

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

BUSINESS MEETING

FEBRUARY 26, 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:

I.	<u>CALL TO ORDER</u>	Master Page No.
II.	<u>APPROVAL OF AGENDA</u>	1 – 3
III	<u>APPROVAL OF MINUTES</u>	
	A. Disability Meeting of February 12, 2018.	4 – 12
IV.	<u>CONSENT AGENDA</u>	
	A. Approve Regular and Deferred Retirements and Survivors Continuances for the Month of January 2018.	13
	B. Receive and File Report of Checks Disbursed in January 2018.	14 – 18
	C. Receive and File Budget Summary for FY 2017-18 Month Ending December 31, 2017.	19 – 20
	D. Receive and File Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Investments and Cash Equivalents, and Schedule of Investment Management Fees for the Period Ending December 31, 2017.	21 – 24

**BOARD OF RETIREMENT
BUSINESS MEETING**

FEBRUARY 26, 2018

**AGENDA
PAGE 2**

V. INVESTMENT MANAGER PRESENTATIONS

- | | | |
|----|------------------------------------------------------------------------------------------------------------------|-----------|
| A. | Receive Annual Investment Presentation, Prudential Real Estate Investors – PGIM, Frank Garcia, and Marcus Berry. | 25 – 70 |
| B. | Receive Annual Investment Presentation, Adam Street Partners, Scott Hazen, and Saguna Malhotra. | 71 – 99 |
| C. | Receive Annual Investment Presentation, UBS Asset Management, Stephen Olstein, and Mario Maturo. | 100 – 191 |

VI. INVESTMENT INFORMATION

- | | | |
|----|---------------------------------------------------------------------------------------------|-----------|
| A. | NEPC – Allan Martin.
VCERA – Dan Gallagher, Chief Investment Officer. | |
| 1. | December 2017 Quarterly Performance Report.
RECOMMENDED ACTION: Receive and file. | 192 – 276 |
| 2. | January 2018 Monthly Performance Report.
RECOMMENDED ACTION: Receive and file. | 277 – 285 |
| 3. | 2018 Outlook: Capital Market Assumptions.
RECOMMENDED ACTION: Receive and file. | 286 – 338 |

VII. OLD BUSINESS

None.

VIII. NEW BUSINESS

- | | | |
|----|---------------------------------------------------------------------------------------------------|-----------|
| A. | Mid-Year Budget Update for FY 2017-18.
RECOMMENDED ACTION: Approve. | |
| 1. | Staff Letter by C.I.O., Henry Solis. | 339 – 340 |
| 2. | Budget Summary. | 341 – 342 |
| B. | Selection of C.P.A. Firm for Auditing Services.
RECOMMENDED ACTION: Select C.P.A. Firm. | |
| 1. | Staff Letter with Attachments by C.F.O., Henry Solis. | 343 – 345 |
| 2. | RFP Summary of Results. | 346 |
| C. | Review of 2017 Board Member Education Compliance.
RECOMMENDED ACTION: Approve. | |
| 1. | Staff Letter.
<i>(To be provided)</i> | |

**BOARD OF RETIREMENT
BUSINESS MEETING**

FEBRUARY 26, 2018

**AGENDA
PAGE 3**

VIII. NEW BUSINESS (continued)

2. Board Education Compliance Report for 2017.
(To be provided)

IX. INFORMATIONAL

- A. NEPC 23rd Annual Conference.

347 – 348

X. PUBLIC COMMENT

XI. STAFF COMMENT

XII. BOARD MEMBER COMMENT

XIII. ADJOURNMENT

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

DISABILITY MEETING

FEBRUARY 12, 2018

MINUTES

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

DIRECTORS
ABSENT: Peter C. Foy, Public Member
Maeve Fox, General Employee Member

STAFF
PRESENT: Linda Webb, Retirement Administrator
Lori Nemiroff, Assistant County Counsel
Henry Solis, Chief Financial Officer
Julie Stallings, Chief Operations Officer
Vickie Williams, Retirement Benefits Manager
Karen Scanlan, Accounting Manager I
Donna Edwards, Retirement Benefits Specialist
Stephanie Berkley, Retirement Benefit Specialist
Rebekah Villalobos, Retirement Benefit Specialist
Nancy Jensen, Retirement Benefit Specialist
Teresa Cruz, Retirement Benefit Specialist
Chris Ayala, Program Assistant

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**

FEBRUARY 12, 2018

**MINUTES
PAGE 2**

ITEM:

I. CALL TO ORDER

Chair Towner called the Disability Meeting of February 12, 2018, to order at 9:00 a.m.

II. APPROVAL OF AGENDA

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

Chair Towner amended the agenda by moving item "VIII.A. Closed Session", before item "V.D. Application for Service Connected Disability Retirement - Titcher, Jeffrey; Case No. 13-017".

MOTION: Approve as Amended.

Moved by Bianchi, seconded by Hintz.

Vote: Motion carried

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

No: -

Absent: Foy, Fox

Abstain:

III. APPROVAL OF MINUTES

A. Business Meeting of January 29, 2018.

Trustee Goulet offered two corrections to the minutes. He said that on page 6 of the agenda, regarding his statement on actuarial report, his statement should have read, "that the decrease in accrued liability was substantially affected". On page 7, Trustee Johnston's question should have included the phrase, "and fulfilling our fiduciary responsibilities".

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

MOTION: Approve Business Meeting Minutes of January 29, 2018, with Corrections.

Moved by Wilson, seconded by Goulet.

Vote: Motion carried

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

No: -

Absent: Foy, Fox

Abstain:

IV. RECEIVE AND FILE PENDING DISABILITY APPLICATION STATUS REPORT

**BOARD OF RETIREMENT
DISABILITY MEETING**

FEBRUARY 12, 2018

**MINUTES
PAGE 3**

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

MOTION: Approve.

Moved by Bianchi, seconded by Sedell.

Vote: Motion carried

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

No: -

Absent: Foy, Fox

Abstain:

V. APPLICATIONS FOR DISABILITY RETIREMENT

A. Application for Service-Connected Disability Retirement - Gonzales, Henry; Case No. 16-017.

1. Application for Service-Connected Disability Retirement, filed May 19, 2016.
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 January 6, 2018, received January 16, 2018.
3. Hearing Notice, dated January 26, 2018.

Catherine Laveau, was present on behalf of County of Ventura Risk Management. The applicant, Henry Gonzales, was also present.

Both parties declined to make statements.

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

MOTION: Approve Application for Service-Connected Disability Retirement.

Moved by Sedell, seconded by McCombs.

Vote: Motion carried

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

No: -

Absent: Foy, Fox

Abstain:

Both parties agreed to waive preparation of findings of fact and conclusions of law.

B. Application for Service-Connected Disability Retirement - Brister, Larry C.; Case No. 16-027.

**BOARD OF RETIREMENT
DISABILITY MEETING**

FEBRUARY 12, 2018

**MINUTES
PAGE 4**

1. Application for Service-Connected Disability Retirement, filed August 31, 2016.
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 January 31, 2018.
3. Hearing Notice, dated February 5, 2018.

Catherine Laveau, was present on behalf of County of Ventura Risk Management. Thomas J. Wicke, Attorney at Law, was present on behalf of the applicant. The applicant, Larry C. Brister, was also present.

Both parties declined to make statements.

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

MOTION: Approve Application for Service-Connected Disability Retirement.

Moved by Johnston, seconded by Bianchi.

Vote: Motion carried

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

No: -

Absent: Foy, Fox

Abstain:

Both parties agreed to waive preparation of findings of fact and conclusions of law.

- C. Application for Service-Connected Disability Retirement - Olmos, Reymundo D.; Case No. 16-013.
 1. Summary and Analysis of the Evidence, Proposed Findings of Fact and Conclusion of Law, submitted by Hearing Officer James P. Cloninger, dated January 2, 2018.
 2. Hearing Notice, dated January 18, 2018.

Stephen D. Roberson, Attorney at Law, was present on behalf of County of Ventura Risk Management. The applicant, Reymundo D. Olmos, was also present.

Mr. Olmos stated that he agreed to accept into the record the Proposed Findings of Fact, but not the Conclusions of Law.

Both parties made brief statements.

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

MOTION: Deny Application for Service-Connected Disability Retirement.

Moved by Hintz, seconded by Wilson.

Vote: Motion carried

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

No: -

Absent: Foy, Fox

Abstain:

Following the vote on this item, the Board advanced to agenda item, VIII.A. "Closed Session."

D. Application for Service-Connected Disability Retirement - Titcher, Jeffrey; Case No. 13-017.

1. Memorandum: Ventura County Employees' Retirement Association General Counsel, submitted by VCERA Board Counsel, Loria A. Nemiroff.
2. Notice of Entry of Revised Judgment-Granting Peremptory Writ of Mandate.
3. Revised Judgment Granting Peremptory Writ of Mandate
4. Petition for Reconsideration dated January 11, 2016, submitted by Applicant Jeffrey Titcher.
5. Legal Memorandum in Opposition to Applicant's Petition for Reconsideration, dated January 15, 2016, submitted by Stephen D. Roberson, Attorney for County of Ventura/Risk Management.
6. Summary of Evidence, Findings of Fact, Conclusion of Law and Recommended Decision, dated October 28, 2015, submitted by Hearing Officer Irene P. Ayala
7. Hearing Notice, dated February 5, 2018.

Catherine Laveau, was present on behalf of County of Ventura Risk Management. The applicant, Jeffrey Titcher, was not present.

Ms. Nemiroff informed the Board that there was a memorandum, a recommendation, and the judgement in the court case Titcher v. Board of Retirement. She said that the first part of the recommendation was to set aside the Board's decision of February 1, 2016, denying Mr. Titcher's request for a non-service connected disability retirement, in lieu of a service connected retirement, and to then make a new decision granting Mr. Titcher's application for a non-service connected disability retirement based on the court's ruling, dated October 13, 2017, and judgment date January 5, 2018.

**BOARD OF RETIREMENT
DISABILITY MEETING**

FEBRUARY 12, 2018

**MINUTES
PAGE 6**

She said the second part of the recommendation was to authorize staff to pay approved court-awarded costs, estimated at \$555.00.

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

MOTION: Approve Staff's Recommendation to Approve the Application for Non-Service Connected Disability.

Moved by Wilson, seconded by Bianchi.

Vote: Motion carried

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

No: -

Absent: Foy, Fox

Abstain:

VI. OLD BUSINESS

A. Recommendation to Approve HCA Fiscal Premium Pay.

RECOMMENDED ACTION: Approve.

1. Staff Letter.
2. Updated Language for Section 410 of the Management Resolution.

Ms. Webb reminded the Board the agenda item had previously been tabled on several occasions, as it had often been discussed along with the Market Based Premium Pay (MBPP), because of similar issues with the two categories. She said that as with MBPP, VCERA's Counsel and the County Counsel collaborated, which resulted in a proposed amendment to Section 410 of the Management Resolution, which was approved by the Board of Supervisors. Staff believed the amended section had met the criteria and therefore recommended approval.

Trustee Goulet said the new language seemed to say the Director of the Health Care Agency could amend the Resolution at his or her sole discretion. He believed that it was not the intent, and thought it would have to be amended by the Board of Supervisors.

Ms. Webb replied that the Resolution stated that changes to the section would have to be publicly posted, which meant that it would have to then be voted on by the Board of Supervisors, at which point the Board of Retirement would reevaluate the amended Resolution.

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

MOTION: Approve.

Moved by Sedell, seconded by Bianchi.

Vote: Motion carried

**BOARD OF RETIREMENT
DISABILITY MEETING**

FEBRUARY 12, 2018

**MINUTES
PAGE 7**

Yes: Bianchi, Fox, Goulet, Hintz, Johnston, Sedell, Wilson, Winter
No: -
Absent: Foy, McCombs
Abstain:

VII. NEW BUSINESS

A. Request for Authorization for Up to 500 Hours for V3 System Enhancements.
RECOMMENDED ACTION: Approve.

1. Staff Letter.
2. Enhancement Summary.
3. V3 Hours Summary.

Ms. Webb said that staff had complied the provided list of enhancements, showing which enhancements are most critical and therefore recommended for the current budget year.

While the expenditure of hours had slowed, staff was still engaging Vitech on some issues.

She noted that item A on the provided list contained work that staff believed should already have been included. As for the other items, she believed that they were either outside of the initial warranty period or not within the original scope of the project.

She said that post-implementation enhancements were common, and that staff had been careful in their requests, continuing to track the number of hours used.

Trustee Goulet said that while he had no objection to the work, he believed there should be a contract signed by both parties stating the work to be done, and a not-to-exceed number of hours agreed upon. He believed the Board should authorize an additional \$25,000 for the enhancement work, to be used at the Retirement Administrator's discretion.

Ms. Webb cautioned that converting the enhancement list into a statement of work could cause each enhancement to move to the range maximums and feasibly cost more than proceeding without the statement of work.

Trustee Bianchi said that based on his experience, a contract was usually better than to have the work done based on time and materials.

Ms. Webb replied that when the V3 project initially was completed, VCERA had the option to buy a block of hours at a discount or to have the work done on time and materials. Ultimately, the Board voted for time and materials. She said that she could ask the vendor to convert the list into a contract, but preferred to request that Vitech agree that if any of the items were going to exceed the estimated range, to stop and notify staff. She believed that the work could be managed best in this way.

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

**BOARD OF RETIREMENT
DISABILITY MEETING**

FEBRUARY 12, 2018

**MINUTES
PAGE 8**

MOTION: Approve Recommendation with an Additional \$25,000 to be Used at the Discretion of the Retirement Administrator as a Contingency.

Moved by Sedell, seconded by Bianchi.

Vote: Motion carried

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

No: -

Absent: Foy, McCombs

Abstain:

VIII. CLOSED SESSION

A. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION (Gov. Code section 54956.9) PURSUANT TO GOVERNMENT CODE SECTION 54956.9, SUBDIVISION (d)(1): NAME OF CASE: Titcher v. Board of Retirement; Ventura County Superior Court Case No. 56-2016-00481070-CU-WM-VTA.

Upon returning to Open Session, the Ms. Nemiroff announced that the Board had voted not to appeal the case of Titcher v. Board of Retirement.

The Board then returned to agenda item V.D.

IX. INFORMATIONAL

A. Follow-Up on Trustee Goulet's Request for Cost of Nossaman LLC Related to MBPP.

X. PUBLIC COMMENT

None.

XI. STAFF COMMENT

Ms. Webb reminded the Board to let staff know if they would be attending the SACRS 2018 Spring Conference and reminded them that filing for the Board's Form 700 would be due in April.

XII. BOARD MEMBER COMMENT

None.

XIII. ADJOURNMENT

**BOARD OF RETIREMENT
DISABILITY MEETING**

FEBRUARY 12, 2018

**MINUTES
PAGE 9**

The meeting was adjourned at 9:41 a.m.

Respectfully submitted,



LINDA WEBB, Retirement Administrator

Approved,

TRACY TOWNER, Chairman

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

January 2018

FIRST NAME	LAST NAME	G/S	DATE OF MEMBERSHIP	BENEFIT SERVICE *	OTHER SERVICE	DEPARTMENT	EFFECTIVE DATE
REGULAR RETIREMENTS:							
Julianne	Albright	G		32.15		Ventura County Library	12/16/2017
Richard	Braden-Kaneski	G		6.04 *		Human Services Agency	12/2/2017
Rachel	Calof	G		11.32		Health Care Agency	12/23/2017
Sally	Carpenter	G		7.79		Public Works Agency (alt-payee)	4/1/2008
James	Carton	G		16.71		Public Works Agency	12/31/2017
Danny	Dube	G		20.49		Sheriff's Department	12/16/2017
Keith	Filegar	G		18.50		Public Works Agency (deferred)	12/27/2017
Jose	Galvez	G		10.80		Health Care Agency	12/23/2017
Kim	Gibbons	G		31.71		District Attorney	12/30/2017
Jackie	Griffin	G		10.29		Ventura County Library	12/16/2017
Thomas	Johnson	G		25.90		District Attorney	12/16/2017
Betty	Jones-Smotherman	G		17.29		Health Care Agency	1/6/2018
Kathy	Judah	G		22.01		Sheriff's Department	12/16/2017
Pamela	Landrio	G		18.55		Public Works Agency	1/12/2018
Lori	Mahon	G		10.00		Information Technology Services	12/18/2017
Barbara	Miller	G		26.61		Agricultural Commissioner	12/30/2017
Lynne	Miller	G		11.47		Animal Services	12/2/2017
Debra	Morgan	G		22.19		Health Care Agency (deferred)	12/21/2017
Mary	Pegnalitti	G		30.13		Superior Courts	12/23/2017
Marc	Prado	S		21.03		Probation Agency	1/4/2018
Rudy	Rodriguez	G		11.79		Human Services Agency	12/10/2017
Maria	Tello	G		7.84		Health Care Agency	12/12/2017
Heidi	Vogtmann	G		5.47		Health Care Agency (deferred)	1/3/2018
Christine	Voth	G		13.73		Area Agency on Aging	12/2/2017
Kathleen	Webb	G		14.02		Retirement Association	12/27/2017
Teresa	Witte	G		29.93		Human Services Agency	12/30/2017

DEFERRED RETIREMENTS:

Joseph	Bacigalupi	G	5/6/2007	10.65		Information Technology Services	1/6/2018
Marc	DeCamp	G	5/31/2011	6.52		Information Technology Services	1/6/2018
Samantha	Hazlewood	G	11/16/2008	5.98		Human Services Agency	12/21/2017
Jacques	LeBlanc	G	12/2/2002	15.07		Public Works Agency	12/29/2017
Christine	Schaffels	G	2/7/2006	10.82		Superior Court	12/26/2017
Ramiro	Valencia	G	11/13/2000	17.13		Public Works Agency	12/28/2017

SURVIVORS' CONTINUANCES:

Vickie	Bell
Marilyn	Brema
Janet	Foy
Jo Ann	Thomas

* = Member Establishing Reciprocity

Business Meeting Agenda - IV. CONSENT AGENDA

Date: Thursday, February 01, 2018
 Time: 04:26PM
 User: 104164

Ventura County Retirement Assn

Check Register - Standard

Period: 07-18 As of: 2/1/2018

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

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
Company: VCERA										
Acct / Sub:	10200		000000							
027391	CK	1/3/2018	CALAPRS CALAPRS	07-18	000270	VO	ADMIN EXP	1/3/2018	0.00	2,600.00
027392	CK	1/3/2018	JOHNSTONCH CHRIS JOHNSTON	07-18	000271	VO	MILEAGE REIMB	1/3/2018	0.00	166.92
027393	CK	1/3/2018	SPRUCEGROV SPRUCEGROVE INVESTMENT M	07-18	000272	VO	INVESTMENT FEES	1/3/2018	0.00	67,482.48
027394	CK	1/3/2018	STROUDES STROUD DESIGN, INC	07-18	000273	VO	ADMIN EXP	1/3/2018	0.00	4,000.00
027395	CK	1/3/2018	VITECHSYST VITECH SYSTEMS GROUP, INC.	07-18	000274	VO	IT	1/3/2018	0.00	15,070.00
027396	CK	1/3/2018	VSGHOSTING VSG HOSTING, INC.	07-18	000275	VO	IT	1/3/2018	0.00	94,280.00
027397	CK	1/10/2018	ADP ADP, LLC	07-18	000276	VO	ADMIN EXP	1/10/2018	0.00	5,190.76
027398	CK	1/10/2018	AYALATOMAS TOMAS C. AYALA	07-18	000277	VO	REIMBURSEMENT	1/10/2018	0.00	28.74
027399	CK	1/10/2018	BANKOFAMER BUSINESS CARD	07-18	000278	VO	ADMIN/IT	1/10/2018	0.00	2,398.46
027400	CK	1/10/2018	BRENTWOODI BRENTWOOD IT	07-18	000279	VO	IT	1/10/2018	0.00	7,315.00
027401	CK	1/10/2018	DIGITALDEP DIGITAL DEPLOYMENT	07-18	000280	VO	IT	1/10/2018	0.00	650.00
027402	CK	1/10/2018	HARRISWATE HARRIS WATER CONDITIONING	07-18	000281	VO	ADMIN EXP	1/10/2018	0.00	99.50
027403	CK	1/10/2018	PUBLICRETI PRISM	07-18	000282	VO	IT	1/10/2018	0.00	300.00

Business Meeting Agenda - IV. CONSENT AGENDA

Date: Thursday, February 01, 2018
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Ventura County Retirement Assn

Check Register - Standard

Period: 07-18 As of: 2/1/2018

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

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
027404	CK	1/10/2018	SEGALCONSU SEGAL CONSULTING	07-18	000285	VO	ACTUARY FEES	1/10/2018	0.00	30,000.00
027405	CK	1/10/2018	SHREDITUSA SHRED-IT USA	07-18	000283	VO	ADMIN EXP	1/10/2018	0.00	79.23
027406	CK	1/10/2018	THOMSONREU THOMSON REUTERS- WEST	07-18	000284	VO	IT	1/10/2018	0.00	374.85
027407	CK	1/17/2018	ACCESSINFO ACCESS INFORMATION PROTEC	07-18	000286	VO	ADMIN EXP	1/17/2018	0.00	359.73
027408	CK	1/17/2018	ATMOBILIT AT&T MOBILITY	07-18	000287	VO	IT	1/17/2018	0.00	358.19
027409	CK	1/17/2018	AYALAIRENE IRENE P. AYALA	07-18	000288	VO	ADMIN EXP	1/17/2018	0.00	875.00
027410	CK	1/17/2018	CLONINGERJ JAMES P. CLONINGER	07-18	000290	VO	ADMIN EXP	1/17/2018	0.00	7,542.50
027411	CK	1/17/2018	COUNTYCOUN COUNTY COUNSEL- COUNTY OF	07-18	000289	VO	LEGAL FEES	1/17/2018	0.00	104.50
027412	CK	1/17/2018	FEDEX FEDEX	07-18	000291	VO	ADMIN EXP	1/17/2018	0.00	24.37
027413	CK	1/17/2018	FLORESHUMB HUMBERTO FLORES	07-18	000293	VO	ADMIN EXP	1/17/2018	0.00	4,375.00
027414	CK	1/17/2018	HEXAVEST HEXAVEST INC.	07-18	000292	VO	INVESTMENT FEES	1/17/2018	0.00	105,815.79
027415	CK	1/17/2018	PENSIONREA PENSION REAL ESTATE ASSOCI	07-18	000294	VO	INVESTMENT EXP	1/17/2018	0.00	302.50
027416	CK	1/17/2018	REAMSASSET REAMS ASSET MANAGEMENT	07-18	000295	VO	INVESTMENT FEES	1/17/2018	0.00	134,684.00

Business Meeting Agenda - IV. CONSENT AGENDA

Date: Thursday, February 01, 2018
 Time: 04:26PM
 User: 104164

Ventura County Retirement Assn

Check Register - Standard

Period: 07-18 As of: 2/1/2018

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

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
027417	CK	1/17/2018	SAFEGUARDB SAFEGUARD BUSINESS SYSTEM	07-18	000296	VO	ADMIN EXP	1/17/2018	0.00	235.60
027418	CK	1/17/2018	STAPLESADV STAPLES ADVANTAGE	07-18	000298	VO	ADMIN EXP	1/17/2018	0.00	1,814.38
027419	CK	1/17/2018	TIMEWARNER TIME WARNER CABLE	07-18	000297	VO	IT	1/17/2018	0.00	294.99
027420	CK	1/17/2018	VITECHSYST VITECH SYSTEMS GROUP, INC.	07-18	000299	VO	IT	1/17/2018	0.00	23,896.10
027421	CK	1/17/2018	WISSLEYDEB DEBORAH Z. WISSLEY	07-18	000300	VO	ADMIN EXP	1/17/2018	0.00	9,537.50
027422	CK	1/25/2018	ABUCOURTRE PERSONAL COURT REPORTERS	07-18	000306	VO	ADMIN EXP	1/25/2018	0.00	315.00
027423	CK	1/25/2018	GALLAGHERD DAN GALLAGHER	07-18	000301	VO	TRAVEL REIMB	1/25/2018	0.00	358.64
027424	CK	1/25/2018	GLOBALCAPA GTT COMMUNICATIONS	07-18	000302	VO	IT	1/25/2018	0.00	603.63
027425	CK	1/25/2018	LINEASOLUT LINEA SOLUTIONS	07-18	000303	VO	ADMIN EXP	1/25/2018	0.00	10,150.00
027426	CK	1/25/2018	LOOMISSAYL LOOMIS, SAYLES & COMPANY, L	07-18	000304	VO	INVESTMENT FEES	1/25/2018	0.00	126,175.51
027427	CK	1/25/2018	MFDAILYCOR M.F. DAILY CORPORATION	07-18	000305	VO	ADMIN EXP	1/25/2018	0.00	17,529.91
027428	CK	1/25/2018	TOWNERTRAC TRACY TOWNER	07-18	000307	VO	TRAVEL REIMB	1/25/2018	0.00	420.97
027429	CK	1/25/2018	WALTERSCOT BNY MELLON INV MGMT CAYMA	07-18	000308	VO	INVESTMENT FEES	1/25/2018	0.00	249,417.35
027430	CK	1/31/2018	BIANCHIROB ROBERT BIANCHI	07-18	000309	VO	MILEAGE REIMB	1/31/2018	0.00	58.86

Business Meeting Agenda - IV. CONSENT AGENDA

Date: Thursday, February 01, 2018
 Time: 04:26PM
 User: 104164

Ventura County Retirement Assn

Check Register - Standard

Period: 07-18 As of: 2/1/2018

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

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
027431	CK	1/31/2018	DELLMARKET DELL MARKETING L.P.	07-18	000310	VO	IT	1/31/2018	0.00	95.14
027432	CK	1/31/2018	GOULETARTH ARTHUR E. GOULET	07-18	000311	VO	MILEAGE REIMB	1/31/2018	0.00	37.06
027433	CK	1/31/2018	NOSSAMAN NOSSAMAN LLP	07-18	000312	VO	LEGAL FEES	1/31/2018	0.00	29,493.45
027434	CK	1/31/2018	PARAMETRIC PARAMETRIC PORTFOLIO ASSO	07-18	000313	VO	INVESTMENT FEES	1/31/2018	0.00	42,297.00
027435	CK	1/31/2018	PENSIONBEN PENSION BENEFIT INFORMATIO	07-18	000314	VO	ADMIN EXP	1/31/2018	0.00	1,625.00
027436	CK	1/31/2018	STAPLESADV STAPLES ADVANTAGE	07-18	000315	VO	ADMIN EXP	1/31/2018	0.00	27.79
027437	CK	1/31/2018	STATESTREE STATE STREET BANK AND TRUŠ	07-18	000316	VO	INVESTMENT FEES	1/31/2018	0.00	109,004.26
027438	CK	1/31/2018	TORTOISECA TORTOISE CAPITAL ADVISORS,	07-18	000317	VO	INVESTMENT FEES	1/31/2018	0.00	185,914.91
027439	CK	1/31/2018	VITECHSYST VITECH SYSTEMS GROUP, INC.	07-18	000318	VO	IT	1/31/2018	0.00	19,085.00
027440	CK	1/31/2018	WEBBLINDA LINDA WEBB	07-18	000319	VO	TRAVEL REIMB	1/31/2018	0.00	93.87
027441	CK	1/31/2018	WNTERCRAIG CRAIG WINTER	07-18	000320	VO	TRAVEL REIMB	1/31/2018	0.00	270.86

Business Meeting Agenda - IV. CONSENT AGENDA

Date: Thursday, February 01, 2018
 Time: 04:26PM
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Ventura County Retirement Assn

Check Register - Standard

Period: 07-18 As of: 2/1/2018

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

Check Nbr	Check Type	Check Date	Vendor ID Vendor Name	Period To Post Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
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Check Count: 51

Acct Sub Total: 1,313,230.30

Check Type	Count	Amount Paid
Regular	51	1,313,230.30
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:	51	1,313,230.30

Company Disc Total 0.00 Company Total 1,313,230.30

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2017-2018
For the Six Months Ended December 31, 2017 and Year-To-Date - 50% of Fiscal Year Expended

	<i>Adopted 2018 Budget</i>	<i>Adjusted 2018 Budget</i>	<i>December 2017</i>	<i>Expended Fiscal Year to Date</i>	<i>Available Balance</i>	<i>Percent Expended</i>
Salaries and Benefits						
Regular Salary	\$3,026,300.00	\$3,026,300.00	\$208,796.79	\$1,243,148.16	\$1,783,151.84	41.08%
Extra-Help/Temporary Services	294,400.00	294,400.00	13,975.00	67,408.98	226,991.02	22.90%
Supplemental Payments	59,900.00	59,900.00	3,469.00	20,790.49	39,109.51	34.71%
Vacation Redemption	139,500.00	139,500.00	9,686.60	117,647.87	21,852.13	84.34%
Retirement Contributions	531,200.00	531,200.00	33,276.70	205,599.75	325,600.25	38.70%
OASDI Contribution	171,600.00	171,600.00	8,585.08	55,203.18	116,396.82	32.17%
FICA-Medicare	48,100.00	48,100.00	3,166.17	19,623.30	28,476.70	40.80%
Medical Insurance	302,000.00	302,000.00	17,732.00	106,451.96	195,548.04	35.25%
Life Insurance	1,300.00	1,300.00	80.60	480.15	819.85	36.93%
Unemployment Insurance	2,500.00	2,500.00	166.48	971.20	1,528.80	38.85%
Mgmt Disability Insurance	23,600.00	23,600.00	1,364.88	8,183.48	15,416.52	34.68%
Workers Compensation Insurance	23,500.00	23,500.00	1,560.56	9,670.40	13,829.60	41.15%
401K Plan Contribution	72,500.00	72,500.00	4,884.61	29,374.49	43,125.51	40.52%
Total Salaries & Benefits	\$4,696,400.00	\$4,696,400.00	\$306,744.47	\$1,884,553.41	\$2,811,846.59	40.16%
Services & Supplies						
Board Member Stipend	\$13,200.00	\$13,200.00	\$1,200.00	\$5,200.00	\$8,000.00	39.39%
Other Professional Services	224,700.00	224,700.00	3,248.34	92,616.23	132,083.77	41.22%
Auditing	46,000.00	46,000.00	4,116.52	39,921.24	6,078.76	86.79%
Hearing Officers	60,000.00	60,000.00	(3,328.75)	35.00	59,965.00	0.06%
Legal	350,000.00	350,000.00	77,276.75	148,110.35	201,889.65	42.32%
Election Services	9,000.00	9,000.00	0.00	0.00	9,000.00	0.00%
Actuary-Valuation	159,000.00	159,000.00	0.00	30,000.00	129,000.00	18.87%
Actuary-Misc Hrly Consult	0.00	0.00	0.00	11,544.00	(11,544.00)	0.00%
Actuary-Actuarial Audit	42,000.00	42,000.00	0.00	42,000.00	0.00	100.00%
Printing	33,000.00	33,000.00	4,204.08	11,024.35	21,975.65	33.41%
Postage	71,400.00	71,400.00	(10,574.88)	16,196.97	55,203.03	22.68%
Copy Machine	4,000.00	4,000.00	758.82	1,276.47	2,723.53	31.91%
General Liability	9,500.00	9,500.00	4,744.00	4,744.00	4,756.00	49.94%
Fiduciary Liability	85,000.00	85,000.00	(91.63)	84,496.37	503.63	99.41%
Cost Allocation Charges	33,500.00	33,500.00	0.00	16,735.00	16,765.00	49.96%
Education Allowance	6,000.00	6,000.00	0.00	4,000.00	2,000.00	66.67%
Training/Travel-Staff	54,200.00	54,200.00	(2,320.00)	12,097.78	42,102.22	22.32%
Training/Travel-Trustee	53,100.00	53,100.00	2,256.25	7,640.60	45,459.40	14.39%
Travel-Due Diligence-Staff	0.00	0.00	0.00	1,853.98	(1,853.98)	0.00%
Travel-Due Diligence-Trustee	19,400.00	19,400.00	0.00	3,433.06	15,966.94	17.70%
Mileage-Staff	8,500.00	8,500.00	0.00	984.60	7,515.40	11.58%
Mileage -Trustee	0.00	0.00	463.16	1,305.18	(1,305.18)	0.00%
Mileage-Due Diligence-Staff	0.00	0.00	0.00	235.83	(235.83)	0.00%
Mileage-Due Diligence-Trustee	0.00	0.00	(69.44)	200.09	(200.09)	0.00%
Auto Allowance	6,900.00	6,900.00	575.00	3,450.00	3,450.00	50.00%
Facilities-Security	3,700.00	3,700.00	0.00	0.00	3,700.00	0.00%
Facilities-Maint & Repairs	0.00	0.00	254.00	2,040.58	(2,040.58)	0.00%
Equipment-Maint & Repairs	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00%
General Office Expense	6,000.00	6,000.00	1,322.78	5,802.50	197.50	96.71%
Books & Publications	2,500.00	2,500.00	0.00	50.00	2,450.00	2.00%
Office Supplies	18,000.00	18,000.00	463.35	5,620.61	12,379.39	31.23%
Memberships & Dues	13,300.00	13,300.00	0.00	6,585.00	6,715.00	49.51%
Bank Service Charges	0.00	0.00	143.92	696.02	(696.02)	0.00%
Offsite Storage	4,800.00	4,800.00	359.73	2,091.96	2,708.04	43.58%
Rents/Leases-Structures	209,900.00	209,900.00	17,395.95	104,215.70	105,684.30	49.65%
Non-Capital Equipment	10,000.00	10,000.00	0.00	0.00	10,000.00	0.00%
Non-Capital Furniture	40,000.00	40,000.00	365.00	19,519.70	20,480.30	48.80%
Depreciation /Amortization	1,163,500.00	1,163,500.00	120,894.86	725,369.16	438,130.84	62.34%
Total Services & Supplies	\$2,762,100.00	\$2,762,100.00	\$223,657.81	\$1,411,092.33	\$1,351,007.67	51.09%
Total Sal, Ben, Serv & Supp	\$7,458,500.00	\$7,458,500.00	\$530,402.28	\$3,295,645.74	\$4,162,854.26	44.19%

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2017-2018
For the Six Months Ended December 31, 2017 and Year-To-Date - 50% of Fiscal Year Expended

	<i>Adopted 2018 Budget</i>	<i>Adjusted 2018 Budget</i>	<i>December 2017</i>	<i>Expended Fiscal Year to Date</i>	<i>Available Balance</i>	<i>Percent Expended</i>
<i>Technology</i>						
Technology Hardware	\$49,400.00	\$49,400.00	\$215.39	\$1,878.10	\$47,521.90	3.80%
Technology Hardware Support	0.00	0.00	0.00	2,102.97	(2,102.97)	0.00%
Technology Software	213,100.00	213,100.00	912.30	39,129.18	173,970.82	18.36%
Technology Software Support	19,000.00	19,000.00	525.47	9,613.97	9,386.03	50.60%
Technology Systems Support	263,400.00	263,400.00	(3,621.78)	87,796.42	175,603.58	33.33%
Technology Infrastruct Support	300.00	300.00	0.00	184.95	115.05	61.65%
Technology Application Support	507,000.00	507,000.00	5,681.80	236,065.53	270,934.47	46.56%
Technology Data Communication	55,800.00	55,800.00	6,704.32	25,797.36	30,002.64	46.23%
Total Technology	<u>\$1,108,000.00</u>	<u>\$1,108,000.00</u>	<u>\$10,417.50</u>	<u>\$402,568.48</u>	<u>\$705,431.52</u>	<u>36.33%</u>
<i>Capital Expenses</i>						
Capitalized Equipment	0.00	0.00	0.00	49,278.19	(49,278.19)	0.00%
Total Capitalized Expenses	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$49,278.19</u>	<u>-\$49,278.19</u>	<u>0.00%</u>
Congtingency	<u>\$532,800.00</u>	<u>\$532,800.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$532,800.00</u>	<u>0.00%</u>
Total Current Year	<u>\$9,099,300.00</u>	<u>\$9,099,300.00</u>	<u>\$540,819.78</u>	<u>\$3,747,492.41</u>	<u>\$5,351,807.59</u>	<u>41.18%</u>

*Ventura County Employees' Retirement Association
Statement of Fiduciary Net Position
As of December 31, 2017 (Unaudited)*

Assets

Cash & Cash Equivalents		\$180,533,601
Receivables		
Interest and Dividends	3,332,942	
Securities Sold	13,609,642	
Miscellaneous	6,616	
Total Receivables		16,949,201
Investments at Fair Value		
Domestic Equity	1,735,903,807	
Non U.S. Equity	892,509,806	
Global Equity	599,349,407	
Fixed Income	960,858,714	
Private Equity	241,831,034	
Real Estate	405,111,120	
Liquid Alternatives	431,676,460	
Cash Overlay	34,027	
Total Investments		5,267,274,376
Capital Assets, Net of Accumulated Depreciation & Amortization		13,831,292
Total Assets		5,478,588,470

Liabilities

Securities Purchased	32,544,933	
Accounts Payable	1,793,838	
Tax Withholding Payable	3,161,609	
Deferred Revenue (PrePaid Contributions)	86,253,102	
Total Liabilities		123,753,481
Net Position Restricted for Pensions		\$5,354,834,988

***Ventura County Employees' Retirement Association
Statement of Changes in Fiduciary Net Position
For The Six Months Ending December 31, 2017 (Unaudited)***

ADDITIONS

Contributions		
Employer	\$91,759,437	
Employee	34,390,127	
Total Contributions	<u>34,390,127</u>	126,149,564

Investment Income

Net Appreciation (Depreciation) in Fair Value of Investments	388,426,412	
Interest Income	8,986,548	
Dividend Income	3,996,274	
Other Investment Income	15,593	
Real Estate Operating Income, Net	9,047,197	
Security Lending Income	384,834	
Total Investment Income	<u>410,856,858</u>	

Less Investment Expenses

Management & Custodial Fees	7,374,205	
Other Investment Expenses	231,134	
Securities Lending Borrower Rebates	281,550	
Securities Lending Management Fees	32,330	
Total Investment Expenses	<u>7,919,219</u>	

Net Investment Income/(Loss)		<u>402,937,638</u>
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Total Additions		529,087,202
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DEDUCTIONS

Benefit Payments	133,065,210	
Member Refunds and Death Benefit Payments	1,966,700	
Administrative Expenses	2,282,991	
Other Expenses	1,184,089	
Total Deductions	<u>1,184,089</u>	<u>138,498,990</u>

Net Increase/(Decrease)		390,588,213
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Net Position Restricted For Pensions

Beginning of Year		<u>4,964,246,776</u>
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Ending Balance		<u><u>\$5,354,834,989</u></u>
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Ventura County Employees' Retirement Association
Investments, Cash, and Cash Equivalents
As of December 31, 2017 (Unaudited)

	<u>Investments</u>	<u>Cash & Cash Equivalents</u>
Equity		
Domestic Equity		
Blackrock - Russell 1000	\$1,501,688,720	\$0
Blackrock - Russell 2500	61,305,451	0
Western Asset Enhanced Equity Index Plus	172,909,636	36,067,276
Total Domestic Equity	<u>1,735,903,807</u>	<u>36,067,276</u>
Non U.S. Equity		
Blackrock - ACWI ex - US	437,710,700	0
Hexavest	94,281,380	0
Sprucegrove	236,456,815	0
Walter Scott	124,060,911	0
Total Non U.S. Equity	<u>892,509,806</u>	<u>0</u>
Global Equity		
Blackrock - ACWI Index	599,349,407	0
Total Global Equity	<u>599,349,407</u>	<u>0</u>
Fixed Income		
Blackrock - Bloomberg Barclays Aggregate Index	223,128,516	0
Loomis Sayles Multi Sector	81,876,268	506,248
Loomis Sayles Strategic Alpha	46,094,642	0
Reams	309,157,064	1,373
Western Asset Management	300,602,223	3,006,223
Total Fixed Income	<u>960,858,714</u>	<u>3,513,844</u>
Private Equity		
Abbott Secondaries	3,279,685	0
Adams Street	133,768,153	0
Carval Investors	1,500,000	0
Drive Capital	2,573,973	0
Harbourvest	69,441,183	0
Pantheon	31,268,040	0
Total Private Equity	<u>241,831,034</u>	<u>0</u>
Real Estate		
Prudential Real Estate	144,511,543	235
RREEF	0	0
UBS Realty	260,599,577	0
Total Real Estate	<u>405,111,120</u>	<u>235</u>
Liquid Alternatives		
Bridgewater All Weather	314,550,694	0
Tortoise (MLPs)	117,125,767	2,149,923
Total Liquid Alternatives	<u>431,676,460</u>	<u>2,149,923</u>
Cash Overlay (Parametric)	34,027	129,042,740
Cash Abbott Capital		1,500,000
In-House Cash		<u>8,259,583</u>
Total Investments, Cash, and Cash Equivalents	<u><u>\$5,267,274,376</u></u>	<u><u>\$180,533,601</u></u>

***Ventura County Employees' Retirement Association
Schedule of Investment Management Fees
For the Six Months Ending December 31, 2017 (Unaudited)***

Equity Managers	
Domestic Equity	
Blackrock - Russell 1000	\$49,982
Blackrock - Russell 2500	4,537
Western Asset Enhanced Equity Index Plus	170,242
Total Domestic Equity	224,762
Non U.S. Equity	
Blackrock - ACWI ex - US	211,307
Hexavest	209,809
Sprucegrove	331,679
Walter Scott	489,642
Total Non U.S. Equity	1,242,437
Global Equity	
Blackrock - ACWI Index	115,535
Total Global Equity	115,535
Fixed Income Managers	
Blackrock Bloomberg Barclays Aggregate Index	44,865
Loomis Sayles Multi Sector	159,227
Loomis Sayles Strategic Alpha	91,932
Reams Asset Management	269,320
Western Asset Management	268,297
Total Fixed Income	833,640
Private Equity	
Abbott Capital	75,000
Adams Street	899,587
Drive Capital	75,000
Harbourvest	639,505
Pantheon	299,795
Total Private Equity	1,988,887
Real Estate	
Prudential Real Estate Advisors	608,189
RREEF	1,005
UBS Realty	1,005,496
Total Real Estate	1,614,691
Liquid Alternatives	
Bridgewater All Weather	581,930
Tortoise (MLPs)	372,861
Total Liquid Alternatives	954,792
Cash Overlay (Parametric)	84,432
Securities Lending	
Borrower's Rebate	281,550
Management Fees	32,330
Total Securities Lending	313,880
Other	
Investment Consultant (NEPC)	152,219
Investment Custodian (State Street)	162,811
Total Other Fees	315,030
Total Investment Management Fees	\$7,688,085

U.S. Core Fund

Ventura County
February 26, 2018

PGIM Real Estate



Table of Contents



Section I	PGIM Real Estate Overview
Section II	Market Outlook
Section III	U.S. Core Fund Review
Appendix	

PGIM REAL ESTATE REPRESENTATIVES



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U.S. Core Fund Senior Portfolio
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Business Development & Client
Relations
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U.S. Core Fund or U.S. Core Fund Composite reflects the combined assets and performance of all assets held by U.S. Core Fund SA and U.S. Core Fund LP. Although this is not an actual fund in which any client is invested, it is indicative of the overall performance of the U.S. Core Fund investment strategy and, therefore, the U.S. Core Fund Composite returns and portfolio metrics will be provided to NCREIF for inclusion in the NFI-ODCE and other NCREIF Indices. U.S. Core Fund may also refer to the U.S. Core Fund portfolio and asset management teams.

Important Note on Historical Information: Economic terms and other portfolio metrics reported for U.S. Core Fund, U.S. Core Fund SA or U.S. Core Fund LP that include periods to the formation of U.S. Core Fund LP reflect information for U.S. Core Fund SA for those periods prior to January 1, 2013. Prior to the formation of U.S. Core Fund LP, U.S. Core Fund and U.S. Core Fund SA were one in the same.

Please see Appendix for important disclosures about U.S. Core Fund's structure.

Note: Data as of December 31, 2017 is preliminary and subject to change. Unless otherwise stated, all return information provided in this presentation is before the deduction of Manager Compensation/Fees and is not a guarantee or a reliable indicator of future results. All performance targets throughout this presentation are made as of June 30, 2017 and are not guaranteed. Effective January 1, 2013, PGIM Real Estate changed its method for calculating income and appreciation returns to one which uses separate geometric linking for each component, which is consistent with recent changes in Global Investment Performance Standards. As a result, when linking multiple periods' returns, the cumulative effect of cross compounding may cause the sum of income and appreciation returns to not equal the total return. Please refer to the Appendix for returns after the deduction of Manager Compensation/Fees and for other important disclosures regarding the information contained herein.

I. PGIM Real Estate Overview

PGIM Real Estate





Strength & Stability

Deep Financial Strength and a Long History of Real Estate Experience

Prudential Financial, Inc. (PFI)

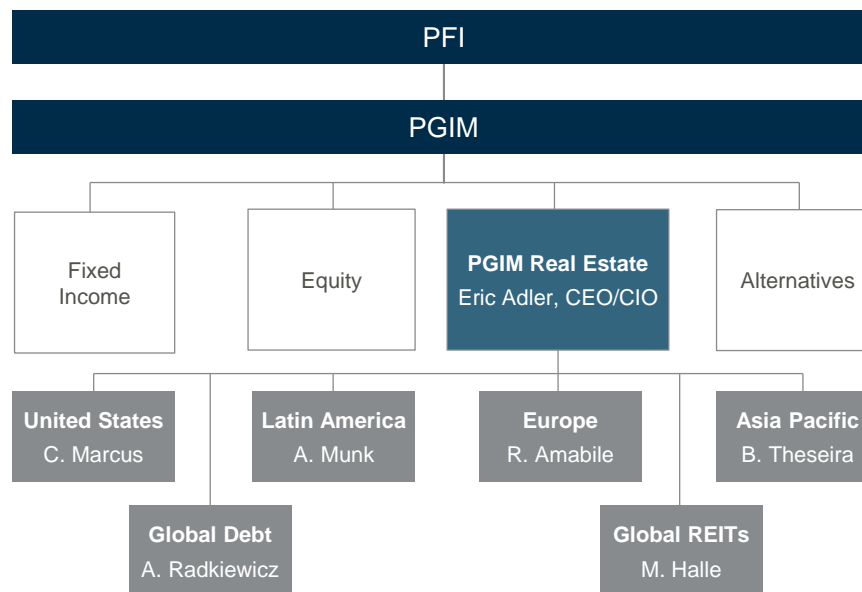
- Over 140 years of managing assets
- Listed on the NYSE (New York Stock Exchange, NYSE: PRU)
- US\$1.39 trillion¹ of AUM
- One of the largest insurance companies in the United States
- A rated (Issuer Credit Rating)² by Standard & Poor's

PGIM

- Global Asset Manager with over US\$1 trillion³ of AUM
- Top 10 Worldwide Institutional Money Manager⁴
- \$160.8 billion in combined real estate equity and debt AUM and AUS⁵

PGIM Real Estate

- US\$69.6 billion⁶ gross AUM globally



¹ As of December 31, 2017. ² As of February 7, 2018. Source: Standard & Poor's. ³ Includes all assets managed by PGIM, Inc., the principal asset management business of PFI. Assets include public and private fixed income, public equity – both fundamental and quantitative and real estate) as of December 31, 2017. ⁴ As of May 30, 2017. Source: Pensions and Investments, Top Money Manager's List. Based on PFI total worldwide institutional assets under management as of December 31, 2016. ⁵ Inclusive of PGIM Real Estate and PGIM Real Estate Finance AUM and AUS. As of December 31, 2017. ⁶ As of December 31, 2017, inclusive of GRES, total net assets under management equal \$49.9 billion.



PGIM Real Estate Americas - U.S. Business

Extensive Resources Committed to Delivering Innovative Strategies

Overview

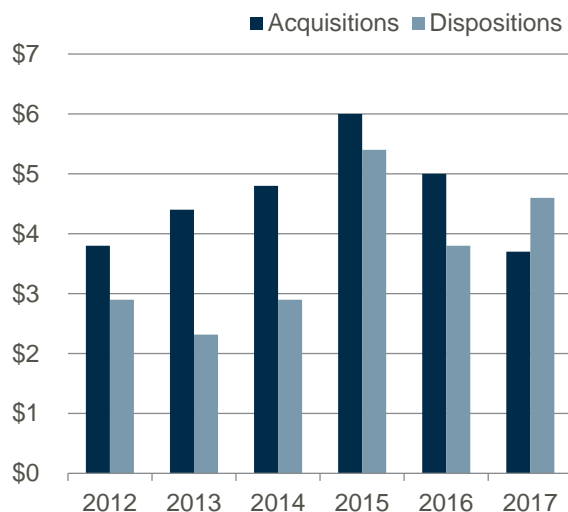
AUM: \$47.3B gross¹

301 Employees / 162 Investment Professionals²

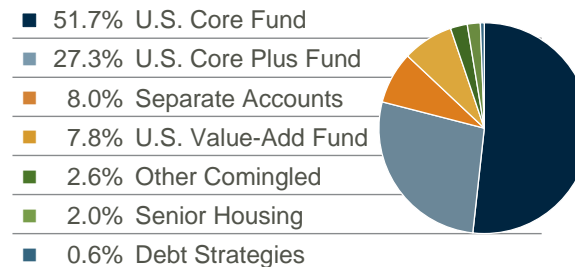
6 Cities



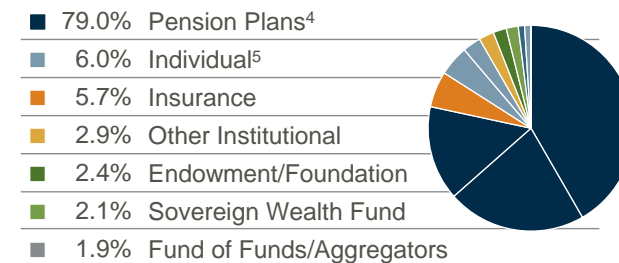
U.S. ACQUISITIONS & SALES HISTORY (\$ BILLIONS)



DISTRIBUTION BY FUND (BASED ON GAV)¹



SOURCE OF FUNDS' CAPITAL (BASED ON NAV)^{1,3}

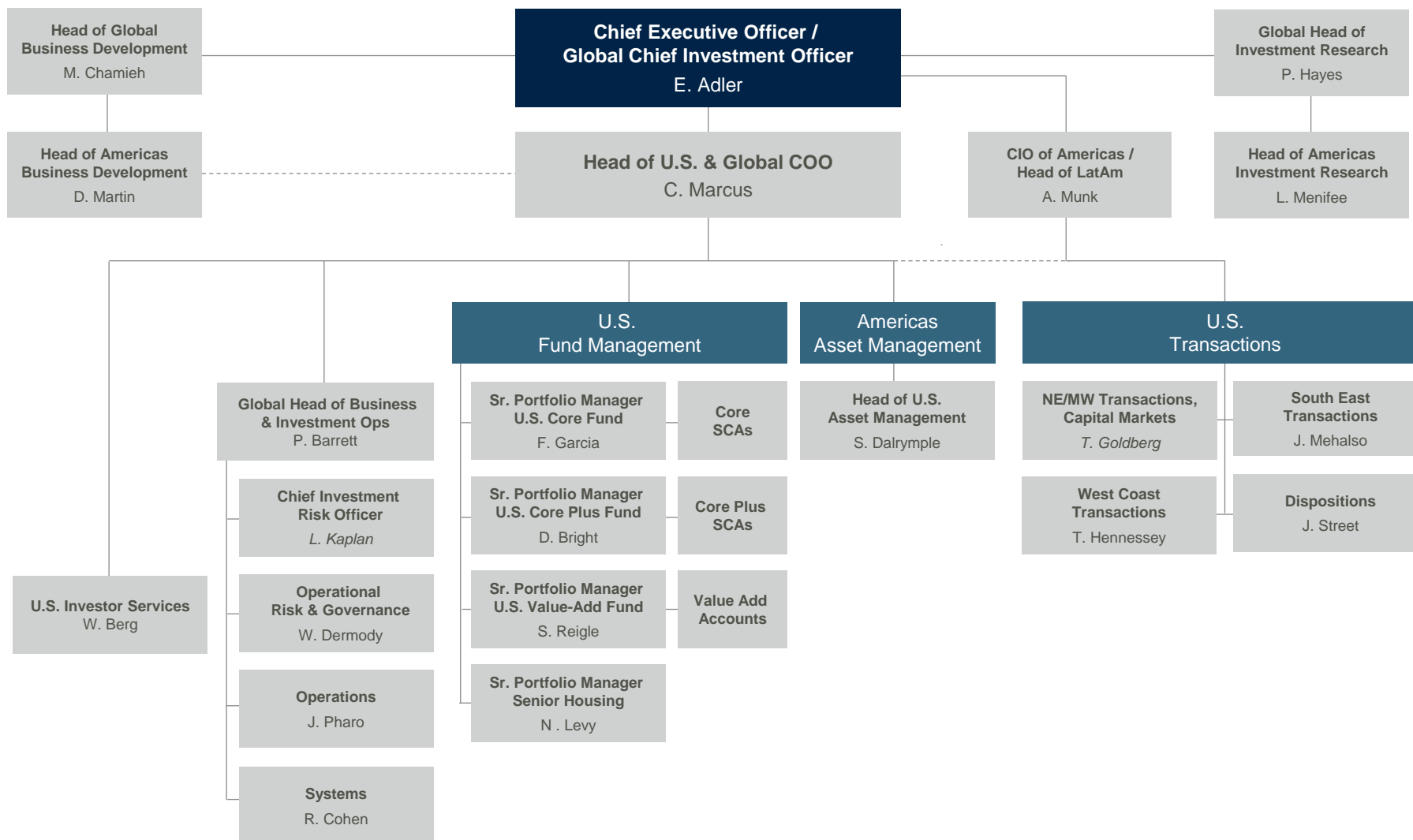


¹ As of December 31, 2017, total net U.S. assets under management equal \$34.7 billion. ² Staffing as of December 31, 2017 in allocated full-time employees. ³ Non-U.S. entities make up 10.7% of U.S. NAV. ⁴ Comprised of Public Pension (41.5%), Private Pension (22.3%), Union Pension (15.2%). ⁵ Comprised of Retail/Mass Affluent (1.0%), Defined Contribution (4.9%), High Net Worth 0.1%), Family Office (0.04%). Note: Percentages may not sum to 100% due to rounding.



PGIM Real Estate U.S. Organization Chart

Effective January 1, 2018





U.S. Core Fund Family of Funds

As of December 31, 2017

	U.S. Core Fund ¹	U.S. Core Plus Fund	U.S. Value-Add Fund
Strategy	Core	Core-Plus	Value-Add
Structure & Status	Open-End, Perpetual Life (Accepting new commitments)	Open-End, Perpetual Life (Accepting new commitments)	Open-End, Perpetual Life (Accepting new commitments thru 3Q18)
Objective	NFI-ODCE	NFI-ODCE +100 bps	11.00% to 14.00% ²
Portfolio Leverage	≤ 30%	≤ 40%	≤ 65%
Targeted Non-Core Exposure	≤ 10%	≤ 35%	≤ 60%
Return Focus	Income	Income + Appreciation	Appreciation
Property Type Focus	Fully Diversified	Diversified	Diversified
Geographic Focus	U.S. Diversified	U.S. Diversified	U.S. Diversified
Size			
GAV	\$24.5B	\$12.9B	\$3.7B
NAV	\$19.7B	\$8.3B	\$1.8B
Inception	1970	1980	2003

¹ U.S. Core Fund represents the aggregate or composite of U.S. Core Fund LP and U.S. Core Fund Separate Account (U.S. Core Fund SA).

² Net target return for U.S. Value-Add Fund is 9.3% - 12.3%. There is no guarantee that targeted returns will be achieved.



U.S. Near-Term Real Estate Market Outlook

As of Fourth Quarter 2017

Moderating real estate market environment

- Steady core returns, trending towards the 6-8% range
- Occupancies have plateaued at historically high levels
- Investment activity has cooled, now in line with 2014 and 2016 paces

Stable pricing with balanced investor demand

- Cap rates have leveled out, but still few signs of upward pressure (with the exception of retail)
- Ample debt availability for stabilized assets, more limited for value add and construction
- Attractive yield spreads in non-Gateway and infill suburban markets

Solid and improving demand drivers...

- Balanced economic expansion, with robust job additions now accompanied by rising wages
- Consumer and business confidence at cyclical highs

...but steady supply additions slowing revenue growth

- Multifamily and industrial construction remains active, so far matched by demand
- All property types experiencing positive, but decelerating, rent growth

Short-term favors office and industrial, stronger long-term outlook for apartments and storage

- Office: substantial embedded office income growth as below-market leases expire
- Industrial: strong demand tailwinds and fueling robust rent growth
- Apartments: supply continues to come online, but healthy demand showing signs of acceleration
- Retail: downsizing and e-commerce headwinds to persist, except in top locations
- Storage: near-term supply will moderate rent gains

Source: PGIM Real Estate. As of 4Q17.

PGIM Real Estate | U.S. Core Fund | REF: 18DCOLL-AVYJMJ
Confidential information. Not for further distribution.



Icon (Atlanta, GA)

III. U.S. Core Fund Review

PGIM Real Estate



Ventura County Employees' Retirement Association

PRISA SA Assets as of December 31, 2017



Investment Details

Contributions (03/31/2005 Inception Date)

03/31/2005	\$40,000,000.00
09/30/2005	\$20,000,000.00
Total Contributions	\$60,000,000.00

Investment Earnings

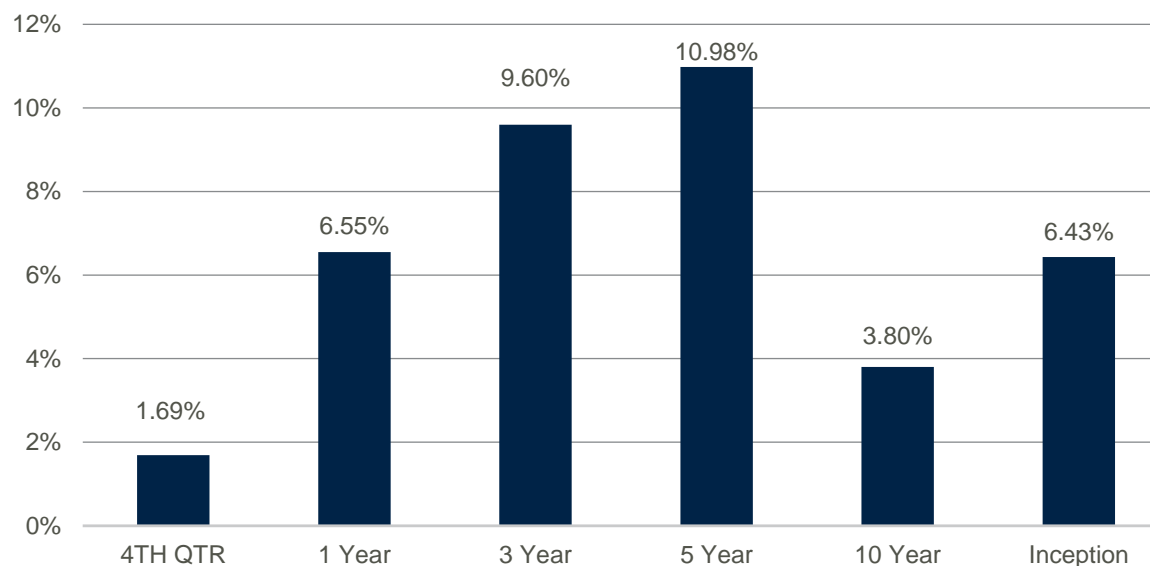
Investment Income	\$60,734,879.55
Appreciation	\$24,730,909.12
Total Investment Earnings	\$85,465,788.67

Disbursements

Withdrawals	\$0
Deducted Fees	(\$954,245.74)
Cash Flow Distributions	\$0
Total Disbursements	(\$954,245.74)

Market Value	\$144,511,542.93
---------------------	-------------------------

NET DOLLAR-WEIGHTED PERFORMANCE



Operating Cash Flow

Total Distributed	\$0
Total Reinvested	\$48,056,259
Current Election	Reinvesting
4Q17 Cash Flow	\$1,646,664

Capital Commitments

Undrawn Commitments	\$0
---------------------	-----

Note: Past performance is not a guarantee or reliable indicator of future results.

PGIM Real Estate | U.S. Core Fund | REF: 18DCOLL-AVYJMJ
Confidential information. Not for further distribution.

10

Disclaimer Regarding U.S. Core Fund Information Presented



Unless indicated otherwise by referencing U.S. Core Fund SA or U.S. Core Fund LP specifically, this presentation contains financial and other information about U.S. Core Fund Composite (“U.S. Core Fund”, “U.S. Core Fund Composite” or the “Fund”). U.S. Core Fund Composite reflects the aggregate holdings, leverage and operations of U.S. Core Fund SA and U.S. Core Fund LP. While U.S. Core Fund Composite is not a fund in which any investor may invest, its performance is indicative of each of U.S. Core Fund SA and U.S. Core Fund LP and is reported to ODCE. U.S. Core Fund SA and U.S. Core Fund LP are separate investment vehicles with separate terms (including fee structures) that invest in substantially the same assets, as further described in “U.S. Core Fund Structure” in the Appendix section **U.S. Core Fund SA, U.S. Core Fund LP, and Net Returns Addendum**. The performance of each of U.S. Core Fund SA and U.S. Core Fund LP, on a separate basis, may differ materially from U.S. Core Fund Composite.

For information about the performance and other data regarding the fund in which they are invested (i.e., U.S. Core Fund SA or U.S. Core Fund LP, as applicable), investors should review the **U.S. Core Fund SA, U.S. Core Fund LP, and Net Returns Addendum** in the Appendix and consult the statements and reports provided to them pursuant to their investment agreements, including their individual client statements, financial statements and quarterly reports, in each case, which include data exclusively related to U.S. Core Fund LP or U.S. Core Fund SA, as the case may be.



U.S. Core Fund¹ Summary

Income-Oriented Core Fund Seeking to Outperform NFI-ODCE

- Open-end commingled U.S. core real estate fund delivering outperformance since NFI-ODCE inception²
- Focus on durable income which represents over 85% of total gross return since inception
- Scale allows for ample diversification and access to irreplaceable assets in major gateway markets
- Overweight to strategic markets and attractive sector weightings to all major property types and self storage

Inception Date	July 1970
Since Inception Gross Return	9.0% (7.9% net)
Benchmark	NFI-ODCE
Gross Asset Value	\$24.5B
Net Asset Value	\$19.7B
Number of Investments	267



100 Park Avenue (New York, NY)

¹ U.S. Core Fund Composite (or "U.S. Core Fund") represents the aggregate or composite of U.S. Core Fund LP and U.S. Core Fund Separate Account (U.S. Core Fund SA). As of December 31, 2017. ² NFI-ODCE inception date March 31, 1978. Note: Past performance is not a guarantee or a reliable indicator of future results.



U.S. Core Fund's Team

Large Team Focused on U.S. Core Fund's Strategy

PORTFOLIO MANAGEMENT TEAM



Frank E. Garcia
 Managing Director
 Senior PM
 Years with Firm: 4
 RE Experience: 24



Joanna Mulford
 Managing Director
 PM & Fund's CFO
 Years with Firm: 28
 RE Experience: 21



James Glen
 Executive Director
 PM
 Years with Firm: 3
 RE Experience: 17



Catherine Minor
 Vice President
 Assistant PM
 Years with Firm: 2
 RE Experience: 18

ASSET MANAGEMENT LEADS



West
Kristin Paul
 (6 / 19)



Midwest
Mark Vande Hey
 (21 / 37)



East / Retail
Carly Miller
 (10 / 19)



Apartment
Yetta Tropper
 (2 / 21)

- Experienced portfolio management team with complementary skill sets
- 33 asset managers aligned by region and strategy
- Three additional portfolio-level team members focused on analytical and strategy support
- Additional oversight/input from PGIM Real Estate's Head of Americas Asset Management



(xx / xx) = Years with PGIM Real Estate / Real Estate experience.

Note: Effective January 2018. U.S. Core Fund also benefits from 4 operational staff support.



U.S. Core Fund – 2017 Report Card

	2017 Target	Full-Year 2017 ²	Comments
Performance	Income: 4.5% to 5.0% Appreciation: 1.5% to 3.0% Total: 6.0% to 8.0%¹	Income: 4.62% Appreciation: 2.76% Total: 7.47%³	<ul style="list-style-type: none"> 2017 total return was within target range Industrial contributed the strongest total returns which was supported by healthy appreciation
Income Growth	> 4%	4.0%	<ul style="list-style-type: none"> Income growth was the main driver of appreciation Industrial had the most significant income growth Storage also produced above average growth
Transactions Target	2017 Acquisitions: \$750M - \$1.25B 2017 Dispositions: \$750M - \$1.00B	\$661.5M \$1,323.3M	<ul style="list-style-type: none"> Net seller with more dispositions of “non-strategic” assets than prior years <ul style="list-style-type: none"> Reduced exposure to office and power centers Exited hotels Increased exposure to the apartment and industrial sectors through new acquisitions
Risk Metrics	LTV: low 20% range Debt to Income: 5.0x Non-Core: 10%	LTV: 19.8% Debt to Income: 4.8x Non-Core: 9.5%	<ul style="list-style-type: none"> Risk metrics are healthy and in line with long-term targets Focused on lower-risk opportunities within non-core

¹ Total net target returns of 5.0% - 7.0%. Target returns are not guaranteed. ² Past performance is not a guarantee or a reliable indicator of future results. ³ Total full-year 2017 net return is 6.59%.



U.S. Core Fund Composite Snapshot¹

As of December 31, 2017

Scale	
Gross Asset Value	\$24.5B
Net Asset Value	\$19.7B
Number of Investments	267
Number of Clients	327

Key Risk Metrics	Actual	Guideline
Core	90.5%	≥ 90%
Leverage Ratio	19.8%	≤ 30%
Debt to Income Multiple	4.8x	≤ 5.0x

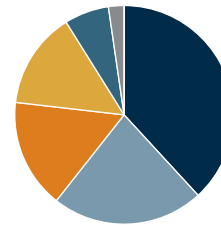
Client Activity	4Q17	Full-Year
Deposits	\$390.8M	\$1,487.6M
Cash Flow Reinvested	\$106.1M	\$340.6M
Withdrawals	\$489.4M	\$1,199.7M
Cash Flow Distributions	\$121.7M	\$398.5M



Eleven Times Square (New York, NY)

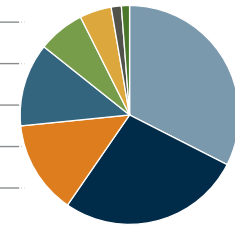
PROPERTY TYPE DIVERSIFICATION²

38.1%	Office
22.5%	Apartment
16.2%	Retail
14.3%	Industrial
6.6%	Storage
2.3%	Other ³



GEOGRAPHIC DIVERSIFICATION²

32.5%	Pacific
27.1%	Northeast
13.8%	Southeast
12.3%	Midwest
6.9%	EN Central
4.7%	Southwest
1.5%	Mountain
1.2%	WN Central



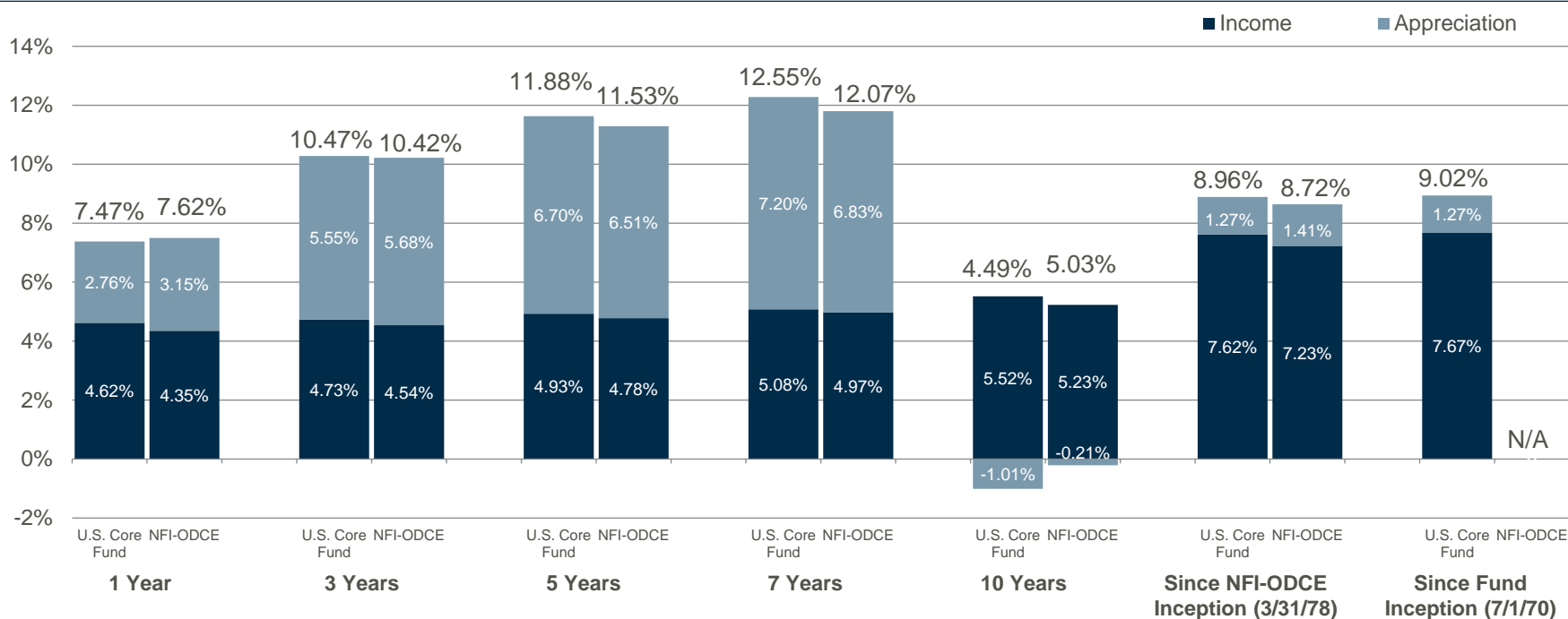
¹ U.S. Core Fund Composite represents combined assets held by U.S. Core Fund SA and U.S. Core Fund LP. ² Based on U.S. Core Fund's preliminary share of gross market value in properties and debt investments. ³ Other includes Harbor Garage and Land. Note: There is no guarantee these targets will be achieved. Please see page 11 for important information regarding U.S. Core Fund Composite.



U.S. Core Fund Composite Gross Performance

As of December 31, 2017

U.S. CORE FUND COMPOSITE GROSS RETURNS VS. NFI-ODCE GROSS RETURNS¹



U.S. CORE FUND COMPOSITE NET RETURNS VS. NFI-ODCE NET RETURNS BY YEAR

	2017	2016	2015	2014	2013	2012	2011	2010
Total	6.59%	8.02%	14.51%	12.53%	13.83%	8.76%	18.03%	17.15%
Spread vs. NFI-ODCE	-7 bps	+23 bps	+56 bps	+107 bps	+93 bps	-103bps	+307 bps	+189 bps

¹ Performance information regarding U.S. Core Fund SA or U.S. Core Fund LP, as applicable, along with performance net of manager compensation/fees, appears in the Appendix. Returns for periods prior to January 1, 2013 are based upon U.S. Core Fund SA only. Note: Returns shown are time-weighted rates of return calculated in conformity with performance reporting standards and are before the deduction of Manager Compensation/Fees. Returns for NFI-ODCE are based on the final report published by NCREIF on January 30, 2018. Past performance is not a guarantee or a reliable indicator of future results.



U.S. Core Fund Drivers of Performance

One-Year Ending December 31, 2017

Unlevered Returns by Sector – 1-Year

	Income	Appreciation	Total
Industrial	5.09%	10.00%	15.46%
Storage	5.72%	5.05%	10.98%
Retail	5.43%	0.44%	5.89%
Office	4.24%	0.77%	5.04%
Apartment	3.99%	1.01%	5.03%

Industrial

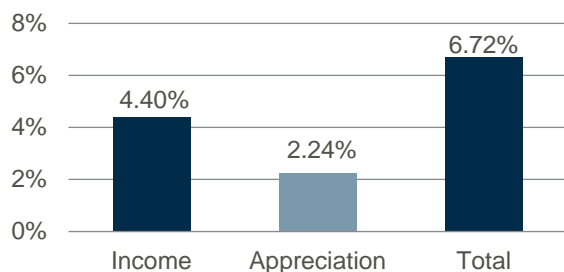
The industrial portfolio generated the highest total returns, which was primarily driven by value gains

- Appreciation continues to be driven by outsized NOI growth (11.9% TTM)
- Portfolio occupancy increased by 160 bps year-over-year to 96.3% on a same property basis, with particular strength in Southern California



Park 70 - Amazon (Denver, CO)

Total Unlevered Returns – 1-Year



Storage

The storage portfolio generated the second highest total returns due to strong income and appreciation

- Occupancy remains high at 92.6% with an increase of 39 bps since last year
- While beginning to moderate, NOI growth remains healthy as rental rates continue to increase



Extra Space Storage Portfolio (Various)

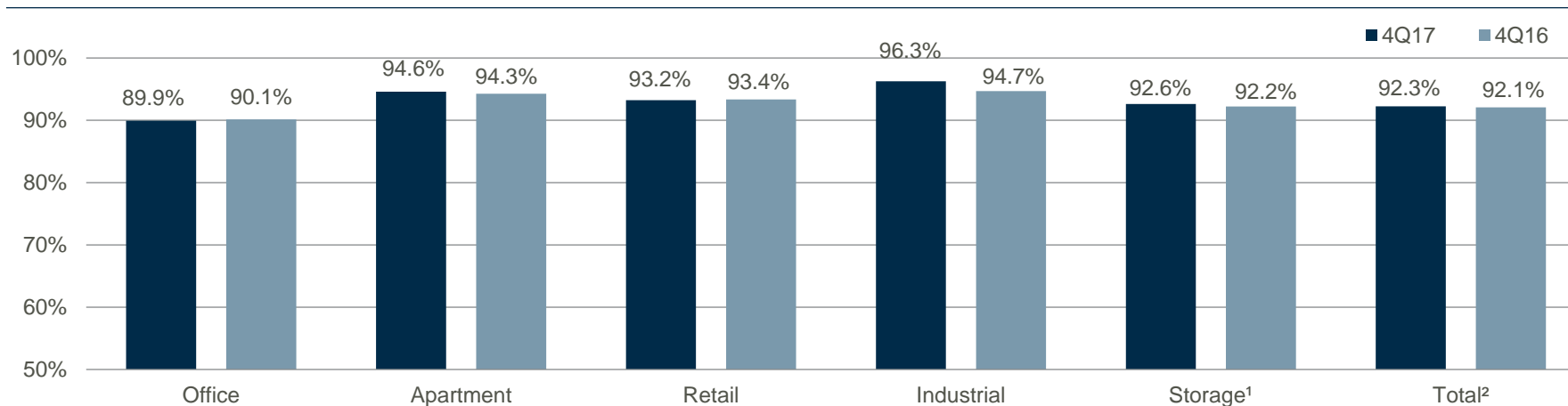
Note: As of December 31, 2017. Past performance is not a guarantee or a reliable indicator of future results.



U.S. Core Fund Occupancy & Income Growth

As of December 31, 2017

SAME PROPERTY LEASED STATUS



Same Property NOI ³	Trailing 12-Months As of 12/31/17 (\$ millions)	YTD NOI Growth %
Industrial	\$154.5	11.9%
Storage	\$86.2	4.9%
Office	\$387.9	3.7%
Retail	\$202.1	2.6%
Apartment	\$189.8	0.2%
Total Same Property NOI⁴	\$1,031.1	4.0%

¹ Represents average leased status for the quarter. ² Same property leased status for total portfolio weighted based on gross market value. ³ 100% Property level unlevered. To provide a more meaningful basis for comparison between periods, property net income excludes income from properties that were purchased or sold during the comparative time periods, land and debt investments. ⁴ Total Same property NOI of \$1,031.1 million represents 86% of U.S. Core Fund's total NOI. Includes Harbor Garage which represent \$10.6 million of NOI.

Note: Results are not guaranteed. Past performance is not a guarantee or reliable indicator of future results.

U.S. Core Fund's Strategic Plan 2018-2020

Strategy For Long-Term Attractive Risk Adjusted Performance



- Continue shift to long-term strategic weightings
 - Reduce office exposure through non-strategic asset sales
 - Increase multifamily and industrial through core and build-to-core acquisitions
 - Decrease exposure to commodity retail
 - Maintain storage allocation
- Remain overweight to long-term strategic markets, but explore investments in select tactical markets
- Preference for urban and infill suburban locations
- Continually upgrade portfolio through acquisitions and tactical sales
 - Monitor for investment opportunities due to any market dislocation
- Ongoing risk focus
 - Maintain healthy debt metrics through a low-20% LTV and 5.0x debt-to-income ratio
 - Optimize term, rate, rollover and flexibility
 - Reserve debt for long-term hold and non-core assets
 - Remain near 10% guideline on non-core with selective investment focus on apartment and industrial build-to-core development
 - Avoid style drift and excessive vintage year risk



Perris Valley Logistics Center (Perris, CA)



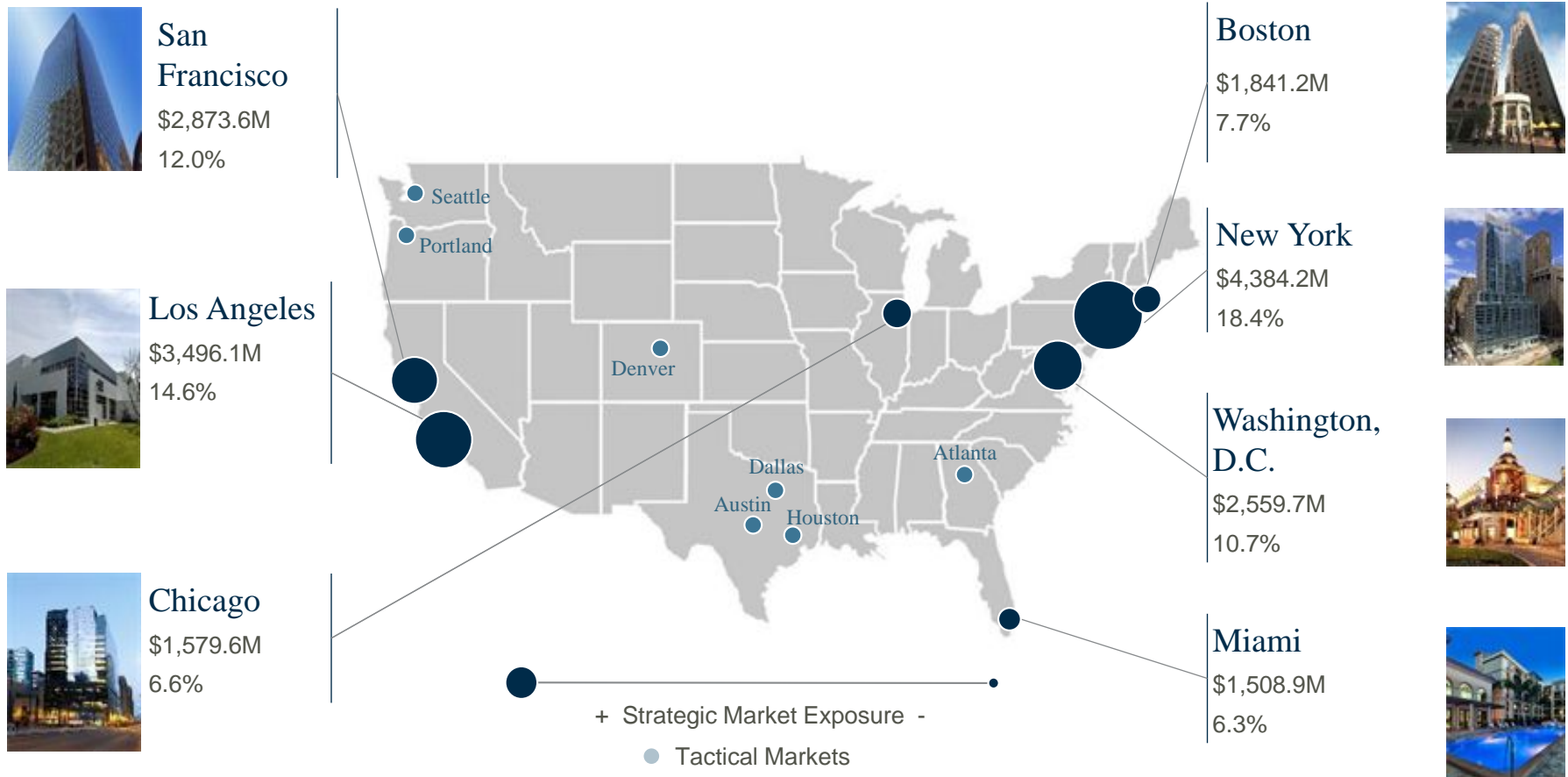
Roosevelt Collection (Chicago, IL)



U.S. Core Fund's Strategic Markets

Research-Driven Market Strategy

- U.S. Core Fund strategic market exposure represents 76% of the portfolio vs. 67% of NFI-ODCE¹



¹ NFI-ODCE does not publish detailed property information. Market information is based on CSA definitions and calculated by extracting NFI-ODCE property data from the NCREIF Research Database. Data as of December 31, 2017. Note: Please see page 11 for important information regarding U.S. Core Fund Composite.



U.S. Core Fund Property Type Strategy

Shifting to Long-Term Strategic Allocations

	2017 Year-End Exposure ¹	Change in Exposure (bps) During 2017 ¹	Target Movement of Exposure 2018-2020	Fund Exposure Target 2018-2020 ²	NFI-ODCE 12/31/2017 ³
Office	38.1%	-280	↓	30-35%	37.5%
Apartments	22.5%	+230	↑	25-30%	25.1%
Retail	16.2%	-130	↓	10-15%	19.0%
Industrial	14.3%	+170	↑	15-20%	14.6%
Storage	6.6%	+40	↔	5-10%	2.3%
Hotel	0.0%	-30	N/A	0%	0.6%

¹ Based upon U.S. Core Funds share of GMV in properties and debt investments. ² There is no guarantee that these targets will be achieved. ³ Diversification as of 4Q17 is based on NFI-ODCE gross market value in the NCREIF Performance Attribution Report.

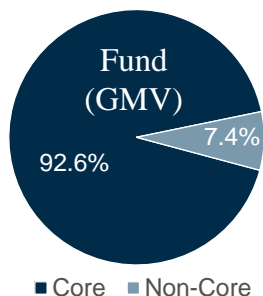


U.S. Core Fund Non-Core Component: 9.5% of Portfolio GMV

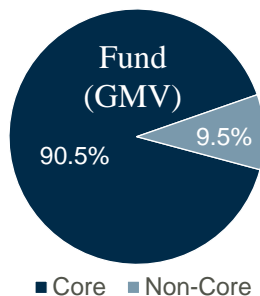
Value Creation Through Build-to-Core Strategies

- Targeting non-core exposure close to maximum guideline of 10% (based on committed exposure)
- Extensive JV network – deal sourcing / mitigates development risk
- Focus on lower risk apartment and industrial development
 - Current market value for build-to-core developments appraised or sold in the current cycle is 35%¹ over cost
- Investments move to “core” once they achieve 80% leased status

CURRENT EXPOSURE²

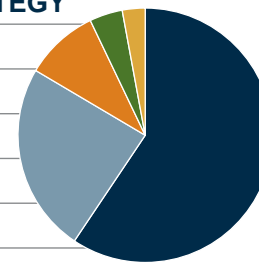


COMMITTED EXPOSURE³



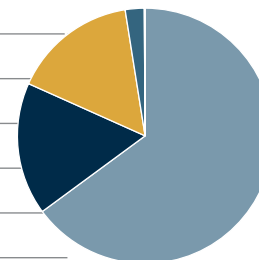
NON-CORE INVESTMENT STRATEGY

- 59.4% Development
- 24.1% Lease-Up
- 9.4% Pre-Development
- 4.2% Land
- 2.9% Debt Investments



NON-CORE BY SECTOR

- 64.9% Apartment
- 16.8% Office
- 15.8% Industrial
- 2.5% Storage
- 0.1% Retail



¹ Statistic based on 100% of GMV. Based on net equity, exposure breakout is Core: 93.9%; Non-Core: 6.1%. ² Based on U.S. Core Fund's share of gross market value in properties and debt investments. ³ Current exposure plus unfunded commitments and assumes no stabilization of non-core assets; basis on which guideline is measured.



Transaction Activity

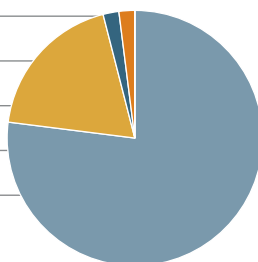
One-Year Ending December 31, 2017

Acquisitions: \$0.7B¹ (14 assets)

- Focus on buying and/or building long-term hold core assets in strategic and select tactical markets
- Recent emphasis on apartments
- Broadly diversified geographically

PROPERTY TYPE ¹

■ 77%	Apartment
■ 19%	Industrial
■ 3%	Storage
■ 1%	Retail

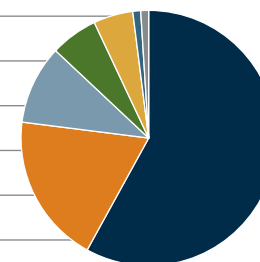


Dispositions: \$1.3B² (15 Assets)

- Improved the overall quality of the portfolio through non-strategic asset sales
- Liquidated hotels
- Continued to reduce office and commodity retail

PROPERTY TYPE ²

■ 61%	Office
■ 21%	Retail
■ 8%	Apartment
■ 5%	Hotel
■ 3%	Industrial
■ 1%	Land
■ 1%	Storage



2017 Transactions Supported Long-Term Allocation Strategy

↓ Office
280 bps

↑ Apartments
230 bps

↓ Retail
130 bps

↑ Industrial
170 bps

¹ Based on U.S. Core Fund's % of gross investment. ² Based on U.S. Core Fund's % sales price.

U.S. Core Fund – Preliminary 2018 Outlook & Objectives



Performance

- Deliver gross returns of 6.0% - 8.0%,¹ including income return of 4.5% - 5.0%

Income Growth

- Anticipated strong market fundamentals coupled with built-in rent gains within the portfolio expected to result in income growth for the year of approximately 4.0%
- Income growth will continue to be the driver of appreciation
- U.S. Core Fund asset management team is focused on capital preservation and income growth (e.g. extending lease terms and seeking credit tenants)

Transactions Target

- Maintain a disciplined approach to investing and continue to sell “non-strategic” assets, particularly in the office sector
- Continue investing in build-to-core pipeline
- Seek attractive new multifamily and industrial acquisitions to increase sector exposure
- Acquisitions and dispositions volume both expected to be consistent with long-term averages

2018 Acquisitions Target: \$1.5B - \$2.0B

2018 Dispositions Target: \$0.5B - \$1.0B

Risk Metrics

- Risk metrics are healthy and in line with long-term targets
- Focus on lower-risk opportunities within non-core

¹ Total net target returns of 5.0% - 7.0%. Target returns are not guaranteed. Past performance is not a guarantee or a reliable indicator of future results.

Appendix

PGIM Real Estate





PGIM Real Estate & U.S. Core Fund Sustainability

As of December 31, 2017

Our Sustainability Mission

To incorporate sustainability practices into our real estate investment process and the management of our global portfolio that result in increased operating efficiency, and contribute to delivering superior risk adjusted returns for our investors and cost savings and health benefits for our property occupants, while being a good global citizen and respecting the needs of all stakeholders.

Our Sustainability Objectives

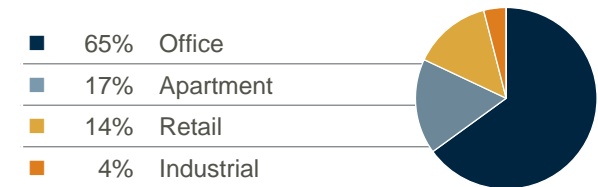
- Improve investment returns for our clients
- Become a landlord of choice
- Practice good global citizenship starting with the communities we serve

U.S. Core Fund Recognition

- U.S. Core Fund's 2017 Global Real Estate Sustainability Benchmark (GRESB) ranking is in the top quartile with respect to its peer group of diversified, non-listed U.S. funds (ranked 9 of 39)² and earned a GRESB 4-star rating.
- U.S. Core Fund earned a GRESB Green Star in the 2017 survey. U.S. Core Fund earned scores of 80 for Management and Policy, 74 for Implementation and Measurement and 75 Overall. PGIM Real Estate has earned a total of 25 GRESB Green Star Awards in the past three years.
- 43 U.S. Core Fund buildings at 40 assets (\$7.6B or 33% of GMV)³ have achieved LEED or National Green Building Standard certification.
- 29 U.S. Core Fund buildings (\$7.1B or 31% of GMV)³ have earned the U.S. EPA's Energy Star Certification for 2017, with more properties expected to achieve certification in 2018.
- In total, 55 buildings⁴ (\$10.0B or 44% of GMV)³ have earned LEED, NGBS or Energy Star certification.

¹ Based on asset count. ² Source: GRESB Benchmark Report 2017 as of September 6, 2017. ³ Based on U.S. Core Fund's share of GMV. ⁴ 17 assets have achieved both a LEED and Energy Star Certification. ⁵ Existing Building – Operations and Maintenance is an acquired or owned operating entity that is certified at the LEED standards. ⁶ Core & Shell – Address the new building design and construction process for buildings where interiors are not part of the initial design process. ⁷ \$4.6B of energy star buildings are also LEED Certified.

CERTIFIED ASSETS BY PROPERTY TYPE¹



CERTIFICATION TYPE¹



Appendix: U.S. Core Fund SA, U.S. Core Fund LP, and Net Returns Addendum

PGIM Real Estate



U.S. Core Fund LP

Management Fee



U.S. Core Fund Management Fee Schedule	
Investor NAV ¹	Fee Rate
First \$25 million	100 bps
Over \$25 million up to \$50 million	95 bps
Over \$50 million up to \$100 million	85 bps
Over \$100 million up to \$200 million	75 bps
Over \$200 million up to \$300 million	70 bps
Over \$300 million	65 bps

Effective Fees for Different Sized Accounts	
Investor NAV ¹	Fee rate
\$25M	100 bps
\$50M	98 bps
\$100M	91 bps
\$150M	86 bps
\$250M	81 bps

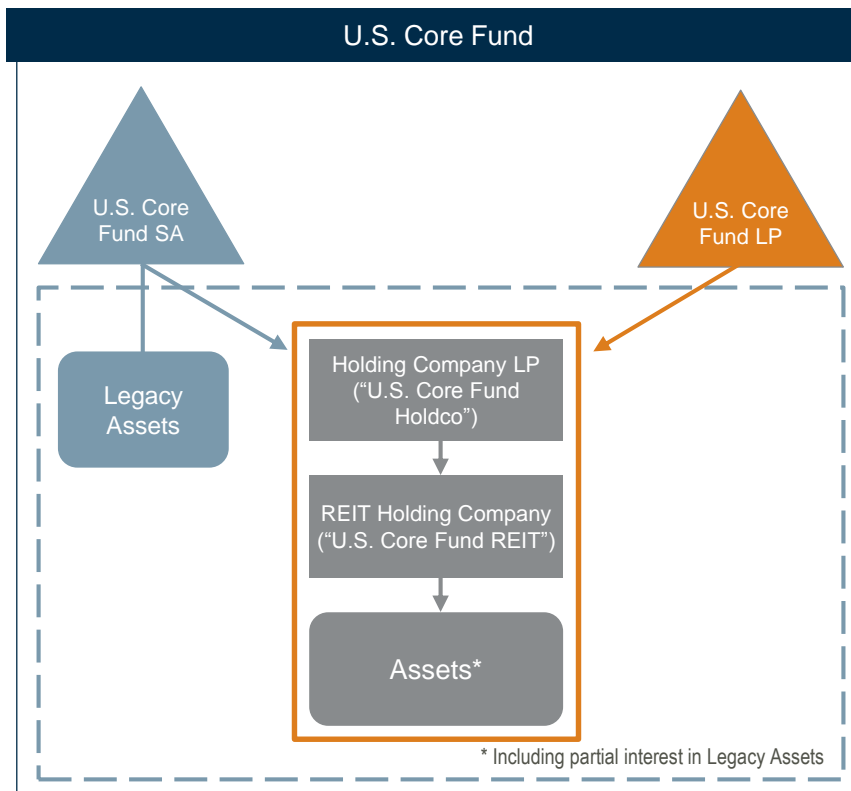
¹Cash balances greater than 5% of the Fund's NAV will not incur a fee.



U.S. Core Fund Structure

Summary of Structure

- U.S. Core Fund is comprised of U.S. Core Fund SA, an Insurance Company Separate Account, and U.S. Core Fund LP, a Delaware Limited Partnership.
- U.S. Core Fund LP, which was launched in 2013, will invest in all assets U.S. Core Fund SA elects to acquire, through a real estate investment trust (“U.S. Core Fund REIT”) that is expected to be domestically (U.S.) controlled.
- U.S. Core Fund SA holds a direct partial interest in certain assets (“Legacy Assets”) acquired prior to the launch of U.S. Core Fund LP. U.S. Core Fund LP and U.S. Core Fund SA have exposure to the remaining interest in these properties through U.S. Core Fund REIT.
- As of December 31, 2017, U.S. Core Fund SA and U.S. Core Fund LP represent approximately 75% and 25% of U.S. Core Fund REIT, respectively.
- With limited exceptions, all new investors in U.S. Core Fund will invest through U.S. Core Fund LP.
- Non-U.S. investors with tax structuring needs can invest directly into U.S. Core Fund LP or indirectly through a vehicle that will act as a “blocker”



- U.S. Core Fund Separate Account
- U.S. Core Fund LP
- Joint Ownership

Note: "U.S. Core Fund" represents the aggregate or composite of U.S. Core Fund SA and U.S. Core Fund LP vehicles.



U.S. Core Fund Legacy Assets

As of December 31, 2017

Legacy Assets

	Location	Property Type	Acquisition Date	Fund's Share GMV (\$M)	Fund's Share Cost (\$M)	Net Market Value ¹ (\$M)	% of REIT GMV (\$M)
100 Park Avenue	NY	Office	8/1/1974	\$413.3	\$208.5	\$236.1	99.6%
2600 10th Street	CA	Office	1/24/2007	31.7	\$40.3	\$28.8	49.9%
EmeryStation Triangle	CA	Industrial	8/27/2007	12.8	\$5.3	\$12.6	49.9%
EmeryStation East	CA	Office	10/30/2008	151.5	\$79.3	\$112.8	49.9%
EmeryStation I	CA	Office	12/21/2004	112.9	\$56.9	\$92.3	49.9%
EmeryStation II	CA	Office	12/31/2004	92.3	\$46.8	\$67.2	49.9%
EmeryStation West	CA	Office	5/27/2016	83.1	\$83.1	\$37.2	87.3%
Galleria	CA	Retail	12/18/1984	26.4	\$46.1	\$31.7	48.3%
Heritage Square	CA	Office	12/31/2004	22.5	\$10.9	\$15.3	49.9%
North Hollywood - Milano	CA	Residential	1/29/2008	74.9	\$50.4	\$74.9	49.9%
Pardee	CA	Industrial	5/5/2008	6.4	\$4.3	\$6.5	49.9%
Post Montgomery Tower	CA	Office	12/18/1984	650.0	\$402.8	\$644.1	48.6%
Signature Point	CA	Residential	9/24/2004	134.0	\$78.7	\$133.8	50.0%
The Fillmore Center	CA	Residential	12/22/2004	661.0	\$279.3	\$662.1	50.0%
Triana	CA	Residential	9/8/2008	141.0	\$110.5	\$142.0	49.9%
Total				\$2,613.8	\$1,503.1	\$2,297.4	\$1,532.7
							58.6%

¹ Reflects U.S. Core Fund's share excluding joint venture partner interests and net of debt.



