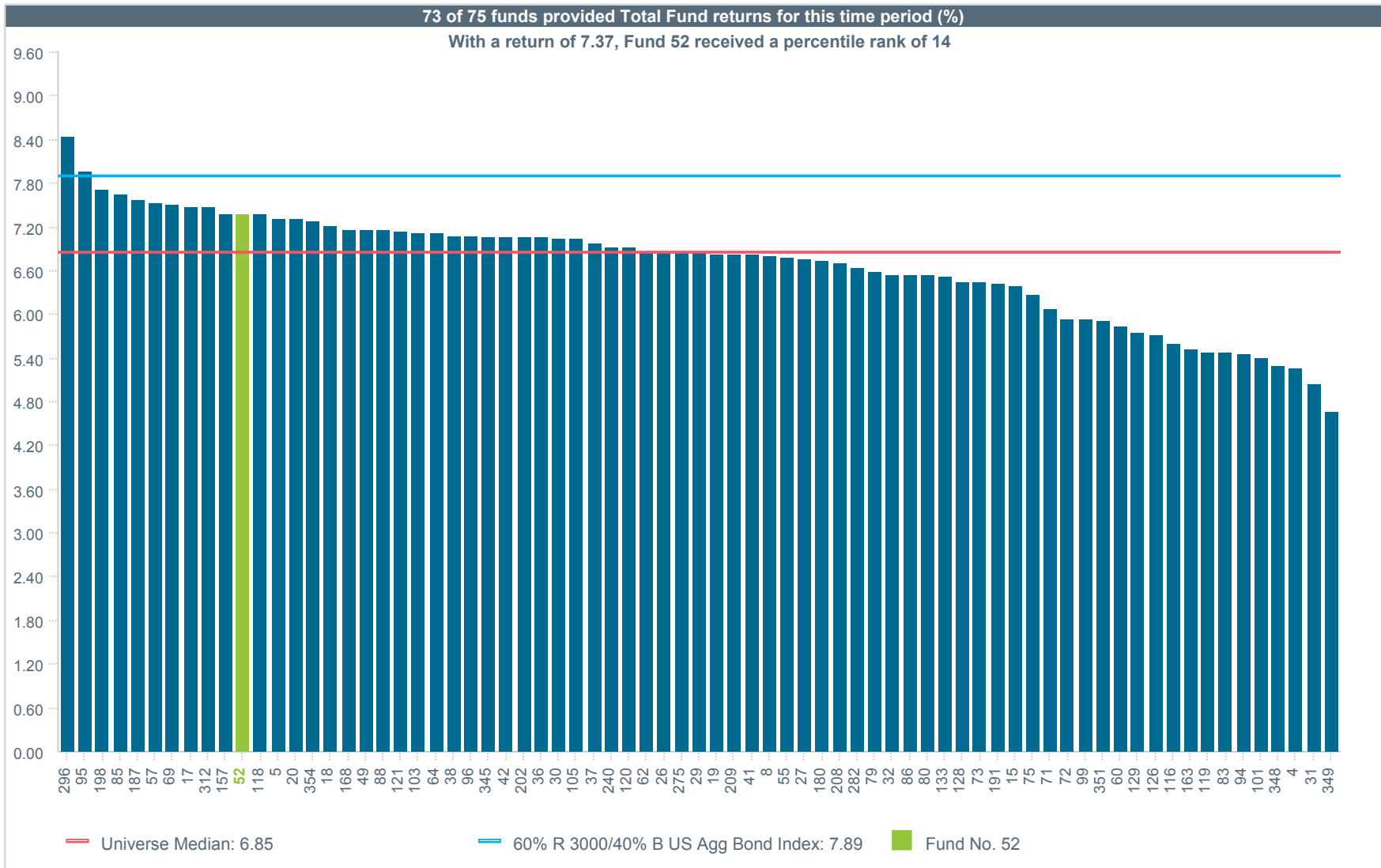


Funds with less history than the specified time period will not appear in the chart.



10 Year Annualized Total Fund Returns

As of June 30, 2018

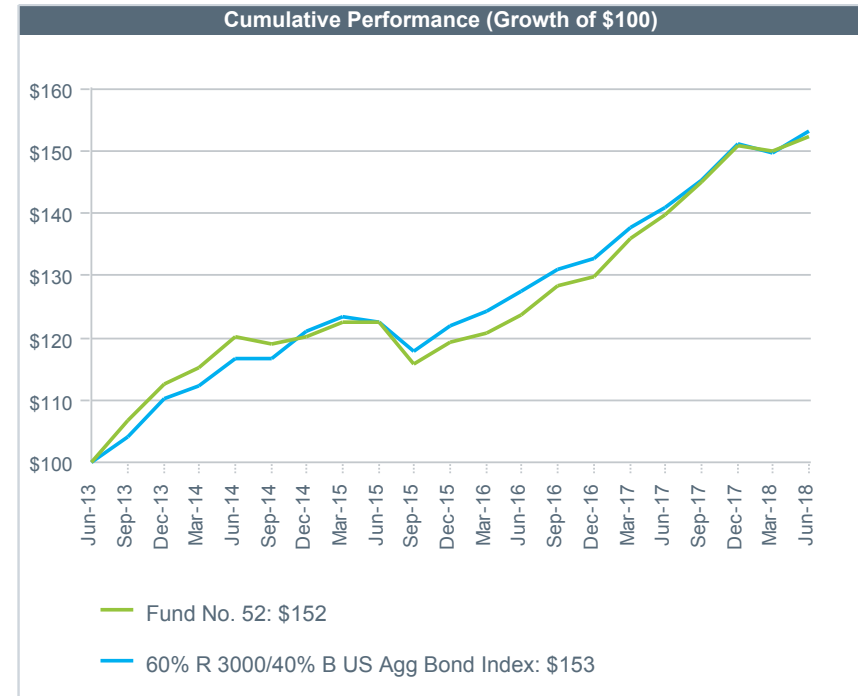
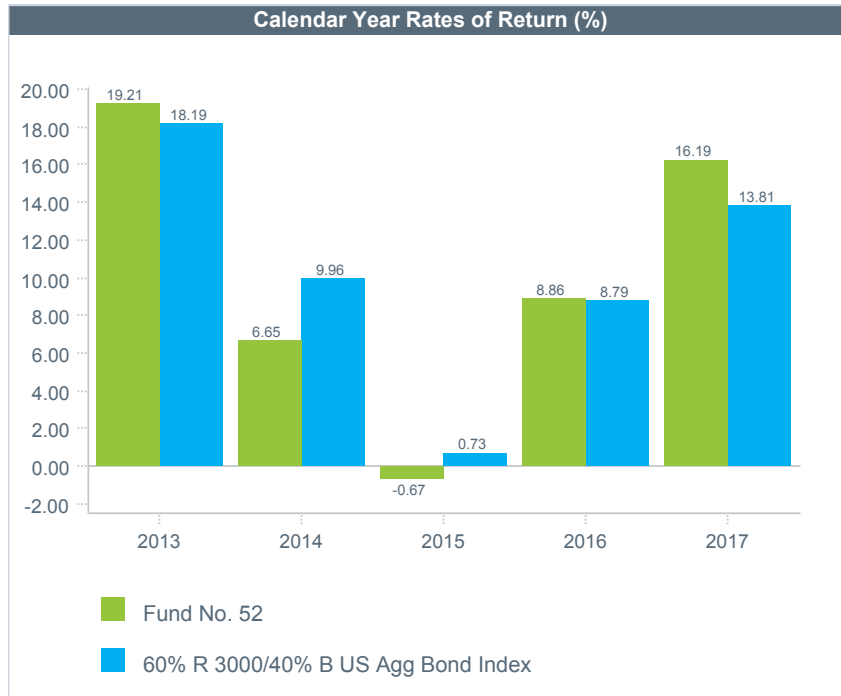


Funds with less history than the specified time period will not appear in the chart.



Total Return - Total Fund
Fund No. 52 vs. 60% R 3000/40% B US Agg Bond Index

As of June 30, 2018

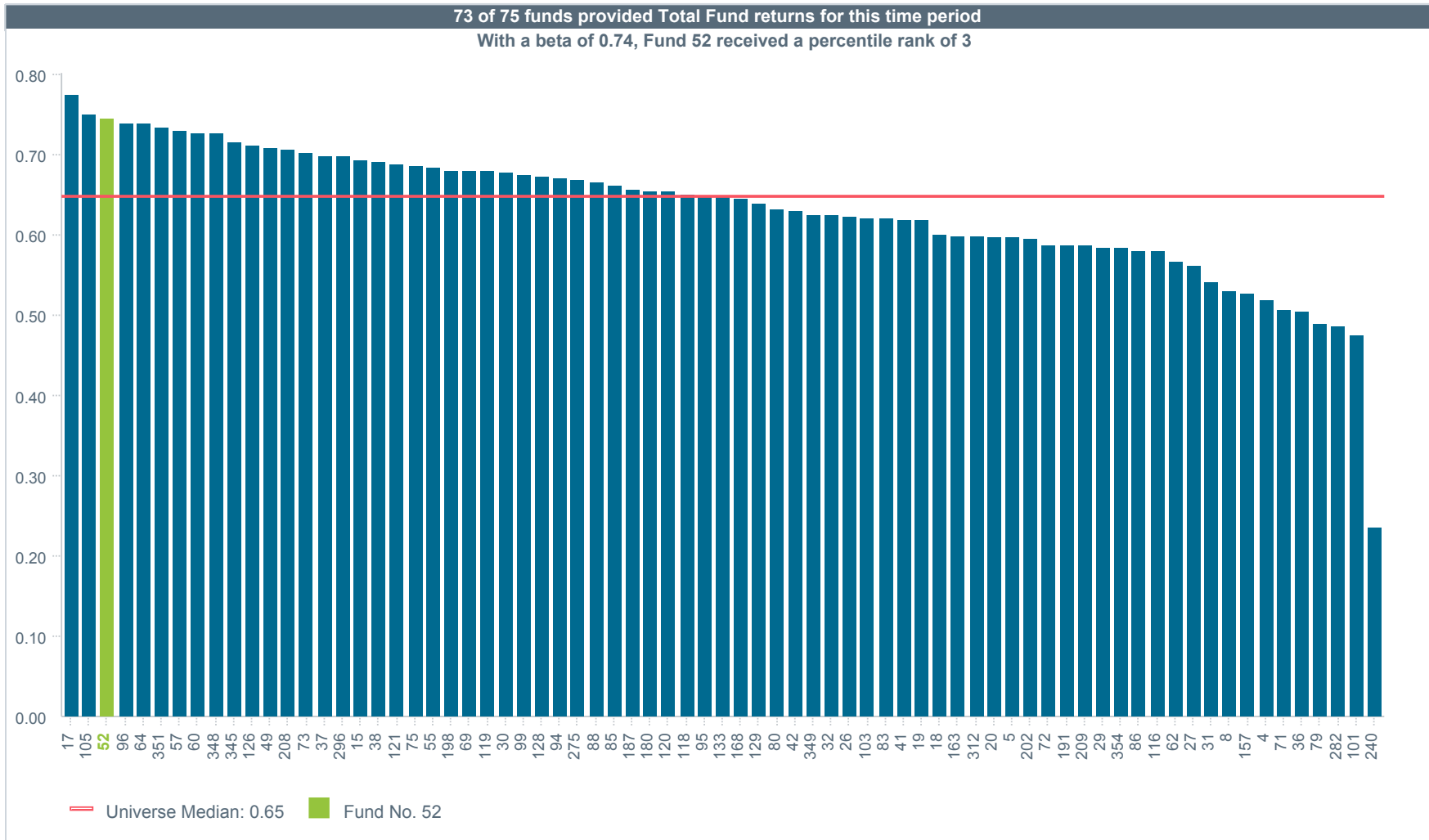


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 52	9.12	7.55	8.79
60% R 3000/40% B US Agg Bond Index	8.56	7.69	8.90
Variance	0.56	-0.14	-0.11



10 Year Total Fund Beta

As of June 30, 2018

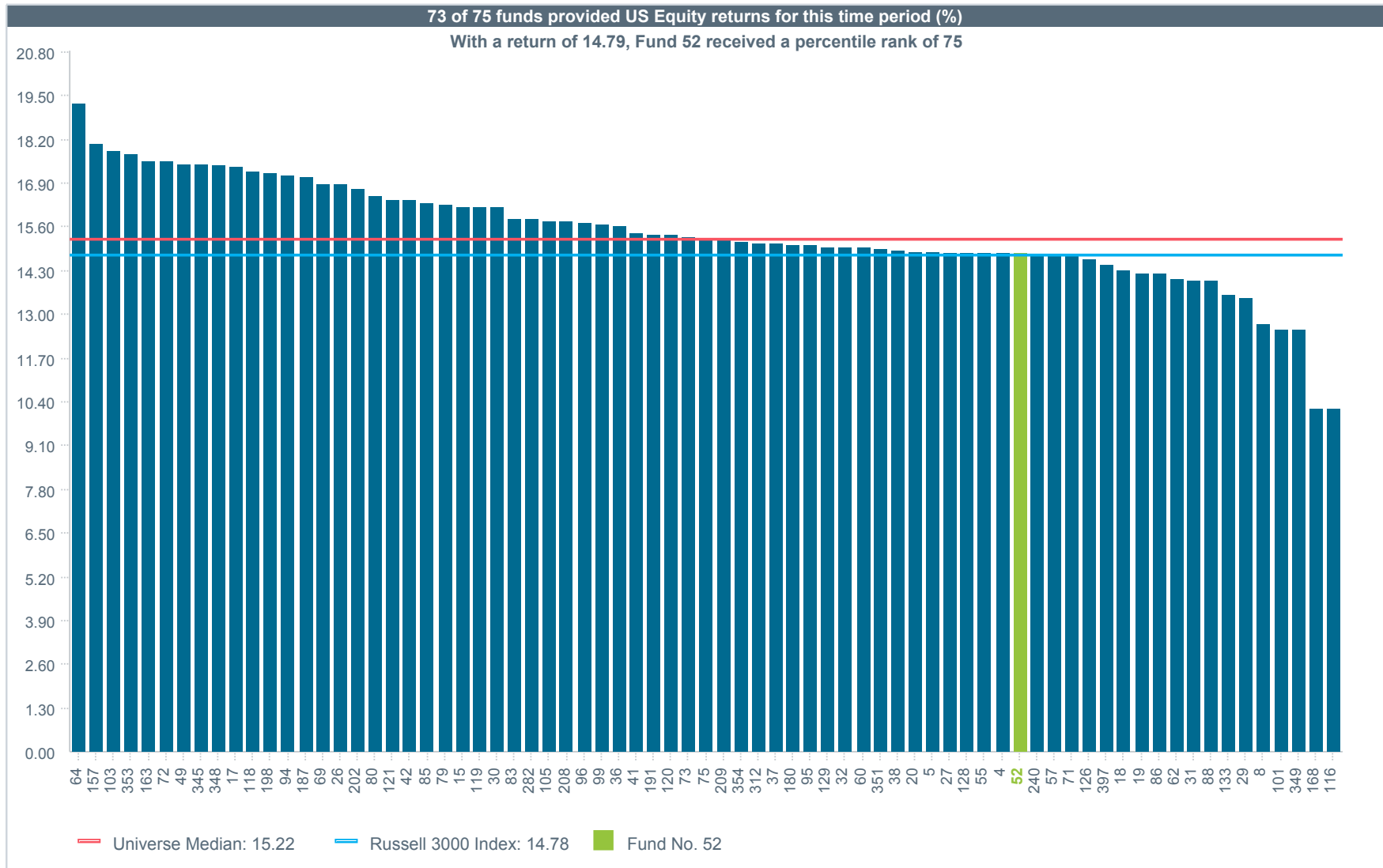


Funds with less history than the specified time period will not appear in the chart. Benchmark used is the S&P 500 Index (Cap Wtd).



