Pension Trust

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San Luis Obispo County
Pension Trust
SLOCPT

AGENDA

Monday, August 27, 2018 9:30 AM
Board of Supervisors Chambers
County Government Center
San Luis Obispo, CA 93408

PENSION TRUST
BOARD OF TRUSTEES

Materials for the meeting may be found at
http://www.slocounty.ca.gov/Departments/Pension-Trust/Board-of-Trustees

PUBLIC COMMENT

1. Public Comment: Members of the public wishing to address the Board on matters other than scheduled items may do so when recognized by the Chair. Presentations are limited to three minutes per individual.

ORGANIZATIONAL

None

CONSENT

2. Minutes of the Regular Meeting of July 23, 2018 (Approve Without Correction).

3. Report of Deposits and Contributions for the month of July 2018 (Receive and File).

4. Report of Service Retirements, Disability Retirements and DROP Participants for the month of July 2018 (Receive, Approve and File).

5. Applications & Elections to participate in the Deferred Retirement Option Program (DROP) received through August 10, 2018 (Receive, Approve and File).

APPLICATIONS FOR DISABILITY RETIREMENT

None

OLD BUSINESS

None

NEW BUSINESS

6. June 30, 2018 Mid-Year Financial Statements and Fiscal Year 2017-2018 Administrative Budget Status (Receive and File).

INVESTMENTS

7. Quarterly Investment Report for the 2nd Quarter of 2018 – Presentation by Scott Whalen, Verus (Receive and File).

8. Monthly Investment Report for July 2018 (Receive and File).

9. Investment Manager Structure Review – Educational Presentation by Scott Whalen, Verus (Receive and File).

10. Private Equity – 2018 Commitment Recommendation – Scott Whalen, Verus (Recommend Approval).

11. Real Assets Outlook – Educational Presentation by Scott Whalen, Verus (Receive and File).

12. Investment Consultant Organizational Update – Presentation by Scott Whalen, Verus (Receive and File).

13. Alternative Investments Fee Disclosure – CA Code 7514.7 - (Receive and File).

14. Asset Allocation - (Review, Discuss, and Direct Staff as necessary).

OPERATIONS

15. Staff Reports

16. General Counsel Reports

17. Committee Reports:
    a. Audit Committee — No Report
    b. Personnel Committee — No Report
    c. PAS Replacement Committee — No Report

18. Upcoming Board Topics (subject to change):
    a. September 24, 2018 (room 161/162)
        i. Disability Case
        ii. TBD topics
        iii. Closed Session – Executive Secretary Evaluation
        iv. Strategic Planning Session
            1. Funding policy
            2. Cybersecurity
            3. Business Continuity planning
            4. SLOCPT member communications
            5. Board recruitment

    b. October 22, 2018
        i. Financial Auditor selection (Audit Committee recommendation)
        ii. Elected Trustee vacancy – appointment process

    c. November 26, 2018
        i. PEPRA Compensation Limit – policy approval
        ii. Interest Crediting Rate – Normal Contributions
        iii. Interest Crediting Rate – Additional Contributions
        iv. 3Q18 Quarterly Report
        v. Private Equity Outlook
        vi. ESG/SRI Update
        vii. Liquidity Study – illiquid investments

19. Trustee Comments

REFERRED ITEMS

None

ADDED ITEMS

None

CLOSED SESSION

None

ADJOURNMENT

Board of Trustees

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San Luis Obispo County Pension Trust
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JULY 23, 2018
MINUTES
OF THE REGULAR MEETING OF THE PENSION TRUST
BOARD OF TRUSTEES

BOARD MEMBERS PRESENT:	**Will Clemens, Vice President** **Guy Savage** **Gere Sibbach** **Jim Hamilton** **Jim Erb** **Jeff Hamm**
BOARD MEMBERS ABSENT:	**Matt Janssen, President**
STAFF:	**Carl Nelson** **Andrea Paley** **Amy Burke**
COUNSEL:	**Chris Waddell, Esq. (via telephone)**
OTHERS:	**Jennifer Alderete, Pension Trust** **Wade Horton, CAO**

The meeting was called to order by Vice President Clemens at 9:30 AM, who presided over same.

AGENDA ITEM NO. 1: PUBLIC COMMENT.

None.

ORGANIZATIONAL:

None.

CONSENT:

AGENDA ITEM NO. 2 - 5: CONSENT.

Public comment: None

Upon the motion of Mr. Hamm, seconded by Mr. Savage, and unanimously passed, the following action was taken:

ITEM 2: The Minutes of the Regular Meeting of June 25, 2018 were approved without correction.

ITEM 3: The Report of Deposits and Contributions for the Month of June 2018, was received and filed.

ITEM 4: The Report of Service Retirements, Disability and DROP Retirements for the month of June 2018, was received, approved and filed.

ITEM 5: The Report of Applications for participation in the Deferred Retirement Option Program received through July 6, 2018 was received, approved and filed.

APPLICATIONS FOR DISABILITY RETIREMENT:

AGENDA ITEM NO. 6: APPLICATION FOR ORDINARY DISABILITY RETIREMENT CASE 2018-01 RYAN RICHARDS.

Public comment: None

Upon the motion of Mr. Sibbach, seconded by Mr. Clemens, and unanimously passed, the following action was taken:

1) Mr. Ryan Richards was found to have become permanently disabled within the meaning of Retirement Plan Section 10.01 on January 19, 2018; and

2) Mr. Richards was found to be entitled to an Ordinary Disability Retirement under Retirement Plan Section 10.02, effective July 24, 2018, the day following the last day of compensated service with the San Luis Obispo County Superior Court.

AGENDA ITEM NO. 7: APPLICATION FOR INDUSTRIAL DISABILITY RETIREMENT CASE 2018-03 MARK SOUZA.

Public comment: None

Upon the motion of Mr. Savage, seconded by Mr. Erb, and unanimously passed, the following action was taken:

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1) Mr. Mark Souza was found to have become permanently disability within the meaning of Retirement Plan Section 10.01 on February 28,2017; and
2) Mr. Souza was found to be entitled to an Industrial Disability Retirement under Retirement Plan Section 10.04, effective on the day following the last day of compensated service with the County of San Luis Obispo.

OLD BUSINESS:

None.

NEW BUSINESS:

AGENDA ITEM NO. 8: FINANCIAL AUDITOR – SELECTION PROCESS.

Public comment: None

Staff reported that the 2013-2017 five year engagement for audit services with Brown Armstrong was completed. After discussion on the merits of retaining the current audit firm or issuing an RFP, the board consensus expressed satisfaction with the current firm. In addition, the small number of audit firms specializing in California public sector retirement systems was discussed. The advantages of retaining continuity in the external audit firm used through at least the 2019 audit with the implementation of the new Pension Administration System in mid 2019 were also discussed.

Upon the motion of Mr. Savage, seconded by Mr. Clemens, and unanimously passed, staff was directed to negotiate two, three, or five year audit engagement agreements with Brown Armstrong for consideration by the Audit Committee and the full Board of Trustees.

INVESTMENTS:

AGENDA ITEM NO. 9: FIDUCIARY PROPERTIES INC. RETENTION OF 1000 MILL ST PROPERTY.

Public comment: None

Upon the motion of Mr. Clemens, seconded by Mr. Savage, and unanimously passed, the Board accepted staff recommendation to retain the real property located at 1000 Mill Street, San Luis Obispo, as the operational office space for the Pension Trust. Staff will further discuss with legal counsel and the auditors regarding the direct or indirect ownership of the property and the appropriate accounting for the asset. Staff will report back to the Board as the final two properties in FPI are marketed and sold.

AGENDA ITEM NO. 10: INVESTMENT REPORT FOR THE PERIOD ENDED JUNE 30, 2018.

Public comment: None

Upon the motion of Mr. Clemens, seconded by Mr. Erb, and unanimously passed, the Investment Report for the period ended June 30, 2018, was received and filed.

AGENDA ITEM NO. 11: ASSET ALLOCATION.

Staff reported that as a result of the County agreeing to prefund the contributions for Fiscal Year 2018/2019 that staff will continue to rebalance the trust assets in conformance with the Pension Trust Investment Policy and Verus consultant recommendations. This is a no action item regarding investment asset allocations except to apprise the Board of rebalancing activity.

OPERATIONS:

AGENDA ITEM NO. 12: STAFF ORAL REPORTS.

A) Staff reported back to public comment at the June 25, 2018 board meeting regarding employees ability to also prefund their contributions similar to the County. In reviewing the options, the contributions would be post tax which would most likely negate any prefunding advantage; no other DB plan offers employees prefunding of their contributions; and it would require a costly rewrite of the PAS.

B) Staff reported that in the design of the PAS there is a lot of data scrubbing. This process has uncovered seven Members whose contribution rate was incorrect, some over stated, some understated. Staff has been working to correct these errors and communicate to each Member adjustments that will need to occur. Two of the members with incorrect contribution rates resulted in under-collections of pension contributions that will have to be remitted to the Pension Trust over some reasonable period of time.

C) Staff advised the Board that Pension Trust current and former employees (now retired) will retain the CalPERS medical insurance options for 2019. This option will be reviewed annually.

D) Staff informed the Board that insurance policies have been renewed for Fiduciary Liability insurance and for Cyber Liability insurance.

E) Staff noted that there has been recent news coverage regarding private equity funds using leverage and CalPERS. Staff is aware of the practice and does not view it as problematic with the private equity firms used by the Trust.

F) Staff commented on news coverage on residential mortgage foreclosures in Puerto Rico that involve one of our investment managers (TPG). On inquiry Staff learned that the particular TPG funds involved in Puerto Rico residential foreclosures are not funds utilized for Pension Trust investments.

AGENDA ITEM NO. 13: GENERAL COUNSEL ORAL REPORTS.

General Counsel advised the Board that he would be conferring soon with President Janssen with regard to the Executive Secretary performance evaluation to be discussed at the September Regular Meeting.

AGENDA ITEM NO. 14: COMMITTEE REPORTS – AS NEEDED.

A) AUDIT COMMITTEE: Nothing to report.

B) PERSONNEL COMMITTEE: Nothing to report.

C) PENSION ADMINISTRATION SYSTEM ADMINISTRATION (PASR) COMMITTEE: Nothing to report.

AGENDA ITEM NO. 15: UPCOMING BOARD TOPICS.

The planned topics for the next three board meetings were included in the agenda summary. This is an information item, nothing further to report.

AGENDA ITEM NO. 16: TRUSTEE COMMENTS.

None.

REFERRED ITEMS: None.

ADDED ITEMS: None.

CLOSED SESSION: None.

ADJOURNMENT.

There being no further business, the meeting was adjourned at 10:20 AM. The next Regular Meeting was set for August 27, 2018, at 9:30 AM, in the Board of Supervisors Chambers, New County Government Center, San Luis Obispo, California 93408.

Respectfully submitted,

Carl Nelson
Executive Secretary

REPORT OF DEPOSITS AND CONTRIBUTIONS FOR THE MONTH OF
JULY 2018

PP 14 7/6/2018 By Employer and Tier:	Pensionable Salary	Employer Contributions	Employer Rate	Employee Contributions	Employer for Employee Contributions	Employee Rate	Combined Rate	Additional Contributions	Buy Backs	**TOTAL Contributions**
County Tier 1	3,863,654.96	904,446.61	23.41%	442,028.73	329,730.59	19.97%	43.38%	1,387.50	818.20	**1,678,411.63**
County Tier 2	964,425.85	229,788.18	23.83%	46,753.42	81,237.22	13.27%	37.10%	67.90	396.33	**358,243.05**
County Tier 3	2,398,865.14	537,253.41	22.40%	281,114.18	-	11.72%	34.11%	-	935.70	**819,303.29**
Superior Court Tier 1	264,997.12	66,428.96	25.07%	43,059.00	-	16.25%	41.32%	-	-	**109,487.96**
Superior Court Tier 3	68,449.66	16,422.64	23.99%	7,520.64	-	10.99%	34.98%	-	114.54	**24,057.82**
APCD Tier 1	65,184.23	14,310.63	21.95%	8,356.22	4,248.55	19.34%	41.29%	-	-	**26,915.40**
APCD Tier 3	8,503.20	1,843.20	21.68%	1,141.23	-	13.42%	35.10%	-	-	**2,984.43**
Pension Trust Staff Tier 1	7,168.55	1,647.33	22.98%	873.13	665.96	21.47%	44.45%	-	-	**3,186.42**
Pension Trust Staff Tier 2	9,599.20	2,205.89	22.98%	230.78	891.77	11.69%	34.67%	-	-	**3,328.44**
Pension Trust Staff Tier 3	9,346.77	2,102.10	22.49%	1,199.32	-	12.83%	35.32%	-	-	**3,301.42**
LAFCO Tier 1	12,494.29	3,666.71	29.35%	677.19	1,160.72	14.71%	44.06%	-	-	**5,504.62**
	7,672,688.97	1,780,115.66	23.20%	832,953.84	417,934.81	16.30%	39.50%	1,455.40	2,264.77	**$ 3,034,724.48**

PP 15 7/20/2018 By Employer and Tier:	Pensionable Salary	Employer Contributions	Employer Rate	Employee Contributions	Employer for Employee Contributions	Employee Rate	Combined Rate	Additional Contributions	Buy Backs	**TOTAL Contributions**
County Tier 1	3,835,322.48	898,205.56	23.42%	439,633.31	326,751.65	19.98%	43.40%	1,387.50	818.20	**1,666,796.22**
County Tier 2	964,663.66	229,856.71	23.83%	47,692.76	81,105.23	13.35%	37.18%	67.90	396.33	**359,118.93**
County Tier 3	2,408,513.72	538,507.97	22.36%	282,460.85	-	11.73%	34.09%	-	639.20	**821,608.02**
Superior Court Tier 1	269,794.64	67,689.13	25.09%	43,879.64	-	16.26%	41.35%	-	-	**111,568.77**
Superior Court Tier 3	71,425.71	17,113.55	23.96%	7,820.05	-	10.95%	34.91%	-	114.54	**25,048.14**
APCD Tier 1	65,363.41	14,349.46	21.95%	8,379.36	4,258.85	19.34%	41.29%	-	-	**26,987.67**
APCD Tier 3	10,367.21	2,238.00	17.78%	1,396.23	-	11.01%	28.79%	-	-	**3,634.23**
Pension Trust Staff Tier 1	7,168.55	1,647.33	22.98%	873.13	665.96	21.47%	44.45%	-	-	**3,186.42**
Pension Trust Staff Tier 2	10,096.80	2,320.24	22.98%	243.96	938.00	11.71%	34.69%	-	-	**3,502.20**
Pension Trust Staff Tier 3	7,215.98	1,622.88	22.49%	932.92	-	12.93%	35.42%	-	-	**2,555.80**
LAFCO Tier 1	13,227.91	3,882.79	29.35%	716.94	1,228.88	14.71%	44.06%	-	-	**5,828.61**
	7,663,160.07	1,777,433.62	23.19%	834,029.15	414,948.57	16.30%	39.49%	1,455.40	1,968.27	**$ 3,029,835.01**
TOTAL FOR THE MONTH	**15,335,849.04**	**3,557,549.28**	**23.20%**	**1,666,982.99**	**832,883.38**	**16.30%**	**39.50%**	**2,910.80**	**4,233.04**	**$ 6,064,559.49**
TOTAL YEAR TO DATE	**114,867,057.67**	**26,530,066.79**	**23.10%**	**12,379,866.98**	**6,368,212.85**	**16.32%**	**39.42%**	**24,257.37**	**120,910.53**	**45,423,314.52**

REPORT OF SERVICE & DISABILITY RETIREMENTS & DROP PARTICIPANTS FOR THE MONTH OF:	JULY 2018

RETIREE NAME	DEPARTMENT	DATE	MONTHLY ALLOWANCE
AGUILERA, TAMMY	SOCIAL SERVICES	07-07-2018	309.64
AIELLO, DEBORAH F. (DROP)	SOCIAL SERVICES	07-01-2018	10942.22 132.46*
BAXTER, BOBBIE	PLANNING	07-07-2018	4017.59
BENAKOVICH, JONI	ASSESSOR	07-07-2018	1856.10
COBURN, BRIAN	LIBRARY	07-17-2018	2569.35 1251.25** 1.88*
DODD, ROBYN	SHERIFF-CORONER	07-14-2018	2817.05
GARNER, LESLIE	ASSESSOR	07-04-2018	2401.74
HIATT, SUSAN	SOCIAL SERVICES	07-06-2018	1849.17
HOLZER, GLENN (DROP)	SHERIFF-CORONER	07-01-2018	4656.04
KELLER, T. MAXWELL (DROP)	PUBLIC WORKS ISF	07-01-2018	5206.64 400.20*
KINNICK-RAMOS, SUSAN	CLERK-RECORDER	07-07-2018	2984.93
LEON, SARAH	BEHAVIORAL HEALTH	07-07-2018	1983.22
RICHARDS, RYAN	SUPERIOR COURT	07-24-2018	Awaiting calcs
ROSE, RICHARD R. (DROP)	PUBLIC WORKS ISF	07-01-2018	5035.72
RUGGLES, ANITA	SOCIAL SERVICES	07-07-2018	2413.95
SMAW, DIANA (DROP)	PUBLIC HEALTH	07-01-2018	1836.60
STECK, SHELLY	CLERK-RECORDER / RECIPROCAL	07-21-2018	Awaiting calcs
ADDENDUM:			
OLSON, DEBBIE	ALTERNATE PAYEE	09-01-2017	1415.81
BROOKINS, LEWIS	SUPERIOR COURT / RECIPROCAL	04-30-2018	335.01 163.54**
MINSK, JANNA	PLANNING & BUILDING / RECIPROCAL	06-13-2018	Option selection
OLIVER, DeANN (HUFF)	PUBLIC HEALTH / RECIPROCAL	06-09-2018	1662.77 91.08*

** Employee Additional Contribution Allowance (per Sections 5.07, 27.12, 28.12, 29.12, 30.12, and 31.12 of the Plan)*
*** Social Security Coordinated Temporary Annuity (per Section 13.06 of the Plan)*

Board of Trustees

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San Luis Obispo County Pension Trust
SLOCPT

Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary

Agenda Item 5: Applications & Elections to Participate in the Defered Retirement Option Program (DROP)

Recomendation:

It is recommended that you receive and approve the Application & Election to Participate in DROP for the individuals listed below.

Discussion:

The San Luis Obispo County Pension Trust has received an Application & Election to Participate in DROP from the following members listed below:

SEPTEMBER 1, 2018	**Mona Lisa Prelesnik, Sheriff Department**
SEPTEMBER 1, 2018	**David G. Platt, Social Services**
SEPTEMBER 1, 2018	**William A. Clarke, Behavioral Health**

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Board of Trustees

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San Luis Obispo County Pension Trust
SLOCPT

Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary
Amy Burke – Deputy Executive Secretary
Jennifer Alderete – Financial Accountant

Agenda Item 6: June 30, 2018 Mid-Year Financial Statements and Fiscal Year (FY) 2017-2018 Final Administrative Budget Status

Recommendation:

It is recommended by Staff that the Board of Trustees –

- Receive and file the unaudited June 30, 2018 mid-year financial statements
- Receive and file the final FY17-18 Final Administrative Budget status report

Discussion:

Attached for your review are the following reports issued for the San Luis Obispo County Pension Trust:

- Statements of Fiduciary Net Position as of June 30, 2018 (unaudited) and December 31, 2017
- Statements of Changes in Fiduciary Net Position for the six months ended June 30, 2018 (unaudited) and the year ended December 31, 2017
- Final Administrative Budget Status – FY17-18

The SLOCPT produces audited financial statements in a full Comprehensive Annual Financial Report (CAFR) format as of the end of each calendar year. As a further accounting report to the Board of Trustees, Staff has maintained the practice of closing its books mid-year as well, and producing a set of basic unaudited financial statements as of June 30th. For comparison purposes, figures for the prior year end have been included.

The SLOCPT's FY17-18 Administrative Budget was adopted by the Board of Trustees. The total expense budget for FY17-18 was adopted to be $2,909,500. Staff has determined actual expenses to be $2,547357 for FY17-18, which is $362,143 or 12.45% under the approved budget. Actual expenses for FY16-17 and FY18-19 adopted budget amounts have been shown for comparison.

Respectfully Submitted,

SAN LUIS OBISPO COUNTY PENSION TRUST
STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2018 AND DECEMBER 31, 2017

	Unaudited 6/30/2018	12/31/2017
ASSETS		
Cash and Cash Equivalents	$ 42,082,495	$ 34,474,219
Receivables		
Accrued Interest and Dividends Receivable	710,073	765,062
Accounts Receivable	9,726	29,270
Contributions Receivable	3,031,004	2,826,010
Securities Sold	2,730,132	13,980,940
Total Receivables	6,480,935	17,601,282
Investments, at Fair Value		
Bonds and Notes	265,510,072	261,990,462
International Fixed Income	148,850,898	147,038,778
Collateralized Mortgage Obligations	2,425,415	2,425,415
Domestic Equities	272,264,081	302,662,187
International Equities	305,778,443	332,949,417
Alternative Investments	111,148,483	95,192,130
Real Estate	186,605,706	176,799,495
Total Investments	1,292,583,098	1,319,057,884
Other Assets		
Prepaid Expenses	1,368	61,759
Capital Assets - Net of Accumulated Depreciation	2,999,357	2,855,154
Total Other Assets	3,000,725	2,916,913
Total Assets	$ 1,344,147,253	$ 1,374,050,298
LIABILITIES		
Securities Purchased	$ 10,500,932	$ 8,528,679
Accrued Liabilities	906,851	1,013,394
Prefunded Contributions	95,750	24,037,203
Total Liabilities	$ 11,503,533	$ 33,579,276
FIDUCIARY NET POSITION		
Fiduciary Net Position Restricted for Pension Benefits	**$ 1,332,643,720**	**$ 1,340,471,022**

SAN LUIS OBISPO COUNTY PENSION TRUST
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
SIX MONTHS ENDED JUNE 30, 2018 AND YEAR ENDED DECEMBER 31, 2017

	Unaudited 6/30/2018	12/31/2017
ADDITIONS		
Contributions		
Employer Contributions	$ 23,089,753	$ 42,340,904
Plan Member Contributions	16,473,996	30,467,232
Total Contributions	39,563,749	72,808,136
Investment Income (Loss)		
Realized and Unrealized Gains and Losses, Net	(969,161)	169,242,335
Interest	1,947,702	3,492,823
Dividends	1,879,538	8,768,901
Real Estate Management Trust Income, Net	-	(9,952)
Real Estate Operating Income, Net	229,836	464,978
Investment Expenses	(1,974,523)	(3,319,561)
Net Investment Income	1,113,392	178,639,524
Total Additions	40,677,141	251,447,660
DEDUCTIONS		
Benefits		
Monthly Benefit Payments	45,567,339	85,052,016
Refund of Contributions	759,185	2,857,104
Death Benefits	40,818	748,157
Total Benefits	46,367,342	88,657,277
Other Deductions		
Administration and Actuarial	1,092,470	2,045,367
Prefunded Discount Amortization	1,044,631	1,516,852
Total Other Deductions	2,137,101	3,562,219
Total Deductions	48,504,443	92,219,496
Net Increase (Decrease) in Fiduciary Net Position	$ (7,827,302)	$ 159,228,164
Fiduciary Net Position Restricted for Pension Benefits - December 31, 2017 and December 31, 2016	$ 1,340,471,022	$ 1,181,242,858
Fiduciary Net Position Restricted for Pension Benefits - June 30, 2018 and December 31, 2017	**$ 1,332,643,720**	**$ 1,340,471,022**

San Luis Obispo County Pension Trust
BUDGET STATUS UPDATE
Fiscal Year 2017-2018
as of 6/30/2018

	FY16-17 Actual Expenses	FY17-18 Adopted Budget	FY17-18 Total Expenses	Budget Variance	FY18-19 Adopted Budget
INVESTMENT EXPENSE (discretionary):					
Custody & Consultant	**$ 445,053**	**$ 461,000**	**$ 524,497**	**$ 63,497**	**$ 481,000**
ADMINISTRATIVE EXPENSE:					
Personnel Services	**$ 1,236,397**	**$ 1,340,500**	**$ 1,107,932**	**$ (232,568)**	**$ 1,220,400**
Professional Service					
Accounting & Auditing	62,006	61,000	61,821	821	65,000
Actuarial	108,292	170,000	205,657	35,657	100,000
Legal	213,540	231,400	211,917	(19,483)	220,500
Medical Evaluations - Disabilities	22,500	21,500	23,275	1,775	21,500
Human Resources Consulting	5,000	5,000	5,000	-	5,000
Information Technology Services	173,531	175,000	156,178	(18,822)	166,000
Banking and Payroll	19,912	22,500	19,448	(3,052)	22,500
Other Professional Services	4,004	2,500	1,516	(984)	2,500
Total Professional Services	**$ 608,785**	**$ 688,900**	**$ 684,812**	**$ (4,088)**	**$ 603,000**
Other Expenses					
Trustee Election Expenses	-	6,000	-	(6,000)	6,000
Insurance	116,423	123,000	116,954	(6,046)	126,000
Building Maintenance	30,489	33,500	25,483	(8,017)	31,500
Office Expense	18,699	27,000	18,324	(8,676)	28,500
Memberships & Publications	4,723	5,100	5,028	(72)	5,100
Postage	24,242	27,000	22,570	(4,430)	27,000
Communications	3,441	5,000	4,434	(566)	5,000
Training & Travel	24,303	49,000	21,287	(27,713)	53,500
Information Technology	4,372	4,500	3,881	(619)	4,500
Equipment	7,816	13,000	12,155	(845)	8,000
Total Other Expenses	**$ 234,508**	**$ 293,100**	**$ 230,116**	**$ (62,984)**	**$ 295,100**
TOTAL ADMINISTRATIVE	**$ 2,079,690**	**$ 2,322,500**	**$ 2,022,860**	**$ (299,640)**	**$ 2,118,500**
TOTAL ADMIN. + INVEST.	**$ 2,524,743**	**$ 2,783,500**	**$ 2,547,357**	**$ (236,143)**	**$ 2,599,500**
Contingencies	**$ -**	**$ 126,000**	**$ -**	**$ (126,000)**	**$ 130,000**
TOTAL	**$ 2,524,743**	**$ 2,909,500**	**$ 2,547,357**	**$ (362,143)**	**$ 2,729,500**

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Board of Trustees

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San Luis Obispo County Pension Trust
SLOCPT

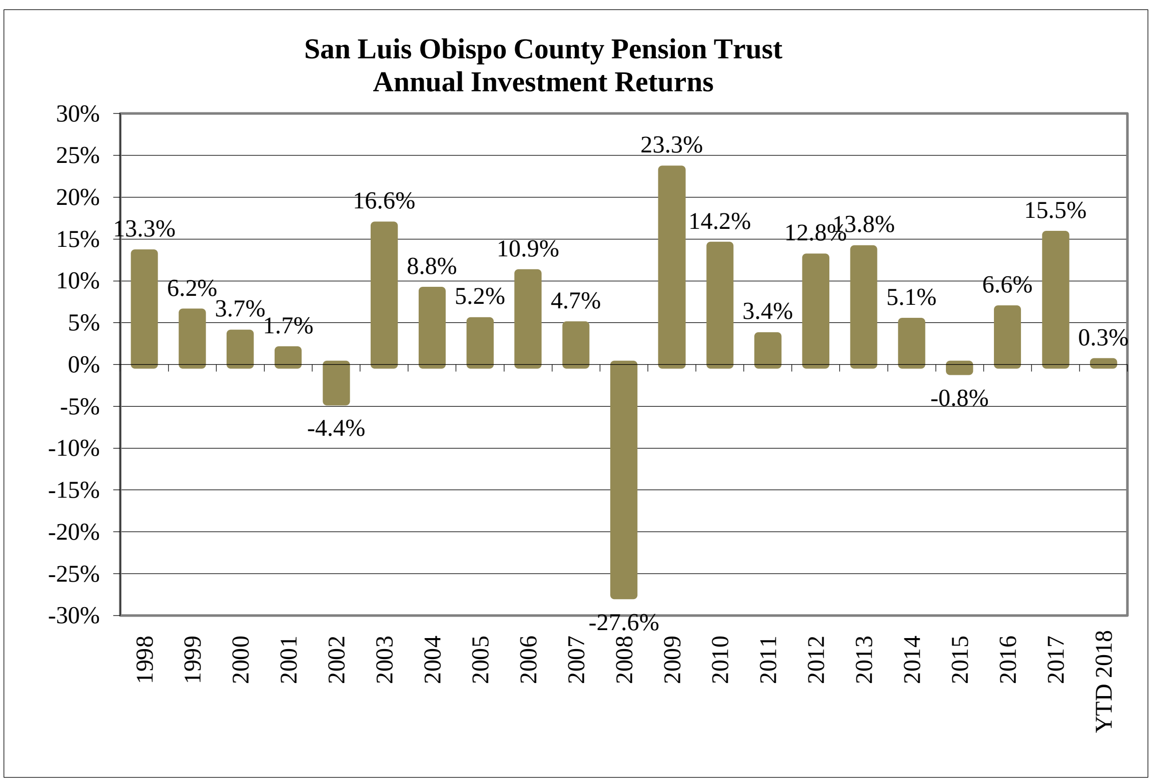
Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary
Amy Burke – Deputy Executive Secretary

Agenda Item 7: Quarterly Investment Report for the 2nd Quarter of 2018

Attached to this memo is the 2Q18 quarterly investment report prepared by the Trust's investment consultant Verus. Scott Whalen of Verus will make a detailed presentation and discuss the quarterly report. The long-term history of the rates of return gross of fees of the Pension Trust are shown below as an extension of the data in the Verus report.



The Verus report shows the gross rate of return of the Pension Trust for the 12 months ended June 30, 2018 to be 7.1%.

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Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: JUNE 30, 2018

Investment Performance Review for

San Luis Obispo County Pension Trust

Agenda Item 7

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Verus

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Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

3RD QUARTER 2018
Investment Landscape

Agenda Item 7

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Verus

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2nd quarter summary

THE ECONOMIC CLIMATE

— U.S. economic data generally surprised to the upside in Q2, leading to a strong quarterly GDP growth estimate of 3.4%. Economic growth in the second and third quarters will likely see the biggest boost from fiscal stimulus. The U.S. is currently outshining other developed economies. ***p. 7, 18***

— The synchronized global growth story of the past year has shifted somewhat as economies have displayed more disparate performance. The change has not been too dramatic – growth continues to be positive, but at a more moderate pace. ***p. 17***

PORTFOLIO IMPACTS

— Emerging market equity and local debt delivered losses of 8.0% and 10.4% in Q2 (MSCI Emerging Markets Index, JPM GBI-EM Global Diversified). Much of the losses were due to currency movement. We believe emerging market assets offer attractive value – recent movements appear to have been driven by a shift in short-term sentiment and currency depreciation. ***p. 27, 34***

— The U.S. implemented a first round of tariffs on Chinese imports on July 6th, which impacted $34 billion worth of goods. So far, only a small portion of the discussed tariffs have been enacted. ***p. 8, 9***

THE INVESTMENT CLIMATE

— Strong corporate earnings growth is expected again in the second quarter. According to FactSet, the bottom-up analyst forecast for the S&P 500 is 20.0% YoY. ***p. 31***

— Short-term U.S. Treasury yields rose, resulting in a flatter yield curve. The spread between the 10- and 2-year yield was 27 bps, a new cycle low. ***p. 23***

— Fears were raised over Italy's role in the European Union after a coalition of the anti-establishment Five Star Movement and League Party formed a new government. Italian sovereign bond yields spiked severely during the move, but have since moderated somewhat. ***p. 19***

ASSET ALLOCATION ISSUES

— Following the February selloff equity markets have been range bound. As corporate earnings rise further equity valuations have been pushed down to more attractive levels closer to the long-term historical average. ***p. 31, 37***

— While we believe trade negotiations and geopolitical uncertainty are potential causes for concern, the backdrop of positive global growth and strong corporate earnings may allow for healthy risk-asset performance. ***p. 18, 31***

A neutral to mild risk overweight may be warranted in today's environment

What drove the market in Q2?

"Trade tariff worries keep stocks under pressure"

TOTAL PROPOSED GOODS SUBJECT TO U.S. TARIFFS ($BILLIONS)

Jan	Feb	Mar	Apr	May	Jun
10	10	106	206	481	881

Article Source: Financial Times, June 21st, 2018

"Economic growth in U.S. leaves world behind"

U.S. Q2 GDP CONSENSUS EXPECTATION (%)

Jan	Feb	Mar	Apr	May	Jun
2.6	2.7	3.0	3.1	3.1	3.4

Article Source: WSJ, June 14th, 2018

"Rising dollar sparks tumult in emerging markets"

MSCI EMERGING MARKETS MONTHLY CURRENCY IMPACT

Jan	Feb	Mar	Apr	May	Jun
1.6%	-0.7%	0.0%	-1.6%	-1.3%	-1.7%

Article Source: WSJ, May 21st, 2018

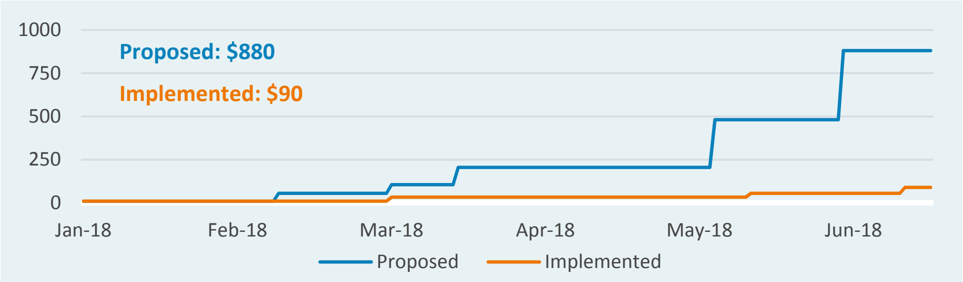
"Investors are getting worried about an inverted yield curve"

U.S. 10- MINUS 2-YEAR YIELD SPREAD (BPS)

Jan	Feb	Mar	Apr	May	Jun
56	61	47	46	42	33

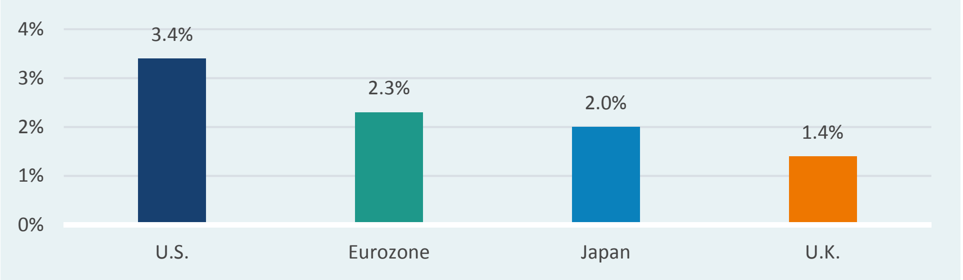
Article Source: Bloomberg, April 18th, 2018

PROPOSED VS. IMPLEMENTED U.S. TARIFFS ($BILLIONS)



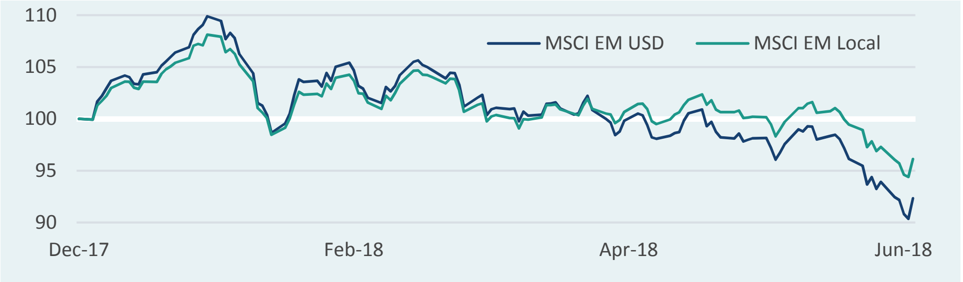
Source: Verus, as of 7/6/18

Q2 GDP EXPECTATIONS



Source: Bloomberg, as of 7/11/18

MSCI EMERGING MARKETS USD VS. LOCAL



Source: Bloomberg, as of 6/30/18

Economic environment

U.S. economics summary

— GDP growth was 2.8% year-over-year in the first quarter (2.0% quarterly annualized rate). The slightly slower pace of expansion was influenced by more conservative consumer spending than in previous quarters.

— The rate of inflation picked up moderately throughout the quarter. Core CPI rose 2.3% over the past year, reaching the upper end of its range during the current cycle. The year-over-year rate was impacted by a low base effect – the 3-month annualized core inflation rate was only 1.7%.

— Job gains during the quarter were strong, despite traditional employment measures indicating a tight labor market. Additions to nonfarm payrolls averaged 211,000 per month and the U-3 unemployment rate fell slightly from 4.1% to 4.0%.

— The broadest measure of labor market health, the ratio of employed individuals to the total population, indicates there may still be room for further improvement. More narrow indicators, such as the U-3 unemployment rate, may be overstating labor market tightness.

— The back and forth on trade between the U.S. and much of the rest of the world intensified. The White House has threatened to enact tariffs on up to $550 billion of Chinese goods over unfair trade practices and intellectual property theft. To this point, tariffs have only been implemented on around $40 billion of Chinese goods.

— The Fed raised interest rates for a second time this year in June to a target rate of 1.8% to 2.0%. Two more rate hikes are expected by the end of the year based on the Fed dot plot.

	Most Recent	**12 Months Prior**
GDP *(YoY)*	2.8% *3/31/18*	2.0% *3/31/17*
Inflation *(CPI YoY, Core)*	2.3% *6/30/18*	1.7% *6/30/17*
Expected Inflation *(5yr-5yr forward)*	2.2% *6/30/18*	1.8% *6/30/17*
Fed Funds Target Range	1.75 – 2.00% *6/30/18*	1.00 – 1.25% *6/30/17*
10 Year Rate	2.9% *6/30/18*	2.3% *6/30/17*
U-3 Unemployment	4.0% *6/30/18*	4.3% *6/30/17*
U-6 Unemployment	7.8% *6/30/18*	8.5% *6/30/17*

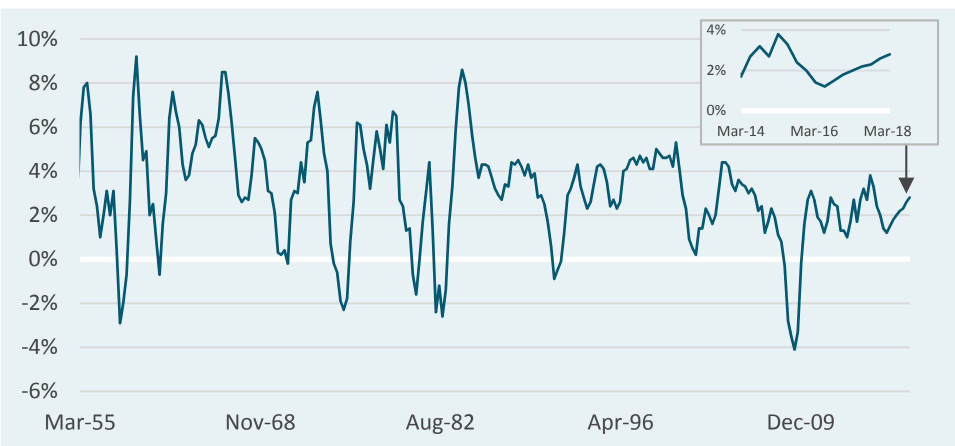
GDP growth

Real GDP growth rose 2.8% from the previous year in the first quarter (2.0% quarterly annualized rate). After a strong fourth quarter, consumers were more conservative with their purchases. Consumer spending contributed only 0.6% to the first quarter growth rate, compared to a 2.8% contribution in the previous quarter. Corporate capital investment was the biggest contributor to growth at 1.2%.

Strong growth is expected throughout the rest of the year as the benefits of fiscal stimulus begin to flow through to the economy. According to the Bloomberg consensus estimate, real GDP growth is expected to be 3.4% in the second quarter. The big question is whether the economic benefits from fiscal stimulus are a one-off or whether they will have a more lasting impact on the economy that will help counter the headwind from monetary tightening.

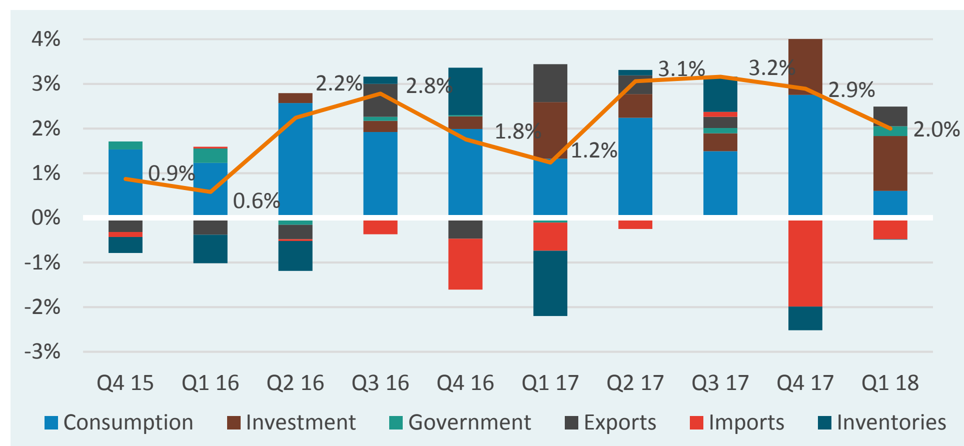
While much of the tax cut windfall has been returned to shareholders via share buybacks there has been a meaningful pick up in corporate fixed investment to more normal levels, which may help sustain growth in the coming quarters.

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 3/31/18

U.S. GDP COMPONENTS



Source: Bloomberg, annualized quarterly rate, as of 3/31/18

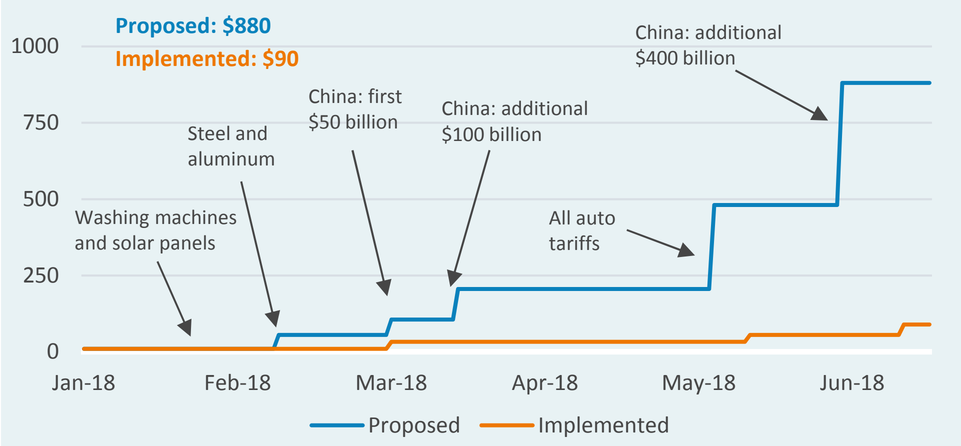
Global trade

The war of words over trade between the U.S. and much of the rest of the world intensified in recent months, particularly with China. A first round of 10% tariffs on $34 billion of Chinese goods was implemented on July 6th.

Thus far, there has been a large discrepancy between tariffs that have been proposed and tariffs that have been implemented. The U.S. has only enacted tariffs on $90 billion of global imports. In comparison, the White House has proposed placing tariffs on a total of $880 billion of imported goods. It is important to remember that tariffs are an avoidable tax on corporations conducting business in the U.S. Assuming a 10% tariff rate on all proposed goods would result in a maximum tax of $88 billion, a relatively small amount when thinking about the U.S. economy as a whole.

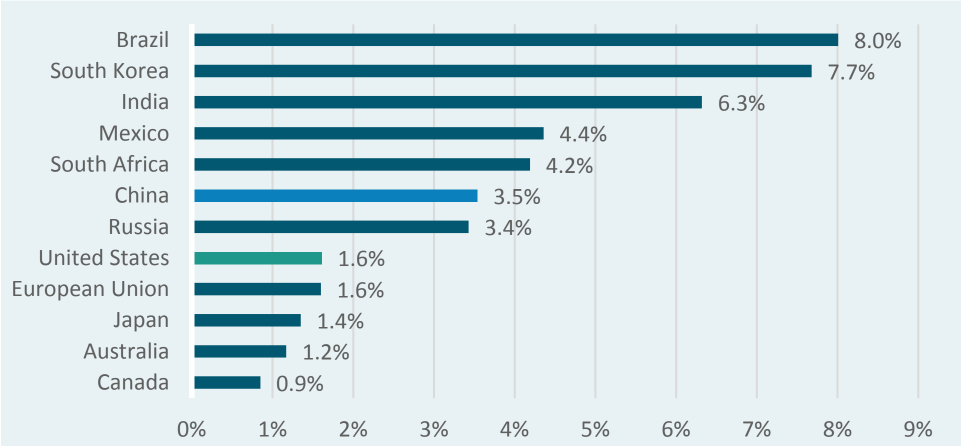
Tariffs in place so far are likely to have a minimal impact on the global economy. We believe that financial markets may be more sensitive to an escalation in the trade conflict than the actual economic impact. Much of the discussion on trade has ignored the fact that the U.S. has upheld less protectionist trade policies than many of its trading partners. While the trade conflict creates potential market downside risks, it also creates potential benefits if the end result is freer trade.

PROPOSED VS. IMPLEMENTED U.S. TARIFFS ($BILLIONS)



Source: Verus, as of 7/6/18

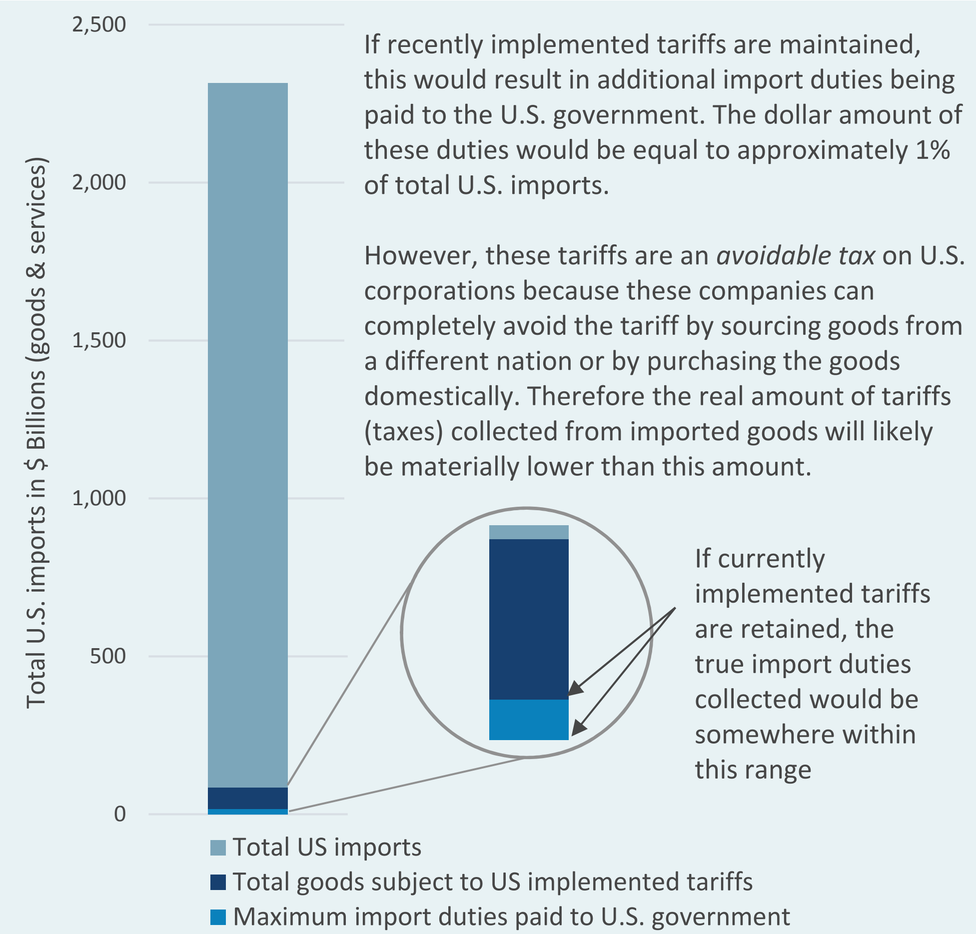
AVERAGE TARIFF RATE

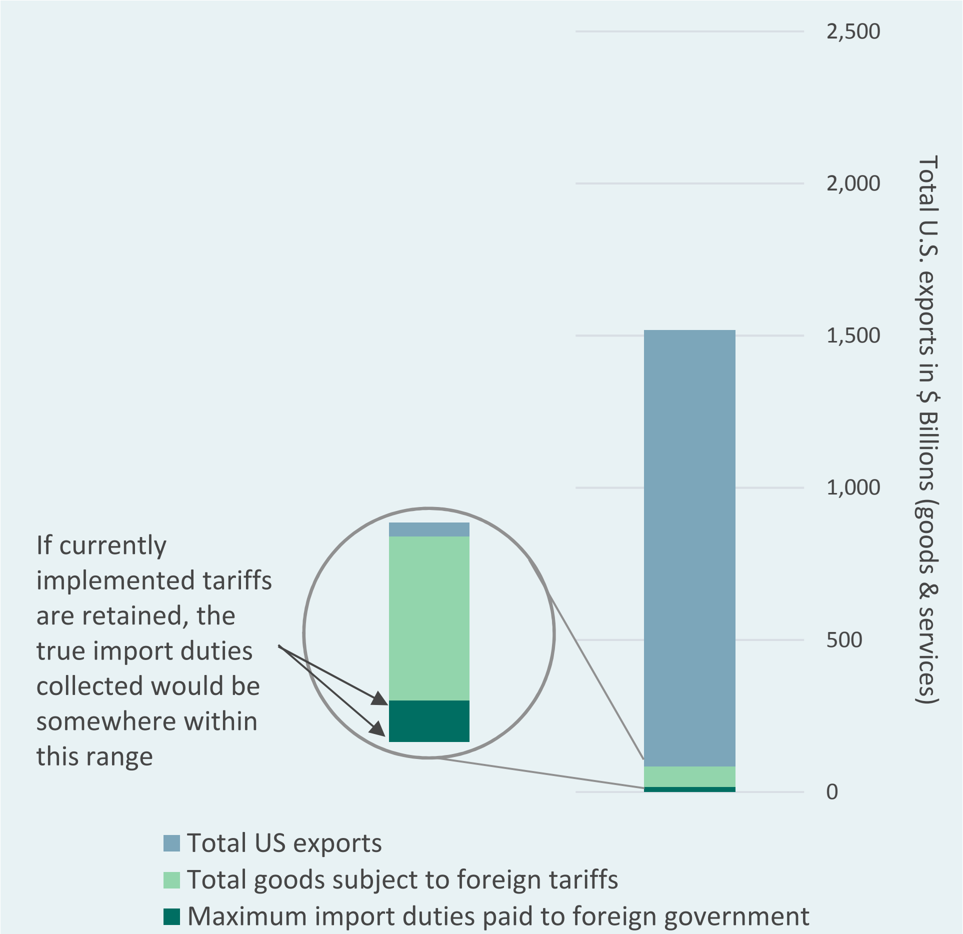


Source: WTO, 2016

Putting tariffs into perspective

Tariff duties are better thought of as an avoidable tax. The impact of recently enacted tariffs is small, especially once substitution effects are accounted for.





Source: U.S. Census Bureau, Verus

Analysis conservatively assumes a 25% tariff rate for an estimated $90 billion of tariffs on both imports and exports, both goods and services are included

Inflation

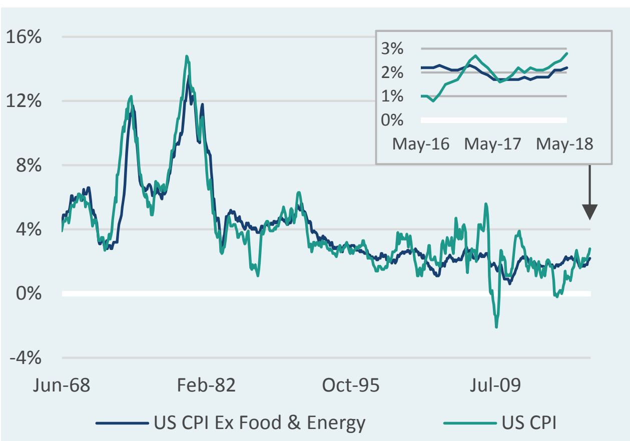
The year-over-year core CPI inflation rate was 2.3% in June, up from 2.1% three months prior. The increase in the yearly rate slightly overstates the size of the move because it was impacted by a low base effect – the annualized 3-month core inflation rate was only 1.7%.

While investors' concerns over inflation have bubbled up occasionally throughout the year, we have yet to see a material increase in price levels. Consumer price inflation has been held back by a lack of wage growth as well as structural factors such as globalization and automation which have weighed down the prices of goods.

The Fed's response to inflation data is potentially more important to investors than actual changes in inflation, barring an unforeseen shock to the upside. To this point, the central bank appears to be tolerant of inflation slightly higher than the stated 2% target.

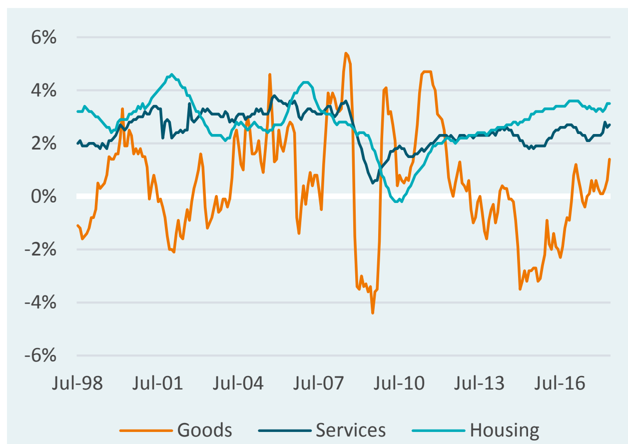
Core inflation remained modest

U.S. CPI (YOY)



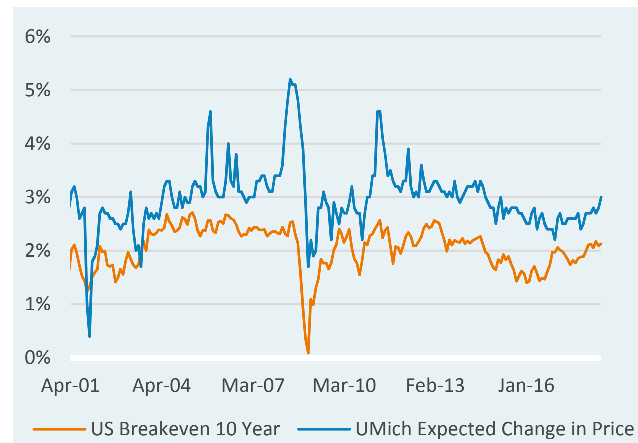
Source: FRED, as of 5/31/18

INFLATION BY PRODUCT TYPE (YOY)



Source: Bloomberg, as of 5/31/18

INFLATION EXPECTATIONS



Source: Bloomberg, as of 6/30/18

Labor market

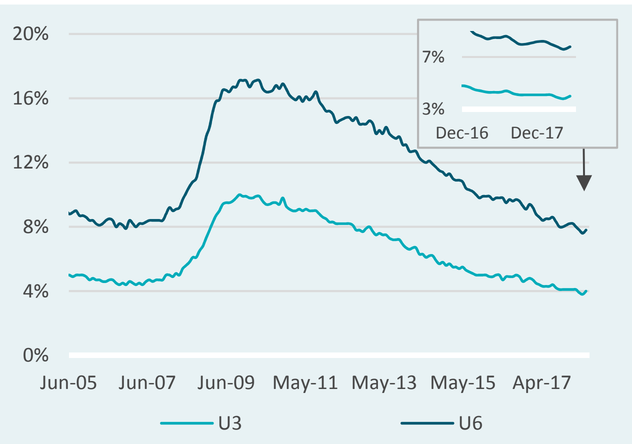
Conditions in the U.S. labor market tightened further in Q2 as unemployment moved from 4.1% to 4.0%. The unemployment rate that includes discouraged and part time workers fell from 8.0% to 7.8%. Despite these headline readings, we believe there may be considerable slack in the U.S. labor force which is not captured in traditional unemployment measures. This suggests further labor market gains in the U.S. expansion may be reflected in higher participation rates rather than solely through a decline in the unemployment rate.

Perhaps the greatest question mark in today's labor market is the degree to which long-term unemployed workers decide to resume their job search. This decision to return to work may be influenced by greater job prospects that come hand-in-hand with a strong economy, or may be influenced purely by necessity (many Americans are not adequately prepared for retirement).

Average hourly earnings growth ticked up to 2.7%, continuing a mild positive trend since the bottom of the U.S. recession.

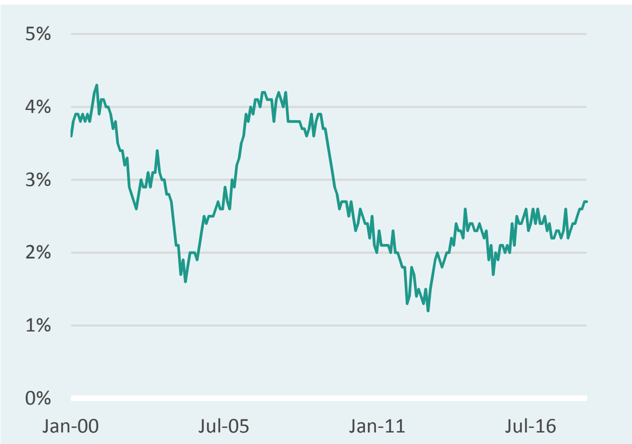
Traditional unemployment metrics may understate labor market slack

UNEMPLOYMENT RATE



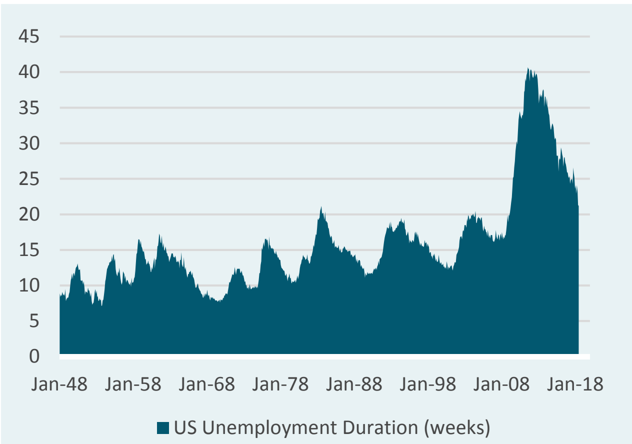
Source: FRED, as of 6/30/18

AVERAGE HOURLY EARNINGS (YOY)



Source: Bloomberg, as 5/31/18

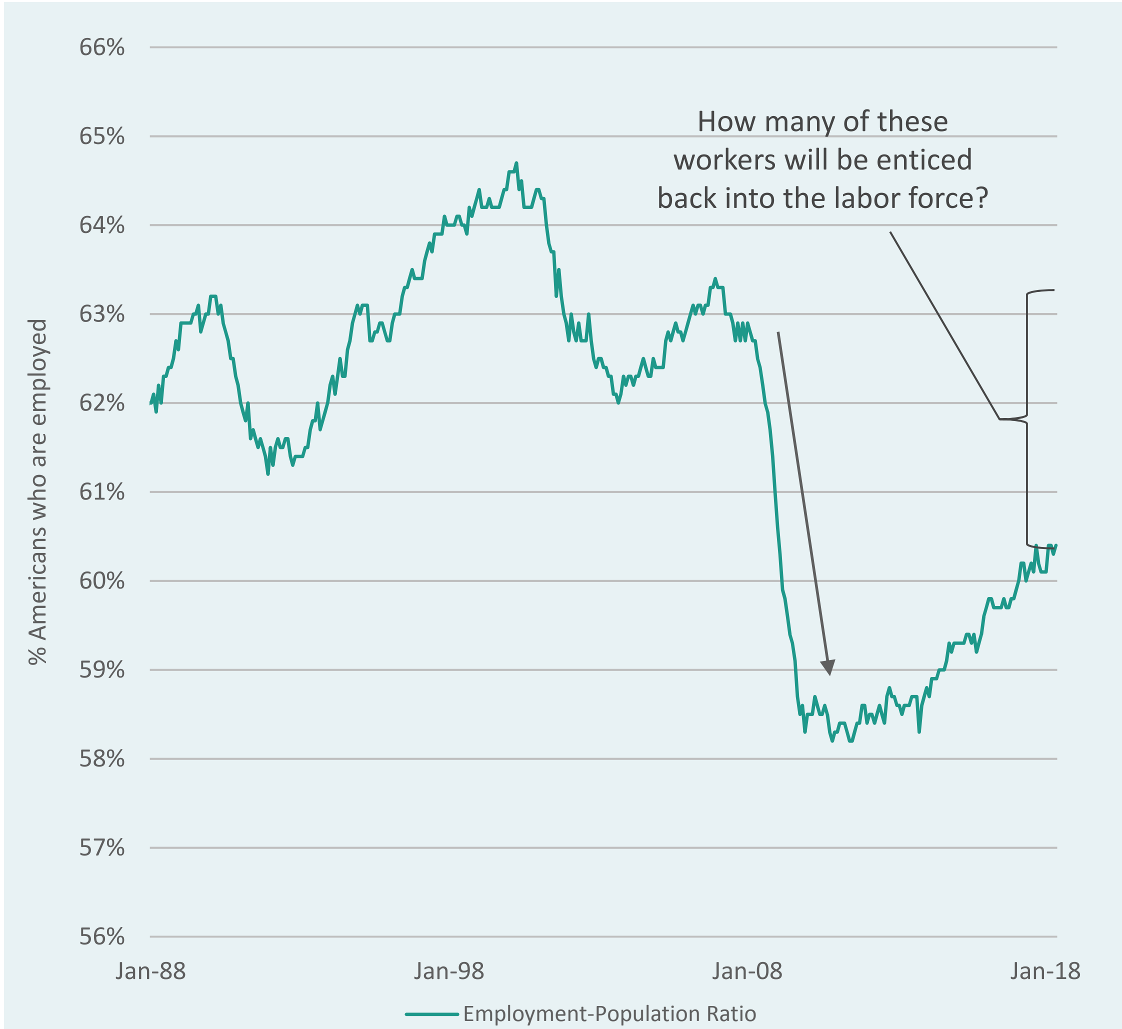
UNEMPLOYMENT DURATION



Source: FRED, as of 6/30/18

How tight is the job market?

- According to the most frequently touted measures of unemployment, the U.S. job market is at the strongest level seen in nearly 50 years. But looking at unemployment through a different lens – the number of Americans employed – paints a very different picture. A significant portion of America remains unemployed relative to 10 years ago.
- During past U.S. economic downturns, between 2% and 3% of Americans lost their jobs, though most or all of those jobs were recovered throughout the subsequent economic recovery. In comparison, 5% of Americans exited the workforce during the latest recession, and less than half of these lost jobs have been regained.
- Some of this shortfall has been fueled by demographic shifts, and some by workers giving up and permanently leaving the workforce. But the remainder of the shortfall is comprised of very discouraged workers who will eventually seek employment. If it turns out that this third category is large, the current U.S. job market may not be as tight as commonly believed, which implies more potential upside to the U.S. economic expansion.



Source: FRED, Verus, as of 6/30/18

The consumer

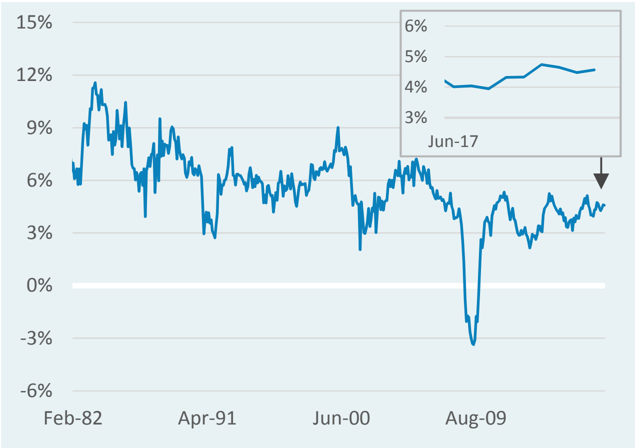
Economic conditions such as low unemployment, moderate wage gains, and restrained inflation remain broadly supportive of the U.S. consumer. Personal spending growth was 4.6% year-over-year in May, in line with the conservative spending habits seen throughout this expansion.

Consumers have also been timid with credit use during the current cycle. Households deleveraged following the financial crisis primarily through less mortgage debt, although this trend has flattened out more recently. Despite this deleveraging, household debt levels are still high relative to history at 91.5% of disposable income.

Given the more conservative use of credit, dissaving has been an important driver of consumer spending. The personal savings rate was only 3.2% in May, near historical lows. Low interest rates and high asset prices likely helped push down the savings rate. If these conditions were to moderate, it would lead to a more normal balance between spending and savings.

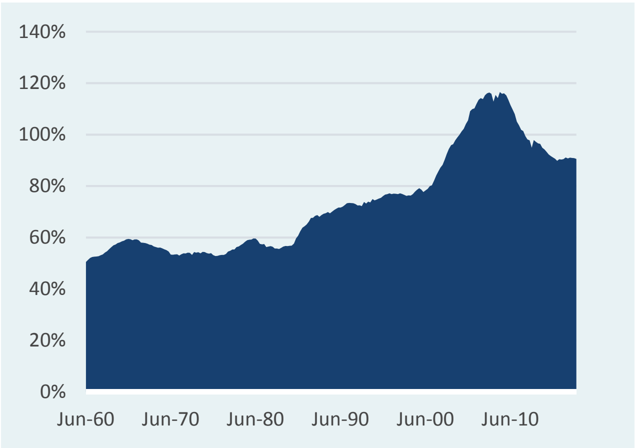
Economic conditions are still supportive of consumer spending

CONSUMER SPENDING GROWTH (YOY)



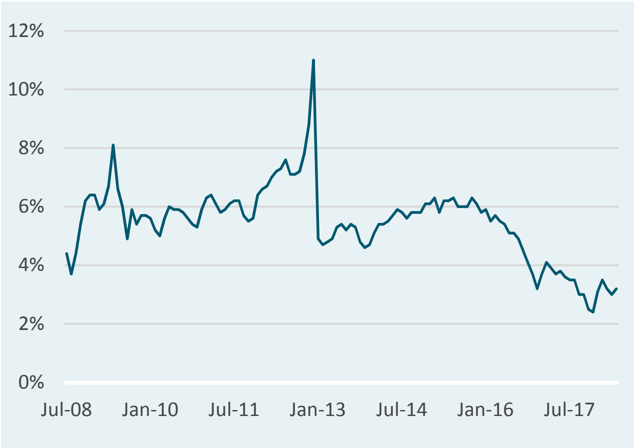
Source: Bloomberg, as of 5/31/18

HOUSEHOLD DEBT (% OF DISPOSABLE INCOME)



Source: Bloomberg, as of 3/31/18

PERSONAL SAVINGS RATE



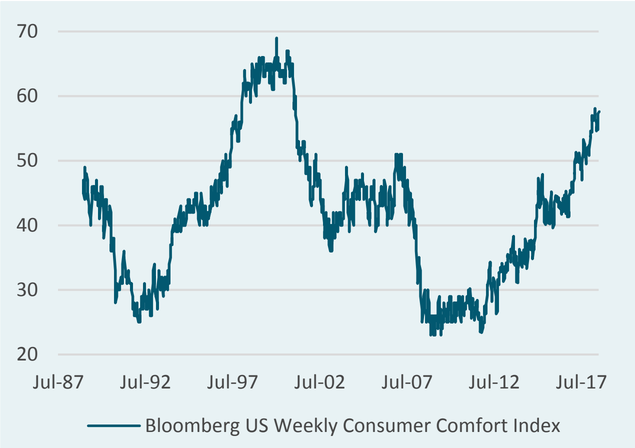
Source: FRED, as of 5/31/18

Sentiment

Consumer and business sentiment readings are impressively high. The Bloomberg U.S. Weekly Consumer Confidence Index is in the 90th percentile, since 1985. The University of Michigan Consumer Sentiment Survey is in the 87th percentile, since 1978. Survey respondents provided favorable views on jobs and wages, and broadly expect modest gains in U.S. employment. Cited concerns included rising inflation, higher energy prices, and the economic risks posed by tariffs.

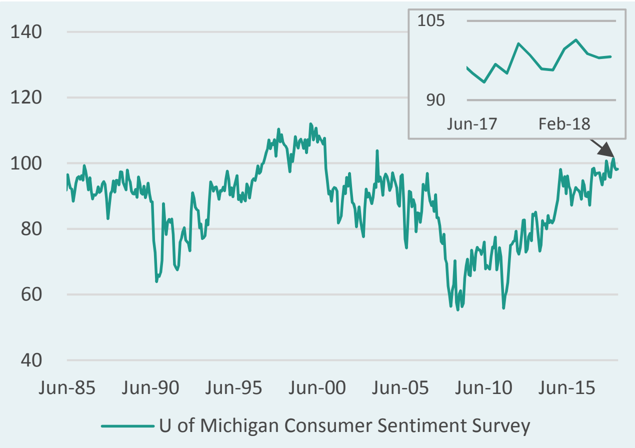
The NFIB Small Business Optimism Index was 107.2 at the end of the quarter – its 6th highest reading in survey history. NFIB noted that "small business owners continue to report astounding optimism as they celebrate strong sales, the creation of jobs, and more profits." Business owners are concerned about the inability to find qualified employees for open positions, consistent with the historically high number of unfilled job openings reported by the Bureau of Labor Services.

CONSUMER COMFORT INDEX



Source: Bloomberg, as of 6/30/18 (see Appendix)

CONSUMER SENTIMENT



Source: University of Michigan, as of 6/30/18 (see Appendix)

NFIB SMALL BUSINESS OPTIMISM INDEX

Source: NFIB, as of 6/30/18 (see Appendix)

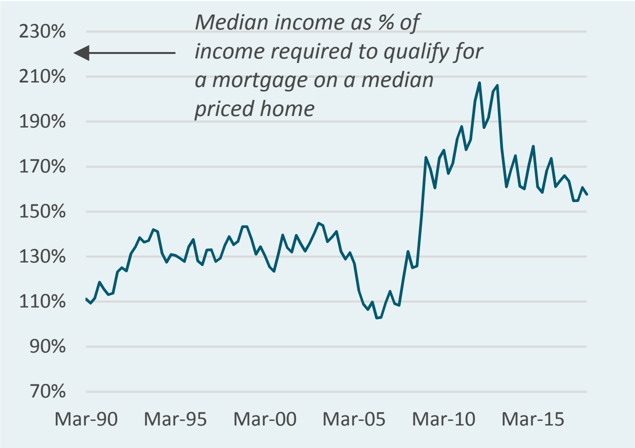
Housing

Single-family home prices have risen steadily thus far this year. As of April, the Case-Shiller National Home Price Index was up 6.4% from the previous year, and was 8.8% above the pre-crisis peak. Since the housing market bottomed in February of 2012, home prices have jumped by nearly 50% while personal incomes were up only 24% during the same period. Despite the outsized gain in home prices, demand for single-family housing has been strong, aided by low mortgage interest rates. Rising mortgage rates may make it difficult for many potential home buyers to enter the market at current prices. However, mortgage rates are still low and home affordability is high relative to history – the median income is over 1.5 times the amount required to qualify for a mortgage on a median priced home.

The homeownership rate rose in 2017 for the first time in 13 years. This rate bottomed at 62.9% in the middle of 2016 and sits at 64.2% as of the end of the March. The rise in homeownership has been driven by younger, first time owners (i.e. Millennials). Mortgage lending standards have moderated after years of very tight standards following the financial crisis, which has helped younger buyers enter the market.

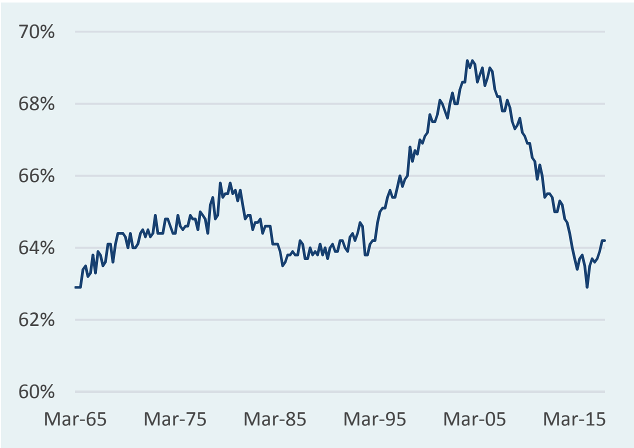
Home ownership rose for the first time in 13 years

HOUSING AFFORDABILITY INDEX



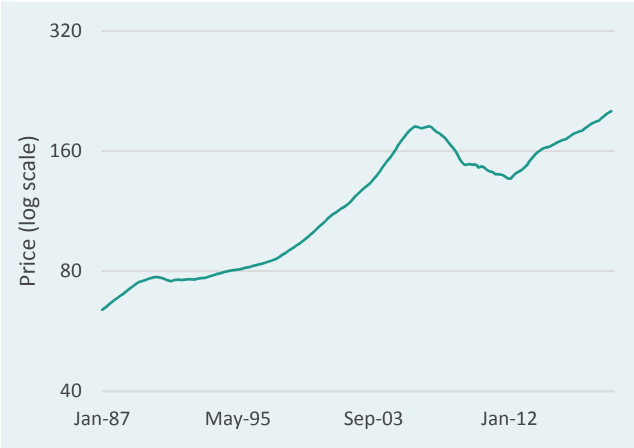
Source: Bloomberg, as of 3/31/18

HOME OWNERSHIP RATE



Source: FRED, as of 3/31/18

U.S. HOME PRICE INDEX



Source: Case-Shiller National Home Price Index, as of 4/30/18

International economics summary

— The synchronized global growth story of the past year has shifted somewhat as greater performance disparity is visible across global economies. Growth continues to be positive but is more moderate in places.

— Developed market economies are expected to grow less quickly in the coming years while emerging economy growth rates are expected to rise.

— The U.S. implemented a first round of tariffs on Chinese imports on July 6th, which impacted $34 billion of goods. So far, only a small portion of the discussed tariffs have been enacted.

— In June, Mario Draghi officially announced the end of Europe's bond buying program. Asset purchases are scheduled to end in December, and it was promised that interest rates will remain unchanged through the summer of 2019. This message was seen by markets as more dovish than expected.

— Fears were raised over Italy's uncertain role in the EU, following a new coalition of the anti-establishment Five Star Movement and League Party taking over the government. Italian bond yields spiked severely during the move, but have since moderated.

— The Eurozone Composite PMI rose for the first time in five months to 54.8 in June. PMIs in most developed and emerging markets remain above 50, indicating expansion.

— The U.S. dollar appreciated 5% during the quarter. Certain emerging market currencies have devalued sharply, such as the Argentine peso, which is down more than 35% against the USD on the year.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.8% 3/31/18	2.8% 5/31/18	4.0% 6/30/18
Eurozone	2.5% 3/31/18	2.0% 6/30/18	8.6% 3/31/18
Japan	1.1% 3/31/18	0.7% 5/31/18	2.2% 5/31/18
BRICS Nations	5.8% 3/31/18	2.5% 6/30/18	5.6% 3/31/18
Brazil	1.2% 3/31/18	4.4% 6/30/18	12.8% 6/30/18
Russia	1.3% 3/31/18	2.3% 6/30/18	4.7% 5/31/18
India	7.7% 3/31/18	5.0% 6/30/18	8.8% 12/31/17
China	6.8% 3/31/18	1.9% 6/30/18	3.9% 3/31/18

International economics

The synchronized global growth story of the past year has shifted as economies display more disparate economic performance. The change has not been too dramatic - growth continues to be positive but more moderate in places. Since 2016 we have been discussing political and economic risks which exist in Europe. These fears were confirmed in recent quarters as Eurozone economies missed expectations in a variety of areas including GDP growth, retail sales, and industrial production – casting some doubt over the European recovery story.