U.S. Core Fund LP Key Information

As of December 31, 2017

The Basics¹

Gross Asset Value	\$23.5B
Net Asset Value	\$18.7B
Cash Balance	\$705.2M

The Debt Picture

Fixed/Floating % ²	75% / 25%
Recourse Leverage Ratio	2.8%
Weighted Average Cost of Debt (Fixed/Floating)	3.8%
Weighted Average Maturity	5.7 Yrs

Strategic Market Exposure

Market	Exposure ³	(Under)/Overweight to ODCE ⁴
New York	19.4%	+290 bps
Los Angeles	14.9%	+210 bps
Washington D.C.	11.2%	+400 bps
San Francisco	8.6%	-200 bps
Boston	8.0%	+40 bps
Chicago	6.9%	-100 bps
Miami	6.6%	+210 bps
Total	75.6%	

Returns vs. NFI-ODCE⁵

Time Period	Income		Appreciation		Total Return	
	U.S. Core Fund LP	NFI-ODCE	U.S. Core Fund LP	NFI-ODCE	U.S. Core Fund LP	NFI-ODCE
Current Quarter	1.14%	1.06%	0.80%	1.01%	1.94%	2.07%
1-Year	4.63%	4.35%	2.74%	3.15%	7.46%	7.62%
3-Year	4.75%	4.54%	5.47%	5.68%	10.41%	10.42%
5-Year	4.95%	4.78%	6.68%	6.51%	11.87%	11.53%
10-Year	5.53%	5.23%	-1.03%	-0.21%	4.48%	5.03%
Since NFI-ODCE Inception (3/31/78)	7.62%	7.23%	1.27%	1.41%	8.96%	8.72%
Since U.S. Core Fund Inception (7/1/70)	7.67%	N/A	1.27%	N/A	9.02%	N/A

¹ "Gross Asset Value," "Net Asset Value" and Cash Balance represents the value of the assets held by U.S. Core Fund SA and U.S. Core Fund LP without netting out U.S. Core Fund SA's respective interest therein. U.S. Core Fund LP's net asset value is \$4,624.8M as of December 31, 2017. ² Includes floating rate loans with caps. ³ Based on U.S. Core Fund LP's share of gross market value in properties and debt investments. ⁴ NFI-ODCE does not publish detailed property information. Market information is based on CSA definitions and calculated by extracting NFI-ODCE property data from the NCREIF Research Database. Data as of December 31, 2017. ⁵ Returns shown are time-weighted rates of return calculated in conformity with performance reporting standards and are before the deduction of Manager Compensation/Fees. Returns for NFI-ODCE are based on the final report published by NCREIF on January 30, 2018. Past performance is not a guarantee or a reliable indicator of future results. Please refer to the appendix for further information.



U.S. Core Fund SA Key Information

As of December 31, 2017

The Basics¹

Gross Asset Value	\$24.5B
Net Asset Value	\$19.7B
Cash Balance	\$706.3M

The Debt Picture

Fixed/Floating % ²	75% / 25%
Recourse Leverage Ratio	2.8%
Weighted Average Cost of Debt (Fixed/Floating)	3.8%
Weighted Average Maturity	5.7 Yrs

Strategic Market Exposure

Market	Exposure ³	(Under)/Overweight to ODCE ⁴
New York	18.4%	+210 bps
Los Angeles	14.6%	+180 bps
San Francisco	12.0%	+140 bps
Washington D.C.	10.7%	+350 bps
Boston	7.7%	+10 bps
Chicago	6.6%	-130 bps
Miami	6.3%	+180 bps
Total	76.3%	

Returns vs. NFI-ODCE⁵

Time Period	Income		Appreciation		Total Return	
	U.S. Core Fund SA	NFI-ODCE	U.S. Core Fund SA	NFI-ODCE	U.S. Core Fund SA	NFI-ODCE
Current Quarter	1.13%	1.06%	0.77%	1.01%	1.90%	2.07%
1-Year	4.60%	4.35%	2.76%	3.15%	7.46%	7.62%
3-Year	4.72%	4.54%	5.56%	5.68%	10.48%	10.42%
5-Year	4.92%	4.78%	6.71%	6.51%	11.88%	11.53%
10-Year	5.51%	5.23%	-1.01%	-0.21%	4.49%	5.03%
Since NFI-ODCE Inception (3/31/78)	7.62%	7.23%	1.27%	1.41%	8.96%	8.72%
Since U.S. Core Fund SA Inception (7/1/70)	7.67%	N/A	1.28%	N/A	9.02%	N/A

¹ "Gross Asset Value," "Net Asset Value" and Cash Balance represents the value of the assets held by U.S. Core Fund SA and U.S. Core Fund LP without netting out U.S. Core Fund LP's respective interest therein. U.S. Core Fund SA's net asset value is \$15,070.1M as of December 31, 2017. ² Includes floating rate loans with caps. ³ Based on U.S. Core Fund SA's share of gross market value in properties and debt investments. ⁴ NFI-ODCE does not publish detailed property information. Market information is based on CSA definitions and calculated by extracting NFI-ODCE property data from the NCREIF Research Database. Data as of December 31, 2017. ⁵ Returns shown are time-weighted rates of return calculated in conformity with performance reporting standards and are before the deduction of Manager Compensation/Fees. Returns for NFI-ODCE are based on the final report published by NCREIF on January 30, 2018. Past performance is not a guarantee or a reliable indicator of future results. Please refer to the appendix for further information.

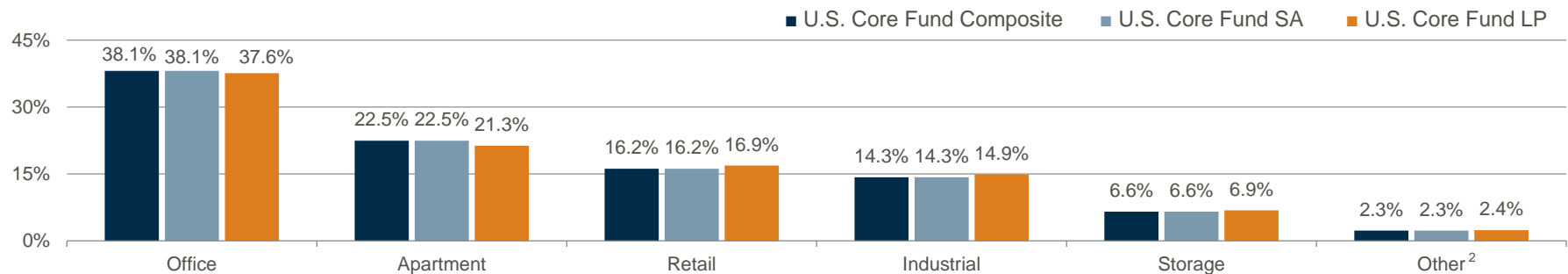


U.S. Core Fund Risk Metrics & Diversification

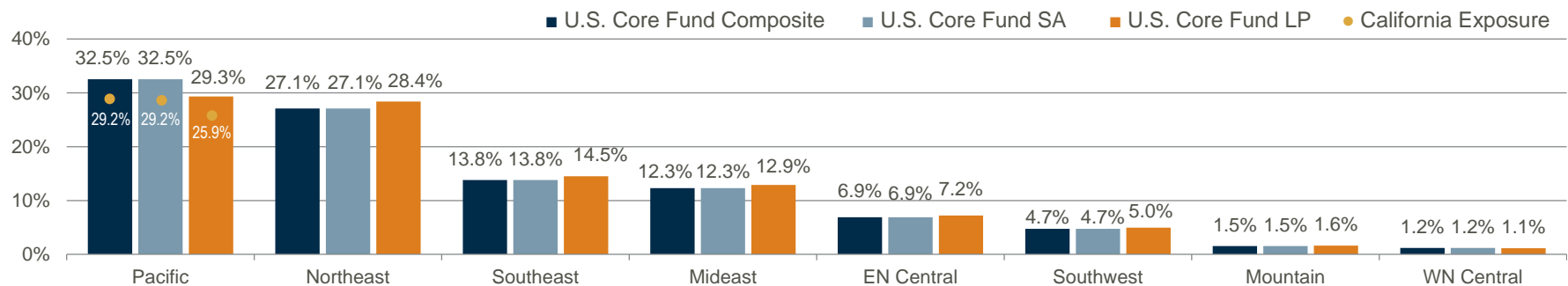
As of December 31, 2017

Key Risk Metrics	Guideline	U.S. Core Fund Composite	U.S. Core Fund SA	U.S. Core Fund LP
Core	≥ 90%	90.5%	90.5%	90.0%
Leverage Ratio	≤ 30%	19.8%	19.8%	19.6%
Debt to Income Multiple	≤ 5x	4.8x	4.8x	5.0x
Single Asset Exposure	< 5%	International Place, 6.1%	International Place, 6.1%	International Place, 6.4%

PROPERTY TYPE DIVERSIFICATION¹



GEOGRAPHIC DIVERSIFICATION¹



¹ Based on U.S. Core Fund's share of gross market value in properties and debt investments. ² Other includes Harbor Garage and land. Note: Please see page 11 for important information regarding U.S. Core Fund Composite.

Endnotes



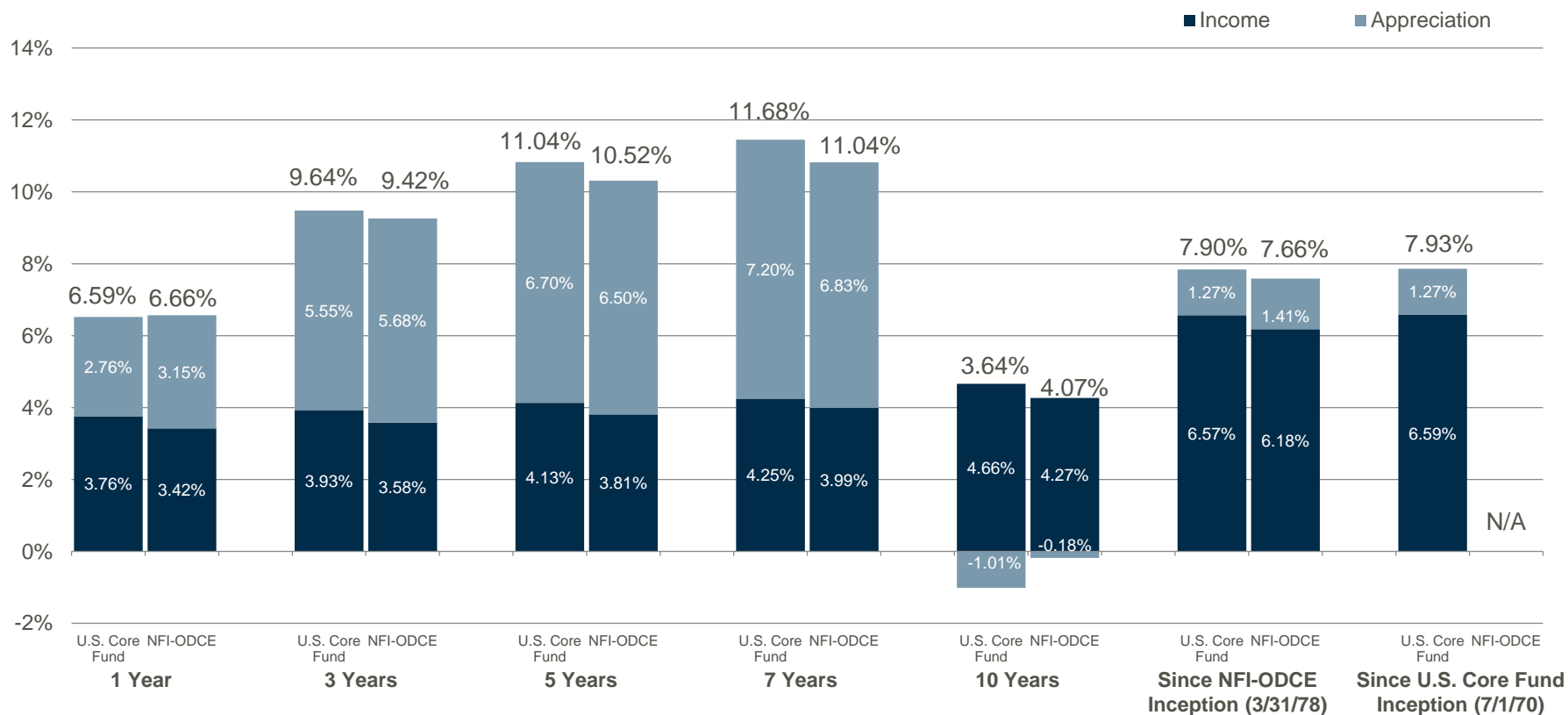
- **U.S. Core Fund Separate Account (" U.S. Core Fund SA")** is the original U.S. Core Fund fund structured as an insurance company separate account with an inception date of July 1970.
- **U.S. Core Fund LP** is the new investment vehicle formed on January 1, 2013 to invest in substantially all of the existing portfolio of U.S. Core Fund SA assets (as of December 31, 2012) as well as all assets that PICA, on behalf of U.S. Core Fund SA, elects to invest in going forward.
- **U.S. Core Fund or U.S. Core Fund Composite** reflects the combined performance of all assets held by U.S. Core Fund SA and U.S. Core Fund LP. Although this is not an actual fund in which any client is invested, it is indicative of the overall performance of the U.S. Core Fund investment strategy and, therefore, the U.S. Core Fund Composite returns and portfolio metrics will be provided to NCREIF for inclusion in the NFI-ODCE and other NCREIF Indices. U.S. Core Fund may also refer to the U.S. Core Fund portfolio and asset management teams.
- **U.S. Core Fund REIT** is the entity through which U.S. Core Fund LP will make all of its investments. As of December 31, 2017, U.S. Core Fund LP and U.S. Core Fund SA own approximately 24.8% and 75.2% of U.S. Core Fund REIT, respectively. Any reference to U.S. Core Fund LP's dollar exposure throughout this document refers to that of U.S. Core Fund REIT, unless otherwise noted.
- **Important Note on Historical Information:** Economic terms and other portfolio metrics reported for U.S. Core Fund , U.S. Core Fund SA or U.S. Core Fund LP that include periods to the formation of U.S. Core Fund LP reflect information for U.S. Core Fund SA for those periods prior to January 1, 2013. Prior to the formation of U.S. Core Fund LP, U.S. Core Fund and U.S. Core Fund SA were one and the same.



U.S. Core Fund Composite Net Performance¹

As of December 31, 2017

U.S. CORE FUND COMPOSITE NET RETURNS VS. NFI-ODCE NET RETURNS



¹ Returns shown prior to January 1, 2013 are based upon U.S. Core Fund SA only.

Note: Returns for NFI-ODCE are based on the final report published by NCREIF on January 30, 2018. Returns shown are time-weighted rates of return after deduction of Manager Compensation/Fees. Past performance is not a guarantee or a reliable indicator of future results.

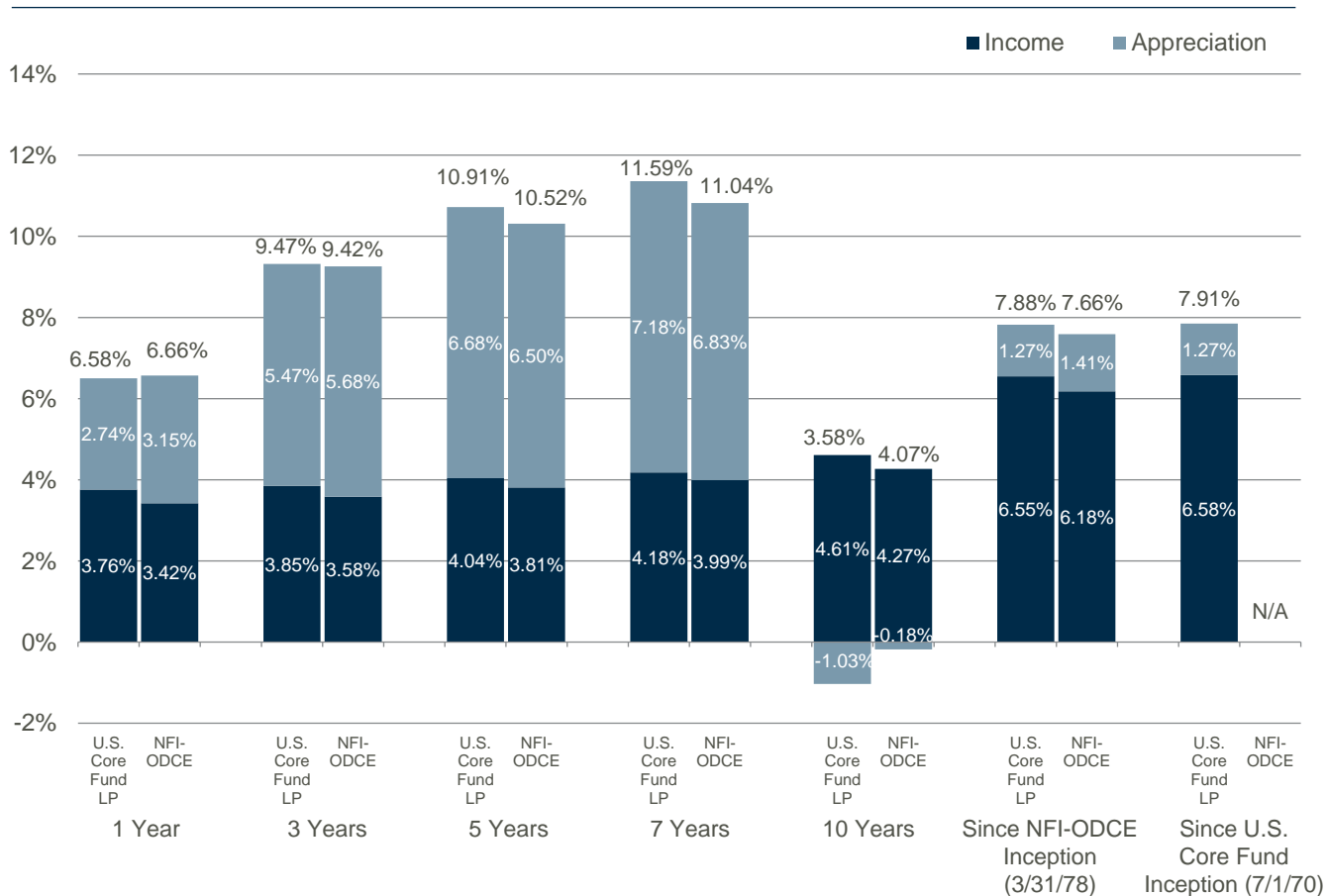


U.S. Core Fund LP Returns After Manager Compensation/Fees

As of December 31, 2017

Net Performance	
U.S. Core Fund LP	4Q17
Income	0.93%
Appreciation	0.80%
Total Return	1.73%
NFI-ODCE	1.85%

U.S. CORE FUND LP NET RETURNS VS. NFI-ODCE NET RETURNS



¹ Returns shown prior to January 1, 2013 are based upon U.S. Core Fund SA only.

Note: Returns for NFI-ODCE are based on the final report published by NCREIF on January 30, 2018. Returns shown are time-weighted rates of return after deduction of Manager Compensation/Fees. Past performance is not a guarantee or a reliable indicator of future results. Please see page 11 for important information regarding U.S. Core Fund Composite.



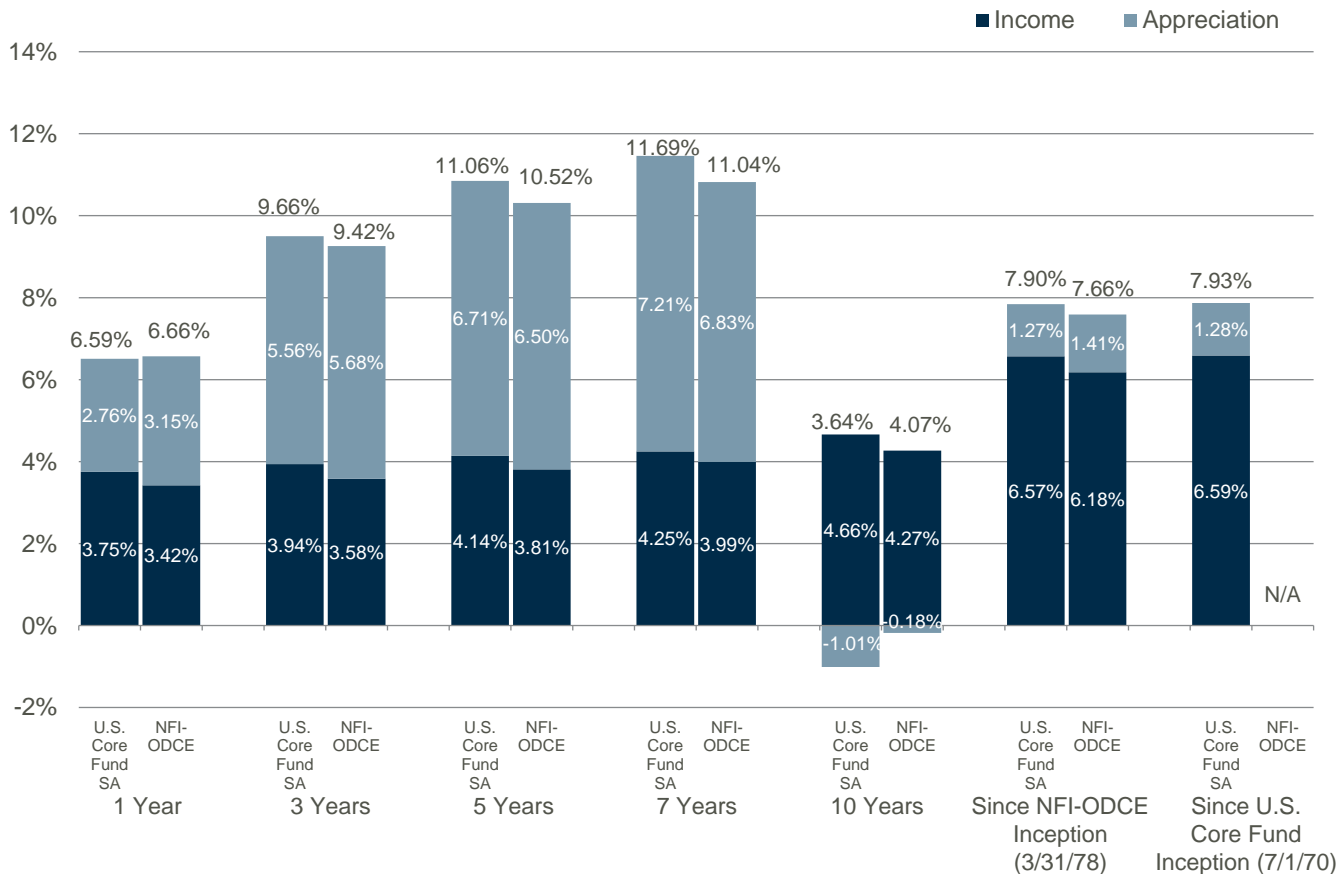
U.S. Core Fund SA Returns After Manager Compensation/Fees

As of December 31, 2017

Net Performance

U.S. Core Fund SA	4Q17
Income	0.93%
Appreciation	0.77%
Total Return	1.70%
NFI-ODCE	1.85%

U.S. CORE FUND SA NET RETURNS VS. NFI-ODCE NET RETURNS



¹ Returns shown prior to January 1, 2013 are based upon U.S. Core Fund SA only.

Note: Returns for NFI-ODCE are based on the final report published by NCREIF on January 30, 2018. Returns shown are time-weighted rates of return after deduction of Manager Compensation/Fees. Past performance is not a guarantee or a reliable indicator of future results. Please see page 11 for important information regarding U.S. Core Fund Composite.

PGIM Real Estate's Definition of Core

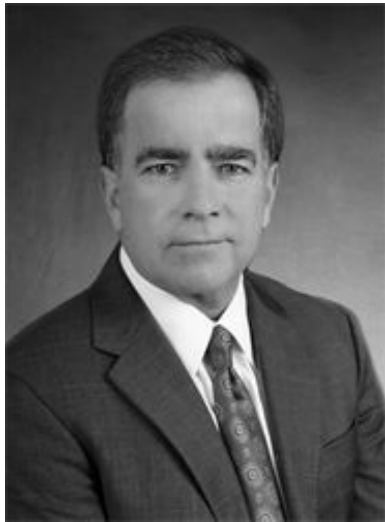


- Office, retail, warehouse, storage, and residential properties that were more than 80% leased when purchased and hotels that were operating at, or near, market occupancy. (For the sake of clarity, properties will not move out of the core category if their occupancy falls below the 80% threshold subsequent to acquisition)
- Properties (office, retail, warehouse, multi-family or storage) that were developed, renovated or purchased and have now achieved leasing of 80% or more of the total leasable area
- Properties undergoing a minor renovation/expansion that does not have a material impact on the property's occupancy or operation
- Build-to-suit investments which are 80% or more pre-leased and where the Fund has reasonable protection from completion and cost overrun risk
- Investment activities incidental to the Fund's main strategies:
 - Listed securities or purchase money mortgages accepted as part of the consideration in a property sale
 - Senior first mortgages with an LTV at origination of 65% or less



Frank E. Garcia

Managing Director, U.S. Core Fund Senior Portfolio Manager



frank.e.garcia@pgim.com
(415) 486-3802

Number of Years of Real Estate Experience: 24

Number of Years with the Firm: 4

Frank Garcia is a managing director at PGIM Real Estate and senior portfolio manager for U.S. Core Fund, PGIM Real Estate's flagship U.S. core equity real estate fund. Based in San Francisco, Frank is responsible for managing all aspects of the fund including portfolio strategy, investment decisions, and management of the U.S. Core Fund team. Frank is a member of the U.S. Executive Council and Investment Committee.

Previously, Frank served as a portfolio manager for U.S. Core Fund. Before joining PGIM Real Estate in 2013, Frank was a managing director at RREEF, where he was a senior portfolio manager for the firm's flagship core fund, responsible for a nearly \$5 billion portfolio of assets, and the lead portfolio

manager for the firm's flagship value-add fund that reached a peak gross value of \$4 billion. He was also a voting member of the firm's investment committee. Earlier, Frank worked at Spieker Properties as a vice president in Northern California, responsible for the development, management, and leasing of approximately three million square feet of office and industrial space with a total portfolio value of over \$250 million. He was also previously an industrial real estate broker with CB Commercial (now CBRE).

Frank has a bachelor's degree from the University of the Pacific with a concentration in business administration.



Marcus E. Berry III

Vice President, U.S. Business Development and Client Relations



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Number of Years of Real Estate Experience: 13

Number of Years with the Firm: 3

Marcus E. Berry III is a vice president at PGIM Real Estate and a member of the U.S. Business Development and Client Relations group. Based in San Francisco, Marcus is responsible for managing relationships with major corporate, public, and Taft Hartley pension funds in the western United States.

Marcus joined PGIM Real Estate in 2014. Previously, Marcus was a vice president with TA Associates Realty from 2006 to 2014, where his responsibilities included the acquisition of office and industrial assets on the West Coast, the asset management and repositioning of more than three million square feet of value-add office and industrial space, and marketing to major corporate

and public pension funds, endowments, and foundations located on the West Coast. Earlier, Marcus worked at Ryder Stilwell Properties where he oversaw a diversified portfolio of office, industrial, multifamily, and retail assets across the west and southwest United States on behalf of high-net-worth clients. Before his career in real estate, Marcus led business development initiatives for a series of venture capital-backed technology companies.

Marcus has a bachelor's degree in international affairs from the University of Colorado, Boulder, and a master of business administration in real estate finance from the University of Southern California.

Valuation Policy



All properties held by the Fund are accounted for at fair value in accordance with applicable contractual requirements and in compliance with authoritative accounting guidance (“U.S. GAAP”). Property level debt is also accounted for at fair value based on the amount at which the impact of the liability could be measured in a current transaction exclusive of direct transactions costs. The Fund’s current valuation procedure is as follows:

The Chief Real Estate Appraiser of PGIM (the “Chief Appraiser”) is responsible for the valuation process of the Fund’s investments and approves all final gross real estate values. The Chief Appraiser position is independent from PGIM-Real Estate and reports directly to the VP of PGIM Center Finance of PGIM, Inc. The Chief Appraiser retains an independent Appraisal Management Firm (“AMF”) to run the day-to-day operation of the appraisal process. The AMF is responsible to assist with the selection, hiring, oversight, rotation and/or termination of third party appraisal firms. Third-party appraisers are typically rotated on a three-year cycle and are selected from the Chief Appraiser’s Approved Vendor’s List through a competitive bid process. To be included in the list, individual experts are interviewed, referenced and a sampling of their work is reviewed to understand capabilities and competencies of the appraisal team. In addition to the administrative services, the AMF collects asset manager comments and provides independent reviews of the appraisal reports in order to maintain documentation and monitoring of the independence and accuracy of the valuation process, and reasonableness of the conclusions. The reported fair values are based on the external appraisal conclusions following the completion of the formal internal and external reviews and sign-offs. However, in the rare instance a material fact or error be identified and considered unresolved during the AMF review process, the AMF is responsible to provide the substantiation and compelling evidence to make an adjustment to the appraised value and it would be reported to the Fund investors.

All real estate properties and other investments are appraised every quarter with the exception of properties recently acquired or under a letter of intent for sale. The fair value of land held for development is considered to be acquisition cost, including soft costs incurred prior to development, assuming it is the assumption a market participant would use. Cost is considered fair value for properties under development until substantial completion or preleasing has occurred assuming the same premise. If cost is not considered to be representative of market, the properties are independently appraised based on the general policy. All appraisals consider the conventional method of valuation (income, cost and market) and all appraisals and AMF appraisal reviews are performed in accordance with the Uniform Standards of Professional Appraisal Practice (“USPAP”), which is the standard for real estate appraisals in the United States. USPAP is consistent in principle with the Red Book Real Estate Valuation Standards set by Royal Institute Chart of Surveyor and the International Valuation Standards as set forth by the International Valuation Standards Council.

As described above, the estimated market value of real estate and real estate related assets is determined through an appraisal process. These estimated market values may vary significantly from the prices at which the real estate investments would sell, since market prices of real estate investments can only be determined by negotiation between a willing buyer and seller. Valuations should be considered only estimates of value and not a measure of realizable value. In addition, such valuations should be viewed as subject to change with the passage of time.

Disclosures



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All performance and targets contained herein are subject to revision by PGIM Real Estate and are provided solely as a guide to current expectations. There can be no assurance that any product or strategy described herein will achieve any targets or that there will be any return of capital. Past performance is not a guarantee or reliable indicator of future results. No representations are made by PGIM Real Estate as to the actual composition or performance of any account.

Disclosures



U.S. Core Fund: The basis for the performance target set forth within this presentation is based on a fund that is a broadly diversified, core portfolio that invests primarily in existing, income-producing properties with strong cash flow that is expected to increase over time and thereby provide the potential for capital appreciation. Target returns are expected to be achieved over a complete market cycle which can be defined as a period of time whereby valuations have bottomed (hit a trough), rose to a peak and then declined to the trough point again. PGIM Real Estate has based this investment objective on certain assumptions that it believes are reasonable. There is no guarantee, however, that any or all of such assumptions will prove to be accurate in the face of actual changes in the market or other material changes in regional or local markets specific to this strategy. Factors necessary to achieve this performance target include a property type and geographic diversification strategy, which is intended to reduce risk and maintain a broadly diversified portfolio. Property selection and performance impact the ability to achieve the target returns, including asset location, asset class, and property type assets, investment strategy and the capitalization of investment. Property and Fund performance are subject to healthy economic conditions in the US market and sub-markets where investments are located. Factors that would mitigate against achieving this performance target would include, but are not limited to, unforeseen sudden and drastic changes in economic and capital markets and/or demographic trends affecting the US or a particular market or sub market that could impact property performance and/or investors' demand for commercial real estate. There can be no guarantee that this target will be achieved.

U.S. Core Plus Fund: The basis for the performance target set forth within this presentation is based on a fund that is a broadly diversified equity real estate portfolio that seeks to structure investments to enhance risk-adjusted returns. Target returns are expected to be achieved over a complete market cycle which can be defined as a period of time whereby valuations have bottomed (hit a trough), rose to a peak and then declined to the trough point again. PGIM Real Estate has based this investment objective on certain assumptions that it believes are reasonable. There is no guarantee, however, that any or all of such assumptions will prove to be accurate in the face of actual changes in the market or other material changes in regional or local markets specific to this strategy. Factors necessary to achieve this performance target include a diversification strategy, which is intended to reduce risk and maintain a broadly diversified portfolio. Property selection and performance impact the ability to achieve the target returns, including asset location, asset class, property type of asset, investment strategy and the capitalization of investment. Property and Fund performance are subject to healthy economic conditions in the US market and sub-markets where investments are located. Factors that would mitigate against achieving this performance target would include, but are not limited to, unforeseen sudden and drastic changes in economic and capital markets and/or demographic trends affecting the US or a particular market or sub market that could impact property performance and/or investors' demand for commercial real estate.

Disclosures



U.S. Value-Add Fund: The basis for the performance target set forth within this presentation is based on a fund that seeks to execute a value-added strategy by acquiring real estate investments located in diverse markets and to structure investments to enhance risk-adjusted returns. Target returns are expected to be achieved over a complete market cycle which can be defined as a period of time whereby valuations have bottomed (hit a trough), rose to a peak and then decline to the trough point again. PGIM Real Estate has based this investment objective on certain assumptions that it believes are reasonable. There is no guarantee, however, that any or all of such assumptions will prove to be accurate in the face of actual changes in the market or other material changes in regional or local markets specific to this strategy. Factors necessary to achieve this performance target include a diversification strategy, which is intended to reduce risk and maintain a broadly diversified portfolio. Property selection and performance impact the ability to achieve the target returns, including asset location, asset class, property type of asset, investment strategy and the capitalization of investment. Property and Fund performance are subject to healthy economic conditions in the US market and sub-markets where investments are located. Factors that would mitigate against achieving this performance target would include, but are not limited to, unforeseen sudden and drastic changes in economic and capital markets and/or demographic trends affecting the US or a particular market or sub market, lack of opportunities in the market and/or investors' demand for commercial real estate. There can be no guarantee that this target will be achieved.

The financial indices referenced herein as benchmarks are provided for informational purposes only. The holdings and portfolio characteristics may differ from those of the benchmark(s), and such differences may be material. Factors affecting portfolio performance that do not affect benchmark performance may include portfolio rebalancing, the timing of cash flows, credit quality, diversification and differences in volatility. In addition, financial indices do not reflect the impact of fees, applicable taxes or trading costs which reduce returns. Unless otherwise noted, financial indices assume reinvestment of dividends. You cannot make a direct investment in an index. The statistical data regarding such indices has not been independently verified by PGIM Real Estate.

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. The securities referenced may or may not be held in portfolios managed by PGIM Real Estate and, if such securities are held, no representation is being made that such securities will continue to be held.

Net returns shown herein are time-weighted rates of return after deduction of manager compensation. Actual manager compensation schedules and other expenses are described in the individual U.S. Core Fund SA contracts and the governing documents of U.S. Core Fund LP and its subsidiaries. Please see Part 2 of the PGIM Inc. Form ADV, for more information concerning manager compensation.

Disclosures



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Risk Factors: Investments in commercial real estate and real estate-related entities are subject to various risks, including adverse changes in domestic or international economic conditions, local market conditions and the financial conditions of tenants; changes in the number of buyers and sellers of properties; increases in the availability of supply of property relative to demand; changes in availability of debt financing; increases in interest rates, exchange rate fluctuations, the incidence of taxation on real estate, energy prices and other operating expenses; changes in environmental laws and regulations, planning laws and other governmental rules and fiscal policies; changes in the relative popularity of properties risks due to the dependence on cash flow; risks and operating problems arising out of the presence of certain construction materials; and acts of God, uninsurable losses and other factors which are beyond the control of the Manager and the Fund. As compared with other asset classes, real estate is a relatively illiquid investment. Therefore, investors' withdrawal requests may not be satisfied for significant periods of time. Other than its general fiduciary duties with respect to investors, PGIM Real Estate has no specific obligation to take any particular action (such as liquidation of investments) to satisfy withdrawal requests. In addition, as recent experience has demonstrated, real estate is subject to long-term cyclical trends that give rise to significant volatility in real estate values.

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NCREIF Fund Index-Open End Diversified Core Equity (NFI-ODCE): The NFI-ODCE, short for NCREIF Fund Index - Open End Diversified Core Equity, is the first of the NCREIF Fund Database products and is an index of investment returns reporting on both a historical and current basis the results of private open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. Fund membership requires the following criteria: (1) Private open-end funds; (2) Not more than 40% leverage; (3) At least 80% of assets in the five major property types; (4) At least 95% of assets located in the U.S.; and (5) Not more than 70% of assets in one region or one property type. Reinvestment of dividends is not applicable to this asset class. Note: A benchmark Index is not professionally managed, does not have a defined investment objective, and does not incur fees or expenses. Investors cannot invest directly in an index.

The NCREIF Property Index (NPI): The NCREIF Property Index (“NPI”) is comprised of the NCREIF Classic Property Index (unleveraged) and the NCREIF Leveraged Property Database. The universe of investments includes: (1) Wholly owned and joint-venture investments; (2) Existing properties only -- no development projects; and (3) Only investment-grade, non-agricultural, income-producing properties: apartments, hotels, office, retail, office showroom/R&D, and warehouses. The database fluctuates quarterly as participants acquire properties, as new members join NCREIF, and as properties are sold. Sold properties are removed from the Index in the quarter the sales take place (historical data remains). Each property’s market value is determined by real estate appraisal methodology, consistently applied. Please note that when returns are computed for the NPI, the returns for the levered properties are computed on a de-levered basis, i.e., the impact of financing is excluded. Reinvestment of dividends is not applicable to this asset class. Note: A benchmark Index is not professionally managed, does not have a defined investment objective, and does not incur fees or expenses. Investors cannot invest directly in an index.

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Ventura County Employees' Retirement Association

February 26, 2018

Presented by: Scott Hazen, CFA and Saguna Malhotra



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Past performance is not a guarantee of future results. Projections or forward looking statements contained in the Presentation are only estimates of future results or events that are based upon assumptions made at the time such projections or statements were developed or made. There can be no assurance that the results set forth in the projections or the events predicted will be attained, and actual results may be significantly different from the projections. Also, general economic factors, which are not predictable, can have a material impact on the reliability of projections or forward looking statements.

Introduction



Scott Hazen, CFA

Partner

Education: University of Notre Dame,
magna cum laude, BBA

University of Chicago
Booth School of Business, MBA

Years of Investment/
Operational Experience: 26



Saguna Malhotra

Partner

Education: University of Pennsylvania,
The Wharton School, BS

Years of Investment/
Operational Experience: 22

Topics for Discussion



	Page
Adams Street Update	5
VCERA Portfolio Review	9
Adams Street Co-Investment Fund IV	20
Appendix	25

■ Adams Street Update



Investing with Adams Street Partners



Global Private Markets Platform

- Employee-owned
- 45+ years of experience
- Over \$32 billion in assets under management
- Highly integrated platform with shared insights

Robust Investment Process

- Disciplined and coordinated investment process
- Top-down, bottom-up analysis
- Consistent outperformance through market cycles

Exemplary Client Service

- Client based solutions have been a strategic focus for Adams Street since inception
- Deep understanding of institutional client needs
- Client access to industry-leading analytical tools and data



No Adams Street client has lost capital in an ASP investment program since our inception

Experienced, Cohesive and Strategically Integrated Platform



Jeff Diehl
**Managing Partner &
 Head of Investments**
 24 Years of Experience*

Bon French
Chairman
 41 Years of Experience*



Primary Investments Since 1979



790+ funds
 260+ GP relationships
 410+ advisory boards
 23 Professionals

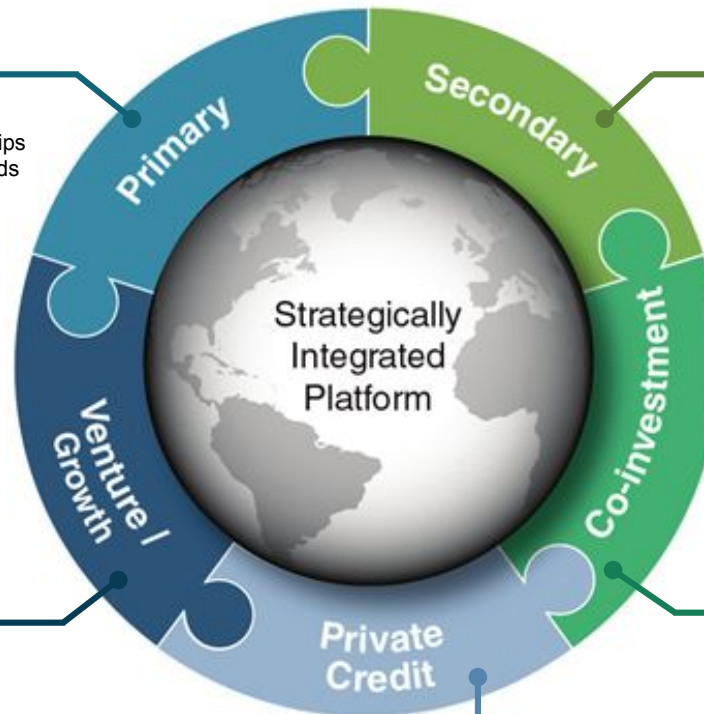
Kelly Meldrum
**Partner & Head of
 Primary Investments**
 33 Years of Experience*

Secondary Investments Since 1986



400+ funds
 170+ GP relationships
 14 Professionals

Jeff Akers
**Partner & Head of
 Secondary Investments**
 20 Years of Experience*



Venture/Growth Since 1972



260+ companies
 9 Professionals

Terry Gould
**Partner & Head of
 Venture/Growth Investments**
 37 Years of Experience*

Co-Investments Since 1989



110+ companies
 80+ GP relationships
 6 Professionals

David Brett
**Partner & Head of
 Co-Investments**
 33 Years of Experience*

Private Credit Since 2016



8 Professionals

Bill Sacher
**Partner & Head of
 Private Credit**
 33 Years of Experience*

*Investment and Operational
 As of September 30, 2017.

Deep Expertise Around the World



Jeff Diehl
Managing Partner &
Head of Investments
Chicago



Bon French
Chairman
Chicago



FUND INVESTMENTS

Kelly Meldrum
Head of Primary
Investments
Menlo Park



Jeff Akers
Head of
Secondary
Investments
Chicago



PRIMARY

SECONDARY

Matt Autrey
Chicago



Morgan Holzaepfel
Boston



Saguna Malhotra
Menlo Park



Yar-Ping Soo
Singapore



Jeff Burgis
Chicago



Brijesh Jeevarathnam
Menlo Park



Sunil Mishra
Singapore



Michael Taylor
Menlo Park



Troy Barnett
Chicago



Joe Goldrick
Chicago



Greg Holden
London



Pinal Nicum
London



Kristof Van Overloop
London



Adam Chenoweth
Chicago



Jim Korczak
Chicago



Ross Morrison
London



Ling Jen Wu
Singapore



Arnaud de Cremiers
London



Alex Lesch
Chicago



Sergey Sheshuryak
London



Andy Wang
Beijing



Doris (Yiyang) Guo
Beijing



DIRECT INVESTMENTS

Dave Brett
Head of
Co-Investments
Chicago



Terry Gould
Head of
Venture/Growth
Investments
Chicago



Bill Sacher
Head of
Private Credit
New York



CO-INVESTMENTS

VENTURE/GROWTH

PRIVATE CREDIT

Sachin Tulyani
London



Alex Kessel
Chicago



Benjamin Wallwork
London



Craig Waslin
Chicago



Tom Bremner
Chicago



Jeff Diehl
Chicago



Robin Murray
Menlo Park



Fred Wang
Menlo Park



Mike Zappert
Menlo Park



Shahab Rashid
New York



Fred Chung
New York



Justin Lawrence
New York



Thomas Petty
New York



Emily Shiao
New York



INVESTMENT STRATEGY AND RISK MANAGEMENT

Miguel Gonzalo
Head of Investment Strategy
and Risk Management
Chicago



Alex Storer
Chicago



Jana Tortora
Chicago



Toby True
Chicago



Jian Zhang
Chicago



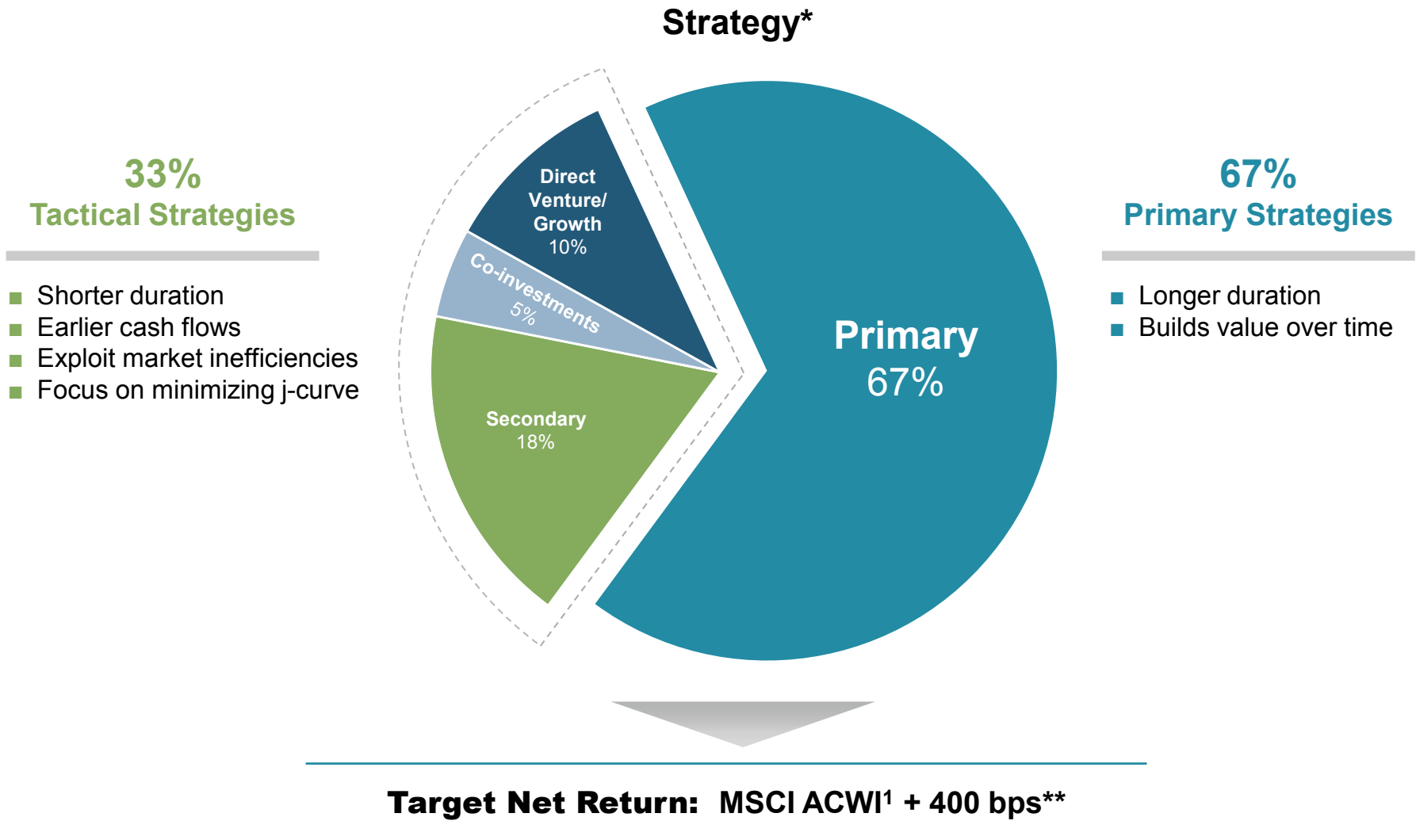
■ VCERA Portfolio Review



Building Value While Maximizing IRR

Constructing VCERA's Global Private Equity Program

\$220 million committed across ASP 2010, 2013 and 2016 Global Programs



* Actual allocations will differ once the Program is fully invested.

** The targeted annual net return (after Adams Street Partners' fees, expenses and carried interest) is only a target. There can be no guarantee that the VCERA Private Equity Program will achieve returns in the targeted range.

10 1. MSCI ACWI (All Country World Index) captures large and mid cap representation across Developed and Emerging Markets countries.

Ventura County Employees' Retirement Association

Subscriptions to ASP Global Programs: \$220,000,000

Total portfolio as of September 30, 2017

	Subscription	Amount Draw n	Market Value (NAV)	Distributions Received (D)	Total Value (NAV + D)	Net IRR 1-Year	Net IRR Since Inception	Inception Date	Total Value / Amount Draw n
ASP 2010 Global Program	\$85,000,000	\$72,286,549	\$69,478,420	\$37,601,559	\$107,079,979	13.67%	12.66%		1.48x
ASP 2010 US Fund	\$42,500,000	\$36,188,750	\$36,223,313	\$18,681,786	\$54,905,099	9.73%	13.83%	5/2010	1.52x
ASP 2010 Non-US Developed Fund	\$25,500,000	\$21,254,249	\$18,783,584	\$10,529,344	\$29,312,928	23.09%	11.07%	5/2010	1.38x
ASP 2010 Emerging Markets Fund	\$8,500,000	\$6,868,000	\$8,622,390	\$1,193,443	\$9,815,833	12.82%	10.81%	1/2011	1.43x
ASP 2010 Direct Fund	\$8,500,000	\$7,975,550	\$5,849,133	\$7,196,986	\$13,046,119	11.52%	12.70%	5/2010	1.64x
ASP 2013 Global Fund	\$75,000,000	\$49,950,000	\$55,265,820	\$4,679,630	\$59,945,450	15.05%	8.95%	6/2013	1.20x
ASP 2016 Global Fund	\$60,000,000	\$5,850,000	\$6,768,847	\$0	\$6,768,847	N/A	15.71% *	8/2016	1.16x
ASP Program Total	\$220,000,000	\$128,086,549	\$131,513,087	\$42,281,189	\$173,794,276	14.73%	11.83%		1.36x

Thru 9/30/2017	Committed / Subscription	Drawn / Subscription	Distributed / Drawn
2010 Program	100%	85%	52%
2013 Program	100%	67%	9%
2016 Program	78%	10%	0%
Grand Total	95%	58%	33%

October 1, 2017 – February 16, 2018

Draws: \$6,754,300

Distributions: \$3,689,234

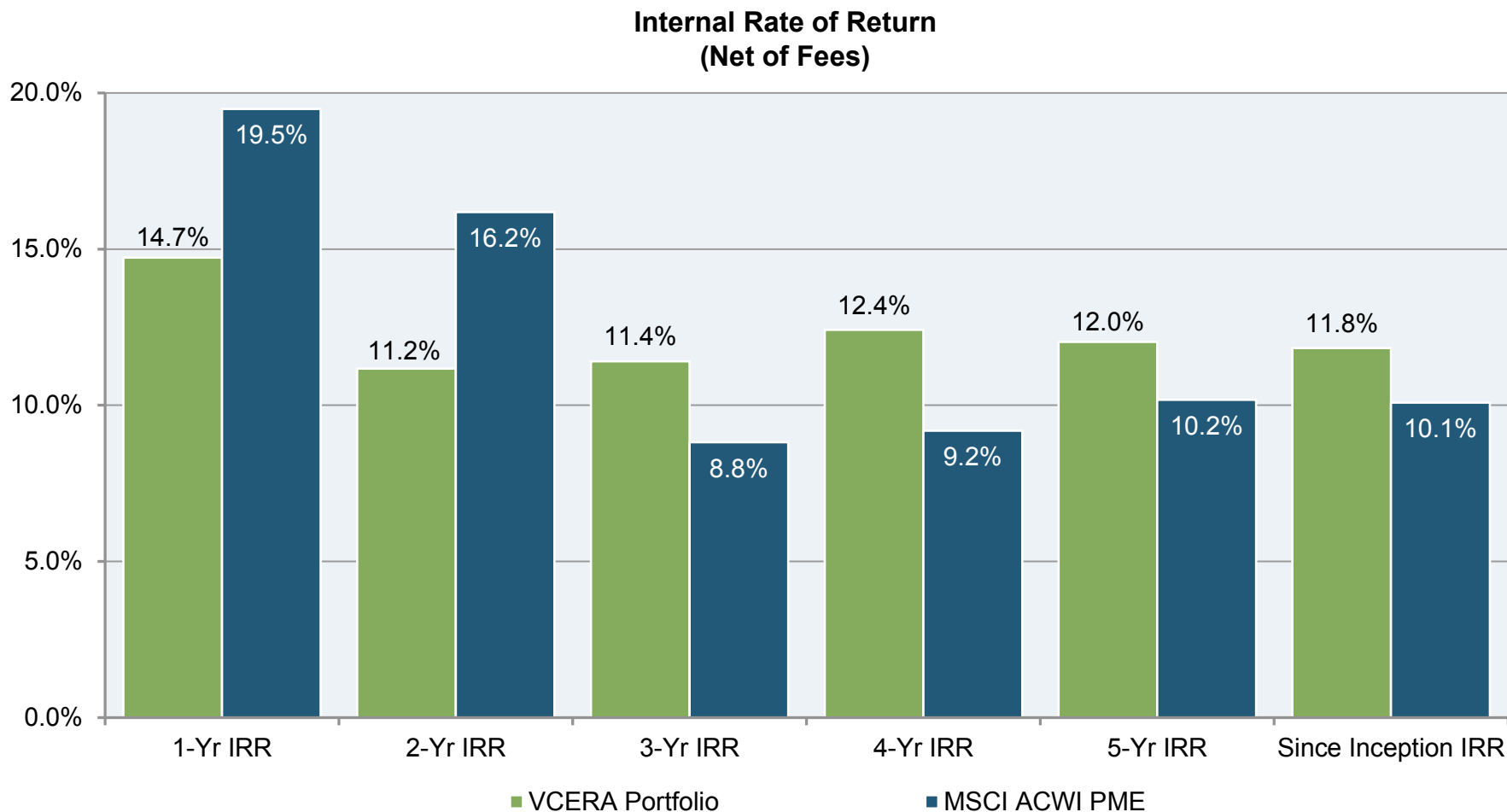
As investments continue to be made and mature, the ASP Global Program is generating attractive returns and is returning capital to VCERA

Ventura County Employees' Retirement Association



Intraperiod Returns

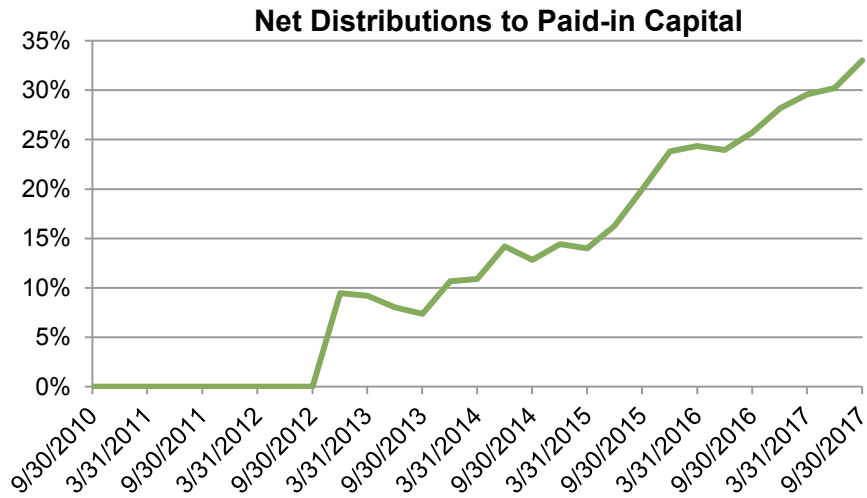
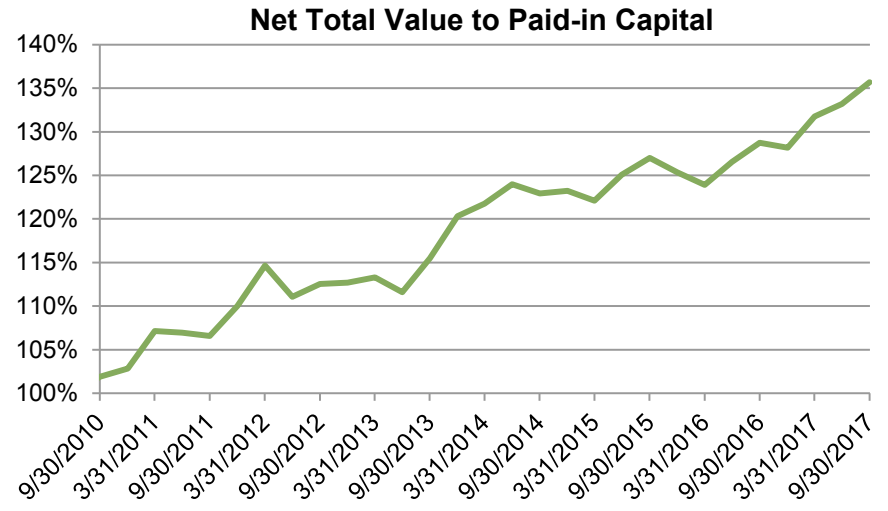
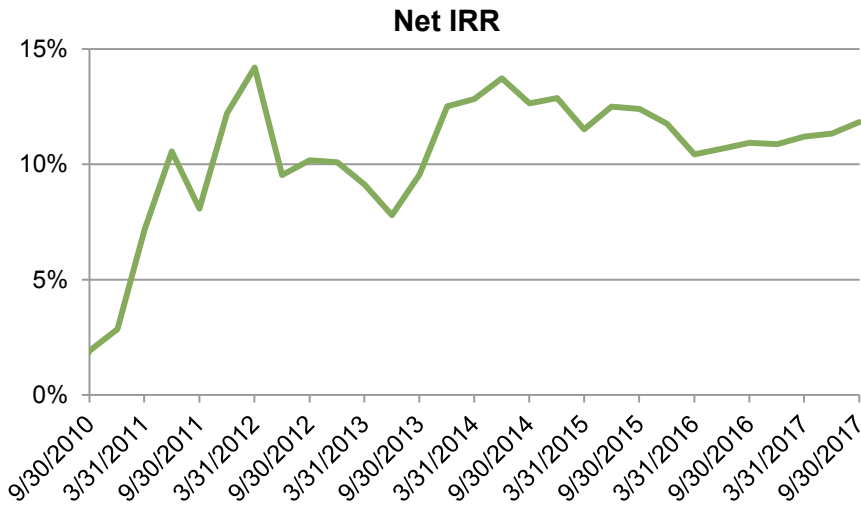
Total Portfolio as of September 30, 2017



VCERA's Global PE Program has established meaningful premium over global public equity markets

Ventura County Employees' Retirement Association

Total Portfolio as of September 30, 2017



- Portfolio moved quickly through j-curve due to secondaries, value now being driven by maturing primaries
- Portfolio is 95% committed and 58% drawn
- Distribution activity continues to ramp up, now at 33% of drawn capital

Buyouts – Market Summary

As of January 2018

Review:

- **Buyout exit markets have been robust driving strong performance and distributions**
 - Strategics have been active acquirers in an effort to bolster growth
 - GPs have been net sellers
- **Fundraising momentum is strong and “dry powder” has ticked up**
- **High valuations have posed a challenge for new deals, though GPs have remained patient**
 - Valuations have been supported by abundant debt and equity availability
 - Covenant Light (Cov-Lite) has remained a major portion of new issuance

Recent market dynamics and go-forward view:

- **Leverage is readily available**
 - Market uncertainty, geopolitical turmoil, and leveraged lending guidelines have caused fluctuations
 - Banks are more discriminating lenders and are less willing to take risk
- **Emphasis on growth-oriented strategies and modestly levered capital structures mitigates impact of economic cyclical**

Case Study: Altamont Capital Partners



Altamont Capital Partners III

Industry: Generalist

Geography: US

General Partner: Altamont Capital Partners

Stage: Buyout / Deep Value

Vintage Year: 2017

Fund Size: \$1.2B

Team:

- Exceptionally strong and sophisticated team relative to other funds of similar size. Altamont has proven the ability to attract high quality investment and operating professionals under the senior leadership of Jesse Rogers, former Managing Partner of Golden Gate Capital and former head of the private equity group at Bain & Company.

Strategy:

- The firm will target deep value, complex / contrarian situations such as out of favor industries, operational turnarounds, distressed situations, founder transitions, etc. Altamont's industry expertise spans a number of sectors.

Differentiation:

- The firm's emphasis on highly complex transactions enables it to operate in a less competitive PE environment. Altamont has built a solid reputation as a trusted and valued partner in a space often characterized by bad actors.

Criteria:

- EBITDA Range: \$5 - \$50 million
- Equity Check: \$20 - \$60 million
- Number of Companies: 10 - 12

Case Study: Oakley Capital



Oakley Capital Fund III

Industry: Technology and Business Services

Geography: Pan-European

General Partner: Oakley Capital

Stage: Buyout / Special Situations

Vintage Year: 2016

Fund Size: €700M Est.

Team:

- Led by a successful entrepreneur who has transitioned well into private equity investing with a proven track record in complex transactions

Strategy:

- Focused on complex investments in Western Europe and creating value through operational improvement and consolidation strategies

Differentiation:

- Deep expertise in TMT sectors such as web hosting and online services businesses. Ability to execute complex transactions and to strategically reposition companies

Criteria:

- Enterprise Value: €50 - €200 million
- Equity Check: €20 - €60 million
- Number of Companies: 10 - 12

For illustrative purposes only. This case study is provided solely to demonstrate Adams Street's process, views and analysis in implementing its primary strategy. It should not be assumed that recommendations made in the future will be profitable or will equal the performance of past investments. A complete list of portfolio investments is available upon request. There is no guarantee this fund will form a part of the European SMB portfolio.

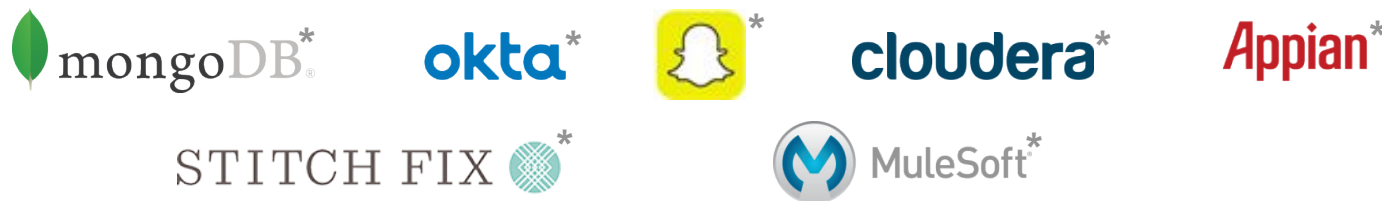
Venture Capital – Market Summary

As of January 2018

- **Unrealized performance remains strong, realizations (liquidity) beginning to pick up**
- **Global venture fundraising and investment activity remain strong** (e.g., 2017 global venture fundraising ~\$60bn¹)
- **Large later-stage venture financing rounds increasing in frequency**
 - Companies are staying private longer, often by choice, to achieve scale and consistent growth
 - Increasing appetite and ability of early stage venture managers to exit via secondaries in later-stage rounds
- **IPO & M&A market appear poised for robust 2018**
 - Strong 2017 M&A market driven by: cash-rich tech incumbents seeking growth; and, non-tech companies transforming their core business. Trend likely to continue in 2018.



- IPO activity picked up significantly in 2017: 61 VC-backed IPOs generated proceeds of \$11 billion, as compared to 42 VC-backed IPOs accounting for \$3.5 billion of proceeds in 2016.
- Current inventory of high quality IPO prospects (e.g. Lyft, Dropbox, Spotify) and strong underlying investor appetite provides a favorable backdrop for IPO environment in 2018.



- **The venture opportunity set remains large and global on the back of continued innovation**

* Indicates a 2017 IPO.

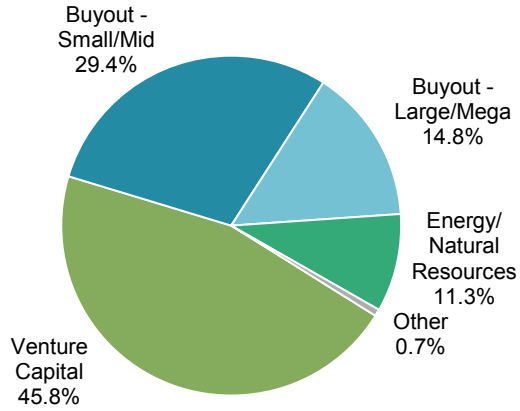
Ventura County Employees' Retirement Association

Diversification of investment commitments*

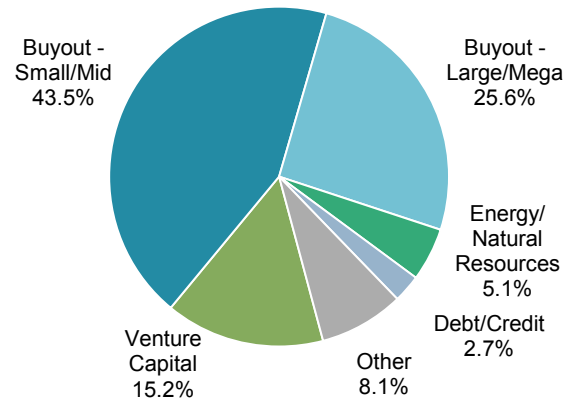
Total portfolio as of September 30, 2017



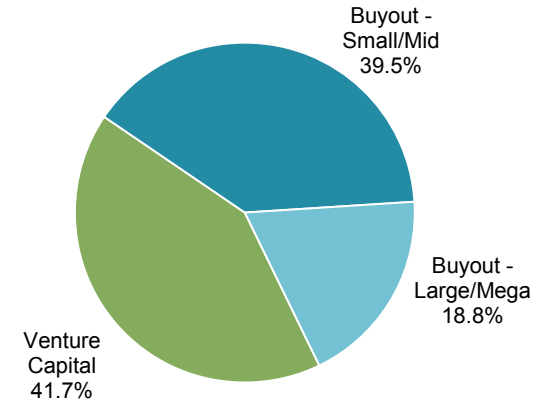
Primary/Direct Partnerships by Subclass – US



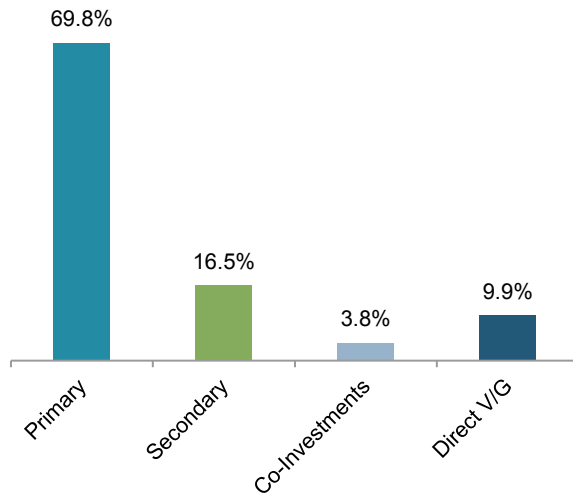
Primary Partnerships by Subclass – Developed



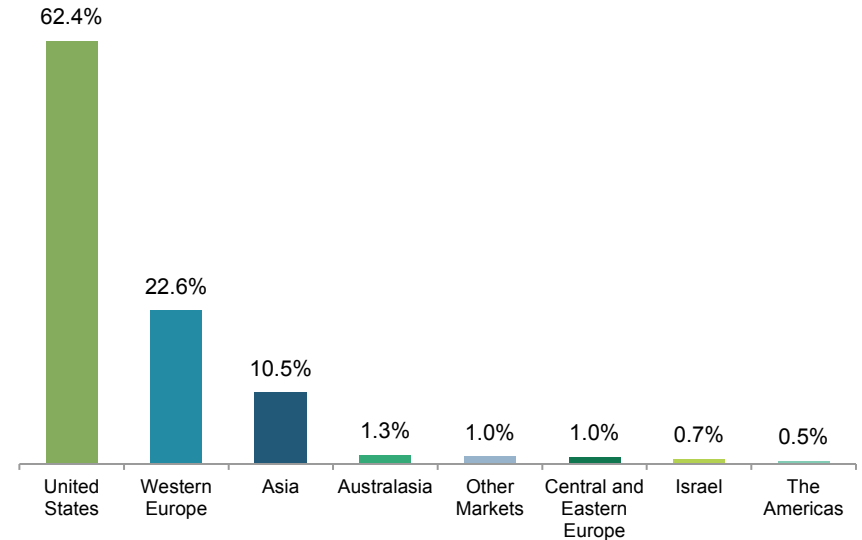
Primary Partnerships by Subclass – Emerging



Strategy Breakout – Total



Geographic – Total



18 * Calculated by applying the participant's respective ownership percentage to the underlying investment commitments.

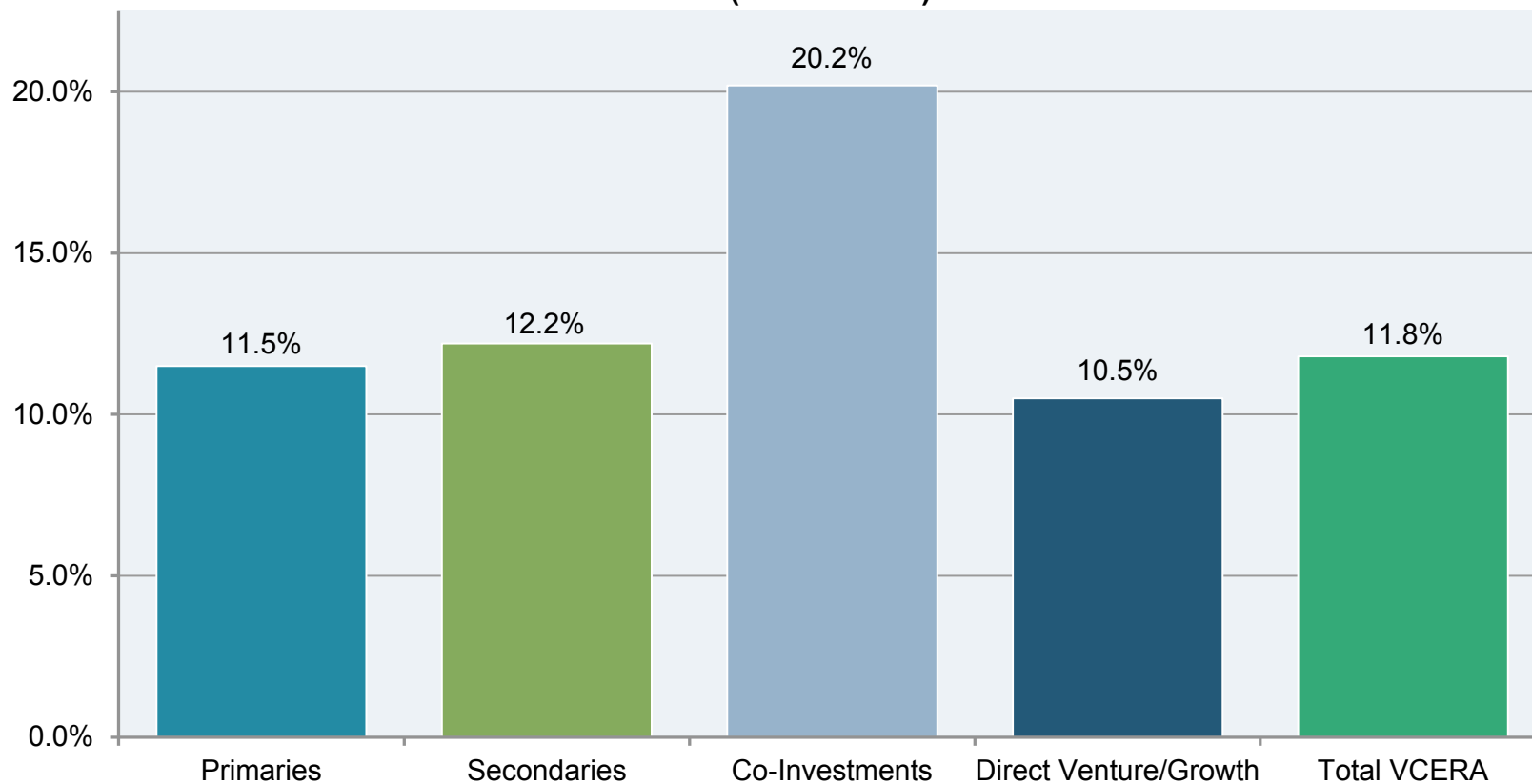
Ventura County Employees' Retirement Association

Multiple Ways to Access Adams Street GP Relationships

2010, 2013 and 2016 Global Programs through September 30, 2017



**Since Inception
Internal Rate of Return
(Net of Fees*)**

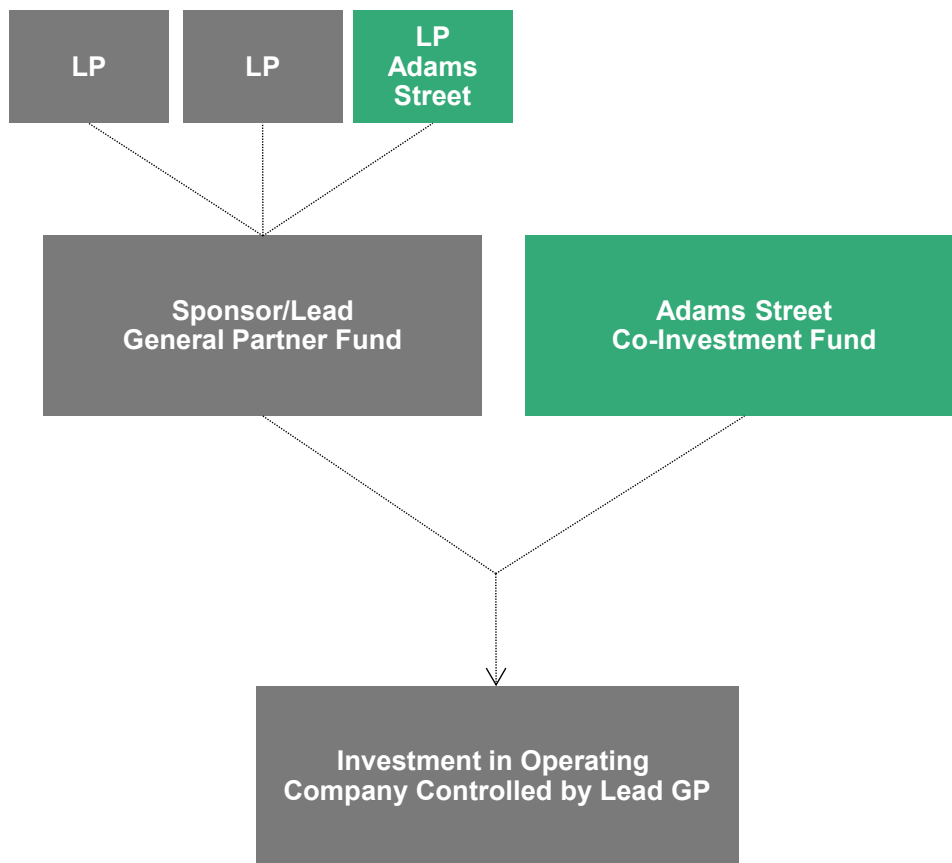


Strategy % of Total Commitments	70%	16%	4%	10%	100%

■ Adams Street Co-Investment Fund IV



Anatomy of a Co-Investment



Benefits of Co-Investments:

- Direct investments made alongside leading GPs
- Additional level of due diligence
- Significantly lower fees than investing in a direct PE fund

Reasons GPs offer Co-Investments:

- Manage portfolio construction and fund-level concentration
- Access additional capital for company growth initiatives
- Strengthen LP relationships

Adams Street Partners Co-Investment Advantage



Proven Co-Investment Track Record¹

MOIC: 2.4x

since inception gross realized investments²

MOIC: 1.9x

since inception gross total invested²

21.2%

since inception net IRR for Co-Investment Funds³



Deep Co-Investment Expertise

1989

first Adams Street co-investment

1.5B+

committed to date

110+

company investments



Strength of ASP Platform

65+

investment professionals around the world

780+

fund commitments over 40 years

300+

GP Relationships

Performance data as of September 30, 2017.

1. Past performance is not a guarantee of future results. The IRR and multiples shown above are composite performance and do not represent returns achieved by any particular Adams Street Partners fund or any investor in an Adams Street Partners fund. There can be no guarantee that unrealized investments reflected in this performance data will ultimately be liquidated at values reflected above. For net performance of Adams Street Partners' dedicated co-investment funds and aggregate net performance of its other co-investments, see the slide entitled "Long-Term, Consistent Record of Success" in this presentation.
2. Composite since inception performance of all co-investments (realized investments only, where indicated above), including co-investments outside dedicated co-investment funds; multiples are gross of Adams Street Partners fees, carried interest and expenses. Inception date as of March 1, 1989. See the slide entitled "Long-Term, Consistent Record of Success" for net performance and other important information. Realized investments include proceeds from investments where 50% or more of the investment has been realized, the fair value is 5% or less of invested capital, or the investment is currently a publicly traded security.
3. Composite since inception IRR of dedicated co-investment funds is net of Adams Street Partners' fees, carried interest and expenses. Inception date as of July 8, 1992. Includes a separate account (1992-1998), Co-Investment Fund I (2006), II (2009) and III (2014).

Co-Investments: Long-Term, Consistent Record of Success

As of September 30, 2017

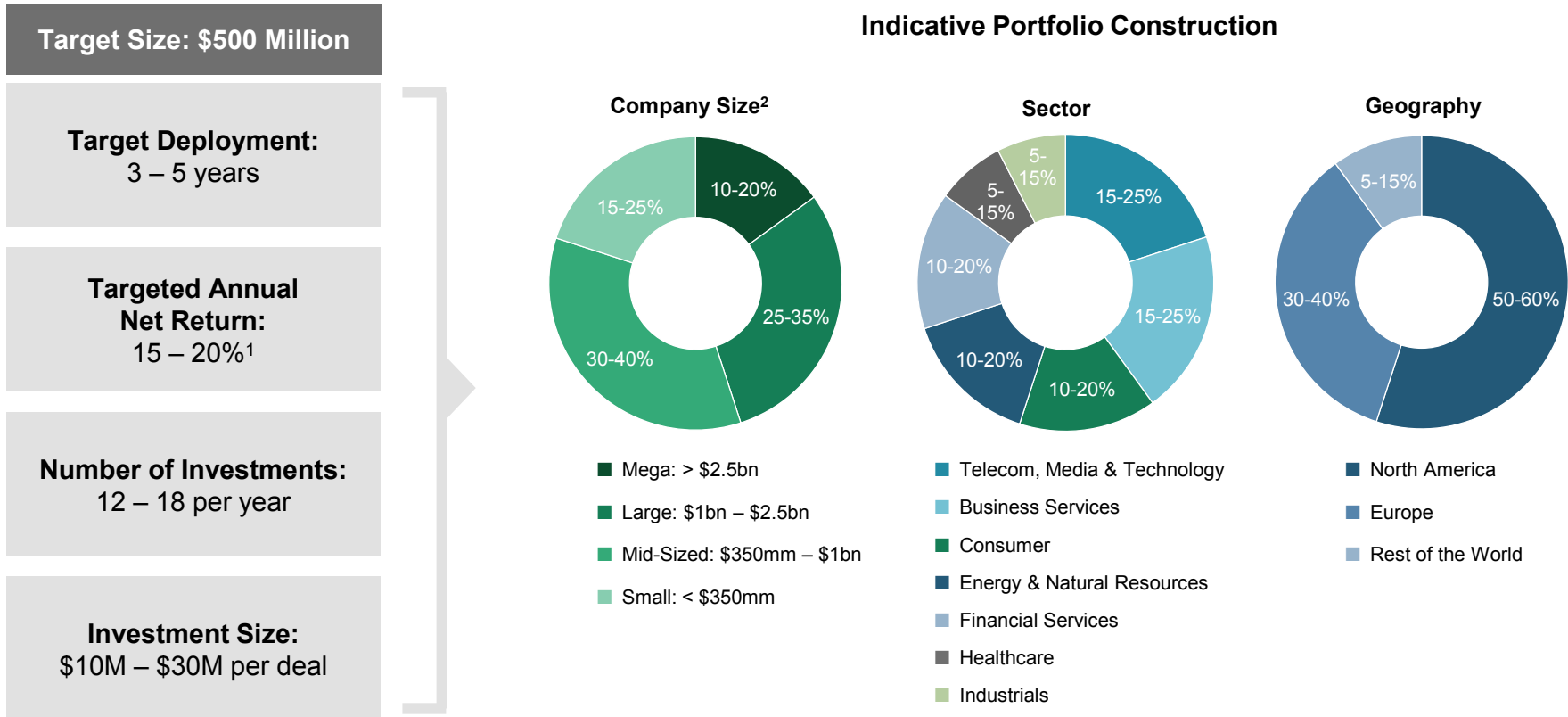


Investment Period	Co-Investments Outside of Dedicated Funds ⁸			Fund I	Fund II	Fund III ⁹
	1989-2000	2001-2010	2011-Present	2006-2011	2009-2015	2014-Present
Fund Size¹ (in millions)	\$151.7	\$138.3	\$418.2	\$250.7	\$263.0	\$342.3
Gross IRR²	37.9%	15.7%	31.4%	7.2%	34.4%	17.5%
Net IRR³	31.9%	12.8%	24.4%	5.5%	26.4%	17.3%
PME⁴	18.5% ⁷	8.2% ⁷	14.2%	6.8%	16.2% ⁷	15.3%
Net Multiple⁵	2.38x	1.76x	1.50x	1.49x	2.18x	1.19x
DPI⁶	2.38x	1.67x	0.46x	1.39x	1.53x	0.05x

Co-Investment Fund IV



- Capitalizes on Adams Street’s 300+ GP relationships and differentiated network to source high-quality deal flow
- Targets a portfolio diversified by time, company size, sector, geography, and investment theme to balance risk and return potential
- Managed by a dedicated team focused on detailed due diligence, reliable deal execution, and GP alignment of interests
- Anticipated fund size and ASP’s GP network allows for overweight to small/mid-market companies

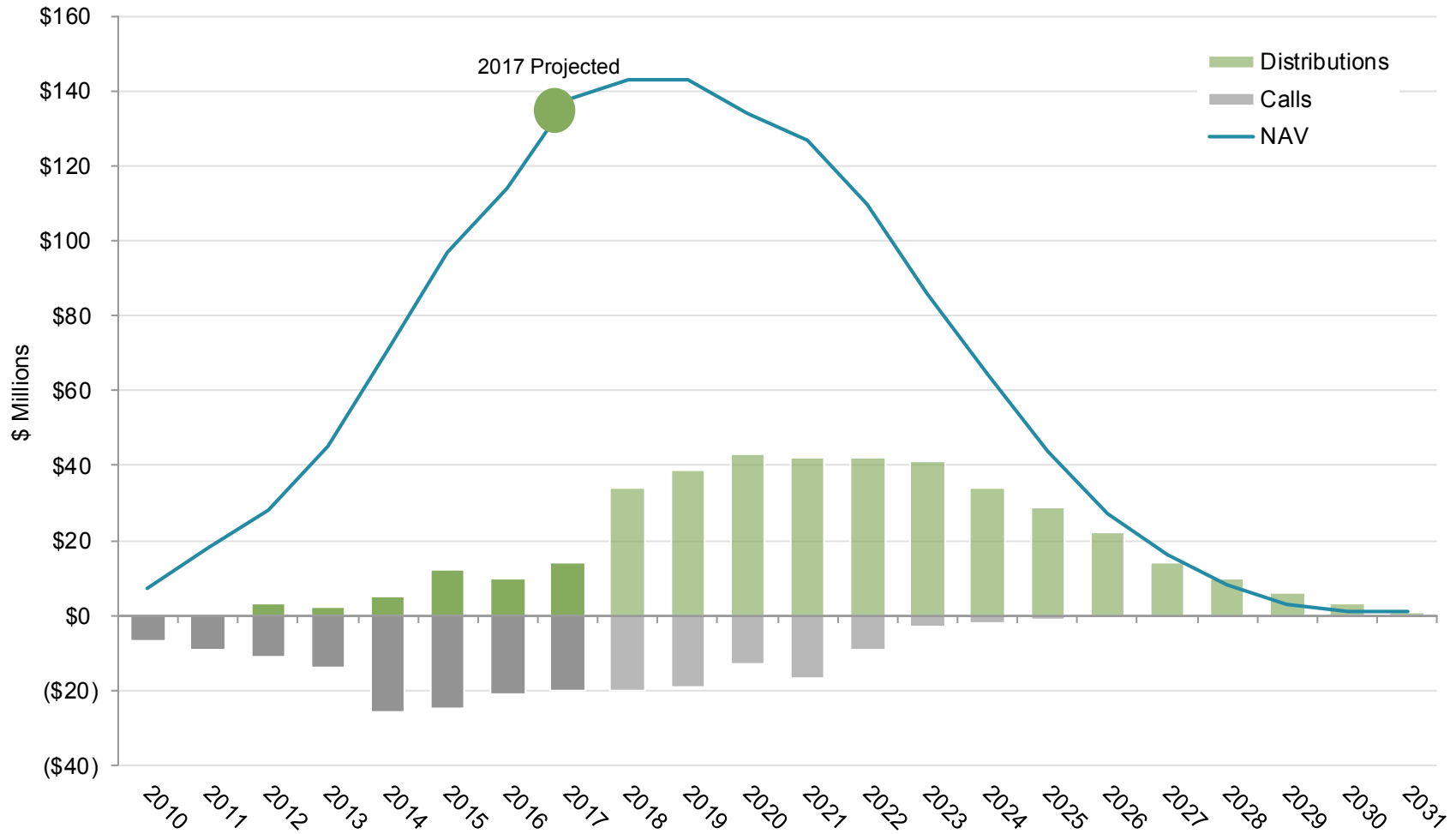


■ Appendix



Ventura County Employees' Retirement Association

Net asset value, capital calls and distributions (actual and projected)
 Represents existing 2010, 2013 and 2016 Global Programs



NAV should build through 2019, then decline as distributions increase and calls decrease

Estimate/Projected
 \$400M distributed
 \$220M called

Scott Hazen, CFA

Partner, Chicago



EDUCATION:

University of Notre Dame,
magna cum laude, BBA

University of Chicago Booth
School of Business, MBA

YEARS OF INVESTMENT/ OPERATIONAL EXPERIENCE:

26

- Scott is a Partner and member of the Investor relations team. He works closely with clients in the management of their portfolios, including providing assistance in the development and monitoring of their private equity programs. Additionally, he is actively involved in the portfolio construction and ongoing monitoring of the various fund of funds programs and separate accounts. Scott is also involved in the tracking and analysis of portfolio performance measurement and in the development of consultant relationships.
- Prior to joining the Firm, Scott was an Executive Director and US Equity Strategist with UBS Global Asset Management focusing on portfolio management and client communication responsibilities.
- Prior to this, Scott was an Executive Director and Institutional Client Advisor with UBS Global Asset Management focusing on business development and client relationship management.
- Scott is a member of the CFA Institute and the CFA Society of Chicago.

Saguna Malhotra

Partner, Menlo Park



EDUCATION:

University of Pennsylvania,
The Wharton School, BS

YEARS OF INVESTMENT/
OPERATIONAL EXPERIENCE:

22

- Saguna is a Partner within the Primary Investment Team. She specializes in buyout and venture fund investments, and manages General Partner relationships within these sectors.
- Prior to joining Adams Street, Saguna was the Managing Director of Private Equity at Stanford Management Company, where she oversaw a \$6.0 billion private equity portfolio. In this role, Saguna was also responsible for all facets of portfolio management, including asset allocation, identifying new investment opportunities, managing GP relationships, serving on fund advisory boards, co-investing, and proactively monitoring the portfolio. She was also a member of the investment committee, and was responsible for building and overseeing the broader investment team.
- Prior to joining Stanford in 2005, Saguna was Vice President at Ripplewood Holdings, LLC in New York. In this role she managed business diligence and deal negotiations, including negotiating financing documents, purchase agreements and employment contracts, conducting operational due diligence, and developing business plans. Saguna commenced her career at Morgan Stanley in their Financial Sponsors Group.

Notes to Performance:

Co-Investments: Long-Term, Consistent Record of Success

As of September 30, 2017

1. For the dedicated co-investment funds, the fund size is the total capital committed to each fund. For Co-Investments Outside of Dedicated Funds, the fund size is the amount of capital committed to co-investments by other funds and separate accounts.
 2. Gross IRR represents annualized internal rate of return, since inception, at the portfolio company level, prior to deduction of Adams Street Partners' management fees, carried interest or expenses, which reduce returns to investors.
 3. Unless otherwise noted, net IRR represents annualized internal rate of return to limited partners, since inception, after subtracting Adams Street Partners' management fees, carried interest and expenses, where applicable. In the case of Co-Investment Fund III, net IRR also reflects the use of a capital call credit line.
 4. Public Market Equivalent (PME) is calculated using the S&P 500 Index. The PME calculation is based on net IRR cash flows, which reflect the payment of Adams Street Partners' fees, carried interest and expenses.
 5. Unless otherwise noted, net multiple represents the sum of estimated remaining fair value plus realized proceeds, divided by invested capital, and is net of Adams Street Partners' management fees, carried interest and expenses. In the case of Co-Investment Fund III, Net Multiple also reflects the use of a capital call credit line.
 6. The DPIs are calculated as the distributions divided by the dollars drawn for the dedicated co-investment funds. DPIs are net to LPs and reflect deduction of underlying general partners' and Adams Street Partners' fees, carried interest and expenses. In the case of Co-Investments Outside of Dedicated Funds, DPIs are calculated at the underlying partnership level and reflect deduction of Adams Street Partners' management fees and carried interest; it is not possible to deduct expenses in this calculation.
 7. During some periods in which Adams Street Partners investments outperformed the benchmark by a substantial margin, PME could not be calculated because the tracking position in the underlying benchmark index would have resulted in a short position. In these cases, the PME is calculated using the "Direct Alpha" PME methodology (Gredil, Griffiths, Stucke, "Benchmarking Private Equity: The Direct Alpha Method," 2014). Mathematically, Direct Alpha PME is equal to the IRR of the future value of the cash flows underlying the IRR calculation, where future value is based on the return of the benchmark index, less the IRR of the actual value of the cash flows.
 8. Reflects dollars invested in co-investments since 1989 by separate accounts and funds other than the Adams Street Partners dedicated co-investment funds. This data reflects only aggregate performance of these co-investments and does not reflect performance of any particular Adams Street Partners fund or the performance achieved by an investor in any such fund. Gross IRR represents annualized internal rate of return, since inception, at the portfolio company level prior to deduction of Adams Street Partners' management fees or carried interest. The net IRR and net multiple are calculated for the investment periods 1989-2000, 2001-2010 and 2011-September 30, 2017 using the assumption that each year bracket is a single fund charging the highest fees under a model fee structure that deducted management fees and carried interest based on the Adams Street Partners dedicated co-investment fund fee schedule. Note that the 1989-2000 investment period includes one separate account dedicated to co-investments (the "Dedicated Account") that had a specific fee structure; however, for purposes of combining this account with other co-investments outside of dedicated funds in this time period, we have calculated the net IRR and net multiple for the Dedicated Account using the model fee structure described above. The Dedicated Account, which had invested capital of \$109.8 million, has an actual net multiple of 2.24x, an actual net IRR of 24.9%, and PME of 17.0%.
 9. Adams Street Co-Investment Fund III is comprised of Adams Street Co-Investment Fund III A LP and Adams Street Co-Investment Fund III C LP.
- Past performance is not indicative of future results. There can be no guarantee that unrealized investments included in this data will ultimately be liquidated at the values reflected therein.



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Trumbull Property Fund (TPF)

Real estate
investment funds

Presented to: Ventura County Employees' Retirement Association
Presented by: Stephen J. Olstein, Executive Director
Mario Maturo, Executive Director



1177 Avenue of Americas, New York, NY

February 26, 2018

General risk disclosure

Certain sections of this presentation that relate to future prospects are forward looking statements and are subject to certain risks and uncertainties that could cause actual results to differ materially. This material is designed to support an in-person presentation, is not intended to be read in isolation, and does not provide a full explanation of all the topics that are presented and discussed.

An investment in real estate will involve significant risks and there are no assurances against loss of principal resulting from real estate investments or that the portfolio's objectives will be attained.

This is not a recommendation. Investors must have the sophistication to independently evaluate investment risks and to exercise independent judgment in deciding to invest in real estate funds. Investors must also have the financial ability and willingness to accept and bear the risks, including, among other things:

- **Risk of illiquidity.** Real estate is an illiquid investment and the account may not be able to generate sufficient cash to meet withdrawal requests from investors. Redemptions may be delayed indefinitely;
- **Risks of investing in real estate.** These risks include adverse changes in economic conditions (local, national, international), occupancy levels and in environmental, zoning, and other governmental laws, regulations, and policies;
- **Use of leverage.** Leverage will increase the exposure of the real estate assets to adverse economic factors, such as rising interest rates, economic downturns, or deteriorations in the condition of the properties or their respective markets and changes in interest rates; and
- **Limitations on the transfer of fund units.** There is no public market for interests in any of our funds and no such market is expected to develop in the future.
- **Legal & Taxation.** Investors should consult their own legal and tax advisers for potential US and/or local country legal or tax implications on any investment

Investors should evaluate all risk and uncertainties before making any investment decision. Risks are detailed in the respective fund's offering memorandum.

Table of contents

	General risk disclosure	
Section 1	Organization and Capabilities	3
Section 2	Market Outlook	9
Section 3	Investment Results	26
Section 4	Trumbull Property Fund (TPF)	28
	4.A Appendix	46
Section 5	Biographies	80

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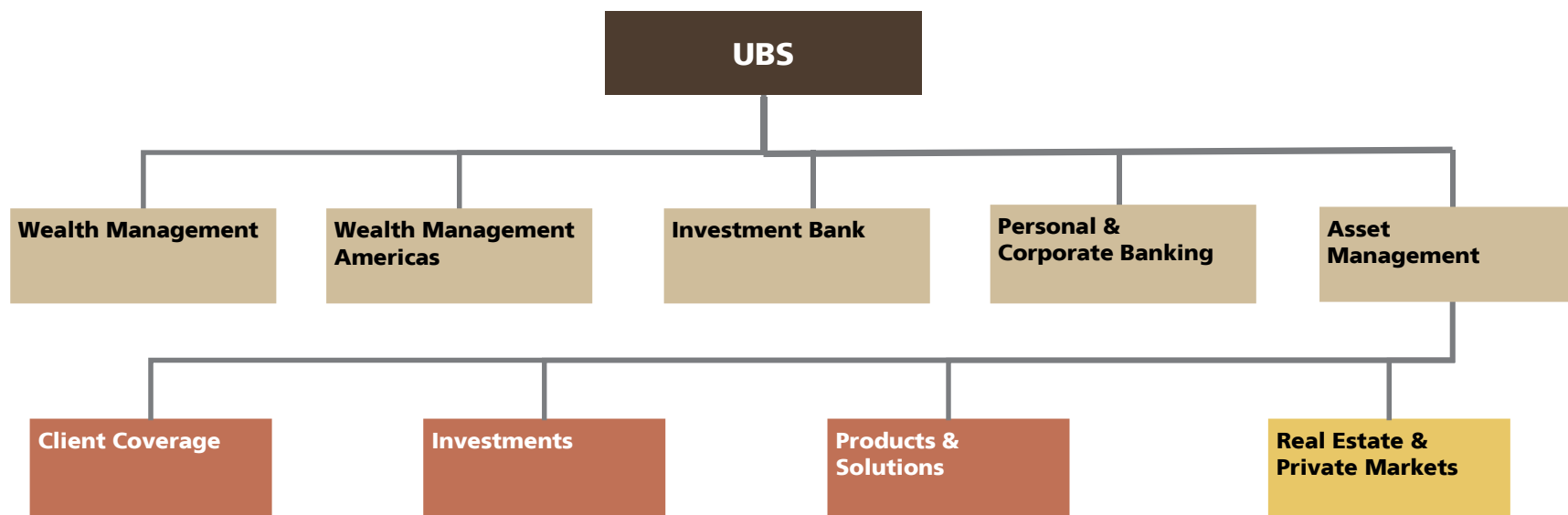
Section 1

Organization and Capabilities



UBS Asset Management - Overview

- Total invested assets: USD 768 billion
- Approximately 2,300 employees located in 23 countries
- Well-diversified businesses across regions, capabilities and client segments
- Value driven investment philosophy
- Real estate is a prominent business area within UBS Asset Management



Data as of September 30, 2017.
Source: UBS Asset Management



US real estate investment experience and mission

- Over 39 years of core and value added real estate investment experience
- USD 32.4 billion of assets for over 650 clients
- Real estate organization with 217 employees and offices in California, Connecticut, and Texas
- Quality people, properties and relationships

Our mission is to provide both superior risk-adjusted investment performance for our clients through private real estate investment strategies and outstanding client service.