1 Year Annualized US Equity Returns

As of June 30, 2018

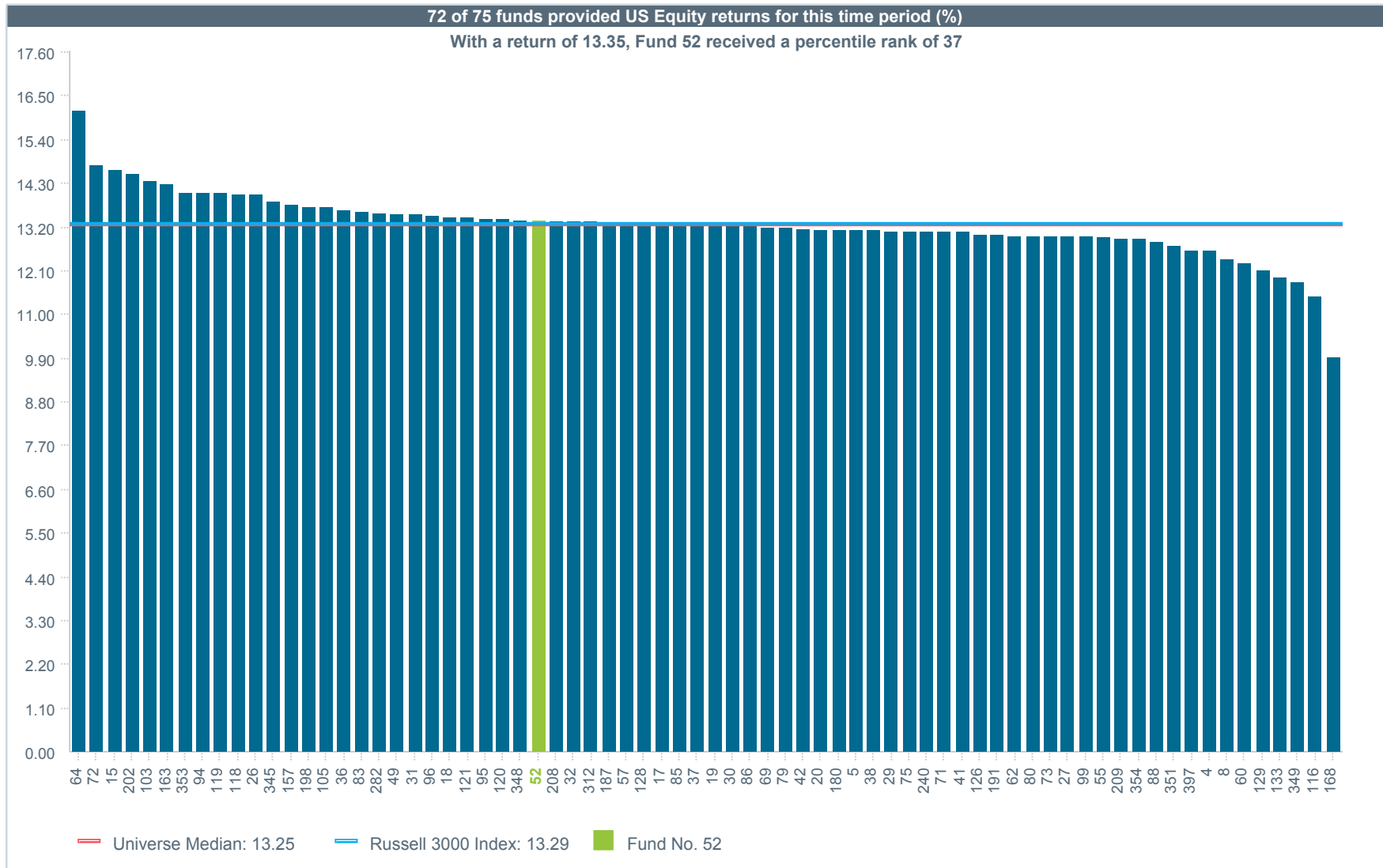


Funds with less history than the specified time period will not appear in the chart.



5 Year Annualized US Equity Returns

As of June 30, 2018

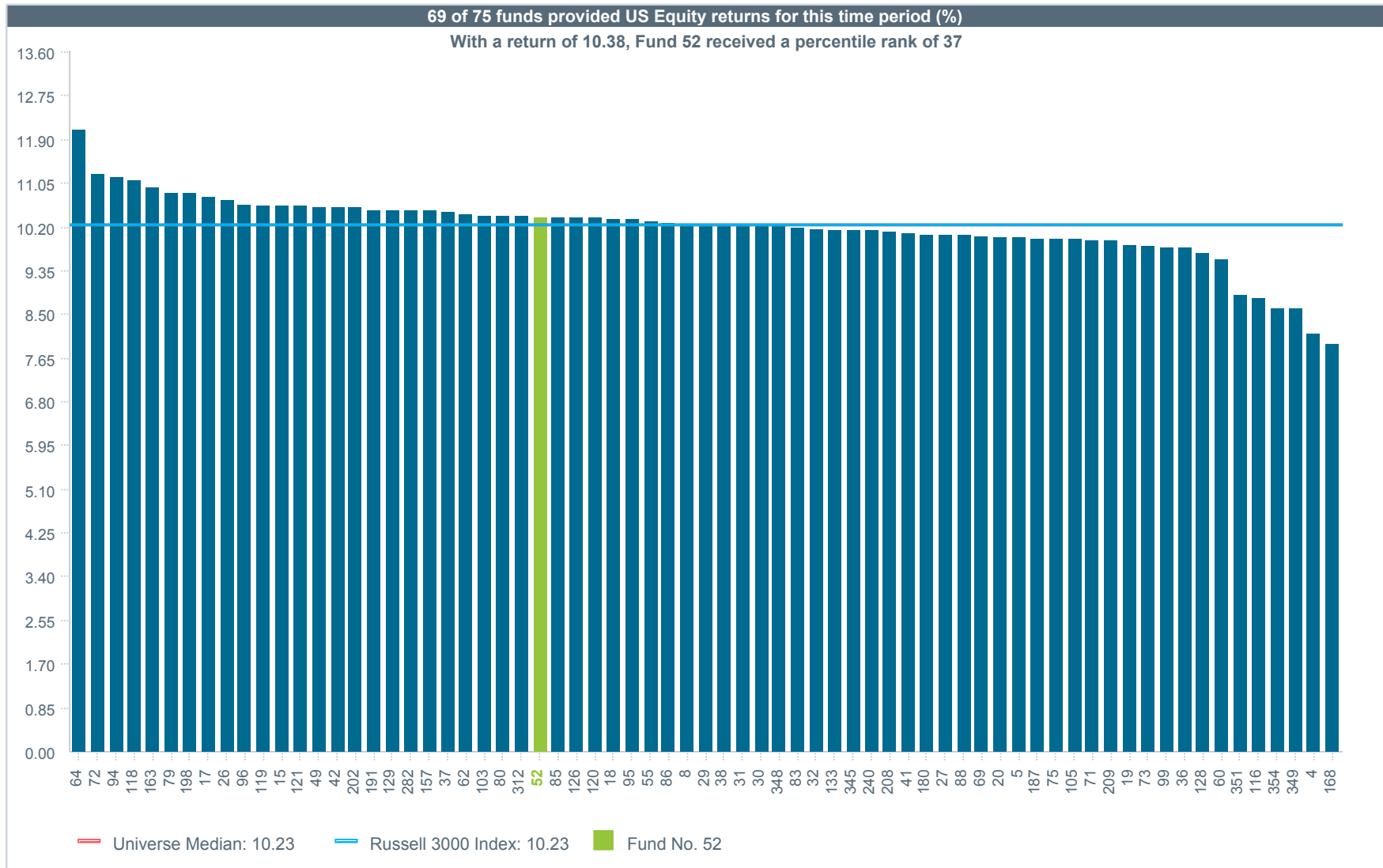


Funds with less history than the specified time period will not appear in the chart.



10 Year Annualized US Equity Returns

As of June 30, 2018

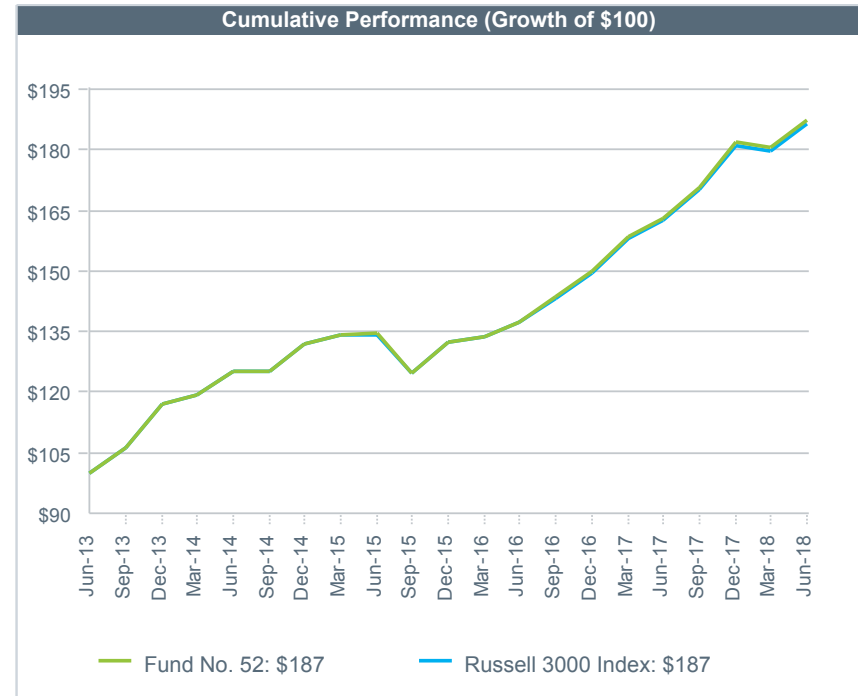
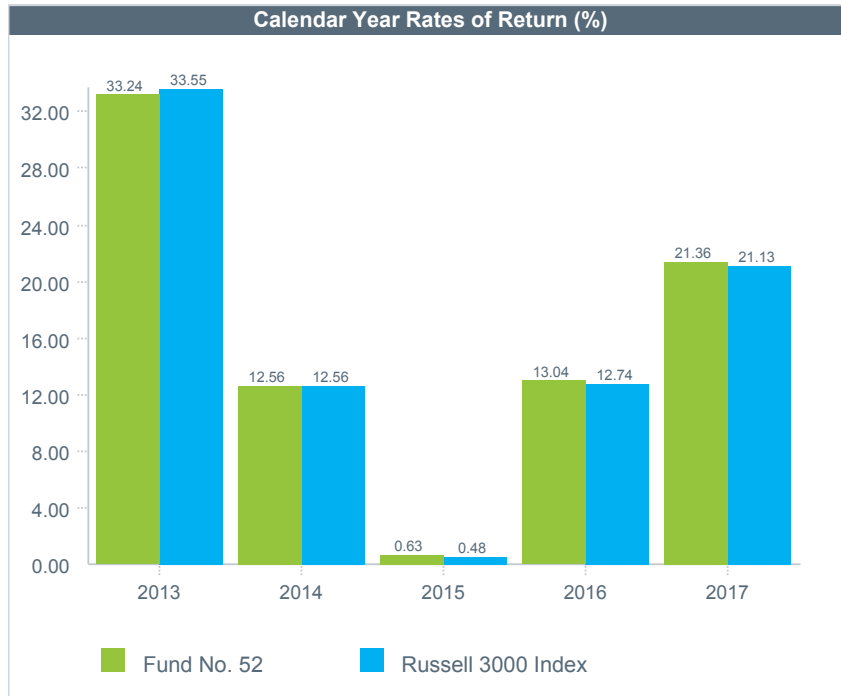


Funds with less history than the specified time period will not appear in the chart.



**Total Return - US Equity
Fund No. 52 vs. Russell 3000 Index**

As of June 30, 2018

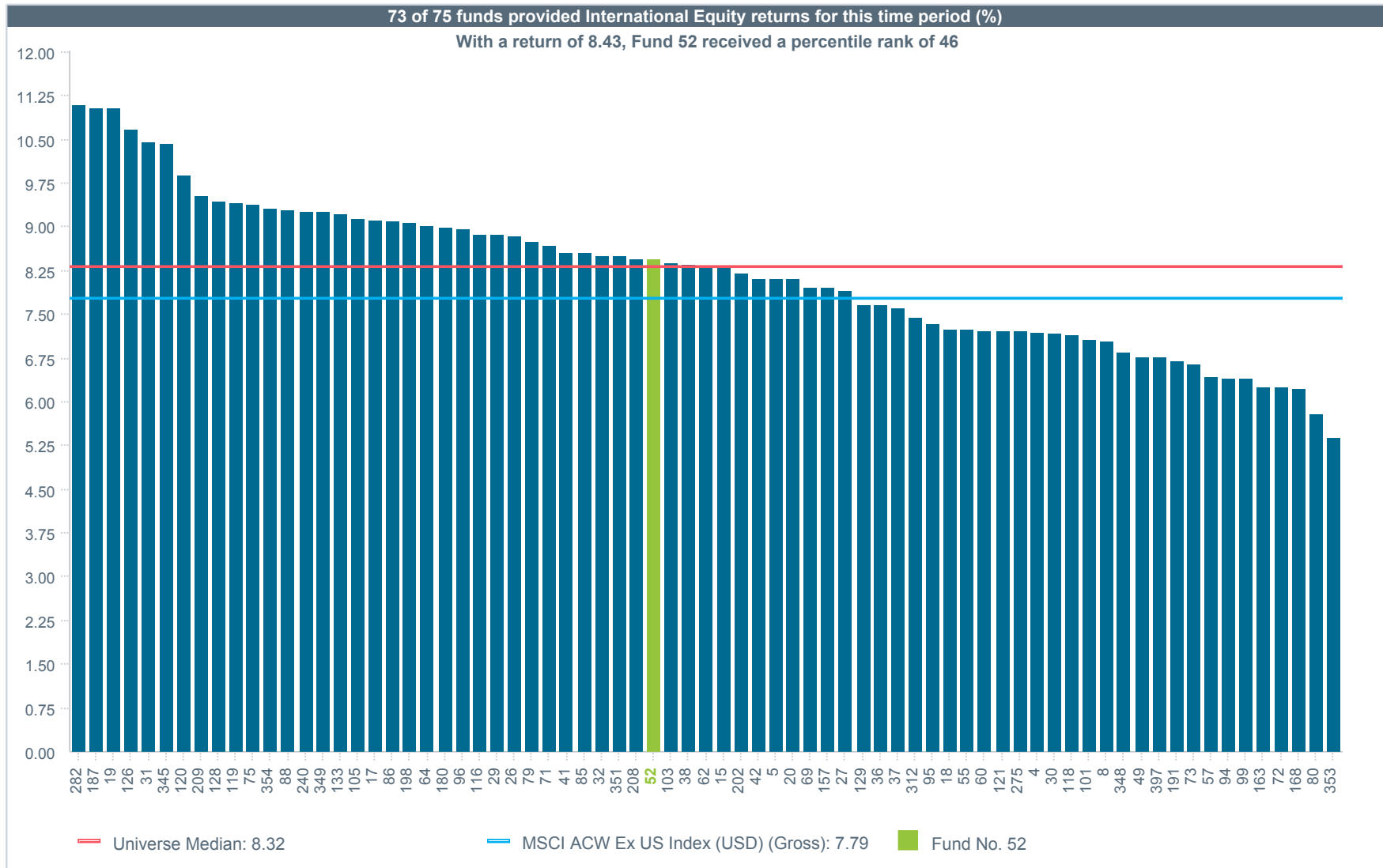


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 52	14.79	11.65	13.35
Russell 3000 Index	14.78	11.58	13.29
Variance	0.01	0.07	0.06



1 Year Annualized International Equity Returns

As of June 30, 2018

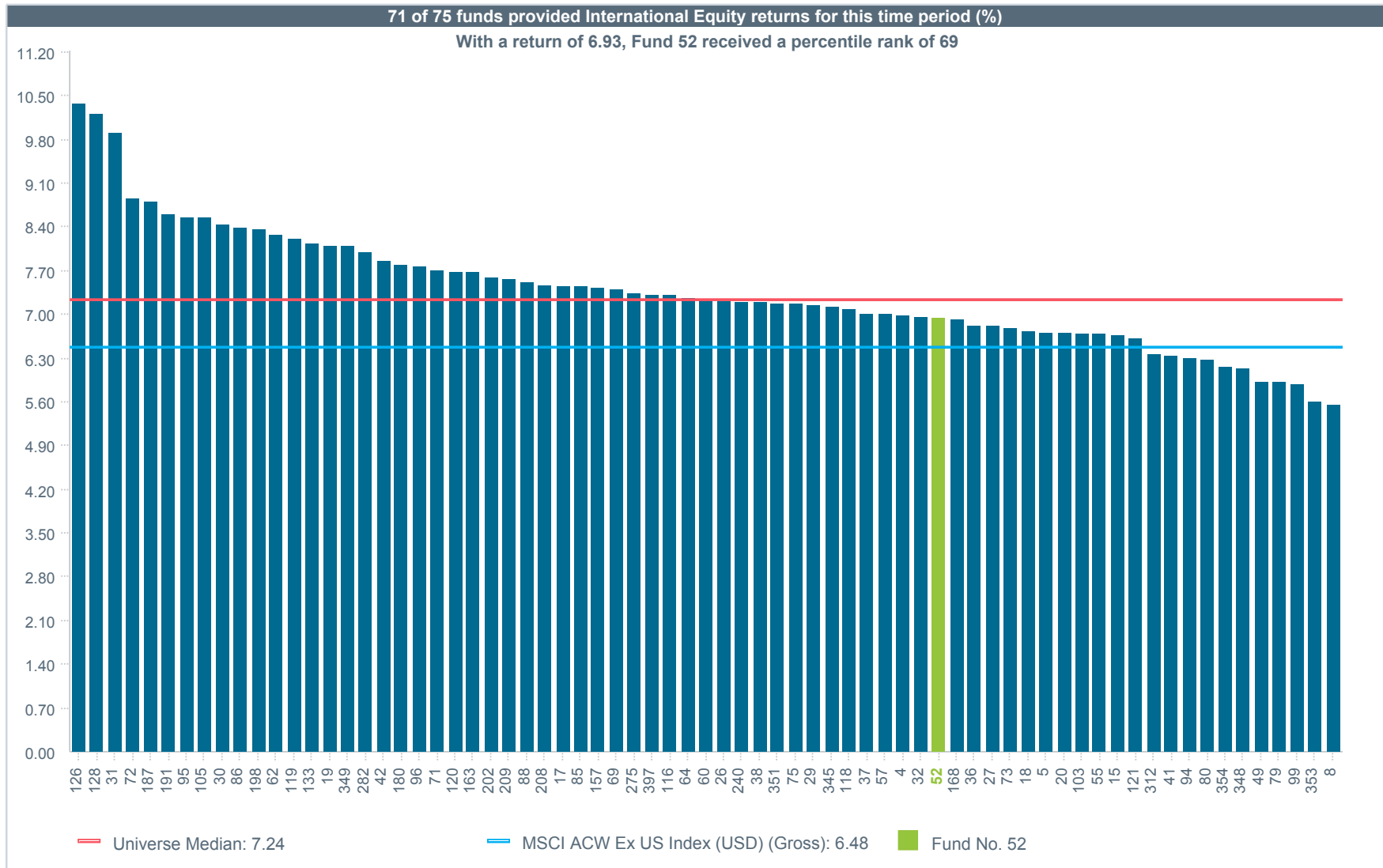


Funds with less history than the specified time period will not appear in the chart.