The Eurozone and Japan exhibited inflation well below central bank targets in the second quarter, while the U.S. delivered a moderate rise. Overall, inflation conditions remain benign which has allowed (or necessitated) easier central bank policy.

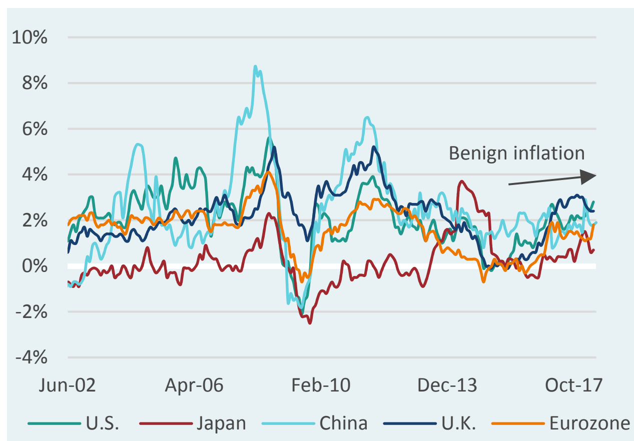
Labor markets tightened broadly, in line with an environment of positive economic expansion. However, joblessness remains stubbornly high in some Eurozone countries such as Italy, Spain, and Greece.

Synchronized global growth has moderated

REAL GDP GROWTH (YOY)

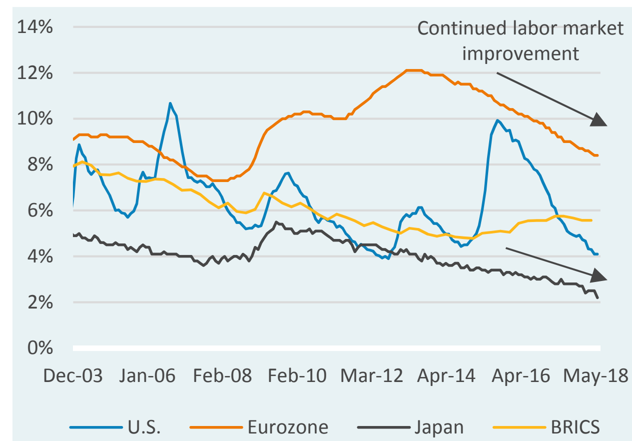
Source: Bloomberg, as of 3/31/18

INFLATION (CPI YOY)



Source: Bloomberg, as of 5/31/18

UNEMPLOYMENT RATE



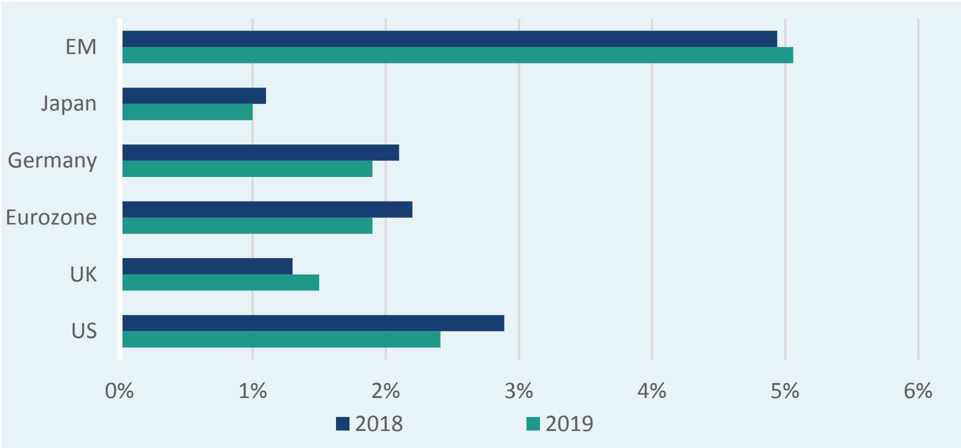
Source: Bloomberg, as of 5/31/18 or most recent release

GDP growth expectations

Economic growth expectations for the rest of 2018 and 2019 have begun to show widening differentials between the U.S. and the rest of the developed world. GDP expectations for the U.S. have been revised upward over the past six months partly due to an expected boost from fiscal stimulus, while growth expectations for other developed countries have been revised slightly lower. This disparity has led to skepticism regarding the story of accelerating synchronized global growth which economies experienced towards the second half of 2017.

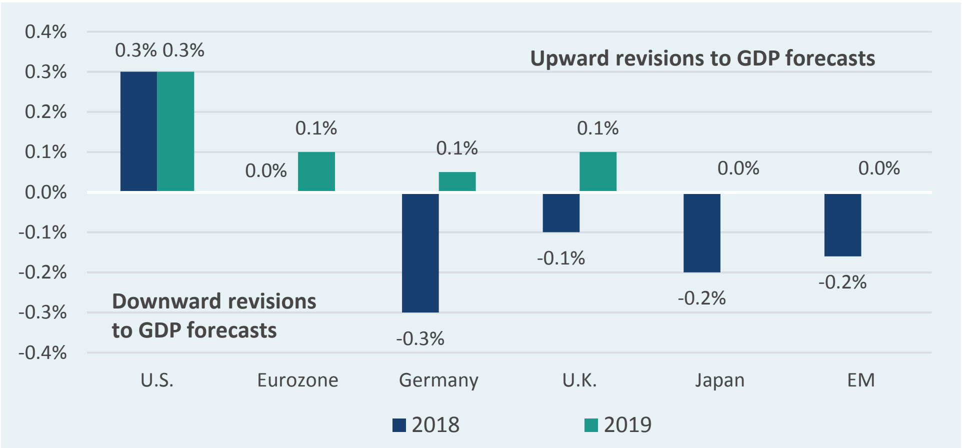
In 2019, growth is expected to moderate in every major developed country as risks develop further, such as tighter monetary conditions. Achieving the right balance of monetary tightening at this stage of the economic cycle becomes increasingly difficult, and the risk of a policy mistake is greater. However, cyclical conditions in most economies (i.e. moderate inflation, wage gains) may allow central banks to be patient, extending the cycle even further. Emerging market economy growth premiums are expected to increase – these markets are earlier in their economic and monetary policy cycles than developed markets.

GDP GROWTH EXPECTATIONS (%)



Source: Bloomberg, as of 7/5/18

YTD NET CHANGES IN GDP EXPECTATIONS



Source: Bloomberg, as of 7/5/18

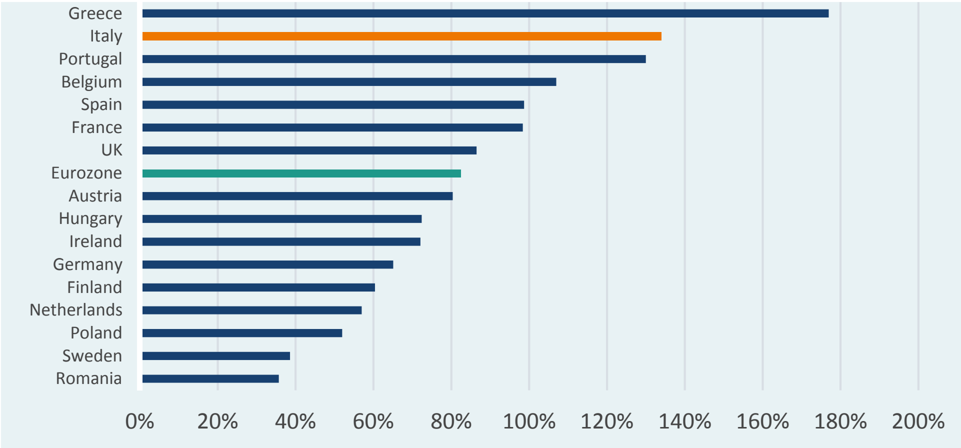
Political shakeup in Italy

Fears were raised over Italy's possible exit from the Eurozone following a coalition of the anti-establishment Five Star Movement and League Party. Italian bond yields spiked severely during the move, but have since moderated.

The greatest immediate risk seems to be coalition talks of significant spending increases. Per the Maastricht Treaty – the founding document of the European Union (EU) – member nation fiscal budgets are limited to a debt-to-GDP level of 60% and a budget deficit of 3% of GDP. Italy's debt-to-GDP is over 130%, while for now the country is running a more reasonable budget deficit of 1.6%. If Italy forges ahead with fiscal stimulus, this may result in further conflict with Maastricht Treaty guidelines and may place the new emboldened leaders head-to-head with the EU.

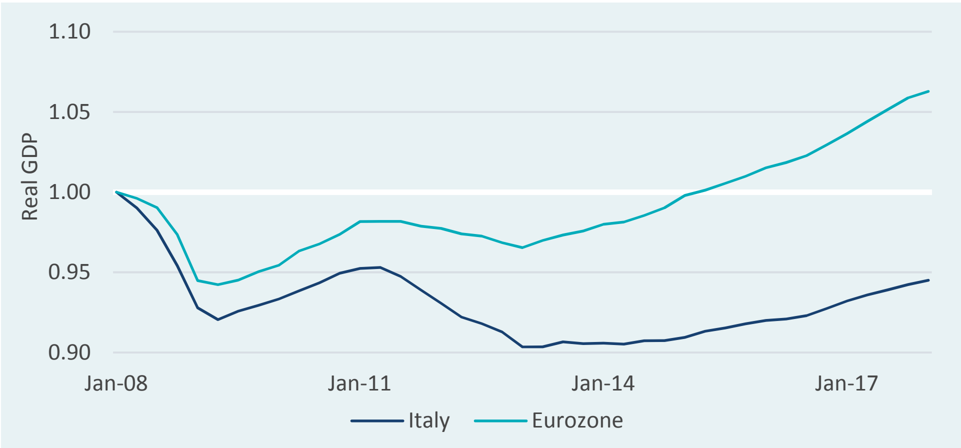
The political events in Italy tie into a broader European trend – the growing power and influence of populism. Populist movements have been fueled by severe economic disparity between some Eurozone economies as well as controversial EU policies relating open borders and immigration. This populist trend will likely pose an ongoing threat to the stability of European economies and the EU as a whole.

DEBT-TO-GDP



Source: ec.europa.eu, as of 2017 Q3

EUROZONE VS. ITALY REAL GDP



Source: Bloomberg, as of 3/31/18

Fixed income rates & credit

Interest rate environment

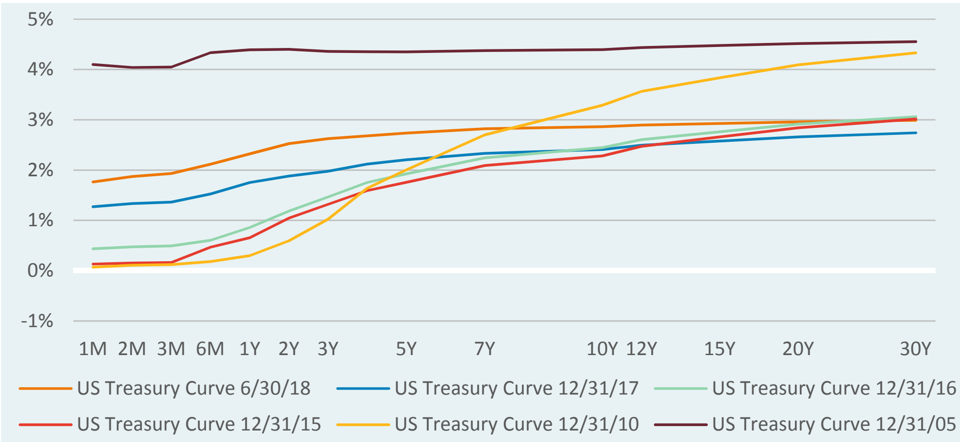
- The Fed raised interest rates in June for the second time this year to a target range of 1.8-2.0%. The balance sheet unwind continued as planned with approximately $18 billion in Treasuries and $12 billion in MBS coming off each month during the quarter.
- According to the Fed dot plot, officials are expecting two additional rate hikes this year, while market pricing suggests only one more hike. Quicker than expected Fed tightening would represent a key risk to the economy and asset prices.
- The 10-year U.S. Treasury yield ticked up modestly during the quarter to 2.9% while the short-end of the curve rose further. The spread between the 2- and 10-year yields fell to a cycle low of 33 bps at quarter end. By another measure of curve shape, the 10-year yield minus 3-month yield, the curve remains at a level of steepness closer to the longer-term average (92 bps vs. 184 bps average).
- Historically, an inverted yield curve has preceded recessions, but the timing between inversion and recession has been anywhere from one to three years.
- In June, Mario Draghi officially announced the end of the Eurozone's bond buying program. The ECB stated that purchases will end in December, and interest rates will remain unchanged through summer of 2019. The markets interpreted this as dovish and yields fell on the news.
- Italian sovereign yields spiked after it appeared the country was headed for new elections later in the year. The 2-year yield jumped 186 bps in one day to 2.8% as risk premiums rose. In the end, a coalition government was formed between the Five Star and League parties and the country avoided going back to the polls.
- Emerging market local and hard yields moved higher, influenced by a general risk-off sentiment towards EM as well as idiosyncratic risks in several vulnerable countries, such as Turkey and Argentina.

Area	Short Term (3M)	10 Year
United States	1.91%	2.86%
Germany	(0.59%)	0.30%
France	(0.63%)	0.67%
Spain	(0.42%)	1.32%
Italy	(0.12%)	2.68%
Greece	1.04%	3.96%
U.K.	0.61%	1.28%
Japan	(0.14%)	0.04%
Australia	1.92%	2.63%
China	3.01%	3.48%
Brazil	6.45%	11.68%
Russia	6.62%	7.81%

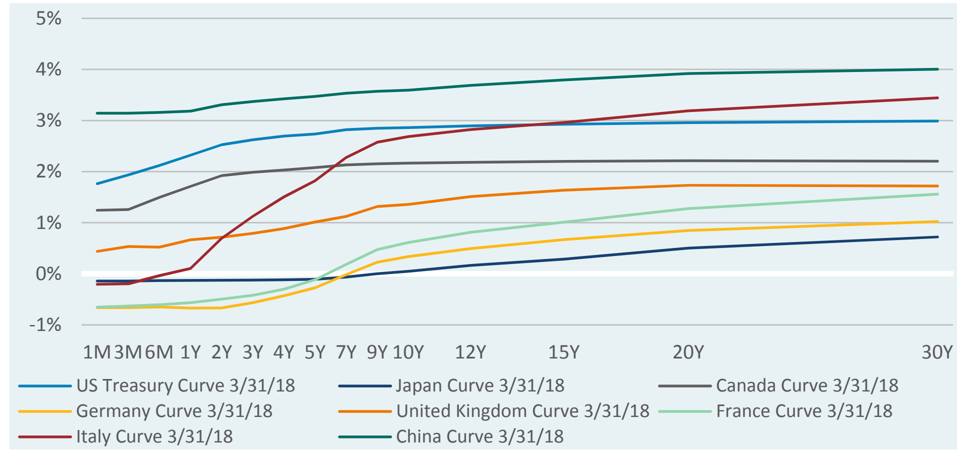
Source: Bloomberg, as of 6/30/18

Yield environment

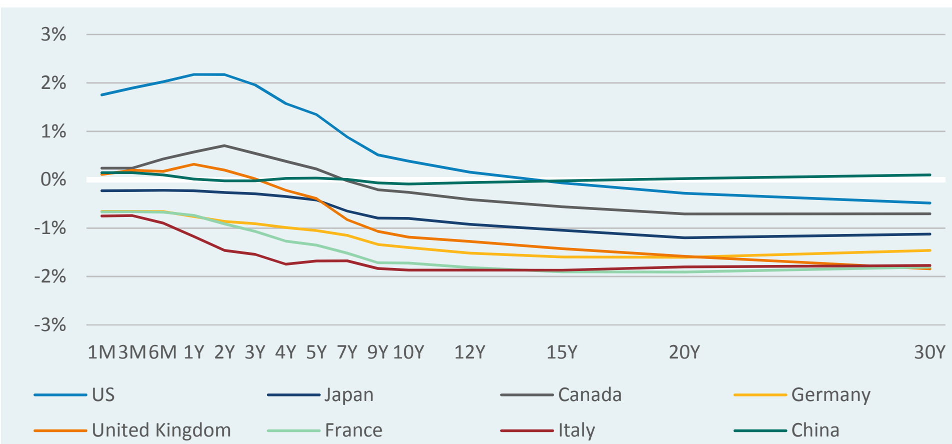
U.S. YIELD CURVE



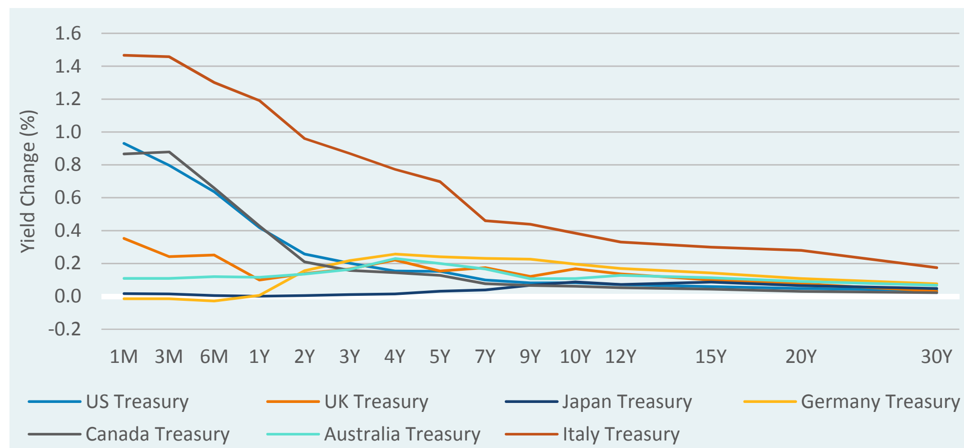
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS

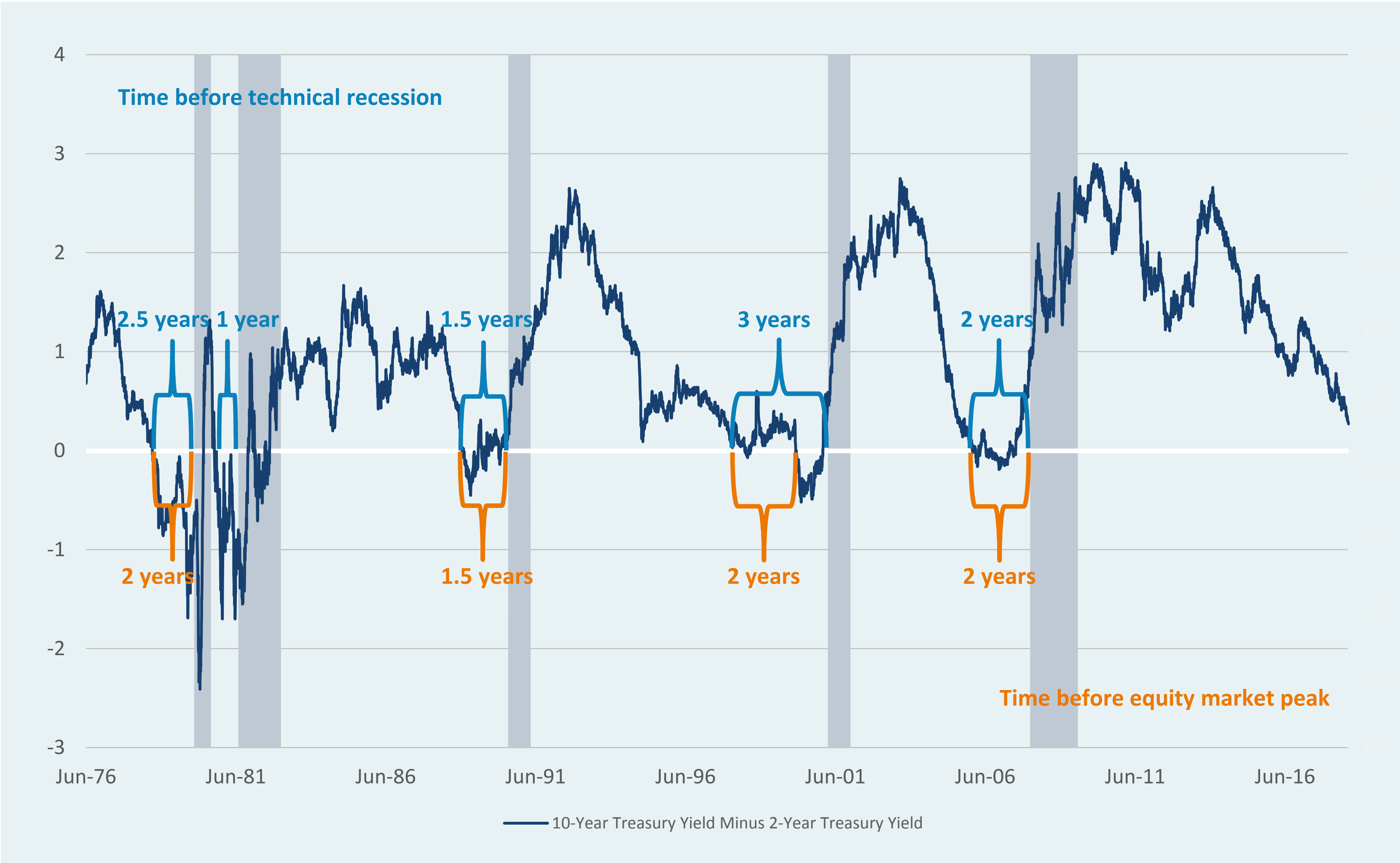


IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/18

What does an inverted curve indicate?

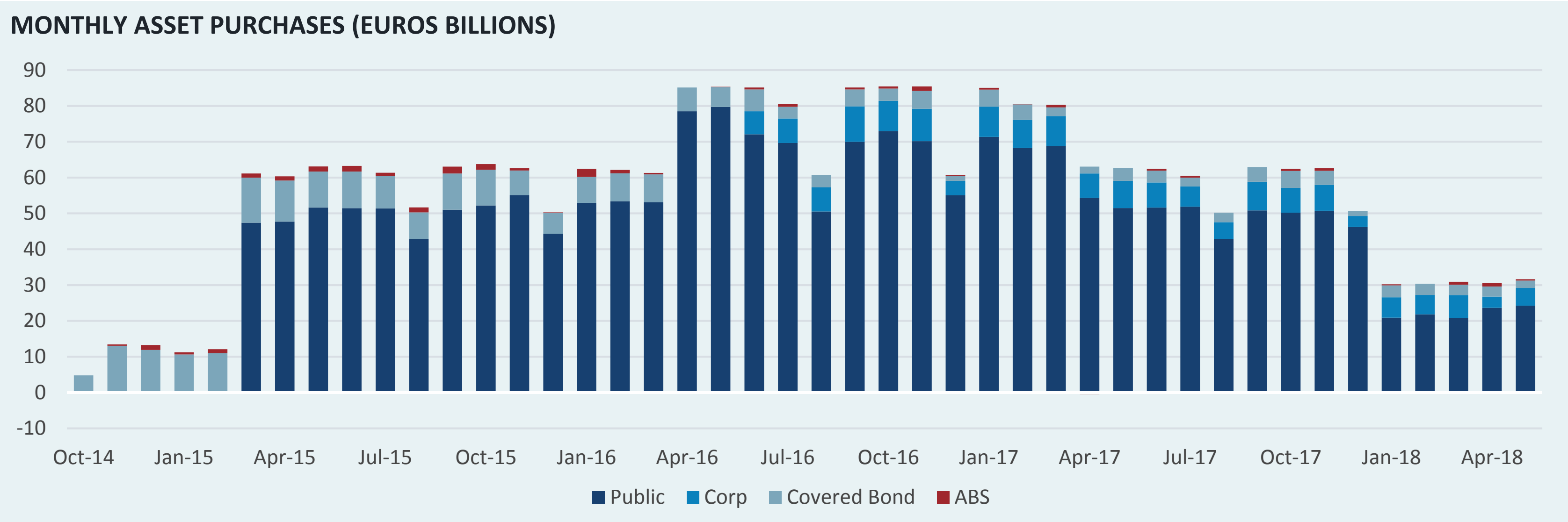


Yield curve inversions often occur during the late-cycle

Recession and equity market peaks typically do not occur immediately after an inversion

Source: FRED, Verus – time that passed between initial yield curve inversion and the next technical recession, and time that passed between initial yield curve inversion and next equity market peak
Note: There was not a clear equity market peak during the early 1980's expansion. A "time before equity market peak" was therefore not calculated.

ECB bond buying program



Country	Debt Purchased by ECB	% of Total Sovereign Purchases	% of Total Country Debt
Germany	€ 485.6	26.6%	23.2%
France	€ 396.7	21.8%	17.9%
Italy	€ 344.8	18.9%	15.0%
Spain	€ 244.4	13.4%	21.4%
Netherlands	€ 108.5	5.9%	26.1%
Belgium	€ 69.2	3.8%	15.3%
Austria	€ 54.9	3.0%	18.9%
Portugal	€ 33.7	1.8%	13.9%

European Central Bank bond purchases are expected to end in December

These purchases have acted as a major support to bond prices in recent years

Credit environment

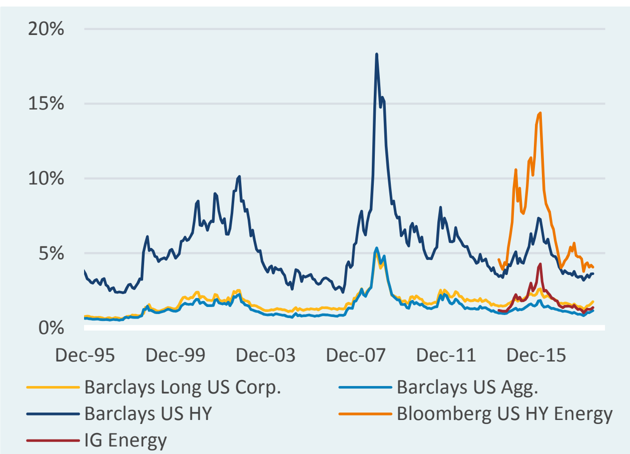
Credit spreads in both leveraged loans and high yield have widened slightly since the beginning of the year, but are still sitting well below their historical averages. Loans outperformed high yield bonds during eight of the past nine months. LIBOR has steadily risen since 2016, surpassing the LIBOR floors which exist in senior loans, causing them to be fully floating-rate instruments.

U.S. high yield option-adjusted spreads widened slightly in the second quarter to 3.6% – the asset class generated a 1.0% total return. Tight credit spreads in both high yield bonds and loans have been driven by strong corporate fundamentals, manageable debt maturities and general macroeconomic improvement. Credit spreads have historically been a good indicator of future performance relative to Treasuries.

Based on low interest rates and tight spreads, we recommend an underweight to U.S. investment and high yield credit.

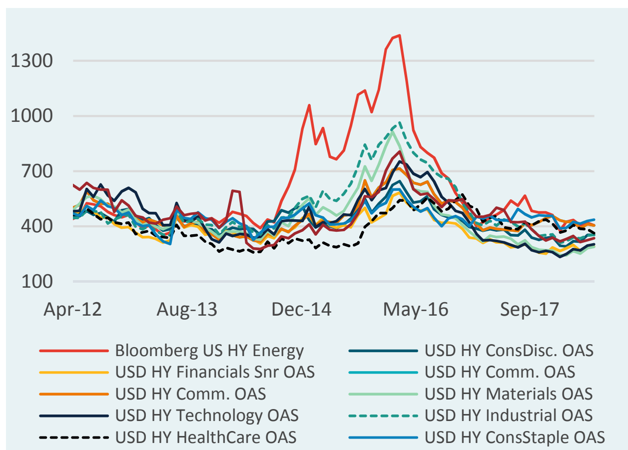
Credit spreads are tight across the capital structure

SPREADS



Source: Barclays, Bloomberg, as of 6/30/18

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/18

Market	Credit Spread (6/30/18)	Credit Spread (1 Year Ago)
Long US Corporate	1.8%	1.6%
US Aggregate	1.2%	1.0%
US High Yield	3.6%	3.6%
US Bank Loans	3.5%	3.7%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/18

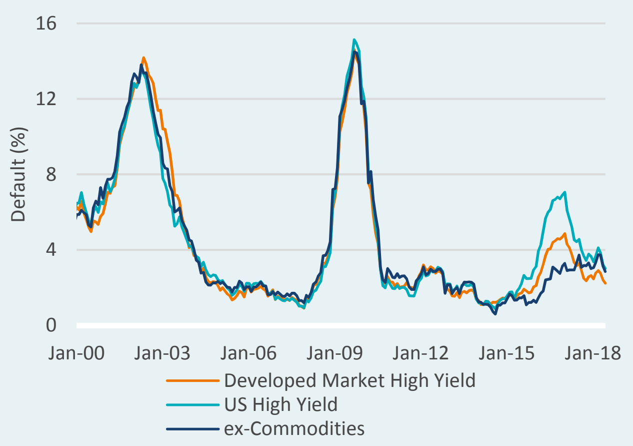
Issuance and default

Default activity has been low and stable in the U.S. and international credit markets. The par-weighted U.S. default rate remains below its long-term average of 3.0-3.5% and is currently at 2.0%. In the second quarter, $1.5 billion of defaults occurred - the lowest quarterly total since Q4 2013.

Senior loan and high yield markets are recovering from a wave of defaults seen in 2015-2016, generated from energy and metals/mining sectors. Recovery rates for high yield bonds have vastly improved since that time.

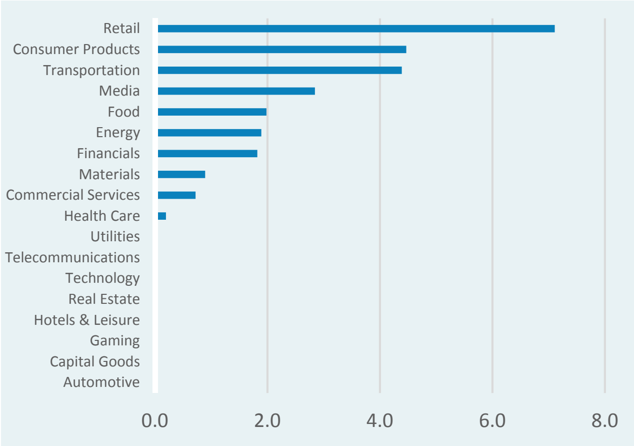
Issuance in high yield bonds totaled $126 billion compared with $176 billion across the first half of 2017. Similarly, issuance in leveraged loans totaled $501 billion, compared with over $577 billion in the first half of 2017. New issue spreads continue to compress with strong demand supported by significant retail and institutional inflows into both high yield and senior loan asset classes, as well as CLO formation.

HY DEFAULT TRENDS (ROLLING 1 YEAR)



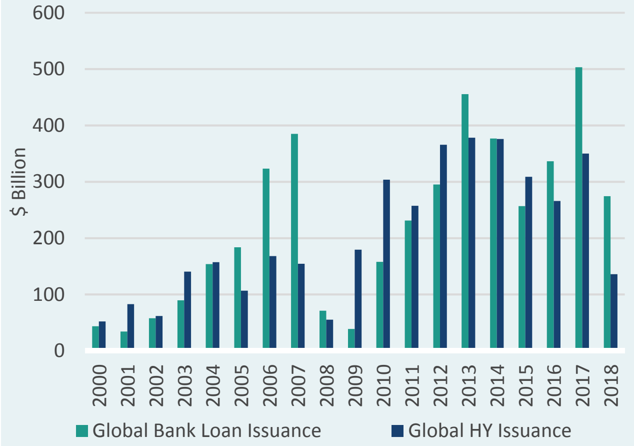
Source: BofA Merrill Lynch, as of 6/30/18

HY SECTOR DEFAULTS (LAST 12 MONTHS)



Source: BofA Merrill Lynch, as of 6/30/18 – par weighted

GLOBAL ISSUANCE (BILLIONS)



Source: Bloomberg, BofA Merrill Lynch, as of 6/30/18

Emerging market debt

Emerging market debt experienced a difficult quarter, particularly in local currency bonds. The JPM EMBI Index (hard) and JPM GBI-EM Index (local) returned -3.5% and -10.4%, respectively. Much of the negative performance in local debt was driven by currency depreciation and rising risk premiums in several vulnerable countries. Excluding Venezuela, there has not yet been any defaults, delayed payments or credit downgrades in this space – Argentina narrowly avoided defaulting after securing a $50 billion bailout from the IMF.

Currency movement in local debt accounted for approximately 80% of the losses in the second quarter. While many currencies moved due to broad strengthening of the U.S. dollar, several countries with high external debt loads and current account deficits, including Brazil, Argentina, and Turkey, saw their currencies depreciate sharply.

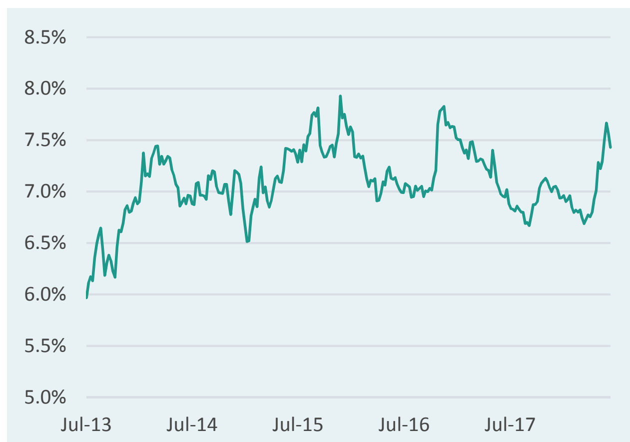
Outside of a few countries, we believe the economic backdrop remains positive for emerging market debt. Most markets have come a considerable way in trimming external debt over the past few years which has made them less reliant on dollar funding. The recent sell-off has created value opportunities that might be taken advantage of – active management is preferred in this asset class.

We maintain a positive outlook on emerging market debt

EMD HARD YIELDS

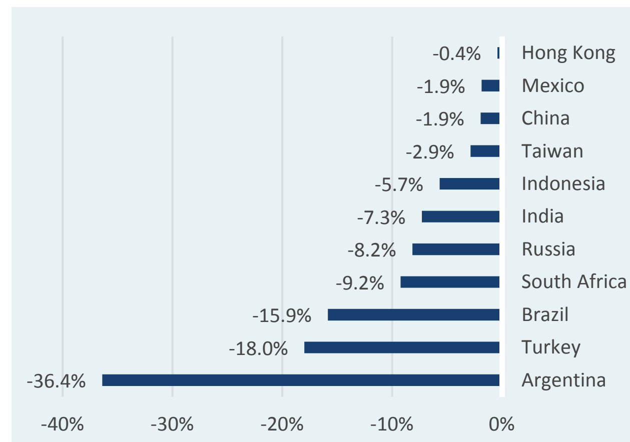
Source: Bloomberg, as of 6/30/18

EMD LOCAL YIELDS



Source: Bloomberg, as of 6/30/18

YTD CURRENCY LOSSES VS USD



Source: Bloomberg, as of 6/30/18

Equity

Equity environment

— We maintain an overweight position to equities through a positive tilt to emerging markets. We do not believe recent price swings reflect any major fundamental change to the trajectory of emerging markets. Equity bull runs in these markets have typically incurred a 10% or larger drawdown sometime during the rally.

— Outside of emerging markets, equities have remained fairly range bound following the February selloff. As corporate earnings rise and prices stay flat, equity valuations have been pushed down to more attractive levels closer in line with the historical average.

— Concerns over global trade contributed to a choppy month for equities, although no major breakthroughs or setbacks occurred. Global equities were up +2.9% on a hedged basis but currency depreciation acted as a drag (+0.5% unhedged).

— The value premium has delivered anomalously poor performance – the worst 10-year return on record (since 1926). However, because performance differences were due to earnings growth disparity rather than moves in valuation, the price difference between value and growth stocks has remained fairly normal. A tactical opportunity to overweight value is not yet apparent - we believe investors should stay the course.

— Equity volatility moved to below-average levels once again, following February's spike. The VIX averaged 15.3 during Q2.

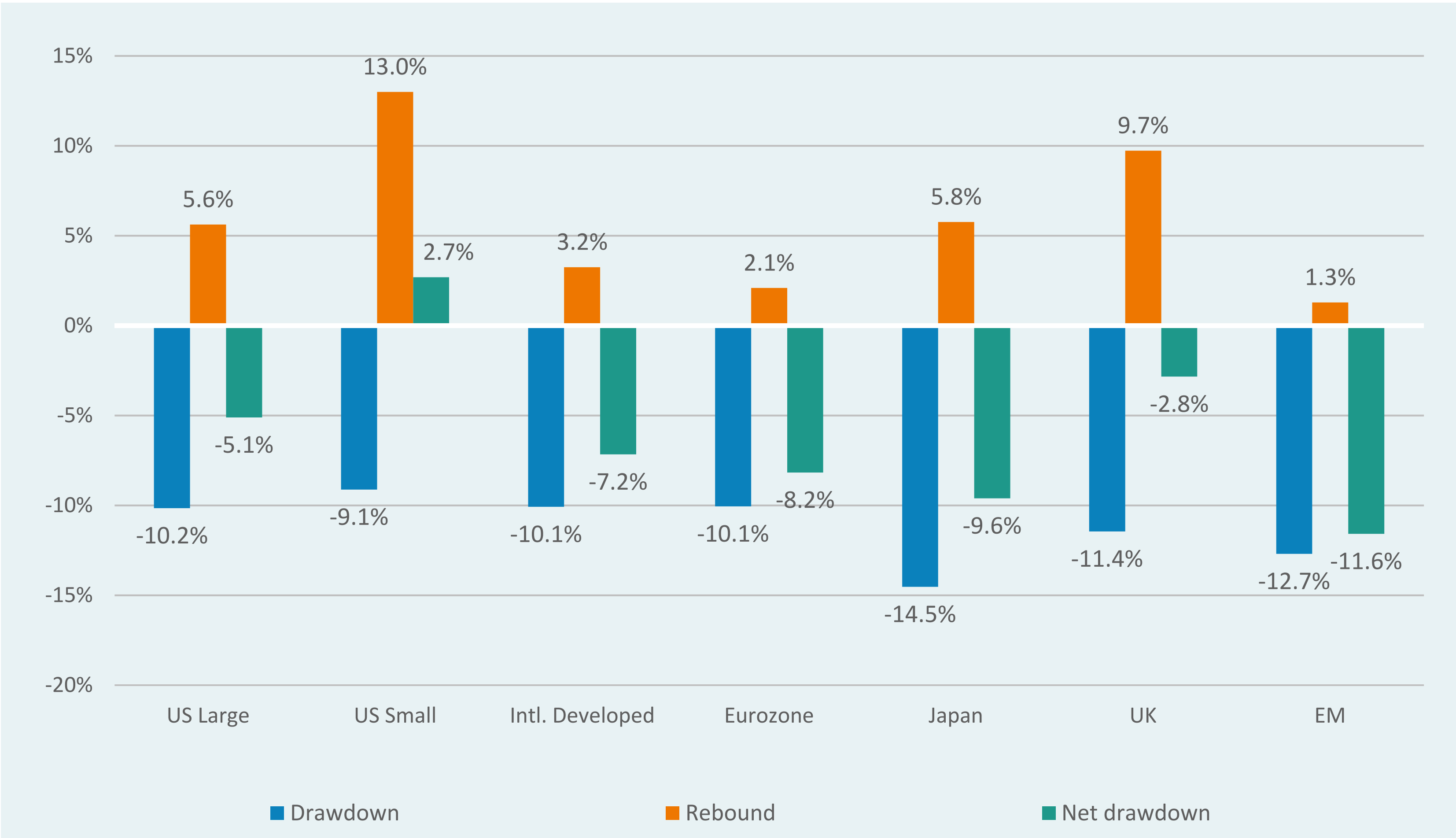
— Currency volatility has frequently been greater than equity market volatility in recent years, causing return disparity for investors with unhedged international assets. A hedging program could allow investors to significantly reduce or eliminate this uncompensated risk.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	3.6%		2.9%		14.5%	
US Small Cap (Russell 2000)	7.8%		7.7%		17.6%	
US Large Value (Russell 1000 Value)	1.0%		-2.0%		6.0%	
US Large Growth (Russell 1000 Growth)	5.8%		7.3%		22.5%	
International Large (MSCI EAFE)	(1.2%)	3.9%	(2.7%)	0.0%	6.8%	7.9%
Eurozone (Euro Stoxx 50)	(2.3%)	3.6%	(3.7%)	0.5%	3.7%	3.7%
U.K. (FTSE 100)	(3.1%)	9.8%	(0.9%)	2.2%	10.2%	9.9%
Japan (NIKKEI 225)	0.2%	4.4%	0.5%	(1.1%)	15.1%	13.2%
Emerging Markets (MSCI Emerging Markets)	(8.0%)	(3.6%)	(6.7%)	(3.0%)	8.2%	9.5%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/18

2018 peak to trough

PEAK TO TROUGH



Most equity markets remain range bound since the February selloff

U.S. small caps have fully recovered while E.M. has stayed depressed

2018 peak to trough, local returns, as of 7/2/18 – the trough (market bottom) date for each market is as follows: US Large (2/8), US Small (2/8), Intl. Dev. (3/26), Eurozone (3/23), Japan (3/23), UK (3/26), EM (6/28)

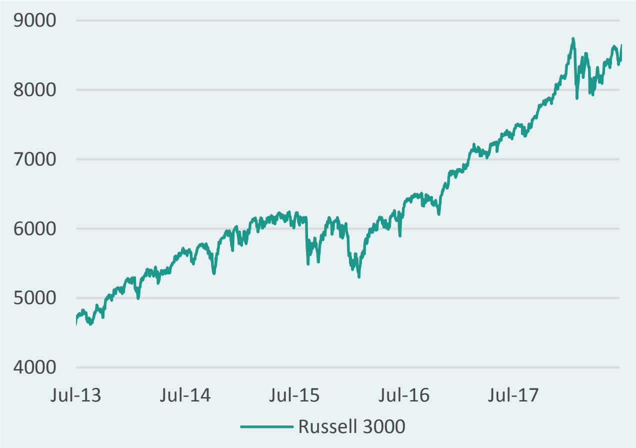
Domestic equity

U.S. equities were range bound over the quarter – the S&P 500 Index posted a positive return of 3.4% and traded within a tight range between 2600 and 2800. The ups and downs of trade negotiations, particularly those between the U.S. and China, impacted equity markets during the quarter. However, considerable uncertainty surrounding the outcome of these negotiations likely helped keep equities from breaking out of their range in either direction.

Strong year-over-year earnings growth is expected to continue for the second quarter. According to FactSet, the bottom-up analyst earnings growth forecast for the S&P 500 is 19.9%. Forward 12-month earnings growth expectations were revised higher throughout the quarter while equity prices leveled out. Given that prices tend to following earnings, there may be potential upside to prices if the expected high growth is realized. Alternatively, higher discount rates from Fed tightening may offset the impact of strong earnings growth.

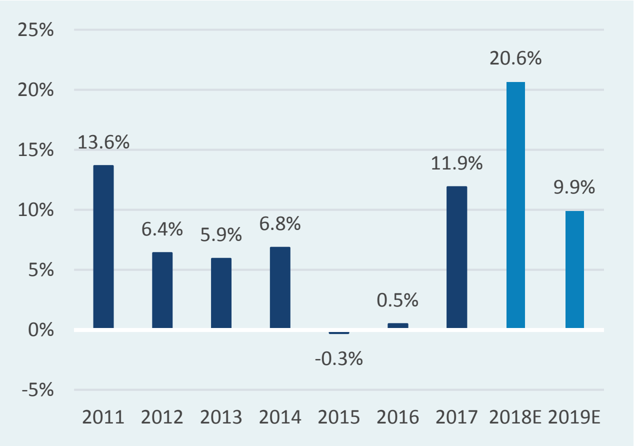
Fundamentals appear unchanged despite falling prices

U.S. EQUITIES



Source: Russell Investments, as of 6/30/18

CALENDAR YEAR EARNINGS GROWTH



Source: FactSet, as of 7/6/18

S&P 500 PRICE & EARNINGS

Source: Bloomberg, as of 6/30/18

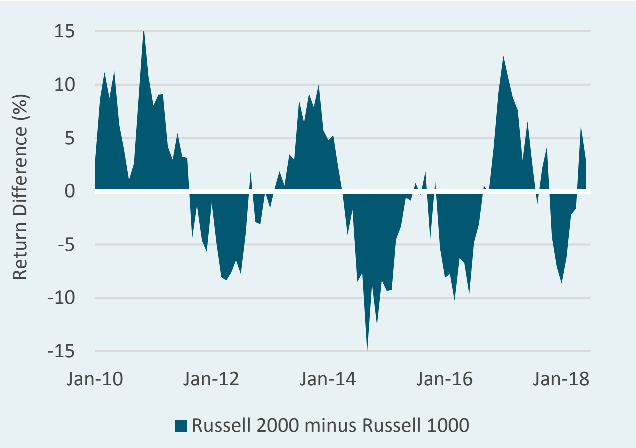
Domestic equity size & style

Large cap equities (Russell 1000 3.6%) underperformed small cap (Russell 2000 7.8%) during the quarter. Value stocks continued to lag growth (Russell 1000 Value 1.2% vs. Russell 1000 Growth 5.8%).

Value has delivered anomalously negative returns – the worst 10-year run on record (since 1926). Because performance differences were due to earnings growth disparity rather than moves in valuation, the price difference between value and growth stocks has remained normal. Earnings trends can be somewhat attributed to the global financial crisis where financials lagged considerably, followed by a bull market for technology stocks (value is concentrated in financials while growth is concentrated in tech). In other words, much of value's underperformance was macroeconomic in nature.

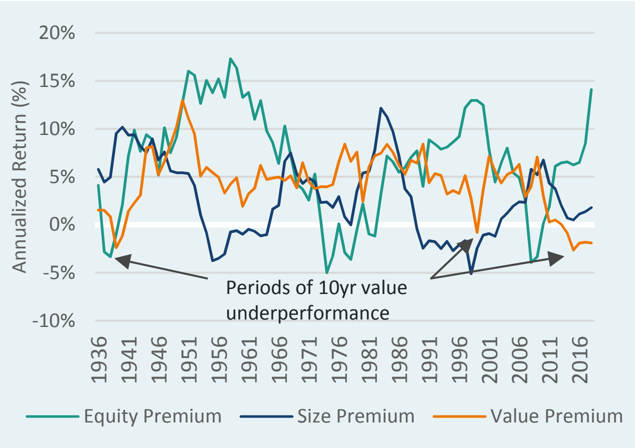
We do not yet see a catalyst for a value comeback, and it is possible that when value bounces back there will not be obvious signals beforehand. Poor recent performance is not always a solid standalone indicator of future reversal. Relative valuations are fairly in line with history, and the economic environment is positive (growth often performs well during later stages of economic cycles). We recommend that value investors stay the course.

SMALL CAP VS LARGE CAP (YOY)



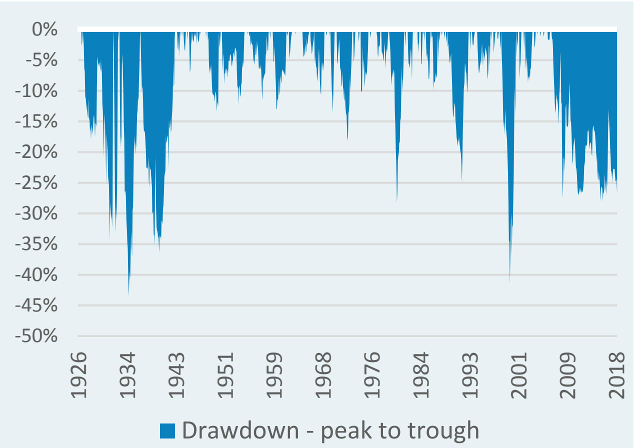
Source: FTSE, as of 6/30/18

FACTOR PERFORMANCE (10YR ROLLING)



Source: Kenneth French Library, as of 5/30/18

VALUE - PEAK TO TROUGH



Source: Kenneth French Library, as of 5/30/18

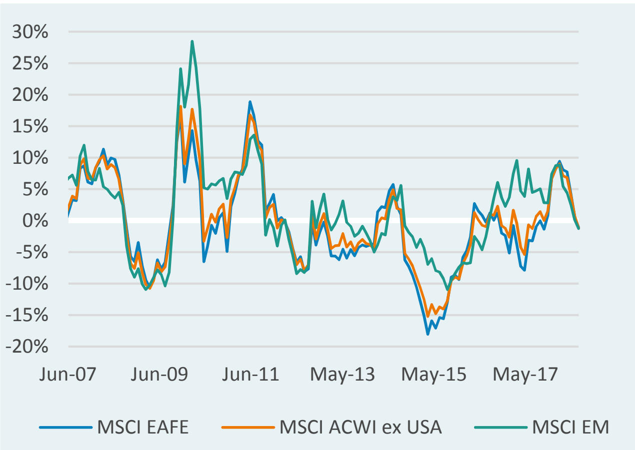
International developed equity

Unhedged international equities underperformed U.S. equities during Q1 (MSCI EAFE -1.2% vs. S&P 500 +3.4%). On a hedged basis, international equities delivered returns of 3.9%, outpacing the U.S. market. Currency volatility has frequently been greater than equity market volatility in recent years, causing considerable return disparity for investors with unhedged investments in international assets. Equity returns in most markets have been positive year-to-date on an ex-currency basis.

Earnings growth remains strong and will likely be supportive of equity prices going forward. The U.S. has taken back the lead in year-over-year earnings growth, alongside a large boost from U.S. tax reform and a relatively strong economy.

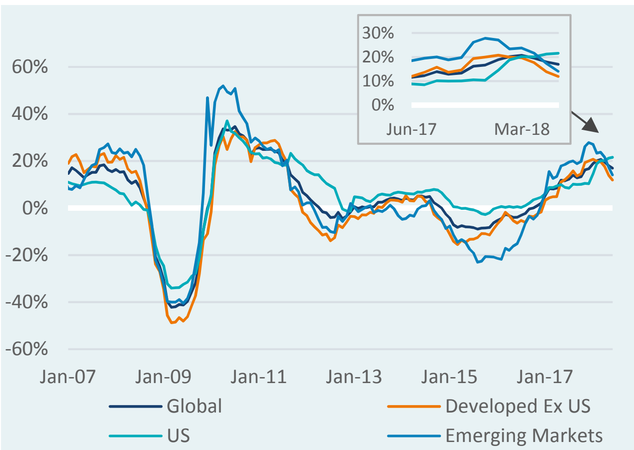
P/E multiples have moved lower as equity prices remain range bound and earnings grow at a brisk pace. Equity valuations are now closer to the longer-term average – a notable change from recent years.

EFFECT OF CURRENCY (1-YEAR ROLLING)



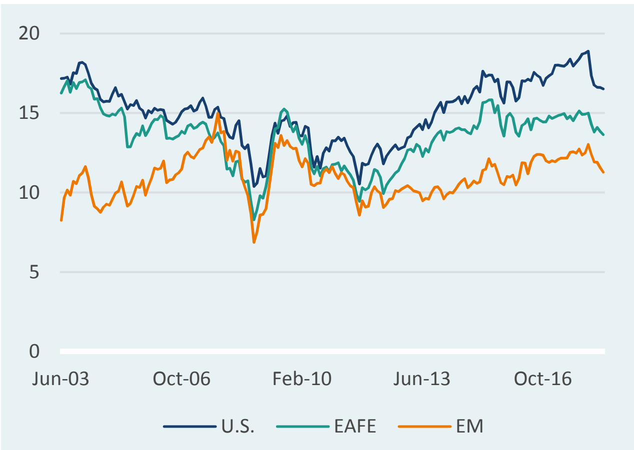
Source: MSCI, as of 6/30/18

EARNINGS GROWTH (YOY)



Source: MSCI, as of 6/30/18 – YoY growth in forward earnings

FORWARD P/E



Source: MSCI, as of 6/30/18

Emerging market equity

Emerging market equities delivered losses of -8.0% in Q2, but remain up +8.2% on a year-over-year basis. Currency movement caused -4.4% of losses during the quarter.

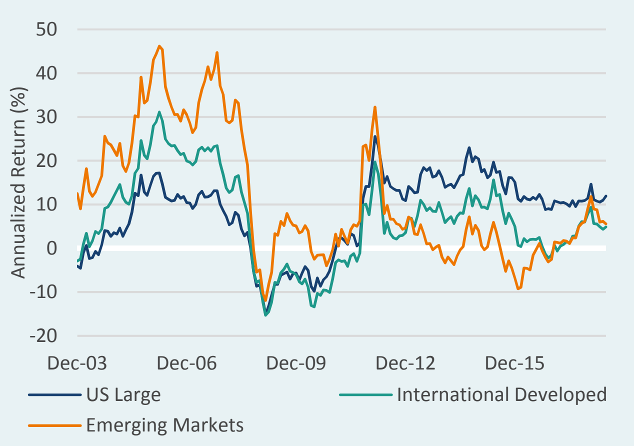
We maintain an overweight position to equities through a positive tilt to emerging markets. Equity bull runs in these markets through history typically incur at least a 10% drawdown sometime during the rally (see next page). Recent price swings were driven by valuation changes rather than by a fundamental change in earnings.

Developed markets are expected to grow less quickly in the coming years while emerging economic growth is expected to rise. A positive growth premium of emerging economies relative to developed economies has historically acted as a tailwind for EM outperformance.

We believe positive emerging economy growth trends, attractive valuations, a strong earnings environment, and depressed currencies should provide an environment of strong equity performance across these markets.

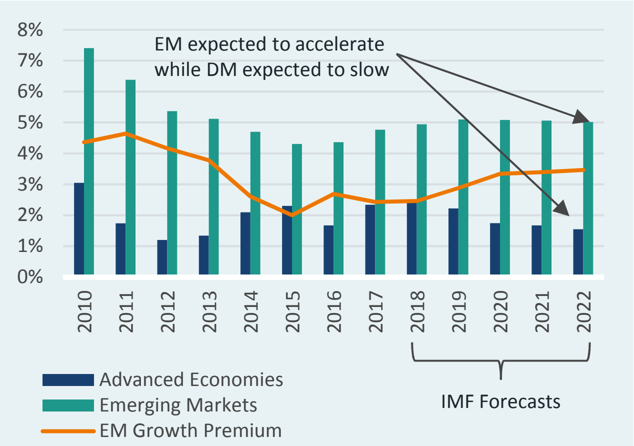
Conditions remain positive for EM equity

EQUITY PERFORMANCE (3YR ROLLING)



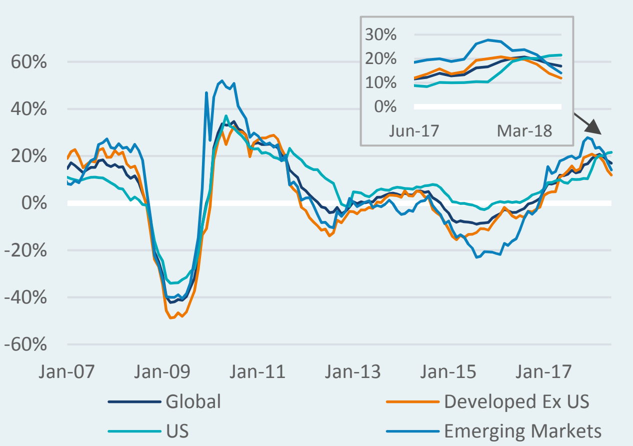
Source: Standard & Poor's, MSCI, as of 6/30/18

EM GROWTH PREMIUM



Source: IMF

EARNINGS GROWTH (YOY)

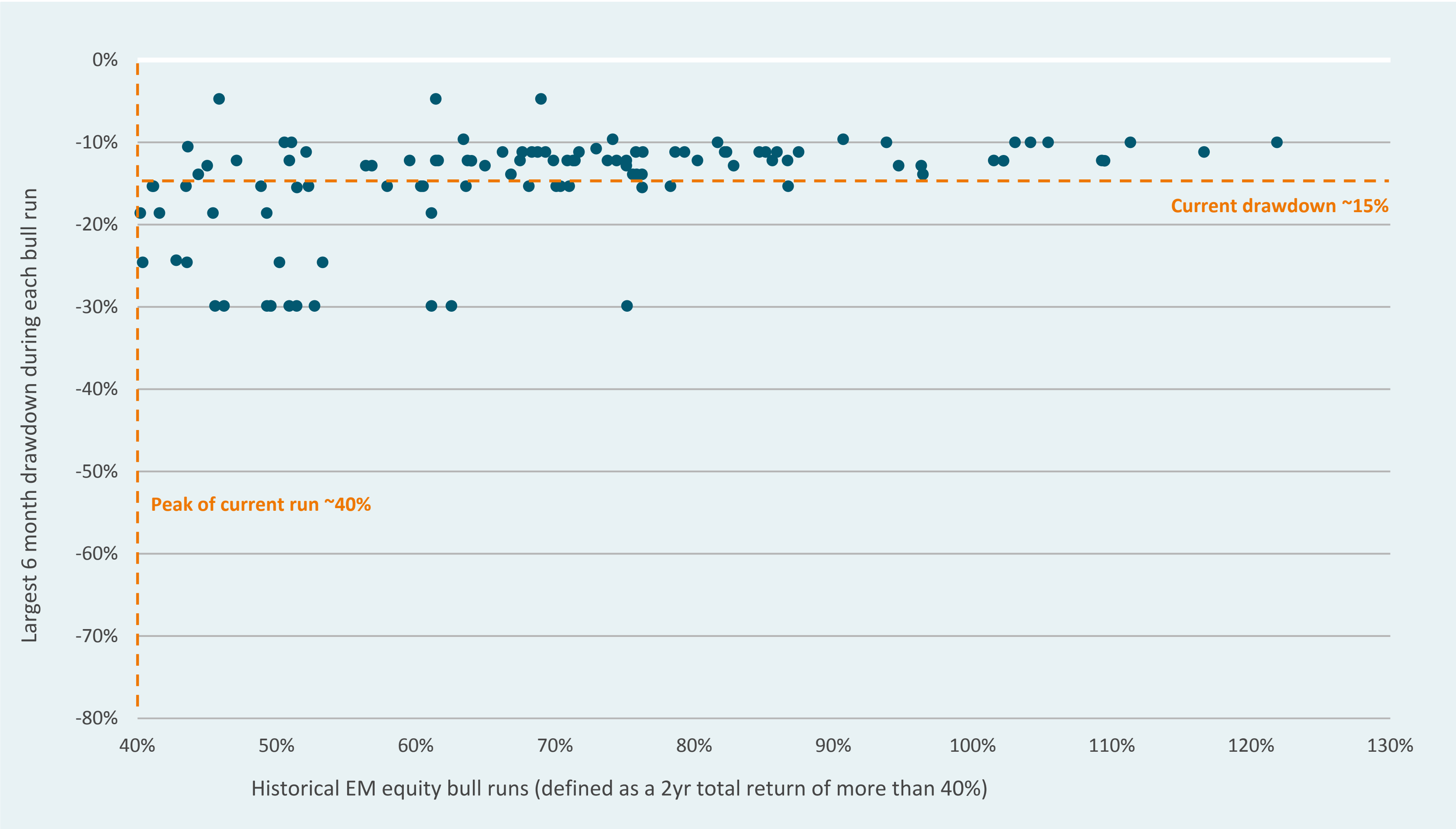


Source: MSCI, as of 6/30/18

Agenda Item 7

Emerging market volatility

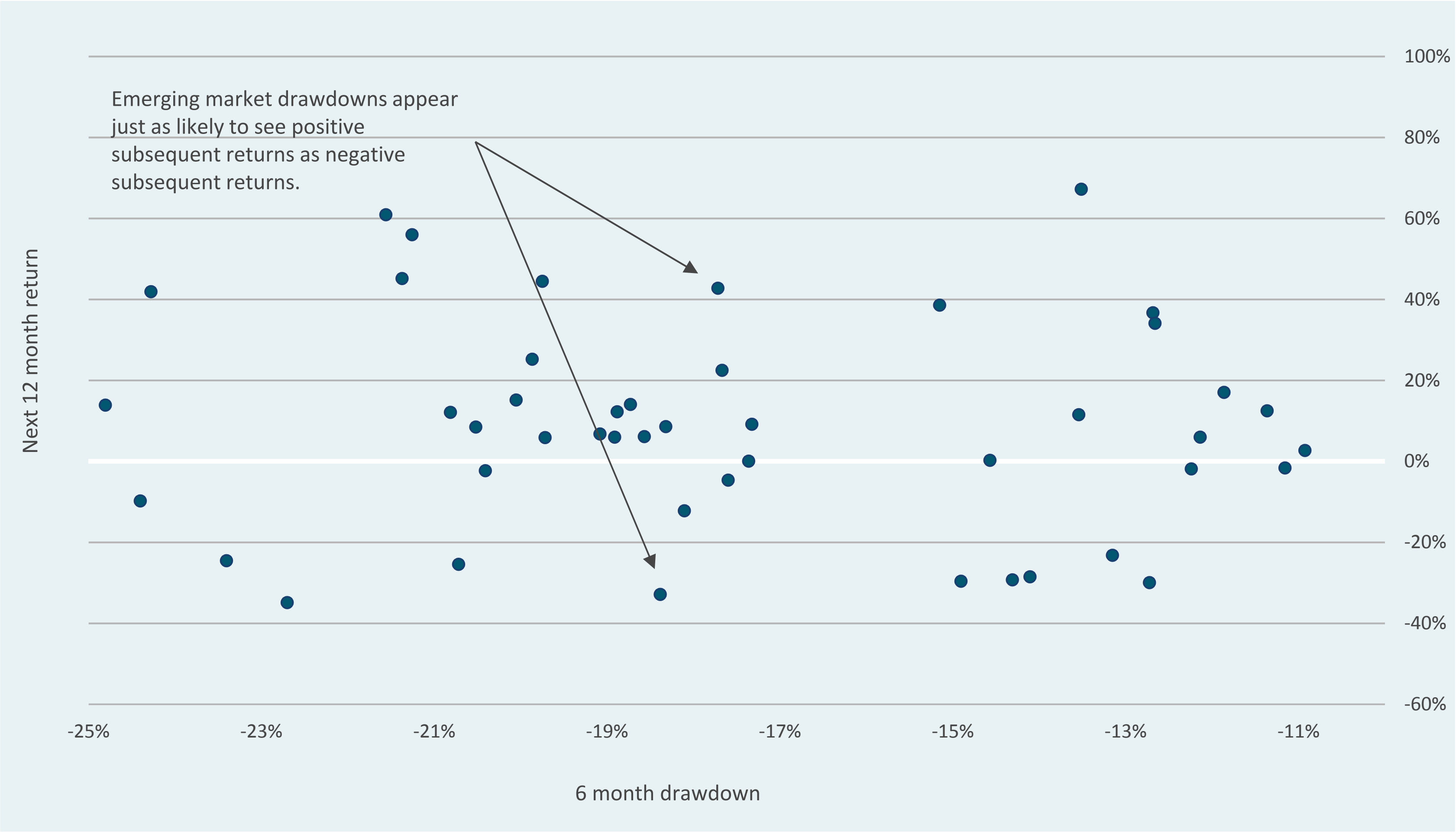
Drawdowns of 10% or more are typical during EM bull runs



The average drawdown experienced during all 2 year periods of 40%+ returns was -14.8%

Emerging market volatility

The recent drawdown does not imply heightened risk of further losses



Source: MSCI, Verus

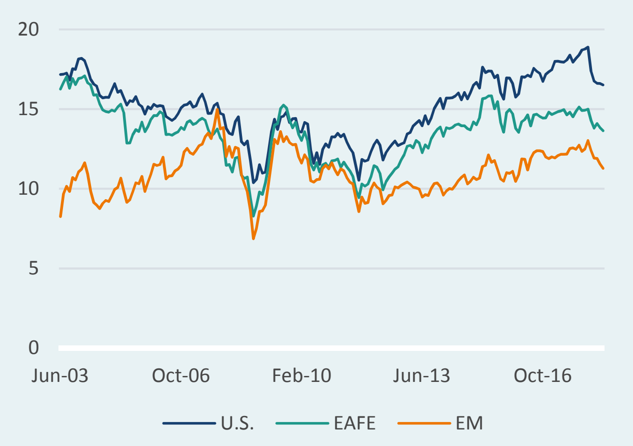
Equity valuations

Equity valuations have moved lower year-to-date as prices fell and earnings increased at a strong pace. U.S. equity valuations have fallen the most as domestic earnings growth recently took the lead year-over-year against other markets.

The trailing P/E ratio of the S&P 500 is notably high, but as we have seen throughout the expansion more expensive markets may deliver consistent outperformance if fundamentally driven by robust earnings. On a forward P/E basis, the U.S. is now only slightly rich relative to valuations of the past 15 years (16.5 today vs. an average of 15.1). Price is an important component of equity investing, but higher prices may be indicative of greater future earnings, which suggests investors cannot rely on price alone when forming expectations.

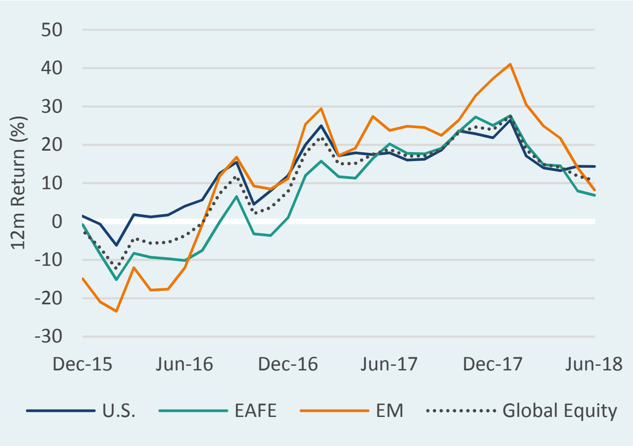
When examining equity markets through our *carry, value, trend,* and *macro* lens, *carry* has improved through lower prices (higher dividend and earnings yields), *value* has improved through lower equity multiples (range bound prices with rising earnings has pushed multiples downward), *trend* has flattened on a short-term basis but remains positive on a 12-month basis, and the *macro* environment has moderated a bit (notable weakness in Europe but strength in the U.S.)

FORWARD P/E RATIOS



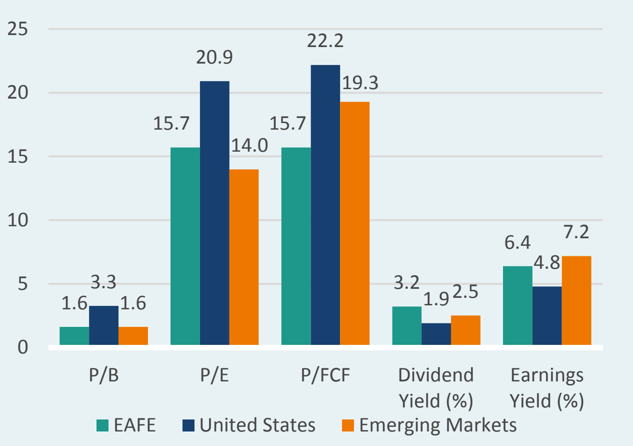
Source: MSCI, as of 6/30/18

MOMENTUM (1YR)



Source: Standard & Poor's, MSCI, as of 6/30/18

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, as of 6/30/18 - trailing P/E

Agenda Item 7

Equity volatility

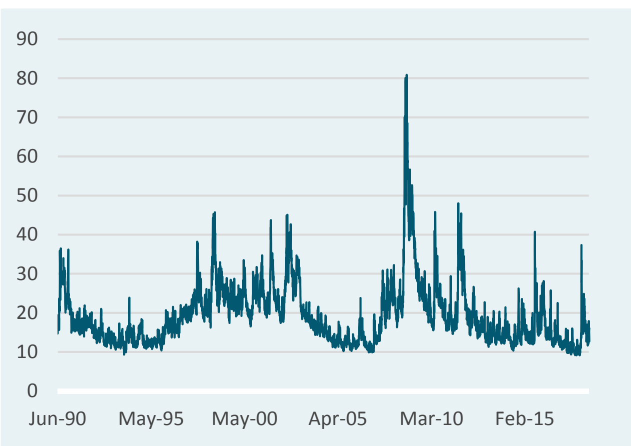
U.S. equity volatility retreated in the second quarter after a period of elevated risk following the February volatility spike. The VIX Index of implied volatility declined steadily throughout the quarter and averaged 15.3, compared to an average of 17.4 in the first quarter.

Realized volatility was below average in domestic and international equity markets in the second quarter, despite the concerns over a global trade war. Emerging markets experienced the greatest volatility, although the annualized standard deviation of daily returns in Q2 were only 13.4% (MSCI Emerging Markets). International developed markets (MSCI EAFE) had a standard deviation of only 9.0%.

The implied volatility curve (i.e. skew), which looks at the differences in implied volatility at various option strike prices, has recently steepened. A steeper volatility curve means that investors are paying a higher premium for equity downside protection.

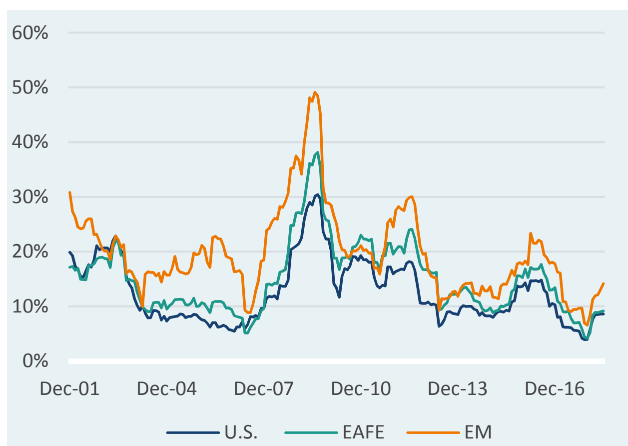
Equity volatility subsided back to below average levels

U.S. IMPLIED VOLATILITY (VIX)



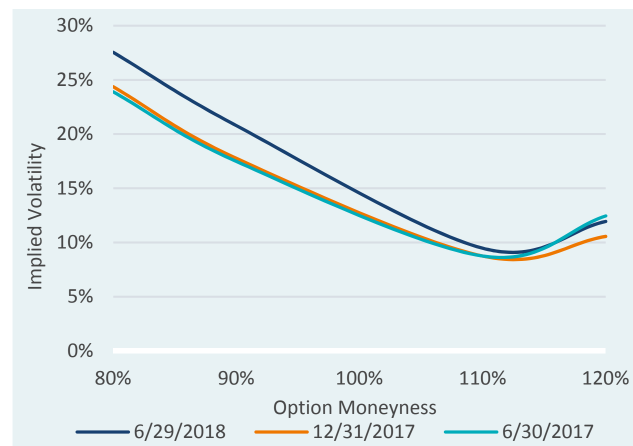
Source: CBOE, as of 6/30/18

REALIZED 1-YEAR ROLLING VOLATILITY



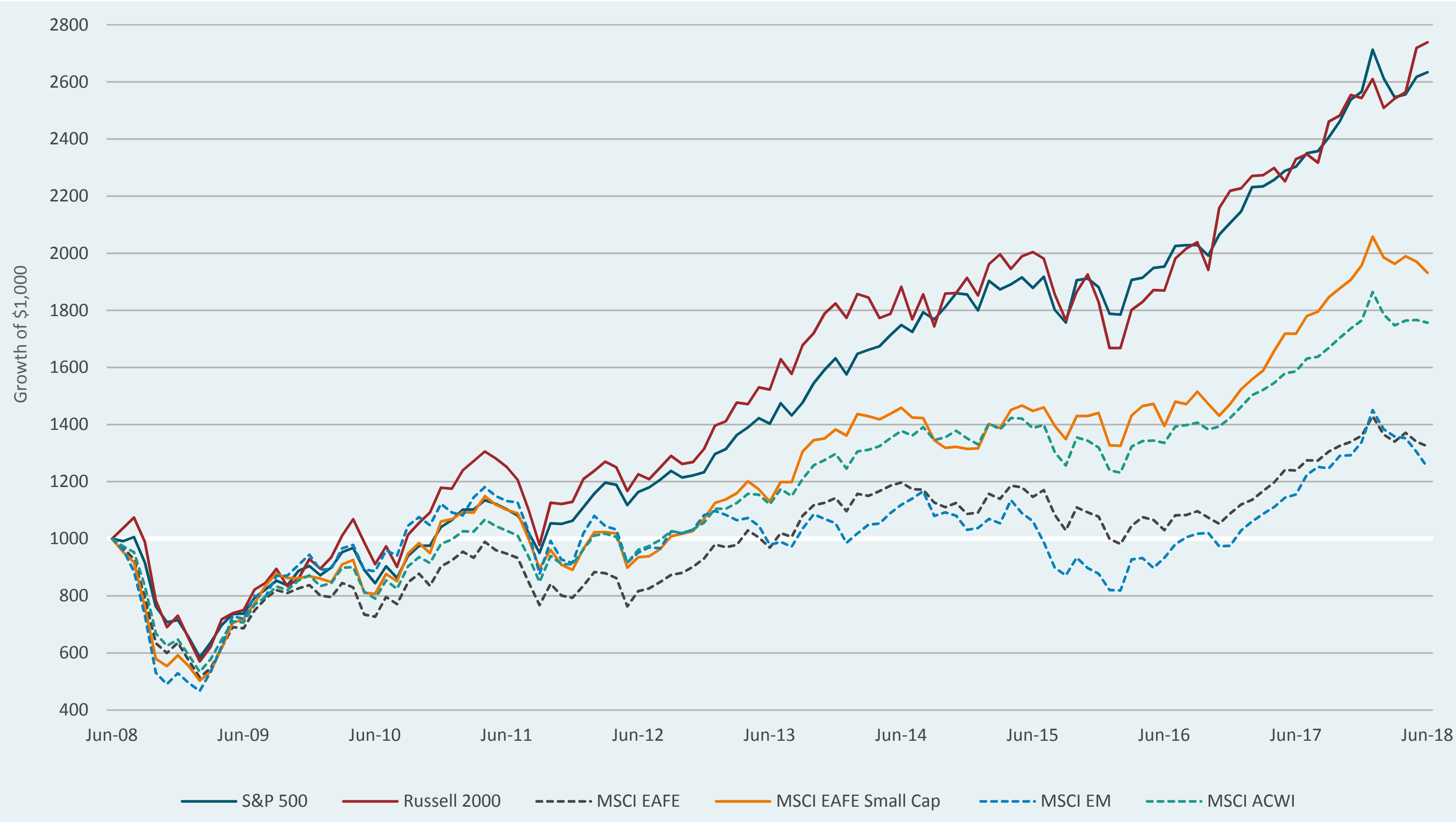
Source: Bloomberg, as of 6/30/18

U.S. IMPLIED VOLATILITY CURVE



Source: Bloomberg, as of 6/30/18

Long-term equity performance



Source: Morningstar, as of 6/30/18

Other assets

Currency

The U.S. dollar appreciated 5% during the quarter, which erased the positive equity returns of many international markets. Relative strength of the U.S. economy, paired with Federal Reserve tightening, likely helped lead the U.S. dollar higher.

Interest rate differentials between the U.S. and the rest of the developed world have been steadily widening over the past 10 months. The spread between the U.S. 10-year Treasury yield and the yield on a basket of developed sovereign debt rose approximately 80 bps to 2.3% during this time. Higher relative interest rates has historically been a short-term driver of currencies.

Emerging market currencies fell 9.1% in Q2, based on the JPM EM Currency Index. The performance of most currencies were in line with expectations based on U.S. dollar appreciation against developed market currencies. Several countries with large current account deficits that are heavily reliant on dollar funding, such as Argentina and Turkey, saw their currencies fall sharply. As a whole, emerging market currencies are significantly undervalued based on purchasing power parity.