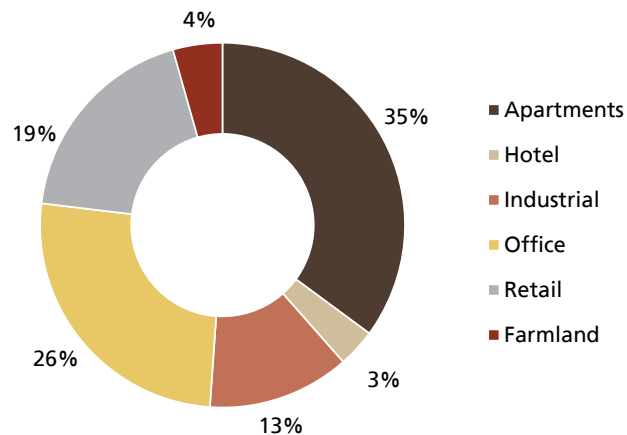


Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM), Includes UBS Farmland Investors LLC

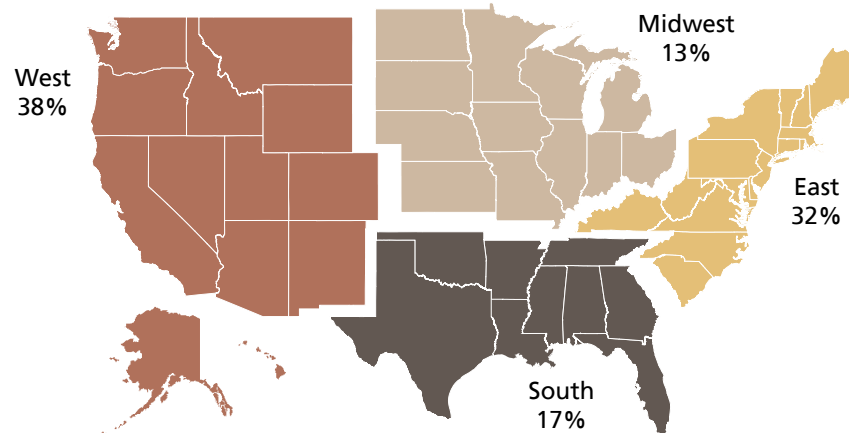
Real Estate funds in the US - Overview

Gross assets – USD 32.4 billion

Assets by property type



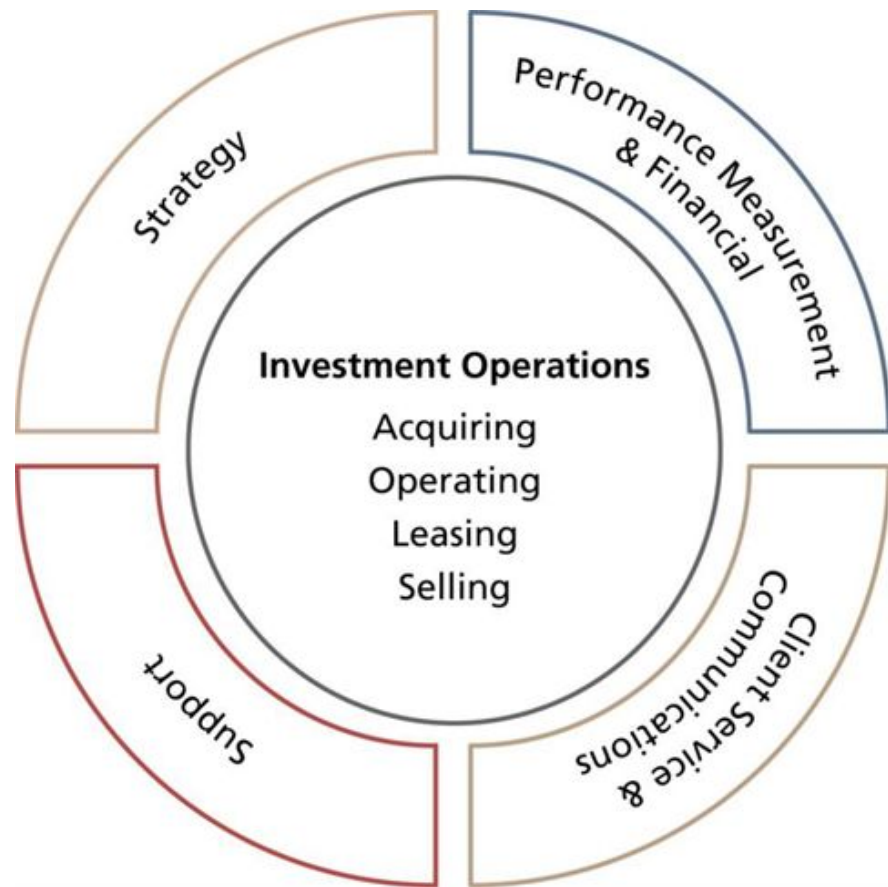
Assets by geographic region



Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). Notes: Assets by property type and geographic regions represent real estate assets only and exclude other assets, such as cash, which are included in Gross Assets. Assets include UBS Farmland Investors LLC.



US real estate - multidisciplined organization



	<u># of Employees¹</u>
Strategy	
- Senior Management	1
- Portfolio Management	15
- Research	8
Investment Operations	
- Acquisitions	20
- Asset Management	50
- Dispositions	4
- Engineering	5
Performance Measurement & Financial	
- Valuation	4
- Fund & Property Accounting	35
- Business Operations	5
Client Service & Communications	
- Portfolio & Client Services	12
- Client Service & Communications	9
Support	
- Information Technology	9
- Legal & Compliance	10
- Administrative	20
Total	207

Data as of December 31, 2017.

¹UBS Farmland Investors LLC consists of 10 additional employees that are not included in this count.

Source: Source: UBS Asset Management, Real Estate & Private Markets (REPM)



US direct real estate funds

	Trumbull Property Income Fund (TPI)	Trumbull Property Fund (TPF)	Trumbull Property Growth & Income Fund (TPG)	AgriVest Farmland Fund, Inc. (UBS-AFF)
Investment strategy	Core income-oriented investments – primarily through participating mortgages secured by real estate assets	Diversified core real estate – primarily through direct ownership of real estate assets	Value-added real estate – tactical orientation w/ investments through joint ventures, direct and indirect ownership	Investing in row , vegetable and permanent crop farmland in select agricultural areas across the US. Leasing strategies avoid farming and commodity risks
Financial objective⁽¹⁾	Seek to achieve at least a 5% real rate of return over any given 3- to 5-year period ⁽²⁾ Seek to provide a positive total return for each quarterly period regardless of market conditions	Seek to outperform the NFI-ODCE index over a full market cycle Seek to achieve at least a 5% real rate of return over any given 3- to 5-year period ⁽²⁾	Seek to outperform the NFI-ODCE Index by at least 200 bps per annum over any given market cycle Seek to achieve at least a 7% real rate of return over any given market cycle ⁽²⁾	Seek to exceed the Core Farmland Index (CFI) over 3- to 5-year period
Leverage	Low or no Leverage 0% at 12/31/2017	Moderate 17.2% at 12/31/2017	Target of approximately 50% of GAV 35.5% at 12/31/2017	Maximum 25% leverage 0% at 12/31/2017
Gross assets	USD 3.2b in 53 investments	USD 23.7b in 211 investments	USD 972.5 million in 24 investments	USD 716.6 million in 61 investments
Inception	1981	1978	2006	2006
Total return⁽³⁾ (gross/net)	One year: 5.39%/4.53% Ten year: 6.68%/5.81%	One year: 6.30%/5.42% Ten year: 5.22%/4.23%	One year: 9.31%/8.18% Ten year: 5.79%/3.80%	One year: 5.01%/3.98% Ten year: 8.97%/7.89%

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Notes: ⁽¹⁾ There is no assurance that the financial objective will ultimately be realized and the possibility of loss does exist.⁽²⁾ Return adjusted for inflation, before fees. ⁽³⁾ Returns supplement the respective Composite, previously provided or included herein.

Section 2

Market Outlook



2018 performance scenarios

2017*		2018		
Estimate		Downside	Base Case	Upside
2.3	GDP (%)	0.5	2.3	3.5
2.0	Employment (mill. Jobs/yr)	0.5	2.0	2.5
2.0	Inflation (%)	1.0	2.2	3.2
3.5	Retail sales (%)	1.0	3.7	5.6
4.4	NOI growth (%)	1.5	3.7	5.4
10	Cap rate change (bps)	10	10	5
4.7	Income return (%)	4.8	4.8	4.7
2.2	Appreciation (%)	-0.7	1.3	4.3
6.9	Total return (%)	4.1	6.1	8.9



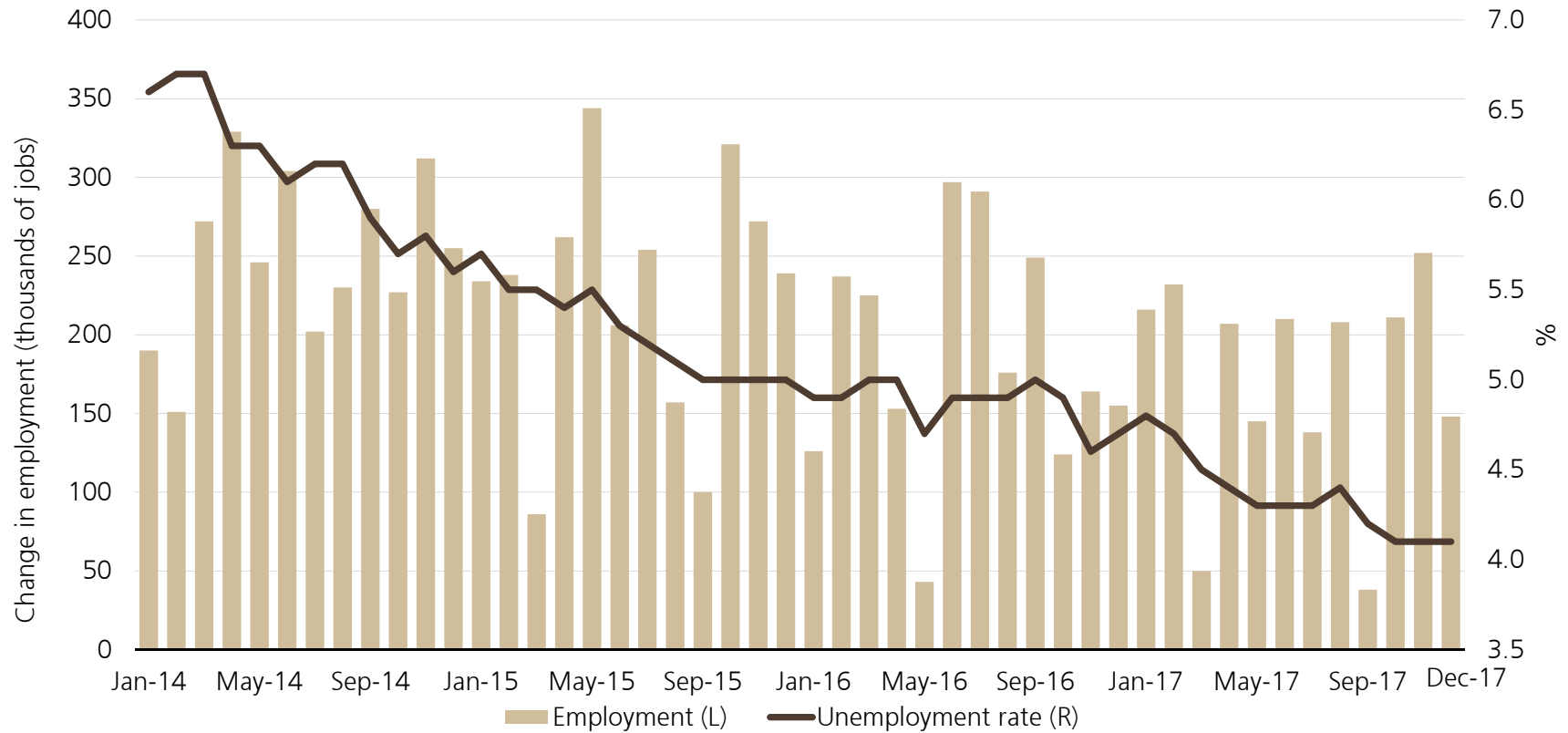
Source: UBS Asset Management, Global Real Estate Research & Strategy-US. Based on data from UBS Investment Bank, NCREIF and Moody's Analytics as of September 2017. Economic data are expressed as fourth-quarter over fourth-quarter rates of change except for retail sales where growth is the average annual change. *2017 data are estimated through year end based on actual data as of October 2017.

Updated: January 25, 2018



Monthly job growth

Steady growth expected to continue



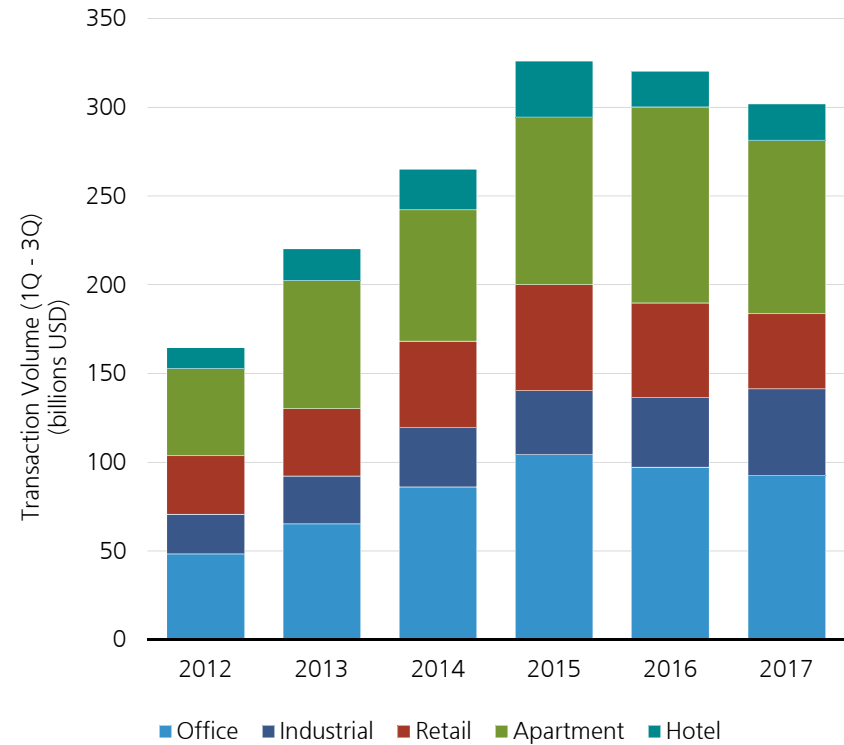
Source: Moody's Analytics as of January 5, 2018.
 Updated: January 5, 2018



Transactions



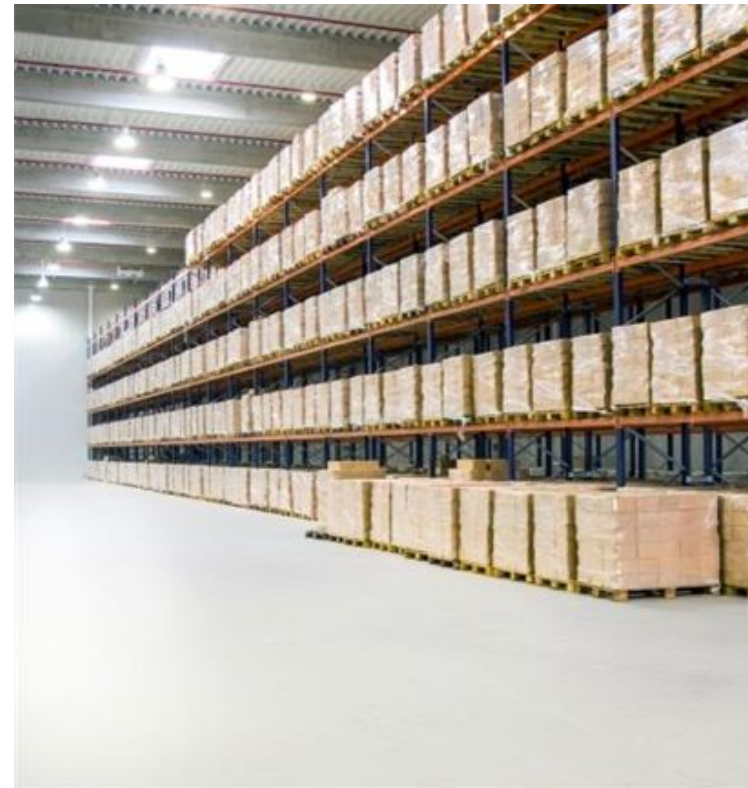
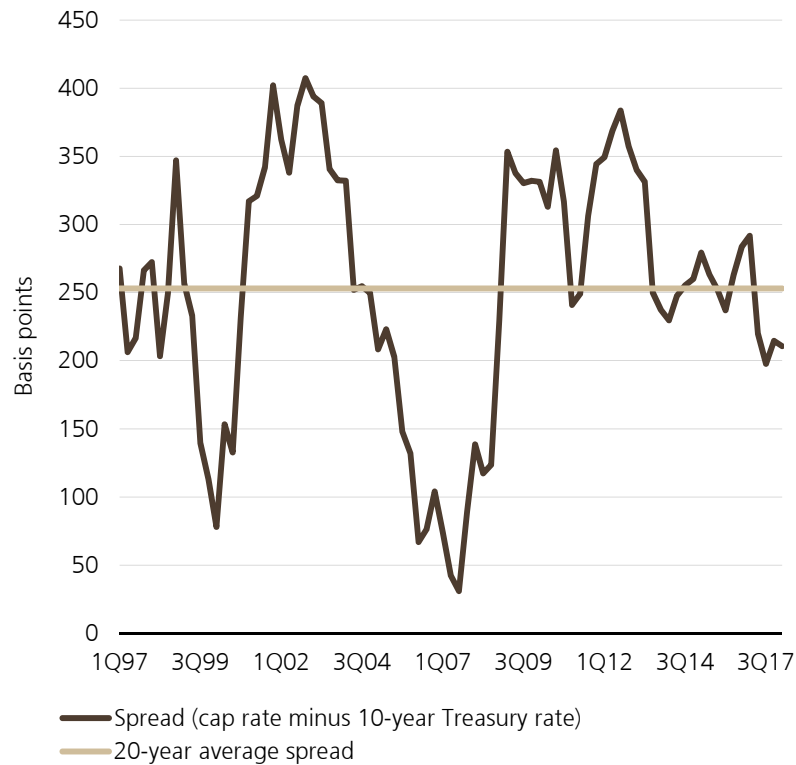
Transactions



Source: Real Capital Analytics as of September 2017.
 Updated: January 5, 2018

Spreads near long-term averages

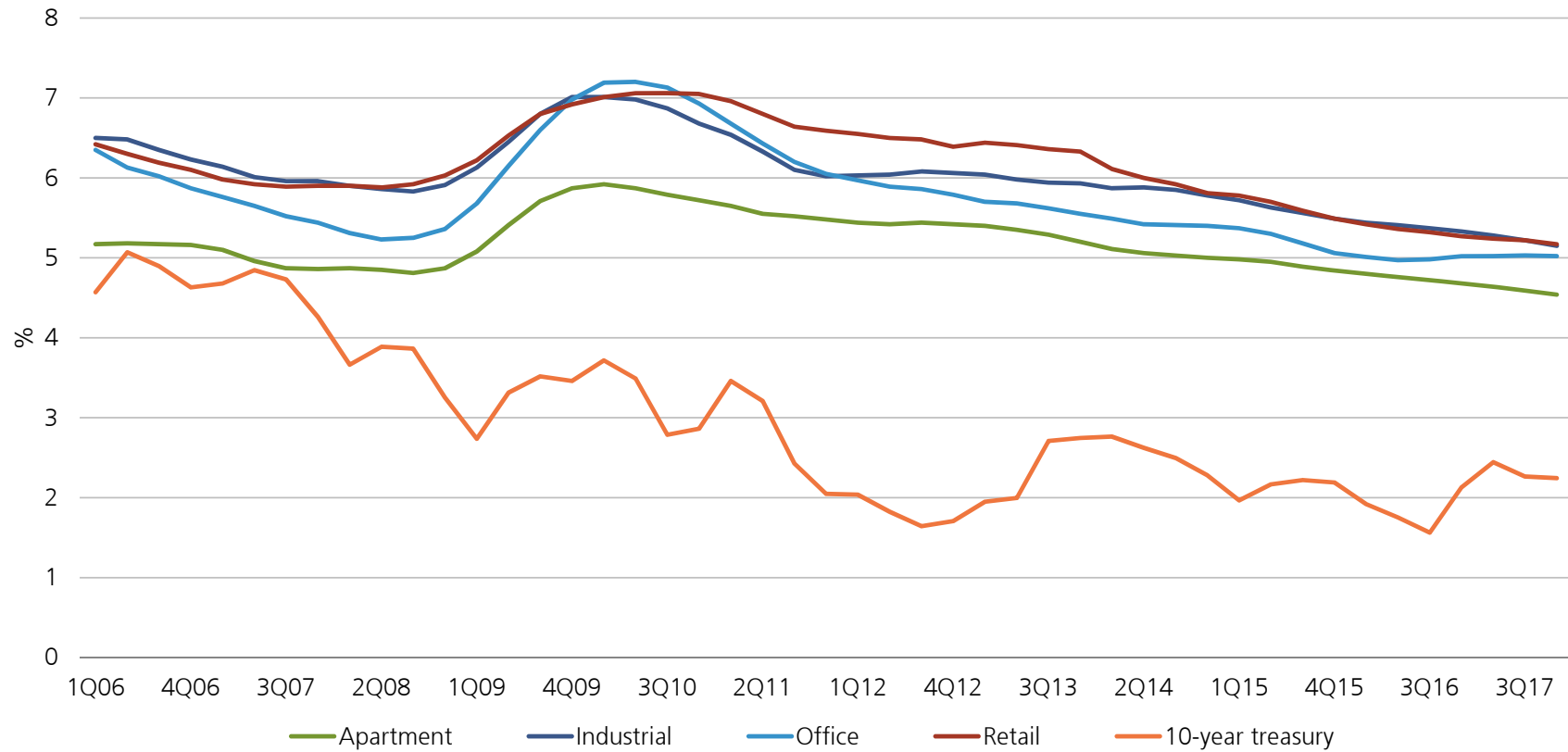
Core cap rate to 10-year Treasury



Source: NCREIF Fund Index-Open-end Diversified Core Equity and Moody's Analytics as of September 2017.
Updated: January 5, 2018



Cap rates

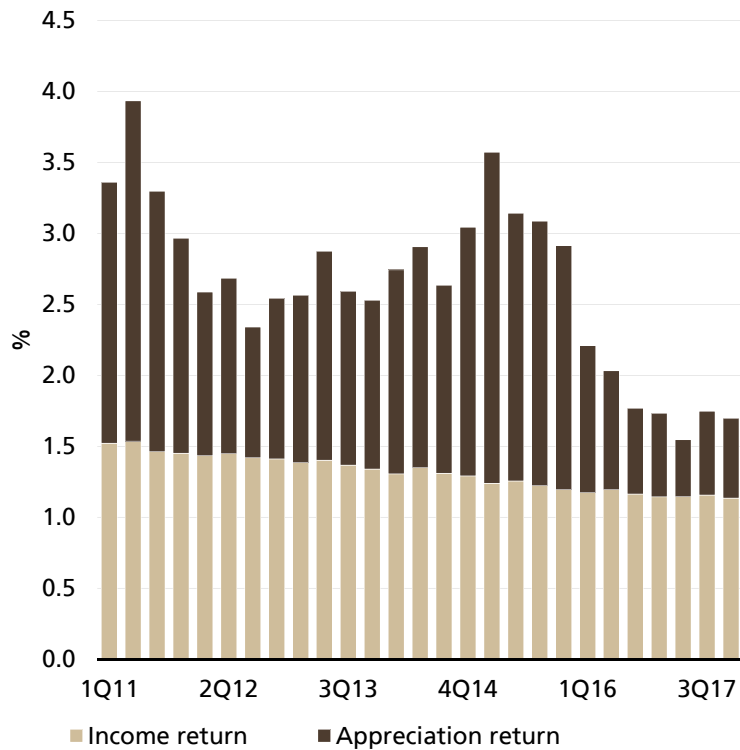


Source: NCREIF and Moody's Analytics as of September 2017.
 Updated: November 3, 2017



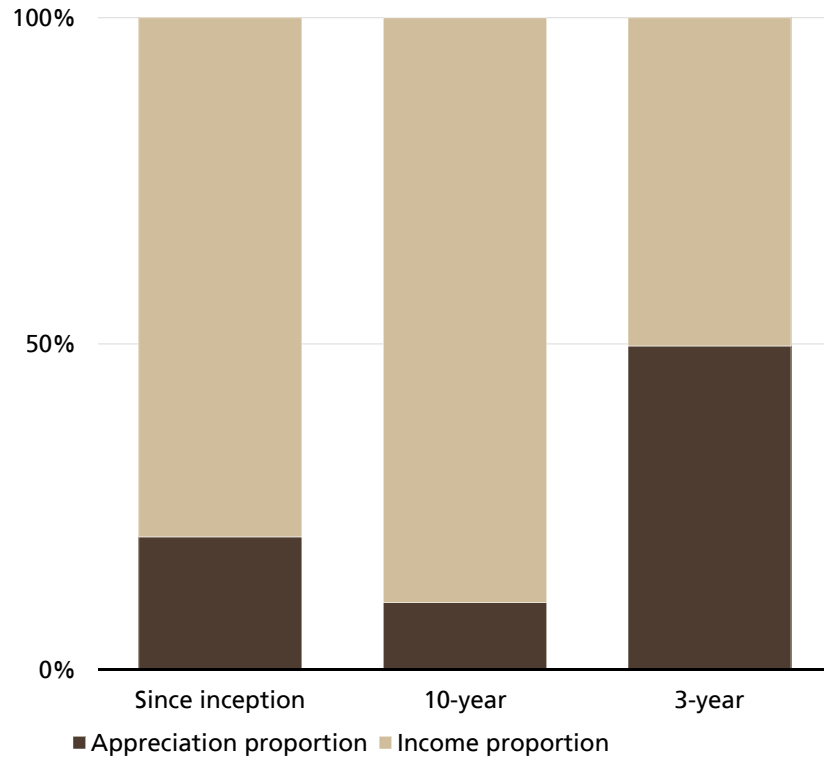
Returns – still appreciating

Total returns



Source: NCREIF Property Index as of September 2017.
Updated: January 3, 2018

Total return components

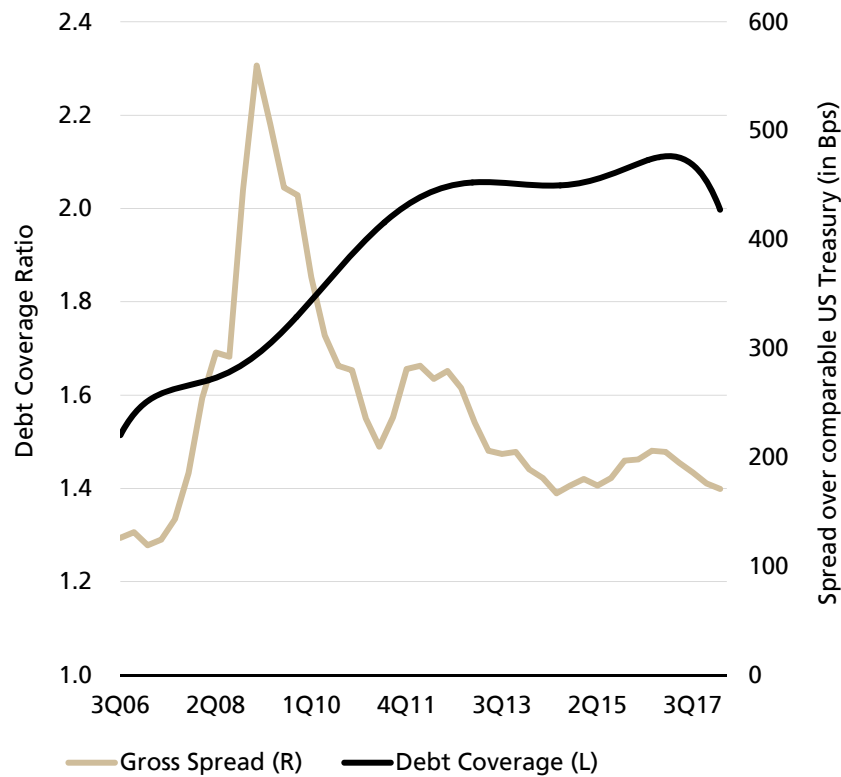


Source: NCREIF Property Index as of September 2017.



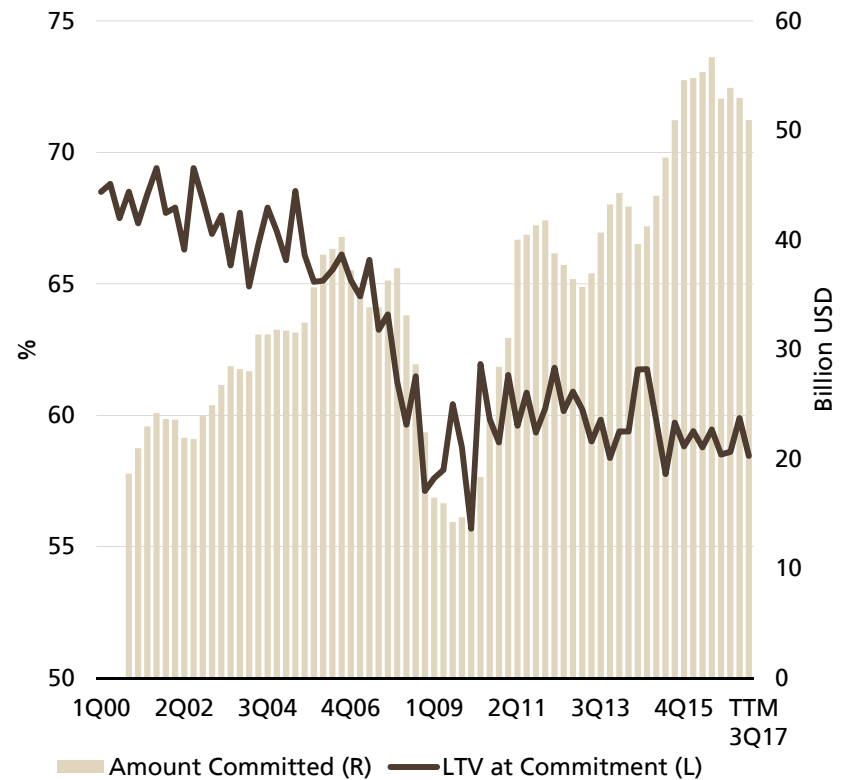
Debt capital markets functioning not booming

Loan profiles at commitment



Source: American Council of Life Insurers as of September 2017.
 Updated: January 3, 2018

ACLI Loan commitments

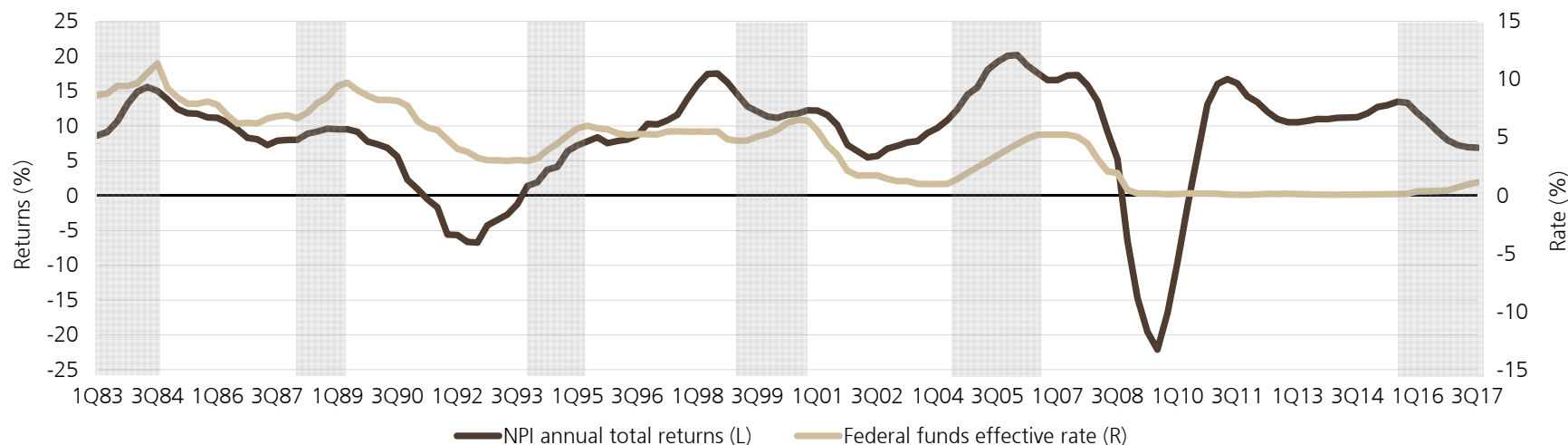


Source: ACLI-Commercial Mortgage Commitments database as of September 2017.



Investment environment

Rising interest rates and private commercial real estate returns

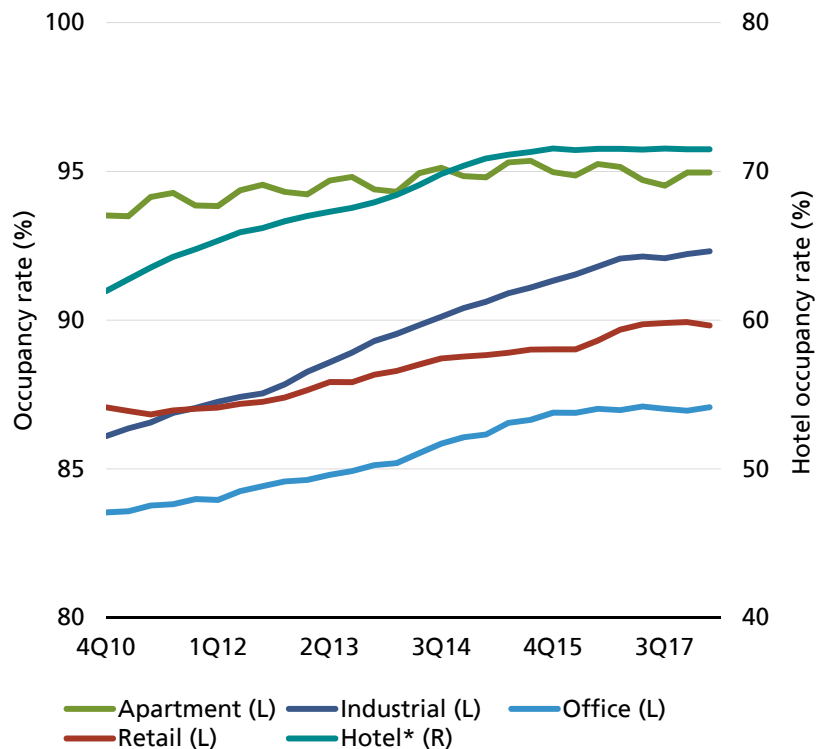


- Historically, private commercial real estate returns have been positive during periods of rising interest rates
- Drivers of real estate performance are complex; interest rates are only part of the story
- Private commercial real estate performance responds to economic growth and expected inflation

Source: NCREIF and Moody's Analytics as of September 2017. NCREIF Property Index (Source NCREIF) is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment.
Updated: November 21, 2017

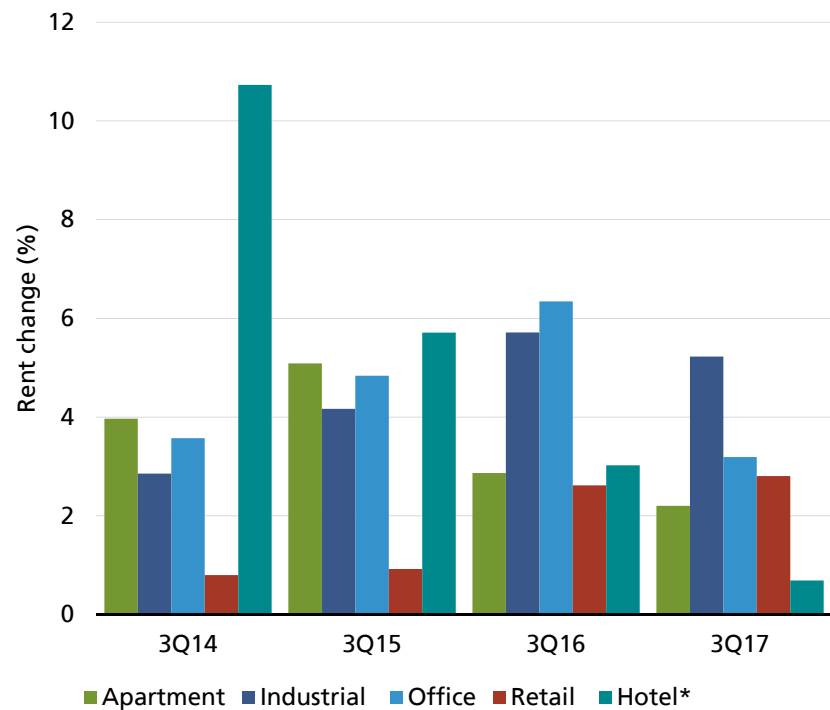
US real estate fundamentals

Occupancy by sector



Source: Axiometrics and CBRE-Econometric Advisors as of September 2017.
 *Hotel data is forecast data
 Updated: December 1, 2017

Rent growth by sector

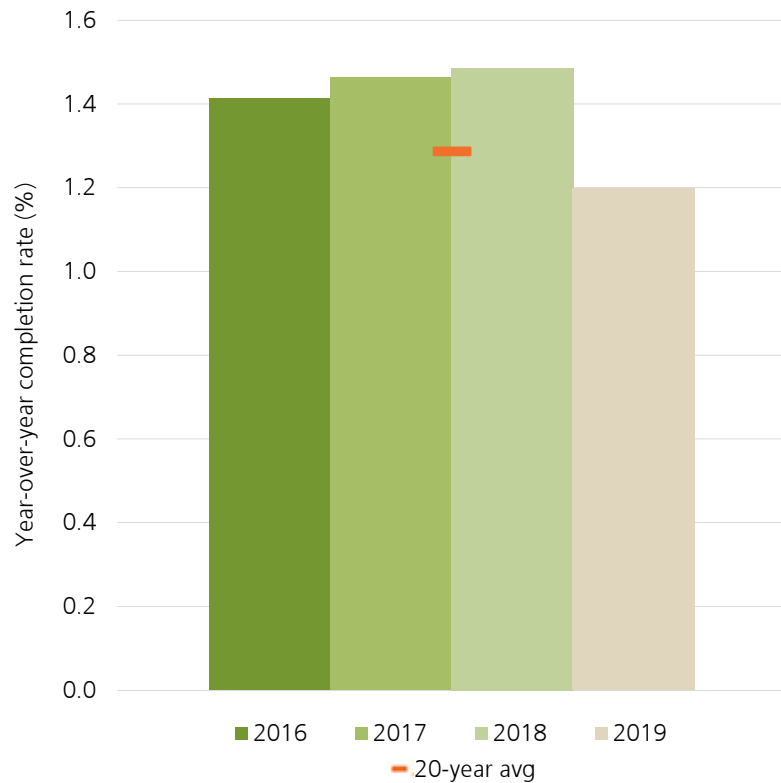


Source: Axiometrics and CBRE-Econometric Advisors as of September 2017.
 *Hotel data is forecast data.



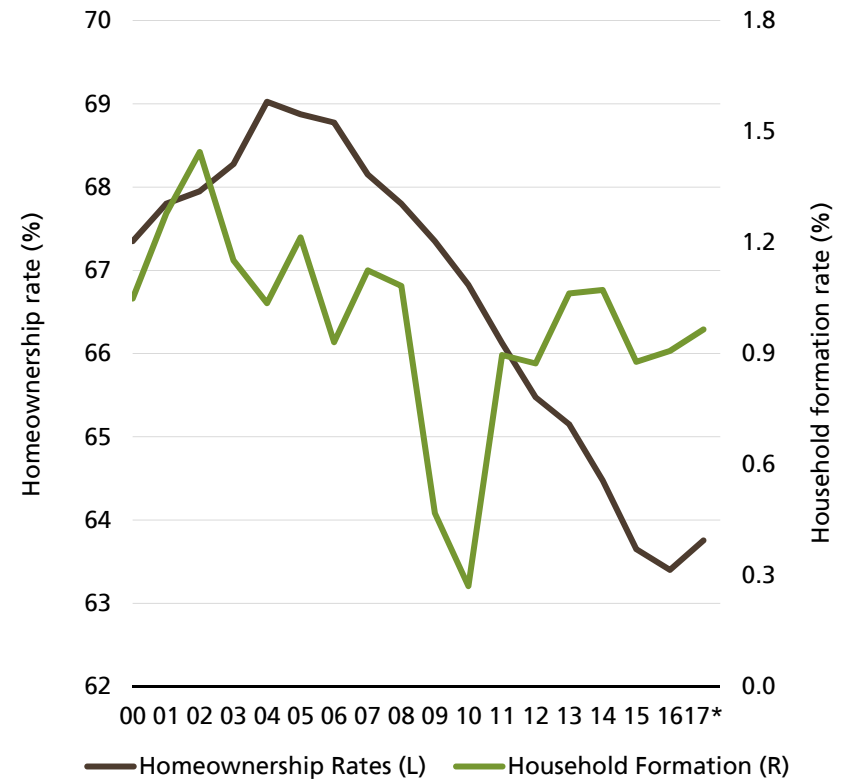
Apartments

Supply growth



Source: Axiometrics as of September 2017.
Updated: December 5, 2017

Housing fundamentals

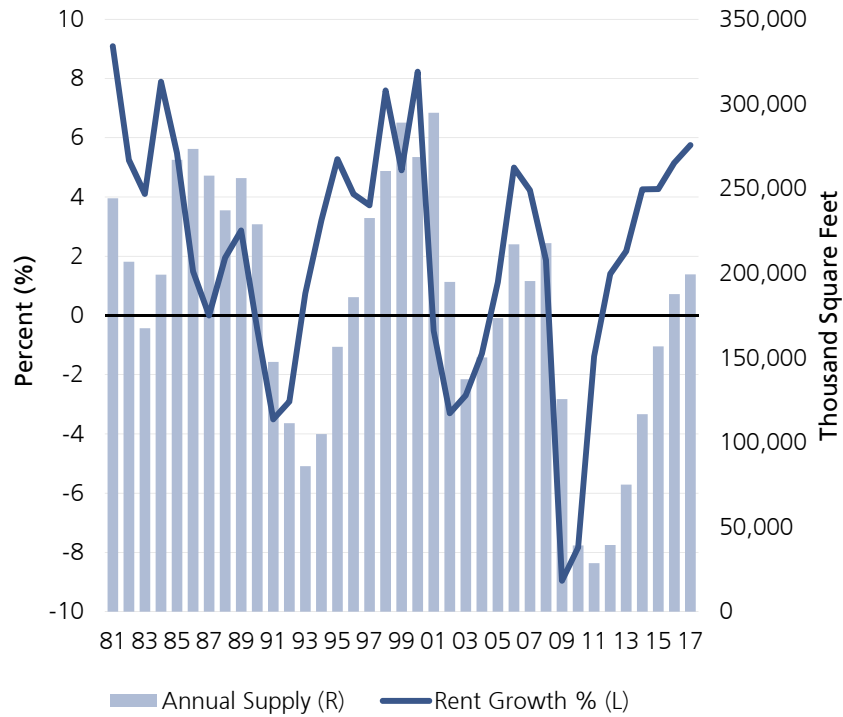


Source: Moody's Analytics as of September 2017.
*Homeownership and household formation are forecast through the end of 2017.



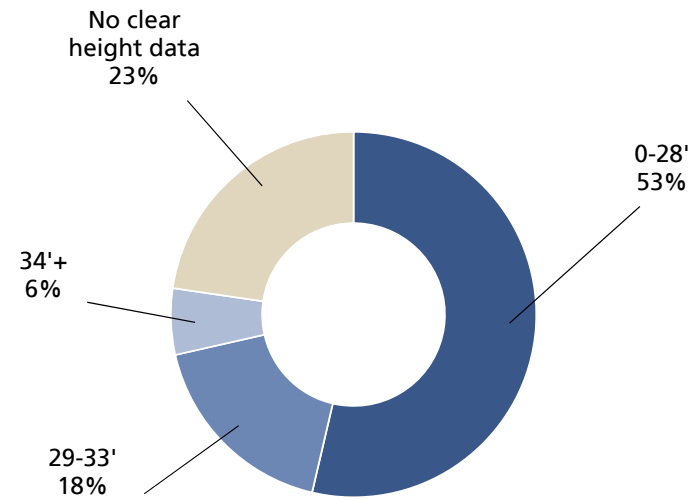
Industrial

Supply response



Source: CBRE-Econometric Advisors as of September 2017. All data are four-quarter rolling as of September 2017.
 Updated: December 5, 2017

Market preference: clear heights

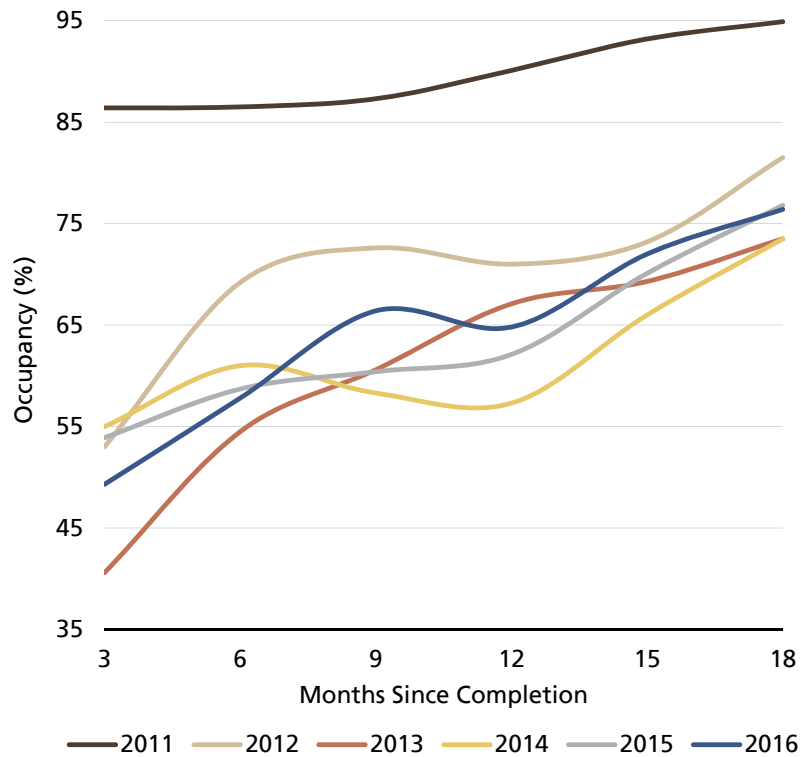


Source: CBRE-Econometric Advisors, Peer Select as of September 2017. Renter-only data.
 Note: Clear height is the minimum height of usable space



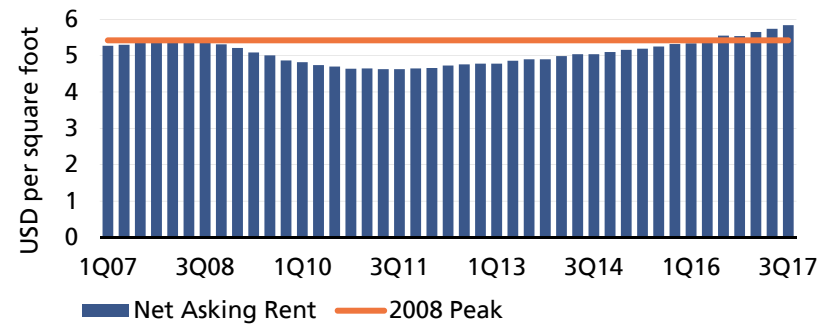
Industrial

Warehouse lease-up trend



Source: CBRE-Econometric Advisors as of September 2017.
 Updated: January 5, 2018

Warehouse rents

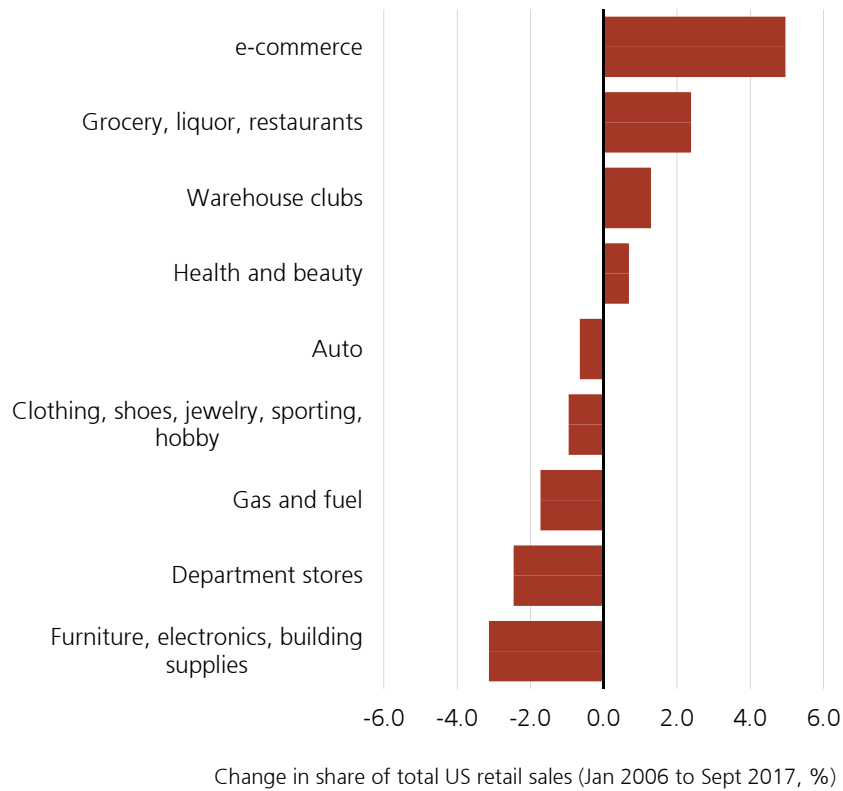


Source: CBRE-Econometric Advisors as of September 2017.



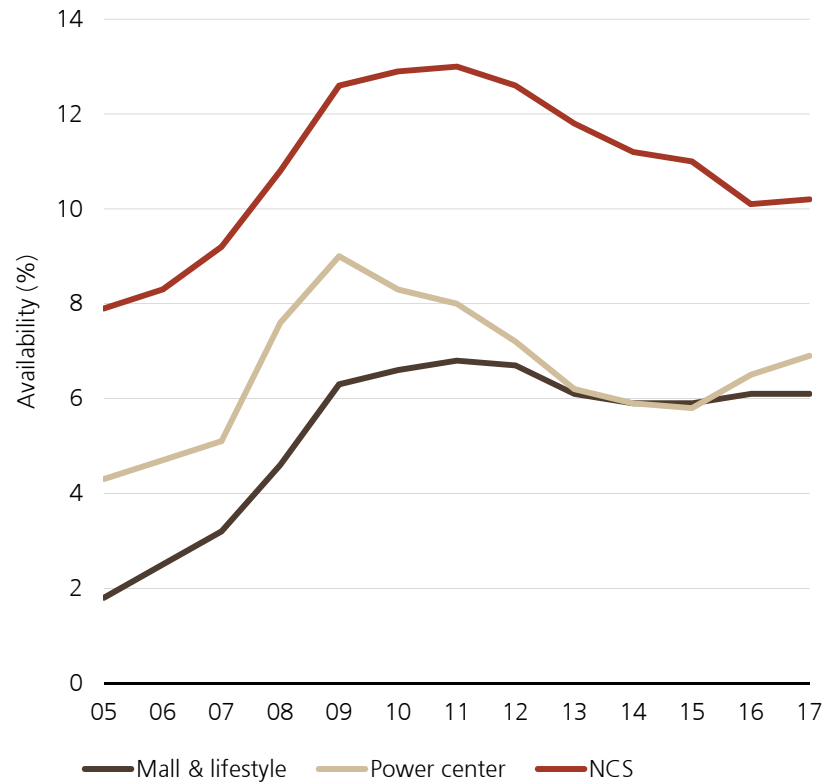
Retail

Retail sales market share



Source: Moody's Analytics as of September 2017.
Updated: January 5, 2018

Subsector availability rates

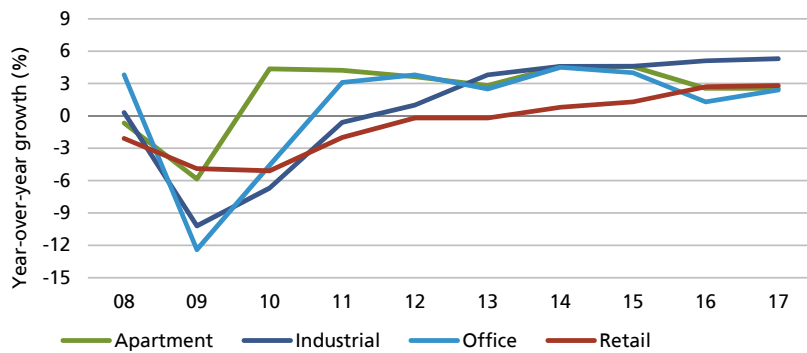
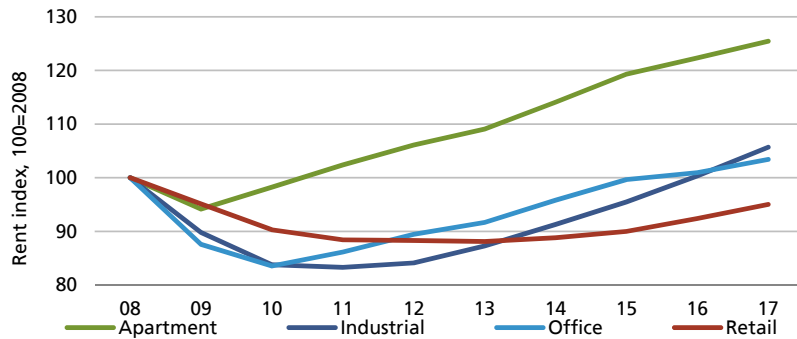


Source: CBRE-Econometric Advisors as of September 2017.



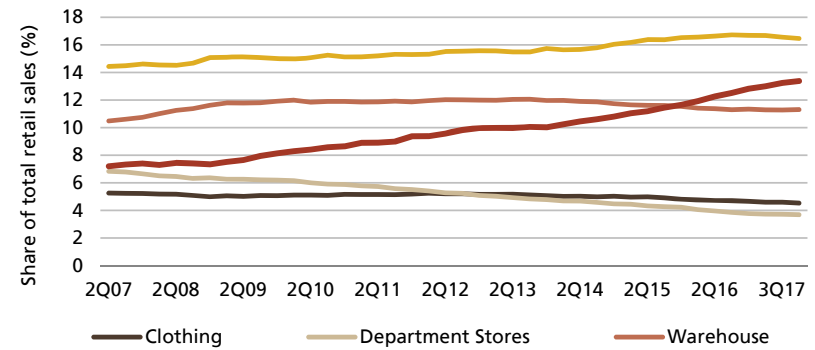
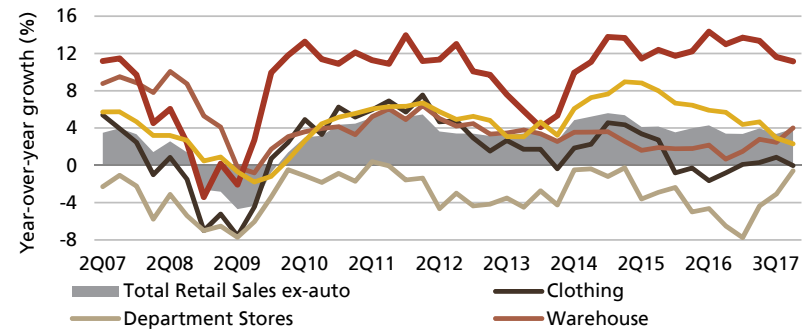
Retail

Rent recovery



Source: CBRE-Econometric Advisors and Axiometrics as of September 2017. 2017 data are forecast through year end.
 Updated: January 5, 2018

Retail sales and e-commerce

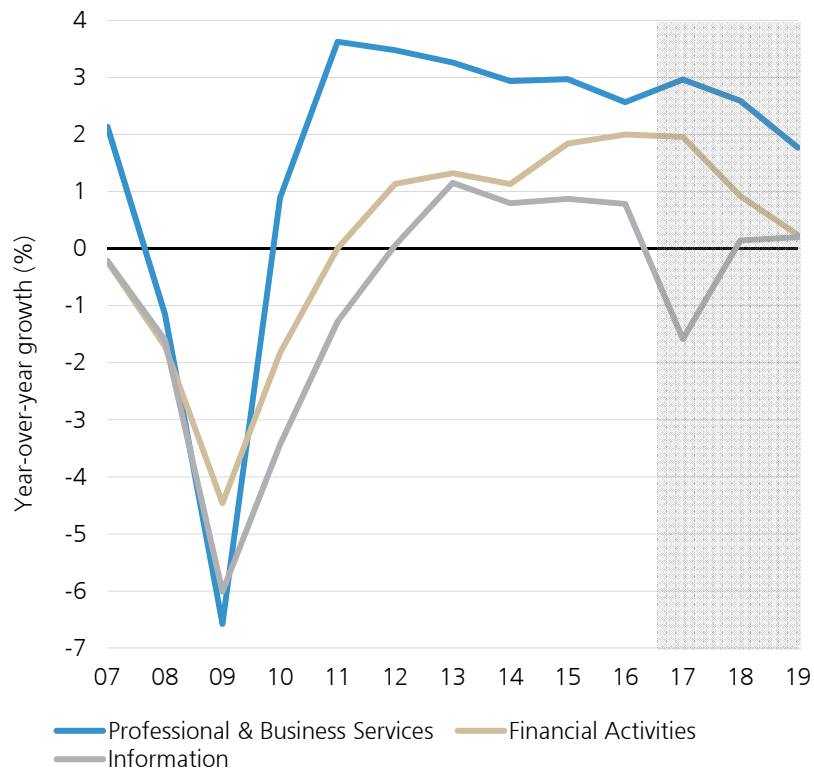


Source: Moody's Analytics as of September 2017.



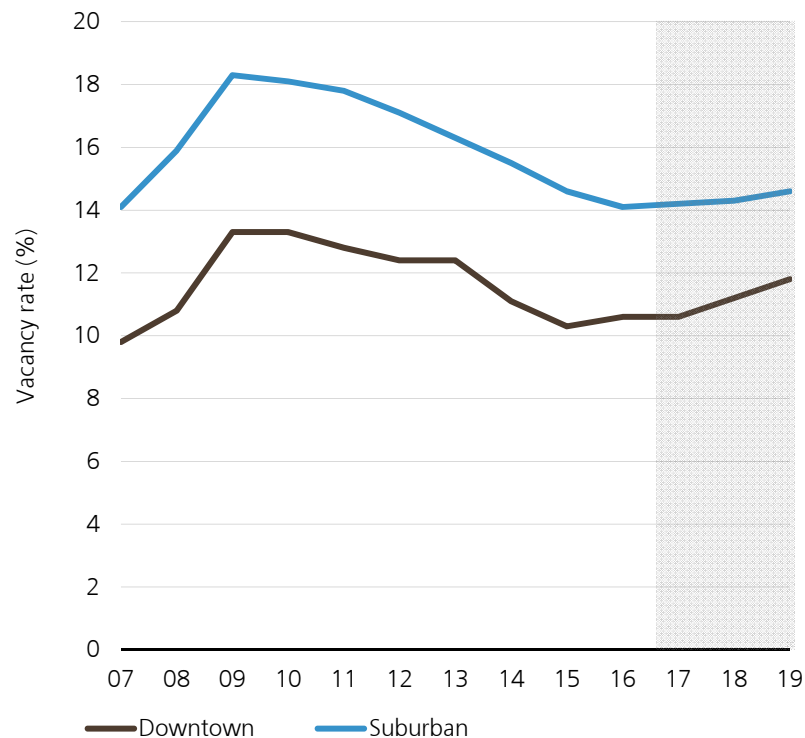
Office

Office-using employment



Source: Moody's Analytics as of September 2017. Shaded area indicates forecast data.
 Updated: January 5, 2018

Office vacancy rates

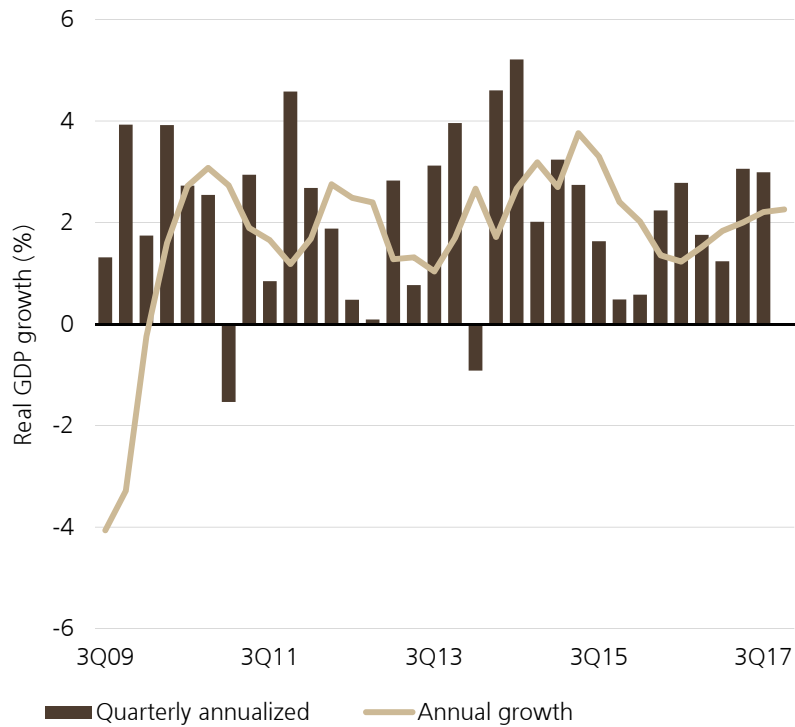


Source: CBRE-Econometric Advisors as of September 2017. Shaded area indicates forecast data.



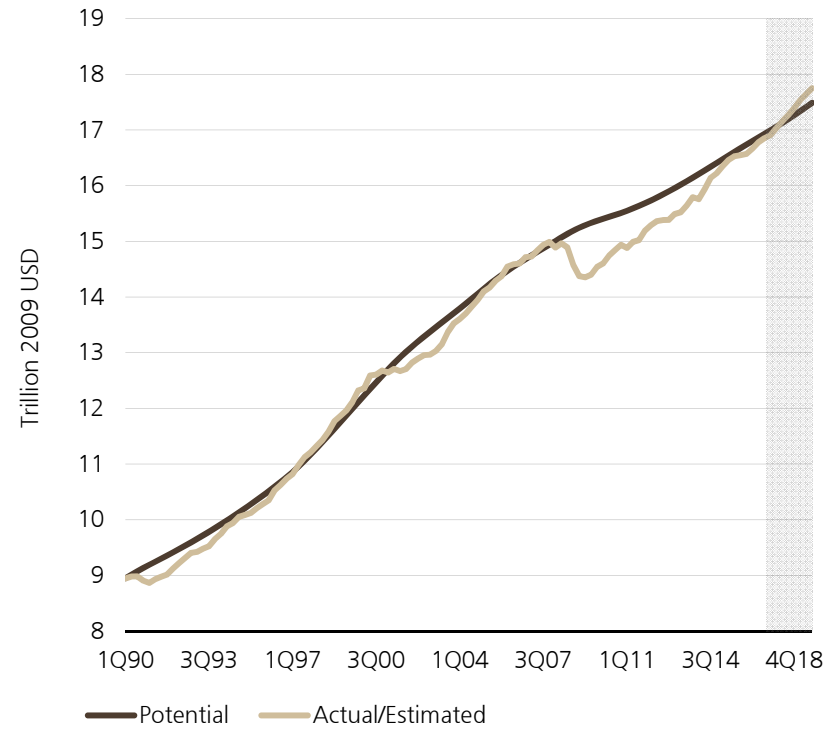
Economy

US GDP growth



Source: Moody's Analytics as of September 2017
 Updated: January 5, 2018

US GDP potential



Source: Congressional Budget Office and Moody's Analytics as of September 2017.
 Shaded area indicates forecast data.



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Section 3

Investment Results



TPF investment results for Ventura County Employees'

Periods ending December 2017

Year	Deposit	Redemptions/ Distributions \$ in thousands	Market Value 12/31/17	Client Net IRR's*				
				12 months ended 12/31/17	3 years ended 12/31/17	5 years ended 12/31/17	10 years ended 12/31/17	Since Inception 3/31/03 to 12/31/17
2003	54,000							
2004	10,000							
2005		10,000						
2009		1,013						
2010	30,000							
2011	30,000							
2013		5,421						
2014		1,355						
	\$124,000	\$17,789	\$260,600	5.5%	7.8%	8.6%	5.6%	7.9%

*Client Net IRRs are dollar-weighted and after fees that were deducted from the account. Past performance is not indicative of future results. This is not an official statement of your account. Refer to your client statement and the quarterly TPF report. Time Weighted Returns are available upon request.



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Section 4

Trumbull Property Fund (TPF)

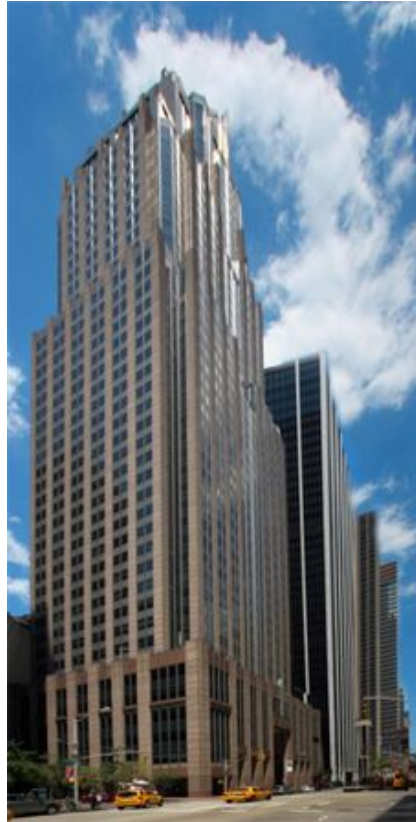


Trumbull Property Fund

Representative assets



**Liberty Green / Liberty Luxe,
New York, NY¹**



**1177 Avenue of the Americas,
New York, NY**



53 State Street, Boston, MA



1101 K Street, Washington, DC



**455 Market Street,
San Francisco, CA**



Water Tower Place, Chicago, IL

Photographs of current TPF properties are shown for illustrative purposes. The properties within the Fund are expected to change over time as investments are acquired and sold.

¹Participating mortgage. Source: UBS Asset Management, Real Estate & Private Markets (REPM); January 1, 2017.

Dedicated and experienced team

Portfolio Managers average 26 years of industry experience

Kevin Crean
Managing Director



Senior Portfolio Manager

38 years of industry experience, 33 with UBS

Mario Mauro
Executive Director
Portfolio Manager



18 years of industry experience,
12 with UBS

Steve Olstein
Executive Director
Portfolio Manager



38 years of industry experience,
14 with UBS

Peter Shaplin
Executive Director
Portfolio Manager



16 years of industry experience,
4 with UBS

Pam Thompson
Executive Director
Portfolio Manager



26 years of industry experience,
15 with UBS

Timothy Walsh
Executive Director
Portfolio Manager



19 years of industry experience,
11 with UBS

Nolan Henry
Director



**Financings
Reporting**

Experience: 14 / 9

Lan Seto
Associate Director



Portfolio Analytics

Experience: 12 / 10

Debby Sce
Associate Director



Portfolio Analytics

Experience: 12 / 10

Peter Juliani
Executive Director



**Cash Management
Forecasting**

Experience: 19 / 13

Source: UBS Asset Management, Real Estate & Private Markets (REPM).
Data as of December, 2017

Trumbull Property Fund

An established open-ended core fund that provides superior risk adjusted returns¹

Fund highlights <ul style="list-style-type: none"> • 40 year track record • USD 23.7 B in assets • Gross Return Since Inception: 9.0% • Gross Dividend Yield: 4.3%² • 440 Investors • 211 Investments 	Stable income	▶ 84% of total return from income since inception	Low end of real estate risk spectrum
	Low Leverage	▶ Facilitate favorable acquisitions	
	Diversification	▶ Research driven Proprietary Inventory Model	Competitive total returns across real estate cycles
	Selective Value Added	▶ Build-to-core, late stage equity	Consistently executed core strategy
	Sustainability	▶ Leader in US diversified funds ³ , economically justified	

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). ¹Ranked #2 (out of 14 funds) for Sharpe Ratio and #1 (out of 14 funds) for Standard Deviation, on a 10-year basis, as calculated by NCREIF as of December 31, 2017. ²Gross dividend yield provided is a one-year gross rolling return. ³Source: GRESB as of 2017/TPF is ranked #2 out of 39 US diversified funds. Notes: The Fund's diversification is managed to our proprietary Inventory Model, and not the NFI-ODCE benchmark. The Inventory Model has outperformed the NPI 31 out of the past 39 years and with a lower standard deviation. Return supplements the Firm's Equity Composite previously provided or included herein. TPF since inception date is 1/13/1978. See required notes page at the end of this section or presentation. Past performance is not indicative of future results.



Diversification driven by proprietary inventory model

TPF does not seek to replicate NFI-ODCE

Proprietary inventory model

- USD 5.0 trillion, ten times NPI
- Twenty times larger than ODCE
- Outperforms NPI 31 of 39 years, with a lower standard deviation

By Property type vs NFI-ODCE

- More apartments
- Less office

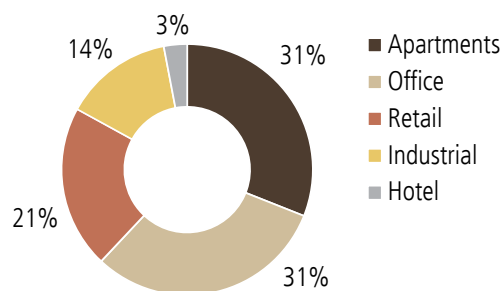
By Geography

- Coastal focus
- Balanced East & West

By Economic drivers

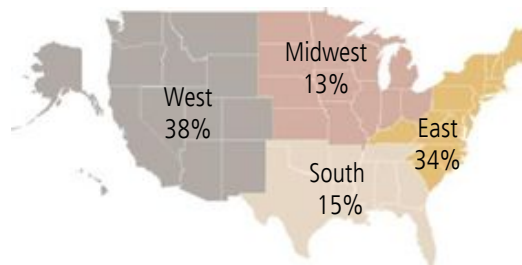
- Affirms diversification

Property type allocation (%)



	TPF target ranges	Current TPF allocation	NFI-ODCE
Apartments	23-39	31	24
Office	15-27	31	36
Retail	20-34	21	20
Industrial	9-13	14	16
Hotel/Other	8-12	3	4

Geographic region allocation (%)



	TPF target ranges	Current TPF allocation	NFI-ODCE
East	22-46	34	31
Midwest	8-16	13	9
South	13-27	15	19
West	22-46	38	41

Data as of December 31, 2017 unless otherwise indicated. Source: UBS Asset Management, Real Estate & Private Markets (REPM). NCREIF is the source for NFI-ODCE and NPI. Percentages may not sum due to rounding. Percentages are based on gross market value of real estate investments. The Investable Universe inventory model has provided superior investment returns (relative to NPI) for 31 of the past 39 years, and with a lower standard of deviation. Data for Investable Universe updated as of December 31, 2016 (updated annually). The Investable Universe as tracked by our Research team is an estimate of the market value of Institutional-quality commercial real estate in 64 of the largest US metro areas for the four primary property sectors: apartments, industrial, office and retail. It provides a larger sample size (approximately USD 5.0 trillion) of assets as compared to the USD 471.7 billion tracked by NPI (as of December 31, 2016).

TPF 10 largest markets and assets

Major market exposure and low property concentration risk

Markets by % of Fund

New York	14%
Chicago	11%
Los Angeles	10%
San Francisco	8%
Boston	7%
Washington DC	7%
Dallas	5%
Denver	5%
Portland, OR	4%
Phoenix	3%
	74%

Assets	Location	Property type	Gross Market Value (USD Mil)	% Portfolio
53 State Street	Boston	CBD Office	792.0	3%
CambridgeSide Galleria ⁽¹⁾	Boston	Regional Mall	625.2	3%
Galleria Dallas	Dallas	Regional Mall	606.0	3%
135 West 50th Street ⁽¹⁾	New York	CBD Office	589.0	3%
120 Broadway	New York	CBD Office	557.1	2%
35 West Wacker	Chicago	CBD Office	522.4	2%
Liberty Green-Liberty Luxe ⁽¹⁾⁽²⁾	New York	High-rise Apartments	518.0	2%
1177 Avenue of the Americas	New York	CBD Office	484.3	2%
US Bancorp Tower	Portland	CBD Office	469.7	2%
Water Tower Place	Chicago	Regional Mall	466.1	2%
			5,629.8	25%



53 State Street



Water Tower Place



CambridgeSide Galleria



120 Broadway

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). ⁽¹⁾Converted to Core from an initial Value-added strategy. ⁽²⁾Participating mortgage investment. Notes: Percentages are based on gross market value of real estate investments. See required notes page at the end of this section or presentation. Amounts may not sum due to rounding. Past performance is not indicative of future results.



TPF positioning

Current environment

- Mature economy
- Lower appreciation returns
- Slowing NOI growth

TPF composition

- Greater allocation apartments/lower allocation office vs NFI-ODCE
- Increasing industrial allocation
- Balanced coastal (East/West) concentration

TPF risk profile

- Lower leverage
- Well-leased portfolio
- Low volatility/standard deviation

TPF growth potential

- Forecasted 2018 same-property NOI growth of 6.0%
- Future value creation from existing assets

TPF disposition focus

- De-emphasize hotels
- Reduce office allocation
- Sell older, non-accretive assets



2828 Zuni, Denver, CO



1221 Broadway, Oakland, CA



Monarc at Met 3, Miami, FL



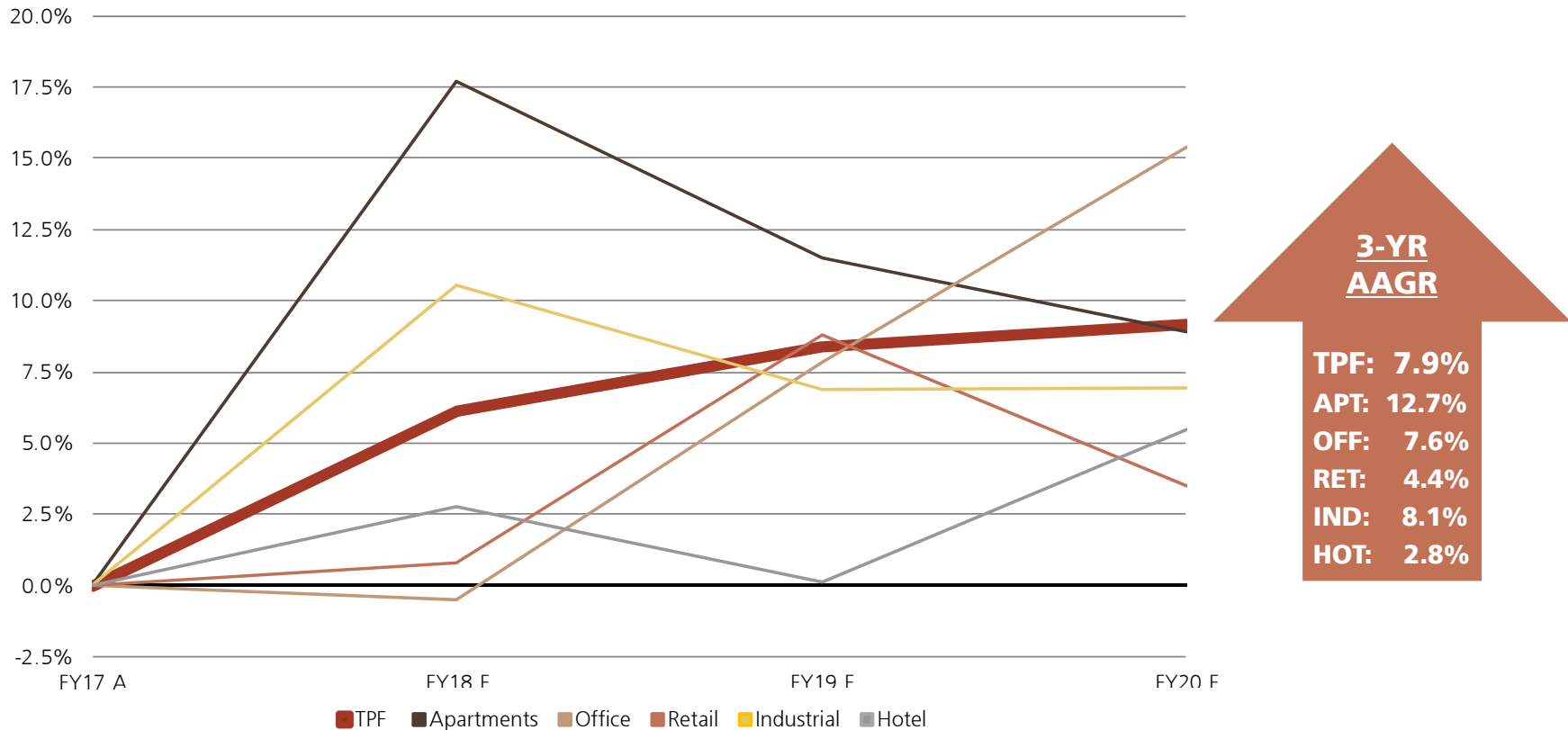
Water Tower Place, Chicago, IL

All data as of December 31, 2017, unless otherwise indicated below. Source: UBS Asset Management, Real Estate & Private Markets (REPM) and NCREIF. The manager seeks to achieve the stated objective. There can be no assurances those objectives will be met. See Required notes page at the end of this section or presentation.



TPF Net Operating Income Forecast

NOI growth currently forecasted at an average annual rate of 7.9% next three years

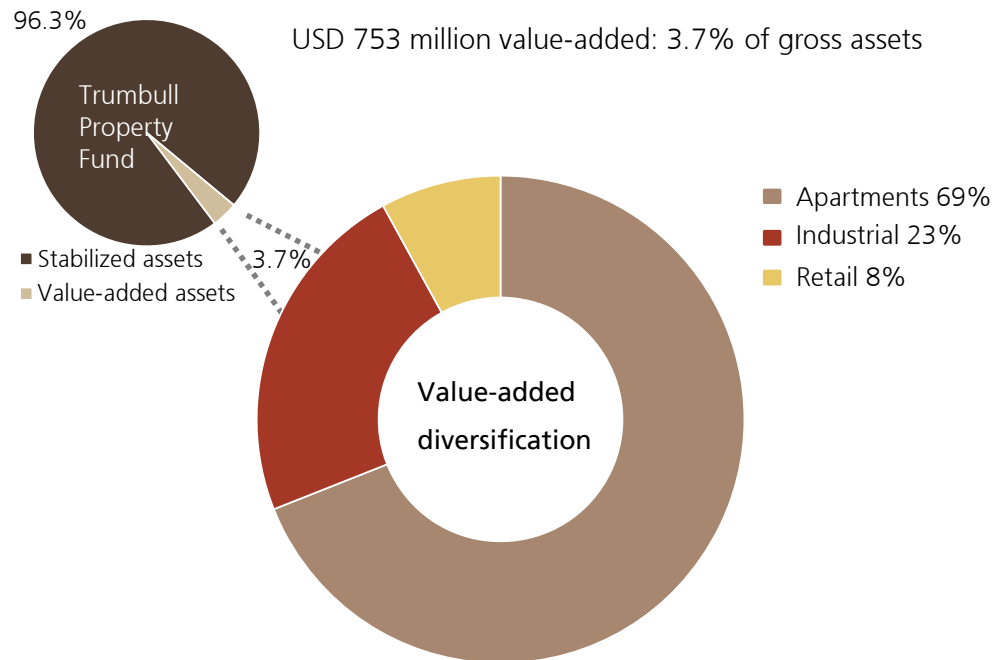


Data as of September 30, 2017. The TPF NOI forecast is not intended to be a projection of fund returns and should not be relied upon as such. NOI growth above includes both stabilized and value-added assets. The data in the forecasts is unleveraged and at the 100% property level. The 3-year NOI growth forecasts include all of the assets held in the Fund as of 9/30/17, except for any assets actually sold by 10/31/17. Individual cash flows contain the actual lease terms of existing tenants and in-place operating expenses, and include assumptions about lease renewals and costs, as well as income and expense growth rates. The Advisor bases these measurements on assumptions that it believes are reasonable and consistent with industry standards. All forecasts contained in the presentation are opinions only and are based on available information at the time of writing. Accordingly, such statements are inherently speculative as they can be affected by incorrect assumptions or known or unknown risks and uncertainties. The outcomes ultimately achieved may differ substantially from the forecasts.



TPF value-added risk management

Value creation through "building to core" with experienced developers



Value creation:

- Multifamily 34% average
- Industrial 21% average

Active risk management:

- Value-added level tailored to economy and market
- Partners cover cost overruns backed by guarantees
- External & internal engineering reviews
- No entitlement or zoning risk

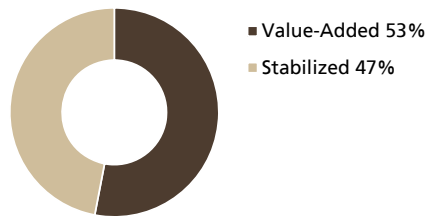
Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). Percentages are based on gross market value of real estate investments. Percentage totals may not sum due to rounding. Past performance is not indicative of future results. As of June 30, 2017 the value-added methodology for TPF was changed to align with the NCREIF Life Cycle definitions. As a result, development assets will be included in the value-added allocation until they are completed and they have achieved 60% leased status (or have been available for lease for one year).

TPF acquisition activity - previous 12 months

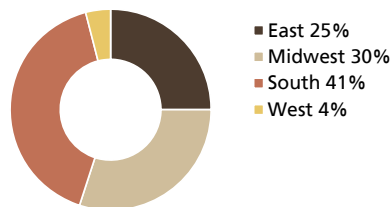
Build-to-core for value creation potential; strategic existing investments for in-place income

- USD 376 million committed in 32 transactions
- Existing relationships provide opportunities
- Continued value-added investment
- Industrial, apartments and medical office
- 2018 – estimate USD 500 million commitments

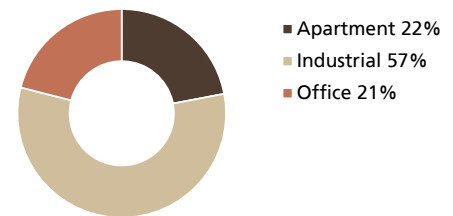
Strategy



Geographic Region



Property Type



LakeView XVIII, Pleasant Prairie, WI



Stony Brook Technology Center, East Setauket, NY



Becknell – Airport Commerce Park, Orlando, FL



The Caruth, Dallas, TX

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). Investments shown either reflect a unique investment opportunity or are the largest, based on gross asset value, acquired during the past 12 months.

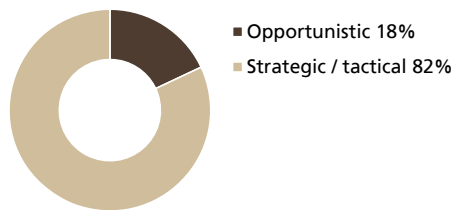


TPF disposition activity - previous 12 months

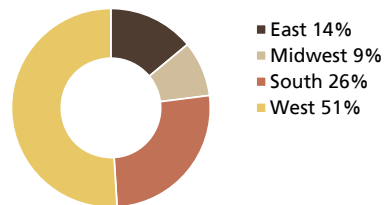
Primarily older properties with increasing capital requirements

- 2017 – USD 1.0 billion closed in 29 transactions
- Continue to improve risk profile
- 2018 – Estimate – USD 1.0 billion

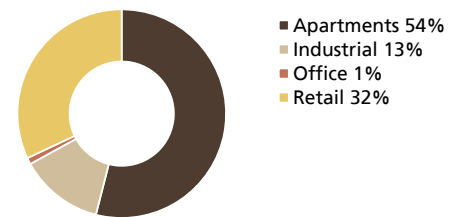
Sale strategies



Geographic Region



Property Type



Riverside Plaza, Riverside, CA



Chino Spectrum Towne Center, Chino, CA



St. Paul Business Center, Maplewood, MN



Solano at Miramar, Miramar, FL

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). Investments shown either reflect a unique investment opportunity or are the largest, based on gross asset value, sold during the past 12 months.

TPF financing update

Increased access to investments, fund major capital and minimize cash

Leverage ratio

- Manage to 20% max / current 17.2%
- NFI-ODCE ratio (excluding TPF) at 21.9%
- Weighted avg LTV for financed assets 34%

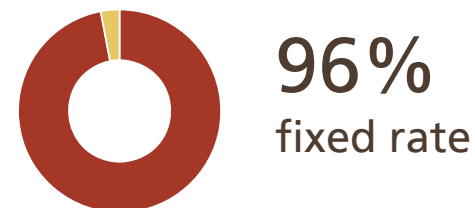
Financing management

- Minimize overall financing costs
- Manage future interest rate risk & maturities
- Maximize property sale flexibility

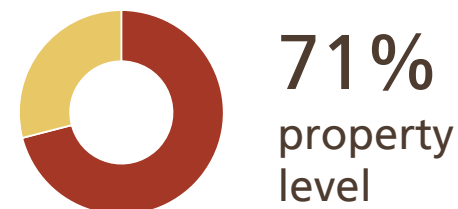
Current position

- Weighted avg interest rate is 3.4%
- Weighted avg maturity of 5.6 years

Fixed vs Floating rate debt



Property vs Fund level debt



Property level debt

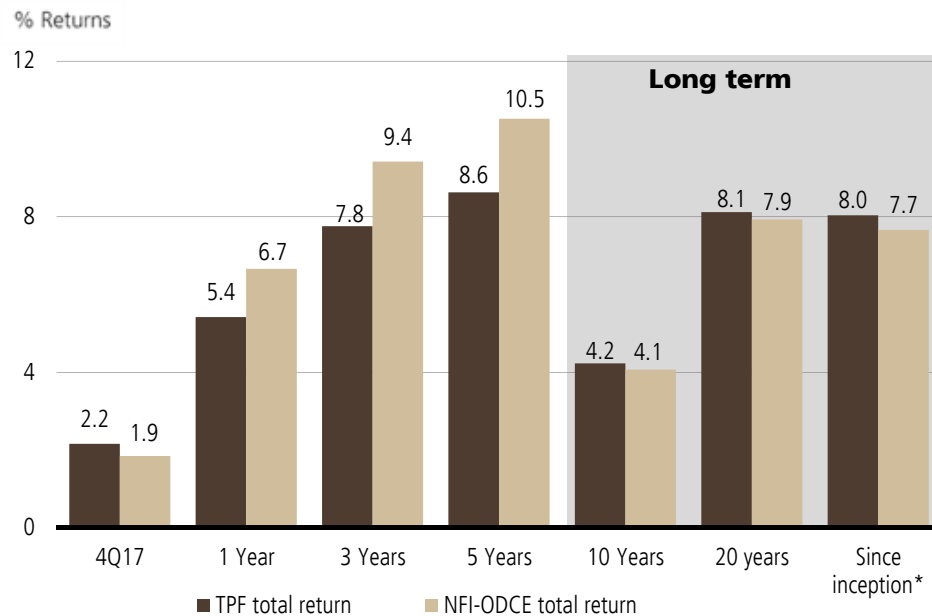


Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). NCREIF is the source of NFI-ODCE. NFI-ODCE leverage ratio including TPF is 21.4%.

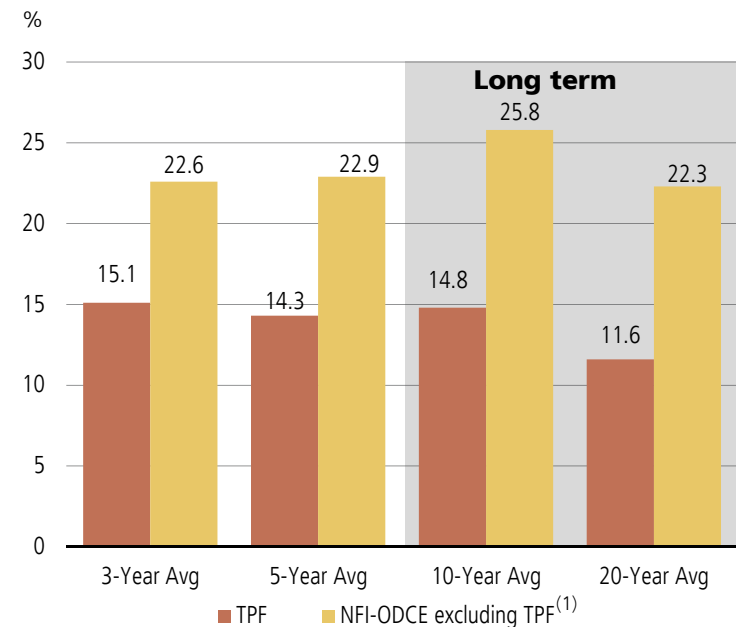
TPF performance

Long-term outperformance with lower leverage

Net TPF total return vs Net NFI-ODCE total return as of December 31, 2017



Weighted Average Leverage Percentage as of December 31, 2017



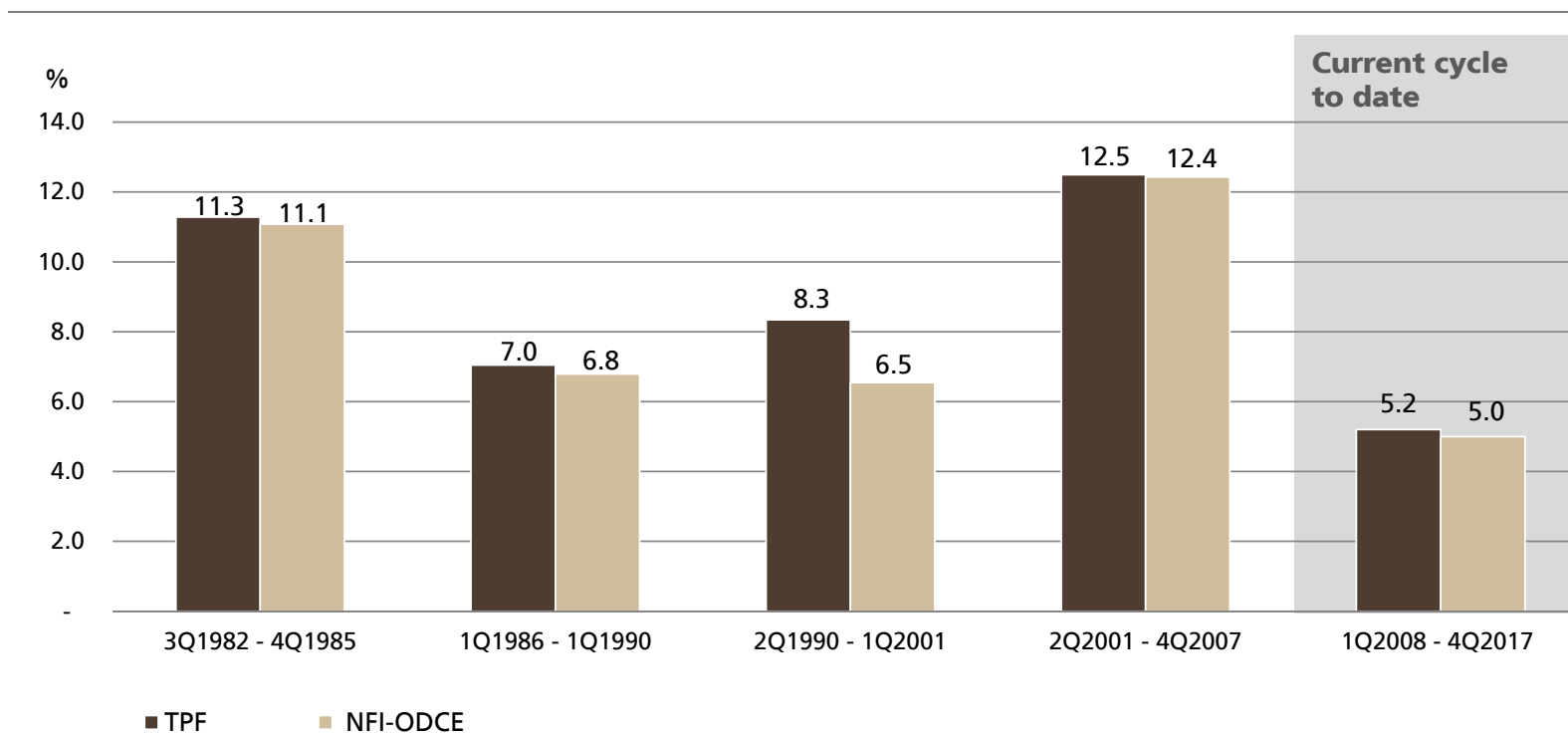
Sources: UBS Asset Management, Real Estate & Private Markets (REPM). NCREIF is the source of NFI-ODCE. Notes: *January 1978 inception date. Returns supplement the Firm's Equity Composite. Past performance is not indicative of future results.

¹⁾Leverage ratios of NFI-ODCE including TPF are as follows: 3-year average 21.7%, 5-year average 21.9%, 10-year average 24.3%, and 20-year average of 20.8% as of December 31, 2017.



Full market cycle total returns – peak to peak

TPF outperformed NFI-ODCE in all full market cycles

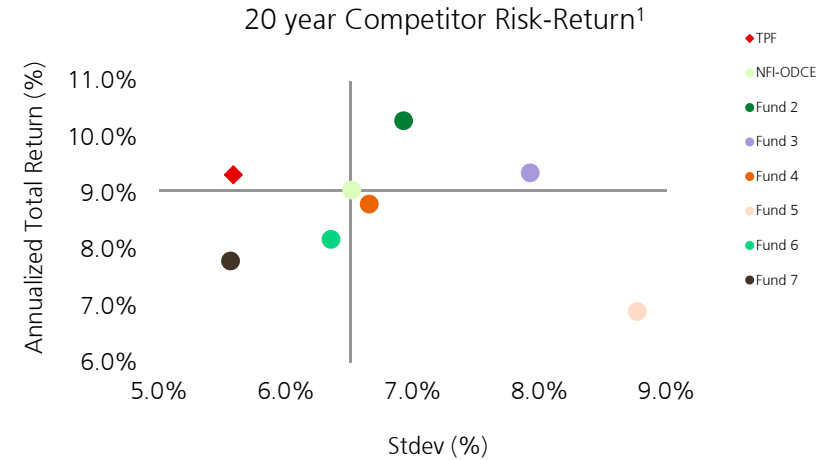
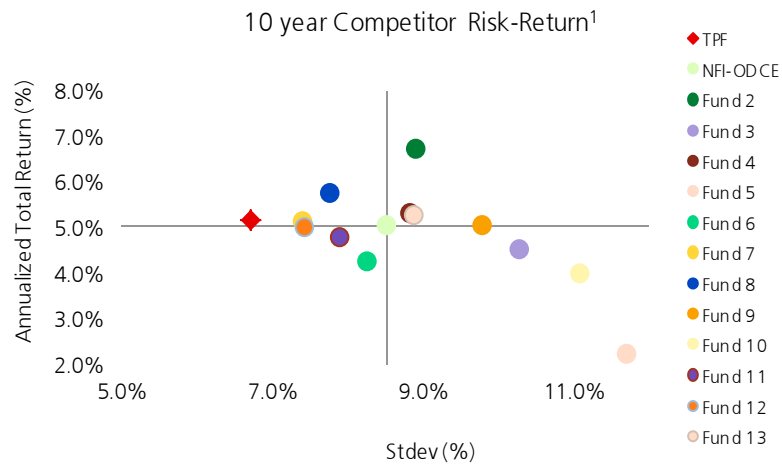


Data as of December 31, 2017. Data shown is back to 1982. All returns are annualized and are gross of fees. Source: UBS Asset Management, Real Estate & Private Markets (REPM). NCREIF is the source of NFI-ODCE. Notes: For purposes of measuring these performance objectives, a "full market cycle" is defined as a period of time from a peak valuation through a trough and a return to a new peak. The Advisor bases these measurements on assumptions that it believes are reasonable and consistent with industry standards. See required notes pages at the end of this section or presentation. Past performance is not indicative of future results.



TPF risk-return profile vs. NFI-ODCE peers

TPF delivers superior risk adjusted returns across real estate cycles



NCREIF-Reported Risk Characteristics for TPF

Measure	10 year value	Ranking (out of 13 Funds)
Sharpe Ratio	0.74	#2
Standard Deviation	6.72%	#1
Jensen Alpha	1.14%	#2
Beta	0.78	n/a



New Village Apartments, Patchogue, NY






Data as of December 31, 2017 unless otherwise noted. Source: UBS Asset Management, Real Estate & Private Markets (REPM) and NCREIF. ¹Competitor Risk-Return charts are as of September 30, 2017. Notes: TPF Risk Characteristics: Sharpe Ratio measures return per unit of risk. Standard Deviation is an annualized standard deviation that measures the variability of fund returns. Jensen Alpha measures the excess fund return adjusted for systematic risk (risk-free rate and beta). Regression Beta measures the variability of returns in relation to NFI-ODCE. Total returns are annualized and are reported gross of management fees. Please see the Required Notes page for additional information. Past performance is not indicative of future results.



TPF 2018+ investment direction

Where we see value

Investment direction

<p>Apartments</p> 	<p>Industrial</p> 	<p>Retail</p> 	<p>Office</p> 	<p>Other</p> 
<ul style="list-style-type: none"> • Both stabilized and development • Demand high, tracking new supply by submarket 	<ul style="list-style-type: none"> • Both stabilized and development • Key relationships provide pipeline 	<ul style="list-style-type: none"> • Both stabilized and repositioning assets • Internet-resistant retail formats and tenants 	<ul style="list-style-type: none"> • Invest selectively, primarily urban locations • Diversified tenant base + expirations, upside in rents 	<ul style="list-style-type: none"> • De-emphasizing hotels



US Bancorp, Portland, OR



Charleston at Boca Raton, Boca Raton, FL



Becknell – Glendale Heights, IL



Bay Street Emeryville, Emeryville, CA

Source: UBS Asset Management, Real Estate & Private Markets (REPM).