5 Year Annualized International Equity Returns

As of June 30, 2018

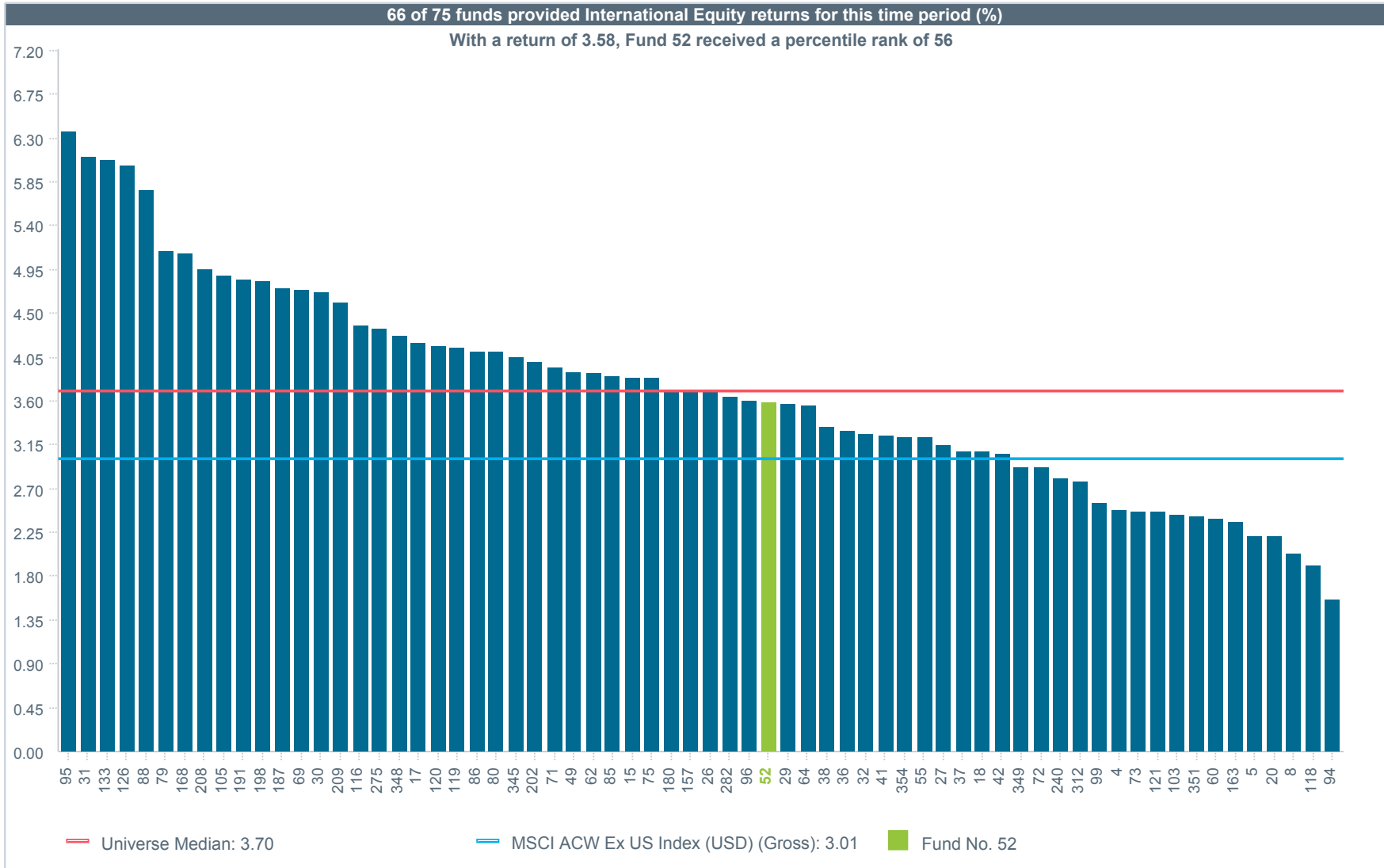


Funds with less history than the specified time period will not appear in the chart.



10 Year Annualized International Equity Returns

As of June 30, 2018

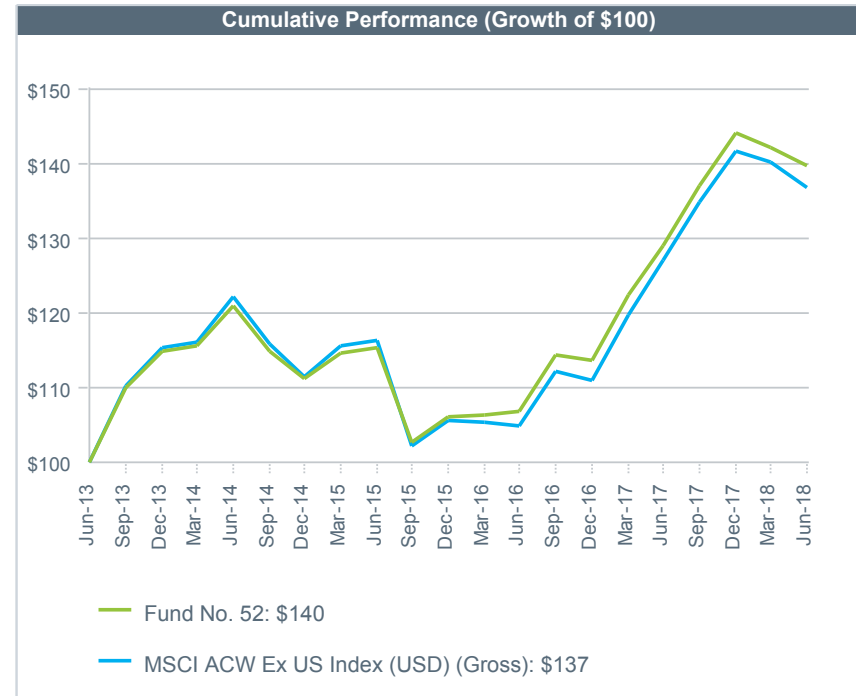
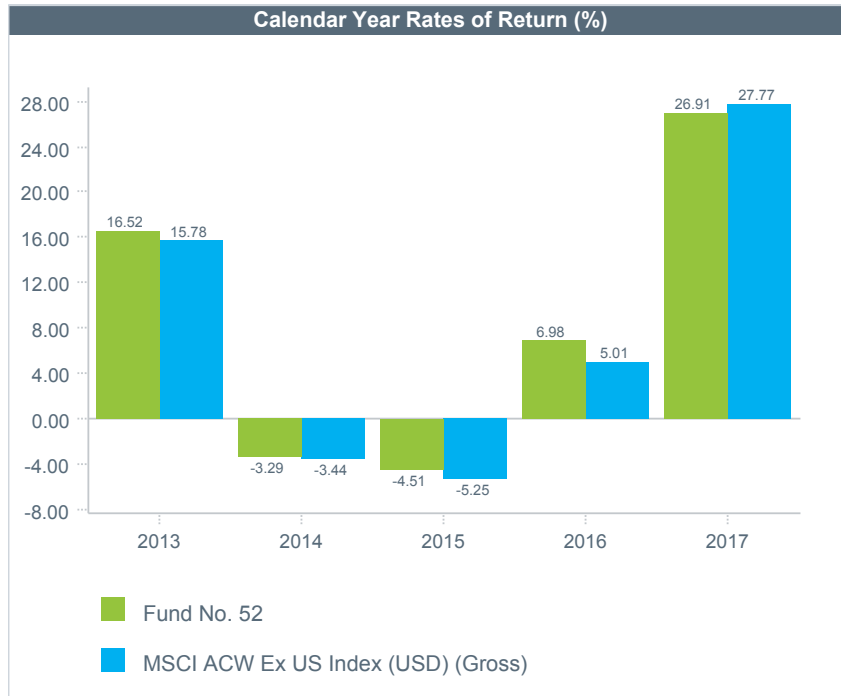


Funds with less history than the specified time period will not appear in the chart.



**Total Return - International Equity
Fund No. 52 vs. MSCI ACW Ex US Index (USD) (Gross)**

As of June 30, 2018

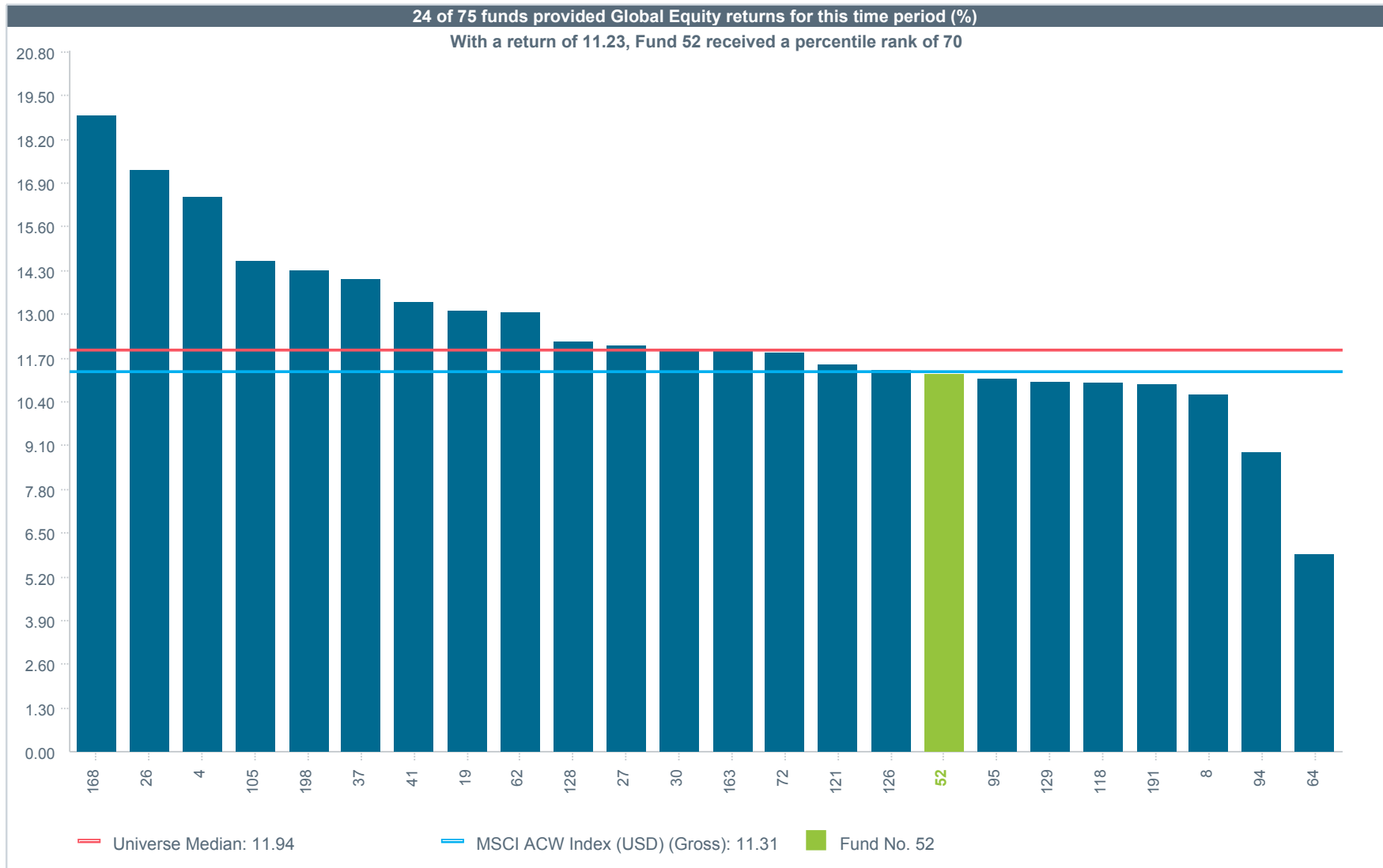


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 52	8.43	6.64	6.93
MSCI ACW Ex US Index (USD) (Gross)	7.79	5.56	6.48
Variance	0.64	1.08	0.45



1 Year Annualized Global Equity Returns

As of June 30, 2018

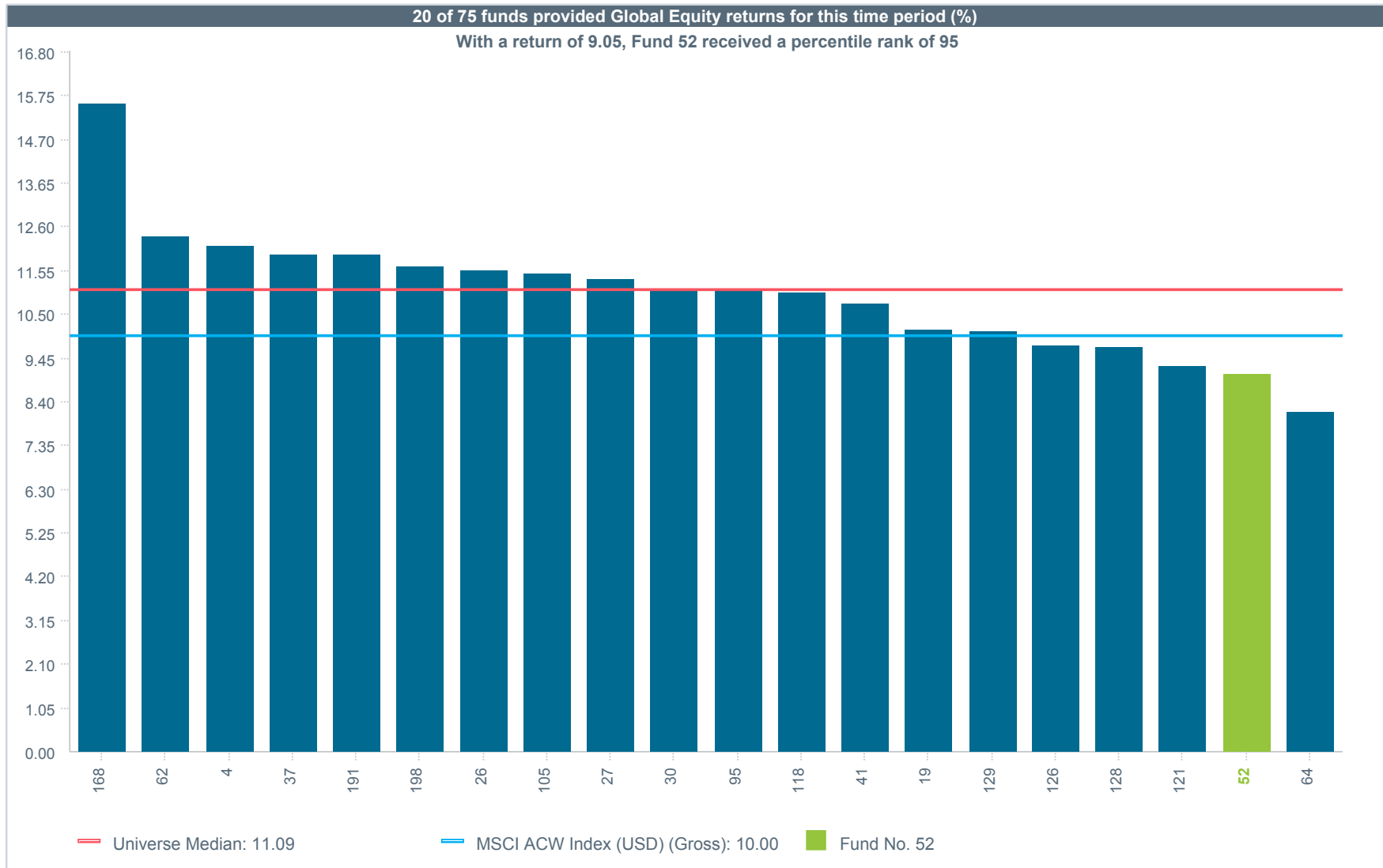


Funds with less history than the specified time period will not appear in the chart.