The U.S. dollar materially appreciated, reversing a multi-year downtrend

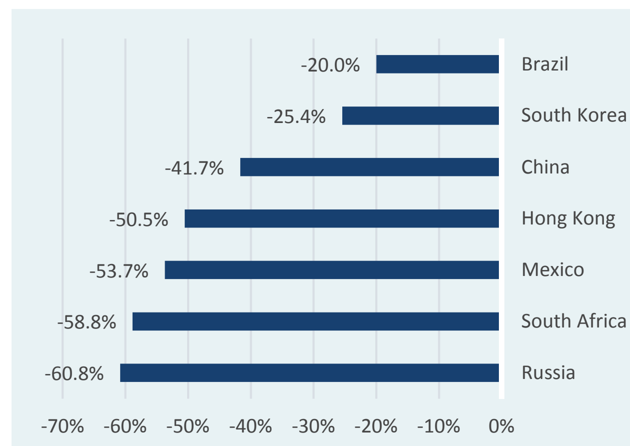
U.S. DOLLAR TRADE WEIGHTED INDEX

Source: Federal Reserve, as of 6/30/18

U.S. VS. DEVELOPED INTEREST RATE SPREAD

Source: Verus, Bloomberg, as of 6/30/18

PURCHASING POWER PARITY VALUATIONS VS. U.S. DOLLAR (BIG MAC INDEX)



Source: Bloomberg, as of 6/30/18

Alternative beta

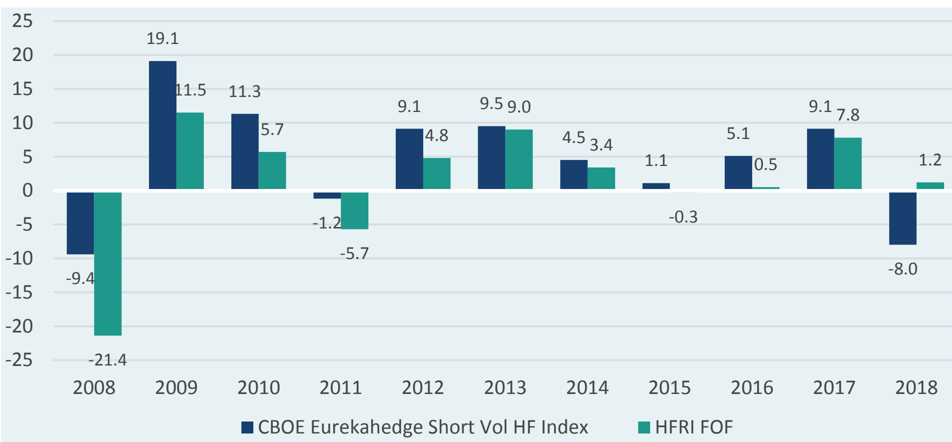
Alternative beta strategies have posted losses in Q2 and year-to-date. Equity value exposures accounted for the largest component of strategy losses in Q2 and year-to-date. Short volatility, a strong performing strategy over the past 10 years, also suffered a severe drawdown in Q1 and affected returns.

Correlation characteristics often benefit strategies with diversified factor exposure (some factors provide losses while others provide gains), but several factors including momentum and carry have not counterbalanced losses in value as they have often done historically.

We do not believe that alternative beta strategies are "broken" per se, but instead have reflected coinciding factor drawdowns as well as muted equity market returns more broadly.

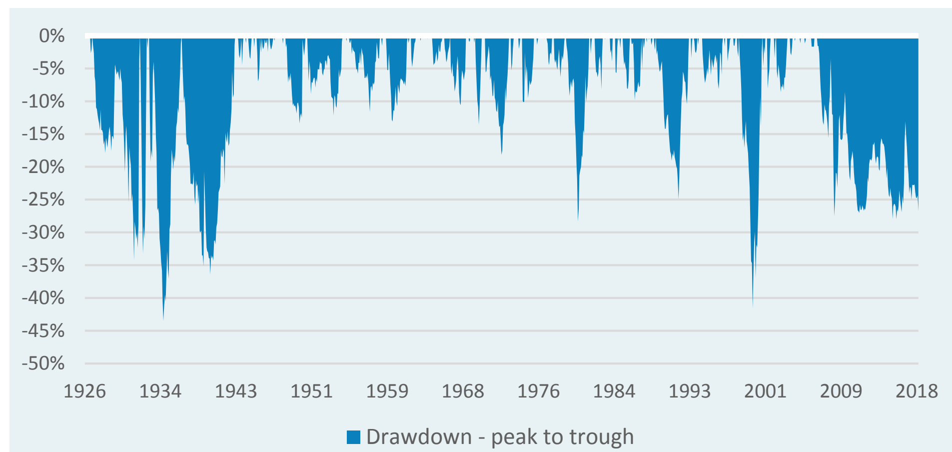
Attribution analyses on the Alt Beta strategies we follow confirm that recent performance is in line with 8-12% target volatility levels of each strategy. We are closely monitoring these funds through an environment of heightened volatility and are continuing discussions with managers. These losses are significant but are within the range we would expect, given the underlying factor exposure.

SHORT VOLATILITY PERFORMANCE



Source: CBOE, HFRI, as of 6/30/18

VALUE – PEAK TO TROUGH



Source: Kenneth French Library, Verus, as of May 2018 – shows value factor peak to trough drawdowns through time

Appendix

Periodic table of returns

BEST

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD	5-Year	10-Year
Small Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	9.7	16.4	11.8
Small Cap Equity	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	7.7	13.6	11.2
Large Cap Growth	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	7.3	13.4	10.6
Small Cap Value	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	5.4	12.5	10.2
Large Cap Equity	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	2.9	11.2	9.9
Real Estate	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	1.7	10.3	8.5
Hedge Funds of Funds	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	1.2	10.0	6.1
Cash	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	0.8	6.4	4.8
Commodities	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	0.0	6.3	3.7
60/40 Global Portfolio	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-0.8	5.0	2.8
US Bonds	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	5.1	-1.6	3.6	2.3
Large Cap Value	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-1.7	2.3	1.5
International Equity	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-2.7	0.4	0.4
Emerging Markets Equity	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-6.7	-6.4	-9.0

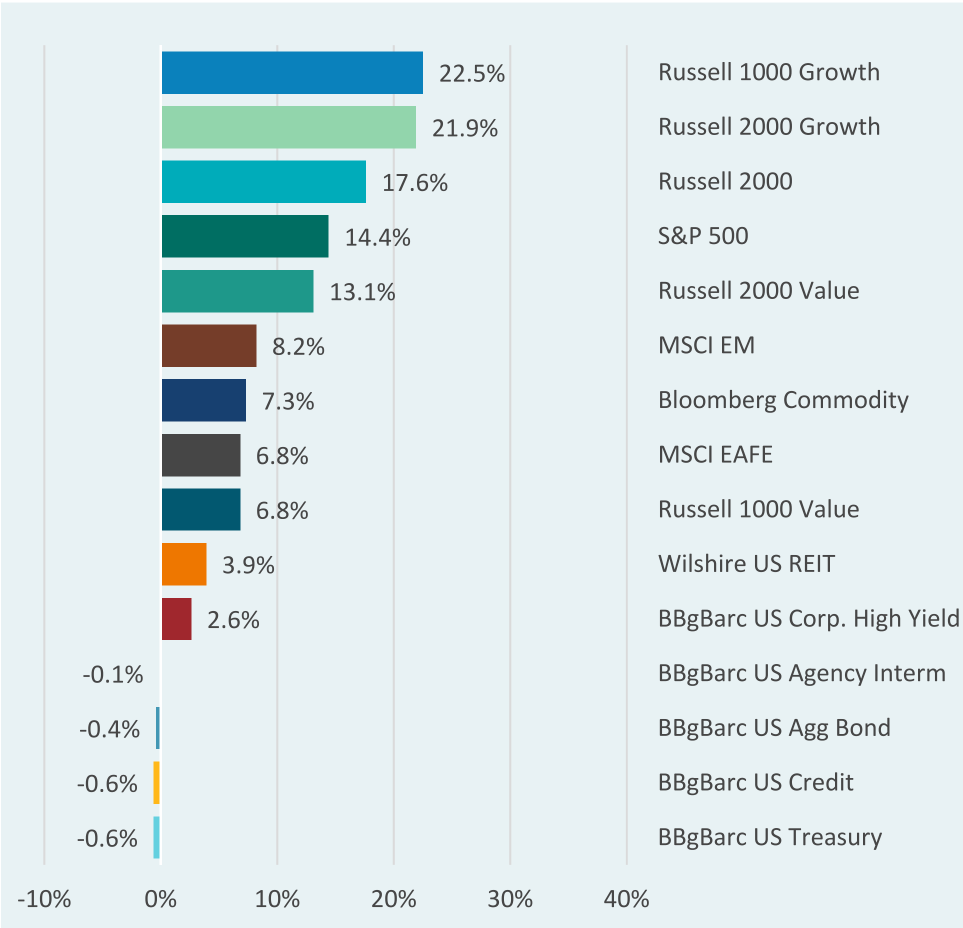
WORST

- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash
- Commodities
- Real Estate
- Hedge Funds of Funds
- 60% MSCI ACWI/40% BBgBarc Global Bond

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 3/31/18.

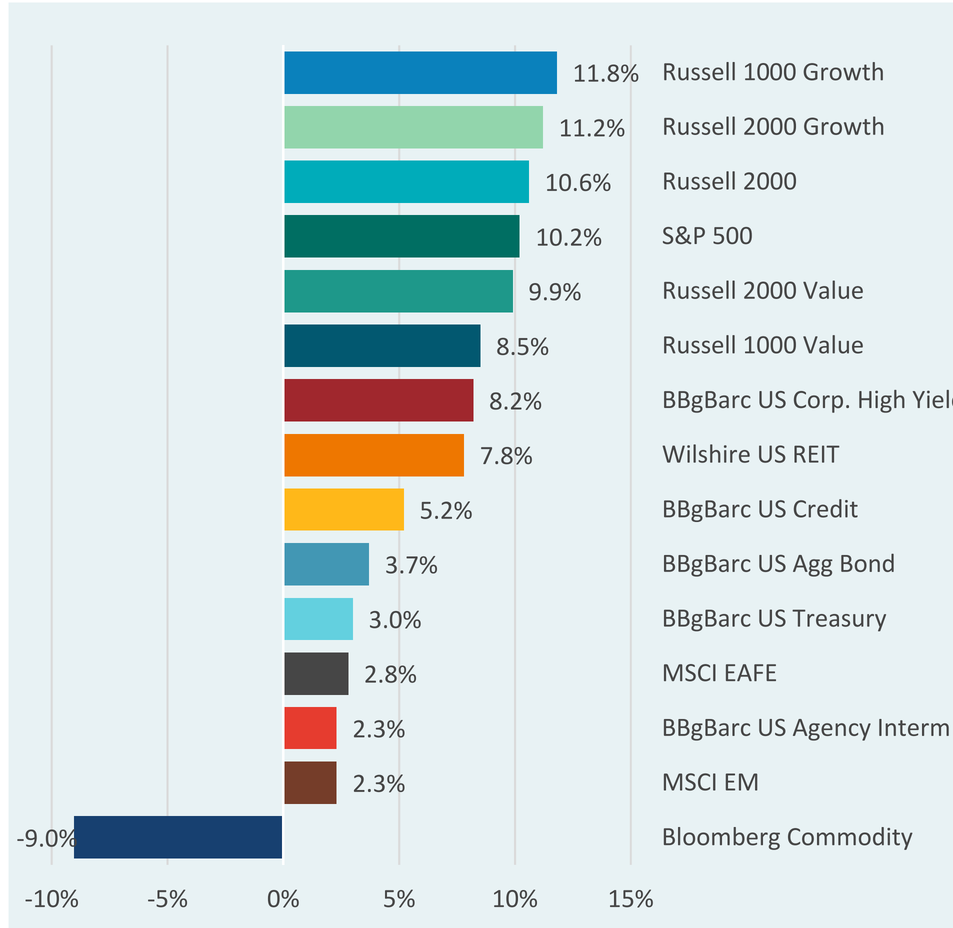
Major asset class returns

ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/18

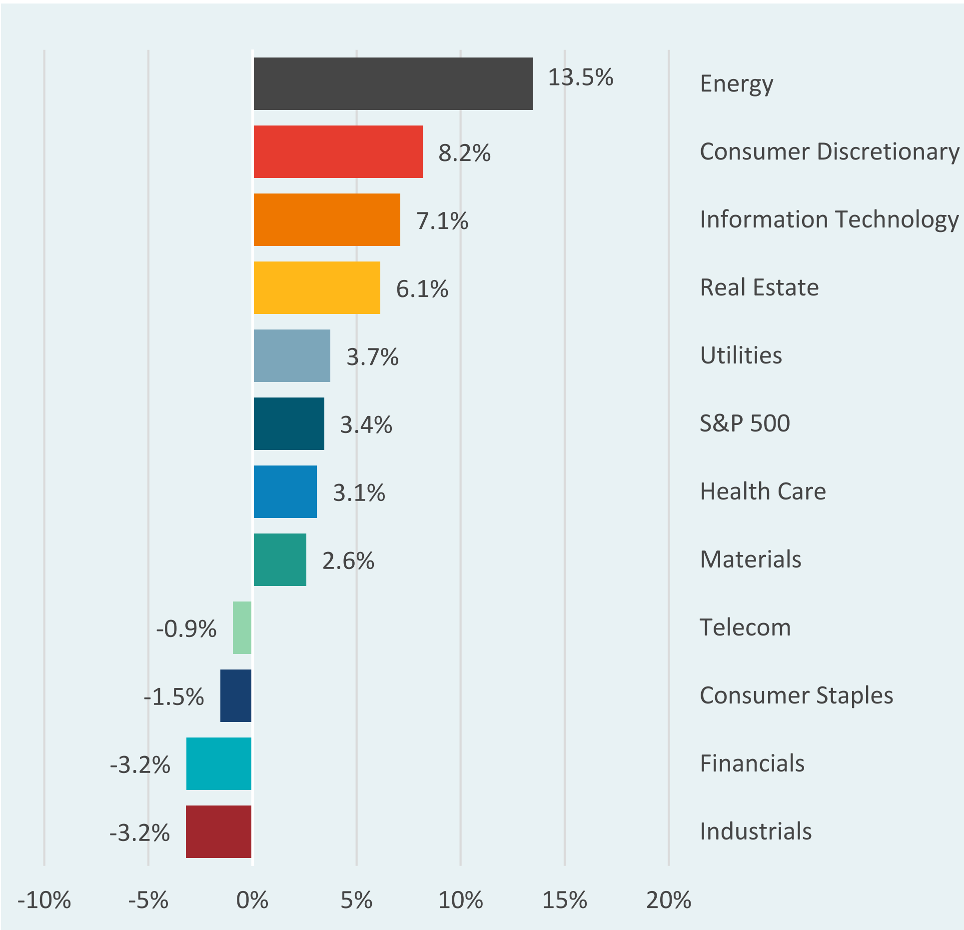
TEN YEARS ENDING JUNE



Source: Morningstar, as of 6/30/18

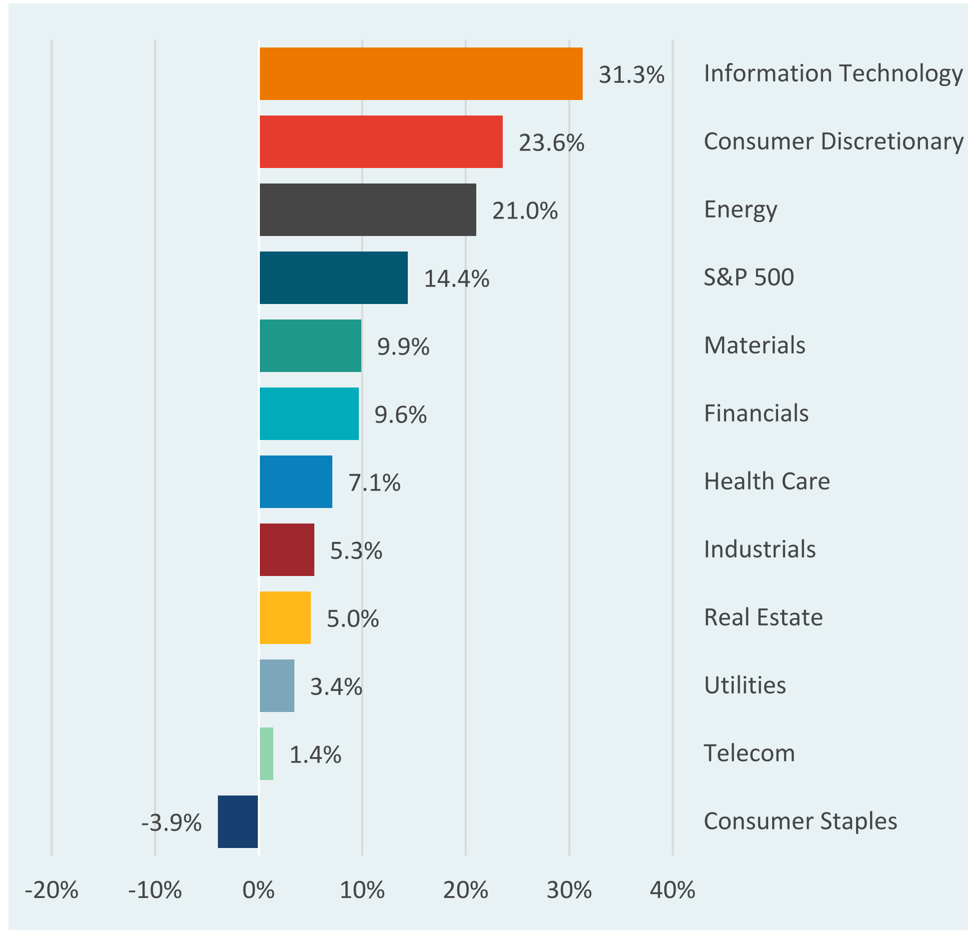
S&P 500 sector returns

2ND QUARTER



Source: Morningstar, as of 6/30/18

ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/18

Detailed index returns

DOMESTIC EQUITY

	June	Q2	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	0.6	3.4	2.6	14.4	11.9	13.4	10.2
S&P 500 Equal Weighted	0.9	2.8	1.8	12.0	10.5	12.8	11.6
DJ Industrial Average	(0.5)	1.3	(0.7)	16.3	14.1	13.0	10.8
Russell Top 200	0.6	3.9	3.1	15.4	12.5	13.8	10.2
Russell 1000	0.6	3.6	2.9	14.5	11.6	13.4	10.2
Russell 2000	0.7	7.8	7.7	17.6	11.0	12.5	10.6
Russell 3000	0.7	3.9	3.2	14.8	11.6	13.3	10.2
Russell Mid Cap	0.7	2.8	2.3	12.3	9.6	12.2	10.2
Style Index							
Russell 1000 Growth	1.0	5.8	7.3	22.5	15.0	16.4	11.8
Russell 1000 Value	0.2	1.2	(1.7)	6.8	8.3	10.3	8.5
Russell 2000 Growth	0.8	7.2	9.7	21.9	10.6	13.6	11.2
Russell 2000 Value	0.6	8.3	5.4	13.1	11.2	11.2	9.9

FIXED INCOME

	June	Q2	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	0.4	0.8	(0.0)	2.1	1.9	1.7	3.0
BBgBarc US Treasury Bills	0.2	0.5	0.8	1.3	0.7	0.4	0.4
BBgBarc US Agg Bond	(0.1)	(0.2)	(1.6)	(0.4)	1.7	2.3	3.7
Duration							
BBgBarc US Treasury 1-3 Yr	0.0	0.2	0.1	0.0	0.4	0.6	1.3
BBgBarc US Treasury Long	0.2	0.3	(3.0)	(0.1)	3.4	4.5	6.1
BBgBarc US Treasury	0.0	0.1	(1.1)	(0.6)	1.0	1.5	3.0
Issuer							
BBgBarc US MBS	0.0	0.2	(1.0)	0.1	1.5	2.3	3.5
BBgBarc US Corp. High Yield	0.4	1.0	0.2	2.6	5.5	5.5	8.2
BBgBarc US Agency Interm	0.0	0.2	(0.2)	(0.1)	0.8	1.1	2.3
BBgBarc US Credit	(0.5)	(0.9)	(3.0)	(0.6)	2.9	3.4	5.2

INTERNATIONAL EQUITY

	June	Q2	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	(0.5)	0.5	(0.4)	10.7	8.2	9.4	5.8
MSCI ACWI ex US	(1.9)	(2.6)	(3.8)	7.3	5.1	6.0	2.5
MSCI EAFE	(1.2)	(1.2)	(2.7)	6.8	4.9	6.4	2.8
MSCI EM	(4.2)	(8.0)	(6.7)	8.2	5.6	5.0	2.3
MSCI EAFE Small Cap	(1.9)	(1.6)	(1.3)	12.4	10.1	11.3	6.8
Style Index							
MSCI EAFE Growth	(1.2)	0.1	(0.9)	9.4	6.4	7.4	3.5
MSCI EAFE Value	(1.3)	(2.6)	(4.6)	4.3	3.3	5.4	2.2
Regional Index							
MSCI UK	(1.0)	2.9	(1.0)	10.0	3.1	4.9	2.7
MSCI Japan	(2.5)	(2.8)	(2.0)	10.5	6.2	7.4	3.5
MSCI Euro	(0.7)	(2.8)	(3.2)	5.0	5.3	7.1	1.1
MSCI EM Asia	(4.7)	(5.8)	(5.1)	10.1	7.3	8.3	5.6
MSCI EM Latin American	(3.1)	(17.8)	(11.2)	(0.2)	2.0	(2.4)	(3.7)

OTHER

	June	Q2	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	(3.5)	0.4	(0.0)	7.3	(4.5)	(6.4)	(9.0)
Wilshire US REIT	4.5	9.7	1.5	3.9	7.8	8.4	7.8
CS Leveraged Loans	0.2	1.0	2.3	4.5	4.2	4.1	5.0
Alerian MLP	(1.5)	11.8	(0.6)	(4.6)	(5.9)	(4.1)	6.5
Regional Index							
JPM EMBI Global Div	(1.2)	(3.5)	(5.2)	(1.6)	4.6	5.1	6.7
JPM GBI-EM Global Div	(2.9)	(10.4)	(6.4)	(2.3)	2.0	(1.4)	2.6
Hedge Funds							
HFRI Composite	(0.1)	0.8	1.2	5.2	2.6	4.2	3.5
HFRI FOF Composite	(0.2)	0.9	1.2	5.6	2.1	3.6	1.5
Currency (Spot)							
Euro	0.0	(5.1)	(2.8)	2.4	1.6	(2.1)	(3.0)
Pound	(0.8)	(5.9)	(2.4)	1.6	(5.7)	(2.7)	(4.0)
Yen	(1.9)	(4.0)	1.7	1.4	(3.4)	(2.2)	(0.3)

Source: Morningstar, as of 6/30/18

Definitions

***Bloomberg US Weekly Consumer Comfort Index** - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. (www.langerresearch.com)*

***University of Michigan Consumer Sentiment Index** - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. (www.Bloomberg.com)*

***NFIB Small Business Outlook** - Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (http://www.nfib-sbet.org/about/)*

Notices & disclosures

San Luis Obispo County Pension Trust

Investment Performance Review

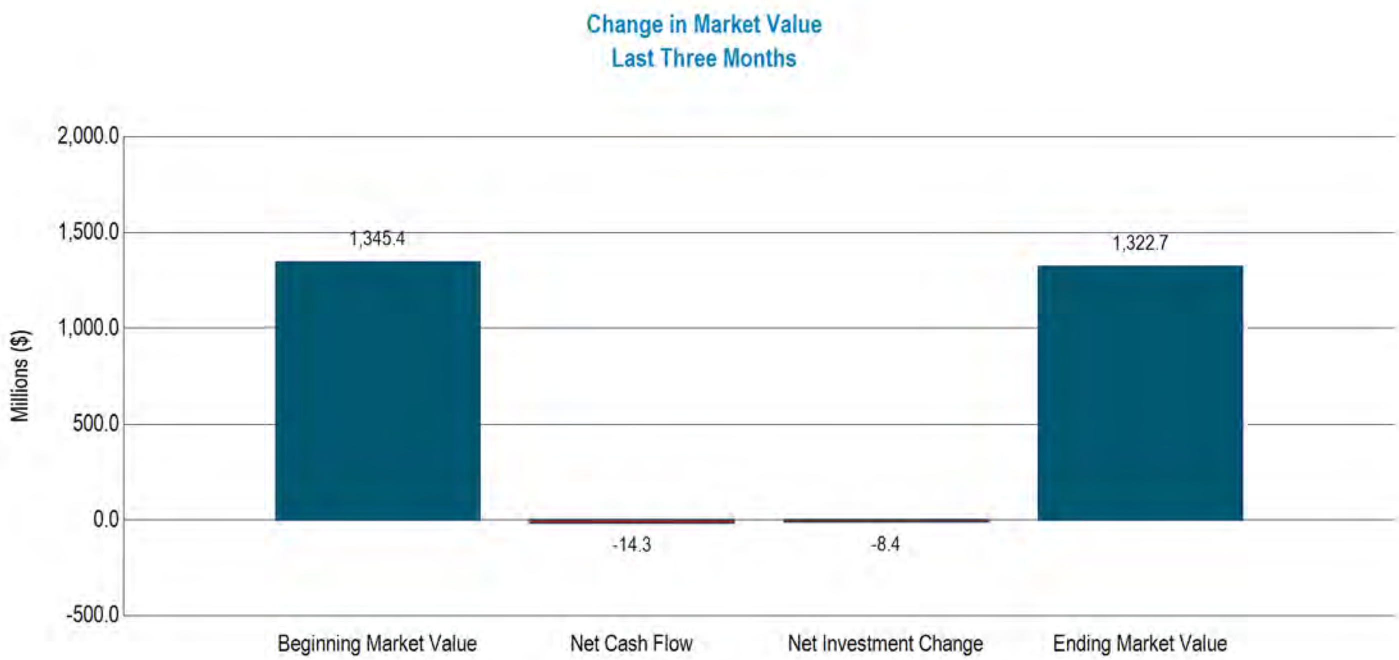
Period Ending: June 30, 2018

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484

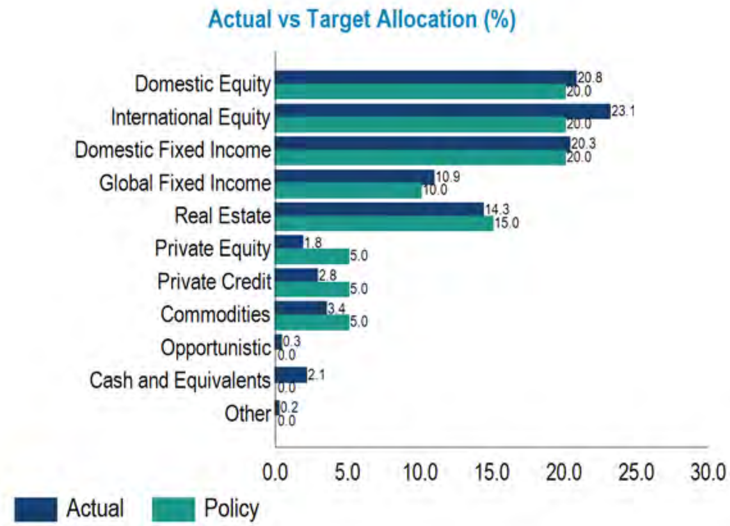
Portfolio Reconciliation

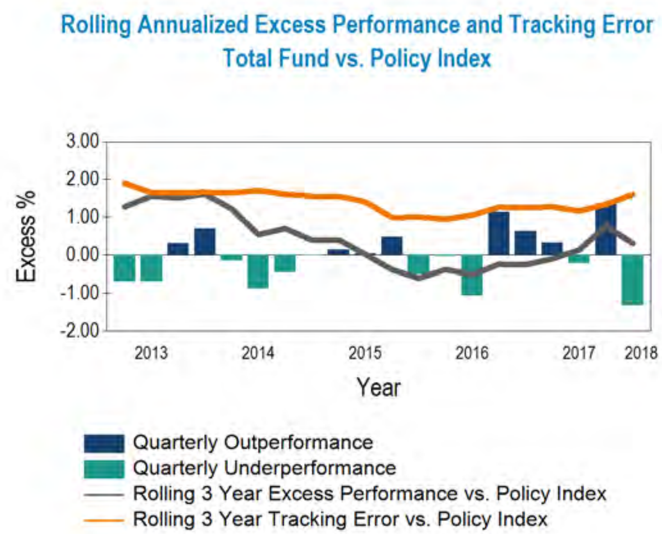
	Last Three Months	Year-To-Date	One Year
Beginning Market Value	$1,345,371,098	$1,350,741,282	$1,260,215,590
Net Cash Flow	-$14,265,287	-$31,671,317	-$25,513,137
Net Investment Change	-$8,430,115	$3,605,731	$87,973,242
Ending Market Value	$1,322,675,695	$1,322,675,695	$1,322,675,695



Contributions and withdrawals may include intra-account transfers between managers/funds.

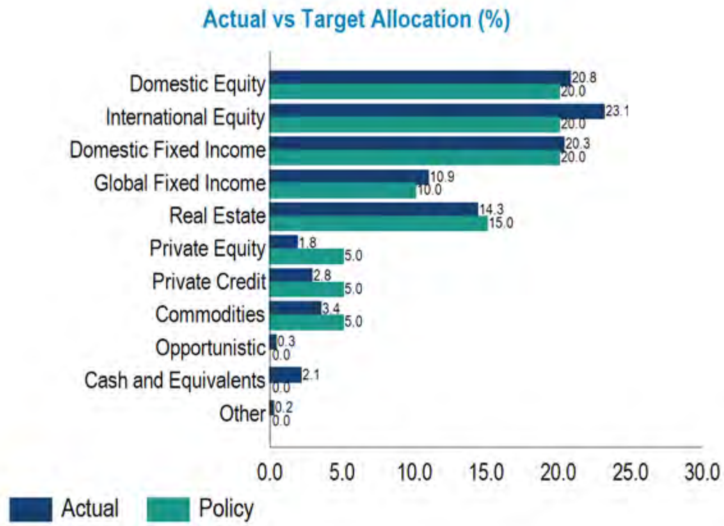
	QTD	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank
Total Fund	-0.6	99	0.3	71	7.1	77	6.4	74	6.9	86
Policy Index	0.8	61	0.3	71	7.0	78	6.1	85	7.1	80
Total Fund ex Overlay	-0.6	99	0.4	71	7.2	76	6.3	75	6.9	86
Policy Index	0.8	61	0.3	71	7.0	78	6.1	85	7.1	80
Total Domestic Equity	2.2	99	2.1	88	15.2	37	13.0	5	13.1	49
Russell 3000	3.9	45	3.2	55	14.8	49	11.6	40	13.3	41
Total International Equity	-1.8	17	-2.0	24	7.3	59	5.5	62	7.2	46
MSCI ACWI ex USA Gross	-2.4	36	-3.4	55	7.8	45	5.6	60	6.5	66
Total Domestic Fixed Income	0.2	13	-0.2	10	1.8	10	2.9	24	2.9	37
BBgBarc US Aggregate TR	-0.2	70	-1.6	93	-0.4	93	1.7	63	2.3	61
Total Global Fixed	-9.4	--	-4.8	--	-1.4	--	1.8	--	-0.3	--
Citi World Govt Bond Index	-3.4	--	-0.9	--	1.9	--	2.8	--	1.1	--
Total Real Estate	2.0	--	4.0	--	7.6	--	9.4	--	10.9	--
NCREIF Property Index	1.8	--	3.5	--	7.2	--	8.3	--	9.8	--
Total Commodities	1.7	--	1.7	--	12.4	--	-2.7	--	-5.0	--
Bloomberg Commodity Index TR USD	0.4	--	0.0	--	7.3	--	-4.5	--	-6.4	--
Total Private Equity	2.3	--	8.2	--	15.8	--	17.0	--	17.6	--
Russell 3000 + 3%	4.6	--	4.7	--	18.2	--	14.9	--	16.7	--
Total Private Credit	2.0	--	5.3	--	8.6	--	--	--	--	--
BBgBarc High Yield +2% (Lagged)	-0.4	--	0.6	--	5.9	--	--	--	--	--
Total Cash	0.7	--	1.0	--	1.3	--	0.9	--	0.7	--
91 Day T-Bills	0.5	--	0.8	--	1.4	--	0.7	--	0.4	--
Total Opportunistic	10.9	--	14.4	--	19.2	--	10.2	--	10.9	--
Russell 3000 + 3%	4.6	--	4.7	--	18.2	--	14.9	--	16.7	--

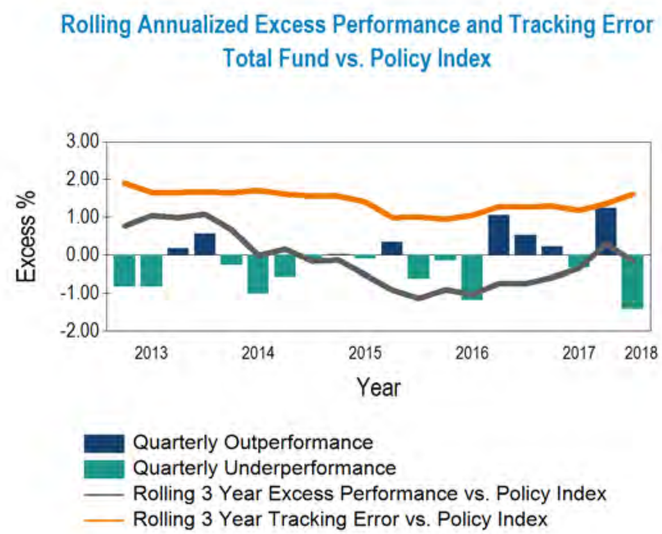




New Policy Index as of 10/1/2016: 20% Russell 3000, 20% MSCI ACWI ex. US, 30% BBgBarc Aggregate, 15% NCREIF Property, 5% Bloomberg Commodity Index, 5% Russell 3000 +3%, 5% BBgBarc High Yield +2% (Lagged). Private Equity, Private Credit and Opportunistic composite returns are lagged by one quarter. Stone Harbor funded 7/9/13. Gresham TAP funded 8/30/13. Pacific Asset Corporate Loan funded 9/1/2014. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. All returns are (G) Gross of fees. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

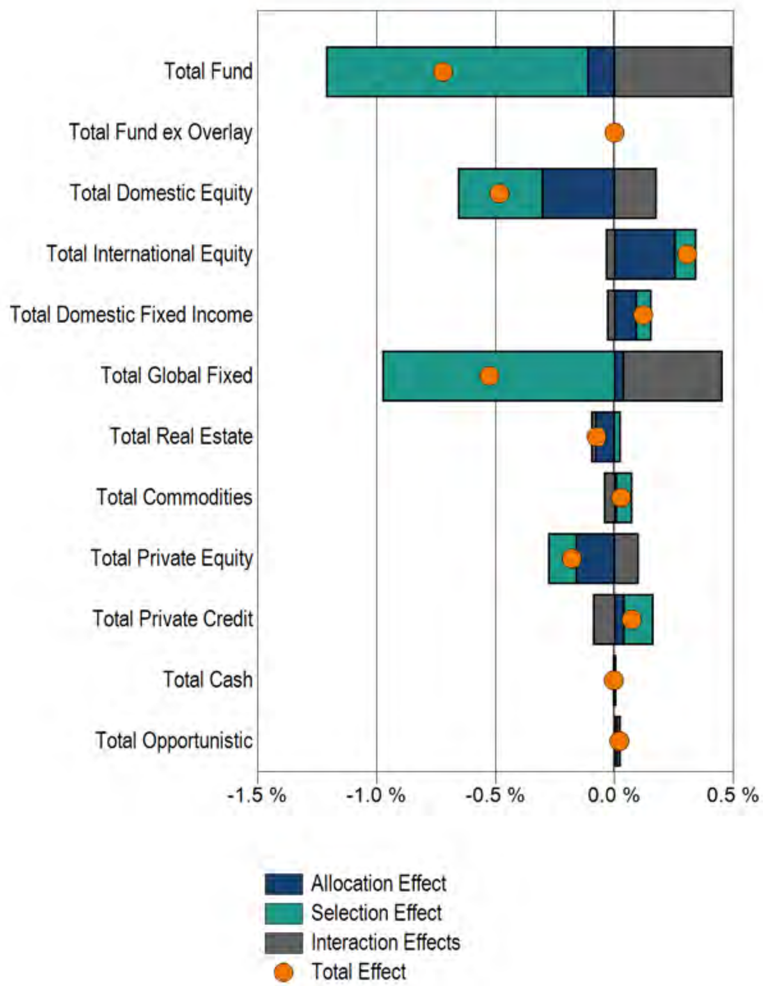
	QTD	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank
Total Fund	-0.7	99	0.1	80	6.7	85	5.9	87	6.4	94
Policy Index	0.8	61	0.3	71	7.0	78	6.1	85	7.1	80
Total Fund ex Overlay	-0.7	99	0.1	80	6.8	84	5.9	88	6.4	94
Policy Index	0.8	61	0.3	71	7.0	78	6.1	85	7.1	80
Total Domestic Equity	2.1	99	1.9	90	14.6	51	12.6	9	12.6	75
Russell 3000	3.9	45	3.2	55	14.8	49	11.6	40	13.3	41
Total International Equity	-1.9	21	-2.4	29	6.5	74	4.8	80	6.5	66
MSCI ACWI ex USA Gross	-2.4	36	-3.4	55	7.8	45	5.6	60	6.5	66
Total Domestic Fixed Income	0.1	26	-0.4	12	1.4	12	2.6	33	2.6	54
BBgBarc US Aggregate TR	-0.2	70	-1.6	93	-0.4	93	1.7	63	2.3	61
Total Global Fixed	-9.6	--	-5.1	--	-2.0	--	1.2	--	-1.0	--
Citi World Govt Bond Index	-3.4	--	-0.9	--	1.9	--	2.8	--	1.1	--
Total Real Estate	2.0	--	4.0	--	7.6	--	8.9	--	10.3	--
NCREIF Property Index	1.8	--	3.5	--	7.2	--	8.3	--	9.8	--
Total Commodities	1.7	--	1.7	--	12.4	--	-3.1	--	-5.5	--
Bloomberg Commodity Index TR USD	0.4	--	0.0	--	7.3	--	-4.5	--	-6.4	--
Total Private Equity	2.3	--	8.2	--	15.8	--	15.8	--	15.5	--
Russell 3000 + 3%	4.6	--	4.7	--	18.2	--	14.9	--	16.7	--
Total Private Credit	2.0	--	5.3	--	8.6	--	--	--	--	--
BBgBarc High Yield +2% (Lagged)	-0.4	--	0.6	--	5.9	--	--	--	--	--
Total Cash	0.7	--	1.0	--	1.3	--	0.9	--	0.7	--
91 Day T-Bills	0.5	--	0.8	--	1.4	--	0.7	--	0.4	--
Total Opportunistic	10.9	--	14.4	--	19.2	--	9.7	--	10.6	--
Russell 3000 + 3%	4.6	--	4.7	--	18.2	--	14.9	--	16.7	--





New Policy Index as of 10/1/2016: 20% Russell 3000, 20% MSCI ACWI ex. US, 30% BBgBarc Aggregate, 15% NCREIF Property, 5% Bloomberg Commodity Index, 5% Russell 3000 +3%, 5% BBgBarc High Yield +2% (Lagged). Private Equity, Private Credit and Opportunistic composite returns are lagged by one quarter. Stone Harbor funded 7/9/13. Gresham TAP funded 8/30/13. Pacific Asset Corporate Loan funded 9/1/2014. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. All returns are (N) Net of fees. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Attribution Effects
3 Months Ending June 30, 2018



Performance Attribution

	Last 3 Mo.	YTD
Wtd. Actual Return	-0.67%	0.15%
Wtd. Index Return *	0.76%	0.33%
Excess Return	**-1.44%**	**-0.18%**
Selection Effect	-1.09%	0.36%
Allocation Effect	-0.11%	-0.13%
Interaction Effect	0.49%	-0.33%

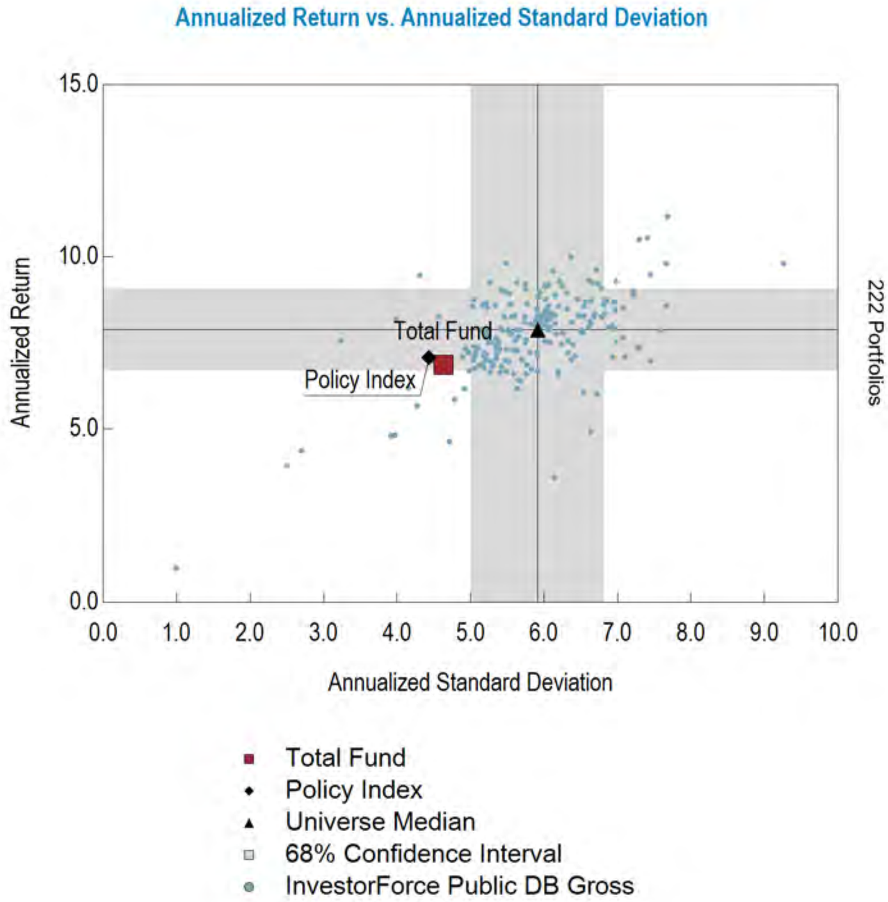
*Calculated from policy benchmark returns and policy weightings of each compenent of the policy benchmark.

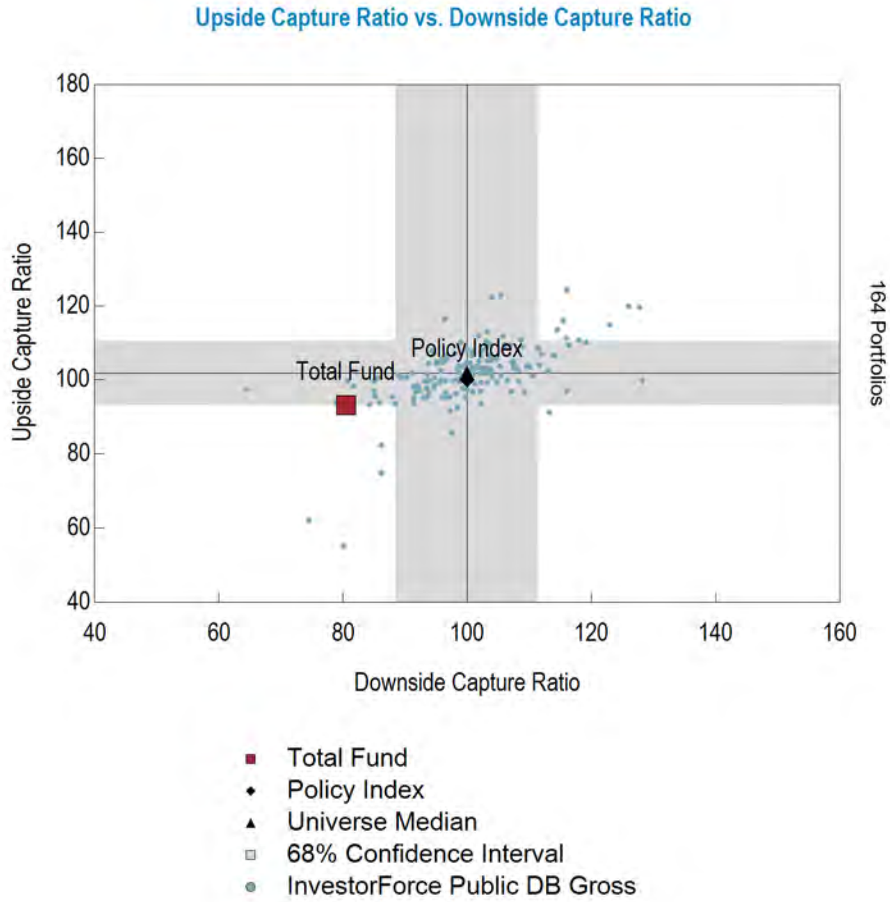
Attribution Summary
3 Months Ending June 30, 2018

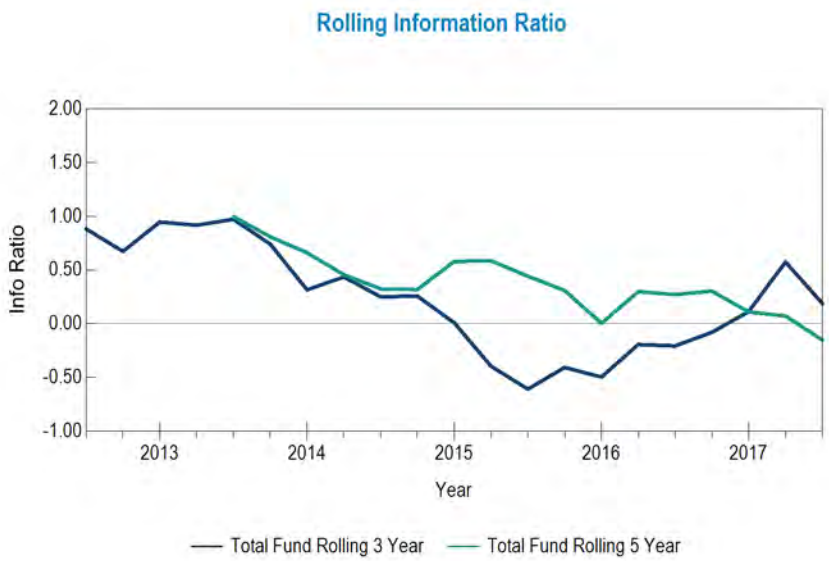
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Fund ex Overlay	-0.67%	0.76%	-1.44%	--	--	--	--
Total Domestic Equity	2.11%	3.89%	-1.77%	-0.35%	-0.30%	0.17%	-0.48%
Total International Equity	-1.95%	-2.39%	0.44%	0.08%	0.26%	-0.03%	0.31%
Total Domestic Fixed Income	0.14%	-0.16%	0.30%	0.06%	0.09%	-0.03%	0.12%
Total Global Fixed	-9.57%	-0.16%	-9.41%	-0.97%	0.04%	0.41%	-0.53%
Total Real Estate	1.96%	1.81%	0.15%	0.02%	-0.08%	-0.01%	-0.08%
Total Commodities	1.69%	0.40%	1.29%	0.06%	0.01%	-0.04%	0.03%
Total Private Equity	2.30%	4.65%	-2.35%	-0.11%	-0.16%	0.10%	-0.18%
Total Private Credit	2.02%	-0.36%	2.38%	0.12%	0.04%	-0.09%	0.07%
Total Cash	0.67%	0.46%	0.21%	0.00%	0.00%	0.00%	0.00%
Total Opportunistic	10.88%	4.65%	6.23%	0.00%	0.01%	0.01%	0.02%
Total	**-0.67%**	**0.76%**	**-1.44%**	**-1.09%**	**-0.11%**	**0.49%**	**-0.72%**

Weighted returns shown in attribution analysis may differ from actual returns. Wtd. Actual Return is the sum of the products of each group's return and its respective weight at the beginning of the period.

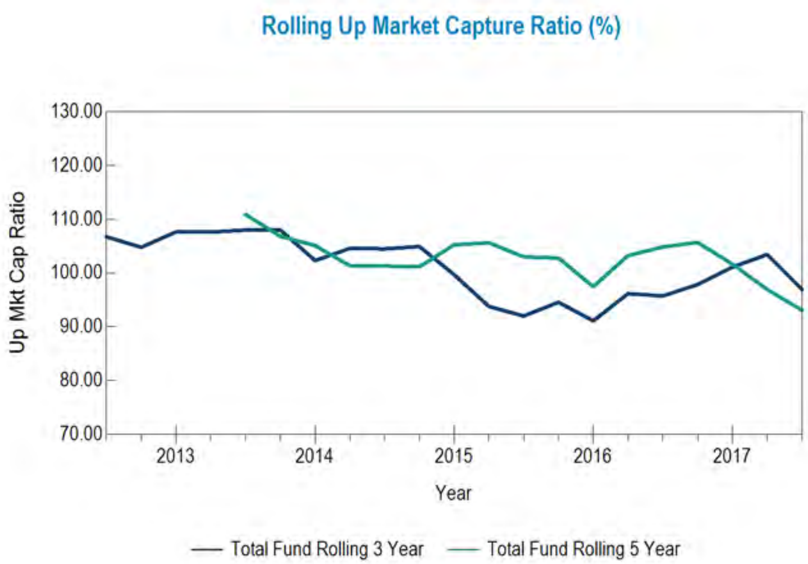
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	6.86%	-0.22%	4.63%	-0.17%	0.99	1.42%	0.91	1.40	-0.15	93.08%	80.44%

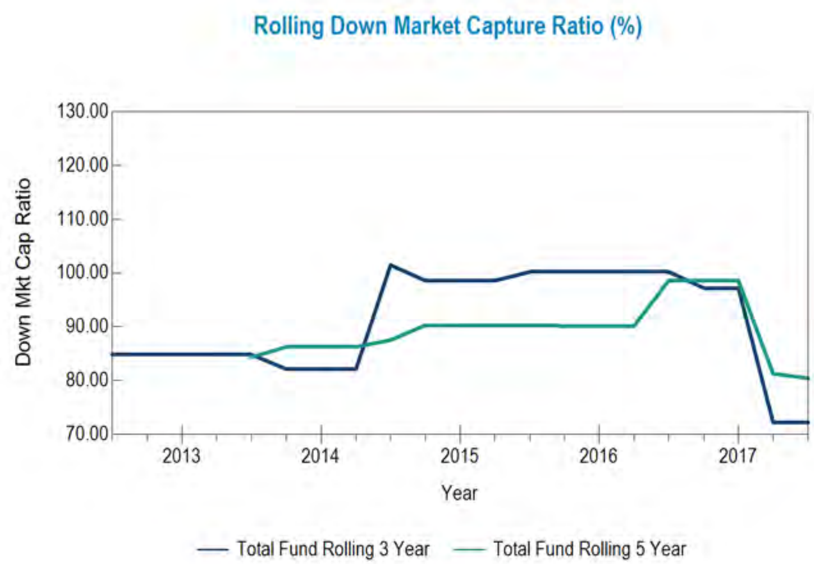





Rolling Information Ratio
2.00
1.50
1.00
0.50
0.00
-0.50
-1.00
Info Ratio
2013
2014
2015
2016
2017
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year


Rolling Tracking Error
2.50
2.00
1.50
1.00
0.50
0.00
Tracking Error
2013
2014
2015
2016
2017
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year


Rolling Up Market Capture Ratio (%)
130.00
120.00
110.00
100.00
90.00
80.00
70.00
Up Mkt Cap Ratio
2013
2014
2015
2016
2017
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year


Rolling Down Market Capture Ratio (%)
130.00
120.00
110.00
100.00
90.00
80.00
70.00
Down Mkt Cap Ratio
2013
2014
2015
2016
2017
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013	Inception	Inception Date
Total Fund	**1,322,675,695**	**100.0**	**-0.6**	**0.3**	**7.1**	**6.4**	**6.9**	**--**	**15.5**	**6.6**	**-0.8**	**5.1**	**13.8**	**--**	
InvestorForce Public DB Gross Rank			*99*	*71*	*77*	*74*	*86*	*--*	*47*	*84*	*74*	*66*	*71*	*--*	
Total Fund ex Overlay	1,320,628,118	99.8	-0.6	0.4	7.2	6.3	6.9	6.1	15.3	6.6	-0.8	5.2	13.8	--	
Policy Index			*0.8*	*0.3*	*7.0*	*6.1*	*7.1*	*5.6*	*13.4*	*7.8*	*-0.5*	*5.2*	*13.4*	*--*	
InvestorForce Public DB Gross Rank			*99*	*71*	*76*	*75*	*86*	*75*	*51*	*83*	*75*	*64*	*72*	*--*	
Total Domestic Equity	**274,515,173**	**20.8**	**2.2**	**2.1**	**15.2**	**13.0**	**13.1**	**10.8**	**25.1**	**13.0**	**1.2**	**11.0**	**32.2**	**--**	
Russell 3000			*3.9*	*3.2*	*14.8*	*11.6*	*13.3*	*10.2*	*21.1*	*12.7*	*0.5*	*12.6*	*33.6*	*--*	
InvestorForce Public DB US Eq Gross Rank			*99*	*88*	*37*	*5*	*49*	*17*	*4*	*48*	*18*	*60*	*91*	*--*	
PIMCO RAE Fundamental PLUS Instl	60,106,165	4.5	2.8	1.4	13.7	10.3	11.9	10.3	17.0	15.9	-2.7	12.7	36.0	8.2	Nov-07
S&P 500			*3.4*	*2.6*	*14.4*	*11.9*	*13.4*	*10.2*	*21.8*	*12.0*	*1.4*	*13.7*	*32.4*	*8.2*	*Nov-07*
eV US Large Cap Core Equity Gross Rank			*50*	*65*	*54*	*66*	*78*	*43*	*89*	*6*	*86*	*58*	*22*	*67*	*Nov-07*
Loomis Sayles Large Cap Growth	78,927,312	6.0	2.9	3.9	17.8	--	--	--	34.1	--	--	--	--	24.7	Dec-16
Russell 1000 Growth			*5.8*	*7.3*	*22.5*	*--*	*--*	*--*	*30.2*	*--*	*--*	*--*	*--*	*24.9*	*Dec-16*
eV US Large Cap Growth Equity Gross Rank			*86*	*85*	*75*	*--*	*--*	*--*	*16*	*--*	*--*	*--*	*--*	*49*	*Dec-16*
Boston Partners Large Cap Value	75,100,785	5.7	-0.1	-1.6	10.3	--	--	--	--	--	--	--	--	11.7	Jan-17
Russell 1000 Value			*1.2*	*-1.7*	*6.8*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*7.6*	*Jan-17*
eV US Large Cap Value Equity Gross Rank			*91*	*71*	*48*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*23*	*Jan-17*
Atlanta Capital Mgmt	60,380,911	4.6	3.8	5.1	19.7	14.8	15.7	--	26.6	12.6	10.4	5.8	37.8	18.8	Aug-10
Russell 2500			*5.7*	*5.5*	*16.2*	*10.3*	*12.3*	*--*	*16.8*	*17.6*	*-2.9*	*7.1*	*36.8*	*15.2*	*Aug-10*
eV US Small-Mid Cap Equity Gross Rank			*66*	*48*	*30*	*7*	*9*	*--*	*15*	*62*	*1*	*56*	*52*	*2*	*Aug-10*
Total International Equity	**305,778,435**	**23.1**	**-1.8**	**-2.0**	**7.3**	**5.5**	**7.2**	**4.9**	**26.6**	**2.2**	**-4.3**	**2.1**	**17.9**	**--**	
MSCI ACWI ex USA Gross			*-2.4*	*-3.4*	*7.8*	*5.6*	*6.5*	*3.0*	*27.8*	*5.0*	*-5.3*	*-3.4*	*15.8*	*--*	
InvestorForce Public DB ex-US Eq Gross Rank			*17*	*24*	*59*	*62*	*46*	*15*	*81*	*82*	*68*	*1*	*50*	*--*	
Dodge & Cox Intl Stock	145,635,364	11.0	-5.0	-6.8	1.1	2.7	6.5	4.3	24.7	9.0	-10.8	0.7	27.1	2.7	Dec-07
MSCI EAFE Gross			*-1.0*	*-2.4*	*7.4*	*5.4*	*6.9*	*3.3*	*25.6*	*1.5*	*-0.4*	*-4.5*	*23.3*	*1.9*	*Dec-07*
eV All EAFE Equity Gross Rank			*98*	*99*	*98*	*98*	*86*	*58*	*74*	*3*	*99*	*13*	*32*	*67*	*Dec-07*
WCM International Growth	160,143,071	12.1	1.3	2.9	13.6	--	--	--	--	--	--	--	--	19.9	Feb-17
MSCI ACWI ex USA Gross			*-2.4*	*-3.4*	*7.8*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*12.7*	*Feb-17*
eV ACWI ex-US All Cap Growth Eq Gross Rank			*30*	*21*	*58*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*33*	*Feb-17*

Since Inception ranking is from the beginning of the first complete month of performance. Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Direct Real Estate is lagged one quarter. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018.

Total Fund
Performance Summary (Gross of Fees)

Period Ending: June 30, 2018

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013	Inception	Inception Date
Total Domestic Fixed Income	**268,690,683**	**20.3**	**0.2**	**-0.2**	**1.8**	**2.9**	**2.9**	**3.7**	**4.3**	**4.5**	**1.1**	**4.7**	**-2.7**	**--**	
BBgBarc US Aggregate TR			*-0.2*	*-1.6*	*-0.4*	*1.7*	*2.3*	*3.7*	*3.5*	*2.6*	*0.6*	*6.0*	*-2.0*	--	
InvestorForce Public DB US Fix Inc Gross Rank			*13*	*10*	*10*	*24*	*37*	*61*	*50*	*49*	*17*	*68*	*95*	--	
BlackRock Core Bond	99,460,836	7.5	0.3	-1.1	0.5	--	--	--	--	--	--	--	--	1.3	Jan-17
BBgBarc US Aggregate TR			*-0.2*	*-1.6*	*-0.4*	--	--	--	--	--	--	--	--	*1.2*	*Jan-17*
eV US Core Fixed Inc Gross Rank			*7*	*19*	*15*	--	--	--	--	--	--	--	--	*42*	*Jan-17*
Dodge & Cox Income Fund	99,003,527	7.5	-0.2	-1.0	0.8	--	--	--	--	--	--	--	--	2.3	Jan-17
BBgBarc US Aggregate TR			*-0.2*	*-1.6*	*-0.4*	--	--	--	--	--	--	--	--	*1.2*	*Jan-17*
eV US Core Fixed Inc Gross Rank			*81*	*15*	*9*	--	--	--	--	--	--	--	--	*5*	*Jan-17*
Pacific Asset Corporate Loan	70,226,320	5.3	0.9	2.3	5.0	5.2	--	--	4.9	9.2	2.5	--	--	4.6	Sep-14
S&P/LSTA Leveraged Loan Index			*0.7*	*2.2*	*4.4*	*4.2*	--	--	*4.1*	*10.2*	*-0.7*	--	--	*3.7*	*Sep-14*
eV US Float-Rate Bank Loan Fixed Inc Gross Rank			*15*	*20*	*25*	*13*	--	--	*26*	*51*	*9*	--	--	*39*	*Sep-14*
Total Global Fixed	**144,165,664**	**10.9**	**-9.4**	**-4.8**	**-1.4**	**1.8**	**-0.3**	**3.0**	**14.4**	**5.8**	**-11.8**	**-2.2**	**-3.8**	**--**	
Citi World Govt Bond Index			*-3.4*	*-0.9*	*1.9*	*2.8*	*1.1*	*2.1*	*7.5*	*1.6*	*-3.6*	*-0.5*	*-4.0*	--	
InvestorForce Public DB Glbl Fix Inc Gross Rank			--	--	--	--	--	--	*29*	*67*	*95*	*93*	*59*	--	
Brandywine Global Fixed Income	74,735,363	5.7	-6.4	-2.0	0.8	2.1	1.2	3.8	12.5	2.2	-9.3	2.9	-1.6	4.0	Nov-07
Citi WGBI ex US			*-5.1*	*-0.9*	*3.2*	*3.7*	*1.0*	*1.8*	*10.3*	*1.8*	*-5.5*	*-2.7*	*-4.6*	*2.1*	*Nov-07*
eV Global Fixed Inc Unhedged Gross Rank			*95*	*66*	*65*	*80*	*83*	*42*	*9*	*71*	*96*	*43*	*59*	*41*	*Nov-07*
Stone Harbor Local Markets Ins	69,430,301	5.2	-12.4	-7.7	-3.6	1.5	--	--	16.4	9.9	-14.4	-7.7	--	-2.0	Jul-13
JPM GBI-EM Global Diversified TR USD			*-10.4*	*-6.4*	*-2.3*	*2.0*	--	--	*15.2*	*9.9*	*-14.9*	*-5.7*	--	*-1.2*	*Jul-13*
eV All Emg Mkts Fixed Inc Gross Rank			*97*	*92*	*93*	*93*	--	--	*14*	*67*	*79*	*98*	--	*98*	*Jul-13*
Total Real Estate	**189,128,859**	**14.3**	**2.0**	**4.0**	**7.6**	**9.4**	**10.9**	**5.2**	**7.8**	**7.8**	**18.0**	**10.4**	**12.9**	**--**	
NCREIF Property Index			*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*6.2*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*	--	
JP Morgan Core Real Estate	157,445,333	11.9	1.7	3.7	6.8	8.4	10.5	5.7	6.1	8.4	15.2	11.2	15.9	5.6	Mar-08
NCREIF-ODCE			*2.1*	*4.3*	*8.4*	*9.4*	*11.0*	*5.3*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*	*5.3*	*Mar-08*
NCREIF Property Index			*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*6.2*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*	*6.2*	*Mar-08*
ARA American Strategic Value Realty	17,238,425	1.3	2.2	4.2	9.0	--	--	--	7.4	--	--	--	--	8.7	Jun-16
NCREIF-ODCE			*2.1*	*4.3*	*8.4*	--	--	--	*7.6*	--	--	--	--	*8.2*	*Jun-16*
NCREIF Property Index			*1.8*	*3.5*	*7.2*	--	--	--	*7.0*	--	--	--	--	*7.1*	*Jun-16*
Direct Real Estate	14,445,101	1.1	4.6	7.5	15.3	15.3	12.8	7.1	20.6	5.5	22.9	6.1	5.2	--	
NCREIF-ODCE			*2.1*	*4.3*	*8.4*	*9.4*	*11.0*	*5.3*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*	--	
NCREIF Property Index			*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*6.2*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*	--	

Since Inception ranking is from the beginning of the first complete month of performance. Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Direct Real Estate is lagged one quarter. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018.

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013	Inception	Inception Date
Total Commodities	**45,379,851**	**3.4**	**1.7**	**1.7**	**12.4**	**-2.7**	**-5.0**	**--**	**6.2**	**12.6**	**-25.2**	**-16.0**	**-9.1**	**--**	
Bloomberg Commodity Index TR USD			*0.4*	*0.0*	*7.3*	*-4.5*	*-6.4*	*--*	*1.7*	*11.8*	*-24.7*	*-17.0*	*-9.5*	*--*	
Gresham MTAP Commodity Builder	45,379,851	3.4	1.7	1.7	12.4	-2.7	--	--	6.2	12.6	-25.2	-16.0	--	-6.0	Aug-13
Bloomberg Commodity Index TR USD			*0.4*	*0.0*	*7.3*	*-4.5*	*--*	*--*	*1.7*	*11.8*	*-24.7*	*-17.0*	*--*	*-7.5*	*Aug-13*
Total Cash	**27,285,856**	**2.1**	**0.7**	**1.0**	**1.3**	**0.9**	**0.7**	**0.8**	**1.0**	**0.5**	**0.4**	**0.3**	**0.3**	**--**	
91 Day T-Bills			*0.5*	*0.8*	*1.4*	*0.7*	*0.4*	*0.3*	*0.9*	*0.3*	*0.0*	*0.0*	*0.0*	*--*	
Cash Account	27,285,856	2.1	0.7	1.0	1.3	0.9	0.7	0.8	1.0	0.5	0.4	0.3	0.3	--	
91 Day T-Bills			*0.5*	*0.8*	*1.4*	*0.7*	*0.4*	*0.3*	*0.9*	*0.3*	*0.0*	*0.0*	*0.0*	*--*	

Since Inception ranking is from the beginning of the first complete month of performance. Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Direct Real Estate is lagged one quarter. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2018

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Fund	**1,322,675,695**	**100.0**	**-0.7**	**0.1**	**6.7**	**5.9**	**6.4**	**--**	**15.0**	**6.0**	**-1.3**	**4.6**	**13.3**
Total Fund ex Overlay	1,320,628,118	99.8	-0.7	0.1	6.8	5.9	6.4	--	14.9	6.1	-1.3	4.7	13.2
Policy Index			*0.8*	*0.3*	*7.0*	*6.1*	*7.1*	*--*	*13.4*	*7.8*	*-0.5*	*5.2*	*13.4*
Total Domestic Equity	**274,515,173**	**20.8**	**2.1**	**1.9**	**14.6**	**12.6**	**12.6**	**--**	**24.5**	**12.7**	**0.8**	**10.5**	**31.6**
Russell 3000			*3.9*	*3.2*	*14.8*	*11.6*	*13.3*	*--*	*21.1*	*12.7*	*0.5*	*12.6*	*33.6*
PIMCO RAE Fundamental PLUS Instl	60,106,165	4.5	2.7	1.2	13.2	9.8	11.4	10.0	16.5	15.4	-3.2	12.3	35.6
S&P 500			*3.4*	*2.6*	*14.4*	*11.9*	*13.4*	*10.2*	*21.8*	*12.0*	*1.4*	*13.7*	*32.4*
Loomis Sayles Large Cap Growth	78,927,312	6.0	2.8	3.7	17.3	--	--	--	33.5	--	--	--	--
Russell 1000 Growth			*5.8*	*7.3*	*22.5*	*--*	*--*	*--*	*30.2*	*--*	*--*	*--*	*--*
Boston Partners Large Cap Value	75,100,785	5.7	-0.2	-1.8	9.9	--	--	--	--	--	--	--	--
Russell 1000 Value			*1.2*	*-1.7*	*6.8*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Atlanta Capital Mgmt	60,380,911	4.6	3.6	4.7	18.8	13.9	14.8	--	25.6	11.7	9.6	5.0	37.0
Russell 2500			*5.7*	*5.5*	*16.2*	*10.3*	*12.3*	*--*	*16.8*	*17.6*	*-2.9*	*7.1*	*36.8*
Total International Equity	**305,778,435**	**23.1**	**-1.9**	**-2.4**	**6.5**	**4.8**	**6.5**	**--**	**25.8**	**1.6**	**-4.9**	**1.4**	**17.0**
MSCI ACWI ex USA Gross			*-2.4*	*-3.4*	*7.8*	*5.6*	*6.5*	*--*	*27.8*	*5.0*	*-5.3*	*-3.4*	*15.8*
Dodge & Cox Intl Stock	145,635,364	11.0	-5.1	-7.1	0.5	2.1	5.8	3.7	23.9	8.3	-11.4	0.1	26.3
MSCI EAFE Gross			*-1.0*	*-2.4*	*7.4*	*5.4*	*6.9*	*3.3*	*25.6*	*1.5*	*-0.4*	*-4.5*	*23.3*
WCM International Growth	160,143,071	12.1	1.2	2.5	12.8	--	--	--	--	--	--	--	--
MSCI ACWI ex USA Gross			*-2.4*	*-3.4*	*7.8*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Total Domestic Fixed Income	**268,690,683**	**20.3**	**0.1**	**-0.4**	**1.4**	**2.6**	**2.6**	**--**	**3.9**	**4.2**	**0.9**	**4.4**	**-3.0**
BBgBarc US Aggregate TR			*-0.2*	*-1.6*	*-0.4*	*1.7*	*2.3*	*--*	*3.5*	*2.6*	*0.6*	*6.0*	*-2.0*
BlackRock Core Bond	99,460,836	7.5	0.2	-1.3	0.3	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR			*-0.2*	*-1.6*	*-0.4*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Dodge & Cox Income Fund	99,003,527	7.5	-0.3	-1.2	0.4	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR			*-0.2*	*-1.6*	*-0.4*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Pacific Asset Corporate Loan	70,226,320	5.3	0.8	2.1	4.7	4.9	--	--	4.6	8.8	2.1	--	--
S&P/LSTA Leveraged Loan Index			*0.7*	*2.2*	*4.4*	*4.2*	*--*	*--*	*4.1*	*10.2*	*-0.7*	*--*	*--*
Total Global Fixed	**144,165,664**	**10.9**	**-9.6**	**-5.1**	**-2.0**	**1.2**	**-1.0**	**--**	**13.7**	**5.1**	**-12.4**	**-2.8**	**-4.4**
Citi World Govt Bond Index			*-3.4*	*-0.9*	*1.9*	*2.8*	*1.1*	*--*	*7.5*	*1.6*	*-3.6*	*-0.5*	*-4.0*
Brandywine Global Fixed Income	74,735,363	5.7	-6.5	-2.2	0.4	1.7	0.8	--	12.0	1.7	-9.7	2.4	-2.3
Citi WGBI ex US			*-5.1*	*-0.9*	*3.2*	*3.7*	*1.0*	*--*	*10.3*	*1.8*	*-5.5*	*-2.7*	*-4.6*

Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Direct Real Estate is lagged one quarter. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018.

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Stone Harbor Local Markets Ins	69,430,301	5.2	-12.6	-8.1	-4.5	0.6	--	--	15.4	9.0	-15.1	-8.6	--
JPM GBI-EM Global Diversified TR USD			*-10.4*	*-6.4*	*-2.3*	*2.0*	*--*	*--*	*15.2*	*9.9*	*-14.9*	*-5.7*	*--*
Total Real Estate	**189,128,859**	**14.3**	**2.0**	**4.0**	**7.6**	**8.9**	**10.3**	**--**	**7.8**	**6.8**	**16.9**	**9.6**	**12.1**
NCREIF Property Index			*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*--*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*
JP Morgan Core Real Estate	157,445,333	11.9	1.7	3.7	6.8	7.9	9.7	--	6.1	7.3	14.1	10.0	14.8
NCREIF-ODCE			*2.1*	*4.3*	*8.4*	*9.4*	*11.0*	*--*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*
NCREIF Property Index			*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*--*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*
ARA American Strategic Value Realty	17,238,425	1.3	2.2	4.2	9.0	--	--	--	7.4	--	--	--	--
NCREIF-ODCE			*2.1*	*4.3*	*8.4*	*--*	*--*	*--*	*7.6*	*--*	*--*	*--*	*--*
NCREIF Property Index			*1.8*	*3.5*	*7.2*	*--*	*--*	*--*	*7.0*	*--*	*--*	*--*	*--*
Direct Real Estate	14,445,101	1.1	4.6	7.5	15.3	15.0	12.6	7.0	20.6	4.9	22.2	6.1	5.2
NCREIF-ODCE			*2.1*	*4.3*	*8.4*	*9.4*	*11.0*	*5.3*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*
NCREIF Property Index			*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*6.2*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*
Total Commodities	**45,379,851**	**3.4**	**1.7**	**1.7**	**12.4**	**-3.1**	**-5.5**	**--**	**6.2**	**11.8**	**-25.8**	**-16.6**	**-9.5**
Bloomberg Commodity Index TR USD			*0.4*	*0.0*	*7.3*	*-4.5*	*-6.4*	*--*	*1.7*	*11.8*	*-24.7*	*-17.0*	*-9.5*
Gresham MTAP Commodity Builder	45,379,851	3.4	1.7	1.7	12.4	-3.1	--	--	6.2	11.8	-25.8	-16.6	--
Bloomberg Commodity Index TR USD			*0.4*	*0.0*	*7.3*	*-4.5*	*--*	*--*	*1.7*	*11.8*	*-24.7*	*-17.0*	*--*
Total Cash	**27,285,856**	**2.1**	**0.7**	**1.0**	**1.3**	**0.9**	**0.7**	**0.8**	**1.0**	**0.5**	**0.4**	**0.3**	**0.3**
91 Day T-Bills			*0.5*	*0.8*	*1.4*	*0.7*	*0.4*	*0.3*	*0.9*	*0.3*	*0.0*	*0.0*	*0.0*
Cash Account	27,285,856	2.1	0.7	1.0	1.3	0.9	0.7	0.8	1.0	0.5	0.4	0.3	0.3
91 Day T-Bills			*0.5*	*0.8*	*1.4*	*0.7*	*0.4*	*0.3*	*0.9*	*0.3*	*0.0*	*0.0*	*0.0*

Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Direct Real Estate is lagged one quarter. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018.