Proven manager and a proven product

Successful track record managing core real estate for almost forty years

Highly experienced team, disciplined investment process and comprehensive research support

Clearly defined and consistently executed core real estate strategy

Well diversified exposure across assets, sectors and geography

Large relative fund size provides access to major market investments

✓ **Robust income**

84% of total return since inception has come from income

Income return greater than NFI-ODCE for all time periods tracked

✓ **Low volatility**

Over last 10 years, ranked #2 for Sharpe Ratio and #1 for Standard Deviation¹

✓ **Competitive returns**

Superior risk-adjusted returns, achieving 9.0% since-inception gross return

Delivering superior risk-adjusted investment performance across real estate cycles

Data as of December 31, 2017.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). NCREIF is the source of NFI-ODCE. Past performance is not indicative of future results. Notes: ¹Ranked #2 (out of 14 funds) for Sharpe Ratio and #1 for Standard Deviation, on a 10-year basis, as calculated by NCREIF as of December 31, 2017.

Trumbull Property Fund

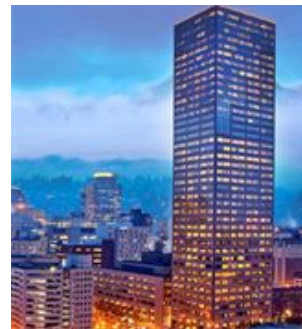
Representative assets



73 East Lake, Chicago, IL



CambridgeSide Galleria, Cambridge, MA



US Bancorp Tower, Portland, OR



1221 Broadway, Oakland, CA



555 17th Street, Denver, CO



Apex I, Los Angeles, CA

Photographs of current TPF properties are shown for illustrative purposes. The properties within the Fund are expected to change over time as investments are acquired and sold.
Source: UBS Asset Management, Real Estate & Private Markets (REPM); January 1, 2017.



Section 4.A

Trumbull Property Fund (TPF)

Appendix



TPF strategy and guidelines

Strategy	Provide broad real estate market diversification to maximize risk adjusted returns
Fund Style & Liquidity	Open-end fund, with quarterly liquidity (subject to available capital); USD 5 million minimum
Financial Objective ⁽¹⁾	<ul style="list-style-type: none"> • Seek to outperform the NFI-ODCE index over a full market cycle • Seek to achieve at least a 5% real rate of return (i.e. inflation- adjusted return) before management fees, over any given 3-5 year period
Fund Investment Guidelines ⁽²⁾	<ul style="list-style-type: none"> • Equity investments at least 70% of Gross Asset Value (“GAV”) • Third Party Joint Ventures limited to 50% of GAV • Debt investments maximum of 30% of GAV (construction loans limited to 10% of GAV) • Publicly traded real estate securities or debt instruments limited to 5% of GAV • Combination of all value-added assets will generally range between 5-15% of total Portfolio Assets
Property type and geographic spread	<ul style="list-style-type: none"> • Apartments, hotels, industrial, retail and office throughout the US • NCREIF property type maximum 50% of GAV • NCREIF region maximum 50% of GAV • Local market (CBSA) maximum of 20% of GAV • Single investment maximum 10% of GAV
Leverage	<ul style="list-style-type: none"> • Mortgage debt generally not to exceed 20% of GAV • Short-term debt generally not to exceed 15% of GAV
Standard of care	Advisor subject to ERISA Fiduciary standard of care

Data as of December 31, 2017.

Source: UBS Asset Management, Real Estate & Private Markets (REPM).

Notes: ⁽¹⁾ There is no assurance that the financial objective will ultimately be realized and the possibility of loss does exist. There is no guarantee that the investment strategy will perform as expected. ⁽²⁾ The Advisor may permit temporary and/or immaterial deviations from the Investment Guidelines from time to time, in its discretion, if the Advisor believes that such deviations are in the best interest of the Fund.



Senior investment professionals - US

Investment Committee members average 33 years of industry experience

Senior investment professionals average 28 years of experience

Investment Committee		Portfolio Management, Investment Operations & Client Services		
<u>Head of Real Estate US and Committee Chair</u>	Matthew Lynch	<u>Trumbull Property Fund</u>	Kevin Crean Nolan Henry Mario Maturo Steve Olstein	Peter Shaplin Pamela Thompson Timothy Walsh
<u>Portfolio Management</u>	Paul Canning Kevin Crean Gary Gowdy Jeffrey Maguire	<u>Trumbull Property Income Fund</u>	Gary Gowdy	Chris Clayton
<u>Research & Strategy - Global</u>	William Hughes ⁽¹⁾	<u>Trumbull Property Growth & Income Fund</u>	Paul Canning	Peter Juliani
<u>Acquisitions</u> ⁽²⁾	John Connelly ⁽¹⁾ Rodney Chu Michael Mistretta William Moreno	<u>Separate Accounts</u>	Jeffrey Maguire	Peter Gilbertie
<u>Asset Management</u>	Thomas Enger ⁽³⁾ James Fishman ⁽³⁾	<u>UBS Trumbull Diversified Property Collective Fund</u>	William Hughes Laurie Tillinghast	Kurt Edwards Kara Foley
<u>Legal-General Counsel</u>	Steven Kapiloff ⁽¹⁾	<u>Portfolio & Client Services</u>	Thomas O'Shea Maria Bascetta Mia Dennis Thomas Klugherz Ronald Lanier	David Lawson Julie Pierro Wayne Wallace Catherine Schuster
<u>Portfolio & Client Services</u>	Thomas O'Shea ⁽¹⁾	<u>Research & Strategy - US</u>	Tiffany Gherlone	
		<u>Engineering</u>	Jeffrey Fraulino	
		<u>Dispositions</u>	William Robertson	
		<u>Accounting</u>	Carol Kuta	

Notes: (1) Department head. (2) The Acquisition Region Heads are voting members of the Investment Committee for any sale or disposition transaction. (3) Co-Heads of Asset Management.



TPF total sales

Year	Number of properties	Gross Sales proceeds (USD in thousands)	Last independent
1982	4	8,845	8,744
1983	8	34,977	34,531
1984	10	61,732	60,340
1985	13	68,425	65,569
1986	10	94,339	89,612
1987	8	198,001	176,560
1988	4	71,330	67,550
1989	14	349,075	306,360
1990	0	-	-
1991	2	24,400	25,100
1992	8	67,575	65,006
1993	6	32,347	31,250
1994	3	87,983	86,444
1995	2	12,317	11,902
1996	4	43,896	39,508
1997	2	49,058	47,830
1998	0	-	-
1999	1	1,597	1,648

Year	Number of properties	Gross Sales proceeds (USD in thousands)	Last independent
2000	5	75,191	58,319
2001	1	16,994	14,896
2002	4	53,126	48,868
2003	2	17,806	16,194
2004	6	25,472	24,771
2005	10	353,876	332,024
2006	9	143,904	134,162
2007	15	599,515	580,395
2008	9	384,975	366,466
2009	6	207,855	209,122
2010	5	35,482	34,692
2011	2	35,750	34,500
2012	6	292,338	290,640
2013	14	311,059	298,667
2014	2	57,771	55,612
2015	16	864,806	830,920
2016	10	372,007	366,110
2017	29	1,021,386	1,009,744
Total	250	6,075,210	5,824,056

Data as of December 31, 2017.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Notes: Number of properties sold may include portions of multi-parcel investments, and therefore may not tie to difference in total properties from year to year. Sales proceeds and appraised values are net of debt. From 1982-2007, sales proceeds and appraised values are also net of closing costs. The properties included in the calculation of total sales had been independently appraised or the appraisal reviewed and updated if necessary by an independent appraisal firm generally within six months of the date of sale.



TPF leasing

Percentage leased - end of period

	2009	2010	2011	2012	2013	2014	2015	2016	4Q2017
Apartments	94	95	95	94	94	95	94	94	93
Industrial	90	87	91	95	96	97	97	97	97
Office	92	92	90	92	91	94	95	89	88
Retail	92	95	93	94	95	95	95	94	94
Total	92	93	93	93	93	95	95	93	92



Orchard Town Center, Westminister, CO



Solano at Miramar, Miramar, FL



Burbank Empire Center, Burbank, CA

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM).

Notes: Leasing numbers exclude hotels. As of June 30, 2017, the leasing data methodology excludes land and development assets less than 60% leased (and available for lease less than one year), but includes all other assets.



TPF value-added stabilized assets (apartments)

Value creation through "building to core"

Page 1 of 2

Property Name	Property Type	City/State	Development cost (USD millions)	Stabilized property value (USD millions)	Stabilized valuation date	Stabilized value increase over development costs
RiverTrace at Port Imperial	Apartments	West New York, NJ	116.9	166.0	6/30/15	42%
73 East Lake	Apartments	Chicago, IL	116.7	197.7	6/30/15	69%
Element Uptown	Apartments	Charlotte, NC	69.8	105.1	12/31/15	51%
New Village Apartments	Apartments	Patchogue, NY	96.2	121.0	3/31/16	26%
The Boulevard	Apartments	Woodland Hills, CA	112.0	153.0	6/30/16	37%
The Brand	Apartments	Glendale, CA	157.8	195.0	9/30/16	24%
The Colony at the Lakes	Apartments	West Covina, CA	151.9	180.0	12/31/17	19%
NV	Apartments	Portland, OR	101.4	134.0	12/31/17	32%
The Reserve at Tinner Hill Apt	Apartments	Falls Church, VA	81.8	94.7	12/31/17	16%
Total Apartments			1,004.5	1,346.5		34%

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). Percentages are based on gross market value of real estate investments. Percentage total may not sum due to rounding. Past performance is not indicative of future results. Value creation to stabilization in current cycle (post Downturn) was 40% for multifamily and 19% for industrial assets.



TPF value-added stabilized assets (industrial)

Value creation through "building to core"

Page 2 of 2

Property Name	Property Type	City/State	Development cost (USD millions)	Stabilized property value (USD millions)	Stabilized valuation date	Stabilized value increase over development costs
Becknell Industrial – 2013	Industrial	Various locations	19.4	21.2	2013	9%
Becknell Industrial – 2014	Industrial	Richland, MS	2.1	2.6	12/31/2014	22%
Becknell Industrial – 2015	Industrial	Various locations	44.5	52.3	2015	17%
Sierra Business Park	Industrial	Fontana, CA	59.7	75.3	12/31/2015	26%
5119 District Boulevard	Industrial	Vernon, CA	25.1	27.6	6/30/2016	10%
Becknell Industrial - 2016	Industrial	Various locations	30.1	35.0	2016	16%
Becknell Industrial - 2017	Industrial	Various locations	145.3	175.5	2017	21%
Sierra Business Park – Phase II	Industrial	Fontana, CA	65.9	83.3	9/30/2017	26%
Total Industrial			392.2	472.8		21%
TOTAL Apartments and Industrial			1,396.7	1,819.3		30%

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). Percentages are based on gross market value of real estate investments. Percentage total may not sum due to rounding. Past performance is not indicative of future results. Value creation to stabilization in current cycle (post Downturn) has been 40% for multifamily and 19% for industrial assets.



TPF annual performance

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
<i>Percent %</i>														
Net investment income	8.42	9.97	9.68	9.96	9.05	8.87	8.86	8.40	7.53	6.80	5.60	6.06	6.36	7.38
Net realized/unrealized gain (loss)	0.77	3.39	7.47	7.02	0.67	3.76	4.00	1.04	0.17	0.08	0.13	1.89	(10.12)	(12.47)
Total, before management fee	9.24	13.61	17.69	17.49	9.76	12.87	13.12	9.51	7.71	6.88	5.74	8.04	(4.25)	(5.78)
Total, net of management fee	8.26	12.58	16.65	16.42	8.71	11.80	12.07	8.45	6.67	5.84	4.68	6.97	(5.14)	(6.48)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Percent %</i>														
Net investment income	7.95	8.60	9.70	9.88	10.33	9.88	8.59	8.73	8.99	8.99	8.38	7.91	7.28	6.85
Net realized/unrealized gain (loss)	(12.01)	(6.76)	2.42	2.14	5.59	12.56	7.33	3.97	7.59	(6.74)	0.51	1.52	6.89	13.61
Total, before management fee	(4.78)	1.41	12.30	12.18	16.34	23.34	16.39	12.96	17.08	1.79	8.93	9.52	14.54	21.13
Total, net of management fee	(5.47)	0.70	11.38	11.09	15.23	22.22	15.33	11.89	15.96	0.86	8.13	8.55	13.49	20.05

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Since Inception	% of total return
<i>Percent %</i>														
Net investment income	6.07	5.12	4.96	6.69	7.05	5.36	5.35	5.13	5.16	4.97	4.72	4.64	7.50	84%
Net realized/unrealized gain (loss)	10.12	8.49	(11.98)	(27.55)	9.32	7.55	4.62	5.12	6.29	7.69	2.40	1.61	1.42	16%
Total, before management fee	16.65	13.93	(7.46)	(22.30)	16.85	13.21	10.15	10.44	11.69	12.94	7.21	6.30	9.00	100%
Total, net of management fee	15.58	12.84	(8.29)	(22.94)	15.89	12.08	9.04	9.32	10.56	11.83	6.14	5.42	8.00	N/A

Data as of December 31, 2017.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Notes: Returns supplement the Firm's Equity Composite previously provided or included herein. See required notes page at the end of this section or presentation. Past performance is not indicative of future results. TPF began operations on January 13, 1978, thus the 1978 return is not for a full year. Returns are annualized.



TPF annual net performance

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
	<i>Percent %</i>													
Total, net of management fee	8.26	12.58	16.65	16.42	8.71	11.80	12.07	8.45	6.67	5.84	4.68	6.97	-5.14	-6.48
NFI-ODCE net of fees	16.44	19.41	16.82	15.83	6.25	12.18	12.51	8.21	5.59	5.59	0.40	5.59	0.40	-7.15
Difference	-8.18	-6.83	-0.17	0.59	2.46	-0.38	-0.44	0.24	1.08	0.25	4.28	1.38	-5.54	0.67

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	<i>Percent %</i>													
Total, net of management fee	-5.47	0.70	11.38	11.09	15.23	22.22	15.33	11.89	15.96	0.86	8.13	8.55	13.49	20.05
NFI-ODCE net of fees	-6.43	-0.47	5.07	6.01	10.53	13.94	15.29	12.05	13.19	4.64	4.57	8.28	12.00	20.15
Difference	0.96	1.17	6.31	5.08	4.70	8.28	0.04	-0.16	2.77	-3.78	3.56	0.27	1.49	-0.10

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Since Inception
	<i>Percent %</i>												
Total, net of management fee	15.58	12.84	-8.29	-22.94	15.89	12.08	9.04	9.32	10.56	11.83	6.14	5.42	8.00
NFI-ODCE net of fees	15.27	14.84	-10.70	-30.40	15.26	14.96	9.79	12.90	11.46	13.95	7.79	6.66	7.66
Difference	0.31	-2.00	2.41	7.46	0.63	-2.88	-0.75	-3.58	-0.90	-2.12	-1.65	-1.24	0.34

Data as of December 31, 2017.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Notes: Returns supplement the Firm's Equity Composite previously provided or included herein. See required notes page at the end of this section or presentation. Past performance is not indicative of future results. TPF began operations on January 13, 1978, thus the 1978 return is not for a full year. Returns are annualized.



TPF net performance

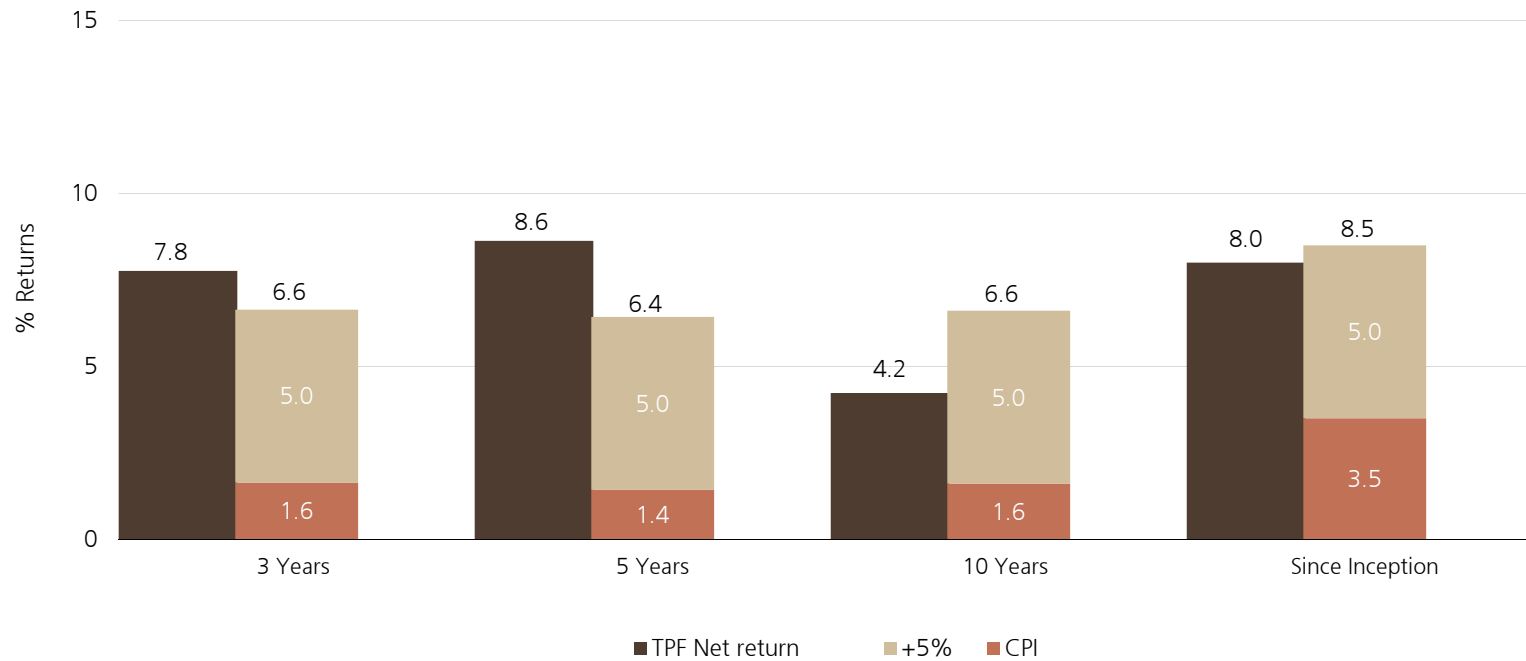
	4Q2017	One Year	Two Years	Three Years	Five Years	Seven Years	Ten Years	Twenty Years	Since Inception
<i>Percent %</i>									
Total, net of management fee	2.16	5.42	5.78	7.76	8.63	9.17	4.23	8.12	8.04
NFI-ODCE net of fees	1.85	6.66	7.22	9.42	10.52	11.04	4.07	7.93	7.66
Difference	0.31	-1.24	-1.44	-1.66	-1.89	-1.87	0.16	0.19	0.38

Data as of December 31, 2017.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Notes: Returns supplement the Firm's Equity Composite previously provided or included herein. See required notes page at the end of this section or presentation. Past performance is not indicative of future results. TPF began operations on January 13, 1978, thus the 1978 return is not for a full year. Returns are annualized.



Net TPF real return performance



Data as of December 31, 2017.

Source: UBS Asset Management, Global Real Estate – US, and the source of CPI is Bureau of Labor Statistics.

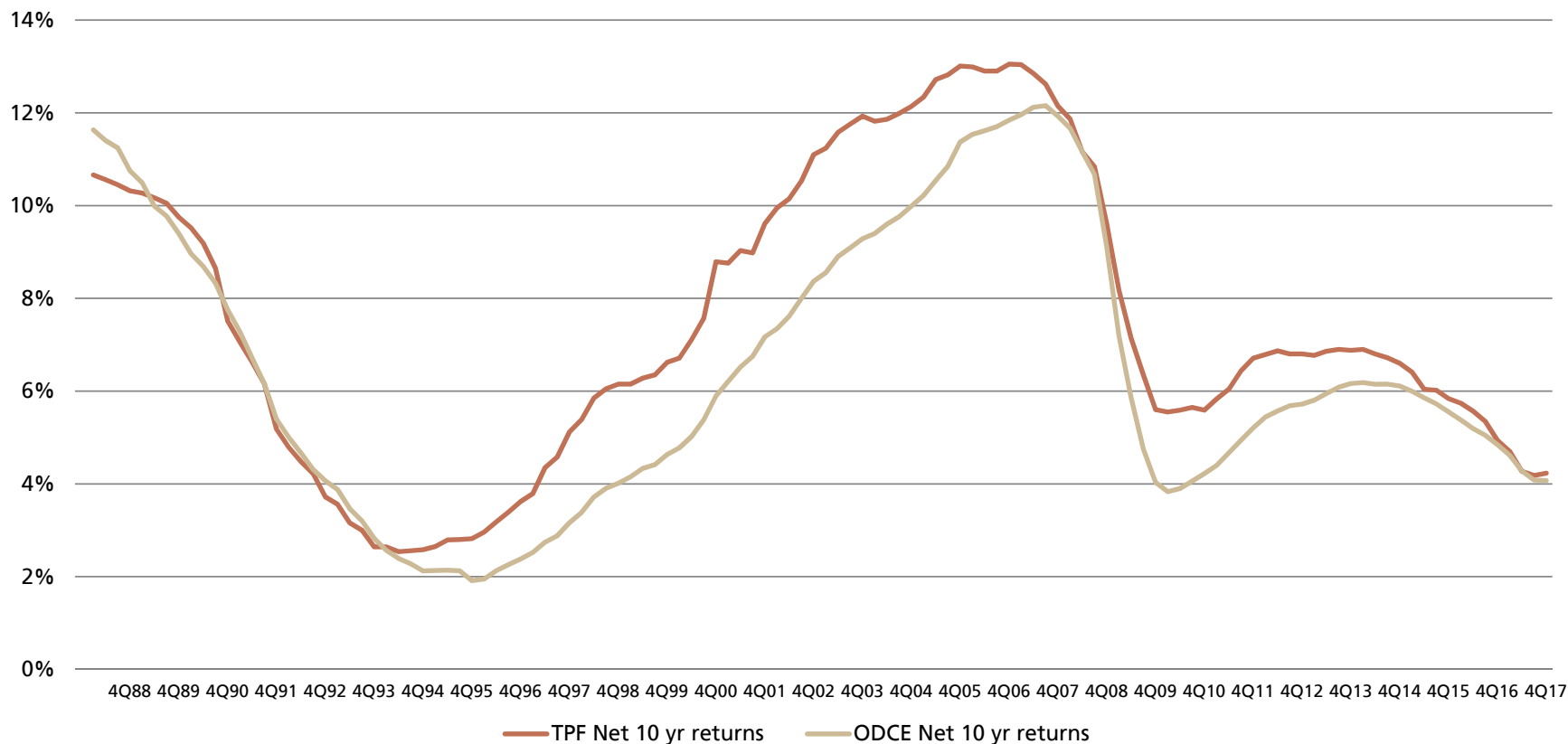
Notes: CPI is the Consumer Price Index, an inflationary indicator of the standard of living in the US. It is also referred to as the “cost of living” index.

Returns supplement the Firm’s Equity Composite. Fund Inception date January 13, 1978. Past performance is not indicative of future results.



TPF ten-year rolling net performance

Ten-year rolling net performance vs net NFI-ODCE as of December 31, 2017



Sources: UBS Global Asset Management, Global Real Estate – US and NCREIF is the source of NFI-ODCE

Notes: Returns supplement the Firm’s Equity Composite. As of December 31, 2017 the NFI-ODCE consisted of 24 active funds with total net assets of USD 178.0 billion. Past performance is not indicative of future results.

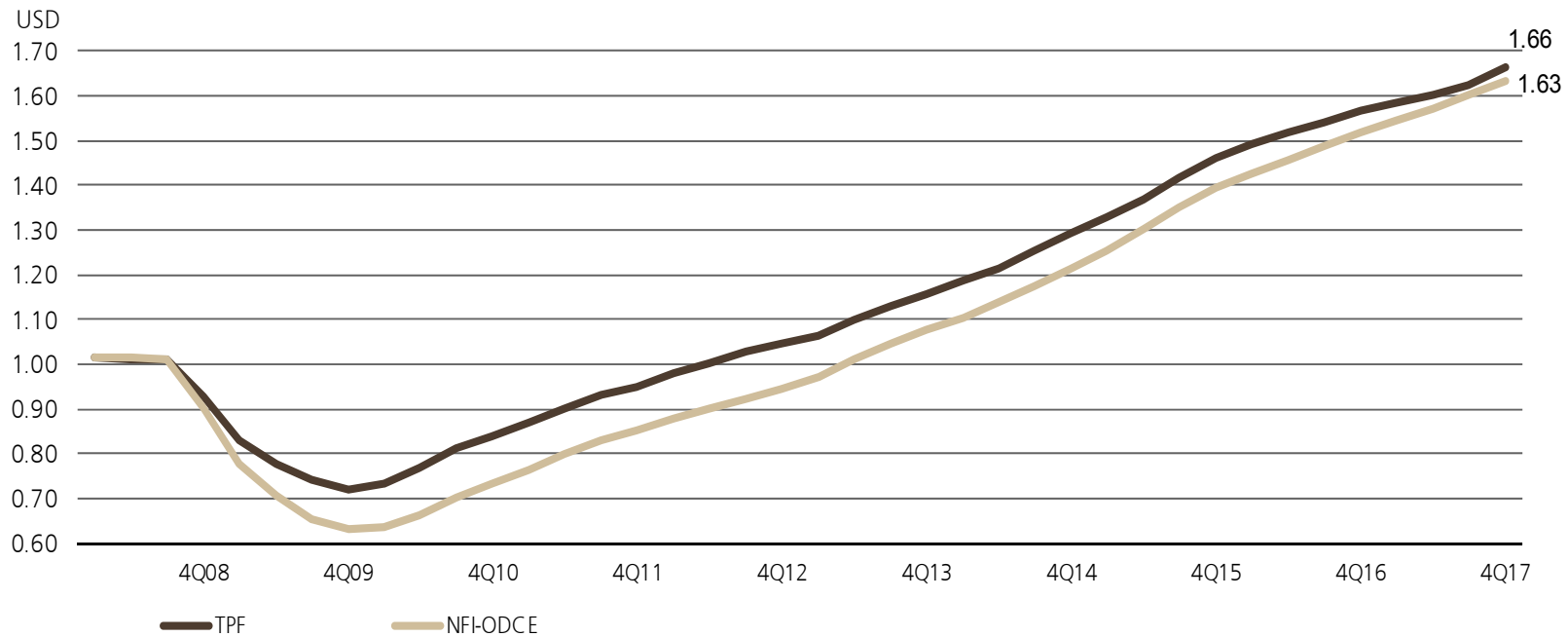


TPF outperformance across real estate cycles

A dollar invested in TPF is worth more than a dollar invested in NFI-ODCE

Wealth comparison current cycle to date¹

Peak to current

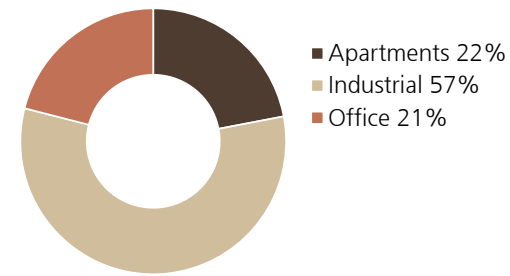
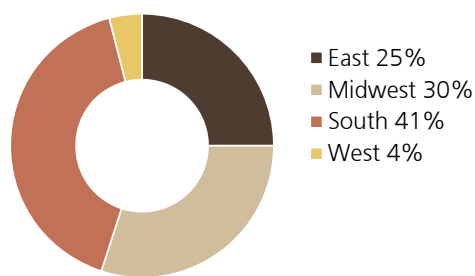
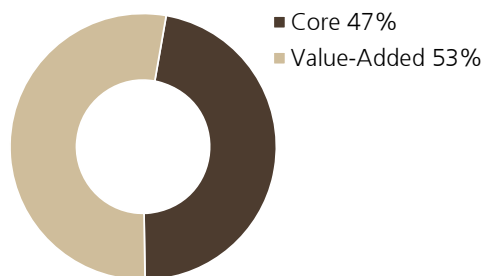


Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). NCREIF is the source of NFI-ODCE. NFI-ODCE as of 12/31/2017 is preliminary.

Notes: Returns supplement the Firm's Equity Composite previously provided or included herein. See required notes pages at the end of this section or presentation. ¹The Wealth comparison charts show how USD 1.00 invested in TPF/NFI-ODCE on 1/1/2008 would have grown over time before fees are deducted. Past performance is not indicative of future results. For purposes of measuring these performance objectives, a "full market cycle" is defined as a period of time from a peak valuation through a trough and a return to a new peak. The Advisor bases these measurements on assumptions that it believes are reasonable and consistent with industry standards.



TPF 2017 investments



Property	Property type	Location	Strategy	Date closed	Size	Gross investment (USD millions)
Becknell	Industrial	Henrico, VA	Value-Added	1/2017	153,473sf	7.8
Becknell	Industrial	Orlando, FL	Value-Added	3/2017	532,400 sf	34.0
Becknell	Industrial	West Chester, OH	Core	4/2017	120,493 sf	4.6
Stony Brook Technology Center	Office	East Setauket, NY	Core	4/2017	261,824 sf	77.0
Becknell	Industrial	Merrillville, IN	Value-Added	4/2017	182,000 sf	9.8
Lakeview XVIII	Industrial	Pleasant Prairie, WI	Value-Added	5/2017	417,384 sf	15.5
Becknell	Industrial	Greenwood, IN	Value-Added	6/2017	11 acres	0.4
Becknell	Industrial	Greenwood, IN	Value-Added	6/2017	15 acres	0.6
Subtotal						149.8

Data as of December 31, 2017

Source: UBS Asset Management, Real Estate & Private Markets (REPM). These properties represent some examples of fund investments. These types of investments may not be available or selected by the Fund in the future. Numbers may not sum due to rounding.



TPF 2017 investments

Property	Property type	Location	Strategy	Date closed	Size (USD millions)	Gross investment
Pleasanton Corporate Commons	Office	Pleasanton, CA	Core	7/2017	1 acre	1.8
Becknell	Industrial	Pompano Beach, FL	Value-Added	7/2017	68,500 sf	8.3
Becknell	Industrial	Henrico, VA	Value-Added	8/2017	202,560 sf	10.1
Becknell	Industrial	Whitestown, IN	Value-Added	9/2017	281,400 sf	11.5
Becknell	Industrial	Whitestown, IN	Value-Added	9/2017	143,000 sf	8.0
10601 Seymour Ave	Industrial	Franklin Park, IL	Value-Added	9/2017	559,780 sf	30.1
Becknell	Industrial	Spartanburg, SC	Value-Added	9/2017	13.78 acres	0.8
Becknell	Industrial	Fairfield, OH	Value-Added	9/2017	176,800 sf	8.8
Becknell	Industrial	Grove City, OH	Value-Added	10/2017	324,000 sf	14.1
Becknell	Industrial	Grove City, OH	Value-Added	11/2017	12 acres	1.2
Becknell	Industrial	Duluth, GA	Value-Added	11/2017	155,520 sf	10.2
The Caruth	Apartments	Dallas, TX	Core	11/2017	338 units	81.9
Becknell	Industrial	Spartanburg, SC	Value-Added	12/2017	171,600 sf	8.2
Subtotal						344.7

Data as of December 31, 2017

Source: UBS Asset Management, Real Estate & Private Markets (REPM). These properties represent some examples of fund investments. These types of investments may not be available or selected by the Fund in the future. Numbers may not sum due to rounding.



TPF 2017 investments

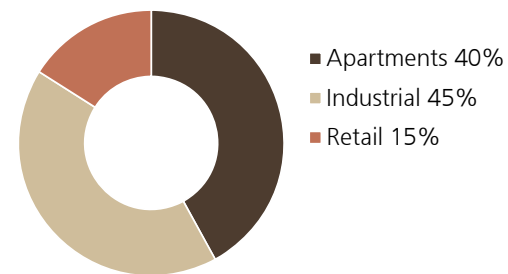
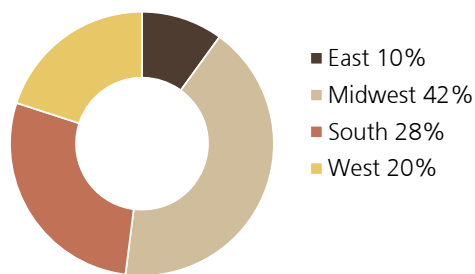
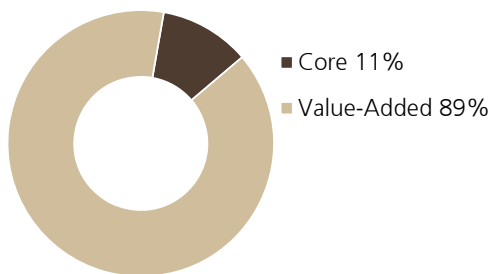
Property	Property type	Location	Strategy	Date closed	Size	Gross investment (USD millions)
Becknell	Industrial	Reno, NV	Core	12/2017	200,000 sf	12.1
Becknell	Industrial	Tampa, FL	Value-Added	12/2017	189,115 sf	12.1
Becknell	Industrial	Tampa, FL	Value-Added	12/2017	93,400 sf	6.6
Becknell	Industrial	Tampa, FL	Value-Added	12/2017	9 acres	0.9
Total						376.4

Data as of December 31, 2017

Source: UBS Asset Management, Real Estate & Private Markets (REPM). These properties represent some examples of fund investments. These types of investments may not be available or selected by the Fund in the future. Numbers may not sum due to rounding.



TPF 2016 investments



Property	Property type	Location	Strategy	Date closed	Size	Gross investment (USD millions)
WIP-Kato II	Industrial	Fremont, CA	Core	2/16	302,400 sf	43.0
WIP-Whipple	Industrial	Union City, CA	Core	2/16	117,420 sf	17.5
Becknell	Industrial	Whitestown, IN	Value-Added	3/16	38 acres	1.2
Addison Park on Clark	Apartments	Chicago, IL	Value-Added	3/16	148 units	59.3
Addison Park on Clark	Retail	Chicago, IL	Value-Added	3/16	145,628 sf	96.8
Becknell	Industrial	Westchester, OH	Core	3/16	138,750 sf	6.3
Becknell	Industrial	Orlando, FL	Value-Added	3/16	478,400 sf	29.4
The Residences at Port Jefferson	Apartments	Port Jefferson, NY	Value-Added	4/16	112 units	5.0
Becknell	Industrial	Davie, FL	Value-Added	4/16	130,350 sf	15.2

Data as of December 31, 2016

Source: UBS Asset Management, Real Estate & Private Markets (REPM). These properties represent some examples of fund investments. These types of investments may not be available or selected by the Fund in the future. Numbers may not sum due to rounding.



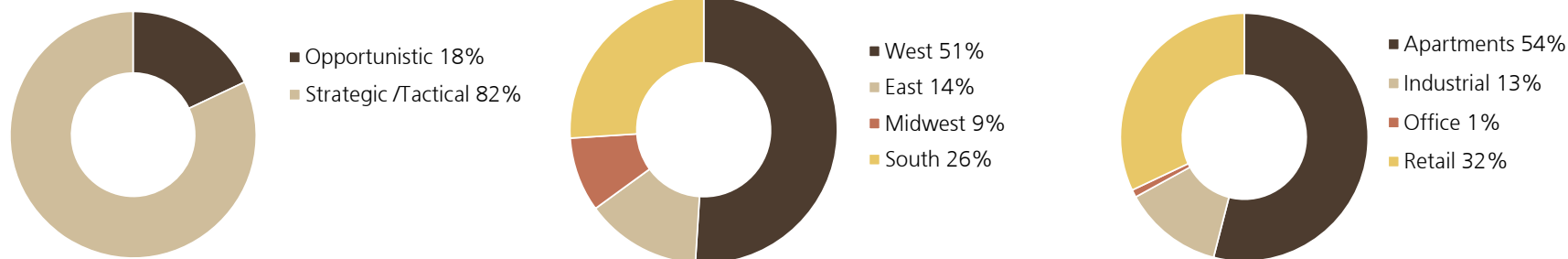
TPF 2016 investments

Property	Property type	Location	Strategy	Date closed	Size	Gross investment (USD millions)
PI-Bandini	Industrial	Vernon, CA	Value-Added	4/16	264,220 sf	39.0
LakeView XVII	Industrial	Pleasant Prairie, WI	Value-Added	4/16	200,607 sf	9.0
Becknell	Industrial	Wichita, KS	Core	5/16	113,524 sf	5.0
Avant at Met Square	Apartments	Miami, FL	Value-Added	6/16	391 units	142.8
Becknell	Industrial	Hobart, IN	Value-Added	7/16	124,800 sf	8.6
Becknell	Industrial	Whitestown, IN	Value-Added	7/16	68,250 sf	7.8
Becknell	Industrial	Grove City, OH	Value-Added	7/16	44 acres	4.1
Becknell	Industrial	Mount Comfort, IN	Value-Added	7/16	100,000 sf	5.3
Becknell	Industrial	Mount Comfort, IN	Value-Added	7/16	34 acres	1.1
Port Jefferson Residences	Apartments	Port Jefferson, NY	Value-Added	7/16	112 units	39.7
Becknell	Industrial	Spartanburg, SC	Value-Added	8/16	201,500 sf	9.9
Becknell	Industrial	Henrico, VA	Value-Added	8/16	216,000 sf	10.6
Becknell	Industrial	Aurora, CO	Value-Added	8/16	251,680 sf	19.5
Becknell	Industrial	Belvidere, IL	Value-Added	9/16	221,844 sf	17.3
Becknell	Industrial	Plainfield, IN	Value-Added	9/16	27 acres	2.6
Becknell	Industrial	Plainfield, IN	Value-Added	10/16	336,000 sf	13.1
Becknell	Industrial	Grove City, OH	Value-Added	11/16	322,000 sf	12.3
Total YTD						621.6

Data as of December 31, 2016. Source: UBS Asset Management, Real Estate & Private Markets (REPM). These properties represent some examples of fund investments. These types of investments may not be available or selected by the Fund in the future. Numbers may not sum due to rounding.



TPF 2017 dispositions



Property	Strategy	Property type	Location	Acquisition Date	Date closed	Size	TPF Gross Sales Price ¹ (USD millions)
Greenpoint Business Park—land parcel	Opportunistic	Industrial	Elmhurst, IL	7/1997	1/2017	3 acres	1.8
Estates at New Albany	Strategic	Apartments	Columbus, OH	6/2002	1/2017	428 units	53.3
CNT Lakeview Corporate Park—land parcel	Opportunistic	Industrial	Pleasant Prairie, WI	9/2007	4/2017	14 acres	1.0
Alexan CityCenter	Strategic	Apartments	Englewood, CO	4/2003	4/2017	438 units	97.0
Riverside Plaza	Opportunistic	Retail	Riverside, CA	9/2012	4/2017	403,922 sf	143.4
Harris Warehouse Properties	Opportunistic	Industrial	Naperville, IL	2/1996	4/2017	74,229 sf	3.2
Prospect Center	Strategic	Office	Rancho Cordova, CA	9/1989	5/2017	128,247 sf	12.4
Orchard Town Center—land parcel	Strategic	Retail	Westminster, CO	12/2013	5/2017	3 acres	1.8
Villas at Old Concord	Strategic	Apartments	Billerica, MA	2/2007	6/2017	324 units	86.5
Cumberland Crossing	Strategic	Apartments	Cumberland, RI	1/2006	6/2017	288 units	57.5
Subtotal							457.9

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). ¹ TPF Gross Sales Price is gross of debt and closing costs and is the Fund's share of the investment. These properties represent some examples of fund investments. These types of investments may not be available or selected by the Fund in the future. Numbers may not sum due to rounding.



TPF 2017 dispositions

Property	Strategy	Property type	Location	Acquisition Date	Date closed	Size	TPF Gross Sales Price ¹ (USD millions)
Becknell	Strategic	Industrial	Stone Mountain, GA	2/2005	7/2017	15,000 sf	1.7
Alexan Lenox	Strategic	Apartments	Atlanta, GA	9/2005	7/2017	305 units	59.3
Becknell	Strategic	Industrial	Dupo, IL	12/2011	7/2017	160,000 sf	6.0
Spectrum Towne Center	Strategic	Retail	Chino, CA	12/2005	7/2017	459,989 sf	138.5
Mesa Spectrum Towne Center	Strategic	Retail	Mesa, AZ	12/2005	7/2017	241,057 sf	40.9
Becknell	Strategic	Industrial	Champaign, IL	12/2011	8/2017	39,790 sf	3.2
Lincolnshire Warehouse	Strategic	Industrial	Lincolnshire, IL	2/1996	8/2017	70,957 sf	5.4
Solano at Miramar	Strategic	Apartments	Miramar, FL	9/2007	8/2017	512 units	119.8
St. Paul Business Center	Strategic	Industrial	Maplewood, MN	12/1996	9/2017	185,750 sf	14.4
Becknell	Strategic	Industrial	Weston, FL	12/1997	10/2017	90,620 sf	7.3
Seneca at Cypress	Strategic	Apartment	Lutz, FL	8/2012	10/2017	451 units	78.9
CNT Gurnee—land parcel	Opportunistic	Industrial	Gurnee, IL	9/2007	10/2017	4 acres	0.9
1400 Busse Road	Strategic	Industrial	Elk Grove Village, IL	10/2008	11/2017	2 acres	1.1
766 Watervliet Shaker Rd	Strategic	Industrial	Latham, NY	2/2005	11/2017	39,686 sf	1.6
Subtotal							936.9

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). ¹ TPF Gross Sales Price is gross of debt and closing costs and is the Fund's share of the investment. These properties represent some examples of fund investments. These types of investments may not be available or selected by the Fund in the future. Numbers may not sum due to rounding.



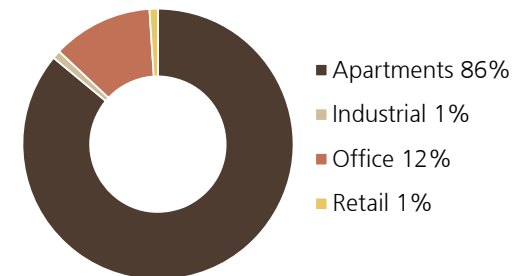
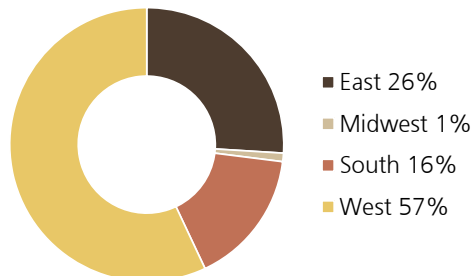
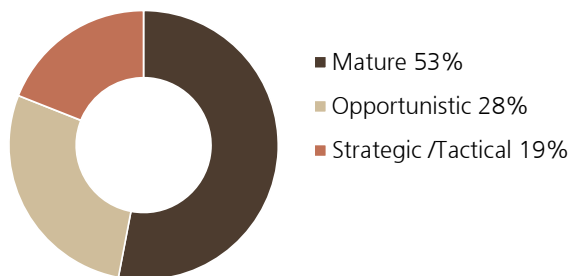
TPF 2017 dispositions

Property	Strategy	Property type	Location	Acquisition Date	Date closed	Size	TPF Gross Sales Price ¹ (USD millions)
7200 West Buckeye Rd	Opportunistic	Industrial	Phoenix, AZ	12/2013	12/2017	400,000 sf	31.2
Becknell	Strategic	Industrial	Mentor, OH	9/2007	12/2017	71,659 sf	2.3
Westcore–Broadway	Strategic	Industrial	Denver, CO	9/2015	12/2017	71,193 sf	8.3
Westcore–Bryant Street Quad	Strategic	Industrial	Denver, CO	9/2015	12/2017	152,940 sf	15.3
Westcore–Table Mountain	Strategic	Industrial	Golden, CO	9/2015	12/2017	261,825 sf	27.5
Total							1,021.4

Data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM). ¹ TPF Gross Sales Price is gross of debt and closing costs and is the Fund's share of the investment. These properties represent some examples of fund investments. These types of investments may not be available or selected by the Fund in the future. Numbers may not sum due to rounding.



TPF 2016 dispositions



Property	Strategy	Property type	Location	Acquisition Date	Date closed	Size	TPF Gross Sales Price ¹ (USD millions)
Deerbrook Land	Opportunistic	Retail	Humble, TX	12/2013	1/2016	8.9 acres	0.9
South Center I to IV	Mature	Office	Tualatin, OR	8/1998	4/2016	341,904 sf	44.3
3050 Windy Hill Road	Opportunistic	Retail	Atlanta, GA	10/2004	8/2016	2 acres	3.5
Lodge at Peasley Canyon Apts	Strategic/tactical	Apartments	Federal Way, WA	6/2011	9/2016	339 units	70.2
Summit Apartments	Mature	Apartments	Mount Laurel, NJ	12/1994	10/2016	288 units	39.0
Jefferson at Bellingham	Mature	Apartments	Bellingham, MA	9/2006	10/2016	285 units	58.4
CNT-Lakeview Corp. Park Land	Opportunistic	Industrial	Pleasant Prairie, WI	9/2007	10/2016	17 acres	1.2
Oaks at Valley Ranch	Mature	Apartment	Irving, TX	8/1985	12/2016	529 units	54.6
CNT-Lakeview Corp. Park Land	Opportunistic	Industrial	Pleasant Prairie, WI	9/2007	12/2016	12 acres	1.0
The Wellington	Opportunistic	Apartment	Laguna Hills, CA	8/1988	12/2016	233 units	99.0
Total							372.0

Data as of December 31, 2016. Source: UBS Asset Management, Real Estate & Private Markets (REPM). ¹ Gross of debt and closing costs and is the Fund's share of the investment. These properties represent some examples of fund investments. These types of investments may not be available or selected by the Fund in the future. Numbers may not sum due to rounding.



Sustainability – A leadership position in ODCE

TPF's Green Philosophy - Reduce environmental impact, maximize total returns

- ★ #2 of 39 for 2017 US Diversified – Non-listed peer funds, GRESB 5-Star rating
- ★ Established goals for reductions in energy, water, waste and greenhouse gas (GHG). Reduced GHG emissions by 5.7% last year
- ★ LEED designations achieved for 91% of urban office properties, most new high-rise multifamily properties
- ★ UBS Realty Investors LLC recognized as a Premier Member by Energy Star in 2014
- ★ Sustainability case studies for three TPF properties published by GRESB and ULI, two for innovation and one on resilience



53 State Street, Boston, MA



455 Market Street,
San Francisco, CA



1670 Broadway, Denver, CO



All data as of December 31, 2017. Source: UBS Asset Management, Real Estate & Private Markets (REPM) and GRESB. See required notes page at the end of this section or presentation.

Our corporate sustainability mission consists of delivering superior risk-adjusted investment performance by integrating sustainability considerations into our investment processes; implementing sustainable practices through innovation and the sharing of best practices; and addressing environmental impacts while enhancing property operations and values. As such, sustainability plays a major role in corporate-, fund- and property-level decisions.



UBS Realty Investors Equity Composite

Year	Year-end		Total Firm Net Assets (USD millions)	Gross of fees (%)			Benchmark return (%)	Net of fees (%)		Range of Gross Returns (%)		Asset weighted standard deviation	% of Composite assets valued externally ⁽¹⁾
	Number of accounts	Composite Net Assets (USD millions)		Income return	Appreciation (depreciation)	Total return		Total return	Max	Min			
											Year-end Composite Net Assets (USD millions)		
2007	9	12,155	14,798	5.14	8.85	14.32	15.97	13.20	38.6	11.7	2.93	100	
2008	9	10,445	13,285	4.99	(12.21)	(7.67)	(10.01)	(8.47)	(4.2)	(41.0)	1.91	100	
2009	9	7,995	10,232	6.68	(27.91)	(22.69)	(29.76)	(23.32)	(11.8)	(62.2)	4.23	100	
2010	8	9,687	12,107	7.10	9.37	16.95	16.36	15.92	42.0	4.7	3.20	100	
2011	8	12,404	15,241	5.57	8.20	14.10	15.99	12.96	35.3	8.6	2.88	100	
2012	9	14,679	17,325	5.45	5.07	10.73	10.94	9.63	25.8	(2.5)	2.53	100	
2013	9	16,114	19,206	5.22	5.40	10.83	13.94	9.71	26.5	(38.7)	2.68	100	
2014	9	18,788	22,252	5.21	6.61	12.07	12.50	10.94	35.8	6.7	2.46	100	
2015	7	21,383	25,379	5.06	8.11	13.47	15.02	12.33	26.3	8.6	2.05	100	
2016	7	22,534	26,744	4.77	2.99	7.86	8.77	6.80	23.2	7.2	2.15	100	

1. Compliance Statement Global Real Estate – US (the Firm) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Global Real Estate - US has been independently verified since January 1, 1993. Verification assesses whether (1) the Firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the Firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The UBS Realty Investors Equity Composite has been independently examined for the periods January 1, 2007 through December 31, 2016. The verification and performance examination report is available upon request.

2. The Firm The Firm is defined as UBS Realty Investors LLC and UBS Farmland Investors LLC (prior to 2016, the UBS Farmland Investors LLC was known as UBS AgriVest LLC), together Global Real Estate - US. Both entities are registered with the US Securities and Exchange Commission as investment advisors. As of January 1, 2017, the Firm will be known as Real Estate & Private Markets, Real Estate US. UBS Asset Management created a combined alternative asset division composed of real estate, private equity and infrastructure to create Real Estate & Private Markets. The Total Firm Gross Assets at December 31, 2016 were USD 31.7 billion, representing the fair value of total Firm assets held under management. Total Firm Net Assets represent the Total Firm Assets held under management less the fair value of liabilities.

3. The Composite The UBS Realty Investors Equity Composite (the "Composite") was created in 2005. All results are presented in US dollars. A complete list and description of Firm composites is available upon request. The Composite comprises all fee-paying, non-taxable discretionary accounts that invest primarily in equity real estate including, but not limited to, the following property types: apartments, office, retail, industrial, and hospitality. The strategy of the accounts in the Composite is to acquire investments in US commercial and multifamily real estate (core and value-added properties) expected to provide attractive risk-adjusted returns consisting of current income and capital appreciation. Since October 2003, a sub-advisor has managed the cash for some pooled accounts included in the Composite. Initially, accounts must have at least USD 30 million in commitments or assets, including debt, to be included in the Composite. Composite dispersion for any year is represented by both the range and the asset-weighted standard deviation of the gross total returns of the accounts that were in the Composite for the entire calendar year. Discretion is broadly defined as the Firm having discretion over the selection, capitalization, asset management, and disposition of investments within the parameters of a given mandate.

4. Valuation An independent appraisal of the underlying real estate for each investment is performed at least annually and includes a complete property inspection and market analysis. Starting October 1, 2009, independent appraisals are generally completed every quarter for most of the underlying real estate investments. For real estate investments that are held in funds where appraisals are not performed on a quarterly basis and prior to October 1, 2009, the underlying real estate is typically scheduled to be appraised twice a year. In the interim quarters, updated property and market information is reviewed. If this review indicates a potential material change in the value, the valuation is then updated by the independent appraiser. If this review indicates that any change in value is likely not material, the value is determined to remain unchanged. Valuations of real estate and debt use significant unobservable inputs. In general, each annual property appraisal includes at least an income approach using a discounted cash flow model and a sales comparison approach, which are considered in determining a final value conclusion. All appraisals are certified by members of the Appraisal Institute who hold the MAI designation. Third-party debt is stated at fair value. The valuation of debt is taken into consideration when determining the estimated fair value of the equity in the related investment.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Past performance is not indicative of future results. ⁽¹⁾Generally for those assets held longer than six months.



UBS Realty Investors Equity Composite

5. Calculation of Performance Returns reflect the impact of leverage, which averaged approximately 15.2% of gross asset value (net asset value plus debt) during 2007 through 2016, and approximately 16.6% in 2016. Leverage has consisted primarily of mortgage loans payable that are collateralized by the related real estate investment. The extent to which leverage is used varies by account strategy and may include either portfolio or property level debt. Expenditures, including tenant improvements and leasing commissions, that extend the useful life or represent additional capital investments benefiting future periods, are capitalized as a component of cost. Annual returns are time-weighted rates of return calculated by linking quarterly returns. The sum of income and appreciation (depreciation) may not equal total returns due to the linking of quarterly returns. Gross of fees returns are presented before all management fees, but after third-party expenses. Net returns are presented net of the management fees, performance fees and third-party expenses. All returns are presented before any applicable insurance company contract charges in effect on certain funds through February 29, 2008. The policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

6. Investment Management Fees Management fees differ by account and reflect the complexity and value of services chosen, anticipated size, and the number and type of investments involved. Depending upon the services, the fee may represent any one or a combination of: fixed flat amounts; a percentage of purchase price, earnings, assets under management, or of sales proceeds; or incentive fees based on performance. The fee for investment in one of the Firm's commingled funds can be up to 150 bps per annum (decreasing to 125 bps per annum effective January 1, 2016) on net asset value based upon the fee scale and the investor's share of net asset value in the fund and other UBS Realty sponsored funds as of the beginning of the quarter with an incentive fee charged on various performance hurdles, for example, 15% above a 7% real return over sequential 3-year periods, subject to certain clawback provisions depending on the performance of the fund. Please see the applicable fee schedule(s) appropriate to the product or services being presented.

7. Benchmark Effective May 2009, the Firm changed the benchmark retroactively from the property-level National Council of Real Estate Investment Fiduciaries ("NCREIF") Property Index ("NPI") to a fund-level Index, the NCREIF Fund Index-Open End Diversified Core Equity ("NFI-ODCE" or the "Index"). The Firm believes a fund-level index provides a more meaningful comparison for a fund-level composite. The NFI-ODCE, first published mid-2005, is a capitalization-weighted, time-weighted, fund-level return index beginning as of the first quarter of 1978, inclusive. It is presented gross of fees. As of December 31, 2016, the NFI-ODCE consisted of 24 active funds with total net assets of USD 167.5 billion. The NFI-ODCE leverage ratio at December 31, 2016 was 22.7%.

8. Market Conditions Over the past decade, commercial real estate experienced historic highs and lows. Fundamental recovery following the 2001 recession, along with a dramatic increase in the availability and reduction in the cost of debt capital propelled commercial and multifamily performance to the highest level in NCREIF history. In 2005, the NCREIF Fund Index – ODCE returned 21.4%, its highest calendar total return since its inception in 1978. A worldwide credit crisis initiated a new recession during 2008. Liquidity evaporated in most asset classes, including commercial real estate. Total returns turned negative in mid-2008, with 2009 producing the lowest performance on record at negative 29.8%. The downturn was swift, and 2010 through 2013 reflected a period of recovery. By late-2013, expansion was underway as total returns on stabilized properties had recouped losses, led by steady income growth and low supply growth across the broad market. After six years of double-digit returns led by above-average appreciation, the NFI-ODCE produced a gross return of 8.8% during 2016.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Past performance is not indicative of future results.



UBS Realty Investors Total Composite

Year	Year-end		Gross of fees (%)				Benchmark return (%)	Net of fees (%)		Range of Gross Returns (%)		Asset weighted standard deviation	% of Composite assets valued externally ⁽¹⁾
	Number of accounts ⁽²⁾	Composite	Total Firm	Income return	Appreciation (depreciation)	Total return		Total return	Range of				
		Net Assets (USD millions)	Net Assets (USD millions)						Max	Min			
2007	10	13,551	14,798	5.20	8.64	14.16	15.97	13.11	38.6	11.7	2.80	100	
2008	10	11,822	13,285	5.03	(11.61)	(7.01)	(10.01)	(7.79)	(1.3)	(41.0)	2.64	100	
2009	10	9,042	10,232	6.49	(27.32)	(22.21)	(29.76)	(22.85)	(11.8)	(62.2)	4.17	100	
2010	9	10,903	12,107	6.93	9.90	17.34	16.36	16.30	42.0	4.7	3.21	100	
2011	9	13,892	15,241	5.52	8.24	14.09	15.99	13.00	35.3	8.6	2.71	100	
2012	10	16,413	17,325	5.32	5.26	10.79	10.94	9.71	25.8	(2.5)	2.40	100	
2013	12	18,196	19,206	5.09	5.38	10.68	13.94	9.59	26.5	(38.7)	2.57	100	
2014	12	21,172	22,252	5.09	6.65	11.99	12.50	10.88	35.8	6.7	2.33	100	
2015	10	24,156	25,379	4.97	7.96	13.22	15.02	12.10	26.3	8.6	2.06	100	
2016	10	25,389	26,744	4.73	3.13	7.97	8.77	6.92	23.2	7.2	2.04	100	

1. Compliance Statement Global Real Estate - US (the Firm) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Global Real Estate - US has been independently verified since January 1, 1993. Verification assesses whether (1) the Firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the Firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The UBS Realty Investors Total Composite has been independently examined for the periods January 1, 2007 through December 31, 2016. The verification and performance examination report is available upon request.

2. The Firm The Firm is defined as UBS Realty Investors LLC and UBS Farmland Investors LLC (prior to 2016, the UBS Farmland Investors LLC was known as UBS AgriVest LLC), together Global Real Estate - US. Both entities are registered with the US Securities and Exchange Commission as investment advisors. As of January 1, 2017, the Firm will be known as Real Estate & Private Markets, Real Estate US. UBS Asset Management created a combined alternative asset division composed of real estate, private equity and infrastructure to create Real Estate & Private Markets. The Total Firm Gross Assets at December 31, 2016 were USD 31.7 billion, representing the fair value of total Firm assets held under management. Total Firm Net Assets represent the Total Firm Assets held under management less the fair value of liabilities.

3. The Composite The UBS Realty Investors Total Composite (the "Composite") was created in 1999. Prior to 2006, the Composite name was the UBS Realty Investors Composite. All results are presented in US dollars. A complete list and description of Firm composites is available upon request. The Composite comprises all fee-paying, non-taxable discretionary accounts that invest in real estate including, but not limited to, the following property types: apartments, office, retail, industrial, and hospitality. The strategy of the accounts in the Composite is to acquire investments in US commercial and multifamily real estate (core and value-added properties) expected to provide attractive risk-adjusted returns consisting of current income and capital appreciation. As of December 31, 2016, mortgage assets constituted USD 3.4 billion of the Composite Net Assets. Since October 2003, a sub-advisor has managed cash for some of the pooled accounts included in the Composite. Initially, accounts must have at least USD 30 million in commitments or assets, including debt, to be included in the Composite. Composite dispersion for any year is represented by both the range and the asset-weighted standard deviation of the gross total returns of the accounts that were in the Composite for the entire calendar year. Discretion is broadly defined as the Firm having discretion over the selection, capitalization, asset management, and disposition of investments within the parameters of a given mandate.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Past performance is not indicative of future results. ⁽¹⁾Generally for those assets held longer than six months. ⁽²⁾Includes Accounts managed by UBS Realty Investors LLC that are invested in other Accounts included in this Composite. These Accounts are excluded from the Composite Net Assets and Total Firm Net Assets.



UBS Realty Investors Total Composite

4. Valuation An independent appraisal of the underlying real estate for each investment is performed at least annually and includes a complete property inspection and market analysis. Starting October 1, 2009, independent appraisals are generally completed every quarter for most of the underlying real estate investments. For real estate investments that are held in funds where appraisals are not performed on a quarterly basis and prior to October 1, 2009, the underlying real estate is typically scheduled to be appraised twice a year. In the interim quarters, updated property and market information is reviewed. If this review indicates a potential material change in the value, the valuation is then updated by the independent appraiser. If this review indicates that any change in value is likely not material, the valuation is not updated by the independent appraiser. Valuations of real estate and debt use significant unobservable inputs. In general, each annual property appraisal includes at least an income approach using a discounted cash flow model and a sales comparison approach, which are considered in determining a final value conclusion. All appraisals are certified by members of the Appraisal Institute who hold the MAI designation. Third-party debt is stated at fair value. The valuation of debt is taken into consideration when determining the estimated fair value of the equity in the related investment.

5. Calculation of Performance Returns reflect the impact of leverage, which averaged approximately 14.8% of gross asset value (net asset value plus debt) during 2007 through 2016, and approximately 15.0% in 2016. Leverage has consisted primarily of mortgage loans payable with the related property serving as the collateral. The extent to which leverage is used varies by account strategy and may include either portfolio or property level debt. Expenditures, including tenant improvements and leasing commissions, that extend the useful life or represent additional capital investments benefiting future periods, are capitalized as a component of cost. Annual returns are time-weighted rates of return calculated by linking quarterly returns. The sum of income and appreciation or depreciation may not equal total returns due to the linking of quarterly returns. Gross of fees returns are presented before all management fees, but after third-party expenses. Net returns are presented net of the management fees, performance fees and third-party expenses. All returns are presented before any applicable insurance company contract charges in effect on certain funds through February 29, 2008. The policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

6. Investment Management Fees Management fees differ by account and reflect the complexity and value of services chosen, anticipated size, and the number and type of investments involved. Depending upon the services, the fee may represent any one or a combination of: fixed flat amounts; a percentage of purchase price, earnings, assets under management, or of sales proceeds; or incentive fees based on performance. The fee for investment in one of the Firm's commingled funds can be up to 125 bps per annum on net asset value based upon the fee scale and the investor's share of net asset value in the fund and other UBS Realty sponsored funds as of the beginning of the quarter with an incentive fee charged on various performance hurdles, for example, 15% above a 7% real return over sequential 3-year periods, subject to certain clawback provisions depending on the performance of the fund. Please see the applicable fee schedule(s) appropriate to the product or services being presented.

7. Benchmark Effective May 2009, the Firm changed the benchmark retroactively from the property-level NCREIF Property Index ("NPI") to a fund-level Index, the NCREIF Fund Index-Open End Diversified Core Equity ("NFI-ODCE" or the "Index"). The Firm believes a fund-level index provides a more meaningful comparison for a fund-level composite. The NFI-ODCE, first published mid-2005, is a capitalization-weighted, time-weighted, fund-level return index beginning as of the first quarter of 1978, inclusive. It is presented gross of fees. As of December 31, 2016, the NFI-ODCE consisted of 24 active funds with total net assets of USD 167.5 billion. The NFI-ODCE leverage ratio at December 31, 2016 was 22.7%.

8. Market Conditions Over the past decade, commercial real estate experienced historic highs and lows. Fundamental recovery following the 2001 recession, along with a dramatic increase in the availability and reduction in the cost of debt capital propelled commercial and multifamily performance to the highest level in NCREIF history. In 2005, the NCREIF Fund Index – ODCE returned 21.4%, its highest calendar total return since its inception in 1978. A worldwide credit crisis initiated a new recession during 2008. Liquidity evaporated in most asset classes, including commercial real estate. Total returns turned negative in mid-2008, with 2009 producing the lowest performance on record at negative 29.8%. The downturn was swift, and 2010 through 2013 reflected a period of recovery. By late-2013, expansion was underway as total returns on stabilized properties had recouped losses, led by steady income growth and low supply growth across the broad market. After six years of double-digit returns led by above-average appreciation, the NFI-ODCE produced a gross return of 8.8% during 2016.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Past performance is not indicative of future results.



UBS Realty Investors Participating Mortgage Funds Composite

Year	Number of accounts	Year-end		Gross of fees (%)			Hybrid Debt Index	Net of fees (%)		% of
		Composite	Total Firm	Income return	Appreciation (depreciation)	Total return	Total return	Total return	Total return	Composite assets valued externally ⁽¹⁾
		Net Assets (USD millions)	Net Assets (USD millions)							
2007	1	1,397	14,798	5.73	6.93	12.95	12.62	12.21	98	
2008	1	1,376	13,285	5.33	(6.35)	(1.27)	(4.63)	(2.07)	100	
2009	1	1,046	10,232	5.14	(22.86)	(18.63)	(14.75)	(19.32)	100	
2010	1	1,216	12,107	5.62	14.21	20.42	9.08	19.46	100	
2011	1	1,488	15,241	5.05	8.81	14.19	9.22	13.30	100	
2012	1	1,734	17,325	4.24	6.80	11.25	5.25	10.35	100	
2013	1	2,082	19,206	4.08	5.18	9.42	6.68	8.52	100	
2014	1	2,384	22,252	4.12	6.98	11.32	6.86	10.40	100	
2015	1	2,773	25,379	4.19	6.80	11.21	8.22	10.29	100	
2016	1	2,854	26,744	4.41	4.25	8.80	4.24	7.91	100	

1. Compliance Statement Global Real Estate - US (the Firm) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Global Real Estate - US has been independently verified since January 1, 1993. Verification assesses whether (1) the Firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the Firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The UBS Realty Investors Participating Mortgage Funds Composite has been independently examined for the periods January 1, 2007 through December 31, 2016. The verification and performance examination report is available upon request.

2. The Firm The Firm is defined as UBS Realty Investors LLC and UBS Farmland Investors LLC (prior to 2016, the UBS Farmland Investors LLC was known as UBS AgriVest LLC), together Global Real Estate - US. Both entities are registered with the US Securities and Exchange Commission as investment advisors. As of January 1, 2017, the Firm will be known as Real Estate & Private Markets, Real Estate US. UBS Asset Management created a combined alternative asset division composed of real estate, private equity and infrastructure to create Real Estate & Private Markets. The Total Firm Gross Assets at December 31, 2016 were USD 31.7 billion, representing the fair value of total Firm assets held under management. Total Firm Net Assets represent the Total Firm Assets held under management less the fair value of liabilities.

3. The Composite The UBS Realty Investors Participating Mortgage Funds Composite (the "Composite") was created in 2006. All results are presented in US dollars. A complete list and description of Firm composites is available upon request. The Composite comprises all fee-paying discretionary accounts that invest primarily in mortgages which typically provide both a fixed interest payment and an equity position in the cash flow of income producing properties. The loans are secured by real estate that include, but are not limited to, the following property types: apartments, office, retail, industrial, and hospitality. Occasionally, properties are acquired by exercise of mortgage remedies, options to purchase or the like. As of December 31, 2016, wholly owned real estate consisted of 9% of the fair value of the real estate investments in the Composite. The strategy of the accounts in the Composite is to invest in construction loans (that will convert into permanent loans) or mortgages secured by investments in US commercial and multifamily real estate expected to provide attractive risk-adjusted returns consisting of current income and capital appreciation. Since October 2003, a sub-advisor has managed cash for the pooled accounts included in the Composite. Initially, accounts must have at least USD 30 million in commitments or assets, including debt, to be included in the Composite. Composite dispersion for any year is represented by the range of the gross total returns of the accounts that were in the Composite for the entire calendar year. Since only one account was included in the Composite over the entire reporting period, dispersion is not presented. Discretion is broadly defined as the Firm having discretion over the selection, capitalization, asset management, and disposition of investments within the parameters of a given mandate.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Past performance is not indicative of future results. ⁽¹⁾Generally for those assets held longer than six months.



UBS Realty Investors Participating Mortgage Funds Composite

4. Valuation An independent appraisal of the underlying real estate for each investment is performed at least annually and includes a complete property inspection and market analysis. Starting October 1, 2009, independent appraisals are generally completed every quarter for the underlying real estate and mortgage investments. Prior to October 1, 2009, the underlying real estate for each investment was scheduled to be appraised twice a year. In the interim quarters, updated property and market information was reviewed. If this review indicated a potential material change in the value, the valuation was then updated by the independent appraiser. If this review indicated that any change in value was likely not material, the value was determined to remain unchanged. Valuations of real estate use significant unobservable inputs. In general, each annual property appraisal includes at least an income approach using a discounted cash flow model and a sales comparison approach, which are considered in determining a final value conclusion. All appraisals are certified by members of the Appraisal Institute who hold the MAI designation. The wholly owned real estate properties in the composite are unleveraged.

5. Calculation of Performance Annual returns are time-weighted rates of return calculated by linking quarterly returns. The sum of income and appreciation (depreciation) may not equal total returns due to the linking of quarterly returns. Gross of fees returns are presented before all management fees, but after third-party expenses. Net returns are presented net of the management fees and third-party expenses. All returns are presented before any applicable insurance company contract charges in effect only through February 29, 2008. Expenditures, including tenant improvements and leasing commissions, that extend the useful life or represent additional capital investments benefiting future periods, are capitalized as a component of cost. Generally, the account in the Composite does not borrow funds to make investments, although it has a line of credit to aid in cash management. The policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

6. Investment Management Fees The fee schedule below represents the schedule for the Trumbull Property Income Fund ("TPI"), the predominant fund in the Composite. The rate equals the investor's applicable annual base fee percentage (pro-rated for the quarter) times the investor's share of average net asset value, as defined in the fund's limited partnership agreement, for the quarter. The investor's annual applicable base fee percentage is a blended percentage rate derived by reference to the following fee scale and based on the investor's share of net asset value in the fund and other designated UBS Realty sponsored funds, as of the beginning of the quarter. To the extent that average cash exceeds 7.5% of the average net assets, the base fee with respect to such excess will be reduced to 20 basis points (pro rated for the quarter). Please see the applicable Confidential Private Offering Memorandum for more information on how fees are calculated and charged.

Investor's Share of Net Asset Value in the Fund (USD)	Annual Base Fee Percentage
First 10 million	0.970%
Next 10 million to 25 million	0.845%
Next 25 million to 100 million	0.815%
Next 100 million to 250 million	0.790%
Next 250 million to 400 million	0.760%
Next 400 million to 600 million	0.720%
Above 600 million	0.680%

7. Benchmark In January 2010, the Firm developed a custom index for TPI. As such, the Firm has retroactively added an index comparison called the Hybrid Debt Index. Like TPI, the Hybrid Debt Index (HDI) has both income and appreciation components. The HDI uses the yield of the Barclays Bond Index as the income component and 75% of the appreciation of NCREIF Fund Index – Open-end Diversified Core Equity (NFI-ODCE) properties that are included in the NCREIF Property Index (NPI) as the appreciation component. The Firm believes that using the NFI-ODCE properties for appreciation will provide a better comparison than using the NCREIF Property Index ("NPI") itself because NFI-ODCE properties have characteristics similar to TPI investments in that they are in open-end funds and are valued on a quarterly basis and reported unleveraged. Historical benchmark returns may differ slightly from previous reports due to correction of misclassifications by NCREIF.

8. Market Conditions Over the past decade, commercial real estate experienced historic highs and lows. Fundamental recovery following the 2001 recession, along with a dramatic increase in the availability and reduction in the cost of debt capital propelled commercial and multifamily performance to the highest level in NCREIF history. In 2005, the NCREIF Fund Index – ODCE returned 21.4%, its highest calendar total return since its inception in 1978. A worldwide credit crisis initiated a new recession during 2008. Liquidity evaporated in most asset classes, including commercial real estate. Total returns turned negative in mid-2008, with 2009 producing the lowest performance on record at negative 29.8%. The downturn was swift, and 2010 through 2013 reflected a period of recovery. By late-2013, expansion was underway as total returns on stabilized properties had recouped losses, led by steady income growth and low supply growth across the broad market. After six years of double-digit returns led by above-average appreciation, the NFI-ODCE produced a gross return of 8.8% during 2016.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Past performance is not indicative of future results.



UBS Farmland Investors Composite

Year	Number of accounts	Year-end		Gross of fees (%)			Benchmark return (%)	Net of fees (%)		Range of Gross Returns (%)		% of Composite assets valued externally
		Composite Net Assets (USD millions)	Total Firm Net Assets (USD millions)	Income return	Appreciation (depreciation)	Total return		Total return	Max	Min		
2007	3	144	14,798	4.83	14.77	20.10	16.97	19.08	20.2	14.9	65	
2008	2	435	13,285	4.30	7.75	12.28	13.40	11.32	15.7	12.5	85	
2009	2	503	10,232	4.21	1.10	5.35	7.30	4.45	5.6	4.9	100	
2010	2	542	12,107	4.70	0.53	5.25	7.68	4.30	5.5	4.8	100	
2011	2	603	15,241	4.45	7.82	12.53	14.93	11.55	13.8	11.7	100	
2012	2	812	17,325	4.21	12.55	17.15	17.33	16.15	17.1	16.9	100	
2013	2	950	19,206	4.18	12.74	17.32	15.82	16.29	24.0	10.9	100	
2014	2	1,014	22,252	4.24	3.64	8.00	7.92	7.04	8.4	7.6	100	
2015	2	1,143	25,379	3.57	2.72	6.37	6.17	5.43	6.6	6.1	100	
2016	4	1,273	26,744	3.58	3.31	6.98	5.28	6.02	7.2	6.5	100	

1. Compliance Statement Global Real Estate - US (the Firm) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Global Real Estate - US has been independently verified since January 1, 1993. Verification assesses whether (1) the Firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the Firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The UBS Farmland Investors Composite has been examined for the periods January 1, 2007 through December 31, 2016. The verification and performance examination report is available upon request.

2. The Firm The Firm is defined as UBS Realty Investors LLC and UBS Farmland Investors LLC (prior to 2016, the UBS Farmland Investors LLC was known as UBS AgriVest LLC), together Global Real Estate - US. Both entities are registered with the US Securities and Exchange Commission as investment advisors. As of January 1, 2017, the Firm will be known as Real Estate & Private Markets, Real Estate US. UBS Asset Management created a combined alternative asset division composed of real estate, private equity and infrastructure to create Real Estate & Private Markets. The Total Firm Gross Assets at December 31, 2016 were USD 31.7 billion, representing the fair value of total Firm assets held under management. Total Firm Net Assets represent the Total Firm Assets held under management less the fair value of liabilities.

3. The Composite The UBS Farmland Investors Composite (the "Composite") was created in 1999. Prior to 2016, the Composite name was the UBS AgriVest Composite. All results are presented in US dollars. A complete list and description of Firm composites is available upon request. The Composite comprises all fee-paying, non-taxable discretionary accounts that invest in agricultural real estate. The strategy of the accounts in the Composite is to acquire investments in US agricultural real estate expected to provide attractive risk-adjusted returns consisting of current income and capital appreciation. Initially, accounts must have at least USD15 million in commitments or assets, including debt, to be included in the Composite. Dispersion represented by asset weighted standard deviation is not considered meaningful where less than five portfolios have been in the Composite for the entire year and, therefore, has not been presented. Discretion is broadly defined as the Firm having discretion over the selection, capitalization, asset management, and disposition of investments within the parameters of a given mandate.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Past performance is not indicative of future results.



UBS Farmland Investors Composite

4. Valuation An independent Accredited Rural Appraiser or Member of the Appraisal Institute appraises assets at least annually, unless otherwise specified by the client. Starting July 1, 2013, the independent appraisals are generally completed each quarter for each farm property. In general, each property appraisal includes an income approach and a sales comparison approach, which are considered in determining a final value conclusion. Valuation of farm investments use significant unobservable inputs.

5. Calculation of Performance Returns reflect the impact of leverage, which has only been utilized on a short-term basis. Expenditures that extend the useful life or represent additional capital investments benefiting future periods are capitalized as a component of cost. Annual returns are time-weighted rates of return calculated by linking quarterly returns. The sum of income and capital returns may not equal total returns due to the linking of quarterly returns. Gross of fees returns are presented before all management fees, but after third party expenses. Net returns are presented net of the management fees, performance fees and third-party expenses. The policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

6. Investment Management Fees Management fees differ by account and reflect the complexity and value of services chosen, anticipated size and the number and type of investments involved. Depending upon the services, the fee may represent any one or a combination of: fixed flat amounts; a percentage of purchase price, earnings, assets under management, or of sales proceeds; or incentive fees based on performance. The fee schedule for investment in the commingled fund is 100 bps per annum on average gross asset value excluding cash and cash equivalents, and 20 bps per annum on average balances of cash and cash equivalents.

7. Benchmark Effective January 1, 2007, UBS Farmland Investors retroactively changed the benchmark from the National Council of Real Estate Fiduciaries (NCREIF) Farmland Index (NFI) to a custom benchmark, the Core Farmland Index (CFI). The CFI is composed of all annual and permanent cropland investments in the NFI that are leased. The NFI had become increasingly weighted to permanent cropland and owner/operated property over time and no longer reflected core, diversified exposure to US farmland. To create the CFI for UBS Farmland Investors, NCREIF excludes the investments in the NFI that are owner/operated and re-weights the NFI returns to 80% annual cropland and 20% permanent cropland. UBS Farmland Investors considers this to be market-neutral and therefore more appropriate as a benchmark for broadly diversified exposure to core US farmland. The composition of the NFI and the CFI that is derived from the NFI differs from that of the Composite since the NFI reflects property level returns and excludes cash and other non-property related assets, liabilities, income and expenses such as management fees. The NFI and the CFI are not available for investment and are for illustrative purposes only.

8. Market Conditions Agricultural real estate appreciated significantly during the period 2004 through 2008 and again in 2011 through 2013. That appreciation reflects periods of strong agricultural returns and falling capitalization rates in most markets.

Source: UBS Asset Management, Real Estate & Private Markets (REPM). Past performance is not indicative of future results.



Required notes

Returns herein, unless otherwise noted, are presented gross of fees.

The Fund's participating mortgages and those construction loans converting to participating mortgages are secured by properties operated by sponsors that the advisor has deemed creditworthy. The Fund does not own these properties.

Returns for periods greater than one year are annualized. For the period ending December 31, 2017 TPF's net total returns for the quarter, one-, three-, five-, ten-, twenty-year periods and since inception were 2.16%, 5.42%, 7.76%, 8.63%, 4.23%, 8.12% and 8.00% respectively, after the deduction of management fees, but before the deduction of contract charges. Contract charges were only applicable through February 29, 2008. TPF returns reflect the reinvestment of income. Returns and dollars are USD denominated.

Additional information on fees is available in the ADV Part 2 for UBS Realty Investors LLC and is also available upon request. As fees are deducted quarterly, the compounding effect will be to increase the impact of the fees by an amount directly related to the gross account performance. For example, on an account with a 1% annual fee, if the gross performance is 10%, the compounding effect of the fees will result in a net performance of approximately 8.93%.

NFI-ODCE (Source NCREIF) is a fund-level, capitalization weighted index of open-ended diversified core equity commercial real estate funds that includes cash balances and leverage and is reported gross of fees. The degree of leverage used varies among the funds included in NFI-ODCE. As of December 31, 2017 the NFI-ODCE consisted of 24 active funds with total net assets of USD 178.0 billion.

There is no assurance that the financial objective will ultimately be realized and the possibility of loss does exist. There is no guarantee that the investment strategy will perform as expected. Property photos shown in this presentation represent some examples of Fund investments. These types of investments may not be available or selected by the Fund in the future.

GRESB, which was formerly known as the Global Real Estate Sustainability Benchmark, is an industry-driven organization committed to assessing the environmental, social and governance (ESG) performance of real assets globally, including real estate portfolios (public, private and direct), real estate debt portfolios and infrastructure. More than 250 members, including over 60 pension funds and their fiduciaries, use GRESB data in their investment management and engagement process, with a clear goal to optimize the risk/return profile of their investments. In 2017, the survey was completed by 850 entities in 62 countries across six continents, representing a total property value of USD 3.7 trillion (GAV).

Energy Star is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices. To celebrate the 15th Year of ENERGY STAR for Buildings, the EPA recognized UBS Realty Investors LLC as a Premier Member of the 2014 ENERGY STAR Certification Nation for certifying 38 buildings this year. To earn certification, a building must achieve an Energy Star rating of 75 or higher.

Please note that past performance is not a guide to the future. The value of investments and the income received may go down as well as up, and investors may not get back the original amount invested.

This presentation is approved for the following jurisdictions: CEMEA (Denmark, Finland, Ireland, Netherlands, Sweden), Switzerland, United Kingdom, United States.



Risks

- Investors should be aware that return objectives are subject to a number of assumptions and factors, a change in any of which could adversely affect returns. Accordingly, investors should note the limitations of an objective.
- Investments in direct real estate and real estate funds involve a high degree of risk. For instance, events in 2008 and 2009 such as the deterioration of credit markets and increased volatility have resulted in a historically unprecedented lack of liquidity and decline in asset values. The value of investments and income from them may increase or decrease. Investors must have the financial ability and willingness to accept and bear the risks (including, among other things, the risk of loss of investment) that are characteristic of real estate investing and investing in commingled fund for an indefinite period of time. Among the risks to be considered are:
 - **Risks of investing in real estate.** Risks include adverse changes in market and economic conditions, zoning, and other governmental laws, regulations, and policies, occupancy levels and the ability to lease space, and environmental risks, and risk of uninsured losses.
 - **Debt investment risk.** Risk includes risks of borrower defaults, bankruptcies, fraud and special hazard losses that are not covered by standard hazard insurance
 - **Restrictions on redemption and transferability of shares or units; illiquidity.** Real estate is an illiquid investment and the account may not be able to generate sufficient cash to meet withdrawal requests from investors.
 - **Reliance on controlling persons and third parties.** The exercise of control over an entity can impose additional risks and the fund can experience a significant loss. The risk of third parties includes a conflict between their objectives and those of the account or fund.
 - **Use of leverage.** Leverage will increase the exposure of the real estate assets to adverse economic factors, such as rising interest rates, economic downturns, or deteriorations in the condition of the properties or their respective markets and changes in interest rates
 - **Legal & Taxation.** Investors should consult their own legal and tax advisers for potential US and/or local country legal or tax implications on any investment
 - **Currency risk.** The funds and accounts managed by UBS Realty Investors LLC are denominated in US Dollars. There is a potential for loss due to currency fluctuations for non-US investors.
 - **Lack of diversification.** Individually managed accounts and funds in their initial investment periods may have investments that are relatively large compared to the account's or fund's anticipated total value. Any limit to diversification increases risk because the unfavorable performance of even a single investment might have an adverse effect on the aggregate return.
 - **Unspecified investments.** There can be no assurance that the advisor will be able to continually locate and acquire assets meeting the fund or account's objective. Competition for assets may generally reduce the number of suitable prospective assets available.
- In considering an investment in a commingled real estate fund, prospective investors must rely on their own examination of the partnership agreement, private placement memorandum, and all terms of the offering, including merits and details of these and other risks involved. If there are any discrepancies in fund terms between this presentation and the private placement (offering) memorandum, the memorandum shall prevail.
- This is not a recommendation to invest in any product or services. Investors must have the sophistication to independently evaluate investment risks and to exercise independent judgment in deciding whether or not to invest in real estate and real estate funds.

Disclaimer – US

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Commingled funds will only be offered pursuant to a Confidential Private Offering Memorandum, or other similar document, and then only to qualified investors on a private placement basis in jurisdictions in which such an offer may legally be made. These funds may not be available to investors in all states and countries. When investing in a commingled fund, investors must read the Confidential Private Offering Memorandum or other governing documents before investing. If there are any discrepancies between information contained in this presentation and the Confidential Private Offering Memorandum and other offering materials, those materials will prevail.

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Any forecasts or projections contained in the presentation are opinions only and are based on available information at the time of writing. Accordingly, such statements are inherently speculative as they can be affected by incorrect assumptions or by known or unknown risks and uncertainties. The outcomes ultimately achieved may differ substantially from the forecasts or projections. Past performance is not an indication of future performance. The opinions expressed are a reflection of UBS Asset Management's best judgment at the time this material was compiled, and any obligation to update or alter forward-looking statements as a result of new information, future events, or otherwise is disclaimed.

Ownership interests in the Fund are not endorsed or guaranteed by UBS AG, UBS Realty Investors LLC, UBS Farmland Investors LLC, UBS Fund Services (USA) LLC, any of their affiliates or any other banking entity, and are not insured by the federal deposit insurance corporation or any other governmental agency. Any losses in the Fund will be borne solely by investors in the Fund and not by UBS AG, UBS Realty Investors LLC, UBS Farmland Investors LLC, UBS Fund Services (USA) LLC or any of their affiliates. Therefore, losses of UBS AG, UBS Realty Investors LLC, UBS Farmland Investors LLC, UBS Fund Services (USA) LLC or any of its affiliates' in the Fund will be limited to losses attributable to the ownership interests in the covered Fund held by UBS AG, UBS Realty Investors LLC, UBS Farmland Investors LLC, UBS Fund Services (USA) LLC or any of its affiliates in their capacity as investors in the Fund. Investors should always read the Fund offering documents prior to investing in the Fund which includes a description of the roles of UBS AG, UBS Realty Investors LLC, UBS Farmland Investors LLC, UBS Fund Services (USA) LLC and its affiliates in greater detail.

The Fund discussed involves risks of a high degree and investors are advised to read and consider carefully the information contained in the offering documents including the detailed risk factors. There is no public market for the fund interests and no such market is expected to develop in the future. Risks include restrictions on the transferability and resale of shares, risk of investing in real estate and in developing markets, and the possibility of loss of investment does exist.

In the US, the Global Real Estate commingled funds are distributed by UBS Fund Services (USA) LLC, member FINRA and other UBS Asset Management broker-dealer affiliates. UBS Fund Services (USA) LLC main office is located at 10 State House Square, Hartford, CT 06103. UBS Realty Investors LLC, UBS Fund Services (USA) LLC is a member of the UBS Asset Management business division and subsidiaries of UBS AG.



Section 5

Biographies



Kevin M. Crean

Senior Portfolio Manager
Managing Director

Years of investment industry experience: 38

Education: University of Denver (US), BSBA, MBA

- Kevin Crean is the Senior Portfolio Manager for the Trumbull Property Fund (TPF) for Real Estate US, a business which forms part of Real Estate & Private Markets within UBS Asset Management. TPF is the firm's largest open-end real estate account. Kevin is also a member of the Strategy Team and Investment Committee.
- Prior to this assignment, Kevin was responsible for property dispositions nationally. Over a 15-year period, he oversaw property sales that totaled over 200 transactions valued in excess of USD 3 billion. Kevin joined the firm's predecessor organization in 1984. During his career with the company he has held positions in mortgage lending, asset management, acquisitions, sales and portfolio management.
- Before joining the company, he worked for The Travelers Insurance Company's Real Estate Department, focusing on acquisition and loan production, and for a real estate brokerage firm in Denver where he was involved with office leasing and property sales.

Dated: January 2017



Mario Maturro

Portfolio Manager

Executive Director

Years of investment industry experience: 18

Education: Trinity College (Hartford, CT), BA; University of North Carolina Kenan-Flagler Business School, MBA

- Mario Maturro is a Portfolio Manager for the Trumbull Property Fund (TPF) and is responsible for asset management and transactions oversight and strategic direction for Real Estate US, a business which forms part of Real Estate & Private Markets within UBS Asset Management. He will be San Francisco based and have a focus on the West Region.
- Prior to his current position, Mario was responsible for acquisitions and development activities in Northern California, the Pacific Northwest and Southwest. Since joining the firm Mario has closed over USD 1.65 billion in transactions in multiple products including office, hotel, industrial and multifamily properties.
- Prior to joining the firm in October 2005, Mario was a Vice President at MMA Financial, LLC (formerly Lend Lease Real Estate Investments) in San Francisco, where he managed affordable housing apartment acquisitions throughout the Western Region of the United States. Prior to MMA Financial, LLC, Mario was a Manager – Risk Management and Investments Group at Cap Gemini Ernst & Young in San Francisco where he was involved with corporate investment and mergers and acquisitions.



Stephen J. Olstein

Portfolio Manager

Executive Director

Years of investment industry experience: 38

Education: New York University (US), BS

- Steve Olstein is a Portfolio Manager for the Trumbull Property Fund (TPF) for Real Estate US, a business which forms part of Real Estate & Private Markets within UBS Asset Management.
- He was previously a Director in the Commercial Asset Management Unit and in Acquisitions, where he was responsible for asset management and acquisitions in portions of the Northeast and Mid-Atlantic states.
- Prior to joining UBS in 2003, Steve was Managing Director in the Asset Management and Portfolio Management areas of CIGNA's Real Estate Investment Department. He also has served in various other management areas of CIGNA's real estate operations, including product development, portfolio management for advisory accounts, acquisitions and mortgage loan origination.
- Steve is active in NAREIM and a US Marine Corps veteran.

Dated: January 2017



Peter Shaplin

Portfolio Manager

Executive Director

Years of investment industry experience: 16 years

Education: Lafayette College, BA

- Peter Shaplin is a Portfolio Manager for the Trumbull Property Fund (TPF) for Real Estate US, a business which forms part of Real Estate & Private Markets within UBS Asset Management.
- He joined UBS in 2013 as an asset manager with responsibilities in the Commercial Asset Management Team – East Region. In this role Peter was primarily responsible for the management of the Becknell Industrial Operating Partnership, a joint venture owned by Trumbull Property Fund. His responsibilities included: asset management, acquisition, development and disposition activities within the partnership.
- Prior to UBS, Peter worked at Commonfund Realty, an open-ended real estate fund located in Wilton, CT as an Asset Manager and Acquisitions Analyst, and the brokerage company Cushman & Wakefield providing investment sale services.
- Peter serves internally as the co-chair of the Industrial Best Practices Group, which is tasked with collaborating with various disciplines within UBS to monitor trends and enhance efficiency in the management of industrial properties.

Pamela J. Thompson

Portfolio Manager
Executive Director

Years of investment industry experience: 26

Education: University of Connecticut (US), BS, MBA

- Pamela Thompson is a Portfolio Manager for the Trumbull Property Fund (TPF) for Real Estate US, a business which forms part of Real Estate & Private Markets within UBS Asset Management.
- Pam has worked at UBS for over 14 years including roles in Acquisitions, Financing, and Multifamily Asset Management.
- Prior to joining UBS, Pam was the Northeast Region Office Head for Bozzuto & Associates, a multifamily development firm, responsible for Regional Property Management and Acquisitions.
- For four years, she worked at CIGNA Realty Investors, where she was the Assistant Portfolio Manager for a separate account. She also had extensive experience in debt placements on their lending team.
- Pam also worked in Problem Loans and Valuations for Aetna Real Estate Investments, and as a Senior Real Estate Analyst for Arthur Andersen & Co.

Dated : January 2017



Timothy D. Walsh

Portfolio Manager
Executive Director

Years of real estate industry experience: 19

Education: Amherst College (US), BA;
Tuck School at Dartmouth College (US), MBA

- Tim is a Portfolio Manager for the Trumbull Property Fund (TPF) for Real Estate US, a business which forms part of Real Estate & Private Markets within UBS Asset Management.
- Prior to this assignment, Tim was a member of the teams responsible for acquisitions in the Northeast and Southeast Regions of the United States. He has worked on fee simple, participating mortgage, joint venture, and portfolio recapitalization transactions totaling USD 2.5 billion. He also managed USD 400 million in construction loans.
- Tim was an intern with UBS in the summer of 2005. Prior to that he worked for Pacific Construction Services where he managed construction projects for the City of Chicago and the Federal Government. He also spent five years with TrizecHahn where he first managed super regional shopping centers and later worked in the development group on two mixed-use projects totaling USD 900 million.

Dated: April 2017



Mia Y. Dennis

Portfolio and Client Services Officer

Director

Years of investment industry experience: 20

Education: University of California at Davis (US), BA

- Mia Dennis is a member of the Portfolio and Client Services Unit for Real Estate US, a business which forms part of Real Estate & Private Markets within UBS Asset Management. She is located in the San Francisco office. Mia's primary responsibility is investor relations and new business development in the Western region.
- Mia has 20 years of experience working in various capacities in the real estate investment management industry. Her prior experience includes acquisitions, asset management, loan originations, consulting and client service.
- Prior to joining UBS, Mia spent six years at Callan Associates as a real estate consultant for pension plans nationwide. She also has worked for AEW and J.P. Morgan as a real estate specialist in client services.
- Mia holds her Series 7 and 66 licenses with the Financial Industry Regulatory Authority (FINRA).

Dated: August 2017



Thomas C. Klugherz

Portfolio and Client Services Officer

Executive Director

Years of investment industry experience: 31

Education: San Jose State University (US), BA;
Santa Clara University (US) MBA-Finance

- Tom Klugherz is a member of the Portfolio and Client Services Unit for Real Estate US, a business which forms part of Real Estate & Private Markets within UBS Asset Management. Tom is located in the San Francisco office. He currently has investor relations and new business development responsibilities in the Western region.
- Tom has 31 years of experience working in various capacities as a fiduciary for some of the nation's largest pension plans and institutions. His prior experience includes acquisitions, asset management, portfolio management and day-to-day operations of several investment managers including GE Capital Investments Advisors and SSR Realty Advisors.
- During his career he has been directly involved in sourcing, underwriting and managing more than USD 10 billion of institutional grade investments across the United States. Tom has worked directly with existing and prospective separate account and fund clients to analyze their portfolios and formulate investment strategies.
- Tom is a member of PREA and NAREIM. He previously served as NAREIM's interim President.

Dated: January 2017



Contact information

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Together, UBS Realty Investors LLC, UBS Farmland Investors LLC, and UBS Fund Services (USA) LLC , subsidiaries of UBS AG, comprise Real Estate US.



QUARTERLY PERFORMANCE REPORT

Ventura County Employees' Retirement Association

December 31, 2017

Allan Martin, Partner,
Anthony Ferrara, CAIA, Consultant
Michael Miranda, Senior Analyst



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

MARKET ENVIRONMENT UPDATE AND OUTLOOK

NEPC, LLC

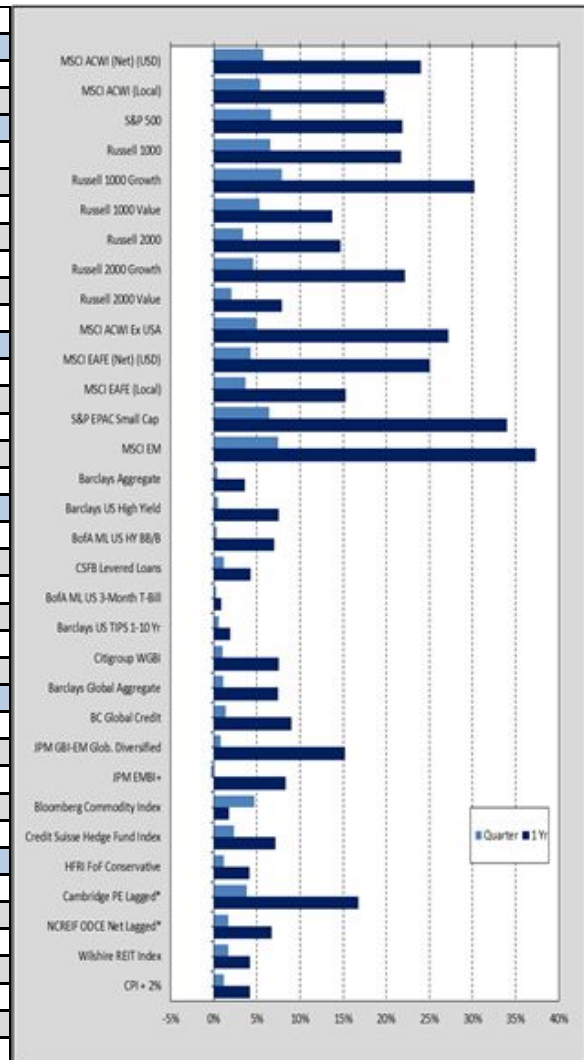
ECONOMIC ENVIRONMENT

- **Fourth quarter GDP growth rate (advance estimate) increased at a modest 2.6%.**
 - Retail sales ended December at +5.6% on a YoY basis. In the same period last year the YoY growth rate was 3.9%.
 - Corporate profits (ended July) as a percent of GDP increased slightly to 9.53% from 9.5% (in April) and remain elevated relative to historical levels.
 - The inventory-to-sales ratio ended November down at 1.3 from 1.4 and has remained relatively flat since early 2010.
 - The U.S. trade deficit widened by 2.3% ended November as imports increased.
- **The unemployment rate decreased to 4.1% from 4.2% in Q4; U-6, a broader measure of unemployment, decreased to 8.1% from 8.3% during the fourth quarter.**
- **The Case-Shiller Home Price Index (ended October) increased to 195.6 from 194.1 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 2.1% at the end of December from 2.2% at the end of September; Capacity Utilization marginally increased to 77.9% in Q4 from 76.1% in Q3.**
- **Fed Funds rate was increased to a targeted range of 1.25% - to – 1.50%. The 10-year Treasury Yield (constant maturity) finished Q4 at 2.4%, up from 2.2% in September.**
- **The Fed balance sheet decreased slightly during Q4 2017, while the European Central Bank balance sheet continues to increase.**
 - ECB held its benchmark refinance rate at 0%, deposit rates -0.4% and asset purchases would slow from €60 billion per month to €30 billion per month.
- **S&P valuations increased slightly in Q4 remaining above the 10-year and long-term averages.**
 - Cyclically adjusted Shiller PE ratio (32.5x) is above the long-term average of 16.8x and above the 10-year average of 23.3x.