5 Year Annualized Global Equity Returns

As of June 30, 2018

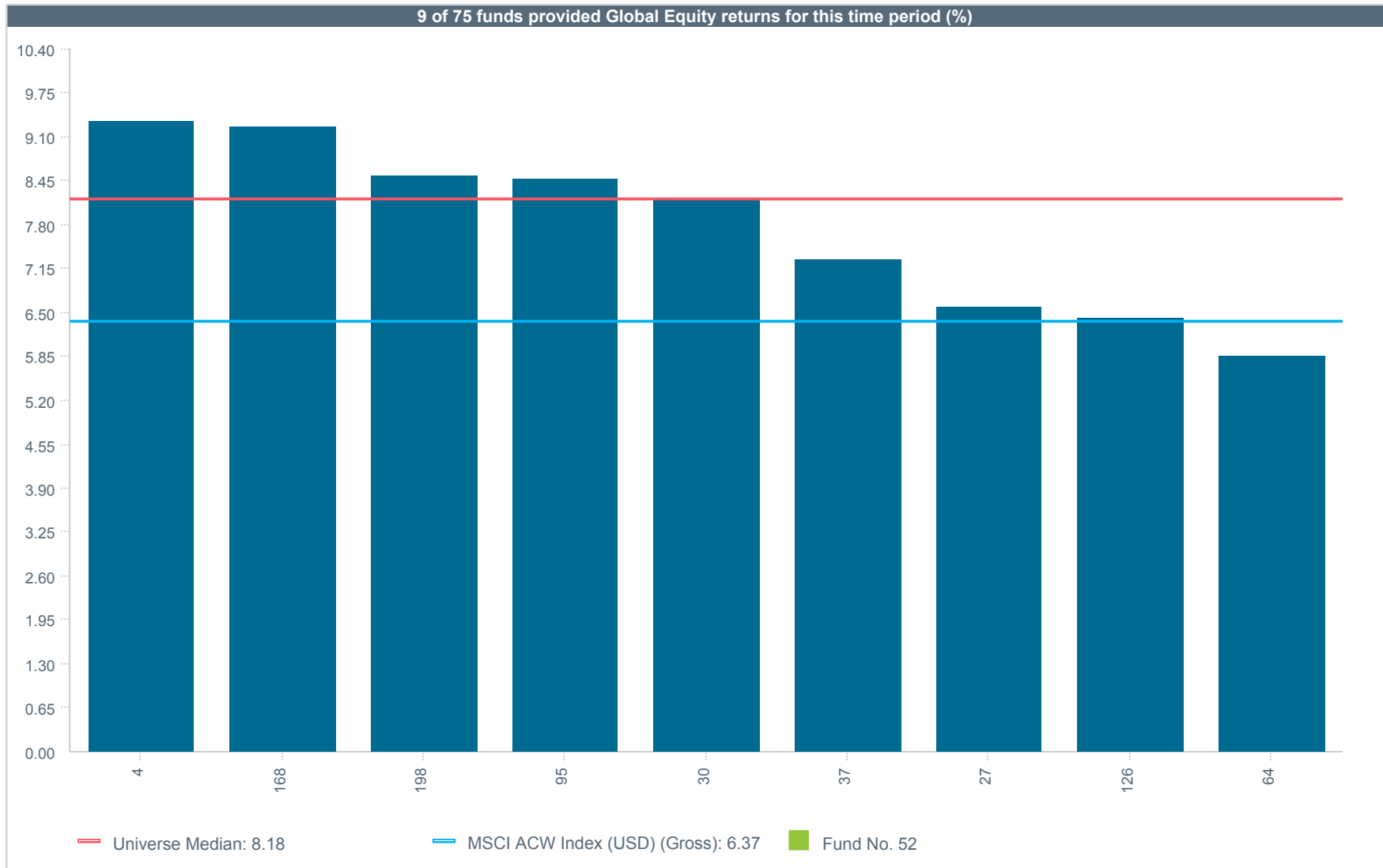


Funds with less history than the specified time period will not appear in the chart.



10 Year Annualized Global Equity Returns

As of June 30, 2018

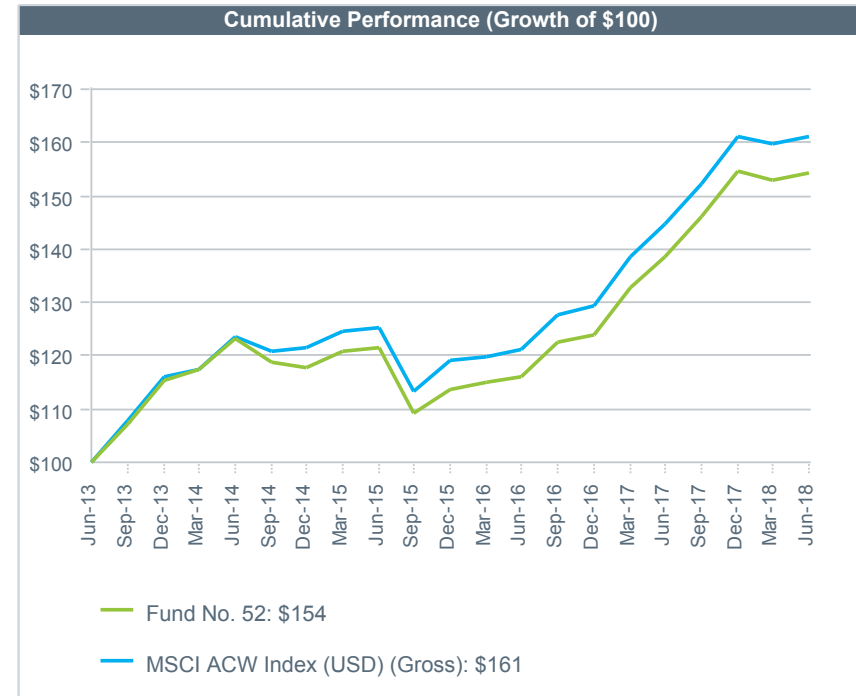
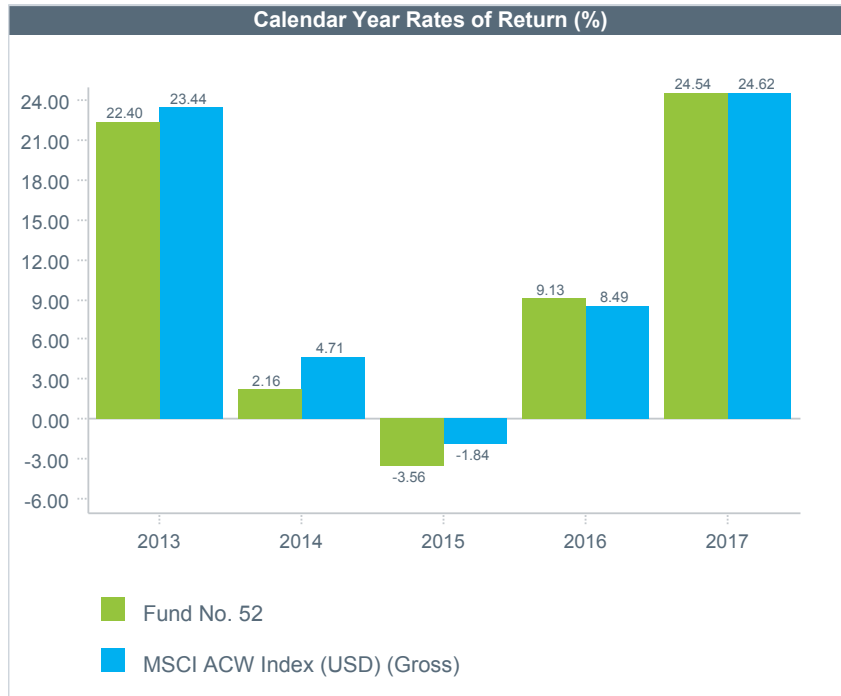


Funds with less history than the specified time period will not appear in the chart.



**Total Return - Global Equity
Fund No. 52 vs. MSCI ACW Index (USD) (Gross)**

As of June 30, 2018

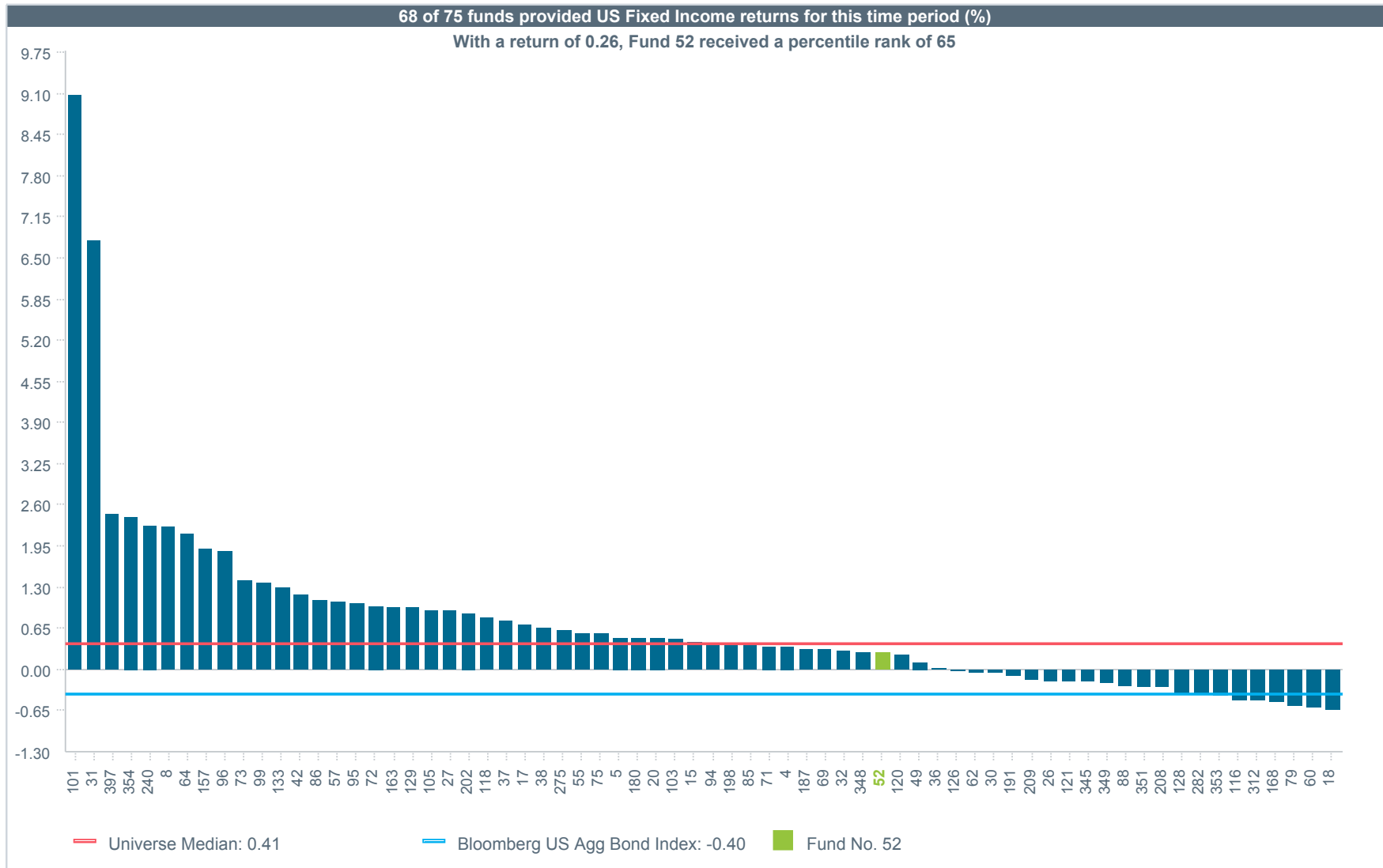


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 52	11.23	8.27	9.05
MSCI ACW Index (USD) (Gross)	11.31	8.78	10.00
Variance	-0.08	-0.51	-0.95



1 Year Annualized US Fixed Income Returns

As of June 30, 2018

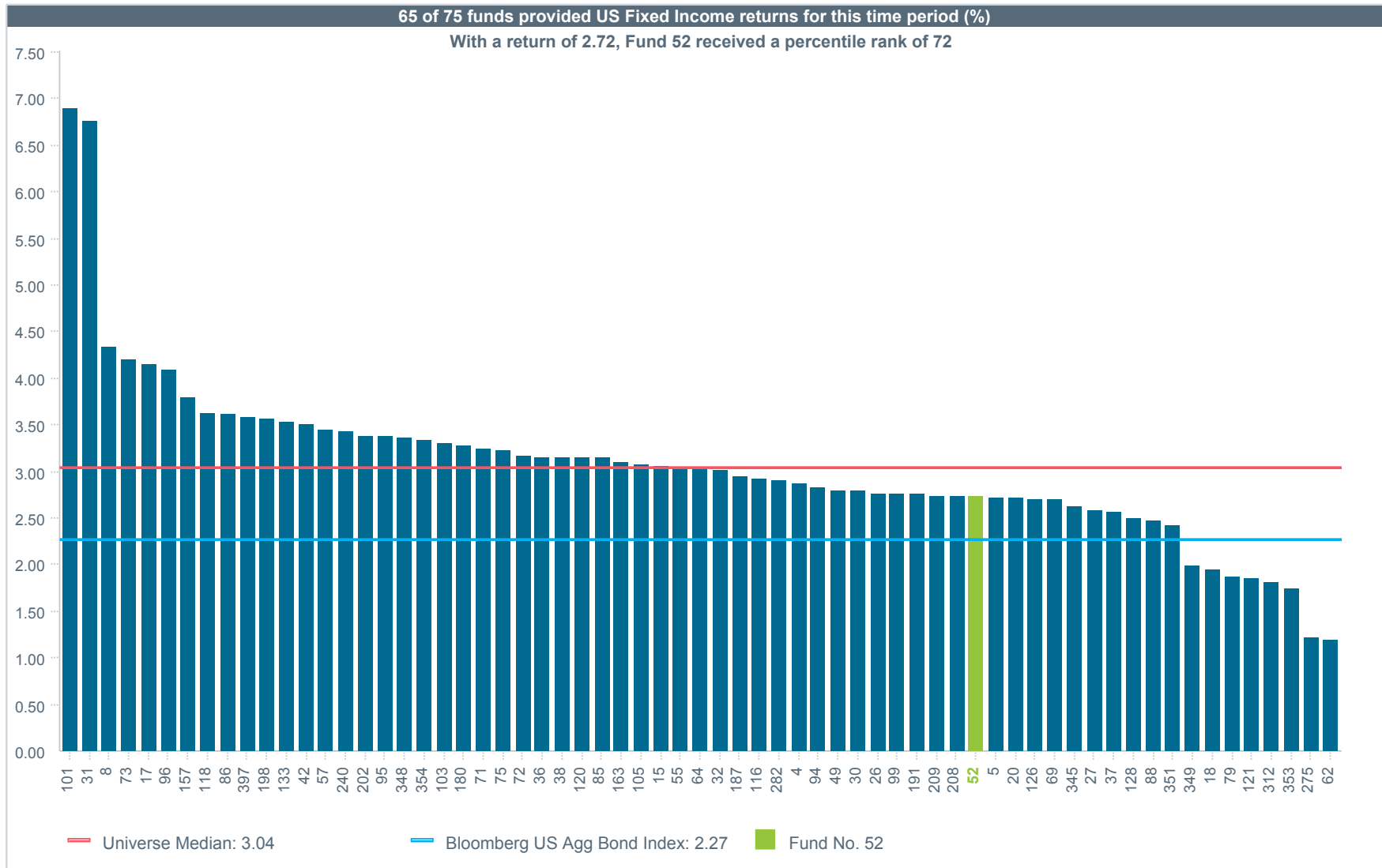


Funds with less history than the specified time period will not appear in the chart.



5 Year Annualized US Fixed Income Returns

As of June 30, 2018

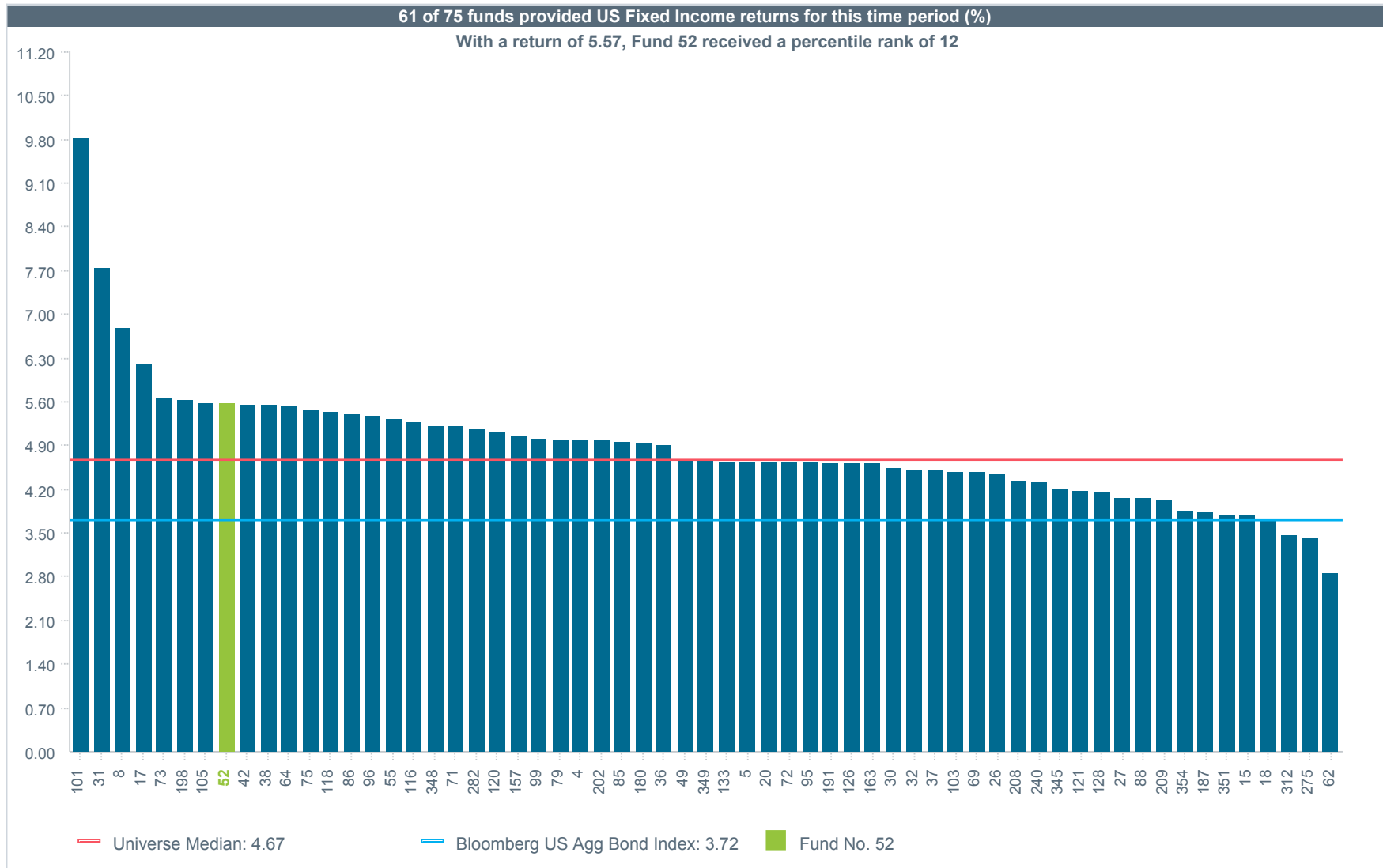


Funds with less history than the specified time period will not appear in the chart.