3 Years

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
PIMCO RAE Fundamental PLUS Instl	9.80%	-2.13%	7.52%	-1.48%	0.95	2.88%	0.86	1.22	-0.74	87.91%	120.59%
Atlanta Capital Mgmt	13.89%	3.59%	7.72%	7.49%	0.62	6.26%	0.55	1.72	0.57	112.48%	51.50%
Dodge & Cox Intl Stock	2.06%	-3.35%	14.15%	-4.69%	1.25	6.10%	0.85	0.10	-0.55	93.83%	138.69%
Pacific Asset Corporate Loan	4.89%	0.68%	1.87%	2.44%	0.58	1.42%	0.89	2.24	0.48	94.46%	20.85%
Brandywine Global Fixed Income	1.69%	-2.04%	9.64%	-1.36%	0.82	5.25%	0.74	0.10	-0.39	68.94%	88.79%
Stone Harbor Local Markets Ins	0.62%	-1.34%	14.39%	-1.52%	1.09	1.79%	0.99	0.00	-0.75	100.93%	112.62%
JP Morgan Core Real Estate	7.89%	-1.47%	1.18%	-0.99%	0.95	0.29%	0.94	6.12	-5.12	83.06%	--
Direct Real Estate	14.97%	5.61%	6.03%	8.53%	0.69	5.98%	0.02	2.38	0.94	168.76%	--
Gresham MTAP Commodity Builder	-3.08%	1.45%	14.45%	1.56%	1.02	2.02%	0.98	-0.26	0.72	120.04%	98.71%

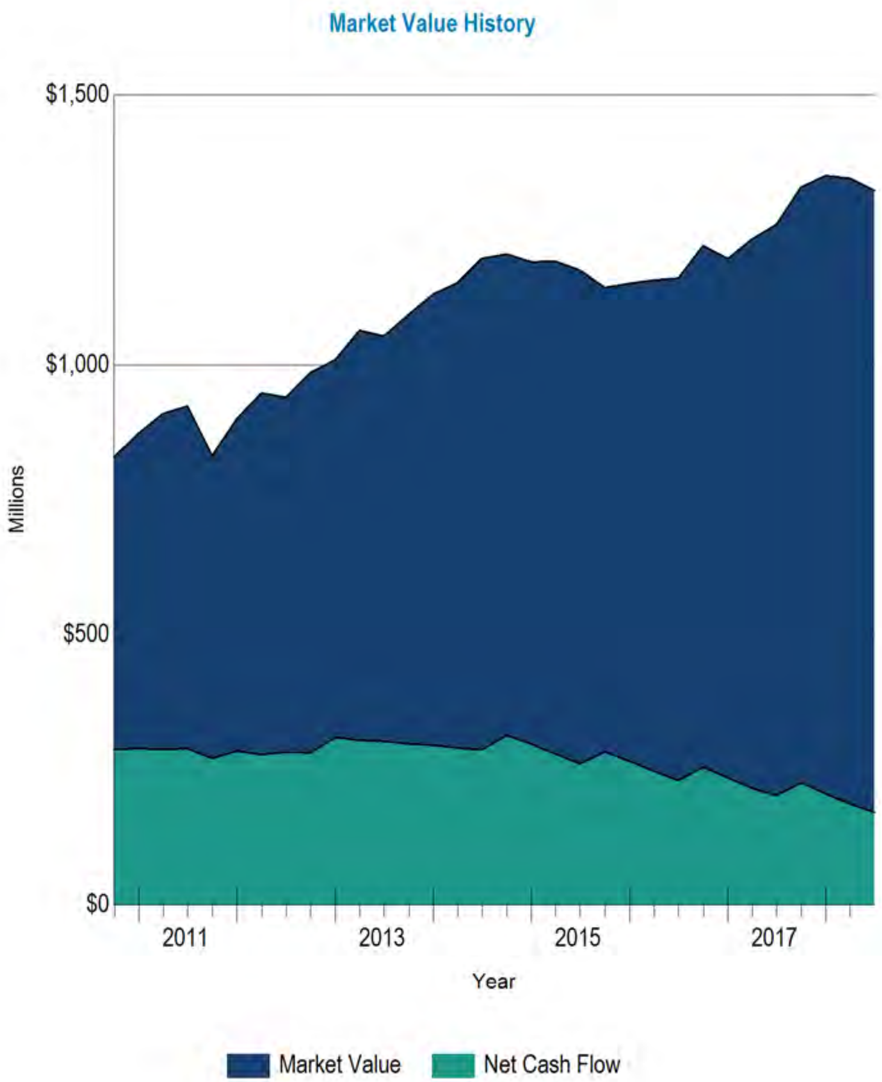
5 Years

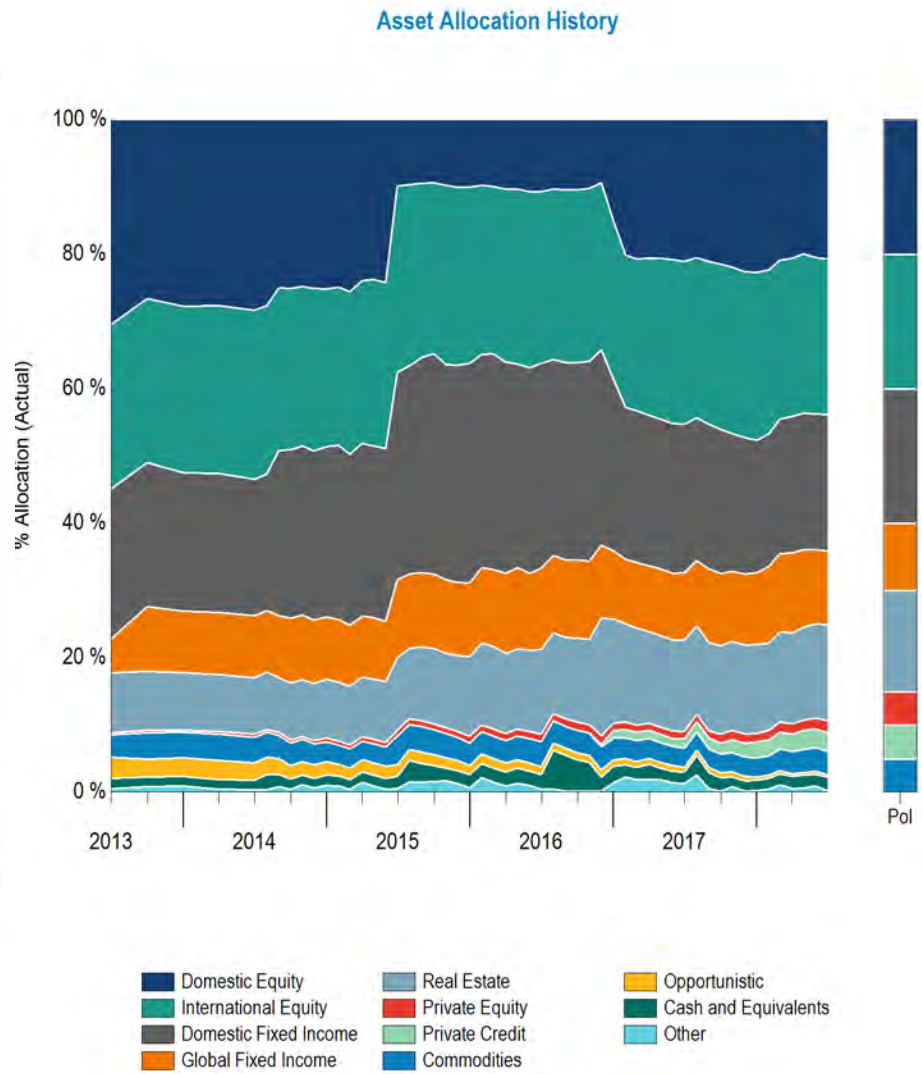
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
PIMCO RAE Fundamental PLUS Instl	11.43%	-1.99%	7.43%	-1.97%	1.00	2.43%	0.89	1.49	-0.82	86.14%	120.59%
Atlanta Capital Mgmt	14.80%	2.52%	8.16%	6.03%	0.71	5.50%	0.65	1.77	0.46	100.59%	38.35%
Dodge & Cox Intl Stock	5.78%	-1.15%	12.73%	-1.97%	1.12	5.22%	0.84	0.42	-0.22	100.97%	117.87%
Brandywine Global Fixed Income	0.78%	-0.23%	7.99%	0.01%	0.76	4.72%	0.73	0.04	-0.05	70.39%	76.98%
Direct Real Estate	12.61%	1.58%	6.77%	10.00%	0.24	6.85%	0.00	1.81	0.23	117.94%	--
JP Morgan Core Real Estate	9.75%	-1.28%	1.66%	-1.91%	1.06	0.70%	0.82	5.63	-1.82	86.15%	--

Vintage	Manager & Fund Name	Estimated 6/30 Market Value[3]	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value as of IRR date	Distrib./ Paid-In (DPI)[1]	Tot. Value/ Paid-In (TVPI)[2]	Net IRR Since Inception[5]	IRR Date
2011	HarbourVest Partners IX-Buyout Fund L.P.	$13,509,957	$20,000,000	$14,147,399	71%	$5,852,601	$7,851,054	$13,331,924	*55.5%*	*151.0%*	*17.4%*	*3/31/18*
2010	KKR Mezzanine Partners I L.P. [6]	$4,320,267	$20,000,000	$20,000,000	100%	$0	$29,528,810	$5,822,514	*147.6%*	*169.2%*	*8.6%*	*3/31/18*
2010	PIMCO Distressed Credit Fund [4]	$149,892	$20,000,000	$20,000,000	100%	$0	$27,899,650	$149,892	*139.5%*	*140.2%*	*12.3%*	*3/31/18*
2016	TPG Diversified Credit Program	$37,396,868	$75,000,000	$35,310,065	47%	$39,689,935	$486,501	$35,391,370	*1.4%*	*107.3%*	*9.8%*	*3/31/18*
2017	Pathway Private Equity Fund Investors 9 L.P.	$10,306,613	$65,000,000	$10,279,842	16%	$54,720,158	-	-	-	-	-	-
	Total Alternative Illiquids	**$65,683,596**	$200,000,000	$99,737,306	50%	$100,262,694	$65,766,014	$54,695,700	*54.8%*	*120.8%*		
	% of Portfolio (Market Value)	***5.0%***										

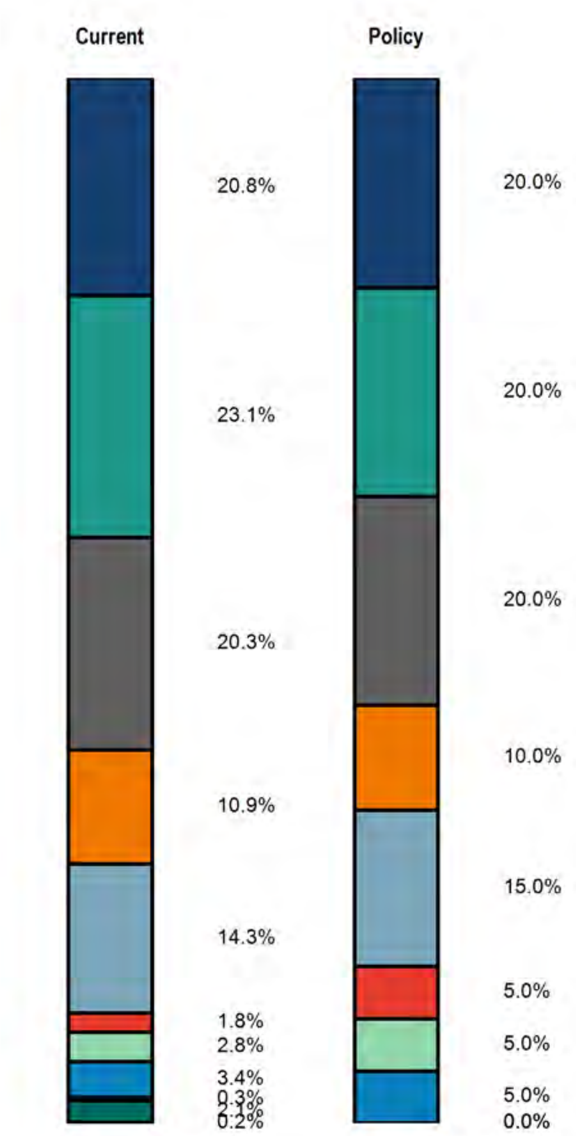
	Management Fee	Admin Fee	Interest Expense	Other Expense	Total Expense[7]
HarbourVest Partners IX-Buyout Fund L.P.	$49,838	$0	$0	$18,207	$68,045
KKR Mezzanine Partners I L.P.	$27,600	$0	$0	$0	$27,600
PIMCO Distressed Credit Fund [4]	$0	$0	$0	$2,109	$2,109
TPG Diversified Credit Program	$36,750	$0	$0	$0	$36,750
Pathway Private Equity Fund Investors 9 L.P.	-	-	-	-	-
	$114,188	$0	$0	$20,316	**$134,504**

[1](DPI) is equal to (capital returned / capital called)
[2](TVPI) is equal to (market value + capital returned) / capital called
[3]Last known market value + capital calls - distributions
[4]Investment period ended, no further capital to be called.
[5]Net IRR is calculated on the cash flows of the underlying investments of the fund and is net of the underlying fund fees and carried interest
[6]KKR: As of 1Q2018, total capital called is $23,593,570, which includes recycled distributions. Unused capital commitment is $2,109,437 after including distribution proceeds available for reinvestment
[7]All fees and expenses are for 1Q 2018





*Other balance represents Clifton Group



	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
Domestic Equity	$274,515,173	20.8%	20.0%	$9,980,034	15.0% - 30.0%	Yes
International Equity	$305,778,435	23.1%	20.0%	$41,243,296	15.0% - 30.0%	Yes
Domestic Fixed Income	$268,690,683	20.3%	20.0%	$4,155,544	10.0% - 30.0%	Yes
Global Fixed Income	$144,165,664	10.9%	10.0%	$11,898,095	0.0% - 20.0%	Yes
Real Estate	$189,128,859	14.3%	15.0%	-$9,272,495	5.0% - 20.0%	Yes
Private Equity	$23,816,570	1.8%	5.0%	-$42,317,215	0.0% - 10.0%	Yes
Private Credit	$37,396,868	2.8%	5.0%	-$28,736,917	0.0% - 10.0%	Yes
Commodities	$45,379,851	3.4%	5.0%	-$20,753,934	0.0% - 10.0%	Yes
Opportunistic	$4,470,159	0.3%	0.0%	$4,470,159	0.0% - 10.0%	Yes
Cash and Equivalents	$27,285,856	2.1%	0.0%	$27,285,856	0.0% - 5.0%	Yes
Other	$2,047,577	0.2%	--	$2,047,577	--	No
Total	**$1,322,675,695**	**100.0%**	**100.0%**			

**Other balance represents Clifton Group*

Total Fund
Investment Fund Fee Analysis

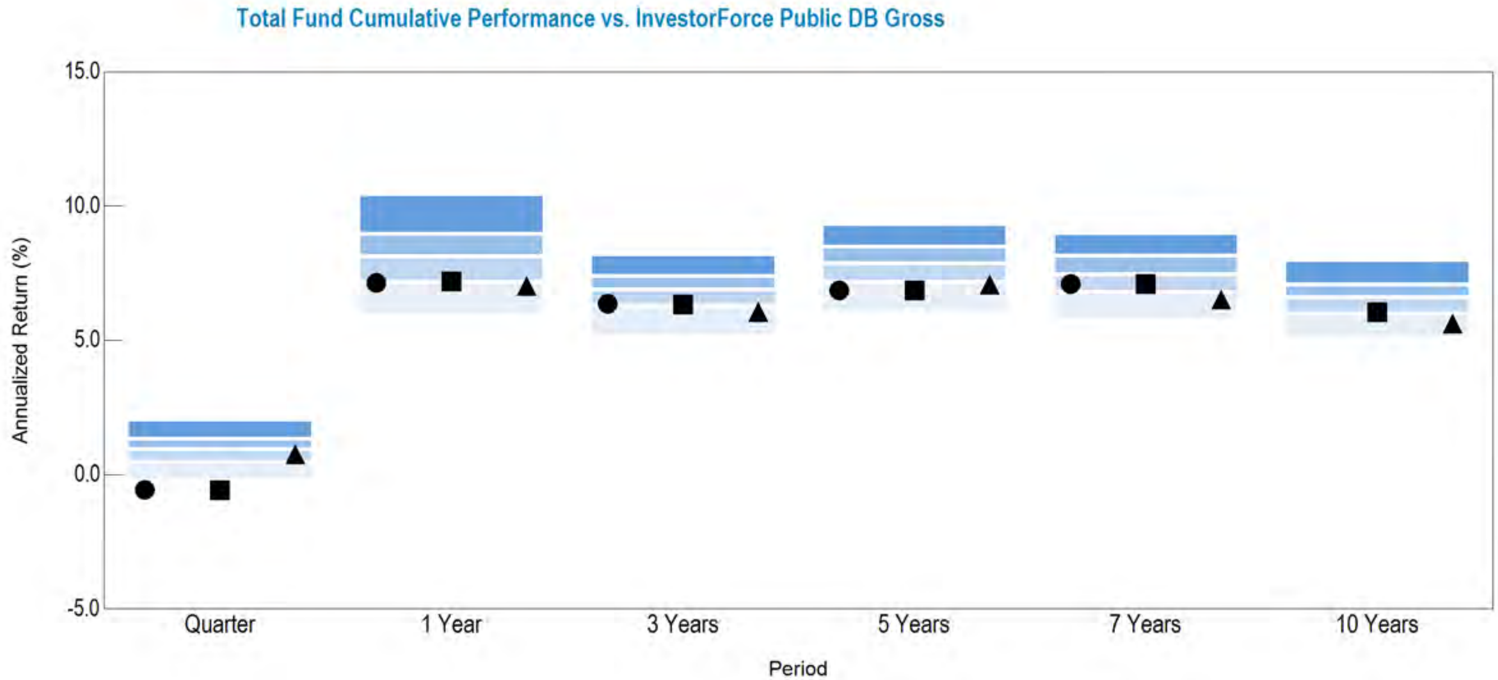
Period Ending: June 30, 2018

Account	Fee Schedule	Market Value As of 6/30/2018	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
ARA American Strategic Value Realty	1.25% of First 10.0 Mil, 1.20% of Next 15.0 Mil, 1.10% of Next 25.0 Mil, 1.00% Thereafter	$17,238,425	1.3%	$211,861	1.23%
Atlanta Capital Mgmt	0.80% of First 50.0 Mil, 0.70% of Next 100.0 Mil, 0.60% Thereafter	$60,380,911	4.6%	$472,666	0.78%
BlackRock Core Bond	0.28% of First 100.0 Mil, 0.26% Thereafter	$99,460,836	7.5%	$278,490	0.28%
Boston Partners Large Cap Value	0.40% of Assets	$75,100,785	5.7%	$300,403	0.40%
Brandywine Global Fixed Income	0.45% of First 50.0 Mil, 0.40% of Next 50.0 Mil, 0.35% Thereafter	$74,735,363	5.7%	$323,941	0.43%
Cash Account	No Fee	$27,285,856	2.1%	--	--
Direct Real Estate	No Fee	$14,445,101	1.1%	--	--
Dodge & Cox Income Fund	0.43% of Assets	$99,003,527	7.5%	$425,715	0.43%
Dodge & Cox Intl Stock	0.64% of Assets	$145,635,364	11.0%	$932,066	0.64%
Gresham MTAP Commodity Builder	0.75% of First 50.0 Mil, 0.50% Thereafter	$45,379,851	3.4%	$340,349	0.75%
Harbourvest Partners IX Buyout Fund L.P.	200,000 Annually	$13,509,957	1.0%	$200,000	1.48%
JP Morgan Core Real Estate	1.00% of Assets	$157,445,333	11.9%	$1,574,453	1.00%
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	300,000 Annually	$4,320,267	0.3%	$300,000	6.94%
Loomis Sayles Large Cap Growth	0.45% of First 100.0 Mil, 0.40% Thereafter	$78,927,312	6.0%	$355,173	0.45%
Pacific Asset Corporate Loan	0.37% of Assets	$70,226,320	5.3%	$259,837	0.37%
Pathway Private Equity Fund Investors 9 L.P.	Please see footnote	$10,306,613	0.8%	--	--
PIMCO Distressed Credit Fund	150,000 Annually	$149,892	0.0%	$150,000	100.07%
PIMCO RAE Fundamental PLUS Instl	0.40% of Assets	$60,106,165	4.5%	$240,425	0.40%
Stone Harbor Local Markets Ins	0.89% of Assets	$69,430,301	5.2%	$617,930	0.89%
The Clifton Group	50,000 Annually	$2,047,577	0.2%	$50,000	2.44%
TPG Diversified Credit Program	Please see footnote	$37,396,868	2.8%	--	--
WCM International Growth	0.70% of Assets	$160,143,071	12.1%	$1,121,001	0.70%
Investment Management Fee		**$1,322,675,695**	**100.0%**	**$8,154,312**	**0.62%**

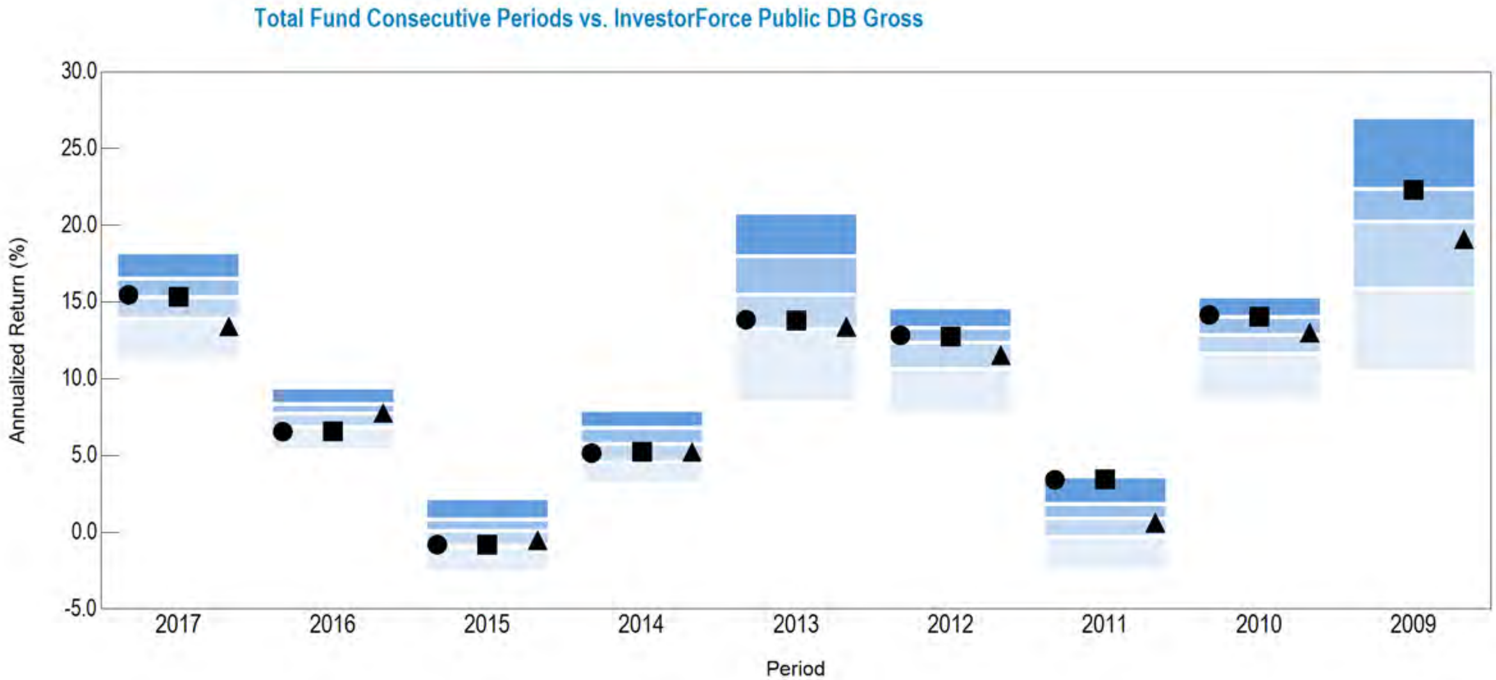
**HarbourVest, KKR and PIMCO Distressed Credit fees are estimated gross management fees only and do not include incentive allocations or offsetting cash flows received by the fund. Pathway fee steps up and down over time, with an effective average of 0.71% up to $25m, 0.67% up to $50m, 0.63% up to $75m, and 0.40% above $75m.*

**Clifton Group fee schedule represents contractual minimum fee. Actual fee charged is $1,500 per month through at least 6/30/2015.*

**TPG: No management fee at SMA level. Subject to the annual fees of each of the underlying TSSP funds. (1) TAO 65bps on unfunded commitments and 1.35% on remaining capital contributions (long-term designation) (2) TSLE 1.5% on commitments, 1.25% on remaining capital contributions post commitment period (3) TICP 30bps on remaining capital contributions.*



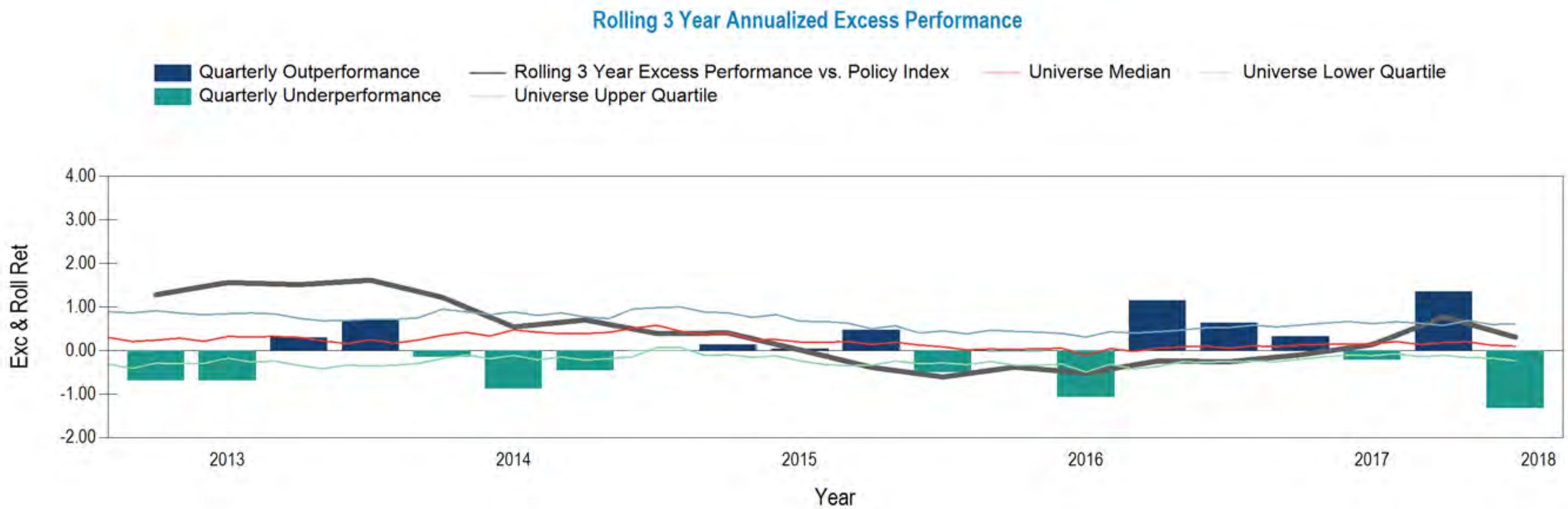
	Return (Rank)											
5th Percentile	2.0		10.4		8.2		9.3		9.0		8.0	
25th Percentile	1.4		9.0		7.4		8.5		8.2		7.1	
Median	1.0		8.1		6.9		7.9		7.5		6.6	
75th Percentile	0.5		7.2		6.3		7.2		6.8		6.0	
95th Percentile	-0.2		5.9		5.2		6.1		5.8		5.1	
# of Portfolios	249		245		238		222		210		190	
● Total Fund	-0.6	(99)	7.1	(77)	6.4	(74)	6.9	(86)	7.1	(65)	--	(--)
■ Total Fund ex Overlay	-0.6	(99)	7.2	(76)	6.3	(75)	6.9	(86)	7.1	(65)	6.1	(75)
▲ Policy Index	0.8	(61)	7.0	(78)	6.1	(85)	7.1	(80)	6.5	(85)	5.6	(86)

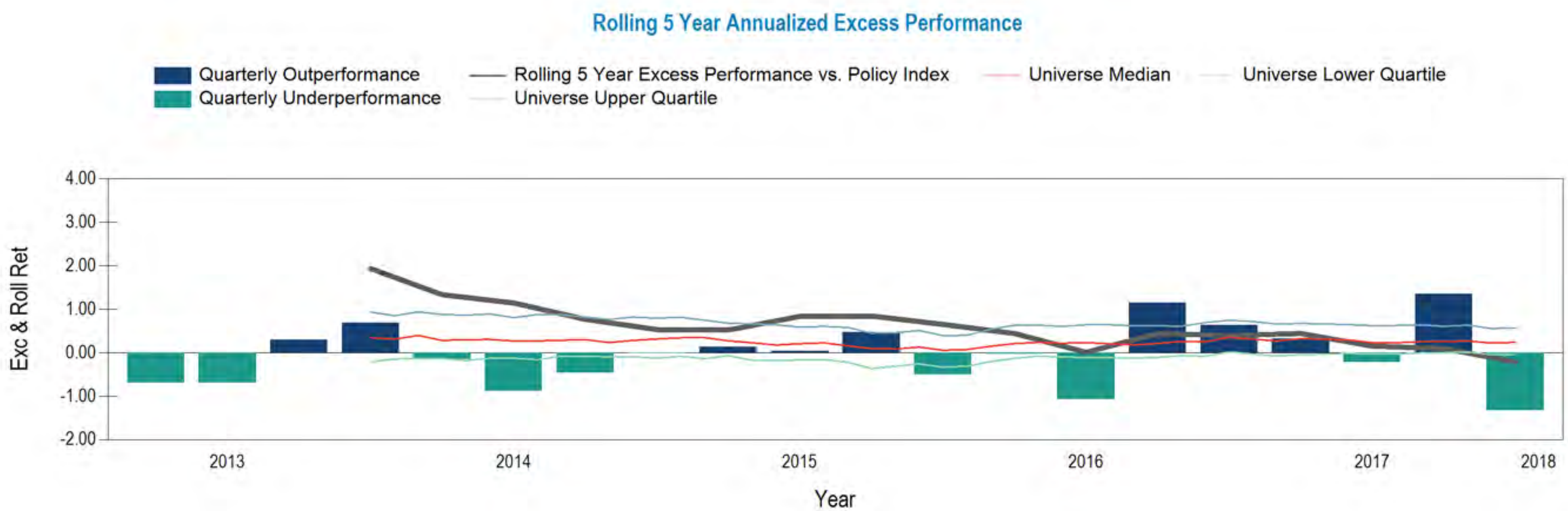


	Return (Rank)																	
5th Percentile	18.2		9.4		2.2		8.0		20.8		14.6		3.6		15.4		27.0	
25th Percentile	16.5		8.4		0.9		6.8		18.0		13.4		1.9		14.0		22.4	
Median	15.3		7.7		0.1		5.8		15.5		12.4		0.9		12.9		20.2	
75th Percentile	14.0		6.9		-0.9		4.6		13.3		10.7		-0.3		11.7		15.9	
95th Percentile	11.3		5.3		-2.6		3.2		8.5		7.8		-2.5		8.6		10.5	
# of Portfolios	304		305		316		248		231		236		206		188		184	
● Total Fund	15.5	(47)	6.6	(84)	-0.8	(74)	5.1	(66)	13.8	(71)	12.8	(40)	3.4	(6)	14.2	(21)	--	(--)
■ Total Fund ex Overlay	15.3	(51)	6.6	(83)	-0.8	(75)	5.2	(64)	13.8	(72)	12.7	(43)	3.5	(6)	14.1	(24)	22.3	(27)
▲ Policy Index	13.4	(86)	7.8	(49)	-0.5	(67)	5.2	(64)	13.4	(74)	11.6	(69)	0.6	(60)	13.0	(48)	19.1	(57)

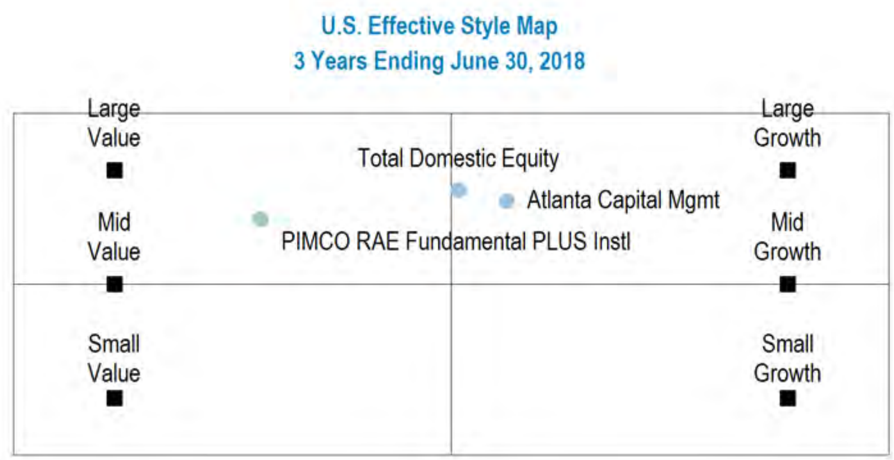
Total Fund

Rolling Return Analysis (Gross of Fees) Period Ending: June 30, 2018





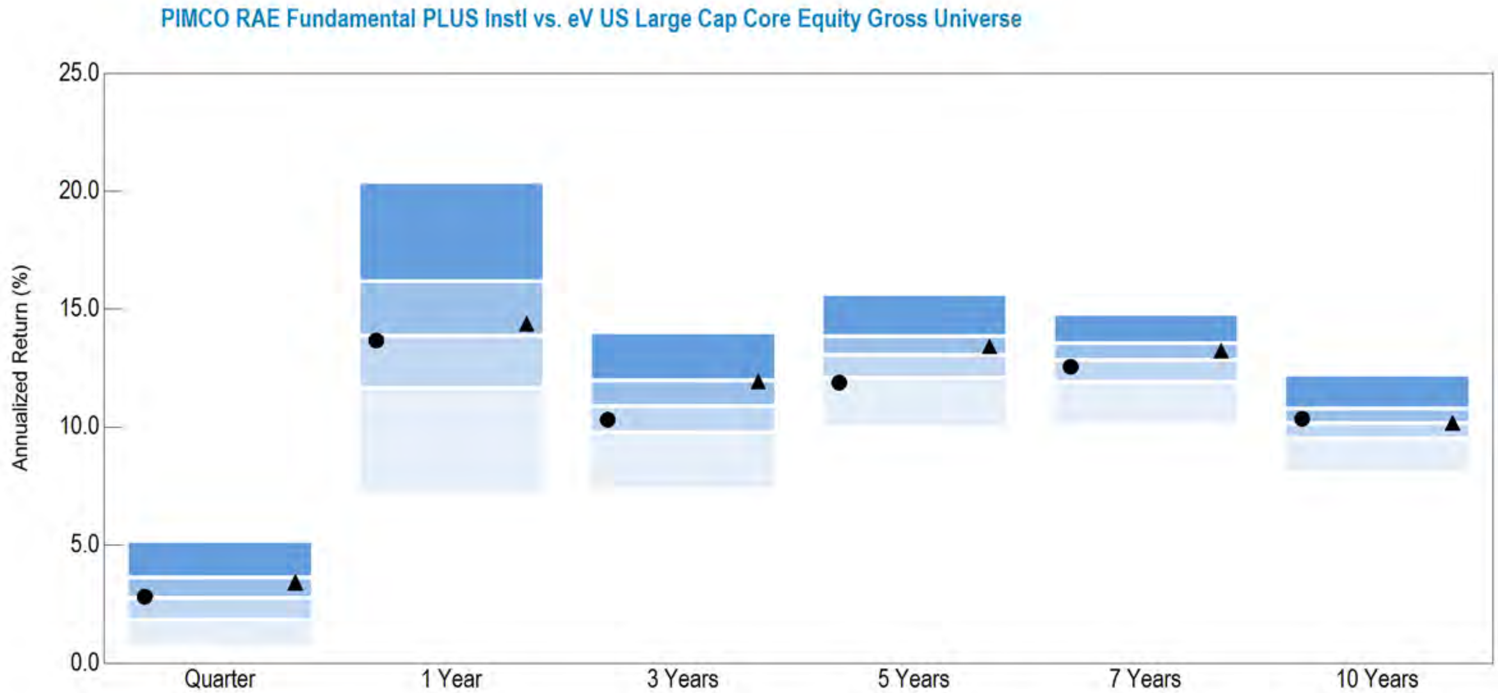
	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Domestic Equity	**274,515,173**	**2.2**	**2.1**	**15.2**	**13.0**	**13.1**	**10.8**	**25.1**	**13.0**	**1.2**	**11.0**	**32.2**
Russell 3000		*3.9*	*3.2*	*14.8*	*11.6*	*13.3*	*10.2*	*21.1*	*12.7*	*0.5*	*12.6*	*33.6*
InvestorForce Public DB US Eq Gross Rank		*99*	*88*	*37*	*5*	*49*	*17*	*4*	*48*	*18*	*60*	*91*
PIMCO RAE Fundamental PLUS Instl	60,106,165	2.8	1.4	13.7	10.3	11.9	10.3	17.0	15.9	-2.7	12.7	36.0
S&P 500		*3.4*	*2.6*	*14.4*	*11.9*	*13.4*	*10.2*	*21.8*	*12.0*	*1.4*	*13.7*	*32.4*
eV US Large Cap Core Equity Gross Rank		*50*	*65*	*54*	*66*	*78*	*43*	*89*	*6*	*86*	*58*	*22*
Loomis Sayles Large Cap Growth	78,927,312	2.9	3.9	17.8	--	--	--	34.1	--	--	--	--
Russell 1000 Growth		*5.8*	*7.3*	*22.5*	--	--	--	*30.2*	--	--	--	--
eV US Large Cap Growth Equity Gross Rank		*86*	*85*	*75*	--	--	--	*16*	--	--	--	--
Boston Partners Large Cap Value	75,100,785	-0.1	-1.6	10.3	--	--	--	--	--	--	--	--
Russell 1000 Value		*1.2*	*-1.7*	*6.8*	--	--	--	--	--	--	--	--
eV US Large Cap Value Equity Gross Rank		*91*	*71*	*48*	--	--	--	--	--	--	--	--
Atlanta Capital Mgmt	60,380,911	3.8	5.1	19.7	14.8	15.7	--	26.6	12.6	10.4	5.8	37.8
Russell 2500		*5.7*	*5.5*	*16.2*	*10.3*	*12.3*	--	*16.8*	*17.6*	*-2.9*	*7.1*	*36.8*
eV US Small-Mid Cap Equity Gross Rank		*66*	*48*	*30*	*7*	*9*	--	*15*	*62*	*1*	*56*	*52*



	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Domestic Equity	**274,515,173**	**2.1**	**1.9**	**14.6**	**12.6**	**12.6**	**--**	**24.5**	**12.7**	**0.8**	**10.5**	**31.6**
Russell 3000		*3.9*	*3.2*	*14.8*	*11.6*	*13.3*	*--*	*21.1*	*12.7*	*0.5*	*12.6*	*33.6*
PIMCO RAE Fundamental PLUS Instl	60,106,165	2.7	1.2	13.2	9.8	11.4	10.0	16.5	15.4	-3.2	12.3	35.6
S&P 500		*3.4*	*2.6*	*14.4*	*11.9*	*13.4*	*10.2*	*21.8*	*12.0*	*1.4*	*13.7*	*32.4*
Loomis Sayles Large Cap Growth	78,927,312	2.8	3.7	17.3	--	--	--	33.5	--	--	--	--
Russell 1000 Growth		*5.8*	*7.3*	*22.5*	*--*	*--*	*--*	*30.2*	*--*	*--*	*--*	*--*
Boston Partners Large Cap Value	75,100,785	-0.2	-1.8	9.9	--	--	--	--	--	--	--	--
Russell 1000 Value		*1.2*	*-1.7*	*6.8*	*--*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Atlanta Capital Mgmt	60,380,911	3.6	4.7	18.8	13.9	14.8	--	25.6	11.7	9.6	5.0	37.0
Russell 2500		*5.7*	*5.5*	*16.2*	*10.3*	*12.3*	*--*	*16.8*	*17.6*	*-2.9*	*7.1*	*36.8*

Correlation Matrix
Last 5 Years

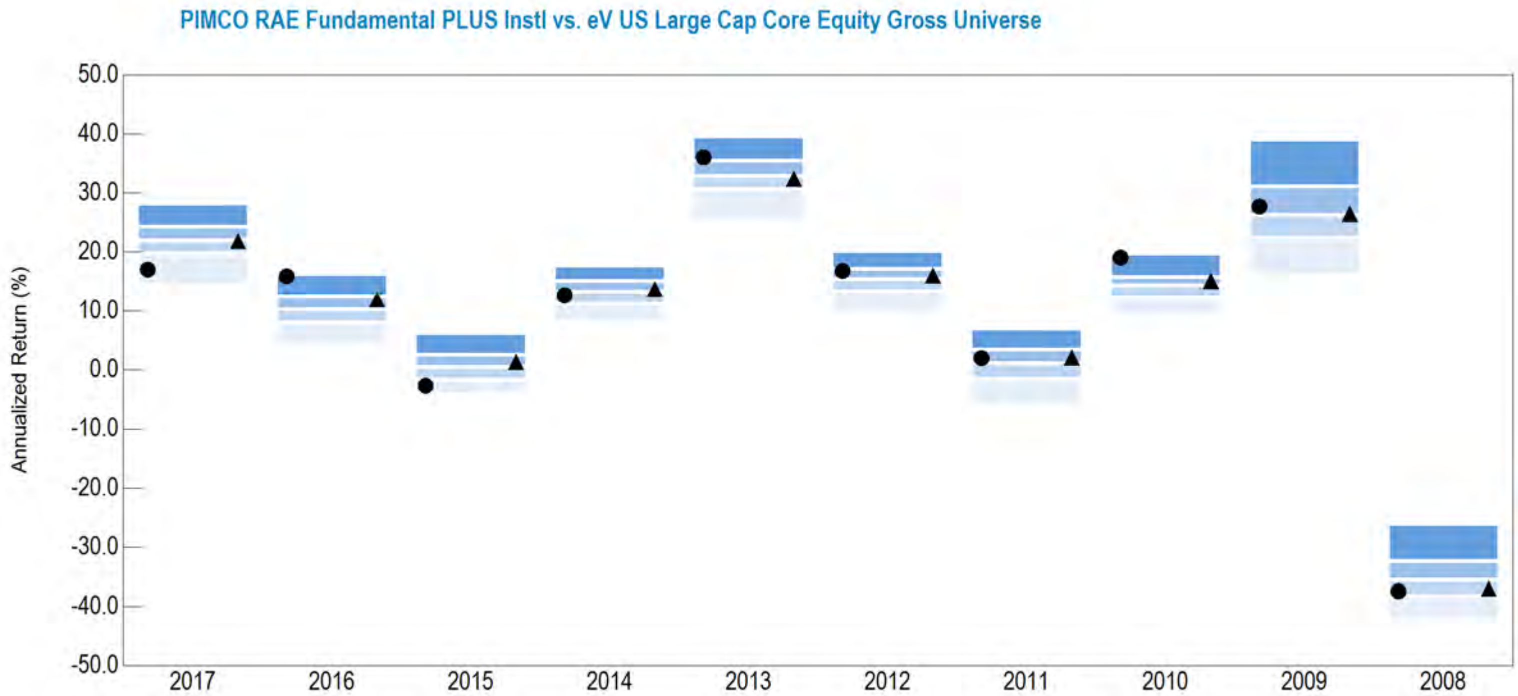
	Total Domestic Equity	PIMCO RAE Fundamental PLUS Instl	Loomis Sayles Large Cap Growth	Boston Partners Large Cap Value	Russell 3000
Total Domestic Equity	1.00	--	--	--	--
PIMCO RAE Fundamental PLUS Instl	0.92	1.00	--	--	--
Loomis Sayles Large Cap Growth	--	--	--	--	--
Boston Partners Large Cap Value	--	--	--	--	--
Russell 3000	0.96	0.95	--	--	1.00



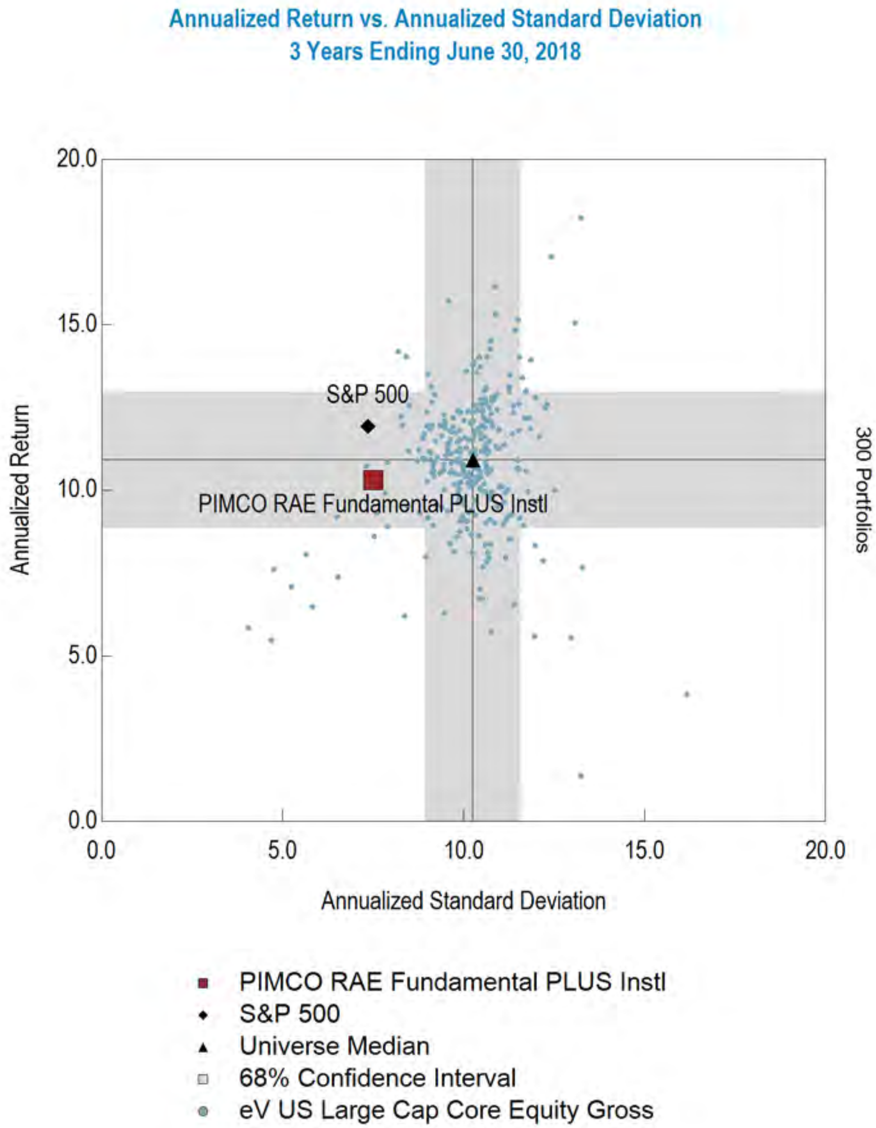
Return (Rank)	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	5.2		20.4		14.0		15.6		14.8		12.2	
25th Percentile	3.7		16.2		12.0		13.9		13.6		10.8	
Median	2.8		13.9		10.9		13.1		12.9		10.2	
75th Percentile	1.9		11.7		9.8		12.1		11.9		9.5	
95th Percentile	0.7		7.2		7.3		10.0		10.1		8.1	
# of Portfolios	313		313		300		284		255		222	
● PIMCO RAE Fundamental PLUS Instl	2.8	(50)	13.7	(54)	10.3	(66)	11.9	(78)	12.6	(61)	10.3	(43)
▲ S&P 500	3.4	(33)	14.4	(44)	11.9	(28)	13.4	(40)	13.2	(37)	10.2	(51)

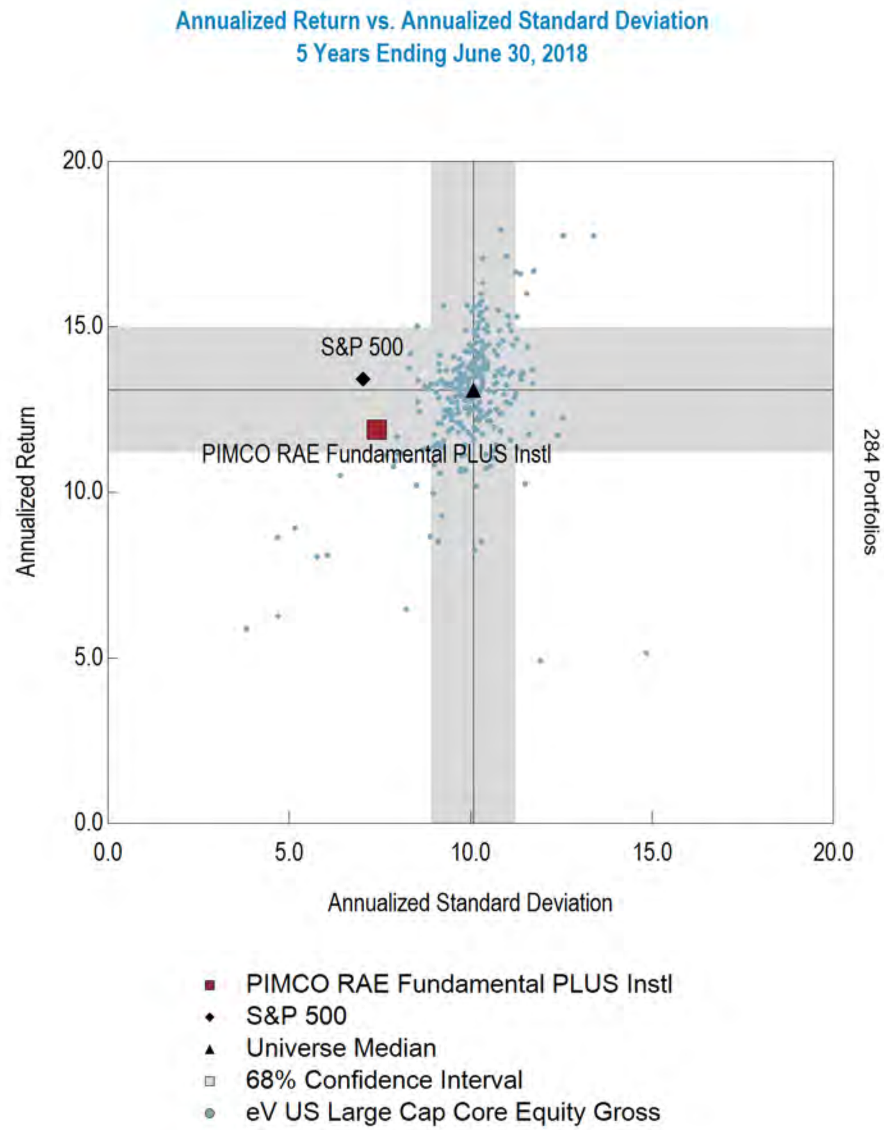
PIMCO RAE Fundamental PLUS Instl

Consecutive Performance Comparison (Gross of Fees) Period Ending: June 30, 2018



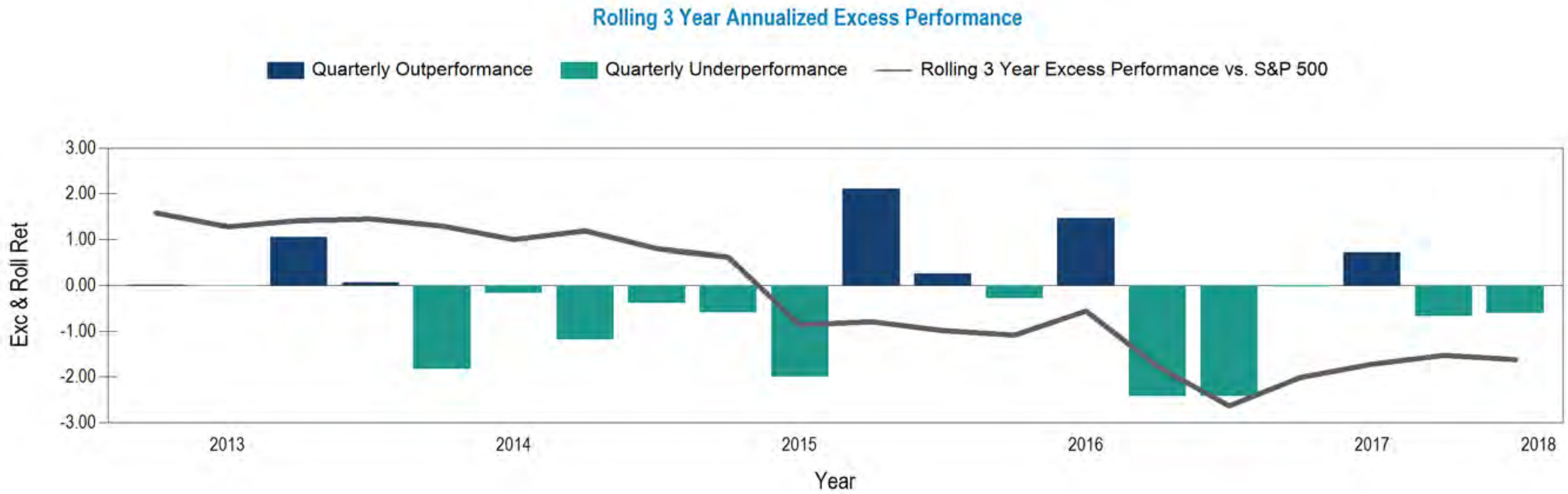
Return (Rank)	2017		2016		2015		2014		2013		2012		2011		2010		2009		2008	
5th Percentile	28.2		16.3		6.3		17.7		39.6		20.1		7.0		19.7		39.1		-26.1	
25th Percentile	24.3		12.5		2.7		15.1		35.5		17.2		3.6		15.8		31.2		-32.3	
Median	22.1		10.4		0.6		13.3		32.9		15.4		1.3		14.4		26.3		-35.4	
75th Percentile	19.8		8.2		-1.6		11.4		30.8		13.4		-1.5		12.3		22.6		-38.1	
95th Percentile	14.4		4.3		-4.1		8.2		25.4		9.8		-5.9		9.1		16.1		-42.3	
# of Portfolios	318		308		267		267		261		254		259		254		280		312	
● PIMCO RAE Fundamental PLUS Instl	17.0	(89)	15.9	(6)	-2.7	(86)	12.7	(58)	36.0	(22)	16.8	(29)	2.0	(41)	19.0	(7)	27.7	(42)	-37.4	(68)
▲ S&P 500	21.8	(53)	12.0	(31)	1.4	(42)	13.7	(42)	32.4	(58)	16.0	(41)	2.1	(40)	15.1	(37)	26.5	(48)	-37.0	(62)

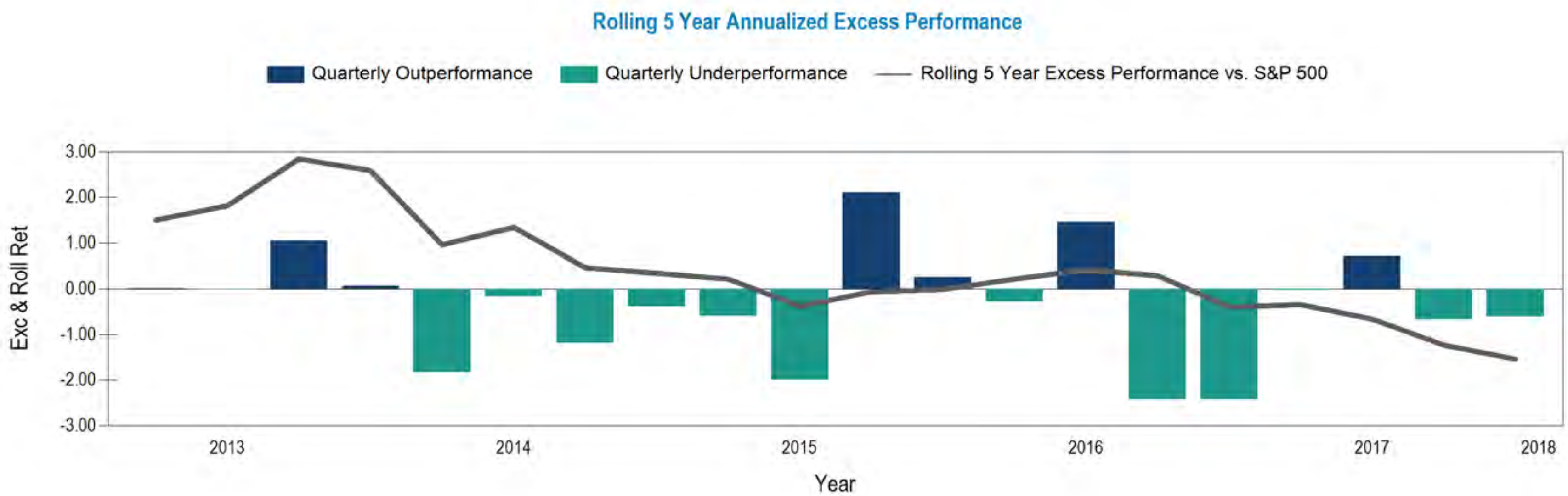

Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2018
20.0
15.0
10.0
5.0
0.0
0.0
5.0
10.0
15.0
20.0
S&P 500
PIMCO RAE Fundamental PLUS Instl
Annualized Return
Annualized Standard Deviation
300 Portfolios
PIMCO RAE Fundamental PLUS Instl
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Gross


Annualized Return vs. Annualized Standard Deviation
5 Years Ending June 30, 2018
20.0
15.0
10.0
5.0
0.0
0.0
5.0
10.0
15.0
20.0
S&P 500
PIMCO RAE Fundamental PLUS Instl
Annualized Return
Annualized Standard Deviation
284 Portfolios
PIMCO RAE Fundamental PLUS Instl
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Gross

PIMCO RAE Fundamental PLUS Instl

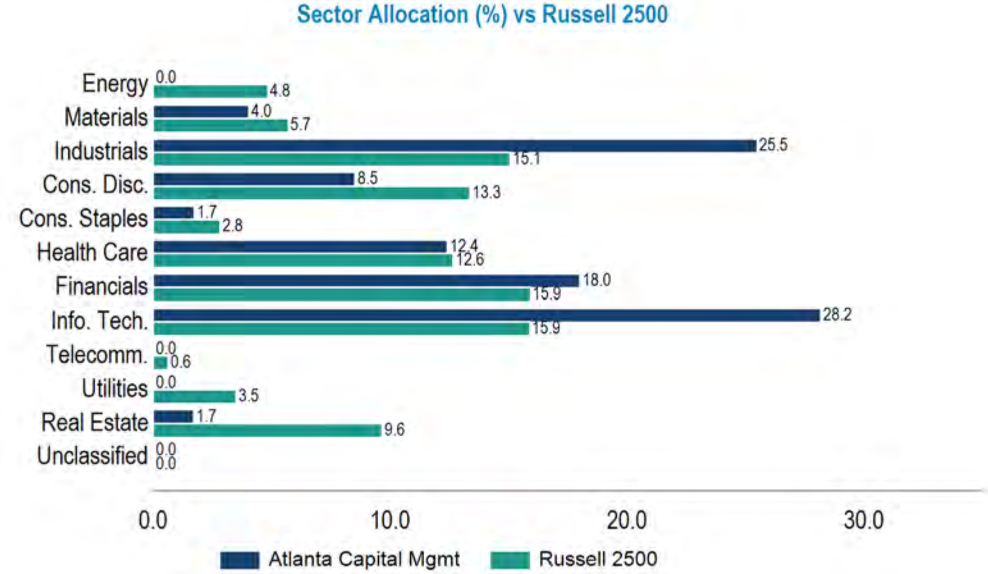
Rolling Return Analysis (Gross of Fees) Period Ending: June 30, 2018





Characteristics

	Portfolio	Russell 2500
Number of Holdings	46	2,504
Weighted Avg. Market Cap. ($B)	8.92	4.76
Median Market Cap. ($B)	7.93	1.28
Price To Earnings	30.29	19.47
Price To Book	6.57	3.46
Price To Sales	4.01	3.31
Return on Equity (%)	21.72	11.14
Yield (%)	0.75	1.31
Beta	0.62	1.00



*Unclassified includes Cash

Top Holdings
Ending Period Weight

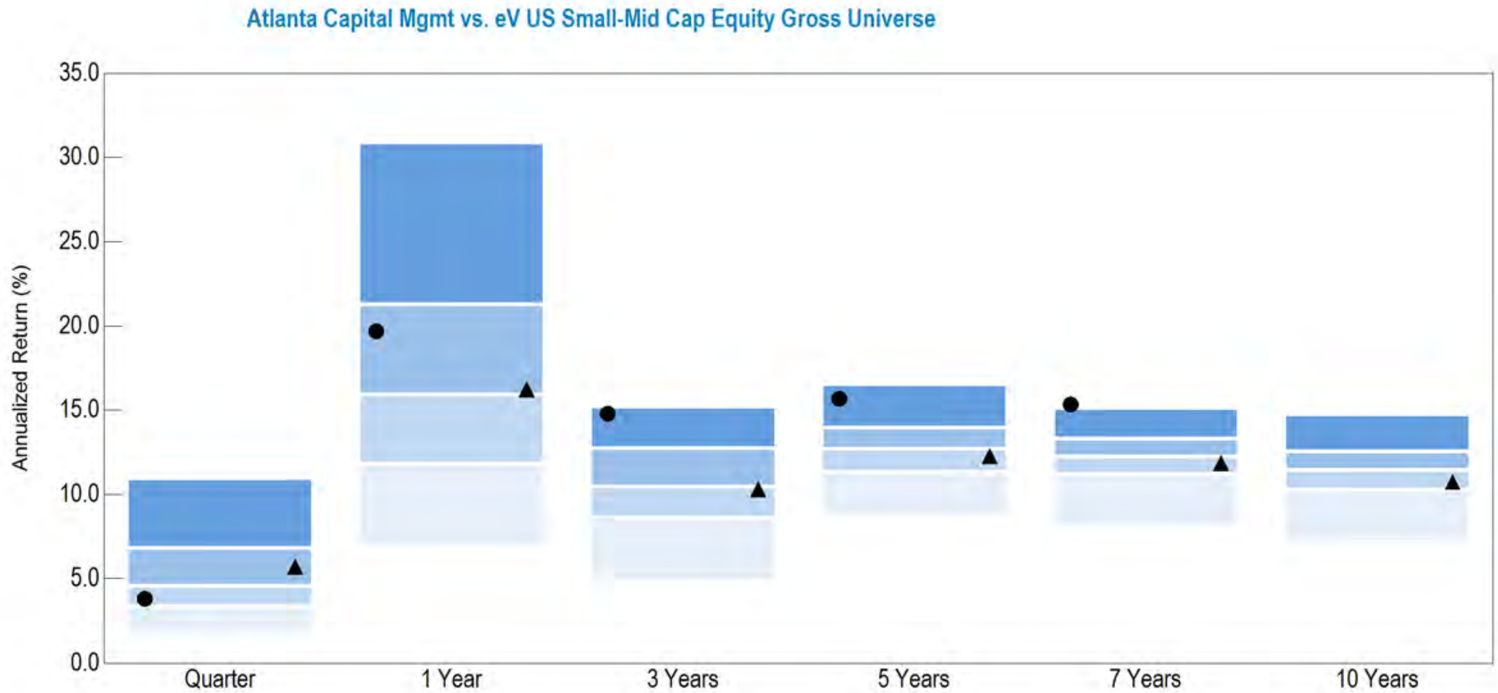
TRANSUNION	4.38%
TELEFLEX	4.21%
ANSYS	4.14%
BIO-RAD LABORATORIES 'A'	3.26%
MARKEL	3.24%
W R BERKLEY	3.19%
CDW	3.10%
WEX	3.04%
ARAMARK	3.01%
SEI INVESTMENTS	2.95%
Total	**34.53%**

Top Contributors

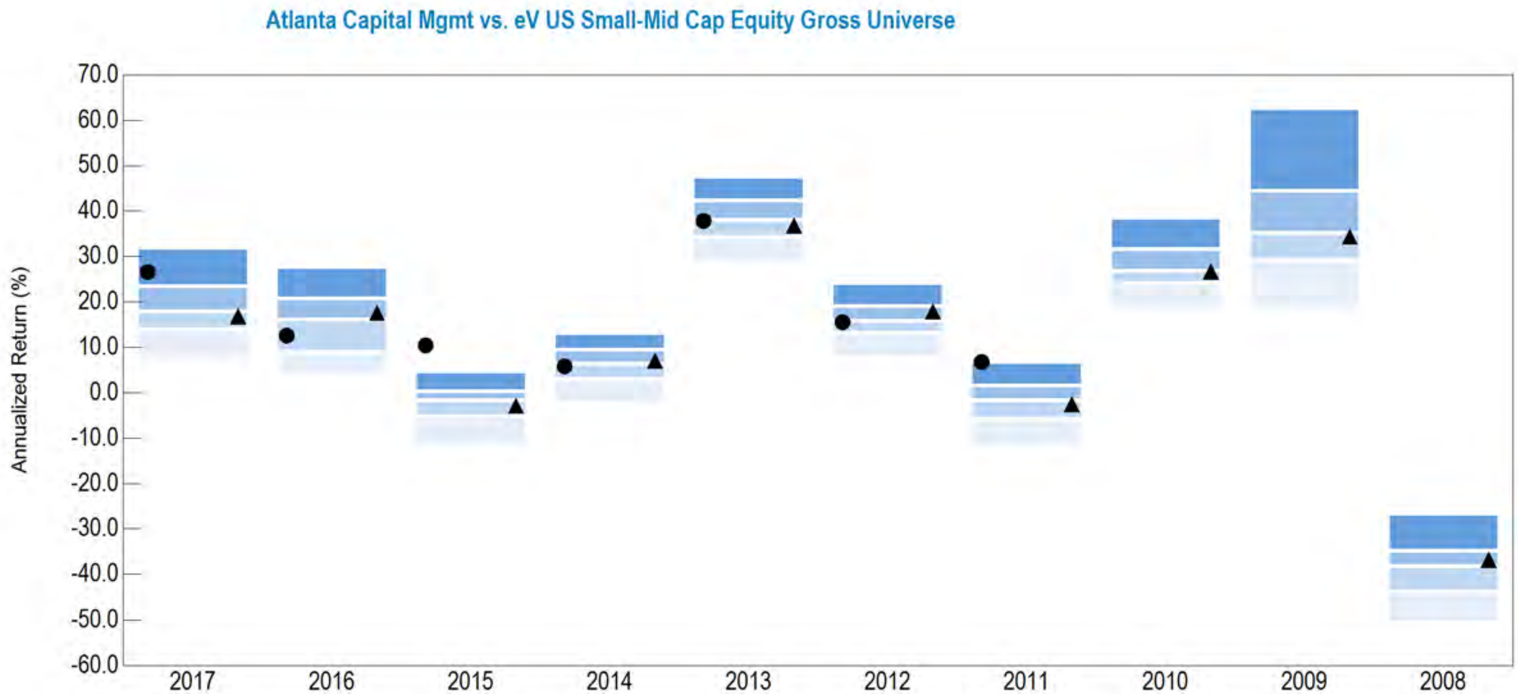
	Avg Wgt	Return	Contribution
TRANSUNION	3.62	26.31	0.95
MORNINGSTAR	1.83	34.61	0.63
WEX	2.61	21.62	0.56
BIO-RAD LABORATORIES 'A'	2.94	15.38	0.45
ANSYS	4.03	11.16	0.45
CDW	2.81	15.21	0.43
SERVICEMASTER GLB.HDG.	2.16	16.95	0.37
FAIR ISAAC	2.55	14.14	0.36
COLUMBIA SPORTSWEAR	1.60	19.99	0.32
RPM INTERNATIONAL	1.24	23.13	0.29

Bottom Contributors

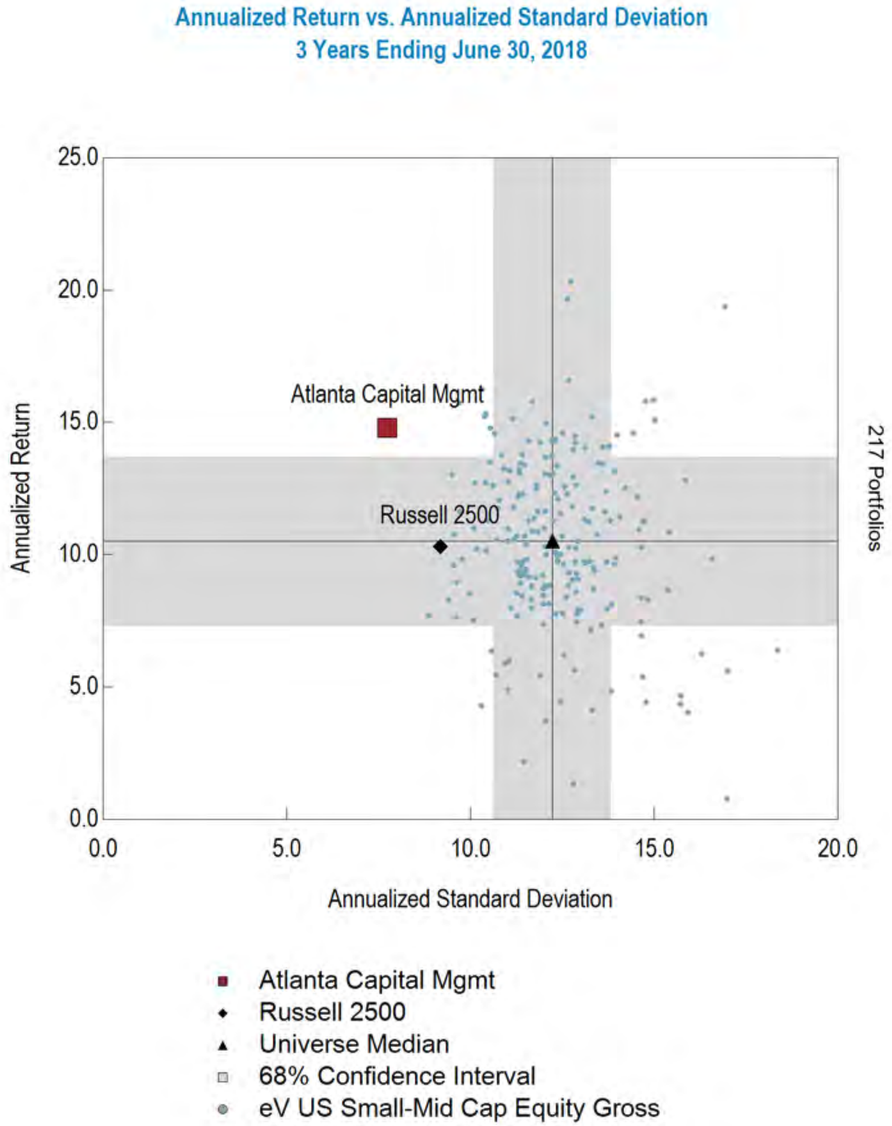
	Avg Wgt	Return	Contribution
SEI INVESTMENTS	3.68	-16.16	-0.59
AFFILIATED MANAGERS	2.59	-21.44	-0.56
ACUITY BRANDS	2.19	-16.67	-0.37
MARKEL	4.37	-7.34	-0.32
DENTSPLY SIRONA	1.80	-12.83	-0.23
ARAMARK	2.88	-5.96	-0.17
TRIMBLE	1.46	-8.47	-0.12
IDEX	2.69	-3.93	-0.11
NORDSON	1.76	-5.59	-0.10
JONES LANG LASALLE	1.99	-4.72	-0.09

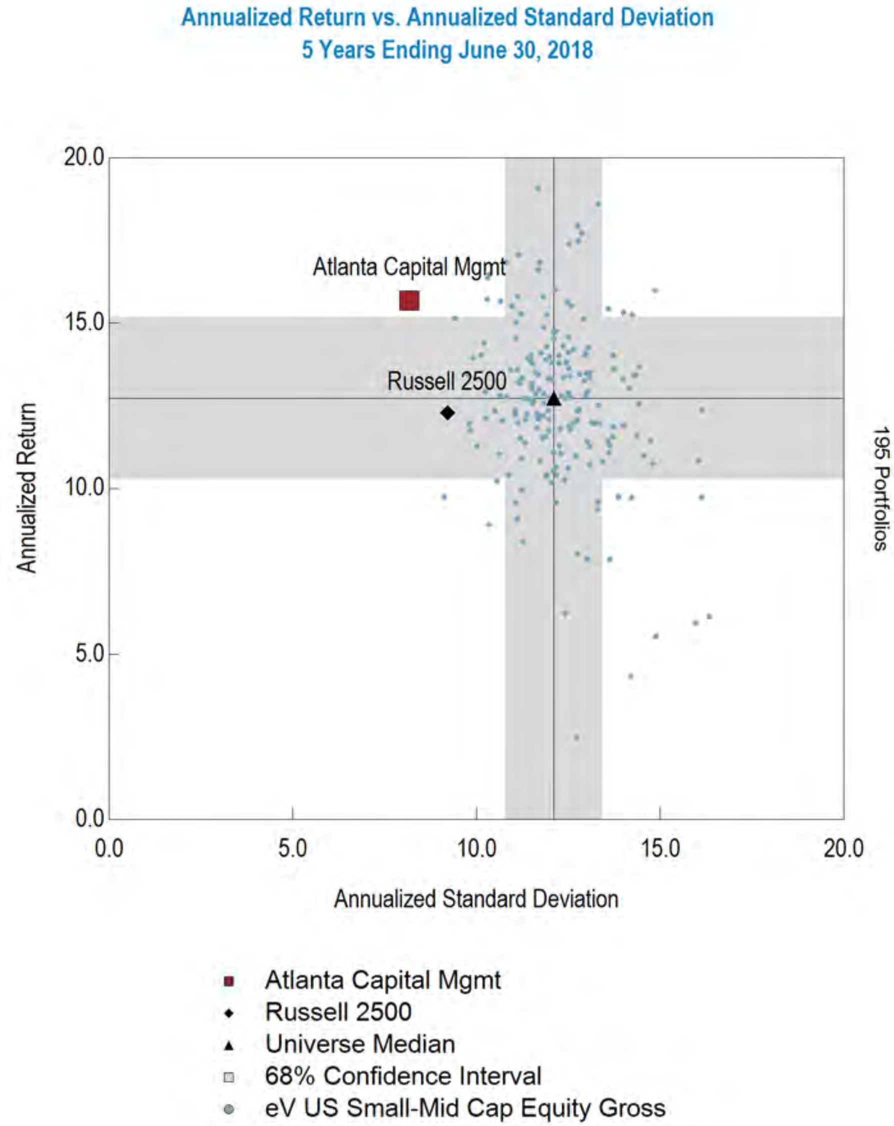


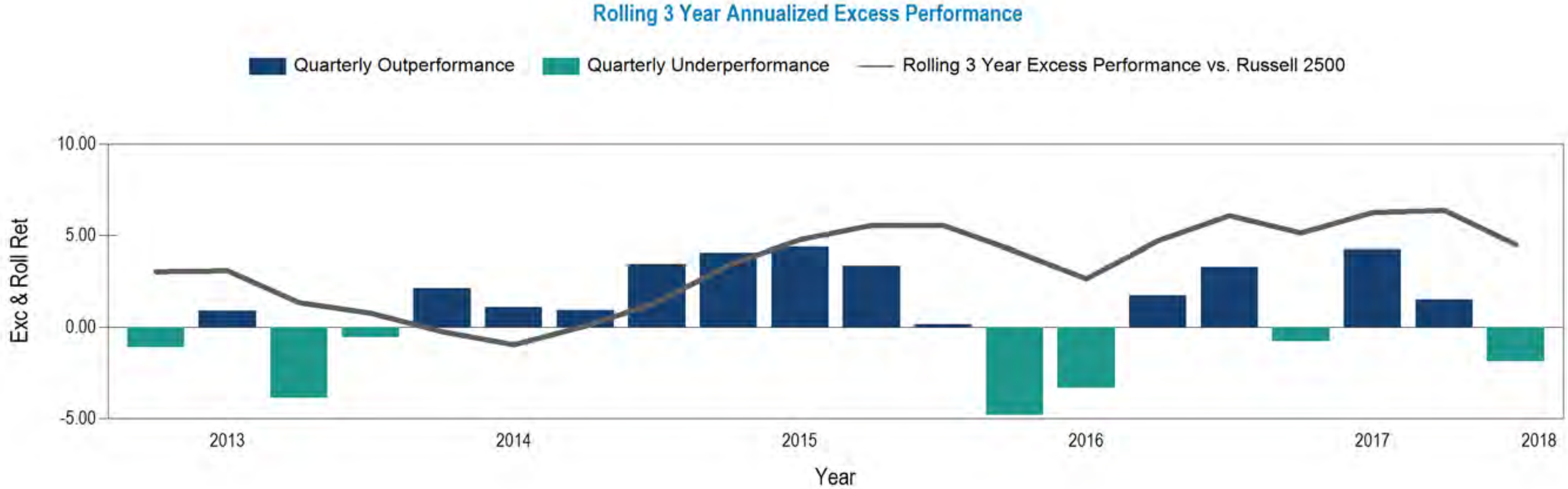
	Return (Rank)											
5th Percentile	10.9		30.9		15.2		16.5		15.1		14.8	
25th Percentile	6.8		21.3		12.7		14.0		13.4		12.6	
Median	4.6		15.9		10.5		12.7		12.3		11.5	
75th Percentile	3.4		11.9		8.6		11.4		11.2		10.3	
95th Percentile	1.8		7.0		4.8		8.7		8.2		7.2	
# of Portfolios	230		230		217		195		175		147	
● Atlanta Capital Mgmt	3.8	(66)	19.7	(30)	14.8	(7)	15.7	(9)	15.3	(4)	--	(--)
▲ Russell 2500	5.7	(35)	16.2	(47)	10.3	(51)	12.3	(58)	11.9	(60)	10.7	(71)