MARKET ENVIRONMENT – Q4 2017 OVERVIEW

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI ACWI (Net) (USD)	World	5.7%	24.0%	9.3%	10.8%	4.7%
MSCI ACWI (Local)	World (Local Currency)	5.3%	19.8%	9.7%	12.6%	5.4%
Domestic Equity Benchmarks						
S&P 500	Large Core	6.6%	21.8%	11.4%	15.8%	8.5%
Russell 1000	Large Core	6.6%	21.7%	11.2%	15.7%	8.6%
Russell 1000 Growth	Large Growth	7.9%	30.2%	13.8%	17.3%	10.0%
Russell 1000 Value	Large Value	5.3%	13.7%	8.7%	14.0%	7.1%
Russell 2000	Small Core	3.3%	14.6%	10.0%	14.1%	8.7%
Russell 2000 Growth	Small Growth	4.6%	22.2%	10.3%	15.2%	9.2%
Russell 2000 Value	Small Value	2.0%	7.8%	9.5%	13.0%	8.2%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	5.0%	27.2%	7.8%	6.8%	1.8%
MSCI EAFE (Net) (USD)	Int'l Developed	4.2%	25.0%	7.8%	7.9%	1.9%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	3.7%	15.2%	8.5%	11.4%	3.3%
S&P EPAC Small Cap	Small Cap Int'l	6.4%	34.0%	14.1%	13.1%	5.6%
MSCI EM	Emerging Equity	7.4%	37.3%	9.1%	4.3%	1.7%
Domestic Fixed Income Benchmarks						
Barclays Aggregate	Core Bonds	0.4%	3.5%	2.2%	2.1%	4.0%
Barclays US High Yield	High Yield	0.5%	7.5%	6.4%	5.8%	8.0%
BofA ML US HY BB/B	High Yield	0.4%	7.0%	6.0%	5.6%	7.3%
CSFB Levered Loans	Bank Loans	1.2%	4.2%	4.5%	4.3%	4.6%
BofA ML US 3-Month T-Bill	Cash	0.3%	0.9%	0.4%	0.3%	0.4%
Barclays US TIPS 1-10 Yr	Inflation	0.5%	1.9%	1.8%	0.1%	2.8%
Global Fixed Income Benchmarks						
Citigroup WGBI	World Gov. Bonds	1.0%	7.5%	1.7%	0.1%	2.7%
Barclays Global Aggregate	Global Core Bonds	1.1%	7.4%	2.0%	0.8%	3.1%
BC Global Credit	Global Bonds	1.3%	8.9%	2.9%	2.3%	4.1%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	0.8%	15.2%	2.5%	-1.5%	3.6%
JPM EMBI+	Em. Mkt. Bonds	-0.3%	8.3%	6.5%	3.3%	6.8%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodities	4.7%	1.7%	-5.0%	-8.5%	-6.8%
Credit Suisse Hedge Fund Index	Hedge Fund	2.3%	7.1%	2.5%	4.3%	3.2%
HFRI FoF Conservative	Fund of Hedge Funds	1.1%	4.1%	2.1%	3.4%	0.9%
Cambridge PE Lagged*	Private Equity	3.8%	16.7%	10.4%	13.3%	9.6%
NCREIF ODCE Net Lagged*	Real Estate	1.6%	6.7%	9.8%	10.6%	4.1%
Wilshire REIT Index	REIT	1.7%	4.2%	5.2%	9.3%	7.3%
CPI + 2%	Inflation/Real Assets	1.1%	4.2%	3.6%	3.4%	3.6%



* As of 9/30/2017



MARKET ENVIRONMENT

Global Equity

- **U.S. equities as measured by the S&P 500 posted strong gains in the fourth quarter (+6.6%).**
- **Small cap stocks underperformed large cap stocks during the quarter, with the Russell 2000 Index returning 3.3% and the Russell 1000 Index returning 6.6%.**
- **International equities underperformed U.S. markets during the quarter, returning 5.0%, as measured by the MSCI ACWI ex-U.S. Index. Emerging markets returned 7.4% as measured by the MSCI Emerging Markets Index in U.S. dollar terms.**
 - Developed international markets returned 4.2% in USD terms, while in local currency terms returned 3.7% as measured by the MSCI EAFE Index.

Private Equity

- **Capital commitment momentum slowed in Q3 2017, however aggregate capital raised has risen versus last year and was dominated by the five largest investment vehicles.**
- **Private equity fundraising totaled \$95 billion in Q3 2017.**
 - North America focused private equity funds raised \$64 billion.
 - Asia focused private equity funds raised \$9.4 billion.
 - Europe focused private equity raised \$20 billion.
- **Private equity dry powder continued its increase to record levels and stands at \$954 billion.**



MARKET ENVIRONMENT

Fixed Income

- **The nominal yield curve continued to flatten in Q4. Long term yields decreased 5 -to- 12 basis points across 20 to 30 year treasury bonds while short term yields increased 33 basis points for the 3 month and 45 basis points in the one year.**
- **The spread between two and 10 year rates decreased to 51 basis points from 86 basis points in Q4.**
- **Treasury Inflation-Protected Securities, or TIPS, returned 0.5% during the quarter, as measured by the BBg Barclays US TIPS 1-10 Yr Index.**
- **The BBg Barclays Long Duration Credit Index gained 3.16%.**
- **Long Treasuries gained 2.37% and investment-grade US corporate debt gained 0.4%.**
- **The BBg Barclays 1-3 year US Government/ Credit Index returned -0.21%. US high yield bonds gained 0.5% as spreads compressed.**
- **Emerging markets debt had mixed results.**
 - US dollar-denominated debt, as measured by the JP Morgan EMBI Index, returned -0.3%; local currency debt gained 0.8%, according to the JP Morgan GBI-EM BD Index.



MARKET ENVIRONMENT

Real Assets/Inflation-Linked Assets

- **Energy remains attractive despite volatile oil prices.**
 - Private equity and debt opportunities are attractive.
 - Fire sale prices never materialized but focusing on assets outside of the hottest zip codes provides potential for strong returns as market normalizes.
- **Infrastructure – select opportunities to access growth markets.**
 - High quality assets are receiving premium bids from direct investors (Pension Funds and Sovereigns) with low costs of capital and long hold horizons; focus on mismanaged or niche opportunities.
- **Metals & Mining – have commodity prices bottomed?**
 - Improving Metals & Mining fundamentals but limited to assets near production
- **Timber – low return potential and limited opportunity for outperformance.**
- **Agriculture – near-term slowdown in price appreciation creates opportunity to invest in a strong (very) long term outlook supported by demographic trends.**



MARKET ENVIRONMENT

Commodities

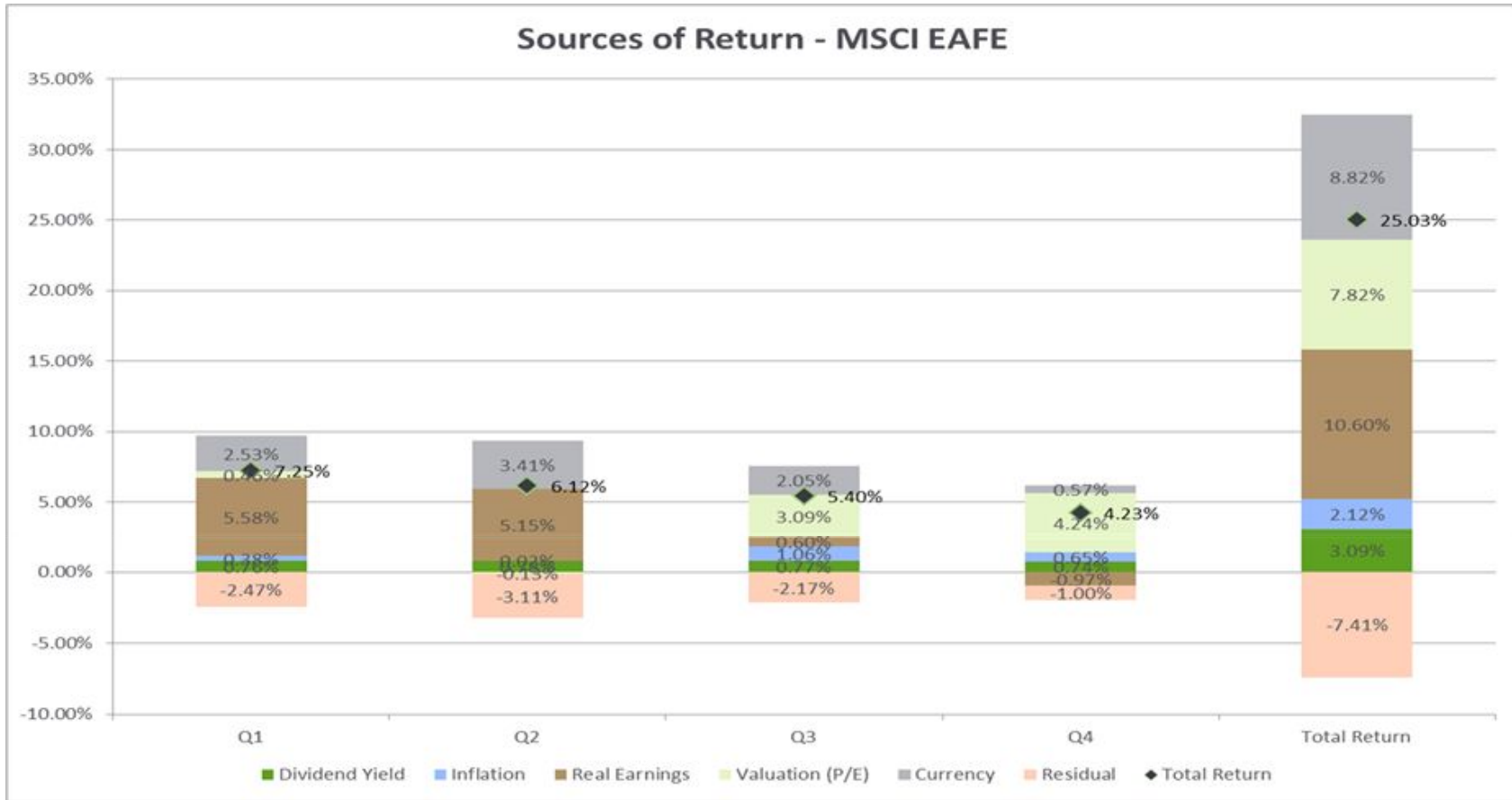
- **Commodities gained 4.7% as measured by the Bloomberg Commodity Index.**
 - US Dollar weakness led to stronger commodity prices broadly.

Real Estate

- **NEPC continues to be neutral on core real estate in the US and remains positive on non-core real estate, that is, value-add and opportunistic strategies.**
- **Real estate fundamentals (rent growth, occupancy, net absorption) remain strong; however, valuations are high on an absolute and relative basis.**
 - Rising interest rates have been baked into existing valuations but excess cap rate expansion (beyond general expectations) will reset valuations.
 - REIT sector has been volatile and remain at the high end of historical FFO multiple ranges
- **Overall, the non-core real estate investment environment in the U.S. is normalizing; however, select areas remain attractive.**
- **Europe is viewed as the best place for a marginal dollar of non-core real estate investment.**
- **Emerging markets in Latin America (Brazil) and Asia (China, India) may have strengthening opportunities.**



CALENDAR YEAR 2017 – ATTRIBUTION OF MSCI EAFE RETURNS



Spot Rates

1 USD = 0.935 Euro

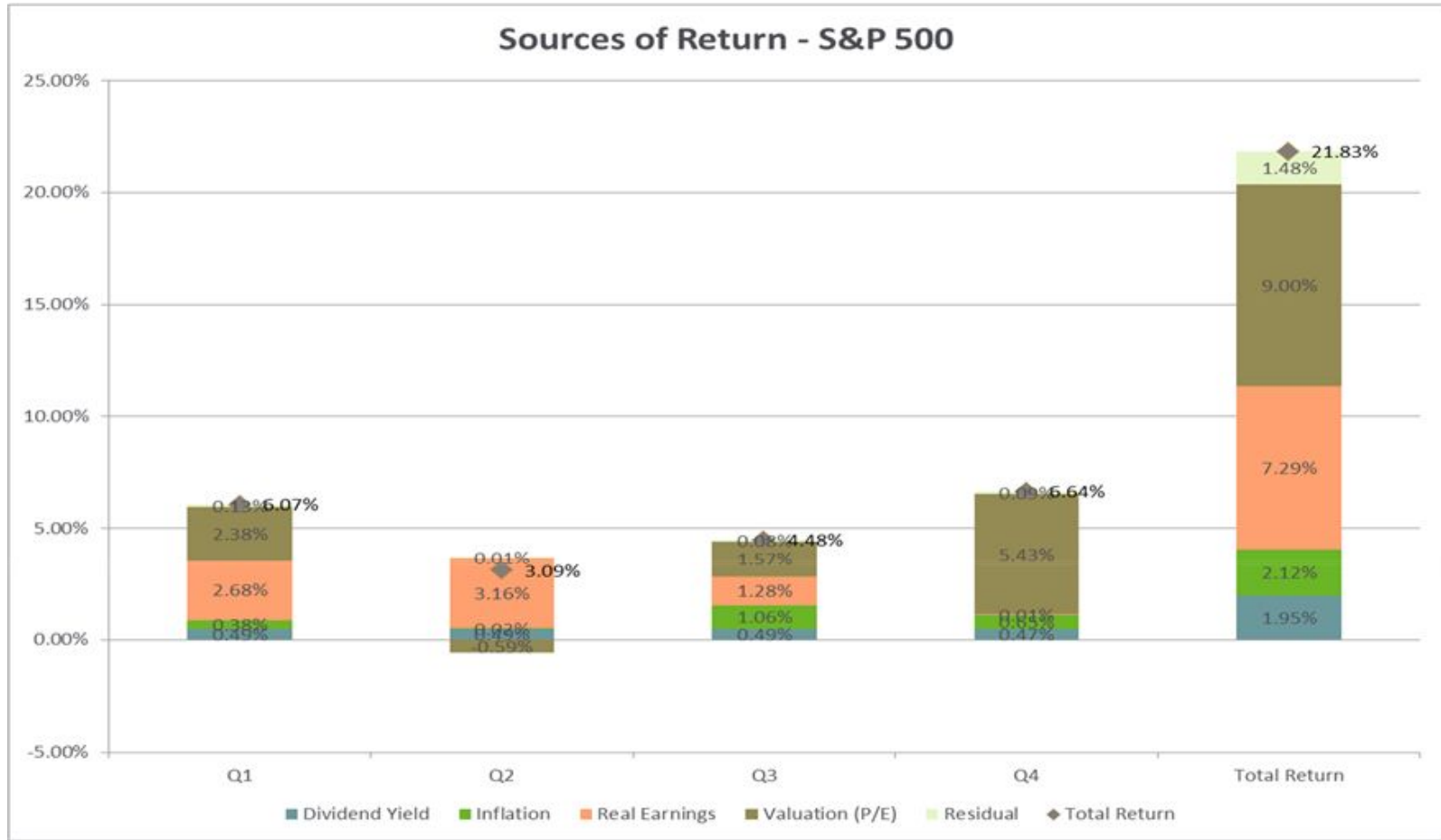
1 USD = 0.876 Euro

1 USD = 0.847 Euro

1 USD = 0.832 Euro



CALENDAR YEAR 2017 – ATTRIBUTION OF S&P 500 RETURNS



Spot Rates

1 USD = 0.935 Euro

1 USD = 0.876 Euro

1 USD = 0.847 Euro

1 USD = 0.832 Euro



KEY MARKET THEMES

Extended US Economic Cycle

Economic cycles do not die of old age

The US economy is in an extended expansionary cycle despite being eight years removed from the last recession

Financial health of US consumers and ongoing recovery of the housing market continue to drive economic growth

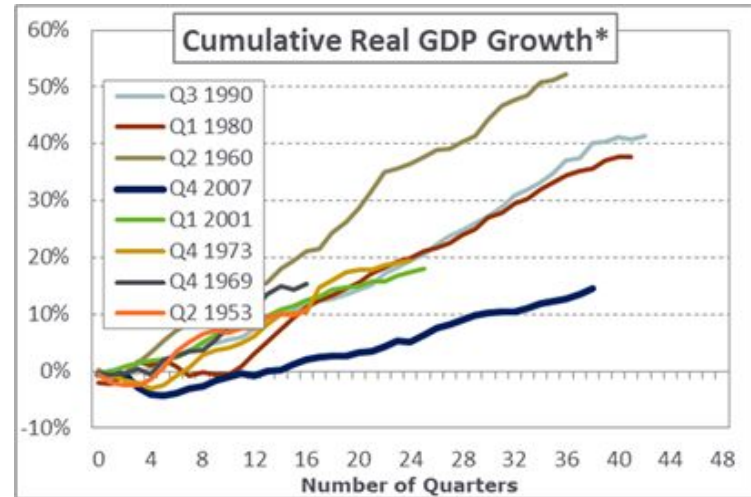
A prolonged US economic expansion can support a continued rally for US equities despite elevated valuation levels

US financial conditions remain loose and support steady economic gains

Low inflation provides a foundation for positive economic conditions and reinforces the Fed's gradual monetary policy approach

Moderating US dollar strength is another form of easy financial conditions, benefiting global trade flows and credit creation

Reversal in these easy conditions may be fueled by actions outside the US, such as a misstep by global central banks and/or increased volatility in the Chinese yuan



Source: (Top) Bloomberg, *Cumulative GDP growth from prior cycle peak
Source: (Bottom) Federal Reserve Bank of Chicago and Kansas City



KEY MARKET THEMES

Extended US Economic Cycle

Excess capacity remains in the system and provides fuel for the expansion

Labor market gains have been robust but slack remains as many have not returned to the workforce

Muted wage gains and low inflation metrics are reflective of the excess capacity remaining in the US economy

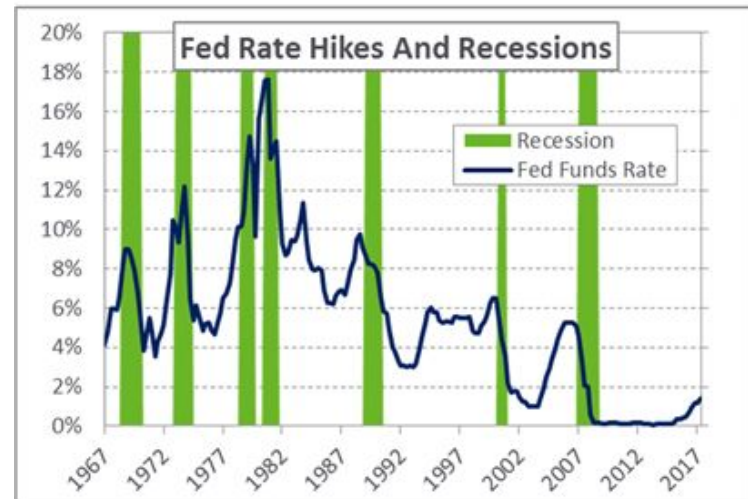
Tax cuts and fiscal stimulus can potentially remove spare economic capacity and be a catalyst for an uptick in inflation measures

US recession concerns are muted

An acceleration in inflation leading to a tightening of financial conditions has historically been a catalyst to end economic expansions

However, improved US household balance sheets have room to expand and support further consumer spending gains

Improving global economic conditions reinforce an expansion of the US economy as global growth factors synchronize



Source: (Top) Federal Reserve Bank of St. Louis
Source: (Bottom) Federal Reserve, NEPC



KEY MARKET THEMES

Synchronized Economic Resurgence

Global economic conditions are improving in a synchronized fashion

Coordinated global growth factors reinforce economic gains across the globe and are distinct from the extension of the US economic cycle

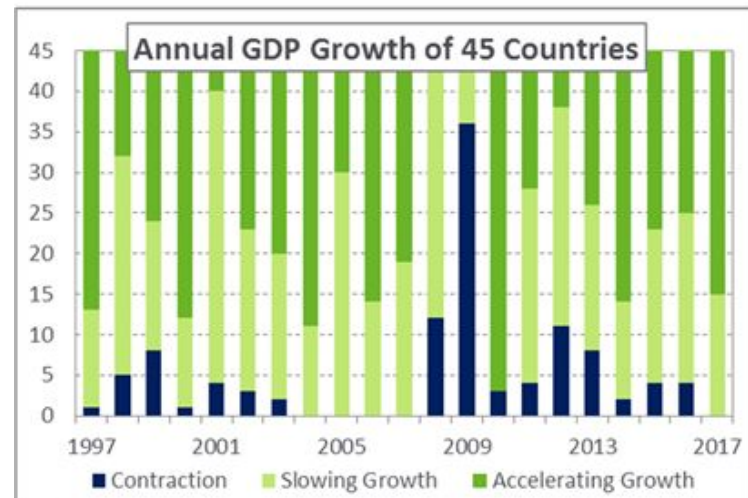
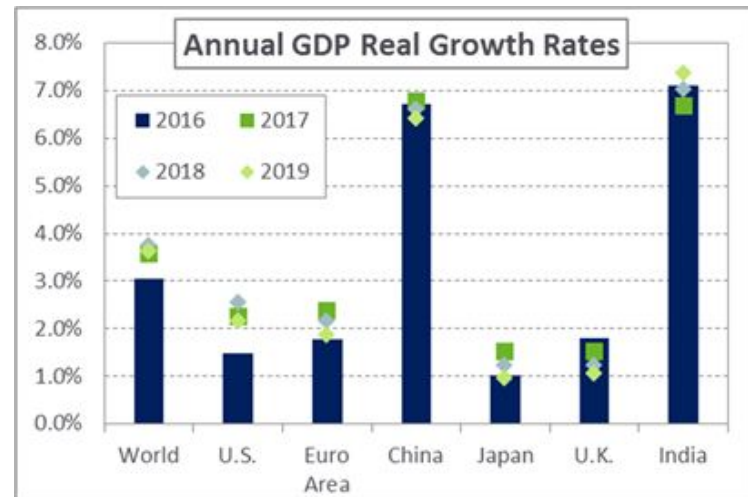
Non-US corporate revenues and equities are best positioned to benefit from a widespread boost in global economic conditions

Positive growth rates harmonized across the globe are relatively rare

Conditions are the result of Europe, Japan, and large parts of the emerging world transitioning out of economic malaise

Persistence of the theme over several years would provide a substantial benefit to equity markets globally – specifically in Europe and Japan

Historically, periods of synchronized growth have been derailed by higher inflation levels and central banks tightening policy



Source: (Top) OECD
Source: (Bottom) OECD



KEY MARKET THEMES

Synchronized Economic Resurgence

Erosion of excess economic capacity is a catalyst to boost economic gains

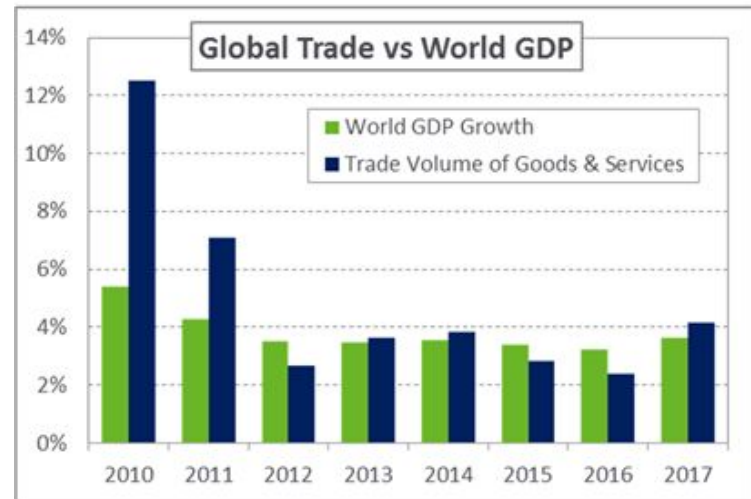
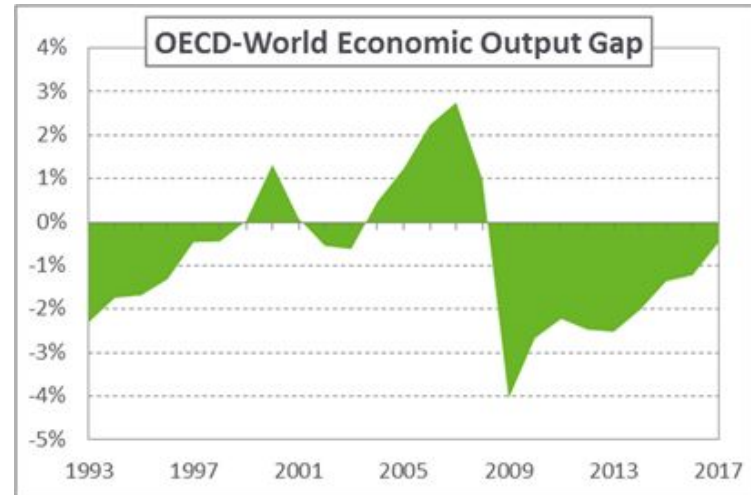
Despite recent labor market improvements, potential for labor reform in Europe and improved workforce participation in Japan offer multi-year benefits to economic growth

Material decline in emerging market inflation provides a cushion for real interest rates to fall and fuel an expansion of economic activity

Economic resurgence is delicate and can be disrupted by lingering global risk factors

US dollar strength, dislocation in China's credit expansion, and restrictive US trade policy pose the greatest threats

The foundation of synchronized economic resurgence is the continuation of positive trends associated with the other key market themes



Source: (Top) OECD
Source: (Bottom) IMF



KEY MARKET THEMES

Federal Reserve Gradualism

The Federal Reserve is expected to slowly increase interest rates

Expected path of Fed policy through 2020 matters more than timing of the next hike as the disconnect between market expectations and Fed signaling has grown

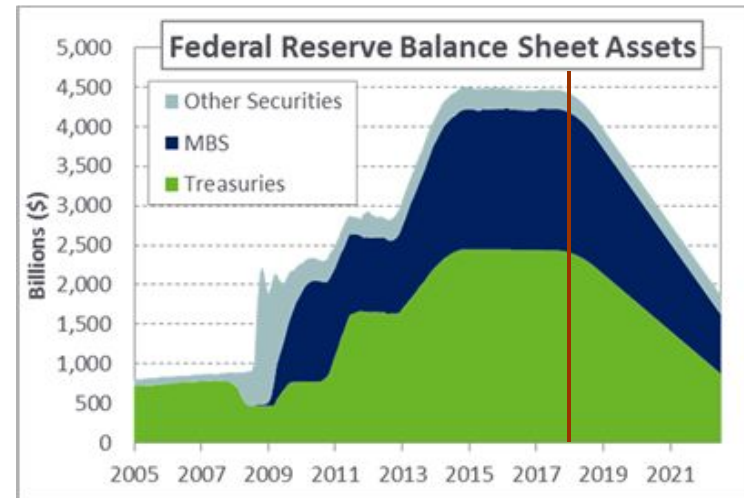
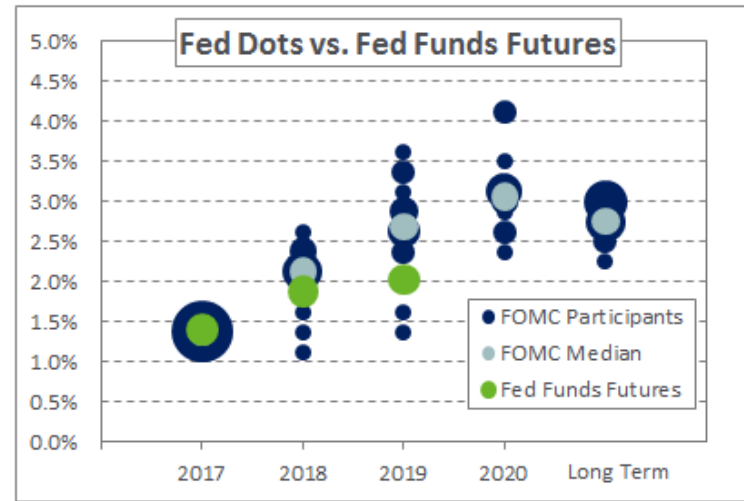
A relatively accommodative Fed is likely to continue, unless there is a dramatic acceleration in inflation

The Fed's balance sheet normalization is a low grade tightening of monetary policy but its impact is untested

Fed is expected to be careful and data dependent yet balance sheet disbursement into a strong economy will likely have tightening effects – in the same way balance sheet expansion had easing effects

The balance sheet will gradually shrink over time assuming conditions remain supportive

The gradual progression of balance sheet reduction combined with the accommodative policies of global central banks supports easy global financial conditions



Source: (Top) Bloomberg, NEPC
Source: (Bottom) Bloomberg, NEPC



KEY MARKET THEMES

Federal Reserve Gradualism

Gradualism is the policy of choice globally as the major central banks manage unprecedented initiatives

ECB's QE program is expanding but at a slower rate

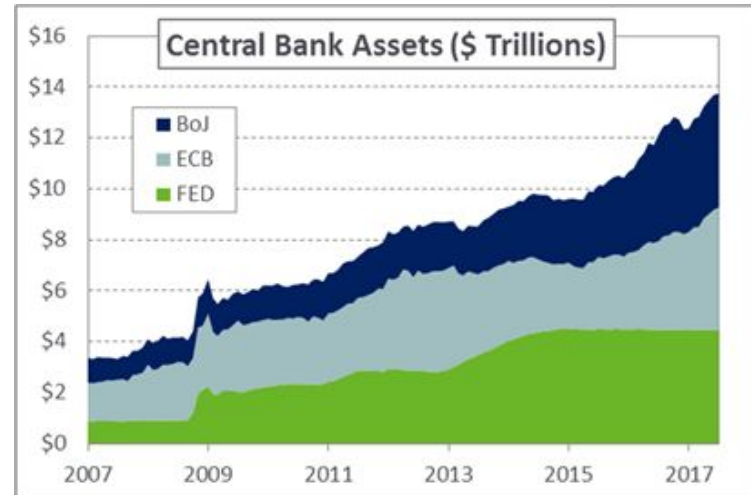
However, the reinvestment of balance sheet holdings is likely to continue for an extended period of time

Bank of Japan's QE yield-curve control program has rapidly slowed bond purchases but solidified steepness in the yield curve

Inflation expected to shift marginally higher in the coming years

Improvements in wage growth and aggregate economic activity support modest upticks in inflation but still within the Fed's tolerance bands to gradually raise rates

Fed has stated a willingness to let the economy "run hot" and accept some inflation to repair the deflationary effects of the past decade



Source: (Top) Bloomberg, NEPC
Source: (Bottom): Bloomberg, FRED



KEY MARKET THEMES

China Transitions

China is the global growth engine but faces fundamental transitions

China’s economic transition is pivoting from production and investment focused to a service and consumption based economy

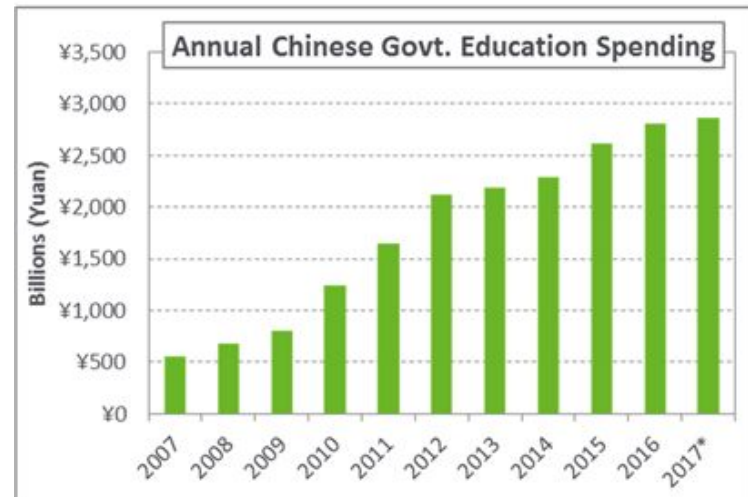
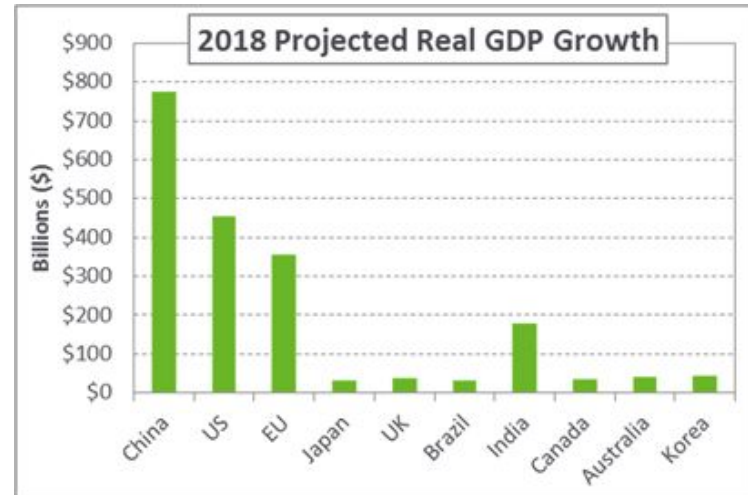
Fixed investment is required to sustain the production based economy and support employment as the rural population moves to urban centers

Any disruption to these transitions will have global repercussions due to China’s role in the global economy

China must manage competing social goals in attempting to sustain growth

Engineering an orderly transition to a consumer-led economy requires supporting employment outside the major cities and improving quality of life metrics such as air quality in the urban centers

Future growth in a services based economy requires advancement in productivity, technology, and a more skilled labor force



Source: (Top) Bloomberg

Source: (Bottom) Bloomberg, *Includes estimate for Nov/Dec 2017



KEY MARKET THEMES

China Transitions

The PBOC is tasked with straddling a delicate path as the economy evolves

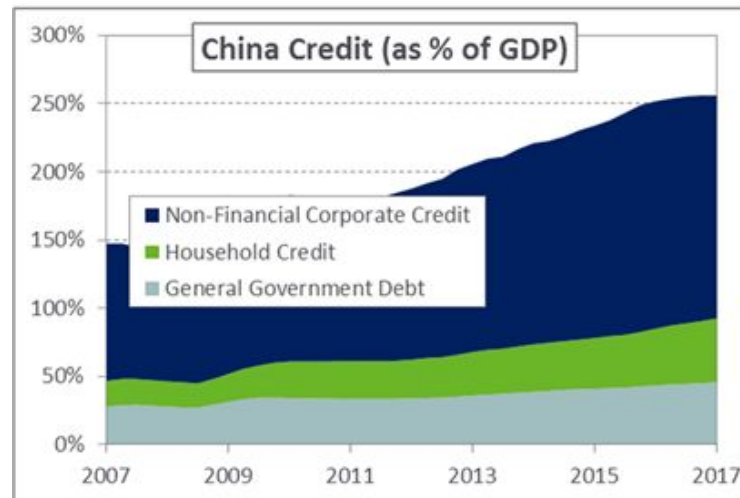
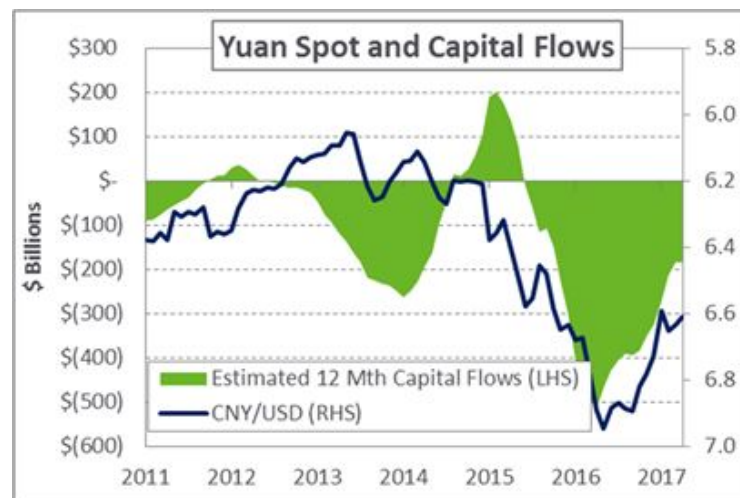
China maintains control of its currency and monetary policy but would have to make concessions to open its capital account and allow the free movement of capital in order to encourage investment

Restrictions on capital markets are slowly being eased, with an eye towards limiting social disruption

China's government is negotiating a balance of tightening credit expansion and support for economic growth

Continued credit expansion and real estate development risk inflating asset price bubbles and pose a systemic risk

Markets have responded positively to the PBOC's management of a more stable yuan as capital outflow pressure has eased but currency devaluation remains a tail risk



Source: (Top) Bloomberg, NEPC
Source: (Bottom) Bank of International Settlements



KEY MARKET THEMES

Globalization Backlash

Uneven economic growth and wage gains have fueled political discontent in the developed world

Election results in France have assuaged fears of political gridlock in the EU

Italian election in first half of 2018 is another potential flashpoint on globalization

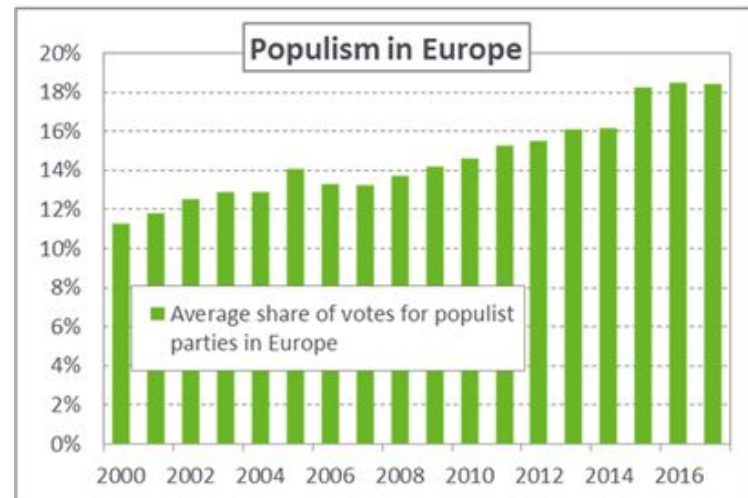
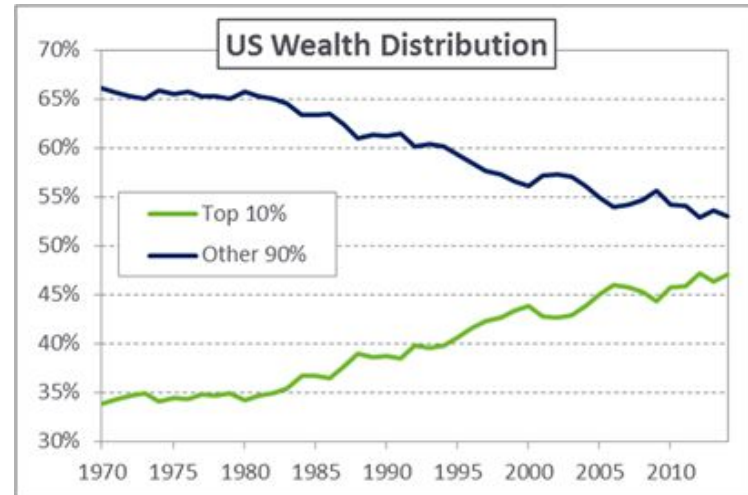
Anti-establishment political bias is likely a long term trend and potentially leads to higher levels of currency volatility over time

For many nations, a turn inward is associated with globalization fatigue

Often fuels greater expression of nationalism and increased geopolitical risks as multilateral relationships are reassessed

Populist movements destabilize the political order and shifts away from political orthodoxy heighten tail risks

However, equity markets often overreact to geopolitical concerns and sell-offs can be a buying opportunity for investors



Source: (Top) World Wealth & Income Database
Source: (Bottom) World Bank



KEY MARKET THEMES

Globalization Backlash

Major shifts in US trade policy did not materialize in 2017

However, a more aggressive protectionist policy would represent a material risk to global markets and the world economy

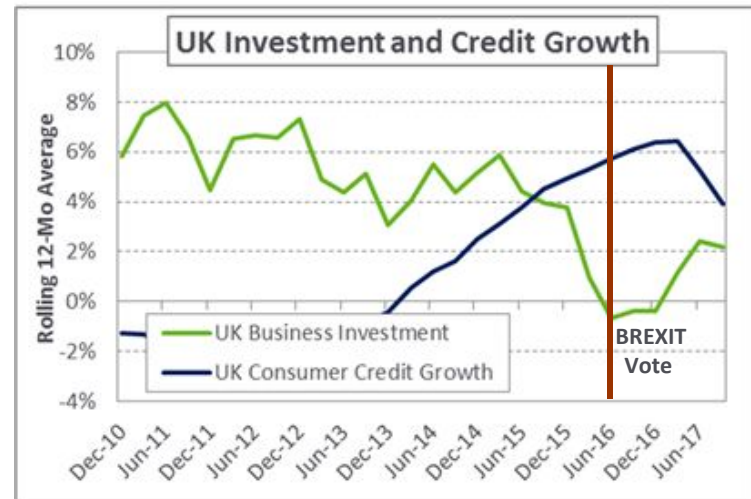
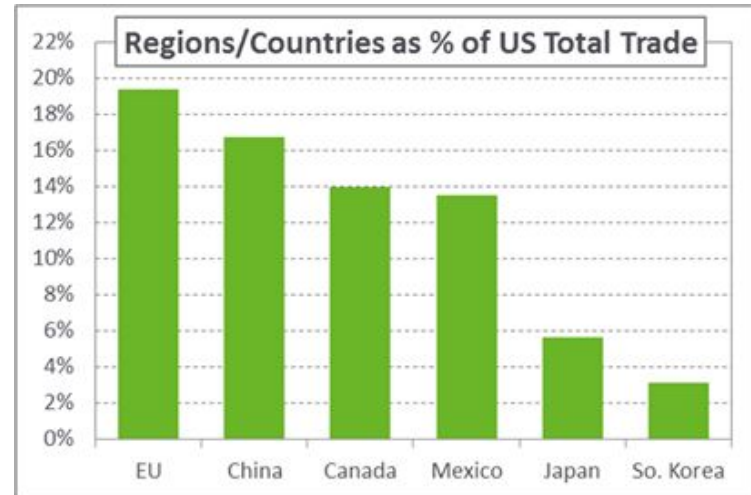
Markets have taken to interpreting the US administration's rhetoric with a grain of salt but ongoing NAFTA negotiations are a concern

The UK serves as a live case study for the effects of globalization backlash

While it is early in the process, economic metrics across the country have turned lower in the 18 months since UK voted to leave the European Union

Expected disruption to financial regulations, customs controls, and business confidence in the UK are proving to be a cautionary tale for a turn away from globalization

However, the economic unease of voters remain and popularity of anti-establishment political parties poses a risk to the global economic order

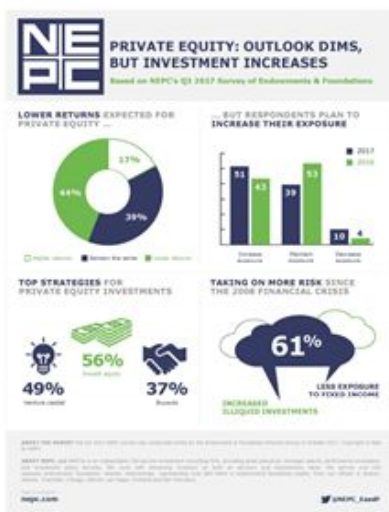


Source: (Top) Federal Reserve Bank of St. Louis

Source: (Bottom) Bloomberg



HIGHLIGHTS OF FOURTH QUARTER HAPPENINGS AT NEPC



NEPC INSIGHTS

- White Paper: Terminated-Vested Lump Sum Payouts
- White Paper: Power Up Your Pension Plans
- Taking Stock: Could ESG Analysis Have Helped Equifax Investors?
- Taking Stock: Ten Years Since The Global Financial Crisis, Part 1: Then and Now
- Taking Stock: No Lull After the Storm for Puerto Rico Bonds
- Taking Stock: Tax Reform Update
- Market Chatter: It's Always Sunny on Sand Hill Road
- Market Chatter: The E-Commerce Grinch that Stole the US Storefront?
- Market Chatter: Endowment Tax Reform Leaves Less to be Thankful for
- NEPC's 2017 Hedge Fund Operational Due Diligence Survey Results
- NEPC's 2017 Defined Benefit Trends Survey Infographic
- NEPC's 2017 Defined Benefit Plan Trends Survey – Healthcare Highlights Infographic
- Taking Stock: What Do Revised Mortality Tables Mean for Terminated-Vested Lump Sum Payouts?
- 2017 Third Quarter Market Thoughts
- 2017 Q3 Endowment & Foundation Survey Results and Infographic

WEBINAR REPLAYS

- NEPC's 2017 Defined Benefit Plan Trends Survey

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

RECENT UPDATES

- Our team continues to grow: Please join us in welcoming our senior consultant and insurance specialist, Andrew Coupe.
- NEPC was featured in over 35 news articles including *Bloomberg*, *Pensions & Investments* and *FundFire*, to name a few.
- NEPC's Chris Levell, ASA, CFA, CAIA, Partner, Client Strategy, was named a finalist in *Chief Investment Officer's* Consultant of the Year list.
- NEPC's Brandon Parrish, CFA, CAIA, Private Wealth Consultant, was featured in *Private Asset Management's* Top Read Stories for 2017 for his article "An Intuitive Approach for High Net Worth Clients."



TOTAL FUND PERFORMANCE SUMMARY

NEPC, LLC

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE SUMMARY (NET)

	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	Return	Since
Total Fund	\$5,420,490,945	4.1%	12	8.0%	20	16.0%	37	7.7%	40	9.4%	20	5.9%	29	8.2%	Apr-94
<i>Policy Index</i>		4.1%	12	7.9%	21	16.3%	29	8.3%	13	9.8%	12	6.1%	22	8.2%	Apr-94
<i>60% MSCI ACWI (Net) / 40% CITI WGBI</i>		3.8%	30	7.8%	27	17.1%	12	6.4%	89	6.5%	89	4.2%	93	--	Apr-94
<i>60% S&P 500 / 40% BBgBarc Aggregate</i>		4.1%	11	7.3%	56	14.2%	73	7.8%	30	10.3%	6	7.0%	3	8.4%	Apr-94
<i>InvestorForce Public DB > \$1B Net Median</i>		3.5%		7.4%		15.6%		7.5%		8.7%		5.4%		7.6%	Apr-94

- For the five year period ending December 31, 2017, the Fund returned 9.4% trailing the policy index by 0.4% and ranking in the 20th 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 74th percentile of its peers, and the risk-adjusted return, or Sharpe Ratio, ranks in the 46th percentile. This means that the Fund has earned more return per unit of volatility taken than 54% of its peers.

- For the three-year period, the Fund returned 7.7%, trailing the policy index by 0.6% and ranking in the 40th percentile of its peers. The Fund's volatility ranks in the 78th percentile of its peers over this period, with the Fund's Sharpe Ratio ranking in the 67th percentile.

- For the one-year period, the Fund returned 16.0%, underperforming the policy index by 0.3% and ranking in the 37th 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 \$763 million which includes a net investment gain of \$218 million in the quarter. Assets increased from \$4.67 billion one year ago to \$5.42 billion.



3 Years Ending December 31, 2017								
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	7.7%	40	6.4%	78	1.1	67	1.6	47
Policy Index	8.3%	13	6.2%	72	1.3	36	1.8	34
InvestorForce Public DB > \$1B Net Median	7.5%	--	5.7%	--	1.2	--	1.6	--

5 Years Ending December 31, 2017								
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	9.4%	20	6.2%	74	1.5	46	2.5	30
Policy Index	9.8%	12	6.0%	69	1.6	27	2.6	27
InvestorForce Public DB > \$1B Net Median	8.7%	--	5.6%	--	1.4	--	2.2	--

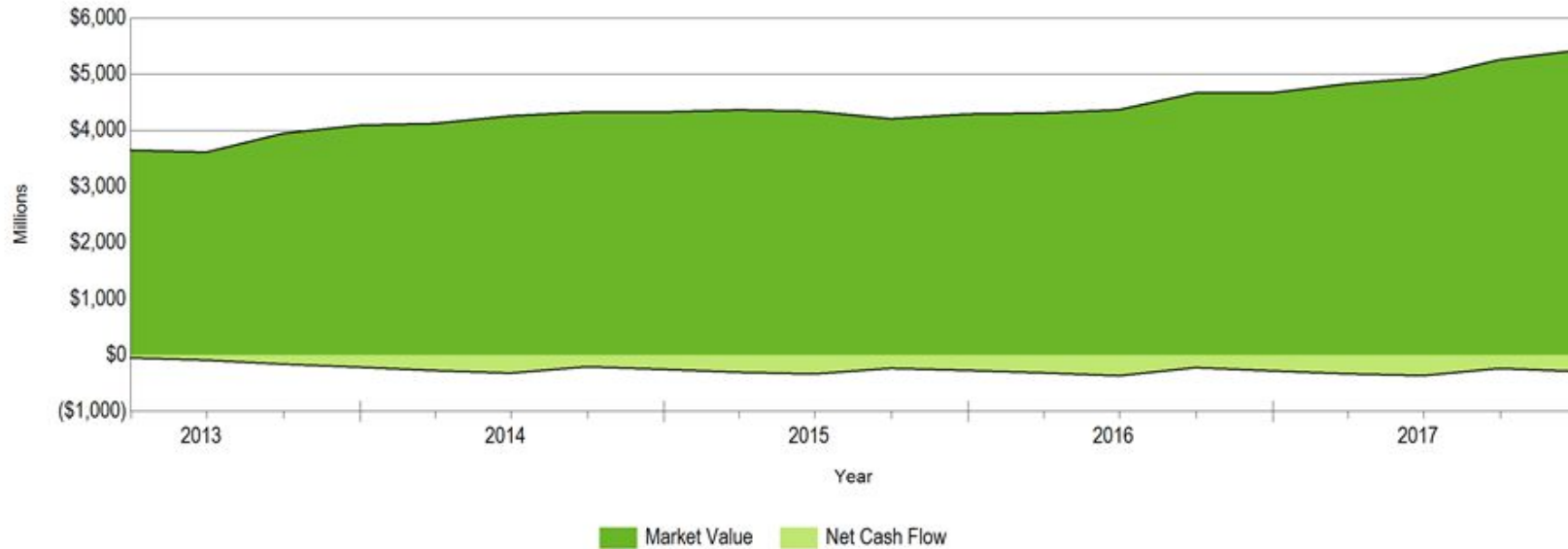
Policy Index as of January 2016: 28% Russell 3000, 20% Barclays Aggregate, 15% MSCI ACWI ex U.S., 10% MSCI ACWI, 10% DJ U.S. Total Stock Market Index + 3%, 10% CPI+4% Index, and 7% NCREIF ODCE Real Estate Index.



Ventura County Employees' Retirement Association

TOTAL FUND ASSET GROWTH SUMMARY

Market Value History
5 Years Ending December 31, 2017

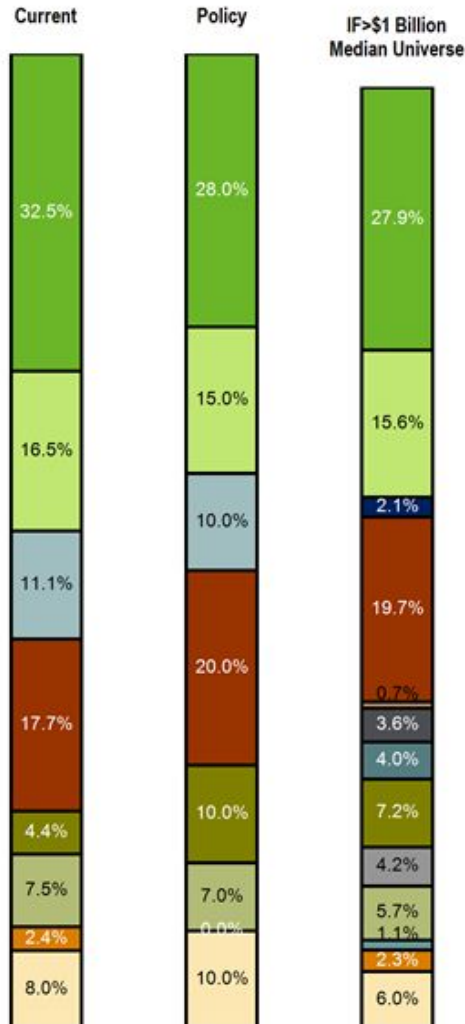


Summary of Cash Flows					
	Last Three Months	Fiscal Year-To-Date	One Year	Three Years	Five Years
Beginning Market Value	\$5,257,900,164	\$4,935,381,791	\$4,668,717,739	\$4,328,232,756	\$3,498,758,840
Net Cash Flow	-\$55,558,176	\$73,852,225	-\$10,957,697	-\$37,760,046	-\$291,503,970
Net Investment Change	\$218,148,957	\$411,256,929	\$762,730,903	\$1,130,018,235	\$2,213,236,075
Ending Market Value	\$5,420,490,945	\$5,420,490,945	\$5,420,490,945	\$5,420,490,945	\$5,420,490,945



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	\$1,760,783,794	32.5%	28.0%	4.5%	24.0% - 32.0%	--	
Non-US Equity	\$892,509,805	16.5%	15.0%	1.5%	12.0% - 18.0%	Yes	
Emerging Markets Equity	--	--	--	0.0%	--	--	
Global Equity	\$599,349,407	11.1%	10.0%	1.1%	7.0% - 13.0%	Yes	
U.S. Fixed Income	\$959,995,760	17.7%	20.0%	-2.3%	16.0% - 24.0%	Yes	
Fixed Income - Emerging	--	--	--	0.0%	--	--	
Fixed Income - Global	--	--	--	0.0%	--	--	
Global Asset Allocation	--	--	--	0.0%	--	--	
Private Equity	\$238,478,359	4.4%	10.0%	-5.6%	0.0% - 12.0%	Yes	
Hedge Funds	--	--	--	0.0%	--	--	
Real Estate	\$405,111,120	7.5%	7.0%	0.5%	4.0% - 10.0%	Yes	
Commodities/ Real Assets	--	--	--	0.0%	--	--	
Cash	\$130,726,462	2.4%	0.0%	2.4%	0.0% - 3.0%	Yes	
Liquid Alternatives	\$433,536,238	8.0%	10.0%	-2.0%	5.0% - 15.0%	Yes	
Total	\$5,420,490,945	100.0%	100.0%				

*Difference between Policy and Current Allocation

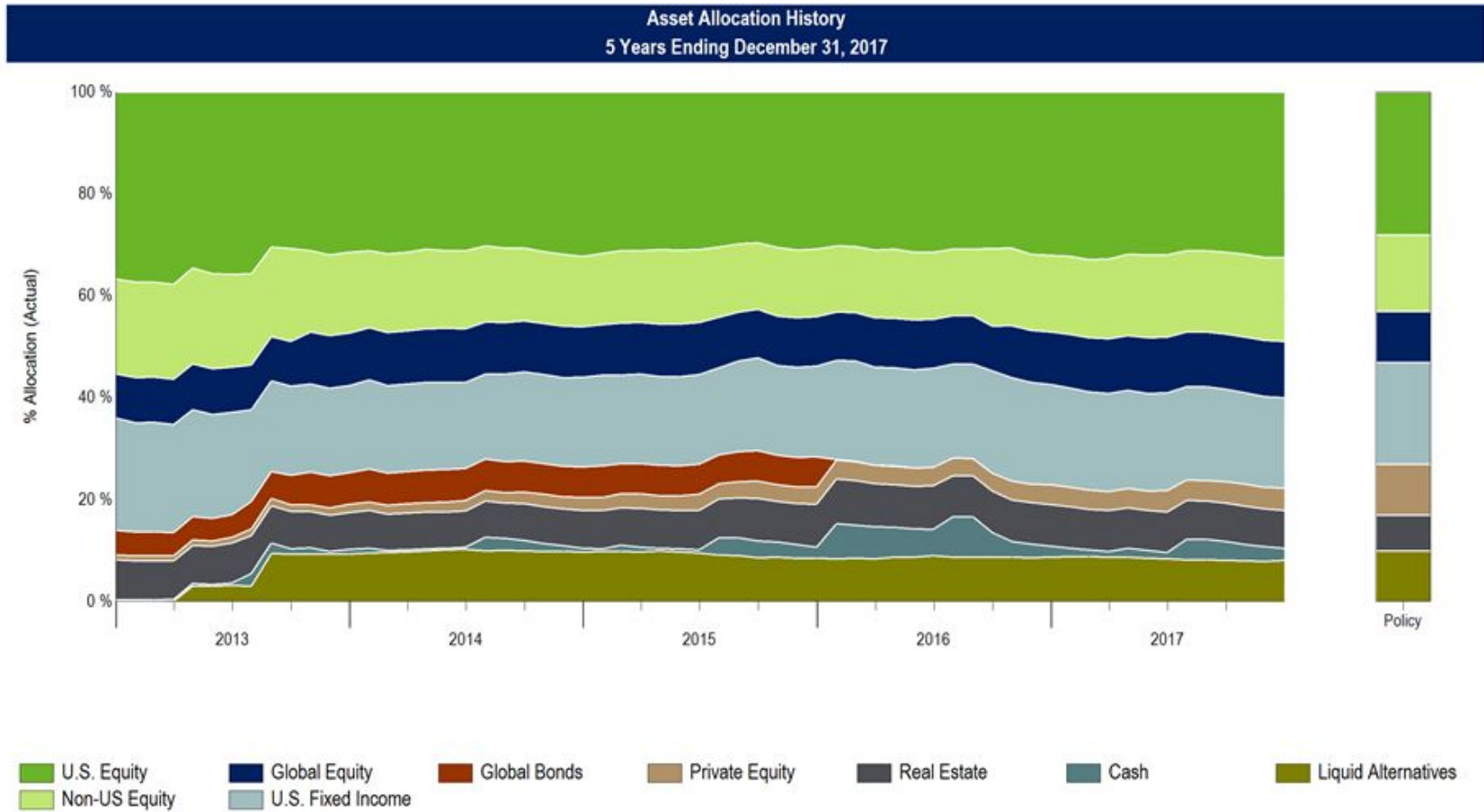
Cash represents asset in Parametric Overlay.

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



Ventura County Employees' Retirement Association

TOTAL FUND ALLOCATION HISTORY

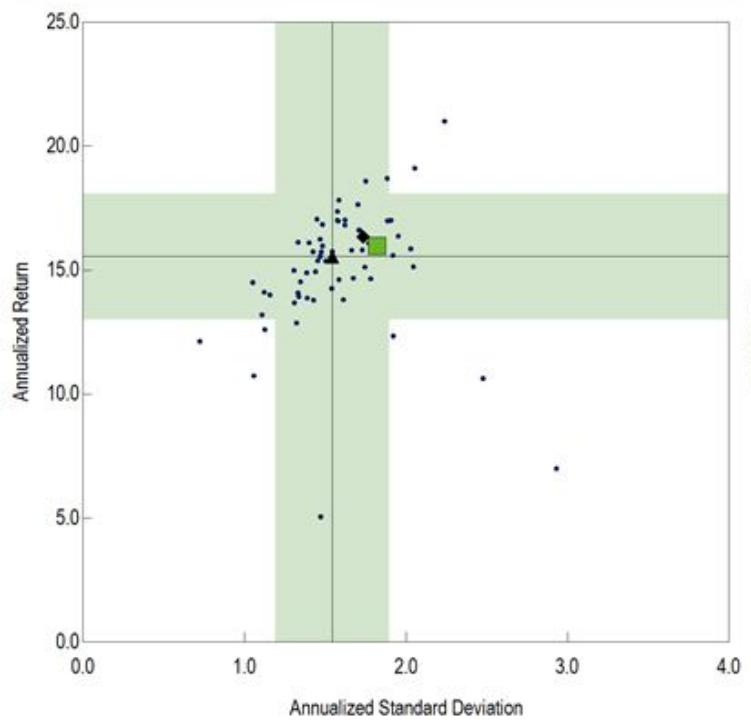


Policy Index shown is most recently approved index



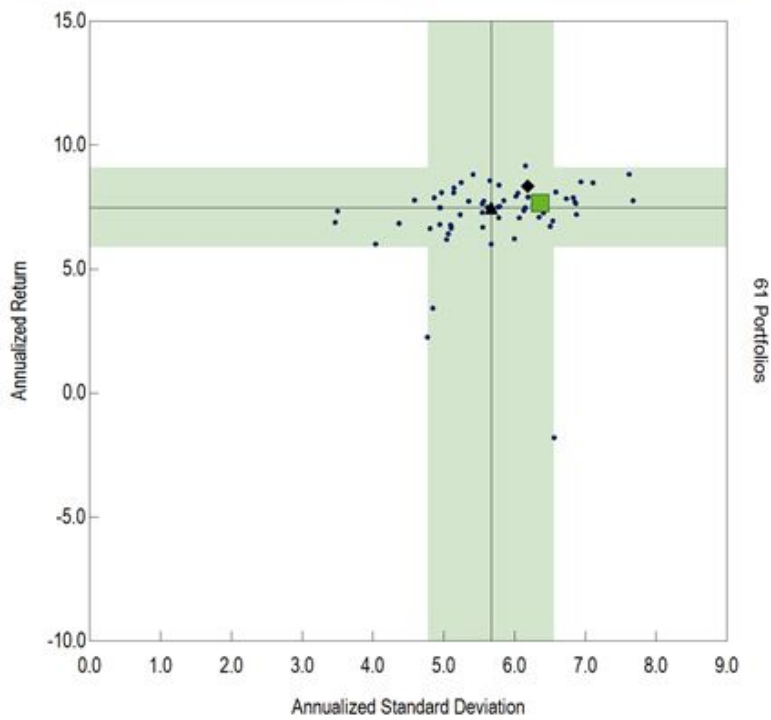
Ventura County Employees' Retirement Association
TOTAL FUND RISK/RETURN

1 Years Ending December 31, 2017



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

3 Years Ending December 31, 2017



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



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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



Sortino Ratio requires two months with negative returns in the time period.



Ventura County Employees' Retirement Association

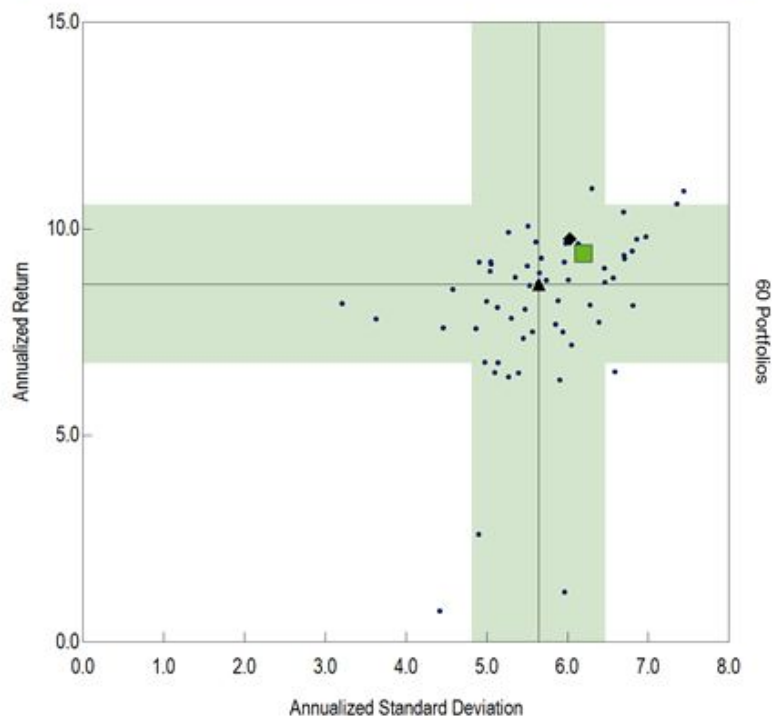
TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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



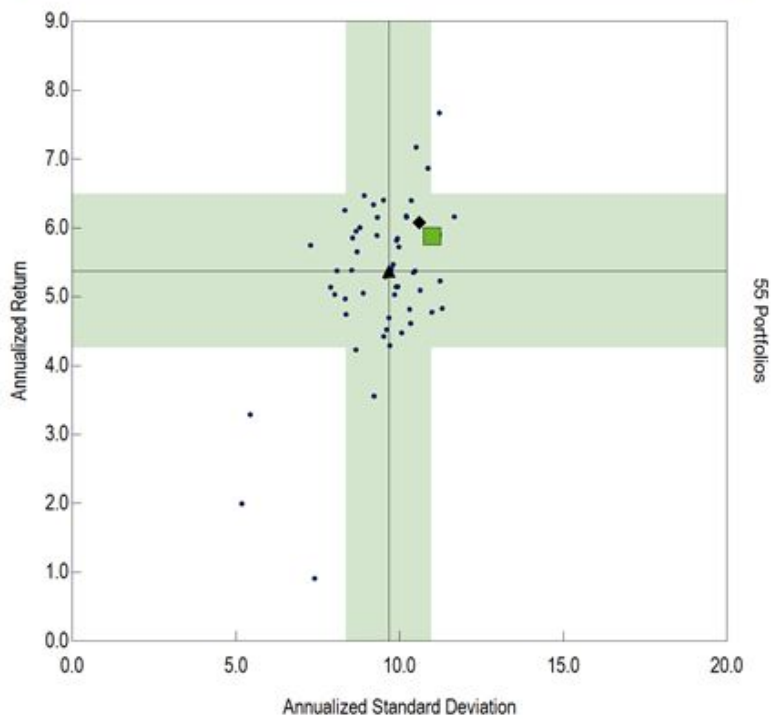
Ventura County Employees' Retirement Association
TOTAL FUND RISK/RETURN

5 Years Ending December 31, 2017



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

10 Years Ending December 31, 2017



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



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

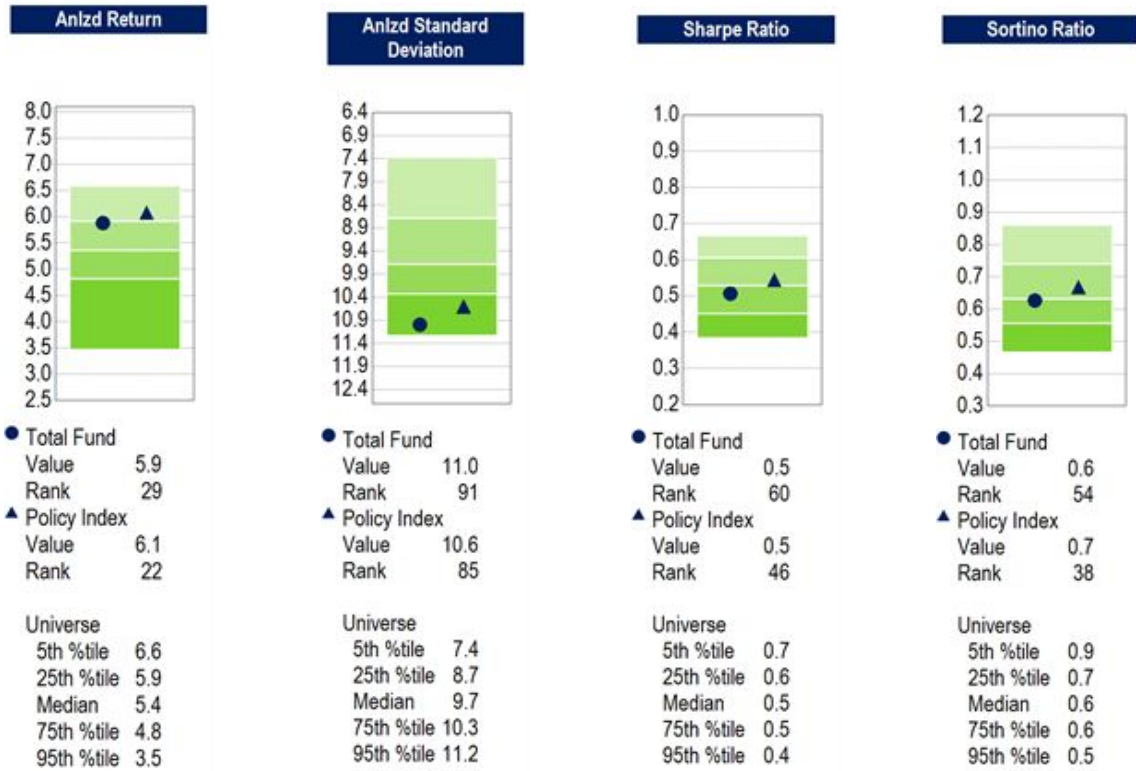
Total Fund vs. InvestorForce Public DB > \$1B Net 5 Years



Ventura County Employees' Retirement Association

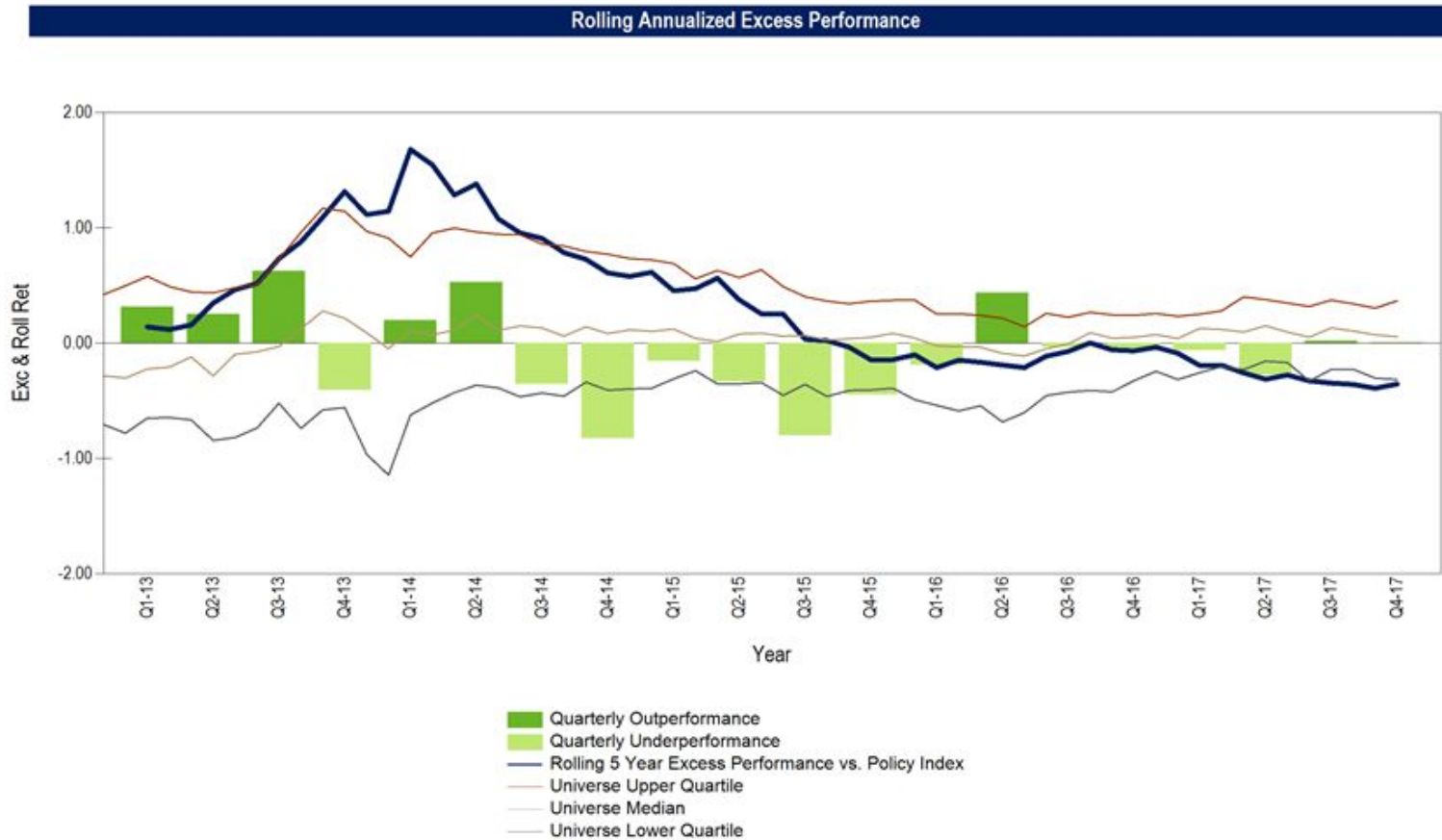
TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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



Ventura County Employees' Retirement Association

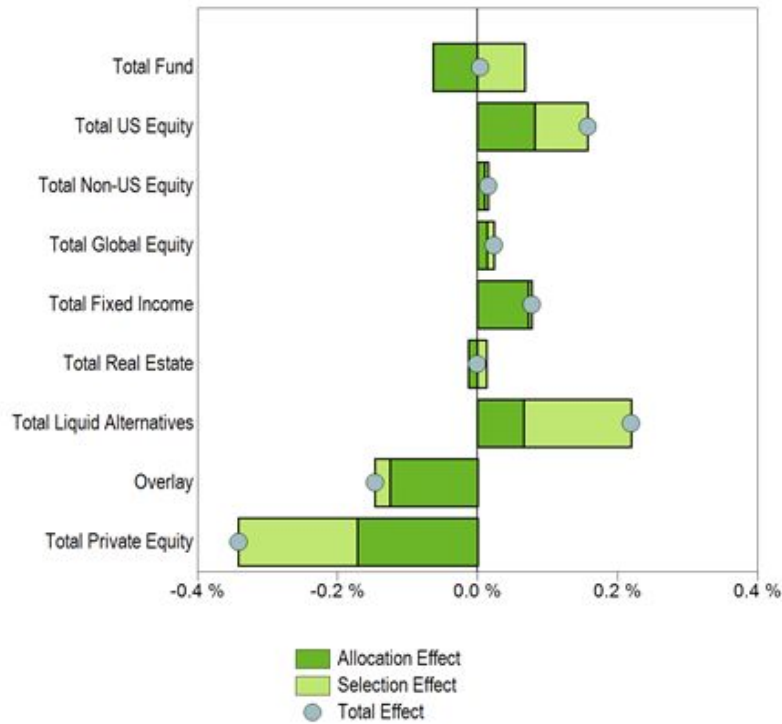
ROLLING 5 YEAR EXCESS RETURNS- NET OF FEES



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
3 Months Ending December 31, 2017



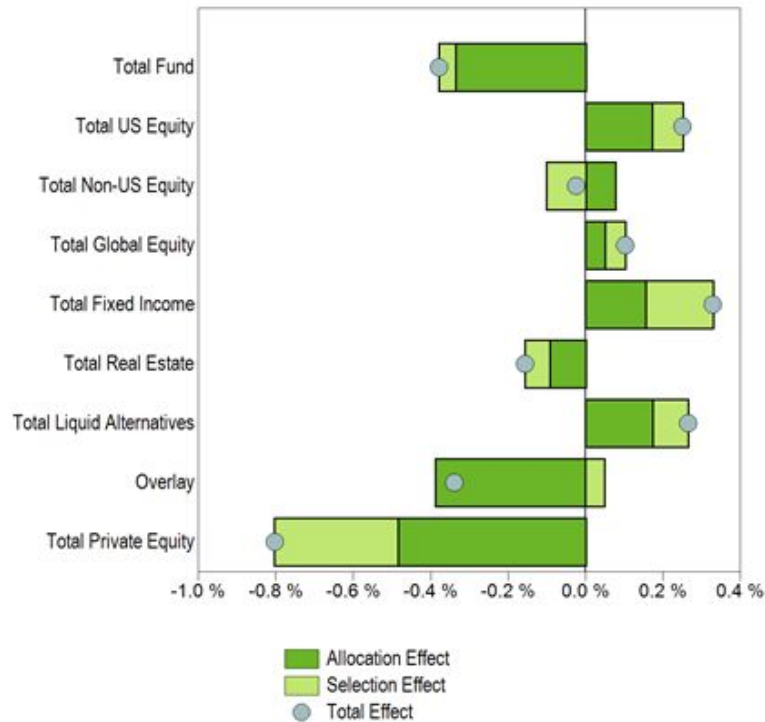
Attribution Summary						
3 Months Ending December 31, 2017						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	6.6%	6.3%	0.2%	0.1%	0.1%	0.2%
Total Non-US Equity	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%
Total Global Equity	5.8%	5.7%	0.1%	0.0%	0.0%	0.0%
Total Fixed Income	0.4%	0.4%	0.0%	0.0%	0.1%	0.1%
Total Real Estate	2.0%	1.9%	0.2%	0.0%	0.0%	0.0%
Total Liquid Alternatives	2.8%	0.9%	1.9%	0.2%	0.1%	0.2%
Overlay	-0.3%	0.3%	-0.6%	0.0%	-0.1%	-0.1%
Total Private Equity	3.1%	7.1%	-4.0%	-0.2%	-0.2%	-0.3%
Total	4.1%	4.1%	0.0%	0.1%	-0.1%	0.0%



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
1 Year Ending December 31, 2017



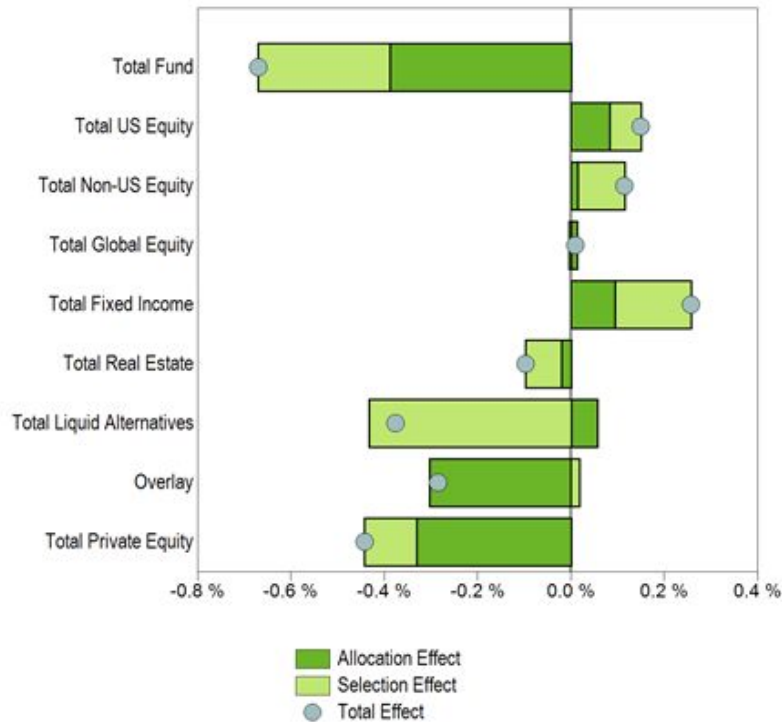
Attribution Summary						
1 Year Ending December 31, 2017						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	21.4%	21.1%	0.3%	0.1%	0.2%	0.2%
Total Non-US Equity	26.5%	27.2%	-0.7%	-0.1%	0.1%	0.0%
Total Global Equity	24.5%	24.0%	0.5%	0.1%	0.1%	0.1%
Total Fixed Income	4.4%	3.5%	0.8%	0.2%	0.2%	0.3%
Total Real Estate	5.9%	6.7%	-0.7%	-0.1%	-0.1%	-0.2%
Total Liquid Alternatives	7.2%	6.2%	1.0%	0.1%	0.2%	0.3%
Overlay	3.9%	0.9%	3.0%	0.0%	-0.4%	-0.3%
Total Private Equity	16.9%	24.7%	-7.9%	-0.3%	-0.5%	-0.8%
Total	16.0%	16.3%	-0.4%	0.0%	-0.3%	-0.4%



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
3 Years Ending December 31, 2017



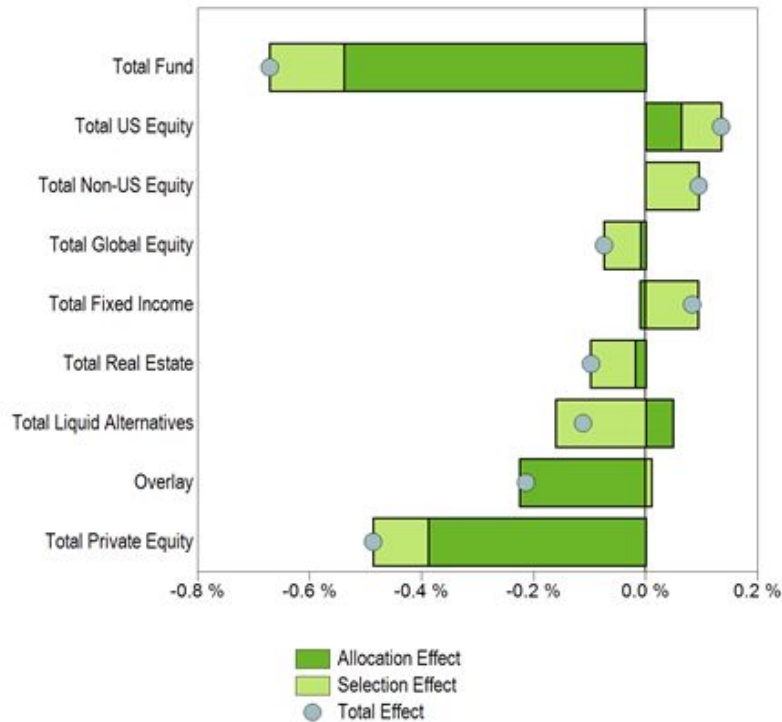
Attribution Summary						
3 Years Ending December 31, 2017						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	11.3%	11.1%	0.2%	0.1%	0.1%	0.1%
Total Non-US Equity	8.7%	7.8%	0.8%	0.1%	0.0%	0.1%
Total Global Equity	9.3%	9.3%	0.0%	0.0%	0.0%	0.0%
Total Fixed Income	2.9%	2.0%	0.9%	0.2%	0.1%	0.3%
Total Real Estate	8.5%	9.4%	-1.0%	-0.1%	0.0%	-0.1%
Total Liquid Alternatives	1.1%	5.7%	-4.6%	-0.4%	0.1%	-0.4%
Overlay	1.4%	0.4%	1.0%	0.0%	-0.3%	-0.3%
Total Private Equity	13.0%	14.4%	-1.4%	-0.1%	-0.3%	-0.4%
Total	7.7%	8.3%	-0.7%	-0.3%	-0.4%	-0.7%



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
5 Years Ending December 31, 2017



Attribution Summary						
5 Years Ending December 31, 2017						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	15.8%	15.5%	0.2%	0.1%	0.1%	0.1%
Total Non-US Equity	7.5%	6.8%	0.7%	0.1%	0.0%	0.1%
Total Global Equity	10.1%	10.8%	-0.7%	-0.1%	0.0%	-0.1%
Total Fixed Income	2.2%	1.7%	0.5%	0.1%	0.0%	0.1%
Total Real Estate	9.5%	10.5%	-1.0%	-0.1%	0.0%	-0.1%
Total Liquid Alternatives	--	5.8%	--	-0.1%	0.0%	-0.1%
Overlay	--	0.3%	--	0.0%	-0.2%	-0.2%
Total Private Equity	15.1%	18.9%	-3.8%	-0.1%	-0.4%	-0.5%
Total	9.2%	9.8%	-0.6%	-0.1%	-0.6%	-0.6%



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

1 Year Ending December 31, 2017												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	60.0%	23.3%	36	3.0%	62	-1.1%	80	0.6%	10	-1.1	63	1.0
MSCI ACWI	--	24.0%	24	2.8%	46	0.0%	54	0.0%	1	--	--	1.0
Total US Equity	32.5%	21.4%	23	3.8%	43	0.5%	23	0.5%	10	0.5	18	1.0
Russell 3000	--	21.1%	31	3.8%	46	0.0%	30	0.0%	1	--	--	1.0
Total Non-US Equity	16.5%	26.5%	77	4.4%	66	-3.8%	87	0.9%	11	-0.7	85	1.1
MSCI ACWI ex USA	--	27.2%	71	3.9%	32	0.0%	62	0.0%	1	--	--	1.0
Total Global Equity	11.1%	24.5%	53	2.8%	9	0.6%	23	0.1%	1	8.2	1	1.0
MSCI ACWI	--	24.0%	72	2.8%	9	0.0%	49	0.0%	1	--	--	1.0
Total Fixed Income	17.7%	4.4%	61	1.1%	14	1.7%	52	0.6%	50	1.4	56	0.7
Total Fixed Income Policy Index	--	3.5%	70	1.5%	81	0.0%	83	0.0%	1	--	--	1.0
Total US Fixed Income	17.7%	4.4%	38	1.1%	20	1.7%	31	0.6%	66	1.4	44	0.7
BBgBarc US Aggregate TR	--	3.5%	51	1.5%	88	0.0%	81	0.0%	1	--	--	1.0
Total Liquid Alternatives	8.0%	7.2%	--	4.3%	--	1.7%	--	4.3%	--	0.2	--	0.9
CPI + 4% (Unadjusted)	--	6.2%	--	0.8%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.5%	5.9%	84	2.6%	71
NCREIF ODCE Net	--	6.7%	66	2.8%	75
Total Private Equity	4.4%	16.9%	31	5.8%	53
DJ U.S. Total Stock Market Index + 3%	--	24.7%	1	3.8%	21

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 173 portfolios), Total Non-US Equity (InvestorForce Public DB ex-US Eq consists of 122 portfolios), Total Global Equity (InvestorForce Public DB Gbl Eq consists of 39 portfolios), Total Fixed Income (InvestorForce Public DB Total Fix Inc consists of 84 portfolios), Total US Fixed Income (InvestorForce Public DB US Fix Inc consists of 109 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 43 portfolios).



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

3 Years Ending December 31, 2017												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	60.0%	10.3%	16	10.2%	67	1.3%	8	1.2%	32	0.8	3	1.0
MSCI ACWI	--	9.3%	77	10.5%	87	0.0%	73	0.0%	1	--	--	1.0
Total US Equity	32.5%	11.3%	18	10.3%	59	0.2%	19	0.3%	1	0.8	1	1.0
Russell 3000	--	11.1%	27	10.2%	53	0.0%	25	0.0%	1	--	--	1.0
Total Non-US Equity	16.5%	8.7%	47	11.5%	51	1.2%	46	1.1%	6	0.7	19	1.0
MSCI ACWI ex USA	--	7.8%	73	12.0%	85	0.0%	78	0.0%	1	--	--	1.0
Total Global Equity	11.1%	9.3%	32	10.6%	70	-0.1%	87	1.0%	1	0.0	44	1.0
MSCI ACWI	--	9.3%	31	10.5%	70	0.0%	83	0.0%	1	--	--	1.0
Total Fixed Income	17.7%	2.9%	47	2.4%	35	1.4%	30	1.8%	62	0.5	33	0.7
Total Fixed Income Policy Index	--	2.0%	72	2.7%	53	0.0%	82	0.0%	1	--	--	1.0
Total US Fixed Income	17.7%	3.2%	26	2.4%	50	1.6%	15	2.0%	83	0.5	45	0.6
BBgBarc US Aggregate TR	--	2.2%	55	2.8%	69	0.0%	74	0.0%	1	--	--	1.0
Total Liquid Alternatives	8.0%	1.1%	--	9.3%	--	-12.2%	--	9.1%	--	-0.5	--	2.4
CPI + 4% (Unadjusted)	--	5.7%	--	0.9%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.5%	8.5%	66	3.7%	46
NCREIF ODCE Net	--	9.4%	39	4.1%	59
Total Private Equity	4.4%	13.0%	27	6.1%	62
DJ U.S. Total Stock Market Index + 3%	--	14.4%	12	10.2%	96

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 81 portfolios), Total US Equity (InvestorForce Public DB US Eq consists of 163 portfolios), Total Non-US Equity (InvestorForce Public DB ex-US Eq consists of 116 portfolios), Total Global Equity (InvestorForce Public DB Gbl Eq consists of 33 portfolios), Total Fixed Income (InvestorForce Public DB Total Fix Inc consists of 79 portfolios), Total US Fixed Income (InvestorForce Public DB US Fix Inc consists of 107 portfolios), Total Real Estate (InvestorForce Public DB Real Estate Pub+Priv consists of 61 portfolios) and Total Private Equity (InvestorForce Public DB Private Eq consists of 42 portfolios).



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

5 Years Ending December 31, 2017												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	60.0%	12.5%	46	9.6%	46	2.1%	6	1.3%	37	1.3	1	1.0
MSCI ACWI	--	10.8%	86	9.9%	81	0.0%	70	0.0%	1	--	--	1.0
Total US Equity	32.5%	15.8%	7	9.8%	39	0.2%	11	0.3%	1	0.7	1	1.0
Russell 3000	--	15.5%	25	9.8%	34	0.0%	14	0.0%	1	--	--	1.0
Total Non-US Equity	16.5%	7.5%	48	10.9%	27	1.1%	34	1.2%	5	0.6	22	0.9
MSCI ACWI ex USA	--	6.8%	74	11.5%	76	0.0%	72	0.0%	1	--	--	1.0
Total Global Equity	11.1%	10.1%	65	10.0%	49	-0.7%	99	1.0%	1	-0.6	99	1.0
MSCI ACWI	--	10.8%	63	9.9%	47	0.0%	89	0.0%	1	--	--	1.0
Total Fixed Income	17.7%	2.2%	54	2.5%	27	0.9%	31	1.6%	57	0.3	44	0.7
Total Fixed Income Policy Index	--	1.7%	72	2.8%	44	0.0%	70	0.0%	1	--	--	1.0
Total US Fixed Income	17.7%	2.5%	35	2.4%	41	1.0%	23	1.8%	84	0.2	53	0.7
BBgBarc US Aggregate TR	--	2.1%	53	2.8%	63	0.0%	72	0.0%	1	--	--	1.0
Total Liquid Alternatives	8.0%	--	--	--	--	--	--	--	--	--	--	--
CPI + 4% (Unadjusted)	--	9.8%	--	6.2%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.5%	9.5%	77	4.0%	45
NCREIF ODCE Net	--	10.5%	55	4.4%	55
Total Private Equity	4.4%	15.1%	23	6.5%	57
DJ U.S. Total Stock Market Index + 3%	--	18.9%	5	9.8%	90

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

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

Composite rankings are used for Total Equity (InvestorForce Public DB Total Eq consists of 62 portfolios), Total US Equity (InvestorForce Public DB US Eq consists of 134 portfolios), Total Non-US Equity (InvestorForce Public DB ex-US Eq consists of 103 portfolios), Total Global Equity (InvestorForce Public DB Gbl Eq consists of 18 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 90 portfolios), Total Real Estate (InvestorForce Public DB Real Estate Pub+Priv consists of 54 portfolios) and Total Private Equity (InvestorForce Public DB Private Eq consists of 37 portfolios).