10 Year Annualized US Fixed Income Returns

As of June 30, 2018

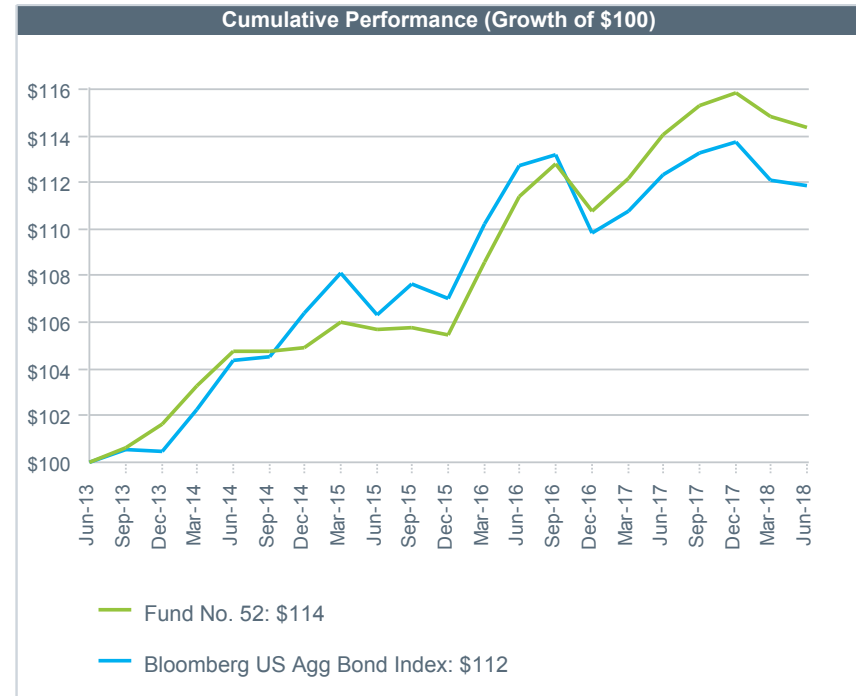
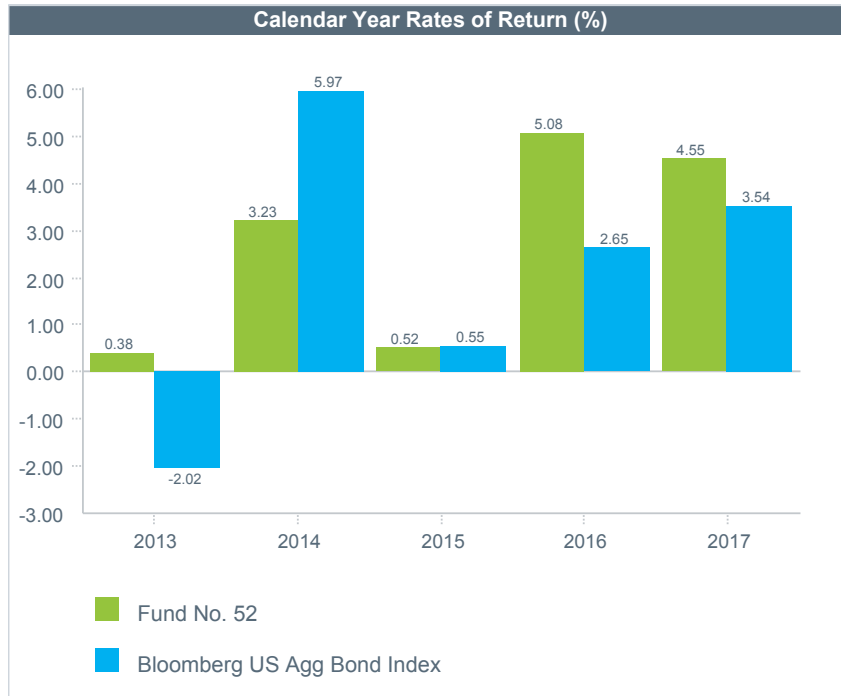


Funds with less history than the specified time period will not appear in the chart.



**Total Return - US Fixed Income
Fund No. 52 vs. Bloomberg US Agg Bond Index**

As of June 30, 2018

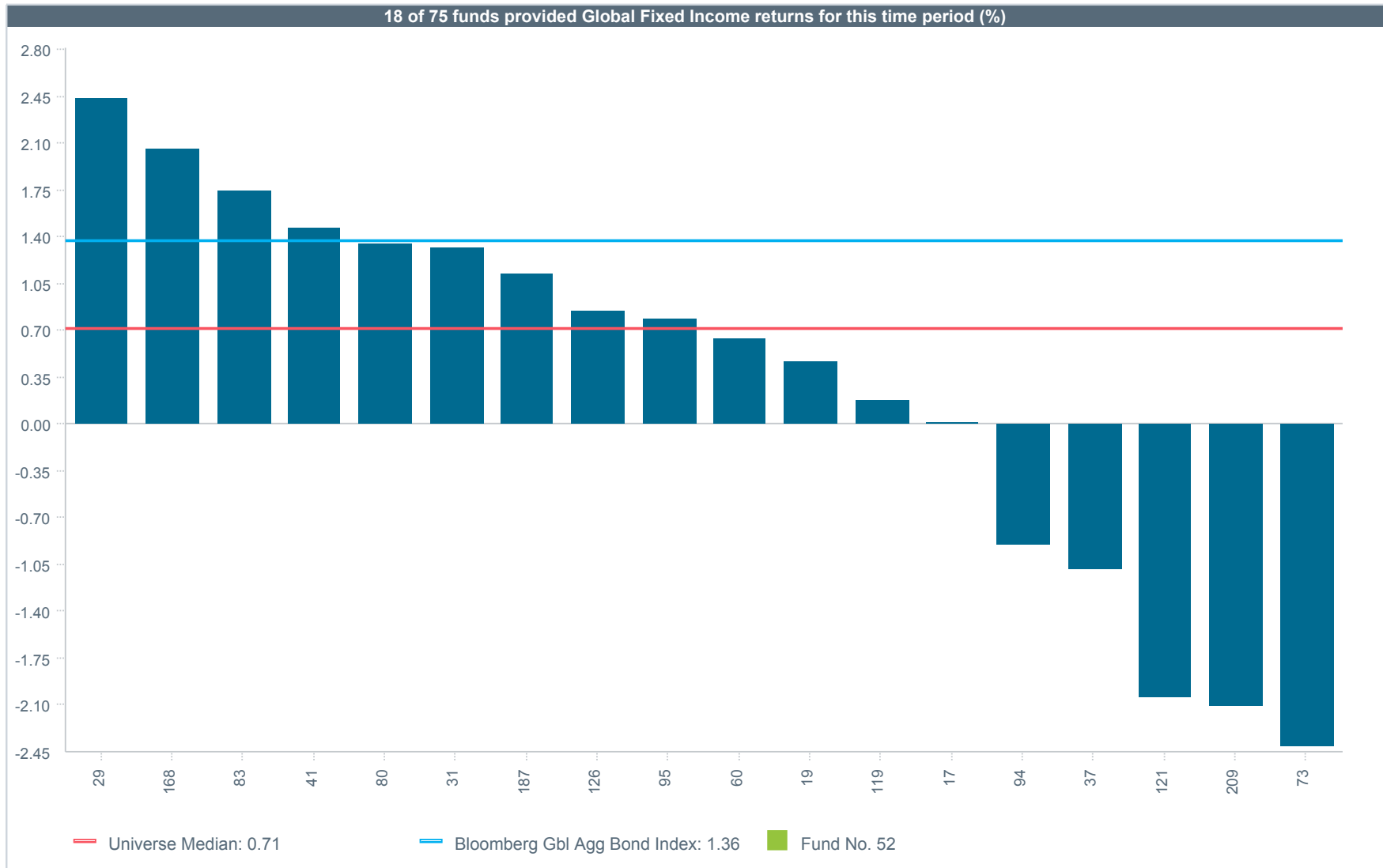


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 52	0.26	2.66	2.72
Bloomberg US Agg Bond Index	-0.40	1.72	2.27
Variance	0.66	0.94	0.45



1 Year Annualized Global Fixed Income Returns

As of June 30, 2018

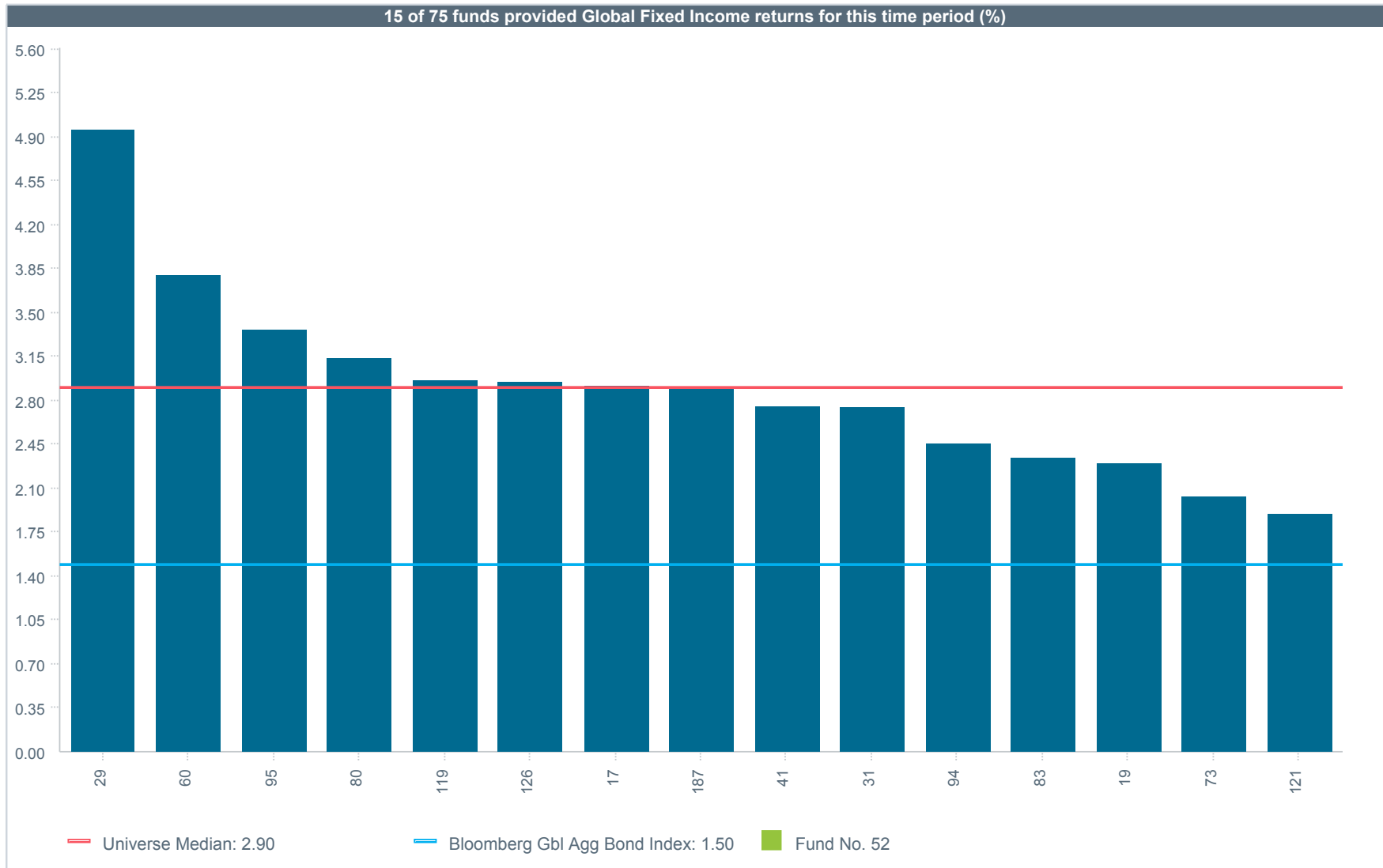


Funds with less history than the specified time period will not appear in the chart.



5 Year Annualized Global Fixed Income Returns

As of June 30, 2018

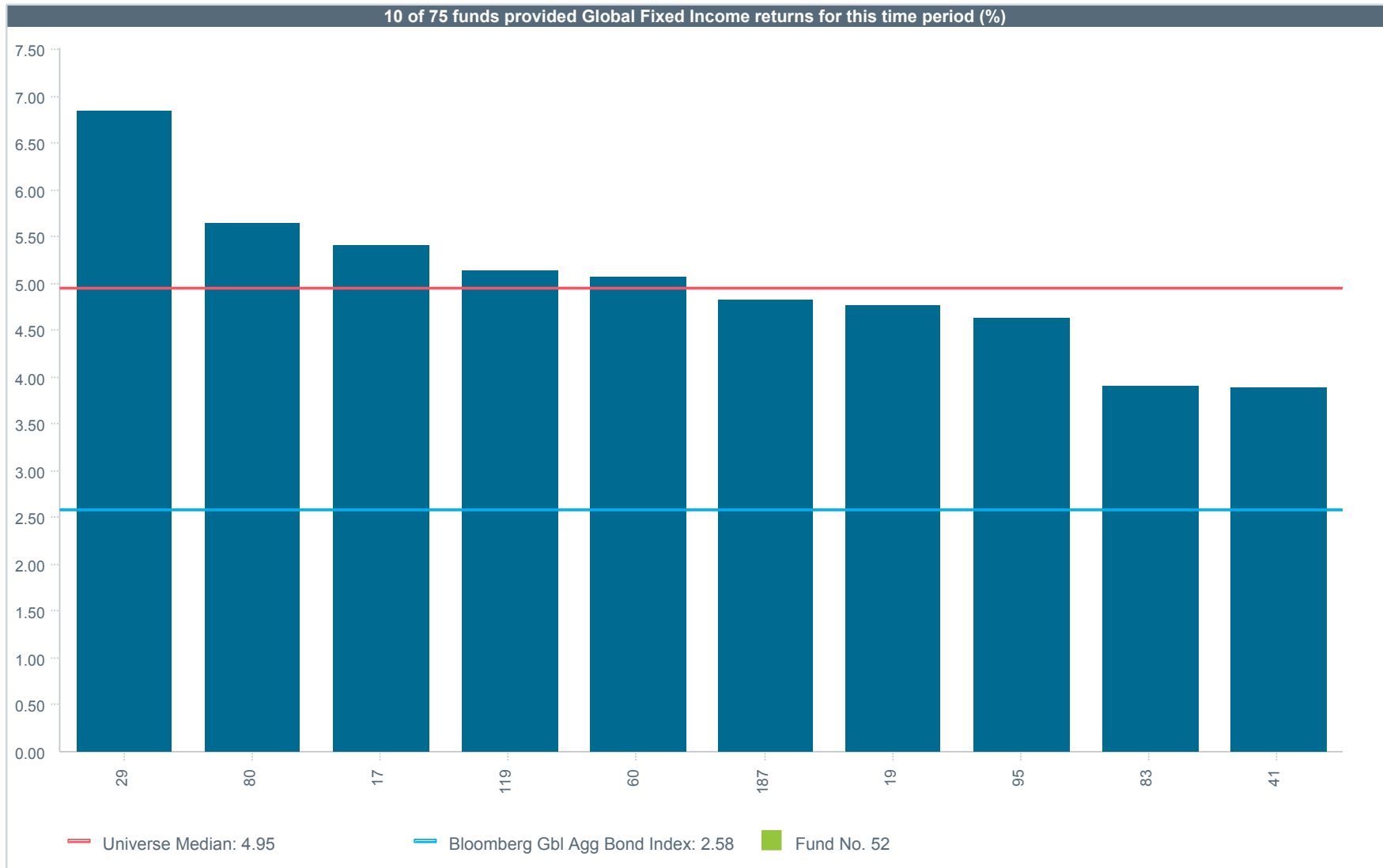


Funds with less history than the specified time period will not appear in the chart.



10 Year Annualized Global Fixed Income Returns

As of June 30, 2018



Funds with less history than the specified time period will not appear in the chart.