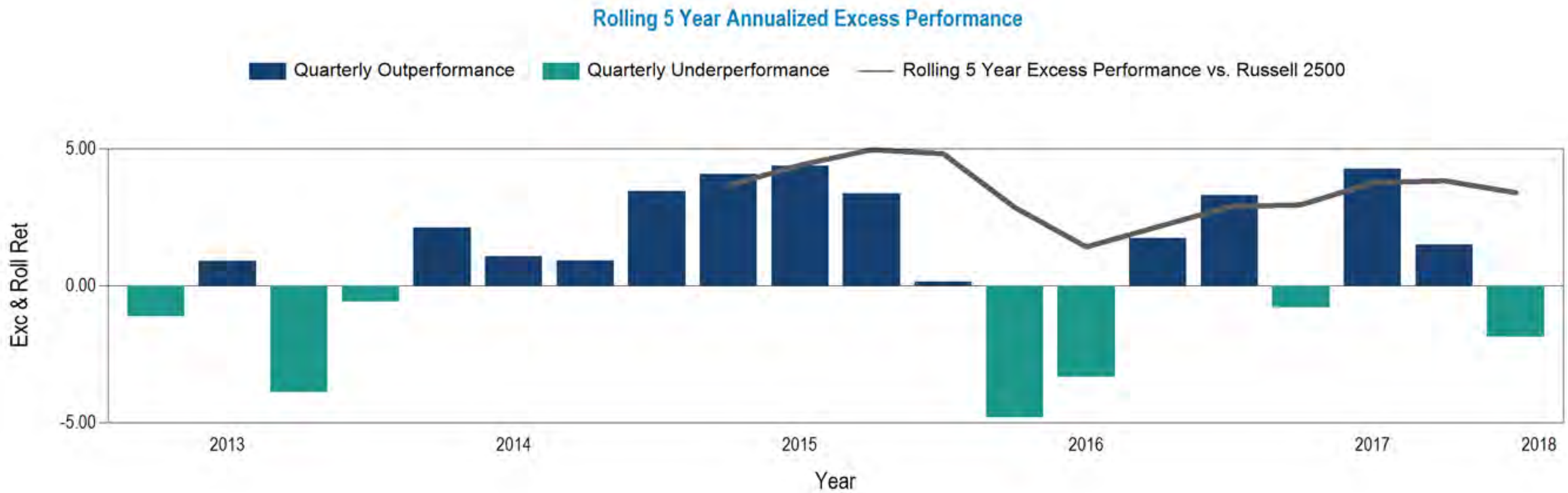


Return (Rank)	2017		2016		2015		2014		2013		2012		2011		2010		2009		2008	
5th Percentile	31.9		27.6		4.6		13.0		47.6		24.1		6.8		38.5		62.6		-26.7	
25th Percentile	23.5		20.8		0.4		9.6		42.5		19.2		1.7		31.7		44.6		-34.7	
Median	18.1		16.1		-1.5		6.5		38.2		16.0		-1.5		26.9		35.2		-38.1	
75th Percentile	14.1		9.2		-5.0		3.1		34.4		13.3		-5.6		24.3		29.4		-43.6	
95th Percentile	7.5		3.8		-11.6		-2.3		28.7		7.8		-11.6		18.7		18.7		-50.3	
# of Portfolios	233		238		215		210		210		216		211		210		226		243	
● Atlanta Capital Mgmt	26.6	(15)	12.6	(62)	10.4	(1)	5.8	(56)	37.8	(52)	15.5	(55)	6.8	(5)	--	(--)	--	(--)	--	(--)
▲ Russell 2500	16.8	(61)	17.6	(38)	-2.9	(64)	7.1	(46)	36.8	(58)	17.9	(36)	-2.5	(56)	26.7	(52)	34.4	(55)	-36.8	(37)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2018
Annualized Return
Annualized Standard Deviation
Atlanta Capital Mgmt
Russell 2500
217 Portfolios
25.0
20.0
15.0
10.0
5.0
0.0
0.0
5.0
10.0
15.0
20.0
Atlanta Capital Mgmt
Russell 2500
Universe Median
68% Confidence Interval
eV US Small-Mid Cap Equity Gross


Annualized Return vs. Annualized Standard Deviation
5 Years Ending June 30, 2018
Annualized Return
Annualized Standard Deviation
Atlanta Capital Mgmt
Russell 2500
195 Portfolios
20.0
15.0
10.0
5.0
0.0
0.0
5.0
10.0
15.0
20.0
Atlanta Capital Mgmt
Russell 2500
Universe Median
68% Confidence Interval
eV US Small-Mid Cap Equity Gross


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. Russell 2500
10.00
5.00
0.00
-5.00
Exc & Roll Ret
2013
2014
2015
2016
2017
2018
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. Russell 2500
5.00
0.00
-5.00
Exc & Roll Ret
2013
2014
2015
2016
2017
2018
Year

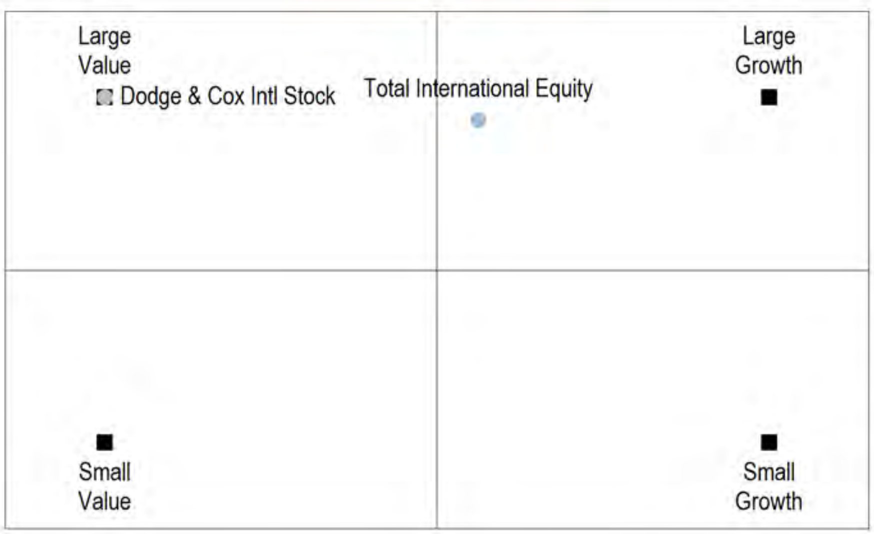
Total International Equity
Asset Class Overview (Gross of Fees)

Period Ending: June 30, 2018

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total International Equity	**305,778,435**	**-1.8**	**-2.0**	**7.3**	**5.5**	**7.2**	**4.9**	**26.6**	**2.2**	**-4.3**	**2.1**	**17.9**
MSCI ACWI ex USA Gross		*-2.4*	*-3.4*	*7.8*	*5.6*	*6.5*	*3.0*	*27.8*	*5.0*	*-5.3*	*-3.4*	*15.8*
InvestorForce Public DB ex-US Eq Gross Rank		*17*	*24*	*59*	*62*	*46*	*15*	*81*	*82*	*68*	*1*	*50*
Dodge & Cox Intl Stock	145,635,364	-5.0	-6.8	1.1	2.7	6.5	4.3	24.7	9.0	-10.8	0.7	27.1
MSCI EAFE Gross		*-1.0*	*-2.4*	*7.4*	*5.4*	*6.9*	*3.3*	*25.6*	*1.5*	*-0.4*	*-4.5*	*23.3*
eV All EAFE Equity Gross Rank		*98*	*99*	*98*	*98*	*86*	*58*	*74*	*3*	*99*	*13*	*32*
WCM International Growth	160,143,071	1.3	2.9	13.6	--	--	--	--	--	--	--	--
MSCI ACWI ex USA Gross		*-2.4*	*-3.4*	*7.8*	--	--	--	--	--	--	--	--
eV ACWI ex-US All Cap Growth Eq Gross Rank		*30*	*21*	*58*	--	--	--	--	--	--	--	--

EAFE Effective Style Map
3 Years Ending June 30, 2018

EAFE Effective Style Map
5 Years Ending June 30, 2018



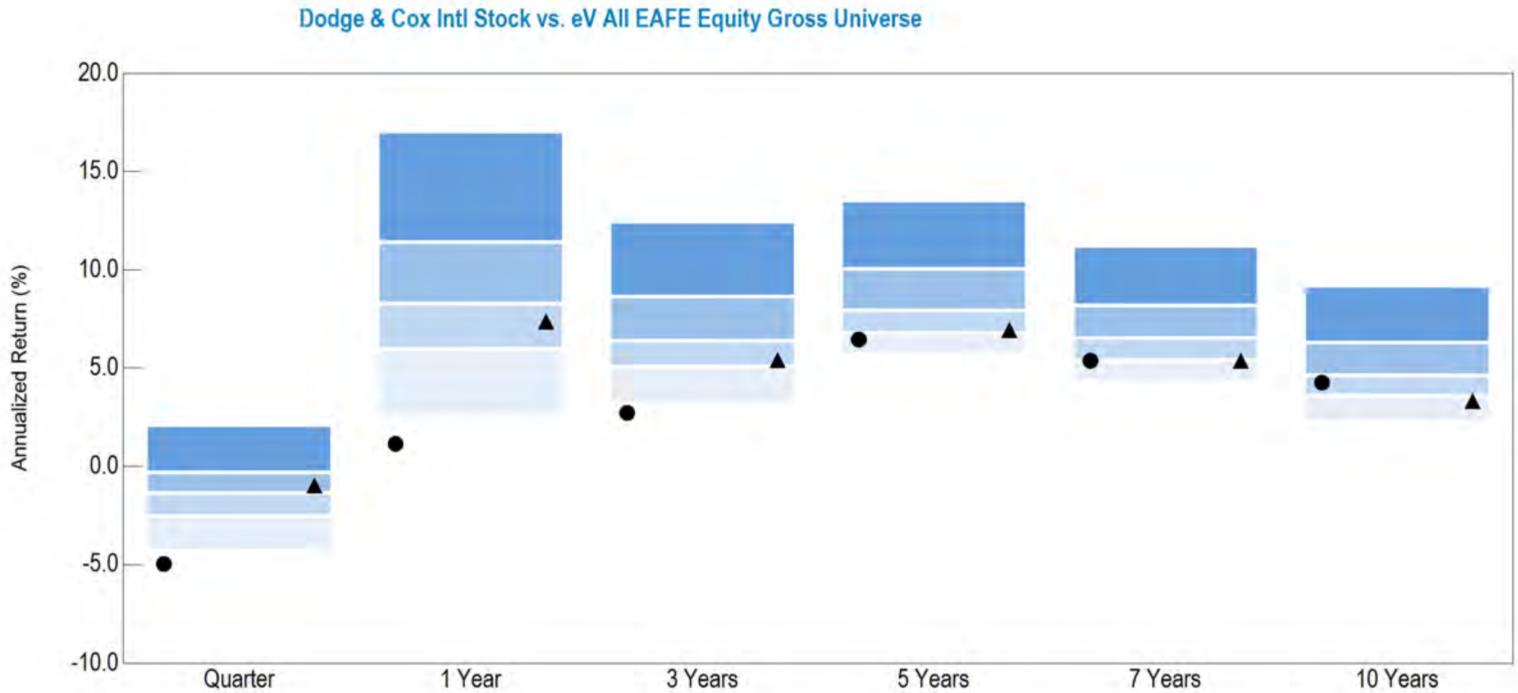
Total International Equity

Asset Class Overview (Net of Fees)

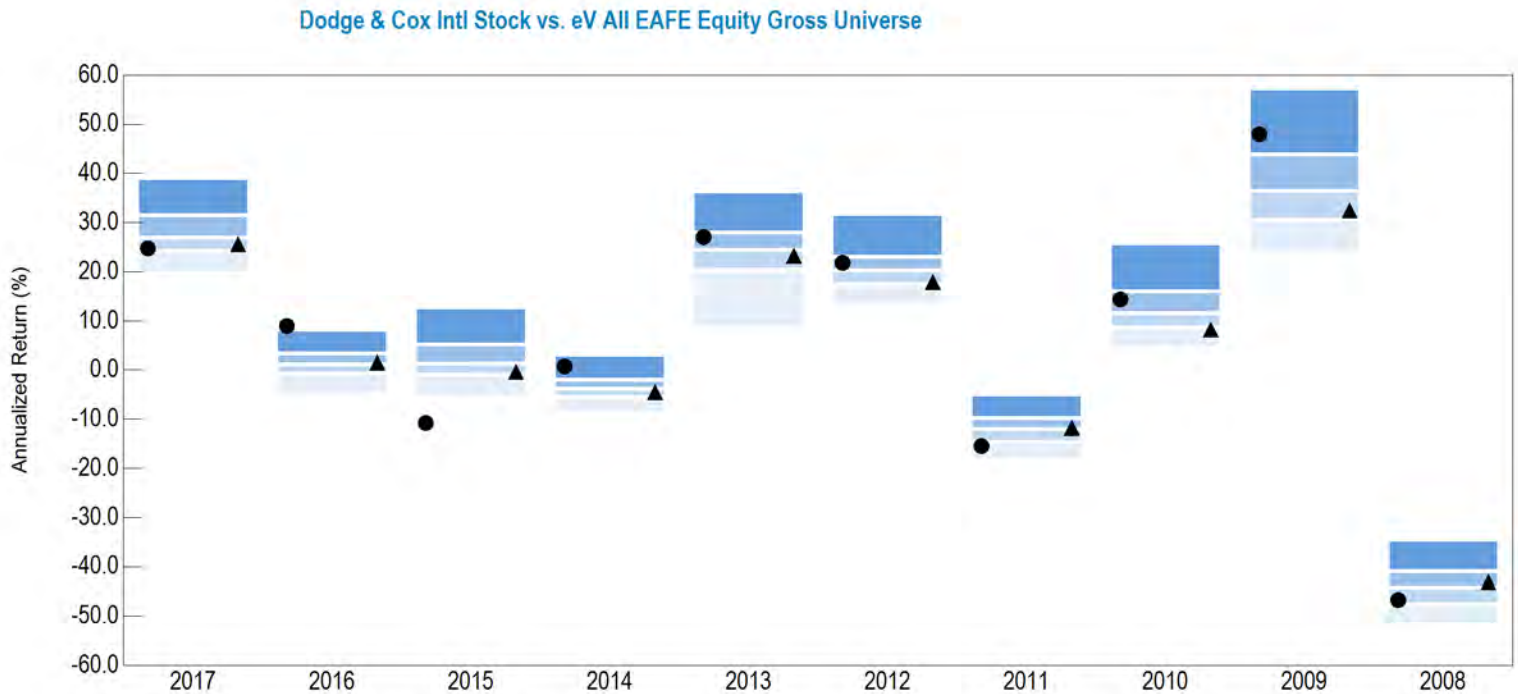
Period Ending: June 30, 2018

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total International Equity	**305,778,435**	**-1.9**	**-2.4**	**6.5**	**4.8**	**6.5**	**--**	**25.8**	**1.6**	**-4.9**	**1.4**	**17.0**
MSCI ACWI ex USA Gross		*-2.4*	*-3.4*	*7.8*	*5.6*	*6.5*	*--*	*27.8*	*5.0*	*-5.3*	*-3.4*	*15.8*
Dodge & Cox Intl Stock	145,635,364	-5.1	-7.1	0.5	2.1	5.8	3.7	23.9	8.3	-11.4	0.1	26.3
MSCI EAFE Gross		*-1.0*	*-2.4*	*7.4*	*5.4*	*6.9*	*3.3*	*25.6*	*1.5*	*-0.4*	*-4.5*	*23.3*
WCM International Growth	160,143,071	1.2	2.5	12.8	--	--	--	--	--	--	--	--
MSCI ACWI ex USA Gross		*-2.4*	*-3.4*	*7.8*	--	--	--	--	--	--	--	--

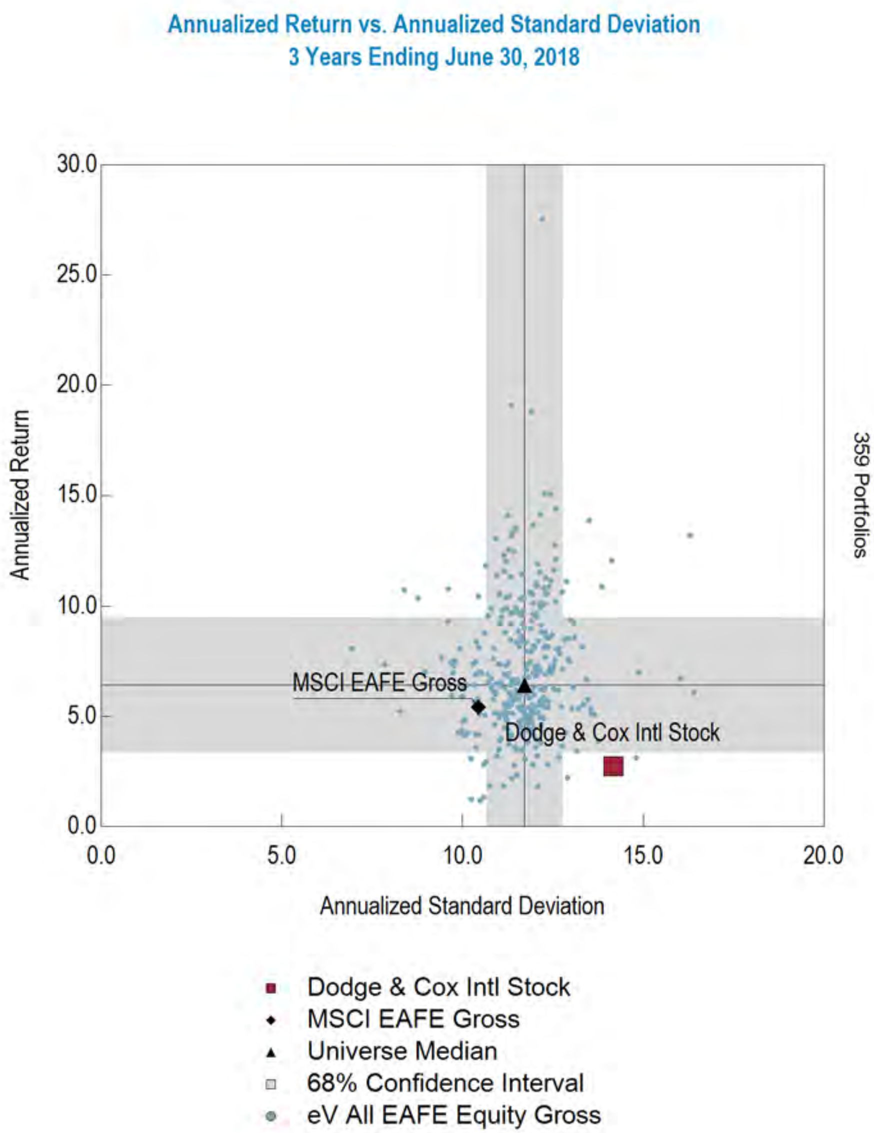
Dodge & Cox Intl Stock
Cumulative Performance Comparison (Gross of Fees) Period Ending: June 30, 2018

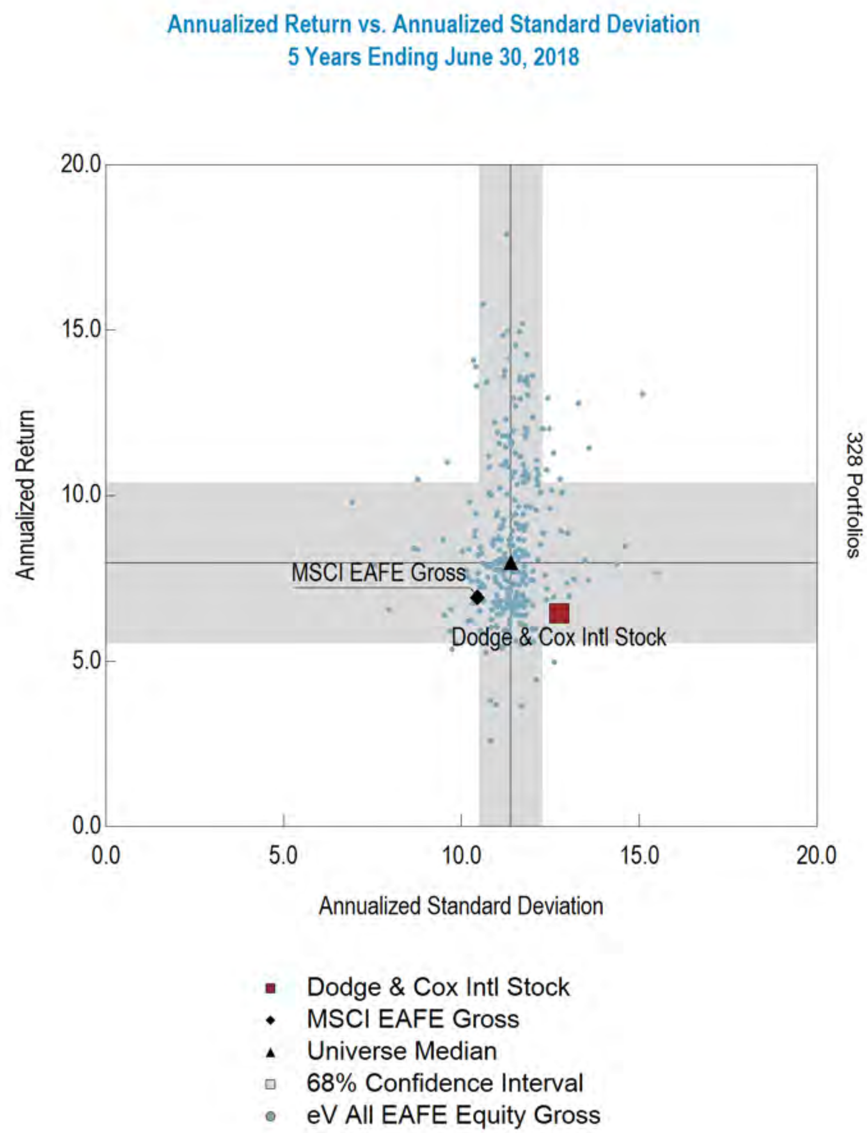


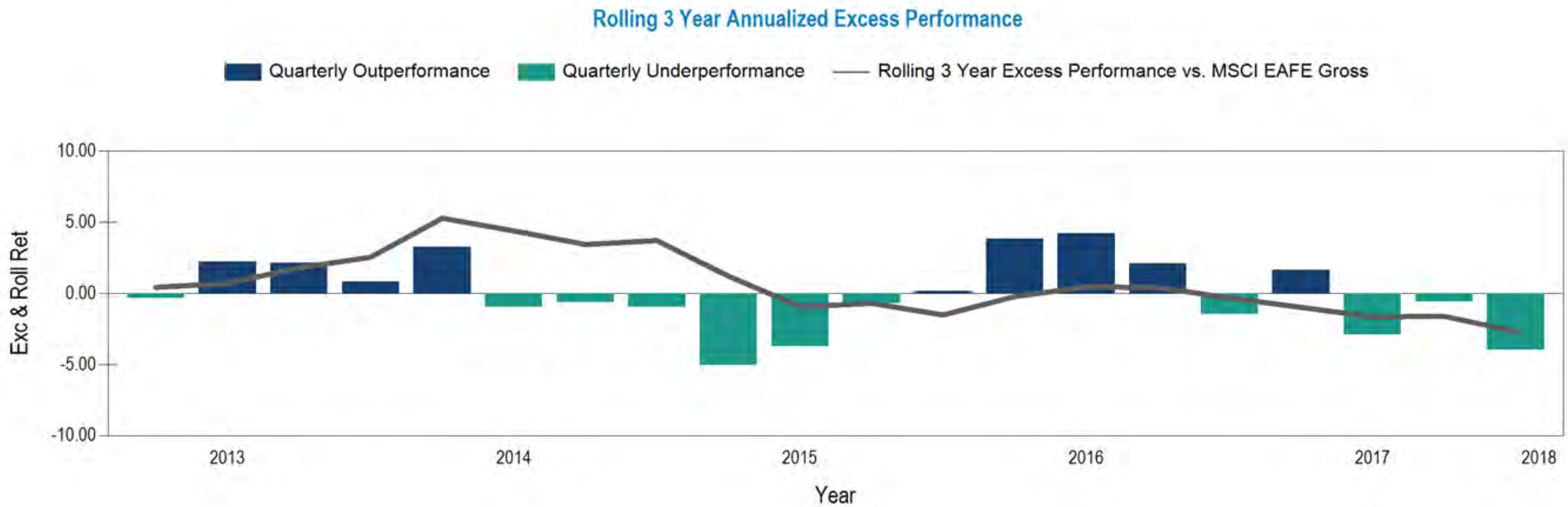
Return (Rank)	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	2.1		17.0		12.4		13.5		11.2		9.2	
25th Percentile	-0.3		11.4		8.7		10.1		8.2		6.3	
Median	-1.3		8.3		6.4		8.0		6.5		4.6	
75th Percentile	-2.5		6.0		5.1		6.8		5.4		3.6	
95th Percentile	-4.3		2.5		3.2		5.7		4.3		2.3	
# of Portfolios	385		383		359		328		298		265	
● Dodge & Cox Intl Stock	-5.0	(98)	1.1	(98)	2.7	(98)	6.5	(86)	5.4	(77)	4.3	(58)
▲ MSCI EAFE Gross	-1.0	(42)	7.4	(59)	5.4	(68)	6.9	(72)	5.4	(77)	3.3	(81)

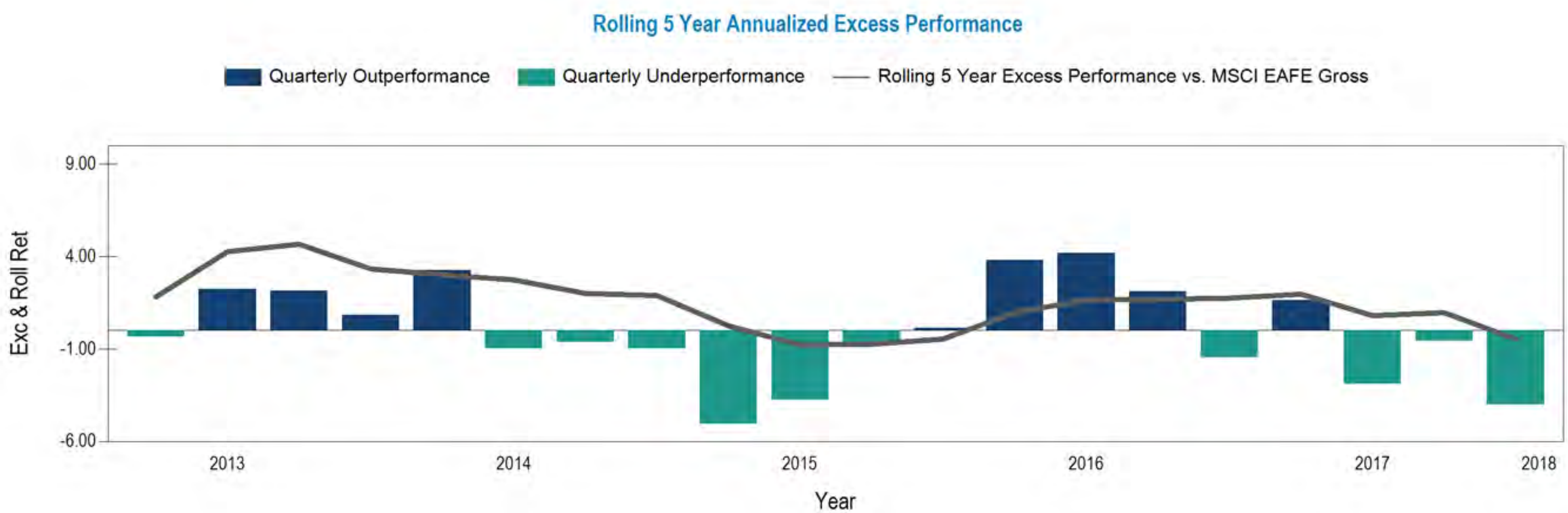


Return (Rank)	2017		2016		2015		2014		2013		2012		2011		2010		2009		2008	
5th Percentile	39.0		8.1		12.6		3.0		36.3		31.7		-5.1		25.7		57.3		-34.5	
25th Percentile	31.6		3.4		5.2		-1.9		28.1		23.1		-9.7		16.1		44.0		-40.8	
Median	27.0		1.3		1.4		-3.7		24.6		20.4		-12.0		11.7		36.5		-44.1	
75th Percentile	24.3		-0.6		-0.9		-5.4		20.5		17.5		-14.5		8.7		30.7		-47.5	
95th Percentile	19.7		-4.9		-5.4		-8.6		8.6		13.3		-18.2		4.6		23.7		-51.5	
# of Portfolios	370		350		325		314		284		263		278		352		455		477	
● Dodge & Cox Intl Stock	24.7	(74)	9.0	(3)	-10.8	(99)	0.7	(13)	27.1	(32)	21.8	(37)	-15.5	(82)	14.4	(36)	48.0	(17)	-46.7	(69)
▲ MSCI EAFE Gross	25.6	(63)	1.5	(47)	-0.4	(66)	-4.5	(60)	23.3	(60)	17.9	(72)	-11.7	(47)	8.2	(78)	32.5	(67)	-43.1	(41)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2018
Annualized Return
Annualized Standard Deviation
359 Portfolios
MSCI EAFE Gross
Dodge & Cox Intl Stock
Dodge & Cox Intl Stock
MSCI EAFE Gross
Universe Median
68% Confidence Interval
eV All EAFE Equity Gross


Annualized Return vs. Annualized Standard Deviation
5 Years Ending June 30, 2018
Annualized Return
Annualized Standard Deviation
328 Portfolios
MSCI EAFE Gross
Dodge & Cox Intl Stock
Dodge & Cox Intl Stock
MSCI EAFE Gross
Universe Median
68% Confidence Interval
eV All EAFE Equity Gross


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. MSCI EAFE Gross
10.00
5.00
0.00
-5.00
-10.00
Exc & Roll Ret
2013
2014
2015
2016
2017
2018
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. MSCI EAFE Gross
9.00
4.00
-1.00
-6.00
Exc & Roll Ret
2013
2014
2015
2016
2017
2018
Year

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Domestic Fixed Income	**268,690,683**	**0.2**	**-0.2**	**1.8**	**2.9**	**2.9**	**3.7**	**4.3**	**4.5**	**1.1**	**4.7**	**-2.7**
BBgBarc US Aggregate TR		*-0.2*	*-1.6*	*-0.4*	*1.7*	*2.3*	*3.7*	*3.5*	*2.6*	*0.6*	*6.0*	*-2.0*
InvestorForce Public DB US Fix Inc Gross Rank		*13*	*10*	*10*	*24*	*37*	*61*	*50*	*49*	*17*	*68*	*95*
BlackRock Core Bond	99,460,836	0.3	-1.1	0.5	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR		*-0.2*	*-1.6*	*-0.4*	--	--	--	--	--	--	--	--
eV US Core Fixed Inc Gross Rank		*7*	*19*	*15*	--	--	--	--	--	--	--	--
Dodge & Cox Income Fund	99,003,527	-0.2	-1.0	0.8	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR		*-0.2*	*-1.6*	*-0.4*	--	--	--	--	--	--	--	--
eV US Core Fixed Inc Gross Rank		*81*	*15*	*9*	--	--	--	--	--	--	--	--
Pacific Asset Corporate Loan	70,226,320	0.9	2.3	5.0	5.2	--	--	4.9	9.2	2.5	--	--
S&P/LSTA Leveraged Loan Index		*0.7*	*2.2*	*4.4*	*4.2*	--	--	*4.1*	*10.2*	*-0.7*	--	--
eV US Float-Rate Bank Loan Fixed Inc Gross Rank		*15*	*20*	*25*	*13*	--	--	*26*	*51*	*9*	--	--

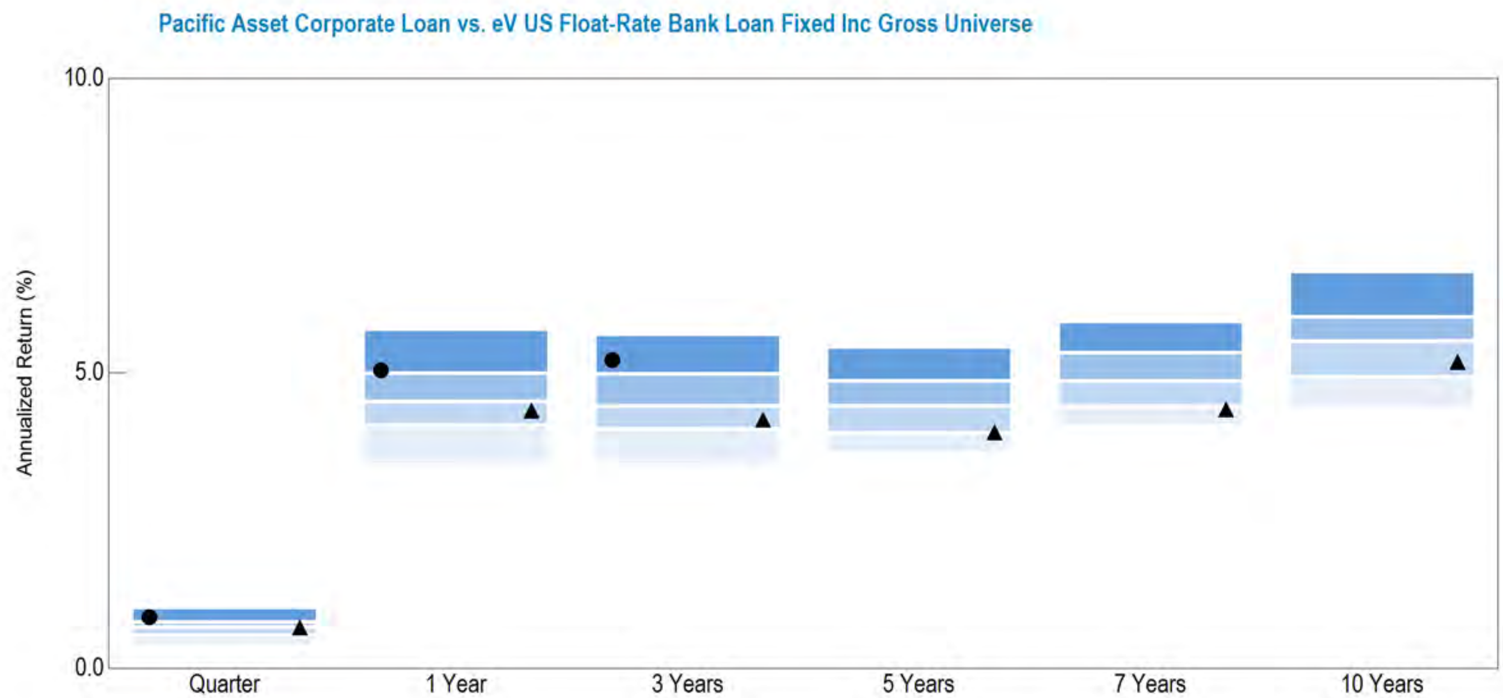
Fixed Income Effective Style Map
3 Years Ending June 30, 2018

Fixed Income Effective Style Map
5 Years Ending June 30, 2018

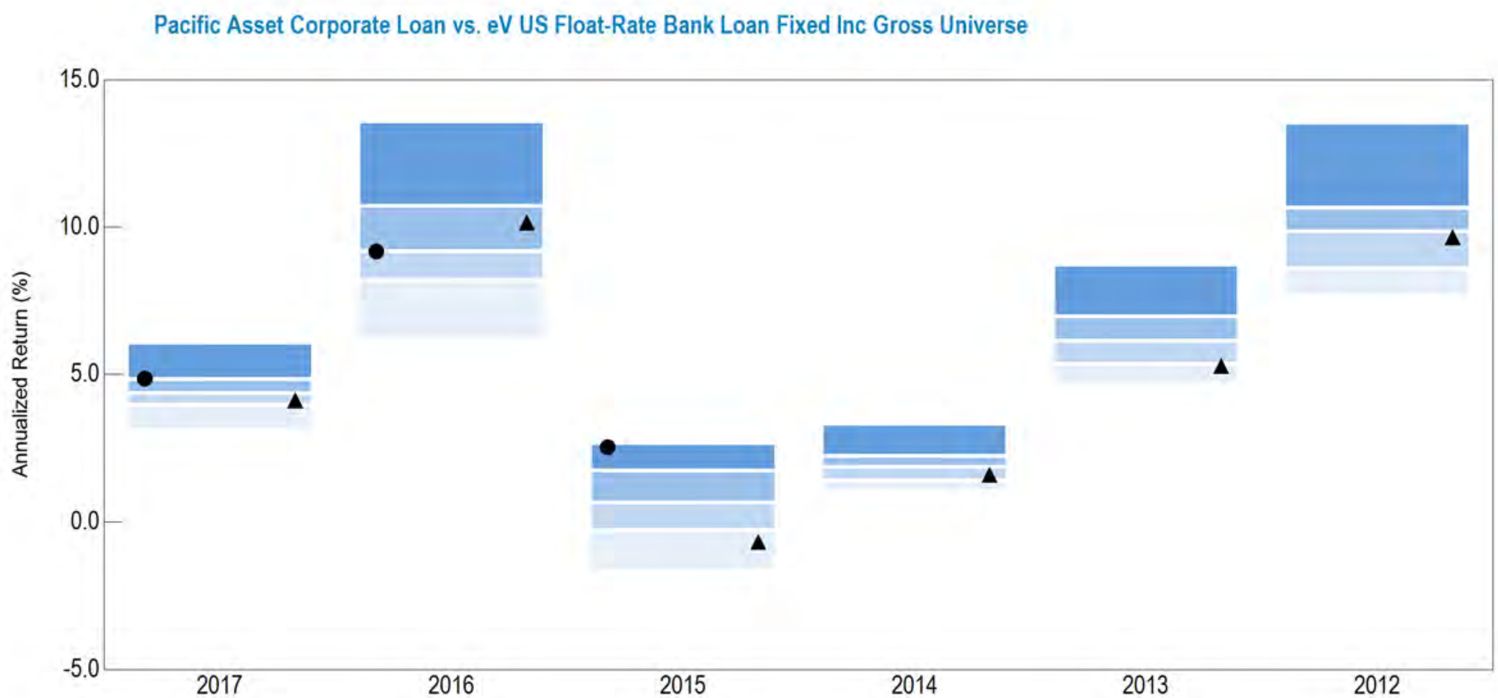
	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Domestic Fixed Income	**268,690,683**	**0.1**	**-0.4**	**1.4**	**2.6**	**2.6**	**--**	**3.9**	**4.2**	**0.9**	**4.4**	**-3.0**
BBgBarc US Aggregate TR		*-0.2*	*-1.6*	*-0.4*	*1.7*	*2.3*	*--*	*3.5*	*2.6*	*0.6*	*6.0*	*-2.0*
BlackRock Core Bond	99,460,836	0.2	-1.3	0.3	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR		*-0.2*	*-1.6*	*-0.4*	--	--	--	--	--	--	--	--
Dodge & Cox Income Fund	99,003,527	-0.3	-1.2	0.4	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR		*-0.2*	*-1.6*	*-0.4*	--	--	--	--	--	--	--	--
Pacific Asset Corporate Loan	70,226,320	0.8	2.1	4.7	4.9	--	--	4.6	8.8	2.1	--	--
S&P/LSTA Leveraged Loan Index		*0.7*	*2.2*	*4.4*	*4.2*	--	--	*4.1*	*10.2*	*-0.7*	--	--

Correlation Matrix
5 Years Ending June 30, 2018

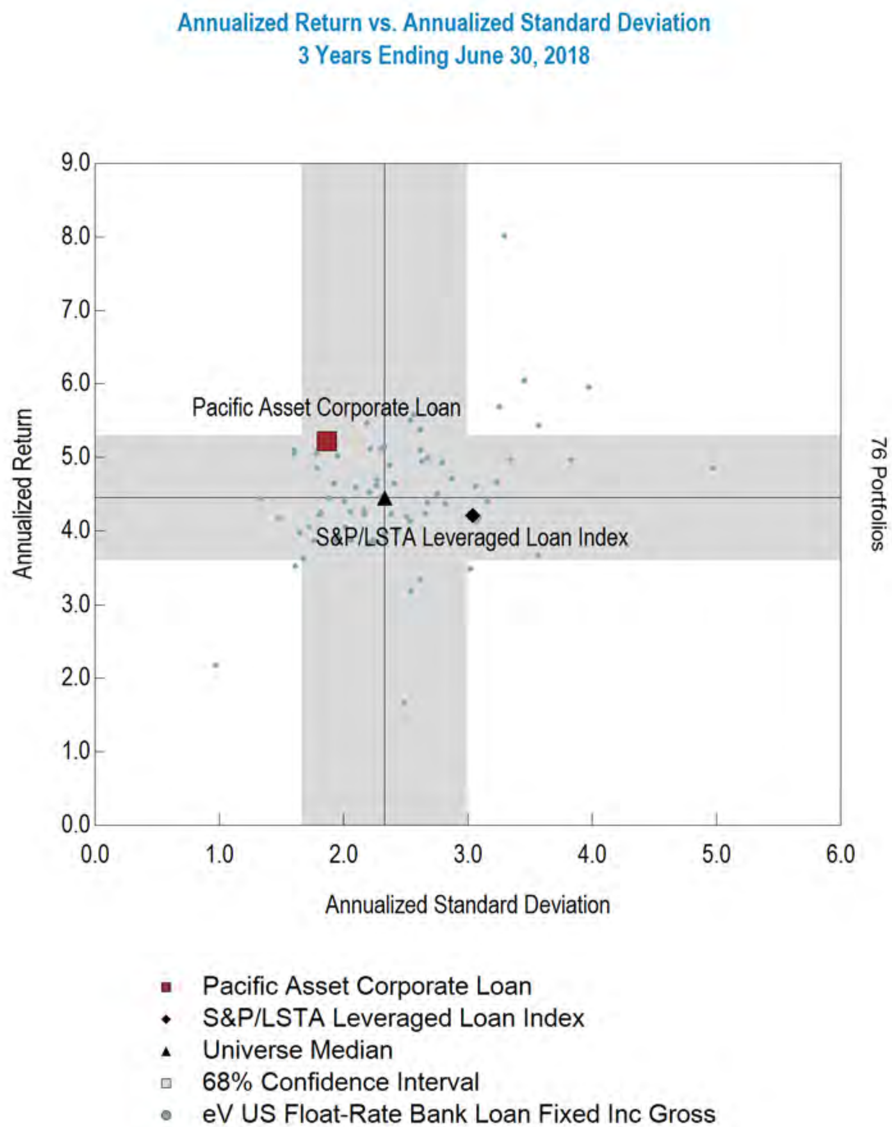
	Total Domestic Fixed Income	BlackRock Core Bond	Dodge & Cox Income Fund	Pacific Asset Corporate Loan	BBgBarc US Aggregate TR
Total Domestic Fixed Income	1.00	--	--	--	--
BlackRock Core Bond	--	--	--	--	--
Dodge & Cox Income Fund	--	--	--	--	--
Pacific Asset Corporate Loan	--	--	--	--	--
BBgBarc US Aggregate TR	0.93	--	--	--	1.00

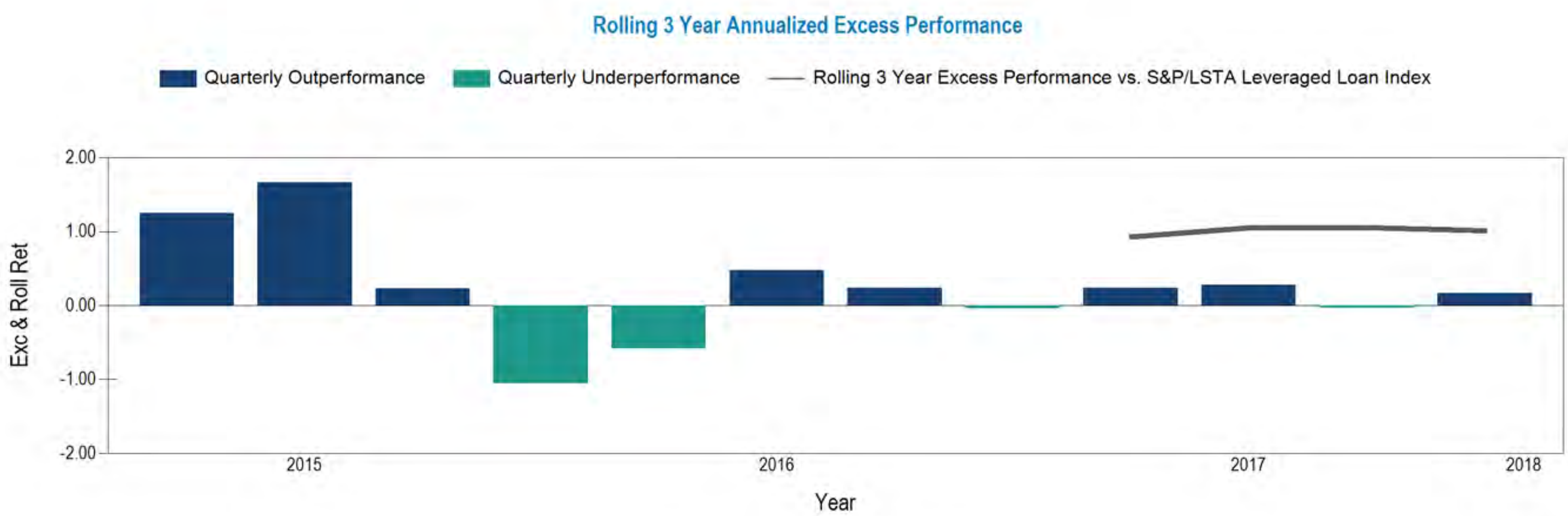


	Return (Rank)											
5th Percentile	1.0		5.7		5.7		5.4		5.9		6.7	
25th Percentile	0.8		5.0		5.0		4.9		5.4		6.0	
Median	0.7		4.5		4.5		4.4		4.9		5.5	
75th Percentile	0.6		4.1		4.1		4.0		4.4		4.9	
95th Percentile	0.4		3.5		3.4		3.6		4.1		4.4	
# of Portfolios	76		76		76		70		61		46	
● Pacific Asset Corporate Loan	0.9	(15)	5.0	(25)	5.2	(13)	--	(--)	--	(--)	--	(--)
▲ S&P/LSTA Leveraged Loan Index	0.7	(52)	4.4	(63)	4.2	(68)	4.0	(75)	4.4	(82)	5.2	(70)



	Return (Rank)											
5th Percentile	6.1		13.6		2.7		3.3		8.7		13.5	
25th Percentile	4.9		10.7		1.8		2.3		7.0		10.7	
Median	4.4		9.2		0.7		1.9		6.2		9.9	
75th Percentile	4.0		8.2		-0.3		1.4		5.4		8.6	
95th Percentile	3.1		6.2		-1.7		1.1		4.7		7.7	
# of Portfolios	75		69		54		48		53		41	
● Pacific Asset Corporate Loan	4.9	(26)	9.2	(51)	2.5	(9)	--	(--)	--	(--)	--	(--)
▲ S&P/LSTA Leveraged Loan Index	4.1	(71)	10.2	(35)	-0.7	(82)	1.6	(68)	5.3	(79)	9.7	(58)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2018
Pacific Asset Corporate Loan
S&P/LSTA Leveraged Loan Index
Annualized Return
Annualized Standard Deviation
76 Portfolios
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
1.0
2.0
3.0
4.0
5.0
6.0
Pacific Asset Corporate Loan
S&P/LSTA Leveraged Loan Index
Universe Median
68% Confidence Interval
eV US Float-Rate Bank Loan Fixed Inc Gross

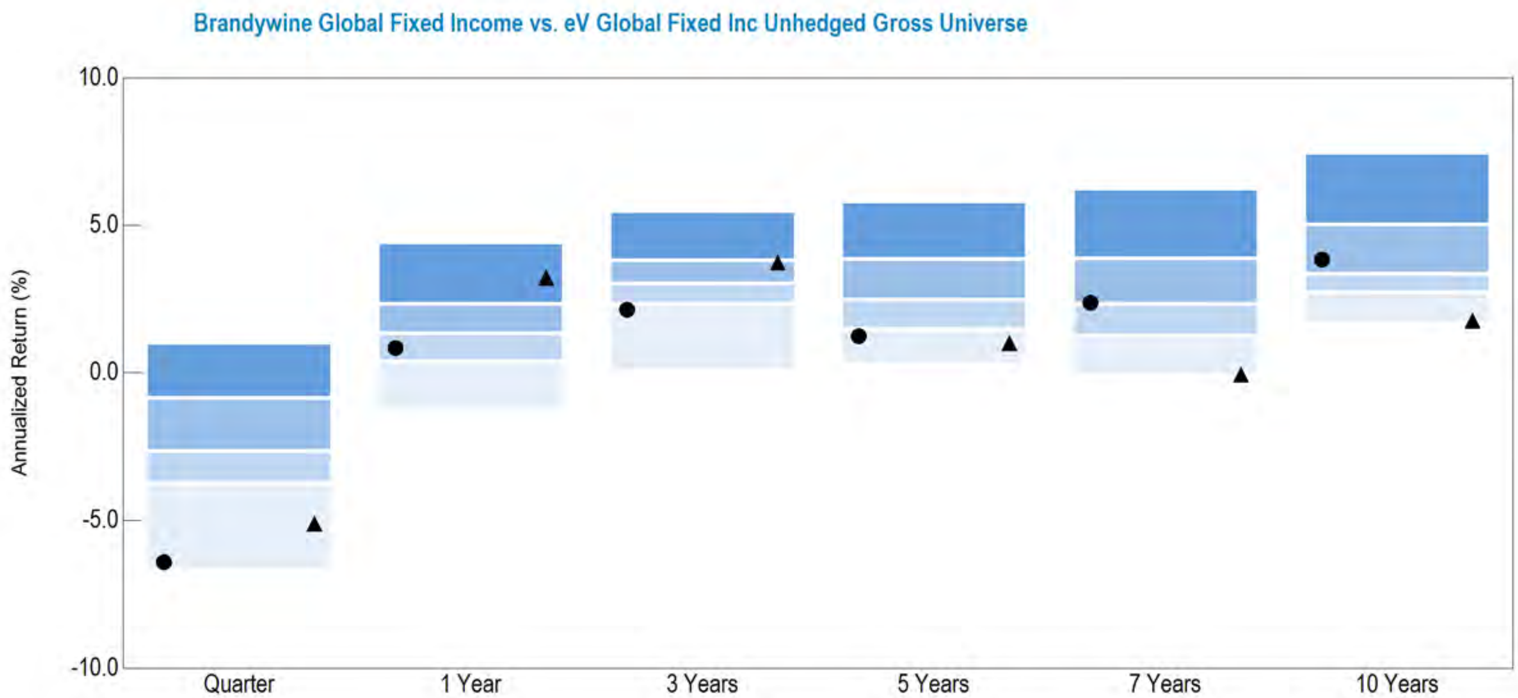

Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. S&P/LSTA Leveraged Loan Index
2.00
1.00
0.00
-1.00
-2.00
Exc & Roll Ret
2015
2016
2017
2018
Year

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Global Fixed	**144,165,664**	**-9.4**	**-4.8**	**-1.4**	**1.8**	**-0.3**	**3.0**	**14.4**	**5.8**	**-11.8**	**-2.2**	**-3.8**
Citi World Govt Bond Index		*-3.4*	*-0.9*	*1.9*	*2.8*	*1.1*	*2.1*	*7.5*	*1.6*	*-3.6*	*-0.5*	*-4.0*
InvestorForce Public DB Glbl Fix Inc Gross Rank		*--*	*--*	*--*	*--*	*--*	*--*	*29*	*67*	*95*	*93*	*59*
Brandywine Global Fixed Income	74,735,363	-6.4	-2.0	0.8	2.1	1.2	3.8	12.5	2.2	-9.3	2.9	-1.6
Citi WGBI ex US		*-5.1*	*-0.9*	*3.2*	*3.7*	*1.0*	*1.8*	*10.3*	*1.8*	*-5.5*	*-2.7*	*-4.6*
eV Global Fixed Inc Unhedged Gross Rank		*95*	*66*	*65*	*80*	*83*	*42*	*9*	*71*	*96*	*43*	*59*
Stone Harbor Local Markets Ins	69,430,301	-12.4	-7.7	-3.6	1.5	--	--	16.4	9.9	-14.4	-7.7	--
JPM GBI-EM Global Diversified TR USD		*-10.4*	*-6.4*	*-2.3*	*2.0*	*--*	*--*	*15.2*	*9.9*	*-14.9*	*-5.7*	*--*
eV All Emg Mkts Fixed Inc Gross Rank		*97*	*92*	*93*	*93*	*--*	*--*	*14*	*67*	*79*	*98*	*--*

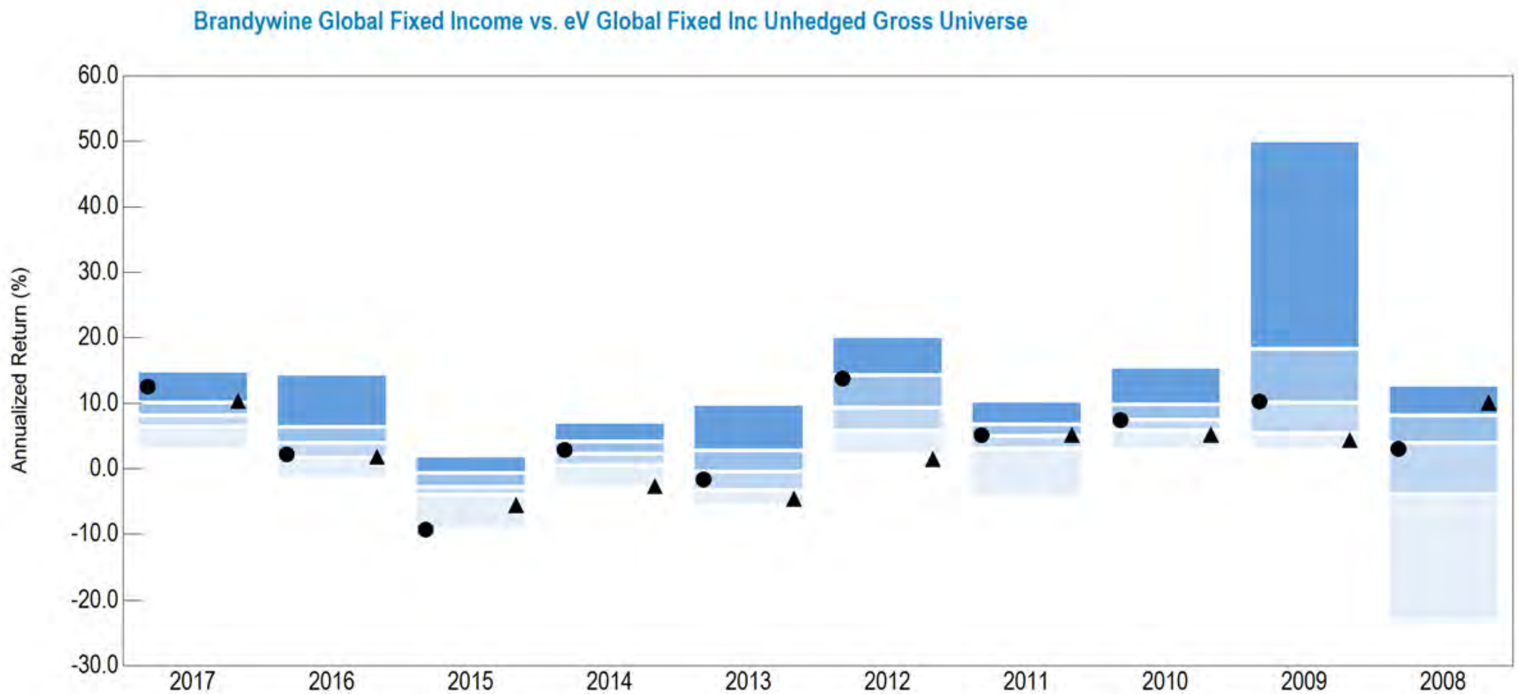
	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Global Fixed	**144,165,664**	**-9.6**	**-5.1**	**-2.0**	**1.2**	**-1.0**	**--**	**13.7**	**5.1**	**-12.4**	**-2.8**	**-4.4**
Citi World Govt Bond Index		*-3.4*	*-0.9*	*1.9*	*2.8*	*1.1*	*--*	*7.5*	*1.6*	*-3.6*	*-0.5*	*-4.0*
Brandywine Global Fixed Income	74,735,363	-6.5	-2.2	0.4	1.7	0.8	--	12.0	1.7	-9.7	2.4	-2.3
Citi WGBI ex US		*-5.1*	*-0.9*	*3.2*	*3.7*	*1.0*	*--*	*10.3*	*1.8*	*-5.5*	*-2.7*	*-4.6*
Stone Harbor Local Markets Ins	69,430,301	-12.6	-8.1	-4.5	0.6	--	--	15.4	9.0	-15.1	-8.6	--
JPM GBI-EM Global Diversified TR USD		*-10.4*	*-6.4*	*-2.3*	*2.0*	*--*	*--*	*15.2*	*9.9*	*-14.9*	*-5.7*	*--*

Correlation Matrix
Last 5 Years

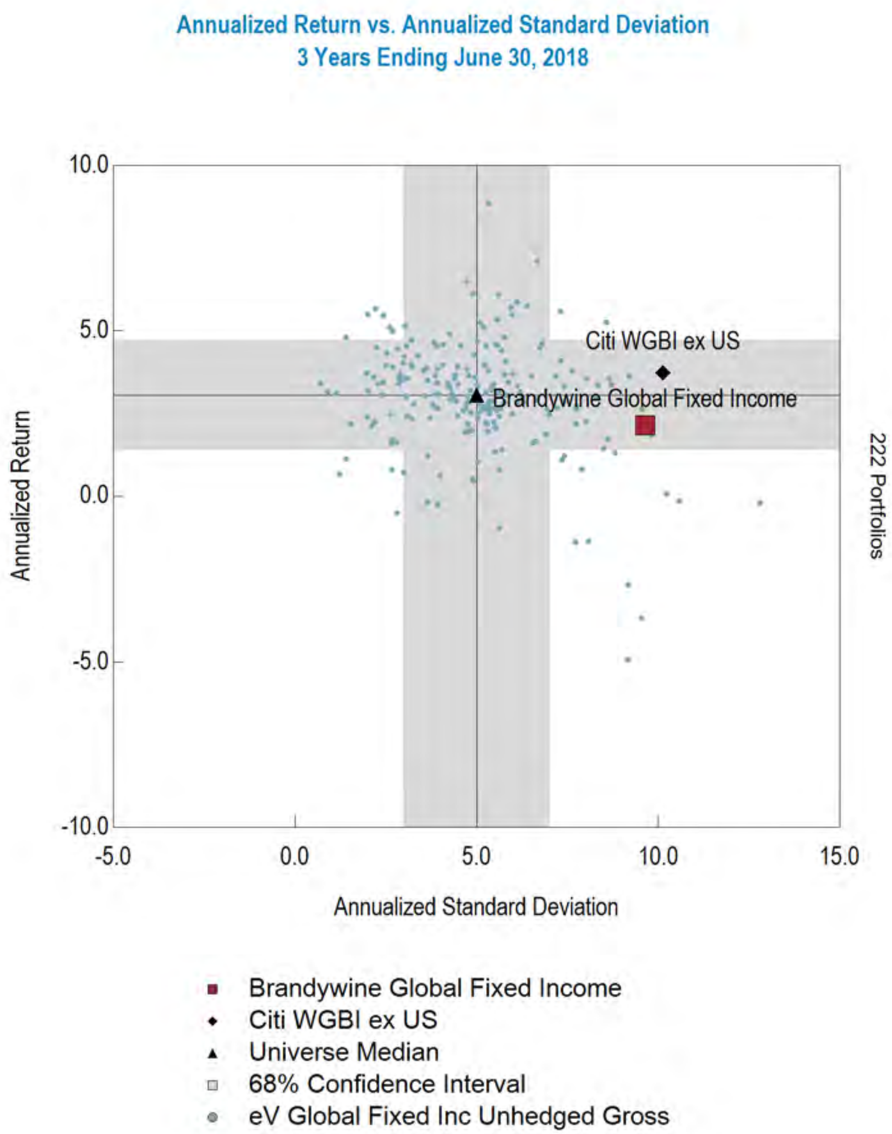
	Total Global Fixed	Brandywine Global Fixed Income	Stone Harbor Local Markets Ins	Citi World Govt Bond Index
Total Global Fixed	1.00	--	--	--
Brandywine Global Fixed Income	0.96	1.00	--	--
Stone Harbor Local Markets Ins	--	--	--	--
Citi World Govt Bond Index	0.77	0.84	--	1.00

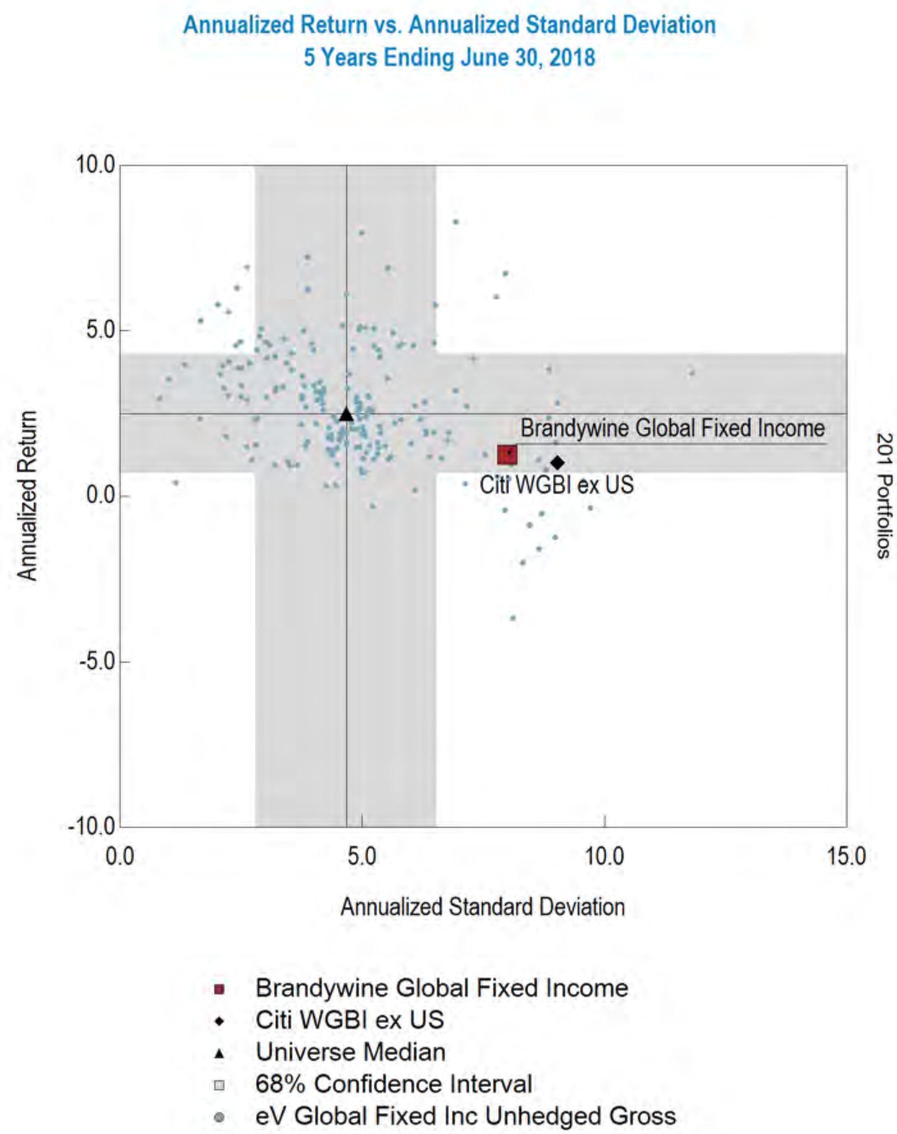


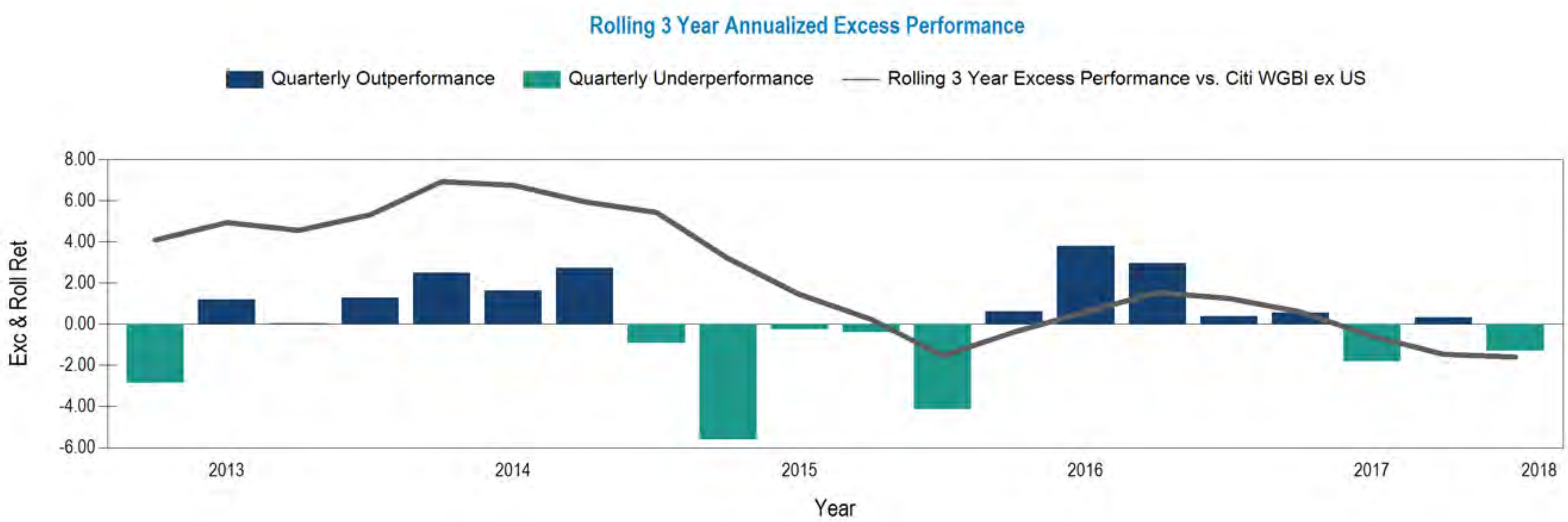
Return (Rank)	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	1.0		4.4		5.5		5.8		6.2		7.4	
25th Percentile	-0.8		2.4		3.8		3.9		3.9		5.0	
Median	-2.6		1.4		3.1		2.5		2.4		3.4	
75th Percentile	-3.7		0.4		2.3		1.5		1.3		2.8	
95th Percentile	-6.7		-1.2		0.1		0.3		-0.1		1.7	
# of Portfolios	235		233		222		201		162		120	
● Brandywine Global Fixed Income	-6.4	(95)	0.8	(65)	2.1	(80)	1.2	(83)	2.4	(50)	3.8	(42)
▲ Citi WGBI ex US	-5.1	(87)	3.2	(13)	3.7	(27)	1.0	(88)	-0.1	(95)	1.8	(95)

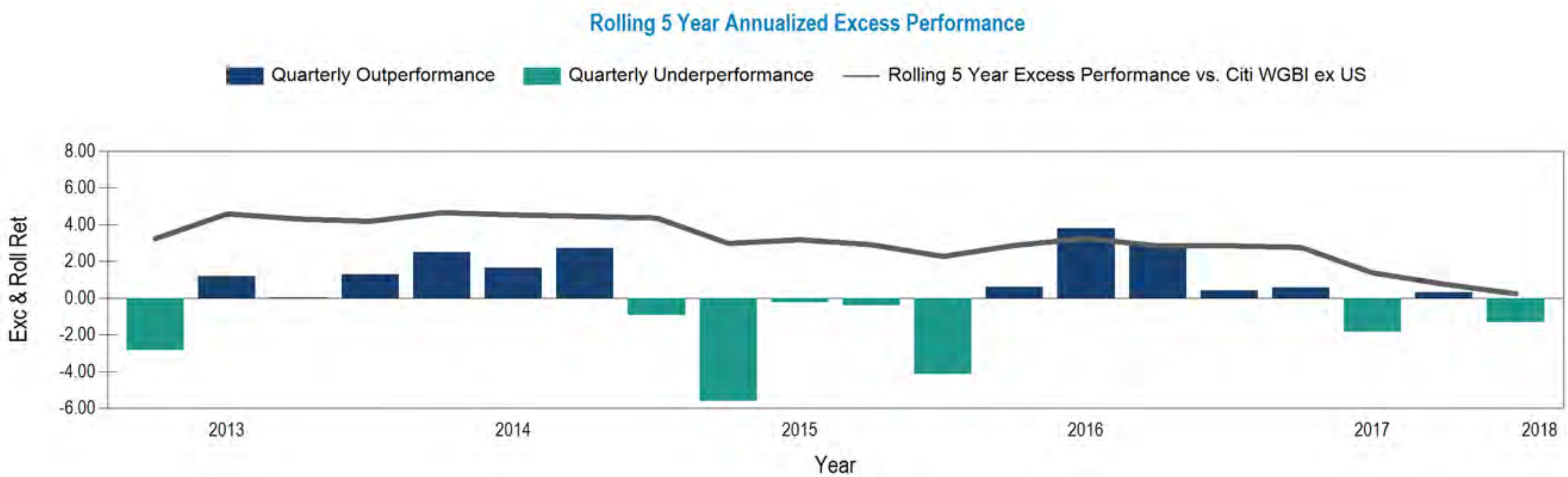


Return (Rank)	2017		2016		2015		2014		2013		2012		2011		2010		2009		2008	
5th Percentile	15.0		14.5		2.0		7.1		9.8		20.2		10.4		15.5		50.1		12.8	
25th Percentile	10.1		6.5		-0.6		4.2		2.8		14.3		6.9		9.9		18.4		8.2	
Median	8.2		4.0		-2.7		2.3		-0.4		9.4		5.0		7.5		10.1		4.0	
75th Percentile	6.5		1.8		-4.0		0.6		-3.2		5.9		3.2		6.0		5.4		-3.8	
95th Percentile	3.0		-1.5		-9.2		-2.7		-5.6		2.2		-4.2		3.0		3.2		-23.0	
# of Portfolios	231		221		189		159		142		118		108		76		72		73	
● Brandywine Global Fixed Income	12.5	(9)	2.2	(71)	-9.3	(96)	2.9	(43)	-1.6	(59)	13.8	(30)	5.1	(49)	7.4	(52)	10.3	(49)	3.0	(53)
▲ Citi WGBI ex US	10.3	(21)	1.8	(75)	-5.5	(89)	-2.7	(95)	-4.6	(89)	1.5	(98)	5.2	(48)	5.2	(87)	4.4	(84)	10.1	(14)

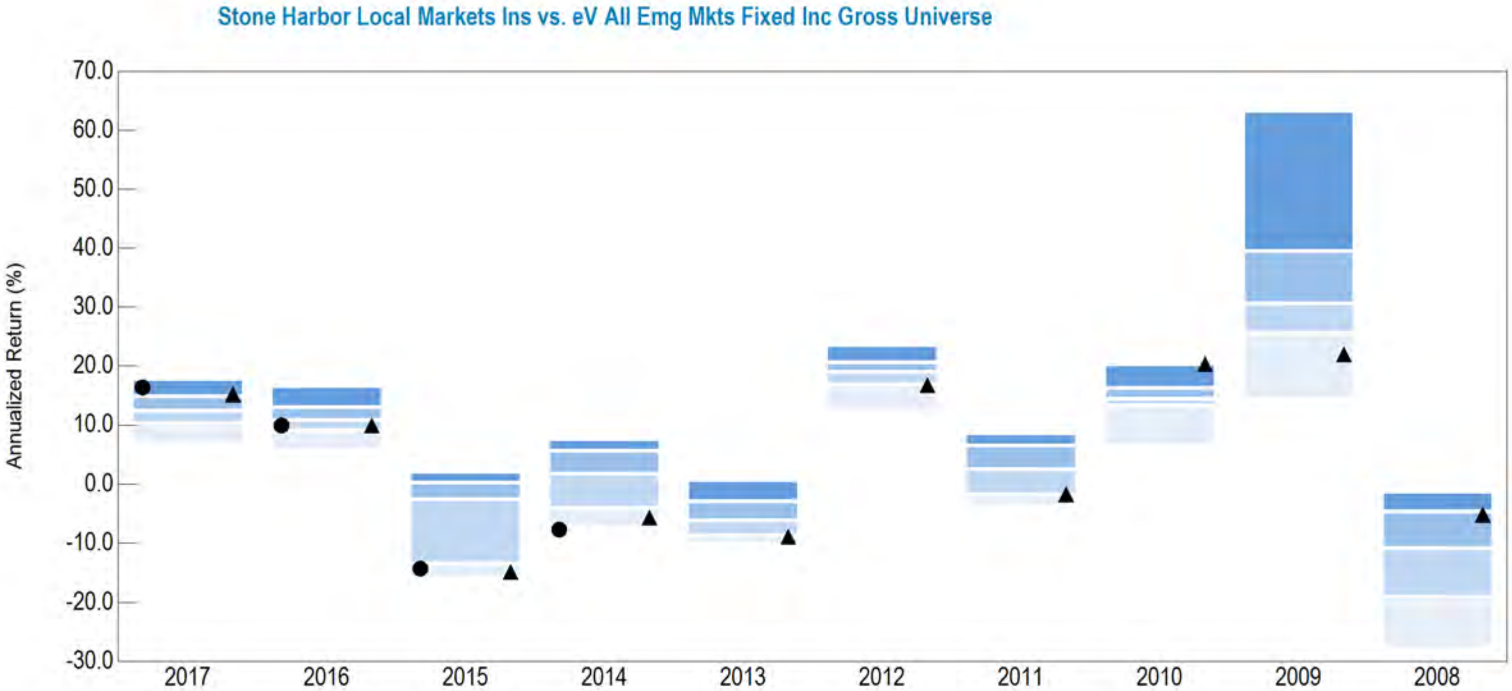

Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2018
Annualized Return
10.0
5.0
0.0
-5.0
-10.0
-5.0
0.0
5.0
10.0
15.0
Annualized Standard Deviation
Citi WGBI ex US
Brandywine Global Fixed Income
222 Portfolios
Brandywine Global Fixed Income
Citi WGBI ex US
Universe Median
68% Confidence Interval
eV Global Fixed Inc Unhedged Gross


Annualized Return vs. Annualized Standard Deviation
5 Years Ending June 30, 2018
Annualized Return
10.0
5.0
0.0
-5.0
-10.0
0.0
5.0
10.0
15.0
Annualized Standard Deviation
Brandywine Global Fixed Income
Citi WGBI ex US
201 Portfolios
Brandywine Global Fixed Income
Citi WGBI ex US
Universe Median
68% Confidence Interval
eV Global Fixed Inc Unhedged Gross

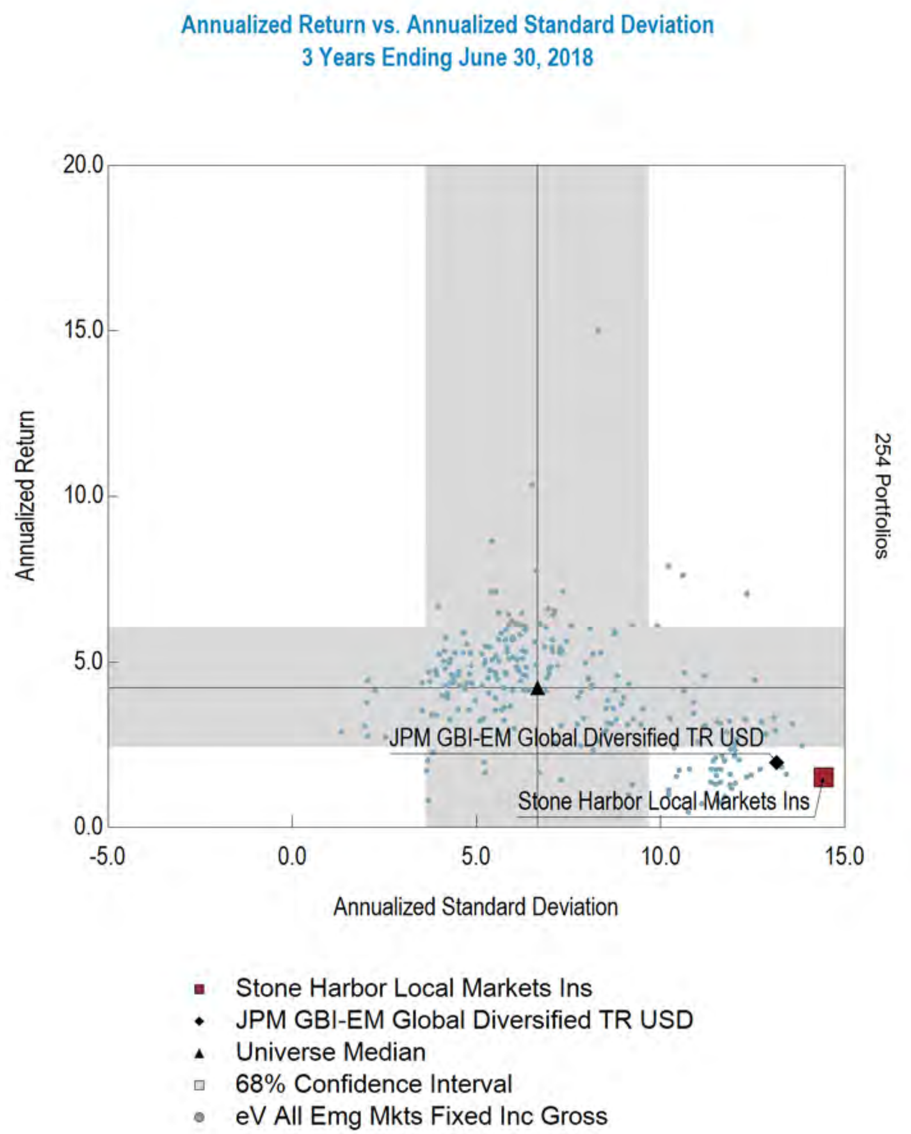

Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. Citi WGBI ex US
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
Exc & Roll Ret
2013
2014
2015
2016
2017
2018
Year