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total Fund	5,420,490,945	100.0	100.0	4.1	12	8.0	20	16.0	37	7.7	40	9.4	20	5.9	29	8.2	Apr-94
Policy Index				4.1	12	7.9	21	16.3	29	8.3	13	9.8	12	6.1	22	8.2	Apr-94
Over/Under				0.0		0.1		-0.3		-0.6		-0.4		-0.2		0.0	
60% MSCI ACWI (Net) / 40% CITI WGBI				3.8	30	7.8	27	17.1	12	6.4	89	6.5	89	4.2	93	--	Apr-94
InvestorForce Public DB > \$1B Net Median				3.5		7.4		15.6		7.5		8.7		5.4		7.6	Apr-94
Total Fund ex Parametric*	5,276,974,531	97.4	--	3.9	--	7.8	--	15.7	--	7.6	--	9.3	--	5.8	--	8.2	Apr-94
Total Fund ex Private Equity	5,180,512,586	95.6	--	4.1	11	8.0	20	15.9	38	7.5	50	8.9	40	--	--	9.6	Jan-12
Policy Index				4.1	12	7.9	21	16.3	29	8.3	13	9.8	12	6.1	22	10.3	Jan-12
Over/Under				0.0		0.1		-0.4		-0.8		-0.9				-0.7	
InvestorForce Public DB > \$1B Net Median				3.5		7.4		15.6		7.5		8.7		5.4		9.2	Jan-12
Total US Equity	1,760,783,794	32.5	28.0	6.6	18	11.5	19	21.4	23	11.3	18	15.8	7	8.5	41	9.4	Dec-93
Russell 3000				6.3	37	11.2	31	21.1	31	11.1	27	15.5	25	8.7	27	9.7	Dec-93
Over/Under				0.3		0.3		0.3		0.2		0.3		-0.2		-0.3	
InvestorForce Public DB US Eq Net Median				6.2		10.9		20.2		10.8		15.0		8.3		9.4	Dec-93
Western U.S. Index Plus	197,789,623	3.6		6.9	25	12.8	20	22.7	31	12.2	18	16.5	16	7.4	78	5.9	May-07
S&P 500				6.6	30	11.4	36	21.8	35	11.4	25	15.8	27	8.5	52	7.7	May-07
Over/Under				0.3		1.4		0.9		0.8		0.7		-1.1		-1.8	
eV All US Equity Net Median				5.6		10.4		18.7		9.8		14.5		8.5		7.6	May-07
Blackrock Russell 1000 Index	1,501,688,720	27.7		6.6	48	11.4	50	--	--	--	--	--	--	--	--	13.6	May-17
Russell 1000				6.6	48	11.4	50	21.7	46	11.2	27	15.7	33	8.6	39	13.6	May-17
Over/Under				0.0		0.0										0.0	
eV US Large Cap Equity Net Median				6.5		11.3		21.1		10.0		14.8		8.3		13.6	May-17
Blackrock Russell 2500 Index	61,305,451	1.1		5.2	54	10.3	44	--	--	--	--	--	--	--	--	11.7	May-17
Russell 2500				5.2	54	10.2	44	16.8	52	10.1	38	14.3	38	9.2	49	11.7	May-17
Over/Under				0.0		0.1										0.0	
eV US Small-Mid Cap Equity Net Median				5.5		9.6		17.1		9.3		13.7		9.1		11.2	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% DJ U.S. Total Stock Market 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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total Non-US Equity	892,509,805	16.5	15.0	5.0	40	11.6	41	26.5	77	8.7	47	7.5	48	2.5	47	6.8	Mar-94
MSCI ACWI ex USA				5.0	43	11.5	47	27.2	71	7.8	73	6.8	74	1.8	68	5.6	Mar-94
Over/Under				0.0		0.1		-0.7		0.9		0.7		0.7		1.2	
MSCI EAFE				4.2	76	9.9	85	25.0	89	7.8	75	7.9	38	1.9	68	5.2	Mar-94
MSCI ACWI ex USA Local Currency				4.2	77	8.8	93	18.2	99	8.8	43	10.4	1	3.5	18	--	Mar-94
MSCI EAFE Local Currency				3.7	86	7.1	99	15.2	99	8.5	53	11.4	1	3.3	21	5.1	Mar-94
InvestorForce Public DB ex-US Eq Net Median				4.8		11.3		28.3		8.6		7.4		2.4		6.0	Mar-94
BlackRock ACWI ex-U.S. Index	437,710,700	8.1		5.2	40	11.9	51	28.1	62	8.6	60	7.4	79	2.4	68	3.3	Mar-07
MSCI ACWI ex USA IMI				5.2	40	11.8	53	27.8	62	8.4	64	7.2	80	2.2	70	3.1	Mar-07
Over/Under				0.0		0.1		0.3		0.2		0.2		0.2		0.2	
MSCI ACWI ex USA Local Currency				4.2	69	8.8	85	18.2	99	8.8	58	10.4	21	3.5	49	3.7	Mar-07
eV ACWI ex-US All Cap Equity Net Median				4.9		11.9		29.6		9.3		9.1		3.4		4.2	Mar-07
Sprucegrove	236,456,815	4.4		5.8	31	14.7	17	27.5	68	9.0	54	8.0	67	3.7	42	8.2	Mar-02
MSCI ACWI ex USA				5.0	43	11.5	54	27.2	69	7.8	73	6.8	84	1.8	82	7.1	Mar-02
Over/Under				0.8		3.2		0.3		1.2		1.2		1.9		1.1	
MSCI EAFE				4.2	68	9.9	74	25.0	80	7.8	73	7.9	69	1.9	79	6.5	Mar-02
MSCI ACWI ex USA Local Currency				4.2	69	8.8	85	18.2	99	8.8	58	10.4	21	3.5	49	5.7	Mar-02
MSCI EAFE Local Currency				3.7	79	7.1	97	15.2	99	8.5	61	11.4	14	3.3	51	4.9	Mar-02
eV ACWI ex-US All Cap Equity Net Median				4.9		11.9		29.6		9.3		9.1		3.4		7.7	Mar-02
Hexavest	94,281,380	1.7		2.5	86	5.7	96	17.4	96	6.3	88	6.7	95	--	--	5.1	Dec-10
MSCI EAFE				4.2	41	9.9	50	25.0	59	7.8	65	7.9	68	1.9	78	6.0	Dec-10
Over/Under				-1.7		-4.2		-7.6		-1.5		-1.2				-0.9	
MSCI EAFE Local Currency				3.7	60	7.1	87	15.2	99	8.5	56	11.4	11	3.3	36	8.5	Dec-10
eV EAFE All Cap Equity Net Median				3.9		9.7		25.7		8.9		8.7		2.7		7.0	Dec-10
Walter Scott	124,060,910	2.3		4.9	50	9.9	73	26.6	74	9.9	41	7.4	79	--	--	6.6	Dec-10
MSCI ACWI ex USA				5.0	43	11.5	54	27.2	69	7.8	73	6.8	84	1.8	82	4.9	Dec-10
Over/Under				-0.1		-1.6		-0.6		2.1		0.6				1.7	
MSCI ACWI ex USA Local Currency				4.2	69	8.8	85	18.2	99	8.8	58	10.4	21	3.5	49	7.7	Dec-10
MSCI EAFE				4.2	68	9.9	74	25.0	80	7.8	73	7.9	69	1.9	79	6.0	Dec-10
eV ACWI ex-US All Cap Equity Net Median				4.9		11.9		29.6		9.3		9.1		3.4		7.1	Dec-10



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total Global Equity	599,349,407	11.1	10.0	5.8	3	11.4	6	24.5	53	9.3	32	10.1	65	3.9	20	6.4	May-05
MSCI ACWI				5.7	6	11.2	9	24.0	72	9.3	31	10.8	63	4.7	14	7.3	May-05
Over/Under				0.1		0.2		0.5		0.0		-0.7		-0.8		-0.9	
InvestorForce Public DB Gbl Eq Net Median				4.6		8.9		24.5		9.1		12.5		2.4		6.4	May-05
BlackRock MSCI ACWI Equity Index	599,349,407	11.1		5.8	34	11.4	40	24.5	43	9.8	38	11.2	52	--	--	12.0	Aug-12
MSCI ACWI				5.7	37	11.2	43	24.0	45	9.3	45	10.8	60	4.7	64	11.6	Aug-12
Over/Under				0.1		0.2		0.5		0.5		0.4				0.4	
eV All Global Equity Net Median				5.1		10.5		23.0		9.0		11.4		5.5		11.9	Aug-12



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total Private Equity	239,978,359	4.4	10.0	3.1	39	8.2	27	16.9	31	13.0	27	15.1	23	--	--	14.3	Jan-12
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>7.1</u>	4	<u>12.8</u>	4	<u>24.7</u>	1	<u>14.4</u>	12	<u>18.9</u>	5	--	--	<u>19.1</u>	Jan-12
Over/Under				-4.0		-4.6		-7.8		-1.4		-3.8				-4.8	
<i>InvestorForce Public DB Private Eq Net Median</i>				2.7		6.2		14.6		11.7		13.5		7.9		12.3	Jan-12
Adams Street Global Fund Series	133,737,393	2.5		4.4	--	7.6	--	13.4	--	10.2	--	13.1	--	--	--	12.7	Jan-12
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>7.1</u>	--	<u>12.8</u>	--	<u>24.7</u>	--	<u>14.4</u>	--	<u>18.9</u>	--	--	--	<u>19.1</u>	Jan-12
Over/Under				-2.7		-5.2		-11.3		-4.2		-5.8				-6.4	
Harbourvest	66,119,273	1.2		0.9	--	9.7	--	23.2	--	19.1	--	--	--	--	--	19.3	Aug-13
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>7.1</u>	--	<u>12.8</u>	--	<u>24.7</u>	--	<u>14.4</u>	--	<u>18.9</u>	--	--	--	<u>16.3</u>	Aug-13
Over/Under				-6.2		-3.1		-1.5		4.7						3.0	
Pantheon Global Secondary Funds	31,268,033	0.6		2.6	--	9.1	--	24.1	--	15.1	--	15.4	--	--	--	12.8	Jan-12
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>7.1</u>	--	<u>12.8</u>	--	<u>24.7</u>	--	<u>14.4</u>	--	<u>18.9</u>	--	--	--	<u>19.1</u>	Jan-12
Over/Under				-4.5		-3.7		-0.6		0.7		-3.5				-6.3	
Drive Capital Fund	2,573,974	0.0		-2.9	--	-7.2	--	-33.7	--	--	--	--	--	--	--	-43.3	Sep-16
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>7.1</u>	--	<u>12.8</u>	--	<u>24.7</u>	--	<u>14.4</u>	--	<u>18.9</u>	--	--	--	<u>22.7</u>	Sep-16
Over/Under				-10.0		-20.0		-58.4								-66.0	
Abbott Secondary Opportunities	3,279,685	0.1		--	--	--	--	--	--	--	--	--	--	--	--	--	Jan-18
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>7.1</u>	--	<u>12.8</u>	--	<u>24.7</u>	--	<u>14.4</u>	--	<u>18.9</u>	--	--	--	--	Jan-18
Over/Under																	
CVI Credit Value Fund	1,500,000	0.0		--	--	--	--	--	--	--	--	--	--	--	--	--	Jan-18
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>7.1</u>	--	<u>12.8</u>	--	<u>24.7</u>	--	<u>14.4</u>	--	<u>18.9</u>	--	--	--	--	Jan-18
Over/Under																	
Abbott Capital Cash	1,500,000	0.0															

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

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

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	\$4,779,685	\$20,583,031	19%	–	\$1,500,000	\$2,875,000	\$4,375,000	-\$404,685	-100%	0.31x	0.92x
Adams Street 2010 U.S. Fund	2010	5/21/2010	\$42,500,000	\$37,442,500	\$5,057,500	88%	\$15,213	\$20,305,453	\$35,853,396	\$56,158,849	\$18,701,136	13.2%	0.54x	1.50x
Adams Street 2010 Non-U.S. Dev. Mkts Fund	2010	5/21/2010	\$25,500,000	\$21,254,249	\$4,245,751	83%	\$1,589	\$11,784,023	\$17,528,905	\$29,312,928	\$8,057,090	10.6%	0.55x	1.38x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	\$8,500,000	\$7,378,000	\$1,122,000	87%	\$0	\$1,507,798	\$8,818,035	\$10,325,833	\$2,947,833	10.2%	0.2x	1.4x
Adams Street 2010 Direct Fund	2010	5/21/2010	\$8,500,000	\$8,046,100	\$453,900	95%	\$6,697	\$7,693,519	\$5,423,150	\$13,116,669	\$5,063,872	12.4%	0.96x	1.63x
Adams Street 2013 Global Fund	2013	6/27/2013	\$75,000,000	\$49,950,000	\$25,050,000	67%	\$10,728	\$4,679,630	\$55,265,820	\$59,945,450	\$9,984,722	8.1%	0.09x	1.2x
Adams Street 2016 Global Fund	2016	12/22/2016	\$60,000,000	\$9,960,000	\$50,040,000	17%	\$0	\$0	\$10,878,847	\$10,878,847	\$918,847	22.5%	0x	1.09x
Clearlake Capital Partners	2017	12/22/2017	\$9,950,000	–	\$9,950,000	0%	–	–	–	–	–	–	–	–
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$1,500,000	\$28,500,000	5%	–	–	\$1,500,000	\$1,500,000	–	–	0x	1x
Drive Capital Fund II	2016	9/1/2016	\$15,000,000	\$3,018,985	\$11,984,305	20%	\$3,210	\$0	\$2,573,973	\$2,573,973	-\$448,222	-23.7%	0x	0.85x
GTCR Fund XII	2017	9/29/2017	\$30,000,000	–	\$30,000,000	0%	–	–	–	–	–	–	–	–
Insight Venture Partners X	2017	10/13/2017	\$25,000,000	–	\$25,000,000	0%	–	–	–	–	–	–	–	–
HarbourVest - Dover Street VIII	2013	5/30/2013	\$67,500,000	\$59,147,454	\$8,437,500	88%	\$84,954	\$46,566,930	\$40,585,660	\$87,152,590	\$27,920,182	21.9%	0.79x	1.47x
HarbourVest - Dover Street IX	2016	12/16/2016	\$60,000,000	\$12,600,000	\$47,400,000	21%	\$0	\$3,388,361	\$12,615,715	\$16,004,076	\$3,404,076	65.0%	0.27x	1.27x
HarbourVest - PRTNS CO INVEST IV L.P.	2017	6/2/2017	\$30,000,000	\$14,521,740	\$15,675,000	48%	\$0	\$0	\$16,043,068	\$16,043,068	\$1,521,328	25.0%	0x	1.1x
Pantheon Global Secondary Fund IV	2010	8/20/2010	\$15,000,000	\$9,960,000	\$5,040,000	66%	\$0	\$11,535,001	\$3,862,210	\$15,397,211	\$5,437,211	14.1%	1.16x	1.55x
Pantheon Global Secondary Fund V	2015	2/26/2015	\$50,000,000	\$24,941,509	\$25,058,491	50%	(\$162,514)	\$4,775,205	\$27,393,227	\$32,168,433	\$7,389,438	21.6%	0.19x	1.29x

Total VCERA Private Equity Program	–	5/21/2010	\$577,450,000	\$264,500,222	\$313,597,478	46%	-\$40,123	\$113,735,920	\$241,217,006	\$354,952,927	\$90,492,828	14.2%	0.43x	1.34x
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1. Includes recycled/recallable distributions received to date.

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

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

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

Performance shown is based on 9/30/2017 NAVs cash-adjusted for cash flows through 12/31/2017.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total US Fixed Income	959,995,760	17.7	20.0	0.4	46	1.4	45	4.4	38	3.2	26	2.5	35	5.4	18	5.9	Feb-94
<i>BBgBarc US Aggregate TR</i>				<i>0.4</i>	<i>47</i>	<i>1.2</i>	<i>53</i>	<i>3.5</i>	<i>51</i>	<i>2.2</i>	<i>55</i>	<i>2.1</i>	<i>53</i>	<i>4.0</i>	<i>56</i>	<i>5.4</i>	<i>Feb-94</i>
Over/Under				0.0		0.2		0.9		1.0		0.4		1.4		0.5	
<i>InvestorForce Public DB US Fix Inc Net Median</i>				<i>0.3</i>		<i>1.3</i>		<i>3.6</i>		<i>2.5</i>		<i>2.3</i>		<i>4.1</i>		<i>5.4</i>	<i>Feb-94</i>
BlackRock U.S. Debt Fund	223,128,516	4.1		0.4	52	1.3	56	3.6	56	2.3	58	2.2	56	4.1	54	5.2	Nov-95
<i>BBgBarc US Aggregate TR</i>				<i>0.4</i>	<i>52</i>	<i>1.2</i>	<i>57</i>	<i>3.5</i>	<i>57</i>	<i>2.2</i>	<i>59</i>	<i>2.1</i>	<i>57</i>	<i>4.0</i>	<i>56</i>	<i>5.2</i>	<i>Nov-95</i>
Over/Under				0.0		0.1		0.1		0.1		0.1		0.1		0.0	
<i>eV All US Fixed Inc Net Median</i>				<i>0.4</i>		<i>1.4</i>		<i>3.9</i>		<i>2.6</i>		<i>2.4</i>		<i>4.2</i>		<i>5.1</i>	<i>Nov-95</i>
Western	298,407,973	5.5		0.7	33	1.9	36	6.0	29	3.6	35	3.4	35	5.3	30	6.2	Dec-96
<i>BBgBarc US Aggregate TR</i>				<i>0.4</i>	<i>52</i>	<i>1.2</i>	<i>57</i>	<i>3.5</i>	<i>57</i>	<i>2.2</i>	<i>59</i>	<i>2.1</i>	<i>57</i>	<i>4.0</i>	<i>56</i>	<i>5.2</i>	<i>Dec-96</i>
Over/Under				0.3		0.7		2.5		1.4		1.3		1.3		1.0	
<i>eV All US Fixed Inc Net Median</i>				<i>0.4</i>		<i>1.4</i>		<i>3.9</i>		<i>2.6</i>		<i>2.4</i>		<i>4.2</i>		<i>5.1</i>	<i>Dec-96</i>
Reams	309,158,438	5.7		0.0	79	0.6	75	2.5	70	2.9	44	1.5	73	5.3	30	5.4	Sep-01
<i>Reams Custom Index</i>				<i>0.4</i>	<i>52</i>	<i>0.7</i>	<i>70</i>	<i>1.3</i>	<i>88</i>	<i>0.8</i>	<i>93</i>	<i>0.4</i>	<i>95</i>	<i>3.2</i>	<i>74</i>	<i>3.9</i>	<i>Sep-01</i>
Over/Under				-0.4		-0.1		1.2		2.1		1.1		2.1		1.5	
<i>BBgBarc US Aggregate TR</i>				<i>0.4</i>	<i>52</i>	<i>1.2</i>	<i>57</i>	<i>3.5</i>	<i>57</i>	<i>2.2</i>	<i>59</i>	<i>2.1</i>	<i>57</i>	<i>4.0</i>	<i>56</i>	<i>4.4</i>	<i>Sep-01</i>
<i>3-Month LIBOR + 3%</i>				<i>1.1</i>	<i>21</i>	<i>2.2</i>	<i>29</i>	<i>4.4</i>	<i>43</i>	<i>3.8</i>	<i>33</i>	<i>3.6</i>	<i>32</i>	<i>3.8</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>1.4</i>		<i>3.9</i>		<i>2.6</i>		<i>2.4</i>		<i>4.2</i>		<i>4.5</i>	<i>Sep-01</i>
Loomis Strategic Alpha	46,094,642	0.9		0.6	36	2.1	30	3.3	60	2.8	48	--	--	--	--	2.7	Jul-13
<i>BBgBarc US Aggregate TR</i>				<i>0.4</i>	<i>52</i>	<i>1.2</i>	<i>57</i>	<i>3.5</i>	<i>57</i>	<i>2.2</i>	<i>59</i>	<i>2.1</i>	<i>57</i>	<i>4.0</i>	<i>56</i>	<i>2.9</i>	<i>Jul-13</i>
Over/Under				0.2		0.9		-0.2		0.6						-0.2	
<i>3-Month LIBOR + 3%</i>				<i>1.1</i>	<i>21</i>	<i>2.2</i>	<i>29</i>	<i>4.4</i>	<i>43</i>	<i>3.8</i>	<i>33</i>	<i>3.6</i>	<i>32</i>	<i>3.8</i>	<i>61</i>	<i>3.6</i>	<i>Jul-13</i>
<i>eV All US Fixed Inc Net Median</i>				<i>0.4</i>		<i>1.4</i>		<i>3.9</i>		<i>2.6</i>		<i>2.4</i>		<i>4.2</i>		<i>3.2</i>	<i>Jul-13</i>
Loomis Sayles Multi Strategy	83,206,191	1.5		0.8	31	2.7	20	8.4	13	4.6	22	4.4	24	6.6	18	6.6	Jul-05
<i>Loomis Custom Index</i>				<i>0.4</i>	<i>51</i>	<i>1.6</i>	<i>45</i>	<i>4.5</i>	<i>42</i>	<i>3.4</i>	<i>38</i>	<i>3.1</i>	<i>39</i>	<i>5.2</i>	<i>31</i>	<i>5.2</i>	<i>Jul-05</i>
Over/Under				0.4		1.1		3.9		1.2		1.3		1.4		1.4	
<i>BBgBarc US Govt/Credit TR</i>				<i>0.5</i>	<i>45</i>	<i>1.3</i>	<i>54</i>	<i>4.0</i>	<i>49</i>	<i>2.4</i>	<i>55</i>	<i>2.1</i>	<i>57</i>	<i>4.1</i>	<i>54</i>	<i>4.2</i>	<i>Jul-05</i>
<i>eV All US Fixed Inc Net Median</i>				<i>0.4</i>		<i>1.4</i>		<i>3.9</i>		<i>2.6</i>		<i>2.4</i>		<i>4.2</i>		<i>4.2</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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total Real Estate	405,111,120	7.5	7.0	2.0	29	3.6	52	5.9	84	8.5	66	9.5	77	2.7	88	7.8	Mar-94
<i>NCREIF ODCE Net</i>				<i>1.9</i>	<i>40</i>	<i>3.5</i>	<i>56</i>	<i>6.7</i>	<i>66</i>	<i>9.4</i>	<i>39</i>	<i>10.5</i>	<i>55</i>	<i>4.1</i>	<i>56</i>	<i>8.1</i>	<i>Mar-94</i>
<i>Over/Under</i>				<i>0.1</i>		<i>0.1</i>		<i>-0.8</i>		<i>-0.9</i>		<i>-1.0</i>		<i>-1.4</i>		<i>-0.3</i>	
<i>InvestorForce Public DB Real Estate Pub+Priv Net Median</i>				<i>1.8</i>		<i>3.7</i>		<i>7.6</i>		<i>9.1</i>		<i>10.7</i>		<i>4.5</i>		<i>5.5</i>	<i>Mar-94</i>
Prudential Real Estate	144,511,543	2.7		1.8	--	3.9	--	7.0	--	9.8	--	11.2	--	3.7	--	6.2	Jun-04
<i>NCREIF ODCE Net</i>				<i>1.9</i>	<i>--</i>	<i>3.5</i>	<i>--</i>	<i>6.7</i>	<i>--</i>	<i>9.4</i>	<i>--</i>	<i>10.5</i>	<i>--</i>	<i>4.1</i>	<i>--</i>	<i>7.1</i>	<i>Jun-04</i>
<i>Over/Under</i>				<i>-0.1</i>		<i>0.4</i>		<i>0.3</i>		<i>0.4</i>		<i>0.7</i>		<i>-0.4</i>		<i>-0.9</i>	
<i>NCREIF ODCE</i>				<i>2.1</i>	<i>--</i>	<i>4.0</i>	<i>--</i>	<i>7.6</i>	<i>--</i>	<i>10.4</i>	<i>--</i>	<i>11.5</i>	<i>--</i>	<i>5.0</i>	<i>--</i>	<i>8.1</i>	<i>Jun-04</i>
UBS Real Estate	260,599,577	4.8		2.1	--	3.5	--	5.4	--	7.8	--	8.6	--	4.2	--	7.4	Mar-03
<i>NCREIF ODCE Net</i>				<i>1.9</i>	<i>--</i>	<i>3.5</i>	<i>--</i>	<i>6.7</i>	<i>--</i>	<i>9.4</i>	<i>--</i>	<i>10.5</i>	<i>--</i>	<i>4.1</i>	<i>--</i>	<i>7.3</i>	<i>Mar-03</i>
<i>Over/Under</i>				<i>0.2</i>		<i>0.0</i>		<i>-1.3</i>		<i>-1.6</i>		<i>-1.9</i>		<i>0.1</i>		<i>0.1</i>	
<i>NCREIF ODCE</i>				<i>2.1</i>	<i>--</i>	<i>4.0</i>	<i>--</i>	<i>7.6</i>	<i>--</i>	<i>10.4</i>	<i>--</i>	<i>11.5</i>	<i>--</i>	<i>5.0</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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Return (%)	Since
Total Liquid Alternatives	433,536,238	8.0	10.0	2.8	--	4.7	--	7.2	--	1.1	--	--	--	--	--	5.1	Apr-13
<i>CPI + 4% (Unadjusted)</i>				<i>0.9</i>	--	<i>2.6</i>	--	<i>6.2</i>	--	<i>5.7</i>	--	<i>9.8</i>	--	--	--	<i>6.2</i>	<i>Apr-13</i>
Over/Under				1.9		2.1		1.0		-4.6						-1.1	
Bridgewater All Weather Fund	314,550,694	5.8		4.1	--	7.8	--	11.9	--	4.7	--	--	--	--	--	5.8	Aug-13
<i>CPI + 5% (Unadjusted)</i>				<i>1.1</i>	--	<i>3.1</i>	--	<i>7.2</i>	--	<i>6.7</i>	--	--	--	--	--	<i>6.3</i>	<i>Aug-13</i>
Over/Under				3.0		4.7		4.7		-2.0						-0.5	
Tortoise Energy Infrastructure	118,985,544	2.2		-0.7	--	-2.7	--	-3.5	--	-6.6	--	--	--	--	--	1.3	Apr-13
<i>Wells Fargo MLP Index</i>				<i>-0.7</i>	--	<i>-2.7</i>	--	<i>-5.7</i>	--	<i>-9.1</i>	--	<i>0.9</i>	--	--	--	<i>-3.0</i>	<i>Apr-13</i>
Over/Under				0.0		0.0		2.2		2.5						4.3	
Overlay	129,226,462	2.4	0.0														
Parametric	129,226,462	2.4															

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	Yes	No Action	-	Announced retirements	6/2014
BlackRock Russell 2500 Index	-	-	-	-		10/2013
BlackRock MSCI ACWI ex-U.S. Index	-	-	-	-		10/2013
Sprucegrove	-	Yes	No Action	-		N/A
Hexavest	Bottom Quartile	Yes	No Action	Watch (Board Driven)	No change in ownership	1/2013
Walter Scott	-	-	-	-		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	-	-	-		
BlackRock U.S. Debt Fund	-	-	-	-		10/2013
Western	-	Yes	No Action	-	Announced retirements	6/2014
Reams	Bottom Quartile	-	-	-		11/2013
Loomis Sayles Multi-Sector Full Discretion	-	-	-	-		11/2013
Loomis Sayles Strategic Alpha	-	-	-	-		11/2013



DUE DILIGENCE MONITOR

	Performance (Recent Quarter)	Changes/ Announcements (Recent Quarter)	NEPC DD Committee Rec.	Plan Rec.	Comments	Last Onsite Conducted
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.



DUE DILIGENCE COMMENTARY

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

Manager Changes/Announcements

Hexavest

NEPC Research was notified that Eaton Vance elected not to exercise its option to increase ownership in Hexavest to 76% from the present 49%. Management explains that both parties have been happy with the present structure - 51% Hexavest, 49% Eaton Vance - allowing Hexavest to continue controlling and directing operations and investment philosophy in its Montreal headquarters. NEPC Research is comfortable with this decision. Hexavest is an independent company with a young team; this structure keeps them incentivized with all strategic choices belonging to them. NEPC Research recommends NO ACTION.

NEPC recommends No Action at this time. We will continue to monitor the situation and provide updates as necessary.

Western

Western Asset Management has announced two retirements at their firm. Generalist Portfolio Manager Carl Eichstaedt will be retiring from Western at the end of March 2019, and Chief Risk Officer Ken Winston will be retiring from Western at the end of December 2018. There is no immediate plan to hire a replacement for Mr. Eichstaedt. His responsibilities will be absorbed by the existing five generalist portfolio managers on the US Broad Market Investment Team. Western's investment process is team-based. Named portfolio managers are tasked with executing team views on each portfolio, and do not diverge from targets dictated by the team-based investment process. For this reason, NEPC Research is not concerned with Carl Eichstaedt retiring, believing the remaining portfolio managers have the ability and transition period necessary to absorb responsibility.

Western is promoting Ahmet Kocagil, who currently leads risk management of the firm's credit strategies, to replace Mr. Winston as Chief Risk Officer (CRO). He will be assuming managerial responsibility of the 34 person risk team. NEPC Research does not anticipate any changes in terms of structure of the team. Leading up to assuming the full CRO role by June 2018, both Mr. Kocagil and Mr. Winston will be assessing new candidates to lead the credit risk team. NEPC Research recommends NO ACTION.

NEPC recommends No Action at this time. We will continue to monitor the situation and provide updates as necessary.

Sprucegrove

NEPC Research held an update call with Sprucegrove and they mentioned that they had added a few new analysts and the team had remained stable since Craig Merrigan's announcement was made in 2016 to retire in June of 2018. Mr. Merrigan stepped down from his role as President as well as from the Board and Business Management Committee. Mr. Merrigan has remained active in portfolio management in addition to serving as an advisor to the Board during the transition period until his retirement. Portfolio Manager and member of Sprucegrove's Business Management Committee, Arjun Kumar, joined Shirley Woo and Sabu Mehta on the Board in early 2017. The firm has transitioned away from having a President and instead has adopted an executive director model. They will be announcing a new internal research director in 2018. Sprucegrove had been placed on HOLD back in 2014 as a result of Peter Ellement's departure and challenging performance. They have shown improvements in hiring new analysts and they hired a VP of HR to professionalize and set expectations for the team. Performance has also turned around. NEPC Research is comfortable with upgrading Sprucegrove from HOLD to NO ACTION.

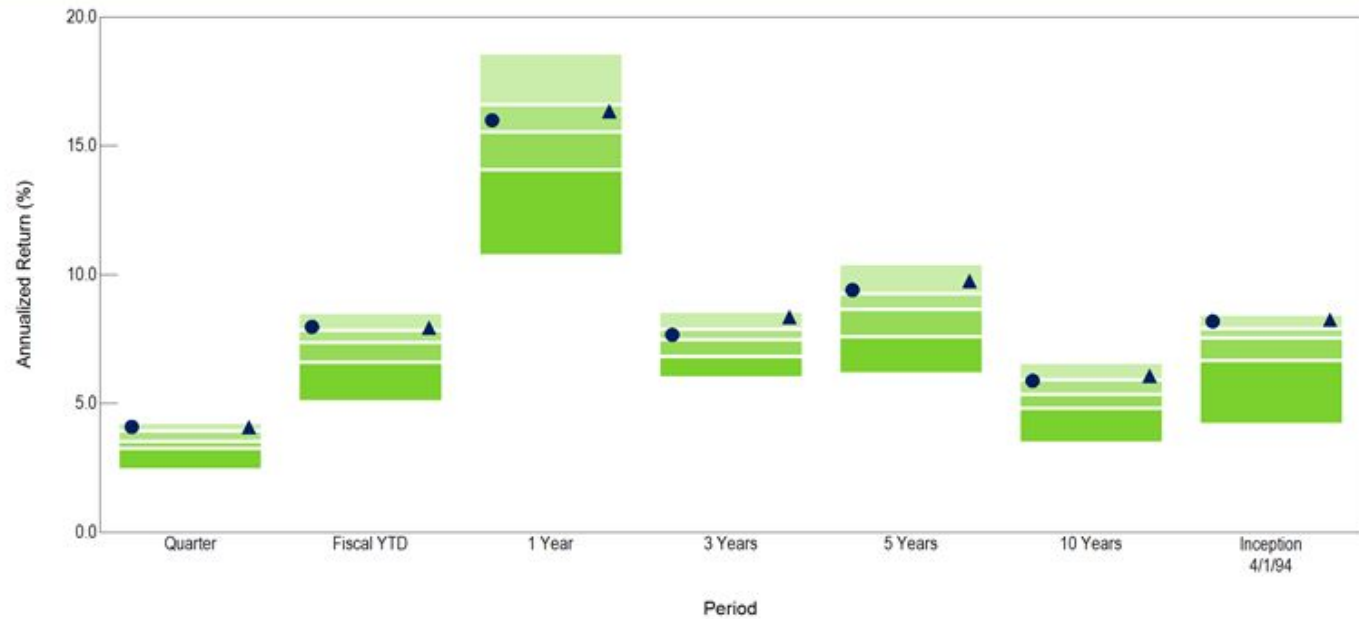
NEPC recommends No Action at this time. We will continue to monitor the situation and provide updates as necessary.



Ventura County Employees' Retirement Association

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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



	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)			
5th Percentile	4.3		8.5		18.6		8.6		10.4		6.6		8.5	
25th Percentile	3.9		7.8		16.6		7.9		9.3		5.9		7.9	
Median	3.5		7.4		15.6		7.5		8.7		5.4		7.6	
75th Percentile	3.3		6.6		14.1		6.8		7.6		4.8		6.7	
95th Percentile	2.4		5.1		10.7		6.0		6.2		3.5		4.2	
# of Portfolios	61		61		61		61		60		55		33	
● Total Fund	4.1	(12)	8.0	(20)	16.0	(37)	7.7	(40)	9.4	(20)	5.9	(29)	8.2	(13)
▲ Policy Index	4.1	(12)	7.9	(21)	16.3	(29)	8.3	(13)	9.8	(12)	6.1	(22)	8.2	(11)



Ventura County Employees' Retirement Association

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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



	Return (Rank)									
5th Percentile	18.6	9.3	2.4	7.6	19.5	14.3	4.2	15.1	27.5	-20.9
25th Percentile	16.6	8.4	0.8	6.1	16.0	13.4	1.5	13.8	21.7	-25.7
Median	15.6	7.7	-0.4	5.1	14.3	12.7	0.6	12.8	20.0	-26.9
75th Percentile	14.1	7.1	-1.3	4.4	11.0	11.8	-0.3	11.8	17.7	-28.3
95th Percentile	10.7	5.3	-3.2	2.6	8.5	9.0	-1.2	9.3	13.4	-30.5
# of Portfolios	61	62	57	55	48	44	42	41	40	39
● Total Fund	16.0 (37)	8.6 (15)	-0.9 (65)	6.3 (20)	18.1 (10)	14.0 (15)	0.3 (61)	15.1 (6)	24.2 (16)	-30.9 (98)
▲ Policy Index	16.3 (29)	8.4 (25)	0.8 (25)	6.8 (12)	17.2 (14)	12.9 (41)	0.5 (55)	13.2 (44)	21.0 (33)	-27.1 (54)



Ventura County Employees' Retirement Association

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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



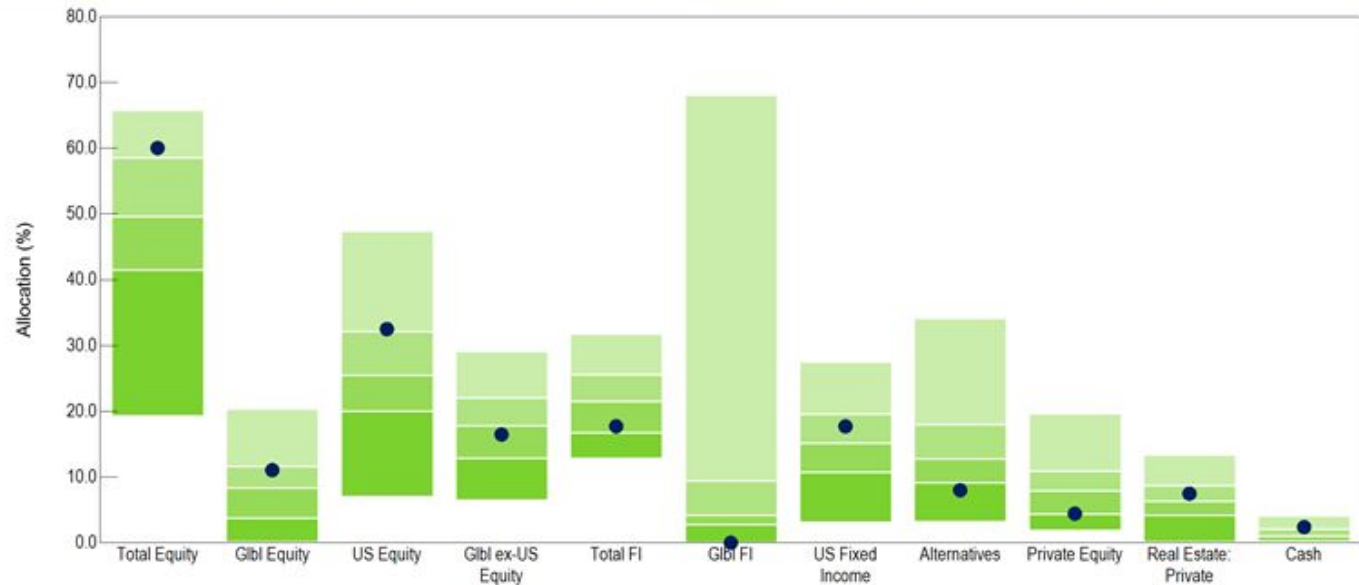
	Fiscal 2017		Fiscal 2016		Fiscal 2015		Fiscal 2014		Fiscal 2013	
	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)
5th Percentile	14.9		2.7		4.3		18.7		15.0	
25th Percentile	13.7		0.8		3.3		17.2		13.1	
Median	12.7		-0.5		2.6		16.1		11.8	
75th Percentile	11.9		-1.2		1.6		14.7		10.5	
95th Percentile	9.2		-2.4		-0.9		13.6		7.5	
# of Portfolios	65		55		53		43		56	
● Total Fund	12.6	(53)	0.8	(26)	1.7	(71)	18.8	(4)	13.2	(22)
▲ Policy Index	13.1	(37)	1.8	(9)	3.4	(25)	17.7	(19)	12.4	(39)



Ventura County Employees' Retirement Association

TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE

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



	Allocation (Rank)																						
5th Percentile	65.8	20.3	47.4	29.1	31.7	68.0	27.5	34.1	19.6	13.4	4.1	--											
25th Percentile	58.6	11.7	32.2	22.1	25.7	9.5	19.6	18.0	11.0	8.8	2.2	--											
Median	49.7	8.4	25.6	17.8	21.6	4.2	15.2	12.8	8.0	6.4	1.1	--											
75th Percentile	41.6	3.8	20.1	12.9	16.8	2.9	10.8	9.3	4.5	4.3	0.3	--											
95th Percentile	19.4	0.2	7.1	6.6	12.9	0.1	3.2	3.3	1.9	0.2	0.0	--											
# of Portfolios	56	22	49	50	56	26	51	51	48	44	54	--											
• Total Fund	60.0	(18)	11.1	(28)	32.5	(24)	16.5	(56)	17.7	(69)	0.0	(96)	17.7	(30)	8.0	(81)	4.4	(76)	7.5	(41)	2.4	(20)	--



Ventura County Employees' Retirement Association

TOTAL FUND CALENDER YEAR RETURN SUMMARY

	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
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
<i>Russell 3000</i>	<u>21.1</u>	<u>12.7</u>	<u>0.4</u>	<u>12.4</u>	<u>33.5</u>	<u>16.4</u>	<u>1.1</u>	<u>17.5</u>	<u>28.6</u>	<u>-37.2</u>	<u>5.5</u>
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	--
<i>S&P 500</i>	<u>21.8</u>	<u>12.0</u>	<u>1.4</u>	<u>13.7</u>	<u>32.4</u>	<u>16.0</u>	<u>2.1</u>	<u>15.1</u>	<u>26.5</u>	<u>-37.0</u>	<u>5.5</u>
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	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 1000</i>	<u>21.7</u>	<u>12.1</u>	<u>0.9</u>	<u>13.2</u>	<u>33.1</u>	<u>16.4</u>	<u>1.5</u>	<u>16.1</u>	<u>28.4</u>	<u>-37.6</u>	<u>5.8</u>
Over/Under											
Blackrock Russell 2500 Index	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 2500</i>	<u>16.8</u>	<u>17.6</u>	<u>-2.9</u>	<u>7.1</u>	<u>36.8</u>	<u>17.9</u>	<u>-2.5</u>	<u>26.7</u>	<u>34.4</u>	<u>-36.8</u>	<u>1.4</u>
Over/Under											
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
<i>MSCI ACWI ex USA</i>	<u>27.2</u>	<u>4.5</u>	<u>-5.7</u>	<u>-3.9</u>	<u>15.3</u>	<u>16.8</u>	<u>-13.7</u>	<u>11.2</u>	<u>41.4</u>	<u>-45.5</u>	<u>16.7</u>
Over/Under	-0.7	2.1	0.9	0.3	1.0	1.1	0.1	2.3	-4.0	1.4	-5.0
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	--
<i>MSCI ACWI ex USA IMI</i>	<u>27.8</u>	<u>4.4</u>	<u>-4.6</u>	<u>-3.9</u>	<u>15.8</u>	<u>17.0</u>	<u>-14.3</u>	<u>12.7</u>	<u>43.6</u>	<u>-46.0</u>	<u>16.1</u>
Over/Under	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.1	-0.5	0.4	
Sprucegrove	27.5	11.9	-9.1	-3.2	17.1	17.2	-10.7	18.8	36.2	-42.4	5.8
<i>MSCI ACWI ex USA</i>	<u>27.2</u>	<u>4.5</u>	<u>-5.7</u>	<u>-3.9</u>	<u>15.3</u>	<u>16.8</u>	<u>-13.7</u>	<u>11.2</u>	<u>41.4</u>	<u>-45.5</u>	<u>16.7</u>
Over/Under	0.3	7.4	-3.4	0.7	1.8	0.4	3.0	7.6	-5.2	3.1	-10.9
Hexavest	17.4	3.8	-1.4	-4.3	20.2	13.7	-9.6	--	--	--	--
<i>MSCI EAFE</i>	<u>25.0</u>	<u>1.0</u>	<u>-0.8</u>	<u>-4.9</u>	<u>22.8</u>	<u>17.3</u>	<u>-12.1</u>	<u>7.8</u>	<u>31.8</u>	<u>-43.4</u>	<u>11.2</u>
Over/Under	-7.6	2.8	-0.6	0.6	-2.6	-3.6	2.5				
Walter Scott	26.6	5.1	-0.4	-3.5	11.8	20.4	-9.3	--	--	--	--
<i>MSCI ACWI ex USA</i>	<u>27.2</u>	<u>4.5</u>	<u>-5.7</u>	<u>-3.9</u>	<u>15.3</u>	<u>16.8</u>	<u>-13.7</u>	<u>11.2</u>	<u>41.4</u>	<u>-45.5</u>	<u>16.7</u>
Over/Under	-0.6	0.6	5.3	0.4	-3.5	3.6	4.4				



Ventura County Employees' Retirement Association

TOTAL FUND CALENDER YEAR RETURN SUMMARY

	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
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
<i>MSCI ACWI</i>	<u>24.0</u>	<u>7.9</u>	<u>-2.4</u>	<u>4.2</u>	<u>22.8</u>	<u>16.1</u>	<u>-7.3</u>	<u>12.7</u>	<u>34.6</u>	<u>-42.2</u>	<u>11.7</u>
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	--	--	--	--	--	--
<i>MSCI ACWI</i>	<u>24.0</u>	<u>7.9</u>	<u>-2.4</u>	<u>4.2</u>	<u>22.8</u>	<u>16.1</u>	<u>-7.3</u>	<u>12.7</u>	<u>34.6</u>	<u>-42.2</u>	<u>11.7</u>
Over/Under	0.5	0.5	0.4	0.4	0.4						
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
<i>BBgBarc US Aggregate TR</i>	<u>3.5</u>	<u>2.6</u>	<u>0.5</u>	<u>6.0</u>	<u>-2.0</u>	<u>4.2</u>	<u>7.8</u>	<u>6.5</u>	<u>5.9</u>	<u>5.2</u>	<u>7.0</u>
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
<i>BBgBarc US Aggregate TR</i>	<u>3.5</u>	<u>2.6</u>	<u>0.5</u>	<u>6.0</u>	<u>-2.0</u>	<u>4.2</u>	<u>7.8</u>	<u>6.5</u>	<u>5.9</u>	<u>5.2</u>	<u>7.0</u>
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
<i>BBgBarc US Aggregate TR</i>	<u>3.5</u>	<u>2.6</u>	<u>0.5</u>	<u>6.0</u>	<u>-2.0</u>	<u>4.2</u>	<u>7.8</u>	<u>6.5</u>	<u>5.9</u>	<u>5.2</u>	<u>7.0</u>
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
<i>Reams Custom Index</i>	<u>1.3</u>	<u>0.7</u>	<u>0.3</u>	<u>0.2</u>	<u>-0.5</u>	<u>4.2</u>	<u>7.8</u>	<u>6.5</u>	<u>5.9</u>	<u>5.2</u>	<u>7.0</u>
Over/Under	1.2	5.3	0.0	-3.8	3.0	5.8	0.6	3.5	27.7	-16.2	0.4
Loomis Strategic Alpha	3.3	6.1	-1.0	2.4	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	<u>3.5</u>	<u>2.6</u>	<u>0.5</u>	<u>6.0</u>	<u>-2.0</u>	<u>4.2</u>	<u>7.8</u>	<u>6.5</u>	<u>5.9</u>	<u>5.2</u>	<u>7.0</u>
Over/Under	-0.2	3.5	-1.5	-3.6							
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
<i>Loomis Custom Index</i>	<u>4.5</u>	<u>7.0</u>	<u>-1.2</u>	<u>4.6</u>	<u>0.8</u>	<u>7.5</u>	<u>7.1</u>	<u>8.7</u>	<u>18.8</u>	<u>-4.6</u>	<u>5.1</u>
Over/Under	3.9	1.2	-1.1	2.2	0.6	9.2	-2.9	4.9	18.8	-15.1	1.3

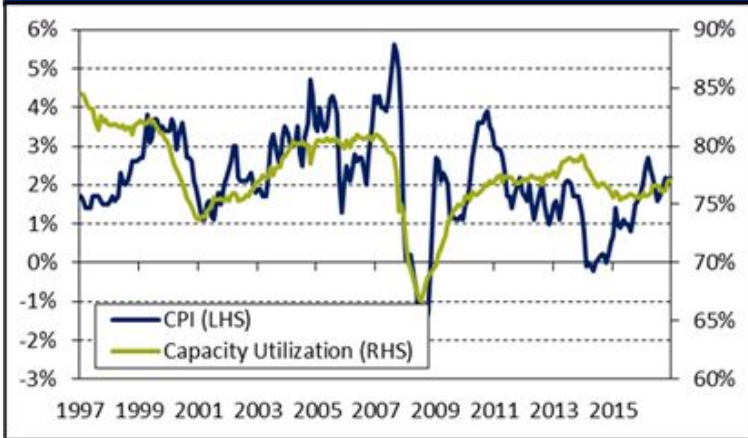


APPENDIX: MARKET ENVIRONMENT

NEPC, LLC

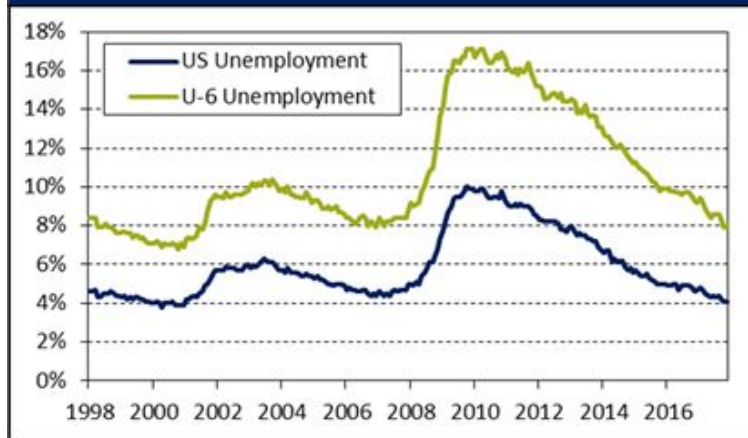
US ECONOMIC INDICATORS

Inflation continues to hover around 2%



Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics

Unemployment remains near historic lows



Source: Bloomberg, Bureau of Labor Statistics

Corporate profits as a % of GDP have increased slightly



Source: Bloomberg, Bureau of Economic Analysis

Manufacturing has retreated slightly, though remains elevated



Source: Bloomberg, Institute for Supply Management



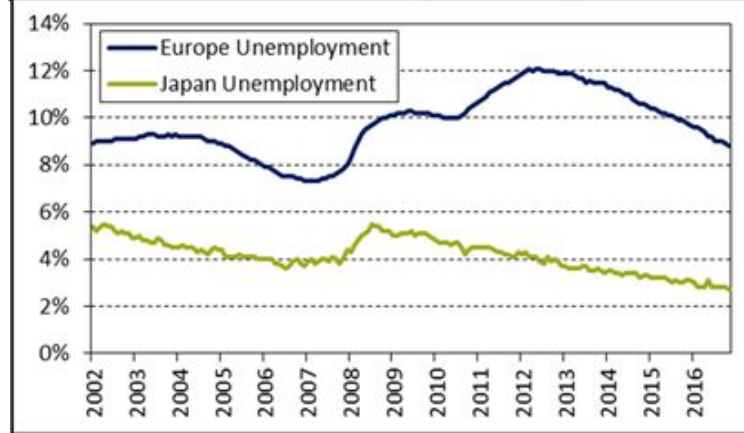
INTERNATIONAL ECONOMIC INDICATORS

Euro and Japan inflation have increased slightly



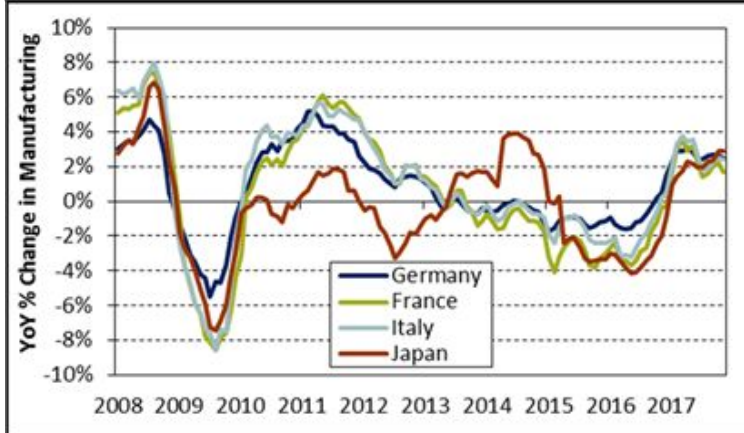
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Unemployment numbers continue to grind lower in Europe and Japan



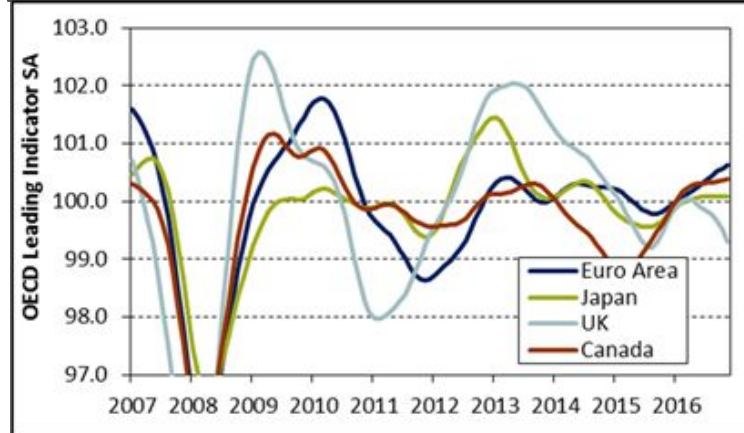
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

Manufacturing has slowed slightly in European countries



Source: Bloomberg, OECD, Eurostat

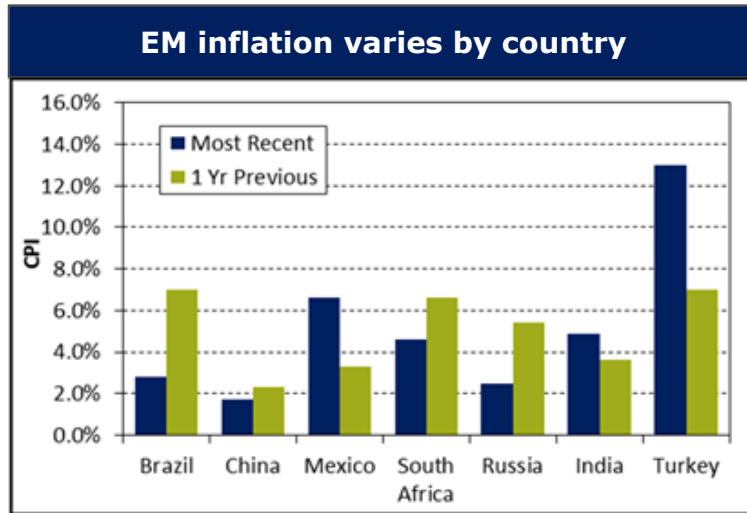
Ex-UK, Euro-area leading indicators remain strong



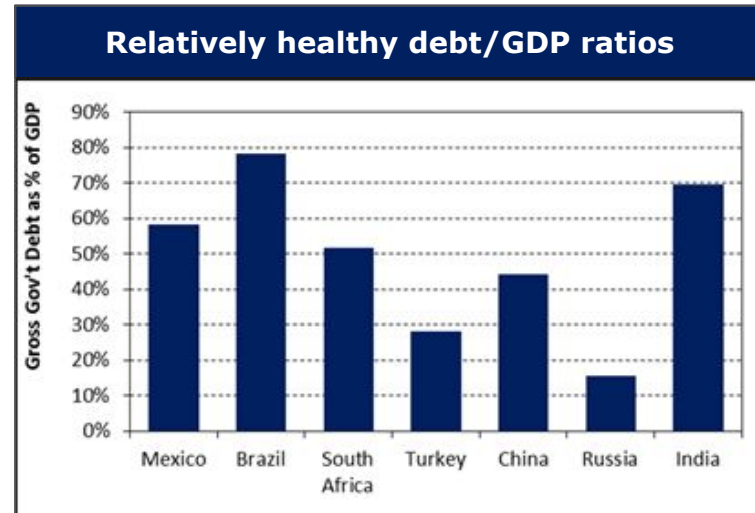
Source: Bloomberg, OECD



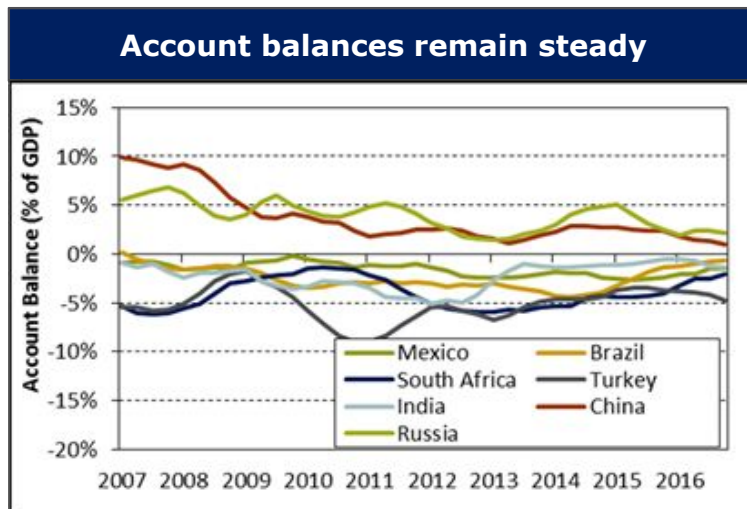
EMERGING MARKET ECONOMIC INDICATORS



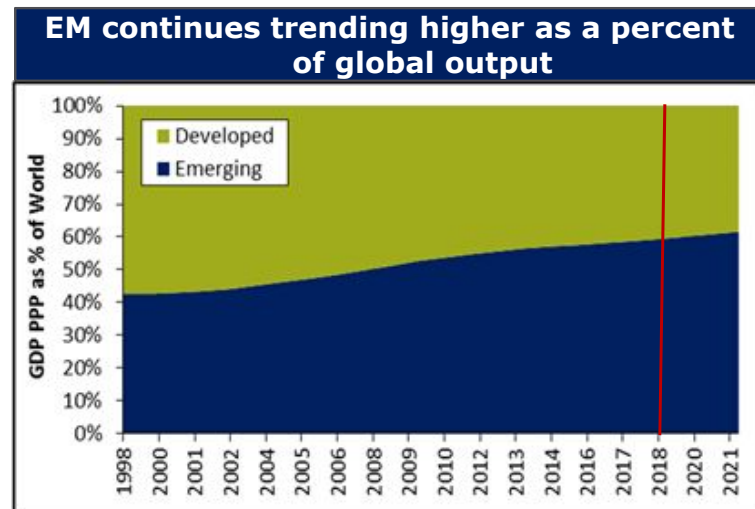
Source: Bloomberg



Source: Bloomberg, IMF



Source: Bloomberg

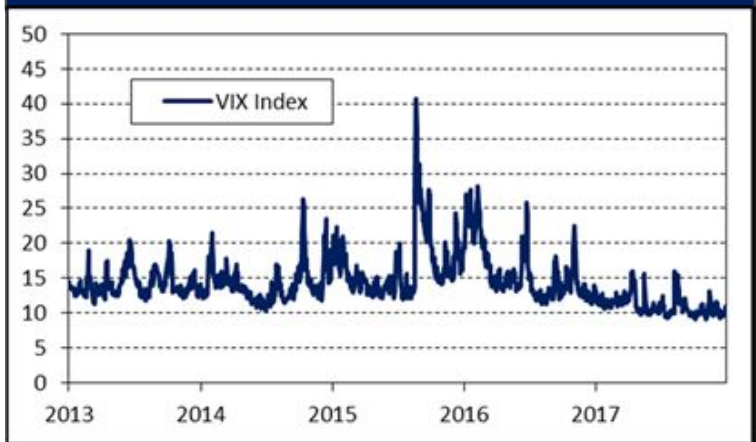


Source: Bloomberg, IMF



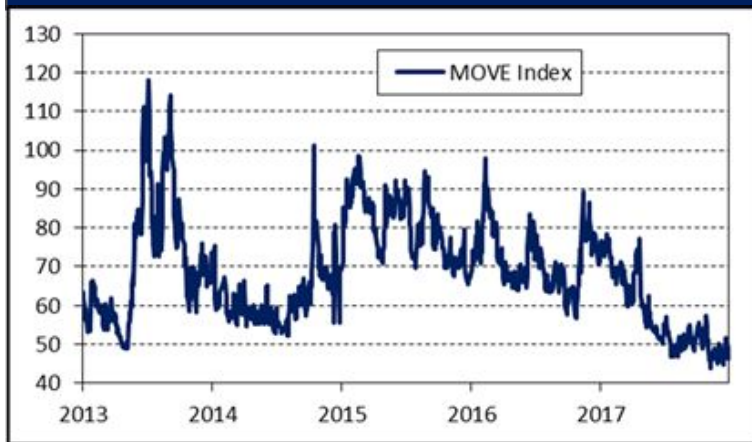
VOLATILITY

Equity volatility remains near historic lows



Source: Bloomberg, CBOE

Treasury volatility continues to decline



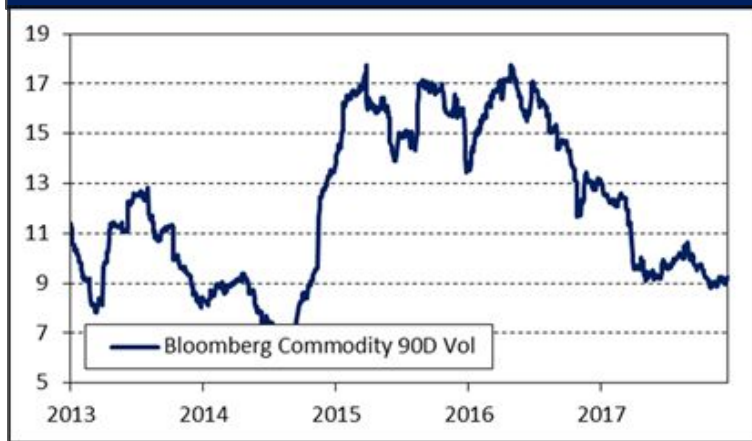
Source: Bloomberg, Merrill Lynch

Currency volatility remains low



Source: Bloomberg, Deutsche Bank

Commodity volatility is trending downward

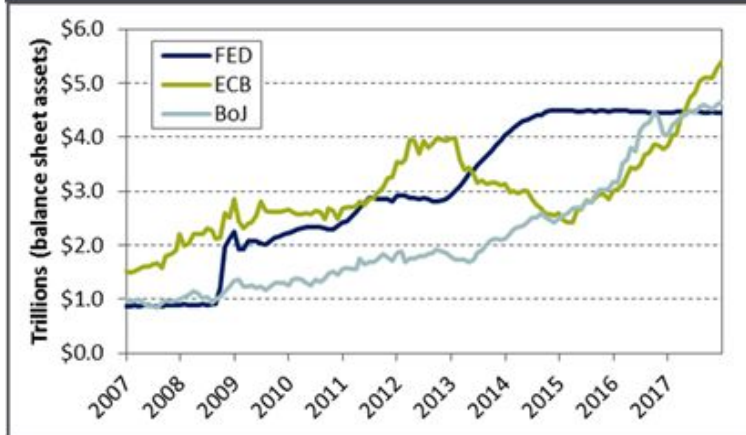


Source: Bloomberg, Merrill Lynch



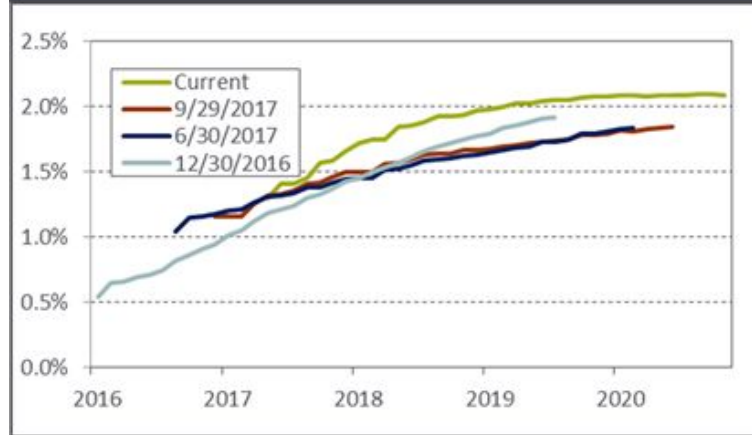
CENTRAL BANKS

Euro strength continues to impact total balance sheet assets



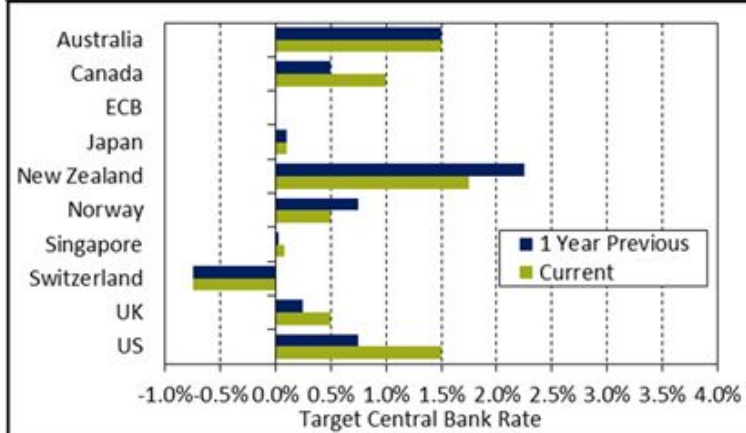
Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC

The yield curve has shifted upward with a December Fed hike



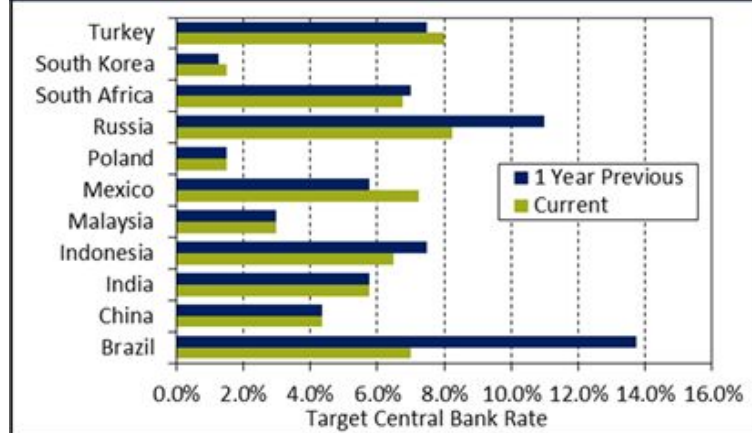
Source: Bloomberg, Federal Reserve

Developed markets have broadly started increasing rates



Source: Bloomberg

EM central bank policies vary by country-specific economic conditions

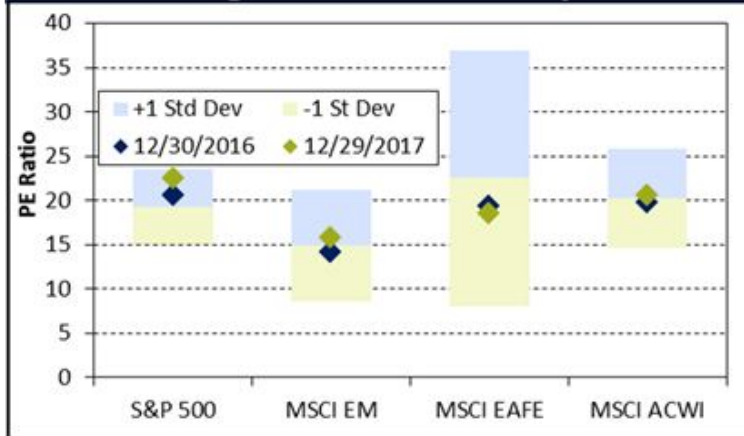


Source: Bloomberg



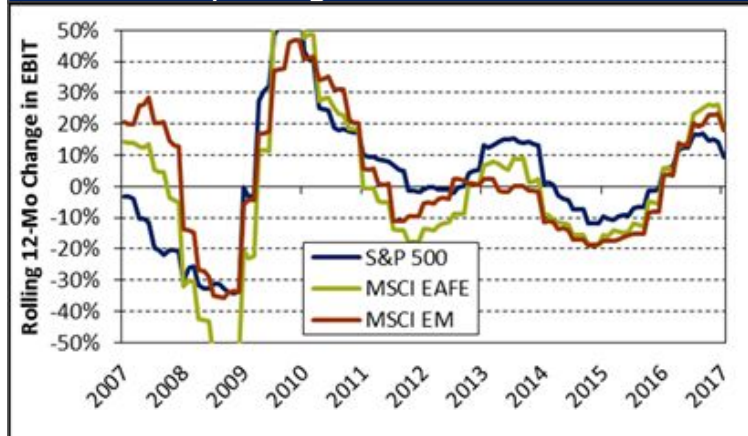
GLOBAL EQUITY

Ex-EAFE, global equity valuations are higher relative to last year



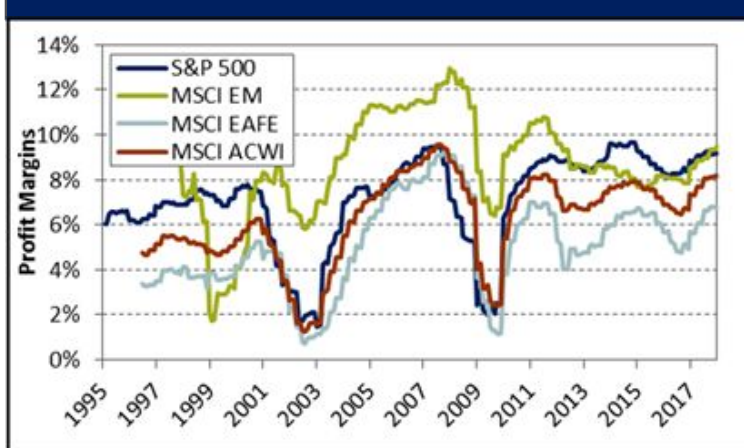
Source: Bloomberg, Standard and Poors, MSCI *MSCI EAFE is ex UK Telecom
*Standard deviation calculations on 20 years of data except S&P 500 (30 years)

Rolling annual earnings growth is trending lower, though still remains elevated



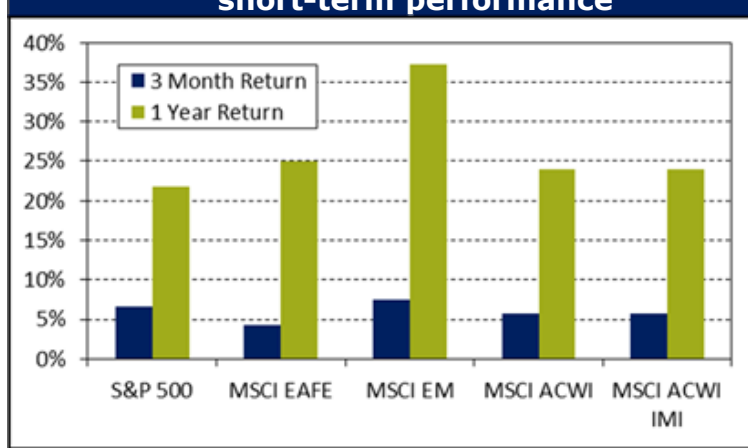
Source: Bloomberg, Standard and Poors, MSCI

Profit margins continue to increase



Source: Bloomberg, MSCI

Equities continue to experience strong short-term performance

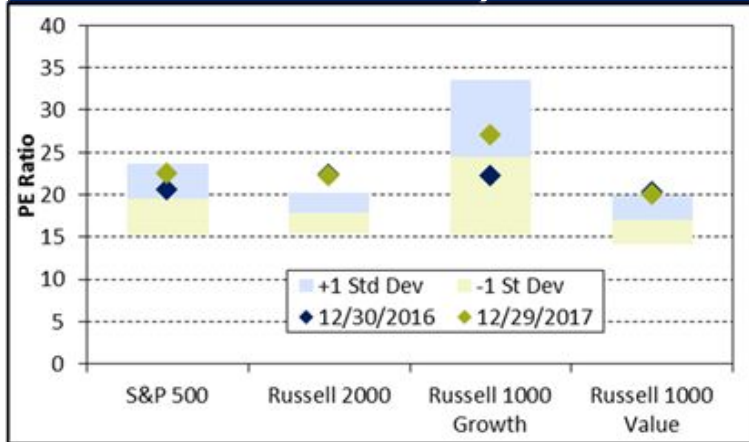


Source: Bloomberg, MSCI



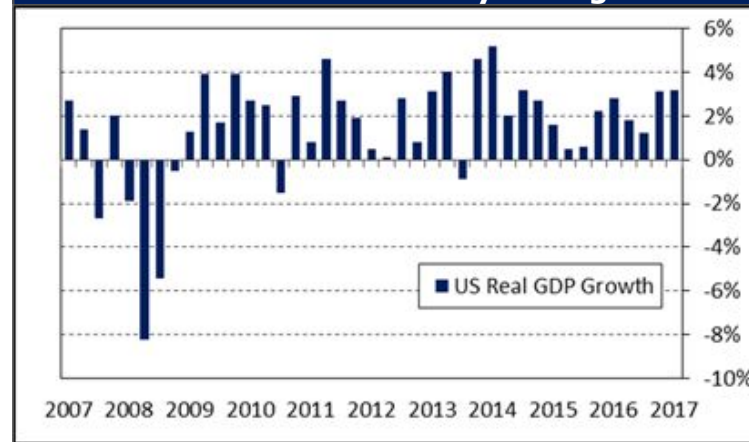
US EQUITY

The S&P 500 PE remains elevated relative to history



Source: Bloomberg, Standard and Poors, Russell *Russell 2000 PE is index adjusted positive* Standard deviation calculations based on 20 years of data

The Q3 real GDP growth revision to 3.3% marked a three-year high



Source: Bloomberg, Bureau of Economic Analysis

Russell 2000 margins have begun trending lower



Source: Bloomberg, Standard and Poors, Russell

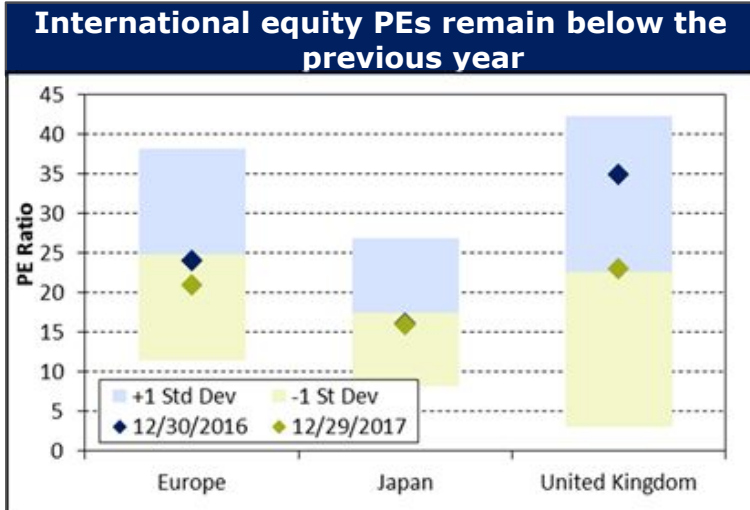
US equities continue to post positive returns



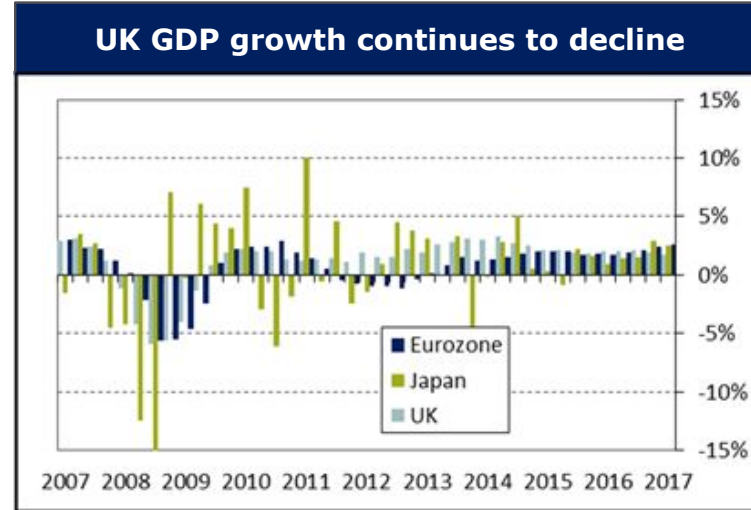
Source: Bloomberg, Standard and Poors, Russell



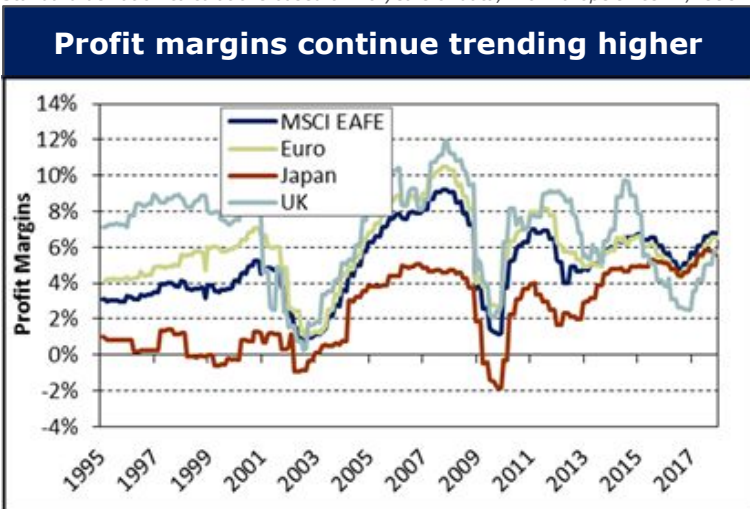
INTERNATIONAL EQUITY



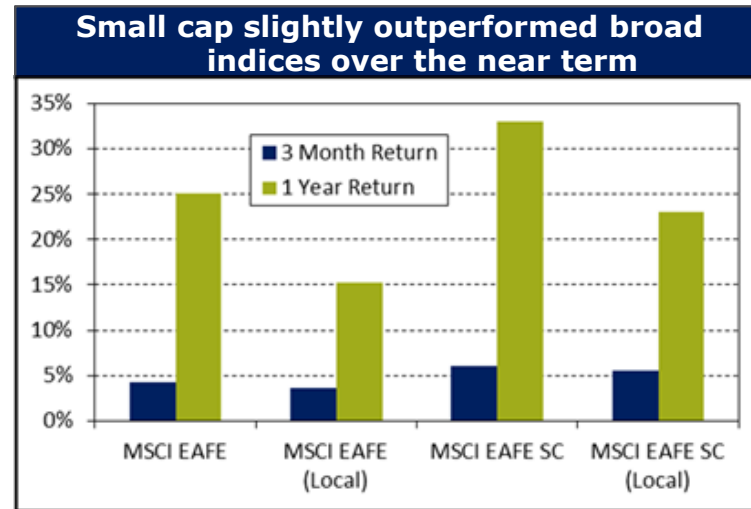
Source: Bloomberg, MSCI, FTSE *UK represented by FTSE 100 Index
 *Standard deviation calculations based on 20 years of data, with Europe since 12/1998



Source: Bloomberg



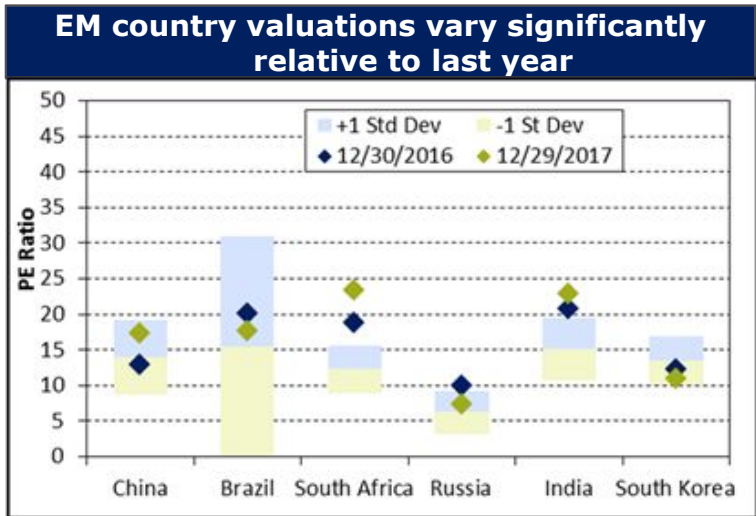
Source: Bloomberg, MSCI



Source: Bloomberg, MSCI



EMERGING MARKETS EQUITY

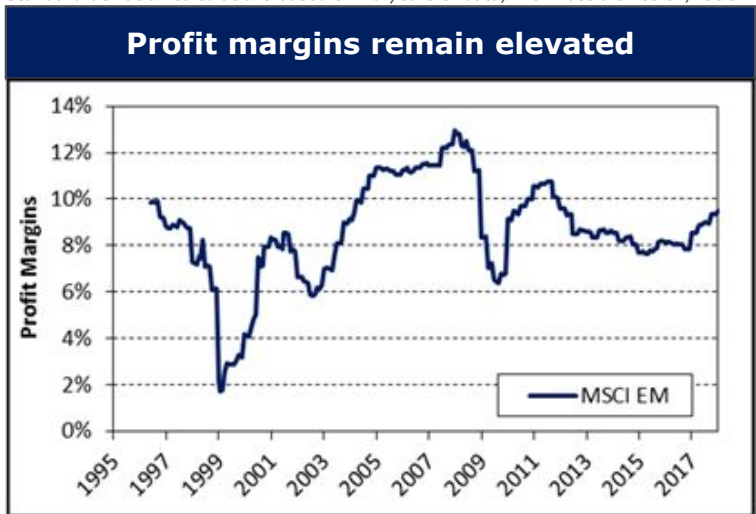


Source: Bloomberg, MSCI

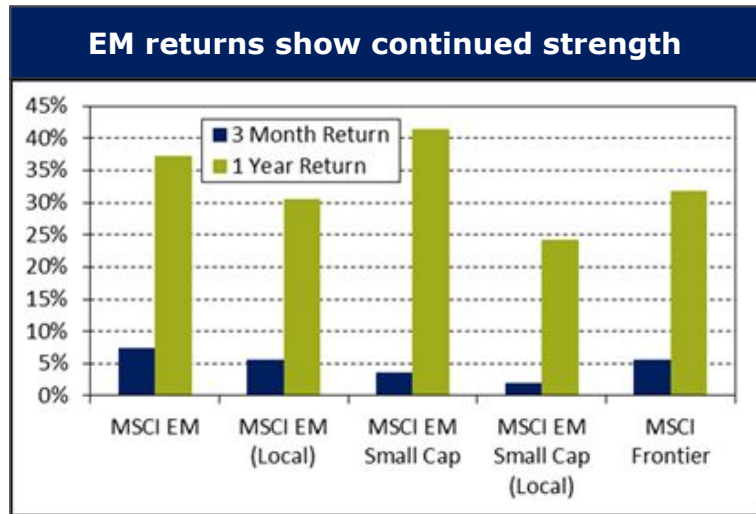
*Standard deviation calculations based on 20 years of data, with Russia since 01/1998



Source: Bloomberg



Source: Bloomberg, MSCI

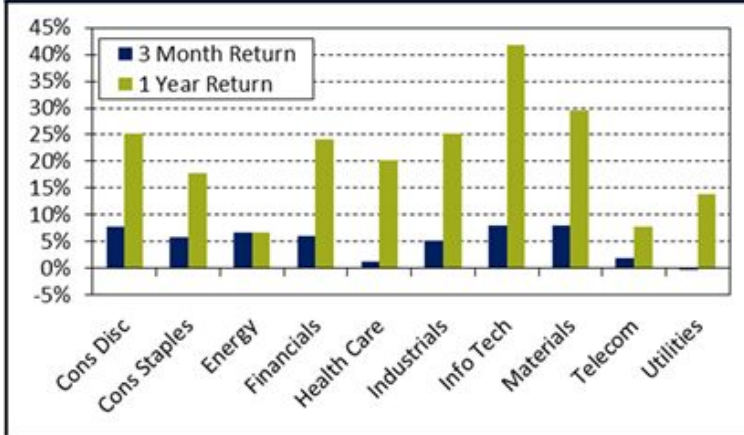


Source: Bloomberg, MSCI



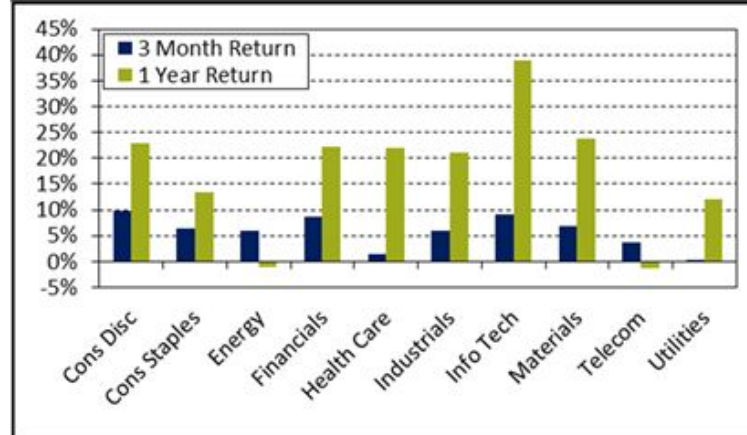
GLOBAL EQUITY BY SECTOR

Info Tech and Consumer Discretionary lead MSCI ACWI short-term returns



Source: Bloomberg, MSCI

The S&P 500 experienced positive performance across all sectors



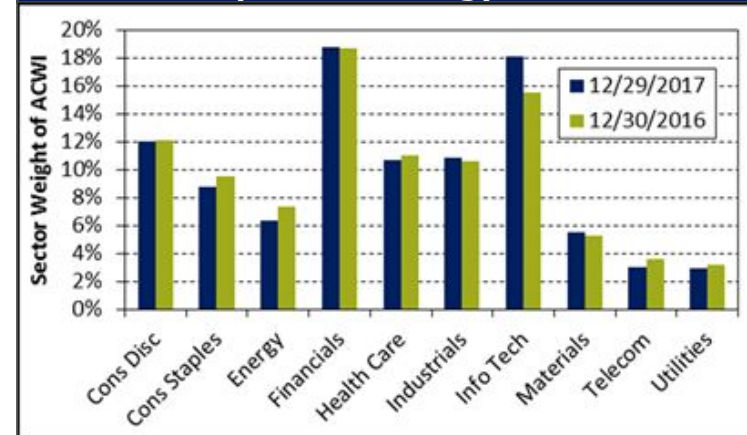
Source: Bloomberg, Standard and Poors

EM short-term returns continue to be driven by Health Care



Source: Bloomberg, MSCI

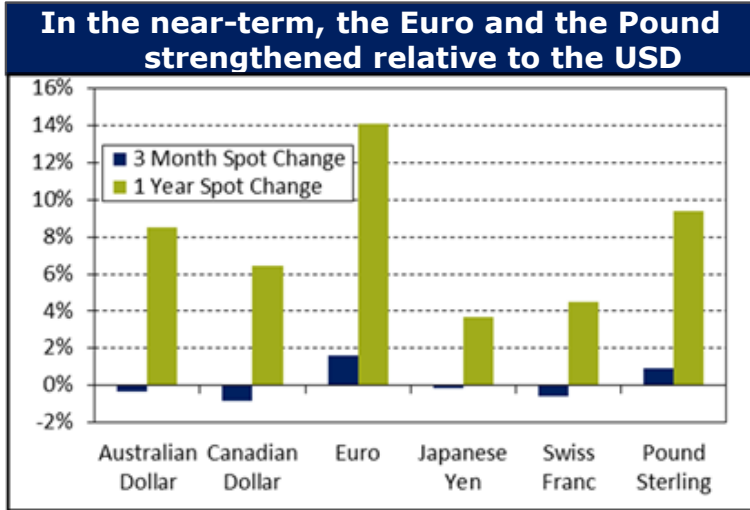
Info Tech sector weight has increased at the expense of Energy and Telecom



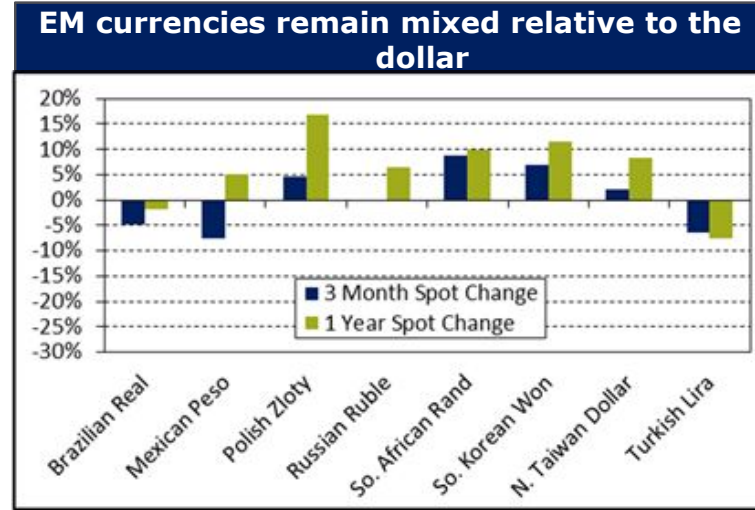
Source: Bloomberg, MSCI



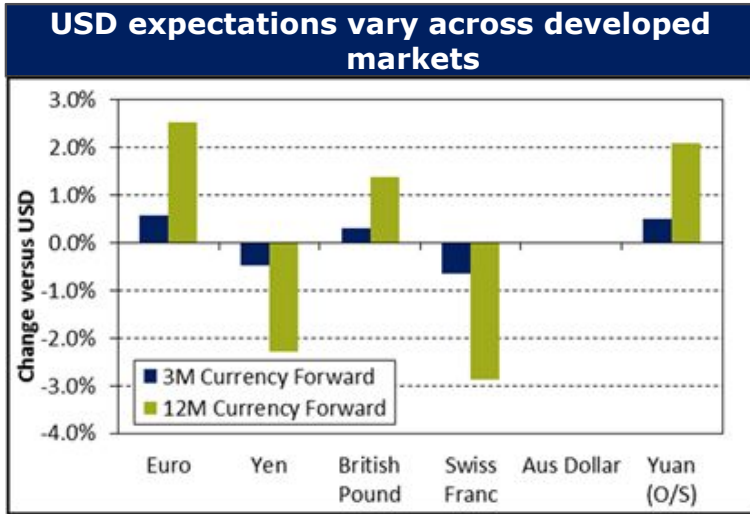
CURRENCIES



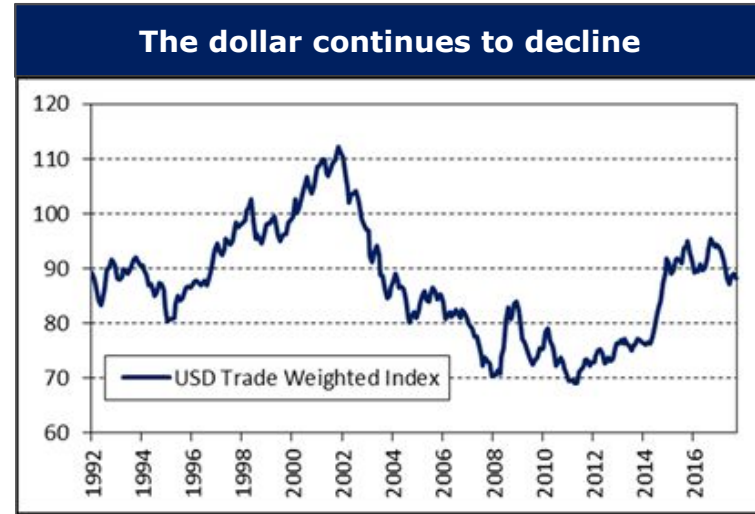
Source: Bloomberg



Source: Bloomberg



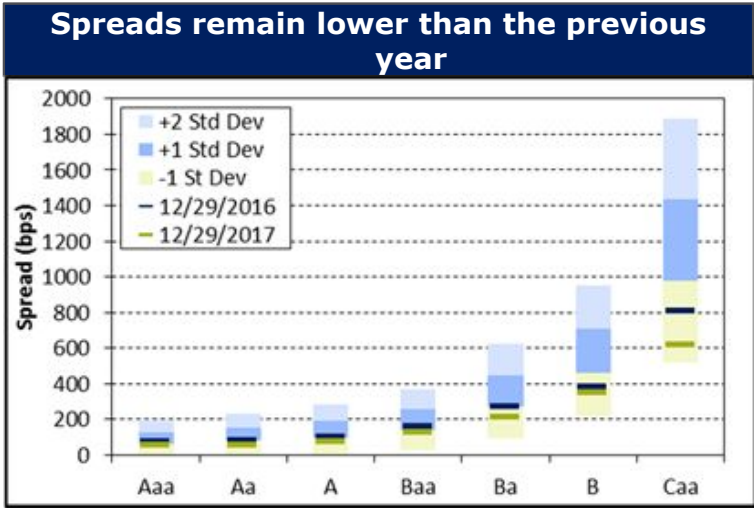
Source: Bloomberg



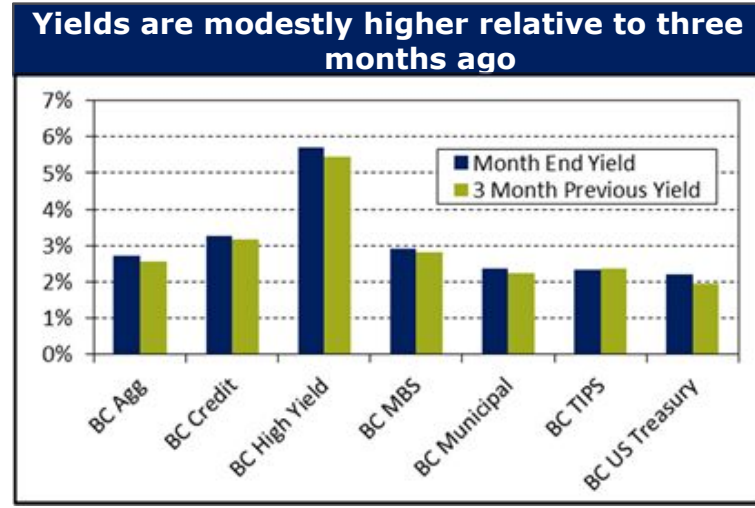
Source: Bloomberg, Federal Reserve



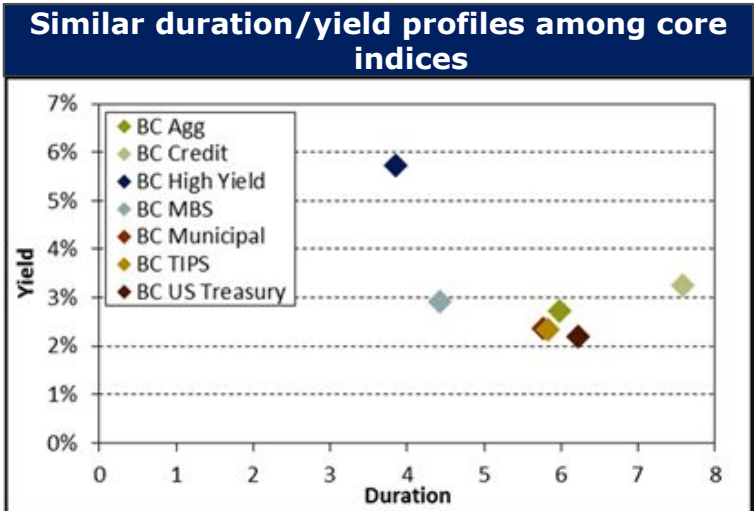
US FIXED INCOME



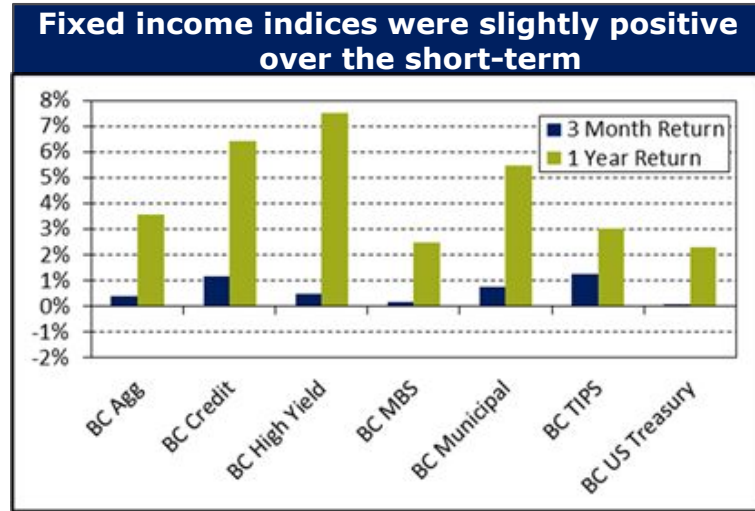
Source: Bloomberg, Barclays
*Standard deviation calculations based on 20 years of data



Source: Bloomberg, Barclays



Source: Bloomberg, Barclays

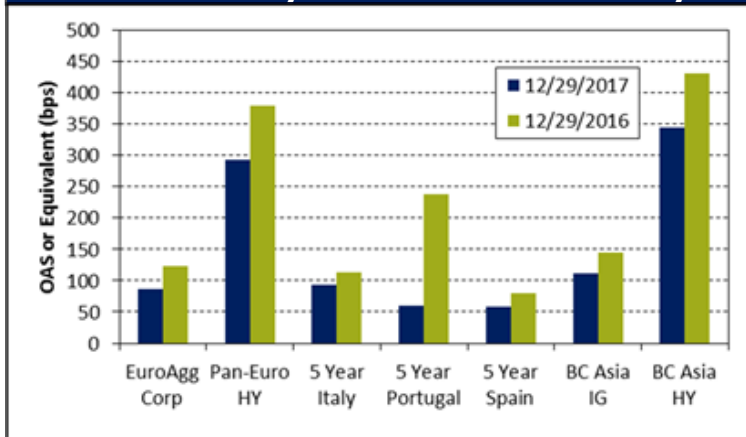


Source: Bloomberg, Barclays



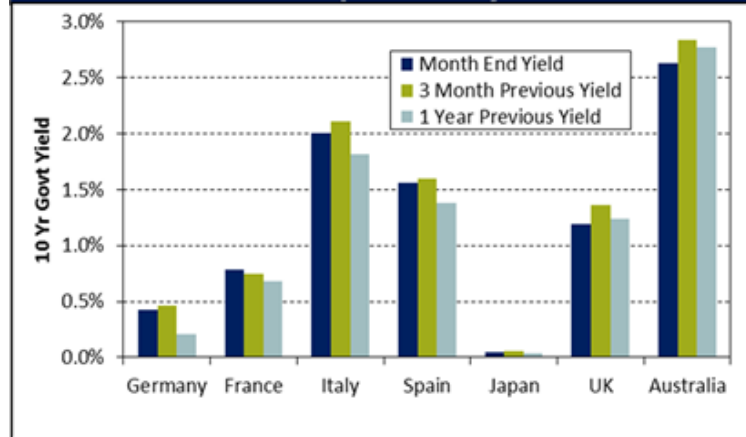
INTERNATIONAL DEVELOPED FIXED INCOME

Periphery yields have broadly declined over the year relative to Germany



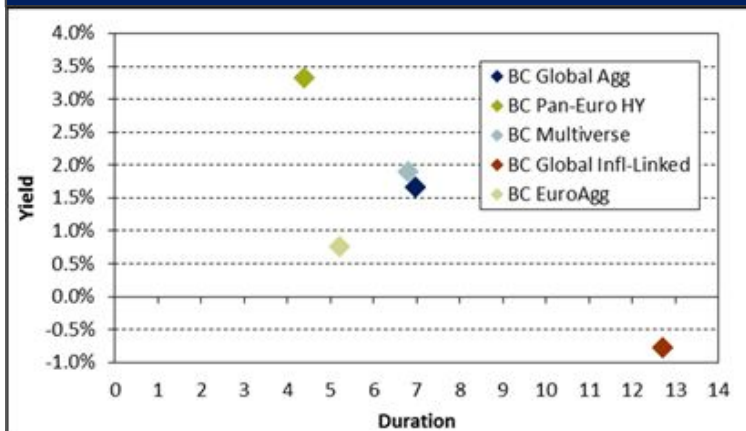
Source: Barclays, Bloomberg, *European periphery spreads are over equivalent German Bund

Ex-UK and Australia, yields are higher than the previous year



Source: Bloomberg

Low yields persist in global bond universe



Source: Bloomberg, Citigroup, Barclays

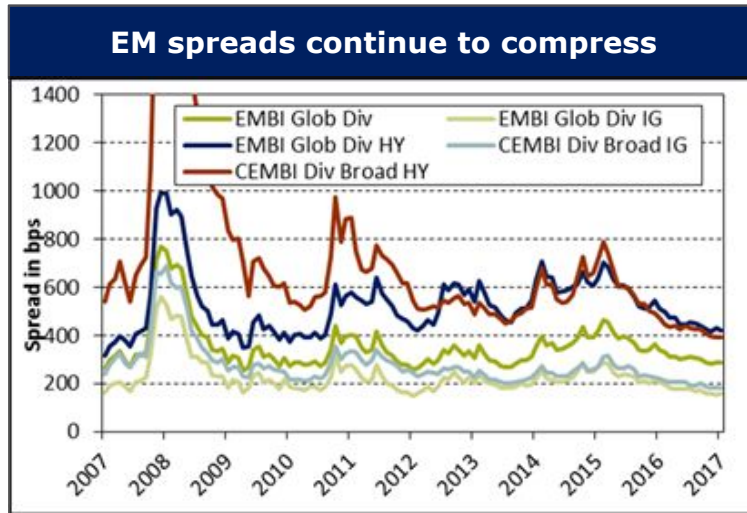
In the near-term, unhedged global bond indices outperformed hedged