Total Return - Global Fixed Income
Fund No. 52 vs. Bloomberg Gbl Agg Bond Index

As of June 30, 2018

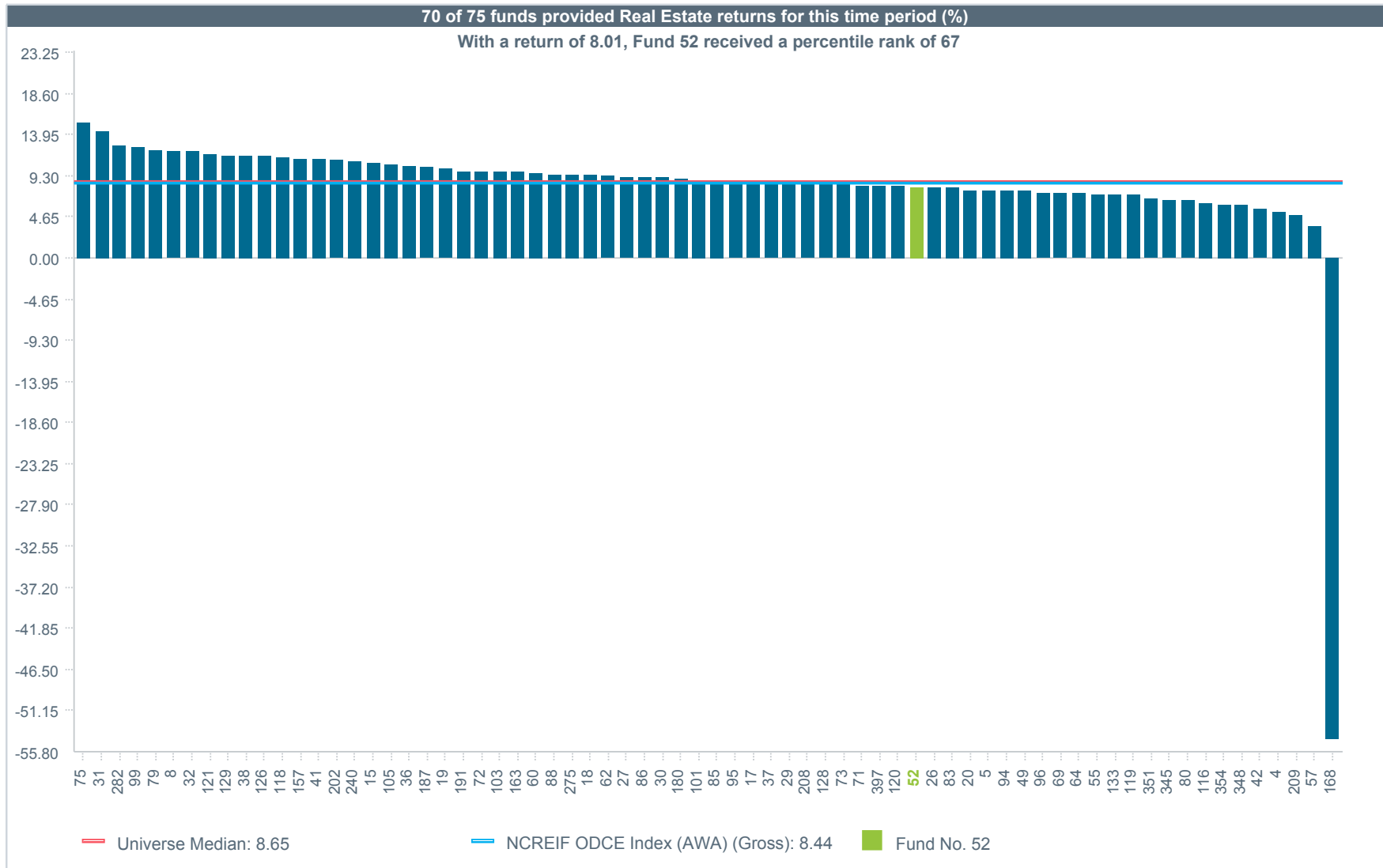
Calendar Year Rates of Return (%)	Cumulative Performance (Growth of \$100)
<p>Fund No. 52 does not have return data for Global Fixed Income</p>	

Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 52	N/A	N/A	N/A
Bloomberg Gbl Agg Bond Index	N/A	N/A	N/A
Variance	N/A	N/A	N/A



1 Year Annualized Real Estate Returns

As of June 30, 2018

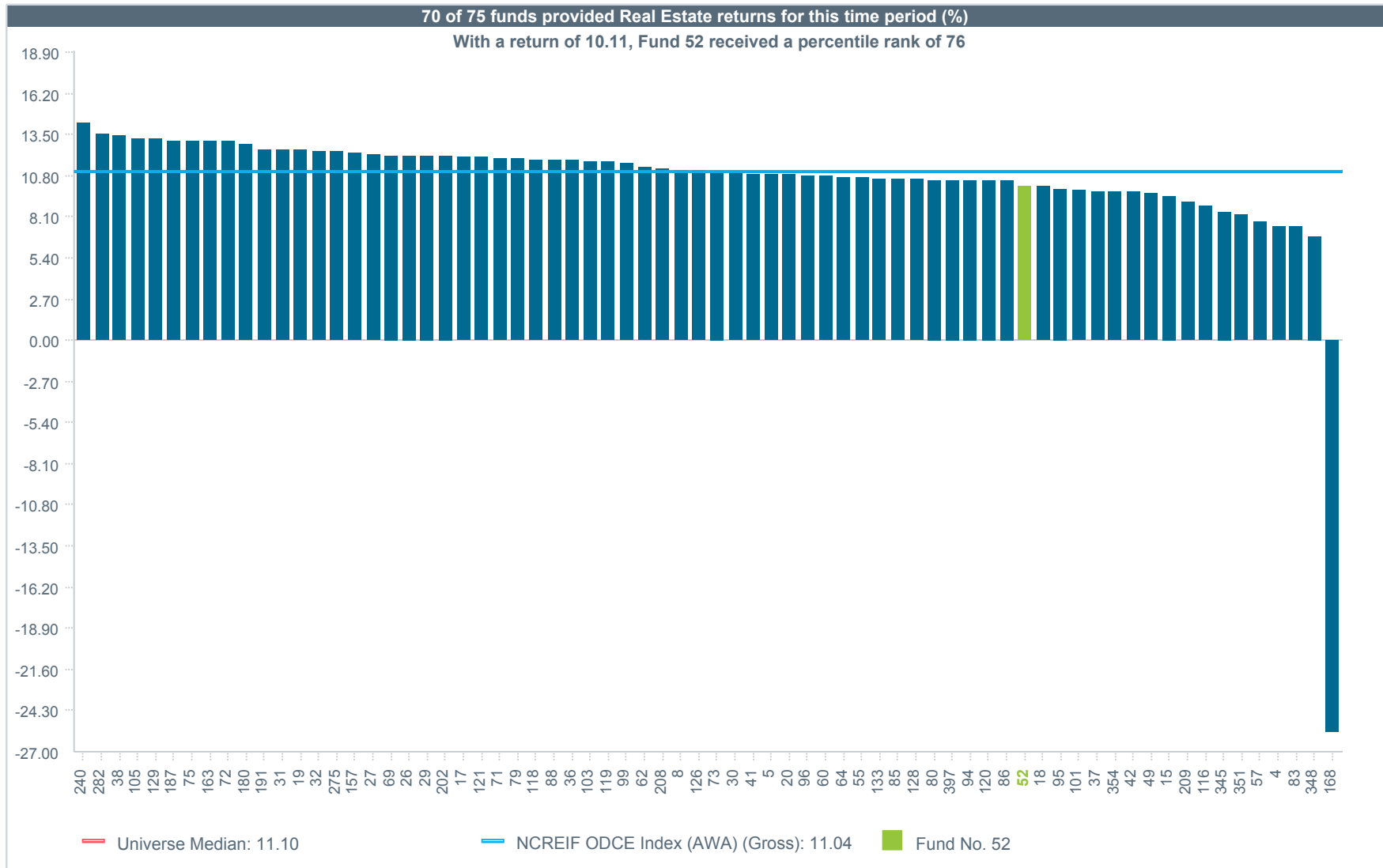


Funds with less history than the specified time period will not appear in the chart.



5 Year Annualized Real Estate Returns

As of June 30, 2018

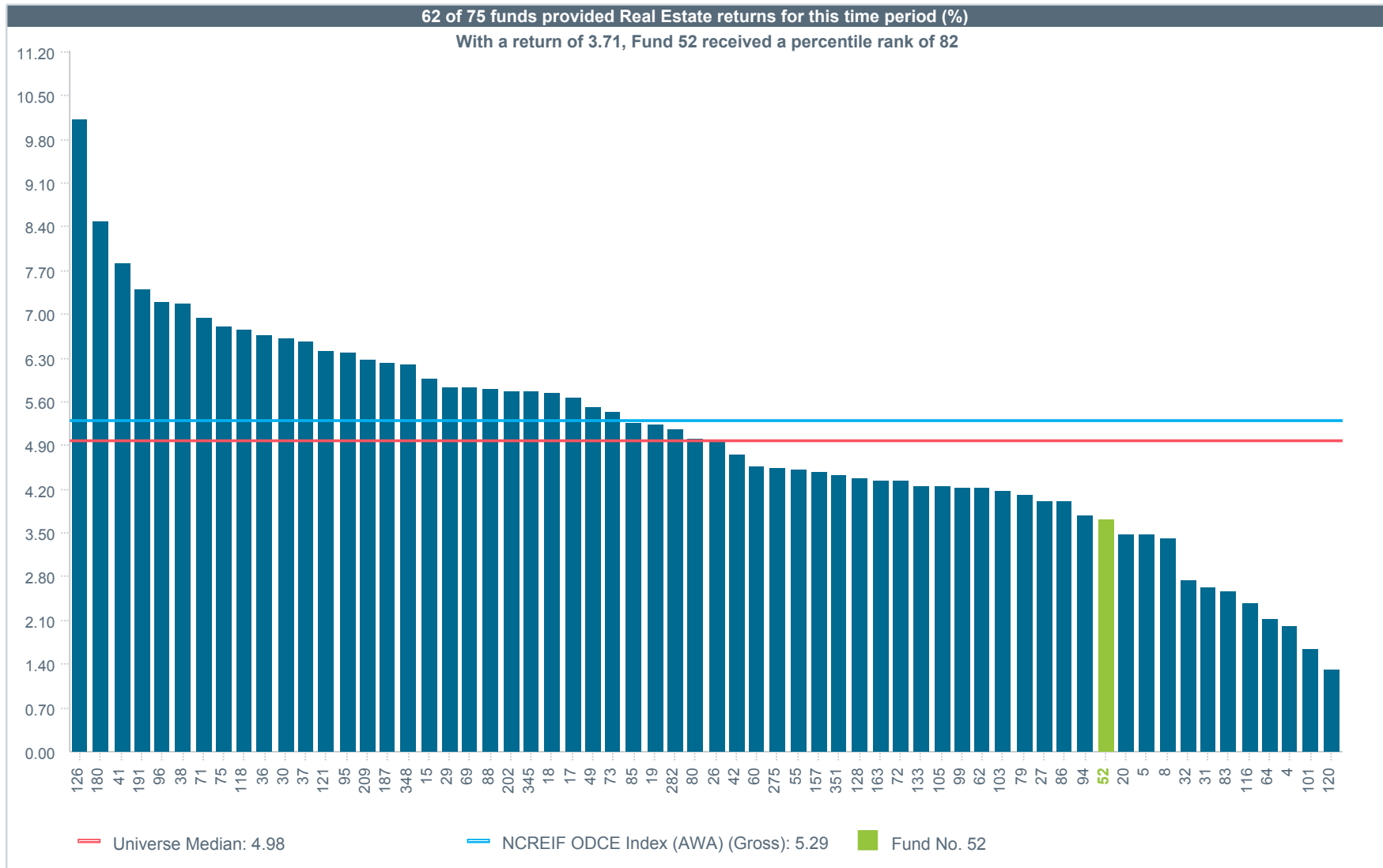


Funds with less history than the specified time period will not appear in the chart.



10 Year Annualized Real Estate Returns

As of June 30, 2018

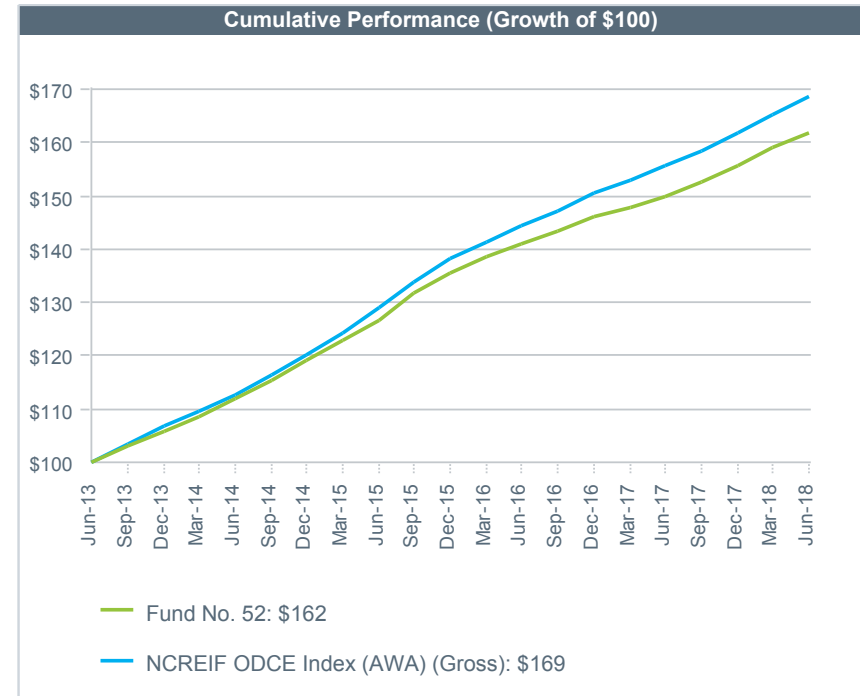
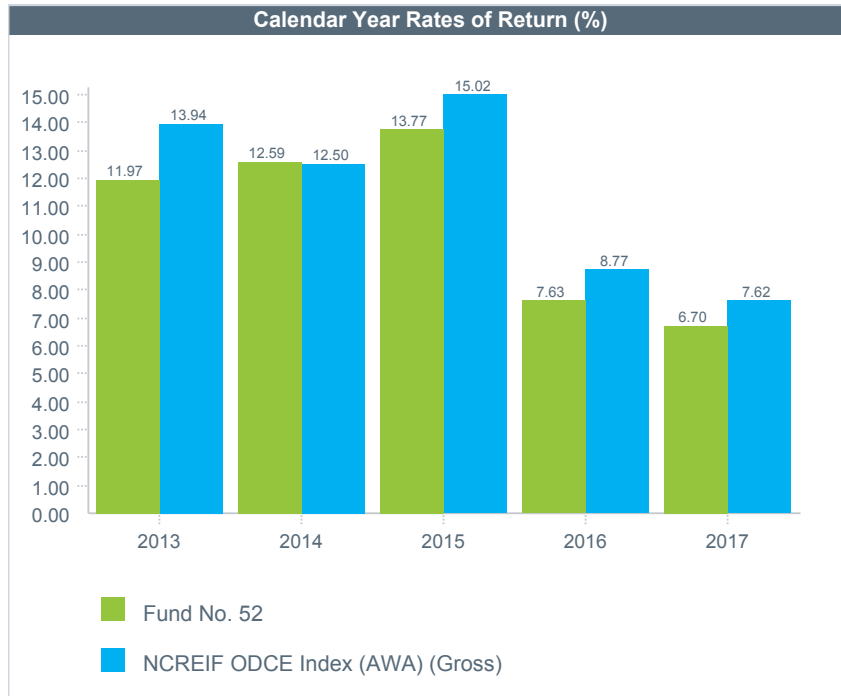


Funds with less history than the specified time period will not appear in the chart.