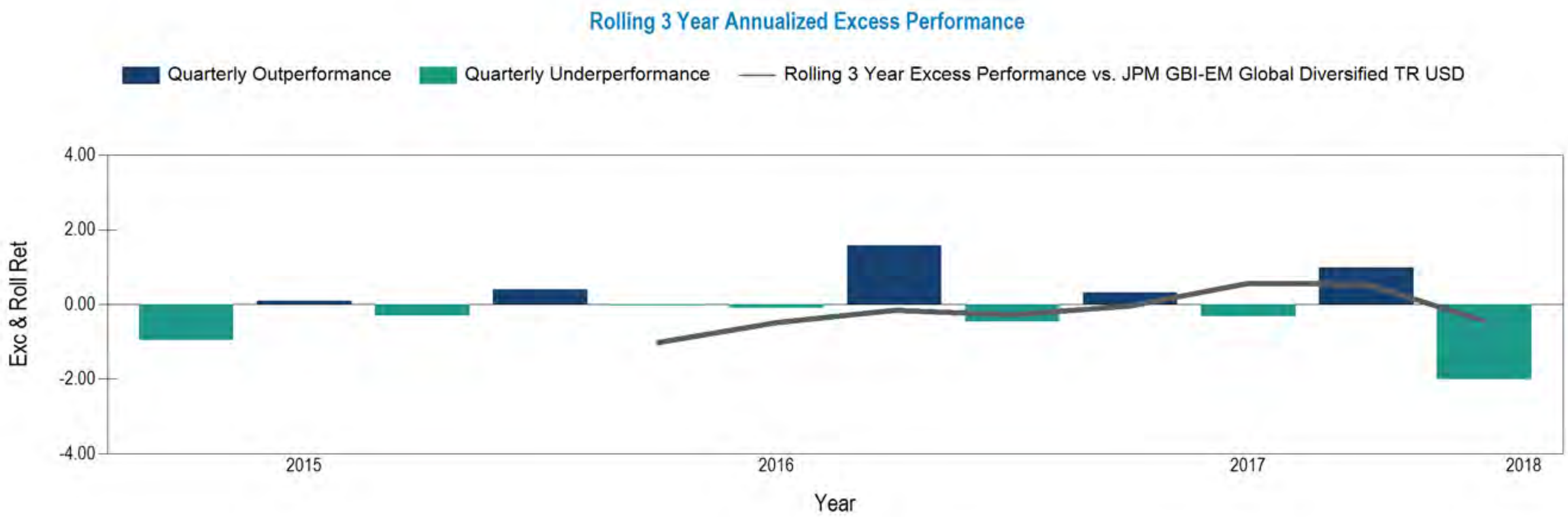

Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. Citi WGBI ex US
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
Exc & Roll Ret
2013
2014
2015
2016
2017
2018
Year

	Return (Rank)											
5th Percentile	-1.4		2.0		6.5		6.0		6.4		8.8	
25th Percentile	-3.1		0.2		5.2		5.1		5.4		7.4	
Median	-5.3		-1.0		4.2		3.8		4.0		6.4	
75th Percentile	-8.7		-2.3		2.9		0.5		0.2		3.2	
95th Percentile	-12.1		-4.1		1.3		-1.8		-1.6		1.7	
# of Portfolios	270		270		254		211		160		95	
● Stone Harbor Local Markets Ins	-12.4	(97)	-3.6	(93)	1.5	(93)	--	(--)	--	(--)	--	(--)
▲ JPM GBI-EM Global Diversified TR USD	-10.4	(84)	-2.3	(75)	2.0	(87)	-1.4	(92)	-1.1	(90)	3.0	(78)



Return (Rank)	2017		2016		2015		2014		2013		2012		2011		2010		2009		2008	
5th Percentile	17.7		16.6		2.1		7.6		0.7		23.6		8.6		20.3		63.2		-1.3	
25th Percentile	15.0		13.1		0.3		5.7		-2.9		20.7		6.6		16.3		39.6		-4.6	
Median	12.6		10.9		-2.6		1.8		-6.1		19.1		2.6		14.5		30.7		-10.8	
75th Percentile	10.4		9.2		-13.4		-4.0		-8.6		17.0		-1.6		13.4		25.6		-18.9	
95th Percentile	6.9		5.9		-15.9		-7.2		-10.2		12.5		-3.6		6.6		14.4		-27.7	
# of Portfolios	257		247		159		148		129		108		75		55		27		30	
● Stone Harbor Local Markets Ins	16.4	(14)	9.9	(67)	-14.4	(79)	-7.7	(98)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ JPM GBI-EM Global Diversified TR USD	15.2	(24)	9.9	(67)	-14.9	(84)	-5.7	(91)	-9.0	(82)	16.8	(80)	-1.8	(77)	20.4	(5)	22.0	(85)	-5.2	(28)

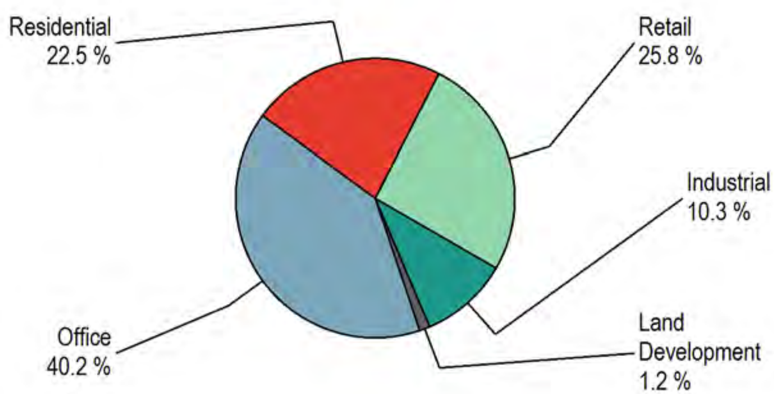

Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2018
20.0
15.0
10.0
5.0
0.0
Annualized Return
-5.0
0.0
5.0
10.0
15.0
Annualized Standard Deviation
254 Portfolios
JPM GBI-EM Global Diversified TR USD
Stone Harbor Local Markets Ins
Stone Harbor Local Markets Ins
JPM GBI-EM Global Diversified TR USD
Universe Median
68% Confidence Interval
eV All Emg Mkts Fixed Inc Gross


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. JPM GBI-EM Global Diversified TR USD
4.00
2.00
0.00
-2.00
-4.00
Exc & Roll Ret
2015
2016
2017
2018
Year

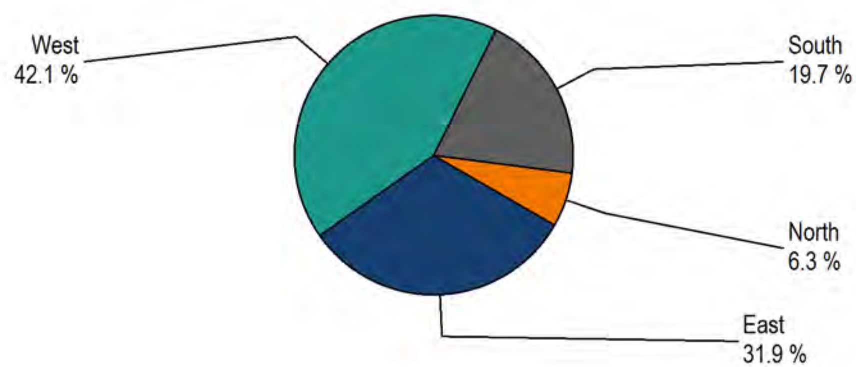

Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. JPM GBI-EM Global Diversified TR USD
4.00
2.00
0.00
-2.00
-4.00
Exc & Roll Ret
2015
2016
2017
2018
Year

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Real Estate	**189,128,859**	**2.0**	**4.0**	**7.6**	**9.4**	**10.9**	**5.2**	**7.8**	**7.8**	**18.0**	**10.4**	**12.9**
NCREIF Property Index		*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*6.2*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*
JP Morgan Core Real Estate	157,445,333	1.7	3.7	6.8	8.4	10.5	5.7	6.1	8.4	15.2	11.2	15.9
NCREIF-ODCE		*2.1*	*4.3*	*8.4*	*9.4*	*11.0*	*5.3*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*
NCREIF Property Index		*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*6.2*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*
ARA American Strategic Value Realty	17,238,425	2.2	4.2	9.0	--	--	--	7.4	--	--	--	--
NCREIF-ODCE		*2.1*	*4.3*	*8.4*	--	--	--	*7.6*	--	--	--	--
NCREIF Property Index		*1.8*	*3.5*	*7.2*	--	--	--	*7.0*	--	--	--	--
Direct Real Estate	14,445,101	4.6	7.5	15.3	15.3	12.8	7.1	20.6	5.5	22.9	6.1	5.2
NCREIF-ODCE		*2.1*	*4.3*	*8.4*	*9.4*	*11.0*	*5.3*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*
NCREIF Property Index		*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*6.2*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*

Property Type Allocation
Allocation as of June 30, 2018



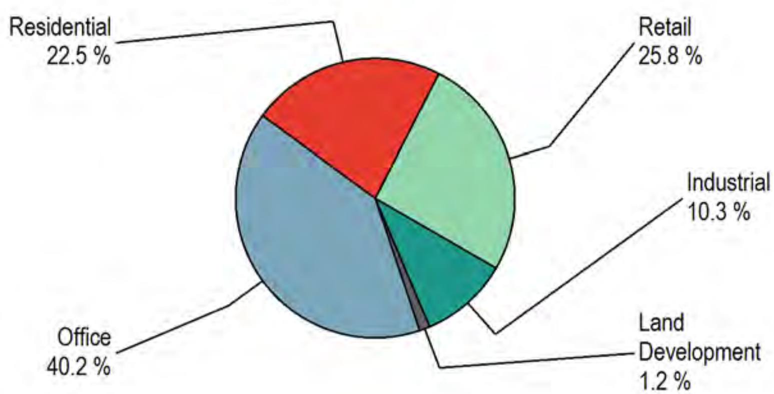
Geographic Diversification
Allocation as of June 30, 2018



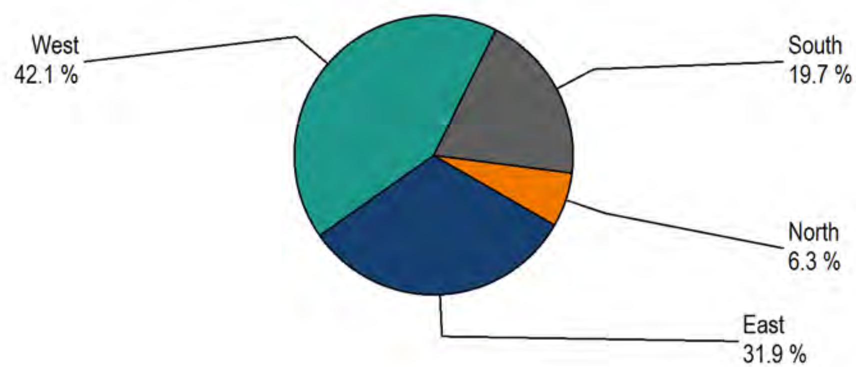
Property Allocation and Geographic Diversification analytics exclude Direct Real Estate. ARA American Strategic Value Realty and Direct Real Estate are lagged one quarter.

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Real Estate	**189,128,859**	**2.0**	**4.0**	**7.6**	**8.9**	**10.3**	**--**	**7.8**	**6.8**	**16.9**	**9.6**	**12.1**
NCREIF Property Index		*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*--*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*
JP Morgan Core Real Estate	157,445,333	1.7	3.7	6.8	7.9	9.7	--	6.1	7.3	14.1	10.0	14.8
NCREIF-ODCE		*2.1*	*4.3*	*8.4*	*9.4*	*11.0*	*--*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*
NCREIF Property Index		*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*--*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*
ARA American Strategic Value Realty	17,238,425	2.2	4.2	9.0	--	--	--	7.4	--	--	--	--
NCREIF-ODCE		*2.1*	*4.3*	*8.4*	*--*	*--*	*--*	*7.6*	*--*	*--*	*--*	*--*
NCREIF Property Index		*1.8*	*3.5*	*7.2*	*--*	*--*	*--*	*7.0*	*--*	*--*	*--*	*--*
Direct Real Estate	14,445,101	4.6	7.5	15.3	15.0	12.6	7.0	20.6	4.9	22.2	6.1	5.2
NCREIF-ODCE		*2.1*	*4.3*	*8.4*	*9.4*	*11.0*	*5.3*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*
NCREIF Property Index		*1.8*	*3.5*	*7.2*	*8.3*	*9.8*	*6.2*	*7.0*	*8.0*	*13.3*	*11.8*	*11.0*

Property Type Allocation
Allocation as of June 30, 2018



Geographic Diversification
Allocation as of June 30, 2018



Property Allocation and Geographic Diversification analytics exclude Direct Real Estate. ARA American Strategic Value Realty and Direct Real Estate are lagged one quarter.

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Commodities	**45,379,851**	**1.7**	**1.7**	**12.4**	**-2.7**	**-5.0**	**--**	**6.2**	**12.6**	**-25.2**	**-16.0**	**-9.1**
Bloomberg Commodity Index TR USD		*0.4*	*0.0*	*7.3*	*-4.5*	*-6.4*	*--*	*1.7*	*11.8*	*-24.7*	*-17.0*	*-9.5*
Gresham MTAP Commodity Builder	45,379,851	1.7	1.7	12.4	-2.7	--	--	6.2	12.6	-25.2	-16.0	--
Bloomberg Commodity Index TR USD		*0.4*	*0.0*	*7.3*	*-4.5*	*--*	*--*	*1.7*	*11.8*	*-24.7*	*-17.0*	*--*

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Commodities	**45,379,851**	**1.7**	**1.7**	**12.4**	**-3.1**	**-5.5**	**--**	**6.2**	**11.8**	**-25.8**	**-16.6**	**-9.5**
Bloomberg Commodity Index TR USD		*0.4*	*0.0*	*7.3*	*-4.5*	*-6.4*	*--*	*1.7*	*11.8*	*-24.7*	*-17.0*	*-9.5*
Gresham MTAP Commodity Builder	45,379,851	1.7	1.7	12.4	-3.1	--	--	6.2	11.8	-25.8	-16.6	--
Bloomberg Commodity Index TR USD		*0.4*	*0.0*	*7.3*	*-4.5*	*--*	*--*	*1.7*	*11.8*	*-24.7*	*-17.0*	*--*

Performance Return Calculations

Performance is calculated using Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

Data Source

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

Illiquid Alternatives

Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

Manager Line Up

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
PIMCO RAE Fundamental PLUS	11/30/2007	J.P. Morgan	Direct Real Estate	-	American Realty Adv.
Loomis Sayles Large Cap Growth	12/31/2016	J.P. Morgan	JP Morgan Core Real Estate	3/6/2008	J.P. Morgan
Boston Partners Large Cap Value	1/31/2017	Boston Partners	Gresham MTAP Commodity	8/31/2013	BNY Mellon
Atlanta Capital Management	8/31/2010	J.P. Morgan	Cash Account	-	SLOCPT
Dodge & Cox Intl Stock	12/6/2007	J.P. Morgan	HarbourVest Partners IX-Buyout	2011[1]	HarbourVest
WCM International Growth	2/15/2017	WCM	KKR Mezzanine Partners	2010[1]	KKR
BlackRock Core Bond	1/19/2017	J.P. Morgan	PIMCO Distressed Credit Fund	2010[1]	Brown Brothers Harriman
Dodge & Cox Income	1/19/2017	Deutsche Bank	ARA American Strategic Value	6/22/2016	American Realty Adv.
Pacific Asset Corporate Loan	9/1/2014	Deutsche Bank	TPG Diversified Credit Progran	2016[1]	TPG
Brandywine Global Fixed	11/30/2007	J.P. Morgan	Pathway Private Equity Fund 9	2017[1]	Pathway
Stone Harbor Local Markets Ins	7/9/2013	Stone Harbor			

[1] *Represents fund vintage year.*

Policy & Custom Index Composition

Policy Index (10/1/2016-Current)	20% Russell 3000, 20% MSCI ACWI ex-US (Gross), 30% BBgBarc U.S. Aggregate, 15% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000+ 300 bps, 5% BBgBarc High Yield +2% (lagged).
Policy Index (7/1/2014-9/30/2016)	23% Russell 3000, 22% MSCI ACWI ex-US (Gross), 35% BBgBarc U.S. Aggregate, 10% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000+ 300 bps.
Policy Index (7/1/2013-6/30/2014)	27% Russell 3000, 23% MSCI ACWI ex-US (Gross), 30% BBgBarc U.S. Aggregate, 10% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000+ 300 bps.
Policy Index (4/1/2011-6/30/2013)	27% Russell 3000, 23% MSCI ACWI ex-US (Gross), 20% BBgBarc U.S. Aggregate, 5% Citi World Gov't Bond, 5% Barclays US TIPS, 10% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000+ 300 bps.

Other Disclosures

Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - Risk-free Rate)].

Benchmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price-to-Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

R-Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

Sortino Ratio: Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

Standard Deviation: A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Verus receives universe data from InvestorForce, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.

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Board of Trustees

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San Luis Obispo County
Pension Trust
SLOCPT

Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary
Amy Burke – Deputy Executive Secretary

Agenda Item 8: Investment Report for July 2018

	July	**Year to Date 2018**		2017	2016	2015	2014	2013
Total Trust Investments ($ millions)	$1,377			$1,351 year end	$1,196 year end	$1,148 year end	$1,190 year end	$1,131 year end
Total Fund Return	1.8% Gross	**2.2%** Gross		15.5 % Gross	6.6 % Gross	-0.8 % Gross	5.1 % Gross	13.8% Gross
Policy Index Return (r)	1.3%	1.6%		13.4 %	7.7 %	-0.5 %	5.2 %	13.4%

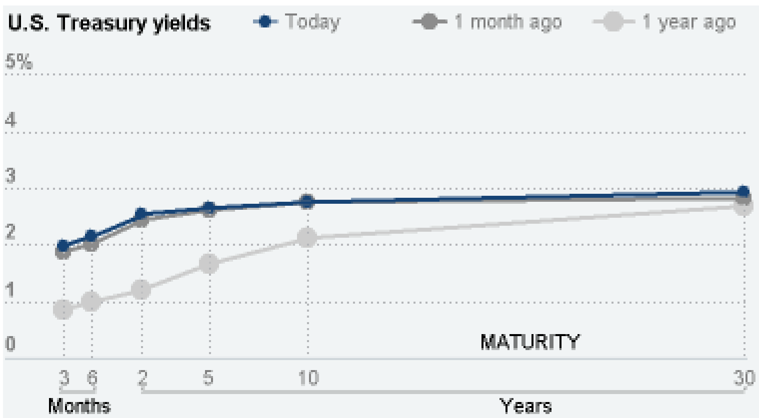
(r) Policy index as of Aug. 2016 revision to Strategic Asset Allocation Policy: 20% domestic equity, 20% international equity, 15% core bonds, 5% bank loans, 5% global bonds, 5% emerging market debt, 15% real estate, 5% commodities, 5% private equity, 5% private credit.

The Economy and Capital Markets:

Some significant factors in the economy for July and into mid-August have been –

- **Fed Policy** – For July and August news from the Fed reflected a steady course on rate normalization.
  - Following the June 13th Fed increase in the Fed Funds rate – the second increase for the year - to the range of 1.75% to 2.00%, no increase occurred in July. Expectations are still for two additional Fed rate hikes in 2018 with the next increase anticipated for the September meeting.

- **Interest Rates –**
    - Concerns over a flattening yield curve continue. The 10 year Treasury remains essentially unchanged for the month at a 2.86% yield. The continued course of Fed rate normalization has contributed to the rise in the short end of the yield curve over the year to flatten the curve significantly.
    - Recession risk is elevated with inverted yield curves (short rates higher than long rates). The Fed appears to be on track to cause an inverted yield curve by the end of 2018 which is suggestive of a recession level GDP growth in late 2019-early 2020.
    - The yield curve as of August 17th is shown in the graph below.



- **GDP Growth –**
    - Initial 2Q18 U.S. Real GDP growth was reported at a 4.1% rate following the 1Q18 increase of 2.2%. The strong 2Q18 GDP growth was the highest quarterly showing since 2014 and was largely due to strong consumer spending. A surge in exports fueled by concerns over pending trade restrictions and tariffs also contributed to the strong 2Q18 growth. Business spending and investment remained subdued despite the fiscal stimulus of tax cuts.
    - The Personal Consumption Expenditure (PCE) price index that provides the “real rate of growth” inflation adjustment to the reported real GDP growth increased at a 2.50% rate in 2Q18 reflecting a modest uptick in inflation.
    - Economists’ consensus is for a slowing in GDP growth in the last half of 2018, but the overall 2018 GDP growth could a 3% rate including the strong second quarter.

- **Trade Protectionism, International Tensions, Economic Fallout –**
    - The building trade disputes between the U.S. and nearly all other countries continued to create economic uncertainty in July. The imposition of tariffs on Chinese imports began in earnest and the tit-for-tat retaliation that naturally results is expected to have negatively, but only vaguely understood impacts on the U.S. economy. U.S. agricultural exports appear to be poised to take much of the negative impact.

- **Employment and Wages –**
    - The July DOL report on nonfarm employment showed -
        - June jobs report was up 157k I line with expectations following the robust June increase in jobs of 248k.
        - Unemployment decreased from 4.0% to 3.9%.
    - For the year ending with July, average hourly earnings increased 2.7%. The trend in wage increases over the last four years has been around 2% so the recent increase may indicate building inflationary pressures.

- **Economy and the markets –**
    - Domestic equity markets have traded higher in July bringing the YTD S&P 500 return above 7%. The main factors seem to be strong corporate profit growth due to both a growing economy and the impact of corporate tax cuts.
    - Globally, both developed market capital returns and emerging market capital returns have faced a headwind of a rising U.S. Dollar. Verus' report points out that the relative valuation levels in global markets are more attractive than domestic markets at present.

SLOCPT Investment Returns:

The attached report from Verus covers the investment returns of the SLOCPT portfolio and general market conditions through the end of July. Subsequent market movements in August will be reported on in next month's investment report.

Respectfully submitted

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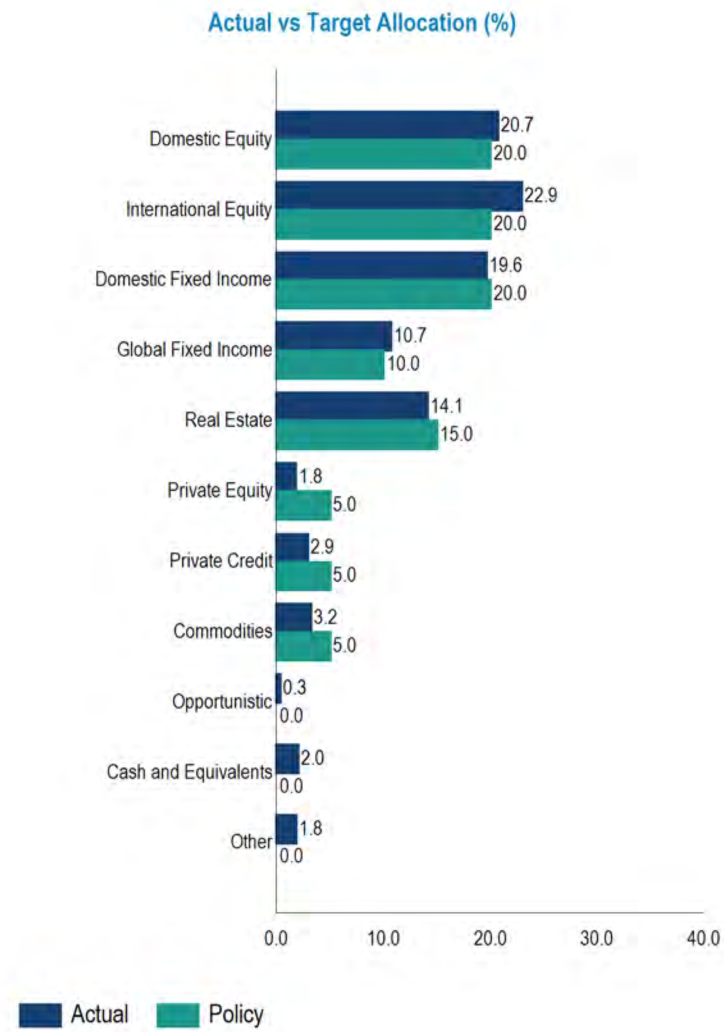
San Luis Obispo County Pension Trust
Executive Summary - Preliminary (Gross of Fees)
Period Ending: July 31, 2018

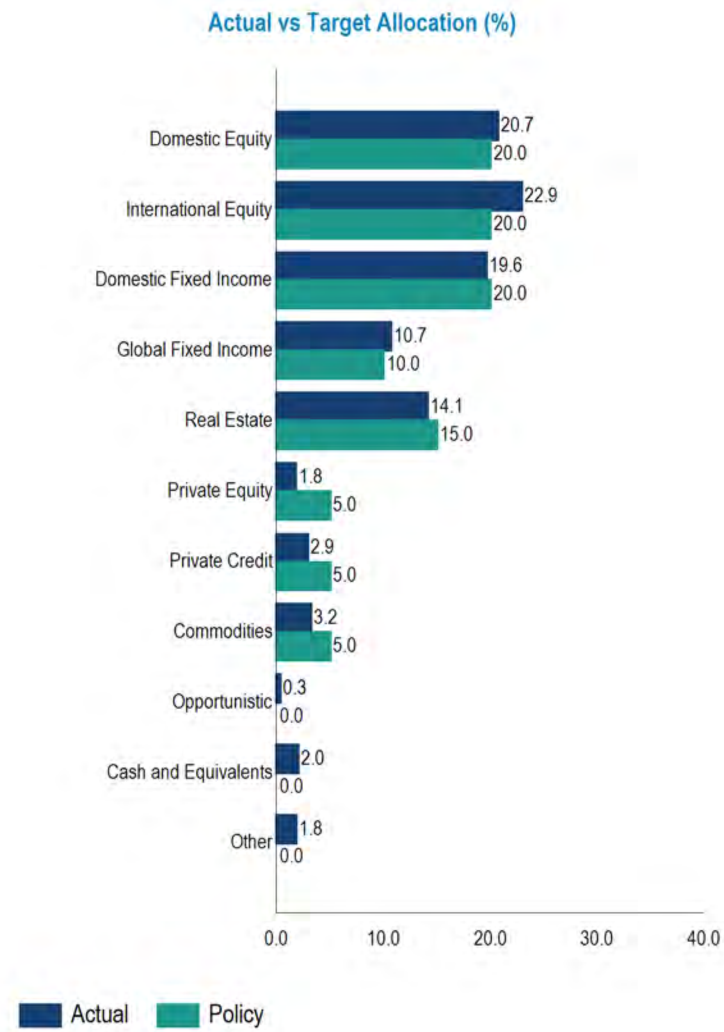
	Market Value	% of Portfolio	1 Mo	YTD
Total Fund	**1,376,602,242**	**100.0**	**1.8**	**2.2**
Total Fund ex Overlay	1,351,531,364	98.2	1.8	2.2
Policy Index			*1.3*	*1.6*
Total Domestic Equity	**285,074,332**	**20.7**	**3.9**	**6.1**
Russell 3000			*3.3*	*6.6*
PIMCO RAE Fundamental PLUS Instl	62,340,199	4.5	3.8	5.2
S&P 500			*3.7*	*6.5*
Loomis Sayles Large Cap Growth	81,438,012	5.9	3.3	7.3
Russell 1000 Growth			*2.9*	*10.4*
Boston Partners Large Cap Value	78,685,518	5.7	4.8	3.1
Russell 1000 Value			*4.0*	*2.2*
Atlanta Capital Mgmt	62,610,603	4.5	3.7	9.0
Russell 2500			*1.9*	*7.5*
Total International Equity	**315,039,028**	**22.9**	**3.1**	**1.0**
MSCI ACWI ex USA Gross			*2.4*	*-1.1*
Dodge & Cox Intl Stock	152,644,562	11.1	4.9	-2.3
MSCI EAFE Gross			*2.5*	*0.0*
WCM International Growth	162,394,466	11.8	1.5	4.4
MSCI ACWI ex USA Gross			*2.4*	*-1.1*
Total Domestic Fixed Income	**269,906,240**	**19.6**	**0.5**	**0.3**
BBgBarc US Aggregate TR			*0.0*	*-1.6*
BlackRock Core Bond	99,631,816	7.2	0.2	-0.9
BBgBarc US Aggregate TR			*0.0*	*-1.6*
Dodge & Cox Income Fund	99,521,851	7.2	0.6	-0.5
BBgBarc US Aggregate TR			*0.0*	*-1.6*
Pacific Asset Corporate Loan	70,752,574	5.1	0.8	3.1
S&P/LSTA Leveraged Loan Index			*0.7*	*2.9*
Total Global Fixed	**147,188,042**	**10.7**	**2.1**	**-2.8**
Citi World Govt Bond Index			*-0.4*	*-1.3*
Brandywine Global Fixed Income	75,917,420	5.5	1.6	-0.4
Citi WGBI ex US			*-0.4*	*-1.3*
Stone Harbor Local Markets Ins	71,270,622	5.2	2.7	-5.2
JPM GBI-EM Global Diversified TR USD			*1.9*	*-4.7*



**Other balance represents Clifton Group.*

Policy Index (10/1/2016): 20% Russell 3000, 20% MSCI ACWI ex. US, 30% BBgBarc Aggregate, 15% NCREIF Property, 5% Bloomberg Commodity, 5% Russell 3000 + 300 bp, 5% BBgBarc High Yield + 200 bp lagged. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. Boston Partners funded 2/1/2017. WCM Intl Growth replaced Vontobel on 2/15/2017. Pathway 9 funded 4/7/2017. SSGA TIPS liquidated on 12/7/2017. Fidelity Real Estate Growth III liquidated on 12/29/2017. SSGA Flagship S&P 500 liquidated 2/1/2018. Most recently reported market values for private equity/credit, opportunistic, and illiquid real estate funds adjusted for calls and distributions through 7/31/2018. All data is preliminary.

	Market Value	% of Portfolio	1 Mo	YTD
Total Real Estate	**194,131,213**	**14.1**	**0.6**	**4.6**
NCREIF Property Index			*0.0*	*3.5*
JP Morgan Core Real Estate	158,141,106	11.5	0.4	4.0
NCREIF-ODCE			*0.0*	*4.3*
NCREIF Property Index			*0.0*	*3.5*
ARA American Strategic Value Realty	21,645,006	1.6	2.9	7.3
NCREIF-ODCE			*0.0*	*4.3*
NCREIF Property Index			*0.0*	*3.5*
Direct Real Estate	14,345,101	1.0	0.0	7.5
NCREIF-ODCE			*0.0*	*4.3*
NCREIF Property Index			*0.0*	*3.5*
Total Commodities	**44,081,804**	**3.2**	**-2.9**	**-1.2**
Bloomberg Commodity Index TR USD			*-2.1*	*-2.1*
Gresham MTAP Commodity Builder	44,081,804	3.2	-2.9	-1.2
Bloomberg Commodity Index TR USD			*-2.1*	*-2.1*
Total Private Equity	**24,511,167**	**1.8**		
Harbourvest Partners IX Buyout Fund L.P.	13,509,957	1.0		
Pathway Private Equity Fund Investors 9 L.P.	11,001,210	0.8		
Total Private Credit	**39,744,522**	**2.9**		
TPG Diversified Credit Program	39,744,522	2.9		
Total Cash	**27,285,856**	**2.0**	**0.0**	**1.0**
91 Day T-Bills			*0.2*	*1.0*
Cash Account	27,285,856	2.0	0.0	1.0
91 Day T-Bills			*0.2*	*1.0*
Total Opportunistic	**4,569,160**	**0.3**		
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	4,407,942	0.3		
PIMCO Distressed Credit Fund	161,218	0.0		
CPI + 5%				



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Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

JULY 2018

Capital Markets Update

Agenda Item 8

Market commentary

U.S. ECONOMICS

— U.S. real GDP grew at an annualized quarterly rate of 4.1% in the second quarter (2.8% YoY), marking the best rate of growth since 2014. Net exports contributed 1.1% of the 4.1% growth rate, the biggest contribution since Q1 of 2014.

— Non-farm payrolls increased by 157,000 jobs in July, compared to the 248,000 jobs added in the prior month. The U-6 unemployment rate, which includes discouraged workers as well as workers who are involuntarily part-time, dropped from 7.8% to 7.5%, the lowest mark since 2001.

— Despite a slightly shorter average work week and a smaller "underemployed" (U-6 unemployment rate) contingent in the labor force, average hourly wage growth remained relatively low at 2.7% over the past year.

U.S. EQUITIES

— Amidst ongoing trade concerns, U.S. equities traded higher on the back of strong earnings and the best quarterly GDP growth since 2014. The S&P 500 Index returned 3.7% in July, its highest monthly return since January, bringing the year-to-date return to 7.3%.

— Second quarter earnings have been strong – of the firms in the S&P 500 that have reported results, 80% topped earnings estimates and 74% beat revenue estimates. Price reaction to positive earnings beats (+1.1%) was mostly in line with the 5-year average (+1.0%), according to FactSet.

U.S. FIXED INCOME

— The 10-year Treasury yield rose 10 bps over the month, ending at 2.96%.

— Short-term Treasury yields continued to climb, resulting in further yield curve flattening. During the month, the spread between the 2- and 10-year yields dropped to a cycle low of 24 bps, further fueling concerns over potential yield curve inversion. At month-end, the 2-10 spread settled at 29 bps.

— Economists expect the Federal Reserve to hold the fed funds target range at 1.8% to 2.0% until September. On July 31st, the implied probability of at least two more rate hikes before the end of the year was 68.5% based on fed fund futures.

INTERNATIONAL MARKETS

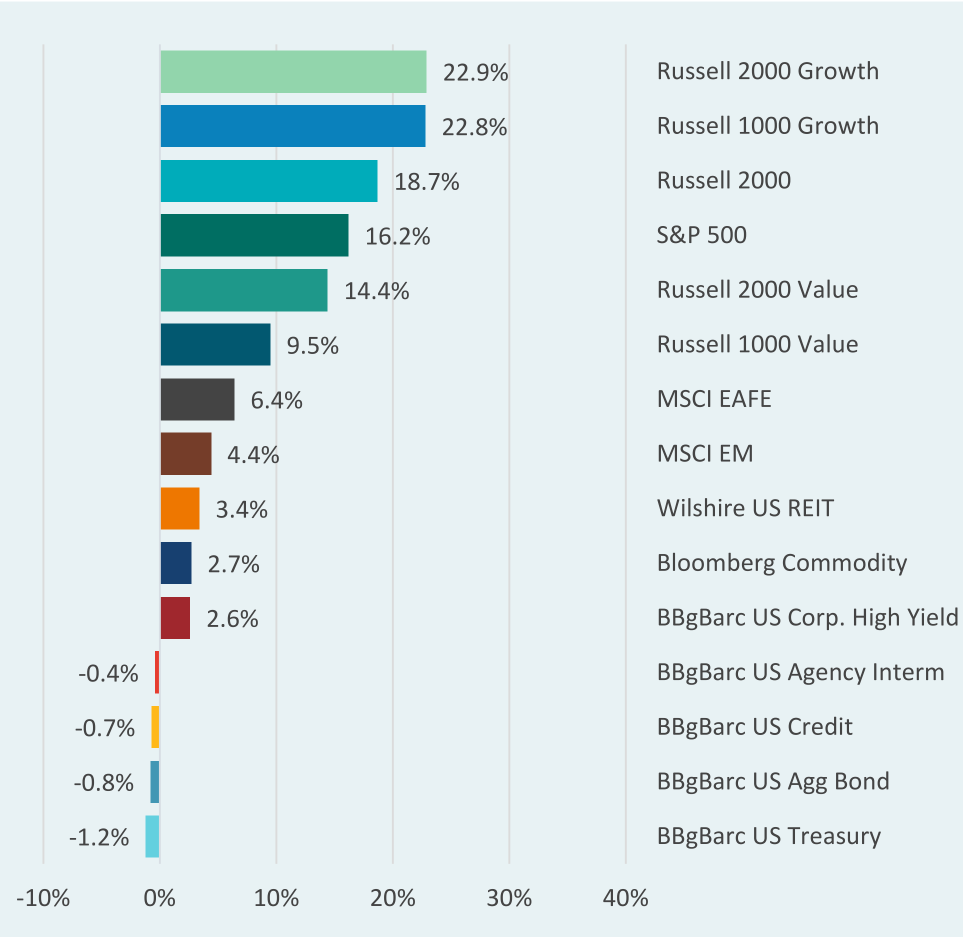
— On July 10, the U.S. Trade Representative's office released a $200 billion list of Chinese goods that could be subject to a 10% tariff. At the end of the month, the Trump administration raised the proposed tariff rate to 25%.

— President Trump met with Jean-Claude Juncker, President of the European Commission, which yielded a "handshake agreement" to de-escalate trade negotiations. In exchange for the relaxed tariffs on E.U. automakers, Juncker pledged E.U. commitment to buy more U.S. soybeans and liquid natural gas.

— International developed equities underperformed U.S. equities (MSCI EAFE +2.5%) for the third straight month, with currency movements producing a slight headwind. On a hedged basis, the MSCI EAFE returned 2.8%.

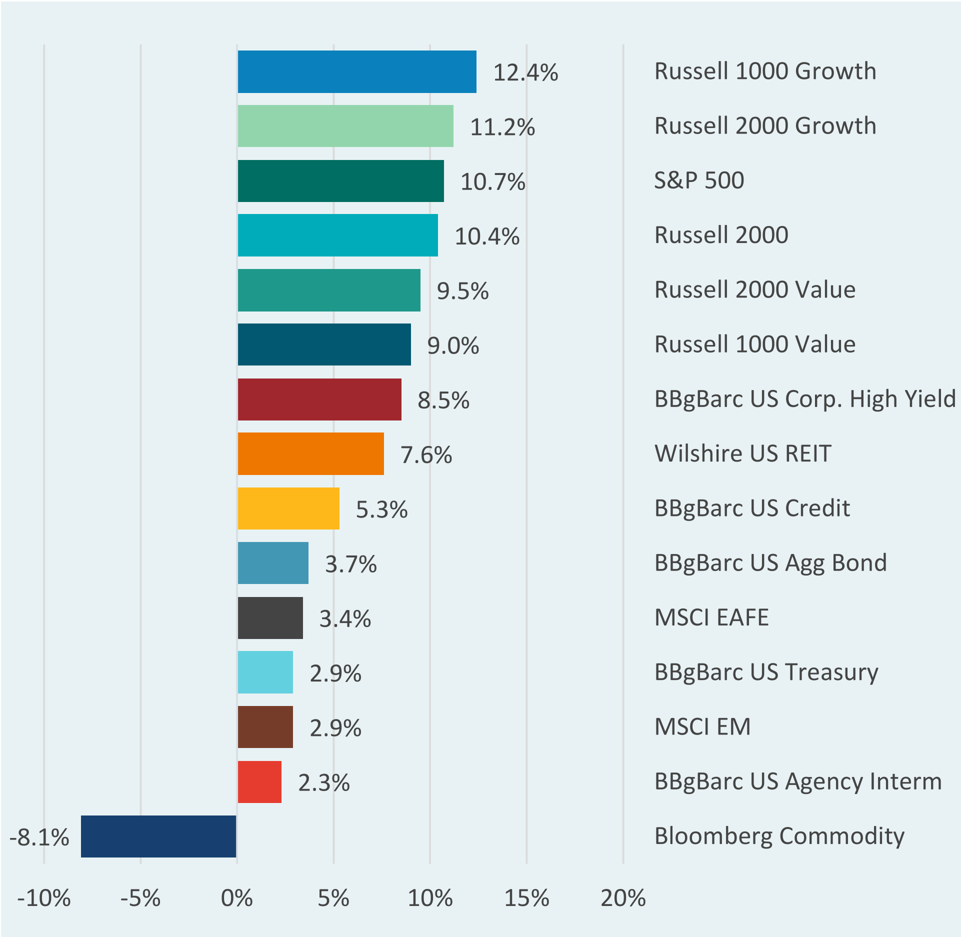
Major asset class returns

ONE YEAR ENDING JULY



Source: Morningstar, as of 7/31/18

TEN YEARS ENDING JULY



Source: Morningstar, as of 7/31/18

U.S. large cap equities

— The S&P 500 Index broke through the upper end of its trailing five-month trading range (2800) in the middle of the month, before settling at 2816 by month-end, 1.8% above its 50-day moving average.

— Within the S&P 500 Index, Industrials (+7.3%), Healthcare (+6.6%), and Financials (+5.3%) outperformed, led by cyclical subsectors such as airlines, pharmaceuticals, and banks. Real estate (+1.1%), and Energy (+1.4%) underperformed the overall index.

— Mega-cap tech firms led the advance with Microsoft, Amazon, Apple, and Google accounting for 23% of the monthly return.

— Several market leaders experienced significant corrections during the month. Netflix returned -13.8% in July after missing Q2 net subscriber expectations. On July 26th, Facebook dropped 19% after missing expectations on revenue user growth. Despite a slight recovery, Facebook finished the month down 11.2%.

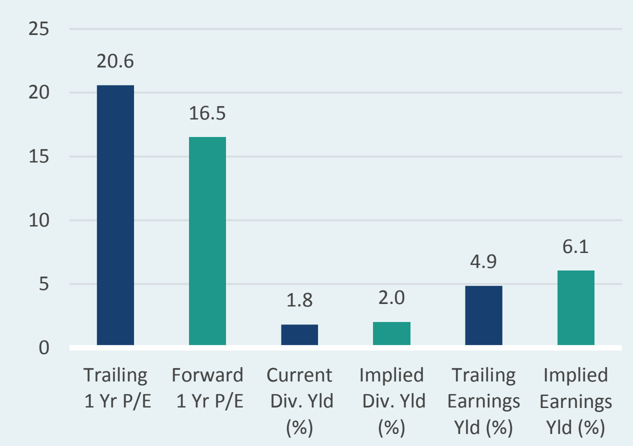
S&P 500 PRICE INDEX

Source: Bloomberg, as of 7/31/18

IMPLIED VOLATILITY (VIX INDEX)

Source: CBOE, as of 7/31/18

S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 7/31/18

Domestic equity size and style

— Small cap equity performance significantly lagged large cap equities. The Russell 2000 Index and Russell 1000 Index returned 1.7% and 3.5% in July, respectively.

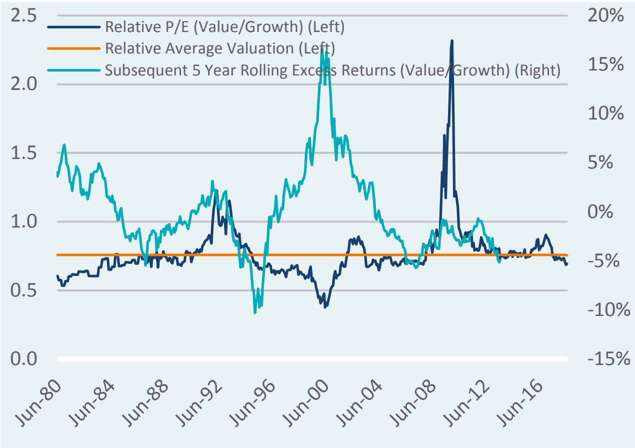
— The momentum story with small cap equities continued. At the end of July, the Russell 2000 Index was trading 6.2% above its 200-day moving average. In comparison, the Russell 1000 Index was trading only 2.3% above its 200-day moving average.

— Value equities outperformed growth equities for the first month since March. The Russell 1000 Value Index and Russell 1000 Growth Index returned 4.0% and 2.9%, respectively.

— While value outperformed growth in the large cap universe, style impact on small cap performance was negligible. Both the Russell 2000 Value Index and the Russell 2000 Growth Index returned 1.7%.

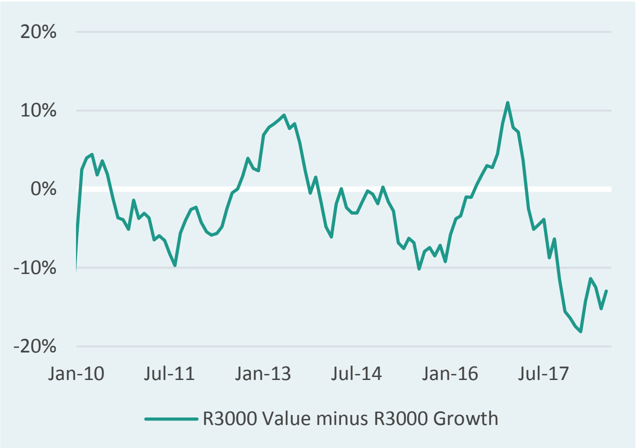
Value outperformed growth, especially within large cap equities

VALUE VS. GROWTH RELATIVE VALUATIONS



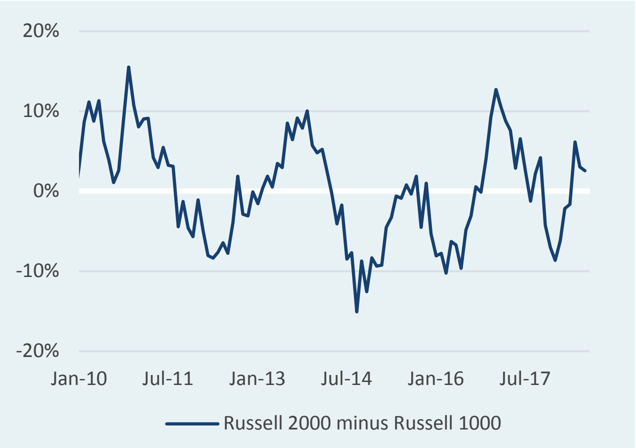
Source: Russell, Bloomberg, as of 7/31/18

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, as of 7/31/18

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, as of 7/31/18

Fixed income

— The Bloomberg Barclays Aggregate Index was unchanged over the month – Treasury yields rose slightly while investment grade credit spreads narrowed. The yield on the index ticked up to 3.4%, below the 20-year average of 4.0%.

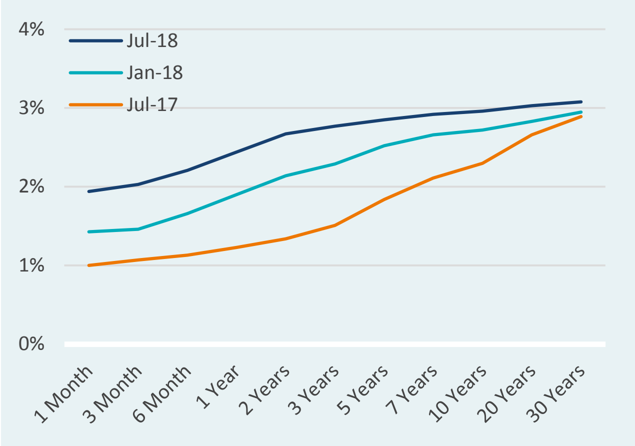
— The spread over the sovereign curve on the Bloomberg Barclays Global High Yield Index narrowed from 4.2% to 3.8% during the month – the index posted a 1.7% gain. Currency effects were muted, as the dollar-hedged index also gained 1.7% in July.

— Investment grade credit spreads narrowed, ending nearly a six-month widening trend. The spread on corporate bonds in the U.S. Aggregate Index dropped from 1.23% to 1.09%.

— The Bank of Japan voted to maintain ultra-loose monetary policy through a short-term rate target of -0.1% and a 10-year target yield of 0.0%, although it expanded the allowable range from +/- 0.1% to +/- 0.2%. The BOJ had to step in several times by offering to buy unlimited amounts of 5-10-year bonds to bring yields back toward the 0.0% target.

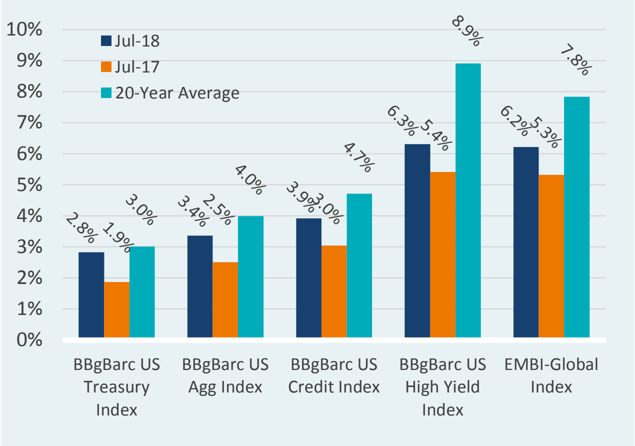
Investment grade credit spreads narrowed for the first time in six months

U.S. TREASURY YIELD CURVE



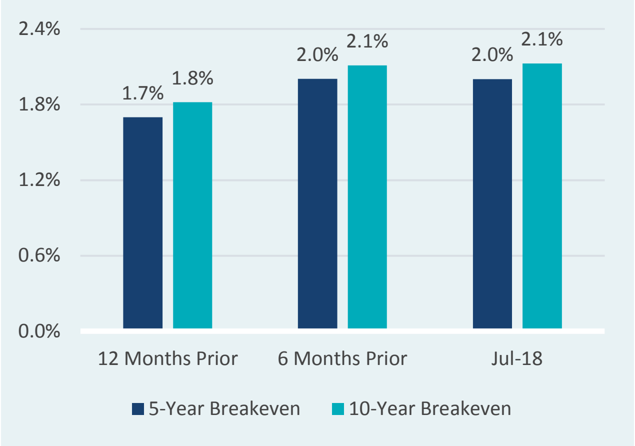
Source: Bloomberg, as of 7/31/18

NOMINAL YIELDS



Source: Morningstar, as of 7/31/18

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 7/31/18

Global markets

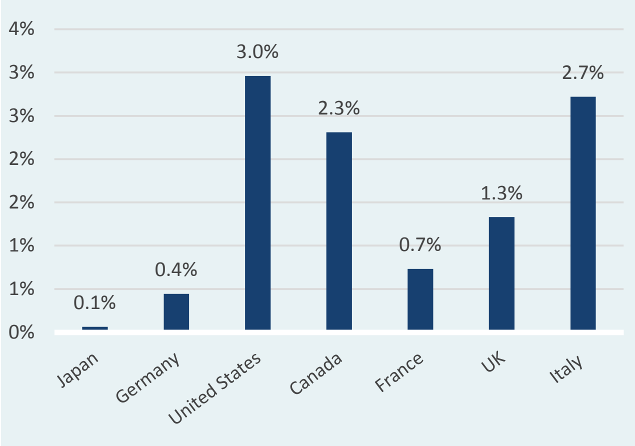
— Emerging market equities bounced back, but developed market equities still outperformed. The MSCI Emerging Markets Index and the MSCI World Index returned 2.3% and 3.2% respectively.

— The ECB reaffirmed that it will cut bond purchases by year-end and keep rates steady “through the summer of 2019”. ECB President Mario Draghi waved off the pickup in the headline inflation rate, which has already breached the 2% target, stating that it is “very early to call victory” on inflation.

— Chinese mainland equities weathered the escalating tariff tensions in July. The CSI 300 Index managed a 0.2% return for the month, holding its trailing three-month return at -6.5%.

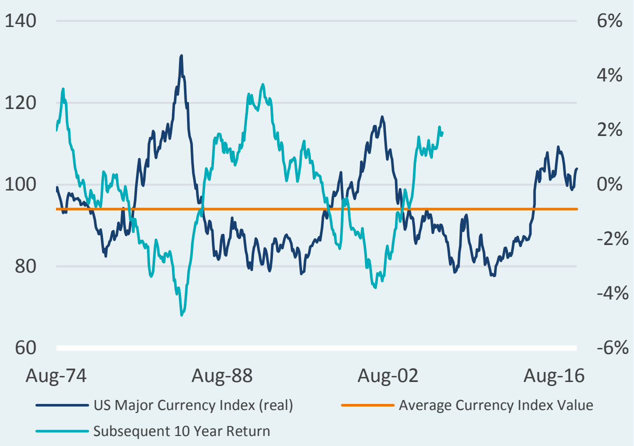
— The yuan depreciated another 2.9% against the dollar in July, bringing the three-month slide to 7.1%. Historically, prolonged currency devaluation has led to capital flight risks, while sustained currency appreciation has compromised the competitiveness of domestic industry.

GLOBAL SOVEREIGN 10-YEAR YIELDS



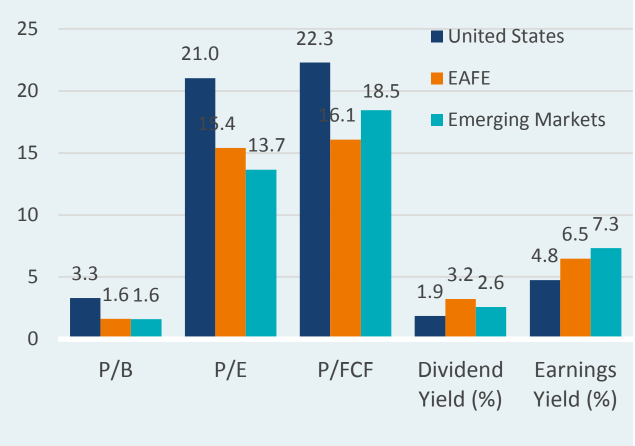
Source: Bloomberg, as of 7/31/18

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 7/31/18

MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 7/31/18

Commodities

— The Bloomberg Commodity Index dropped another 2.1% in July, led by oil and industrial metals.

— The Bloomberg Commodity Industrial Metals Index fell 4.7%, as copper and zinc dropped 3.8% and 8.0%, respectively. The drawdown in industrial metals may have been impacted by uncertainty surrounding global trade policies.

— Oil suffered its worst month in two years. WTI oil prices fell back down to $69 per barrel, losing 7.3% on the month and price volatility hit its highest level since February.

— Many factors impacted oil prices during the month, including pending U.S. sanctions on Iran, supply shortages in several OPEC member countries, unexpected increases in U.S. reserves, and reports of potential production increases from Saudi Arabia.

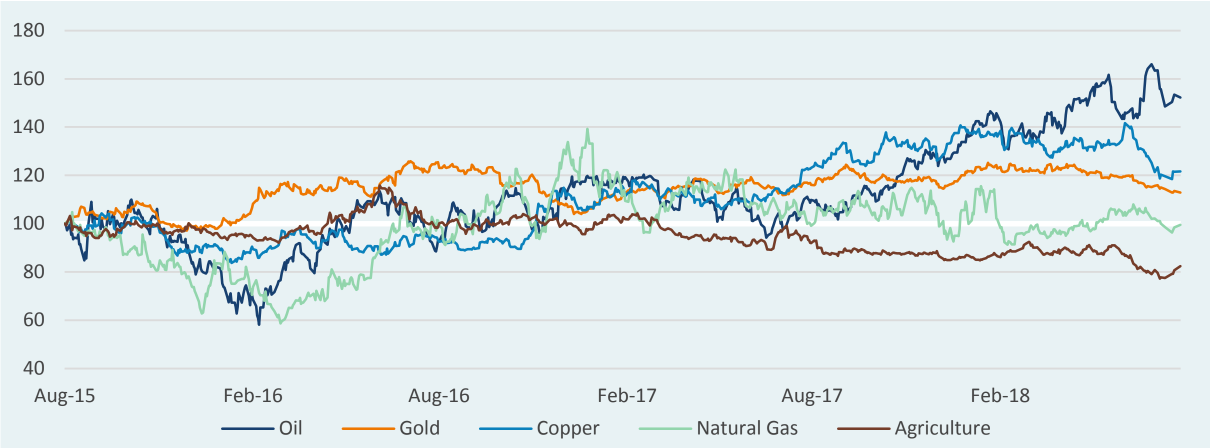
Commodities fell, erasing year-to-date gains

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(2.1)	(2.1)	(2.1)	2.7	(1.6)	(7.1)	(8.1)
Bloomberg Agriculture	2.7	2.7	(3.2)	(11.7)	(5.5)	(8.5)	(5.8)
Bloomberg Energy	(4.4)	(4.4)	7.8	23.2	(5.6)	(14.5)	(18.6)
Bloomberg Grains	6.5	6.5	2.9	(9.3)	(7.7)	(10.1)	(7.5)
Bloomberg Industrial Metals	(4.7)	(4.7)	(9.8)	5.4	7.2	(0.2)	(4.5)
Bloomberg Livestock	(4.3)	(4.3)	(9.2)	(8.9)	(5.2)	(3.3)	(6.0)
Bloomberg Petroleum	(4.5)	(4.5)	13.0	38.6	0.7	(13.1)	(13.3)
Bloomberg Precious Metals	(2.7)	(2.7)	(7.5)	(5.1)	2.5	(2.9)	1.3
Bloomberg Softs	(5.7)	(5.7)	(16.8)	(19.1)	(3.6)	(9.4)	(5.0)

Source: Morningstar, as of 7/31/18

COMMODITY PERFORMANCE



Source: Bloomberg, as of 7/31/18

Appendix

Periodic table of returns

BEST ↑ / ↓ WORST

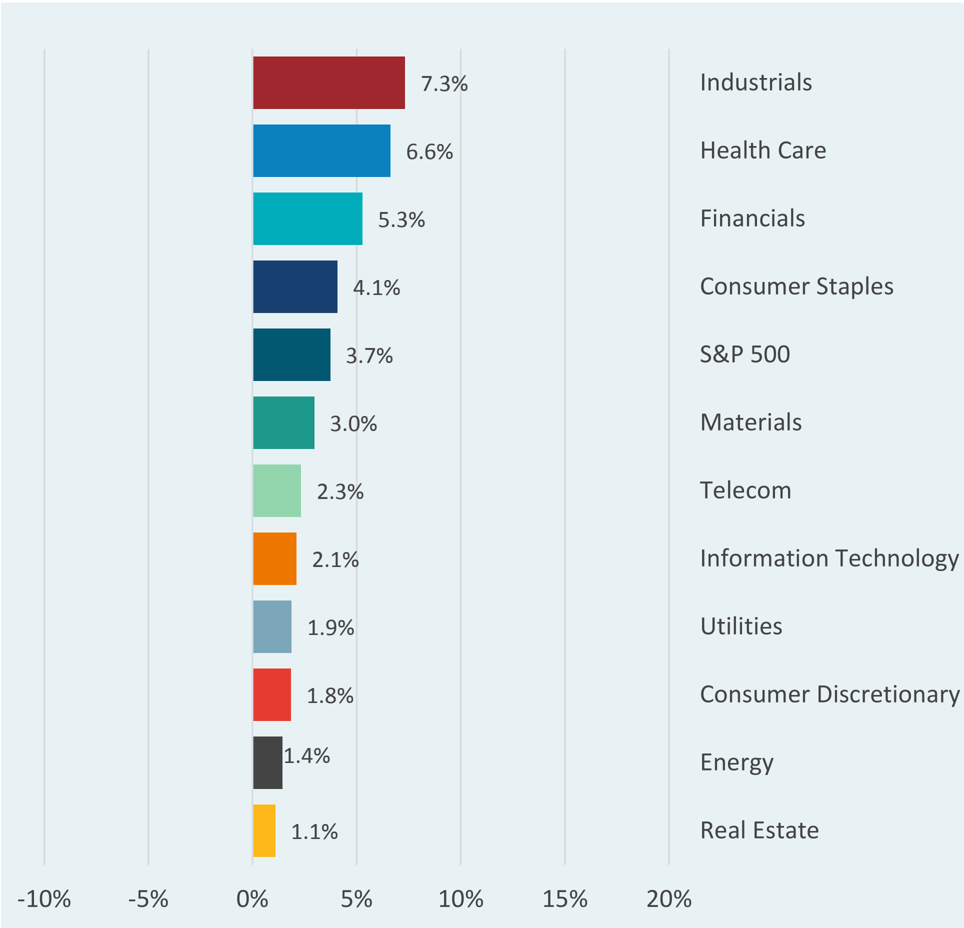
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD	5-Year	10-Year
Small Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	11.6	15.8	12.4
Large Cap Growth	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	10.4	13.0	11.2
Small Cap Equity	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	9.5	12.4	10.7
Small Cap Value	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	7.3	11.3	10.4
Large Cap Equity	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	6.4	10.2	9.5
Real Estate	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	3.5	10.0	9.0
Large Cap Value	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	2.2	9.8	6.2
60/40 Global Portfolio	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	0.9	6.0	5.1
Cash	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	0.9	5.9	3.7
Hedge Funds of Funds	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	0.8	5.3	3.4
International Equity	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	5.1	-0.4	3.3	2.9
US Bonds	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-1.6	2.2	1.7
Commodities	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-2.1	0.4	0.3
Emerging Markets Equity	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-4.6	-7.1	-8.1

- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash
- Commodities
- Real Estate
- Hedge Funds of Funds
- 60% MSCI ACWI/40% BBgBarc Global Bond

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 6/30/18.

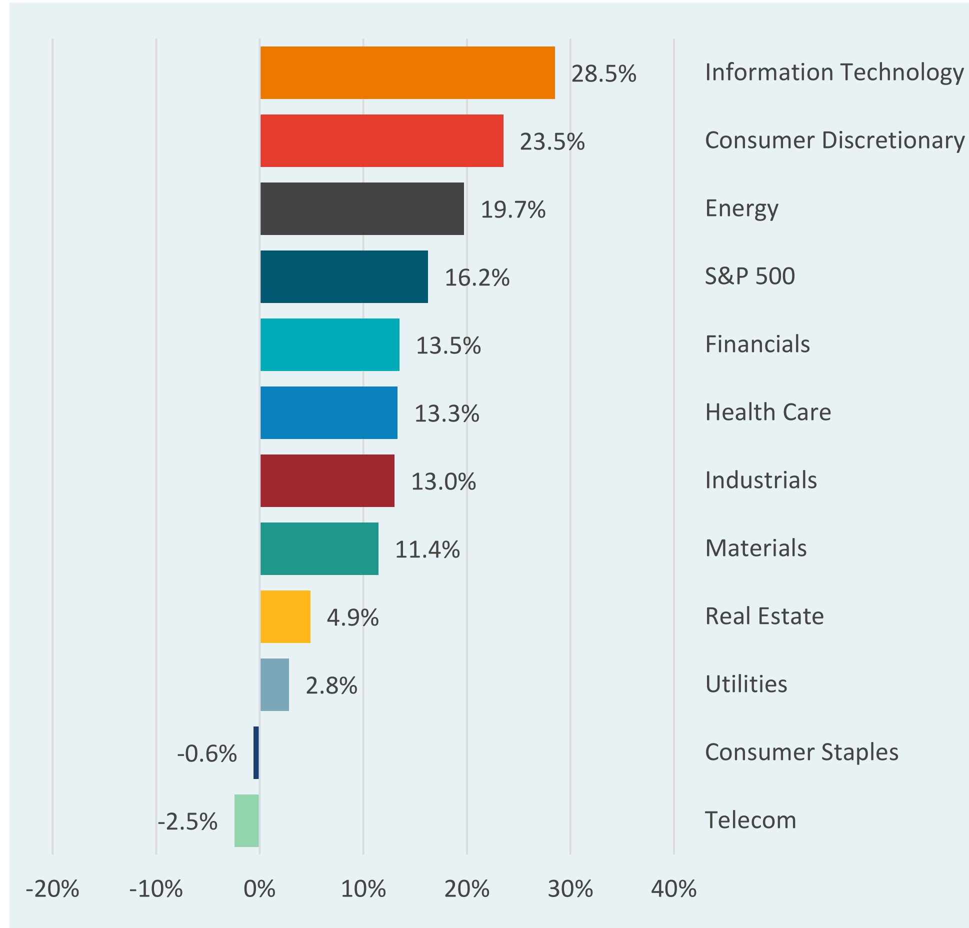
S&P 500 sector returns

QTD



Source: Morningstar, as of 7/31/18

ONE YEAR ENDING JULY



Source: Morningstar, as of 7/31/18

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	3.7	3.7	6.5	16.2	12.5	13.1	10.7
S&P 500 Equal Weighted	3.2	3.2	5.0	13.8	11.3	12.3	12.0
DJ Industrial Average	4.8	4.8	4.1	18.7	15.7	13.1	11.3
Russell Top 200	3.8	3.8	7.0	17.3	13.0	13.6	10.7
Russell 1000	3.5	3.5	6.4	16.2	12.2	13.0	10.7
Russell 2000	1.7	1.7	9.5	18.7	12.0	11.3	10.4
Russell 3000	3.3	3.3	6.6	16.4	12.2	12.8	10.7
Russell Mid Cap	2.5	2.5	4.9	13.5	10.2	11.5	10.8
Style Index							
Russell 1000 Growth	2.9	2.9	10.4	22.8	14.8	15.8	12.4
Russell 1000 Value	4.0	4.0	2.2	9.5	9.5	10.0	9.0
Russell 2000 Growth	1.7	1.7	11.6	22.9	11.1	12.4	11.2
Russell 2000 Value	1.8	1.8	7.3	14.4	12.9	10.2	9.5

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	(0.5)	(0.5)	(0.5)	1.2	1.7	1.4	3.0
BBgBarc US Treasury Bills	0.2	0.2	0.9	1.4	0.7	0.5	0.4
BBgBarc US Agg Bond	0.0	0.0	(1.6)	(0.8)	1.5	2.2	3.7
Duration							
BBgBarc US Treasury 1-3 Yr	(0.0)	(0.0)	0.0	(0.2)	0.4	0.5	1.2
BBgBarc US Treasury Long	(1.5)	(1.5)	(4.4)	(1.0)	1.7	4.6	5.9
BBgBarc US Treasury	(0.4)	(0.4)	(1.5)	(1.2)	0.6	1.4	2.9
Issuer							
BBgBarc US MBS	(0.1)	(0.1)	(1.1)	(0.4)	1.2	2.3	3.5
BBgBarc US Corp. High Yield	1.1	1.1	1.3	2.6	6.1	5.3	8.5
BBgBarc US Agency Interm	(0.0)	(0.0)	(0.2)	(0.4)	0.7	1.1	2.3
BBgBarc US Credit	0.7	0.7	(2.3)	(0.7)	2.9	3.4	5.3

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	3.0	3.0	2.6	11.0	8.9	9.0	6.4
MSCI ACWI ex US	2.4	2.4	(1.5)	5.9	6.0	5.6	3.2
MSCI EAFE	2.5	2.5	(0.4)	6.4	5.0	5.9	3.4
MSCI EM	2.2	2.2	(4.6)	4.4	8.9	5.3	2.9
MSCI EAFE Small Cap	0.7	0.7	(0.7)	9.2	10.0	10.2	7.4
Style Index							
MSCI EAFE Growth	2.1	2.1	1.1	9.0	6.3	6.9	4.0
MSCI EAFE Value	2.9	(2.8)	(1.9)	3.8	3.7	4.8	2.8
Regional Index							
MSCI UK	0.9	0.9	(0.2)	8.2	2.8	3.8	3.2
MSCI Japan	0.4	0.4	(1.6)	8.8	6.2	7.3	3.9
MSCI Euro	3.6	3.6	0.3	4.9	5.2	6.1	1.6
MSCI EM Asia	0.7	0.7	(4.4)	5.0	10.3	8.1	5.8
MSCI EM Latin American	9.2	9.2	(3.0)	0.7	8.1	(0.4)	(2.0)

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	(2.1)	(2.1)	(2.1)	2.7	(1.6)	(7.1)	(8.1)
Wilshire US REIT	0.6	2.7	2.1	3.4	6.0	8.4	7.6
CS Leveraged Loans	0.8	(4.4)	3.2	4.7	4.6	4.2	5.2
Alerian MLP	(1.5)	11.8	(0.6)	(4.6)	(5.9)	(4.1)	6.5
Regional Index							
JPM EMBI Global Div	2.6	2.6	(2.8)	0.1	5.3	5.4	6.9
JPM GBI-EM Global Div	1.9	1.9	(4.7)	(2.5)	3.5	(0.9)	2.2
Hedge Funds							
HFRI Composite	0.2	0.2	1.6	4.6	2.6	4.0	3.8
HFRI FOF Composite	0.1	0.1	0.8	4.2	1.9	3.3	1.7
Currency (Spot)							
Euro	0.2	0.2	(2.6)	(0.8)	1.9	(2.5)	(2.8)
Pound	(0.6)	(0.6)	(3.0)	(0.5)	(5.6)	(2.9)	(4.0)
Yen	(1.0)	(1.0)	0.6	(1.3)	3.4	(2.6)	(0.3)

Source: Morningstar, HFR, as of 7/31/18

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San Luis Obispo County Pension Trust
SLOCPT

Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary
Amy Burke – Deputy Executive Secretary

Agenda Item 9: Investment Manager Structure Review – Verus

Scott Whalen of Verus, the SLOCPT's investment consultant, will deliver an educational presentation on managing investment risk related to the structure of the investment managers employed. In particular, the taking on of active management risk in addition to the inherent investment risk of passive portfolios will be addressed. This will include consideration of investment benchmarks and tracking error in investment results.

This is an educational presentation and no Board of Trustees action is necessary.

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Verus

PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS

AUGUST 2018

Active Risk Review

San Luis Obispo County Pension Trust

Table of Contents

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Introduction

Measuring active risk

- Every investor must decide the asset allocation of their portfolio, known as the SAA. Every investor must then decide how to <u>implement</u> this asset allocation.
- A portfolio at any point in time rarely resembles the exact asset allocation specified in the SAA. This is due to:
  - Benchmark mismatches
  - Asset class weights being different than SAA weights
  - Active manager bets
- Each of these **3 sources** contributes to <u>active risk</u>.

Why is plan tracking error important?

— Active risk is also know as tracking error.

— Tracking error is created when portfolio performance is different from the performance of the SAA.

— Investors typically require compensation for incurring active risk.

— However, certain plan tracking error is associated with expected compensation (**skill-based**) while other plan tracking error is not associated with expected compensation (**luck-based**).

This analysis allows investors to understand the three types of tracking error in their portfolio, and to identify where they are exposed to uncompensated tracking error.

Sources of tracking error

— Benchmark mismatches create **unintended** tracking error (typically zero expected compensation).

— Asset class weights being different than the weights specified in the SAA creates tracking error.

- This tracking error can be **unintended** if weighting differences are due to fund drift (zero expected compensation). Or this can be **intended** if weighting differences are due to asset allocation bets (expected compensation).

— Active managers generate **intended** tracking error (expected compensation).

Portfolio definitions

- **Policy:** as defined by the asset allocation target.
- **Benchmark Target:** manager benchmarks at target weights.
- **Benchmark Actual:** manager benchmarks at actual weights.
- **Fund:** manager exposures.

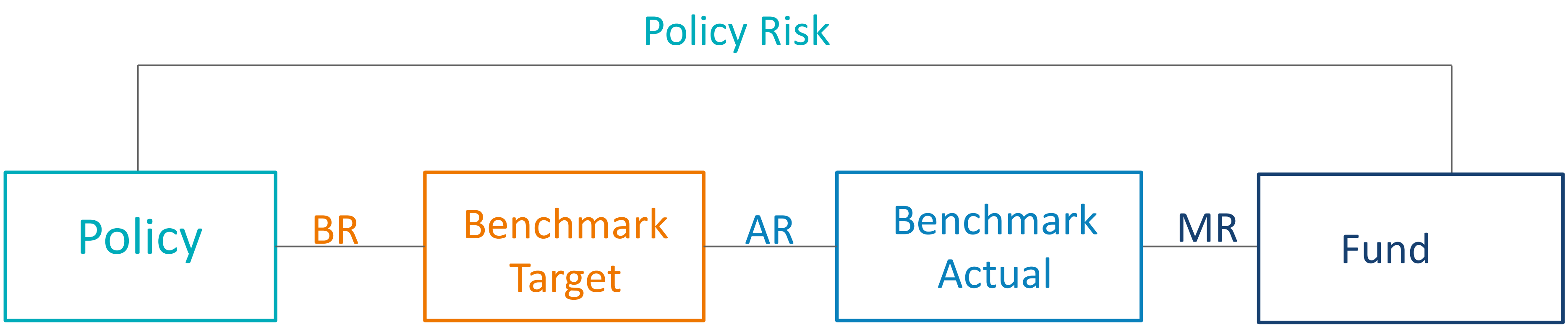
Risk definitions

— **Policy Risk (PR):** Fund tracking error to Policy.

— **Benchmark Risk (BR):** Benchmark Target tracking error to Policy.

— **Allocation Risk (AR):** Benchmark Actual tracking error to Benchmark Target.

— **Manager Risk (MR):** Fund tracking error to Benchmark Actual.



An example

A portfolio SAA includes a 30% U.S. Equity allocation benchmarked to the Russell 3000 Index. Hiring a single active manager with a 35% weight and benchmarked to the S&P 500 creates the following **Policy Risk (PR):**

- **Benchmark Risk (BR):** J.P. Morgan's benchmark is the S&P 500 Index, which is different than the Russell 3000 Index.
- **Allocation Risk (AR):** J.P. Morgan's allocation is 35% (S&P 500) which is different than the SAA weight of 30%.
- **Manager Risk (MR):** J.P. Morgan's strategy is active relative to the S&P 500 Index which creates active management risk.

Things to consider

— Consider a number of factors which can affect Active Risk:

- **Active/Passive allocation**
  — Is passive or active management a better alternative to gain exposure?
- **Policy Risk**
  — How does the tracking error compare with alternatives and fund objectives?
- **Benchmark Risk**
  — Minimize
- **Allocation Risk**
  — Intended or unintended?
- **Manager Risk**
  — Is the asset class active risk balanced and diversified across managers and approaches?
- **Factor exposure**
  — Are there unintended factor exposures that need to be addressed?