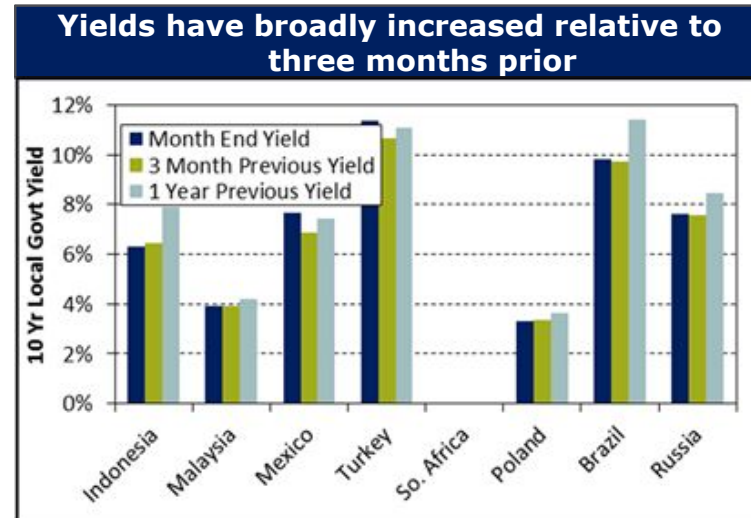
Source: Bloomberg, Citigroup, Barclays



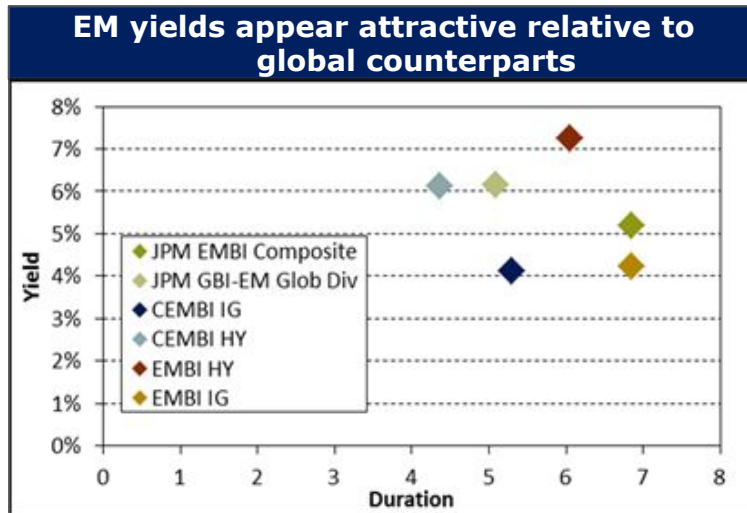
EMERGING MARKETS FIXED INCOME



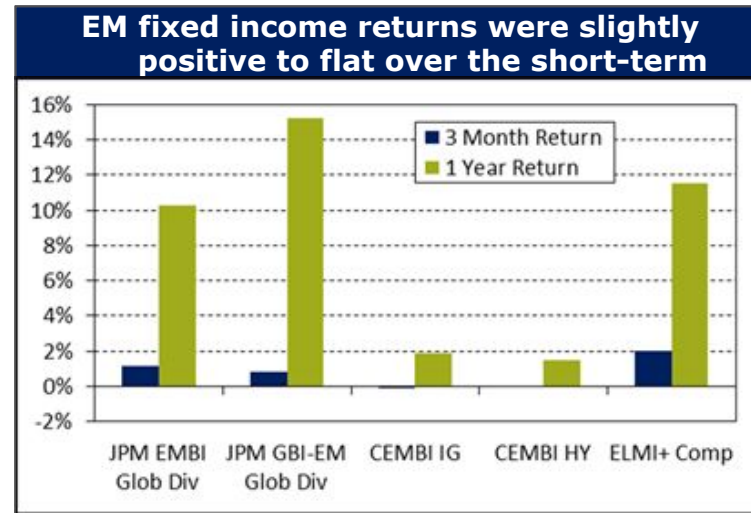
Source: Bloomberg, JP Morgan



Source: Bloomberg



Source: Bloomberg, JP Morgan

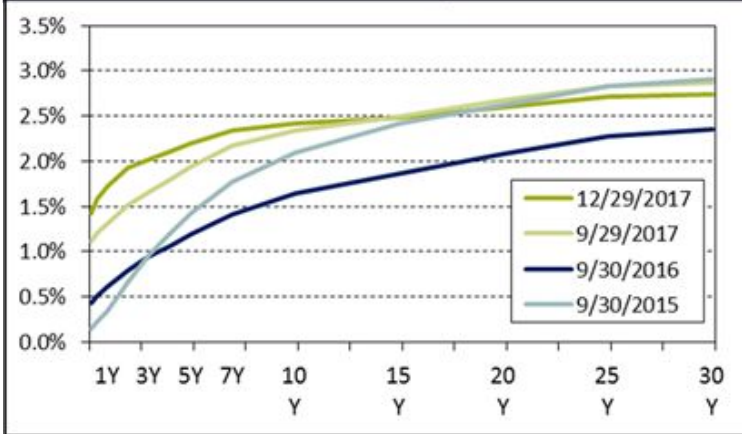


Source: Bloomberg, JP Morgan



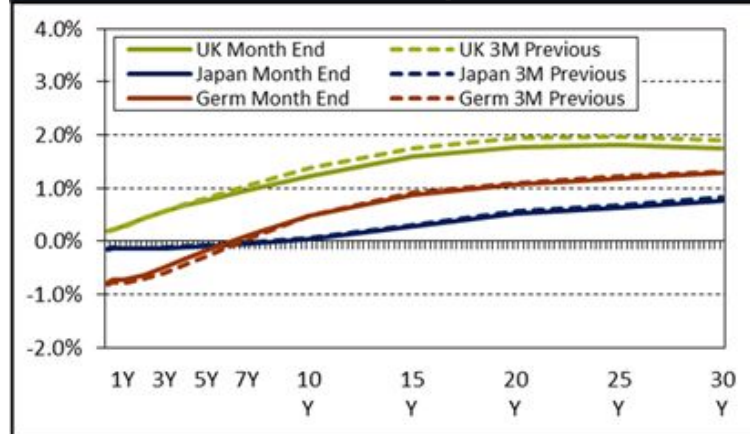
RATES

The curve has flattened relative to three months prior



Source: Bloomberg

Longer term rate expectations have declined relative to previous months



Source: Bloomberg

10-2 spreads continue to decline



Source: Bloomberg

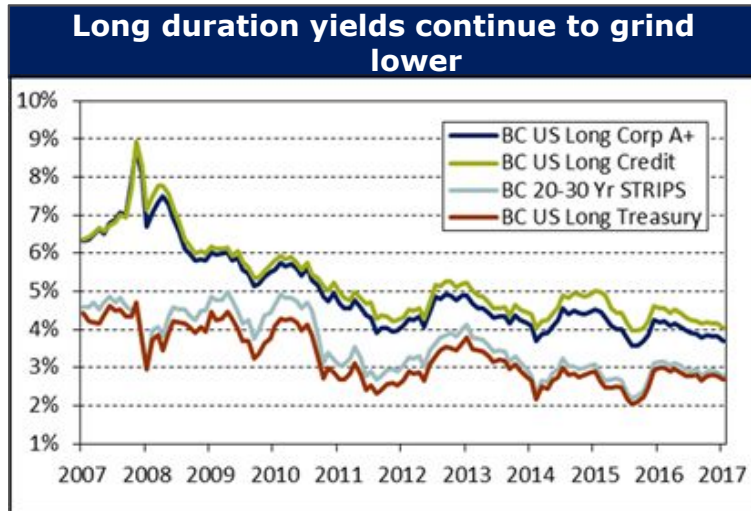
Sovereign bond yields remain relatively flat



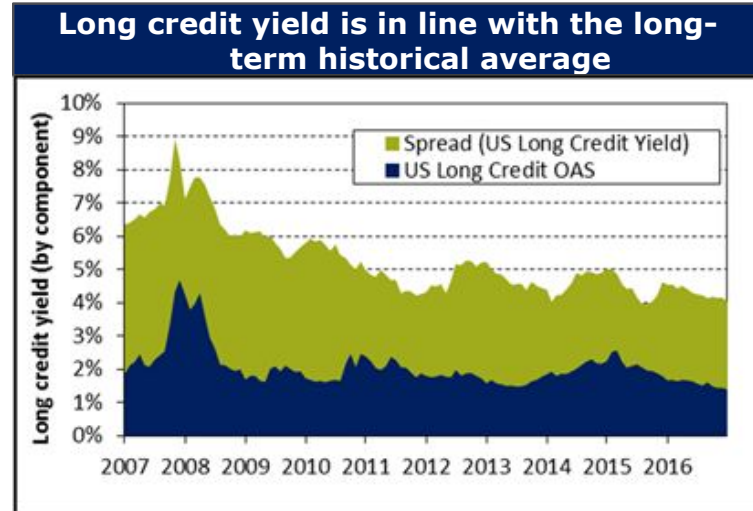
Source: Bloomberg



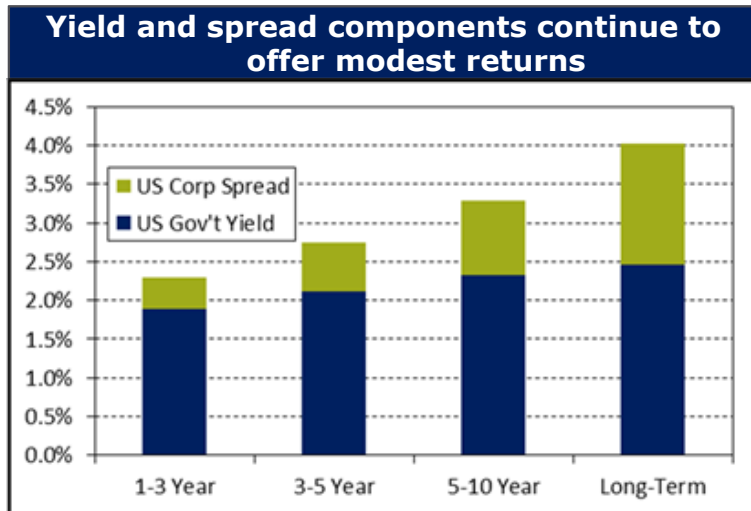
LONG RATES AND LIABILITY



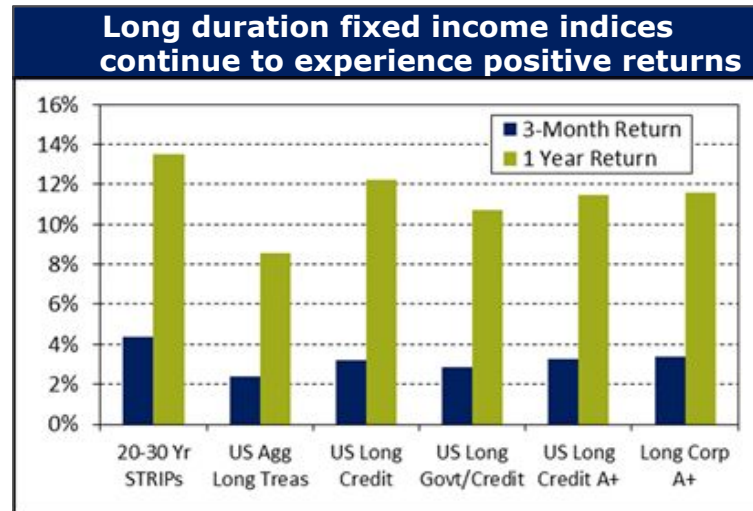
Source: Bloomberg, Citigroup, Barclays



Source: Bloomberg, US Treasury, Barclays, NEPC



Source: Bloomberg, Barclays

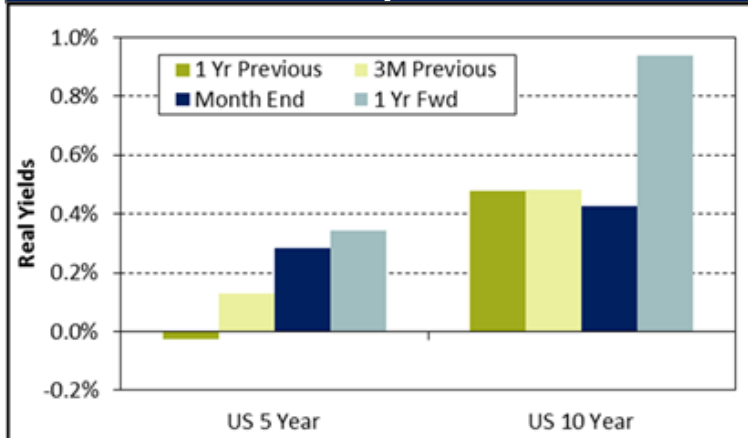


Source: Bloomberg, Barclays



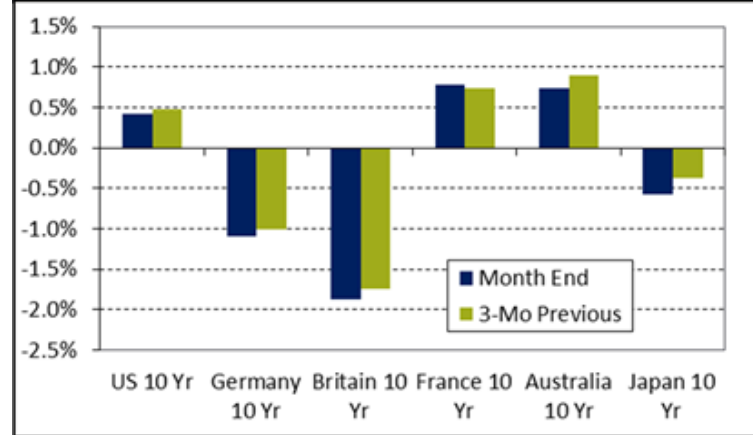
INFLATION AND REAL RATES

Changes in 5 and 10 year real yields echo a flatter yield curve



Source: Bloomberg

Ex-France, developed market real yields have declined in recent months



Source: Bloomberg

US inflation expectations continue to rise



Source: Bloomberg

Ex-UK, inflation expectations have begun trending upward

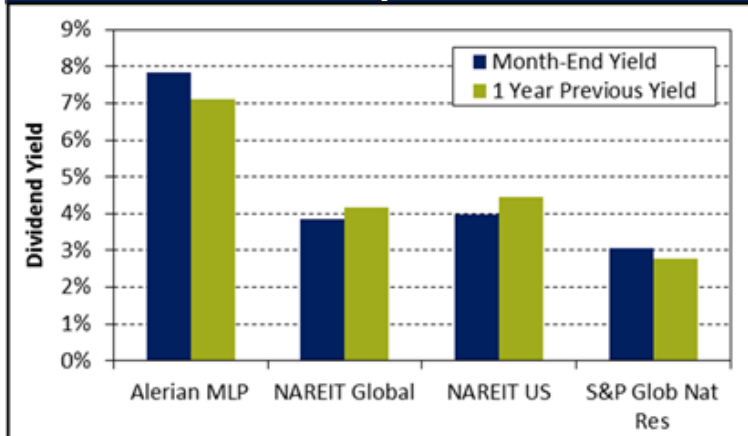


Source: Bloomberg



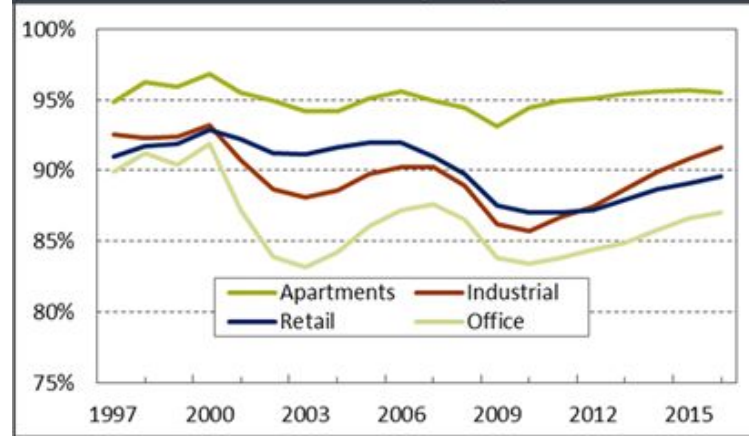
INFLATION-SENSITIVE GROWTH ASSETS

MLP yields have increased relative to last year



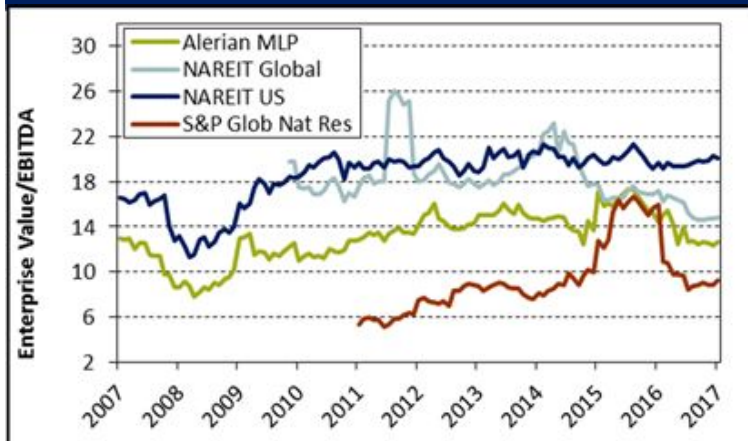
Source: Bloomberg, Alerian, NAREIT, Standard and Poors

Sustained recovery in commercial real estate occupancy rates



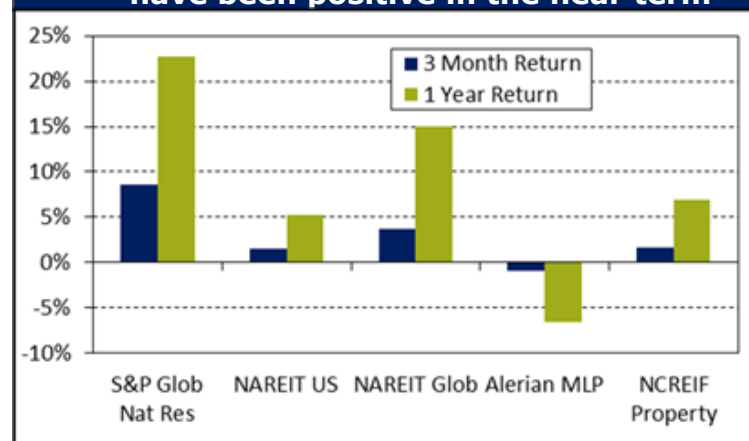
Source: CBRE

US REIT valuations have steadied



Source: Bloomberg, US Census Bureau

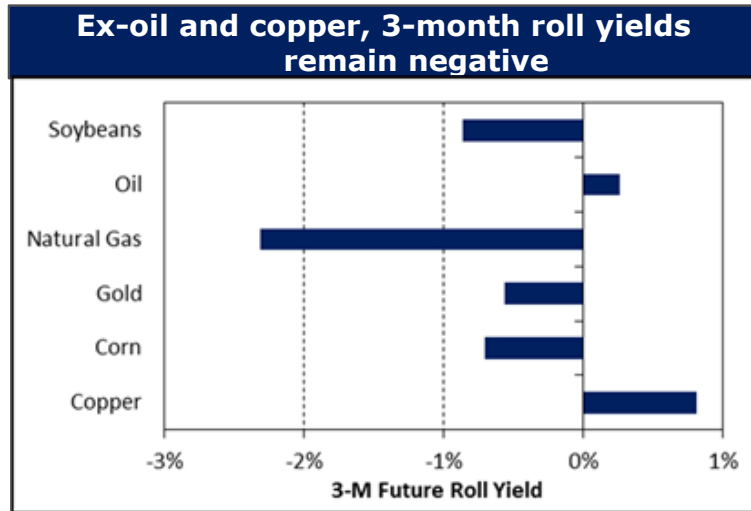
Ex-MLPs, inflation-sensitive growth assets have been positive in the near term



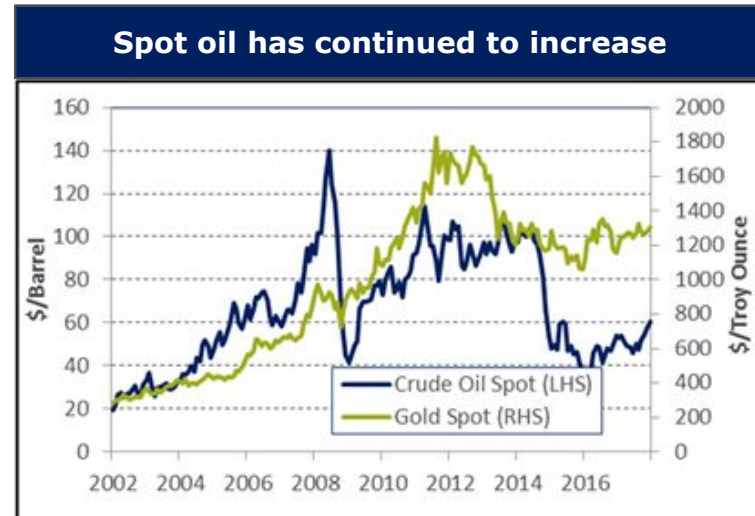
Source: Bloomberg, Alerian, NAREIT, Standard and Poors



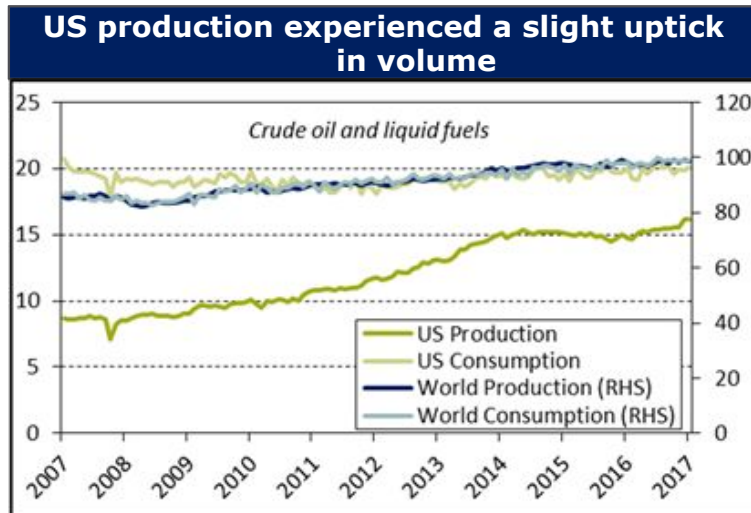
COMMODITIES



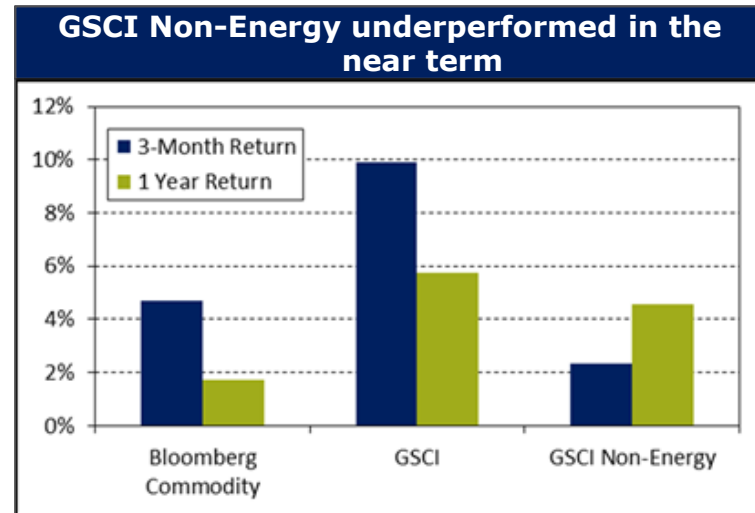
Source: Bloomberg



Source: Bloomberg



Source: Bloomberg, US Department of Energy *Crude oil and liquid fuels



Source: Bloomberg, Standard and Poors



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 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) * √(# 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 re-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

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

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 Hurdle³ – is a hurdle rate that once beaten allows a fund manager to charge a performance fee on only the funds above the specified hurdle rate.

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

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

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

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

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

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

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

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

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

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



GLOSSARY OF INVESTMENT TERMINOLOGY

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

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

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

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

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

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

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

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

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

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

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

Upside Deviation¹ - Standard Deviation of Positive Returns

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

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

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

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



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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.



PRELIMINARY MONTHLY PERFORMANCE REPORT

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

January 31, 2018

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

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Fund	5,580,657,151	100.0	100.0	3.3	11.5	17.7	9.1	9.4	6.6	8.3	Apr-94
<i>Policy Index</i>				<u>3.2</u>	<u>11.4</u>	<u>18.1</u>	<u>9.8</u>	<u>9.8</u>	<u>6.9</u>	<u>8.4</u>	<i>Apr-94</i>
Over/Under				0.1	0.1	-0.4	-0.7	-0.4	-0.3	-0.1	
<i>60% MSCI ACWI (Net) / 40% CITI WGBI</i>				4.0	12.2	19.4	8.2	6.9	5.0	--	<i>Apr-94</i>
Total Fund ex Parametric	5,463,809,826	97.9	--	3.3	11.3	17.4	9.0	9.3	6.5	8.3	Apr-94
Total Fund ex Private Equity	5,346,098,431	95.8	--	3.3	11.6	17.6	9.0	8.9	--	10.1	Jan-12
<i>Policy Index</i>				<u>3.2</u>	<u>11.4</u>	<u>18.1</u>	<u>9.8</u>	<u>9.8</u>	<u>6.9</u>	<u>10.7</u>	<i>Jan-12</i>
Over/Under				0.1	0.2	-0.5	-0.8	-0.9	--	-0.6	
Total US Equity	1,856,451,226	33.3	28.0	5.4	17.5	25.6	14.3	15.7	9.7	9.6	Dec-93
<i>Russell 3000</i>				<u>5.3</u>	<u>17.1</u>	<u>25.2</u>	<u>14.1</u>	<u>15.5</u>	<u>9.9</u>	<u>9.9</u>	<i>Dec-93</i>
Over/Under				0.1	0.4	0.4	0.2	0.2	-0.2	-0.3	
Western U.S. Index Plus	209,141,208	3.7		5.7	19.3	27.7	15.4	16.5	8.7	6.4	May-07
<i>S&P 500</i>				<u>5.7</u>	<u>17.8</u>	<u>26.4</u>	<u>14.7</u>	<u>15.9</u>	<u>9.8</u>	<u>8.2</u>	<i>May-07</i>
Over/Under				0.0	1.5	1.3	0.7	0.6	-1.1	-1.8	
Blackrock Russell 1000 Index	1,584,134,557	28.4		5.5	17.5	--	--	--	--	19.8	May-17
<i>Russell 1000</i>				<u>5.5</u>	<u>17.5</u>	<u>25.8</u>	<u>14.3</u>	<u>15.7</u>	<u>9.9</u>	<u>19.8</u>	<i>May-17</i>
Over/Under				0.0	0.0	--	--	--	--	0.0	
Blackrock Russell 2500 Index	63,175,460	1.1		3.0	13.6	--	--	--	--	15.1	May-17
<i>Russell 2500</i>				<u>3.0</u>	<u>13.6</u>	<u>18.7</u>	<u>12.0</u>	<u>13.5</u>	<u>10.2</u>	<u>15.1</u>	<i>May-17</i>
Over/Under				0.0	0.0	--	--	--	--	0.0	

Policy Index: Currently, 28% Russell 3000, 20% Barclays Aggregate, 15% MSCI ACWI ex U.S., 10% MSCI ACWI, 10% DJ U.S. Total Stock Market 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.

CPI+4% and CPI+5% are estimated due to CPI monthly lag.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Non-US Equity	938,503,839	16.8	15.0	5.1	17.3	28.1	10.5	7.8	3.9	7.0	Mar-94
<i>MSCI ACWI ex USA</i>				<u>5.6</u>	<u>17.7</u>	<u>29.7</u>	<u>9.9</u>	<u>7.1</u>	<u>3.4</u>	<u>5.8</u>	<i>Mar-94</i>
Over/Under				-0.5	-0.4	-1.6	0.6	0.7	0.5	1.2	
<i>MSCI EAFE</i>				5.0	15.4	27.6	9.4	7.8	3.4	5.4	<i>Mar-94</i>
<i>MSCI ACWI ex USA Local Currency</i>				2.4	11.4	19.9	8.8	10.0	4.9	--	<i>Mar-94</i>
<i>MSCI EAFE Local Currency</i>				1.2	8.4	16.5	7.9	10.4	4.6	5.1	<i>Mar-94</i>
BlackRock ACWI ex-U.S. Index	461,676,906	8.3		5.5	18.0	30.4	10.6	7.7	4.0	3.8	<i>Mar-07</i>
<i>MSCI ACWI ex USA IMI</i>				<u>5.5</u>	<u>17.9</u>	<u>30.1</u>	<u>10.4</u>	<u>7.5</u>	<u>3.8</u>	<u>3.6</u>	<i>Mar-07</i>
Over/Under				0.0	0.1	0.3	0.2	0.2	0.2	0.2	
<i>MSCI ACWI ex USA Local Currency</i>				2.4	11.4	19.9	8.8	10.0	4.9	3.9	<i>Mar-07</i>
Sprucegrove	249,849,422	4.5		5.6	21.1	27.9	11.1	8.5	5.0	8.5	<i>Mar-02</i>
<i>MSCI ACWI ex USA</i>				<u>5.6</u>	<u>17.7</u>	<u>29.7</u>	<u>9.9</u>	<u>7.1</u>	<u>3.4</u>	<u>7.4</u>	<i>Mar-02</i>
Over/Under				0.0	3.4	-1.8	1.2	1.4	1.6	1.1	
<i>MSCI EAFE</i>				5.0	15.4	27.6	9.4	7.8	3.4	6.8	<i>Mar-02</i>
<i>MSCI ACWI ex USA Local Currency</i>				2.4	11.4	19.9	8.8	10.0	4.9	5.8	<i>Mar-02</i>
<i>MSCI EAFE Local Currency</i>				1.2	8.4	16.5	7.9	10.4	4.6	4.9	<i>Mar-02</i>
Hexavest	97,785,324	1.8		3.7	9.6	19.4	7.5	6.6	--	5.6	<i>Dec-10</i>
<i>MSCI EAFE</i>				<u>5.0</u>	<u>15.4</u>	<u>27.6</u>	<u>9.4</u>	<u>7.8</u>	<u>3.4</u>	<u>6.7</u>	<i>Dec-10</i>
Over/Under				-1.3	-5.8	-8.2	-1.9	-1.2	--	-1.1	
<i>MSCI EAFE Local Currency</i>				1.2	8.4	16.5	7.9	10.4	4.6	8.6	<i>Dec-10</i>
Walter Scott	129,192,187	2.3		4.1	14.4	27.2	11.3	7.6	--	7.1	<i>Dec-10</i>
<i>MSCI ACWI ex USA</i>				<u>5.6</u>	<u>17.7</u>	<u>29.7</u>	<u>9.9</u>	<u>7.1</u>	<u>3.4</u>	<u>5.7</u>	<i>Dec-10</i>
Over/Under				-1.5	-3.3	-2.5	1.4	0.5	--	1.4	
<i>MSCI ACWI ex USA Local Currency</i>				2.4	11.4	19.9	8.8	10.0	4.9	7.9	<i>Dec-10</i>
<i>MSCI EAFE</i>				5.0	15.4	27.6	9.4	7.8	3.4	6.7	<i>Dec-10</i>
Total Global Equity	633,242,046	11.3	10.0	5.7	17.7	28.0	11.7	10.5	5.4	6.8	May-05
<i>MSCI ACWI</i>				<u>5.6</u>	<u>17.5</u>	<u>27.5</u>	<u>11.9</u>	<u>11.0</u>	<u>6.1</u>	<u>7.7</u>	<i>May-05</i>
Over/Under				0.1	0.2	0.5	-0.2	-0.5	-0.7	-0.9	
BlackRock MSCI ACWI Equity Index	633,242,046	11.3		5.7	17.7	28.0	12.4	11.5	--	12.9	<i>Aug-12</i>
<i>MSCI ACWI</i>				<u>5.6</u>	<u>17.5</u>	<u>27.5</u>	<u>11.9</u>	<u>11.0</u>	<u>6.1</u>	<u>12.5</u>	<i>Aug-12</i>
Over/Under				0.1	0.2	0.5	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 (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Private Equity	234,558,720	4.2	10.0	1.9	10.2	19.6	12.8	14.8	--	14.4	Jan-12
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>5.6</u>	<u>19.1</u>	<u>28.8</u>	<u>17.5</u>	<u>18.9</u>	--	<u>19.9</u>	<i>Jan-12</i>
Over/Under				-3.7	-8.9	-9.2	-4.7	-4.1		-5.5	
Adams Street Global Fund Series	134,547,394	2.4		0.0	7.6	14.2	10.2	12.6	--	12.5	Jan-12
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>5.6</u>	<u>19.1</u>	<u>28.8</u>	<u>17.5</u>	<u>18.9</u>	--	<u>19.9</u>	<i>Jan-12</i>
Over/Under				-5.6	-11.5	-14.6	-7.3	-6.3		-7.4	
Harbourvest	58,726,339	1.1		6.8	17.2	31.8	18.6	--	--	20.7	Aug-13
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>5.6</u>	<u>19.1</u>	<u>28.8</u>	<u>17.5</u>	<u>18.9</u>	--	<u>17.3</u>	<i>Aug-13</i>
Over/Under				1.2	-1.9	3.0	1.1			3.4	
Pantheon Global Secondary Funds	31,058,033	0.6		0.0	9.1	24.1	15.1	13.4	--	12.6	Jan-12
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>5.6</u>	<u>19.1</u>	<u>28.8</u>	<u>17.5</u>	<u>18.9</u>	--	<u>19.9</u>	<i>Jan-12</i>
Over/Under				-5.6	-10.0	-4.7	-2.4	-5.5		-7.3	
Drive Capital Fund	3,947,269	0.1		0.0	-7.2	-33.7	--	--	--	-41.4	Sep-16
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>5.6</u>	<u>19.1</u>	<u>28.8</u>	<u>17.5</u>	<u>18.9</u>	--	<u>26.0</u>	<i>Sep-16</i>
Over/Under				-5.6	-26.3	-62.5				-67.4	
Abbott Secondary Opportunities	3,279,685	0.1		0.0	--	--	--	--	--	0.0	Jan-18
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>5.6</u>	<u>19.1</u>	<u>28.8</u>	<u>17.5</u>	<u>18.9</u>	--	<u>5.6</u>	<i>Jan-18</i>
Over/Under				-5.6						-5.6	
CVI Credit Value Fund	1,500,000	0.0		0.0	--	--	--	--	--	0.0	Jan-18
<i>DJ U.S. Total Stock Market Index + 3%</i>				<u>5.6</u>	<u>19.1</u>	<u>28.8</u>	<u>17.5</u>	<u>18.9</u>	--	<u>5.6</u>	<i>Jan-18</i>
Over/Under				-5.6						-5.6	
Abbott Capital Cash	1,500,000	0.0									

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	\$4,779,685	\$20,583,031	19%	--	\$1,500,000	\$2,875,000	\$4,375,000	-\$404,685	-100%	0.31x	0.92x
Adams Street 2010 U.S. Fund	2010	5/21/2010	\$42,500,000	\$37,442,500	\$5,057,500	88%	\$15,213	\$20,305,453	\$35,853,396	\$56,158,849	\$18,701,136	13.0%	0.54x	1.50x
Adams Street 2010 Non-U.S. Dev. Mkts Fund	2010	5/21/2010	\$25,500,000	\$21,254,249	\$4,245,751	83%	\$1,589	\$11,784,023	\$17,528,905	\$29,312,928	\$8,057,090	10.4%	0.55x	1.38x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	\$8,500,000	\$7,378,000	\$1,122,000	87%	\$0	\$1,507,798	\$8,818,035	\$10,325,833	\$2,947,833	10.0%	0.2x	1.4x
Adams Street 2010 Direct Fund	2010	5/21/2010	\$8,500,000	\$8,046,100	\$453,900	95%	\$6,697	\$7,693,519	\$5,423,150	\$13,116,669	\$5,063,872	12.3%	0.96x	1.63x
Adams Street 2013 Global Fund	2013	6/27/2013	\$75,000,000	\$49,950,000	\$25,050,000	67%	\$10,728	\$4,679,630	\$55,265,820	\$59,945,450	\$9,984,722	7.8%	0.09x	1.2x
Adams Street 2016 Global Fund	2016	12/22/2016	\$60,000,000	\$10,770,000	\$49,230,000	18%	\$0	\$0	\$11,688,847	\$11,688,847	\$918,847	18.5%	0x	1.09x
Buenaventure One, LLC	2018	1/5/2018	\$49,500,000	--	\$49,500,000	0%	--	--	--	--	--	--	--	--
Clearlake Capital Partners	2017	12/22/2017	\$9,950,000	--	\$9,950,000	0%	--	--	--	--	--	--	--	--
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$1,500,000	\$28,500,000	5%	--	--	\$1,500,000	\$1,500,000	--	--	0x	1x
Drive Capital Fund II	2016	9/1/2016	\$15,000,000	\$4,392,200	\$10,611,010	29%	\$3,210	\$0	\$3,947,268	\$3,947,268	-\$448,142	-20.2%	0x	0.9x
GTCR Fund XII	2017	9/29/2017	\$30,000,000	--	\$30,000,000	0%	--	--	--	--	--	--	--	--
Insight Venture Partners X	2017	10/13/2017	\$25,000,000	--	\$25,000,000	0%	--	--	--	--	--	--	--	--
HarbourVest - Dover Street VIII	2013	5/30/2013	\$67,500,000	\$59,147,454	\$8,437,500	88%	\$84,954	\$58,429,180	\$28,723,410	\$87,152,590	\$27,920,182	21.5%	0.99x	1.47x
HarbourVest - Dover Street IX	2016	12/16/2016	\$60,000,000	\$12,600,000	\$47,400,000	21%	\$0	\$3,388,361	\$12,615,715	\$16,004,076	\$3,404,076	55.8%	0.27x	1.27x
HarbourVest - PRINS CO INVEST IV L.P.	2017	6/2/2017	\$30,000,000	\$14,521,740	\$15,675,000	48%	\$0	\$0	\$16,043,068	\$16,043,068	\$1,521,328	20.6%	0x	1.1x
Pantheon Global Secondary Fund IV	2010	8/20/2010	\$15,000,000	\$9,960,000	\$5,040,000	66%	\$0	\$11,745,001	\$3,652,210	\$15,397,211	\$5,437,211	14.1%	1.18x	1.55x
Pantheon Global Secondary Fund V	2015	2/26/2015	\$50,000,000	\$24,941,509	\$25,058,491	50%	(\$162,514)	\$4,775,205	\$27,393,227	\$32,168,433	\$7,389,438	20.4%	0.19x	1.29x
Total VCERA Private Equity Program	--	5/21/2010	\$626,950,000	\$266,683,437	\$360,914,183	43%	-\$40,123	\$125,808,170	\$231,328,051	\$357,136,222	\$90,492,908	14.2%	0.47x	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 9/30/2017 NAVs cash-adjusted for cash flows through 1/31/2018.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total US Fixed Income	954,677,778	17.1	20.0	-0.6	0.9	3.3	2.7	2.4	5.1	5.9	Feb-94
<i>BBgBarc US Aggregate TR</i>				<i>-1.2</i>	<i>0.1</i>	<i>2.1</i>	<i>1.1</i>	<i>2.0</i>	<i>3.7</i>	<i>5.3</i>	<i>Feb-94</i>
Over/Under				0.6	0.8	1.2	1.6	0.4	1.4	0.6	
BlackRock U.S. Debt Fund	220,543,167	4.0		-1.2	0.1	2.2	1.2	2.1	3.8	5.1	Nov-95
<i>BBgBarc US Aggregate TR</i>				<i>-1.2</i>	<i>0.1</i>	<i>2.1</i>	<i>1.1</i>	<i>2.0</i>	<i>3.7</i>	<i>5.1</i>	<i>Nov-95</i>
Over/Under				0.0	0.0	0.1	0.1	0.1	0.1	0.0	
Western	295,777,531	5.3		-0.9	1.0	4.4	2.5	3.3	5.0	6.1	Dec-96
<i>BBgBarc US Aggregate TR</i>				<i>-1.2</i>	<i>0.1</i>	<i>2.1</i>	<i>1.1</i>	<i>2.0</i>	<i>3.7</i>	<i>5.1</i>	<i>Dec-96</i>
Over/Under				0.3	0.9	2.3	1.4	1.3	1.3	1.0	
Reams	308,592,919	5.5		-0.2	0.4	2.0	3.4	1.5	5.2	5.3	Sep-01
<i>Reams Custom Index</i>				<i>0.2</i>	<i>0.9</i>	<i>1.4</i>	<i>0.8</i>	<i>0.6</i>	<i>3.0</i>	<i>3.9</i>	<i>Sep-01</i>
Over/Under				-0.4	-0.5	0.6	2.6	0.9	2.2	1.4	
<i>BBgBarc US Aggregate TR</i>				<i>-1.2</i>	<i>0.1</i>	<i>2.1</i>	<i>1.1</i>	<i>2.0</i>	<i>3.7</i>	<i>4.4</i>	<i>Sep-01</i>
3-Month LIBOR + 3%				0.4	2.6	4.4	3.9	3.6	3.8	4.8	Sep-01
Loomis Strategic Alpha	46,434,685	0.8		0.7	2.9	3.7	2.7	--	--	2.8	Jul-13
<i>BBgBarc US Aggregate TR</i>				<i>-1.2</i>	<i>0.1</i>	<i>2.1</i>	<i>1.1</i>	<i>2.0</i>	<i>3.7</i>	<i>2.6</i>	<i>Jul-13</i>
Over/Under				1.9	2.8	1.6	1.6			0.2	
3-Month LIBOR + 3%				0.4	2.6	4.4	3.9	3.6	3.8	3.7	Jul-13
Loomis Sayles Multi Strategy	83,329,476	1.5		0.1	2.9	7.5	4.2	4.1	6.6	6.6	Jul-05
<i>Loomis Custom Index</i>				<i>-0.6</i>	<i>1.0</i>	<i>3.4</i>	<i>2.6</i>	<i>3.0</i>	<i>5.0</i>	<i>5.1</i>	<i>Jul-05</i>
Over/Under				0.7	1.9	4.1	1.6	1.1	1.6	1.5	
<i>BBgBarc US Govt/Credit TR</i>				<i>-1.2</i>	<i>0.1</i>	<i>2.5</i>	<i>1.1</i>	<i>2.1</i>	<i>3.8</i>	<i>4.1</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.

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Total Real Estate	405,111,120	7.3	7.0	0.0	3.6	5.9	8.5	9.5	2.7	7.8	Mar-94
<i>NCREIF ODCE Net</i>				<i>0.0</i>	<i>3.5</i>	<i>6.7</i>	<i>9.4</i>	<i>10.5</i>	<i>4.1</i>	<i>8.1</i>	<i>Mar-94</i>
Over/Under				0.0	0.1	-0.8	-0.9	-1.0	-1.4	-0.3	
Prudential Real Estate	144,511,543	2.6		0.0	3.9	7.0	9.8	11.2	3.7	6.2	Jun-04
<i>NCREIF ODCE Net</i>				<i>0.0</i>	<i>3.5</i>	<i>6.7</i>	<i>9.4</i>	<i>10.5</i>	<i>4.1</i>	<i>7.1</i>	<i>Jun-04</i>
Over/Under				0.0	0.4	0.3	0.4	0.7	-0.4	-0.9	
<i>NCREIF ODCE</i>				<i>0.0</i>	<i>4.0</i>	<i>7.6</i>	<i>10.4</i>	<i>11.5</i>	<i>5.0</i>	<i>8.0</i>	<i>Jun-04</i>
UBS Real Estate	260,599,577	4.7		0.0	3.5	5.4	7.8	8.6	4.2	7.4	Mar-03
<i>NCREIF ODCE Net</i>				<i>0.0</i>	<i>3.5</i>	<i>6.7</i>	<i>9.4</i>	<i>10.5</i>	<i>4.1</i>	<i>7.3</i>	<i>Mar-03</i>
Over/Under				0.0	0.0	-1.3	-1.6	-1.9	0.1	0.1	
<i>NCREIF ODCE</i>				<i>0.0</i>	<i>4.0</i>	<i>7.6</i>	<i>10.4</i>	<i>11.5</i>	<i>5.0</i>	<i>8.3</i>	<i>Mar-03</i>
Total Liquid Alternatives	441,265,097	7.9	10.0	1.8	6.6	6.8	1.4	--	--	5.4	Apr-13
<i>CPI + 4% (Unadjusted)</i>				<i>0.3</i>	<i>2.9</i>	<i>5.5</i>	<i>5.8</i>	<i>7.3</i>	<i>--</i>	<i>6.1</i>	<i>Apr-13</i>
Over/Under				1.5	3.7	1.3	-4.4			-0.7	
Bridgewater All Weather Fund	316,407,277	5.7		0.6	8.4	11.3	3.9	--	--	5.8	Aug-13
<i>CPI + 5% (Unadjusted)</i>				<i>0.3</i>	<i>3.5</i>	<i>6.5</i>	<i>6.9</i>	<i>--</i>	<i>--</i>	<i>6.2</i>	<i>Aug-13</i>
Over/Under				0.3	4.9	4.8	-3.0			-0.4	
Tortoise Energy Infrastructure	124,857,821	2.2		4.9	2.1	-3.2	-4.2	--	--	2.3	Apr-13
<i>Wells Fargo MLP Index</i>				<i>5.3</i>	<i>2.4</i>	<i>-4.2</i>	<i>-6.9</i>	<i>-0.4</i>	<i>--</i>	<i>-1.9</i>	<i>Apr-13</i>
Over/Under				-0.4	-0.3	1.0	2.7			4.2	
Overlay	116,847,325	2.1	0.0								
Parametric	116,847,325	2.1									

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 12/31/2017.

Ventura County Employees' Retirement Association

TOTAL FUND

Cash Flow Summary							
Month Ending January 31, 2018							
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value
Abbott Capital Cash	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$1,500,000
Abbott Secondary Opportunities	\$3,279,685	\$0	\$0	\$0	\$0	\$0	\$3,279,685
Adams Street Global Fund Series	\$133,737,393	\$810,000	\$0	\$810,000	\$0	\$1	\$134,547,394
BlackRock ACWI ex-U.S. Index	\$437,710,700	\$0	\$0	\$0	-\$40,140	\$23,966,206	\$461,676,906
BlackRock MSCI ACWI Equity Index	\$599,349,407	\$0	\$0	\$0	-\$22,775	\$33,892,639	\$633,242,046
Blackrock Russell 1000 Index	\$1,501,688,720	\$0	\$0	\$0	-\$13,618	\$82,445,838	\$1,584,134,557
Blackrock Russell 2500 Index	\$61,305,451	\$0	\$0	\$0	-\$1,053	\$1,870,009	\$63,175,460
BlackRock U.S. Debt Fund	\$223,128,516	\$0	\$0	\$0	-\$10,685	-\$2,585,349	\$220,543,167
Bridgewater All Weather Fund	\$314,550,694	\$0	\$0	\$0	-\$99,252	\$1,856,583	\$316,407,277
CVI Credit Value Fund	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$1,500,000
Drive Capital Fund	\$2,573,974	\$1,373,295	\$0	\$1,373,295	\$0	\$0	\$3,947,269
Harbourvest	\$66,119,273	\$0	-\$11,862,250	-\$11,862,250	\$0	\$4,469,315	\$58,726,339
Hexavest	\$94,281,380	\$0	\$0	\$0	-\$36,762	\$3,503,943	\$97,785,324
Loomis Sayles Multi Strategy	\$83,206,191	\$0	\$0	\$0	-\$26,666	\$123,285	\$83,329,476
Loomis Strategic Alpha	\$46,094,642	\$0	\$0	\$0	-\$15,478	\$340,042	\$46,434,685
Pantheon Global Secondary Funds	\$31,268,033	\$0	-\$210,000	-\$210,000	\$0	\$0	\$31,058,033
Parametric	\$129,226,462	\$12,072,250	-\$20,183,295	-\$8,111,045	-\$14,991	-\$4,268,091	\$116,847,325
Prudential Real Estate	\$144,511,543	\$0	\$0	\$0	\$0	\$0	\$144,511,543
Reams	\$309,158,438	\$0	\$0	\$0	-\$44,824	-\$565,519	\$308,592,919
Sprucegrove	\$236,456,815	\$0	\$0	\$0	-\$71,635	\$13,392,607	\$249,849,422
Tortoise Energy Infrastructure	\$118,985,544	\$0	\$0	\$0	-\$65,030	\$5,872,276	\$124,857,821
UBS Real Estate	\$260,599,577	\$0	\$0	\$0	\$0	\$0	\$260,599,577
Walter Scott	\$124,060,910	\$0	\$0	\$0	-\$86,471	\$5,131,277	\$129,192,187
Western	\$298,407,973	\$0	\$0	\$0	-\$49,472	-\$2,630,442	\$295,777,531
Western U.S. Index Plus	\$197,789,623	\$0	\$0	\$0	-\$38,643	\$11,351,585	\$209,141,208
Total	\$5,420,490,945	\$14,255,545	-\$32,255,545	-\$18,000,000	-\$637,493	\$178,166,206	\$5,580,657,151



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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- 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.



NEPC 2018 INVESTMENT OUTLOOK

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

February 26, 2018

Allan Martin, Partner

Anthony Ferrara, CAIA, Consultant



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

2018 ASSET CLASS ASSUMPTIONS

NEPC asset class assumptions offer both an intermediate (5-7 years) and long term (30 years) forecast horizon

November 30th market data is used for inputs to the asset class models

The 5-7 year return expectations for US credit and equity asset classes are broadly lower due to continued increases in valuation levels

Credit-based asset class expectations have declined considerably from prior year, with credit spreads moving below long-term medians across most sectors

The outlook for non-US equities remains attractive over 5-7 years supported by improvement in corporate earnings and economic growth

We anticipate US inflation will gradually move higher and average 2.5%

We continue to refine and enhance our process where appropriate

The asset class assumption for Real Estate has been split into Core and Non-Core to offer a distinction between the volatility and return profile

Core has a greater income orientation with broad exposure to commercial real estate beta and Non-Core is oriented to capital appreciation with increased use of leverage



ASSUMPTION DEVELOPMENT

Capital market assumptions are published for over 40 asset classes

Assumptions include 5-7 year and 30 year return forecasts, average annual volatility expectations, and correlations

The 5-7 year forecast is designed to capture the return outlook for the current investment cycle

30 year return assumptions reflect a long-term outlook and are informed by the historical relationships among asset classes

Assumptions are published annually on December 15th and use market data as of November 30th

Assumptions are developed by the Asset Allocation Committee and approved by the Partners Research Committee (PRC)

Return assumptions are developed with proprietary valuation models and rely on a core building block methodology

Asset Allocation Committee	
September	<p>Asset Allocation Committee Assumptions Kickoff</p> <p>Finalize List of New Asset Class Assumptions</p>
October	<p>Review Draft of Asset Class Return Assumptions</p> <p>Discuss Outlook with NEPC Research Beta Groups</p>
November	<p>Finalize Volatility and Correlation Assumptions</p> <p>Final Update of Asset Class Models (As of 11/30)</p>
December	<p>Review Model Output and Create Return Assumptions</p> <p>Present Draft to the PRC</p> <p>Publish Assumptions on December 15th</p>

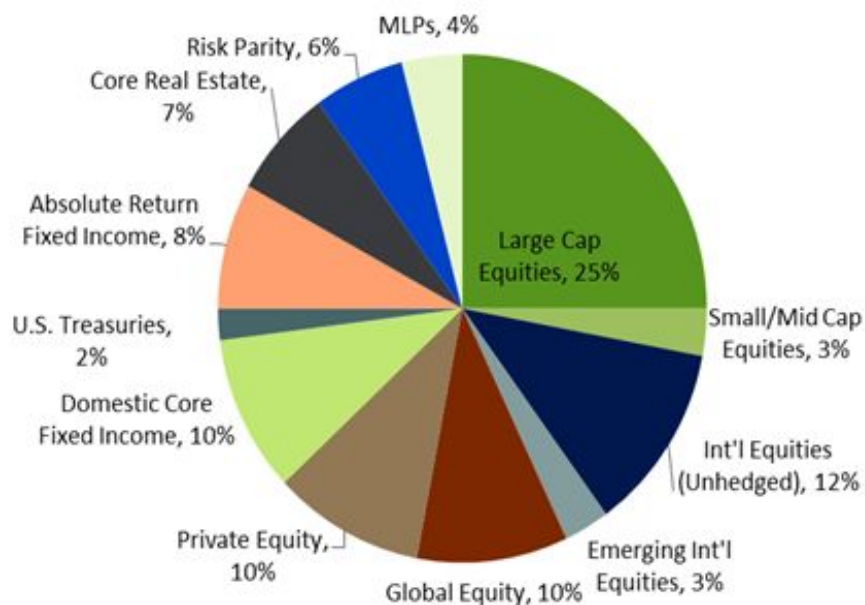


VCERA PORTFOLIO

NEPC, LLC

VCERA TARGET MIX – USING NEPC’S 2018 ASSUMPTIONS

Long Term Asset Allocation Targets



	5-7 Year		30 Year	
	2017	2018	2017	2018
Expected Return	6.4%	6.3%	7.7%	7.7%
Expected Volatility	11.8%	11.8%	11.8%	11.8%
Sharpe Ratio	0.40	0.37	0.40	0.42
Sortino Ratio	0.67	0.66	0.84	0.84

Probabilities Using 2018 Assumptions

Probability of 1-Year Return Under 0%	29.6%
Probability of 6-Year Return Under 0%	9.5%
Probability of 6-Year Return Over 7.5%	40.4%
Probability of 30-Year Return Over 7.5%	53.4%

*Expected Returns are Geometric



KEY MARKET THEMES

NEPC, LLC

THEMES - INTRODUCTION

The outlook for developed market equities outside the US has improved

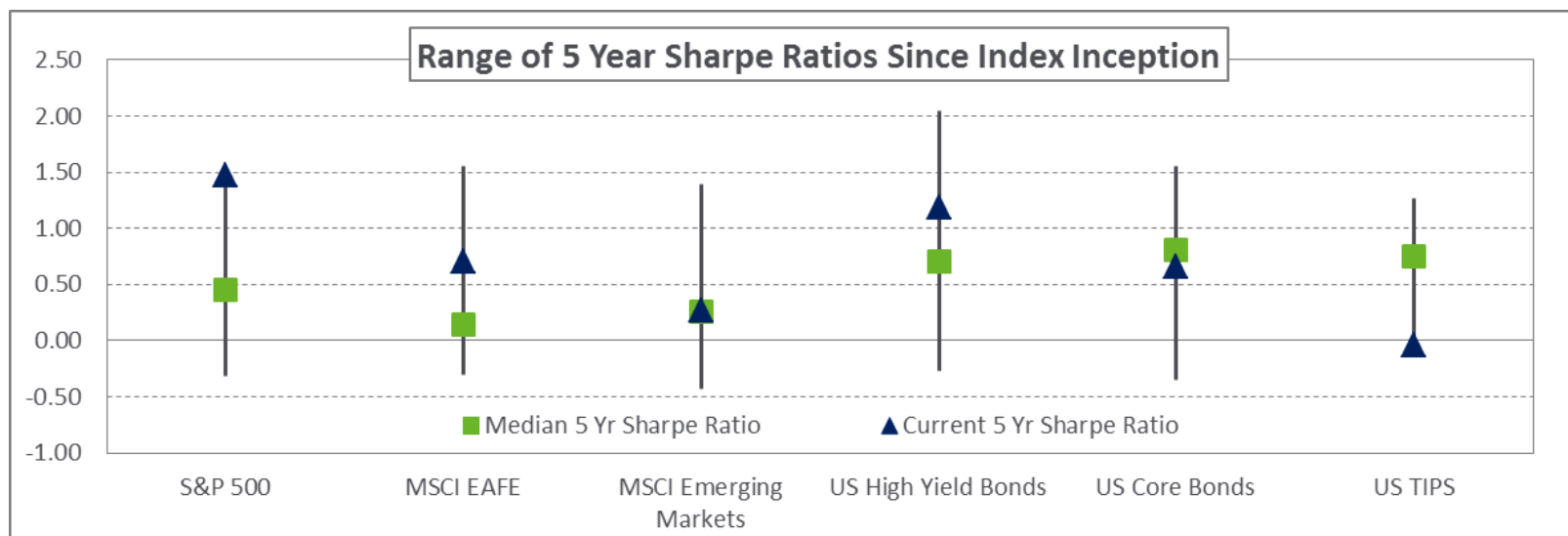
Growth conditions across the globe are on the upswing supported by easy financial conditions and an improved corporate earnings outlook

We encourage reducing exposure to assets that have outperformed expectations over a prolonged period such as US stocks and high yield

Tilt exposure to assets underperforming expectations in recent years, particularly emerging market equities, developed market equities, and US TIPS

Market stability must not elicit complacency, we encourage investors to increase exposure to strategies that mitigate market drawdowns

Look to rebalance "safe haven" fixed income exposure back to strategic targets



Index Inception: S&P 500 - 1926, MSCI EAFE - 1970, MSCI EM - 1988, US High Yield - 1983, US Core Bonds - 1976, US TIPS - 1997

Source: Ibbotson-Morningstar, eVestment, Sharpe Ratio range spans 5th to 95th percentile



KEY MARKET THEMES

Extended US Economic Cycle

Synchronized Economic Resurgence

Federal Reserve Gradualism

China Transitions

Globalization Backlash



KEY MARKET THEMES

Extended US Economic Cycle

Economic cycles do not die of old age

The US economy is in an extended expansionary cycle despite being eight years removed from the last recession

Financial health of US consumers and ongoing recovery of the housing market continue to drive economic growth

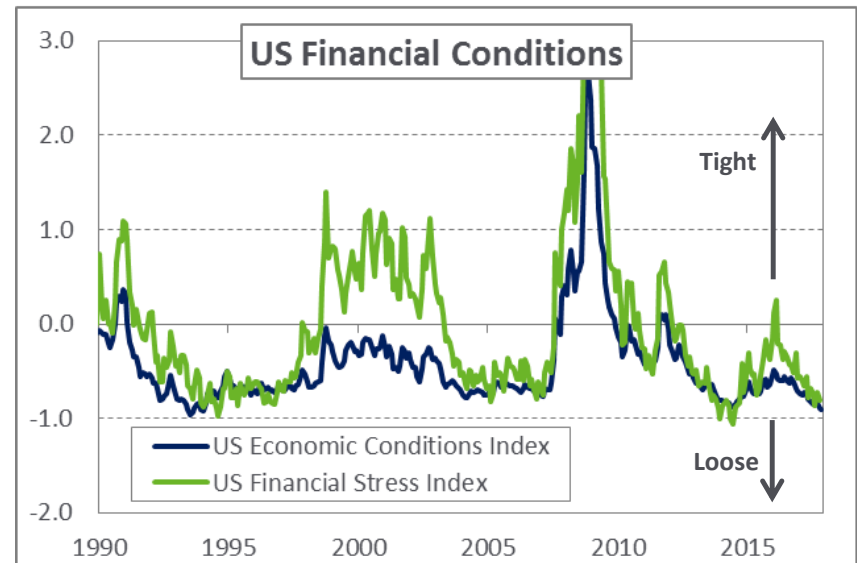
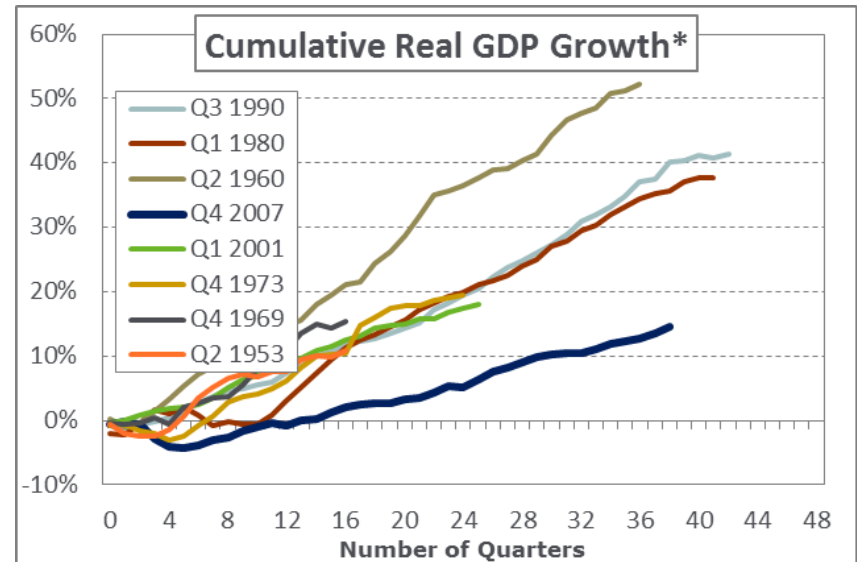
A prolonged US economic expansion can support a continued rally for US equities despite elevated valuation levels

US financial conditions remain loose and support steady economic gains

Low inflation provides a foundation for positive economic conditions and reinforces the Fed's gradual monetary policy approach

Moderating US dollar strength is another form of easy financial conditions, benefiting global trade flows and credit creation

Reversal in these easy conditions may be fueled by actions outside the US, such as a misstep by global central banks and/or increased volatility in the Chinese yuan



Source: (Top) Bloomberg, *Cumulative GDP growth from prior cycle peak
Source: (Bottom) Federal Reserve Bank of Chicago and Kansas City



KEY MARKET THEMES

Extended US Economic Cycle

Excess capacity remains in the system and provides fuel for the expansion

Labor market gains have been robust but slack remains as many have not returned to the workforce

Muted wage gains and low inflation metrics are reflective of the excess capacity remaining in the US economy

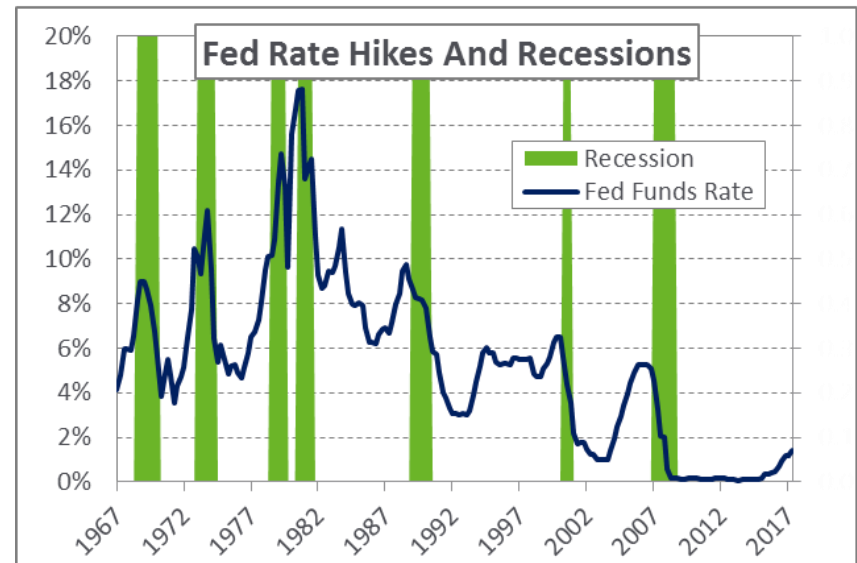
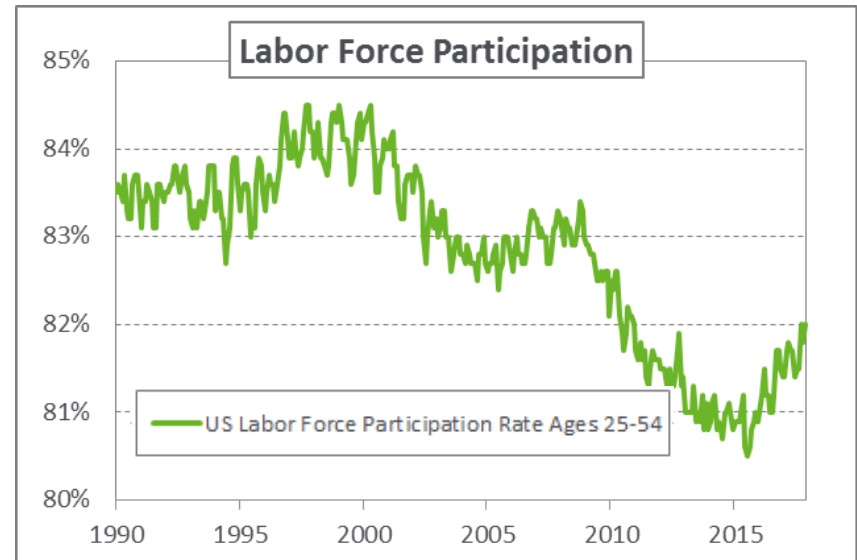
Tax cuts and fiscal stimulus can potentially remove spare economic capacity and be a catalyst for an uptick in inflation measures

US recession concerns are muted

An acceleration in inflation leading to a tightening of financial conditions has historically been a catalyst to end economic expansions

However, improved US household balance sheets have room to expand and support further consumer spending gains

Improving global economic conditions reinforce an expansion of the US economy as global growth factors synchronize



Source: (Top) Federal Reserve Bank of St. Louis
Source: (Bottom) Federal Reserve, NEPC



KEY MARKET THEMES

Synchronized Economic Resurgence

Global economic conditions are improving in a synchronized fashion

Coordinated global growth factors reinforce economic gains across the globe and are distinct from the extension of the US economic cycle

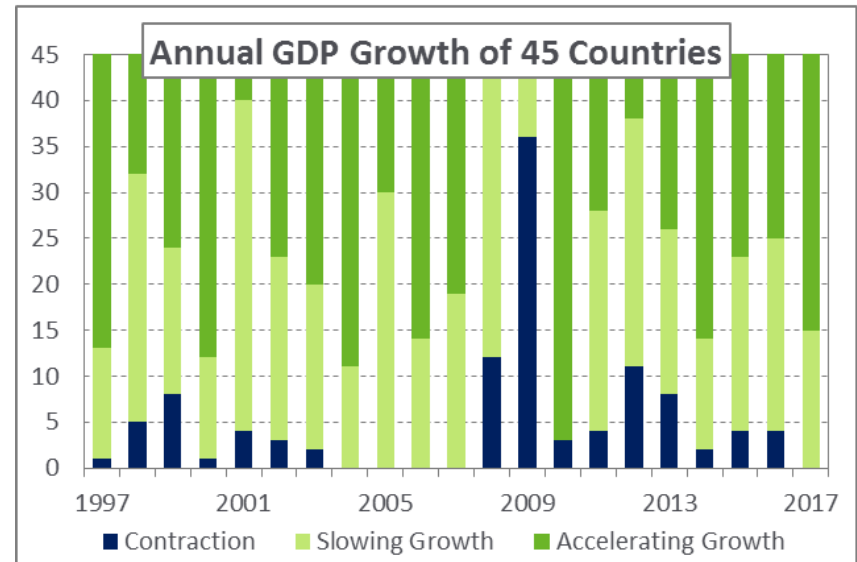
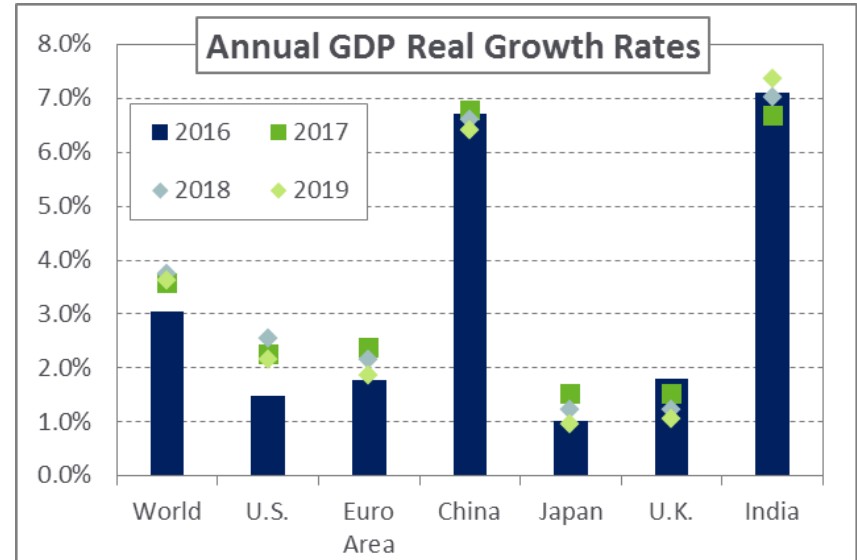
Non-US corporate revenues and equities are best positioned to benefit from a widespread boost in global economic conditions

Positive growth rates harmonized across the globe are relatively rare

Conditions are the result of Europe, Japan, and large parts of the emerging world transitioning out of economic malaise

Persistence of the theme over several years would provide a substantial benefit to equity markets globally – specifically in Europe and Japan

Historically, periods of synchronized growth have been derailed by higher inflation levels and central banks tightening policy



Source: (Top) OECD
Source: (Bottom) OECD



KEY MARKET THEMES

Synchronized Economic Resurgence

Erosion of excess economic capacity is a catalyst to boost economic gains

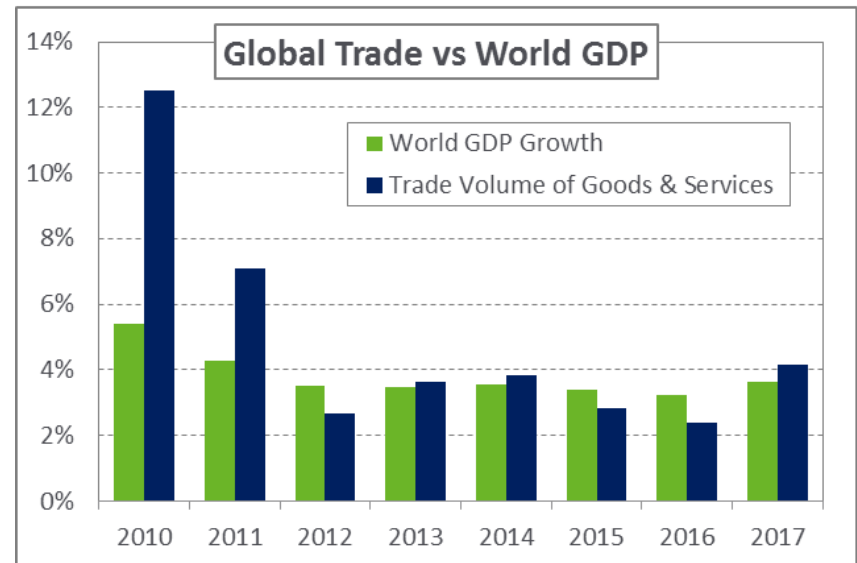
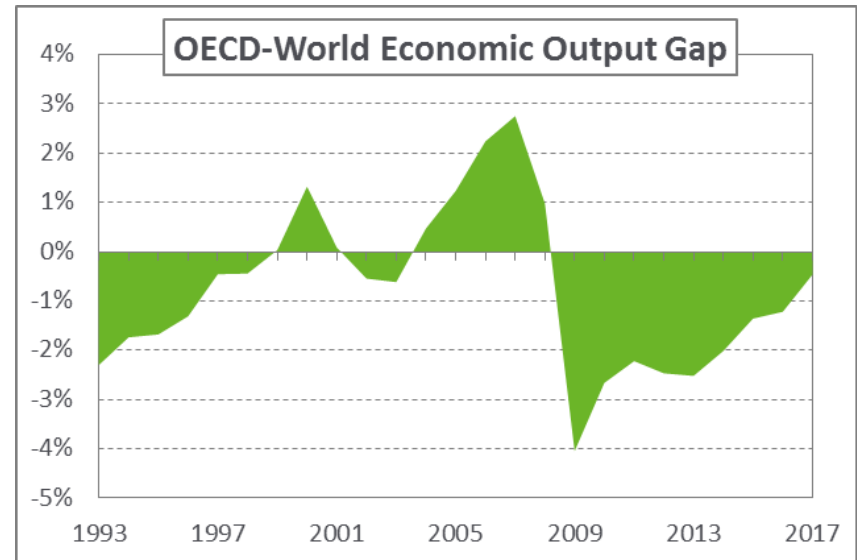
Despite recent labor market improvements, potential for labor reform in Europe and improved workforce participation in Japan offer multi-year benefits to economic growth

Material decline in emerging market inflation provides a cushion for real interest rates to fall and fuel an expansion of economic activity

Economic resurgence is delicate and can be disrupted by lingering global risk factors

US dollar strength, dislocation in China's credit expansion, and restrictive US trade policy pose the greatest threats

The foundation of synchronized economic resurgence is the continuation of positive trends associated with the other key market themes



Source: (Top) OECD
Source: (Bottom) IMF



KEY MARKET THEMES

Federal Reserve Gradualism

The Federal Reserve is expected to slowly increase interest rates

Expected path of Fed policy through 2020 matters more than timing of the next hike as the disconnect between market expectations and Fed signaling has grown

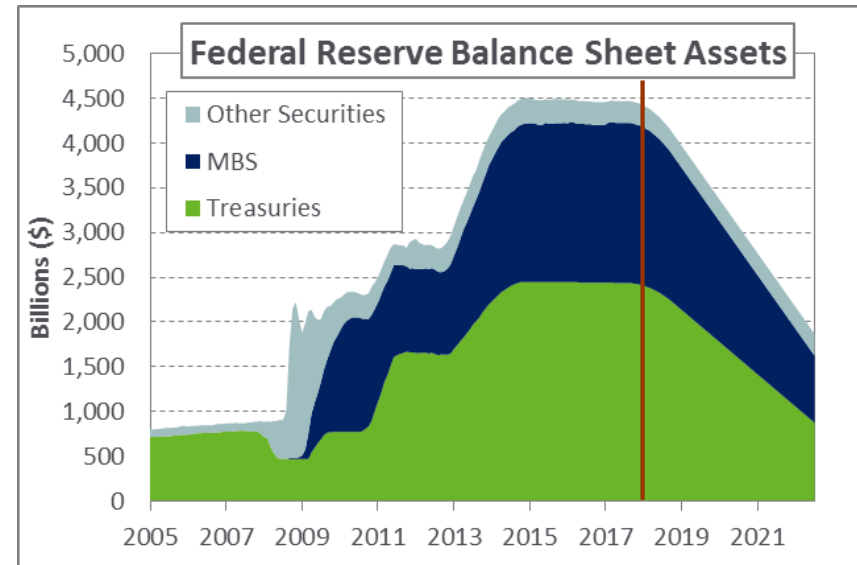
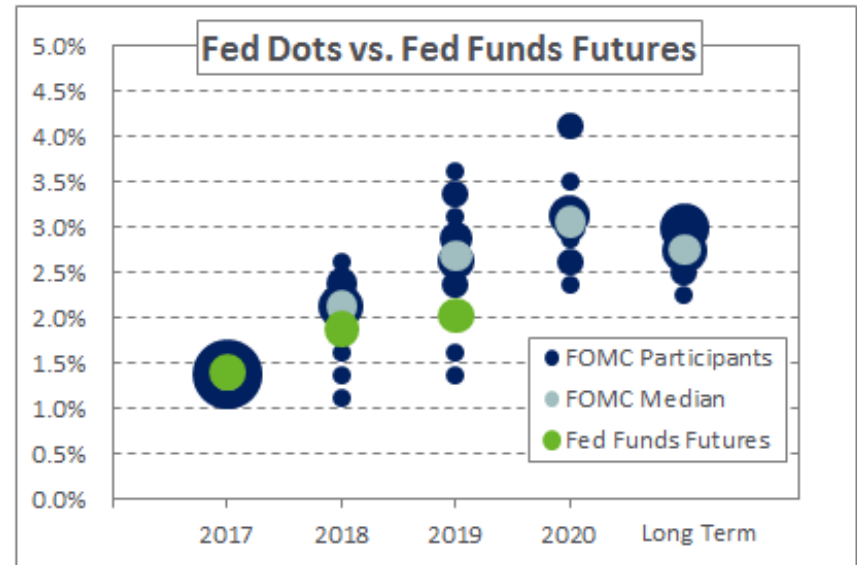
A relatively accommodative Fed is likely to continue, unless there is a dramatic acceleration in inflation

The Fed's balance sheet normalization is a low grade tightening of monetary policy but its impact is untested

Fed is expected to be careful and data dependent yet balance sheet disbursement into a strong economy will likely have tightening effects – in the same way balance sheet expansion had easing effects

The balance sheet will gradually shrink over time assuming conditions remain supportive

The gradual progression of balance sheet reduction combined with the accommodative policies of global central banks supports easy global financial conditions



Source: (Top) Bloomberg, NEPC
Source: (Bottom) Bloomberg, NEPC



KEY MARKET THEMES

Federal Reserve Gradualism

Gradualism is the policy of choice globally as the major central banks manage unprecedented initiatives

ECB's QE program is expanding but at a slower rate

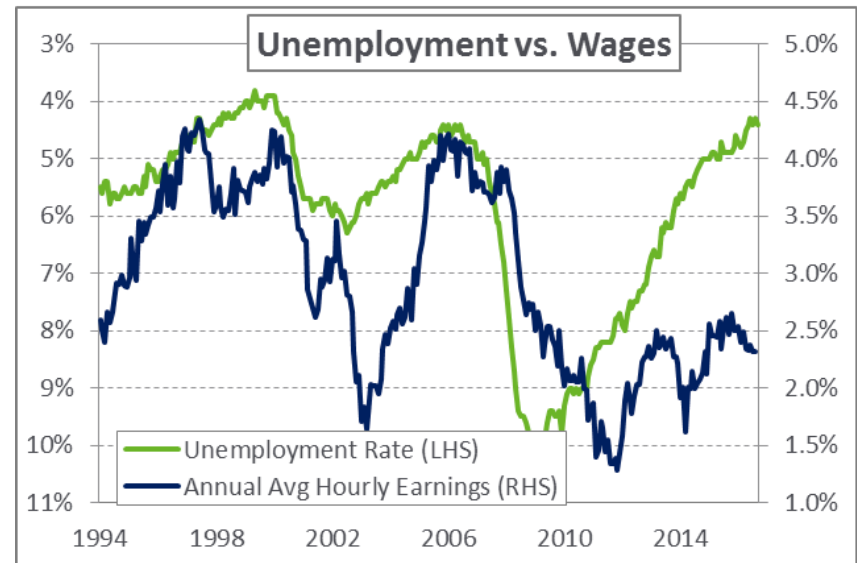
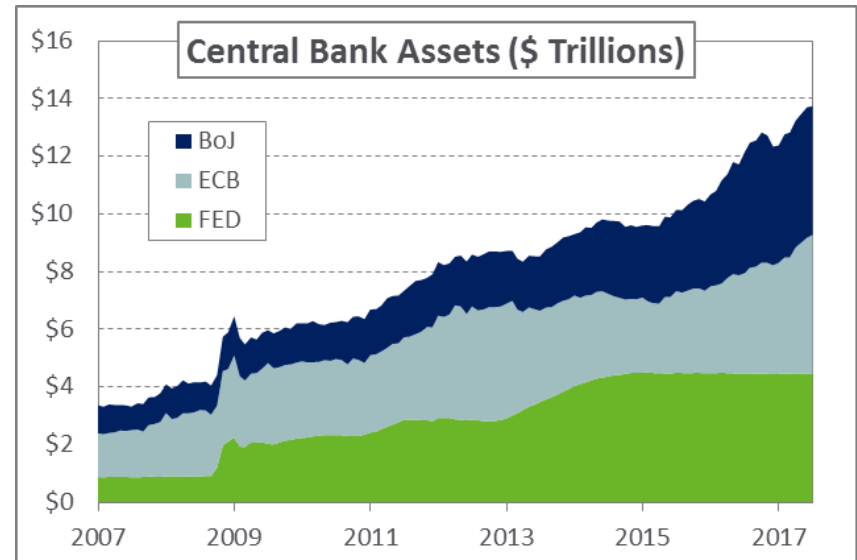
However, the reinvestment of balance sheet holdings is likely to continue for an extended period of time

Bank of Japan's QE yield-curve control program has rapidly slowed bond purchases but solidified steepness in the yield curve

Inflation expected to shift marginally higher in the coming years

Improvements in wage growth and aggregate economic activity support modest upticks in inflation but still within the Fed's tolerance bands to gradually raise rates

Fed has stated a willingness to let the economy "run hot" and accept some inflation to repair the deflationary effects of the past decade



Source: (Top) Bloomberg, NEPC
Source: (Bottom): Bloomberg, FRED



KEY MARKET THEMES

China Transitions

China is the global growth engine but faces fundamental transitions

China's economic transition is pivoting from production and investment focused to a service and consumption based economy

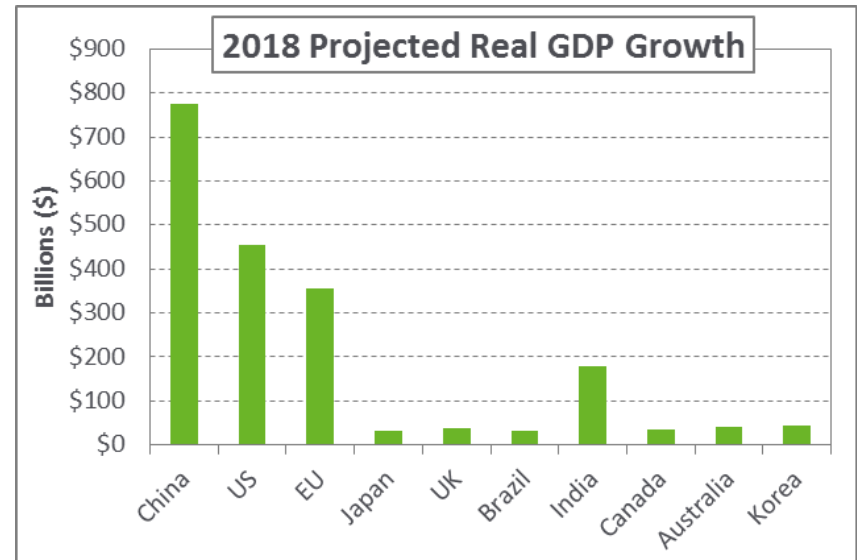
Fixed investment is required to sustain the production based economy and support employment as the rural population moves to urban centers

Any disruption to these transitions will have global repercussions due to China's role in the global economy

China must manage competing social goals in attempting to sustain growth

Engineering an orderly transition to a consumer-led economy requires supporting employment outside the major cities and improving quality of life metrics such as air quality in the urban centers

Future growth in a services based economy requires advancement in productivity, technology, and a more skilled labor force



Source: (Top) Bloomberg

Source: (Bottom) Bloomberg, *Includes estimate for Nov/Dec 2017



KEY MARKET THEMES

Globalization Backlash

Uneven economic growth and wage gains have fueled political discontent in the developed world

Election results in France have assuaged fears of political gridlock in the EU

Italian election in first half of 2018 is another potential flashpoint on globalization

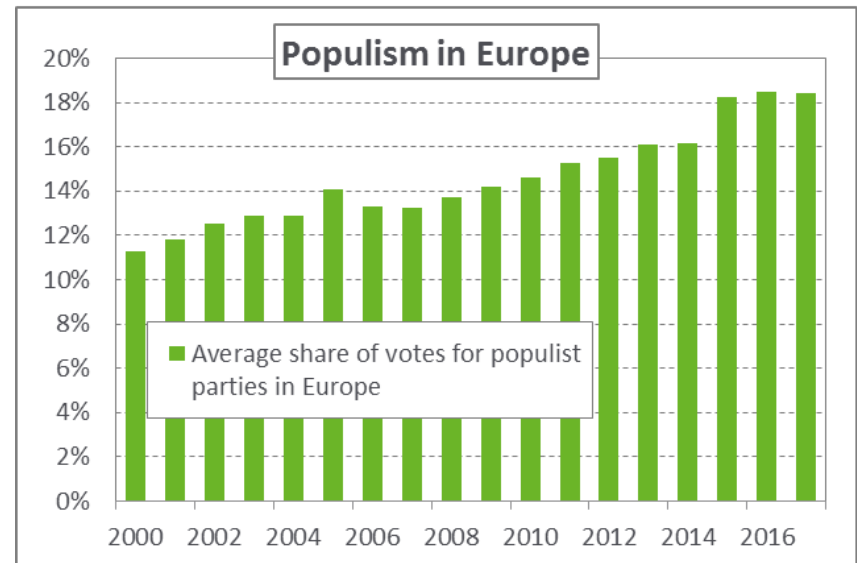
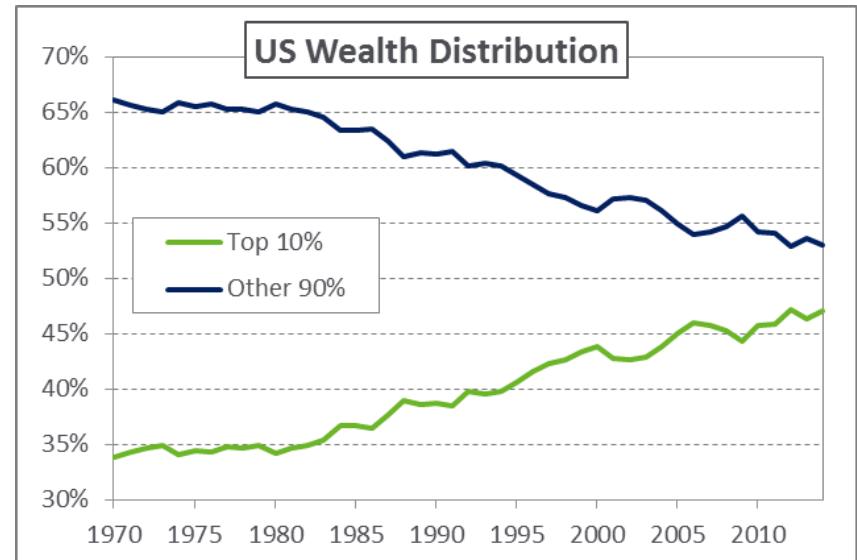
Anti-establishment political bias is likely a long term trend and potentially leads to higher levels of currency volatility over time

For many nations, a turn inward is associated with globalization fatigue

Often fuels greater expression of nationalism and increased geopolitical risks as multilateral relationships are reassessed

Populist movements destabilize the political order and shifts away from political orthodoxy heighten tail risks

However, equity markets often overreact to geopolitical concerns and sell-offs can be a buying opportunity for investors



Source: (Top) World Wealth & Income Database
Source: (Bottom) World Bank



KEY MARKET THEMES

Globalization Backlash

Major shifts in US trade policy did not materialize in 2017

However, a more aggressive protectionist policy would represent a material risk to global markets and the world economy

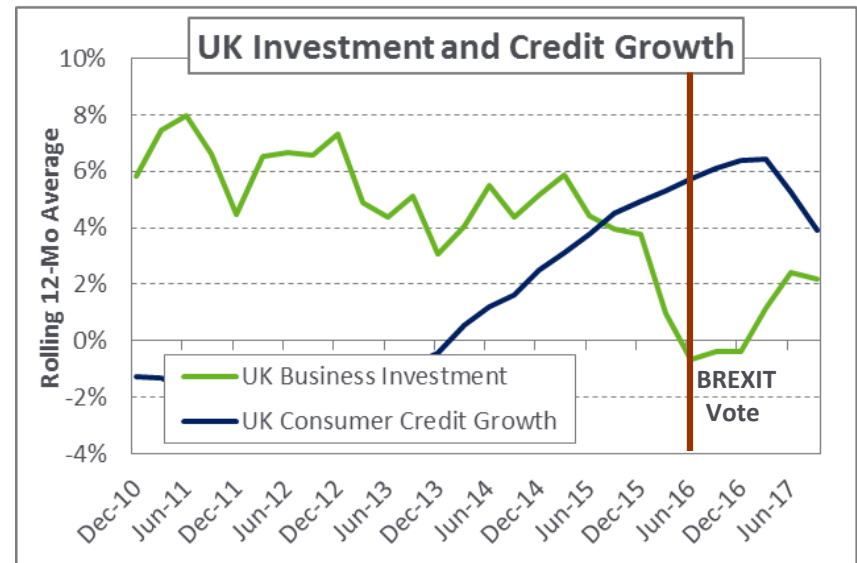
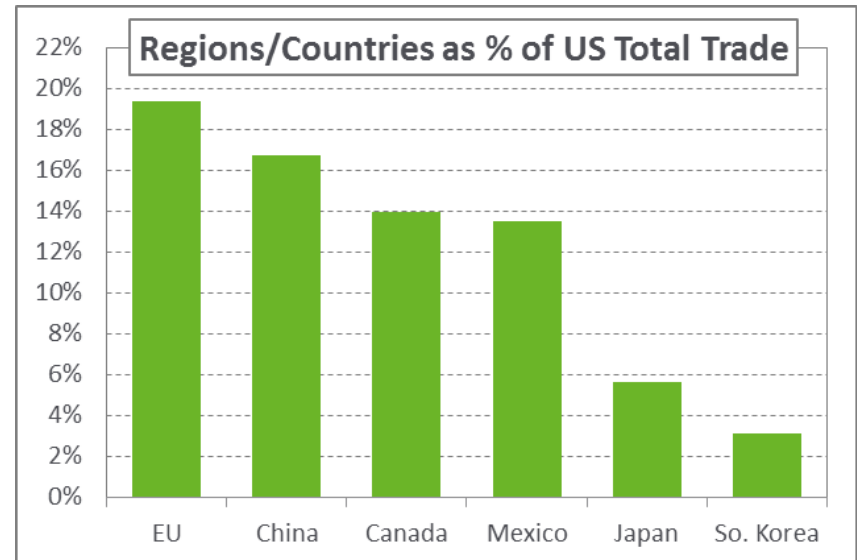
Markets have taken to interpreting the US administration's rhetoric with a grain of salt but ongoing NAFTA negotiations are a concern

The UK serves as a live case study for the effects of globalization backlash

While it is early in the process, economic metrics across the country have turned lower in the 18 months since UK voted to leave the European Union

Expected disruption to financial regulations, customs controls, and business confidence in the UK are proving to be a cautionary tale for a turn away from globalization

However, the economic unease of voters remain and popularity of anti-establishment political parties poses a risk to the global economic order



Source: (Top) Federal Reserve Bank of St. Louis

Source: (Bottom) Bloomberg



INTRODUCTION TO ASSET CLASS ASSUMPTIONS

NEPC, LLC

BUILDING BLOCKS METHODOLOGY

Forward-looking asset class models incorporate current and forecasted market and economic data to inform expected returns

Quantitative inputs combined with qualitative factors and investor sentiment (capital flows, etc.) drive the 5 to 7 year return outlook

Components are combined to capture core drivers of return across asset classes – forming the foundation of our building blocks framework

Building blocks will vary across equity, credit, and real assets



INFLATION OVERVIEW

Inflation is an integral component of our asset allocation assumptions

Represents an essential building block for developing asset class returns

Inflation building blocks are model driven and informed by multiple sources for both the US and global asset classes

Includes forecasts from international organizations (e.g. IMF), local consumer and producer price indices, break-even inflation expectations, and global interest rate curves

US inflation is based upon the TIPS breakeven inflation curve adjusted for expectations of economic activity, employment, and capacity levels

Global inflation expectations are informed by consensus forecasts across countries along with implied inputs from global bond curves

The 30 year global inflation forecast assumes purchase power parity holds across the globe and country specific inflation levels converge to a terminal value

Region	5-7 Year Inflation Assumption	30-Year Inflation Assumption
United States	2.50%	2.75%
Global	3.00%	3.25%



5-7 YEAR RETURN ASSUMPTIONS

	Asset Class	5-7 Year Return	Change 2018-2017	Volatility
	Cash	2.00%	+.25%	1.00%
	US Inflation	2.50%	-	-
Equity	Large Cap Equities	5.25%	-.50%	17.50%
	International Equities (Unhedged)	7.50%	+.25%	21.00%
	Emerging International Equities	9.00%	-.50%	28.00%
	Private Equity	8.00%	-.25%	23.00%
Rates/Credit	Treasuries	2.25%	+.25%	5.50%
	Core Bonds	2.75%	+.10%	5.99%
	High Yield Bonds	3.75%	-1.00%	13.00%
	Private Debt	6.50%	-.75%	13.00%
Real Assets	Core Real Estate	5.75%	-.25%	13.00%
	Non-Core Real Estate	7.00%	-	17.00%
	Private Real Assets: Energy/Metals	8.00%	-.25%	21.00%
	Private Real Assets: Infrastructure/Land	6.00%	-	14.00%
Multi-Asset	US 60/40*	4.54%	-.24%	10.99%
	Global 60/40*	4.91%	-.13%	11.78%

*Each calculated as a blend of other asset classes



2018 5-7 YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	2018	2017	2018-2017
Cash	2.00%	1.75%	+0.25%
Treasuries	2.25%	2.00%	+0.25%
IG Corp Credit	3.50%	3.75%	-0.25%
MBS	2.50%	2.25%	+0.25%
Core Bonds*	2.75%	2.65%	+0.10%
TIPS	3.25%	3.00%	+0.25%
High-Yield Bonds	3.75%	4.75%	-1.00%
Bank Loans	4.50%	5.25%	-0.75%
Non-US Bonds (Unhedged)	0.50%	1.00%	-0.50%
Non-US Bonds (Hedged)	0.73%	1.09%	-0.36%
EMD External	4.25%	4.75%	-0.50%
EMD Local Currency	6.00%	6.75%	-0.75%
Large Cap Equities	5.25%	5.75%	-0.50%
Small/Mid Cap Equities	5.75%	6.00%	-0.25%
Int'l Equities (Unhedged)	7.50%	7.25%	+0.25%
Int'l Equities (Hedged)	7.82%	7.57%	+0.25%
Emerging Int'l Equities	9.00%	9.50%	-0.50%
Private Equity	8.00%	8.25%	-0.25%
Private Debt	6.50%	7.25%	-0.75%
Core Real Estate	5.75%	6.00%	-0.25%
Non-Core Real Estate	7.00%	N/A	N/A
Private Real Assets: Energy/Metals	8.00%	8.25%	-0.25%
Private Real Assets: Infrastructure/Land	6.00%	6.00%	-

* Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).

** Hedge Funds is a calculated blend of 40% Equity, 40% Credit, 20% Macro-related strategies.



2018 30 YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	2018	2017	2018-2017
Cash	2.75%	3.00%	-0.25%
Treasuries	3.25%	3.50%	-0.25%
IG Corp Credit	4.75%	5.00%	-0.25%
MBS	3.25%	3.50%	-0.25%
Core Bonds*	3.75%	4.00%	-0.25%
TIPS	3.75%	3.75%	-
High-Yield Bonds	5.50%	5.75%	-0.25%
Bank Loans	5.50%	6.00%	-0.50%
Non-US Bonds (Unhedged)	2.50%	2.75%	-0.25%
Non-US Bonds (Hedged)	2.77%	2.87%	-0.10%
EMD External	5.00%	5.75%	-0.75%
EMD Local Currency	6.50%	6.50%	-
Large Cap Equities	7.50%	7.50%	-
Small/Mid Cap Equities	7.75%	7.75%	-
Int'l Equities (Unhedged)	7.75%	7.75%	-
Int'l Equities (Hedged)	8.14%	8.14%	-
Emerging Int'l Equities	9.25%	9.50%	-0.25%
Private Equity	9.50%	9.50%	-
Private Debt	7.50%	8.00%	-0.50%
Core Real Estate	6.50%	6.50%	-
Non-Core Real Estate	7.50%	N/A	N/A
Private Real Assets: Energy/Metals	7.75%	7.75%	-
Private Real Assets: Infrastructure/Land	6.25%	6.00%	+0.25%

* Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).

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2018 VOLATILITY FORECASTS

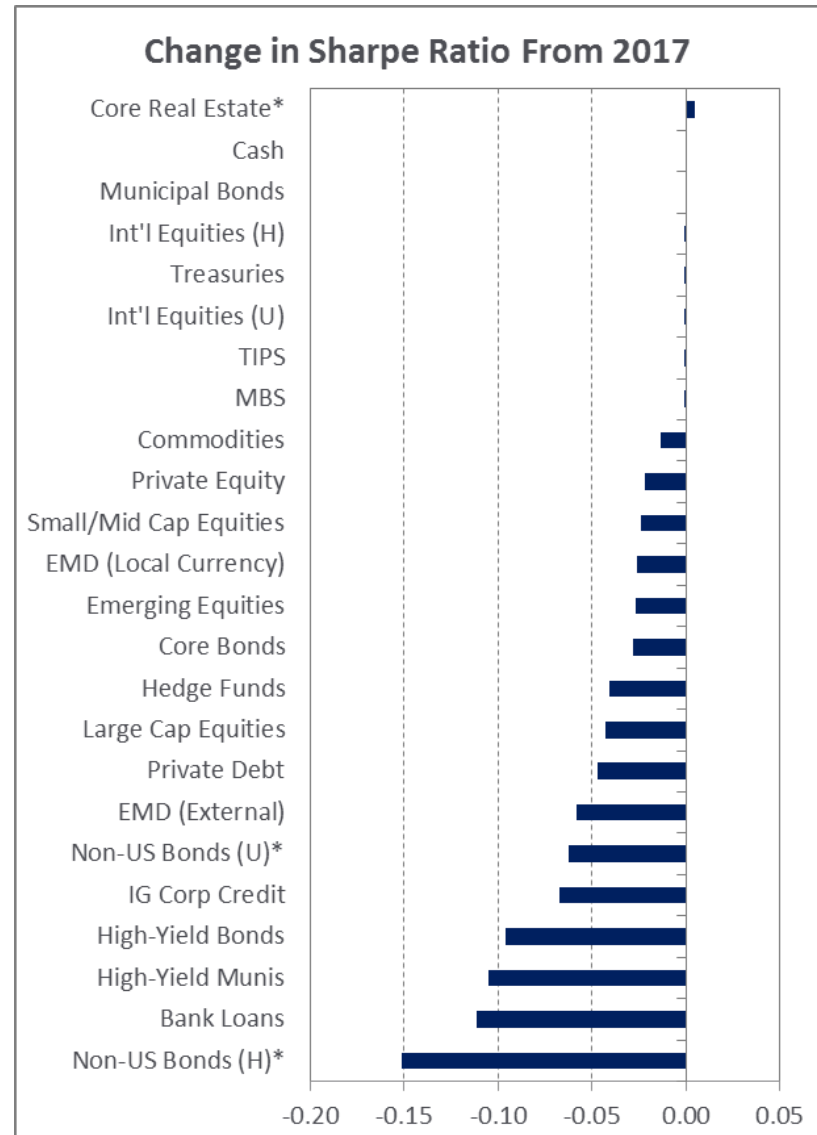
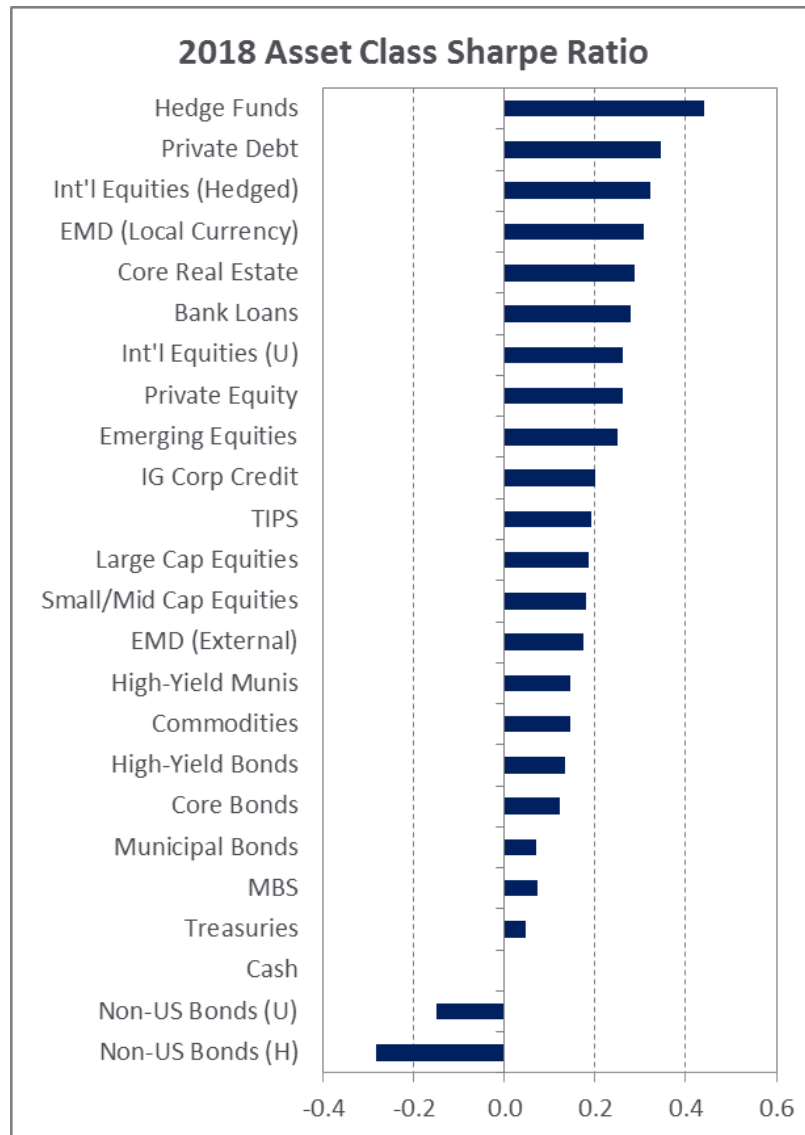
Volatility		
Asset Class	Capital Market Volatility	Accounting Volatility
Cash	1.00%	1.00%
Treasuries	5.50%	5.50%
IG Corp Credit	7.50%	7.50%
MBS	7.00%	6.50%
Core Bonds*	5.99%	5.85%
TIPS	6.50%	6.00%
High-Yield Bonds	13.00%	9.00%
Bank Loans	9.00%	5.50%
Non-US Bonds (Unhedged)	10.00%	10.00%
Non-US Bonds (Hedged)	4.50%	3.50%
EMD External	13.00%	13.50%
EMD Local Currency	13.00%	13.00%
Large Cap Equities	17.50%	16.00%
Small/Mid Cap Equities	21.00%	20.50%
Int'l Equities (Unhedged)	21.00%	18.50%
Int'l Equities (Hedged)	18.00%	15.50%
Emerging Int'l Equities	28.00%	25.00%
Private Equity	23.00%	12.50%
Private Debt	13.00%	8.50%
Core Real Estate	13.00%	6.00%
Non-Core Real Estate	17.00%	
Private Real Assets: Energy/Metals	21.00%	
Private Real Assets: Infrastructure/Land	12.00%	

* Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).