Total Return - Real Estate
Fund No. 52 vs. NCREIF ODCE Index (AWA) (Gross)

As of June 30, 2018



Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 52	8.01	8.48	10.11
NCREIF ODCE Index (AWA) (Gross)	8.44	9.37	11.04
Variance	-0.43	-0.89	-0.93



Risk/Return Analysis
5 Year Annualized Total Fund Returns vs. Standard Deviation

As of June 30, 2018



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
10 Year Annualized Total Fund Returns vs. Standard Deviation

As of June 30, 2018



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
5 Year Annualized US Equity Returns vs. Standard Deviation

As of June 30, 2018



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
 10 Year Annualized US Equity Returns vs. Standard Deviation

As of June 30, 2018



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
5 Year Annualized International Equity Returns vs. Standard Deviation

As of June 30, 2018



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
 10 Year Annualized International Equity Returns vs. Standard Deviation

As of June 30, 2018

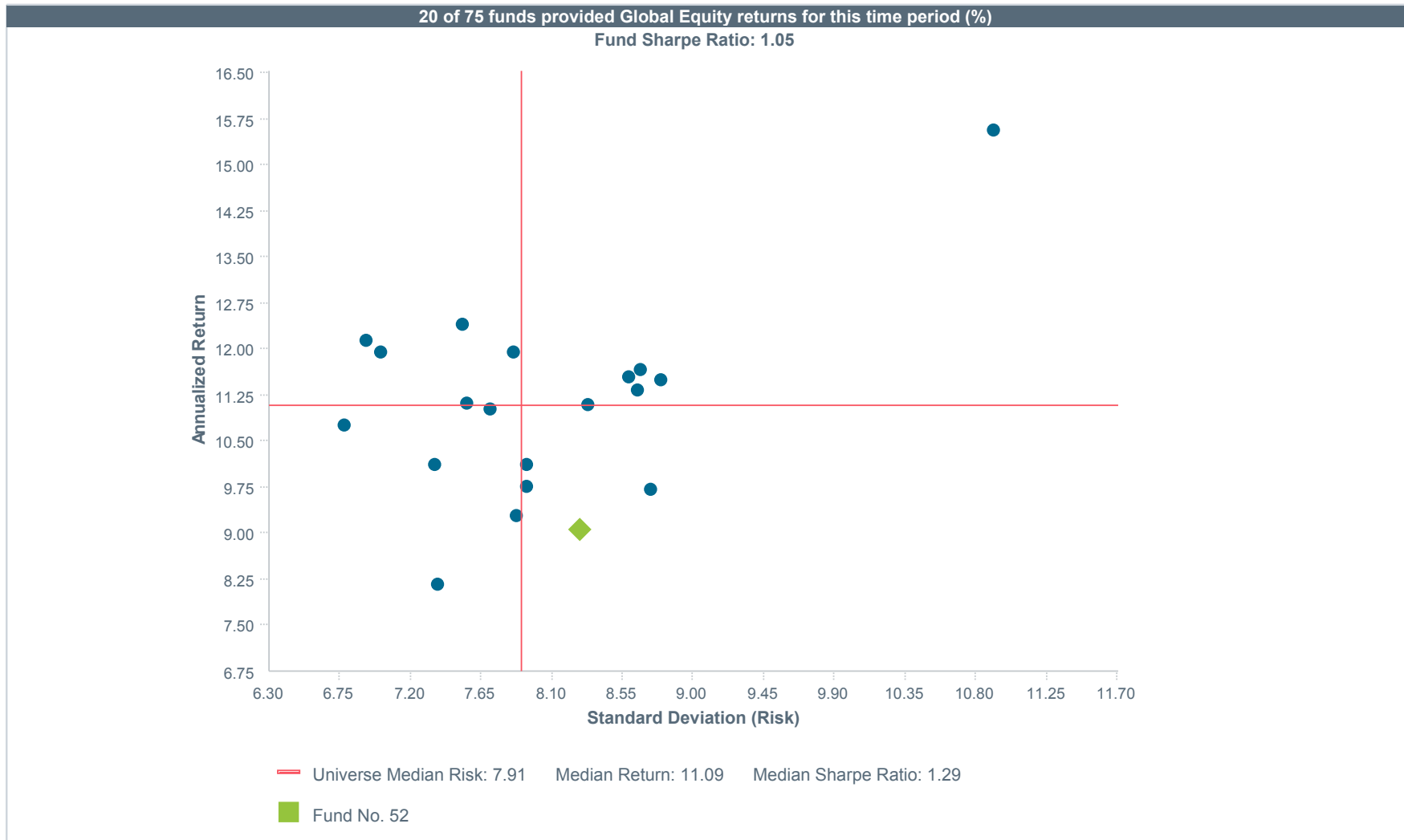


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
5 Year Annualized Global Equity Returns vs. Standard Deviation

As of June 30, 2018

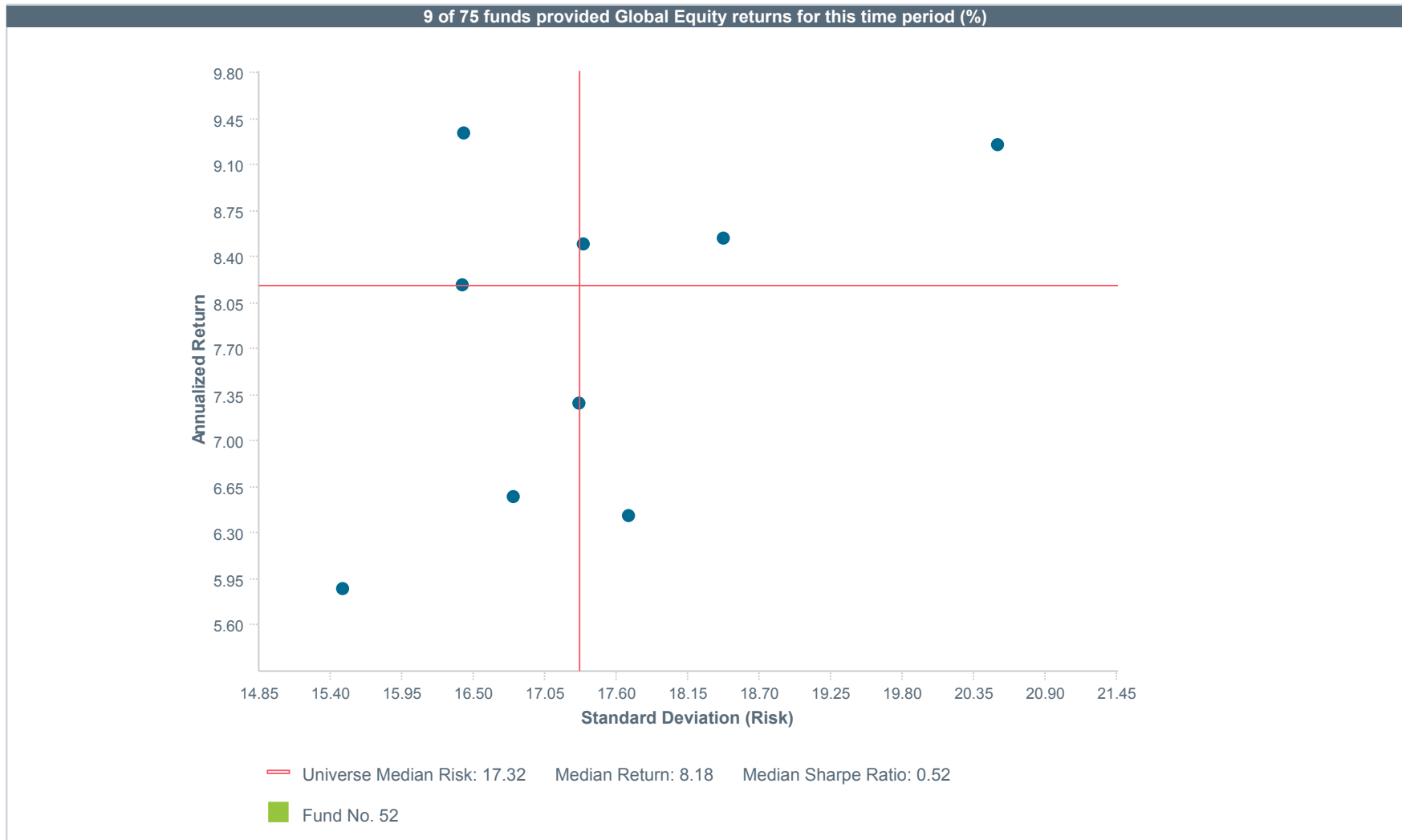


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
10 Year Annualized Global Equity Returns vs. Standard Deviation

As of June 30, 2018

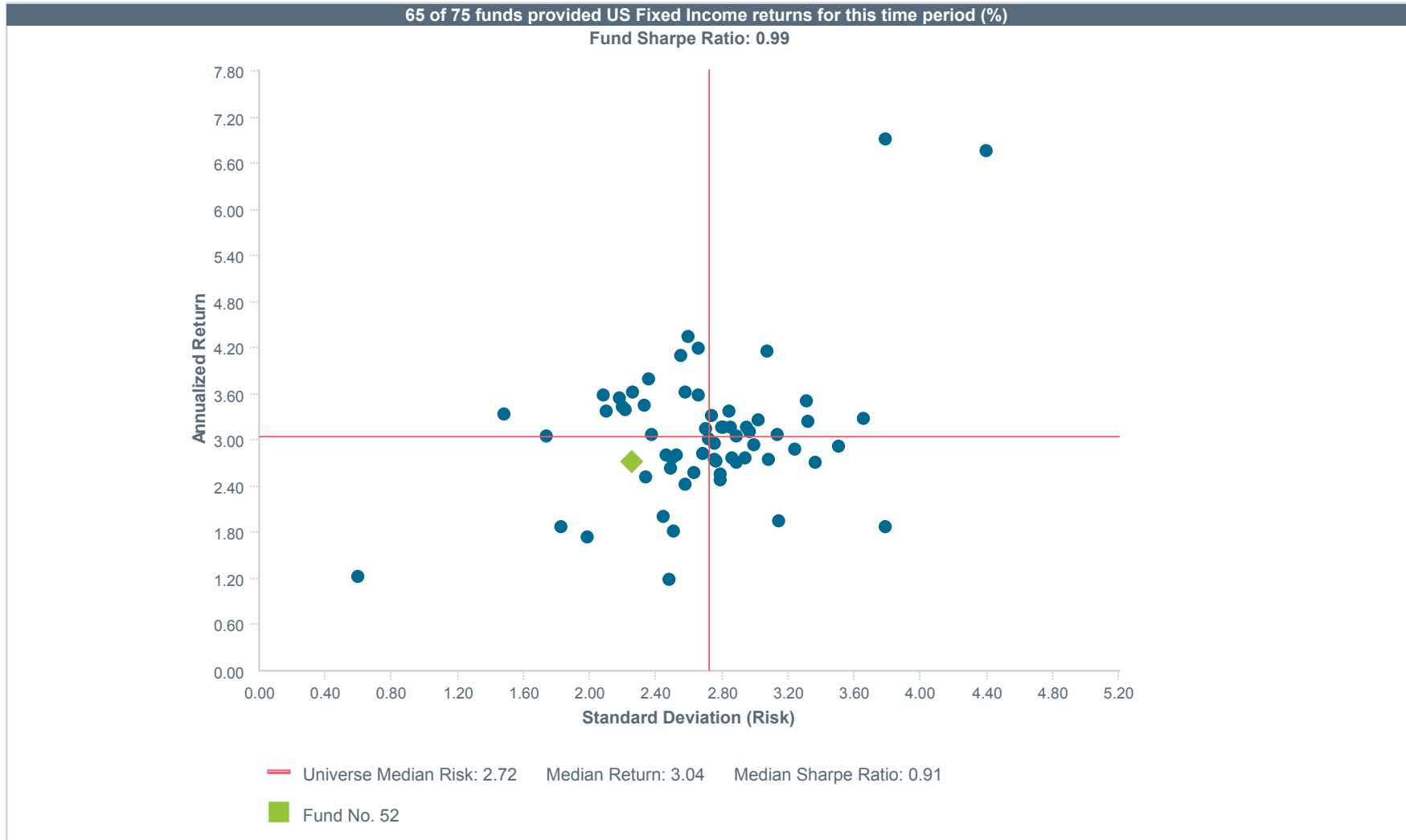


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
5 Year Annualized US Fixed Income Returns vs. Standard Deviation

As of June 30, 2018



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
10 Year Annualized US Fixed Income Returns vs. Standard Deviation

As of June 30, 2018

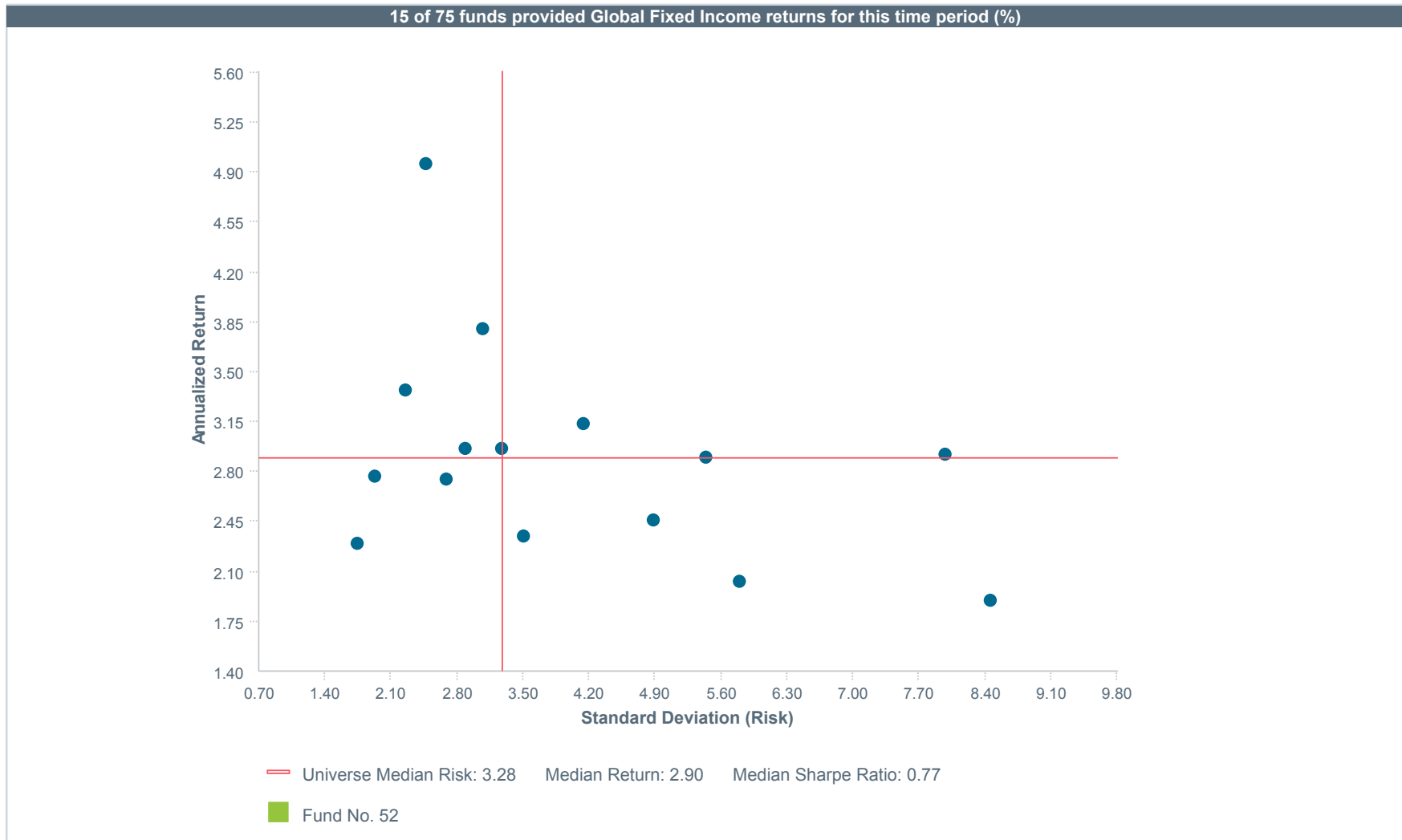


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
5 Year Annualized Global Fixed Income Returns vs. Standard Deviation

As of June 30, 2018

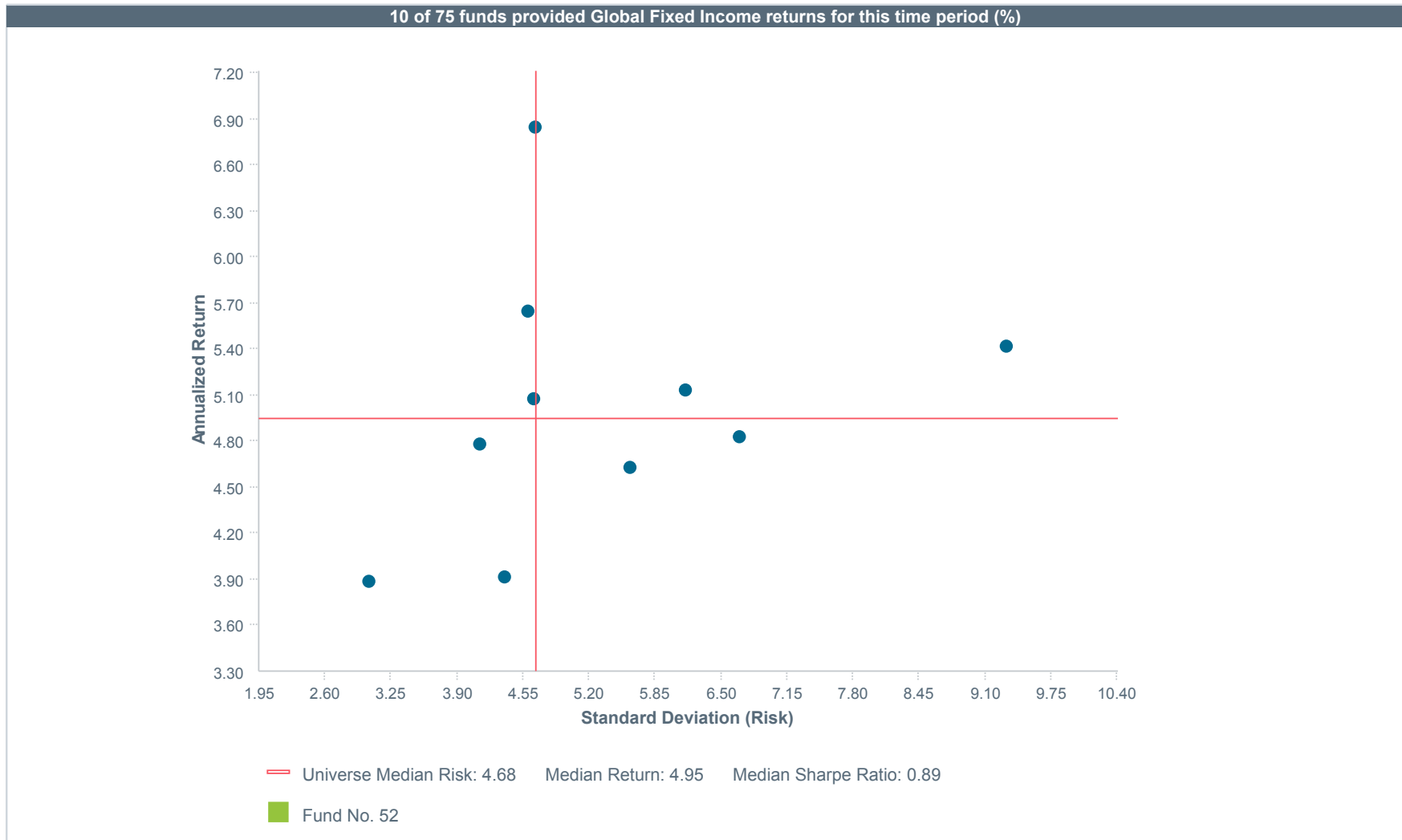


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
 10 Year Annualized Global Fixed Income Returns vs. Standard Deviation