Analysis

Actual components at each risk level

Policy	Weight
Russell 3000	28.6%
MSCI ACWI ex US	28.6%
BC Agg	42.9%
Total	100.0%

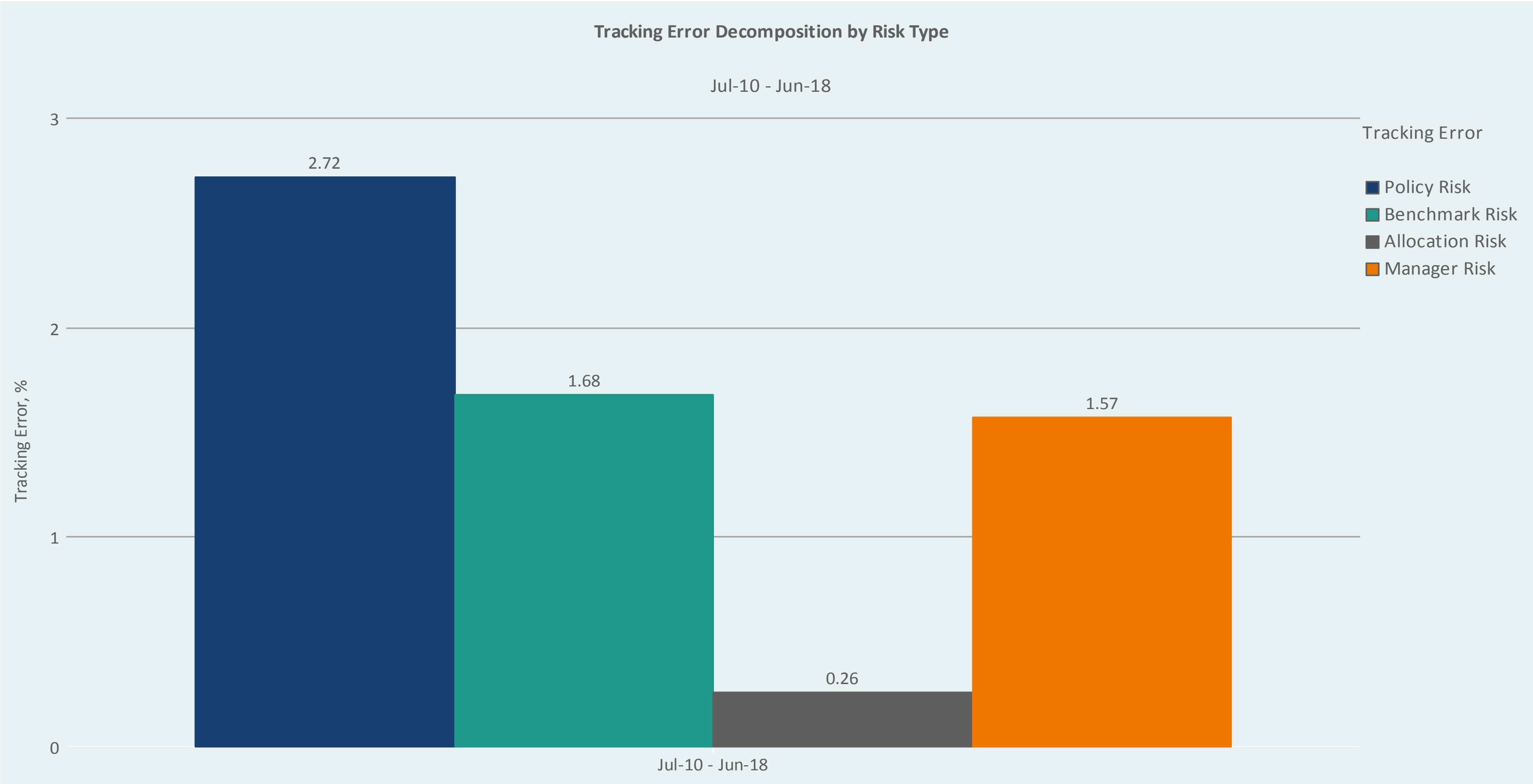
Benchmark Target	
S&P 500	7.1%
Russell 1000 Growth	7.1%
Russell 1000 Value	7.1%
Russell 2500	7.1%
MSCI ACWI ex US	28.6%
BC Agg	21.4%
S&P/LSTA Leveraged Loand	7.1%
Citi WGBI ex US	7.1%
JPM GBI-EM	7.1%
Total	100.0%

Benchmark Actual	
S&P 500	6.0%
Russell 1000 Growth	7.9%
Russell 1000 Value	7.6%
Russell 2500	6.0%
MSCI ACWI ex US	31.0%
BC Agg	19.9%
S&P/LSTA Leveraged Loand	7.0%
Citi WGBI ex US	7.5%
JPM GBI-EM	7.2%
Total	100.0%

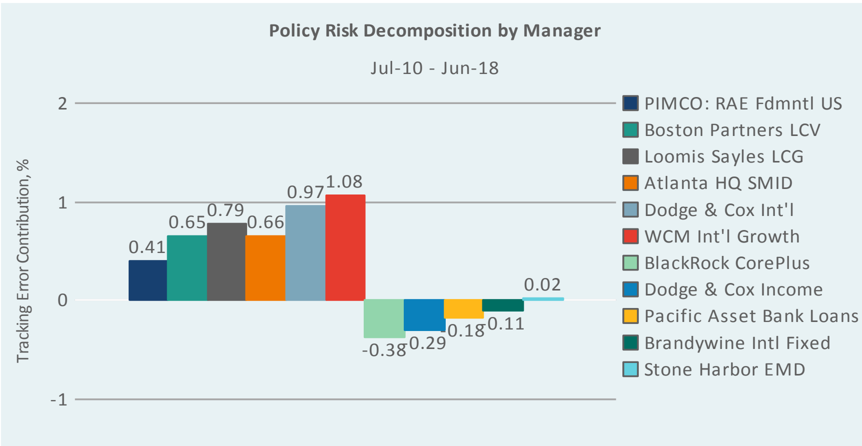
Fund	
PIMCO RAE Fundamental PLUS	6.0%
Loomis Sayles LCG	7.9%
Boston Partners LCV	7.6%
Atlanta Capital Management	6.0%
Dodge & Cox Int'l	14.8%
WCM Int'l Growth	16.2%
BlackRock Core Bond	10.0%
Dodge & Cox Income Fund	9.9%
Pacific Asset	7.0%
Brandywine Global	7.5%
Stone Harbor EMD	7.2%
Total	100.0%

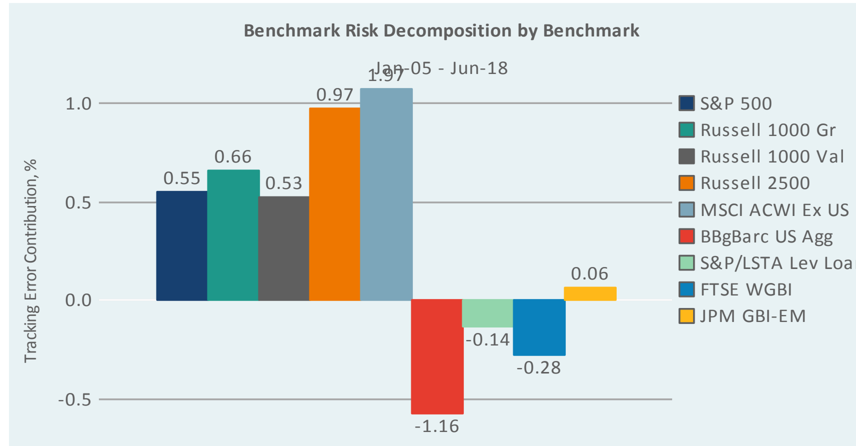
Note: Values in the tables above may not appear to sum to 100 due to rounding.

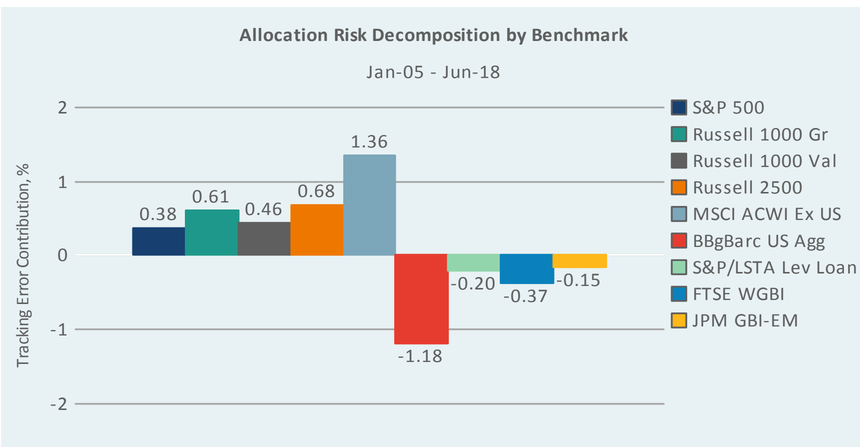
Policy risk levels

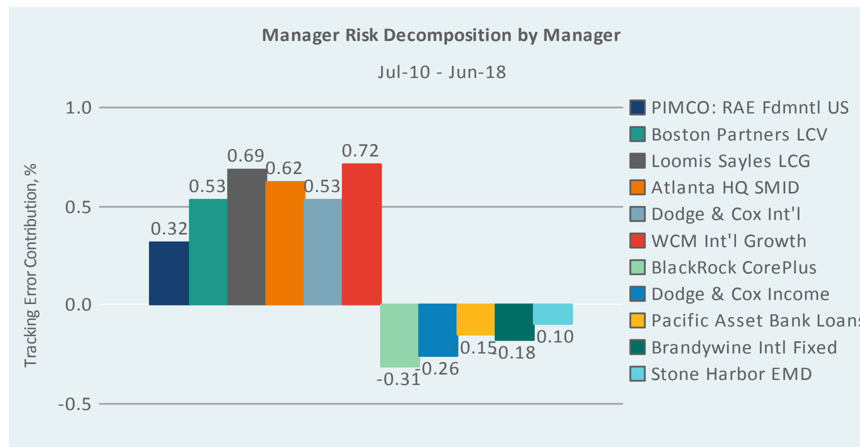


Risk decomposition

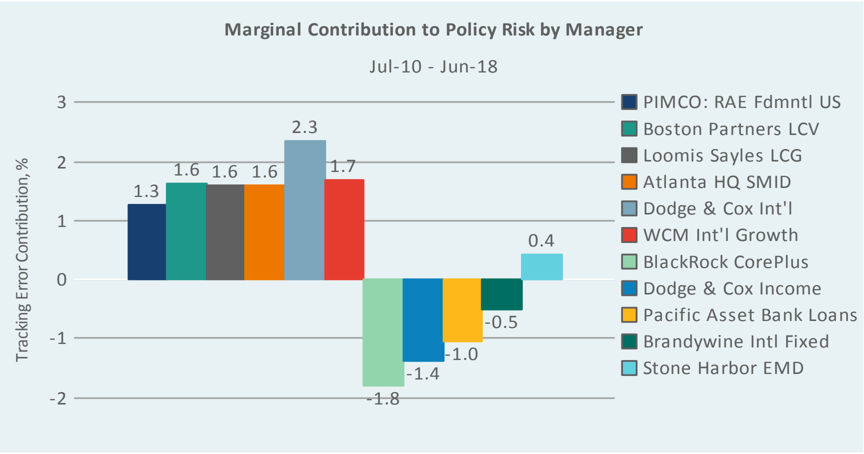


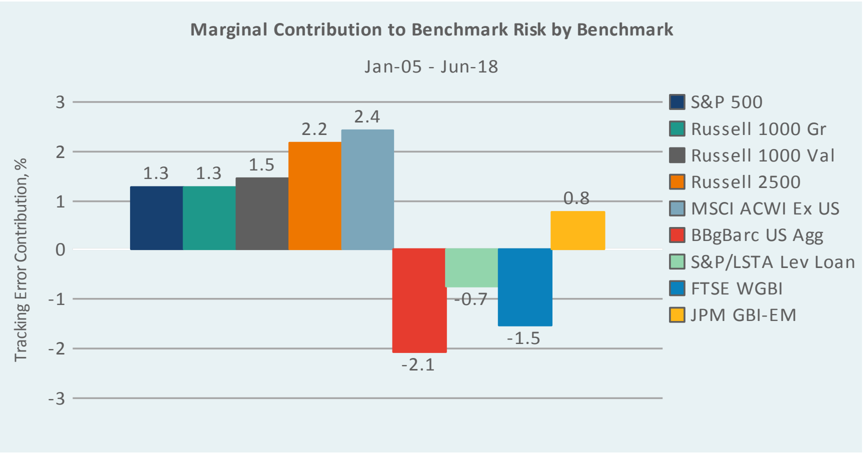


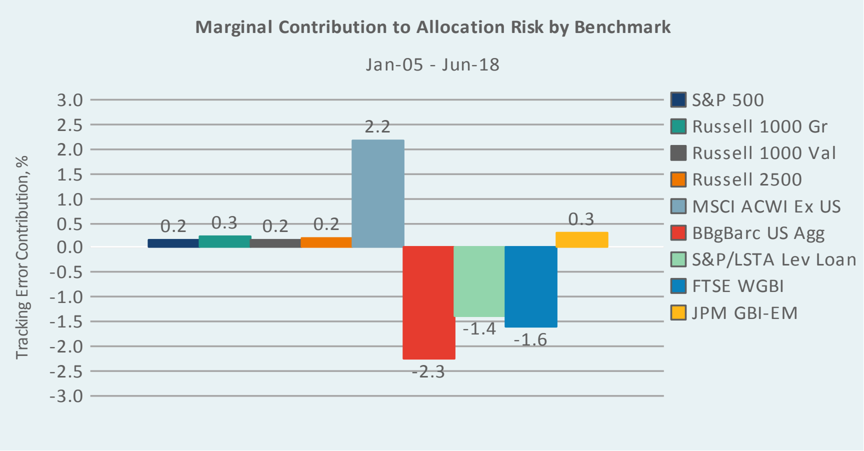


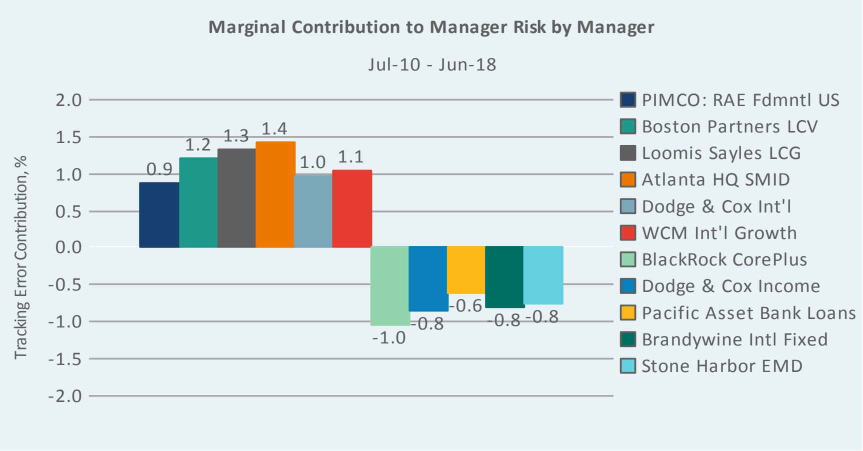


Marginal contribution

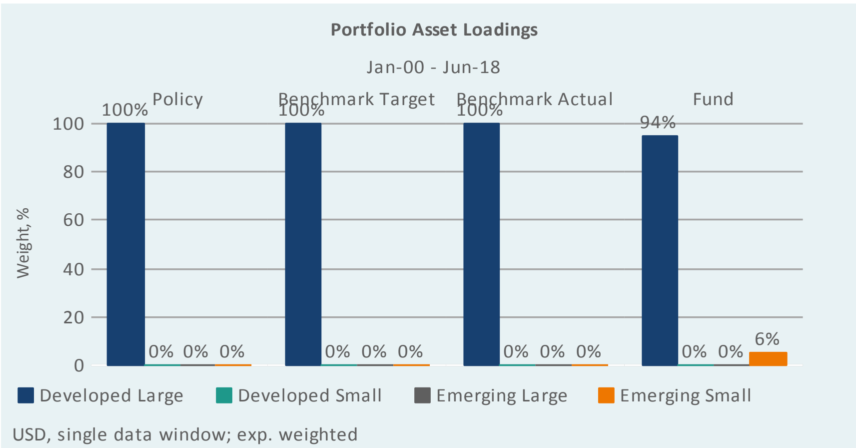


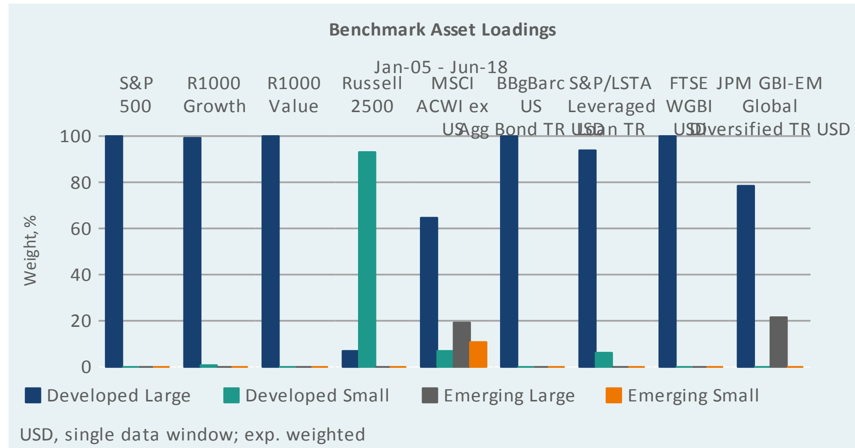


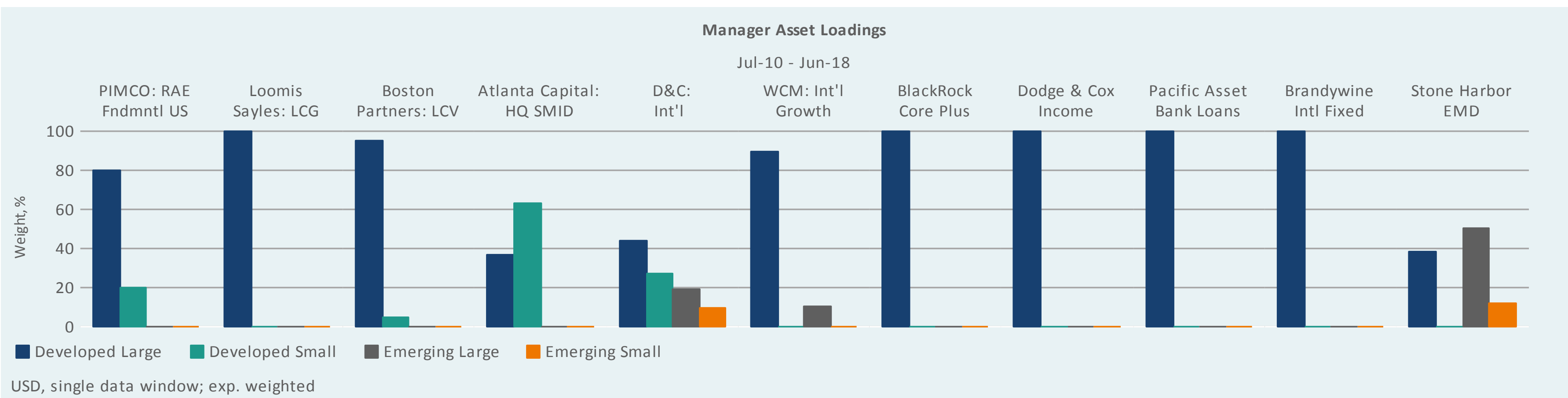




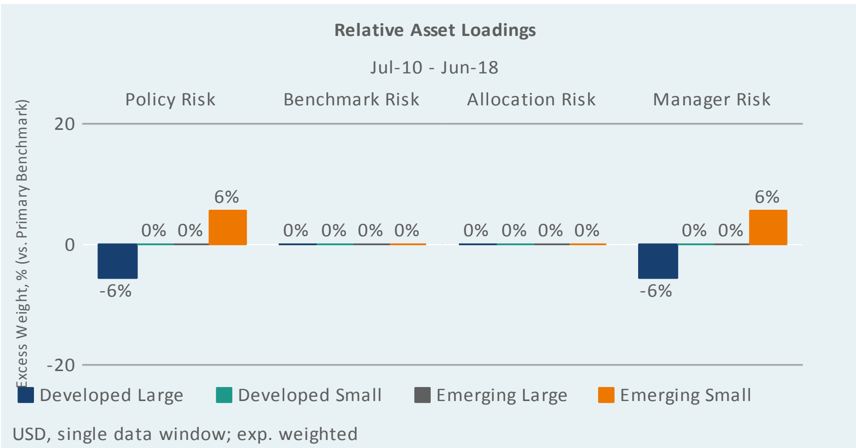
Factor loadings (absolute)

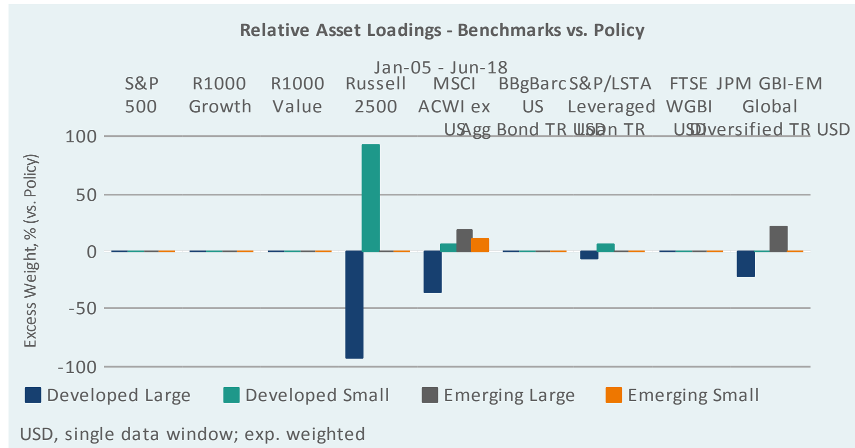


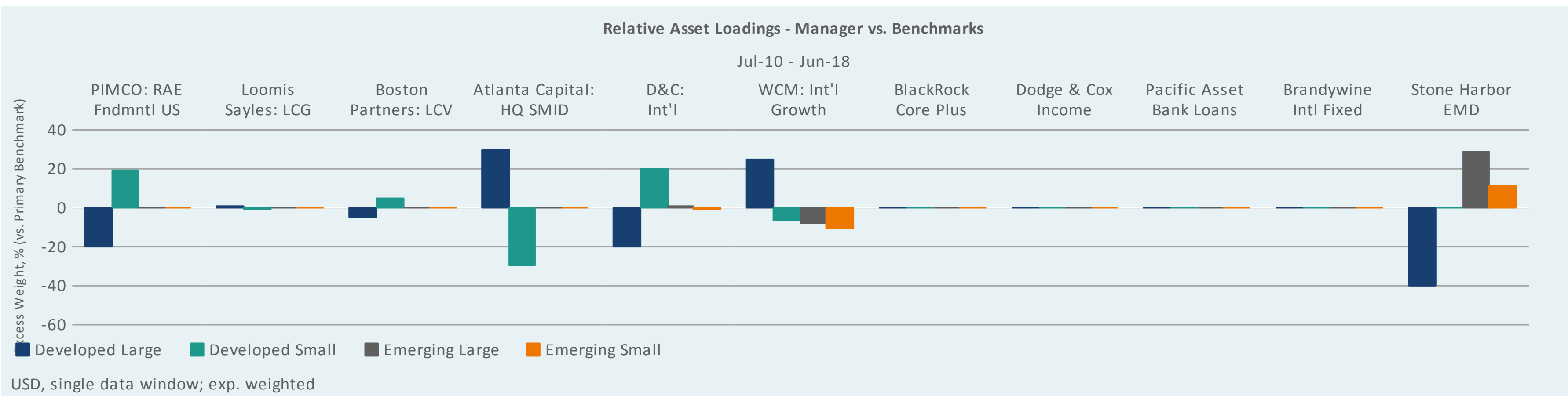




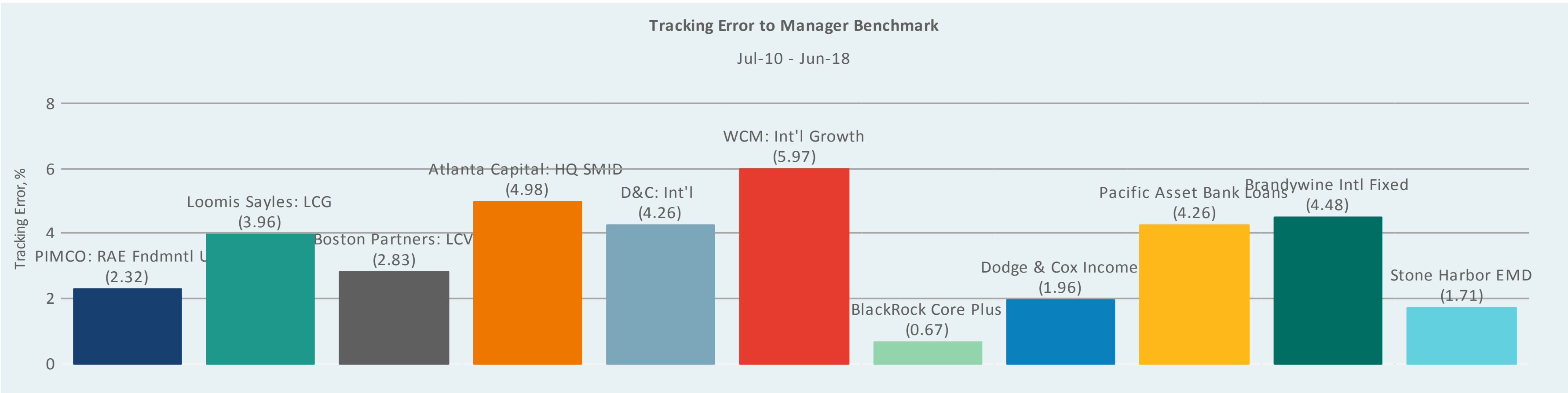
Factor loadings (relative)







Manager tracking error and correlations



Excess Returns Correlation		1	2	3	4	5	6	7	8	9	10	11
PIMCO RAE US	1	1.00										
Loomis, Sayles Large Cap Growth	2	-0.20	1.00									
Boston Partners Large Cap Value	3	-0.12	-0.02	1.00								
Atlanta Capital SMID Cap	4	-0.25	0.18	-0.10	1.00							
Dodge & Cox International Equity	5	0.18	0.15	0.33	-0.26	1.00						
WCM International Growth	6	-0.16	-0.02	-0.14	0.31	-0.25	1.00					
BlackRock CorePlus Bond Fund	7	-0.19	0.15	-0.02	-0.11	0.09	-0.29					
Dodge & Cox Income	8	0.10	-0.02	0.36	-0.43	0.45	-0.49	-0.02	1.00			
Pacific Asset Loan Strategy	9	0.02	-0.11	-0.03	0.09	-0.19	0.13	-0.10	-0.04	1.00		
Brandywine Intl Fixed	10	0.05	0.07	0.20	-0.30	0.38	-0.35	0.23	0.55	-0.05	1.00	
Stone Harbor Local Markets EMD	11	0.01	-0.06	0.04	-0.02	0.11	0.13	-0.11	0.14	-0.09	0.09	1.00

Appendix

Standalone measures

Excess Returns Correlation	Policy Risk	Benchmark Risk	Allocation Risk	Manager Risk
Policy Risk	1.00			
Benchmark Risk	0.95	1.00		
Allocation Risk	-0.73	-0.70	1.00	
Manager Risk	-0.15	-0.46	0.05	1.00

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San Luis Obispo County
Pension Trust
SLOCPT

Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary
Amy Burke – Deputy Executive Secretary
Scott Whalen – Verus – Investment Consultant

Agenda Item 10: 2018 Private Equity Commitment Recommendation

Recommendation:

Consider and discuss with Verus as investment consultant and Staff the four recommended Private Equity fund-of-funds for a $20 million commitment in 2018.

Approve one of the four recommended funds.

- Harbourvest 2018 Global Fund
- Makena Perpetual Private Equity Fund
- Pantheon Global Select 2017 Fund
- Pathway Private Equity Fund 10

Discussion:

At the May21, 2018 Board of Trustees meeting the recommendation from Verus and Staff relative to Private Equity (PE) was to increase the level of commitments to PE funds. The intent is to improve on the level of assets actually invested in PE (currently 1.8% of total assets) closer to the target allocation of 5% of total assets. The recommended next step in this regard was to make a 2018 PE commitment of an additional $20 million to a fund-of-funds to be selected.

Verus has performed additional analysis and narrowed down their "focus list" of PE fund-of-funds recommended for the Pension Trust's 2018 PE commitment. The attached presentation will be discussed at length by Scott Whalen of Verus. The approval of one of the four recommended PE fund-of-funds will be the topic of discussion and decision by the Board. Any of the four recommended funds are reasonable and acceptable in the view of Verus.

Respectfully Submitted,

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Verus

PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS

AUGUST 2018

Private Equity Program – Manager Search

San Luis Obispo County Pension Trust

Agenda Item 10

Table of Contents

Verus

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I. Program review

(selected slides from May Board presentation)

Summary

— SLOCPT's private equity (PE) program composes 1.3% of the total fund, compared to a target of 5.0%, based on the December 31, 2017 performance report.

— A significant portion of the private equity program is mature and in the distribution phase of their life cycle.

— SLOCPT has recently re-committed to private equity through its investment in Pathway Fund 9. This fund is in the early stage of its life cycle.

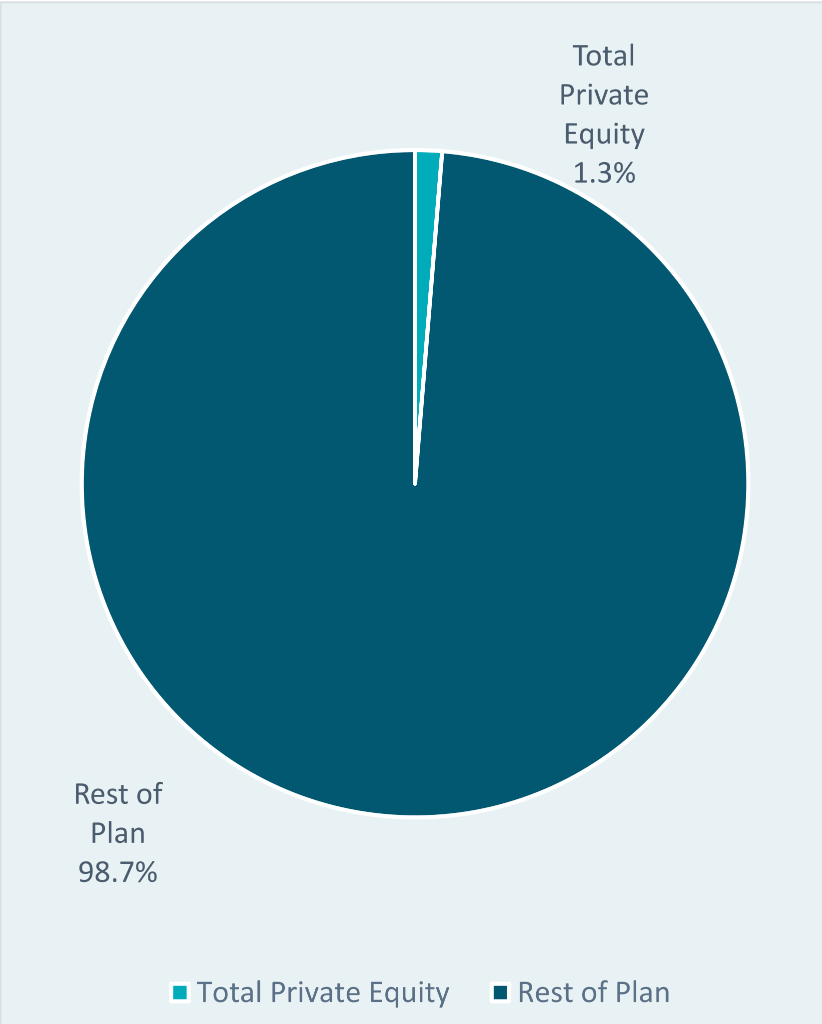
— Capital call pacing among managers has been largely in-line with expectations.

— Cash flow projections indicate additional capital commitment to private equity is appropriate to maintain the program at the target allocation.

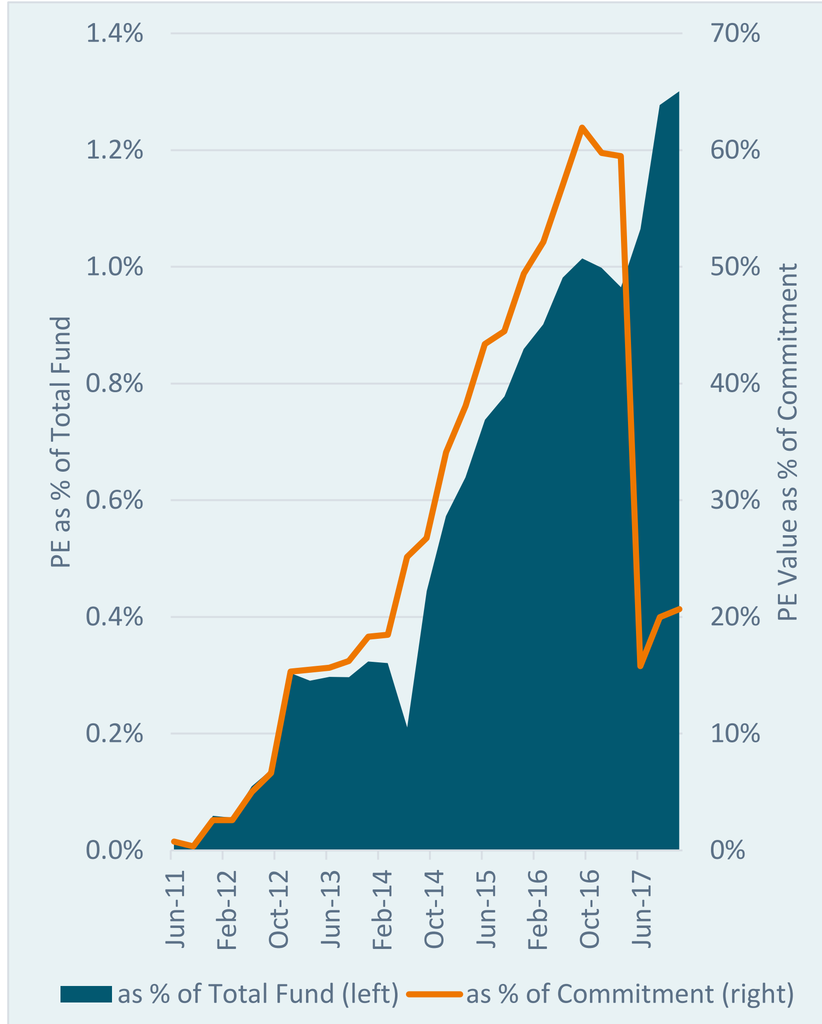
— We recommend a $20 million commitment to extend the current program and reviewing the program annually on a go-forward basis with the expectation of making regular ongoing commitments.

Private equity program at a glance

PRIVATE EQUITY AS % OF TOTAL FUND



PRIVATE EQUITY VALUE AS % OF COMMITMENT AND TOTAL FUND



As of 9/30/17

Program projections

Fund	Vintage Year	Commitment	Remaining Commitment	Cumulative To Date	(Contributions) / Distributions 2018	2019	2020	2021	2022	2023	2024
HarbourVest IX Buyout	2011	$20.00	$7.35								
Contributions (%)				(63%)	(13%)	(12%)	(5%)	(3%)			
Distributions (%)				28%	18%	20%	25%	23%	22%	17%	14%
Contributions ($)				($12.7)	($2.6)	($2.4)	($1.0)	($0.6)			
Distributions ($)				$5.6	$3.5	$4.0	$5.0	$4.6	$4.5	$3.5	$2.9
Net Cash Flow					$0.9	$1.6	$4.0	$4.0	$4.5	$3.5	$2.9
NAV				$12.5	$13.4	$13.9	$12.0	$9.8	$6.8	$4.3	$2.1
Pathway 9	2017	$65.00	$59.52								
Contributions (%)				(8%)	(17%)	(23%)	(13%)	-4.8%	-4.8%	-4.8%	-4.8%
Distributions (%)				0%	0.0%	0.0%	2.0%	18.8%	18.8%	18.8%	18.8%
Contributions ($)				($5.5)	($11.1)	($15.0)	($8.5)	($3.1)	($3.1)	($3.1)	($3.1)
Distributions ($)				$0.0	$0.0	$0.0	$1.3	$12.2	$12.2	$12.2	$12.2
Net Cash Flow					($11.1)	($15.0)	($7.2)	$9.1	$9.1	$9.1	$9.1
NAV				$5.4	$17.1	$34.1	$45.2	$41.5	$37.4	$32.8	$27.6
PE Balance		**$85.00**	**$66.87**	**$17.87**	**$30.52**	**$47.93**	**$57.22**	**$51.30**	**$44.16**	**$37.10**	**$29.72**
% of Total Assets				**1.3%**	**2.1%**	**3.2%**	**3.6%**	**3.0%**	**2.4%**	**1.9%**	**1.5%**
Total Plan Assets				**$1,351**	**$1,432**	**$1,518**	**$1,609**	**$1,706**	**$1,808**	**$1,917**	**$2,032**

II. Manager search

Manager comparison

	Harbourvest Partners	Makena	Pantheon	Pathway
FIRM LOCATION	Boston, MA	Menlo Park, CA	San Francisco, CA	Irvine, CA
FIRM FOUNDED	1982	2005	1982	1991
FIRM AUM ($MM)	$55,562	$20,000	$40,400	$51,249
PRODUCT NAME	2018 Global Fund L.P.	Makena Perpetual Private Equity Fund	Pantheon Global Select 2018	Pathway Private Equity Fund 10 Investors
GP COMMITMENT	1.00%	$100 million	1.00%	0.50%
ANTICIPATED FIRST / FINAL CLOSE	1Q 2018 4Q 2018	Evergreen	3Q 2018 1Q 2019	4Q 2018 1Q/2Q 2020
INVESTMENT STYLE	Buyout, Venture, Credit/Other	Buyout, Venture*, Credit/Other	Buyout, Venture, Credit/Other	Buyout, Venture, Credit/Other
TEAM SIZE	115 investment professionals	26 investment professionals	78 investment professionals	56 investment professionals

Investment vehicle information

	Harbourvest 2018 Global Fund	Makena Perpetual Private Equity Fund	Pantheon Global Select 2017	Pathway Private Equity Fund 9
INVESTMENT VEHICLE	Fund of Funds	Fund of Funds	Fund of Funds	Fund of Funds
MINIMUM INVESTMENT	$2 million	$10 million	$10 million	$10 million
TARGET FUND SIZE	$500 million	N/A	N/A	$300 million
FUND TERM	10 years (subject to three 1-year extensions)	Evergreen	13 years (subject to extensions)	12 years (subject to extensions)
INVESTMENT PERIOD	2 years	2 years	5 years	3 years subject to two 1-year extensions at GP discretion
MANAGEMENT FEES	Average fee based on commitment: Up to $20mm: 69bps $20mm to $50mm: 65bps $50mm to $125mm: 57bps Over $125mm: 45bps	Blended average fee 50bps. No fee on committed capital, 50bps on invested undrawn capital, and 85bps on NAV.	Up to $25mm: 55bps $25mm to $50mm: 50bps $50mm to $100mm: 45bps 100bps on secondaries and co-investments.	Fee steps up and down over time, effective average fee on committed capital: 64bps on $15m, 62bps on $35m, 57bps on $75m.
INCENTIVE FEES	None on primary investments, 12.5% on secondaries and 10% on co-investments (20% above 2.0x)	5% carried interest	None on primary investments, 10% on secondaries and co-investments	None
OTHER FEES	Subject to underlying fund fees. No cap stated for organizational costs or Partnership expenses.	Subject to underlying fund fees. Operational expenses expected to be 10-20 bps/year with no cap.	Subject to underlying fund fees. Fund organizational costs (setup/legal) expected to be 15 bps - no stated cap. Ongoing Partnership expenses (audit, tax, legal) are expected to be 6 bps annually with no stated cap.	Subject to underlying fund fees. Fund organizational costs (setup/legal) are capped at $500,000. Ongoing Partnership expenses (audit, tax, legal) are expected to total $1.35 million with no stated cap.
PREFERRED RETURN	8% on secondaries and co-Investments	8%	8% on secondaries and co-Investments	N/A
TARGET NUMBER OF INVESTMENTS	15 to 20 primary fund investments	140 Current Investments (12 Vintages)	20-30 primary funds + Optional sleeves for venture, secondaries and co-investments	25-35 primary funds
EXISTING INVESTMENTS	6 closed commitments	Fully invested	None	None

Strategy overview – Harbourvest Global Fund 2018

Investment Overview

— Looks to provide investors with compelling returns while reducing risk through diversification.
— Offering will include a mix of primary partnerships, secondary investments, and direct co-investments.
— The fund looks invest across all geographies, with an emphasis on North America and Western Europe.
— The fund will include small, medium and large vehicles and targets 50% primary investments, 35% secondary investments and 15% co-investments.

Firm Overview

— Firm is independent and employee owned.
— Has been making private equity investments since 1982.
— Made first secondary investment in 1986.
— 1 domestic and 8 international offices.

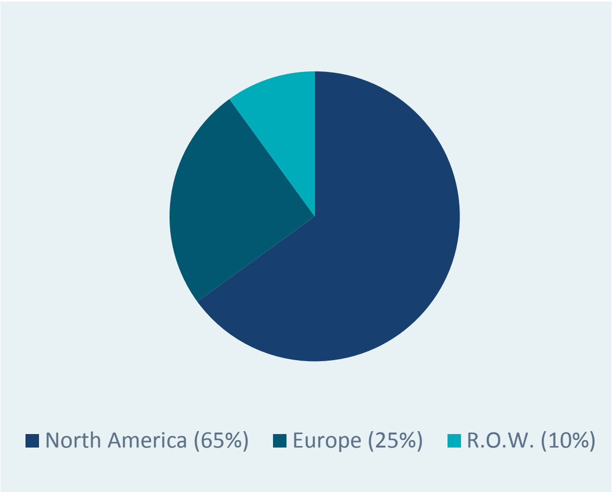
Differentiating Characteristics

— Since inception, HarbourVest has committed $34 billion to primary funds, $20 billion to secondaries and $8 billion to direct co-investments.
— Harbourvest has a deep team of 400+ employees and over 100 investment professionals.
— Robust internal fund monitoring and reporting system.
— Fund will be slightly more concentrated with just 15-20 underlying funds.

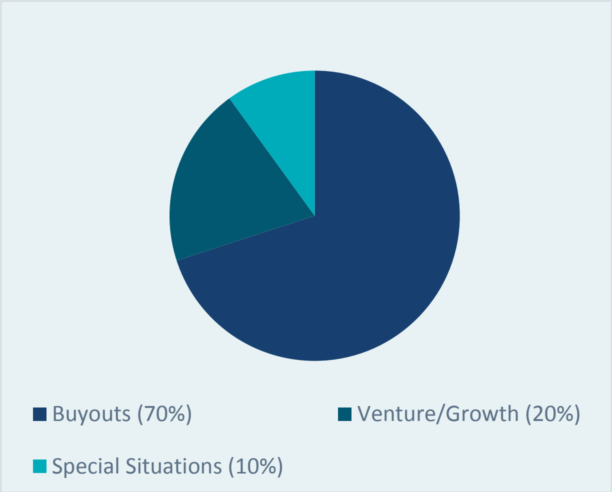
Potential Concerns

— As compared to direct private equity investing, fund of funds have a second layer of fees and thus a longer j-curve. The length of the j-curve and increased fees are partially offset by the introduction of secondaries and co-investments.

TARGET REGIONAL ALLOCATION



TARGET STRATEGY ALLOCATION



Strategy overview – Makena Perpetual Private Equity Fund

Investment Overview

— The Perpetual Private Equity Fund seeks to offer investors a portfolio of 12+ years of vintage year diversification.
— Evergreen fund structure allows investors to fully deploy capital into a mature portfolio of private assets on the first day of investment.
— The fund looks invest across all geographies, with an emphasis on North America and Western Europe.
— The fund will include small, medium and large vehicles as well as credit and co-investment investments.

Firm Overview

— Founded in 2005 by principals from leading North American endowments and foundations.
— Firm strategies and operations built around effectively executing the endowment model investment strategy.
— 1 office in Menlo Park, CA.

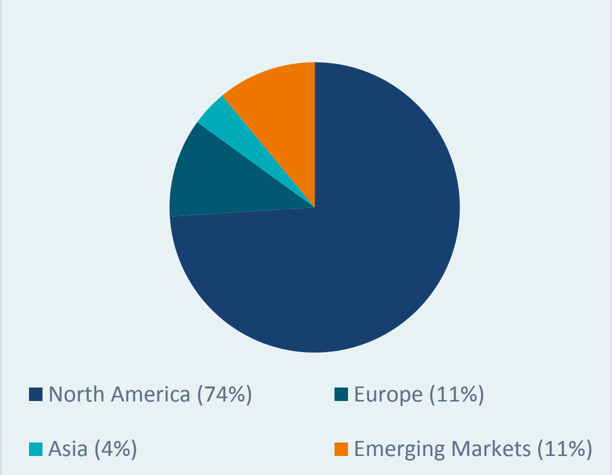
Differentiating Characteristics

— The evergreen fund structures eliminates the capital drawdown period, which allows investors to avoid the j-curve effect of building out a private portfolio
— Strong cash flows are generated for mature assets, which provides opportunity for reinvestment into new commitment.
— In addition to the Perpetual Private Equity Fund, Makena offers a Perpetual Venture Capital Fund. Investors can allocate to either or both funds and customize allocation size.

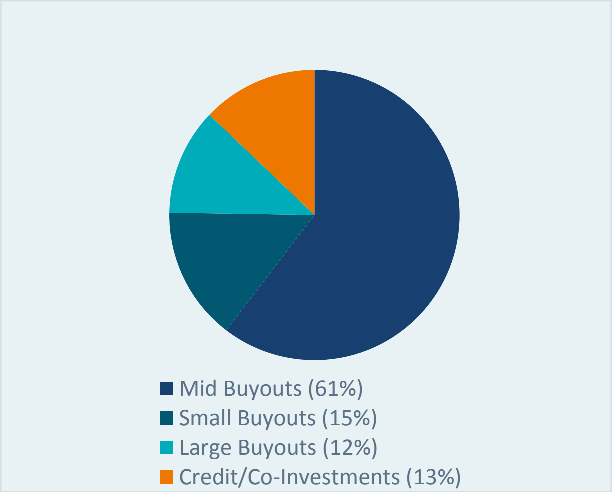
Potential Concerns

— As compared to direct private equity investing, fund of funds have a second layer of fees.
— Potential conflicts of interest related to competing products within Makena that invest in similar strategies.
— Clients entering or exiting at NAV could experience near term frothy or discounted valuations

CURRENT REGIONAL ALLOCATION



CURRENT STRATEGY ALLOCATION



Strategy overview – Pantheon Global Select 2018

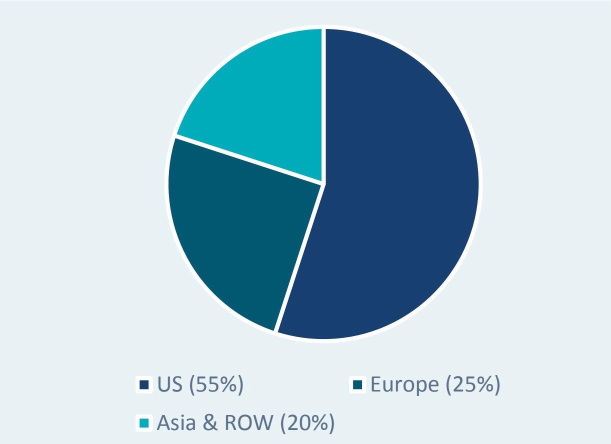
Investment Overview
— Intends to generate superior private equity returns over the long term through the implementation of a high-quality global portfolio, diversified by manager, stage, geography, vintage year (likely 2018-22), and industry.
— The fund looks invest across all geographies, with an emphasis on the U.S. and Europe.
— Offering will include a mix of primary partnerships, secondary investments, and direct co-investments.
— Concentrated portfolio with mid-market focus along with emerging markets exposure.

Firm Overview
— Pantheon has been investing in private equity funds on a global basis since 1983 committing over $20 billion to 590 primary 5 domestic and 6 international offices.
— Pantheon is 2/3 owned by Affiliated Managers Group (AMG) and 1/3 owned by 30 active partners with an average tenure of 15 years.
— Offices in 6 cities across 4 countries.

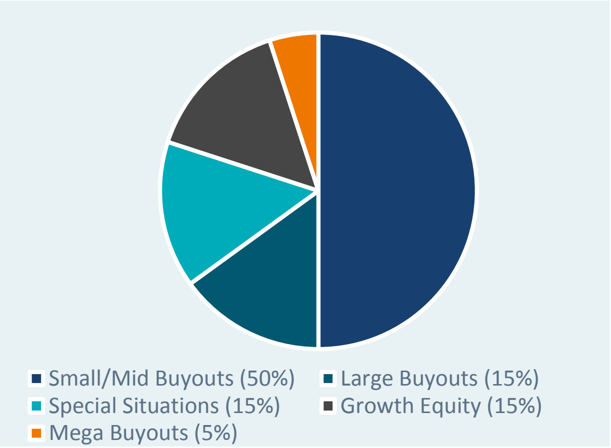
Differentiating Characteristics
— Allocations to primaries, secondaries, co-investments, venture etc. are fully customizable at $25m level.
— Investors in Global Select 2018 will be given standard allocation of 10% to Global Venture 2018, 10% to Global Secondaries 2018 and 15% to Global Co-Investment IV. Investors may opt out of these if they wish.

Potential Concerns
— As compared to direct private equity investing, fund of funds have a second layer of fees and thus a longer j-curve. The length of the j-curve and increased fees are partially offset by the introduction of secondaries and co-investments.
— Past global performance is pro-forma only. Prior to 2014 investments were part of regional silos.

TARGET REGIONAL ALLOCATION



TARGET STRATEGY ALLOCATION*



Investors in Global Select 2018 will also be allocated to 10% Pantheon Global Venture 2018, 15% Pantheon Global Secondaries 2018, and 15% Pantheon Global Co-Investment Opportunities IV.

Strategy overview – Pathway Fund 10

Investment Overview

- Focus on manager selection using bottom-up approach.
- Construct diversified, high-conviction, portfolio with active engagement with managers in the portfolio.
- Offering will include a mix of primary partnerships, secondary investments, and direct co-investments.
- The fund looks invest across all geographies, with an emphasis on North America.
- The fund targets >65% primary investments, <20% secondary investments and <15% co-investments.

Firm Overview

- Has been making private equity investments since 1991.
- 2 domestic and 2 international offices.
- 100% independent, employee owned.

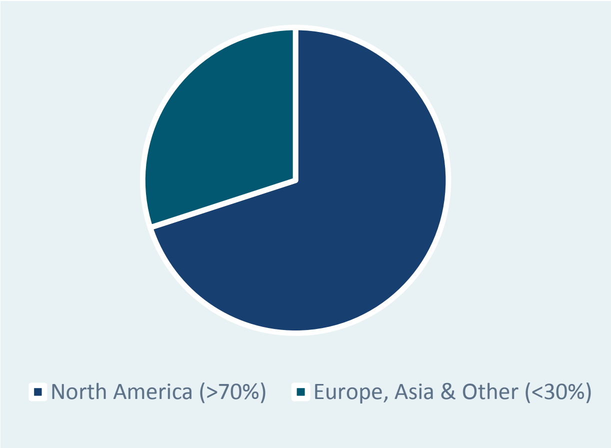
Differentiating Characteristics

- While Pathway has over ~$40 billion in AUM, they have a relatively small investor base with a high ratio of professionals to clients.
- 100% ownership by partners at the firm.
- Very strong diligence process. Robust internal fund monitoring and reporting system.
- Heavier weight to small and mid market buyout funds than peers.
- Does not charge a carried interest on any investments.

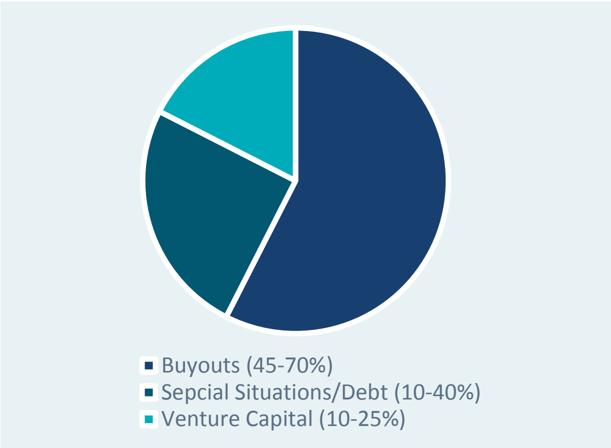
Potential Concerns

- As compared to direct private equity investing, fund of funds have a second layer of fees and thus a longer j-curve. The length of the j-curve and increased fees are partially offset by the introduction of secondaries and co-investments.
- Three co-founders may be retiring in 5-10 years, although internal succession for ownership is expected.

TARGET REGIONAL ALLOCATION



TARGET STRATEGY ALLOCATION



Performance – Harbourvest

Harbourvest Investment Performance (as of 3/31/2018) ($ millions)

Fund Name	Vintage	Fund Size	Capital Drawn	Distributed Capital	Total Value	Gross IRR	Net IRR	Net Multiple	Net DPI	Net IRR Rank	Net Multiple Rank	Net DPI Rank
Global Fund 2014	2014	380.7	275.9	68.5	376.3	20.7%	17.5%	1.36x	0.3x	Q1	Q1	Q1
Global Fund 2015	2015	339.6	196.7	29.2	249.4	26.9%	20.5%	1.27x	0.2x	Q1	Q1	Q1
Global Fund 2016	2016	446.6	190.5	24.1	235.3	34.8%	28.5%	1.24x	0.1x	Q1	Q1	Q1
Global Fund 2017	2017	589.5	137.8	0.0	152.5	NM	NM	NM	NM	NM	NM	NM

Performance – Makena

Makena Investment Performance (as of 3/31/2018) ($ millions)

Fund Name	Vintage	Fund Size	Capital Drawn	Distributed Capital	Total Value	Gross IRR	Net IRR	Net Multiple	Net DPI	Net IRR Rank	Net Multiple Rank	Net DPI Rank
MCCA I	2009	372.5	293.3	401.6	513.3	16.8%	14.4%	1.75x	1.37x	Q2	Q1	Q1
MCCA II	2010	125.6	107.9	138.3	181.3	13.0%	10.9%	1.68x	1.28x	Q3	Q2	Q1
MPEF I	2012	128.9	126.7	104.7	188.8	14.5%	12.9%	1.49x	0.83x	Q2	Q3	Q1
MPEF II	2014	107.3	62.4	6.0	83.0	14.2%	12.5%	1.33x	0.10x	Q2	Q1	Q2
MPEF III	2015	214.8	96.2	26.6	114.0	16.6%	15.7%	1.19x	0.28x	Q2	Q2	Q1
Private Equity Portfolio within the Makena Endowment Portfolio	*2006-2018*	*3,203.0*	*3,179.0*	*2,848.0*	*4,922.0*	*9.3%*	*n/a*	*1.55x*	0.90x	*n/a*	*Q2*	Q4

**Performance is net of all underlying manager fees but gross of Makena management and performance fees. Figures are unaudited and subject to change. Net returns will vary depending upon the investors' fees.*

Performance – Pantheon: Global Select Program

Pantheon Global Investment Performance (as of 3/31/2018) ($ millions)

Fund Name	Vintage	Fund Size	Capital Drawn	Distributed Capital	Total Value	Gross IRR	Net IRR	Net Multiple	Net DPI	Net IRR Rank	Net Multiple Rank	Net DPI Rank
Pro forma 1993-95	1993	100	100	245.5	246.0	30.9%	28.8%	2.46x	2.39x	n/a	n/a	n/a
Pro forma 1995-98	1996	100	99.9	161.4	160.9	10.2%	9.0%	1.61x	1.55x	n/a	n/a	n/a
Pro forma 1999-2001	1999	100	99.7	200.2	201.4	15.4%	14.1%	2.02x	1.95x	Q1	Q1	Q1
Pro forma 2002-2004	2002	100	98.6	181.9	183.5	15.8%	14.1%	1.86x	1.80x	Q1	Q2	Q2
Pro forma 2005-2007	2005	100	94.3	129.8	151.8	9.3%	8.2%	1.61x	1.54x	Q2	Q2	Q1
Pro forma 2008-2010	2008	100	92.3	99.9	180.9	13.6%	12.1%	1.69x	1.63x	Q2	Q3	Q1
Pro forma 2011-2013	2011	100	81.7	36.6	122.5	14.1%	12.3%	1.50x	1.45x	Q3	Q3	Q1
Global Select 2014	2014	100	37.6	3.5	47.4	22.3%	NM	1.26x	1.17x	NM	Q2	Q1
Global Select 2016	2016	100	11.4	0.5	13.2	35.1%	NM	1.16x	1.12x	NM	Q1	Q1

Performance – Pathway

Pathway Investment Performance (as of 3/31/2018) ($ millions)

Fund Name	Vintage	Fund Size	Capital Drawn	Distributed Capital	Total Value	Gross IRR	Net IRR	Net Multiple	Net DPI	Net IRR Rank	Net Multiple Rank	Net DPI Rank
DAF Global	2000	569.2	525.3	907.3	944.4	13.6%	12.3%	1.8x	1.7x	Q2	Q1	Q2
PPEF 2007	2007	300.0	299.6	290.9	484.2	14.3%	11.2%	1.6x	1.0x	Q2	Q2	Q3
PPEF 2008	2009	320.9	302.3	206.7	471.0	16.0%	12.3%	1.5x	0.7x	Q3	Q4	Q2
PPEF Investors 6	2011	226	196.3	61.9	281.8	17.1%	13.1%	1.4x	0.3x	Q2	Q4	Q3
PPEF Investors 7	2013	307.7	235.2	30.5	295.4	15.8%	11.2%	1.3x	0.1x	Q3	Q2	Q2
PPEF Investors 8	2015	400.0	180.9	16.5	225.3	24.7%	18.8%	1.2x	0.1x	Q1	Q2	Q2
PPEF Investors 9	2017	288.6	27.3	0	28.0	NM	NM	NM	NM	NM	NM	NM

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Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary
Amy Burke – Deputy Executive Secretary

Agenda Item 11: Real Assets Outlook – Verus

Scott Whalen of Verus, the SLOCPT's investment consultant, will deliver an educational presentation on the firm's most recent Real Assets Outlook report..

This is an educational presentation and no Board of Trustees action is necessary.

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Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

MAY 2018

Real Assets Outlook

Agenda Item 11

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Executive summary

Key theme for 2018

Observations driving our outlook

Inflation fears keeping the market on edge, so far data shows a benign inflationary environment

In February, wage inflation data emerged which appeared to signal long-awaited inflation numbers were rising which contributed to a market sell-off and spike in volatility. As markets settled and more data came through, inflation concerns subsided, though market volatility remained above recent historical levels. In April, Core CPI numbers were released which showed inflation moving higher and reaching the Feds target rate of 2.0%. While the inflation rate is now at target levels, the risk to the upside and the Fed's response to that potential outcome will likely be a factor in driving market volatility.

Higher interest rates putting pressure on income-oriented investments

In the second half of 2017, REITs, MLPs and other liquid yield-oriented investments faced selling pressure as expectations for rising interest rates were priced into select markets. The selling pressure has continued in 2018, with REITs and MLPs in particular down 7.3% and 3.9% YTD through April, respectively.

Stable prices across commodities with a tailwind coming from Capex cuts from mining and energy companies potentially driving prices higher in the next 2-3 years

For long-time commodity investors, the recent recovery in prices shouldn't be a big surprise. As the old saying goes, "the cure for low commodity prices, is low commodity prices". In practice, commodity producers are forced to curtail spending in response to low prices which will reduce future supply, that creates a potential shortage, driving prices higher until producers are once again incentivized to spend again. Not all commodities are in the same supply position but several industrial metals and oil appear to have supply/demand levels that favor higher prices going forward.

Tactical opportunities in MLPs

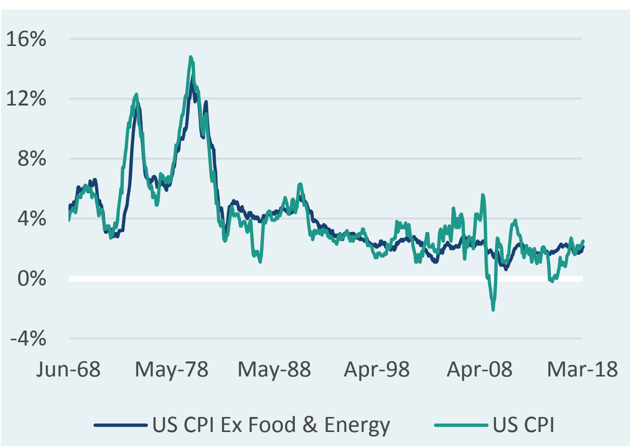
We recently became bullish on MLPs after a lengthy bearish attitude towards the asset class. We have a separate presentation on the midstream energy opportunity but we touch on a few of the reasons we believe the asset class looks attractive in this Outlook.

U.S. economics – Inflation

U.S. economics – Inflation

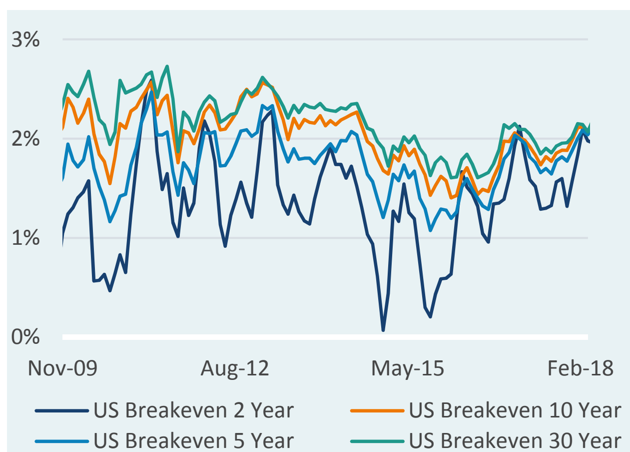
- Core CPI remained at 2.1% in April and March, up from 1.8% in February, surpassing the Fed's long-term target of 2.0%.
- Headline CPI hit 2.4% in March, moving higher in the first quarter of this year but still at levels below that seen in typical late-cycle periods. The Fed appears eager to get out in front of any inflationary pressure and thus, the risk of inflation moving higher than market expectations appears less probable than the risk of disinflation coming from the next market downturn.
- In most late-stage business cycles, real assets are often the best performing asset classes due to rising inflation. This cycle appears unique for a number of secular reasons (globalization, automation, etc.) but there is always some probability that we are wrong and that this cycle resembles history in which case it will be advantageous to have exposure to assets which perform well when inflation exceeds expectations.

U.S. CPI (YOY)



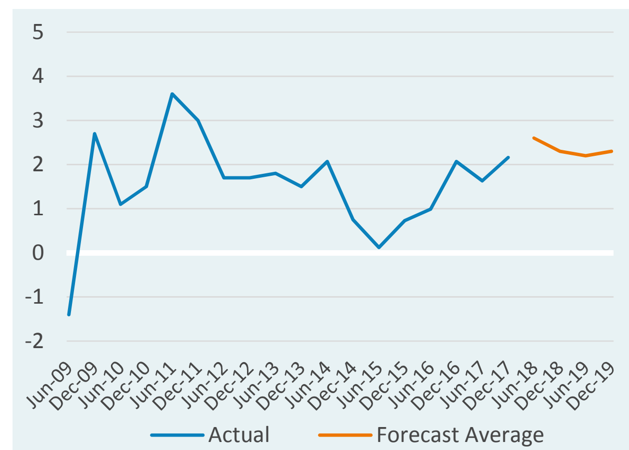
Source: FRED, as of 3/31/18

U.S. TIPS BREAKEVEN RATES



Source: FRED, as of 3/31/18

INFLATION EXPECTATIONS



Source: Wall Street Journal, 4/1/18

Outlook summary

Outlook summary

Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
Private Real Estate	Fundamentals remain strong with declining vacancies, increasing NOI growth and moderate new supply. Valuations are getting expensive, especially for high quality core assets in gateway markets. Returns have moderated to normal levels and income has become a larger portion of total returns.	— New supply could increase ahead of current projections and outpace demand. — A sharp rise in interest rates could lead to increased cap rates, hurting values. — A general economic slowdown may drastically impact demand for real estate.	We remain broadly favorable on real estate given continued strong fundamentals, modest new supply and favorable interest rate environment. Given we are potentially late in the cycle, we would recommend remaining cautious with the use of leverage, excess illiquidity, lower quality assets or strategies with a long time horizon to execute such as complex distress or construction.	**Positive**
REITs	REITs have benefitted from the overall strength of the real estate market, however REITs have underperformed broader equities in recent periods. REITs have been hurt by an increase in interest rates and increased economic growth expectations led to a rotation away from yield-oriented assets.	— Rising interest rates can have a negative effect on REITs and all yield-sensitive assets over short time periods. — REITs are sensitive to economic decline and general equity market volatility.	While we are broadly favorable on real estate, we remain neutral on REITs given current valuations appear fair. REITs can provide liquid exposure to real estate with the following caveats: high sensitivity to equity market volatility over shorter holding periods, higher leverage and higher exposures to non-core sectors such as hotels, self-storage, for-rent residential, etc.	**Neutral**
Commodities	Commodities futures have had lackluster performance over the last decade. An upward sloping futures curve for most of the last decade has created a headwind for the asset class. In most commodities, contango continues to create a headwind to commodity performance. More recently, oil prices have traded in backwardation along points in the curve though roll yields remain anemic.	— Supply responses surprising the market to the upside. — Global growth slowing down, reducing demand for energy and industrial metals.	Commodity futures continue to face headwinds as futures trade in contango across most commodities. The uptick in interest rates has helped margin returns and prices have stabilized across metals and energy but we expect the asset class to generate low returns going forward.	**Neutral**
TIPS	Low nominal interest rates combined with low to moderate inflation has led to a depressed return environment for TIPS.	— Decreasing inflation expectations or rising nominal interest rates would be a headwind to TIPS. Continued low rates create a high cost of carry.	While inflation expectations have been trending modestly upward, low current yields and modest inflation expectations has led to other real assets offering higher total return potential than TIPS.	**Negative**

Outlook summary (continued)

Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
Infrastructure	With interest rates rising, we saw yield-oriented assets sell-off in late 2017 and continue to exhibit weakness in 2018. While we welcome the revaluation, most infrastructure markets, especially core transactions, continue to trade at high valuations. In our last outlook we highlighted the interest rate concerns and our view that better opportunities exist in value-add infrastructure and specific sectors like power. Our views have not changed.	— Rising interest rates in the U.S. market and abroad will remain a headwind to yield-oriented infrastructure. — Fund raising was strong in 2017 for global infrastructure funds, creating additional competition for managers to deploy capital.	We remain less favorable on core infrastructure given valuation concerns. We do think opportunities exist within pockets of the value-add universe. We generally like teams with a particular sector expertise and with a strong development track record and pipeline.	**Neutral**
Private Natural Resources	As expected, the market was able to work-through much of the supply overhand in the oil market. Prices have stabilized around $60/bbl which appears high enough to induce on-shore US and parts of Canada to grow production but is too low for oil majors and national oil companies to commit substantial capital to large off-shore projects. With recent tensions flaring up in the Middle East, oil prices could shock to the upside.	— A significant amount of dry powder has been raised in the private markets, creating a competitive environment for deals in prime on-shore US acreage locations. — Demand growth below expectations resulting in lower prices for longer. — Breakdown of OPEC could induce member countries to discontinue the supply cuts and flood the market with oil .	We think there are opportunities to invest in onshore US/Canada and achieve attractive returns but it's hard today to buy large tracts of prime acreage and generate healthy returns. We believe private energy funds where there are dual performance fee structures face a considerable headwind to delivering 20%+ IRRs that investors expect for taking drilling risk. Could see a healthy M&A market develop as oil majors look for production growth.	**Positive**
Midstream Energy / MLPs	MLPs have faced heavy selling pressure in 2017 and in 2018. Valuations are reaching trough levels not seen since the GFC. Cash flows within midstream energy are recovering and balance sheets are healthier today than they were going into the oil collapse. We believe there is a compelling tactical opportunity within midstream energy for investors that can be patient and manage tax issues that come with holding MLPs.	— Falling oil/gas prices could curtail drilling programs and reduce production volumes which would hurt MLP cash flows. — Regulatory risk is low and though recent headlines around the Federal Energy Regulatory Commission (FERC) rules changing cost pass-throughs created selling pressure the end result was de minimis for most MLPs.	MLPs are currently providing a healthy 8+% dividend yield and distribution growth has recovered to a range of 4-6%. MLPs are offering a compelling entry point that we have not seen since the GFC.	**Positive**

Outlook summary (continued)

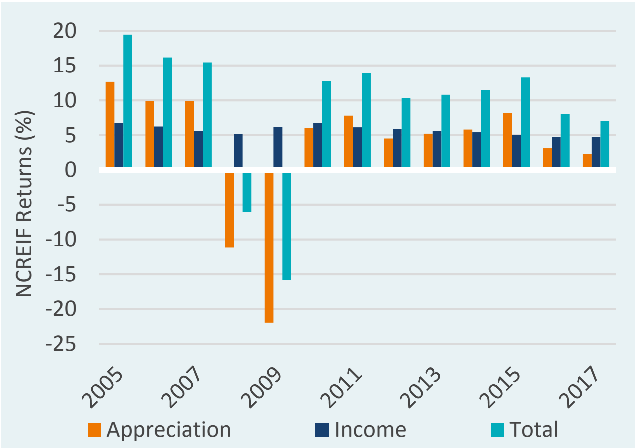
Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
Timberland	Timber markets in North America continue to face challenges from a slow recovery in housing, low interest rates and unfavorable transaction market. Our outlook on timber has been negative for several years due to the headwinds the asset class has faced. More recently, our view has shifted on a strong recovery in housing starts, timber supply issues out of Canada and low levels of capital competing within the timber industry. While we still believe that returns are unlikely to achieve double digit rates seen in the late 90's/early 2000's, some investors may find high single-digit returns acceptable within the asset class.	— Despite several years of disappointing returns within timber, we don't see returns reaching beyond single-digits on a go-forward basis. Competitive timber from South America has driven prices for certain softwood products lower and favorable hardwood markets in the Pacific Northwest remain difficult to access. — Markets outside the U.S. tend to face currency and political risk which has resulted in disappointing returns for many investors.	For most investors, high single-digit expected returns for timberland in the U.S. is too low for the illiquidity and risk assumed within the asset class. However, the unique return drivers and potential for higher than expected prices in softwood lumber may be attractive for some investors with sufficient liquidity and a low cost of capital.	Neutral/ Negative
Farmland	Farmland prices in the Midwest leveled off after 2014 but remain too expensive for the income and return potential. We are selectively looking at permanent crop deals but broadly they trade well above historical valuations. Prices across most crops have fallen over the last year as record supply has outstripped demand.	— Similar to timber markets, we have concerns around valuations and the risk/return proposition for farmland investments. — The income potential within farmland is more attractive than timber and the global growth in food is a more compelling macro trend than pulp and paper but we remain bearish on the sector, in general.	Currently viewed as expensive. Selectively looking at agriculture business investments where crop and land are a component of the return.	Negative

Current conditions and outlooks

Real estate performance – Recent history

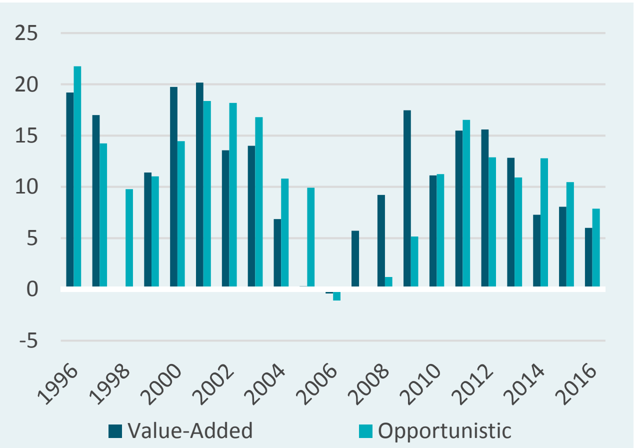
- Core real estate returns have moderated over the last two years back to “normal” levels of 7-8% total returns. Appreciation has slowed while income has remained near 5% for several years, becoming a larger component of total return.
- Correlation between GDP growth and core real estate returns has historically been very high. In the last few quarters, GDP has ticked up slightly higher while real estate returns moderated.
- Some of the best non-core real estate vintage years occur during recessionary years and early recovery periods (2001-2003 and 2009-2012) as market dislocations create attractive entry valuations.
- Late stage vintage years for non-core have historically been the most challenged (1998-1999) and (2005-2007).

NCREIF RETURNS



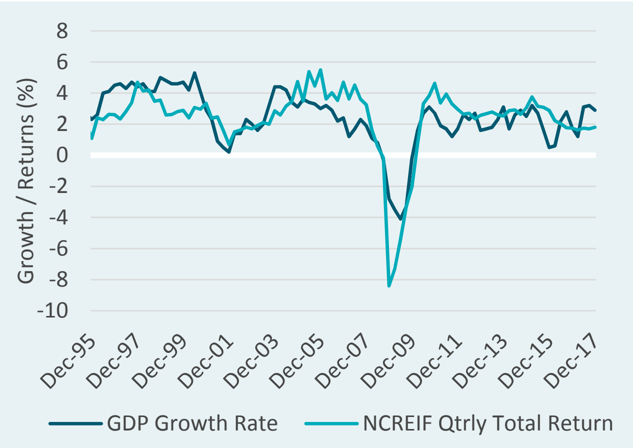
Source: NCREIF, as of 12/31/17

VINTAGE YEAR RETURN (%) – NON-CORE REAL ESTATE



Source: Cambridge Associates, as of 9/30/17

REAL ESTATE AND THE BUSINESS CYCLE



Source: NCREIF, Bloomberg, as of 12/31/17

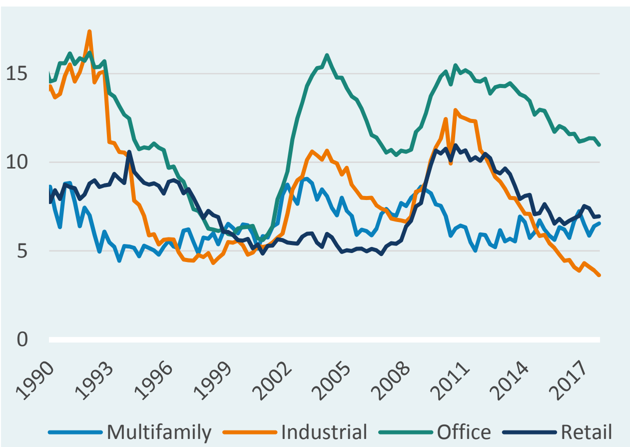
Real estate fundamentals

— Real estate fundamentals remain generally healthy. Vacancy rates continue to decline in most property types. Multifamily is the only exception, which has seen a slight uptick in vacancy after being the earliest sector to recover. This move has been influenced by an increase in prices and some pockets of strong new supply.

— Cap rates continue to move in a steady downward trend and sit at historic lows. The spread versus the 10-year Treasury yield remains moderate however, providing a slight cushion against rising interest rates. This was recently tested when the 10-year yield rose from 1.5% to 2.4% after the presidential election, yet cap rates remained flat. Capital continues to flow into the asset class as investors seek sources of high quality income and U.S. dollar-denominated assets.

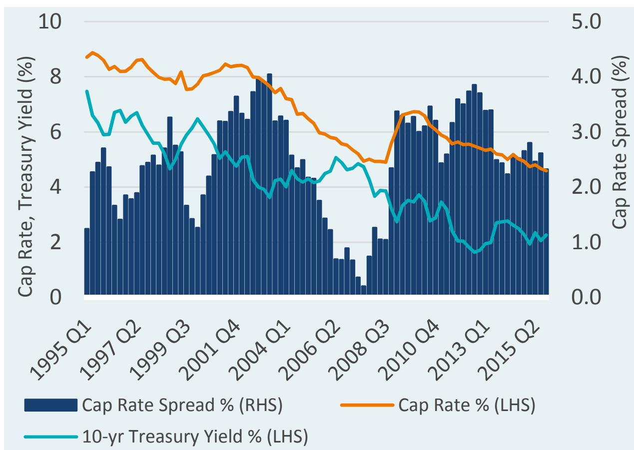
— Net operating income (NOI) growth has remained strong - above 5% in the first quarter for all property types. Multifamily NOI has come down from above 10% growth, while industrial properties have seen the strongest improvement.