** Hedge Funds is a calculated blend of 40% Equity, 40% Credit, 20% Macro-related strategies.



RELATIVE ASSET CLASS ATTRACTIVENESS



Source: NEPC

*Impacted by methodology changes for Core Real Estate (reduction in volatility) and Non-US Bonds (formerly was Global Bonds)



2018 CORRELATIONS

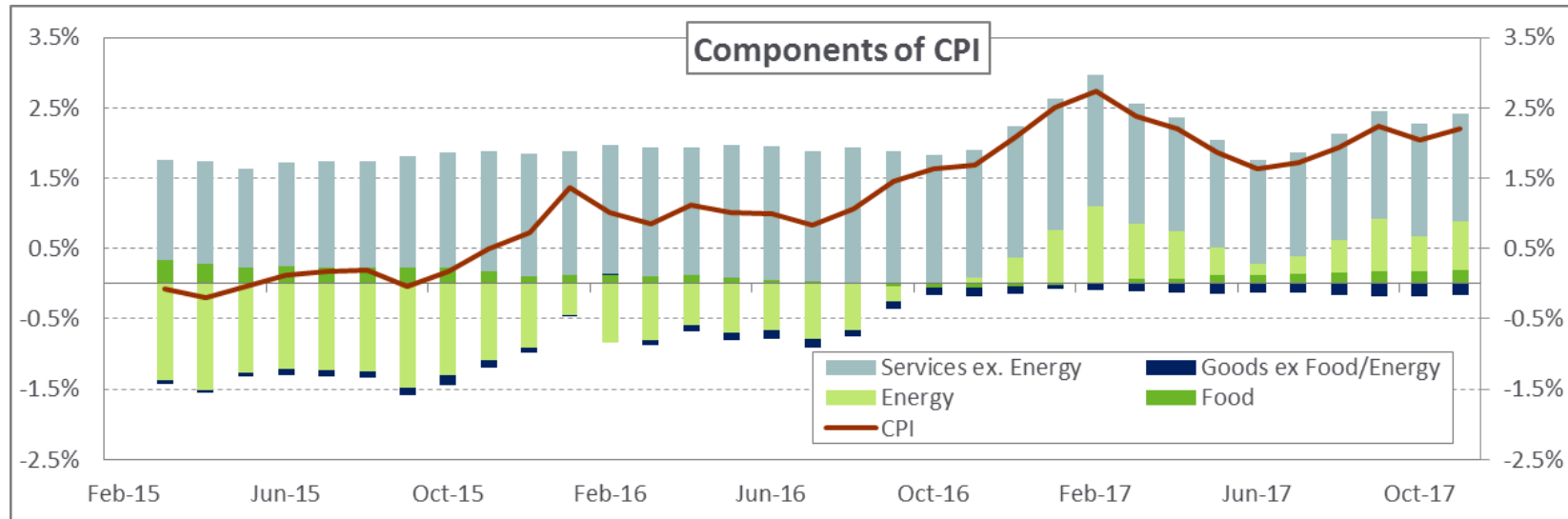
Asset Class	Cash	US Lev	Tsy	IG	MBS	TIPS	HY	Non-US Bonds (U)	Non-US Bonds (H)	EMD (Ext)	EMD (Loc)	Large Cap	SMID	Int'l (U)	Int'l (H)	EME	PE	PD	PRA - Egy/Met	PRA: Infra/Land	Core RE	Comm odities
Cash	1.00	0.90	0.20	0.10	0.25	0.35	-0.05	0.10	0.15	0.05	0.05	-0.10	-0.15	-0.10	-0.10	-0.10	-0.20	0.00	-0.05	0.15	0.10	0.10
US Lev	0.90	1.00	0.20	0.10	0.25	0.35	-0.05	0.10	0.15	0.05	0.05	-0.10	-0.15	-0.10	-0.10	-0.10	-0.25	0.00	-0.05	0.15	0.10	0.10
Treasuries	0.20	0.20	1.00	0.65	0.85	0.65	0.10	0.45	0.70	0.20	0.10	-0.10	-0.15	-0.10	-0.10	-0.20	-0.15	-0.35	-0.20	-0.05	0.10	-0.10
IG	0.10	0.10	0.65	1.00	0.75	0.65	0.55	0.45	0.60	0.60	0.50	0.25	0.25	0.30	0.30	0.35	0.30	0.15	0.20	0.10	0.15	0.15
MBS	0.25	0.25	0.85	0.75	1.00	0.65	0.30	0.45	0.60	0.35	0.25	0.10	0.10	0.05	0.05	-0.10	0.10	-0.15	-0.05	-0.05	0.05	0.00
TIPS	0.35	0.35	0.65	0.65	0.65	1.00	0.20	0.40	0.65	0.30	0.25	-0.10	-0.10	-0.05	-0.05	-0.10	-0.10	-0.10	-0.05	0.05	0.10	0.30
HY	-0.05	-0.05	0.10	0.55	0.30	0.20	1.00	0.10	0.20	0.70	0.55	0.65	0.70	0.65	0.65	0.70	0.60	0.65	0.50	0.40	0.35	0.20
Non-US Bonds (U)	0.10	0.10	0.45	0.45	0.45	0.40	0.10	1.00	0.40	0.30	0.35	0.00	-0.05	0.35	0.05	0.25	-0.15	-0.10	-0.10	0.05	0.15	0.10
Non-US Bonds (H)	0.15	0.15	0.70	0.60	0.60	0.65	0.20	0.40	1.00	0.30	0.20	-0.10	-0.15	-0.10	-0.10	-0.20	-0.20	-0.10	-0.15	0.00	0.05	-0.10
EMD (Ext)	0.05	0.05	0.20	0.60	0.35	0.30	0.70	0.30	0.30	1.00	0.75	0.55	0.55	0.60	0.60	0.70	0.35	0.50	0.40	0.35	0.25	0.35
EMD (Local)	0.05	0.05	0.10	0.50	0.25	0.25	0.55	0.35	0.20	0.75	1.00	0.60	0.50	0.70	0.65	0.80	0.40	0.60	0.40	0.40	0.40	0.50
Large Cap	-0.10	-0.10	-0.10	0.25	0.10	-0.10	0.65	0.00	-0.10	0.55	0.60	1.00	0.90	0.70	0.75	0.65	0.70	0.60	0.65	0.50	0.40	0.30
SMID Cap	-0.15	-0.15	-0.15	0.25	0.10	-0.10	0.70	-0.05	-0.15	0.55	0.50	0.90	1.00	0.65	0.70	0.65	0.75	0.65	0.70	0.50	0.40	0.30
Int'l Eqty (U)	-0.10	-0.10	-0.10	0.30	0.05	-0.05	0.65	0.35	-0.10	0.60	0.70	0.70	0.65	1.00	0.85	0.70	0.60	0.75	0.55	0.45	0.35	0.40
Int'l Eqty (H)	-0.10	-0.10	-0.10	0.30	0.05	-0.05	0.65	0.05	-0.10	0.60	0.65	0.75	0.70	0.85	1.00	0.70	0.65	0.75	0.60	0.45	0.40	0.30
EM	-0.10	-0.10	-0.20	0.35	-0.10	-0.10	0.70	0.25	-0.20	0.70	0.80	0.65	0.65	0.70	0.70	1.00	0.45	0.80	0.50	0.40	0.30	0.55
PE	-0.20	-0.25	-0.15	0.30	0.10	-0.10	0.60	-0.15	-0.20	0.35	0.40	0.70	0.75	0.60	0.65	0.45	1.00	0.65	0.85	0.60	0.50	0.25
PD	0.00	0.00	-0.35	0.15	-0.15	-0.10	0.65	-0.10	-0.10	0.50	0.60	0.60	0.65	0.75	0.75	0.80	0.65	1.00	0.65	0.50	0.40	0.30
PRA - Egy/Met	-0.05	-0.05	-0.20	0.20	-0.05	-0.05	0.50	-0.10	-0.15	0.40	0.40	0.65	0.70	0.55	0.60	0.50	0.85	0.65	1.00	0.75	0.45	0.35
PRA - Infra/Land	0.15	0.15	-0.05	0.10	-0.05	0.05	0.40	0.05	0.00	0.35	0.40	0.50	0.50	0.45	0.45	0.40	0.60	0.50	0.75	1.00	0.70	0.40
Core RE	0.10	0.10	0.10	0.15	0.05	0.10	0.35	0.15	0.05	0.25	0.40	0.40	0.40	0.35	0.40	0.30	0.50	0.40	0.45	0.70	1.00	0.30
Commodities	0.10	0.10	-0.10	0.15	0.00	0.30	0.20	0.10	-0.10	0.35	0.50	0.30	0.30	0.40	0.30	0.55	0.25	0.30	0.35	0.40	0.30	1.00



MACRO ASSUMPTIONS

NEPC, LLC

US INFLATION



Source: Bloomberg, NEPC

Low inflation continued throughout 2017 despite strong economic growth, tightening labor market, and early signs of wage gains

These metrics were thought to help inflation accelerate, yet the Fed’s 2% inflation target has been a difficult target for the US economy to maintain

A seemingly transitory drop in certain CPI elements, such as healthcare costs and vehicles, have minimized price pressures in 2017 even as the impact from energy prices has turned positive

The Fed’s preferred inflation measure, the personal consumption expenditures (PCE), remains below their 2% target

However, other more inclusive indicators such as the NY Fed Underlying Inflation Gauge, point to an increase in inflation in the coming years, but still below the long-term average



GLOBAL INFLATION

In most developed economies, core inflation has failed to reach or exceed central bank targets despite improved domestic demand and labor markets

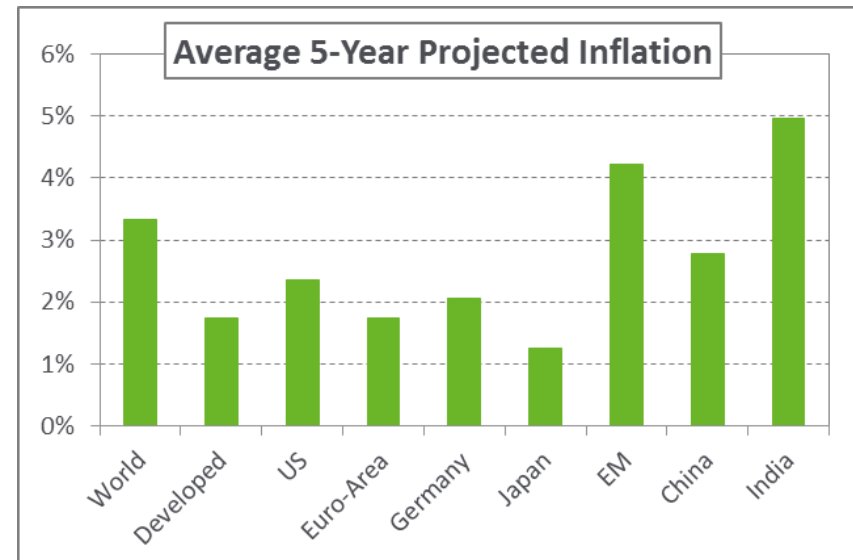
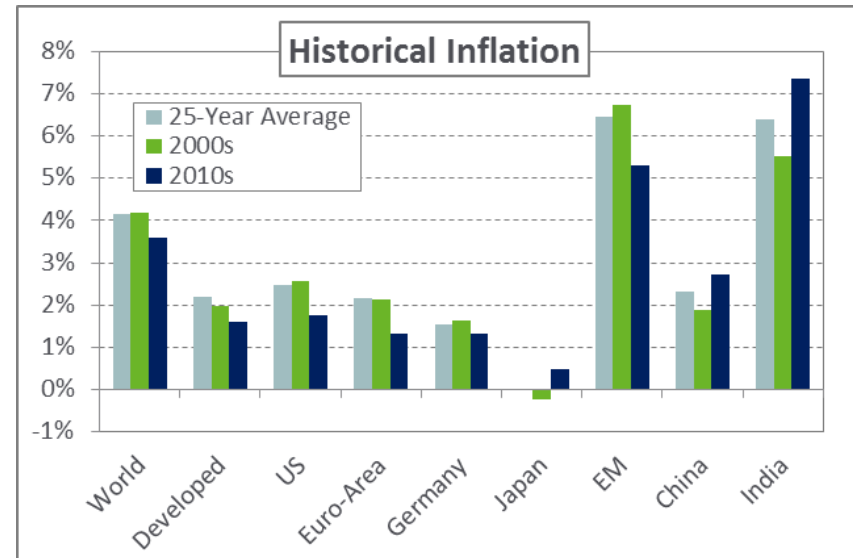
Ultra accommodative monetary policy remains in place for Europe and Japan to fuel higher levels of inflation

The UK is an exception to this trend as significant depreciation of the pound has led to higher consumer prices

Emerging market inflation has broadly declined over the last 24 months

This is in part due to the large fiscal correction and prudent monetary policy actions that followed the currency declines of prior years

Core inflation particularly in Russia and Brazil have declined significantly as the effect of high real interest rates weakens inflationary trends



Source: (Top) IMF, NEPC
Source: (Bottom) IMF, NEPC



US CASH EXPECTATIONS

Cash is the basic cornerstone of all asset class forecasts

The assumption flows through as a direct building block component or as a relative value adjustment (cash + risk premia)

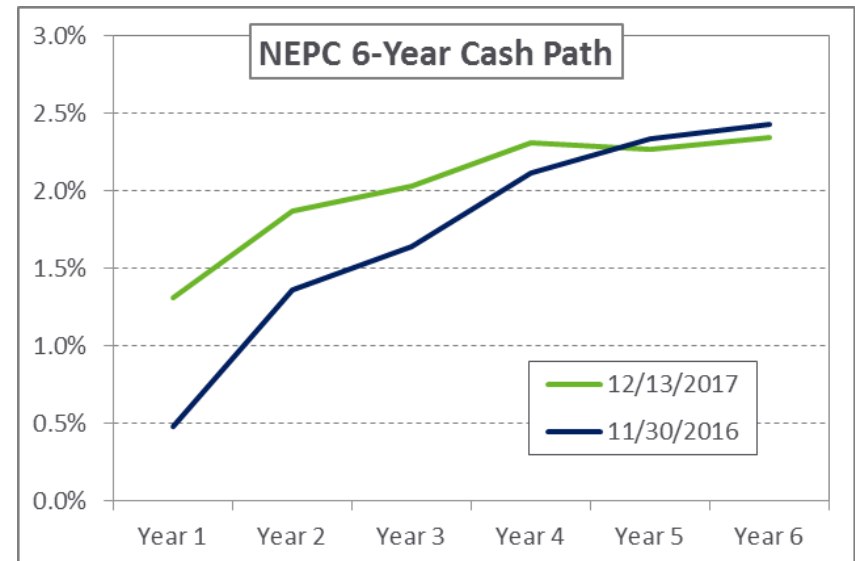
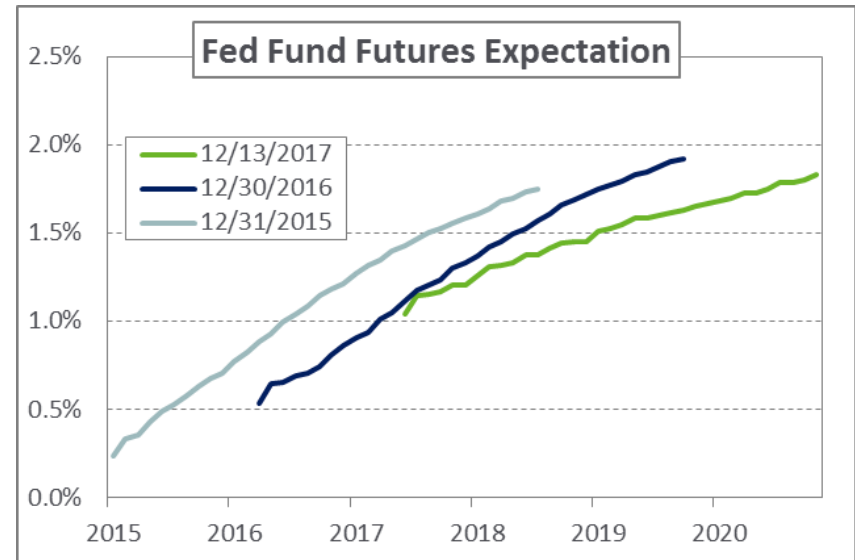
The longer-term cash assumption is a result of the inflation assumption in conjunction with our forecasted real interest rate path

After three Fed rate hikes in 2017, expectations for increased short term interest rates project higher still

A progressively flatter yield curve has formed as longer-term rate expectations remain muted

Market prices reflect only two rate hikes in 2018, despite FOMC expectations of three

A key risk to our overall investment outlook is the ending of Fed gradualism and rate increases beyond market expectations



Source: (Top) Bloomberg

Source: (Bottom) Bloomberg, NEPC
Charts as of 12/13/2017



US INTEREST RATE EXPECTATIONS

Real yields are marginally higher relative to last year

Continued strength in economic data and expectation of future Fed rate hikes have improved the outlook for real yields

While higher, real rates remain below long-term averages, reinforcing the subdued outlook for fixed income

Long-term expectations for real yields remain positive but low in the US

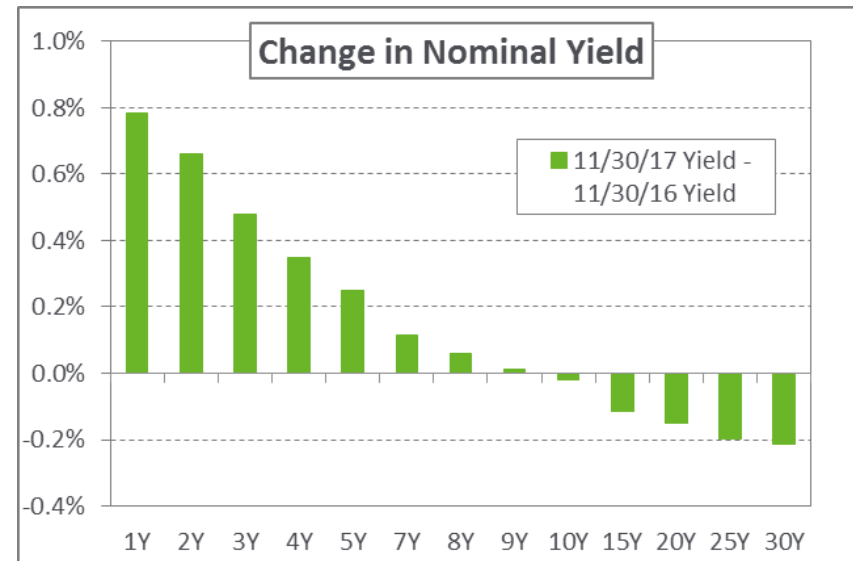
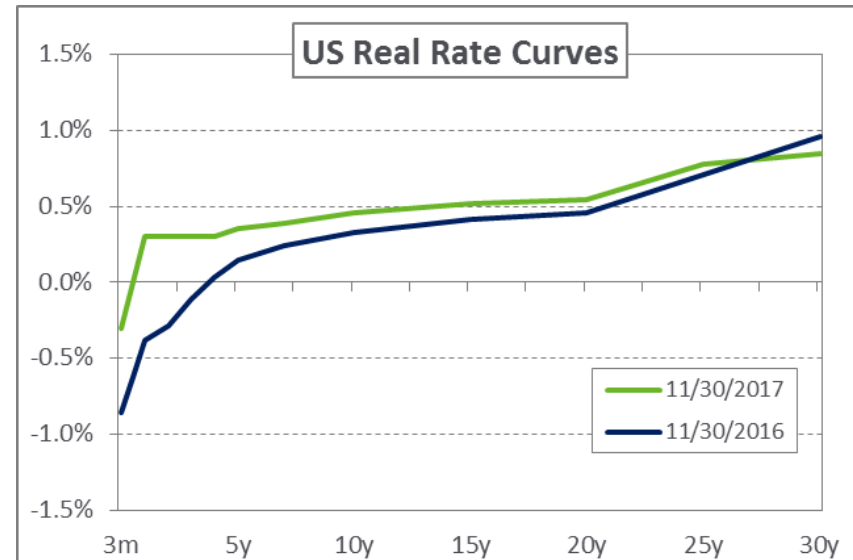
Low real rates depress the return outlook for risk assets over the long-term

Interest rate increases have been slower than what the market has discounted

Additional uncertainty surrounding the path of rates is possible in 2018

Potential disruption with the confirmation of new Fed Chairman Jerome Powell

Tax cuts could push interest rates higher due to the larger federal deficits and debt issuance needs



Source: (Top) Bloomberg, NEPC
Source: (Bottom) Bloomberg



GLOBAL INTEREST RATE EXPECTATIONS

Government bond yields remain low and negative in much of the developed world

European sovereign yields have declined relative to Germany as political and economic risk declines

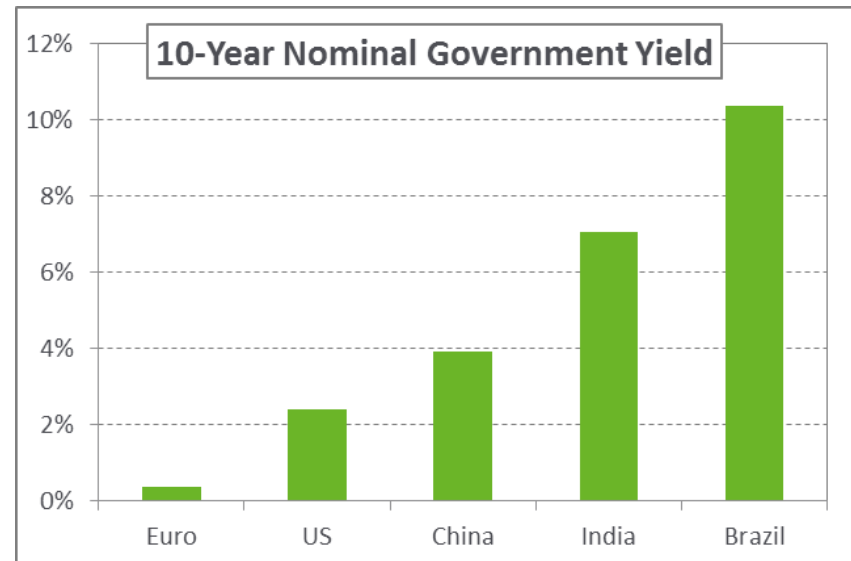
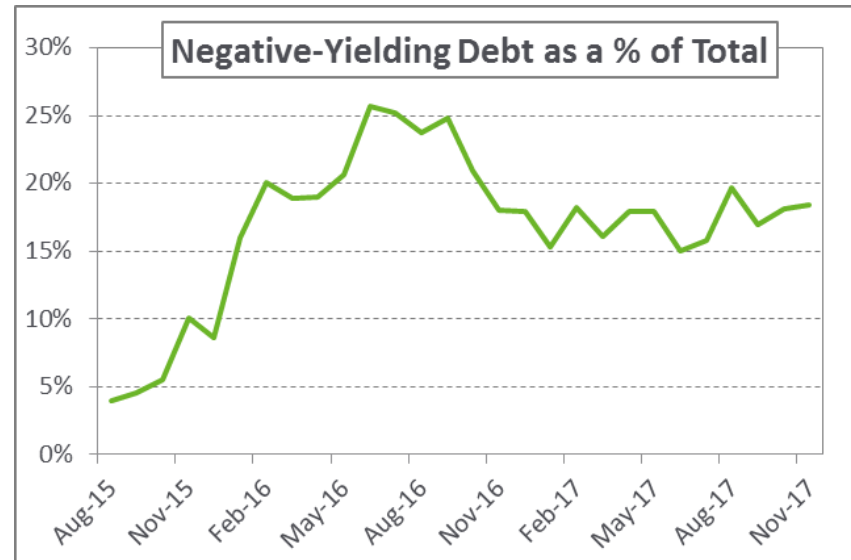
Spain and other periphery nations have showed positive economic momentum

France’s election of Emmanuel Macron was seen as a stabilizing event for the country and the EU as a whole

Emerging market local interest rates are attractively priced as real yields remain elevated

Emerging market yields continue to retain a healthy premia over developed world rates

Additionally, positive real rates provide a larger cushion for EM central banks to cut interest rates and ease monetary conditions



Source: (Top) Bloomberg
Source: (Bottom) Bloomberg



RATES & CREDIT ASSUMPTIONS

NEPC, LLC

RATES & CREDIT: ASSUMPTIONS

Rate & Credit Building Blocks	
Illiquidity Premium	The additional return expected for investments carrying liquidity risk
Government Rates Price Change	The valuation change resulting from a change in the current yield curve to forecasted rates
Spread Price Change	The valuation change resulting from a change in credit spreads over the duration of the investment and highly sensitive to economic cycles
Credit Deterioration	The average loss for credit securities associated with an expected default cycle and recovery rates
Credit Spread	Additional yield premium provided by securities with credit risk
Government Rates	The yield attributed to sovereign bonds that do not have credit risk associated with their valuation

Asset Class	5-7 Year Return	Change 2018-2017
Treasuries	2.25%	+0.25%
Investment-Grade Corporate Credit	3.50%	-0.25%
Municipal Bonds	2.50%	+0.25%
TIPS	3.25%	+0.25%
High-Yield Bonds	3.75%	-1.00%
High-Yield Municipal Bonds	3.75%	-0.50%
Bank Loans	4.50%	-0.75%
Non-US Bonds (Unhedged)	0.50%	-0.50%
EMD (External)	4.25%	-0.50%
EMD (Local Currency)	6.00%	-0.75%
Private Debt	6.50%	-0.75%
Core Bonds	2.75%	+0.10%

RATES & CREDIT: CREDIT SPREAD

Strong global growth and yield-seeking investor behavior has compressed credit spreads

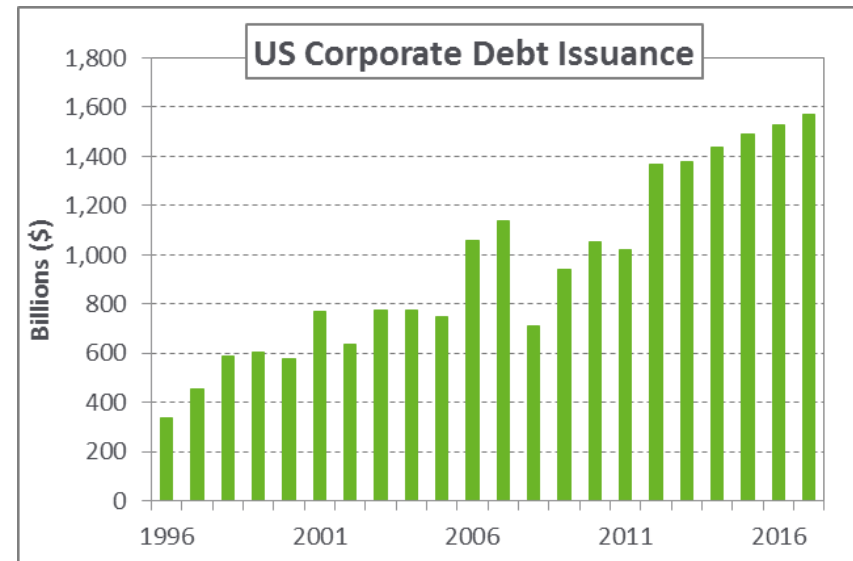
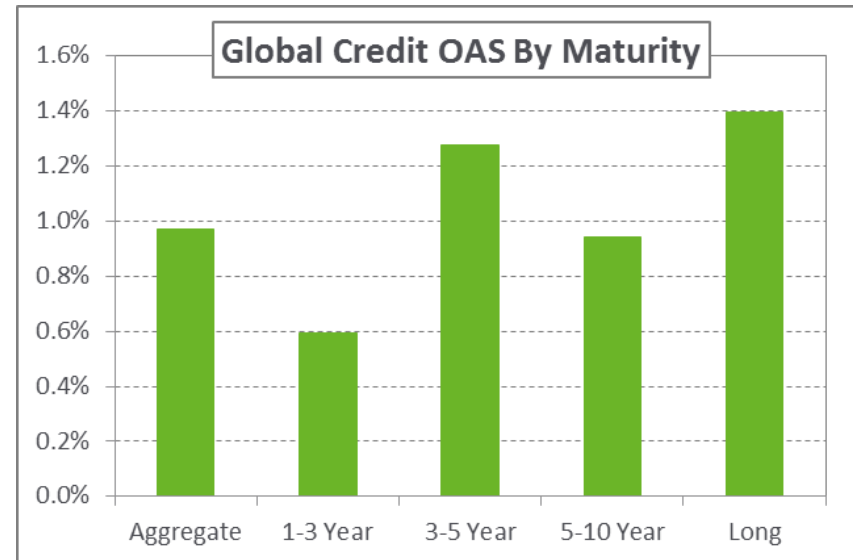
Economic growth usually translates to tighter credit spreads due to a lower probability of defaults

In Europe, the ECB's decision to include corporate bonds in its quantitative easing program has also contributed to smaller credit risk premiums globally

Low borrowing costs have encouraged record issuance in both investment grade and high yield bonds

Passive ownership of credit has increased significantly, even with a larger denominator

The outlook for US credit is subdued with limited return opportunities as credit spreads trade below long-term medians



Source: (Top) Barclays, Bloomberg
Source: (Bottom) SIFMA



RATES & CREDIT: RATES PRICE CHANGE

Rates price change include changes in the level of interest rates, changes to the shape of the curve, and roll down

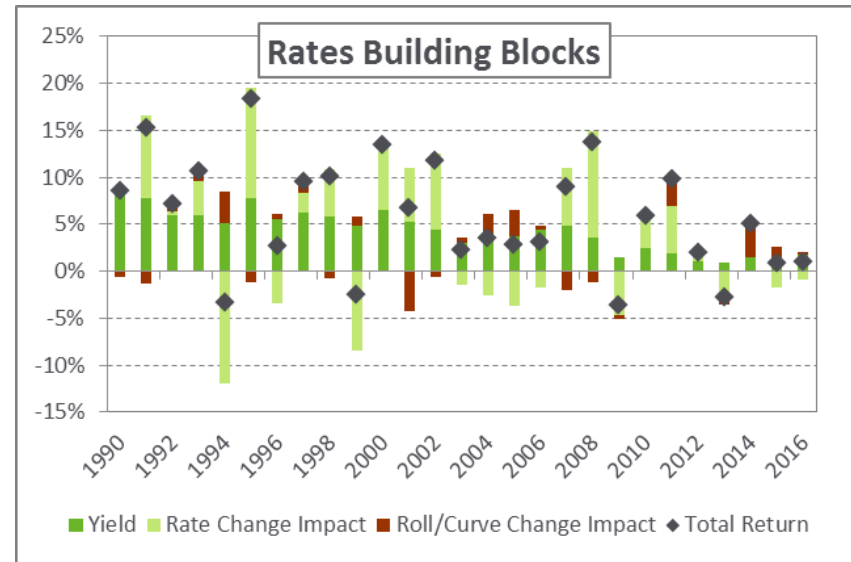
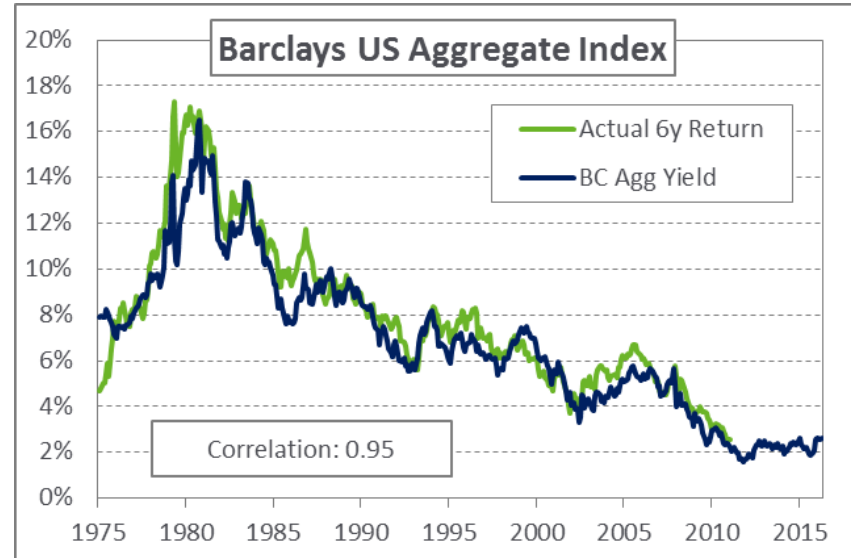
Roll down refers to expected price change due to aging of a bond along the curve

Rate change impact often dominates total return and is a likely detractor in the coming cycle, given expectations of modestly higher rates

Path of interest rates for each market is tied to both central bank actions and inflation expectations

Roll down offers some relief to rising rates when yield curves are steep

As yield curve flattens this can be a drag, pushing investors to shorter duration bonds



Source: (Top) Barclays, Bloomberg, NEPC
Source: (Bottom) Barclays, Bloomberg, NEPC



RATES & CREDIT: SPREAD PRICE CHANGE

Credit spreads continued to tighten throughout the year and remain below long-term averages

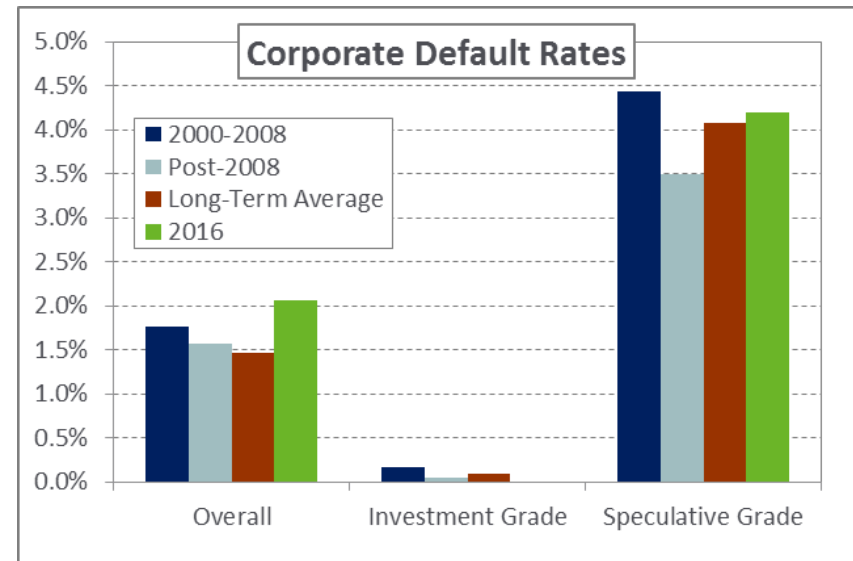
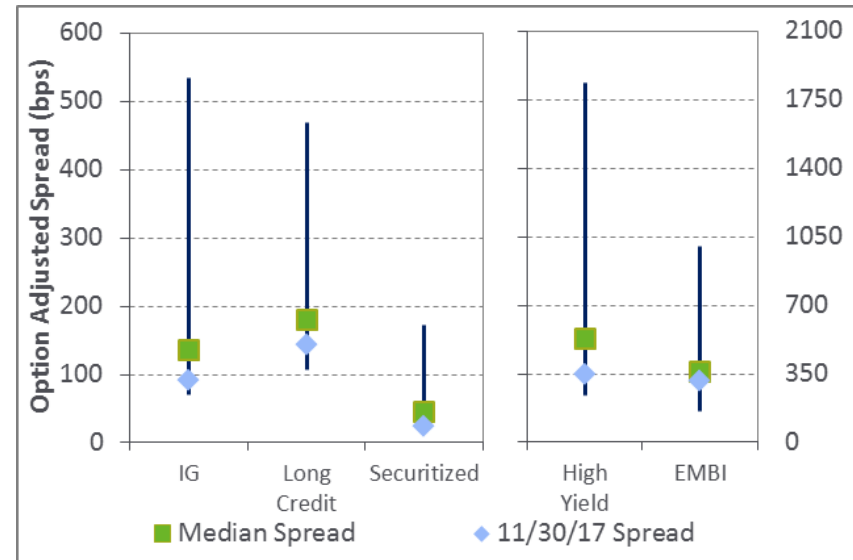
With positive economic indicators and strong technicals, spreads could grind lower

The number of defaults increased last year as a result of the depressed energy and natural resources sector

Over 50% of credit defaults occurred within the energy sector

Nearly all other sectors experienced default rates well below long-term averages

Credit spreads near historic lows suggest investors are receiving less compensation for taking on risk

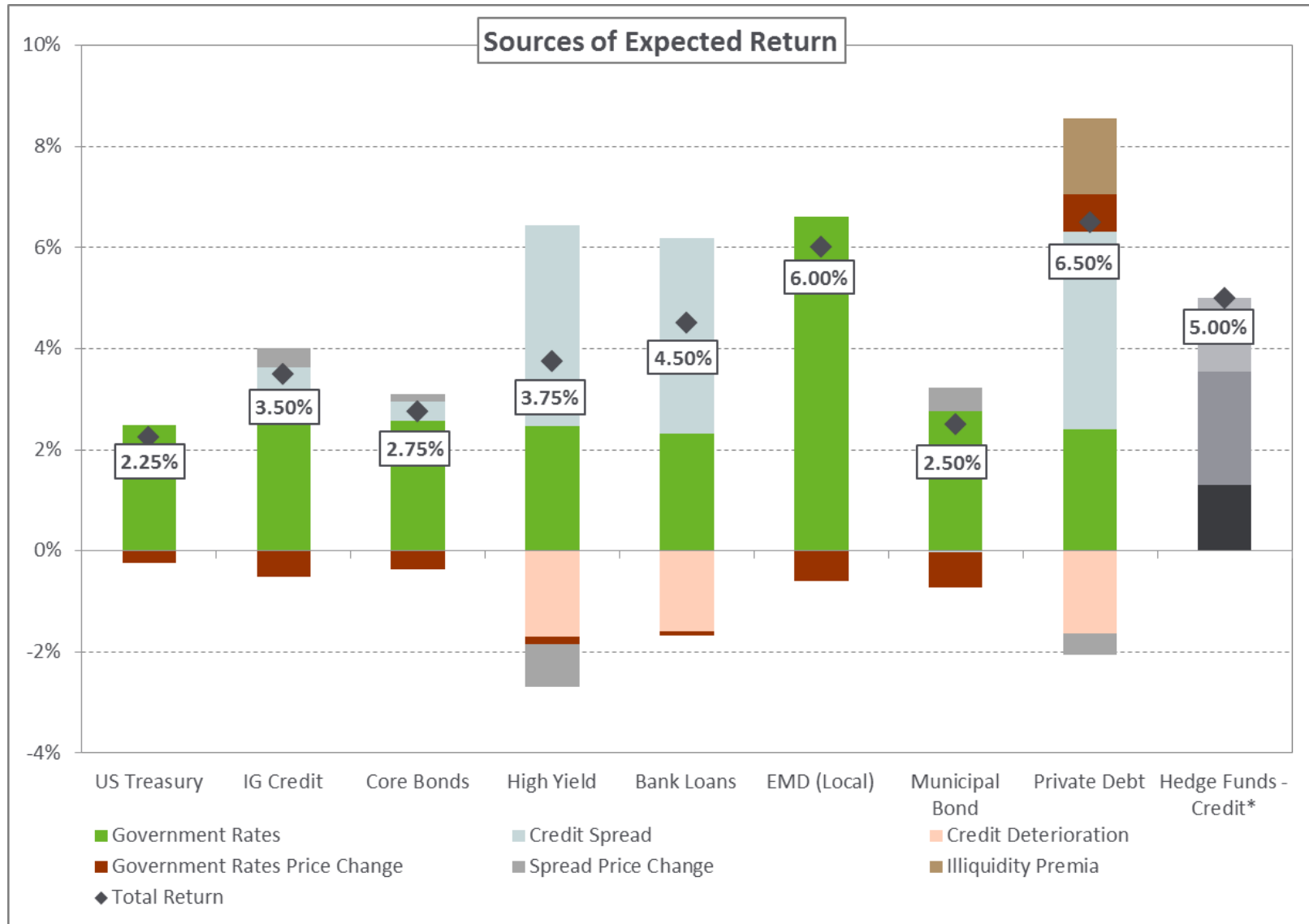


Source: (Top) JPM, Bloomberg, NEPC. As of 01/31/2000

Source: (Bottom) S&P, NEPC



CREDIT: BUILDING BLOCKS



Source: NEPC

*Hedge Funds are discussed in detail in the Multi-Asset section



EQUITY ASSUMPTIONS

NEPC, LLC

EQUITY: ASSUMPTIONS

Equity Building Blocks	
Illiquidity Premium	The additional return expected for investments carrying liquidity risk
Valuation	An input representing P/E multiple contraction or expansion relative to long-term trend
Inflation	Represents market-specific inflation derived from index country revenue contribution and region-specific forecasted inflation
Real Earnings Growth	Reflects market-specific real growth for each equity asset class as a weighted-average derived from index country revenue contribution and forecasted GDP growth
Dividend Yield	Informed by current income distributed to shareholders with adjustments made to reflect market conditions and trends

Asset Class	5-7 Year Return	Change 2018-2017
US Large Cap	5.25%	-.50%
US Small/Mid-Cap	5.75%	-.25%
International (Unhedged)	7.50%	+.25%
International (Hedged)	7.82%	+.25%
International Small Cap	7.75%	+.25%
Emerging International	9.00%	-.50%
Emerging Intl. Small Cap	9.25%	-.75%
Private Equity	8.00%	-.25%
Hedge Funds – Long/Short	6.25%	-
<i>Global Equity</i>	6.88%	-.33%

EQUITY: REAL EARNINGS GROWTH

Global growth was stronger than expected during 2017

Synchronized global growth is likely to persist with continued favorable market growth conditions

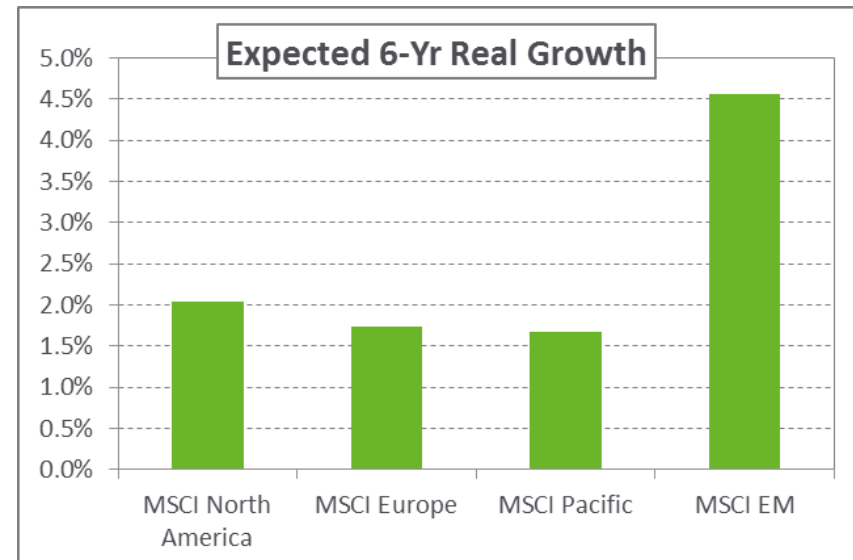
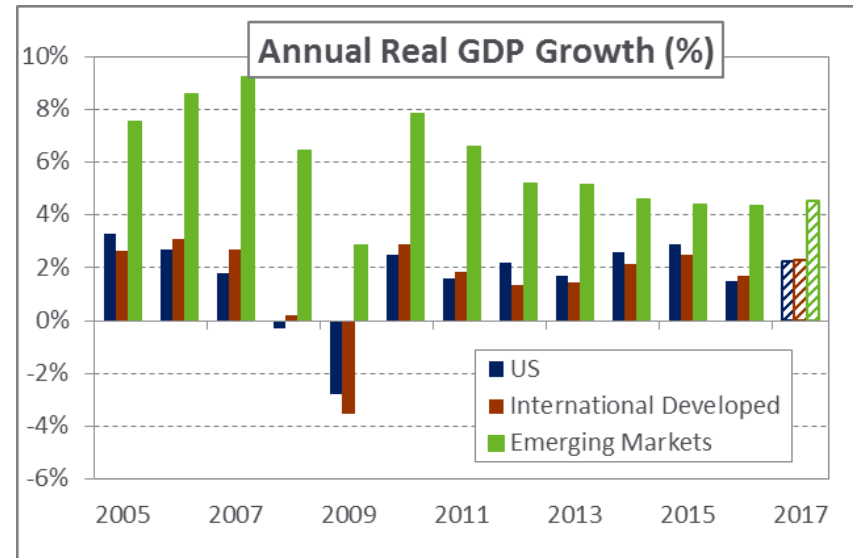
The broad outlook for developed economies has improved as a real earnings recovery has begun

The UK remains a notable outlier as the country continues sorting through Brexit

Emerging economies are broadly expected to continue strong growth

Chinese real growth is expected to slow in future years as the country transitions to a more consumer based economy

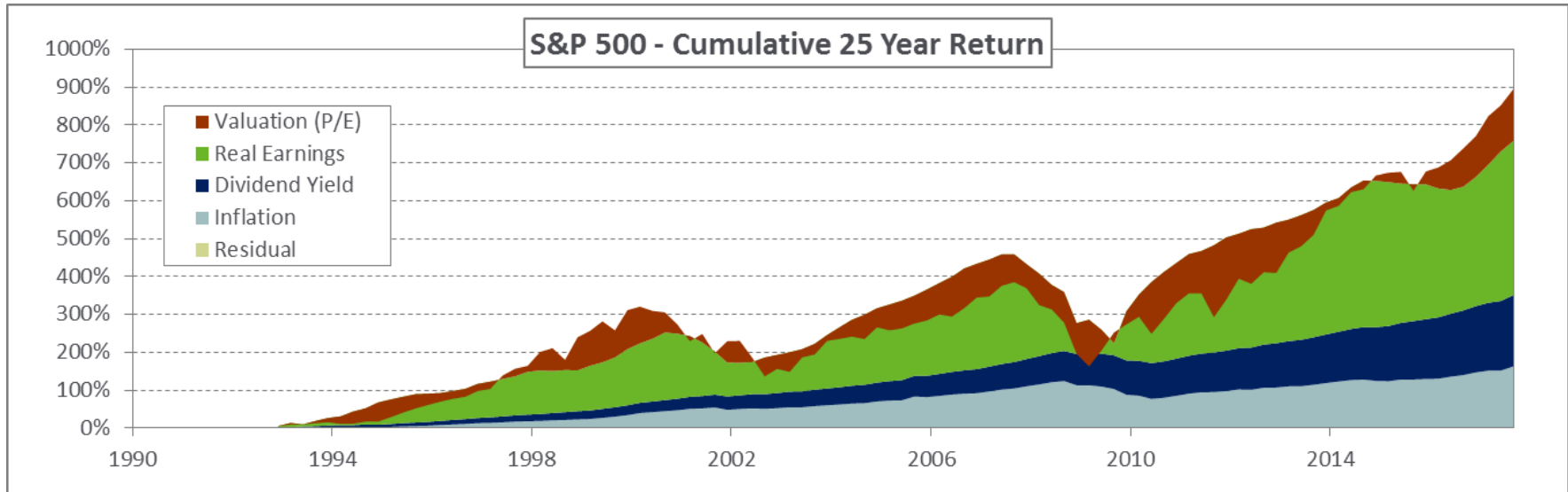
Reforms in India and southeast Asia are expected to boost investment, productivity, and per-capita growth



Source: (Top) Bloomberg, NEPC
Source: (Bottom) IMF, MSCI, Bloomberg

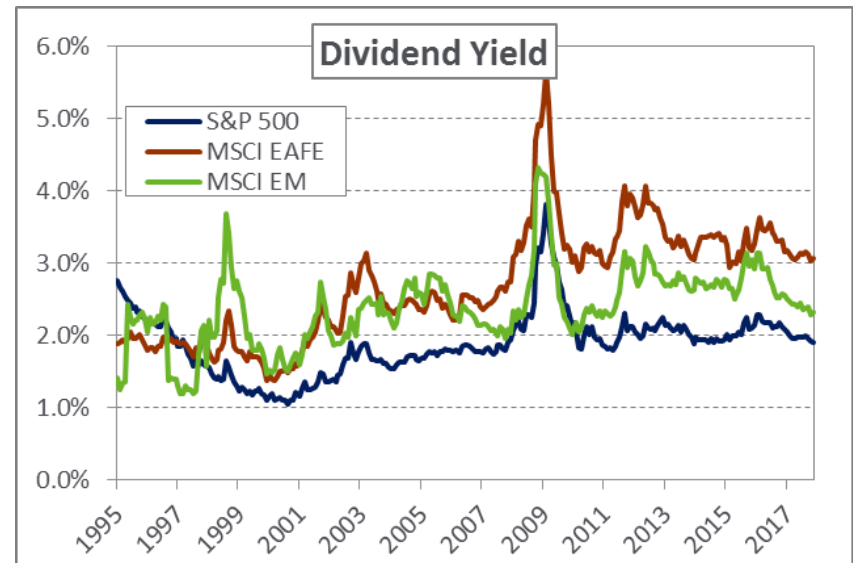


EQUITY: DIVIDEND YIELD



Real dividends per share have increased over time, but prices have increased at a faster rate, leading to falling yields

International and Emerging Markets continue to offer a more attractive dividend yield relative to the US



Source: (Top) S&P, NEPC, Bloomberg
 Source: (Bottom) S&P, MSCI, Bloomberg



EQUITY: VALUATION

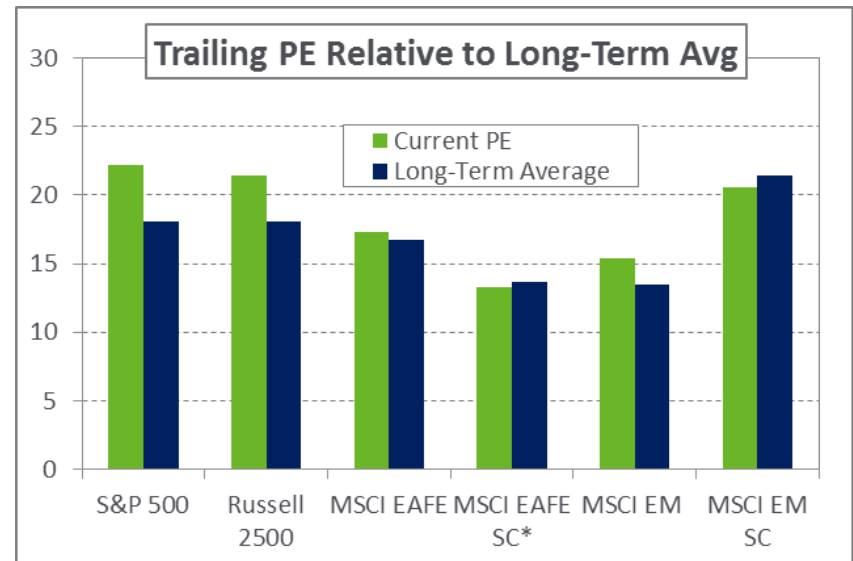
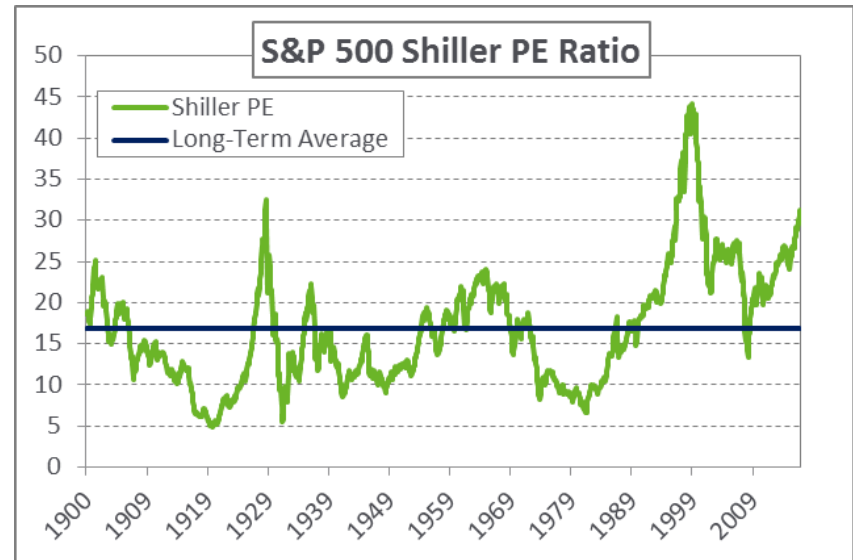
Global equities broadly pushed higher in 2017 supported by macroeconomic data, robust earnings, and easy financial conditions

While earnings growth in the US came in stronger than expected, price gains continued to outpace – leading to further P/E multiple expansion

Recovering corporate earnings for international developed markets have allowed valuations to remain relatively attractive

A multi-year earnings recovery in Europe and Japan offers the potential for an elevated return in these markets

While emerging market equities posted the strongest gains for 2017, valuations remain close to long-term averages relative to domestic markets



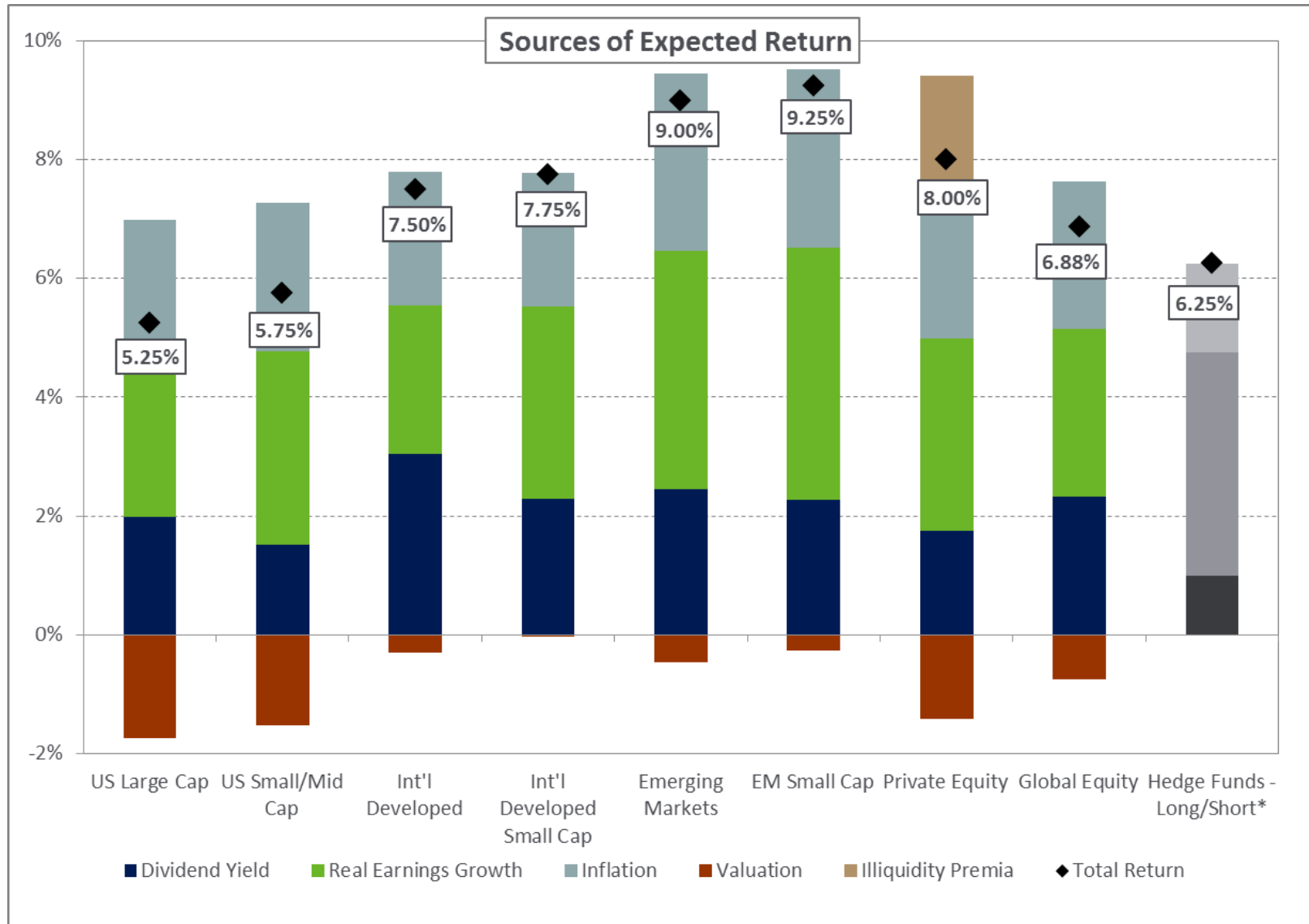
Source: (Top) S&P, Shiller

Source: (Bottom) S&P, Russell, MSCI, Bloomberg

*Reflects index-adjusted positive P/E values



EQUITY: BUILDING BLOCKS



Source: NEPC

*Hedge Funds are discussed in detail in the Multi-Asset section



REAL ASSETS ASSUMPTIONS

NEPC, LLC

REAL ASSETS: ASSUMPTIONS

Real Assets Building Blocks	
Illiquidity Premium	The additional return expected for investments carrying liquidity risk
Valuation	The expected change in price of the underlying asset reverting to a long-term real average or terminal value assumption
Inflation	Incorporates the inflation paths as defined by TIPS breakeven expectations and NEPC expected inflation assumptions
Real Earnings Growth	Reflects market-specific real growth for each equity asset class as a weighted-average derived from index country revenue contribution and forecasted GDP growth
Real Income	Represents the inflation-adjusted income produced by the underlying tangible or physical asset

Asset Class	5-7 Year Return	Change 2018-2017
Commodities	4.75%	-
MLPs	7.25%	+ .25%
REITs	6.50%	-
Core Real Estate	5.75%	- .25%
Non-Core Real Estate	7.00%	N/A
Private Real Assets: Energy/Metals	8.00%	- .25%
Private Real Assets: Infrastructure/Land	6.00%	-
<i>Real Assets (Liquid)</i>	5.87%	- .05%

REAL ASSETS: REAL INCOME

Equity-like investments: Real income represents the inflation-adjusted dividend yield

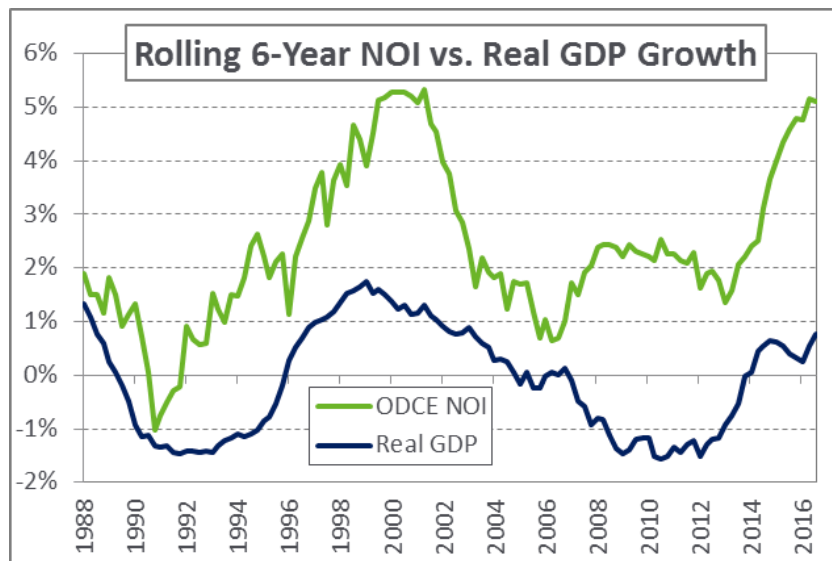
Includes MLPs, natural resource equities, global infrastructure equities, and REITs
 Notably, MLP yields have increased relative to last year in combination with generally stronger balance sheets and a double-digit price decline

Real Estate: Real income growth is a function of Net Operating Income (NOI) growth

Rolling 6-year NOI growth exhibits cyclically economic pattern and appears to be at or near its peak

Commodities: Real income is represented by collateral return

A cash proxy is used to represent the collateral and as such, it represents the return on cash over the investment horizon



Real Asset Yields	11/30/16	11/30/17
MLPs	7.4%	8.1%
Core Real Estate	4.7%	4.6%
US REITs	4.6%	4.0%
Global REITs	4.2%	3.6%
Global Infrastructure Equities	4.1%	3.9%
Natural Resource Equities	3.0%	3.3%
US 10-Yr Breakeven Inflation	2.0%	1.9%
Commodity Index Roll Yield	-6.5%	-1.4%

Source: (Top) NCREIF, Bloomberg, NEPC

Source: (Bottom) NCREIF, Alerian, NAREIT, S&P, Bloomberg



REAL ASSETS: VALUATION

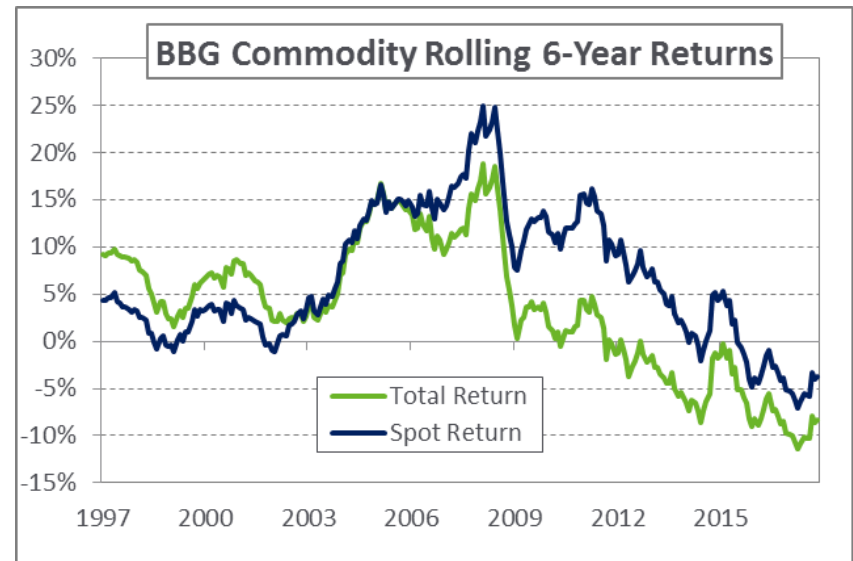
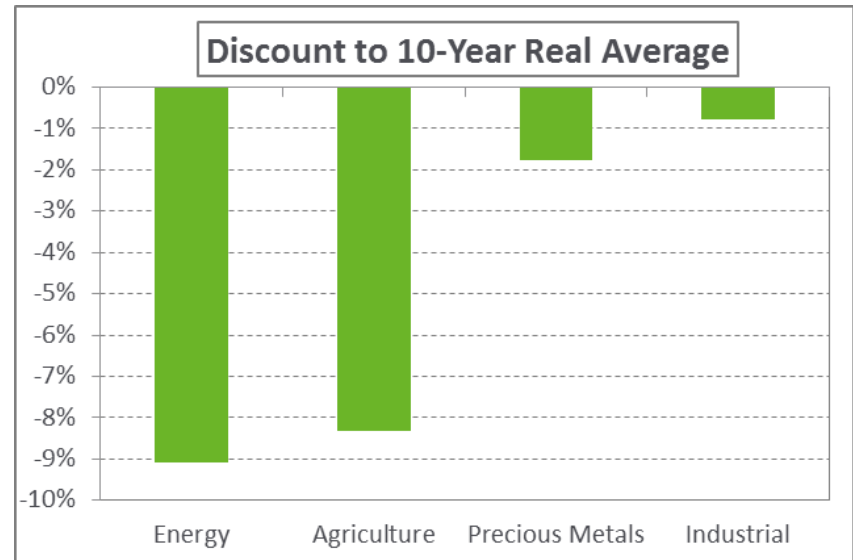
Change in commodity valuations can be attributed to both roll yield and change in spot price

Commodity prices continue to trade below their long-term real averages, particularly in the energy and agriculture sectors

Roll yield continues to be a hurdle for investing in commodity futures

Post-2008, spot returns have had consistently higher returns than total return indices – demonstrating the impact of negative roll yield on overall investments

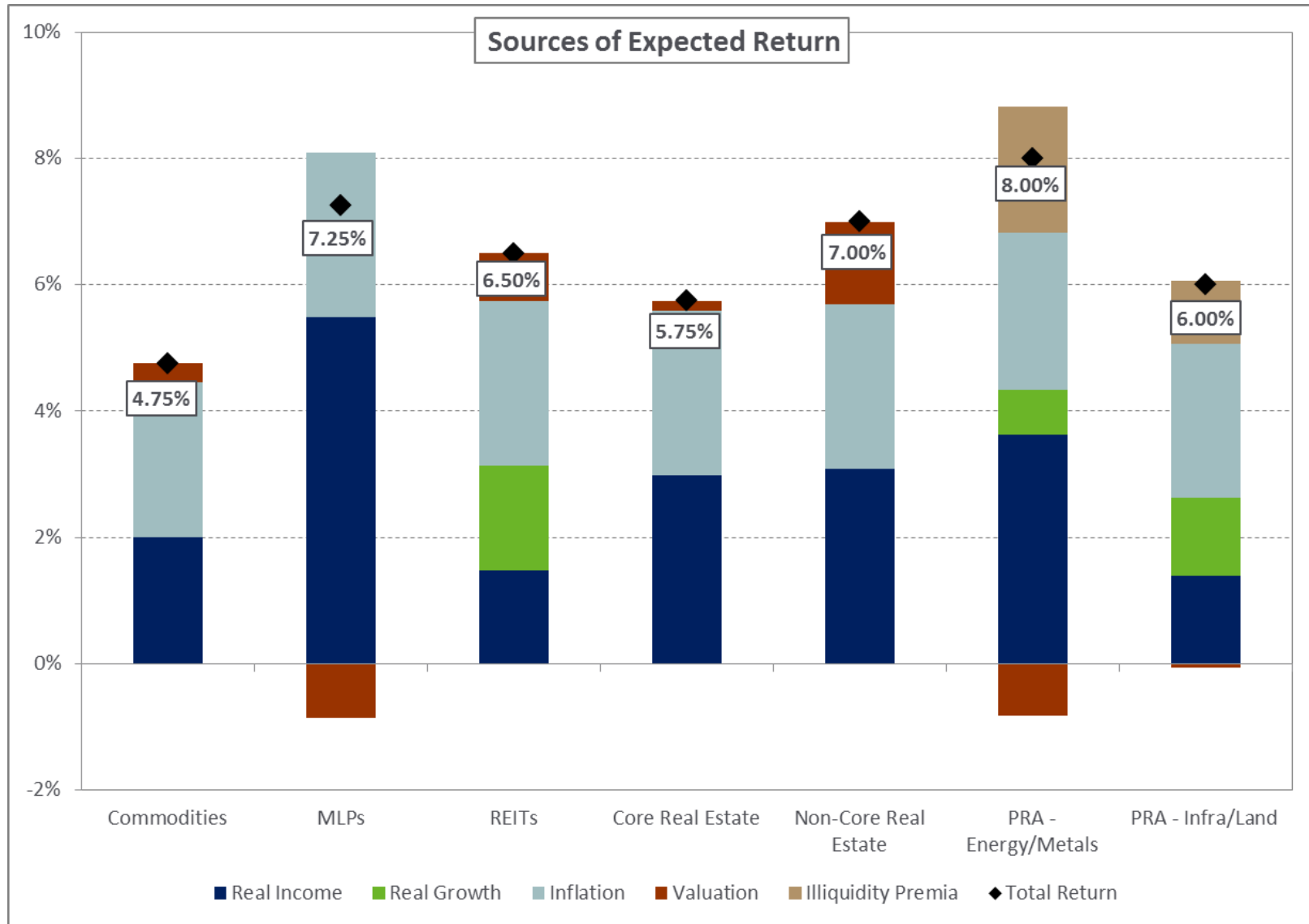
In the latter half of 2017, commodity prices rallied off mid-year lows, causing the negative roll yield to be much smaller relative to last year



Source: (Top) Bloomberg, NEPC
Source: (Bottom) Bloomberg, NEPC



REAL ASSETS: BUILDING BLOCKS



Source: NEPC



MULTI-ASSET & DERIVED COMPOSITES

NEPC, LLC

MULTI-ASSET & DERIVED COMPOSITES

Multi-asset assumptions are the result of the sum of equity, credit, and real asset building blocks

Global 60/40: 60% global equity and 40% global bonds

US 60/40: 60% US equity and 40% core bonds

Risk Parity 10% Vol: Average of 3 common risk parity exposures

GAA Strategies: Average of 3 common GAA exposures

Global Equity: Market weighted blend of MSCI ACWI IMI (US, Non-US Developed, Emerging)

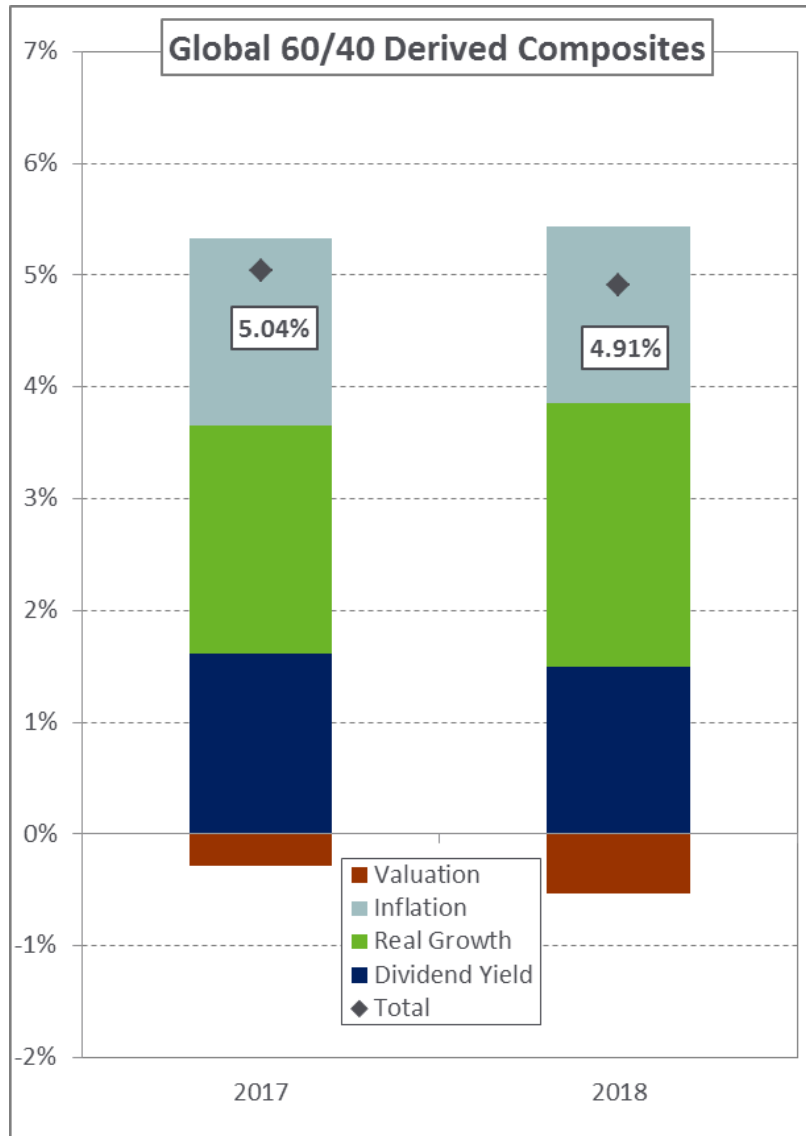
Core Bonds: Market weighted blend of Bloomberg Barclays US Aggregate Bond Index (Treasuries, IG Credit, MBS)

Real Assets (Liquid): Weighted blend of TIPS, global equities, REITs, and commodities

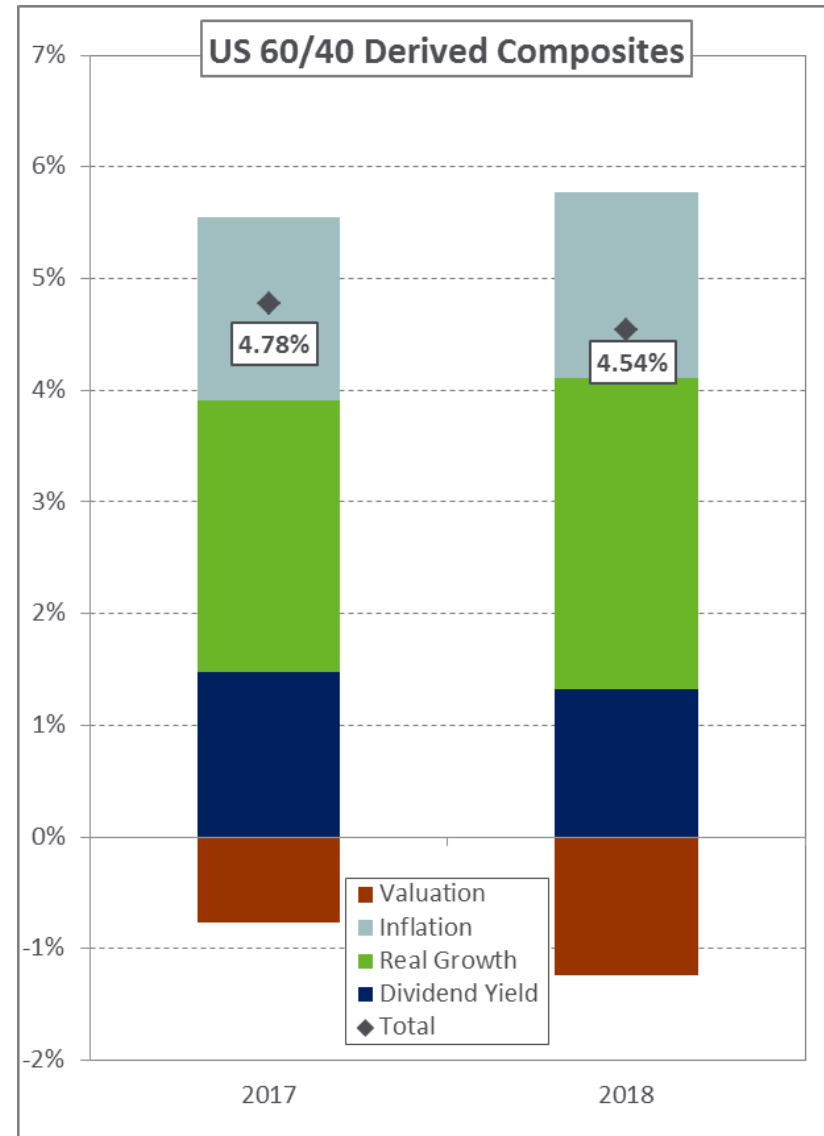
Hedge Funds: Weighted blend of 40% HF equity, 40% HF credit, and 20% HF macro

Asset Class	5-7 Year Return	Change 2018-2017
<i>Global 60/40</i>	4.91%	-.13%
<i>US 60/40</i>	4.54%	-.24%
<i>Risk Parity 10% Vol</i>	5.11%	+.04%
<i>GAA Strategies</i>	5.44%	-.11%
<i>Global Equity</i>	6.88%	-.33%
<i>Core Bonds</i>	2.75%	+.10%
<i>Real Assets (Liquid)</i>	5.87%	-.05%

GLOBAL VS. US 60/40 DERIVED COMPOSITES



Source: NEPC



Source: NEPC



INFORMATION DISCLAIMER

Past performance is no guarantee of future results.

The goal of this report is to provide a basis for substantiating asset allocation recommendations. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.

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

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

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February 26, 2018

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

SUBJECT: MID-YEAR BUDGET UPDATE FOR FISCAL YEAR 2017-18

Dear Board Members:

With respect to the adopted budget, fifty percent of the fiscal year ending June 30, 2018, is complete; consequently, we have a reasonable estimate of the financial status for the year. The attached Budget Summary (Attachment A) reflects actual expenditures through December 31, 2017, as well as year-end projected expenditures based on staff's estimates.

Salaries & Employee Benefits: Overall Salaries and Employee Benefits are projected to be under budget by approximately \$512,300. Included in the savings is \$86,400 that was inadvertently included in the Extra-Help object line that staff submitted for consideration internally during the budget development process but eliminated for inclusion in the proposed budget. The savings realized after accounting for this error is due to vacancies (IT Manager and Communications/Public Information Officer), new/promotional hires at lower amounts than were budgeted and lower than expected use of Extra-Help. The savings from the IT Manager are offset with expenditures in Professional Services for the outsourced IT Manager within the Services and Supplies expenditure category.

Services & Supplies: Overall Services & Supplies is projected to be over budget at fiscal year-end by approximately \$141,500. Most of the budget overrun is due to Depreciation/Amortization (noncash expense) (\$287,300) and Other Professional Services (\$38,500), offset by cost savings in object line accounts, the most significant being Legal (\$42,400), Postage (\$25,200), Non-Capital Furniture (\$20,500), Hearing Officers (\$20,000), Printing (\$15,000) and Non-Capital Equipment (\$10,000). While variances appear within the Actuary and Training/Travel/Mileage object series, this is due more to misalignment of charging the expense within the new chart of accounts as compared to budget. The Depreciation/Amortization is \$287,300 higher than budget due to underestimating the actual cost of the new pension system at June 30, 2017. The Other Professional Services variance of \$38,500 is due to continued use of outsourced IT Manager, due to vacancy, offset with savings in Salaries and Benefits.

The Legal category cost savings of \$42,400 is due to less than anticipated needs within the Administrative budget. Specifically, administrative legal costs were \$75,300 lower than anticipated, offset by an increase in the Investment budget of \$32,900 to cover additional legal services required for the private equity program. The savings in Postage and Printing are due to the postponement of outreach related to member self-services portal roll out. Hearing Officer savings are due to less than anticipated activity related to disability cases. Non-Capital expenditures will be less than anticipated for the year based on current needs. The remaining service and supplies variances are minor.

MID-YEAR BUDGET UPDATE FOR FISCAL YEAR 2017-18

February 26, 2018

Page 2 of 2

Technology: The Information Technology budget is projected to be over budget by approximately \$152,200. This is due in part to Technology Application Support projected to be over budget by \$129,100, due to recent board approved increase of 500 hours, above budget for enhancements, and a \$50,000 final payment for the pension administration project completion that was due one year after warranty period, that was not included in the adopted budget. In addition, Technology Software Support is projected to be over budget by \$25,200. This is due to the increase in the cost of hosting services for the pension system and outstanding invoice of \$19,500 from the prior year that was inadvertently not paid in the prior year.

Capital Expenses: Capital Expenses represents purchases for equipment that will exceed VCERA’s capitalized threshold of \$25,000 and will be depreciated in future periods based on the estimated asset useful life. For budgeting purposes, this will be reported as an outlay in the Budget Summary. At year end, the Capital Expense will be transferred to the balance sheet as a Capitalized asset. The cost will be depreciated/amortized over subsequent periods and reflected in future budgets as a non-cash expenditure. This category is projected to be over budget by approximately \$49,300. This amount was budgeted for the prior year, but early in the new fiscal year, it was determined that the equipment was defective, so could not be placed in service and was returned. A new purchase was made in the current budget year. Because appropriations for it were not included in the current year’s adopted budget, staff is requesting appropriations to reestablish this previously-approved expense.

Overall, the budget can be balanced by transferring appropriations between major expenditure categories, and therefore staff requests approval of the recommendations that follow.

Recommendations:

1. Receive and file the mid-year projection.
2. Authorize Staff to process the following Budgetary Adjustments:

DECREASE – Salaries & Benefits	\$375,000
INCREASE – Service & Supplies	\$150,000
INCREASE – Technology	\$175,000
INCREASE – Capital Expenses	\$ 50,000

If necessary, Staff will return to the Board after year end, and if required, request appropriation adjustments between object levels to close out the year.

I would be happy to respond to any questions you may have on this matter.

Sincerely,



Henry C. Solis, CPA
Chief Financial Officer

Attachment

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2017-2018 (Combined)
Year-To-Date through December 31, 2017 and Projected through Fiscal Year Ending June 30, 2018

	Adopted 2018 Budget	Adjusted 2018 Budget	Expended Fiscal Year to Date	Projected Jan - June	Projected June 30, 2018	Available Balance	Percent Expended
Salaries and Benefits							
Regular Salary	\$3,026,300.00	\$3,026,300.00	\$1,243,148.16	\$1,547,881.53	\$2,791,029.69	\$235,270.31	92.23%
Extra-Help/Temporary Services	294,400.00	294,400.00	67,408.98	94,000.00	161,408.98	132,991.02	54.83%
Supplemental Payments	59,900.00	59,900.00	20,790.49	25,114.49	45,904.98	13,995.02	76.64%
Vacation Redemption	139,500.00	139,500.00	117,647.87	20,000.00	137,647.87	1,852.13	98.67%
Retirement Contributions	531,200.00	531,200.00	205,599.75	273,160.36	478,760.11	52,439.89	90.13%
OASDI Contribution	171,600.00	171,600.00	55,203.18	97,310.20	152,513.38	19,086.62	88.88%
FICA-Medicare	48,100.00	48,100.00	19,623.30	25,115.45	44,738.75	3,361.25	93.01%
Medical Insurance	302,000.00	302,000.00	106,451.96	153,639.00	260,090.96	41,909.04	86.12%
Life Insurance	1,300.00	1,300.00	480.15	672.97	1,153.12	146.88	88.70%
Unemployment Insurance	2,500.00	2,500.00	971.20	1,258.40	2,229.60	270.40	89.18%
Mgmt Disability Insurance	23,600.00	23,600.00	8,183.48	12,073.48	20,256.96	3,343.04	85.83%
Workers Compensation Insurance	23,500.00	23,500.00	9,670.40	11,882.64	21,553.04	1,946.96	91.72%
401K Plan Contribution	72,500.00	72,500.00	29,374.49	37,390.52	66,765.01	5,734.99	92.09%
Total Salaries & Benefits	\$4,696,400.00	\$4,696,400.00	\$1,884,553.41	\$2,299,499.03	\$4,184,052.44	\$512,347.56	89.09%
Services & Supplies							
Board Member Stipend	\$13,200.00	\$13,200.00	\$5,200.00	\$6,000.00	\$11,200.00	\$2,000.00	84.85%
Other Professional Services	224,700.00	224,700.00	92,616.23	170,550.00	263,166.23	(38,466.23)	117.12%
Auditing	46,000.00	46,000.00	39,921.24	6,000.00	45,921.24	78.76	99.83%
Hearing Officers	60,000.00	60,000.00	35.00	40,000.00	40,035.00	19,965.00	66.73%
Legal	350,000.00	350,000.00	148,110.35	159,500.00	307,610.35	42,389.65	87.89%
Election Services	9,000.00	9,000.00	0.00	9,000.00	9,000.00	0.00	100.00%
Actuary-Valuation	159,000.00	159,000.00	30,000.00	30,000.00	60,000.00	99,000.00	37.74%
Actuary-GASB 67	0.00	0.00	0.00	13,000.00	13,000.00	(13,000.00)	#DIV/0!
Actuary-Assump/Exp	0.00	0.00	0.00	45,000.00	45,000.00	(45,000.00)	#DIV/0!
Actuary-Misc Hrly Consult	0.00	0.00	11,544.00	20,000.00	31,544.00	(31,544.00)	#DIV/0!
Actuary-Actuarial Audit	42,000.00	42,000.00	42,000.00	7,000.00	49,000.00	(7,000.00)	116.67%
Printing	33,000.00	33,000.00	11,024.35	7,000.00	18,024.35	14,975.65	54.62%
Postage	71,400.00	71,400.00	16,196.97	30,000.00	46,196.97	25,203.03	64.70%
Telephone	0.00	0.00	0.00	0.00	0.00	0.00	#DIV/0!
Copy Machine	4,000.00	4,000.00	1,276.47	2,700.00	3,976.47	23.53	99.41%
General Liability	9,500.00	9,500.00	4,744.00	4,744.00	9,488.00	12.00	99.87%
Fiduciary Liability	85,000.00	85,000.00	84,496.37	0.00	84,496.37	503.63	99.41%
Cost Allocation Charges	33,500.00	33,500.00	16,735.00	16,735.00	33,470.00	30.00	99.91%
Education Allowance	6,000.00	6,000.00	4,000.00	0.00	4,000.00	2,000.00	66.67%
Training/Travel-Staff	54,200.00	54,200.00	12,097.78	28,000.00	40,097.78	14,102.22	73.98%
Training/Travel-Trustee	53,100.00	53,100.00	7,640.60	20,000.00	27,640.60	25,459.40	52.05%
Travel-Due Diligence-Staff	0.00	0.00	1,853.98	5,000.00	6,853.98	(6,853.98)	#DIV/0!
Travel-Due Diligence-Trustee	19,400.00	19,400.00	3,433.06	6,000.00	9,433.06	9,966.94	48.62%
Mileage-Staff	8,500.00	8,500.00	984.60	2,500.00	3,484.60	5,015.40	41.00%
Mileage -Trustee	0.00	0.00	1,305.18	2,000.00	3,305.18	(3,305.18)	#DIV/0!
Mileage-Due Diligence-Staff	0.00	0.00	235.83	500.00	735.83	(735.83)	#DIV/0!
Mileage-Due Diligence-Trustee	0.00	0.00	200.09	500.00	700.09	(700.09)	#DIV/0!
Auto Allowance	6,900.00	6,900.00	3,450.00	3,450.00	6,900.00	0.00	100.00%
Facilities-Security	3,700.00	3,700.00	0.00	2,600.00	2,600.00	1,100.00	70.27%
Facilities-Maint & Repairs	0.00	0.00	2,040.58	0.00	2,040.58	(2,040.58)	#DIV/0!
Equipment-Maint & Repairs	2,000.00	2,000.00	0.00	1,000.00	1,000.00	0.00	50.00%
General Office Expense	6,000.00	6,000.00	5,802.50	3,500.00	9,302.50	(3,302.50)	155.04%
Books & Publications	2,500.00	2,500.00	50.00	1,800.00	1,850.00	650.00	74.00%
Office Supplies	18,000.00	18,000.00	5,620.61	8,000.00	13,620.61	4,379.39	75.67%
Memberships & Dues	13,300.00	13,300.00	6,585.00	6,100.00	12,685.00	615.00	95.38%
Bank Service Charges	0.00	0.00	696.02	700.00	1,396.02	(1,396.02)	#DIV/0!
Offsite Storage	4,800.00	4,800.00	2,091.96	2,700.00	4,791.96	8.04	99.83%
Rents/Leases-Structures	209,900.00	209,900.00	104,215.70	105,600.00	209,815.70	84.30	99.96%
Non-Capital Equipment	10,000.00	10,000.00	0.00	0.00	0.00	10,000.00	0.00%
Non-Capital Furniture	40,000.00	40,000.00	19,519.70	0.00	19,519.70	20,480.30	48.80%
Depreciation /Amortization	1,163,500.00	1,163,500.00	725,369.16	725,369.16	1,450,738.32	(287,238.32)	124.69%
Total Services & Supplies	\$2,762,100.00	\$2,762,100.00	\$1,411,092.33	\$1,492,548.16	\$2,903,640.49	(\$141,540.49)	105.12%
Total Sal, Ben, Serv & Supp	\$7,458,500.00	\$7,458,500.00	\$3,295,645.74	\$3,792,047.19	\$7,087,692.93	\$370,807.07	95.03%

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2017-2018 (Combined)
Year-To-Date through December 31, 2017 and Projected through Fiscal Year Ending June 30, 2018

	<i>Adopted 2018 Budget</i>	<i>Adjusted 2018 Budget</i>	<i>Expended Fiscal Year to Date</i>	<i>Projected Jan - June</i>	<i>Projected June 30, 2018</i>	<i>Available Balance</i>	<i>Percent Expended</i>
Technology							
Technology Hardware	\$49,400.00	\$49,400.00	\$1,878.10	\$45,000.00	\$46,878.10	\$2,521.90	94.89%
Technology Hardware Support	0.00	0.00	2,102.97	2,000.00	4,102.97	(4,102.97)	#DIV/0!
Technology Software	213,100.00	213,100.00	39,129.18	173,000.00	212,129.18	970.82	99.54%
Technology Software Support	19,000.00	19,000.00	9,613.97	8,700.00	18,313.97	686.03	96.39%
Technology Systems Support	263,400.00	263,400.00	87,796.42	200,805.01	288,601.43	(25,201.43)	109.57%
Technology Infrastruct Support	300.00	300.00	184.95	120.00	304.95	(4.95)	101.65%
Technology Application Support	507,000.00	507,000.00	236,065.53	400,000.00	636,065.53	(129,065.53)	125.46%
Technology Data Communication	55,800.00	55,800.00	25,797.36	28,000.00	53,797.36	2,002.64	96.41%
Total Technology	\$1,108,000.00	\$1,108,000.00	\$402,568.48	\$857,625.01	\$1,260,193.49	(\$152,193.49)	113.74%
Capital Expenses							
Capitalized Equipment	0.00	0.00	49,278.19	0.00	49,278.19	(49,278.19)	#DIV/0!
Total Capitalized Expenses	\$0.00	\$0.00	\$49,278.19	\$0.00	\$49,278.19	(\$49,278.19)	#DIV/0!
Congtingency	\$532,800.00	\$532,800.00	\$0.00	\$0.00	\$0.00	\$532,800.00	0.00%
Total Current Year	\$9,099,300.00	\$9,099,300.00	\$3,747,492.41	\$4,649,672.20	\$8,397,164.61	\$702,135.39	92.28%



February 26, 2018

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

SUBJECT: SELECTION OF CERTIFIED PUBLIC ACCOUNTING FIRM TO PERFORM ANNUAL FINANCIAL AUDIT

Dear Board Members:

A Request for Proposal (RFP) was issued seeking a qualified Certified Public Accounting (CPA) Firm to perform the annual financial audit of VCERA's financial statements beginning with the year ending June 30, 2018. The term would be for 3 years with the option to renew for one additional year. The RFP opened on December 29, 2017 and closed on January 31, 2018. Notice of the RFP was distributed to all current 1937 Act CERL system CPA audit firms. In addition, the RFP was sent to CALAPRS and SACRS for posting on their websites as well as posted on VCERA's website.

VCERA has contracted the audit services of Brown Armstrong Accountancy Corporation (Brown Armstrong) for more than fifteen years. No formal RFP was issued during that period, as the original agreement was reviewed and renewed for three-year terms over that period. The current agreement with Brown Armstrong expired June 30, 2016, but the Board approved a one-year extension to allow for issuance of an RFP. Although VCERA has not experienced any significant issues or concerns with Brown Armstrong during the term of the relationship, it is considered prudent to conduct an RFP to determine if VCERA's audit costs were in line with industry averages and to evaluate if other qualified CPA firms offered comparable services.

VCERA received two qualified proposals from CPA firms, one from Brown Armstrong and the other from CliftonLarsonAllen (CLA). A four-member committee (consisting of the VCERA CFO and three individuals from participating plan employers with financial backgrounds) evaluated the proposals based on criteria included in the RFP. Each rater assigned a score with the average of the four scores determining the final score. The criteria used to evaluate each proposal was as follow:

February 26, 2018

Page 2 of 3

Evaluation Criteria	Maximum Points
Firm's Experience, Capabilities and References	20
Quality and Experience of Assigned Professional Personnel	20
Schedule, Estimation of Hours and Audit Approach	15
Communication, Understanding of Scope and Quality of Proposal	20
Fee Proposal	25
Total Points	100

Attachment 1 shows the final score, annual and total costs over the term, and resource hours that will be allocated to the audit annually by each firm. Based on the above criteria, Brown Armstrong received the highest overall score 96. While both firms are qualified and have dedicated governmental audit teams, they each had their pros and cons. Brown Armstrong is a regional firm with presence exclusively in California. In addition, Brown Armstrong has significantly more audit experience with 1937 Act systems as well as many local government entities. Brown Armstrong would also dedicate about 25% more hours to the audit with overall costs over the term of the agreement approximately \$15,000 lower than CLA.

CLA is a national accounting firm performing audits throughout the nation. They have much less experience auditing 1937 act systems, but have extensive experience auditing many state retirement systems, deferred compensation plans and other government entities nationally. Their RFP response indicates they serve more than 2,200 government entities. CLA will allocate 90 fewer man hours per year towards the audit. Their proposal states that they incorporate automated techniques in analyzing the retiree data, which may explain why fewer man hours would be assigned to the audit. Despite the lower total hours that would dedicated to the audit, the overall cost is higher due to their higher hourly billable rates.

While some trustees have previously expressed that perhaps a rotation in auditor may be prudent and good practice, neither staff nor the evaluation committee gave any weight to this consideration in the rating process. However, should the Board choose to take this factor into consideration, staff feels confident that both firms are qualified and capable of providing auditing services.

Bearing these considerations in mind, reference checks on both firms was conducted. All reference checks stated that the clients were very satisfied with their respective firm and would highly recommend their respective auditors.

Note that from a budgetary perspective, the first-year cost for the audit is higher than the amount included in the adopted budget, regardless of which firm is chosen. However, the excess can be absorbed within existing budgeted appropriations. Future budgets will incorporate the appropriate amount based on the corresponding cost of the vendor selected.

February 26, 2018

Page 3 of 3

Recommendations:

1. Award contract for audit services to either Brown Armstrong Accountancy Corporation based on overall score or CliftonLarsonAllen if the Board chooses to rotate auditors.
2. Authorize Staff to finalize an agreement with selected audit firm.
3. Authorize Board Chair or Retirement Administrator to execute agreement upon Counsel's review and approval.

We would be happy to respond to any questions you may have on this matter.

Sincerely,



Linda Webb
Retirement Administrator



Henry C. Solis, CPA
Chief Financial Officer

Attachment

Attachment 1

Summary of VCERA RFP - Auditing Services

	Brown Armstrong	CliftonLarsonAllen
Overall Score	96	91
Annual Audit Cost		
Year 1	\$ 51,380.00	\$ 52,890.00
Year 2	51,380.00	54,540.00
Year 3	51,380.00	56,190.00
Year 4 (Optional)	51,380.00	58,050.00
Total	\$ 205,520.00	\$ 221,670.00
Planned hours per year		
	420	330

From: NEPC [mailto:mailings@nepc.com]
Sent: Monday, February 12, 2018 6:11 AM
To: Gallagher, Dan <Dan.Gallagher@ventura.org>
Subject: Find out who's coming to our upcoming conference...



Daniel,

We are excited to announce our keynote speakers, information on Pre-Conference Workshops and hotel booking details for NEPC's 23rd Annual Investment Conference on May 14-15, 2018.

Keynote Speakers:

- [Joseph F. Coughlin](#), PhD, Founder and Director, Massachusetts Institute of Technology AgeLab
- [Mark D. Kvamme](#), Co-Founder and Partner, Drive Capital
- [Mihir A. Desai](#), Mizuho Financial Group Professor, Harvard Business School and Professor, Harvard Law School

By popular demand, we will again offer our optional Pre-Conference Workshops: "Private Equity A to Z" and "An Introduction to Beta Groups" in the morning on Monday, May 14, 2018. **We will be reaching out shortly with more information on the workshops and directions for registration.**

Book your hotel room early! Call the Renaissance Waterfront Hotel at (877) 901-6632 or [reserve your room online](#) to receive our discounted room rate.

Feel free reach out to Sarah Winrow at swinrow@nepc.com if you have any questions.

*Please note, this conference is open to NEPC clients and prospective clients only. Investment managers do not subsidize or underwrite NEPC's conferences or workshops.