As of June 30, 2018



Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
5 Year Annualized Real Estate Returns vs. Standard Deviation

As of June 30, 2018

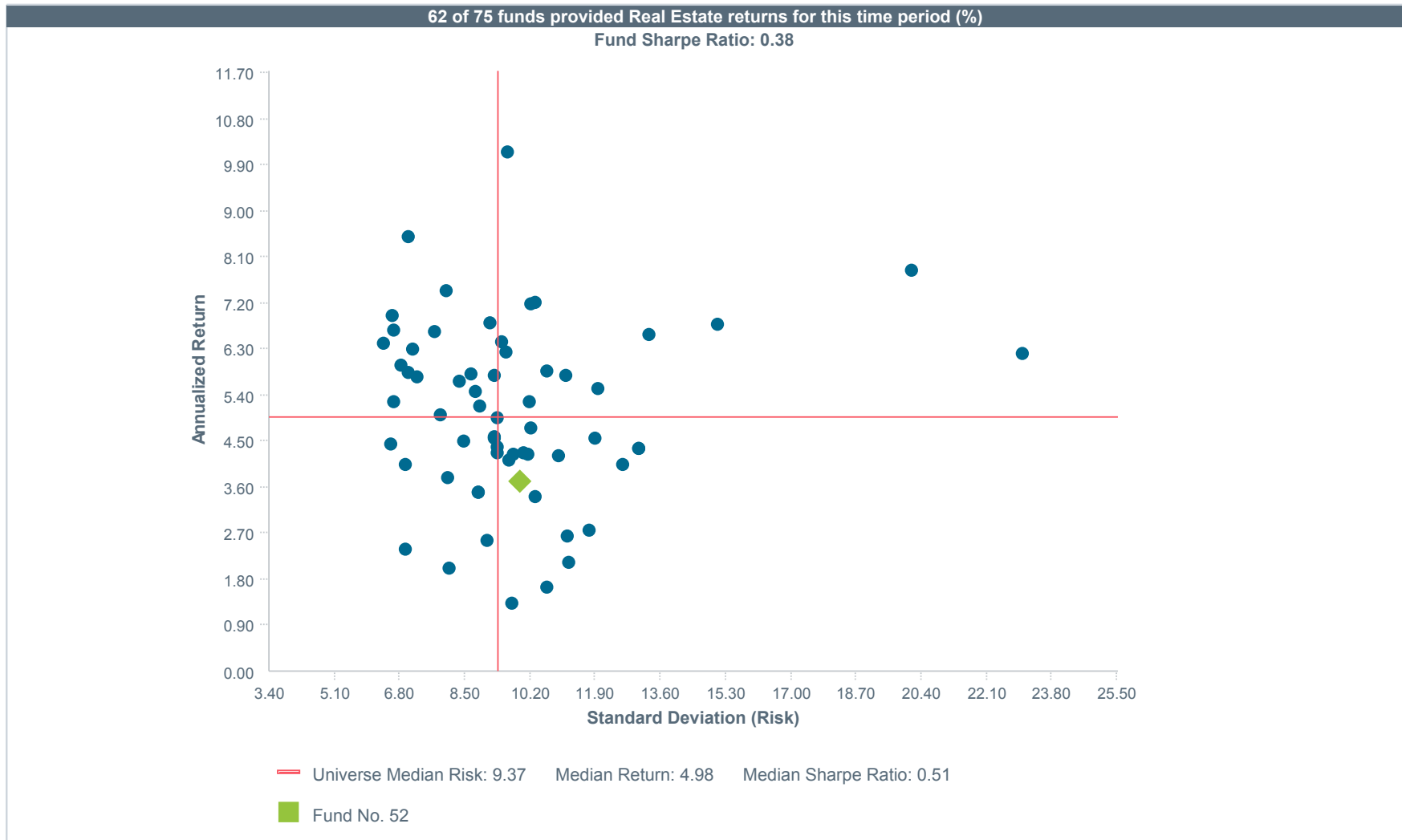


Funds with less history than the specified time period will not appear in the chart.



Risk/Return Analysis
10 Year Annualized Real Estate Returns vs. Standard Deviation

As of June 30, 2018

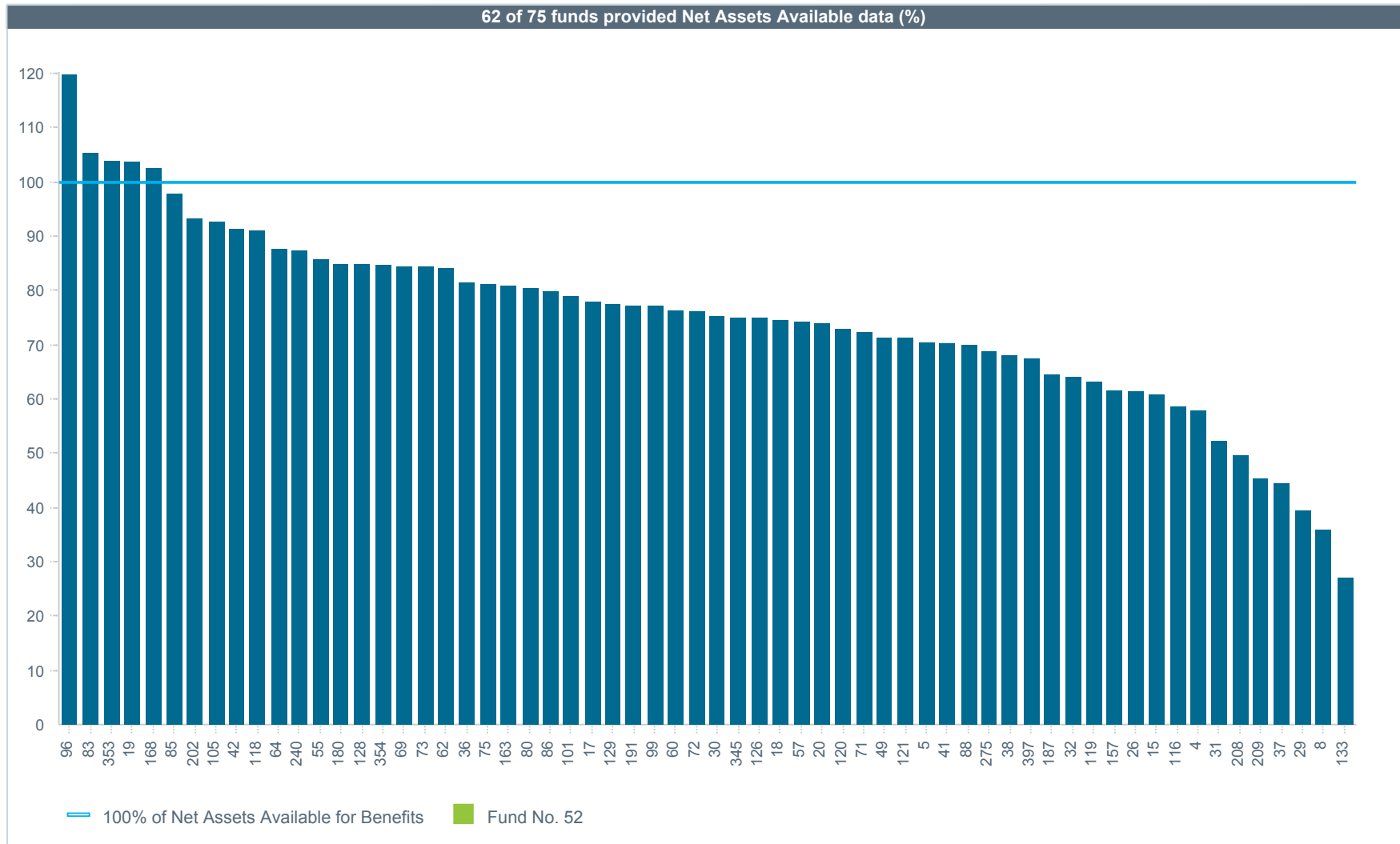


Funds with less history than the specified time period will not appear in the chart.



Net Assets Available For Benefits
Expressed as a Percentage of the Pension Benefit Obligation

As of June 30, 2018

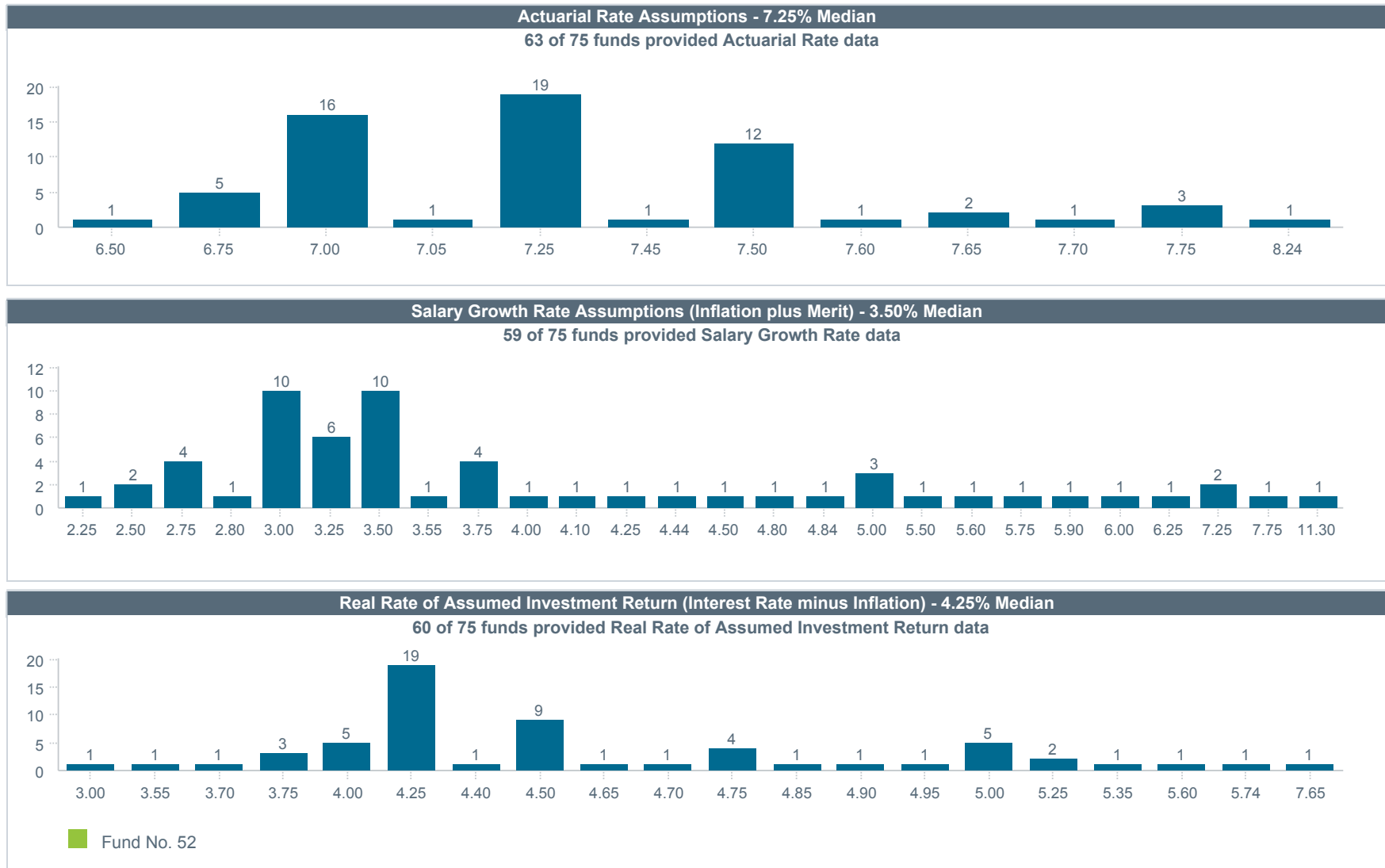


Funds that did not provide data will not appear in the chart.



Actuarial Assumption Rates

As of June 30, 2018



Funds that did not provide data will not appear in the chart.



Overlay Survey Summary

As of June 30, 2018

Overlay Survey Summary

Q1. Of the 75 participants in the 2018 Q2 Public Fund Report, 57 participants provided a response to the Overlay Survey. Of those participants, 27 answered 'Yes', 4 answered 'Yes, considering', and 26 answered 'No'.

Q2. Of the 29 participants that provided a response to the Overlay Survey and have exposure to an overlay manager or managers, the purposes of the overlay programs are distributed as follows:

- 31.03 % Manage foreign currency risk
- 31.03 % Generate alpha
- 0.00 % Match Plan liabilities more closely (either as part of an explicit or conceptual framework)
- 3.45 % Express a view on US Dollar
- 0.00 % Manage market risk within an LDI construct
- 13.79 % Tactical asset allocation
- 48.28 % Cash equitization
- 51.72 % Rebalancing management
- 27.59 % Transition management
- 0.00 % Other

Q3. Of the 11 participants that provided a response to the Overlay Survey and have exposure to a currency manager or managers, the program structures are distributed as follows:

- 54.55 % Static hedge ratio
- 36.36 % Dynamic hedging program where manager varies the hedge ratio
- 27.27 % Alpha generating currency manager focused on absolute return

Q4. Of the 6 respondents that indicated use of a hedge ratio on a currency program, the responses are distributed as follows:

- 3 responses indicated 50.00 % hedge on Developed Equity exposure
- 1 response indicated 75.00 % hedge on Developed Equity exposure
- 1 response indicated 25.00 % hedge on All Equities
- 1 response indicated 50.00 % hedge on Other - 50% hedged/50% unhedged currency benchmark



Addendum and Glossary

As of June 30, 2018

Miscellaneous Comments

- Performance shown is gross of fees, with the exception of the following:
 - **Funds 8, 31, 49, 350, 351, and 397:** Performance shown is net of fees.
 - **Funds 5 and 20:** Performance shown is net of fees, except for Total Fund performance.
 - **Funds 55, 75, and 85:** Performance shown for Real Estate is net of fees.
- Performance shown is calculated using quarterly performance provided by participating public funds.
- Performance shown may differ from a fund's actual performance due to rounding.
- Net Assets Available for Benefit includes funding percentage valuation as of dates between June 2017 and June 2018.
- Allocations shown reflect dedicated managers/mandates rather than actual exposure, with the exception of the following:
 - **Funds 29, and 119:** Performance shown for Global Fixed Income includes US and Non-US exposure.
 - **Fund 121:** Performance shown for Global Fixed Income includes Non-US exposure.
 - **Funds 4, 42, 64, and 240:** Performance shown for US Fixed Income includes US and Non-US exposure.

Glossary of Terms

Beta - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

Return - Compounded rate of return for the period.

% Return - The time-weighted rate of return of a portfolio for a given period.

Sharpe Ratio - Represents the excess rate of return over the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

Standard Deviation - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period. Calculation is based on quarterly periodicity.

PORTLAND

CHICAGO

NEW YORK

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November 9, 2018

We understand that the Unite HERE union has contacted certain of our investors with respect to potential unionization of certain employees working at the Baltimore Waterfront Marriott (the "Hotel"). We are writing to update you on the situation in case you are contacted.

The Hotel is owned in a joint venture that includes the Trumbull Property Fund ("TPF"), Marriott and a local developer. We understand that Unite HERE has asked that UBS Realty support a fair process by which the employees are able to decide on unionization in an environment free from intimidation or threats. Please know that we are indeed fully supportive of the Hotel employees' right to unionize in a fair process conducted in accordance with the National Labor Relations Act and all other laws governing these matters.

The workers at the Hotel are employed by Marriott—not UBS Realty, TPF or the joint venture owner of the Hotel. A management agreement with Marriott has been in place since the Hotel's original construction in 2001, which provides that Marriott has discretion in all employment matters at the Hotel.

We require the managers at all of our properties to treat their employees fairly in all employment matters and to act in accordance with our long-standing Responsible Contractor Policy. Our Responsible Contractor policy seeks to ensure that managers providing services at our properties are acting in a responsible manner and in compliance with all applicable laws and that they pay their employees fair wages and fair benefits. Our managers are reminded of their obligations in this regard annually.

Please note that in the course of managing investments on your behalf, TPF's properties employ hundreds of contractors who, in turn, employ thousands of workers. UBS Realty invests in properties in which the workers are both unionized and not unionized. In fact two of our most recently completed hotel transactions in New York and Los Angeles operated successfully with fully unionized work forces.

Since learning of the situation in July, we have been in contact with both Marriott and Unite HERE to encourage its resolution in a timely and amicable manner. We understand that the Unite HERE and Marriott are engaged in over 40 contract negotiations across the country and have been in active discussions for some time. Unfortunately, we do not control the priority or the pace of those negotiations.

As always, we continue to seek to manage your investments prudently and in a manner consistent with our fiduciary obligations, while also seeking to ensure that contractors providing services at the properties are acting in a responsible manner.

We will continue to keep you informed of the situation as circumstances merit.

UBS Realty Investors LLC

News Flash

Timely information, November 15, 2018

California wildfires: No investments in impacted areas

Real Estate US

The 2018 wildfire season in California has been one of the most destructive on record. There are currently two fires of greatest concern. The Camp Fire, 100 miles north of Sacramento, most notably impacting Paradise, California, has killed at least 56 persons and is the deadliest fire in state history. The Woolsey Fire has killed three and destroyed hundreds of homes and businesses in Ventura County and into Malibu in Los Angeles County.

Our hearts go out to victims, survivors and first responders of these terrible catastrophes.

Although we have many California investments, none are in areas expected to be impacted by the fires.