VACANCY BY PROPERTY TYPE



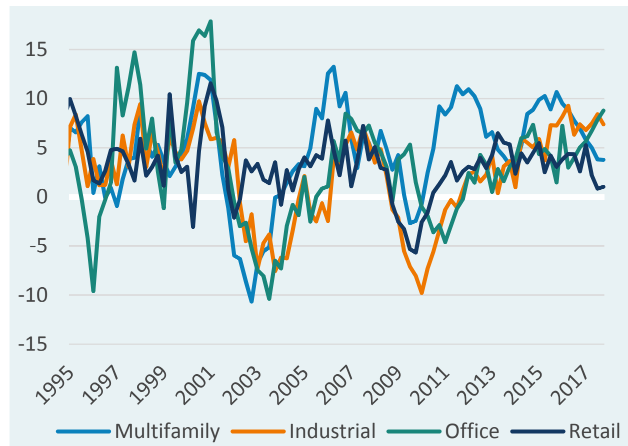
Source: NCREIF, as of 12/31/17

CAP RATE SPREADS



Source: FRED, NCREIF, as of 12/31/17

4-QTR ROLLING NOI GROWTH (%) BY PROPERTY TYPE

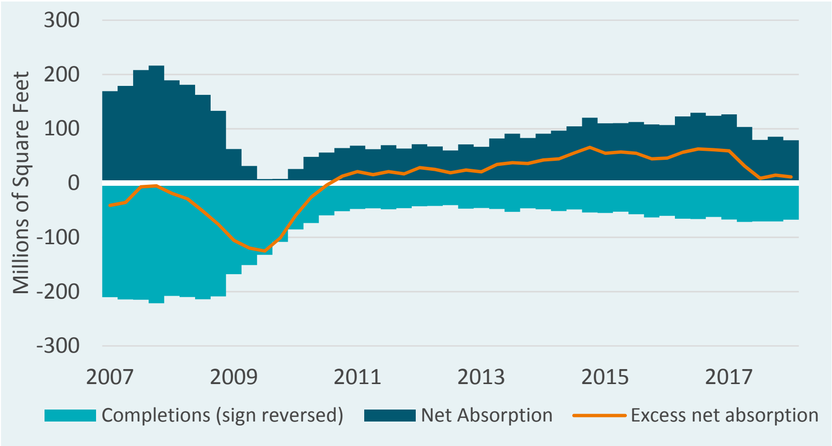


Source: NCREIF, as of 12/31/17

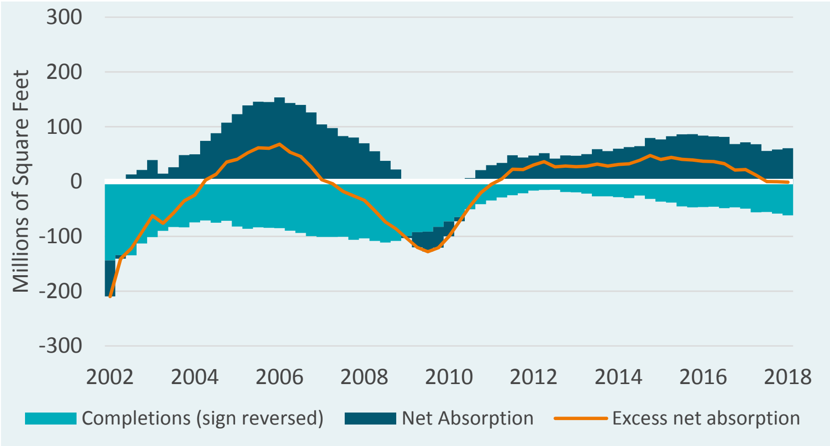
Real estate – New supply and absorption

Overall, new supply/construction remains below peak levels of 2007-08

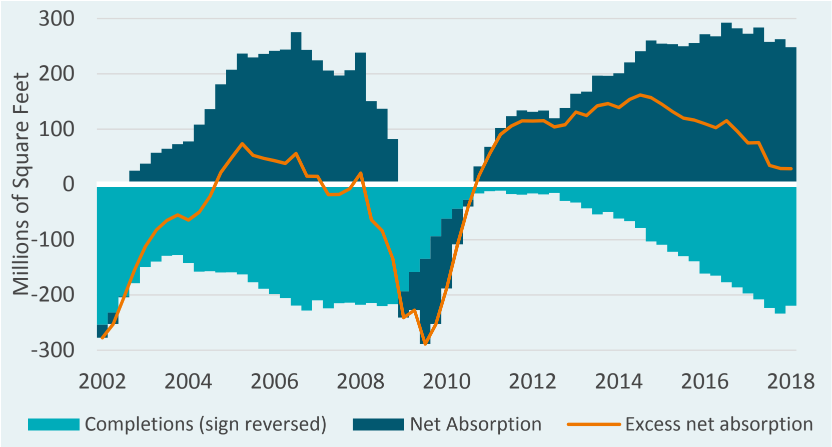
RETAIL SECTOR



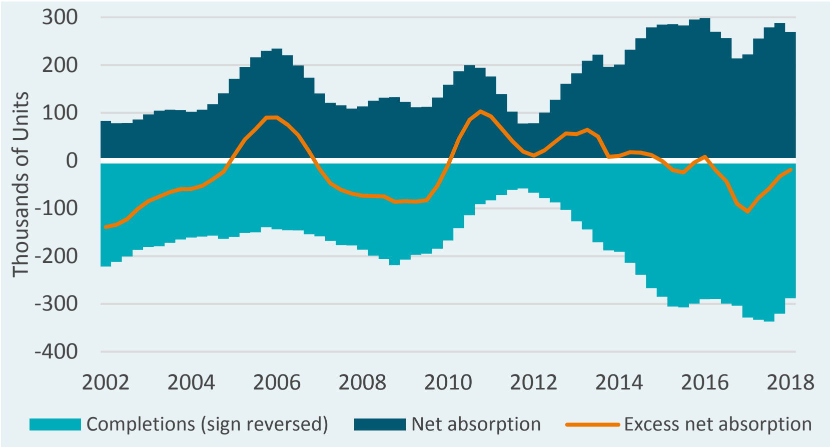
OFFICE SECTOR



INDUSTRIAL SECTOR



MULTIFAMILY SECTOR



Multifamily exceeding peak levels, starting to see net absorptions decline, NOI growth slow

New supply in industrial nearing peak levels, but demand from ecommerce keeping warehouse net absorptions positive

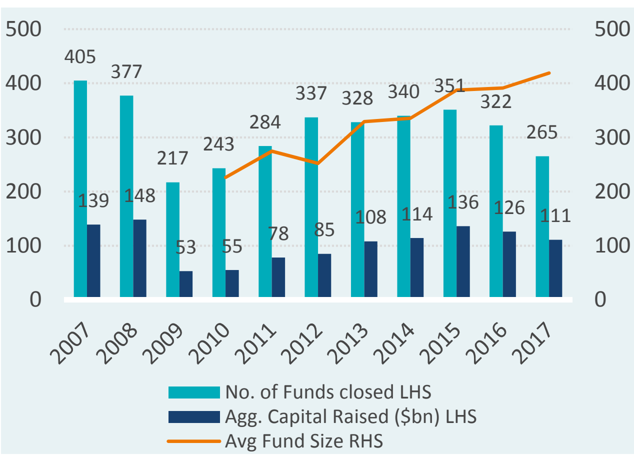
Retail lagging, slowdown in brick and mortar demand

Source: CoStar, Nareit, as of 3/31/18

Real estate fundraising

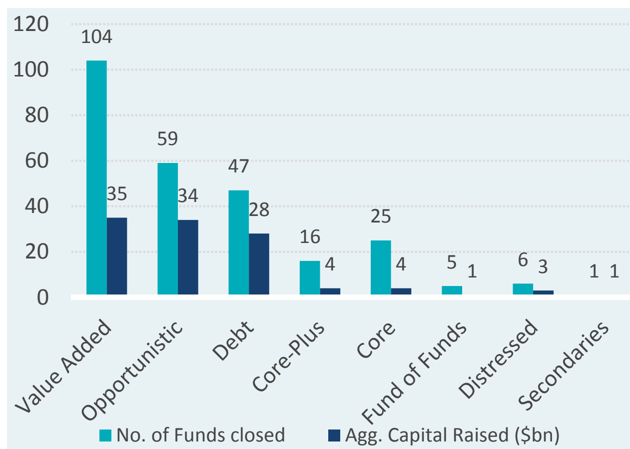
- The number of funds closed and aggregate capital raised have slightly declined the last two years, although still remain at high levels. The average fund size has continued to grow.
- Dry powder in the closed-end fund space has continued to rise to all time highs with two-thirds of that capital going to North American focused opportunities.
- The majority of closed end funds are targeting value added strategies, while debt funds saw the largest increase in interest
- Core open-end funds currently have over $5 billion in investment queues with negligible redemption queues. The core space continues to receive strong competition from foreign buyers, especially in the gateway markets.

HISTORICAL PRIVATE REAL ESTATE CLOSED-END FUNDRAISING



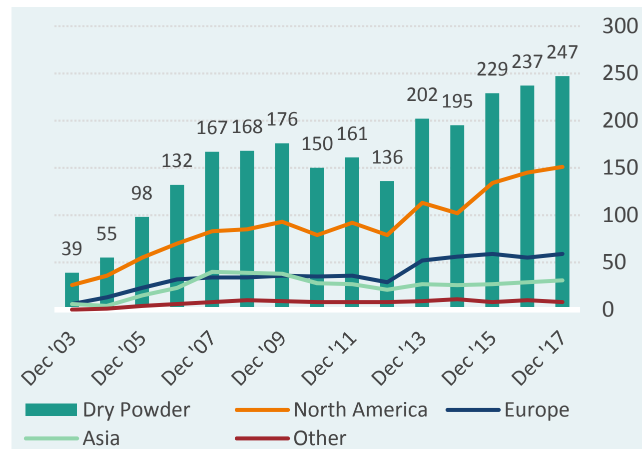
Source: Preqin, as of 2/28/18

2017 PRIVATE REAL ESTATE CLOSED-END FUNDRAISING BY STRATEGY



Source: Preqin, as of 1/31/18

DRY POWDER BY REGION – CLOSED-END FUNDS

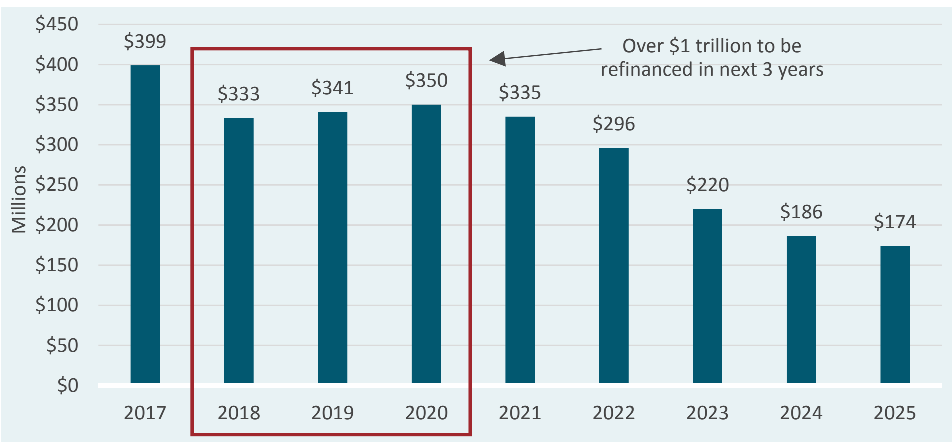


Source: Preqin, as of 1/31/18

Real estate debt

- Over the last several years, due to regulatory pressures for risk retention (Dodd-Frank) and increased capital requirements for "High Volatility Commercial Real Estate Loans" or HVCRE loans, traditional sources of lending from banks and insurance companies has declined, allowing private capital sources to step in and earn a premium for providing capital.
- Real estate transaction volumes have remained healthy and there will be a continued need for debt refinancing over the next several years.
- The potential returns for providing mezzanine loans on core-plus and light transitional assets or leveraged returns on senior whole loans on stable assets appear to offer a favorable risk versus return tradeoff in comparison to real estate equity.
- These loans are typically floating rate and tied to a premium over LIBOR, which provides some protection against rising interest rates.
- Lending spreads have come down over the last 12 months, however rising LIBOR has offset this from a total return perspective

CURRENT COMMERCIAL DEBT MATURITIES



Source: Trepp, Ares, 12/31/17

LENDING PREMIUMS

	Stable Asset Whole Loans	Transitional Asset Whole Loans	Lower Risk Mezzanine	Transitional Asset Mezzanine & Preferred Equity	Developmental Asset Mezzanine & Preferred Equity
Capital Stack	0 - 70% LTV	0 - 85% LTV	50-65% LTV	65-90% LTC	65 - 90% LTC
Duration	2-5 Years	2-5 Years	2-7 Years	2-4 Years	2-4 Years
Typical Lending Spreads	LIBOR + 2.0-2.5%	LIBOR + 3.0 - 4.5%	LIBOR + 4.0-5.0%	LIBOR + 6.0 - 7.5%	LIBOR + 9 - 14%

Source: PGIM

REITs

— REITs have broadly benefitted from the overall strength of the real estate market, however REITs have underperformed broader equities over the last year. A rise in interest rates and increased economic growth expectations led to a rotation away from yield-oriented assets.

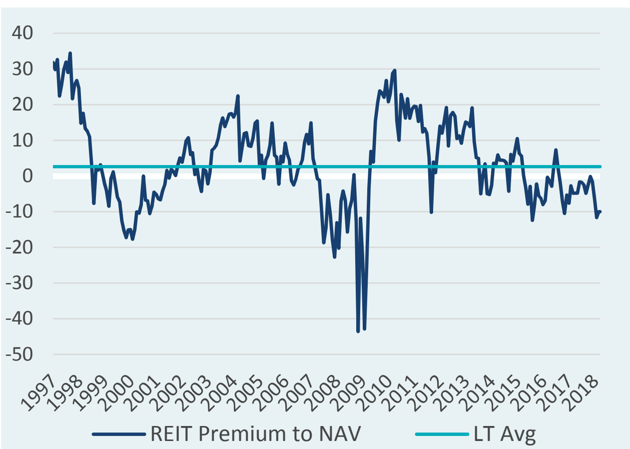
— Valuations currently appear fair on a number of metrics. Implied cap rate spreads relative to Treasuries look fairly valued compared to history. REITs are currently trading at a discount to NAV of around 10%, while historically trading at an average premium of 2%.

— REITs also appear fairly valued relative to equities as measured by the adjusted funds from operations (AFFO) multiple in comparison to the S&P 500 forward P/E.

— REITs can provide liquid exposure to real estate with the following caveats: high sensitivity to equity market volatility over shorter holding periods, higher leverage and higher exposures to non-core sectors such as hotels, self-storage, for-rent residential, etc.

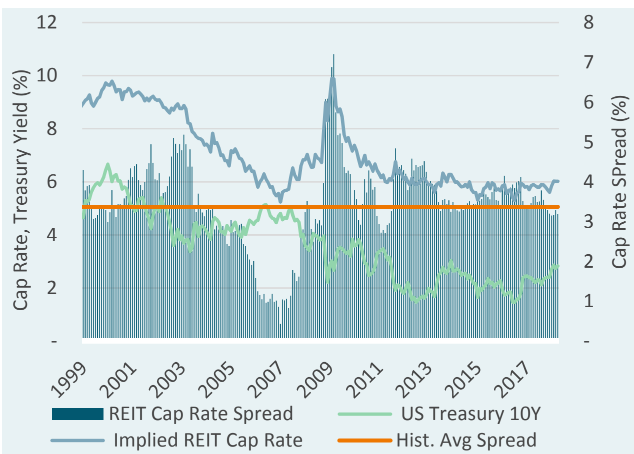
— Verus recommends utilizing active management in REITs with managers that have significant private real estate expertise.

REIT PREMIUM TO NAV



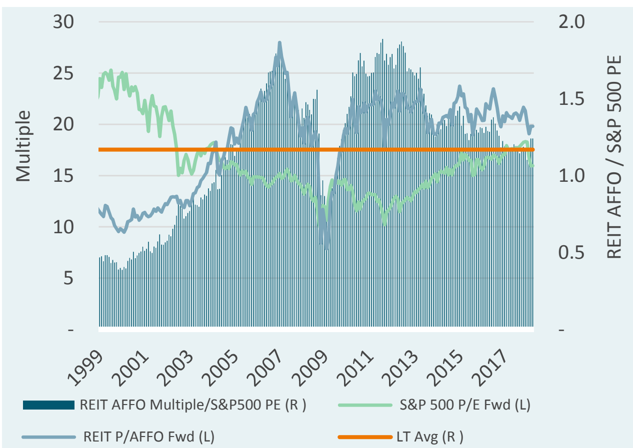
Source: JPMorgan, as of 4/16/18

YIELDS (VS. TREASURIES)



Source: JPMorgan, as of 4/16/18

VALUATION (VS. EQUITIES)



Source: JPMorgan, as of 4/16/18

Private real estate summary

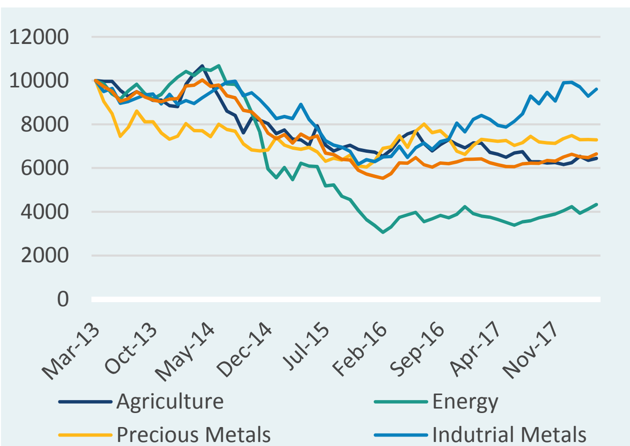
Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
Core	Fundamentals remain strong, however valuations are getting expensive, especially for high quality assets in gateway markets.	— New supply could increase ahead of current projections and outpace demand. — A sharp rise in interest rates could lead to increased cap rates, hurting values. — A general economic slowdown would drastically impact demand for real estate.	Steady, but slow growth could lead to a longer than normal cycle, as we have not seen the level of overheating and new construction that typically occurs near the end of a cycle.	**Neutral/ Positive**
Value-Add	Heavy demand for high quality core real estate assets has been a tailwind for value-add strategies, as the completed project are often core real estate buyers.	— Slowing demand for core real estate could lead to fewer buyers of value-add assets. — Any decline in demand due to an economic slowdown would likely impact renovation and lease-up strategies. — Increased capital moving up the risk spectrum could lead to increased competition.	A flat to positive environment for core real estate should be a good environment for value-add. Increased capital raising in the space will lead to additional competition however, squeezing returns.	**Neutral**
Opportunistic	The strong recovery in the commercial real estate market has led to fewer distressed opportunities available for opportunistic funds, especially in the U.S. Lending standards remain tight for new construction opportunities, pressuring returns.	— A turn in the market might dramatically affect the performance of investments with a long time horizon, such as construction or complex distressed situations. — Increased capital moving up the risk spectrum could lead to increased competition.	Fewer distressed opportunities should continue to put downward pressure on returns. We would caution against broad development strategies at this point in the cycle, especially speculative or long duration projects.	**Negative**
Debt	Traditional lenders, such as banks and insurance companies have reduced lending to commercial real estate, creating a need for capital. Lending spreads have tightened a bit, although LIBOR has risen, offsetting the impact on total returns.	— Changes in regulations, such as the elimination or loosening of Dodd-Frank, could possibly lead to a re-emergence of banks and insurance companies in lending, increasing competition and reducing potential returns. — A further decline in spreads due to increased competition could pressure returns.	The risk-return profile for commercial real estate loan origination, both senior loans and mezzanine loans, appears to be favorable compared to core real estate. These strategies can be implemented in both open end and closed end fund structures.	**Positive**

Commodities

— Commodity performance has been lackluster over the past decade, delivering negative returns through the global financial crisis and the recent oil crisis. Much of this performance has been caused not by price movement, but by the shape of commodity futures curves. An upward sloping curve creates a drag for investors as a higher price is paid to enter each futures contract, and a downward sloping curve creates positive carry for investors as prices paid for futures contracts are lower. This premium/discount is a major determinant of commodity performance, and is known as "roll yield". Roll yield can be negatively affected by commodity crises as current contract prices drop further than distant prices and the curve becomes steeper.

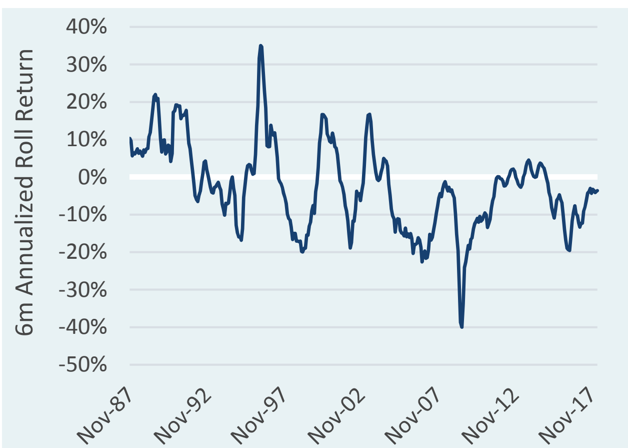
— As commodity prices moderate, futures curves have flattened and negative roll yield has begun to dissipate. Oil in particular significantly impacts overall roll yield due to its large weight in commodities indices. Oil has exhibited a backward-dated curve shape recently. We are continuing to monitor these effects since a neutral or positive roll return would improve commodity returns.

SECTOR PERFORMANCE



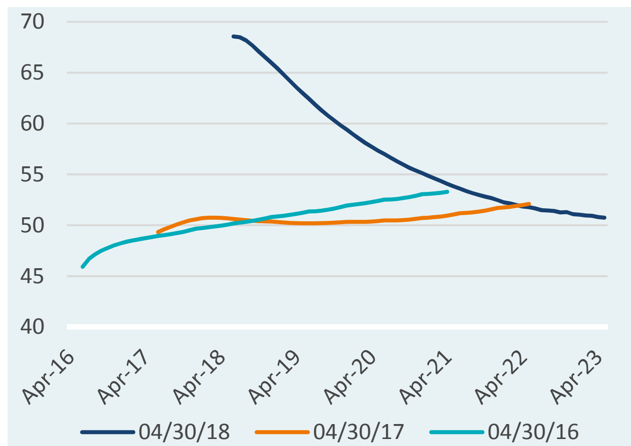
Source: Bloomberg, as of 3/31/18

ROLL RETURN



Source: Bloomberg, as of 4/19/18

CURVE SHAPE (WTI)

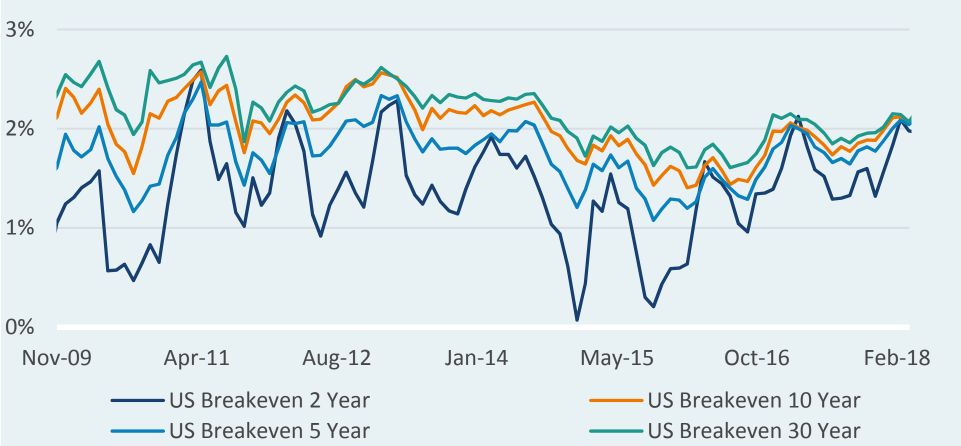


Source: Bloomberg, as of 5/8/18

TIPS

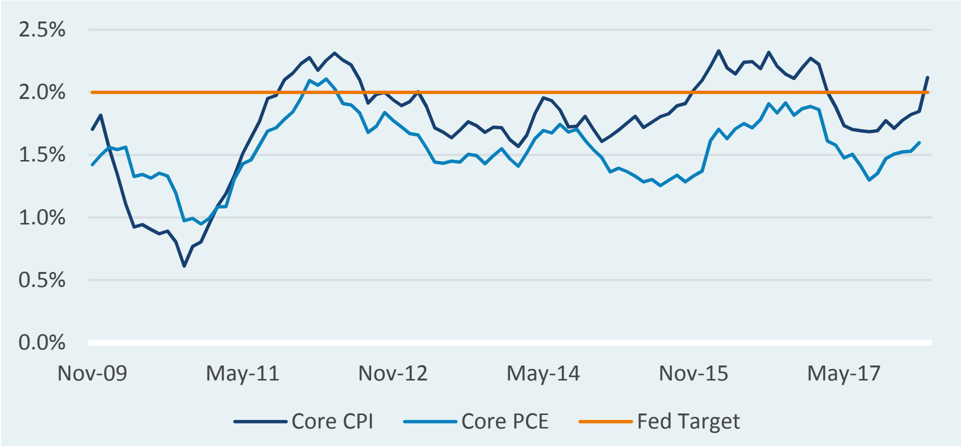
- Inflation has been trending upward over recent periods and is now hovering around the Fed inflation target of 2%, but still remains below historical averages.
- TIPS 10-year breakevens came down slightly in April to 1.9%, while the 30-year breakevens are just slightly above 2%.
- Due to low inflation and nominal rates, TIPS returns have been very lackluster. The Barclays U.S. TIPS Index has returned 1.5%, 2.0% and 1.0% over the last 1-, 3- and 5-years respectively. Over the past 10 years the return for the index was 4.2%.
- Over the intermediate-term, we believe TIPS appear less attractive relative to other real assets from a total return perspective because of low carry. Other real assets will likely do better in a stable growth environment, such as private real estate and natural resources.
- TIPS may retain a place in long-term strategic allocations to inflation protecting assets within fixed income, and should help hedge against unexpected inflation shocks.

U.S. TREASURY BOND RATES



Source: FRED, as of 3/31/18

CURRENT INFLATION VS. FED TARGET



Source: BLS, as of 3/31/18

Opportunity in midstream energy

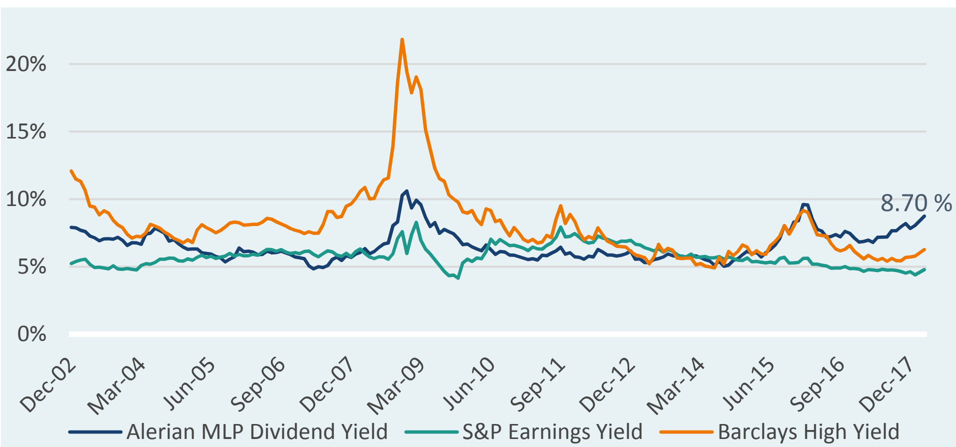
— MLP yields have steadily climbed since mid-2016 on the back of a sell-off in the sector and recovery in distributions following the energy price collapse.

— Balance sheets across the industry are in better shape today than before the oil crisis. Debt-to-cash flow has improved since peaking at 6.4x in 2015.

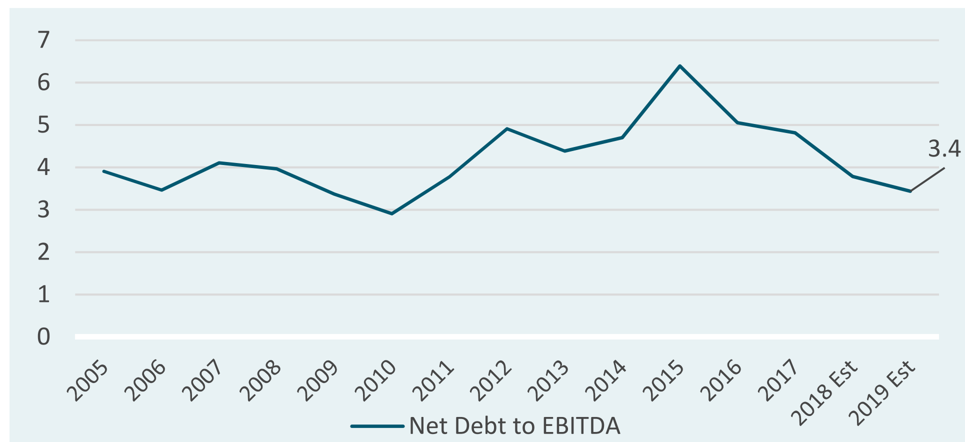
— The U.S. is expected to surpass Russia in 2018 to be the largest oil producer in the world. Midstream companies grow through oil/gas volume increases, not commodity price appreciation.

— Distribution growth rates are expected to reach 4-6% by 2019. Reduced capex spending needs going forward could lead to more earnings being converted into free cash flow and even greater distribution growth.

MLP YIELDS



MLP DEBT TO CASH FLOW RATIO

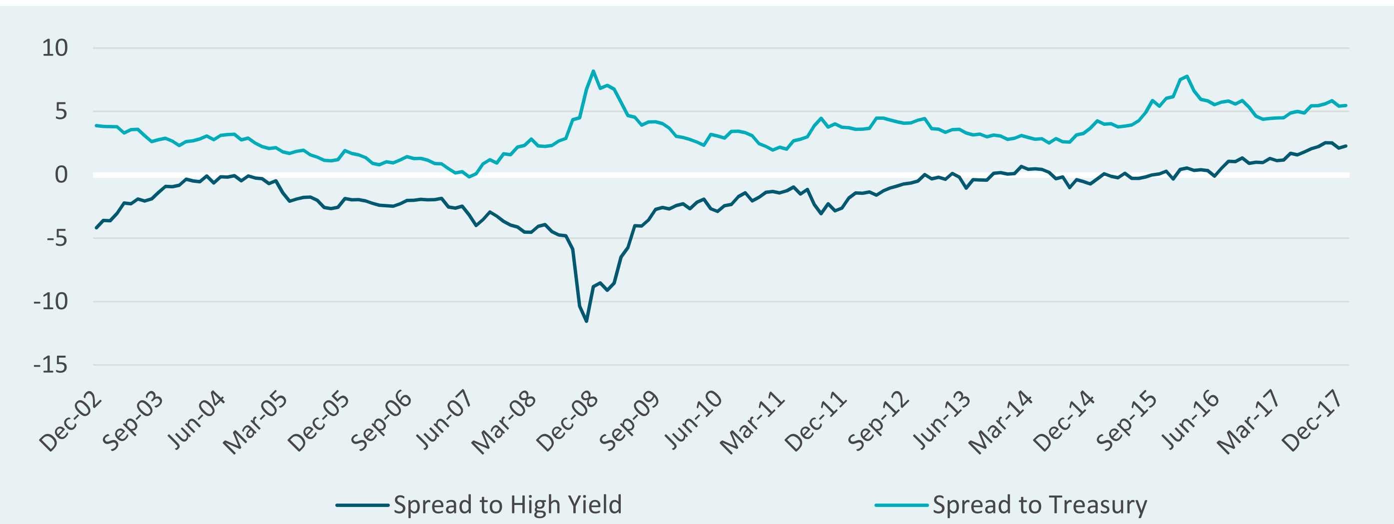


Source: Bloomberg, as of 12/31/17

Opportunity in midstream energy (cont'd.)

- For most clients, we recommend a tactical position in MLPs with a short-medium term hold period (2-4 years).
- The current spread on MLPs above the 10-year Treasury is around 580bps; closer to 300bps historically.
- The current spread on MLPs above the Barclays High Yield index is around 250bps.
- **We recognize that 20+% annualized returns in any environment are rare. If we handicap the returns with a lower probability of fully achieving those results, even a 50% probability would still provide an attractive return target to investors in today's environment.**

MLP SPREADS VS HIGH YIELD AND TREASURY RATES



3-Year Expected Return:

Current Yield - 8%

+

Distribution Growth - 4-6%

+

Return to FMV - 10-13%

= 22-27%/year

Source: Bloomberg, as of 12/31/17

Infrastructure

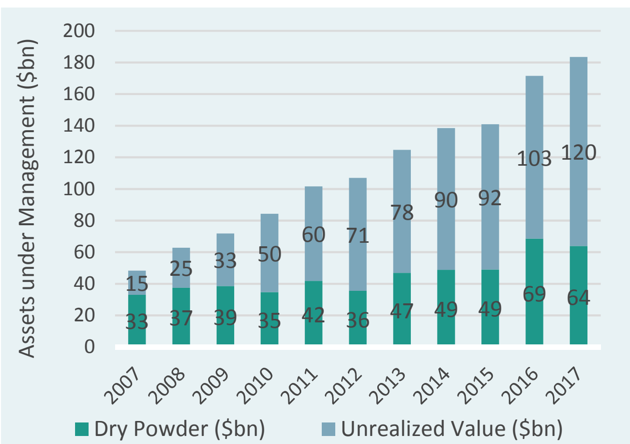
— Dry powder within private infrastructure appears to have declined slightly in 2017 from a peak in 2016, according to Preqin. That said, there remains a highly competitive market for assets with contracted cash flows.

— Within infrastructure, we remain positive on value-add opportunities relative to core strategies. Interest rate sensitivity is generally lower in value-add infrastructure and pricing levels, though elevated, are below comparable core valuations. Within value-add we focus on sector specialists or teams with a track record of successful project development and/or operational expertise.

— Transportation infrastructure (i.e. ports, toll roads, airports) continues to trade at extremely rich valuations. We believe these assets carry a high level of interest rate risk and will face performance headwinds as discount rates adjust to a normalized interest rate environment.

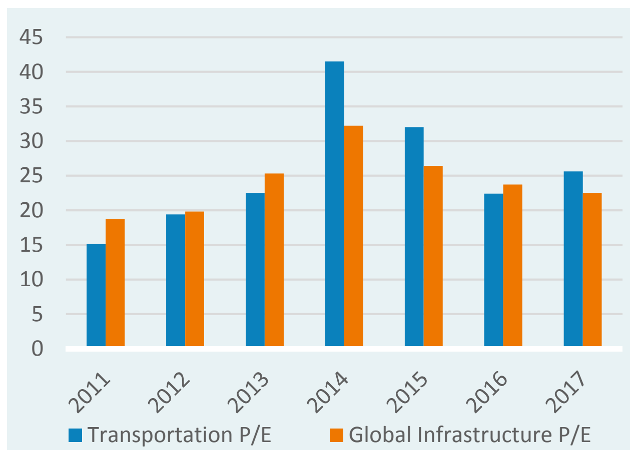
— Returns for the median infrastructure fund have been disappointing relative to their illiquidity and fund economics. Relative to private equity buyouts, returns for infrastructure investments should exhibit lower IRRs but comparable net multiples. Returns have lagged in nearly all vintages for infrastructure which confirms our own observations that investors need to be highly selective within the asset class and look for managers with a specialized sector focus and fund economics that reward the manager for performance and not assets under management.

INFRASTRUCTURE DRY POWDER



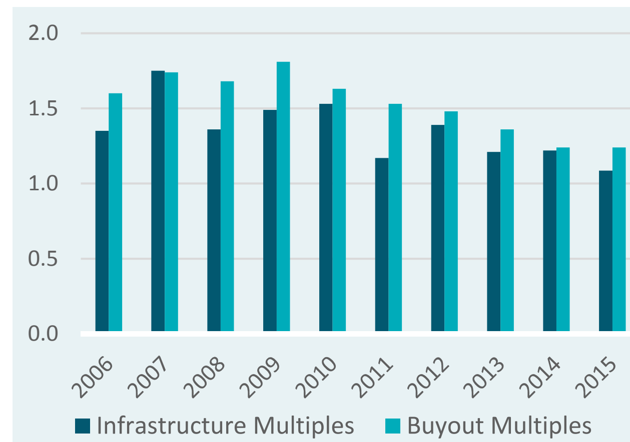
Source: Preqin

VALUATIONS IN TRANSPORTATION INFRASTRUCTURE



Source: Bloomberg

MEDIAN MULTIPLES FOR INFRASTRUCTURE BY VINTAGE YEAR (NET)



Source: Preqin

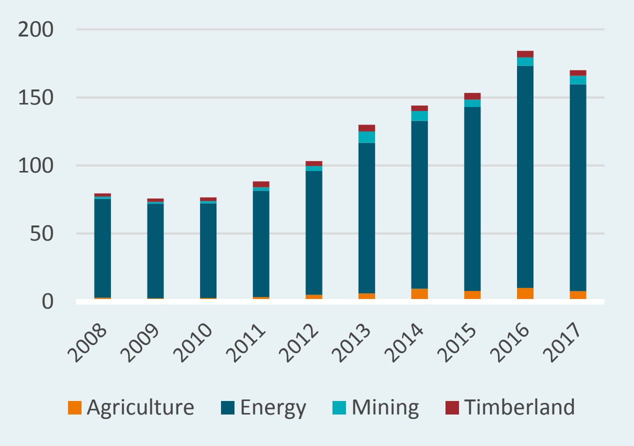
Private natural resources

— Energy remains the most liquid and scalable segment of the natural resource universe. Dry powder within energy appears to have declined in 2017 from a peak in 2016, according to Preqin. North America remains the largest market for energy funds to raise and deploy capital, more than double the size of the next largest market, Europe.

— Mining has experienced a recovery from a cyclical low in early 2016. While asset prices have seen some recovery, capital expenditures across the industry have lagged for several years which may lead to a supply shortfall in industrial metals. Our overall outlook within mining is positive with a notable challenge in finding enough investment opportunities that meet our underwriting criteria.

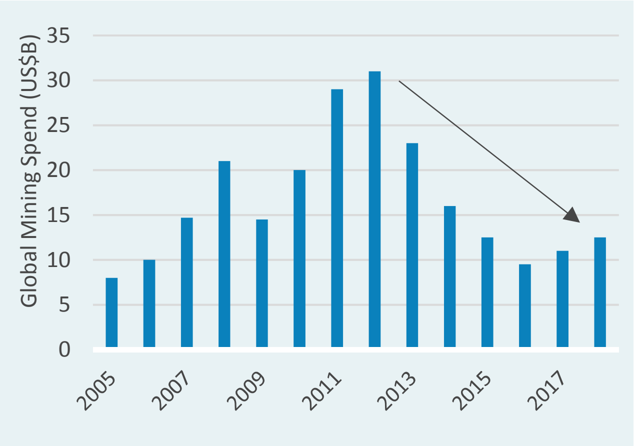
— Within a diversified real asset portfolio, we believe agriculture investments can play an interesting diversification role and reduce our clients exposure to more volatile energy/mining markets. The most promising investments within agriculture continue to be with funds that buy or build vertically-integrated business utilizing permanent crops. Unfortunately, returns within the sector have faced headwinds in recent years as row crop prices and tree nut prices have declined on excess supply issues. We remain negative within agriculture due to a challenging operating environment and lack of attractive investment opportunities.

FUND DRY POWDER BY STRATEGY



Source: Preqin

CAPITAL EXPENDITURE IN MINING



Source: Bloomberg

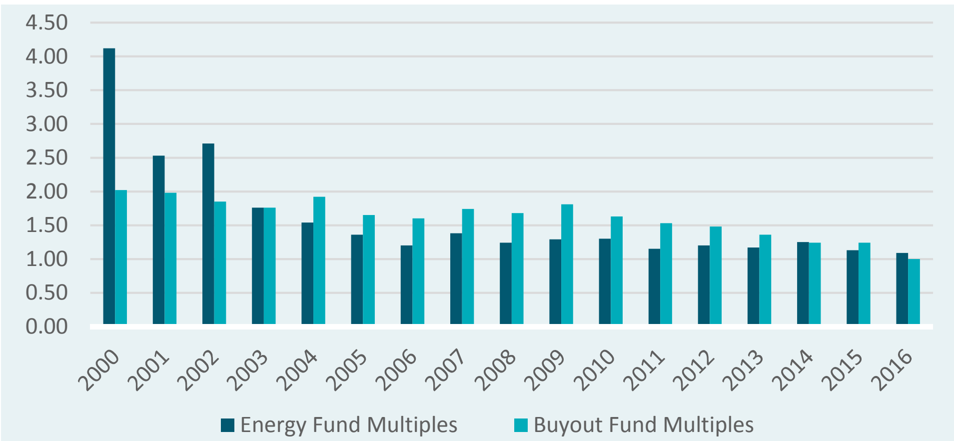
CROP PRICES – BLOOMBERG AGRICULTURE

Source: Bloomberg

Private energy

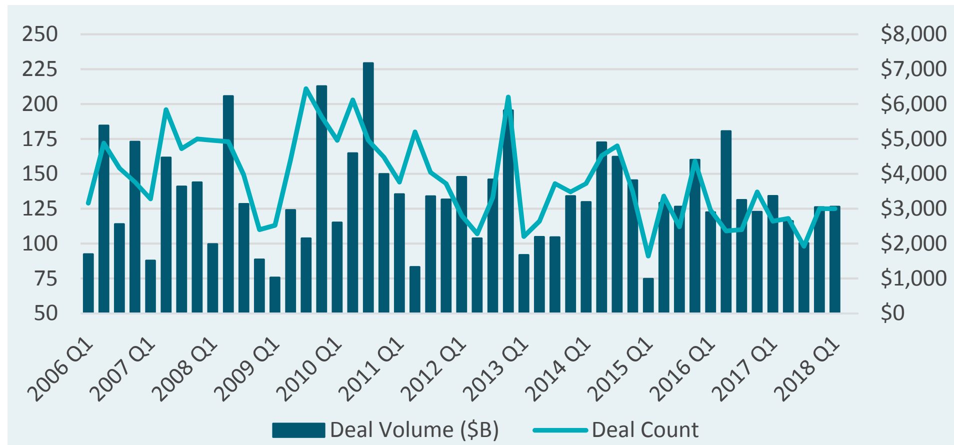
- Energy prices and asset values have recovered quickly after reaching a low point in Q1 2016. Now that the dust has settled on one of the worst periods for the energy industry since the 1980's, one interesting takeaway is how much the private markets aided in the sector's recovery. Billions of dollars were raised in quick order by private credit and equity investors to take advantage of a frozen high yield and public equity market in 2015/16. While still early, those investments appear to have paid-off as oil and gas prices stabilized at much higher levels.
- The experience for many investors in private equity energy has not been without heartache as exceptional early vintages in the industry brought new capital to the asset class. Returns have lagged since, no doubt driven by the commodity downturn but also as competition fueled a more efficient market. We believe investors will need to consider the traditional double performance fee structure (a.k.a. double promote) on energy funds and find ways to reduce the fee overhang in a lower return environment.
- The M&A market within upstream energy saw a recovery in 2016 but slowed again in 2017 as E&P shareholders began demanding more spending restraint and an increase in shareholder-friendly actions (i.e. dividends and buybacks). Activity from Oil Majors (i.e. Exxon, BP, etc.) could pick-up as declining reserves draw them back into the acquisition market.

MEDIAN GLOBAL ENERGY FUND RETURN MULTIPLES BY VINTAGE YEAR (NET)



Source: Preqin

M&A TRANSACTIONS IN THE UPSTREAM OIL& GAS MARKET



Source: Bloomberg; (excludes Royal Dutch Shell/BG Group in 2015)

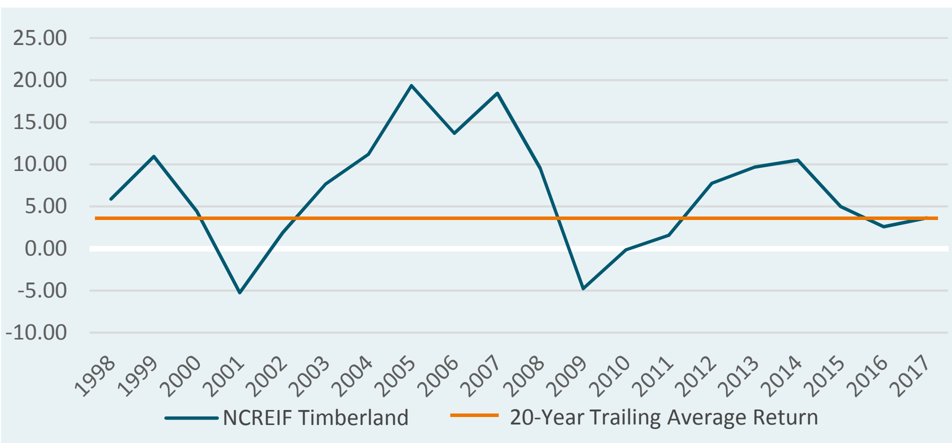
Timberland

— We are highlighting timberland in this year's outlook given our bearish attitude on the asset class for many years. Fundraising within timber-focused funds peaked in 2008, according to Preqin. With less dry powder and fewer funds being raised, we wanted to see if there was an attractive opportunity in an overlooked industry.

— The past 10 years have been lackluster for timber investors, achieving a trailing average return of 4.4%, according to the NCREIF Timberland Index. Many TIMO funds have faired worse than the index due to leverage and/or less favorable geographic exposures within their portfolio. The 10-year returns prior to the GFC were more than double the returns experienced after which raises the question will the next 10 years look more like those experienced in the 90s and early 2000s or the most recent 10 years.

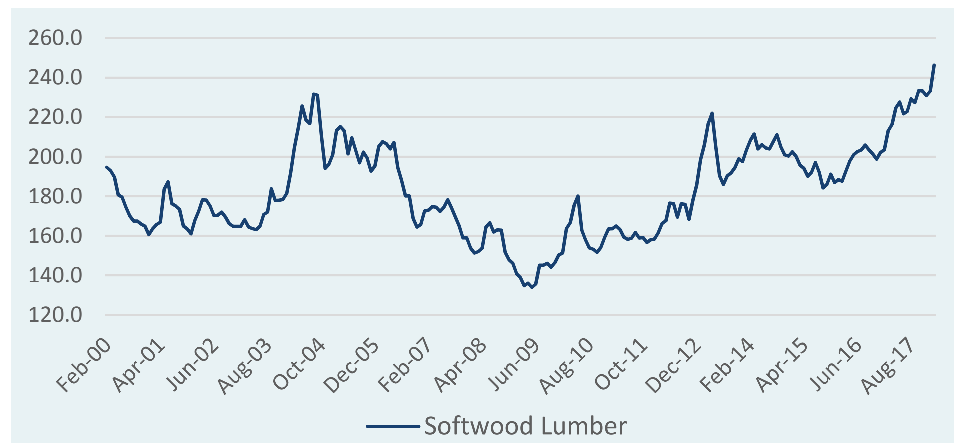
— One of the challenges for newer investors in Timberland is gaining access to the most lucrative timber, the pacific northwest, where hardwood species are in high demand by Asia. Most transactions in timber occur in the Southwest/Southeast where softwood pine species dominate. Softwood is less valuable and faces intense competition from growers in South America. Prices have seen a recovery of late as housing starts improve and competition from Canadian imports have declined.

NCREIF TIMBERLAND CALENDAR YEAR RETURNS



Source: NCREIF, as of 12/31/17

SOFTWOOD LUMBER PRICES



Source: Bloomberg, as of 2/28/18

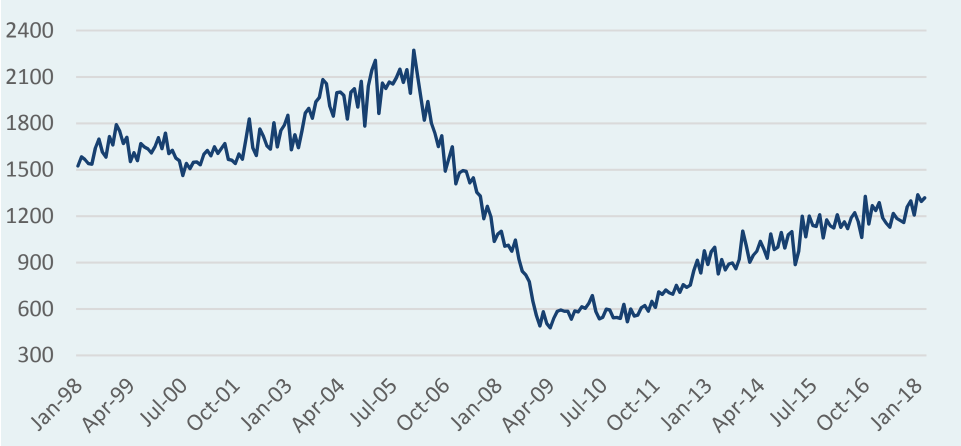
Timberland (continued)

— Housing starts have experienced a slow rebound since the GFC as millennials delayed buying and urban living trends reduced demand for single family homes. There are some signs that the trends are reversing as millennials begin settling down and look to own vs. rent. A key driver of lumber demand comes from housing construction which is why this is an important metric to watch.

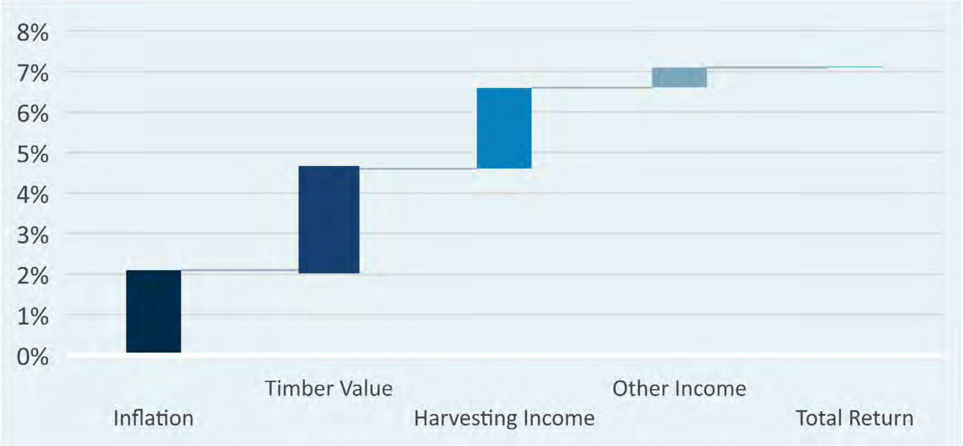
— Return drivers within timber come from the appreciation of the land (inflation + timber value) and income from both harvesting timber and non-timber income sources (i.e. hunting leases, oil/gas royalty income, etc.). Without factoring in rising discount rates that create a meaningful headwind for future terminal values, we derive expected returns within timberland of 7-9% (gross).

— There appears some tailwinds to the timberland story but when we look at returns in the asset class, we struggle to reach a return target that merits investing in an asset class which is highly illiquid, offers little income and appears dependent on selling to other TIMO investors. For most clients, we think there are better opportunities within real assets to deploy capital. For investors with a low cost of capital and an interest in renewable resources, there may be merit to an allocation in timber.

U.S. HOUSING STARTS



TIMBERLAND RETURN BRIDGE



Source: St. Louis Fed, as of 3/31/18

Appendix

Glossary of terms

Adjusted Funds From Operations (AFFO): A measurement which is helpful in analyzing real estate investment trusts (REITs). The AFFO typically equals the trust's funds from operations (FFO) but is adjusted for ongoing capital expenditures which are necessary for upkeep of the REIT's assets.

Backwardation: Also, sometimes called normal backwardation, is the market condition where the price of a commodities forward or futures contract is trading below the expected spot price at maturity.

Capitalization Rates: The rate of return of a real estate investment, which is calculated by dividing the property's net operating income by the property's purchase price.

Core Real Estate: This category of real estate will include a preponderance of stabilized properties. Core real estate should achieve relatively high income returns and exhibit relatively low volatility. Core real estate funds tend to use less leverage.

Consumer Price Index (CPI): A measure of purchasing power and inflation that takes the average prices of a basket of consumer goods and services, such as food, medical care, and transportation, and compares the same basket of goods in terms of prices to the same period in a previous year. Changes in CPI are used to assess price changes associated with the cost of living.

Contango: When the futures price of a commodity is above the expected future spot price. A futures or forward curve is upward sloping when the market is in contango.

Double Promote: A joint venture private equity structure is considered to have a "double promote" if the sponsor of a project is in fact comprised of two separate parties who each have a profit waterfall agreement or cash flow disbursements.

Dry Powder: Investment reserves raised by investment funds to cover future obligations or to purchase assets in the future.

GDP: The total value of all services and goods produced within a country's borders, for a given time period. This calculation includes both private and public consumption, government expenditures, investments, along with total exports net of total imports.

Internal Rate of Return (IRR): the IRR is the discount rate that equates the present value of cash outflows (investment) with the present value of cash inflows (return of capital). IRR is often referred to as a dollar-weighted rate of return that accounts for the timing of cash inflows and outflows.

LIBOR: Is a benchmark rate that some of the world's largest banks charge each other for short-term loans. It stands for London Interbank Offered Rate and serves as the first step in calculating interest rates on various loans throughout the world.

Master Limited Partnerships (MLPs): A limited partnership structure which is publicly traded on an exchange. MLPs combine the tax benefits of a limited partnership with the liquidity of publicly traded securities. To qualify as an MLP, the entity must generate 90% of its income from the production, processing and transportation of oil, natural gas and coal.

Net Operating Income (NOI): A calculation which is used to analyze real estate investments that generate income. NOI is the property's annual income generated by operations after deducting all expenses incurred from those operations. The growth rate in NOI is a common metric used in determining the health of a property.

OPEC: The Organization of Petroleum Exporting Countries (OPEC) is a group consisting of 12 of the world's major oil-exporting nations. OPEC is a cartel that aims to manage the supply of oil in an effort to influence the price of oil on the world market.

Opportunistic Real Estate: An opportunistic fund is one that includes preponderantly non-core assets. The fund as a whole is expected to derive most of its return from property appreciation which may result in significantly volatile returns. These funds may employ a variety of tools such as development, significant leasing risk and potentially high leverage.

Real Estate Investment Trusts (REITs): A REIT is a company that owns and operates commercial real estate properties. REITs can be publicly traded or privately held. There are two main type of REITs: Equity REITs which generate income from the operation of properties, and Mortgage REITs, which invest in mortgages or mortgage securities.

Glossary of terms (continued)

Timber Investment Management Organizations (TIMOs): A management group that invests in timberland assets for institutional investors. TIMOs will purchase, manage and sell various timberland properties on behalf of investors.

Treasury Inflation Protected Securities (TIPS): A treasury bond that is adjusted to eliminate the effects of inflation on interest and principal payments, as measured by the Consumer Price Index (CPI). TIPS are issued in terms of five, ten and twenty years and are auctioned twice per year.

Value-Added Real Estate: A value-added real estate fund often holds a combination of core assets and other assets characterized by less dependable cash flows. These strategies are likely to have moderate lease exposure and employ moderate leverage. Consequentially, these strategies seek significant returns from property appreciation and typically exhibit moderate volatility.

Vacancy Rates: The vacancy rate is calculated as the total number of unoccupied units of a property divided by the total units of the property, at a particular point in time.

Vintage Year: Represents the year the first capital call or portfolio company investment was made. .

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Board of Trustees

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www.SLOPensionTrust.org

San Luis Obispo County Pension Trust
SLOCPT

Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary
Amy Burke – Deputy Executive Secretary

Agenda Item 12: Investment Consultant Organizational Update – Verus

Scott Whalen of Verus, the SLOCPT's investment consultant, will deliver a presentation on the organizational status of Verus.

The Pension Trust has employed Verus (formerly named Wurts & Associates) as its general investment consultant since 2007. During that entire period, Scott Whalen had been the consultant assigned to the Pension Trust. Staff is exposed to different investment consulting firms in the course of business and rates Verus' performance and advice quite favorably. The Pension Trust has followed a practice with its key consultants – investment and actuarial – of considering issuing RFPs to evaluate alternative consultants on a need-based approach should the Board of Trustees or Staff perceive a performance problem. Due to the positive assessment of the quality of consulting service provided by Verus no such change is recommended at present.

That being said, Verus has gone through a number of changes over the years that bear reporting to the Board of Trustees on. Verus transitioned its ownership to the current employee owned structure as the founder, Bill Wurts, retired from the business. Verus has launched an active Outsourced Chief Investment Officer (OCIO) practice and some of the professionals involved in the OCIO business transitioned to another consulting firm in recent years. Verus also merged with SIS, another institutional investment consulting firm, that broadened the firm's expertise and client base. Verus has also undergone the inevitable evolution as a consulting firm as it has grown and reorganized the way it staffs and delivers professional service. As a result, Staff requested Verus to provide an update on the firm.

This is an educational presentation and no Board of Trustees action is necessary.

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AUGUST 2018

Consultant Review

San Luis Obispo County Pension Trust

Agenda Item 12

We are stewards of the means to a better life.

Success at what we do preserves and fortifies the wellbeing of individuals, families, and communities. We rely on objective observation, rigorous research, demonstrable facts, and measurable results to help guide our clients. Yet the true value of our work lies beyond what can be measured – what we do impacts people's lives.

Table of contents

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484

I. Verus update

Firm overview

ESTABLISHED

Founded in 1986
83 employees across three offices
71 investment professionals

KNOWLEDGEABLE

Established reputation for research
21 years average consultant experience

VESTED

100% employee-owned; independent business philosophy and structure

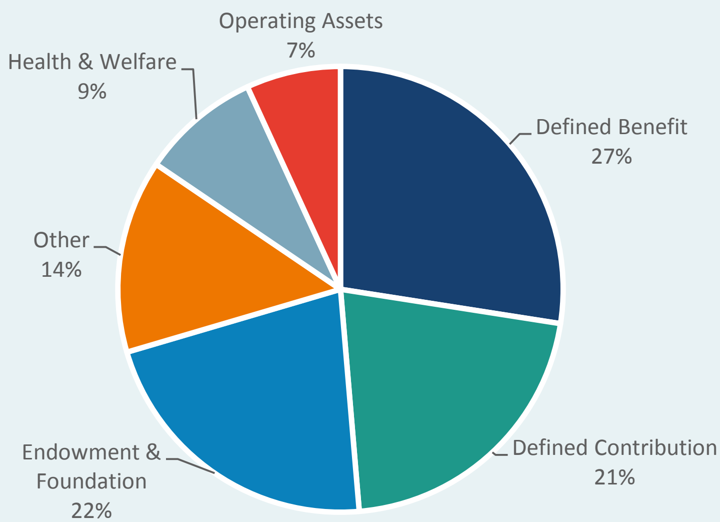
INDUSTRY LEADING

Thought leadership on risk allocation, risk management and capital markets

BOUTIQUE CULTURE

Personalized and well-resourced

CLIENT PLANS



$437 billion in assets under advisement*

$434 billion traditional consulting services

$3 billion discretionary services

152 client relationships

**Includes Verus' total assets under advisement; preliminary as of 4/1/18; pie chart depicts client breakdown by number of plans.*

Firm resources

CHIEF INVESTMENT OFFICER

Ian Toner, CFA***, Chief Investment Officer

INVESTMENT COMMITTEE

*indicates membership

ALTERNATIVE INVESTMENTS COMMITTEE

**indicates membership

GENERAL CONSULTING

Jeffrey MacLean
CEO, Sr. Consultant

Shelly Heier, CFA, CAIA*
President, COO, Sr. Cons.

Scott Whalen, CFA
Exec. Managing Dir. Sr. Consultant

Barry Dennis
Managing Dir., Sr. Consultant

Margaret Jadallah*
Managing Dir., Sr. Consultant

John Meier, CFA**
Managing Dir., Sr. Consultant

Anne Westreich, CFA**
Managing Dir., Sr. Consultant

Ed Hoffman, CFA, FRM*
Managing Dir., Sr. Consultant

Brent Nelson**
Managing Dir., Sr. Consultant

Eileen Neill, CFA*
Managing Dir., Sr. Consultant

Annie Taylor, CFA,
Managing Dir., Sr. Consultant

P. Bradley Ness
Managing Dir., Sr. Consultant

Victor Lee
Sr. Consultant

Jason Taylor
Sr. Consultant

Michael Kamell, CFA, CAIA
Consultant

Stephen Quirk, CFA
Consultant

Brian Kwan, CFA
Consultant

Herbert Nishii
Consultant

+9 Consulting Associates

PRIVATE MARKETS CONSULTING & RESEARCH

Faraz Shooshani
Managing Director, Sr. Private Markets Consultant

Steve Hempler
Managing Director, Sr. Private Markets Consultant

John Nicolini, CFA
Managing Director, Sr. Consultant

Ping Zhu, CFA, FRM, CAIA
Sr. Associate Director

John Wasnock
Associate Director

Francis Griffin
Sr. Associate Director

Jing Chen
Sr. Private Markets Research Analyst

MyDung Do
Sr. Private Markets Performance Analyst

Vincent Phan
Private Markets Performance Analyst

PUBLIC MARKETS RESEARCH

Marianne Feeley, CFA
Managing Director

Vince Francom, CFA, CAIA
Director

Paul Kreiselmaier, CFA
Sr. Associate Director

Maggie McRae, CFA
Associate Director

David Greenwood
Sr. Public Markets Research Analyst

Trevor Parmelee, CFA
Sr. Hedge Funds Research Analyst

Misty Watson, CFA
Sr. Public Markets Research Analyst

RISK ADVISORY

Max Giolitti*
Chief Risk Officer

Danny Sullivan, FRM, CAIA
Sr. Associate Director

Zoey Yan, FRM
Associate Director

Vance Creekpaum, ASA
Sr. Actuarial Analyst

PORTFOLIO MANAGEMENT & STRATEGIC RESEARCH

Austin Smith
Portfolio Management Analyst

Thomas Garrett, CFA, CAIA
Sr. Associate Director

Andrew Akers
Sr. Strategic Research Analyst

PERFORMANCE ANALYTICS

14 Professionals

OPERATIONS

Kraig McCoy, CFA**
Chief Financial Officer

Jonathan Henderson
Associate Director

LEGAL

Warren Spencer, JD, LLM
CCO, Chief Legal Counsel

IT DEVELOPMENT

Joe Wilson
Director of IT & Development

+2 Professionals

FIRM INFRASTRUCTURE

12 Professionals

Research oversight and guidance

INVESTMENT COMMITTEE

Shelly Heier, CFA, CAIA*
President

Ian Toner, CFA
Chief Investment Officer

Max Giolitti
Chief Risk Officer

Ed Hoffman, CFA, FRM
Managing Director

Margaret Jadallah
Managing Director

Eileen Neill, CFA
Managing Director

ALTERNATIVE INVESTMENTS COMMITTEE

Kraig McCoy, CFA*
Chief Financial Officer

Ian Toner, CFA
Chief Investment Officer

John Meier, CFA
Managing Director

Brent Nelson
Managing Director

Anne Westreich, CFA
Managing Director

GUIDANCE, OVERSIGHT AND APPROVAL OF STRATEGIC ADVICE & PORTFOLIO TOOLS

- ASSET ALLOCATION PROCESS & MODELS
- CAPITAL MARKET ASSUMPTIONS
- INVESTMENT LANDSCAPE
- REAL ASSETS OUTLOOK
- PRIVATE EQUITY OUTLOOK
- HEDGE FUND ENVIRONMENT
- ACTIVE MANAGEMENT ENVIRONMENT
- FOCUS LIST & RECOMMENDED PRODUCTS

CHIEF INVESTMENT OFFICER

Ian Toner, CFA

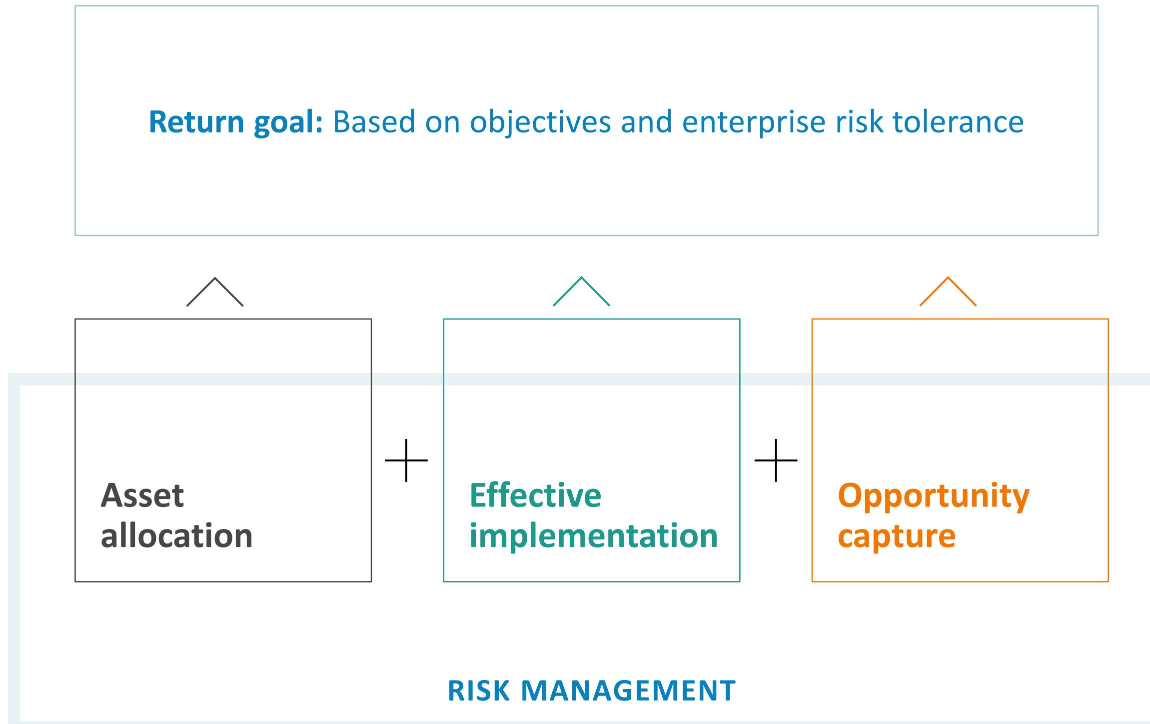
OWNERSHIP OF TACTICAL TILTS & PORTFOLIO MANAGEMENT

- MONTHLY STRATEGY MEETING
- TACTICAL TILTS
- OPPORTUNITIES
- OCIO PORTFOLIO STRATEGY
- EDITORIAL & COMMENTARY
- SPECIAL PROJECTS

**Committee Chair*

Achieving your return goal one step at a time

- Develop a thoughtful **strategic asset allocation** based on your enterprise objectives and risk tolerance
- Implement efficiently, combining **best-in-class investment managers**, low-cost passive exposures, and effective operations
- Identify and **capture attractive** valuation-based **market opportunities**
- Apply **risk management best practices** across the portfolio to maximize risk-adjusted return



Services offered

Centralized investment team supports service delivery for varied client governance models

Consulting

Risk advisory

Private markets

Outsourced CIO

Consulting & Client Service	Capital Markets & Strategy	Investment Manager Research	Risk Allocation, Management, & Reporting	Portfolio Management

71 Investment Professionals

SHARED INVESTMENT PRINCIPLES AND VALUES

II. Manager research

Research

Max Giolitti
Chief Risk Officer

Ian Toner, CFA
Chief Investment Officer

Risk Advisory

- **Danny Sullivan, FRM, CAIA** — Senior Associate Director, Risk
- **Zoey Yan, FRM** — Associate Director, Risk
- **Vance Creekpaum, ASA** — Senior Actuarial Analyst

Public Markets

- **Marianne Feeley, CFA** — Managing Director, Public Markets
  - **Paul Kreiselmaier, CFA** — Senior Associate Director, Hedge Funds
  - **Trevor Parmelee, CFA** — Senior Hedge Funds Research Analyst
    - **Aksia, LLC.**
  - **Vincent Francom, CFA, CAIA** — Director, Public Markets
  - **Maggie McRae, CFA** — Associate Director, Public Markets
  - **David Greenwood** — Senior Public Markets Research Analyst
  - **Misty Watson, CFA** — Senior Public Markets Research Analyst

Private Markets

- **Faraz Shooshani** — Managing Director, Private Markets
- **Steve Hempler** — Managing Director | Senior Private Markets Consultant
- **John Nicolini, CFA** — Managing Director, Senior Consultant
  - **John Wasnock** — Associate Director, Private Markets
  - **Jing Chen** — Senior Private Markets Research Analyst
  - **Ping Zhu, CFA, FRM, CAIA** — Senior Associate Director, Private Markets
  - **Francis Griffin** — Senior Associate Director, Private Markets
  - **MyDung Do** — Senior Private Markets Performance Analyst
  - **Vincent Phan** — Private Markets Performance Analyst

Portfolio Management

- **Charles Anselm, CFA** — Director, Portfolio Management
- **Austin Smith** — Portfolio Management Analyst

Strategic Research

- **Thomas Garrett, CFA, CAIA** — Senior Associate Director, Strategic Research
- **Andrew Akers** — Senior Strategic Research Analyst

Spending time in the right places

Guiding principles

Keeping it fresh

Stage 1

Asset Class Universe – broadest data set

- Idea generation
  - Screening of eVestment
  - Cultivation of Verus network
- Quantitative analysis: returns, risk characteristics, portfolio characteristics, investment firm characteristics
- Review of existing research

Stage 2

Desk Research – 40-50 products annually

- Review manager-provided information
- Detailed review of return history and risk exposures of the portfolio
- Detailed review of firm history, team history and remuneration
- Introductory meeting or conference call

Stage 3

Detailed review of candidates for approval – 5-10 products

- Meeting decision-maker(s), typically face-to-face
- Requests for supplemental data
- Investigation of risk characteristics and performance in different market environments
- Public Markets team “Devil’s Advocate Review”
- Investment Committee review

Research with the client in mind

Focused, nimble and collaborative team; emphasis on top-down integration

Bottom-up

3 Public Markets Group sources candidates

2 Investment team clarifies scope/mandate and defines desired manager characteristics

1 Investment team identifies manager need

Public Markets Group sources candidates

In-depth quantitative analysis

Qualitative reviews (on-site and in-office meetings, conference calls)

Detailed due diligence write-up on top candidates

IC review/approval

Top-down

1 Capital Markets team identifies top down Beta opportunity

2 Investment Committee clarifies scope/mandate and define desired manager characteristics

3 Public Markets Group sources candidates

Current portfolio structure

Contribution to tracking error
Correlations
Style/capitalization biases
Active/passive allocation

- **Consistent, rigorous** process
- **Knowledgeable, dedicated** team led by CIO
- **Oversight and approval** by Investment Committee (IC)
- **Supported** by Portfolio Analytics Group

Board of Trustees

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San Luis Obispo County Pension Trust
SLOCPT

Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary
Amy Burke – Deputy Executive Secretary

Agenda Item 13: Alternative Investments Fee Disclosure – CA Code 7514.7

Recommendation:

Receive and File the attached report on Alternative Investment Fee Disclosure as required by California Code Sections 7514.7.

Discussion:

California Assembly Bill 2833 added Section 7514.7 to the California Code effective at the start of 2017 requiring additional disclosures on fees and expenses paid by a retirement system for alternative investment vehicles. The intent of the legislation is to increase the transparency of fees public investors are paying for alternative investments. CA Code 7514.7 also incorporates certain alternative investment related disclosures as specified in CA Code Section 6254.26.

These additional alternative investment disclosures are unique to California public pension systems. Many of these disclosure requirements are already included in the Verus quarterly investment reports received by the Board of Trustees. The Disclosure Requirements can be summarized as –

- Applies to any private fund that is an alternative investment vehicle whose contract with a California retirement plan was entered into on or after January 1, 2017 or for an existing contract at December 31, 2016 for which an additional capital commitment is made on or after January 1, 2017.

- The CA Code 7514.7 disclosure requirements are –

    - The fees and expenses that the California retirement system pays directly to the alternative investment vehicle, the fund manager, or related parties.

    - The California retirement system's pro rata share of fees and expenses not included above that are paid from the alternative investment vehicle to the fund manager or related parties.

    - The California retirement system's pro rata share of carried interest distributed to the fund manager or related parties.

    - The California retirement system's pro rata share of aggregate fees and expenses paid by all of the portfolio companies held within the alternative investment vehicle to the fund manager or related parties.

    - Additional information specified in CA Code 6254.26 – including
        - Name, address and vintage year of each alternative investment vehicle.
        - Commitment amount since inception.
        - Contributions made since inception.
        - Distributions received since inception.
        - Amount of distributions received plus remaining value of partnership assets.
        - Net Internal Rate of Return since inception.
        - Investment multiple of funds returned since inception.
        - Amount of total management fees and costs paid on a fiscal year basis. (Note – total management fees reported under CA Code 6254.26 may differ from fees reported under the broader definitions included in CA Code 7514.7)
        - Cash profit (distributions) received on a fiscal year basis.

- For alternative investments entered into prior to January 1, 2017 California retirement systems are required to use reasonable efforts to acquire the mandatory information. The funds invested in by the SLOCPT prior to 2017 do not publish equivalent fee disclosure information so are not included in the CA Code 7514.7 reporting. They are included in the supplementary CA Code 6254.26 reporting to the extent the data is available from Verus quarterly investment reports.

- The CA Code 7514.7 disclosures must be presented must be presented at least once annually in a report at a meeting open to the public.

The annual presentation of this data in this report satisfies the SLOCPT's reporting requirements under CA Code 7514.7. No action other than a Receive and File by the Board of Trustees is necessary.

Respectfully Submitted,

San Luis Obispo County Pension Trust

SLOCPT

Section 7514.7 Disclosure - Alternative Investments

Source: Alt. Inv. Mgr.s ILPA reporting

2017

Investment	Commitment	Ending Valuation	Mgmt. Fee	Partner-ship Expenses	Offsets	Other Fees & Expenses paid to GP	Carried Interest Paid	Fees & Expenses paid by Portfolio Companies	One Year Net IRR	One Year Gross IRR
Private Credit:										
TSSP Diversified Credit Program 2016 (A), L.P. (a)	75,000,000	30,978,587	-	-	-	312,478	-	2,866,094	9.3%	11.0%
Private Equity:										
Pathway Private Equity Fund Investors 9, L.P. (b)	65,000,000	5,288,785	98,283	73,885	-	182,706	-	98,283	NA	NA

(a) TPPS DCF fund data from commencement of operations 10/31/16 through December 31, 2017
(b) PPEF Fund 9 fund data from commencement of operations 2/7/17 through December 31, 2017

San Luis Obispo County Pension Trust
Section 6254.26 Disclosure - Alternative Investments
2017

Source: Verus, quarterly investment reports

Investment	Address	Vintage	Commitment	Contributions since inception	Distributions since inception	Remaining Value	Total Value Distrib. + Remaining Value	Since Inception Net IRR	Net Invest. Multiple	Total Mgmt. Fees in FY	Cash Profit (Distrib.) Received in FY
Private Credit:											
TSSP Diversified Credit Program 2016 (A), L.P. (a)	San Francisco	2016	75,000,000	33,277,831	459,765	30,978,587	31,438,352	9.3%	1.06x	234,595	459,765
Private Equity:											
Pathway Private Equity Fund Investors 9, L.P. (b)	Boston	2017	65,000,000	5,164,009	-	5,288,785	5,288,785	NA	NA	-	-
Private Equity - pre Jan. 1, 2017 (not subject to 7514.7)											
Harbourvest Partners IX - Buyout Fund, L.P.	Boston	2011	20,000,000	13,964,818	6,852,918	13,464,670	20,317,588	17.5%	1.45x	226,164	2,210,159
KKR Mezanine Partners I, L.P.	San Francisco	2010	20,000,000	20,000,000	28,026,563	5,228,751	33,255,314	8.1%	1.67x	122,365	4,405,277
PIMCO Distressed Credit Fund	Newport Beach	2010	20,000,000	20,000,000	27,899,650	1,248,698	29,148,348	12.2%	1.40x	17,673	1,123,728

(a) TPPS DCF fund data 12 months through December 31, 2017
(b) PPEF Fund 9 fund data from commencement of operations 2/7/17 through December 31, 2017

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San Luis Obispo County Pension Trust
SLOCPT

Date: August 27, 2018

To: Board of Trustees

From: Carl Nelson – Executive Secretary
Amy Burke – Deputy Executive Secretary

Agenda Item 14: Asset Allocation August 2018

This item on the agenda provides a properly noticed opportunity for the Board of Trustees to discuss and take action if necessary regarding asset allocation and related investment matters.

As was discussed at the July 23rd Board of Trustees meeting, the asset rebalancing shifts following the County's prefunding of $54 million of FY18-19 Employer Appropriations and Employer Paid for Member Contributions (EPMC or "pick up") were completed at the start of August. They are repeated below for reference.

SLO County contributions prefunding	$ 54 to Treasury account
Retain in Treasury account to fund July, August, and September drawdowns for retiree payroll.	$ 19
Asset Rebalancing transfers – ($ 25 total)	
Loomis – domestic equity (growth)	$ 3
Boston Partners – domestic equity (value)	$ 7
Pacific Asset Mgmt. – bank loans	$ 5
Stone Harbor – emerging market debt	$ 5
Gresham – commodities	$ 5
Retain in liquidity account for 3Q18 capital calls	$ 10

No Board action is necessary at this point.

Respectfully submitted

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